ACCELERATE PERFORMANCE

WITH 7TH GEN INTEL® CORE™ PROCESSOR FAMILY

Responsive performance, fantastic gaming & entertainment and dazzling viewing experiences across a range of form factors.

The 7th Gen Intel® Core processor family raises the bar once again on Intel's latest processors- delivering more responsive performance than ever before[1], fantastic entertainment & gaming, and more natural, intuitive interactions with your PC. Incredible processor graphics transform the viewing experience with 4K Ultra HD video, 360° video, multiple video streams, and premium content playback, enabling new ways to enjoy sharp and engaging content across a range of form factors.

OPTIMIZED FOR EFFICIENT PERFORMANCE

RESPONSIVE PERFORMANCE

7th Gen Intel Core processors utilize a power efficient microarchitecture, advanced process technology, and silicon optimizations to deliver faster performance than previous generation processors.[1]** Web browsing is snappy and responsive with Intel® Speed Shift Technology. On processors with Intel® Turbo Boost 2.0 Technology, performance and power is dynamically controlled—for cores and graphics—boosting performance precisely when it is needed, and saving energy when it counts. Both the Y-series and U-series processors support two cores and four threads with Intel® Hyper-Threading Technology (Intel® HT Technology), enabling compelling 2 in 1 designs and thin clamshells that achieve a unique balance between performance and mobility. PCs enabled with Microsoft Windows* Modern Standby are able to wake immediately at the push of a button, so users don't have to wait for their system to start up.

RICH, IMMERSIVE EXPERIENCE. Intel® HD Graphics deliver advanced performance and the new media engine for captivating visuals.[2] With 7th Gen Intel Core processors, users can easily watch, create, edit, share, and game. With the ability to view premium content up to 4K UHD from more vendors, the 7th gen Intel Core processor family allow users to enjoy amazing and vibrant multimedia experiences on compatible displays. It also enables powerful photo & video editing, multiple video streams, 360° videos and high resolution video chat. In addition, users can play their favorite PC games on-the-go in HD with fluid, texture-rich graphics. Finally, thanks to our new media engine with power efficient VP9 and HEVC 10-bit hardware acceleration, 4K viewing and content creation is significantly improved versus previous generation processors.[3]

BALANCING PERFORMANCE & MOBILITY

SIMPLICITY AND CONVENIENCE

With even more designs supporting touch, voice, and stylus input, intuitive interaction becomes prevalent with 7th Gen Intel Core processors, enabling users to simplify their interactions and unleash their creativity. On notebooks with cameras supporting Windows* Hello facial recognition, users are able to securely[4] log into a PC and websites hassle-free.

EXTENDED BATTERY LIFE

With the 7th Generation Intel Core processor family further improving power efficiency at a processor and platform level, 7th Gen Intel Core™ processor-based systems have longer battery life and can utilize smaller batteries to enable even thinner and lighter systems.[5] Dedicated hardware acceleration reduces power consumption dramatically, enabling 3X longer battery life during local 4K video playback.[6] With the Y-processor family, 2 in 1s and clamshells are reimagined, enabling thin and fanless designs for ultra-mobility. On U-series processors, enhanced productivity and creativity are possible in increasingly slim form factors.

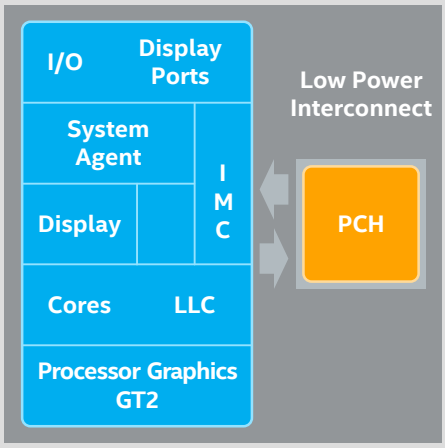
BRING IDEAS TO LIFE

VERSATILE AND FAST I/O

I/O SUPPORT

I/O in U & Y series Intel® 7th Generation Core™ processors offers Gen 3 PCIe support, supporting higher data transfer rates of 8 GT/s versus 5 GT/s with PCIe Gen 2. The latest Intel® Rapid Storage Technology supports NVMe PCIe x4 Solid State Drives and is capable of utilizing Gen 3 PCIe Speeds. The Intel® Context Sensing SDK for the Intel® Integrated Sensor Solution allows third party software vendors to develop exciting sensor-enhanced applications.

