

Intel Core i5-4690 processor 3.5 GHz 6 MB Smart Cache

Brand : Intel

Product family: Core

Product code:
CM8064601560516

Product name : i5-4690



Intel® Core™ i5-4690 Processor
(6M Cache, up to 3.90 GHz)

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Amazing performance and stunning visuals with a boost. Raise the bar on your PC experience with rich visuals plus an automatic burst of speed when you need it. The 4th generation Intel® Core™ i5 processor delivers amazing performance, stunning visuals, and built-in security for deeper protection.



Discover the thrill of an automatic burst of speed when you need it with Intel® Turbo Boost Technology 2.0. Experience your movies, photos, and games smoothly and seamlessly with a built-in suite of visual enhancements—and enjoy them even more with longer battery life.

Get a boost in your performance that you can truly see and feel, along with extra peace of mind from enhanced security. Because the only thing more amazing than Intel® technology is what you'll do with it.

Processor		Processor special features	
Processor manufacturer *	Intel	Intel® Anti-Theft Technology (Intel® AT)	✓
Processor generation	4th gen Intel® Core™ i5	Intel® Hyper Threading Technology (Intel® HT Technology)	✗
Processor model *	i5-4690	Intel® Identity Protection Technology (Intel® IPT)	✓
Processor base frequency *	3.5 GHz	Intel® My WiFi Technology (Intel® MWT)	✓
Processor family *	Intel® Core™ i5	Intel® Turbo Boost Technology	2.0
Processor cores *	4	Intel® Quick Sync Video Technology	✓
Processor socket *	LGA 1150 (Socket H3)	Intel® InTru™ 3D Technology	✓
Component for	PC	Intel® Wireless Display (Intel® WiDi)	✓
Processor lithography *	22 nm	Intel FDI Technology	✓
Processor series	Intel Core i5-4600 Desktop series	Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Processor threads	4	Intel® Insider™	✓
System bus rate	5 GT/s	Intel® Smart Cache	✓
Processor operating modes *	64-bit	Intel® AES New Instructions (Intel® AES-NI)	✓
Processor boost frequency	3.9 GHz	Enhanced Intel SpeedStep Technology	✓
Processor cache	6 MB	Intel Trusted Execution Technology	✓
Processor cache type	Smart Cache	Intel® Turbo Boost Technology 2.0 frequency	3.9 GHz
Thermal Design Power (TDP)	84 W	Intel® Transactional Synchronization Extensions	✗
Box *	✗	Intel Enhanced Halt State	✓
Cooler included *	✗	Intel VT-x with Extended Page Tables (EPT)	✓
Generation	4th Generation	Intel® Secure Key	✓
Compatible chipsets	Intel® H81, Intel® H87, Intel® H97, Intel® Q85, Intel® Q87, Intel® Z87, Intel® Z97	Intel TSX-NI	✗
Stepping	C0	Intel Stable Image Platform Program (SIPP)	✓
Bus type	DMI	Intel® OS Guard	✓
Memory bandwidth supported by processor (max)	25.6 GB/s	Intel 64	✓
Processor codename	Haswell	Intel Identity Protection Technology version	1.00
Processor code	SR1QH	Intel Secure Key Technology version	1.00
Processor ARK ID	80810		
Memory			
Maximum internal memory supported by processor	32 GB		
Memory types supported by processor	DDR3-SDRAM, DDR3L-SDRAM		
Memory clock speeds supported by processor	1333,1600 MHz		

Memory		Processor special features	
Memory voltage supported by processor	1.5 V	Intel Small Business Advantage (SBA) version	1.00
Memory channels *	Dual-channel	Intel Stable Image Platform Program (SIPP) version	1.00
ECC	✗	Intel Virtualization Technology (VT-x)	✓
Graphics		Intel Virtualization Technology for Directed I/O (VT-d)	✓
On-board graphics card *	✓	Intel TSX-NI version	0.00
On-board graphics card model *	Intel® HD Graphics 4600	Conflict-Free processor	✓
Maximum on-board graphics card memory	2 GB	Intel® vPro™ Platform Eligibility	✓
On-board graphics card outputs supported	Embedded DisplayPort (eDP), DisplayPort, HDMI, VGA (D-Sub)	Operational conditions	
On-board graphics card base frequency	350 MHz	Tcase	72.72 °C
On-board graphics card dynamic frequency (max)	1200 MHz	Technical details	
Number of displays supported (on-board graphics)	3	Bus bandwidth	5
On-board graphics card DirectX version	11.2/12	Bus type units	GT/s
On-board graphics card OpenGL version	4.3	Launch date	Q2'14
On-board graphics card maximum resolution (DisplayPort)	3840 x 2160 pixels	Maximum resolution & refresh rate (DisplayPort)	3840x2160@60Hz
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	3840 x 2160 pixels	Maximum resolution & refresh rate (HDMI)	4096x2304@24Hz
On-board graphics card maximum resolution (HDMI)	4096 x 2304 pixels	Maximum resolution & refresh rate (Integrated Flat Panel)	3840x2160@60Hz
On-board graphics card maximum resolution (VGA)	1920 x 1200 pixels	Maximum resolution & refresh rate (VGA)	1920x1200@60Hz
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz	Number of graphics cores	20
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	60 Hz	Processor cache	6144 KB
On-board graphics card refresh rate at maximum resolution (HDMI)	24 Hz	Product type	Processor
On-board graphics card refresh rate at maximum resolution (VGA)	60 Hz	Status	Discontinued
On-board graphics card ID	0x412	Maximum memory	32 GB
Features		Processor brand name	Intel Core i5 Intel Core i5 Processor
Execute Disable Bit	✓	Supported memory types	DDR3-SDRAM, DDR3L-SDRAM
Idle States	✓	Last change	63903513
Thermal Monitoring Technologies	✓	Product family	4th Generation Intel Core i5 Processors
Market segment	Desktop	Bus speed	5 GT/s
Maximum number of PCI Express lanes	16	Maximum graphics card memory	2 GB
PCI Express slots version	3.0	Processor ID	0x412
PCI Express configurations	1x16, 2x8, 1x8+2x4	Logistics data	
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Harmonized System (HS) code	8542310001
Bandwidth	5 MB/s	Packaging data	
Scalability	1S	Package type	Retail box
CPU configuration (max)	1	Weight & dimensions	
Embedded options available	✗	Processor package size	37.5 x 37.5 mm
Graphics & IMC lithography	22 nm	Other features	
Thermal solution specification	PCG 2013D	Intel® Virtualization Technology (Intel® VT)	VT-d, VT-x
Export Control Classification Number (ECCN)	5A992C	Maximum internal memory	32 GB
Commodity Classification Automated Tracking System (CCATS)	G077159	Maximum internal memory	32768 MB
		Graphics output	eDP/DP/HDMI/VGA
		Video decoding	✓

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