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MVME760 Transition Module
User's Manual

VME760A/UM1

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Motorola, Inc.
Computer Group
2900 South Diablo Way
Tempe, Arizona 85282

Preface

The *MVME760 User's Manual* provides general information, hardware preparation, installation instructions and support information for the MVME760 Transition Module.

The MVME760 module is used as the interface between host VMEmodules and various peripheral devices. A ribbon cable is used to connect the MVME760 Transition Module to the host VMEmodule.

This manual is intended for anyone who wants to design OEM systems, supply additional capability to an existing compatible system, or for use in a lab environment for experimental purposes.

A basic knowledge of computers and digital logic is assumed.

To use this manual you should be familiar with the publications listed in the following section: *Related Documentation.*

Related Documentation

The Motorola publications listed below are referenced in this document. If not shipped with this product, manuals may be purchased by contacting your local Motorola sales office.

Document Title	Motorola Publication Number
MVME1603/MVME1604 Single Board Computer Installation and Use	V1600-1A/IH
MVME1603/MVME1604 Single Board Computer Programmer's Reference Guide	V1600-1A/PG
MVME1603/MVME1604 Support Information	V1600-1A/SC
PM603/PM604 Processor/Memory Mezzanine Module User's Manual	PM603A/UM
PPCBug Debugging Package User's Manual (Parts 1 and 2)	PPCBUGA1/UM PPCBUGA2/UM
PPC1Bug Diagnostics Manual	PPC1DIAA/UM
SIM705 Serial Interface Module Installation Guide	SIM705A/IH

Note

Although not shown in the above list, each Motorola Computer Group manual publication number is suffixed with characters which represent the revision level of the document, such as "/D2" (the second revision of a manual); a supplement bears the same number as the manual but has a suffix such as "/A1" (the first supplement to the manual).

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January 1995

Safety Summary
Safety Depends On You

The following general safety precautions must be observed during all phases of operation, service, and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the equipment. Motorola, Inc. assumes no liability for the customer's failure to comply with these requirements.

The safety precautions listed below represent warnings of certain dangers of which Motorola is aware. You, as the user of the product, should follow these warnings and all other safety precautions necessary for the safe operation of the equipment in your operating environment.

Ground the Instrument.

To minimize shock hazard, the equipment chassis and enclosure must be connected to an electrical ground. The equipment is supplied with a three-conductor ac power cable. The power cable must either be plugged into an approved three-contact electrical outlet or used with a three-contact to two-contact adapter, with the grounding wire (green) firmly connected to an electrical ground (safety ground) at the power outlet. The power jack and mating plug of the power cable meet International Electrotechnical Commission (IEC) safety standards.

Do Not Operate in an Explosive Atmosphere.

Do not operate the equipment in the presence of flammable gases or fumes. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

Keep Away From Live Circuits.

Operating personnel must not remove equipment covers. Only Factory Authorized Service Personnel or other qualified maintenance personnel may remove equipment covers for internal subassembly or component replacement or any internal adjustment. Do not replace components with power cable connected. Under certain conditions, dangerous voltages may exist even with the power cable removed. To avoid injuries, always disconnect power and discharge circuits before touching them.

Do Not Service or Adjust Alone.

Do not attempt internal service or adjustment unless another person capable of rendering first aid and resuscitation is present.

Use Caution When Exposing or Handling the CRT.

Breakage of the Cathode-Ray Tube (CRT) causes a high-velocity scattering of glass fragments (implosion). To prevent CRT implosion, avoid rough handling or jarring of the equipment. Handling of the CRT should be done only by qualified maintenance personnel using approved safety mask and gloves.

Do Not Substitute Parts or Modify Equipment.

Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification of the equipment. Contact your local Motorola representative for service and repair to ensure that safety features are maintained.

Dangerous Procedure Warnings.

Warnings, such as the example below, precede potentially dangerous procedures throughout this manual. Instructions contained in the warnings must be followed. You should also employ all other safety precautions which you deem necessary for the operation of the equipment in your operating environment.



WARNING

Dangerous voltages, capable of causing death, are present in this equipment. Use extreme caution when handling, testing, and adjusting.



WARNING

This equipment generates, uses, and can radiate electromagnetic energy. It may cause or be susceptible to electromagnetic interference (EMI) if not installed and used in a cabinet with adequate EMI protection.

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General Information 1

Introduction

This manual provides general information, hardware preparation, installation instructions, and support information for the MVME760 Transition Module.

The MVME760 module is used as the interface between host VMEmodules and various peripheral devices. A 64-pin ribbon cable (P / N 30-W2514B02, 17” length) connects the MVME760 Transition Module to the host VMEmodule.

Features of the MVME760 Module

The features of the MVME760 module include industry-standard connectors that interface to:

- Two EIA-232 asynchronous serial ports
- Two synchronous serial ports
- One parallel port (IEEE Standard 1284-I compliant)
- Ethernet interface (both AUI and 10BaseT)
- Two 60-pin connectors are provided to support existing MCG Serial Interface Modules. Currently, there are four types of SIMs available: EIA-232 DCE, EIA-232 DTE, EIA-530 DCE, and EIA-530 DTE. The selection of these modules determines the functionality of the two synchronous serial ports.

Specifications

The MVME760 module specifications are shown in Table 1-1.

Table 1-1. MVME760 Specifications

Characteristics		Specifications
Power Requirements		+ 5Vdc, 1A maximum (500 mA typical) +12Vdc, 100mA (w/o LAN transceiver) -12Vdc, 100mA
I/O Port Connectors	Serial Parallel Ethernet	Two EIA-232 async serial ports Two synchronous serial ports One IEEE Std 1284-I compliant parallel port One AUI and One 10BaseT
Operating temperature		0 degrees to 55 degrees C at point of entry of forced air (approximately 5 CFM)
Storage temperature		-40 degrees to 85 degrees C
Relative Humidity		5% to 90% (non-condensing)
Physical characteristics (excluding front panel)	Height Depth Thickness	9.187 inches(233.35 mm) 3.200 inches(80.00 mm) 0.063 inches (1.60 mm)

Cooling Requirements

The MVME760 module has minimal active circuitry. In general, convection cooling will suffice. However, care must be taken such that other system components or other external sources of heat do not cause the actual operating temperature to exceed the specified operating temperature.

FCC Compliance

The MVME760 module was tested in an FCC-compliant chassis, and meets the requirements for Class A equipment. FCC compliance was achieved under the following conditions:

1. Shielded cables on all external I/O ports.
2. Cable shields connected to earth ground via metal shell connectors bonded to a conductive module front panel.
3. Conductive chassis rails connected to earth ground. This provides the path for connecting shields to earth ground.
4. Front panel screws properly tightened.

For minimum RF emissions, it is essential that the conditions above be implemented; failure to do so could compromise the FCC compliance of the equipment containing the modules.

General Description

The MVME760 Transition Module provides the interface between standard Ethernet, Parallel Port, and the Serial Port connectors and the Host board P2 connector. The Ethernet and Parallel Ports contain passive circuitry only. The I/O controllers themselves reside in the host board. The Serial Ports contain active circuitry, to provide multiplexing and buffering functions (reference Figure 3-1, MVME760 Transition Module Block Diagram). The multiplexing function is transparent to the user. Two 60-pin headers are provided to support existing MCG Serial Interface Modules. Currently, there are four types of Serial Interface modules available as shown in Table 1-2:

Table 1-2. Module Type Identification

Model Number	Module Type	Part Number
SIM705-001	EIA-232 DCE	01-W3876Bxx
SIM705-002	EIA-232 DTE	01-W3877Bxx
SIM705-003	EIA-530 DCE	01-W3878Bxx
SIM705-004	EIA-530 DTE	01-W3879Bxx

Hardware Preparation and Installation

2

Introduction

This chapter provides unpacking instructions, hardware preparation, and installation instructions for the MVME760 module.

