

# **Investor Presentation**

September 2024



# Forward-Looking Statements; Non-GAAP Financial Measures

This presentation contains forward-looking statements within the meaning of the U.S. Securities Exchange Act of 1934 and the Securities Act of 1933. The forward-looking statements include statements concerning, among other things, our future business model and strategies, our financial model and structure, market and market share growth, industry trends, customer demand and growth opportunities. In some instances, you can identify these statements by forward-looking words, such as "may," "might," "will," "could," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "intend" and "continue," the negative or plural of these words and other comparable terminology. The target financial model described in this presentation is intended to aid in the evaluation of long-term potential, and is not guidance or a statement of forecasted performance in a specific future period. The forward-looking statements are only predictions based on our current expectations and our projections about future events. All information and forward-looking statements included in this presentation and the related discussions are based upon information available to us as of September 4, 2024. You should not place undue reliance on these forward-looking statements. These forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by these statements, including risks related to technology and market trends; the benefits of acquisitions and investments; macroeconomic conditions; uncertainties related to the COVID-19 pandemic and the impacts of our responses to it; the interpretation and impacts of changes in export controls and other trade barriers; our success in executing our business strategies and other risks discussed in the section titled "Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 30, 2023 and in our other filings with the U.S. Securities and Exchange Commission copies of which may be obtained by visiting the Investor Relations section of our website at http://investors.formfactor.com or at www.sec.gov.

This presentation and related discussions contain non-GAAP measures relating to our financial performance. These measures may be different from non-GAAP financial measures used by other companies. The presentation of this financial information is not intended to be considered in isolation of, or as a substitute for, financial information prepared and presented in accordance with generally accepted accounting principles. You can find the reconciliation of non-GAAP financial measures to the most directly comparable U.S. GAAP measures in the Supplemental Information contained in this presentation.



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# **FormFactor At a Glance**

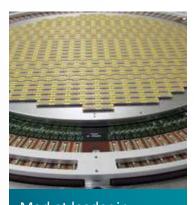


ORMFACTOR

#### \*As of 07/31/24

\*\* Customers that have accounted for >10% of revenue for one or more quarters since Q1 FY18

## **Compelling Investment Thesis**



Market leader in large and growing semiconductor test and measurement sector



Benefits from powerful secular trends:

- Exponential growth in semiconductor content, increased 5G and data center spending
- Adoption of advanced packaging to counter slowdown in Moore's Law



Technology leadership enables customers' most critical roadmap advancements, from R&D through Production



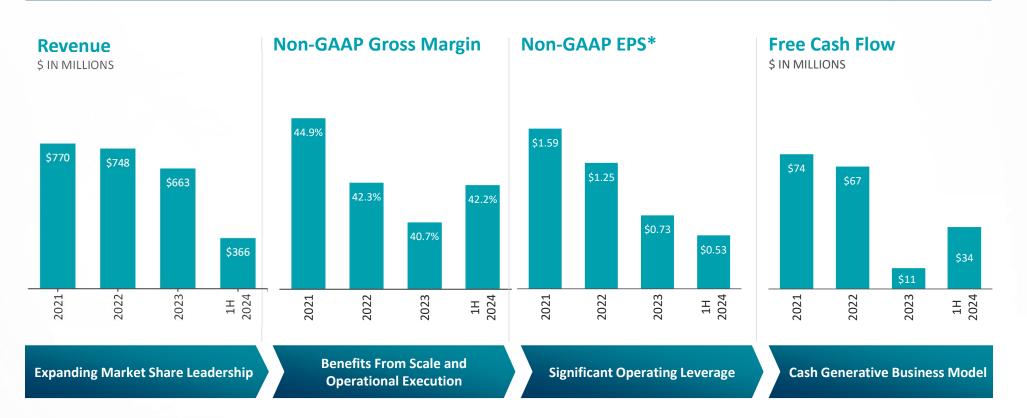
Profitable financial model with earnings growth and strong cash flow



Active execution of acquisition strategy increases scale and diversification



## **Proven Track Record**



**FORMFACTOR** 

See Supplemental Information for reconciliations of non-GAAP financial measures to the most directly comparable GAAP financial measures. \*All references to EPS are on a diluted basis.

Sources: Historical information, company SEC filings and press releases.

