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CES 2021: Intel Announces Four New Processor Families

Delivering the Best Business, Education, Mobile and Gaming Computing Platforms for More Than 500 New PC Designs Coming in 2021

NEWS HIGHLIGHTS

- At its CES news conference, Intel highlighted how it is driving technology leadership with the introduction of more than 50 processors, resulting in more than 500 new designs for laptops and desktops coming to market in 2021.
- Intel launched the 11th Gen Intel® Core™ vPro® platform and Intel® Evo™ vPro® platform, delivering the highest performance and most comprehensive hardware-based security[1].
- Intel introduced the new N-series 10-nanometer Intel® Pentium® Silver and Intel® Celeron® processors that offer an unmatched balance of performance, media and collaboration for education systems.
- Intel announced a new line of 11th Gen Intel® Core™ H-series mobile processors for gaming platforms that deliver an industry-leading balance of mobility and enthusiast-level gaming.
- Intel also previewed products coming to market later in 2021, including 11th Gen Intel® Core™ S-series desktop processors (code-named “Rocket Lake-S”) and its next-generation processors (code-named “Alder Lake”).

SANTA CLARA, Calif.--(BUSINESS WIRE)--In a world where computing is pervasive and intelligence is distributed across every surface – from the cloud to the network to the intelligent edge – Intel today at CES 2021 highlighted how it is driving technology leadership to define the future of computing for people, business and society.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20210111005970/en/

To help people navigate through this extraordinary time, Intel introduced new processors for business, education, mobile and gaming computing platforms – all designed to offer the premium PC experiences people deserve, with the most choices and no limits.

More: Intel at CES 2021 (Press Kit) | Mobileye Innovation Will Bring AVs to Everyone, Everywhere (News Release) | 11th Gen Intel vPro Platform (Product Brief) | 11th Gen Intel Core H Series Processors (Product Brief) | 11th Gen Intel Core H Series Processors for Ultraportable Gaming (Press Deck)

Intel Executive Vice President Gregory Bryant outlines in Intel's CES 2021 news conference how the company is introducing new processors for business, education, mobile and gaming computing platforms – all designed to offer the premium PC experiences people deserve, with the most choices and no limits. As part of the all-virtual CES 2021, Intel makes clear that now is the time to "Go and Do Something Wonderful." (Credit: Intel Corporation)

"Only Intel has the breadth of products spanning multiple architectures; the large, open ecosystem; sheer scale of manufacturing footprint; and deep technical expertise customers need to unlock opportunities in this era of distributed intelligence," said Intel Executive Vice President Gregory Bryant. "With an intense focus on execution for our core products and across our broader portfolio, we're introducing a series of leadership products at CES with more following throughout the year."

Introducing 11th Gen Intel® Core™ vPro®: The Best Platform for Business

For business, Intel introduced the 11th Gen Intel vPro platform, an unrivaled business platform delivering the industry's highest performance and world's most comprehensive hardware-based security[2]. The new 11th Gen Intel Core vPro processors unveiled today are based on the world's best business processor for thin-and-light laptops[2] and, when combined with the new Intel Core vPro platform, offer:

- Intel® Hardware Shield, providing the world's most comprehensive security deep in hardware for business[3] and the industry's first silicon-enabled artificial intelligence (AI) threat detection to help stop ransomware and crypto-mining attacks. It is also equipped with Intel® Control Flow Enforcement Technology, ground-breaking technology to help shut down an entire class of attacks that long evaded software-only solutions[4].
- Intel 10-nanometer (nm) SuperFin technology, delivering industry-leading performance, Intel® Iris® Xᵉ graphics and the world's biggest Wi-Fi improvement in 20 years – with integrated Intel® Wi-Fi 6/6E (Gig+) that enables up to six times faster uploads and downloads in the office and nearly three times faster speeds at home versus standard Wi-Fi 5[5].
- Eight times[6] better AI performance, enabling businesses new compute power to keep pace with the fast-changing software ecosystem, and up to 2.3 times faster[7] creation and video editing compared to the previous generation.
- Up to 23% faster productivity[8] than the competition when using apps like Office 365 and the best business collaboration experience, enabling more than 50% faster[9] office productivity compared to the competition while on a video conference call.

