

# AMC703

Processor AMC based on QorIQ  
T4241, PCIe



AMC703

## Key Features

- Processor AMC with QorIQ T4241
- Single-module, mid-size per AMC.0
- Three banks of 64-bit DDR3 memory (up to 24 GB total)
- Front panel has 10GbE via SFP+ and GbE via RJ-45
- 128 MB NOR Flash and 512 MB NAND Flash
- 24 virtual cores at up to 1.8 GHz
- PCIe on Ports 4-7 and 8-11
- SATA on Ports 2-3

## Benefits

- Integrated control and data path processing in a single module
- 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



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# AMC703

The AMC703 is a Processor AMC (PrAMC) based on the Freescale QorIQ T4241 in a single-module, mid-size AdvancedMC™ (AMC) form factor based on AMC.1, AMC.2 and AMC.3 specifications.

The front panel provides access to GbE via a single RJ-45 connector and 10GbE via SFP+ connector.

The AMC703 provides dual GbE to the rear per AMC.2 specification on Ports 0 and 1, and single GbE to the front panel. The module supports SATA on Ports 2 and 3 and also provides PCIe on Ports 4-7 and 8-11.



Figure 1: AMC703

# Block Diagram

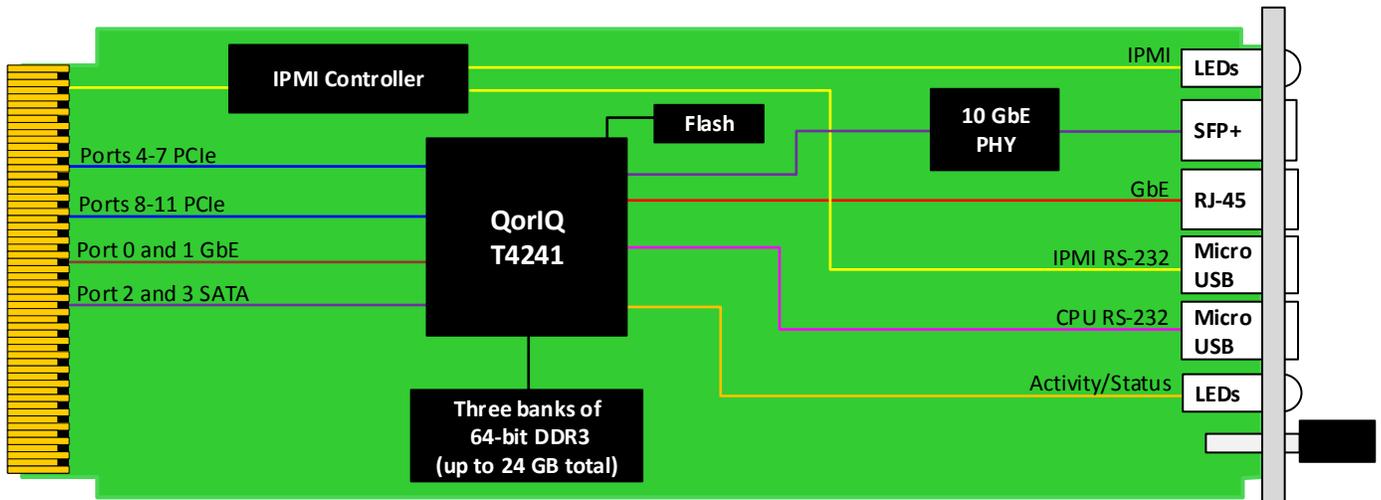


Figure 2: AMC703 Functional Block Diagram

# Front Panel

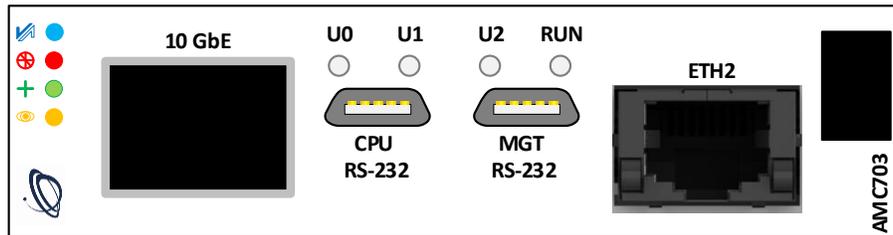


Figure 3: AMC703 Front Panel

# Specifications

| Architecture             |                             |   |
|--------------------------|-----------------------------|---|
| <b>Physical</b>          | <b>Dimensions</b>           | Single module, mid-size with full-size option<br>Width: 2.89" (73.5 mm)<br>Depth 7.11" (180.6 mm)                       |
| <b>Type</b>              | <b>PrAMC</b>                | Freescale QorIQ T4241   |
| Standards                |                             |   |
| <b>AMC</b>               | <b>Type</b>                 | AMC.0, AMC.2 and AMC.1  |
| <b>Module Management</b> | <b>IPMI</b>                 | IPMI v2.0   |
| <b>PCIe</b>              | <b>Lanes</b>                | Dual x4   |
| <b>10GbE</b>             | <b>Lanes</b>                | 10GbE via front panel   |
| <b>Ethernet</b>          | <b>GbE</b>                  | GbE on Ports 0 and 1, single GbE via front panel and SATA on Ports 2 and 3  |
| Configuration            |                             |   |
| <b>Power</b>             | <b>AMC703</b>               | ~55W  |
| <b>Environmental</b>     | <b>Temperature</b>          | See <a href="#">Ordering Options</a> and <a href="#">Environmental Spec Sheet</a><br>Storage Temperature: -40° to +85°C |
|                          | <b>Vibration</b>            | Operating 9.8 m/s <sup>2</sup> (1G), 5 to 500 Hz on each axis   |
|                          | <b>Shock</b>                | Operating 325 G/2 ms, 160G/1 ms   |
