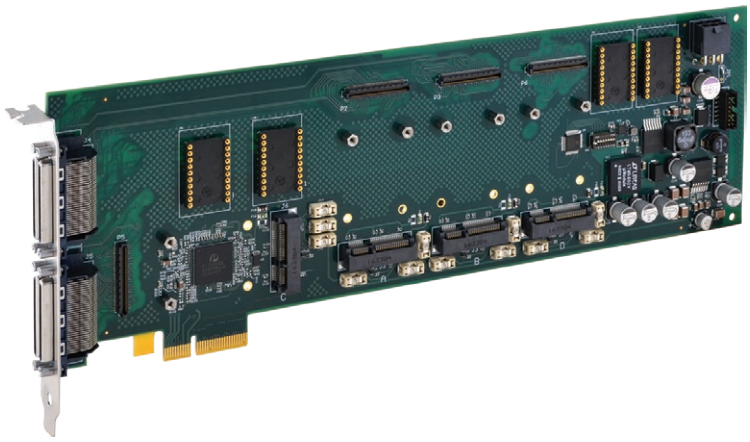
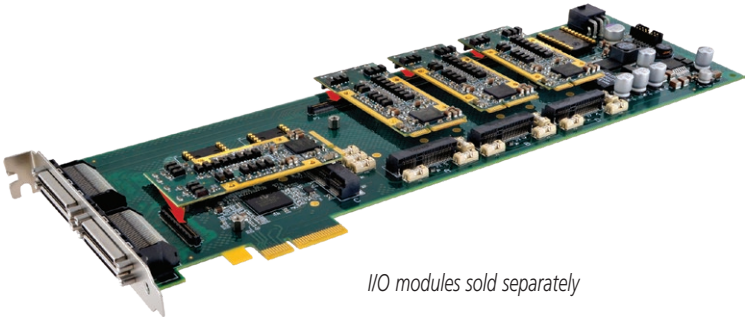
AcroPack® Carriers

APCe7000 Series PCI Express Carrier Cards for AcroPack® Modules

CE 2 YEAR WARRANTY RoHS Compliant





I/O modules sold separately

Four AcroPack or mini-PCIe mezzanine module slots ◆ Non-Intelligent carrier card ◆ PCIe x4 interface

Description

Model: APCe7040E-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.

This board interfaces four AcroPack mezzanine modules to a PCI Express bus on a PC-based computer system. It is designed to provide isolation between the AcroPack field I/O signals and the host when used with an isolated AcroPack module.

Four AcroPack module slots give you the freedom to mix a variety of I/O functions (A/D, D/A, digital in, digital out, serial I/O, FPGA, etc.) on a single board. Or, combine modules of the same type for almost two hundred channels on a single card. Either way, the APCe7040 saves your precious card slots and reduces your costs.

Select I/O modules from Acromag's offering or use most third-party mPCIe compliant modules.

Key Features & Benefits

- Four AcroPack or mini-PCIe module slots support any combination of I/O functions
- PCI Express 2.1 compliant
- Plug-and-play carrier configuration and interrupt support
- Fused +1.5V, +3.3V, +5V, +12V, and -12V DC power is provided. A fuse is present on each supply line serving each AcroPack module.
- Front panel 68-pin VHDC1 CHAMP 0.8 connectors for field I/O signals
- Optional isolated power supplies. Support for AcroPacks requiring ±12 V isolated power.
- Extended temperature range
- DIP switch card identification
- Standard 14-pin Xilinx JTAG programming header
- Software development tools for VxWorks®, Linux®, and Windows® environments.

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® Carriers

ISO9001
AS9100
MADE IN USA

Performance Specifications

PCI Express Bus Compliance

This device meets or exceeds all written PCI Express specifications per revision 2.1.

Includes a PCIe Gen 2 switch to expand the single host PCIe port to four ports, one to each device (AcroPack or mini-PCIe).

The host port consists of four PCIe lanes, each of the mini-PCIe sites have one lane each.

I/O Interface

Front I/O
Connector: Four 68-pin CHAMP cable connections. Pin assignments are defined by the installed AcroPack module.

The field side connector of the AcroPack I/O module mates to a Samtec SS5-50-3.00-L-D-K-TR socket connector P2 on the carrier board.

Gold plating in the connection area, M2.5 screws and spacers provide excellent connection integrity and stability for harsh environments.

Ease of Use

A unique carrier and site number can be set for each AcroPack site by a DIP switch. This provides the capability to distinguish a particular AcroPack module from others when multiple instances of the same module are used in a system.

A standard 14-pin Xilinx JTAG programming header is provided for programming and debugging the FPGA on some AcroPack modules. The JTAG ports of the four AcroPack modules are daisy-chained.

Physical

Physical Configuration
PCIe x4 lane.
Length: 12.283 inches (312.0 mm).
Height: 4.375 inches (111.12 mm).

Environmental

Operating temperature
-40 to +85°C.

