Lenovo

Lenovo ThinkPad T420 Intel® Core™ i5 i5-2410M 35.6 cm (14") 4 GB DDR3-SDRAM 320 GB HDD Windows 7 Professional Black

Brand : Lenovo   **Product family:** ThinkPad   **Product code:** NW19YRT

Product name : T420

Intel Core i5-2410M(2.3GHz), 4GB DDR3, 320GB, 14.0" HD+ (1366 x 768), Intel HD Graphics 3000, Windows 7 Professional 64-bit
Lenovo ThinkPad T420. Processor family: Intel® Core™ i5, Processor model: i5-2410M, Processor frequency: 2.3 GHz. Display diagonal: 35.6 cm (14"), Display resolution: 1366 x 768 pixels. Internal memory: 4 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 320 GB, Storage media: HDD, Optical drive type: DVD±RW. On-board graphics card model: Intel® HD Graphics 3000. Operating system installed: Windows 7 Professional. Product color: Black. Weight: 2.24 kg

Design	
Product color *	Black
Housing material	Plastic

Display	
Display diagonal *	35.6 cm (14")
Display resolution *	1366 x 768 pixels
LED backlight	✔
Native aspect ratio	16:9
Display surface	Matt
Display brightness	230 cd/m²
Dual-screen	✘
Contrast ratio (typical)	300:1

Processor	
Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	2nd gen Intel® Core™ i5
Processor model *	i5-2410M
Processor cores	2
Processor threads	4
Processor boost frequency	2.9 GHz
Processor frequency *	2.3 GHz
System bus rate	5 GT/s
Processor cache	3 MB
Processor cache type	Smart Cache
Processor socket	BGA 1023
Processor lithography	32 nm
Processor operating modes	64-bit
Processor series	Intel Core i5-2400 Mobile Series
Processor codename	Sandy Bridge
Bus type	DMI
FSB Parity	✘
Stepping	J1
Thermal Design Power (TDP)	35 W
Tjunction	100 °C

Software	
Operating system architecture	64-bit
Drivers included	✔
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® Identity Protection Technology (Intel® IPT)	✔
Intel® Hyper Threading Technology (Intel® HT Technology)	✔
Intel® Turbo Boost Technology	2.0
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® Smart Cache	✔
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	✘
Intel® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID)	✘
Intel 64	✔

Processor

Maximum number of PCI Express lanes	16
PCI Express slots version	2.0
PCI Express configurations	1x8, 1x16, 2x4, 2x8
CPU multiplier (bus/core ratio)	23
ECC supported by processor	✘

Memory

Internal memory *	4 GB
Internal memory type	DDR3-SDRAM
Memory clock speed	1333 MHz
Memory slots	2x SO-DIMM
Maximum internal memory *	8 GB

Storage

Total storage capacity *	320 GB
Storage media *	HDD
Number of HDDs installed	1
HDD capacity	320 GB
HDD interface	SATA
HDD speed	7200 RPM
Optical drive type *	DVD±RW
Card reader integrated	✔
Compatible memory cards	MMC, SD, SDHC, SDXC

Graphics

Discrete graphics card model *	Not available
On-board graphics card *	✔
Discrete graphics card *	✘
On-board graphics card family	Intel® HD Graphics
On-board graphics card model *	Intel® HD Graphics 3000
On-board graphics card base frequency	650 MHz
On-board graphics card dynamic frequency (max)	1200 MHz
On-board graphics card ID	0x116
Maximum graphics card memory	0.256 GB

Audio

Audio system	HDA
Number of built-in speakers	2
Speaker power	1 W
Built-in subwoofer	✘
Built-in microphone	✔
Audio system direct 3D sound	✘

Network

Wi-Fi	✔
Networking features	1Gb Ethernet
Wi-Fi standards	802.11b, 802.11g, Wi-Fi 4 (802.11n)
Ethernet LAN	✔
Bluetooth	✘
WWAN	Installed
Data network	Not supported
Cabling technology	10/100/1000Base-T(X)
4G WiMAX	✘

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	✘

Processor special features

Execute Disable Bit	✔
Idle States	✔
Thermal Monitoring Technologies	✔
Processor package size	37.5x37.5 (rPGA988B); 31 x 24 (BGA1023)
Supported instruction sets	AVX
Embedded options available	✘
Graphics & IMC lithography	32 nm
Intel Virtualization Technology for Directed I/O (VT-d)	✘
Intel Identity Protection Technology version	1.00
Intel Virtualization Technology (VT-x)	✔
Intel Dual Display Capable Technology	✔
Intel FDI Technology	✔
Intel Rapid Storage Technology	✘
Intel Fast Memory Access	✔
Processor ARK ID	52224
Conflict-Free processor	✘
Integrated 4G WiMAX	✔

Battery

Battery life (max)	9 h

Power

AC adapter power	90 W
DC-in jack	✔

Security

Cable lock slot	✔
Fingerprint reader	✔
Trusted Platform Module (TPM)	✔
Password protection type	BIOS

Operational conditions

Operating temperature (T-T)	5 - 35 °C
Storage temperature (T-T)	5 - 43 °C
Operating relative humidity (H-H)	8 - 95%
Storage relative humidity (H-H)	5 - 95%
Operating altitude	0 - 3048 m

Weight & dimensions

Width	340 mm
Depth	229.8 mm
Height (front)	2.99 cm
Height (rear)	3.04 cm
Width (imperial)	34 cm (13.4")
Depth (imperial)	23 cm (9.05")
Height (front) (imperial)	3 cm (1.18")
Height (rear) (imperial)	3.05 cm (1.2")
Weight *	2.24 kg

Packaging content

AC adapter included *	✔
Handheld remote control	✘

Other features

LightScribe	✘
Infrared data port	✘
Graphics card family	Intel
3D	✘

Ports & interfaces

VGA (D-Sub) ports quantity	1
Headphone outputs	1
S/PDIF out port	✘
Microphone in	✔
Line-in	✘
Docking connector	✘
ExpressCard slot	✔
CardBus PCMCIA slot type	✘
SmartCard slot	✘
TV-out	✘

Performance

Motherboard chipset	Intel® QM67 Express

Keyboard

Pointing device	ThinkPad UltraNav
Numeric keypad *	✘
Full-size keyboard	✘
Keyboard number of keys	89
Keyboard layout	QWERTY

Other features

Type	PC
Display	LED
Power requirements	100/240 V
Hot keys	7
TV-in port	✘
HDD user password	✔
Internal modem	✘
Audio system full duplex	✘
TV tuner integrated	✘
Intel segment tagging	Home office, Small Business

Catalog Object Cloud