



Intel® Xeon® Processor W3680 (12M Cache, 3.33 GHz, 6.40 GT/s Intel® QPI)

SPECIFICATIONS

Essentials

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ORDERING / SSPECS / STEPPINGS

SPECIFICATIONS

Essentials

Status	End of Life
Launch Date	Q1'10
Processor Number	W3680
# of Cores	6
# of Threads	12
Clock Speed	3.33 GHz
Max Turbo Frequency	3.6 GHz
Intel® Smart Cache	12 MB
Intel® QPI Speed	6.4 GT/s
# of QPI Links	1
Instruction Set	64-bit
Instruction Set Extensions	SSE4.2
Embedded Options Available	 No
Lithography	32 nm
Max TDP	130 W
VID Voltage Range	0.800V-1.375V
Recommended Customer Price	

Memory Specifications

Max Memory Size (dependent on memory type)	24 GB
Memory Types	DDR3-800/1066/1333
# of Memory Channels	3
Max Memory Bandwidth	32 GB/s
Physical Address Extensions	36-bit
ECC Memory Supported ‡	 Yes

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RELATED PRODUCTS

- Intel® Xeon® Processor 3000 Sequence
- Intel® Xeon® Processor 3600 Series
- Products formerly Westmere-EP

QUICK LINKS

- Download Datasheet
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PCN/MDDS INFORMATION

SLBV2
907377: [PCN](#) | [MDDS](#)
907399: [PCN](#) | [MDDS](#)

Max CPU Configuration	1
Tjcase	67.9°C
Package Size	42.5mm X 45mm
Sockets Supported	FCLGA1366
Low Halogen Options Available	See MDDS

Advanced Technologies

Intel® Turbo Boost Technology ‡	Yes
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Intel® Hyper-Threading Technology ‡		Yes
Intel® Virtualization Technology (VT-x) ‡		Yes
Intel® VT-x with Extended Page Tables (EPT) ‡		Yes
Intel® 64 ‡		Yes
Idle States		Yes
Enhanced Intel SpeedStep® Technology		Yes
Intel® Demand Based Switching		Yes
Thermal Monitoring Technologies		No
Intel® Data Protection Technology		
AES New Instructions		Yes
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.

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.

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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