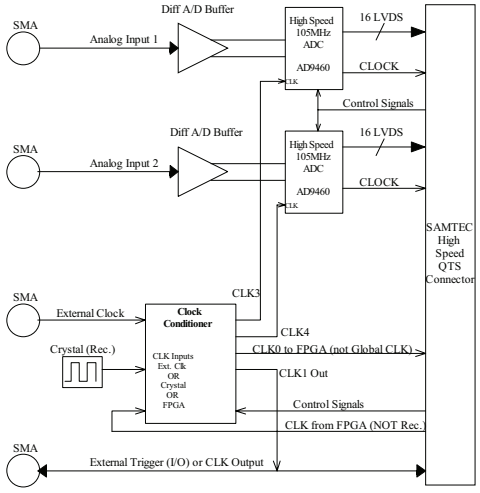
Extension I/O Modules

AXM-A30 Analog I/O Extension Modules for PMC FPGA Boards

RoHS Compliant CE 2 YEAR WARRANTY



High Speed Analog Input ◆ 2 Differential Channels ◆ 2 16-bit A/D Channels

Description

AXM Series extension modules offer numerous I/O options for Acromag's PMC modules with configurable FPGAs. These extension modules plug into the front mezzanine on Acromag's PMC-LX/SX (Virtex®-4 FPGA), and PMC-VLX/VSX/VFX (Virtex-5 FPGA) modules.

AXM-A30 Analog Input

This module features two 105MHz 16-bit A/D channels. An external clock and trigger can be used to control sampling.

An internal precision clock conditioner provides the functions of jitter cleaning/reconditioning, multiplication, and distribution of a reference clock.

Each clock distribution block includes a programmable divider, a phase synchronization circuit, and a programmable delay. This allows multiple integer-related and phase-adjusted copies of the reference to be distributed to multiple system components.

Key Features & Benefits

- Analog Input
- Input configuration: Two differential channels using two Analog Devices AD9460 A/D converter
- A/D resolution: 16 bits
- Input range: 3.4V peak-to-peak, centered at 0V, into a 50 ohm load
- External clock input: 3.3V peak-to-peak
- Input clock range:1-105MHz
- Maximum throughput rate:
  1 channel (max.): 9.5nS (105MHz)
  2 channels (max.): 9.5nS (105MHz)
  A/D trigger: External source, FPGA controlled
- Input clock controller:Precision clock conditioner combines the functions of jitter cleaning/reconditioning, multiplication, and distribution of a reference clock
- Signal-to-noise ratio: 69dB (25°C) typical
- Signal-to noise and distortion: 67dB (25°C) typical
- General purpose I/O: Low voltage TTL

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

Acromag THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0310 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Extension I/O Modules

AXM-A30 Analog I/O Extension Modules for PMC FPGA Boards

Performance Specifications

AXM-A30 Analog Input

Input configuration
Two differential channels using two Analog Devices AD9460 A/D converter.

A/D resolution
16 bits.

Input range
3.4V peak-to-peak, centered at 0V, into a 50 ohm load.

External clock input:
3.3V peak-to-peak.

Input clock range:
1-105MHz.

Maximum throughput rate
1 channel (max.): 9.5nS (105MHz).
2 channels (max.): 9.5nS (105MHz).

A/D trigger
External source, FPGA controlled.

Input clock controller:
Precision clock conditioner combines the functions of jitter cleaning/reconditioning, multiplication, and distribution of a reference clock.

Signal-to-noise ratio
69dB (25°C) typical.

Signal-to-noise and distortion
67dB (25°C) typical.
General purpose I/O: Low voltage TTL.

Physical

Acromag's AXM Series extension modules offer numerous I/O options for Acromag's PMC modules with configurable FPGA. These extension modules plug into the front mezzanine on Acromag's PMC-LX/SX (Virtex®-4 FPGA), and PMC-VLX/VSX/VFX (Virtex-5 FPGA) modules. Analog and digital I/O AXM modules are sold separately.

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
5.0 mm (0.197 inches).

Weight
41.3 g (1.46 oz).

Connectors
Front field I/O: Four SMA PCB jack female receptacle connectors.

Complies with PMC Specification P1386.1 for a single-width PMC module when installed on a supported PMC module.

Environmental

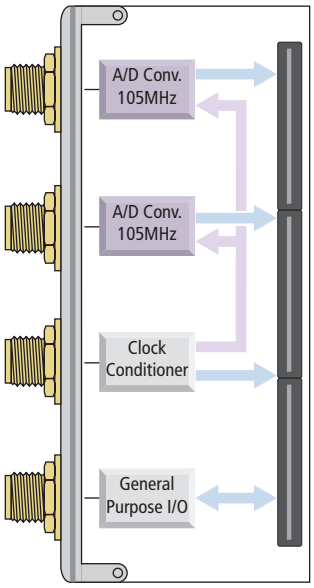
Operating temperature
-0 to 70°C.

Storage temperature
-55 to 105°C.

Relative humidity
5 to 95% non-condensing.

Power
4.5 Watts typical.

MTBF
1,972,542 hrs. at 25°C, MIL-HDBK-217F, Notice 2.



Ordering Information

AXM Plug-In I/O Modules

For more information, see www.acromag.com.

AXM-A30
2 analog input channels

AXM-??

Custom I/O configurations available, call factory.

Accessories

For more information, see www.acromag.com.

XMC FPGA Modules

PMC FPGA Modules

ISO9001
AS9100
MADE IN USA

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