NETBuilder II® HSS V.35 3-Port Module Installation Guide

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CHALLENGE
AWARD
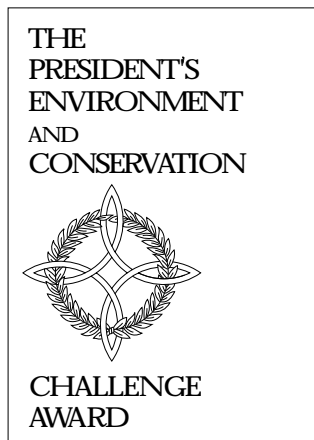
1992

For 3Com User Group Information
1-800-NET-3Com
or your local 3Com office

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Ethernet stackable hubs and Unmanaged Ethernet fixed port repeaters . . . . .Lifetime* (One year if not registered)
*Power supply and fans in these stackable hubs and unmanaged repeaters . . . . .One Year
Other hardware products . . . . .One Year
Spare parts and spares kits. . . . . .90 days

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Some states do not allow the exclusion of implied warranties or the limitation of incidental or consequential damages for consumer products, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights which may vary from state to state.

GOVERNING LAW: This Limited Warranty shall be governed by the laws of the state of California.

3Com Corporation
5400 Bayfront Plaza
Santa Clara, CA 95052-8145
(408) 764-5000

Before You Begin

This guide describes how to install, cable, maintain, and troubleshoot the High Speed Serial (HSS) V.35 3-Port module for the NETBuilder II® base system. The information in this guide applies to the NETBuilder II 4-slot chassis and the NETBuilder II 8-slot chassis, both single wide and dual wide configurations.

For more information about the NETBuilder II base system installation, refer to the *NETBuilder II Base System Installation Guide*.

This guide is intended for the system administrator, network equipment installer, or network manager who is responsible for installing and managing the network hardware. It assumes a working knowledge of network operations, but it does not assume prior knowledge of 3Com® internetworking equipment.

NOTE: If the information in the release notes shipped with your software differs from the information in this guide, follow the release notes.

How to Use This Guide

The following list shows where to find specific information. Refer to the documentation roadmap in the front of this guide for information on related guides.

If you are looking for:	Turn to:
Installation procedure	Chapter 1
Troubleshooting and maintenance information	Chapter 2
Description of the HSS V.35 3-Port module components	Appendix A
Displaying the MAC addresses procedure	Appendix B
Technical support information	Appendix C

Conventions

"Enter" vs. "Type"	When the word "enter" is used in this guide, it means type something, then press the Return key. Do not press the Return key when an instruction simply says "type."
Text represented as `screen display`	`This typeface` is used to represent displays that appear on your terminal screen and commands that you enter, for example: `setd !3 -path cl = e`
Bold vs. plain text in procedures	Bold text summarizes the task you must perform. Plain text provides additional information, for example: **3. Assign a name to port 1.** Use a name that is easy to remember.

Keys	When specific keys are referred to in the text, they are called out by their labels, such as "the Return key" or "the Escape key," or they may be shown as [Return] or [Esc].
	If two or more keys are to be pressed simultaneously, the keys are linked with a plus sign (+), for example:
	Press [Ctrl]+[Alt]+[Del].
Italics	Italics are used to denote *new terms* or *emphasis*.

Special Messages

A special format indicates notes, cautions, and warnings. These messages are defined as follows.

NOTE: Notes call attention to important features or instructions.

CAUTION: Cautions contain directions that you must follow to avoid immediate system damage or loss of data.

WARNING: Warnings contain directions that you must follow for your personal safety. Follow all instructions carefully.

Chapter 1

Installation

This chapter describes how to install the High Speed Serial (HSS) V.35 3-Port module into the NETBuilder II® base system. The HSS V.35 3-Port module provides three V.35 ports that provide access to Boundary Routing™ networks.

For information about the HSS V.35 3-Port module components, refer to Appendix A, "HSS V.35 3-Port Module Components."

Before Installing the HSS V.35 3-Port Module

Before you install the HSS V.35 3-Port module into the NETBuilder II base system, follow these steps:

1. **Observe appropriate ESD precautions.**

    Electrostatic discharge (ESD) can damage circuit board components. Failures resulting from ESD may not be covered under your warranty. To prevent this, follow these handling procedures:

    ■ Keep the HSS V.35 3-Port module in its antistatic shielded bag until you are ready to install it.

    ■ Do not touch pins, leads, or solder connections on the board.

    ■ Handle the board by the edges only.

    ■ Store or ship the HSS V.35 3-Port module in static-protective packaging.

