# AMC106

## AMC Carrier for Custom Modules

AMC106

## Key Features

- Provides a generic interface with LVDS/Single ended to a custom module
- Allows an easy way to interface to the uTCA system
- On board XCZU04CG FPGA for any protocol interface to the module and the backplane
- GbE on ports 0 and 1
- Dual SERDES to ports 4/5 and 8/9
- Single module, Extended-size AMC

## Benefits

- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

AdvancedMC™


vadatech
THE POWER OF VISION

# AMC106

The AMC106 is a carrier to allow customer custom modules to be easily implemented on an AMC module. The AMC106 utilizes a XCZU04CG FPGA from AMD which interfaces between the AMC backplane and customer custom modules. The FPGA allows any protocol to be used to interface to the backplane and customer custom module.

The AMC106 interfaces to the backplane via dual GbE as well as x4 SERDES which could be configured to run with any protocol (GbE, 10GbE, SRIO, PCIe, Aurora, etc.). Ports 4-5 and 7-8 are routed to the x4 SERDES. The FPGA has a single hard core PCIe which could be instantiated on the Ports 4-5 and/or Ports 7-8.

*Figure 1: AMC106*

# Block Diagram

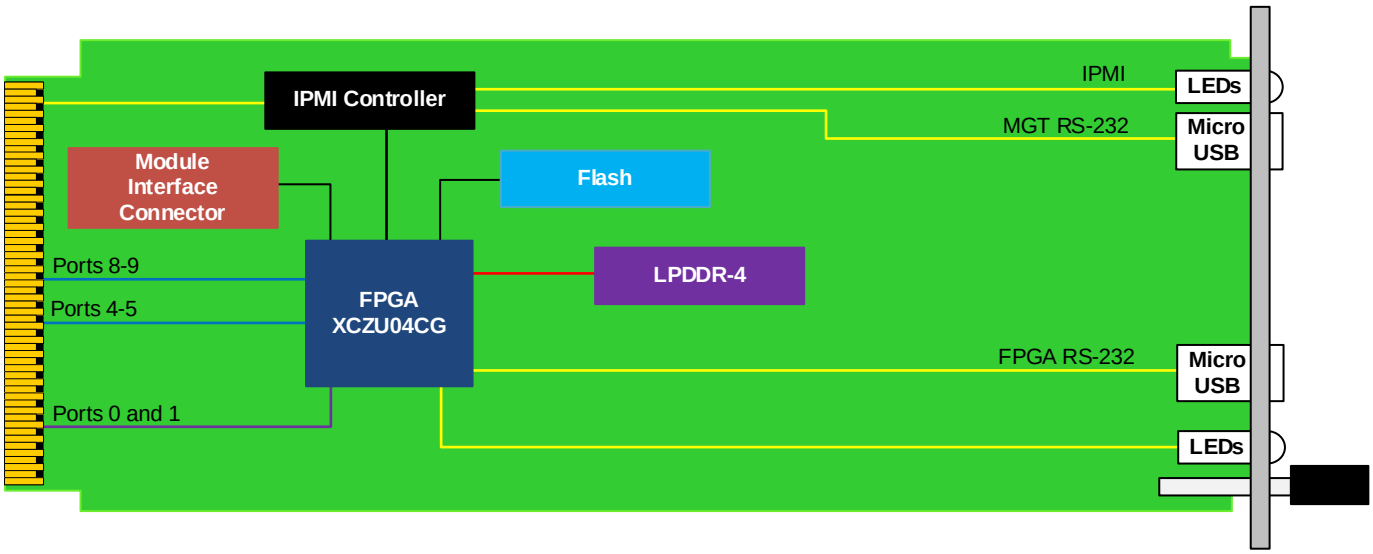


*Figure 2: AMC106 Functional Block Diagram*

# Specifications

| | | |
|---|---|---|
| **Architecture** | | |
| **Physical** | **Dimensions** | Single Module, Extended-size 8HP |
| | | Width: 2.89” (73.5 mm) |
| | | Depth: 7.11” (180.6 mm) |
| **Type** | **AMC Carrier** | Interface to Customer Custom Module |
| **Standards** | | |
| **AMC** | **Type** | AMC.1, AMC.2, AMC.4 |
| **Module Management** | **IPMI** | IPMI v2.0 |
| **Configuration** | | |
| **Power** | **AMC106** | ~5W (FPGA load dependent and without customer module) |
| **Environmental** | **Temperature** | See Ordering Options and Environmental Spec Sheet |
| | | Storage Temperature: –40° to +85°C |
| | **Vibration** | Operating 9.8 m/s2 (1G), 5-500 Hz |
| | **Shock** | Operating 30Gs each axis |
| | **Relative Humidity** | 5 to 95% non-condensing |
| **Front Panel** | **Interface Connectors** | RS-232 |
| | **LEDs** | IPMI management |
| | | User defined |
| | **Mechanical** | Hot-swap ejector handle |
| **Software Support** | **Operating System** | N/A |
| **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 ISO9001:2015 and AS9100D 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

### AMC106 – 00C-DE0-00J

| | | |
|---|---|---|
| | **D = Ports 4-5**** | |
| | 0 = No PCIe<br>1 = PCIe | |
| | **E = Port 8-9**** | |
| | 0 = No PCIe<br>1 = PCIe | |
| **C = Front Panel Size** | | **J = Temperature Range and Coating** |
| 0 = Extended Size (8 HP) | | 0 = Commercial (–5° to +55°C), No coating<br>1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane<br>2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic<br>3 = Industrial (–20° to +70°C), No coating<br>4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane<br>5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic<br>6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane*<br>7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic* |

**Notes:**

*Conduction cooled; temperature is at edge of module. Consult factory for availability.

** The FPGA has a single hardcore PCIe. If PCIe is desired option D = 1 or E =1 should be selected but not both unless the second PCIe is instantiated as softcore

# Related Products

AMC233

- Network interface board with dual QSFP+ Ports
- 40GbE or (4x) 10GbE via the QSFP+ Ports
- XLPPI-to-XLAUI/XFI operation

UTC004

- Unified 1 GHz quad-core CPU for MicroTCA Carrier Management Controller (MCMC), Shelf Manager, Clocking, and Fabric management
- Non-blocking PCIe Gen 3, SRIO Gen 2, 10GbE/40GbE, or Crossbar Switch option to AMC fat pipes with options for up to 40GbE uplink
- 1GbE base switch with dual 100/1000/10G uplink

VT866

- MTCA System Platform 19” x 5U x 17”
- Up to 12 AMCs in single width/full-size
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and dual Power Modules

# Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014
Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District, Taipei 114, Taiwan
Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR
Phone: +44 2380 016403

info@vadatech.com | www.vadatech.com

# Choose VadaTech

## We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

## We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

## We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

## We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited

vadatech
THE POWER OF VISION


**DOC NO. 4FM737-12 REV 01 | VERSION 1.4 – FEB/24**