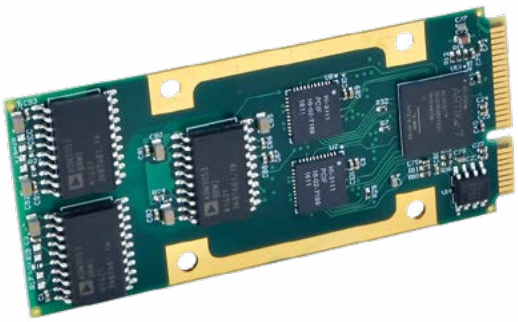
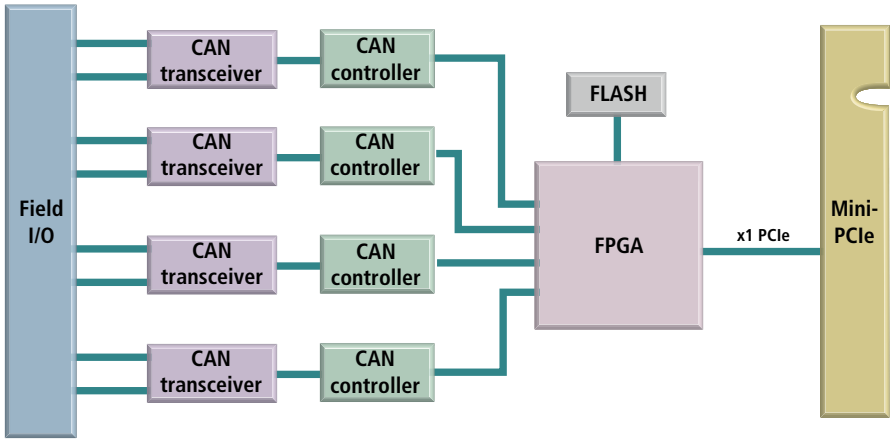
AcroPack® Modules

AP560 Isolated CAN Bus Interface





Four CAN bus channels with isolation ◆ CAN 2.0A/B ◆ ARINC 825 ◆ CANaerospace

Description

AP560 modules provide four independent CAN bus interface channels. Each channel has a Holt H13111 CAN controller with an ADM3053 transceiver. The advantage of this design is that it has the ability to transmit, receive and perform message filtering on extended and standard messages.

This module offers an effective solution for avionics and other applications implementing the CAN 2.0A/B specification. The controller is configurable to comply with both the ARINC 825 and CANaerospace standards. High channel density and high-level isolation make this rugged module well-suited for use in a variety of challenging environments.

The AcroPack CAN module is RoHS compliant and ideal for the following applications:

- Avionics and aerospace
- Defense vehicles
- Marine control and navigation systems

The AcroPack® product line updates our popular Industry Pack I/O modules with a PCIe interface format. This tech-refresh design offers a compact size, low-cost I/O, the same functionality of the existing Industry Pack modules and a rugged form factor.

The AP560 modules are 70mm long, 19.05mm longer than the full length mini PCIe card. The board's width is the same as mPCIe board and use the same mPCIe standard board hold down standoff and screw keep out areas.

A down facing 100 pin Samtec connector will mate with the carrier card. Fifty of these signals are available as field I/O signals.

Key Features & Benefits

- Four isolated CAN channels
- H13111 CAN bus controller with high-speed ADM3053 CAN transceiver
- 1000V isolation, channel-to-channel and channel-to-host
- ISO 11898 compliance for Part A (11-bit) and Part B extended (29-bit) arbitration IDs
- CAN 2.0A/B protocol with programmable bit rate up to 1Mbit/sec. ISO 11898-5 compliant
- Configurable to support ARINC 825 and CANaerospace Standards
- Standard, Extended and Remote frames supported
- 8 maskable identifier filters
- Filtering on ID and first two data bytes for both Standard and Extended Identifiers
- Monitor (Listen-only) mode
- 8-messageTransmit and Receive FIFOs
- Internal 16-bit free running counter for time tagging of transmitted or received messages
- Re-transmission disable capability

Acromag THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0310 ■ Fax 248-624-9234 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Bulletin #8400-923

AcroPack® Modules

AP560 Isolated CAN Bus Interface

Performance Specifications

CAN Bus

Configuration
Four independent CAN bus channels.
Holt H13111 CAN controller with ADM3053 transceiver.

ISO 11898 standard
Supports the standard data and remote frame as well as the extended data and remote frame according to CAN specification 2.0 Part A and Part B.

Isolation
1kV DC isolation.

Maximum data rate
1Mb/S.

PCI Express Base Specification

Conforms to PCIe base specification
Revision 2.1.

Lanes
1 lane in each direction.

Bus Speed
2.5 Gbps (Generation 1).

Memory
1MB space required.
1 base address register.

Environmental

Operating temperature
-40 to 71°C.
A conduction cooled application with an AcroPack requires heatsink model AP-CC-01.

Storage temperature
-55 to 125°C.

Relative humidity
5 to 95% non-condensing.

Power
+3.3V (±5%): 480 mA typical, 500 mA maximum.
+5 Volts (±5%): 180 mA typical, 250 mA maximum.

Physical

Length
70mm

Width
30mm

Ordering Information

Model

AP560E-ISO-LF
Quad-channel isolated CAN bus interface module.
(Note: AcroPack modules are compatible only with the carriers listed below)

Accessories

AP-CC-01
Conduction-cool kit

5028-609
Cable, 68-pin VHDCI to four maile DE-9, 7″ long.

Carrier Cards

APCe7010E-LF
PCIe AcroPack carrier, holds one AcroPack board

APCe7020E-LF
PCIe AcroPack carrier, holds two AcroPack boards

APCe7040E-LF
PCIe AcroPack carrier, holds four AcroPack boards

VPX4500E-LF
3U VPX air-cooled AcroPack carrier, holds three AcroPack boards

VPX4500-CC-LF
3U VPX conduction-cooled AcroPack carrier, holds one board

XMCAP2020-LF
XMC AcroPack carrier, holds two AcroPack boards, two-slots out the front

XMCAP2021-LF
XMC AcroPack carrier, holds two AcroPack boards, two-slots out the rear

Software *(see software documentation for details)*

APSW-API-VXW
VxWorks® software support package

APSW-API-WIN
Windows® DLL driver software support package

APSW-API-LNX
Linux™ support (website download only)

ISO9001
AS9100
MADE IN USA

Acromag®
THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0310 ■ Fax 248-624-9234 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

All trademarks are property of their respective owners. Copyright © Acromag, Inc. 2018. Data subject to change without notice. Printed in USA 03/14/2018.