    Observe proper grounding techniques when handling the HSS V.35 3-Port module: Use a foot strap and grounded mat, or wear a grounded static discharge wrist strap.

2. **Inspect the HSS V.35 3-Port module for shipping damage.**

    If you find any damage, contact the shipping company to file a report. If the assembly must be returned to your network supplier, ship it in its original shipping carton. If the original carton was damaged in shipment, repack the system in a carton that provides equivalent protection.

### 3. Verify that you have received all the contents.

When you purchase the HSS V.35 3-Port module, you receive the following:

- HSS V.35 3-Port module
- *NETBuilder II HSS V.35 3-Port Module Installation Guide*
- HSS V.35 3-Port cable

If an item is missing from an undamaged carton, contact your network supplier to secure a replacement.

4. **Write down the serial number and the three MAC addresses from the label on the component side of the HSS V.35 3-Port module on the following line:**

_____

Serial number label

MAC addresses label
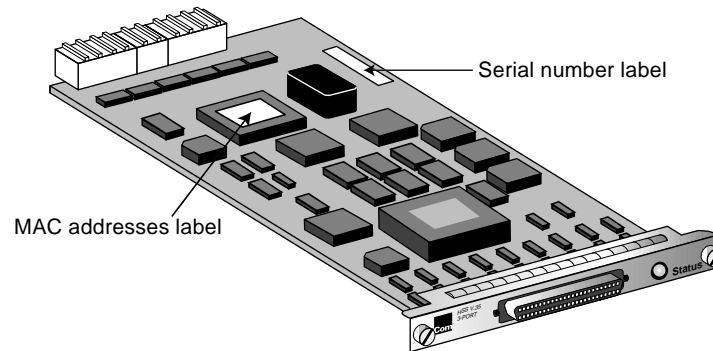
You will need this information if you have to contact your network supplier.

Serial number example: S/N:1BL12345

MAC addresses example: 0800021A4B5C, 0800021A4B5D, 0800021A4B5E

The MAC addresses are also encoded in the module's EEPROM. Use the procedure in Appendix B, "Displaying the MAC Addresses," to display the MAC addresses encoded in the EEPROM.

NOTE: The HSS V.35 3-Port module has IEEE network addresses and not MAC addresses as stated throughout this guide. "MAC address" is an encompassing term used by the software to indicate both MAC and IEEE network addresses.

Installing the HSS V.35 3-Port Module

Use this procedure to install the HSS V.35 3-Port module into the NETBuilder II base system. You will need a small flatblade screwdriver.

NOTE: There are two versions of the NETBuilder II 4-slot and 8-slot chassis. The older, single-wide versions of the NETBuilder II 4-slot and 8-slot chassis have two ejector tabs for each module. The newer, dual-wide versions have one ejector tab for each module, except for the CEC module slot which has two ejector tabs. When the term "dual-wide NETBuilder II chassis" is used in this manual, it refers to a chassis with only one ejector tab per module.

1. **Select an I/O slot in which to install the HSS V.35 3-Port module.**

You can install the module in any available I/O slot in the rear of the NETBuilder II base system. The top slot is designated for the CEC module only.

2. **Remove the blanking plate from the I/O slot you have selected for the HSS V.35 3-Port module.**

CEC slot

I/O slots (8)

1
2
3
4

8
7
6
5

② Push ejector tab(s) apart

① Loosen captive screws (with screwdriver if necessary)

