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**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**AMENDMENT NO. 5**

**TO  
FORM S-1  
REGISTRATION STATEMENT  
Under  
THE SECURITIES ACT OF 1933**

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**FORMFACTOR, INC.**

(Exact name of Registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

3825  
(Primary standard industrial  
classification code number)

13-3711155  
(I.R.S. employer  
identification no.)

FormFactor, Inc.

2140 Research Drive  
Livermore, California 94550  
(925) 294-4300

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Jens Meyerhoff

Chief Financial Officer and Senior Vice President of Operations

FormFactor, Inc.  
2140 Research Drive  
Livermore, California 94550  
(925) 294-4300

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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**Approximate date of commencement of proposed sale to the public:**

As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.  \_\_\_\_\_

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If delivery of the prospectus is expected to be made pursuant to Rule 434 under the Securities Act of 1933, please check the following box.  \_\_\_\_\_

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay the effective date of this Registration Statement until the Registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PROSPECTUS (Subject to Completion)

Issued May 7, 2003

Shares



FORMFACTOR

COMMON STOCK

FormFactor, Inc. is offering \_\_\_\_\_ shares of its common stock and the selling stockholders are offering \_\_\_\_\_ shares. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between \$ \_\_\_\_\_ and \$ \_\_\_\_\_ per share.

We have applied to list our common stock for quotation on the Nasdaq National Market under the symbol "FORM."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 9.

PRICE \$ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to FormFactor	Proceeds to Selling Stockholders
Per Share	\$	\$	\$	\$
Total	\$	\$	\$	\$

FormFactor, Inc. has granted the underwriters the right to purchase up to an additional \_\_\_\_\_ shares to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Morgan Stanley & Co. Incorporated expects to deliver the shares to purchasers on \_\_\_\_\_, 2003.

MORGAN STANLEY  
LEHMAN BROTHERS  
BANC OF AMERICA SECURITIES LLC  
THOMAS WEISEL PARTNERS LLC

, 2003

## INSIDE FRONT COVER PAGE

This page has a picture that covers the left two-thirds of the page and a column of text that covers the right one-third of the page. In the background of the picture, a part of a wafer probe card manufactured by FormFactor is depicted. Appearing at the bottom of the image of the wafer probe card are enlarged images of the geometrically precise tip structures of the MicroSpring contacts. Sets of MicroSpring contacts that blend into the wafer probe card and the tip structures of the MicroSpring contracts are in the lower center of the picture. The column of text has four blocks of text. The headings of the blocks of text from top to bottom are as follows: "Proprietary Technology," "Market Leadership," "High Value Solutions" and "Industry Leading Customers." The following sentence appears below the heading "Proprietary Technology": "Our patented MicroSpring interconnect technology replaces conventional wafer probe card technologies to improve the performance and lower the cost of semiconductor test" and projected behind that sentence is shadow text repeating the heading of "Proprietary Technology" in a larger font. The following sentence appears below the heading "Market Leadership": "In 2001, we were the leader in the advanced wafer probe card market in terms of revenues" and projected behind that sentence is shadow text repeating the heading of "Market Leadership" in a larger font. The following sentence appears below the heading "High Value Solutions": "Our advanced wafer test solutions are optimized for the testing requirements of the Dynamic Random Access Memory, or DRAM, Flash, Microprocessor and Logic Markets" and projected behind that sentence is shadow text repeating the heading of "High Value Solutions" in a larger font. The following sentence appears below the heading "Industry Leading Customers": "Our products are used in the wafer fabrication facilities of leading semiconductor companies, including our 4 largest manufacturing customers in 2002, Infineon, Micron, Samsung and the world's largest microprocessor manufacturer, who together accounted for approximately 65% of our revenues" and projected behind that sentence is shadow text repeating the heading of "Industry Leading Customers" in a larger font. The FormFactor logo trademark is in the bottom right corner of the page next to the company's name, "FORMFACTOR", at the bottom of the column of text.

## GATEFOLD

This page is dominated by a picture entitled "Wafer Test Solutions." The heading "Wafer Test Solutions" has a shadow of text that repeats the heading in a font twice the size of the heading. On the left edge of the page, the following text runs from the bottom left corner of the page to the top left corner of the page, parallel to the edge of the page: "FormFactor's wafer test solutions enable integration of the semiconductor pipeline from design to system." That sentence has a shadow of text that repeats the sentence in a larger font. To the immediate right of that sentence is a column depicting the design to system pipeline in the chip manufacturing process. From the top of the page to the bottom of the page, the column contains the word "Design" followed by a triangular arrow pointing to the words "Wafer Fab (Deposition, Litho, Etch, Metrology)," followed by a triangular arrow pointing to the words "Wafer Probe Test," followed by a triangular arrow pointing to the words "Wafer Cut," followed by a triangular arrow pointing to the words "Assembly and Packaging," followed by a triangular arrow pointing to the words "Final Test," followed by a triangular arrow pointing to the words "System," followed by a triangular arrow pointing downwards. In that column, behind the words "Design," "Wafer Fab (Deposition, Litho, Etch, Metrology)," and "Wafer Probe Test" appears a section of a wafer. In that column, behind and below the words "Wafer Cut" are eleven rectangular chips, and between the words "Assembly and Packaging" and "Final Test" are two completed chips. In that column, below the words "Final Test" and behind the word "System" is the faded image of two computers, a cellular telephone, a headset and various computer accessories. From the words "Wafer Probe Test" in that column, rays of light create a cone shape pointing to the right of the page and fading toward the center of the page. This cone of light opens up into the picture of a wafer probe card manufactured by FormFactor, which is directly above a picture of a wafer. This wafer probe card is approximately 1/5th of the size of the page and dominates the left half of the page. A cone of light originating from the middle of the wafer probe card that contains the MicroSpring contact elements opens up into a circle containing a picture of the MicroSpring contact elements, which are housed in the wafer probe card. Parallel to the bottom of the page are pictures of four types of wafer probe cards manufactured by FormFactor. The wafer probe cards have the following labels, which correspond to the chip applications for such wafer probe cards, reading from left to right: "DRAM," "Microprocessor," "Flash" and "Logic." On the right hand side of each wafer probe card is an enlarged image of the MicroSpring contact elements used in the particular wafer probe card. On the far right side of the page, another column of text appears. At the top, there is the FormFactor logo trademark next to the company's name "FormFactor." Below the FormFactor logo trademark and the name of the company, there are five blocks of text. At the top, the first block of text reads as follows: "Improve throughput and reduce test cost by testing more die at the same time through High Parallelism" and the words "High Parallelism" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Increase yields and achieve higher test frequencies with Signal Integrity" and the words "Signal Integrity" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Precision Contacts to test shrinking die sizes and scale with front-end processes" and the words "Precision Contacts" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Test with high positional accuracy over a wide range of temperatures with Thermal Compensation" and the words "Thermal Compensation" appear as a shadow of text in a larger font immediately behind this block of text. The final block of text, which is at the bottom of the column of text, reads as follows: "Low Contact Force to reduce structural damage to bond pads and next generation materials" and the words "Low Contact Force" appear as a shadow of text in a larger font immediately behind this block of text.

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. Unless otherwise indicated, all information in this prospectus:

- assumes that the underwriters do not exercise their over-allotment option; and
- assumes the automatic conversion of all outstanding shares of our preferred stock into shares of our common stock.

Until \_\_\_\_\_, 2003 (25 days after the commencement of this offering), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

For investors outside the United States: Neither we, the selling stockholders nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

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## PROSPECTUS SUMMARY

*You should read the following summary together with the entire prospectus, including the more detailed information in our consolidated financial statements and related notes appearing elsewhere in this prospectus. You should carefully consider, among other things, the matters discussed in “Risk Factors.”*

### FORMFACTOR, INC.

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. In 2001, the latest period for which market data is available, we were the leader in the advanced wafer probe card market in terms of revenues. Our products are based on our proprietary MicroSpring™ interconnect technology, which includes resilient spring-like contacts that we manufacture using precision micro-machining and scalable semiconductor-like wafer fabrication processes. Our technology enables us to produce wafer probe cards for test applications that require reliability, speed, precision and signal integrity.

The semiconductor industry has historically separated the manufacture of chips into two distinct parts: the front-end wafer fabrication process and the back-end assembly, packaging and final test process. Test is a critical and expensive part of semiconductor manufacturing and is performed in both the front-end and back-end processes. In the front-end, wafer probe test is performed on the whole wafer using wafer probe cards, and in the back-end, final test is performed on the individual packaged chip.

The semiconductor industry is experiencing a critical technology evolution driven by movement to smaller chip geometries, migration to 300 mm wafers, transition to copper interconnects and introduction of new insulating materials such as low-k dielectrics. This evolution is pushing conventional wafer probe card technologies to their practical performance limits due to one or more factors, including: the inability to test in parallel many chips on a wafer; poor signal integrity; the inability to make precise contact with shrinking bond pad sizes and pitches; the inability to test accurately over a wide range of temperatures; and the inability to contact the wafer without damaging the chips on the wafer. While conventional wafer probe cards address some of these performance limitations, no conventional technology solves all of them.

Our MicroSpring interconnect technology and our proprietary design tools and technologies solve the limitations of conventional wafer probe cards by providing:

- a high degree of parallelism that enables our customers to test a significant number of chips at the same time in a single touchdown, which reduces total test time and the overall cost of test;
- superior signal integrity, enabling customers to improve yields;
- micro-machining and semiconductor-like wafer fabrication processes that enable us to scale our products to shrinking semiconductor geometries;
- thermal compensation to permit wafer probe testing over a wide range of temperatures; and
- low contact force to permit testing without damage to the chips, particularly those incorporating fragile next-generation materials, such as low-k and super low-k dielectrics.

The current evolution of the semiconductor manufacturing process is driving a substantial increase in the cost of building new manufacturing capacity, with the cost of a leading edge 300 mm wafer manufacturing facility now approaching or exceeding \$3.0 billion. With ever increasing capital investments, semiconductor manufacturers are focusing on ways to accelerate their return on investment by increasing volumes and yields, decreasing the overall costs of manufacturing and improving the time to market of their products. One area of focus is test because it provides vital feedback to the design and wafer fabrication processes.

In addition to addressing the shortcomings of conventional wafer probe cards, we believe that our customers will be able to use our technology to perform more advanced test functions on devices at the wafer-level front-end, rather than on individual devices in the back-end. This will enable them to optimize their manufacturing pipeline, from initial device design and fabrication through assembly, packaging and final test. As a result,

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manufacturers will be able to accelerate their return on investment by improving time to market, yield and volume.

Our objectives are to enhance our position as the leading supplier of advanced wafer probe card solutions and to apply our core MicroSpring interconnect technology to drive wafer-level economies of scale in semiconductor test. The principal elements of our strategy include: enhancing our market leadership in the dynamic random access memory, or DRAM, industry; expanding our presence in the flash memory market; increasing our penetration into the logic market; enabling migration of elements of final test to the wafer level; extending our technology leadership position; and continuing to build on our strategic relationships.

We introduced our first wafer probe card based on our MicroSpring interconnect technology in 1995, and, by the end of 2000, we were the leading supplier of advanced wafer probe cards, based on revenues. Our customers include the top 10 DRAM manufacturers, the world's largest microprocessor company, and three of the top 10 flash memory manufacturers, and, combined, these identified groups of our customers account for substantially all of our revenues. We focus our research and development activities on expanding our products into new markets and expanding applications for our MicroSpring interconnect technology. We manufacture our wafer probe cards in Livermore, California, and sell and support our products worldwide through our direct sales force, a distributor and independent sales representatives.

We were incorporated in Delaware in April 1993. Our principal executive offices are located at 2140 Research Drive, Livermore, California 94550, and our telephone number at that address is (925) 294-4300. Our Web site address is [formfactor.com](http://formfactor.com). The information on our Web site does not constitute part of this prospectus.



**SUMMARY CONSOLIDATED FINANCIAL DATA**

The following tables provide summary consolidated financial data and should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	Fiscal Year Ended					Three Months Ended	
	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Dec. 28, 2002	Mar. 30, 2002	Mar. 29, 2003
(in thousands, except per share data)							
(unaudited)							
<b>Consolidated Statement of Operations</b>							
<b>Data:</b>							
Revenues	\$19,329	\$35,722	\$56,406	\$73,433	\$78,684	\$17,288	\$18,669
Cost of revenues	10,763	20,420	28,243	38,385	39,456	8,859	9,800
Gross margin	8,566	15,302	28,163	35,048	39,228	8,429	8,869
Total operating expenses	14,698	20,827	27,688	34,968	32,636	7,406	7,871
Operating income (loss)	(6,132)	(5,525)	475	80	6,592	1,023	998
Interest and other income (expense), net	157	(119)	1,719	477	642	155	129
Net income (loss)	\$ (5,975)	\$ (5,644)	\$ 2,079	\$ 250	\$10,359	\$ 846	\$ 699
Net income (loss) per share:							
Basic	\$ (3.60)	\$ (2.16)	\$ .61	\$ .06	\$ 2.33	\$ .19	\$ .15
Diluted	\$ (3.60)	\$ (2.16)	\$ .08	\$ .01	\$ .35	\$ .03	\$ .02
Weighted-average number of shares used in per share calculations:							
Basic	1,659	2,609	3,408	4,029	4,448	4,391	4,539
Diluted	1,659	2,609	26,821	28,654	29,554	29,823	29,266
Pro forma net income per share (unaudited):							
Basic					\$ .38		\$ .03
Diluted					\$ .35		\$ .02
Weighted-average number of shares used in pro forma per share calculations (unaudited):							
Basic					27,447		27,542
Diluted					29,554		29,266

The pro forma consolidated balance sheet data below reflects the automatic conversion of all of our outstanding shares of preferred stock into 23,002,626 shares of our common stock upon the closing of this offering. The pro forma as adjusted column of the consolidated balance sheet data also reflects the sale of \_\_\_\_\_ shares of our common stock offered by us and the selling stockholders at an assumed initial public offering price of \$ \_\_\_\_\_ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds by the selling stockholders.

	March 29, 2003		
	Actual	Pro Forma	Pro Forma As Adjusted
(unaudited) (in thousands)			
<b>Consolidated Balance Sheet Data:</b>			
Cash, cash equivalents and short-term investments	\$ 34,846	\$ 34,846	\$
Working capital	44,649	44,649	
Total assets	74,358	74,358	
Long-term debt, less current portion	500	500	
Redeemable convertible preferred stock and warrants	65,201	—	
Deferred stock-based compensation, net	(12,023)	(12,023)	
Total stockholders’ equity (deficit)	(3,938)	61,263	

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information in this prospectus, before deciding whether to invest in shares of our common stock. If any of the following risks actually occurs, our business, financial condition and results of operations would suffer. In this case, the trading price of our common stock would likely decline and you might lose all or part of your investment in our common stock. The risks described below are not the only ones we face. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business operations.*

### **Risks Related to Our Business and Industry**

***Our operating results are likely to fluctuate, which could cause us to miss expectations about these results and cause the trading price of our common stock to decline.***

Our operating results are likely to fluctuate. As a result, we believe that you should not rely on period-to-period comparisons of our financial results as an indication of our future performance. Factors that are likely to cause our revenues and operating results to fluctuate include those discussed in the risk factors below. If our revenues or operating results fall below the expectations of market analysts or investors, the market price of our common stock could decline substantially.

***Cyclicality in the semiconductor industry historically has affected our sales and might do so in the future, and as a result we could experience reduced revenues or operating results.***

The semiconductor industry has historically been cyclical and is characterized by wide fluctuations in product supply and demand. From time to time, this industry has experienced significant downturns, often in connection with, or in anticipation of, maturing product and technology cycles, excess inventories and declines in general economic conditions. This cyclicality could cause our operating results to decline dramatically from one period to the next. For example, our revenues in the three months ended September 29, 2001 declined by 25.5% compared to our revenues in the three months ended June 30, 2001, and our revenues in the three months ended March 29, 2003 declined by 15.7% compared to our revenues in the three months ended December 28, 2002. Our business depends heavily upon the development of new semiconductors and semiconductor designs, the volume of production by semiconductor manufacturers and the overall financial strength of our customers, which, in turn, depend upon the current and anticipated market demand for semiconductors and products, such as personal computers, that use semiconductors. Semiconductor manufacturers generally sharply curtail their spending during industry downturns and historically have lowered their spending disproportionately more than the decline in their revenues. As a result, if we are unable to adjust our levels of manufacturing and human resources or manage our costs and deliveries from suppliers in response to lower spending by semiconductor manufacturers, our gross margin might decline and cause us to experience operating losses.

***If we do not keep pace with technological developments in the semiconductor industry, our products might not be competitive and our revenues and operating results could suffer.***

We must continue to invest in research and development to improve our competitive position and to meet the needs of our customers. Our future growth depends, in significant part, upon our ability to work effectively with and anticipate the testing needs of our customers, and on our ability to develop and support new products and product enhancements to meet these needs on a timely and cost-effective basis. Our customers' testing needs are becoming more challenging as the semiconductor industry continues to experience rapid technological change driven by the demand for complex circuits that are shrinking in size and at the same time are increasing in speed and functionality and becoming less expensive to produce. Our customers expect that they will be able to integrate our wafer probe cards into any manufacturing process as soon as it is deployed. Therefore, to meet these expectations and remain competitive, we must continually design, develop and introduce on a timely basis new

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products and product enhancements with improved features. Successful product development and introduction on a timely basis requires that we:

- design innovative and performance-enhancing features that differentiate our products from those of our competitors;
- transition our products to new manufacturing technologies;
- identify emerging technological trends in our target markets;
- maintain effective marketing strategies;
- respond effectively to technological changes or product announcements by others; and
- adjust to changing market conditions quickly and cost-effectively.

We must devote significant research and development resources to keep up with the rapidly evolving technologies used in the semiconductor manufacturing processes. Not only do we need the technical expertise to implement the changes necessary to keep our technologies current, but we must also rely heavily on the judgment of our management to anticipate future market trends. If we are unable to timely predict industry changes, or if we are unable to modify our products on a timely basis, we might lose customers or market share. In addition, we might not be able to recover our research and development expenditures, which could harm our operating results.

### ***If semiconductor memory device manufacturers do not convert to 300 mm wafers, our growth could be impeded.***

The growth of our business for the foreseeable future depends in large part upon sales of our wafer probe cards to manufacturers of dynamic random access memory, or DRAM, and flash memory devices. The recent downturn in the semiconductor industry caused various chip manufacturers to readdress their respective strategies for converting existing 200 mm wafer fabrication facilities to 300 mm wafer fabrication, or for building new 300 mm wafer fabrication facilities. Some manufacturers have delayed, cancelled or postponed previously announced plans to convert to 300 mm wafer fabrication. We believe that the decision to convert to a 300 mm wafer fabrication facility is made by each manufacturer based upon both internal and external factors, such as:

- current and projected chip prices;
- projected price erosion for the manufacturer's particular chips;
- supply and demand issues;
- overall manufacturing capability within the manufacturer's target market(s);
- the availability of funds to the manufacturer;
- the technology roadmap of the manufacturer; and
- the price and availability of equipment needed within the 300 mm facility.

One or more of these internal and external factors, as well as other factors, including factors that a manufacturer may choose to not publicly disclose, can impact the decision to maintain a 300 mm conversion schedule, to delay the conversion schedule for a period of time, or to cancel the conversion. We have invested significant resources to develop technology that addresses the market for 300 mm wafers. If manufacturers of memory devices do not transition to 300 mm wafers, or make the transition more slowly than we currently expect, our growth and profitability could be impeded. In addition, any delay in large-scale adoption of manufacturing based upon 300 mm wafers would provide time for other companies to develop and market products that compete with ours, which could harm our competitive position.

### ***We are subject to general economic and market conditions.***

Our business is subject to the effects of general economic conditions in the United States and worldwide, and to market conditions in the semiconductor industry in particular. For example, in fiscal 2001, our operating

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results were adversely affected by unfavorable global economic conditions and reduced capital spending by semiconductor manufacturers. These adverse conditions resulted in a decrease in the demand for semiconductors and products using semiconductors, and in a sharp reduction in the development of new semiconductors and semiconductor designs. As a result, we experienced a decrease in the demand for our wafer probe cards. If the economic conditions in the United States and worldwide do not improve, or if they worsen from current levels, we could experience material negative effects on our business.

***We depend upon the sale of our wafer probe cards for substantially all of our revenues, and a downturn in demand for our products could have a more disproportionate impact on our revenues than if we derived revenues from a more diversified product offering.***

Historically, we have derived substantially all of our revenues from the sale of our wafer probe cards. We anticipate that sales of our wafer probe cards will represent a substantial majority of our revenues for the foreseeable future. Our business depends in large part upon continued demand in current markets for, and adoption in new markets of, current and future generations of our wafer probe cards. Large-scale market adoption depends upon our ability to increase customer awareness of the benefits of our wafer probe cards and to prove their reliability, ability to increase yields and cost effectiveness. We may be unable to sell our wafer probe cards to certain potential customers unless those customers change their device test strategies, change their wafer probe card and capital equipment buying strategies, or change or upgrade their existing test equipment. We might not be able to sustain or increase our revenues from sales of our wafer probe cards, particularly if the current downturn in the semiconductor market continues or if the market enters into another downturn in the future. Any decrease in revenues from sales of our wafer probe cards could harm our business more than it would if we offered a more diversified line of products.

***If demand for our products in the memory device and microprocessor markets declines or fails to grow as we anticipate, our revenues could decline.***

We derive substantially all of our revenues from wafer probe cards that we sell to manufacturers of memory devices and microprocessors. For fiscal 2002, sales to manufacturers of DRAM devices accounted for 69.6% of our revenues, sales to manufacturers of microprocessors accounted for 17.4% of our revenues, and sales to manufacturers of flash memory devices accounted for 11.7% of our revenues. Therefore, our success depends in part upon the continued acceptance of our products within these markets and our ability to continue to develop and introduce new products on a timely basis for these markets. For example, the market might not accept an increasingly high parallelism wafer test solution.

A substantial portion of these semiconductor devices is sold to manufacturers of personal computers and computer-related products. The personal computer market has historically been characterized by significant fluctuations in demand and continuous efforts to reduce costs, which in turn have affected the demand for and price of DRAM devices and microprocessors. The personal computer market might not grow in the future at historical rates or at all and design activity in the personal computer market might decrease, which could negatively affect our revenues and operating results.

***The markets in which we participate are intensely competitive, and if we do not compete effectively, our operating results could be harmed.***

The wafer probe card market is highly competitive. With the introduction of new technologies and market entrants, we expect competition to intensify in the future. In the past, increased competition has resulted in price reductions, reduced gross margins or loss of market share, and could do so in the future. Competitors might introduce new competitive products for the same markets that our products currently serve. These products may have better performance, lower prices and broader acceptance than our products. In addition, for products such as wafer probe cards, semiconductor manufacturers typically qualify more than one source, to avoid dependence on a single source of supply. As a result, our customers will likely purchase products from our competitors. Current and potential competitors include Cascade Microtech, Inc., ESJ Corporation, Feinmetall GmbH, Japan Electronic Materials Corporation, Kulicke and Soffa Industries, Inc., Micronics Japan Co., Ltd., MicroProbe, Inc., NanoNexus Inc., Phicom Corporation, Tokyo Cathode Laboratory Co., Ltd. and Wentworth Laboratories, Inc.,

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among others. Many of our current and potential competitors have greater name recognition, larger customer bases, more established customer relationships or greater financial, technical, manufacturing, marketing and other resources than we do. As a result, they might be able to respond more quickly to new or emerging technologies and changes in customer requirements, devote greater resources to the development, promotion, sale and support of their products, and reduce prices to increase market share. Some of our competitors also supply other types of test equipment, or offer both advanced wafer probe cards and needle probe cards. Those competitors that offer both advanced wafer probe cards and needle probe cards might have strong, existing relationships with our customers or with potential customers. Because we do not offer a needle probe card or other conventional technology wafer probe card for less advanced applications, it may be difficult for us to introduce our advanced wafer probe cards to these customers and potential customers for certain wafer test applications. It is possible that existing or new competitors, including test equipment manufacturers, may offer new technologies that reduce the value of our wafer probe cards. The wafer probe card market has historically been fragmented with many local suppliers serving individual customers. However, recent consolidation has reduced the number of competitors. For example, in late 2000, Kulicke and Soffa Industries, Inc. acquired Probe Technology Corporation and Cerprobe Corporation. These and other combinations might result in a competitor gaining a significant advantage over us by enabling it to expand its product offerings and service capabilities to meet a broader range of customer needs.

***We derive a substantial portion of our revenues from a small number of customers, and our revenues could decline significantly if any major customer cancels, reduces or delays a purchase of our products.***

A relatively small number of customers has accounted for a significant portion of our revenues in any particular period. In the three months ended March 29, 2003, four customers accounted for 73.7% of our revenues. In fiscal 2002, four customers accounted for 77.2% of our revenues. Our ten largest customers accounted for 98.9% of our revenues in the three months ended March 29, 2003, 97.4% of our revenues in fiscal 2002, and 97.8% in fiscal 2001. We anticipate that sales of our products to a relatively small number of customers will continue to account for a significant portion of our revenues. The cancellation or deferral of even a small number of purchases of our products could cause our revenues to decline in any particular quarter. A number of factors could cause customers to cancel or defer orders, including manufacturing delays, interruptions to our customers' operations due to fire, natural disasters or other events or a downturn in the semiconductor industry. Our agreements with our customers do not contain minimum purchase commitments, and our customers could cease purchasing our products with short or no notice to us or fail to pay all or part of an invoice. In some situations, our customers might be able to cancel orders without a significant penalty. In addition, the continuing trend toward consolidation in the semiconductor industry, particularly among manufacturers of DRAMs, could reduce our customer base and lead to lost or delayed sales and reduced demand for our wafer probe cards. Industry consolidation also could result in pricing pressures as larger DRAM manufacturers could have sufficient bargaining power to demand reduced prices and favorable nonstandard terms. Additionally, certain customers may not want to rely entirely or substantially on a single wafer probe card supplier and, as a result, such customers could reduce their purchases of our wafer probe cards.

***If our relationships with our customers and companies that manufacture semiconductor test equipment deteriorate, our product development activities could be harmed.***

The success of our product development efforts depends upon our ability to anticipate market trends and to collaborate closely with our customers and with companies that manufacture semiconductor test equipment. Our relationships with these customers and companies provide us with access to valuable information regarding manufacturing and process technology trends in the semiconductor industry, which enables us to better plan our product development activities. These relationships also provide us with opportunities to understand the performance and functionality requirements of our customers, which improve our ability to customize our products to fulfill their needs. Our relationships with test equipment companies are important to us because test equipment companies can design our wafer probe cards into their equipment and provide us with the insight into

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their product plans that allows us to offer wafer probe cards for use with their products when they are introduced to the market. Our relationships with our customers and test equipment companies could deteriorate if they:

- become concerned about our ability to protect their intellectual property;
- develop their own solutions to address the need for testing improvement;
- regard us as a competitor;
- establish relationships with others in our industry; or
- attempt to restrict our ability to enter into relationships with their competitors.

Many of our customers and the test equipment companies we work with are large companies. The consequences of deterioration in our relationship with any of these companies could be exacerbated due to the significant influence these companies can exert in our markets. If our current relationships with our customers and test equipment companies deteriorate, or if we are unable to develop similar collaborative relationships with important customers and test equipment companies in the future, our long-term ability to produce commercially successful products could be impaired.

***Because we generally do not have a sufficient backlog of unfilled orders to meet our quarterly revenue targets, revenues in any quarter are substantially dependent upon customer orders received and fulfilled in that quarter.***

Our revenues are difficult to forecast because we generally do not have a sufficient backlog of unfilled orders to meet our quarterly revenue targets at the beginning of a quarter. Rather, a majority of our revenues in any quarter depends upon customer orders for our wafer probe cards that we receive and fulfill in that quarter. Because our expense levels are based in part on our expectations as to future revenues and to a large extent are fixed in the short term, we might be unable to adjust spending in time to compensate for any unexpected shortfall in revenues. Accordingly, any significant shortfall of revenues in relation to our expectations could hurt our operating results.

***We rely upon a distributor for a substantial portion of our revenues, and a disruption in our relationship with our distributor could have a negative impact on our revenues.***

We rely on Spirox Corporation, our distributor in Taiwan, Singapore and China, for a substantial portion of our revenues. Sales to Spirox accounted for 20.9% of our revenues in fiscal 2002 and 10.0% of our revenues in the three months ended March 29, 2003. Spirox also provides customer support. A reduction in the sales or service efforts or financial viability of our distributor, or deterioration in, or termination of, our relationship with our distributor could harm our revenues, our operating results and our ability to support our customers in the distributor's territory. In addition, establishing alternative sales channels in the region could consume substantial time and resources, decrease our revenues and increase our expenses.

***If we do not continue to execute on our transition from indirect to direct sales in Japan, we could lose customers.***

Until March 31, 2002, we relied upon a distributor to sell our products in Japan. For the three months ended March 29, 2003, we did not have any sales through the distributor in Japan, and in fiscal 2002, our sales to our distributor in Japan were 1.7% of our revenues. We intend to rely upon our direct sales force and believe we have successfully transitioned to the direct sales model. However, if we do not continue to execute effectively on the direct sales model, we could lose customers and fail to obtain new customers in Japan. Any difficulties as a result of this transition could hurt our reputation and sales in Japan, which is an important market for us.

***If our relationships with our independent sales representatives change, our business could be harmed.***

We currently rely on independent sales representatives to assist us in the sale of our products in various geographic regions. If we make the business decision to terminate or modify our relationships with one or more of our independent sales representatives, or if an independent sales representative decides to disengage from us,

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and we do not effectively and efficiently manage such a change, we could lose sales to existing customers and fail to obtain new customers.

***If semiconductor manufacturers do not migrate elements of final test to wafer probe test, market acceptance of other applications of our technology could be delayed.***

We intend to work with our customers to migrate elements of final test from the device level to the wafer level. This migration will involve a change in semiconductor test strategies from concentrating final test at the individual device level to increasing the amount of test at the wafer level. Semiconductor manufacturers typically take time to qualify new strategies that affect their testing operations. As a result, general acceptance of wafer-level final test might not occur in the near term or at all. In addition, semiconductor manufacturers might not accept and use wafer-level final test in a way that uses our technology. If the migration of elements of final test to wafer probe test does not grow as we anticipate, or if semiconductor manufacturers do not adopt our technology for their wafer probe test requirements, market acceptance of other applications for our technology could be delayed.

***Changes in test strategies, equipment and processes could cause us to lose revenues.***

The demand for wafer probe cards depends in large part upon the number of semiconductor designs and the overall semiconductor unit volume. The time it takes to test a wafer depends upon the number of devices being tested, the complexity of these devices, the test software program and the test equipment itself. As test programs become increasingly effective and test throughput increases, the number of wafer probe cards required to test a given volume of devices declines. Therefore, advances in the test process could cause us to lose sales.

If semiconductor manufacturers implement chip designs that include built-in self-test capabilities, or similar functions or methodologies that increase test throughput, it could negatively impact our sales or the migration of elements of final test to the wafer level. Additionally, if new chip designs or types of chips are implemented that require less, or even no, test using wafer probe cards, our revenues could be impacted. Further, if new chip designs are implemented which we are unable to test, or which we are unable to test efficiently and provide our customers with an acceptably low overall cost of test, our revenues could be negatively impacted.

We incur significant research and development expenses in conjunction with the introduction of new product platforms. Often, we time our product introductions to the introduction of new test equipment platforms. Because our customers require both test equipment and wafer probe cards, any delay or disruption of the introduction of new test equipment platforms would negatively affect our growth.

***We manufacture all of our products at a single facility, and any disruption in the operations of that facility could adversely impact our business and operating results.***

Our processes for manufacturing our wafer probe cards require sophisticated and costly equipment and a specially designed facility, including a semiconductor clean room. We manufacture all of our wafer probe cards at one facility located in Livermore, California. Any disruption in the operation of that facility, whether due to technical or labor difficulties, destruction or damage from fire or earthquake, infrastructure failures such as power or water shortage or any other reason, could interrupt our manufacturing operations, impair critical systems, disrupt communications with our customers and suppliers and cause us to write off inventory and to lose sales. In addition, if the energy crises in California that resulted in disruptions in power supply and increases in utility costs were to recur, we might experience power interruptions and shortages, which could disrupt our manufacturing operations. This could subject us to loss of revenues as well as significantly higher costs of energy. Further, current and potential customers might not purchase our products if they perceive our lack of an alternate manufacturing facility to be a risk to their continuing source of supply.

***The transition to our new manufacturing facilities could cause a decline in our operating results.***

We plan to move our manufacturing operations into a new facility in Livermore in 2004. The costs of starting up our new manufacturing facility, including capital costs such as equipment and fixed costs such as rent, will be substantial. We might not be able to shift from our current production facility to the new production

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facility efficiently or effectively. The transition will require us to have both our existing and new manufacturing facilities operational for several quarters. This will cause us to incur significant costs due to redundancy of infrastructure at both sites. Furthermore, the qualification of the new manufacturing facility will require us to use materials and build product and product components that will not be sold to our customers, causing higher than normal material spending. The transition might also lead to manufacturing interruptions, which could mean delayed deliveries or lost sales. Some or all of our customers could require a full qualification of our new facility. Any qualification process could take longer than we anticipate. Any difficulties with the transition or with bringing the new manufacturing facility to full capacity and volume production could increase our costs, disrupt our production process and cause delays in product delivery and lost sales.

***If we are unable to manufacture our products efficiently, our operating results could suffer.***

We must continuously modify our manufacturing processes in an effort to improve yields and product performance, lower our costs and reduce the time it takes us to design and produce our products. We will incur significant start-up costs associated with implementing new manufacturing technologies, methods and processes and purchasing new equipment, which could negatively impact our gross margin. We could experience manufacturing delays and inefficiencies as we refine new manufacturing technologies, methods and processes, implement them in volume production and qualify them with customers, which could cause our operating results to decline. The risk of encountering delays or difficulties increases as we manufacture more complex products. In addition, if demand for our products increases, we will need to expand our operations to manufacture sufficient quantities of products without increasing our production times or our unit costs. As a result of such expansion, we could be required to purchase new equipment, upgrade existing equipment, develop and implement new manufacturing processes and hire additional technical personnel. Further, new or expanded manufacturing facilities could be subject to qualification by our customers. In the past, we have experienced difficulties in expanding our operations to manufacture our products in volume on time and at acceptable cost. Any difficulties in expanding our manufacturing operations could cause product delivery delays and lost sales. If demand for our products decreases, we could have excess manufacturing capacity. The fixed costs associated with excess manufacturing capacity could cause our operating results to decline. If we are unable to achieve further manufacturing efficiencies and cost reductions, particularly if we are experiencing pricing pressures in the marketplace, our operating results could suffer.

***If we are unable to continue to reduce the time it takes for us to design and produce a wafer probe card, our growth could be impeded.***

Our customers continuously seek to reduce the time it takes them to introduce new products to market. The cyclicity of the semiconductor industry, coupled with changing demands for semiconductor devices, requires our customers to be flexible and highly adaptable to changes in the volume and mix of products they must produce. Each of those changes requires a new design and each new design requires a new wafer probe card. For some existing semiconductor devices, the manufacturers' volume and mix of product requirements are such that we are unable to design, manufacture and ship products to meet such manufacturers' relatively short cycle time requirements. If we are unable to reduce the time it takes for us to design, manufacture and ship our products in response to the needs of our customers, our competitive position could be harmed. If we are unable to meet a customer's schedule for wafer probe cards for a particular design, our customer might purchase wafer probe cards from a competitor and we might lose sales.

***We obtain some of the components and materials we use in our products from a single or sole source or a limited group of suppliers, and the partial or complete loss of one of these suppliers could cause production delays and a substantial loss of revenues.***

We obtain some of the components and materials used in our products, such as printed circuit board assemblies, plating materials and ceramic substrates, from a single or sole source or a limited group of suppliers. Alternative sources are not currently available for sole source components and materials. Because we rely on purchase orders rather than long-term contracts with the majority of our suppliers, we cannot predict with

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certainty our ability to obtain components and materials in the longer term. A sole or limited source supplier could increase prices, which could lead to a decline in our gross margin. Our dependence upon sole or limited source suppliers exposes us to several other risks, including a potential inability to obtain an adequate supply of materials, late deliveries and poor component quality. Disruption or termination of the supply of components or materials could delay shipments of our products, damage our customer relationships and reduce our revenues. For example, if we were unable to obtain an adequate supply of a component or material, we might have to use a substitute component or material, which could require us to make changes in our manufacturing process. From time to time in the past, we have experienced difficulties in receiving shipments from one or more of our suppliers, especially during periods of high demand for our products. If we cannot obtain an adequate supply of the components and materials we require, or do not receive them in a timely manner, we might be required to identify new suppliers. We might not be able to identify new suppliers on a timely basis or at all. Our customers and we would also need to qualify any new suppliers. The lead-time required to identify and qualify new suppliers could affect our ability to timely ship our products and cause our operating results to suffer. Further, a sole or limited source supplier could require us to enter into non-cancelable purchase commitments or pay in advance to ensure our source of supply. In an industry downturn, commitments of this type could result in charges for excess inventory of parts. If we are unable to predict our component and materials needs accurately, or if our supply is disrupted, we might miss market opportunities by not being able to meet the demand for our products.

***Wafer probe cards that do not meet specifications or that contain defects could damage our reputation, decrease market acceptance of our technology, cause us to lose customers and revenues, and result in liability to us.***

The complexity and ongoing development of our wafer probe card manufacturing process, combined with increases in wafer probe card production volumes, have in the past and could in the future lead to design or manufacturing problems. For example, the presence of contaminants in our plating baths has caused a decrease in our manufacturing yields or has resulted in unanticipated stress-related failures when our wafer probe cards are being used in the manufacturing test environment. Manufacturing design errors such as the miswiring of a wafer probe card or the incorrect placement of probe contact elements have caused us to repeat manufacturing design steps. In addition to these examples, problems might result from a number of factors, including design defects, materials failures, contamination in the manufacturing environment, impurities in the materials used, unknown sensitivities to process conditions, such as temperature and humidity, and equipment failures. As a result, our products have in the past contained and might in the future contain undetected errors or defects. Any errors or defects could:

- cause lower than anticipated yields and lengthening of delivery schedules;
- cause delays in product shipments;
- cause delays in new product introductions;
- cause us to incur warranty expenses;
- result in increased costs and diversion of development resources;
- cause us to incur increased charges due to unusable inventory;
- require design modifications; or
- decrease market acceptance or customer satisfaction with these products.

The occurrence of any one or more of these events could hurt our operating results.

In addition, if any of our products fails to meet specifications or has reliability, quality or compatibility problems, our reputation could be damaged significantly and customers might be reluctant to buy our products, which could result in a decline in revenues, an increase in product returns or warranty costs and the loss of existing customers or the failure to attract new customers. Our customers use our products with test equipment and software in their manufacturing facilities. Our products must be compatible with the customers' equipment and software to form an integrated system. If the system does not function properly, we could be required to provide field application engineers to locate the problem, which can take time and resources. If the problem

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relates to our wafer probe cards, we might have to invest significant capital, manufacturing capacity and other resources to correct it. Our current or potential customers also might seek to recover from us any losses resulting from defects or failures in our products. Liability claims could require us to spend significant time and money in litigation or to pay significant damages.

***If we fail to forecast demand for our products accurately, we could incur inventory losses.***

Each semiconductor chip design requires a custom wafer probe card. Because our products are design-specific, demand for our products is difficult to forecast. Due to our customers' short delivery time requirements, we often design, and at times produce, our products in anticipation of demand for our products rather than in response to an order. Due to the uncertainty inherent in forecasts, we are and expect to continue to be subject to inventory risk. If we do not obtain orders as we anticipate, we could have excess inventory for a specific customer design that we would not be able to sell to any other customer, which would likely result in inventory write-offs.

***If we fail to effectively manage our regional service centers, our business might be harmed.***

In 2002, we opened a regional repair and service center in Seoul, South Korea, and in 2003, we opened a regional repair and service center in Dresden, Germany. These regional service centers are part of our strategy to, among other things, provide our customers with more efficient service and repair of our wafer probe cards. If we are unable to effectively manage our regional service centers, or if the work undertaken in the regional service centers is not equivalent to the level and quality provided by repairs and services performed by our North American repair and service operations, which are part of our manufacturing facility in Livermore, California, we could incur higher wafer probe card repair and service costs, which could harm our operating results.

***If we do not effectively manage changes in our business, these changes could place a significant strain on our management and operations and, as a result, our business might not succeed.***

Our ability to grow successfully requires an effective planning and management process. We plan to increase the scope of our operations and the size of our direct sales force domestically and internationally. For example, we have leased a new facility in Livermore, California and plan to move our corporate headquarters and manufacturing operations into this facility in 2004. Our growth could place a significant strain on our management systems, infrastructure and other resources. To manage our growth effectively, we must invest the necessary capital and continue to improve and expand our systems and infrastructure in a timely and efficient manner. Those resources might not be available when we need them, which would limit our growth. Our officers have limited experience in managing large or rapidly growing businesses. In addition, the majority of our management has no experience in managing a public company or communicating with securities analysts and public company investors. Our controls, systems and procedures might not be adequate to support a growing public company. If our management fails to respond effectively to changes in our business, our business might not succeed.

***If we fail to attract and retain qualified personnel, our business might be harmed.***

Our future success depends largely upon the continued service of our key management, technical, and sales and marketing personnel, and on our continued ability to hire, integrate and retain qualified individuals, particularly engineers and sales and marketing personnel in order to increase market awareness of our products and to increase revenues. For example, in the future, we might need technical personnel experienced in competencies that we do not currently have or require. Competition for these employees may be intense, and we might not be successful in attracting or retaining these personnel. The loss of any key employee, the failure of any key employee to perform in his or her current position or our inability to attract and retain skilled employees as needed could impair our ability to meet customer and technological demands. All of our key personnel in the United States are employees at-will. We have no employment contracts with any of our personnel in the United States.

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***We may make acquisitions, which could put a strain on our resources, cause ownership dilution to our stockholders and adversely affect our financial results.***

While we have made no acquisitions of businesses, products or technologies in the past, we may make acquisitions of complementary businesses, products or technologies in the future. Integrating newly acquired businesses, products or technologies into our company could put a strain on our resources, could be expensive and time consuming, and might not be successful. Future acquisitions could divert our management's attention from other business concerns and expose our business to unforeseen liabilities or risks associated with entering new markets. In addition, we might lose key employees while integrating new organizations. Consequently, we might not be successful in integrating any acquired businesses, products or technologies, and might not achieve anticipated revenues and cost benefits. In addition, future acquisitions could result in customer dissatisfaction, performance problems with an acquired company, potentially dilutive issuances of equity securities or the incurrence of debt, contingent liabilities, possible impairment charges related to goodwill or other intangible assets or other unanticipated events or circumstances, any of which could harm our business.

***As part of our sales process, we could incur substantial sales and engineering expenses that do not result in revenues, which would harm our operating results.***

Our customers generally expend significant efforts evaluating and qualifying our products prior to placing an order. The time that our customers require to evaluate and qualify our wafer probe cards is typically between three and 12 months and sometimes longer. While our customers are evaluating our products, we might incur substantial sales, marketing, and research and development expenses. For example, we typically expend significant resources educating our prospective customers regarding the uses and benefits of our wafer probe cards and developing wafer probe cards customized to the potential customer's needs, for which we might not be reimbursed. Although we commit substantial resources to our sales efforts, we might never receive any revenues from a customer. For example, many semiconductor designs never reach production, including designs for which we have expended design effort and expense. In addition, prospective customers might decide not to use our wafer probe cards. The length of time that it takes for the evaluation process and for us to make a sale depends upon many factors including:

- the efforts of our sales force and our distributor and independent sales representatives;
- the complexity of the customer's fabrication processes;
- the internal technical capabilities of the customer; and
- the customer's budgetary constraints and, in particular, the customer's ability to devote resources to the evaluation process.

In addition, product purchases are frequently subject to delays, particularly with respect to large customers for which our products may represent a small percentage of their overall purchases. As a result, our sales cycles are unpredictable. If we incur substantial sales and engineering expenses without generating revenues, our operating results could be harmed.

***From time to time, we might be subject to claims of infringement of other parties' proprietary rights, or to claims that our intellectual property rights are invalid or unenforceable, which could result in significant expense and loss of intellectual property rights.***

In the future, we might receive claims that we are infringing intellectual property rights of others, or claims that our patents or other intellectual property rights are invalid or unenforceable. We have received in the past, and may receive in the future, communications from third parties inquiring about our interest in licensing certain of their intellectual property or more generally identifying intellectual property that may be of interest to us. For example, we received such a communication from Microelectronics and Computer Technology Corporation in October 2001, with a follow-up letter in January 2002, inquiring about our interest in acquiring a license to certain of their patents and technology, and from IBM Corporation in February 2002 inquiring about our interest in acquiring a license to IBM patents and technology related to high density integrated probes. In August 2002, subsequent to our initiating correspondence with Japan Electronic Materials Corporation regarding the scope of

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our intellectual property rights and the potential applicability of those rights to certain of its wafer probe cards, Japan Electronic Materials Corporation offered that precedent technologies exist as to one of our foreign patents that we had identified, and also referenced a U.S. patent in which it stated we might take an interest. For the inquiries we have received to date, we do not believe we infringe any of the identified patents and technology. The semiconductor industry is characterized by uncertain and conflicting intellectual property claims and vigorous protection and pursuit of these rights. The resolution of any claims of this nature, with or without merit, could be time consuming, result in costly litigation or cause product shipment delays. In the event of an adverse ruling, we might be required to pay substantial damages, cease the use or sale of infringing products, spend significant resources to develop non-infringing technology, discontinue the use of certain technology or enter into license agreements. License agreements, if required, might not be available on terms acceptable to us or at all. The loss of access to any of our intellectual property or the ability to use any of our technology could harm our business.

***If we fail to protect our proprietary rights, our competitors might gain access to our technology, which could adversely affect our ability to compete successfully in our markets and harm our operating results.***

If we fail to protect our proprietary rights adequately, our competitors might gain access to our technology. Unauthorized parties might attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Others might independently develop similar or competing technologies or methods or design around our patents. In addition, the laws of many foreign countries in which we or our customers do business do not protect our intellectual property rights to the same extent as the laws of the United States. As a result, our competitors might offer similar products and we might not be able to compete successfully. We also cannot assure that:

- our means of protecting our proprietary rights will be adequate;
- patents will be issued from our currently pending or future applications;
- our existing patents or any new patents will be sufficient in scope or strength to provide any meaningful protection or commercial advantage to us;
- any patent, trademark or other intellectual property right that we own will not be invalidated, circumvented or challenged in the United States or foreign countries; or
- others will not misappropriate our proprietary technologies or independently develop similar technology, duplicate our products or design around any patent or other intellectual property rights that we own.

We might be required to spend significant resources to monitor and protect our intellectual property rights. We may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Any litigation, whether or not it is resolved in our favor, could result in significant expense to us and divert the efforts of our technical and management personnel. In addition, many of our customer contracts contain provisions that require us to indemnify our customers for third party intellectual property infringement claims, which would increase the cost to us of an adverse ruling in such a claim. An adverse determination could also prevent us from licensing our technologies and methods to others.

***Our failure to comply with environmental laws and regulations could subject us to significant fines and liabilities, and new laws and regulations or changes in regulatory interpretation or enforcement could make compliance more difficult and costly.***

We are subject to various and frequently changing U.S. federal, state and local, and foreign governmental laws and regulations relating to the protection of the environment, including those governing the discharge of pollutants into the air and water, the management and disposal of hazardous substances and wastes, the cleanup of contaminated sites and the maintenance of a safe workplace. We could incur substantial costs, including cleanup costs, civil or criminal fines or sanctions and third-party claims for property damage or personal injury, as a result of violations of or liabilities under environmental laws and regulations or non-compliance with the environmental permits required at our facilities.

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These laws, regulations and permits also could require the installation of costly pollution control equipment or operational changes to limit pollution emissions or decrease the likelihood of accidental releases of hazardous substances. In addition, new laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination at our or others' sites or the imposition of new cleanup requirements could require us to curtail our operations, restrict our future expansion, subject us to liability and cause us to incur future costs that would have a negative effect on our operating results and cash flow.

***Because we conduct some of our business internationally, we are subject to operational, economic, financial and political risks abroad.***

Sales of our products to customers outside the United States have accounted for an important part of our revenues. Our international sales as a percentage of our revenues were 47.6% for the three months ended March 29, 2003 and 44.4% for fiscal 2002. In the future, we expect international sales, particularly into Europe, Japan, South Korea and Taiwan, to continue to account for a significant percentage of our revenues. Accordingly, we will be subject to risks and challenges that we would not otherwise face if we conducted our business only in the United States. These risks and challenges include:

- compliance with a wide variety of foreign laws and regulations;
- legal uncertainties regarding taxes, tariffs, quotas, export controls, export licenses and other trade barriers;
- political and economic instability in, or foreign conflicts that involve or affect, the countries of our customers;
- difficulties in collecting accounts receivable and longer accounts receivable payment cycles;
- difficulties in staffing and managing personnel, distributors and representatives;
- reduced protection for intellectual property rights in some countries;
- currency exchange rate fluctuations, which could affect the value of our assets denominated in local currency, as well as the price of our products relative to locally produced products;
- seasonal fluctuations in purchasing patterns in other countries; and
- fluctuations in freight rates and transportation disruptions.

Any of these factors could harm our existing international operations and business or impair our ability to continue expanding into international markets.

***The recent outbreak of SARS in the Asia-Pacific region and its continued spread could harm sales of our products.***

The recent outbreak of severe acute respiratory syndrome, or SARS, that began in China, Hong Kong, Singapore and Vietnam may have a negative impact on our business, although we do not have any employees located in any of those countries. Our business may be impacted by a number of SARS-related factors, including, but not limited to, disruptions in the operations of our customers and their partners, reduced sales in certain end-markets, such as DRAM devices, and increased costs to conduct our business abroad. If the number of cases of SARS continues to rise or spread to other areas, including the United States, our sales could potentially be harmed.

***We might require additional capital to support business growth, and such capital might not be available.***

We intend to continue to make investments to support business growth and may require additional funds to respond to business challenges, which include the need to develop new products or enhance existing products, enhance our operating infrastructure and acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financing to secure additional funds. Equity and debt financing, however, might not be available when needed or, if available, might not be available on terms satisfactory to us. If we are

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unable to obtain adequate financing or financing on terms satisfactory to us, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

***Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.***

We prepare our financial statements in conformity with accounting principles generally accepted in the United States. These accounting principles are subject to interpretation by the Financial Accounting Standards Board, the American Institute of Certified Public Accountants, the Securities and Exchange Commission and various bodies formed to interpret and create appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of a change.

***Recently enacted and proposed changes in securities laws and regulations are likely to increase our costs.***

The Sarbanes-Oxley Act of 2002 that became law in July 2002, as well as new rules subsequently implemented by the Securities and Exchange Commission, have required changes in some of our corporate governance practices. The Act also requires the Securities and Exchange Commission to promulgate additional new rules on a variety of subjects. In addition to final rules and rule proposals already made by the Securities and Exchange Commission, Nasdaq has proposed revisions to its requirements for companies that are Nasdaq-listed, as we propose to be. We expect these new rules and regulations to increase our legal and financial compliance costs, and to make some activities more difficult, time consuming and/or costly. We also expect these new rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These new rules and regulations could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee, and qualified executive officers.

### **Risks Related to this Offering**

***The trading price of our common stock is likely to be volatile, and you might not be able to sell your shares at or above the initial public offering price.***

The trading prices of the securities of technology companies have been highly volatile. Accordingly, the trading price of our common stock is likely to be subject to wide fluctuations. Further, our securities have no prior trading history. Factors affecting the trading price of our common stock include:

- variations in our operating results;
- announcements of technological innovations, new products or product enhancements, strategic alliances or significant agreements by us or by our competitors;
- recruitment or departure of key personnel;
- the gain or loss of significant orders or customers;
- changes in the estimates of our operating results or changes in recommendations by any securities analysts that elect to follow our common stock; and
- market conditions in our industry, the industries of our customers and the economy as a whole.

In addition, if the market for technology stocks or the stock market in general experiences continued or greater loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, operating results or financial condition. The trading price of our common stock also might decline in reaction to events that affect other companies in our industry even if these events do not directly affect us.

***If securities analysts do not publish research or reports about our business, our stock price could decline.***

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business. We do not control these analysts. If one or more of the

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analysts who cover us downgrade our stock, our stock price would likely decline rapidly. If one or more of these analysts cease coverage of our company, we could lose visibility in the market, which in turn could cause our stock price to decline.

***The concentration of our capital stock ownership with insiders upon the completion of this offering will likely limit your ability to influence corporate matters.***

We anticipate that our executive officers, directors, current 5% or greater stockholders and entities affiliated with any of them will together beneficially own approximately % of our common stock outstanding after this offering. As a result, these stockholders, acting together, will have significant influence over all matters that require approval by our stockholders, including the election of directors and approval of significant corporate transactions. As a result, corporate actions might be taken even if other stockholders, including those who purchase shares in this offering, oppose them. This concentration of ownership might also have the effect of delaying or preventing a change of control of our company that other stockholders may view as beneficial.

***Our management will have broad discretion over the use of the proceeds to us from this offering and might not apply the proceeds of this offering in ways that increase the value of your investment.***

Our management will have broad discretion to use the net proceeds to us from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. We intend to use a portion of the net proceeds to us from this offering for leasehold improvements at our new corporate headquarters and manufacturing facility. Although we expect our management to use the remaining net proceeds from this offering for general corporate purposes, including working capital and for potential strategic investments or acquisitions, we have not allocated these net proceeds for specific purposes. Our management might not be able to yield a significant return, if any, on any investment of these net proceeds.

***Future sales of shares by existing stockholders could cause our stock price to decline.***

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the 180-day contractual lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline below the initial public offering price. For example, if at the end of the 180-day lock-up period, existing stockholders sell substantial amounts of our common stock, the trading price of our common stock could decline significantly. Based on shares outstanding as of March 29, 2003, upon completion of this offering, we will have outstanding approximately shares of common stock, assuming no exercise of the underwriters' over-allotment option. Of these shares, only shares of common stock sold in this offering will be freely tradable, without restriction, in the public market, except that the shares of common stock sold in this offering that are purchased through the directed share program, which is available only to employees, will also be subject to the 180-day lock-up period. Further, any shares of common stock purchased by any of our employees who are deemed to be our affiliates through the directed share program, in addition to being subject to the 180-day lock-up agreement, will also be tradable only under the provisions of Rule 144 under the Securities Act. Morgan Stanley & Co. Incorporated may, in its sole discretion, permit our officers, directors, employees and current stockholders to sell shares prior to the expiration of the lock-up agreements.

After the lock-up agreements pertaining to this offering expire 180 days from the date of this prospectus, an additional shares will be eligible for sale in the public market. of these shares are held by directors, executive officers and other affiliates and will be subject to volume limitations under Rule 144 of the Securities Act and various vesting agreements. In addition, the shares subject to outstanding warrants and the shares subject to outstanding options and reserved for future issuance under our stock option and purchase plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements, the lock-up agreements and Rules 144 and 701 under the Securities Act. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline. See "Shares Eligible for Future Sale" for more information regarding shares of our common stock that existing stockholders may sell after this offering.

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***If you purchase shares of our common stock through our directed share program, the trading price of our common stock could decline significantly before you may sell those shares.***

If employees purchase shares of our common stock through the directed share program, they will be prohibited from selling those shares until 180 days following the date of this prospectus. It is possible that the trading price of our common stock could decline significantly between the date our employees purchase shares through the directed share program and the date that they can sell them. As a result, upon the expiration of the 180-day lock-up period, these employees might not be able to sell their shares at or above the initial public offering price. Accordingly, our employees who participate in the directed share program could lose a substantial portion of their investment.

***You will experience immediate and substantial dilution in the net tangible book value of the shares you purchase in this offering.***

The initial public offering price of our common stock will be substantially higher than the book value per share of the outstanding common stock after this offering. Therefore, based on an assumed initial public offering price of \$        per share, if you purchase our common stock in this offering, you will suffer immediate and substantial dilution of approximately \$        per share. If the underwriters exercise their over-allotment option, or if outstanding options and warrants to purchase our common stock are exercised, you will experience additional dilution.

***Provisions of our certificate of incorporation and bylaws or Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.***

Delaware corporate law and our certificate of incorporation and bylaws contain provisions that could discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- establish a classified board of directors so that not all members of our board are elected at one time;
- provide that directors may only be removed “for cause” and only with the approval of 66 2/3% of our stockholders;
- require super-majority voting to amend some provisions in our certificate of incorporation and bylaws;
- authorize the issuance of “blank check” preferred stock that our board could issue to increase the number of outstanding shares and to discourage a takeover attempt;
- limit the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the board of directors is expressly authorized to make, alter or repeal our bylaws; and
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at stockholder meetings.

In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

We have made statements under the captions “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” and in other sections of this prospectus that are forward-looking statements. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “could,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential” or “continue,” the negative or plural of these words and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, include, among other things, our anticipated growth strategies and anticipated trends in our business and the markets in which we operate. These statements are only predictions based on our current expectations and projections about future events. Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Because these forward-looking statements involve risks and uncertainties, there are important factors that could cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by the forward-looking statements, including those factors discussed under the caption entitled “Risk Factors.” You should specifically consider the numerous risks outlined under “Risk Factors.”

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement on Form S-1, of which this prospectus is a part, that we have filed with the Securities and Exchange Commission, completely and with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

## USE OF PROCEEDS

We estimate that the net proceeds we will receive from this offering will be approximately \$            million, at an assumed initial public offering price of \$            per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses. If the underwriters exercise their over-allotment option in full, we estimate that our net proceeds will be approximately \$            million. The selling stockholders will receive aggregate net proceeds of approximately \$            million. The selling stockholders intend to use the entire net proceeds to them from the sale of shares of common stock to repay the outstanding principal of and unpaid accrued interest on loans from us and to pay the related tax liability. As a result, we will receive approximately \$            million of the aggregate net proceeds from the sale of common stock by the selling stockholders.

The principal purposes of this offering are to obtain additional capital, establish a public market for our common stock and facilitate our future access to public capital markets. We intend to use the net proceeds to us from this offering for general corporate purposes and working capital requirements. We may use a portion of the net proceeds to us for leasehold improvements at our new corporate headquarters and manufacturing facility, which improvements we expect will total approximately \$25.0 million through the third quarter of 2004. We may also use a portion of the net proceeds to us to fund possible investments in, or acquisitions of, complementary businesses, products or technologies or establishing joint ventures. We have no current agreements or commitments with respect to any investment, acquisition or joint venture, and we currently are not engaged in negotiations with respect to any investment, acquisition or joint venture. Pending their ultimate use, we intend to invest the net proceeds to us from this offering in short-term, interest-bearing, investment grade securities.

The amount and timing of what we actually spend for these purposes may vary significantly and will depend on a number of factors, including our future revenue and cash generated by operations and the other factors described in "Risk Factors." Therefore, we will have broad discretion in the way we use the net proceeds to us.

## DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently expect to retain all available funds and any future earnings for use in the operation and development of our business. Accordingly, we do not anticipate declaring or paying cash dividends on our common stock in the foreseeable future. In addition, the terms of our loan and security agreement prohibit us from paying cash dividends without the prior consent of the bank.

**CAPITALIZATION**

The following table shows our capitalization as of March 29, 2003. Our capitalization is presented (1) on an actual basis, (2) on a pro forma basis to reflect the automatic conversion of our outstanding shares of preferred stock into 23,002,626 shares of our common stock upon the closing of this offering, and (3) on a pro forma as adjusted basis to reflect the sale of \_\_\_\_\_ shares of our common stock offered by us and the selling stockholders at an assumed initial public offering price of \$ \_\_\_\_\_ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds by the selling stockholders as described in the use of proceeds.

	March 29, 2003		
	Actual	Pro Forma	Pro Forma As Adjusted
	(unaudited) (in thousands, except share and per share data)		
Long-term obligations, less current portion	\$ 500	\$ 500	\$ _____
Redeemable convertible preferred stock, \$.001 par value; 23,126,983 shares authorized, 23,002,626 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	64,895	—	_____
Redeemable convertible preferred stock warrants	306	—	_____
Stockholders' equity (deficit):			
Preferred stock \$.001 par value; 10,000,000 shares authorized, none issued or outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	_____
Common stock, \$.001 par value; 250,000,000 shares authorized, 4,705,058 shares issued and outstanding, actual; 250,000,000 shares authorized, 27,707,684 shares issued and outstanding, pro forma; and 250,000,000 shares authorized, _____ shares issued and outstanding, pro forma as adjusted	5	28	_____
Additional paid-in capital	20,193	85,371	_____
Notes receivable from stockholders	(3,437)	(3,437)	_____
Deferred stock-based compensation, net	(12,023)	(12,023)	_____
Accumulated other comprehensive loss	(10)	(10)	_____
Accumulated deficit	(8,666)	(8,666)	_____
Total stockholders' equity (deficit)	(3,938)	61,263	_____
Total capitalization	\$ 61,763	\$ 61,763	\$ _____

The number of shares of our common stock shown as issued and outstanding in the table above excludes:

- 5,675,028 shares of common stock issuable upon exercise of options outstanding at March 29, 2003 with a weighted average exercise price of \$5.65 per share;
- 118,227 shares of common stock issuable upon exercise of warrants outstanding at March 29, 2003 with a weighted average exercise price of \$5.25 per share;
- 3,237,308 shares of common stock available for issuance under our stock option plans at March 29, 2003;
- 500,000 shares of common stock to be available for issuance under our stock option plan effective upon the completion of this offering; and
- 1,500,000 shares of common stock to be available for issuance under our employee stock purchase plan effective upon the completion of this offering.

This capitalization table should be read together with "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

## DILUTION

Our pro forma net tangible book value as of March 29, 2003 was approximately \$61.3 million, or \$2.21 per share of our common stock. Our pro forma net tangible book value per share represents our total tangible assets less total liabilities divided by the number of shares of our common stock outstanding on March 29, 2003 and assumes the automatic conversion of our outstanding shares of preferred stock into 23,002,626 shares of our common stock upon the closing of this offering.

Without taking into account any changes in pro forma net tangible book value after March 29, 2003, other than to give effect to the sale of shares of our common stock offered by us at an initial public offering price of \$ \_\_\_\_\_ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value as of March 29, 2003 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of our common stock. This amount represents an immediate increase in pro forma net tangible book value of \$ \_\_\_\_\_ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing shares in this offering. The following table illustrates the dilution in pro forma net tangible book value per share to new investors.

Assumed initial public offering price per share	\$	
Pro forma net tangible book value per share as of March 29, 2003		2.21
Increase per share attributable to new investors		—
Pro forma net tangible book value per share after this offering		—
Dilution in pro forma net tangible book value per share to new investors	\$	—

If all of the outstanding options and warrants were exercised, the pro forma net tangible book value as of March 29, 2003 would have been \$ \_\_\_\_\_ million and the pro forma net tangible book value after this offering would have been \$ \_\_\_\_\_ per share, causing dilution to new investors of \$ \_\_\_\_\_.

The following table summarizes, as of March 29, 2003 on the pro forma basis described above, the number of shares of our common stock purchased from us, the total consideration paid to us, and the average price per share paid to us by existing stockholders and to be paid by new investors purchasing shares of our common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	27,707,684	%	\$72,517,433	%	\$2.62
New investors	—	—	—	—	—
<b>Total</b>	—	100.0%	\$	100.0%	—

The above information excludes:

- 5,675,028 shares of common stock issuable upon exercise of options outstanding at March 29, 2003 with a weighted average exercise price of \$5.65 per share;
- 118,227 shares of common stock issuable upon exercise of warrants outstanding at March 29, 2003 with a weighted average exercise price of \$5.25 per share;
- 3,237,308 shares of common stock available for issuance under our stock option plans at March 29, 2003;
- 500,000 shares of common stock to be available for issuance under our stock option plan effective upon the completion of this offering; and
- 1,500,000 shares of common stock to be available for issuance under our employee stock purchase plan effective upon the completion of this offering.

## SELECTED CONSOLIDATED FINANCIAL DATA

The selected consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus. The consolidated statement of operations data for the fiscal years ended December 30, 2000, December 29, 2001 and December 28, 2002, and the consolidated balance sheet data as of December 29, 2001 and December 28, 2002, are derived from our audited consolidated financial statements appearing elsewhere in this prospectus. The consolidated statement of operations data for the fiscal years ended December 26, 1998 and December 25, 1999 and the consolidated balance sheet data as of December 26, 1998, December 25, 1999 and December 30, 2000, are derived from our audited consolidated financial statements that are not included in this prospectus. The consolidated statement of operations data for the three months ended March 30, 2002 and March 29, 2003, and the consolidated balance sheet data as of March 29, 2003, are derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus. We have prepared the unaudited information on the same basis as the audited consolidated financial statements and have included, in our opinion, all adjustments, consisting only of normal and recurring adjustments, that we consider necessary for a fair presentation of the financial information set forth in those statements. The historical results are not necessarily indicative of the results to be expected in any future period.

