



**TeraBox 200DE**  
2U Short-Depth Edge FPGA Server

Preliminary Product Info

## 2U Short-Depth Edge FPGA Server

Ideal for harsh environments

The Terabox 200DE enables world-class FPGA acceleration to be deployed in the more challenging, harsh environments demanded of edge applications. The 200DE is NEBS compliant, 2U short-depth server with an extended operating temperature range based on the new DELL PowerEdge™ XE2420. It can be populated with a range of BittWare accelerator products featuring the latest FPGAs from Achronix, Intel and Xilinx to support the increasingly complex demands of highly specialized workloads.

Chassis by  
**DELL EMC**



### key features

**2U**  
2S short-depth server

**Harsh Environment**  
Extended temperature range 5C to 40C

**3-year**  
Single comprehensive warranty

Rich choice of FPGA-based accelerator slots: PCIe, M.2, U.2 and EDSFF

4x8 single-width or 2x16 double-width slots

Two 2nd Generation Intel® Xeon® Scalable processors

Shortest depth 2S server currently offered by Dell EMC: 19" (562.95mm w/ bezel, 495.77mm w/o bezel)



2000W redundant power supply (optional 1100W DC-DC, -48V)

Optional filtered bezel to guard against dust

Front accessible and cold-aisle serviceable for easy maintenance

Tested to Network Equipment-Building System (NEBS) guidelines

Server supports iDRAC 9

Designed to operate in harsh environments outside the data center with extended operating temperatures from 5°C to 40°C (41F to 104F)

# TeraBox 200DE

2U Short-Depth Edge FPGA Server

## Purchase Directly From Dell

Customers can purchase the TeraBox 200DE with FPGA accelerators pre-integrated directly from Dell Technologies via the Dell OEM program. The system includes Dell certification – a single comprehensive warranty covers server and BittWare FPGA accelerator cards. Dell can supply and support custom configurations.

## 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.

## Certified Cards

The TeraBox 200DE supports many of BittWare's Achronix, Intel or Xilinx FPGA-based PCIe cards. The table below lists specifications for some of our certified cards\*:

	FPGA	Cards per Server	Memory	I/O	Processing
<b>S7t-VG6</b>	Achronix Speedster7t	2	<ul style="list-style-type: none"><li>4 banks GDDR6 (up to 8 GBytes)</li></ul>	<ul style="list-style-type: none"><li>450 Gbits/sec</li><li>6x 100/50/40/25/10 GbE</li></ul>	<ul style="list-style-type: none"><li>692K 6-input lookup tables (LUTs)</li><li>375 Mbits embedded RAM</li></ul>
<b>520N-MX</b>	Intel Stratix 10 MX	2	<ul style="list-style-type: none"><li>2 banks DDR4 (up to 256 Gbytes)</li><li>2 banks QDR11+ (up to 1152 Mbits)</li><li>16 GBytes HBM2</li></ul>	<ul style="list-style-type: none"><li>250 Gbits/sec</li><li>4x 100/50/40/25/10 GbE</li></ul>	<ul style="list-style-type: none"><li>2.1 million system logic elements</li><li>3,960 DSP blocks</li></ul>
<b>XUP-P3R</b>	Xilinx UltraScale+ VU9P	2	<ul style="list-style-type: none"><li>4 banks DDR4 (up to 512 Gbytes)</li><li>4 banks QDR11+ (up to 2304 Mbits)</li></ul>	<ul style="list-style-type: none"><li>250 Gbits/sec</li><li>4x 100/50/40/25/10 GbE</li><li>Clock output, 1PPS output, trigger input/output</li></ul>	<ul style="list-style-type: none"><li>2.5 million system logic cells</li><li>Up to 6,840 DSP slices</li></ul>

\*Other certified cards available. Additional expansion capabilities are also available via M.2, U.2, and ESDFF. Contact BittWare for details.



## Server Configurations

### Low

- 48GB DDR4
- (2) 960GB SSD
- (2) Xeon Silver 4216 Processors

### Medium

- 96GB DDR4
- (2) 960GB SSD
- (2) Xeon Gold 6234 Processors

### High

- 192GB DDR4
- (2) 960GB SSD
- (2) Xeon Gold 6252 Processors

Contact SkyBlue or Zerif for additional server configuration options.

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