

## HP Z230 E3-1225V3 SFF Intel® Xeon® E3 V3 Family 4 GB DDR3-SDRAM 500 GB HDD Windows 7 Professional Workstation Black

Brand: HP Product code: F6A56UC

**Product name:** Z230

Intel Xeon E3-1225V3 (3.2GHz, 8MB, 4 Cores), 4GB DDR3-SDRAM 1600MHz (1 x 4), 500GB SATA HDD 7200, DVD Super Multi DL, Intel HD Graphics P4600, Gigabit LAN, Windows 7 Professional 64-bit HP Z230. Processor frequency: 3.2 GHz, Processor family: Intel® Xeon® E3 V3 Family, Processor: E3-1225V3. Internal memory: 4 GB, Internal memory type: DDR3-SDRAM, Memory clock speed: 1600 MHz. Total storage capacity: 500 GB, Storage media: HDD, Optical drive type: DVD Super Multi DL. Onboard graphics card model: Intel® HD Graphics P4600. Operating system installed: Windows 7 Professional, Operating system architecture: 64-bit. Chassis type: SFF. Product type: Workstation. Product colour: Black







Processor		Expansion Slots	
Processor manufacturer *	Intel	PCI Express x4 (Gen 2.x) slots	1
Processor *	E3-1225V3	PCI Express x16 (Gen 3.x) slots	1
Processor family *	Intel® Xeon® E3 V3 Family	Design	
Processor number of cores Processor frequency * Processor boost frequency Processor socket Processor cache Processor cache type	4 3.2 GHz 3.6 GHz LGA 1150 (Socket H3) 8 MB Smart Cache	Chassis type * Placement supported Number of 3.5" bays Number of 5.25" bays Number of 2.5" bays Product colour *	SFF Vertical 1 1 1 Black
Processor threads	4	Country of origin	China
Bus type	QPI	Performance	
Processor lithography	22 nm		We desired a
Processor operating modes	64-bit	Product type *	Workstation
Processor series	Intel Xeon E3-1200 v3	Software	
Processor codename Thermal Design Power (TDP) PCI Express slots version	Haswell 84 W	Operating system installed * Operating system architecture	Windows 7 Professional 64-bit
Maximum number of PCI Express	3.0 Processor special features		
lanes	16	Intel 64	1
PCI Express configurations Number of processors installed	1x16, 2x8, 1x8+2x4 1	Enhanced Intel SpeedStep Technology	<b>*</b>
Number of QPI links	1	Embedded options available	✓
Stepping	C0	Intel® Built-in Visuals Technology	✓
Maximum internal memory supported by processor	32 GB	Intel® InTru™ 3D Technology Intel Clear Video HD Technology	<b>4</b>
Memory types supported by processor	DDR3-SDRAM	Intel VT-x with Extended Page Tables (EPT)	<b>v</b>
Memory clock speeds supported by processor	1333,1600 MHz	Intel TSX-NI	<b>✓</b>
Memory bandwidth supported by processor (max)	25.6 GB/s	Idle States Thermal Monitoring Technologies	<b>√</b>
ECC supported by processor	✓	Intel Stable Image Platform Program (SIPP)	✓
Memory voltage supported by processor	1.5 V	Intel AES New Instructions	✓
Memory		Intel® Secure Key	1
riemoi y		Intel® OS Guard	✓

Memory		Processor special features	
Internal memory * Maximum internal memory * Internal memory type Memory layout (slots x size) Memory slots Memory clock speed	4 GB 32 GB DDR3-SDRAM 1 x 4 GB 4x DIMM 1600 MHz	Intel Trusted Execution Technology Execute Disable Bit Intel HD Graphics Intel FDI Technology Intel Flex Memory Access Intel Fast Memory Access	1 1 1 1
ECC Memory channels	✓ Dual-channel	Intel® Smart Cache Intel Enhanced Halt State	1
Storage  Card reader integrated Total storage capacity * Storage media * Optical drive type * Number of storage drives installed Number of hard drives installed Hard drive capacity Hard drive interface Hard drive rotational speed  Graphics Discrete graphics card model * On-board graphics card family On-board graphics card model * On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max)	V 500 GB HDD DVD Super Multi DL 1 1 500 GB SATA 7200 RPM  Not available ✓ Intel® HD Graphics Intel® HD Graphics P4600 350 MHz 1200 MHz	Processor package size Supported instruction sets Processor code Scalability CPU configuration (max) Graphics & IMC lithography Thermal solution specification Intel Virtualization Technology for Directed I/O (VT-d) Intel Identity Protection Technology version Intel Stable Image Platform Program (SIPP) version Intel Secure Key Technology version Intel Virtualization Technology (VT-x) Intel TSX-NI version Intel Dual Display Capable Technology Processor ARK ID	1.00  1.00  1.00  7  7  7  7  7  7  7  7  7  7  7  7
Number of displays supported (on- board graphics)	3	Intel Turbo Boost Technology Intel Hyper-Threading Technology	2.0
Network Ethernet LAN connection * Ethernet LAN data rates	√ 10,100,1000 Mbit/s	Intel® Quick Sync Video Technology Intel Identity Protection Technology Intel Anti-Theft Technology Conflict-Free processor	√ √ √ ×
Ports & interfaces		Weight & Dimensions	
USB 2.0 ports quantity * USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity * DVI port	6 4 ✓ 3	Width * Depth * Height * Weight *	338.3 mm 381.5 mm 105 mm 7.2 kg
DisplayPorts quantity PS/2 ports quantity Ethernet LAN (RJ-45) ports quantity Microphone in Headphone outputs Line-out Line-in  Expansion Slots PCI Express x1 (Gen 2.x) slots	2 1 ✓ 1 ✓	Packaging Content  Display included *  Mouse included  Keyboard included	× × ×
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