



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 2022 earnings.

July 28, 2022 — Pat Gelsinger, Intel chief executive officer ([bio](#)):

Good afternoon, everyone. While we continue to make solid progress on our strategy, Q2 results were disappointing, below the standards we have set for the company, and below the commitments we have made to you, our shareholders. The sudden and rapid decline in economic activity was the largest driver of the shortfall, but Q2 also reflected our own execution issues in areas like product design, DCAI and the ramp of AXG offerings.

We have an obligation to remain vigilant and to respond to the changing business conditions, while not losing sight of our long-term goals and opportunities. We will look to do both by adjusting and refocusing our spending levels in the near term, at the same time as we accelerate the deployment of our smart capital strategy and improve product execution. Collectively these actions will begin to show dividends in the second half of the year, allowing us to return gross margins to our target range by Q4, and maintain our initial free cash flow outlook for 2022.

While still early in our journey, we remain laser-focused on executing to our strategy to deliver leadership products anchored on open and secure platforms, powered by at-scale manufacturing and supercharged by our people. The current economic backdrop only strengthens our resolve, and we are embracing this environment to accelerate our transformation.

For example, regaining our leadership begins with Moore's Law and the capacity to deliver it at scale. Over the last 18 months, we've taken the right steps to establish a strong footing for our TD roadmap. We are well into the ramp of Intel 7, now shipping in excess of 35 million units. Intel 4 is ready for volume production in second half of this year and Intel 3, 20A and 18A are all at or ahead of schedule. We received additional strong third-party validation for TD, IFS and our manufacturing group just this week when we announced MediaTek as our next major foundry customer – a great example of our One Intel culture. I want to congratulate our teams on what we expect to be many announcements as we execute to become an at-scale, leading-edge and geographically diversified systems foundry.

But we must also be clear-eyed as we look into the second half. We are planning for volatility as the world adjusts to the end of a 2-plus-year pandemic and the unprecedented stimulus governments used to fight it. Across the economy, supply chain issues have both limited the ability to meet demand in some areas and driven inventory well above normal levels in others. We are prepared to manage through a slowdown typical of the normal cycles the semiconductor industry has experienced over the last 50 years. While the depth and duration are still difficult to predict, we have a proven track record of being able to adjust and succeed in any environment.

Let me address some of the specific actions we are taking.

First, we further sharpened our focus in Q2, selling our drone business and making the difficult decision to wind down our efforts in Optane as we embrace CXL, a standard which Intel



Corporation pioneered. These add to actions last year in NAND and the sale of McAfee. In total, we have now exited six business since my return, providing roughly \$1.5 billion for investments aligned with our IDM2.0 strategy. We are also lowering core expenses in calendar year 2022 and will look to take additional actions in the second half of the year, which Dave will address later. Importantly, expense discipline is not impacting the strategy, and we remain firmly on track to achieve process performance parity in 2024 and unquestioned leadership in 2025. This goal is our true North Star.

Second, our ability to invest aggressively and fulfill our commitment to a strong and growing dividend is anchored by the progress we are making in deploying our smart capital strategy. We are thrilled to see the bipartisan vote in the Congress this week and expect the CHIPS Act to be on the president's desk shortly. We have been integrally involved in moving this groundbreaking legislation forward. This progress combined with the strong momentum in Europe will reshape our industry and bring us toward a geographically balanced resilient supply chain that we are uniquely positioned to enable and benefit from. Access to mission-aligned pools of capital support the accelerated pursuit of our strategy and will enable our torrid pace.

Third, I rejoined Intel to re-energize and re-establish a culture of execution and innovation. With process technology and capacity expansion both now trending very well, we have the critical foundation we need for improved product execution. We have rebuilt our leadership team – now fully assembled for the first time, and together we have re-established OKRs throughout the organization to drive common purpose and, importantly, a system of accountability. In the coming months, we will begin to share more with the investment community on the next evolution of our tick tock model to drive consistent and predictable cadence of process and design innovation.

