

# Financial Results

FQ1 2022

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# Sanjay Mehrotra

**President and CEO** 



# **Highlights**

 Delivered outstanding results in fiscal Q1, achieving strong year-over-year revenue growth and solid profitability

On track to deliver record revenue and robust profitability in fiscal 2022

 Rapidly ramping our industry-leading 1-alpha DRAM and 176-layer NAND products and achieving excellent yields; these products are now shipping across our major end markets

 Achieved significant product advancements and customer wins - launching our first DDR5 solution, introducing our vertically integrated Gen4 NVMe data center SSD, validating the world's first low-power DDR5X with MediaTek, and shipping our GDDR6 for AMD's Radeon RX 6000 graphics card



# Strong Technology and Roadmap Execution

With the successful ramp of 1-alpha DRAM and 176-layer NAND products across major end markets, we are several quarters ahead of the industry in market deployment of these leading-edge process technologies

#### **DRAM**

- The combination of 1-alpha and 1z DRAM nodes represents the majority of our DRAM bit production
- Planning for volume DRAM production on EUV in 2024 with our 1-gamma node
- Integrating EUV with our existing multipatterning immersion lithography expertise will help us maintain DRAM technology leadership for many years to come

#### **NAND**

- 176-layer NAND now accounts for the majority of our NAND bit production
- Successfully transitioned to replacement gate
- Roadmap to scale for several generations while leveraging our leadership in CMOS under array and QLC to maintain bit density leadership



# **Operations**

- Two-thirds of our customers rank us No. 1 in quality
- Amid ongoing semiconductor supply chain challenges, Micron has leveraged our deep partnerships with customers and suppliers to support DRAM, NAND and NOR supply continuity
- Over 75% of our revenue comes from volume-based annual agreements, a significant increase from around 10% of revenue they represented only five years ago
- Have entered into strategic agreements to secure supply of certain components that we need to manufacture our products; as a result of these agreements, the current tight supply of these components is expected to gradually improve for us throughout calendar 2022



# **End Market Highlights**



#### **Data Center**

- Memory and storage is growing as a portion of server BOM, supported by new and heterogenous computing architectures, the growth of data intensive workloads and AI, and the ongoing displacement of HDDs by SSDs
- Data center revenue grew more than 70% Y/Y as a result of continued cloud demand and a resurgence of enterprise IT investment
- Launched the 7400 SSD, our first data center NVMe SSD to utilize our internally developed controller and firmware along with our DRAM and NAND
- Expect a strong ramp in our data center SSD revenues in FQ2, driven by increased sales of our data center NVMe SSD products



#### **PC & Graphics**

- PC: Inventory adjustment at most PC customers is now largely behind us, and we are seeing signs of stabilization in demand in this end market; in CY-22, we expect PC unit sales to be in line with CY-21 unit sales
- Low-power DRAM has grown to 20% of the PC industry DRAM bit demand today and is projected to become the majority of the PC market in five years
- Our product achievements included qualifications and volume production of our 176-layer Gen4 PCIe client SSD at several PC OEMs, as well as our first revenues for DDR5 memory
- Graphics: Increased our revenue Q/Q and Y/Y
- Pleased to announce availability of our GDDR6 memory solutions on AMD's Radeon RX 6000 graphics card extending the value of GDDR6 memory to the entire gaming market



#### **Mobile & Intelligent Edge**

- Mobile: Mobile revenue increased more than 25% Y/Y
- Recent 5G phones feature more than 50% higher DRAM and double the NAND content versus 4G phones. 5G smartphone sales are forecast to exceed 500 million units in CY-21, with 700 million units forecast for CY-22
- Our 1-alpha-based LPDDR5X, the world's fastest mobile DRAM, was sampled and validated with MediaTek
- Auto: Y/Y auto revenue growth remained strong at 25%; we are already seeing examples of 2022-model-year EVs supporting level 3 autonomous capability with over 140GB of DRAM and also examples with over 1TB of NAND
- Industrial: In industrial IoT, we saw more than 80% Y/Y
  revenue growth, fueled by the continued ramp in
  applications such as factory automation and security
  systems; in consumer IoT, we saw more than 40% Y/Y
  revenue growth, driven by applications such as VR
  headsets and smart home devices



