



| TVS-h1688X-W1250-32G | | |
|-------------------------------------|---|--|
| CPU | Intel® Xeon® W-1250 6-core/12-thread processor, up to 4.7 GHz | |
| CPU Architecture | 64-bit x86 | |
| Graphic Processors | Intel® UHD Graphics P630 | |
| Floating Point Unit | Yes | |
| Encryption Engine | Yes (AES-NI) | |
| Hardware-accelerated Transcoding | Yes | |
| System Memory | 32GB ECC UDIMM DDR4 (2 x 16 GB) | |
| Maximum Memory | 128 GB (4 x 32 GB) | |
| Memory Slot | 4 x UDIMM DDR4 | |
| | For dual-DIMM configurations, you must use a pair of identical DDR4 modules. | |
| Flash Memory | 5GB (Dual boot OS protection) | |
| Drive Bay | 12 x 3.5-inch SATA 6Gb/s, 3Gb/s + 4 x 2.5-inch SATA 6Gb/s, 3Gb/s | |
| | The system is shipped without HDD. For the HDD compatibility list, please visit https://www.qnap.com/compatibility/ | |
| Drive Compatibility | 3.5-inch bays: 3.5-inch SATA hard disk drives 2.5-inch SATA hard disk drives 2.5-inch SATA solid state drives | |
| | 2.5-inch bays:2.5-inch SATA solid state drives | |
| Hot-swappable | Yes | |
| M.2 Slot | 2 x M.2 22110/2280 NVMe PCIe Gen3 x4 slots | |
| | Compatible with NVMe SSD PCIe Gen 3 and above. Please refer to https://www.qnap.com/compatibility/ for compatibility. | |
| SSD Cache Acceleration Support | Yes | |

| GPU pass-through | Yes |
|--|---|
| 2.5 Gigabit Ethernet Port (2.5G/1G/100M) | 4 (2.5G/1G/100M/10M) |
| 5 Gigabit Ethernet Port (5G/2.5G/1G/100M) | Optional via an adapter |
| 10 Gigabit Ethernet Port | 2 x 10GBASE-T (10G/1G) |
| 25 Gigabit Ethernet Port | Optional via an adapter |
| Wake on LAN (WOL) | Yes |
| | Only the 2.5GbE port |
| Jumbo Frame | Yes |
| Thunderbolt Port | Optional via the QXP-T32P 2-port Thunderbolt 3 PCIe adapter |
| | Supports only Thunderbolt connections for Windows & Mac hosts and USB storage devices. Third-party Thunderbolt external storage devices are not supported. |
| PCIe Slot | 3 Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4 Slot 3: PCIe Gen3 x4 |
| | *Slot 1 is preinstalled with a 2-port 10GbE network adapter. Card dimensions for PCIe slot 1 : $260 \times 111.15 \times 37.52 \text{ mm} / 10.25 \times 4.38 \times 1.48$ inches. Card dimensions for PCIe slot 2 : $150 \times 68.9 \times 18.76 \text{ mm} / 5.90 \times 2.71 \times 0.74$ inches. Card dimensions for PCIe slot 3 : $150 \times 68.9 \times 18.76 \text{ mm} / 5.90 \times 2.71 \times 0.74$ inches. Wider cards can be installed if the next PCIe slot will not be used. |
| USB 3.2 Gen 2 (10Gbps) Port | 2 x Type-C 4 x Type-A |
| HDMI™ Output | 1, HDMI™ 1.4b (up to 4096 x 2160 @ 30Hz) |
| Audio Input | - (No longer available on units manufactured on or after 2021/1/1) |
| Audio Output | - (The line out jack and speaker are no longer available on units manufactured on or after 2021/1/1) |
| Form Factor | Tower |
| LED Indicators | System status, LAN, USB, Disk 1~16, M.2 SSD 1~2 |
| LCD Display/ Button | Yes |
| Buttons | Power, Reset, USB Auto Copy |
| Dimensions (HxWxD) | 294.3 × 369.89 × 319.8 mm |
| | Dimensions do not include foot pad (foot pad may be up to $30\mathrm{mm}$ / 1.18 inches high depending on model) |
| Weight (Net) | 14.49 kg |
| | |

| Weight (Gross) | 15.89 kg |
|---|---|
| Operating Temperature | 0 - 40°C (32°F - 104°F) |
| Storage Temperature | -20 - 70°C (-4°F - 158°F) |
| Relative Humidity | 5-95% RH non-condensing, wet bulb: 27°C (80.6°F) |
| Power Supply Unit | 550W PSU, 100~240V |
| Power Consumption: HDD Sleep Mode | 91.26 W |
| Power Consumption: Operating Mode, Typical | 108.67 W |
| | Tested with drives fully populated. |
| Fan | System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC |
| System Warning | Buzzer |
| Kensington Security Slot | Yes |
| Standard Warranty | 3 |
| Max. Number of Concurrent Connections (CIFS) - with Max. Memory | 10000 |

Note: Use only QNAP memory modules to maintain system performance and stability. For NAS devices with more than one memory slot, use QNAP modules with identical specifications and refer to the hardware user manual to install compatible QNAP memory modules.

Warning: Using unsupported modules may degrade performance, cause errors, or prevent the operating system from starting. QNAP reserves the right to replace partial parts or accessories if the original is no longer available from its manufacturer/supplier. Any replacement would be fully tested and verified to meet strict compatibility and stability guidelines and will deliver identical performance to the original.

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