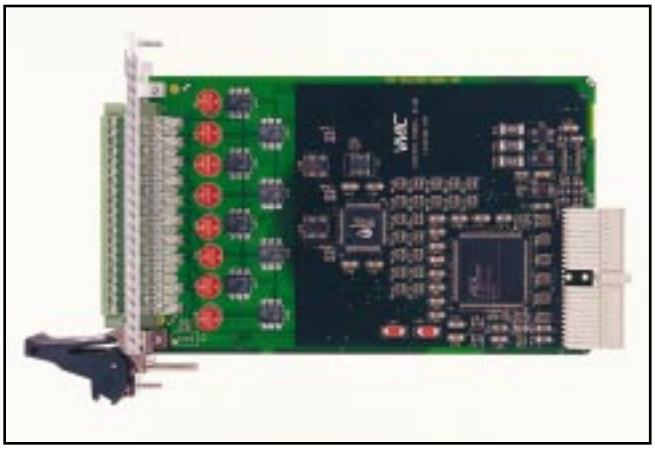
VMICPCI-2140

8-Channel Triac-Driven Optically Coupled CompactPCI AC Output Board

- Full hot swap CompactPCI® compliant and high availability
- 8 optically coupled Triac-driven outputs
- High isolation potential
  - 1 K VAC RMS sustained (channel-to-PCI bus)
- Galvanic (channel-to-channel) isolation to 600 V
- 8-, 16-, and 32-bit data transfers (single or burst mode)
- Memory addressing
- 300 mA current sinking outputs (RMS)
- 250 VRMS maximum output voltage
- Complies with hot swap CompactPCI specification PICMG 2.1 R1.0
- Single CompactPCI slot
- 3U board size
- Screw terminal I/O plug/header



FUNCTIONAL CHARACTERISTICS

Board Function: This board has eight optically coupled Triac-driven outputs. The VMICPCI-2140 board uses the Siemens IL410 zero-crossing Triac for the output drivers. The outputs provide a sustained 1 K VAC RMS of system isolation to the CompactPCI bus backplane.

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.

Addressing Scheme: The VMICPCI-2140 board address is assigned by the system BIOS per the CompactPCI specification

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

Vendor and Device Identification: The CompactPCI configuration register, reserved for the vendor identification shall have the value 114A (HEX), which designates VMIC. The CompactPCI configuration register, reserved for the device identification shall have the value 2140 (HEX), which designates the VMICPCI-2140.

OUTPUT CHARACTERISTICS

(See Table 1.)

Output Leakage Current: 10 µA maximum

Output Voltage: 250 VRMS maximum

Switching Time: 35 µs turn-on-time (typical)
50 µs turn-off-time (typical)

Output Configuration: Refer to Figure 2

Isolation Voltage: 600 V sustained channel-to-channel maximum.

PHYSICAL/ENVIRONMENTAL

Physical Dimensions: 3U CompactPCI board

User Connectors: One right-angle 20-pin header with threaded flange. Mating receptacle connector has removable screw terminals.

Ambient Temperature: 0 to 65 ˚C, operating
-40 to +85 ˚C, storage

Humidity: 20 to 80 percent, noncondensing

Altitude: 0 to 10,000 ft (3,048 m)

Cooling: 50 LFM minimum air flow

Power Requirements: +5 VDC at 1.5 A

Drivers: VxWorks and Windows NT® drivers are available (see VMISFT-9450)

TRADEMARKS

Ordering Options								
December 16, 1999 800-652140-000 A	A	B	C	–	D	E	F	
VMICPCI-2140	–	0	0	0	–			
ABC = 000 (Options reserved for future use)								

For Ordering Information, Call:
1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859
E-mail: info@vmic.com Web Address: www.vmic.com