## **Outlook**

# Industry

- Expect CY-21 industry DRAM bit demand growth to be in the low 20% range and industry NAND bit demand growth to be in the high 30% range
- Expect CY-22 industry bit demand growth to be in the mid to high teens for DRAM and approximately 30% for NAND
- Long-term DRAM bit demand growth CAGR of mid-to-high teens
- Long-term NAND bit demand growth CAGR of approximately 30%

## Micron

- Our CY-22 bit supply growth for DRAM and NAND expected to be in line with industry demand
- Planning to deliver record revenue with solid profitability in FY-22 with stronger bit shipment growth in the second half of the fiscal year
- Expect annual cost-per-bit reductions to be competitive with the industry in FY-22 and over the long term
- Expect FY-22 capex in the range of \$11 billion to \$12 billion



# **Dave Zinsner**

**Chief Financial Officer** 



## FQ1-22 Revenue

# \$7.7B

Revenue down 7% Q/Q and up 33% Y/Y





# Performance by Technology

# **DRAM**

- 73% of total revenue in FQ1-22
- Revenue down 8% Q/Q and up 38% Y/Y
- Bit shipments down mid-single-digit percent range Q/Q
- ASPs down lower-single-digit percent range Q/Q



- 24% of total revenue in FQ1-22
- Revenue down 5% Q/Q and up 19% Y/Y
- Bit shipments were approximately flat Q/Q
- ASPs down mid-single-digit percent range Q/Q



# **Revenue by Business Unit**

Amounts in millions	FQ1-22	FQ4-21	Q/Q % Change	FQ1-21	Y/Y % Change
Compute and Networking (CNBU)	\$3,406	\$3,794	(10)%	\$2,546	34%
Mobile (MBU)	\$1,907	\$1,892	1%	\$1,501	27%
Storage (SBU)	\$1,150	\$1,203	(4)%	\$911	26%
Embedded (EBU)	\$1,220	\$1,360	(10)%	\$809	51%



## **FQ1-22**

Non-GAAP Operating Results

Revenue: \$7.7 billion

**Gross Margin:** 47.0%

**Operating Expenses:** \$891 million

**Operating Income:** \$2.7 billion

Net Income: \$2.5 billion

Diluted EPS: \$2.16

Adjusted EBITDA: \$4.4 billion

Cash from Operations (GAAP): \$3.9 billion



# Cash Flow and Capital Allocation

# From FY-17 to FQ1-22, generated approximately \$21 billion of free cash flow\*

- ~\$5 billion to retire debt
- ~\$7 billion toward buying back stock and eliminating the dilution from convertible debt, reducing our share count by 151 million shares
- Improved our total cash and investment position by \$6.5 billion

Cash Flow from Operations	• FQ1-22: \$3.9B (51% of revenue)
Net CapEx <sup>1</sup>	<ul><li>FY-22: CapEx guidance of \$11B to \$12B</li></ul>
FCF*	■ FQ1-22: \$671M
Buybacks	• FQ1-22: \$259M (3.6M shares)
Dividends	Dividend payment of \$0.10 per share will be paid January 18 <sup>th</sup>
Liquidity <sup>2</sup>	\$14B in liquidity at end of FQ1-22
Cash <sup>3</sup> -Debt	\$4.5B of net cash at end of FQ1-22

¹CapEx net of amounts funded by partners and proceeds from sales of property, plant, and equipment



<sup>&</sup>lt;sup>2</sup>Cash, short-term and long-term marketable investments, restricted cash, and undrawn revolver capacity

<sup>&</sup>lt;sup>3</sup>Cash, short-term and long-term marketable investments, and restricted cash

<sup>\*</sup>Free cash flow is a non-GAAP measure defined as net cash provided by operating activities less net investments in capital expenditures adjusted for amounts funded by partners and proceeds from sales of PP&E.

