






Intel® Xeon Phi™ Processor 7250

16GB, 1.40 GHz, 68 core







Specifications

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Essentials

Product Collection	Intel® Xeon Phi™ x200 Product Family
Code Name	Products formerly Knights Landing
Vertical Segment	Server
Processor Number	7250
Status	Launched
Launch Date 	Q2'16
Lithography 	14 nm
Recommended Customer Price 	\$2436.00




Performance

# of Cores 	68
Processor Base Frequency 	1.40 GHz
Max Turbo Frequency 	1.60 GHz
Cache 	34 MB L2
TDP 	215 W
VID Voltage Range 	0.550-1.125V

Supplemental Information

Embedded Options Available 	No
Datasheet	View now

<div> <div>Intel Xeon Phi processors do not currently support Virtualization. Intel is working with interested OEMs, customers, and the virtualization developer community in providing them with Virtualization feature at a later date.</div> <div>Description</div> </div>	
Memory Specifications	
Max Memory Size (dependent on memory type)	384 GB
Memory Types	DDR4-2400
Max # of Memory Channels	6
Max Memory Bandwidth	115.2 GB/s
ECC Memory Supported ‡	Yes
Expansion Options	
PCI Express Revision	3.0
PCI Express Configurations ‡	x16 port (Port 2 and 3) may negotiate down to x8, x4, x2, or x1. x4 port (Port1) may negotiate down to x2, or x1
Max # of PCI Express Lanes	36
Package Specifications	
Sockets Supported	SVLCLGA3647
Advanced Technologies	
Intel® Turbo Boost Technology ‡	2.0
Intel® Virtualization Technology (VT-x) ‡	No
Intel® Virtualization Technology for Directed I/O (VT-d) ‡	No
Intel® VT-x with Extended Page Tables (EPT) ‡	No
Intel® 64 ‡	Yes
Instruction Set	64-bit
Instruction Set Extensions	Intel® AVX-512
Idle States	Yes
Thermal Monitoring Technologies	Yes
Security & Reliability	
Intel® AES New Instructions	Yes
Intel® Software Guard Extensions (Intel® SGX)	No
Intel® Memory Protection Extensions (Intel® MPX)	No

Intel® Trusted Execution Technology ‡ 	No
Execute Disable Bit ‡ 	Yes
Intel® Boot Guard 	No

Compatible Products

Ordering and Compliance

Downloads and Software

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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.