

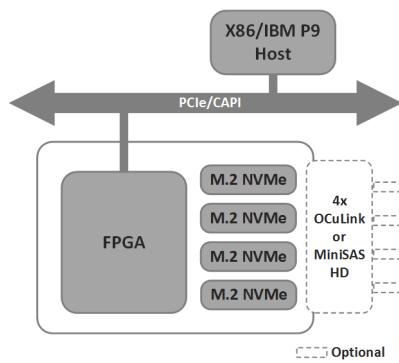
Near Storage Accelerator with Kintex FPGA

Directly Attached Accelerator & Proxy In-Line Accelerator

The 250S+ is a fully-programmable NIC-sized near-storage accelerator featuring a Xilinx UltraScale+ Kintex FPGA. This PCIe Gen 3-capable accelerator card can be added to PCIe or CAPI-enabled server platforms introducing an energy-efficient acceleration capability for applications including:

- Database Acceleration
- In-line Compression/Encryption
- Checkpoint Restarting
- Burst Buffer Caching

The 250S+ is available with a choice of two configurations: up to four M.2 NVMe SSDs coupled on-card to the Xilinx FPGA, OCuLink or MiniSAS-HD break-out cabling allowing the 250S+ to be part of a massively scaled storage array.

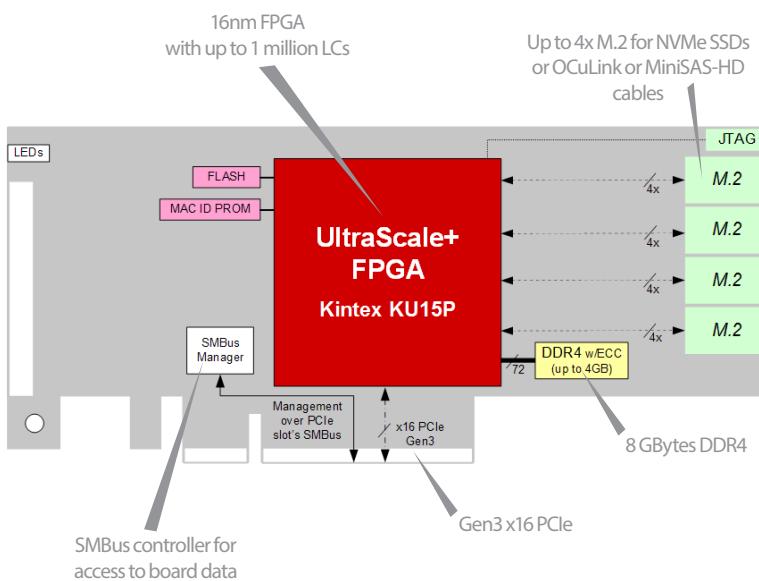


key features

Up to
4x NVMe
drives

Up to
8 GBytes
DDR4

KU15P FPGA:
1.1 million LCs
Kintex UltraScale+

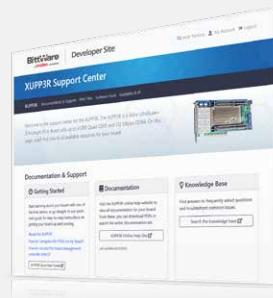


Accelerating High Level Design

- Vivado HLx Editions supply design teams with the tools and methodology needed to leverage C-based design and optimized reuse
- Includes IP sub-system reuse, integration automation and accelerated design closure
- When coupled with the UltraFast™ High-Level Productivity Design Methodology Guide, this unique combination is proven to accelerate productivity
- It enables designers to work at a high level of abstraction while facilitating design reuse

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.

Specifications

FPGA	<ul style="list-style-type: none">Xilinx Kintex UltraScale+KU15P in a FFVA1156 packageCore speed grade -2Contact BittWare for other FPGA options
On-board DDR4 SDRAM	<ul style="list-style-type: none">One bank of DDR4 SDRAM x80 bits8GB per bank (4GB version also available)Transfer Rate: 2400 MT/s
Host interface	<ul style="list-style-type: none">x8 mechanical PCIe Gen3
Storage options	<ul style="list-style-type: none">Four on-board 960GB NVMe SSD sticksFour OCuLink cablesFour MiniSAS-HD cables
Power supply monitoring & reporting	<ul style="list-style-type: none">Voltage monitoringTemperature monitoringFault condition reporting to FPGA
Cooling	<ul style="list-style-type: none">Single-width passive heatsink for FPGA power up to 25WDouble-width passive heatsink for FPGA power up to 50W

Electrical

- On-card power derived from PCIe slot supplies
- Power dissipation is application dependent
- Typical FPGA power consumption ~25-50W

Environmental

- Operating temperature: 5°C to 35°C

Quality

- Manufactured to ISO9001:2008 IPC JSTD-001 -Class III
- RoHS compliant

Form factor

- Half-height, half-length PCIe board
- Dimensions: 167.7 mm x 68.9 mm
- Single or double-width option
- Full-height PCI bracket option

Development Tools

FPGA development	<ul style="list-style-type: none">BIST - Built-In Self-Test for CentOS 7 provided with source code (pinout, gateware, PCIe driver and host test application)
Application development	<ul style="list-style-type: none">Xilinx Tools - Vivado Design Suite HLx Editions: HDL and C/C++ with HLSOpenPOWER CAPI SNAP 2.0 for POWER9

Deliverables

- 250S+ FPGA board
- Built-In Self-Test (BIST)
- 1-year access to online Developer Site
- 1-year hardware warranty

To learn more, visit www.BittWare.com

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