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

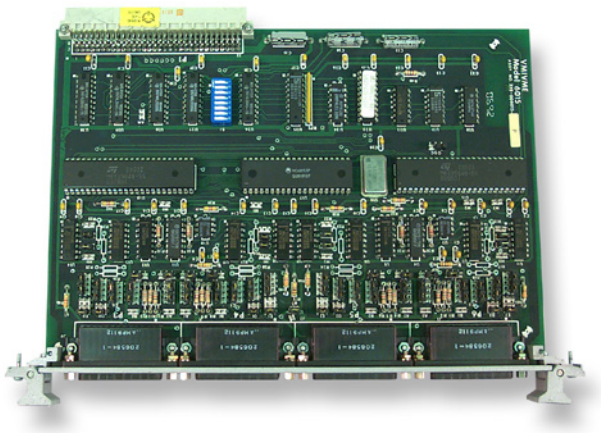
Expert team | Trust guarantee | 100% satisfaction

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

Find the *Abaco Systems / VMIC VMIVME-6015 / VMIVME-6015-000* at our website: *Click HERE*

GE
Intelligent Platforms

VMIVME-6015* Specifications



Quad-Serial Input/Output Interface Board

Features:

- A16:D8
- Four full-duplex channels
- Fully programmable synchronous/asynchronous operation
- RS232C, RS423, RS422A, and RS485 compatible
- 0 to 1 Mbaud data rate
- Self-test capability
- Programmable interrupt capability
- Modem control lines for each channel
- Uses four industry-standard DB25 connector
- Double Eurocard form factor
- Four programmable baud rate generators
- Asynchronous features
  - 5, 6, 7, or 8 bits/character
  - 1, 1 1/2, or 2 stop bits
  - Even, odd, or no parity
  - Break generation and detection
  - Parity, overrun, and error detection
- Synchronous features
  - Compatible with byte-oriented protocols such as IBM® BiSync
  - Compatible with byte-oriented protocols such as HDLC and IBM SDLC
  - Internal CRC generation
- Supports half-duplex 1 Mbaud RS485 LAN (local area network)
- Sample software available

imagination at work

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Ordering Options							
August 24, 2010 800-006015-000 F		A	B	C	D	E	F
VMIVME-6015	–	0	0	0	0	0	

A = 0 Reserved
B = 0 Reserved
C = 0 Reserved
D = 0 Reserved
E = 0 Reserved
F = Conformal Coating
0 = Standard VME front panel without conformal coating
1 = Reserved
2 = Standard VME front panel with conformal coating

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

Copyright © 2010 GE Intelligent Platforms Embedded Systems, Inc.
All Rights Reserved.
Specifications subject to change without notice.

Functional Characteristics

Introduction: The VMIVME-6015* Serial Input/Output (SIO) is a four-channel multifunctional peripheral interface board, designed to satisfy a wide variety of serial data communications requirements in VMEbus systems. The basic function of the VMIVME-6015 is a serial-to-parallel, parallel-to-serial controller; however, it is software configurable so that its "characteristics" may be optimized for any given serial data communications application.

The VMIVME-6015 is capable of handling asynchronous protocols, synchronous byte-oriented protocols (such as IBM BiSync), and synchronous bit-oriented protocols (such as HDLC and IBM SDLC). This SIO Controller can also be used to support virtually any serial protocol for applications other than data communications (cassette or floppy disk interface, for example).

The VMIVME-6015 can generate and check CRC codes in any synchronous mode and may be programmed to check data integrity in various modes. The controller also has facilities for modem controls, and in applications where these controls are not needed the modem controls may be used for general-purpose I/O.

The VMIVME-6015 is designed with two MK68564 SIO dual-channel multifunctional peripheral circuits that support a self-test capability. When the loop mode bit is set in the command register, the loop mode is activated to support Built-in-Test functions.

