January 8, 2024

CES 2024: Intel Delivers New High-Level Compute Solutions in Mobile, Desktop and Edge

New Intel Core HX and U-series mobile processors bring robust Intel Core platform to new enthusiast and mainstream mobile systems, alongside expanded desktop stack reaching the mainstream and edge.

NEWS HIGHLIGHTS

- Intel announces the Intel® Core™ 14th Gen mobile processor family, led by the launch of the new flagship Intel® Core™ i9-14900HX featuring 24 cores and the world's best experience for mobile enthusiasts[1].
- Intel introduces the complete lineup of Intel Core 14th Gen desktop processors at the 65-watt and 35-watt levels for mainstream desktop, All-in-One and edge devices.
- Intel introduces the new Intel® Core™ mobile processor Series 1 family, led by the Intel® Core™ 7 processor 150U featuring 10 cores/12 threads and up to 5.4 gigahertz (GHz) turbo frequencies.

LAS VEGAS--(BUSINESS WIRE)-- Please replace the release issued Jan. 08, 2024 with the following corrected version due to revisions to the first bullet under "The new processor family includes:" and footnote 2.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20240108595215/en/

Intel Core 14th Gen mainstream desktop processors – Intel's expansion of the Intel Core 14th Gen desktop stack – gives mainstream PC users and businesses across various vertical markets new ways to experience the performance of Intel's latest-gen desktop processors. These 18 new processors up and down the stack help users game, create and work at the levels they demand every day, all while enjoying the platform features users have come to expect from Intel. Intel introduced new Intel Core 14th Gen processors at CES 2024 on Monday, Jan. 8, 2024. (Credit: Intel Corporation)

The updated release reads:

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- Intel introduces the new Intel® Core™ mobile processor Series 1 family, led by the Intel® Core™ 7 processor 150U featuring 10 cores/12 threads and up to 5.4 gigahertz (GHz) turbo frequencies.

Today at CES, Intel announced its full Intel Core 14th Gen mobile and desktop processor lineup, including powerful new HX-series mobile processors and mainstream 65-watt and 35-watt desktop processors. Additionally, Intel introduced its new Intel Core mobile processor Series 1 family, led by the Intel Core 7 processor 150U, for performant mainstream thin-and-light mobile systems.

"Our Intel Core 14th Gen processor family is built to bring top-notch performance and platform features to enthusiast and mainstream PC users alike," said Roger Chandler, Intel vice president and general manager, Enthusiast PC and Workstations, Client Computing Group. "Enthusiasts on-the-go can now enjoy the best mobile experience available today with our HX-series processors. And mainstream desktop users can now experience the efficient performance and robust platform features available in our latest-gen 65-watt and 35-watt desktop processors."

More: Intel at CES 2024 (Press Kit) | Intel Core Processors: HX/U Mobile and 65/35W Desktop (Media Deck) | Intel Core Desktop Processor (Product Brief) | Intel Core Processors HX-Series (14th Gen) (Product Brief) | Intel Core Processor (Series 1) (Product Brief)

The launch of these new mobile and desktop processors at CES comes alongside the parade of new Intel Core Ultra-powered systems from Intel's partners. Whether PC users are looking for powerful enthusiast and mainstream mobile and desktops powered by Intel Core 14th Gen or new AI PCs powered by Intel® Core™ Ultra processors, Intel has the right compute solution.

Intel Core 14th Gen HX-series Powers World's Best Experience for Mobile Enthusiasts

The new Intel Core 14th Gen HX-series mobile processors are built for gamers, creators and professionals who need both higher levels of compute performance and require the mobility that a laptop provides. Led by the Intel Core i9-14900HX, featuring eight Performance-cores (P-cores) and 16 Efficient-cores (E-cores), the new HX-series combines best-in-class connectivity with incredible single- and multi-thread performance. Additionally, the HX-series features a leap in creator performance thanks to 50% more E-cores in the Intel® Core™ i7-14700HX processors.

The new processor family includes:

- Up to 5.8 GHz turbo frequency delivering up to 17% better gaming performance and up to 51% faster multitasking performance versus the competition[2].
- Up to 24 cores (eight P-cores, 16 E-cores) and 32 threads in its i9-14900HX processors.
- 50% more E-cores in its i7-14700HX processors, bringing those to 20 cores (eight P-

cores, 12 E-cores) and 28 threads.
- Support for up to 192 gigabytes (GB) of total DDR5-5600 megatransfers/second (MT/S) memory.
- Overclocking capabilities on HX series processors, including Intel® Extreme Utility (XTU) and Intel® Extreme Memory Profile (XMP) support[3].
- New Intel® Application Optimization (APO) support on HX series, with six new gaming titles (eight total) supported since the initial Intel Core 14th Gen desktop launch in October 2023[4].
- Thunderbolt™ 5, delivering 80 gigabits per second (Gbps) of bi-directional bandwidth, and bandwidth boost providing up to 120 Gbps, 3x the capability of today's fastest solutions, for the best display and data experiences – in addition to Thunderbolt™ 4 delivering bandwidth of 40 Gbps for PC connectivity to multiple 4K monitors and accessories.
- Leading wireless features, including integrated Intel® Wi-Fi 6E (Gig+) and available new discrete Intel® Wi-Fi 7 (5 Gig) for multi-gigabit speeds in more locations, wired-like responsiveness and extreme reliability.
- The latest in Bluetooth® connectivity with support for both Bluetooth 5.4 and Bluetooth 5.3, providing exceptional performance for multiple simultaneous Bluetooth-enabled device connections.

