



Intel® Core™ i5-6300U Processor

3M Cache, up to 3.00 GHz

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Essentials

Export specifications

Product Collection	6th Generation Intel® Core™ i5 Processors
Code Name	Products formerly Skylake
Vertical Segment	Mobile
Processor Number	i5-6300U
Status	Launched
Launch Date ?	Q3'15
Lithography ?	14 nm
Recommended Customer Price ?	
Use Conditions ?	Industrial Commercial Temp, Embedded Broad Market Commercial Temp, PC/Client/Tablet

Performance




# of Cores ?	2
# of Threads ?	4
Processor Base Frequency ?	2.40 GHz
Max Turbo Frequency ?	3.00 GHz
Cache ?	3 MB SmartCache
Bus Speed ?	4 GT/s OPI
TDP ?	15 W
Configurable TDP-up Frequency ?	2.50 GHz
Configurable TDP-up ?	25 W
Configurable TDP-down Frequency ?	800 MHz
Configurable TDP-down ?	7.5 W

Supplemental Information



Embedded Options Available ?	Yes
Datasheet	View now
Product Brief	View now

Memory Specifications



Max Memory Size (dependent on memory type) ?	32 GB
Memory Types ?	DDR4-2133, LPDDR3-1866, DDR3L-1600

Max # of Memory Channels 	2
Max Memory Bandwidth 	34.1 GB/s
ECC Memory Supported [‡] 	No



Processor Graphics

Processor Graphics [‡] 	Intel® HD Graphics 520
Graphics Base Frequency 	300 MHz
Graphics Max Dynamic Frequency 	1.00 GHz
Graphics Video Max Memory 	32 GB
Graphics Output 	eDP/DP/HDMI/DVI
4K Support 	Yes, at 60Hz
Max Resolution (HDMI 1.4)‡ 	4096x2304@24Hz
Max Resolution (DP)‡ 	4096x2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡ 	4096x2304@60Hz
Max Resolution (VGA)‡ 	N/A
DirectX* Support 	12
OpenGL* Support 	4.5
Intel® Quick Sync Video 	Yes
Intel® InTru™ 3D Technology 	Yes
Intel® Clear Video HD Technology 	Yes
Intel® Clear Video Technology 	Yes
# of Displays Supported [‡]	3
Device ID	0x1916


Expansion Options

PCI Express Revision 	3.0
PCI Express Configurations [‡] 	1x4, 2x2, 1x2+2x1 and 4x1
Max # of PCI Express Lanes 	12

Package Specifications

Sockets Supported 	FCBGA1356
Max CPU Configuration	1
T _{JUNCTION} 	100°C
Package Size	42mm X 24mm

Advanced Technologies

Intel® Turbo Boost Technology [‡] 	2.0
Intel® vPro™ Platform Eligibility [‡] 	Yes
Intel® Hyper-Threading Technology [‡] 	Yes
Intel® Virtualization Technology (VT-x) [‡] 	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) [‡] 	Yes

Intel® VT-x with Extended Page Tables (EPT) † ?	Yes
Intel® TSX-NI ?	Yes
Intel® 64 ‡ ?	Yes
Instruction Set ?	64-bit
Instruction Set Extensions ?	Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2
Idle States ?	Yes
Enhanced Intel SpeedStep® Technology ?	Yes
Thermal Monitoring Technologies ?	Yes
Intel® Flex Memory Access ?	Yes
Intel® Identity Protection Technology † ?	Yes
Intel® Stable Image Platform Program (SIPP) ?	Yes
Intel® Smart Response Technology ?	Yes
Intel® My WiFi Technology ?	Yes

Security & Reliability

Intel® AES New Instructions ?	Yes
Secure Key ?	Yes
Intel® Software Guard Extensions (Intel® SGX) ?	Yes
Intel® Memory Protection Extensions (Intel® MPX) ?	Yes
Intel® Trusted Execution Technology † ?	Yes
Execute Disable Bit † ?	Yes
Intel® OS Guard	Yes

More support options for Intel® Core™ i5-6300U Processor (3M Cache, up to 3.00 GHz)



Product Support



Downloads and Software



Support Community



Warranty and Replacement



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“Announced” SKUs are not yet available. Please refer to the Launch Date for market availability.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Max Turbo Frequency refers to the maximum single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information.

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System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

For benchmarking data see <http://www.intel.com/performance>.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.



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