Notebooks with the versatile Thunderbolt™ 3 technology, the USB-C that does it all, provide an incredible I/O experience. A single cable conveniently supports up to 40Gbps transfer speeds, two 4K 60Hz displays, system charging up to 100W, external graphics, and Thunderbolt™ networking to bolster productivity.



7th Gen Intel® Core™ processor architecture for the Y-series and U-series.

7TH GEN INTEL® CORE™ PROCESSOR FEATURES AT A GLANCE

FEATURES[7]	BENEFITS
Intel® Turbo Boost Technology 2.0[8]	Dynamically increases the processor's frequency, as needed, by taking advantage of thermal and power headroom when operating below specified limits.
Intel® Hyper-Threading Technology[9]	Delivers two processing threads per physical core. Highly threaded applications can get more work done in parallel, completing tasks sooner.
Intel Built-In Visuals	**Intel® HD Graphics**—Allows playing of HD videos with exceptional clarity, viewing and editing of even the smallest details of photos, and playing today's modern games. **Intel® Quick Sync Video**—Delivers excellent video conferencing capability, fast video conversion, online sharing, and fast video editing and authoring. **Intel® Clear Video HD**—Visual quality and color fidelity enhancements for HD playback and immersive web browsing.
Integrated Memory Controller	Offers stunning memory read/write performance through efficient prefetching algorithms, lower latency, and higher memory bandwidth.
Intel® Smart Cache	Dynamically allocates shared cache to each processor core, based on workload, reducing latency and improving performance.
Intel® Virtualization Technology[10]	Allows one hardware platform to function as multiple "virtual" platforms. Offers improved manageability by limiting downtime and maintaining productivity by isolating computing activities into separate partitions.
Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI)[11]	Fast, secure AES engine for a variety of encryption apps, including whole disk encryption, file storage encryption, conditional access of HD content, internet security, and VoIP. Consumers benefit from protected internet and email content, plus fast, responsive disk encryption.
Intel® Power Optimizer & Processor C-States	Intel® Power Optimizer increases periods of silicon sleep state across the platform ingredients, including the CPU, chipset, and third-party system components, to reduce power. Processor C-states (C8-C10) provide low idle power.
Configurable TDP Power	With Configurable TDP, the processor is now capable of modulating the maximum sustained power vs. performance. Configurable TDP thus provides design and performance flexibility to control system performance based on the cooling capability and usage scenarios. For example, a detachable Ultrabook™ may need more performance when used in a full clamshell mode (vs. tablet mode), or when balanced performance is needed in a quiet conference room setting.

7TH GEN INTEL® CORE™ PROCESSOR FEATURES AT A GLANCE

FEATURES[7]	BENEFITS
Intel® Secure Key[12] (formerly Digital Random Number Generator [DRNG])	Security hardware-based random number generator that can be used for generating high-quality keys for cryptographic (encryption and decryption) protocols. Provides quality entropy that is highly sought after in the cryptography world for added security.
Intel® Transactional Synchronization Extensions New Instructions (TSX-NI)[13]	TSX-NI is a set of instructions focused on enterprise-level multi-threaded performance scaling, making parallel operations more efficient via improved control of software threads and locks. This offers performance benefits for enterprise-level big data analytics/business intelligence and visualization apps, which involve multi-user collaboration.
Intel® Advanced Vector Extensions (Intel® AVX) 2.0[14]	AVX 2.0 is an extension of AVX 1.0 with new optimized instructions to deliver enhanced performance on floating point–intensive apps. AVX 2.0 adds 256-bit integer instructions and new instructions for FMA (Fused Multiply Add). FMA delivers better performance on media and floating point computations, including face recognition; professional imaging; high-performance computing; consumer video and imaging; compression; and encryption.
Collaborative Processor Performance Control (CPPC)	A technology based on the ACPI 5.0 specification that dynamically modulates performance vs. active application power. It reduces active power to deliver better battery life and allows deep low power states to be reached.
Intel® Software Guard Extensions (Intel® SGX)[15]	A processor enhancement designed to help protect application integrity and confidentiality of secrets and withstand software and certain hardware attacks.
Intel® Memory Protection Extensions (Intel® MPX)[16]	Provides hardware accelerated mechanism for memory testing (heap and stack) buffer boundaries in order to identify buffer overflow attacks.
Intel® BIOS Guard[17]	Intel BIOS Guard is an augmentation of existing chipset-based BIOS flash protection capabilities targeted to address the increasing malware threat to BIOS flash storage. It helps protect the BIOS flash from modification without platform manufacturer authorization, helps defend the platform against low-level DOS (denial of service) attacks, and restores BIOS to a known good state after an attack.
Intel® Boot Guard[18]	Hardware-based boot integrity protection that helps prevent unauthorized software and malware takeover of boot blocks critical to a system's function, thus providing added level of platform security based on hardware. Configurable boot types include: **Measured Boot**—Measures the initial boot block into the platform storage device such as trusted platform module (TPM) or Intel® Platform Trust Technology (PTT). **Verified Boot**—Cryptographically verifies the platform initial boot block using the boot policy key.
Intel® Platform Trust Technology[19]	A trusted element of the platform execution that provides enhanced security by verifying the boot portion of the boot sequence on U-series processors.
VMCS shadowing	VMCS shadowing allows a Virtual Machine Manager (VMM) running in a guest (nested virtualization) to access a shadow VMCS memory area using the normal VMRead/VMWrite instructions. This technology reduces overhead for a more natural and responsive user experience. It also allows users to take control of their personal and professional data and apps while being protected by game-changing security.

