ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Abaco Systems / VMIC VMIVME-2170A-110* at our website: *Click HERE*

VMIVME-2170A
32-bit Optically Isolated Digital Output

- 32 optically isolated outputs
- 2.5 or 300 mA outputs
- Externally supplied pull-up voltage for maximum isolation
- Field-configurable pull-up resistors
- Source or sink output capability with low current option
- High output voltage tolerance to 30 V normal mode
- High isolation potential; 1 kV sustained, 6 kV pulsed
- Positive or negative true options
- 8- or 16-bit data transfers
- On-board DIP switches provide 14-bit board address selection
- Double Eurocard format with front panel
- Field-selectable nonprivileged or supervisory short I/O transfers

APPLICATIONS

- Digital control from VMEbus
- Elimination of system ground loops
- Control in high-electrical noise environments
- Control of multiple-potential system components

INTRODUCTION — The VMIVME-2170A Optically Coupled Digital Output Board consists of VMEbus compatibility logic, data control logic, four 8-bit output registers, and 32 optically isolated high-level outputs. The board is implemented as a double Eurocard form factor PC board, and provides all necessary address decoding and data transfer control logic to accept both 8- and 16-bit data transfers. Optical couplers isolate the 32 outputs from each other and from the VMEbus. Both supervisory and nonprivileged data transfers are supported.

The VMIVME-2170A's typical output configuration is shown in Figure 1. The internal configuration of the VMIVME-2170A board is shown in Figure 2.

FUNCTIONAL CHARACTERISTICS

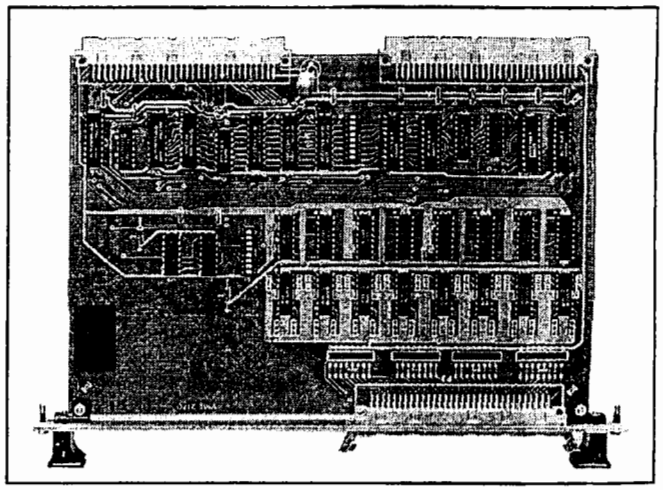
Board Function: 32-bit, optically isolated, digital output board, designed and optimized specifically for the VMEbus. Featuring high isolation, the VMIVME-2170A provides a flexible, low-cost 4-byte digital output port with high noise immunity.

Compatibility: The VMIVME-2170A is a standard double height VME printed circuit board, and is electrically and mechanically compatible with the VMEbus.

Addressing Scheme: Addressable as four 8-bit ports or two 16-bit registers, located on any 32-bit boundary within the short supervisory or short nonprivileged I/O space.

Board Address: Board address is selected by 14 on-board DIP switches. Operation is supported in any available slot in the VMEbus backplane, except slot 1.

VMEbus Access: Address modifier bits are decoded to support either short supervisory or nonprivileged short I/O access. A single jumper is provided to support this option, and is factory configured for short supervisory I/O access.



Data Transfer Type: D16, D8(EO)

Access Time: 250 ns maximum

OUTPUT CHARACTERISTICS

Output Current Modes: See Figure 1 and Table 1 for high and low current options.

Output Configurations:
Current sinking with pull-up resistor
Current sinking, no pull-up resistor
Voltage sourcing (low current mode)

Ordering Options

March 29, 2000 800-102170-000 E	A	B	C	–	D	E	F
VMIVME-2170A	–			0	–			

A = Data Polarity
1 = Positive True
2 = Negative True
B = Output Current
0 = 2.5 mA
1 = 300 mA
C = 0 (Option reserved for future use)

Connector Data

Compatible Cable Connector	Panduit No. 120-964-435
Strain Relief	Panduit No. 100-000-072
PC Board Header Connector	Panduit No. 120-964-033A

Note

Panduit is also known as ITW/Pancon.

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 © January 1986 by VMIC
Specifications subject to change without notice.