Unpacking Instruction

Note If the carton is damaged upon receipt, request that the carrier's agent be present during unpacking and inspection of the equipment.

Unpack the equipment from the shipping carton. Refer to the packing list and verify that all items are present. Save the packing material for storing and reshipping of the equipment.

MVME760 Module Preparation

No preparation is necessary if Serial ports 3 and 4 are not used. However, to ensure full functionality of Serial Port 3 and Serial Port 4, the MVME760 Transition Module must be properly configured. Configuration is accomplished through jumper settings and SIM module population options. The MVME760 connectors and header locations are illustrated in Figure 2-1 and Figure 2-2. Note that Serial Port 3 is available at J7, as well as at J5 on the front panel. Serial Port 4 is available only via the J2 header

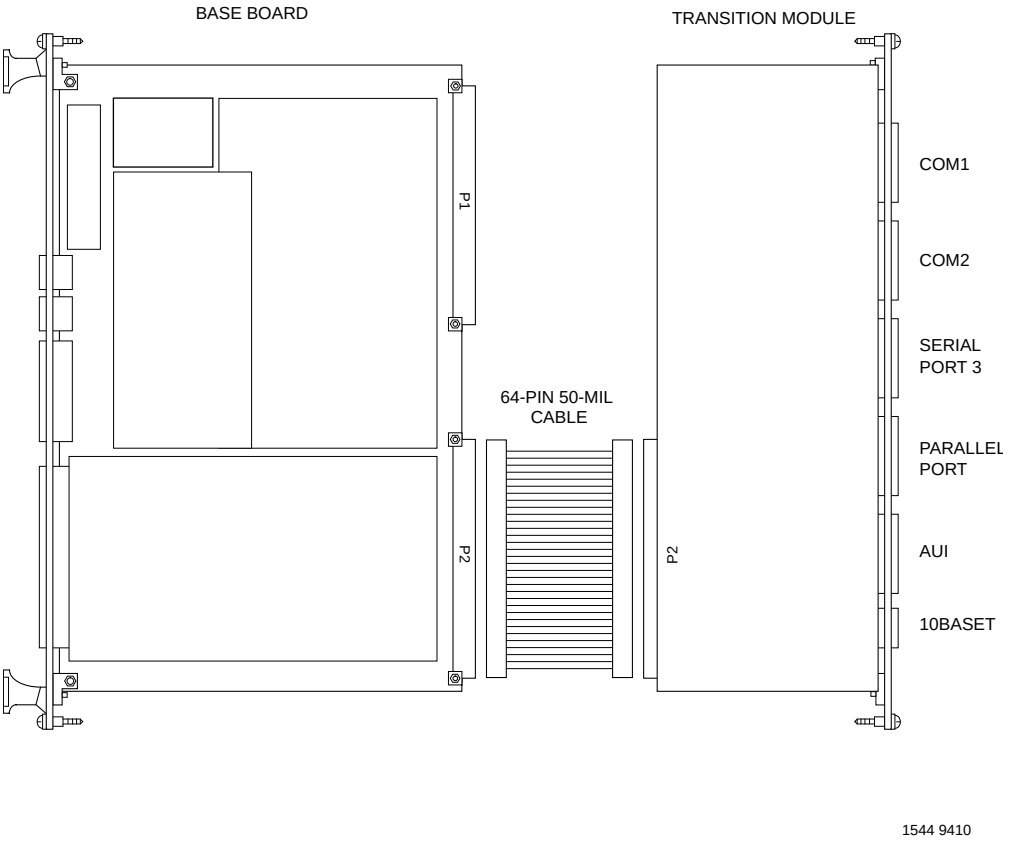


Figure 2-1. MVME760 Connector Locations

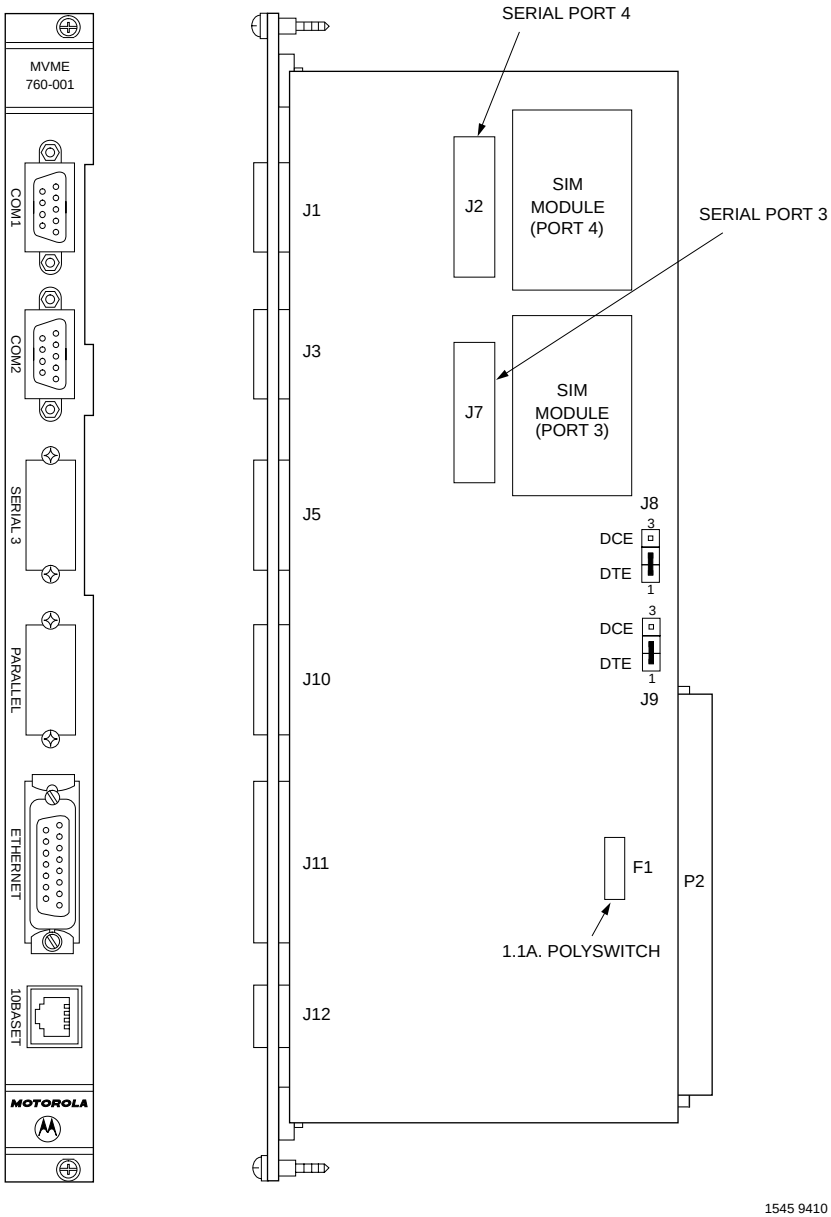
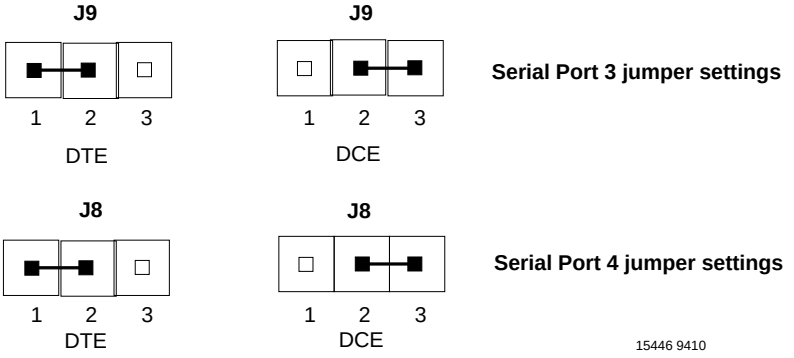


Figure 2-2. MVME760 Header Locations

Configuring Serial Ports 3 and 4

Headers J9 and J8 are used to configure Serial Port 3 and Serial Port 4, respectively. When the jumper is in position 1-2, the port is configured as a DTE. When the jumper is in position 2-3, the port is configured as a DCE. The jumper setting must match the corresponding SIM module controlling that port (DTE or DCE). When installing the SIM modules, note the headers are keyed for proper orientation.



