

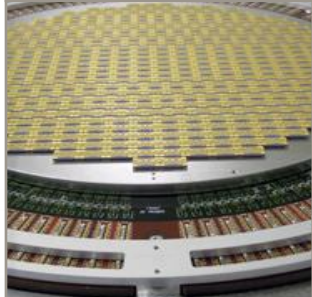


# Forward-Looking Statements; Non-GAAP Financial Measures

This presentation contains forward-looking statements that are based on our current expectations, forecasts and assumptions, and that involve risks and uncertainties. These statements include, but are not limited to, statements regarding our future performance (such as our projected operating results, financial results, financial condition and targets), business strategy and plans, and anticipated developments in our business and industry. Forward-looking statements may contain words such as “target,” “might,” “will,” “could,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “intend,” and “continue,” and the negative or plural of these words, and similar expressions. Our actual results may differ materially from those described in this presentation and related discussions for a variety of reasons. Factors that could cause or contribute to such differences include, but are not limited to: macro-economic conditions; business cycles; changes in the competitive environment; changes in the technologies or test strategies used by customers and other factors affecting the demand for our products; challenges to the efficient development and manufacturing of our existing and new products; disruptions or price increases in our supply chain; risks associated with selling products internationally; and risks to our ability to further diversify or realize benefits from past or future acquisitions. More information about factors that could affect our operating results is included under the caption “Risk Factors” and elsewhere in our annual report on Form 10-K and quarterly reports on Form 10-Q 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 the SEC's website at [www.sec.gov](http://www.sec.gov). All information in this presentation and the related discussions are as of February 6, 2019. Undue reliance should not be placed on these forward-looking statements, which are based on information available to us on the date hereof. No assurances are, or can be, given that any of the circumstances or events anticipated by the forward-looking statements will transpire or occur, or if any of them do occur, what impact they will have on our results of operations or financial condition. Unless required by law, we are under no obligation, and disclaim any obligation, to update or revise forward-looking statements whether as a result of new information, future events, or otherwise.

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 at the end of this presentation.

# FormFactor Investment Themes



Leading supplier of probe cards and engineering systems - a \$1.5B growing market of consumables & tools



Aligned with long-term electronics technology and demand trends through long-term relationships with leading customers



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



Structurally profitable financial model delivering earnings growth and strong cash flow

