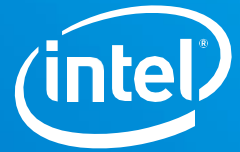


PRODUCT BRIEF

The Latest 8th Gen Intel® Core™ vPro™ Processors¹



A New Mobile Computing Experience for Business

The latest 8th generation Intel® Core™ vPro™ processors reshape the mobile computing experience for the modern workplace



The notebook computer has benefited from four decades of innovation, with each generation coming one step closer to delivering the vision of anytime, anywhere computing. As the preferred form factor for the modern worker, notebooks must capture the perfect balance between performance, battery life, connectivity, and mobility. Systems based on the latest 8th Gen Intel® Core® vPro™ processors make strides in all these areas, while also providing the rich set of stability, manageability and security features that business PC buyers have come to expect.

Mainstream Mobile Processor

The latest 8th Gen Intel Core vPro processor refreshes the older U-series 15W processors targeting mainstream mobile computing. As shown in Figure 1, it features four processor cores (14nm), Gen 9 Intel® UHD Graphics, two-channel memory controller, and a new on-package Intel® 300 Series Platform Controller Hub (PCH).

Empowering the Mobile Worker

The latest U-series processor delivers 58% better overall system performance versus a 3-year old PC² and up to 11 hours of battery life for a productive work day³. Longer battery life is made possible by power management features such as Intel® Dynamic Tuning Technology, Intel® Display Power Saving Technology, and Intel® Power Optimizer. Systems may also support Microsoft Windows* Modern Standby as recommended in the Intel® vPro™ platform specification. In addition, a variety of thermal management features within the processor enable attractive mobile form factors ranging from thin and light notebooks to versatile detachable and convertible systems.

Maximum Connectivity

The new PCH offers a wide range of connectivity options including integrated Intel® Wireless-AC which supports 802.11ac Wi-Fi and Bluetooth* 5.0 when paired with the Intel® Wireless-AC 9560 external RF transceiver chip. For businesses transitioning their network infrastructure to the latest technology, some mobile systems may alternatively feature the next generation Intel® Wi-Fi 6 AX200 component for improved performance, scalability, and enhanced security via the WPA3 protocol. Remote management of the platform using Intel® Active Management Technology is possible over both Wi-Fi and wired Local Area Network connections.

In addition, the platform has been validated with the Intel® XMM 7360 M.2 module, which offers a power-efficient RF architecture supporting world coverage and up to LTE Advanced Cat. 10 speeds.

Next generation 40 Gbps Thunderbolt™ 3 enables a flexible computing experience with single-cable docking solutions that easily integrate the mobile PC into a peripheral-rich, stationary computing environment. The new PCH also supports 16 PCIe 3.0 lanes and integrated USB 3.1 Gen 2 with up to 10 Gbps data transfer rates.

intel
vPro™ Platform

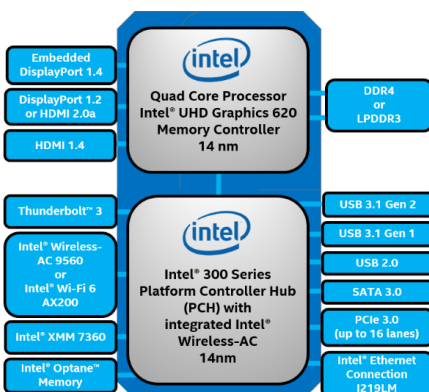


Figure 1: The Latest 8th Gen Intel® Core™ vPro™ Processor (U-Series)

Built for Business

Mobile computing systems identified by the processor SKUs and on-system brands shown on Figure 2 provide various optimizations for corporate environments. In concert with Microsoft Windows* 10 Pro or Windows 10 Enterprise versions of the operating system, mobile computers using the latest Intel Core vPro processors address the needs of both users and technology decision makers.

Platform Stability

The Intel® Stable Image Platform Program enables predictable transitions for businesses that test devices for performance, compatibility, and compliance within their computing environment. In combination with extensive validation by Intel and system vendors of multiple versions of the Windows 10 OS, businesses can deploy a consistent set of hardware and software throughout the buying cycle for that stable platform.

Manageability and Security Features

The Intel® vPro™ platform provides businesses with the tools to efficiently manage and help secure computing endpoints. Consequently, systems based on the latest 8th Gen Intel Core vPro processor support a rich suite of established and innovative features (Figure 3). For instance, Intel® Hardware Shield provides an evolving set of configurable platform protection technologies. In the latest systems, low-level system critical software may utilize Intel Hardware Shield to reduce each platform's attack surface while communicating the current set of security policies to the operating system. The capabilities of the Intel vPro platform are designed to enable, accelerate, or compliment Windows* 10 Pro and Enterprise, thus providing a robust computing solution for business.

Ready for Refresh

The latest 8th Gen Intel Core vPro processor brings mobile computing closer to the goal of anytime anywhere productivity [Figure 4]. With a new wave of designs from top vendors, businesses that refresh their computing fleets to the latest technology can reap the benefits of a more modern workplace. To learn more about the Intel vPro platform please visit intel.com/vpro.



