# Financial Results Fourth Quarter Fiscal 2017

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# Sanjay Mehrotra President and CEO



# **Business Unit Update**

# Compute & Networking

- Strong FQ4 revenue growth driven by Cloud and Graphics
- Initial ramp of 1X nm DDR4 product, primarily to Client and Cloud segments
- TSV-stacked DDR4 products in qualification targeting Enterprise and Cloud

#### Mobile

- FQ4 Mobile NAND and eMCP revenue nearly doubled Y/Y
- Achieved first OEM qualification on 1X nm LPDRAM, multiple others underway
- Qualified first 3D TLC eMCP and eMMC solutions

#### Storage

- FQ4 revenue up 71% Y/Y driven by strong demand for SSD solutions
- Broad interest in SATA 5100 SSD from Enterprise and Cloud customers
- Positive demand trends in Client SSDs supported by increasing attach rates

#### Embedded

- Automotive demand for driving significant ramp of 20 nm DDR and LPDDR
- Began sampling Automotive-grade 1X nm DRAM
- Record quarterly revenue in industrial and consumer/connected home



### **Technology Progress**

- 1X nm DRAM and 64L 3D NAND production rollout on plan
  - Expect to achieve mature yields on both technologies before end of CY-17
  - 1X nm DRAM represented mid-teens percent of FQ4-17 DRAM bit output
    - Expect to achieve bit crossover exiting CY-18
  - 64L 3D NAND represented mid-teens percent of FQ4-17 trade NAND bit output
    - Expect to achieve bit crossover in 2H FY-18
- Advanced DRAM and NAND development proceeding on plan
  - Focused on late stages of 1Y nm DRAM development
  - 3rd generation 3D NAND production expected to begin later in FY-18



# **Industry Outlook**

- Expect DRAM and NAND to remain moderately undersupplied in CY-17
  - DRAM industry supply bit growth of ~20%
  - NAND industry supply bit growth of high-30%

#### 2018 Outlook:

- DRAM industry supply bit growth of ~20%, supported by demand trends from Cloud; healthy supply-demand balance
- NAND industry supply bit growth approaching ~50%, satisfying currently unfulfilled demand



# Micron's Strategic Priorities

Cost Competitiveness	Achieve cost competitiveness versus best-in-class
Execution Excellence	Drive for execution excellence
High-Value Solutions	Accelerate transition to high-value solutions
Customers	Develop deeper collaboration and partnerships with marquee customers
Talent	Invest in talent and embrace a winning culture



# **Ernie Maddock**

Chief Financial Officer



#### **DRAM** Revenue

Represented 66% of Micron Total Revenue in FQ4-17

- Server was approximately 30%
- Mobile was 20%
- Specialty DRAM was in the mid-20% range
  - Includes Networking, Graphics, Automotive, and Other Embedded technologies
- PC was in the mid-20% range



#### **Trade NAND Revenue**

Represented 30% of Micron Total Revenue in FQ4-17

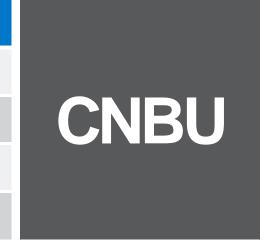
- SSDs were 20%
- Mobile was 20%
  - Includes managed NAND discrete solutions and the majority of our MCPs
- Automotive, Industrial, and Other Embedded applications were approximately 20%
- Consumer represented approximately 40%\*



<sup>\*</sup>Consumer consists primarily of component sales to partners and customers

# **Compute & Networking Business Unit**

	FQ4-17	FQ3-17	FQ4-16
Revenue	\$2.85B	\$2.39B	\$1.25B
% of total company revenue	46%	43%	39%
Operating income	\$1.60B	\$1.22B	\$10M
Operating income %	56%	51%	1%



- Record quarterly revenue, more than doubling Y/Y
- Strong demand from cloud customers for data centers
- 20 nm & initial 1X nm DRAM output drove operating income up 31% Q/Q



#### **Mobile Business Unit**

	FQ4-17	FQ3-17	FQ4-16
Revenue	\$1.18B	\$1.13B	\$671M
% of total company revenue	19%	20%	21%
Operating income (loss)	\$364M	\$304M	(\$35M)
Operating income (loss) %	31%	27%	(5%)



- Record quarterly revenue, up 76% Y/Y
- Positive progress driven by progress on mobile NAND solutions

# **Storage Business Unit**

	FQ4-17	FQ3-17	FQ4-16
Revenue	\$1.30B	\$1.32B	\$758M
% of total company revenue	21%	24%	24%
Operating income (loss)	\$250M	\$276M	(\$57M)
Operating income (loss) %	19%	21%	(8%)



- FQ4-17 revenue up 71% Y/Y
- Global SSD revenue market share nearly doubled in FY-17

