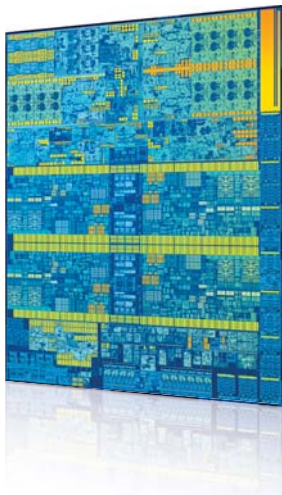intel®

Intel Sets New Standard for Computing with 6th Gen Intel® Core™ Processor Family and Intel® Xeon® Processors for Mobile Workstations – Intel's Best Processors Ever

The 6th Gen Intel® Core™ processor family and Intel® Xeon® processors for mobile workstations are Intel's newest wave of 14nm processors. Along with the Intel® 100 Series and Intel® CM236 chipsets, they deliver a leap in performance and power efficiency, provide stunning visuals, enable the broadest range of designs, and enable amazing user experiences when paired with Windows® 10. These are Intel's best processors ever, setting a new standard of computing with 2.5x better productivity performance, 3x longer battery life, and 30x better 3D graphics performance when compared to a 5-year-old notebook PC[1].

The 6th Gen Intel Core processor family is our most scalable processor family ever, enabling a diverse range of form factors to meet every lifestyle and work style–from compute sticks, tablets, ultra-thin 2 in 1 detachables and convertibles, sleek Ultrabooks™ and clamshell notebooks to All-in-One desktop PCs, mini desktops, workstations and gaming systems.

The 6th Gen Intel Core processor family and Intel Xeon processors for mobile workstations will include 48 new processors:

- Five 4.5W Intel Core Y-series processors for small-screen 2 in 1 detachables and 2 in 1 convertibles.
- Ten 15W and four 28W Intel Core U-series processors for 2 in 1 convertibles and ultra-thin clamshells.
- Six 45W Intel Core H-series processors for thin clamshells and large-screen notebooks.
- One 45W Intel Core H-series unlocked mobile K SKU for enthusiast notebooks.
- Two 45W Intel Xeon processors for mobile workstations.
- Ten 65W and eight 35W Intel Core S-series processors for gaming towers, stationary All-in-Ones, and mini PCs.
- Two 91W desktop Intel Core S-series processors for overclockers and gaming enthusiasts.

The Skylake architecture being used in 6th Gen Intel Core and Intel Xeon processors has been in development for more than four years, with the goal to deliver high processor and graphics performance, high-resolution video playback, and seamless responsiveness for fanless systems with low power usage while retaining the capability to scale up to the most powerful mobile workstations and enthusiast desktop systems. The result is immersive experiences with up to 40% better graphics performance[2] (versus the previous generation graphics) and a power-sipping 4K video playback capability. The Skylake architecture made it possible to realize a stunning improvement in energy efficiency–up to 60% for some SKUs[3]–while enabling higher levels of performance.

The Skylake architecture also enabled several firsts, including Intel Xeon processors for mobile workstations and two new desktop K SKUs, as well as a new mobile K SKU that have enhanced overclocking through BCLK and DDR4 overclocking. The 6th Gen Intel Core processor family delivers a new generation of Intel graphics and features designed to improve performance and battery life while taking full advantage of Windows 10. 6th Gen Intel Core processors introduce the powerful Intel® 500 Series graphics (including Intel® HD graphics, Intel® Iris™ graphics, and Intel® Iris™ Pro graphics) as well as other new features that may include: adaptive performance, modern standby, key feature integration such as an image signal processor[4] and eMMC memory card interface, support for DirectX 12, Intel® Speed Shift Technology, Thunderbolt™ 3 with USB-C, and broader scaling across the product family. Intel® Core™ m processors will also now include the brand levels Intel Core m3, m5 and m7 to provide people with more clarity and choice in finding the Intel Core m processor device that best suits their specific needs.

Key benefits of the 6th Gen Intel Core processor family for mobile and desktop PCs and Intel Xeon processors for mobile workstations include:

LEAP IN PERFORMANCE. 6th Gen Intel Core and Intel Xeon processors harness the power of Intel's leading 14nm process. They were designed from the ground up to take advantage of the latest 3D transistors allowing for lower power consumption and more transistors for adding capabilities and enhancing performance, such as graphics and media, while still delivering great battery life. 6th Gen Intel Core i5 processors compared to previous generation Intel Core i5 processors deliver up to 60% better compute gen on gen[5]. In addition, with Intel® Speed Shift Technology system responsiveness will increase with 20-45% performance improvement[6].

