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TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

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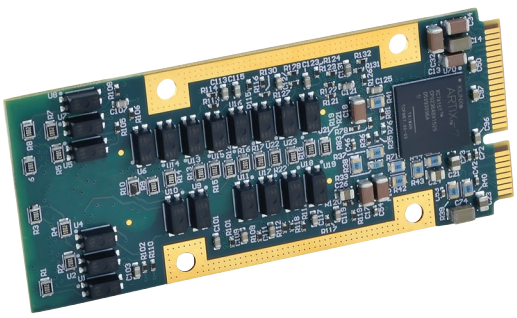
Expert team | Trust guarantee | 100% satisfaction

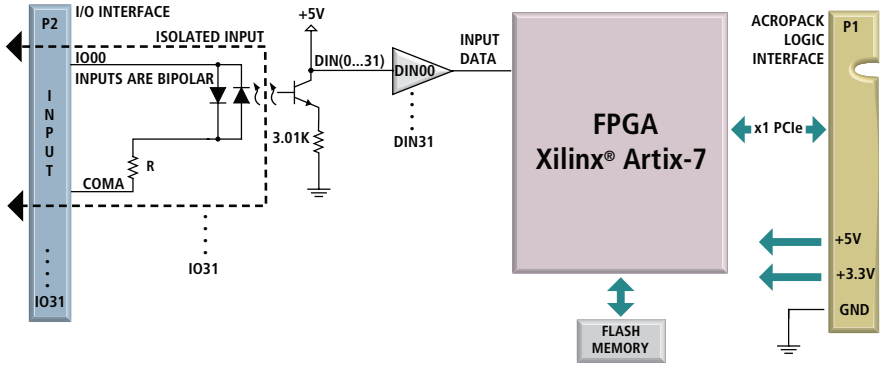
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Find the *Acromag / Xembedded / Xycom AP408* at our website: *Click HERE*

AcroPack® Modules

AP400 Series High Voltage Digital Input/Output





32 Isolated Digital Input Channels ◆ Extended Temperature ◆ PCIe Bus Interface

Description

Models

AP441-1E-LF: ±4 to ±18V DC or AC peak input
AP441-2E-LF: ±16 to ±40V or AC peak input
AP441-3E-LF: ±38 to ±60 or AC peak input

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 IP modules and a rugged form factor.

AP441-XE-LF modules provide 32 optically isolated inputs to safely monitor a wide range of digital input voltage levels.

Isolation protects your computer system from noise, transient signals, and field wiring faults. The inputs are grouped into four 8-channel ports. Ports are isolated from the logic and each other.

Change-of-state, high-to-low and low-to high interrupts are individually programmable for each channel. Debounce eliminates spurious interrupts from noise and switching transients for error-free edge detection

Closed-loop monitoring of critical control signals is easily accomplished using the AP441-XE-LF in conjunction with Acromag's AP445E-LF digital output module.

The AP441 module is 70mm long, this is 19.05mm longer than the full length mini PCIe card at 50.95mm. The board's width is the same as mPCIe board of 30mm and they 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.

Pin spacing and signal assignments will allow for 100V of port to port isolation. Logic and field lines are isolated from each other for voltages up to 250V AC or DC on a continuous basis.

The AP441 series maintains the same functionality of the existing Industry Pack modules providing a smooth transition to the AcroPack I/O modules.

AcroPack modules are RoHS compliant and ideal for military, defense, automation, aerospace, scientific, and development labs industries.

Key Features & Benefits

- PCI Express Generation 1 interface
- 2.5 Gbps bus speed with one lane in each direction
- 32 port-isolated input channels
- Interrupt support for each channel
- Programmable event interrupts (change-of-state, low-to-high or high-to-low transitions)
- Programmable debounce
- Input hysteresis
- Reverse polarity protection
- Software configuration (no jumpers or switches)
- Software configuration allows "on-the-fly" changes without removing modules.
- Pins are compatible with AP445E-LF output module for loopback monitoring
- Loopback monitoring enables self-test and fault diagnostics to detect open switches or shorts.
- Extended temperature range

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 optically isolated inputs

Isolation
Logic and field connections are optically isolated. Individual ports are also isolated from each other. Input lines of individual ports share a common connection and are not isolated from each other. Logic and field lines are isolated from each other for voltages up to 250V AC rms 250V DC on a continuous basis (unit will withstand a 1250V AC dielectric strength test for one minute without breakdown).

Bipolar input voltage range
AP441-1E-LF: ±4 to ±18V DC or AC peak
AP441-2E-LF: ±16 to ±40V DC or AC peak
AP441-3E-LF: ±38 to ±60V DC or AC peak

Input low-to-high threshold
AP441-1E-LF: ±4V maximum
AP441-2E-LF: ±16V maximum
AP441-3E-LF: ±38V maximum

Input response time
On to off: 15µS typical
Off to on: 35µS typical

Interrupts: 32 channels configurable as below
High-to-low transitions
Low-to-high transitions
Change-of-state

Debounce
Selectable for 4µS, 64µS, 1mS, or 8mS

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
-55 to 150°C

Relative humidity
5 to 95% non-condensing

MTBF
Contact the factory

Power
+1.5 VDC (±5%) not used
+3.3 VDC (±5%) 0.48 A Typical, 0.63 A maximum
+5 VDC (±5%) 0.048 A Typical, 0.052 A maximum
+12 VDC (±5%) not used
-12 VDC (±5%) not used

Physical

Length
70mm

Width
30mm

Ordering Information

AcroPack® Modules

AP441-1E-LF
Digital input, ±4 to ±18V

AP441-2E-LF
Digital input, ±16 to ±40V input range

AP441-3E-LF
Digital input, ±38 to ±60V input range

(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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Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

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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