



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 second-quarter 2023 earnings.

The following are the prepared remarks provided on Intel's second-quarter 2023 earnings conference call held at 2 p.m. PT on July 27, 2023. These remarks include forward-looking statements that are based on the environment as seen by the company as of the time of the call and, as such, are subject to various risks and uncertainties. They also contain references to non-GAAP financial measures that the company believes provide useful information to investors. Refer to the company's earnings release for the second-quarter 2023, most recent annual report on Form 10-K and other filings with the SEC for more information on the risk factors that could cause actual results to differ materially from the company's expectations and additional information on non-GAAP financial measures, including reconciliations where appropriate to the corresponding GAAP financial measures.


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

Good afternoon, everyone. Our strong second-quarter results exceeded expectations on both the top and bottom line, demonstrating continued financial improvement and confirmation of our strategy in the marketplace. Effective execution across our process and product roadmaps is rebuilding customer confidence in Intel. Strength in client and data center, and our efforts to drive efficiencies and cost savings across the organization, all contributed to the upside in the quarter and a return to profitability. We remain committed to delivering on our strategic roadmap, achieving our long-term goals and maximizing shareholder value.

In Q2, we began to see real benefits from our accelerating AI opportunity. We believe we are in a unique position to drive the best possible TCO (total cost of ownership) for our customers at every node on the AI continuum. Our strategy is to democratize AI – scaling it and making it ubiquitous across the full continuum of workloads and usage models. We are 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 data prep, training and inference, in both discrete and integrated solutions. As we have previously outlined, AI is one of five superpowers – along with pervasive connectivity, ubiquitous compute, cloud-to-edge and sensing – underpinning a \$1 trillion semi industry by 2030.

Intel Foundry Services, or IFS, positions us to further capitalize on the AI market opportunity as well as the growing need for a secure, diversified and resilient global supply chain. IFS is a significant accelerant to our IDM 2.0 strategy, and every day of geopolitical tension reinforces the correctness of our strategy. IFS expands our scale, accelerates our ramps at the leading edge and creates long tails at the trailing edge. More importantly for our customers, it provides choice, leading-edge capacity outside of Asia and, at 18A and beyond, what we believe will deliver leadership performance.

We are executing well on Intel 18A as a key foundry offering and continue to make substantial progress against our strategy. In addition, in July we announced that Boeing and Northrop Grumman will join the RAMP-C program along with IBM, Microsoft and Nvidia. The Rapid Assured Microelectronics Prototypes – Commercial, or RAMP-C, is a program created by the U.S. Department of Defense in 2021 to assure domestic access to next-generation semiconductors specifically by establishing and demonstrating a U.S.-based foundry ecosystem to develop and fabricate chips on Intel 18A. RAMP-C continues to build on recent customer and partner



announcements by IFS, including MediaTek, Arm and a leading cloud, edge and data center solutions provider. We also made good progress on two significant 18A opportunities this quarter.

We are strategically investing in manufacturing capacity to further advance our IDM 2.0 strategy and overarching foundry ambitions while adhering to our Smart Capital strategy. In Q2, we announced an expanded investment to build two leading-edge semiconductor facilities in [Germany](#) as well as plans for a new assembly and test facility in [Poland](#). The building out of “Silicon Junction” in Magdeburg is an important part of our go-forward strategy, and with our investment in Poland and the Ireland sites, we already operate at scale in the region. We are encouraged to see the passage of the EU Chips bill supporting our building out an unrivaled capacity corridor in Europe. In addition, a year after being signed into law, we submitted our first application for U.S. CHIPs funding for the on-track construction of our fab expansion in Arizona, working closely with the U.S. Department of Commerce.

It all starts with our process and product roadmaps, and I am pleased to report that all our programs are on or ahead of schedule. We remain on track to 5N4Y (five nodes in four years) and to regain transistor performance and power performance leadership by 2025. Looking specifically at each node, Intel 7 is done and with the 2H launch of Meteor Lake, Intel 4, our first EUV node, is essentially complete with production ramping. For the remaining three nodes I would highlight: Intel 3 met defect density and performance milestones for Q2, released PDK1.1, and is on track for overall yield and performance targets. We will launch Sierra Forest (SRF) in 1H'24 with Granite Rapids (GNR) following shortly thereafter, our lead vehicles for Intel 3.

