



ASI & Serial ECL (DHEI) Interface Installation Guide

Product Number: E6291A

Document Part Number: E6291-92005 Ed2

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MPEGscope

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Printing history

New editions of this guide are issued to reflect extensive changes made to the software. Revisions may be issued between editions to correct errors in the manual. A new edition may not be issued with every application release. The application release, at the date of printing, is noted in the following table.

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Product Number: E6291A

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Product support

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Victoria, Australia Web: <http://advanced.comms.agilent.com/mpegscope>

Certification

Agilent Technologies certifies that this product met its published specifications at the time of shipment from the factory. Agilent Technologies further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology (formerly National Bureau of Standards), to the extent allowed by that organization's calibration facility, and to the calibration facilities of other International Standards Organization members.

Additional Information for Test and Measurement Equipment

To comply with EMC regulations, shielded cables should be used on all appropriate connections. Otherwise, the user has to ensure that, under operating conditions, the Radio Interference Limits are still met at the border of the user's premises.

Warnings

The following general safety precautions must be observed during all phases of operation, service, and repair of this product. 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 product. Agilent Technologies assumes no liability for the customer's failure to comply with these requirements.

Ground the Equipment: For safety, Class 1 equipment (equipment having a protective earth terminal), an uninterruptible safety ground must be provided from the mains power source to the product input wiring terminals or supplied power cable. Before operating the equipment, guard against electric shock in case of fault by always using the provided 3-conductor power cord to connect the equipment to a grounded power outlet.

DO NOT use in hazardous environments: Do not operate the product in an explosive atmosphere or in the presence of flammable gases or fumes. This product is designed for indoor use only.

DO NOT use repaired fuses or short-circuited fuse holders: For continued protection against fire, replace line fuses only with fuses of the same voltage and current rating and type.

Keep away from live circuits: Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers and shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off. To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.

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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 to the product. Return the product to an Agilent Technologies Sales and Service Office for service and repair to ensure features are maintained.

DO NOT clean with fluids: Doing so may make the equipment unsafe for use. Power down the equipment and disconnect the power cord before cleaning. To clean, use a soft dry cloth.

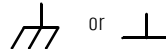
Safety Symbols



If you see this symbol on a product, you must refer to the manuals for specific Warning or Caution information to avoid personal injury or damage to the product



Indicates the field wiring terminal that must be connected to ground before operating the equipment. Protects against electrical shock in case of fault.



Frame or chassis ground terminal. Typically connects to the equipment's metal frame.



Alternating current (ac).



Direct current (dc).



Indicates hazardous voltages and potential for electrical shock.



Indicates that antistatic precautions should be taken.



This product complies with CSA requirement CSA 22.2 No. 1010.1, NRTL/C, EN 61010-1:1993 + A2:1995/IEC 1010-1:1990 + A1:1992 + A2:1995 Safety requirements for electrical equipment for measurement, control, and laboratory use.



Notice for European Community: This product complies with the relevant European legal Directives: EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC.

Das CE-Zeichen zeigt die Übereinstimmung mit allen für das Produkt geltenden Direktiven der Europäischen Union an.

ISM 1—A

This is the symbol for an Industrial, Scientific, and Medical Group 1 Class A product.

Dieses Zeichen steht für ein Produkt der Gruppe 1, Klasse A, für den Einsatz im industriellen, wissenschaftlichen und medizinischen Bereich.



This product meets the requirements of the Australian EMC Framework (AS/NZS 2064.1/2 for ISM:1A), enforced by the Radiocommunications Act 1992.

WARNING

Calls attention to a procedure, practice, or condition that could cause bodily injury or death.

CAUTION

Calls attention to a procedure, practice, or condition that could possibly cause damage to equipment or permanent loss of data.

Certification

Agilent Technologies certifie que cet instrument est conforme aux spécifications publiées au moment de sa sortie d'usine. Agilent Technologies atteste en outre qu'il est possible de trouver référence à ses mesures d'étalonnage auprès de l'organisme de normalisation américain "United States National Institute of Standards and Technology" (auparavant National Bureau of Standards), dans la mesure des possibilités autorisées par cet organisme, et dans celles autorisées par d'autres membres de l'Organisation Internationale de Normalisation.

Informations complémentaires relatives à l'équipement de test et de mesure

Conformément aux réglementations concernant la compatibilité électromagnétique, il convient d'utiliser des câbles blindés sur toutes les connexions appropriées. S'il n'emploie pas ce type de câble, l'utilisateur doit vérifier qu'en condition d'exploitation les interférences radio sont encore acceptables à la limite de ses locaux.

Avertissement

Les précautions générales de sécurité ci-dessous doivent être observées au cours de toutes les phases d'exploitation, de maintenance et de réparation de l'instrument. Le non-respect de ces précautions ou d'avertissements spécifiques cités ailleurs dans le manuel entraîne la violation des normes de sécurité relatives à la conception, la fabrication et l'utilisation prévue de cet instrument. Agilent Technologies n'assume aucune responsabilité en cas de non-respect de ces exigences.

Mise à la terre de l'équipement: en vue de garantir la sécurité, pour l'équipement de classe 1 (comportant une borne mise à la terre de protection), une mise à la terre permanente doit être assurée de la source d'alimentation secteur aux bornes de câblage d'entrée de l'instrument ou au câble d'alimentation fourni. Avant d'utiliser l'équipement, évitez les chocs électrostatiques en cas de défaillance de l'instrument en utilisant toujours le cordon d'alimentation 3 conducteurs fourni pour brancher l'équipement à une prise de terre.

N'UTILISEZ PAS dans un environnement à risque : N'utilisez pas l'instrument dans des conditions de risques d'explosion ni en présence de gaz ni d'émanations inflammables. Cet instrument est conçu exclusivement pour un usage intérieur.

N'UTILISEZ PAS de fusibles usagés ni de porte-fusibles en court-circuit: Pour une protection permanente contre le feu, remplacez les fusibles uniquement par des fusibles de même tension, de même calibre et de même type.

Tenez vous à l'écart des circuits sous tension: Le personnel d'exploitation ne doit pas retirer les capots ni les blindages. Les procédures impliquant ces manipulations doivent être exécutées exclusivement par un personnel formé à la maintenance. Dans certaines conditions, des tensions dangereuses peuvent être générées même lorsque l'équipement n'est pas sous tension. Afin d'éviter tout risque d'électrocution, N'EXÉCUTEZ PAS de procédure nécessitant la manipulation des capots et des blindages sans qualification à cet effet.

N'UTILISEZ PAS d'équipement endommagé: Si les caractéristiques de l'instrument relatives à la sécurité ont été atteintes, que ce soit en raison d'un dommage physique, d'une humidité excessive, ou pour toute autre cause, METTEZ L'EQUIPEMENT HORS TENSION et ne l'utilisez plus jusqu'à ce que la sécurité de son fonctionnement puisse être vérifiée par un personnel formé à la maintenance. Si nécessaire, retournez l'instrument à un bureau commercial et de service après-vente Agilent Technologies pour le faire réparer et garantir ses caractéristiques de sécurité.

NE REMPLACEZ PAS de pièce ni ne modifiez l'équipement: En raison des risques supplémentaires que cela implique, n'installez pas de pièce de remplacement ni n'exécutez aucune modification non autorisée sur l'instrument. Retournez-le à un bureau commercial et de service après-vente Agilent Technologies pour le faire réparer et garantir ses caractéristiques de sécurité.

NE NETTOYEZ PAS avec des produits liquides: L'emploi de produits liquides peut être risqué. Mettez l'équipement sous tension et débranchez le cordon d'alimentation avant le nettoyage. Utilisez un chiffon doux et sec.

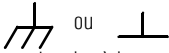
Symboles de sécurité



Si vous apercevez ce symbole sur un instrument, vous devez vous référer aux manuels pour de plus amples informations concernant les notes Avertissement et Attention en vue d'éviter des blessures corporelles ou des dommages à l'instrument.



Indique la borne de câblage qui doit être connectée à la terre avant la mise en route de l'équipement. Protège contre les électrocutions en cas de défaillance de l'instrument.



Borne de mise à la terre de cadre ou de châssis. Connectée en principe au cadre métallique de l'équipement.



Courant alternatif (ca).



Courant continu (cc).



Indique une tension dangereuse et des risques d'électrocution.



Indique que des précautions anti-statiques doivent être prises.



Cet instrument satisfait aux spécifications CSA 22.2 No. 1010.1, NRTL/C, EN 61010-1:1993 + A2:1995/IEC 1010-1:1990 + A1:1992 + A2:1995 en matière de sécurité pour les équipements électriques de mesure, de contrôle et de laboratoire.



Label européen: cet instrument est conforme aux directives européennes suivantes: EMC 89/336/EEC et basse tension 73/23/EEC.

Das CE-Zeichen zeigt die Übereinstimmung mit allen für das Produkt geltenden Direktiven der Europäischen Union an.

ISM 1—A

Ce symbole indique que l'instrument est un instrument de type Industriel Scientifique et Médical Groupe 1 Classe A.

Dieses Zeichen steht für ein Produkt der Gruppe 1, Klasse A, für den Einsatz im industriellen, wissenschaftlichen und medizinischen Bereich.



Cet instrument est conforme aux spécifications de l'Australian EMC Framework (AS/NZS 2064.1/2 for ISM:1A), mises en oeuvre par le Radiocommunications Act de 1992.

