PMC/XMC Module Carriers

APCe8670 PCI Express Carrier Card for PMC Modules

FC | ★2★ YEAR WARRANTY

JP1 POWER SOURCE SELECT
P4 JTAG
JP2 JTAG I/O VOLTAGE SELECT
DIAGNOSTIC LEDS
J5 AUX POWER (PCIe GRAPHICS)

P3 FAN POWER

J1
J2
PMC PCI-X BUS
PMC PCI-X BUS
DC-DC CONVERT
J6 BOARD-TO-BOARD SCSI-3 CONNECTOR

J3
J4
PMC PCI-X BUS
PMC REAR I/O

BRIDGE

P1 PCIe x4 EDGE CONNECTOR
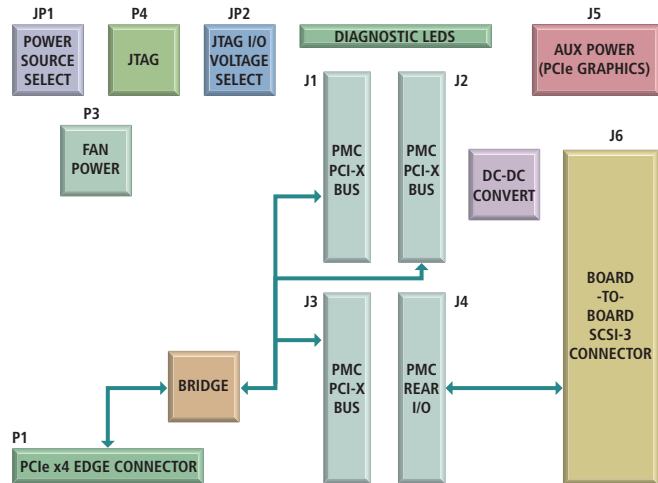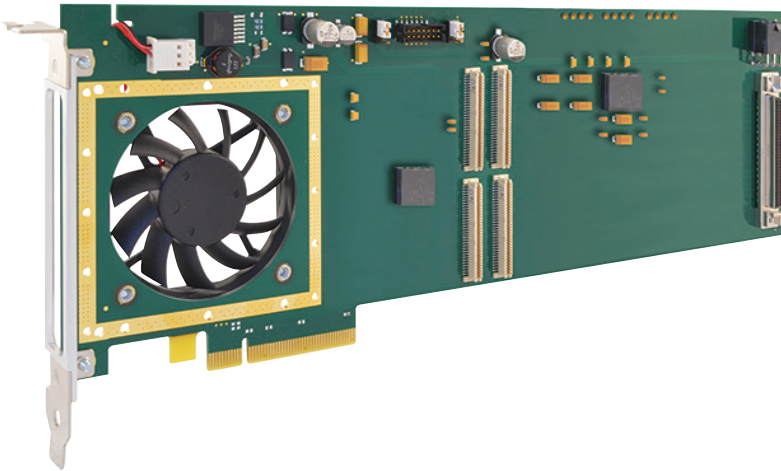
One PMC mezzanine module slot ◆ Non-Intelligent carrier card ◆ PCIe x4 interface

Description

Acromag's APCe8670 carrier card interfaces a PMC mezzanine module to a PCI Express bus in a PC-based desktop computer system.
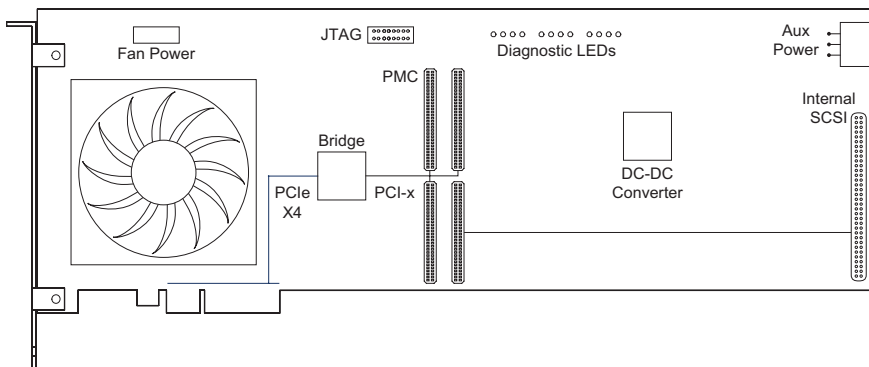
The APCe8670 is a PCIe bus adapter board that allows a PC (PCIe bus master) to control and communicate with the hosted PMC module. It simply acts as an adapter to route signals between the system's PCIe bus and the PMC module connectors.