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# **Recognized Industry Leader**



2014 • 2015 • 2016 2017 • 2018 • 2019 2020 • 2021 • 2022 2023

## **S**FORMFACTOR™

## FormFactor Named One of THE BEST Suppliers in the Semiconductor Industry for Tenth Consecutive Year

**LIVERMORE, Calif., May 17, 2023** (GLOBE NEWSWIRE) — FormFactor, Inc. (NASDAQ: FORM), a leading semiconductor test and measurement supplier, announced that it has again been named a top performer in TechInsights' customer satisfaction survey earning five stars in three categories:

10 BEST Focused Suppliers of Chip Making Equipment, THE BEST Suppliers of Test Equipment, and THE BEST Suppliers of Test Subsystems.

In this survey, worldwide semiconductor manufacturing companies rate their vendors for supplier performance, customer service, and product performance. The results mark ten years running that FormFactor has been selected in THE BEST Suppliers of Test Subsystems which includes manufacturers of probe cards, test sockets, and device interface boards. FormFactor again ranked number one in the '10 BEST Focused Suppliers of Chip Making Equipment' category.

"Customers give FormFactor high rankings for technical leadership and field engineering support," said G. Dan Hutcheson, Vice Chair, TechInsights. "In multiple categories, FormFactor consistently rates as a Five Star supplier."

## Trusted by leading semiconductor designers and foundries



# FormFactor Earns Intel's 2024 EPIC Distinguished Supplier Award



## 

#### FormFactor Earns Intel's 2024 EPIC Distinguished Supplier Award

LIVERMORE, CA – (Globe Newswire – March 28, 2024) – FormFactor is proud to announce that it has earned Intel's EPIC Distinguished Supplier Award. Through its dedication to Excellence, Partnership, Inclusion, and Continuous (EPIC) quality improvement, FormFactor has achieved a level of performance that consistently exceeds Intel's expectations.

"As one of the 27 Distinguished Supplier Award recipients in 2024, FormFactor stands out among suppliers in Intel's trusted supply chain," said Keyvan Esfarjani, chief global operations officer at Intel. "Through their relentless drive to improve, they have achieved a level of performance that consistently exceeds Intel's expectations and serves as a benchmark across the ecosystem."

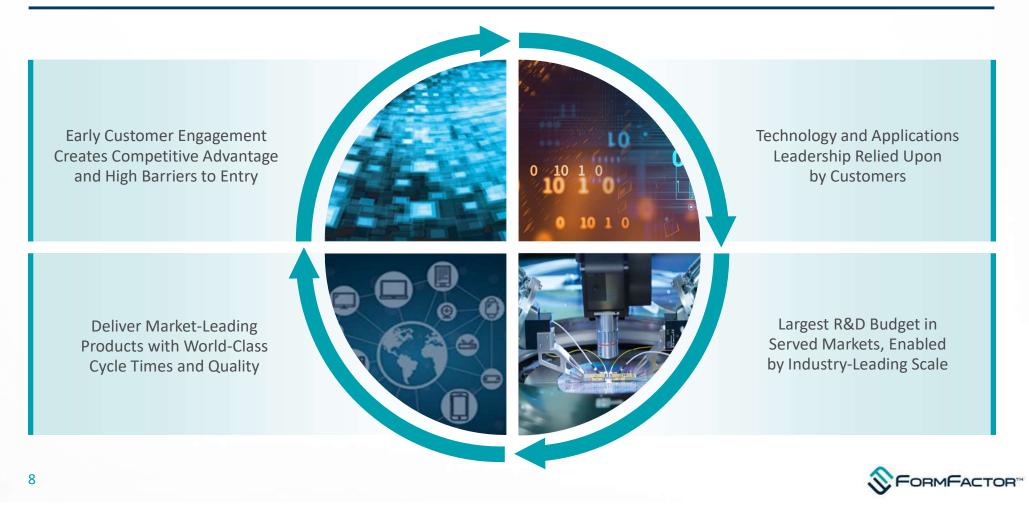
The Intel EPIC Distinguished Supplier Award recognizes a consistent level of strong performance across all performance criteria. Of the thousands of Intel suppliers around the world, only a few hundred qualify to participate in the EPIC Supplier Program. The EPIC Distinguished Award is the second-highest honor a supplier can achieve. In 2024, only 27 suppliers in the Intel supply chain network earned this award.

