# Financial results

FQ3 2023





#### Safe harbor statement

During the course of this meeting, we may make projections or other forward-looking statements regarding market demand and supply, future events or the future financial performance of the Company and the industry. We wish to caution you that such statements are predictions, and that actual events or results may differ materially. We refer you to the documents the Company files from time to time with the Securities and Exchange Commission, including the Company's most recent Form 10-K and Form 10-Q. These documents contain and identify important factors that could cause the actual results for the Company to differ materially from those contained in our projections or forward-looking statements. These certain factors can be found at micron.com/certainfactors. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. We are under no duty to update any of the forward-looking statements to conform these statements to actual results.

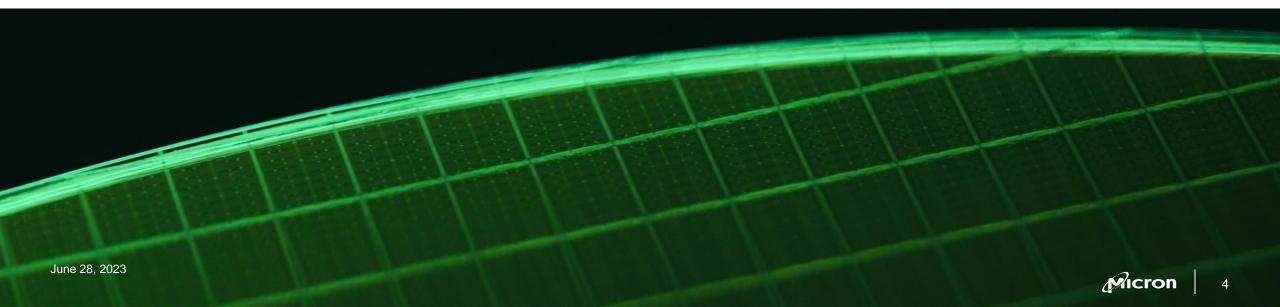
# Sanjay Mehrotra President and CEO



#### **Overview**

- Micron delivered fiscal third quarter revenue within our guidance range, with gross margin and EPS above the range.
- The ongoing improvement of customer inventories and content growth are driving higher industry demand, while production cuts across the industry continue to help reduce excess supply.
- As a result, pricing trends are improving.

- We have increased confidence that the industry has passed the bottom for quarterly revenue and year-on-year revenue growth.
- Our technology leadership and strengthening product portfolio position us well across diverse growth markets, including AI and memory-centric computing.
- Beyond this downturn, we expect to see record TAM in calendar 2025 along with a return to more normalized levels of profitability.



### **Update on business in China**

- The impact of the May 21st decision by the Cyberspace Administration of China (CAC) on the business of Micron remains uncertain and fluid.
- Several Micron customers, including mobile OEMs, have been contacted by certain Critical Information Infrastructure (CII) operators or representatives of the government in China concerning the future use of Micron products.
- Micron's revenue with companies headquartered in mainland China and Hong Kong, including direct sales as well as indirect sales through distributors, accounts for approximately a quarter of Micron's worldwide revenue and remains the principal exposure.
- We currently estimate that approximately half of that China-headquartered customer revenue, which equates to a low-double-digit percentage of Micron's worldwide revenue, is at risk of being impacted.
- Micron is working to mitigate this impact over time and expects increased quarter-to-quarter revenue variability. Micron's long-term goal is to retain its worldwide DRAM and NAND share.



## **Technology & production**

- Micron continues to lead the industry in both DRAM and NAND technology. We are
  investing prudently to maintain our technology competitiveness while managing capex,
  node ramps and wafer start reductions to reduce our bit supply and align it with demand.
- Our industry-leading 1-beta DRAM and 232-layer NAND nodes are achieving world-class yields, and yield ramp has been faster than any of our prior nodes.
- These leadership nodes provide a strong cost capability, along with best-in-class power and performance specifications that will be leveraged across the portfolio of DRAM and NAND products.
- In fiscal Q3, we achieved several important product qualifications on these advanced nodes and are well positioned to ramp them in fiscal 2024.
- We are also making good progress towards the introduction of our EUV-based 1-gamma node in 2025, which will be manufactured first in our Taiwan site, where we already have EUV capability installed and operating in preparation for this ramp.
- In fiscal Q3, we announced plans to bring EUV technology to Japan, with support from the Japanese government. Micron will be the first company to bring EUV technology to Japan for production.



