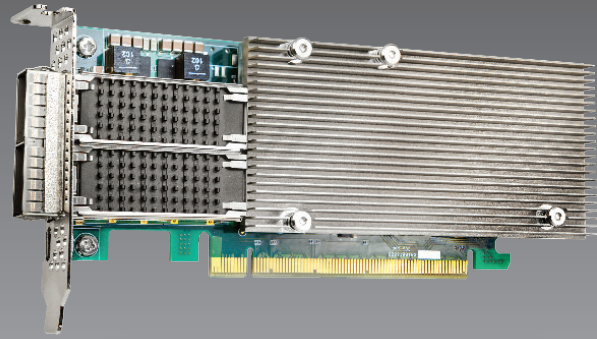




## 250-SoC PCIe FPGA Card



### Low-Profile UltraScale+ MPSoC card

2x 100Gbps and 64-bit ARM processors

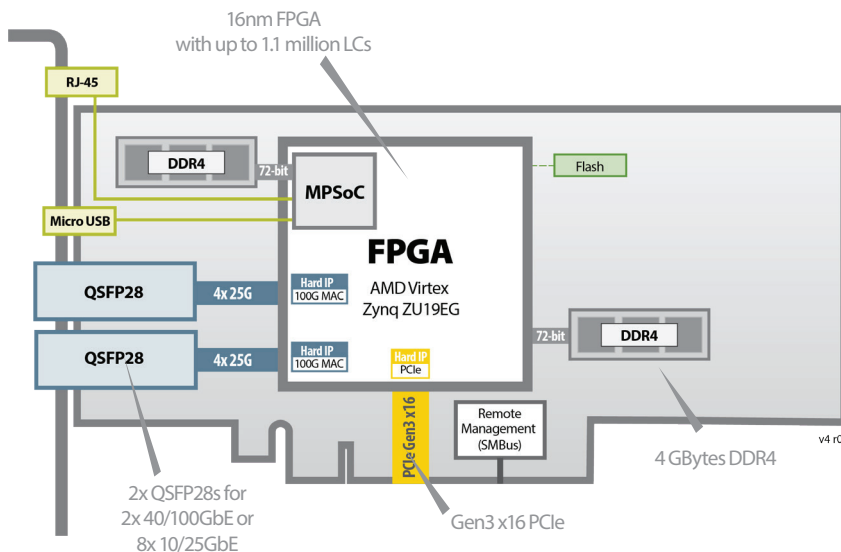
The 250-SoC features an AMD Zynq UltraScale+ MPSoC device offering both programmable logic and 64-bit ARM processors. This powerful, feature-rich device coordinates data transfer between two 100GbE network ports, on-board DDR4 memory and a PCIe Gen 3 host interface and is ideal for data center, networking and edge compute workloads.

### key features

**2x  
100GbE**  
via 2 QSFP28

**8 GB  
DDR4**

**ZU19EG MPSoC:  
64-bit Cortex A53 ARM**  
Zynq 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



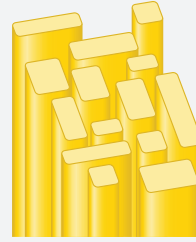
## Customization

[Additional specification options](#) or [accessory boards](#) to meet your exact needs.



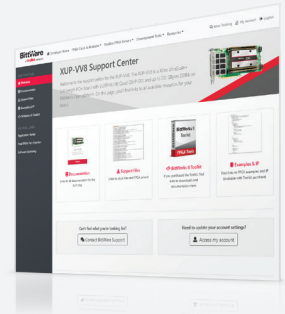
## Server Integration

Available pre-integrated in our [TeraBox servers](#) in a range of configurations.



## IP and Solutions

Our portfolio of IP and solutions reduce risk for development and deployment.



## Service and Support

BittWare Developer Site provides online documentation and issue tracking.

## Specifications

FPGA	<ul style="list-style-type: none"> <li>AMD Zynq UltraScale+               <ul style="list-style-type: none"> <li>ZU19EG FFVD1760 package</li> <li>Core speed grade -2</li> <li>Application ARM: Quad-core Cortex-A53 MP-Core 1.5GHz</li> <li>Real-Time ARM: Dual-core Cortex-R5 MPCore 600MHz</li> <li>Graphics Processor: Mali-400 MP2</li> </ul> </li> <li>Contact BittWare for other MPSoC options</li> </ul>
On-board DDR4 SDRAM	<ul style="list-style-type: none"> <li>DDR4 SDRAM FPGA Fabric Memory               <ul style="list-style-type: none"> <li>One 4GB bank of DDR4 SDRAM x72 bits</li> <li>Transfer Rate: 2400 MT/s</li> </ul> </li> <li>DDR4 SDRAM MPSoC Memory               <ul style="list-style-type: none"> <li>One 4GB bank of DDR4 SDRAM x72 bits</li> <li>Transfer rate: 2400 MT/s</li> </ul> </li> </ul>
Host interface	<ul style="list-style-type: none"> <li>x16 mechanical PCIe Gen3 capable</li> <li>Configurable as x16 up to Gen3, or two x8 PCI in bifurcated slots</li> </ul>
QSFP cages	<ul style="list-style-type: none"> <li>2 front panel 4-25Gbps-lane QSFP28 cages</li> <li>User programmable low jitter clocking supporting 10/25/40/100GbE</li> <li>Each QSFP28 can be independently clocked</li> </ul>
Board control (front panel)	<ul style="list-style-type: none"> <li>RJ45 1GbE access to the ARM processor</li> <li>USB connector for UART to ARM processor</li> </ul>

Datacenter Deployment, Health Monitoring & Reporting	<ul style="list-style-type: none"> <li>On-board power, voltage and temperature monitoring</li> <li>Field flash update via software</li> <li>SMBus controlled anti-bricking, fallback and multi-boot</li> <li>SMBus access to unique board data and temperature sensor</li> </ul>
Cooling	<ul style="list-style-type: none"> <li>Passive heatsink</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>On-card power derived from PCIe slot supplies</li> <li>Power dissipation is application dependent</li> <li>Typical FPGA power consumption ~50W</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>Operating temperature: 5°C to 35°C</li> </ul>
Quality	<ul style="list-style-type: none"> <li>Manufactured to IPC-A-610 Class 2</li> <li>RoHS compliant</li> </ul>
Form factor	<ul style="list-style-type: none"> <li>Half-height, half-length PCIe board</li> <li>Full-height PCI bracket option</li> <li>68.90mm x 167.65mm (2.713in x 6.600in)</li> </ul>

## Development Tools

FPGA development	<b>BIST</b> - Built-In Self-Test for CentOS 7 provided with source code (pinout, gateway, PCIe driver and host test application)
Application development	<b>Xilinx Tools</b> - Vivado Design Suite HLx Editions: HDL and C/C++ with HLS

## Deliverables

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

## Sales Part Numbers

250SoC-0004	Zynq 19EG, passive heatsink, RJ45, (2) 1Gb Flash
250SoC-0005	Zynq 19EG, passive heatsink, (2) 1Gb Flash

Looking for a different configuration? Ask us about other configuration options.

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

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