To qualify for an Intel EPIC Distinguished Supplier Award, suppliers must exceed expectations, meet aggressive performance goals, and score 80 percent or higher in performance assessments throughout the year. Suppliers must also meet 80 percent or more of their improvement plan deliverables and demonstrate formidable quality and business systems.

# FormFactor is one of twenty-seven Distinguished Supplier Award recipients in all of Intel's global supply chain



## **How FormFactor Wins**



## FormFactor Occupies a Unique Place in Semiconductor Industry

## Front-End: Wafer Fabrication Equipment



#### Industry: \$100 Billion

- 6% CAGR
- Highly cyclical, tied to capital spending
- Highly consolidated



#### Industry: \$2.5 Billion Advanced Probe Cards: \$2.0B; Engineering Systems: \$0.5B

- 8% CAGR for Advanced Probe Cards, devicespecific consumables
- 3% CAGR for Engineering Systems, driven by R&D budgets
- Demand driven by design releases on both new and existing nodes
  - Moderate cyclicality

#### Consolidated industry

## Back-End: Wafer Assembly and Final Test



#### Industry: \$3.5 Billion

- 7% CAGR
- Highly cyclical, tied to capital spending
- Highly fragmented

## Customers' shorter product cycles and faster times-to-market amplify secular growth in silicon devices

Sources: 2023 Data. All market size and growth rates are TechInsights estimates, except for Engineering Systems which are company estimates.



## Customers Value, FormFactor Benefits From "Lab to Fab" Capabilities

## Customers benefit from accelerated path from concept to volume production

 Saves time and effort, improves yields, shortens time-to-market FormFactor Engages Customers Throughout Their Product Life Cycle



R&D/Engineering

High Volume Engineering/



Fu

Full Production

Niche Production

FormFactor's unique visibility to emerging trends, e.g. Silicon Photonics, Quantum Computing, Cryogenics, Micro LED, ensures focused R&D spend

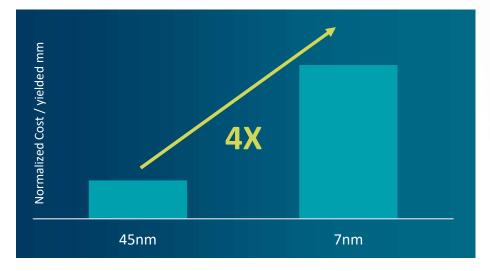


# **FormFactor Benefits from Two Industry Dynamics**

#### Secular Growth in the Semiconductor Industry



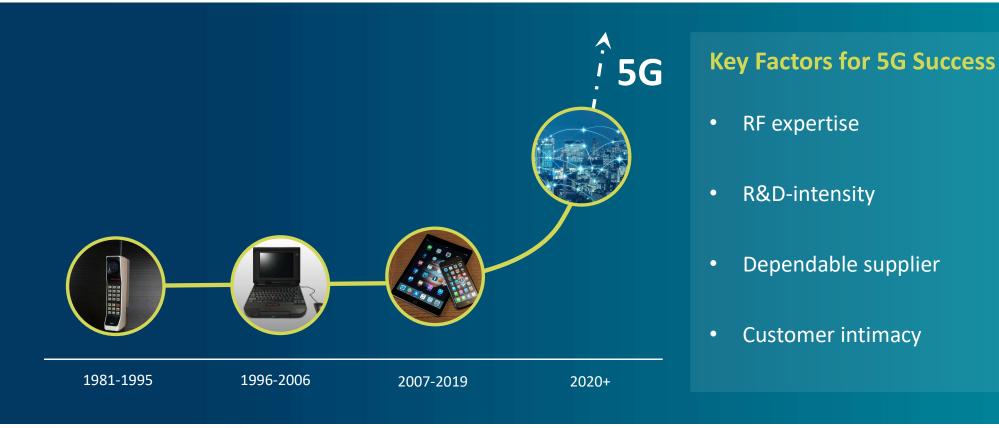
## Slowing of Moore's Law: Node shrinks no longer provide cost reduction



Source: Su (AMD), IEDM 2017.