	Fiscal Year Ended					Three Months Ended	
	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Dec. 28, 2002	Mar. 30, 2002	Mar. 29, 2003
	(in thousands, except per share data)					(unaudited)	
<b>Consolidated Statement of Operations Data:</b>							
Revenues	\$19,329	\$35,722	\$56,406	\$73,433	\$78,684	\$17,288	\$18,669
Cost of revenues	10,763	20,420	28,243	38,385	39,456	8,859	9,800
Gross margin	8,566	15,302	28,163	35,048	39,228	8,429	8,869
Operating expenses:							
Research and development	7,486	9,466	11,995	14,619	14,592	3,249	3,525
Selling, general and administrative	7,212	11,020	15,434	18,500	17,005	3,992	4,013
Stock-based compensation	—	341	259	469	1,039	165	333
Restructuring charges	—	—	—	1,380	—	—	—
Total operating expenses	14,698	20,827	27,688	34,968	32,636	7,406	7,871
Operating income (loss)	(6,132)	(5,525)	475	80	6,592	1,023	998
Interest and other income (expense), net	157	(119)	1,719	477	642	155	129
Income (loss) before income taxes	(5,975)	(5,644)	2,194	557	7,234	1,178	1,127
Benefit (provision) for income taxes	—	—	(115)	(307)	3,125	(332)	(428)
Net income (loss)	\$ (5,975)	\$ (5,644)	\$ 2,079	\$ 250	\$10,359	\$ 846	\$ 699
Net income (loss) per share:							
Basic	\$ (3.60)	\$ (2.16)	\$ .61	\$ .06	\$ 2.33	\$ .19	\$ .15
Diluted	\$ (3.60)	\$ (2.16)	\$ .08	\$ .01	\$ .35	\$ .03	\$ .02
Weighted-average number of shares used in per share calculations:							
Basic	1,659	2,609	3,408	4,029	4,448	4,391	4,539
Diluted	1,659	2,609	26,821	28,654	29,554	29,823	29,266
Pro forma net income per share (unaudited):							
Basic					\$ .38		\$ .03
Diluted					\$ .35		\$ .02
Weighted-average number of shares used in pro forma per share calculations (unaudited):							
Basic					27,447		27,542
Diluted					29,554		29,266

As of

	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Dec. 28, 2002	Mar. 29, 2003
	(in thousands)					(unaudited)
<b>Consolidated Balance Sheet Data:</b>						
Cash, cash equivalents and short-term investments	\$ 10,449	\$ 19,248	\$ 16,897	\$ 27,576	\$ 34,343	\$ 34,846
Working capital	8,032	17,694	23,391	31,074	40,536	44,649
Total assets	22,532	38,332	47,499	62,264	77,518	74,358
Long-term debt, less current portion	2,834	2,183	521	1,167	625	500
Redeemable convertible preferred stock and warrants	27,963	47,913	55,129	65,201	65,201	65,201
Deferred stock-based compensation, net	—	(184)	(184)	(4,071)	(12,294)	(12,023)
Total stockholders’ deficit	(15,889)	(21,286)	(18,586)	(17,582)	(5,037)	(3,938)

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and the related notes included elsewhere in this prospectus. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under "Risk Factors" and elsewhere in this prospectus.*

**Overview**

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. At the core of our product offering is our proprietary MicroSpring interconnect technology. Our MicroSpring interconnect technology includes a resilient contact element manufactured at our production facilities in Livermore, California. To date, we have derived our revenues primarily from the sale of wafer probe cards incorporating our MicroSpring interconnect technology.

We were formed in 1993 and in 1995 introduced our first commercial product. During 1996, we introduced the industry's first memory wafer probe card capable of testing up to 32 devices in parallel. Our revenues increased from \$1.1 million in fiscal 1995 to \$78.7 million in fiscal 2002.

We work closely with our customers to design, develop and manufacture custom wafer probe cards. Each wafer probe card is a custom product that is specific to the chip design of the customer. As a result, our revenue growth is driven by both the number of new semiconductor designs and increased semiconductor production volumes.

While the majority of our sales are directly to semiconductor manufacturers, we also have significant sales to our distributor in Taiwan. Sales to our distributors were 10.0% of revenues in the three months ended March 29, 2003, 22.6% of revenues in fiscal 2002, 32.9% of revenues in fiscal 2001 and 40.6% of revenues in fiscal 2000. We sold our products in Japan to a distributor until March 31, 2002, when we began to sell directly in Japan. Currently, we have one distributor, Spirox Corporation, which serves Taiwan, Singapore and China. We also have the ability to sell our products directly to customers in that region.

Because our products serve the highly cyclical semiconductor industry, our business is subject to demand fluctuations that have resulted in significant variations of revenues, expenses and results of operations in the periods presented. Fluctuations are likely to continue in future periods. Due to a high concentration of large customers in the semiconductor industry, we believe that sales to a limited number of customers will continue to account for a substantial part of our business. We generally have limited backlog and therefore we rely upon orders that are booked and shipped in the same quarter for a majority of our revenues.

*Fiscal Year.* Our fiscal year ends on the last Saturday in December. The fiscal year ended December 28, 2002 had 52 weeks, the fiscal year ended December 29, 2001 had 52 weeks, and the fiscal year ended December 30, 2000 had 53 weeks.

*Revenues.* We derive our revenues from product sales, license and development fees and royalties. To date, wafer probe card sales have comprised substantially all of our revenues. Wafer probe card sales accounted for 99.8% of our revenues in the three months ended March 29, 2003, 99.9% of our revenues in fiscal 2002, 99.2% of our revenues in fiscal 2001 and 97.8% of our revenues in fiscal 2000. Revenues from license and development fees and royalties have historically not been significant. Increases in revenues have resulted from increased demand for our existing products, the introduction of new, more complex products and the acceptance of new applications. Revenues from our customers are subject to both quarterly and annual fluctuations due to design cycles, technology adoption rates and cyclical nature of the different end markets into which our customers' products are sold. We expect that revenues from the sale of wafer probe cards will continue to account for substantially all of our revenues for the foreseeable future.

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*Cost of Revenues.* Cost of revenues consists primarily of manufacturing materials, payroll and manufacturing-related overhead. Our manufacturing operations rely upon a limited number of suppliers to provide key components of our products, some of which are sole source. We order materials and supplies based on backlog and forecasted customer orders. Tooling and setup costs related to changing manufacturing lots at our suppliers are also included in the cost of revenues. We expense all warranty costs and inventory reserves or write-offs as cost of revenues.

We design, manufacture and sell a fully custom product into a market that has been subject to cyclicity and significant demand fluctuations. Wafer probe cards are complex products, custom to a specific chip design and have to be delivered on lead-times shorter than most manufacturers' cycle times. It is therefore common to start production and to acquire production materials ahead of the receipt of an actual purchase order. Wafer probe cards are manufactured in low volumes, therefore, material purchases are often subject to minimum purchase order quantities in excess of our actual demand. Inventory valuation adjustments for these factors are considered a normal component of cost of revenues.

*Research and Development.* Research and development expenses include expenses related to product development, engineering and material costs. All research and development costs are expensed as incurred. We plan to invest a significant amount in research and development activities to develop new technologies for current and new markets and new applications in the future. We expect research and development expenses to increase in absolute dollars, but to decline as a percentage of revenues.

*Selling, General and Administrative.* Selling, general and administrative expenses include expenses related to sales, marketing, and administrative personnel; internal and outside sales representatives' commissions, market research and consulting; and other marketing and sales activities. We expect that selling expenses will increase as revenues increase, and we expect that general and administrative expenses will increase in absolute dollars to support future operations, as well as from the additional costs of being a publicly traded company. We expect selling, general and administrative expenses to decline as a percentage of revenues.

*Stock-Based Compensation.* In connection with the grant of stock options to employees in fiscal 2001, 2002 and the three months ended March 29, 2003, we recorded an aggregate of \$13.5 million in deferred stock-based compensation. These options are considered compensatory because the fair value of our stock determined for financial reporting purposes is greater than the fair value determined by the board of directors on the date of the grant. As of March 29, 2003, we had an aggregate of \$12.0 million of deferred stock-based compensation remaining to be amortized. This deferred stock-based compensation balance will be amortized as follows: \$1.0 million during the remainder of fiscal 2003; \$2.3 million during fiscal 2004; \$4.0 million during fiscal 2005; \$3.7 million during fiscal 2006 and \$1.0 million during fiscal 2007. We are amortizing the deferred stock-based compensation on a straight line basis over the vesting period of the related options, which is generally four years. For options granted to employees to date, the amount of stock-based compensation amortization actually recognized in future periods could decrease if options for which deferred but unvested compensation has been recorded are forfeited.

*Provision for Income Taxes.* As of December 28, 2002, we had state net operating loss carryforwards of approximately \$825,000. The state net operating loss carryforwards will expire at various dates from 2006 through 2013. We also had research and development tax credit carryforwards of approximately \$742,000 and \$836,000 for federal and state income tax purposes, respectively. The federal research and development tax credit carryforward will expire at various dates from 2019 through 2022. The state research credit can be carried forward indefinitely. In the third quarter of fiscal 2002, we released our valuation allowance recorded against our deferred tax assets because we believe that it is more likely than not that our deferred tax assets will be realized.

Under the Internal Revenue Code, as amended, and similar state provisions, certain substantial changes in our ownership could result in an annual limitation on the amount of net operating loss and credit carryforwards that can be utilized in future years to offset future taxable income. Annual limitations may result in the expiration of net operating loss and credit carryforwards before they are used.

*Use of Estimates.* Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles

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generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amount of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to uncollectible receivables, inventories, investments, intangible assets, income taxes, financing operations, warranty obligations, excess component and order cancellation costs, restructuring, and contingencies and litigation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. For excess component costs, the estimates are dependent on our expected use of such components and the size of the minimum order quantity imposed by the vendor in relation to our inventory requirements. Because this can vary in each situation, actual results may differ from these estimates under different assumptions or conditions.

### Results of Operations

The following table presents our historical operating results for the periods indicated as a percentage of revenues:

	Fiscal Year Ended			Three Months Ended	
	Dec. 30, 2000	Dec. 29, 2001	Dec. 28, 2002	Mar. 30, 2002	Mar. 29, 2003
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	50.1	52.3	50.1	51.2	52.5
Gross margin	49.9	47.7	49.9	48.8	47.5
Operating expenses:					
Research and development	21.3	19.9	18.6	18.8	18.9
Selling, general and administrative	27.4	25.2	21.6	23.1	21.5
Stock-based compensation	0.4	0.6	1.3	1.0	1.8
Restructuring charges	—	1.9	—	—	—
Total operating expenses	49.1	47.6	41.5	42.9	42.2
Operating income	0.8	0.1	8.4	5.9	5.3
Interest and other income, net	3.1	0.6	0.8	0.9	0.7
Income before income taxes	3.9	0.7	9.2	6.8	6.0
Benefit (provision) for income taxes	(0.2)	(0.4)	4.0	(1.9)	(2.3)
Net income	3.7%	0.3%	13.2%	4.9%	3.7%

#### *Three Months Ended March 29, 2003 and March 30, 2002*

*Revenues.* Revenues for the three months ended March 29, 2003 were \$18.7 million compared with \$17.3 million for the three months ended March 30, 2002, an increase of \$1.4 million, or 8.0%. The \$1.4 million increase was due primarily to an increase of \$1.5 million in revenues from manufacturers of flash memory devices and an increase of \$948,000 in revenues from a manufacturer of chipsets, offset in part by a reduction of \$492,000 in revenues generated from sales to microprocessor manufacturers and by a reduction of \$515,000 in revenues from sales to DRAM manufacturers.

The majority of revenues for the three months ended March 29, 2003 were generated by sales of wafer probe cards to manufacturers of DRAM devices, consistent with sales for the three months ended March 30, 2002. The decrease in revenues from DRAM manufacturers was due primarily to an overall decreased demand for SDRAM devices, offset in part by an increase in revenues for double data rate, or DDR, based DRAM devices. SDRAM based revenues declined by \$4.4 million, while DDR based revenues increased by \$3.4 million.

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The increase in our revenues in the flash memory market for the three months ended March 29, 2003 compared to the three months ended March 30, 2002 was due primarily to increased design wins at manufacturers of flash memory devices. Revenues generated from sales to flash memory device manufacturers were \$3.2 million for the three months ended March 29, 2003 compared to \$1.2 million for the three months ended March 30, 2002.

Our existing relationship with a microprocessor manufacturer enabled us to win more designs for chipsets, for the three months ended March 29, 2003 compared to the three months ended March 30, 2002. Revenues generated from sales to chipset manufacturers were approximately \$1.7 million for the three months ended March 29, 2003 compared to \$765,000 for the three months ended March 30, 2002.

Revenues by geographic region in the three months ended March 29, 2003 as a percentage of revenues were 52.4% in North America, 8.6% in Europe, 23.8% in Asia Pacific and 15.2% in Japan. Revenues by geographical region in the three months ended March 30, 2002 as a percentage of revenues were 66.4% in North America, 15.8% in Europe, 12.9% in Asia Pacific and 4.9% in Japan. The increase in the percentage of revenues in Asia Pacific and Japan was primarily due to increased sales to our distributor and increased sales of large area array product to manufacturers of DRAM devices in Japan. The decrease in percentage of revenues in North America and Europe was due primarily to decreased sales of SDRAM devices.

The following customers accounted for 10% or more of our revenues in the first three months of fiscal 2003 or fiscal 2002:

	Three Months Ended	
	Mar. 30, 2002	Mar. 29, 2003
Intel Corporation	30.1%	38.0%
Spirox Corporation	12.8	18.7
Infineon Technologies AG	21.7	10.0
Micron Technologies Inc.	17.7	*

\* less than 10% of revenues.

Revenues from our largest customer during the three months ended March 29, 2003 increased due to stronger demand for chipset and flash memory wafer probe products. We experienced an increase in revenues from our distributor in Asia as a result of increased demand of DRAM wafer probe cards primarily in Taiwan. We experienced a decline in DRAM wafer probe card revenues from both Infineon Technologies AG and Micron Technologies Inc. The decline in revenues was due to an overall decreased demand for SDRAM devices.

*Gross Margin.* Gross margin as a percentage of revenues was 47.5% for the three months ended March 29, 2003 compared with 48.8% for the three months ended March 30, 2002. The decrease in gross margin percentage was primarily due to increased investment in quality systems, processes and procedures and the cost of increased capacity, partially offset by continued reductions in the cost of materials and a favorable product mix. Gross margin in absolute dollars and as a percentage of revenues will be subject to fluctuations as we continue to introduce new technologies into our manufacturing processes and to experience cyclicity in our end markets. We expect to continue to invest in new infrastructure, increasing fixed costs, which could have a material adverse impact on our gross margin. We anticipate that increased competition will also continue to impact our pricing, particularly in our lower complexity products sold to certain customers, and negatively impact our gross margin. We will continue to implement cost reduction programs as well as focus our investments on new products, which tend to have higher margins.

*Research and Development.* Research and development expenses increased to \$3.5 million, or 18.9% of revenues, for the three months ended March 29, 2003 compared to \$3.2 million, or 18.8% of revenues, for the three months ended March 30, 2002. Personnel costs for the first three months of 2003 increased by approximately \$270,000 from the same period in 2002. Through the three month period ended March 29, 2003, we continued our development of fine pitch memory and logic products, advanced microspring interconnect technology and new manufacturing process technologies.

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*Selling, General and Administrative.* Selling, general and administrative expenses were \$4.0 million for the three months ended March 29, 2003 and for the three months ended March 30, 2002. Selling, general and administrative expenses as a percentage of net sales were 21.5% and 23.1% for the three months ended March 29, 2003 and for the three months ended March 30, 2002, respectively.

*Interest and Other Income (Expense), Net.* Interest and other income (expense), net for the three months ended March 29, 2003 was \$129,000 compared with \$155,000 for the three months ended March 30, 2002 reflecting lower interest income primarily due to lower average interest rates.

*Benefit (Provision) for Income Taxes.* Provision for income taxes was \$428,000 for the three months ended March 29, 2003 compared to \$332,000 for the three months ended March 30, 2002. The lower effective tax rate for 2002 is primarily due to various credits, notably research and development credits, being a larger component of taxable income.

### ***Fiscal Years Ended December 28, 2002 and December 29, 2001***

*Revenues.* Revenues were \$78.7 million for fiscal 2002 compared with \$73.4 million for fiscal 2001, an increase of 7.2%. The \$5.3 million increase was due primarily to an increase of \$3.7 million in revenues from manufacturers of flash memory devices and an increase of \$3.5 million in revenues from a manufacturer of chipsets, offset in part by a reduction of \$1.6 million in revenues from DRAM manufacturers.

In fiscal 2001, we introduced our wafer probe cards to manufacturers of flash memory devices. The design wins and penetration at these customers, combined with increased demand for dense flash devices, generated the increased flash memory device related revenues in fiscal 2002.

The industry trend of faster and smaller devices resulting in increased power handling requirements has caused large scale integrated logic devices to migrate from wirebond-based package technologies to flip chip packaging. Our capabilities in flip chip microprocessor wafer probe cards enabled us to qualify and sell our wafer probe cards for chipset device probing applications, such as memory controller integrated circuits, in fiscal 2002. We generated minimal revenue from sales to chipset device manufacturers in fiscal 2001.

Consistent with fiscal 2001, the majority of fiscal 2002 revenues were generated by sales of wafer probe cards to manufacturers of DRAM devices. The decrease in revenues from DRAM manufacturers in fiscal 2002 was due primarily to reduced design activity and weaker bit growth. In addition, sales of Rambus DRAM, or RDRAM, wafer probe cards declined in fiscal 2002 compared to fiscal 2001. During the first two quarters of fiscal 2001, parts of the semiconductor industry adopted RDRAM architecture-based memory devices for higher speed applications. This adoption drove increased design activity and demand for wafer probe cards. During the second half of fiscal 2001, demand for Rambus-based chipsets and RDRAM devices decreased, a trend that persisted through fiscal 2002. This resulted in declining overall sales due to a significant decline in demand for RDRAM wafer probe cards. For fiscal 2002, our sales of RDRAM wafer probe cards decreased by \$8.7 million compared to fiscal 2001 while sales of other DRAM wafer probe cards increased by \$7.1 million. The increase in our other DRAM wafer probe card revenues was primarily the result of increased sales of our DRAM large area array wafer probe cards and the industry's conversion to DDR based DRAM devices in the second half of fiscal 2002.

Revenues by geographic region for fiscal 2002 as a percentage of total revenues were 55.6% in North America, 15.5% in Europe, 21.8% in Asia Pacific and 7.1% in Japan. Revenues by geographical region for fiscal 2001 as a percentage of total revenues were 52.7% in North America, 13.8% in Europe, 26.6% in Asia Pacific and 6.9% in Japan. The increase in the percentage of revenues in North America was due primarily to increased sales to a manufacturer of flash memory and chipset devices. The decrease in percentage of revenues in Asia Pacific was due primarily to decreased sales to our distributor of DRAM wafer probe cards.

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The following customers accounted for 10% or more of our revenues in fiscal 2001 or fiscal 2002:

	Fiscal 2001	Fiscal 2002
Intel Corporation	12.4%	26.9%
Spirox Corporation	26.4	20.9
Infineon Technologies AG	16.1	20.1
Samsung Electronics Industries Co., Ltd.	20.2	*

\* less than 10% of revenues.

The increase in revenues from certain of these customers for fiscal 2002 resulted from increased sales of microprocessor and flash memory wafer probe cards to one of these customers and increased sales of large area array DRAM devices to another one of these customers. In fiscal 2002, sales to certain customers were negatively impacted by an overall decreased demand for DRAM wafer probe cards.

*Gross Margin.* Gross margin as a percentage of revenues was 49.9% for fiscal 2002 compared with 47.7% for fiscal 2001. The increase in gross margin percentage was primarily due to cost reduction actions associated with our restructuring in the third quarter of fiscal 2001, continued reductions in the cost of materials, and shipments of high complexity products incorporating newer technology. These benefits were partially offset by a generally less favorable pricing environment due to the overall decline in demand. We also experienced an increase in warranty expenses caused primarily by an increase in field failures at one of our customers. Gross margin in absolute dollars and as a percentage of revenues will be subject to fluctuations as we continue to introduce new technologies into our manufacturing processes and to experience cyclicalities in our end markets. We expect to continue to invest in new infrastructure, increasing fixed costs, which could have a material adverse impact on our gross margin. We anticipate that increased competition will also continue to impact our pricing, particularly in our lower complexity products sold to certain customers, and as a result, negatively impact our gross margin.

*Research and Development.* Research and development expenses remained flat at \$14.6 million, equivalent to 18.6% of revenues for fiscal 2002 compared to 19.9% of revenues for fiscal 2001. Personnel costs for fiscal 2002 increased by approximately \$230,000 from fiscal 2001 and were partially offset by a reduction of approximately \$175,000 for development program materials and related costs. During the first half of fiscal 2001, we completed the development of our MicroSpring Contact on Silicon Technology, or MOST technology. During the second half of fiscal 2001, we reduced spending while focusing our research and development efforts on developing wafer probe card products. Through fiscal 2002, we continued our development of new large area array memory products and fine pitch logic products.

*Selling, General and Administrative.* Selling, general and administrative expenses decreased to \$17.0 million, or 21.6% of revenues, for fiscal 2002 compared to \$18.5 million, or 25.2% of revenues, for fiscal 2001. The decrease was due primarily to a reduction of approximately \$611,000 in personnel and recruiting costs and a reduction of approximately \$752,000 in advertising, tradeshow and travel related expenses resulting from cost reduction actions taken in the second half of fiscal 2001. We expect selling, general and administrative expenses to increase in the future, however, we expect these expenses to decline as a percentage of revenues.

*Restructuring Charges.* During the third quarter of fiscal 2001, we recorded a restructuring charge of \$1.4 million. We implemented the restructuring plan to better align our infrastructure with the market conditions in the semiconductor industry and to further focus the company on the wafer probe card business. The restructuring charge consisted of \$880,000 for headcount reductions covering 14 employees in research and development, 23 employees in operations and 17 employees in selling, general and administrative. The majority of the affected employees were based in Livermore, California. Further, we recorded charges of \$223,000 for the consolidation of excess facilities and \$277,000 for asset write-offs, primarily for property and equipment. The consolidation of excess facilities included the closure of certain corporate facilities that had been vacated. The charge of \$223,000 primarily related to lease termination and noncancelable lease costs. The charge of \$277,000 primarily related to the disposal of property and equipment, which primarily consisted of leasehold improvements for the excess facilities. As of December 28, 2002, the restructuring plan had been fully executed.

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*Interest and Other Income, Net.* Interest and other income, net for fiscal 2002 was \$642,000 compared to \$477,000 for fiscal 2001, reflecting lower currency losses from the revaluation and translation of certain receivables and assets denominated in foreign currencies.

*Benefit (Provision) for Income Taxes.* We recorded a benefit for income taxes for fiscal 2002 of \$3.1 million compared to the provision of \$307,000 for fiscal 2001. The benefit resulted from the release of the valuation allowance recorded against deferred tax assets, partially offset by the provision for income taxes on pre-tax profits. The valuation allowance was released because we believe that it is more likely than not that the deferred tax assets will be realized.

### ***Fiscal Years Ended December 29, 2001 and December 30, 2000***

*Revenues.* Revenues were \$73.4 million for fiscal 2001 compared with \$56.4 million for fiscal 2000, an increase of 30.2%. The increase was due to strong demand for our wafer probe cards used to test DRAM and flash memory devices. The increase in revenues reflected an increase in unit shipments, which was partially offset by a decline in average selling prices.

The increase of DRAM production, in particular RDRAM, at some of our customers impacted revenue growth favorably through the first six months of fiscal 2001. Revenues for this period also benefited from the introduction of our large area array products that enable a higher level of parallelism for test of memory devices. During fiscal 2001, we introduced our products to manufacturers of flash memory, which also contributed to our revenue growth.

During the second six months of fiscal 2001, our revenues declined compared to the first six months of fiscal 2001 as DRAM manufacturers experienced significant price declines for their products. This decline adversely impacted both the volume and pricing of our products. The effects of this decline were offset in part by increased demand for our products due primarily to technological innovations in the semiconductor industry, such as the migration toward smaller feature sizes of .15 micron and below.

Revenues by geographic region in fiscal 2001 as a percentage of total revenues were 52.7% in North America, 13.8% in Europe, 26.6% in Asia Pacific and 6.9% in Japan. Revenues by geographic region in fiscal 2000 as a percentage of total revenues were 42.0% in North America, 16.4% in Europe, 33.4% in Asia Pacific and 8.2% in Japan. The year-to-year increase in revenues in North America was primarily due to the increased sales of RDRAMs by one of our major customers.

The following customers accounted for 10% or more of our revenues in fiscal 2000 or fiscal 2001:

	<u>Fiscal 2000</u>	<u>Fiscal 2001</u>
Spirox Corporation	25.4%	26.4%
Samsung Electronics Industries Co., Ltd.	*	20.2
Infineon Technologies AG	21.3	16.1
Intel Corporation	16.5	12.4

\* less than 10% of revenues.

Revenues to our largest customers during fiscal 2001 increased due to the ramp of RDRAM wafer probe products and the continued penetration of new end customers by our distributor Spirox. Revenue percentages declined for some of our customers due to our overall increased revenues during fiscal 2001, while revenues in absolute dollars to such customers remained flat.

*Gross Margin.* Gross margin as a percentage of revenues was 47.7% for fiscal 2001 compared with 49.9% for fiscal 2000. The decline in gross margin percentage was due to the overall industry downturn in the second half of fiscal 2001, resulting in increased pricing pressure and reduced unit volumes. Furthermore, we continued to incur start-up costs from the transition to a new manufacturing process for our next generation MicroSpring technology, which added new shapes and/or materials for our MicroSpring contacts and increased the amount of wafer fabrication-based processing, during the first six months of fiscal 2001. The start-up costs related to increased materials spending from pre-production lots, as well as reduced yields during the process ramp. Cost of

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revenues increased in fiscal 2001 due to continued investments in our manufacturing infrastructure, primarily increased personnel expenses, which impacted our gross margin unfavorably.

*Research and Development.* Research and development expenses increased to \$14.6 million, or 19.9% of revenues, for fiscal 2001 from \$12.0 million, or 21.3% of revenues, for fiscal 2000. Of this increase, approximately \$1.6 million was due to increases in headcount and approximately \$480,000 was due to increased spending on engineering materials. This increased investment resulted in the development of large area array products and process technologies to enhance the manufacturability of various products. We also increased our investment in design capability to address a growing business in Asian markets.

*Selling, General and Administrative.* Selling, general and administrative expenses increased to \$18.5 million, or 25.2% of revenues, for fiscal 2001 from \$15.4 million, or 27.4% of revenues, for fiscal 2000. The increase was due to hiring additional personnel in sales, field applications and administrative capacities as well as increases in commissions due to increased revenues.

*Restructuring charges.* During the third quarter of fiscal 2001, we recorded a restructuring charge of \$1.4 million. We implemented the restructuring plan to better align our infrastructure with the market conditions in the semiconductor industry and to further focus the company on the wafer probe card business. The restructuring charge consisted of \$880,000 for headcount reductions covering 14 employees in research and development, 23 employees in operations and 17 employees in selling, general and administrative. The majority of the affected employees were based in Livermore, California. Further, we recorded \$223,000 for the consolidation of excess facilities and \$277,000 for asset write-offs, primarily for property and equipment. The consolidation of excess facilities included the closure of certain corporate facilities that had been vacated. The charge of \$223,000 primarily related to lease termination and noncancelable lease costs. Property and equipment that was disposed of resulted in a charge of \$277,000 and primarily consisted of leasehold improvements for the excess facilities. As a result of our restructuring plan, we expect an annual reduction of employee related costs of \$3.9 million and facility and related expenses of \$266,000. As of December 29, 2001, \$441,000 of the \$1.4 million restructuring charge remained accrued, primarily relating to ongoing scheduled severance payments and pending lease contract cancellations being executed under the restructuring plan. We substantially completed these restructuring payment obligations as of the end of the third quarter of fiscal 2002.

*Interest and Other Income, Net.* Interest and other income, net for fiscal 2001 was \$477,000 compared with \$1.7 million for fiscal 2000. The difference was due to non-recurring other income of \$1.3 million recorded in fiscal 2000 from the settlement of a claim against a licensee for an alleged breach of a license agreement.

*Provision for Income Taxes.* Provision for income taxes was \$307,000 for fiscal 2001 compared with \$115,000 for fiscal 2000. This increase represented the estimated tax liability for fiscal 2001 arising from both alternative minimum tax and income tax. As of December 29, 2001, our deferred tax asset was \$9.1 million, representing prior years' operating loss carry forwards and unutilized tax credits, and had been reduced in full by a valuation allowance.

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### Quarterly Results of Operations

The following table presents our unaudited quarterly results of operations for the thirteen quarters in the period ended March 29, 2003. You should read the following table in conjunction with the consolidated financial statements and related notes contained elsewhere in this prospectus. We have prepared the unaudited information on the same basis as our audited consolidated financial statements. This table includes all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of our financial position and operating results for the quarters presented. Operating results for any quarter are not necessarily indicative of results for any future quarters or for a full year.

	Three Months Ended												
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 30, 2000	Mar. 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 29, 2001	Mar. 30, 2002	June 29, 2002	Sept. 28, 2002	Dec. 28, 2002	Mar. 29, 2003
	(unaudited) (in thousands)												
Revenues	\$10,313	\$13,028	\$15,842	\$17,223	\$19,849	\$21,507	\$16,021	\$16,056	\$17,288	\$18,510	\$20,729	\$22,157	\$18,669
Cost of revenues	5,198	6,159	7,808	9,078	10,410	11,269	8,477	8,229	8,859	9,422	10,259	10,916	9,800
Gross margin	5,115	6,869	8,034	8,145	9,439	10,238	7,544	7,827	8,429	9,088	10,470	11,241	8,869
Operating expenses:													
Research and development	2,516	2,699	3,247	3,533	4,073	4,323	3,054	3,169	3,249	3,579	3,828	3,936	3,525
Selling, general and administrative	2,904	3,500	4,431	4,599	4,730	5,230	4,344	4,196	3,992	4,172	4,265	4,576	4,013
Stock-based compensation	67	68	63	61	58	102	103	206	165	302	283	289	333
Restructuring charges	—	—	—	—	—	—	1,380	—	—	—	—	—	—
Total operating expenses	5,487	6,267	7,741	8,193	8,861	9,655	8,881	7,571	7,406	8,053	8,376	8,801	7,871
Operating income (loss)	(372)	602	293	(48)	578	583	(1,337)	256	1,023	1,035	2,094	2,440	998
Interest and other income (expense), net	1,354	55	157	153	(74)	94	229	228	155	164	85	238	129
Income (loss) before income taxes	982	657	450	105	504	677	(1,108)	484	1,178	1,199	2,179	2,678	1,127
Benefit (provision) for income taxes	(51)	(34)	(24)	(6)	(207)	(291)	426	(235)	(332)	(485)	5,031	(1,089)	(428)
Net income (loss)	\$ 931	\$ 623	\$ 426	\$ 99	\$ 297	\$ 386	\$ (682)	\$ 249	\$ 846	\$ 714	\$ 7,210	\$ 1,589	\$ 699
Net income (loss) per share:													
Basic	\$ .29	\$ .19	\$ .12	\$ .03	\$ .08	\$ .10	\$ (.16)	\$ .06	\$ .19	\$ .16	\$ 1.61	\$ .35	\$ .15
Diluted	\$ .03	\$ .02	\$ .02	\$ —	\$ .01	\$ .01	\$ (.16)	\$ .01	\$ .03	\$ .02	\$ .24	\$ .05	\$ .02
Weighted-average number of shares used in per share calculations:													
Basic	3,181	3,337	3,497	3,611	3,790	3,941	4,137	4,248	4,391	4,438	4,478	4,529	4,539
Diluted	26,656	26,582	27,293	27,636	27,924	28,353	4,137	29,038	29,823	29,535	29,575	29,227	29,266

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The following table presents our historical results for the periods indicated as a percentage of revenues:

	Three Months Ended												
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 30, 2000	Mar. 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 29, 2001	Mar. 30, 2002	June 29, 2002	Sept. 28, 2002	Dec. 28, 2002	Mar. 29, 2003
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	50.4	47.3	49.3	52.7	52.4	52.4	52.9	51.3	51.2	50.9	49.5	49.3	52.5
Gross margin	49.6	52.7	50.7	47.3	47.6	47.6	47.1	48.7	48.8	49.1	50.5	50.7	47.5
Operating expenses:													
Research and development	24.4	20.7	20.5	20.5	20.5	20.1	19.1	19.7	18.8	19.3	18.5	17.8	18.9
Selling, general and administrative	28.2	26.9	28.0	26.7	23.9	24.3	27.1	26.1	23.1	22.6	20.6	20.6	21.5
Stock-based compensation	0.6	0.5	0.4	0.4	0.3	0.5	0.6	1.3	1.0	1.6	1.3	1.2	1.8
Restructuring charges	—	—	—	—	—	—	8.6	—	—	—	—	—	—
Total operating expenses	53.2	48.1	48.9	47.6	44.7	44.9	55.4	47.1	42.9	43.5	40.4	39.6	42.2
Operating income (loss)	(3.6)	4.6	1.8	(0.3)	2.9	2.7	(8.3)	1.6	5.9	5.6	10.1	11.1	5.3
Interest and other income (expense), net	13.1	0.4	1.0	0.9	(0.4)	0.4	1.4	1.4	0.9	0.9	0.4	1.0	0.7
Income (loss) before income taxes	9.5	5.0	2.8	0.6	2.5	3.1	(6.9)	3.0	6.8	6.5	10.5	12.1	6.0
Benefit (provision) for income taxes	(0.5)	(0.2)	(0.1)	—	(1.0)	(1.3)	2.6	(1.5)	(1.9)	(2.6)	24.3	(4.9)	(2.3)
Net income (loss)	9.0%	4.8%	2.7%	0.6%	1.5%	1.8%	(4.3)%	1.5%	4.9%	3.9%	34.8%	7.2%	3.7%

**Revenues.** Revenues increased sequentially in each of the quarters ended April 1, 2000 through June 30, 2001, due to increased demand across all markets for our wafer probe cards. Revenues declined during the three months ended September 29, 2001 due to the overall industry downturn, which resulted in a decline in unit volumes and pricing for our products. Revenues increased sequentially in each of the quarters ended December 29, 2001 through December 28, 2002 as design activity increased, primarily in the DRAM, driven by the architecture conversion to DDR, and logic markets. Revenues for the quarter ended March 29, 2003 declined primarily due to the completion of the DDR tooling cycle and the resulting lower demand for DRAM wafer probe cards.

**Gross Margin.** Gross margin by quarter increased to 52.7% in the three months ended July 1, 2000, due to an increase in sales of higher performance products in that quarter. Gross margin declined between the three months ended July 1, 2000 and the three months ended December 30, 2000, due to the start-up costs associated with a new manufacturing process as well as continued investments in our manufacturing infrastructure, primarily in increased personnel. Gross margin remained relatively stable from the three months ended December 30, 2000 through the three months ended September 29, 2001. Gross margin increased sequentially in each of the quarters ended December 29, 2001 through December 28, 2002 as a result of increased higher performance product sales and the benefits of our restructuring as well as other cost reduction programs, such as scheduled plant shutdowns. These benefits were partially offset by the overall industry downturn beginning in the second half of fiscal 2001 and continuing into 2002, resulting in increased pricing pressure. Gross margin decreased in the three months ended March 29, 2003 due to the increased investment in quality systems, processes and procedures and the cost of increased capacity.

**Operating Expenses.** Operating expenses increased in absolute dollars in each of the six quarters ended April 1, 2000 through June 30, 2001, reflecting the combination of increased staffing in all departments to support our overall business growth; increased spending on research and development to continue to develop new technologies for current and new applications; increased selling costs related to higher revenue levels; and increased management and infrastructure spending to support our planned growth and penetration into new markets. Operating expenses decreased in the three months ended September 29, 2001 and the three months ended December 29, 2001 as we restructured our operations in response to the overall industry downturn. Operating expenses continued to decline in the three months ended March 30, 2002, due to realization of ongoing

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benefits of our restructuring plan and further reduction of workforce during the three months ended December 29, 2001, and a scheduled plant shutdown. Operating expenses increased in each of the following three quarters due to the operation of plants that experienced periodic shutdowns in prior periods, increased research and development spending on new technologies and increased expenses related to increased revenues. Operating expenses declined for the three months ended March 29, 2003 as spending was reduced in response to the lower revenue level.

Our quarterly operating results are likely to fluctuate, and if we fail to meet or exceed the expectations of securities analysts or investors, the trading price of our common stock could decline. Some of the important factors that could cause our revenues and operating results to fluctuate from period-to-period include:

- customer demand for our products;
- our ability to deliver reliable, cost-effective products in a timely manner;
- the reduction, rescheduling or cancellation of orders by our customers;
- the timing and success of new product introductions and new technologies by our competitors and us;
- our product and customer sales mix and geographical sales mix;
- changes in the level of our operating expenses needed to support our anticipated growth;
- a reduction in the price or the profitability of our products;
- changes in our production capacity or the availability or the cost of components and materials;
- our ability to bring new products into volume production efficiently;
- the timing of and return on our investments in research and development;
- our ability to collect accounts receivable;
- seasonality, principally due to our customers' purchasing cycles; and
- market conditions in our industry, the semiconductor industry and the economy as a whole.

The occurrence of one or more of these factors might cause our operating results to vary widely. As such, we believe that period-to-period comparisons of our revenues and operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

### **Critical Accounting Policies and Estimates**

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

*Revenue Recognition.* We recognize revenue in accordance with Securities and Exchange Commission Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements, as amended by SAB 101A and 101B. SAB 101 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Determination of criteria (3) and (4) are based on management's judgments regarding the fixed nature of the fee charged for services rendered and products delivered and the collectibility of those fees. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected.

Revenues from product sales to customers other than distributors are recognized upon shipment and reserves are provided for estimated allowances. We defer recognition of revenues on sales to distributors until the distributor confirms an order from its customer. Revenues from licensing of our design and manufacturing technology, which have been insignificant to date, are recognized over the term of the license agreement or when the significant contractual obligations have been fulfilled.

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*Accounts Receivable.* We perform ongoing credit evaluations of our customers and adjust credit limits based upon payment history and the customer's current credit worthiness, as determined by our review of their current credit information. We continuously monitor collections and payments from our customers and maintain an allowance for doubtful accounts based upon our historical experience and any specific customer collection issues that we have identified. While our credit losses have historically been within our expectations and the allowance established, we might not continue to experience the same credit loss rates that we have in the past. Our accounts receivable are concentrated in a relatively few number of customers. Therefore, a significant change in the liquidity or financial position of any one customer could make it more difficult for us to collect our accounts receivable and require us to increase our allowance for doubtful accounts.

*Warranty Reserve.* We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. We continuously monitor product returns for warranty and maintain a reserve for the related expenses based upon our historical experience and any specifically identified field failures. As we sell new products to our customers, we must exercise considerable judgment in estimating the expected failure rates. This estimating process is based on historical experience of similar products as well as various other assumptions that we believe to be reasonable under the circumstances. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

From time to time, we may be subject to additional costs related to warranty claims from our customers. If and when this occurs, we generally make significant judgments and estimates in establishing the related warranty liability. This estimating process is based on historical experience, communication with our customers, and various assumptions that we believe to be reasonable under the circumstances. This additional warranty would be recorded in the determination of net income in the period in which the additional cost was identified.

*Inventory Reserve.* We state our inventories at the lower of cost, computed on a first in, first out basis, or market. We record inventory reserve for estimated obsolescence or unmarketable inventories equal to the difference between the cost of inventories and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory reserve may be required.

*Accounting for Income Taxes.* We account for income taxes under the provisions of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes." Under this method, we determine deferred tax assets and liabilities based upon the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. The tax consequences of most events recognized in the current year's financial statements are included in determining income taxes currently payable. However, because tax laws and financial accounting standards differ in their recognition and measurement of assets, liabilities, equity, revenue, expenses, gains and losses, differences arise between the amount of taxable income and pretax financial income for a year and between the tax bases of assets or liabilities and their reported amounts in the financial statements. Because it is assumed that the reported amounts of assets and liabilities will be recovered and settled, respectively, a difference between the tax basis of an asset or a liability and its reported amount in the balance sheet will result in a taxable or a deductible amount in some future years when the related liabilities are settled or the reported amounts of the assets are recovered, hence giving rise to a deferred tax asset. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and to the extent we believe that recovery is not likely, we must establish a valuation allowance.

As of December 29, 2001, we had recorded a full valuation allowance of \$9.1 million against our deferred tax assets, due to uncertainties related to our ability to utilize our deferred tax assets, primarily consisting of certain net operating losses carried forward, before they expire. In fiscal 2002, we released our valuation allowance because, based upon our recurring level of profitability, we believe that it is more likely than not that we will be able to utilize our deferred tax assets before they expire.

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As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes. This process involves estimating our actual current tax exposure together with assessing temporary differences that may result in deferred tax assets. Management judgment is required in determining any valuation allowance recorded against our net deferred tax assets. Any such valuation allowance would be based on our estimates of taxable income and the period over which our deferred tax assets would be recoverable. While management has considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, if we were to determine that we would be able to realize our deferred tax assets in the future, in excess of their net recorded amount, an adjustment to the deferred tax asset would increase income in the period that determination was made.

### **Liquidity and Capital Resources**

Since our inception, we have financed our operations primarily through sales of equity securities and more recently through cash generated from operations, as well. We have received a total of \$64.9 million from private offerings of our equity securities. As of March 29, 2003, we had \$34.8 million in cash, cash equivalents and short-term investments.

Net cash used by operating activities was \$1.3 million for the three months ended March 29, 2003 compared with net cash provided by operating activities of \$1.9 million for the three months ended March 30, 2002. The difference was due primarily to an increase in working capital for the three months ended March 29, 2003. Net cash provided by operating activities for fiscal 2002, 2001 and 2000 was \$12.9 million, \$10.3 million and \$935,000, respectively. For fiscal 2002, cash was provided through net income increased by non-cash expenses such as depreciation, amortization and stock-based compensation, offset in part by the release of the valuation allowance for the deferred tax asset. For fiscal 2001, cash was provided by a reduction in working capital, as well as from net income increased by non-cash expenses. In fiscal 2000, cash was provided by net income, increased by non-cash expenses, offset in part by an increase in working capital, primarily accounts receivable.

Accounts receivable declined by \$1.7 million for the three months ended March 29, 2003, reflecting a decline in revenues. Accounts receivable remained flat for fiscal 2002, compared to a decline of \$501,000 for fiscal 2001, reflecting lower days sales outstanding, and an increase of \$7.9 million for fiscal 2000. The increase in fiscal 2000 was due to increased revenues.

For the three months ended March 29, 2003, inventories increased by \$1.9 million due to an increase in raw materials as we started to build products which require more expensive parts as well as an increase in work-in-process to meet the expected increased demand for our products. Inventories increased in fiscal 2002, 2001 and 2000 by \$683,000, \$522,000 and \$3.1 million, respectively, to meet the expected increased demand for our products.

Accrued liabilities decreased from \$7.7 million in fiscal 2002 to \$5.3 million for the three months ended March 29, 2003 due primarily to the payment of yearly incentive bonuses and sales commissions. Accrued liabilities increased from \$3.5 million in fiscal 2000 to \$5.8 million in fiscal 2001 and to \$7.7 million in fiscal 2002. The increase was due to the increase in accrued incentive bonuses as part of our shift to more variable compensation, and sales commissions as well as an increase in accrued warranty costs reflecting higher revenue levels.

Net cash provided by investing activities was \$5.1 million for the three months ended March 29, 2003, compared to \$5.8 million used for investing activities for the three months ended March 30, 2002. Net cash used in investing activities was \$7.5 million for fiscal 2002 and \$11.6 million for fiscal 2001. In fiscal 2000, investing activities provided \$4.2 million. Capital expenditures were \$960,000 for the three months ended March 29, 2003 and \$496,000 for the three months ended March 30, 2002. Capital expenditures were \$4.2 million for fiscal 2002, \$9.4 million for fiscal 2001 and \$6.3 million for fiscal 2000. We invested in the expansion of manufacturing facilities as well as in leasehold improvements to our new headquarters and manufacturing facility. These expenditures were partially offset or increased by the net sale or purchase of short-term investments in each of these periods.

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Net cash used in financing activities was \$48,000 for the three months ended March 29, 2003 compared with net cash provided by financing activities of \$995,000 for the three months ended March 30, 2002. Net cash provided by financing activities was \$863,000 for fiscal 2002, \$10.0 million for fiscal 2001 and \$2.5 million for fiscal 2000. Net cash provided by financing activities was primarily due to the issuance of common stock in fiscal 2002 and to the net sale of our redeemable convertible preferred stock in fiscal 2001 and fiscal 2000.

In May 2001, we signed a ten-year lease for an additional 119,000 square feet of manufacturing, research and development and office space. The total rent obligation over the term of the lease is \$21.8 million and is accounted for as an operating lease. Our obligations under our operating leases for fiscal 2003 were approximately \$2.3 million as of March 29, 2003. We expect to invest approximately \$25.0 million in leasehold improvements for our new headquarters and manufacturing facility through the third quarter of 2004. Of this amount, approximately \$18.0 million relates to the design and construction of a new manufacturing facility, while the remaining amount relates to the build out and infrastructure of research and development and office space.

In March 2001, we entered into a financing agreement with Comerica Bank that provides for total borrowings of up to \$16.0 million. The agreement provides for a revolving line of credit that permitted borrowings from time to time up to the commitment amount of \$12.0 million. The agreement also provided for an equipment line of credit of \$2.0 million and a term loan of \$2.0 million payable in 48 equal monthly payments of principal plus accrued interest. Amounts drawn under the equipment line of credit and the term loan could not be reborrowed once repaid. In February 2003, the agreement was amended to increase the line of credit to \$16.0 million. In April 2003, we borrowed funds under the line of credit to pay down the amounts outstanding under the expiring term loan and equipment line of credit. On March 29, 2003, we had the following amounts available and amounts drawn under this agreement to support our ongoing financing requirements:

	Commitment Amount	Amount Drawn	Outstanding Principal Amounts	Amount Available for Future Borrowing
Comerica Bank equipment line of credit	\$ 2,000,000	\$ 375,000	\$ 375,000	\$ 1,625,000
Comerica Bank term loan	2,000,000	2,000,000	1,000,000	—
Comerica Bank line of credit	12,000,000	—	—	12,000,000
	<hr/>	<hr/>	<hr/>	<hr/>
Total	\$16,000,000	\$2,375,000	\$1,375,000	\$13,625,000
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Borrowings under the amended agreement accrue interest based on either the Comerica Bank prime rate or the LIBOR rate plus 2.0%. We have no debt obligations that have not been recorded in our consolidated financial statements.

The financial covenants in the agreement require us to maintain cash and cash equivalents of a minimum of \$3.0 million, limit capital expenditures to a maximum of \$30.0 million per fiscal year, and provide specific levels of profitability which we must achieve. As of March 29, 2003, we had complied with these and all other covenants in the agreement.

The following table describes our commitments to settle contractual obligations in cash as of December 28, 2002.

Contractual Obligations	Payments due by period				
	Up to 1 year	2-3 years	4-5 years	After 5 years	Total
			(in thousands)		
Operating leases	\$3,177	\$4,684	\$4,516	\$8,463	\$20,840
Notes payable	500	625	—	—	1,125
Bank line of credit	375	—	—	—	375
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total contractual cash obligations	\$4,052	\$5,309	\$4,516	\$8,463	\$22,340
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We believe our existing cash balance and credit facilities will be sufficient to meet our anticipated cash needs for at least the next 12 months. Our future capital requirements will depend on many factors, including our rate of revenue growth, the timing and extent of spending to support product development efforts, the expansion of sales

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and marketing activities, the timing of introductions of new products and enhancement to existing products, the costs to ensure access to adequate manufacturing capacity, and the continuing market acceptance of our products. To the extent that funds generated by this offering, together with existing cash, cash equivalents and short-term investments balances and any cash from operations, are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing. Although we are currently not a party to any agreement or letter of intent with respect to potential investments in, or acquisitions of, complementary businesses, products or technologies, we may enter into these types of arrangements in the future, which could also require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all.

### **Recent Accounting Pronouncements**

In November 2002, the Emerging Issues Task Force (“EITF”) reached a consensus on Issue No. 00-21, “Revenue Arrangements with Multiple Deliverables.” EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. We do not expect the adoption of EITF Issue No. 00-21 to have a material impact on our financial position or on our results of operations.

In January 2003, the FASB issued FASB Interpretation No. 46 (“FIN 46”), “Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51.” FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period beginning after June 15, 2003. We do not expect the adoption of FIN 46 to have a material impact on our financial position or on our results of operations.

### **Quantitative and Qualitative Disclosure of Market Risks**

*Foreign Currency Exchange Risk.* Our revenues, except in Japan, and our expenses, except those expenses related to our Germany, United Kingdom, Japan and Korea operations, are denominated in U.S. dollars. As a result, we have relatively little exposure for currency exchange risks and foreign exchange losses have been minimal to date. We do not currently enter into forward exchange contracts to hedge exposure denominated in foreign currencies or any other derivative financial instruments for trading or speculative purposes. In the future, if we feel our foreign currency exposure has increased, we may consider entering into hedging transactions to help mitigate that risk.

*Interest Rate Risk.* The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities in which we invest may be subject to market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. For example, if we hold a security that was issued with an interest rate fixed at the then-prevailing rate and the prevailing interest rate later rises, the principal amount of our investment will probably decline. To minimize this risk in the future, we intend to maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including commercial paper, money market funds, government and non-government debt securities and certificates of deposit. The risk associated with fluctuating interest rates is limited to our investment portfolio and we do not believe that a 10% change in interest rates will have a significant impact on our interest income. As of March 29, 2003, all of our investments were in money market accounts, certificates of deposit or high quality corporate debt obligations and U.S. government securities.

Our exposure to market risk also relates to the increase or decrease in the amount of interest expense we must pay on our outstanding debt instruments, primarily borrowings under a financing agreement we entered into with a financial institution in March 2001. See Note 5 of the notes to our consolidated financial statements. As of

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March 29, 2003, this facility provides for borrowings up to \$16.0 million, of which approximately \$13.6 million is available for future borrowings. At March 29, 2003, approximately \$1.4 million was outstanding under this facility. The loans bear a variable interest rate based on either the Comerica Bank prime rate or the LIBOR plus 2.0%. The risk associated with fluctuating interest expense is limited to this debt instrument and we do not believe that a 10% change in the prime or LIBOR rate would have a significant impact on our interest expense.

## BUSINESS

### Overview

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. In 2001, the latest period for which market data is available, we were the leader in the advanced wafer probe card market in terms of revenues. Our products are based on our proprietary MicroSpring interconnect technology. This technology, which includes resilient spring-like contact elements, enables us to produce wafer probe cards for applications that require reliability, speed, precision and signal integrity. We manufacture our MicroSpring contact elements through precision micro-machining and scalable semiconductor-like wafer fabrication processes. We offer our customers high parallelism, large area array wafer probe cards to reduce their overall cost of test. We believe that our customers will be able to use our technology to optimize the semiconductor manufacturing pipeline, from initial device design and fabrication through system assembly and test, by performing more advanced test functions on whole wafers in the front-end of the semiconductor manufacturing process, rather than on individual devices in the back-end.

We introduced our first wafer probe card based on our MicroSpring interconnect technology in 1995, and, by the end of 2000, we were the leading supplier of advanced wafer probe cards, based on revenues, according to VLSI Research, an independent research firm. Our customers include the top 10 dynamic random access memory, or DRAM, manufacturers, the world's largest microprocessor company, and three of the top 10 flash memory manufacturers; and, combined, these identified groups of our customers account for substantially all of our revenues. We focus our research and development activities on expanding our products into new markets and developing new applications for our MicroSpring interconnect technology. We manufacture our wafer probe cards in Livermore, California, and sell and support our products worldwide through our direct sales force, a distributor and independent sales representatives.

### Industry Background

Integrated circuits, also commonly referred to as semiconductors, devices or chips, are complex electronic devices made up of a large number of transistors that are fabricated on wafers, packaged and integrated into systems used in a wide range of electronic products, including personal computers, portable electronics, telecommunication equipment, wireless applications and digital consumer electronics. The World Semiconductor Trade Statistics estimates that over 78.6 billion chips were shipped in 2002.

#### *The Continual Evolution of the Chip — Faster, Smaller, Lower Cost*

The ability to integrate increasing numbers of transistors on a given area of silicon has allowed the semiconductor industry to manufacture faster, smaller and more complex devices at a decreasing cost. Over time, the complexity of semiconductors has increased significantly, with the number of transistors on a chip doubling approximately every 18 months, with an accompanying decrease in the cost per device. This evolutionary phenomenon was first articulated by Dr. Gordon Moore, a co-founder of Intel Corporation, and has come to be known as "Moore's Law."

In order to satisfy the demand for faster, smaller and lower cost chips, the semiconductor industry continually develops manufacturing, process and design improvements, most recently including the following:

- *Smaller Geometries.* The ability to reduce the feature sizes within transistors in a chip to .13 micron and below is enabling manufacturers to produce greater numbers of chips per wafer, or the same number of chips with greater complexity, improve performance and reduce cost.
- *300 mm Wafers.* The transition of the standard wafer form factor from 200 mm to 300 mm will more than double the available area on a wafer, significantly increasing the number of chips per wafer and further reducing the cost at which chips can be manufactured.
- *Copper Interconnect.* Because of copper's higher level of conductivity as compared to aluminum, the transition from aluminum to copper as the preferred wiring material for interconnecting layers within chips is enabling higher speeds and greater performance.

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- *Low-K Dielectrics.* The introduction of new insulating materials such as low-k and super low-k dielectrics will enable improved device performance by reducing signal delay and electrical cross-talk, or interference, between increasingly densely-packed electrical connections on a chip.

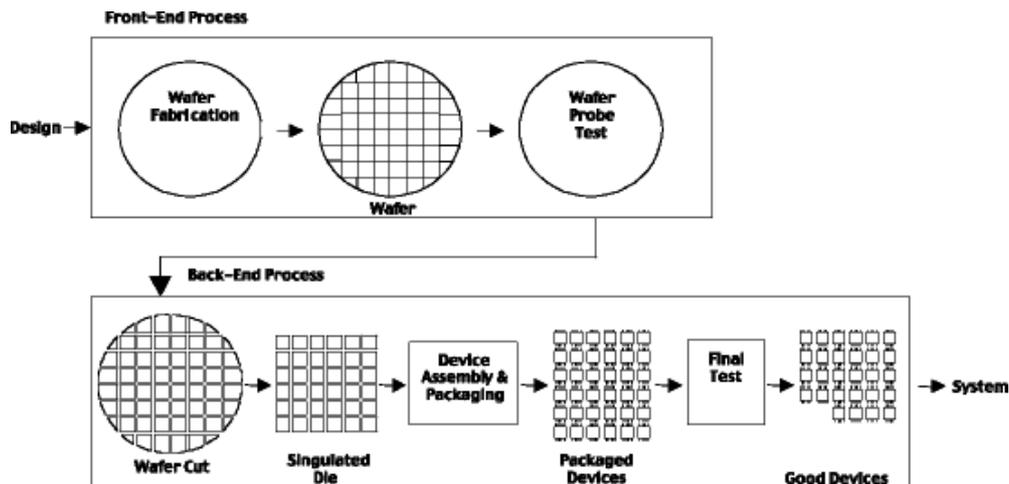
With these changes, the semiconductor industry is currently experiencing a critical technology evolution. This evolution is resulting in a substantial increase in the cost of building new manufacturing capacity, with the cost of a leading edge 300 mm wafer manufacturing facility now approaching or exceeding \$3.0 billion. With ever increasing capital investments, semiconductor manufacturers are focusing on ways to accelerate their return on investment by increasing volumes and yields, decreasing manufacturing costs and improving the time to market of their products.

### *The Chip Manufacturing Front-End and Back-End Processes*

The semiconductor industry has historically separated the manufacture of chips into two distinct parts: the front-end wafer fabrication process, and the back-end assembly, packaging and final test process. The front-end process involves numerous complex and repetitive processing steps, including deposition, photolithography, etch and ion implantation, during which hundreds or even thousands of copies of an integrated circuit are formed simultaneously on a single wafer. After fabrication of the wafer is complete, the wafer is subject to wafer probe test. During wafer probe test, a wafer probe card is mounted in a prober, which is in turn connected to a semiconductor tester, sends an electrical signal through each chip on the wafer and verifies whether the chip performs basic functions, such as sending and receiving electrical signals. In some instances, wafer probe test is also used for more in-depth testing of the performance of the chip against design specifications. All of the steps in the front-end process, including wafer probe test, are performed at the “wafer-level,” before the wafer is cut into individual chips.

After wafer probe test, the wafer is transferred to the back-end portion of the manufacturing process. The first step in the back-end process is singulation, in which the wafer is cut into individual die. As a result of this first step, all subsequent back-end process steps must be performed at the individual chip level and, therefore, cannot be performed with the economies of scale afforded by the whole-wafer steps of the front-end process. After singulation, die that failed wafer probe test are discarded and the remaining die are assembled and packaged. The packaged chips are then subjected to final test over a range of operating conditions and temperatures to confirm that the packaged chips perform according to full specifications. Chips are sorted by performance characteristics and those passing final test standards are ready to be incorporated into a system.

The following diagram depicts the typical design to system semiconductor manufacturing pipeline:



In view of the increasing complexity of semiconductor fabrication, manufacturers have introduced technologies to increase yields and minimize costs. In the front-end process, for example, manufacturers are using metrology and inspection tools to identify, diagnose and minimize fabrication defects. Manufacturers also perform parametric test to verify process uniformity and capability. These tools confirm compliance with some manufacturing criteria, but they cannot test the functional electrical performance of a chip and, therefore, cannot confirm whether chips perform according to specifications.

### *The Significance and Cost of Test*

Test is a critical part of the manufacturing process. In addition to identifying chips that do not function properly, both wafer probe test and final test generate information that may be used to redesign the chip or to implement manufacturing process changes that can result in improved chip yield. Test is the only process step that semiconductor manufacturers perform during both the front-end and back-end processes, and the cost of test is high. According to Infrastructure, Inc., an independent market research firm, the price for a high-end tester for logic chips has increased 25-fold over the last two decades from about \$400,000 per system in the 1980s, to \$3.0 to \$5.0 million in the mid-1990s, to \$6.0 to \$10.0 million today. In addition, according to the International Technology Roadmap for Semiconductors, the cost per pin of testing is expected to remain constant in the near future, while the number of pins per chip is projected to grow by 10% per year, resulting in the cost of test becoming a larger portion of the overall cost of manufacturing a device.

One way to address the high cost of test is to migrate elements of test from the individual chip level of the back-end process to the whole-wafer level of the front-end process. If wafer probe test can be used to provide greater levels of device validation, manufacturers will expend less time and money in the back-end process assembling, packaging and testing defective chips. This test migration will also reduce manufacturers' need to purchase more processing equipment and testers to handle increasingly complex chips and the increasing number of chips per wafer. However, the migration of elements of final test to the front-end process will place significant capability and performance demands on wafer probe test.

### *Wafer Probe Test*

During wafer probe test, wafer probe cards are used as an interface to electrically connect with and test individual chips on a wafer by moving the wafer into contact with the wafer probe card. The contact that occurs between the wafer probe card and the input/output terminals, or bond pads, of the chips on the wafer is commonly called a "touchdown." Some wafer probe cards are capable of contacting the bond pads of more than one chip on the wafer at a time. This capability is known as parallelism. Depending on the number of chips on the wafer, and the testing parallelism capability of the wafer probe card, wafer probe test requires a varying number of touchdowns. For example, in order to test a typical 200 mm DRAM wafer containing approximately 400 to 500 chips, a wafer probe card that tests 32 chips per touchdown could require 15 to 18 touchdowns, depending on the layout of the chips on the wafer. A wafer probe card that tests 16 chips per touchdown could require twice the number of touchdowns to test a whole wafer. An increase in touchdowns means that test requires more time to complete and the cost of test increases.

In order to pass wafer probe test, chips must perform within a range of tolerances established by the manufacturer. A wide range will typically result in a higher yield from the front-end process, but an increased number of failures at final test. A narrow range will typically reduce final test failures and the costs associated with assembling and packaging defective chips, but reduce revenue per wafer because otherwise sellable chips will be discarded after wafer probe test as a result of their being incorrectly identified as failing to meet basic performance requirements — commonly referred to as "false fails."

The accuracy of wafer probe test is a function of the accuracy of the wafer probe test systems, which consist of the semiconductor tester, the prober, and the wafer probe card. The wafer probe card is mounted within the prober, which also houses the wafers to be probed or tested. The wafers are placed on a platform or "chuck" in the prober and precisely aligned with the wafer probe card to permit the probes on the wafer probe card to touchdown on the bond pads of one or more die on the wafer. Once this contact is made, the semiconductor tester, which is connected to the wafer probe card and prober, transmits electrical signals through the wafer probe card to the individual die on the wafer. Signals are then returned back through the wafer probe card to the semiconductor tester for evaluation. The signal integrity of the electrical path in the wafer probe card is a critical element of overall test accuracy. As wafer probe test accuracy increases, manufacturers can reduce the range of tolerance within which a chip must perform and realize an increase in chip yield at final test without suffering an unacceptable loss of yield from false fails at wafer probe test. Accordingly, manufacturers expend considerable time and expense creating test methodologies that optimize wafer probe test systems and wafer probe cards. VLSI Research forecasts that the wafer probe test market, comprised of wafer probe test systems and wafer probe

cards, will grow from \$1.6 billion in 2001 to \$2.5 billion in 2005. VLSI Research also projects that the wafer probe card portion of the overall wafer probe test market will grow from \$392.4 million in 2001 to \$612.5 million in 2005.

Wafer probe cards for testing DRAM, flash, logic and microprocessor chips vary in design depending upon the type and design of the chip to be tested, the number of chips on the wafer, and the testing strategy of the chip manufacturer, including the selected semiconductor tester and prober. For example, these factors will affect the layout of the contact elements, the electrical path design, the presence or absence of additional components, such as capacitors, resistors or active elements, and the tester interface on the wafer probe card.

Wafer probe card purchases are driven by chip design changes and growth in the number of units manufactured. Because every semiconductor design is unique, every new chip design requires the use of a new wafer probe card customized for that design. Design changes result both from implementation of ongoing improvements to the design and manufacturing process of current generation chips and from application of new technologies and processes, such as shrinking geometries and the introduction of copper interconnects and low-k dielectrics. New chip designs will also be required in connection with the transition to 300 mm wafers. During industry upturns when manufacturers are increasing capacity, chip unit growth is the principal driver of wafer probe card demand. However, even in industry downturns, semiconductor manufacturers typically continue to introduce new products or modify the designs of existing products, requiring new wafer probe cards.

### *Conventional Wafer Probe Card Technologies*

VLSI Research divides current probe card technologies into two principal categories: needle probe cards and advanced technology wafer probe cards. The manufacture of needle, or epoxy-ring, probe card technology, which has been in existence for over 30 years, involves the gluing of needles with epoxy in a ring and manually bending the needles, typically a few inches long, to the specifications of a wafer probe card design. Advanced technology wafer probe cards are generally used to test chips with a high number of input/output pins, to test a significant number of chips in parallel, and to perform high speed testing. Advanced technology wafer probe cards include vertical or buckling beam, or COBRA, technology and membrane technology. COBRA probe card technology, based upon technology first described in 1966, uses manually-built vertical beam probes, which are long, slightly curved, vertical wires that buckle slightly as they contact a wafer. Membrane technology, which was introduced in the mid-1980s, probes chips by pressing contact tips mounted on flexible membranes to the wafer. We refer to needle probe cards and advanced technology wafer probe cards using the COBRA and membrane technology as “conventional” wafer probe cards or technologies. VLSI Research also identifies a third technology category, tungsten probes, which do not have widespread application for the faster, smaller and lower cost chips being developed and manufactured by the semiconductor industry.

### *The Limitations of Conventional Wafer Probe Card Technologies*

Conventional wafer probe card technologies are starting to face practical performance limits due to one or more of the following factors:

- *Lack of Parallelism Increases Cost.* Shrinking geometries and the transition to 300 mm wafers increases the number of chips per wafer. This increase imposes significant challenges for manufacturers of conventional wafer probe cards. Unless the number of chips that a wafer probe card is able to contact in parallel increases in proportion to the increasing number of chips on a wafer, the economies of scale generated during the front-end fabrication process cannot be matched during wafer probe test. To meet the demand for higher parallelism and in order to make uniform contact with the chips on the wafer, wafer probe cards need to be manufactured with large area probe arrays that are precisely engineered in a single level plane, or planarized. Because some conventional wafer probe cards must be manufactured in part by hand, those cards cannot, without great difficulty, if at all, be manufactured with precisely planarized probe arrays that are large enough to meet parallelism demands. As a consequence, those cards cannot match the increasing efficiencies of the front-end fabrication process. The result is that the cost of test increases as a percentage of total manufacturing cost.

