

AXM Series I/O Extension Modules for PMC FPGA Boards

Description

AXM Series extension modules offer numerous I/O options for Acromag's PMC modules with user-configurable FPGAs. These extension modules plug into the front mezzanine on the PMC-LX/SX, PMC-VLX, and PMC-VSX modules.

AXM-D02 RS-485 Differential I/O

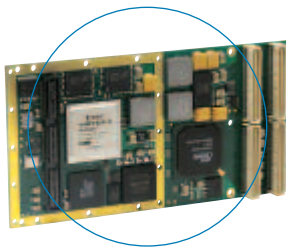
This module provides 30 differential I/O channels. Data direction, either input or output, on each channel is independently controlled. Eight of the channels support programmable change-of-state interrupts.

AXM-D03 Digital I/O and RS-485 Diff. I/O

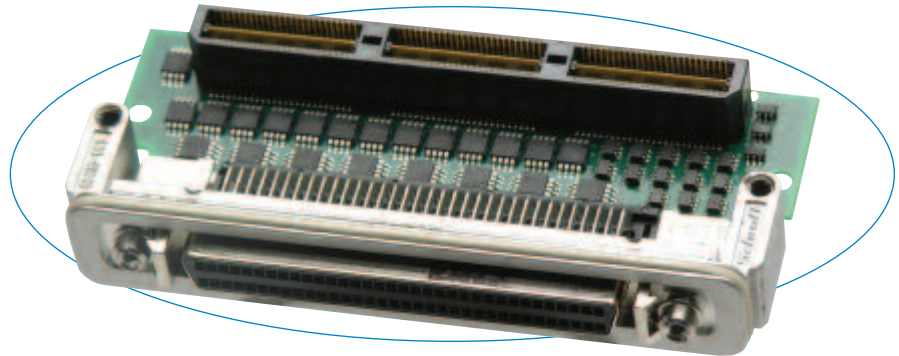
This module provides 16 CMOS and 22 RS-485 differential I/O channels. Data direction, either input or output, on each channel is independently controlled. Eight of the channels support programmable change-of-state interrupts.

AXM-D04 LVDS

This module provides 30 channels of low voltage differential signaling with independently configured direction. Interrupts are programmable on eight of the channels for any bit change of state or level.



AXM modules attach to PMC Modules with user-configurable FPGAs.



AXM extension modules attach to the PMC-LX/SX, PMC-VLX, and PMC-VSX module front mezzanine to provide I/O processing capabilities.

Specifications

AXM-D02

Channel configuration: 30 bi-directional differential signals with independently configured direction. Channels to the FPGA are buffered using EIA RS485/RS422 line transceivers.

Differential driver output voltage:
1.5V minimum, 3.3V maximum with 54 ohm load.

AXM-D03

Channel configuration: 16 bi-directional CMOS transceivers (input/output direction controlled as pairs of channels) and 22 bi-directional differential signals with independently configured direction.

Differential channels: Same as AXM-D02.

CMOS I/O electrical characteristics:

| | |
|--------------------------------|---------------------------------|
| V _{OH} : 3.8V minimum | V _{OL} : 0.55V maximum |
| I _{OH} : -32.0mA | I _{OL} : 32.0mA |
| V _{IH} : 3.5V minimum | V _{IL} : 1.5V maximum |

AXM-D04

Channel configuration: 30 channels of low voltage differential signaling with independently configured I/O direction.

LVDS I/O electrical characteristics:

| |
|---|
| LVDS driver output voltage: 247mV min., 454mV max. |
| Common mode output voltage: 1.37V max. |
| LVDS Input Threshold Voltage: -50mV min., 50mV max. |

Physical Dimensions

Size: 11.5 mm high x 31.0 mm deep x 74.0 mm wide
(0.453 inches x 1.220 inches x 2.913 inches)

Stacking height: 8.0 mm (0.315 inches).

Complies with PMC Specification P1386.1 for a single-width PMC module when attached to the PMC front mezzanine.

Connectors

Front field I/O: 68-pin, SCSI-3, female receptacle header (AMP 5787394-7 or equivalent).

Environmental

Operating temperature: -40 to 85°C

Storage temperature: -55 to 150°C.

Relative humidity: 5 to 95% non-condensing.

Power:

1.5W typical (AXM-do2, AXM-D03)

0.6W typical (AXM-D04)

MTBF: Consult factory.

Ordering Information

AXM Plug-In I/O Modules

AXM-D02

30 RS-485 Differential I/O channels

AXM-D03

16 CMOS and 22 RS485 differential I/O channels

AXM-D04

30 LVDS I/O channels

AXM-??

Custom I/O configurations available, call factory.

PMC Modules

For more information, see data sheets

[PMC-LX](#)

[PMC-SX](#)

[PMC-VLX85/VLX110](#)

[PMC-VSX](#)

Software (see [software documentation](#) for details)

Accessories (see [accessories documentation](#) for details)



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