

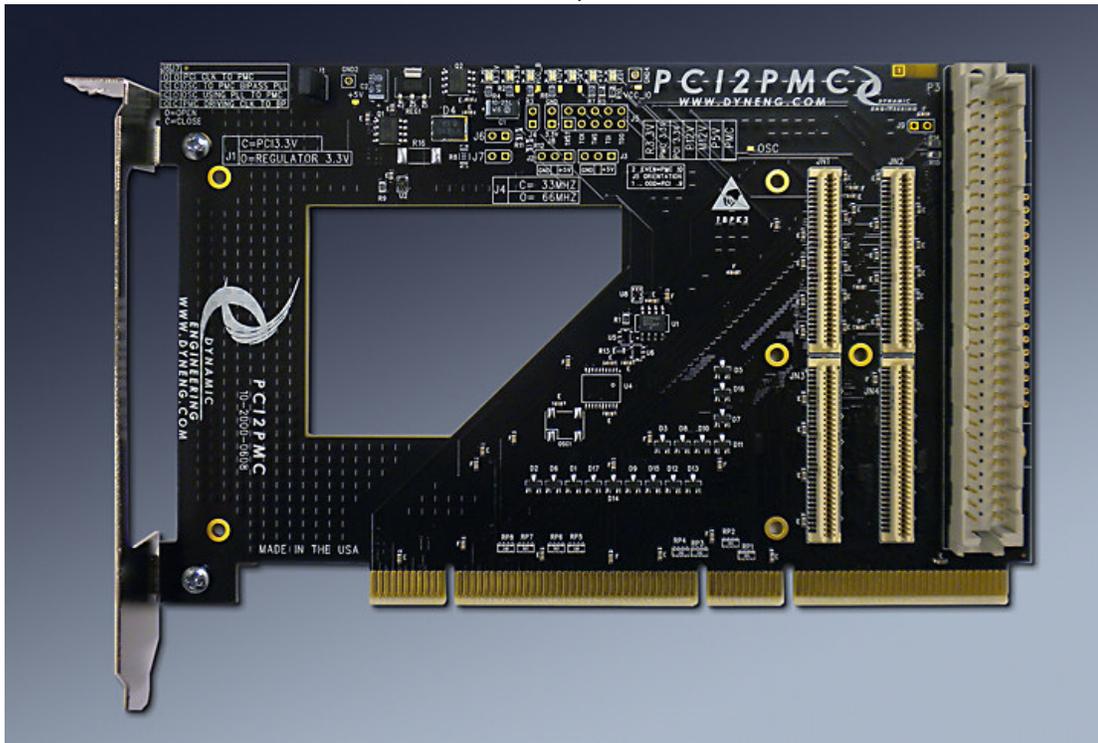


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- IndustryPack
 - PMC
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 - PCI
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PCI2PMC

PCI to PMC Adapter / Carrier



- Features
- Benefits
- Manuals
- Customized
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PCI2PMC: PCI and PMC Compatible Adapter Carrier Front View shown with DIN64 connector option.

- Half Length, Passive PMC Carrier for PCI
- ROHS and Standard processing available
- 32 and 64 bit compatible
- 33 and 66 MHz. compatible
- Impedance control, clamping and filtering to provide quiet reliable operation
- Bezel IO and Rear IO
- 1 year warranty standard. Extended warranty available.

Since its introduction in 2000, 1000's of units of PCI2PMC have been utilized by hundreds of satisfied clients, many of whom are repeat purchasers. While there are many potential vendors of a basic PMC carrier, our clients have reported that the Dynamic Engineering design works where others do not. Our standard, full featured "PCI2PMC" is designed to provide trouble free operation in a multitude of environments for an extended life span. Dynamic Engineering hardware is always designed to give you the most in one card to allow for greater flexibility. We understand costs and budget allowances. If all you need is 32 bit operation with no extra features, the "PCI2PMC-ME-HC" is your best option. This version retains superior routing and signal conditioning with

minimized components to meet your 32 bit needs, all while remaining price competitive.

What is PCI2PMC? PCI2PMC (PCI to PMC) is an adapter to install a PMC card into a PCI slot. Sometimes known as a carrier or converter. PCI2PMC is a universal voltage 1/2 length PCI card, and will fit into standard and half width chassis. The combination of PCI2PMC and mounted PMC will occupy a single PCI slot allowing multiple cards to be mounted within the same chassis. With universal voltage keying and 32/33 <=> 64/66 operation the PCI2PMC will work with any PMC in any chassis. The PMC front panel connector is mounted through the PCI mounting bracket. Two connector options are available for rear panel [Pn4] IO.

The PCI2PMC design is passive with no added delays to access the PMC hardware. The traces are carefully routed with proper attention paid to the impedance and reference planes to maximize compatibility with your PCI system. The PCI bus is buffered with series resistors and clamped with Schottky diodes. The PCI clock is distributed with a zero delay buffer.

