

## General Features

The ACPe-1 is a member of AIM's family of 32-bit extended PMC Carrier Boards. The ACPe-1 is a standard height, half-length, Single Lane PCI Express add-in card with one PMC slot to plug in a standard PMC module. The ACPe-1 implements a PCIe-to-PCI Bridge and fulfils the requirements of the PCI Express Base Specification Revision 1.0a on the primary side and the PCI Bus Specification Revision 3.0 on the secondary side. The PMC slot is in conformance with the Draft Standard Physical and Environmental Layers for PCI Mezzanine Cards (P1386.1/ Draft 2.4).

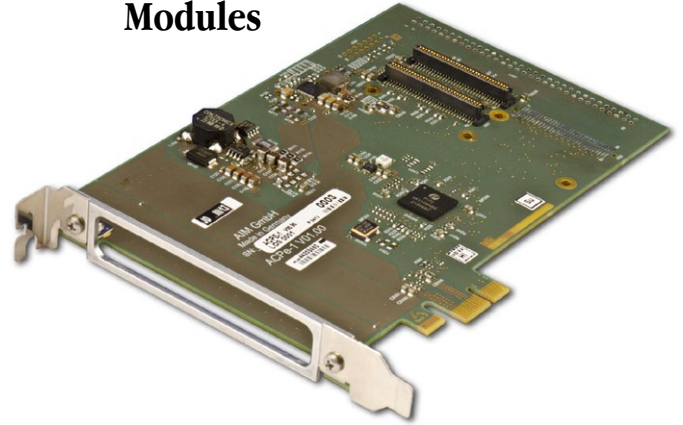
### PMC Module Interface

The ACPe-1 is designed to plug in all standard PMC modules. The carrier provides a PCIbus width of 32-bit and a PCIbus operation frequency of either fixed 33MHz or 66MHz (defined by configuration/ ordering option). For special test purposes, the Rear-IO signals of the plugged in PMC module are routed to a 64-bit ribbon cable connector on the rear area of the ACPe-1 module (not available in default configuration).

The PMC slot on secondary PCIe-to-PCI bridge side is configured by default for +3.3V IO signalling voltage. Therefore the carrier can be used to host +3.3V or universal signalling PMC modules. For usage of +5.0V (only) PMC modules the Carrier have to be ordered by separate ordering number. The use of a voltage keying pin protects against false PMC assembly.

# ACPe-1

## PCI Express Generic Carrier Card for PMC (PCIbus Mezzanine Card) Modules

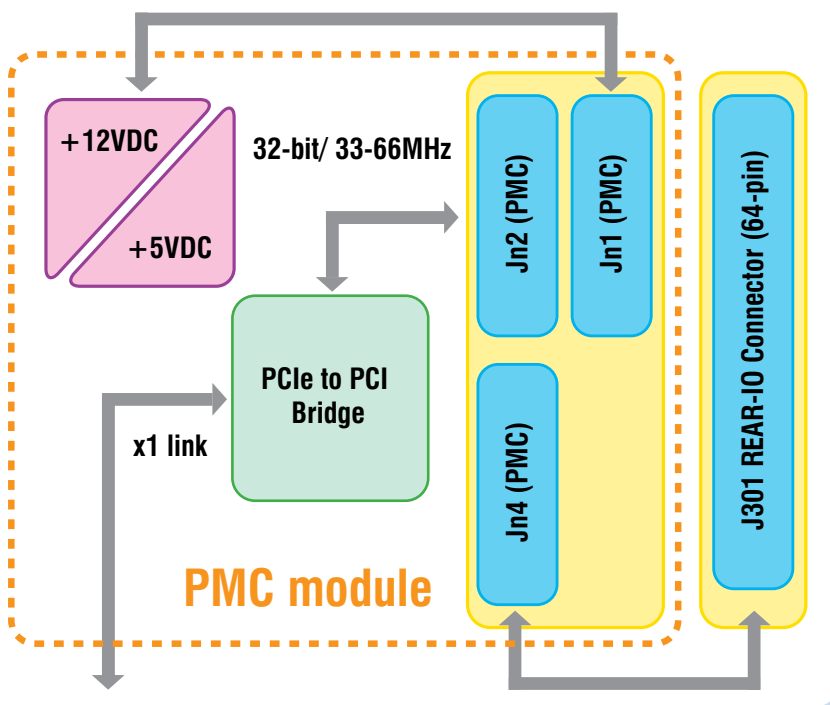


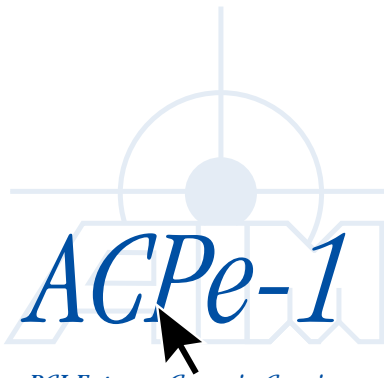
## Plug all standard PMC Modules

### Key Features

- Easily configured with any AIM PMC Databus Module: AFDX/ ARINC664, ARINC429, MIL-STD-1553 or any standard Third Party PMC module
- Default configuration is 32-bit@33MHz
- Up to 66MHz PCIbus operation for +3.3V environments
- +5.0V signaling environment available
- Fully compliant to PCI Express Specification, Rev. 1.0a
- Fully compliant to PCI Specification, Rev. 3.0
- Hosts PMC interfaces designed to PMC standard P1386.1/ Draft 2.4
- Onboard +5VDC Power Supply (up to 10W) and -12VDC Power Supply (up to 12W, used for AMC429 modules) are provided

## Avionics Databus Solutions





*PCI Express Generic Carrier  
Card for PMC  
(PCIbus Mezzanine Card) Modules*

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## *Technical Data*

### **PCI Express Interface**

- Fully compliant to PCI Express Base Specification, Revision 1.0a
- Fully compliant to PCI Express Card Electromechanical Specification, Rev. 1.0a
- Single lane standard height, half-length PCI Express add-in card
- 2.5 Gb/s data rate

### **PMC Interface**

- Provides one PMC slot
- Fully compliant to PCI Mezzanine card standardisation P1386.1/ Draft 2.4
- Supports either +5V or +3.3V signaling voltage, protected by PMC Keying Code (configuration/ Ordering option)
- PMC Databus width of 32-bit
- PMC Databus operation of 33MHz (default)/ 66MHz
- Onboard +5VDC Power Supply (up to 10W) and -12VDC Power Supply (up to 12W) to supply ARINC429 Transmitters

### **Front Panel:**

PMC-Bezel standard Breakout on PCI Express-Bracket

### **Dimensions:**

Single lane PCI Express add-in card: 167.64mm x 106.68mm

### **Power Dissipation:**

1W maximum: @full BusLoad (excludes PMC-module power dissipation)

### **Temperature:**

0°C to +70°C Standard Operating

-40°C to +85°C Extended Temperature

-40°C to +85°C Storage

### **Humidity:**

5 to 95% non-condensing

## *Ordering Information*

**ACPe-1:** PCIe bus (1.0a) Single Lane Carrier Module with one PMC slot (3.3V/33MHz version)

**ACPe-1-66MHz:** PCIe bus (1.0a) Single Carrier Module with one PMC slot (3.3V/66MHz version)

**ACPe-1-5V:** PCIe bus (1.0a) Single Carrier Module with one PMC slot (5V/33MHz version)