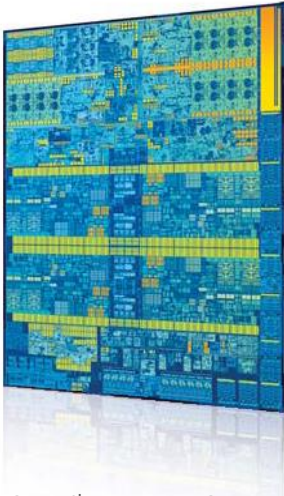# Intel Takes Computing to the Next Level with 7th Gen Intel® Core™ Processor Family and Intel® Xeon® Processors for Mobile Workstations

The 7th Gen Intel® Core™ processor family is based on Intel's latest, most advanced 14nm+ process technology and delivers new levels of **performance** and **security**.[1] These processors – along with their compatible chipsets – open up a world of **rich and immersive** experiences for consumers, enterprises, and performance-hungry gaming and media enthusiasts. **Simplicity and convenience** combine with **increased battery life** and **I/O support** to boost users' productivity and unleash their creativity. With a range of smart, stylish designs and sizes, there is a 7th Gen Intel Core processor-powered computer to fit every life and workstyle.

The 7th Gen Intel Core processor family provides **something for everyone** with an array of form factors to choose from, including: compute sticks, ultra-thin 2 in 1 detachables and convertibles, thin and light laptops, high-performance laptops, a range of desktops, All-in-Ones and minis, and Intel® Xeon® processor-based mobile workstations.

Lineup and Availability:

The new 7th Gen Intel Core processor and Intel Xeon processor family includes new processors for a range of systems and needs

- 4.5W Intel® Core™ vPro™ processors (Y-series) for 2 in 1 detachables
- 15W Intel Core vPro, 15W and 28W Intel Core processors (U-series) for 2 in 1 convertibles and thin and light clamshells including SKUs with Intel® Iris™ Plus graphics
- 45W Intel Core vPro processors (H-series) for large-screen clamshells and premium notebooks
- 45W Intel Core mobile processor (H-series), unlocked[2] SKUs for enthusiast and VR-capable notebooks
- 45W Intel Xeon processors for mobile workstations
- 65W Intel Core and Intel Core vPro processors (S-series) for mainstream towers
- 65W and 35W Intel Core and Intel Core vPro processors (S-series) for All-in-Ones and minis
- 95W and 65W Intel Core processors (S-series) for enthusiast towers, including unlocked[2] SKUs

Key features and benefits:

AMAZING PLATFORM PERFORMANCE AND RESPONSIVENESS.
Intel's advanced 14nm+ process technology is the foundation for the entire 7th Gen Intel Core processor family, delivering performance improvements over previous-generation processors. For the enthusiast, choosing unlocked[2] notebook and desktop processors provides the opportunity to tune performance to its fullest potential in order to get the most out of games and virtual reality experiences, with performance headroom left over for live broadcasting.

On Intel Core i5 and i7 processors with Intel® Turbo Boost 2.0 Technology[3], performance and power are dynamically controlled boosting performance precisely when it is needed, and saving energy when it counts. Intel® Speed Shift Technology[3] allows control of processor performance states (or P states) to be managed by the hardware instead of the OS. The result is the system can get to peak turbo frequencies much faster, allowing tasks to complete quicker, and then return to idle faster. In addition, Intel® Ready Mode Technology[3] keeps PCs on and updated while retaining fast responsiveness.

With Intel® Optane™ Memory Ready motherboards and systems, one can add Intel Optane memory purchased aftermarket for a snappy PC experience with short boot times and fast application launches, and to help accelerate day-to-day compute tasks.

RICH, IMMERSIVE EXPERIENCES.
Entertainment, media creation and gaming reach new levels with the newest generation of Intel processors combined with Intel Iris™ Plus and Intel® HD Graphics. Thanks to our improved media engine with power-efficient VP9 and HEVC 10-bit hardware acceleration, 4K viewing and content creation are improved versus previous generation processors.[4] Users can multi-stream HD and Ultra HD video content and enjoy Netflix* premium movies and TV shows in vivid 4K UHD. Users can enjoy a fluid and immersive gaming experience with Intel Iris Plus graphics at 1080p. Intel 7Th Gen Intel Core processors with Intel Iris Plus graphics has tremendous performance.

3D Graphics Performance alone is 6.6x better than a 5-year-old desktop PC[5] and high-performance 7th Gen Intel Core H-series and S-series processors deliver amazing VR experiences through incredible CPU performance providing balanced specs that AAA games demand in order to maximize play. Intel HD graphics in 7th Gen Intel Core platforms enhance gameplay at 720p.

SIMPLICITY AND CONVENIENCE.
PCs with 7th Gen Intel Core processors are expected to increasingly include touch, voice and stylus inputs, helping users to simplify their interactions and unleash their creativity. Using new features like voice control and facial recognition, users can log in hassle-free with Windows* Hello[6] and True Key™ by Intel, enabled by the 7th Gen Intel Core i-series and m3-series processors.

