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VMIVME-7459
Single-Slot VMEbus IDE CD-RW/Hard Drive Module

Installation Guide

A GE Fanuc Company

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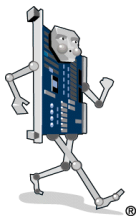
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Installation Procedures

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Introduction

The VMIVME-7459 is designed to interface with VMIC's VMEbus family of P2-compatible SBCs. A 6U single-slot VMEbus passive board, the VMIVME-7459 contains an 8x / 8x / 24x CD / CD-RW and optional Hard and Flash drive. VMIC, on occasion may supply equivalent or faster speed components. The VMIVME-7459 is a Read / Writable CD-ROM drive compatible with Photo CD, CD-I, Video CD, Enhanced CD, CD PLUS, CD-ROM-XA and CD-DA. The VMIVME-7459 can be configured to have the hard drive or CD-RW as the Master / Slave device.

Single Board Computers (SBCs) connect to the VMIVME-7459 using the P2 I / O connector on the rear of the VMEbus backplane, eliminating any cable clutter on the the front panel. A diagram of the VMIVME-7459 is shown in Figure 2 on page 8.

NOTE: The VMIVME-7459 will require a CD-ROM Authoring Software package in order to create / write to a CD-ROM. The software package is not provided with the CD-RW.

Features:

- VMEbus IDE CD / CD-RW (Option dependent)
- CompactFlash Drive (Optional)

- Hard Disk Drive (Optional)

NOTE: It is recommended that the VMIVME-7459 only be used in a standard VMEbus chassis with shrouded P2 96-pin backplane connectors. The shrouded connectors provide stability and the proper pin alignment.

The VMIVME-7459 utilizes the P2 connectors on the VMEbus Backplane rear I/O for the routing of all signals. All IDE signals are routed from the SBC to the VMIVME-7459 using 64-conductor flat ribbon cable assemblies. See “64-Conductor Cable Assembly (Model No. VMIVME-VMXC-2 and VMIVME-VMXC-3)” on page 9.

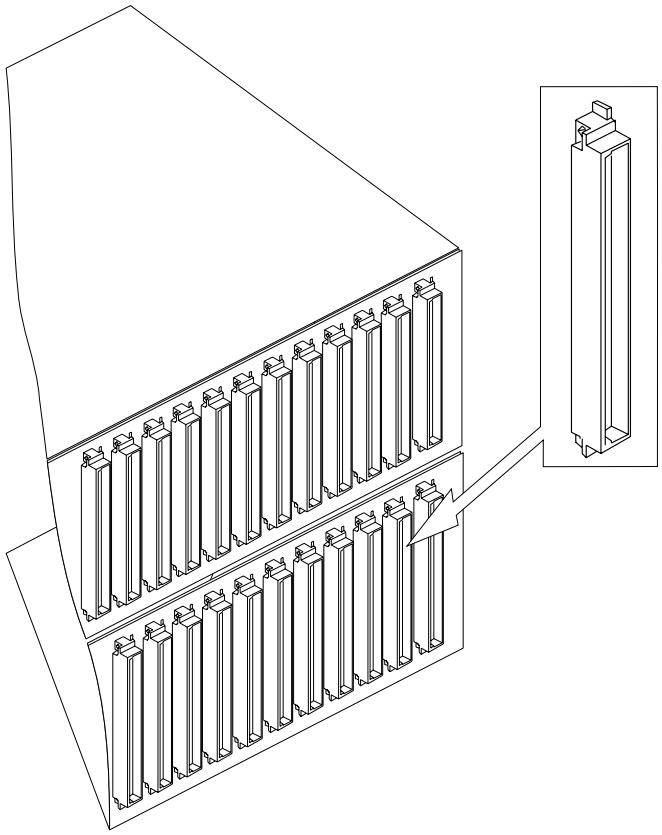


Figure 1 VMEbus Chassis with Shrouded Backplane Connectors

Master/Slave Configuration

The VMIVME-7459 can be configured as Master or Slave using either the CD-RW, Hard Drive or the CompactFlash. To configure the VMIVME-7459 as Master / Slave on-board jumpers are used. Jumper E3 is used to configured the CompactFlash. Jumper E4 is used to configure the Hard Drive, and Jumper E2 is used for the CD-RW.

