



Farhan Ahmad, Vice President, Investor Relations

Thank you, and welcome to Micron Technology's fiscal second-quarter 2022 financial conference call. On the call with me today are Sanjay Mehrotra, president and CEO, and Sumit Sadana, our chief business officer and interim CFO. Today's call is approximately 60 minutes long and being webcast from our Investor Relations site at investors.micron.com, including audio and slides. In addition, the press release detailing our quarterly results has been posted on the website, along with the prepared remarks for this call.

Today's discussion of financial results is presented on a non-GAAP financial basis unless otherwise specified. A reconciliation of GAAP to non-GAAP financial measures may be found on our website. We encourage you to visit our website at micron.com throughout the quarter for the most current information on the company, including information on financial conferences that we will be attending. You can also follow us on Twitter at MicronTech.

As a reminder, the matters we are discussing today include forward-looking statements. These forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from statements made today. We refer you to the documents we file with the SEC, specifically our most recent Form 10-K and 10-Q, for a discussion of risks that may affect our future results. 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 after today's date to conform these statements to actual results.

I'll now turn the call over to Sanjay.

Sanjay Mehrotra, President and Chief Executive Officer

Thank you, Farhan.

Good afternoon, everyone.

Intro/FQ2 Highlights

Micron delivered an excellent performance in fiscal Q2 with results above the high end of our guidance. We grew revenue and margins sequentially while driving favorable mix and cost reductions amid ongoing global supply chain challenges. We saw broad-based demand for our products, with our SSD products achieving record revenue, and our auto market revenue also reaching an all-time high. Execution was outstanding, with our industry-leading 1 α (1-alpha) DRAM and 176-layer NAND technology node ramps delivering strong cost reductions. Our portfolio transformation continues to gain momentum, as we lead the industry on the DDR5 transition and grow our mix of NVMe data center SSDs. Following a solid first



half, we are on track to deliver record revenue and robust profitability in fiscal 2022 and remain well positioned to create significant shareholder value in fiscal 2022 and beyond.

Technology and Operations

In fiscal Q2, 1z and 1α DRAM combined represented the majority of our DRAM bit shipments, while 176-layer NAND represented the majority of our NAND bit shipments. Our 1α DRAM and 176-layer NAND products are achieving excellent yields, providing us with solid front-end cost reductions and contributing meaningful revenue. We qualified additional products on these advanced nodes with a broad set of customers, which sets us up for continued strong revenue ramp in the second half of the fiscal year. We are tracking several quarters ahead of the industry in ramping products based on these leading-edge process technologies. We are also investing to maintain technology leadership for the next decade and making good progress in the development of future technology nodes.

Micron is not only a technology leader but also the industry leader in quality, with the majority of our customers ranking us No. 1. Our leadership in quality is an important differentiator for Micron, particularly in fast-growing data center and automotive markets where our quality scores are excellent.

We have also strengthened our position as a strategic supplier to our customers, as demonstrated by our commitment to supply continuity amid ongoing semiconductor supply chain challenges this past quarter. In late December, a government mandated COVID-19 lockdown impacted production output at our back-end facility in Xi'an, China. The Micron team executed with tenacity to return the Xi'an site back to normal output levels post lockdown. As a result of this outstanding effort, we mitigated the lost output from Xi'an and delivered on our customer commitments for the quarter by leveraging our global manufacturing network. Additional COVID-19-related lockdowns in the region present a risk to the global electronics supply chain, and we continue to monitor the situation closely.

The global semiconductor supply chain is experiencing pressure due to impact of Russia's invasion of Ukraine. The region is an important source for the global supply of noble gases and other critical minerals that are used in semiconductor manufacturing. We have strategically diversified our supply chain over the last several years and maintain appropriate inventories of materials and noble gases. We currently do not expect any negative impact to our near-term production volumes because of the Russia-Ukraine war, but we do expect an increase in our costs as we secure supply of certain raw materials that could be at risk. We also remain vigilant in this dynamic situation and are engaged with our key suppliers to ensure continuous availability of materials to support our operations.

End Markets

Now let's review our end markets. Demand for memory and storage is broad, extending from the data center to the intelligent edge and to a growing diversity of user devices. Memory and storage revenue has



outpaced the rest of the semiconductor industry over the last two decades, and we expect this trend to continue over the next decade, thanks to ongoing advancement of AI, 5G and EV adoption.

Our team's execution on strengthening our product portfolio has been outstanding, with several new product launches and customer qualifications in fiscal Q2 — achievements that we are very proud of.