EXTENDED BATTERY LIFE.
Intel continues to drive power efficiency improvements at the processor and platform level to increase battery life and enable even smaller and thinner[4] devices. Dedicated hardware acceleration reduces power consumption dramatically. With the Y-series processor family, 2 in 1s 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 without sacrificing battery life – in fact, new 7th Gen Intel Core U-series processors now provide up to 10 hours[5] of battery life for the whole workday. Modern Standby ensures laptops resume with data ready in a flash.

SOMETHING FOR EVERYONE.
This generation of Intel's best-performing processors, from 4.5 – 91W, provides a range of form factor options from the thinnest detachables to enthusiast class performance desktops and more.

I/O SUPPORT.
A range of I/O solutions are available with the 7th Gen Intel Core processor family creating multiple ways to interact with new devices:

- **Thunderbolt™ 3**. Doubling the bandwidth of the previous generation, Thunderbolt 3 transfers data 8x faster than USB 3.0.[6] Plus, for the first time, you can run data, video and power over a single cable. 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 40 Gbps transfer speeds, two 4K 60 Hz displays, system charging up to 100W, external graphics, and Thunderbolt networking to bolster productivity.

- **Gen 3 PCIe Support.** 7th Gen Intel Core processors offer Gen 3 PCIe support for 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. DT systems will offer 15 percent more I/O capability[3] over the previous generation.

SECURITY.
7th Gen Intel Core vPro processors include a variety of hardened security[1] features built into the silicon. Intel® Authenticate Technology provides a robust multifactor solution that is protected in hardware, reducing users' exposure to identity theft attacks such as phishing and screen scraping. With fingerprint, Bluetooth proximity, protected PIN, location, and facial recognition, there are plenty of options for policy customization on PCs.

For consumers, adding biometrics plus hardware-based security makes it both easier and safer to buy online. Intel is working with partners to enable secure fingerprint touch to pay and Secure Guest Checkout, which provides hardware-level data protection[3] to better verify that you are you.

Intel is also working with Password Manager providers to provide simpler and more secure web login to online sites and services through password manager applications that take advantage of Intel security hardware. These password managers can take advantage of Intel® Software Guard Extensions to manage passwords with access through a protected master password that is secured in hardware.

Use of two-factor authentication defeats a vast number of attacks targeting online user passwords. Intel® Online Connect provides consumers with hassle-free, built-in, two-factor authentication for Dropbox* and other industry-leading online services.

3

WINDOWS* 10 SUPPORT.
Intel has partnered with Microsoft* to optimize Windows* 10 experiences on 7th Gen Intel Core processor-powered devices. Intel's platform innovations combined with Windows* 10 deliver benefits for both consumer and business users. Using Windows* Hello[8] removes the hassle of remembering and typing passwords. Other features such as Windows* Ink[11] provide a more natural way to interact with your device, making it as easy to use as pencil and paper.

New Chipsets for 7th Gen Intel Core Processor Family and New Intel Xeon Processors for Mobile Workstations

In addition to processors, Intel also is introducing eight new chipsets that tailor this incredibly responsive, immersive experience to a range of form factors and user needs. The Intel 200 series of chipsets offers 15 percent more I/O lanes[3] with port flexibility for a range of designs and are Intel Optane Memory ready.

For Desktop

- Intel® Q270 and Q250 chipsets enhance manageability and security[1]
- Intel® Z270 chipset for tuning capabilities with unlocked[2] Intel Core processors
- Intel® H270 chipset for improving visual display and performance for media creation
- Intel® B250 chipset to enable performance, manageability and security[1] features useful for small- and medium-sized businesses

For Mobile

- Intel® CM238, Intel® HM175 and Intel® QM175 chipsets with fast I/O and other performance benefits as well as sensor support for mobile 7th Gen Intel Core and Intel Xeon processors.

7TH GEN INTEL CORE PROCESSOR SKU DETAIL   Y-SERIES

PROCESSOR NAME		INTEL CORE i7 PROCESSOR	INTEL CORE i5 PROCESSOR		INTEL CORE m3 PROCESSOR
Processor Number		i7-7Y75	i5-7Y57	i5-7Y54	m3-7Y30
Cores/Threads		2/4	2/4	2/4	2/4
Base Frequency (GHz)		1.3	1.2	1.2	1.0
INTEL® TURBO BOOST TECHNOLOGY 2.0[3]	Maximum Single Core Turbo (GHz)	3.6	3.3	3.2	2.6
	Maximum Dual Core Turbo (GHz)	3.4	2.9	2.8	2.4
	Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A
Graphics		Intel® HD Graphics 615	Intel® HD Graphics 615	Intel® HD Graphics 615	Intel® HD Graphics 615
Graphics Base / Maximum Freq (MHz)		300/1050	300/950	300/950	300/900
LPDDR3/DDR3L Memory Speed Support (MHz)		1866/1600	1866/1600	1866/1600	1866/1600
L3 Cache		4MB	4MB	4MB	4MB
TDP		4.5W	4.5W	4.5W	4.5W
cTDP Up/Down		7W / 3.5W	7W / 3.5W	7W / 3.5W	7W / 3.75W
Tj (deg)		100	100	100	100
Tj @ SDP (deg)		N/A	–	–	–
Intel® SIPP		✓	✓	–	–
INTEL® TECHNOLOGIES	Intel® vPro™	✓	✓	–	–
	Intel® TXT	✓	✓	–	–
	Intel® VT-d	✓	✓	✓	✓
	Intel® VT-x	✓	✓	✓	✓
	AES-NI	✓	✓	✓	✓
1ku Pricing		$ 393.00	$281.00	$281.00	$281.00