POWER EFFICIENT. Intel continues to drive battery life improvements, and the 6th Gen Intel Core processor family and Intel Xeon processors continue to deliver power efficiency savings. With power management and design improvements, plus the increased efficiency of Intel's 14nm manufacturing process and a 33% smaller package, Intel® Core™ m processor-based platforms can be thinner and lighter, with up to 10 hours of battery life[7]. In addition, Intel tests show up to 60% lower power consumption for the high-performance 6th Gen Intel Core H-series processors (45W)[8], and the benefit is more performance without sacrificing battery life.

STUNNING VISUALS. New Intel® 500 Series graphics deliver up to 40% better graphics performance[9] and 20% faster 4K transcode[10] plus dedicated hardware support for 4K playback enables a great 4K experience at a fraction of the power of previous generation systems. Processor resources are also freed up so users can interact with the system more smoothly. 6th Gen Intel Core processors support enhanced game playability including DirectX 12 games that will run fast on PCs with long battery life and that run efficiently in terms of low processor utilization.

AMAZING EXPERIENCES. The performance of 6th Gen Intel Core processors enable great user experiences today and in the future, including no wires, no passwords, and more natural and immersive user interfaces. When paired with Intel® RealSense™ technology and Windows 10, 6th Gen Intel Core processors can help remove the hassle of remembering and typing in passwords. Intel is also introducing the first long-range, world-facing Intel RealSense Camera (R200) for select 2 in 1 detachables to enable usages like 3D scan and share, depth capture and measurement, and enhanced photo and video.

With a vision for a "no wires" experience, Intel® Wireless Display (WiDi), Intel Pro WiDi, and WiGig wireless docking provide users more control over their experience by allowing them to compute and share from virtually anywhere without the clutter of wires and cords. For those that need high-bandwidth wired connectivity, 6th Gen Intel Core supports Thunderbolt™ 3 which brings Thunderbolt to USB Type-C at speeds up to 40 Gbps – eight times faster than USB 3.0 – creating one compact port that does it all, delivering the fastest, most versatile connection to any dock, device, or display. Natural user interfaces such as using one's voice to get more done rather than a keyboard and mouse are possible.

BETTER SECURITY. The Skylake architecture has been designed to enable better security, including Intel® Software Guard Extensions (Intel® SGX) that can provide an additional level of hardware-based protection by putting data into a secure container on the platform, and Intel® Memory Protection Extensions (Intel® MPX) that can help prevent buffer flow attacks. To be fully utilized, Intel SGX and Intel MPX require additional software capabilities, which will begin to be delivered by the ecosystem later this year.

Intel has partnered with Microsoft for the best Windows 10 experiences:

Intel has partnered with Microsoft to optimize Windows® 10 experiences on 6th Gen Intel Core-powered systems and devices. Intel's platform innovations together with Windows 10 create new experiences that help people have more secure PCs while removing the hassle of remembering and typing passwords, manage their lives without ever having to touch a keyboard and mouse, enjoy stunning 4K video content, and enable new levels of performance. For example:

- Windows Hello and the Intel RealSense Camera (F200) enable a fast, more secure user authentication and login through advanced facial recognition for a superior, power-managed user experience.
- Cortana* personal digital assistant with improved speech algorithm tuning, voice activation capabilities and improvements in microphone, power, latency, and responsiveness. Additionally, upcoming support for hardware offload for improved power/performance on 6th Gen Intel Core processors.

Lineup and availability:

The new 6th Gen Intel Core processor family and Intel Xeon for mobile workstations include the following:

- Intel Core m3, Intel Core m5 and Intel Core m5 vPro™, Intel Core m7 and Intel Core m7 vPro
- Intel Core i3, Intel Core i5 and Intel Core i5 vPro, Intel Core i7 and Intel Core i7 vPro
- Intel Xeon E3-1500M v5

OEMs will be introducing new products based on 6th Gen Intel Core across a range of form factors that are coming available now with many more coming over the next few months. Also available this year will be Intel Xeon and Intel® Pentium® processors. Intel Core m5 vPro and Intel Core m7 vPro, as well as Intel® Celeron® processors will be available early next year. For more information, visit www.intel.com.