On Intel 20A, our first node using both RibbonFet and PowerVia, ARL, a volume client product, is currently running its first stepping in the fab. In Q2, we announced that we will be the first to implement backside power delivery in silicon two-plus years ahead of the industry, enabling power savings, area efficiency and performance gains for increased compute demands ideal for use cases like AI, CPUs (central processing units) and graphics. In addition, back-side power improves ease of design, a major benefit not only for our own products, but even more so for our foundry customers. On Intel 18A, we continue to run internal and external test chips and remain on track to being manufacturing-ready in 2H of 2024. Just this week, we were pleased to have announced an agreement with Ericsson to partner broadly on their next-generation optimized 5G infrastructure. Reinforcing customer confidence in our roadmap, Ericsson will be utilizing Intel's 18A process technology for its future custom 5G SoC (system-on-chip) offerings.

Moving to products, our client business exceeded expectations and gained share yet again in Q2 as the group executed well, seeing a modest recovery in the consumer and education segments, as well as strength in premium segments, where we have leadership performance. We worked closely with our customers to manage client CPU inventory down to healthy levels. As we continue to execute against our strategic initiatives, we see a sustained recovery in the second half of the year as inventory has normalized. Importantly, we see the AI PC as a critical inflection point for the PC market over the coming years that will rival the importance of Centrino and Wi-Fi in the early 2000s, and we believe that Intel is very well positioned to capitalize on the emerging growth opportunity. In addition, we remain positive on the long-term outlook for PCs, as household density is stable to increasing across most regions and usage remains above pre-pandemic levels.

Building on strong demand for our 13th Gen Intel® Core™ processor family, Meteor Lake is ramping well in anticipation of a Q3 PRQ (production release qualification) and will maintain and extend our performance leadership and share gains over the last four quarters. MTL will be a key inflection point in our client processor roadmap as the first PC platform built on Intel 4, our first EUV node, and the first client chiplet design enabled by Foveros advanced 3D packaging



technology, delivering improved power efficiency and graphics performance. Meteor Lake will also feature a dedicated AI engine, Intel® AI Boost. With AI Boost, our integrated neural VPU (vision processing unit), enabling dedicated low-power compute for AI workloads, we will bring AI use cases to life through key experiences people want and need for hybrid work, productivity, sensing, security and creator capabilities, many of which were previewed at Microsoft's Build 2023 conference. Finally, while making the decision to end direct investment in our Next Unit of Computing, or NUC, business, this well-regarded brand will continue to scale effectively with our recently announced Asus partnership.

In the data center, our 4th Gen Intel® Xeon® Scalable processor is showing strong customer demand despite the mixed overall market environment. I am pleased to say that we are poised to ship our 1-millionth 4th Gen Xeon unit in the coming days. This quarter, we also announced the general availability of 4th Gen cloud instances by Google Cloud.

We also saw great progress with 4th Gen's AI acceleration capabilities, and we now estimate more than 25% of Xeon data center shipments are targeted for AI workloads. Also, in Q2, we saw third-party validation from MLCommons when they published MLPerf training performance benchmark data showing that 4th Gen Xeon and Habana® Gaudi®2 are two strong, open alternatives in the AI market that compete on both performance and price versus the competition. End-to-end AI-infused applications like DeepMind's AlphaFold and algorithms such as graph neural networks show our 4th Gen Xeon outperforming other alternatives including the best published GPU results. Our strengthening positioning within the AI market was reinforced by our recent announcement of our collaboration with Boston Consulting Group to deliver enterprise-grade secure and responsible generative AI, leveraging our Gaudi and 4th Gen Xeon offerings to unlock business value while maintaining high levels of security and data privacy.

Our data center CPU roadmap continues to get stronger and remains on or incrementally ahead of schedule, with Emerald Rapids, our 5th Gen Intel® Xeon® Scalable, set to launch in Q4 '23. Sierra Forest, our lead vehicle for Intel 3, will launch in 1H'24. Granite Rapids will follow shortly thereafter. For both SRF and GNR volume validation with customers is progressing ahead of schedule. Multiple Sierra Forest customers have powered on their boards and silicon is hitting all power and performance targets. Clearwater Forest, the follow-on to Sierra Forest, will come to market in 2025 and be manufactured on Intel 18A.