As we look beyond the near term, the semiconductor industry continues to be at the beginning of a new structural growth phase driven by four superpowers: ubiquitous compute, pervasive connectivity, cloud-to-edge infrastructure and AI. Combined, these drivers support a semiconductor industry eclipsing \$1 trillion by 2030. What remains very clear, even during this period of uncertainty, is the growing importance of silicon to the global economy and to each of our daily lives.

However, as a result of macro weaknesses, we now expect the PC TAM to decline roughly 10% in calendar year 2022, characterized by broadening consumer weakness and relative strength in enterprise and higher end SKUs. Importantly, our Q2 PC unit volumes suggest we are shipping below consumption as some of our largest customers are reducing inventory levels at a rate not seen in the last decade and, along with some pricing actions, should allow for sequential growth into the second half even as some customers manage inventory lower. While COVID-related dynamics like work-from-home and school-from-home pulled forward some demand, they also solidified the PC as an essential tool in the post-pandemic world. For example, PC and corporate usage remains historically high even as the pandemic's most acute impacts diminish. Markedly higher per PC usage and a larger installed base, including 600 million PCs that are four years and older, supports a PC TAM sustainably above 300 million units.

Data center trends are still well entrenched. Data has been growing exponentially at a 50% CAGR for over 20 years, but until recently it has been uneconomical to turn that data into true actionable insights. With the advent of AI, along with CPUs, GPUs and accelerators, we now have the tools to access and use more of the data we create, driving significantly higher compute demand and a multiyear CAGR in the data center TAM of at least mid-teens. Despite these drivers, demand will not be immune from economic headwinds. In addition to match-set issues which have constrained shipments for multiple quarters, increasing economic concerns are leading to a reduction in

second-half demand. As a result, we have lowered our server TAM assumptions to reflect more modest growth in 2022.

Against this backdrop, let me highlight key developments in our businesses:

In response to supply chain and match-set issues, we closely collaborated with our customers and suppliers to effectively address their most critical needs. We rapidly adjusted to changing market conditions, made cost reductions and leveraged smart capital to execute toward our IDM 2.0 strategy. Despite significantly lower revenue impacting overall gross margins, Q2 saw continued strong performance in our factory network, and we exceeded our wafer cost goals with 10 nm unit costs declining approximately 8% year-on-year. In TD, we continue to deliver on the promise of Moore's Law, and our ambitions to deliver 1 trillion transistors in a device by 2030. Intel 4 details were released at the recent VLSI conference to positive reviews, and we've now taped in the first stepping of the Granite Rapids CPU and expect power-on this quarter. In the second half of this year, we plan to tape in numerous internal and foundry customer test chips on various process nodes including Intel 3 and Intel 18A.

In our client business, Alder Lake momentum continues. We have the strongest PC lineup in 5-plus years, and we remain unapologetic about our growing leadership and share position. We are building on Alder Lake leadership with Raptor Lake in second half of this year and Meteor Lake in 2023 – exemplifying how our innovative design decisions can drive leadership performance even before re-establishing best-in-class transistor technology. In Q2, we launched the 12th Gen Intel® Core™ HX processors – the final products in our Alder Lake family. The Alder Lake family is now powering more than 525 designs from Acer, Asus, Dell, HP, Lenovo, LG, Microsoft, Samsung and others. To date, we've shipped well in excess of 35 million units of Alder Lake. Within the current market, we are also seeing relative strength in the premium segments we serve across consumer and commercial. We expect to build on this momentum with the launch of our next-gen product family – Raptor Lake – starting with our desktop SKUs this fall, followed by our mobile family by end of year. The Raptor Lake family will offer customers significant advantages, including double-digit performance gains gen-on-gen and socket compatibility with Alder Lake. And in 2023, we will deliver our first disaggregated CPU built on Intel 4 – Meteor Lake – which is showing good health in both our and our customers' labs.