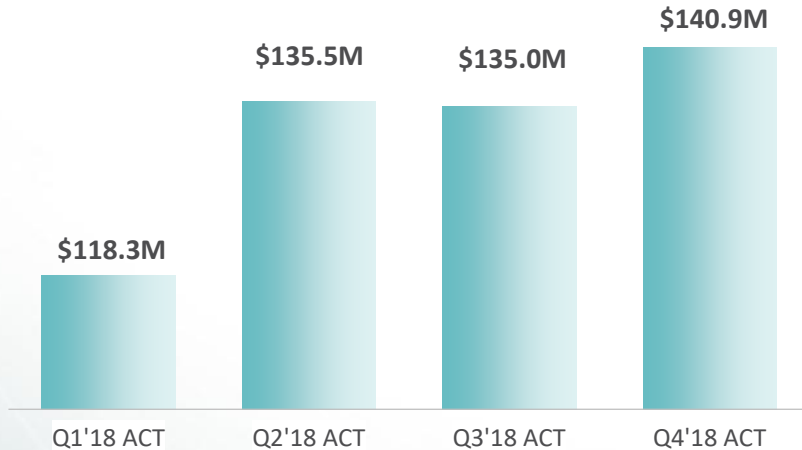


Active execution of acquisition strategy provides both scale and diversification

# Recent Results

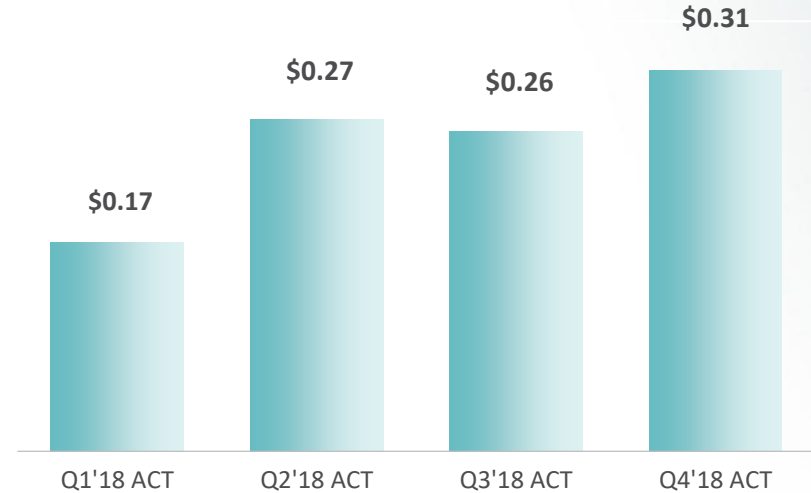
Free Cash Flow	Q1'18	Q2'18	Q3'18	Q4'18
	\$6.3M	\$16.8M	\$13.0M	\$15.8M

## 2018 Revenue



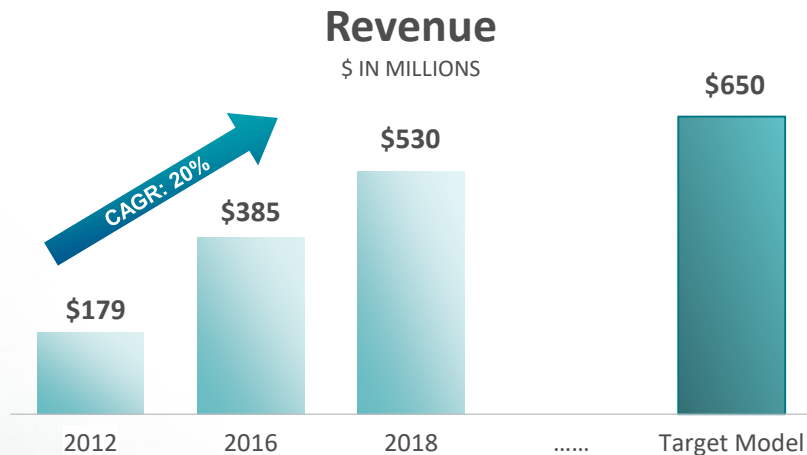
Device-specific consumable products & diversified end markets producing consistent results

## 2018 Non-GAAP EPS

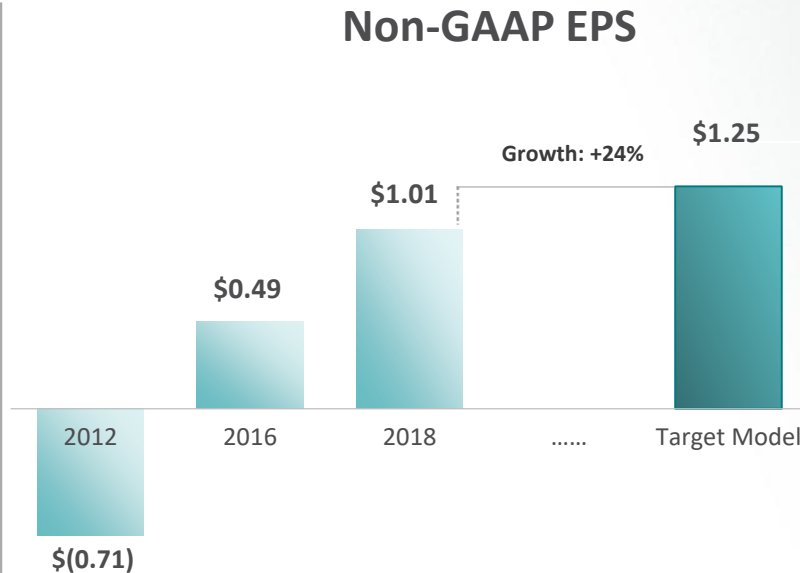


Consistent profitability & cash generation while investing in increasing differentiation