6TH GEN INTEL® CORE MOBILE PROCESSOR™ SKU DETAIL

PROCESSOR NAME		INTEL® CORE m7 PROCESSORS (Y-SERIES)	INTEL® CORE m5 PROCESSORS (Y-SERIES)		INTEL® CORE m3 PROCESSORS (Y-SERIES)	INTEL® PENTIUM® PROCESSORS (Y-SERIES)
Processor Number		m7-6Y75	m5-6Y57	m5-6Y54	m3-6Y30	4405Y
Cores/ Threads		2/4	2/4	2/4	2/4	2/4
Base Frequency (GHz)		1.2	1.1	1.1	0.9	1.5
INTEL® TURBO BOOST TECHNOLOGY 2.0	Maximum Single Core Turbo (GHz)	3.1	2.8	2.7	2.2	N/A
	Maximum Dual Core Turbo (GHz)	2.9	2.4	2.4	2.0	N/A
	Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A	N/A
Graphics		Intel® HD Graphics 515	Intel® HD Graphics 515	Intel® HD Graphics 515	Intel® HD Graphics 515	Intel® HD Graphics 515
Graphics Base / Maximum Freq (MHz)		300/1000	300/900	300/900	300/850	300/800
LPDDR3/DDR3L Memory Speed Support (MHz)		1866/1600	1866/1600	1866/1600	1866/1600	1866/1600
L3 Cache		4MB	4MB	4MB	4MB	2MB
TDP		4.5W	4.5W	4.5W	4.5W	6W
cTDP Up/Down		7W / 3.5W	7W / 3.5W	7W / 3.5W	7W / 3.8W	N/A / 4.5W
Tj (deg)		100	100	100	100	100
SDP		3W	3W	3W	3W	N/A
Tj @ SDP (deg)		N/A	–	–	–	–
Intel® SIPP		2016	2016	–	–	–
INTEL® TECHNOLOGIES	Intel® vPro™	X	X	–	–	–
	Intel TXT	X	X	–	–	–
	Intel VT-d	X	X	X	X	–
	Intel VT-x	X	X	X	X	X
	AES-NI	X	X	X	X	X
1ku Pricing		$393	$281	$281	$281	TBD

6TH GEN INTEL® CORE MOBILE PROCESSOR™ SKU DETAIL   (15W)

PROCESSOR NAME		INTEL® CORE i7 PROCESSORS (U-SERIES)				INTEL® CORE i5 PROCESSORS (U-SERIES)				INTEL® CORE i3 PROCESSORS (U-SERIES)	INTEL® PENTIUM® PROCESSORS (U-SERIES)
Processor Number		i7-6650U	i7-6600U	i7-6560U	i7-6500U	i5-6360U	i5-6300U	i5-6260U	i5-6200U	i3-6100U	4405U
Cores/ Threads		2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4
Base Frequency (GHz)		2.2	2.6	2.2	2.5	2.0	2.4	1.8	2.3	2.3	2.1
INTEL® TURBO BOOST TECHNOLOGY 2.0	Maximum Single Core Turbo (GHz)	3.4	3.4	3.2	3.1	3.1	3.0	2.9	2.8	N/A	N/A
	Maximum Dual Core Turbo (GHz)	3.2	3.2	3.1	3.0	2.9	2.9	2.7	2.7	N/A	N/A
	Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Graphics		Intel® Iris™ Graphics 540	Intel® HD Graphics 520	Intel® Iris™ Graphics 540	Intel® HD Graphics 520	Intel® Iris™ Graphics 540	Intel® HD Graphics 520	Intel® Iris™ Graphics 540	Intel® HD Graphics 520	Intel® HD Graphics 520	Intel® HD Graphics 510
Graphics Base / Maximum Freq (MHz)		300/ 1050	300/ 1050	300/ 1050	300/ 1050	300/ 1000	300/ 1000	300/ 950	300/ 1000	300/ 1000	300/ 950
LPDDR3 Memory Speed Support (MHz)		1866	1866	1866	1866	1866	1866	1866	1866	1866	1866
DDR3L/DDR4 Memory Speed Support (MHz)		1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133
L3 Cache		4MB	4MB	4MB	4MB	4MB	3MB	4MB	3MB	3MB	2MB
TDP		15W	15W	15W	15W	15W	15W	15W	15W	15W	15W
cTDP Up/Down		9.5W	7.5W	9.5W	7.5W	9.5W	7.5W	9.5W	7.5W	7.5W	10W
Tj (deg)		100	100	100	100	100	100	100	100	100	100
Intel® SIPP		2016	2016	–	–	2016	2016	–	–	–	–
INTEL® TECHNOLOGIES	Intel® vPro™	X	X	–	–	X	X	–	–	–	–
	Intel TXT	X	X	–	–	X	X	–	–	–	–
	Intel VT-d	X	X	X	X	X	X	X	X	X	X
	Intel VT-x	X	X	X	X	X	X	X	X	X	X
	AES-NI	X	X	X	X	X	X	X	X	X	X
Package Type		BGA	BGA	BGA	BGA	BGA	BGA	BGA	BGA	BGA	BGA
1ku Pricing		TBD	$393	TBD	$393	TBD	$281	TBD	$281	$281	TBD

