

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

Brand: HP Product code: 769737-001

Product name: Intel Core i5-4690

Intel Core i3-4690, 6M Cache, 3.5 GHz, 5 GT/s DMI2

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

Options, accessories, services and support for all your HP and Compaq products. HP Intel Core i5-4690. Processor family: Intel® Core™ i5, Processor socket: LGA 1150 (Socket H3), Processor lithography: 22 nm. Memory channels: Dual-channel, Maximum internal memory supported by processor: 32 GB, Memory types supported by processor: DDR3-SDRAM, DDR3L. On-board graphics card model: Intel® HD Graphics 4600, Maximum on-board graphics card memory: 2 GB, On-board graphics card outputs supported: DisplayPort, Embedded DisplayPort (eDP), HDMI, VGA (D-Sub). Market segment: Desktop, PCI Express configurations: 1x16, 1x8+2x4, 2x8, Supported instruction sets: AVX 2.0, SSE4.1, SSE4.2. Compatibility: ProDesk 600 G1

Processor		Graphics	
Processor generation	4th gen Intel® Core™ i5	On-board graphics card refresh rate	
Processor model *	i5-4690	at maximum resolution (VGA)	60 Hz
Processor base frequency *	3.5 GHz	Features	
Processor family *	Intel® Core™ i5	Execute Disable Bit	/
Processor cores *	4	Idle States	<b>✓</b>
Processor socket *	LGA 1150 (Socket H3)	Thermal Monitoring Technologies	<b>✓</b>
Component for	PC	Market segment	Desktop
Processor lithography * Processor series	22 nm Intel Core i5-4600 Desktop series	Maximum number of PCI Express	•
Processor threads	4	lanes	16
System bus rate	5 GT/s	PCI Express slots version	3.0
Processor operating modes *	64-bit	PCI Express configurations	1x16, 1x8+2x4, 2x8
Processor boost frequency	3.9 GHz	Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2
Processor cache	6 MB	Scalability CRU configuration (max)	1S 1
Processor cache type	Smart Cache	CPU configuration (max)	_
Thermal Design Power (TDP)	84 W	Embedded options available	X 22 nm
Stepping	C0	Graphics & IMC lithography Thermal solution specification	PCG 2013D
Bus type	DMI2	·	100 20130
Memory bandwidth supported by processor (max)	25.6 GB/s	Processor special features	
Memory		Intel® Anti-Theft Technology (Intel® AT)	✓
Maximum internal memory supported by processor	32 GB	Intel® Hyper Threading Technology (Intel® HT Technology)	×
Memory types supported by processor	DDR3-SDRAM, DDR3L	Intel® Identity Protection Technology (Intel® IPT)	✓
Memory clock speeds supported by processor	1333,1600 MHz	Intel® My WiFi Technology (Intel® MWT)	✓
Memory voltage supported by	1.5 V	Intel® Turbo Boost Technology	2.0
processor		Intel® Quick Sync Video Technology	<b>✓</b>
Memory channels *	Dual-channel	Intel® InTru™ 3D Technology	<b>✓</b>
ECC	×	Intel® Wireless Display (Intel® WiDi)	✓
Graphics		Intel FDI Technology	<b>✓</b>
On-board graphics card *	<b>✓</b>	Intel® Clear Video HD Technology	/
On-board graphics card model *	Intel® HD Graphics 4600	(Intel® CVT HD)	•
Maximum on-board graphics card memory	2 GB	Intel® AES New Instructions (Intel® AES-NI)	✓
On-board graphics card outputs supported	DisplayPort, Embedded DisplayPort (eDP), HDMI, VGA (D-Sub)	Enhanced Intel SpeedStep Technology	✓
On-board graphics card base frequency	350 MHz	Intel Trusted Execution Technology	<b>✓</b>

Graphics		Processor special features	
On-board graphics card dynamic frequency (max)	1200 MHz	Intel VT-x with Extended Page Tables (EPT)	1
Number of displays supported (on- board graphics)	3	Intel® Secure Key	✓
		Intel TSX-NI	×
On-board graphics card DirectX version	11.2/12	Intel Stable Image Platform Program (SIPP)	<b>✓</b>
On-board graphics card OpenGL version	4.3	Intel® OS Guard	<b>✓</b>
On-board graphics card maximum resolution (DisplayPort)	3840 x 2160 pixels	Intel® Small Business Advantage (Intel® SBA)	<b>✓</b>
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	3840 x 2160 pixels	Intel 64	✓
		Intel Virtualization Technology (VT-x)	<b>✓</b>
On-board graphics card maximum resolution (HDMI)	4096 x 2304 pixels	Intel Virtualization Technology for Directed I/O (VT-d)	<b>✓</b>
On-board graphics card maximum resolution (VGA)	1920 x 1200 pixels	Conflict-Free processor	<b>✓</b>
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz	Intel® vPro™ Platform Eligibility	✓
		Operational conditions	
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	60 Hz	Tcase	72.72 °C
		Other features	
On-board graphics card refresh rate at maximum resolution (HDMI)	24 Hz	Compatibility	ProDesk 600 G1