AVERTISSEMENT

Attire l'attention sur une procédure, pratique ou condition comportant un risque de blessure ou d'électrocution.

ATTENTION

Souligne qu'une procédure, pratique ou condition peut entraîner des dommages à l'équipement ou la perte permanente de données.

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Introduction

The E6291A ASI and Serial ECL (DHEI) interface is a versatile, dual-purpose card for the transmission of MPEG-2 transport streams. The ASI line interface can be used in either ASI mode (Asynchronous Serial Interface) or M2S mode (MPEG-2 Serial). When using the interface in M2S mode, your installation kit includes two blue impedance converters to convert cable impedance between 50 and 75 ohms. The kit also contains a special external DHEI cable for use with the Serial ECL (DHEI) interface.

This manual shows how to install the ASI and Serial ECL (DHEI) interface card into your MPEGscope Plus, MPEGscope Lite, MPEGscope Portable, or MPEGscope Portable Lite test system. Each step provides photographs and easy-to-understand explanations. The manual also includes illustrations and physical specifications for the interface and connectors.

Installation kit

Before beginning, ensure that your ASI & Serial ECL (DHEI) interface installation kit contains the following items:

- ASI & Serial ECL (DHEI) Interface Installation Guide (E6291-92005)
- Latest version of the MPEGscope Software CD-ROM
- Folded Instrument Application Bus (IAB) ribbon cable (E6277-64002)
- ASI & Serial ECL (DHEI) Interface Printed Circuit Assembly (E6277-66004)
- BNC to SMA Adapter (0955-0838)
- BNC to SMB Adapter (0955-0837)
- External DHEI Cable (E6294-61601)
- Size 15 Torx Head Screwdriver (8710-1622)
- Antistatic Wrist Strap (9300-1408)

Introduction

For more help...

If you have any questions about the installation procedure, call your local HP representative. You can also contact digital video customer support at the following numbers:

Location	Number
North, Central, South America	1 800 698 0061 <i>or</i> (719) 531 4589
Asia-Pacific	1 800 375 8100 <i>or</i> (65) 272 5293
Europe, Africa, Middle East	+31 20 547 9900 <i>or</i> +33 69 29 41 14
Japan	0120 421 345 <i>or</i> +81 426 56 7799

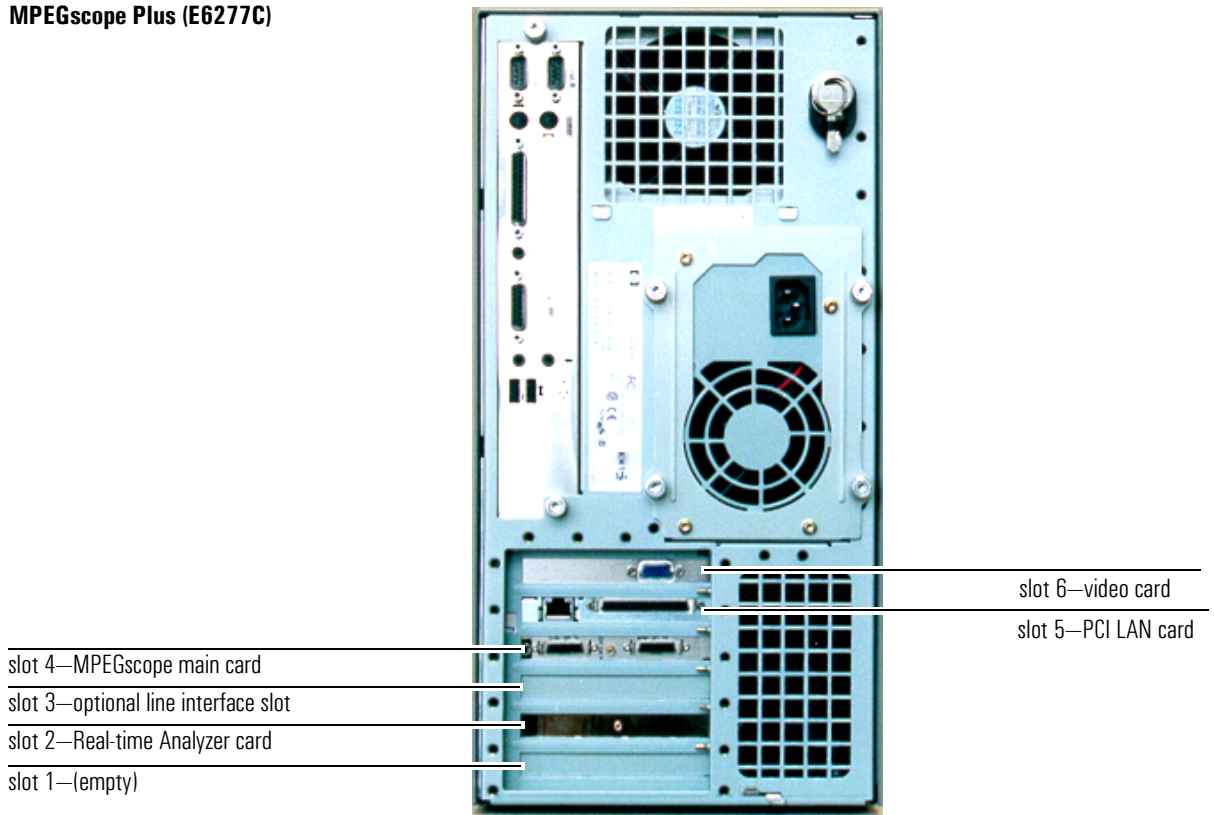
If you prefer to email your question, please write to digital video customer support at this address:

Email dv-support@hp.com

MPEGscope Plus and MPEGscope Lite

This section explains how to install the ASI & Serial ECL (DHEI) interface into the MPEGscope Plus or MPEGscope Lite models. Normally, you will install the interface into slot 3, the optional line interface slot. If you have a different MPEGscope PC than the one illustrated below, you can still follow the procedure described in this section, as the affected cards are installed in the same positions.

MPEGscope Plus (E6277C)



Note

If your MPEGscope is housed in a Kayak XU PC and you also have the SMPTE 310M or ARIB interface, you can rearrange the cards so that both the ASI & Serial ECL (DHEI) interface and your other interface are installed at the same time. This alternative configuration is shown on page 10.

Step 1: Remove the cover

WARNING

Never remove the computer cover without first removing the power cord from the power outlet and any connection to a telecommunications network.



① Power off your PC.

② Unplug the AC power cord from the rear of the PC.

③ If you are connected to a telecommunications network, disconnect the network cable.

④ If you are connected to a system under test, disconnect the line interface cable(s).



⑤ Flip the two latches on the front sides of the computer cover upwards.

⑥ Grasp the cover on the sides at the back of the computer and slide it forwards and off the computer.

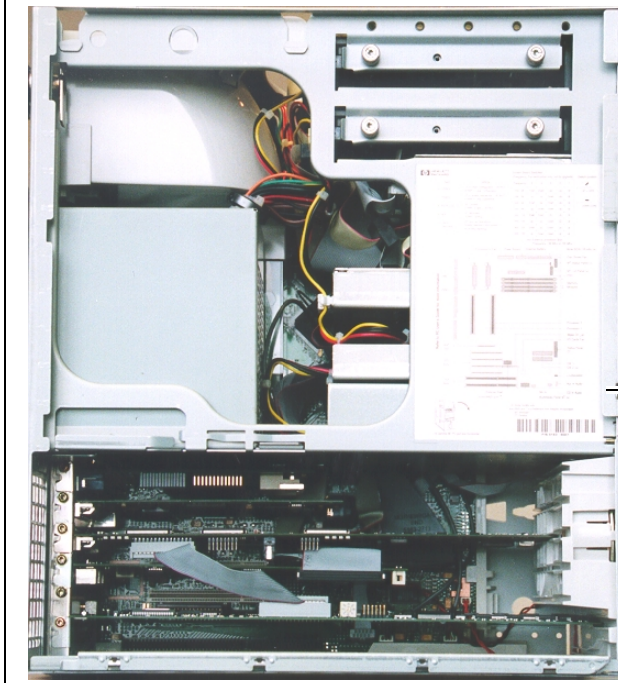
Step 2: Remove the optional line interface

Complete this step if your MPEGscope already has an optional line interface installed and you want to replace it with the ASI & Serial ECL (DHEI) interface. For an alternative card configuration, refer to page 10.

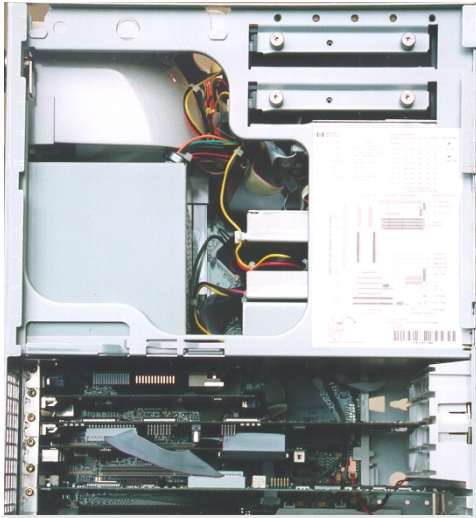
IMPORTANT:

- ① Attach the antistatic wrist strap to your wrist and to the PC chassis as described in the instructions on the envelope. Ensure that the copper foil end of this strap attaches to a metallic part of the chassis.