# Market Share Gains and Diversifying Demand Has Been Producing Strong Financial Results



Growing and diversifying revenue



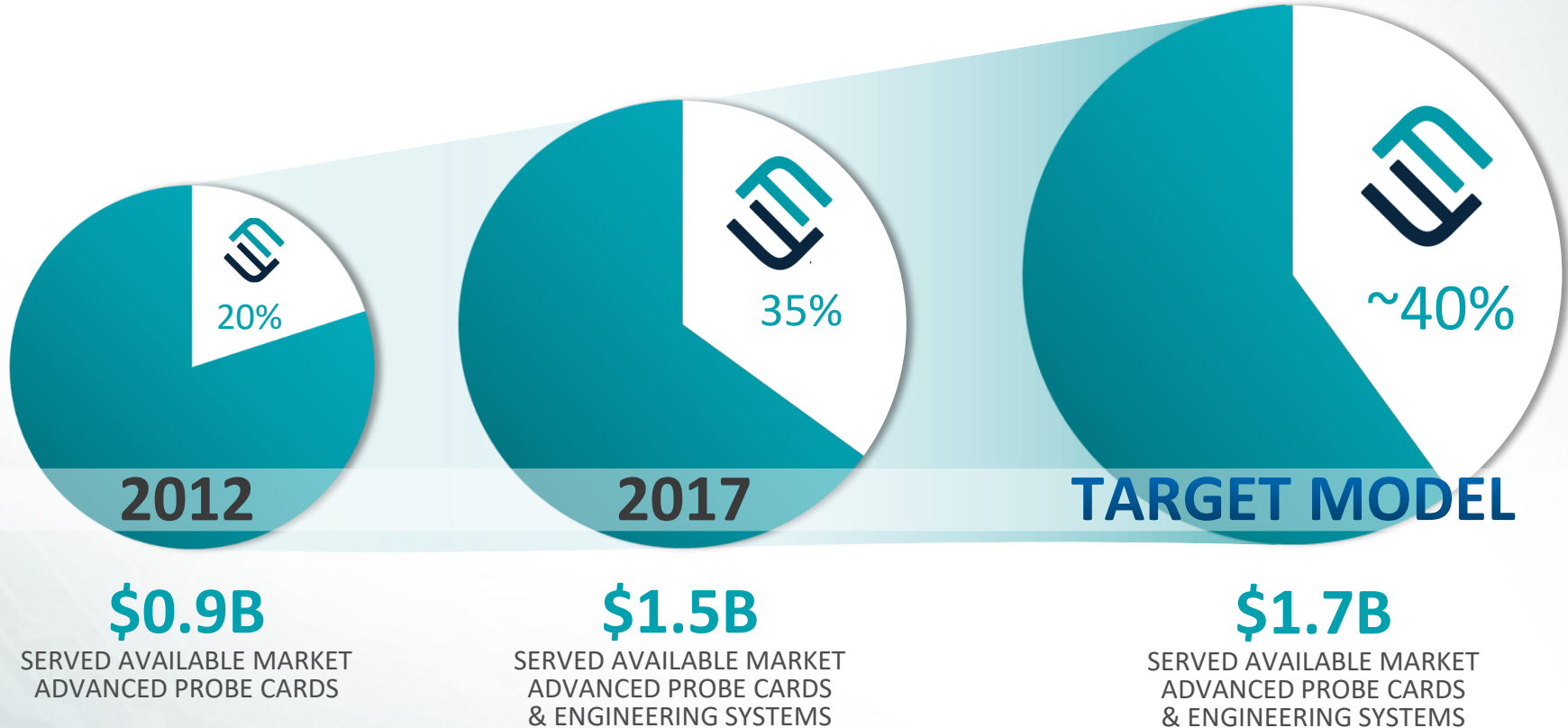
Expanding Earnings Per Share

# Growth to \$650M Target Model Delivers \$1.25 Non-GAAP Earnings Per Share

	2018 Actuals	Target Model
Revenue	\$530M	\$650M
Non-GAAP Gross Margin	44.3%	46%
Non-GAAP Operating Income	15.8%	19%
Non-GAAP Effective Tax Rate	6.3%	25.0%
Non-GAAP Diluted Earnings Per Share	\$1.01	\$1.25
Free Cash Flow	\$51.9M	\$110M