Intel also launched the Intel® Evo™ vPro® platform, the best laptop experience for business users[10]. Laptop designs verified on the Intel Evo vPro platform are stylish, thin and light and provide an amazing immersive visual experience. They also offer remarkable responsiveness, instant wake and real-world battery life. More than 60 new laptops from top manufacturers will be available this year, combining the security and manageability of vPro and the amazing on-the-go experiences of Intel Evo. Additionally, Intel announced Intel Evo Chromebooks, enabling a new class of premium Chromebooks.

New Processors and Partnerships for Best Education Platform

Use of the PC as an essential education tool has accelerated greatly worldwide over the past year. To meet the growing needs of students, Intel introduced new N-series Intel® Pentium® Silver and Celeron® processors with an unmatched balance of performance, media and collaboration for education systems. The processors are designed on Intel's 10nm architecture, delivering up to 35%[11] better overall application performance and up to 78% better graphics performance gen on gen. This enables smooth application performance and browsing while multitasking, plus advanced camera and connectivity features for an enriched video conferencing and viewing experience.

As critical as advancing technology for meeting students' evolving needs is putting laptops in their hands. Even with accelerated adoption, up to 30% of U.S. school children still lack internet or laptops for learning, and the pandemic has only exacerbated those requirements. During the last 15 years, Intel has invested more than $1 billion globally in education, including training for more than 15 million teachers. Last April, Intel launched the Online Learning Initiative and has provided hundreds of thousands of devices, as well as connectivity and resources, to students worldwide. Intel will continue these efforts in 2021 along with partners from inside and outside the technology industry.

New Line of 11th Gen Intel® Core™ H-series Mobile Processors for the Best Gaming Platforms

Intel launched a new line of 11th Gen Intel Core H-series mobile processors for gaming that extends the 11th Gen mobile family of products and pushes the limits of what's possible for enthusiast-level gaming in laptops as thin as 16 millimeters. Led by the Intel® Core™ i7 Special Edition 4-core processor with up to 5 gigahertz (GHz) Turbo, these H35 processors are specifically targeted for ultraportable gaming. They feature new Gen 4 PCIE architecture for connecting to latest discrete graphics and deliver amazingly low latency and immersive game play on the go. At CES, Acer, ASUS, MSI and Vaio announced new systems powered by the 11th Gen Intel Core H35-series processor for ultraportable gaming, with more than 40 designs from top manufacturing partners launching in the first half of 2021.

For mobile enthusiasts who want desktop-caliber gaming and creation performance, Intel also announced an 8-core processor that will start shipping later this quarter. This platform is unique in the industry with features that would normally only be found in high-end desktop systems – including up to 5GHz, 20 lanes of PCIe Gen 4.0 architecture for fastest storage and discrete graphics, and Intel® Killer™ Wi-fi 6E (Gig+).

Preview of Next-Generation "Rocket Lake" and "Alder Lake" Technologies for Leadership Desktop and Mobile Platforms

Intel also demonstrated next-generation desktop technology for gamers and enthusiasts coming to market in 11th Gen Intel® Core™ S-series desktop processors ("Rocket Lake-S"). Featuring 19% gen-over-gen instructions per cycle (IPC) improvement[12] for the highest frequency cores and headlined by the Intel Core i9-11900K, these processors will bring even more performance to gamers and PC enthusiasts at launch in the first quarter of 2021.

Additionally, Intel demonstrated "Alder Lake," the next-generation processor that represents a significant breakthrough in x86 architecture and Intel's most power-scalable system-on-chip. Due in second half of 2021, Alder Lake will combine high-performance cores and high-efficiency cores into a single product. Alder Lake will also be Intel's first processor built on a new, enhanced version of 10nm SuperFin and will serve as the foundation for leadership desktop and mobile processors that deliver smarter, faster and more efficient real-world computing.

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.

[1] In thin & light Windows-based devices, based on 1) unique features and performance testing on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration, comparing Intel® Core™ vPro® i7-1185G7 to AMD Ryzen 7 PRO 4750U and 2) an IOActive study (commissioned by Intel) comparing Intel® Hardware Shield security capabilities on 11th Gen Intel Core vPro processors with corresponding competitor technologies. All testing as of December 2020.
Visit www.Intel.com/11thgenvpro for details. Results may vary.

