AMC314

Zynq UltraScale+ FPGA Video Streaming with USB 2.0, AMC

AMC314

Key Features

- Xilinx UltraScale+ XCZU7EV FPGA
- Double module, full-size
- Rear Transition Module (RTM) per uTCA.4
- 4x Video Stream from the RTM
- Dual USB 2.0 from the RTM to FPGA
- Quad USB 2.0 as pass thru to front panel
- 8 GB of 64-bit wide DDR4 Memory (single bank) with ECC to 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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The AMC314 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 an RTM (such as the MRT314A).

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 RTM may provide up to four Video streaming and dual USB ports to the FPGA.

The module brings out as pass thru 4 x USB2.0 to the front.

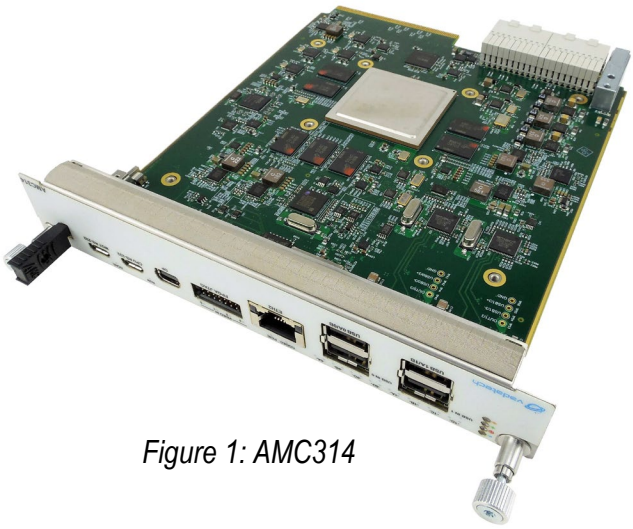

Figure 1: AMC314

Block Diagram

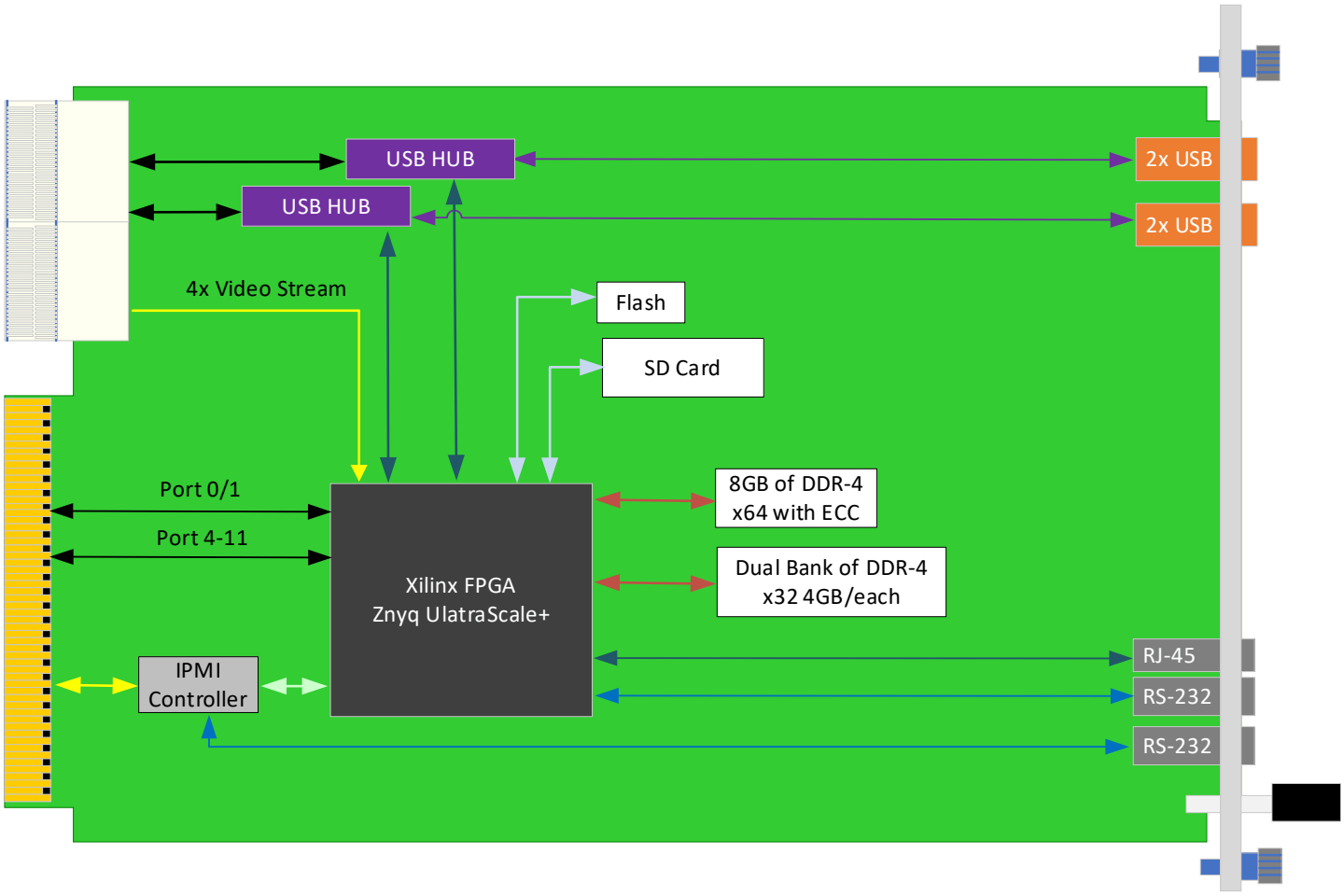

Figure 2: AMC314 Functional Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	Double module, full-size
		Width: 5.85” (148.5 mm)
		Depth 7.11” (180.6 mm)
Type	**AMC FPGA**	Xilinx Zynq UltraScale+,
Standards		
AMC	**Type**	AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4
Module Management	**IPMI**	IPMI v2.0
GbE	**Lanes**	Port 0 and 1
PCIe	**Lanes**	x8 (4-7/8-11) per option F
10GbE/40GbE/SRIO		4-7, 8-11 per option F
Configuration		
Power	**AMC314**	~25W
	To RTM	RTM Interface Available
Environmental	**Temperature**	See Ordering Options and Environmental Spec Sheet
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz on each axis
	Shock	Operating 30G on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	Four USB 2.0 as pass thru to the front panel
		Micro USB for MGT RS-232 on front panel
		Micro USB for CPU RS-232 on front panel
		GbE via RJ-45 on front panel
	LEDs	IPMI management control
	Mechanical	Hot-swap ejector handle
Software Support	**Operating System**	Linux

Other	
MTBF	MIL Hand book 217-F@ TBD hrs
Certifications	Designed to meet FCC, CE and UL certifications, where applicable
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
Warranty	Two (2) years, see VadaTech Terms and Conditions

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

AMC314 – 00C-D0F-00J

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

MRT314A

- MicroTCA.4 RTM for the AMC314 Module
- Four Video Input over Optics
- Dual USB 2.0 over Optics (as end points)

UTC006

- 3rd 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

Contact

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