Table 1 lists the configuration for each device. Figure 2 on page 8 is an illustration of the VMIVME-7459, showing the location of all user configurable jumpers.

NOTE: When configuring the Hard Drive for Master / Slave, check for the manufacturer of the drive. The Master / Slave configuration differs depending on the manufacturer.

Table 1 Master/Slave Jumper Configuration

Jumper	Pins	Installation	Description	*Hard Drive Manufacturer
CD-RW E2	1 - 2	Installed	Slave	
	1 - 2	Omitted	Master	
CompactFlash E3	1 -2	Installed	Master	
	1 - 2	Omitted	Slave	
*Hard Drive E4	1 - 2	Installed	Slave	IBM and Seagate
	2 - 4	Installed	Slave	Fujitsu
	3 - 4	Installed	Slave	Toshiba
	N / A	Omitted	Master	
NOTE: *The Hard Drive Master / Slave configuration is dependent on manufacturer (model) used.				

NOTE: Only two IDE devices can be used on the PCI bus when using VMIC's SBCs.

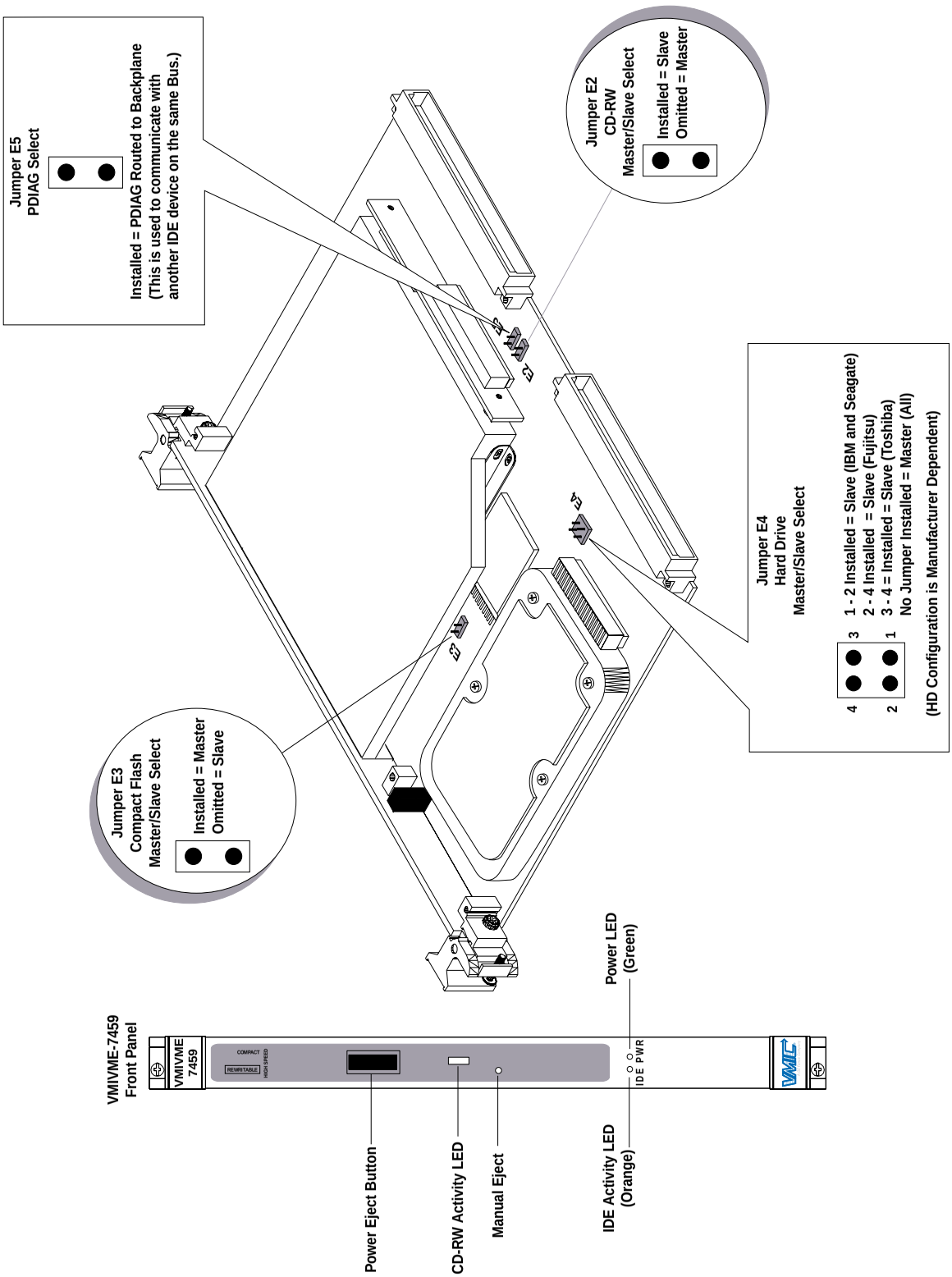


Figure 2 VMIVME-7459 Board Layout

Installation of the VMIVME-7459 with VMIC's SBCs

The VMIVME-7459 receives and passes IDE signals by way of the P2 connector, routed through the backplane from the SBC. To utilize the P2 configuration, a backplane which supports I/O cabling from the rear must be used, along