Installation Instructions

The basic procedure for installation of the MVME760 module is as follows:

1. Turn all equipment power OFF and disconnect the power cable from the AC power source.

Caution

Connecting modules while the power is applied may result in damage to components on the module.

Warning

Dangerous voltages, capable of causing death, are present in this equipment. Use extreme caution when handling, testing, and adjusting.

2. Remove the chassis cover as instructed in the equipment user's manual.
3. Remove the filler panel(s) from the appropriate card slot(s) at the rear of the chassis (if the chassis has a rear card cage). Other modules in the unit may have to be moved to allow space for the cables connected to the MVME760 module.
4. Install SIM modules for Serial Ports 3 and 4 (see Figure 2-2 for location of SIMs).
5. Install MVME760 module in rear card cage.
6. Attach the flat ribbon cable supplied with the MVME760 module from P2 on the host board to P2 on the Transition Module. Be sure to orient cable pin 1 with connector pin 1 (See Figure 2-3).
7. After making sure you will not pinch cables with the cover, reinstall the cover you previously removed.
8. Connect the power cable to the AC power source and turn on the unit.

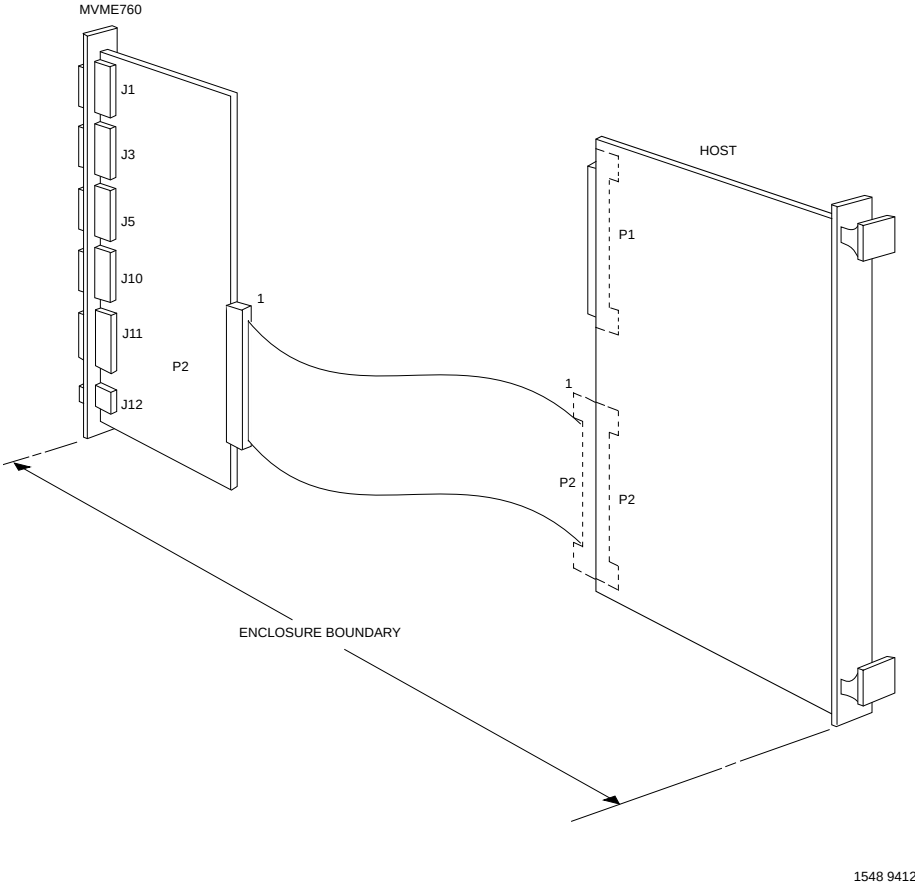


Figure 2-3. MVME760 Cable Connections

Support Information 3

Introduction

This chapter provides the interconnection signals, parts lists, parts location illustrations, and schematic diagrams for the MVME760 Transition Module.

The block diagram for the MVME760 Transition Module is shown in Figure 3-1.

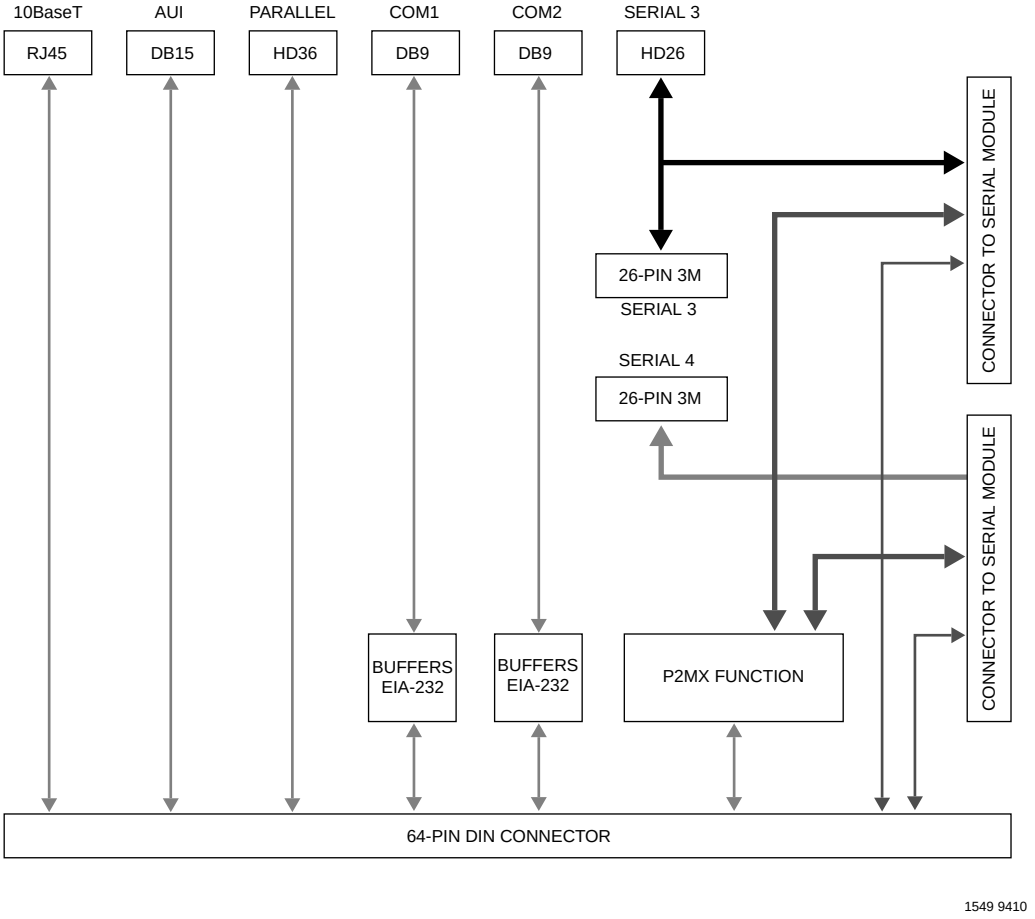


Figure 3-1. MVME760 Transition Module Block Diagram

COM1 and COM2 Serial Ports

COM1 and COM2 are the two asynchronous serial ports. These two ports are configured as shown in Figure 3-2.

