msi

MSI Gaming GE72 2QD(Apache)-001AU Intel® Core™ i7 i7-4720HQ Laptop 43,9 cm (17.3") Full HD 8 GB DDR3L-SDRAM 1,13 TB HDD+SSD NVIDIA® GeForce® GTX 960M Wi-Fi 5 (802.11ac) Windows 8.1 Black

Brand : MSI

Product family: Gaming

Product code: GE72 2QD-001AU

Product name : GE72 2QD(Apache)-001AU

Intel Core i7-4720HQ (6M Cache, 2.60 GHz), 17.3" Full HD (1920x1080) LED, 8GB DDR3L, 128GB SSD + 1TB SATA HDD, DVD Super Multi, Intel HD Graphics 4600 + NVIDIA GeForce GTX 960M 2GB GDDR5, Gigabit Ethernet, WLAN 802.11ac, Bluetooth 4.1, HD Webcam, Windows 8.1 64-bit
MSI Gaming GE72 2QD(Apache)-001AU. Product type: Laptop, Form factor: Clamshell. Processor family: Intel® Core™ i7, Processor model: i7-4720HQ, Processor frequency: 2,6 GHz. Display diagonal: 43,9 cm (17.3"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 8 GB, Internal memory type: DDR3L-SDRAM. Total storage capacity: 1,13 TB, Storage media: HDD+SSD, Optical drive type: DVD Super Multi. Operating system installed: Windows 8.1. Product colour: Black

Design		Ports & interfaces	
Product type *	Laptop	Mini DisplayPorts quantity	1
Product colour *	Black	DVI port	✗
Form factor *	Clamshell	Headphone outputs	1
Market positioning	Gaming	S/PDIF out port	✗
Display		Microphone in	✔
Display diagonal *	43,9 cm (17.3")	Line-in	✔
Display resolution *	1920 x 1080 pixels	Docking connector	✗
Touchscreen *	✗	ExpressCard slot	✗
HD type	Full HD	CardBus PCMCIA slot type	✗
LED backlight	✔	SmartCard slot	✗
Native aspect ratio	16:9	**Performance**	
Display surface	Matt	Motherboard chipset	Intel® HM87
Dual-screen	✗	**Keyboard**	
Processor		Pointing device	Touchpad
Processor manufacturer *	Intel	Numeric keypad *	✔
Processor family *	Intel® Core™ i7	Keyboard backlit	✔
Processor generation	4th gen Intel® Core™ i7	Windows keys	✔
Processor model *	i7-4720HQ	**Software**	
Processor cores	4	Operating system architecture	64-bit
Processor threads	8	Operating system installed *	Windows 8.1
Processor boost frequency	3,6 GHz	**Processor special features**	
Processor frequency *	2,6 GHz	Intel® Wireless Display (Intel® WiDi)	✔
System bus rate	5 GT/s		
Processor cache	6 MB	Intel® My WiFi Technology (Intel® MWT)	✗
Processor cache type	L3		
Processor socket	BGA 1364	Intel® Anti-Theft Technology (Intel® AT)	✔
Processor lithography	22 nm		
Processor operating modes	64-bit	Intel® Identity Protection Technology (Intel® IPT)	✔
Processor series	Intel Core i7-4700 Mobile series		
Processor codename	Haswell	Intel® Hyper Threading Technology (Intel® HT Technology)	✔
Bus type	DMI2		
FSB Parity	✗	Intel® Turbo Boost Technology	✗
Stepping	C0		
Thermal Design Power (TDP)	47 W		

Processor

Tjunction	100 °C
Maximum number of PCI Express lanes	16
PCI Express slots version	3.0
PCI Express configurations	1x16, 2x8, 1x8+2x4
ECC supported by processor	✘

Memory

Internal memory *	8 GB
Internal memory type	DDR3L-SDRAM
Memory clock speed	1600 MHz
Memory slots	2x SO-DIMM
Maximum internal memory *	16 GB

Storage

Total storage capacity *	1,13 TB
Storage media *	HDD+SSD
Number of hard drives installed	1
Hard drive capacity	1 TB
Hard drive interface	SATA
Hard drive speed	7200 RPM
Number of SSDs installed	1
Solid-state drive capacity	128 GB
Solid-state drive interface	mSATA
Optical drive type *	DVD Super Multi
Card reader integrated	✔
Compatible memory cards	SD, SDHC, SDXC

Graphics

Discrete graphics card model *	NVIDIA® GeForce® GTX 960M
Discrete graphics card memory	2 GB
Discrete graphics memory type	GDDR5
On-board graphics card *	✔
Discrete graphics card *	✔
On-board graphics card family	Intel® HD Graphics
On-board graphics card model *	Intel® HD Graphics 4600
On-board graphics card base frequency	400 MHz
On-board graphics card dynamic frequency (max)	1200 MHz
Maximum on-board graphics card memory	1,74 GB
On-board graphics card DirectX version	11.2/12
On-board graphics card OpenGL version	4.3
On-board graphics card ID	0x416

Audio

Audio system	Sound Blaster Cinema
Number of built-in speakers	4
Speakers manufacturer	Dynaudio
Speaker power	2 W
Built-in microphone	✔

Camera

Front camera	✔
Front camera resolution	1280 x 720 pixels
Video capturing speed	30 fps

Network

Wi-Fi	✔
Top Wi-Fi standard *	Wi-Fi 5 (802.11ac)

Processor special features

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® Secure Key	✔
Intel TSX-NI	✘
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	37.5 x 32 x 1.6 mm
Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2
Processor code	SR1Q8
CPU configuration (max)	1
Embedded options available	✘
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Identity Protection Technology version	1,00
Intel Secure Key Technology version	1,00
Intel TSX-NI version	0,00
Intel Virtualization Technology (VT-x)	✔
Intel Dual Display Capable Technology	✘
Intel FDI Technology	✔
Intel Rapid Storage Technology	✘
Intel Fast Memory Access	✘
Processor ARK ID	78934
Conflict-Free processor	✔

Battery

Battery technology	Lithium-Ion (Li-Ion)
Number of battery cells	6
Battery capacity *	60 Wh

Power

AC adapter power	150 W
AC adapter frequency	50 - 60 Hz
DC-in jack	✔

Security

Cable lock slot	✔
Cable lock slot type	Kensington

Network

Wi-Fi standards	802.11a, Wi-Fi 5 (802.11ac), 802.11b, 802.11g, Wi-Fi 4 (802.11n)
Ethernet LAN	✔
Ethernet LAN data rates	10,100,1000 Mbit/s
Bluetooth	✔
Bluetooth version	4.1

Ports & interfaces

USB 2.0 ports quantity *	1
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	3
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity *	1
HDMI version	1.4b

Weight & dimensions

Width	419 mm
Depth	280 mm
Height	29 mm
Weight *	2,7 kg

Packaging content

AC adapter included *	✔
Manual	✔

Other features

LightScribe	✘
3D	✘
Intel® Virtualization Technology (Intel® VT)	VT-d, VT-x

Catalog Object Cloud