7TH GEN INTEL® CORE™ PROCESSOR SKU DETAIL — U-SERIES (15W) INTEL® HD GRAPHICS

PROCESSOR NAME	INTEL CORE i7 PROCESSOR		INTEL CORE i5 PROCESSOR		INTEL CORE i3 PROCESSOR
Processor Number	i7-7600U	i7-7500U	i5-7300U	i5-7200U	i3-7100U
Cores/Threads	2/4	2/4	2/4	2/4	2/4
Base Frequency (GHz)	2.8	2.7	2.6	2.5	2.4
INTEL® TURBO BOOST TECHNOLOGY 2.0³ Maximum Single Core Turbo (GHz)	3.9	3.5	3.5	3.1	N/A
Maximum Dual Core Turbo (GHz)	3.9	3.5	3.5	3.1	N/A
Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A	N/A
Graphics	Intel® HD Graphics 620	Intel® HD Graphics 620	Intel® HD Graphics 620	Intel® HD Graphics 620	Intel® HD Graphics 620
Graphics Base / Maximum Freq (MHz)	300/ 1150	300/ 1050	300/ 1100	300/ 1000	300/ 1000
LPDDR3 Memory Speed Support (MHz)	1866	1866	1866	1866	1866
DDR4/DDR3L Memory Speed Support (MHz)	2133/1600	2133/1600	2133/1600	2133/1600	2133/1600
L3 Cache	4MB	4MB	3MB	3MB	3MB
TDP	15W	15W	15W	15W	15W
cTDP Down	7.5W	7.5W	7.5W	7.5W	7.5W
Tj (deg)	100	100	100	100	100
Intel® SIPP	✓	–	✓	–	–
INTEL® TECHNOLOGIES Intel® vPro™	✓	–	✓	–	–
Intel® TXT	✓	–	✓	–	–
Intel® VT-d	✓	✓	✓	✓	✓
Intel® VT-x	✓	✓	✓	✓	✓
AES-NI	✓	✓	✓	✓	✓
1ku Pricing	$393.00	$393.00	$281.00	$281.00	$281.00

7TH GEN INTEL® CORE™ PROCESSOR SKU DETAIL — U-SERIES (15W) INTEL® IRIS™ PLUS GRAPHICS

PROCESSOR NAME	INTEL CORE i7 PROCESSOR		INTEL CORE i5 PROCESSOR	
Processor Number	i7-7660U	i7-7560U	i5-7360U	i5-7260U
Cores/Threads	2/4	2/4	2/4	2/4
Base Frequency (GHz)	2.5	2.4	2.3	2.2
INTEL® TURBO BOOST TECHNOLOGY 2.0[3] — Maximum Single Core Turbo (GHz)	4.0	3.8	3.6	3.4
Maximum Dual Core Turbo (GHz)	3.8	3.7	3.6	3.4
Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A
Graphics	Intel Iris Plus Graphics 640	Intel Iris Plus Graphics 640	Intel Iris Plus Graphics 640	Intel Iris Plus Graphics 640
Graphics Base / Maximum Freq (MHz)	300/1050	300/1050	300/1000	300/950
LPDDR3 Memory Speed Support (MHz)	1866	1866	1866	1866
DDR4/DDR3L Memory Speed Support (MHz)	2133/1600	2133/1600	2133/1600	2133/1600
L3 Cache	4MB	4MB	4MB	4MB
TDP	15W	15W	15W	15W
cTDP Down	9.5W	9.5W	9.5W	9.5W
Tj (deg)	100	100	100	100
Intel® SIPP	✓	–	✓	–
INTEL® TECHNOLOGIES — Intel® vPro™	✓	–	✓	–
Intel® TXT	✓	–	✓	–
Intel® VT-d	✓	✓	✓	✓
Intel® VT-x	✓	✓	✓	✓
AES-NI	✓	✓	✓	✓
Package Type	BGA	BGA	BGA	BGA
1ku Pricing	$415.00	$415.00	$304.00	$304.00

