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Intel® Core™ i7-3615QE Processor

6M Cache, up to 3.30 GHz

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Product Collection	Legacy Intel® Core™ Processors
Code Name	Products formerly Ivy Bridge
Vertical Segment	Embedded
Processor Number	i7-3615QE
Status	Launched
Launch Date ❓	Q2'12
Lithography ❓	22 nm
Use Conditions ❓	Embedded Broad Market Commercial Temp, PC/Client/Tablet
❓	

Performance

# of Cores ❓	4
# of Threads ❓	8
Processor Base Frequency ❓	2.30 GHz
Max Turbo Frequency ❓	3.30 GHz
Cache ❓	6 MB SmartCache
Bus Speed ❓	5 GT/s DMI
TDP ❓	45 W

Supplemental Information

Embedded Options Available ❓	Yes
Datasheet	View now

Memory Specifications

Max Memory Size (dependent on memory type) ❓	16.11 GB
Memory Types ❓	DDR3/DDR3L 1067/1333/1600
Max # of Memory Channels ❓	2
Max Memory Bandwidth ❓	25.6 GB/s
ECC Memory Supported ‡ ❓	Yes

Processor Graphics

Processor Graphics ‡ ?	Intel® HD Graphics 4000
Graphics Base Frequency ?	650 MHz
Graphics Max Dynamic Frequency ?	1.00 GHz
Graphics Output ?	eDP/DP/HDMI/SDVO/CRT
Intel® Quick Sync Video ?	Yes
Intel® InTru™ 3D Technology ?	Yes
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

Sockets Supported ?	FCBGA1023
Max CPU Configuration	1
$T_{JUNCTION}$?	105°C
Package Size	31mm x 24mm (BGA 1023)
Low Halogen Options Available	Yes

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® 64 ‡ ?	Yes
Instruction Set ?	64-bit
Instruction Set Extensions ?	Intel® AVX
Intel® My WiFi Technology ?	Yes
4G WiMAX Wireless Technology ?	No
Idle States ?	Yes
Enhanced Intel SpeedStep® Technology ?	Yes
Intel® Demand Based Switching ?	No
Thermal Monitoring Technologies ?	Yes

Intel® Fast Memory Access ?	Yes
Intel® Flex Memory Access ?	Yes
Intel® Identity Protection Technology ‡ ?	Yes

Security & Reliability

Intel® AES New Instructions ?	Yes
Intel® Trusted Execution Technology ‡ ?	Yes
Execute Disable Bit ‡ ?	Yes
Anti-Theft Technology ?	No

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

Product Support

Downloads and Software

Support Community

Warranty and Replacement

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

‡ 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.

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.

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

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

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

Check http://ipt.intel.com/ for systems that support Intel® Identity Protection Technology (Intel® IPT).

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.

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.

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.

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