PCI2PMC is built using a solder stencil for accurate, repeatable solder, Pick and Place machine for accurate repeatable assembly, and an 8 zone reflow oven using a profile specific to the PCI2PMC. Any through hole parts are mounted by our highly trained assemblers before going in the wash. The wash is high pressure and non-polluting with the chemicals recaptured and treated. ROHS and standard assembly processes are offered.

Every PCI2PMC is verified using a functional test including 32/33 and 64/66 operation. Both target and DMA operations are tested. Loop-back is performed to check IO paths at speed. Each card has a written ATP signed off by the test technician and stored in our archives. Boards are individually inspected and signed off by Q.A. Traceability is achieved with individual serial numbers and tracking. The quality goes in before the bag goes on.

For superior performance PCI2PMC features a cooling cutout for increased airflow to the PMC. The cut-out is optimized to allow the shortest length PCI traces and the most mechanical strength while still providing ample air flow to the component side of the PMC. For PMC cards requiring direct cooling [fans] we recommend the [PCIBPMC](#), and [PCIBPMCET](#) [industrial temperature] carriers.

PCI VIO is interconnected to the PMC directly. The PCI backplane will determine the bus voltage reference. The voltage keying is set to universal on the PCI2PMC; it is left to the user to properly select the PMC and PCI motherboard for PCI voltage level considerations. Many PMC's are "universal" and can work with 3.3 or 5V PCI backplanes. If you need to use a 3.3V card on a 5V backplane or vice-versa please consider the [PCIBPMC](#) design. The bridge implementation provides level shifting between the PCI and PMC buses.

PCI2PMC's heavy power planes tie the PCI voltages to the PMC. The planes are designed based on the power capabilities of the PMC pins. Many designers use more power on their PMC than allowed by the PMC specification. PCI2PMC can handle the load.

Most PCI systems have 3.3V supplied by the host power supply. Occasionally a system does not have its own 3.3V supply or cleaner power is required. A linear regulator with 1.5A capability is part of the PCI2PMC. The 3.3V at the PMC can be selected to come from the PCI connector or the local linear supply. A shunt controls a 3 FET's to switch between the supplies and prevent back driving the host supply. FET's are used instead of diodes for a low forward voltage drop at full power. You can still order the "-HC" replacing the FET with a hardwired selection, however this is unnecessary and only included to support clients with requirements to match previous builds exactly. If you require more power, the PCIBPMC features a high efficiency switching power supply [8A].

The individual pins on the JN4 (PN4) connector are accessible by either connector on the PCI2PMC. With the 68 pin SCSI connector option we recommend using our SCSI cable and the [HDEterm68](#) breakout block. With the industry standard VME IDC connector; [DINterm64](#) is a 64 position terminal strip compatible with the PCI2PMC and the [DIN Ribbon Cable 64](#) is a 64 position ribbon cable that can be used to interconnect the carrier with the terminal strip.

PCI2PMC really is half size, meeting the PCI specification of 6.600 in long. Please note: the DIN [VME] connector option must be used to meet this requirement.

Please refer to the [PCIBPMCX2](#) if you need a multi-PMC solution for PCI.

If you have custom requirements please call or e-mail us with the details. We have several customer versions of the PCI2PMC and are willing to make more.

PCI2PMC Features

- **Size** Half size PCI card. meets "6600" spec.

- **PMC Positions** 1 PMC Slot provided.
- **Clocks** PCI bus can operate at 66 or 33 MHz. The PMC must be 66 MHz capable for 66 MHz operation to work properly. M66EN has a user shunt to allow or disable 66 MHz operation. Standard operation from zero-delay buffered PCI clock. Options for PMC sourced clock or local oscillator and clock driver.
- **Access Width** Standard PCI byte lanes supported for byte, word and long access dependent on installed PMC. 64 or 32 bit operation supported.
- **Software Interface** PMC register definitions as defined by installed hardware. No software set-up required by PCI2PMC.
- **Interrupts** INTA, B, C, D routed to PCI connector from PMC.
- **Signal Conditioning** AD signals are series terminated. Schottky clamping Diodes on critical PCI signals. Zero delay buffer for PCI clock distribution. Proper impedance for PCI maintained.
- **Power** +5, +3.3, +12, -12V supplied to PMC. Jumper option for onboard 1500mA regulator or PCI 3.3V supply.
- **VIO** PCI IO Voltage is set by the PCI backplane. VIO is routed from the PCI connector to the PMC.
- **Thermal** PCI2PMC has a cut-out to support increased airflow over the PMC component side.
- **IO Interface** Front Bezel IO supported at PCI bracket. Jn4 "user IO" supported with SCSI and DIN connectors. See Panduit for mate [120-964-455] or standard SCSI II /III connector. +5V and Ground references on SCSI II /III connector - user jumper selectable. SCSI connector has matched length traces to Jn4. DIN connector is matched length per side - Column A is matched and column C is matched with a slight offset between them.
- **LED's** PCI +3V, Regulator 3.3, PMC 3.3, +5V, +12V, -12V, PMC Present
- **PCB** Hi Temp ROHS compliant FR4 used with Gold instead of Tin to allow for ROHS and non-ROHS assembly techniques. PCB material is UL rated 94V-0 compliant
- **MTBF** 4.63 Million Hours GB 25C "-ME-HC" option
2.96 Million Hours GB 25C standard card
- **Temperature Range** operating: -40<=>85 standard
- **Conformal Coating** add "-CC" for conformal coating
- **JTAG** Primary PCI JTAG connections are routed to a header. The PCI JTAG can be connected to the PMC JTAG or left open for download cable use. JTAG pin definitions are in the silkscreen. Ask for option "-JTAG" to have this installed.
- **Statement of Volatility** [Download PDF here](#)

