



Intel® Xeon® Processor E5603

4M Cache, 1.60 GHz, 4.80 GT/s Intel® QPI

Specifications

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Essentials

Product Collection	Legacy Intel® Xeon® Processors
Code Name	Products formerly Westmere EP
Vertical Segment	Server
Processor Number	E5603
Status	Discontinued
Launch Date	Q1'11
Lithography	32 nm
Recommended Customer Price	\$188.00 - \$195.00

CPU Specifications

# of Cores	4
# of Threads	4
Processor Base Frequency	1.60 GHz
Cache	4 MB Intel® Smart Cache
Bus Speed	4.8 GT/s
# of QPI Links	2
TDP	80 W
VID Voltage Range	0.750V-1.350V

Supplemental Information

Embedded Options Available	No
Datasheet	View now

Memory Specifications

Max Memory Size (dependent on memory type)	288 GB
Memory Types	DDR3 800/1066
Max # of Memory Channels	3
Max Memory Bandwidth	25.6 GB/s
Physical Address Extensions	40-bit
ECC Memory Supported [†]	Yes

Package Specifications

Sockets Supported	FCLGA1366
Max CPU Configuration	2
Package Size	42.5mm X 45mm

Advanced Technologies

Intel® Turbo Boost Technology ‡	No
Intel® Hyper-Threading Technology ‡	No
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® SSE4.2
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Intel® Demand Based Switching	Yes
Thermal Monitoring Technologies	No

Security & Reliability

Intel® AES New Instructions	Yes
Intel® Trusted Execution Technology ‡	Yes
Execute Disable Bit ‡	Yes

Ordering and Compliance

Product Images

Compatible Products

Drivers and Software

Technical Documentation

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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.

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.

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.

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.

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.

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

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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