



Comments from CEO Pat Gelsinger and CFO Dave Zinsner

Intel's chief executive officer and chief financial officer offer comments after the company released its first-quarter 2023 earnings.

April 27, 2023 — Pat Gelsinger, Intel chief executive officer ([bio](#)):

Good afternoon, everyone. We delivered solid first-quarter results on both the top and bottom line. Upside was driven by better-than-expected revenue and very disciplined expense management across our organization. The latter is not easy, and I want to thank the entire Intel team as we thoughtfully execute on cost reductions and efficiency improvements that support the investments critical to drive our strategy. Q1 results demonstrate the progress we are making to advance our transformation and the IDM 2.0 strategy. We still have more work to do as we re-establish process, product and cost leadership, but we continue to provide proof points each quarter and we remain committed to delivering long-term value for all our stakeholders.

Consistent with prior quarters, I'd like to focus my comments on three areas: (1) our view of the macro and our markets, (2) key highlights from Q1, and (3) an update on our strategic priorities with a focus on our move to an internal foundry model.

As the industry continues to navigate through multiple global challenges and headwinds, we remain cautious on the macro outlook even as we expect some modest recovery in the second half. We are seeing increasing stability in the PC market with inventory corrections largely proceeding as we had expected. However, the server and networking markets have yet to reach their bottoms, as cloud and enterprise remain weak. As a result, our Q2 revenue guide embeds continued inventory corrections in our core markets, and a range of normal seasonal to better-than-seasonal growth off depressed Q1 revenue levels. We remain focused on what is within our control and steadfast in our commitment to advancing our strategy.

As we anticipated on our Q4 earnings call, the PC market depleted a significant amount of inventory in Q1 and is tracking to be at a healthy level by the end of Q2. Importantly, the PC installed base is larger and usage remains well above pre-pandemic levels, and along with a better-than-expected Q1, strengthens our view that the PC market is on track to a sell-through of ~270 million units in calendar year 2023. As we highlighted during our PC webinar in January, strong usage, an installed base which is roughly 10% higher than pre-COVID levels, and what we see as a conservative refresh rate, supports a longer-term PC TAM of 300 million units plus or minus.

In servers, Q1 consumption TAM declined both sequentially and year-over-year at an accelerated rate, and we still expect to see first half '23 TAM decline year over year with a modest recovery in the second half of the year. While all segments have weakened, we'd re-iterate that the correction in enterprise and ROW, where we have stronger positions, is further along and will likely recover more quickly.

Lastly, in our broad-based markets like industrial, auto and infrastructure, demand trends are relatively stronger, although, as anticipated, NEX did see a Q1 inventory correction that we expect will continue for the next couple of quarters and likely will cause NEX revenue to decline this year.



In contrast, PSG, IFS and MBLY continue on a strong growth trajectory, and we see the collection of these businesses in total growing year over year in CY23, much better than third-party expectations for a mid-single-digits decline in the semiconductor market ex-memory.

While the semiconductor industry is cyclical by nature, we continue to accelerate our transformation and position ourselves to capture the significant market growth in semiconductors expected over the next decade, nearly doubling to more than \$1 trillion by 2030. Combined with the need for globally balanced and resilient supply chains and a foundry market expected to be roughly \$200 billion by 2030, we are well positioned to capitalize on multiple vectors of growth.

On that front, let me highlight some key milestones from Q1. We are relentlessly focused on driving execution excellence across process and product roadmaps and throughout the company, including a rigorous focus on efficiency and cost savings. Looking first at the progress we are making with our process roadmap — we remain on track to regain transistor performance and power performance leadership by 2025. Relative to five nodes in four years, notably, two out of these five nodes, Intel 7 and Intel 4, are now essentially done. Intel 7 is in high-volume manufacturing, and Meteor Lake on Intel 4 is ramping production wafer starts today for a second-half product launch. We are quickly mastering EUV technology with Intel 4 as our first EUV node.

As we focus on the next three nodes, Intel 3 is on track and as we highlighted in our recent Data Center and AI (DCAI) webinar, Sierra Forest will begin shipping in the first half of 2024, with Granite Rapids shortly thereafter, both on Intel 3. We also have significant milestones planned in Q2 for Intel 3, Intel 20A and Intel 18A, and look forward to providing more details as we execute. Overall, we are squarely on-track to deliver five nodes in four years.