③ Slide blanking plate out of rear panel
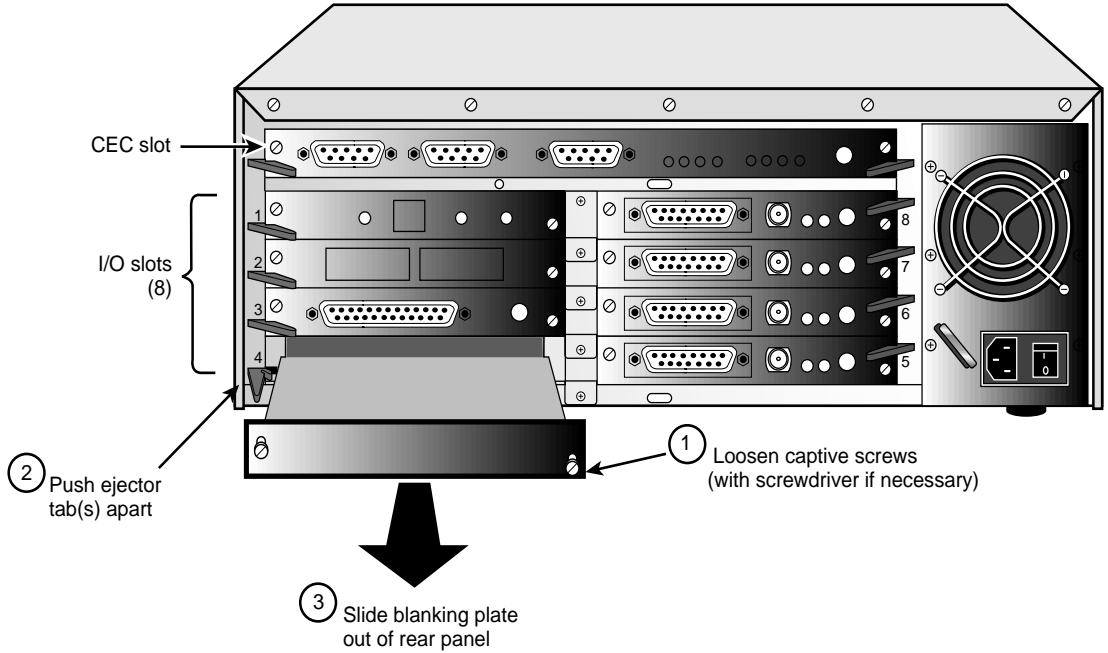
⚠ *CAUTION: Only remove the blanking plate from an I/O slot that will house an I/O module. All unused I/O slots require blanking plate covers to maintain proper cooling of the unit and regulatory compliance. Failure to cover open slots can result in overheating of the NETBuilder II base system and voiding of the warranty.*

3. Insert the HSS V.35 3-Port module into an uncovered I/O slot.

Make sure the ejector tab is in an open position. With the connector end toward the backplane and the board facing up (check that the labels on the connector/LED panel are right side up), grasp the left and right sides of the panel and fit the board along the guide rails into the I/O slot opening.

The ejector tab will engage itself once board is inserted

Push board into slot
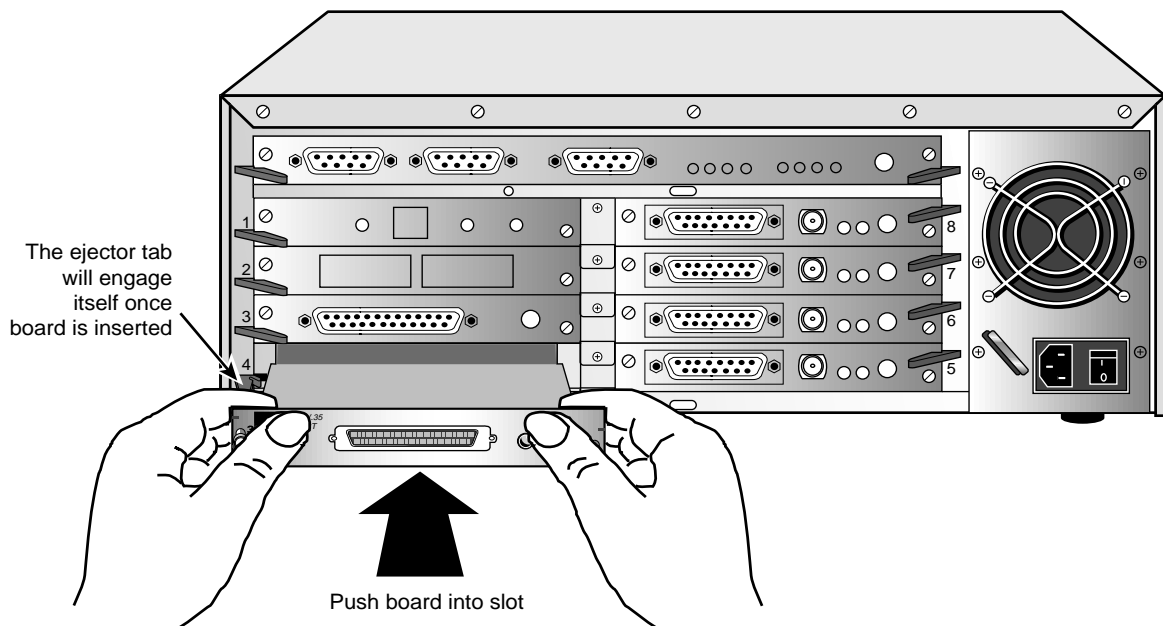
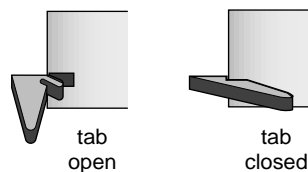**4. Lock the board in the slot.**

For the dual-wide NETBuilder II chassis, use your thumbs to push the board all the way into the slot. As you slide the board into the slot, the ejector tab engages itself. For single-wide NETBuilder II chassis, push the ejector tab closed.