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- *Poor Signal Integrity Lowers Yield.* Due to the limitations of their electrical characteristics, many conventional wafer probe card technologies limit the degree to which the test environment can replicate the environment in which the chip will be packaged and used. These limitations become more pronounced as operating frequency increases. As a result, conventional wafer probe cards may report a significant number of false fails and the engineering effort to prevent chip yield loss per wafer becomes more difficult.
- *Manual Assembly Impairs Precision.* The manufacture of certain conventional wafer probe cards requires the manual attachment of the probing contact elements. Needle probe cards require manual assembly and positioning, which inherently results in less precision and requires continual adjustment at the chip manufacturer's fabrication facility. This limitation is magnified as device geometries shrink and enable more complex chips with an increasing number of input/output pins. With the increasing number of pins, smaller bond pad sizes are needed to provide electrical connections for those pins, and bond pads must also be located closer to each other, which is referred to as reduced pitch. It will become increasingly difficult for some conventional wafer probe cards, such as those using COBRA technology, to provide predictable contact with bond pads under these circumstances.
- *Testing at Extreme Temperature Negatively Affects Performance.* Wafer probe test is often performed both below and above room temperature in order to replicate the operating condition at which the chip is expected to fail. For the flash memory market in particular, manufacturers may need to test at temperature ranges from -40C to +150 C for chips used in some consumer and automotive applications. As temperature ranges increase, the component materials for conventional wafer probe cards are subject to a greater range of expansion and contraction, which significantly increases the complexity of making accurate contact with the bond pad. This problem is exacerbated by increases in the size of the probe array, or the number of probing elements that contact the bond pads of the chips on the wafer, and by increases in the number of chips under test. These challenges have limited many conventional wafer probe cards to smaller probe array sizes.
- *High Contact Force Reduces Yield and Tester Uptime.* As new materials such as low-k and super low-k dielectrics are introduced into the chip manufacturing process, the force with which the wafer probe card contacts the chips on the wafer becomes increasingly important. Many of these new materials are relatively fragile. In order to make contact, conventional wafer probe cards apply significant force on the bond pads, which can damage the underlying structure of the chips. The likelihood of damage increases as the number of contacts on the same bond pad increases. As a result, the wafer probe card can cause an otherwise fully-functional chip to become defective or can cause latent defects that may impact reliability. This significant contact force also frequently generates debris and contaminants on the bond pads or probe tips, which can impair the electrical contact. Impaired electrical contact can result in false fails and reduced production yield. In addition, the existence of debris and contaminants requires that manufacturers frequently clean the test equipment, resulting in reduced overall tester uptime and increased test costs.

While some conventional wafer probe cards address various performance limitations, no conventional technology resolves all of the performance issues adequately. In many cases, the features of conventional wafer probe cards that solve one or more of the performance limitations compromise the performance of the wafer probe card in other areas. For example, while needle probe cards can provide a fast design to product cycle time that is advantageous for certain wafer test applications and smaller wafer volume requirements, the manual assembly and positioning requirements of needle probe cards negatively impact their precision and ability to meet the demand for higher parallelism arising out of certain other wafer test requirements. As a result, conventional wafer probe card technologies fail to meet the industry's need to reduce test cost. These cost inefficiencies will be magnified by new developments in the front-end process, including shrinking geometries and the move to 300 mm wafers. We believe that in order for the cost of test to keep pace with the decreases in front-end process per chip manufacturing costs, not only must the performance limitations of conventional wafer probe card technologies be resolved, but more of the test functions must be performed at the wafer level. The semiconductor industry needs a solution that addresses the performance limitations of conventional wafer probe card technology and also enables the migration of more elements of final test to the front-end manufacturing process. Such a

solution will help to better integrate the front-end and back-end processes and provides a scalable solution to the rising cost of test.

## The FormFactor Solution

We design, develop, manufacture, sell and support precision, high performance advanced wafer test probe cards based on our proprietary MicroSpring interconnect technology. We believe that our wafer probe cards are the optimal test solution available today for probing chips at the wafer level and offer the potential for our customers to migrate elements of final test to wafer probe test.

Our wafer probe cards address the performance limitations of conventional wafer probe card technologies:

- *Our High Parallelism Advantage Reduces Cost of Test.* Our high parallelism wafer probe cards enable our memory customers to test a significant number of chips in parallel in a single touchdown, reducing the cost of test and improving their time to market. Our wafer probe cards are manufactured with large probe arrays that are precisely planarized in order to contact uniformly the chips on the wafer. For example, our largest commercially available area array wafer probe cards can test most 200 mm DRAM wafers with as few as four touchdowns and most 300 mm DRAM wafers with as few as six touchdowns. This reduced number of touchdowns can significantly decrease total test time per wafer, resulting in a significant reduction in the cost of test.
- *Our High Signal Integrity Improves Yield.* Due to the proprietary metallurgy and design of our wafer probe cards and our proprietary design processes, our wafer probe cards perform wafer probe test with a high level of signal integrity as compared to conventional needle cards. The signal measured at the tip of the MicroSpring contact element is reported to the wafer probe test system with a high degree of accuracy and with minimal signal loss and distortion. The result is that our wafer probe cards precisely measure the working performance of the chips and can operate with a flat or nearly flat response at higher frequencies. The precision of our measuring capability can improve wafer yields because our wafer probe cards generate fewer false fails during the wafer probe test. Our signal integrity also allows our customers to narrow their range of device test tolerances.
- *Precise MicroSpring Technology Enables Precise Probing.* Our MicroSpring contact elements have geometrically precise contact tips that allow our customers to probe the increasingly small bond pad sizes and reduced pitches that chip manufacturers are implementing. We achieve this contact precision by manufacturing our wafer probe cards using micro-machining and semiconductor-like wafer fabrication processes, including deposition and photolithography. Because we employ some of the same processes used in front-end wafer fabrication, we are able to scale our testing capabilities to the shrinking geometries of semiconductors on a wafer. For example, our latest large area array platform is capable of precisely contacting in parallel 256 chips on a wafer having bond pads that measure 60 microns x 60 microns.
- *Compensation for Extreme Temperatures Improves Performance.* The proprietary design of our wafer probe cards allows us to select materials and provide for precise matching of the thermal expansion characteristics of our wafer probe card with the wafer under test. As a result, our wafer probe cards generally are able to accurately probe over a large range of operating temperatures. Our current operating specification range is -40°C to +120°C. This feature enables our customers to use the same wafer probe card for both low and high temperature testing without a loss of performance. In addition, for those testing situations that require positional accuracy at a specific temperature, we have designed wafer probe cards optimized for testing at such temperatures.
- *Lower Contact Force Increases Yield and Tester Uptime.* Our MicroSpring contact elements have precise contact geometries, enabling the use of relatively low contact force during wafer probe test. Our proprietary technology allows us to implement spring elements having a spring constant of approximately one gram force per one-thousandth of an inch, or 1 gmf/mil, as compared to a range of 2 to 3 gmf/mil of deflection to ensure stable, long-term contact performance. The lower contact force permitted by our technology allows our wafer probe cards to test chips incorporating fragile

next-generation materials, such as low-k and super low-k dielectrics, without damaging the chips. As contact force decreases, our MicroSpring interconnect technology allows us to precisely design our contact tip geometries and materials to enable stable contact with current and future bond pad materials, such as copper. This lower contact force is also an advantage for probing solder bump wafers. With lower contact force, our wafer probe cards generate less debris when contacting the bond pads of the chips on the wafer, reducing false fails and reducing the need to clean our wafer probe cards, increasing uptime. This lower contact force, combined with the robust characteristics of our MicroSpring interconnect technology, provides our customers with a very durable and reliable probing solution. Our wafer probe cards also couple this lower contact force with a stable and consistent contact resistance over repeated touchdowns.

In addition to solving the limitations of conventional wafer probe cards, our MicroSpring interconnect technology and our other proprietary design tools and technology enable our customers to realize a lower total cost of test. Although we do not sell semiconductor testers or probers, our wafer probe cards can be designed to work in any manufacturer's wafer probe test system for DRAM, flash, logic and microprocessor devices. We believe that our existing technology enables us to test substantially all currently available DRAM, flash, logic and microprocessor devices, and substantially all emerging DRAM flash, logic and microprocessor devices for which our customers have provided us designs or guidance. We employ a sales model that emphasizes the customer's total cost of ownership as it relates to test costs. We demonstrate how a customer's test costs can be reduced by simulating its test floor environment, including testers and probers, utilizing our products and comparing them to conventional wafer probe cards. We believe that the yield improvement, total cost of ownership and scalability advantages of our wafer probe cards, combined with our efforts to understand and solve our customers' problems, allow us to capture a higher selling price compared to conventional wafer probe cards.

The migration of elements of final test from the packaged chip back-end process to front-end wafer probe test requires a wafer probe card technology that has a flat or nearly flat response at high frequencies along signal transmission lines, a minimal level of electrical cross-talk among signals, or interference, and a high degree of power decoupling, which prevents power supply voltage variations at the chips being tested. We believe that the signal integrity of our wafer probe cards combined with their high parallelism and power decoupling characteristics meet these requirements and will facilitate the migration of elements of final test to front-end wafer probe test. We believe this migration will allow our customers to extend the benefits of wafer-level scaling to elements of final test and thereby enable them to feed back this test information earlier in the design and fabrication process, improving time to market. We believe that this migration will also enable our customers to realize a more cost effective, optimized semiconductor manufacturing pipeline.

### **Strategy**

Our objectives are to enhance our position as the leading supplier of advanced wafer probe card solutions and to apply our MicroSpring interconnect technology to drive economies of scale at the wafer-level in semiconductor test. The principal elements of our strategy include:

*Enhance our Market Leadership in the DRAM Industry.* Our technology and products have enabled the DRAM industry to conduct high parallelism testing at the wafer level, with up to 256 chips under test in parallel. Parallelism is particularly important in the testing of DRAMs. As DRAM densities increase, test times also increase, because the time to test each cell within a chip is relatively fixed. Therefore, higher parallelism test is needed in order to maintain or improve the rate of throughput in test. We believe that in the future DRAM test will benefit by transitioning from high parallelism test to full wafer test in a single touchdown. To this end, we intend to work closely with our customers and business partners to deploy higher parallel solutions which are not commercially available, and ultimately a single touchdown solution for testing 200 mm and 300 mm DRAM wafers.

*Expand our Presence in the Flash Memory Test Market by Leveraging our MicroSpring Interconnect Technology.* The fundamental MicroSpring interconnect technology and large area array capabilities that enable high parallelism DRAM chip testing are transferable to flash memory testing, and we intend to continue to

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leverage into the flash memory test market the expertise and capabilities we have developed in the DRAM market. We successfully introduced in 2001 the industry's first high parallelism wafer probe cards for flash memory. Our existing commercially available technology is designed for flash memory tests up to 64 chips in parallel. We believe that our technology is capable of greater levels of parallelism, up to and beyond testing 128 chips in parallel. We intend to continue penetrating the flash memory test market, as we believe that flash memory will offer us additional growth opportunities outside of the personal computer-centric DRAM and microprocessor markets.

*Increase our Penetration into the Logic Market.* In the logic chip market, time to market is particularly critical, as significant market penetration requires very short lead times. As part of our strategy to address high volume applications, we have entered the microprocessor market. We believe that with increasing pin counts, an increasing number of logic applications will migrate toward large area array packaging, which will create additional opportunities for the use of our products. Our wafer probe cards are also well suited for testing system on a chip, or SOC devices, where leading edge probe capability is required to meet a wide range of electrical, mechanical and temperature requirements. We are working with some of our customers to create custom wafer probe cards for testing SOC devices by addressing the specific pitch, parallelism, signal count, electrical integrity and test frequency requirements of customers' SOC devices. We are also engaged in research and development activities directed to reducing our manufacturing costs and cycle time to compete more effectively, including in short lead time and lower volume wafer test applications.

*Enable Migration of Elements of Final Test to the Wafer Level.* We intend to continue to work with our customers to enable them to migrate elements of final test from the chip level to the wafer level. The benefits of obtaining test results earlier in the manufacturing process will become particularly important as the miniaturization of systems requires manufacturers to deliver fully functioning chips in die form, which increases the importance of having chips validated at the wafer level. For example, in the case of system in a package, or SIP, and small form factor applications, where unpackaged chips are included in a system, an individual chip that is not fully tested at the wafer level might cause the entire system to fail if the chip fails to deliver full performance. An important part of our strategy is to continue working with our customers to identify and implement programs in which our MicroSpring interconnect technology can help to migrate elements of final test to the front-end process.

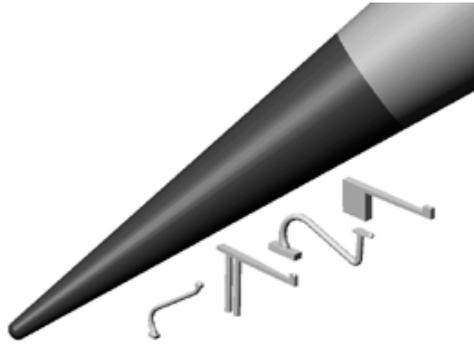
*Extend our Technology Leadership Position.* With our MicroSpring interconnect technology, we have established a leading position in the advanced wafer probe card market. Wafer probe cards provide a rigorous and taxing environment for interconnection structures because they must touchdown on a wafer hundreds of thousands of times. Based on our success in developing wafer probe cards that can address these requirements, we believe that our MicroSpring interconnect technology can be applied in a broad range of applications where reliability, speed, precision and signal integrity are important, including wafer test, wafer-level packaging, final test, burn-in and socket and connector applications. We plan to continue to engage in research and development activities to extend our MicroSpring interconnect technology and other proprietary technologies to these and other applications.

*Continue to Build on our Strategic Relationships.* We have benefited from and plan to continue to rely on relationships with other industry participants. We have developed strategic relationships with leading semiconductor manufacturers and test equipment manufacturers. For example, we have engaged with tester companies, including Advantest Corporation, Agilent Technologies Inc. and Teradyne Inc., to introduce solutions that include wafer probe test systems and wafer probe cards. These engagements are typically informal in nature and have not historically been documented in written agreements. We have also engaged with semiconductor manufacturers to introduce new high parallelism test solutions and high frequency at-speed testing solutions. These engagements typically involve our designing and manufacturing of prototype probe cards for our customers. We believe these strategic relationships will facilitate faster product introduction and market acceptance for our customers and enhance our market position. Our strategic relationships also include licensing arrangements. We select applications for licensing, rather than manufacturing, where the applications are characterized by long adoption cycles, high barriers to entry, or the inclusion of our MicroSpring interconnect technology with one or more technologies that fall outside the area of our core competence.

## FormFactor's MicroSpring Interconnect Technology and Products

Our products are based on our proprietary MicroSpring interconnect technology. Our MicroSpring contacts are springs that optimize the relative amounts of vertical contact force on, and horizontal force across, a bond pad during the test process and maintain their shape and position over a range of compression. These characteristics allow us to achieve reliable, electrical contact on either clean or oxidized surfaces, including bond pads on a wafer. Our MicroSpring contacts enable our wafer probe cards to make hundreds of thousands of touchdowns with minimal maintenance. The MicroSpring contact can be attached to many surfaces, or substrates, including printed circuit boards, silicon wafers, ceramics and various metalized surfaces. This flexibility allows the MicroSpring contact to be considered for use in a broad range of other applications, including chip scale packages, sockets and connectors.

Since its original conception, the MicroSpring contact has evolved into a library of spring shapes and technologies. Our designers use this library to design an optimized custom wafer probe card for each application. Since developing this fundamental technology, we have broadened and refined it to respond to the increasing demands of smaller, faster and more complex semiconductors. Our MicroSpring contacts have scaled in size with the evolution of semiconductors. Depicted in relative scale below are four of our basic spring types compared to a rendering of a standard No. 2 pencil.



Our MicroSpring contacts include geometrically precise tip structures. These tip structures are the parts of our wafer probe cards that contact the chips, and are manufactured using proprietary semiconductor-like processes. These tip structures enable precise contact with small bond pad sizes and pitches. Our technology allows us to specifically design the geometries of the contact tip in order to ensure the most precise and predictable electrical contact is achieved for a customer's particular application. We believe our technology will scale with that of front-end fabrication processes because we use proven semiconductor-like wafer fabrication processes and equipment in our manufacturing processes. As a consequence, we believe we have the ability to shrink wafer probe card contact geometries as necessary to test shrinking chip geometries on the wafer. However, because we do not use costly leading-edge equipment, we are able to manufacture in a less capital-intensive manner.

Our wafer probe cards are custom products that we design to order for our customers' unique wafer designs. Contacting up to 256 chips in parallel requires large area contact array sizes because they must accommodate over 11,000 simultaneous contacts. This requirement poses fundamental challenges that include the planarity of the array, the force needed to make contact and the need to touch all bond pads with equal accuracy. We have developed wafer probe cards that use array sizes ranging from 50 mm x 50 mm to greater than 100 mm x 100 mm, in combination with complex multi-layer printed circuit boards designed by our design team. While leading edge DRAM designs use larger array sizes for highly-parallel applications, smaller array sizes used for DRAM applications a few years ago can be used for today's leading edge applications in the flash memory and logic markets. Our current DRAM contact technology allows our products to contact up to 256 DRAM chips in parallel. Our flash contacting technology allows us to contact up to 144 flash chips in parallel. We believe that

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the levels of parallelism in our wafer probe cards that are produced in volume are one or two generations ahead of the volume production capabilities of our competitors.

We have invested and intend to continue to invest considerable resources in our wafer probe card design tools and process. These tools and processes enable automated routing and trace length adjustment within our printed circuit boards and greatly enhance our ability to rapidly design and lay out complex printed circuit board structures. Our proprietary design tools also enable us to design wafer probe cards particularly suited for testing today's low voltage, high power chips. Low voltage, high power chips require superior power supply performance, and our MicroSpring interconnect technology is used to provide a very low inductance, low resistance electrical path between the power source and the chip under test.

Because our customers typically use our wafer probe cards in a wide range of operating temperatures, as opposed to conducting wafer probe test at one predetermined temperature, we have designed complex thermal compensation characteristics into our products. We select our wafer probe card materials after careful consideration of the potential range of test operating temperatures and design our wafer probe cards to provide for a precise match with the thermal expansion characteristics of the wafer under test. As a result, our wafer probe cards generally are able to accurately probe over a large range of operating temperatures. This feature enables our customers to use the same wafer probe card for both low and high temperature testing without a loss of performance. In addition, for those testing situations that require positional accuracy at a specific temperature, we have designed wafer probe cards optimized for testing at such temperatures.

Our many spring shapes, different geometrically-precise tip structures, various array sizes and diverse printed circuit board layouts enable a wide variety of solutions for our customers. Our designers select the most appropriate of these elements, or modify or improve upon such existing elements, and integrate them with our other technologies to deliver a custom solution optimized for the customer's requirements. We believe that the yield improvement, total cost of ownership and scalability advantages of our wafer probe cards, combined with our efforts to understand and solve our customers' test problems, allow us to capture a higher selling price compared to conventional wafer probe cards.

### **Customers**

Our customers include manufacturers in the DRAM, flash and logic markets. Our customers use our wafer probe cards to test DRAM chips including DDR, RDRAM, SDRAM and EDRAM, static RAM chips, NOR and NAND flash memory chips, Serial Data devices, chipsets, microprocessors and microcontrollers. Our DRAM customers include the 10 largest DRAM manufacturers in the world, and our flash customers include three of the 10 largest flash memory manufacturers in the world. We believe that our products are now used in more than 65 wafer fabrication facilities worldwide. The table below is a representative list of semiconductor manufacturers that use our wafer probe cards:

<b>DRAM Market</b>	<b>Flash Market</b>
Elpida Memory, Inc. Hynix Semiconductor America, Inc. Infineon Technologies AG Micron Technology, Inc. Nanya Technology Corporation PowerChip Semiconductor Corp. ProMOS Technologies Inc. Samsung Electronics Industries Co., Ltd. TECH Semiconductor Singapore Pte. Ltd. Winbond Electronics Corporation	Hitachi Nippon Steel Semiconductor Sing. Pte. Ltd. Intel Corporation Samsung Electronics Industries Co., Ltd. Toshiba Corporation
	<b>Logic Market</b>
	Intel Corporation

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In the three months ended March 29, 2003, sales to three customers accounted for 66.7% of our revenues, with 38.0% attributable to Intel Corporation, 18.7% attributable to Spirox Corporation, our distributor, and 10.0% attributable to Infineon Technologies AG. In fiscal 2002, sales to three customers accounted for 67.9% of our revenues, with 26.9% attributable to Intel Corporation, 20.9% attributable to Spirox Corporation and 20.1% attributable to Infineon Technologies AG. In fiscal 2001, sales to four customers accounted for approximately 75.1% of our revenues, with 26.4% attributable to Spirox Corporation, 20.2% attributable to Samsung Electronics Industries Co., Ltd., 16.1% attributable to Infineon Technologies AG and 12.4% attributable to Intel Corporation. No other customer accounted for more than 10% of our revenues in any of these referenced periods.

### **Strategic Relationships and Licensees**

We work closely with semiconductor tester manufacturers and prober manufacturers to maintain our leadership in advanced wafer probe test and to help our customers achieve faster product introduction and acceptance. For example, we have engaged with tester companies, including Advantest Corporation, Agilent Technologies Inc. and Teradyne Inc., to introduce complete test solutions for semiconductor manufacturers. These engagements are typically informal in nature and are not documented in written agreements. Thus, while we believe they are important to ensure the alignment of our product roadmaps with those of our customers, we have no contractual commitments or guarantees. We have also engaged with semiconductor manufacturers to introduce new high parallelism test solutions and high frequency at-speed testing solutions. These engagements typically involve our designing and manufacturing prototype wafer probe cards for our customers. We believe these relationships also serve to validate our basic test strategies and facilitate an integration of test and manufacturing roadmaps.

In 1998, we introduced a MicroSpring interconnect technology-based wafer level chip scale package using our proprietary MOST technology. MOST technology involves mounting MicroSpring contacts on the die on a wafer to be used both as the temporary connections necessary for test and as the permanent connections necessary to attach the chip to a separate component or module. MOST technology allows wafer level processing at the packaging step, providing customers a high performance, reliable, small footprint packaging solution. If customers combine our MOST technology with a wafer level test contactor, they can integrate the back-end assembly, packaging and final test process steps at the wafer level, allowing significant cost and performance advantages over traditional processing. We have also licensed our MOST technology for specific wafer-level packaging applications and our MicroSpring interconnect technology for incorporation into socket and connector applications.

### **Sales and Marketing**

We sell our products primarily through a sales model that emphasizes the customer's total cost of ownership as it relates to test costs. With this sales model, we strive to demonstrate how test costs can be reduced by simulating the customer's test floor environment, including testers and probers, utilizing our product and comparing the overall cost of test to that of conventional wafer probe cards.

We sell our products worldwide primarily through our direct sales force, a distributor and independent sales representatives. As of March 29, 2003, we had 13 sales professionals. In North America, we sell our products through our direct sales force. In Europe, our local sales team works with independent sales representatives. In South Korea, we sell our products through our direct sales force, while in Taiwan, China and Singapore we sell through Spirox Corporation, our distributor in the region. In Japan, effective April 1, 2002, we converted from a distributor arrangement to a direct sales team that is based in Tokyo, Japan.

Our marketing staff, located in Livermore, California and Tokyo, Japan, works closely with customers to understand their businesses, anticipate trends and define products that will provide significant technical and economic advantages to our customers.

We also utilize a highly skilled team of field application engineers that support our customers as they integrate our products into their manufacturing processes. Through this process, we develop a close understanding of product and customer requirements, speeding our customers' production ramps. We plan to expand our

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customer support by adding engineering services. We believe this expanded service offering will enable our customers to more fully benefit from our products and technology and create new business opportunities for us.

### **Manufacturing**

Our wafer probe cards are custom products that we design to order for our customers' unique wafer designs. We manufacture our products at our facilities in Livermore, California. We believe that we are the first wafer probe card company to successfully utilize micro-machining and scalable semiconductor-like wafer fabrication processes for the volume production of wafer probe cards. Our proprietary manufacturing processes include wirebonding, photolithography, plating and metallurgical processes, dry and electro-deposition, and complex interconnection system design. The critical steps in our manufacturing process are performed in a Class 100 clean room environment. We also expend considerable resources on the assembly and test of our wafer probe cards and on quality control.

We have deployed state of the art shop floor controls and systems that allow our operators to monitor and optimize manufacturing flows and capacity. We also use statistical process control to further enhance the quality of our production processes.

We depend upon suppliers for some components of our manufacturing process, including ceramic substrates and complex printed circuit boards. Some of these components are supplied by a single vendor. Generally, we rely on purchase orders rather than long-term contracts with our suppliers, which subjects us to risks including price increases and component shortages. We continue to evaluate alternative sources of supply for these components.

We are subject to U.S. federal and state and foreign governmental laws and regulations relating to the protection of the environment. We believe that we comply with all material environmental laws and regulations that apply to us. New laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination at our or others' sites or the imposition of new cleanup requirements could have a negative effect on our operating results.

We maintain a repair and service capability in Livermore, California. Since 2000, we have been providing service and maintenance capabilities in our local service center in Seoul, South Korea. In 2002, we expanded our center in Seoul, South Korea to service a greater part of the Asia Pacific region, and in 2003, we opened a local repair and service center in Dresden, Germany. We plan to expand these capabilities in other geographies to provide faster response time to our customers, maximizing the uptime of their wafer probe cards.

### **Research and Development**

The semiconductor industry is subject to rapid technological change and new product introductions and enhancements. We believe that our continued commitment to research and development and timely introduction of new and enhanced wafer probe test solutions and other technologies related to our MicroSpring interconnect technology are integral to maintaining our competitive position. We are investing considerable time and resources in creating structured processes for undertaking, tracking and completing our development projects, and plan to implement those developments into new product or technology offerings. We expect to continue to allocate significant resources to these efforts and to use automation and information technology to provide additional efficiencies in our research and development activities.

We have historically devoted on average approximately 20% of our revenues to research and development programs. Research and development expenses were \$3.5 million for the three months ended March 29, 2003, \$14.6 million for fiscal 2002, \$14.6 million for fiscal 2001 and \$12.0 million for fiscal 2000.

Our research and development and product engineering activities are directed by individuals with significant expertise and industry experience. As of March 29, 2003, we had 69 employees in research and development, of which 62 worked on the design and development of new interconnect and contact technologies related to our core MicroSpring interconnect technology. Of these employees, 42 are engineers and 14 have PhD or MS degrees. The engineering and science disciplines represented in our research and design and product development include:

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polymer science, chemistry, chemical engineering, electrochemistry, metallurgy, materials science, electrical engineering, mechanical engineering, electronic packaging and computer science.

### **Intellectual Property**

Our success depends in part upon our ability to maintain and protect our proprietary technology and to conduct our business without infringing the proprietary rights of others. We rely on a combination of patents, trade secret laws, trademarks and contractual restrictions on disclosure to protect our intellectual property rights.

As of March 29, 2003, we had 136 issued patents, of which 79 are United States patents and 57 are foreign patents. The expiration dates of these patents range from 2012 to 2022. Our issued patents cover our core interconnect technology, as well as some of our inventions related to wafer probe cards and testing, wafer-level packaging and test, sockets and assemblies and chips. In addition, as of March 29, 2003, we had 336 patent applications pending worldwide, including 120 United States applications, 196 foreign national or regional stage applications and 20 Patent Cooperation Treaty applications. We do not know whether our current patent applications, or any future patent applications that we may file, will result in a patent being issued with the scope of the claims we seek, or at all, or whether any patents we may receive will be challenged or invalidated. Even if additional patents are issued, our patents might not provide sufficiently broad coverage to protect our proprietary rights or to avoid a third party claim against one or more of our products or technologies.

We have both registered and unregistered trademarks, including FormFactor, MicroSpring, MOST and the FormFactor logo.

We routinely require our employees, customers, suppliers and potential business partners to enter into confidentiality and non-disclosure agreements before we disclose to them any sensitive or proprietary information regarding our products, technology or business plans. We require employees to assign to us proprietary information, inventions and other intellectual property they create, modify or improve.

Legal protections afford only limited protection for our proprietary rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Others might independently develop similar or competing technologies or methods or design around our patents. In addition, leading companies in the semiconductor industry have extensive patent portfolios and other intellectual property with respect to semiconductor technology. In the future, we might receive claims that we are infringing intellectual property rights of others or that our patents or other intellectual property rights are invalid. We have received in the past, and may receive in the future, communications from third parties inquiring about our interest in licensing certain of their intellectual property or more generally identifying intellectual property that may be of interest to us. For example, we received such a communication from Microelectronics and Computer Technology Corporation in October 2001, with a follow-up letter in January 2002, inquiring about our interest in acquiring a license to certain of their patents and technology, and from IBM Corporation in February 2002 inquiring about our interest in acquiring a license to IBM patents and technology related to high density integrated probes. Neither the Microelectronics and Computer Technology Corporation communications nor the IBM Corporation communication alleged that we were violating protected proprietary rights or threatened to initiate litigation. We have not engaged in a dialog with either company. In August 2002, subsequent to our initiating correspondence with Japan Electronic Materials Corporation regarding the scope of our intellectual property rights and the potential applicability of those rights to certain of its wafer probe cards, Japan Electronic Materials Corporation offered that precedent technologies exist as to one of our foreign patents that we had identified, and also referenced a U.S. patent in which it stated we might take an interest. For the inquiries we have received to date, we do not believe we infringe any of the identified patents and technology.

We have invested significant time and resources in our technology, and it is possible that we will be required to enforce our intellectual property rights against one or more third parties. Litigation may be necessary to defend against claims of infringement or invalidity, to determine the validity and scope of our proprietary rights or those of others, to enforce our intellectual property rights or to protect our trade secrets. Intellectual property litigation is expensive and time-consuming and could divert management's attention from running our business. If an infringement claim against us resulted in a ruling adverse to us, we could be required to pay substantial damages,

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cease the use or sale of infringing products, spend significant resources to develop non-infringing technology, discontinue the use of certain technology or obtain a license to the technology. We cannot predict whether a license agreement would be available, or whether the terms and conditions would be acceptable to us. In addition, many of our customer contracts contain provisions that require us to indemnify our customers for third party intellectual property infringement claims, which would increase the cost to us of an adverse ruling in such a claim. An adverse determination could also prevent us from licensing our technologies and methods to others.

### **Competition**

The wafer probe card market is highly competitive, is comprised of many domestic and foreign companies, and has historically been fragmented with many local suppliers servicing individual customers. Recent consolidation has reduced the number of competitors. Current and potential competitors in the wafer probe card market include Cascade Microtech, Inc., ESJ Corporation, Feinmetall GmbH, Japan Electronic Materials Corporation, Kulicke and Soffa Industries, Inc., Micronics Japan Co., Ltd., MicroProbe, Inc., NanoNexus Inc., Phicom Corporation, Tokyo Cathode Laboratory Co., Ltd. and Wentworth Laboratories, Inc., among others. While some of these competitors offer wafer probe cards that address various of the performance limitations presented in wafer probe test, we believe none of them resolves all of the performance issues adequately. In many cases a competitor that solves one or more performance limitations compromises other areas of wafer probe card performance. In addition to the ability to address wafer probe card performance issues, the primary competitive factors in our industry include product quality and reliability, price, total cost of ownership, lead times, the ability to provide prompt and effective customer service, field applications support and timeliness of delivery. We believe that we compete favorably with respect to these factors.

Some of our competitors are also suppliers of other types of test equipment, or offer both advanced wafer probe cards and needle probe cards, and may have greater financial and other resources than we do. We expect that our competitors will enhance their current wafer probe products and that they may introduce new products that will be competitive with our wafer probe cards. In addition, it is possible that new competitors, including test equipment manufacturers, may offer new technologies that reduce the value of our wafer probe cards.

Additionally, semiconductor manufacturers may implement chip designs that include built-in self-test capabilities or similar functions or methodologies that increase test throughput and eliminate some or all of our current competitive advantages. Our ability to compete favorably is also negatively impacted by low volume orders that do not meet our present minimum volume requirements, by very short cycle time requirements that we cannot meet because of our design or manufacturing processes, by long-standing relationships between our competitors and certain semiconductor manufacturers, and by semiconductor manufacturer test strategies that include low performance semiconductor testers.

### **Employees**

As of March 29, 2003, we had 299 full-time employees, including 69 in research and development, 42 in sales and marketing, 27 in general and administrative functions, and 161 in operations. By region, 267 of our employees were in North America, 20 in Japan, 10 in South Korea and two in Europe. None of our employees is covered by a collective bargaining agreement. We believe our relations with our employees are good.

### **Facilities**

Our corporate headquarters and manufacturing facilities are located in six buildings in Livermore, California totaling approximately 73,700 square feet. We lease these facilities under lease agreements expiring between February 2004 and April 2004.

During 2001, we leased additional facilities in Livermore, California totaling approximately 119,000 square feet. The new facility, currently under construction, will be comprised of a campus of three buildings. The lease for this site commenced in stages between November 2001 and June 2002 and will expire in 2011, with options to renew through 2031. We plan to move our operations to our new facility in 2004. We believe that the new facility will be adequate for our needs for the foreseeable future.

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We also lease office and research and development space totaling approximately 12,000 square feet in Tokyo, Japan; Seoul, South Korea; Munich, Germany; and Budapest, Hungary.

### **Legal Proceedings**

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. As of the date of this prospectus, we are not involved in any material legal proceedings.

## MANAGEMENT

### Executive Officers and Directors

Our executive officers and directors, and their ages and positions as of March 29, 2003 are as follows:

Name	Age	Position
Dr. Igor Y. Khandros	48	President, Chief Executive Officer and Director
Benjamin N. Eldridge	42	Senior Vice President of Development and Chief Technical Officer
Yoshikazu Hatsukano	64	Senior Vice President of Asia-Pacific Operations and President of FormFactor K.K.
Jens Meyerhoff	38	Senior Vice President of Operations and Chief Financial Officer
Frans van Wijk	45	Senior Vice President of Marketing and Business Development
Michael M. Ludwig	41	Vice President of Human Resources and Finance, and Controller
Peter B. Mathews	40	Vice President of Worldwide Sales
Stuart L. Merkadeau	42	Vice President, General Counsel and Secretary
Harrold J. Rust	41	Vice President of Operations
Joseph R. Bronson	54	Director
Dr. William H. Davidow	68	Chairman of the Board of Directors
G. Carl Everett, Jr.	52	Director
James A. Prestridge	71	Director

*Dr. Igor Y. Khandros* founded FormFactor in April 1993. Dr. Khandros has served as our President and Chief Executive Officer as well as a Director since April 1993. From 1990 to 1992, Dr. Khandros served as the Vice President of Development of Tessera, Inc., a provider of chip scale packaging technology that he co-founded. From 1986 to 1990, he was employed at the Yorktown Research Center of IBM Corporation as a member of the technical staff and a manager. From 1979 to 1985, Dr. Khandros was employed at ABEX Corporation, a casting foundry and composite parts producer, as a research metallurgist and a manager, and he was an engineer from 1977 to 1978 at the Institute of Casting Research in Kiev, Russia. Dr. Khandros holds a M.S. equivalent degree in metallurgical engineering from Kiev Polytechnic Institute in Kiev, Russia, and a Ph.D. in metallurgy from Stevens Institute of Technology.

*Benjamin N. Eldridge* has served as our Senior Vice President of Development and Chief Technical Officer since September 2000. Mr. Eldridge also served as our Vice President of Development from June 1997 to September 2000, as our Director of Development from June 1995 to June 1997 and as our Manager of Development Engineering from November 1994 to May 1995. From 1984 to October 1994, he was employed at the TJ Watson Research Center of IBM Corporation, where he held various engineering positions in the Physical Sciences and Computer Science departments. Mr. Eldridge holds a B.S. in electrical engineering from Union College and a M.S. in physics from Rensselaer Polytechnic Institute.

*Yoshikazu Hatsukano* has served as our Senior Vice President of Asia-Pacific Operations since April 2001, and as the President of FormFactor K.K., our wholly owned subsidiary, since December 1998. From 1961 to October 1998, Mr. Hatsukano was employed by various companies affiliated with Hitachi, Ltd., where he held several management positions including the President of Hitachi Micro Systems, Inc. from 1991 to October 1998 and the Vice General Manager of the Hitachi Semiconductor Design and Development Center from 1990 to 1991. Mr. Hatsukano holds a B.S. in electronics from Kyoto University in Kyoto, Japan.

*Jens Meyerhoff* has served as our Senior Vice President of Operations since January 2003 and as our Chief Financial Officer since August 2000. He served as a Senior Vice President from August 2000 to January 2003, and as our Secretary from April 2002 to October 2002. From March 1998 to August 2000, Mr. Meyerhoff served as the Chief Financial Officer and the Senior Vice President, Materials at Siliconix Incorporated, a manufacturer of power and analog semiconductor products. From 1991 to February 1998, Mr. Meyerhoff was employed in various corporate controller and financial positions with the North American subsidiaries as well as the German

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headquarters of Daimler-Benz AG. Mr. Meyerhoff holds a German Wirtschaftsinformatiker degree, which is the equivalent of a finance and information technology degree, from Daimler-Benz's Executive Training program.

*Frans van Wijk* has served as our Senior Vice President of Marketing and Business Development since November 2002. From September 2000 to June 2001, Mr. van Wijk was employed at ON Semiconductor, a manufacturer of advanced semiconductors, where he served as Vice President and General Manager, Broadband Business Group. From 1988 to September 2000, Mr. van Wijk held various positions at Philips Semiconductors, including Senior Vice President and General Manager, Logic Products Group, and General Manager, International Product Marketing. Mr. van Wijk holds a M.S. in electrical engineering from Delft University of Technology, in Delft, The Netherlands.

*Michael M. Ludwig* has served as our Vice President of Human Resources and Finance, and Controller since April 2001. From January 1999 to March 2001, Mr. Ludwig was employed at Elo TouchSystems, Inc., a touch screen manufacturing company, where he most recently served as the Vice President, Systems and Services Group. From 1989 to January 1999, Mr. Ludwig was employed by Beckman Coulter, Inc., a medical diagnostics and life sciences equipment manufacturer, and various of its subsidiaries, holding positions including Finance Director, Clinical Chemistry Division; Director, Strategic Planning and Finance; and Controller. Mr. Ludwig holds a B.S. in business administration from California State Polytechnic University at Pomona.

*Peter B. Mathews* has served as our Vice President of Worldwide Sales since April 1999. From March 1997 to April 1999, Mr. Mathews served as our Director, Worldwide Sales and Business Development. From May 1992 to March 1997, Mr. Mathews was employed at MicroModule Systems, a manufacturer of multichip modules and interconnect test products, where he most recently held the position of Director of Marketing and Business Development. From 1989 to May 1992, he served as the U.S. Sales Manager for the Advanced Packaging Systems Division of Raychem Corporation, a component manufacturer for electronic and energy applications that was acquired by Tyco Electronics Ltd. Mr. Mathews holds a B.S. in chemical engineering from Cornell University.

*Stuart L. Merkadeau* has served as our Vice President, General Counsel and Secretary since October 2002. From July 2000 to October 2002, Mr. Merkadeau served as our Vice President of Intellectual Property. From 1990 to July 2000, Mr. Merkadeau practiced law as an associate and then a partner with Graham & James LLP, where he specialized in licensing and strategic counseling in intellectual property matters. Mr. Merkadeau is admitted to practice in California and registered to practice before the U.S. Patent and Trademark Office. Mr. Merkadeau holds a B.S. in industrial engineering from Northwestern University and a J.D. from the University of California at Los Angeles.

*Harrold J. Rust* has served as our Vice President of Operations since March 2003. From January 2002 to February 2003, Mr. Rust served as our Vice President of Manufacturing. From April 2001 to December 2001, Mr. Rust served as our Senior Director of Probe Head Manufacturing. From 1984 to April 2001, Mr. Rust held various positions in the Storage Technology Division at IBM Corporation, including Business Operations and Planning Manager, and Manufacturing and Engineering Manager. Mr. Rust holds a B.S. in mechanical engineering from the University of California, Davis and a M.S. in mechanical engineering from Stanford University.

*Joseph R. Bronson* has served as a Director since April 2002. Mr. Bronson has served as an Executive Vice President of Applied Materials, Inc., a manufacturer of semiconductor wafer fabrication equipment, since December 2000, and a member of the Office of the President and the Chief Financial Officer of Applied Materials since January 1998. Mr. Bronson also served as a Senior Vice President and as the Chief Administrative Officer of Applied Materials from January 1998 to December 2000 and as Group Vice President of Applied Materials from April 1994 to January 1998. Mr. Bronson serves on the Board of Directors of one publicly traded company, Jacobs Engineering Group Inc. Mr. Bronson is a Certified Public Accountant and holds a B.S. in accounting from Fairfield University and a M.B.A. from the University of Connecticut.

*Dr. William H. Davidow* has served as a Director since April 1995 and as Chairman of the Board of Directors since June 1996. Since 1985, Dr. Davidow has been a general partner of Mohr, Davidow Ventures, a venture capital firm. Dr. Davidow serves as Chairman of the Board of Directors of one publicly traded company,

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Rambus Inc., and Vice-Chairman of another publicly traded company, Numerical Technologies, Inc. Dr. Davidow also serves on the board of directors of one privately held company in addition to FormFactor. Dr. Davidow holds an A.B. and a M.S. in electrical engineering from Dartmouth College, a M.S. in electrical engineering from the California Institute of Technology and a Ph.D. in electrical engineering from Stanford University.

*G. Carl Everett, Jr.* has served as a Director since June 2001. Mr. Everett founded GCE Ventures, a venture advisement firm, in April 2001. From February 1998 to April 2001, Mr. Everett served as Senior Vice President, Personal Systems Group of Dell Computer Corporation. During 1997, Mr. Everett was on a personal sabbatical. From 1978 to December 1996, Mr. Everett held several management positions with Intel Corporation including, Senior Vice President and General Manager of the Microprocessor Products Group and Senior Vice President and General Manager of the Desktop Products Group. Mr. Everett holds a B.A. in business administration from New Mexico State University.

*James A. Prestridge* has served as a Director since April 2002. Mr. Prestridge has served as a consultant for Empirix Inc., a provider of test and monitoring solutions for communications applications, since October 2001. From June 2000 to January 2001, Mr. Prestridge served as a consultant to the companies that were amalgamated into Empirix. Mr. Prestridge served as a director of Teradyne Inc., a manufacturer of automated test equipment, from May 1997 until May 2000. Mr. Prestridge was Vice-Chairman of Teradyne from January 1996 until May 2000 and served as Executive Vice President of Teradyne from 1992 until May 2000. Mr. Prestridge currently serves on the board of directors of one privately held company in addition to FormFactor. Mr. Prestridge holds a B.S. in general engineering from the U.S. Naval Academy and a M.B.A. from Harvard University. Mr. Prestridge served as a Captain in the U.S. Marine Corps.

## **Board of Directors**

All of our current directors were elected pursuant to a voting agreement that we entered into with certain holders of our common stock and holders of our preferred stock. The holders of a majority of our common stock and Series A preferred stock, voting together on an as-converted to common stock basis, designated Dr. Khandros and Mr. Everett for election to our board of directors. The holders of a majority of our Series B preferred stock designated Dr. Davidow for election to our board. The two remaining directors, who are Messrs. Bronson and Prestridge, were designated for election to our board by a majority of our common stock and Series A preferred stock, voting together on an as-converted to common stock basis, and a majority of our Series B, Series C, Series D, Series E, Series F and Series G preferred stock, voting together on an as-converted to common stock basis. Upon the closing of this offering, these board representation rights will terminate and none of our stockholders will have any special rights regarding board representation.

Effective upon the closing of this offering, our certificate of incorporation and bylaws will authorize a board of directors of seven members and at that time, our board of directors will consist of five directors, who will be divided into three classes:

- Class I, whose term will expire at the annual meeting of stockholders expected to be held in 2004;
- Class II, whose term will expire at the annual meeting of stockholders expected to be held in 2005; and
- Class III, whose term will expire at the annual meeting of stockholders expected to be held in 2006.

As a result, only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing on our board of directors for the remainder of their terms. This classification of our board of directors may make it more difficult for a third party to acquire, or may discourage a third party from acquiring, control of our company. Effective upon the closing of this offering, the following individuals will serve as our directors:

- Dr. Khandros and Dr. Davidow will be our Class I directors;
- Mr. Everett will be our Class II director; and
- Messrs. Bronson and Prestridge will be our Class III directors.

## Committees of the Board of Directors

Our board of directors has established three standing committees: the audit committee, the compensation committee and the governing committee.

*Audit Committee.* The audit committee reviews and evaluates our financial statements, accounting practices and our internal audit and control functions, makes recommendations to our board regarding the selection of our independent auditors and reviews the results and scope of the audit and other services provided by our independent auditors. The members of our audit committee are Messrs. Bronson, Everett and Prestridge.

*Compensation Committee.* The compensation committee reviews and makes recommendations to our board concerning the compensation and benefits of our officers and directors, administers our stock option and employee benefits plans and reviews general policy relating to compensation and benefits. The members of our compensation committee are Messrs. Bronson and Everett and Dr. Davidow.

*Governing Committee.* The governing committee considers and makes recommendations to our board of directors regarding candidates to serve as members of our board. The members of the governing committee are Messrs. Everett and Prestridge and Dr. Davidow.

## Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time been one of our officers or employees. None of our executive officers serves or in the past has served as a member of the board of directors or compensation committee of any entity that has one or more of its executive officers serving on our board of directors or our compensation committee.

## Director Compensation

Effective fiscal 2003, our independent directors receive annual compensation of \$12,500, compensation of \$1,000 for each board meeting attended, and compensation of \$500 for each board committee meeting attended. Prior to fiscal 2003, our independent directors did not receive cash compensation for their services as directors. Our directors, other than our independent directors, do not receive cash compensation for their services as directors. All of our directors, including our independent members, are reimbursed for their reasonable expenses in attending board and board committee meetings. Directors have been eligible to participate in our management incentive option plan and our 1996 stock option plan. The following directors have been granted options to purchase shares of our common stock in fiscal 2002:

- In April 2002, we granted Mr. Bronson an option under the management incentive option plan to purchase 50,000 shares of our common stock at an exercise price of \$6.50 per share.
- In April 2002, we granted Mr. Prestridge an option under the management incentive option plan to purchase 50,000 shares of our common stock at an exercise price of \$6.50 per share.

Each director will be eligible to participate in our 2002 equity incentive plan. Under this plan, option grants to directors who are not our employees, or employees of a parent or subsidiary of ours, will be automatic and non-discretionary. Each non-employee director who is a member of our board of directors before the date of this offering and who has not received a prior option grant will receive an option to purchase 12,500 shares of our common stock effective upon this offering. Each non-employee director who becomes a member of our board of directors on or after the date of this offering will be granted an option to purchase 12,500 shares of our common stock as of the date that director joins the board. Immediately after each annual meeting of our stockholders, each non-employee director will automatically be granted an additional option to purchase 12,500 shares of our common stock, as long as the non-employee director is a member of our board on that date and has served continuously as a member of our board for at least twelve months since the last option grant to that non-employee director. If less than twelve months has passed, then the number of shares subject to the option granted after the annual meeting will be equal to 12,500 multiplied by a fraction, the numerator of which is the number of days that have elapsed since the last option grant to that director and the denominator of which is 365 days.

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Each option will have an exercise price equal to the fair market value of our common stock on the date of grant. The options will have ten-year terms and will terminate three months after the date the director ceases to be a director or consultant or twelve months if the termination is due to death or disability. All options granted to non-employee directors who first became members of our board of directors after the date of this offering will vest over a one-year period at a rate of 1/12th of the total shares granted at the end of each full succeeding month, so long as the non-employee director continuously remains our director or consultant. All succeeding option grants to non-employee directors who were members of our board of directors prior to the date of this offering will vest as to 1/12th of the total shares granted at the end of each full succeeding month from the later of the date of grant or the date when all outstanding stock options and all outstanding shares issued upon exercise of any stock options granted to the non-employee director prior to the grant of such succeeding grant have fully vested. In the event of our dissolution or liquidation or a change in control transaction, options granted to our non-employee directors under the plan will become 100% vested and exercisable in full.

Members of our board of directors, who are employees of FormFactor, or any parent or subsidiary of FormFactor and who own our common stock or hold options to purchase our common stock in an amount less than 5% of our total outstanding shares, will be eligible to participate in our 2002 employee stock purchase plan. For additional information, see “— Employee Benefit Plans and Option Grants — 2002 Employee Stock Purchase Plan.”

### Executive Compensation

The following table presents information regarding the compensation received during fiscal 2002 and 2001 by our chief executive officer and each of our four other most highly compensated executive officers. The compensation table excludes other compensation in the form of perquisites and other personal benefits to a named executive officer where that compensation constituted less than the lesser of \$50,000 or 10% of his total annual salary and bonus for such fiscal year.

Name and Principal Position	Year	Annual Compensation		Long-Term Compensation Awards
		Salary	Bonus	Securities Underlying Options
Dr. Igor Y. Khandros President and Chief Executive Officer	2002	\$252,756	\$115,800	—
	2001	228,923	27,943	—
Benjamin N. Eldridge Senior Vice President of Development and Chief Technical Officer	2002	201,387	77,760	94,500
	2001	190,769	18,629	52,105
Yoshikazu Hatsukano Senior Vice President of Asia-Pacific Operations and President of FormFactor K.K.	2002	237,815(1)	89,115	31,500
	2001	200,495(2)	20,750(2)	43,770
Jens Meyerhoff Senior Vice President of Operations and Chief Financial Officer	2002	209,849	77,760	142,500
	2001	190,077	15,046	102,485
Peter B. Mathews Vice President of Worldwide Sales	2002	251,179(3)	—	58,500
	2001	271,565(4)	—	35,000

(1) The U.S. dollar equivalent of the salary, which is paid to Mr. Hatsukano in Japanese Yen, is calculated using the exchange rate at December 27, 2002 of one U.S. dollar to 119.92 Japanese Yen.

(2) The U.S. dollar equivalent of the salary and bonus, which is paid to Mr. Hatsukano in Japanese Yen, is calculated using the exchange rate at December 28, 2001 of one U.S. dollar to 131.30 Japanese Yen.

(3) Includes \$88,099 in sales commissions.

(4) Includes \$121,969 in sales commissions.

### Option Grants in Fiscal 2002

The following table presents information regarding grants of stock options during fiscal 2002 to the executive officers named in the executive compensation table above. We granted these options to the named executive officers under our management incentive option plan. All of the options listed on the following table expire ten years from the date of grant and were granted at an exercise price equal to the fair market value of our

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common stock as determined by our board of directors on the date of grant. The percentage of total options granted to employees in fiscal 2002 is based on options to purchase a total of 1,999,243 shares of our common stock granted in fiscal 2002.

Name	Individual Grants				Potential Realizable Value At Assumed Annual Rates of Stock Price Appreciation for Option Term	
	Number of Securities Underlying Options Granted	% of Total Options Granted to Employees in Fiscal Year	Exercise Price Per Share	Expiration Date	5%	10%
Dr. Igor Y. Khandros	—	—%	\$ —	—	\$ —	\$ —
Benjamin N. Eldridge	63,000	3.2	6.50	4/17/12		
	31,500	1.6	6.50	4/17/12		
Yoshikazu Hatsukano	31,500	1.6	6.50	4/17/12		
Jens Meyerhoff	95,000	4.8	6.50	4/17/12		
	47,500	2.4	6.50	4/17/12		
Peter B. Mathews	39,000	2.0	6.50	4/17/12		
	19,500	1.0	6.50	4/17/12		

Potential realizable values are calculated by:

- multiplying the number of shares of our common stock subject to a given option by the assumed initial public offering price of \$ — per share;
- assuming that the aggregate stock value derived from that calculation compounds at the annual 5% or 10% rates shown in the table for the entire ten-year term of the option; and
- subtracting from that result the total option exercise price.

The 5% and 10% assumed annual rates of stock price appreciation are required by the rules of the Securities and Exchange Commission and do not represent our estimate or projection of future stock price growth. Actual gains, if any, on stock option exercises will be dependent on the future performance of our common stock.

The options for 63,000 shares of our common stock granted to Mr. Eldridge vest in 12 equal monthly increments beginning on November 21, 2005 and the option for 31,500 shares vests in 12 equal monthly increments beginning on November 21, 2006. The option granted to Mr. Hatsukano vests in 12 equal monthly increments beginning on December 1, 2005. The options for 95,000 shares of our common stock granted to Mr. Meyerhoff vest in 12 equal monthly increments beginning on August 7, 2005 and the option for 47,500 shares vests in 12 equal monthly increments beginning on August 7, 2006. The options for 39,000 shares of our common stock granted to Mr. Mathews vest in 12 equal monthly increments beginning on March 6, 2005 and the option for 19,500 shares vests in 12 equal monthly increments beginning on March 6, 2006. These options provide that the optionholder will receive credit for an additional 12 months of service when calculating the number of shares of our common stock that vest after a change in control of FormFactor where the officer's employment is terminated without cause within 12 months following the change in control transaction.

### Aggregate Option Exercises in Fiscal 2002

The following table presents the number of shares of our common stock subject to unexercised options held by the executive officers named in the executive compensation table above at December 28, 2002 and the value of the unexercised options that are in-the-money. This value is calculated based on the difference between an assumed initial public offering price of \$ per share and the exercise price for the shares underlying the

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option, multiplied by the number of shares. None of the named executive officers exercised any options to purchase our common stock in fiscal 2002.

Name	Number of Securities Underlying Unexercised Options at December 28, 2002		Value of Unexercised In-The-Money Options at December 28, 2002	
	Exercisable	Unexercisable	Exercisable	Unexercisable
Dr. Igor Y. Khandros	—	—	\$ —	\$ —
Benjamin N. Eldridge	316,605	—	—	—
Yoshikazu Hatsukano	195,270	—	—	—
Jens Meyerhoff	344,985	—	—	—
Peter B. Mathews	173,000	—	—	—

### **Change of Control and Severance Agreements**

In September 2001, our board adopted our key management bonus plan, which provides awards to our chief executive officer, senior vice presidents and vice presidents based upon the target percentage achievement of corporate objectives and personal objectives for these individuals. If a change in control of FormFactor occurs, all bonus awards will be deemed to have been earned at 100% of the bonus target percentage for the current plan year and will be paid to the participants at that time. This plan is administered by the compensation committee of our board of directors. For additional information, see “— Employee Benefit Plans and Option Grants — Key Management Bonus Plan.”

Our current stock option agreements for our officers provide that the optionholder will receive credit for an additional 12 months of service when calculating the number of shares of our common stock that vest after a change in control of FormFactor where the officer’s employment is terminated without cause within 12 months following the change in control transaction. For additional information, see “— Employee Benefit Plans and Option Grants.”

We have entered into an agreement with Mr. Hatsukano, our Senior Vice President of Asia-Pacific Operations and the President of FormFactor K.K., that provides that if his employment is terminated, he will receive a severance payment equal to one month’s base salary for each year of service with us with service for partial years to be prorated. If Mr. Hatsukano’s employment is terminated for reasons other than cause, he will receive an additional lump sum payment equal to one month’s base salary.

### **Employee Benefit Plans and Option Grants**

#### *Incentive Option Plan*

As of March 29, 2003, options to purchase 1,574,800 shares of our common stock were outstanding under our incentive option plan and 3,020,398 shares were available for future option grants. The options had a weighted average exercise price of \$5.55 per share. Our employees who have an annual base salary equal to or greater than \$60,000 are eligible to receive awards under the incentive option plan. Awards can be incentive stock options, nonqualified stock options, or any combination of the two. No options will be granted under our incentive option plan after this offering. However, any outstanding options granted under our incentive option plan will remain outstanding and subject to our incentive option plan and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our incentive option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

#### *Management Incentive Option Plan*

As of March 29, 2003, options to purchase 1,435,730 shares of our common stock were outstanding under our management incentive option plan and 93,827 shares were available for future option grants. The options had a weighted average exercise price of \$6.20 per share. Our employees, consultants and directors are eligible to receive awards under the management incentive option plan. Awards can be incentive stock options, nonqualified

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stock options, or any combination of the two. No options will be granted under our management incentive option plan after this offering. However, any outstanding options granted under our management incentive option plan will remain outstanding and subject to our management incentive option plan and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our management incentive option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

### *1995 Stock Plan and 1996 Stock Option Plan*

As of March 29, 2003, options to purchase 25,000 shares of our common stock were outstanding under our 1995 stock plan and no shares were available for future option grants. The options outstanding under the 1995 stock plan had a weighted average exercise price of \$0.12 per share. Our employees and consultants were eligible to receive awards under the 1995 stock plan. As of March 29, 2003, options to purchase 2,639,498 shares of our common stock were outstanding under our 1996 stock option plan and 123,083 shares of our common stock remained available for future option grants. The options outstanding under the 1996 stock option plan had a weighted average exercise price of \$5.47 per share. Our employees, consultants and directors are eligible to receive awards under the 1996 stock option plan. No options will be granted under our 1996 stock option plan after this offering. However, any outstanding options granted under our 1995 stock plan or 1996 stock option plan will remain outstanding and subject to our 1995 stock plan and 1996 stock option plan, as applicable, and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our 1995 stock plan or 1996 stock option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

### *2002 Equity Incentive Plan*

In April 2002 our board of directors adopted and in May 2002 our stockholders approved our 2002 equity incentive plan. The 2002 equity incentive plan will become effective on the date of this prospectus and will serve as the successor to our previously existing stock option plans. The 2002 equity incentive plan authorizes the award of options, restricted stock and stock bonuses.

Our 2002 equity incentive plan will be administered by the compensation committee of our board of directors, each member of which is an outside director as defined under applicable federal tax laws. Our compensation committee will have the authority to interpret this plan and any agreement entered into under the plan, grant awards and make all other determinations for the administration of the plan.

Our 2002 equity incentive plan provides for the grant of both incentive stock options that qualify under Section 422 of the Internal Revenue Code and nonqualified stock options. The incentive stock options may be granted only to our employees or employees of any of our subsidiaries. The nonqualified stock options, and all awards other than incentive stock options, may be granted to our employees, officers, directors, consultants, independent contractors and advisors and those of any of our subsidiaries. However, consultants, independent contractors and advisors are only eligible to receive awards if they render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. The exercise price of incentive stock options must be at least equal to the fair market value of our common stock on the date of grant. The exercise price of incentive stock options granted to 10% stockholders must be at least equal to 110% of the fair market value of our common stock on the date of grant.

The maximum term of the options granted under our 2002 equity incentive plan is ten years. The awards granted under this plan may not be transferred in any manner other than by will or by the laws of descent and distribution and may be exercised during the lifetime of the optionee only by the optionee. Our compensation committee may allow exceptions to this restriction for awards that are not incentive stock options. Options granted under our 2002 equity incentive plan expire one month after the termination of the optionee's service to us or to a parent or subsidiary of ours for cause, three months if the termination is for reasons other than death, disability or cause, or 12 months if the termination is due to death or disability. In the event of a liquidation, dissolution or change in control transaction, except for options granted to non-employee directors, the options may be assumed or substituted by the successor company. Except for options granted to non-employee directors,

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options that are not assumed or substituted will expire on the transaction at the time and on the conditions as our compensation committee will determine. In the event of a change in control transaction in which an optionee, other than a non-employee director, is terminated without cause within 12 months following the change in control, our current stock option agreements provide for 12 months of accelerated vesting of the optionee's shares of our common stock.

We have reserved 500,000 shares of our common stock for issuance under the 2002 equity incentive plan. The number of shares reserved for issuance under this plan will be increased by:

- the number of shares of our common stock reserved under our incentive option plan, management incentive option plan and 1996 stock option plan that are not issued or subject to outstanding grants on the date of this prospectus;
- the number of shares of our common stock issued under our incentive option plan, management incentive option plan, 1995 option plan or 1996 stock option plan that we repurchase at the original purchase price; and
- the number of shares of our common stock issuable upon exercise of options granted under our incentive option plan, management incentive option plan, 1995 option plan or 1996 stock option plan that expire or become unexercisable at any time after this offering without having been exercised in full.

In addition, under the terms of our 2002 equity incentive plan, the number of shares of our common stock reserved for issuance under the plan will increase automatically on January 1 of each year starting in 2004 by an amount equal to 5% of our total outstanding shares as of the immediately preceding December 31.

Shares available for grant and issuance under our 2002 equity incentive plan include:

- shares of our common stock issuable upon exercise of an option granted under this plan that is terminated or cancelled before the option is exercised;
- shares of our common stock issued upon exercise of any option granted under this plan that we repurchase at the original purchase price;
- shares of our common stock subject to awards granted under this plan that are forfeited or that we repurchase at the original issue price; and
- shares of our common stock subject to stock bonuses granted under this plan that otherwise terminate without shares being issued.

During any calendar year, no person will be eligible to receive more than 1,000,000 shares, or 3,000,000 shares in the case of a new employee, under our 2002 equity incentive plan. Our 2002 equity incentive plan will terminate in 2012, unless it is terminated earlier by our board of directors.

### ***2002 Employee Stock Purchase Plan***

In April 2002 our board of directors adopted and in May 2002 our stockholders approved our 2002 employee stock purchase plan. The 2002 employee stock purchase plan will become effective on the first day on which price quotations are available for our common stock on the Nasdaq National Market. The employee stock purchase plan is designed to enable eligible employees to purchase shares of our common stock at a discount on a periodic basis.

Our compensation committee will administer the 2002 employee stock purchase plan. Our employees generally will be eligible to participate in this plan if they are employed by us, or a subsidiary of ours that we designate, for more than 20 hours per week and more than five months in a calendar year. Our employees are not eligible to participate in our 2002 employee stock purchase plan if they are 5% stockholders or would become 5% stockholders as a result of their participation in the plan. Under the 2002 employee stock purchase plan, eligible employees may acquire shares of our common stock through payroll deductions, or through a single lump sum cash payment in the case of the first offering period. Our eligible employees may select a rate of payroll deduction

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between 1% and 15% of their cash compensation. For the first offering period, employees will automatically be granted an option based on 15% of their cash compensation during the first purchase period. An employee's participation in this plan will end automatically upon termination of employment for any reason. In the event of a change in control transaction, this plan will continue with regard to any offering periods that commenced prior to the closing of the proposed transaction and shares will be purchased based on the fair market value of the surviving corporation's stock on each purchase date, unless otherwise provided by our compensation committee.

No participant will be able to purchase shares having a fair market value of more than \$25,000, determined as of the first day of the applicable offering period, for each calendar year in which the employee participates in the 2002 employee stock purchase plan. Except for the first offering period, each offering period will be for two years and will consist of four six-month purchase periods. The first offering period is expected to begin on the first day on which price quotations are available for our common stock on the Nasdaq National Market. The first purchase period may be more or less than six months long. After that, the offering periods will begin on February 1 and August 1. The purchase price for shares of our common stock purchased under the 2002 employee stock purchase plan will be 85% of the lesser of the fair market value of our common stock on the first day of the applicable offering period or the last day of each purchase period. Our compensation committee will have the power to change the starting date of any later offering period, the purchase date of a purchase period and the duration of any offering period or purchase period without stockholder approval if this change is announced before the relevant offering period or purchase period. Our 2002 employee stock purchase plan is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code.

We have reserved 1,500,000 shares of our common stock for issuance under the 2002 employee stock purchase plan. The number of shares reserved for issuance under the plan will increase automatically on January 1 of each year, starting in 2004, by an amount equal to 1% of our total outstanding shares as of the immediately preceding December 31. Our board of directors or compensation committee may reduce the amount of the increase in any particular year. The 2002 employee stock purchase plan will terminate in April 2012, unless it is terminated earlier by our board of directors.

### ***Key Management Bonus Plan***

In September 2001, our board adopted our key management bonus plan, which provides awards to our chief executive officer, senior vice presidents, vice presidents and other employees based upon the percentage achievement of corporate objectives and personal objectives for these individuals. Bonus target percentages for these awards for each participant level are established for each fiscal year. Corporate objectives are also established for each fiscal year. In fiscal 2003, the corporate objectives are bookings, net sales and operating margin for our company. Personal objectives are determined by the participants in consultation with their immediate supervisors and these objectives are generally critical to the success of the participant in our company and relate to the overall business priorities of FormFactor. For each participant, percentage participation rates are based upon the level of that individual's responsibility and the scope of that individual's work in our organization. In the event of a change of control of FormFactor, all bonus awards will be deemed to have been earned at 100% of the bonus target percentage for the current plan year and will be paid to the participants at that time. This plan is administered by the compensation committee of our board of directors.

### ***Sales Incentive Plan***

We have implemented a sales incentive plan that provides incentive commissions to each member of our sales force who is a vice president, director, area manager or regional manager. These commissions are based upon bookings for the region in which the sales member participates and upon management objectives regarding our revenues, backlog and market share. The commissions of each participating member of our sales force are calculated based upon a percentage of that member's base salary with the commission allocated between the bookings targets and the management buy objectives. These incentive commissions are paid on a quarterly basis.

