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Find the *Abaco Systems / VMIC VMIVME-6016-000* at our website: ***Click HERE***

VMIVME-6016
VMEbus Intelligent 16-Channel Asynchronous Serial Controller

- 16 channels available in one VMEbus slot
- Line parameters independently controlled for each channel by control blocks in memory
  - — Baud rate
  - — Internal ring buffer size
  - — User buffer size and address
  - — User buffer type (linear, ring)
  - — Flow control: XON/XOFF, Any/XOFF, user characters, RTS/CTS, none
  - — Interrupt on EOB or user-defined character
  - — Interrupt on receive timeout
  - — Interrupt on flow control
  - — Interrupt on transmit complete
  - — BREAK send/receive and duration
  - — Interrupt vector and level
- RJ-11 front panel channel connectors
- Signal levels RS-232 compatible
- Channel signals: TXD, RXD, RTS, CTS, DCD, GND
- Short I/O-accessed control blocks
- Standard/extended/DMA-accessed user buffers
- Programmable VMEbus address modifiers
- Size-programmable on-board ring buffers
- 128, 256, 512, or 1,024 Kbyte total user buffer space
- 68020 processor, 25 or 32 MHz, no-wait-states
- Each channel baud rate selectable 50 through 38,400 bps
- Programmable interrupt vector and level
- VMEbus compatible (ANSI/IEEE STD 1014-1987 IEC 821 and 297)
- MA32:MBLT32 as master, optional MBLT (VME64)
- SAD032:SD32 as slave, optional MBLT (VME64)
- Front panel status LED
- Programmable slave address for extended/standard
- Jumper-selectable slave address for short I/O
- Bus release: ROR, RWD, FAIR, RCLR
- Jumper-enabled system controller functions

DESCRIPTION — The VMIVME-6016 is a single-slot, 16-channel, serial port controller with dedicated on-board ring buffers for each channel (in both directions), and an on-board 25 MHz zero-wait-state 68020 microprocessor. The VMIVME-6016's VMEbus interface is controlled by a VIC068 VMEbus interface controller, and is jumper enabled to perform system controller functions. The 68020 microprocessor handles all character data input/output and buffering so the host driver overhead is kept to a minimum. The USER buffers are configurable as RING buffers or LINEAR buffers, and are also configurable to reside either on-board or off-board in VMEbus global memory.

Each channel is controlled through a Control Block in local memory. These blocks specify line parameters, DMA access mode (AM code), flow control method, BREAKs, interrupts, on-board transmit and receive ring buffer size, and off-board user buffer location, size, and method: linear or ring. This allows each of the 16 channels to be independently programmable for bit rate, handshake method, interrupts to the host, and control signals. Any valid combination of bit rates on the 16 channels is valid as long as the rated aggregate throughput of 30,000 characters per second (300,000 bits per second) is not exceeded. Note: these numbers assume the USER buffers are configured as RING buffers, and that they are located on-board.



The front panel has an RJ-11 6-pin telecom jack for each channel. Each channel supports signal ground and five signals: Receive Data, Transmit Data, Request to Send, Clear to Send, and Data Carrier Detect.

PROGRAMMABLE FEATURES —

Baud rate: 50 through 38,400 bit/s

Transmit and receive on-board and off-board buffer sizes

Flow control: XON/XOFF, any/XOFF, CTS/RTS, user-defined characters

Special characters for End-of-Transmission or End-of-Buffer, with optional interrupts

Send/receive BREAK

BREAK duration

Error status: parity, framing, overrun, break, flow control

Interrupts: priority, level, and vectors

VMEbus address and modifiers, for Control Blocks and off-board buffers

Enable/disable VMEbus BERR timer

Ordering Options

Sept. 6, 2002 800-006016-000 C		A	B	C	–	D	E	F
VMIVME-6016	–				–			

A = Memory Size
- 0 = 128 Kbyte User Buffer Space
- 1 = 256 Kbyte User Buffer Space
- 2 = 512 Kbyte User Buffer Space
- 3 = 1,024 Kbyte User Buffer Space