#### **Embedded Business Unit**

	FQ4-17	FQ3-17	FQ4-16
Revenue	\$827M	\$700M	\$513M
% of total company revenue	13%	13%	16%
Operating income	\$348M	\$256M	\$141M
Operating income %	42%	37%	27%



- Record quarterly performance, with revenue up 61% Y/Y
- Automotive remains a key driver with increased memory content in cars
- Solid demand from Home Automation and Automotive



# FQ4 2017 Summary

- Revenue of \$6.14 billion
- GAAP results
  - Gross margin of 51%
  - Net income of \$2.37 billion
  - Diluted earnings per share of \$1.99
- Non-GAAP results
  - Gross margin of 51%
  - Net income of \$2.39 billion
  - Diluted earnings per share of \$2.02
- Operating cash flow of \$3.20 billion



#### **Other Financial Metrics**

- Capital expenditures, net of partner contributions
  - \$1.5 billion spent in FQ4-17
  - \$5.1 billion spent in FY-17 with 40% 45% for DRAM and ~30% for non-volatile
- Free cash flow\*
  - \$1.7 billion in FQ4-17
  - \$3.3 billion in FY-17
- Deployed 50% of free cash flow in FY-17 to de-levering activities
- FQ4-17 cash, marketable investments, and restricted cash of \$6.2 billion



<sup>\*</sup> Free cash flow consists of cash provided by operating activities less investments in capital expenditures.

#### **FY 2018 Investment Plans**

#### FY 2018 Capex Guidance

Net to Micron \$7.5B +/- 5%

**DRAM Memory** 

35% - 45%

Non-Volatile Memory

35% - 45%

Technology and Product Enablement

Remaining investments



# **FY 2018 Capital Management Priorities**

- Continue to deploy free cash flow towards opportunistic retirement of debt
- Opportunity to reach interim target of \$8 \$9 billion gross debt in FY-18
- Potential for \$0.18 to \$0.23 EPS improvement from FY-17 / FY-18 debt reduction activities (annualized)
- Potential to be net cash positive exiting FY-18



### FQ1 2018 Guidance

Non-GAAP

	FQ1-18 Guidance
Revenue	\$6.10 – \$6.50 billion
Gross margin	50% - 54%
Operating expenses	\$575 – \$625 million
Operating income	\$2.65 – \$2.85 billion
Diluted EPS*	\$2.09 - \$2.23



# Q&A



# **Financial Summary**

Non-GAAP

Dollars in millions, except per share	FQ4-17	% of Sales	FQ3-17	% of Sales	FQ4-16 <sup>1</sup>	% of Sales
Net sales	\$6,138	100%	\$5,566	100%	\$3,217	100%
Gross margin	3,147	51%	2,671	48%	598	19%
Operating income	2,546	41%	2,071	37%	66	2%
Income tax (provision) benefit	(60)		(64)		20	
Net income (loss) attributable to Micron	2,386	39%	1,896	34%	(9)	0%
Diluted earnings (loss) per share	2.02		1.62		(0.01)	
Cash provided by operating activities	3,203		2,407		896	
Cash, marketable investments, and restricted cash	6,152		4,899		4,934	

<sup>&</sup>lt;sup>1</sup> Fiscal 2016 amounts have been adjusted to conform with current period presentation to exclude stock-based compensation and amortization of acquisition related intangibles from non-GAAP reporting.



## **Financial Summary**

Non-GAAP

Dollars in millions, except per share	FY-17	% of Sales	FY-16 <sup>1</sup>	% of Sales
Net sales	\$20,322	100%	\$12,399	100%
Gross margin	8,639	43%	2,592	21%
Operating income	6,232	31%	450	4%
Income tax (provision) benefit	(173)		66	
Net income attributable to Micron	5,648	28%	273	2%
Diluted earnings per share	4.96		0.26	
Cash provided by operating activities <sup>2</sup>	8,514		3,168	
Cash, marketable investments, and restricted cash	6,152		4,934	

<sup>&</sup>lt;sup>1</sup> Fiscal 2016 amounts have been adjusted to conform with current period presentation to exclude stock-based compensation and amortization of acquisition related intangibles from non-GAAP reporting.

<sup>&</sup>lt;sup>2</sup> FY-17 operating cash flows of \$8,514 million is equal to GAAP operating cash flows of \$8,153 million, plus \$361 million of the Inotera purchase price, which was reflected for GAAP as an operating cash outflow.



