



11th Gen Intel® Core™ vPro® Mobile Processors

The world's best business
processor powers the latest
Intel vPro® platform.¹

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.

**LARGE ENTERPRISE
PROCESSOR BRIEF**

Empowering Enterprises to Meet Evolving Business Needs

Modern business looks different now. The Intel vPro® platform provides tools and technologies you can count on to help your business keep up with the needs of an ever-changing world.

Now, you can set a new standard for business security, performance, and remote manageability in your organization. The 11th Gen Intel vPro® platform is powered by the world's best business processor,¹ and delivers the highest performance and most comprehensive hardware-based security² — making it the unrivaled PC platform for business.



A Scalable Processor Portfolio

With more of today's modern workforce operating remotely, today's businesses require technology that can power amazing experiences wherever business happens. The U-Series 11th Gen Intel® Core™ vPro® processors are segmented into the i5 and i7 processor designators, giving enterprises greater flexibility to meet a wide variety of performance and price point requirements across their organization.

The U-Series 11th Gen Intel® Core™ vPro® processors are available in two versions, enabling IT teams to deliver business-class mobile systems in a thin and light form factor that end users will appreciate. Processors with the i5 designator feature 4 cores, 8 threads, and an 8 MB cache. Processors with the i7 designator support 4 cores, 8 threads, and a 12 MB cache. For i5 and i7 processors, the thermal design power (cTDP-up and cTDP-down) ranges from 7-28W.

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.



Designed for IT and End Users

Today's agile and highly capable IT management teams are often tasked with a wide range of maintenance and support tasks, but their most time-consuming challenge is handling day-to-day tactical activities. With 11th Gen Intel® Core™ vPro® processor-based PCs, managed service providers and in-house IT teams can do more to manage their PC deployments remotely — from performing maintenance to running diagnostics, repairing systems, and rebooting.

By intelligently investing in efficient IT solutions that enable IT teams to work smarter, businesses are better able to innovate, boost their overall effectiveness, and grow.

Built for Business

PCs powered by the Intel vPro® platform meet the demands of today's dynamic business environment. The Intel vPro® platform features built-in, enhanced security solutions, runs on architecture that delivers performance, promotes workforce productivity, and helps lower total cost of ownership.

Computing systems based on the Intel vPro® platform that incorporate the eligible processor SKUs shown in the table on page 8 and meet the Intel vPro® brand requirements are optimized for corporate environments and an increasingly remote workforce. These systems also require either the Microsoft Windows 10 Pro or Windows 10 Enterprise OS.

Your costs and results may vary.



Groundbreaking Performance and Amazing Experiences for Business

The 11th Gen Intel vPro® platform delivers the world's best productivity³ for business and the world's best business collaboration.⁴ With an impressive leap in architecture performance, powerful graphics, and next-gen connectivity and responsiveness, 11th Gen Intel® Core™ vPro® processors deliver amazing real-world experiences for IT and end users, and allow your workforce to collaborate and work productively from anywhere.

Advanced Performance and Collaboration Features:

- ✔ Your workforce — no matter where they work — can experience the rich media and visuals delivered by **Intel® Iris® Xe graphics** to power applications, collaboration, productivity, and creation.
- ✔ Be ready for the future of **AI on PCs**. 11th Gen Intel® Core™ vPro® processors are designed to dramatically accelerate the future of AI-enhanced applications and workflows, with up to 8x better AI performance vs. 8th Gen Intel® Core™ vPro® i7-8650U processors.⁵
- ✔ **Intel® Optane™ memory** is an optional feature that enhances the unique advantage of the Intel platform by delivering a new level of performance and large storage capacity options. Compared to its predecessor, Intel® Optane™ memory delivers gen-over-gen performance benefits, lower power, and support for Intel® Stable IT Platform Program (Intel® SIPP).
- ✔ **Intel® Wi-Fi 6/6E (Gig+)** provides the best Wi-Fi technology for video conferencing,⁶ offering faster speeds, ultra reliable connectivity, and great wireless experiences that allow employees to collaborate anywhere seamlessly.⁷

Not all features are available on all SKUs. Please check with your OEM for availability.

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.



Comprehensive Security that Businesses Depend on Yesterday, Today, and Tomorrow

Intel® Hardware Shield, available exclusively on the Intel vPro® platform, provides the world's most comprehensive hardware-based security for business.⁸ The 11th Gen Intel® Core™ vPro® mobile processors with Intel® Hardware Shield offer enhanced full-stack security features that help deliver data and device protection for businesses of all sizes.

