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Intel Extends Leadership in AI PCs and Edge Computing at CES 2025

Intel pushes the boundaries of AI performance and power efficiency for businesses and consumers, ushering in the next era of AI computing.

NEWS HIGHLIGHTS

- New Intel® Core™ Ultra 200V series mobile processors with Intel vPro® are empowering businesses with AI-driven productivity and enhanced IT management[1]. The combination of performance, efficiency and industry-leading business computing with advanced security and manageability – all while enabling a seamless Microsoft Copilot+ experience – helps to deliver a robust platform for modern workplaces.
- New Intel® Core™ Ultra 200HX and H series mobile processors feature improved Performance-cores and Efficient-cores, an integrated neural processing unit (NPU) for AI acceleration and available Intel® Arc™ graphics[2].
- New Intel® Core™ Ultra 200U series mobile processors blend performance and power efficiency for mainstream mobile users.
- The Intel Core Ultra 200S series desktop processor portfolio expands with 12 new 65-watt and 35-watt offerings for mainstream desktop users.
- New Intel® Core™ Ultra processors, Intel® Core™ processors, and Intel® Processors for edge computing prioritize scalability and performance across edge-relevant applications. These processors, particularly the Intel® Core™ Ultra 9, excel in AI workloads, showcasing significant gen-over-gen performance advancements in key areas like media processing and AI analytics[3].
- New updates on Intel's 18A manufacturing and next-generation processor family.

LAS VEGAS--(BUSINESS WIRE)-- Today, at CES 2025, Intel unveiled the new Intel® Core™ Ultra (Series 2) processors, designed to revolutionize mobile computing for businesses, creators and enthusiast gamers. The latest additions to the Intel Core Ultra family feature cutting-edge AI enhancements, increased efficiency and performance improvements.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20250106076497/en/

At CES in January 2025, Intel extended the benefits of its latest Intel Core Ultra 200V series mobile processors with Intel vPro commercial customers. The combination of performance, efficiency and industry-leading business computing with advanced security and manageability helps to elevate new PC experiences for businesses around the world. (Credit: Intel Corporation)

"Intel Core Ultra processors are setting new benchmarks for mobile AI and graphics, once again

demonstrating the superior performance and efficiency of the x86 architecture as we shape the future of personal computing," said Michelle Johnston Holthaus, interim co-CEO of Intel and CEO of Intel Products. "The strength of our AI PC product innovation, combined with the breadth and scale of our hardware and software ecosystem across all segments of the market, is empowering users with a better experience in the traditional ways we use PCs for productivity, creation and communication, while opening up completely new capabilities with over 400 AI features. And Intel is only going to continue bolstering its AI PC product portfolio in 2025 and beyond as we sample our lead Intel 18A product to customers now ahead of volume production in the second half of 2025."

Event Press Kit: Intel at CES 2025

Intel Core Ultra 200V Series: Transforming Business Productivity

For businesses striving to stay ahead in the AI era, Intel introduces Intel Core Ultra 200V series processors with Intel vPro®. These new processors offer dramatic performance gains, enhanced efficiency, and robust security and manageability features to help modernize IT environments[1].

Intel has partnered with Microsoft to continue to advance AI-driven innovation, enhanced security and superior performance into 2025. Copilot+ PCs powered by Intel Core Ultra 200V series processors unlock next-gen AI productivity, all while delivering long-lasting battery life.

The updated Intel vPro platform further raises the bar for IT excellence, offering comprehensive security, modern device management, and broad app compatibility for seamless IT transitions and device refreshes.

"Copilot+ PCs offer exceptional performance, battery life, enhanced AI experiences, and are all Secured-core PCs with the Microsoft Pluton security processor. Copilot+ PCs powered by Intel Core Ultra 200V series deliver on all these fronts, and we are excited to partner with Intel to bring a broad set of Copilot+ PCs to commercial audiences," said Pavan Davuluri, corporate vice president, Windows + Devices at Microsoft. "Intel Core Ultra 200V series Copilot+ PCs are an excellent choice for commercial customers looking to upgrade their existing Windows 10 PCs to Windows 11."

Intel vPro: Elevating IT Operations with AI and Security

Intel vPro continues to set the standard for business computing, offering advanced fleet provisioning, unmatched defense and manageability with AI enhanced security, premium connectivity and exceptional device stability.

"With decades of experience delivering proven business solutions, Intel is committed to empowering IT professionals with the most advanced tools for managing distributed fleets securely and efficiently," said David Feng, vice president of the Client Computing Group and general manager of Client Segments at Intel. "We're accelerating innovation with Intel vPro to provide IT teams the capabilities they need to maximize productivity and reduce complexity."

