



Intel® Core™ i7-3615QE Processor (6M Cache, up to 3.30 GHz)

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Specifications

Essentials	
Status	Launched
Launch Date	Q2'12
Processor Number	i7-3615QE
# of Cores	4
# of Threads	8
Clock Speed	2.3 GHz
Max Turbo Frequency	3.3 GHz
Intel® Smart Cache	6 MB
DMI	5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	AVX
Embedded Options Available	Yes
Lithography	22 nm
Max TDP	45 W
Recommended Customer Price	TRAY: \$393.00
Datasheet	Link

Memory Specifications	
Max Memory Size (dependent on memory type)	16 GB
Memory Types	DDR3-1067/1333/1600; DDR3L-1067/1333/1600
# of Memory Channels	2
Max Memory Bandwidth	25.6 GB/s
ECC Memory Supported ‡	Yes

Graphics Specifications	
Processor Graphics ‡	Intel® HD Graphics 4000
Graphics Base Frequency	650 MHz
Graphics Max Dynamic Frequency	1 GHz
Graphics Output	eDP/DP/HDMI/SDVO/CRT
Intel® Quick Sync Video	Yes
Intel® InTru™ 3D Technology	Yes
Intel® Insider™	No
Intel® Wireless Display	No
Intel® Flexible Display Interface (Intel® FDI)	Yes
Intel® Clear Video HD Technology	Yes
# of Displays Supported ‡	3

Expansion Options	
PCI Express Revision	3.0
PCI Express Configurations ‡	1x16 2x8 1x8 2x4
Max # of PCI Express Lanes	16

Package Specifications	
Max CPU Configuration	1
T _{JUNCTION}	105°C
Package Size	31mm x 24mm (BGA 1023)
Graphics and IMC Lithography	22nm
Sockets Supported	FCBGA1023
Low Halogen Options Available	See MDDS

Advanced Technologies	
Intel® Turbo Boost Technology ‡	2.0
Intel® vPro Technology ‡	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® 64 ‡	Yes
Intel® My WiFi Technology	Yes

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- 3rd Generation Intel® Core™ i7 Processors
- Intel® Core™ i7-3600 Mobile Processor Series
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PCN/MDDS Information

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4G WiMAX Wireless Technology		No
Idle States		Yes
Enhanced Intel SpeedStep® Technology	Q	Yes
Intel® Demand Based Switching	Q	No
Thermal Monitoring Technologies		Yes
Intel® Fast Memory Access		Yes
Intel® Flex Memory Access		Yes
Intel® Identity Protection Technology ‡		Yes
Intel® Data Protection Technology		
AES New Instructions	Q	Yes
Intel® Platform Protection Technology		
Trusted Execution Technology ‡	Q	Yes
Execute Disable Bit ‡		Yes
Anti-Theft Technology		No

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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.

"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/ for more information.

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers 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. 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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