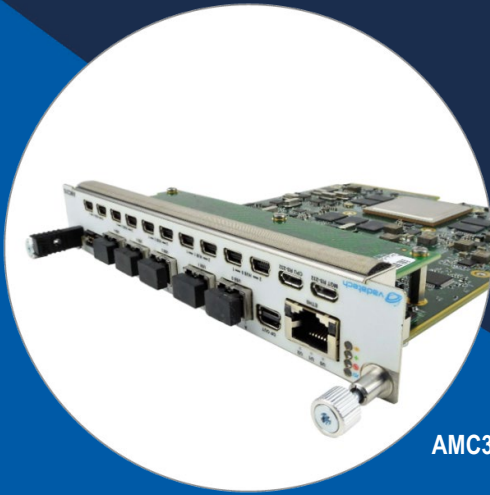


# AMC315

## Zynq UltraScale+ FPGA, AMC



AMC315

## Key Features

- Xilinx UltraScale+ XCZU7EV FPGA
- Double module, full-size
- Five USB 1.1 Fiber Links via SFF
- Dual USB 1.1 as copper per USB Link
- 8 GB of 64-bit wide DDR4 Memory (single bank) with ECC to the PS Side
- Dual 4 GB 32-bit wide DDR4 to the PL Side
- SD Card
- 128 MB of boot Flash

## Benefits

- Zynq UltraScale+ MPSoC
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



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# AMC315

The AMC315 is an AMC FPGA module with Zynq UltraScale+ EV part. The AMC is compliant to AMC.1, AMC.2, AMC.3 and AMC.4 specifications. It is based on Xilinx UltraScale+ XCZU7EV MPSoC FPGA with USB 1.1 interface to each of the Fiber Optics as end point devices.

The Module has a single bank of 8GB of DDR-4 64-bit wide with ECC to the PS and in addition dual bank of x32 DDR-4 to the PL for a total of 8GB.

The module brings out dual USB 1.1 from each of the Optical link to the front panel for a total of 10USB ports.