7TH GEN INTEL® CORE™ PROCESSOR FEATURES AT A GLANCE

FEATURES[7]	BENEFITS
Intel® Active Management Technology (Intel® AMT) [20]	Using built-in platform capabilities and popular third-party management and security applications, Intel AMT allows IT to discover, heal, and protect computing assets on wired and wireless networks. Intel AMT is supported on platforms that have Intel® vPro™.
Intel® Rapid Storage Technology (Intel® RST) [21]	Offers excellent levels of performance, responsiveness, and expandability. Take advantage of the enhanced performance and lower power consumption available with Intel® RST with one or more SATA or PCIe storage drives. With additional SATA drives, Intel® RST provides quicker access to digital photo, video, and data files with RAID 0, 5, and 10, and greater data protection against a storage disk drive failure with RAID 1, 5, and 10. Dynamic Storage Accelerator unleashes the maximum performance of Solid State Drives (SSD) when multitasking.
Intel® Speed Shift Technology	Delivers dramatically quicker responsiveness with single-threaded, transient (short duration) workloads, such as web browsing, by allowing the processor to more quickly select its best operating frequency and voltage for optimal performance and power efficiency.
Intel® Smart Response Technology[22]	Spend less time waiting, with fast access to the files and applications you use the most.

7TH GEN INTEL® CORE™ PROCESSOR FEATURES AT A GLANCE

Y-SERIES & U-SERIES PROCESSORS

FEATURES[7]	BENEFITS
Intel® High Definition Audio[23]	Integrated audio support enables premium digital surround sound and delivers advanced features such as multiple audio streams and jack re-tasking.
Intel® Smart Sound Technology[24]	A dedicated audio Digital Signal Processor designed to process audio for media playback and voice for PC interactions like Cortana*, Nuance Dragon*, or Skype*. Enables long battery life while providing new usages and maintaining high-end audio playback.
Universal Serial Bus 3.0	Integrated USB 3.0 support enhances performance with a design data rate of up to 5 gigabits per second (Gbps) with up to 6 USB 3.0 ports. [25]
Universal Serial Bus 2.0	Hi-Speed USB 2.0 support with a design data rate of up to 480 megabits per second (Mbps) with up to 6 USB 2.0 ports in Y-series and 10 USB 2.0 ports in U-series. [25]
Serial ATA (SATA) 6 Gb/s	Next-generation high-speed storage interface supporting up to 6 Gb/s transfer rates for optimal data access with up to 2 SATA 6Gb/s ports[24] in Y-series and 3 SATA 6Gb/s ports[24] in U-series. The PCH SATA controller also supports SATA 3 Gb/s and 1.5 Gb/s transfer capabilities.
eSATA	SATA interface designed for use with external SATA devices. Provides a link for 3 Gb/s data speeds to eliminate bottlenecks found with current external storage solutions.
SATA Port Disable	Enables individual SATA ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through SATA ports. Especially targeted for eSATA ports.
PCI Express* 3.0 Interface	Offers up to 5 GT/s for fast access to peripheral devices and networking with up to 12 lanes and 6 ports.[24] PCI Express ports can be configured as x1, x2 and x4 depending on motherboard designs.
USB Port Disable	Enables individual USB ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through USB ports.
Intel® Integrated 10/100/1000 MAC	Support for the Intel® I219LM and Intel® I219V Gigabit Network Connection
Green Technology	Manufactured with lead-free and halogen-free component packages
Conflict Free	“Conflict-free” means “DRC conflict-free”, which is defined by the Securities and Exchange Commission rules to mean products that do not contain conflict minerals (tin, tantalum, tungsten and/or gold) that directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo (DRC) or adjoining countries.