While we performed ahead of expectations, the Q2 consumption TAM (total addressable market) for servers remained soft on persistent weakness across all segments, but particularly in the enterprise and ROW, where the recovery is taking longer than expected across the entire industry. We see the server CPU inventory digestion persisting in the 2H, additionally impacted by the near-term wallet-share focus on AI accelerators rather than general-purpose compute in the cloud. We expect Q3 server CPUs to modestly decline sequentially before recovering in Q4. Longer term, we see AI as TAM-expansive to server CPUs and, more importantly, we see our accelerator product portfolio as well-positioned to gain share in 2024 and beyond.

The surging demand for AI products and services is expanding the pipeline of business engagements for our accelerator products, which includes our Gaudi, Flex and Max product lines. Our pipeline of opportunities through 2024 is rapidly increasing and is now over \$1 billion and continuing to expand with Gaudi driving the lion's share. The value of our AI products is demonstrated by public instances of Gaudi at AWS and new commitments to our Gaudi product line from leading AI companies such as Hugging Face and Stability.ai, in addition to emerging AI leaders, including Indian Institute of Technology-Madras Pravartak and Genesis Cloud.



In addition to building near-term momentum with our family of accelerators, we continue to make key advancements in next-generation technologies which present significant opportunities for Intel. In Q2, we shipped our test chip “Tunnel Falls” a 12-qubit, silicon-based quantum chip which uniquely leverages decades of transistor design and manufacturing investments and expertise. Tunnel Falls fabrications achieved 95% yield rate with voltage uniformity similar to chips manufactured under the more usual CMOS process, with a single 300 millimeter wafer providing 24,000 quantum dot test chips. We strongly believe our silicon approach is the only path to true cost-effective commercialization of quantum computing as silicon-based qubit approach is a million times smaller than alternative approaches.

Turning to PSG, NEX and Mobileye, demand trends are relatively stronger across our broad-based markets like industrial, auto and infrastructure, although, as anticipated, NEX did see a Q2 inventory correction, which we expect to continue into Q3. In contrast, PSG, IFS and MBLY continue on a solid growth trajectory, and we see the collection of these businesses in total growing year-over-year in CY23 (calendar year 2023), much better than third-party expectations for a mid-single-digit decline in the semi market ex-memory.

Looking specifically at our Programmable Solutions Group, we delivered record results for a third consecutive quarter. In Q2, we [announced](#) the Intel Agilex® 7 with the R-Tile chiplet is shipping production-qualified devices in volume to help customers accelerate workloads with seamless integration and the highest bandwidth processor interfaces. We have now PRQ'd 11 of the 15 new products we expected to bring to market in CY23.

For NEX during Q2: Intel, Ericsson and HPE successfully demonstrated the industry’s first vRAN (radio access network) solution running on the 4th Gen Intel® Xeon® Scalable processor with Intel® vRAN Boost. In addition, we will enhance the collaboration we announced at Mobile World Congress to accelerate industry-scale open RAN, utilizing standard Intel Xeon-based platforms as telcos transform to a foundation of programmable software-defined infrastructure.

Mobileye continued to generate strong profitability in Q2 and demonstrated impressive traction with their advanced product portfolio by announcing a SuperVision eyes-on, hands-off design win with Porsche and a mobility-as-a-service collaboration with Volkswagen Group that will soon begin testing in Austin, Texas. We continue to drive technical and commercial engagement with them: co-developing leading FMCW (frequency modulated continuous wave) lidar products based on Intel’s silicon photonics technology and partnering to drive the software-defined automobile vision that integrates Mobileye’s ADAS (advanced driver-assistance systems) technology with Intel’s cockpit offerings. Additionally, in the second quarter, we executed a secondary offering that generated meaningful proceeds as we continue to optimize our value-creation efforts.

In addition to executing on our process and product roadmaps during the quarter, we remain on track to achieve our goal of reducing costs by \$3 billion in 2023 and \$8 billion to \$10 billion exiting 2025. As mentioned during our internal foundry webinar, our new operating model establishes a separate P&L (profit and loss statement) for our manufacturing group, inclusive of IFS and TD (Technology Development Group), which enables us to facilitate and accelerate our efforts to drive a best-in-class cost structure, de-risk our technology for external foundry customers and fundamentally change incentives to drive incremental efficiencies. We have already identified numerous gains in efficiency including factory loading, test and sort time reductions, packaging cost improvements, litho field utilization improvements, reductions in steppings, expedites and many more. It is important to underscore the inherent sustained value creation due to the tight connection between our business units and TD, manufacturing and IFS.



