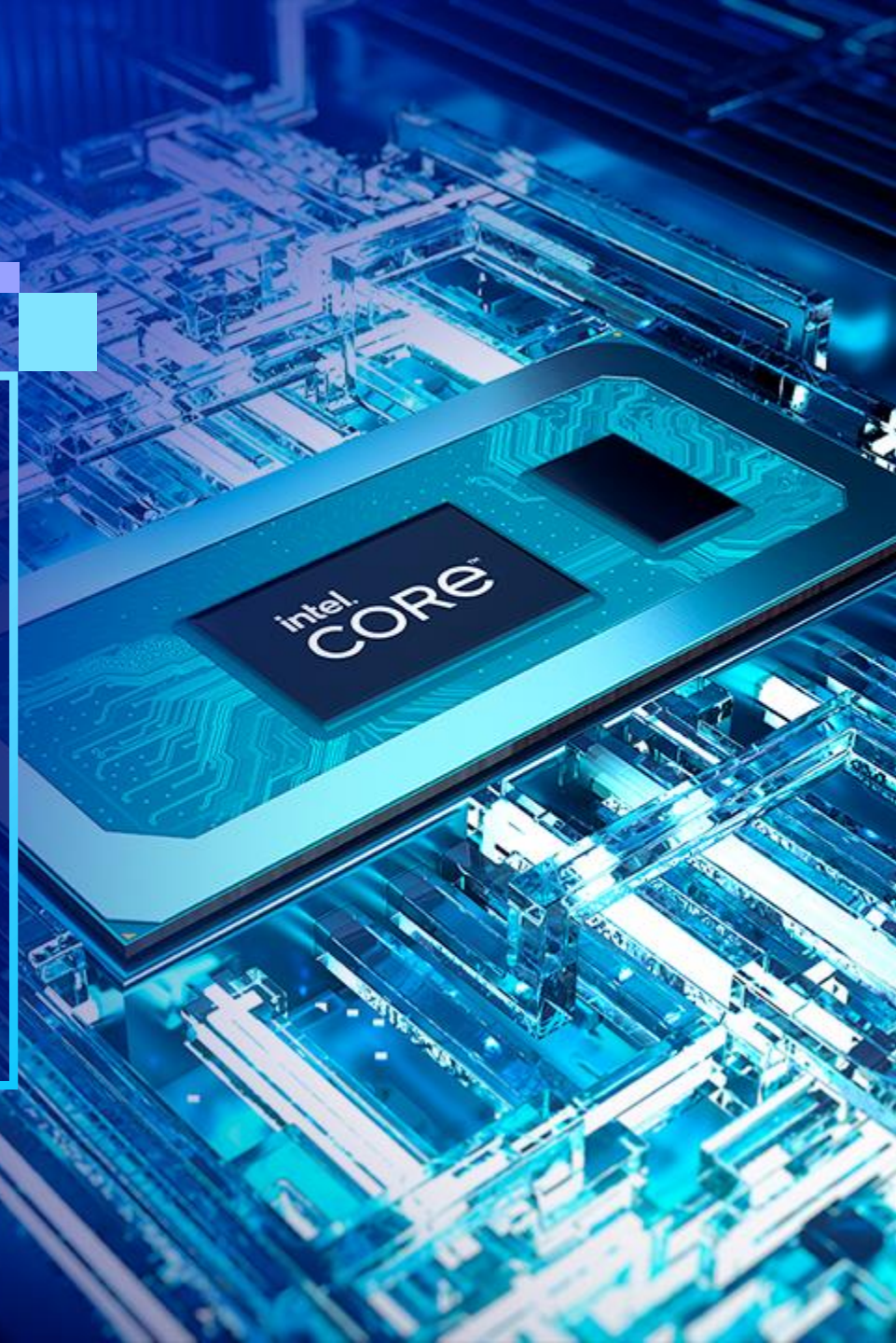


# Intel CES 2023

## CCG Press & Industry Analyst Pre-Brief

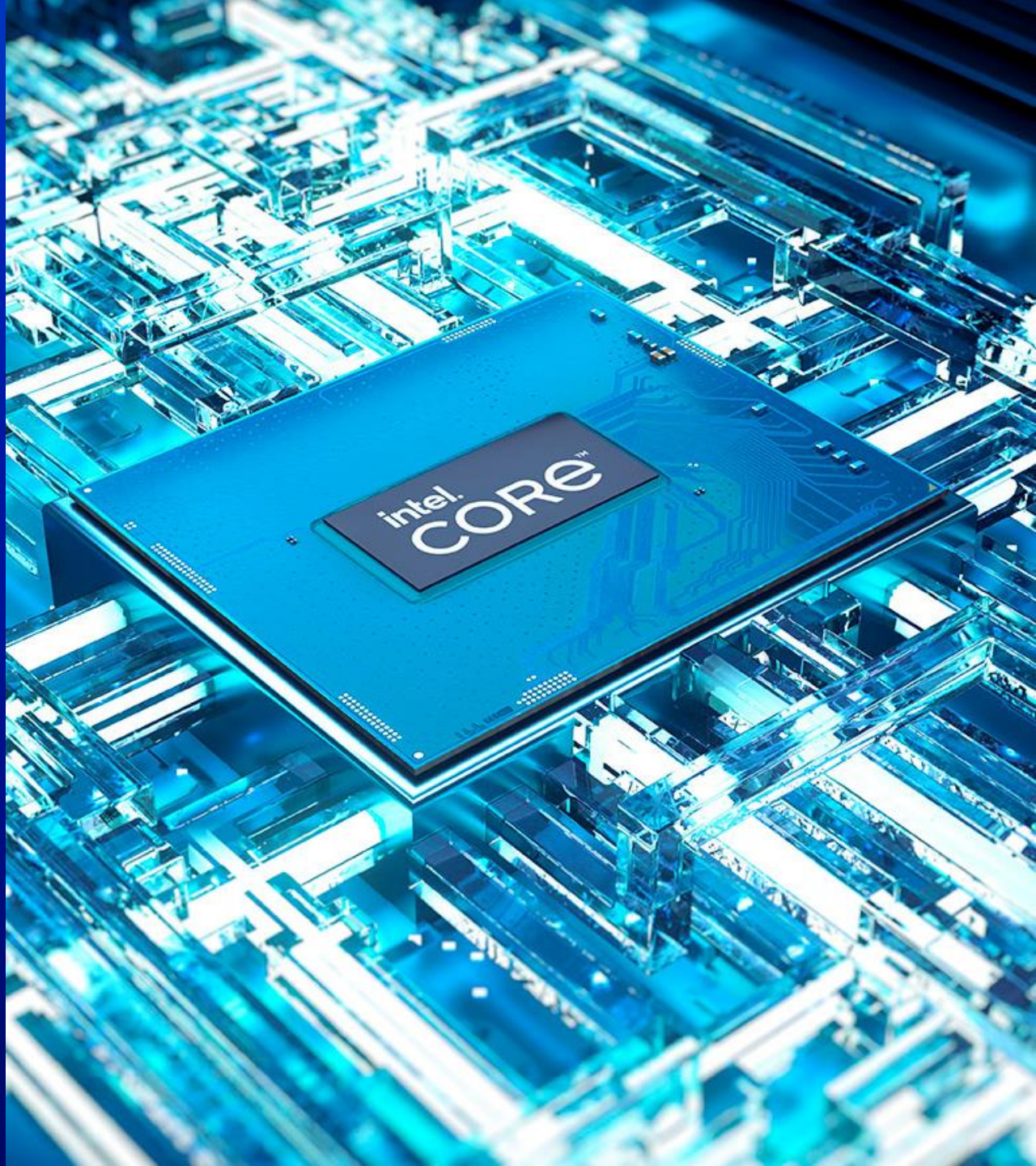
intel®







# 13th Gen Intel® Core™ Mobile Processors





# Announcing 13th Gen Intel Core Mobile Processors

**HX**

Extreme Performance

55W



**H-series**

Thin Enthusiast

45W



**P-series**

Performance Thin & Light

28W



**U-series**

Modern Thin & Light

15W



Scalable Performance for Leadership Platforms

# Introducing 13th Gen Intel Core HX Platform

The Fastest Mobile Processor<sup>1</sup>

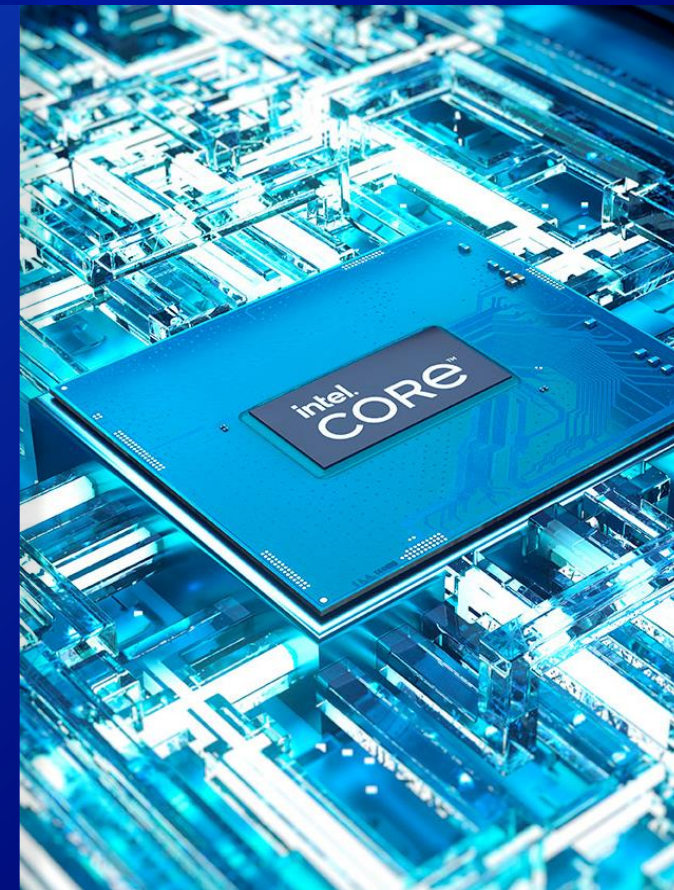
First 24-core, up to 5.6 GHz

The Best Gaming Laptop Platform<sup>2</sup>

Intel Killer™ Wi-Fi 6E, Bluetooth® LE Audio, Thunderbolt™ 4

Built for Enthusiasts and Professionals

Gamers, Creators, Scientists and Engineers

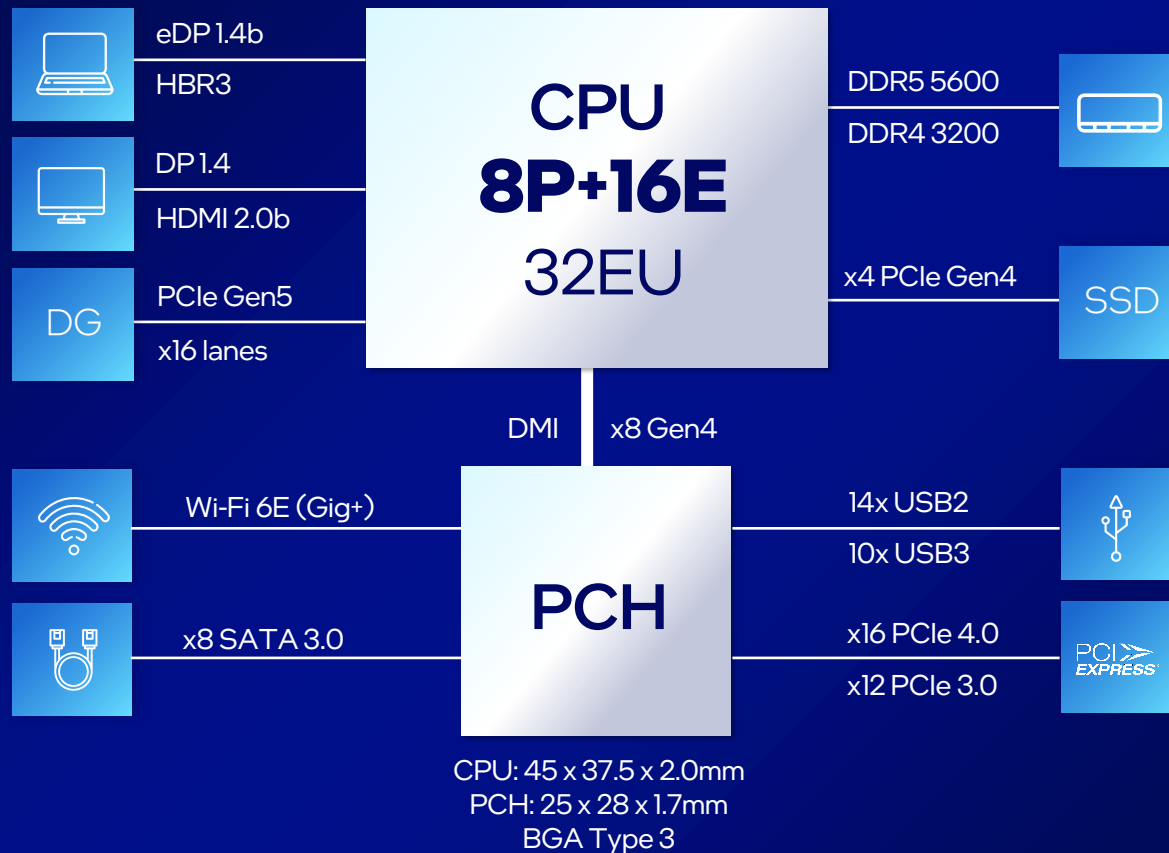


<sup>1</sup> At 5.6GHz, 13th Gen Intel Core i9-13980HX is the fastest mobile processor as of December 2022.

<sup>2</sup> Based on unique features and superior in-game benchmark mode performance of 13th Gen Intel® Core™ i9-13950HX with NVIDIA RTX 3080 Ti GPU vs 12th Gen Intel® Core™ i9-12900HX with same GPU and vs AMD R9-6900HX with same GPU. See [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) for additional workload and configuration details. Results may vary. Other names and brands may be claimed as the property of others.

## Key Features

# 13th Gen Intel Core HX Platform



### Advanced Performance Hybrid

- Up to 24-core: 8 P-cores + 16 E-cores
- Enhanced Intel® Thread Director
- Broad overclocking support with all HX SKUs unlocked

### Broad Memory Support

- Up to DDR5-5600 and DDR4-3200
- Up to 128GB RAM (4 DIMM, 2 DPC)
- Dynamic Overclocking with XMP3.0 support

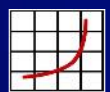
### Leading IO and Connectivity

- Support for PCIe Gen5 x16 (or 2x8)
- Up to 2x discrete Thunderbolt™ 4 controllers
- Support for Intel® Killer™ Wi-Fi 6E and BT LE Audio



# 13th Gen Intel® Core™ HX Processors

## Powerful Mobile Performance



spec®

### Single Thread Performance

SPECrate®2017\_int\_base (1 copy)

Intel Core i9-13950HX

**+11%**  
performance

Intel Core i9-12900HX