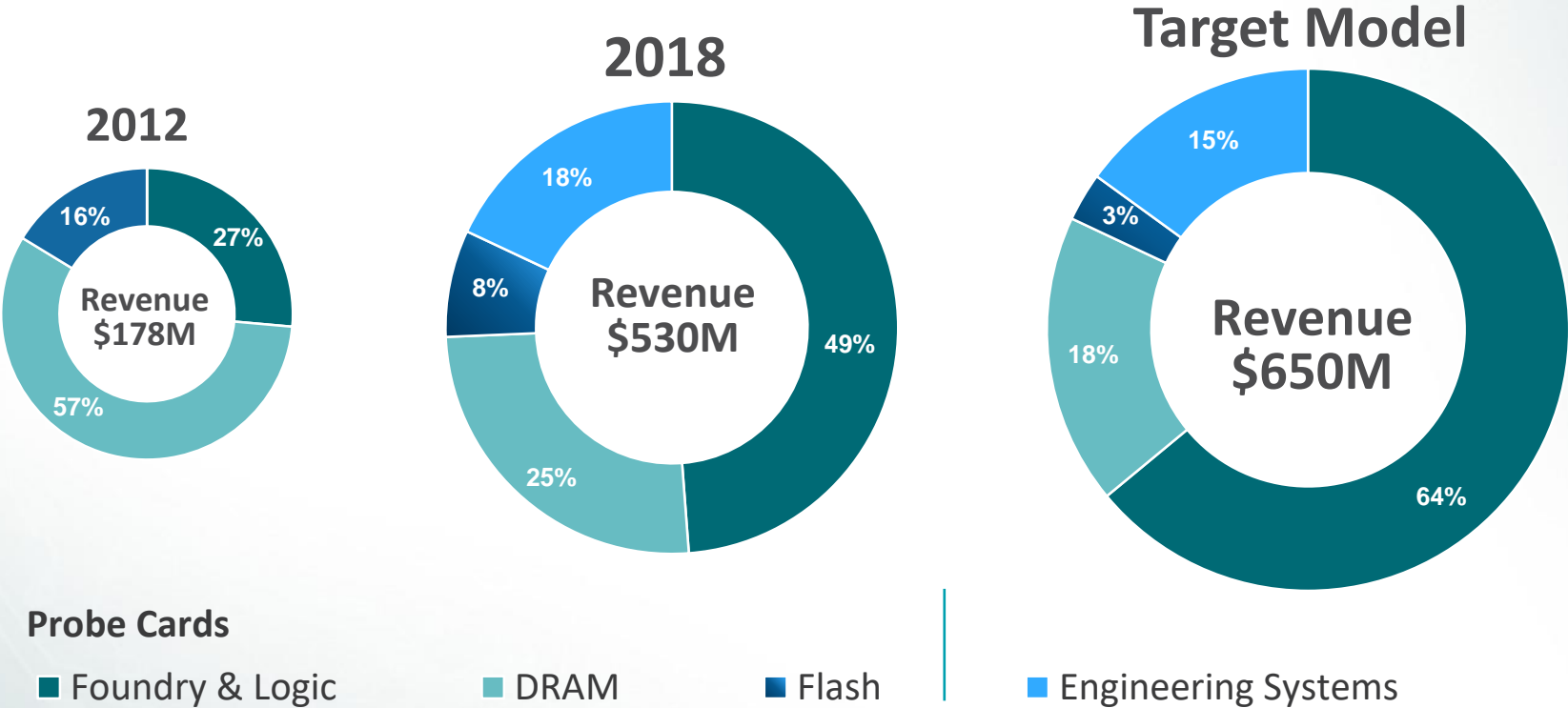
# Gaining Share in Growing Markets



2012 and 2017 served available market and market share – VLSIresearch 2017

Target model assumptions: Advanced probe cards served available market of \$1.4B in 2019/2020 (Source – VLSIresearch 2016) and Engineering systems served available market of \$0.3B (Company's internal estimates)


# Diversification Improves Mix and Drives Profitability



2012 and 2018 information source: Company filings and reports



# Line of Sight Growth Opportunities Building to the \$650M Model

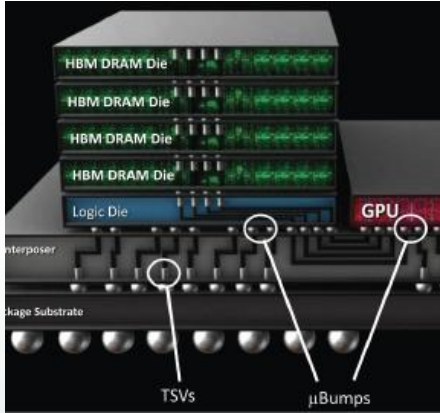


			FormFactor Customers' End Markets		
			Data Center	Mobile	Automotive
			8%	6%	14%
			Market CAGR (2016-2020)		
FormFactor Products	Engineering Systems		3%		
	Probe Cards	Foundry & Logic	7%	Advanced Packaging +\$60M	Automotive ICs +\$30M
		DRAM			
		Flash			
			Mobile Data +\$40M		

**Total Cumulative Opportunity = +\$130M**

Sources: IC Insights, VLSIresearch 2016, Gartner Semiconductor and Electronics Market Outlook 2017, company estimates

# Advanced Packaging: Higher Wafer Test Intensity Requires More High-Performance Probe Cards



## THE MARKET OPPORTUNITY

- Heterogeneous die integration (2.5D/3D, InFO, etc.) taking over from Moore's law
- Fanout adoption at 87% CAGR 2015-2020\*
- >20% test-time increase moving to 10nm fanout wafer-level packaging flow\*\*