with a 64-conductor cable assembly (**VMIC Model Number VMIVME-VMXC-2 or VMXC-3**) shown below. Figure 4 on page 10 is an illustration of the installation. The cables are an option with the VMIVME-7459.

When installing the SBC and the VMIVME-7459, the boards must be installed in consecutive slots. Under certain conditions the system may require a longer cable. This cable is available as (**VMIC Model Number VMIVME-VMXC-7**), see Figure 5 on page 11.

The P2 connection to the SBC involves the following board configuration:

1. Ensure that the SBC is configured to route the signals to the P2 connector (some SBCs require jumpering to route the IDE signals to the backplane). Refer to the product manual for the configuration and installation.
2. Insert the SBC into the desired slot.
3. Insert the VMIVME-7459 into the desired slot.
4. Install the 64-conductor cable assembly onto the rear of the backplane. The cable must be connected to the rear I/O shrouded P2 connectors of both slots, one occupied by the SBC and the other connected to the VMIVME-7459 P2 connector. See Figure 7 on page 13.

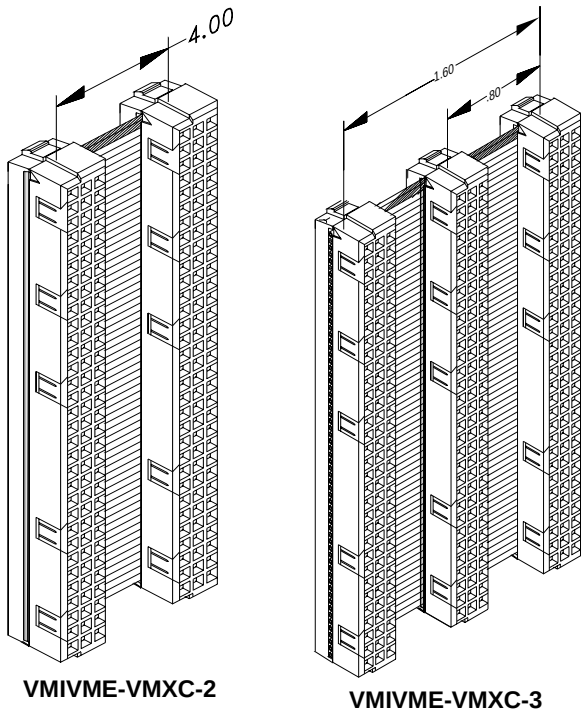


Figure 3 64-Conductor Cable Assembly (Model No. VMIVME-VMXC-2 and VMIVME-VMXC-3)