7TH GEN INTEL CORE PROCESSOR SKU DETAIL   U-SERIES (28W) INTEL IRIS PLUS GRAPHICS

PROCESSOR NAME		INTEL CORE i7 PROCESSOR	INTEL CORE i5 PROCESSOR		INTEL CORE i3 PROCESSOR
Processor Number		i7-7567U	i5-7287U	i5-7267U	i3-7167U
Cores/Threads		2/4	2/4	2/4	2/4
Base Frequency (GHz)		3.5	3.3	3.1	2.8
INTEL® TURBO BOOST TECHNOLOGY 2.0[3]	Maximum Single Core Turbo (GHz)	4.0	3.7	3.5	2.8
	Maximum Dual Core Turbo (GHz)	3.9	3.7	3.5	2.8
	Maximum Quad Core Turbo (GHz)	N/A	N/A	N/A	N/A
Graphics		Intel Iris Plus Graphics 650	Intel Iris Plus Graphics 650	Intel Iris Plus Graphics 650	Intel Iris Plus Graphics 650
Graphics Base / Maximum Freq (MHz)		300/1100	300/1100	300/1050	300/1000
LPDDR3 Memory Speed Support (MHz)		1866	1866	1866	1866
DDR4/DDR3L Memory Speed Support (MHz)		2133/1600	2133/1600	2133/1600	2133/1600
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	✓	✓	✓	✓
	Intel® VT-x	✓	✓	✓	✓
	AES-NI	✓	✓	✓	✓
1ku Pricing		$415.00	$304.00	$304.00	$304.00

INTEL NEWS FACT SHEET

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7TH GEN INTEL XEON PROCESSOR SKU DETAIL   H-SERIES (45W)

PROCESSOR NAME	INTEL XEON PROCESSOR		
Processor Number	E3-1535M v6		E3-1505M v6
Cores/Threads	4/8		4/8
Base Frequency (GHz)	3.1		3.0
INTEL® TURBO BOOST TECHNOLOGY 2.0[3] Maximum Single Core Turbo (GHz)	4.2		4.0
Maximum Dual Core Turbo (GHz)	4.1		3.8
Maximum Quad Core Turbo (GHz)	3.9		3.6
Graphics	Intel® HD Graphics P630		Intel® HD Graphics P630
Graphics Base / Maximum Freq (MHz)	350/1100		350/1100
LPDDR3 Memory Speed Support (MHz)	2133		2133
DDR4/DDR3L Memory Speed Support (MHz)	1600/2400		1600/2400
L3 Cache	8MB		8MB
TDP	45W		45W
cTDP Down	35W		35W
Tj (deg)	100		100
Intel® SIPP	✓		✓
INTEL® TECHNOLOGIES Intel® vPro™	✓		✓
Intel® TXT	✓		✓
Intel® VT-d	✓		✓
Intel® VT-x	✓		✓
AES-NI	✓		✓
1ku Pricing	$623.00		$434.00

7TH GEN INTEL CORE PROCESSOR SKU DETAIL   H-SERIES (45W)

PROCESSOR NAME		INTEL CORE i7 PROCESSOR				INTEL CORE i5 PROCESSOR		INTEL CORE i3 PROCESSOR
Processor Number		i7-7920HQ	i7-7820HQ	i7-7820HK*	i7-7700HQ	i5-7440HQ	i5-7300HQ	i3-7100H
Cores/Threads		4/8	4/8	4/8	4/8	4/4	4/4	2/4
Base Frequency (GHz)		3.1	2.9	2.9	2.8	2.8	2.5	3.0
INTEL® TURBO BOOST TECHNOLOGY 2.0³	Maximum Single Core Turbo (GHz)	4.1	3.9	3.9	3.8	3.8	3.5	3.0
	Maximum Dual Core Turbo (GHz)	3.9	3.7	3.7	3.6	3.6	3.3	–
	Maximum Quad Core Turbo (GHz)	3.7	3.5	3.5	3.4	3.4	3.1	–
Graphics		Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630
Graphics Base / Maximum Freq (MHz)		350/1100	350/1100	350/1100	350/1100	350/1000	350/1000	350/950
LPDDR3 Memory Speed Support (MHz)		2133	2133	2133	2133	2133	2133	2133
DDR4/DDR3L Memory Speed Support (MHz)		2400/1600	2400/1600	2400/1600	2400/1600	2400/1600	2400/1600	2400/1600
L3 Cache		8MB	8MB	8MB	6MB	6MB	6MB	3MB
TDP		45W	45W	45W	45W	45W	45W	35W
cTDP Down		35W	35W	35W	35W	35W	35W	–
Tj (deg)		100	100	100	100	100	100	100
Intel® SIPP		✓	✓	–	–	✓	–	–
INTEL® TECHNOLOGIES	Intel® vPro™	✓	✓	–	–	✓	–	–
	Intel® TXT	✓	✓	–	–	✓	–	–
	Intel® VT-d	✓	✓	✓	✓	✓	✓	✓
	Intel® VT-x	✓	✓	✓	✓	✓	✓	✓
	AES-NI	✓	✓	✓	✓	✓	✓	✓
1ku Pricing		$568.00	$378.00	$378.00	$378.00	$250.00	$250.00	$225.00