|                          | <b>Relative Humidity</b>    | 5 to 95% non-condensing   |
| <b>Front Panel</b>       | <b>Interface Connectors</b> | 10GbE via SFP+<br>GbE via RJ-45<br>Dual micro USB for MGT RS-232 and CPU RS-232   |
|                          | <b>LEDs</b>                 | IPMI Management Control<br>Link/Activity  |
|                          | <b>Mechanical</b>           | Hot-swap ejector handle   |
| <b>Software Support</b>  | <b>Operating System</b>     | Linux (consult Sales for other OS options)  |
| Other                    |                             |   |
| <b>MTBF</b>              |                             | MIL Hand book 217-F@ TBD hrs  |
| <b>Certifications</b>    |                             | Designed to meet FCC, CE and UL certifications, where applicable  |
| <b>Standards</b>         |                             | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards   |
| <b>Warranty</b>          |                             | Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>  |

## 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

## AMC703 – ABC-0E0-00J

|  |  |  |
|--|--|--|
| <b>A = Processor Option</b>  |  |  |
| 0 = 1.8 GHz with SE<br>1 = 1.8 GHz without SE<br>2 = 1.5 GHz with SE<br>3 = 1.5 GHz without SE   |  |  |
| <b>B = DDR3 Memory</b>   |  | <b>E = SFP+ TXCVR</b>  |
| 0 = 6 GB<br>1 = 12 GB<br>2 = 24 GB   |  | 0 = No TXCVR<br>1 = 10GBASE-SR<br>2 = Reserved<br>3 = Reserved<br>4 = 10GBASE-LR   |
| <b>C = Front Panel</b>   |  | <b>J = Temperature Range and Coating</b>   |
| 1 = Reserved<br>2 = Mid-size<br>3 = Full-size<br>4 = Reserved<br>5 = Reserved<br>6 = Mid-size, MTCA. 1/4<br>7 = Full-size, MTCA. 1/4<br>8 = Reserved |  | 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.

## Related Products

AMC725



- Intel® Xeon E3 processor options with PCH
- DVI graphics (SM750 w/16 MB DDR), up to 1920x1440 resolution
- Optional up to 256 GB SSD with RAID option

VT811



- MTCA System Platform 19" x 8U x 14.9" deep (with handles 16.23" deep)
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and quad Power Modules
- Up to twelve AMCs: 12 front mid-size double module slots and RTM slots

VT814



- MicroTCA rack mount or desktop chassis platform, 19" x 2U x 14.2" deep
- Compliant to MTCA.4 specifications with rear IO for High-Energy Physics and other applications
- Supports up to six MTCA.4 mid-size, double module AMCs and RTMs

# 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, Wenhua 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](mailto:info@vadatech.com) | [www.vadatech.com](http://www.vadatech.com)

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