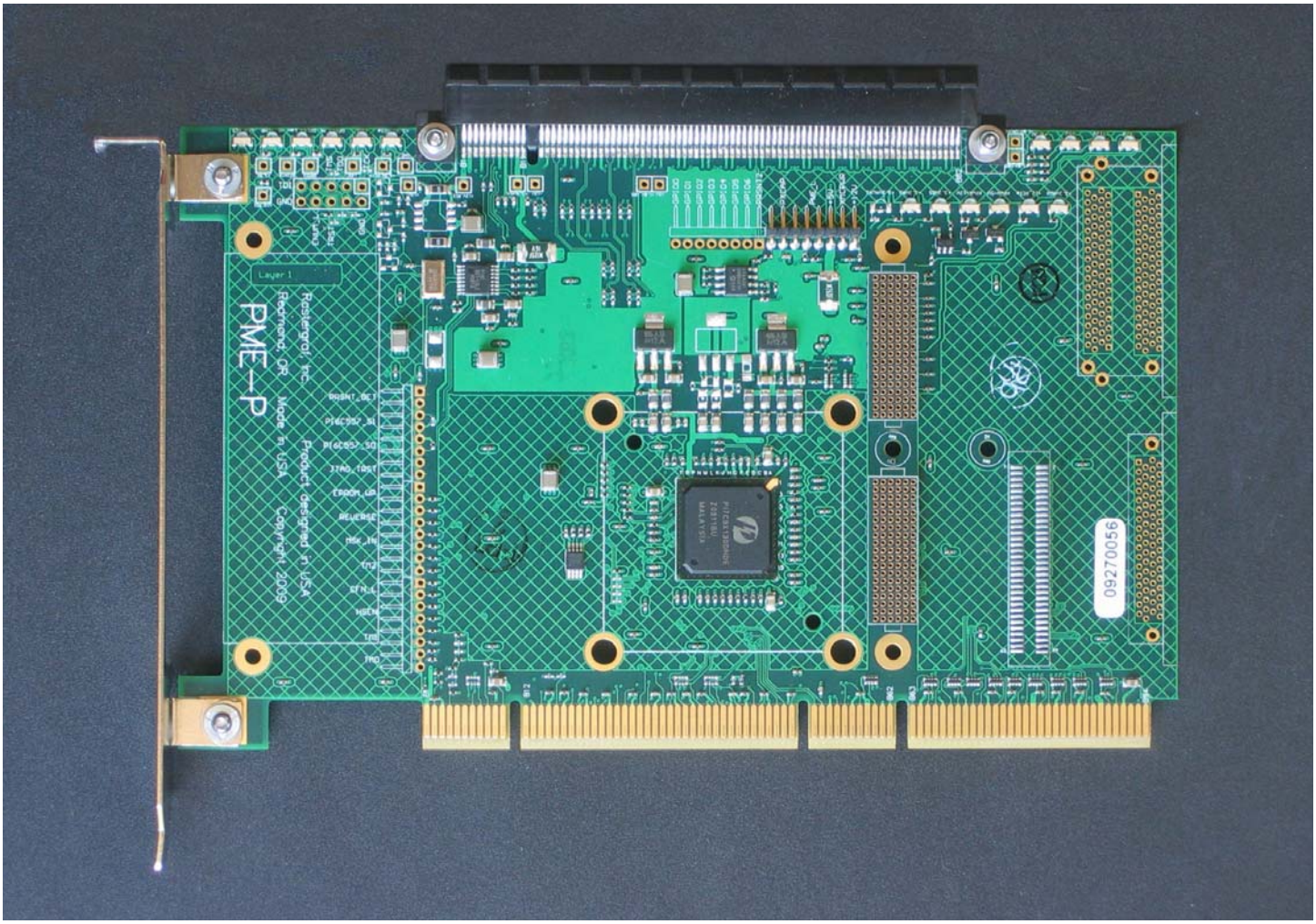
Rastergraf

PME-P

PCI Express (PCIe) to PCI/PCI-X Adapter Board



Features

- x1, x2, and x4 PCI Express 1.1 (PCIe) compatibility
- 32 and 64-bit PCI/PCI-X compatibility
- PCI-X supported up to 64-bit, 133 MHz
- Test Points and Power and Status LEDs
- XMC to PCI/PCI-X version also available (PMX-P)

Applications

- Eases debugging of PCIe boards
- Enables use of the latest PCIe boards in older PCs

PME-P

The PME-P is a single slot PCI Express (PCIe) to PCI/PCI-X adapter board. It enables any x1, x2, or x4 PCIe 1.1 board module to be plugged into any Universal PCI 32 or 64-bit PCI or PCI-X slot.