Output Leakage Current:

High Current Version: 500 µA maximum at V_{CE} = 50 V and T_A = 70 °C

Low Current Version: 50 nA maximum at V_{CE} = 10 V and T_A = 70 °C

Output Voltage: 30 V maximum

Switching Time: See Table 1

Output Isolation: 10 MΩ, minimum

Isolation Voltage: 1,000 V maximum sustained field-to-VMEbus, 6,000 V for one second. Sustained channel-to-channel potential is 500 V maximum.

PHYSICAL/ENVIRONMENTAL

Temperature: 0 to +55 °C, operating
-20 to +85 °C, storage

Humidity: 20 to 80 percent relative, noncondensing

Altitude: Operation to 10,000 ft

Cooling: Forced air convection

Dimensions: Double height Eurocard (160 mm x 233.35 mm)

Output Connector: Front panel 64-pin DIN connector. Refer to the Connector Data table on the Ordering Options sheet.

Power Requirements: 1.5 A (typical) at +5 VDC
2.2 A (maximum)

MTBF: 153,100 hours (stress)

RELATED PRODUCTS AND APPLICATIONS — VMIC offers a broad range of digital I/O products for VME systems, and supports these products with comprehensive applications information. Contact VMIC for a description of current products and a list of application guides.

SPECIFYING FACTORY OPTIONS — To accommodate the variety of control output requirements encountered in VMEbus applications, the following VMIVME-2170A characteristics can be specified as factory options:

Data polarity	Positive or negative true
Pull-up resistor sockets	The user may select and install pull-up resistors
Output current	2.5 or 300 mA sink

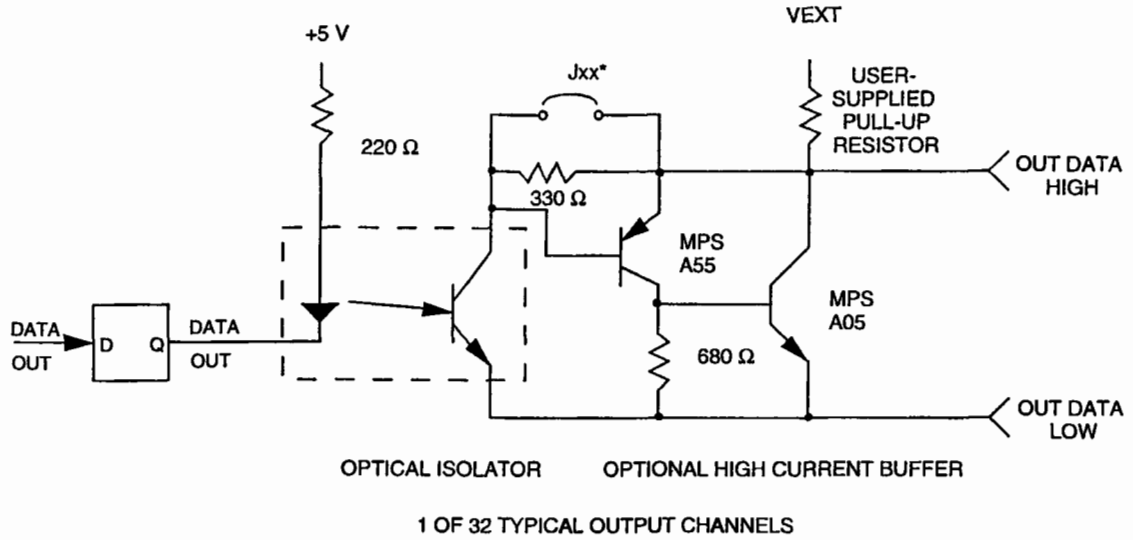
Refer to the Ordering Options to obtain the part number codes associated with each option.

Output current is specified either as *zero* for low (2.5 mA) current, or as *one* for high (300 mA) current. All low current outputs are mutually isolated from each other and from the VMEbus. High current outputs are isolated in groups of four outputs.

The pull-up resistor is chosen by the user. DIP sockets are installed on the board for these resistor networks. The type of resistor DIPs used must be the isolated type. This DIP has individual resistors between pins across the package. For example, a resistor is between Pins 1 and 16. The value of this resistor is a function of the voltage across it, and the power it can dissipate. For example, a 1/8 W DIP with an external voltage (Vext) of 48 V would have a value of 18 kΩ ($R = V^2/P$) as a minimum.

TRADEMARKS

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



* Install only Jxx for low current option.
Install the resistors and transistors for high current option.

