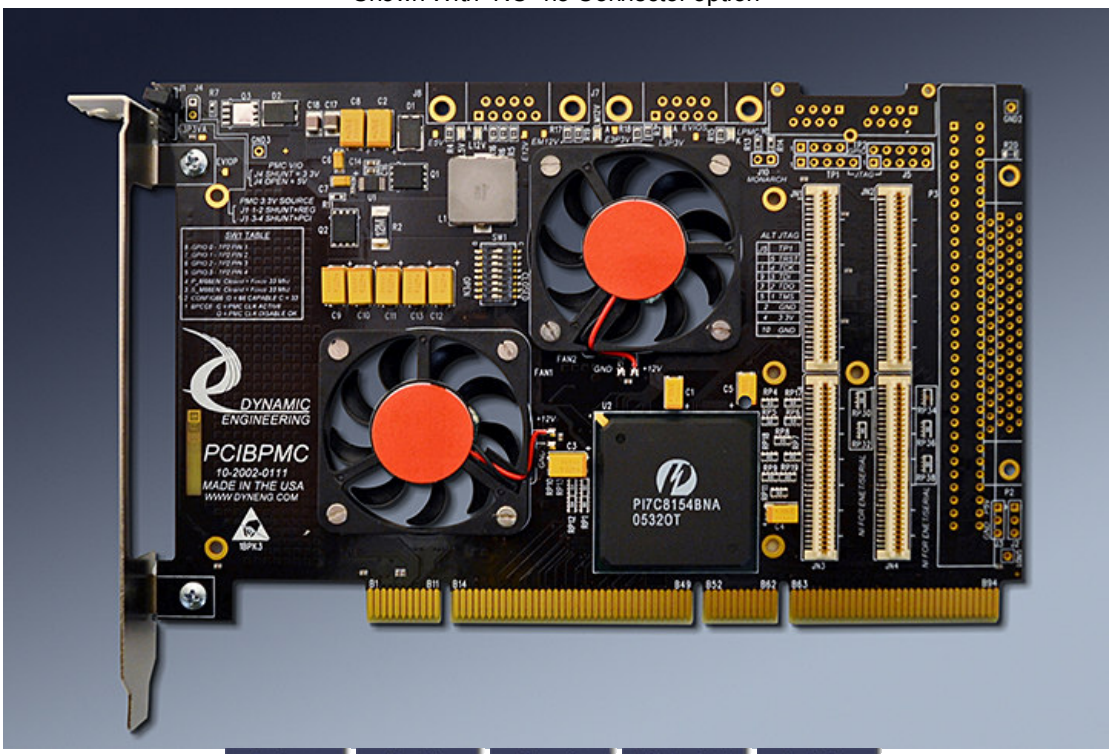
PCIBPMC now "ET" extended temperature standard

PCI to PMC Adapter / Carrier

PCIBPMC Bridge based PCI and PMC Compatible Adapter Carrier Front View
Shown With "NC" no Connector option



Features | Benefits | Manuals | Customized | Ordering

Dynamic Engineering has done the hard part for you with impedance controlled, PCI compliant routing, matched length IO, extended temperature bridge, high speed differentially routed Ethernet, local DC/DC power supply (3.3V) and more. Sometimes beauty is more than skin deep. With the PCIBPMC (PCI Bridge PMC) adapter / carrier converter card all you have to do is install your PMC onto the adapter, and then plug into the PCI slot. PCIBPMC is even compatible with both 64 and 32 bit slots. PCIBPMC is a universal voltage 1/2 length PCI card. Suitable for 32 bit or 64 bit bus operation. The bridge operates in transparent mode to provide plug and play operation. The PMC slot can be programed with user jumpers to use 3.3 or 5V for VIO, and to use the local or PCI generated 3.3V.

The PMC user IO connector Pn4 is brought out to one of two connectors for access (DIN IDC or SCSI II).The signals corresponding to the PrPMC standard Ethernet and Serial lines can optionally be connected to the Ethernet and Serial port connectors at the top edge of the board. The signals are isolated with resistor packs to keep the routing short. The PMC front panel connector is mounted though the PCI mounting bracket.

For superior performance the PCIBPMC has cooling cutouts for increased airflow to the PMC.If your application

requires a fan you can order the **PCIBPMC-FANx** to have a fan(s) mounted to your PCIBPMC. The forward position is #1.

The PCI bus is interconnected to the PMC via a 64 bit 66 MHz capable bridge.The bridge allows the PCI bus to operate with different parameters than the PMC card - for example the PCI bus can operate at 66 MHz with 64 bit data and the PMC with 33 mhz and 32 bit data.The buffering within the bridge will take care of the rate and data matching. The local side can also operate at 64/66 if the PMC supports it. PCIBPMC can control the M66EN signal via a dipswitch setting or the PMC can control the M66EN setting directly.