Intel Core i9-12900HK

baseline

Apple M2

Ryzen R9 6900HX

Apple M1 Max



spec®

### Multitask Performance

SPECrate®2017\_int\_base (n copy)

Intel Core i9-13950HX

**+49%**  
performance

Intel Core i9-12900HX

Intel Core i9-12900HK

baseline

Ryzen R9 6900HX

Apple M1 Max

Apple M2

- Intel Core i9-13950HX**  
MSI Titan GT77 HX with RTX 3080Ti @175W
- Intel Core i9-12900HX**  
MSI GT77 Titan with RTX 3080Ti @175W
- Intel Core i9-12900HK**  
MSI GE76 Raider with RTX 3080Ti @175W
- Ryzen 9 6900HX**  
Dell Alienware M17 with RTX 3080Ti @155W
- Apple M1 Max**  
MacBook Pro 16 with 32 core integrated GPU
- Apple M2**  
MacBook Pro 13 with 10 core integrated GPU

Source: Intel; Measured December 2022; comparison of select top end laptops; For more information on SPEC CPU 2017, see <https://www.spec.org>;

Windows binaries generated with Intel Compiler 2022.1; OS X binaries generated with Apple Clang 14.0.0, gfortran 12.1.0

For all workload and configuration details, see [www.intel.com/PerformanceIndex](http://www.intel.com/PerformanceIndex). Results may vary.

\*Other names and brands may be claimed as the property of others

intel®

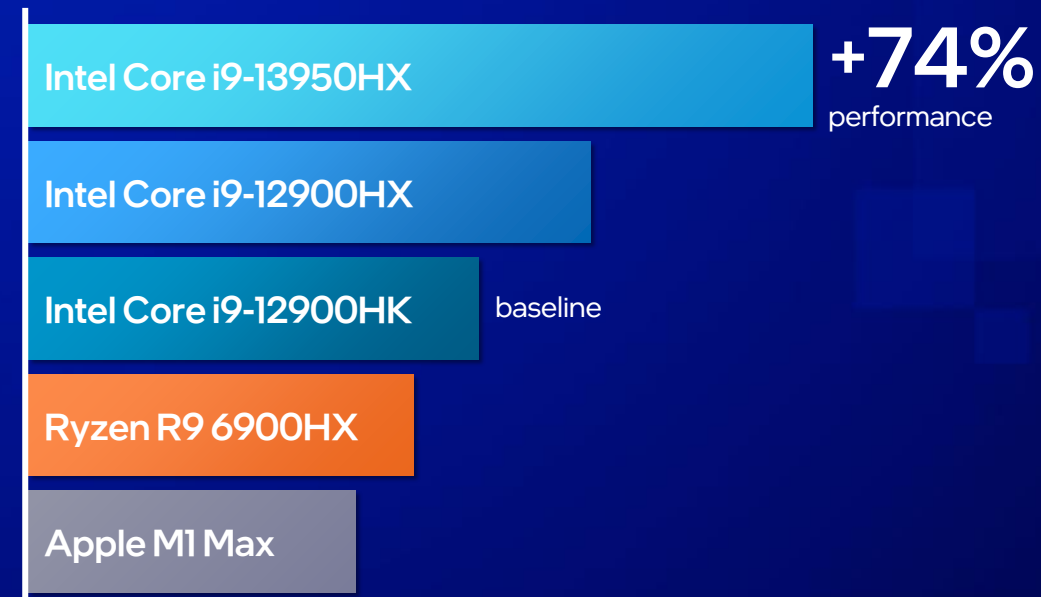
# 13th Gen Intel® Core™ HX Processors

## Powerful Mobile Performance

### 3D Rendering Performance Blender v3.3.1 BMW (CPU)



### 3D Rendering Performance Blender v3.3.1 Laundromat (CPU)



For all workload and configuration details, see [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex). Results may vary.  
\*Other names and brands may be claimed as the property of others

- Intel Core i9-13950HX**  
MSI Titan GT77 HX with RTX 3080Ti @175W
- Intel Core i9-12900HX**  
MSI GT77 Titan with RTX 3080Ti @175W
- Intel Core i9-12900HK**  
MSI GE76 Raider with RTX 3080Ti @175W
- Ryzen 9 6900HX**  
Dell Alienware M17 with RTX 3080Ti @155W
- Apple M1 Max**  
MacBook Pro 16 with 32 core integrated GPU

# 13th Gen Intel® Core™ HX Processors

## Professional-Grade Performance



Cadalyst – Total Score



Model Creation – Total Time



InvMark – Overall Score



For workload and configuration details, see [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex). Results may vary.

