AMC FPGA Carrier with FMC Interface

AMC514

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Photo with heat sink

KEY FEATURES

- AMC FPGA carrier for FPGA Mezzanine Card (FMC) per VITA-57
- AMC Ports 2-3 and 4-11 are routed to FPGA (protocols such as PCIe, SRIO, XAUI, etc. are FPGA programmable)
- Xilinx Virtex-6 FPGA in FF1759 package
- AMC FCLKA, TCLKA, TCLKB, TCLKC and TCLKD are routed
- On board PLL for buffering/multiplying and jitter cleaner
- Option for up to 4GB of DDR-III memory
- Option for on board Freescale QorIQ PPC1020 with DDR-III
- RoHS compliant

The AMC514 is an AMC FPGA Carrier with an FMC (VITA 57) interface. The AMC514 is compliant to the AMC.1, AMC.2 and/or AMC.4 specification. The unit has an on-board, re-configurable FPGA which interfaces directly to the AMC Ports 2-3, 4-11, FCLKA, TCLKA, TCLKB, TCLKC, and TCLKD. The FPGA has an interface to four banks of DDR-III memory (32-bit wide). This allows for large buffer sizes to be stored during processing as well as for queuing the data to the host.

The AMC514 has a single FMC connector per VITA-57. This allows having a single Carrier with multiple-different FMC modules in the system.

The on board PPC can run at 800MHz with 512 Mbytes of DDR-III, 8Mbytes of boot flash and 128MBytes of user Flash. The PPC has an x4 PCIe interface to the FPGA in addition to it's local bus. The PPC has it's dual GbE routed to ports 0 and 1 of the AMC.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

AdvancedMC™

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SPECIFICATIONS

Architecture		
Physical	**Dimensions**	Single-width, Full-Height
		Width: 2.89 in. (73.5 mm)
		Depth: 7.11 in. (180.6 mm)
Type	**AMC FPGA Carrier**	Xilinx FGPA Virtex-6 Devices
		PLL multiplier/divider with jitter cleaner
		Single FMC slot
		Four banks of DDR-III
Standards		
AMC	**Type**	AMC.1, AMC.2, and AMC.4 (FPGA programmable)
Module Management	**IPMI**	IPMI Version 2.0
PCIe	**Lanes**	x4 or x8
SRIO	**Lanes**	Dual x4
XAUI	**Lanes**	Dual port XAUI
Aurora	**Lanes**	Dual x4
Ethernet	**GbE**	Dual 1000-BaseBX from PPC or FPGA
Configuration		
Power	**AMC514**	Carrier is 40W max without the Mezzanine
Environmental	**Temperature**	Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 400 LFM)
		Storage Temperature: -40° to +90° C
	Vibration	1G, 5-500Hz each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	**Interface Connectors**	Front panel FMC
	LEDs	IPMI Management Control
		8 user defined LED
	Mechanical	Hot Swap Ejector Handle
Software Support	**Operating Systems**	Linux, Windows, Solaris and VxWorks
Other		
MTBF	MIL Handbook 217-F > TBD.	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Compliance	RoHS and NEBS	
Warranty	Two (2) years.	
Trademarks and Logos	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC™ and the AdvancedTCA™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.	

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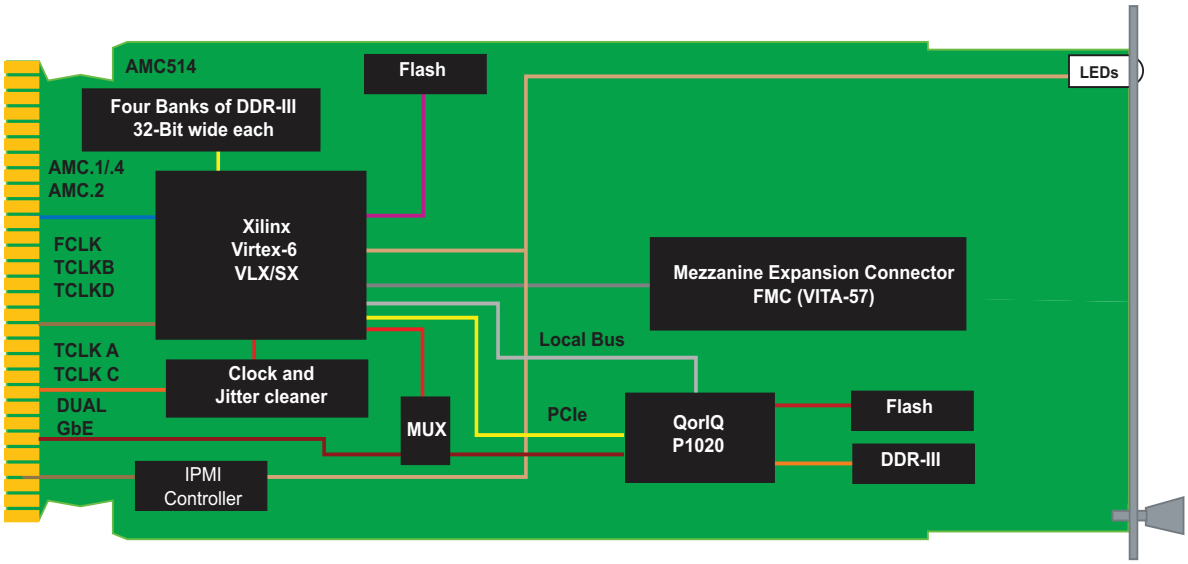
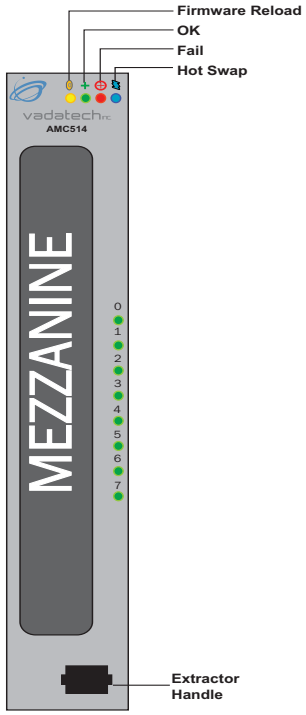


FIGURE 1. AMC514 Functional Block Diagram

FIGURE 2. AMC514 Front Panel



ORDERING OPTIONS

AMC514 - ABC - DEF - 0HJ

A = DDR-III Memory

0 = None
1 = 512MB per Bank (total of 2Gbytes)
2 = 1GB per Bank (total of 4Gbytes)

B = QorIQ CPU

0 = None (FPGA is loaded via the Flash)
1 = Reserved
2 = Reserved
3 = Reserved
4 = 1020 @800MHz (FPGA is loaded by CPU)

C = Front Panel

1 = Reserved
2 = Mid-Height
3 = Full-Height

D = FPGA

1= Reserved
2= Reserved
3= Reserved
4= XC6VLX240T
5= XC6VLX365T
6= XC6VLX550T
7= XC6VSX475T
8 = Reserved

E = FPGA SPEED

1 = Low
2 = High

F = PCIe option

0 = No PCIe (ports 4-11)
1 = PCIe on ports 4-7
2 = PCIe on ports 8-11
3 = PCIe on Ports 4-11

H = Operating Temp

0 = Commercial
1 = Industrial

J = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

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