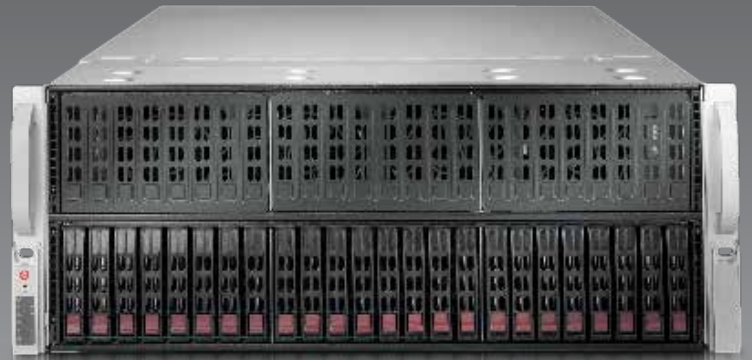




TeraBox 4000S 4U FPGA Server



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 boards using Xilinx Virtex UltraScale+ or Intel Stratix 10 FPGAs. Users seeking maximum logic/memory density can choose the XUPVV4 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 boards can be configured or **8** low-profile boards



key features

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

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

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

Support for BittWare's full range of FPGA boards



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 boards, this server is an excellent premium option for the 4U form factor.

System Management

For system management, BittWare's

FPGA boards 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 board power and temperature, and re-program the onboard clocks. You'll also be able to set points to shut down the board 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 boards 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 table below lists system totals when populated with eight boards:

	FPGA	Boards in Server	Memory	I/O	Processing
XUP-VV8	UltraScale+ VU13P	8	<ul style="list-style-type: none">32 banks DDR4 (up to 4 Terabytes)64 banks QDRII+ (up to 18.4 Gbits)	<ul style="list-style-type: none">4.6 Terabits/sec64x 100/50/40/25/10 GbE	<ul style="list-style-type: none">30.4 million system logic cellsUp to 98.304 DSP slices
520N-MX	Stratix 10 MX	8	<ul style="list-style-type: none">16 banks DDR4 (up to 2 Terabytes)32 banks QDRII+ (up to 4.6 Gbits)	<ul style="list-style-type: none">2.3 Terabits/sec32x 100/50/40/25/10 GbE	<ul style="list-style-type: none">16.8 million system logic elements128 GBytes HBM2

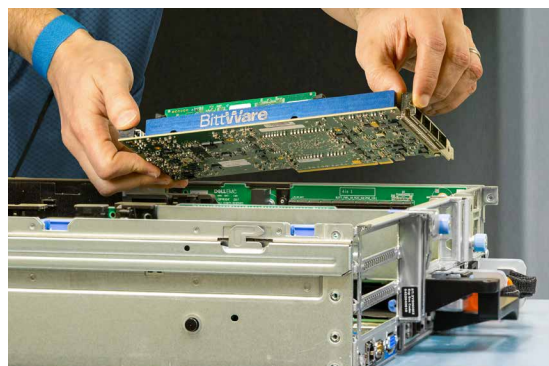
Server Specifications

SuperMicro 4029GP-TRT 4U rackmount chassis

- Dimensions: 29" x 17.2" x 7" (737 x 437 x 178mm)
- 2000W (2+2) redundant Titanium-level power supply (96%+)
- Up to 8 hot-swap fans for system cooling
- 8 double-width PCIe x16 slots
- 2 PCIe x8 slots; 1 PCIe x4 slot

Motherboard (Super X11DPG-OT-CPU)

- Dual-socket 2nd Gen Intel® Xeon® Scalable processors
- 24 x ECC DDR4-2667 MHz DIMMs
- Storage: 10 hot-swap 2.5" SATA (6Gbps) ports with RAID 0, 1, 5, 10
- I/O: 4 USB 3.0, VGA, COM Port, 2 10GbE, 1GbE for IPMI
- Embedded management: Intel Node Manager, IPMI 2.0, SuperDoctor®5



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