B = CPU Speed
- 0 = 25 MHz CPU
- 1 = 32 MHz CPU

C = Block Transfer
- 0 = No MBLT Capability
- 1 = MBLT (VME64) Capability

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
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SPECIFICATIONS

Slave: SAD032:SD32:MBLT (A32:A24:A16:AD0:D32:D16:D8(EO); MD64) A16 address base jumper selectable; 256 bytes occupied. A32/A24 address base programmable; 128, 256, 512, or 1,024 Kbyte occupied. Supervisory only, or both supervisory and nonprivileged allowed.
Interrupt levels and vectors programmable.

Master: MA32:MBLT32:MBLT (A32:A24:A16:D32:D16:D8(EO):BLT; MD64)
Bus Request Level 0, 1, 2, or 3
Interrupt levels and vectors programmable

Maximum Aggregate Transfer Rate: 40,000 characters/s when on-board buffers are used in a ring format using a 25 MHz CPU. A 32 MHz CPU yields 51,000 characters/s in this case. The maximum aggregate transfer rate when off-board buffers (DMA Access) are used is approximately 15,000 bytes/s depending on the access time of the memory device used.

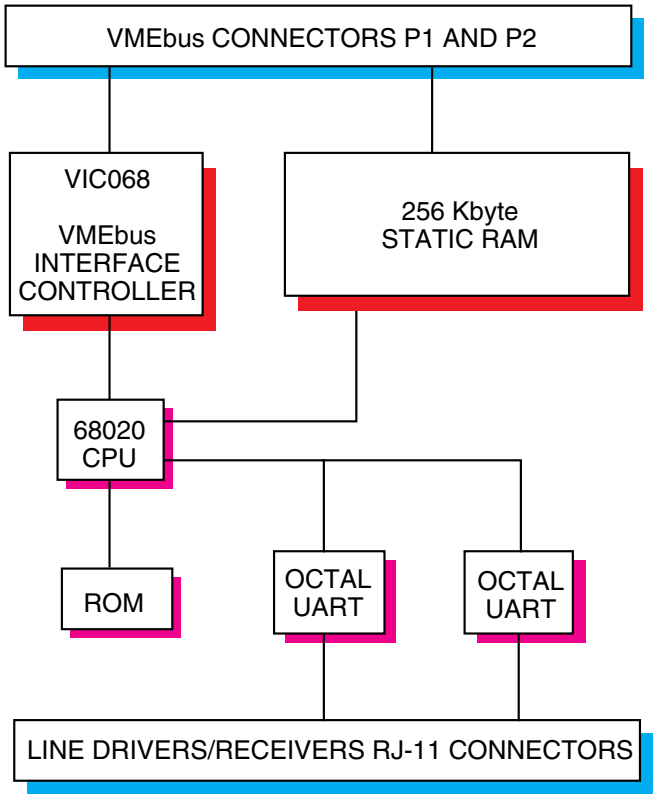


Figure 1. VMIVME-6016 Functional Block Diagram

PHYSICAL/ENVIRONMENTAL

Temperature: 0 to 65 °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 (6U) (160 x 233.35 mm)

Power Requirements: +5 VDC at 4.5 A maximum

TRADEMARKS

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Signal	RJ-11	Meaning	Direction
CTS	1	Clear to Send	Input
GND	2	Signal Ground	
RXD	3	Receive Data	Input
TXD	4	Transmit Data	Output
DCD	5	Data Carrier Detect	Input
RTS	6	Request to Send	Output

Figure 2. RJ-11 Pinout

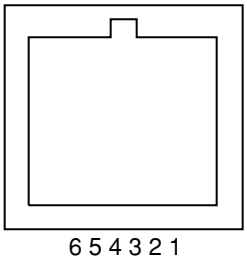


Figure 3. Front Panel View of RJ-11 Connector

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