

Intel® Evo™ Platform: Engineered to do it all. That's a Laptop Evolved.

Intel Introduces the Third-Edition specification and Key Experience Indicators for Intel Evo laptops. More than 100 Intel Evo laptop designs based on our latest specifications are expected this year.

February 23, 2022 — Now 3+ years into our program, we continue to drive new innovations and premium experiences users want with the new 3rd Edition Specification bringing Intel® Evo™ with 12th Gen Intel® Core™ processors to market.

Intel Evo platform-based designs are powered by 12th Gen Intel® Core™ processors with Intel® Iris® X^e graphics and verified¹ to meet expanding key experience indicators (KEIs) research has shown is important to users. In addition, the program adds more stringent and real-world representative measurement and testing methodologies to the verification process. A primary goal of the program is to continually focus on delivering best experience and adjust to ongoing research and market feedback about what is really valued by the end user to bring the best overall experience in premium laptops.



Engineered to go anywhere. Without giving up anything.

Intel Evo platforms are co-engineered and designed to help people get the things done that matter most. With a combination of key platform technologies and system optimizations, these laptops are engineered to help remove lag, distractions, and dependency on battery chargers – ensuring exceptional experiences from anywhere. All designs on the Intel Evo platform are verified¹ against the following KEI targets:

- Consistent responsiveness on battery across 25 common tasks.²
- Wake from sleep in less than 1 second.
- 9 or more hours of real-world battery life on laptops with full HD display.³
- 4 or more hours of battery life in a 30-minute charge on laptops with full HD display.⁴

In addition to our focus on responsiveness and battery life, every Intel 12th Gen Core based Intel Evo branded laptop are required to have other premium features like: Intel® Thunderbolt™ 4, verified $\geq 1080p+$ display with minimum quality metrics (brightness, contrast, color space, bit depth), backlit keyboard, precision touchpad, password-less log-in, intelligent noise suppression for voice and video calls, smart Wi-Fi optimization, and more. Through a combination of technologies, engineering, and verification testing these come together to bring the best overall laptop experience.

To address the demands for the high-performance mobile creator, we have expanded the device offerings in the program this year to include designs with our new 12th Gen Intel® Core™ H-series and P-series processors with Intel® Arc™ discrete graphics. These new laptop designs must meet the same requirements of any Intel Evo branded system but adds the performance benefit of the Intel Arc discrete graphics.

Verified designs will feature an ALL NEW Intel Evo badge to easily identify those with the new 12th Gen Intel Core Processors.

NEW - Intelligent Collaboration:

A new usage focus area that is part of our verification program is collaboration. We want to give users the ability to connect, be seen and be heard with confidence without the worry of a poor WiFi connection, intrusive background noise, or poor video quality. Multiple technologies must come together seamlessly to make this user experience the best it can be:

- Intel Wi-Fi 6E (Gig+) with 160MHz channel support and 6GHz spectrum for a low latency and reliable connections⁵
- Intel® Connectivity Performance Suite for Smart Wi-Fi connection and optimization⁶
- Intelligent noise suppression based on GNA or other AI enhanced software and hardware
- AI based imaging effects to enhance your appearance to others

We also test and verify that 12th Gen Intel Core designs meet a minimum battery life criterion while an 8-way (1 to 7) conference call is in progress to simulate real world conditions. This ensures not only responsiveness is maintained, but battery life meets our certain requirements while the user is on the go.

NEW - Third-Edition Target Specification

All Intel Evo platform designs are powered by 12th Gen Intel® Core™ i7 or i5 processors with Intel Iris X^e graphics, feature best-in-class wireless and wired connectivity⁷ with Thunderbolt™ 4 and Intel® Wi-Fi 6E (Gig+), and deliver exceptional audio and display to make each experience premium.

Intel® Evo™

Project Athena 3rd Edition Specification Target Highlights

12th Gen Intel® Core™ Processors with Intel® Iris® X^e Graphics Based Laptops
Co-engineered Designs Verified to Deliver

Instant Wake

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

Incredible Performance and Responsiveness

- ✓ 12th Gen Intel® Core™ i5, i7, i9 processors with Iris® Xe graphics
- ✓ Optional Intel® Arc™ Discrete Graphics
- ✓ Optimized with Windows 11 or Chrome OS
- ✓ Intel® Adaptix™ Technology
- ✓ ≥8GB, 128b Dual Channel Memory and ≥256GB PCIe/NVMe SSD

Intelligence Built Across Platform Levels

- ✓ AI-assisted Dynamic Background Noise Suppression
- ✓ Intel® DL Boost + Intel® GNA 3.0 enabled
- ✓ Far-field voice services
- ✓ OpenVINO™ AI on PC; WinML support
- ✓ Optional Intel Visual Sensing Technology for adaptive usages including Wake-on-Approach, Gaze-Based Dimming and Walk-Away Lock



Responsiveness on Battery
Real World Battery Life
Instant Wake
Fast Charging
NEW Intelligent Collaboration Experience

Focus. Always Ready. Adaptive.