Turning to DCAI, as we stated at investor fay, over the next couple of years as we rebuild our server product portfolio, we expect to grow slower than the overall data center market – it's not a fact we like, but the forecast we see. We have a singular focus to regain performance and TCO leadership across all workloads and use cases from enterprise to cloud. The advantage of our incumbency position remains underappreciated and provides significant opportunity to drive outsized advantages to our customers. For example, we expanded our supply agreement with Meta, leveraging our IDM advantage to ensure Meta can meet its expanding compute needs. Also in Q2, we agreed to expand our partnership with AWS to include the co-development of multigenerational data center solutions optimized for AWS infrastructure and Intel as a strategic customer for internal workloads including EDA. We expect these custom Intel Xeon® solutions will bring greater levels of differentiation and a durable TCO advantage to AWS and their customers, including Intel. In addition, Nvidia announced the selection of Sapphire Rapids for use in their new DGX-H100, which will couple Sapphire Rapids with Nvidia's Hopper GPUs to deliver unprecedented AI performance. Beyond Xeon-based CPUs, we launched our next-generation Gaudi 2 AI accelerator in the quarter with a whopping ~4x improvement generation-to-generation, and in the most recent MLPerf training benchmark test, Gaudi 2 has a substantial lead in Resnet-50 and BERT benchmarks. In the second quarter, we also began delivering on our software strategy with the acquisition of Granulate, expanding our platform capabilities with real-






time AI-driven continuous optimizations for cloud computing and the initial release of Amber, our security attestation service. Since we acquired Granulate, its customer pipeline has doubled and its revenue pipeline has tripled. Finally, programmable solutions achieved record 2Q revenue and was just shy of an all-time record revenue quarter driven by strong demand, including the ramp of the flagship Intel® Agilix™ FPGA family and improving supply.

In NEX, we had an outstanding Q2. We achieved record revenue and PRQ'd Mount Evans, an IPU we co-developed and are now beginning to ramp with a large hyperscale partner with additional customers in 2023. In addition, our latest Xeon D processors, built specifically for software-defined infrastructure across the network and edge, launched at this year's Mobile World Congress, and is ramping with leading companies including Cisco, Juniper Networks and Rakuten Symphony. Across the network edge, we're continuing to see interest to deploy more compute and AI capabilities. For example, Ferrovial, a multinational Spanish infrastructure company, is using our edge computing, AI and connectivity technologies to deploy roadside solutions that can identify wrong-way drivers, warn of oncoming hazards and more. In Singapore, Singtel has deployed a network solution with Xeon, Smart Edge and OpenVINO™ to improve user experiences for use cases like entertainment, industrial, smart manufacturing, smart transportation and smart city. Lastly, ABB is helping utility providers modernize their electric grid and create a more sustainable energy market by adopting standardized rugged servers based on 3rd Gen Intel Xeon. NEX continues to clearly benefit from networks that are increasingly moving toward software and AI that is increasingly moving to the edge, and we expect another revenue record in Q3.

For AXG, while we will not hit our GPU unit target. We remain on track to deliver over \$1 billion in revenue this year. In Q2, we started to ramp Intel Arc graphics for laptops with OEMs, including Samsung, Lenovo, Acer, HP and Asus. COVID-related supply chain issues and our own software-readiness challenges caused availability delays that we continue to work to overcome. Intel Arc A5 and A7 desktop cards will start to ship in Q3. Our energy-efficient blockchain accelerator Blockscale™ achieved a major milestone in Q2 with revenue shipments to our lead customers, going from tape-in to shipping in less than a year. We expect to ship millions of units this year, not originally in our forecast. Our data center GPU code-named Arctic Sound-M has started production and is now shipping to customers supporting a diverse range of workloads, starting with media streaming and cloud gaming, followed by support for AI visual inference and virtual desktops. In high-performance computing, we highlighted the installation of the Argonne National Lab Aurora supercomputer at our Intel Vision event in May, and we are on track to deliver over 10,000 blades in 2022, enabling over 2 exaflops of peak performance. We also announced new partnerships including with the Barcelona Supercomputing Center to set up a pioneering RISC-V zettascale lab, and our continued collaboration with the University of Cambridge to evolve their current lab from exascale to zettascale.