# **Exponential Growth in Silicon Devices Will Be Accelerated by 5G**

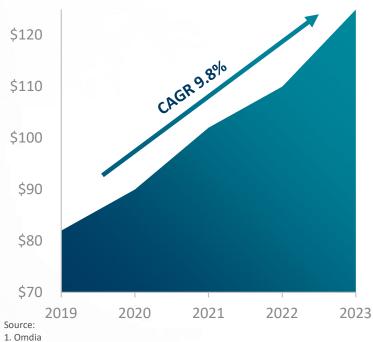


Source: Yole Development of Technology for 5G.

# Infrastructure Spending and 5G Adoption Are Spurring Semiconductor and Probe Card Use

Mobility

#### Data Center Capital Spending Forecast<sup>1</sup> IN BILLIONS



2. Cisco "Annual Internet Report"

3. Lear Corporation, IHS Automotive for industry production.

#### 5G Will Drive Increased Content in Mobility and Automotive Applications

	10% >			BOB	h.: 2022
0	Connected Devices 2018-2023 CAGR	M2M <b>50%</b>	Connected Smartphones 23%	TVs <b>11%</b>	Other (tablets, PCs, etc.) 16%



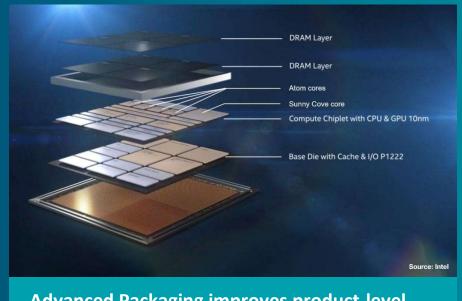
Trends Driving Semiconductor Content and Sensor Growth								
Autonomous ≈ \$50B	Electrification	Connectivity ≈ \$9B						
2035 Market Size	2027 Market Size	2027 Market Size						



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## Advanced Packaging Addresses Scaling Challenges As Moore's Law Slows

# Node shrinks no longer provide cost reduction Output 4X Atmage: Atmage



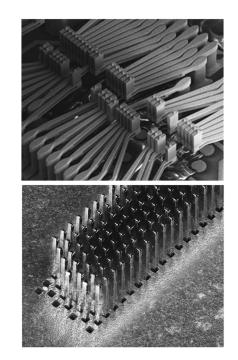
Advanced Packaging improves product-level performance, power and density

Source: Su (AMD), IEDM 2017. Note: Cost per yielded mm2 for a 250 mm2 die.



# **Probe Cards are Critical to Advanced Packaging**





Test intensity, and therefore probe card demand, increases as advanced packaging becomes widespread



# Unique Capabilities Position FormFactor for Faster Growth in Advanced Probe Cards



#### \$2.7 Billion Advanced Probe Card Market In 2028

Source: \*2023 TechInsights estimates. \*\*Company estimates.



# **Poised for Above-Market Growth in Engineering Systems**

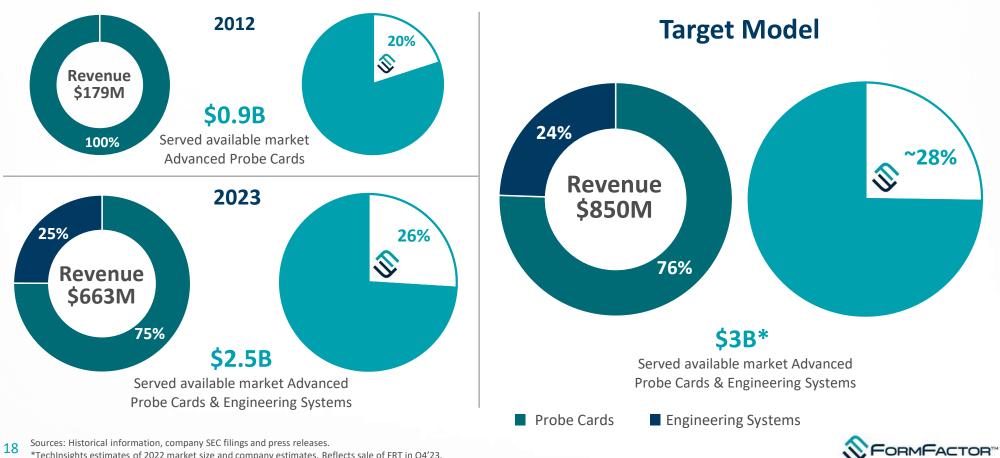


## Technology Leadership and Worldwide Infrastructure Lead to Customer Intimacy and Early Involvement

Source: \*2022 TechInsights estimates. \*\*Company estimates.