\*Other names and brands may be claimed as the property of others



- Intel Core i9-13950HX**  
MSI Titan GT77 HX with RTX 3080Ti @175W
- Intel Core i9-12900HX**  
MSI GT77 Titan with RTX 3080Ti @175W
- Intel Core i9-12900HK**  
MSI GE76 Raider with RTX 3080Ti @175W
- Ryzen 9 6900HX**  
Dell Alienware M17 with RTX 3080Ti @155W



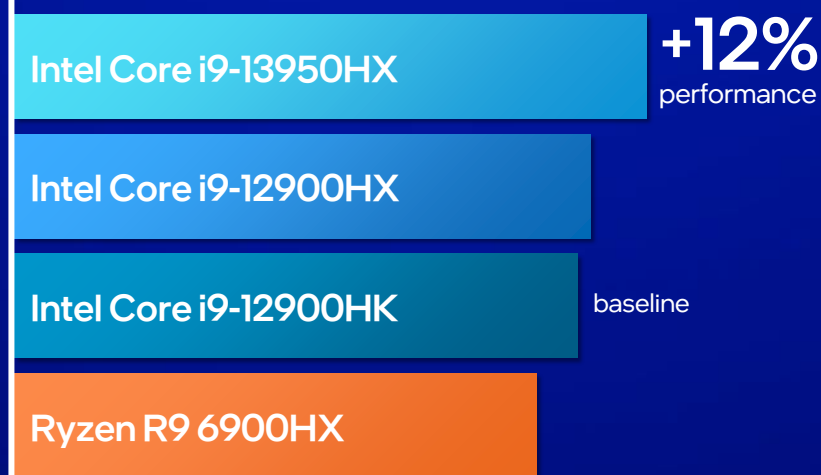
# 13th Gen Intel® Core™ HX Processors

## Built for Creators

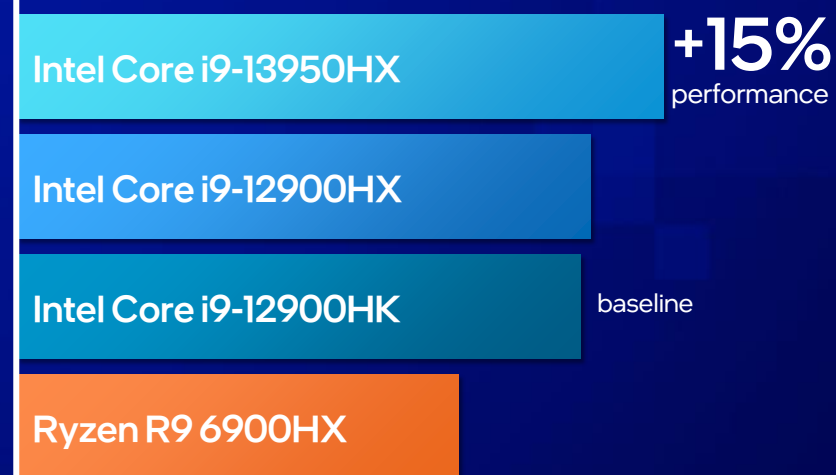
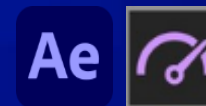
Puget Bench for  
Premiere Pro



Puget Bench for  
Photoshop



Puget Bench for  
After Effects



For all workload and configuration details, see [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex). Results may vary.

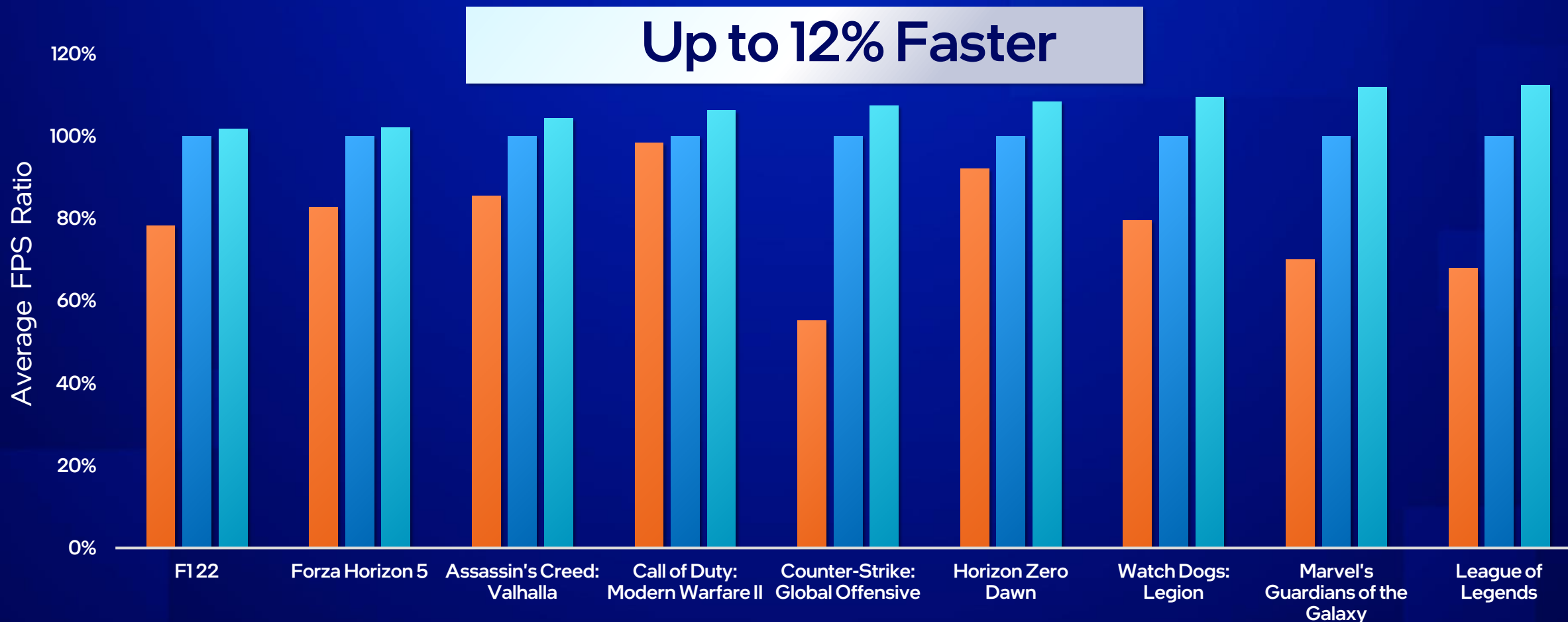
\*Other names and brands may be claimed as the property of others

-  **Intel Core i9-13950HX**  
MSI Titan GT77 HX with RTX 3080Ti @175W
-  **Intel Core i9-12900HX**  
MSI GT77 Titan with RTX 3080Ti @175W
-  **Intel Core i9-12900HK**  
MSI GE76 Raider with RTX 3080Ti @175W
-  **Ryzen 9 6900HX**  
Dell AlienwareM17 with RTX 3080Ti @155W

# 13th Gen Intel® Core™ HX Processors

## Amazing Game Performance

- Intel Core i9-13950HX**  
MSI Titan GT77 HX with RTX 3080Ti@175W
- Intel Core i9-12900HX**  
MSI GT77 Titan with RTX 3080Ti @175W
- Ryzen 9 6900HX**  
Dell Alienware®M17\* with RTX 3080Ti @155W



Based on in-game benchmark mode performance of 13th Gen Intel® Core™ i9-13950HX with NVIDIA RTX 3080Ti GPU vs 12th Gen Intel® Core™ i9-12900HX with same GPU and vs AMD R9-6900HX with same GPU. See [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) for additional workload and configuration details. Results may vary. Other names and brands may be claimed as the property of others.



# 13th Gen Intel® Core™ HX Processors

## Leading Wireless Connectivity for Enthusiasts

### Intel® Killer™ Wi-Fi 6E (Gig+)



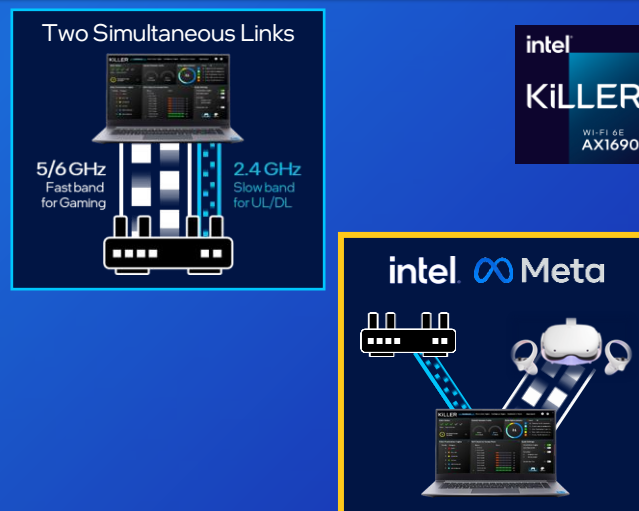
#### Great Wi-Fi Gaming

6 GHz Speed / Low Latency

Game Traffic Prioritization

Dynamic Connection Optimization

### Intel® Double Connect Technology



#### Enhanced Wi-Fi Performance & VR

Enhanced Prioritization

Band Aggregation ~3 Gbps<sup>1</sup>

Up to 20% Lower VR Latency<sup>2</sup>

### Intel® Bluetooth® LE Audio



#### Next-Gen Bluetooth® Audio

Synchronized Multi-stream TWS

High Fidelity Music / SWB speech

Up to 50% Lower Bit-Rate / Power<sup>3</sup>

# 13th Gen Intel® Core™ HX Processors

## Breakthrough Design Scale



acer



Lenovo



msi



RAZER

### 60+ Incredible HX Designs

Across a wide range of performance laptop form factors



# For Gaming Laptops and Mobile Workstations

## 13th Gen Intel Core™ HX Processors

	Processor Number	Processor Cores	Processor Threads	Performance Cores	Efficient Cores	L3 Cache	Max Turbo Frequency P-cores	Max Turbo Frequency E-cores	Base Frequency P-cores	Base Frequency E-cores	Processor Graphics	Max Graphics Frequency	DDR5 Frequency	Processor Base Power	Max Turbo Power	Intel vPro® eligible
intel. CORE™ i9	i9-13980HX	24C	32T	8P	16E	36 MB	5.6 GHz	4.0 GHz	2.2 GHz	1.6 GHz	32 EU	1.65 GHz	5600	55 W	157 W	
	i9-13950HX	24C	32T	8P	16E	36 MB	5.5 GHz	4.0 GHz	2.2 GHz	1.6 GHz	32 EU	1.65 GHz	5600	55 W	157 W	Enterprise
	i9-13900HX	24C	32T	8P	16E	36 MB	5.4 GHz	3.9 GHz	2.2 GHz	1.6 GHz	32 EU	1.65 GHz	5600	55 W	157 W	
intel. CORE™ i7	i7-13850HX	20C	28T	8P	12E	30 MB	5.3 GHz	3.8 GHz	2.1 GHz	1.5 GHz	32 EU	1.60 GHz	5600	55 W	157 W	Enterprise
	i7-13700HX	16C	24T	8P	8E	30 MB	5.0 GHz	3.7 GHz	2.1 GHz	1.5 GHz	32 EU	1.55 GHz	4800	55 W	157 W	
	i7-13650HX	14C	20T	6P	8E	24 MB	4.9 GHz	3.6 GHz	2.6 GHz	1.9 GHz	16 EU	1.55 GHz	4800	55 W	157 W	
intel. CORE™ i5	i5-13600HX	14C	20T	6P	8E	24 MB	4.8 GHz	3.6 GHz	2.6 GHz	1.9 GHz	32 EU	1.50 GHz	4800	55 W	157 W	Enterprise
	i5-13500HX	14C	20T	6P	8E	24 MB	4.7 GHz	3.5 GHz	2.5 GHz	1.8 GHz	16 EU	1.50 GHz	4800	55 W	157 W	
	i5-13450HX	10C	16T	6P	4E	20 MB	4.6 GHz	3.4 GHz	2.4 GHz	1.8 GHz	16 EU	1.45 GHz	4800	55 W	157 W	

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Intel vPro eligible systems will be available at the launch of Intel vPro™.