The voltage definitions are also buffered between the PCI and PMC buses. The PCI VIO automatically defines the reference levels for the primary side of the bridge. A shunt is used to control a MOSFET to select which voltage reference is used on the secondary side. A 5V PMC card can be used with a 3.3V PCI bus and vice-versa. The voltages can also be the same.

The bridge insures that multiple PCIBPMC cards can be installed onto the same PCI bus stub.

Local Regulation of the 3.3V power insures clean power on the 3.3V rail and that the rail is energizedThe 5V supply is routed to the 5V rail and to the local regulator. The new design utilizes a switching regulator controlling a MOSFET to convert 5V to 3.3V. An LC filter insures clean power at the PMC. A shunt allows the user to select between the PCI supply and the local regulator. The bridge uses approximately 700 mA maximum leaving 9+ amps on the 3.3V rail for the PMC. The bridge is properly bipassed with additional capacitors near the PMC connectors.

The 5V, +12 and -12V voltages are supplied to the PMC slot via the PCI connector. The voltages are bipassed at the PCI connector and at the PMC connector. The 5V power has additional decoupling to support the regulator requirements.

The individual pins on the JN4 (PN4) connector are accessible via SCSI or DIN. The routing is matched length from Pn4 to the connector pins. With the SCSI connector option we recommend using with our SCSI cable and the HDEterm68 breakout block for ease of debugging. To mate with the VME DIN connector; DINterm64 is a 64 position terminal strip compatible with the PCIBPMC and theDIN Ribbon Cable 64 is a 64 position ribbon cable that can be used to interconnect the carrier with the terminal strip.

The JTAG signals from the primary PCI bus are routed to the bridge. The PMC JTAG connections are routed to two separate headers. One header is configured to match the Altera standard and the other is set for discrete connections - Xilinx and other manufacturers. Please let us know if you want these headers installed by adding -JTAG to your ordered PN.

- 1 year warranty
- Quantity discounts available

PCIBPMC Features

- **Size** — Half size PCI card.
- **PMC compatible slot** — 1 PMC Slot provided.
- **Clocks** — PCI primary bus can operate at 66 or 33 MHz. Secondary side can operate at the same or lower frequency than primary side. User switch provided for clock selection.
- **Access Width** — Standard PCI byte lanes supported for byte, word and long access dependent on installed PMC. 64 or 32 bit operation from either bus supported by Bridge.
- **Access Frequency** — Bridge supports 66 or 33 MHz operation. If the primary PCI bus is 66 MHz then the secondary bus can be either frequency - user selectable. If the primary bus is 33 MHz then the secondary bus will be 33 MHz.
- **Software Interface** — Industry Standard 21154 Bridge register definitions. The bridge does not require any user set-up. PMC register definitions as defined by installed hardware.
- **Interrupts** — INTA, INTB, INTC, INTD routed to PCI connector. Most PMCs use one Interrupt level [INTA].

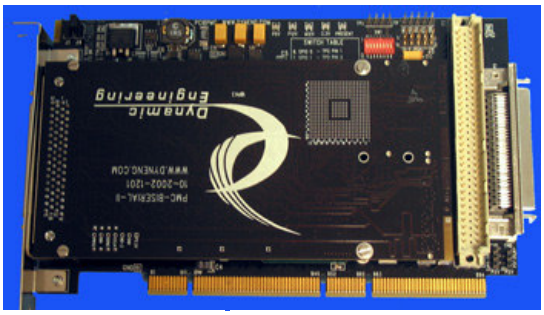
- **Power** — +5, +12, -12V, regulated or PCI +3V supplied to PMC.
- **VIO** — Primary side set by PCI bus. Secondary side set by user selection [shunt]. Regulated 3.3V or 5V via MOSFET to VIO mini-plane.
- **Thermal** — PCIBPMC has cut-outs to support increased airflow over the PMC component side. Optional fan(s) with two mounting positions are available. Extended Temperature components [-40 <=> +85C]
- **IO Interface** — Front Bezel IO supported at PCI bracket. Jn4 "user IO" supported with either SCSI or DIN connectors. See Panduit for mate [120-964-455] or standard SCSI II connector. Optional support for Ethernet and Serial ports from PrPMC devices.
- **Specification** — PICMG 2.15 specification compliant
- **LED´s** — +3V, +5V, +12V, -12V and Busmode 1 [present].
- **DIP switch** — An 8 position switch is available to allow for configuration control and to select the primary and secondary clocking options.
- **JTAG** — Primary PCI JTAG connections are made to the Bridge. The PMC JTAG connections are tied to labeled headers. One header following the Altera standard and one compatible with Xilinx and other manufacturers.
- **MTBF** — 1.27 Million hours per Bellcore SR-332 GB 25C