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 for Intelligent Wi-Fi connection management**
- ✓ Universal cable connectivity over USB Type C with Thunderbolt™ 4
- ✓ Optional Intel® 5G LTE or 5G

Innovative and Engaging Form Factor

- ✓ >12" 16.x" > FHD bright displays, backlit keyboards, precision touchpads and more
- ✓ <15mm fanned / fanless designs
- ✓ Sleek, thin-and-light and 2-in-1 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)

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*6GHz WiFi band not available for use in all countries
**Windows only
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Intel Led Innovation Inspiring the Ecosystem and Experiences

Intel® Visual Sensing Controller:

We will see an expanding portfolio of laptops using the Intel Visual Sensing Controller that provides new features like wake on approach, walk away lock, context awareness, and enhanced privacy and security features. These together reduce panel power, when possible, for extended battery life while offering all new capabilities in an ultra-low power hardware controller. This is an optional innovation item found on select designs.

5G Connectivity:

Staying in the flow while users are more mobile and taking advantage of the new 5G networks is an important usage where WIFI may not always be available. We are engineering and working with the top OEM's to offer more 5G capable devices in the Intel Evo lineup for 2022. This is an optional innovation item found on select designs⁷.

Expanding Further into New Technologies and Experiences

Foldable Display Devices:

An exciting new innovation are all new laptop formfactors taking advantage of foldable display technologies. These are adaptive and immersive laptops with discrete bluetooth keyboards for where you go and work that allow new ways of using a laptop. These designs are tested and verified to the same criteria of other Intel Evo laptops, but with some allowances on weight and size so we can adapt to these new designs while still giving OEM's the flexibility to innovate to bring the best possible experience to the end user.

Intel® Evo™

Project Athena FOLED Specification Target Highlights

12th Gen Intel® Core™ Processors with Intel® Iris® Xe Graphics Based Laptops
Co-engineered Designs Verified to Deliver

Instant Wake

- ✓ Adaptive Connected Standby
- ✓ Biometric login: fingerprint sensor, face recognition or Bluetooth phone proximity

Incredible Performance and Responsiveness

- ✓ 12th Gen Intel® Core™ i5, i7 processors with Iris® Xe graphics
- ✓ Optimized with Windows 11
- ✓ Intel® Adaptix™ Technology
- ✓ ≥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
- ✓ Far-field voice services
- ✓ OpenVINO™ AI on PC, WinML support
- ✓ Optional Intel Visual Sensing Controller for adaptive usages including Wake-on-Approach, Gaze-Based Dimming and Walk-Away Lock



Responsiveness on Battery
Real World Battery Life
Instant Wake
Fast Charging
NEW Intelligent Collaboration Experience

Battery Life For The Real World

- ✓ Fast charging capabilities over USB Type C
- ✓ Integration and optimization of lowpower 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 for intelligent WiFi connection management**
- ✓ Universal cable connectivity over USB Type C with Thunderbolt™ 4
- ✓ Optional Intel® Gb LTE or 5G

Innovative and Engaging Form Factor

- ✓ ≥16.1" ≥ QHD Foldable Touch Immersive Display w/ narrow bezels and bright, high color/contrast images
- ✓ Must offer a discrete Bluetooth keyboard accessory
- ✓ Keyboard accessory to be attachable/storable with foldable system when device is closed for easy transport and designed to complement system design
- ✓ Immersive audio with premium high-fidelity audio codec/speaker and microphone tuning
- ✓ User-facing camera ≥ FHD 1080p @ 30 fps (optional camera collaboration imaging effects)

Focus. Always Ready. Adaptive.

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**Windows only

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Engineered for Accessories Program:

The Intel Engineered for Program aims to build on top of the base standards and enable a high-quality experience of specific partner accessories with Intel Evo and Intel Evo vPro™ platforms. Specifically, this new program ensures capabilities based on a specification, co-engineering, and validation testing. The testing on Thunderbolt docks and monitor designs is about ensuring fast wake times, cross-device and dock interoperability, Fast charging of PC via dock/smart monitor and minimum bars for monitor quality and storage speed. For Bluetooth® headsets it is about ensuring high levels of quality and reliability via KEIs (key experience indicators) and technologies such as better codecs & antenna optimization, simple pairing with the headset and PC via Microsoft® Swift Pair, seamless PC to phone switching and dongle free option to help users running out of USB-C slots. We have more than 10 accessory designs that have been verified for key experiences and expect to expand more soon.

[Accessories Program](#)



Multi-Device Experience:

As part of our ongoing commitment to advancing and scaling new PC experiences, we are driving to deliver seamless multi-device and screen sharing experiences with full flexibility across OS, silicon and form factors.

We announced at CES our acquisition Screenovate to help accelerate these experiences.

