msi

MSI Gaming GE72 2QE(Apache)-051AU Intel® Core™ i7 i7-4720HQ Laptop 43.9 cm (17.3") Full HD 16 GB DDR3L-SDRAM 1 TB HDD NVIDIA® GeForce® GTX 965M Wi-Fi 5 (802.11ac) Windows 8.1 Black

Brand : MSI

Product family: Gaming

Product code: GE72 2QE-051AU

Product name : GE72 2QE(Apache)-051AU

Intel Core i7-4720HQ (6M Cache, 2.60 GHz), 17.3" Full HD (1920x1080) LED, 16GB DDR3L, 1TB SATA HDD, DVD Super Multi, Intel HD Graphics 4600 + NVIDIA GeForce GTX 965M 2GB GDDR5, Gigabit Ethernet, WLAN 802.11ac, Bluetooth 4.1, HD Webcam, Windows 8.1 64-bit
MSI Gaming GE72 2QE(Apache)-051AU. 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: 16 GB, Internal memory type: DDR3L-SDRAM. Total storage capacity: 1 TB, Storage media: HDD, Optical drive type: DVD Super Multi. Operating system installed: Windows 8.1. Product colour: Black

Design

Product type *	Laptop
Product colour *	Black
Form factor *	Clamshell
Market positioning	Gaming

Display

Display diagonal *	43.9 cm (17.3")
Display resolution *	1920 x 1080 pixels
Touchscreen *	✗
HD type	Full HD
LED backlight	✔
Native aspect ratio	16:9
Display surface	Matt
Dual-screen	✗

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i7
Processor generation	4th gen Intel® Core™ i7
Processor model *	i7-4720HQ
Processor cores	4
Processor threads	8
Processor boost frequency	3.6 GHz
Processor frequency *	2.6 GHz
System bus rate	5 GT/s
Processor cache	6 MB
Processor cache type	L3
Processor socket	BGA 1364
Processor lithography	22 nm
Processor operating modes	64-bit
Processor series	Intel Core i7-4700 Mobile series
Processor codename	Haswell
Bus type	DMI2
FSB Parity	✗
Stepping	C0
Thermal Design Power (TDP)	47 W

Ports & interfaces

Headphone outputs	1
S/PDIF out port	✗
Microphone in	✔
Line-in	✔
Docking connector	✗
ExpressCard slot	✗
CardBus PCMCIA slot type	✗
SmartCard slot	✗

Performance

Motherboard chipset	Intel® HM87

Keyboard

Pointing device	Touchpad
Numeric keypad *	✔
Keyboard backlit	✔
Windows keys	✔

Software

Operating system architecture	64-bit
Operating system installed *	Windows 8.1

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	✗
Enhanced Intel SpeedStep Technology	✔
Intel® Clear Video HD Technology (Intel® CVT HD)	✔

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 *	16 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 TB
Storage media *	HDD
Number of HDDs installed	1
HDD capacity	1 TB
HDD interface	SATA
HDD speed	7200 RPM
Optical drive type *	DVD Super Multi
Card reader integrated	✔
Compatible memory cards	SD, SDHC, SDXC

Graphics

Discrete graphics card model *	NVIDIA® GeForce® GTX 965M
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)
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	10,1000,100 Mbit/s

Processor special features

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

Weight & dimensions

Width	419 mm
Depth	280 mm
Height	29 mm

Network

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
Mini DisplayPorts quantity	1
DVI port	✘

Weight & dimensions

Weight *	2.7 kg

Packaging content

AC adapter included *	✔
Manual	✔

Other features

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

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