

# Financial Results

FQ2 2023

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# Sanjay Mehrotra

President and CEO



### **Overview**

• Delivered fiscal second quarter revenue within our guidance range; margins and EPS were also within the range (excl. impact of inventory write downs).

 Believe that customer inventories have reduced in several end markets and see gradually improving supply-demand balance in the months ahead.

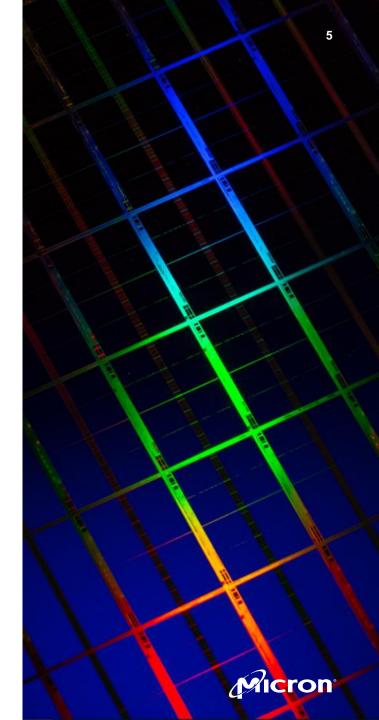
Excluding the impact of inventory write downs, we believe our balance sheet DIO
has peaked in fiscal Q2 and we are close to a transition to sequential revenue
growth in our quarterly results.

- We have taken substantial supply reduction and austerity measures, including executing a company-wide reduction in force. We are navigating the near-term difficult environment with our strong technology position, deep manufacturing expertise, strengthening product portfolio, solid balance sheet and incredibly talented team.
- Beyond this downturn, we anticipate a return to normalized growth and profitability in line with our long-term financial model.



## **Technology**

- We are investing prudently to maintain our technology competitiveness, while managing node ramps to reduce our bit supply and align it with demand.
- In DRAM, 1-alpha represents most of our DRAM bit production, and we continue to make great progress in initiating our transition to 1-beta.
- In NAND, 176-layer and 232-layer now represent more than 90% of NAND bit production. QLC accounted for over 20% of our NAND bit production and shipments in fiscal Q2.
- Yields on 1-alpha DRAM and 176-layer NAND have reached levels that are now higher than any node in our history. In addition, both our 1-beta DRAM and 232layer NAND have reached targeted yields ahead of schedule and faster than any of our prior nodes.
- Making good progress towards the introduction of our EUV based 1-gamma node in 2025. Similar to our 1-alpha and 1-beta nodes, we expect this node to provide us with competitive performance, power, cost and density improvements.



## **End Market Highlights**



#### **Data Center**

- Believe that our revenue bottomed in fiscal Q2. Data center customer inventories should reach relatively healthy levels by the end of calendar 2023
- Al server today can have up to eight times the DRAM content of a regular server and up to three times the NAND content
- In fiscal Q2, we expanded shipments of CXL DRAM samples to OEMs that service enterprise, cloud and HPC workloads
- Shipping D5 in high volume to data center customers and achieved our first qual for our 1-alpha 24Gb D5 product
- Began volume production and shipments of the fastest PCIe Gen4x4 NVMe SSD in the market, which excels in AI and highperformance computing workloads



#### **PC & Graphics**

- PC: now forecast calendar 2023 PC units to decline by mid-single digit percentage
- Although still elevated, client customer inventories have improved meaningfully, and we expect increased bit demand in the second half of the fiscal year
- Client D4 to D5 mix crossover expected in early-to-mid calendar 2024
- Our NAND QLC bit shipment mix reached a record for the second consecutive quarter
- Qualified our Micron 2400 SSD, the world's only 176-layer QLC SSD qualified at OEMs
- Graphics: expect demand in the calendar second half of 2023 to be stronger than the first half
- Our proprietary 16Gb G6X was featured in the recently launched NVIDIA RTX 4070TI



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

- Mobile: now expect calendar 2023 smartphone units to be down slightly YoY
- Expect mobile customer inventory to improve through calendar 2023, and expect growth in bit shipments in second half of our fiscal year
- Expect revenue later this fiscal year for our industry-leading 1-beta 16Gb LP5X
- Displayed eight flagship mobile customer design wins at Mobile World Congress
- Auto: revenues grew ~5% YoY; expect auto demand growth to continue in second half.
   Qualified industry's first 176-layer eMMC 5.1 automotive product and began shipping industry's first 176-layer UFS 3.1 auto solution
- Industrial: Customer inventories are starting to stabilize at most customers; expect demand to improve in the second half of fiscal year



