



TVS-h1688X-W1250-32G	
CPU	Intel® Xeon® W-1250 6-core 3.3 GHz processor (boost 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 Long-DIMM DDR4
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
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 SSD Slot	2 x M.2 22110/2280 NVMe PCIe Gen3 x4 slots
SSD Cache Acceleration Support	Yes
2.5 Gigabit Ethernet Port (2.5G/1G/100M)	4 (also support 10M)
5 Gigabit Ethernet Port (5G/2.5G/1G/100M)	Optional via an adapter
10 Gigabit Ethernet Port	2 x 10GBASE-T (10G/1G)

Wake on LAN (WOL) Jumbo Frame Yes Thunderbolt Port Optional via the QXP-T32P 2-port Thunderbolt 3 PCIe adapter PCIe Slot 3 Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4 Slot 3: PCIe Gen3 x4 Slot 3: PCIe Gen3 x4 Slot 3: PCIe Gen3 x4 USB 3.2 Gen 2 (10Gbps) 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 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) 303.84 x 369.89 x 319.8 mm Weight (Net) 13.41 kg Weight (Gross) 0-40°C (32°F - 104°F) Storage 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 Consumption: HDD Sleep Mode Power Consumption: HDD Sleep Mode Power Consumption: D3.67 W Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer Kensington Security Slot Yes	25 Gigabit Ethernet Port	Optional via an adapter
Thunderbolt Port Optional via the QXP-T32P 2-port Thunderbolt 3 PCIe adapter PCIe Slot 3 Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4 Slot 2: PCIe Gen3 x4 Slot 3: PCIE Gen3 x4 S	Wake on LAN (WOL)	Yes
PCIe Slot 3 Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4 Slot 2: PCIe Gen3 x4 Slot 2: PCIe Gen3 x4 Slot 3: PCIE Gen3	Jumbo Frame	Yes
Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4 Slot 2: PCIe Gen3 x4 Slot 2: PCIe Gen3 x4 USB 3.2 Gen 2 (10Gbps) Port 1. HDMI 1.4b (up to 4096 x 2160 @ 30Hz) Audio Input 1. HDMI 1.4b (up to 4096 x 2160 @ 30Hz) Audio Output - (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) 303.84 × 369.89 × 319.8 mm Weight (Net) 13.41 kg Weight (Gross) 16.3 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 Consumption: HDD Sleep Mode Power Consumption: 108.67 W Operating Mode, Typical Fan System fan: 3 × 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Thunderbolt Port	Optional via the QXP-T32P 2-port Thunderbolt 3 PCIe adapter
Port 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) 303.84 × 369.89 × 319.8 mm Weight (Net) 13.41 kg Weight (Gross) 16.3 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 Consumption: HDD Sleep Mode Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	PCIe Slot	Slot 1: PCIe Gen3 x8 Slot 2: PCIe Gen3 x4
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Buttons Power, Reset, USB Auto Copy Dimensions (HxWxD) 303.84 × 369.89 × 319.8 mm Weight (Net) 13.41 kg Weight (Gross) 16.3 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 Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	LED Indicators	System status, LAN, USB, Disk 1~16, M.2 SSD 1~2
Dimensions (HxWxD) 303.84 × 369.89 × 319.8 mm Weight (Net) 13.41 kg Weight (Gross) 16.3 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 Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	LCD Display/ Button	Yes
Weight (Net) 13.41 kg Weight (Gross) 16.3 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 Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Buttons	Power, Reset, USB Auto Copy
Weight (Gross) 16.3 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 Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Dimensions (HxWxD)	303.84 × 369.89 × 319.8 mm
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 Power Consumption: 00 108.67 W Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Weight (Net)	13.41 kg
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 Power Consumption: 0 108.67 W Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Weight (Gross)	16.3 kg
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 Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Operating temperature	0 - 40°C (32°F - 104°F)
Power Supply Unit 550W PSU, 100~240V Power Consumption: HDD 91.26 W Sleep Mode Power Consumption: 108.67 W Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Storage Temperature	-20 - 70°C (-4°F - 158°F)
Power Consumption: HDD Sleep Mode Power Consumption: Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Relative Humidity	5-95% RH non-condensing, wet bulb: 27°C (80.6°F)
Sleep Mode Power Consumption: 108.67 W Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	Power Supply Unit	550W PSU, 100~240V
Operating Mode, Typical Fan System fan: 3 x 80mm, 12VDC CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer	-	91.26 W
CPU fan: 2 x 97mm, 12VDC Sound Level 25.8 db(A) System Warning Buzzer		108.67 W
System Warning Buzzer	Fan	
	Sound Level	25.8 db(A)
Kensington Security Slot Yes	System Warning	Buzzer
	Kensington Security Slot	Yes

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.

Warning: Using unsupported modules may degrade performance, cause errors, or prevent the operating system from starting. * Sound Level Test

Environment: Refer to ISO 7779; Maximum HDD loaded; Bystander Position; Average data from 1 meter in front of operating NAS. Product images are for illustrative purposes only and may differ from the actual product. Due to differences in monitors, colors of products may also appear different to those shown on the site.

Designs and specifications are subject to change without notice.