



Intel® Xeon® Processor E5-2643 v2

25M Cache, 3.50 GHz

Specifications

Export specifications

Essentials

Product Collection	Intel® Xeon® Processor E5 v2 Family
Code Name	Products formerly Ivy Bridge EP
Vertical Segment	Server
Processor Number	E5-2643V2
Status	Launched
Launch Date	Q3'13
Lithography	22 nm
Recommended Customer Price	\$1552.00

Performance

# of Cores	6
# of Threads	12
Processor Base Frequency	3.50 GHz
Max Turbo Frequency	3.80 GHz
Cache	25 MB SmartCache



Bus Speed

USA (English)    8 GT/s QPI

of QPI Links

2

TDP

130 W

VID Voltage Range

0.65–1.30V

Supplemental Information

Embedded Options Available

No

Datasheet

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Additional Information
URL

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Memory Specifications

Max Memory Size (dependent on memory type)

768 GB

Memory Types

DDR3 800/1066/1333/1600/1866

Max # of Memory Channels

4

Max Memory Bandwidth

59.7 GB/s

Physical Address Extensions

46-bit

ECC Memory Supported †

Yes

Expansion Options

Scalability

2S Only

PCI Express Revision

3.0

PCI Express Configurations †

x4, x8, x16

Max # of PCI Express Lanes

40

Package Specifications



Sockets Supported

Max CPU Configuration

2

T_{CASE}

74°C

Package Size

52.5mm x 45mm

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

No

Intel® 64 ‡

Yes

Instruction Set

64-bit

Instruction Set Extensions

Intel® AVX

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

Ordering and Compliance

Compatible products

All information provided is subject to change at any time, without notice. Intel may make changes to manufacturing life cycle, specifications, and product descriptions at any time, without notice. The information herein is provided "as-is" and Intel does not make any representations or warranties whatsoever regarding accuracy of the information, nor on the product features, availability, functionality, or compatibility of the products listed. Please contact system vendor for more information on specific products or systems.

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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.

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.

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.

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

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.

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



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