With more than 60 Intel Core 14th Gen HX-powered partner systems coming to market in 2024, mobile enthusiasts can game, create and work on-the-go better than before.

New Intel Core 14th Gen Mainstream Desktop Processors Bring Powerful Real-World Performance from Desktop to the Edge

Intel's expansion of the Intel Core 14th Gen desktop stack gives mainstream PC users – and businesses across various vertical markets – new ways to experience the performance of Intel's latest-gen desktop processors. These 18 new processors up and down the stack help users game, create and work at the levels they demand every day, all while enjoying the platform features users have come to expect from Intel.

The latest Intel desktop processors include:

- Up to 5.8 GHz turbo frequency delivering up to 37% faster multi-thread performance and up to 7% better Microsoft Office performance gen-over-gen[5].
- Up to 24 cores (eight P-cores, 16 E-cores) and 32 threads in its i9-14900 processors.
- For the i7-14700, the addition of four E-cores for a total of 20 cores (eight P-cores, 12 E-cores) and 28 threads.
- Support for up to 192 GB of total DDR5-5600/DDR4-3200 MT/S memory – providing backward compatibility with existing Intel 600- and 700-series-based motherboards.
- Continued support for in-box thermal solutions, including the Intel® Laminar RH1 and RM1 coolers.
- Next-generation wireless connectivity with support for both Intel® Killer™ Wi-Fi 7 (5 Gig) and Intel Killer Wi-Fi 6E (Gig+).
- Continued support for both PCIe Gen 5.0, Gen 4.0 and Thunderbolt 4 providing 40 Gbps bandwidth, in addition to integrated USB 3.2 connectivity support providing up to 20 Gbps transfer bandwidth.

With the full Intel Core 14th Gen desktop processor lineup now available online and in stores, PC users can find the right processor – at every price point – for their everyday gaming, creating and productivity needs.

At the edge, these processors enable powerful AI and compute-intensive workloads with more cores in LGA-socketed packaging. From interactive whiteboards in school classrooms to detail-rich medical imaging displays and controlled automation and robotics on the factory floor, Intel Core 14th Gen processors allow vertical markets to deliver innovative results more efficiently, safely and effectively.

Intel Core U Processor Series 1 Brings Efficient Performance, Robust Features to Mainstream Thin-and-Light Systems

The newly introduced Intel Core U mobile processor family is bringing to market the efficient, balanced performance mainstream mobile PC users desire in thin-and-light devices. The new mobile processor line also maintains the platform features that PC users have come to expect from Intel mobile processors.

The new Intel Core U Processor Series 1 includes:

- Up to 5.4 GHz turbo frequency along with up to 10 cores (two P-cores, eight E-cores) and 12 threads in its Intel Core 7 processor 150U.
- Up to 96 GB of total DDR5-5200/DDR4-3200 MT/S memory.
- Thunderbolt 4 universal connectivity for work and play, enabling 40 Gbps bandwidth for connection to multiple 4K monitors and accessories.
- Support for eight PCIe Gen 4.0 and 12 PCIe Gen 3.0 lanes for latest solid-state drive (SSD) storage.
- The latest in Bluetooth connectivity with support for both Bluetooth 5.4 and Bluetooth 5.3, including Bluetooth Low Energy (BLE) audio enabling low-power, immersive, high-fidelity PC sonic experiences and support for new Bluetooth Auracast™ capabilities for broadcast audio tuning, personal audio sharing, and enhanced accessibility for hearing aids and new assisted listening services.
- Next-generation wireless connectivity with support for both Intel Killer Wi-Fi 7 (5 Gig) and Intel Killer Wi-Fi 6E (Gig+).

Mobile systems powered by the Intel Core U Processor Series 1 will come to market in the first quarter of 2024, with more details to come from Intel partners.

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] Based on the performance and unique features, (as of December 2023) of Intel® Core™ 14th Gen mobile processors, including in comparison to prior generation and competitive mobile processor offerings. See www.intel.com/performanceindex for details. Results may vary. Other names and brands may be claimed as the property of others.

[2] Performance claims based on 14th Gen i9-14900HX performance measured by (1) 17% higher average FPS vs. the AMD 7945HX3D and (2) 51% Faster Multitasking Workflow featuring Epic Games Unreal Engine 5 MetaHuman and CapturingReality RealityCapture vs. AMD 7945HX. See www.intel.com/performanceindex for details. Results may vary.

[3] Overclocking may void warranty or affect system health. Learn more at www.intel.com/overclocking. Results may vary. For details, see intel.com/overclocking.

[4] Intel® Application Optimization is a policy within Intel® Dynamic Tuning Technology that optimizes performance on select games, with required configurations on select Intel® Core™ 14th Gen Processors. For additional information on Intel® Application Optimization, see www.intel.com/content/www/us/en/support/articles/000095419/Processors.html. Data shown captured using the Intel® Core™ 14th Gen i9-14900HX. See www.intel.com/PerformanceIndex. Results may vary.

[5] Multi-threaded performance on Autodesk 3ds Max Toon Shader Arnold Render workload of Intel® Core™ 14th Gen i7 processor 14700 vs prior generation. See www.intel.com/performanceindex for details. Results may vary.

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Thomas Hannaford
1-718-820-6604
thomas.hannaford@intel.com

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