



# VMIVME-5504L

## D32/A16 RS-485 VMEbus Repeater Link

- Multidrop capability reduces cost
- Differential line drivers and receivers provide  $\pm 7$  V common-mode noise rejection
- Software transparent link
- Supports up to 1,000-ft cables
- Supports the configuration of large I/O systems
- Supports 8-, 16-, and 32-bit data transfers
- Supports 16-bit addressing
- Double Eurocard form factor
- Link includes one master board, one slave board, and a wide variety of cable length options
- DIN-type I/O connectors
- Supports up to 16 slave-only chassis per master
- Slave chassis is placed in reset if master chassis is powered down or cables are disconnected

**OVERVIEW** — The VMIVME-5504L is designed to use a single master repeater board which may be connected to as many as 16 slave repeater boards using a single pair of cable assemblies with cable taps. This configuration allows VMEbus slave I/O boards residing in one VMEbus chassis to be controlled by a VMEbus master residing in another chassis. The VMEbus chassis in which VMEbus masters reside is referred to as a master chassis, while the VMEbus slave boards reside in a slave chassis.

A typical multidrop configuration is shown in Figure 1. This design concept allows the user to configure large I/O subsystems using a minimum number of slots in the master chassis.

For users who require dedicated, high-performance, long-line links, a single master VMIVME-5504 Master may be connected to a single VMIVME-5504 Slave as shown in Figures 2 and 3.

Detailed specifications are shown on page 2. The signals which are regenerated from the master VMEbus to the slave VMEbus are summarized below. Note that this product does not support interrupts generated by slave boards in the slave chassis.

The VMIVME-REPEAT Link regenerates the following VMEbus signals:

D00 to D31	SYSRESET*
A01 to A15	SYSCLK
DS0*	LWORD*
DS1*	IACK*
AS*	SYSFAIL*
AM0 to AM5	BERR*
WRITE*	DTACK*

Slave Chassis are placed in Reset if Master Chassis power is OFF or if the cables are disconnected. The VMIVME-5504 Slave supplies Power-on-Reset when Slave Chassis is powered up. The VMIVME-5504 slave board is the only board allowed to assert SYSRESET\* in a slave chassis.



### SPECIFICATIONS

- 1,000-ft maximum cable length
- Supports 8-, 16-, and 32-bit data transfers
- Supports 16-bit addressing
- Supports VMEbus slaves in slave chassis
- Allows expansion to 19 x 19 x 16 slots using 20-slot backplanes. See Figure 1.
- DIN format connectors
- Inexpensive ribbon cable interconnects
- Double Eurocard form factor
- The VMIVME-5504 slave board must be installed in slot 1 of the VMEbus slave chassis
- A VMIVME-5504 slave is the only VMEbus master allowed in the slave chassis
- Interrupts not supported

Ordering Options							
June 7, 1999 800-005504-000 C	A	B	C	-	D	E	F
<b>VMIVME-5504L</b>	-			-			
<b>ABC = Length of Cables in Feet</b> Standard Links: (See standard cable requirements) VMIVME-5504L-005 VMIVME-5504L-010 VMIVME-5504L-025 VMIVME-5504L-050 <b>For Nonstandard Link(s), Order:</b> VMIVME-5504 Master VMIVME-5504 Slave and Two Cables (see nonstandard cable requirements)							
Connector Data							
Compatible Connector	120-964-435						
Strain Relief	100-000-072						
PC Board Connector	120-964-053A						
Examples							
Part number VMIVME-5504L-025 would specify a VMIVME-5504 Master, a VMIVME-5504 Slave, and two 25-ft cables.							
Note							
Panduit is also known as ITW/Pancon.							
<b>For Ordering Information, Call:</b> 1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859 E-mail: info@vmic.com Web Address: www.vmic.com Copyright © November 1993 by VMIC Specifications subject to change without notice.							

- Typical VMEbus cycle delay (for accesses across 10-ft cables)
  - Read delay 340 ns
  - Write delay 380 ns

**PHYSICAL/ENVIRONMENTAL**

**Temperature Range:** 0 to 65 °C, operating  
-40 to 85 °C, storage

**Altitude:** Operation to 3,000 m

**Relative Humidity Range:** 20 to 80 percent, noncondensing

**Cooling:** Forced air convection (standard VME slot)

**Power Requirements:** VMIVME-5504 Master  
+5 V at 2.0 A (maximum)  
±12 V at 50 mA (maximum)  
VMIVME-5504 Slave +5 V at 2.1 A (maximum)