# Non-GAAP Reconciliations



#### **Consolidated Results**

#### Non-GAAP Reconciliations

Amounts in millions, except per share amounts	F	Q4-17	F	Q3-17	F	Q4-16 <sup>1</sup>
GAAP net income (loss) attributable to Micron	\$	2,368	\$	1,647	\$	(170)
Non-GAAP adjustments:						
Flow-through of Inotera inventory step up		11		36		_
Stock-based compensation		57		57		43
Restructure and asset impairments		(27)		12		51
Amortization of debt discount and other costs		32		30		32
Loss on debt repurchases and conversions		37		61		_
(Gain) loss from changes in currency exchange rates		12		22		11
Other		3		3		4
Estimated tax effects of above and changes in net deferred income taxes		(107)		28		20
Total non-GAAP adjustments		18		249		<u>161</u>
Non-GAAP net income (loss) attributable to Micron	\$	2,386	\$	<u> 1,896</u>	\$	(9)
GAAP shares used in diluted EPS calculations		1,187		1,177		1,037
Effect of capped calls and other adjustments		(6)		(8)		
Non-GAAP shares used in diluted EPS calculations		<u>1,181</u>		<u>1,169</u>		1,037
GAAP diluted earnings (loss) per share	\$	1.99	\$	1.40	\$	(0.16)
Effects of above		0.03		0.22		0.15
Non-GAAP diluted earnings (loss) per share	\$	2.02	\$	1.62	\$	(0.01)

<sup>&</sup>lt;sup>1</sup> Fiscal 2016 amounts have been adjusted to conform with current period presentation to exclude stock-based compensation and amortization of acquisition related intangibles from non-GAAP reporting.



#### **Consolidated Results**

#### Non-GAAP Reconciliations

Amounts in millions, except per share amounts	FY-17	FY-16 <sup>1</sup>
GAAP net income (loss) attributable to Micron	\$ 5,089	\$ (276)
Non-GAAP adjustments:		
Flow-through of Inotera inventory step up	107	_
Stock-based compensation	215	191
Inotera acquisition costs	13	3
Restructure and asset impairments	34	92
Amortization of debt discount and other costs	125	126
Loss on debt repurchases and conversions	100	4
(Gain) loss from changes in currency exchange rates	74	24
(Gain) loss from business acquisition activities	(71)	(5)
Other	21	29
Estimated tax effects of above and changes in net deferred income taxes	(59)	<u>85</u>
Total non-GAAP adjustments	559	549
Non-GAAP net income attributable to Micron	\$ 5,648	<u>\$ 273</u>
GAAP shares used in diluted EPS calculations	1,154	1,036
Effect of capped calls and other adjustments	(14)	14
Non-GAAP shares used in diluted EPS calculations	1,140	<u>1,050</u>
GAAP diluted earnings (loss) per share	\$ 4.41	\$ (0.27)
Effects of above	0.55	0.53
Non-GAAP diluted earnings per share	<u>\$ 4.96</u>	\$ 0.26

<sup>&</sup>lt;sup>1</sup> Fiscal 2016 amounts have been adjusted to conform with current period presentation to exclude stock-based compensation and amortization of acquisition related intangibles from non-GAAP reporting.

September 26, 2017



FQ4 2017 Non-GAAP Reconciliation

Amounts in millions	GA	AP	Adjustments	;	Non-GAAP
Net sales	\$	6,138	\$ —		\$ 6,138
Cost of goods sold		3,026	(35)	A,B,I	2,991
Gross margin	:	3,112	35		3,147
Calling, was and and administrative		400	(22)	0	474
Selling, general, and administrative		193	(22)	С	171
Research and development		447	(14)	D,I	433
Restructure and asset impairments		(27)	27	E	
Other operating (income) expense		(3)			(3)
Total operating expenses		610	(9)		601
Operating income	:	2,502	44		2,546
Interest expense, net		(132)	32	F	(100)
Other non-operating income (expense), net		(49)	49	G,H	
		2,321	125		2,446
Income tax (provision) benefit		47	(107)	J	(60)
Equity in net income (loss) of equity method investees		<u> </u>			1
Net income	4	2,369	18		2,387
Net income attributable to noncontrolling interests		(1)			(1)
Net income attributable to Micron	\$ 2	<u>2,368</u>	<u>\$ 18</u>		\$ 2,386



FQ4 2017 Non-GAAP Reconciliation (continued)

Amoui	nts in millions	
Α	Flow-through of Inotera inventory step up	\$ 11
В	Stock-based compensation – cost of goods sold	22
С	Stock-based compensation – sales, general, and administrative	22
D	Stock-based compensation – research and development	13
Е	Restructure and asset impairments	(27)
F	Amortization of debt discount and other costs	32
G	Loss on debt repurchases and conversions	37
Н	(Gain) loss from changes in currency exchange rates	12
- 1	Other	3
J	Estimated tax effects of above and non-cash changes in net deferred income taxes	(107)
		<u>\$ 18</u>