We demonstrated these experiences across different OSs and devices. Intel is excited to work with and uniquely positioned to lead the industry to unify and enable multi-device experiences at scale. We intend to deploy the initial experiences on select Intel Evo platforms starting in Holiday '22 and will enrich and scale the experience in future Intel Evo platform specifications, based on our research into the experiences people want and need. If you missed this check out this demonstration on the Intel newsroom.

[Multi-Device Demonstration](#)

Intel® Evo™: Rearchitecting Laptop Innovation and Measurement

Intel's long-term commitment is to deliver the most advanced laptop experiences and form factors. In 2019, Intel laid the technical foundation and built the infrastructure necessary to get there. Derived from real-world research on how people use their laptops, Intel developed KEI engineering metrics as an experience-focused framework on which to measure all Intel Evo branded designs. Intel measures workflows in a realistic environment versus isolated tasks under controlled conditions, providing a preview into how a laptop will perform each day.

In 2020-2022, Intel intensified its testing methodology to be even more true to life. Verification of third edition designs pays attention to the interaction between local and cloud-based tasks to better reflect today's agile work environment. Intel's research found that most people have multiple cloud-based accounts logged in while companion apps—such as Chrome, Zoom, Spotify or Twitter—run simultaneously in the background. Intel has also intensified the workload testing and number of tasks that KEIs are measured against – 25 tasks, compared to 15 in the first edition – to help ensure laptop designs deliver the experiences and technologies promised under real world conditions. Then we added verification testing for the latest operating systems, intelligent collaboration, Bluetooth headsets and more that create even more demanding workloads while maintaining battery life.

Ongoing Ecosystem Support

Project Athena has the support of more than 150 ecosystem partners, including Acer, Asus, Dell, Dynabook, Google, HP, Innolux, Lenovo, Microsoft, Samsung and Sharp, among many others. Together, they continue to push the boundaries of laptop innovation as they look to the future of adaptive PC experiences leveraging artificial intelligence, 5G and new form factors.

Intel is also expanding its educational work within the ecosystem to ensure partners are confident in Project Athena's unique methodology, as it continues to co-engineer the most advanced laptop experiences and designs. As part of this commitment, Intel has released its automated testing tool to partners to assess, tune and improve their laptop designs for better performance and battery life.

Since opening in June 2019, Intel's Open Labs in Taipei, Shanghai and Folsom, California, continue to support performance and low-power optimization of vendor components for laptops aligned to Project Athena. Utilization of Open Labs is exceptional across ecosystem partners – on average, operating at 90% utilization of available testing and validation resources of vendor components. More than 140 laptop components have been validated through Open Labs to date, and this year, Intel broadened component vendor assessment to include memory and solid-state drives with customized firmware. These efforts combined will continue to help drive consistency in delivering Intel's North Star vision for advanced laptop experiences.

More Context: [Project Athena Press Kit](#) | [Intel.com/ProjectAthena](https://www.intel.com/ProjectAthena)

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 backup 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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¹ As measured by unique features of Intel Evo designs such as high performing CPUs, premium audio & visual components, broad ecosystem compatibility, sleek form factor innovations, optional touch screen and connectivity solutions. Intel's comprehensive laptop innovation program Project Athena ensures all designs with the Intel Evo brand have been tested, measured and verified against a premium specification and key experience indicators. Testing results as of February 2022, and do not guarantee individual laptop performance. Details at intel.com/Evo. Measured responsiveness of premium Windows OS-based designs while performing typical workflows in a realistic environment. For more complete information about performance and benchmark results, visit intel.com/Evo.

² Time taken to drain from 100% to critical battery level while performing typical workflows in a realistic environment. For more complete information about performance and benchmark results, visit intel.com/Evo.

³ Charge attained from OEM-default shutdown level. For more complete information about performance and benchmark results, visit intel.com/Evo.

⁴ 6 GHz Wi-Fi 6E functionality requires Intel® Wi-Fi 6E products, Wi-Fi 6E APs/Routers/Gateways, Operating System support for 6 GHz operation, along with country-specific 6 GHz spectrum allocation for non-licensed use, and associated regional regulatory approvals. 6 GHz spectrum may not be available in all markets. Intel technologies may require enabled hardware, software or service activation.

⁵ The Intel® Connectivity Performance Suite software application enables automated network traffic prioritization and connection optimization for Intel PC platforms configured with Intel® Wi-Fi 6E (Gig+) products. The Intel® Connectivity Performance Suite software application is only available for Intel® 12th Generation platforms configured with Microsoft* Windows* operating systems.

⁶ Based on integrated Intel® Wi-Fi 6 (Gig+) and Thunderbolt™ 4 technology. For more complete information about performance and benchmark results, visit intel.com/Evo.

⁷ 5G performance may vary and requires similarly configured 3GPP cellular networks and a carrier contract for 5G service, which is subject to regional availability and may not be available in all markets. Intel technologies may require enabled hardware, software or service activation.

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.