DELL OptiPlex 3020 Intel® Core™ i5 i5-4590 8 GB DDR3-SDRAM 500 GB HDD Windows 7 Professional Mini Tower PC Black, Silver

Brand : DELL **Product family:** OptiPlex **Product code:** 3020-5364

Product name : 3020

OptiPlex 3020 Mini Tower - Intel Core i5-4590 (6M Cache, up to 3.70 GHz), 8GB DDR3 1600 MHz, 500GB HDD 7200rpm, H81, HD Graphics 4600, DVD+/-RW, Gigabit Ethernet, 290W, 2x USB 3.0, 6x USB 2.0, Windows 7 Professional/Windows 8.1 Pro
DELL OptiPlex 3020. Processor frequency: 3,3 GHz, Processor family: Intel® Core™ i5, Processor model: i5-4590. Internal memory: 8 GB, Internal memory type: DDR3-SDRAM, Memory clock speed: 1600 MHz. Total storage capacity: 500 GB, Storage media: HDD, Optical drive type: DVD±RW. On-board graphics card model: Intel® HD Graphics 4600. Operating system installed: Windows 7 Professional, Operating system architecture: 64-bit. Power supply: 290 W. Chassis type: Mini Tower. Product type: PC

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	4th gen Intel® Core™ i5
Processor model *	i5-4590
Processor cores	4
Processor threads	4
Processor boost frequency	3,7 GHz
Processor frequency *	3,3 GHz
Processor socket	LGA 1150 (Socket H3)
Processor cache	6 MB
Processor cache type	L3
System bus rate	5 GT/s
Bus type	DMI2
FSB Parity	✗
Processor lithography	22 nm
Processor operating modes	64-bit
Processor series	Intel Core i5-4500 Desktop Series
Processor codename	Haswell
Thermal Design Power (TDP)	84 W
Tcase	72,72 °C
PCI Express slots version	3.0
Maximum number of PCI Express lanes	16
PCI Express configurations	1x16, 2x8, 1x8+2x4
Number of processors installed	1
Stepping	C0
Maximum internal memory supported by processor	32 GB
Memory types supported by processor	DDR3-SDRAM
Memory clock speeds supported by processor	1333,1600 MHz
Memory bandwidth supported by processor (max)	25,6 GB/s
ECC supported by processor	✗

Memory

Internal memory *	8 GB
Maximum internal memory *	16 GB

Software

Operating system installed *	Windows 7 Professional
Drivers included	✔
Trial software	Microsoft Office

Processor special features

Intel® Small Business Advantage (Intel® SBA)	✗
Intel® Wireless Display (Intel® WiDi)	✔
Intel 64	✔
Enhanced Intel SpeedStep Technology	✔
Embedded options available	✗
Intel® InTru™ 3D Technology	✔
Intel® Insider™	✔
Intel® Clear Video HD Technology (Intel® CVT HD)	✔
Intel Clear Video Technology	✗
Intel VT-x with Extended Page Tables (EPT)	✔
Intel TSX-NI	✗
Idle States	✔
Thermal Monitoring Technologies	✔
Intel Stable Image Platform Program (SIPP)	✔
Intel® AES New Instructions (Intel® AES-NI)	✔
Intel® Secure Key	✔
Intel® OS Guard	✔
Intel Trusted Execution Technology	✔
Execute Disable Bit	✔
Intel FDI Technology	✔
Intel Flex Memory Access	✗
Intel Fast Memory Access	✗
Intel® Smart Cache	✔
Intel Enhanced Halt State	✔
Intel Demand Based Switching	✗

Memory

Internal memory type	DDR3-SDRAM
Memory layout (slots x size)	2 x 4 GB
Memory slots	2x DIMM
Memory clock speed	1600 MHz
Non-ECC	✔
Memory channels	Dual-channel

Storage

Total storage capacity *	500 GB
Storage media *	HDD
Optical drive type *	DVD±RW
Number of storage drives installed	1
Number of hard drives installed	1
Hard drive capacity	500 GB
Hard drive interface	SATA
Hard drive speed	7200 RPM

Graphics

On-board graphics card *	✔
Discrete graphics card model *	Not available
On-board graphics card family	Intel® HD Graphics
On-board graphics card model *	Intel® HD Graphics 4600
On-board graphics card base frequency	350 MHz
On-board graphics card dynamic frequency (max)	1150 MHz
Maximum on-board graphics card memory	2 GB
Number of displays supported (on-board graphics)	3
On-board graphics card DirectX version	11.1
On-board graphics card ID	0x412

Network

Ethernet LAN *	✔
Ethernet LAN data rates	10,100,1000 Mbit/s
Wi-Fi *	✘

Ports & interfaces

USB 2.0 ports quantity *	6
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
VGA (D-Sub) ports quantity	1
DVI port	✘
DisplayPorts quantity	1
Ethernet LAN (RJ-45) ports	1
Microphone in	✔
Headphone outputs	1
Line-out	✔
Line-in	✔

Expansion slots

PCI Express x1 slots	3
PCI Express x16 slots	1

Design

Chassis type *	Mini Tower
Placement supported	Vertical
Water cooling system	✘
Number of 3.5" bays	2
Number of 5.25" bays	2
Cable lock slot	✔
Product colour *	Black, Silver

Processor special features

Intel® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID)	✘
Processor package size	37.5 x 37.5 mm
Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2
Processor code	SR1QJ
Scalability	1S
CPU configuration (max)	1
Graphics & IMC lithography	22 nm
Thermal solution specification	PCG 2013D
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Identity Protection Technology version	1,00
Intel Stable Image Platform Program (SIPP) version	1,00
Intel Secure Key Technology version	1,00
Intel Virtualization Technology (VT-x)	✔
Intel Small Business Advantage (SBA) version	1,00
Intel TSX-NI version	0,00
Intel Dual Display Capable Technology	✘
Intel Rapid Storage Technology	✘
Processor ARK ID	80815
Intel® Smart Response Technology	✘
Intel® Rapid Start Technology	✘
Intel® Turbo Boost Technology	2.0
Intel Smart Connect Technology	✘
Intel® Hyper Threading Technology (Intel® HT Technology)	✘
Intel® Quick Sync Video Technology	✔
Intel® My WiFi Technology (Intel® MWT)	✔
Intel® Identity Protection Technology (Intel® IPT)	✔
Intel® Anti-Theft Technology (Intel® AT)	✔
Conflict-Free processor	✔

Power

Power supply *	290 W
Power supply input voltage	100 - 240 V
Power supply input frequency	50 - 60 Hz

Certificates

Compliance certificates	RoHS
Certification	CECP, WEEE, Energy Law, E-standby

Sustainability

Sustainability certificates	ENERGY STAR

Weight & dimensions

Width *	175 mm
Depth *	417 mm
Height *	360 mm
Weight *	9,4 kg

Packaging content

Mouse included	✘
Keyboard included	✘
Cables included	AC
Manual	✔

Performance

Motherboard chipset	Intel® H81
Password protection	✔
Password protection type	BIOS
Product type *	PC

Software

Operating system architecture	64-bit
Operating system language	Multilingual
Recovery operating system	Windows 8.1 Pro

Display

Display included *	✘

Other features

Optical drives quantity	1
Intel® Virtualization Technology (Intel® VT)	VT-d, VT-x
Intel segment tagging	Enterprise, Small Business

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