The frequency of cores and core types varies by workload, power consumption and other factors.

Visit [Intel ARK](https://ark.intel.com) for more information.

All SKUs shown support CPU, GPU, and memory overlocking. Max Turbo Frequency for P-cores may include Intel Turbo Boost Max 3.0 and Thermal Velocity Boost.

See [ark.intel.com](https://ark.intel.com) for more specification details.



# 13th Gen Intel® Core™ HX Processors

## Powerful Multitasking for Creative Professionals

### Game Development



Unreal Engine + MetaHuman + RealityCapture



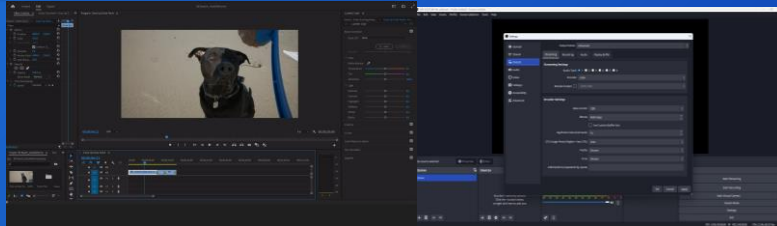
Intel Core i9-13950HX

10% better

Intel Core i9-12900HX

Baseline

### 8K Streaming



Adobe Premiere Pro + OBS



<1%  
Core i9  
13950HX

~10%  
Core i9  
12900HX

Percentage of Skipped Frames  
(lower is better)

### AEC Engineering



Autodesk Inventor + ReCap



Intel Core i9-13950HX

29% better

Intel Core i9-12900HX

Baseline

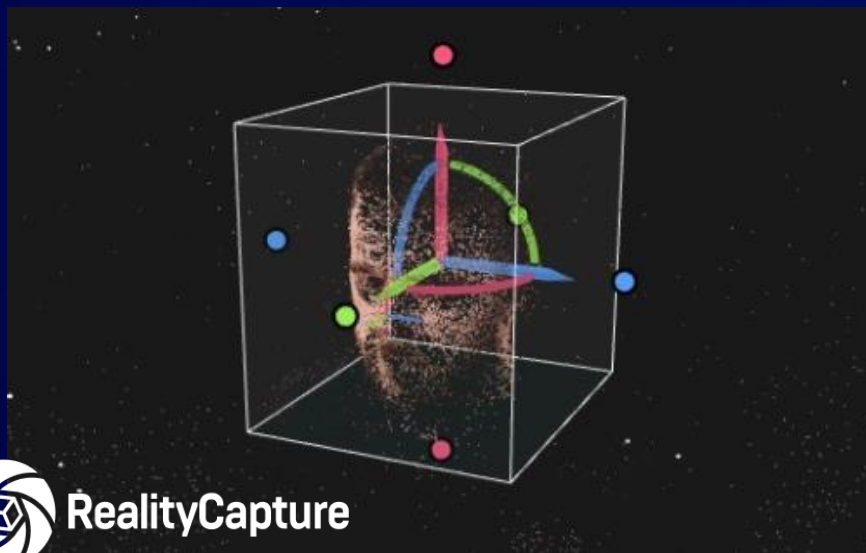


# 13th Gen Intel® Core™ HX Processors

## Game Development Workflow

### Game Development Multitasking

RealityCapture + Unreal Engine 5 + MetaHuman



#### Foreground Task(s)

Prepare images for custom character based on a real person in RealityCapture for use in MetaHuman Creator. Here the workload involves the CPU heavy “Align Images” operation in RealityCapture.

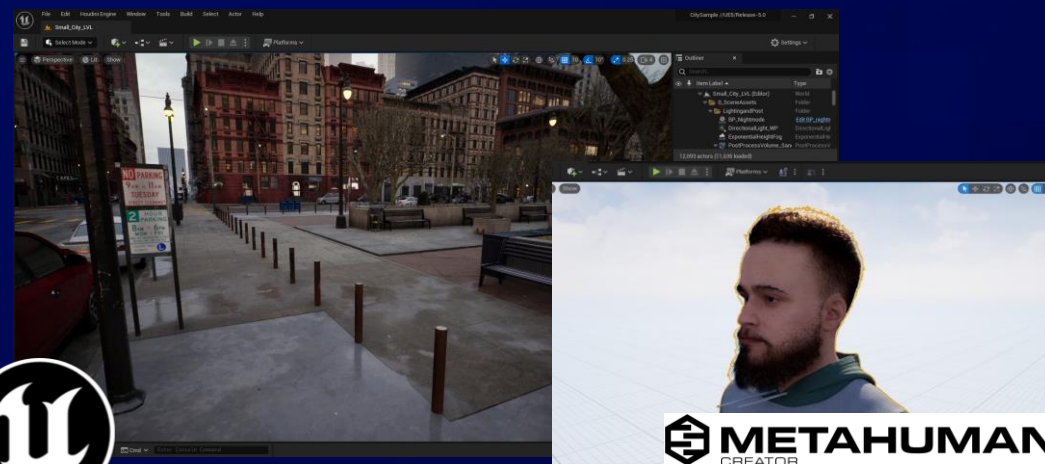


Intel Core i9-13950HX

10% better

Intel Core i9-12900HX

Baseline



#### Background Task

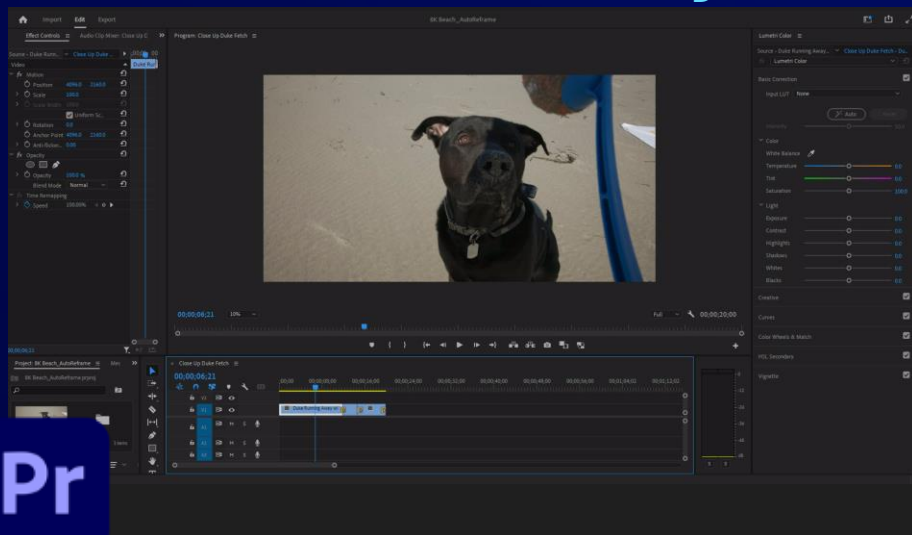
Import a real person's customized Metahuman file into the Unreal Engine project

# 13th Gen Intel® Core™ HX Processors

## 8K Streaming Workflow

Create | Stream | Record

Adobe Premiere Pro + OBS (streaming to YouTube)



Pr

### Foreground Task(s)

Creative Streamer showcasing 8K video playback and editing experience. Premiere Pro takes advantage of hardware accelerated HEVC 422 decoding for smooth playback, along with WinML to quickly Auto Reframe content to different aspect ratios for posting to different social media channels such as Instagram, YouTube, or TikTok.



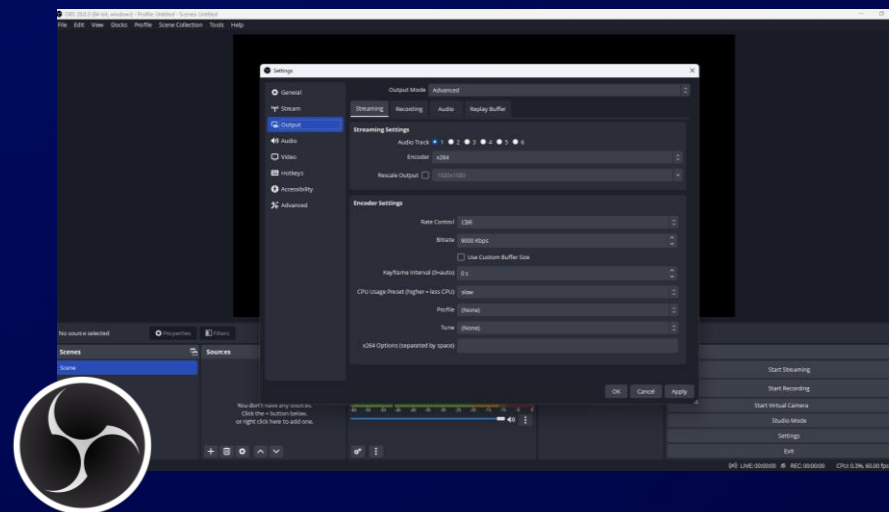
<1%

Intel Core i9-13950HX

~10%

Intel Core i9-12900HX

Percentage of Skipped Frames (lower is better)



### Background Task

OBS allows the user to stream AND record content simultaneously. The Streamer utilizes the CPU x264 "Slower" preset, providing a high-quality stream and recording in the background.