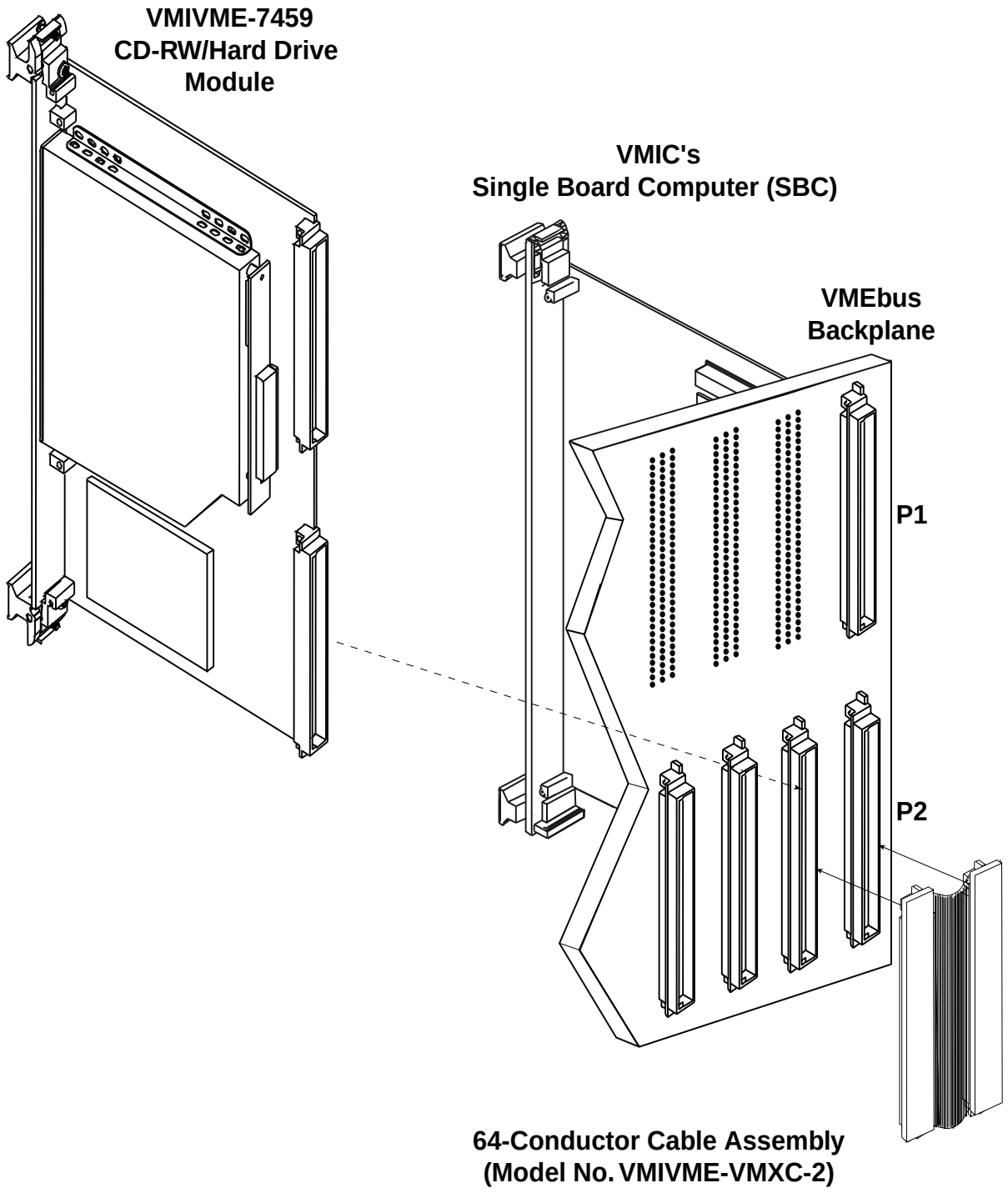


Figure 4 Installation of the VMIVME-7459 with VMIC's SBCs

Installation of the VMIVME-7459 with VMIC's 2-Slot SBCs

Figure 6 on page 12 illustrates the installation of VMIC's 2-Slot SBC with the VMIVME-7459.

