AMC243

Dual High performance
40/50/100GbE Host Bus Adapter

Key Features

- Dual 40/50/100GbE via QSFP28+
- PCIe Gen3 x16
- 32K concurrent offload connectivity capacity
- Full TCP and UDP offload
- Full iSCSI and FCoE offload
- Full NVMe over Fabrics (NVMe-oF) offload
- On board 4GB of DDR-4 with ECC

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
AMC243

VadaTech AMC243 Host Bus Adapter (HBA) is a dual port 40/50/100Gb Ethernet Unified Wire Adapter, with a PCI Express 3.0 x16 host bus interface, optimized for storage, cloud computing, HPC, virtualization and other datacenter networking applications. The module has 4GB of DDR-4 memory with ECC.

The AMC243 offers support for integrated offload of IPsec, TLS/SSL, DTLS and SMB 3.X crypto. The AMC243 provides sub micro-second end-to-end latency, while offloading the host CPU from a variety of typical storage, networking, and cloud related protocols. This will enable savings in host CPU acquisition costs, power and operational costs, and dramatically increases system performance.

FCoE and iSCSI support in AMC243 benefit from high reliability features that include memory ECC, data path CRC and T10-DIX offload, in addition to the checksums and CRC available at different protocols layers. High performance iSCSI and FCoE provide a drop-in replacement upgrade from legacy SANs to converged networks.
Block Diagram

Figure 1: AMC243 Functional Block Diagram
## Specifications

### Architecture

<table>
<thead>
<tr>
<th>Physical</th>
<th>Dimensions</th>
<th>Single Module, mid-size (full-size options available)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Width: 2.89” (73.5 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Depth: 7.11” (180.6 mm)</td>
</tr>
<tr>
<td>Type</td>
<td>AMC 40/50/100GbE</td>
<td>Two port 40/50/100GbE</td>
</tr>
</tbody>
</table>

### Standards

- **AMC Type**: AMC.2
- **Module Management**: IPMI IPMI v2.0

### Configuration

- **Power**: AMC243 24W
- **Environmental Temperature**: See ordering options
- **Storage Temperature**: -40° to +85°C
- **Vibration**: Operating 9.8 m/s² (1 G), 5-500 Hz
- **Shock**: Operating 30 Gs each axis
- **Relative Humidity**: 5 to 95% non-condensing

### Front Panel

- **Interface Connectors**: Dual QSFP28 connectors
- **LEDs**: IPMI management
- **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 ISO9001:2000 and AS9100B:2004 standards
- **Warranty**: Two (2) years

### 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

AMC243 – A0C-D00-00J

<table>
<thead>
<tr>
<th>A = QSFP+ Transceivers</th>
<th>D = PCIe Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = No Transceivers</td>
<td>0 = x4</td>
</tr>
<tr>
<td>1 = 40G Dual SR</td>
<td>1 = x8</td>
</tr>
<tr>
<td>2 = 40G Dual LR</td>
<td>2 = x16</td>
</tr>
<tr>
<td>3 = 100G Dual SR</td>
<td></td>
</tr>
<tr>
<td>4 = 100G Dual LR</td>
<td></td>
</tr>
<tr>
<td>5 = Reserved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C = Front Panel Size</th>
<th>J = Temperature Range and Coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Reserved</td>
<td>0 = Commercial (–5° to +55°C), No coating</td>
</tr>
<tr>
<td>2 = Mid-size</td>
<td>1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>3 = Full-size</td>
<td>2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic</td>
</tr>
<tr>
<td></td>
<td>3 = Industrial (–20° to +70°C), No coating</td>
</tr>
<tr>
<td></td>
<td>4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td></td>
<td>5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic</td>
</tr>
<tr>
<td></td>
<td>6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane*</td>
</tr>
<tr>
<td></td>
<td>7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic*</td>
</tr>
</tbody>
</table>

Notes: * Conduction cooled, temperature is at edge of module. Consult factory for availability.

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 1GHz quad-core CPU for MCMC (MicroTCA Carrier Management Controller), 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
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

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