



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 2022 earnings.

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

Thank you for joining us today.

Q1 was another solid quarter where we beat on the top line, exceeded our guidance on gross margin and EPS ... and where we continued to execute on our long-term growth strategy to unlock a \$1 trillion market opportunity.

As we laid out at our recent investor day, our strategy is built around four key pillars:

- We will deliver leadership products ...
- anchored on open and secure platforms ...
- powered by at-scale manufacturing ...
- and supercharged by our people.


In Q1 we made great progress in all of these areas, and we are continuing to hold our full-year revenue outlook.

- In our Datacenter and AI Group (DCAI), we began shipping initial SKUs of Sapphire Rapids to select customers, as planned. We also unveiled our expanded dual track Xeon roadmap that strengthens our position in both per-core-performance and performance-per-watt for cloud and enterprise workloads.
- We launched our Arc A-Series GPUs for laptops, taking our first steps to give the graphics industry a much-needed new addition.
- Mobileye demonstrated its Level 4 self-driving system in Jerusalem – a major milestone in preparation for its upcoming robotaxi services.
- We continued to add to our talent with strong industry leaders like Christoph Schell, who recently joined us from HP as our chief commercial officer.
- And finally, we took another major step in creating a balanced semiconductor supply chain with the announcement of our plans for new investments in Europe. We also held the grand opening of our latest leading-edge factory in Oregon – including a new name for the campus: The Gordon Moore Park at Ronler Acers, which recognizes our founder and the site's unique contributions to driving Moore's Law.

Q1 also marked a special moment for Intel as we announced our plans to further reduce our greenhouse gas emissions and develop more sustainable technology solutions, including:

- Using 100% renewable energy across our global operations by 2030.
- And achieving net-zero greenhouse gas emissions in our global operations by 2040.

Overall, Q1 was a great start to the year as we continued to execute on the path to our long-term growth story. We still have a lot of work to do ... but we are executing at a torrid pace and I remain confident in our path forward.



Before I get into specific updates for each of our business units, let me start with some observations of what we are seeing in the industry.

I continue to believe we are just at the beginning of a long-term growth cycle across semiconductors. We continue to see some matched-set limitations in areas like Ethernet, some softening in low-end consumer PC and some inventory adjustments as we discussed on our last call, but overall the demand signals from customers continue to be robust in areas like enterprise, cloud, AI, graphics and networking. Semiconductors are the fuel of innovation and transformation across a wide range of industries.

In the supply chain, lockdowns in Shanghai and the war in Ukraine have demonstrated more than ever that the world needs more resilient and more geographically balanced semiconductor manufacturing. The chip shortage cost the U.S. economy \$240 billion last year, and we expect the industry will continue to see challenges until at least 2024 in areas like foundry capacity and tool availability.

As an IDM, we believe we are in a good position in the industry to manage through these constraints. In fact, Intel is rising to meet this challenge. Following our announcements in Arizona, New Mexico and Ohio, we recently announced a series of investments in Europe, spanning our existing operations as well as our new investments in France and Germany: the Silicon Junction. These investments position Intel to meet the future growth, and represent a significant step toward our moonshot goal of having half the world's semiconductor manufacturing located in the U.S. and Europe.

The pace at which we can reach this goal is dependent on the actions of the U.S. and other governments. America showed leadership when Congress passed the CHIPS Act, but the global situation has grown even more serious since then. The EU has been very aggressive in moving legislation forward to meet this challenge, and I recently testified before the Senate to highlight the critical need for the U.S. to fund the CHIPS Act. I continue to encourage Congress to fund this critical legislation and enable us to move faster toward making a balanced semiconductor supply chain a reality.

Turning now to Intel: We continue to make great progress on our plans to deliver five process nodes in four years. Intel 7 is ramping extremely well with Alder Lake. And on Intel 4, Meteor Lake has now successfully booted Windows, Chrome and Linux. The speed at which the team was able to achieve this milestone is a significant sign of the health of both Meteor Lake and our Intel 4 process technology.