Our IFS momentum continues. Creating a geographically balanced, secure and resilient semiconductor supply chain as well as access to our transistor technology is driving strong customer interest in our foundry business. In addition to the MediaTek agreement that we announced earlier this week, we now have active engagements with six of the top 10 fabless customers across our offerings, including Intel 18A. Overall, we are engaged with 30 customers for test chips, and now have more than 10 qualified opportunities in advanced stages across our process and package offerings that collectively represent a deal value of greater than \$6 billion. Augmenting our organic activity is our proposed acquisition of Tower Semiconductor. We now have regulatory approval or clearance in four geographies, including the U.S., and we still expect the acquisition to close by early next year. In Q2, we also launched the IFS Cloud Alliance a partnership with leading cloud providers including Microsoft Azure, AWS and EDA tool providers,



including Ansys, Cadence, Siemens EDA and Synopsys. The IFS Cloud Alliance is the next phase of our accelerator ecosystem program that will enable secure design environments in the cloud, improving foundry customer design efficiency and accelerating time-to-market.

Lastly, in Mobileye, we achieved another record in revenue in Q2 and we continue to be poised to unlock further value with our proposed IPO later this year, pending market conditions. Mobileye's backlog continues to grow, with first-half 2022 design wins generating 37 million units of projected future business, compared to 16 million units actually shipped in the first half. As a result of Mobileye's high-definition map product, called REM, we are currently crowd-sourcing 43 million miles per day on average from approximately 1.5 million vehicles. This data is automatically built into a map, which currently covers greater than 90% of all roads in both Europe and U.S. which will support systems across the entire driving assist to autonomous vehicle spectrum.

Looking ahead: Before turning it over to Dave, I want to close with a few thoughts. First, after a very successful Intel Vision event in Q2, I am looking forward to hosting Intel Innovation on September 27 and 28, our core technical conference for global developers, architects and engineering leaders. I hope to see many of you joining me there. Second, as I said when we began our journey, Intel will be a source of innovation driving new businesses and additional TAM in large and growing markets. Taken together, we have already announced over 10 new revenue-producing product lines so far this year, which are just now beginning to ramp, and we expect to announce more to come in second half and calendar year 2023. The foundations for our growth story are taking shape. I know I speak for all of our employees when I say that while we have work to do, our best days are ahead.

Dave Zinsner, Intel chief financial officer (bio):

Thanks, Pat, and good afternoon, everyone.

As Pat referenced, Q2 was a challenging quarter negatively impacted by multiple factors:

- First, a weakening and uncertain macroeconomic environment impacted by inflation, higher interest rates and the war in Ukraine.
- Second, a much larger than expected OEM inventory correction as our customers adjust to this new macroeconomic environment.
- Third, worse-than-expected Covid driven demand reductions and supply dislocations in China and other parts of the supply chain.

Due to the difficult macroeconomic environment together with our own execution challenges, our results for the quarter were well below expectations and necessitate a significant revision to our full-year financial guidance. That said, we are taking the actions necessary to maintain our prior full-year adjusted free cash flow guidance, including a slowdown in hiring, capex reductions and the expectation for increased capital offsets consistent with our smart capital strategy. We remain fully committed to the business strategy and long-term financial model presented during this year's investor meeting in February.

Moving to Q2 Results: Revenue was \$15.3 billion, 15% below our original Q2 guidance as our CCG and DCAI businesses both underperformed our expectations. Note that even in this challenging environment, our NEX and Mobileye businesses achieved all-time record quarterly revenue.