7TH GEN INTEL CORE PROCESSOR SKU DETAIL — S-SERIES

PROCESSOR NAME	INTEL CORE i7 PROCESSOR	INTEL CORE i5 PROCESSOR	INTEL CORE i7 PROCESSOR	INTEL CORE i5 PROCESSOR		INTEL CORE i7 PROCESSOR	INTEL CORE i5 PROCESSOR	
TDP	91W		65W			35W		
Processor Number	i7-7700K	i5-7600K	i7-7700	i5-7600	i5-7500	i7-7700T	i5-7600T	i5-7500T
Cores/Threads	4/8	4/4	4/8	4/4	4/4	4/8	4/4	4/4
Base Frequency (GHz)	4.2	3.8	3.6	3.5	3.4	2.9	2.8	2.7
Intel® Turbo Boost Technology† Maximum Single Core Turbo (GHz)	4.5	4.2	4.2	4.1	3.8	3.8	3.7	3.3
Unlocked²	✓	✓	–	–	–	–	–	–
Graphics	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630
Dynamic Frequency (MHz)	1150	1150	1150	1150	1100	1150	1100	1100
DDR4/DDR3L Memory Speed Support (MHz)	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600
Intel® Smart Cache	8M	6M	8M	6M	6M	8M	6M	6M
Integrated Memory Controller	2 ch	2 ch	2 ch	2 ch	2 ch	2 ch	2 ch	2 ch
TDP	91W	91W	65W	65W	65W	35W	35W	35W
PCG	2015D	2015D	2015C	2015C	2015C	2015A	2015A	2015A
Intel® SIPP	–	–	✓	✓	✓	✓	✓	✓
INTEL® TECHNOLOGIES — Intel® vPro™	–	–	✓	✓	✓	✓	✓	✓
ISM†	–	–	✓	✓	✓	✓	✓	✓
Intel® VT-d	✓	✓	✓	✓	✓	✓	✓	✓
Intel® TXT	–	–	✓	✓	✓	✓	✓	✓
AES-NI	✓	✓	✓	✓	✓	✓	✓	✓
Intel® Device Protection with Boot Guard	✓	✓	✓	✓	✓	✓	✓	✓
1ku Pricing	$339.00	$242.00	$303.00	$213.00	$192.00	$303.00	$213.00	$192.00

† Fused from quad core source die
± DDR4-2400 support is 1 and 2 DPC for UDIMMs but only 1 DPC for SODIMMs
††Intel® Standard Manageability
Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. All processors are lead-free (per EU RoHS directive July 2006) and halogen free (residual amounts of halogens are below November 2007 proposed IPC/JEDEC J-STD-709 standards).
All processors support Intel® Virtualization Technology (Intel® VT-x)

7TH GEN INTEL CORE PROCESSOR SKU DETAIL S-SERIES

PROCESSOR NAME	INTEL CORE i5 PROCESSOR	
TDP	65W	35W
Processor Number	i5-7400	i5-7400T
Cores/Threads	4/4	4/4
Base Frequency (GHz)	3.0	2.4
Intel® Turbo Boost Technology† Maximum Single Core Turbo (GHz)	3.5	3.0
Unlocked[2]	–	–
Graphics	Intel® HD Graphics 630	Intel® HD Graphics 630
Dynamic Frequency (MHz)	1000	1000
DDR4/DDR3L Memory Speed Support (MHz)	2400±/1600	2400±/1600
Intel® Smart Cache	6M	6M
Integrated Memory Controller	2 ch	2 ch
TDP	65W	35W
PCG	2015C	2015A
Intel® SIPP	–	–
INTEL® TECHNOLOGIES — Intel® vPro™	–	–
ISM††	✓	✓
Intel® VT-d	✓	✓
Intel® TXT	–	–
AES-NI	✓	✓
Intel® Device Protection with Boot Guard	✓	✓
1ku Pricing	$182.00	$182.00

† Fused from quad core source die
± DDR4-2400 support is 1 and 2 DPC for UDIMMs but only 1 DPC for SODIMMs
††Intel® Standard Manageability
Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. All processors are lead-free (per EU RoHS directive July 2006) and halogen free (residual amounts of halogens are below November 2007 proposed IPC/JEDEC J-STD-709 standards).
All processors support Intel® Virtualization Technology (Intel® VT-x)

7TH GEN INTEL CORE PROCESSOR SKU DETAIL   S-SERIES

PROCESSOR NAME	INTEL CORE i3 PROCESSOR				INTEL CORE i3 PROCESSOR	
TDP	60W	51W			35W	
Processor Number	i3-7350K	i3-7320	i3-7300	i3-7100	i3-7300T	i3-7100T
Cores/Threads	2/4	2/4	2/4	2/4	2/4	2/4
Base Frequency (GHz)	4.2	4.1	4.0	3.9	3.5	3.4
Intel® Turbo Boost Technology† Maximum Single Core Turbo (GHz)	N/A	N/A	N/A	N/A	N/A	N/A
Unlocked²	✓	–	–	–	–	–
Graphics	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630	Intel® HD Graphics 630
Dynamic Frequency (MHz)	1150	1150	1150	1100	1100	1100
DDR4/DDR3L Memory Speed Support (MHz)	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600	2400±/1600
Intel® Smart Cache	4M	4M	4M	3M	4M	3M
Integrated Memory Controller	2 ch	2 ch	2 ch	2 ch	2 ch	2 ch
TDP	60W	51W	51W	51W	35W	35W
PCG	2015D	2015C	2015C	2015C	2015A	2015A
Intel® SIPP	–	–	–	–	–	–
INTEL® TECHNOLOGIES — **Intel® vPro™**	–	–	–	–	–	–
ISM††	✓	✓	✓	✓	✓	✓
Intel® VT-d	✓	✓	✓	✓	✓	✓
Intel® TXT		–	–	–	–	–
AES-NI	✓	✓	✓	✓	✓	✓
Intel® Device Protection with Boot Guard	✓	✓	✓	✓	✓	✓
1ku Pricing	$168.00	$149.00	$138.00	$117.00	$138.00	$117.00