**MTBF:** 5504L: 117,800 hours (217F)  
5504M: 243,100 hours (217F)  
5504S: 228,600 hours (217F)

**STANDARD CABLE REQUIREMENTS**

The VMIVME-5504L requires two cables each. Cables may be ordered from VMIC according to the following model numbers:

Item	Description Model Number
1.	Cable Assembly - 5 ft VMIVME-000-64-005

Item	Description Model Number
2.	Cable Assembly - 10 ft VMIVME-000-64-010
3.	Cable Assembly - 25 ft VMIVME-000-64-025
4.	Cable Assembly - 50 ft VMIVME-000-64-050
5.	Cable Assembly - 100 ft VMIVME-000-64-100
6.	Cable Assembly - 150 ft VMIVME-000-64-150
7.	Cable Assembly - 200 ft VMIVME-000-64-200
8.	Cable Assembly - 250 ft VMIVME-000-64-250

**NONSTANDARD CABLE REQUIREMENTS**

The VMIVME-5504L requires two cables each.

Item	Description Model Number
1.	Cable Assembly - xxx ft VMIVME-000-64xxx

Nonstandard cable lengths have long lead delivery times. (Must consult the factory for price and delivery.)

**TRADEMARKS**

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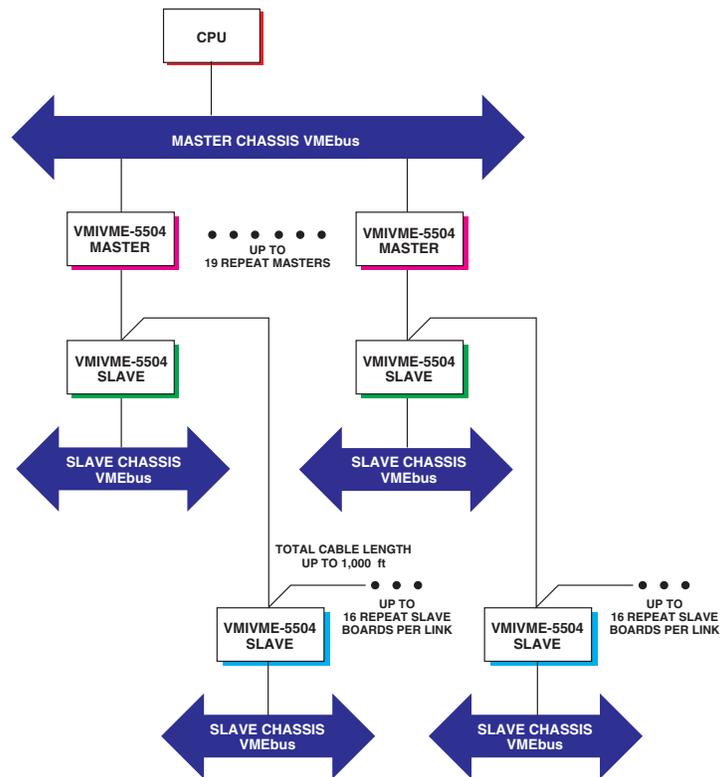


