

Two overlapping blue squares, one light blue and one darker blue, are located to the right of the woman's head.

The Platform
of Choice
for Business
Computing

Intel vPro[®] with 12th Gen
Intel[®] Core[™] processors



Computing endpoints with 12th Gen Intel® Core™ processors propel business today, while helping them prepare for tomorrow

Businesses today are demanding more from their technology than ever before. With remote work now commonplace, users need a computing experience that empowers productivity wherever they may be. Furthermore, technology decision makers require platforms that facilitate these new workplace trends and that can also be deployed and maintained with confidence. The Intel vPro® platform with 12th Gen Intel® Core™ processors meets these technology demands and offers a wide array of computing options to empower businesses of all sizes.

New Intel vPro® Platform Portfolio

New for 12th Gen Intel Core processors, Intel is expanding the platform portfolio as follows.

- **Intel vPro® Enterprise for Windows** is the full-featured commercial platform focused on large enterprises and managed businesses. It features a comprehensive set of technologies to help businesses stay ahead of security threats. In addition, Intel vPro Enterprise for Windows offers complete modern management capabilities and platform stability suited for businesses with formal PC purchase practices.
- **Intel vPro® Essentials** extends security and device management capabilities previously targeting large enterprise to the small and medium business segment. These businesses also need to protect devices, applications, and data, so Intel vPro Essentials also incorporates Intel® Hardware Shield to help protect platforms based on the Windows operating system. In addition, Intel vPro Essentials supports partner-ready device management with Intel® Standard Manageability.
- **Intel vPro® Enterprise for Chrome** creates a new class of Chromebooks for business environments with the performance, stability, and security technologies that businesses require. This new platform further enables decision makers to match the right device to the right user.
- Finally, **Intel vPro®, An Evo™ Design** devices meet both the Intel vPro and Intel Evo design criteria, identifying notebooks that bring compelling user experiences to mobile business environments.



Leading Business Productivity

12th Gen Intel Core processors feature a new architecture consisting of performance cores and efficient cores that excel at both single-threaded and multithreaded software environments.¹ This architecture empowers users to be more productive and enjoy higher performance from their PC, especially for multitasking and collaboration. Performance is optimized in real time by Intel® Thread Director, which works with the operating system to assign the right task to the right core at the right time.² This level of sophistication enables business PCs to execute demanding workloads, inclusive of user applications and IT software.

In addition, the new 12th Gen Intel Core processor family addresses the computing needs of nearly every type of worker, with an extensive portfolio of mobile and desktop processors with varying core counts and power offerings. Specific processors in Intel's portfolio are eligible for the various versions of Intel vPro (see table on page 4).

The performance of 12th Gen Intel Core processors is further enhanced with support for DDR5 and LPDDR5 memory. Intel vPro Enterprise entry workstations also support ECC memory with the corresponding Intel chipset.

Intel offers networking and I/O solutions that result in a more complete platform. 12th Gen Intel Core processors integrate Intel® Wi-Fi 6E Gig+ and mobile platforms also feature the new Intel® Connectivity Performance Suite, which optimizes wireless performance for popular use cases such as video conferencing.³ Mobile users may also adopt Thunderbolt™ 4 docking solutions to connect peripherals to the PC via a single cable for a more elegant workspace. Intel vPro continues to support traditional wired connectivity for the 1 Gbps and 2.5 Gbps Ethernet standards.



Comprehensive Platform Security

Intel vPro features a comprehensive set of security technologies to help protect the full computing stack including hardware, firmware, the operating system, and applications.

Windows Devices

For Windows PCs, Intel® Hardware Shield continues to meet or exceed Microsoft Secured-core PC requirements. On both Intel vPro Essentials and Intel vPro Enterprise platforms, Intel Hardware Shield supports dynamic root of trust, OS reporting, and an expanded set of policies for protecting system management mode (SMM) operations.

Intel® Control Flow Enforcement Technology (Intel® CET), available on mobile beginning with 11th Gen Intel Core processors, comes to desktop processors for the first time with the 12th Gen Intel vPro platform. Intel CET helps protect against malicious code insertion into applications executing in PC memory.