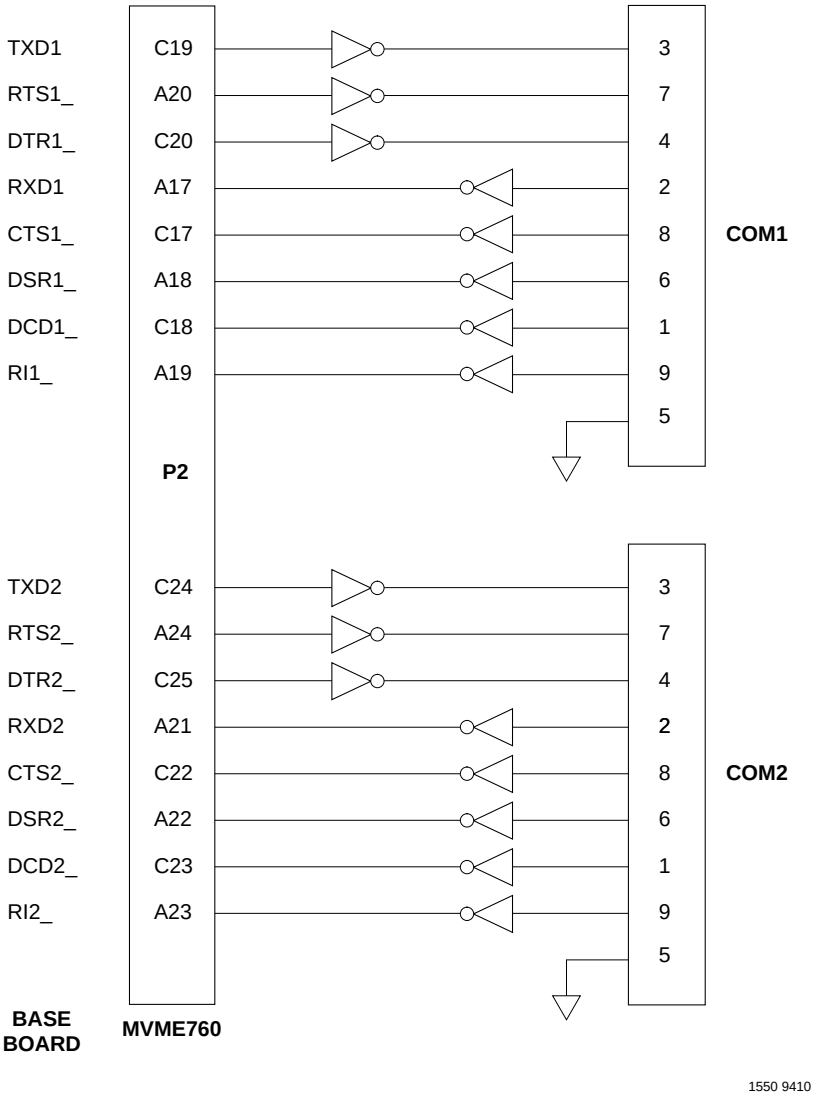


Figure 3-2. COM1 and COM2 Configurations

Serial Ports 3 and 4

Serial Ports 3 and 4 can be individually configured as EIA-232-D DCE, EIA-232-D DTE, EIA-530 DCE, or EIA-530 DTE by installing the appropriate Serial Interface Module. Figure 3-3 and Figure 3-4 show the configuration diagrams for Serial Ports 3 and 4 with the EIA-232 DCE and EIA-232 DTE Serial Interface Modules. Figure 3-5 and 3-6 show the configuration diagrams for Serial Ports 3 and 4 with the EIA-530 DCE and EIA-530 DTE Serial Interface Modules.