6TH GEN INTEL® CORE MOBILE PROCESSOR™ SKU DETAIL (28W)

PROCESSOR NAME	INTEL® CORE i7 PROCESSORS (U-SERIES)	INTEL® CORE i5 PROCESSORS (U-SERIES)		INTEL® CORE i3 PROCESSORS (U-SERIES)
Processor Number	i7-6567U	i5-6287U	i5-6267U	i3-6167U
Cores/ Threads	2/4	2/4	2/4	2/4
Base Frequency (GHz)	3.3	3.1	2.9	2.7
INTEL® TURBO BOOST TECHNOLOGY 2.0 Maximum Single Core Turbo (GHz)	3.6	3.5	3.3	N/A
Maximum Dual Core Turbo (GHz)	3.4	3.3	3.1	N/A
Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A
Graphics	Intel® Iris™ Graphics 550	Intel® Iris™ Graphics 550	Intel® Iris™ Graphics 550	Intel® Iris™ Graphics 550
Graphics Base / Maximum Freq (MHz)	300/1100	300/1100	300/1050	300/1000
LPDDR3 Memory Speed Support (MHz)	1866	1866	1866	1866
DDR3L/DDR4 Memory Speed Support (MHz)	1600/2133	1600/2133	1600/2133	1600/2133
L3 Cache	4MB	4MB	4MB	3MB
TDP	28W	28W	28W	28W
cTDP Down	23W	23W	23W	23W
Tj (deg)	100	100	100	100
Intel® SIPP	–	–	–	–
INTEL® TECHNOLOGIES Intel® vPro™	–	–	–	–
Intel TXT	–	–	–	–
Intel VT-d	X	X	X	X
Intel VT-x	X	X	X	X
AES-NI	X	X	X	X
Package Type	BGA	BGA	BGA	BGA
1ku Pricing	TBD	TBD	TBD	TBD

6TH GEN INTEL® CORE MOBILE PROCESSOR™ SKU DETAIL (45W)

PROCESSOR NAME	INTEL® CORE i7 PROCESSORS (H-SERIES)				INTEL® CORE i5 PROCESSORS (H-SERIES)		INTEL® CORE i3 PROCESSORS (H-SERIES)
Processor Number	i7-6920HQ	i7-6820HQ	i7-6820HK	i7-6700HQ	i5-6440HQ	i5-6300HQ	i3-6100H
Cores/ Threads	4/8	4/8	4/8	4/8	4/4	4/4	2/4
Base Frequency (GHz)	2.9	2.7	2.7	2.6	2.6	2.3	2.7
INTEL® TURBO BOOST TECHNOLOGY 2.0 Maximum Single Core Turbo (GHz)	3.8	3.6	3.6	3.5	3.5	3.2	2.7
Maximum Dual Core Turbo (GHz)	3.6	3.4	3.4	3.3	3.3	3.0	2.7
Maximum Quad Core Turbo (GHz)	3.4	3.2	3.2	3.1	3.1	2.8	N/A
Graphics	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530
Graphics Base / Maximum Freq (MHz)	350/1050	350/1050	350/1050	350/1050	350/950	350/950	350/900
LPDDR3 Memory Speed Support (MHz)	1866	1866	1866	1866	1866	1866	1866
DDR3L/DDR4 Memory Speed Support (MHz)	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133	1600/ 2133
L3 Cache	8MB	8MB	8MB	6MB	6MB	6MB	3MB
TDP	45W	45W	45W	45W	45W	45W	35W
Tj (deg)	100	100	100	100	100	100	100
Intel® SIPP	2015	2015	–	–	2015	–	–
INTEL® TECHNOLOGIES Intel® vPro™	X	X	–	–	X	–	–
Intel TXT	X	X	–	–	X	–	–
Intel VT-d	X	X	X	X	X	X	X
Intel VT-x	X	X	X	X	X	X	X
AES-NI	X	X	X	X	X	X	X
Package Type	BGA	BGA	BGA	BGA	BGA	BGA	BGA
1ku Pricing	$568	$378	$378	$378	$250	$250	$225