# FQ2-22 Guidance

Non-GAAP

Revenue	\$7.5 billion ± \$200 million
Gross margin	46.0% ± 1%
Operating expenses	\$975 million ± \$25 million
Diluted EPS*	\$1.95 ± \$0.10

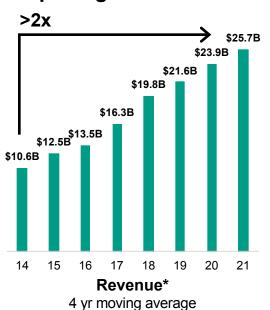
\*Based on ~1.14 billion diluted shares



# The New Micron Delivers Strong Revenue Growth and Profitability Cross Cycle

\*4-year average metrics reveal sustained cross cycle performance

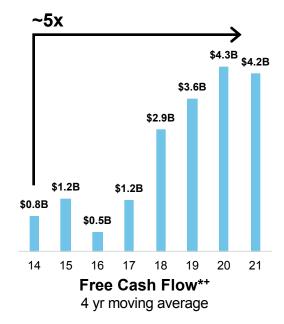
# Strong revenue growth outpacing broader semis



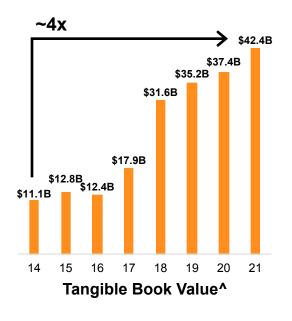
## Cash generation power



# Meaningful FCF over time



#### **Growing Asset Base**



#### Multiple expansion opportunity as investors appreciate growth and profitability

Fiscal years or 4-year avg fiscal years represented in graphs



<sup>^</sup>Tangible book value includes Micron's shareholders equity less goodwill and intangibles.

<sup>+</sup>Free cash flow is a non-GAAP measure defined as net cash provided by operating activities less net investments in capital expenditures adjusted for amounts funded by partners and proceeds from sales of PP&E.





# Other Key Data



# Financial Summary Non-GAAP

Amounts in millions, except per share	FQ1-22	% of Revenue	FQ4-21	% of Revenue	FQ1-21	% of Revenue
Revenue	\$7,687	100%	\$8,274	100%	\$5,773	100%
Gross margin	3,616	47%	3,964	48%	1,784	31%
Operating income	2,725	35%	3,073	37%	973	17%
Income tax (provision) benefit	(240)		(298)		(71)	
Net income	2,471	32%	2,778	34%	897	16%
Diluted earnings per share	2.16		2.42		0.78	
Cash provided by operating activities (GAAP)	3,938		3,884		1,967	
Cash, marketable investments, and restricted cash (GAAP)	11,480		10,464		8,363	



## Non-GAAP Financial Data and Guidance

% of Revenue	FQ1-22
DRAM	73%
NAND	24%

% Sales Volume Change	FQ1-22 Q/Q
DRAM	Decreased mid-single-digit percent range
NAND	Approximately flat

% ASP Change	FQ1-22 Q/Q
DRAM	Decreased lower-single- digit percent range
NAND	Decreased mid-single-digit percent range

	FQ1-22 Non-GAAP (amounts in millions, except per share)		FQ2-22 Non-GAAP Guidance
Revenue	\$ 7,687		\$7.5 billion ± \$200 million
Gross margin		47.0%	46.0% ± 1%
Operating expenses	\$	891	\$975 million ± \$25 million
Diluted earnings per share	\$ 2.16		\$1.95 ± \$0.10

	2 Non-GAAP ts in millions)	FQ2-22 Non-GAAP Estimates
Diluted shares	1,141	~1.14 billion
Income tax (provision) benefit	\$ (240)	~10%
Cash from operations (GAAP)	\$ 3,938	_
Depreciation and amortization	\$ 1,676	<del></del>
Investments in capex, net (capital cash flow)	\$ 3,267	FY-22: \$11 billion to \$12 billion

See non-GAAP reconciliations

# Revenue by Technology

Amounts in millions	FQ1-22	% of Revenue	FQ4-21	% of Revenue	FQ1-21	% of Revenue
DRAM	\$5,587	73%	\$6,091	74%	\$4,056	70%
NAND	1,878	24%	1,971	24%	1,574	27%
Other	222	3%	212	3%	143	2%
Total	\$7,687	100%	\$8,274	100%	\$5,773	100%



Amounts in millions	FQ1-22	FQ4-21	FQ1-21
GAAP gross margin	\$ 3,565	\$ 3,912	\$ 1,736
Stock-based compensation	43	43	41
Other	8	9	7
Non-GAAP gross margin	\$ 3,616	\$ 3,964	\$ 1,784
GAAP operating expenses	\$ 934	\$ 957	\$ 870
Stock-based compensation	(73)	(50)	(5
Restructure and asset impairments	(38)	(22)	3)
Other	68	6	_
Non-GAAP operating expenses	\$ 891	\$ 891	\$ 81′
GAAP operating income	\$ 2,631	\$ 2,955	\$ 866
Stock-based compensation	116	93	92
Restructure and asset impairments	38	22	8
Other	(60)	3	
Non-GAAP operating income	\$ 2,725	\$ 3,073	\$ 973