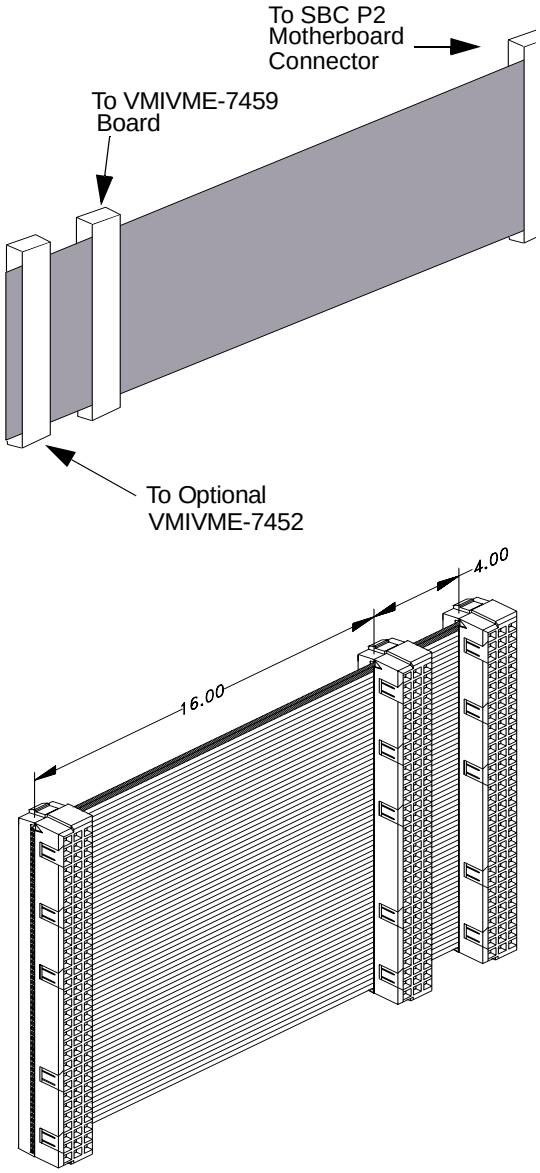


Figure 5 64-Conductor Cable Assembly (Model No. VMIVME-VMXC-7)

NOTE: When installing a VMIVME-7459 with VMIC's 2-Slot SBC the VMIVME-7459 does not have to be in consecutive slots in the VMEbus chassis.

