**BittWare** a molex company

TeraBox 1000S
1U FPGA Server

Low-cost 1U Server for FPGA Cards Including Front Panel Access

Looking for an economical 1U server for a single FPGA card? BittWare's **TeraBox 1000S** is an excellent solution that doesn't limit your card options—any of our Achronix-, Intel-, or Xilinx-FPGA equipped PCIe cards are compatible! Front panel PCIe access gives you the best access to 4 QSFPs, with up to 8x 100G or 32x 10/25G in a single rack space!
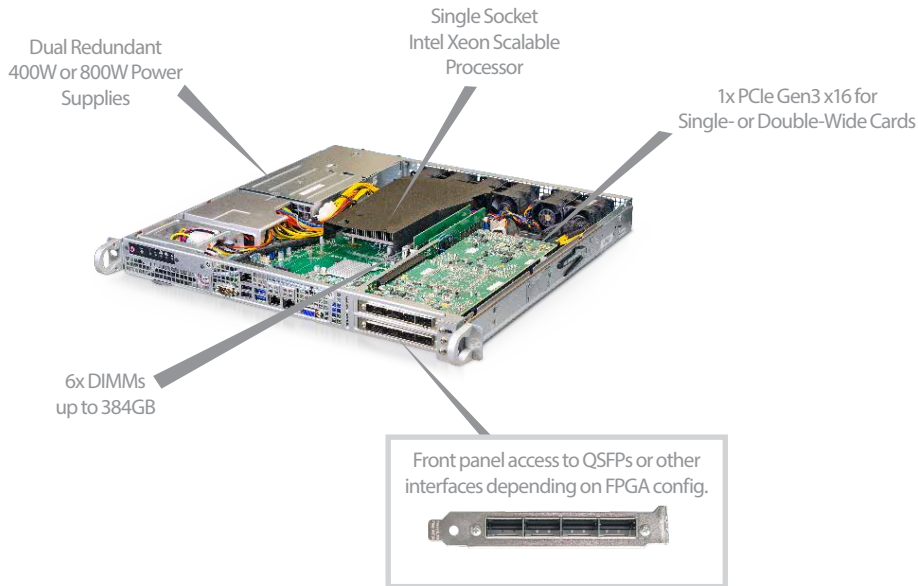

Single- or double-wide cards featuring Achronix, Intel, or Xilinx FPGAs
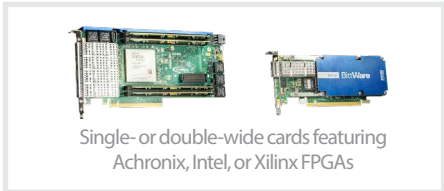
key features

Up to 4 QSFP-DDs
for up to 8x 100G
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, Intel, or Xilinx FPGAs

Dual Redundant 400W or 800W Power Supplies

Single Socket Intel Xeon Scalable Processor

1x PCIe Gen3 x16 for Single- or Double-Wide Cards

6x DIMMs up to 384GB

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

chassis key specs

1U, depth 16.9 in (429mm)

Processor: Intel® Xeon® Scalable Processor

Chipset: Intel C236

Memory: 6x ECC DDR4 DIMMs

Slots: 1x PCIe Gen3 x16 with front panel access

Storage: 1x SATA 6 Gb/s, Intel C236 RAID

Power supply: Dual Platinum 400W or 800W

FPGA Cards

The TeraBox 1000S supports a single- or dual-width BittWare PCIe FPGA card. Choose from a variety of cards based on Achronix Speedster 7t, Intel Stratix 10/ Arria 10, or Xilinx UltraScale+ FPGAs.

Card specs vary depending on the FPGA card you select. For example, some cards support up to 512 GBytes of DDR4. Our latest UltraScale+ cards feature QSFP-DDs, which you can use with a breakout cable for up to 8x 100Gb interfaces.

Development Support

For system management, BittWare's FPGA cards are equipped with a Board Management Controller (BMC), which accepts IPMI 2.0 commands. Use it along with BittWare's BittWorks II Toolkit 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.

Example System Configuration

The TeraBox 1000S supports many of BittWare's Achronix, Intel, or Xilinx FPGA-based PCIe cards. The table below lists system totals when populated with a double-wide card*:

	FPGA	Cards in Server	Memory	I/O	Processing
S7t-VG6	Speedster7t	1	• 8 banks GDDR6 (up to 192 GBytes)	• 600 Gbits/sec • 6x 100/50/40/25/10 GbE	• 692K 6-input lookup tables (LUTs) • 189 Mb embedded RAM
520N-MX	Stratix 10 MX	1	• 2 banks DDR4 (up to 256 GBytes) • 4 banks QDRII+ (up to 1152 Mbits)	• 400 Gbits/sec • 4x 100/50/40/25/10 GbE	• 2.1 million system logic elements • 16 GBytes HBM2
XUP-VV8	UltraScale+ VU13P	1	• 4 banks DDR4 (up to 512 GBytes) • 8 banks QDRII+ (up to 2.3 Gbits)	• 800 Gbits/sec • 8x 100/50/40/25/10 GbE	• 3.8 million system logic cells • Up to 12,288 DSP slices

* Contact BittWare for additional FPGA card options.

Server Configurations

Low
- (1) Intel Xeon Bronze 3204 Processor (1.9GHz, 6C/6T)
- 48GB DDR4
- (1) 1TB M.2 NVMe
- 400W Redundant Power Supplies

Medium
- (1) Intel Xeon Silver 4214 Processor (2.2GHz, 12C/24T)
- 96GB DDR4
- (1) 1TB M.2 NVMe
- 400W Redundant Power Supplies

High
- (1) Intel Gold 6132 Processor (2.6GHz, 14C/28T)
- 192GB DDR4
- (1) 1TB M.2 NVMe
- 800W Redundant Power Supplies

Ultra
- (1) Intel Xeon Platinum 8280 Processor (2.5GHz, 28C/56T)
- 384GB DDR4
- (1) 1TB M.2 NVMe
- 800W Redundant Power Supplies

To learn more, visit **www.BittWare.com**

BittWare
a **molex** company