

AMC584

Virtex UltraScale+™ FPGA with
Zone 3, AMC



AMC584

Key Features

- Xilinx XCVU13P UltraScale+
- Two banks of DDR4 Memory
- Total of 16 GB of DDR4
- High-speed Zone 3 connector for I/O
- Five front-panel QSFP28 (5x100GbE)
- PCIe x16 to neighboring PinoutPlus™ cards

Benefits

- High-performance FPGA; 12,288 DSP slices and over 3 million logic cells
- Zone 3 connector board-to-board interconnect for multi-module configurations with AMC594
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



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AdvancedMC™



AMC584

The AMC584 is an AMC double-module form factor card with Xilinx Virtex UltraScale+™ XCVU13P FPGA. The module has a total of 16 GB of DDR4 across two banks.

The FPGA provides over 12,000 DSP slices and 3,780 thousand logic cells and is routed to base and extended option regions (all the tongue one SERDES are routed). The module routes up to twenty lanes to Tongue 2 for PinoutPlus™ connection to neighbouring AMC (in a chassis supporting this option) such as the AMC750. The front panel QSFP28 allows data output of up to 5x100GbE over five standard connectors.

The module has a high-speed Zone 3 connector that provides the primary digital I/O routing. Multiple AMC594s can be connected to the AMC584 (e.g. for generating I/Q or multi-polarizations), or this I/O can be routed to further FPGA AMCs for additional processing. Contact sales for further information.