We understand that our foundry ambitions will not be realized overnight — building a vibrant foundry ecosystem will take time, but we also understand our foundry success is vitally important to establishing a geographically diverse and secure supply of semiconductors. We took a major step forward on building our ecosystem this month when we announced a multi-generation agreement with ARM Holdings. This will enable chip designers to build leading-edge mobile SoC designs on Intel 18A, giving the design community a new foundry alternative for product innovation and fast time to market, while also opening up new options and approaches for the large ecosystem of ARM customers. We look forward to providing access to best-in-class CPU IP and the power of an open system foundry with leading-edge process technology. Finally, as part of my recent trip to China, we continue to work hard to complete the Tower acquisition and will update you appropriately.

In our webinar last month, we provided a substantial update on our data center and AI business, highlighting the progress and health of our roadmap. Sapphire Rapids, our 4th Gen Xeon, is one of the highest quality data center CPUs Intel has ever delivered and continues to ramp aggressively with excellent customer feedback. We are shipping over 400 designs across numerous system and memory configurations for all OEMs, ODM and cloud providers and we are on track to 1 million units by mid-year.

Notably, AI inference performance and confidential computing substantially differentiate our 4th Gen Xeon from competitors. Specifically, in 4th Gen Xeon, Intel offers the most comprehensive confidential computing portfolio in the industry, including virtual machine isolation with Intel® Trust Domain Extensions (Intel® TDX) and trust attestation services. Just this week, leading cloud service providers signaled readiness for Intel TDX instances, including Microsoft announcing their preview on Azure, Google releasing joint research conducted pre-launch to further harden TDX in complex environments, and Alibaba Cloud.



Emerald Rapids, our 5th Gen Xeon® Scalable, is already sampling with customers and is on track to launch in Q4 '23. As stated earlier, Sierra Forest, our lead vehicle for Intel 3, will begin shipping in 1H '24, with Granite Rapids shortly thereafter, both of which are receiving very positive responses from sampled customers. Sierra Forest is our first E-core server CPU, which will provide competitive performance per watt across all workloads and leadership across many, with all of the benefits of the x86 ecosystem. Clearwater Forest, which is the follow-on to Sierra Forest, is coming to market in 2025, and will be manufactured on Intel 18A, the node where we intend to achieve process leadership and representing the culmination of our five nodes in four years strategy. The combination of our roadmap strengthening as we highlighted in our webinar, better than expected Q1 market share results, and great execution on the Xeon Gen 4 ramp, Q1 was a turning point as the first quarter of an improving data center position since I became CEO.

Further, in Q1 we taped-in the Habana Gaudi 3 AI accelerator, and the Habana Gaudi 2 is in the market and offering substantial performance advantage over A100 in training and inferencing vision and language models. For example, Gaudi2 delivers 60% higher power efficiency, measured in throughput per watt, for inferencing large language models such as Bloom-176 billion parameter model. Along with 4th Gen Xeon and Xeon Max, Gaudi enables us to address the accelerating growth in AI. Recent endorsements by Hugging Face and Stability AI are strong points of the validation in our AI roadmap and strategy.

Our strategy is to truly democratize the incredible power of AI – championing an open ecosystem with a full suite of silicon and software IP to drive AI from cloud to enterprise, network, edge and client across, training and inference, in both discrete and integrated solutions. Our One API now includes the open and royalty free C++ based programming model SYCL, which is critical to driving collaboration and innovation. As developers want the ability to “write once, run anywhere,” our open source toolkit SYCLomatic, is helping to accelerate the migration to SYCL as we work to democratize AI. While AI development – sparked by enthusiasm around Generative AI – is today centered on LLMs in the cloud, AI deployment will rapidly migrate to inference as the dominant AI workload and adoption will quickly expand outward to edge and client, all areas that play to our strengths. We are focused on capitalizing across all segments with optimized silicon and software solutions.