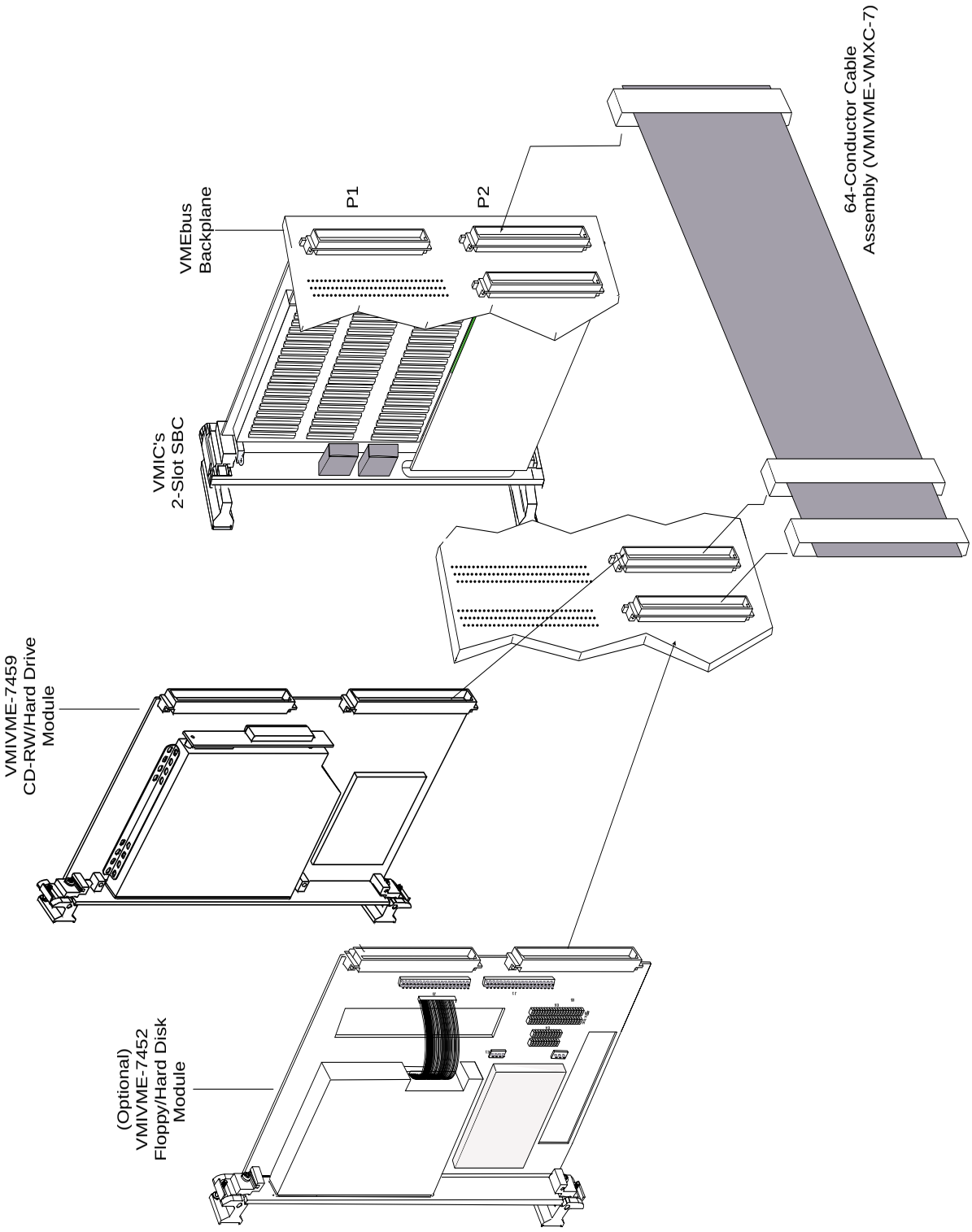


Figure 6 Connecting a VMIVME-7459 to a 2-Slot SBC with the optional VMIVME-7452

Installation of the VMIVME-7459 with VME64 Compatible backplanes

The installation of the VMIVME-7459 with VME64-compatible backplanes is similar to the installation on the previous pages. It is recommended that the VMIVME-7459 and the VME64-compatible SBC be used in a standard VMEbus chassis. However, if it is a requirement to use a VME64 chassis, the VME64 backplane uses 160-pin 5 row connectors, of which only the center three rows of the backplane pins are utilized for signals, power and ground. Therefore, when installing the VMIVME-7459 in a VME64 chassis, care must be taken to ensure the correct pin alignment. Use the 64-conductor cable assembly identified in Figure 7 below to connect the SBC to the VMIVME-7459 through the backplane. The same 64-conductor cable assembly should be used for both the VMEbus and VME64 backplanes. The interface cable part number is **VMIC Model Number VMIVME-VMXC-2, VMXC-3 or VMXC-7**.

