

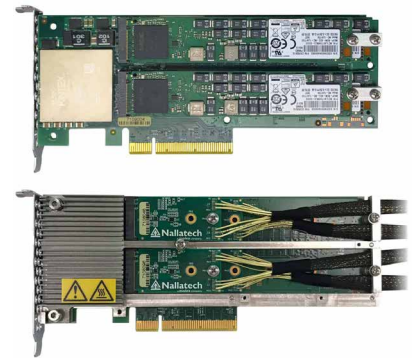
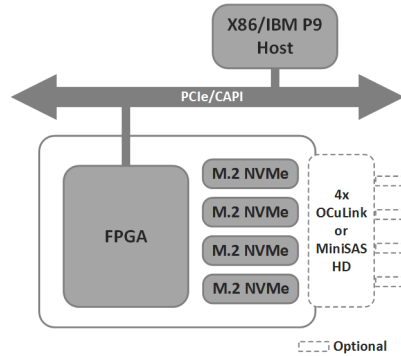
## Near Storage Accelerator with Kintex FPGA

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:

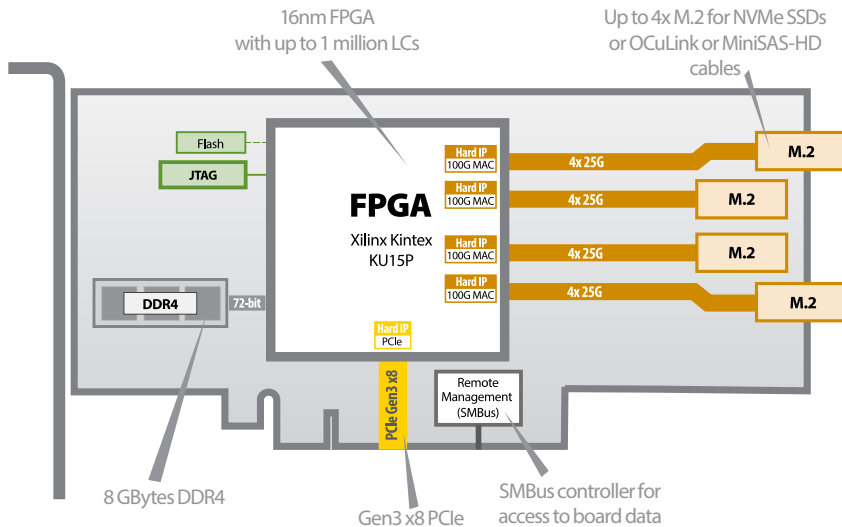
- Database Acceleration
- In-line Compression/Encryption
- Checkpoint Restarting
- Burst Buffer Caching

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.



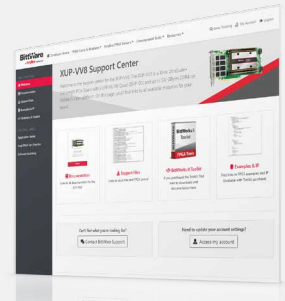
## Server Integration

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"> <li>Xilinx Kintex UltraScale+             <ul style="list-style-type: none"> <li>KU15P in a FFVA1156 package</li> <li>Core speed grade -2</li> </ul> </li> <li>Contact BittWare for other FPGA options</li> </ul>
On-board DDR4 SDRAM	<ul style="list-style-type: none"> <li>One bank of DDR4 SDRAM x80 bits</li> <li>8GB per bank (4GB version also available)</li> <li>Transfer Rate: 2400 MT/s</li> </ul>
Host interface	<ul style="list-style-type: none"> <li>x8 mechanical PCIe Gen3</li> </ul>
Storage options	<ul style="list-style-type: none"> <li>Four on-board 960GB NVMe SSD sticks</li> <li>Four OCuLink cables</li> <li>Four MiniSAS-HD cables</li> </ul>
Power supply monitoring & reporting	<ul style="list-style-type: none"> <li>Voltage monitoring</li> <li>Temperature monitoring</li> <li>Fault condition reporting to FPGA</li> </ul>
Cooling	<ul style="list-style-type: none"> <li>Single-width passive heatsink for FPGA power up to 25W</li> <li>Double-width passive heatsink for FPGA power up to 50W</li> </ul>

### 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

- BIST** - Built-In Self-Test for CentOS 7 provided with source code (pinout, gateway, PCIe driver and host test application)

### Application development

- Xilinx Tools** - Vivado Design Suite HLx Editions: HDL and C/C++ with HLS
- OpenPOWER 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](http://www.BittWare.com)

Rev 2020.10.26 | October 2020

© BittWare 2020

UltraScale, Virtex, and Vivado are registered trademarks of Xilinx Corp. All other products are the trademarks or registered trademarks of their respective holders.

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