† Fused from quad core source die
± DDR4-2400 support is 1 and 2 DPC for UDIMMs but only 1 DPC for SODIMMs
††Intel® Standard Manageability
Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. All processors are lead-free (per EU RoHS directive July 2006) and halogen free (residual amounts of halogens are below November 2007 proposed IPC/JEDEC J-STD-709 standards).
All processors support Intel® Virtualization Technology (Intel® VT-x)

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	CORES / THREADS	BASE FREQ.	SCT	DCT	QCT	INTEL® GRAPHICS	GRAPHICS FREQUENCY	LPDDR3	DDR4/ DDR3L	L3 CACHE	TDP	CONFIG TDP	INTEL® VPRO™
Y-SERIES													
i7-7Y75	2/4	1.3	3.6	3.4	N/A	HD 615	300/1050	1866	- / 1600	4MB	4.5W	7W/ 3.5W	√
i5-7Y57	2/4	1.2	3.3	2.9	N/A	HD 615	300/950	1866	- /1600	4MB	4.5W	7W/ 3.5W	√
i5-7Y54	2/4	1.2	3.2	2.8	N/A	HD 615	300/950	1866	- / 1600	4MB	4.5W	7W/ 3.5W	-
m3-7Y30	2/4	1.0	2.6	2.4	N/A	HD 615	300/900	1866	- /1600	4MB	4.5W	7W/ 3.75W	-
U-SERIES													
i7-7600U	2/4	2.8	3.9	3.9	N/A	HD 620	300/1150	1866	2133/1600	4MB	15W	7.5W	√
i7-7500U	2/4	2.7	3.5	3.5	N/A	HD 620	300/1050	1866	2133/1600	4MB	15W	7.5W	-
i5-7300U	2/4	2.6	3.5	3.5	N/A	HD 620	300/1100	1866	2133/1600	3MB	15W	7.5W	√
i5-7200U	2/4	2.5	3.1	3.1	N/A	HD 620	300/1000	1866	2133/1600	3MB	15W	7.5W	-
i3-7100U	2/4	2.4	N/A	N/A	N/A	HD 620	300/1000	1866	2133/1600	3MB	15W	7.5W	-
U-SERIES (15W) INTEL® IRIS™ PLUS GRAPHICS													
i7-7660U	2/4	2.5	4.0	3.8	N/A	Iris Plus 640	300/1050	1866	2133/1600	4MB	15W	9.5W	√
i7-7560U	2/4	2.4	3.8	3.7	N/A	Iris Plus 640	300/1050	1866	2133/1600	4MB	15W	9.5W	-
i5-7360U	2/4	2.3	3.6	3.6	N/A	Iris Plus 640	300/1000	1866	2133/1600	4MB	15W	9.5W	√
i5-7260U	2/4	2.2	3.4	3.4	N/A	Iris Plus 640	300/950	1866	2133/1600	4MB	15W	9.5W	-
U-SERIES (28W) INTEL® IRIS™ PLUS GRAPHICS													
i7-7567U	2/4	3.5	4.0	3.9	N/A	Iris Plus 650	300/1100	1866	2133/1600	4MB	28W	23W	-
i5-7287U	2/4	3.3	3.7	3.7	N/A	Iris Plus 650	300/1100	1866	2133/1600	4MB	28W	23W	-
i5-7267U	2/4	3.1	3.5	3.5	N/A	Iris Plus 650	300/1050	1866	2133/1600	4MB	28W	23W	-
i3-7167U	2/4	2.8	2.8	2.8	N/A	Iris Plus 650	300/1000	1866	2133/1600	3MB	28W	23W	-
H-SERIES INTEL® XEON® PROCESSORS (45W)													
E3-1535M v6	4/8	3.1	4.2	4.1	3.9	HD P630	350/1100	2133	1600/2400	8MB	45W	35W	√
E3-1505M v6	4/8	3.0	4.0	3.8	3.6	HD P630	350/1100	2133	1600/2400	8MB	45W	35W	√
H-SERIES INTEL® CORE™ PROCESSORS													
i7-7920HQ	4/8	3.1	4.1	3.9	3.7	HD 630	350/1100	2133	2400/1600	8MB	45W	35W	√
i7-7820HQ	4/8	2.9	3.9	3.7	3.5	HD 630	350/1100	2133	2400/1600	8MB	45W	35W	√
i7-7820HK*	4/8	2.9	3.9	3.7	3.5	HD 630	350/1100	2133	2400/1600	8MB	45W	35W	-
i7-7700HQ	4/8	2.8	3.8	3.6	3.4	HD 630	350/1100	2133	2400/1600	6MB	45W	35W	-
i5-7440HQ	4/4	2.8	3.8	3.6	3.4	HD 630	350/1000	2133	2400/1600	6MB	45W	35W	√
i5-7300HQ	4/4	2.5	3.5	3.3	3.1	HD 630	350/1000	2133	2400/1600	6MB	45W	35W	-
i3-7100H	2/4	3.0	3.0	–	–	HD 630	350/950	2133	2400/1600	3MB	35W	–	-