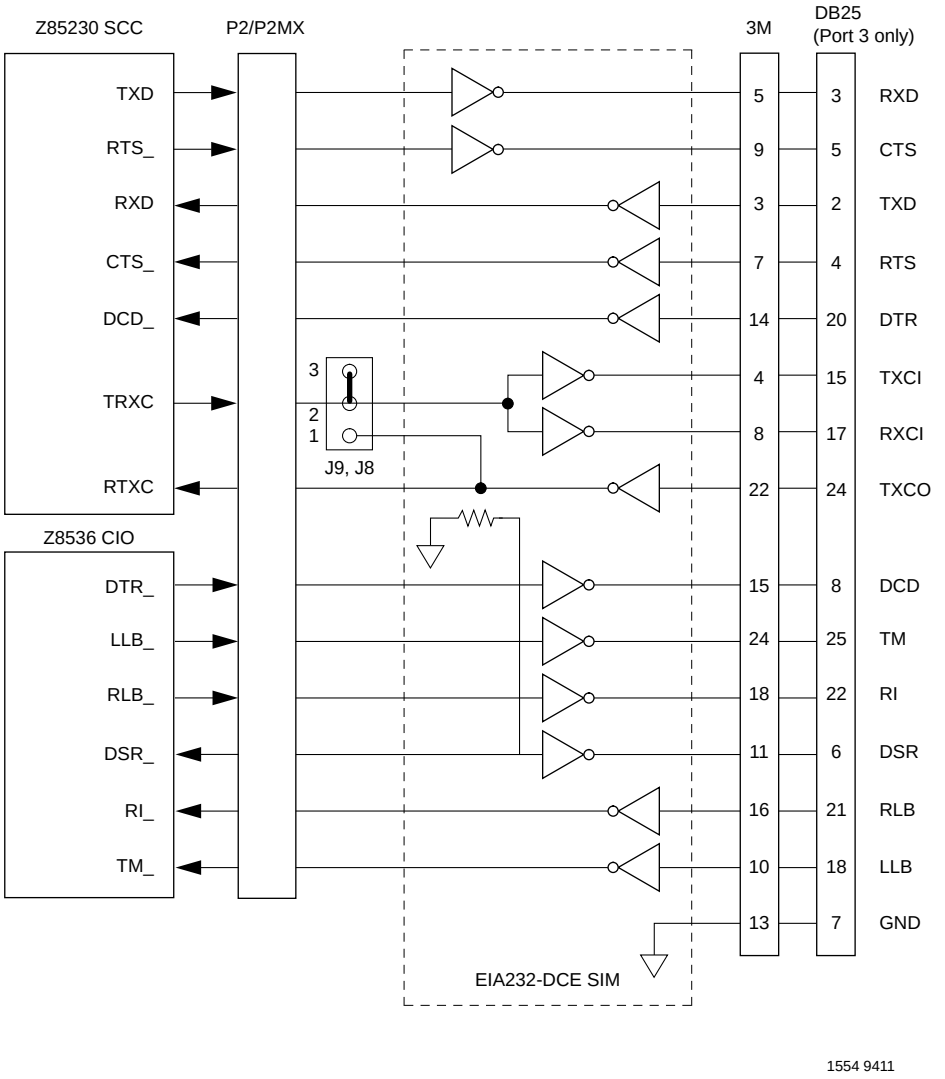


Figure 3-3. Ports 3/4 in EIA-232 DCE Configuration

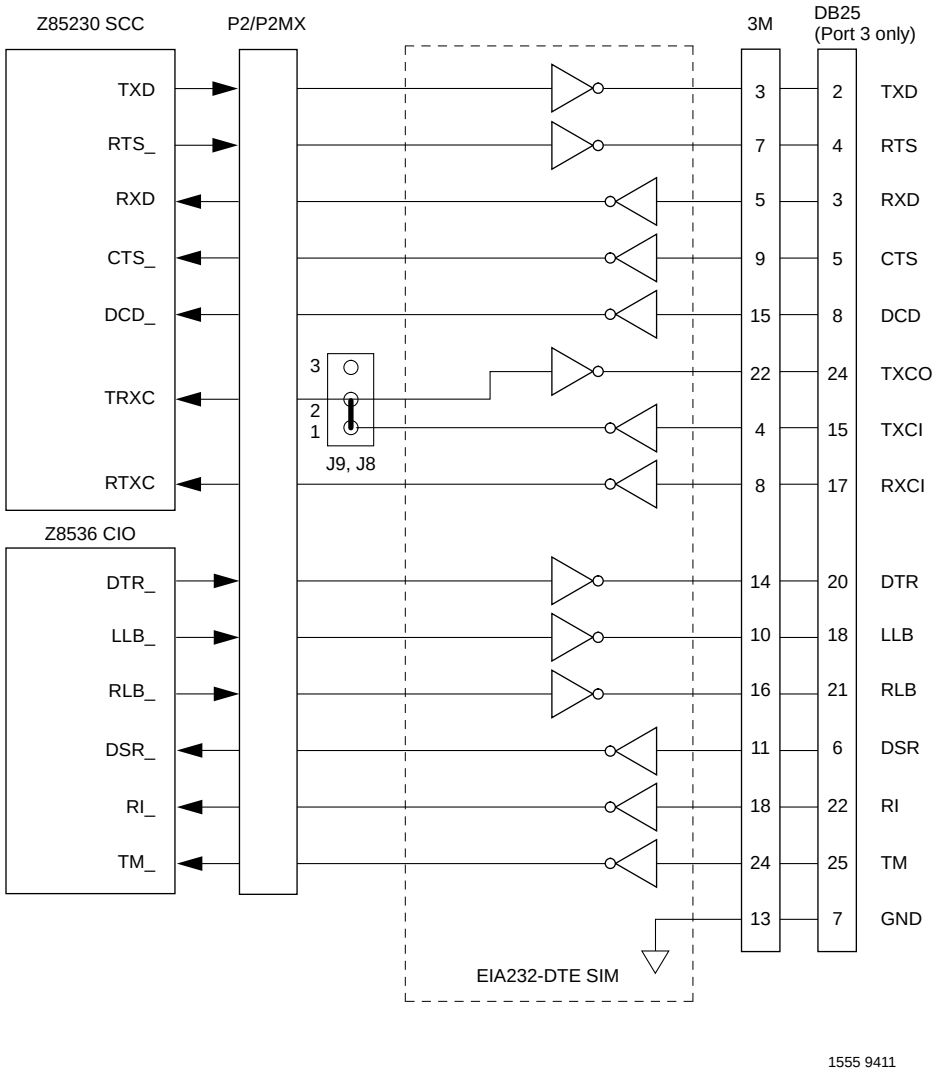


Figure 3-4. Ports 3/4 in EIA-232 DTE Configuration

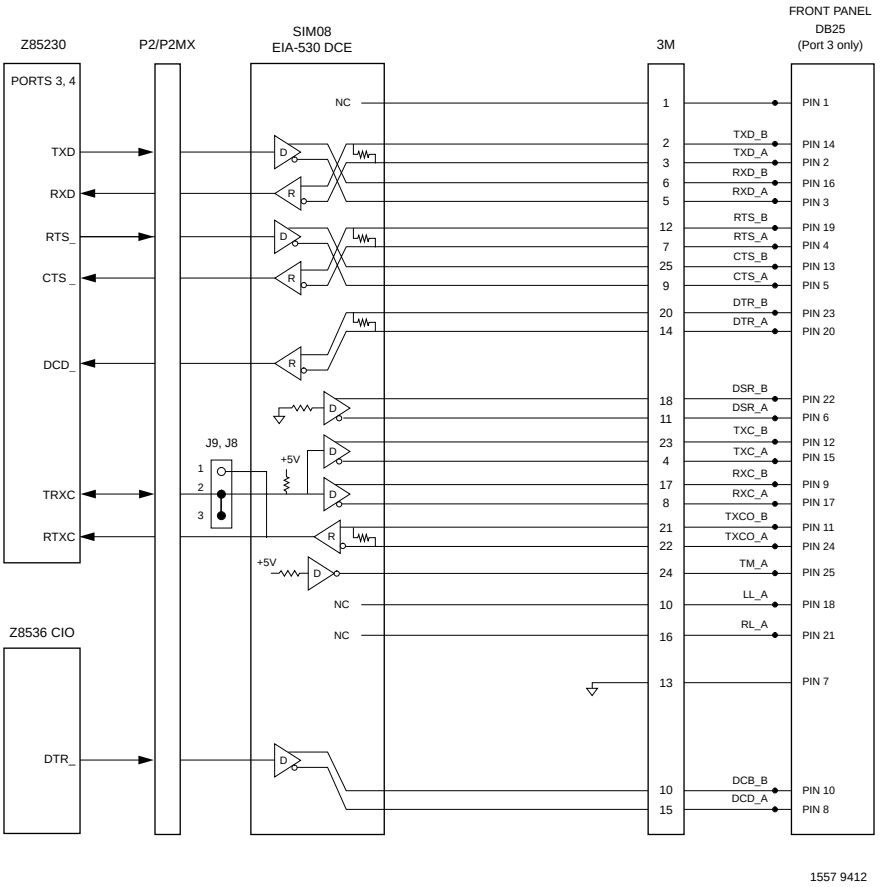


Figure 3-5. Ports 3/4 in EIA-530 DCE Configuration

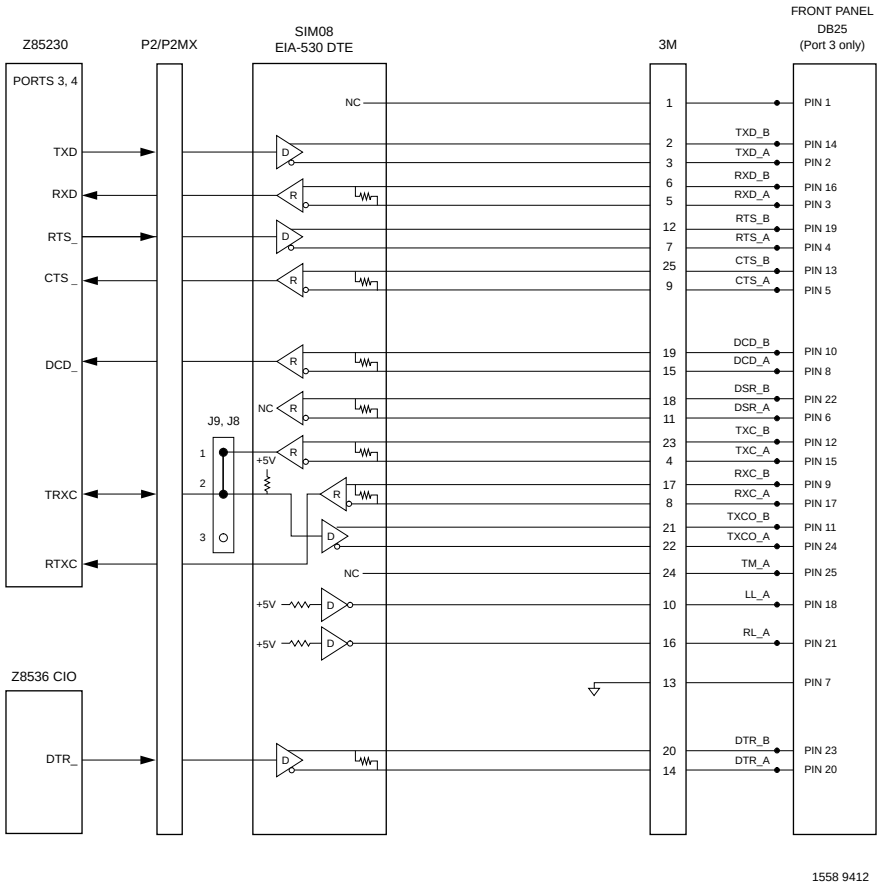


Figure 3-6. Ports 3/4 in EIA-530 DTE Configuration

P2 Connector

P2 is a 64-pin DIN connector providing power and signaling. The 64-pin ribbon cable P / N is 30-W2514B02. Table 3-1 shows the interconnect signals. Note Row B is not populated. Power distribution and signaling are accomplished using rows A and C only.

