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Intel® Xeon® Processor E5-2650 (20M Cache, 2.00 GHz, 8.00 GT/s Intel® QPI)

SPECIFICATIONS

Essentials	
Status	Launched
Launch Date	Q1'12
Processor Number	E5-2650
# of Cores	8
# of Threads	16
Clock Speed	2 GHz
Max Turbo Frequency	2.8 GHz
Cache	20 MB
Intel® QPI Speed	8 GT/s
# of QPI Links	2
Instruction Set	64-bit
Instruction Set Extensions	AVX
Embedded Options Available	No
Lithography	32 nm
Scalability	2S Only
MaxTDP	95 W
MD Voltage Range	0.60V-1.35V
Recommended Customer Price	BOX: \$1112.00 TRAY: \$1107.00

Memory Specifications	
Max Memory Size (dependent on memory type)	384 GB
Memory Types	DDR3-800/1066/1333/1600
# of Memory Channels	4
Max Memory Bandwidth	51.2 GB/s
FCC Memory Supported ±	Vos

Expansion Options	
PCI Express Revision	3.0
Max# of PCI Express Lanes	40

Package Specifications	
Max CPU Configuration	2
TCASE	77.4°C
Package Size	52.5mm x45.0mm
Sockets Supported	FCLGA2011
Low Halogen Options Available	See MDDS

Advanced Technologies		
Intel® Turbo Boost Technology‡		2.0
Intel® vPro Technology‡	9	Yes
Intel® Hyper-Threading Technology‡	Q	Yes
Intel® Virtualization Technology (VT-x) ‡	9	Yes
$ \begin{array}{l} \textbf{Intel} @ \mbox{ Mrtualization Technology for Directed I/O} \\ \mbox{ d)} \mbox{ $\overset{\div}{}$} \end{array} $	(VT-	Yes
Intel® VT-x with Extended Page Tables (EPT) ‡	9	Yes
Intel® 64 ±	Q	Yes
Idle States		Yes
Enhanced Intel SpeedStep® Technology	Q	Yes
Intel® Demand Based Switching	9	Yes
Thermal Monitoring Technologies		Yes
Intel® Flex Memory Access		No
Intel® Identity Protection Technology‡		No

Intel® Data Protection Technology	
AES New Instructions	(Yes)

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PCN/MDDS Information

\$R0KQ 919090: PCN | MDDS 919841: PCN | MDDS \$R0H4 917891: PCN | MDDS

Intel® Platform Protection Technology	
Trusted Execution Technology‡	(Yes)
Execute Disable Bit ‡	Yes

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

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.

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

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

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‡ This feature may not be available on all computing systems. Rease 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, platformsoftware, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

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 POB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

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

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.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QMi7-2635QM, i7-2670QMi7-2675QM, i5-2430Mi5-2435M, i5-2410Mi5-2415M. Please contact OBMfor the BIOS that includes the latest Processor configuration update.

Send us your feedback!