Key Intel vPro features include:

- **Enhanced Productivity:** Intel Core Ultra 200V processors help deliver exceptional battery life in thin-and-light designs, empowering AI experiences on the go.
- **Advanced Security:** Intel vPro Security is the only hardware-assisted security validated by the MITRE ATT&CK framework, with more than 150 silicon-enabled mitigations. A new Intel® Partner Security Engine provides an isolated platform for third-party firmware, such as Microsoft Pluton, enhancing sensitive data protection[4].
- **Seamless Manageability:** New out-of-band diagnosis and remediation tools, including Intel® Endpoint Cloud Services, simplify remote support and ensure rapid recovery from PC outages. Intel vPro® Fleet Services, which will preview in the first half of this year, allows IT professionals to manage PC fleets remotely via an Intel-hosted cloud service. It is ideal for organizations seeking flexible, cloud-based device management.
- **Unrivaled Stability:** With Intel vPro's support for 99.7% app compatibility, IT managers can confidently migrate to the latest technologies without disrupting business operations[5].

Intel Core Ultra 200HX and H Series: Powering Creators and Gamers

For creators and gaming enthusiasts, Intel introduces the Core Ultra 200HX and H series mobile processors, delivering industry-leading performance, efficiency and platform capabilities, alongside a landmark reduction in power usage. These processors elevate mobile creativity and provide gamers with an immersive experience backed by powerful AI acceleration.

"Our Intel Core Ultra 200HX and H series processors are built for the next generation of creators and gamers," said Josh Newman, vice president of the Client Computing Group and general manager of Product Marketing and Management at Intel. "With breakthrough compute and graphics performance, efficiency and AI capabilities, these processors will push the entire laptop experience to new heights."

Key features of the Intel Core Ultra 200HX and H series mobile processors include:

- Up to 24 cores – eight Performance-cores (P-cores) and 16 Efficient-cores (E-cores) – for HX-series and up to 16 cores – six P-cores, eight E-cores and two low-power E-cores – for H-series, based on Intel's latest core architecture. These new processors give gamers, creators and professionals the computing power they need for gaming and creating on the go – including up to 41% better multi-thread (MT) performance for Intel Core Ultra 200HX series compared to prior-gen HX-series processors[6].
- The Intel Core Ultra 200H series features Intel® Arc™ graphics with up to eight Intel Xe cores featuring Intel® Xe Matrix Extensions (XMX) for AI acceleration – providing up to 22% better gaming performance compared with prior gen H-series processors[7]. Across the entire platform these processors deliver up to 99 TOPS (trillion operations per second) when using the graphics processing unit (GPU), central processing unit (CPU) and neural processing unit (NPU).
- The Intel Core Ultra 200HX series processor is Intel's first mobile enthusiast AI PC with a built-in NPU, providing 13 TOPS.
- The Intel Core Ultra 200HX series processor provides the latest in bandwidth and connectivity, with as many as 48 total PCIe lanes (including PCIe 4.0 and 5.0) to connect the latest discrete GPUs and storage.

- Packaging improvements result in a 33% smaller processor package overall, enabling new premium thin-and-light designs without compromising on performance.

Select Intel Core Ultra 200HX SKUs will offer overclocking options to further tune performance, with key features including[8]:

- Compute overclocking for P-cores and E-cores.
- Intel® Extreme Memory Profile (XMP) support for DDR5 SODIMM overclocking.
- New overclocking interfaces including die-to-die and fabric and controls like 16.6 megahertz ratios.
- Intel® Extreme Tuning Utility with one-click overclocking using the Intel® Speed Optimizer feature.

Additionally, Intel is launching its Intel Core Ultra 200U series mobile processors featuring up to two P-cores and eight E-cores, Intel Xe LPG graphics, and up to 24 platform TOPS. Intel Core Ultra 200U series systems give users a great balance of performance, power efficiency and price.

Intel is also expanding its Intel Core Ultra 200S series desktop processors with 12 new 65-watt and 35-watt offerings. Featuring up to eight P-cores and 16 E-cores, these new processors will give customers an incredible blend of performance and power efficiency in a desktop CPU – whether for gaming, creating or using productivity applications.

Intel Core Ultra (Series 2) platforms also include premium connectivity, with features including[9]:

- Greater networking speeds, responsiveness and reliability with Intel® Wi-Fi 7 (5 Gig) support, along with the fastest, simplest and most reliable USB-C connection with Thunderbolt™ 5 or Thunderbolt™ 4 technology.
- Continuous AI-based network connection optimization with Intel® Connectivity Performance Suite software.
- High-fidelity, low-power Intel® Bluetooth® LE Audio.
- Ability to share screens, keyboard, mouse, storage and files with two PCs using Thunderbolt™ Share.

AI Optimization for the Edge

Intel also unveiled a new suite of processors for edge computing designed to provide scalability and superior performance across diverse use cases. Intel Core Ultra processors deliver remarkable power efficiency, making them ideal for AI workloads at the edge, with performance gains that surpass competing products in critical metrics like media processing and AI analytics.

New Intel® Core™ Ultra 9 processors show tremendous performance improvements in AI workloads compared with the previous generation, setting a new benchmark for edge AI capabilities. When comparing the Intel® Core™ Ultra 9 285H with the 185H, performance is up to 2.2x higher in Procyon AI computer vision, up to 3.3x higher in Llama 3 8B and up to 2.3x higher in stable diffusion 1.5[10].