PCI2PMC Benefits

- **Speed** You have a choice between the PCI2PMC and the PCIBPMC(). With the PCI2PMC direct connect to the PCI bus the latency to the PMC is optimized. With the Bridged design of the PCIBPMC() the system speed is optimized.

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** PCI2PMC has two price points with the "PCI2PMC-ME-HC" model appropriate for 32/33 PMC 's with front panel IO, and the "PCI2PMC" model for optimized inventory and flexibility. Make use of existing PMC designs in PCI applications without paying for the expense of a new design and layout. Quantity discounts are available.
- **Warranty** 1 year warranty standard. Extended Warranty available.
- **Ease of Use** The PCI2PMC is easy to use. A plug and play interface to the PMC site.
- **Availability** PCI2PMC is a popular board. We keep the standard build PCI2PMC and -ME-HC versions in stock. Alternate versions may have a short delay in processing. Send in your order and in most cases have your hardware the next day.
- **Size** PCI2PMC is a half size PCI board which conforms to the PCI mechanical specifications. Eliminate mechanical interference issues. PCI2PMC can be used in all PCI slots including narrow chassis.
- **PMC Compatibility** PCI2PMC is **PMC** compliant per the IEEE 1386 specification. All Dynamic Engineering PMC Modules are compatible with the PCI2PMC. All PMC Modules which are compliant with the PMC specification are compatible with the PCIBPMC.
- **PCI Compatibility** PCI2PMC is not **PCI** compliant. All passive PMC carriers for the PCI bus including PCI2PMC have trace lengths in excess of the maximum specified by the PCI specification. PCI2PMC design includes several features to minimize the effects of the longer traces. The zero delay clock buffer keeps the PCI side of the clock length within specification, the series resistors and clamping diodes help to filter the PCI signals. Proper impedance control helps to minimize reflections.

Single PCI2PMC adapters can be expected to work in any PCI bus stub. If you need to operate multiple adapters per stub we recommend the [PCIBPMC](#) which is completely PCI specification compliant. PCI2PMC is in use in hundreds of chassis and tested in multiple backplanes.

Ordering Information

PCI2PMC: Standard PCI2PMC with VME [DIN] connector, no SCSI Connector.

PCI2PMC-SCSI: PCI2PMC with SCSI connector, no VME [DIN]

PCI2PMC-ME-HC: minimized PCI2PMC . If you are using a 32 bit PMC with front panel IO this version is for you. Minimized features and reduced cost. 32 bit only and does not provide the "backplane IO" path [Jn4, SCSI and DIN IDC] HC option installed to use PCI 3.3V at PMC without regulator.

PCI2PMC-M(33,66) option: Monarch capability with PMC receiving clock input from added oscillator. System

clock driven by PCI2PMC. Select 33 or 66 MHz. Please note that shunts allow several options for operation once the Mxx feature is installed. Use backplane clock, use PMC clock to drive backplane, use local oscillator to drive backplane and PMC.

-CC option: Add conformal coating

-JTAG option: Add JTAG header to assembly

-ROHS option: Add ROHS compliant processing and parts.

-BO: [SCSI] Break Out Kit includes: 3' HDEcabl68 and HDEterm68-MP

-BO64 VME Break Out Kit includes :3' HDEcabl64 and HDEterm64

If you wish to order a version other than the standard PCI2PMC, please select from below.

PCI2PMC (full featured card) No Breakout Kit

Quantity

Manuals & Data Sheets

Download the [PCI2PMC](#) User Manual in PDF format.

Download the [PCI2PMC-ME-HC](#) ME version Data Sheet in PDF format.

Download the [PMC mounting](#) hole placement in relation to top right corner in PDF format.

Customer Special Versions

Please note: this version is built to order. The standard versions are stock items.

PCI2PMC-SKY(-64): minimized PCI2PMC-ME - Reduced version based on ME. no LED's, no regulator or header points. "-64" adds 64 bit path to the minimized version. Download the [PCI2PMC-SKY](#) Sky version Data Sheet.

Related:

[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

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