Back of computer with
connectors and faceplates

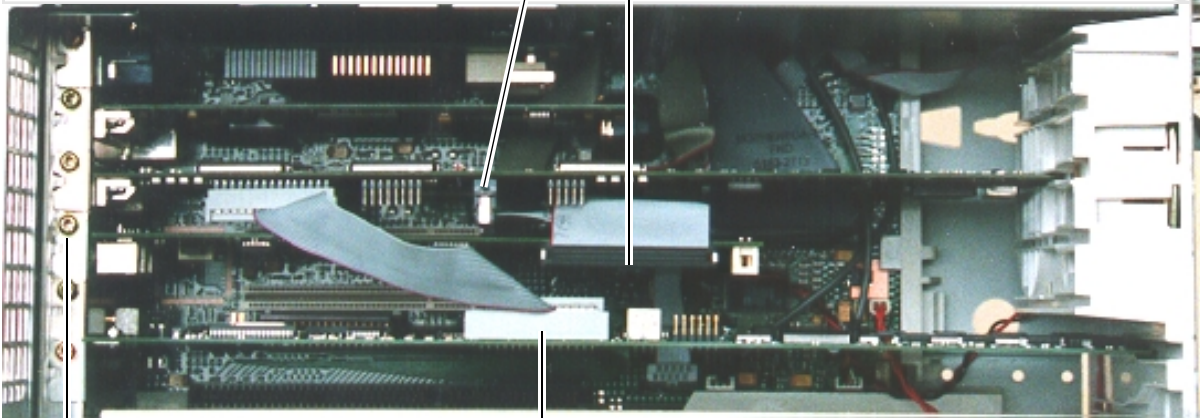


- ② Lay the computer on its side so that you can access the cards from the top.



⑥ If your optional line interface is connected to the MPEGscope main card with a cable, disconnect the other end of the cable from the MPEGscope main card and remove the cable.

④ If your optional line interface is connected to the MPEGscope main card with a cable, disconnect the cable from the optional interface card.



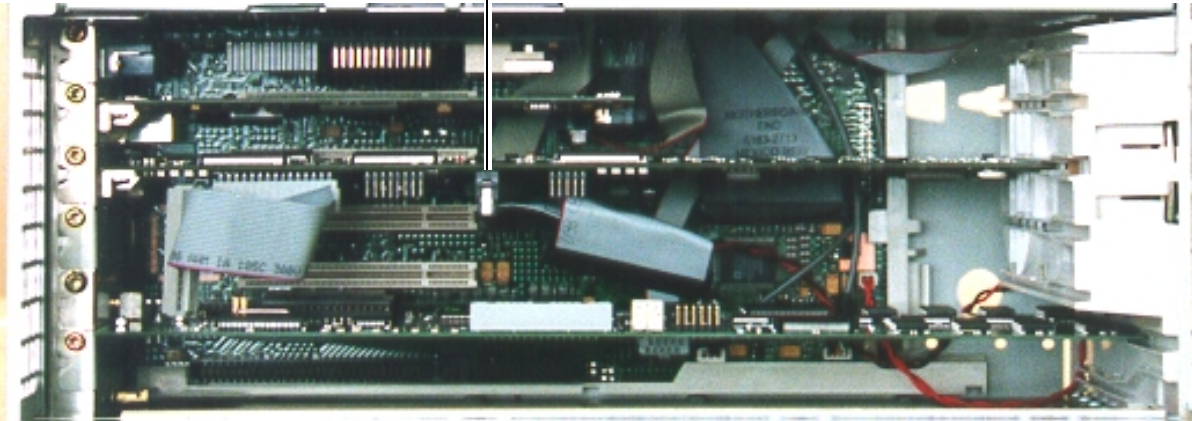
⑤ Remove the faceplate screw from slot 3 with the screwdriver provided, then remove the optional line interface.

③ If your MPEGscope has a Real-time Analyzer, disconnect the ribbon cable from the Real-time Analyzer card. The cable runs from the MPEGscope main card to the Real-time Analyzer card.

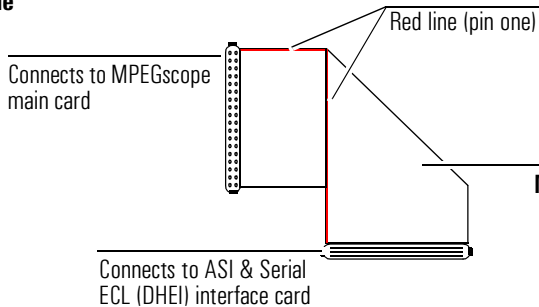
Step 3: Install the ASI & Serial ECL (DHEI) interface

IMPORTANT: ① Attach the antistatic wrist strap to your wrist and to the PC chassis as described in the instructions on the envelope. Ensure that the copper foil end of this strap attaches to an electrical ground.

② Connect the IAB (Instrument Application Bus) ribbon cable to the MPEGscope main card.

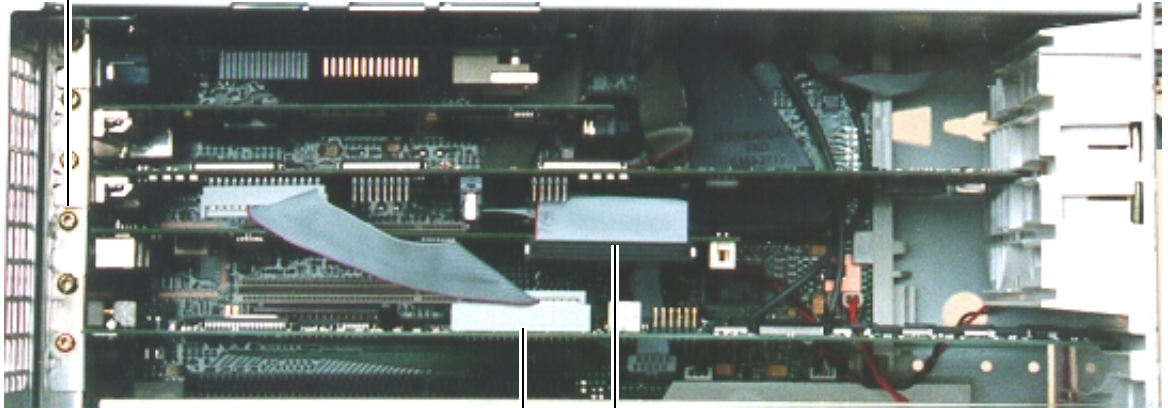


IAB ribbon cable



Note: The IAB ribbon cable comes folded. The connectors have polarity tabs to ensure that the ribbon cable can only be attached in the correct way.

- ③ Install the ASI & Serial ECL (DHEI) interface card into slot 3 and screw the faceplate to the PC chassis. (If this is the first interface installed into slot 3, you will have to remove the blank faceplate first.)



- ⑤ If your MPEGscope has a Real-time Analyzer, reconnect the ribbon cable from the MPEGscope main card to the Real-time Analyzer card.

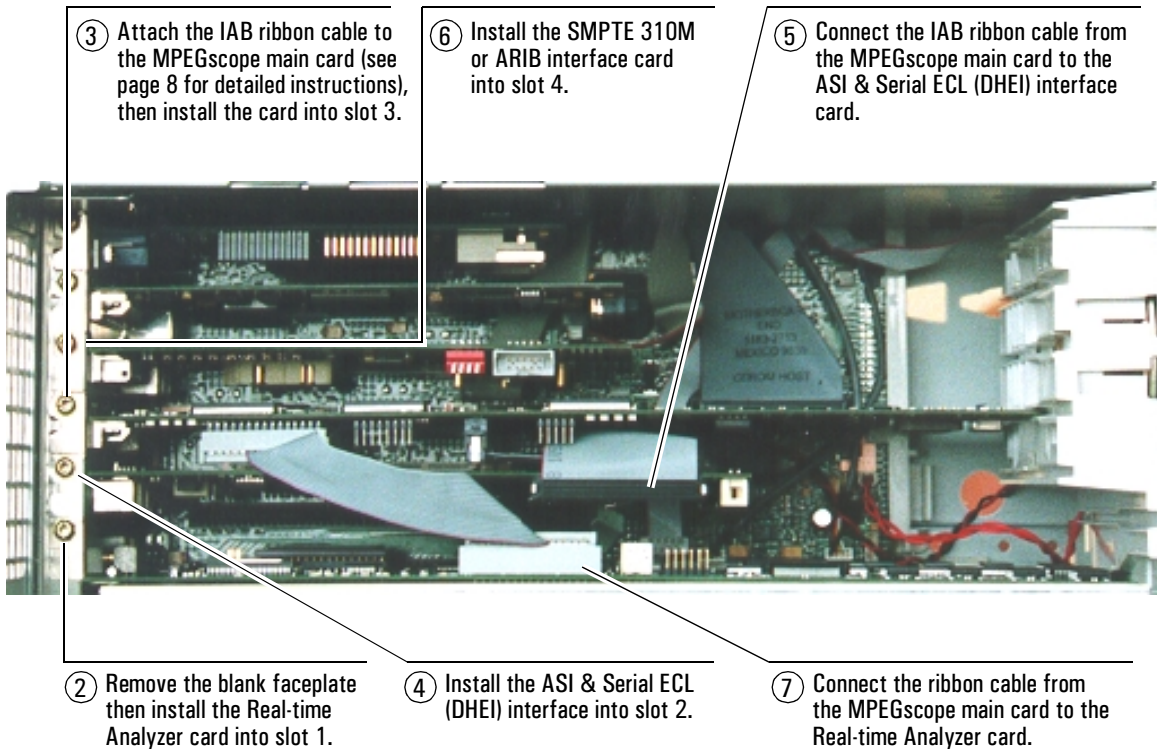
- ④ Connect the IAB ribbon cable to the ASI & Serial ECL (DHEI) interface card in slot 3.