#### **Backend investments**

- We are advancing our global assembly and test network in order to support our product portfolio and extend our ability to deliver on global customer demand.
- In China, we announced an investment of approximately \$600M over the next several years in our operations in Xi'an.
- As a part of this investment, we decided to purchase the assembly equipment of Powertech Semiconductor Xi'an. We also intend to construct a new building at our Xi'an site.
- In India, with the strong support of the Indian government, we will build a new assembly and test facility in Gujarat to address demand for the latter half of this decade.
- We are also increasing our investments in assembly and test capacity in Taiwan for high-bandwidth memory products as we gear up for stronger demand in this segment driven by the AI wave.



### **End market highlights**



- Strong sequential revenue growth in both cloud and enterprise in fiscal Q3 driven by some recovery from depressed sales levels in fiscal Q2.
- Generative AI is driving higher-than-expected industry demand for memory and storage for AI servers, while traditional server demand for mainstream data center applications continues to be lackluster. AI servers have 6x-8x the DRAM content of a regular server and 3x the NAND content.
- NVIDIA's DGX GH200 supercluster shows how memory-intensive AI workloads can be. It provides developers the ability to support giant models with a massive, shared memory space of 144TB, of which a significant majority is enabled by a joint development project with Micron. We are proud to pioneer this differentiated LP DRAM innovation to deliver significant reduction in data center power consumption compared to DDR-based solutions helping to support customers' green initiatives.
- HBM: The customer response has been strong, and we believe our product delivers significantly higher bandwidth than competing solutions and establishes the new benchmark in performance and power consumption. We expect to begin mass production ramp for this product in early CY24, and to achieve meaningful revenues in FY24.

- DDR5 (D5): Our D5 percentage of DRAM shipments has more than doubled from Q2 to Q3, and we expect Micron D5 volume to cross over D4 at the end of first calendar quarter of 2024 versus mid-calendar 2024 for the industry.
- We are also making good progress on 1-beta based high-density 128GB D5 modules using a 32Gb die that optimizes cost and performance. We expect these high-density modules to ramp in calendar Q2 of 2024 with significant cost improvements over today's TSV-based solutions in the industry.
- Data center SSDs: our entire portfolio is now on 176-layer or 232-layer NAND
- In fiscal Q3, we launched the world's first 200+ layer NAND data center SSD, and qualification is in progress at multiple key customers to support Al cluster installations. We have already passed qualification of this product at a critical server OEM partner.
- We also launched our "extreme endurance" data center SSD, which offers superior scalability and affordability versus hard drives.



### **End market highlights**



## PC and graphics

- **PC:** Forecast CY23 PC unit volume to decline by a low double-digit % YoY, with PC units to be below the pre-COVID levels last seen in 2019.
- We are well positioned for the ongoing industry transition to D5. Industry client D5 mix is expected to crossover from D4 in early calendar 2024.
- In fiscal Q3, we achieved record quarterly client SSD bit shipments, driven by share growth in client SSDs
- Our SSD QLC bit shipment mix reached a new record for the third consecutive quarter, with growth in both client and consumer.
- Launched Crucial T700, the world's fastest Gen5 PCle consumer SSD, built with our 232-layer NAND.
- Graphics: Analysts continue to expect graphics' TAM growth CAGR to outpace the broader market, supported by applications across client and data center. We expect customer inventories to normalize in calendar Q3.
- We plan to introduce our next-generation G7 product on our industry-leading 1-beta node in the first half of CY24.



## Mobile and intelligent edge

- Mobile: Now expect CY23 smartphone unit volumes to be down by a midsingle digit % YoY. While units are weaker, we are seeing stronger memory content growth driven by mix shift towards premium phones and elasticity.
- In FQ3, we achieved key mobile customer qualifications on 1-beta based LP5X and started high-volume revenue shipments to tier-1 OEMs.
- We achieved significant milestones in UFS with the qualification and ramp of a high-capacity uMCP5 featuring 16GB of DRAM and 512GB of NAND.
   We have also started to sample a new UFS4 product based on our latest 232-layer NAND technology
- Automotive: FQ3 revenue reached another quarterly record and grew by a high-single-digit % YoY. Expect growth in auto memory demand for the 2H of CY23, driven by easing non-memory supply, normalizing customer inventory levels, and increasing memory content per vehicle.
- Industrial: Market saw early signs of recovery in fiscal Q3. We expect an improvement in demand in the 2H of CY23. Industrial customers continue to adopt and implement IoT, AI, and machine learning in the factory.

