Processor AMC, 100G, Cavium with Virtex-7 FPGA – AMC738

KEY FEATURES

- Cavium™ Octeon II CN6880 multi-core
- 32GBytes of DDR3 with ECC
- Xilinx Virtex-7 FPGA
- 100GbE via CFP2
- Standard double module AMC form factor
- Complies to AMC.1, AMC.2 and AMC.4
- RTC with 8MB NOR
- On-board SDHC socket for mass storage
- Dual GbE on the front panel
- IPMI 2.0 compliant

Benefits of Choosing VadaTech

- 100G performance with CFP2 port to the front panel
- Combines Cavium multi core packet processing with Virtex-7 FPGA
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company

The AMC738 utilizes the 32 Core Cavium Octeon II Processor that combines with a Xilinx V7 (XC7VX690T) FPGA to provide 100GbE via the CFP2 module. The CFP2 module could utilize 4 x 25 Gbps lanes or 10 x 10 Gbps lanes. The module follows the AMC.1, AMC.2 and AMC.4 specification. The FPGA has a single bank of 64-bit wide DDR3 memory.

The module has dual GbE going to ports 1 and 2 with additional dual GbE on the front panel. Ports 4-7 are dedicated for PCIe or XAUI, while ports 8-11 run as XAUI.

Linux OS is standard on the AMC738, consult VadaTech for other options.

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INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and µTCA 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.
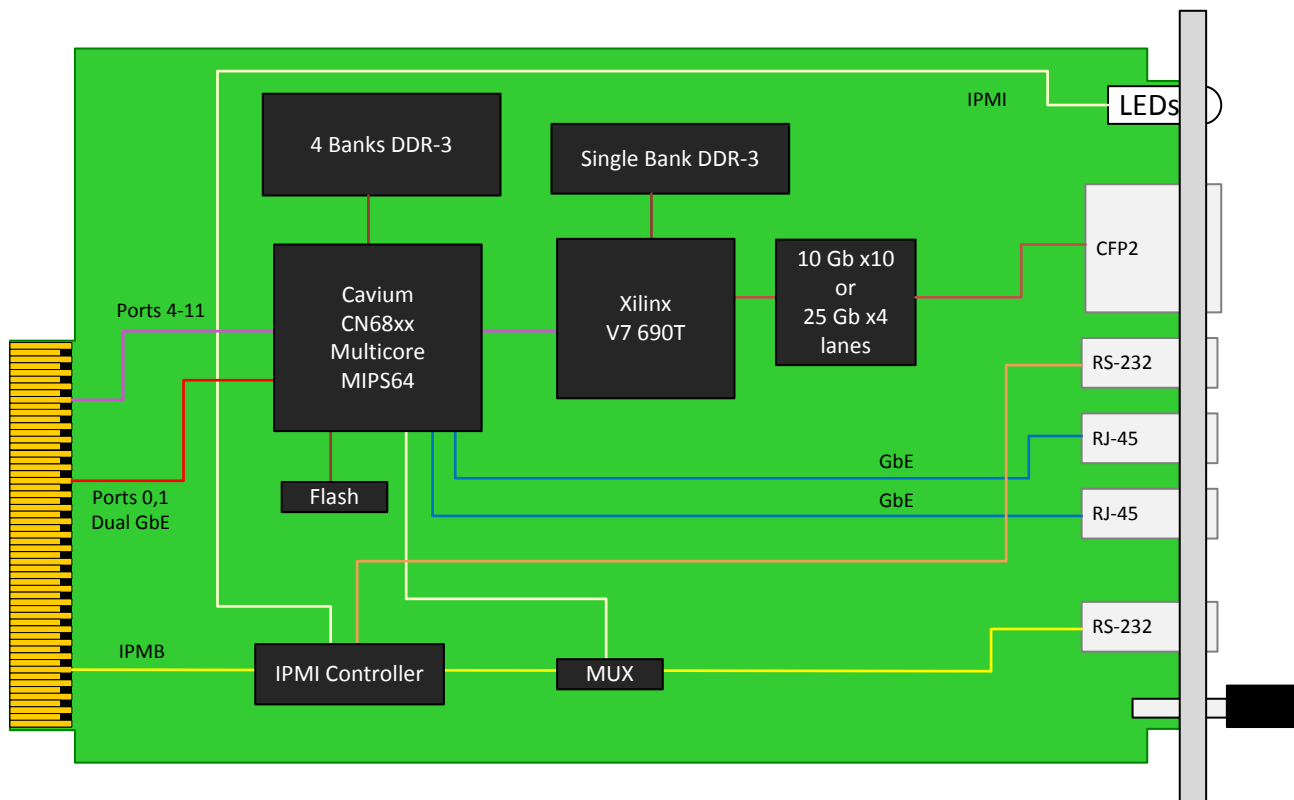
BLOCK DIAGRAM