Also new for 12th Gen Intel Core processors, Intel® Threat Detection Technology (Intel® TDT) is upgraded with anomalous behavior detection, making anti-virus software enabled for Intel TDT more effective at intercepting threats.

Finally, with Intel® Total Memory Encryption - Multi-Key (Intel® TME-MK) and Intel® Virtualization Technology with Redirect Protection (Intel® VT-rp), Intel vPro Enterprise platforms offer new hardware support for OS virtualization, pending enabling in an expected future OS release.

Chrome Devices

Systems built on the new Intel vPro Enterprise for Chrome platform feature Intel TME-MK to help protect against a physical attack on the device, as well as Intel® Key Locker to help protect encryption keys. These capabilities combined with other platform requirements raise the bar for Chromebooks as businesses consider mobile productivity devices.

Modern Device Management

Workplace trends are driving demand for remote device management. Intel® Standard Manageability is now available on Intel vPro Essentials mobile and desktop devices with support for remote out-of-band management over Wi-Fi, as well as out-of-band management for Windows PCs whether inside or outside the corporate firewall.

Intel vPro Enterprise continues to support a superset of capabilities with Intel® Active Management Technology (Intel® AMT). Intel AMT adds keyboard-video-mouse (KVM) remote control of devices, as well as new life cycle management features for device sanitization and recovery on select OEM PCs.

Intel device management capabilities are supported by the Intel® Endpoint Management Assistant (Intel® EMA) console and any third-party management software that integrates Intel EMA.

Driving Business Continuity

Both Intel vPro Enterprise for Windows and Intel vPro Enterprise for Chrome support the Intel® Stable IT Platform Program (Intel® SIPP), which aims for zero changes to the platform over a five-quarter device deployment window. Intel SIPP covers key Intel hardware and software in the platform, and the program includes enterprise-class platform validation for the supported operating systems. Intel SIPP enables corporations to minimize computing disruptions, simplify device qualification, and employ scheduled device purchase and deployment practices.

For Windows devices, both Intel vPro Essentials and Intel vPro Enterprise support reliable updates with automated restart and recovery of a failed firmware update. This capability spans both UEFI/BIOS and the Intel® Management Engine firmware, and it facilitates conducting firmware updates over the life cycle of a Windows PC.

Built for All Businesses

Intel vPro delivers professional-grade performance with a comprehensive set of capabilities to help protect and manage devices. Now with 12th Gen Intel Core processors, Intel vPro delivers a complete platform portfolio with computing solutions for nearly every type of worker at any business of any size. With increased remote collaboration, multitasking, plus user and IT apps competing for computing resources, Intel vPro is vital for enabling worker productivity and maintaining business continuity.

For more information, please visit
www.intel.com/vpro.



Intel vPro® with 12th Gen Intel® Core™ processors

Intel vPro® Enterprise for Windows Eligible Processors			
Mobile			
U9	U15	P28	H45
i7-1260U	i7-1265U	i7-1280P	i9-12900H
i5-1240U	i5-1245U	i7-1270P	i7-12800H
		i5-1250P	i5-12600H
Desktop			
35W	65W	125W	
i9-12900T	i9-12900	i9-12900K	
i7-12700T	i7-12700	i7-12700K	
i5-12600T	i5-12600	i5-12600K	
i5-12500T	i5-12500		

Intel vPro® Essentials Eligible Processors			
Mobile			
U9	U15	P28	H45
i7-1250U	i7-1255U	i7-1260P	i9-12900HK
i5-1230U	i5-1235U	i5-1240P	i7-12700H
			i5-12500H
Desktop			
35W	65W		
i9-12900T	i9-12900		
i7-12700T	i7-12700		
i5-12600T	i5-12600		
i5-12500T	i5-12500		

Intel vPro® Enterprise for Chrome Eligible Processors		
U9	U15	P28
i7-1260U	i7-1265U	i7-1270P
i5-1240U	i5-1245U	i5-1250P

