



Intel® Xeon® Processor D-1521

6M Cache, 2.40 GHz

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Product Collection	Intel® Xeon® D Processor
Code Name	Products formerly Broadwell
Vertical Segment	Server
Processor Number	D-1521
Status	Launched
Launch Date ?	Q4'15
Lithography ?	14 nm
Recommended Customer Price ?	

Performance

# of Cores ?	4
# of Threads ?	8
Processor Base Frequency ?	2.40 GHz
Max Turbo Frequency ?	2.70 GHz
Cache ?	6 MB
TDP ?	45 W

Supplemental Information

Embedded Options Available ?	No
Datasheet	View now
Product Brief	View now

Memory Specifications

Max Memory Size (dependent on memory type) ?	128 GB
Memory Types ?	DDR4, DDR3
Maximum Memory Speed	2133 MHz
Max # of Memory Channels ?	2
ECC Memory Supported [†] ?	Yes

Expansion Options

Scalability	1S Only
PCI Express Revision ?	2.0/3.0

PCI Express Configurations † ?	x4 x8 x16
Max # of PCI Express Lanes ?	32

I/O Specifications

# of USB Ports	8
USB Revision ?	2.0/3.0
Total # of SATA Ports ?	6
Integrated LAN ?	Yes
General Purpose IO	Yes
UART	Yes

Networking Specifications

Interfaces Supported	SFI, KR, KX, 1000Base-T, 10GBase-T
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Package Specifications

Sockets Supported ?	FCBGA1667
Max CPU Configuration	1
Package Size	37.5mm x 37.5mm

Advanced Technologies

Intel® Turbo Boost Technology † ?	2.0
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
Thermal Monitoring Technologies ?	Yes

Security & Reliability

Intel® AES New Instructions ?	Yes
Secure Key ?	Yes
Intel® Trusted Execution Technology † ?	Yes
Execute Disable Bit † ?	Yes
Intel® OS Guard	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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