The I/O signals are accessible via rear connectors and though the front mounting bracket. Cables are available to connect the carrier's rear I/O to a front panel connector in an adjacent slot.

Select PMC modules from Acromag's offering of high-performance FPGA and I/O solutions or use any third-party ANSI/VITA 20 compliant mezzanine modules.

Key Features & Benefits

- One PMC module slot
- 4-lane PCI Express interface
- PCI-X interface supports 32/64-bit addressing, 32/64-bit data bus at up to 100MHz operation
- Carrier routes 32 differential pairs to rear connector for LVDS I/O from the PMC module
- JTAG connector supports Xilinx programmer for use with hosted FPGA modules
- Cooling fan
- Auxilliary power connection for 12V source
- Diagnostic LEDs indicate communication speed

Fan Power
JTAG
Diagnostic LEDs
Aux Power
PMC
Internal SCSI
Bridge
PCIe X4
PCI-x
DC-DC Converter

Acromag ®
THE LEADER IN INDUSTRIAL I/O

APCe8670 PCI Express Carrier Card for PMC Modules

Performance Specifications

■ PMC Compliance

PMC Module
Conforms to CMC/PMC Specification, P1386.1.

■ PCI/X Bridge

Compliant to the following specifications:
PCI Express Base Specification (Rev. 1.1)
PCI Express-to-PCI/PCI-X Bridge Specification (Rev. 1.0)
PCI-to-PCI Bridge Specification (Rev. 1.2)
PCI Local Bus Specification (Rev. 3.0)
PCI-X Addendum to PCI Local Bus Specification
(Rev. 2.0, mode 1 only)
PCI Bus Power Management Interface Specification
(Rev. 1.2)

Addressing
32/64-bit.

Data bus
32/64-bit.

Interface
Supports up to 100MHz operation.

■ PCI Express Interface

PCI Express interface
4 lane, Gen 1 capable.

PCIe bus compliance
This device meets or exceeds all written PCI Express
specifications per revision 1.1 dated March 28, 2005.

■ I/O Interface

Rear I/O (J6)
Connector: MD68 (internal SCSI), male.

32 LVDS pairs routed from the PMC P4 connector.

■ Environmental

Operating temperature
0 to 70°C.

Storage temperature
-55 to 125°C.

Relative humidity
5 to 95% non-condensing.

Power
The carrier provides +3.3V, +5V, +12V and -12V
power to the PMC module. The +12V power source
is jumper-selectable from the PCIe bus +12V supply or
the PCIe graphics power connector. DC/DC converters
generate a +5V or -12V supply from the +12V source.

+3.3V (±10%): 0mA.
+12V (±5%): ??mA, typical with fan operating.

Currents specified are for the carrier board only. For
the total current required from each supply, add the
PMC module currents.

MTBF
Contact the factory.

■ Physical

Dimensions
Length: 9.342 inches (237.3 mm).

Height: 4.376 inches (111.2 mm).

Width: Occupies two slots with fan installed (fan is
mounted on solder side, height is 10 mm). Occupies
one slot with fan removed.

Board thickness: 0.062 inches (1.59 mm).

Connectors
J1, J2, J3: PMC PCI-X signals.

J4 : PMC user signals (rear I/O).

J5: Auxiliary power connector (PCIe graphics).

J6: Board-to-board connection of J4 user signals.

JP1: Power source select jumper.

JP2: JTAG I/O voltage select jumper.

P1: PCI Express V1.1 x4 lanes card edge.

P3: Fan power.

P4: JTAG (Xilinx programming adapter).
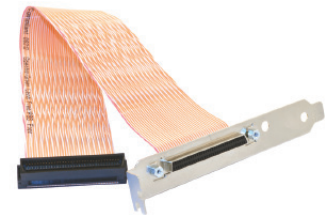
Ordering Information

Carrier Cards

APCe8670
PCI Express carrier card for PMC modules

Accessories

5025-913
CS Electronics internal SCSI cable with PCI bracket-
mounted HD68 female connector. Brings the PMC J4
rear I/O signals to back panel of the PC.

PMC Modules

See www.acromag.com for more information.

ISO9001
AS9100

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