Quad SFP Interface Module

» Cost optimized design
» Quad 1000Base-X SFP
» AMC.0 / AMC.2 compliant
» Management through IPMI 1.5 implementation
AM4311
Quad 1000Base-X SFP

The AM4311 is a single-width AMC module offering 4x 1000Base-X SFP interfaces at the front panel. The main function of this module is to direct-connect GbE ports from an AMC connector of an AMC carrier or a μTCA system to the front. The AM4311 selects 4 of 8 GbE ports from the AMC connector.

By using the AM4311 either in a μTCA system or on an AMC carrier the overall available uplink GbE interfaces in the system can be increased.

Technical Information

**System Interconnect**

- **Gigabit Ethernet**: 2x 4 GbE ports: AMC port 0, 1, 4, 20 (Quad-Lane A) and AMC port 8, 9, 10, 11 (Quad-Lane B). Either Quad-Lane A or B can be selected via software (IPMI OEM-command) to be directed to the front panel.
- **I2C**: 1x IPMB-L

**Front Interfaces**

- **Gigabit Ethernet**: 4x SFP
- **LEDs**: 3 AMC management LEDs (Hot Swap, Out-of-Service, Health)

**Compliance**

- **AMC**: PICMG® AMC.0, Advanced Mezzanine Card Specification R2.0
- **PICMG® AMC.2 AMC Gigabit Ethernet R1.0**
- **MicroTCA**: PICMG® MTC.0 Micro Telecommunications Computing Architecture R1.0
- **IPMI**: IPMI - Intelligent Platform Management Interface Specification, V1.5
- **CE**: EN55022, EN55024, EN61000-6-2/-6-3, EN300386, EN60950-1
- **Safety**: CB report to IEC 60950-1, complies with EN/CSA/UL 60950-1
- **Electromagnetic Compatibility**
  - CFR 47, FCC Part 15, Subpart B
  - Telcordia GR-1089-Core-Issue 3 and SR-3580 Issue 2
  - » EMC Directive 89/336/ECC (Europe)
  - » EN55022 (Europe)
  - » EN55024 (Europe)
  - » EN61000-4-2 + A1 + A2
  - » EN61000-4-3 + A1
  - » EN300 386 V1.3.3, Electro Magnetic Compatibility (EMC) Requirements for Public Telecommunication Network Equipment; Electromagnetic Compatibility (EMC) Requirements

**WEEE**: Directive 2002/96/EC
**RoHS**: Directive 2002/95/E
# Technical Information

## Environmental

| Temperature Range          | Operating: 0 °C to +60 °C, at air flow: 20 CFM  
|                           | Non-Operating: -40 °C to +85 °C  
| Humidity                  | Operating: 15%-90% (non-condensing) at 0°C to 55°C  
|                           | Non-Operating: 5%-95% (non-condensing) at -40°C to 70°C  
| Vibration                 | According to IEC 60068-2-6, Bellcore GR-63, Section 4.4 and MIL-STD-810E, Method 514:  
|                           |  
|                           | » 5Hz to 100Hz: 1G @ 0.25 Octave/minute  
|                           | » 100Hz to 500Hz: 1G @ 1 Octave/minute  
|                           | » 5Hz @ 0.01 g² /Hz to 20 Hz @ 0.02 g² /Hz (slope up)  
|                           | » 20Hz to 600 Hz @ 0.02 g² /Hz (flat)  
|                           | » 3.13 g RMS, 10 minutes per axis for all 3 axes  
|                           | » Non-Operating:  
|                           | » 5Hz to 50Hz: 0.5G @ 0.1 Octave/minute  
|                           | » 50Hz to 500Hz: 3G @ 0.25 Octave/minute  
| Shock                      | The board is designed to meet the following requirements IEC 60068-2-27 and MIL-STD-810E, Method 516:  
|                           | » Operating: 30G/11 ms half sine  
|                           | » Non-Operating: 50G, 170 inches/second trapezoidal  

## Miscellaneous

| Dimensions                  | Single-width, mid-size, 180.6 mm x 73.5 mm  
| Power Supply                | 12 V Payload Power, 3.3 V Management Power  
| Power Consumption           | Typ. 4.5 W  
| Board Weight                | 100 grams  
| MTBF                        | >170,000h@40°C, calculations based on Bellcore/Telcordia SR-332  

## Ordering Information

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<th>Article</th>
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<tr>
<td>AM4311M</td>
<td>4x SFP Interfaces, single mid-size</td>
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**Corporation Offices**

Europe, Middle East & Africa
Oskar-von-Miller-Str. 1  
85386 Eching/Munich  
Germany  
Tel.: +49 (0)8165/ 77 777  
Fax: +49 (0)8165/ 77 279  
info@kontron.com

North America
14118 Stowe Drive  
Poway, CA 92064-7147  
USA  
Tel.: +1 888 294 6558  
Fax: +1 858 677 0898  
info@us.kontron.com

Asia Pacific
17 Building, Block #1, ABP,  
188 Southern West 4th Ring Road  
Beijing 100070, P.R.China  
Tel.: + 86 10 63751188  
Fax: + 86 10 83862438  
info@kontron.cn

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