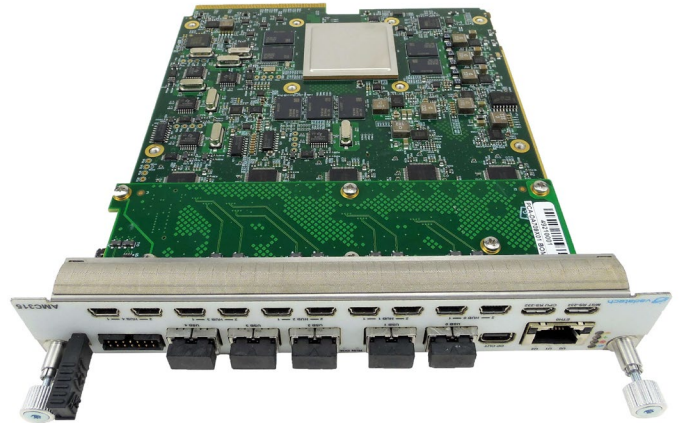


Figure 1: AMC315

# Block Diagram

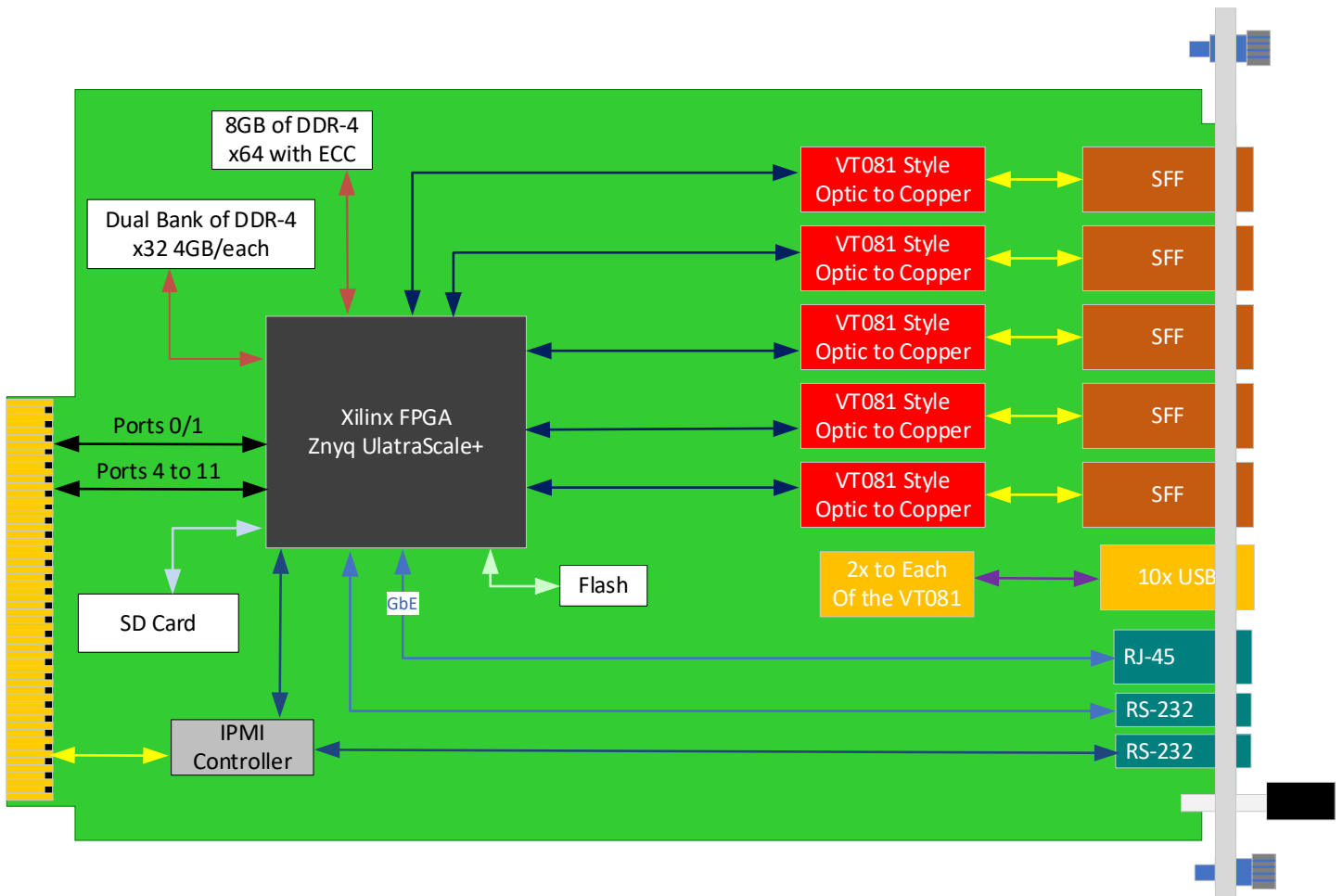


Figure 2: AMC315 Functional Block Diagram

# Specifications

| Architecture             |   |
|--------------------------|---|
| <b>Physical</b>          | <b>Dimensions</b> Double module, full-size<br>Width: 5.85" (148.5 mm)<br>Depth 7.11" (180.6 mm)   |
| <b>Type</b>              | <b>AMC FPGA</b> Xilinx Zynq UltraScale+   |
| Standards                |   |
| <b>AMC</b>               | <b>Type</b> AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4  |
| <b>Module Management</b> | <b>IPMI</b> IPMI v2.0   |
| <b>GbE</b>               | <b>Lanes</b> Port 0 and 1   |
| <b>PCIe</b>              | <b>Lanes</b> x8 (4-7/8-11) per option F   |
| <b>10GbE/40GbE/SRIO</b>  | 4-7, 8-11 per option F  |
| Configuration            |   |
| <b>Power</b>             | <b>AMC315</b> ~25W<br><b>To RTM</b> No RTM  |
| <b>Environmental</b>     | <b>Temperature</b> See <a href="#">Ordering Options</a> and <a href="#">Environmental Spec Sheet</a><br>Storage Temperature: -40° to +85°C<br><b>Vibration</b> Operating 9.8 m/s <sup>2</sup> (1G), 5 to 500 Hz on each axis<br><b>Shock</b> Operating 30G on each axis<br><b>Relative Humidity</b> 5 to 95% non-condensing |
| <b>Front Panel</b>       | <b>Interface Connectors</b> Five SFF optics coming in as USB 1.1<br>Dual Micro USB for MGT RS-232 and CPU RS-232<br>10x USB to USB 1.1 coming from the optics (2x per optics)<br>GbE via RJ-45<br><b>LEDs</b> IPMI management control<br>Debug (user defined) LED<br><b>Mechanical</b> Hot-swap ejector handle              |
| <b>Software Support</b>  | <b>Operating System</b> Linux   |
| Other                    |   |
| <b>MTBF</b>              | MIL Hand book 217-F@ TBD hrs  |
| <b>Certifications</b>    | Designed to meet FCC, CE and UL certifications, where applicable  |
| <b>Standards</b>         | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards   |
| <b>Warranty</b>          | Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>  |

## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

# Ordering Options

## AMC315 – 00C-D0F-00J

|  |  |  |
|--|--|--|
|  | <b>D = SD Card</b>   |  |
|  | 0 = SD Card (32 GB)<br>1 = SD Card (64GB)  |  |
|  |  |  |
|  |  |  |
| <b>C = Front Panel</b>   | <b>F = PCIe Fabric</b>   | <b>J = Temperature Range and Coating</b>   |
| 1 = Reserved<br>2 = Reserved<br>3 = Full-size<br>4 = Reserved<br>5 = Reserved<br>6 = Full-size, MTCA.1 (captive screw) | 0 = No PCIe<br>1 = PCIe on Ports 4-7<br>2 = PCIe on Ports 8-11<br>3 = PCIe on Ports 4-11 | 0 = Commercial (–5° to +55°C), No coating<br>1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane<br>2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic<br>3 = Industrial (–20° to +70°C), No coating<br>4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane<br>5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic<br>6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane**<br>7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic** |

Notes: \*\*Conduction cooled; temperature is at edge of module. Consult factory for availability.

For operational reasons VadaTech reserves the right to supply a higher speed FPGA device than specified on any particular order/delivery at no additional cost, unless the customer has entered into a Revision Lock agreement with respect to this product.

## Related Products

VT813



- MTCA.4 Chassis Platform with rear I/O
- 19" x 8U x 14.9" deep (with handles 16.23" deep)
- Full redundancy with dual MicroTCA Carrier Hubs

AMC314



- Xilinx UltraScale+ XCZU7EV FPGA
- 4x Video Stream from the RTM
- Dual USB 2.0 from the RTM to FPGA

UTC006



- 3<sup>rd</sup> Gen MicroTCA Carrier Hub (MCH)
- Double module, full size per AMC.0 and MTCA.4
- Multiple Fabric Options (PCIe Gen3, 40G and others) and Full Layer 3 managed Ethernet switch

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