We plan to deliver several additional milestones in 2022, demonstrating our process technology development remains on track. These include:

- Early Sierra Forest pre-production wafers on Intel 3.
- IP Test wafers on Intel 20A.
- And foundry customer test chips and initial IP shuttles on Intel 18A.

Simply put, we remain on – and in some places, ahead – of schedule to deliver five nodes in four years.

Our manufacturing network continues to perform well in a challenging environment. For the first time in years, Intel fabs and our substrate supply are close to meeting our customers' demand. Using our IDM advantage, the team was able to remix almost 3 million units within lead time to meet changing demand signals. For example, we were able to partner with Meta to improve their



Xeon supply and meet their needs. Finally, our supply chain resilience showed as our teams worked tirelessly to mitigate any significant disruptions to our factory operations from the war in Ukraine, supplier shutdowns and COVID lockdowns in China.

Turning to our business groups: At our Investor Day, we laid out our long-term growth strategy centered around six distinct but highly complementary business units. A structure that provides investment flexibility, increased market resiliency and enhanced transparency for investors ... and, in fact, we will report our results in this structure for the first time today.

Our client group continues to deliver world-class platforms positioning us to win share, grow ASP and win share of market. There is broad ecosystem agreement that the long-term PC market is sustainably larger going forward driven by PC density, refresh rates and increased penetration as the PC remains the essential tool for work, learn and play. We are seeing particular strength in gaming and in commercial PCs that is somewhat tempered by slower consumer, inflationary pressure and customer inventory management, which CFO Dave Zinsner will talk more to later.

Our 12th Gen Alder Lake family continues to ramp in Q1, and we have already shipped more than 15 million units. This family now has more than 250 designs planned this year from Acer, Asus, Dell, HP, Lenovo, LG, Samsung and others, and it includes the world's fastest desktop processor: the Core i9-1200KS.


Alder Lake will scale across every segment, including for businesses of all sizes, with the launch of our latest vPro platform. vPro offers industry-leading manageability and security for business, including the first and only hardware-based ransomware detector with Intel Threat Detection. The strength of our client roadmap continues with Raptor Lake, where we are shipping both desktop and mobile samples to our customers today ... and we plan to follow that with Meteor Lake in 2023.

In data center: DCAI had strong year-over-year growth as customers continue to choose Intel, and as we continue to deliver increasing value and innovation. We are seeing strength in both hyperscale and enterprise, and we expect the market to grow double digits going forward, driven by workloads like AI and security. Here too, we are seeing ecosystem supply constraints, particularly in Ethernet, that have limited end-system shipments and that we expect to be a headwind through the year.

Our 3rd Generation Intel Scalable processor Ice Lake has now shipped almost 4 million units and Amazon Web Services recently announced general availability of its EC2 I4i instance designed for storage and I/O intensive workloads. This is the 48th AWS instance powered by Ice Lake.

I am also pleased to say that, as committed, we began shipping initial SKUs of our 4th Gen Intel Xeon scalable processor, Sapphire Rapids, to select customers in Q1. These are the first of many SKUs for Sapphire Rapids, with more due to ramp throughout the remainder of the year.

We also unveiled our expanded dual-track Xeon roadmap using Performance- and Efficient-cores delivered in a common platform maximizing customer investments and on a cadence they prefer. Our first-generation E-core Xeon will be Sierra Forest, which is designed to maximize performance-per-watt, providing high-density, ultra-efficient compute for the cloud. For workloads that benefit from high performance-per-core and low latency, like AI, we have our redefined Granite Rapids on Intel 3 with a new and improved P-core.



The strength of Intel Agilex and Stratix10 FPGAs generated record revenue as we continue to win designs and ramp into key markets. Intel FPGA-based IPU are deployed in volume at five of the top six cloud service providers and we continue to win designs with comms service providers utilizing Intel's latest generation FPGAs and eASICs.

Our launch of the Habana Gaudi-based AWS EC2 DL1 instance has shown end-customers how they can reduce training costs by as much as 40% versus GPU-based instances. One of the early customers – Mobileye – is now using DL1 for training their object detection models. Gaudi2 is already sampling to customers and demonstrating leadership performance versus competitive GPUs on multiple workloads.

