8096 - 64-bit PMC to PCI Adapter for Delivery Systems

- Enables the use of PMCs in a PCI based system
- Designed to improve signal integrity while retaining passive adapter
- Key control signals on PCI fixed to ground to reduce signal undershoot
- 5V to 3.3V Linear regulator provided
- LEDs monitor power and key PCI signals
- VIO signal monitor LED to determine 3.3V or 5V bus signaling
- Cooling fan provided for higher power PMCs
- A & C rows of 96-pin DIN connect with 64-pin I/O connector

This 64-bit PMC to PCI Adapter permits delivery of PMC-derived applications in a standard PCI environment.

Mechanically, a PMC card fits cleanly on a short-length PCI board, resulting in a highly acceptable delivery solution for desktop applications. PMC suppliers can introduce products to desktop packaging without having to maintain two PCI-based designs — one for standard PCI and a second for PMC.

This product has been specifically designed to improve PCI bus signal integrity while retaining the convenience of a passive adapter. The key control signals on the PCI bus (IRDY, TRDY, FRAME, etc.) are Schottky-diode clamped to ground in order to reduce signal undershoot. The 32-bit PCI bus (AD[31 ..0]) has 10 ohm series termination which reduces undershoot/overshoot on the address/data lines. Because the distance from the 64-bit PCI databus (AD[63..32]) to the corresponding PMC connector (PN3) is minimal, a direct connection from the edge finger to the AD [63..32] is implemented for these signals.

A 3.3V linear regulator on the board converts the 5V power from the PCI edge finger to 3.3V to the PMC. This allows operation in motherboards that do not support 3.3V power. The maximum current from the regulator is 3 Amps.

Several LEDs visible from the edge of the board monitor for power (VIO, +12V, -12V, 5V, 3.3V) and key PCI bus signals (INTx, BUSMODE1, REQ32). One LED senses the VIO signal voltage to indicate if the slot uses 3.3V (VIO = 3.3V) or 5V (VIO = 5V) PCI bus signaling.

A fan on the adapter, under the central area of the PMC card, is provided to effectively cool higher-powered PMC cards. The dimensions and positioning of the fan adheres to the IEEE 1386 PMC component height restrictions, allowing use of any IEEE 1386 compliant PMC in the adapter.

The BUSMODE [4..2] to the PMC is set for the PMC encoding (001).

The JTAG signals between the PCI bus and the PMC are intercepted with a header. This allows jumpers to be installed to connect JTAG on the PMC to the PCI bus, or access to the JTAG signals to permit testing and programming of the user's PMC circuits.

The A and C rows of a 96-pin DIN connector, located toward the rear of the board, connect with the 64-pinuser I/O connector (J4/P4) on the mezzanine card. This connection is specified by IEEE 1386 for the P2 connector on VMEbus boards and permits internal connection of rear I/O, in cases where the PMC supports rear I/O.

An aluminum panel is provided on the PCI board bracket. This mimics the mechanics of a PMC installed on a VMEbus board or other host environments, and allows the PMC bezel to be firmly positioned on the board.

For further information, please call us at 215-957-9102 or e-mail us at sales@acttechnico.com.

Technical Data

Block Diagram
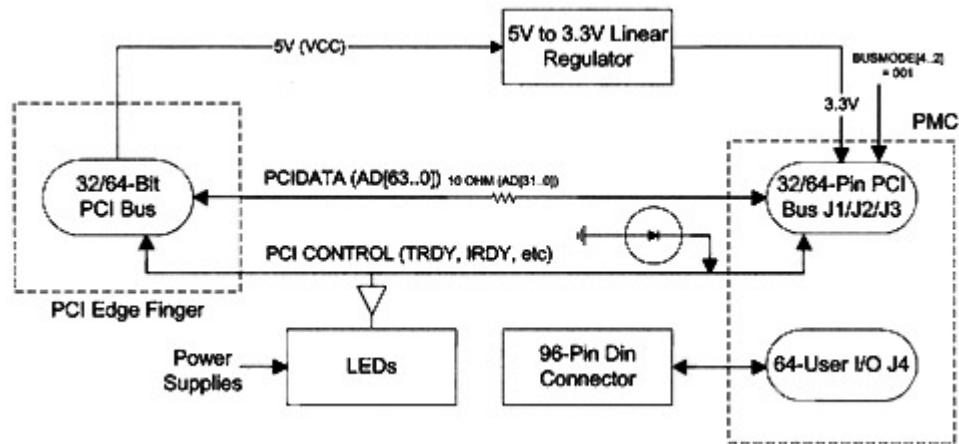
Power

+5 Volt, 3.3V or 5V PCI signaling environment

Environmental

Operating Storage/Transit

Temperature: +5° C to +50° C –20° C to +60° C

Humidity (NC): 5% to 90% @ 40° C

Electromagnetic Compatibility (EMC)

Intended for use in systems meeting the following regulations:

U.S.: FCC Part 15, Subpart B, Class A (non-residential)

Canada: ICES-003, Class A (non-residential)

Ordering Information

Part Number

8096 64-bit PCI to PMC Adapter for Delivery

ACT/Technico, a division of Advanced Control Technology, Inc.

760 Veterans Circle Warminster, PA 18974   -   Tel (215) 956-1200   -   Fax (215) 956-1201
www.acttechnico.com