BittWare a molex company

TeraBox 4000S

4U FPGA Server

The original TeraBox gets better

BittWare's TeraBox-4000S offers a 4U, 8-slot chassis that is ideal for all-around density, CPU power, and yet cost-effectiveness. Configurations include up to 8 of BittWare's large double-width cards using Achronix Speedster 7t, Intel Stratix 10, or Xilinx Virtex UltraScale+ FPGAs. Users seeking maximum logic/memory density can choose the XUP-VV4 for 30M logic cells and 4TB FPGA-attached DDR4 memory.

Or choose the XUP-VV8, which features QSFP-DDs and yields an impressive 64x 100G — for a port density of 16 per rack unit! No matter which configuration you choose, you're getting BittWare's installation and support.

Up to **8** double-slot FPGA cards can be configured or **8** low-profile cards

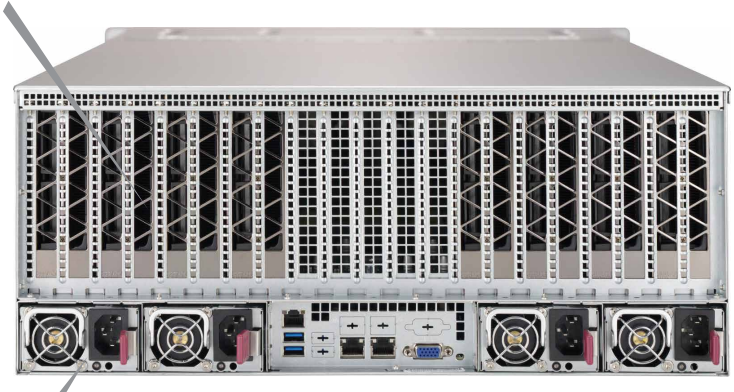
key features

Up to **32 QSFPs** for 64x 100G or 256x 10/25G

FPGA Resouces: Up to **30M** logic cells (Xilinx), and 4TB DDR4

Support for BittWare's full range of FPGA cards

Up to 8 low-profile FPGA cards or 8 double-width cards



2+2 redundant power supply

chassis key specs

4U, depth 29 in (737mm)

Processor: Intel® Xeon® Scalable processor

Memory: 24x ECC DDR4-2667 DIMMs

Slots: 8x double-width PCIe Gen3 x16, 2x PCIe Gen3 x8

Storage: Up to 10x 2.5" SATA, Intel C622 RAID

Power supply: 2000W, redundant (2+2), Titanium

TeraBox 4000S

4U FPGA Server

The TeraBox 4000S is a 4U FPGA server based on the SuperMicro 4029GP-TRT chassis. This server offers two Intel Xeon Scalable CPUs along with high PCIe slot density. With configurations of up to 8 of BittWare's large double-width cards, this server is an excellent premium option for the 4U form factor.

System Management

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 4000S supports many of BittWare's Achronix, Intel, or Xilinx FPGA-based PCIe cards. The table below lists system totals when populated with eight cards*:

	FPGA	Cards in Server	Memory	I/O	Processing
S7t-VG6	Speedster7t	8	• 64 banks GDDR6 (up to 64 GBytes)	• 3.6 Terabit/sec • 48x 100/50/40/25/10 GbE	• 5.5 million 6-input lookup tables (LUTs) • 1.5 Gbits embedded RAM
520N-MX	Stratix 10 MX	8	• 16 banks DDR4 (up to 2 Terabytes) • 32 banks QDRII+ (up to 4.6 Gbits)	• 2.3 Terabits/sec • 32x 100/50/40/25/10 GbE	• 16.8 million system logic elements • 128 GBytes HBM2
XUP-VV8	UltraScale+ VU13P	8	• 32 banks DDR4 (up to 4 Terabytes) • 64 banks QDRII+ (up to 18.4 Gbits)	• 4.6 Terabits/sec • 64x 100/50/40/25/10 GbE	• 30.4 million system logic cells • Up to 98,304 DSP slices

** Contact BittWare for additional FPGA card options.*

Achronix intel XILINX

Server Configurations

Low
- (2) Intel Xeon Bronze 3106 Processors (1.7GHz, 8C/8T)
- 96GB DDR4
- (2) 960GB SSD
- 2000W Redundant Power Supplies

Medium
- (2) Intel Xeon Silver 4114 Processors (2.2GHz, 10C/20T)
- 96GB DDR4
- (2) 960GB SSD
- 2000W Redundant Power Supplies

High
- (2) Intel Gold 5120 Processors (2.2GHz, 14C/28T)
- 192GB DDR4
- (2) 960GB SSD
- 2000W Redundant Power Supplies

Ultra
- (2) Intel Xeon Platinum 8180 Processors (2.5GHz, 28C/56T)
- 768GB DDR4
- (2) 960GB SSD
- 2000W Redundant Power Supplies

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

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