

## Intel Xeon E5640 processor 2.66 GHz 12 MB Smart Cache Box

**Brand :** Intel

**Product family:** Xeon

**Product code:** BX80614E5640

**Product name :** E5640

Intel® Xeon® Processor E5640

(12M Cache, 2.66 GHz, 5.86 GT/s Intel® QPI)

Intel Xeon E5640. Processor family: Intel® Xeon® 5000 Sequence, Processor socket: LGA 1366 (Socket B), Processor lithography: 32 nm. Memory channels: Triple-channel, Maximum internal memory supported by processor: 288 GB, Memory types supported by processor: DDR3-SDRAM. Market segment: Server, Supported instruction sets: SSE4.2, Physical Address Extension (PAE): 40 bit. Package type: Retail box. Processor package size: 42.5mm x 45mm



Processor		Features	
Processor manufacturer *	Intel	Export Control Classification Number (ECCN)	5A992C
Processor model *	E5640	Commodity Classification Automated Tracking System (CCATS)	G077159
Processor base frequency *	2.66 GHz	<b>Processor special features</b>	
Processor family *	Intel® Xeon® 5000 Sequence	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor cores *	4	Intel® Turbo Boost Technology	1.0
Processor socket *	LGA 1366 (Socket B)	Intel® AES New Instructions (Intel® AES-NI)	✓
Component for	Server/workstation	Enhanced Intel SpeedStep Technology	✓
Processor lithography *	32 nm	Intel Trusted Execution Technology	✓
Processor series	Intel Xeon 5600 Series	Intel Enhanced Halt State	✓
Processor threads	8	Intel VT-x with Extended Page Tables (EPT)	✓
System bus rate	5.86 GT/s	Intel Demand Based Switching	✓
Processor operating modes *	64-bit	Intel 64	✓
Processor boost frequency	2.93 GHz	Intel Virtualization Technology (VT-x)	✓
Processor cache	12 MB	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Processor cache type	Smart Cache	Conflict-Free processor	✗
Thermal Design Power (TDP)	80 W	<b>Operational conditions</b>	
Box *	✓	Maximum operating temperature	77.6 °C
Cooler included *	✓	Tcase	77.6 °C
VID Voltage Range	0.75 - 1.35 V	<b>Technical details</b>	
Stepping	B1	Bus bandwidth	5.86
Bus type	QPI	Bus type units	GT/s
CPU multiplier (bus/core ratio)	20	Launch date	Q1'10
Number of QPI links	2	Processor cache	12288 KB
Memory bandwidth supported by processor (max)	25.6 GB/s	Product type	Processor
Processor ARK ID	47923	Status	Discontinued
<b>Memory</b>		Maximum memory	288 GB
Maximum internal memory supported by processor	288 GB	Processor brand name	Intel Xeon
Memory types supported by processor	DDR3-SDRAM	Supported memory types	DDR3-SDRAM
Memory clock speeds supported by processor	800,1066 MHz	Last change	63903513
Memory channels *	Triple-channel	Product family	Intel Xeon Processor 5000 Sequence
ECC	✓	Bus speed	5.86 GT/s
<b>Graphics</b>		<b>Logistics data</b>	
On-board graphics card *	✗	Harmonized System (HS) code	8542310001
<b>Features</b>			
Execute Disable Bit	✓		
Idle States	✓		
Thermal Monitoring Technologies	✗		
Market segment	Server		
Supported instruction sets	SSE4.2		

Features		Packaging data	
CPU configuration (max)	2	Package type	Retail box
Embedded options available	<b>X</b>	Weight & dimensions	
Physical Address Extension (PAE)	40 bit	Processor package size	42.5mm x 45mm
		Other features	
		Maximum internal memory	288 GB
		Maximum internal memory	294912 MB



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