## **FormFactor's Target Model**



\*TechInsights estimates of 2022 market size and company estimates. Reflects sale of FRT in Q4'23.

# Growth to \$850M Target Model Revenue, Delivers \$2.00 Non-GAAP EPS

	2023 Actuals	1H 2024	Target Model
Revenue	\$663M	\$366M	\$850M
Non-GAAP Gross Margin	40.7%	42.2%	47.0%
Non-GAAP Operating Margin	9.2%	11.3%	11.0%
Non-GAAP Effective Tax Rate	15.6%	14.9%	17.0%
Non-GAAP Diluted Earnings Per Share	\$0.73	\$0.53	\$2.00
Free Cash Flow	\$11M	\$34M	\$160M

See Supplemental Information below for reconciliations of non-GAAP financial measures to the most directly comparable GAAP financial measures. Sources: Historical information, company SEC filings and press releases.



# **Drivers of Shareholder Value Creation**

## **Revenue Growth**

- Underlying growth in semiconductor applications
- Participation in Advanced Packaging and 5G mega trends
- Diversification of customers

## **Operating Leverage**

- Gross Margin expansion
- Disciplined operating structure
- Robust Operating Cash Flow and Free Cash Flow
- Profitable growth

## **Capital Allocation**

#### **Focused reinvestment**

- R&D
- Capacity expansion
- Fund organic growth

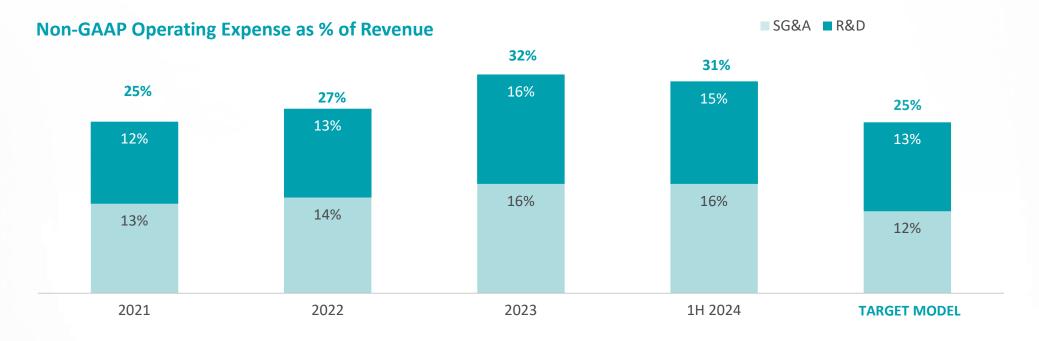
#### M&A

- Increase SAM
- Acquire attractive technologies
- Patient, deliberate approach
  - Complementary to organic growth
  - Diversifies revenue stream
  - Accretive to earnings

Stock buyback to offset dilution from stock-based compensation







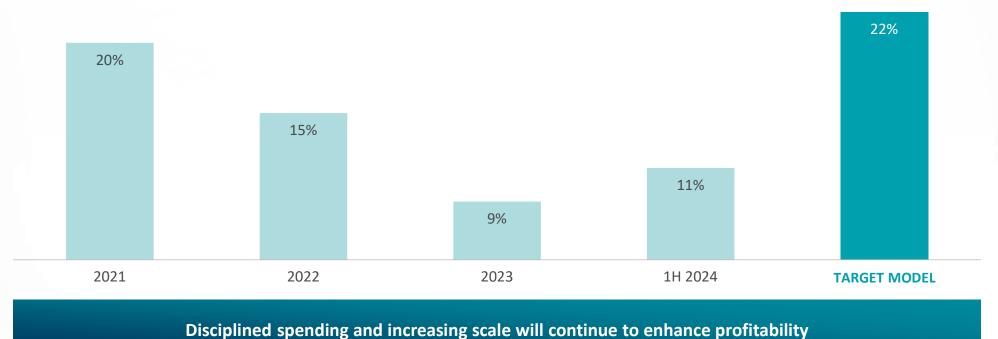
## Capitalize on scale to leverage our operating expense infrastructure. Continued significant R&D investment creates new organic growth opportunities.