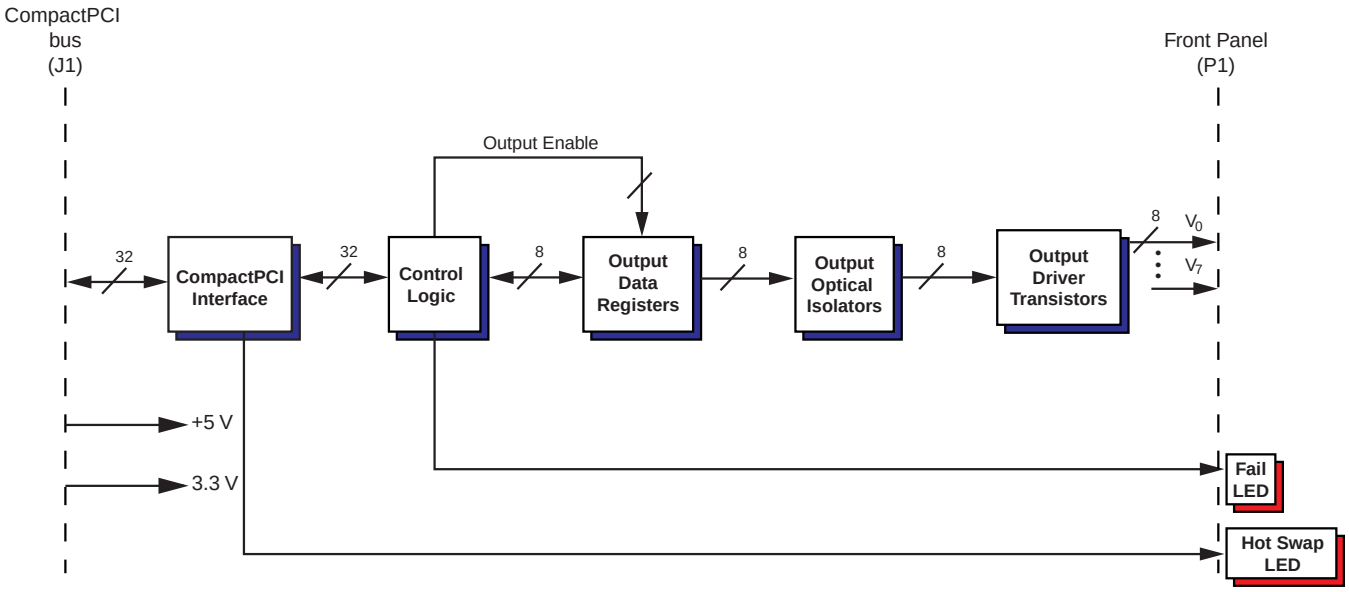


Figure 1. VMICPCI-2140 Functional Block Diagram

Table 1. Output Characteristics

Mode	Parameter	Condition	Min.	Typ.	Max.	Units
Voltage Sourcing and Sinking	Voltage External (V_{CE})				250	V VRMS
Current Sinking	I_{CE} (Sinking)	Output On			300	mA - RMS
Current Sinking	I_{CE} (Sinking)	Output Off			10	µA
Voltage Sourcing or Current Sinking	T_D On			35		µs
Voltage Sourcing or Current Sinking	T_D Off			50		µs

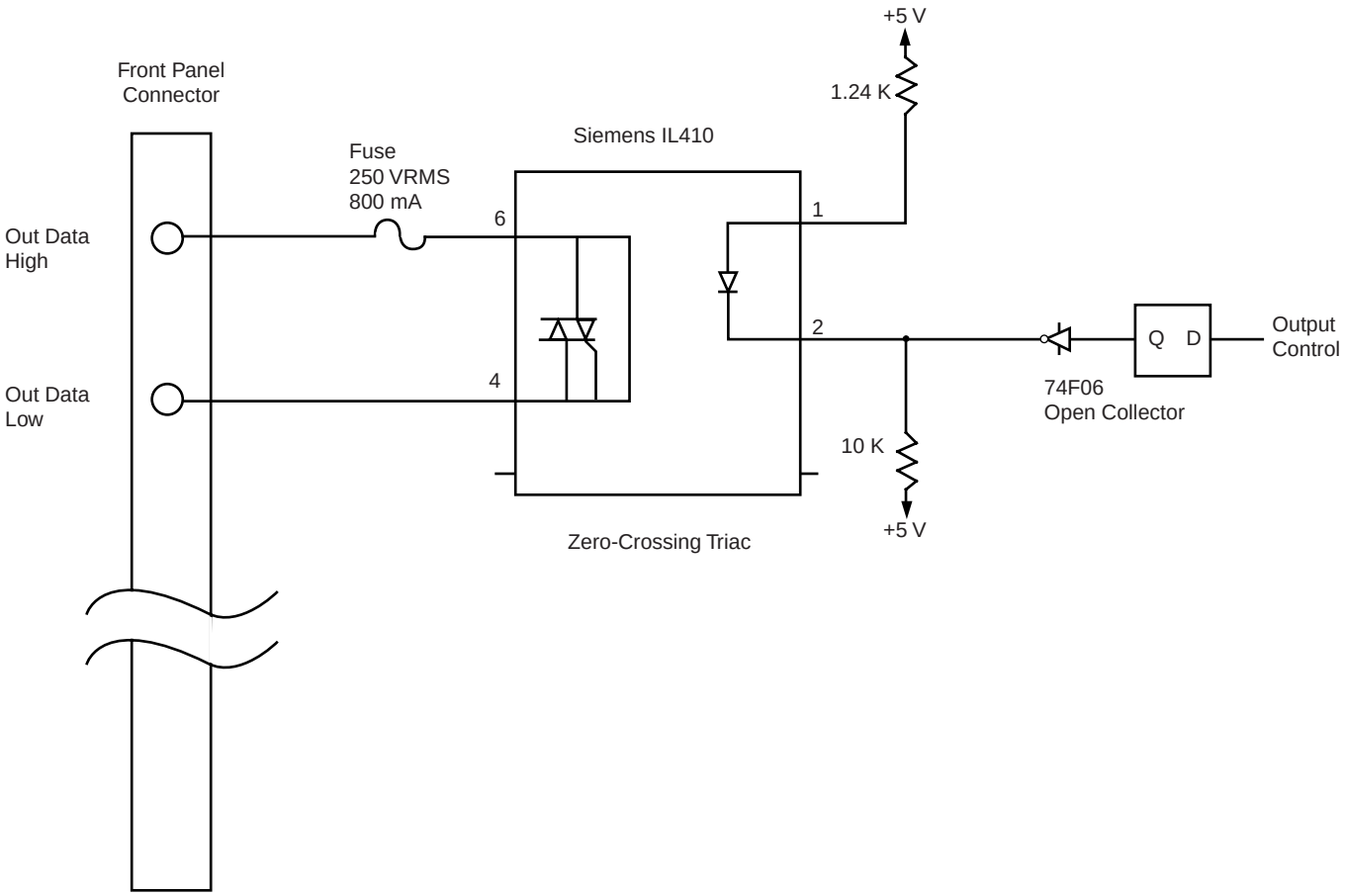


Figure 2. Output Configuration