## THE CUSTOMER NEED

- Pitch moves to <math><100\mu\text{m}</math> with exploding density
- High-fidelity electrical performance for known-good-die (KGD) test
- KGD required for cost: a 4-die assembly of 90%-yielding die has <math><66\%</math> net yield\*\*\*

**+\$60M**  
INCREMENTAL  
REVENUE

## WHY FORMFACTOR WINS

- Proprietary MEMS probe & assembly technology gives best performance and cost
- Demonstrated adoption at all 10nm Foundry & Logic customers/fabs

\* Advanced Packaging Trends, TechSearch Int'l 2016

\*\* Teradyne Q1'17 Earnings Call, May 2017

\*\*\* Quality/Reliability Requirements for Bare Die, Micron TN0014

# Mobile Data: Explosion of Data Traffic Packed into Narrow Spectrum Drives RF Semi Content and Technology



## THE MARKET OPPORTUNITY

- Mobile data traffic growing 7x 2016-2021\* over increasingly crowded spectrum
- RF filter and front-end IC at 14% CAGR 2016-2022\*\*
- 5G adoption and infrastructure buildout provides significant long-term RF growth

## THE CUSTOMER NEED

- Uncompromised RF fidelity to ensure high test yields for ultra narrow-band devices
- Scale and breadth to keep pace with dynamic capacity and design cycles



## WHY FORMFACTOR WINS

- Best-in-class RF performance from engineering through high-volume production
- Integration of RF and digital test technologies to mirror customers' roadmaps