tab
open

tab
closed

5. Check that the connector/LED panel of the newly inserted module is flush with the NETBuilder II chassis.

To verify that the board is seated correctly, check that it is aligned with the connector/LED panel of an installed module.
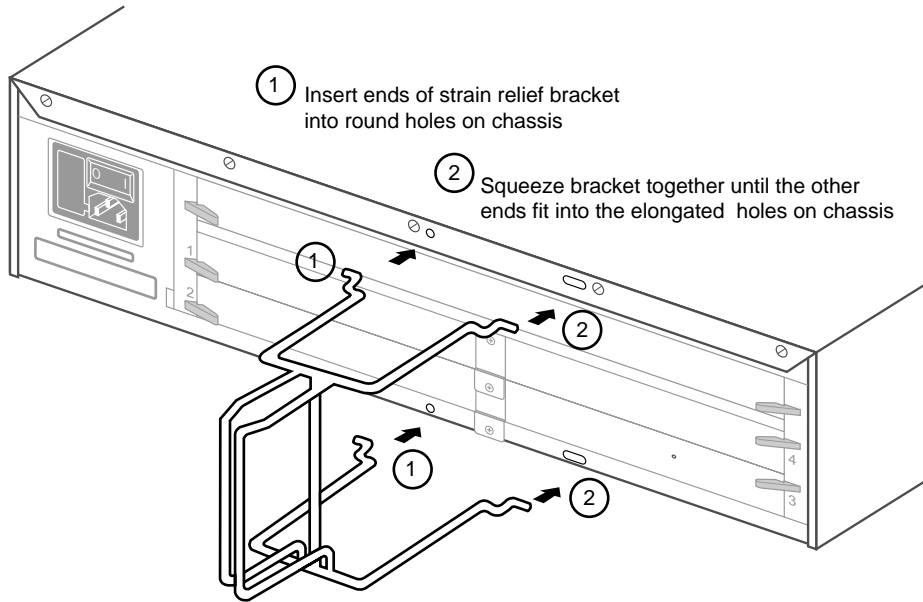
6. Hand tighten the captive screws. Do not use a screwdriver.

A solid connection of the connector/LED panel to the chassis is required for proper operation. Do *not* use the screws to force the board into place.

7.   Attach the HSS V.35 3-Port cable to the HSS V.35 3-Port module.

Hold the connector firmly in place while hand tightening the screws on either side of the connector.

8.   Attach the cable strain relief mechanism to the rear of the NETBuilder II chassis.

① Insert ends of strain relief bracket
   into round holes on chassis

② Squeeze bracket together until the other
   ends fit into the elongated holes on chassis

NOTE: There are 4 holes in the rear of the chassis. The location of the top holes depends on which chassis you have. On the NETBuilder II four-slot chassis, the top holes are located above the slot for the main processor module. On the eight-slot chassis, the top holes are located below the slot for the main processor module.

9.   Route the HSS V.35 3-Port cable through the two arms that protrude from the bracket.

CAUTION: Due to the weight of the HSS V.35 3-Port module cable, use the strain relief bracket to decrease the possibility of damage to the module. If the cable is too large to fit in the bracket along with other NETBuilder II module cables, use cable ties or other means of strain relief.

10. **Attach the remaining 3 connectors of the HSS V.35 3-Port cable to a standard V.35 interface.**

   It is not necessary to attach all 3 connectors.
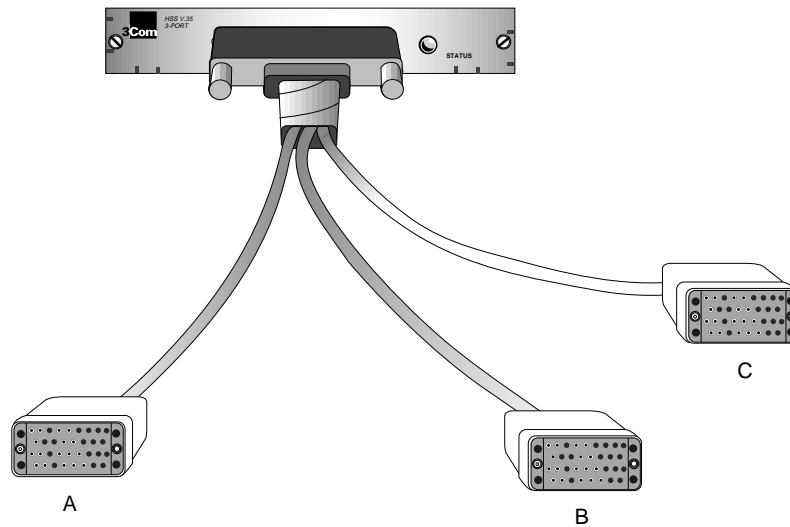
Data Transfer Rates

The HSS V.35 3-Port module supports a total of 2.048 Mbps full-duplex over all three ports. A sample configuration would be one port at 1.544 Mbps and two ports at 256 Kbps. If one port is used at 2.048 Mbps, the other two ports would not be used.