Table 3-1. Connector P2 Interconnect Signals (MVME760)

Pin Number P2	Signal Mnemonic	Signal Name and Description
C1	C+	COLLISION + (Input) (Ethernet) - a signal to indicate that multiple stations are contending for access to the transmission medium.
A1	C-	COLLISION - (Input) (Ethernet) - part of a differential pair.
C2	T+	TRANSMIT + (Output) (Ethernet) - this line is intended to operate into terminated transmission lines.
A2	T-	TRANSMIT - (Output) (Ethernet) - part of a differential pair.
C3	R+	RECEIVE + (Input) (Ethernet) - a data input sourced by the MAU.
A3	R-	RECEIVE - (Input) (Ethernet) - part of a differential pair.
C4	RD-	RECEIVE DATA -
A4	RD+	RECEIVE DATA+
C5	TD-	TRANSMIT DATA-
A5	TD+	TRANSMIT DATA+
C6	+12V	+12Vdc Power
A6	PRD0	Refer to the IEEE P1284 D2.00 Standard
C7	PRD1	Refer to the IEEE P1284 D2.00 Standard
A7	PRD2	Refer to the IEEE P1284 D2.00 Standard
C8	PRD3	Refer to the IEEE P1284 D2.00 Standard
A8	PRD4	Refer to the IEEE P1284 D2.00 Standard
C9	PRD5	Refer to the IEEE P1284 D2.00 Standard
A9	PRD6	Refer to the IEEE P1284 D2.00 Standard
C10	PRD7	Refer to the IEEE P1284 D2.00 Standard

Table 3-1. Connector P2 Interconnect Signals (MVME760) (Continued)

Pin Number P2	Signal Mnemonic	Signal Name and Description
A10	GND	SIGNAL GROUND
C11	PRSTB_	Refer to the IEEE P1284 D2.00 Standard
A11	PRACK_	Refer to the IEEE P1284 D2.00 Standard
C12	GND	SIGNAL GROUND
A12	PRBSY	Refer to the IEEE P1284 D2.00 Standard
C13	PRPE	Refer to the IEEE P1284 D2.00 Standard
A13	PRSEL	Refer to the IEEE P1284 D2.00 Standard
C14	INPRIME_	Refer to the IEEE P1284 D2.00 Standard
A14	PRFAULT_	Refer to the IEEE P1284 D2.00 Standard
C15	SELIN_	Refer to the IEEE P1284 D2.00 Standard
A15	AUTOFD_	Refer to the IEEE P1284 D2.00 Standard
C16	+5V	+5Vdc Power
A16	GND	SIGNAL GROUND
C17	CTS1	CLEAR TO SEND (serial port 1) - CTS is a function supplied to the terminal by the modem, and indicates that it is permissible to begin transmission of a message. When using a modem, CTS follows the off-to-on transition of RTS after a time delay.
A17	RXD1	RECEIVE DATA (serial port 1) - data that is demodulated from the receive line is presented to the terminal by the modem.
C18	DCD1	DATA CARRIER DETECT (serial port 1) - sent by the modem to the terminal to indicate that a valid carrier is being received.
A18	DSR1	DATA SET READY (serial port 1) - a function supplied by the modem to the terminal to indicate that the modem is ready to transmit data.
C19	TXD1	TRANSMIT DATA (serial port 1) - data to be transmitted is furnished on this line to the modem from the terminal.
A19	RI1	RING INDICATOR (serial port 1) - Sent by the modem to the terminal indicating the ringing signal is present.

Table 3-1. Connector P2 Interconnect Signals (MVME760) (Continued)

Pin Number P2	Signal Mnemonic	Signal Name and Description
C20	DTR1	DATA TERMINAL READY (serial port 1) - a signal from the terminal to the modem indicating that the terminal is ready to send or receive data.
A20	RTS1	REQUEST TO SEND (serial port 1) - RTS is supplied by the terminal to the modem when it is required to transmit a message. With RTS off, the modem carrier remains off. When RTS is turned on, the modem immediately turns on the carrier.
A21	RXD2	RECEIVE DATA (serial port 2) - data that is demodulated from the receive line is presented to the terminal by the modem.
C21	GND	SIGNAL GROUND
C22	CTS2	CLEAR TO SEND (serial port 2) - CTS is a function supplied to the terminal by the modem, and indicates that it is permissible to begin transmission of a message. When using a modem, CTS follows the off-to-on transition of RTS after a time delay.
A22	DSR2	DATA SET READY (serial port 2) - a function supplied by the modem to the terminal to indicate that the modem is ready to transmit data.
C23	DCD2	DATA CARRIER DETECT (serial port 2) - sent by the modem to the terminal to indicate that a valid carrier is being received.
A23	RI2	RING INDICATOR (serial port 2) - Sent by the modem to the terminal indicating the ringing signal is present.
C24	TXD2	TRANSMIT DATA (serial port 2) - data to be transmitted is furnished on this line to the modem from the terminal.
A24	RTS2	REQUEST TO SEND (serial port 2) - RTS is supplied by the terminal to the modem when it is required to transmit a message. With RTS off, the modem carrier remains off. When RTS is turned on, the modem immediately turns on the carrier.

Table 3-1. Connector P2 Interconnect Signals (MVME760) (Continued)

Pin Number P2	Signal Mnemonic	Signal Name and Description
C25	DTR2	DATA TERMINAL READY (serial port 2) - a signal from the terminal to the modem indicating that the terminal is ready to send or receive data.
A25	GND	SIGNAL GROUND
C26	RXD3	RECEIVE DATA (serial port 3) - data that is demodulated from the receive line is presented to the terminal by the modem.
A26	RTXC3	RECEIVE CLOCK (serial port 3) - this line can be configured to clock input data from a terminal to a modem.
C27	TXD3	TRANSMIT DATA (serial port 3) - data to be transmitted is furnished on this line to the modem from the terminal.
A27	TRXC3	TRANSMIT CLOCK (serial port 3) - this line can be configured to clock output data to the modem from the terminal.
C28	RXD4	RECEIVE DATA (serial port 4) - data that is demodulated from the receive line is presented to the terminal by the modem.
A28	RTXC4	RECEIVE CLOCK (serial port 4) - this line can be configured to clock input data from a terminal to a modem.
C29	TXD4	TRANSMIT DATA (serial port 4) - data to be transmitted is furnished on this line to the modem from the terminal.
A29	TRXC4	TRANSMIT CLOCK (serial port 4) - this line can be configured to clock output data to the modem from the terminal.
C30	-12V	-12Vdc Power
A30	MXDI	Serial MULTIPLEXER DATA IN - signal driven to the main board.
C31	MXDO	Serial MULTIPLEXER DATA OUT - received from main board.
A31	MXSYNC_	MULTIPLEXER SYNC - Serial Multiplexer sync signal.
C32	GND	SIGNAL GROUND
A32	MXCLK	MULTIPLEXER CLOCK - Serial Multiplexer clock signal.

Ethernet (AUI and 10BaseT) Connectors

The MVME760 provides both AUI and 10BaseT interface via the front panel of the MVME760 transition module. The AUI interface and the 10BaseT interface are provided through a standard 2-row DB15 connector and an RJ45 connector respectively.