Finally, we continue to build our extensive data center software capabilities and recently announced the acquisition of Granulate. Granulate is a SaaS service that improves performance and cloud costs with its autonomous dynamic optimization service to unmodified customer workloads.

The network and edge market continues to be strong with the transformation from proprietary, fixed-function devices to fully programmable, software-defined infrastructure. Our Network and Edge Group (NEX) is uniquely positioned to capitalize on this transition and had record revenue in Q1.

At Mobile World Congress, NEX launched our newest Xeon D processor. Built specifically for software-defined infrastructure across the network and edge, our latest Xeon D has more than 70 leading companies working on designs including Cisco, Juniper Networks and Rakuten Symphony.


We believe that in the network, oRAN and vRAN have reached a tipping point as the preferred model of all future network deployments. Nearly all commercial deployments running today are using Xeon and our FlexRAN software. We have more than 10 engagements with major global operators that we expect to be in high-volume commercial deployment within the next 2 years.

We also launched a new version of our OpenVino software toolkit with downloads growing 70% year over year. Built on the foundation of OneAPI, OpenVino has enabled hundreds of thousands of developers to dramatically accelerate performance on rapidly growing AI workloads at the edge, including Zeblok Computational, who is using OpenVINO to deliver their Ai-MicroCloud solution to cities everywhere.

Going forward, the scale-out of 5G, the explosion of AI inferencing and the growth of low-latency workloads will further drive the need for compute at the edge. They will eventually begin to shift compute from the cloud, making the edge the next wave of semiconductor growth. With a broad portfolio of hardware, software and deep ecosystems partnerships, NEX remains positioned to lead the transformation across the network and win the edge.

Moving to our emerging businesses: Our Accelerated Computing Systems and Graphics Group (AXG) builds on our installed base of CPUs, IP and software, to leverage a thriving open ecosystem to disrupt a large and growing market.

In Q1, AXG had strong growth and celebrated a major milestone with the official launch of the Intel Arc A-Series portfolio for laptops. Alchemist, the first of these products, has been shipping to customers since early Q1 with designs from Acer, ASUS, Dell, HP, Lenovo, Samsung and others.



The A-series enables up to a two-times performance improvement in graphics versus integrated graphics and incorporates Intel Deep Link technology, which utilizes Intel integrated graphics to increase application performance by up to 30%.

The first laptops with Intel Arc 3 GPUs are available now. These will be followed by even more powerful designs with Intel Arc 5 and Intel Arc 7 along with desktop and workstation offerings later this year.

In the data center, our flagship Ponte Vecchio GPU for high performance computing and AI is sampling to customers. Ponte Vecchio, along with Sapphire Rapids with high bandwidth memory, will power the 2 exaflop Aurora supercomputer at Argonne National Laboratory. In addition, Arctic Sound, our general-purpose data center GPU, designed for industry leading media, graphics and AI inference capabilities, will be available in the second half of the year.

Finally, in Q1, we announced our intent to contribute to the development of blockchain technologies. Intel will help advance this technology in a responsible and sustainable way by developing energy-efficient computing technologies at scale. Blockscale, our first blockchain accelerator, is sampling today and will ship in production later this year.

AXG remains on track to deliver over \$1 billion in revenue this year.

Our Intel Foundry Services (IFS) group hit a \$1 billion run rate for the first time, as we continue to make progress toward being the trusted provider of foundry services.

Our overall customer pipeline remains robust and we now have more than 10 qualified opportunities in advanced stages of engagement across our process and package offerings that collectively represent a deal value of greater than \$5 billion.

We have over 30 test-chips committed to Intel 16 this year, and we expect the first Intel 3 and Intel 18A customer test-chips to tape-out in the second half of 2022. Our work with our five target anchor customers is progressing well. We expect additional updates later this year.

Finally, we have seen tremendous enthusiasm from customers for our acquisition of Tower. Tower shareholders recently approved the proposed acquisition, we have completed regulatory review in two jurisdictions outside the U.S., and hope to close the transaction as soon as possible.

