

VMIPCI-2335 16-Channel Optically Coupled Digital

Output Board with Built-in-Test

- 16 optically coupled outputs
- High isolation potential
- 1.5 kV sustained (channel-to-PCI bus)
- Galvanic (channel-to-channel) isolation to 500 V sustained in current sinking mode
 8-, 16-, and 32-bit data transfers
- I/O addressing
- 300 mA current sinking outputs
- 50 V maximum output voltage
- Supports Built-in-Test
- Complies with PCI local bus specification
- VMISFT-9450 software driver available for:
 - Windows NT®
 - VxWorks — QNX
 - Linux

FUNCTIONAL CHARACTERISTICS

Board Function: This board has 16 optically coupled outputs. The outputs provide a sustained 1.5 kV of system isolation to the PCI bus backplane.

Compliance: This board complies with the PCI Local Bus Specification Revision 2.1

Built-in-Test: The VMIPCI-2335 supports both on-line and off-line Built-in-Test (BIT).

The contents of the Output Data Registers may be read at any time, thereby supporting on-line testing. The outputs may be put into off-line test mode by setting bits in the CSR. In the off-line test mode, the open-collector outputs are all disabled. Data patterns may then be written to and read from the Output Registers for test purposes without affecting the outputs.

Addressing Scheme: The VMIPCI-2335 board address is assigned by the system BIOS per the PCI specification.

OUTPUT CHARACTERISTICS

See Table 1

Output Configuration: Optically isolated, open collector. The user may use the external voltage pins on byte boundaries. External voltage may be injected on byte boundaries to supply power for pull-up resistors.

Output Leakage Current: 500 μ A maximum at V_{CE} = 50 V and T_A = 60 °C

Output Voltage: 50 V maximum

Switching Time: See Table 1

Output Isolation: 10 M Ω , minimum

Isolation Voltage¹:1,500 V sustained field to PCI bus; 500 V sustained channel-to-channel maximum.*



PHYSICAL/ENVIRONMENTAL

Physical Dimensions: Half size PCI board, 4.2-in. height x 6.9-in. length

User Connectors: One 37-pin D-shell connector (female)

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, maximum

TRADEMARKS

The VMIC logo is a registered trademark of VMIC. Windows NT is a registered trademark of Microsoft Corporation. Other registered trademarks are the property of their respective owners.

Ordering Options										
Dec. 16, 1999 800-852335-000) B	Α	В	С	-	D	Е	F		
VMIPCI-2335	-		0	0	-					
A = Output Configuration 0 = Current Sinking 1 = Voltage Sourcing 15 kΩ Pull Ups* BC = 00 (Options reserved for future use)										
Note										
*Voltage Sourcing maintains byte-to-byte isolation only.										
Compatible Cable Connector										
Standard Subminiature D 37-pin female connector.										
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 Copyright © August 1995 by VMIC Specifications subject to change without notice.										

^{1.} Voltage sourcing option will limit isolation.





Figure 1. VMIPCI-2335 Functional Block Diagram

PARAMETER	CONDITION	MIN	ТҮР	МАХ	UNITS
V _{CE (MAX)}				50	V
V _{CE} (SAT)	I _{CE} = 300 mA			1.2	V
I _{CE}				300	mA
I _{CEO} (CURRENT SINKING)				500	μA
T _D ON	V _{CE} = 50 V T _A = 60 °C		7.0		μs
T _D OFF				56	μs

Table 1. Output Characteristics



Figure 2. Typical Output Configuration