msi

MSI Gaming GE60 0ND-661XFR Intel® Core™ i5 i5-3210M Laptop 39,6 cm (15.6") Full HD 4 GB DDR3-SDRAM 750 GB HDD NVIDIA® GeForce® GTX 660M FreeDOS Black

Brand : MSI

Product name : GE60
0ND-661XFR

Product family: Gaming

Article code: 9S7-16GA11-661

MSI Gaming GE60 0ND-661XFR. Product type: Laptop, Form factor: Clamshell. Processor family: Intel® Core™ i5, Processor model: i5-3210M, Processor frequency: 2,5 GHz. Display diagonal: 39,6 cm (15.6"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 4 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 750 GB, Storage media: HDD, Optical drive type: DVD Super Multi. Operating system installed: FreeDOS. Product color: Black

Design

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

Display

Display diagonal *	39.6 cm (15.6")
Display resolution *	1920 x 1080 pixels
Touchscreen *	✗
HD type	Full HD
LED backlight	✔
Native aspect ratio	16:9

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	3rd gen Intel® Core™ i5
Processor model *	i5-3210M
Processor cores	2
Processor threads	4
Processor boost frequency	3.1 GHz
Processor frequency *	2.5 GHz
System bus rate	5 GT/s
Processor cache	3 MB
Processor cache type	Smart Cache
Processor socket	BGA 1023
Processor lithography	22 nm
Processor operating modes	64-bit
Processor series	Intel Core i5-3200 Mobile series
Processor codename	Ivy Bridge
Bus type	DMI
FSB Parity	✗
Stepping	L1
Thermal Design Power (TDP)	35 W

Ports & interfaces

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

Performance

Motherboard chipset	Intel HM76 Express

Keyboard

Pointing device	Touchpad
Numeric keypad *	✔

Software

Operating system installed *	FreeDOS

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
Intel® Small Business Advantage (Intel® SBA)	✗
Enhanced Intel SpeedStep Technology	✔

Processor

Tjunction	105 °C
Maximum number of PCI Express lanes	16
PCI Express slots version	3.0
PCI Express configurations	1x16, 2x8, 1x8+2x4
CPU multiplier (bus/core ratio)	25
ECC supported by processor	✘

Memory

Internal memory *	4 GB
Internal memory type	DDR3-SDRAM
Memory clock speed	1600 MHz
Memory layout (slots x size)	1 x 4 GB
Memory slots	2x SO-DIMM
Maximum internal memory *	16 GB

Storage

Total storage capacity *	750 GB
Storage media *	HDD
Number of HDDs installed	1
HDD capacity	750 GB
HDD interface	SATA
HDD speed	7200 RPM
Optical drive type *	DVD Super Multi
Card reader integrated	✔
Compatible memory cards	Memory Stick (MS), MMC, MS PRO, SD, SDHC, SDXC, xD

Graphics

Discrete graphics card model *	NVIDIA® GeForce® GTX 660M
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 4000
On-board graphics card base frequency	650 MHz
On-board graphics card dynamic frequency (max)	1100 MHz
On-board graphics card ID	0x166

Audio

Audio system	THX TruStudio Pro
Number of built-in speakers	4
Speaker power	2 W
Built-in microphone	✔

Network

Wi-Fi	✔
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	4.0
Cabling technology	10/100/1000Base-T(X)

Ports & interfaces

USB 2.0 ports quantity *	2
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity *	1

Processor special features

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® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID)	✘
Intel 64	✔
Execute Disable Bit	✔
Idle States	✔
Thermal Monitoring Technologies	✔
Processor package size	31.0 x 24.0 (BGA1023)
Supported instruction sets	AVX
Processor code	SR0N0
CPU configuration (max)	1
Embedded options available	✘
Graphics & IMC lithography	22 nm
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Identity Protection Technology version	1.00
Intel Secure Key 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	65708
Conflict-Free processor	✔
Integrated 4G WiMAX	✔

Battery

Battery technology	Lithium-Ion (Li-Ion)
Number of battery cells	6

Security

Cable lock slot	✘

Weight & dimensions

Width	383 mm
Depth	249.5 mm
Height (front)	3.23 cm
Height (rear)	3.76 cm
Weight *	2.4 kg

Packaging content

AC adapter included *	✔

Ports & interfaces		Other features	
DVI port	✕	LightScribe	✕
VGA (D-Sub) ports quantity	1		