Gross margin for the quarter was approximately 45%, 600 basis points below guidance on lower revenue and Sapphire Rapids preproduction charges offset by lower manufacturing cost.



EPS was 29 cents, 41 cents below our guide on lower revenue and gross profit, offset by lower operating expenses.

Operational cash flow for the quarter was \$800 million. Capex for the quarter was \$7.2 billion, resulting in an adjusted free cash flow of negative \$6.4 billion. Our balance sheet remains strong with cash and investments of \$27.5 billion dollars, modest leverage and a strong investment-grade credit profile.

Now turning to our business unit results:

CCG revenue was \$7.7 billion, below expectations and down 25% year-over-year on global TAM weakness, particularly in the consumer, education and small/medium business markets. The shortfall was also driven by OEM inventory reductions as we worked with our customers to lower their inventory, protect market share and continue to manage through matched set constraints. CPU ASP's were up 11% year-over-year on a richer mix and strong demand for our high-end mobile and desktop products across both our commercial and consumer segments. Operating profit was \$1.1 billion, down 73% year-over-year on lower revenue, increased 10 nanometer and Intel 7 mix, and increased spending to further strengthen our product and platform roadmap.

DCAI revenue was \$4.6 billion, below expectations and down 16% year-over-year on OEM inventory reductions, mix related ASP decline and competitive pressures. Operating profit was \$214 million dollars, down 90% year-over-year on lower revenue, higher advanced node startup cost, increased investment in the product roadmap, and Sapphire Rapids pre-production charges.

NEX achieved all-time record quarterly revenue of \$2.3 billion, up 11% year-over-year on strength in data center networking products, specifically networking Ethernet and 5G. Operating profit was \$241 million, down 60% year-over-year on mix shift to networking Ethernet and 5G, increased investment in process technology and lower sell-through of reserved inventory.

AXG revenue was \$186 million, up 5% year-over-year on the ramp of the Super Compute and Alchemist discrete GPU products. Operating loss was \$507 million dollars versus an operating loss of \$168 million in Q2'21, with the increase driven by inventory reserves on our Ponte Vecchio and Alchemist products, and increased investment to deliver the roadmap of visual, supercompute and custom accelerated graphics products.

Mobileye achieved all-time record quarterly revenue of \$460 million dollars, up 41% year-over-year on higher ADAS adoption and increased market share. Operating profit was \$190 million, up 43 percent year-over-year on higher revenue, partially offset by increased investment in next-generation ADAS products.

IFS revenue was \$122 million, down 54% year-over-year, driven by lower mask tool sales as well as a revenue decrease in the automotive segment, due to customer shortages in the automotive market. Operating loss was \$155 million versus an operating profit of \$52 million in Q2'21, driven by lower revenue and increased investment to build out the custom foundry business.

Before we transition to full-year and Q3 guidance, after six months on the job, let me provide my perspectives on the opportunities I see and focus areas to improve our financial performance and achieve our long-term goals. At the highest level, I see opportunities to improve in two areas.



First, ensuring we are allocating our capital to the programs that are clearly aligned to our revised business strategy and generate maximum long-term value to our shareholders. As Pat mentioned, two good examples of continuing to optimize our portfolio are exiting the Optane and drone businesses. We continue to deeply evaluate all opportunities to more narrowly focus our resources on the highest value programs, increasing the probability of success for each of these programs.

Second, driving structural product cost and operational expense efficiency across the company, taking full advantage of our IDM 2.0 strategy. A major focus for me is driving Intel to world-class product cost. Key to this is executing our five-nodes-in-four-years strategy, but there are many more aspects to achieving this goal, with programs in flight to dramatically reduce product cost. Likewise, there are opportunities in opex to ensure we are achieving world-class efficiency in everything we do. With my history in the memory business, where every penny counts, I know there are large opportunities for Intel to improve and deliver maximum output per dollar.