Our programmable solutions business continues to perform well with all-time record revenue in Q1, and our FPGA (field-programmable gate array) portfolio now includes more than 15 new products scheduled to PRQ this calendar year – the highest number of new product introductions ever in our FPGA business. The Programmable Solutions Group (PSG) is also piloting an initiative to build a more resilient supply chain by which customers would provide Intel with enhanced demand and new design visibility while Intel provides customers with greater predictability of supply – leveraging the benefits of transitioning a great percentage of PSG product to an Intel supply chain.

Our client computing business continues to execute on its roadmap and build on recent market share wins. We gained overall PC market share in Q1 and expect our competitive position to continue to improve as we ramp Meteor Lake production in Q2 for launch in 2H. In Q1 we introduced our 13th Gen Intel Core mobile processor followed by our new vPro platform powered by the full lineup of 13th Gen Intel Core processors. Intel vPro delivers the most comprehensive security and the necessary hardware for companies in need of a PC refresh and increased productivity. In 2023, our expansive commercial portfolio will deliver more than 170 notebooks, desktops and entry workstations from technology providers such as Acer, ASUS, DELL, HP, Lenovo, Fujitsu, Panasonic and Samsung Electronics.



Turning to NEX and Mobileye. At Mobile World Congress, we demonstrated that nearly all vRAN and virtualized network core deployments run on Intel. We also introduced a range of products and solutions that enable the world's networks – from the core to the radio access network and out to the intelligent edge – to transition from fixed-function hardware to open, programmable software-defined platforms. Highlights include the launch of our 4th Gen Intel® Xeon® Scalable processors with Intel vRAN Boost, delivering two times the capacity gains gen-over-gen within the same power envelope and up to an additional 20% power savings with integrated acceleration – with extensive industry support from Ericsson, Verizon, Telefonica and Vodafone, among many others. In particular, Ericsson has been working closely with us to enable the cloudification of the network, making possible industry-scale Open RAN.

Lastly, Mobileye continues to be an important part of the Intel family and delivered strong growth and profitability in Q1. They continue to gain significant traction with customers for their advanced product portfolio and we remain very confident in the long-term growth profile and value of the Mobileye business.

In addition to our process and product roadmap, we continue to make progress on our commitment to reduce costs and drive efficiencies. We are well on our way toward our goal of reducing \$3 billion in costs in 2023, and \$8 to \$10 billion in annual savings exiting 2025. We further rationalize our products as we prioritize our investments in support of IDM 2.0. This includes integrating AXG into DCAI and CCG respectively. In addition, we exited our server systems business in Q1, and signed an agreement with MiTAC, an edge-to-cloud IT solutions provider and longstanding ODM partner, to manufacture and sell products based on the designs of our server systems business to create a path forward for our channel customers.

I want to spend a few minutes on cost leadership. Last month, I had the opportunity to meet with some of you on the East Coast, and while everyone understands that we are establishing an internal foundry model, I'm not sure we have fully explained the importance and impact of this change. Giving the manufacturing group their own P&L, and the business units (BUs) a standard wafer price will drive a more efficient factory network and better decisions on design-to-cost at the BU level.

It will also serve to create parity between internal and external foundry customers and drive a more efficient manufacturing cost structure needed to compete and win external foundry customers. With a separate P&L for the manufacturing group, we will also provide you with a cleaner comparison of the BUs to their external fabless peers. As we stated on our Q3 earnings call, we believe this structure should allow us to access and execute on multiple pools of profit that are unique to an IDM, which none of our peers have. Establishing an internal foundry model is one of the most consequential steps we are taking to deliver IDM 2.0 and fundamentally shifts the way the company operates and the incentive mechanisms that drive day-to-day behaviors. We look forward to discussing this in much more detail during our IFS Webinar in Q2.

I am proud of our team's progress this quarter. We remain committed to executing on our strategic roadmap by first delivering on five nodes in four years, achieving process performance parity in 2024 and unquestioned leadership by 2025 with Intel 18A; second, executing on our data center and AI roadmap, including the Sapphire Rapids ramp, the launch of Emerald Rapids in 2H '23 and Granite Rapids and Sierra Forest in 2024; third, ramping Meteor Lake in 2H '23 and launching Lunar Lake and Arrow Lake in 2024; and fourth, expanding our IFS customer base to include large design wins on advanced packaging, Intel 16, Intel 3 and Intel 18A this year.