[2] In thin & light Windows-based devices, based on unique features and performance testing (as of December 1, 2020) on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration of Intel® Core™ vPro® i7-1185G7, including in comparison to AMD Ryzen 7 PRO 4750U. Visit www.Intel.com/11thgenvpro for details. Results may vary.

[3] In thin & light Windows-based devices, based on unique features and testing by IOActive (commissioned by Intel; as of December 2020) comparing Intel® Hardware Shield security capabilities with corresponding technologies in an AMD Ryzen Pro 4750U-based system. Visit www.intel.com/11thgenvpro for details. Results may vary.

[4] Intel Control-flow Enforcement Technology (CET) is designed to help protect against jump/call-oriented programming (JOP/COP) attack methods and return-oriented programming (ROP) attack methods, malware known as memory safety issues and which comprise over half of ZDI-disclosed vulnerabilities. Visit www.intel.com/11thgenvpro for details. Results may vary.

[5] For more information about the data presented, visitwww.intel.com/wifi6disclaimers.

[6] As measured by MLPerf v0.7 Inference, Mobile Notebooks, Closed Division with Offline Scenario using OpenVINO 2021.1 Pre framework on MobileNetEdge model int8 GPU (Batch=16) on 11th Gen Intel® Core™ i7-1185G7 Processor vs highest attainable MLPerfv0.7 Inference, Mobile Notebooks, Closed Division with Offline Scenario using OpenVINO 2021.1 Pre framework on MobileNetEdge model int8 GPU (Batch=1) on 10th Gen Intel® Core™ vPro® i7-10810U processor

[7] As measured by Video Editing workflow. 11th Gen Intel® Core™ vPro® i7-1185G7 Processor vs. 10th Gen Intel® Core™ vPro® i7-10610U Processor

[8] As measured by Microsoft Office 365 workflow. 11th Gen Intel® Core™ vPro® i7-1185G7 Processor vs. MD Ryzen 7 PRO 4750U

[9] As measured by Productivity and Collaboration Workflow. 11th Gen Intel® Core™ vPro® i7-1185G7 Processor vs. AMD Ryzen 7 PRO 4750U

[10] In thin & light Windows-based devices, based on 1) unique features and performance testing on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration, comparing Intel® Core™ vPro® i7-1185G7to AMD Ryzen 7 PRO 4750U and 2) an IOActive study (commissioned by Intel) comparing Intel® Hardware Shield security capabilities on 11th Gen Intel Core vPro processors with corresponding competitor technologies. All testing as of December 2020. Intel Evo vPro designs are co-engineered as part of Intel's comprehensive laptop innovation program Project Athena then tested, measured, and verified against a premium specification and key experience indicators to ensure unparalleled user experiences.
Visit www.Intel.com/11thgenvpro for details. Results may vary.

[11] Source: Intel estimates as of January 2021. Based on measurements on Intel Pentium Silver and Celeron measured on platforms with Intel® Pentium® Silver N6000 Processor, PL1=6W TDP, PL2 = 20W 4C4T, Turbo up to 3.3GHz, Motherboard: JSL RVP, Graphics: Intel® UHD Graphics 605, Memory: 2x4GB DDR4- 3200, Storage: 512GB Intel SSD 660P, OS: Windows* 10 20 H1, OS Version 19041.546, BIOS : 2385.02_140 vs. Intel® Pentium® N5030 Processor, PL1=6W TDP, PL2 = 15W 4C4T, Turbo up to 3.1GHz, Motherboard: GLK RVP, Graphics: Intel® UHD Graphics 605, Memory: 2x4GB DDR4 -2400, Storage: 256GB Intel® SSD 540s Series, OS: Windows* 10 19H1, OS Version: 10.0.19041.630 BIOS : 0064_42

[12] Source: Intel estimates as of January 2021. Based on measurements on Intel Internal reference platforms running SPEC CPU 2017 1-copy rate on 11th Gen Intel® Core™ i9-11900K vs 10th Gen Intel® Core™ i9-10900K (running each at the same fixed frequency).

Performance varies by use, configuration and other factors. Learn more at intel.com/PerformanceIndex.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See CES 2021 Claim Appendix on intel.com/PerformanceIndex for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

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