# 13th Gen Intel® Core™ HX Processors

## AEC: Engineering Design Workflow

### Product Design Modern Multitasking

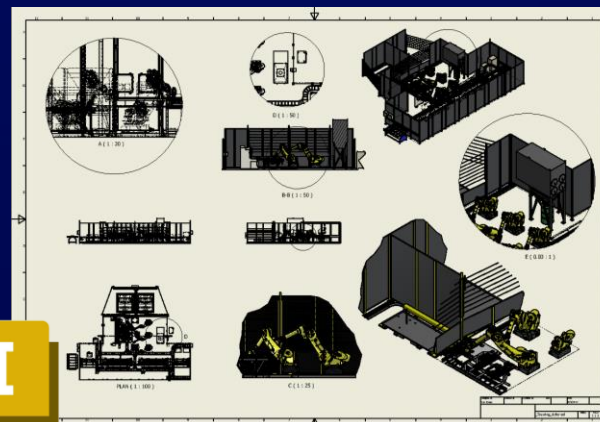
Autodesk Inventor + Autodesk Recap

Intel Core i9-13950HX

29% better

Intel Core i9-12900HX

Baseline



#### Foreground Task(s)

Update 2D schematics for the fabricator and index a point cloud to complete on-site placement planning.



#### Background Task

Use Inventor to create a high-resolution image of a current design for marketing materials with ray-tracing



# Announcing 13th Gen Intel Core Mobile Processors

**HX**

Extreme Performance

55W



**H-series**

Thin Enthusiast

45W



**P-series**

Performance Thin & Light

28W



**U-series**

Modern Thin & Light

15W



**Scalable Performance for Leadership Platforms**

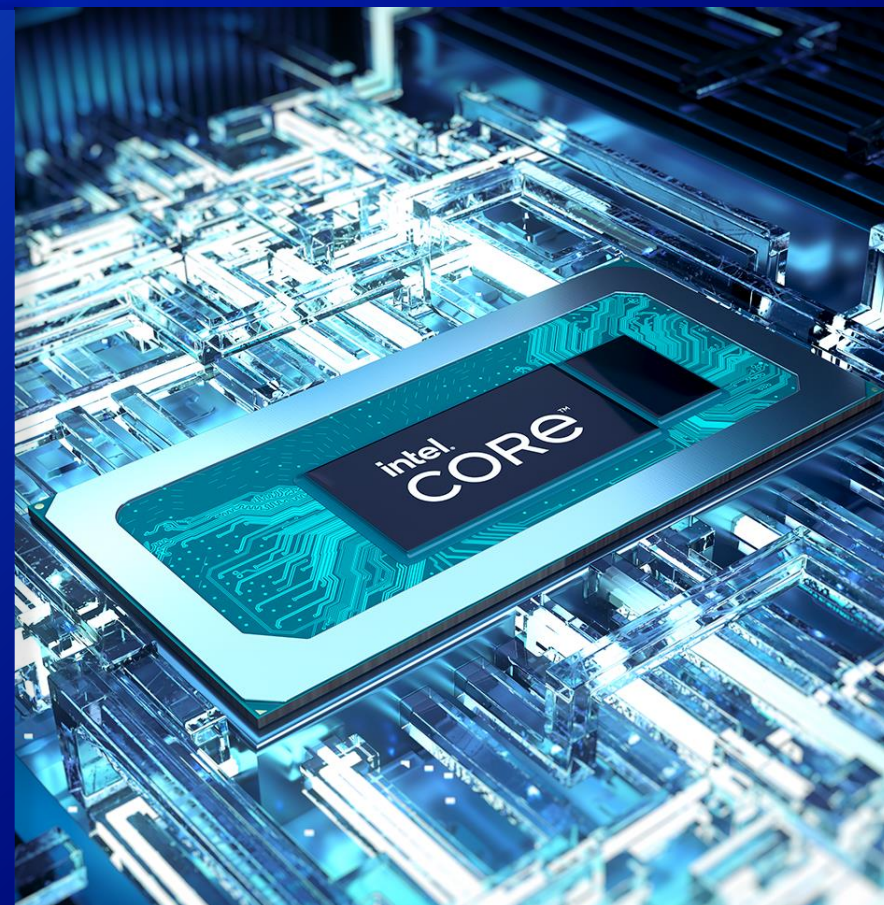
# Introducing 13th Gen Intel Core Mobile Processors

H-series, P-series, and U-series

Advanced Hybrid Performance  
Up to 10% faster office productivity<sup>1</sup>

Best-in-Class Connectivity  
Intel Wi-Fi 6E, Bluetooth® LE Audio, Thunderbolt™ 4

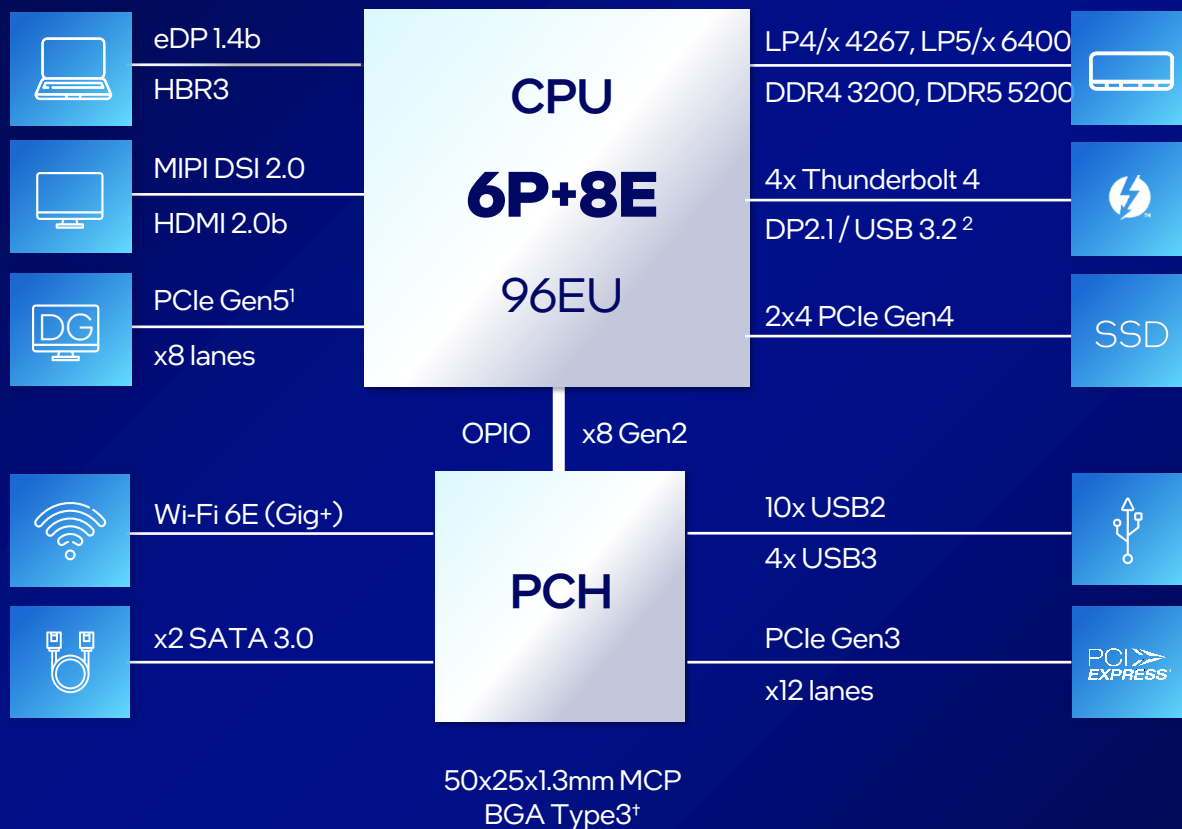
Powering the Newest, Fastest Laptops  
Coming to over 250 designs in 2023



<sup>1</sup> As measured by Cross Mark overall score on 13th Gen Intel® Core™ i9 13900HK vs. 12th Gen Intel® Core™ i9-12900H based on measurements as of December 2022. See [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) for additional workload and configuration details. Results may vary. See [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) (connectivity) for details.

# Key Features

## 13th Gen Intel Core Mobile Platforms (H, P and U-Series)



### Advanced Performance Hybrid

- Up to 14-cores: 6 P-cores + 8 E-cores
- Enhanced Intel Thread Director

### Leading IO and Connectivity

- Up to 4x Thunderbolt™ 4<sup>†</sup> with DP2.1 and USB3.2
- Integrated Intel® Wi-Fi 6E (Gig+), BT LE Audio

### Broad Memory Support

- Support for DDR5-5200<sup>†</sup> and DDR4-3200<sup>†</sup>
- Support for LPDDR5/x-6400 and LPDDR4x-4267<sup>†</sup>

<sup>1</sup> PCIe Gen 5 on H SKUs Only. <sup>2</sup> Requires Hayden Bridge Re-Timer

<sup>†</sup> Certain SKUs available in optional type 4 form factor- optimized package of 40x25x1.25mm, with up to 3x Thunderbolt™ 4, PCIe Gen4 and only LPDDR5/LPDDR5x memory support.



# 13th Gen Intel® Core™ H Processors

## CrossMark Performance



### Productivity



### Creativity



### Responsiveness



- Intel Core i9-13900HK**  
MSI Stealth 17" with RTX 3080Ti@105W
- Intel Core i9-12900H**  
MSI Stealth GS77\* with RTX\* 3080Ti@105W
- Ryzen 9 6900HX**  
Dell Alienware\* M17 with RTX\* 3080Ti@155W
- Apple M1 Max**  
MacBook Pro 16"\* with 32 core integrated GPU



For all workload and configuration details, see [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex). Results may vary.