7TH GEN INTEL® CORE™ PROCESSOR QUICK SUMMARY CHART   S-SERIES

	CORES / THREADS	BASE FREQ.	SCT	UNLOCK[2]	INTEL® GRAPHICS	DYNAMIC FREQUENCY	INTEL® SMART CACHE	DDR4± / DDR3L	TDP	INTEL® VPRO™
S-SERIES										
i7-7700K	4/8	4.2	4.5	√	HD 630	1150	8M	2400/ 1600	91W	–
i5-7600K	4/4	3.8	4.2	√	HD 630	1150	6M	2400/ 1600	91W	–
i7-7700	4/8	3.6	4.2	–	HD 630	1150	8M	2400/ 1600	65W	√
i5-7600	4/4	3.5	4.1	–	HD 630	1150	6M	2400/ 1600	65W	√
i5-7500	4/4	3.4	3.8	–	HD 630	1100	6M	2400/ 1600	65W	√
i7-7700T	4/8	2.9	3.8	–	HD 630	1150	8M	2400/ 1600	35W	√
i5-7600T	4/4	2.8	3.7	–	HD 630	1100	6M	2400/ 1600	35W	√
i5-7500T	4/4	2.7	3.3	–	HD 630	1100	6M	2400/ 1600	35W	√
i5-7400	4/4	3.0	3.5	–	HD 630	1000	6M	2400/ 1600	65W	–
i5-7400T	4/4	2.4	3.0	–	HD 630	1000	6M	2400/ 1600	35W	–
i3-7350K	2/4	4.2	N/A	√	HD 630	1150	4M	2400/ 1600	60W	–
i3-7320	2/4	4.1	N/A	–	HD 630	1150	4M	2400/ 1600	51W	–
i3-7300	2/4	4.0	N/A	–	HD 630	1150	4M	2400/ 1600	51W	–
i3-7100	2/4	3.9	N/A	–	HD 630	1100	3M	2400/ 1600	51W	–
i3-7300T	2/4	3.5	N/A	–	HD 630	1100	4M	2400/ 1600	35W	–
i3-7100T	2/4	3.4	N/A	–	HD 630	1100	3M	2400/ 1600	35W	–

± DDR4-2400 support is 1 and 2 DPC for UDIMMs but only 1 DPC for SODIMMs
Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families.
All processors support Intel® Virtualization Technology (Intel® VT-x)

NEW INTEL DESKTOP CHIPSET FEATURE COMPARISON

	FEATURES	INTEL Q270 CHIPSET	INTEL Q250 CHIPSET	INTEL B250 CHIPSET	INTEL H270 CHIPSET	INTEL Z270 CHIPSET
CHIPSET I/O	Chipset PCI Express* 3.0 Lanes[1]	Up to 24	Up to 14	Up to 12	Up to 20	Up to 24
	SATA 3.0 (6 Gb/s) Ports[1]	Up to 6	Up to 6	Up to 6	Up to 6	Up to 6
	USB 3.0 Ports[1]	Up to 10	8	6	8	Up to 10
	Total USB Ports (USB 2.0 + 3.0)[1]	14	14	12	14	14
	Intel® RST for PCIe 3.0 Storage Ports (up to x4 M.2)◊	3	1	1	2	3
	Enhanced SPI	✓	✓	✓	✓	✓
PROCESSOR	Processor PCI Express* 3.0 Lanes Configuration Support	1x16 or 2x8 or 1x8+2x4	1x16	1x16	1x16	1x16 or 2x8 or 1x8+2x4
	DMI Speed	3.0	3.0	3.0	3.0	3.0
MANAGEABILITY	Intel® Management Engine 11.6	Corporate	Corporate	Consumer/ Corporate	Consumer/ Corporate	Consumer
	Intel® vPro™ Technology with Intel® Active Management Technology 11.6	✓	–	–	–	–
	Intel® Standard Manageability	✓	✓	–	–	–
SECURITY	Intel® Platform Trust Technology 3.0	✓ w/o Intel® TXT	✓ w/o Intel® TXT	✓	✓	✓
	Intel® Device Protection Technology with Boot Guard	✓	✓	✓	✓	✓
PROCESSOR	Overclocking	–	–	–	–	✓
	Intel® Stable Image Platform	✓	✓	–	–	–
	Independent Display Support	3	3	3	3	3
	System Memory Support	DDR4/3L	DDR4/3L	DDR4/3L	DDR4/3L	DDR4/3L
	System Memory Channels/SPC	2/2	2/2	2/2	2/2	2/2
CSR	Conflict Free†	Yes	Yes	Yes	Yes	Yes
	Lead-free and halogen-free‡ component packages	Yes	Yes	Yes	Yes	Yes