As we improve our cost structure and drive operational efficiency, we will: first, return to profitability; second, execute on our internal foundry P&L by 2024; and third, expand the use of our



Smart Capital strategy to balance our long-term capital aspirations with near-term realities. We are steadfast in our commitment to continue to effectively allocate your capital in the pursuit of creating value for all of our stakeholders.

Before I turn it over to Dave, I'd like to take a moment to honor and pay tribute to the life of Gordon Moore, who passed away on March 24th. Gordon defined and enabled the technology industry through his insight and vision. He was instrumental in revealing the power of transistors, and inspired technologists and entrepreneurs across the decades. I am forever grateful for his guiding hand, willingness to mentor and his unwavering friendship. Gordon famously said, "What can be done, can be outdone." This is our guiding principle as stewards of Moore's Law, which we intend to enable and drive until the periodic table is exhausted as we use the power of technology to improve the lives of every person on Earth. Intel will hold a memorial service to honor the life and accomplishments of Gordon, and we will share more details on this shortly.

Dave Zinsner, Intel chief financial officer ([bio](#)):

We drove solid business execution in the first quarter, beating guidance on both the top and bottom line. Against the backdrop of persistent macroeconomic volatility, we will continue to prioritize investments critical to our IDM2.0 transformation, prudently and aggressively manage expenses near-term and drive fundamental improvements to our cost structure long term.

First quarter revenue was \$11.7 billion, seven hundred million dollars above the midpoint of our guide. Results from CCG, DCAI, IFS and Mobileye exceeded our expectations, partially offset by softer demand in the Network and Edge markets impacting NEX revenue in the quarter. Gross margin was 38.4%, modestly below our guidance on higher-than-expected inventory reserves tied to continued macro uncertainty. Q1 margins were impacted 300 basis points by factory underload charges taken in the period.

EPS was negative \$0.04 for the quarter, \$0.11 better than guide, demonstrating our cross-company focus on spending discipline.

Operating cash flow in Q1 was negative \$1.8 billion. Net CapEx was \$7.0 billion, resulting in an adjusted free cash flow of negative \$8.8 billion, and we paid dividends of \$1.5 billion. Our balance sheet remains strong with cash and investment balances of more than \$27 billion and a strong investment-grade profile.

Before moving to business unit results, I will highlight a few changes made within our segment reporting. The client and data center products from the former AXG business are now reported within our CCG and DCAI segments respectively and will have a dilutive effect on the operating margins of those businesses. Our silicon photonics and foundry automotive businesses have moved out of NEX and IFS respectively and are now reported as part of "All Other" revenue, sharpening our focus on the significant market opportunities available to both NEX and IFS

Shifting to first quarter business unit results.

The Client Computing Group (CCG) achieved revenue of \$5.8 billion, better than our expectations for the quarter. While we continue to see a challenging demand environment, especially in our consumer and education segments, customers continue to prefer Intel, driven by our leadership product performance. As discussed last quarter, we saw significant inventory burn at our customers in the period. While inventory levels remain elevated, we anticipate the market will be closer to equilibrium as we exit Q2. ASPs were down sequentially due to mix. Q1 operating profit was \$520 million, flat sequentially despite revenue declining 13% from Q4, and down year-over-



year on lower revenue, higher unit costs and excess capacity charges, partially offset by reduced operational expenditures (OpEx).

DCAI revenue was \$3.7 billion, ahead of our expectations in Xeon, PSG and AXG lines of business. We saw significant sequential and year-over-year TAM contraction across all CPU market segments and expect demand to remain soft in the second quarter. We saw stable CPU market share in Q1 and are excited by the broad market ramp of our 4th Gen Xeon Scalable processor, Sapphire Rapids. Operating loss was \$518 million, impacted sequentially by lower revenue, higher product costs, and investments in leadership products on new process nodes. DCAI margins were also diluted by the merge of the AXG business and inventory reserves tied to the exit of our server systems business.