### **401(k) Plan**

We sponsor a defined contribution plan intended to qualify under Section 401 of the Internal Revenue Code, or a 401(k) Plan. Employees are generally eligible to participate in this plan. Participants may make pre-tax contributions to the plan of up to 25% of their eligible earnings, subject to a statutorily prescribed annual limit. Each participant is fully vested in his or her contributions and the investment earnings. We may make matching contributions on a discretionary basis to the 401(k) Plan but had not done so as of March 29, 2003. Contributions by us, if any, would generally be deductible by us when made. Contributions are held in trust as required by law. Individual participants may direct the trustee to invest their accounts in authorized investment alternatives.

### **Indemnification of Directors and Officers and Limitation of Liability**

Our certificate of incorporation eliminates the personal liability of a director for monetary damages resulting from any breach of his fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Our bylaws provide that:

- we are required to indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions where indemnification is not permitted by applicable law;
- we are required to advance expenses, as incurred, to our directors and officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and
- the rights conferred in the bylaws are not exclusive.

In addition to the indemnification required in our certificate of incorporation and bylaws, we intend to enter into indemnification agreements with each of our current directors and executive officers, which may, in some cases, be broader than the indemnification provisions set forth under Delaware law. These agreements will provide for the indemnification of our directors and executive officers for all expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were our agents. We also intend to obtain directors' and officers' insurance to cover our directors, officers and some of our employees for liabilities, including liabilities under securities laws. We believe that these indemnification provisions and agreements and this insurance are necessary to attract and retain qualified directors and executive officers.

The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees regarding which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the Securities and Exchange Commission this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

## RELATED PARTY TRANSACTIONS

Since December 27, 1999, we have not been a party to, and we have no plans to be a party to, any transaction or series of similar transactions in which the amount involved exceeded or will exceed \$60,000 and in which any current director, executive officer, holder of more than 5% of our common stock or entities affiliated with them had or will have an interest, other than as described under “Management” and in the transactions described below.

### Stock Sales to Insiders

The following table summarizes purchases of our common stock since December 27, 1999 by our executive officers, directors and holders of more than 5% of our common stock.

Purchaser	Shares of Common Stock	Total Purchase Price	Date of Purchase
Dr. Igor Y. Khandros President, Chief Executive Officer and Director	100,000	\$600,000	11/14/00
Jens Meyerhoff Senior Vice President of Operations and Chief Financial Officer	100,000	550,000	10/17/00
Stuart L. Merkadeau Vice President, General Counsel and Secretary	36,363	199,997	10/17/00
Dr. William H. Davidow Chairman of the Board of Directors	100,000	650,000	3/13/02
Joseph R. Bronson Director	10,000	65,000	5/2/02

The following table summarizes purchases of our preferred stock since December 27, 1999 by our executive officers, directors and holders of more than 5% of our outstanding stock and entities affiliated with them. We sold 633,130 shares of our Series F preferred stock from September 2000 to November 2000 at \$11.00 per share. Each share of our preferred stock will convert automatically into one share of our common stock upon the closing of this offering.

Purchaser	Shares of Series F Preferred Stock
Yoshikazu Hatsukano Senior Vice President of Asia-Pacific Operations and President of FormFactor K.K.	5,000
James A. Prestridge Director	348

### Registration Rights

We have entered into an investors' rights agreement with each of the purchasers of preferred stock listed above. Under this agreement, these and other stockholders and warrant holders are entitled to registration rights with respect to their shares of common stock issuable upon the automatic conversion of their preferred stock upon the closing of this offering. For additional information, see “Description of Capital Stock — Registration Rights.”

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### Loans to Executive Officers

In connection with exercises of options to purchase our common stock, the following executive officers delivered full recourse promissory notes, each with a six-year term and bearing interest at the annual rate indicated below, compounded semi-annually, on the dates and in the amounts in the table below. These notes are secured by the shares purchased by the executive officer or director.

<b>Borrower</b>	<b>Principal Amount</b>	<b>Interest Rate</b>	<b>Loan Date</b>	<b>Shares Purchased</b>
Dr. Igor Y. Khandros President, Chief Executive Officer and Director	\$599,900	5.92%	11/14/00	100,000
Benjamin N. Eldridge Senior Vice President of Development and Chief Technical Officer	80,000 4,500 9,874	5.51 6.29 5.91	2/27/98 8/05/97 4/08/97	100,000 45,000 59,840
Jens Meyerhoff Senior Vice President of Operations and Chief Financial Officer	549,900	6.00	10/17/00	100,000
Peter B. Mathews Vice President of Worldwide Sales	8,663	5.91	4/08/97	52,500
Stuart L. Merkadeau Vice President, General Counsel and Secretary	199,960	6.00	10/17/00	36,363

As of March 29, 2003, the principal amount of and the accrued interest on these loans were outstanding. The executive officers who are selling stockholders have agreed to repay the outstanding principal of and unpaid accrued interest on their respective loans and to pay the related tax liability in full from the net proceeds that they will receive from the shares of common stock that they sell in this offering.

On February 1, 2001, we loaned \$150,000 to Mr. Merkadeau, our Vice President, General Counsel and Secretary, under a loan agreement. This loan is evidenced by a full recourse promissory note with an interest rate of 5.01% per year, compounded semiannually. This loan is secured by up to 125,000 shares of our common stock that are issuable to Mr. Merkadeau under a stock option agreement. This loan is due and payable upon the earliest to occur of the sale of his residence or February 1, 2007. As of March 29, 2003, the entire principal amount and the accrued interest of this loan were outstanding.

### Indemnification Agreements

We intend to enter into indemnification agreements with each of our current directors and executive officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to FormFactor, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. We also intend to enter into indemnification agreements with our future directors and executive officers.

### Relationships with Intel Corporation

In connection with the purchase by Intel Corporation of our preferred stock in August 1997, we provided to Intel registration rights with respect to their shares of our common stock issuable upon the automatic conversion of their preferred stock under an investors' rights agreement. We have entered into agreements with Intel Corporation under which we sell to them our wafer probe cards and related services. The agreements do not obligate Intel to purchase our products. We sell products based on Intel purchase orders and the terms of the agreements. Under these agreements, we price our products and services to Intel at the lowest price that is charged to any of our other customers for the same products and services. We received \$7.0 million in the three months ended March 29, 2003 and \$21.2 million in fiscal 2002 from sales of our wafer probe cards and related installation, training and support services to Intel.

## PRINCIPAL AND SELLING STOCKHOLDERS

The following table presents information regarding the beneficial ownership of our common stock as of March 29, 2003, and as adjusted to reflect the sale of our common stock in this offering, for:

- each person or entity known by us to own beneficially more than 5% of our common stock;
- each of our current directors;
- each of our current executive officers;
- all of our current directors and executive officers as a group; and
- all other selling stockholders.

The percentage of beneficial ownership for the following table is based on 27,707,684 shares of our common stock outstanding as of March 29, 2003, assuming the automatic conversion of all outstanding shares of our preferred stock into 23,002,626 shares of our common stock, which will occur upon the closing of this offering. The percentage of beneficial ownership after the offering is based on \_\_\_\_\_ shares of our common stock issued in connection with this offering, assuming no exercise of the underwriters' over-allotment option.

Beneficial ownership is determined under the rules and regulations of the Securities and Exchange Commission and does not necessarily indicate beneficial ownership for any other purpose. Under these rules, beneficial ownership includes those shares of common stock over which the stockholder has sole or shared voting or investment power. It also includes shares of common stock that the stockholder has a right to acquire within 60 days of March 29, 2003 through the exercise of any option, warrant or other right, and restricted shares of our common stock, which are subject to a lapsing right of repurchase at their initial purchase price, purchased by some of our officers who exercised immediately exercisable options. The percentage ownership of the outstanding common stock, however, is based on the assumption, expressly required by the rules and regulations of the Securities and Exchange Commission, that only the person or entity whose ownership is being reported has exercised options or warrants into shares of our common stock.

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To our knowledge, except under community property laws or as otherwise noted, the persons named in the table have sole voting and sole investment power with respect to all shares beneficially owned. Unless otherwise indicated, each 5% stockholder listed below maintains a mailing address of c/o FormFactor, Inc., 2140 Research Drive, Livermore, California 94550.

Name of Beneficial Owner	Shares Beneficially Owned Prior to Offering		Shares Being Offered	Shares Beneficially Owned After Offering	
	Number	Percent		Number	Percent
Dr. Igor Y. Khandros(1)	6,100,000	22.0%			%
Dr. William H. Davidow(2)	5,328,281	19.2	—	5,328,281	
Entities affiliated with Mohr, Davidow Ventures					
Entities affiliated with Institutional Venture Partners(3)	2,321,299	8.4	—	2,321,299	
Entities affiliated with Morgan Stanley Venture Partners(4)	2,082,320	7.5	—	2,082,320	
Intel Corporation	1,775,821	6.4	—	1,775,821	
Benjamin N. Eldridge(5)	648,327	2.3			
Jens Meyerhoff(6)	444,985	1.6			
Yoshikazu Hatsukano(7)	350,270	1.3	—	350,270	
Stuart L. Merkadeau(8)	242,077	*			*
Peter B. Mathews(9)	225,500	*			*
Frans van Wijk(10)	220,000	*	—	220,000	*
Harrold J. Rust(11)	123,750	*	—	123,750	*
Michael M. Ludwig(12)	122,250	*	—	122,500	*
G. Carl Everett, Jr.(13)	100,000	*	—	100,000	*
James A. Prestridge(14)	63,748	*	—	63,748	*
Joseph R. Bronson(15)	50,000	*	—	50,000	*
All current executive officers and directors as a group (13 persons)(16)	14,019,188	47.4			
All other selling stockholders(17)		7.9%			

\* Represents beneficial ownership of less than 1%.

- (1) Includes 2,500,000 shares held by Susan Bloch, Dr. Khandros' spouse, 500,000 shares held by The Khandros 1997 Trust I U/T/A dated March 28, 1997 and 500,000 shares held by The Khandros 1997 Trust II U/T/A dated March 28, 1997. Also includes 100,000 unvested shares that are, as of March 29, 2003, subject to our lapsing right of repurchase at the initial purchase price for these shares.
- (2) Includes 160,361 shares held by Dr. Davidow, one of our directors, which includes 68,750 unvested shares that are, as of March 29, 2003, subject to our lapsing right of repurchase at the initial purchase price for these shares. Also includes 75,000 shares held by Chachagua Partnership, of which Dr. Davidow is a general partner. Also includes 4,905,082 shares held by Mohr, Davidow Ventures IV, L.P. and 187,838 shares held by MDV IV Entrepreneurs' Network Fund, L.P. Dr. Davidow is a general partner of Mohr, Davidow Ventures IV, L.P. and MDV IV Entrepreneurs' Network Fund, L.P. Dr. Davidow disclaims beneficial ownership of the shares held by these funds except to the extent of his pecuniary interest in these funds. The address of these funds and Dr. Davidow is 2775 Sand Hill Road, Suite 240, Menlo Park, California 94025.
- (3) Includes 2,168,636 shares held by Institutional Venture Partners VII, L.P., 81,027 shares held by IVP Founders Fund I, L.P., and 36,636 shares held by Institutional Venture Management VII, L.P. Institutional Venture Management VI, L.P. is the general partner of IVP Founders Fund I, L.P. and Institutional Venture Management VII, L.P. is the general partner of Institutional Venture Partners VII, L.P. Also includes 35,000 shares held by T. Peter Thomas, who is a general partner of Institutional Venture Management VI, L.P. and Institutional Venture Management VII, L.P. The address of these funds and Mr. Thomas is 3000 Sand Hill Road, Building 2, Suite 290, Menlo Park, California 94025.
- (4) Represents 1,881,654 shares held by Morgan Stanley Venture Partners III, L.P., 180,666 shares held by Morgan Stanley Venture Investors III, L.P. and 20,000 shares held by Morgan Stanley Venture Partners III, L.L.C. Morgan Stanley

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Venture Partners III, L.L.C. is the general partner of each of Morgan Stanley Venture Partners III, L.P. and Morgan Stanley Venture Investors III, L.P. The address of these funds is 1585 Broadway, 38th floor, New York, New York 10036.

- (5) Includes 316,605 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 90,438 will be vested and 226,167 will be unvested.
- (6) Includes 344,985 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 53,109 will be vested and 291,876 will be unvested.
- (7) Includes 195,270 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 81,770 will be vested and 113,500 will be unvested.
- (8) Includes 205,714 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 54,255 will be vested and 151,459 will be unvested.
- (9) Includes 173,000 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 54,500 will be vested and 118,500 will be unvested.
- (10) Represents 220,000 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, all of which will be unvested. Options for 204,616 of such shares are held by the van Wijk/ van Wijk-Hochhausen Family Trust.
- (11) Represents 123,750 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 32,811 will be vested and 90,939 will be unvested.
- (12) Represents 122,250 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 34,791 will be vested and 87,459 will be unvested.
- (13) Includes 25,000 shares held by ACE 2002 Retained Annuity Trust and 25,000 shares held by GCE 2002 Retained Annuity Trust. Also includes 50,000 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 23,958 will be vested and 26,042 will be unvested.
- (14) Includes 13,748 shares of common stock held of record by the Prestridge 1989 Family Trust. Includes 50,000 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 14,583 will be vested and 35,417 will be unvested.
- (15) Includes 40,000 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 4,583 will be vested and 35,417 will be unvested.
- (16) Includes 168,750 unvested shares that are, as of March 29, 2003, subject to our lapsing right of repurchase at the initial purchase price for these shares, and 1,953,501 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 495,558 will be vested and 1,457,943 will be unvested.
- (17) Includes 1,088,751 shares issuable upon exercise of options that are exercisable within 60 days of March 29, 2003, of which 485,986 will be vested and 602,765 will be unvested.

## DESCRIPTION OF CAPITAL STOCK

### General

Immediately following the closing of this offering, our authorized capital stock will consist of 250,000,000 shares of common stock, \$.001 par value per share, and 10,000,000 shares of undesignated preferred stock, \$.001 par value per share. As of March 29, 2003, we had outstanding 27,707,684 shares of our common stock, assuming the automatic conversion of all outstanding preferred stock into common stock, which will occur upon the closing of this offering. As of March 29, 2003, we had 294 stockholders of record.

### Common Stock

#### *Dividend Rights*

Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time.

#### *Voting Rights*

Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our certificate of incorporation. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. In addition, our certificate of incorporation and bylaws provide that certain actions require the approval of two-thirds, rather than a majority, of the shares entitled to vote. For a description of these actions, see “— Anti-Takeover Effects of Delaware Law and our Certificate of Incorporation and Bylaws.”

#### *No Preemptive, Conversion or Redemption Rights*

Our common stock is not entitled to preemptive rights and is not subject to conversion or redemption.

#### *Right to Receive Liquidation Distributions*

Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Each outstanding share of common stock is, and all shares of common stock to be issued in this offering when they are paid for will be, fully paid and nonassessable.

### Preferred Stock

Upon the closing of this offering, each outstanding share of our preferred stock will be converted into one share of common stock. Thereafter, our board of directors will be authorized, subject to limitations imposed by Delaware law, to issue up to a total of 10,000,000 shares of preferred stock in one or more series, without stockholder approval. Our board is authorized to establish from time to time the number of shares to be included in each series, and to fix the rights, preferences and privileges of the shares of each wholly unissued series and any of its qualifications, limitations or restrictions. Our board can also increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

The board may authorize the issuance of preferred stock with voting or conversion rights that could harm the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of FormFactor and might harm the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

## Warrants

Warrants to purchase 118,227 shares of our common stock were outstanding as of March 29, 2003, assuming the automatic conversion of our preferred stock into common stock upon the closing of this offering. The warrants that we issued that were outstanding as of March 29, 2003 are as follows:

- In April 1996, we issued warrants to purchase a total of 72,727 shares of our Series B preferred stock at an exercise price of \$1.65 per share. If not earlier exercised, these warrants will remain outstanding for the later of five years after the completion of this offering or April 2006.
- In September 2000, we issued a warrant to a customer to purchase up to 45,500 shares of our Series F preferred stock at an exercise price of \$11.00 per share. This warrant is exercisable on September 22, 2005. This warrant, however, will become exercisable immediately with respect to all 45,500 shares if the warrant holder achieves certain commercial milestones. If not earlier exercised, this warrant will expire September 23, 2005.

## Registration Rights

The holders of 16,957,626 shares of our common stock issuable upon the automatic conversion of our preferred stock and the holders of 118,227 shares of our common stock issuable upon exercise of warrants are entitled to rights with respect to the registration of their shares under the Securities Act. These registration rights are contained in our sixth amended and restated investors' rights agreement and in stockholder's agreements. The holders of 16,731,750 shares of our common stock, including common stock issuable upon conversion of our preferred stock and upon the exercise of warrants, have demand, piggyback and Form S-3 registration rights pursuant to the investors' rights agreement as described below. The holders of 344,103 shares of our common stock that are issuable upon conversion of our preferred stock have piggyback registration rights pursuant to the stockholders' agreements as described below. The registration rights under the investors' rights agreement will expire five years following the completion of this offering, or for any particular stockholder with registration rights, at such time following this offering when that stockholder holds shares of our common stock equal to or less than one percent of the then outstanding capital stock of our company. The piggyback registration rights under the stockholder's agreements expire upon the written agreement of the parties to those agreements.

### *Demand Registration Rights*

At any time following six months after the closing of this offering, the holders of at least 40% of our then outstanding shares of common stock having demand registration rights under the investors' rights agreement have the right to require that we register all or a portion of their shares. We are only obligated to effect two registrations in response to these demand registration rights. Each demand registration right exercised must cover a sale of securities with a total public offering price of at least \$10.0 million. We may postpone the filing of a registration statement for up to 120 days once in any 12-month period if we determine that the filing would be materially detrimental to us and our stockholders. The underwriters of any underwritten offering have the right to limit the number of shares to be included in a registration statement filed in response to the exercise of these demand registration rights. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with these demand registration rights, except that we are not required to pay for expenses incurred if the holders of these rights subsequently withdraw their request for registration.

### *Piggyback Registration Rights*

If we register any securities for public sale, the stockholders with piggyback registration rights under the investors' rights agreement have the right to include their shares in the registration, subject to specified exceptions. The underwriters of any underwritten offering have the right to limit the number of shares registered by these holders due to marketing reasons. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with these piggyback registration rights.

Under the stockholder's agreements, the stockholders with piggyback registration rights have the right to include their shares in any registration under the Securities Act which we effect, subject to specified exceptions.

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The underwriters of any underwritten offering have the right to limit the number of shares registered by these holders due to marketing reasons. We must pay all expenses, except for underwriters' discounts and commissions and the expenses of legal counsel for the selling stockholders, incurred in connection with these piggyback registration rights.

### ***Form S-3 Registration Rights***

If we are eligible to file a registration statement on Form S-3, holders of shares of our common stock having Form S-3 registration rights under the investors' rights agreement can request that we register their shares, provided that the stockholders making the request hold at least one percent of the then outstanding capital stock of our company and the total price of the shares of common stock offered to the public is at least \$1.0 million. These holders may only require us to file one Form S-3 registration statement in any 12-month period, and we are not required to file a registration statement on Form S-3 if we have already effected two registrations on Form S-3 at the request of the holders of shares having these registration rights. We may postpone the filing of a registration statement for up to 90 days once in any 12-month period if we determine that the filing would be materially detrimental to us and our stockholders. We must pay all expenses, except for underwriters' discounts and commissions, for two registrations on Form S-3.

### **Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws**

The provisions of Delaware law, our certificate of incorporation and our bylaws described below may have the effect of delaying, deferring or discouraging another party from acquiring control of us.

#### ***Delaware Law***

We will be subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, those provisions prohibit a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the transaction is approved by the board before the date the interested stockholder attained that status;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or
- on or after the date the business combination is approved by the board and authorized at a meeting of stockholders by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

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In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

A Delaware corporation may opt out of this provision either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of this provision. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

### *Charter and Bylaws*

Following the completion of this offering, our certificate of incorporation and bylaws will provide that:

- no action can be taken by stockholders except at an annual or special meeting of the stockholders called in accordance with our bylaws, and stockholders may not act by written consent;
- the approval of holders of two-thirds of the shares entitled to vote at an election of directors will be required to adopt, amend or repeal our bylaws or amend or repeal the provisions of our certificate of incorporation regarding the election and removal of directors and the ability of stockholders to take action;
- our board of directors will be expressly authorized to make, alter or repeal our bylaws;
- stockholders may not call special meetings of the stockholders or fill vacancies on the board;
- our board of directors will be divided into three classes serving staggered three-year terms. This means that only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective terms;
- our board of directors will be authorized to issue preferred stock without stockholder approval;
- directors may only be removed for cause by the holders of two-thirds of the shares entitled to vote at an election of directors; and
- we will indemnify officers and directors against losses that they may incur in investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures.

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is EquiServe Trust Company, N.A.

### **Listing**

We have applied to list our common stock for quotation on the Nasdaq National Market under the trading symbol FORM.

## SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has not been a public market for our common stock. Future sales of substantial amounts of our common stock, including shares issued upon exercise of outstanding options and warrants, in the public markets after this offering could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares currently outstanding will be available for sale immediately after this offering due to contractual and legal restrictions on resale. Nevertheless, future sales of substantial amounts of our common stock, including shares issued upon exercise of outstanding options and warrants, in the public market after the restrictions lapse, or the possibility of the sales, could cause the prevailing market price of our common stock to fall or impair our ability to raise equity capital in the future.

Upon completion of this offering, we will have outstanding \_\_\_\_\_ shares of our common stock assuming the automatic conversion of all of our outstanding preferred stock, or \_\_\_\_\_ shares if the underwriters' over-allotment option is exercised in full, assuming that there are no exercises of outstanding options or warrants after March 29, 2003. Of these shares, all of the \_\_\_\_\_ shares sold in this offering will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act or are purchased through the directed share program in this offering. For purposes of Rule 144, an "affiliate" of an issuer is a person that, directly or indirectly through one or more intermediaries, controls, or is controlled by or is under common control with, the issuer. Shares purchased by an affiliate may not be resold except pursuant to an effective registration statement or an exemption from registration, including the exemption under Rule 144 of the Securities Act described below. Shares purchased through the directed share program in this offering will be subject to the lock-up agreement described below. Up to approximately \_\_\_\_\_ shares are reserved for the directed share program. The remaining \_\_\_\_\_ shares of our common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities may be sold in the public market only if they are registered or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act. These rules are summarized below. Subject to the lock-up agreements described below and the provisions of Rule 144 and Rule 701, these restricted securities will be available for sale in the public market as follows:

Number of Shares	Date
No shares	On the date of this prospectus
_____ shares	180 days after the date of this prospectus

In addition, based on options and warrants outstanding as of March 29, 2003, after this offering, 5,793,255 shares will be subject to outstanding options and warrants, of which approximately \_\_\_\_\_ will be vested and exercisable 180 days after this offering.

### Lock-Up Agreements

All of our officers, directors and employees and substantially all of our other stockholders have agreed, subject to limited exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any of their shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock; or enter into any swap or other arrangement that transfers to another, in whole or in part, any economic consequences of ownership of our common stock during the period ending 180 days after the date of this prospectus without the prior written consent of Morgan Stanley & Co. Incorporated, on behalf of the underwriters. Each of our other security holders who has not entered into this agreement with Morgan Stanley has otherwise contractually committed to us not to sell any of our common stock during the period ending 180 days after the date of this prospectus. These restrictions will also apply to the shares purchased in our directed share program. These restrictions do not apply to transactions relating to our common stock or other securities (1) acquired in this offering, other than the shares purchased in our directed share program, or (2) acquired in open market transactions after this offering.

## Rule 144

In general, under Rule 144 as currently in effect, beginning 90 days after the date of this prospectus, a person who has beneficially owned shares of our common stock for at least one year from the later of the date those shares of common stock were acquired from us or from an affiliate of ours would be entitled to sell, within any three-month period, a number of shares that is not more than the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after this offering; or
- the average weekly trading volume of our common stock on the Nasdaq National Market during the four calendar weeks before a notice of the sale on Form 144 is filed.

Sales under Rule 144 are also subject to manner of sale provisions, notice requirements and the availability of current public information about us.

## Rule 144(k)

In addition, under Rule 144(k), a person who is not one of our affiliates at any time during the three months preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years from the later of the date these shares of our common stock were acquired from us or from an affiliate of ours, including the holding period of any prior owner other than an affiliate, is entitled to sell those shares without complying with the manner of sale, public information, volume limitation or notice provisions of Rule 144. Therefore, unless otherwise restricted pursuant to the lock-up agreements, those shares may be sold immediately upon the completion of this offering.

## Rule 701

Any employee, officer or director of, or consultant to us who purchased shares under a written compensatory plan or contract may be entitled to sell them in reliance on Rule 701. Rule 701 permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. Rule 701 further provides that non-affiliates may sell these shares in reliance on Rule 144 without complying with the holding period, public information, volume, limitation or notice provisions of Rule 144. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling those shares. However, all shares issued under Rule 701 are subject to lock-up agreements and will only become eligible for sale when the 180-day lock-up agreements expire.

## Stock Options

Based on options granted as of March 29, 2003, we intend to file a registration statement on Form S-8 under the Securities Act covering \_\_\_\_\_ shares of our common stock subject to options outstanding or reserved for issuance under our 1995 stock plan, 1996 stock option plan, incentive option plan, management incentive option plan, 2002 equity incentive plan and 2002 employee stock purchase plan, and shares of our common stock issued upon exercise of options by employees. We expect to file this registration statement as soon as practicable after this offering. In addition, we will file a registration statement on Form S-8 or such other form as may be required under the Securities Act for the resale of shares of our common stock issued upon the exercise of options that were granted under the management incentive option plan but that were not granted under Rule 701. We expect to file this registration statement as soon as permitted under the Securities Act. However, none of the shares registered on Form S-8 will be eligible for resale until expiration of the 180-day lock-up agreements to which they are subject.

## Registration Rights

Upon completion of this offering, the holders of 16,957,626 shares of our common stock issuable upon the automatic conversion of our preferred stock and the holders of 118,227 shares of our common stock issuable upon exercise of warrants, may demand that we register their shares under the Securities Act or, if we file another registration statement under the Securities Act, may elect to include their shares in such registration. If these shares are registered, they will be freely tradable without restriction under the Securities Act. For additional information, see "Description of Capital Stock — Registration Rights."

**UNDERWRITERS**

Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. Incorporated, Lehman Brothers Inc., Banc of America Securities LLC and Thomas Weisel Partners LLC are acting as representatives, have each agreed to purchase, and we and the selling stockholders have agreed to sell to them, severally, the number of shares indicated below:

	Name	Number of Shares
	Morgan Stanley & Co. Incorporated	
	Lehman Brothers Inc.	
	Banc of America Securities LLC	
	Thomas Weisel Partners LLC	
		—
	Total	—

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ over-allotment option described below.

The per share price of any shares sold by the underwriters will be the initial public offering price listed on the cover page of this prospectus, less an amount not greater than the per share amount of the concession to dealers described below.

The table below shows the per share and total underwriting discounts and commissions we will pay the underwriters. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase additional shares.

	No Exercise	Full Exercise
Per Share	\$	\$
Total	\$	\$

The underwriters initially propose to offer part of the shares of common stock directly to the public at the initial public offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ \_\_\_\_\_ a share under the initial public offering price. Any underwriter may allow, and such dealers may reallow, a concession not in excess of \$ \_\_\_\_\_ a share to other underwriters or to certain dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time-to-time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of \_\_\_\_\_ additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table

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bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table. If the underwriters' option is exercised in full, the total price to the public would be \$ \_\_\_\_\_, the total underwriters' discounts and commissions would be \$ \_\_\_\_\_ and the total proceeds to us would be \$ \_\_\_\_\_.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed five percent of the total number of shares offered by them.

We estimate that the total expenses of the offering payable by us, excluding underwriting discounts and commissions, will be approximately \$ \_\_\_\_\_ million. Expenses include the Securities and Exchange Commission and NASD filing fees, Nasdaq National Market listing fees, printing, legal, accounting and transfer agent and registrar fees, premiums of approximately \$ \_\_\_\_\_ for directors' and officers' insurance that we intend to obtain to cover our directors and officers for certain liabilities, including coverage for public securities matters, and other miscellaneous fees and expenses.

Each of our officers, directors, employees and substantially all of our other stockholders have agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated on behalf of the underwriters, it will not, during the period ending 180 days after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph do not apply to:

- the sale of any shares of common stock to the underwriters;
- transactions relating to shares of common stock or other securities acquired in this offering or thereafter acquired in open market transactions;
- the transfer of shares of common stock or other securities by gift;
- the distribution of shares of common stock or other securities to partners, members or stockholders;
- the transfer of shares of common stock or other securities to affiliates of stockholders that are corporations; and
- acquisitions from us of any shares of common stock or other securities,

provided that in the case of each of the last four transactions, each donee, distributee, transferee and recipient agrees to be subject to the restrictions described in the immediately preceding paragraph and no filing under Section 16 of the Exchange Act is required in connection with these transactions.

In order to facilitate this offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open

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market after pricing that could adversely affect investors who purchase in this offering. In addition, to stabilize the price of the common stock, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in this offering, if the syndicate repurchases previously distributed common stock to cover syndicate short positions or to stabilize the price of the common stock. Any of these activities may stabilize or maintain the market price of the common stock above independent market levels. The underwriters are not required to engage in these activities, and may end any of these activities at any time.

A prospectus in electronic format may be made available on the web sites maintained by one or more of the underwriters. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations. In addition, shares may be sold by the underwriters to securities dealers who resell shares to online brokerage account holders.

Certain entities affiliated with Morgan Stanley & Co. Incorporated, one of the underwriters of this offering, were some of our original investors and continue to hold shares of our capital stock. Morgan Stanley Ventures Partners III, L.P. holds 1,881,654 shares of our preferred stock, Morgan Stanley Venture Investors III, L.P. holds 180,666 shares of our preferred stock and Morgan Stanley Venture Partners III, L.L.C. holds 20,000 shares of our common stock. These entities acquired these shares between April 1997 and August 1999 at an aggregate cost of \$7,266,007. Upon the automatic conversion of the preferred stock into common stock upon the completion of this offering, these entities will own a total of 2,082,320 shares of our common stock. Morgan Stanley Venture Partners III, L.L.C. is the general partner of both Morgan Stanley Venture Partners III, L.P. and Morgan Stanley Venture Investors III, L.P. Morgan Stanley Venture Capital III, Inc., a wholly owned subsidiary of Morgan Stanley, is the institutional managing member of Morgan Stanley Venture Partners III, L.L.C.

We have an investment account with Morgan Stanley & Co. Incorporated for which it receives customary fees and commissions. Through this account, we maintain the majority of our portfolio of cash equivalents and short-term investments in a variety of securities, including money market funds, commercial paper and government and non-government debt securities.

The underwriters, on the one hand, and we and the selling stockholders, on the other hand, have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

At our request, the underwriters have reserved for sale, at the initial public offering price, up to \_\_\_\_\_ shares offered by this prospectus to our employees. We will pay all fees and disbursements of counsel incurred by the underwriters in connection with offering the shares to such persons. The number of shares of common stock available for sale to the general public will be reduced to the extent such persons purchase such reserved shares. Any reserved shares, which are not so purchased, will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

### **Pricing of the Offering**

Prior to this offering, there has been no public market for the common stock. The initial public offering price will be determined by negotiations among us, the selling stockholders and the representatives. Among the factors to be considered in determining the initial public offering price will be our future prospects and those of our industry in general; our sales, earnings and certain other financial and operating information in recent periods; and the price-earnings ratios, price-sales ratios and market prices of securities and certain financial and operating information of companies engaged in activities similar to ours.

### **LEGAL MATTERS**

Fenwick & West LLP, Mountain View, California, will pass upon the validity of the issuance of the shares of common stock offered by this prospectus. Gray Cary Ware & Freidenrich LLP, Palo Alto, California, will pass upon legal matters for the underwriters. As of the date of this prospectus, two investment entities affiliated with Fenwick & West LLP beneficially owned an aggregate of 23,674 shares of our common stock.

## EXPERTS

The consolidated financial statements of FormFactor, Inc. as of December 29, 2001 and December 28, 2002 and for each of the three years in the period ended December 28, 2002 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1, including exhibits, under the Securities Act with respect to the common stock to be sold in this offering. This prospectus, which constitutes a part of the registration statement, does not contain all of the information in the registration statement or the exhibits. Statements made in this prospectus regarding the contents of any contract, agreement or other document are only summaries. With respect to each contract, agreement or other document filed as an exhibit to the registration statement, we refer you to the exhibit for a more complete description of the matter involved. You may read and copy all or any portion of the registration statement or any reports, statements or other information in the files at the public reference facility of the Securities and Exchange Commission located at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549.

You can request copies of these documents upon payment of a duplicating fee by writing to the Securities and Exchange Commission. You may call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on the operation of its public reference room. Our filings, including the registration statement, will also be available to you on the web site maintained by the Securities and Exchange Commission at <http://www.sec.gov>.

We intend to furnish our stockholders with annual reports containing consolidated financial statements audited by our independent auditors, and to make available to our stockholders quarterly reports for the first three quarters of each year containing unaudited interim consolidated financial statements.

**FORMFACTOR, INC.**

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**REPORT OF INDEPENDENT ACCOUNTANTS**

The Board of Directors and Stockholders of

FormFactor, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, of stockholders' deficit and of cash flows present fairly, in all material respects, the financial position of FormFactor, Inc. (the "Company") and its subsidiaries at December 29, 2001 and December 28, 2002, and the results of their operations and their cash flows for each of the three years in the period ended December 28, 2002 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PRICEWATERHOUSECOOPERS LLP

San Jose, California

January 17, 2003, except for the last paragraph of Note 5,  
as to which the date is February 21, 2003

**FORMFACTOR, INC.**
**CONSOLIDATED BALANCE SHEETS**
**(in thousands, except share and per share data)**

	December 29, 2001	December 28, 2002	March 29, 2003	Pro Forma at March 29, 2003 (see Note 2)
<b>(unaudited)</b>				
<b>ASSETS</b>				
Current assets:				
Cash and cash equivalents	\$ 20,565	\$ 26,786	\$ 30,509	
Short-term investments	7,011	7,557	4,337	
Accounts receivable, net of allowance for doubtful accounts of \$414 in 2001, \$253 in 2002 and \$203 (unaudited) in 2003	11,863	11,986	10,309	
Inventories, net	2,390	4,230	5,028	
Deferred tax assets	—	2,571	2,571	
Prepaid expenses and other current assets	1,813	3,463	3,878	
<b>Total current assets</b>	<b>43,642</b>	<b>56,593</b>	<b>56,632</b>	
Restricted cash	—	2,835	—	
Property and equipment, net	17,998	16,538	16,204	
Deferred tax assets	—	1,068	1,068	
Other assets	624	484	454	
<b>Total assets</b>	<b>\$ 62,264</b>	<b>\$ 77,518</b>	<b>\$ 74,358</b>	
<b>LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)</b>				
Current liabilities:				
Bank line of credit	\$ —	\$ 375	\$ 375	
Notes payable, current portion	560	500	500	
Accounts payable	5,549	6,712	5,112	
Accrued liabilities	5,849	7,677	5,285	
Deferred revenue	610	793	711	
<b>Total current liabilities</b>	<b>12,568</b>	<b>16,057</b>	<b>11,983</b>	
Notes payable, less current portion	1,167	625	500	
Deferred revenue	910	672	612	
<b>Total liabilities</b>	<b>14,645</b>	<b>17,354</b>	<b>13,095</b>	
Commitments and contingencies (Note 6)				
Redeemable convertible preferred stock, \$0.001 par value:				
Authorized: 23,126,983 shares				
Issued and outstanding: 22,994,543 shares in 2001, 23,002,626 shares in 2002 and 2003 (unaudited) and none pro forma (unaudited) (Liquidation preferences: \$65,886 at December 29, 2001, \$66,263 at December 28, 2002 and March 29, 2003 (unaudited))				
	64,895	64,895	64,895	\$ —
Redeemable convertible preferred stock warrants	306	306	306	—
	<b>65,201</b>	<b>65,201</b>	<b>65,201</b>	<b>—</b>
Stockholders' equity (deficit):				
Preferred stock, \$0.001 par value:				
Authorized: 10,000,000 shares				
Issued and outstanding: none in 2001, 2002, 2003 (unaudited) and none pro forma (unaudited)				
	—	—	—	—
Common stock, \$0.001 par value:				
Authorized: 250,000,000 shares				
Issued and outstanding: 4,578,450 shares in 2001, 4,680,118 shares in 2002, 4,705,058 shares in 2003 (unaudited) and 27,707,684 shares pro forma (unaudited)				
	5	5	5	28
Additional paid-in capital	10,026	20,064	20,193	85,371
Notes receivable from stockholders	(3,818)	(3,447)	(3,437)	(3,437)
Deferred stock-based compensation, net	(4,071)	(12,294)	(12,023)	(12,023)

Accumulated other comprehensive loss	—	—	(10)	(10)
Accumulated deficit	(19,724)	(9,365)	(8,666)	(8,666)
	<u>(17,582)</u>	<u>(5,037)</u>	<u>(3,938)</u>	<u>\$ 61,263</u>
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	<u>\$ 62,264</u>	<u>\$ 77,518</u>	<u>\$ 74,358</u>	

The accompanying notes are an integral part of these consolidated financial statements.

**FORMFACTOR, INC.**
**CONSOLIDATED INCOME STATEMENTS**

(in thousands, except per share data)

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
				(unaudited)	
Revenues	\$56,406	\$73,433	\$78,684	\$17,288	\$18,669
Cost of revenues(1)	28,243	38,385	39,456	8,859	9,800
Gross margin	28,163	35,048	39,228	8,429	8,869
Operating expenses:					
Research and development(1)	11,995	14,619	14,592	3,249	3,525
Selling, general and administrative(1)	15,434	18,500	17,005	3,992	4,013
Stock-based compensation	259	469	1,039	165	333
Restructuring charges	—	1,380	—	—	—
Total operating expenses	27,688	34,968	32,636	7,406	7,871
Operating income	475	80	6,592	1,023	998
Interest income	1,258	989	808	189	162
Interest expense	(661)	(170)	(79)	(17)	(14)
Other income (expense), net	1,122	(342)	(87)	(17)	(19)
	1,719	477	642	155	129
Income before income taxes	2,194	557	7,234	1,178	1,127
Benefit (provision) for income taxes	(115)	(307)	3,125	(332)	(428)
Net income	\$ 2,079	\$ 250	\$10,359	\$ 846	\$ 699
Net income per share:					
Basic	\$ 0.61	\$ 0.06	\$ 2.33	\$ 0.19	\$ 0.15
Diluted	\$ 0.08	\$ 0.01	\$ 0.35	\$ 0.03	\$ 0.02
Weighted-average number of shares used in per share calculations:					
Basic	3,408	4,029	4,448	4,391	4,539
Diluted	26,821	28,654	29,554	29,823	29,266
Pro forma net income per share (unaudited) (see Note 13):					
Basic			\$ 0.38		\$ 0.03
Diluted			\$ 0.35		\$ 0.02
Weighted-average number of shares used in pro forma per share calculations (unaudited) (see Note 13):					
Basic			27,447		27,542
Diluted			29,554		29,266

(1) Amounts exclude stock-based compensation, as follows:

Cost of revenues	\$ —	\$ 27	\$ 172	\$ 22	\$ 55
Research and development	61	139	217	3	69
Selling, general and administrative	198	303	650	140	209
Total	\$ 259	\$ 469	\$ 1,039	\$ 165	\$ 333



**FORMFACTOR, INC.**
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT**

**For the Years Ended December 30, 2000 and  
December 29, 2001 and December 28, 2002  
and Three Months Ended March 29, 2003  
(in thousands, except share data)**

	Common Stock		Additional Paid-in Capital	Notes Receivable from Stockholders	Deferred Stock-based Compensation	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount						
Balances, December 26, 1999	4,306,547	\$ 4	\$ 3,443	\$(2,496)	\$ (184)	\$ —	\$(22,053)	\$(21,286)
Issuance of common stock pursuant to exercise of options for cash and notes receivable	509,275	—	2,189	(2,014)	—	—	—	175
Issuance of common stock for services provided	18,043	—	100	—	—	—	—	100
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	(375,578)	—	(462)	462	—	—	—	—
Repayment of notes receivable from stockholders	—	—	—	87	—	—	—	87
Deferred stock-based compensation	—	—	259	—	(259)	—	—	—
Recognition of stock-based compensation	—	—	—	—	259	—	—	259
Net income	—	—	—	—	—	—	2,079	2,079
Balances, December 30, 2000	4,458,287	4	5,529	(3,961)	(184)	—	(19,974)	(18,586)
Issuance of common stock pursuant to exercise of options for cash and notes receivable	168,229	1	340	(43)	—	—	—	298
Issuance of common stock for services provided	2,462	—	15	—	—	—	—	15
Repurchase of common stock for cash and in connection with cancellation of notes receivable from stockholders	(50,528)	—	(214)	186	—	—	—	(28)
Deferred stock-based compensation	—	—	4,356	—	(4,356)	—	—	—
Recognition of stock-based compensation	—	—	—	—	469	—	—	469
Net income	—	—	—	—	—	—	250	250
Balances, December 29, 2001	4,578,450	5	10,026	(3,818)	(4,071)	—	(19,724)	(17,582)
Repayment of notes receivable from stockholders	—	—	—	26	—	—	—	26
Issuance of common stock pursuant to exercise of options for cash	223,113	—	1,070	—	—	—	—	1,070
Issuance of common stock for services provided	7,538	—	57	—	—	—	—	57
Repurchase of common stock for cash and in connection with cancellation of notes receivable from stockholders	(128,983)	—	(351)	345	—	—	—	(6)
Deferred stock-based compensation, net of cancellations	—	—	9,262	—	(9,262)	—	—	—
Recognition of stock-based compensation	—	—	—	—	1,039	—	—	1,039
Net income	—	—	—	—	—	—	10,359	10,359
Balances, December 28, 2002	4,680,118	5	20,064	(3,447)	(12,294)	—	(9,365)	(5,037)
Repayment of notes receivable from stockholders (unaudited)	—	—	—	10	—	—	—	10
Issuance of common stock pursuant to exercise of options for cash (unaudited)	24,940	—	67	—	—	—	—	67
Deferred stock-based compensation, net of cancellations (unaudited)	—	—	62	—	(62)	—	—	—
Recognition of deferred stock-based compensation (unaudited)	—	—	—	—	333	—	—	333
Components of other comprehensive income (unaudited):								
Translation adjustments (unaudited)	—	—	—	—	—	(10)	—	(10)
Net income (unaudited)	—	—	—	—	—	—	699	699
Comprehensive income (unaudited)								689
Balances, March 29, 2003 (unaudited)	4,705,058	\$ 5	\$20,193	\$(3,437)	\$(12,023)	\$(10)	\$ (8,666)	\$ (3,938)

The accompanying notes are an integral part of these consolidated financial statements.

**FORMFACTOR, INC.**
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

(in thousands)

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
	(unaudited)				
<b>Cash flows from operating activities:</b>					
Net income	\$ 2,079	\$ 250	\$ 10,359	\$ 846	\$ 699
Adjustments to reconcile net income to net cash provided by (used in) operating activities:					
Depreciation and amortization	3,636	4,745	5,392	1,303	1,281
Stock-based compensation expense	259	469	1,039	165	333
Common stock issued for services provided	100	15	57	—	—
Deferred tax assets	—	—	(3,639)	—	—
Interest income from stockholders' notes receivable	(140)	(257)	(238)	(65)	(58)
Provision for doubtful accounts	(32)	(166)	(161)	16	(50)
Provision for excess and obsolete inventories	2,227	969	(1,157)	143	1,102
Loss on disposal of property and equipment	—	194	322	—	10
Non-cash restructuring expenses	—	277	—	—	—
Changes in assets and liabilities:					
Accounts receivable	(7,903)	501	38	546	1,731
Inventories	(3,146)	(522)	(683)	(1,051)	(1,901)
Prepays and other current assets	(109)	(268)	(1,412)	(513)	(356)
Accounts payable	2,720	1,246	1,163	(299)	(1,641)
Accrued liabilities	1,349	2,307	1,828	198	(2,339)
Deferred revenues	(105)	501	(55)	623	(157)
Net cash provided by (used in) operating activities	935	10,261	12,853	1,912	(1,346)
<b>Cash flows from investing activities:</b>					
Acquisition of property and equipment	(6,290)	(9,356)	(4,177)	(496)	(960)
Purchase of investments	(5,970)	(17,865)	(23,136)	(9,297)	(2,810)
Proceeds from maturities of investments	16,937	15,817	22,590	3,992	6,030
Restricted cash	—	—	(2,835)	—	2,835
Other assets	(468)	(203)	63	22	10
Net cash provided by (used in) investing activities	4,209	(11,607)	(7,495)	(5,779)	5,105
<b>Cash flows from financing activities:</b>					
Proceeds from issuance of redeemable convertible preferred stock, net	6,910	10,072	—	—	—
Proceeds from issuance of common stock	175	298	1,070	810	67
Repayment of notes receivable from stockholders	87	—	26	8	10
Repurchase of common stock	—	(28)	(6)	—	—
Proceeds from issuance of notes payable	—	2,000	—	—	—
Proceeds from issuance of bank line of credit	—	—	375	375	—
Repayment of notes payable	(1,913)	(2,365)	(602)	(198)	(125)
Repayment of bank line of credit	(2,800)	—	—	—	—
Net cash provided by (used in) financing activities	2,459	9,977	863	995	(48)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	—	12
Net increase (decrease) in cash and cash equivalents	7,603	8,631	6,221	(2,872)	3,723
Cash and cash equivalents, beginning of period	4,331	11,934	20,565	20,565	26,786
Cash and cash equivalents, end of period	\$ 11,934	\$ 20,565	\$ 26,786	\$ 17,693	\$ 30,509
<b>Non-cash financing activities:</b>					
Common stock issued for notes receivable	\$ 2,014	\$ 43	\$ —	\$ —	\$ —
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	\$ 462	\$ 186	\$ 345	\$ 345	\$ —
Deferred stock-based compensation	\$ 259	\$ 4,356	\$ 9,262	\$ 1,451	\$ 62
Issuance of warrants to purchase Series F redeemable convertible preferred stock	\$ 306	\$ —	\$ —	\$ —	\$ —
<b>Supplemental disclosure of cash flow information:</b>					
Interest paid	\$ 669	\$ 170	\$ 79	\$ 17	\$ 14
Income taxes paid	\$ 1	\$ 271	\$ 179	\$ 58	\$ —

The accompanying notes are an integral part of these consolidated financial statements.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

**Note 1 — Formation and Business of the Company:**

FormFactor, Inc. (the "Company") was incorporated on April 15, 1993 to design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. The Company is based in Livermore, California, home to its corporate offices, research and development, and manufacturing locations. The Company has offices in California, Japan, Hungary, Germany and South Korea.

**Note 2 — Summary of Significant Accounting Policies:**

*Basis of consolidation and foreign currency translation*

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany balances and transactions have been eliminated.

Translation adjustments resulting from the process of remeasuring into the United States of America dollar the foreign currency financial statements of the Company's wholly owned subsidiaries, for which the United States of America dollar is the functional currency, are included in operations. For the Company's international subsidiaries which use their local currency as their functional currency, assets and liabilities are translated at exchange rates in effect at the balance sheet date and revenue and expense accounts at average exchange rates during the period. Resulting translation adjustments are recorded directly to cumulative comprehensive income.

*Unaudited interim results*

The accompanying consolidated balance sheet as of March 29, 2003, the consolidated income statements and consolidated statements cash flows for the three months ended March 30, 2002 and March 29, 2003 and the consolidated statement of stockholders' deficit for the three months ended March 29, 2003 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly the Company's financial position and results of operations and cash flows for the three months ended March 30, 2002 and March 29, 2003. The financial data and other information disclosed in these notes to financial statements related to the three-month periods are unaudited. The results for the three months ended March 29, 2003 are not necessarily indicative of the results to be expected for the year ending December 27, 2003 or for any other interim period or for any other future year.

*Unaudited pro forma stockholders' equity*

If the offering contemplated by this prospectus is consummated, all of the redeemable convertible preferred stock outstanding will automatically convert into 23,002,626 shares of common stock based on the shares of redeemable convertible preferred stock outstanding at March 29, 2003. Unaudited pro forma stockholders' equity, as adjusted for the assumed conversion of the redeemable convertible preferred stock, is set forth on the balance sheet.

*Use of estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

*Cash and cash equivalents*

The Company considers all highly liquid investments with original or remaining maturities of three months or less, at the date of purchase, to be cash equivalents. Cash and cash equivalents include money market and various deposit accounts.

*Investments*

The Company has classified its investments as "available-for-sale." Such investments are recorded at fair value and unrealized gains and losses, if material, are recorded as a separate component of stockholders' equity (deficit) until realized. Realized gains and losses on sale of all such securities are reported in earnings, computed using the specific identification cost method. Both realized and unrealized gains have not been significant to date.

*Restricted cash*

Under the terms of its facility lease, the Company provides security to the landlord in the form of six letters of credit totaling \$2,830,000 (see Note 5). In July 2002, the letters of credit were secured by a certificate of deposit of \$2,835,000, which has been classified as restricted cash as of December 28, 2002. As of March 29, 2003, the Company was no longer obligated to secure the letters of credit with a certificate of deposit and accordingly the \$2,835,000 (unaudited) was reclassified to short-term investments.

*Inventories*

Inventories are stated at the lower of cost (principally standard cost which approximates actual cost on a first-in, first-out basis) or market value. Reserves for potentially excess and obsolete inventory are made based on management's analysis of inventory levels and future sales forecasts.

The Company designs, manufactures and sells a fully custom product into a market that has been subject to cyclicity and significant demand fluctuations. Probe cards are complex products, custom to a specific chip design and have to be delivered on lead-times shorter than most manufacturers' cycle times. It is therefore common to start production and to acquire production materials ahead of the receipt of an actual purchase order. Probe cards are manufactured in low volumes, therefore, material purchases are often subject to minimum purchase order quantities in excess of the actual demand. These factors make inventory valuation adjustments part of the normally occurring cost of revenue. The aggregate inventory valuation adjustments equal the additions to the inventory reserves and were \$2,227,000, \$4,504,000, \$1,279,000 and \$1,102,000 (unaudited) for the years ended December 30, 2000, December 29, 2001, December 28, 2002, and for the three months ended March 29, 2003, respectively. The Company retains the excess inventory until the customer's design is discontinued. The inventory may be used to satisfy customer warranty demand. When the customer's design is discontinued, the Company disposes of any excess inventory. The Company wrote-off inventories of \$3,535,000 in fiscal year 2001 and \$2,436,000 in fiscal year 2002 but did not write-off any inventories in fiscal year 2000 and in the three months ended March 29, 2003 (unaudited).

*Property and equipment*

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is provided on a straight-line method over the estimated useful lives of the assets, generally two to five years. Leasehold improvements are amortized over their estimated useful lives or the term of the related lease, whichever is less. Upon sale or retirement of assets, the cost and related accumulated depreciation or amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations.

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

*Impairment of long-lived assets*

The Company reviews long-lived assets for impairment, whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. When such an event occurs, management determines whether there has been an impairment by comparing the anticipated undiscounted future net cash flows to the related asset's carrying value. If an asset is considered impaired, the asset is written down to fair value, which is determined based either on discounted cash flows or appraised value, depending on the nature of the asset.

*Warranty accrual*

The Company offers warranties on certain products and records a liability for the estimated future costs associated with warranty claims, which is based upon historical experience and the Company's estimate of the level of future costs. Warranty costs are reflected in the income statement as a cost of revenues. A reconciliation of the changes in the Company's warranty liability for the year ending December 28, 2002 and the three months ended March 29, 2003 follows (in thousands):

Warranty accrual at December 29, 2001	\$ 430
Accruals for warranties issued during the year	1,688
Settlements made during the year	(1,439)
	<hr/>
Warranty accrual at December 28, 2002	679
Accrual for warranties issued during the period (unaudited)	197
Settlements made during the period (unaudited)	(340)
	<hr/>
Warranty accrual at March 29, 2003 (unaudited)	\$ 536

*Concentration of credit risk and other risks and uncertainties*

The Company maintains its cash and cash equivalents in accounts with two major financial institutions in the United States of America and in countries where subsidiaries operate, in the form of demand deposits and money market accounts. Deposits in these banks may exceed the amounts of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

Carrying amounts of certain of the Company's financial instruments including cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to their short maturities. Based on borrowing rates currently available to the Company for loans with similar terms, the carrying value of notes payable and the bank line of credit approximate fair value. Estimated fair values for marketable securities, which are separately disclosed elsewhere, are based on quoted market prices for the same or similar instruments.

The Company markets and sells its products to a narrow base of customers and generally does not require collateral. In fiscal year 2000, three customers accounted for approximately 25%, 21% and 17% of revenues. In fiscal year 2001, four customers accounted for approximately 26%, 20%, 16% and 12% of revenues. In fiscal year 2002, three customers accounted for approximately 27%, 21% and 20% of revenues. At December 29, 2001, three customers accounted for approximately 24%, 20% and 11% of accounts receivable. At December 28, 2002, three customers accounted for approximately 26%, 25% and 19% of accounts receivable.

The Company operates in the intensely competitive semiconductor industry, primarily dynamic random access memory, or DRAM, which has been characterized by price erosion, rapid technological change, short product life, cyclical market patterns and heightened foreign and domestic competition. Significant technological changes in the industry could affect operating results adversely.

Certain components that meet the Company's requirements are available only from a limited number of suppliers. The rapid rate of technological change and the necessity of developing and manufacturing products

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

with short life-cycles may intensify these risks. The inability to obtain components as required, or to develop alternative sources, if and as required in the future, could result in delays or reductions in product shipments, which in turn could have a material adverse effect on the Company's business, financial condition, and results of operations.

***Revenue recognition***

The Company recognizes revenue upon shipment where there is a contract or purchase order, the fee is fixed or determinable and where collectibility of the resulting receivable is reasonably assured. Revenues from product sales to customers other than distributors are recognized upon shipment and reserves are provided for estimated returns and allowances. Although the Company's distributor has no price protection rights or rights to return product, other than for warranty claims, the Company defers recognition of revenue from its distributor until the distributor confirms an order from its customer, given the lack of visibility into distributors inventory levels. Revenues from the licensing of the Company's design and manufacturing technology are recognized over the term of the license agreement or when the significant contractual obligations have been fulfilled.

***Research and development***

Research and development costs are charged to operations as incurred.

***Advertising costs***

Advertising costs, included in sales and marketing expenses, are expensed as incurred. Advertising expenses in fiscal years 2000, 2001 and 2002 were approximately \$301,000, \$328,000 and \$114,000, respectively.

***Income taxes***

The Company accounts for income taxes under the provisions of Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

***Segments***

The Company operates in one segment, using one measurement of profitability to manage its business.

***Stock-based compensation***

In December 2002, the Financial Accounting Standards Board ("FASB") issued SFAS No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosure — an amendment of FASB Statement No. 123" ("SFAS No. 148") which amends FASB Statement No. 123, "Accounting for Stock-Based Compensation" ("SFAS No. 123"), to provide alternative methods of transition for voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS No. 148 amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The transition and annual disclosure requirements of SFAS No. 148 are effective for fiscal years ended after December 15, 2002. The interim disclosure requirements are effective for interim periods ending after December 15, 2002.

The Company uses the intrinsic value method of Accounting Principles Board Opinion No. 25 ("APB No. 25"), "Accounting for Stock Issued to Employees," in accounting for its employee stock options, and

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

presents disclosure of pro forma information required under SFAS No. 123 (“SFAS No. 123”), “Accounting for Stock-Based Compensation” (see Note 8).

The following table provides a reconciliation of net income to pro forma net income (loss) as if the fair value method had been applied to all awards (in thousands, except per share data):

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
Net income, as reported	\$2,079	\$ 250	\$10,359	\$ 846	\$ 699
Add: Stock-based employee compensation expense included in reported net income	—	195	997	165	333
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards	(520)	(1,269)	(2,128)	(491)	(428)
Pro forma net income (loss)	\$1,559	\$ (824)	\$ 9,228	\$ 520	\$ 604
Net income (loss) per share					
Basic:					
As reported	\$ 0.61	\$ 0.06	\$ 2.33	\$0.19	\$0.15
Pro forma	\$ 0.46	\$ (0.20)	\$ 2.08	\$0.12	\$0.13
Diluted:					
As reported	\$ 0.08	\$ 0.01	\$ 0.35	\$0.03	\$0.02
Pro forma	\$ 0.06	\$ (0.20)	\$ 0.31	\$0.02	\$0.02

The Company accounts for equity instruments issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force (“EITF”) Issue No. 96-18, “Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services” which require that such equity instruments are recorded at their fair value on the measurement date. The measurement of stock-based compensation is subject to periodic adjustment as the underlying equity instruments vest.

*Net income per share*

Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted net income per share is computed giving effect to all potential dilutive common stock, including options, warrants, common stock subject to repurchase and redeemable convertible preferred stock.

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

A reconciliation of the numerator and denominator used in the calculation of basic and diluted net income per share follows (in thousands):

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
				(unaudited)	
Numerator:					
Net income	\$ 2,079	\$ 250	\$10,359	\$ 846	\$ 699
Denominator:					
Weighted-average common stock outstanding	4,262	4,557	4,675	4,642	4,722
Less: Weighted-average shares subject to repurchase	(854)	(528)	(227)	(251)	(183)
Weighted-average shares used in computing basic net income per share	3,408	4,029	4,448	4,391	4,539
Dilutive potential common shares used in computing diluted net income per share	23,413	24,625	25,106	25,432	24,727
Total weighted-average number of shares used in computing diluted net income per share	26,821	28,654	29,554	29,823	29,266

The following outstanding options, common stock subject to repurchase, redeemable convertible preferred stock and warrants were excluded from the computation of diluted net income per share as they had an antidilutive effect (in thousands):

	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
				(unaudited)	
Options to purchase common stock	392	1,164	258	—	258
Common stock subject to repurchase	—	—	—	—	—
Redeemable convertible preferred stock	—	—	—	—	—
Warrants	46	46	46	—	46

**Comprehensive income (loss)**

Comprehensive income (loss) include foreign currency translation adjustments, the impact of which have been excluded from net income and reflected as equity. The component of comprehensive income (loss) is reported on the Company's consolidated statements of stockholders' deficit.

**Recent accounting pronouncements**

In October 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 addresses significant issues relating to the implementation of SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," and develops a single accounting method under which long-lived assets that are to be disposed of by sale are measured at the lower of book value or fair value less cost to sell. Additionally, SFAS No. 144 expands the scope of discontinued operations to include all components of an entity with operations that (1) can be distinguished from the rest of the entity, and (2) will be eliminated from the ongoing operations of the entity in a disposal

**FORMFACTOR, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

transaction. SFAS No. 144 is effective for financial statements issued for fiscal years beginning after December 15, 2001 and its provisions are to be applied prospectively. The Company has adopted SFAS No. 144 effective December 29, 2002. This adoption has not had a material impact on the Company's financial position or on its results of operations.

In April 2002, the FASB issued SFAS No. 145, "Rescission of FASB Statement No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections" ("SFAS No. 145") which eliminates inconsistencies between the required accounting for sale-leaseback transactions and the required accounting for certain lease modifications that have economic effects that are similar to sale-leaseback transactions. SFAS No. 145 also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions. The provisions of SFAS No. 145 are effective for fiscal years beginning after May 15, 2002 and for transactions occurring after May 15, 2002. The Company does not expect adoption of SFAS No. 145 to have a material impact on the Company's financial position or on its results of operations.

In June 2002, the FASB issued SFAS No. 146, "Accounting for Exit or Disposal Activities" ("SFAS No. 146") which addresses the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for pursuant to the guidance that the EITF has set forth in EITF Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)". SFAS No. 146 will be effective for exit or disposal activities that are initiated after December 31, 2002. The Company does not expect adoption of SFAS No. 146 to have a material impact on its financial position or on its results of operations.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." FIN 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002, irrespective of the guarantor's fiscal year-end. The disclosure requirements of FIN 45 are effective for financial statements for interim or annual periods ending after December 15, 2002. The adoption of FIN 45 did not have a material impact on the Company's financial position or on its results of operations.

In November 2002, the EITF reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The Company does not expect adoption of EITF Issue No. 00-21 to have a material impact on its financial position or on its results of operations.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51." FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period beginning after June 15, 2003. The Company does not expect adoption of FIN 46 to have a material impact on its financial position or on its results of operations.

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Note 3 — Balance Sheet Components:**

At December 29, 2001 and December 28, 2002, the amortized cost basis of the available-for-sale securities represents the fair value of the investments (in thousands):

	December 29, 2001	December 28, 2002
Commercial paper	\$3,989	\$ —
Corporate bonds and notes	—	1,512
Foreign debt securities	—	1,504
Municipal bonds	—	1,043
Term notes	1,025	—
US Government	1,997	3,498
	<u>\$7,011</u>	<u>\$7,557</u>

At December 28, 2002, the investments mature between January and April 2003.

Inventories, net of reserves, consisted of the following (in thousands):

	December 29, 2001	December 28, 2002	March 29, 2003
Raw materials	\$ 744	\$1,520	(unaudited) \$1,666
Work-in-progress	1,296	2,319	3,114
Finished goods	350	391	248
	<u>\$2,390</u>	<u>\$4,230</u>	<u>\$5,028</u>

Property and equipment consisted of the following (in thousands):

	December 29, 2001	December 28, 2002
Machinery and equipment	\$ 17,078	\$ 19,265
Computer equipment and software	5,176	6,046
Furniture and fixtures	599	682
Leasehold improvements	3,055	3,047
Construction-in-progress	4,560	5,046
	<u>30,468</u>	<u>34,086</u>
Less: Accumulated depreciation and amortization	(12,470)	(17,548)
	<u>\$ 17,998</u>	<u>\$ 16,538</u>

Depreciation and amortization of property and equipment for the years ended December 30, 2000, December 29, 2001 and December 28, 2002 was approximately \$3,345,000, \$4,433,000 and \$5,315,000, respectively.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Accrued liabilities consisted of the following (in thousands):

	December 29, 2001	December 28, 2002
Accrued compensation and benefits	\$2,792	\$4,746
Accrued commissions	520	402
Accrued restructuring	441	—
Other accrued expenses	2,096	2,529
	<u>\$5,849</u>	<u>\$7,677</u>

**Note 4 — Restructuring Charges and Expenses:**

During fiscal 2001, the Company recorded a restructuring charge of approximately \$1,400,000. The Company implemented the restructuring plan to better align the infrastructure with the market conditions in the semiconductor industry and to further focus the Company on the wafer probe card business. The restructuring charge consisted of \$880,000 for headcount reductions covering 14 employees in research and development, 23 employees in operations and 17 employees in selling, general and administrative. The majority of the affected employees were based in Livermore, California. Further, the Company recorded \$223,000 for the consolidation of excess facilities and \$277,000 for asset write-offs, primarily for property and equipment. The consolidation of excess facilities included the closure of certain corporate facilities that had been vacated. The charge of \$223,000 primarily related to lease termination and noncancelable lease costs. Property and equipment that was disposed of resulted in a charge of \$277,000 and primarily consisted of leasehold improvements for the excess facilities. As of December 28, 2002, the restructuring plan had been fully executed and there were no remaining payments to be made in respect of the restructuring.

Information related to the restructuring plan follows (in thousands):

	Workforce Reductions	Lease Contractual Commitments	Facilities	Total
Restructuring provisions at August 16, 2001	\$ 880	\$ 223	\$ 277	\$1,380
Utilized:				
Non-cash	—	—	(277)	(277)
Cash	(615)	(47)	—	(662)
Restructuring liability at December 29, 2001	<u>265</u>	<u>176</u>	<u>—</u>	<u>441</u>
Utilized:				
Cash	(265)	(176)	—	(441)
Restructuring liability at December 28, 2002	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

**Note 5 — Notes Payable and Bank Line of Credit:**

In June 1997, the Company entered into two financing agreements with a financial institution which provided for borrowings up to \$1,600,000 and \$3,300,000 to purchase equipment. The agreements expired on March 31 and June 30, 1998, respectively. Prior to their expiration, the Company borrowed a total of \$4,526,000 under these agreements. During 2001, the Company paid off the remaining balances of the loans in their entirety.

In February 1999, the Company entered into a financing agreement, which provided for borrowings up to \$5,000,000 to purchase semiconductor assembly manufacturing and test equipment and expired on December 31,

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1999. Prior to its expiration, the Company borrowed \$1,775,000 under this financing line. During 2001, the Company paid off the remaining balance of the loan in its entirety.

In June 1999, the Company entered into a note payable agreement to finance the acquisition and installation of software. The Company borrowed a total of \$311,000 under this agreement. During 2002, the Company paid off the remaining balance of the loan in its entirety.