MPEGscope Plus and MPEGscope Lite

Alternative configuration

This configuration applies only if your MPEGscope is housed in a Kayak XU PC (e.g., E6277B or E6277C). It enables you to have both the ASI and Serial ECL (DHEI) interface and the SMPTE 310M or ARIB interface installed at the same time. The configuration requires repositioning all MPEGscope cards into the first four slots, and replaces Steps 2 and 3 on pages 6 to 9. Follow all other steps as usual.

- ① Remove the cards from slots 2, 3 and 4, disconnecting cables as necessary.



Note

Before closing the MPEGscope cover, it is a good idea to check that you have installed the interface correctly by installing the new MPEGscope software and running a short test while you observe the indicator lights on the sides of the MPEGscope, ASI & Serial ECL (DHEI) interface, and Real-time Analyzer cards. The next two steps outline this procedure.

Step 4: Install the MPEGscope software

- 1 With the cover still open, carefully position the computer so you can see the indicator lights on the sides of the MPEGscope, ASI & Serial ECL (DHEI) interface, and Real-time Analyzer cards.
- 2 Connect the monitor, keyboard, and mouse to MPEGscope, then connect the power cords to a grounded outlet. For more information, refer to the computer user's guide that was shipped with MPEGscope.
- 3 If you have lost the license file backup disk shipped with your MPEGscope, back up your permanent license file before installing software by copying the file **C:\HP-Apps\FLEX\m\licence.dat** to a floppy disk.
- 4 Insert the MPEGscope CD that was shipped with your ASI & Serial ECL (DHEI) interface installation kit into the CD-ROM drive.
- 5 Launch the installation program by double-clicking on **D:\Setup.exe** from the Windows[®] NT Explorer window.
- 6 Follow the prompts in the installation dialogs. Accept the defaults each time you are prompted for a choice.
- 7 When the installation program has finished copying MPEGscope files, the PC will automatically shut down. Instead of resetting the PC, turn off the power with the power switch.
- 8 Turn the power back on and log in. When the PC reboots, firmware is automatically downloaded to the MPEGscope main card.

IMPORTANT

Occasionally a blue "crash dump" screen may occur if you log in quickly. To avoid the problem, do not log in until the hard disk light on the front of your PC has stopped flickering and all disk activity has stopped. If a blue screen occurs, press the **reset** button and hold it down for a few seconds to make sure that MPEGscope resets.

-
- 9 Follow the prompts to shut down the PC once more. Use the power switch to turn off the PC when Windows[®] NT indicates it is safe to do so.
 - 10 Turn the power switch back on and remove the MPEGscope installation CD from the CD-ROM drive.

Step 5: Test the installation

This section describes a quick diagnostic test you can run while you observe the indicator lights on the sides of the MPEGscope main card, the ASI & Serial ECL (DHEI) interface card, and the Real-time Analyzer card to ensure they are installed correctly.

A. Start MPEGscope and configure the ASI & Serial ECL (DHEI) line interface

- 1 Power on your MPEGscope and log in.
- 2 From the Launch Pad, click the **LIF Status** button.
- 3 From the **LIF** menu of the LIF dialog, select **ASI/M2S**.
- 4 Again from the **LIF** menu, select **Configure**.
- 5 From the **Configure ASI LIF** dialog, select the **Mode** tab.
- 6 From the **Mode** page, select **Loopback** then click **OK** to close the dialog.

B. Start the Real-time Analyzer and observe the indicator lights

- 1 From the Launch Pad, click the **RT Analyzer** button.
- 2 From the Real-time Analyzer's **Configure** menu, select **System**.
- 3 From the **Configure System** dialog, select **Experimental (Non-std)** under the **Input Packet Framing** section, and click **OK** to close the dialog.

Indicator lights on cards



The indicator lights on the sides of the cards installed in MPEGscope will show the following patterns if the cards are installed correctly:

	Indicator lights	Explanation of symbols
MPEGscope main card	o o o o o * * #	o off
ASI & Serial ECL (DHEI) interface card	* o * o	* on
Real-time Analyzer card	# * * * * * #	# flashing heartbeat
		<- * -> rotating pattern

Indicator lights on LIF Status dialog The indicator lights on the ASI/M2S LIF dialog will show the following patterns:

RED	Rx Sync	GREEN	Rx Frame
RED	Rx Signal	OFF	M2S Detect

C. Play a stream and observe the indicator lights

- 1 From the Launch Pad, click the **Rec/Play** button.
- 2 From the Recorder/Player, click the **Loop Play** button. 
- 3 From the Recorder/Player's File menu, open **E:\sample_42_5Mbs_10s.tsp**.
- 4 Click the **Play** button. 

Indicator lights on cards The indicator lights on the sides of the cards installed in MPEGscope will show the following patterns if the cards are installed correctly:

	Indicator lights	Explanation of symbols
MPEGscope main card	o o o o <- * ->	o off
ASI & Serial ECL (DHEI) interface card	* * * *	* on
Real-time Analyzer card	# * * * * * #	# flashing heartbeat
		<- * -> rotating pattern

Indicator lights on LIF Status dialog The indicator lights on the ASI/M2S LIF dialog will show the following patterns:

RED	Rx Sync	GREEN	Rx Frame
RED	Rx Signal	OFF	M2S Detect

The **Data Rate** section on the dialog will display the following rates:

Data Rate	
Total	42.5 Mb/s
Non-NULL	6.4 – 6.5 Mb/s
NULL	36.0 – 36.1 Mb/s

Step 6: Replace the cover



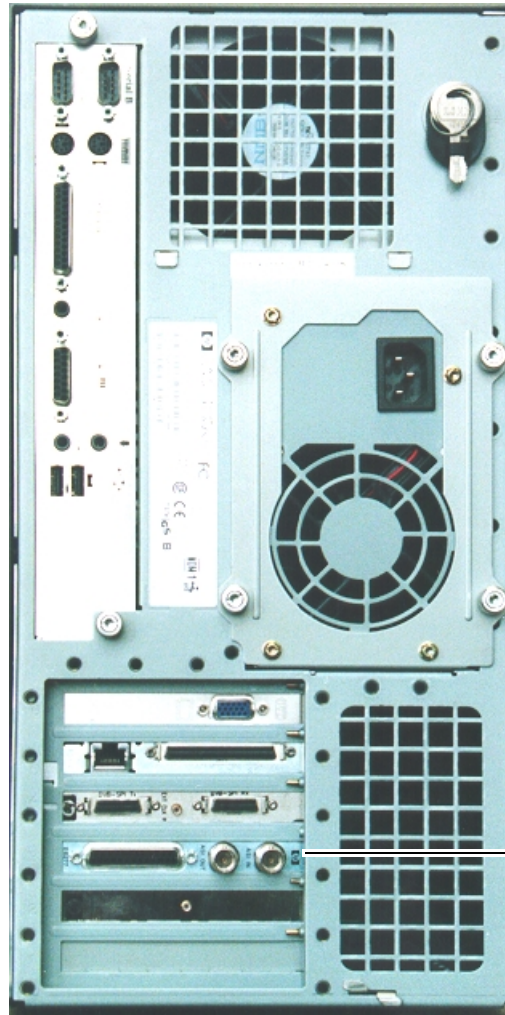
- ② Slide the cover onto the computer, making sure that the two guides at the bottom of the case slide into the two rails at the base of the computer. Firmly slide the cover backwards into position.

- ① Ensure that the two latches on the front sides of the cover are lifted up.

- ③ Lower the two latches on the front sides of the cover into place.

- ④ Reconnect your mouse, keyboard, display, power cables, and LAN connection, then power on your MPEGscope.