Figure 1. Typical Multidrop Configuration

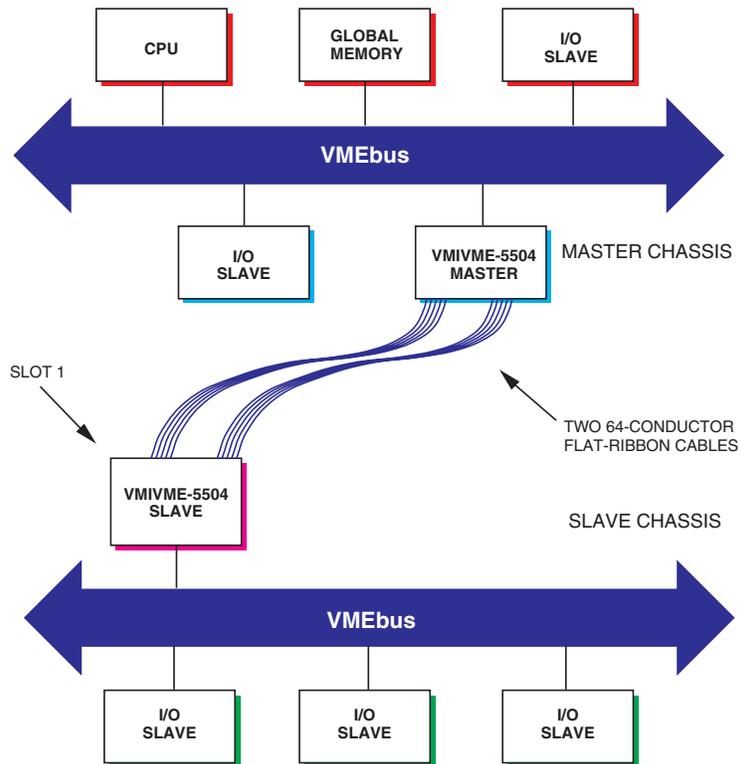
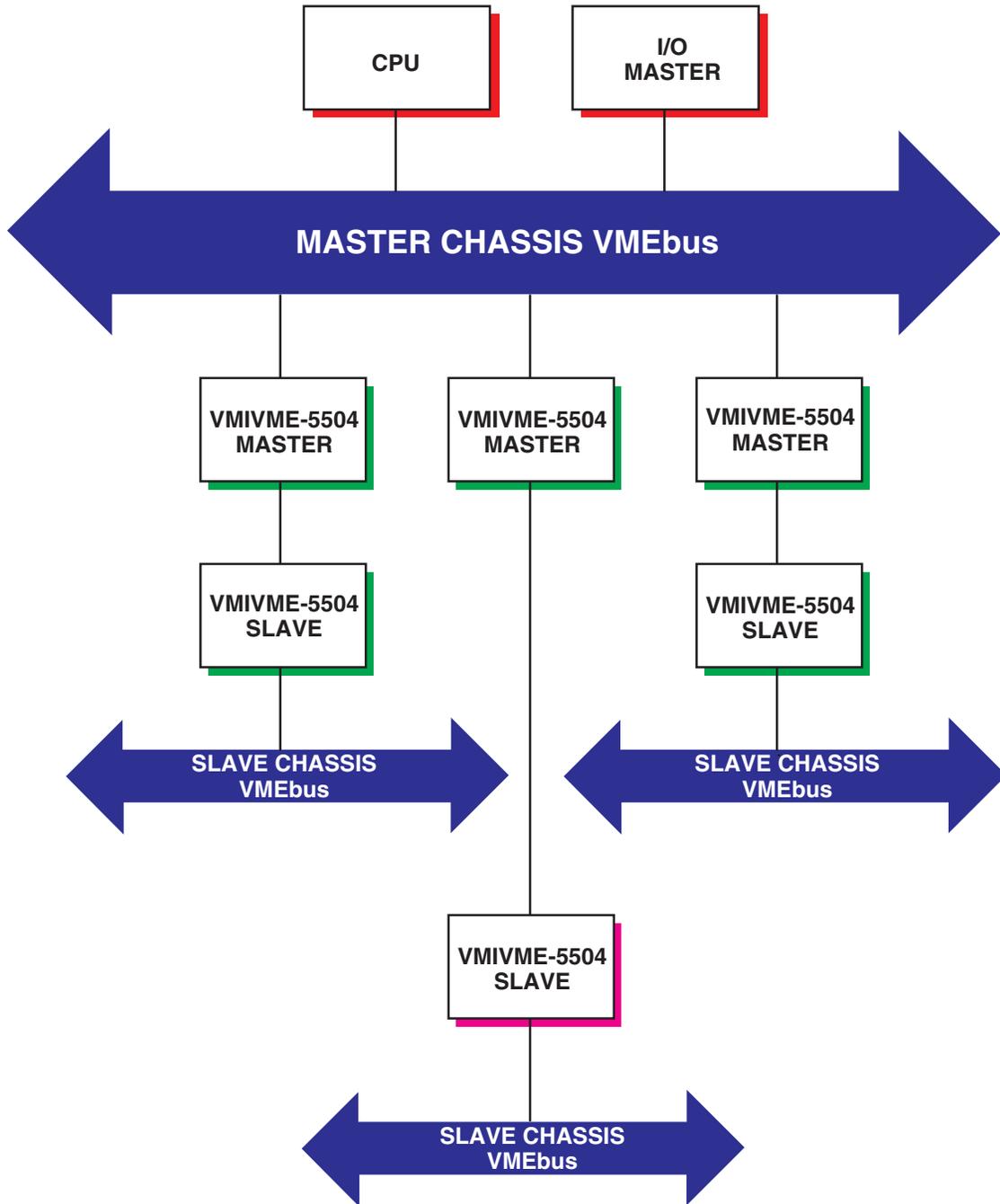


Figure 2. Typical Configuration Using a Dedicated Link



**Figure 3. Multiple Dedicated Slave I/O Chassis**