Data Center

Last year, data center became the largest market for memory and storage, eclipsing the mobile market. Looking ahead, we expect data center demand growth to outpace the broader memory and storage market over the next decade, fueled by secular drivers in cloud and healthy enterprise IT investment. Memory and storage share of server BOM costs already exceeds 40% and this number is even higher for servers optimized for AI/ML workloads. This growth is supported by new heterogenous computing architectures, the increase in data-intensive workloads, and the ongoing displacement of HDDs by SSDs. In the fiscal second quarter, data center revenue grew more than 60% year over year, supported by robust demand across our DRAM and SSD portfolio. We have broadened the qualifications for our 1α DRAM products and are well positioned to support the data center DDR5 transition driven by new CPU platforms, which are targeted to begin ramping later this calendar year and gain momentum in 2023.

Following the introduction of our 7400 SSD, in fiscal Q2 we introduced the 7450 – which is the industry's first 176-layer vertically integrated data center NVMe SSD. These Gen4 NVMe data center drives are generating an enthusiastic response from our customers. We are making robust progress in our qualifications of these drives with data center customers, which has contributed to a doubling of our fiscal Q2 data center SSD revenues year over year. We expect strong growth of data center SSD revenues to continue for the remainder of this fiscal year.

PC

In fiscal Q2, we saw recovery in our client revenue, driven by strength in enterprise PCs, which more than offset softer consumer and Chromebook demand. We expect that calendar 2022 PC unit sales will be flattish versus last year's sales, but we expect solid growth in DRAM and NAND content, driven in part, by the increasing mix of content-rich enterprise desktops and laptops. We are leading the industry's client DDR5 transition, and our DDR5 revenue continues to increase as multiple PC customers launch next-generation notebooks. Client DDR5 demand continues to outstrip supply, and we are seeing meaningful price premiums over DDR4 alternatives. Building on our QLC leadership, in fiscal Q2 we also launched our 2400 NVMe SSD, the world's first client SSD built on 176-layer QLC NAND.



Graphics

Micron maintains a leading position in the fast-growing graphics market. We have a broad product portfolio featuring industry-leading product performance, and deep partnerships with leading GPU suppliers. In fiscal Q2, revenues grew year over year, driven by strong demand for the latest generation of gaming consoles and graphics cards. Our advanced GDDR6X continues to lead the industry in performance, and in fiscal Q2, we began revenue shipments of our next-generation GDDR6X solutions.

Mobile

Fiscal Q2 mobile revenue grew slightly year over year as the 5G transition continues in smartphones. We see some weakness in the China market as the local economy slows, smartphone market share shifts and some customers take a more prudent approach to inventory management. Mobile memory and storage demand continues to be supported by content-hungry applications and the ongoing transition from 4G to 5G, which is driving 50% higher DRAM content and a doubling of NAND content. 5G smartphone sales are expected to grow to 700 million units in calendar year 2022. In fiscal Q2, we achieved the first qualification of our 1 α LP5 DRAM, which delivers more than a 15% power improvement over the previous generation, enabling our customers to offer an improved 5G experience with better battery life. We are also seeing a very strong revenue ramp for our 176-layer NAND UFS products, which are now qualified in nearly 50 different OEM platforms.

Auto & Industrial

The automotive and industrial segments are expected to be the fastest-growing memory and storage markets over the next decade. Today, more than 10% of our revenue comes from these end markets, and we are exceptionally well positioned as the market share leader.

In fiscal Q2, our auto revenues set a new record, driven by robust demand for memory and storage. Auto unit production remains below demand, constrained by numerous supply chain challenges, including logic and analog semiconductor component shortages. The Russian invasion of Ukraine has also impacted auto builds. Nevertheless, the demand for memory and storage remains strong, driven by auto content growth. New EVs are becoming like data centers on wheels, and we expect over 100 new EV models to launch worldwide in this calendar year alone. These new EVs include advanced ADAS and in-vehicle infotainment features that have significantly higher memory and storage requirements. In fact, some of these level-3 autonomous EVs have about \$750 in memory and storage content, which is 15 times higher than the average car.

In industrial IoT, we saw approximately 60% year-over-year revenue growth, fueled by the continued ramp in applications such as factory automation and security systems.



Market Outlook

Turning to the market outlook.

Our expectation for calendar 2022 industry demand is largely unchanged from our last earnings call. We expect calendar 2022 industry bit demand growth to be in the mid to high teens for DRAM, and at approximately 30% for NAND. We anticipate underlying demand in calendar 2022 to be led by data center, ongoing adoption of 5G smartphones, and continued strength in automotive and industrial markets. Currently, we see a healthy supply-demand balance across both DRAM and NAND, given these demand trends, supply discipline across the memory industry, long semiconductor manufacturing equipment lead times, and reduced NAND supply from some of our competitors that experienced a contamination issue in their fab.