MPEGscope Plus with ASI & Serial ECL (DHEI) interface installed

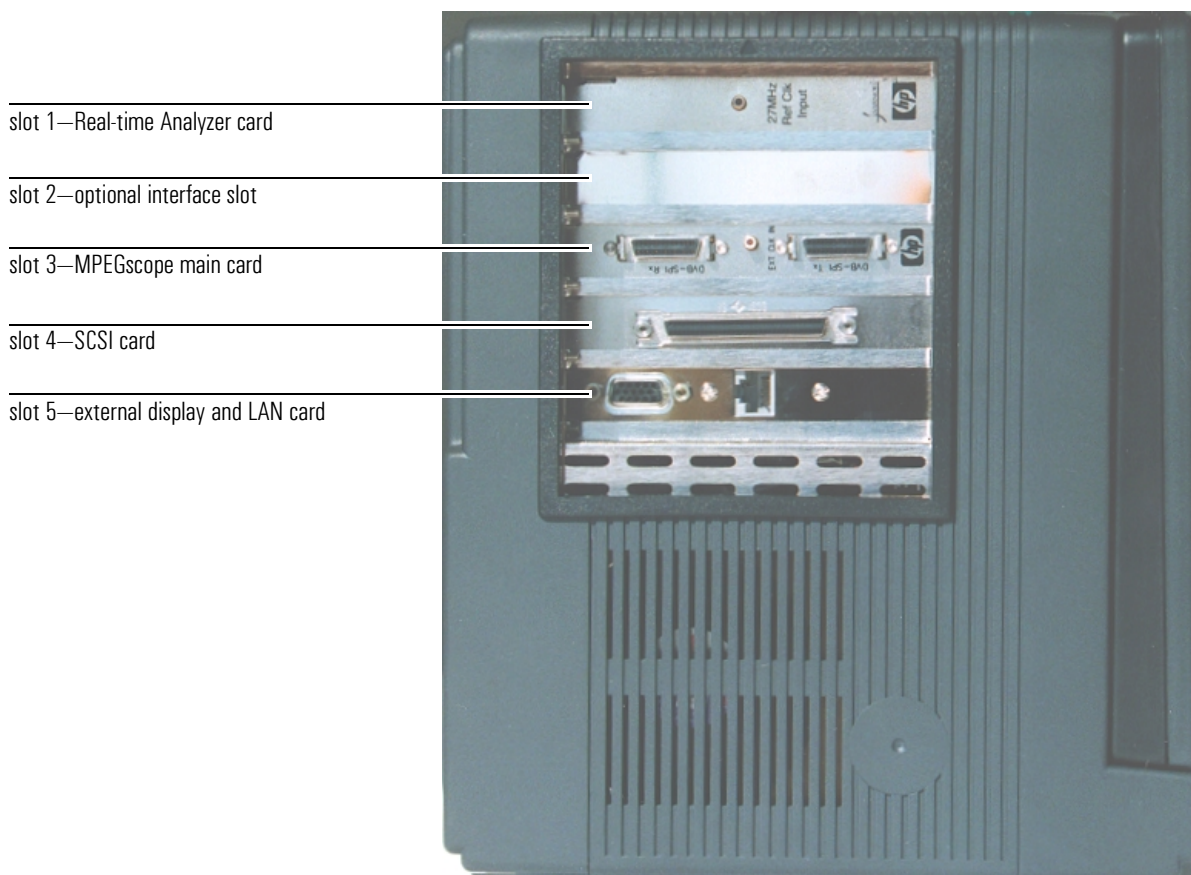


ASI & Serial ECL (DHEI)
interface installed in slot 3.

MPEGscope Portable and Portable Lite

This section explains how to install the ASI & Serial ECL (DHEI) interface into the MPEGscope Portable or Portable Lite models. You will install the interface into slot 2, the optional line interface slot, illustrated below.

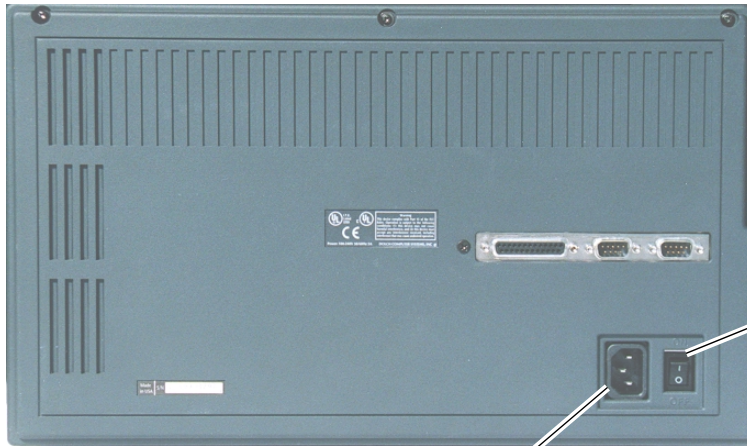
E6300C MPEGscope Portable platform



Step 1: Remove the cover

WARNING

Never remove the computer cover without first removing the power cord from the power outlet and any connection to a telecommunications network.

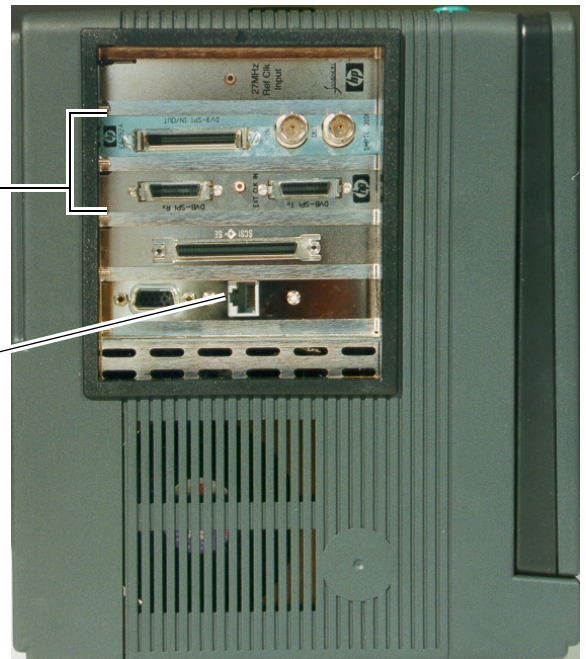


① Power off your portable.

② Unplug the AC power cord from the rear of the portable.

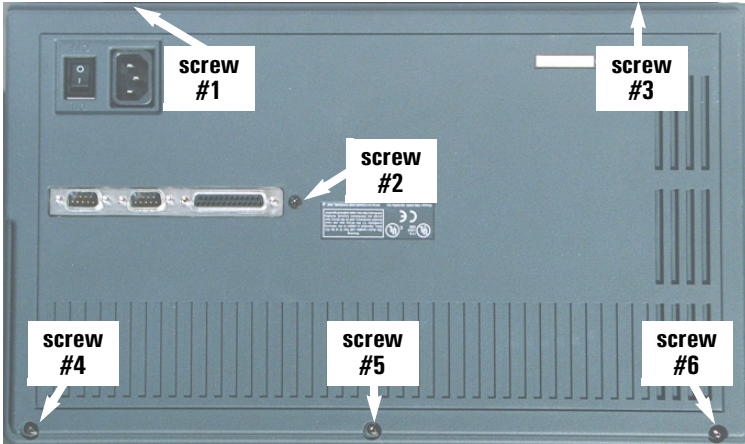
③ If you are connected to a system under test, disconnect the line interface cable(s).

④ If you are connected to a telecommunications network, disconnect the network cable.



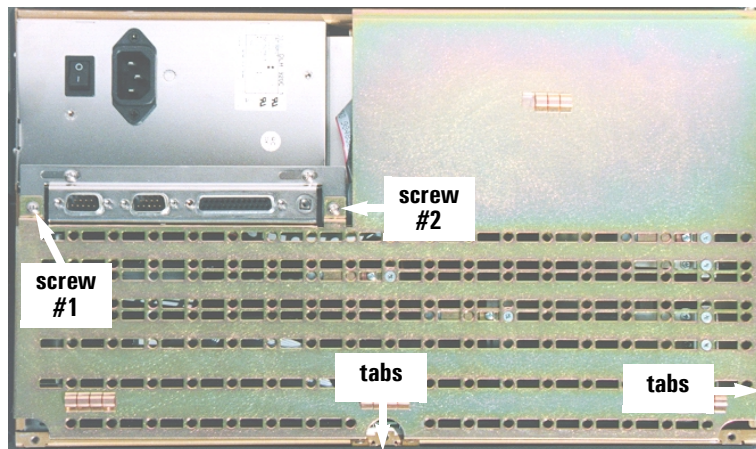
MPEGscope Portable and Portable Lite

- ⑤ Carefully lay MPEGscope Portable face down with the handle towards you.



- ⑥ Remove the six back panel screws from the back and side, then lift off the back panel.

- ⑦ Remove the two metal shield screws, then gently pull tabs from slots and remove the metal shield.

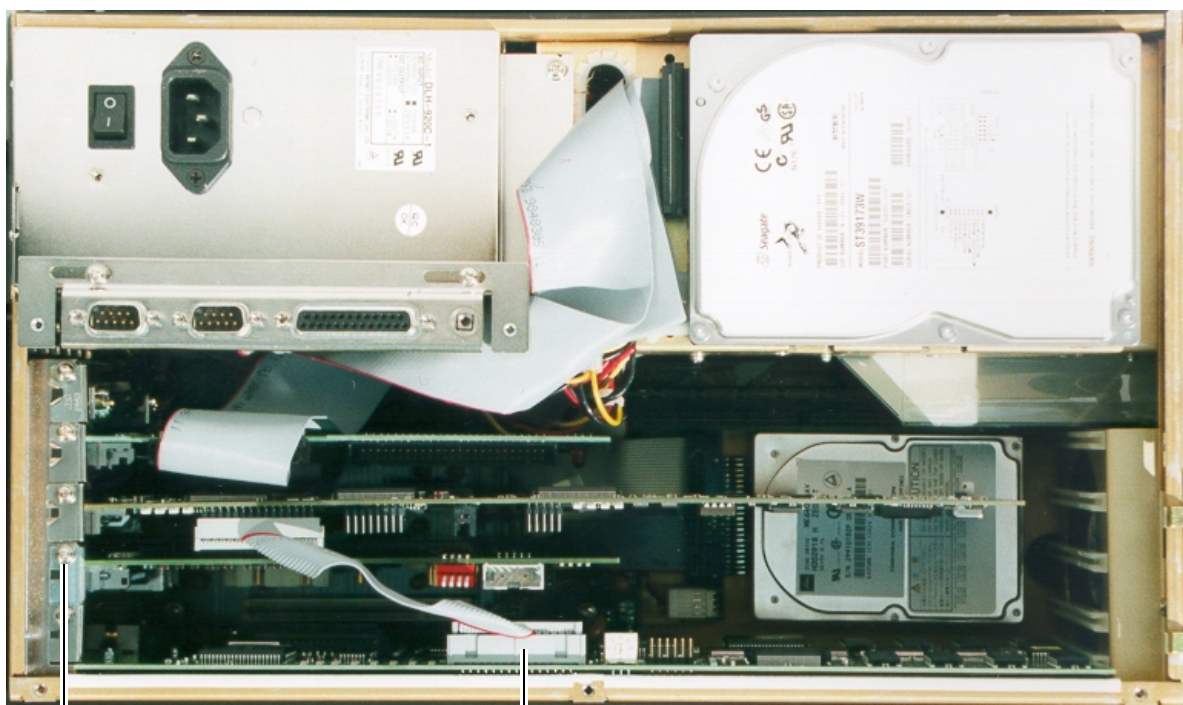


Step 2: Remove optional interface

Complete this step if your MPEGscope already has an optional interface installed and you want to replace it with the ASI & Serial ECL (DHEI) interface.