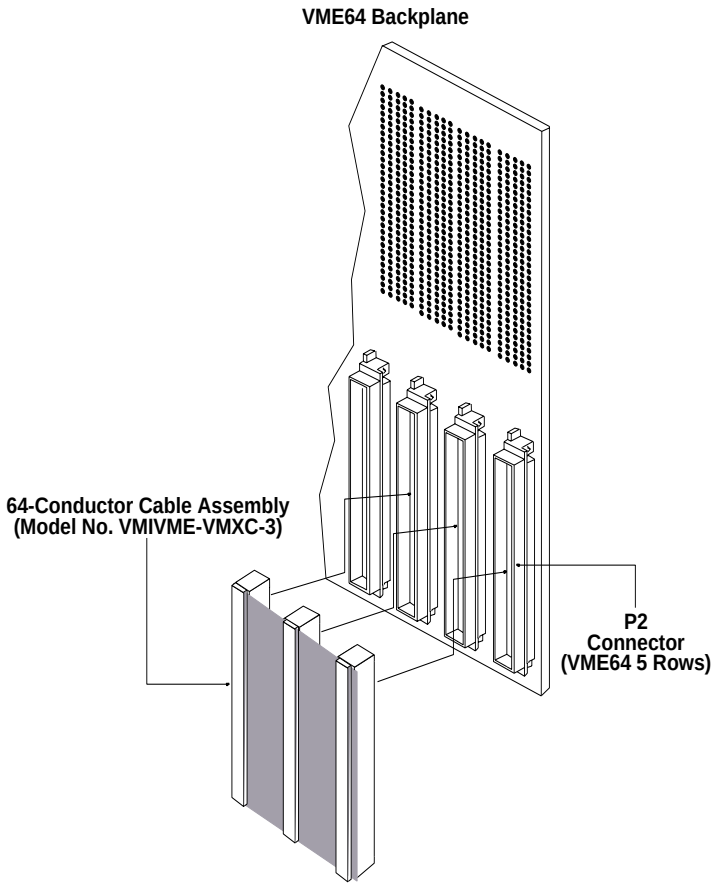


Figure 7 VME64 Backplane with 64-Conductor Cable Assembly

NOTE: When placing the cable on the backplane ensure that only the center three rows of the VME64 shrouded connector are used.

Board P1 Connector Pinout

Pin No.	Row C	Row B	Row A
1	N/C	N/C	N/C
2	N/C	N/C	N/C
3	N/C	N/C	N/C
4	N/C	BG0OUT*	N/C
5	N/C	BG0IN*	N/C
6	N/C	BG1OUT*	N/C
7	N/C	BG1IN*	N/C
8	N/C	BG2OUT*	N/C
9	GND	BG2IN*	GND
10	N/C	BG3OUT*	N/C
11	N/C	BG3IN*	GND
12	N/C	N/C	N/C
13	N/C	N/C	N/C
14	N/C	N/C	N/C
15	N/C	N/C	GND
16	N/C	N/C	N/C
17	N/C	N/C	GND
18	N/C	N/C	N/C
19	N/C	N/C	GND
20	N/C	GND	N/C
21	N/C	N/C	IACKOUT*
22	N/C	N/C	IACKIN*
23	N/C	GND	N/C
24	N/C	N/C	N/C
25	N/C	N/C	N/C
26	N/C	N/C	N/C
27	N/C	N/C	N/C
28	N/C	N/C	N/C
29	N/C	N/C	N/C
30	N/C	N/C	N/C
31	N/C	N/C	N/C
32	+5 V	+5 V	+5 V