INTEL® XEON® MOBILE PROCESSOR™ SKU DETAIL (45W)

PROCESSOR NAME		INTEL® XEON® PROCESSORS (H-SERIES)	
Processor Number		E3-1535M v5	E3-1505M v5
Cores/ Threads		4/8	4/8
Base Frequency (GHz)		2.9	2.8
INTEL® TURBO BOOST TECHNOLOGY 2.0	Maximum Single Core Turbo (GHz)	3.8	3.7
	Maximum Dual Core Turbo (GHz)	3.6	3.5
	Maximum Quad Core Turbo (GHz)	3.4	3.3
Graphics		Intel® HD Graphics P530	Intel® HD Graphics P530
Graphics Base / Maximum Freq (MHz)		350/1050	350/1050
LPDDR3 Memory Speed Support (MHz)		1866	1866
DDR3L/DDR4 Memory Speed Support (MHz)		1600/2133	1600/2133
L3 Cache		8MB	8MB
TDP		45W	45W
Tj (deg)		100	100
Intel® SIPP		2015	2015
INTEL® TECHNOLOGIES	Intel® vPro™	X	X
	Intel TXT	X	X
	Intel VT-d	X	X
	Intel VT-x	X	X
	AES-NI	X	X
Package Type		BGA	BGA
1ku Pricing		$623	$434

6TH GEN INTEL® CORE DESKTOP PROCESSOR™ SKU DETAIL (35W)

PROCESSOR NAME	INTEL® CORE i7 PROCESSORS (S-SERIES)	INTEL® CORE i5 PROCESSORS (S-SERIES)			INTEL® CORE i3 PROCESSORS (S-SERIES)		INTEL® PENTIUM® PROCESSORS (S-SERIES)	
Processor Number	i7-6700T	i5-6600T	i5-6500T	i5-6400T	i3-6300T	i3-6100T	G4500T	G4400T
Cores/ Threads	4/8	4/4	4/4	4/4	2/4	2/4	2/2	2/2
Base Frequency (GHz)	2.8	2.7	2.5	2.2	3.3	3.2	3.0	2.9
INTEL® TURBO BOOST TECHNOLOGY 2.0 Maximum Single Core Turbo (GHz)	3.6	3.5	3.1	2.8	N/A	N/A	N/A	N/A
Maximum Dual Core Turbo (GHz)	3.5	3.4	3.0	2.7	N/A	N/A	N/A	N/A
Maximum Quad Core Turbo (GHz)	3.4	3.3	2.8	2.5	N/A	N/A	N/A	N/A
Graphics	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 510
Graphics Base / Maximum Freq (MHz)	350/1100	350/1100	350/1100	350/950	350/950	350/950	350/950	350/950
DDR4 Memory Speed Support (MHz)	2133	2133	2133	2133	2133	2133	2133	2133
DDR3L Memory Speed Support (MHz)	1600	1600	1600	1600	1600	1600	1600	1600
L3 Cache	8MB	6MB	6MB	6MB	4MB	3MB	3MB	3MB
TDP[1]	35W	35W	35W	35W	35W	35W	35W	35W
Tj (deg)	100	100	100	100	100	100	100	100
Intel® SIPP	2015	2015	2015	–	–	–	–	–
INTEL® TECHNOLOGIES Intel® vPro™	X	X	X	–	–	–	–	–
Intel TXT	X	X	X	–	–	–	–	–
Intel VT-d	X	X	X	X	X	X	X	X
Intel VT-x	X	X	X	X	X	X	X	X
AES-NI	X	X	X	X	X	X	X	X
Package Type	LGA	LGA	LGA	LGA	LGA	LGA	LGA	LGA
1ku Pricing	Tray $303	Tray $213	Tray $192	Tray $182	Tray $138	Tray $117	Tray $75	Tray $64