## **Industry Outlook**

- Expectations for calendar 2023 industry bit demand growth have moderated to approximately 5% in DRAM and low-teens percentage range 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.
- The reduction in calendar 2023 demand from our prior forecast is driven by an assessment of customer inventories as well as some degradation in end market demand.
- We expect that improving customer inventories will support sequential bit demand growth for DRAM and NAND through the calendar year. China's reopening is also a positive factor for calendar 2023 bit demand.
- Now expect that industry bit supply growth for DRAM and NAND in calendar 2023 will be below demand growth, which will help improve supplier inventories. While the supply demand balance is expected to gradually improve, due to the high levels of inventories, industry profitability and free cash flow are likely to remain extremely challenged in the near term.
- Market recovery can accelerate if there is a year-to-year reduction in production, or in other words, negative DRAM and NAND industry bit supply growth in 2023.



## Micron's Actions and Outlook

- 1. **Reducing our supply:** Made additional reductions to our fiscal 2023 capex plan and now expect to invest ~\$7B, down >40% from last year, with WFE down >50%. In fiscal 2024, we expect WFE to fall further, as we ramp 1-beta and 232-layer nodes in a capital efficient manner. We have further reduced DRAM and NAND wafer starts, which are now down by ~25%.
- 2. **Furthering cuts to Opex:** Now expect our overall headcount reduction to approach 15%. This will occur through a combination of workforce reductions which are now largely complete as well as anticipated attrition through the remainder of the calendar year.
- 3. **Executing to our flat bit share strategy:** While we have had to reduce price to remain competitive in the market, we have not done so in an attempt to gain share, as such share changes at customers are generally transitory.
- 4. **Ensuring ample liquidity:** We have the strongest balance sheet among the pureplay memory & storage companies. Our strong liquidity will enable us to weather this downturn while ensuring our product and technology competitiveness.

Resulting Outlook:
Expect Micron's CY23
year-on-year bit
supply growth to be
meaningfully negative for
DRAM. We also expect to
produce fewer NAND bits
in CY23 than in CY22.
Excluding the impact of
inventory write-downs, we
expect Micron's DIO to
decline sequentially going
forward, from its peak in
the second quarter.



# **Mark Murphy**

**Chief Financial Officer** 



## FQ2-23 Revenue

# \$3.7B

Revenue down 10% Q/Q and down 53% Y/Y





# Performance by Technology

## **DRAM**

- 74% of total revenue in FQ2-23
- Revenue down 4% Q/Q
- Bit shipments increased in the mid-teens percent range Q/Q
- ASPs declined approximately 20% Q/Q



- 24% of total revenue in FQ2-23
- Revenue down 20% Q/Q
- Bit shipments increased in the mid-to-high single-digit percent range Q/Q
- ASPs declined in the mid-20s percent range Q/Q



## **Revenue by Business Unit**

Amounts in millions	FQ2-23	FQ1-23	Q/Q % Change	Q/Q % Change FQ2-22		
Compute and Networking (CNBU)	\$1,375	\$1,746	\$1,746 (21%)		(60%)	
Mobile (MBU)	\$945	\$655	44%	\$1,875	(50%)	
Embedded (EBU)	\$865	\$1,000	(14%)	\$1,277	(32%)	
Storage (SBU)	\$507	\$680	(25%)	\$1,171	(57%)	



## **FQ2-23**

Non-GAAP Operating Results

Fiscal second quarter results were impacted by \$1.43 billion of inventory write downs; EPS impacted by \$1.34 per diluted share

Revenue: \$3.7 billion

**Gross margin:** (31.4%)

Operating expenses: \$916 million

Operating income (loss): (\$2.1 billion)

Net income (loss): (\$2.1 billion)

**Diluted earnings (loss) per share: (\$1.91)** 

Cash from operations (GAAP): \$343 million



# Cash Flow and Capital Allocation

#### From FY-20 to FQ2-23:

- \$4.2 billion towards repurchasing 63 million shares
- ~\$300 million toward settling convert premiums which reduced diluted share count by 5 million shares
- \$5.2 billion returned to shareholders from share repurchases, convert premiums, and dividends