\* Cisco VNI Forecast, February 2017

\*\* RF FE modules and components for cellphones, Yole 2017

# Automotive ICs: Rapidly-Growing Semiconductor End Market with Stringent Quality and Test Requirements



## 2015 ASSIST

- Sensor
- Driver Active
- Fail Safe

## 2020 AUTOMATE

- Sensor Fusion
- Co-pilot
- Dependable

## 2030 AUTONOMOUS

- High Accuracy Maps
- Driverless
- Safety Cocoon

## THE MARKET OPPORTUNITY

- ICs & sensors improve both performance & safety on the path to autonomous vehicles
- Highest major end market growth in semiconductors at 14% CAGR 2016-2020\*
- Proliferation and integration of digital ICs, RF (mmWave radar) and MEMS sensors

## THE CUSTOMER NEED

- Required defect levels is at least 10x more stringent than mobile and consumer applications\*\*
- Extreme test conditions—high power/ current, high + low temperatures, etc.
- Supplier scale and sustainability important

**+\$30M**  
INCREMENTAL  
REVENUE

## WHY FORMFACTOR WINS

- Best-in-class electrical performance over broad range of test conditions
- Long history as key supplier to top companies in automotive supply chain



 TEXAS INSTRUMENTS

\* IC Market Drivers 2017 Update, IC Insights  
\*\* Spotlight on Automotive, PwC Semiconductor Report 2013

# MicroLED Testing: An Emerging Example of Our Next-Generation Opportunities



## THE MARKET OPPORTUNITY

- Projected growth to 330 million display units in 2025 from near-zero today\*
- GaN technology offers improved brightness and energy efficiency over OLED in small-format displays

## THE CUSTOMER NEED

- System-level integration of electro-optics, substrate-handling, and electrical tests
- Customization and flexibility to meet rapidly-changing requirements
- Scale to support production ramps

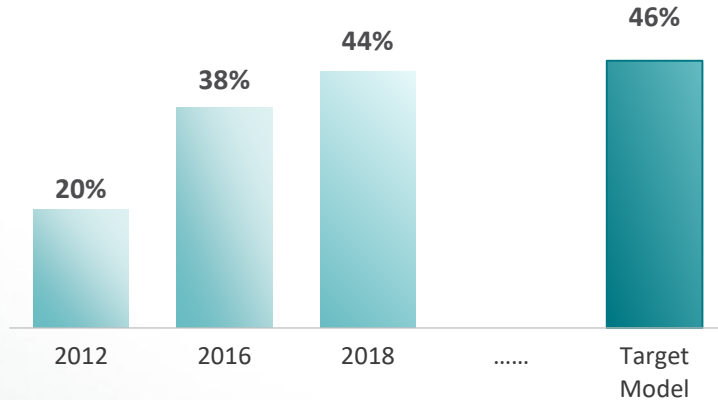
**SIGNIFICANT  
GROWTH  
POTENTIAL**

## WHY FORMFACTOR WINS

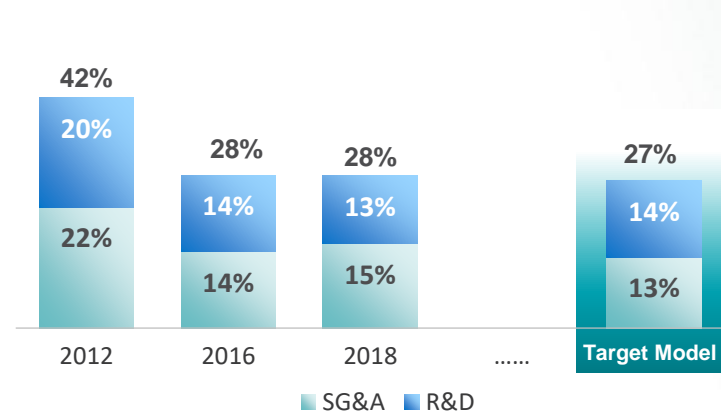
- Engagement in engineering through high-volume production
- Application expertise in material handling/positioning, electronics, and optics