Hardware-Based Security Features of the Intel vPro® Platform

Intel® Hardware Shield, available exclusively on all Intel vPro® devices, delivers integrated hardware-based PC protection for more secure business productivity, including:

- ✓ Below-the-OS security
- ✓ Application and data security
- ✓ Advanced threat detection

Advanced Security Features

And now on 11th Gen Intel® Core™ vPro® mobile processors, Intel® Hardware Shield includes:

- ✓ **Intel® Control-Flow Enforcement Technology (Intel® CET)**, which provides hardware-based protection against multiple classes of attacks, including memory safety-based attacks and increasingly popular control flow subversion techniques. This ground-breaking technology was invented by Intel engineers to help shut down an entire class of attacks that have long evaded software-only solutions.⁹
- ✓ **Intel® Threat Detection Technology (Intel® TDT)**, which provides IT teams with near real-time insights about end user devices. With the industry's first silicon-enabled AI threat detection, provided only by Intel, this enhanced security feature takes full advantage of the advanced telemetry capabilities of Intel® Hardware Shield by augmenting ISV solutions to help stop ransomware and cryptomining attacks.¹⁰

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.



Leading Remote Manageability and Stability

Keep your fleet of business PCs up and running from anywhere with the Intel vPro® platform. Intel® Active Management Technology, part of the Intel vPro® platform, provides hardware-based remote remediation that helps return your PCs to a known good state, no matter where your employees are working — even when the OS is down.¹¹

Advanced Manageability and Stability Features

Intel® Active Management Technology and **Intel® Endpoint Management Assistant** provide:

- ✓ The only wireless solution for remote manageability in business through Intel® Active Management Technology, available exclusively on the Intel vPro® platform.¹¹
- ✓ Control over PC fleets — both inside and outside the corporate firewall. These advanced solutions are scalable to multiple devices and support both wireless and wired connectivity.
- ✓ Cloud-ready, out-of-band remote management (via Intel® EMA) helps businesses save time and money.
- ✓ Remote management capabilities, including remote power control, remote access, and the recently expanded Intel® Remote Secure Erase.

Intel® Stable IT Platform Program (Intel® SIPP) provides industry platform validation that ensures optimal device stability and reliability for all users, with zero hardware changes for at least 15 months or until the next generational release. The capabilities listed in the Platform Security, Manageability, and Stability Features table on page 9 are designed to enable, accelerate, or complement features and services within the Windows 10 Pro and Windows 10 Enterprise operating systems.

Intel works collaboratively with OEM partners to certify that devices are built to give IT and end users the stability and reliability of a true business-class device. The Intel vPro® platform includes full platform validation support for additional (post-Time to Market) Windows 10 Enterprise SAC releases; including up to two previous OS releases.

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.



The Intel® Evo™ vPro® Platform

Intel® Evo™ vPro® platform-based laptops are the best thin and light business laptops for getting things done.¹² These verified laptop designs deliver business-class performance, hardware-enhanced security features, superior remote manageability, and PC fleet stability — along with remarkable responsiveness, user productivity features, and enhanced graphics for amazing visual experiences.

Thin, stylish, and lightweight, Intel® Evo™ vPro® platform-based laptops are built with what IT needs and what end users want — and are designed to deliver the best thin and light laptop experience for business.¹²

Intel® Evo™ vPro® Platform Features:

- ➔ Verified Intel® Evo™ vPro® platform designs deliver an average of more than **40% improved responsiveness** compared to a 3-year-old premium laptop while on battery,¹³ so employees' devices can stay ready for business.
- ➔ Help keep your workforce in the productivity zone with **fast charging** that delivers 4 or more hours of real-world battery life in a 30-minute charge on laptops with FHD displays.¹⁴
- ➔ Keep employees — and all of their video conferencing and other critical applications — up and running for longer with 9 or more hours of **real-world battery life** on systems with FHD displays.¹⁵
- ➔ Keep everyone working quickly and effectively with **instant wake** (<1 sec) that lets users jump right back into their workflows without missing a beat.
- ➔ Let users work how they want, as quickly as they need, with universal charging and accessory ports powered by integrated **Thunderbolt™ 4 technology** for faster file transfers and day-to-day functionality.
- ➔ Improve the quality and reliability of high-bandwidth interactions like video conferencing with **best-in-class wireless and wired connectivity**.¹⁶