12th Gen Intel vPro[®] Features at a Glance

Feature	Benefit
Intel[®] Hardware Shield⁴	A suite of security technologies that helps protect Windows PCs in the Intel vPro [®] Essentials and Intel vPro [®] Enterprise platforms
Intel[®] Virtualization Technology (Intel [®] VT-x / VT-d)	Accelerates hypervisor and virtual machine switching for OS security services
Intel[®] Trusted Execution Technology⁴	Provides dynamic root of trust for Windows or other system software
Intel[®] System Security Report⁴	Communicates low-level security configuration to the Windows operating system
Intel[®] System Resources Defense⁴	Configurable System Management Mode (SMM) protections required for Microsoft Secured-core PC compliance
Intel[®] VT-rp⁵	Hardware-enhanced protection for OS virtualization (pending expected enabling)
Intel[®] Total Memory Encryption-Multi-Key (Intel [®] TME-MK) ⁶	Key 0: Encrypts DRAM to help protect against a physical cold boot attack; Keys 1-15 can encrypt sections of DRAM as directed by OS (pending expected enabling)
Intel[®] Platform Trust Technology	Integrated Trusted Platform Module within Intel SOCs, supporting TPM 2.0
Intel[®] Boot Guard	Supports cryptographically-verified boot as recommended by Windows best security practices
Intel[®] BIOS Guard	Helps protect firmware residing in non-volatile memory
Intel[®] Threat Detection Technology	Provides a hardware assist for security applications, such as anti-virus software
Intel[®] Control Flow Enforcement Technology	Hardware-enhanced protection against memory safety attacks, such as malicious code insertion into applications executing in PC memory
Intel[®] Stable IT Platform Program⁶	Platform validation that aims for zero hardware changes for 15 months from first availability or until the next generational release
Intel[®] Active Management Technology⁵	Remote out-of-band management for efficient proactive and reactive system maintenance over Ethernet, Wi-Fi, and supporting Thunderbolt™ 4 docks. Supports Keyboard-Video-Mouse (KVM) remote control.
Intel[®] Standard Manageability	DASH standard-based out-of-band management over Ethernet and Wi-Fi with cloud manageability support for devices outside corporate firewalls. Does not support Keyboard-Video-Mouse (KVM) remote control.
Intel[®] One Click Recovery⁵	Fast remote recovery of a disabled computing endpoint
Intel[®] Remote Platform Erase⁵	Method for re-purposing computer systems by erasing the disk, cleaning the TPM, resetting the Intel [®] Converged Security Management Engine (Intel [®] CSME), and resetting UEFI/BIOS
Intel[®] Key Locker⁷	Used in select Chrome devices to help protect keys used by AES-NI encryption

¹ Performance hybrid architecture combines two new core microarchitectures, Performance-cores (P-cores) and Efficient-cores (E-cores), on a single processor die. Select 12th Gen Intel[®] Core™ processors (certain 12th Gen Intel Core i5 processors and lower) do not support performance hybrid architecture, only P-cores.

² Built into the hardware, Intel[®] Thread Director is provided only in performance hybrid architecture configurations of 12th Gen Intel[®] Core™ processors; OS enablement is required. Available features and functionality vary by OS.

³ Intel[®] Connectivity Performance Suite is available for Windows OS only.

⁴ Supported on Intel vPro[®] Essentials and Intel vPro Enterprise.

⁵ Supported on Intel vPro[®] Enterprise only.

⁶ Supported on Intel vPro[®] Enterprise for Windows and Intel vPro[®] Enterprise for Chrome only.

⁷ Supported on Intel vPro[®] Enterprise for Chrome only.

All versions of the Intel vPro[®] platform require an eligible Intel[®] Core™ processor, a supported operating system, Intel LAN and/or WLAN silicon, firmware enhancements, and other hardware and software necessary to deliver the manageability use cases, security features, system performance, and stability that define the platform. See www.intel.com/PerformanceIndex (platforms) for details.

Performance varies by use, configuration, and other factors. Learn more at www.intel.com/PerformanceIndex.

Intel technologies may require enabled hardware, software, or service activation.

No product or component can be absolutely secure.

Your costs and results may vary.

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