Storage temperature
-55 to +125°C.

Relative humidity
5 to 95% non-condensing.

Power
+3.3 Volts (±10%): 0.383mA typical.
+12 Volts (±5%): 0.175mA typical.

The APCe7040E-LF has four DC/DC converters to provide the power supply voltages to the AcroPack modules that are not present at the host interface. The +1.5 Volt supply is sourced from the +3.3 Volt host power. The +5 Volt, +3.3 Volt and -12 Volt supply is sourced from +12 Volt host power.

Ordering Information

Carrier Card

APCe7040E-LF: AcroPack carrier card for AcroPack or mPCIe modules, four module slots.

See Acromag.com/AcroPacks for a full list of I/O modules.

Accessories

5025-288: Termination panel, DIN-rail mountable, SCSI-3 connector, 68 screw terminals.

5028-420: Round cable, shielded, male SCSI-3 connector to 68-pin CHAMP. 0.8mm, 2 meters long.

5028-615: Cable, 68-pin CHAMP to pigtail, 36 inches long.

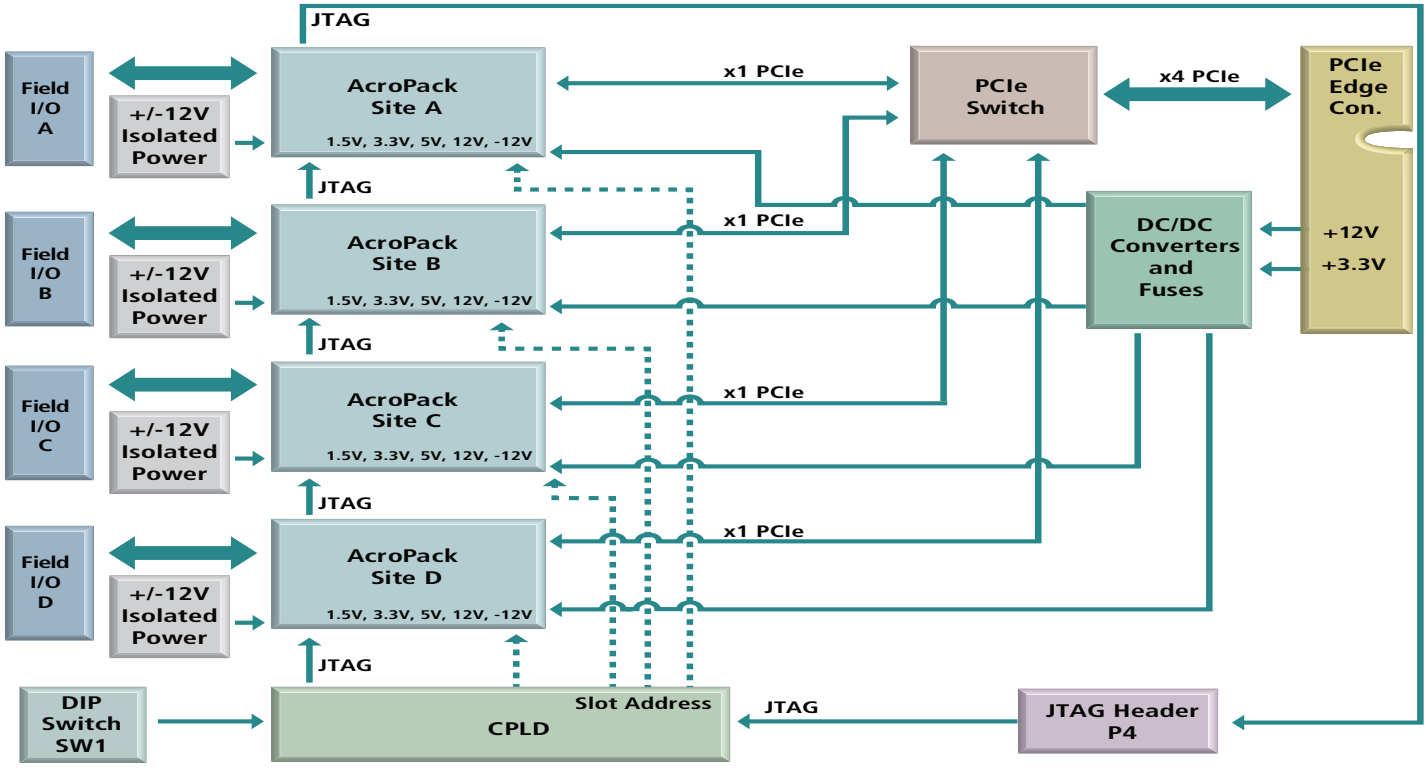
5028-616: Cable, 68-pin CHAMP to pigtail, 70 inches long.

Software *(see software documentation for details)*

APSW-API-VXW: VxWorks software support package.

APSW-API-WIN: Windows DLL driver software support pkg.

APSW-API-LNX: Linux® support (website download only).



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