In March 2001, the Company entered into a financing agreement with a financial institution which provided for total borrowings up to \$16,000,000. The terms of the agreement provide for a revolving line of credit, up to the commitment amount of \$12,000,000 for working capital requirements and the issuance of letters of credit, an equipment line of credit, which provides for borrowings up to \$2,000,000, and a term loan of \$2,000,000, to be used only to consolidate and refund other existing long-term debt. The facility is renewable annually and expires on January 31, 2003. The Company executed the term loan of \$2,000,000, and as of December 28, 2002, has an outstanding balance of \$1,125,000. The term loan, and any additional borrowings under the agreements, accrue interest based on the LIBOR rate plus 2.0%, which was 3.38% at December 28, 2002, and are repayable in 48 equal monthly payments of principal plus accrued interest. In March 2002, the Company drew down \$375,000 against the equipment line of credit. Borrowings under the equipment line of credit accrue interest at an annual rate of 4.25%. As of December 28, 2002, the Company had an outstanding balance of \$375,000 under the equipment line of credit, which has been classified as a current liability. In addition, six letters of credit totaling \$2,830,000 have been issued to the lessor of the Company's facilities. All borrowings under the financing agreements are collateralized by all of the Company's assets.

Aggregate annual maturities of notes payable at December 28, 2002 are as follows (in thousands):

2003	\$ 875
2004	500
2005	125
	<hr/>
	1,500
Less: Current portion	(875)
	<hr/>
	\$ 625
	<hr/>

In February 2003, the financing agreement was amended to increase the revolving line of credit, to allow for a maximum commitment amount of \$16,000,000. The revolving line of credit, as amended, is renewable annually and expires on February 21, 2005.

**Note 6 — Commitments and Contingencies:**

The Company leases its facilities under various operating leases which expire through December 2011. In addition to the base rental, the Company is responsible for certain taxes, insurance and maintenance costs. Under the terms of the lease agreements, the Company has the option to extend the term leases. As of December 28, 2002, aggregate future minimum lease payments are as follows (in thousands):

2003	\$ 3,177
2004	2,426
2005	2,258
2006	2,258
2007	2,258
Thereafter	8,463
	<hr/>
	\$20,840
	<hr/>

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Rent expense for the years ended December 30, 2000, December 29, 2001 and December 28, 2002 was approximately \$932,000, \$1,016,000 and \$2,902,000, respectively.

During fiscal 2000, the Company received \$1,330,000 from the settlement of a claim against a licensee for an alleged breach of a license agreement. This amount was recognized immediately as other income.

From time to time, the Company may become involved in litigation relating to additional claims arising from the ordinary course of business. Management is not currently aware of any matters that will have a material adverse affect on the financial position, results of operations or cash flows of the Company.

**Note 7 — Redeemable Convertible Preferred Stock:**

Under the Company's Certificate of Incorporation, the Company's redeemable convertible preferred stock is issuable in series.

From April through December 1995, the Company sold 6,389,103 shares of Series A redeemable convertible preferred stock to new investors for net cash proceeds of \$349,000.

In December 1995, the Company sold 3,448,293 shares of Series B redeemable convertible preferred stock to new investors for net cash proceeds of \$2,967,000.

From May through July 1996, the Company sold 3,298,161 shares of Series C redeemable convertible preferred stock to existing and 60% to new investors for net cash proceeds of \$5,426,000.

From April 1997 through October 1998, the Company sold 5,552,973 shares of Series D redeemable convertible preferred stock to existing and 84% to new investors for net cash proceeds of \$19,221,000. In October 2000, the Company issued an additional 326,545 shares of Series D redeemable convertible preferred stock pursuant to the exercise of a warrant. In June 2002, the Company issued an additional 8,083 shares of Series D redeemable convertible preferred stock pursuant to the exercise of a warrant.

From August through October 1999, the Company sold 2,666,666 shares of Series E redeemable convertible preferred stock to existing and 80% to new investors for net cash proceeds of \$19,950,000.

From September through November 2000, the Company sold 633,130 shares of Series F redeemable convertible preferred stock to existing and 94% to new investors for net cash proceeds of \$6,910,000.

From July through September 2001, the Company sold 679,672 shares of Series G redeemable convertible preferred stock to an existing and 98% to new investors for net cash proceeds of \$10,072,000.

As of December 30, 2000, the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Cost	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	\$ —	\$0.0424
Series B	3,527,258	3,448,293	2,967	0.87	0.0696
Series C	3,300,000	3,298,161	5,426	1.65	0.1320
Series D	6,376,812	5,879,518	19,221	3.45	0.2760
Series E	2,866,667	2,666,666	19,950	7.50	0.6000
Series F	750,000	633,130	6,910	11.00	0.8800
	<u>23,209,840</u>	<u>22,314,871</u>	<u>\$54,823</u>		

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As of December 29, 2001, the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Cost	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	\$ —	\$0.0424
Series B	3,527,258	3,448,293	2,967	0.87	0.0696
Series C	3,300,000	3,298,161	5,426	1.65	0.1320
Series D	6,376,812	5,879,518	19,221	3.45	0.2760
Series E	2,866,667	2,666,666	19,950	7.50	0.6000
Series F	750,000	633,130	6,910	11.00	0.8800
Series G	1,470,000	679,672	10,072	15.00	1.2000
	<u>24,679,840</u>	<u>22,994,543</u>	<u>\$64,895</u>		

As of December 28, 2002 and March 29, 2003 (unaudited) the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Cost	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	\$ —	\$0.0424
Series B	3,521,020	3,448,293	2,967	0.87	0.0696
Series C	3,298,161	3,298,161	5,426	1.65	0.1320
Series D	5,893,731	5,887,601	19,221	3.45	0.2760
Series E	2,666,666	2,666,666	19,950	7.50	0.6000
Series F	678,630	633,130	6,910	11.00	0.8800
Series G	679,672	679,672	10,072	15.00	1.2000
	<u>23,126,983</u>	<u>23,002,626</u>	<u>\$64,895</u>		

The rights, preferences and privileges of the redeemable convertible preferred stock are as follows:

**Dividends**

The holders of Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock are entitled to receive the above annual dividends which are cumulative, accrue quarterly, and are payable when and as declared by the Board of Directors. After payment of the dividends on the Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock, holders of Series A redeemable convertible preferred stock are entitled to receive non-cumulative annual dividends as stated above, when and as declared by the Board of Directors. No dividends can be paid on common stock until the dividends on the redeemable convertible preferred stock have been paid in full. As of March 29, 2003 (unaudited), no dividends have been declared or paid. As there are no fixed redemption dates associated with the preferred stock and as no dividends have been declared to date, no amounts have been accrued for the dividends. As of March 29, 2003, the amount of dividends in arrears is approximately \$22,151,000 (unaudited).

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

***Liquidation***

The holders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock shall be entitled to receive prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of Series C, Series B and Series A redeemable convertible preferred stock or common stock by reason of their ownership thereof, an amount per share as stated in the table above (each as adjusted for any stock dividends, combinations or splits with respect to such shares) plus all accrued or declared but unpaid dividends on each such share. If upon the occurrence of such event, the assets and funds thus distributed among the holders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock shall be insufficient to permit the payment to such holders of the full preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed ratably and with equal priority among the holders of the Series D, the Series E, the Series F and the Series G redeemable convertible preferred stock in proportion to the preferential amount each such holder is otherwise entitled to receive. After payment has been made to the holders of the Series D, the Series E, the Series F and the Series G redeemable convertible preferred stock of the full amounts to which they shall be entitled, the holders of the Series B and Series C redeemable convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds to the holders of the Series A redeemable convertible preferred stock or common stock by reason of their ownership thereof, an amount per share as stated in the table above (each adjusted for any stock dividends, combinations or splits with respect to such shares). After payment has been made to the holders of the Series D, Series E, Series F, Series G, Series B and Series C redeemable convertible preferred stock of the full amounts to which they shall be entitled, any remaining assets are distributed pro-rata to holders of Series A convertible preferred and common stock.

***Redemption***

The merger or consolidation of the Company into another entity or any transactions in which more than 50% of the voting power of the Company is disposed of or the sale, transfer or disposition of substantially all of the property or business of the Company is deemed a liquidation, dissolution, or winding up of the Company. These liquidation characteristics require classification of the redeemable convertible preferred stock outside of the stockholders' equity (deficit) section as these factors are outside the control of the Company. The redeemable convertible preferred stock is not redeemable in any other circumstances.

***Voting***

Each share of preferred stock is entitled to vote on an "as converted" basis along with common stockholders. The holders of Series B redeemable convertible preferred stock shall have the right, voting together as a separate class, to elect one member of the Board of Directors. The holders of common stock and Series A redeemable convertible preferred stock shall have the right, voting together as a separate class, to elect two members to the Board of Directors. The holders of at least 70% of Series D redeemable convertible preferred stock shall have the right, voting together as a separate class, to elect one member to the Board of Directors. The remaining director shall be elected by the holders of common stock and Series A, Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock, voting together as a single class, with the holder of each share of the preferred stock entitled to the number of votes equal to the number of shares of common stock into which such share of preferred stock could then be converted.

***Conversion***

Each share of preferred stock, at the option of the holders, is convertible into the number of fully paid and nonassessable shares of common stock which results from dividing the respective conversion price per share in effect for the preferred stock at the time of conversion by the per share conversion value of such shares in effect at that time. The initial per share conversion price and per share conversion value of the Series A, Series B,

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Series C, Series D, Series E, Series F and Series G preferred stock is \$0.53, \$0.87, \$1.65, \$3.45, \$7.50, \$11.00 and \$15.00 per share, respectively. Conversion is automatic at its then effective conversion rate upon the earlier of (i) in the case of the Series A, Series B, Series C and Series D preferred stock, the closing of the sale of the Company's common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$6.90 per share, (ii) in the case of the Series E preferred stock, the closing of the sale of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$7.50 per share, (iii) in the case of the Series F preferred stock, the closing of the sale of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$11.00 per share, (iv) in the case of the Series G preferred stock, the closing of the sale of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$15.00 per share and (v) the date specified by written consent or agreement of the holders of not less than two-thirds of the then outstanding shares of each series of preferred stock.

In the event of the sale by the Company of common stock below \$11.00 per share in a public offering, the conversion price of the Series F and Series G redeemable convertible preferred stock will be adjusted pursuant to a defined adjustment formula. As a result of that adjustment, each share of Series F and Series G redeemable convertible preferred stock will convert upon such a public offering into more than one share of common stock. In the event of the sale of common stock at or above \$11.00 in a public offering, the conversion price of the Series F and Series G redeemable convertible preferred stock will not be adjusted.

*Warrants*

In connection with a financing agreement entered into by the Company in April 1996, the Company issued warrants to purchase an aggregate of 72,727 shares of Series B redeemable convertible preferred stock at an exercise price of \$1.65 per share. These warrants expire upon the later of April 2006 or five years after the closing of an underwritten initial public offering. The value of these warrants determined using a Black-Scholes model was not material.

In September 2000, the Company entered into a seven year technology license agreement to transfer technology to a related party. In connection with the license agreement, the Company issued a warrant to purchase 45,500 shares of Series F redeemable convertible preferred stock at an exercise price of \$11.00 per share. The warrant was fully vested upon grant and nonforfeitable. This warrant is exercisable on September 22, 2005 and would have become exercisable earlier with respect to 22,750 shares on March 22, 2003 if, on or before that date, the warrant holder had achieved specified commercial milestones. Further, the warrant will become exercisable immediately with respect to all 45,500 shares if the warrant holder has achieved certain higher commercial milestones. As of March 29, 2003 (unaudited), no shares are exercisable. This warrant expires upon the earlier of September 23, 2005 or immediately prior to an acquisition of the Company. The Company reserved 45,500 shares of Series F redeemable convertible preferred stock in the event of exercise. The fair value of this warrant, estimated on the date of grant using a Black-Scholes model, of \$306,220 has been capitalized as an other asset, and is being amortized against revenue using the straight-line method over the expected life of the technology of five years. The assumptions used in the calculation were: dividend yield of 0%; expected volatility of 67%; an expected term of 5 years; risk free interest rate of 6.00%.

**Note 8 — Stockholders' Equity (Deficit):**

*Preferred stock*

The Company has authorized 10,000,000 shares of undesignated preferred stock, \$0.001 par value, none of which is issued and outstanding. The Company's Board of Directors shall determine the rights, preferences, privileges and restrictions of the preferred stock, including dividends rights, conversion rights, voting rights,

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series.

*Common stock*

Each share of common stock has the right to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, subject to the prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No dividends have been declared or paid as of March 29, 2003 (unaudited).

During fiscal 2000, 2001 and 2002, the Company issued fully vested unrestricted common stock in exchange for goods or services from non-employees. The Company believes that the fair value of the common stock is more reliably measurable than the fair value of the consideration received. The Company has measured these transactions using the fair value of the unrestricted common stock at the time of issuance and has recognized the related expenses immediately.

*Stock option plans*

The Company has reserved shares of common stock for issuance under the 1996 Stock Option Plan, Incentive Option Plan and Management Incentive Option Plan (the "Plans"). Under all Plans, the Board of Directors may issue incentive stock options to employees and nonqualified stock options and stock purchase rights to consultants or employees of the Company. The Board of Directors has the authority to determine to whom options will be granted, the number of shares, the term and exercise price (which cannot be less than fair market value at date of grant for incentive stock options or 85% of fair market value for nonqualified stock options). If an employee owns stock representing more than 10% of the outstanding shares, the price of each share shall be at least 110% of the fair market value, as determined by the Board of Directors. Generally, all options are immediately exercisable and vest 25% on the first anniversary of the vesting commencement date and on a monthly basis thereafter for a period of an additional three years. The options have a maximum term of ten years. Unvested option exercises are subject to repurchase upon termination of the holder's status as an employee or consultant. At December 28, 2002 and March 29, 2003, 189,849 shares of common stock and 180,201 shares of common stock (unaudited), respectively, were subject to the Company's right of repurchase.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Activity under the Plans is set forth below (in thousands, except share and per share data):

	Outstanding Options				
	Shares Available	Number of Shares	Exercise Price	Aggregate Price	Weighted Average Exercise Price
Balances, December 26, 1999	687,404	1,889,182	\$0.10-\$5.00	\$ 4,735	\$2.51
Additional shares reserved	1,885,000	—	—	—	—
Options granted	(2,238,660)	2,238,660	5.50-6.00	12,558	5.61
Options exercised	—	(509,275)	0.10-6.00	(2,189)	4.30
Options canceled	353,986	(353,986)	0.165-6.00	(1,406)	3.97
Balances, December 30, 2000	687,730	3,264,581	0.10-6.00	13,698	4.20
Additional shares reserved	1,840,000	—	—	—	—
Options granted	(1,952,073)	1,952,073	6.00-6.50	12,308	6.31
Options exercised	—	(168,229)	0.10-6.00	(341)	2.03
Options canceled/shares repurchased	922,278	(885,971)	0.50-6.50	(4,444)	5.02
Balances, December 29, 2001	1,497,935	4,162,454	0.10-6.50	21,221	5.10
Additional shares reserved	3,500,000	—	—	—	—
Options granted	(1,999,243)	1,999,243	6.50-8.00	13,364	6.68
Options exercised	—	(223,113)	0.10-6.50	(1,070)	4.79
Options canceled	234,559	(234,559)	1.50-8.00	(1,390)	5.93
Balances, December 28, 2002	3,233,251	5,704,025	0.10-8.00	32,125	5.63
Options granted (unaudited)	(65,000)	65,000	6.50	423	6.50
Options exercised (unaudited)	—	(24,940)	0.10-6.50	(67)	2.70
Options canceled (unaudited)	69,057	(69,057)	2.50-6.50	(389)	5.63
Balances, March 29, 2003 (unaudited)	3,237,308	5,675,028	\$0.10-\$8.00	\$32,092	\$5.65

The options outstanding and vested by exercise price at December 29, 2001 are as follows:

Range of Exercise Prices	Options Outstanding and Exercisable			Options Vested	
	Number of Options Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Vested	Weighted Average Exercise Price
\$0.10 - \$1.25	261,587	5.55	\$0.61	261,009	\$0.61
\$1.50	91,439	6.83	1.50	68,539	1.50
\$2.50 - \$3.00	25,025	7.26	2.55	16,726	2.54
\$3.25	682,902	7.45	3.25	251,437	3.25
\$3.75 - \$5.00	39,633	7.74	4.30	23,117	4.26
\$5.50	974,940	8.62	5.50	208,154	5.50
\$6.00	923,035	9.09	6.00	148,273	6.00
\$6.50	1,163,893	9.79	6.50	28,501	6.50
	4,162,454			1,005,756	

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The options outstanding and vested by exercise price at December 28, 2002 are as follows:

Options Outstanding and Exercisable				Options Vested	
Range of Exercise Prices	Number of Options Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Vested	Weighted Average Exercise Price
\$0.10 - \$1.25	220,378	4.62	\$0.66	220,378	\$0.66
\$1.50	74,821	5.81	1.50	74,549	1.50
\$2.50 - \$3.00	23,641	6.26	2.54	22,193	2.54
\$3.25	666,813	6.45	3.25	465,382	3.25
\$3.75 - \$5.00	30,414	6.71	4.23	26,109	4.23
\$5.50	930,316	7.62	5.50	364,025	5.50
\$6.00	776,222	8.09	6.00	383,117	6.00
\$6.50	2,723,120	9.18	6.50	135,677	6.50
\$7.50 - \$8.00	258,300	9.37	7.87	—	—
	<u>5,704,025</u>			<u>1,691,430</u>	

The options outstanding and vested by exercise price at March 29, 2003 (unaudited) are as follows:

Options Outstanding and Exercisable				Options Vested	
Range of Exercise Prices	Number of Options Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Vested	Weighted Average Exercise Price
\$0.10 - \$1.25	207,878	4.38	\$0.67	207,878	\$0.67
\$1.50	74,821	5.56	1.50	74,821	1.50
\$2.50 - \$3.00	14,975	5.99	2.57	14,891	2.56
\$3.25	661,030	6.20	3.25	522,951	3.25
\$3.75 - \$5.00	26,196	6.43	4.11	23,565	4.09
\$5.50	924,416	7.37	5.50	411,362	5.50
\$6.00	742,491	7.83	6.00	415,771	6.00
\$6.50	2,764,921	8.95	6.50	183,783	6.50
\$7.50 - \$8.00	258,300	9.12	7.87	—	—
	<u>5,675,028</u>			<u>1,855,022</u>	

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

*Stock-based compensation*

The Company has adopted the disclosure only provisions of SFAS No. 123. The Company calculated the fair value of each option on the date of grant using the minimum value method as prescribed by SFAS No. 123. The assumptions used are as follows:

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
Risk-free interest rate	6.24%	4.58%	4.48%	4.83%	3.03%
Expected life (in years)	5	5	5	5	5
Dividend yield	—	—	—	—	—

(unaudited)

As the determination of fair value of all options granted after such time the Company becomes a public company will include an expected volatility factor in addition to the factors described in the preceding table, the pro forma net income (loss) (see Note 2) may not be representative of future periods.

The weighted-average per share grant date fair value of options granted during the years ended December 30, 2000, December 29, 2001, December 28, 2002 and three months ended March 29, 2003 (unaudited) was \$1.46, \$1.06, \$1.32 and \$0.90, respectively.

*Deferred stock-based compensation*

During fiscal 2001, 2002 and the three months ended March 29, 2003, the Company issued options to certain employees under the Plan with exercise prices below the deemed fair market value of the Company's common stock at the date of grant. In accordance with the requirements of APB No. 25, the Company has recorded deferred stock-based compensation for the difference between the exercise price of the stock option and the deemed fair market value of the Company's stock at the grant. This deferred stock-based compensation is amortized to expense on a straight line basis over the period during which the Company's right to repurchase the stock lapses or the options become vested, generally four years. During the years ended December 29, 2001, December 28, 2002, and the three months ended March 29, 2003 the Company has recorded deferred stock-based compensation related to these options in the amounts of \$4,265,000, \$9,262,000 and \$62,000 (unaudited), net of cancellations, respectively, of which \$195,000, \$997,000 and \$333,000 (unaudited) had been amortized to expense during fiscal 2001, 2002 and for the three months ended March 29, 2003, respectively.

Stock-based compensation expense related to stock options granted to non-employees is recognized on a straight line basis, as the stock options are earned. During fiscal 2000 and 2001, the Company issued options to non-employees. The options generally vest ratably over four years. The values attributable to these options are amortized over the service period and the vested portion of these options were remeasured at each vesting date. The Company believes that the fair value of the stock options is more reliably measurable than the fair value of the services received. The fair value of the stock options granted were revalued at each reporting date using the Black-Scholes option pricing model as prescribed by SFAS No. 123 using the following assumptions:

	Years Ended	
	December 30, 2000	December 29, 2001
Risk-free interest rate	6.05%	5.75%
Expected life (in years)	10	10
Dividend yield	—	—
Expected volatility	67%	67%

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The stock-based compensation expense will fluctuate as the deemed fair market value of the common stock fluctuates. In connection with the grant of stock options to non-employees, the Company recorded deferred stock-based compensation of \$259,000, \$91,000, none and none (unaudited) for the years ended December 30, 2000, December 29, 2001, December 28, 2002, and for the three months ended March 29, 2003, respectively. Stock-based compensation expenses related to options granted to non-employees were allocated to research and development, selling, general and administrative expenses as follows (in thousands):

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
				(unaudited)	
Research and development	\$ 61	\$ 70	\$ —	\$ —	\$ —
Selling, general and administrative	198	204	42	—	—
	—	—	—	—	—
	\$259	\$274	\$ 42	\$ —	\$ —

**2002 Equity Incentive Plan**

On April 18, 2002, the Board of Directors adopted the 2002 Equity Incentive Plan ("2002 Plan"), which will become effective upon the effective date of an initial public offering of the Company's common stock. The 2002 Plan provides for the grant of both incentive stock options and non-qualified stock options, restricted stock and stock bonuses. The incentive stock options may be granted to the employees and the non-qualified stock options, and all awards other than incentive stock options, may be granted to employees, officers, directors and consultants. The exercise price of incentive stock options must be at least equal to the fair market value of common stock on the date of grant. The exercise price of incentive stock options granted to 10% stockholders must be at least equal to 110% of the fair market value of common stock on the date of grant. The Company has reserved 500,000 shares of common stock for issuance under the 2002 Plan plus any shares which have been reserved but not issued under the Company's existing Plans, plus any shares repurchased at the original purchase price and any options which expire, thereafter. The Company will not grant any options under the 1996 Stock Option Plan, the Incentive Option Plan and the Management Incentive Option Plan after the effectiveness of the 2002 Plan. In addition, on each January 1, the number of shares available for issuance under the 2002 Plan will be increased by an amount equal to 5.0% of the outstanding shares of common stock on the preceding day.

**2002 Employee Stock Purchase Plan**

On April 18, 2002, the Board of Directors approved the 2002 Employee Stock Purchase Plan ("2002 ESPP"), which will commence on the first day that price quotations are available for the Company's common stock on the Nasdaq National Market. The 2002 ESPP is designed to enable eligible employees to purchase shares of common stock at a discount on a periodic basis through payroll deductions or through a single lump sum cash payment in the case of the first offering period. Except for the first offering period which will have an approximately six-month duration, each offering period will be for two years and will consist of four six-month purchase periods. The price of the common stock purchased shall be 85% of the lesser of the fair market value of the common stock on the first day of the applicable offering period or the last day of each purchase period. 1,500,000 shares of common stock are reserved for issuance under the 2002 ESPP and will be increased on each January 1 by an amount equal to 1.0% of the outstanding shares of common stock on the preceding day.

**Notes receivable**

In fiscal 2000 and 2001, the Company received full recourse notes receivable from certain employees in exchange for common stock. The notes bear interest at the applicable market interest rate, ranging from 4.46% to 6.60%, and have due dates through May 2007. Under the terms of the full recourse notes receivable, the Company

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

may proceed against any assets of the holder of the notes, or against the collateral securing the notes, or both, in event of default. The notes are collateralized by the underlying shares of common stock.

**Note 9 — Income Taxes:**

The components of the provision (benefit) for income taxes are as follows (in thousands):

	Years Ended		
	December 30, 2000	December 29, 2001	December 28, 2002
Current:			
Federal	\$114	\$158	\$ 385
State	1	108	(14)
Foreign	—	41	143
	—	—	—
	115	307	514
	—	—	—
Deferred:			
Federal	—	—	(2,073)
State	—	—	(1,566)
	—	—	—
Total provision (benefit) for income taxes	\$115	\$307	\$(3,125)

At December 28, 2002, the Company had state net operating loss carryforward of approximately \$825,000 available to offset future taxable income. This carryforward begins to expire in 2006 unless utilized.

At December 28, 2002, the Company had research credit carryforwards of approximately \$742,000 and \$836,000 for federal and state income tax purposes, respectively. If not utilized, the federal carryforwards will expire in various amounts beginning in 2019. The state research credit can be carried forward indefinitely.

Under the Internal Revenue Code, as amended, and similar state provisions, certain substantial changes in the Company's ownership could result in an annual limitation on the amount of credit net operating loss and carryforwards that can be utilized in future years to offset future taxable income. Annual limitations may result in the expiration of net operating loss and credit carryforwards before they are used.

Components of the Company's deferred tax assets are as follows (in thousands):

	December 29, 2001	December 28, 2002
Net operating losses	\$ 1,225	\$ 37
Tax credits	3,468	2,297
Depreciation and amortization	208	(196)
Other reserves and accruals	4,160	1,501
	—	—
	9,061	3,639
Less: Valuation allowance	(9,061)	—
	—	—
	\$ —	\$3,639

Management periodically evaluates the recoverability of the deferred tax assets and recognizes the tax benefit only as reassessment demonstrates that they are realizable. At such time, if it is determined that it is more likely than not that the deferred tax assets are realizable, the valuation allowance will be adjusted. At December 29, 2001, the Company provided a valuation allowance against its deferred tax assets due to the uncertainty regarding their realizability. As of December 28, 2002, the Company has released the valuation

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

allowance because it believes it is more likely than not that all deferred tax assets will be realized in the foreseeable future.

The items accounting for the difference between income taxes computed at the federal statutory rate and the provision (benefit) for income taxes consisted of:

	Years Ended		
	December 30, 2000	December 29, 2001	December 28, 2002
Federal statutory rate	34.0%	34.0%	34.0%
State taxes and credits, net of federal benefit	(46.8)	(77.4)	2.0
Non-deductible deferred stock-based compensation	4.0	28.6	4.7
No tax benefit of foreign losses	15.9	183.9	44.6
Extraterritorial income exclusion	—	(35.0)	(2.6)
Tax credits	(32.4)	(132.3)	(4.7)
Change in valuation allowance	35.4	56.0	(125.3)
Permanent items and other	(4.4)	(2.7)	4.2
Total	5.7%	55.1%	(43.1)%

**Note 10 — Employee Benefit Plan:**

In 1996, the Company adopted a retirement plan which is qualified under Section 401(k) of the Internal Revenue Code of 1986. Eligible employees may make voluntary contributions to the retirement plan of up to 25% of their annual compensation, not to exceed the statutory amount, and the Company may make matching contributions. The Company made no contributions to the retirement plan in fiscal 2000, 2001 and 2002.

**Note 11 — Operating Segment and Geographic Information:**

As of December 29, 2001, December 28, 2002 and March 29, 2003, 97%, 97% and 95% (unaudited) of long-lived assets are maintained in the United States of America, respectively.

The following table summarizes revenue by geographic region:

	Years Ended			Three Months Ended	
	December 30, 2000	December 29, 2001	December 28, 2002	March 30, 2002	March 29, 2003
				(unaudited)	
North America	42.0%	52.7%	55.6%	66.4%	52.4%
Taiwan	25.4	26.4	20.9	12.8	18.7
Asia (excluding Japan and Taiwan)	8.0	0.2	0.9	0.1	5.1
Japan	8.2	6.9	7.1	4.9	15.2
Europe	16.4	13.8	15.5	15.8	8.6
Total export sales	100.0%	100.0%	100.0%	100.0%	100.0%

**Note 12 — Related Party Transactions:**

The Company provided services or sold products to related parties, who are also stockholders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock which were issued by the Company in 1997, 1999, 2000 and 2001, respectively. For the years ended December 30, 2000, December 29, 2001 and December 28, 2002, revenue recognized from these related parties was \$35,311,000, \$46,042,000 and

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

\$50,639,000, respectively. At December 29, 2001 and December 28, 2002, the Company had accounts receivable of \$7,313,000 and \$8,593,000, respectively, from its related parties.

The Company purchased inventories from related parties, and paid commissions to related parties, who are also stockholders of the Series E and Series G redeemable convertible preferred stock. For the years ended December 30, 2000, December 29, 2001 and December 28, 2002, transactions with these related parties were \$133,000, \$11,458,000 and \$9,767,000, respectively. At December 29, 2001 and December 28, 2002, the Company had accounts payable of \$1,458,000 and \$2,903,000, respectively, to its related parties.

The Company received professional services from a law firm that is affiliated with two entities that are stockholders of the Series D and Series F redeemable convertible preferred stock, which were issued by the Company in 1997 and 2000, respectively. For the years ended December 30, 2000, December 29, 2001 and December 28, 2002, expenses relating to these professional services were \$498,000, \$199,000 and \$77,000, respectively. In addition, the Company incurred costs of \$530,000 in fiscal 2002 with this law firm for professional services, relating to the filing of the Company's Registration Statement on Form S-1. At December 29, 2001 and December 28, 2002, the Company had accounts payable of \$28,600 and \$209,000, respectively, to this law firm.

**Note 13 — Unaudited Pro Forma Net Income Per Share:**

Pro forma basic and diluted net income per share have been computed to give effect to redeemable convertible preferred stock that will convert to common stock upon the closing of the Company's initial public offering (using the as-converted method) for the year ended December 28, 2002 and the three months ended March 29, 2003. A reconciliation of the numerator and denominator used in the calculation of pro forma basic and diluted net income per share follows (in thousands, except per share data):

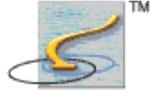
	Year Ended December 28, 2002	Three Months Ended March 29, 2003
	(unaudited)	
Numerator:		
Net income	\$10,359	\$ 699
Denominator:		
Weighted-average shares outstanding used in computing basic net income per share	4,448	4,539
Adjustments to reflect the effect of the assumed conversion of the preferred stock from the date of issuance	22,999	23,003
Weighted-average shares used in computing basic pro forma net income per share	27,447	27,542
Adjustments to reflect the effect of the assumed conversion of options outstanding, warrants and weighted-average unvested common shares subject to repurchase	2,043	1,724
Weighted-average shares used in computing diluted pro forma net income per share	29,554	29,266
Pro forma net income per share		
Basic	\$ 0.38	\$ 0.03
Diluted	\$ 0.35	\$ 0.02

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### INSIDE BACK COVER PAGE

This page contains the picture of a wafer probe card manufactured by FormFactor. The wafer probe card is set in the lower half of the page and is held by a technician whose image fades into the background of the picture. In the top of the picture and written upon the image of the technician is the title of the picture, "Delivering the Solution." The words "Delivering the Solution" are repeated in a larger font behind the title as a shadow to the title. Five lines of text appear below the title and above the image of the wafer probe card. The lines of text read from top to bottom as follows: "Proprietary Design Tools," "MicroSpring Interconnect Technology," "Micro-machining Manufacturing," "Large Contact Arrays" and "Test Integration." Each line of text stated in the sentence above has a shadow that repeats the line of text in a larger font. The FormFactor logo trademark placed next to the company's name, "FORMFACTOR," appears in the bottom left corner of the picture.

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# FORMFACTOR

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**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the expenses, other than the underwriting discounts and commissions, payable by the Registrant in connection with the sale and distribution of the shares of common stock being registered hereby, including the shares offered for sale by the selling stockholders. All amounts shown are estimates, except the Securities and Exchange Commission registration fee, the National Association of Securities Dealers, Inc. filing fee and the Nasdaq National Market listing fee.

Securities and Exchange Commission registration fee	\$ 9,200
National Association of Securities Dealers, Inc. filing fee	10,500
Nasdaq National Market listing fee	100,000
Accounting fees and expenses	400,000
Legal fees and expenses	650,000
Road show expenses	50,000
Printing expenses	275,000
Blue Sky fees and expenses	10,000
Transfer agent and registrar fees and expenses	15,000
Miscellaneous	30,300
	<hr/>
Total	\$1,550,000

**Item 14. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Registrant's certificate of incorporation includes a provision that eliminates the personal liability of its directors for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to the Registrant or its stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law regarding unlawful dividends and stock purchases; or
- for any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Registrant's bylaws provide that:

- the Registrant is required to indemnify its directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions where indemnification is not permitted by applicable law;
- the Registrant is required to advance expenses, as incurred, to its directors and officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to certain limited exceptions; and
- the rights conferred in the bylaws are not exclusive.

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In addition, the Registrant intends to enter into indemnity agreements with each of its current directors and officers. These agreements will provide for the indemnification of the Registrant's officers and directors for all expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of the Registrant. At present, there is no pending litigation or proceeding involving a director, officer or employee of the Registrant regarding which indemnification is sought, nor is the Registrant aware of any threatened litigation that may result in claims for indemnification.

The Registrant intends to obtain directors' and officers' insurance to cover its directors and officers for certain liabilities, including coverage for public securities matters.

The indemnification provisions in the Registrant's certificate of incorporation and bylaws and the indemnity agreements to be entered into between the Registrant and each of its directors and officers may be sufficiently broad to permit indemnification of the Registrant's directors and officers for liabilities arising under the Securities Act.

Reference is also made to Section 7 of the underwriting agreement (Exhibit 1.01 hereto), which provides for the indemnification by the underwriters of the Registrant and its executive officers, directors and controlling persons against certain liabilities, including liabilities arising under the Securities Act, in connection with matters specifically provided for in writing by the underwriters for inclusion in this Registration Statement.

See also the undertakings set out in response to Item 17.

Reference is made to the following documents filed as exhibits to this Registration Statement regarding relevant indemnification provisions described above and elsewhere herein:

Exhibit Document	Number
Form of Underwriting Agreement	1.01
Form of Restated Certificate of Incorporation to be filed upon the closing of the offering	3.02
Restated Bylaws of the Registrant to be effective upon the closing of the offering	3.04
Form of Indemnity Agreement	10.01
Sixth Amended and Restated Rights Agreement by and among the Registrant and certain stockholders of the Registrant dated July 13, 2001	4.02

### **Item 15. Recent Sales of Unregistered Securities.**

In the three years prior to the filing of this Registration Statement, the Registrant issued and sold the following unregistered securities.

1. In September 2000, the Registrant issued a warrant to a customer to purchase up to 45,500 shares of Series F preferred stock at an exercise price of \$11.00 per share. The warrant is exercisable on September 22, 2005. The warrant, however, will become exercisable immediately with respect to all 45,500 shares if the warrant holder achieves certain commercial milestones. If not earlier exercised, this warrant will expire September 23, 2005.

2. In September through November 2000, the Registrant issued and sold a total of 633,130 shares of Series F preferred stock to 19 investors, consisting of 14 individual investors, two corporate investors and three venture capital and investment funds for a total purchase price of \$6,964,430, all of which was paid in cash.

3. In July and September 2001, the Registrant issued and sold a total of 679,672 shares of Series G preferred stock to five corporate investors for a total purchase price of \$10,195,080, all of which was paid in cash.

4. In June 2002, the Registrant issued 8,083 shares of Series D preferred stock to a company, which held a warrant of the Registrant, pursuant to a cashless net exercise of the warrant.

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5. As of March 29, 2003, the Registrant had issued 7,302 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's incentive option plan, with exercise prices ranging from \$3.25 to \$6.50 per share.

6. As of March 29, 2003, the Registrant had issued 448,750 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's management incentive option plan, with exercise prices ranging from \$5.50 to \$6.50 per share.

7. As of March 29, 2003, the Registrant had issued 2,132,139 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's 1995 stock plan, with exercise prices ranging from \$0.10 to \$0.165 per share.

8. As of March 29, 2003, the Registrant had issued 3,167,919 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's 1996 stock option plan, with exercise prices ranging from \$0.165 to \$8.00 per share.

9. From December 26, 1998 to March 29, 2003, the Registrant had issued 28,043 shares of common stock to nine of its consultants under stock purchase agreements, with purchase prices ranging from \$5.50 to \$8.00 per share.

The sales and issuances of securities above, other than the sales and issuances in items 5, 6 and 8, were determined to be exempt from registration under Section 4(2) of the Securities Act or Regulation D thereunder as transactions by an issuer not involving a public offering. The sales and issuances of securities listed above in items 5, 6 and 8 were deemed to be exempt from registration under the Securities Act by virtue of Rule 701 promulgated under Section 3(b) of the Securities Act as transactions pursuant to compensation benefits plans and contracts relating to compensation. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

### **Item 16. Exhibits and Financial Statement Schedules.**

(a) The following exhibits are filed herewith:

<b>Exhibit Number</b>	<b>Exhibit Title</b>
1.01	Form of Underwriting Agreement.
3.01	Amended and Restated Certificate of Incorporation of the Registrant as filed September 30, 2002.
3.02	Form of Registrant's Amended and Restated Certificate of Incorporation to be filed upon the closing of the offering.
3.03	Amended Bylaws of the Registrant, as amended through March 14, 2002.
3.04	Amended and Restated Bylaws of the Registrant to be effective upon the closing of the offering.
4.01	Specimen Common Stock Certificate.
4.02	Sixth Amended and Restated Rights Agreement by and among the Registrant and certain stockholders of the Registrant dated July 13, 2001.
4.03	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Richard Hoffman dated February 9, 1994.
4.04	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Milton Ohring dated April 11, 1994.
4.05	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Benjamin Eldridge dated August 12, 1994.
4.06	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Charles Baxley, P.C. dated September 8, 1994.
5.01**	Form of opinion of Fenwick & West LLP.
10.01	Form of Indemnity Agreement.

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<b>Exhibit Number</b>	<b>Exhibit Title</b>
10.02	1995 Stock Plan, and form of option grant.
10.03	1996 Stock Option Plan, and form of option grant.
10.04	Incentive Option Plan, and form of option grant.
10.05	Management Incentive Option Plan, and form of option grant.
10.06	2002 Equity Incentive Plan.
10.07	2002 Employee Stock Purchase Plan.
10.08†	Key Management Bonus Plan.
10.09	Forms of promissory notes from executive officers and directors to the Registrant made in connection with exercise of options.
10.10	Loan Agreement by and between Stuart Merkadeau and the Registrant dated February 1, 2001.
10.11	Employment Offer Letter dated October 29, 1998 to Yoshikazu Hatsukano.
10.12	Lease by and between Paul E. Iacono and the Registrant dated June 26, 1995.
10.12.1	First Option to Extend Lease Term by and between Paul E. Iacono and the Registrant dated October 4, 2002 for the Lease between the parties dated June 26, 1995.
10.13	Lease by and between Paul E. Iacono and the Registrant dated April 12, 1996.
10.13.1	First Option to Extend Lease Term by and between Paul E. Iacono and the Registrant dated October 4, 2002 for the Lease between the parties dated April 12, 1996.
10.14	Lease by and between Paul E. Iacono and the Registrant dated November 20, 1996.
10.14.1	First Option to Extend Lease Term by and between Paul E. Iacono and the Registrant dated October 4, 2002 for the Lease between the parties dated November 20, 1996.
10.15	Lease by and between Paul E. Iacono and the Registrant dated April 24, 1997.
10.15.1	First Option to Extend Lease Term by and between Paul E. Iacono and the Registrant dated October 4, 2002 for the Lease between the parties dated April 24, 1997.
10.16	Lease by and between Richard K. and Pamela K. Corbett, Robert and Cheryl Rumberger, Connie Duke and the Registrant dated March 12, 1998.
10.17	Lease by and between L One and the Registrant dated March 25, 1998.
10.18†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.18.1**	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.19†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.19.1**	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.20†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.20.1**	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.21	Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of March 20, 2001, as amended through September 17, 2001.
10.22†	Basic Purchase Agreement by and among Infineon Technologies Aktiengesellschaft, Whiteoak Semiconductor Partnership, Promos Technologies Inc. and the Registrant dated July 9, 1999.
10.22.1**	Letter Agreement by and between Infineon Technologies Aktiengesellschaft and the Registrant dated July 19, 2002.

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<b>Exhibit Number</b>	<b>Exhibit Title</b>
10.23†	Authorized International Distributor Agreement by and between Spirox Corporation and the Registrant dated June 1, 2000.
10.24†	Probecard Purchase Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated November 22, 2000.
10.24.1**†	Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated October 31, 2001, Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated January 10, 2002, and Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated January 22, 2003.
10.25†	Intel Corporation Purchase Agreement — Capital Equipment and Services by and between Intel Corporation and the Registrant dated January 8, 2001, and as amended on January 22, 2001, on March 1, 2001, and on April 1, 2001.
10.25.1**†	Amendment to Intel Corporation Purchase Agreement by and between Intel Corporation and the Registrant dated May 22, 2002.
10.26	Second Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of January 15, 2002 and Third Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of May 14, 2002.
10.26.1	Letter Agreement by and between Comerica Bank — California and the Registrant dated July 10, 2002.
10.27†	Production and Development Materials and Services Purchase Agreement by and between Harbor Electronics and the Registrant dated April 17, 2002.
10.28†	Production and Development Materials and Services Purchase Agreement by and between NTK Technologies and the Registrant dated June 25, 2002.
10.29**	Third Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated February 21, 2003.
21.01	List of Subsidiaries of Registrant.
23.01*	Consent of Fenwick & West LLP (See Exhibit 5.01).
23.02**	Consent of independent accountants.
24.01	Power of Attorney (see page II-8 of the original filing of this Registration Statement).

\* To be filed by amendment.

\*\* Filed herewith.

† Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from this Registration Statement and have been filed separately with the Securities and Exchange Commission.

(b) *Financial Statement Schedule*

**REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULE**

To the Board of Directors of

FormFactor, Inc.:

Our audits of the consolidated financial statements referred to in our report dated January 17, 2003, except for the last paragraph of Note 5, as to which the date is February 21, 2003, appearing in the Registration Statement on Form S-1 of FormFactor, Inc. also included an audit of the financial statement schedule listed in Item 16(b) on Page II-5 of this Form S-1. In our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

/s/ PRICEWATERHOUSECOOPERS LLP

San Jose, California

May 6, 2003

## FORMFACTOR, INC.

## VALUATION AND QUALIFYING ACCOUNTS

For the Years Ended December 30, 2000, December 29, 2001 and December 28, 2002

(In thousands)

Descriptions	Balance at Beginning of Period	Additions	Deductions	Balance at End of Year
Allowance for doubtful accounts receivable:				
Year ended December 30, 2000	\$ 612	\$ —	\$ 32	\$ 580
Year ended December 29, 2001	\$ 580	\$ —	\$ 166	\$ 414
Year ended December 28, 2002	\$ 414	\$ 165	\$ 326	\$ 253
Reserve for excess and obsolete inventories:				
Year ended December 30, 2000	\$5,420	\$2,227	\$ —	\$7,647
Year ended December 29, 2001	\$7,647	\$4,504	\$ 3,535	\$8,616
Year ended December 28, 2002	\$8,616	\$1,279	\$ 2,436	\$7,459
Allowance against deferred tax assets:				
Year ended December 30, 2000	\$7,972	\$ 777	\$ —	\$8,749
Year ended December 29, 2001	\$8,749	\$ 312	\$ —	\$9,061
Year ended December 28, 2002	\$9,061	\$ —	\$(9,061)	\$ —

All other financial statement schedules have been omitted because the information required to be set forth herein is not applicable or is shown either in the consolidated financial statements or the notes thereto.

**SIGNATURES**

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Livermore, State of California, on this 7th day of May 2003.

FORMFACTOR, INC.

By: /s/ STUART L. MERKADEAU

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Stuart L. Merkadeau  
*Vice President, General Counsel and Secretary*

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<b>Principal Executive Officer:</b>		
<u>/s/ IGOR Y. KHANDROS*</u> Dr. Igor Y. Khandros	President, Chief Executive Officer and Director	May 7, 2003
<b>Principal Financial Officer and Principal Accounting Officer:</b>		
<u>/s/ JENS MEYERHOFF*</u> Jens Meyerhoff	Senior Vice President of Operations and Chief Financial Officer	May 7, 2003
<b>Additional Directors:</b>		
<u>/s/ JOSEPH R. BRONSON*</u> Joseph R. Bronson	Director	May 7, 2003
<u>/s/ WILLIAM H. DAVIDOW*</u> Dr. William H. Davidow	Director	May 7, 2003
<u>/s/ G. CARL EVERETT, JR.*</u> G. Carl Everett, Jr.	Director	May 7, 2003
<u>/s/ JAMES A. PRESTRIDGE*</u> James A. Prestridge	Director	May 7, 2003
<b>*By: /s/ STUART L. MERKADEAU</b> Stuart L. Merkadeau, Attorney-in-Fact May 7, 2003		

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Exhibit Title</b>
5.01	Form of opinion of Fenwick & West LLP.
10.18.1	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.19.1	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.20.1	First Amendment to Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated January 31, 2003.
10.22.1	Letter Agreement by and between Infineon Technologies Aktiengesellschaft and the Registrant dated July 19, 2002.
10.24.1†	Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated October 31, 2001, Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated January 10, 2002, and Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated January 22, 2003.
10.25.1†	Amendment to Intel Corporation Purchase Agreement by and between Intel Corporation and the Registrant dated May 22, 2002.
10.29	Third Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated February 21, 2003.
23.02	Consent of independent accountants.

† Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from this Registration Statement and have been filed separately with the Securities and Exchange Commission.

[Form of Exhibit 5.01 Legal Opinion]

\_\_\_\_\_, 2003

FormFactor, Inc.  
2140 Research Drive  
Livermore, California 94550

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-1 (Registration Number 333-86738) filed on April 22, 2002, as amended by Amendment No. 1 filed on April 29, 2002, Amendment No. 2 filed on May 24, 2002, Amendment No. 3 filed on December 18, 2002, Amendment No. 4 filed on December 20, 2002, Amendment No. 5 filed on May 6, 2003 and Amendment No. 6 filed on \_\_\_\_\_, 2003, by FormFactor, Inc., a Delaware corporation (the "COMPANY"), with the Securities and Exchange Commission (the "COMMISSION") (as amended from time to time, the "REGISTRATION STATEMENT") in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of up to \_\_\_\_\_ shares of the Company's Common Stock, par value \$0.001 per share (the "STOCK"), \_\_\_\_\_ of which are presently issued and outstanding and will be sold by certain selling stockholders (the "SELLING STOCKHOLDERS").

In rendering this opinion, we have examined such matters of fact as we have deemed necessary in order to render the opinion set forth herein, which included examination of the following:

- (1) the Company's Amended and Restated Certificate of Incorporation, certified by the Delaware Secretary of State on September 30, 2002.
- (2) form of the Company's Amended and Restated Certificate of Incorporation to be filed upon the closing of the offering contemplated by the Registration Statement.
- (3) the Company's Amended Bylaws, certified by the Company's Secretary on \_\_\_\_\_, 2003.
- (4) the Company's Amended and Restated Bylaws to be effective upon the closing of the offering contemplated by the Registration Statement.
- (5) the Registration Statement, together with the exhibits filed as a part thereof or incorporated therein by reference.
- (6) the Prospectus prepared in connection with the Registration Statement.
- (7) the minutes of meetings and actions by written consent of the stockholders and the Board of Directors of the Company that are contained in the Company's minute books that are in our possession.

- (8) the stock records for the Company that the Company has provided to us (consisting of a list of stockholders and a list of option and warrant holders respecting the Company's capital stock and of any rights to purchase capital stock that was prepared by the Company and dated \_\_\_\_\_, 2003 verifying the number of such issued and outstanding securities).
- (9) the stock option or stock purchase agreements under which the Selling Stockholders acquired the Stock to be sold by them as described in the Registration Statement.
- (10) the Custody Agreement, Transmittal Letter and Irrevocable Power of Attorney signed by each of the Selling Stockholders in connection with the sale of Stock described in the Registration Statement.
- (11) a Management Certificate addressed to us and dated of even date herewith executed by the Company containing certain factual representations (the "MANAGEMENT CERTIFICATE").
- (12) the form of Underwriting Agreement to be entered into by and among the Company, the Selling Stockholders and the several underwriters party thereto, which is attached as Exhibit 1.01 to the Registration Statement.

In our examination of documents for purposes of this opinion, we have assumed, and express no opinion as to, the authenticity and completeness of all documents submitted to us as originals, the conformity to originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same, the lack of any undisclosed termination, modification, waiver or amendment to any document entered into by the Selling Stockholders and the due authorization, execution and delivery of all such documents by the Selling Stockholders where due authorization, execution and delivery are prerequisites to the effectiveness thereof. We have also assumed that the certificates representing the Stock to be issued and sold by the Company will be, when issued, properly signed by authorized officers of the Company or their agents.

We are admitted to practice law in the State of California, and we render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than, the existing laws of the United States of America, the State of California, and the Delaware General Corporation Law, the Delaware Constitution and reported judicial decisions relating thereto.

In connection with our opinion expressed below, we have assumed that, at or prior to the time of the delivery of any shares of Stock, the Registration Statement will have been declared effective under the Securities Act of 1933, as amended, that the registration will apply to such shares of Stock and will not have been modified or rescinded and that there will not have occurred any change in law affecting the validity of the issuance of such shares of Stock.

Based upon the foregoing, it is our opinion that (i) the up to \_\_\_\_\_ shares of Stock to be issued and sold by the Company, when issued, sold and delivered in the manner and for the consideration stated in the Registration Statement and the Prospectus and in accordance with the resolutions regarding the public offering price, the underwriting discounts and commissions, and other matters dependent upon the public offering price to be adopted by the Pricing Committee of the Company's Board of Directors, will be validly issued, fully paid and nonassessable, and (ii) the \_\_\_\_\_ shares of Stock to be sold by the Selling Stockholders are validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments thereto. This opinion is intended solely for use in connection with issuance and sale of shares subject to the Registration Statement and is not to be relied upon for any other purpose. We assume no obligation to advise you of any fact,

circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify the opinions expressed herein.

Very truly yours,

FENWICK & WEST LLP

By: \_\_\_\_\_

Mark A. Leahy, a Partner

## FIRST AMENDMENT TO BUILDING 1 LEASE

THIS FIRST AMENDMENT TO BUILDING 1 LEASE (the "First Amendment") is made and entered into as of January 31, 2003 (the "Effective Date") by and between GREENVILLE INVESTORS, L.P. a California limited partnership (hereafter, "LANDLORD"), and FORMFACTOR, INC., a Delaware corporation (hereafter "TENANT").

## RECITALS

A. Landlord and Tenant entered into a Lease Agreement dated May 3, 2001 (the "Lease") relating to certain premises referred to as Building 1 in the Pacific Corporate Center as described in said Lease, and

B. On May 3, 2001 Landlord and Tenant also entered into two leases relating to other premises in the Pacific Corporate Center: a lease for the premises referred to as Building 2 (the "Building 2 Lease") and a lease for the premises referred to as Building 3 (the "Building 3 Lease").

C. Landlord and Tenant desire to amend the Lease on the terms and conditions set forth herein. Concurrently with the amendment of the Lease, Landlord and Tenant are also amending the Building 2 Lease and the Building 3 Lease.

NOW, THEREFORE, in consideration of the mutual covenants made herein, Landlord and Tenant agree as follows:

## AGREEMENTS

1. COMMENCEMENT DATE. Landlord and Tenant acknowledge and agree that:

a. The Commencement Date of the Lease occurred on November 8, 2001, and that the Term of the Lease and Tenant's obligation to pay the Base Rent and all other charges payable by Tenant under the Lease commenced on that date, and

b. As of the Effective Date of this First Amendment, Tenant is current on all such payment obligations.

2. ACKNOWLEDGMENT. On the Effective Date of this First Amendment, Landlord and Tenant shall execute a written acknowledgment of the Commencement Date in the form attached hereto as Exhibit A-1.

3. APPROVED TENANT IMPROVEMENT PLANS. The Tenant Improvements for the Premises are set forth in the plans described on Exhibit B-1 attached hereto which have been approved by Landlord and Tenant. The plans shall be deemed to be the "Approved Tenant Improvement Plans" referred to in Section 2.4 of the Work Letter attached hereto as Exhibit C-1.

4. WORK COMPLETED BY LANDLORD. Tenant acknowledges that Landlord has completed the following work and Tenant has accepted such work and possession of the Premises as of the Commencement Date, subject to Paragraph 9 below:

a. The Base Building and all Parcel 1 Improvements as described in Sections 1.1 and 1.2 of Exhibit C-1 attached hereto and

b. All Tenant Improvement Work for which Landlord has furnished contractor invoices to Tenant as of the date of this First Amendment.

At Tenant's request Landlord has stopped all further Tenant Improvement Work by Landlord. Landlord represents it has made all payments and met all obligations to any contractors, agents or other third party for all work completed by Landlord under Lease. Subject to Paragraph 9 below, Tenant agrees that Landlord shall have no further obligation to construct Tenant Improvements for the Building and that Landlord's Work is deemed to have been fully completed.

5. TENANT'S WORK. From and after the date of this First Amendment, the term "Tenant's Work" as used in the Lease shall include all Tenant Improvements described in the

Approved Tenant Improvement Plans (as defined in Section 2.4 of the attached Exhibit C-1) which have not been completed by Landlord as of the date hereof. Tenant shall construct Tenant's Work in accordance with the Approved Tenant Improvement Plans and the provisions of the Work Letter for Tenant's Work which is attached hereto as Exhibit C-1 and which replaces Exhibit C to the Lease in its entirety. Tenant will complete Tenant's Work at Tenant's sole cost and expense, subject to the Tenant Improvement Allowance described in Paragraph 6 below.

6. TENANT IMPROVEMENT ALLOWANCE. The Lease provides for a Tenant Improvement Allowance of \$1,118,700 (\$25/sq. ft.). Landlord represents that all Tenant Improvement Work completed by Landlord has been paid in full and the remaining Tenant Improvement Allowance amount is \$456,437.35 (\$10.20/sq. ft), subject to the provisions of the Lease. That amount shall be disbursed at the time and in the manner provided in Exhibit C-1 attached hereto.

7. TERM; RENT ADJUSTMENT. The parties agree to extend the term of the Lease for one year and acknowledge that the termination date of the initial term shall be November 30, 2012. The parties further agree to delete Section 3.2 of the Lease and substitute the following therefor:

" 3.2 As of the date of commencement of the third Lease Year and as of the commencement of each Lease Year during the initial Lease Term thereafter, the monthly Base Rent shall increase by four percent (4%) over the monthly Base Rent in effect immediately preceding the applicable adjustment date."

8. NO OUTSTANDING DEFAULTS. Subject to Paragraph 9 below, the parties acknowledge that as of the Effective Date, neither party is in default of any of its obligations under the Lease. As of the Effective Date Landlord expressly releases Tenant from all liability arising out of any alleged breach or default by Tenant prior to the Effective Date. All such outstanding alleged (or actual, if any) defaults by Tenant of the Lease shall be deemed to be settled by the terms of this First Amendment.

9. NO WAIVER. The parties agree that neither Tenant's acceptance in Paragraph 4 above of the work completed by Landlord nor Tenant's acknowledgment in Paragraph 8 above regarding Landlord defaults shall be deemed a waiver by Tenant of any warranties provided in the Lease with respect to Landlord's Work (defined in Section 1.4 of Exhibit C-1), or of any rights or remedies provided in the Lease for the correction of defects or cure of lack of compliance in Landlord's work.

10. EFFECTIVENESS OF LEASE. Except as otherwise expressly provided herein, from and after the Effective Date of this First Amendment, all provisions of the Lease shall remain in full force and effect and references to the "Lease" shall mean the Lease as amended hereby.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment to Building 1 Lease as of the day and year first written above.

LANDLORD:  
  
GREENVILLE INVESTORS, L.P.  
By: Greenville Ventures, Inc.  
Title: General Partner  
  
By: /s/ William A. Drummond  
-----  
William A. Drummond  
  
Its: VicePresident

TENANT:  
  
FORMFACTOR, INC.,  
a Delaware corporation  
  
By: /s/ Jens Meyerhoff  
-----  
  
Its: CFO  
-----

ADDRESS: 675 Hartz Avenue, Suite 300  
Danville, CA 94526

ADDRESS: 2140 Research Drive  
Livermore, CA 94550

Dated: 1/31/03  
-----

Dated: January 15th, 2003  
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EXHIBITS

A-1 Acknowledgment of Commencement Date

B-1 Description of Approved Plans

C-1 Work Letter for Tenant's Work

EXHIBIT A-1

ACKNOWLEDGEMENT OF COMMENCEMENT DATE

THIS ACKNOWLEDGMENT OF COMMENCEMENT DATE is made as of January 31, 2002, by and between the undersigned parties with reference to that certain Lease (the "LEASE") dated as of May 3, 2001, by and between Greenville Investors, L.P., as "LANDLORD" therein, and FormFactor, Inc. as "TENANT," for the premises commonly known as "BUILDING 1", located in the Pacific Corporate Center, in the City of Livermore, California, as more particularly described in the Lease. All capitalized terms referred to herein shall have the same meaning defined in the Lease, except where expressly provided to the contrary.

1. Landlord and Tenant hereby confirm that in accordance with the provisions of the Lease, the Commencement Date of the Term has occurred and is November 8, 2001, and that, unless sooner terminated, the initial term thereof expires on November 30, 2012. If Tenant elects to exercise its first extension option pursuant to the terms of the Lease, Tenant must deliver written notice to Landlord by no later than November 30, 2011.

2. This Acknowledgment of Commencement Date shall inure to the benefit of, and bind, the parties hereto, and their respective heirs, successors and assigns, subject to the restrictions upon assignment and subletting contained in the Lease.

IN WITNESS WHEREOF, the parties have executed this Acknowledgment of Commencement Date as of the date first above written.

LANDLORD:

GREENVILLE INVESTORS, L.P.  
a California limited partnership

By: Greenville Ventures, Inc.  
Title: General Partner

By: /s/ William A. Drummond  
Its: Vice President

TENANT:

FORMFACTOR, INC,

By: /s/ Jens Meyerhoff

Its: CFO

EXHIBIT B-1

DESCRIPTION OF APPROVED PLANS  
(BUILDING 1)

SHEET - - - - -	DATE - - - -
T0.1	7/23/01
T0.2	7/23/01
A0.1	7/23/01
A1.1	7/23/01
A1.2	7/23/01
A2.1	7/23/01
A2.2	7/23/01
A2.3	7/23/01
A2.4	7/23/01
A2.5	7/23/01
A2.6	7/23/01
A3.1	7/23/01
A3.2	7/23/01
A3.3	7/23/01
A4.1	7/23/01
A4.2	7/23/01
A4.3	7/23/01
A4.4	7/23/01
A5.1	7/23/01
A5.2	7/23/01
A5.3	7/23/01
A5.4	7/23/01
A6.1	7/23/01
A6.2	7/23/01
A8.1	7/23/01
A9.1	7/23/01
A9.2	7/23/01
A9.3	7/23/01
A9.4	7/23/01
AF2.1	7/23/01
AF2.2	7/23/01
AF2.3	7/23/01
AF2.4	7/23/01
EQ2.1	7/23/01
EQ2.2	7/23/01
S2.1	7/23/01
S2.2	7/23/01
S4.1	7/23/01
S4.2	7/23/01
S4.3	7/23/01

SHEET  
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DATE  
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M0.0	7/23/01
M0.1	7/23/01
M0.2	7/23/01
M2.0	7/23/01
M2.1	7/23/01
M2.2	7/23/01
M2.3	7/23/01
M2.4	7/23/01
M5.1	7/23/01
M6.1	7/23/01
T24.0	7/23/01
P.1	7/23/01
P.2	7/23/01
P.3	7/23/01
E1.0	7/23/01
E2.0	7/23/01
E2.1	7/23/01
E3.0	7/23/01
E3.1	7/23/01
E4.0	7/23/01
E4.1	7/23/01
E5.0	7/23/01

WORK LETTER

This Work Letter sets forth the terms and conditions relating to the construction of the Premises.

SECTION 1

INITIAL CONSTRUCTION OF THE BUILDING AND THE PREMISES

1.1 Base Building. Landlord shall construct the "BASE BUILDING" at Landlord's sole cost and expense; provided that any modifications to the Base Building required by the Tenant Improvement Work described below shall be deemed to be Tenant Improvements. The Base Building shall be constructed in accordance with the plans for such improvements listed on the plan list attached as Schedule 1 to this Exhibit C (the "PLAN LIST"). The Base Building shall include without limitation:

- a) Fully enclosed tilt-up concrete building(s) with 5" thick concrete slab and grade doors as shown on the construction drawings;
- b) Water and gas service stubbed into Building;
- c) A sanitary sewer gut line as shown on the construction drawings;
- d) 2000 amp, 480/277 volt, 3 phase electrical service with main switch in the electrical room;
- e) Four (4) 4" telephone conduits and 8' x 8' plywood terminal board in the electrical room;
- f) Fire sprinklers at roof to meet Legal Requirements for the Building shell.

1.2 Parcel 1 Improvements. Landlord shall construct the site improvements on Parcel 1 at Landlord's sole cost and expense in accordance with the plans for such improvements listed on the Plan List. The site improvements shall include, without limitation: site concrete, asphalt paving, striping, exterior lighting, site utilities and landscaping.

1.3 Tenant Improvements. Except for improvements which have been constructed by Landlord as of the Effective Date of the First Amendment to which this Exhibit is attached, Tenant shall construct the "TENANT IMPROVEMENTS" required by Tenant for the Premises as set forth in Approved Tenant Improvement Plans described in Section 2.4 below. Landlord will disburse the Tenant Allowance described in Section 3 below to pay for the Tenant Improvement Costs (defined hereafter). All costs in excess of the Tenant Allowance shall be paid by Tenant as provided in Section 3. As used in this Lease, Tenant Improvements includes all improvements to the Building which are described in the Approved Tenant Improvement Plans.

1.4 Landlord's Work. "LANDLORD'S WORK" shall mean all work described in Sections 1.1 and 1.2 above and the Tenant Improvements constructed by Landlord as of the Effective Date of the First Amendment to which this Exhibit is attached.

1.5 Tenant's Work. Subject to Section 1.3 above, "TENANT'S WORK" will include designing, providing and installing all Tenant Improvements (defined hereafter) and providing the required furnishings, fixtures and equipment for Tenant's use of the Premises. As used in this Lease, the term "TENANT IMPROVEMENTS" shall mean all improvements set forth in the Approved Tenant Improvement Plans (as defined in Section 2.4 below). Tenant shall obtain all necessary permits and approvals for and shall construct the "TENANT IMPROVEMENTS" in accordance with the Approved Tenant Improvement Plans. Landlord will disburse the Tenant Improvement Allowance described in Section 4 below to pay for Tenant Improvement Costs (defined hereafter). All such costs of completing Tenant's Work which are in excess of the Tenant Improvement Allowance shall be paid by Tenant pursuant to the terms of the Lease and this Work Letter.

## SECTION 2

### TENANT IMPROVEMENT PLANS

2.1 Architect/Construction Plans. Tenant has retained CAS Architects, Inc. (the "Architect") to prepare the construction plans for all Tenant Improvements and Special Tenant Improvements. Tenant shall retain engineering consultants (the "Engineers") approved by Landlord (which approval shall not be unreasonably withheld or delayed) to prepare all plans and engineering working drawings relating to the Tenant Improvements, including without limitation, all structural, HVAC, electrical, plumbing, life safety, and sprinkler work in the Premises which is not part of the Base Building. The final working plans and drawings to be prepared by Architect and the Engineers hereunder shall be known collectively as the "Tenant Improvement Plans". The scope, form and content of all plans and drawings shall be discussed in reasonable detail at each of the weekly meetings held pursuant to the terms of Section 3.2.6 below. All Tenant Improvement Plans shall be in a form suitable for bidding and construction by qualified contractors, shall meet the requirements of the City of Livermore, and shall be subject to Landlord's approval, which shall not be unreasonably withheld or delayed. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the Base Building plans, and Tenant and Architect shall be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Tenant Improvement Plans as set forth in this Section 2, shall be for its sole purpose and shall not obligate Landlord to review the same, for quality, design, code compliance or other like matters. Accordingly, notwithstanding that any Tenant Improvement Plans are reviewed by Landlord or its architect, engineers and consultants, and notwithstanding any advice or assistance which may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Tenant Improvement Plans, and Tenant's waiver and indemnity set forth in Section 16 of this Lease shall specifically apply to the Tenant Improvement Plans.

2.2 Final Design Drawings. Tenant and the Architect shall prepare the final design drawings and specifications for Tenant Improvements in the Premises (collectively, the "Final Design Drawings") and shall deliver the same to Landlord for Landlord's approval. The Final Design Drawings shall include a layout and designation of all offices, rooms and other partitioning. Landlord may request clarification or more specific drawings for special use items not included in the Final Design Drawings. Landlord shall advise Tenant within five (5) business days after Landlord's receipt of the Final Design Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect. If Tenant is so advised, Tenant shall promptly cause the Final Design Drawings to be revised to correct any deficiencies or other matters Landlord may reasonably require.

2.3 Final Working Drawings. After the Final Design Drawings have been approved by Landlord, Tenant shall promptly cause the Architect and the Engineers to complete the architectural and engineering drawings for the Premises, and Architect shall compile a fully coordinated set of architectural, structural, mechanical, electrical and plumbing working drawings in a commercially reasonable and customary form which is sufficiently complete to allow subcontractors with a reasonable level of competence and experience in the industry to bid on the work and to obtain all permits required for the construction of the Tenant Improvements (the "PERMITS") and shall submit the same (collectively, the "FINAL WORKING DRAWINGS") to Landlord for Landlord's approval, which approval shall not be unreasonably withheld or delayed. Tenant shall supply Landlord with three (3) copies signed by Tenant of such Final Working Drawings. Landlord shall advise Tenant in writing within five (5) business days after Landlord's receipt of the Final Working Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect, and provide Tenant with sufficient detail to address the issues presented by Landlord. If Tenant is so advised, Tenant shall promptly cause the Final Working Drawings to be revised in accordance with such review and any disapproval of Landlord in connection therewith.