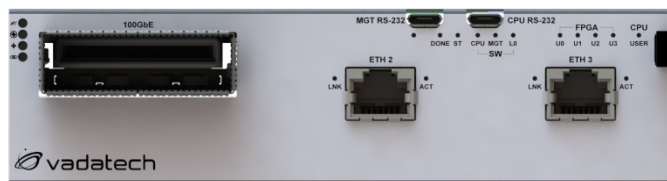
Figure 1: AMC738 Functional Block Diagram

Figure 2: Front Panel

SPECIFICATIONS

Architecture		
Physical	Dimensions	Double module, full-size
		Width 5.85 in. (148.5 mm)
		Depth 7.11 in. (180.6 mm)
Type	AMC	AMC 100 GbE Ethernet
Standards		
AMC	Type	AMC.1, AMC.2 and AMC.4
Power	AMC738	82W
Environmental	Temperature	Operating temperature: -5° to 55° C (air flow requirement of >200 LFM, industrial and military versions also available (See environmental spec sheet)
		Storage Temperature: –40° to +85° C
	Altitude	Chassis Dependent
	Relative Humidity	5 to 95 percent, non-condensing
	Mechanical	Hot-swap extractor handle
	LEDs	IPMI management, Activity, GPIO
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
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	
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	

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ORDERING OPTIONS

AMC738 – ABC – DEF – GHJ

A = CPU Core
1 = CN6880AAP (32 Core)

B = CPU Speed
0 = 800 MHz
1 = 1.2 GHz

C = Front Panel Size
1 = Reserved
2 = Reserved
3 = Full-size (6HP)
4 = Extended-size (8HP)

D = DDR3 Memory w/ECC
0 = 32 GB

E = CFP2 Transceivers
0 = None
1 = 850 nm, 100GBASE-SR10
2 = 850 nm, 100GBASE-LR4

F = Ports 4-7
0 = PCIe
1 = XAUI

G = FPGA Speed
0 = High
1 = Highest

H = Operating Temperature
0 = Commercial (-5° to +55° C)
1 = Industrial (–20° to +70° C)
2 = Military (–40° to +80° C)*

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

* Edge of module for conduction-cooled

RELATED PRODUCTS

AMC534 100G FPGA	**VT899 7U Chassis Cube**	**UTC002 MCH**

CONTACT US

VadaTech Corporate Office	**Asia Pacific Sales Office**	**Europe: EMCOMO Solutions AG**
198 N. Gibson Road, Henderson, NV 890142 Email: info@vadatech.com Telephone: +1 702 896-3337 Fax: +1 702 896-0332	7 Floor, No. 2, Wenhu Street, Neihu District, Taipei 114,Taiwan Email: info@vadatech.com Telephone: +886-2-2627-7655 Fax: +886-2-2627-7792	Industriestr. 10, 89231 Neu-Ulm, Germany Email: vadatech@emcomo.de Telephone: +49 731 880 3510 Fax: +49 731 880 35129 www.emcomo.de

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