

## AMC Stratix V FPGA, 100G -AMC534

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### KEY FEATURES

- Altera Stratix V GT FPGA in FFG-900 package
- Dual zQSFP+ ports to the front panel
- AMC Ports 4-7 and 8-11 are routed to FPGA per AMC.1, AMC.2 and AMC.4 (protocols such as PCIe, SRIO, XAUI, XLAUI, etc. are FPGA programmable)
- Option for on-board Freescale QorIQ PPC2040 with DDR3
- FPGA can load via Flash or via the P2040
- FPGA Flash can be programmed via the JTAG or the P2040
- Serial over LAN (SOL) with hardware RNG
- IPMI 2.0 compliant

## AdvancedMC™

### Benefits of Choosing VadaTech

- 100G performance with dual zQSFP+ ports to the front panel
- Distributed processing with local P2040 processor provides more reliability, performance and eliminates a potential single-point-of-failure in the system
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The AMC534 is an FPGA with dual zQSFP+ connectors offering 100G performance via the front panel. The module is compliant to the AMC.1, AMC.2 and/or AMC.4 specification. It has an on-board, reconfigurable FPGA which interfaces directly to the AMC FCLKA and TCLKA-D. The FPGA has an interface to two DDR3 memory channels (32-bit wide each) which can be internally ganged to a single 64-bit wide interface if desired. This allows for large buffer sizes to be stored during processing as well as for queuing the data to the host.

The on-board quad-core P2040 can run at 1GHz with 512 Mbytes of DDR3, 32 Mbytes of boot Flash and 16 GBytes of NAND Flash. The PPC has an x4 PCIe interface to the FPGA in addition to its local bus. The PPC has its dual GbE routed to ports 0 and 1 of the AMC.

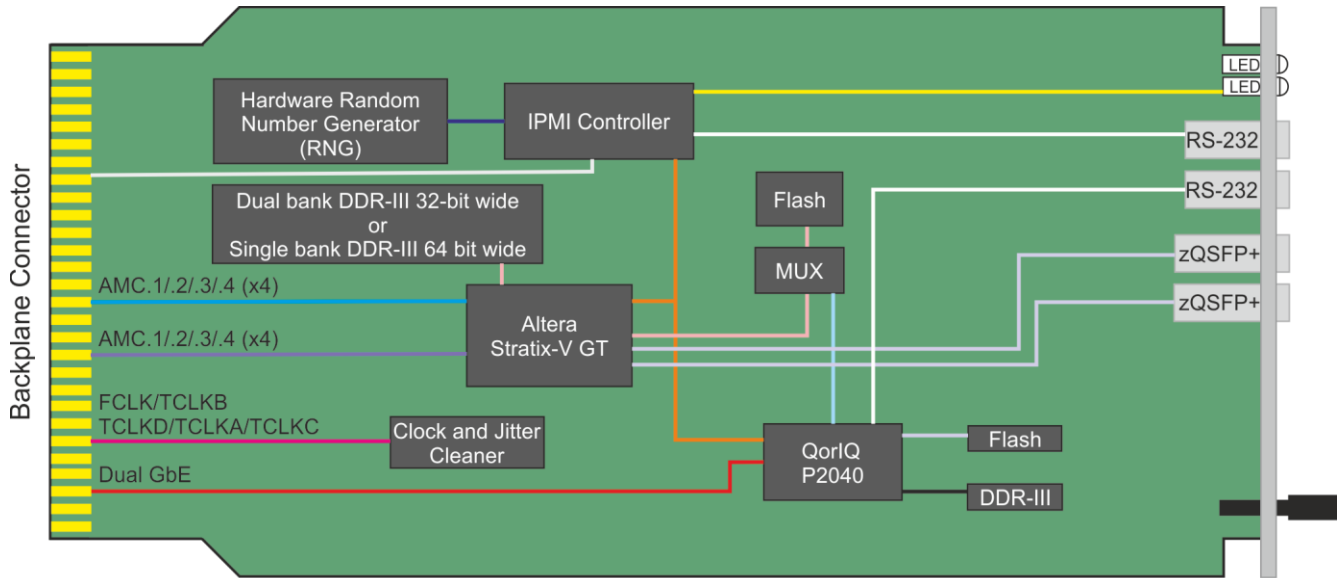
The AMC534 has Serial over LAN per the IPMI specification and a hardware RNG (Random Number Generator) for secure session.

*VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.*

## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and  $\mu$ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

## BLOCK DIAGRAM



## SPECIFICATIONS

Architecture		
Physical	Dimensions	Width: 2.89" (73.5 mm)
		Depth 7.11" (180.6 mm)
Type	AMC FPGA Carrier	Altera FPGA Stratix-V GT Device
		Optional on-board CPU
		Two banks of DDR3 (32 bits each) internally gangable to 64-bit, if desired
Standards		
AMC	Type	AMC.1, AMC.2 and AMC.4 (FPGA programmable)
Module Management	IPMI	IPMI version 2.0
PCIe	Lanes	Dual x4 via FPGA to AMC
SRIO	Lanes	Dual x4 via FPGA to AMC
Ethernet	10GbE and GbE	Dual 10GbE via FPGA and dual 1000 BaseBX from PPC
Configuration		
Power	AMC534	Carrier is ~40W (without mezzanine) application specific
Environmental	Temperature	Operating Temperature: 0° to 65°C (air flow greater than 400 LFM)
		Storage Temperature: -40° to +90°C
	Vibration	Operating 9.8 m/s <sup>2</sup> , 1G, 5 to 500Hz on each axis
	Shock	Operating 30G on each axis
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	Interface Connectors	Dual zQSFP+, dual RS-232
	LEDs	IPMI management control Activity / Link user LEDs
	Mechanical	Hot swap ejector handle
Software Support	Operating System	Linux, VxWorks and Windows
Other		
MTBF	MIL Handbook 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	
Trademarks and Disclaimer	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice	

## ORDERING OPTIONS

### AMC534 – ABC – DE0 – 0HJ

#### A = FPGA DDR3 Memory

- 0 = None
- 1 = 1GB (total)
- 2 = 2GB (total)

#### B = QorIQ CPU Sub-system

- 0 = None (FPGA loaded via Flash)
- 1 = P2040, 1 GHz

#### C = Front Panel Height

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

#### D = FPGA

- 0 = Reserved
- 1 = 5SGTC5
- 2 = 5SGTC7
- 3 = Reserved
- 4 = Reserved

#### E = FPGA Speed

- 1 = Low
- 2 = High

#### H = Temperature Range

- 0 = Commercial
- 1 = Industrial

#### J = Conformal Coating

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

## RELATED PRODUCTS



VT899 Cube Chassis



FMC223 High Speed  
FMC for DAC



UTC020 1000W Power  
Module

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