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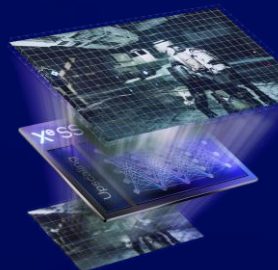
# 13th Gen Intel® Core™ Processors

## New Intel Iris Xe Graphics Features



### Endurance Gaming

Play up to 4.5hrs unplugged on games like LOL & Rocket League with Endurance Gaming



AI-Enhanced Performance



Exceptional Image Quality



Widely Compatible

### XeSS Super Sampling

XeSS brings up to 30% FPS vs. native rendering on enabled titles like Hitman 3 & Shadows of the Tomb Raider



### Intel® Arc™ Control

Tune your graphics performance, stream with a built-in studio, & more with Intel Arc Control

# 13th Gen Intel® Core™ Processors

## Best in Class Wired Connectivity with Thunderbolt™ 4

One cable powers your laptop and connects to displays, storage, and accessories

### Thunderbolt – The Best USB-C Connection

Simple, Reliable, High Performance

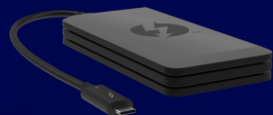


Dual 4K 60Hz or dual 240 Full HD

NEW

Now supporting DP2.1

Immerse in lifelike visuals

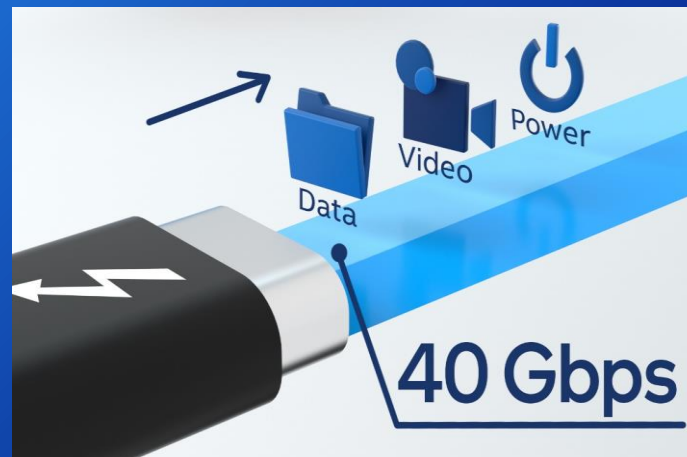


Fast data transfer thru PCIe based SSDs

NEW

Now supporting USB3.2 at 20Gb/s

Move and store big files quickly



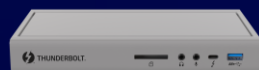
Capture up to 240Hz in Full HD

Share/stream high quality reels



High-end desktop GPU thru PCIe

Level up the experience



Consolidate all accessories with a dock

Clean desk with one cable



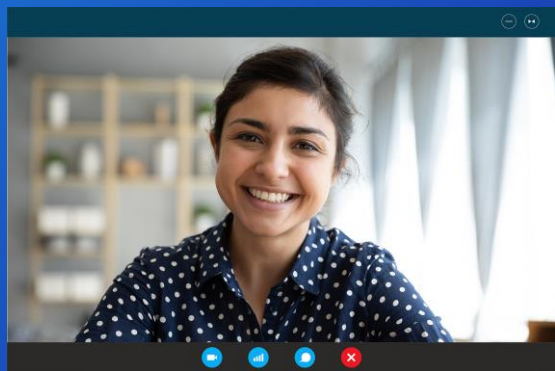
Details at [intel.com/performance-wired](https://intel.com/performance-wired). Results may vary.



# 13th Gen Intel® Core™ Processors

## Intel® Movidius™ VPU for Laptops

Discrete Module for AI Acceleration



### Premium Video Collaboration

High Quality Background Blur + Eye Contact + Automatic Framing

Professional grade collaboration & streaming

Powered by advanced Windows AI models



### Uncompromised AI

CPU/GPU offload

Discrete VPU module

Future IP Integration



### Seamless Integration

Consistent Windows video effects

Turn on/off in Windows Settings

Available to all apps that use the integrated camera

Shipping as discrete option with select 13th Gen Intel Core-based laptops for developers and early adopters

For Enthusiast Laptops

# 13th Gen Intel® Core™ H-series Processors

	Processor Number	Processor Cores	Processor Threads	Performance Cores	Efficient Cores	L3 Cache	Max Turbo Frequency P-cores	Max Turbo Frequency E-cores	Base Frequency P-cores	Base Frequency E-cores	Processor Graphics	Max Graphics Frequency	LPDDR5 Frequency	Processor Base Power	Max Turbo Power	Intel vPro®
intel CORE i9	i9-13900HK	14C	20T	6P	8E	24MB	5.4 GHz	4.1GHz	2.6 GHz	1.9 GHz	96EU	1.5 GHz	6400	45W	115W	Essentials
	i9-13905H*	14C	20T	6P	8E	24MB	5.4 GHz	4.1GHz	2.6 GHz	1.9 GHz	96EU	1.5 GHz	6400	45W	115W	
	i9-13900H	14C	20T	6P	8E	24MB	5.4 GHz	4.1GHz	2.6 GHz	1.9 GHz	96EU	1.5 GHz	6400	45W	115W	Enterprise
intel CORE i7	i7-13800H	14C	20T	6P	8E	24MB	5.2 GHz	4.0 GHz	2.5 GHz	1.8 GHz	96EU	1.5 GHz	6400	45W	115W	Enterprise
	i7-13705H*	14C	20T	6P	8E	24MB	5.0 GHz	3.7 GHz	2.4 GHz	1.8 GHz	96EU	1.5 GHz	6400	45W	115W	
	i7-13700H	14C	20T	6P	8E	24MB	5.0 GHz	3.7 GHz	2.4 GHz	1.8 GHz	96EU	1.5 GHz	6400	45W	115W	Essentials
	i7-13620H	10C	16T	6P	4E	24MB	4.9 GHz	3.6 GHz	2.4 GHz	1.8 GHz	64EU	1.5 GHz	5200	45W	115W	-
intel CORE i5	i5-13600H	12C	16T	4P	8E	18MB	4.8 GHz	3.6 GHz	2.8 GHz	2.1 GHz	80EU	1.5 GHz	6400	45W	95W	Enterprise
	i5-13505H*	12C	16T	4P	8E	18MB	4.7 GHz	3.5 GHz	2.6 GHz	1.9 GHz	80EU	1.45 GHz	6400	45W	95W	
	i5-13500H	12C	16T	4P	8E	18MB	4.7 GHz	3.5 GHz	2.6 GHz	1.9 GHz	80EU	1.45 GHz	6400	45W	95W	Essentials
	i5-13420H	8C	12T	4P	4E	12MB	4.6 GHz	3.4 GHz	2.1GHz	1.5 GHz	48EU	1.4 GHz	5200	45W	95W	-

Intel® processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families.

The frequency of cores and core types varies by workload, power consumption and other factors. Visit <https://www.intel.com/content/www/us/en/architecture-and-technology/turbo-boost/intel-turbo-boost-technology.html?wapkw=turbo%20boost%20technology> for more information. i9-13900HK supports CPU Over Clocking. Memory Ratio Override is not supported. Intel Thermal Velocity Boost not supported on 13th Gen mobile processors; Max Turbo Frequency for P-cores may include Intel Turbo Boost Max 3.0.

All H-series type 3 support up to DDR5 (5200 MT/S)/DDR4 (3200 MT/S)/LPDDR4 (4267 MT/S) memory (LPDDR5 frequencies are listed above). \* All H-series type 4 SKUs only support LPDDR5/X (6400MT/S). See [ark.intel.com](https://ark.intel.com) for more specification details.

# For Performance Thin & Light Laptops

## 13th Gen Intel Core™ P-series Processors

	Processor Number	Processor Cores	Processor Threads	Performance Cores	Efficient Cores	L3 Cache	Max Turbo Frequency P-cores	Max Turbo Frequency E-cores	Base Frequency P-cores	Base Frequency E-cores	Processor Graphics	Max Graphics Frequency	Processor Base Power	Max Turbo Power	Intel vPro® eligible
intel. CORE i7	i7-1370P	14C	20T	6P	8E	24MB	5.2 GHz	3.9 GHz	1.9 GHz	1.4 GHz	96EU	1.5 GHz	28W	64W	Enterprise
	i7-1360P	12C	16T	4P	8E	18MB	5.0 GHz	3.7 GHz	2.2 GHz	1.6 GHz	96EU	1.5 GHz	28W	64W	Essentials
intel. CORE i5	i5-1350P	12C	16T	4P	8E	12MB	4.7 GHz	3.5 GHz	1.9 GHz	1.4 GHz	80EU	1.5 GHz	28W	64W	Enterprise
	i5-1340P	12C	16T	4P	8E	12MB	4.6 GHz	3.4 GHz	1.9 GHz	1.4 GHz	80EU	1.45 GHz	28W	64W	Essentials

Intel® processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Intel vPro eligible systems will be available at the launch of Intel vPro

The frequency of cores and core types varies by workload, power consumption and other factors.

Visit [Intel ARK](#) for more information.

Intel Thermal Velocity Boost not supported on 13th Gen mobile processors.

Max Turbo Frequency for P-cores may include Intel Turbo Boost Max 3.0.