6TH GEN INTEL® CORE DESKTOP PROCESSOR™ SKU DETAIL (65W)

PROCESSOR NAME	INTEL® CORE i7 PROCESSORS (S-SERIES)	INTEL® CORE i5 PROCESSORS (S-SERIES)			INTEL® CORE i3 PROCESSORS (S-SERIES)			INTEL® PENTIUM® PROCESSORS (S-SERIES)		
Processor Number	i7-6700	i5-6600	i5-6500	i5-6400	i3-6320	i3-6300	i3-6100	G4520	G4500	G4400
Cores/ Threads	4/8	4/4	4/4	4/4	2/4	2/4	2/4	2/2	2/2	2/2
Base Frequency (GHz)	3.4	3.3	3.2	2.7	3.9	3.8	3.7	3.6	3.5	3.4
INTEL® TURBO BOOST TECHNOLOGY 2.0 — Maximum Single Core Turbo (GHz)	4.0	3.9	3.6	3.3	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Dual Core Turbo (GHz)	3.9	3.8	3.5	3.3	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Quad Core Turbo (GHz)	3.7	3.6	3.3	3.1	N/A	N/A	N/A	N/A	N/A	N/A
Graphics	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 510
Graphics Base / Maximum Freq (MHz)	350/ 1150	350/ 1150	350/ 1050	350/ 950	350/ 1150	350/ 1150	350/ 1050	350/ 1050	350/ 1050	350/ 1050
DDR4 Memory Speed Support (MHz)	2133	2133	2133	2133	2133	2133	2133	2133	2133	2133
DDR3L Memory Speed Support (MHz)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
L3 Cache	8MB	6MB	6MB	6MB	4MB	4MB	3MB	3MB	3MB	3MB
TDP[1]	65W	65W	65W	65W	47W	47W	47W	47W	47W	47W
Tj (deg)	100	100	100	100	100	100	100	100	100	100
Intel® SIPP	2015	2015	2015	–	–	–	–	–	–	–
INTEL® TECHNOLOGIES — Intel® vPro™	X	X	X	–	–	–	–	–	–	–
Intel TXT	X	X	X	–	–	–	–	–	–	–
Intel VT-d	X	X	X	X	X	X	X	X	X	X
Intel VT-x	X	X	X	X	X	X	X	X	X	X
AES-NI	X	X	X	X	X	X	X	X	X	X
Package Type	LGA	LGA	LGA	LGA	LGA	LGA	LGA	LGA	LGA	LGA
1ku Pricing	Box $312 Tray $303	Box $224 Tray $213	Box $202 Tray $192	Box $187 Tray $182	Box $157 Tray $149	Box $147 Tray $138	Box $117 Tray $117	Box $93 Tray $86	Box $82 Tray $75	Box $64 Tray $64

6TH GEN INTEL® CORE DESKTOP PROCESSOR™ SKU DETAIL (91W)

PROCESSOR NAME		INTEL® CORE™ i7 PROCESSORS (S-SERIES)	INTEL® CORE™ i5 PROCESSORS (S-SERIES)
Processor Number		i7-6700K	i5-6600K
Cores/ Threads		4/8	4/4
Base Frequency (GHz)		4.0	3.5
INTEL® TURBO BOOST TECHNOLOGY 2.0	Maximum Single Core Turbo (GHz)	4.2	3.9
	Maximum Dual Core Turbo (GHz)	4.0	3.8
	Maximum Quad Core Turbo (GHz)	4.0	3.6
Graphics		Intel® HD Graphics 530	Intel® HD Graphics 530
Graphics Base / Maximum Freq (MHz)		350/1150	350/1150
DDR4 Memory Speed Support (MHz)		2133	2133
DDR3L Memory Speed Support (MHz)		1600	1600
L3 Cache		8MB	6MB
TDP[1]		91W	91W
Tj (deg)		100	100
Intel® SIPP		–	–
INTEL® TECHNOLOGIES	Intel® vPro™	–	–
	Intel TXT	–	–
	Intel VT-d	X	X
	Intel VT-x	X	X
	AES-NI	X	X
Package Type		LGA	LGA
1ku Pricing		Box $350 Tray $339	Box $243 Tray $242

