

## HP Z440 MT E5-1650V4 Mini Tower Intel® Xeon® E5 v4 16 GB DDR4-SDRAM 512 GB SSD Windows 7 Professional Workstation Black

Brand: HP Product code: T4K81EA-DE-NEW OPEN BOX

**Product name :** Z440 Workstation

Intel Xeon E5-1650 v4 (3.6GHz, 15MB), 16GB (2 x 8GB) DDR4 SDRAM, HP Z Turbo Drive 512GB PCle SSD, SuperMulti DVD±RW, Windows 7 Professional 64 / Windows 10 Pro 64 HP Z440 MT. Processor frequency: 3.6 GHz, Processor family: Intel® Xeon® E5 v4, Processor: E5-1650V4. Internal memory: 16 GB, Internal memory type: DDR4-SDRAM, Memory clock speed: 2400 MHz. Total storage capacity: 512 GB, Storage media: SSD, Optical drive type: DVD Super Multi. Operating system installed: Windows 7 Professional, Operating system architecture: 64-bit. Power supply: 700 W. Chassis type: Mini Tower. Product type: Workstation. Product colour: Black











Processor		Expansion Slots	
Processor manufacturer *	Intel	PCI slots	1
Processor *	E5-1650V4	Design	
Processor family * Processor number of cores Processor boost frequency Processor frequency * Processor socket Processor cache	Intel® Xeon® E5 v4 6 4 GHz 3.6 GHz LGA 2011-v3 15 MB	Chassis type * Number of 3.5" bays Number of 5.25" bays Product colour * Country of origin	Mini Tower 2 2 Black China
Processor cache type	Smart Cache	Performance	
Processor threads Bus type Processor lithography	12 QPI 14 nm	Motherboard chipset Audio chip Product type *	Intel® C612 Realtek HD ALC221 Workstation
Processor operating modes	64-bit	Software	
Processor series Processor codename Thermal Design Power (TDP) Tcase	Intel Xeon E5-1600 v4 Broadwell 140 W 69 °C	Operating system installed * Operating system architecture Recovery operating system	Windows 7 Professional 64-bit Windows 10 Pro
PCI Express slots version	3.0	Processor special features	
Maximum number of PCI Express lanes	40	Intel 64 Enhanced Intel SpeedStep	<b>√</b>
Number of processors installed	1	Technology	✓
Stepping	R0	Embedded options available	×
Maximum internal memory supported by processor	1536 GB	Intel VT-x with Extended Page Tables (EPT)	✓
		Intel TSX-NI	✓

Processor		Processor special features	
Memory types supported by	DDD4 CDDAM	Idle States	<b>√</b>
processor	DDR4-SDRAM	Thermal Monitoring Technologies	<b>v</b>
Memory clock speeds supported by	1600,1866,2133,2400 MHz	Intel AES New Instructions	✓
processor  Memory bandwidth supported by		Intel® Secure Key	✓
processor (max)	76.8 GB/s	Intel® OS Guard	✓
ECC supported by processor	✓	Intel Trusted Execution Technology	✓
Memory		Execute Disable Bit	<b>✓</b>
Internal memory *	16 GB	Intel Flex Memory Access	×
Maximum internal memory *	128 GB	Intel Enhanced Halt State	<b>√</b>
Internal memory type	DDR4-SDRAM	Intel Demand Based Switching Processor package size	45 x 52.5 mm
Memory layout (slots x size)	2 x 8 GB	Supported instruction sets	45 X 52.5 IIIIII
Memory slots	8x DIMM	Processor code	SR2P7
Memory clock speed	2400 MHz	Scalability	15
Memory channels	Quad-channel	Physical Address Extension (PAE)	<b>✓</b>
Storage		Physical Address Extension (PAE)	46 bit
Card reader integrated	1	CPU configuration (max)	1
Total storage capacity * Storage media *	512 GB SSD	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Optical drive type *	DVD Super Multi	Intel Identity Protection Technology version	1.00
Total SSDs capacity	512 GB	Intel Secure Key Technology version	1.00
Number of SSDs installed Solid-state drive capacity	1 512 GB	Intel Virtualization Technology (VT-x)	✓
Solid-state drive interfaces	PCI Express	Intel TSX-NI version	1.00
Graphics		Processor ARK ID	92994
Discrete graphics card *	×	Intel Turbo Boost Technology	2.0
Discrete graphics card model *	Not available	Intel Hyper-Threading Technology	<b>√</b>
On-board graphics card *	×	Intel Identity Protection Technology  Conflict Free processor	1
On-board graphics card model *	Not available	Conflict-Free processor	*
Network		Energy Management	
Ethernet LAN connection *	1	Power supply *	700 W
Ethernet LAN data rates	10,100,1000 Mbit/s	Sustainability	
Wi-Fi *	×	Sustainability certificates	ENERGY STAR
Ports & interfaces		Weight & Dimensions	
USB 2.0 ports quantity *	2	Width *	169 mm
USB 3.2 Gen 1 (3.1 Gen 1) Type-A	8	Depth *	445 mm
ports quantity *		Height *	432 mm
DVI port	X	Weight *	11 kg
PS/2 ports quantity Ethernet LAN (RJ-45) ports quantity	2 1	Packaging Content	
Microphone in	<b>√</b>	Display included *	×
Headphone outputs	1	Mouse included	✓
·	-	Keyboard included	✓
Expansion Slots	1	Other features	
PCI Express x1 (Gen 2.x) slots	1	Optical drives quantity	1
PCI Express x4 (Gen 2.x) slots PCI Express x8 (Gen 3.x) slots	1	BD interface type	SATA
PCI Express x16 (Gen 3.x) slots	2	··	

