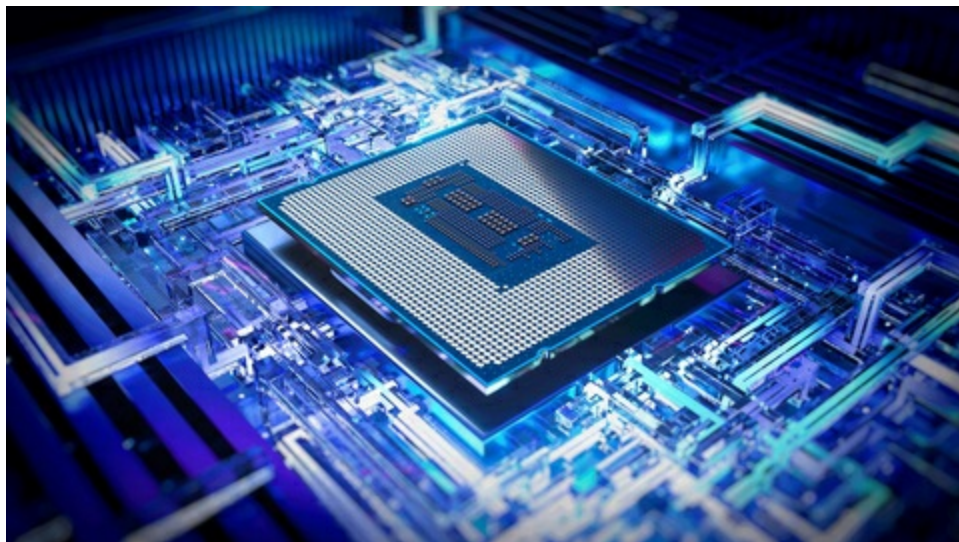September 27, 2022

![intel]

Intel Launches 13th Gen Intel Core Processor Family Alongside New Intel Unison Solution

13th Gen Intel Core desktop processors deliver the world's best gaming experience and unmatched overclocking capabilities.

SAN JOSE, Calif.--(BUSINESS WIRE)-- Today at [Intel Innovation](#), Intel revealed the 13th Gen Intel® Core™ processor family, led by the 13th Gen Intel® Core™ i9-13900K – the world's fastest desktop processor[1]. The new 13th Gen Intel Core family includes six new unlocked desktop processors with up to 24 cores and 32 threads and blazing clock speeds up to 5.8 GHz for the best gaming, streaming and recording experience[2].

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220927005482/en/

At Intel Innovation on Sept. 27, 2022, Intel revealed its new 13th Gen Intel Core processor family powered by Intel's performance hybrid architecture. The new processor family launched with six new unlocked desktop processors. (Credit: Intel Corporation)

Led by the launch of the Intel Core "K" processors, the 13th Gen Intel Core desktop family will consist of 22 processors and more than 125 partner system designs – providing an uncompromising experience in both application performance and platform compatibility. Enthusiasts can take advantage of 13th Gen Intel Core processors' performance improvements with existing Intel® 600 or new Intel® 700 series chipset motherboards. Combined with both the latest DDR5 memory support and continued DDR4 memory support, users can enjoy the benefits of 13th Gen Intel Core while customizing their setup based on their own feature and budget preferences.

More: [13th Gen Intel Core Processors/Unison](#) (Press Kit) | [Tech Minute: 13th Gen Intel](#)

[Core Processors](#) (Video) | [13th Gen Intel Core Desktop Processors](#) (Product Brief) | [13th Gen Intel Core Desktop Processors](#) (Media Presentation) | [Intel Unison](#) (Fact Sheet) | [Intel Innovation 2022](#) (Press Kit) | [Intel Equips Developers to Solve Challenges of Today and Tomorrow](#) (News) | [Intel Innovation Day 1 Broadcast](#) (Livestream/Replay) | [The Future is Wide Open](#) (Greg Lavender Editorial)

"We are raising the standards of PC performance once again with our latest generation of flagship 13th Gen Intel Core Processors," said Michelle Johnston Holthaus, executive vice president and general manager of the Client Computing Group at Intel. "The 13th Gen Intel Core family is the latest example of how Intel is enabling amazing experiences to happen on the PC – at scale and across all PC product segments. Combine this with an industry-leading partner ecosystem and new solutions like Intel Unison, and together we are showing the world what's truly possible with the PC experience going forward."

A Complete, All-Around Platform to Game and Create

Building on a matured Intel 7 process and [x86 performance hybrid architecture](#), 13th Gen Intel Core desktop processors enable better system performance – even through the most demanding of multitasking workloads. This includes up to 15% better single-threaded performance and up to 41% better multi-threaded performance[3].

