BittWare a molex company

XUS-PL4

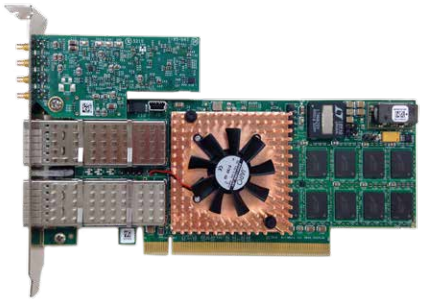
PCIe FPGA Board

UltraScale Low-Profile PCIe Board with Dual QSFP and DDR4

XILINX

BittWare's XUS-PL4 is a low-profile PCIe x8 card based on the Xilinx Virtex or Kintex UltraScale FPGA. The high-performance UltraScale devices provide increased system integration, reduced latency, and high bandwidth for systems demanding massive data flow and packet processing. The board offers up to 32 GBytes of memory, sophisticated clocking and timing options, and two front panel QSFP cages, each supporting up to 100 Gbps (4x25) - including 100GbE.

The XUS-PL4 also incorporates a Board Management Controller (BMC) for advanced system monitoring, which greatly simplifies platform integration and management. All of these features combine to make the XUS-PL4 ideal for a wide range of data center applications, including network processing and security, acceleration, storage, broadcast, and SigInt.



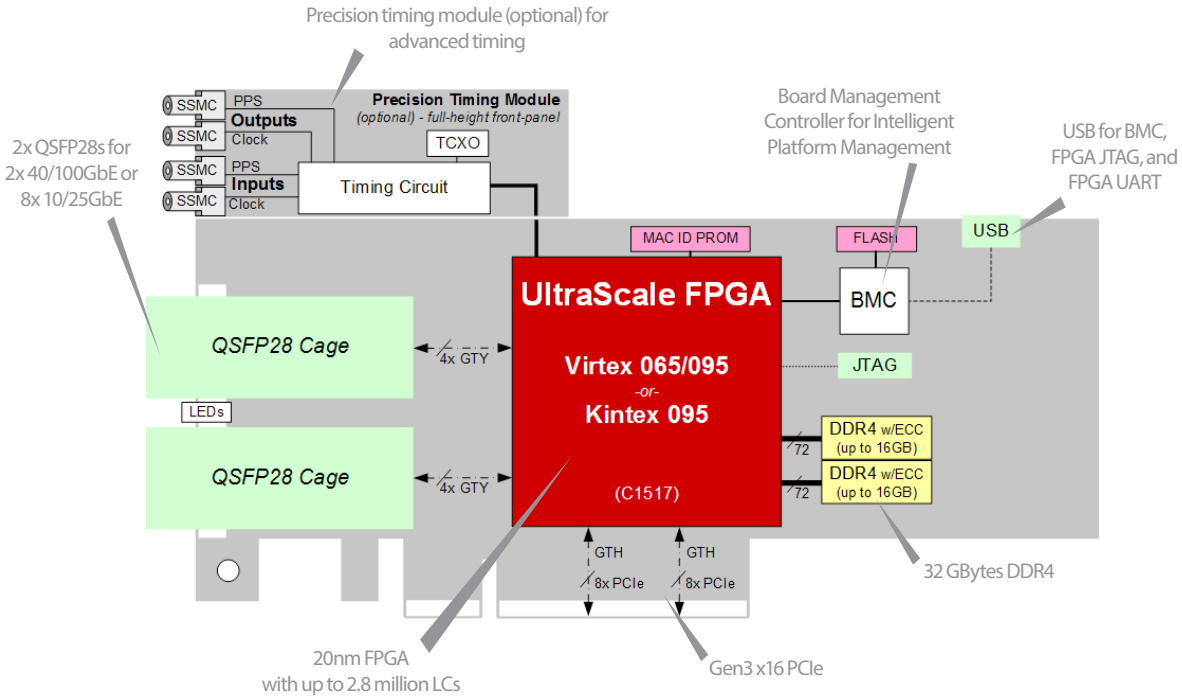
An optional add-on module provides precision timestamping capabilities

key features

2x 100GbE via 2 QSFP28

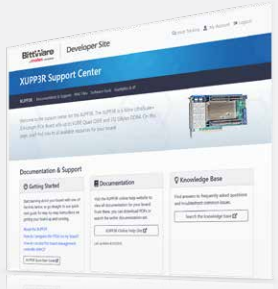
Up to **32 GBytes** DDR4

Up to VU095: **1.1 million LCs** FPGA by Xilinx



Additional Services

Take advantage of BittWare's range of design, integration, and support options



Customization

Additional specification options or accessory boards to meet your exact needs.

Server Integration

Available pre-integrated in our TeraBox servers in a range of configurations.

Application Optimization

Ask about our services to help you port, optimize, and benchmark your application.

Service and Support

BittWare Developer Site provides online documentation and issue tracking.

Board Specifications

FPGA	• Virtex UltraScale
	  • VU065 in C1517 package
	  • Core speed grade - 2
	• Contact BittWare for additional FPGA options

On-board memory	• Two banks of up to 16 GB DDR4 (x72) • Flash memory for booting FPGA
Host interface	• Up to two 8-lane PCIe interfaces up to Gen3 (one 8x interface in a standard slot; two 8x interfaces requires a bifurcated slot)
Utility header	• Micro USB for BMC access and programming Flash
Timestamping (optional)	• 1 PPS input/output • Reference clock input/output
QSFP cages	• 2 QSFP28 (zQSFP) cages on front panel connected directly to FPGA via 8 transceivers • Each supports 100GbE, 40GbE, 4x 25GbE, or 4x 10GbE and can be combined for 400GbE • Backward compatible with QSFP and can be optionally adapted for use as SFP+
Board Management Controller	• Voltage, current, temperature monitoring • Power sequencing and reset • Field upgrades • FPGA configuration and control • Clock configuration • I^2C bus access • USB 2.0 • Voltage overrides
Cooling	• Standard: single-width active heatsink
Electrical	• On-board power derived from 12V PCIe slot • Power dissipation is application dependent
Environmental	• Operating temperature 5°C to 35°C
Size	• Low profile (half-height, half-length) PCIe slot board • 6.6 x 3.85 inches

Development Tools

System development	• BittWorks II Toolkit - host, command, and debug tools for BittWare hardware
FPGA development	• FPGA Examples - example Vivado projects • Xilinx Tools - Vivado® Design Suite

XILINX
ALLIANCE PROGRAM
CERTIFIED

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

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