See Supplemental Information below for reconciliations of non-GAAP financial measures to the most directly comparable GAAP financial measures. Sources: Historical information, company SEC filings and press releases.



## **Driving Operating Leverage Through Scale**

## **Non-GAAP Operating Margin**



See Supplemental Information below for reconciliations of non-GAAP financial measures to the most directly comparable GAAP financial measures. Sources: Historical information, company SEC filings and press releases.



# **Capital Expenditures to Support Organic Growth**

	2020	2021	2022	2023	1H'24	Target CapEx Model
СарЕх	\$56M	\$67M	\$65M	\$56M	\$22M	\$30M - \$35M
Revenue	\$694M	\$770M	\$748M	\$663M	\$366M	\$850M
CapEx as % of Revenue	8.0%	8.6%	8.7%	8.4%	6.0%	3.5%-4.0%



New Livermore Manufacturing Center



Highly Automated Manufacturing



Factory Expansions



# Acquisition Strategy Adds Scale and Diversification

# Established process focused on extending long-term industry leadership

- Acquisition priorities
  - Market leader in growing market
  - Compelling technical capabilities
  - Accretive
  - Focus on tuck-ins as well as larger scale companies
- Leveraging FormFactor's key capabilities and infrastructure to achieve synergies

## **Opportunistic tuck-in acquisitions aligned with our longterm strategy and M&A principles**

- Provide critical enabling technologies reinforcing FormFactor's leadership
- Create potential opportunity to increase served available market

## Proven track record of identifying and integrating accretive acquisitions MICROPROBE

Year: 2012 Amount: \$117M



**Year:** 2016 **Amount:** \$352M

Acquisition of Advantest's probe card assets

**Year:** 2020 **Amount:** \$35M



**Year:** 2020 **Amount:** \$15M

Acquisition of JanisULT dilution refrigerator product line Year: 2022 Amount: \$3.4M

# Highly Resilient Business Model

## Enabled by Flexible Cost Structure

- 100% of employees with variable pay component
- Flexible staffing model

## Strong and Healthy Balance Sheet

- Supported by strong free cash flows
- History of successfully managing debt and significant borrowing capacity available if needed



# **Recent Results (non-GAAP)**

	Revenue	Gross Margin	Diluted EPS	Free Cash Flow
Q1'24 ACTUAL	\$168.7M	38.7%	\$0.18	\$19.7M
Q2'24 ACTUAL	\$197.5M	45.3%	\$0.35	\$14.2M
Q3'24 OUTLOOK	\$200M +/- \$5M	43.0% +/- 1.5%	\$0.31 +/- \$0.04	

## Q2'24 and Q3'24 Themes:

- Q2 revenue and profitability exceeded the midpoint of the outlook range; Probe Card segment strength drove secondquarter results, with HBM doubling for the third consecutive quarter.
- Q3 revenue outlook range reflects demand levels similar to those achieved in the second quarter, although with a less-favorable DRAM product mix, with heavier weighting towards DDR5 probe cards.





