



# Intel® Core™ i7-6700 Processor (8M Cache, up to 4.00 GHz)

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## Specifications

### Essentials

Status	Launched
Launch Date	Q3'15
Processor Number	i7-6700
Intel® Smart Cache	8 MB
DMI3	8 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2, AVX 2.0
Embedded Options Available	<a href="#">Q</a> Yes
Lithography	14 nm
Scalability	15 Only
Thermal Solution Specification	PCG 2015C (65W)
Recommended Customer Price	
Datasheet	<a href="#">Link</a>

### Performance

# of Cores	4
# of Threads	8
Processor Base Frequency	3.4 GHz
Max Turbo Frequency	4 GHz
TDP	65 W

### Memory Specifications

Max Memory Size (dependent on memory type)	64 GB
Memory Types	DDR4-1866/2133, DDR3L-1333/1600 @ 1.35V
Max # of Memory Channels	2
Max Memory Bandwidth	34.1 GB/s
ECC Memory Supported †	<a href="#">Q</a> No

### Graphics Specifications

Processor Graphics †	Intel® HD Graphics 530
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.15 GHz
Graphics Video Max Memory	1.7 GB
Graphics Output	eDP/DP/HDMI/DVI
4K Support	Yes, at 60Hz
Max Resolution (Intel® WiDi)‡	1080p
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	4.4
Intel® Quick Sync Video	<a href="#">Q</a> Yes
Intel® InTru™ 3D Technology	Yes
Intel® Insider™	Yes
Intel® Wireless Display	<a href="#">Q</a> Yes
Intel® Clear Video HD Technology	Yes
Intel® Clear Video Technology	Yes
# of Displays Supported †	3
Device ID	0x1912

### Expansion Options

## Related Products

- 6th Generation Intel® Core™ i7 Processors
- Intel® Core™ i7-6700 Desktop Processor Series
- Products formerly Skylake



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## PCN/MDDS Information

**SR2L2**  
 947202: PCN | MDDS  
 947559: MDDS  
 947566: MDDS

PCI Express Revision	3.0
PCI Express Configurations ‡	Up to 1x16, 2x8, 1x8+2x4
Max # of PCI Express Lanes	16
<b>Package Specifications</b>	
Max CPU Configuration	1
T <sub>CASE</sub>	71°C
Package Size	37.5mm x 37.5mm
Graphics and IMC Lithography	14 nm
Sockets Supported	FCLGA1151
Low Halogen Options Available	See MDDS
<b>Advanced Technologies</b>	
Intel® Turbo Boost Technology ‡	2.0
Intel® vPro Technology ‡	<input type="checkbox"/> Yes
Intel® Hyper-Threading Technology ‡	<input type="checkbox"/> Yes
Intel® Virtualization Technology (VT-x) ‡	<input type="checkbox"/> Yes
Intel® Virtualization Technology for Directed I/O (VT-d) ‡	<input type="checkbox"/> Yes
Intel® VT-x with Extended Page Tables (EPT) ‡	<input type="checkbox"/> Yes
Intel® TSX-NI	<input type="checkbox"/> Yes
Intel® 64 ‡	<input type="checkbox"/> Yes
Idle States	<input type="checkbox"/> Yes
Enhanced Intel SpeedStep® Technology	<input type="checkbox"/> Yes
Thermal Monitoring Technologies	<input type="checkbox"/> Yes
Intel® Identity Protection Technology ‡	<input type="checkbox"/> Yes
Intel® Stable Image Platform Program (SIPP)	<input type="checkbox"/> Yes
Intel® Small Business Advantage	<input type="checkbox"/> Yes
<b>Intel® Data Protection Technology</b>	
Intel® AES New Instructions	<input type="checkbox"/> Yes
Secure Key	<input type="checkbox"/> Yes
Intel® Software Guard Extensions (Intel® SGX)	<input type="checkbox"/> Yes
Intel® Memory Protection Extensions (Intel® MPX)	<input type="checkbox"/> Yes
<b>Intel® Platform Protection Technology</b>	
OS Guard	<input type="checkbox"/> Yes
Trusted Execution Technology ‡	<input type="checkbox"/> Yes
Execute Disable Bit ‡	<input type="checkbox"/> Yes

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Refer to Datasheet for formal definitions of product properties and features.

"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.

"Conflict free" and "conflict-free" means "DRC conflict free", which is defined by the U.S. 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. Intel also uses the term "conflict-free" in a broader sense to refer to suppliers, supply chains, smelters and refiners whose sources of conflict minerals do not finance conflict in the DRC or adjoining countries. Intel processors manufactured before January 1, 2013 are not confirmed conflict free. The conflict free designation refers only to product manufactured after that date. For Intel Boxed Processors, the conflict free designation refers to the processor only, not to any additional included accessories, such as heatsinks/coolers.

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/](http://www.intel.com/technology/turboboost/) for more information.

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers, typically represent 1,000-unit purchase quantities, and are subject to change without notice. Taxes and shipping, etc. not included. Prices may vary for other package types and shipment quantities, and special promotional arrangements may apply. If sold in bulk, price represents individual unit. Listing of these RCP does not constitute a formal pricing offer from Intel. Please work with your appropriate Intel representative to obtain a formal price quotation.

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

Low Halogen: 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-709 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.

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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