

## Intel Xeon X5650 processor 2.66 GHz 12 MB Smart Cache

**Brand :** Intel

**Product family:** Xeon

**Product code:**  
AT80614004320AD

**Product name :** X5650

Intel® Xeon® Processor X5650  
(12M Cache, 2.66 GHz, 6.40 GT/s Intel® QPI)



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Intel Xeon processors represent a broad product line to meet a range of demanding performance and energy efficiency requirements for compute-intensive embedded, storage, and communications applications. on processor is ideal for compute intensive and heavy workload applications that require floating-point performance and the intense use of graphics for design. The Intel Xeon processor features a 400 MHz front side bus, dual channel RDRAM memory and the Intel 860 chipset, which provides the bandwidth and performance throughput to deliver streaming audio/video and online collaboration. For your demanding application needs, Intel Xeon processor-based workstations provide the ideal solution. The Intel Xeon processor at 2 GHz is designed for dual-processing performance workstations. The processor is binary compatible with previous generation Intel Architecture processors.

Processor		Features	
Processor manufacturer *	Intel	Commodity Classification	
Processor model *	X5650	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 *	6	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	12	Intel VT-x with Extended Page Tables (EPT)	✓
System bus rate	6.4 GT/s	Intel Demand Based Switching	✓
Processor operating modes *	64-bit	Intel 64	✓
Processor boost frequency	3.06 GHz	Intel Virtualization Technology (VT-x)	✓
Processor cache	12 MB	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Processor cache type	Smart Cache	<b>Operational conditions</b>	
Thermal Design Power (TDP)	95 W	Tcase	81.3 °C
Box *	✗	<b>Technical details</b>	
Cooler included *	✗	Born on date	Q1'10
VID Voltage Range	0.75 - 1.35 V	Bus bandwidth	6.4
Stepping	B1	Bus type units	GT/s
Bus type	QPI	Launch date	Q1'10
CPU multiplier (bus/core ratio)	20	Processor cache	12288 KB
Number of QPI links	2	Processor core voltage	0.750-1.350 V
Memory bandwidth supported by processor (max)	32 GB/s	Product name	Intel Xeon X5650 (12M Cache, 2.66 GHz, 6.40 GT/s Intel QPI)
Processor system type	DP	Product type	Processor
Processor codename	Westmere EP	Status	Discontinued
Processor code	SLBV3	Maximum memory	288 GB
Processor ARK ID	47922	Processor brand name	Intel Xeon
<b>Memory</b>		Supported memory types	DDR3-SDRAM
Maximum internal memory supported by processor	288 GB	Last change	63903513
Memory types supported by processor	DDR3-SDRAM		
Memory clock speeds supported by processor	800,1066,1333 MHz		
Memory channels *	Triple-channel		
ECC	✓		

Graphics		Technical details	
On-board graphics card *	✘	Product family	Intel Xeon Processor 5000 Sequence
Features		Bus speed	6.4 GT/s
Execute Disable Bit	✔	Logistics data	
Idle States	✔	Harmonized System (HS) code	8542310001
Thermal Monitoring Technologies	✘	Packaging data	
Market segment	Server	Package type	Retail box
Supported instruction sets	SSE4.2	Weight & dimensions	
CPU configuration (max)	2	Package dimensions (WxDxH)	42.5 x 42.5 x 45 mm
Embedded options available	✘	Processor package size	42.5mm x 45mm
Physical Address Extension (PAE)	40 bit	Other features	
Export Control Classification Number (ECCN)	5A992C	Intel® Virtualization Technology (Intel® VT)	VT-d, VT-x
		On-board memory controller	✔
		Maximum internal memory	288 GB
		Maximum internal memory	294912 MB
		Cache memory	12 MB



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