# Supplemental Information



## FY 2023 GAAP to Non-GAAP Reconciliation

		GAAP	Adjustments									Ν	lon-GAAP		
								ortization of					_		
		welve Months	December Stock-based				Acc	uisition Fair						elve Months	
	En	ded December 30, 2023			Amortization of Intangibles		Value Adjustments and		D ( ) ;				Ended December		
Revenues	\$	663,102	<u> </u>	mpensation	-	\$ —		S —		Restructuring \$ —		Sale of Business		<b>30,2023</b> \$ 663,102	
Cost of revenues	р С	404,522	ծ Տ	(6,854)	ծ Տ	(3,081)	э \$	(1,255)	ф	(357)	ծ Տ	_	¢ Þ	392,975	
Gross profit	\$	258,580	\$	6,854	\$	3,081	\$	1,255	\$	357	\$		\$	270,127	
Gross pront	Э	238,380 39.0 %	Э	0,834	\$	3,081	Ф	1,233	ф	557	Э		Ф	40.7 %	
<b>Operating expenses:</b>		39.0 %												40.7 %	
1 0 1	¢	115 765	¢	(10.(52))	¢		¢	(222)		(201)			¢	104 (00	
Research and development Sales and marketing	\$	115,765	\$ ¢	(10,652)	\$	(2.7(0))	\$ \$	(222) 10		(291)		_	\$ ©	104,600	
General and administrative	\$ \$	75,142	\$ ¢	(8,448)	\$	(3,769)	•			(775)		(2,407)	3 ¢	62,160	
	\$	57,870	\$	(12,662)	\$	(2.7(0))	\$	(100)	¢	(117)	¢	(2,407)	\$ \$	42,584	
Total operating expenses	\$	248,777	\$	(31,762)	\$	(3,769)	\$	(312)	\$	(1,183)	\$	(2,407)		209,344	
Gain on sale of business	\$	72,953	\$		\$		\$		\$	1.540	\$	(72,953)	\$		
Operating profit (loss)	\$	82,756	\$	38,616	\$	6,850	\$	1,567	\$	1,540	\$	(70,546)	\$	60,783	
Interest income	¢	7.017	¢		¢		¢		¢		¢		¢	2012	
	\$	7,217	\$	—	\$	—	\$		\$	—	\$	—	\$	7,217	
Interest expense	\$	(421)	\$	—	\$	—	\$		\$	—	\$	—	\$	(421)	
Other income (expense), net	\$	(285)	\$		\$		\$		\$	1.540	\$		\$	(285)	
Income (loss) before income taxes	\$	89,267	\$	38,616	\$	6,850	\$	1,567	\$	1,540	\$	(70,546)	\$	67,294	
Provision (benefit) for income taxes	\$	6,880	\$	(6,369)	\$	(1,130)	\$	(258)	\$	(254)	\$	11,635	\$	10,504	
	<u>_</u>		<u>_</u>						÷		<u>_</u>	(00.404)			
Net income (loss)	\$	82,387	\$	44,985	\$	7,980	\$	1,825	\$	1,794	\$	(82,181)	\$	56,790	
Net income (loss) per share:		<b>* * * *</b>		<b>**</b>		<b>*</b> ****		<b>*</b> **		<b>*</b> ••• <b>•</b>		<b>*</b> /1 • 0		<b>** **</b>	
Basic		\$1.06		\$0.58		\$0.10		\$0.02		\$0.02		\$(1.06)		\$0.73	
Diluted		\$1.05		\$0.58		\$0.10		\$0.02		\$0.02		\$(1.05)		\$0.73	
Weighted-average number of shares	_	77 270		77 270		77.270		77 270		77.270		77 270		77,370	
Basic Diluctoria		77,370		77,370		77,370		77,370		77,370		77,370		,	
Diluted	_	78,159		78,159		78,159		78,159		78,159		78,159		78,159	

28 In thousands, except per share data



## 1H 2024 GAAP to Non-GAAP Reconciliation

	GAAP		Non-GAAP				
			Amortization of				
				Acquisition Fair		C M 4 F L L	
	Six Months Ended June 29, 2024	Stock-based Compensation	Amortization of Intangibles	Value Adjustments and Other	Sale of Business	Six Months Ended June 29, 2024	
Bevenues	\$366,199		intaligibles		Sale of Busiliess	\$366,199	
Cost of revenues	\$216,561	(\$3,860)	(\$898)	(\$316)		\$211,487	
Gross profit	\$149,638	\$3,860	\$898	\$316		\$154,712	
	40.9 %	\$5,800	\$656	\$510		42.2 %	
Operating expenses:	40.9 %					42.2 70	
Research and development	\$60,191	(\$5,227)				\$54,964	
Sales and marketing	\$38,172	(\$4,634)	(\$382)	—		\$33,156	
General and administrative	\$32,781	(\$6,893)	(\$382)	(\$98)	(\$689)	\$25,101	
Total operating expenses	\$131,144	(\$16,754)	(\$382)	(\$98)	(\$689)	\$113,221	
Gain on sale of business	\$20,581	(\$10,754)	(\$382)	(\$90)	(\$20,581)	\$115,221	
Operating profit	\$39,075	\$20,614	\$1,280	\$414	(\$19,892)	\$41,491	
Operating pront	\$39,075	\$20,014	\$1,200	\$ <del>4</del> 14	(\$19,692)	\$41,491	
Interest income	\$6,772	_	_	_	_	\$6,772	
Interest expense	(\$201)		_	_		(\$201)	
Other income (expense), net	\$880	_	_	_	_	\$880	
Income before income taxes	\$46,526	\$20,614	\$1,280	\$414	(\$19,892)	\$48,942	
Provision for income taxes	\$5,353	\$16,400	\$1,018	\$329	(\$15,825)	\$7,275	
	++,+++		+-,	**->	(+-+,+)	÷,,_,+	
Net income	\$41,173	\$4,214	\$262	\$85	(\$4,067)	\$41,667	
Net income per share:							
Basic	\$0.53	\$0.05	\$0.00	\$0.00	\$(0.05)	\$0.54	
Diluted	\$0.53	\$0.05	\$0.00	\$0.00	<u>\$(0.05)</u> \$(0.05)	\$0.53	
Dhuteu	\$0.32	\$0.05	\$0.00	\$0.00	\$(0.03)	\$0.55	
Weighted-average number of shares:							
Basic	77,343	77,343	77,343	77,343	77,343	77,343	
Diluted	78,746	78,746	78,746	78,746	78,746	78,746	