# Continuing to Leverage Our Operating Structure

## Non-GAAP Gross Margin as % of Revenue



## Non-GAAP Operating Expense as % of Revenue



- Leverage factory utilization and product mix to drive gross margin expansion
- Capitalize on scale to leverage our operating expense infrastructure
- Continue significant R&D investment to execute on organic growth opportunities

# Strategic Focus Areas



## LEADERSHIP IN CORE MARKERS

- Continue share gains in advanced probe card market segment & engineering systems
- Leverage existing key roadmap technologies and investments across all markets



## DRIVE PROFITABILITY

- Continue to improve operating efficiency by capitalizing on leadership positions and extracting economies of scale



## ENTER ADJACENT MARKETS

- Continued long term diversification of revenue stream and customer mix through M&A in electrical test and measurement



# Supplemental Information

# FY 2018 GAAP to Non-GAAP Reconciliation

	GAAP	Adjustments				Non-GAAP
	12-Months Ended December 29, 2018	Stock-based Compensation	Restructuring & Impairment	Amortization of Intangibles	Valuation Allowance Release	12-Months Ended December 29, 2018
Revenues	\$ 529,675	\$ -	\$ -	\$ -	\$ -	\$ 529,675
Cost of revenues	319,336	(3,525)	-	(20,530)	-	295,281
Gross profit	210,339	3,525	-	20,530	-	234,394
<b>Operating expenses:</b>						
Research and development	74,976	(5,398)	-	-	-	69,578
Sales and marketing	61,005	(4,917)	-	(8,843)	-	47,245
General and administrative	38,089	(3,987)	-	-	-	34,102
Restructuring and impairment charges, net	160	-	(160)	-	-	-
Total operating expenses	174,230	(14,302)	(160)	(8,843)	-	150,925
Operating profit	36,109	17,827	160	29,373	-	83,469
Interest income	1,356	-	-	-	-	1,356
Interest expense	(3,314)	-	-	-	-	(3,314)
Other income (expense), net	(224)	-	-	-	-	(224)
Income before income taxes	33,927	17,827	160	29,373	-	81,287
Provision for income taxes	\$ (70,109)	\$ (263)	\$ (13)	\$ (278)	75,803	\$ 5,139
<b>Net income</b>	<b>\$ 104,036</b>	<b>\$ 18,090</b>	<b>\$ 173</b>	<b>\$ 29,651</b>	<b>\$ (75,803)</b>	<b>\$ 76,148</b>
<b>Net income per share:</b>						
Basic	\$ 1.42	\$ 0.25	\$ 0.00	\$ 0.40	\$ (1.03)	\$ 1.04
Diluted	\$ 1.38	\$ 0.24	\$ 0.00	\$ 0.39	\$ (1.01)	\$ 1.01
<b>Weighted-average number of shares</b>						
Basic	73,482	73,482	73,482	73,482	73,482	73,482
Diluted	75,182	75,182	75,182	75,182	75,182	75,182

# Free Cash Flow Reconciliation

in thousands	2013	2014	2015	2016	2017	2018
Net cash provided by (used in operating activities)	\$ (5,802)	\$ 17,659	\$ 36,122	\$ 17,423	\$ 86,323	\$ 68,700
Add: Cash paid for interest	-	-	-	2,110	3,836	3,113
Add: Cash paid for acquisition related expenses	-	-	-	15,446	-	-
Capital expenditures	(8,530)	(5,670)	(8,640)	(11,521)	(17,756)	(19,869)
Free cash flow	\$ (14,332)	\$ 11,989	\$ 27,482	\$ 23,458	\$ 72,403	\$ 51,944

# 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 non-recurring.

For more information on non-GAAP measures and adjustments, please see the reconciliations of non-GAAP measures included in this presentation and available at <http://investors.formfactor.com>.