Asynchronous features
— 5, 6, 7, or 8 bits/character
— 1, 1 1/2, or 2 stop bits
— Even, odd, or no parity
— x1, x16, x32, and x64 clock modes
— Break generation and detection
— Parity, overrun, and framing error detection

Byte synchronous features
— One or two sync characters in separate registers
— Automatic sync character insertion
— CRC-16 or CRC-CCITT block check generation and checking

Bit synchronous features
Abort sequence generation and detection
— Automatic zero insertion and deletion
— Automatic flag insertion between messages
— Address field recognition
— I-field residue handling
— Valid receive messages protected from overrun
— CRC-CCITT block check generation and checking

Signal Conditioning Options: The VMIVME-6015 Quad-SIO Board is designed to support a wide variety of signal conditioning options, such as EAI, RS232, RS422, RS423, and RS485. Jumpers are provided to allow the user to independently configure each I/O channel. In addition to the signal conditioning options listed above, each channel of the SIO Board may be configured as an RS485 token passing network.

Self-Test The MK68564 SIO chip is designed with internal self-test logic that supports a loop test on each SIO channel. When the loop mode bit is set in the command register, the receiver shift clock input pin (RxC) and the receiver data input pin (RxD) are electrically disconnected from the internal logic. The transmit data output pin (TxD) is connected to the internal receiver data logic, and the transmit shift clock pin (TxC) is connected to the internal receiver shift clock logic. All other features of the SIO are unaffected.

RS485 Token Passing Network: GE's Model VMIVME-6015 SIO interface provides an easy connection to the new RS485 interface standard. RS485 is an upgraded version of the earlier RS422 standard for balanced voltage digital interface circuits. Up to 32 RS485 devices can be multidropped onto a single low-cost 24-gauge twisted-pair cable, forming a half-duplex network. The RS485 transmitter in the VMIVME-6015 is controlled via the RS232 request-to-send signal. The RS485 interface is typically capable of 0 to 100 Kbaud at distances up to 4,000 feet.

A network of RS485 devices would normally be implemented in a token bus topology. All devices would be wired in line, one after another, forming a single main bus. One device would have the imaginary token, and thereby the ability to transmit onto the bus. All the RS232 devices connected to the bus via a VMIVME-6015 need to share some common software in order to determine which device has possession of the token, and to control their request-to-send signals.

RS485 improvements over RS422 include higher receiver input impedance, increased generator drive, and a greater common-mode voltage range. The VMIVME-6015 will operate with a common-mode voltage (ground potential difference) of ±7V peak. This means the ground voltage difference between any two VMIVME-6015s in a network can be up to 7V. Since the signal grounds between RS485 devices are normally not connected, problems caused by ground loop currents are virtually eliminated. This fact, along with the inherent

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

common-mode noise rejection of differential transmission, makes RS485 a viable interface for multipoint communication in both data processing and industrial control applications.

Other types of networks include those with a single transmitter and multiple receivers, and those with a single receiver and multiple transmitters. Both types of these networks are commonly used where there is one controlling device (master) and several devices being controlled (slaves). This network allows full duplex operation over two pairs of twisted-pair wires.

Slave Data Transfer Options: A16: D8

Interrupter Options: Any one of I1 to I7 DYN for each of two-channel pairs

Physical/Environmental Specifications

Dimensions: 6U (4HP) single slot Eurocard form factor

Height	9.2 in. (233.4mm)
Depth	6.3 in. (160mm)
Thickness	0.8 in. (20.3mm)

Power Requirements:
1.6A maximum (0.85A typical) at +5VDC
100mA maximum (0.80mA typical) at +12VDC
100mA maximum (0.80mA typical) at -12VDC

Temperature:
Operating: 0° to +60°C

Altitude:
Operating: 0 – 10,000 ft (3,000m)
Storage: 0 – 40,000 ft (12,000m)

Humidity:
Operating: relative humidity 5% to 90%, noncondensing
Storage: relative humidity 5% to 90%, noncondensing

I/O CONNECTION: Four 25-pin subminiature D female connectors mounted on front panel

I/O Signal Conditioning Level Compatibility (Jumper-Selectable):
Data Lines: RS232C, RS422A, RS423, and RS485
Control Lines: RS232C

Standard Data Rates Supported:
76.8K, 38.4K, 19.2K, 9,600, 7,200, 4,800, 3,600, 2,400, 2,000, 1,800, 1,200, 600, 300, 110

Other Rates Supported:
1M, 500K, 333K, 250K, 167K, 143K, 125K, 111K, 100K, 62.5K, 50K, 33K, 25K

Trademarks

* indicates a trademark of GE Intelligent Platforms, Inc. and/or its affiliates. All other trademarks are the property of their respective owners.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

