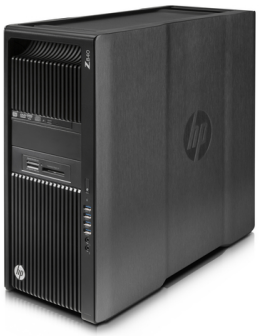
# HP Z840 E5-2680V4 Tower Intel® Xeon® E5 v4 32 GB DDR3L-SDRAM 512 GB SSD Windows 7 Professional Workstation Black



**Brand :** HP

**Product code:** T4K64EA-R-RENEW

**Product name :** Z840

Intel Xeon E5-2680 v4 (2.4GHz, 35MB), 32GB (4 x 8GB) DDR4 SDRAM, HP Z Turbo Drive 512GB PCIe SSD, SuperMulti DVD±RW, Windows 7 Professional 64 / Windows 10 Pro 64
HP Z840. Processor frequency: 2.4 GHz, Processor family: Intel® Xeon® E5 v4, Processor: E5-2680V4. Internal memory: 32 GB, Internal memory type: DDR3L-SDRAM, Memory clock speed: 2133 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: 1125 W. Chassis type: Tower. Product type: Workstation. Product colour: Black

| Processor | |
|---|---|
| Processor manufacturer * | Intel |
| Processor * | E5-2680V4 |
| Processor family * | Intel® Xeon® E5 v4 |
| Processor number of cores | 14 |
| Processor boost frequency | 3.3 GHz |
| Processor frequency * | 2.4 GHz |
| Processor socket | LGA 2011-v3 |
| Processor cache | 35 MB |
| Processor cache type | Smart Cache |
| Processor threads | 28 |
| System bus data transfer rate | 9.6 GT/s |
| Bus type | QPI |
| Processor lithography | 14 nm |
| Processor operating modes | 64-bit |
| Processor series | Intel Xeon E5-2600 v4 |
| Processor codename | Broadwell |
| Thermal Design Power (TDP) | 120 W |
| Tcase | 86 °C |
| PCI Express slots version | 3.0 |
| Maximum number of PCI Express lanes | 40 |
| Number of processors installed | 1 |
| Number of QPI links | 2 |
| Stepping | M0 |
| Maximum internal memory supported by processor | 1536 GB |
| Memory types supported by processor | DDR4-SDRAM |

| Expansion Slots | |
|---|---|
| PCI Express x4 (Gen 2.x) slots | 1 |
| **Design** | |
| Chassis type * | Tower |
| Number of 3.5" bays | 4 |
| Number of 5.25" bays | 2 |
| Product colour * | Black |
| Country of origin | China |
| **Performance** | |
| Motherboard chipset | Intel® C612 |
| Audio system | High Definition Audio |
| Product type * | Workstation |
| **Software** | |
| Operating system installed * | Windows 7 Professional |
| Operating system architecture | 64-bit |
| Recovery operating system | Windows 10 Pro |
| **Processor special features** | |
| Intel 64 | ✓ |
| Enhanced Intel SpeedStep Technology | ✓ |
| Embedded options available | ✓ |
| Intel VT-x with Extended Page Tables (EPT) | ✓ |
| Intel TSX-NI | ✓ |
| Idle States | ✓ |
| Thermal Monitoring Technologies | ✓ |
| Intel AES New Instructions | ✓ |

| Processor | |
|---|---|
| Memory clock speeds supported by processor | 1600,1866,2133,2400 MHz |
| Memory bandwidth supported by processor (max) | 76.8 GB/s |
| ECC supported by processor | ✓ |

| Memory | |
|---|---|
| Internal memory * | 32 GB |
| Maximum internal memory * | 512 GB |
| Internal memory type | DDR3L-SDRAM |
| Memory layout (slots x size) | 4 x 8 GB |
| Memory slots | 8x DIMM |
| Memory clock speed | 2133 MHz |
| ECC | ✓ |
| Memory channels | Quad-channel |

| Storage | |
|---|---|
| Card reader integrated | ✗ |
| Total storage capacity * | 512 GB |
| Storage media * | SSD |
| Optical drive type * | DVD Super Multi |
| Total SSDs capacity | 512 GB |
| Number of SSDs installed | 1 |
| Solid-state drive capacity | 512 GB |
| Solid-state drive interfaces | PCI Express |

| Graphics | |
|---|---|
| Discrete graphics card * | ✗ |
| Discrete graphics card model * | Not available |
| On-board graphics card * | ✗ |
| On-board graphics card model * | Not available |

| Network | |
|---|---|
| Ethernet LAN connection * | ✓ |
| Ethernet LAN data rates | 10,100,1000 Mbit/s |
| Wi-Fi * | ✗ |

| Ports & interfaces | |
|---|---|
| USB 2.0 ports quantity * | 2 |
| USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity * | 8 |
| DVI port | ✗ |
| PS/2 ports quantity | 2 |
| Ethernet LAN (RJ-45) ports quantity | 1 |
| Microphone in | ✓ |
| Headphone outputs | 1 |

| Expansion Slots | |
|---|---|
| PCI Express x1 (Gen 2.x) slots | 1 |

| Processor special features | |
|---|---|
| Intel® Secure Key | ✓ |
| Intel® OS Guard | ✓ |
| Intel Trusted Execution Technology | ✓ |
| Execute Disable Bit | ✓ |
| Intel Flex Memory Access | ✗ |
| Intel Enhanced Halt State | ✓ |
| Intel Demand Based Switching | ✓ |
| Processor package size | 45 x 52.5 mm |
| Supported instruction sets | AVX 2.0 |
| Processor code | SR2N7 |
| Scalability | 2S |
| Physical Address Extension (PAE) | ✓ |
| Physical Address Extension (PAE) | 46 bit |
| CPU configuration (max) | 2 |
| Intel Virtualization Technology for Directed I/O (VT-d) | ✓ |
| Intel Identity Protection Technology version | 0.00 |
| Intel Secure Key Technology version | 1.00 |
| Intel Virtualization Technology (VT-x) | ✓ |
| Intel TSX-NI version | 1.00 |
| Processor ARK ID | 91754 |
| Intel Turbo Boost Technology | 2.0 |
| Intel Hyper-Threading Technology | ✓ |
| Intel Identity Protection Technology | ✗ |
| Conflict-Free processor | ✓ |

| Energy Management | |
|---|---|
| Power supply * | 1125 W |

| Sustainability | |
|---|---|
| Sustainability certificates | ENERGY STAR |

| Weight & Dimensions | |
|---|---|
| Width * | 203 mm |
| Depth * | 525 mm |
| Height * | 444 mm |
| Weight * | 21.1 kg |

| Packaging Content | |
|---|---|
| Display included * | ✗ |
| Mouse included | ✓ |
| Keyboard included | ✓ |

| Other features | |
|---|---|
| Optical drives quantity | 1 |
| BD interface type | SATA |

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Publication date: 12-NOV-2022. Prints or copies of Information are only valid on the printed Publication date