#### **Outlook and actions**

- Expectations for calendar 2023 industry bit demand growth have reduced to low-to-mid single digits in DRAM and to high-single digits in NAND, which are well below the expected long-term CAGR of mid-teens percentage range in DRAM and low 20s percentage range in NAND.
- We continue to expect stronger industry bit shipments for DRAM and NAND in the second half of the calendar year, driven by secular content growth and continued improvement in customer inventory.
- We see DRAM and NAND supply growth in calendar 2023 to be negative for the industry as utilization and capex cuts are impacting supply growth.
- While supply demand balance is improving, due to the excess inventory, profitability and cash flow will remain extremely challenged for some time.
- We expect Micron's year-on-year bit supply growth to be meaningfully negative for DRAM, and to produce fewer NAND bits in calendar 2023 than in calendar 2022.

#### **Micron Actions:**

- We have taken decisive actions to bring our supply back in balance with demand.
- Our fiscal 2023 capex plan of \$7B is down more than 40% from last year, with WFE down more than 50%. We continue to expect fiscal 2024 WFE to be down year on year.
- Recently, we have further reduced wafer starts to approach 30% in both DRAM and NAND. We now expect that reduced wafer starts will continue well into calendar 2024.

## **Mark Murphy**

**Chief Financial Officer** 



## FQ3-23 revenue

\$3.8B

Revenue up 2% Q/Q and down 57% Y/Y

#### Performance by technology

#### DRAM

- 71% of total revenue in FQ3-23
- Revenue down 2% Q/Q
- Bit shipments increased in the 10-percentange range Q/Q
- ASPs declined approximately 10% Q/Q

#### **NAND**

- 27% of total revenue in FQ3-23
- Revenue up 14% Q/Q
- Bit shipments increased in the upper 30percentage range Q/Q
- ASPs declined in the mid-teens percentage range Q/Q

## Revenue by business unit

Amounts in millions	FQ3-23	FQ2-23	Q/Q % Change	FQ3-22	Y/Y % Change
Compute and Networking (CNBU)	\$1,389	\$1,375	1%	\$3,895	(64%)
Embedded (EBU)	\$912	\$865	5%	\$1,435	(36%)
Mobile (MBU)	\$819	\$945	(13%)	\$1,967	(58%)
Storage (SBU)	\$627	\$507	24%	\$1,341	(53%)

## FQ3-23 Non-GAAP Operating Results

Fiscal third quarter results were impacted by ~\$400 million of inventory write downs, impacting EPS by \$0.37 per diluted share

Revenue: \$3.8 billion

**Gross margin:** (16%)

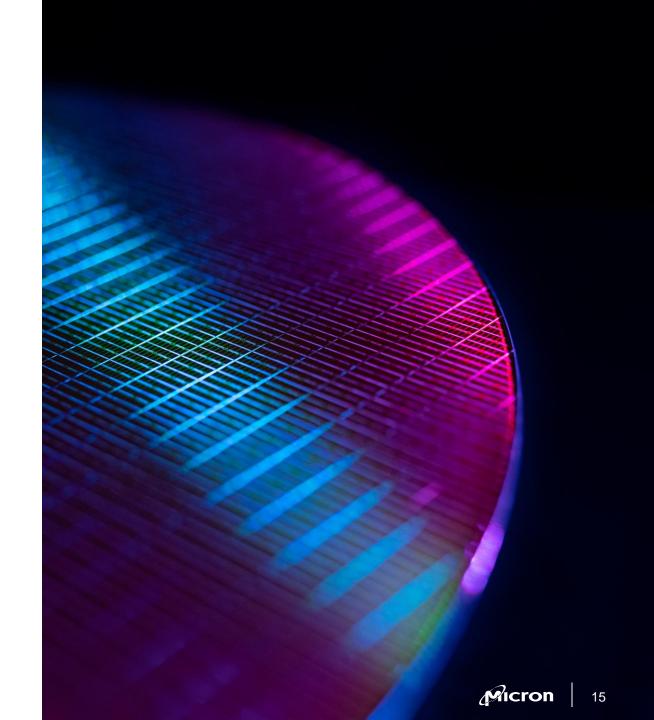
Operating expenses: \$866 million

Operating income (loss): (\$1.5 billion)

Net income (loss): (\$1.6 billion)

Diluted earnings (loss) per share: (\$1.43)