Cash flow from operations	• FQ2-23: \$343M (9% of revenue)
Net CapEx <sup>1</sup>	<ul><li>FQ2-23: CapEx of \$2.2B</li><li>FY-23: CapEx guidance of ~\$7.0B</li></ul>
FCF*	<ul> <li>FQ2-23: Negative \$1.8B</li> </ul>
Buybacks	<ul> <li>FQ2-23: Temporarily suspended</li> </ul>
Dividends	Dividend payment of \$0.115 per share will be paid on April 25 <sup>th</sup>
Liquidity <sup>2</sup>	\$14.6B in liquidity at end of FQ2-23

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

## FQ3-23 Guidance

Non-GAAP

Revenue	\$3.70 billion ± \$200 million
Gross margin	(21.0%) ± 2.5%
Operating expenses	\$900 million ± \$15 million
Diluted earnings (loss) per share*	$(\$1.58) \pm \$0.07$

FQ3-23 guidance assumes ~\$500 million of additional write downs associated with new inventory produced during FQ3-23.



## Other key data



# Financial Summary Non-GAAP

Amounts in millions, except per share	FQ2-23 % of Revenue FQ1-23		% of Revenue	FQ2-22	% of Revenue	
Revenue	\$3,693	100%	\$4,085	100%	\$7,786	100%
Gross margin	(1,161)	(31%)	934	23%	3,724	48%
Operating income (loss)	(2,077)	(56%)	(65)	(2%)	2,750	35%
Income tax (provision) benefit	(53)		(1)		(286)	
Net income (loss)	(2,081)	(56%)	(39)	(1%)	2,444	31%
Diluted earnings (loss) per share	(1.91)		(0.04)		2.14	
Cash provided by operating activities (GAAP)	343		943		3,628	
Cash, marketable investments, and restricted cash (GAAP)	12,119		12,075		11,947	



## Non-GAAP Financial Data and Guidance

% of Revenue	FQ2-23
DRAM	74%
NAND	24%

% Sales Volume Change	FQ2-23 Q/Q
DRAM	Increased in the mid-teens percent range
NAND	Increased in the mid-to-high single-digit percent range

% ASP Change	FQ2-23 Q/Q
DRAM	Declined by approximately 20%
NAND	Declined in the mid-20s percent range

	FQ2-23 Non-GAAP (amounts in millions, except per share)		FQ3-23 Non-GAAP Guidance
Revenue	\$	3,693	\$3.7 billion ± \$200 million
Gross margin		(31.4%)	$(21.0\%) \pm 2.5\%$
Operating expenses	\$	916	\$900 million ± \$15 million
Diluted earnings (loss) per share	\$ (1.91)		(\$1.58) ± \$0.07

	23 Non-GAAP nts in millions)	FQ3-23 Non-GAAP Estimates
Diluted shares	1,091	~1.09 billion
Income tax (provision) benefit	\$ (53)	~(\$50) million
Cash from operations (GAAP)	\$ 343	<del>_</del>
Depreciation and amortization	\$ 1,942	<del></del>
Investments in capex, net (capital cash flow)	\$ 2,155	FY-23: ~\$7.0 billion



## Revenue by Technology

Amounts in millions	FQ2-23	% of Revenue	FQ1-23	% of Revenue	FQ2-22	% of Revenue
DRAM	\$ 2,722	74%	\$ 2,829	69%	\$ 5,719	73%
NAND	885	24%	1,103	27%	1,957	25%
Other	86	2%	153	4%	110	1%
Total	\$ 3,693	100%	\$ 4,085	100%	\$ 7,786	100%





Amounts in millions	FQ2-23	FQ1-23	FQ2-22
GAAP gross margin	\$ (1,206)	\$ 893	\$ 3,676
Stock-based compensation	41	36	44
Other	4	5	4
Non-GAAP gross margin	\$ (1,161)	\$ 934	\$ 3,724
GAAP operating expenses	\$ 1,097	\$ 1,102	\$ 1,130
Stock-based compensation	(95)	(90)	(75)
Restructure and asset impairments	(86)	(13)	(5)
Other	_	_	(76)
Non-GAAP operating expenses	\$ 916	\$ 999	\$ 974
GAAP operating income (loss)	\$ (2,303)	\$ (209)	\$ 2,546
Stock-based compensation	136	126	119
Restructure and asset impairments	86	13	5
Other	4	5	80
Non-GAAP operating income (loss)	\$ (2,077)	\$ (65)	\$ 2,750