Finally, as we continue to optimize our portfolio, we agreed to sell a minority stake in our IMS Nanofabrication business to Bain Capital, who brings a long history of partnering with companies to drive growth and value creation. IMS has created a significant market position with multi-beam mask writing tools that are critical to the semiconductor ecosystem for enabling EUV technology and is already providing benefit in our 5N4Y efforts. Further, this capability becomes even more critical with the adoption of High-NA EUV in the second half of the decade as we continue to keep Moore's Law alive and very well. IMS is a hidden gem within Intel and the business's growth will be exposed and accelerated through this transaction.

While we still have work to do, we continue to advance our IDM 2.0 Strategy; 5N4Y remains well on-track; our product execution and roadmap is progressing well; we continue to build out our foundry business; and we are seeing early signs of success as we work to truly democratize AI from cloud to enterprise, network, edge and client. We also saw strong momentum on our financial discipline and costs savings as we returned to profitability, are executing on our internal foundry model by 2024, and are leveraging our Smart Capital Strategy to effectively and efficiently position us for the future.

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

Thank you, Pat, and good afternoon, everyone.

We drove stronger than expected business results in the second quarter, comfortably beating guidance on both the top and bottom line. While we expect continued improvement to global macroeconomic conditions, the pace of recovery remains moderate. We will continue to focus on what we can control – prioritizing investments critical to our IDM2.0 transformation, prudently and aggressively managing expenses near-term, and driving fundamental improvements to our cost structure longer term.

Second-quarter revenue was \$12.9 billion, more than \$900 hundred million above the midpoint of our guidance. Revenue exceeded our expectations in CCG, DCAI, IFS and Mobileye, partially offset by continued demand softness and elevated inventory levels in the Network and Edge markets, which impacted NEX results. Gross margin was 39.8%, 230 basis points better than guidance on stronger revenue.

EPS for the quarter was \$0.13, beating guidance by \$0.17, as our revenue strength, better gross margin and disciplined OpEx (operating expenses) management resulted in a return to profitability.

Q2 operating cash flow was \$2.8 billion, up \$4.6 billion sequentially. Net Inventory was reduced by \$1 billion, or 18 days, in the quarter and accounts receivable declined by \$850 million, or 7 days, as we continue to focus on disciplined cash management.

Net CapEx (capital expenditures) was \$5.5 billion, resulting in adjusted free cash flow of negative \$2.7 billion, and we paid dividends of a half-billion dollars in the quarter. Our actions in the last few weeks – the completed secondary offering of Mobileye shares and the upcoming investment in our IMS Nanofabrication business by Bain Capital – will generate more than \$2.4 billion of cash and help to unlock roughly \$35 billion of shareholder value. These actions further bolster our strong balance sheet and investment-grade profile, with cash and short-term investments of more than \$24 billion exiting Q2. We will continue to focus on avenues to generate shareholder value from our broad portfolio of assets in support of our IDM2.0 strategy.



Moving to second-quarter business unit results. CCG delivered revenue of \$6.8 billion, up 18% sequentially and ahead of our expectations for the quarter, as the pace of customer inventory burn slowed. As anticipated, we see the market moving toward equilibrium and expect shipments to more closely align to consumption in the second half. ASPs (average selling prices) declined modestly in the quarter due to higher education shipments and sell-through of older inventory. CCG showed outstanding execution in Q2, generating operating profit of \$1 billion, an improvement of more than \$500 million sequentially, on higher revenue, improved unit costs and reduced operating expenses, offsetting the impact of pre-PRQ inventory reserves in preparation for the second-half launch of Meteor Lake.

DCAI revenue was \$4 billion, ahead of expectations and up 8% sequentially, with the Xeon business up double-digits sequentially. Data center CPU TAM contracted meaningfully in the first half of '23, and while we expect the magnitude of year-over-year declines to diminish in the second half, a slower than anticipated TAM recovery in China and across enterprise markets has delayed a return to CPU TAM growth. CPU market share remained relatively stable in Q2 and the continued ramp of Sapphire Rapids contributed to CPU ASP improvement of 3% sequentially and 17% year-over-year. DCAI had an operating loss of \$161 million, improving sequentially on higher revenue and ASPs and reduced operating expenses.

