



Intel® Xeon® Processor E5-2680 v4

35M Cache, 2.40 GHz

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Product Collection	Intel® Xeon® Processor E5 v4 Family
Code Name	Products formerly Broadwell
Vertical Segment	Server
Processor Number	E5-2680V4
Status	Launched
Launch Date	Q1'16
Lithography	14 nm
Recommended Customer Price	-
Use Conditions	Server/Enterprise

Performance

# of Cores	14
# of Threads	28
Processor Base Frequency	2.40 GHz
Max Turbo Frequency	3.30 GHz
Cache	35 MB SmartCache
Bus Speed	9.6 GT/s QPI
# of QPI Links	2
TDP	120 W
VID Voltage Range	0

Supplemental Information

Embedded Options Available	Yes
Datasheet	View now

Memory Specifications

Max Memory Size (dependent on memory type)	1.54 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
⌘CC Memory Supported †	Yes

Expansion Options

Scalability	25
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} ?	86°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 E5-2680 v4 (35M Cache, 2.40 GHz)



Product Support



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Support Community



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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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