



Intel® Xeon® Processor E5-2690 v4

35M Cache, 2.60 GHz

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Specifications

Essentials

[Performance](#)
[Supplemental Information](#)
[Memory Specifications](#)
[Expansion Options](#)
[Package Specifications](#)
[Advanced Technologies](#)
[Security & Reliability](#)
[Ordering and Compliance](#)
[Compatible Products](#)
[Downloads and Software](#)

Essentials

[Export specifications](#)

Product Collection	Intel® Xeon® Processor E5 v4 Family
Code Name	Products formerly Broadwell
Vertical Segment	Server
Processor Number	E5-2690V4
Off Roadmap	No
Status	Launched
Launch Date	Q1'16
Lithography	14 nm
Recommended Customer Price	-

Performance




# of Cores	14
# of Threads	28
Processor Base Frequency	2.60 GHz
Max Turbo Frequency	3.50 GHz
Cache	35 MB Intel® Smart Cache
Bus Speed	9.6 GT/s
# of QPI Links	2
TDP	135 W
VID Voltage Range	0

Supplemental Information




Embedded Options Available	No
Datasheet	View now

Memory Specifications



Max Memory Size (dependent on memory type)	1.5 TB
Memory Types	DDR4 1600/1866/2133/2400
Max # of Memory Channels	4

Max Memory Bandwidth 	76.8 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} 	89°C
Package Size	45mm x 52.5mm

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® TSX-NI 	Yes
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

More support options for Intel® Xeon® Processor E5-2690 v4 (35M Cache, 2.60 GHz)



Product Support



Downloads and Software



Support Community



Warranty and
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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.

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

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.

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.

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



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