

AMC FPGA with Altera EP4S100Gx

AMC530



KEY FEATURES

- AMC Ports 2-3 and 4-11 are routed to FPGA (protocols such as PCIe, SRIO, XAUI, etc. are FPGA programmable)
- Ports 0 and 1 are Muxed with P2020 GbE
- Altera Stratix IV Device EP4S100Gx in 1517 pin count (40mm x 40mm)
- AMC FCLKA, TCLKA, TCLKB, TCLKC and TCLKD are routed
- On board PLL for buffering/multiplying and jitter cleaner
- Option for up to 16GB of DDR-III memory to the FPGA
- Three banks of QDR-II+ each 72-bit wide
- Option for three banks of QDR-II+
- Option for on board Freescale QorIQ PPC2020 with up to 4GB DDR-III
- RoHS compliant

The AMC530 is an AMC FPGA module based on the Altera Stratix IV EP4S100Gx device. The AMC530 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 0-1, 2-3, 4-11, FCLKA, TCLKA, TCLKB, TCLKC, and TCLKD. The FPGA has an interface to DDR-III memory (72-bit wide) and three banks of QDR-II+ (18-bit wide). This allows for large buffer sizes to be stored during processing as well as for queuing the data to the host.

The AMC530 has dual 10GbE routed to the front and interfaces with dual SFP+ cages.

The on board PPC runs at 1.2GHz with up to 4Gbytes 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 which is muxed with the FPGA.

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

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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	Altera EP4S100Gx Devices
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
Ethernet	GbE	Dual 1000-BaseBX from PPC or FPGA
Configuration		
Power	AMC530	35W (FPGA size and application dependent)
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	Dual SPF+
	LEDs	IPMI Management Control
		3 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.	

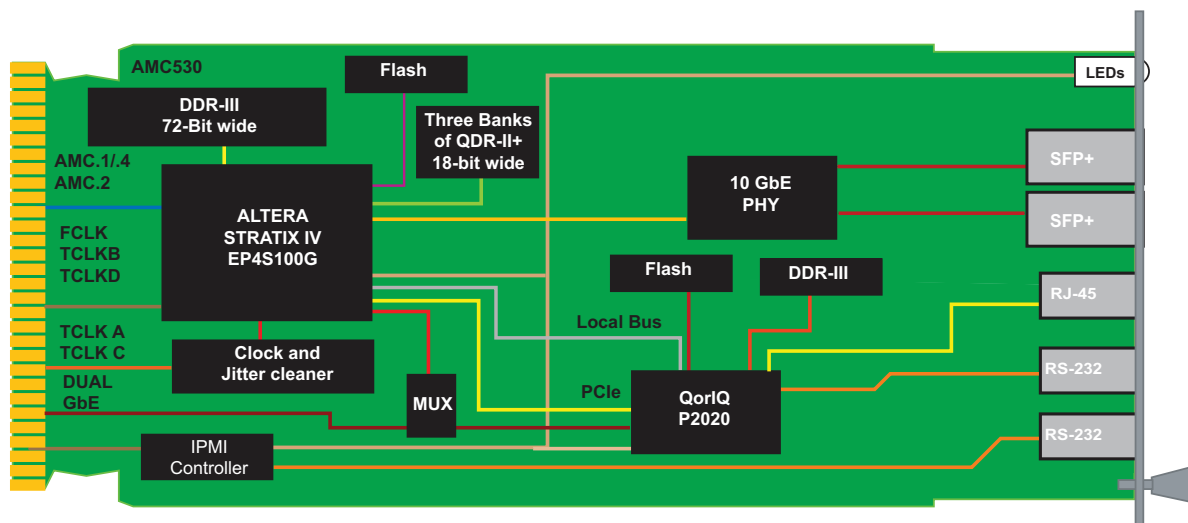
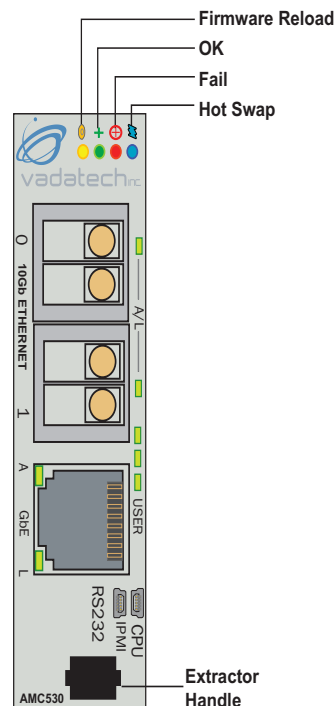


FIGURE 1. AMC530 Functional Block Diagram

FIGURE 2. AMC530 Front Panel



ORDERING OPTIONS

AMC530 - ABC - DEF - GHJ

A = FPGA

- 1= EPS100G2
- 2= Reserved
- 3= Reserved
- 4= EPS100G5

B = QorIQ CPU

- 1 = P2020 @ 1.2 GHz with 2 GB
- 2 = P2020 @ 1.2 GHz with 4 GB

C = Front Panel

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

D = FPGA DDR-III Memory with ECC

- 0 = None
- 1 = 4GB
- 2 = 8GB

E = QDR-II+ (three banks)

- 0 = None
- 1 = 2M x 18
- 2 = 4M x 18

F = FPGA SPEED

- 1 = Highest
- 2 = High
- 3 = Low

G = PCIe option

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

H = SFP+ Transceiver for front

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LR
- 4 = 1Gb LC/SX (850nm)
- 5 = 1Gb LC/LX (1310nm)
- 6 = Copper 1000 Mbit
- 7 = Reserved

J = Operating Temp and Conformal Coating

- 0 = Commercial Temp
- 1 = Industrial Temp
- 2 = Commercial Temp and Humiseal 1A33 Polyurethane
- 3 = Commercial Temp and Humiseal 1B31 Acrylic
- 4 = Industrial Temp and Humiseal 1A33 Polyurethane
- 5 = Industrial Temp and Humiseal 1B31 Acrylic