Non-memory component shortages are improving, and we expect that further improvements should support memory and storage demand growth for rest of this year. However, there are some pockets where semiconductor shortages have not improved as fast as we had expected and these shortages are likely to continue into calendar year 2023. We are mindful of increased macroeconomic uncertainty and remain vigilant of any changes in market conditions.

Turning now to Micron's bit supply growth expectations for the year. Consistent with the rest of the industry, we are experiencing a challenging environment for equipment and material supplies. However, due to strong execution by Micron's operations team, our calendar year 2022 bit supply growth for DRAM and NAND remains unchanged from prior expectations and will be in line with industry demand. We are on track to deliver record revenue with solid profitability in fiscal year 2022, and we continue to expect strong bit shipment growth in the second half of the fiscal year.

We expect our cost reductions to outpace that of the industry this year driven by the exceptionally well executed ramp of our world class 1 α DRAM and 176-layer NAND nodes. However, across the industry there are cost challenges stemming from supply chain and inflationary pressures which will limit cost reductions this year for the industry. We remain confident in our long-term technology roadmap and our ability to drive competitive cost reductions for years to come.

I will now turn it over to Sumit.

Sumit Sadana, Executive Vice President, Chief Business Officer and Interim Chief Financial Officer

Opening

Thanks, Sanjay.



Micron delivered excellent fiscal Q2 results marked by record revenues across multiple products and markets, strong profitability, and generation of over \$1 billion in free cash flow. I am particularly excited by the execution of our industry-leading 1 α DRAM and 176-layer NAND technology ramp, and the accelerating momentum of our product portfolio transformation.

Revenue

Total fiscal Q2 revenue was approximately \$7.8 billion, up 1% quarter over quarter and up 25% year over year. Revenue was particularly strong in client, and cloud markets.

DRAM

Fiscal Q2 DRAM revenue was \$5.7 billion, representing 73% of total revenue. DRAM revenue increased 2% quarter over quarter and was up 29% year over year. Sequentially, bit shipments increased in the high-single-digit percentage range while ASPs declined in the mid-single-digit percentage range.

NAND

Fiscal Q2 NAND revenue was \$2 billion, representing 25% of Micron's total revenue. NAND revenue increased 4% quarter over quarter and was up 19% year over year. Sequential bit shipments were flat, and ASPs increased in the mid-single-digit percentage range due to a stronger mix of SSDs more than offsetting like-for-like price declines. Our ongoing portfolio transformation and solid front-end cost reductions drove sequential gains in gross margin in NAND, despite sequential price declines in most products.

Revenue by Business Unit

Now turning to our fiscal Q2 revenue trends by business unit.

Revenue for the Compute and Networking Business Unit was \$3.5 billion, up 2% sequentially and up 31% year over year. Cloud generated record DRAM revenue, and client DRAM revenues also performed well in the quarter.

Revenue for the Mobile Business Unit was \$1.9 billion, down 2% sequentially and up 4% year over year. Our mobile business continues to perform well, building on our leadership in managed NAND and MCPs, as well as our strong relationships with all smartphone customers.

Revenue for the Storage Business Unit was \$1.2 billion, up 2% sequentially and up 38% year over year. We achieved record SSD revenues, which were up approximately 80% year over year. Our storage business is gaining momentum – growing revenue as well as profitability – as we become the first in the industry to



ramp several 176-layer NAND SSDs, from QLC and TLC client products to vertically integrated data center SSDs.

Finally, revenue for the Embedded Business Unit was \$1.3 billion, up 5% sequentially and up 37% year over year. Our Embedded Business Unit saw strong demand across automotive and industrial markets, with auto revenue hitting a new record.

Operating Results

Gross Margin

The consolidated gross margin for fiscal Q2 was 47.8%, up approximately 80 basis points quarter over quarter. Gross margins benefitted from improvements in our portfolio mix as we ramped several high value solutions, and from manufacturing cost reductions.

Opex

Operating expenses in fiscal Q2 were \$974 million, near the midpoint of our guidance range.

Operating Income

Fiscal Q2 operating income was strong at \$2.8 billion, resulting in an operating margin of 35%, flat quarter over quarter and up from 20% in the prior year.

Fiscal Q2 adjusted EBITDA was \$4.5 billion, resulting in an EBITDA margin of 58%, up from 57% in the prior quarter and up from 45% in the prior year.

Earnings Per Share

Non-GAAP earnings per share in fiscal Q2 were \$2.14, down slightly from \$2.16 in fiscal Q1 and up more than 100% from the \$0.98 in the year-ago quarter. The sequential increase in fiscal Q2 tax rate impacted fiscal Q2 EPS by 4 cents per share.

Operating Cash Flow

Turning to cash flows and capital spending, we generated \$3.6 billion in cash from operations in fiscal Q2, representing 47% of revenue.