TOPS alone don't define the real-world performance needs at the edge. The Intel® Core™ Ultra 7 processor – with about one-third fewer TOPS than Nvidia's Jetson AGX Orin – beats its competitor with media performance that is up to 5.6 x faster, video analytics performance that is up to 3.4x faster and performance per watt per dollar up to 8.2x better[11].

Key edge products launching today at CES include:

- Intel® Core™ Ultra 200S/H/U series processors (code-named Arrow Lake).
- Intel® Core™ 200S/H series processors (code-named Bartlett Lake S and Raptor Lake H Refresh).
- Intel® Core™ 100U series processors (code-named Raptor Lake U Refresh).
- Intel® Core™ 3 processor and Intel® Processor (code-named Twin Lake).

Availability Starts Now

Intel Core Ultra 200V series-powered systems with the Intel vPro platform are available at online and in-store retailers, as well as via OEM partner storefronts, beginning Jan. 6, 2025. Intel Core Ultra 200H and U series-powered systems will follow with availability starting in February 2025. Intel Core Ultra 200HX series-powered systems will become available in the first half of 2025, with more details to come closer to system availability.

Intel Core Ultra 200S series 65-watt and 35-watt desktop processors and OEM systems will be available through online and in-store retailers, as well as via OEM partner storefronts, beginning Jan. 13, 2025.

More: Intel Core Processors (Series 2) for the Edge (Product Brief) | Intel Core Ultra 200S Series Processors for the Edge (Product Brief) | Intel Core Ultra 200U and 200H Series Processors for the Edge (Product Brief) | Intel to Power Large PC Refresh Cycle with All-New Silicon-Based Security (News) | CES 2025: Intel Keynote Highlights the AI PC's Future (Event Video) | Intel Core Ultra 200V Series-Intel vPro Commercial (Media Deck) | Intel Edge CES 2025 (Media Deck)

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] All versions of the Intel vPro® platform require an eligible Intel processor, a supported operating system, Intel LAN and/or WLAN silicon, firmware enhancements, and other hardware and software necessary to deliver the manageability use cases, security features, system performance and stability that define the platform. See intel.com/performance-vpro for details.
[2] Intel® Arc™ GPUs only available on select H-series Intel® Core™ Ultra processor-powered systems with required configurations. OEM enablement required; check with OEM or retailer for system configuration details.

[3] AI features may require software purchase, subscription or enablement by a software or platform provider, or may have specific configuration or compatibility requirements. Data latency, cost, and privacy advantages refer to non-cloud-based AI apps. Learn more at intel.com/AIPC.

[4] As of December 2024, based on MITRE data report and blog https://community.intel.com/t5/Blogs/Tech-Innovation/Artificial-Intelligence-AI/Intel-AI-PCs-Deliver-an-Industry-Validated-Defense-vs-Real-World/post/1649007. See www.intel.com/performance-vpro for details. Results may vary.

[5] As of December 2024, refers to client applications. Based on the broad compatibility, extensive software options, unique architecture, and impressive performance of Intel® Core™ Ultra processors that combine to deliver the best overall AI experience, including in comparison to competition processors. AI features may require additional purchase or specific compatibility requirements. See intel.com/performanceindex for details. Results may vary.

[6] As of January 2025. As measured by Cinebench 2024 Multi Core benchmark on Intel Core Ultra 9 285HX vs. Intel Core i9-14900HX. Individual system results may vary as power and performance are affected by use, configuration and other factors. Details at intel.com/performanceindex.

[7] As of January 2025. As measured by average FPS at 1080P medium settings and calculated as a geo mean across 37 Popular Games on Intel Core Ultra 9 285H vs. Intel Core Ultra 9 185H. Individual system results may vary as power and performance are affected by use, configuration and other factors. Details at intel.com/performanceindex.

[8] Altering clock frequency or voltage may void any product warranties and reduce stability, security, performance and life of the processor and other components. Check with system and component manufacturers for details.

[9] For more information on wired and wireless connectivity, seeintel.com/performanceindex.

[10] As of November 2024. Based on system featuring Intel® Core™ Ultra 9 285H Processor 8P+16E (45W), 2x16GB DDR5-6400, Windows 11 24H2 (OS Build 26100.1457), running Llama-3-8B (INT4), Stable-Diffusion-v1.5 (FP16). Procyon AI Computer Vision. Comparison system features Intel® Core™ Ultra 9 185H Processor H 6P+8E (45W), 32GB LPDDR5-7467 MHz, Windows 11 26100.712, running Llama-3-8B (INT4), Stable-Diffusion-v1.5 (FP16). Procyon AI Computer Vision. See intel.com/processorclaims for more details. Results may vary.

[11] As of November 2024. Based on system featuring Intel® Core™ Ultra 7 265H Processor 6P+8E+2LPE (45W), 2X8GB DDR5-6400, Ubuntu 24.04.1 LTS, running OpenVINO 2024.4.0 [From Archives, Linux] & DLStreamer. Comparison system features 12-core Arm Cortex A78AE v8.2 64-bit processor, 64GB 256-bit LPDDR5 @ 204.8 GB/s, Ubuntu 22.0.4.4 LTS, running Jetpack 5.0.2 and Jetpack 6.0 Rev 2. See intel.com/processorclaims for more details. Results may vary.

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