

## Intel Xeon E5-4650 processor 2.7 GHz 20 MB Smart Cache

**Brand :** Intel

**Product family:** Xeon

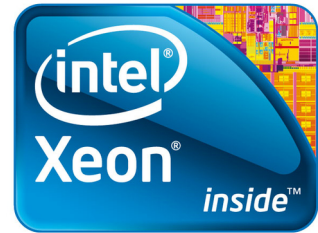
**Product code:**  
CM8062101229200

**Product name :** E5-4650


Intel® Xeon® Processor E5-4650

(20M Cache, 2.70 GHz, 8.00 GT/s Intel® QPI)

Intel Xeon E5-4650. Processor family: Intel® Xeon® E5 Family, Processor socket: LGA 2011 (Socket R), Processor lithography: 32 nm. Memory channels: Quad-channel, Maximum internal memory supported by processor: 384 GB, Memory types supported by processor: DDR3-SDRAM. Market segment: Server, Supported instruction sets: AVX, Scalability: 4S. Intel® Turbo Boost Technology 2.0 frequency: 3.3 GHz. Package width: 44 mm, Package depth: 140 mm, Package height: 117 mm



Processor		Processor special features	
Processor manufacturer *	Intel	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor model *	E5-4650	Intel® Identity Protection Technology (Intel® IPT)	✗
Processor base frequency *	2.7 GHz	Intel® Turbo Boost Technology	2.0
Processor family *	Intel® Xeon® E5 Family	Intel Flex Memory Access	✗
Processor cores *	8	Intel® Smart Cache	✓
Processor socket *	LGA 2011 (Socket R)	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 E5-4600	Intel® Turbo Boost Technology 2.0 frequency	3.3 GHz
Processor threads	16	Intel Enhanced Halt State	✓
System bus rate	8 GT/s	Intel VT-x with Extended Page Tables (EPT)	✓
Processor operating modes *	64-bit	Intel Demand Based Switching	✓
Processor boost frequency	3.3 GHz	Intel 64	✓
Processor cache	20 MB	Intel Identity Protection Technology version	0.00
Processor cache type	Smart Cache	Intel Virtualization Technology (VT-x)	✓
L3 cache speed	2.7 GHz	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Thermal Design Power (TDP)	130 W	Conflict-Free processor	✗
Box *	✗	Intel® vPro™ Platform Eligibility	✗
Cooler included *	✗		
VID Voltage Range	0.6 - 1.35 V		
Compatible chipsets	Intel® C602, Intel® C602J, Intel® C604, Intel® C606, Intel C608		
Stepping	C2		
Bus type	QPI		
Number of QPI links	2		
Memory bandwidth supported by processor (max)	51.2 GB/s		
Processor code	SR0QR		
Processor ARK ID	64622		
Memory		Technical details	
Maximum internal memory supported by processor	384 GB	Bus bandwidth	8
Memory types supported by processor	DDR3-SDRAM	Bus type units	GT/s
		Launch date	Q2'12
		Processor cache	20480 KB
		Product type	Processor
		Status	Discontinued
		Maximum memory	384 GB

Memory		Technical details	
Memory clock speeds supported by processor	800,1066,1333,1600 MHz	Processor brand name	Intel Xeon
Memory channels *	Quad-channel	Supported memory types	DDR3-SDRAM
ECC	✓	Last change	63903513
<b>Graphics</b>		Product family	Intel Xeon Processor E5 Family
On-board graphics card *	✗	Bus speed	8 GT/s
<b>Features</b>		<b>Logistics data</b>	
Execute Disable Bit	✓	Harmonized System (HS) code	8542310001
Idle States	✓	<b>Packaging data</b>	
Thermal Monitoring Technologies	✓	Package width	44 mm
Market segment	Server	Package depth	140 mm
Maximum number of PCI Express lanes	40	Package height	117 mm
PCI Express slots version	3.0	Package weight	125 g
Supported instruction sets	AVX	Package type	Retail box
Scalability	4S	<b>Weight &amp; dimensions</b>	
CPU configuration (max)	4	Processor package size	52.5mm x 45mm
Embedded options available	✗	<b>Other features</b>	
PCI Express CEM revision	3.0	Intel® Virtualization Technology (Intel® VT)	VT-d, VT-x
Export Control Classification Number (ECCN)	5A992C	Maximum internal memory	384 GB
Commodity Classification Automated Tracking System (CCATS)	G077159	Maximum internal memory	393216 MB
Images Type Map			

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