BittWare a **molex** company

TeraBox 1102S
1U FPGA Server

Low-Cost PCIe Gen5 1U Server for FPGA Cards with Front Panel I/O Access

Looking for an economical 1U server for a double-width FPGA card or multiple single-width cards? BittWare's **TeraBox 1102S** is an excellent solution that doesn't limit your card options—any of our Achronix, Altera, or AMD FPGA equipped PCIe cards are compatible! Front panel PCIe access gives you the best access to I/O, with up to 8x 100G or 32x 10/25G in a single rack space.

Single- or double-wide cards featuring Achronix, Altera, or AMD FPGAs
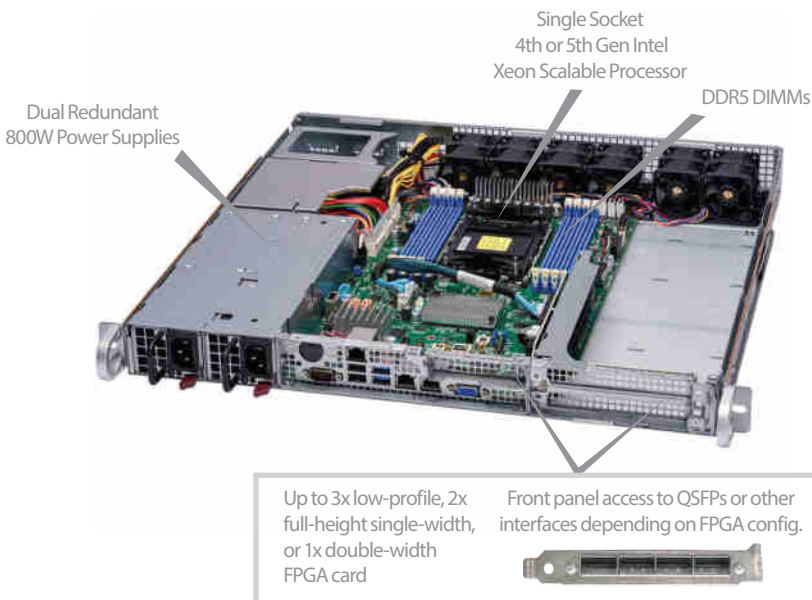

key features

Up to 8x 100GbE or 32x 10/25G

1U Our lowest-cost FPGA server

Low-profile Single Slot · Standard Height Double Slot
Fits any BittWare PCIe card using Achronix, Altera, or AMD FPGAs

Dual Redundant 800W Power Supplies

Single Socket 4th or 5th Gen Intel Xeon Scalable Processor

DDR5 DIMMs

Up to 3x low-profile, 2x full-height single-width, or 1x double-width FPGA card

Front panel access to QSFPs or other interfaces depending on FPGA config.

chassis key specs

1U, depth 16.9 in (429.3mm)

Processor: 4th or 5th Generation Intel® Xeon® Scalable Processor

Memory: 8x ECC DDR5 DIMMs

Slots: 2x FHFL PCIe Gen5 x16 slots, 1x LP PCIe Gen5 x16 slot

Storage: 1x NVMe M.2 PCIe Gen3

Power supply: (1+1) 800W

TeraBox 1102S
1U FPGA Server

1U PCIe Gen5 Server

The TeraBox 1102S is a 1U server based on the SuperMicro SYS-111E-FWTR. Featuring an Intel 4th or 5th Gen Xeon Processor, it is the ideal platform to unleash the energy-efficient acceleration of BittWare's FPGA cards. This FPGA-optimized 1U server delivers unrivaled performance density and value for a range of compute-intensive applications, including machine learning.

The server is assembled in the USA and offers a 3-year warranty.

System Management

For system management, BittWare's FPGA cards are equipped with a Board Management Controller (BMC), which accepts PLDM commands. Use it along with BittWare's Software Development Kit to program the FPGA over USB, monitor card power and temperature, and re-program the onboard clocks. You'll also be able to set points to shut down the card when it gets too hot, access JTAG, or access the software tools remotely.

The TeraBox Advantage

Choosing a TeraBox FPGA server means knowing you are getting a pre-configured and tested solution. This includes setup and installation of your FPGA cards and associated hardware, your choice of operating system, and development tools. Your TeraBox arrives ready for use—giving your team more time for development and deployment.

Server Configuration

Standard
- (1) Intel Xeon Silver 4410T (2.0 GHz, 12C/24T) processor
- (1) 16GB DDR5-4800
- (1) 960GB NVMe M.2 Gen3
- (1+1) 800W AC power supplies

The server has additional space for (2) 2.5" internal SATA drives and an option for a (1+1) 600W DC power supply.

Contact BittWare if this configuration is not exactly what you are looking for. BittWare can work with you to come up with a server configuration that suits your exact needs.

Key Applications

The TeraBox 1102S is ideal for applications in:

- Multi-access edge computing
- Flex-RAN, Open-RAN
- Artificial Intelligence (AI) on the Edge
- Machine learning (ML)
- Satellite communication
- 5G applications

BittWare
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