Cash from operations (GAAP): \$24 million



### Cash flow and capital allocation

#### From FY-20 to FQ3-23:

- \$4.2 billion towards repurchasing 63 million shares
- ~\$300 million toward settling convert premiums which reduced diluted share count by 5 million shares
- \$5.3 billion returned to shareholders from share repurchases, convert premiums, and dividends

Cash flow from operations	FQ3-23: \$24M (1% of revenue)
Net CapEx <sup>1</sup>	FQ3-23: CapEx of \$1.4B FY-23: CapEx guidance of ~\$7.0B
FCF*	FQ3-23: Negative \$1.4B
Buybacks	FQ3-23: Temporarily suspended
Dividends	Dividend payment of \$0.115 per share will be paid on July 25th
Liquidity <sup>2</sup>	\$13.9B in liquidity at end of FQ3-23

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



<sup>&</sup>lt;sup>1</sup>CapEx 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

## **FQ4-23 guidance** Non-GAAP

Revenue	\$3.90 billion ± \$200 million
Gross margin	(10.5%) ± 2.5%
Operating expenses	\$845 million ± \$15 million
Diluted earnings (loss) per share*	(\$1.19) ± \$0.07

## Other key data

# **Financial Summary**Non-GAAP

Amounts in millions, except per share	FQ3-23	% of Revenue	FQ2-23	% of Revenue	FQ3-22	% of Revenue	
Revenue	\$3,752	100%	\$3,693	100%	\$8,642	100%	
Gross margin	(603)	(16%)	(1,161)	(31%)	4,097	47%	
Operating income (loss)	(1,469)	(39%)	(2,077)	(56%)	3,144	36%	
Income tax (provision) benefit	(102)		(53)		(193)		
Net income (loss)	(1,565)	(42%)	(2,081)	(56%)	2,939	34%	
Diluted earnings (loss) per share	(1.43)		(1.91)		2.59		
Cash provided by operating activities (GAAP)	24		343		3,838		
Cash, marketable investments, and restricted cash (GAAP)	11,397		12,119		11,977		

See non-GAAP reconciliations

#### **Non-GAAP Financial Data and Guidance**

% of Revenue	FQ3-23
DRAM	71%
NAND	27%

% Sales Volume Change	FQ3-23 Q/Q
DRAM	Increased in the 10-percentage range
NAND	Increased in the upper 30-percentage range

% ASP Change	FQ3-23 Q/Q
DRAM	Declined by approximately 10%
NAND	Declined in the mid-teens percentage range

	(amo	23 Non-GAAP unts in millions, ept per share)	FQ4-23 Non-GAAP Guidance
Revenue	\$	3,752	\$3.90 billion ± \$200 million
Gross margin		(16%)	(10.5%) ± 2.5%
Operating expenses	\$	866	\$845 million ± \$15 million
Diluted earnings (loss) per share	\$	(1.43)	(\$1.19) ± \$0.07

	23 Non-GAAP ints in millions)	FQ4-23 Non-GAAP Estimates
Diluted shares	1,094	~1.10 billion
Income tax (provision) benefit	\$ (102)	~(\$40) million
Cash from operations (GAAP)	\$ 24	_
Depreciation and amortization	\$ 1,956	_
Investments in capex, net (capital cash flow)	\$ 1,379	FY-23: ~\$7.0 billion

See non-GAAP reconciliations

## Revenue by Technology

Amounts in millions	FQ3-23	% of Revenue	FQ2-23	% of Revenue	FQ3-22	% of Revenue
DRAM	\$ 2,672	71%	\$ 2,722	74%	\$ 6,271	73%
NAND	1,013	27%	885	24%	2,288	26%
Other	67	2%	86	2%	83	1%
Total	\$ 3,752	100%	\$ 3,693	100%	\$ 8,642	100%

# Non-GAAP reconciliations

Amounts in millions	FQ3-23	FQ2-23	FQ3-22
GAAP gross margin	\$ (668)	\$ (1,206)	\$ 4,035
Stock-based compensation	60	41	57
Other	5	4	5
Non-GAAP gross margin	\$ (603)	\$ (1,161)	\$ 4,097
GAAP operating expenses	\$ 1,093	\$ 1,097	\$ 1,031
Stock-based compensation	(91)	(95)	(78)
Restructure and asset impairments	(68)	(86)	_
Litigation contingency accrual	(68)	_	_
Non-GAAP operating expenses	\$ 866	\$ 916	\$ 953
GAAP operating income (loss)	\$ (1,761)	\$ (2,303)	\$ 3,004
Stock-based compensation	151	136	135
Restructure and asset impairments	68	86	_
Litigation contingency accrual	68	_	_
Other	5	4	5
Non-GAAP operating income (loss)	\$ (1,469)	\$ (2,077)	\$ 3,144