Each pin connection, signal mnemonic, and signal description for the AUI connector is listed in Table 3-2. The AUI connector shield is tied to chassis ground.

Table 3-2. AUI Connector Pin Assignments (MVME760)

Pin Number	Signal Mnemonic	Signal Name and Description
1	GND	SIGNAL GROUND.
2	C+	COLLISION + (Input) - a signal to indicate that multiple stations are contending for access to the transmission medium.
3	T+	TRANSMIT + (Output) - this line is intended to operate into terminated transmission lines.
4	GND	SIGNAL GROUND.
5	R+	RECEIVE + (Input) - a data input sourced by the MAU.
6	GND	SIGNAL GROUND.
7		Not used.
8	GND	SIGNAL GROUND.
9	C-	COLLISION - (Input) - part of a differential pair.
10	T-	TRANSMIT - (Output) - part of a differential pair.
11	GND	SIGNAL GROUND.
12	R-	RECEIVE - (Input) - part of a differential pair.
13	+12VF	+12 Vdc Power -(1.1A Polyswitch)
14	GND	SIGNAL GROUND.
15		Not used.

Each pin connection, signal mnemonic, and signal description for the 10BaseT connector is listed in the following table. The 10BaseT connector shield is tied to chassis ground.

Table 3-3. 10BaseT Connector Pin Assignments

Pin Number	Signal Mnemonic	Signal Name and Description
1	TD+	Transmit Data+
2	TD-	Transmit Data-
3	RD+	Read Data+
4		Not used.
5		Not used.
6	RD-	Read Data-
7,8		Not used.

IEEE P1284 Parallel I/O Connector

The parallel I/O connector is a standard IEEE P1284-C, 36-pin receptacle on the MVME760 front panel. The functionality of each signal depends on the mode of operation of this bi-directional Parallel Peripheral Interface. Refer to the IEEE P1284 D2.00 Standard for a complete description of each signal function.

The pin assignments for this connector are shown in the following table. The parallel port connector shield is tied to chassis ground.

Table 3-4. Parallel I/O Connector Signals (MVME760)

Pin Number	Signal Mnemonic	Signal Name and Description
1	PRBSY	See IEEE P1284 D2.00 Standard for signal names and functionality.
2	PRSEL	See IEEE P1284 D2.00 Standard
3	PRACK_	See IEEE P1284 D2.00 Standard
4	PRFAULT_	See IEEE P1284 D2.00 Standard
5	PRPE	See IEEE P1284 D2.00 Standard

Table 3-4. Parallel I/O Connector Signals (MVME760) (Continued)

Pin Number	Signal Mnemonic	Signal Name and Description
6	PRD0	See IEEE P1284 D2.00 Standard
7	PRD1	See IEEE P1284 D2.00 Standard
8	PRD2	See IEEE P1284 D2.00 Standard
9	PRD3	See IEEE P1284 D2.00 Standard
10	PRD4	See IEEE P1284 D2.00 Standard
11	PRD5	See IEEE P1284 D2.00 Standard
12	PRD6	See IEEE P1284 D2.00 Standard
13	PRD7	See IEEE P1284 D2.00 Standard
14	INPRIME_	See IEEE P1284 D2.00 Standard
15	PRSTB_	See IEEE P1284 D2.00 Standard
16	SELIN_	See IEEE P1284 D2.00 Standard
17	AUTOFD_	See IEEE P1284 D2.00 Standard
18	+5V	+5Vdc Power
19-25	GND	SIGNAL GROUND

COM1 and COM2 Connectors

Two standard DB9 connectors located on the front panel of the MVME760 transition module provide the interface to the COM1 and COM2 serial ports. The pin assignments for these connectors are shown in Table 3-5. The COM1 and COM2 connector shields are tied to chassis ground.

Table 3-5. COM1 and COM2 Interconnect Signals (MVME760)

Pin Number	Signal Mnemonic	Signal Name and Description
1	DCD	DATA CARRIER DETECT - Sent by the modem to the terminal to indicate that a valid carrier is being received. Not used by port 1 (J1).

Table 3-5. COM1 and COM2 Interconnect Signals (MVME760) (Continued)

Pin Number	Signal Mnemonic	Signal Name and Description
2	RXD	RECEIVE DATA - data that is demodulated from the receive line is presented to the terminal by the modem.
3	TXD	TRANSMIT DATA - data to be transmitted is furnished on this line to the modem from the terminal.
4	DTR	DATA TERMINAL READY - A signal from the terminal to the modem indicating that the terminal is ready to send or receive data.
5	GND	SIGNAL GROUND
6	DSR	DATA SET READY - DSR is a function supplied by the modem to the terminal to indicate that the modem is ready to transmit data. This signal can be held high or low through header J8, J9, J13, J14.
7	RTS	REQUEST TO SEND - RTS is supplied by the terminal to the modem when it is required to transmit a message. With RTS off, the modem carrier remains off. When RTS is turned on, the modem immediately turns on the carrier.
8	CTS	CLEAR TO SEND - CTS is a function supplied to the terminal by the modem, and indicates that it is permissible to begin transmission of a message. When using a modem, CTS follows the off-to-on transition of RTS after a time delay.
9	RI	RING INDICATOR - Sent by the modem to the terminal indicating the ringing signal is present.

Serial Port 3 Connectors

Two connectors are provided for Serial Port 3: A 26-pin mini delta ribbon connector located on the front panel of the MVME760 transition module and a 26-pin ribbon-cable (3M-type) header located on the board itself. The pin assignments for these two connectors are shown in Table 3-6. The mini delta ribbon connector shield is tied to chassis ground.

Table 3-6. Pin Assignments for Serial Port 3 Connectors

Front-panel Connector		3m-Type Ribbon Connector			
Pin #	**Signal Name**	**Pin #**	**Signal Name**	**Mated DB25 Pin #**	**Mated DB26 Pin #**
1	No Connect	1	No Connect	1	1
2	TXD3	3	TXD3	2	2
3	RXD3	5	RXD3	3	3
4	RTS3	7	RTS3	4	4
5	CTS3	9	CTS3	5	5
6	DSR3	11	DSR3	6	6
7	GND	13	GND	7	7
8	DCD3	15	DCD3	8	8
9	SP3_P9	17	SP3_P9	9	9
10	SP3_P10	19	SP3_P10	10	10
11	SP3_P11	21	SP3_P11	11	11
12	SP3_P12	23	SP3_P12	12	12
13	SP3_P13	25	SP3_P13	13	13
14	SP3_P14	2	SP3_P14	14	14
15	TXCI3	4	TXCI3	15	15
16	SP3_P16	6	SP3_P16	16	16
17	RXCI3	8	RXCI3	17	17
18	LLB3	10	LLB3	18	18
19	SP3_P19	12	SP3_P19	19	19
20	DTR3	14	DTR3	20	20
21	RLB3	16	RLB3	21	21
22	RI3	18	RI3	22	22
23	SP3_P23	20	SP3_P23	23	23
24	TXCO3	22	TXCO3	24	24
25	TM3	24	TM3	25	25
26	No Connect	26	No Connect		26

NOTE: signal names indicate functionality when EIA-232 SIM module is installed.

Serial Port 4 Connector

A 26-pin ribbon-cable (3M-type) header provides the interface to Serial Port 4. Ribbon cable with mating connector can be used to interface to this header. The pin assignments for this connector are shown in the following table. This connector is not shielded.