Amounts in millions	FQ2-23	FQ1-23	FQ2-22
GAAP cost of goods sold	\$ 4,899	\$ 3,192	\$ 4,110
Stock-based compensation	(41)	(36)	(44)
Other	(4)	(5)	(4)
Non-GAAP cost of goods sold	\$ 4,854	\$ 3,151	\$ 4,062
GAAP research and development	\$ 788	\$ 849	\$ 792
Stock-based compensation	(59)	(53)	(45)
Other	_	_	(1)
Non-GAAP research and development	\$ 729	\$ 796	\$ 746
GAAP selling, general, and administrative	\$ 231	\$ 251	\$ 263
Stock-based compensation	(36)	(37)	(30)
Non-GAAP selling, general, and administrative	\$ 195	\$ 214	\$ 233



Amounts in millions	FQ2-23	FQ1-23	FQ2-22
GAAP net income (loss)	\$ (2,312)	\$ (195)	\$ 2,263
Stock-based compensation	136	126	119
Restructure and asset impairments	86	13	5
Amortization of debt discount and other costs	4	5	8
Other	4	5	80
Estimated tax effects of above and other tax adjustments	1	7	(31)
Non-GAAP net income (loss)	\$ (2,081)	\$ (39)	\$ 2,444
GAAP interest (income) expense, net	\$ 30	\$ 37	\$ 43
Amortization of debt discount and other costs	4	5	(8)
Non-GAAP interest (income) expense, net	\$ 34	\$ 42	\$ 35
GAAP income tax (provision) benefit	\$ (54)	\$ (8)	\$ (255)
Estimated tax effects of non-GAAP adjustments and other tax adjustments	1	7	(31)
Non-GAAP income tax (provision) benefit	\$ (53)	\$ (1)	\$ (286)



Amounts in millions	FQ2-23	FQ1-23	FQ2-22
GAAP shares used in diluted EPS calculations	1,091	1,090	1,130
Adjustment for stock-based compensation	-	-	13
Non-GAAP shares used in diluted EPS calculations	1,091	1,090	1,143
GAAP diluted earnings (loss) per share	\$ (2.12)	\$ (0.18)	\$ 2.00
Effects of non-GAAP adjustments	0.21	0.14	0.14
Non-GAAP diluted earnings (loss) per share	\$ (1.91)	\$ (0.04)	\$ 2.14
Net cash provided by operating activities	\$ 343	\$ 943	\$ 3,628
Expenditures for property, plant, and equipment	(2,205)	(2,449)	(2,611)
Proceeds from sales of property, plant, and equipment	17	23	27
Payments on equipment purchase contracts	(29)	(47)	(27)
Amounts funded by partners	62	2	11
Investments in capital expenditures, net	(2,155)	(2,471)	(2,600)
Adjusted free cash flow	\$ (1,812)	\$ (1,528)	\$ 1,028



## FQ3-23 Guidance

#### Non-GAAP Reconciliations

	GAAP	Adjustments		Non-GAAP
Revenue	\$3.70 billion ± \$200 million	_		\$3.70 billion ± \$200 million
Gross margin	$(23.0\%) \pm 2.5\%$	~2%	А	(21.0%) ± 2.5%
Operating expenses	\$1.07 billion ± \$15 million	\$166 million	В	\$900 million ± \$15 million
Diluted earnings (loss) per share*	(\$1.79) ± \$0.07	\$0.21	A,B,C	(\$1.58) ± \$0.07

Adjus	stments (amounts in millions)		
Α	Stock-based compensation – cost of goods sold	\$ 55	
Α	Other – cost of goods sold	5	
В	Stock-based compensation – research and development	62	
В	Stock-based compensation – selling, general, and administrative	44	
В	Restructure and asset impairments	60	
С	Tax effects of the above items and other tax adjustments	5	
		\$ 231	

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 1.09 billion diluted shares.