Amounts in millions	FQ1-22		FQ4-21		FQ1-21
GAAP cost of goods sold	\$ 4,122	\$	4,362	\$	4,037
Stock-based compensation	(43)		(43)		(41)
Other	(8)		(9)		(7)
Non-GAAP cost of goods sold	\$ 4,071	\$	4,310	\$	3,989
GAAP research and development	\$ 712	\$	705	\$	647
Stock-based compensation	(38)		(28)		(24)
Non-GAAP research and development	\$ 674	\$	677	\$	623
GAAP selling, general and administrative	\$ 259	\$	236	\$	214
Stock-based compensation	(35)		(22)		(27)
Non-GAAP selling, general and administrative	\$ 224	\$	214	\$	187



Amounts in millions	FQ1-22	FQ4-21	FQ1-21
GAAP net income	\$ 2,306	\$ 2,720	\$ 803
Stock-based compensation	116	93	92
Restructure and asset impairments	38	22	8
Amortization of debt discount and other costs	9	8	7
(Gain) loss on debt repurchases and conversions	83	_	_
Other	(60)	3	7
Estimated tax effects of above and other tax adjustments	(21)	(68)	(20)
Non-GAAP net income	\$ 2,471	\$ 2,778	\$ 897
GAAP interest (income) expense, net	\$ 35	\$ 38	\$ 38
Amortization of debt discount and other costs	(9)	(8)	(7)
Non-GAAP interest (income) expense, net	\$ 26	\$ 30	\$ 31
GAAP income tax (provision) benefit	\$ (219)	\$ (230)	\$ (51)
Estimated tax effects of non-GAAP adjustments and other tax adjustments	(21)	(68)	(20)
Non-GAAP income tax (provision) benefit	\$ (240)	\$ (298)	\$ (71)



Amounts in millions	FQ1-22	FQ4-21	FQ1-21
GAAP shares used in diluted EPS calculations	1,130	1,138	1,135
Adjustment for stock-based compensation and capped calls	11	9	11
Non-GAAP shares used in diluted EPS calculations	1,141	1,147	1,146
GAAP diluted earnings per share	\$ 2.04	\$ 2.39	\$ 0.71
Effects of non-GAAP adjustments	0.12	0.03	0.07
Non-GAAP diluted earnings per share	\$ 2.16	\$ 2.42	\$ 0.78
GAAP net income	\$ 2,306	\$ 2,720	\$ 803
Interest (income) expense, net	35	38	38
Provision (benefit) for income taxes	219	230	51
Depreciation and amortization of property, plant, and equipment and intangibles	1,671	1,621	1,487
Non-GAAP adjustments			
Stock-based compensation	116	93	92
Restructure and asset impairments	38	22	8
(Gain) loss on debt repurchases and conversions	83	_	_
Other	(65)	(3)	_
Adjusted EBITDA	\$ 4,403	\$ 4,721	\$ 2,479



Amounts in millions	FQ1-22	FQ4-21		FQ1-21
Net cash provided by operating activities	\$ 3,938	\$	3,884	\$ 1,967
Expenditures for property, plant, and equipment	(3,265)		(2,015)	(2,738)
Proceeds from sales of property, plant, and equipment	21		4	12
Payments on equipment purchase contracts	(78)		(156)	(97)
Amounts funded by partners	55		160	40
Investments in capital expenditures, net	(3,267)		(2,007)	(2,783)
Adjusted free cash flow	\$ 671	\$	1,877	\$ (816)

Amounts in millions	FQ1-22	FQ4-21
Cash and short-term investments	\$ 9,580	\$ 8,633
Current and noncurrent restricted cash	83	66
Long-term marketable investments	1,817	1,765
Current and long-term debt	(7,022)	(6,776)
Net cash	\$ 4,458	\$ 3,688