Within DCAI, our FPGA products delivered a third consecutive quarter of record revenue, up 35% year-over-year, along with another record quarterly operating margin. We expect this business to return to a more natural demand profile in the second half of the year as we work down customer backlog to normalized levels.


NEX revenue was \$1.4 billion, below our expectations in the quarter and down significantly in comparison to a record Q2'22. Network and edge markets are slowly working through elevated inventory levels – elongated by a sluggish China recovery – and telcos have delayed infrastructure investments due to macro uncertainty. We see demand remaining weak through at least the third quarter. Q2 NEX operating loss of \$187 million improved sequentially on lower inventory reserves and reduced operating expenses.

Mobileye continued to perform well in Q2. Revenue was \$454 million, roughly flat sequentially and year-over-year, with operating profit improving sequentially to \$129 million. This morning, Mobileye increased fiscal year 2023 outlook for adjusted operating income by 9% at the midpoint.

Intel Foundry Services revenue was \$232 million, up 4x year-over-year and nearly doubling sequentially on increased packaging revenue and higher sales of IMS Nanofabrication tools. Operating loss was \$143 million with higher factory startup costs offsetting stronger revenue. Q2 was another strong quarter of cross-company spending discipline, with operating expenses down 14% year-over-year. We are on track to achieve \$3 billion of spending reductions in '23. With the decision to stop direct investment in our client NUC business earlier this month, we have now exited nine lines of business since Pat rejoined the company with a combined annual savings of more than \$1.7 billion.

Through focused investment prioritization and austerity measures in the first half of the year – some of which are temporary in nature – OpEx is tracking a couple hundred million dollars better than our \$19.6 billion '23 committed goal.

Now turning to Q3 guidance. We expect third-quarter revenue of \$12.9 to \$13.9 billion. At the midpoint of \$13.4 billion, we expect client CPU shipments to more closely match sell-through. Data center, network and edge markets continue to face mixed macro signals and elevated



inventory levels in the third quarter, while IFS and Mobileye are well positioned to generate strong sequential and year-over-year growth.

We are forecasting gross margin of 43%, a tax rate of 13% and EPS of \$0.20 at the midpoint of revenue guidance. We expect sequential margin improvement on higher sales and lower pre-PRQ inventory reserves. While we are starting to see some improvement in factory underload charges, most of the benefit will take some time to run through inventory and positively impact cost of sales.

Investment in manufacturing capacity continues to be guided by our Smart Capital framework – creating flexibility through proactive investment in shells and aligning equipment purchases to customer demand. In the last few weeks, we have closed agreements with governments in Poland and Germany, which include significant capital incentives, and we are well positioned to meet the requirements for funding laid out by the U.S. CHIPS Act.

Looking at capital requirements and offsets made possible by our Smart Capital strategy, we expect net capital intensity in the mid-30s as a percentage of revenue across 2023 and 2024 in aggregate. While our expectations for gross CapEx have not changed, the timing of some capital offsets is uncertain and could land in either '23 or '24 depending on a number of factors. Having said that, we are confident in the level of capital offsets we will receive over the next 18 months, and expect offsets to track to the high end of our previous range of 20% to 30%.

Our financial results in Q2 reflect improved execution and improving macro conditions. Despite a slower than expected recovery in key consumption markets like China and the enterprise, we maintain our forecast of sequential revenue growth throughout the year. Accelerating AI use cases will drive increased demand for compute across the AI continuum, and Intel is well positioned to capitalize on the opportunity in each of our business units. We remain focused on the execution of our near- and long-term product, process and financial commitments, and the prioritization of our owners' capital to generate free cash flow and create value for all our stakeholders.

Closing – Pat Gelsinger, Intel chief executive officer:

Let me just wrap up our time together.

First, I would like to say thank you. We are grateful for you joining us today, and for the opportunity that you have given us to update you on our business. It was a very good quarter; we exceeded our expectations on both the top and bottom line and look forward to continued growth and margin expansion in the second half of the year. We are pleased with our operational progress and execution on process and product roadmaps. Furthermore, we are encouraged by the progress we have made on our transformational journey as we are beginning to see proof points that validate our strategy and demonstrate the strength of our team.

We look forward to catching up with many of you throughout the quarter and will be hosting an investor Q&A track at Intel Innovation in September, and we hope many of you will be able to join us live.

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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