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TECHNOLOGY GROUP

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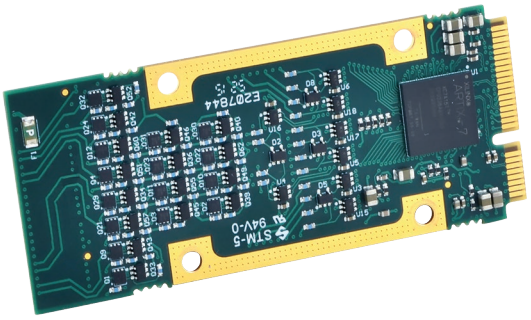
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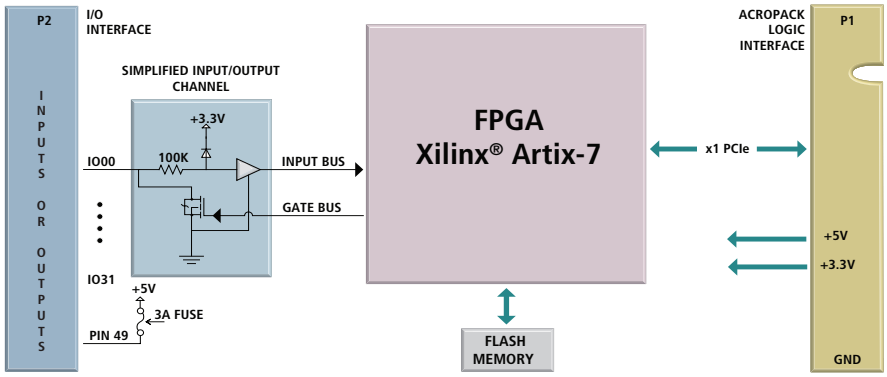
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Find the *Acromag / Xembedded / Xycom AP408* at our website: *Click HERE*

AcroPack® Modules

AP400 Series High Voltage Digital Input/Output





32 Digital I/O Channels ◆ High impedance ◆ PCIe Bus Interface

Description

Model: AP408E-LF

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 and memory map of the existing Industry Pack modules and a rugged form factor.

The AP408 monitors or controls the on/off (high/low) status of up to 32 devices. Each channel can be used as an input or output.

All 32 input channels can be configured with interrupts for a change of state or level detection of any bit. The TTL input threshold includes hysteresis for increasing noise immunity.

In order to ensure safe, reliable control under all conditions, output operation is "fail-safe." That is, the outputs are always off upon power-up and are automatically cleared following a software reset.

Loopback monitoring of critical control signals is easy since the input and output circuitry are connected in tandem to each channel.

The AP408 is 70mm long, this is 19.05mm longer than the full length mini PCIe card at 50.95mm. The board width is the same as mPCIe board of 30mm and uses 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. Pin spacing and signal assignments will allow for 100V of signal to signal isolation.

The AP408 maintains the same functionality and memory map of the existing Industry Pack modules providing a smooth transition to the AcroPack I/O modules.

Key Features & Benefits

- PCI Express Generation 1 interface
- 32 digital input/output channels
- 0 to 60V DC input range, 60V DC low-side switch outputs
- Outputs sink up to 1A per channel
- TTL-compatible input threshold with hysteresis
- Change-of-state/level interrupts (up to 32)
- Buffered inputs include hysteresis to increase noise immunity.
- Interrupts are software-programmable for a change of state or level detection.
- Loopback monitoring enables self-test and fault diagnostics to detect open output switches or shorts.
- High impedance inputs prevent loading of the input source and minimize current.
- Individual outputs sink up to 1A DC continuous. No deration of output current required at elevated temperatures.

Acromag® THE LEADER IN INDUSTRIAL I/O

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AcroPack® Modules

ISO9001
AS9100
MADE IN USA

Performance Specifications

Digital Inputs

Input channel configuration
32 noninverting buffered inputs with a common connection

Input signal voltage range
0 to 60V DC, maximum

Input signal threshold
TTL compatible. Limited to TTL levels of 0.8V DC (max.low level) and 2.0V DC (minimum high level)

Interrupts
Change-of-state and level on channels 0-31

Digital Outputs

Channel configuration
32 open-drain MOSFETs with common source connection

Output ON current range
0 to 1A DC, continuous per channel (5A total for all channels combined). No deration required at elevated ambients

Output Rds ON Resistance
0.1 Ω maximum

PCI Express Base Specification

Conforms to revision 2.1

Lanes
1 lane in each direction

Bus Speed
2.5 Gbps (Generation 1)

Memory
4k space required
1 base address register

Environmental

Operating temperature
-40 to 70°C.
-40 to 85°C.
(requires an AcroPack heatsink conduction-cool kit)

Storage temperature
-40 to 125°C

Relative humidity
5 to 95% non-condensing

Power
+3.3V (±5%) — 400mA typical 600mA maximum
+5V (±5%) — 20mA typical 50mA maximum

Physical

Length
70mm

Width
30mm

Ordering Information

AcroPack® Modules

AP408E-LF
32 bidirectional input/output channels

(Note: AcroPack modules are compatible only with the carriers listed below)

Accessories

AP-CC-01
Conduction-cool kit

Carrier Cards

See Acromag.com/AcroPack-Carriers for a full list of AcroPack carrier cards.

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).



AP-CC-01 Conduction-Cool Kit

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We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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