# FQ2-22 Guidance

#### Non-GAAP Reconciliations

	GAAP	Adjustm	ents	Non-GAAP
Revenue	\$7.5 billion ± \$200 million	<del>_</del>		\$7.5 billion ± \$200 million
Gross margin	45.0% ± 1%	1%	Α	46.0% ± 1%
Operating expenses	\$1,058 million ± \$25 million	\$83 million	В	\$975 million ± \$25 million
Diluted EPS*	\$1.83 ± \$0.10	\$0.12	A,B,C	\$1.95 ± \$0.10

Α	Stock-based compensation – cost of goods sold	\$ 48	
Α	Other – cost of goods sold	5	
В	Stock-based compensation – research and development	48	
В	Stock-based compensation – sales, general, and administrative	35	
С	Tax effects of the above items and other tax adjustments	(2)	
		\$ 134	

The above guidance does not incorporate the impact of any potential business combinations, divestitures, restructuring activities, balance sheet valuation adjustments, strategic investments, financing transactions, and other significant transactions. The timing and impact of such items are dependent on future events that may be uncertain or outside of our control.



<sup>\*</sup>GAAP EPS based on ~1.13 billion diluted shares and non-GAAP EPS based on ~1.14 billion diluted shares.

Amounts in millions	FY-11	FY-12	FY-13
Net cash provided by operating activities	\$ 2,482	\$ 2,115	\$ 1,811
Expenditures for property, plant, and equipment	(2,550)	(1,871)	(1,442)
Proceeds from sales of property, plant, and equipment	127	67	28
Payments on equipment purchase contracts	(322)	_	(16)
Amounts funded by partners	14	203	16
Investments in capital expenditures, net	(2,731)	(1,601)	(1,414)
Adjusted free cash flow	\$ (249)	\$ 514	\$ 397

Amounts in millions	FY-14	4 FY-15		FY-16
Net cash provided by operating activities	\$ 5,698	\$ 5,209	\$	3,169
Expenditures for property, plant, and equipment	(3,107)	(4,021)		(5,817)
Proceeds from sales of property, plant, and equipment	43	36		37
Payments on equipment purchase contracts	(30)	(95)		(46)
Amounts funded by partners	108	220		75
Investments in capital expenditures, net	(2,986)	(3,860)		(5,751)
Adjusted free cash flow	\$ 2,712	\$ 1,349	\$	(2,582)
Adjusted free cash flow – 4-year moving average	\$ 844	\$ 1,243	\$	469



Amounts in millions	FY-17		FY-18		FY-19
Net cash provided by operating activities	\$	8,153	\$	17,400	\$ 13,189
Expenditures for property, plant, and equipment		(4,734)		(8,879)	(9,780)
Proceeds from sales of property, plant, and equipment		93		208	146
Payments on equipment purchase contracts		(519)		(206)	(75)
Amounts funded by partners		13		895	754
Other free cash flows		361		_	_
Investments in capital expenditures, net		(4,786)		(7,982)	(8,955)
Adjusted free cash flow	\$	3,367	\$	9,418	\$ 4,234
Adjusted free cash flow – 4-year moving average	\$	1,212	\$	2,888	\$ 3,609

Amounts in millions	FY-20		FY-21
Net cash provided by operating activities	\$	8,306	\$ 12,468
Expenditures for property, plant, and equipment		(8,223)	(10,030)
Proceeds from sales of property, plant, and equipment		69	108
Payments on equipment purchase contracts		(63)	(295)
Amounts funded by partners		272	502
Investments in capital expenditures, net		(7,945)	(9,715)
Adjusted free cash flow	\$	361	\$ 2,753
Adjusted free cash flow – 4-year moving average	\$	4,345	\$ 4,192



Amounts in millions	FY-14		FY-15		FY-16
Equity	\$	11,562	\$	13,239	\$ 12,928
Less:					
Intangible assets		468		449	464
Goodwill		4		23	104
Tangible book value	\$	11,090	\$	12,767	\$ 12,360

Amounts in millions	FY-17		FY-18		FY-19
Equity	\$	19,470	\$	33,164	\$ 36,770
Less:					
Intangible assets		387		331	340
Goodwill		1,228		1,228	1,228
Tangible book value	\$	17,855	\$	31,605	\$ 35,202

Amounts in millions	FY-20		FY-21	
Equity	\$ 38,996	\$	49,933	
Less:				
Intangible assets	334		349	
Goodwill	1,228		1,228	
Tangible book value	\$ 37,434	\$	42,356	