Intel® vPro™ Platform Processor	Eligible SKU	On-System Brand
8 th Gen Intel® Core™ i7 Processor	i7-8665U	
8 th Gen Intel® Core™ i5 Processor	i5-8365U	

Figure 2: New Mobile Computing SKUs for the Intel® vPro™ Platform

Platform Feature [partial list]	Brief Description
Intel® Active Management Technology	Remote out-of-band management for efficient proactive and reactive system maintenance
Intel® Hardware Shield	A set of configurable platform protection technologies
Intel® Runtime BIOS Resilience	Intel® Hardware Shield technology providing hardened protection for system firmware
Intel® Trusted Execution Technology	Intel® Hardware Shield technology providing hardware root-of-trust for critical software
Intel® System Security Report	Communicates Intel® Hardware Shield security policies to the operating system
Intel® Authenticate Technology	Enables enforceable PC login policy requiring multiple proof points of identity
Intel® Transparent Supply Chain	Mechanism for confirming authenticity of system components
Intel® Virtualization Technology	Enables a variety of operating system security services
Intel® Threat Detection Technology	Accelerates third party security software

Figure 3: Intel® vPro™ Platform Security and Manageability Features

Feature*	Brief Description
Intel® Hyperthreading Technology	Delivers two processing threads per core so threaded applications can get more work done in parallel
Intel® Smart Cache Technology	Dynamically allocates shared cache to each processor core based on workload
Intel® Turbo Boost Technology 2.0	Dynamically increases the processor's frequency, as needed, by taking advantage of thermal and power headroom when operating below specified limits
Intel® Speed Shift Technology with Energy-Performance Preference	Delivers dramatically quicker responsiveness with single-threaded, transient workloads by allowing the processor to more quickly select its best operating frequency and voltage for optimal performance and power efficiency
Intel® Power Optimizer and Processor C-States	Increases periods of sleep state across platform ingredients to reduce power. C8-C10 states provide low idle power.
Intel® Dynamic Tuning Technology	Configurable processor power settings that dynamically adjust to help provide maximum performance based on available cooling
Intel® Low Power Display Technology	Optimizes the display technology, including the backlight and panel circuitry, to halve power consumption

Feature*	Brief Description
Intel® UHD Graphics	Gen 9 integrated Intel graphics with up to 24 Execution Units
Integrated Memory Controller	Offers stunning memory read/write performance through efficient pre-fetching algorithms, lower latency, and higher memory bandwidth (DDR4 up to 2400, LPDDR3 up to 2133)
Serial ATA (SATA)	High speed storage interface supporting up to 6 Gb/s transfer rates for optimal data access (up to 3 SATA ports)
PCI Express (PCIe) 3.0 interface	Offers up to 8 GT/s for fast access to peripheral devices and networking
Intel® Rapid Storage Technology	Offers excellent levels of performance for SATA/PCIe storage components and Intel® Optane Memory
Universal Serial Bus (USB) 3.1	Integrated USB Gen 1 and Gen 2 supports enhanced performance with a design data rate of up to 10 Gb/s
Thunderbolt™ 3 controller support	Support for Intel Thunderbolt 3 controllers (up to 40 Gb/s transfer rates) and advanced single-cable docking solutions
Intel® Integrated 10/100/1000 MAC	Support for the Intel® Ethernet Connection I219LM
Intel® CNVi	Integrated wireless connectivity for 802.11ac Wi-Fi and Bluetooth* 5.0

* Not a complete list

Figure 4: Mobile Productivity Features and Technologies

¹ Intel® vPro™ eligible i7-8665U and i5-8365U processors

² As measured by Intel (2018) using SYSmark® 2018 Overall with the following system configurations: Intel® Reference Platform with Intel® Core™ i5-8365U processor, PL1=15W TDP, 4C8T, Turbo up to 4.1 GHz, Intel® UHD Graphics 620, 2 x 4 GB DDR4-2400, 512 GB Intel® SSD 760p, Microsoft Windows* 10 RS5 Version 1809 (Build 1763v1), BIOS x177 and MCU: A8. Intel Reference Platform with Intel Core i5-6300U processor, PL1=15W TDP, 2C4T, Turbo up to 3.0 GHz, Intel® HD Graphics 520, 8 GB DDR4, 512 GB SSD, Microsoft Windows RS5 Version 1809 (Build 1763v1), BIOS x144 and MCU: C6

³ As measured by Intel (2018) using MobileMark 2018 with the following system configuration: pre-production OEM system with Intel® Core™ i7-8665U processor, PL1=15W TDP, 4C8T, Turbo up to 4.8 GHz, Intel® UHD Graphics 620, 14" screen with 1920 x 1080 resolution, 16GB RAM, Hynix 256 GB, 52 WHr battery, Microsoft Windows* 10 Pro, BIOS v.1.0.1 and MCU: AA

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