7TH GEN INTEL® CORE™ PROCESSOR COMPARISON

Y-SERIES PROCESSORS	7TH GEN INTEL® CORE™ i7 PROCESSOR	7TH GEN INTEL® CORE™ i5 PROCESSOR	7TH GEN INTEL® CORE™ m3 PROCESSOR
Processor Number	i7-7Y75	i5-7Y54	m3-7Y30
Number of Processor Cores/Threads	2/4	2/4	2/4
Intel® Turbo Boost Technology 2.0[8]	Yes	Yes	Yes
Number of Memory Channels	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz)	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz)	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz)
Intel® Hyper-Threading Technology[9]	Yes	Yes	Yes
Intel® Smart Cache	Yes	Yes	Yes
Intel® AES–New Instructions (AES–NI)[11]	Yes	Yes	Yes
Intel® Advanced Vector Extensions (AVX) 2.0	Yes	Yes	Yes
Intel® HD Graphics	Yes	Yes	Yes
Intel® Quick Sync Video	Yes	Yes	Yes
Intel Clear Video HD	Yes	Yes	Yes
Intel® Virtualization Technology[10] (Intel® VT)	Yes	Yes	Yes
Windows * Modern Standby	Yes	Yes	Yes
Intel® Active Management Technology 11.0[20]	Yes	Yes	No
Intel® TSX-NI[13]	Yes[13]	Yes[13]	No
Intel® Secure Key[12]	Yes	Yes	Yes
Intel® Platform Trust Technology[19]	Yes	Yes	Yes
Intel® Boot Guard[18]	Yes	Yes	Yes
Intel BIOS Guard[17]	Yes	Yes	Yes
Conflict Free	Yes	Yes	Yes

7TH GEN INTEL® CORE™ PROCESSOR COMPARISON

U-SERIES PROCESSORS	7TH GEN INTEL® CORE™ i7 PROCESSOR	7TH GEN INTEL® CORE™ i5 PROCESSOR	7TH GEN INTEL® CORE™ i3 PROCESSOR
Processor Number	i7-7500U	i5-7200U	i3-7100U
Number of Processor Cores/Threads	2/4	2/4	2/4
Intel® Turbo Boost Technology 2.0[8]	Yes	Yes	No
Number of Memory Channels	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz, up to DDR4 2133 MHz)	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz, up to DDR4 2133 MHz)	2 (DDR3L 1600 MHz, up to LPDDR3 1866MHz, up to DDR4 2133 MHz)
Intel® Hyper-Threading Technology[9]	Yes	Yes	Yes
Intel® Smart Cache	Yes	Yes	Yes
Intel® AES–New Instructions (AES–NI)[11]	Yes	Yes	Yes
Intel® Advanced Vector Extensions (AVX) 2.0	Yes	Yes	Yes
Intel® HD Graphics	Yes	Yes	Yes
Intel® Quick Sync Video	Yes	Yes	Yes
Intel Clear Video HD	Yes	Yes	Yes
Intel® Virtualization Technology[10] (Intel® VT)	Yes	Yes	Yes
Windows * Modern Standby	Yes	Yes	Yes
Intel® Active Management Technology 11.0[20]	Yes	Yes	No
Intel® TSX-NI[13]	Yes[13]	Yes[13]	No
Intel® Secure Key[12]	Yes	Yes	Yes
Intel® Platform Trust Technology[19]	Yes	Yes	Yes
Intel® Boot Guard[18]	Yes	Yes	Yes
Intel BIOS Guard[17]	Yes	Yes	Yes
Conflict Free	Yes	Yes	Yes

Y-SERIES & U-SERIES PROCESSOR PLATFORM INPUT/OUTPUT CONFIGURATION

Y-series & U-series processors have integrated platform input/output. The following table summarizes the two configurations supported.