Capital Allocation

Net capital spending was \$2.6 billion during the quarter. We continue to expect fiscal year 2022 capex to be in the range of \$11 billion to \$12 billion — with the capex being roughly even between the first and second half of fiscal year.

Our free cash flow for fiscal Q2 was strong, at slightly over \$1 billion. We remain confident in our ability to generate significant free cash flow in the second half of the fiscal year, substantially higher than that in the first half.

We completed share repurchases of \$408 million, or approximately 4.8 million shares, in the quarter. Including our dividend payment, we returned around \$520 million to shareholders in fiscal Q2.

From the inception of the share repurchase program in fiscal 2019, we have deployed \$4.7 billion toward repurchasing 94 million shares at an average price of \$50 per share. In addition, we have deployed approximately \$800 million toward settling convert premiums, which reduced our diluted share count by 19 million shares. Combining the share repurchases, convert premiums and dividends, we have returned to shareholders \$5.8 billion or 64% of our cumulative free cash flow in this time frame.

We remain committed to returning more than 50% of the cross-cycle free cash flow through a combination of dividends and buybacks. As we have mentioned before, we will be opportunistic in share repurchases and more aggressive when the shares are trading at larger discounts to intrinsic value.

Our board of directors approved a quarterly dividend of \$0.10 to be paid on April 26 to shareholders of record on April 11.

Inventory

Our ending fiscal Q2 inventory was \$5.4 billion, and average days of inventory for the quarter were 113 days. Our fiscal Q2 DIO increased sequentially due to an increase in raw materials and WIP to support demand in the fiscal second half. Finished goods inventory declined quarter over quarter in both DRAM and NAND.

Total Cash/Debt

We ended the quarter with \$11.9 billion of total cash and investments and \$14.4 billion of total liquidity. Our fiscal Q2 total debt was \$7.1 billion.



Outlook

Now turning to our outlook for the fiscal third quarter. Our overall business is tracking ahead of our plans a quarter ago and demand is strong across most end markets, with some regional challenges that Sanjay referenced earlier. Near-term supply and pricing trends are constructive. Our improved fiscal year financial outlook is increasing our variable compensation expenses, which will impact our costs in fiscal Q3. We are also seeing cost impacts from continuing inflationary pressures and from supply chain mitigation actions related to industry-wide shortages. Additionally, due to the pull-in of cost reductions in Q2, we expect more modest front-end cost reductions in Q3 on a sequential basis.

We do expect both DRAM and NAND gross margins to increase sequentially in fiscal Q3. A higher mix of NAND revenue in our consolidated total will affect our consolidated gross margin, as our DRAM gross margins are substantially higher than our NAND gross margins.

Non-GAAP Guidance

With all these factors in mind, our non-GAAP guidance for fiscal Q3 is as follows. We expect revenue to be \$8.7 billion, plus or minus \$200 million, which will represent a new record for quarterly revenues; gross margin to be in the range of 48%, plus or minus 100 basis points; and operating expenses to be approximately \$1.05 billion, plus or minus \$25 million. We expect our non-GAAP tax rate to be approximately 10% for fiscal Q3. Based on a share count of approximately 1.14 billion fully diluted shares, we expect EPS to be \$2.46, plus or minus \$0.10. We remain on track to deliver record revenue and solid profitability and free cash flow in fiscal year 2022.

Closing

In closing, Micron continues to deliver strong cross-cycle performance. Revenue growth has significantly outpaced the broader semiconductor industry, gross margins have averaged over 40%, and operating margins have averaged around 30%. Micron's financial foundation and outlook have never been stronger as we build on the momentum created by our portfolio transformation, leadership technology roadmap and manufacturing excellence.

I will now turn it back to Sanjay.

Sanjay Mehrotra, President and Chief Executive Officer

Thanks, Sumit.

I am proud to note that earlier this month, Micron was named one of the World's Most Ethical Companies by the Ethisphere Institute. This recognition reflects our global team's dedication to holding ourselves to



the highest ethical standards, both in how we operate and how we pursue environmental and social responsibility.

We continue to manage our business with a discipline and foresight that is driving industry-leading technology ramps, improving our product portfolio and strengthening our customer relationships. A strong first-half performance and our guidance for an all-time record quarter show our continued progress toward delivering record fiscal 2022 revenues and robust profitability. Given our technology leadership, Micron is in an excellent position to capitalize on the broad trends that are driving demand for DRAM and NAND solutions — solutions that transform data into better customer experiences and greater business value. I look forward to seeing you at our Investor Day presentation on May 12 in San Francisco, where we will discuss the technology drivers behind these trends in greater depth, and detail Micron's strategies to seize the opportunity ahead.

Thanks for joining us today. We'll now open for questions.