29 In thousands, except per share data

# **Free Cash Flow Reconciliation**

#### Free Cash Flow Trend (in thousands)

	2019	2020	2021	2022	2023	1H'24
Net cash provided by operating activities	\$ 121,048 \$	169,256	\$ 139,364 \$	131,786 \$	64,602 \$	54,890
Add: Cash paid for interest	\$ 1,405 \$	867	\$ 643 \$	535 \$	422 \$	201
Add: Cash paid for acquisition / divestiture related expenses	\$ 213 \$	509	\$ 209 \$	— \$	2,407 \$	677
Capital expenditures	\$ (20,847) \$	(55,865)	\$ (66,496) \$	(65,254) \$	(56,027) \$	(21,834)
Free cash flow	\$ 101,819 \$	114,767	\$ 73,720 \$	67,067 \$	11,404 \$	33,934



## **About Non-GAAP Financial Measures**

We believe that the presentation of non-GAAP earnings per fully-diluted share, free cash flow and other non-GAAP measures in this presentation provides supplemental information that is important to understanding financial and business trends and other factors relating to our financial condition and results of operations. These non-GAAP measures are among the primary indicators used by management as a basis for planning and forecasting future periods, and by management and our board of directors to determine whether our operating performance has met certain targets and thresholds. Management uses non-GAAP operating income (loss), non-GAAP earnings per fully-diluted share and other non-GAAP measures when evaluating operating performance because it believes that the exclusion of the items indicated herein, for which the amounts or timing may vary significantly depending upon our activities and other factors, facilitates comparability of our operating performance from period to period. We use free cash flow to conduct and evaluate our business as an additional way of viewing our liquidity that, when viewed with our GAAP results, provides a more complete understanding of factors and trends affecting our cash flows. Many investors also prefer to track free cash flow, as opposed to only GAAP earnings. Free cash flow has limitations due to the fact that it does not represent the residual cash flow available for discretionary expenditures, and therefore it is important to view free cash flow as a complement to our entire consolidated statements of cash flows. We have chosen to provide non-GAAP information to investors so they can analyze our operating results closer to the way that management does, and use this information in their assessment of our business and the valuation of our company. We compute non-GAAP operating income (loss) and non-GAAP fully-diluted earnings per share by adjusting GAAP operating income (loss) and GAAP earnings per fully-diluted share to remove the impact of certain items and the tax effect of those adjustments. These and other non-GAAP measures are not in accordance with, or an alternative to, GAAP and may be materially different from other non-GAAP measures, including similarly titled non-GAAP measures used by other companies. The presentation of this additional information should not be considered in isolation from, as a substitute for, or superior to, operating income (loss) or earnings per fully-diluted share and other measures prepared in accordance with GAAP. Non-GAAP financial measures have limitations in that they do not reflect certain items that may have a material impact upon our reported financial results. We may expect to continue to incur expenses of a nature similar to these non-GAAP adjustments, and exclusion of these items should not be construed as an inference that these costs are unusual, infrequent or nonrecurring.

For more information on non-GAAP measures and adjustments, please see the Supplemental Information in this presentation and available at <a href="http://investors.formfactor.com">http://investors.formfactor.com</a> for reconciliations of non-GAAP financial measures to the most directly comparable GAAP financial measures.