IMPORTANT:

- ① Attach the antistatic wrist strap to your wrist and to the PC chassis as described in the instructions on the envelope. Ensure that the copper foil end of this strap attaches to an electrical ground.



- ③ Remove the faceplate screw from slot 2 with the screwdriver provided, then remove the optional line interface.

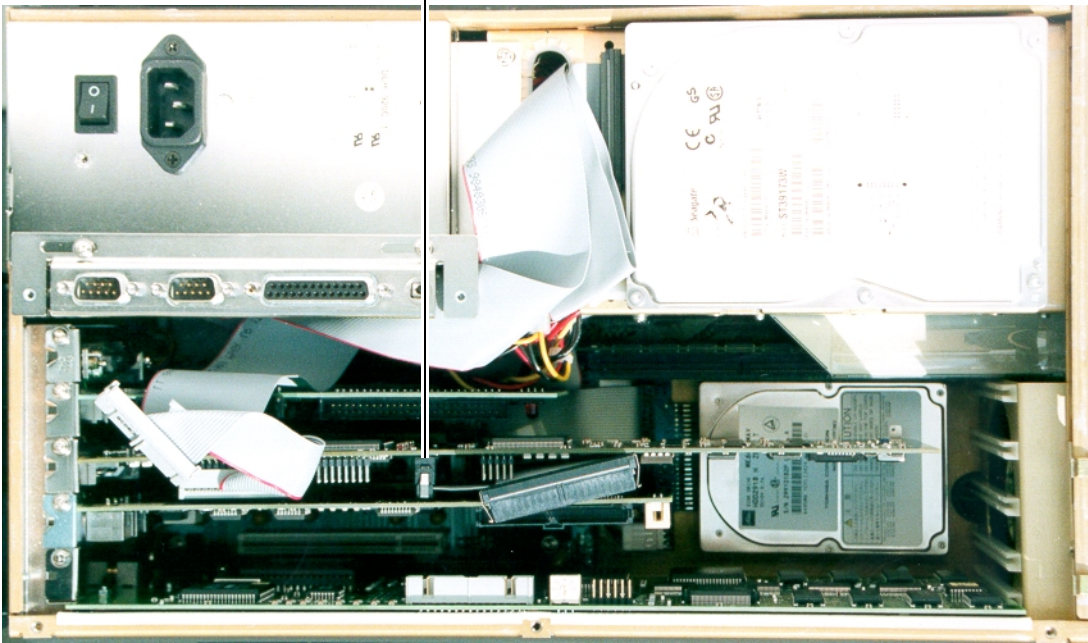
If your interface has a cable attaching it to the MPEGscope main card (not shown in this illustration), detach the cable first.

- ② If your MPEGscope has a Real-time Analyzer, disconnect the ribbon cable connector from the Real-time Analyzer card. The cable runs from the MPEGscope main card to the Real-time Analyzer card.

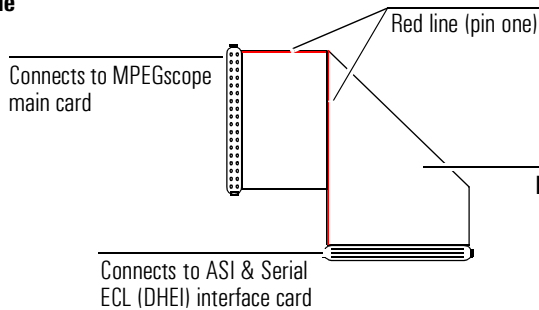
Step 3: Install ASI & Serial ECL (DHEI) interface

IMPORTANT: ① Attach the antistatic wrist strap to your wrist and to the PC chassis as described in the instructions on the envelope. Ensure that the copper foil end of this strap attaches to an electrical ground.

② Connect the IAB ribbon cable to the MPEGscope main card.

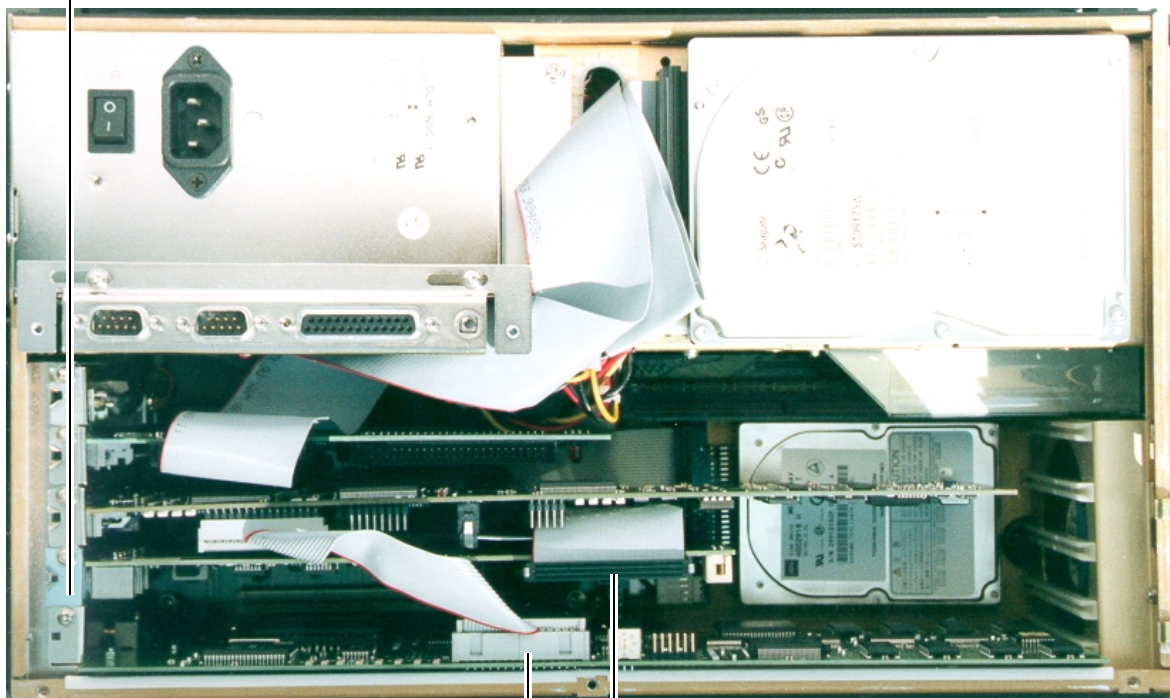


IAB ribbon cable



Note: The IAB ribbon cable comes folded. The connectors have polarity tabs to ensure that the ribbon cable can only be attached in the correct way.

- ③ Install the ASI & Serial ECL (DHEI) interface card into slot 2 and screw the faceplate to the PC chassis. (If this is the first interface installed into slot 2, you will have to remove the blank faceplate first.)



- ⑤ If your MPEGscope has a Real-time Analyzer, reconnect the ribbon cable from the MPEGscope main card to the Real-time Analyzer card.

- ④ Connect the IAB ribbon cable to the ASI & Serial ECL (DHEI) interface card in slot 3.

Note

Before closing the MPEGscope cover, it is a good idea to check that you have installed the interface correctly by installing the new MPEGscope software and running a short test while you observe the indicator lights on the sides of the MPEGscope, ASI & Serial ECL (DHEI) interface, and Real-time Analyzer cards. The next two steps outline this procedure.

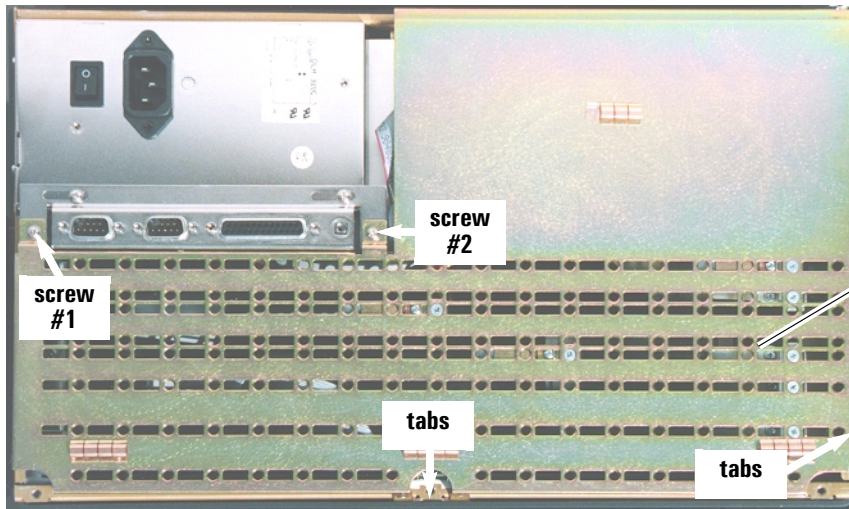
Step 4: Install the MPEGscope software

For a complete description of this procedure, refer to Step 4 of the “MPEGscope Plus and MPEGscope Lite” section on page 11.

