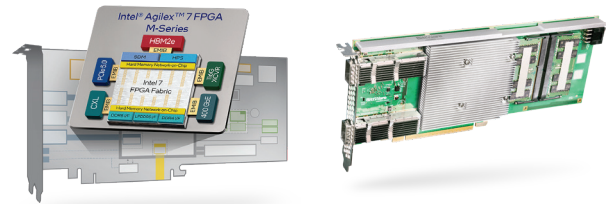**BittWare** a **molex** company

TeraBox 5202S
5U FPGA Server

Up to 10 double-width FPGA Cards

BittWare's TeraBox-5202S offers a 5U, 10 dual-slot chassis supporting Intel's latest 4th Generation Xeon Scalable processors and PCIe Gen5. Configurations include up to 10 of BittWare's double-width cards using Achronix, Intel, or AMD Xilinx FPGAs.

Users seeking maximum logic/memory density can choose the VectorPath with the Achronix Speedster7t FPGA and high-bandwidth GDDR6 memory or the IA-860m, which features an Intel Agilex FPGA along with QSFP-DDs and yields up to an impressive 30x 400G. No matter which configuration you choose, you're getting BittWare's installation, support, and comprehensive warranty.

Support for up to **10** double-width or **13** single-width FPGA accelerator cards

key features

Up to **40 QSFPs** for 80x 100G or 320x 10/25G

PCIe Gen5

12X Single-Wide   10X Double-Wide FPGA Cards

Support for BittWare's full range of FPGA cards

Up to 13 single-width or 10 double-width FPGA cards

Up to 24x hot-swap NVMe/SATA/SAS drive bays

chassis key specs

5U, depth 29 in (737mm)

Processor: 2x Intel® 4th Generation Xeon® Scalable processors

Memory: Up to 32x ECC DDR5-4800 DIMMs

Slots: 10x double-width PCIe Gen5 x16 slots

Storage: Up to 24x 2.5" hot-swap NVMe/SATA/SAS drive bays (8x 2.5" NVMe dedicated)

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

The TeraBox 5202S is a 5U FPGA server based on the SuperMicro 521GE-TNRT chassis. This server offers two Intel 4th Generation Xeon Scalable CPUs along with high PCIe slot density. With configurations of up to 10 of BittWare's large double-width cards, this server is an excellent premium option for the 5U form factor.

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.

Certified Cards

The TeraBox 5202S supports any of BittWare's Achronix, Intel, or Xilinx FPGA-based PCIe cards. The table below lists specifications for some of our certified cards*:

	FPGA	Cards in Server	Memory	I/O	Processing
S7t-VG6	Achronix Speedster7t	10	• 4 banks GDDR6 (up to 16 GBytes)	• 1x QSFP-DD, 1x QSFP • 6x 100/50/40/25/10 GbE	• 692K 6-input lookup tables (LUTs) • 375 Mbits embedded RAM
IA-860m	Agilex AGM039	10	• 32 GBytes HBM2e	• 2x QSFP-DDs • 2x 400 GbE, 8x 100GbE, 16x 50 GbE	• 3.9M system logic elements • ARM HPS
IA-780i	Agilex AGI023	13	• 2 banks DDR4 (up to 32 GBytes)	• 2x QSFP-DD • 1x 400 GbE, 2x 200 GbE, 4x 100GbE, 16x 10/25 GbE	• 2.3M system logic elements • ARM HPS
XUP-VV8	UltraScale+ VU13P	10	• 4 banks DDR4 (up to 512 GBytes) • 8 banks QDRII+ (up to 2.3 Gbits)	• 4x QSFP-DDs • 8x 100/50/40/25/10 GbE	• 3.8 million system logic cells • Up to 12,288 DSP slices

Other certified cards available. Contact BittWare for additional FPGA card options.

Server Configurations

Low
- (2) Intel Xeon Silver 4410Y (2 GHz 12Core / 24Thread) Processors
- (4) 32GB DDR5-4800 memory modules (128GB)
- (2) 480GB NVMe M.2 Drives
- 2700W Redundant Titanium Power Supplies

Medium
- (2) Intel Xeon Gold 5415+ (2.9 GHz 8Core/16Thread) Processors
- (4) 32GB DDR5-4800 memory modules (128GB)
- (2) 480GB NVMe M.2 Drives
- 2700W Redundant Titanium Power Supplies

High
- (2) Intel Xeon Gold 6444Y (3.6GHz 16Core/32Thread) Processors
- (4) 32GB DDR5-4800 memory modules (128GB)
- (2) 480GB NVMe M.2 Drives
- 2700W Redundant Titanium Power Supplies

Ultra
- (2) Intel Xeon Platinum 8480+ (2.0GHz 56Core/112Thread) Processors
- (32) 32GB DDR5-4800 memory modules (1TB)
- (2) 480GB NVMe M.2 Drives
- 2700W Redundant Titanium Power Supplies

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

BittWare
a **molex** company