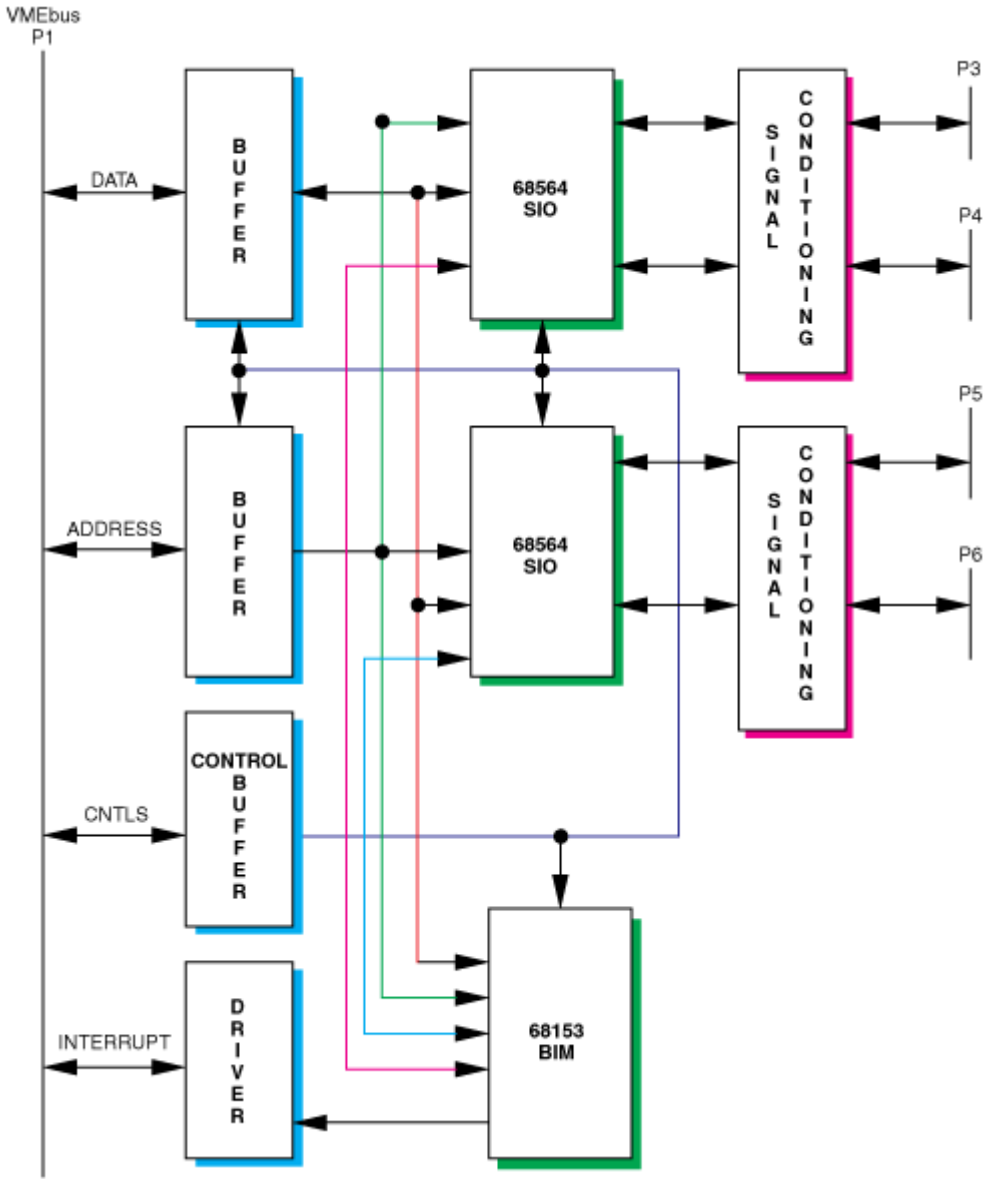


Figure 1. VMIVME-6015 Functional Block Diagram

GE Intelligent Platforms
Information Centers

Americas:
1 800 322 3616 or 1 256 880 0444

Asia Pacific:
86 10 6561 1561

Europe, Middle East and Africa:
Germany +49 821 5034-0
UK +44 1327 359444

Additional Resources

For more information, please visit the GE Intelligent Platforms Embedded Systems web site at:

www.ge-ip.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

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