FY 2017 Non-GAAP Reconciliation

Amounts in millions		GAAP Adjustments			Non-GAAP		
Net sales	\$	20,322	\$ —		\$ 20,322		
Cost of goods sold	_	11,886	(203)	A,B,K	11,683		
Gross margin		8,436	203		8,639		
Colling ganged and administrative		740	(00)	0.5	CEE		
Selling, general, and administrative		743	(88)	C,E	655		
Research and development		1,824	(55)	D,K	1,769		
Restructure and asset impairments		18	(18)	F			
Other operating (income) expense	_	(17)			(17)		
Total operating expenses	_	2,568	(161)		2,407		
Operating income		5,868	364		6,232		
Interest expense, net		(560)	125	G	(435)		
Other non-operating income (expense), net	_	(112)	112	H,I,J,K			
		5,196	601		5,797		
Income tax (provision) benefit		(114)	(59)	L	(173)		
Equity in net income (loss) of equity method investees	_	8	17	M,K	25		
Net income		5,090	559		5,649		
Net income attributable to noncontrolling interests	_	(1)			(1)		
Net income attributable to Micron	\$	5,089	<u>\$ 559</u>		\$ 5,648		



FY 2017 Non-GAAP Reconciliation (continued)

Amour	ts in millions	
А	Flow-through of Inotera inventory step up	\$ 107
В	Stock-based compensation – cost of goods sold	88
С	Stock-based compensation – sales, general, and administrative	75
D	Stock-based compensation – research and development	52
Е	Inotera acquisition costs	13
F	Restructure and asset impairments	18
G	Amortization of debt discount and other costs	125
Н	Loss on debt repurchases and conversions	100
1	(Gain) loss from changes in currency exchange rates	74
J	(Gain) loss from business acquisition activities	(71)
K	Other	21
L	Estimated tax effects of above and non-cash changes in net deferred income taxes	(59)
M	Impairment of equity method investments	 <u> 16</u>
		\$ <u>559</u>



# **Summary Key Data**



#### Non-GAAP Financial Data and Guidance

% of Revenue	FQ4-17	FQ4-16
DRAM	66%	60%
Trade NAND*	30%	32%
Sales Bit Growth	FQ4-17 Q/Q	FQ4-17 Y/Y
DRAM	5%	32%
Trade NAND*	3%	78%
ASP Change	FQ4-17 Q/Q	FQ4-17 Y/Y
DRAM	8%	57%
Trade NAND*	5%	2%
Cost/Bit Change	FQ4-17 Q/Q	FQ4-17 Y/Y
DRAM	(4%)	(20%)
Trade NAND*	6%	(27%)
Gross Margin	FQ4-17	FQ4-16
DRAM	59%	20%
Trade NAND*	40%	17%

	FQ4-17 Non-GAAP (amounts in millions, except per share)	FQ1-18 Non-GAAP Guidance
Revenue	\$6,138	\$6.10 – \$6.50 billion
Gross margin	51%	50% – 54%
Operating expenses	\$601	\$575 – \$625 million
Operating income	\$2,546	\$2.65 – \$2.85 billion
Earnings per share	\$2.02	\$2.09 - \$2.23
	FQ4-17 Non-GAAP (amounts in millions)	FQ1-18 Non-GAAP Estimates
		A

	rQ4-17 Non-GAAP (amounts in millions)	FQ1-18 Non-GAAP Estimates
Net interest expense	\$100	~\$90 million
Diluted shares	1,181	~1,191 million Refer to the Convertible Notes Dilution Overview provided
Tax (provision) benefit	(\$60)	~(\$90 million)
Operating cash flow	\$3,203	-
Depreciation and amortization	\$1,063	_
Capital expenditures (Capital cash flow) (a)	\$1,513	FY-18: \$7.5 billion +/- 5%

See Non-GAAP reconciliations



<sup>\*</sup>Trade NAND excludes sales to Intel through IMFT, which are at long-term negotiated prices approximating cost

<sup>(</sup>a) Net of amounts funded by partners

#### **Convertible Notes Dilution Overview**

FQ4 2017 (shares in millions)

Stock Price	\$29	\$30	\$31	\$32	\$33	\$34	\$35	\$36	\$37	\$38	\$39	\$40	<b>\$41</b>	\$42
2032 C Notes	16	16	16	16	16	17	17	17	17	17	17	18	18	18
2032 D Notes	12	12	12	12	12	13	13	13	13	13	13	13	13	14
2033 E Notes	7	7	7	7	7	7	7	7	7	7	8	8	8	8
2033 F Notes	17	17	18	18	18	18	19	19	19	19	20	20	20	20
2043 G Notes	0	1	2	3	4	5	6	7	7	8	9	10	10	11
Total dilutive shares	52	53	55	56	57	60	62	63	63	64	67	69	69	71
Benefit from capped calls	-18	-18	-17	-16	-16	-16	-15	-15	-14	-14	-14	-13	-13	-13
Net dilution	34	35	38	40	41	44	47	48	49	50	53	56	56	58

Note: At the end of FQ4-17 market price of Micron's stock closed at \$31.97/share



