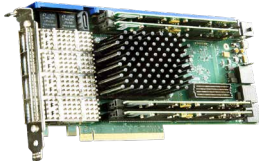


**TeraBox 1100L**  
1U FPGA Server

## Front Panel Access to 4x 100GbE and 20x 10GbE, Hosts XUPP3R FPGA Board

Looking for a 1U server for your FPGA-accelerated networking applications? BittWare's **TeraBox 1100L** is an ideal solution featuring an UltraScale+ FPGA PCIe card connected to an expansion board with 20 SFP+ cages. All QSFPs and SFPs have front panel access, with 4x 100G or 16x 40/25/10G QSFPs plus 20x 10G SFPs in a single rack space!

The host includes BittWare's XUPP3R FPGA board, up to a Xeon E5-2600 v4, 64GB (4x DIMMS), and dual redundant 800W power supply.



Features BittWare's XUPP3R with a custom expansion board

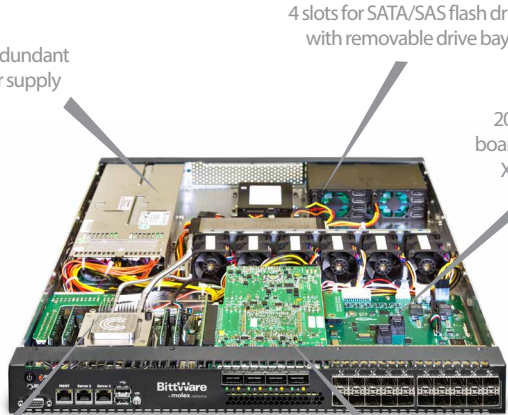


### key features

**4 QSFPs  
and  
20 SFPs**

**1U**  
Rackmount  
FPGA server

**Xilinx VU9P FPGA  
and  
Xeon E5-2600**



Dual redundant power supply

4 slots for SATA/SAS flash drives with removable drive bays

20 SFP+ cages on an expansion board attached by a flex cable to the XUPP3R expansion connector

C612 single socket server board with loop heat pipe cooling

XUPP3R board with UltraScale+ FPGA and 4 front panel QSFP cages

### chassis key specs

- 1U, depth 24in (609mm)
- Processor: Xeon E5-2600 v4
- Chipset: Intel C612
- Memory: 4x ECC DDR4 DIMMs
- Slots: 1x PCIe Gen3 x16 with front panel access
- Storage: 4x removable SATA3 6Gb/s
- Power supply: Dual Redundant 800W

# TeraBox 1100L

1U FPGA Server

The TeraBox 1100L is a 1U rackmount chassis featuring a BittWare XUPP3R PCIe board connected to a custom expansion board. The chassis has a custom front panel that allows easy access to the motherboard management interfaces and the GbE ports on the BittWare board and the expansion board. An embedded management system, accessible via command line, allows you to configure, manage, and monitor the expansion board and its interfaces.

## Development Support

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.

### Server Specifications

#### 1U rackmount chassis with custom front panel

- 1U rackmount chassis, depth 24 in (609mm)
- 800W dual-redundant power supply platinum
- Supports 1 double-wide Gen3 x16 board (BittWare XUPP3R)
- Storage: 4x removable SATA 6 Gb/s, Intel RSTe 4.0 RAID
- 6 high-performance fans with fan controller to monitor the temperature of the motherboard CPU, FPGA board, and SEP expansion board

#### Mini ITX motherboard

- CPU with up to Intel® Xeon® processor E5-2600 v4 product family
- Chipset: Intel C612
- DDR4 DIMMs at up to 2400MT/s; 4 DIMM slots: 4GB/8GB/16GB (up to 64 GBytes)
- I/O: VGA, IPMI LAN, LAN1, LAN2, Dual USB, UID
- Intel processor is loop heat pipe cooled

### FPGA and Expansion Board Specifications

#### BittWare expansion board

- 20 SFP+ cages
- Embedded management interface provides CLI access to the expansion board and its interfaces
- Connected to the XUPP3R via SEP interface

#### BittWare XUPP3R PCIe board

- FPGA: Xilinx UltraScale+ VU9P
- PCIe interface: PCIe Gen3 x16
- Memory: 4 DIMMs, each supporting up to 128GBytes DDR4
- I/O: 4 QSFP+ cages supporting 10/25/40/100 GbE
- SEP: Serial expansion port (SEP) connected to the expansion board in the chassis via a ribbon cable.

### Development Tool Options

- **BittWorks II Toolkit:** host, command, and debug tools
- **FPGA examples:** board support IP and integration
- **Vivado:** tools for Xilinx FPGAs
- **SDAccel** support

To learn more, visit [www.BittWare.com](http://www.BittWare.com)

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