msi

MSI Workstation WS65 9TJ-014CA laptop Intel® Core™ i7 i7-9750H Mobile workstation 39.6 cm (15.6") Full HD 16 GB DDR4-SDRAM 512 GB SSD NVIDIA Quadro T2000 Wi-Fi 5 (802.11ac) Windows 10 Pro Black

Brand : MSI

Product family: Workstation

Product code: WS65 9TJ-014CA

Product name : WS65 9TJ-014CA

- Windows 10 Pro 64-bit
- Intel Core i7-9750H (12MB Cache, 2.6GHz)
- 39.6 cm (15.6") Full HD 1920 x 1080, NVIDIA Quadro RTX 3000 (6GB GDDR6)
- 32GB (2666MHz) DDR4-SDRAM (2 x 16) & 512GB SSD

Intel Core i7-9750H (12MB Cache, 2.6GHz), 16GB DDR4-SDRAM, 512GB SSD, 39.6 cm (15.6") Full HD 1920 x 1080, Intel UHD Graphics 630, NVIDIA Quadro T2000 (4GB GDDR5), LAN, WLAN, Bluetooth, Webcam, Windows 10 Pro 64-bit

MSI Workstation WS65 9TJ-014CA. Product type: Mobile workstation, Form factor: Clamshell. Processor family: Intel® Core™ i7, Processor model: i7-9750H, Processor frequency: 2.6 GHz. Display diagonal: 39.6 cm (15.6"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 16 GB, Internal memory type: DDR4-SDRAM. Total storage capacity: 512 GB, Storage media: SSD. On-board graphics card model: Intel® UHD Graphics 630. Operating system installed: Windows 10 Pro. Product colour: Black

Design

Product type *	Mobile workstation
Product colour *	Black
Form factor *	Clamshell

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
Dual-screen	✗
Maximum refresh rate	60 Hz
NTSC coverage (typical)	72%
sRGB coverage (typical)	100%

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i7
Processor generation	9th gen Intel® Core™ i7
Processor model *	i7-9750H
Processor cores	6
Processor threads	12
Processor boost frequency	4.5 GHz
Processor frequency *	2.6 GHz
System bus rate	8 GT/s
Processor cache	12 MB
Processor cache type	Smart Cache
Processor socket	BGA 1440
Processor lithography	14 nm
Processor operating modes	64-bit
Processor codename	Coffee Lake
Thermal Design Power (TDP)	45 W
Configurable TDP-down	35 W

Network

Top Wi-Fi standard *	Wi-Fi 5 (802.11ac)
Wi-Fi standards	802.11a, 802.11b, 802.11g, Wi-Fi 4 (802.11n), Wi-Fi 5 (802.11ac)
Antenna type	2x2
Ethernet LAN	✔
Ethernet LAN data rates	10,100,1000 Mbit/s
Bluetooth	✔
Bluetooth version	5.0

Ports & interfaces

USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
USB 3.2 Gen 2 (3.1 Gen 2) Type-A ports quantity	1
USB 3.2 Gen 2 (3.1 Gen 2) Type-C ports quantity	1
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity *	1
Mini DisplayPorts quantity	1
Headphone outputs	1
Microphone in	✔
USB Type-C DisplayPort Alternate Mode	✔

Keyboard

Pointing device	Touchpad
Numeric keypad *	✗
Keyboard backlit	✔
Keyboard backlit colour	White
Windows keys	✔

Software

Operating system architecture	64-bit
Operating system installed *	Windows 10 Pro

Processor

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

Memory

Internal memory *	16 GB
Internal memory type	DDR4-SDRAM
Memory clock speed	2666 MHz
Memory form factor	SO-DIMM
Memory layout (slots x size)	2 x 8 GB
Memory slots	2x SO-DIMM
Maximum internal memory *	64 GB

Storage

Total storage capacity *	512 GB
Storage media *	SSD
Total SSDs capacity	512 GB
Number of SSDs installed	1
SSD capacity	512 GB
SSD interface	PCI Express 3.0
SSD form factor	M.2
Optical drive type *	✘
Card reader integrated	✘

Graphics

Discrete graphics card model *	NVIDIA Quadro T2000
Discrete graphics card memory	4 GB
Discrete graphics memory type	GDDR5
On-board graphics card *	✔
Discrete graphics card *	✔
On-board graphics card family	Intel® UHD Graphics
On-board graphics card model *	Intel® UHD Graphics 630
On-board graphics card base frequency	350 MHz
On-board graphics card dynamic frequency (max)	1150 MHz
Maximum on-board graphics card memory	64 GB
On-board graphics card DirectX version	12.0
On-board graphics card OpenGL version	4.5
On-board graphics card ID	0x3E9B
Number of discrete graphics cards installed	1
CUDA	✔

Audio

Number of built-in speakers	2
Speaker power	2 W
Built-in microphone	✔

Camera

Front camera	✔
Front camera signal format	720p
Front camera HD type	HD
Video capturing speed	30 fps

Network

Wi-Fi	✔

Processor special features

Intel® My WiFi Technology (Intel® MWT)	✔
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® Quick Sync Video Technology	✔
Intel Flex Memory Access	✔
Intel® AES New Instructions (Intel® AES-NI)	✔
Intel Trusted Execution Technology	✘
Intel VT-x with Extended Page Tables (EPT)	✔
Intel® Secure Key	✔
Intel TSX-NI	✘
Intel Stable Image Platform Program (SIPP)	✘
Intel® OS Guard	✔
Intel Software Guard Extensions (Intel SGX)	✔
Intel 64	✔
Execute Disable Bit	✔
Idle States	✔
Thermal Monitoring Technologies	✔
Processor package size	42 x 28 mm
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0
CPU configuration (max)	1
Embedded options available	✘
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Virtualization Technology (VT-x)	✔
Processor ARK ID	191045

Battery

Battery technology	Lithium Polymer (LiPo)
Number of battery cells	4
Battery capacity *	82 Wh

Power

AC adapter power	180 W
DC-in jack	✔

Weight & dimensions

Width	357.7 mm
Depth	247.7 mm
Height	17.9 mm
Weight *	1.9 kg

Packaging content

AC adapter included *	✔

Other features

3D	✘

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