FEATURE[7]	PREMIUM (U/Y-Series)	BASELINE (U-Series)
Independent Displays Supported[26]	3	3
Intel® Rapid Storage Technology[21]	RAID, AHCI support	AHCI support
Intel® Smart Response Technology[22]	Yes	No
Intel® High Definition Audio[23]	Yes	Yes
Intel® Smart Sound Technology[24]	Yes	Yes
USB 3.0 Ports	Up to 6	Up to 4
USB 2.0 Ports	6 (for Y-series) & 10 (for U-series)	8
PCIe Express*	Up to 10 Gen 3 lanes[25] for Y-series and Up to 12 Gen 3 lanes[25] for U-series	Up to 10 Gen 2 lanes[25]
SATA Ports	Up to 4 SATA 6Gbps[25]	2 SATA 6Gbps[25]
I2C	6[25]	6[25]
UART	3	3
SDXC	1	1

For more information, visit www.intel.com/core

1. Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more complete information visithttp://www.intel.com/performance. For Y-Series, performance/battery life comparison based on measurement of Intel® Core™ i7-7Y75 vs. Intel® Core™ m7-6Y75 using SYSmark* 2014. System configuration info for 7th generation processor: Intel reference platform running Intel® Core™ i7-7Y75 processor, PL1=4.5W TDP, 2C4T, Turbo up to 3.6GHz/3.4GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel® SSD, Display Resolution: 1920x1080, Windows 10 Build 10586 (Intel® Speed Shift Technology mode set to Autonomous), 35Whr Battery. SYSmark 2014 is measured in BAPCo power plan. Graphics driver: 15.45.4471. System configuration for 6th Gen processor: Intel reference platform running Intel® Core™ m7-6Y75 processor, PL1=4.5W TDP, 2C4T, Turbo up to 3.1GHz/2.9GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel® SSD, Display Resolution: 1920x1080, Windows 10 Build 10586 (Intel® Speed Shift Technology mode set to Autonomous), 35Whr battery. SYSmark 2014 is measured in BAPCo power plan. Graphics driver: 15.45.4471 for CPU benchmarks, 15.40.4256 for 3D graphics benchmarks. For U-Series, performance/battery life comparison based on measurement of Intel® Core™ i7-7500U vs. Intel® Core™ i7-6500U using SYSmark* 2014. System configuration info for 7th generation processor: Intel reference platform running Intel® Core™ i7-7500U processor, PL1=15W TDP, 2C4T, Turbo up to 3.5GHz/3.5GHz, Memory: 2x4GB DDR4-2133, Storage: Intel® SSD, Display Resolution: 1920x1080, Windows 10 Build 10586 (Intel® Speed Shift Technology mode set to Autonomous), 40Whr battery. SYSmark 2014 is measured in BAPCo power plan. Graphics driver: 15.45.4471. System configuration info for 6th generation processor: Intel® reference platform running Intel® Core i7-6500U processor, PL1=15W TDP, 2C4T, Turbo up to 3.1GHz/3.0GHz, Memory: 2x4GB DDR4-2133, Storage: Intel® SSD, Display Resolution: 1920x1080, Windows 10 Build 10586 (Intel® Speed Shift Technology mode set to Autonomous), 40Whr battery. SYSmark 2014 is measured in BAPCo power plan. Graphics driver: 15.45.4471 for CPU benchmarks, 15.40.4256 for 3D graphics benchmarks.

2. Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at [intel.com].

3. Based on measurement of Intel® Core™ i7-7Y75 vs. Intel® Core™ m7-6Y75 and Intel® Core™ i7-7500U vs. Intel® Core™ i7-6500U. System configurations from footnote 25 using SEG0596 4K HEVC Content Creation benchmark.

4. No system can provide absolute security. Consult your system manufacturer for more information.

5. Based on measurement of Intel® Core™ i7-7Y75 vs. Intel® Core™ m7-6Y75 and Intel® Core™ i7-7500U vs. Intel® Core™ i7-6500U. System configurations on slide 14 using the following procedure: Disconnect all USB devices, connect to a local WiFi access point and set the screen brightness to 200 nits (disable DPST, set brightness to 200 nits on a white background and enable DPST). Wait for 10 mins for the OS to completely idle. Launch Tears of Steel (1080p H264 10MBps) video using the Universal Windows player. Measure and calculate average power for the duration of the video. Report 3 run median.

