![Lenovo]

Lenovo ThinkPad T510 Intel® Core™ i5 i5-520M 39,6 cm (15.6") 2 GB DDR3-SDRAM 160 GB HDD Windows 7 Professional Black

Brand : Lenovo   **Product family:** ThinkPad   **Product code:** NTH4XU1

Product name : T510

Intel Core i5-520M (2.40 GHz), 2GB DDR3 RAM, 160GB SATA HDD, 15.6" TFT (1366x768), Intel HD Graphics, Gigabit Ethernet, WLAN 802.11 b/g/n, Bluetooth, DVD-RW, Windows 7 Professional 32-bit Lenovo ThinkPad T510. Form factor: Clamshell. Processor family: Intel® Core™ i5, Processor model: i5-520M, Processor frequency: 2,4 GHz. Display diagonal: 39,6 cm (15.6"), Display resolution: 1366 x 768 pixels. Internal memory: 2 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 160 GB, Storage media: HDD, Optical drive type: DVD-RW. On-board graphics card model: Intel® HD Graphics. Operating system installed: Windows 7 Professional. Product colour: Black. Weight: 2,67 kg

Design	
Product colour *	Black
Form factor *	Clamshell

Display	
Display diagonal *	39,6 cm (15.6")
Display resolution *	1366 x 768 pixels
LED backlight	✔
Native aspect ratio	16:9
Display brightness	220 cd/m²

Processor	
Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	Intel® Core™ i5
Processor model *	i5-520M
Processor cores	2
Processor threads	4
Processor boost frequency	2,93 GHz
Processor frequency *	2,4 GHz
System bus rate	2,5 GT/s
Processor cache	3 MB
Processor cache type	Smart Cache
Processor socket	BGA 956
Processor lithography	32 nm
Processor operating modes	64-bit
Processor series	Intel Core i5-500 Mobile Series
Processor codename	Arrandale
Bus type	DMI
FSB Parity	✘
Stepping	C2
Thermal Design Power (TDP)	35 W
Tjunction	105 °C
Maximum number of PCI Express lanes	16
PCI Express slots version	2.0
PCI Express configurations	1x16
Number of Processing Die Transistors	382 M
Processing Die size	81 mm²

Ports & interfaces	
TV-out	✘

Performance	
Motherboard chipset	Intel® QM57 Express

Keyboard	
Pointing device	ThinkPad UltraNav
Numeric keypad *	✘
Windows keys	✔

Software	
Operating system architecture	32-bit
Operating system installed *	Windows 7 Professional

Processor special features	
Intel® Wireless Display (Intel® WiDi)	✘
Intel® My WiFi Technology (Intel® MWT)	✘
Intel® Anti-Theft Technology (Intel® AT)	✘
Intel® Hyper Threading Technology (Intel® HT Technology)	✔
Intel® Turbo Boost Technology	1.0
Enhanced Intel SpeedStep Technology	✔
Intel® Clear Video HD Technology (Intel® CVT HD)	✔
Intel Clear Video Technology	✔
Intel® InTru™ 3D Technology	✘
Intel® Insider™	✘
Intel® Quick Sync Video Technology	✘
Intel Flex Memory Access	✔
Intel® AES New Instructions (Intel® AES-NI)	✔
Intel Trusted Execution Technology	✔
Intel Enhanced Halt State	✔
Intel VT-x with Extended Page Tables (EPT)	✔
Intel Demand Based Switching	✘

Processor

CPU multiplier (bus/core ratio)	18
ECC supported by processor	✘

Memory

Internal memory *	2 GB
Internal memory type	DDR3-SDRAM
Memory clock speed	1066 MHz
Memory layout (slots x size)	1 x 2 GB
Memory slots	2x SO-DIMM
Memory slots (available)	1
Maximum internal memory *	8 GB

Storage

Total storage capacity *	160 GB
Storage media *	HDD
Number of HDDs installed	1
HDD capacity	160 GB
HDD interface	SATA
HDD speed	7200 RPM
Optical drive type *	DVD-RW
Card reader integrated	✔
Compatible memory cards	Memory Stick (MS), MMC, MS PRO, SD, SDHC

Graphics

On-board graphics card *	✔
On-board graphics card family	Intel® HD Graphics
On-board graphics card model *	Intel® HD Graphics
On-board graphics card base frequency	500 MHz
On-board graphics card dynamic frequency (max)	766 MHz
Maximum resolution	1366 x 768 pixels

Audio

Audio system	HD
Number of built-in speakers	2
Speaker power	1 W
Built-in microphone	✔

Network

Wi-Fi	✔
Networking features	Gigabit Ethernet
Wi-Fi standards	802.11b, 802.11g, Wi-Fi 4 (802.11n)
Ethernet LAN	✔
Ethernet LAN data rates	10,100,1000 Mbit/s
Bluetooth	✔
Bluetooth version	2.1+EDR
WWAN	Installed

Ports & interfaces

USB 2.0 ports quantity *	3
eSATA/USB 2.0 ports quantity	1
Ethernet LAN (RJ-45) ports	1
DisplayPorts quantity	1
DVI port	✘
VGA (D-Sub) ports quantity	1
Firewire (IEEE 1394) ports	1
Headphone outputs	1
S/PDIF out port	✘
Microphone in	✔
ExpressCard slot	✔
CardBus PCMCIA slot type	✘

Processor special features

Intel® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID)	✔
Intel 64	✔
Execute Disable Bit	✔
Idle States	✔
Thermal Monitoring Technologies	✔
Processor package size	rPGA 37.5x 37.5, BGA 34x28
Supported instruction sets	SSE4.1/4.2
Physical Address Extension (PAE)	36 bit
CPU configuration (max)	1
Embedded options available	✔
Graphics & IMC lithography	45 nm
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Virtualization Technology (VT-x)	✔
Intel Dual Display Capable Technology	✔
Intel FDI Technology	✔
Intel Rapid Storage Technology	✘
Intel Fast Memory Access	✔
Processor ARK ID	47341
Conflict-Free processor	✘

Battery

Battery technology	Lithium-Ion (Li-Ion)
Number of battery cells	6
Battery life (max)	6,2 h

Power

AC adapter power	65 W
DC-in jack	✔

Security

Cable lock slot	✔
Cable lock slot type	Kensington
Password protection type	HDD, Power on, Supervisor

Sustainability

Sustainability certificates	EPEAT Gold, ENERGY STAR

Weight & dimensions

Width	372,8 mm
Depth	245,1 mm
Height (front)	3,2 cm
Height (rear)	3,58 cm
Weight *	2,67 kg

Packaging content

AC adapter included *	✔

Other features

Wireless technology	Wi-Fi
Infrared data port	✘
Graphics card family	Intel
Type	PC
Display	TFT
Compliance industry standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
Intel segment tagging	Home office, Small Business

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