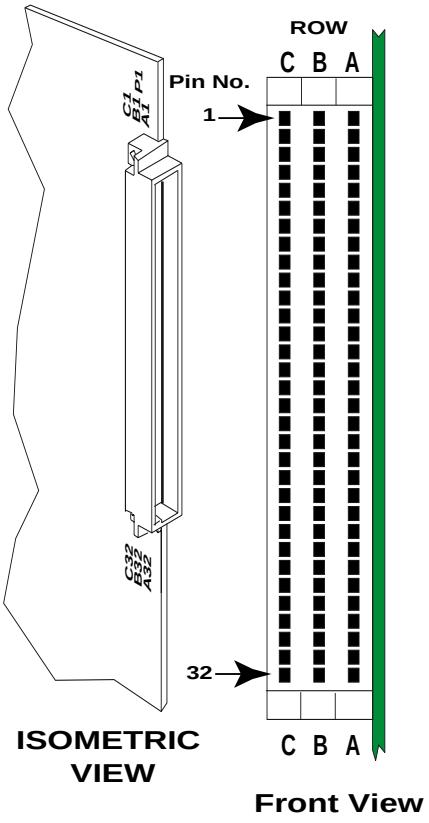


Figure 8 P1 Connector and Pinout

Board P2 Connector Pinout

Pin No.	Row C	Row B	Row A
1	RESET*	N/C	PDIAG
2	DD7	GND	DD8
3	DD6	N/C	DD9
4	DD5	N/C	DD10
5	DD4	N/C	DD11
6	DD3	N/C	DD12
7	DD2	N/C	DD13
8	DD1	N/C	DD14
9	DD0	N/C	DD15
10	IOCS16*	N/C	DMARQ*
11	GND	N/C	DIOW*
12	GND	GND	DIOR*
13	GND	N/C	IORDY
14	CSEL	N/C	GND
15	DMACK*	N/C	GND
16	INTRQ	N/C	GND
17	DA2	N/C	DA1
18	DA0	N/C	CS0*
19	CS1*	N/C	DASP*
20	N/C	N/C	N/C
21	N/C	N/C	GND
22	N/C	GND	N/C
23	N/C	N/C	GND
24	N/C	N/C	GND
25	N/C	N/C	GND
26	N/C	N/C	GND
27	N/C	N/C	GND
28	N/C	N/C	GND
29	N/C	N/C	N/C
30	N/C	N/C	GND
31	N/C	GND	N/C
32	N/C	N/C	N/C

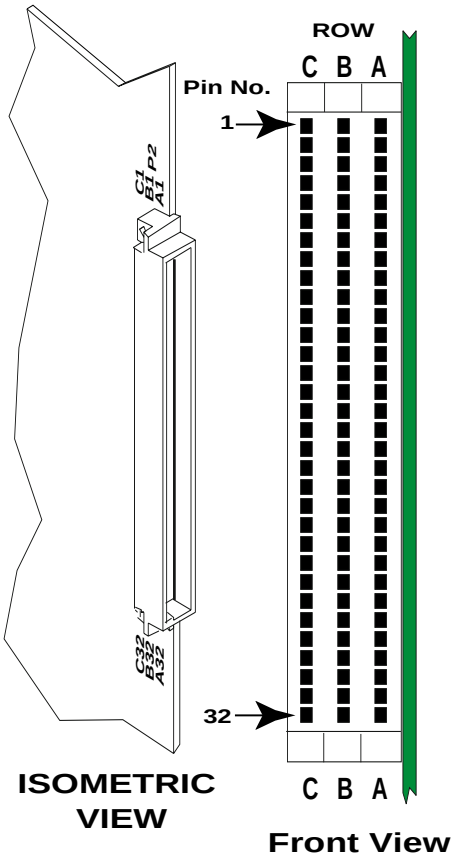


Figure 9 P2 Connector and Pinout

NOTE: Use only the 96 position, 64-conductor ribbon cables.

Maintenance

Maintenance

This section provides information relative to the care and maintenance of VMIC's products. If the product malfunctions, verify the following:

- System power
- Software
- System configuration
- Electrical connections
- Jumper or configuration options
- Boards are fully inserted into their proper connector location
- Connector pins are clean and free from contamination
- No components of adjacent boards are disturbed when inserting or removing the board from the chassis
- Quality of cables and I/O connections

If products must be returned, contact VMIC for a Return Material Authorization (RMA) Number. **This RMA Number must be obtained prior to any return**.

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