2.4 Approved Tenant Improvement Plans. The Final Working Drawings shall be approved by Landlord (the "Approved Tenant Improvement Plans") prior to the commencement of

construction of the Tenant Improvements by Tenant. In order to expedite the permitting process, however, prior to Landlord's approval pursuant to Section 2.3 above, Tenant may submit the Final Working Drawings to the appropriate municipal authorities for all Permits necessary to allow Tenant's contractor to commence and fully complete the construction of the Tenant Improvements. Notwithstanding the foregoing, Tenant acknowledges that Landlord does not waive the right to approve the Final Working Drawings and by electing to submit the Final Working Drawings for permit prior to Landlord's approval, Tenant is assuming the risk that Landlord may require changes in such drawings after the same have been submitted for permits. Tenant hereby agrees that neither Landlord nor Landlord's consultants shall be responsible for obtaining any of the Permits or a certificate of occupancy for the Premises and that obtaining the same shall be Tenant's responsibility; provided, however, that Landlord shall in all events cooperate with Tenant in executing permit applications and performing other ministerial acts reasonably necessary to enable Tenant to obtain any such permit or certificate of occupancy. No changes, modifications or alterations in the Approved Tenant Improvement Plans may be made without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed.

### SECTION 3

#### CONSTRUCTION OF TENANT IMPROVEMENTS

##### 3.1 Tenant's Selection of Contractors.

3.1.1 Tenant's Contractor. A general contractor shall be retained by Tenant to construct the Tenant Improvements. Such general contractor ("TENANT'S CONTRACTOR") shall be subject to Landlord's prior approval, which approval shall not be unreasonably withheld or delayed.

3.1.2 Tenant's Agents. All subcontractors, laborers, materialmen, and suppliers used by Tenant (such subcontractors, laborers, materialmen, and suppliers, and Tenant's Contractor to be known collectively as "TENANT'S AGENTS") must be approved in writing by Landlord, which approval shall not be unreasonably withheld or delayed. If Landlord does not approve any of Tenant's proposed subcontractors, laborers, materialmen or suppliers, Tenant shall submit other proposed subcontractors, laborers, materialmen or suppliers for Landlord's written approval. Notwithstanding the foregoing, Tenant shall retain subcontractors designated or reasonably approved by Landlord in connection with any structural, mechanical, electrical, plumbing or heating, air-conditioning or ventilation work to be performed in the Premises. Further Landlord's approval shall not be required for any of Tenant's Agents performing work or providing materials costing less than \$10,000.

##### 3.2 Construction of Tenant Improvements by Tenant's Agents.

3.2.1 Tenant's Construction Contract; Cost Budget. Prior to Tenant's execution of the construction contract and general conditions with Tenant's Contractor ("TENANT'S CONSTRUCTION CONTRACT"), Tenant shall submit Tenant's Construction Contract to Landlord for its approval, which approval shall not be unreasonably withheld or delayed. Prior to the commencement of the construction of the Tenant Improvements, and after Tenant has accepted all bids for the Tenant Improvements, Tenant shall provide Landlord with a detailed breakdown, by trade, of the final costs to be incurred or which have been incurred in connection with the design and construction of the Tenant Improvements to be performed by or at the direction of Tenant or Tenant's Contractor, which costs form a basis for the amount of Tenant's Construction Contract (the "Final Costs"). If the costs of the Tenant Improvements exceed the Tenant Improvement Allowance, Tenant shall also provide Landlord with its computation of percentage that the Tenant Improvement Allowance bears to the total costs of the Tenant Improvements (the "ALLOWANCE PERCENTAGE")

##### 3.2.2 Tenant's Agents.

A. Landlord's General Terms for Tenant's Agents and Tenant Improvement Work. Tenant's and Tenant's Agent's construction of the Tenant Improvements shall comply with the following: (i) the Tenant Improvements shall be constructed in accordance with the Approved Tenant Improvement Plans; and (ii) Tenant shall abide by all rules reasonably made by Landlord with respect to storage of materials, coordination of work with the contractors of other tenants and

Landlord, and any other matter in connection with this Work Letter, including, without limitation, the construction of the Tenant Improvements.

B. Indemnity. Tenant's indemnity of Landlord as set forth in Section 16.1 of this Lease shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to any act or omission of Tenant or Tenant's Agents, or anyone directly or indirectly employed by any of them, or in connection with Tenant's non-payment of any amount arising out of the Tenant Improvements and/or Tenant's disapproval of all or any portion of any request for payment. Such indemnity by Tenant, as set forth in Section 16.1 of this Lease, shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to Landlord's performance of any ministerial acts reasonably necessary (i) to permit Tenant to complete the Tenant Improvements, and (ii) to enable Tenant to obtain any building permit or certificate of occupancy for the Premises.

C. Requirements of Tenant's Agents. Each of Tenant's Agents shall guarantee to Tenant and for the benefit of Landlord that the portion of the Tenant Improvements for which it is responsible shall be free from any defects in workmanship and materials for a period of not less than one (1) year from the date of completion thereof. Each of Tenant's Agents shall be responsible for the replacement or repair, without additional charge, of all work done or furnished in accordance with its contract that shall become defective within one (1) year after the later to occur of (i) completion of the work performed by such contractor or subcontractors and (ii) the Lease Commencement Date. The correction of such work shall include, without additional charge, all additional expenses and damages incurred in connection with such removal or replacement of all or any part of the Tenant Improvements, and/or the Building and/or common areas that may be damaged or disturbed thereby. All such warranties or guarantees as to materials or workmanship of or with respect to the Tenant Improvements shall be contained in the Contract or subcontract and shall be written such that such guarantees or warranties shall inure to the benefit of both Landlord and Tenant.

D. Insurance Requirements.

1. General Coverages. All of Tenant's Agents shall carry worker's compensation insurance covering all of their respective employees, and shall also carry public liability insurance, including property damage, all with limits, in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

2. Special Coverages. Tenant shall carry "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of the Tenant Improvements, and such other commercially reasonable insurance as Landlord may require, it being understood and agreed that the Tenant Improvements shall be insured by Landlord pursuant to Article 14 of this Lease upon completion thereof. Tenant's policy of Builder's All Risk insurance shall be in amounts and shall include such extended coverage endorsements as may be reasonably required by Landlord including, but not limited to, the requirement that all of Tenant's Agents shall carry Excess Liability and Products and Completed Operation Coverage insurance, each in amounts not less than \$1,000,000 per incident, \$2,000,000 in aggregate, and in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

3. General Terms. Certificates for all insurance carried pursuant to this Section 3.2.2(D) shall be delivered to Landlord before the commencement of construction of the Tenant Improvements and before the equipment of Tenant's Contractor is moved onto the site. All such policies of insurance must contain a provision that the company writing said policy will give Landlord thirty (30) days' prior written notice of any cancellation or lapse of the effective date or any reduction in the amounts of such insurance. In the event that the Tenant Improvements are damaged by any cause during the course of the construction thereof, Tenant shall immediately repair the same at Tenant's sole cost and expense. Tenant's Agents shall maintain all of the foregoing insurance coverage in force until the Tenant Improvements are fully completed and accepted by Landlord, except for any Products and Completed Operation Coverage insurance required by Landlord, which is to be maintained for ten (10) years following completion of the work and acceptance by Landlord and Tenant. All policies carried under this Section 3.2.2(D) shall insure Landlord and Tenant, as their interests may appear, as well as Tenant's Contractor and Tenant's Agents. All insurance, except Workers' Compensation, maintained by Tenant's Agents shall preclude subrogation claims by the insurer against anyone insured thereunder. Such insurance shall provide that it is primary insurance

as respects the Landlord and that any other insurance maintained by Landlord is excess and noncontributing with the insurance required hereunder. The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Landlord by Tenant under Section 3.2.2(B) of this Work Letter.

3.2.3 Governmental Compliance. The Tenant Improvements shall comply in all respects with the following: (i) all building codes and other state, federal, city or quasi-governmental laws, codes, ordinances and regulations, as each may apply according to the rulings of the controlling public official, agent or other person; (ii) applicable standards of the American Insurance Association (formerly, the National Board of Fire Underwriters) and the National Electrical Code; and (iii) building material manufacturer's specifications.

3.2.4 Mechanic's Liens. Tenant shall keep the Premises and the Center free and clear of mechanics' liens arising out of its construction of Tenant's Work as provided in Article 29. All provisions of Article 29 shall apply to Tenant's Work as if fully set forth into this Work Letter.

3.2.5 Inspection by Landlord. Landlord shall have the right to inspect the Tenant Improvements at all times, provided however, that Landlord's failure to inspect the Tenant Improvements shall in no event constitute a waiver of any of Landlord's rights hereunder nor shall Landlord's inspection of the Tenant Improvements constitute Landlord's approval of the same. Should Landlord reasonably disapprove any portion of the Tenant Improvements, Landlord shall notify Tenant in writing of such disapproval and shall specify the items disapproved. Any material defects or deviations in, and/or disapproval by Landlord of, the Tenant Improvements shall be rectified by Tenant at no expense to Landlord, provided however, that in the event Landlord determines that a defect or deviation exists or disapproves of any matter in connection with any portion of the Tenant Improvements and such defect, deviation or matter might adversely affect the mechanical, electrical, plumbing, heating, ventilating and air-conditioning or life-safety systems of the Building, the structure or exterior appearance of the Building or any other tenant's use of such other tenant's leased premises, Landlord after giving Tenant at least three (3) business days advance written notice and an opportunity to cure or otherwise demonstrate compliance, may take such action as Landlord deems necessary, at Tenant's expense and without incurring any liability on Landlord's part, to correct any such defect, deviation and/or matter, including, without limitation, causing the cessation of performance of the construction of the Tenant Improvements until such time as the defect, deviation and/or matter is corrected to Landlord's satisfaction.

3.2.6 Meetings. Commencing upon the execution of this Lease, Tenant shall hold weekly meetings at a reasonable time, with the Architect and the Tenant's Contractor regarding the progress of the preparation of the Tenant Improvement Plans and the construction of the Tenant Improvements, and Landlord and/or its agents shall receive prior notice of, and shall have the right to attend, all such meetings, and, upon Landlord's request, certain of Tenant's Agents shall attend such meetings. Such meetings shall include a detailed review of the plans, drawings and specifications prepared to date and all participants in the meeting shall make a good faith effort to raise any issues or concerns they may have regarding the scope, form or content of any plan submitted.

3.3 Notice of Completion; Copy of Record Set of Plans. Within ten (10) days after completion of construction of the Tenant Improvements, Tenant shall cause a Notice of Completion with respect to the Tenant Improvements to be recorded in the office of the Recorder of the County of Alameda in accordance with Section 3093 of the Civil Code of the State of California or any successor statute, and shall furnish a copy thereof to Landlord upon such recordation. If Tenant fails to do so, Landlord may execute and file the same on behalf of Tenant as Tenant's agent for such purpose, at Tenant's sole cost and expense. At the conclusion of construction, (i) Tenant shall cause the Architect and Tenant's Contractor (A) to update the Approved Working Drawings as necessary to reflect all changes made to the Approved Working Drawings during the course of construction, (B) to certify to the best of their knowledge that the "record-set" of mylar as-built drawings are true and correct, which certification shall survive the expiration or termination of this Lease, and (C) to deliver to Landlord two (2) sets of copies of such record set of drawings within ninety (90) days following issuance of a certificate of occupancy for the Premises, and (ii) Tenant shall deliver to Landlord a copy of all warranties, guaranties, and operating manuals and information relating to the improvements, equipment, and systems in the Premises.

SECTION 4

TENANT IMPROVEMENT ALLOWANCE; CONSTRUCTION COSTS

4.1 Tenant Improvement Allowance. Tenant shall be entitled to a one-time tenant improvement allowance (the "Tenant Improvement Allowance") in the amount set forth in the First Amendment to Building 1 Lease to which this Work Letter is attached, for the costs relating to the initial design and construction of the Tenant Improvements. In no event shall Landlord be obligated to make disbursements pursuant to this Work Letter in a total amount which exceeds the Tenant Improvement Allowance.

4.2 Disbursement of the Tenant Improvement Allowance.

4.2.1 Tenant Improvement Allowance Items. Except as otherwise set forth in this Work Letter, the Tenant Improvement Allowance shall be disbursed by Landlord only for the following items and costs (collectively the "Tenant Improvement Allowance Items"):

A. Payment of the fees of the Architect and the Engineers

B. The payment of plan check, permit and license fees relating to construction of the Tenant Improvements;

C. The cost of construction of the Tenant Improvements, including, without limitation, testing and inspection costs, utility usage, trash removal costs, and contractors' fees and general conditions;

D. The cost of any changes in the Base Building when such changes are required by the Tenant Improvement Plans, such cost to include all direct architectural and/or engineering fees and expenses incurred in connection therewith; and

E. The cost of any changes to the Tenant Improvement Plans or Tenant Improvements required by Code.

4.2.2 Disbursement of Tenant Improvement Allowance. During the construction of the Tenant Improvements, Landlord shall make monthly disbursements of the Tenant Improvement Allowance for Tenant Improvement Allowance Items:

A. Monthly Disbursements. No more frequently than monthly, during the construction of the Tenant Improvements (or such other date as Landlord may designate), Tenant shall deliver to Landlord: (i) a request for payment of Tenant's Contractor, approved by Tenant, in a form to be provided by Landlord, showing the schedule, by trade, of percentage of completion of the Tenant Improvements in the Premises, detailing the portion of the work completed and the portion not completed; (ii) invoices from all of Tenant's Agents, for labor rendered and materials delivered to the Premises; (iii) executed mechanic's lien releases from all of Tenant's Agents which shall comply with the appropriate provisions, as reasonably determined by Landlord, of California Civil Code Section 3262(d); and (iv) all other information reasonably requested by Landlord. Tenant's request for payment shall be deemed Tenant's approval of the work furnished and/or the materials supplied as set forth in Tenant's payment request. After receipt of the foregoing and provided that Landlord does not dispute any request for payment based on non-compliance of any work with the Approved Tenant Improvement Plans, or due to any substandard work, or for any other reasonable reason, Landlord shall deliver a check to Tenant in an amount equal to the lesser of: (a) the Allowance Percentage of the Tenant Improvement costs for which payment is so requested less a ten percent (10%) retention (the aggregate amount of such retentions to be known as the "Final Retention") or (b) the balance of the undisbursed Tenant Improvement Allowance (excluding the Final Retention). Landlord's payment of such amounts shall not be deemed Landlord's approval or acceptance of the work furnished or materials supplied as set forth in Tenant's payment request.

B. Final Retention. Subject to the provisions of this Work Letter, a check for the Final Retention shall be delivered by Landlord to Tenant within fifteen (15) days after all the following conditions have been satisfied: (i) Tenant delivers to Landlord a properly

executed unconditional waiver and lien release from Tenant's Contractor in compliance with applicable sections of the California Civil Code, (ii) Landlord has determined that no substandard work exists, (iii) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of the Tenant Improvements in the Premises has been substantially completed, (iv) Tenant has recorded a Notice of Completion with respect to Tenant's Work and thirty (30) days has expired from the date of such recording with no liens having been filed during such thirty day period, and (v) there is no existing Event of Default by Tenant under the Lease nor has Landlord notified Tenant of any default which would become an Event of Default under the Lease with the passage of time if not cured.

C. Other Terms. Landlord shall only be obligated to make disbursements from the Tenant Improvement Allowance to the extent costs are incurred by Tenant for Tenant Improvement Allowance Items. All costs of completing Tenant's Work in excess of the Tenant Improvement Allowance shall be at Tenant's sole cost and expense.

D. Other Landlord Costs. Tenant shall also be responsible for the payment of the fees incurred by, and the cost of documents and materials supplied by, Landlord and Landlord's consultants in connection with the preparation and review of the Final Design Drawings and Final Working Drawing as defined in Section 2 of this Work Letter. The Tenant Improvement Allowance will not be used to pay the foregoing costs. Tenant shall pay such costs to Landlord from time to time within ten (10) days after receipt from Landlord of statements of such expenses and all back-up documentation to support the same.

#### SECTION 5

INTENTIONALLY DELETED.

#### SECTION 6

#### MISCELLANEOUS

6.1 Tenant's Representative. Tenant has designated Dennis Rhett as its sole representative with respect to the matters set forth in this Work Letter, each of whom, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Work Letter.

6.2 Landlord's Representative. Landlord has designated William Drummond as its sole representative with respect to the matters set forth in this Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Work Letter.

6.3 Time of the Essence in This Work Letter. Unless otherwise indicated, all references herein to a "number of days" shall mean and refer to calendar days.

## FIRST AMENDMENT TO BUILDING 2 LEASE

THIS FIRST AMENDMENT TO BUILDING 2 LEASE (the "First Amendment") is made and entered into as of January 31, 2003 (the "Effective Date") by and between GREENVILLE INVESTORS, L.P. a California limited partnership (hereafter, "LANDLORD"), and FORMFACTOR, INC., a Delaware corporation (hereafter "TENANT").

## RECITALS

A. Landlord and Tenant entered into a Lease Agreement dated May 3, 2001 (the " Lease") relating to certain premises referred to as Building 2 in the Pacific Corporate Center as described in said Lease, and

B. On May 3, 2001 Landlord and Tenant also entered into two leases relating to other premises in the Pacific Corporate Center: a lease for the premises referred to as Building 1 (the "Building 1 Lease") and a lease for the premises referred to as Building 3 (the "Building 3 Lease").

C. Landlord and Tenant desire to amend the Lease on the terms and conditions set forth herein. Concurrently with the amendment of the Lease, Landlord and Tenant are also amending the Building 1 Lease and the Building 3 Lease.

NOW, THEREFORE, in consideration of the mutual covenants made herein, Landlord and Tenant agree as follows:

## AGREEMENTS

## 1. COMMENCEMENT DATE. Landlord and Tenant acknowledge and agree that:

a. The Commencement Date of the Lease occurred on December 5, 2001, and that the Term of the Lease and Tenant's obligation to pay the Base Rent and all other charges payable by Tenant under the Lease commenced on that date, and

b. As of the Effective Date of this First Amendment, Tenant is current on all such payment obligations.

2. ACKNOWLEDGMENT. On the Effective Date of this First Amendment, Landlord and Tenant shall execute a written acknowledgment of the Commencement Date in the form attached hereto as Exhibit A-1.

3. APPROVED TENANT IMPROVEMENT PLANS. The Tenant Improvements for the Premises are set forth in the plans described on Exhibit B-1 attached hereto which have been approved by Landlord and Tenant. The plans shall be deemed to be the "Approved Tenant Improvement Plans" referred to in Section 2.4 of the Work Letter attached hereto as Exhibit C-1.

4. CONSTRUCTION AND ACCEPTANCE. Landlord and Tenant hereby amend the provisions of Article 8 as follows:

a. Notwithstanding any provisions of Article 8 to the contrary, subject to Paragraph 8 below, Tenant acknowledges that: (i) Landlord has fully completed Landlord's Work (defined in Section 1.3 of Exhibit C-1), and (ii) all punchlist work with respect to Landlord's Work has been completed. Tenant acknowledges that Landlord's Work no longer includes construction of any Tenant Improvements. From and after the date of this First Amendment, the term "Tenant's Work" as used in the Lease shall include all Tenant Improvements. Tenant shall construct Tenant's Work in accordance with the Approved Tenant Improvements Plans and the provisions of the Work Letter for Tenant's Work which is attached hereto as Exhibit C-1 and replaces Exhibit C to the Lease in its entirety. Tenant will complete Tenant's Work at Tenant's sole cost and expense, subject to the Tenant Improvement Allowance described in Paragraph 5

below. Landlord represents it has made all payments and met all obligations to any contractors, agents or other third parties for all work completed by Landlord under the lease.

b. Landlord delivered possession of the Premises to Tenant on the Commencement Date and, subject to Paragraph 8 below, Tenant accepted possession of Premises on such date in its then existing condition.

c. Sections 8.4 of the Lease are deleted in their entirety.

5. TENANT IMPROVEMENT ALLOWANCE. The Lease provides for a Tenant Improvement Allowance of \$952,175 (\$25/sq.ft.), subject to the provisions of the Lease. The Tenant Improvement Allowance shall be disbursed at the time and in the manner provided in Exhibit C-1 attached hereto.

6. TERM; RENT ADJUSTMENT. The parties agree to extend the term of the Lease for one year and acknowledge that the termination date of the initial term shall be November 30, 2012. The parties further agree to delete Section 3.2 of the Lease and substitute the following therefor: " 3.2 As of the date of commencement of the third Lease Year and as of the commencement of each Lease Year during the initial Lease Term thereafter, the monthly Base Rent shall increase by four percent (4%) over the monthly Base Rent in effect immediately preceding the applicable adjustment date."

7. NO OUTSTANDING DEFAULTS. Subject to Paragraph 8 below, the parties acknowledge that as of the Effective Date, neither party is in default of any of its obligations under the Lease. As of the Effective Date Landlord expressly releases Tenant from all liability arising out of any alleged breach or default by Tenant prior to the Effective Date. All such outstanding alleged (or actual, if any) defaults by Tenant of the Lease shall be deemed to be settled by the terms of this First Amendment.

8. NO WAIVER. The parties agree that neither Tenant's acceptance in Paragraph 4 above of Landlord's Work and possession of the Premises nor Tenant's acknowledgment in Paragraph 7 above regarding Landlord defaults shall be deemed a waiver by Tenant of any warranties provided in the Lease with respect to Landlord's Work, or of any rights or remedies provided in the Lease for the correction of defects of cure of lack of compliance in Landlord's work.

9. EFFECTIVENESS OF LEASE. Except as otherwise expressly provided herein, from and after the Effective Date of this First Amendment, all provisions of the Lease shall remain in full force and effect and references to the "Lease" shall mean the Lease as amended hereby.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment to Building 2 Lease as of the day and year first written above.

LANDLORD:

GREENVILLE INVESTORS, L.P.  
By: Greenville Ventures, Inc.  
Title: General Partner

By: /s/ William A. Drummond  
-----  
William A. Drummond

Its: Vice President

ADDRESS: 675 Hartz Avenue, Suite 300  
Danville, CA 94526

Dated: 1/31/03  
-----

TENANT:

FORMFACTOR, INC.,  
a Delaware corporation

By: /s/ Jens Meyerhoff  
-----

Its: CFO  
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ADDRESS: 2140 Research Drive  
Livermore, CA 94550

Dated: January 15th, 2003  
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EXHIBITS

- A-1 Acknowledgment of Commencement Date
- B-1 Description of Approved Plans
- C-1 Work Letter for Tenant's Work

EXHIBIT A-1

ACKNOWLEDGMENT OF COMMENCEMENT DATE

THIS ACKNOWLEDGMENT OF COMMENCEMENT DATE is made as of January 31, 2002, by and between the undersigned parties with reference to that certain Lease (the "LEASE") dated as of May 3, 2001, by and between Greenville Investors, L.P., as "LANDLORD" therein, and FormFactor, Inc. as "TENANT," for the premises commonly known as "BUILDING 2", located in the Pacific Corporate Center, in the City of Livermore, California, as more particularly described in the Lease. All capitalized terms referred to herein shall have the same meaning defined in the Lease, except where expressly provided to the contrary.

1. Landlord and Tenant hereby confirm that in accordance with the provisions of the Lease, the Commencement Date of the Term is December 5, 2001, and that, unless sooner terminated, the initial term thereof expires on November 30, 2012. If Tenant elects to exercise its first extension option pursuant to the terms of the Lease, Tenant must deliver written notice to Landlord by no later than November 30, 2011.

2. This Acknowledgment of Commencement Date shall inure to the benefit of, and bind, the parties hereto, and their respective heirs, successors and assigns, subject to the restrictions upon assignment and subletting contained in the Lease.

IN WITNESS WHEREOF, the parties have executed this Acknowledgment of Commencement Date as of the date first above written.

LANDLORD:

GREENVILLE INVESTORS, L.P.  
a California limited partnership

By: Greenville Ventures, Inc.  
Title: General Partner

By: /s/ William A. Drummond  
-----  
Its: Vice President  
-----

TENANT:

FORMFACTOR, INC,

By: /s/ Jens Meyerhoff  
-----

Its: CFO  
-----

EXHIBIT B-1

DESCRIPTION OF APPROVED PLANS  
(BUILDING 2)

SHEET - - - - -	DATE - - - - -
T0.1	6/21/01
A0.1	6/21/01
A1.1	6/21/01
A1.2	6/21/01
A2.1	6/21/01
A2.2	6/21/01
A2.3	6/21/01
A2.4	6/21/01
A2.5	6/21/01
A3.1	6/21/01
A3.2	6/21/01
A4.1	6/21/01
A5.1	6/21/01
A5.2	6/21/01
A5.3	6/21/01
A6.1	6/21/01
A6.2	6/21/01
A8.1	6/21/01
A9.1	6/21/01
A9.2	6/21/01
A9.3	6/21/01
S2.1	6/21/01
S2.2	6/21/01
S4.1	6/21/01
S4.2	6/21/01
T24.0	6/21/01
M0.0	6/21/01
M0.1	6/21/01
M2.0	6/21/01
M2.1	6/21/01
M2.2	6/21/01
M2.3	6/21/01
M2.4	6/21/01
M5.1	6/21/01
M6.1	6/21/01
P1	6/21/01
P2	6/21/01
P3	6/21/01
E1.0	6/21/01
E2.0	6/21/01

E2.1	6/21/01
E3.0	6/21/01
E3.1	6/21/01
E4.0	6/21/01
E4.1	6/21/01
E5.1	6/21/01

EXHIBIT C-1  
WORK LETTER

This Work Letter sets forth the terms and conditions relating to the construction of the Premises.

SECTION 1

INITIAL CONSTRUCTION OF THE BUILDING AND THE PREMISES

1.1 Base Building. Landlord shall construct the "BASE BUILDING" at Landlord's sole cost and expense; provided that any modifications to the Base Building required by the Tenant Improvement Work described below shall be deemed to be Tenant Improvements. The Base Building shall be constructed in accordance with the plans for such improvements listed on the plan list attached as Schedule 1 to this Exhibit C (the "PLAN LIST"). The Base Building shall include without limitation:

- a) Fully enclosed tilt-up concrete building(s) with 5" thick concrete slab and grade doors as shown on the construction drawings;
- b) Water and gas service stubbed into Building;
- c) A sanitary sewer gut line as shown on the construction drawings;
- d) 2000 amp, 480/277 volt, 3 phase electrical service with main switch in the electrical room;
- e) Four (4) 4" telephone conduits and 8' x 8' plywood terminal board in the electrical room;
- f) Fire sprinklers at roof to meet Legal Requirements for the Building shell.

1.2 Parcel 2 Improvements. Landlord shall construct the site improvements on Parcel 1 at Landlord's sole cost and expense in accordance with the plans for such improvements listed on the Plan List. The site improvements shall include, without limitation: site concrete, asphalt paving, striping, exterior lighting, site utilities and landscaping.

1.3 Landlord's Work. "LANDLORD'S WORK" shall mean all work described in Sections 1.1 and 1.2 above.

1.4 Tenant's Work. "TENANT'S WORK" will include designing, providing and installing all Tenant Improvements (defined hereafter) and providing the required furnishings, fixtures and equipment for Tenant's use of the Premises. As used in this Lease, the term "TENANT IMPROVEMENTS" shall mean all improvements set forth in the Approved Tenant Improvement Plans (as defined in Section 2.4 below). Tenant shall obtain all necessary permits and approvals for and shall construct the "TENANT IMPROVEMENTS" in accordance with the Approved Tenant Improvement Plans. Landlord will disburse the Tenant Improvement Allowance described in Section 4 below to pay for Tenant Improvement Costs (defined hereafter). All such costs of completing Tenant's Work which are in excess of the Tenant Improvement Allowance shall be paid by Tenant pursuant to the terms of the Lease and this Work Letter.

SECTION 2

TENANT IMPROVEMENT PLANS

2.1 Architect/Construction Plans. Tenant has retained CAS Architects, Inc. (the "Architect") to prepare the construction plans for all Tenant Improvements and Special Tenant Improvements. Tenant shall retain engineering consultants (the "Engineers") approved by Landlord (which approval shall not be unreasonably withheld or delayed) to prepare all plans and engineering working drawings relating to the Tenant Improvements, including without

limitation, all structural, HVAC, electrical, plumbing, life safety, and sprinkler work in the Premises which is not part of the Base Building. The final working plans and drawings to be prepared by Architect and the Engineers hereunder shall be known collectively as the "Tenant Improvement Plans". The scope, form and content of all plans and drawings shall be discussed in reasonable detail at each of the weekly meetings held pursuant to the terms of Section 3.2.6 below. All Tenant Improvement Plans shall be in a form suitable for bidding and construction by qualified contractors, shall meet the requirements of the City of Livermore, and shall be subject to Landlord's approval, which shall not be unreasonably withheld or delayed. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the Base Building plans, and Tenant and Architect shall be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Tenant Improvement Plans as set forth in this Section 2, shall be for its sole purpose and shall not obligate Landlord to review the same, for quality, design, code compliance or other like matters. Accordingly, notwithstanding that any Tenant Improvement Plans are reviewed by Landlord or its architect, engineers and consultants, and notwithstanding any advice or assistance which may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Tenant Improvement Plans, and Tenant's waiver and indemnity set forth in Section 16 of this Lease shall specifically apply to the Tenant Improvement Plans.

2.2 Final Design Drawings. Tenant and the Architect shall prepare the final design drawings and specifications for Tenant Improvements in the Premises (collectively, the "Final Design Drawings") and shall deliver the same to Landlord for Landlord's approval. The Final Design Drawings shall include a layout and designation of all offices, rooms and other partitioning. Landlord may request clarification or more specific drawings for special use items not included in the Final Design Drawings. Landlord shall advise Tenant within five (5) business days after Landlord's receipt of the Final Design Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect. If Tenant is so advised, Tenant shall promptly cause the Final Design Drawings to be revised to correct any deficiencies or other matters Landlord may reasonably require.

2.3 Final Working Drawings. After the Final Design Drawings have been approved by Landlord, Tenant shall promptly cause the Architect and the Engineers to complete the architectural and engineering drawings for the Premises, and Architect shall compile a fully coordinated set of architectural, structural, mechanical, electrical and plumbing working drawings in a commercially reasonable and customary form which is sufficiently complete to allow subcontractors with a reasonable level of competence and experience in the industry to bid on the work and to obtain all permits required for the construction of the Tenant Improvements (the "PERMITS") and shall submit the same (collectively, the "FINAL WORKING DRAWINGS") to Landlord for Landlord's approval, which approval shall not be unreasonably withheld or delayed. Tenant shall supply Landlord with three (3) copies signed by Tenant of such Final Working Drawings. Landlord shall advise Tenant in writing within five (5) business days after Landlord's receipt of the Final Working Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect, and provide Tenant with sufficient detail to address the issues presented by Landlord. If Tenant is so advised, Tenant shall promptly cause the Final Working Drawings to be revised in accordance with such review and any disapproval of Landlord in connection therewith.

2.4 Approved Tenant Improvement Plans. The Final Working Drawings shall be approved by Landlord (the "Approved Tenant Improvement Plans") prior to the commencement of construction of the Tenant Improvements by Tenant. In order to expedite the permitting process, however, prior to Landlord's approval pursuant to Section 2.3 above, Tenant may submit the Final Working Drawings to the appropriate municipal authorities for all Permits necessary to allow Tenant's contractor to commence and fully complete the construction of the Tenant Improvements. Notwithstanding the foregoing, Tenant acknowledges that Landlord does not waive the right to approve the Final Working Drawings and by electing to submit the Final Working Drawings for permit prior to Landlord's approval, Tenant is assuming the risk that Landlord may require changes in such drawings after the same have been submitted for permits. Tenant hereby agrees that neither Landlord nor Landlord's consultants shall be responsible for obtaining any of the Permits or a certificate of occupancy for the Premises and that obtaining the

same shall be Tenant's responsibility; provided, however, that Landlord shall in all events cooperate with Tenant in executing permit applications and performing other ministerial acts reasonably necessary to enable Tenant to obtain any such permit or certificate of occupancy. No changes, modifications or alterations in the Approved Tenant Improvement Plans may be made without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed.

### SECTION 3

#### CONSTRUCTION OF TENANT IMPROVEMENTS

##### 3.1 Tenant's Selection of Contractors.

3.1.1 Tenant's Contractor. A general contractor shall be retained by Tenant to construct the Tenant Improvements. Such general contractor ("TENANT'S CONTRACTOR") shall be subject to Landlord's prior approval, which approval shall not be unreasonably withheld or delayed.

3.1.2 Tenant's Agents. All subcontractors, laborers, materialmen, and suppliers used by Tenant (such subcontractors, laborers, materialmen, and suppliers, and Tenant's Contractor to be known collectively as "TENANT'S AGENTS") must be approved in writing by Landlord, which approval shall not be unreasonably withheld or delayed. If Landlord does not approve any of Tenant's proposed subcontractors, laborers, materialmen or suppliers, Tenant shall submit other proposed subcontractors, laborers, materialmen or suppliers for Landlord's written approval. Notwithstanding the foregoing, Tenant shall retain subcontractors designated or reasonably approved by Landlord in connection with any structural, mechanical, electrical, plumbing or heating, air-conditioning or ventilation work to be performed in the Premises. Further Landlord's approval shall not be required for any of Tenant's Agents performing work or providing materials costing less than \$10,000.

##### 3.2 Construction of Tenant Improvements by Tenant's Agents.

3.2.1 Tenant's Construction Contract; Cost Budget. Prior to Tenant's execution of the construction contract and general conditions with Tenant's Contractor ("TENANT'S CONSTRUCTION CONTRACT"), Tenant shall submit Tenant's Construction Contract to Landlord for its approval, which approval shall not be unreasonably withheld or delayed. Prior to the commencement of the construction of the Tenant Improvements, and after Tenant has accepted all bids for the Tenant Improvements, Tenant shall provide Landlord with a detailed breakdown, by trade, of the final costs to be incurred or which have been incurred in connection with the design and construction of the Tenant Improvements to be performed by or at the direction of Tenant or Tenant's Contractor, which costs form a basis for the amount of Tenant's Construction Contract (the "Final Costs"). If the costs of the Tenant Improvements exceed the Tenant Improvement Allowance, Tenant shall also provide Landlord with its computation of percentage that the Tenant Improvement Allowance bears to the total costs of the Tenant Improvements (the "ALLOWANCE PERCENTAGE")

##### 3.2.2 Tenant's Agents.

A. Landlord's General Terms for Tenant's Agents and Tenant Improvement Work. Tenant's and Tenant's Agent's construction of the Tenant Improvements shall comply with the following: (i) the Tenant Improvements shall be constructed in accordance with the Approved Tenant Improvement Plans; and (ii) Tenant shall abide by all rules reasonably made by Landlord with respect to storage of materials, coordination of work with the contractors of other tenants and Landlord, and any other matter in connection with this Work Letter, including, without limitation, the construction of the Tenant Improvements.

B. Indemnity. Tenant's indemnity of Landlord as set forth in Section 16.1 of this Lease shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to any act or omission of Tenant or Tenant's Agents, or anyone directly or indirectly employed by any of them, or in connection with Tenant's non-payment of

any amount arising out of the Tenant Improvements and/or Tenant's disapproval of all or any portion of any request for payment. Such indemnity by Tenant, as set forth in Section 16.1 of this Lease, shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to Landlord's performance of any ministerial acts reasonably necessary (i) to permit Tenant to complete the Tenant Improvements, and (ii) to enable Tenant to obtain any building permit or certificate of occupancy for the Premises.

C. Requirements of Tenant's Agents. Each of Tenant's Agents shall guarantee to Tenant and for the benefit of Landlord that the portion of the Tenant Improvements for which it is responsible shall be free from any defects in workmanship and materials for a period of not less than one (1) year from the date of completion thereof. Each of Tenant's Agents shall be responsible for the replacement or repair, without additional charge, of all work done or furnished in accordance with its contract that shall become defective within one (1) year after the later to occur of (i) completion of the work performed by such contractor or subcontractors and (ii) the Lease Commencement Date. The correction of such work shall include, without additional charge, all additional expenses and damages incurred in connection with such removal or replacement of all or any part of the Tenant Improvements, and/or the Building and/or common areas that may be damaged or disturbed thereby. All such warranties or guarantees as to materials or workmanship of or with respect to the Tenant Improvements shall be contained in the Contract or subcontract and shall be written such that such guarantees or warranties shall inure to the benefit of both Landlord and Tenant.

D. Insurance Requirements.

1. General Coverages. All of Tenant's Agents shall carry worker's compensation insurance covering all of their respective employees, and shall also carry public liability insurance, including property damage, all with limits, in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

2. Special Coverages. Tenant shall carry "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of the Tenant Improvements, and such other commercially reasonable insurance as Landlord may require, it being understood and agreed that the Tenant Improvements shall be insured by Landlord pursuant to Article 14 of this Lease upon completion thereof. Tenant's policy of Builder's All Risk insurance shall be in amounts and shall include such extended coverage endorsements as may be reasonably required by Landlord including, but not limited to, the requirement that all of Tenant's Agents shall carry Excess Liability and Products and Completed Operation Coverage insurance, each in amounts not less than \$1,000,000 per incident, \$2,000,000 in aggregate, and in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

3. General Terms. Certificates for all insurance carried pursuant to this Section 3.2.2(D) shall be delivered to Landlord before the commencement of construction of the Tenant Improvements and before the equipment of Tenant's Contractor is moved onto the site. All such policies of insurance must contain a provision that the company writing said policy will give Landlord thirty (30) days' prior written notice of any cancellation or lapse of the effective date or any reduction in the amounts of such insurance. In the event that the Tenant Improvements are damaged by any cause during the course of the construction thereof, Tenant shall immediately repair the same at Tenant's sole cost and expense. Tenant's Agents shall maintain all of the foregoing insurance coverage in force until the Tenant Improvements are fully completed and accepted by Landlord, except for any Products and Completed Operation Coverage insurance required by Landlord, which is to be maintained for ten (10) years following completion of the work and acceptance by Landlord and Tenant. All policies carried under this Section 3.2.2(D) shall insure Landlord and Tenant, as their interests may appear, as well as Tenant's Contractor and Tenant's Agents. All insurance, except Workers' Compensation, maintained by Tenant's Agents shall preclude subrogation claims by the insurer against anyone insured thereunder. Such insurance shall provide that it is primary insurance as respects the Landlord and that any other insurance maintained by Landlord is excess and noncontributing with the insurance required hereunder. The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Landlord by Tenant under Section 3.2.2(B) of this Work Letter.

3.2.3 Governmental Compliance. The Tenant Improvements shall comply in all respects with the following: (i) all building codes and other state, federal, city or quasi-governmental laws, codes, ordinances and regulations, as each may apply according to the rulings of the controlling public official, agent or other person; (ii) applicable standards of the American Insurance Association (formerly, the National Board of Fire Underwriters) and the National Electrical Code; and (iii) building material manufacturer's specifications.

3.2.4 Mechanic's Liens. Tenant shall keep the Premises and the Center free and clear of mechanics' liens arising out of its construction of Tenant's Work as provided in Article 29. All provisions of Article 29 shall apply to Tenant's Work as if fully set forth into this Work Letter.

3.2.5 Inspection by Landlord. Landlord shall have the right to inspect the Tenant Improvements at all times, provided however, that Landlord's failure to inspect the Tenant Improvements shall in no event constitute a waiver of any of Landlord's rights hereunder nor shall Landlord's inspection of the Tenant Improvements constitute Landlord's approval of the same. Should Landlord reasonably disapprove any portion of the Tenant Improvements, Landlord shall notify Tenant in writing of such disapproval and shall specify the items disapproved. Any material defects or deviations in, and/or disapproval by Landlord of, the Tenant Improvements shall be rectified by Tenant at no expense to Landlord, provided however, that in the event Landlord determines that a defect or deviation exists or disapproves of any matter in connection with any portion of the Tenant Improvements and such defect, deviation or matter might adversely affect the mechanical, electrical, plumbing, heating, ventilating and air-conditioning or life-safety systems of the Building, the structure or exterior appearance of the Building or any other tenant's use of such other tenant's leased premises, Landlord after giving Tenant at least three (3) business days advance written notice and an opportunity to cure or otherwise demonstrate compliance, may take such action as Landlord deems necessary, at Tenant's expense and without incurring any liability on Landlord's part, to correct any such defect, deviation and/or matter, including, without limitation, causing the cessation of performance of the construction of the Tenant Improvements until such time as the defect, deviation and/or matter is corrected to Landlord's satisfaction.

3.2.6 Meetings. Commencing upon the execution of this Lease, Tenant shall hold weekly meetings at a reasonable time, with the Architect and the Tenant's Contractor regarding the progress of the preparation of the Tenant Improvement Plans and the construction of the Tenant Improvements, and Landlord and/or its agents shall receive prior notice of, and shall have the right to attend, all such meetings, and, upon Landlord's request, certain of Tenant's Agents shall attend such meetings. Such meetings shall include a detailed review of the plans, drawings and specifications prepared to date and all participants in the meeting shall make a good faith effort to raise any issues or concerns they may have regarding the scope, form or content of any plan submitted.

3.3 Notice of Completion; Copy of Record Set of Plans. Within ten (10) days after completion of construction of the Tenant Improvements, Tenant shall cause a Notice of Completion with respect to the Tenant Improvements to be recorded in the office of the Recorder of the County of Alameda in accordance with Section 3093 of the Civil Code of the State of California or any successor statute, and shall furnish a copy thereof to Landlord upon such recordation. If Tenant fails to do so, Landlord may execute and file the same on behalf of Tenant as Tenant's agent for such purpose, at Tenant's sole cost and expense. At the conclusion of construction, (i) Tenant shall cause the Architect and Tenant's Contractor (A) to update the Approved Working Drawings as necessary to reflect all changes made to the Approved Working Drawings during the course of construction, (B) to certify to the best of their knowledge that the "record-set" of mylar as-built drawings are true and correct, which certification shall survive the expiration or termination of this Lease, and (C) to deliver to Landlord two (2) sets of copies of such record set of drawings within ninety (90) days following issuance of a certificate of occupancy for the Premises, and (ii) Tenant shall deliver to Landlord a copy of all warranties, guaranties, and operating manuals and information relating to the improvements, equipment, and systems in the Premises.

#### SECTION 4

TENANT IMPROVEMENT ALLOWANCE; CONSTRUCTION COSTS

4.1 Tenant Improvement Allowance. Tenant shall be entitled to a one-time tenant improvement allowance (the "Tenant Improvement Allowance") in the amount set forth in the First Amendment to Building 2 Lease to which this Work Letter is attached, for the costs relating to the initial design and construction of the Tenant Improvements. In no event shall Landlord be obligated to make disbursements pursuant to this Work Letter in a total amount which exceeds the Tenant Improvement Allowance.

4.2 Disbursement of the Tenant Improvement Allowance.

4.2.1 Tenant Improvement Allowance Items. Except as otherwise set forth in this Work Letter, the Tenant Improvement Allowance shall be disbursed by Landlord only for the following items and costs (collectively the "Tenant Improvement Allowance Items"):

A. Payment of the fees of the Architect and the Engineers

B. The payment of plan check, permit and license fees relating to construction of the Tenant Improvements;

C. The cost of construction of the Tenant Improvements, including, without limitation, testing and inspection costs, utility usage, trash removal costs, and contractors' fees and general conditions;

D. The cost of any changes in the Base Building when such changes are required by the Tenant Improvement Plans, such cost to include all direct architectural and/or engineering fees and expenses incurred in connection therewith; and

E. The cost of any changes to the Tenant Improvement Plans or Tenant Improvements required by Code.

4.2.2 Disbursement of Tenant Improvement Allowance. During the construction of the Tenant Improvements, Landlord shall make monthly disbursements of the Tenant Improvement Allowance for Tenant Improvement Allowance Items:

A. Monthly Disbursements. No more frequently than monthly, during the construction of the Tenant Improvements (or such other date as Landlord may designate), Tenant shall deliver to Landlord: (i) a request for payment of Tenant's Contractor, approved by Tenant, in a form to be provided by Landlord, showing the schedule, by trade, of percentage of completion of the Tenant Improvements in the Premises, detailing the portion of the work completed and the portion not completed; (ii) invoices from all of Tenant's Agents, for labor rendered and materials delivered to the Premises; (iii) executed mechanic's lien releases from all of Tenant's Agents which shall comply with the appropriate provisions, as reasonably determined by Landlord, of California Civil Code Section 3262(d); and (iv) all other information reasonably requested by Landlord. Tenant's request for payment shall be deemed Tenant's approval of the work furnished and/or the materials supplied as set forth in Tenant's payment request. After receipt of the foregoing and provided that Landlord does not dispute any request for payment based on non-compliance of any work with the Approved Tenant Improvement Plans, or due to any substandard work, or for any other reasonable reason, Landlord shall deliver a check to Tenant in an amount equal to the lesser of: (a) the Allowance Percentage of the Tenant Improvement costs for which payment is so requested less a ten percent (10%) retention (the aggregate amount of such retentions to be known as the "Final Retention") or (b) the balance of the undisbursed Tenant Improvement Allowance (excluding the Final Retention). Landlord's payment of such amounts shall not be deemed Landlord's approval or acceptance of the work furnished or materials supplied as set forth in Tenant's payment request.

B. Final Retention. Subject to the provisions of this Work Letter, a check for the Final Retention shall be delivered by Landlord to Tenant within fifteen (15) days after all the following conditions have been satisfied: (i) Tenant delivers to Landlord a properly executed unconditional waiver and lien release from Tenant's Contractor in compliance with

applicable sections of the California Civil Code, (ii) Landlord has determined that no substandard work exists, (iii) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of the Tenant Improvements in the Premises has been substantially completed, (iv) Tenant has recorded a Notice of Completion with respect to Tenant's Work and thirty (30) days has expired from the date of such recording with no liens having been filed during such thirty day period, and (v) there is no existing Event of Default by Tenant under the Lease nor has Landlord notified Tenant of any default which would become an Event of Default under the Lease with the passage of time if not cured.

C. Other Terms. Landlord shall only be obligated to make disbursements from the Tenant Improvement Allowance to the extent costs are incurred by Tenant for Tenant Improvement Allowance Items. All costs of completing Tenant's Work in excess of the Tenant Improvement Allowance shall be at Tenant's sole cost and expense.

D. Other Landlord Costs. Tenant shall also be responsible for the payment of the fees incurred by, and the cost of documents and materials supplied by, Landlord and Landlord's consultants in connection with the preparation and review of the Final Design Drawings and Final Working Drawing as defined in Section 2 of this Work Letter. The Tenant Improvement Allowance will not be used to pay the foregoing costs. Tenant shall pay such costs to Landlord from time to time within ten (10) days after receipt from Landlord of statements of such expenses and all back-up documentation to support the same.

#### SECTION 5

INTENTIONALLY DELETED.

#### SECTION 6

#### MISCELLANEOUS

6.1 Tenant's Representative. Tenant has designated Dennis Rhett as its sole representative with respect to the matters set forth in this Work Letter, each of whom, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Work Letter.

6.2 Landlord's Representative. Landlord has designated William Drummond as its sole representative with respect to the matters set forth in this Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Work Letter.

6.3 Time of the Essence in This Work Letter. Unless otherwise indicated, all references herein to a "number of days" shall mean and refer to calendar days.

## FIRST AMENDMENT TO BUILDING 3 LEASE

THIS FIRST AMENDMENT TO BUILDING 3 LEASE (the "First Amendment") is made and entered into as of January 31, 2003 (the "Effective Date") by and between GREENVILLE INVESTORS, L.P. a California limited partnership (hereafter, "LANDLORD"), and FORMFACTOR, INC., a Delaware corporation (hereafter "TENANT").

## RECITALS

A. Landlord and Tenant entered into a Lease Agreement dated May 3, 2001 (the "Lease") relating to certain premises referred to as Building 3 in the Pacific Corporate Center as described in said Lease, and

B. On May 3, 2001 Landlord and Tenant also entered into two leases relating to other premises in the Pacific Corporate Center: a lease for the premises referred to as Building 1 (the "Building 1 Lease") and a lease for the premises referred to as Building 2 (the "Building 2 Lease").

C. Landlord and Tenant desire to amend the Lease on the terms and conditions set forth herein. Concurrently with the amendment of the Lease, Landlord and Tenant will also be amending the Building 1 Lease and the Building 2 Lease.

NOW, THEREFORE, in consideration of the mutual covenants made herein, Landlord and Tenant agree as follows:

## AGREEMENTS

1. RENT COMMENCEMENT DATE. Landlord and Tenant acknowledge and agree that: a. The Rent Commencement Date occurred on June 30, 2002 and that Tenant's obligation to pay the Base Rent and all other charges payable by Tenant under the Lease commenced on that date; and b. As of the effective date of this First Amendment, Tenant is current on all such payment obligations.

2. ACKNOWLEDGMENT. On the Effective Date of this First Amendment, Landlord and Tenant shall execute a written acknowledgment of the Rent Commencement Date in the form attached hereto as Exhibit A-1.

3. WORK LETTER. The Work Letter which is attached hereto as Exhibit C-1 replaces Exhibit C to the Lease in its entirety.

4. APPROVED TENANT IMPROVEMENT PLANS. The Tenant Improvements for the Premises are set forth in the plans described on Exhibit B-1 attached hereto which have been approved by Landlord and Tenant. The plans shall be deemed to be the "Approved Tenant Improvement Plans" referred to in Section 2.4 of the Work Letter attached hereto as Exhibit C-1.

5. LANDLORD'S WORK. Tenant acknowledges that subject to Paragraph 10 below, Landlord has fully completed all Landlord's Work (as defined in Section 1.4 of Exhibit C-1) and Tenant has accepted such work and possession of the Premises. Landlord represents it has made all payments and met all obligations to any contractors, agents or other third parties for all work completed by Landlord under the Lease.

6. TENANT'S WORK. Tenant commenced construction of Tenant's Work but has elected to stop such construction prior to its completion. Section 8.2 of the Lease requires Tenant to diligently proceed to complete Tenant's Work. Landlord consents to Tenant's temporary work stoppage.

7. TENANT IMPROVEMENT ALLOWANCE. The Lease provides for a Tenant Improvement Allowance of \$952,175 (\$25/sq.ft.), subject to the provisions of the Lease, to be disbursed at the time and in the manner provided in Exhibit C-1 attached hereto.

8. TERM; RENT ADJUSTMENT. The parties agree to extend the term of the Lease for one year and acknowledge that the termination date of the initial term shall be November 30, 2012. The parties further agree to delete Section 3.2 of the Lease and substitute the following therefor:

" 3.2 As of the date of commencement of the third Lease Year and as of the commencement of each Lease Year during the initial Lease Term thereafter, the monthly Base Rent shall increase by four percent (4%) over the monthly Base Rent in effect immediately preceding the applicable adjustment date."

9. NO OUTSTANDING DEFAULTS. Subject to Paragraph 10 below, the parties acknowledge that as of the Effective Date, neither party is in default of any of its obligations under the Lease. As of the Effective Date Landlord expressly releases Tenant from all liability arising out of any alleged breach or default by Tenant prior to the Effective Date. All such outstanding alleged (or actual, if any) defaults by Tenant of the Lease shall be deemed to be settled by the terms of this First Amendment.

10. NO WAIVER. The parties agree that neither Tenant's acceptance in Paragraph 5 above of Landlord's Work and possession of the Premises nor Tenant's acknowledgment in Paragraph 9 above regarding Landlord defaults shall be deemed a waiver by Tenant of any warranties provided in the Lease with respect to Landlord's Work, or of any rights or remedies provided in the Lease for the correction of defects or cure of lack of compliance in Landlord's work.

11. EFFECTIVENESS OF LEASE. Except as otherwise expressly provided herein, from and after the Effective Date of this First Amendment, all provisions of the Lease shall remain in full force and effect and references to the "Lease" shall mean the Lease as amended hereby.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment to Building 3 Lease as of the day and year first written above.

LANDLORD:  
GREENVILLE INVESTORS, L.P.  
By: Greenville Ventures, Inc.  
Title: General Partner

TENANT:  
FORMFACTOR, INC.,  
a Delaware corporation

By: /s/ William A. Drummond  
William A. Drummond  
Its: Vice President

By: /s/ Jens Meyerhoff  
Its: CFO

ADDRESS: 675 Hartz Avenue, Suite 300  
Danville, CA 94526

ADDRESS: 2140 Research Drive  
Livermore, CA 94550

Dated: 1/31/03

Dated: January 15, 2003

EXHIBIT A-1

ACKNOWLEDGMENT OF RENT COMMENCEMENT DATE

THIS ACKNOWLEDGMENT OF RENT COMMENCEMENT DATE is made as of January 31, 2002, by and between the undersigned parties with reference to that certain Lease (the "LEASE") dated as of May 3, 2001, by and between Greenville Investors, L.P., as "LANDLORD" therein, and FormFactor, Inc. as "TENANT," for the premises commonly known as "BUILDING 3", located in the Pacific Corporate Center, in the City of Livermore, California, as more particularly described in the Lease. All capitalized terms referred to herein shall have the same meaning defined in the Lease, except where expressly provided to the contrary.

1. Landlord and Tenant hereby confirm that in accordance with the provisions of the Lease, the Rent Commencement Date has occurred and is June 30, 2002, and that, unless sooner terminated, the initial term of the Lease expires on November 30, 2012. If Tenant elects to exercise its first extension option pursuant to the terms of the Lease, Tenant must deliver written notice to Landlord by no later than November 30, 2011.

2. This Acknowledgment of Rent Commencement Date shall inure to the benefit of, and bind, the parties hereto, and their respective heirs, successors and assigns, subject to the restrictions upon assignment and subletting contained in the Lease.

IN WITNESS WHEREOF, the parties have executed this Acknowledgment of Rent Commencement Date as of the date first above written.

LANDLORD:

GREENVILLE INVESTORS, L.P.  
a California limited partnership

By: Greenville Ventures, Inc.  
Title: General Partner

By: /s/ William A. Drummond

Its: Vice President

TENANT:

FORMFACTOR, INC,

By: /s/ Jens Meyerhoff

Its: CFO

Description of Approved Plans

## EXHIBIT B-1

DESCRIPTION OF APPROVED PLANS  
(BUILDING 3)

SHEET - - - - -	DATE - - - - -
T0.1	4/17/02
T0.2	4/17/02
T0.3	4/17/02
A0.1	4/17/02
A1.1	4/17/02
A2.1	4/17/02
A2.2	4/17/02
A2.3	4/17/02
A2.4	4/17/02
A2.5	4/17/02
A2.6	5/24/02
A2.7	5/24/02
A2.8	4/17/02
A2.9	4/17/02
A3.1	4/17/02
A3.2	4/17/02
A3.3	4/17/02
A4.1	4/17/02
A5.1	4/17/02
A5.2	4/17/02
A6.1	4/17/02
A6.2	4/17/02
A9.1	4/17/02
A9.2	4/17/02
A9.3	4/17/02
A9.4	4/17/02
A9.5	4/17/02
A9.6	4/17/02
EQ2.1	4/17/02
EQ2.2	4/17/02
AF2.1	5/24/02
AF2.2	5/24/02
AF2.3	5/24/02
AF2.4	4/17/02
A1.4R	4/17/02
A1.5R	4/17/02
AC0.1	4/17/02
AC0.2	4/17/02

AC0.3	4/17/02
AC0.4	4/17/02
AC1.1A	4/17/02
AC1.1B	4/17/02
AC1.1C	4/17/02
AC1.1D	4/17/02
AC1.1E	4/17/02
AC1.1F	4/17/02
AC1.1G	4/17/02
AC1.1H	4/17/02
AC1.1I	4/17/02
AC1.1J	4/17/02
AC1.1K	4/17/02
AC1.2A	4/17/02
AC1.2B	4/17/02
AC1.2C	4/17/02
AC1.2D	4/17/02
AC4.1	4/17/02
AC5.1	4/17/02
AC5.2	4/17/02
AC5.3	4/17/02
AC5.4	4/17/02
AC5.5	4/17/02
AC5.6	4/17/02
AC5.7	4/17/02
AC6.1	4/17/02
AC6.2	4/17/02
AC6.3	4/17/02
AC7.1	4/17/02
AC7.2	4/17/02
S2.1	5/28/02
S2.2	3/6/02
S2.3	3/6/02
S2.4	3/6/02
S2.5	3/6/02
S2.6	3/6/02
S3.1	3/6/02
S4.1	3/6/02
S5.1	5/28/02
S5.2	5/28/02
S6.1	3/6/02
S7.1	3/6/02
S7.2	3/6/02
S7.3	3/6/02
S7.4	3/6/02
S8.1	3/6/02

S8.2	3/6/02
PP0.0	4/17/02
PP0.1	4/17/02
PP1.1	4/17/02
PP1.1A	4/17/02
PP1.1B	4/17/02
PP1.1C	4/17/02
PP1.1D	4/17/02
PP1.1E	4/17/02
PP1.2	4/17/02
PP5.1	4/17/02
PP5.2	4/17/02
PP5.3	4/17/02
PP5.4	4/17/02
PP5.5	4/17/02
P0.0	4/17/02
P1.0A	4/17/02
P1.0B	4/17/02
P2.0A	4/17/02
P2.0B	4/17/02
P2.1	4/17/02
P3.0A	4/17/02
P3.0B	4/17/02
P3.1	4/17/02
P3.2	4/17/02
P4.1A	4/17/02
P4.1B	4/17/02
P4.2A	4/17/02
P4.2B	4/17/02
P5.1	4/17/02
E0.0	4/17/02
E0.1	4/17/02
E0.2	4/17/02
E1.0	4/17/02
E1.1	4/17/02
E1.2	4/17/02
E2.1	4/17/02
E2.2	4/17/02
E2.3	4/17/02
E2.4	4/17/02
E3.1	4/17/02
E3.2	4/17/02
E3.1.1	4/17/02
E3.1.2	4/17/02
E3.1.3	4/17/02

E3.1.4	4/17/02
E3.3	4/17/02
E3.4	4/17/02
E4.1	4/17/02
E4.2	4/17/02
E5.1	4/17/02
E5.2	4/17/02
E5.3	4/17/02
E6.1	4/17/02
E6.2	4/17/02
E7.0	4/17/02
E7.1	4/17/02
E7.2	4/17/02
E7.3	4/17/02
E7.4	4/17/02

EXHIBIT C-1

WORK LETTER

This Work Letter sets forth the terms and conditions relating to the construction of the Premises.

SECTION 1

INITIAL CONSTRUCTION OF THE BUILDING AND THE PREMISES

1.1 Base Building. Landlord shall construct the "BASE BUILDING" at Landlord's sole cost and expense; provided that any modifications to the Base Building required by the Tenant Improvement Work described below shall be deemed to be Tenant Improvements. The Base Building shall be constructed in accordance with the plans for such improvements listed on the plan list attached as Schedule 1 to this Exhibit C (the "PLAN LIST"). The Base Building shall include without limitation:

a) Fully enclosed tilt-up concrete building(s) with 5" thick concrete slab and grade doors as shown on the construction drawings listed in the Plan List;

b) Water and gas service stubbed into Building;

c) A sanitary sewer gut line as shown on the construction drawings;

d) 2000 amp, 480/277 volt, 3 phase electrical service with main switch in the electrical room;

e) Four (4) 4" telephone conduits and 8' x 8' plywood terminal board in the electrical room;

f) Fire sprinklers at roof to meet Legal Requirements for the Building shell.

1.2 Special Tenant Improvements. In addition to the Base Building, Landlord shall also obtain all necessary permits and approvals for and shall construct those improvements specifically described in Architect's Bulletin No. 4 dated February 2, 2001 (the "BULLETIN") and prepared by Ware Malcomb Architects, which Bulletin has been approved by Landlord and is attached hereto (the "SPECIAL TENANT IMPROVEMENTS"). Prior to the date hereof Tenant has paid to Landlord \$135,000 representing the estimated cost of the Special Tenant Improvements. In the event the actual cost of completing the Special Tenant Improvements exceeds \$135,000 the remainder shall be charged against the Tenant Improvement Allowance. If the actual cost is less than \$135,000, the remainder shall be promptly refunded to Tenant.

1.3 Parcel 3 Improvements. Landlord shall construct the site improvements on Parcel 3 at Landlord's sole cost and expense in accordance with the plans for such improvements listed on the Plan List. The site improvements shall include, without limitation, site concrete, asphalt paving, striping, exterior lighting, site utilities and landscaping.

1.4 Landlord's Work. "LANDLORD'S WORK" shall mean all work to be constructed by Landlord described in Sections 1.1, 1.2 and 1.3 above.

1.5 Tenant's Work. "TENANT'S WORK" will include designing, providing and installing all Tenant Improvements (defined hereafter) and providing the required furnishings, fixtures and equipment for Tenant's use of the Premises. As used in this Lease, the term "TENANT IMPROVEMENTS" shall mean all improvements set forth in the Approved Tenant Improvement Plans. Tenant shall obtain all necessary permits and approvals for and shall construct the "TENANT IMPROVEMENTS" in accordance with the Approved Tenant Improvement Plans (as defined in Section 2.4 below). Landlord will disburse the Tenant Improvement Allowance described in Section 4 below to pay for Tenant Improvement Costs (defined hereafter). All such costs of completing Tenant's Work which are in excess of the Tenant Improvement Allowance shall be paid by Tenant pursuant to the terms of the Lease and this Work Letter.

## SECTION 2

### TENANT IMPROVEMENT PLANS

2.1 Architect/Construction Plans. Tenant has retained CAS Architects, Inc. (the "Architect") to prepare the construction plans for all Tenant Improvements and Special Tenant Improvements. Tenant shall retain engineering consultants (the "Engineers") approved by Landlord (which approval shall not be unreasonably withheld or delayed) to prepare all plans and engineering working drawings relating to the Tenant Improvements, including without limitation, all structural, HVAC, electrical, plumbing, life safety, and sprinkler work in the Premises which is not part of the Base Building. The final working plans and drawings to be prepared by Architect and the Engineers hereunder shall be known collectively as the "Tenant Improvement Plans". The scope, form and content of all plans and drawings shall be discussed in reasonable detail at each of the weekly meetings held pursuant to the terms of Section 3.2.6 below. All Tenant Improvement Plans shall be in a form suitable for bidding and construction by qualified contractors, shall meet the requirements of the City of Livermore, and shall be subject to Landlord's approval, which shall not be unreasonably withheld or delayed. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the Base Building plans, and Tenant and Architect shall be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Tenant Improvement Plans as set forth in this Section 2, shall be for its sole purpose and shall not obligate Landlord to review the same, for quality, design, code compliance or other like matters. Accordingly, notwithstanding that any Tenant Improvement Plans are reviewed by Landlord or its architect, engineers and consultants, and notwithstanding any advice or assistance which may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Tenant Improvement Plans, and Tenant's waiver and indemnity set forth in Section 16 of this Lease shall specifically apply to the Tenant Improvement Plans.

2.2 Final Design Drawings. Tenant and the Architect shall prepare the final design drawings and specifications for Tenant Improvements in the Premises (collectively, the "Final Design Drawings") and shall deliver the same to Landlord for Landlord's approval. The Final Design Drawings shall include a layout and designation of all offices, rooms and other partitioning. Landlord may request clarification or more specific drawings for special use items not included in the Final Design Drawings. Landlord shall advise Tenant within five (5) business days after Landlord's receipt of the Final Design Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect. If Tenant is so advised, Tenant shall promptly cause the Final Design Drawings to be revised to correct any deficiencies or other matters Landlord may reasonably require.

2.3 Final Working Drawings. After the Final Design Drawings have been approved by Landlord, Tenant shall promptly cause the Architect and the Engineers to complete the architectural and engineering drawings for the Premises, and Architect shall compile a fully coordinated set of architectural, structural, mechanical, electrical and plumbing working drawings in a commercially reasonable and customary form which is sufficiently complete to allow subcontractors with a reasonable level of competence and experience in the industry to bid on the work and to obtain all permits required for the construction of the Tenant Improvements (the "PERMITS") and shall submit the same (collectively, the "FINAL WORKING DRAWINGS") to Landlord for Landlord's approval, which approval shall not be unreasonably withheld or delayed. Tenant shall supply Landlord with three (3) copies signed by Tenant of such Final Working Drawings. Landlord shall advise Tenant in writing within five (5) business days after Landlord's receipt of the Final Working Drawings for the Premises if the same are unsatisfactory or incomplete in any commercially reasonable respect, and provide Tenant with sufficient detail to address the issues presented by Landlord. If Tenant is so advised, Tenant shall promptly cause the Final Working Drawings to be revised in accordance with such review and any disapproval of Landlord in connection therewith.