1   6th Gen Intel Core i5-6200U (43WHr batter size) to a 5 year old PC based on Intel Core i5-520UM (62WHr battery size): 2.5x better performance (SYSmark*2014), 3x better battery life (Windows* 10 on i5-6200U and Windows 7 on i5-520UM), 30x better graphics performance (3D Mark Cloud Gate graphics test sub-score).
2   Intel® Core™ M7-6Y75 (PL1=4.5W) compared to Intel® Core™ M-5Y71 (PL1=4.5W) using 3DMark* 1.2.0 Sky Diver
3   60% improvement in energy efficiency (CPU+PCH) achieved when comparing 6th Gen Intel® Core™ processor i7-6920HQ to a 4th Gen Intel® Core™ processor i7-4910MQ Windows 10 Local HD Video Playback
4   Image signal processing is integrated only for "U" and "Y" series processor SKUs.
5   Intel® Core™ i5-6300HQ vs. Intel® Core™ i5-4300M estimated SPEC*int_rate_base2006
6   Intel® Core™ i5-6200U WebXPRT*2015 (20% Overall) and up to 45% for photo enhancement subtest of WebXPRT*2015
7   Projection Intel® Core™ M7-6Y75 for local 1080p video playback with 36WHr battery
8   Intel® Core™ i7-6920HQ compared to Intel® Core™ i7-4910MQ Windows 10 HD Local video playback
9   Intel® Core™ M7-6Y75 (PL1=4.5W) compared to Intel® Core™ M-5Y71 (PL1=4.5W) 3DMark* 1.2.0 Sky Diver
10 Intel® Core™ M7-6Y75 compared to Intel® Core™ M-57Y1 for 4k transcode using CyberLink Media Expresso 7 UHD

Benchmark information:

3DMark* is a benchmark from Futuremark* that measures DX* 9 / OpenGL* ES 2.0, DX 10 and DX 11 gaming performance. There are four main tests: "Ice Storm" for DX 9 / OpenGL ES 2.0, "Sling Shot" for OpenGL ES 3.0/1, "Cloud Gate" for DX 10, "Sky Diver" for DX11 and "Fire Strike" for DX 11 graphics.

SPEC* CPU2006 is a benchmark from the SPEC consortium that measures device performance and throughput using compute intensive application subtests. SPECint*_base2006 measures how fast a device completes a single integer compute task. SPECint*_rate_base2006 measures throughput, or how many integer compute tasks a device can accomplish in a given amount of time.

Windows* HD Local Video Playback Component Average Power. 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 Windows metro player. 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 Configurations:

Intel CRB, Intel® Core™ M-5Y71, PL1=4.5W TDP, 2C4T, Turbo up to 2.9GHz/2.6GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080.

Intel CRB, Intel® Core™ M7-6Y75, PL1=4.5W TDP 1 PL1=4.5W TDP , 2C4T, Turbo up to 3.1GHz/2.9GHz, Memory: 2x2GB LPDDR3-1600, Storage: Intel SSD, Display Resolution:1920x1080.

Intel CRB, Intel® Core i7-6920HQ, 45W TDP, 4C8T, Turbo up to 3.8GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD 240GB 535 Series, Display Resolution:1920x1200.

Intel CRB, Intel® Core™ i5-6200U, PL1=15W TDP, 2C4T, Turbo up to 3.4GHz/3.2GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD, Display Resolution:1920x1080. Graphics driver: 15.40.4225

Intel® Core™ i5-520UM processor (up to 1.86 GHz, 4T/2C, 3M cache) on Acer Aspire One* 1830T-3721:18W thermal design power. BIOS: Insyde v.1.11*, Graphics: Intel HD Graphics (driver v. 8.15.10.2104), Memory: 8 GB (2 x 4 GB) DDR3 1333 Mhz, HDD: Seagate* 500 GB, OS: Windows* 7, Battery size: 62 Wh.

Intel CRB, Intel® Core i5-6300HQ, 45W TDP, 4C4T, Turbo up to 3.2GHz, Memory: 2x4GB DDR4-2133, Storage: Intel SSD 240GB 535 Series, Display Resolution:1920x1200.

Intel CRB, Intel® Core i5-4300M, 37W TDP, 2C4T, Turbo up to 3.3GHz, Memory: 2x4GB DDR3-1600, Storage: Intel SSD 240GB 535 Series, Display Resolution:1920x1200.

Intel CRB, Intel® Core™ i7-4910MQ 47W TDP, 4C8T, Turbo up to 3.9GHz, Memory: 2x4GB DDR3L-1600, Storage: Intel SSD, Display Resolution:1920x1200.