With this generation, Intel's performance hybrid architecture brings together the fastest Performance-cores (P-core) ever built along with up to double the number of Efficient-cores (E-core) – delivering improved single-threaded and multi-threaded performance that enables:

- **World's best gaming experience:** Available with up to 24 cores (8 P-cores, 16 E-cores) and 32 threads, the new Core i9-13900K provides the best experience for gaming, streaming and recording. With up to 5.8 GHz and 15% better single-thread performance, it can push high frame rates and allow for unleashed gaming experiences across top titles[4].
- **Continued advances in content creation performance:** The 13th Gen Intel Core desktop processor lineup adds more E-cores and up to 41% better multi-threaded performance to handle multiple, compute intensive workloads to keep people in the creative flow.
- **An unmatched overclocking experience[5]:** The 13th Gen Intel Core processor offers an unmatched overclocking experience for everyone – from experts to beginners. 13th Gen Intel Core processor users can see higher average overclocking speeds across P-cores, E-cores and DDR5 memory. Intel also updated its easy one-click overclocking feature, Intel® Speed Optimizer, to support 13th Gen processors so users can overclock with minimal effort. And the robust Intel® Extreme Memory Profile (XMP) 3.0 ecosystem provides a wide selection of overclocking modules. When coupled with Intel® Dynamic Memory Boost, this feature provides a hassle-free memory overclocking experience with both DDR4 and DDR5.

Rob Bartholomew, chief product officer at Creative Assembly, said, "We've been working with Intel for over a decade to deliver an incredible Total War experience on Intel CPUs. We've optimized Total War: WARHAMMER III for the hybrid 12th Gen architecture, and we're excited to continue the work with the new 13th Gen Intel Core Processors."

Industry-Leading Features for Desktop Platforms

The 13th Gen Intel Core desktop processors empower users with leading-edge performance and experiences across gaming, content creation and work, with several new and improved features including:

- Intel® Adaptive Boost Technology and Thermal Velocity Boost opportunistically boosts processor clock frequencies based on power and thermal headroom during a given workload. Available in Intel Core i9 unlocked SKUs.
- More E-cores across Intel Core i5, i7, i9 power a big leap in multi-threaded performance and better multi-tasking/mega-tasking experience for users.
- PCIe Gen 5.0 support, with as many as 16 lanes off the processor.
- Increased memory support to DDR5-5600 and DDR5-5200, while maintaining DDR4 compatibility.
- Up to 2x the L2 cache and increased L3 cache.

Introducing the Intel 700 Series Chipset with Backward Compatibility

Alongside the 13th Gen Intel Core desktop processors, Intel is launching the new Intel 700 Series chipset with advanced features for increased reliability and performance. Eight additional PCIe Gen 4.0 lanes combined with PCIe Gen 3.0 provide 28 total lanes off the chipset, increased USB 3.2 Gen 2x2 (20Gbps) ports provide improved USB connectivity speed, and DMI Gen 4.0 increases the chipset-to-CPU throughput for fast access to peripheral devices and networking. Additionally, Intel is bringing forward and backward compatibility. Take advantage of 13th Gen Intel Core processor performance improvements with existing Intel 600 chipset-based motherboards.

Availability

13th Gen Intel Core desktop "K" processors and the Intel Z790 chipset will be available starting Oct. 20, 2022, including boxed processors, motherboards and desktop system sales.

Additional details on the rest of the 13th Gen Intel Core processor family will be shared at a later date.

Intel Unison: A Seamless Multi-Device Experience Enabling an Open Ecosystem

Following the acquisition of Screenovate showcased at [CES 2022](#), Intel is introducing [Intel® Unison™](#), a software solution that seamlessly connects your PC and devices for a universal, easy-to-use experience across operating systems.

Intel Unison's initial release will deliver a continuous and seamless connectivity experience between the PC and phone, beginning with iOS and Android. Following a simple pairing process, users will be able to:

- **File transfer:** Users save time when transferring files and photos between a PC and Android or iOS device, as well as extend the power of the PC and enjoy the continuity of taking a photo or video on a phone and seamlessly editing on the PC.
- **Text message:** Users send and receive text messages from PCs to avoid device-switching and enjoy the comfort and ease of a full keyboard and monitor.
- **Phone calls:** With access to a phone's full contact list, users can make and receive

voice calls directly from their PCs.

- **Phone notifications:** Users can receive and manage phone notifications from a PC to stay connected and maintain control.

Intel Unison will launch on select Intel® Evo™ laptops based on 12th Gen Intel Core processors from Acer, HP and Lenovo this year, and will scale to 13th Gen Intel Core-based designs starting early in 2023. Intel Unison will continue to evolve with additional form factors, functionality and operating systems in the future[6].

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 Intel Core i9-13900K is the world's fastest desktop processor at 5.8 GHz. As of September 7, 2022.

[2] World's Best Gaming Experience based on performance and unique features of 13th Gen Intel Core processors, including in comparison to 12th Gen Intel Core i9-12900K, AMD Ryzen 9 5950X, and AMD Ryzen 7 5800X3D, as of Sept. 7, 2022. See www.intel.com/PerformanceIndex for details.

[3] Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex. Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See configuration disclosure for additional details.

[4] Performance hybrid architecture combines two core microarchitectures, Performance-cores (P-cores) and Efficient-cores (E-cores), on a single processor die first introduced on 12th Gen Intel Core processors. Select 13th Gen Intel Core processors do not have performance hybrid architecture, only P-cores, and have same cache size as prior generation; see ark.intel.com for SKU details.

[5] Overclocking may void warranty or affect system health. Results may vary. See www.intel.com/overclocking for details.

[6] Intel® Unison™ solution is currently only available on eligible Intel® Evo™ designs on Windows-based PCs and only pairs with Android- or iOS-based phones; all devices must run a supported OS version. See intel.com/performance-evo for details, including set-up requirements. Results may vary.

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