Building on its market leadership in ADAS and AV solutions, Mobileye advanced system launches have continued, including the next-generation BMW 7-Series with a leading-edge combination of EyeQ5 and an 8-megapixel camera, as well as BMW Highway Assistant, which enables hands-free driving on separated roadways up to 80 miles per hour.

We also added Miami and Stuttgart to our global AV testing program, bringing the total number of places where we have tested AVs to 10 cities in six countries across three continents around the world. Additionally, we recently showcased Mobileye's Level 4 self-driving system in action for the first time with a robotaxi navigating the streets of Jerusalem. Mobileye expects to launch its commercial robotaxi services in Munich and Tel Aviv by the end of 2022.

Finally, we remain committed to unlocking shareholder value and are working on our plans to take Mobileye public in 2022. In March, we announced that we confidentially submitted a draft registration statement with the SEC. The IPO is proceeding smoothly and we continue to make good progress as we work with the SEC to refine our Form S-1.



Before turning it over to Dave, I wanted close with a few thoughts.

First, I look forward to hosting our customers, partners and analysts at our Intel Vision event in Dallas on May 10 and 11. This will be our second Intel On series event dedicated to the future of business and technology.

Next, as I said at our Investor Day, we believe we have a tremendous growth story over the next several years:

- We're investing in innovation and embracing an open approach to compute, platforms and manufacturing.
- We continue to add to our incredible pool of technical talent.
- And, of course, we remain intensely focused on rebuilding our execution machine.

Finally, we'll continue to highlight our progress on key operational milestones as we manage within the financial framework we laid out in February.

I know I speak for over 120,000 Intel employees when I say that while we have work to do ... our best days are ahead.

With that, let me turn it over to Dave.

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

Thanks, Pat, and good afternoon, everyone.

Q1 was a solid quarter, exceeding revenue, gross margin percentage and EPS guidance despite continued ecosystem supply chain constraints, inflationary pressures and macroeconomic uncertainty. Three of our six newly formed business segments: NEX, Mobileye and IFS achieved record quarterly revenue.

Revenue was \$18.4 billion, slightly exceeding our guidance, led primarily by broad-based strength in our NEX business.

Gross margin for the quarter was 53 percent, exceeding our guidance by 100 basis points on improved manufacturing yields and lower factory costs.

EPS was 87 cents, 7 cents above our guide on higher gross profit and slightly lower operating expenses.

Operational cash flow for the quarter was \$5.9 billion and we received an additional \$4.6 billion from the McAfee equity sale. Total cash and investments increased by \$9.7 billion in the quarter to \$39 billion, driven by the NAND divestiture and McAfee sale. Capex for the quarter was \$4.6 billion.

Now turning to our newly formed business unit results.

CCG (Client Computing Group) revenue was \$9.3 billion, down 13% year-over-year on ramp-down of the Apple CPU and modem business, the expected OEM inventory burn we cited in our Q4 call, as well as lower consumer and education demand.



CPU ASP's were up greater than 25% year-over-year on richer mix and strong demand for our high-end mobile and desktop products across both our commercial and consumer segments.

Operating profit was down 34% year-over-year on lower revenue, increased 10nm/Intel7 mix and increased spending to further strengthen our product and platform roadmap.

DCAI revenue was \$6 billion, up 22% year-over-year on strong Xeon demand from both our hyperscale and enterprise customers.

DCAI operating profit was flat year-over-year as increased revenue was offset by increased 10nm mix, factory startup charges and increased investment in our technology and product roadmap.

NEX achieved all-time record quarterly revenue of \$2.2 billion, up 23% year-over-year on broad-based strength across the cloud networking and edge product lines. Operating profit was \$366 million, up 51% year-over-year on higher revenue offset by increased investment.

Mobileye achieved all-time record quarterly revenue of \$394 million, up 11% sequentially and 5% in comparison to Q1 2021, which saw exceptionally strong auto production and pipeline rebuilding due to COVID-related recovery last year. Operating profit was \$148 million, down 13 percent year-over-year on increased investment in next-generation products.