6. Based on measurement of Intel® Core™ i7-7Y75 vs. Intel® Core™ m7-6Y75 and Intel® Core™ i7-7500U vs. Intel® Core™ i7-6500U. System configurations (see slide 14) running Tears of Steel (4K 10b HEVC 24fps) video using the Universal Windows player. Measure and calculate average power for the duration of the video. Report 3 run median.

7. Not all features available on all systems.

8. Requires a system with Intel® Turbo Boost Technology. Intel Turbo Boost Technology and Intel Turbo Boost Technology 2.0 are only available on select Intel® processors. Consult your system manufacturer. Performance varies depending on hardware, software, and system configuration. For more information, visit http://www.intel.com/go/turbo.

9. Available on select Intel® Core™ processors. Requires an Intel® HT Technology-enabled system. Consult your PC manufacturer. Performance will vary depending on the specific c hardware and software used. For more information, including details on which processors support HT Technology, visit http://www.intel.com/info/hyperthreading.

10. Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, and virtual machine monitor (VMM). Functionality, performance or other benefits will vary depending on hardware and software configurations. Software applications may not be compatible with all operating systems. Consult your PC manufacturer. For more information, visit http://www.intel.com/go/virtualization.

11. Intel® AES-NI requires a computer system with an AESNI enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on select Intel® processors. For availability, consult your reseller or system manufacturer. For more information, see Intel® Advanced Encryption Standard Instructions (AES-NI).

12. No system can provide absolute security. Requires an Intel® Secure Key-enabled platform, available on select Intel processors, and software optimized to support Intel Secure Key. Consult your system manufacturer for more information.

13. Available on select processor models enabled for Intel® vPro™ Technology. For details, see ark.intel.com.

14. Intel® Advanced Vector Extensions (Intel® AVX)* are designed to achieve higher throughput to certain integer and floating point operations. Due to varying processor power characteristics, utilizing AVX instructions may cause a) some parts to operate at less than the rated frequency and b) some parts with Intel® Turbo Boost Technology 2.0 to not achieve any or maximum turbo frequencies. Performance varies depending on hardware, software, and system configuration and you should consult your system manufacturer for more information. *Intel® Advanced Vector Extensions refers to Intel® AVX, Intel® AVX2 or Intel® AVX-512. For more information on Intel® Turbo Boost Technology 2.0, visit http://www.intel.com/go/turbo

15. No system can provide absolute security. Requires an Intel® Software Guard Extensions –enabled platform, available on select Intel processors, and an enabled operating system. Consult your system manufacturer for more information.

16. No system can provide absolute security. Requires an Intel® Memory Protection Extensions–enabled platform, available on select Intel processors, and an enabled operating system. Consult your system manufacturer for more information.

17. No system can provide absolute security. Requires an Intel® BIOS Guard–enabled platform, available on select Intel processors, and an enabled operating system. Consult your system manufacturer for more information.

18. No system can provide absolute security. Requires an Intel® Boot Guard–enabled platform, available on select Intel processors, and an enabled operating system. Consult your system manufacturer for more information.

19. No system can provide absolute security. Requires an Intel® Platform Trust Technology–enabled platform, available on select Intel processors, and an enabled operating system. Consult your system manufacturer for more information.

20. Requires activation and a system with a corporate network connection, an Intel® AMT–enabled chipset, network hardware, and software. For notebooks, Intel AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating, or powered off. Results dependent upon hardware, setup, and configuration. For more information, visit Intel® Active Management Technology.

21. Requires a select Intel® Core™ processor, an enabled chipset, Intel® Rapid Storage Technology software, and a properly configured storage device. PCIe and SATA storage supported.

22. Requires an Intel® Core™ processor, an enabled chipset, Intel® Rapid Storage Technology software, and a properly configured dual drive (HDD + small SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

23. Requires an Intel® HD Audio enabled system. Consult your PC manufacturer for more information. Sound quality will depend on equipment and actual implementation. For more information about Intel HD Audio, refer to Intel® High Definition Audio.

