



TVS-AIh1688ATX-U7-32G

|                                          |                                                                                                                                                                       |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                                      | Intel Core Ultra 7, 20 (8P+12E) core, 20 Threads, up to 5.3GHz                                                                                                        |
| CPU Architecture                         | 64-bit x86                                                                                                                                                            |
| Graphic Processors                       | Intel® Graphics                                                                                                                                                       |
| Floating Point Unit                      | Yes                                                                                                                                                                   |
| Encryption Engine                        | Yes (AES-NI)                                                                                                                                                          |
| Hardware-accelerated Transcoding         | Yes                                                                                                                                                                   |
| Neural Processing Unit (NPU)             | Yes                                                                                                                                                                   |
| System Memory                            | 32GB ECC UDIMM DDR5 (1 x 32 GB)                                                                                                                                       |
| Maximum Memory                           | 192 GB (4 x 48 GB)                                                                                                                                                    |
| Memory Slot                              | 4 x UDIMM DDR5<br><br>For dual-DIMM configurations, you must use a pair of identical DDR5 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 U.2 NVMe Gen 4 x2 slots                                                                                                |
| Drive Compatibility                      | 3.5-inch bays:<br>3.5-inch SATA hard disk drives<br>2.5-inch SATA hard disk drives<br>2.5-inch SATA solid state drives<br><br>2.5-inch bays:<br>2.5-inch U.2/SATA SSD |
| Hot-swappable                            | Yes                                                                                                                                                                   |
| SSD Cache Acceleration Support           | Yes                                                                                                                                                                   |
| 2.5 Gigabit Ethernet Port (2.5G/1G/100M) | 2 (2.5G/1G/100M/10M)                                                                                                                                                  |

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 Gigabit Ethernet Port<br>(5G/2.5G/1G/100M) | Optional via an adapter                                                                                                                                                                                                                                                                                                                                                                                                            |
| 10 Gigabit Ethernet Port                     | 2 x 10GBASE-T (10G/5G/2.5G/1G)                                                                                                                                                                                                                                                                                                                                                                                                     |
| 25 Gigabit Ethernet Port                     | Optional via an adapter                                                                                                                                                                                                                                                                                                                                                                                                            |
| Wake on LAN (WOL)                            | Yes<br><br>Only the 2.5GbE port                                                                                                                                                                                                                                                                                                                                                                                                    |
| Jumbo Frame                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Thunderbolt Port                             | Optional via the QXP-T52P 2-port Thunderbolt 5 PCIe adapter<br><br>Supports only Thunderbolt connections for Windows & Mac hosts and USB storage devices. Third-party Thunderbolt external storage devices are not supported.                                                                                                                                                                                                      |
| PCIe Slot                                    | 3<br>Slot 1: PCIe Gen4 x16<br>Slot 2: PCIe Gen4 x4<br>Slot 3: PCIe Gen4 x4<br><br>Card dimensions for PCIe slot 1 : 260 x 111.15 x 37.52 mm / 10.25 x 4.38 x 1.48 inches.<br>Card dimensions for PCIe slot 2 : 150 x 68.9 x 18.76 mm / 5.90 x 2.71 x 0.74 inches.<br>Card dimensions for PCIe slot 3 : 150 x 68.9 x 18.76 mm / 5.90 x 2.71 x 0.74 inches.<br>Wider cards can be installed if the next PCIe slot will not be used." |
| USB 3.2 Gen 2 (10Gbps) Port                  | 3 x USB3.2 Gen2 Type-A<br>2 x USB3.2 Gen 2 Type-C                                                                                                                                                                                                                                                                                                                                                                                  |
| USB 4 port                                   | 2 x USB4 Type-C                                                                                                                                                                                                                                                                                                                                                                                                                    |
| HDMI™ Output                                 | 1, HDMI™ 2.1 (up to 4096 x 2160 @ 60Hz)                                                                                                                                                                                                                                                                                                                                                                                            |
| Form Factor                                  | Tower                                                                                                                                                                                                                                                                                                                                                                                                                              |
| LED Indicators                               | System status, LAN, USB, Disk 1~16                                                                                                                                                                                                                                                                                                                                                                                                 |
| LCD Display/ Button                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Buttons                                      | Power, Reset, USB Auto Copy                                                                                                                                                                                                                                                                                                                                                                                                        |
| Dimensions (HxWxD)                           | 294.3 × 369.89 × 319.8 mm                                                                                                                                                                                                                                                                                                                                                                                                          |
| Weight (Net)                                 | 13.8 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                            | 750W PSU, 100~240V                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Power Consumption: Disk Standby Mode         | 97.036 W                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Power Consumption: Operating Mode, Typical   | 130.83 W                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                 |                                                         |
|-----------------------------------------------------------------|---------------------------------------------------------|
| Fan                                                             | System fan: 3 x 80mm, 12VDC<br>CPU fan: 2 x 97mm, 12VDC |
| System Warning                                                  | Buzzer                                                  |
| Kensington Security Slot                                        | Yes                                                     |
| Standard Warranty                                               | 5                                                       |
| 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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