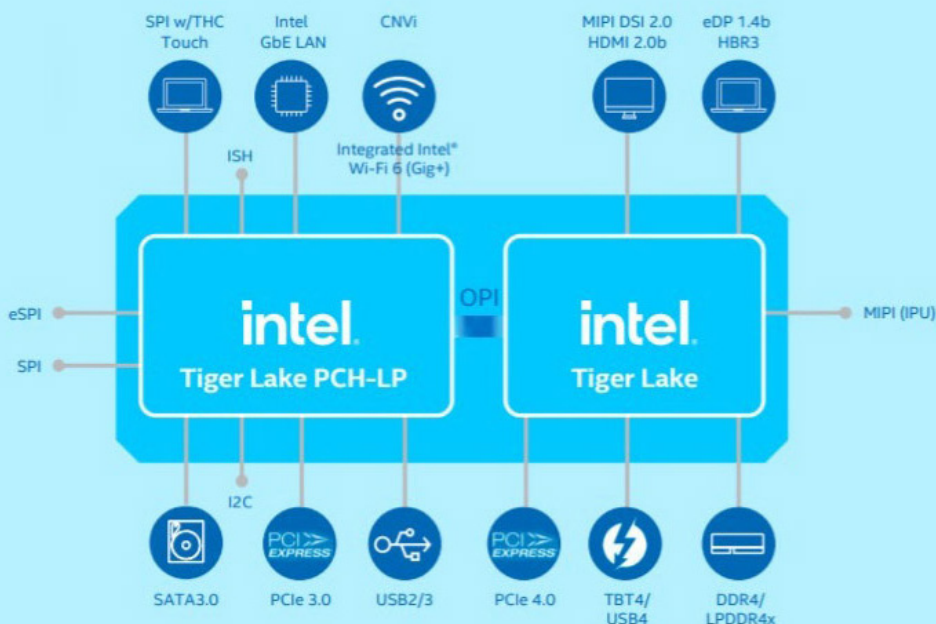
See backup for workloads and configurations. Results may vary.

The 11th Gen Intel® Core™ vPro® Mobile Processor Family

U-Series Mobile Processors

Processor Number	Cores/Threads	Graphics (EUs)	Cache (MB)	Operating Range (W)	Base Clock Speed (GHz)	Maximum Single Core Turbo Freq (GHz)	Maximum All Core Turbo Freq (GHz)	Graphics Max Freq (GHz)	Memory Support
i7-1185G7	4C/8T	96	12	12-28	3.0	4.8	4.3	1.35	DDR4-3200 LPDDR4x-4266
i5-1145G7	4C/8T	80	8	12-28	2.6	4.4	4.0	1.3	DDR4-3200 LPDDR4x-4266
i7-1180G7	4C/8T	96	12	7-15	1.3	4.6	3.7	1.1	LPDDR4x-4266
i5-1140G7	4C/8T	80	8	7-15	1.1	4.2	3.5	1.1	LPDDR4x-4266

11th Gen Intel® Core™ vPro® U-Series Processor Block Diagram



Not all features are available on all SKUs. Please check with your OEM for availability.

11th Gen Intel® Core™ vPro® Mobile Processors: Features at a Glance

Platform Security, Manageability, and Stability	Benefits
Intel® Active Management Technology (Intel® AMT)	Remote out-of-band management for efficient proactive and reactive system maintenance
Intel® Endpoint Management Assistant	Remotely and securely manage devices beyond the firewall from the cloud
Intel® Remote Secure Erase	Allows IT administrators to remotely wipe the data from Intel and third-party SSDs via Intel® AMT
Intel® Stable IT Platform Program	Delivers integrated hardware validation that helps IT teams ensure long-term device reliability and compatibility
Intel® Hardware Shield	A set of built-in, hardware-enabled platform protection technologies
Intel® Threat Detection Technology	Delivers advanced threat detection and enhanced security
Intel® Control-Flow Enforcement Technology	Helps protect against control-flow hijacking malware attacks
Intel® Total Memory Encryption	Ensures that memory accessed from the Intel® CPU, including sensitive data, is protected with a single encryption key
Intel® Runtime BIOS Resilience	Intel® Hardware Shield technology that helps protect system firmware
Intel® Trusted Execution Technology	Intel® Hardware Shield technology providing hardware root-of-trust for critical software
Intel® System Security Report	Communicates the current Intel® Hardware Shield configuration to the OS
Intel® System Resource Defense	Helps prevent malicious software injection by locking down system critical resources
Intel® Virtualization Technology	Provides hardware assist to the virtualization software, helping to reduce size, cost, and complexity
Intel® Transparent Supply Chain	Mechanism for confirming authenticity of system components

Not all features are available on all SKUs. Please check with your OEM for availability.