AXG revenue was \$219 million, up 21% year-over-year on the ramp of its super compute and Alchemist discrete GPU products. Operating loss was \$390 million versus an operating loss of \$176 million in Q1 2021, with the increase driven by new product qualification reserves on our Alchemist and Arctic Sound products, production ramp charges and increased investment.

IFS revenue was \$283 million, up 175% year-over-year on increased IMS tool shipments, increased automotive demand and initial revenue from Amazon and Cisco. Operating loss was \$31 million, roughly flat year-over-year as revenue and gross margin increases were offset by increased investment to build out the custom foundry business.

Moving to our full-year and Q2 guidance: As Pat mentioned earlier, we continue to see strong end-user demand for our products across each of our business units and we reaffirm our revenue guidance of \$76 billion, as lower than previously expected PC revenue is offset by NEX growth and DCAI hyperscale customer strength.

More specifically in our PC business, we continue to see strong commercial demand offset by low-end consumer and education softness and the impact of no longer shipping to customers in Russia and Belarus. Further, component supply constraints continue to be a challenge with the most recent COVID lockdowns in Shanghai further increasing supply chain risk and contributing to inflationary pressures that are having a negative impact on PC TAM for the year. As a result, we are seeing OEMs continue to lower inventory levels to better match demand and align with other system components. We expect elements of this inventory burn to continue in Q2, subsiding in the second half of the year.

Although these headwinds have reduced our CCG revenue forecast, we expect CCG revenue to increase in the second half of the year as a return to normal seasonality boosts demand, OEM inventory burn subsides and the ramp of our leadership Alder Lake and Raptor Lake products position us to compete for share.



For DCAI, we also expect to see a stronger second half of the year as hyperscale customer demand remains robust, component supply improves and the ramp of Ice Lake and Sapphire Rapids increase competitiveness.

For NEX, we expect the strength we saw in Q1 to continue with growth throughout the year fueled by improving component supply, continued 5G ramp and transformation at the edge.

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 Blocksacle products.

Finally, we expect to see 2H growth in each of our two remaining businesses – Mobileye and IFS – as they ramp new products and secure new customers.

For gross margin, we are guiding 52%, in-line with the 51-53% range previously communicated. Note that the inflationary environment creates a headwind that we are continuing to monitor, but we remain confident in our ability to mitigate the impact through continued cost reduction programs, as well as increased pricing in certain segments of the business.

For EPS, we are guiding \$3.60, 10 cents higher than prior guide on the Q1 beat and a slightly improved tax rate of 12 percent.

Finally, net capex guidance of \$27 billion and moderately negative adjusted free cash flow for the year remain unchanged. We have made significant progress on our smart capital initiatives and will continue to manage within the framework communicated at Investor Day.

Moving to Q2 guidance: For revenue, we are guiding \$18 billion, down 2% sequentially on the short-term headwinds detailed earlier and the impact of an additional 14th week in Q1. For the lockdowns in Shanghai, we are estimating the impact to be relatively contained under the assumption that these restrictions are nearing an end. Even under a short lockdown, we anticipate it will take some time for the supply chain to normalize, and if the lockdowns persist or spread beyond Shanghai, we could see more material impacts to our outlook.

For gross margin, we are guiding 51%, down approximately 200 basis points sequentially on increased 10nm/Intel 7 mix and Raptor Lake pre-qualification reserves. We had always expected Q2 gross margin to be at the lower end of our range, and with our full-year guide of 52%, we expect gross margin to inflect upward in the second half of the year as revenue increases and inventory reserves sell through. Finally, we are guiding a tax rate of 12% and EPS of 70 cents, down 17-cents sequentially on lower gross profit and higher OPEX.

About Intel

Intel (NASDAQ:INTC), a leader in the semiconductor industry, is shaping the data-centric future with computing and communications technology that is the foundation of the world's innovations. The company's engineering expertise is helping address the world's greatest challenges as well as helping secure, power and connect billions of devices and the infrastructure of the smart, connected world – from the cloud to the network to the edge and everything in between. Find more information about Intel at newsroom.intel.com and intel.com.

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