Step 5: Test the installation

For a complete description of this procedure, refer to Step 5 of the “MPEGscope Plus and MPEGscope Lite” section on pages 12 to 13.

Step 6: Replace the cover

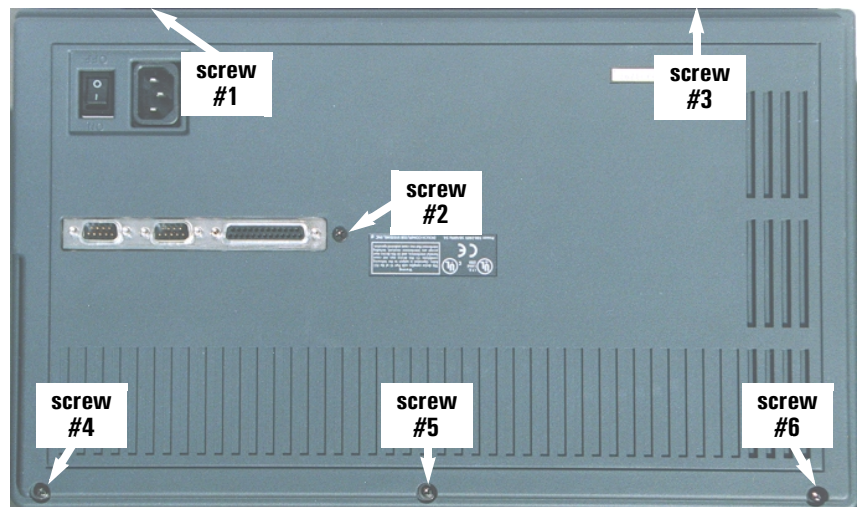


① Insert tabs on the sides of the metal shield into the slots on the outer frame, then replace the two metal shield screws.

② A plastic guide for the MPEGscope main card is located on the *inside* of the metal shield (by the third plastic guide screw). Use a small screwdriver to push down the plastic guide until the edge of the MPEGscope main card is engaged in the slot on the guide.

③ Place the back cover in position and replace the six back panel screws.

④ Reconnect your display, power cables, and LAN connection, then power on your MPEGscope Portable.



E6300A MPEGscope Portable with ASI & Serial ECL (DHEI) interface installed

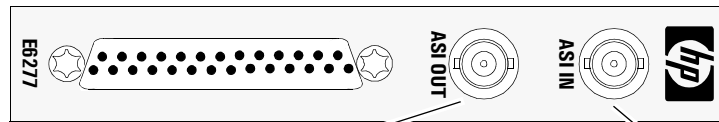
ASI & Serial ECL (DHEI)
interface installed in slot 2.



Connecting to the ASI & Serial ECL interface

The ASI & Serial ECL (DHEI) interface includes two blue impedance converters for the M2S line interface and one DHEI Expansion In/Out “Y” cable for the DHEI line interface.

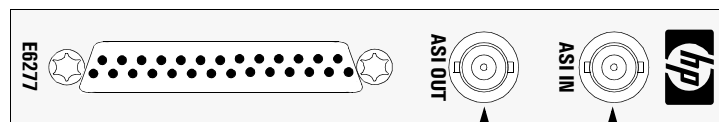
ASI Line Interface



① Connect the output line to the *ASI OUT* port.

② Connect the input line to the *ASI IN* port.

M2S Line Interface



① Connect the BNC connector of the *transmitter* impedance converter to the *ASI OUT* port. The transmitter impedance converter has a push-on SMB connector.

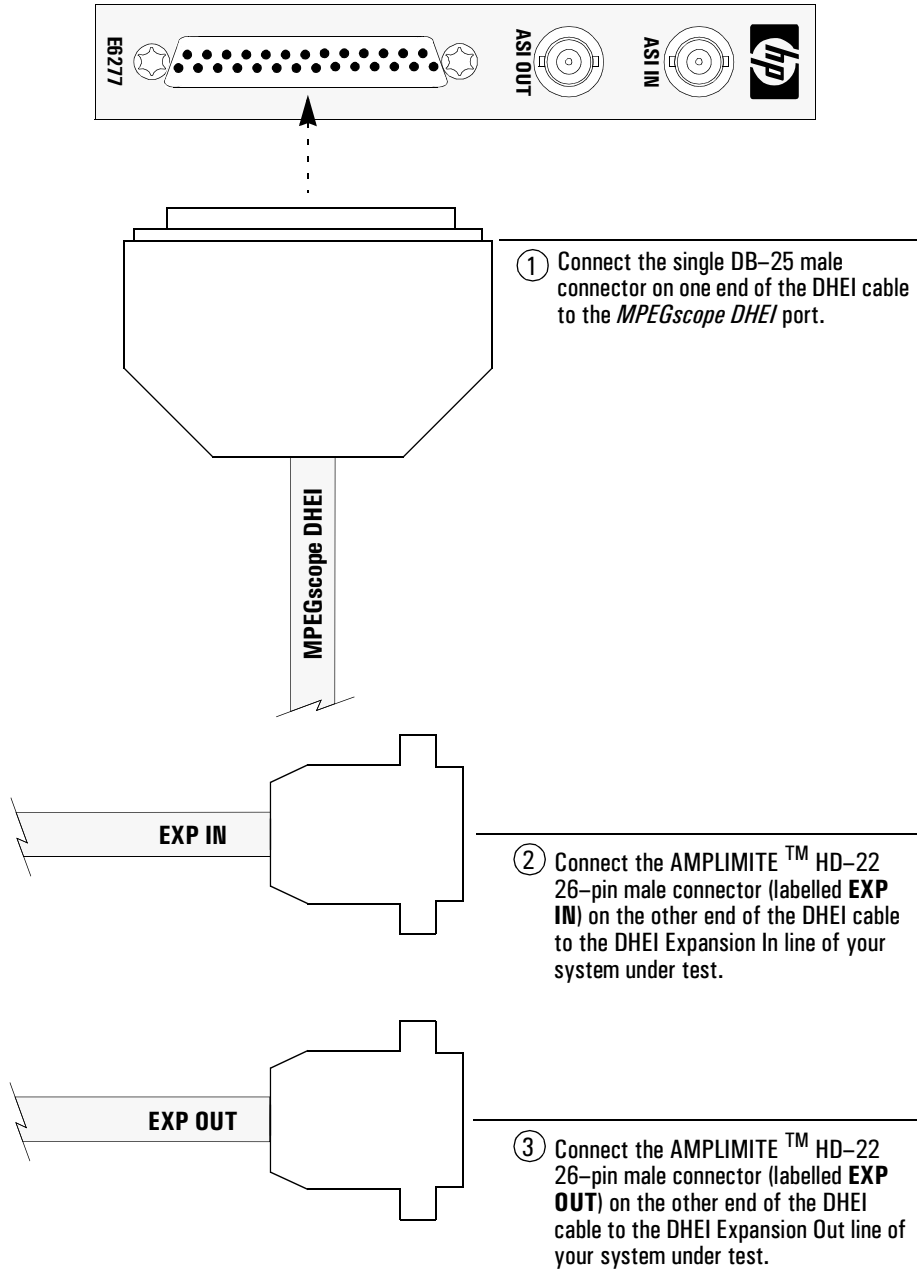
② Connect the BNC connector of the *receiver* impedance converter to the *ASI IN* port. The receiver impedance converter has a threaded SMA connector.

③ Connect the SMB connector on the transmitter impedance converter to the SMB connector on the output line.

④ Connect the SMA connector on the receiver impedance converter to the SMA connector on the input line.

Connecting to the ASI & Serial ECL interface

DHEI Line Interface

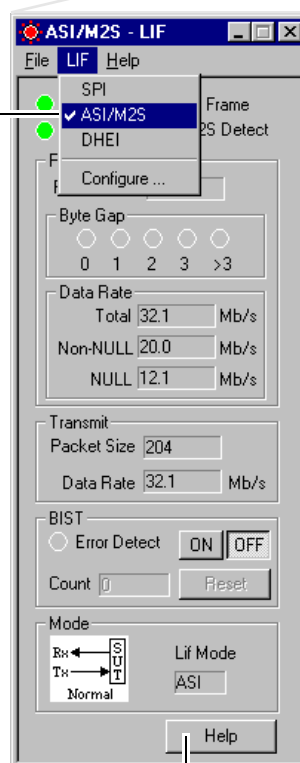


Configuring the software

This section shows how to configure the ASI & Serial ECL (DHEI) interface software. When you have completed it, you are ready to begin testing.