Amounts in millions	FQ3-23 F		FQ2-23	FQ3-22	
GAAP cost of goods sold	\$ 4,420	\$	4,899	\$ 4,607	
Stock-based compensation	(60)		(41)	(57)	
Other	(5)		(4)	(5)	
Non-GAAP cost of goods sold	\$ 4,355	\$	4,854	\$ 4,545	
GAAP research and development	\$ 758	\$	788	\$ 773	
Stock-based compensation	(57)		(59)	(45)	
Non-GAAP research and development	\$ 701	\$	729	\$ 728	
GAAP selling, general, and administrative	\$ 219	\$	231	\$ 264	
Stock-based compensation	(34)		(36)	(33)	
Non-GAAP selling, general, and administrative	\$ 185	\$	195	\$ 231	

Amounts in millions	FQ3-23		FQ2-23		FQ3-22	
GAAP net income (loss)	\$ (1,896)	\$	(2,312)	\$	2,626	
Stock-based compensation	151		136		135	
Restructure and asset impairments	68		86			
Litigation contingency accrual	68		_		_	
Amortization of debt discount and other costs	2		4		8	
Other	5		4		5	
Impact of Idaho income tax reform	_		_		189	
Estimated tax effects of above and other tax adjustments	37		1		(24)	
Non-GAAP net income (loss)	\$ (1,565)	\$	(2,081)	\$	2,939	
GAAP interest (income) expense, net	\$ 8	\$	30	\$	24	
Amortization of debt discount and other costs	2		4		(8)	
Non-GAAP interest (income) expense, net	\$ 10	\$	34	\$	16	
GAAP income tax (provision) benefit	\$ (139)	\$	(54)	\$	(358)	
Impact of Idaho income tax reform	_		_		189	
Estimated tax effects of non-GAAP adjustments and other tax adjustments	37		1		(24)	
Non-GAAP income tax (provision) benefit	\$ (102)	\$	(53)	\$	(193)	

Amounts in millions	FQ3-23	FQ2-23	FQ3-22
GAAP shares used in diluted EPS calculations	1,094	1,091	1,121
Adjustment for stock-based compensation	_	_	15
Non-GAAP shares used in diluted EPS calculations	1,094	1,091	1,136
GAAP diluted earnings (loss) per share	\$ (1.73)	\$ (2.12)	\$ 2.34
Effects of non-GAAP adjustments	0.30	0.21	0.25
Non-GAAP diluted earnings (loss) per share	\$ (1.43)	\$ (1.91)	\$ 2.59
Net cash provided by operating activities	\$ 24	\$ 343	\$ 3,838
Expenditures for property, plant, and equipment	(1,561)	(2,205)	(2,578)
Proceeds from sales of property, plant, and equipment	34	17	39
Payments on equipment purchase contracts	(36)	(29)	(27)
Amounts funded by partners	184	62	38
Investments in capital expenditures, net	(1,379)	(2,155)	(2,528)
Adjusted free cash flow	\$ (1,355)	\$ (1,812)	\$ 1,310

#### FQ4-23 guidance Non-GAAP reconciliations

	GAAP	Adjustments		Non-GAAP
Revenue	\$3.90 billion ± \$200 million	_		\$3.90 billion ± \$200 million
Gross margin	(12.5%) ± 2.5%	2.0%	А	(10.5%) ± 2.5%
Operating expenses	\$946 million ± \$15 million	\$101 million	В	\$845 million ± \$15 million
Diluted earnings (loss) per share*	(\$1.34) ± \$0.07	\$0.15	A,B,C	(\$1.19) ± \$0.07

Non-	GAAP Adjustments (amounts in millions)		
А	Stock-based compensation – cost of goods sold	\$ 57	
Α	Other – cost of goods sold	4	
В	Stock-based compensation – research and development	59	
В	Stock-based compensation – selling, general, and administrative	42	
С	Tax effects of the above items and other tax adjustments	 5	
		\$ 167	

The above guidance does not incorporate the impact of any potential business combinations, divestitures, additional 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 and Non-GAAP earnings (loss) per share based on approximately 1.10 billion diluted shares.



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