Within our DCAI business, the Programmable Solutions Group delivered record revenue for the second consecutive quarter in Q1, up 36% year-over-year, with increased ASPs and improved external supply, which enables us to satisfy customer backlog, helping to drive continued operating profit growth.

Network and Edge Group (NEX) revenue was \$1.5 billion, below our expectations for the quarter, driven by demand softness and elevated inventory levels in our Network and Edge markets, consistent with the overall industry. Operating loss was \$300 million, impacted sequentially by depressed revenue in the quarter and inventory reserves, partially offset by continued expense management and discipline.

Mobileye continues to outperform underlying automotive end-markets, delivering record first quarter revenue of \$458 million, up 16% year-over-year, along with a 6% year-over-year increase in content per vehicle. Profitability continues to be strong, with Q1 operating income of \$123 million.

IFS revenue was \$118 million, including 67% sequential growth in packaging revenue. Operating loss was \$140 million, impacted sequentially by increased factory start-up costs as we invest in this strategic growth business.

We are well on our way toward our committed \$3 billion of spending reductions in 2023, on our path to \$8-10 billion of reductions exiting 2025, which will exclude benefits from the change in equipment useful life. As demonstrated by our Q1 results, focused investment prioritization and spending discipline have our OpEx reductions trending ahead of pace, while revenue-adjusted cost of sales reductions face headwinds from factory underload charges and inventory reserves due to continued demand uncertainty.

As Pat highlighted, our shift to an internal foundry model is already demonstrating a path to the structural cost improvements necessary to achieve our long-term profit goals. We have seen early wins with a reduction in disruptive factory expedites and increased focus on sort and test times. We look forward to unpacking the financial and operational benefits of our internal foundry model in much more detail in our investor webinar later in the quarter.

Now, turning to Q2 guidance.

We expect second quarter revenue of \$11.5 billion to \$12.5 billion. At the midpoint of \$12 billion, we expect billings to continue to trail consumption in our Data Center, Network, and Client markets as customers focus on right-sizing operating inventories. While we remain cautious, we are seeing green shoots and expect sequential revenue growth throughout the year. Pat mentioned the continued strong signals of elevated PC usage and active devices, giving us confidence that our short-term headwinds are an anomaly to long-term revenue opportunity. Demand for AI



capabilities in the cloud, across the network and at the edge continue to grow, and we are confident that our CPU and accelerator portfolios are well positioned to benefit from the market tailwind.

We are forecasting Q2 gross margin of 37.5%, a tax rate of 13% and EPS of negative \$0.04 at the midpoint of revenue guidance.

Factory underload charges are projected to impact Q2 gross margins by approximately 300 basis points. While gross margins are well below acceptable levels, I would highlight inventory reserves on pre-PRQ products impact Q2 margins by approximately 250 basis points; costs which should begin to unwind later this year as new products launch. Increased sample costs in support of our Xeon product roadmap will impact margins by 40 basis points sequentially. Our Q2 guidance includes an approximately \$500 million benefit to operating margin from the useful life accounting change we announced in January, split approximately 80% to COS and 20% to OpEx, up from \$460 million in Q1.

It is important to remember that this is a fixed-cost business. The impact of underloaded factories goes beyond the period charges we are seeing in the first half of the year and will be felt for several quarters, as we sell through products with higher average unit costs.

We will continue to deploy factory capacity prudently as we operate within our Smart Capital framework. As communicated last quarter, we expect to manage net CapEx intensity in the low-30 percent of revenue range in 2023, with capital offsets of approximately 20 to 30 percent of gross CapEx. Consistent with Smart Capital, IFS capacity represents approximately 10% of 2023 gross CapEx, a number which will scale in line with foundry customer commitments. With gross CapEx weighted to first half and capital offsets weighted to second half, we expect adjusted free cash flow to improve sequentially throughout the year and to be positive in second half 2023.

While we are encouraged by first-quarter revenue and expect growth to improve sequentially through 2023, we are not satisfied with our financial results and remain focused on what we can control – our execution and the prioritization of our owners' capital toward our long-term goals. We are confident that as we deliver on our roadmap commitments we will meet and exceed our customers' expectations for our products and our owners' expectations for strong revenue growth and free cash flow generation.

About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to newsroom.intel.com and intel.com.

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