



Intel® Xeon® Processor E5-2609 v3

15M Cache, 1.90 GHz

Add to Compare

Specifications

Essentials

- Performance
- Supplemental Information
- Memory Specifications
- Expansion Options
- Package Specifications
- Advanced Technologies
- Security & Reliability

Ordering and Compliance

Product Images

Compatible Products

Downloads and Software

Essentials

Export specifications

Product Collection	Intel® Xeon® Processor E5 v3 Family
Code Name	Products formerly Haswell
Vertical Segment	Server
Processor Number	E5-2609V3
Status	Launched
Launch Date ?	Q3'14
Lithography ?	22 nm
Recommended Customer Price ?	
Use Conditions ?	Server/Enterprise

Performance

# of Cores ?	6
# of Threads ?	6
Processor Base Frequency ?	1.90 GHz
Cache ?	15 MB SmartCache
Bus Speed ?	6.4 GT/s QPI
# of QPI Links ?	2
TDP ?	85 W
VID Voltage Range ?	0.65V–1.30V

Supplemental Information

Embedded Options Available ?	Yes
Datasheet	View now
Product Brief	View now
Additional Information URL	View now

Memory Specifications

Max Memory Size (dependent on memory type) ?	768 GB
Memory Types ?	DDR4 1600
Max # of Memory Channels ?	4
Max Memory Bandwidth ?	51 GB/s
Physical Address Extensions ?	46-bit

ECC Memory Supported ‡ ?

Yes

Expansion Options

Scalability

2S

PCI Express Revision ?

3.0

PCI Express Configurations ‡ ?

x4, x8, x16

Max # of PCI Express Lanes ?

40

Package Specifications

Sockets Supported ?

FCLGA2011-3

Max CPU Configuration

2

T_{CASE} ?

70.9°C

Package Size

52.5mm x 45mm

Advanced Technologies

Intel® Turbo Boost Technology ‡ ?

No

Intel® vPro™ Platform Eligibility ‡ ?

Yes

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® TSX-NI ?

No

Intel® 64 ‡ ?

Yes

Instruction Set ?

64-bit

Instruction Set Extensions ?

Intel® AVX2

Idle States ?

Yes

Enhanced Intel SpeedStep® Technology ?

Yes

Intel® Demand Based Switching ?

Yes

Thermal Monitoring Technologies ?

Yes

Intel® Flex Memory Access ?

No

Intel® Identity Protection Technology ‡ ?

No

Security & Reliability

Intel® AES New Instructions ?

Yes

Secure Key ?

Yes

Intel® OS Guard

Yes

Intel® Trusted Execution Technology ‡ ?

Yes

Execute Disable Bit ‡ ?

Yes



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.

"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, typically represent 1,000-unit purchase quantities, 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. If sold in bulk, price represents individual unit. 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.

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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