As part of these focus areas, we expect to see restructuring charges in Q3 and I will continue to provide regular updates on these efforts.

Moving to our full-year and Q3 guidance:

For the remainder of the year, we expect macroeconomic conditions to continue to soften with the potential for a recessionary scenario to materialize. There is also risk for continued COVID-related impacts on demand and the supply chain to continue throughout the year. As a result of this high level of uncertainty we are moving to a range-based approach to revenue guidance for the rest of the year.

For full-year revenue, we are now guiding a range of \$65 billion to \$68 billion, down from our prior guidance of \$76 billion driven by lower expectations for our CCG and DCAI businesses.

More specifically, in our PC business, as Pat discussed, we now see TAM decreasing approximately 10% year-over-year due to the softening macroeconomic environment and inflationary pressures. Although these headwinds have reduced our CCG revenue forecast, we expect CCG revenue to increase in the second half of the year due to seasonal strength, OEM inventory returning to balanced levels, inflation-related price increases to take effect, and the ramp of our leadership Alder Lake and Raptor Lake products position us to compete for share.

For DCAI, we expect to see second-half revenue growth relative to Q2 levels, but growth will remain muted as competitive and macroeconomic headwinds persist, OEM inventory reductions continue and component constraints impact certain segments.

For NEX, we expect another record quarter in Q3 and continued growth throughout the year. NEX revenue tailwinds will be fueled by new product introductions, data center and telco networking demand, and continued improvement in pricing and component supply.

For AXG we continue to expect full-year revenue greater than \$1 billion, driven by the launch and ramp of the Alchemist, Arctic Sound-M, Ponte Vecchio and Blockscales products.

Finally, we expect to see second-half growth in each of our two remaining businesses, Mobileye and IFS, as they ramp new products and secure new customers.



For full-year gross margin, we are guiding to 49%, at the midpoint of revenue guidance with the expectation that gross margin will return to the low end of our target range of 51 to 53% in Q4 as revenue increases, we achieve scale on new product ramps and costs continue to improve. We are forecasting a tax rate of approximately 8% and EPS of \$2.30, at the midpoint of revenue guidance.

For net capex, we are revising down our forecast to \$23 billion, \$4 billion less than our previous guidance as we moderately adjust our investment in capacity and take advantage of potentially larger than originally forecast capital offsets, highlighting significant progress on our smart capital strategy. We expect these actions to offset lower than originally forecast operating cash flow, allowing us to reaffirm adjusted free cash flow of negative \$1 billion to \$2 billion for the year. Finally, we paid dividends of \$1.5 billion dollars, a 5% increase year-over-year and remain committed to growing the dividend over time.

Now, moving to Q3 Guidance: Given the aforementioned market environment, we are guiding revenue of \$15 billion to \$16 billion. At the midpoint of the revenue guidance, we are guiding gross margin of 46.5%, a tax rate of 13% and earnings per share of 35 cents.

In closing: The market turbulence and updated outlook are disappointing. However, we believe our turnaround is clearly taking shape and expect Q2 and Q3 to be financial bottom for the company. We remain completely committed to the strategy and financial model communicated at investor day. The long-term financial opportunity of compelling revenue growth and free cash flow at 20% of revenue remains, and I believe this downturn represents an opportunity to more quickly make the transformations necessary to achieve these goals.

With that, let me turn it back over to John and get to your questions.

Closing – Pat Gelsinger, Intel chief executive officer:

I'd like to wrap up by saying we are grateful for all of you joining us today and for the opportunity to update you on the business. We have three key messages we wanted to convey today: We are not satisfied with our financial results. We have growing confidence in our strategy. And we are optimistic about our future. We deserved some difficult questions this quarter – but we appreciate that they were also fair and relevant. Transformations are not easy – but nothing worth it ever is. And despite the multiple headwinds, we demonstrated progress with IFS, CHIPS, customer wins and TD progress, among others. We look forward to updating you again next quarter.

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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