11th Gen Intel® Core™ vPro® Mobile Processors: Features at a Glance

Business Productivity & Technologies	Benefits
Intel® Iris® X^e Graphics	Delivers stunning creation and graphics capabilities for immersive work experiences
Integrated Thunderbolt™ 4 technology	Support for Thunderbolt™ 4 controllers (up to 40 Gb/s transfer rates) providing one universal computer port for charging and accessories
Intel® Optane™ memory	Enhances the unique advantage of the Intel platform by delivering a new level of performance and large storage capacity options
Intel® Wi-Fi 6/6E (Gig+)	Offers fast speeds, ultra reliable connectivity, and great wireless experiences
Intel® Hyper-Threading Technology	Delivers two processing threads per core, allowing applications to handle greater workloads for more efficient multitasking
Intel® Smart Cache Technology	Dynamically allocates shared cache to each processor core based on workload
Intel® Smart Sound Technology	An integrated audio DSP (Digital Signal Processor) that enables quick responses to voice commands and offers high fidelity audio without impacting system performance and battery life
Intel® Gaussian Neural Accelerator 2.0 (GNA 2.0)	Delivers a dedicated engine for background workloads such as voice processing and noise suppression at ultra-low power for maximum battery life
Intel® Turbo Boost Technology 2.0¹⁷	Dynamically increases the processor's frequency, as needed, by taking advantage of thermal and power headroom when operating below specified limits

Not all features are available on all SKUs. Please check with your OEM for availability.

11th Gen Intel® Core™ vPro® Mobile Processors: Features at a Glance

Business Productivity & Technologies	Benefits
Intel® Speed Shift Technology with Energy-Performance Preference	Improves responsiveness for single-threaded transient workloads by allowing the processor to more quickly select its best operating frequency and voltage for optimal performance and power efficiency
Per-core P-states	Allows the monitoring of voltage-frequency control states for each processor core
Intel® Thermal Velocity Boost¹⁸	Increases clock frequency in select processors based on specific operating conditions
Integrated Memory Controller	Improves memory read/write performance through efficient pre-fetching algorithms, lower latency, and higher memory bandwidth (DDR4 up to 3200)
PCI Express (PCIe) Gen4 Interface	Offers up to 8 GT/s for fast access to peripheral devices and networking
Universal Serial Bus (USB) 4	Supports enhanced performance with a design data rate of up to 10 Gb/s
Intel® Rapid Storage Technology	Offers excellent levels of performance for SATA/PCIe storage components and Intel® Optane™ memory
Serial ATA (SATA)	High speed storage interface supporting up to 6 Gb/s transfer rates for optimal data access (up to 3 SATA ports)

Not all features are available on all SKUs. Please check with your OEM for availability.

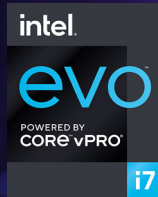
Choose the Unrivaled 11th Gen Intel® Core™ vPro® Platform

Powered by the world's best
business processor¹



BUILT FOR BUSINESS

Learn more about the
built-for-business
[Intel vPro® platform](#)



Discover the premium
[Intel® Evo™ vPro® platform](#)



Explore the [11th Gen Intel®
Core™ vPro® processors](#)



Learn more about
[Intel® Iris® Xe graphics](#)

See backup for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/11thgenvpro for details. Results may vary.

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Notices and Disclaimers

¹ In thin & light Windows-based devices, based on unique features and performance testing (as of December 1, 2020) on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration of Intel® Core™ vPro® i7-1185G7, including in comparison to AMD Ryzen 7 PRO 4750U. Visit www.intel.com/11thgenvpro for details. Results may vary.

² In thin & light Windows-based devices, based on 1) unique features and performance testing on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration, comparing Intel® Core™ vPro® i7-1185G7 to AMD Ryzen 7 PRO 4750U and 2) an IOActive study (commissioned by Intel) comparing Intel® Hardware Shield security capabilities on 11th Gen Intel® Core™ vPro® processors with corresponding competitor technologies. All testing as of December 2020. Visit www.intel.com/11thgenvpro for details. Results may vary.

^{3,4} In thin & light Windows-based devices, based on unique features and performance testing (as of December 1, 2020) on industry benchmarks and Representative Usage Guides of Intel® Core™ vPro® i7-1185G7, including in comparison to AMD Ryzen 7 PRO 4750U. Visit www.intel.com/11thgenvpro for details. Results may vary.