2.4 Approved Tenant Improvement Plans. The Final Working Drawings shall be approved by Landlord (the "Approved Tenant Improvement Plans") prior to the commencement of construction of the Tenant Improvements by Tenant. In order to expedite the permitting process,

however, prior to Landlord's approval pursuant to Section 2.3 above, Tenant may submit the Final Working Drawings to the appropriate municipal authorities for all Permits necessary to allow Tenant's contractor to commence and fully complete the construction of the Tenant Improvements. Notwithstanding the foregoing, Tenant acknowledges that Landlord does not waive the right to approve the Final Working Drawings and by electing to submit the Final Working Drawings for permit prior to Landlord's approval, Tenant is assuming the risk that Landlord may require changes in such drawings after the same have been submitted for permits. Tenant hereby agrees that neither Landlord nor Landlord's consultants shall be responsible for obtaining any of the Permits or a certificate of occupancy for the Premises and that obtaining the same shall be Tenant's responsibility; provided, however, that Landlord shall in all events cooperate with Tenant in executing permit applications and performing other ministerial acts reasonably necessary to enable Tenant to obtain any such permit or certificate of occupancy. No changes, modifications or alterations in the Approved Tenant Improvement Plans may be made without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed.

### SECTION 3

#### CONSTRUCTION OF TENANT IMPROVEMENTS

##### 3.1 Tenant's Selection of Contractors.

3.1.1 Tenant's Contractor. A general contractor shall be retained by Tenant to construct the Tenant Improvements. Such general contractor ("TENANT'S CONTRACTOR") shall be subject to Landlord's prior approval, which approval shall not be unreasonably withheld or delayed.

3.1.2 Tenant's Agents. All subcontractors, laborers, materialmen, and suppliers used by Tenant (such subcontractors, laborers, materialmen, and suppliers, and Tenant's Contractor to be known collectively as "TENANT'S AGENTS") must be approved in writing by Landlord, which approval shall not be unreasonably withheld or delayed. If Landlord does not approve any of Tenant's proposed subcontractors, laborers, materialmen or suppliers, Tenant shall submit other proposed subcontractors, laborers, materialmen or suppliers for Landlord's written approval. Notwithstanding the foregoing, Tenant shall retain subcontractors designated or reasonably approved by Landlord in connection with any structural, mechanical, electrical, plumbing or heating, air-conditioning or ventilation work to be performed in the Premises. Further Landlord's approval shall not be required for any of Tenant's Agents performing work or providing materials costing less than \$10,000.

##### 3.2 Construction of Tenant Improvements by Tenant's Agents.

3.2.1 Tenant's Construction Contract; Cost Budget. Prior to Tenant's execution of the construction contract and general conditions with Tenant's Contractor ("TENANT'S CONSTRUCTION CONTRACT"), Tenant shall submit Tenant's Construction Contract to Landlord for its approval, which approval shall not be unreasonably withheld or delayed. Prior to the commencement of the construction of the Tenant Improvements, and after Tenant has accepted all bids for the Tenant Improvements, Tenant shall provide Landlord with a detailed breakdown, by trade, of the final costs to be incurred or which have been incurred in connection with the design and construction of the Tenant Improvements to be performed by or at the direction of Tenant or Tenant's Contractor, which costs form a basis for the amount of Tenant's Construction Contract (the "Final Costs"). If the costs of the Tenant Improvements exceed the Tenant Improvement Allowance, Tenant shall also provide Landlord with its computation of percentage that the Tenant Improvement Allowance bears to the total costs of the Tenant Improvements (the "ALLOWANCE PERCENTAGE")

##### 3.2.2 Tenant's Agents.

A. Landlord's General Terms for Tenant's Agents and Tenant Improvement Work. Tenant's and Tenant's Agent's construction of the Tenant Improvements shall comply with the following: (i) the Tenant Improvements shall be constructed in accordance with the Approved Tenant Improvement Plans; and (ii) Tenant shall abide by all rules reasonably made by Landlord with respect to storage of materials, coordination of work with the contractors of other tenants and Landlord, and any other matter in connection with this Work Letter, including, without limitation,

the construction of the Tenant Improvements.

B. Indemnity. Tenant's indemnity of Landlord as set forth in Section 16.1 of this Lease shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to any act or omission of Tenant or Tenant's Agents, or anyone directly or indirectly employed by any of them, or in connection with Tenant's non-payment of any amount arising out of the Tenant Improvements and/or Tenant's disapproval of all or any portion of any request for payment. Such indemnity by Tenant, as set forth in Section 16.1 of this Lease, shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to Landlord's performance of any ministerial acts reasonably necessary (i) to permit Tenant to complete the Tenant Improvements, and (ii) to enable Tenant to obtain any building permit or certificate of occupancy for the Premises.

C. Requirements of Tenant's Agents. Each of Tenant's Agents shall guarantee to Tenant and for the benefit of Landlord that the portion of the Tenant Improvements for which it is responsible shall be free from any defects in workmanship and materials for a period of not less than one (1) year from the date of completion thereof. Each of Tenant's Agents shall be responsible for the replacement or repair, without additional charge, of all work done or furnished in accordance with its contract that shall become defective within one (1) year after the later to occur of (i) completion of the work performed by such contractor or subcontractors and (ii) the Lease Commencement Date. The correction of such work shall include, without additional charge, all additional expenses and damages incurred in connection with such removal or replacement of all or any part of the Tenant Improvements, and/or the Building and/or common areas that may be damaged or disturbed thereby. All such warranties or guarantees as to materials or workmanship of or with respect to the Tenant Improvements shall be contained in the Contract or subcontract and shall be written such that such guarantees or warranties shall inure to the benefit of both Landlord and Tenant.

D. Insurance Requirements.

1. General Coverages. All of Tenant's Agents shall carry worker's compensation insurance covering all of their respective employees, and shall also carry public liability insurance, including property damage, all with limits, in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

2. Special Coverages. Tenant shall carry "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of the Tenant Improvements, and such other commercially reasonable insurance as Landlord may require, it being understood and agreed that the Tenant Improvements shall be insured by Landlord pursuant to Article 14 of this Lease upon completion thereof. Tenant's policy of Builder's All Risk insurance shall be in amounts and shall include such extended coverage endorsements as may be reasonably required by Landlord including, but not limited to, the requirement that all of Tenant's Agents shall carry Excess Liability and Products and Completed Operation Coverage insurance, each in amounts not less than \$1,000,000 per incident, \$2,000,000 in aggregate, and in form and with companies as are required to be carried by Tenant as set forth in Article 14 of this Lease.

3. General Terms. Certificates for all insurance carried pursuant to this Section 3.2.2(D) shall be delivered to Landlord before the commencement of construction of the Tenant Improvements and before the equipment of Tenant's Contractor is moved onto the site. All such policies of insurance must contain a provision that the company writing said policy will give Landlord thirty (30) days' prior written notice of any cancellation or lapse of the effective date or any reduction in the amounts of such insurance. In the event that the Tenant Improvements are damaged by any cause during the course of the construction thereof, Tenant shall immediately repair the same at Tenant's sole cost and expense. Tenant's Agents shall maintain all of the foregoing insurance coverage in force until the Tenant Improvements are fully completed and accepted by Landlord, except for any Products and Completed Operation Coverage insurance required by Landlord, which is to be maintained for ten (10) years following completion of the work and acceptance by Landlord and Tenant. All policies carried under this Section 3.2.2(D) shall insure Landlord and Tenant, as their interests may appear, as well as Tenant's Contractor and Tenant's Agents. All insurance, except Workers' Compensation, maintained by Tenant's Agents shall preclude subrogation claims by the insurer against anyone insured thereunder. Such insurance shall provide that it is primary insurance

as respects the Landlord and that any other insurance maintained by Landlord is excess and noncontributing with the insurance required hereunder. The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Landlord by Tenant under Section 3.2.2(B) of this Work Letter.

3.2.3 Governmental Compliance. The Tenant Improvements shall comply in all respects with the following: (i) all building codes and other state, federal, city or quasi-governmental laws, codes, ordinances and regulations, as each may apply according to the rulings of the controlling public official, agent or other person; (ii) applicable standards of the American Insurance Association (formerly, the National Board of Fire Underwriters) and the National Electrical Code; and (iii) building material manufacturer's specifications.

3.2.4 Mechanic's Liens. Tenant shall keep the Premises and the Center free and clear of mechanics' liens arising out of its construction of Tenant's Work as provided in Article 29. All provisions of Article 29 shall apply to Tenant's Work as if fully set forth into this Work Letter.

3.2.5 Inspection by Landlord. Landlord shall have the right to inspect the Tenant Improvements at all times, provided however, that Landlord's failure to inspect the Tenant Improvements shall in no event constitute a waiver of any of Landlord's rights hereunder nor shall Landlord's inspection of the Tenant Improvements constitute Landlord's approval of the same. Should Landlord reasonably disapprove any portion of the Tenant Improvements, Landlord shall notify Tenant in writing of such disapproval and shall specify the items disapproved. Any material defects or deviations in, and/or disapproval by Landlord of, the Tenant Improvements shall be rectified by Tenant at no expense to Landlord, provided however, that in the event Landlord determines that a defect or deviation exists or disapproves of any matter in connection with any portion of the Tenant Improvements and such defect, deviation or matter might adversely affect the mechanical, electrical, plumbing, heating, ventilating and air-conditioning or life-safety systems of the Building, the structure or exterior appearance of the Building or any other tenant's use of such other tenant's leased premises, Landlord after giving Tenant at least three (3) business days advance written notice and an opportunity to cure or otherwise demonstrate compliance, may take such action as Landlord deems necessary, at Tenant's expense and without incurring any liability on Landlord's part, to correct any such defect, deviation and/or matter, including, without limitation, causing the cessation of performance of the construction of the Tenant Improvements until such time as the defect, deviation and/or matter is corrected to Landlord's satisfaction.

3.2.6 Meetings. Commencing upon the execution of this Lease, Tenant shall hold weekly meetings at a reasonable time, with the Architect and the Tenant's Contractor regarding the progress of the preparation of the Tenant Improvement Plans and the construction of the Tenant Improvements, and Landlord and/or its agents shall receive prior notice of, and shall have the right to attend, all such meetings, and, upon Landlord's request, certain of Tenant's Agents shall attend such meetings. Such meetings shall include a detailed review of the plans, drawings and specifications prepared to date and all participants in the meeting shall make a good faith effort to raise any issues or concerns they may have regarding the scope, form or content of any plan submitted.

3.3 Notice of Completion; Copy of Record Set of Plans. Within ten (10) days after completion of construction of the Tenant Improvements, Tenant shall cause a Notice of Completion with respect to the Tenant Improvements to be recorded in the office of the Recorder of the County of Alameda in accordance with Section 3093 of the Civil Code of the State of California or any successor statute, and shall furnish a copy thereof to Landlord upon such recordation. If Tenant fails to do so, Landlord may execute and file the same on behalf of Tenant as Tenant's agent for such purpose, at Tenant's sole cost and expense. At the conclusion of construction, (i) Tenant shall cause the Architect and Tenant's Contractor (A) to update the Approved Working Drawings as necessary to reflect all changes made to the Approved Working Drawings during the course of construction, (B) to certify to the best of their knowledge that the "record-set" of mylar as-built drawings are true and correct, which certification shall survive the expiration or termination of this Lease, and (C) to deliver to Landlord two (2) sets of copies of such record set of drawings within ninety (90) days following issuance of a certificate of occupancy for the Premises, and (ii) Tenant shall deliver to Landlord a copy of all warranties, guaranties, and operating manuals and information relating to the improvements, equipment, and systems in the Premises.

SECTION 4

TENANT IMPROVEMENT ALLOWANCE; CONSTRUCTION COSTS

4.1 Tenant Improvement Allowance. Tenant shall be entitled to a one-time tenant improvement allowance (the "Tenant Improvement Allowance") in the amount set forth in the First Amendment to Building 3 Lease to which this Work Letter is attached, for the costs relating to the initial design and construction of the Tenant Improvements. In no event shall Landlord be obligated to make disbursements pursuant to this Work Letter in a total amount which exceeds the Tenant Improvement Allowance.

4.2 Disbursement of the Tenant Improvement Allowance.

4.2.1 Tenant Improvement Allowance Items. Except as otherwise set forth in this Work Letter, the Tenant Improvement Allowance shall be disbursed by Landlord only for the following items and costs (collectively the "Tenant Improvement Allowance Items"):

A. Payment of the fees of the Architect and the Engineers

B. The payment of plan check, permit and license fees relating to construction of the Tenant Improvements;

C. The cost of construction of the Tenant Improvements, including, without limitation, testing and inspection costs, utility usage, trash removal costs, and contractors' fees and general conditions;

D. The cost of any changes in the Base Building when such changes are required by the Tenant Improvement Plans, such cost to include all direct architectural and/or engineering fees and expenses incurred in connection therewith; and

E. The cost of any changes to the Tenant Improvement Plans or Tenant Improvements required by Code.

4.2.2 Disbursement of Tenant Improvement Allowance. During the construction of the Tenant Improvements, Landlord shall make monthly disbursements of the Tenant Improvement Allowance for Tenant Improvement Allowance Items:

A. Monthly Disbursements. No more frequently than monthly, during the construction of the Tenant Improvements (or such other date as Landlord may designate), Tenant shall deliver to Landlord: (i) a request for payment of Tenant's Contractor, approved by Tenant, in a form to be provided by Landlord, showing the schedule, by trade, of percentage of completion of the Tenant Improvements in the Premises, detailing the portion of the work completed and the portion not completed; (ii) invoices from all of Tenant's Agents, for labor rendered and materials delivered to the Premises; (iii) executed mechanic's lien releases from all of Tenant's Agents which shall comply with the appropriate provisions, as reasonably determined by Landlord, of California Civil Code Section 3262(d); and (iv) all other information reasonably requested by Landlord. Tenant's request for payment shall be deemed Tenant's approval of the work furnished and/or the materials supplied as set forth in Tenant's payment request. After receipt of the foregoing and provided that Landlord does not dispute any request for payment based on non-compliance of any work with the Approved Tenant Improvement Plans, or due to any substandard work, or for any other reasonable reason, Landlord shall deliver a check to Tenant in an amount equal to the lesser of: (a) the Allowance Percentage of the Tenant Improvement costs for which payment is so requested less a ten percent (10%) retention (the aggregate amount of such retentions to be known as the "Final Retention") or (b) the balance of the undisbursed Tenant Improvement Allowance (excluding the Final Retention). Landlord's payment of such amounts shall not be deemed Landlord's approval or acceptance of the work furnished or materials supplied as set forth in Tenant's payment request.

B. Final Retention. Subject to the provisions of this Work Letter, a

check for the Final Retention shall be delivered by Landlord to Tenant within fifteen (15) days after all the following conditions have been satisfied: (i) Tenant delivers to Landlord a properly executed unconditional waiver and lien release from Tenant's Contractor in compliance with applicable sections of the California Civil Code, (ii) Landlord has determined that no substandard work exists, (iii) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of the Tenant Improvements in the Premises has been substantially completed, (iv) Tenant has recorded a Notice of Completion with respect to Tenant's Work and thirty (30) days has expired from the date of such recording with no liens having been filed during such thirty day period, and (v) there is no existing Event of Default by Tenant under the Lease nor has Landlord notified Tenant of any default which would become an Event of Default under the Lease with the passage of time if not cured.

C. Other Terms. Landlord shall only be obligated to make disbursements from the Tenant Improvement Allowance to the extent costs are incurred by Tenant for Tenant Improvement Allowance Items. No disbursements shall be made to pay for Special Improvements unless the Tenant Improvement Allowance exceeds the costs of all other Tenant Improvements. All costs of completing Tenant's Work in excess of the Tenant Improvement Allowance shall be at Tenant's sole cost and expense.

D. Other Landlord Costs. Tenant shall also be responsible for the payment of the fees incurred by, and the cost of documents and materials supplied by, Landlord and Landlord's consultants in connection with the preparation and review of the Final Design Drawings and Final Working Drawing as defined in Section 2 of this Work Letter. The Tenant Improvement Allowance will not be used to pay the foregoing costs. Tenant shall pay such costs to Landlord from time to time within ten (10) days after receipt from Landlord of statements of such expenses and all back-up documentation to support the same.

#### SECTION 5

INTENTIONALLY DELETED.

#### SECTION 6

#### MISCELLANEOUS

6.1 Tenant's Representative. Tenant has designated Dennis Rhett as its sole representative with respect to the matters set forth in this Work Letter, each of whom, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Work Letter.

6.2 Landlord's Representative. Landlord has designated William Drummond as its sole representative with respect to the matters set forth in this Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Work Letter.

6.3 Time of the Essence in This Work Letter. Unless otherwise indicated, all references herein to a "number of days" shall mean and refer to calendar days.

19 July 2002

Herr Jens Moeckel  
Infineon Technologies AG  
St.-Martin-Str.53  
81541 Munchen  
Germany

Re: Extension of Basic Purchase Agreement

Dear Herr Moeckel:

We write to confirm our company agreement to extend the term of the Basic Purchase Agreement ("AGREEMENT") between, on the one hand, Infineon Technologies AG, WhiteOak Semiconductor Partnership (now Infineon Technologies Richmond), and PROMOS Technologies, Inc. and, on the other hand, FormFactor, Inc. Specifically, this letter confirms that we have agreed to extend the term of the Agreement for one year, or to and until July 9, 2003. All other terms and conditions of the Agreement remain unchanged.

As required by the Agreement, and in order to ensure the completeness of everyone's files, we would appreciate it if you would countersign this letter in the appropriate space indicated below.

If you have any questions or concerns, please do not hesitate to contact Peter Mathews or the undersigned.

Very truly yours,

/s/ Peter B. Mathews

Peter B. Mathews  
Vice President, Worldwide Sales

ACCEPTED AND AGREED TO ON \_\_\_\_\_, 2002

INFINEON TECHNOLOGIES AG

By: /s/ i.v. [illegible]  
-----  
Its: Corporate Core Com. Manager  
-----

By: /s/ i.v. [illegible]  
-----  
Its: Sen. Director  
-----

ACCEPTED AND AGREED TO ON JULY 19, 2002

FORMFACTOR, INC.

By: /s/ Peter B. Mathews  
-----  
Its: V.P. Worldwide Sales  
-----

[PRODUCT PRICING FOR SAMSUNG]

[Date: Oct/31/2001]

Pricing for Probecards ordered in 12 months period starting the execution of the Probecard purchase agreement shall be as follows:

- 1. \* \* \* : \* \* \*
- 2. Unite Price : \* \* \*
- 3. Product : \* \* \*
- 4. Order due date : \* \* \*
- 5. Delivery due date : \* \* \*
- 6. Minimum Q'ty/New-design:
  - 6-1. \* \* \* for \* \* \*
  - 6-2. \* \* \* (\* \* \*) for \* \* \*.
  - 6-3. \* \* \*: \* \* \* (\* \* \*-will be credit with the re-order)
- 7. \* \* \* : \* \* \* will be \* \* \* to get \* \* \* information at SEC.
- 8. Signed: Agreed as above for \* \* \* and will be applied in the future PPA.

FormFactor, Inc.

Samsung Electronics Co., Ltd.

By: /s/ K.K. Kim

By: /s/ S.M. Lee

Date: Oct/31/2001

Date: 10/31/2001

FormFactor Confidential

\* \* \* Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as \* \* \*. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

Product Pricing for Samsung

Pricing Terms:

1. Pricing for probecards delivered in a 1 year period starting from the execution of the Probecard Purchase Agreement shall be as follows:

Product Type	Unit Price	NRE
* * *	\$ * * *	\$ * * *
* * *	\$ * * *	\$ * * *
* * *	\$ * * *	\$ * * *

2. Contract Term and Condition:

2.1 Contract term for one year shall be from January 2002 to December 2002

2.2 The \* \* \* is guaranteed

3. Price Condition:

3.1 A \* \* \* shall apply to the table above should a DUT exceed \* \* \* (\* \* \*)

3.2 Should Samsung purchase a quantity of \* \* \* of a new design (\* \* \*), the \* \* \* shall apply. \* \* \* re-orders quantity is \* \* \* for next new design for \* \* \* of new design. Should the New Design be a \* \* \*, the \* \* \* shall be \* \* \*.

4. Repair Condition:

4.1 \* \* \* is included on above price. \* \* \*

4.2 VENDOR will assign a \* \* \*.

5. Payment terms, \* \* \*, F.O.B. Livermore, CA, Payable in US Dollars

6. Both companies agree to Order - Cancellation Policy (Attached)

7. Both companies will cooperate together to improve relationship.

8. FFI and Samsung shall issue a joint press release about the existence of this contract.

9. Signed:

FormFactor, Inc.

Samsung Electronics Co., Ltd.

By: /s/ S.M. Kim

By: /s/ [illegible]

Date: 1/10/2002

Date: 1/10/2002

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All rights reserved

\* \* \* Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as \* \* \*. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

PRODUCT PRICING FOR SAMSUNG

Pricing Terms:

1. Pricing for probecards delivered in a 1 year period starting from the execution of the Probecard Purchase Agreement shall be as follows:

Product Type	Unit Price	NRE	Credit Condition
* * *	\$ * * *	\$ * * *	Total qty = * * *
* * *	\$ * * *	\$ * * *	Total qty = * * *
* * *	\$ * * *	\$ * * *	Total qty = * * *
* * *	\$ * * *	\$ * * *	Total qty = * * *

2. Contract Term and Condition:

2.1 Contract term for one year shall be from December 2002 to December 2003.

3. Price Condition:

3.1 A \* \* % premium shall apply to the table above should a DUT exceed \* \* \* (\* \* \*), and \* \* \* a DUT exceed \* \* \*.

3.2 For \* \* \*, Should Samsung purchase a quantity of \* \* \* of a new design (\* \* \*), the \* \* \* shall apply.

\* \* \* will be credit for next new design in case purchasing \* \* \* on \* \* \*.

Should the \* \* \* be a \* \* \*, the \* \* \* shall be charged at a price of \$\* \* \*.

3.3 For more than \* \* \*, Should Samsung purchase a quantity of \* \* \* of a new design (\* \* \*), the \* \* \* shall apply. \* \* \* will be credit for next new design in case purchasing \* \* \* on \* \* \*.

Should the \* \* \* be a \* \* \*, the \* \* \* shall be charged at a price of \$\* \* \*.

3.4 For \* \* \* and \* \* \* with \* \* \*

3.5 \* \* \* is provided \* \* \* at FFIK if \* \* \* of PC purchased.  
 \* \* \* is provided \* \* \* at FFIK if \* \* \* of PC purchased.  
 \* \* \* is provided \* \* \* at FFIK if \* \* \* of PC purchased.

3.6 Released product (\* \* \* or \* \* \*), (\* \* \* or \* \* \*), (\* \* \*) is applied on \* \* \*, and \* \* \* is released when \* \* \* is \* \* \*.

3.7 Recycling program is applied for purchasing.

4. Repair Condition:

4.1 \* \* \* is included on above price. (Attached)

4.2 VENDOR will assign a \* \* \*.

5. Payment terms, Net \* \* \*, F.O.B. Livermore, CA, Payable in US Dollars.

6. Both companies agree to Order Cancellation Policy (Attached).

7. Both companies will cooperate together to improve relationship.

8. FFI and Samsung shall issue a joint press release about the existence of this contract.

-----  
 Proprietary Data, BUYER and FormFactor Confidential  
 -----

\* \* \* Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as \* \* \*. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

9. Signed:

FormFactor, Inc.

Samsung Electrics Co., Ltd.

By: /s/ [illegible]

By: /s/ [illegible]

Date: '03/01/22

Date: '03/01/22

/s/ Peter B. Mathews

VP-Worldwide Sales

Jan. 22, 2003

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page 2/2

AMENDMENT NO. R TO

INTEL CORPORATE EQUIPMENT AND SERVICE PURCHASE AGREEMENT NO. C-05673

BETWEEN

INTEL CORPORATION AND FORMFACTOR, INC.

For valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, Intel Corporation ("Buyer") and FormFactor, Inc. ("Seller") hereby amend the above referenced Intel Corporation Purchase Agreement No. C-05673 (the "Agreement") as set forth hereafter.

1. EFFECTIVE DATE.

The Effective Date of this amendment ("Amendment") shall be 2-4-02.

2. DEFINITIONS.

Unless provided otherwise in this Amendment, each term appearing in this Amendment shall have the same meaning as given in the Agreement.

3. AMENDMENTS.

By executing this Amendment, Buyer and Seller are amending the Agreement to add the terms and conditions applicable to Flash Products as set forth in Exhibits A attached hereto and incorporated herein by this reference.

4. LEGAL EFFECT ON AGREEMENT.

As amended by this Amendment, all provisions of the Agreement shall remain in full force and effect. In the event of a conflict between this Amendment and the Agreement, this Amendment shall take precedence.

INTEL CORPORATION

FORMFACTOR, INC.

By: /s/ Bill deDiego

By: /s/ David Browne

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Bill deDiego

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David Browne

-----  
(Printed Name)

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(Printed Name)

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Commodity Manager

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Technical Sales Manager

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(Title)

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(Title)

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5-7-02

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5/22/02

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(Date)

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(Date)

\* \* \* Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as \* \* \*. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

EXHIBIT A

FLASH PRODUCTS

1. The prices in Tables 1 and 2, below, apply to all purchase orders submitted by Buyer to Seller for \* \* \* and \* \* \* Flash memory probe cards meeting the following requirements: (i) pitch \* \* \*um; (ii) pad size \* \* \*um; (iii) maximum of \* \* \* pads per die; (iv) use of \* \* \* (\* \* \* inches) or \* \* \* (\* \* \* inches) space transformer; and (v) technical specifications in Buyer Procurement Document \* \* \*, or as otherwise mutually agreed upon by Buyer and Seller ("Flash SIU").

TABLE 1  
\* \* \* Pricing

Quantity Per Design Tier	Base Prices	* * * After * * * Cards	* * * After * * * Cards	After * * * cards or as of 1/1/2003
First * * *	* * *	* * *	* * *	* * *
* * * Through * * *	* * *	* * *	* * *	* * *
* * * Through * * *	* * *	* * *	* * *	* * *
* * * Through * * *	* * *	* * *	* * *	* * *
>* * *	* * *	* * *	* * *	* * *

TABLE 2  
\* \* \* Pricing

Quantity Per Design Tier	For 2002
First * * *	* * *
* * * Through * * *	* * *
* * * Through * * *	* * *
* * * Through * * *	* * *
>* * *	* * *

- (a) In addition to the price schedules of Tables 1 and 2, Seller will provide a \* \* \* on \* \* \*, respectively; provided, however, that in all events the applicable \* \* \* will not be implemented prior to \* \* \*, even if \* \* \* exceed the \* \* \* threshold.
- (b) Seller shall provide an \* \* \* on \* \* \* exceed \* \* \*, respectively.
- (c) Seller shall provide a \* \* \* on \* \* \*.

2. The prices for Flash SIU purchase orders submitted by Buyer to Seller that do not meet all of the following requirements: (i) pitch \* \* \*um; (ii) pad size \* \* \*um; (iii) maximum of \* \* \* pads per die; (iv) use of \* \* \*; and (v) FFI design rules, will be quoted on a case-by-case basis.

3. The quantities called out in Table 1 and Table 2, above, are for each different new Flash SIU design. That is, the quantities of a first article design and re-orders of the same design may be combined within the "Quantity Per Design Tier" when calculating whether a particular identified quantity level is met. By way of example, if a first article design is placed for \* \* \* cards, and a re-order is subsequently (i.e., on any day subsequent to the day the first article design order was placed) placed for \* \* \* cards, the first article design order shall be subject to the pricing in the "First \* \* \*" quantity level, and then \* \* \* of the cards in the reorder will be subject to the pricing in the "First \* \* \*" quantity level, and the remaining \* \* \* cards in the reorder will be subject to the pricing in the "\* \* \* through \* \* \*" quantity level. In no event will the pricing of a first article design order, or a subsequent re-order, be revisited or revised in view of subsequent purchases or demand,

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even if a significant volume purchase order is ultimately placed by Buyer. The quantity of one design cannot be added to the quantity of another design to use the prices in each Quantity Per Design Tier.

4. The prices shown in Tables 1 and 2, and paragraphs 1.a) through 1.c) will not be combined with any other pricing modifications that the parties may negotiate in the future and are valid through \* \* \*.
5. For Flash SIU purchase orders with more than \* \* \* cards, all cards will be priced against the applicable cumulative quantity price.
6. A minimum order value of \* \* \* is required for each new \* \* \*.
7. The NRE for each new \* \* \* shall comply with Table 3, below.

TABLE 3  
NRE for New Flash SIU Designs

Design requirements	NRE
Only requires a new PCB or a modification to an existing PCB	* * *
Only requires a new MLC	* * *
New MLC and PCB	* * *

8. If Seller is able to reuse previous NRE work, the NRE will be quoted on a case-by-case bases.
9. Table 4, below, sets forth the \* \* \* that will apply to \* \* \* by Seller as indicated below, if any, of only the following probe cards: \* \* \*.

TABLE 4  
\* \* \*

Days * * *	* * *
* * *	* * *
* * *	* * *
* * *	* * *
* * *	* * *

- (a) The \* \* \* is taken from the then-applied price for the card.
- (b) The \* \* \* is taken on the card(s) that are \* \* \*, and not on all cards within the purchase order.
- (c) No \* \* \* will apply:
  - (i) in the event that Seller's \* \* \* is \* \* \* based upon a \* \* \*.
  - (ii) if the cause of \* \* \* is due, in whole or in part, to a cause other than Seller's (or Seller's suppliers or vendors) own \* \* \*.
  - (iii) for designs that do not meet the specification requirements for the established pricing tables.

10. First Article Lead-times for \* \* \* probe cards that meet the requirements set forth in Paragraph 1, above, shall be:

- \* \* \* weeks as of \* \* \*
- \* \* \* weeks as of \* \* \*
- \* \* \* weeks as of \* \* \*

Lead-time is measured from the time that FFI receives both the complete data sheet and specifications for the particular \* \* \* probe card being ordered, and the purchase order that meets the minimum order requirement. Lead-times exclude scheduled vendors and FFI holidays. Seller's annual Holiday schedule will be provided to Intel promptly upon Seller finalizing the same for any given year during the term. The additional Lead-time due to vendor and FFI holidays will not exceed \* \* \*. Seller is currently

developing its \* \* \* probe cards. In the event that Buyer qualifies Seller's \* \* \* probe cards, Seller will offer a \* \* \* first article lead time for up to \* \* \* probe cards.

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11. Reorder Lead-times for \* \* \* probe cards that meet the requirements set forth in Paragraph 1, above, shall be:

(i) \* \* \* weeks for forecasted orders

(ii) \* \* \* weeks for forecasted orders where FFI has required MLC inventory in house

(iii) \* \* \* weeks for unforecasted orders without MLC inventory at FFI

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THIRD AMENDED AND RESTATED  
 LOAN AND SECURITY AGREEMENT  
 (ACCOUNTS AND INVENTORY)

THIS AGREEMENT is entered into on February 21, 2003, between COMERICA BANK-CALIFORNIA, a California banking corporation ("Bank") as secured party, whose headquarters office is 333 West Santa Clara Street, San Jose, California and FORMFACTOR, INC., a Delaware corporation ("Borrower"), whose sole place of business (if it has only one), chief executive office (if it has more than one place of business) or residence (if an individual) is located at the address set forth below its name on the signature page to this Agreement.

Borrower and Bank are parties to (i) that certain Second Amended and Restated Loan Agreement (Secured), dated March 20, 2001 (as amended from time to time prior to the date hereof, the "Prior Loan Agreement") pursuant to which Bank has made certain revolving credit facilities and certain term credit facilities available to Borrower. Borrower and Bank desire to amend and restate the Prior Loan Agreement in its entirety in accordance herewith.

In consideration of the mutual covenants and conditions hereof, the parties to this Agreement hereby agree that the Prior Loan Agreement is hereby amended and restated in full as follows:

1. DEFINITIONS.

1.1 "Accounts" shall mean and includes all presently existing and hereafter arising accounts, including without limitation all accounts receivable, contract rights and other forms of right to payment for monetary obligations or receivables for property sold or to be sold, leased, licensed, assigned or otherwise disposed of, or for services rendered or to be rendered (including without limitation all health-care-insurance receivables) owing to Borrower, and any supporting obligations, credit insurance, guaranties or security therefor, irrespective of whether earned by performance.

1.2 "Agreement" shall mean and includes this Third Amended and Restated Loan and Security Agreement (Accounts and Inventory), any concurrent or subsequent rider to this Third Amended and Restated Loan and Security Agreement (Accounts and Inventory) and any extensions, supplements, amendments or modifications to this Third Amended and Restated Loan and Security Agreement (Accounts and Inventory) and/or to any such rider.

1.3 "Bank Expenses" shall mean and includes: all costs or expenses required to be paid by Borrower under this Agreement which are paid or advanced by Bank; taxes and insurance premiums of every nature and kind of Borrower paid by Bank; filing, recording, publication and search fees, appraiser fees, auditor fees and costs, and title insurance premiums paid or incurred by Bank in connection with Bank's transactions with Borrower; costs and expenses incurred by Bank in collecting the Accounts (with or without suit) to correct any default or enforce any provision of this Agreement, or in gaining possession of maintaining, handling, preserving, storing, shipping, selling, disposing of, preparing for sale and/or advertising to sell the Collateral, whether or not a sale is consummated; costs and expenses of suit incurred by Bank in enforcing or defending this Agreement or any portion hereof, including, but not limited to, expenses incurred by Bank in attempting to obtain relief from any stay, restraining order, injunction or similar process which prohibits Bank from exercising any of its rights or remedies; and reasonable attorneys' fees and expenses incurred by Bank in advising, structuring, drafting, reviewing, amending, terminating, enforcing, defending or concerning this Agreement, or any portion hereof or any agreement related hereto, whether or not suit is brought. Bank Expenses shall include Bank's in-house legal charges at reasonable rates.

1.4 "Base Rate" shall mean that variable rate of interest so announced by Bank at its headquarters office in San Jose, California as its "Base Rate" from time to time and which serves as the basis upon which effective rates of interest are calculated for those loans making reference thereto.

1.5 "Borrower's Books" shall mean and includes all of Borrower's books and records including but not limited to minute books; ledgers; records indicating, summarizing or evidencing Borrower's assets (including, without limitation, the Accounts), liabilities, business operations or financial condition, and all information relating thereto, computer programs; computer disk or tape files; computer printouts; computer runs; and other computer prepared information and equipment of any kind.

1.6 "Borrowing Base" shall mean:

a. at any time prior to any fiscal quarter in which Borrower's Net Income shall be less than One and No/100 Dollars (\$1.00), the Credit Limit; or

b. following any such occurrence, the period commencing upon Borrower's achievement of Net Income in excess of One and No/100 Dollars (\$1.00) in each of two (2) consecutive fiscal quarters, the Credit Limit, or

c. commencing upon the end of fiscal quarter in which Borrower's Net income shall be less than One and No/100 Dollars (\$1.00) continuing thereafter until Borrower shall achieve a positive Net Income in each of two (2) consecutive fiscal quarters, the sum of

(1) eighty percent (80%) of the net amount of Eligible Domestic Accounts after deducting therefrom all payments, adjustments and credits applicable thereto;

(2) eighty percent (80%) of the net amount of Eligible Foreign Accounts after deducting therefrom all payments, adjustments and credits applicable thereto; and

(3) one hundred percent (100%) of the aggregate amount of all Cash Collateral.

1.7 "Cash Flow shall mean, for any applicable period of determination, the Net Income (after deduction for income taxes and other taxes of such Person, or its subsidiaries, determined by reference to income or profits of such Person, or its subsidiaries) for such period, plus, to the extent deducted in computation of such Net Income, the amount of depreciation and amortization expense, the amount of deferred tax liability during such period, and the amount of all compensation paid in Borrower's capital stock during such period, all as determined in accordance with GAAP.

1.8 "Cash Flow Coverage Ratio" shall mean the ratio, as of any applicable period of determination, the numerator of which is Net Income plus depreciation plus amortization plus (or minus) the increase (or decrease), in the deferred tax liability minus dividends, and the denominator of which is the current portion of long term debt plus the current portion of capital lease payments (but not including any operating or other non-capital lease payments) for the same period of determination.

1.9 "Cash Collateral" shall mean and includes all cash on deposit with Comerica Bank, Comerica Securities, Inc. or UBS PaineWebber Inc. which have been validly pledged to Bank as Collateral for the Indebtedness and that strictly comply with all of Borrower's warranties and representations to Bank.

1.10 "Collateral" shall mean and includes all personal property of Borrower, including without limitation each and all of the following: the Accounts; the Inventory; the General Intangibles (excluding, however, the Intellectual Property Rights); the Negotiable Collateral; Borrower's Books; all Borrower's deposit accounts; all Borrower's investment property (including without limitation securities and securities entitlements); all goods, instruments, documents, policies and certificates of insurance, deposits, money or other personal property of Borrower in which Bank receives a security interest and which now or later come into the possession, custody or control of Bank; all Borrower's equipment and fixtures; all additions, accessions, attachments, parts, replacements, substitutions, renewals, interest, dividends, distributions or rights of any kind for or with respect to any of the foregoing (including without limitation any stock splits, stock rights, voting rights and preferential rights); any supporting obligations for any of the foregoing; and the products and proceeds of any of the foregoing, including, but not limited to, proceeds of insurance covering the Collateral, and any and all Accounts, General Intangibles, Negotiable Collateral, inventory, equipment, money, deposit accounts, investment property, equipment, fixtures or other tangible and intangible property of Borrower resulting from the sale or other disposition of the Collateral and the proceeds thereof and any supporting obligations or security therefor and any right to payment thereunder, and including, without limitation, cash or other property which were proceeds and are recovered by a bankruptcy trustee or otherwise as a preferential transfer by Borrower. Notwithstanding anything to the contrary contained herein, Collateral shall not include any waste or other materials which have been or may be designated as toxic or hazardous by Bank.

1.11 "Credit" shall mean all indebtedness, except that indebtedness arising pursuant to any other separate contract, instrument, note, or other separate agreement which, by its terms, provides for a specified interest rate and term.

1.12 "Credit Limit" shall mean Sixteen Million and No/100 Dollars (\$16,000,000.00) as the same may be reduced from time to time pursuant to Section 2.3, Section 3 or Section 8 of this Agreement.

1.13 "Current Assets" shall mean, in respect of a Person and as of any applicable date of determination; all (a) unrestricted cash, marketable securities, or certificates of deposit; (b) non-affiliated accounts receivable; (c) United States government securities; (d) claims against the United States government; and (e) Inventories (held for sale in the ordinary course of

business) of such Person.

1.14 "Current Liabilities" shall mean, in respect of a Person and as of any applicable date of determination, (a) all liabilities of such Person that should be classified as current in accordance with GAAP, including, without limitation, any portion of the principal of the Indebtedness under this Agreement classified as current, plus (b) to the extent not otherwise included, all liabilities of Borrower to any of its affiliates (including officers, directors, shareholders, subsidiaries and commonly held companies) whether or not classified as current in accordance with GAAP.

1.15 "Daily Balance" shall mean the amount determined by taking the amount of the Credit owed at the beginning of a given day, adding any new Credit advanced or incurred on such date, and subtracting any payments or collections which are deemed to be paid and are applied by Bank in reduction of the Credit on that date under the provisions of this Agreement.

1.16 "Debt" shall mean, as of any applicable date of determination, all items of indebtedness, obligation or liability of a Person, whether matured or unmatured, liquidated or unliquidated, direct or indirect, absolute or contingent, joint or several, that should be classified as liabilities in accordance with GAAP, in the case of Borrower, the term "Debt" shall include, without limitation, the Indebtedness.

1.17 "Debt-to-Worth Ratio" shall mean, in respect of a Person and as of any applicable date of determination, the ratio of (a) the total Debt of such Person at such time, to (b) the Tangible Effective Net Worth of such Person at such time.

1.18 "Eligible Accounts" shall mean and includes the Eligible Domestic Accounts and the Eligible Foreign Accounts.

1.19 "Eligible Domestic Accounts" shall mean and includes those Accounts of Borrower which were due and payable within sixty (60) days, or less, from the date of invoice, have been validly assigned to Bank and strictly comply with all of Borrower's warranties and representations to Bank; but Eligible Accounts shall not include the following; (a) Accounts with respect to which the account debtor is an officer, employee, partner, joint venturer or agent of Borrower; (b) Accounts with respect to which goods are placed on consignment, guaranteed sale or other terms by reason of which the payment by the account debtor may be conditional; (c) Accounts with respect to which the account debtor is not a resident of the United States; (d) Accounts with respect to which the account debtor is the United States or any department, agency or instrumentality of the United States; (e) Accounts with respect to which the account debtor is any State of the United States or any city, county, town, municipality or division thereof; (f) Accounts with respect to which the account debtor is a subsidiary of, related to, affiliated or has common shareholders, officers or directors with Borrower; (g) Accounts with respect to which Borrower is or may become liable to the account debtor for goods sold or services rendered by the account debtor to Borrower; (h) Accounts not paid by an account debtor within ninety (90) days from the date of the invoice; (i) Accounts with respect to which account debtors dispute liability or make any claim, or have any defense, crossclaim, counterclaim, or offset; (j) Accounts with respect to which any Insolvency Proceeding is filed by or against the account debtor, or if an account debtor becomes insolvent, falls or goes out of business; and (k) Accounts owed by any single account debtor which exceed twenty percent (20%) of all of the Eligible Accounts; and (l) Accounts with a particular account debtor on which over twenty-five percent (25%) of the aggregate amount owing is greater than ninety (90) days from the date of the invoice.

1.20 "Eligible Foreign Accounts" shall mean and includes those Accounts that do not qualify as Eligible Accounts solely because they arise with respect to an account debtor that does not have its principal place of business in the United States, but that determined from time to time by Bank, in its sole discretion, to be eligible, including, without limitation, any Accounts due from major, publicly owned foreign companies that Bank, in its sole discretion, may deem eligible, in connection with Bank's determination of the eligibility of any such foreign Accounts. Bank may, in its sole discretion, require that, as a condition of eligibility, any such Accounts be (i) subject to credit insurance, in form and amount, and issued by an insurance company satisfactory to Bank, and excluding the amount of any deductible(s) that may be applicable thereto, or (ii) supported by one or more letters of credit in amount(s) and of tenor(s), and issued, advised and/or confirmed by financial institution(s) acceptable to Bank.

1.21 "Event of Default" shall mean one or more of those events described in Section 7 contained herein below.

1.22 "GAAP" shall mean, as of any applicable period, generally accepted accounting principles in effect during such period.

1.23 "General Intangibles" shall mean and includes all of Borrower's present and future general intangibles and other personal property (including without limitation all payment Intangibles, electronic chattel paper, contract rights, rights arising under common law, statutes, or regulations, choses or things in action, goodwill, patents, trade names, trademarks, servicemarks,

copyrights, blueprints, drawings, plans, diagrams, schematics, purchase orders, customer flats, monies due or recoverable from pension funds, route lists, rights to payment (including without limitation, rights to payment evidenced by chattel paper, documents or instruments) and other rights under any royalty or licensing agreements, infringement claims, software (including without limitation any computer program that is embedded in goods that consist solely of the medium in which the program is embedded), information contained on computer disks or tapes, literature, reports, catalogs, insurance premium rebates, tax refunds, and tax refund claims), other than goods, Accounts, Inventory, Negotiable Collateral, and Borrower's Books.

1.24 "Indebtedness" shall mean and includes any and all loans, advances, Letter of Credit Obligations, overdrafts, debts, liabilities (including, without limitation, any and all amounts charged, to Borrower's loan account pursuant to any agreement authorizing Bank to charge Borrower's loan account), obligations, lease payments, guaranties, covenants and duties owing by Borrower to Bank of any kind and description whether advanced pursuant to or evidenced by this Agreement; by any note or other instrument; or by any other agreement between Bank and Borrower and whether or not for the payment of money, whether direct or indirect, absolute or contingent, due or to become due now existing or hereafter arising, including, without limitation, any interest, fees, expenses, costs and other amounts owed to Bank that but for the provisions of the United States Bankruptcy Code would have accrued after the commencement of any Insolvency Proceeding, and including, without limitation, any debt, liability, or obligations owing from Borrower to others which Bank may have obtained by assignment, participation, purchase or otherwise, and further including, without limitation, all interest not paid when due and all Bank Expenses which Borrower is required to pay or reimburse by this Agreement, by law, or otherwise.

1.25 "Insolvency Proceeding" shall mean and includes any proceeding or case commenced by or against Borrower, or any guarantor of Borrower's Indebtedness, or any of Borrower's account debtors, under any provisions of the Bankruptcy Code, as amended, or any other bankruptcy or insolvency law, including, but not limited to assignments for the benefit of creditors, formal or informal moratoriums, composition or extensions with some or all creditors, any proceeding seeking a reorganization, arrangement or any other relief under the Bankruptcy Code, as amended, or any other bankruptcy or insolvency law.

1.26 "Intellectual Property Rights" shall mean and includes all of Borrower's right, title, and interest in and to any and all (a) inventions (whether patentable or otherwise), patents, copyrights or trademarks; (b) trade secrets or any intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held; (c) design rights which may be available to Borrower now or hereafter existing, created, acquired or held; (d) claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above; (e) licenses or other rights to use any of the patents, copyrights, or trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights; (f) amendments, renewals and extensions of any of the patents, copyrights or trademarks; and (g) proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

1.27 "Inventory" shall mean and includes all present and future inventory in which Borrower has any interest, including, but not limited to, goods held by Borrower for sale or lease or to be furnished under a contract of service and all of Borrower's present and future raw materials, work in process, finished goods (including without limitation any computer program embedded in any of the foregoing goods and any supporting information provided in connection therewith that (i) is associated with the goods in such a manner that the program customarily is considered part of the goods or that (ii) by becoming the owner of the goods, a person acquires a right to use the program in connection with the goods, together with any advertising materials and packing and shipping materials, wherever located and any documents of title representing any of the above, and any equipment, fixtures or other property used in the storing, moving, preserving, identifying, accounting for and shipping or preparing for the shipping of inventory, and any and all other items hereafter acquired by Borrower by way of substitution, replacement, return, repossession or otherwise, and all additions and accessions thereto, and the resulting product or mass, and any documents of title respecting any of the above.

1.28 "Judicial Officer or Assignee" shall mean and includes any trustee, receiver, controller, custodian, assignee for the benefit of creditors or any other person or entity having powers or duties like or similar to the powers and duties of trustee, receiver, controller, custodian or assignee for the benefit of creditors.

1.29 "Letter of Credit Obligations" shall mean, as of any applicable date of determination, the sum of the undrawn amount of any letter(s) of credit issued by Bank upon the application of and/or for the account of Borrower, plus any unpaid reimbursement obligations owing by Borrower to Bank in respect of any such letter(s) of credit.

1.30 "Liquid Assets" shall mean and includes all unrestricted cash, unrestricted marketable securities, FDIC insured certificates of deposit, and United States government securities.

1.31 "Loan Documents" shall mean and includes this Agreement, and any other documents, instruments or agreements entered into by Borrower with or in favor of Bank from time to time in connection with this Agreement or otherwise, including without limitation any documents, instruments or agreements set forth on Exhibit 5.1, to this Agreement.

1.32 "Maturity Date" shall mean October 30, 2004.

1.33 "Negotiable Collateral" shall mean and include all of Borrower's present and future letters of credit, advises of credit, letter-of-credit rights, certificates of deposit, notes, drafts, money, documents (including without limitation all negotiable documents), instruments (including without limitation all promissory notes), tangible chattel paper or any other similar property.

1.34 "Net Income" shall mean the net income (or loss) of a person for any period of determination, determined in accordance with GAAP but excluding in any event:

a. any gains or losses on the sale or other disposition, not in the ordinary course of business, of Investments or fixed or capital assets, and any taxes on the excluded gains and any tax deductions or credits on account on any excluded losses; and

b. in the case of Borrower, net earnings of any Person in which Borrower has an ownership interest, unless such net earnings shall have actually been received by Borrower in the form of cash distributions.

1.35 "New Facility" shall mean borrower's new campus facility to be located at 7005 South Front Road, Livermore, California 94851, 7401 Longard Road, Livermore, California 94851, and 501 Lawrence Drive, Livermore, California 94551.

1.36 "Permitted Indebtedness" means and includes all (a) Debt to trade creditors incurred in the ordinary course of Borrower's business; (b) Indebtedness of Borrower in favor of Bank arising under this Agreement, any document, instrument or agreement entered into in connection herewith or otherwise; (c) Indebtedness existing on the date of this Agreement and disclosed in Schedule P-1; (d) Debt to any other Person secured by a lien described in clause (e) of the defined term "Permitted Liens," provided such Debt does not exceed the lesser of the cost or fair market value of the equipment financed with such Debt; (f) unsecured Debt to any other Person in an aggregate amount not to exceed Ten Million and No/100 Dollars (\$10,000,000.00) incurred by Borrower in connection with Borrower's construction of tenant Improvements on the New Facility; and (g) Subordinated Debt.

1.37 "Permitted Investments" means and includes all (a) investments existing on the date of this Agreement including without limitation any common stock of the Subsidiaries owned by Borrower on the date of this Agreement; and (b) investments in (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within two (2) year from the date of acquisition thereof, (ii) commercial paper maturing no more than two (2) years from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, and (ii) money market accounts or certificates of deposit maturing no more then two (2) year from the date of investment therein issued by Bank or any other commercial bank with capital, surplus and undivided profits in excess of One Hundred Million Dollars (\$100,000,000).

1.38 "Permitted Liens" means and includes any: (a) liens existing on the date of this Agreement and disclosed in Schedule P-2 or arising under this Agreement, any document, instrument or agreement entered into in connection herewith or otherwise in favor of Bank; (b) liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings, provided the same have no priority over any of Bank's security interests; (c) liens (i) upon or in any equipment acquired or held by Borrower or any of its subsidiaries to secure the purchase price of such equipment or Debt Incurred solely for the purpose of financing the acquisition of such equipment, or (ii) existing on such equipment at the time of its acquisition, provided that the lien is confined solely to the equipment so acquired and improvements and additions thereto, and the proceeds of such equipment to the extent that the acquisition of such equipment is permitted otherwise permitted under this Agreement; (d) liens arising by operation of law in favor of warehousemen, landlords, carriers, mechanics, materialmen, laborers, or suppliers, incurred in the ordinary course of business of Borrower and not in connection with the borrowing of money, and which liens either (i) are for sums not yet due and payable, or (ii) are the subject of Permitted Protests; (e) liens incurred in connection with the extension, renewal or refinancing of the Debt secured by liens of the type described in clauses (a) through (c) above, provided that any extension, renewal or replacement lien shall be limited to the property encumbered by the existing lien and the principal amount of the Debt being extended, renewed or refinanced does not increase.

1.39 "Permitted Protest" means the right of Borrower to protest liens other than liens that secure the Indebtedness, provided that (a) a reserve with respect to such obligation is established on the books of Borrower in an amount that is reasonably satisfactory to Bank, (b) any such protest is instituted and diligently prosecuted by Borrower in good faith, and (c) Bank is satisfied that, while any such protest is pending, there will be no impairment of the enforceability, validity, or priority of any of the liens of Bank in and to the Collateral.

1.40 "Person" or "person" shall mean and includes any individual, corporation, partnership, joint venture, firm, association, trust, unincorporated association, joint stock company, government, municipality, political subdivision or agency or other entity.

1.41 "Quick Assets" shall mean, as of any applicable date of determination, unrestricted cash, certificates of deposit or marketable securities and net accounts receivable arising from the sale of goods and services, and United States government securities and/or claims against the United States government of Borrower and its subsidiaries.

1.42 "Revolving Loan" and "Revolving Loans" shall have the meaning set forth in Section 2.1, of this Agreement.

1.43 "Subordinated Debt" shall mean indebtedness of Borrower to third parties which has been subordinated to the Indebtedness pursuant to a subordination agreement in form and content satisfactory to Bank.

1.44 "Subordination Agreement" shall mean a subordination agreement in form satisfactory to Bank making all present and future indebtedness of Borrower to any Person entering into any such subordination agreement subordinate to the Indebtedness.

1.45 "Tangible Effective Net Worth" shall mean, with respect to any Person and as of any applicable date of determination, Tangible Net Worth plus Subordinated Debt.

1.46 "Tangible Net Worth" shall mean, with respect to any Person, and including any consolidated affiliates thereof, if any, and as of any applicable date of determination, the excess of:

a. the net book value of all assets of such Person (excluding any non-consolidated affiliate receivables, patents, patent rights, trademarks, trade names, franchises, copyrights, licenses, goodwill, and all other intangible assets of such Person) after all appropriate deductions in accordance with GAAP (including, without limitation, reserves for doubtful receivables, obsolescence, depreciation and amortization); over

b. all Debt of such Person at such time.

1.47 "Term Loan" shall have the meaning set forth in Section 2.3 of this Agreement.

1.48 "Working Capital" shall mean, as of any applicable date of determination, Current Assets less Current Liabilities.

Any and all terms used in the foregoing definitions and elsewhere in this Agreement shall be construed and defined in accordance with the meaning and definition of such terms under and pursuant to the California Uniform Commercial Code (hereinafter referred to as the "Uniform Commercial Code") as amended, revised or replaced from time to time. Notwithstanding the foregoing, the parties intend that the terms used herein which are defined in the Uniform Commercial Code have, at all times, the broadest and most inclusive meanings possible. Accordingly, if the Uniform Commercial Code shall in the future be amended or held by a court to define any term used herein more broadly or inclusively than the Uniform Commercial Code in effect on the date of this Agreement, then such term, as used herein, shall be given such broadened meaning. If the Uniform Commercial Code shall in the future be amended or held by a court to define any term used herein more narrowly, or less inclusively, than the Uniform Commercial Code in effect on the date of this Agreement, such amendment or holding shall be disregarded in defining terms used in this Agreement.

## 2. LOAN AND TERMS OF PAYMENT.

For value received, Borrower promises to pay to the order of Bank such amount as provided for below, together with interest, as provided for below.

2.1 Upon the request of Borrower, made at any time and from time to time during the term hereof, and so long as no Event of Default has occurred, Bank shall lend to Borrower an amount equal to the Borrowing Base (each a "Revolving Loan," and collectively, the "Revolving Loans"); provided, however, that the Daily Balance shall not exceed the lesser of either the Credit Limit or the Borrowing Base, minus all Letter of Credit Obligations. If at any time for any reason, the amount of indebtedness owed by Borrower to Bank pursuant to this Section 2.1 and Section 2.2 of this Agreement is greater than the aggregate amount available to be drawn under this Section 2.1, Borrower shall immediately pay to Bank, in cash, the amount of such excess. Any commitment of Bank, pursuant to the terms of this Agreement, to make Revolving Loans to Borrower shall expire on the Maturity Date, subject to Bank's right to renew said commitment in its sole and absolute discretion at Borrower's request. Any such renewal of said commitment shall not be binding upon Bank unless it is in writing and signed by an officer of Bank. Provided that no Event of Default has occurred and is continuing, all or any portion of the Revolving Loans which are

repaid by Borrower shall be available for reborrowing in accordance with the LIBOR Addendum (as hereinafter defined) and the terms hereof. Borrower promises to pay to Bank the entire outstanding unpaid principal balance (and all accrued unpaid interest thereon) of the Revolving Loans on the Maturity Date.

2.2 Subject to the terms and conditions of this Agreement, and so long as no Event of Default has occurred, Bank agrees to issue or cause to be issued letters of credit for the account of Borrower during the term of this Agreement in the aggregate outstanding face amount not to exceed (i) the lesser of the Credit Limit or the Borrowing Base, minus (ii) the then outstanding Daily Balance, provided that the Letter of Credit Obligations shall not in any case exceed Three Million and No/100 Dollars (\$3,000,000.00). All letters of credit shall be in form and substance, acceptable to Bank in its sole discretion and shall be subject to the terms and conditions of Bank's form of standard Letter of Credit Application and Agreement. All Letter of Credit Obligations issued under this Agreement shall expire on or before the Maturity Date.

The obligation of Borrower to Immediately reimburse Bank for drawings made under letters of credit shall be absolute, unconditional and irrevocable in accordance with the terms of this Agreement and the Letter of Credit Application and Agreement with respect to each such letter of credit. Borrower shall indemnify, defend, protect and hold Bank harmless from any loss, cost, expense, or liability, including, without limitation, reasonable attorney's fees incurred by Bank, whether in-house or outside counsel is used, arising out of or in connection with any letters of credit.

2.3 Subject to the terms and conditions of this Agreement, and so long as no Event of Default has occurred (including, without limitation, any Event of Default that would occur as of such date under the minimum Cash Flow Coverage Ratio set forth in Section 6.16.d of this Agreement), if on any anniversary date of this Agreement Bank shall decline to extend the Maturity Date by one (1) additional year, then Bank shall make available to Borrower a term loan (the "Term Loan") in the amount of up to Five Million and No/100 Dollars (\$5,000,000.00), the proceeds of which shall be used only for the repayment of the outstanding principal balance of the Revolving Loans; provided, however, that upon the making of the Term Loan hereunder, the amount of the Credit Limit shall be permanently reduced by the amount of the Term Loan. If, following any election by Bank to decline to extend the Maturity Date on any anniversary date hereof Borrower shall not elect to request the Term Loan on or before the Maturity Date, then Bank's commitment to make the Term Loan shall expire on the Maturity Date.

The principal amount of the Term Loan, together with accrued interest thereon, shall be payable on the last day of each month, beginning on the last day of the first calendar month immediately following the making of the Term Loan, in monthly principal payments in an amount sufficient to amortize the principal balance of the Term Loan over the amortization period of forty-eight (48) months. The interest rate, payment terms, maturity date and certain other terms of the Term Loan shall be contained in a promissory note dated the date of the making of the Term Loan, as such may be amended or replaced from time to time, but which shall be substantially in the form attached hereto me Exhibit 2.3.

2.4 Except as hereinbelow provided or as otherwise provided in any promissory note entered into with respect to any portion of the Indebtedness, the Credit shall bear interest on the Daily Balance owing, at a fluctuating rate of interest equal to the Base Rate plus Zero (-0-%) percentage points per annum, or at the rate applicable thereto in accordance with the LIBOR Addendum to this Agreement, attached hereto and Incorporated herein by this reference.

All interest chargeable under this Agreement that is based upon a per annum calculation shall be computed on the basis of a three hundred sixty (360) day year for actual days elapsed. The Base Rate as of the date of this Agreement is four and three quarters ( 4.75% ) per annum, in the event that the Base Rate announced is, from time to time hereafter, changed, adjustment in the Base Rate shall be made and based on the Base Rate in effect on the date of such change. The Base Rate, as adjusted, shall apply to the Credit until the Base Rate is adjusted again.

All interest payable by Borrower under the Credit shall be due and payable on the first day of each calendar month during the term of this Agreement. A late payment charge equal to five percent (5%) of each late payment may be charged on any payment not received by Bank within ten (10) calendar days after the payment due date, but acceptance of payment of this charge shall not waive any Event of Default under this Agreement. Upon the occurrence of an Event of Default hereunder, and without constituting a waiver of any such Event of Default, then during the continuation thereof, at Bank's option, the Credit shall bear interest, on the Daily Balance owing at a rate equal to three percent (3%) per year in excess of the rate applicable immediately prior to the occurrence of the Event of Default, and such rate of interest shall fluctuate thereafter from time to time at the same time and in the same amount as any fluctuation in the rate of interest applicable immediately prior to any such occurrence.

2.5 To the extent that any Indebtedness, loans or other obligations made

or incurred by Bank to or on behalf of Borrower prior to the date of this Agreement remain outstanding on the date hereof or if any obligation by Bank to make additional loans or otherwise extend financing to Borrower, exists or remains in effect on the date hereof, all such Indebtedness, loans or obligations, and any such commitments to make loans or extend financing shall be subject to the terms and conditions of this Agreement and the interest rate, payments of principal and Interest and other the terms contained in any note(s) evidencing any such prior loan(s) shall remain in full force and effect, and Borrower hereby ratifies and reaffirms the continuing effectiveness of any such prior note(s) and agrees to continue to make payments in accordance with the terms thereof.

2.6 In addition to any other amounts due or to become due under this Agreement, Borrower shall pay to Bank the following fees:

a. In connection with the financial accommodations provided under this Agreement, on the date hereof, and on each anniversary date hereof, an annual commitment fee in an amount equal to one half percent (0.50% ) of the Credit Limit, which shall be fully earned and non-refundable on the date of payment thereof.

b. In connection with the financial accommodations provided under this Agreement, an annual unused commitment fee in an amount equal to one quarter percent (0.25%) per annum on the unused portion of the Credit Limit available under Section 2.1 hereof, minus the then outstanding amount of all Letter of Credit Obligations under Section 2.2 hereof, which shall be due and payable in arrears on the test day of each calendar quarter during the effectiveness of this agreement, and which shall be fully earned and non-refundable on the date of payment thereof.

c. In addition to all Bank's customary charges, commissions, fees and costs payable to Bank in connection with the letters of credit in accordance with Letter of Credit Application and Agreement, Borrower shall pay Bank a fee equal to one and one quarter percentage points (1.25%) per annum, computed on the basis of a three hundred sixty (360) day year for actual days elapsed, of the aggregate amount of all Letter of Credit obligations outstanding hereunder; provided, however, that the forgoing fee shall be reduced to one percentage point (1.00%) per annum with respect to all Letter of Credit Obligations secured in full by Cash Collateral.

d. In addition to any other amounts due, or to become due, concurrently with the execution hereof, Borrower agrees to pay to Bank a legal documentation fee in the amount of Five Thousand Two Hundred Fifty and No/100 Dollars (\$5,250) and all other costs and expenses incurred by Bank in the preparation of this Agreement, the other documents, instruments and agreements entered into in connection herewith, and the perfection of any security interest granted to Bank by Borrower.

### 3. TERM.

3.1 This Agreement shall remain in full force and effect until the Maturity Date or until terminated by notice, by either party in accordance with the terms and conditions hereof. Notice of such termination shall be effectuated by mailing of a registered or certified letter not less than thirty (30) days prior to the effective date of such termination, addressed to Bank at the address set forth herein and the termination shall be effective as of the date so fixed in such notice. Any commitment of Bank, pursuant to the terms of this Agreement, to make Loans shall expire on the Maturity Date, subject to Bank's right to renew said commitment in its sole and absolute discretion at Borrower's request. Any such renewal of said commitment shall not be binding upon Bank unless it is in writing and signed by an officer of Bank.

3.2 Notwithstanding the foregoing, should Borrower be in default of one or more of the provisions of this Agreement, Bank may terminate this Agreement at any time without notice. Notwithstanding the foregoing, should either Bank or Borrower become Insolvent or unable to meet its debts as they mature, or fall, suspend, or go out of business, the other party shall have the right to terminate this Agreement at any time without notice. On the date of termination all indebtedness shall become immediately due and payable without notice or demand; provided, however, that no such notice of termination by Borrower shall be effective until the payment in full in cash of all indebtedness to Bank (including without limitation the expiration or cash collateralization of all of all Letter of Credit Obligations in accordance with the terms and conditions of this Agreement). Any notice of termination given by Borrower shall be irrevocable unless Bank otherwise agrees in writing, and Bank shall have no obligation to make any loans or issue any letters of credit on or after the termination date stated in such notice. Borrower may elect to terminate this Agreement in its entirety only. No section of this Agreement or type of loan available hereunder may be terminated singly.

3.3 All undertakings, agreements, covenants, warranties, and representations of Borrower contained in the Loan Documents shall survive any such termination, and Bank shall retain its security interest in and to all

existing Collateral and Collateral arising thereafter, any and all liens thereon, and all of its rights and remedies under the Loan Documents notwithstanding such termination until the payment in full in cash of all Indebtedness to Bank (including, without limitation, the expiration or cash collateralization of all of all Letter of Credit Obligations in accordance with the terms and conditions of this Agreement and the payment in full of all applicable termination charges, if any). Notwithstanding the satisfaction in full of the Indebtedness. Bank shall not be required to terminate its security interests in the Collateral unless, with respect to any loss or damage Bank may incur as a result of dishonored checks or other items of payment received by Bank and applied to the Indebtedness. Bank shall, at its option, (a) have received a written agreement, executed by Borrower and by any Person whose loans or other advances to Borrower are used in whole or in part to satisfy the Indebtedness, indemnifying Bank from any such loss or damage, or (b) have retained such monetary reserves and liens on the Collateral for such period of time as Bank, in its reasonable discretion, may deem necessary to protect Bank from any such loss or damage. After termination and when Bank has received payment in full in cash of Borrower's Indebtedness to Bank, Bank shall reassign to Borrower all Collateral held by Bank, and shall execute a termination of all security agreements and security interests given by Borrower to Bank.

