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TECHNOLOGY GROUP

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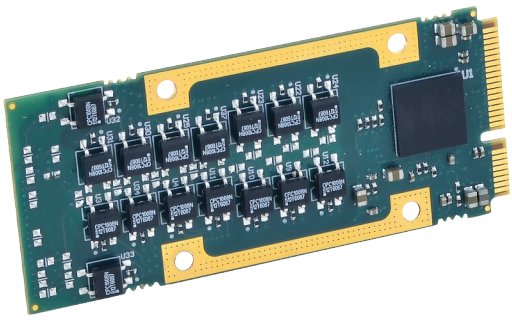
Expert team | Trust guarantee | 100% satisfaction

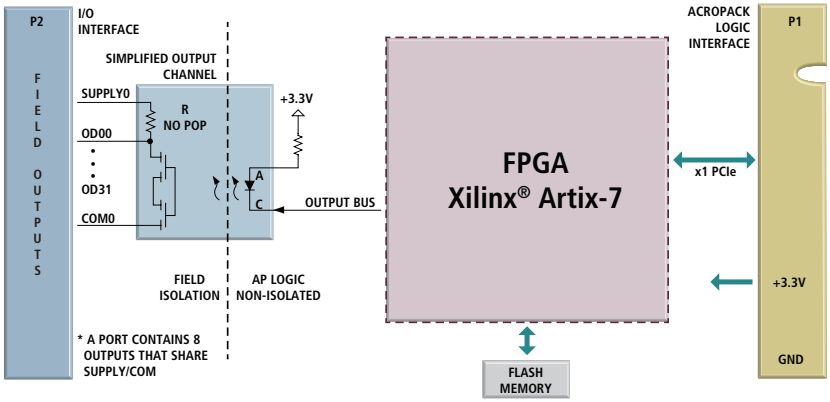
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Find the *Acromag / Xembedded / Xycom AP408* at our website: *Click HERE*

AcroPack® Modules

AP400 Series High Voltage Digital Input/Output





When used together, the AP441 input module and AP445 output module simplify loop-back monitoring of your critical signals.

32 bipolar solid-state relays ◆ Extended Temperature ◆ PCIe Bus Interface

Description

Model: AP445E-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 IP modules and a rugged form factor.

AP445 modules provide 32 isolated solid-state relay outputs to safely control discrete devices.

A major AP445 advantage is its flexibility. The module supports wide range bipolar (AC or DC) voltage switching. Each port can be configured for high or low-side switches. The outputs are TTL-compatible when configured as low-side switches and populating on board pull up resistors or using external pull-ups.

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

Readback buffers simplify output status monitoring. And for easy closed-loop monitoring of critical control signals, use the AP445 with an AP440 input module.

The AP445 series modules are 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 AP445 series 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

- 32 bipolar solid state relays
- High/low-side switch configuration
- Port-isolated output channels
- ±60V AC/DC voltage range
- High speed processing
- TTL-compatible
- Failsafe power-up and system reset
- Output readback function
- On board pull-up resistors can be populated for low-side switching applications
- Unique ground reference points for each port permits AC and DC switching on one module.
- Pins are compatible with AP440 input module for loopback monitoring.

Acromag® THE LEADER IN INDUSTRIAL I/O

Tel: 844-878-2352 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

AcroPack® Modules

ISO9001
AS9100
MADE IN USA

Performance Specifications

Digital Outputs

Output channel configuration
32 isolated solid-state relays support AC or DC (high/low-side switching) operation.

Isolation
Logic and field connections are optically isolated by solid-state relays. Individual ports are also isolated from each other. Output lines of an individual port share a common connection and are not isolated from each other. IP Logic and field lines are isolated from each other for voltages up to 250V AC or 354V DC on a continuous basis (unit will withstand a 1450V AC dielectric strength test for one minute without breakdown).

Voltage range
0 to ±60V DC or peak AC

Output ON current range
150mA maximum continuous (up to 1A total per port)

Turn on time
1ms typical, 2ms maximum

Turn off time
0.2ms typical, 1ms maximum

Output pull-up resistors
Not populated, consult factory

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%) all outputs off: 495mA typical
+3.3V (±5%) all outputs on: 675mA typical

Physical

Length
70mm

Width
30mm

Ordering Information

AcroPack® Modules

AP445E-LF
Isolated digital output module

(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

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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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