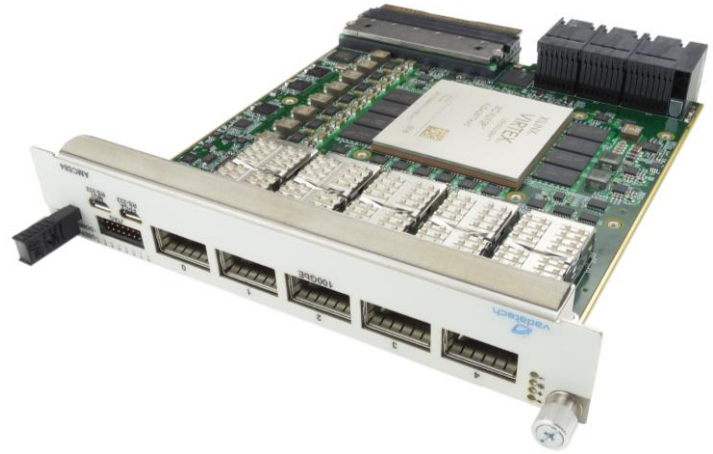


Figure 1: AMC584

Block Diagram

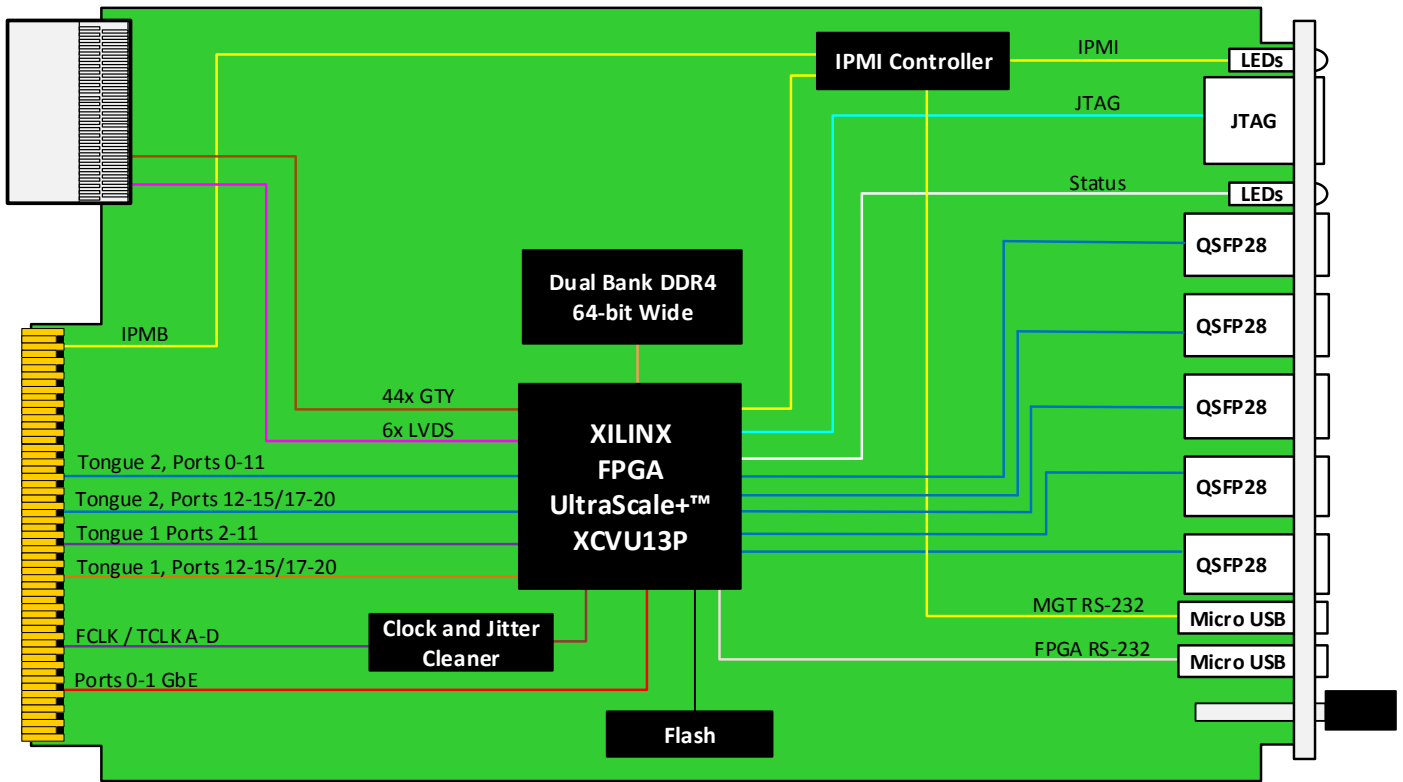


Figure 2: AMC584 Functional Block Diagram

Specifications

Architecture	
Physical	Dimensions Double module, full-size Width: 5.85" (148.5 mm) Depth 7.11" (180.6 mm)
Type	AMC FPGA XCVU13P
Standards	
AMC	Type AMC.0, AMC.1, AMC.2 and AMC.3
Module Management	IPMI IPMI v2.0
PCIe (see option F)	Lanes Via MUX: "Dual x4 (Tongue 1) and x8 (Tongue 2)" or "x16 (Tongue 2)"
Configuration	
Power	AMC584 TBD W (application specific)
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 QSFP28 JTAG Dual micro USB for RS-232 (management and payload) LEDs IPMI management control Debug (user defined) LED Mechanical Hot-swap ejector handle
Software Support	Operating System Independent
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

AMC584 – 00C-DEF-00J

	D = Ports 12-15 and 17-20 Tongue 1	
	0 = Not connected to FPGA 1 = Connected to FPGA	
	E = FPGA Speed Grade	
	0 = High (-2) 1 = Highest (-3)	
C = Front Panel	F = PCIe Fabric Tongue 1	J = Temperature Range and Coating
1 = Reserved 2 = Reserved 3 = Full-size 4 = Reserved 5 = Reserved 6 = Full-size, MTCA.1 (captive screw)	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

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

AMC594



- 8-bit ADC at up to dual 56 GSPS
- 2 x 56 or 4 x 28 GSPS channels
- Xilinx UltraScale™ XCVU190 FPGA with 16 GB of DDR4 Memory

VT815



- 9U MTCA Chassis Platform, 12 slots, double-module
- Full redundancy
- High-bandwidth (20-lane) connections between adjacent slots

UTC004



- Single module, full size per AMC.0
- Unified 1 GHz quad-core CPU for MicroTCA Carrier Management Controller (MCMC), Shelf Manager, Clocking, and Fabric management
- Automatic fail-over with redundant UTC004s

Contact

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