



## Lenovo ThinkPad W520 Intel® Core™ i7 i7-2720QM Mobile workstation 39,6 cm (15.6") Full HD 4 GB DDR3-SDRAM 500 GB HDD NVIDIA® Quadro® 1000M Windows 7 Professional Black



**Brand :** Lenovo

**Product family:** ThinkPad

**Product code:** NY54CGE

**Product name :** W520

ThinkPad W520 - Intel Core i7-2720QM (2.20 GHz), 4GB DDR3 RAM, 500GB SATA HDD, 15.6" FHD (1920x1080), nVidia Quadro 1000M 2GB, Gigabit Ethernet, WLAN 802.11a/g/n, DVD-RW, Windows 7 Professional 64-bit

Lenovo ThinkPad W520. Product type: Mobile workstation, Form factor: Clamshell. Processor type: Intel® Core™ i7, Processor: i7-2720QM, Processor frequency: 2,2 GHz. Display diagonal: 39,6 cm (15.6"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 4 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 500 GB, Storage media: HDD, Optical drives: DVD-RW. Operating system software: Windows 7 Professional. Product colour: Black

Design		Ports & interfaces	
Product type *	Mobile workstation	TV-out	✗
Product colour *	Black	<b>Performance</b>	
Form factor *	Clamshell	Chipset	Intel® QM67 Express
Display		Keyboard	
Display diagonal *	39,6 cm (15.6")	Pointing device	ThinkPad UltraNav
Display resolution *	1920 x 1080 pixels	Numeric keypad *	✗
Touchscreen *	✗	Spill-resistant keyboard	✓
HD type	Full HD	Windows keys	✓
LED backlight	✓	<b>Software</b>	
Native aspect ratio	16:9	Operating system architecture	64-bit
Processor		Operating system software *	Windows 7 Professional
Processor manufacturer *	Intel	<b>Processor special features</b>	
Processor type *	Intel® Core™ i7	Intel Wireless Display (WiDi) Technology	✓
Processor generation	2nd gen Intel® Core™ i7	Intel My WiFi Technology	✓
Processor *	i7-2720QM	Intel Anti-Theft Technology	✓
Processor number of cores	4	Intel® Smart Response Technology	✗
Processor threads	8	Intel Identity Protection Technology	✓
Processor boost frequency	3,3 GHz	Intel Hyper-Threading Technology	✓
Processor frequency *	2,2 GHz	Intel Turbo Boost Technology	2.0
Processor cache	6 MB	Intel® Small Business Advantage (Intel® SBA)	✗
Processor cache type	Smart Cache	Enhanced Intel SpeedStep Technology	✓
Processor socket	Socket 1224	Intel Clear Video HD Technology	✓
Processor system bus	1600 MHz	Intel Clear Video Technology	✗
Processor lithography	32 nm	Intel® InTru™ 3D Technology	✓
Processor operating modes	64-bit	Intel® Insider™	✓
Processor series	Intel Core i7-2700 Mobile Series	Intel® Quick Sync Video Technology	✓
Processor codename	Sandy Bridge	Intel Flex Memory Access	✓
Bus type	DMI	Intel AES New Instructions	✓
FSB Parity	✗	Intel Trusted Execution Technology	✓
Stepping	D2	Intel Enhanced Halt State	✓
Thermal Design Power (TDP)	45 W	Intel VT-x with Extended Page Tables (EPT)	✓
Tjunction	100 C	Intel Demand Based Switching	✗
Maximum number of PCI Express lanes	16		
PCI Express slots version	2.0		
PCI Express configurations	1x16, 2x8		
CPU multiplier (bus/core ratio)	22		
ECC supported by processor	✗		

Memory		Processor special features	
Internal memory *	4 GB	Intel Clear Video Technology for MID	✗
Internal memory type	DDR3-SDRAM	Intel 64	✓
Memory speed	1333 MHz	Execute Disable Bit	✓
Memory slots	4x SO-DIMM	Idle States	✓
Maximum memory *	32 GB	Thermal Monitoring Technologies	✓
Storage		Processor package size	37.5 x 37.5 (rPGA988B); 31.0 x 24.0 (BGA1224)
Total storage capacity *	500 GB	Supported instruction sets	AVX
Storage media *	HDD	Processor code	SR00W
Number of HDDs installed	1	CPU configuration (max)	1
Hard drive capacity	500 GB	Embedded options available	✗
Hard drive interface	SATA	Graphics & IMC lithography	32 nm
Hard drive rotational speed	7200 RPM	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Optical drives *	DVD-RW	Intel Identity Protection Technology version	1,00
Card reader integrated	✓	Intel Virtualization Technology (VT-x)	✓
Compatible memory cards	MMC	Intel Dual Display Capable Technology	✓
Graphics		Intel FDI Technology	✓
Discrete graphics card model *	NVIDIA® Quadro® 1000M	Intel Rapid Storage Technology	✗
Discrete graphics card memory	2 GB	Intel Fast Memory Access	✓
Discrete graphics memory type	GDDR3	Processor ARK ID	50067
On-board graphics card *	✓	Conflict-Free processor	✗
Discrete graphics card *	✓	Integrated 4G WiMAX	✓
On-board graphics card family	Intel® HD Graphics	Battery	
On-board graphics card model *	Intel® HD Graphics 3000	Battery technology	Lithium-Ion (Li-Ion)
On-board graphics card base frequency	650 MHz	Number of battery cells	9
On-board graphics card dynamic frequency (max)	1300 MHz	Battery life (max)	8,9 h
On-board graphics card ID	0x116	Power	
Number of discrete graphics cards	1	AC adapter power	170 W
Number of discrete graphics cards installed	1	DC-in jack	✓
Maximum resolution	1920 x 1080 pixels	Security	
Audio		Cable lock slot	✓
Number of built-in speakers	2	Fingerprint reader	✓
Speaker power	1 W	Password protection type	HDD, Power on, Supervisor
Built-in microphone	✓	Sustainability	
Camera		Sustainability certificates	EPEAT Gold, ENERGY STAR
Front camera	✓	Weight & dimensions	
Network		Width	372,8 mm
Wi-Fi	✓	Depth	245,1 mm
Network interface	Gigabit Ethernet	Height (front)	3,16 cm
Wi-Fi standards	802.11a, 802.11g, Wi-Fi 4 (802.11n)	Height (rear)	3,58 cm
Ethernet LAN connection	✓	Width (imperial)	37,3 cm (14.7")
Bluetooth	✗	Depth (imperial)	24,5 cm (9.65")
Cabling technology	10/100/1000Base-T(X)	Height (front) (imperial)	3,2 cm (1.26")
Ports & interfaces		Height (rear) (imperial)	3,58 cm (1.41")
USB 2.0 ports quantity *	1	Weight *	3,11 kg
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2	Packaging content	
eSATA/USB 2.0 ports quantity	1	AC adapter included *	✓
Ethernet LAN (RJ-45) ports	1	Cables included	AC
DisplayPorts quantity	1	Other features	
DVI port	✗	Wireless technologies	Wi-Fi
VGA (D-Sub) ports quantity	1	Infrared data port	✗
Headphone outputs	1	Graphics card family	Intel, NVIDIA
S/PDIF out port	✗		
Microphone in	✓		

Ports & interfaces		Other features	
Combo headphone/mic port	✓	3D compatibility	✗
Docking connector	✗	Type	PC
ExpressCard slot	✓	Display	TFT
CardBus PCMCIA slot type	✗	Compliance industry standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
		Intel segment tagging	Professional

## Catalog Object Cloud



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