

# 8-Channel Optically Coupled CompactPCI AC Voltage Input Board

- Complies with CompactPCI® specification PICMG® 2.1 R1.0
- Full hot swap/high-availability CompactPCI compliant
- 1,000 V withstand test voltage
- Utilizes Hewlett-Packard HCPL-3700 recognized under the component program of Underwriters Laboratories, Inc.
- 250 VRMS maximum voltage sensing
- Optically coupled inputs
- Single CompactPCI slot
- 3U board size
- 8-, 16-, or 32-bit data transfers
- Guaranteed temperature compensated threshold level with hysteresis
- Screw terminal I/O plug/header
- Field-replaceable fuses
- 3.3 V signaling, 5 V tolerant

#### **APPLICATIONS**

- Limit switch sensing
- Low-voltage detector
- Relay contact monitor
- Relay coil voltage monitor
- Current sensing

**OPERATIONAL OVERVIEW** — This product is designed to read all eight AC inputs with one byte of data at offset location 40H. The board supports positive true data. The VMICPCI-1120 does not support interrupts.

**POSITIVE TRUE INFORMATION** — The positive true options will present a logical *one* to the PCI bus corresponding to a logical *one* (a high-level voltage) generated by the board, or a high-level stored in the input latches (due to current flow in the optocouplers).

## **FUNCTIONAL CHARACTERISTICS**

**I/O Connector Type:** One right-angle 20-pin header with threaded flange. Mating receptacle connector has removable screw terminals.

**Field-Replaceable Fuse:** Each AC input channel is protected with an 800 mA, 250 VAC field-replaceable fuse

Addressing Scheme: The VMICPCI-1120 board address is assigned by the system BIOS per the CompactPCI specification

**Hot Swap CompactPCI Compliance:** This product conforms with the requirements of a full hot swap board per the hot swap specification PICMG 2.1 R1.0. Furthermore, it is capable of operating in a *high availability* system as defined by the hot swap specification.

**PCI Local Bus Compliance:** This product complies with PCI Local bus specification, version 2.2 (V2.2)

# Vendor and Device Identification:

Vendor Identification is <u>114A</u> (HEX), which designates VMIC



Device Identification is  $\underline{1120}$  (HEX), which designates the VMICPCI-1120 board

#### Voltage Thresholds:

ON Voltage  $\geq$  70 VAC (±2 VAC) OFF Voltage  $\leq$  45 VAC (± 2 VAC)

Input Circuit Configurations: AC optically coupled voltage sensing

Data Polarity: Positive true only

## **Applications:**

Limit switch sensing Low-voltage detector Relay contact monitor current sensing

#### **Maximum Input Current:**

Average	50 mA
Surge	140 mA
Transient	500 mA
Turn-on voltage	70 VAC RMS
Turn-off voltage	45 VAC RMS
Hysteresis	25 VAC RMS

#### Maximum Input Voltage: 250 VRMS

Input Isolation: 1 K VAC RMS

**Applications Data:** Refer to Hewlett-Packard Application Note 1004





# PHYSICAL/ENVIRONMENTAL

**Temperature Range:** 0 to 65 °C, operating - 20 to 85 °C, storage

Power Requirements: 1.25 A at +5 VDC

Relative Humidity Range: 20 to 80 percent, noncondensing

Physical Dimensions: 3U CompactPCI board

# TRADEMARKS

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Figure 1. VMICPCI-1120 Functional Block Diagram



Figure 2. AC Board Typical Signal Conditioning