◊ Maximum lanes/ports available may vary depending on platform implementation
† "Conflict-free" refers to products, suppliers, supply chains, smelters, and refiners that, based on our due diligence, do not contain or source tantalum, tin, tungsten or gold (referred to as 'conflict minerals' by the U.S. Securities and Exchange Commission) that directly or indirectly finance or benefit armed groups in the Democratic Republic of Congo or adjoining countries.
‡ Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709A requirements, and the PCB/Substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

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NEW INTEL® MOBILE CHIPSET FEATURE COMPARISON

FEATURES		INTEL CM238 CHIPSET	INTEL QM175 CHIPSET	INTEL HM175 CHIPSET
CHIPSET I/O	Chipset PCI Express* 3.0 Lanes[1]	Up to 20	Up to 16	Up to 16
	SATA 3.0 (6 Gb/s) Ports[1]	Up to 8	Up to 4	Up to 4
	USB 3.0 Ports[1]	Up to 10	Up to 8	Up to 8
	Total USB Ports (USB 2.0 + 3.0)[1]	14	14	14
	Intel® RST for PCIe 3.0 Storage Ports (up to x4 M.2) ◊	3	2	2
	Enhanced SPI	✓	✓	✓
PROCESSOR	Processor PCI Express* 3.0 Lanes Configuration Support	1x16 or 2x8 or 1x8+2x4	1x16 or 2x8 or 1x8+2x4	1x16 or 2x8 or 1x8+2x4
	DMI Speed	3.0	3.0	3.0
	Independent Display Support	3	3	3
	System Memory Support‡	DDR4/DDR3L/LPDDR3	DDR4/DDR3L/LPDDR3	DDR4/DDR3L/LPDDR3
	System Memory Channels/DPC	2/2	2/2	2/2
MANAGEABILITY	Intel® Management Engine 11.6	Consumer/ Corporate	Consumer/ Corporate	Consumer/ Corporate
	Intel® vPro™ Technology with Intel® Active Management Technology 11.6	✓	✓	–
SECURITY	Intel® Platform Trust Technology 3.0	✓	✓	✓
	Intel® Device Protection Technology with Boot Guard	✓	✓	✓
	Intel® Stable Image Platform	✓	✓	–
CSR	Conflict Free†	Yes	Yes	Yes
	Lead-free and halogen-free‡ component packages	Yes	Yes	Yes

◊ Maximum lanes/ports available may vary depending on platform implementation
± Refer to the product specification for memory speed support details.
† "Conflict-free" refers to products, suppliers, supply chains, smelters, and refiners that, based on our due diligence, do not contain or source tantalum, tin, tungsten or gold (referred to as 'conflict minerals' by the U.S. Securities and Exchange Commission) that directly or indirectly finance or benefit armed groups in the Democratic Republic of Congo or adjoining countries.
‡ Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709A requirements, and the PCB/Substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

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

1. No computer system can provide absolute security under all conditions. Built-in security features available on select Intel® Core™ processors may require additional software, hardware, services and/or an Internet connection. Results may vary depending upon configuration. Consult your PC manufacturer for more details. For more information visit www.intel.com/technology/security.

2. Altering clock frequency and/or voltage may cause damage to or reduce the useful life of the processor and other system components and/or reduce system stability and performance. Product warranties may not apply if the processor is operated beyond its specifications. Check with manufacturers of other system components for warranty and additional details. For more information, visit: http://www.intel.com/content/www/us/en/gaming/overclocking-intel-processors.html

3. 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 http://support.intel.com.

4. 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.

5. As measured by 3DMark* Cloud Gate Graphics on Intel® Core™ i5-7600 Processor vs. Intel® Core™ i5-2500 Processor
• Intel® Core™ i5-7600 Processor, PL1=65W TDP, 4C4T, Turbo up to 4.1GHz, Motherboard: ASUS* Z270, Memory: 2x4GB DDR4-2400, Storage: Seagate HDD, OS: Windows* 10 Build 1607
• Intel® Core™ i5-2500 Processor, PL1=95W TDP, 4C4T, Turbo up to 3.7GHz, Motherboard: H67, Memory: 2x4GB DDR3-1333, Storage: Seagate HDD, OS: Windows* 7

6. Windows* Hello requires specialized hardware, including fingerprint reader, illuminated IR sensor or other biometric sensors and capable devices.

7. 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 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.

8. As measured by Windows* 10 EEMBC Browsing Bench Component Average Power.
• 7th Generation Performance Measurements and Battery Life Projections:
Intel® Core™ i5-7300U Processor, PL1=15W TDP, 2C4T, Turbo up to 3.5GHz, Memory: 2x4GB DDR4-2133, Storage: Intel® SSD 535 Series, Display Resolution:1920x1080. Intel HD Graphics 620, OS: Windows* 10, Battery Size: 42WHr

9. As compared to other PC I/O connection technologies including eSATA, USB, and IEEE 1394 Firewire*. Performance will vary depending on the specific hardware and software used. Must use a Thunderbolt™-enabled device

10. 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.

11. Windows* Ink requires Touch capable tablet or PC. Pen accessory may be sold separately. For instant access, user must enable in settings and have a Bluetooth button on pen.