All SKUs support up to DDR5 (5200 MT/S)/DDR4 (3200 MT/S)/LPDDR5 (6400 MT/S)/LPDDR4 (4267 MT/S) memory

See [ark.intel.com](#) for more specification details



# For Modern Thin & Light Laptops

## 13th Gen Intel Core™ U-series Processors

	Processor Number	Processor Cores	Processor Threads	Performance Cores	Efficient Cores	L3 Cache	Max Turbo Frequency P-cores	Max Turbo Frequency E-cores	Base Frequency P-cores	Base Frequency E-cores	Processor Graphics	Max Graphics Frequency	LPDDR5 Frequency	Processor Base Power	Max Turbo Power	Intel vPro® eligible
intel. CORE™ i7	i7-1365U	10C	12T	2P	8E	12MB	5.2 GHz	3.9 GHz	1.8 GHz	1.3 GHz	96EU	1.30 GHz	6400	15W	55W	Enterprise
	i7-1355U	10C	12T	2P	8E	12MB	5.0 GHz	3.7 GHz	1.7 GHz	1.2 GHz	96EU	1.30 GHz	6400	15W	55W	Essentials
intel. CORE™ i5	i5-1345U	10C	12T	2P	8E	12MB	4.7 GHz	3.5 GHz	1.6 GHz	1.2 GHz	80EU	1.25 GHz	6400	15W	55W	Enterprise
	i5-1335U	10C	12T	2P	8E	12MB	4.6 GHz	3.4 GHz	1.3 GHz	0.9 GHz	80EU	1.25 GHz	6400	15W	55W	Essentials
	i5-1334U	10C	12T	2P	8E	12MB	4.6 GHz	3.4 GHz	1.3 GHz	0.9 GHz	80EU	1.25 GHz	5200	15W	55W	Essentials
intel. CORE™ i3	i3-1315U	6C	8T	2P	4E	10MB	4.5 GHz	3.3 GHz	1.2 GHz	0.9 GHz	64EU	1.25 GHz	5200	15W	55W	-
	i3-1305U	5C	6T	1P	4E	10MB	4.5 GHz	3.3 GHz	1.6 GHz	1.2 GHz	64EU	1.25 GHz	5200	15W	55W	-
Intel® Processor	U300	5C	6T	1P	4E	8MB	4.4 GHz	3.3 GHz	1.2 GHz	0.9 GHz	48EU	1.10 GHz	5200	15W	55W	-

Intel® processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Intel vPro eligible systems will be available at the launch of Intel vPro

The frequency of cores and core types varies by workload, power consumption and other factors.

Visit [Intel ARK](https://ark.intel.com) for more information.

Intel Thermal Velocity Boost not supported on 13th Gen mobile processors. All SKUs support up to DDR5 (5200 MT/S)/DDR4 (3200 MT/S)/LPDDR4 (4267 MT/S) memory (LPDDR5 frequencies are listed above) See [ark.intel.com](https://ark.intel.com) for more specification details

# Intel CES 2023

CCG Press & Industry Analyst Pre-Brief



# Intel<sup>®</sup> Evo<sup>™</sup>

intel<sup>®</sup>



# Intel® Evo™

Driving innovations for future PC experiences



Co-Engineered  
& Verified Designs

>100

Evo Designs  
supporting our mission

25

verification tasks  
and checks for each design

150+

Partners  
aligned to Evo vision

3

Open Labs  
to test and validate  
components

>15

OEMs  
in the program

900+

components  
tested in Intel Project Athena  
Open Labs

Annual Ecosystem Symposium

Drive innovations for future PC experiences



# Intel Evo Designs with 13th Gen Intel Core

## Experiences



### Multi-Device

- Intel Unison software
- Sharing between Laptop & Phone (iOS/Android)



### Gathering with Others

- Intelligent Collaboration



### No-Compromise Mobile Performance

- Consistent Responsiveness while unplugged
- Long Real-World Battery Life
- Instant Wake
- Fast Charge

# Intel® Evo™

## Project Athena Specification Target Highlights

13th Gen Intel® Core™ Processors with Intel® Iris® Xe Graphics Based Laptops

Co-engineered Designs Verified to Deliver

### Instant Action

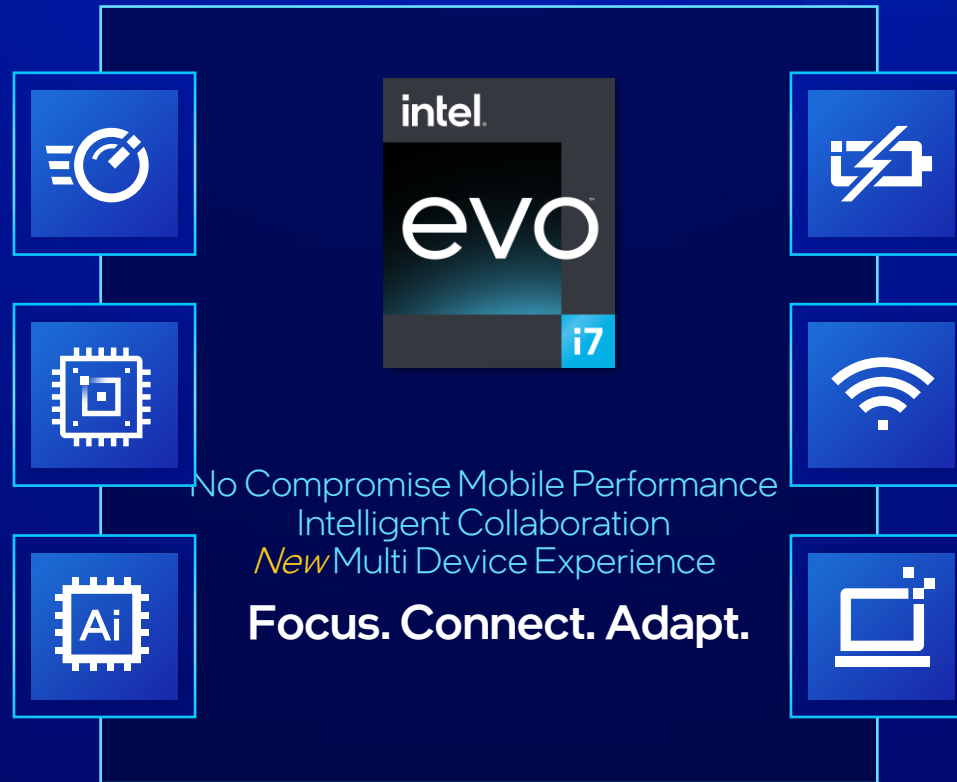
- ✓ Wake in an instant with Adaptive Connected Standby / Lucid Sleep
- ✓ Biometric login: fingerprint sensor, face recognition or Bluetooth phone proximity

### Incredible Performance and Responsiveness

- ✓ 13th Gen Intel® Core™ i5, i7, i9 processors with Iris® Xe graphics
- ✓ Optional Intel® Arc™ or 3rd Party Discrete Graphics
- ✓ Optimized with Windows 11 or Chrome OS
- ✓ Intel® Adaptix™ Technology with Intel Energy Performance Optimizer
- ✓ ≥8GB, 128b Dual Channel Memory and ≥256GB PCIe SSD

### Intelligence Built Across Platform Levels

- ✓ AI-assisted Dynamic Background Noise Suppression
- ✓ Intel® DL Boost + Intel® GNA 3.0 enabled
- ✓ Optional discrete VPU
- ✓ Optional adaptive usages including Wake-on-Approach, Gaze-Based Dimming and Walk-Away Lock enabled by context sensors such as Intel Visual Sensing Technology



### Battery Life For The Real World

- ✓ Fast charging capabilities over USB Type C
- ✓ Integration and optimization of low-power components and co-engineering support for power efficiency

### Lightning-Fast Connectivity

- ✓ Fast and persistent connection with Intel® Wi-Fi 6E (Gig+)\*
- ✓ Intel® Connectivity Performance Suite 2.0 for intelligent Wi-Fi connection management\*\*
- ✓ Universal cable connectivity over USB Type C with Thunderbolt™ 4
- ✓ Optional Intel® Gb LTE or 5G

### Innovative and Engaging Form Factor

- ✓ >12"-16.x" > FHD bright displays, backlit keyboards, precision touchpads and more Optional: QHD/UHD, OLED
- ✓ <15mm target for integrated graphics, <20mm for dGfx fanned / fanless designs,
- ✓ Sleek, thin-and-light, 2-in-1 and Foldable Display chassis designs with narrow bezels for a more immersive experience
- ✓ Immersive audio with premium high-fidelity audio codec/speaker and microphone tuning
- ✓ User-facing camera ≥ FHD 1080p @ 30 fps (optional camera collaboration imaging effects)

intel®

\* 6GHz WiFi band not available for use in all countries

\*\*Windows only

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# Leading Wireless Connectivity for Thin & Light

## Intel® Wi-Fi 6E (Gig+) & Intel® Connectivity Performance Suite



### Great Wi-Fi Experiences

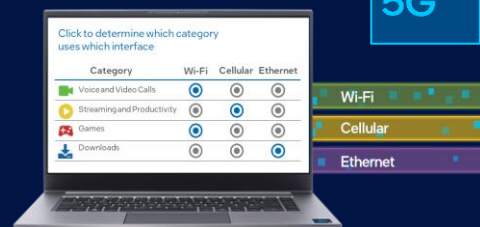
6 GHz Speed / Low Latency

Wi-Fi Traffic Prioritization

Dynamic Connection Optimization

## Intel® 5G Solution 5000 & (ICPS) Advanced Connection Manager

### Simultaneous Network Connections



Distribute, Combine, Switch

### Enhanced Laptop Connectivity

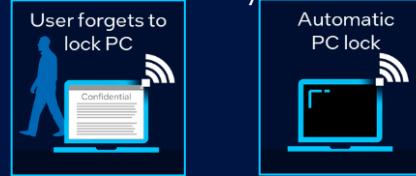
Prioritize Applications

Max Download Aggregation

Automatic Interface Switching

## Intel Wi-Fi Proximity Sensing

### Walk Away Lock



### Wake on Approach



### Improved Security & Convenience

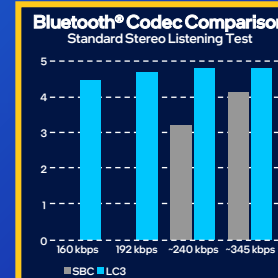
Windows 11 support

Lower Cost, Existing Wi-Fi

Privacy & Omnidirectional

## Intel® Bluetooth® LE Audio

Multi-Stream Audio = TWS



### Next-Gen Bluetooth® Audio

Synchronized Multi-stream TWS

High Fidelity Music / SWB speech

Up to 50% Lower Bit-Rate / Power<sup>1</sup>



















# Intel® Connectivity Performance Suite

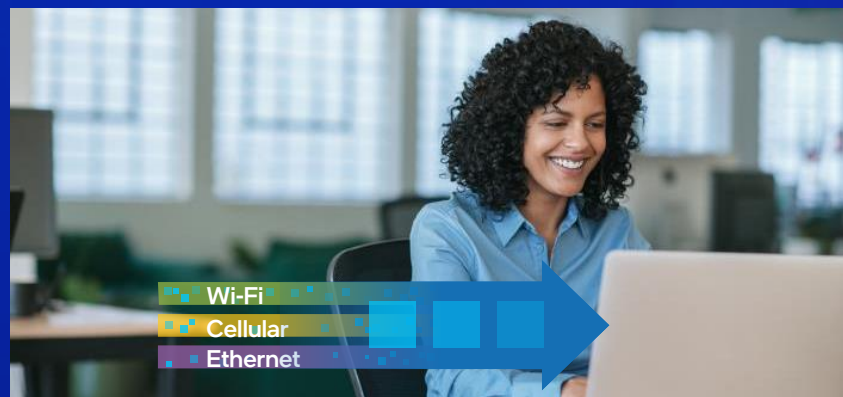
## New Advanced Connection Manager

Use all your PC's networking technologies simultaneously for great connected experiences