3.4 Borrower hereby authorizes Bank to collect all principal, interest, fees, costs, or Bank Expenses due under this Agreement as follows:

a. Borrower authorizes Bank to automatically deduct from Borrower's account number 1891457133 with Bank, or any other account maintained by Borrower with Bank, the full amount of all principal and interest due under this Agreement or the other Loan Documents when due and payable. Should there be insufficient funds in any such account to pay all such sums when due, the full amount of such deficiency shall be immediately due and payable by Borrower; provided, however, that Bank shall not be obligated to advance funds to cover any such payment.

b. Any such amounts not collected in accordance with the forgoing instructions may be paid in cash or deducted from loan proceeds; provided, however, that Bank shall not be obligated to advance funds to cover payment of any such amounts.

c. Anything contained in herein to the contrary notwithstanding, Bank agrees that it shall endeavor to provide prior notice to Borrower of any such interest and principal payments to be deducted from Borrower's account in accordance with its customary notice and billing procedures for such charges or payments; provided, however, that the failure of Bank to provide any such notice to Borrower shall have no effect on Bank's rights or remedies under this Agreement, including without limitation Bank's rights to deduct the full amount of any such interest, principal, fees or Bank Expenses from Borrower's account in accordance with the terms and conditions of this Section or as otherwise provided in accordance with the provisions of this Agreement.

d. All other fees, costs or other Bank Expenses shall be due and payable upon demand by Bank, and Borrower shall pay all such amounts promptly upon demand by Bank. Any such amounts not paid in full in cash upon demand by Bank may be deduct from Borrower's account number 1891457133 with Bank, or from any other account maintained by Borrower with Bank, or if no funds are available in such accounts, from loan proceeds; provided, however, that Bank shall not be obligated to advance funds to cover payment of any such amounts.

#### 4. CREATION OF SECURITY INTEREST.

4.1 Borrower hereby grants to Bank a continuing security interest in all presently existing and hereafter arising Collateral in order to secure prompt repayment of any and all Indebtedness owed by Borrower to Bank and in order to secure prompt performance by Borrower of each and all of its covenants and obligations under this Agreement and otherwise created. Bank's security interest in the Collateral shall attach to all Collateral without further act on the part of Bank or Borrower, in the event that any Collateral, including proceeds, is evidenced by or consists of Negotiable Collateral, Borrower, immediately upon the request of Bank, shall (a) endorse or assign such Negotiable Collateral to Bank, (b) deliver actual physical possession of such Negotiable Collateral to Bank, and (c) mark conspicuously all of its records pertaining to such Negotiable Collateral with a legend, in form and substance satisfactory to Bank (and in the case of Negotiable Collateral consisting of tangible chattel paper, immediately mark all such tangible chattel paper with a conspicuous legend in form and substance satisfactory to Bank), indicating that the Negotiable Collateral is subject to the security interest granted to Bank hereunder.

4.2 Bank's security interest in the Accounts shall attach to all Accounts without further act on the part of Bank or Borrower. Upon request from Bank, Borrower shall provide Bank with schedules describing all Accounts created or acquired by Borrower (including without limitation agings listing the names and addresses of, and amounts owing by date by account debtors), and shall execute and deliver written assignments of all Accounts to Bank all in a form acceptable to Bank; provided, however, Borrower's failure to execute and deliver such schedules and/or assignments shall not affect or limit Bank's security interest and other rights in and to the Accounts. Together with each schedule, upon request from Bank, Borrower shall furnish Bank with copies of Borrower's customers' invoices or the equivalent, and original shipping or delivery receipts for all merchandise sold, and Borrower warrants the genuineness thereof. Upon the occurrence of an Event of Default, Bank or Bank's designee may notify customers or account debtors of Bank's security interest in the Collateral and direct such customers or account debtors to make payments directly to Bank, but unless and until Bank does so or gives Borrower other written instructions, Borrower shall collect all Accounts for Bank, receive in trust all payments thereon as Bank's trustee, and, if so requested to do so from Bank, Borrower shall immediately deliver said payments to Bank in their original form as received from the account debtor and all letters of credit, advises of credit, instruments, documents, chattel paper or any similar property evidencing

or constituting Collateral. Notwithstanding anything to the contrary contained herein, if sales of inventory are made for cash, Borrower shall immediately deliver to Bank, in identical form, all such cash, checks, or other forms of payment which Borrower receives. The receipt of any check or other item of payment by Bank shall not be considered a payment on account until such check or other item of payment is honored when presented for payment, in which event said check or other item of payment shall be deemed to have been paid to Bank two (2) calendar days after the date Bank actually receives such check or other item of payment.

4.3 Bank's security interest in Inventory shall attach to all Inventory without further act on the part of Bank or Borrower. Upon request from Bank on or after the occurrence of an Event of Default, Borrower will at Borrower's expense

pledge, assemble and deliver such Inventory to Bank or to a third party as Bank's bailee; or hold the same in trust for Bank's account or store the same in a warehouse in Bank's name; or deliver to Bank documents of title representing said Inventory; or evidence of Banks security interest in some other manner acceptable to Bank. Until a default by Borrower under this Agreement or any other Agreement between Borrower and Bank, Borrower may, subject to the provisions hereof and consistent herewith, sell the Inventory, but only in the ordinary course of Borrower's business. A sale of Inventory in Borrower's ordinary course of business does not include an exchange or a transfer in partial or total satisfaction of a debt owing by Borrower.

4.4 Concurrently with Borrower's execution of this Agreement, and at any time or times hereafter at the request of Bank, Borrower shall (a) execute and deliver to Bank security agreements, mortgages, assignments, certificates of title, affidavits, reports, notices, schedules of accounts; letters of authority and all other documents that Bank may reasonably request, in form satisfactory to Bank, to perfect and maintain perfected Banks security interest in the Collateral and in order to fully consummate all of the transactions contemplated under this Agreement, (b) cooperate with Bank in obtaining a control agreement in form and substance satisfactory to Bank with respect to all deposit accounts, electronic chattel paper, Investment property, and letter-of-credit rights, and (c) in the event that any Collateral is in the possession of a third party, Borrower shall join with Bank in notifying such third party of Bank's security interest and obtaining an acknowledgment from such third party that it is holding such Collateral for the benefit of Bank. By authenticating or becoming bound by this Agreement, Borrower authorizes the filing of initial financing statement(s), and any amendment(s) covering the Collateral to perfect and maintain perfected Bank's security interest in the Collateral. Upon the occurrence of an Event of Default, Borrower hereby irrevocably makes, constitutes and appoints Bank (and any of Banks officers, employees or agents designated by Bank) as Borrower's true and lawful attorney-in-fact with power to sign the name of Borrower on any security agreement, mortgage, assignment, certificate of title, affidavit, letter of authority, notice of other similar documents which must be executed and/or filed in order to perfect or continue perfected Bank's security interest in the Collateral, and to take such actions in its own name or in Borrower's name as Bank, in its sole discretion, deems necessary or appropriate to establish exclusive possession or control (as defined in the Uniform Commercial Code) over any Collateral of such nature that perfection of Bank's security interest may be accomplished by possession or control.

4.5 Borrower shall make appropriate entries in Borrower's Books disclosing Bank's security interest in the Accounts. Bank (through any of its officers, employees or agents) shall have the right at any time or times hereafter, provided that reasonable notice is provided, during Borrower's usual business hours or during the usual business hours of any third party having control over the records of Borrower, to inspect and verify Borrower's Books in order to verify the amount or condition of, or any other matter, relating to, said Collateral and Borrower's financial condition.

4.6 Effective only upon the occurrence of an Event of Default, Borrower appoints Bank or any other person whom Bank may designate as Borrower's attorney-in-fact, with power to endorse Borrower's name on any checks, notes, acceptances, money order, drafts or other forms of payment or security that may come into Bank's possession; to sign Borrower's name on any invoice or bill of lading relating to any Accounts, on drafts against account debtors, on schedules and assignments of Accounts, on verifications of Accounts and on notices to account debtors; to establish a lock box arrangement and/or to notify the post office authorities to change the address for delivery of Borrower's mail addressed to Borrower to an address designated by Bank, to receive and open all mail addressed to Borrower, and to retain all mail relating to the Collateral and forward all other mail to Borrower; to send, whether in writing or by telephone, requests for verification of Accounts; and to do all things necessary to carry out this Agreement. Borrower ratifies and approves all acts of the attorney-in-fact. Neither Bank nor its attorney-in-fact will be liable for any acts or omissions or for any error of judgment or mistake of fact or law. This power being coupled with an interest. is irrevocable so long as any Accounts in which Bank has a security interest remain unpaid and until the indebtedness has been fully satisfied.

4.7 In order to protect or perfect any security interest which Bank is granted hereunder, Bank may, in its sole discretion, discharge any lien or encumbrance or bond the same, pay any insurance, pay any service bureau, or obtain any records on the Collateral, and, under any circumstances where Bank reasonably believes that the physical security of the Collateral is presently in, or eminently will fall into, physical jeopardy or otherwise at risk, then Bank may maintain guards, warehousemen, or any personnel to protect the

Collateral, and all costs for the same shall be added to the Indebtedness and shall be payable on demand.

4.8 Borrower agrees that Bank may provide Information relating to this Agreement or relating to Borrower to Bank's parent, affiliates, subsidiaries and service providers.

5. CONDITIONS PRECEDENT.

5.1 Conditions precedent to the making of the loans and the extension of the financial accommodations hereunder, Borrower shall execute, or cause to be executed, and deliver to Bank, in form and substance satisfactory to Bank and its counsel, the following:

a. This Agreement and other documents, instruments and agreements required by Bank and identified in Exhibit 5.1 to this Agreement:

b. If Borrower is a corporation, limited liability company, limited partnership or other such entity, certified copies of all actions taken by Borrower, any grantor of a security interest to Bank to secure the Indebtedness, and any guarantor of the Indebtedness, authorizing the execution, delivery and performance of this Agreement and any other documents, instruments or agreements entered into in connection herewith, and authorizing specific officers to execute and deliver any such documents, instruments and agreements;

c. If Borrower is a corporation, limited liability company, limited partnership or other such entity, then a certificate of good standing showing that Borrower is in good standing under the laws of the state of its incorporation or formation and certificates indicating that Borrower is qualified to transact business and is in good standing in any other state in which it conducts business;

d. If Borrower is a partnership, then a copy of Borrower's partnership agreement certified by each general partner of Borrower;

e. UCC searches and financing statements, tax lien and litigation searches, fictitious business statement filings, insurance certificates, notices or other similar documents which Bank may require and in such form as Bank may require, in order to reflect, perfect or protect Bank's first priority security interest in the Collateral and in order to fully consummate all of the transactions contemplated under this Agreement;

f. Bank shall have completed an audit of Borrower's Books relating to the Accounts and other Collateral, the results of which shall be satisfactory to Bank;

g. Evidence that Borrower has obtained insurance and acceptable endorsements;

h. Such control agreements from each Person as Bank may require, if any;

i. Duly executed certificates of title with respect to that portion of the Collateral that is subject to certificates of title, if any;

j. Such collateral access agreements from each lessor, warehouseman, bailee, and other Person as Bank may require, duly executed by each such Person; and

k. Warranties and representations of officers.

## 6. WARRANTIES, REPRESENTATIONS AND COVENANTS.

6.1 If so requested by Bank, Borrower shall, at such intervals designated by Bank, during the term hereof execute and deliver a Report of Accounts Receivable or similar report, in form customarily used by Bank. The aggregate amount of the Borrowing Base at all times during the effectiveness of this Agreement shall not be less than the advances made hereunder. Bank shall have the right to recompute the Borrowing Base in conformity with this Agreement.

6.2 If any warranty is breached as to any Account, or any Account is not paid in full by an account debtor within ninety (90) days from the date of invoice, or an account debtor disputes liability or makes any claim with respect thereto, or a petition in bankruptcy or other application for relief under the Bankruptcy Code or any other insolvency law is filed by or against an account debtor, or an account debtor makes an assignment for the benefit of creditors, becomes insolvent, fails or goes out of business, then Bank may deem ineligible any and all Accounts owing by that account debtor, and reduce the Borrowing Base by the amount thereof. Bank shall retain its security interest in all Accounts, whether eligible or ineligible, until all Indebtedness has been fully paid and satisfied. Returns and allowances, if any, as between Borrower and its customers, will be on the same basis and in accordance with the usual customary practices of Borrower, as they exist at this time. Any merchandise which is returned by an account debtor or otherwise recovered shall be set aside, marked with Bank's name, and Bank shall retain a security interest therein. Borrower shall promptly notify Bank of all disputes and claims and settle or adjust them on terms approved by Bank. After default by Borrower hereunder, no discount, credit or allowance shall be granted to any account debtor by Borrower and no return of merchandise shall be accepted by Borrower without Bank's consent. Bank may, after default by Borrower, settle or adjust disputes and claims directly with account debtors for amounts and upon terms which Bank considers advisable,

and in such cases Bank will credit Borrower's loan account with only the net amounts received by Bank in payment of the Accounts, after deducting all Bank Expenses in connection therewith.

6.3 Borrower warrants, represents, covenants and agrees that:

a. Borrower has good and marketable title to the Collateral. Bank has and shall continue to have a first priority perfected security interest in and to the Collateral. The Collateral shall at all times remain free and clear of all liens, encumbrances and security interests (except for any permitted Liens);

b. All Accounts are and will, at all times pertinent hereto, be bona fide existing obligations created by the sale and delivery of merchandise or the rendition of services to account debtors in the ordinary course of business, free of liens, claims, encumbrances and security interests (except Permitted Liens and except as may be consented to, in writing, by Bank) and are unconditionally owed to Borrower without defenses, disputes, offsets counterclaims, rights of return or cancellation, and Borrower shall have received no notice of actual or imminent bankruptcy or insolvency of any account debtor at the time an Account due from such account debtor is assigned to Bank; and

c. At the time each Account is pledged and assigned to Bank as Collateral all property giving rise to such Account shall have been delivered to the account debtor or to the agent for the account debtor for immediate shipment to, and unconditional acceptance by, the account debtor. Borrower shall deliver to Bank, as Bank may from time to time require, delivery receipts, customers purchase orders, shipping instructions, bills of lading and any other evidence of shipping arrangements. Absent such a request by Bank, copies of all such documentation shall be held by Borrower as custodian for Bank.

6.4 At the time each eligible Account is assigned to Bank, all such Eligible Accounts will be due and payable on terms set forth in Section 1.19 and 1.20, or on such other terms approved in writing by Bank in advance of the creation of such Accounts and which are expressly set forth on the face of all invoices, copies of which shall be held by Borrower as custodian for Bank, and no such Eligible Account will then be past due.

6.5 Borrower shall keep the inventory only at the locations set forth on Schedule 6.5 to this Agreement, attached hereto and Incorporated herein by this reference. The owner or mortgagees of the respective locations are as set forth in Schedule 6.5.

a. Borrower, promptly upon demand by Bank therefor, but in any event within ten (10) business days of any such demand therefor, shall now and from time to time hereafter, at such intervals as are reasonably requested by Bank, deliver to Bank, designations of Inventory specifying Borrower's cost of Inventory, the wholesale market value thereof and such other matters and information relating to the Inventory as Bank may request;

b. All of the Inventory is and shall remain free from all purchase money or other security interests, liens or encumbrances, except Permitted Liens;

c. Borrower does now keep and hereafter at all times shall keep correct and accurate records itemizing and describing the kind, type, quality and quantity of the inventory, its cost therefor and selling price thereof, and the daily withdrawals therefrom and additions thereto, all of which records shall be available promptly upon demand by Bank therefor, but in any event within ten (10) business days of any such demand therefor, to any of Bank's officers, agents and employees for inspection and copying;

d. Except for any work-in-process, all Inventory, now and hereafter at all times, shall be new Inventory of good and merchantable quality free from material defects;

e. Inventory is not now and shall not at any time or times hereafter be located or stored with a bailee, warehouseman or other third party without Bank's prior written consent, and, in such event, Borrower will concurrently therewith cause any such bailee, warehouseman or other third party to issue and deliver to Bank, warehouse receipts in Bank's name evidencing the storage of inventory and/or an acknowledgment by such bailee of Bank's prior rights in the Inventory, in each case in form and substance acceptable to Bank. In any event, Borrower shall instruct any third party to hold all such inventory for Bank's account subject to Bank's security interests and its instructions; and

f. Bank shall have the right upon demand now and/or at all times hereafter, during Borrower's usual business hours, after reasonable notice, to inspect and examine the Inventory and to check and test the same as to quality, quantity, value and condition and, subject to the limitations set forth in Section 6.24, Borrower agrees to reimburse Bank for Bank's reasonable costs and expenses in so doing; provided, however, that Bank agrees to reimburse Borrower

for physical damage to any item of inventory tested by Bank that results from Bank's gross negligence or intentional misconduct.

6.6 At all times during the effectiveness of this Agreement, any Cash Collateral not on deposit with Bank shall be subject to a control agreement with the depository Institution or securities Intermediary at which any such Cash Collateral is on deposit, in form and substance satisfactory to Bank.

6.7 Borrower represents, warrants and covenants with Bank that Borrower will not, without Bank's prior written consent:

a. Grant a security interest in or permit a lien, claim or encumbrance upon any of the Collateral to any person, association, firm, corporation, entity or governmental agency or instrumentality (except for any Permitted Liens);

b. Permit any levy, attachment or restraint in an aggregate amount in excess of Five Hundred Thousand and No/100 Dollars (\$500,000.00) to be made affecting any of Borrower's assets:

c. Permit any Judicial Officer or Assignee to be appointed or to take possession of any or all of Borrower's assets;

d. Other than sales or transfers of inventory in the ordinary course of Borrower's business, to sell, lease, or otherwise dispose of, move, or transfer, whether by sale or otherwise, any of Borrower's assets;

e. Change its name, the location of its sole place of business, chief executive office or residence, business structure, corporate identity or structure, form of organization or the state in which it has been formed or organized; add any new fictitious names; provided, however, that prior to the occurrence of an Event of Default, and subject to (i) Borrower's delivery to Bank of not less than ninety (90) days prior notice thereof and (ii) Borrower's execution of any document, instrument or agreement as Bank shall require, in such form as Bank may require, in order to reflect, perfect or protect Bank's first priority security interest in the Collateral and in order to continue the effectiveness of this Agreement and the other Loan Documents. Borrower may change its name, the location of its sole place of business, chief executive office or residence, business structure, corporate identity or structure, form of organization or the state in which it has been formed or organized or add any new fictitious names.

f. Move or relocate any Collateral to any location not set forth on Schedule 6.5 to this Agreement; provided, however, that anything contained in the forgoing to the contrary notwithstanding, Borrower shall not move any material portion of the Collateral to any location outside the United States of America without the prior written consent of Bank;

g. Enter into any transaction not in the usual course of Borrower's business;

h. Make any change in Borrower's financial structure or in any of its business objectives, purposes or operations which would materially adversely affect the ability of Borrower to repay Borrower's Indebtedness;

i. Incur any Debts except for Permitted Indebtedness and renewals or extensions thereof and Interest thereon in excess of Seven Hundred Fifty Thousand and No/100 Dollars (\$750,000.00) in any one year,

j. Except for Permitted Investments and loans to employees of Borrower in an aggregate amount not to exceed Eight Hundred Fifty Thousand and No/100 Dollars (\$850,000.00) per employee or Five Million and No/100 Dollars (\$5,000,000.00) in the aggregate, or short term loans to employees from time to time to facilitate the exercise of such employee's options on Borrower's capital stock granted to such employee by Borrower, make loans, advances or extensions of credit to any other Person except in the ordinary course of business, or purchase or hold beneficially any stock or other securities of, or make any Investment or acquire any securities or other interest whatsoever in, any other Person;

k. Guarantee or otherwise, directly or indirectly, in any way be or become responsible for obligations of any other Person, whether by agreement to purchase the Indebtedness of any other Person, agreement for the furnishing of funds to any other Person through the furnishing of goods, supplies or services, by way of stock purchase, capital contribution, advance or loan, for the purpose of paying or discharging (or causing the payment or discharge of) the indebtedness of any other Person, or otherwise, except for the endorsement of negotiable instruments by Borrower in the ordinary course of business for deposit or collection;

l. Make any payment on account of any Subordinated Debt except for regularly scheduled payments of interest and principal in accordance with the provisions of any Subordination Agreement executed by Bank and the subordinated debt holder, or amend any provision contained in any documentation relating to any such Subordinated Debt without Bank's prior written consent: and

m. Liquidate, dissolve, merge or consolidate with or into any other

business organization, permit another corporation to liquidate, dissolve, merge or consolidate into it; purchase or otherwise acquire all or substantially all the properties, assets or business of any third Person or entity; enter into any reorganization or recapitalization or

reclassify its capital stock; sell, lease, assign, or transfer any substantial part of its business or fixed assets, or any property or other assets necessary for the continuance of its business as now conducted, including without limitation the selling of any property or other asset accompanied by the leasing back of the same, in each case to any third Person; or commence any proceedings with respect to any of the foregoing other than (1) sales and transfers of inventory in the ordinary course of Borrower's business; (2) transfers of non-exclusive licenses and similar arrangements for the use of the property of Borrower or its subsidiaries; (3) transfers of surplus, worn-out or obsolete Equipment; (4) sales and transfers of any assets other than Intellectual Property Rights in an aggregate amount not to exceed One Million and No/100 Dollars (\$1,000,000.00) in each calendar year; (5) sales and transfers of any assets consisting of Intellectual Property Rights in an aggregate amount not to exceed Two Million and No/100 Dollars (\$2,000,000.00) in each calendar year; or (6) the transfer of any assets assigned in connection with Borrower's exercise of its rights under clause (i) above.

6.8 Borrower represents, warrants, covenants and agrees that:

a. Borrower's true and correct legal name is that set forth on the signature page to this Agreement. Except as disclosed in writing to Bank on or before the date of this Agreement, Borrower has not done business under any name other than that set forth on the signature page to this Agreement;

b. If Borrower is an individual, the location (as determined pursuant to the Uniform Commercial Code) of Borrower's principal residence is that set forth following Borrower's name on the signature page to this Agreement;

c. If Borrower is a registered organization that is organized under the laws of any one of the states comprising the United States (e.g. corporation, limited partnership, registered limited liability partnership or limited liability company), and is located (as determined pursuant to the Uniform Commercial Code) in the state under the laws of which it was organized, Borrower's form of organization and the state in which it has been organized are those set forth immediately following Borrower's name on the signature page to this Agreement;

d. If Borrower is a registered organization organized under the laws of the United States, and Borrower is located in the state that United States law designates as its location or, if United States law authorizes Borrower to designate the state for its location, the state designated by Borrower, or if neither of the foregoing are applicable, at the District of Columbia (in each case as determined in accordance with the Uniform Commercial Code), Borrower's form of organization and the state or district in which it is located are those set forth immediately following Borrower's name on the signature page to this Agreement;

e. If Borrower is a domestic organization that is not a registered organization under the laws of the United States or any state thereof (e.g. general partnership, joint venture, trust, estate or association), and Borrower is located (as determined pursuant to the Uniform Commercial Code) at its sole place of business or, if it has more than one place of business, at its chief executive office, Borrower's form of organization and the address of that location are those set forth on the signature page to this Agreement; and

f. If Borrower is a foreign individual or foreign organization or a branch or agency of a bank that is not organized under the laws of the United States or a state thereof, Borrower is located (as determined pursuant to the Uniform Commercial Code) at the address set forth following Borrower's name on the signature page to this Agreement.

6.9 If Borrower is a corporation, Borrower represents, warrants and covenants as follows:

a. Borrower will not make any distribution or declare or pay any dividend (in stock or in cash) to any shareholder or on any of its capital stock, of any class, whether now or hereafter outstanding, or purchase, acquire, repurchase, or redeem or retire any such capital stock;

b. Borrower is and shall at all times hereafter be a corporation duly organized and existing in good standing under the laws of the state of its incorporation and qualified and licensed to do business in California or any other state in which it conducts its business;

c. Borrower has the right and power and is duly authorized to enter into this Agreement; and

d. The execution by Borrower of this Agreement shall not constitute

a breach of any provision contained in Borrower's articles of incorporation or by-laws.

6.10 The execution of and performance by Borrower of all of the terms and provisions contained in this Agreement shall not result in a breach of or constitute an event of default under any agreement to which Borrower is now or hereafter becomes a party.

6.11 All assessments and taxes, whether real, personal or otherwise, due or payable by, or imposed, levied or assessed against, Borrower or any of its property have been paid, and shall hereafter be paid in full, before delinquency. Borrower shall make due and timely payment or deposit of all federal, state and local taxes, assessments or contributions required of it by law, and will execute and deliver to Bank, on demand, appropriate certificates attesting to the payment or deposit thereof. Borrower will make timely payment or deposit of all F.I.C.A. payments and withholding taxes required of it by applicable laws, and will upon request furnish Bank with proof satisfactory to it that Borrower has made such payments or deposit. If Borrower fails to pay any such assessment, tax, contribution, or make such deposit, or furnish the required proof, Bank may, in its sole and absolute discretion and without notice to Borrower, (i) make payment of the same or any part thereof, or (ii) set up such reserves in Borrower's loan account as Bank deems necessary to satisfy site liability therefor, or both. Bank may conclusively rely on the usual statements of the amount owing or other official statements issued by the appropriate governmental agency. Each amount so paid or deposited by Bank shall constitute a Bank Expense and an additional advance to Borrower.

6.12 Except as set forth on Schedule 6.12, to the best of Borrower's knowledge, after due inquiry, there are no actions or proceedings pending by or against Borrower or any guarantor of Borrower before any court or administrative agency and Borrower has no knowledge of any pending, threatened or imminent litigation, governmental investigations or claims, complaints, actions or prosecutions involving Borrower or any guarantor of Borrower, except as heretofore specifically disclosed in writing to Bank or asset forth on Schedule 6.12. If any of the foregoing arise during the term of the Agreement, Borrower shall immediately notify Bank in writing.

#### 6.13 Insurance.

a. Borrower, at its expense, shall keep and maintain its assets insured against loss or damage by fire, theft, explosion, sprinklers and all other hazards and risks ordinarily insured against by other owners who use such properties in similar businesses for the full insurable value thereof. Borrower shall also keep and maintain business Interruption insurance and public liability and property damage insurance relating to Borrower's ownership and use of the Collateral and its other assets. All such policies of insurance shall be in such form, with such companies, and to such amounts as may be satisfactory to Bank. Borrower shall deliver to Bank certified copies of such policies of insurance and evidence of the payments of all premiums therefor. All such policies of insurance (except those of public liability and property damage) shall contain an endorsement in a form satisfactory to Bank showing Bank as a loss payee thereof, with a waiver of warranties satisfactory to Bank, and all proceeds payable thereunder shall be payable to Bank and, upon receipt by Bank, shall be applied on account of the Indebtedness owing to Bank. To secure the payment of the indebtedness, Borrower grants Bank a security interest in and to all such policies of insurance (except those of public liability and property damage) and the proceeds thereof, and Borrower shall direct all insurers under such policies of insurance to pay all proceeds thereof directly to Bank.

b. Borrower hereby irrevocably appoints Bank (and any of Bank's officers, employees or agents designated by Bank) as Borrower's attorney for the purpose of making, selling and adjusting claims under such policies of insurance, endorsing the name of Borrower on any check, draft, instrument or other item of payment for the proceeds of such policies of insurance and for making all determinations and decisions with respect to such policies of insurance. Borrower will not cancel any of such policies without Bank's prior written consent. Each such insurer shall agree by endorsement upon the policy or policies of insurance issued by it to Borrower as required above, or by independent instruments furnished to Bank, that it will give Bank at least ten (10) days written notice before any such policy or policies of insurance shall be altered or canceled, and that no act or default of Borrower, or any other person, shall affect the right of Bank to recover under such policy or policies of insurance required above or to pay any premium in whole or in part relating thereto. Bank, without waiving or releasing any indebtedness or any Event of Default may, but shall have no obligation to do so, obtain and maintain such policies of insurance and pay such premiums and take any other action with respect to such policies which Bank deems advisable. All sums so disbursed by Bank, as well as reasonable attorneys' fees incurred by Bank, whether in-house or outside counsel is used, court costs, expenses and other charges relating thereto, shall constitute Bank Expenses and are payable on demand.

6.14 All financial statements and information relating to Borrower which have been or may hereafter be delivered by Borrower to Bank are true and correct and have been prepared in accordance with GAAP consistently applied and there has been no material adverse change in the financial condition of Borrower since the submission of such financial information to Bank.

6.15 Financial Reporting.

a. Borrower at all times hereafter shall maintain a standard and modern system of accounting in accordance with GAAP consistently applied with ledger and account cards and/or computer tapes and computer disks, computer printouts and computer records pertaining to the Collateral which contain information as may from time to time be requested by Bank, not modify or change its method of accounting or enter into, modify or terminate any agreement presently existing, or at any time hereafter entered into with any third party accounting firm and/or service bureau for the

preparation and/or storage of Borrower's accounting records without the written consent of Bank first obtained (except for changes in the preparation of Borrower's accounting records made in accordance with changes in any corresponding GAAP standards or applicable regulatory standards) and without said accounting firm and/or service bureau agreeing to provide information regarding the Accounts and Inventory and Borrower's financial condition to Bank, and Bank agrees that it shall not unreasonably withhold its consent to any such change; permit Bank and any of its employees, officers or agents, upon demand, during Borrower's usual business hours, or the usual business hour of third persons having control thereof, to have access to and examine all of Borrower's Books relating to the Collateral, Borrower's indebtedness to Bank, Borrower's financial condition and the results of Borrower's operations and in connection therewith, permit Bank or any of its agents, employees or officers to copy and make extracts therefrom.

b. Borrower shall deliver to Bank (1) within thirty (30) days after the end of each calendar month, a company prepared balance sheet and profit and loss statement covering Borrower's operations in the summary form presented to Borrower's board of directors, and including without limitation a summary balance sheet and profit and loss statement and statement of Borrower's financial ratios, (2) within forty five (45) days after the end of each calendar quarter, a company prepared balance sheet and profit and loss statement covering Borrower's operations in complete GAAP form, and (3) deliver to Bank within one hundred twenty (120) days after the end of each of Borrower's fiscal years the annual audited statement of the financial condition of Borrower for each such fiscal year, including but not limited to, a balance sheet and profit and loss statement and any other report requested by Bank relating to the Collateral and the financial condition of Borrower, audited by a certified public accountant selected by Borrower and acceptable to Bank, together with a certificate signed by an authorized employee of Borrower to the effect that all reports, statements, computer disk or tape files, computer printouts, computer runs, or other computer prepared information of any kind or nature relating to the foregoing or documents delivered or caused to be delivered to Bank under this subparagraph are complete, correct and thoroughly present the financial condition of Borrower and that there exists on the date of delivery to Bank no condition or event which constitutes a breach or Event of Default under this Agreement.

c. In the event that Borrower's capital stock or Debt shall be offered and/or traded on any national securities exchange located in the United States and Borrower shall be required to file periodic financial reports with the Securities and Exchange Commission or any governmental authority at any time substituted therefor in connection with such publicly traded capital stock or Debt, then, in lieu of the financial statements required under Section 6.15.b, above, promptly after the same are available, copies of any and all proxy statements, financial statements and reports as Borrower or any subsidiary or affiliate of Borrower shall send to its members or stockholders, or to any holders of any such Debt, as applicable, if any, and copies of all reports on Forms 10-K, 10-Q, and 8-Q or otherwise filed by Borrower or any subsidiary or affiliate of Borrower with the Securities and Exchange Commission or any governmental authority at any time substituted therefor.

d. In addition to the financial statements requested above, Borrower agrees to provide Bank with the following schedules:

(1) Accounts Receivable Agings on a monthly basis within twenty (20) days of Borrower's month end;

(2) Accounts Payable Agings on a monthly basis within twenty (20) days of Borrower's month end;

(3) Borrowing Base Certificate on a monthly basis within twenty (20) days of Borrower's month end at all times that the Revolving Loans are subject to a Borrowing Base calculated on the basis of Eligible Accounts; and

(4) Compliance Certification on a monthly basis (including, without limitation a calculation of Borrower's compliance with each of the financial covenants set forth in, Section 6.16 of this Agreement) within twenty (20) days of Borrower's month and together with each request for the making of each Revolving Loan advance under Section 2.1 hereof,

6.16 Borrower shall maintain the following financial ratios and covenants on a consolidated basis, which shall be monitored on a monthly basis, except as noted below:

a. Tangible Effective Net Worth in an amount not less than Thirty-Five Million and No/100 Dollars (\$35,000,000.00);

b. a ratio of Quick Assets to Current Liabilities (inclusive of the outstanding amount of all Indebtedness) of not less than 1.75:1.00;

c. a Debt-to-Worth Ratio of not more than .90:1.00;

d. As of the making of the Term Loan and at all times thereafter, a Cash Flow Coverage Ratio of not less than 2.00:1.00;

e. Net Income after taxes of not less than One and No/100 Dollars (\$1.00), measured as of the end of each fiscal year of Borrower, provided, however, that Borrower shall not experience Net Income after taxes of less than One and No/100 Dollars (\$1.00) as of the end of more than any two (2) consecutive fiscal quarters during any such fiscal year,

f. Borrower shall not without Bank's prior written consent acquire or expend for or commit itself to acquire or expand for fixed assets by lease, purchase or otherwise in an aggregate amount that exceeds Thirty Million and No/100 Dollars (\$30,000,000.00) in any fiscal year, and

g. Borrower shall be and remain the owner at all times of unencumbered Liquid Assets having a value (as such value is determined by Bank) of not less than Three Million and No/100 Dollars (\$3,000,000.00). Borrower shall within thirty (30) days after and as of the end of each calendar month, deliver to Bank such schedules, certificates, reports, documents and other information respecting all or any of Borrower's Liquid Assets as Bank may request any such schedule, certificate, report or other document identifying any Liquid Asset shall be accompanied if so requested by Bank) by satisfactory evidence of Borrower's ownership of any such Liquid Asset, evidence that any such Liquid Asset is unencumbered, and evidence of the current value of any such Liquid Asset.

All financial covenants shall be computed in accordance with GAAP consistently applied except as otherwise specifically set forth in this Agreement. All monies due from affiliates (including officers, directors and shareholders) shall be excluded from Borrower's assets for all purposes hereunder.

6.17 Borrower shall promptly supply Bank (and cause any guarantor to supply Bank) with such other information (including tax returns) concerning its financial affairs (or that of any guarantor) as Bank may request from time to time hereafter, and shall promptly notify Bank of any material adverse change in Borrower's financial condition and of any condition or event which constitutes a breach of or an event which constitutes an Event of Default under this Agreement.

6.18 Borrower is now and shall be at all times hereafter solvent and able to pay its debts (including trade debts) as they mature.

6.19 Borrower shall immediately and without demand reimburse Bank for all sums expended by Bank in connection with any action brought by Bank to correct any Event of Default or enforce any provision of this Agreement, including all Bank Expenses; Borrower authorizes and approves all advances and payments by Bank for items described in this Agreement as Bank Expenses. Anything contained in herein to the contrary notwithstanding, prior to the occurrence of any Event of Default, Bank agrees that it shall endeavor to provide prior notice to Borrower of out-of-pocket Bank Expenses to be incurred by Bank in an estimated aggregate amount in excess of Two Thousand Five Hundred and No/100 Dollars (\$2,500.00); provided, however, that the failure of Bank to provide any such notice to Borrower shall have no effect on Bank's rights or remedies under this Agreement, including without limitation Bank's rights to reimbursement for the full amount of any such Bank Expenses in accordance with the terms and conditions of this Section or as otherwise provided in accordance with the provisions of this Agreement.

6.20 Each warranty, representation and agreement contained in this Agreement shall be automatically deemed repeated with each advance and shall be conclusively presumed to have been relied on by Bank regardless of any investigation made or information possessed by Bank. The warranties, representations and agreements set forth herein shall be cumulative and in addition to any and all other warranties, representations and agreements which Borrower shall give, or cause to be given, to Bank, either now or hereafter.

6.21 Borrower shall keep all of its principal bank accounts with Bank and shall notify Bank immediately in writing of the existence of any and all other bank account, deposit account, or any other account into which money can be deposited that may exist or be established from time to time that contain deposits in an aggregate amount in excess of One Hundred Thousand and No/100 Dollars (\$100,000.00).

6.22 Borrower shall not (i) permit any fact, condition or event to occur or exist with respect to any employee pension or profit sharing plans established or maintained by it which might constitute grounds for termination

of any such plan or for the court appointment of a trustee to administer any such plan, or (ii) with respect to any defined benefit pension plan as defined in the Employees Retirement Income Security Act of 1974, as amended ("ERISA"), fail to meet the minimum funding standards of Section 302 of ERISA, permit any Reportable Event or Prohibited Transaction as defined in

ERISA to occur with respect to any such plan, or permit any other material failure to comply with ERISA to occur with respect to any such plan. Borrower shall furnish to Bank: (a) as soon as possible, but in no event later than thirty (30) days after Borrower knows or has reason to know that any reportable event or prohibited transaction with respect to any deferred compensation or defined benefit pension plan has occurred, a statement of the chief financial officer of Borrower setting forth the details concerning such reportable event or prohibited transaction and the action which Borrower proposes to take with respect thereto, together with a copy of the notice of such reportable event or prohibited transaction given to the Pension Benefit Guaranty Corporation. If a copy of such notice is available to Borrower; (b) promptly after the filing thereof with the United States Secretary of Labor or the Pension Benefit Guaranty Corporation, copies of each annual report with respect to each deferred compensation plan; (c) promptly after receipt thereof, a copy of any notice Borrower may receive from the Pension Benefit Guaranty Corporation or the Internal Revenue Service with respect to any deferred compensation plan or defined benefit pension plan; provided, however, this subparagraph shall not apply to notice of general application issued by the Pension Benefit Guaranty Corporation or the Internal Revenue Service; and (d) when the same is made available to participants in the deferred compensation plan or defined benefit pension plan, all notices and other forms of information from time to time disseminated to the participants by the administrator of the deferred compensation plan or defined benefit pension plan.

6.23 Borrower is now and shall at all times hereafter remain in compliance in all material respects with all federal, state and municipal laws, regulations and ordinances relating to the handling, treatment and disposal of toxic substances, wastes and hazardous material and shall maintain all necessary authorizations and permits.

6.24 Borrower shall permit representatives of Bank to conduct audits of Borrower's Books relating to the Accounts and other Collateral and make extracts therefrom, with results satisfactory to Bank, provided that Bank shall use its best efforts to not interfere with the conduct of Borrower's business, and to the extent possible to arrange for verification of the Accounts directly with the account debtors obligated thereon or otherwise, all under reasonable procedures acceptable to Bank and at Borrower's sole expense; provided, however, that, prior to an Event of Default, Borrower shall not be responsible for payment or reimbursement of any Bank Expenses incurred by Bank in connection with more than one (1) such audit of Borrower's Books in each calendar year provided, provided, further, that anything contained in the forgoing to the contrary notwithstanding Borrower shall be responsible for the payment or reimbursement of Bank Expenses incurred in connection with one (1) annual audit in each such year. Notwithstanding any of the provisions contained in Sections 1.19, 1.20, or 2.1, of this Agreement or otherwise, Borrower hereby acknowledges and agrees that upon completion of any such audit Bank shall have the right to adjust the Borrowing Base percentage or the definition of Eligible Accounts, in its sole and reasonable discretion, based on its review of the results of such collateral audit.

6.25 In connection with this Agreement, Borrower hereby further acknowledges and agrees that, except as expressly permitted under this Agreement, there exists no lien, pledge, encumbrance, security interest, deed of trust, mortgage or other charge upon, and at all times during the effectiveness of this Agreement Borrower shall not create, incur, assume, suffer or permit to exist any lien, pledge, encumbrance, security interest, deed of trust, mortgage or other charge upon, any of its property or assets, whether now owned or hereafter acquired, including without limitation any real property or Intellectual Property Rights. In addition, Borrower further acknowledges and agrees that it has and at all times during the effectiveness of this Agreement shall not enter into an agreement with a third party providing financing to Borrower by which Borrower places an additional negative pledge on any such property or assets or promises not to hypothecate or transfer any such property or assets.

## 7. EVENTS OF DEFAULT.

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

a. If Borrower fails to pay when due and payable or declared due and payable, all or any portion of Borrower's Indebtedness (whether of principal, interest, taxes, reimbursement of Bank Expenses, or otherwise) payable hereunder or under any other Loan Document within ten (10) days of the due date thereof;

b. If Borrower fails or neglects to perform, keep or observe (i) any negative term, provision, condition, covenant, agreement, or (ii) any warranty or representation contained in Section 6 of this Agreement;

c. If Borrower fails or neglects to perform, keep or observe any other term, provision, condition, affirmative or financial covenant, or agreement contained in this Agreement, any other Loan Document, or any other present or future document, instrument or agreement between Borrower and Bank (other than those terms and conditions described in Sections 7.a. and 7.b hereof), and such failure continues for ten (10) days after the earlier of (a) Borrower's discovery of such failure and (b) Bank's dispatch of notice to Borrower of such failure; provided, however, that if any such Event of Default is curable and Borrower has not been given a prior notice of a breach of the same term or condition, it may be cured by Borrower within ten (10) days of the earlier of discovery or notice thereof, or, if the cure will require more than ten (10) days, if Borrower immediately initiates steps that Bank deems in its sole discretion to be sufficient to cure

such Event of Default and thereafter continues and completes all reasonable and necessary steps sufficient to produce compliance as soon as reasonably practical;

d. If any representation, statement, report or certificate made or delivered by Borrower, or any of its officers, employees or agents to Bank is not true and correct;

e. If there is a material impairment of the prospect of repayment of all or any portion of Borrower's Indebtedness or a material impairment of the value or priority of Bank's security interest in the Collateral;

f. If all or any of Borrower's assets are attached, seized, subject to a writ or distress warrant, or are levied upon, or come into the possession of any Judicial Officer or Assignee and the same are not released, discharged or bonded against within ten (10) days thereafter;

g. If any Insolvency Proceeding is filed or commenced by or against Borrower without being dismissed within ten (10) days thereafter;

h. If any proceeding is filed or commenced by or against Borrower for its dissolution or liquidation;

i. If Borrower is enjoined, restrained or in any way prevented by court order from continuing to conduct all or any material part of its business affairs;

j. If a notice of lien, levy or assessment in an aggregate amount in excess of Five Hundred Thousand and No/100 Dollars (\$500,000.00) is filed of record with respect to any or all of Borrower's assets by the United States Government, or any department, agency or instrumentality thereof, or by any state, county, municipal or other government agency, or if any taxes or debts owing at any time hereafter to any one or more of such entities becomes a lien, whether inchoate or otherwise, upon any or all of Borrower's assets and the same is not paid on the payment date thereof;

k. If a judgment or other claim becomes a lien or encumbrance in an aggregate amount in excess of Five Hundred Thousand and No/100 Dollars (\$500,000.00) upon any or all of Borrower's assets and the same is not satisfied, dismissed or bonded against within ten (10) days thereafter;

l. If Borrower's records are prepared and kept by an outside computer service bureau at the time this Agreement is entered into or during the term of this Agreement such an agreement with an outside service bureau is entered into, and at any time thereafter, without first obtaining the written consent of Bank, Borrower terminates, modifies, amends or changes its contractual relationship with said computer service bureau or said computer service bureau fails to provide Bank with any requested information or financial data pertaining to Bank's Collateral, Borrower's financial condition or the results of Borrower's operations;

m. If Borrower permits a default in any material agreement to which Borrower is a party with third parties to as to result in an acceleration of the maturity of Borrower's indebtedness to others, whether under any indenture, agreement or otherwise;

n. If Borrower makes any payment on account of indebtedness which has been subordinated to Borrower's Indebtedness to Bank except as otherwise permitted under the terms of this Agreement;

o. If any misrepresentation exists now or thereafter in any warranty or representation made to Bank by any officer or director of Borrower, or if any such warranty or representation is withdrawn by any officer or director;

p. If any party subordinating its claims to that of Bank's or any guarantor of Borrower's Indebtedness dies, terminates its subordination or guaranty, violates the terms of the subordination or guaranty, becomes insolvent, or an Insolvency Proceeding is commenced by or against any such subordinating party or guarantor;

q. If Borrower is an individual and Borrower dies;

r. If any reportable event, which Bank determines constitutes grounds for the termination of any deferred compensation plan by the Pension Benefit Guaranty Corporation or for the appointment by the appropriate United States District Court of a trustee to administer any such plan, shall have occurred and be continuing thirty (30) days after written notice of such

determination shall have been given to Borrower by Bank, or any such Plan shall be terminated within the meaning of Title IV of the Employment Retirement Income Security Act ("ERISA"), or a trustee shall be appointed by the appropriate United States District Court to administer any such plan, or the Pension Benefit Guaranty

Corporation shall institute proceedings to terminate any plan and in case of any event described in this Section 7, the aggregate amount of Borrower's liability to the Pension Benefit Guaranty Corporation under Sections 4062, 4083 or 4064 of ERISA shall exceed five percent (5%) of Borrower's Tangible Effective Net Worth.

Notwithstanding anything contained in Section 7 to the contrary, Bank shall refrain from exercising its rights and remedies and Event of Default shall thereafter not be deemed to have occurred by reason of the occurrence of any of the events set forth in Sections 7.f, 7.g or 7.k of this Agreement if, within ten (10) days from the date thereof, the same is released, discharged, dismissed, bonded against or satisfied; provided, however, if the event is the institution of insolvency Proceedings against Borrower, Bank shall not be obligated to make advances to Borrower during such cure period.

#### 8. BANK'S RIGHTS AND REMEDIES.

8.1 Upon the occurrence of an Event of Default by Borrower under this Agreement, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

a. Declare Borrower's Indebtedness, whether evidenced by this Agreement, installment notes, demand notes or otherwise, immediately due and payable to Bank; provided, however, that upon the occurrence of an Event of Default described in Section 7.g, all indebtedness shall become immediately due, owing and payable in full without any action by Bank;

b. Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement, or any other agreement between Borrower and Bank;

c. Terminate this Agreement as to any future liability or obligation of Bank, but without affecting Bank's rights and security interests in the Collateral, and the Indebtedness of Borrower to Bank;

d. Without notice to or demand upon Borrower or any guarantor, make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Bank so requires and to make the Collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, take and maintain possession of the Collateral and the premises (at no charge to Bank), or any part thereof, and to pay, purchase, contest or compromise any encumbrance, charge or lien which in the opinion of Bank appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith;

e. Without limiting Bank's rights under any security interest, Bank is hereby granted a license or other right to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks and advertising matter, or any property or a similar nature as it pertains to the Collateral (including, without limitation any such property included in the Intellectual Property Rights) in completing production of, advertising for sale and selling any Collateral and Borrower's rights under all licenses and all franchise agreement shall inure to Bank's benefit, and Bank shall have the right and power to enter into sublicense agreements with respect to all such rights with third parties on terms acceptable to Bank;

f. Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sales and sell (in the manner provided for herein) the inventory;

g. Sell or dispose the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as is commercially reasonable in the opinion of Bank. It is not necessary that the Collateral be present at any such sale. At any sale or other disposition of the Collateral pursuant to this Section, Bank disclaims all warranties which would otherwise be given under the Uniform Commercial Code, including without limitation a disclaimer of any warranty relating to title, possession, quiet enjoyment or the like, and Bank may communicate these disclaimers to a purchaser at such disposition. This disclaimer of warranties will not render the sale commercially unreasonable;

h. Bank shall give notice of the disposition of the Collateral as follows:

(1) Bank shall give Borrower and each holder of a security interest in the Collateral who has filed with Bank a written request

for notice, a notice in writing of the time and place of public sale, or, if the sale is a private sale or some disposition other than a public sale is to be made of the Collateral, the time on or after which the private sale or other disposition is to be made;

(2) The notice shall be personally delivered or mailed, postage prepaid, to Borrower's address appearing in this Agreement. at least ten (10) calendar days before the date fixed for the sale, or at least ten (10) calendar days before the date on or after which the private sale or other disposition is to be made, unless the Collateral is perishable or threatens to decline speedily in value. Notice to persons other than Borrower claiming an interest in the Collateral shall be sent to such addresses as have been furnished to Bank or as otherwise determined in accordance with Section 9811 of the Uniform Commercial Code; and

(3) If the sale is to be a public sale, Bank shall also give notice of the time and place by publishing a notice one time at least ten (10) calendar days before the date of the sale in a newspaper of general circulation in the county in which the sale is to be held; and

(4) Bank may credit bid and purchase at any public sale.

i. Borrower shall pay all Bank Expenses incurred in connection with Bank's enforcement and exercise of any of its rights and remedies as herein provided, whether or not suit is commenced by Bank;

j. Any deficiency which exists after disposition of the Collateral as provided above will be paid immediately by Borrower. Any excess will be returned, without interest and subject to the rights of third parties, to Borrower by Bank, or, in Bank's discretion, to any party who Bank believes, in good faith, is entitled to the excess;

k. Without constituting a retention of Collateral in satisfaction of an obligation within the meaning of 9620 of the Uniform Commercial Code or an action under California Code of Civil Procedure 728, apply any and all amounts maintained by Borrower as deposit accounts (as that term is defined under 9102 of the Uniform Commercial Code) or other accounts that Borrower maintains with Bank against the Indebtedness;

l. The proceeds of any sale or other disposition of Collateral authorized by this Agreement shall be applied by Bank first upon all expenses authorized by the Uniform Commercial Code and all reasonable attorney fees and legal expenses incurred by Bank, whether in-house or outside counsel is used, the balance of the proceeds of the sale or other disposition shall be applied in the payment of the indebtedness, first to interest, then to principal, then to remaining Indebtedness and the surplus, if any, shall be paid over to Borrower or to such other person(s) as may be entitled to it under applicable law. Borrower shall remain liable for any deficiency, which it shall pay to Bank immediately upon demand. Borrower agrees that Bank shall be under no obligation to accept any non-cash proceeds in connection with any sale or disposition of Collateral unless failure to do so would be commercially unreasonable. If Bank agrees in its sole discretion to accept non-cash proceeds (unless the failure to do so would be commercially unreasonable), Bank may ascribe any commercially reasonable value to such proceeds. Without limiting the foregoing, Bank may apply any discount factor in determining the present value of proceeds to be received in the future or may elect to apply proceeds to be received in the future only as and when such proceeds are actually received in cash by Bank; and

m. The following shall be the basis for any finder of facts determination of the value of any Collateral which is the subject matter of a disposition giving rise to a calculation of any surplus or deficiency under Section 9615(f) of the Uniform Commercial Code: (i) The Collateral which is the subject matter of the disposition shall be valued in an "as is" condition as of the date of the disposition, without any assumption or expectation that such Collateral will be repaired or improved in any manner, (ii) the valuation shall be based upon an assumption that the transferee of such Collateral desires a resale of the Collateral for cash promptly (but no later than 30 days) following the disposition; (iii) all reasonable closing costs customarily borne by the seller in commercial sales transactions relating to property similar to such Collateral shall be deducted including, without limitation, brokerage commissions, tax prorations, attorney's fees, whether in-house or outside counsel is used, and marketing costs; (iv) the value of the Collateral which is the subject matter of the disposition shall be further discounted to account for any estimated holding costs associated with maintaining such Collateral pending sale (to the extent not accounted for in (iii) above), and other maintenance, operational and ownership expenses; and (v) any expert opinion testimony given or considered in connection with a determination of the value of such Collateral must be given by persons having at least 5 years experience in appraising property similar to the Collateral and who have conducted and prepared a complete written appraisal of such Collateral taking into consideration the factors set forth above. The "value" of any such Collateral shall be a factor in determining the amount of proceeds which would have been realized in a

disposition to a transferee other than a secured party, a person related to a secured party or a secondary obligor under Section 9615(f) of the Uniform Commercial Code.

8.2 In addition to any and all other rights and remedies available to Bank under or pursuant to this Agreement or any other documents, instrument or agreement contemplated hereby. Borrower acknowledges and agrees that (i) at any time following the occurrence and during the continuance of any Event of Default, and/or (ii) termination of Bank's commitment or obligation to make loans or advances or otherwise extend credit to or in favor of Borrower hereunder, in the event that and to the extent that there are any Letter of Credit Obligations outstanding at such time, upon demand of Bank, Borrower shall deliver to Bank, or cause to be delivered to Bank, cash collateral in an amount not less

then such Letter of Credit Obligations. which cash collateral shall be held and retained by Bank of Cash collateral for the repayment of such Letter of Credit Obligations, together with any and all other Indebtedness of Borrower to Bank remaining unpaid, and Borrower pledges to Bank and grants to Bank a continuing first priority security interest in such cash collateral so delivered to Bank. Alternatively, Borrower shall cause to be delivered to Bank an irrevocable standby letter of credit issued in favor of Bank by a bank acceptable to Bank, in its sole discretion, in an amount not less than such Letter of Credit Obligations, and upon terms acceptable to Bank, in its sole discretion.

8.3 Bank's rights and remedies under this Agreement and all other agreements shall be cumulative. Bank shall have all other rights and remedies not inconsistent herewith as provided by law or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any default on Borrower's part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election or acquiescence by Bank.

9. TAXES AND EXPENSES REGARDING BORROWER'S PROPERTY. If Borrower fails to pay promptly when due to another person or entity, monies which Borrower is required to pay by reason of any provision in this Agreement, Bank may, but need not, pay the same and charge Borrower's loan account therefor, and Borrower shall promptly reimburse Bank. All such sums shall become additional Indebtedness owing to Bank, shall bear interest at the rate hereinabove provided, and shall be secured by all Collateral. Any payments made by Bank shall not constitute (i) an agreement by it to make similar payments in the future, or (ii) a waiver by Bank of any default under this Agreement. Bank need not inquire as to, or contest the validity of, any such expense, tax, security interest, encumbrance or lien and the receipt of the usual official notice of the payment thereof shall be conclusive evidence that the same was validly due and owing. Such payments shall constitute Bank Expenses and additional advances to Borrower.

#### 10. WAIVERS.

10.1 Borrower agrees that checks and other instruments received by Bank in payment or on account of Borrower's Indebtedness constitute only conditional payment until such items are actually paid to Bank and Borrower waives the right to direct the application of any and all payments at any time or times hereafter received by Bank on account of Borrower's Indebtedness and Borrower agrees that Bank shall have the continuing exclusive right to apply and reapply such payments in any manner as Bank may deem advisable, notwithstanding any entry by Bank upon its books.

10.2 Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension or renewal of any or all commercial paper, accounts, documents, instruments, chattel paper, and guarantees at any time held by Bank on which Borrower may in any way be liable.

10.3 Bank shall not in any way or manner be liable or responsible for (a) the safekeeping of the Inventory; (b) any loss or damage thereto occurring or arising in any manner or fashion from any cause; (c) any diminution in the value thereof; or (d) any act or default of any carrier, warehouseman, bailee, forwarding agency or other person whomsoever. All risk of loss, damage or destruction of inventory shall be borne by Borrower.

10.4 Borrower waives the right and the right to assert a confidential relationship, if any, it may have with any accountant, accounting firm and/or service bureau or consultant in connection with any information requested by Bank pursuant to or in accordance with this Agreement, and agrees that a Bank may contact directly any such accountants, accounting firm and/or service bureau or consultant in order to obtain such information. Anything contained in the foregoing to the contrary notwithstanding, Bank agrees that it shall endeavor to provide notice to Borrower of any such contact with Borrower's accountants, accounting firm or service bureau; provided, however, that the failure of Bank to provide any such notice to Borrower shall have no effect on Bank's rights or remedies under this Agreement.

10.5 THE UNDERSIGNED AND THE BANK ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED. EACH PARTY, AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF THEIR CHOICE, KNOWINGLY AND VOLUNTARILY, AND FOR THEIR MUTUAL BENEFIT, WAIVES ANY RIGHT TO TRIAL BY JURY IN THE EVENT OF LITIGATION REGARDING THE PERFORMANCE OR ENFORCEMENT OF, OR IN ANY WAY RELATED TO, THIS AGREEMENT OR THE INDEBTEDNESS.

10.6 In the event that Bank elects to waive any rights or remedies hereunder, or compliance with any of the terms hereof, or delays or fails to pursue or enforce any term, such waiver, delay or failure to pursue or enforce shall only be effective with respect to that single act and shall not be construed to affect any subsequent transactions or Bank's right to later pursue

such rights and remedies.

11. ONE CONTINUING LOAN TRANSACTION. All loans and advances heretofore, now or at any time or times hereafter made by Bank to Borrower under this Agreement or any other agreement between Bank and Borrower, shall

constitute one loan secured by Bank's security interests in the Collateral and by all other security interests, liens, encumbrances heretofore, now or from time to time hereafter granted by Borrower to Bank.

Notwithstanding the above, (i) to the extent that any portion of the Indebtedness is a consumer loan, that portion shall not be secured by any deed of trust or mortgage on or other security interest in Borrower's principal dwelling which is not a purchase money security interest as to that portion, unless expressly provided to the contrary in another place, or (ii) if Borrower (or any of them) has (have) given or give(s) Bank a deed of trust or mortgage covering real property, that deed of trust or mortgage shall not secure the loan and any other indebtedness of Borrower (or any of them), unless expressly provided to the contrary in another place.

12. NOTICES. Unless otherwise provided in this Agreement, all notices or demands by either party on the other relating to this Agreement shall be in writing and sent by regular United States mail, postage prepaid, properly addressed to Borrower or to Bank at the addresses stated in this Agreement, or to such other addresses as Borrower or Bank may from time to time specify to the other in writing. Requests to Borrower by Bank hereunder may be made orally. Notices delivered by telefacsimile shall also be delivered by mail in accordance with the forgoing requirements; provided, however, that all such notices shall be equally as effective as delivery of a such notice in accordance with the forgoing requirements, and provided, that the failure of Bank to deliver a copy of any such notice in accordance with the forgoing shall not effect the validity, effectiveness and binding effect of any such notice or the effectiveness or enforceability of any provision of this Agreement or the other Loan Documents.

13. AUTHORIZATION TO DISBURSE. Bank is hereby authorized to make loans and advances hereunder upon prior written request (which may include, without limitation, a written request in the form of an electronic mail transmission) from a Person purporting to be an authorized officer, employee, or representative of Borrower, or at the discretion of Bank if sold loans and advances are necessary to meet any indebtedness of Borrower to Bank. Bank shall have no duty to make inquiry or verify the authority of any such party, and Borrower shall hold Bank harmless from any damage, claims or liability by reason of Bank's honor of, or failure to honor, any such instructions.

14. PAYMENTS. Borrower hereby authorizes Bank to deduct the full amount of any interest, fees, costs, or Bank Expenses due under this Agreement and not paid or collected when due in accordance with the terms and conditions hereof from any account maintained by Borrower with Bank. Should there be insufficient funds in any such account to pay all such sums when due, the full amount of such deficiency shall be immediately due and payable by Borrower; provided, however, that Bank shall not be obligated to advance funds to cover any such payment.

15. DESTRUCTION OF BORROWER'S DOCUMENTS. Any documents, schedules, invoices or other papers delivered to Bank, may be destroyed or otherwise disposed of by Bank six (6) months after they are delivered to or received by Bank, unless Borrower requests, in writing, the return of the said documents, schedules, invoices or other papers and makes arrangements, at Borrower's expense, for their return.

16. CHOICE OF LAW. The validity of this Agreement, its construction, interpretation and enforcement, and the rights of the parties hereunder and concerning the Collateral, shall be determined according to the laws of the State of California. The parties agree that all actions or proceedings arising in connection with this Agreement shall be tried and litigated only in the state and federal courts in the Northern District of California or the County of Santa Clara.

#### 17. GENERAL PROVISIONS.

17.1 This Agreement shall be binding and deemed affective when executed by Borrower and accepted and executed by Bank at its headquarters office.

17.2 This Agreement shall bind and inure to the benefit of the respective successors and assigns of each of the parties; provided, however, that Borrower may not assign this Agreement or any rights hereunder without Bank's prior written consent and any prohibited assignment shall be absolutely void. No consent to an assignment by Bank shall release Borrower or any guarantor from their obligations to Bank. Bank may assign this Agreement and its rights and duties hereunder. Bank reserves the right to sell, assign, transfer, negotiate or grant participation in all or any part of, or any interest in Bank's rights and benefits hereunder, in connection therewith, Bank may disclose all documents and information which Bank now or hereafter may have relating to Borrower or Borrower's business.

17.3 Paragraph headings and paragraph numbers have been set forth herein for convenience only; unless the contrary is compelled by the context, everything contained in each paragraph applies equally to this entire Agreement. Unless the context of this Agreement clearly requires otherwise, references to the plural include the singular, references to the singular include the plural, and the term "including" is not limiting. The words "hereof," "herein," "hereby," "hereunder," and similar terms in this Agreement refer to this Agreement as a whole and not to any particular provision of this Agreement.

17.4 Neither this Agreement nor any uncertainty or ambiguity herein shall be construed or resolved against Bank or Borrower, whether under any rule of construction or otherwise; on the contrary, this Agreement has been reviewed by all parties and shall be construed and interpreted according to the ordinary meaning of the words used so as to fairly accomplish the purposes and intentions of all parties hereto.

17.5 Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

17.6 This Agreement cannot be changed or terminated orally. This Agreement contains the entire agreement of the parties hereto and supersedes all prior agreements, understandings, representations, warranties and negotiations, if any, related to the subject matter hereof, and none of the parties shall be bound by anything not expressed in writing.

17.7 The parties intend and agree that their respective rights, duties, powers, liabilities, obligations and discretions shall be performed, carried out, discharged and exercised reasonably and in good faith.

17.8 In addition, if this Agreement is secured by a deed of trust or mortgage covering real property, then the trustor or mortgagor shall not mortgage or pledge the mortgaged premises as security for any other Indebtedness or obligations. This Agreement, together with all other indebtedness secured by said deed of trust or mortgage, shall become due and payable immediately, without, notice, at the option of Bank, (a) if said trustor or mortgagor shall mortgage or pledge the mortgaged premises for any other Indebtedness or obligations or shall convey, assign or transfer the mortgaged premises by deed, installment sale contract or other instrument; (b) if the title to the mortgaged premises shall become vested in any other person or party in any manner whatsoever; or (c) if there is any disposition (through one or more transactions) of legal or beneficial title to a controlling interest of said trustor or mortgagor.

17.9 Each undersigned Borrower hereby agrees that it is jointly and severally, directly, and primarily liable to Bank for payment and performance in full of all duties, obligations and liabilities under this Agreement and each other document, instrument and agreement entered into by Borrower with or in favor of Bank in connection herewith, and that such liability is independent of the duties, obligations and liabilities of any other Borrower or any other guarantor of the Indebtedness, as applicable. Each reference herein to Borrower shall mean each and every Borrower party hereto, individually and collectively, jointly and severally.

17.10 This Agreement maybe executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement. This Agreement, together with each other document, instrument and agreement entered into with or in favor of Bank in connection herewith or in connection with the Prior Loan Agreement, to the extent any such document instrument or agreement is not amended and restated in connection herewith, constitute the entire understanding among the parties hereto with respect to the subject matter hereof and, as applicable amends and restates in full the Prior Loan Agreement and any other agreement, written or oral, with respect thereto. Borrower ratifies and reaffirms the continuing effectiveness of all promissory notes, guaranties, security agreements, mortgages, deeds of trust, environmental agreements, and all other instruments, documents and agreements entered into in connection with the Prior Loan Agreement that are not amended and restated in connection with this Agreement.

17.11 At any time at the request of Bank, Borrower shall execute and deliver to bank security agreements, pledges, assignments, endorsements of certificates of title, applications for title, affidavits, reports, notices, schedules of accounts, letters of authority and other documents that Bank may reasonably request, in form satisfactory to Bank, to perfect and continue perfected Bank's security interests in the Collateral and in order to fully consummate all of the transactions contemplated under the Loan Documents.

IN WITNESS WHEREOF, the parties hereto have caused this Third Amended and Restated Loan and Security Agreement (Accounts and Inventory) to be executed as of the date first hereinabove written.

Accepted and effective as of  
3/25/03

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at Bank's Headquarters Office

COMERCIA BANK - CALIFORNIA  
a California banking corporation

By: /s/ Lorraine Sue  
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Name: Lorraine Sue  
-----

Title: \_\_\_\_\_

Address for Notices:

75 East Trimble Road  
San Jose, California 95131  
Attn: Credit Manager  
Fax number (408) 556-5097

With a copy to:

1331 North California Blvd., Suite 4000  
Walnut Creek, California 94596-9504  
Attn: Lorraine Sue

Fax number: (925) 941-1999

BORROWER:

FORMFACTOR, INC.  
a Delaware corporation

By: /s/ Jens Meyerhoff  
-----

Name: /s/ Jens Meyerhoff  
-----

Title: CFO  
-----

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address for Notices:

2140 Research Drive  
Livermore, California 94550  
Attn: Jens Meyerhoff

Fax number (925) 294-4067

Exhibit 2.3

FORM OF TERM NOTE

Exhibit 5.1

LOAN DOCUMENTS

1. LIBOR-Addendum to Third Amended and Restated Loan and Security Agreement (Accounts and Inventory)
2. Variable Rate - Installment Note
3. LIBOR - Addendum to Variable Rate - Installment Note
4. Environmental Rider
5. Equipment Rider
6. Disbursement Authorization
7. Corporation Resolutions and Incumbency Certification -- Authority to Procure Loans
8. Borrower's Telephone and Facsimile Authorization
9. Automatic Loan Payment Authorization
10. Landlord's Consents

## CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in this Amendment No. 5 to the Registration Statement on Form S-1 of our report dated January 17, 2003, except for the last paragraph of Note 5, as to which the date is February 21, 2003, relating to the consolidated financial statements and our report dated May 6, 2003, relating to the financial statement schedule of FormFactor, Inc., which appear in such Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

San Jose, California  
May 6, 2003