Table 3-7. Serial Port 4 Interconnections

Ribbon Connector		Mated DB25 Pin #	Mated DB26 Pin #
Pin #	Signal Name		
1	No Connect	1	1
3	TXD4	2	2
5	RXD4	3	3
7	RTS4	4	4
9	CTS4	5	5
11	DSR4	6	6
13	GND	7	7
15	DCD4	8	8
17	SP4_P9	9	9
19	SP4_P10	10	10
21	SP4_P11	11	11
23	SP4_P12	12	12
25	SP4_P13	13	13
2	SP4_P14	14	14
4	TXCI4	15	15
6	SP4_P16	16	16
8	RXCI4	17	17
10	LLB4	18	18
12	SP4_P19	19	19
14	DTR4	20	20
16	RLB4	21	21
18	RI4	22	22
20	SP4_P24	23	23
22	TXCO4	24	24
24	TM4	25	25
26	No Connect		26

NOTE: Signal names indicate functionality when EIA-232 SIM module is installed.

Serial I/O Data Rate

The serial data rate supported depends on the host board implementation. Refer to related documentation.

Ethernet Data Rate

The Ethernet data rate supported depends on the host board implementation. Refer to related documentation.

Parts Lists and Locations

The following parts lists and parts location drawings reflect the latest issue of hardware at the time of printing.

Parts lists are illustrated in Table 3-8. Parts locations are illustrated in Figure 3-7.

Model	Parts List	Parts Location Drawing
MVME*760*	Table 3-8	Figure 3-7

Table 3-8. MVME760 Module Parts List

Reference Designation	Motorola Part Number	Description
	84-W8000F01A	Printed wiring board (MVME760)
CR1,CR2	48NW963A04	Rectifier, Schottky
C1-12,16,17,23, 30,35-40, 42, 43,45,46,49,50,	21NW9711A02	Capacitor, fixed,ceramic,100KpF
C13,18	21NW9711A20	Capacitor, fixed, ceramic, 220pF
C14,19,32-34	21NW9711A21	Capacitor, fixed, ceramic, 47pF
C15,20-22,24-26,29	21NW9711A29	Capacitor, fixed, ceramic, 470pF
C27,28	21NW9711A12	Capacitor, fixed, ceramic, 680pF
C31, 48	23NW9712A04	Capacitor, fixed, 10 µF @25 Vdc

Table 3-8. MVME760 Module Parts List (Continued)

Reference Designation	Motorola Part Number	Description
C41	23NW9712A06	Capacitor, fixed, 33 µF @15 Vdc
C44,47,51	21NW9711A11	Capacitor, fixed, ceramic, 22pF
F1	06NW9650A01	Polyswitch, 1.1A
J1, 3	28NW9802H73	Connector, 9-pin plug
J2, 7	28NW9802G11	Connector, 26-pin
J4, 6	28-W6249B01	Connector, receptacle, SMT2X30
J5	28NW9802K30	Connector, 26-pin miniature
J8, J9	29NW9805C07	Pin, square, auto-insert
J10	28NW9802K76	Connector, 36-pin receptacle
J11	28NW9802J64	Connector, 15-pin socket
J12	28NW9802K05	Modular jack, 8-pin, shielded
P2	28NW9802E05	Connector, 64-pin plug “PWB”
R1, 2	51NW9635A28	Resistor network, 16-pin, 8-100 ohm, 2%
R3	06SW-965A14	Resistor, SMD, 1K ohm, 5%, 1/8 W
R4, 11, 12, 14, 15	06SW965A24	Resistor, SMD, 22 ohm, 5%, 1/8 W
R5-8	51NW9635A13	Resistor network, 16-pin, 8-22 ohm, 2%,
R9, 10, 13	51NW9635A14	Resistor network, 16-pin, 15-10K ohm, 2%
R16	51NW9635A35	Resistor network, 16-pin, 15-4.7K ohm
R17	51NW9635A06	Resistor network, 16-pin, 8-33 ohm, 2%
R18, 19	06SW-965B62	Resistor, SMD, 33 ohm, 1/8W, 5%
R20, 21	06SW-965A02	Resistor, SMD, 100 ohm, 1/8 W, 5%
U1-4	51NW9615Z19	I.C. MC145406DW,16-pin
U5,6	51-W5888B88	I.C., PAL
U7, 8, 10	51NW9637D11	I.C., SN74BCT244DB, 20-pin
U9	51NW9615P91	I.C., N74F04D, 14-pin
U11	51NW9615P82	I.C., N74F74D, 14-pin
U12	51NW9615Y31	I.C., N74F163AD, 16-pin
U13, 16	51NW9637E49	I.C., MC74F251D, 16-pin

Table 3-8. MVME760 Module Parts List (Continued)

Reference Designation	Motorola Part Number	Description
U14, 15	51NW9637C20	I.C., MC74F257AD, 16-pin
	64-W4478C01A	Front Panel (MVME760-001)
	30-W2514B02	17” length, 64-pin ribbon cable

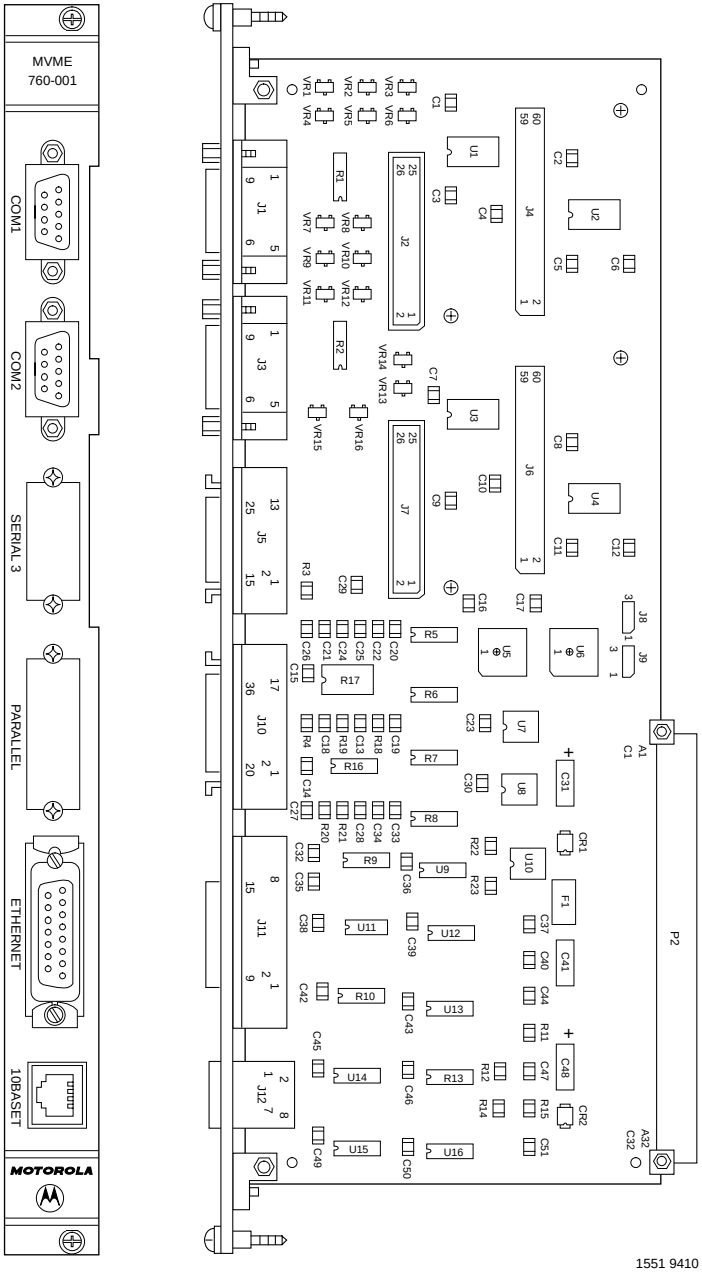


Figure 3-7. MVME760 Parts Location Drawing

Schematic Drawings

Schematic drawings for the MVME760 Transition Module are shown on the following pages.

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