PCIBPMC Benefits

- **Speed** — You have a choice between the PCI**2**PMC and the PCI**B**PMC. With the PCI2PMC direct connect to the PCI bus the accesses to the PMC are optimized. With the Bridged design of the PCIBPMC the PMC is isolated from the backplane bus. In some cases the possibility of doing 64 bit accesses to 32 bit PMC ports [memory] and 66 MHz primary PCI with a 33 MHz PMC secondary may be faster than the direct connect model. In either case your data will move quickly and reliably through the PCI bus to and from your hardware.
- **Price** — The PCIBPMC has the low price point. Make use of existing PMC designs in PCI applications without paying for the expense of a new design and layout. Quantity discounts are available.
- **Ease of Use** — The PCIBPMC is easy to use. A plug and play interface to the PMC site. The Bridge can be configured with the user switches on board; eliminating any requirement for special software for the bridge itself. The board comes configured for a 66 MHz capable primary bus and 33 MHz secondary bus. In most cases the switches can be left with the factory settings. The switches are clearly labeled on the fab. The manual also contains clear directions for their use. The engineering kit provides a good starting point for a new user.
- **Availability** — The PCIBPMC is a popular board. We keep the

PCIBPMC in stock. Send in your order and in most cases have your hardware the next day - delivered to you via FedEx.

- **Size** — The PCIBPMC is a half size PCI board which conforms to the PCI mechanical and electrical specifications. Eliminate mechanical interference issues. The PCIBPMC can be used in all PCI slots including the new narrow chassis.
- **PMC Compatibility** — The PCIBPMC is **PMC** compliant per the IEEE 1386 specification. All Dynamic Engineering PMC Modules are compatible with the PCIBPMC. All other PMC Modules which are compliant with the PMC specification are compatible with the PCIBPMC.
- **PCI Compatibility** — The PCIBPMC is **PCI** compliant. The PCIBPMC can be expected to work in any PCI compliant backplane. The PCIBPMC has been tested in multiple backplanes.



Front view of PCIBPMC with PMC_BISERIAL II installed
Note: The PMC front bezel is aligned with the PCI mounting bracket on the left side. The Pn4 [user IO] connectors on the right hand side. DIN vertical and SCSI rt angle.

PCIBPMC Ordering Information

- **PCIBPMC** Order the **PCIBPMC** for a base version - PCIBPMC with DIN connector 1/2 length PCI card

- **PCIBPMC-FAN(1,2)** Need additional cooling? order the **PCIBPMC-FAN(1,2)** for a pre-installed 12V 8CFM fan to maximize cooling and funtionality of your card.
The fan has been tested with high wattage prPMC devices.Select position 1 closest to the PCI bezel or position 2 closest to the PMC connectors.

- **PCIBPMC-ENET** Order the **PCIBPMC-ENET** to receive a PCIBPMC with 2 ethernet ports installed .
The connectors are added to work with Ethernet equipped PMC's

- **PCIBPMC-SER** Order the **PCIBPMC-SER** to receive a PCIBPMC with a serial connectors installed .
The Serial Port connectors are added to work with serial port equipped PMC´s

- **PCIBPMC-SCSI** Order the **PCIBPMC-SCSI** to receive a PCIBPMC with the SCSI connector mounted for Pn4 IO.[no DIN]

- **PCIBPMC-NC** Order the **PCIBPMC-NC** to receive a PCIBPMC that meets the required length if installing into a PowerEdge or other system with a true "half size PCI" card width.This model has **neither** VME nor SCSI style connector installed.

- **-VIO3** The VIO3 option removes the FET for the secondary VIO to force it to be 3.3V only for no mistakes about voltage selection

- **PCIBPMC** Order combinations of the above options by simply adding the extension(s) to your order request. Some combinations are incompatible [-SCSI, -NC]

Ordering Options: Please select the board version and engineering kit you wish to order.

Select Board Version | Standard Processing | No FAN1 closest to PCI bezel
No FAN2 closest to PMC Connectors | No Serial & Ethernet Ports | Programmable VIO (3.3/5)

Quantity 1 Add to Cart View Cart

Manual

You must have Adobe Acrobat to read our PDF files.
Download the PCIBPMC Manual 07/11/12 Rev H1 in PDF format.

Related Items:

HDEcabl68 SCSI II/III Cable
HDEterm68 SCSI II/III to 68 pin terminal block
DINribn64 64 position Ribbon Cable
DINterm64 Ribbon to 64 pin terminal block