⁵ As measured by MLPerf v0.7 Inference, Mobile Notebooks, Closed Division with Offline Scenario using OpenVINO™ 2021.1 Pre framework on MobileNetEdge model int8 GPU (Batch=16) on 11th Gen Intel® Core™ i7-1185G7 processor vs highest attainable MLPerf v0.7 Inference, Mobile Notebooks, Closed Division with Offline Scenario using OpenVINO™ 2021.1 Pre framework on MobileNetEdge model int8 GPU (Batch=1) on 8th Gen Intel® Core™ vPro® i7-8650U processor. For workloads and configurations visit www.intel.com/PerformanceIndex. Results may vary.

⁶ For more information about the data presented, visit www.intel.com/wifi6disclaimers. For workloads and configurations visit www.intel.com/PerformanceIndex. Results may vary.

⁷ See www.intel.com/PerformanceIndex (connectivity). Results may vary.

⁸ In thin & light Windows-based devices, based on unique features and testing by IOActive (commissioned by Intel; as of December 2020) comparing Intel® Hardware Shield security capabilities with corresponding technologies in an AMD Ryzen Pro 4750U-based system. Visit www.intel.com/11thgenvpro for details. Results may vary.

⁹ Intel® Control-flow Enforcement Technology (Intel® CET) is designed to help protect against jump/call-oriented programming (JOP/COP) attack methods and return-oriented programming (ROP) attack methods, malware known as memory safety issues and which comprise over half of ZDI-disclosed vulnerabilities. Visit www.intel.com/11thgenvpro for details. Results may vary.

¹⁰ In thin & light Windows-based PCs, based on December 2020 IOActive study (commissioned by Intel) comparing malware detection by 11th Gen Intel® Core™ vPro® platform with Intel® TDT and AMD Ryzen Pro 4750U-based system. Visit www.intel.com/11thgenvpro for details on Intel's industry-leading CPU behavior monitoring technology. Results may vary.

¹¹ As measured by December 2020 IOActive study (commissioned by Intel) of in-band software-based remote management functions; out-of-band hardware-based remote management functions; and cloud-based support in thin & light Windows-based PCs. AMT requires a network connection; must be a known network for Wi-Fi out-of-band management. Learn more at www.intel.com/11thgenvpro. Results may vary.

¹² In thin & light Windows-based devices, based on 1) unique features and performance testing on industry benchmarks and Representative Usage Guides across 3 key usages: productivity, creation, and collaboration, comparing Intel® Core™ vPro® i7-1185G7 to AMD Ryzen 7 PRO 4750U and 2) an IOActive study (commissioned by Intel) comparing Intel® Hardware Shield security capabilities on 11th Gen Intel® Core™ vPro® processors with corresponding competitor technologies. All testing as of December 2020. Intel® Evo™ vPro® designs are co-engineered as part of Intel's comprehensive laptop innovation program Project Athena then tested, measured, and verified against a premium specification and key experience indicators to ensure unparalleled user experiences. Visit www.intel.com/11thgenvpro for details. Results may vary.

¹³ Measured average responsiveness of premium Windows OS-based designs while performing typical workflows in a realistic environment, compared to 3-year-old premium design. Visit www.intel.com/11thgenvpro for details. Results may vary.

¹⁴ Charge attained from OEM-default shutdown level. Visit www.intel.com/11thgenvpro for details. Results may vary.

¹⁵ Time taken to drain from 100% to critical battery level while performing typical workflows in a realistic environment. Visit www.intel.com/11thgenvpro for details. Results may vary.

¹⁶ Best in class wireless and wired connectivity. Based on integrated Intel® Wi-Fi 6 (Gig+) and Thunderbolt™ 4 technology. For more complete information about performance and benchmark results, visit www.intel.com/11thgen. For workloads and configurations visit www.intel.com/PerformanceIndex. Results may vary.

¹⁷ Intel® Turbo Boost Technology requires a PC with a processor with Intel® Turbo Boost Technology capability. Intel® Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel® Turbo Boost Technology. For more information, see www.intel.com/technology/turboboost.

¹⁸ Intel® Thermal Velocity Boost opportunistically and automatically increases clock frequency above single-core and multi-core Intel® Turbo Boost Technology frequencies based on how much the processor is operating below its maximum temperature and whether turbo power budget is available. The frequency gain and duration is dependent on the workload, capabilities of the processor, and the processor cooling solution.

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 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.

Certain features are not available on all SKUs.

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