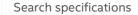
46-bit

Yes









Intel® Xeon® Processor E5-2680 v4

Physical Address Extensions ?

[□]CC Memory Supported [‡] ?

35M Cache, 2.40 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

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

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 ③	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











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Refer to Datasheet for formal definitions of product properties and features.

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

 $Some\ products\ can\ support\ AES\ New\ Instructions\ with\ a\ Processor\ Configuration\ update,\ in\ particular,\ i7-2630QM/i7-2635QM,\ i7-2670QM/i7-2630QM/i7-2635QM,\ i7-2670QM/i7-2630QM/i7-2635QM,\ i7-2670QM/i7-2630QM/i7-2635QM,\ i8-2670QM/i7-2630QM/i7-2635QM,\ i8-2670QM/i7-2630QM/i7-2635QM,\ i8-2670QM/i7-2630QM/i7-2635QM,\ i8-2670QM/i7-2630QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-2600QM/i7-26$ 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.

 $\textcolor{red}{\textbf{See}} \ \text{http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?}$ 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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