The PME-P features the Pericom PI7C9X130 PCI Express to PCI/PCI-X Reversible Bridge. Among others, the PI7C9X130 is compliant with the PCI Express Base Specification, Revision 1.1 and the PCI Express to PCI/PCI-X Bridge Specification, Revision 1.0. PI7C9X130 supports transparent and non-transparent mode of operations.

The PI7C9X130 is used on the PME-P in the reverse bridge mode (PCIe to a PCI/PCI-X host system). In reverse bridge mode, PI7C9X130 has a 64-bit PCI-X upstream port and an x4 PCI Express downstream port (2.5Gb/s data rate). PI7C9X130 configuration registers are backward compatible with existing PCI bridge software and firmware.

The PME-P's conventional (PCI/PCI-X) connector is Universal PCI 2.3/PCI-X 1.0 compatible. It supports 32 or 64 bit data, 33 or 66 MHz (PCI and PCI-X), 100 and 133 MHz (PCI-X), and 3.3V or 5V VIO signaling. The PME-P interface is 5V I/O tolerant and, in keeping with PCI 2.3, the I/O buffers are powered by a 3.3V supply.

The board's PCIe (local side) slot supports x1, x2, or x4 PCIe 1.1 boards. Boards with x8 or x16 can also be installed but only (up to) a x4 path is supported.

Separate power planes are provided for +3.3V, +1.8V (PI7C9X130 core), and ground. Bypass capacitors are located at regular intervals across the board and at all connector power pins.

To aid in debugging, the PME-P has Test Point pins and LED indicators for all major power sources, +12V, -12V, +5V, +3.3V, a variety of +1.8V sources, and VIO.

Due to the fact that the PI7C9X130 BGA footprint is laid out to support optimal placement in a PCI/PCI-X to PCIe adapter (the reverse of the PME-P), the PCI bus signal lengths must unavoidably exceed the PCI 2.3 standard. There is no bridge chip made that is optimized for PCIe to PCI/PCI-X. However, the extra length has not been found to be a problem on the PME-P, even when tested at 133 MHz PCI-X on a high-quality extender card.

Other Rastergraf carrier products include:

PMX-P, an active (bridged) single XMC (x1/x2/x4 PCIe) to PCI carrier;

PMA-P, a passive (bridgeless) single PMC to PCI carrier;

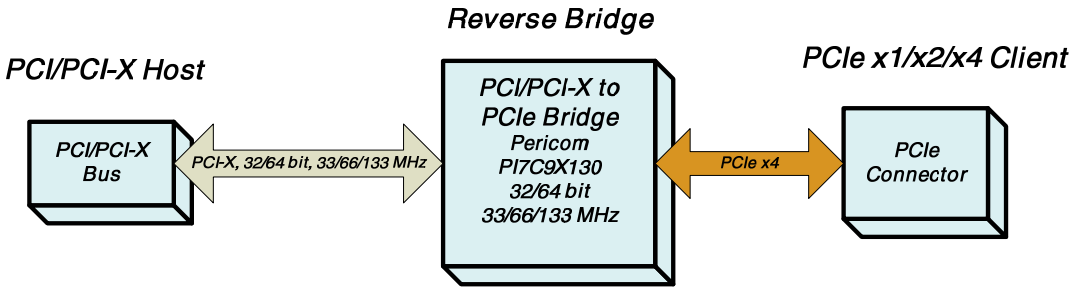
PMB-P, an active (bridged) single PMC to PCI carrier;

PMA-C, a passive (bridgeless) single PMC to CompactPCI carrier; and

PMB-C, an active (bridged) dual-PMC site CompactPCI carrier.

Please check our web site for more information:
http://www.rastergraf.com.

PME-P Block Diagram



Product Specifications

Form Factor	Single slot PCI, short card Width: 0.6 inches (15.24 mm) Depth: 6.9 inches (175.26 mm) Height: 4.2 inches (106.68 mm)
PCI Compatibility	Revision 2.3, 33/66 MHz, 32/64 bit PCI Supports 66/100/133 MHz, 32/64 bit PCI-X Universal signaling (3.3V or 5V).
PCI Express Compatibility	PCI Express 1.1 x1, x2, or x4 data lane width
Environment	Operating temperature: 0°C to 70°C Storage temperature: -40°C to +85°C Humidity: 5% - 95% non-condensing

Ordering Information

Standard Configurations:

PME-P
Single-slot PCIe-to-PCI adapter board

www.rastergraf.com

Rastergraf, Inc.
1804-P SE First Street
Redmond, Oregon 97756
tel: +1 (541) 923-5530
fax: +1 (541) 923-6475
email:sales@rastergraf.com