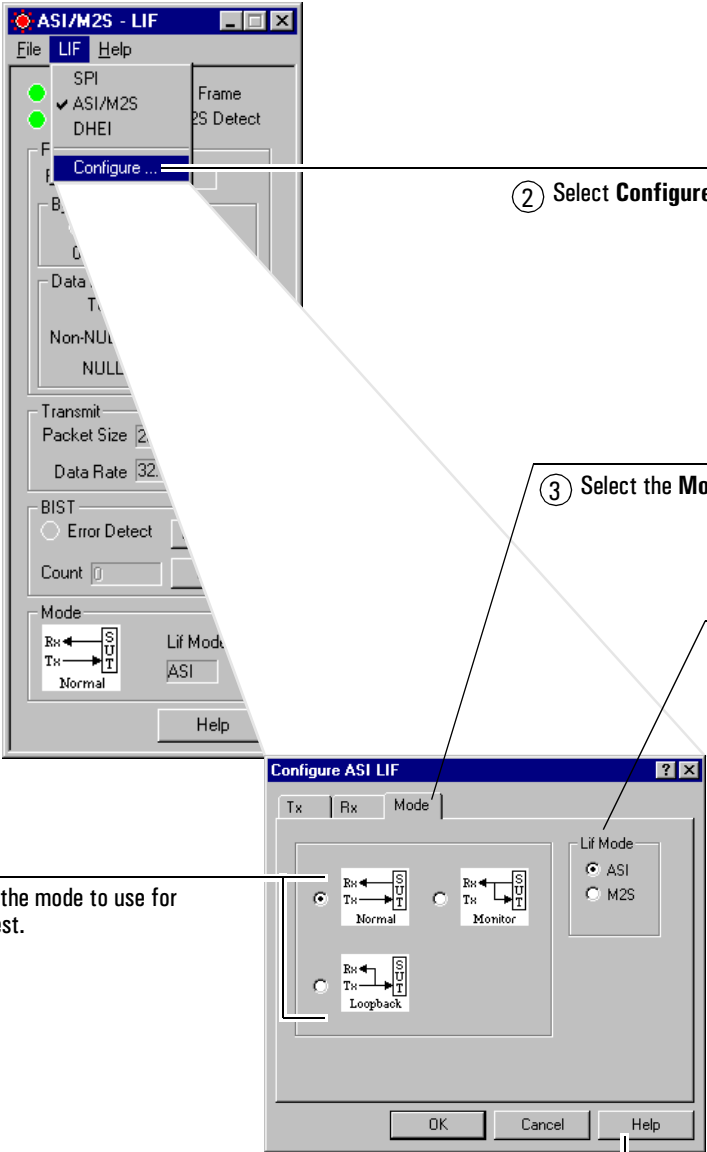


- ① Select the **ASI/M2S** or **DHEI** line interface.



For information about this dialog, press the **Help** button.

Configuring the software



The image shows two windows from the ASI/M2S software. The top window, titled "ASI/M2S - LIF", has a menu bar with "File", "LIF", and "Help". Under the "LIF" menu, "Configure..." is highlighted. The main area shows several sections: "SPI" and "DHEI" are checked; "Frame" and "2S Detect" are visible; "Data Rate" is set to 32; "Transmit Packet Size" is 2; "BIST Error Detect" is selected; and "Mode" is set to "Normal". The bottom window, titled "Configure ASI LIF", has tabs for "Tx", "Rx", and "Mode". The "Mode" tab is active, showing three radio button options: "Normal", "Monitor", and "Loopback". The "Normal" option is selected. To the right, under "Lif Mode", "ASI" and "M2S" are listed with radio buttons, and "ASI" is selected. At the bottom are "OK", "Cancel", and "Help" buttons.

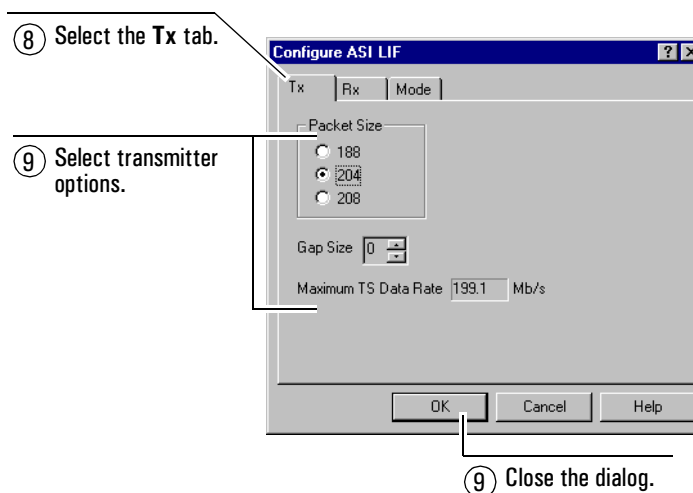
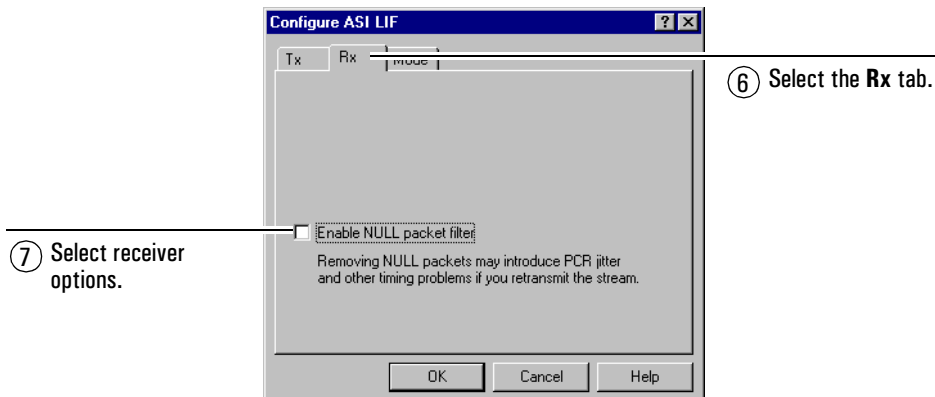
② Select **Configure**.

③ Select the **Mode** tab.

④ If you are testing with the ASI interface, select **ASI** or **M2S** mode.

⑤ Select the mode to use for your test.

For information about modes, press the **Help** button. You can also click on a field using the right mouse button.



For information about receiver and transmitter options, press the **Help** button at the bottom of the dialog. You can also click on a field using the right mouse button.

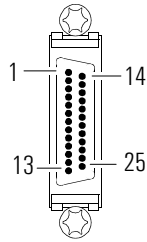
ASI & Serial ECL (DHEI) interface specifications

	ASI	M2S	DHEI
Type	serial	serial	serial
Maximum line rate	216 Mb/s	216 Mb/s	40 Mb/s
Timestamps	Packet timestamp clock: 33 MHz +/- 5 ppm Resolution of timestamp clock: 30 ns Packet timestamp sampling is accurate to within +/- 1 timestamp clock period between consecutive packets	Packet timestamp clock: 33 MHz +/- 5 ppm Resolution of timestamp clock: 30 ns Packet timestamp sampling is accurate to within +/- 1 timestamp clock period between consecutive packets	Packet timestamp clock: 33 MHz +/- 5 ppm Resolution of timestamp clock: 30 ns Packet timestamp sampling is accurate to within +/- 1 timestamp clock period between consecutive packets
Electrical Spec	75 Ω coax	50 Ω coax	Balanced ECL
Connector Type	BNC	SMA/SMB (through adapter)	DB-25
Standard	EN 50083-9 "Interfaces for CATV/SMATV Headends and similar Professional Equipment"	"Using the DiviCom M2S Interface"—DiviCom Application Note 0002	SCTE DVS/110 4 September 1997 Response to SCTE DVS CFI (DVS/089R1): Cable Headend and Distribution Systems
Part Number	ASI & Serial ECL (DHEI) line interface: E6291A		

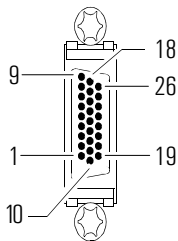
WARNING

To ensure the Electromagnetic Compatibility (EMC) of MPEGScope, use shielded cables on all interfaces.

Pinouts



DB-25 female
connector on
MPEGscope DHEI port



AMPLIMITE™ HD-22
26-pin connector on
DHEI cable

Pin	M2S ^(a)	DHEI ^(b)	DHEI EXP IN ^(c)	DHEI EXP OUT ^(e)
1	—	PROTGND	PROTGND	PROTGND
2	—	PCLKI+	SENSEOR	SENSEIR
3	—	PDATAI+	PSYNCO-	PSYNCI-
4	—	PSYNCI+	PDATAO-	PDATAI-
5	—	SENSEIL	PCLKO+	PCLKI+
6	—	REFCLKI+	PCLKO-	PCLKI-
7	—	SIGGND	REFCLKO+	REFCLKI+
8	—	PCLKO+	REFCLKO-	REFCLKI-
9	—	PDATAO+	SIGGND	SIGGND
10	—	PSYNCO+	—	—
11	—	SENSEOL	SENSEOL	SENSEIL
12	—	REFCLKO+	PSYNCO+	PSYNCI+
13	Serial-	SIGGND	PDATAO+	PDATAI+
14	—	SIGGND	—	—
15	—	PCLKI-	—	—
16	—	PDATAI-	—	—
17	—	PSYNCI-	—	—
18	—	SENSEIR	—	—
19	—	REFCLKI-	—	—
20	—	SIGGND	—	—
21	—	PCLKO-	—	—
22	—	PDATAO-	—	—
23	—	PSYNCO-	—	—
24	—	SENSEOR	—	—
25	—	REFCLKO-	—	—
26	Serial+	—	—	—

a. SMA/SMB connector

b. DB-25 connector

c. AMPLIMITE™ HD-22 26-pin connector