24. Intel® Smart Sound Technology (SST) requires the use of an I2S based CODEC for operation. Intel SST cannot be used concurrently with Intel High Definition Audio. Not available on all systems. Consult your PC manufacturer for more information. Sound quality will depend on equipment and actual implementation.

25. Actual number of ports available may vary by processor number and system configuration. Please refer to the specifications corresponding to the processor number of interest or consult your system vendor for more information.

26. Display performance may vary depending on SoC power, resolution, and application.

Notices and Disclaimers

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors.

Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more complete information visithttp://www.intel.com/performance.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at intel.com.

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System Configurations:

Battery life and performance measurements on Intel Reference Platform unless otherwise noted (ie. YouTube 4K Streaming, Overwatch FPS, LoL FPS is the exception).

Intel Reference Platform is an example new system. Products available from systems manufacturers will not be identical in design, and performance will vary.

System power management policy: DC balanced for battery life measurements, AC balanced for performance measurements on 2nd Generation system and AC High Performance on 7th and 6th Generation systems. Wireless: On and connected.

7th Generation Measurements:

Intel® Core™ i7-7Y75 Processor, PL1=4.5W TDP, 2C4T, Turbo up to 3.6GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080, Intel HD Graphics 615, OS: Windows* 10 TH2.

Intel® Core™ m3-7Y30 Processor, PL1=4.5W TDP, 2C4T, Turbo up to 2.6GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080, Intel HD Graphics 615, OS: Windows* 10 TH2.

Intel® Core™ i5-7200U Processor, PL1=15W TDP, 2C4T, Turbo up to 3.1GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD, Display Resolution:1920x1080. Intel HD Graphics 620, OS: Windows* 10 TH2.

Intel® Core™ i7-7500U Processor, PL1=15W TDP, 2C4T, Turbo up to 3.5GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD, Display Resolution: 1920x1080, Intel HD Graphics 620, OS: Windows* 10 TH2.

6th Generation Measurements:

Intel® CRB, Intel® Core™ M7-6Y75 Processor, PL1=4.5W TDP , 2C4T, Turbo up to 3.1GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080, OS: Windows* 10 TH2.

Intel® CRB, Intel® Core™ i7-6500U Processor, PL1=15W TDP, 2C4T, Turbo up to 3.1, Memory: 2x4GB DDR4-2133, Storage: Intel SSD, Display Resolution: 1920x1080. Graphics Driver: 15.40.4254, OS: Windows* 10 TH2.

7th Generation 4K Measurements:

Windows 10* 4K 24fps 10bit HEVC Local Video Playback Component Average Power on 66 WHr battery Disconnect all USB devices, connect to a local WiFi access point and set the screen brightness to 200 nits (disable DPST, set brightness to 200 nits on a white background and enable DPST). Wait for 10 mins for the OS to completely idle. Launch Tears of Steel (4K H265 24fps) video using the Windows Movie & TV App. Measure and calculate average power for the duration of the video. Report 3 run median.

Battery life and performance measurements on Intel Reference Platform

Intel Reference Platform is an example new system. Products available from systems manufacturers will not be identical in design, and performance will vary.

System power management policy: DC balanced for battery life measurements, AC balanced for performance measurements on 2nd Generation system and AC High Performance on 7th generation systems. Wireless: On and connected.

7th Generation system configuration:

Intel® Core™ i5-7200U Processor, PL1=15W TDP, 2C4T, Turbo up to 3.1GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD, Display Resolution:4K. Intel HD Graphics 620, OS: Windows* 10 TH2, Battery Size: 66WHr

Intel® Core™ i5-7200U Processor

Intel® Core™ i7-6500U Processor

Refresh Comparison Measurements:

Intel® Core™ i5-2467M Processor (1.6 GHz base, up to 2.3GHz 2C4T, 17W TDP) measured on Dell* XPS13-40002sLV 13" Ultrabook, RAM: 4GB DDR3, Storage: 128GB SSD, Display: 13.3" 1366x768 resolution, Battery: 46WHr, OS: Windows* 7

Intel® CRB, Intel® Core™ M-5Y10, PL1=4.5W TDP, 2C4T, Turbo up to 2GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080, OS: Windows* 10

Competitive Systems

Apple* iPad Pro* - Apple* A9X (2T2C, 2.2 GHz) Wi-Fi Model, Storage: 128GB OS: IOS 9, Screen: 12.9-inch Resolution: 2732x2048