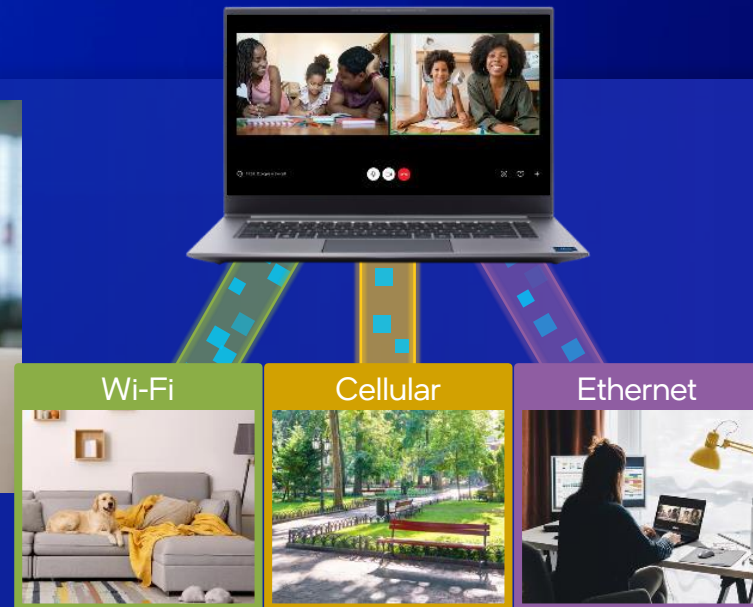
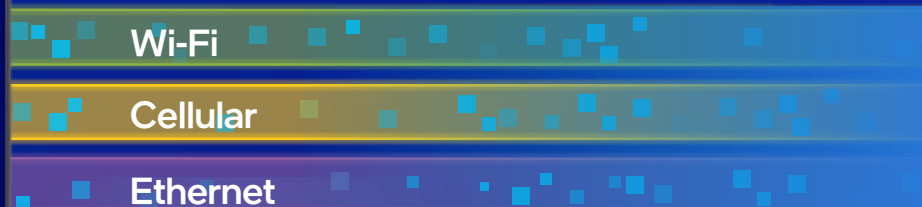
**Distribute** application traffic  
across multiple network interfaces

Click to determine which category  
uses which interface

Category	Wi-Fi	Cellular	Ethernet
 Voice and Video Calls			
 Streaming and Productivity			
 Games			
 Downloads			



**Combine** all connections  
for max download speeds



**Switch** automatically to the best technology  
quickly & with minimal application impact



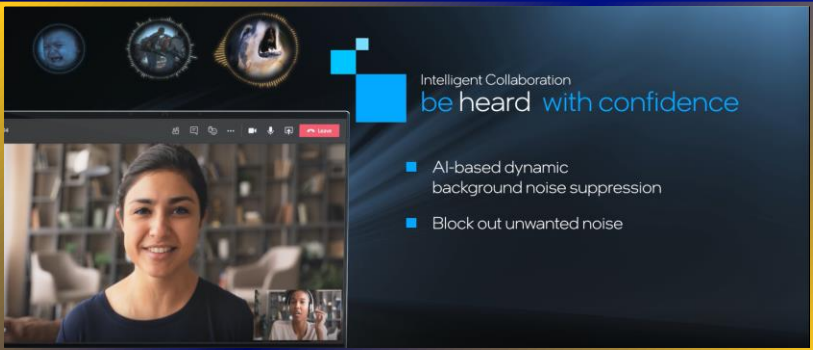
Look for the new Advanced Connection Manager  
On select Intel® Evo™ laptops configured with the Intel® Connectivity Performance Suite.  
Discover more at [www.intel.com/wireless](https://www.intel.com/wireless)



Learn more at [intel.com/performance-wireless](https://intel.com/performance-wireless). Results may vary.

# Intel® Evo™ and Intelligent Collaboration

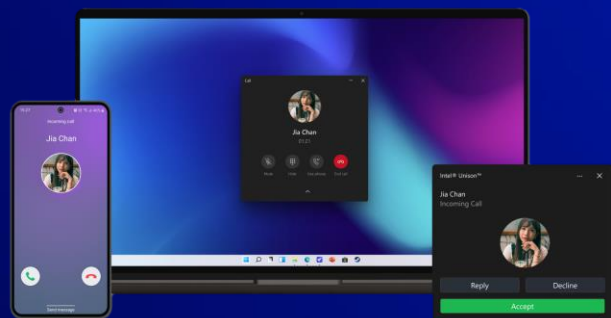
Connect. Be Seen. Be heard with Confidence



# Beginning to Scale Intel® Unison™ on Intel Evo

Enabling the Open Ecosystem with Android & iOS

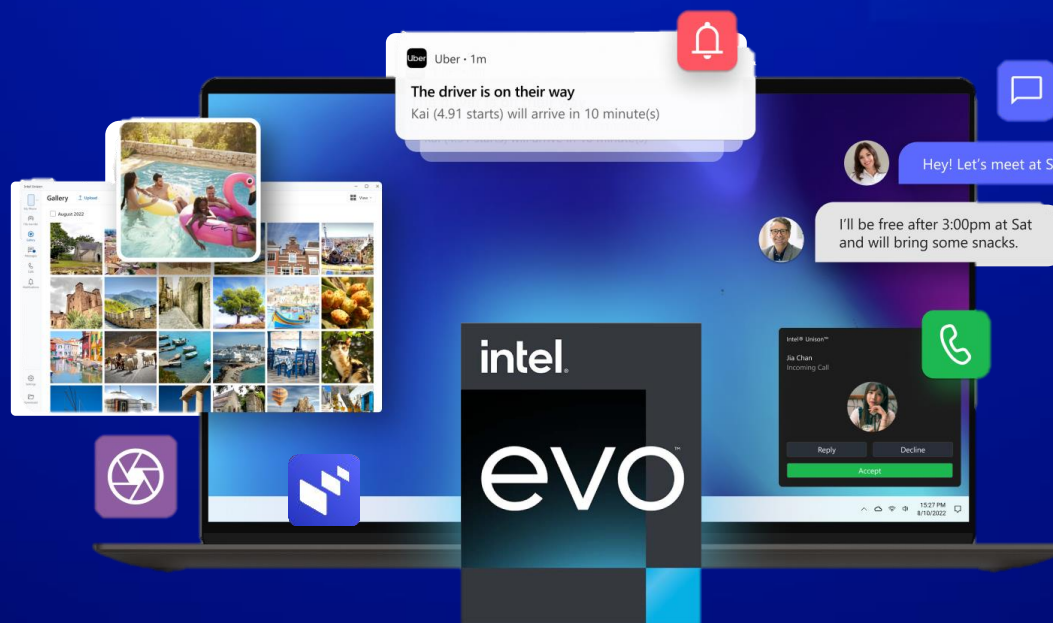
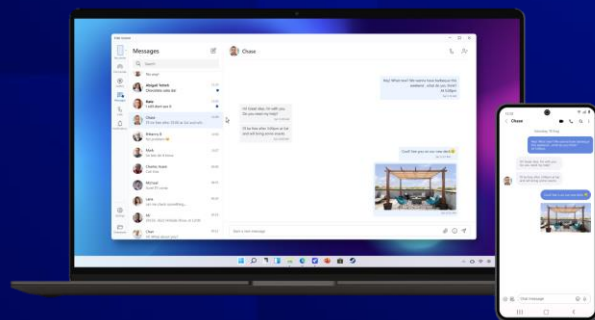
## Phone Calls



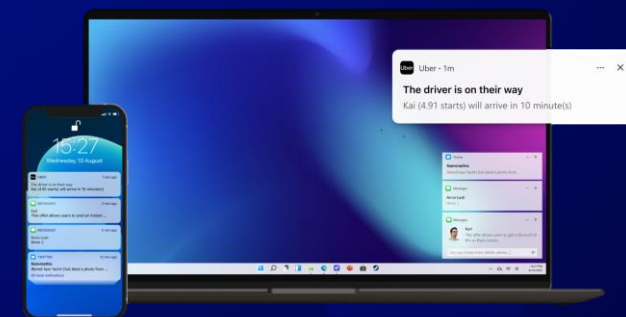
## File & Photo Sharing



## Messages



## Notifications



Intel® Unison™ solution is currently only available on eligible Intel® Evo™ designs on Windows-based PCs powered by 12th Gen or newer Intel Core and only pairs with Android- or iOS-based phones; all devices must run a supported OS version. See [intel.com/performance-evo](https://intel.com/performance-evo) for details, including set-up requirements. Results may vary.



# Engineered for Evo

Accessories verified

Engineered for

intel  
evo

## Great Experiences

High quality audio, video, expansion, & connectivity



## Seamless Connectivity

Plug and play with fast connection times



## Reliability

PC and accessories verified for reliable operation



# Engineered for Evo Partners

ANKER

ASUS®

belkin.



*HYPER*



Kensington®

Lenovo



logitech



Microsoft



plugable



SABRENT

SAMSUNG



Thunderbolt™  
Docks, Monitors &  
Storage



NEW

Bluetooth Headsets,  
Mice & Keyboard



NEW

Access Points



A small cluster of three squares in the top right corner: a small light blue square, a medium light blue square, and a small dark blue square.

# Thank You



The Intel logo is centered on a dark blue background. It features the word "intel" in a white, lowercase, sans-serif font. A small, light blue square is positioned above the letter "i". To the right of the word "intel" is a registered trademark symbol (®).

intel®