Figure 1. VMIVME-2170A Typical Output Configuration

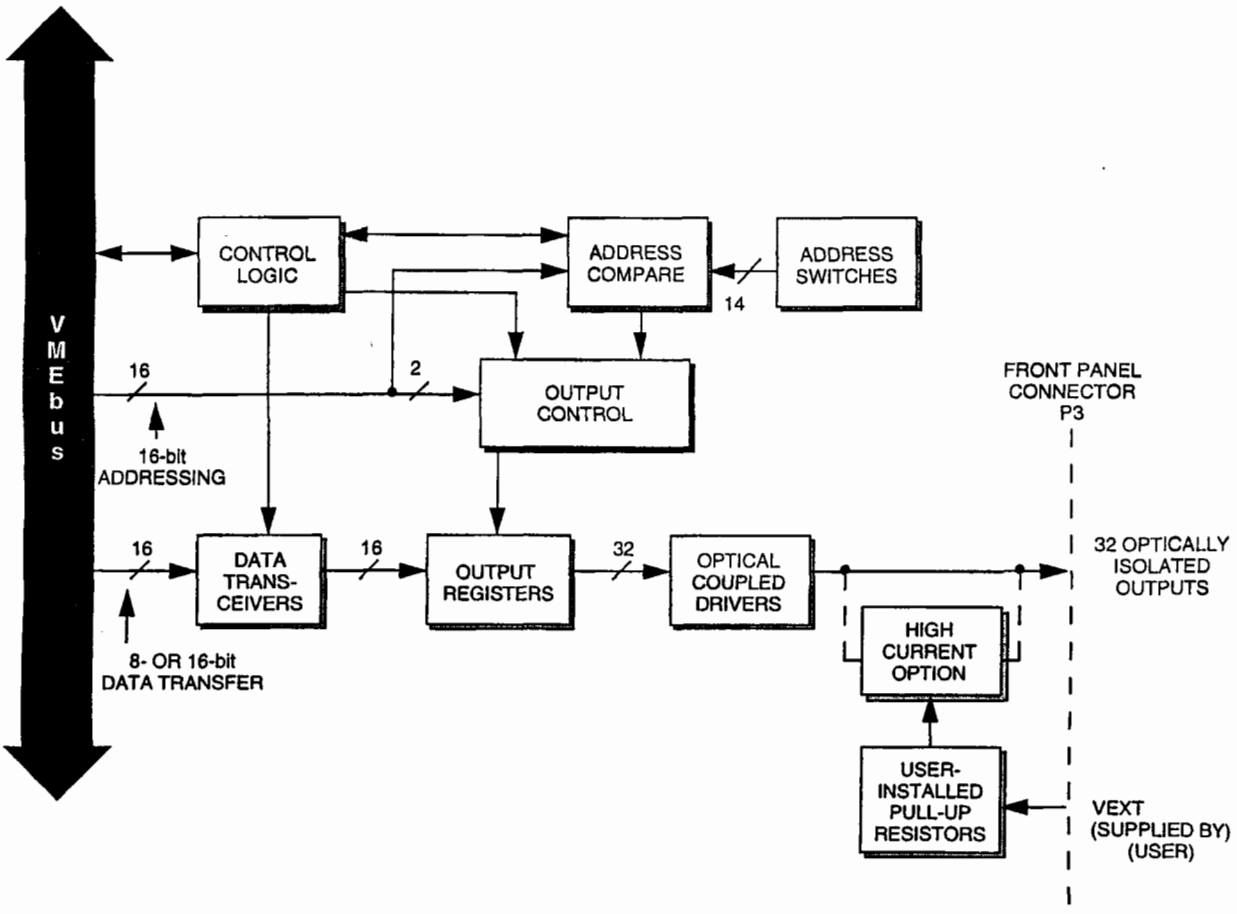


Figure 2. VMIVME-2170A Functional Block Diagram

Table 1. Output Characteristics

HIGH CURRENT OPTION:

Parameter	Conditions	Minimum	Typical	Maximum	Units
V_{CE}		50			V
V_{CE} (SAT)	I_{CE} = 300 mA			2.5	V
I_{CE}				300	mA
T_D ON			7.0		µs
T_D OFF			3.5		µs
I_{CEO}	V_{CE} = 50 V T_A = 70 °C			500	µA

LOW CURRENT OPTION:

V_{CE}		30			V
V_{CE} (SAT)	I_{CE} = 2.5 mA			0.7	V
I_{CE}				2.5	mA
T_D ON			6.0		µs
T_D OFF			25	50	µs
I_{CEO}	V_{CE} = 10 V I^F = 0			50	nA

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP