



Lenovo ThinkPad X220 Intel® Core™ i7 i7-2620M 31.8 cm (12.5") 4 GB DDR3-SDRAM 320 GB HDD Windows 7 Professional Black

Brand : Lenovo

Product family: ThinkPad

Product code: 429147U

Product name : X220

Intel Core i7-2620M(2.70GHz), 4GB RAM, 320GB 7200rpm HD, 12.5in 1366x768 LCD, Intel HD Graphics, Intel 802.11agn wireless, Bluetooth, 1Gb Ethernet, UltraNav, Secure Chip, Fingerprint reader, 6c Li-Ion, Windows 7 Professional 64

Lenovo ThinkPad X220. Processor family: Intel® Core™ i7, Processor model: i7-2620M, Processor frequency: 2.7 GHz. Display diagonal: 31.8 cm (12.5"), Display resolution: 1366 x 768 pixels. Internal memory: 4 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 320 GB, Storage media: HDD. On-board graphics card model: Intel® HD Graphics 3000. Operating system installed: Windows 7 Professional. Product color: Black. Weight: 1.3 kg



Design		Software	
Product color *	Black	Operating system architecture	64-bit
Housing material	Plastic	Drivers included	✓
Display		Operating system installed *	Windows 7 Professional
Display diagonal *	31.8 cm (12.5")	Processor special features	
Display resolution *	1366 x 768 pixels	Intel® Wireless Display (Intel® WiDi)	✓
LED backlight	✓	Intel® My WiFi Technology (Intel® MWT)	✓
Native aspect ratio	16:9	Intel® Anti-Theft Technology (Intel® AT)	✓
Display surface	Matt	Intel® Identity Protection Technology (Intel® IPT)	✓
Dual-screen	✗	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor		Intel® Turbo Boost Technology	2.0
Processor manufacturer *	Intel	Enhanced Intel SpeedStep Technology	✓
Processor family *	Intel® Core™ i7	Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Processor generation	2nd gen Intel® Core™ i7	Intel Clear Video Technology	✗
Processor model *	i7-2620M	Intel® InTru™ 3D Technology	✓
Processor cores	2	Intel® Insider™	✓
Processor threads	4	Intel® Quick Sync Video Technology	✓
Processor boost frequency	3.4 GHz	Intel Flex Memory Access	✓
Processor frequency *	2.7 GHz	Intel® AES New Instructions (Intel® AES-NI)	✓
System bus rate	5 GT/s	Intel Trusted Execution Technology	✓
Processor cache	4 MB	Intel Enhanced Halt State	✓
Processor cache type	Smart Cache	Intel VT-x with Extended Page Tables (EPT)	✓
Processor socket	BGA 1023	Intel Demand Based Switching	✗
Processor lithography	32 nm	Intel® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID)	✗
Processor operating modes	64-bit	Intel 64	✓
Processor series	Intel Core i7-2600 Mobile Series		
Processor codename	Sandy Bridge		
Bus type	DMI		
FSB Parity	✗		
Stepping	J1		
Thermal Design Power (TDP)	35 W		
Tjunction	100 °C		
Maximum number of PCI Express lanes	16		

Processor		Processor special features	
PCI Express slots version	2.0	Execute Disable Bit	✓
PCI Express configurations	1x16, 2x8, 1x8+2x4	Idle States	✓
CPU multiplier (bus/core ratio)	27	Thermal Monitoring Technologies	✓
ECC supported by processor	✗	Processor package size	37.5 x 37.5 (rPGA988B); 31 x 24 (BGA1023)
Memory		Supported instruction sets	AVX
Internal memory *	4 GB	Processor code	SR041
Internal memory type	DDR3-SDRAM	CPU configuration (max)	1
Memory clock speed	1333 MHz	Embedded options available	✗
Memory layout (slots x size)	2 x 2 GB	Graphics & IMC lithography	32 nm
Memory slots	2x SO-DIMM	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Maximum internal memory *	8 GB	Intel Identity Protection Technology version	1.00
Storage		Intel Virtualization Technology (VT-x)	✓
Total storage capacity *	320 GB	Intel Dual Display Capable Technology	✓
Storage media *	HDD	Intel FDI Technology	✓
Number of HDDs installed	1	Intel Rapid Storage Technology	✗
HDD interface	SATA	Intel Fast Memory Access	✓
HDD speed	7200 RPM	Processor ARK ID	52231
Optical drive type *	✗	Conflict-Free processor	✗
Card reader integrated	✓	Integrated 4G WiMAX	✓
Compatible memory cards	Memory Stick (MS), MMC, MS PRO, SD, xD	Battery	
Graphics		Number of battery cells	6
Discrete graphics card model *	Not available	Battery life (max)	15 h
On-board graphics card *	✓	Power	
Discrete graphics card *	✗	DC-in jack	✓
On-board graphics card family	Intel® HD Graphics	Security	
On-board graphics card model *	Intel® HD Graphics 3000	Cable lock slot	✓
On-board graphics card base frequency	650 MHz	Cable lock slot type	Kensington
On-board graphics card dynamic frequency (max)	1300 MHz	Fingerprint reader	✓
On-board graphics card ID	0x116	Trusted Platform Module (TPM)	✓
Audio		Password protection type	BIOS
Audio system	HDA	Operational conditions	
Number of built-in speakers	2	Operating temperature (T-T)	5 - 35 °C
Speaker power	2 W	Storage temperature (T-T)	5 - 43 °C
Built-in subwoofer	✗	Operating relative humidity (H-H)	8 - 80%
Network		Storage relative humidity (H-H)	5 - 95%
Wi-Fi	✓	Operating altitude	0 - 2438 m
Networking features	Gigabit Ethernet	Sustainability	
Ethernet LAN	✓	Sustainability certificates	ENERGY STAR
Bluetooth	✓	Weight & dimensions	
Bluetooth version	2.1+EDR	Width	305 mm
WWAN	Not installed	Depth	206.5 mm
Data network	Not supported	Height (front)	1.9 cm
Cabling technology	10/100/1000Base-T(X)	Height (rear)	3.46 cm
4G WiMAX	✗	Weight *	1.3 kg
Ports & interfaces		Packaging content	
USB 2.0 ports quantity *	3	AC adapter included *	✓
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	1	Handheld remote control	✗
Ethernet LAN (RJ-45) ports	1	Other features	
DisplayPorts quantity	1	LightScribe	✗
DVI port	✗	Infrared data port	✗
VGA (D-Sub) ports quantity	1		
Headphone outputs	1		
S/PDIF out port	✗		

Ports & interfaces		Other features	
Microphone in	✓	Graphics card family	Intel
Line-in	✗	Type	PC
Docking connector	✗	Display	LCD
ExpressCard slot	✓	Power requirements	230 V
CardBus PCMCIA slot type	✗	TV-in port	✓
SmartCard slot	✗	HDD user password	✓
TV-out	✗	Internal modem	✗
Keyboard		TV tuner integrated	✗
Pointing device	ThinkPad UltraNav		
Numeric keypad *	✗		
Full-size keyboard	✓		

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