Data Transfer Rates

Chapter 2

Troubleshooting and Maintenance

This chapter describes how to troubleshoot and maintain the HSS V.35 3-Port module.

If you are unable to resolve a problem with your HSS V.35 3-Port module, you will need to contact a customer service representative. Refer to Appendix C, "Technical Support," for information about who to contact in your area.

Troubleshooting Startup Problems

The following symptom indicates a self-test failure. For complete information on configurable firmware parameters, refer to the *NETBuilder Family Bridge/Router Guide, Version 7.0* or later.

Symptom

The following message is displayed:

```
HSS V.35 3-Port Interface: Self Tests failed - slot X
```

The value of X can be 1 through 4 or 1 through 8, depending on whether you have a 4-slot or an 8-slot NETBuilder II chassis.

Action

Check to see if the card is inserted completely into the NETBuilder II chassis. If you still have a self-test failure, contact your local supplier.

Symptom

If the board has a physical interface to another serial device and the following message is displayed:

```
Path 1 Available
Path 1B Available
Path 1C Available
```

but the next message is *not* displayed:

```
Path 1 Up
Path 1B Up
Path 1C Up
```

Action

Make sure the cable is securely attached.

If the cable is attached correctly and your paths are still not coming up, make sure there is a complete data path and correct clocking between both ends of the serial link. Check DSU/CSU connections and telco connections.

Maintaining the HSS V.35 3-Port Module

This section describes preventive maintenance you can take and how to replace the HSS V.35 3-Port module.

Preventive Maintenance

3Com recommends the following procedures for preventive maintenance:

■   Observe the guidelines in Appendix A of the *NETBuilder II Base System Installation Guide* for minimum and maximum electrical and environmental requirements.

■   Keep the area around the NETBuilder II base system clean and avoid accumulated dust.

■   Allow sufficient air space around the NETBuilder II base system for proper ventilation. This protects the HSS V.35 3-Port module from excessively high temperatures.

■   Observe ESD guidelines whenever handling the HSS V.35 3-Port module.

Refer to Chapter 5 of the *NETBuilder II Base System Installation Guide* for preventive maintenance tips that apply to the entire system.

Replacing the HSS V.35 3-Port Module

If any component in the HSS V.35 3-Port module fails, you will need to replace the entire module. The HSS V.35 3-Port module can be hot-swapped, which means that you can safely remove and install a new one without turning off or rebooting the NETBuilder II base system. To perform the following procedure, you may need a small flatblade screwdriver.

Follow these steps to remove and replace the HSS V.35 3-Port module:

1.   **Disconnect any network cabling from the HSS V.35 3-Port module, and remove the cable from the strain relief bracket.**

You do not need to remove the bracket.

2.   **Unscrew the two captive screws that anchor the board in the slot until they disengage from the chassis. Do not remove the screws from the I/O panel.**

Use a screwdriver to loosen the screws, if necessary.

NOTE: If you have a dual-wide NETBuilder II chassis, skip step 3.

3.   **Release the ejector tabs on both sides of the board by pushing the tabs apart.**

The board will disengage from the NETBuilder II backplane and partially eject from the slot.

4.   **For the dual-wide NETBuilder II chassis, use one hand to disengage the ejector tab by pulling it back, and simultaneously use the other hand to pull on the anchoring screw on the opposite side of the I/O panel.**

5.   **Use both hands to grasp the board and gently pull it from the slot.**

6.   **Install the new HSS V.35 3-Port module using the procedures outlined in Chapter 1, "Installation."**

Maintaining the HSS V.35 3-Port Module

Appendix A

HSS V.35 3-Port Module Components

This appendix describes the HSS V.35 3-Port module components and gives the specifications of the board. The following figures show the surface and backplane of the HSS V.35 3-Port module.
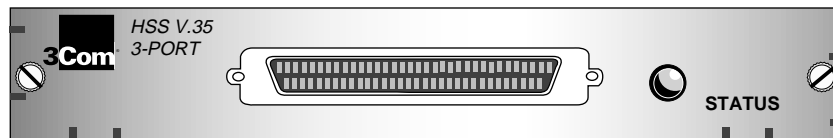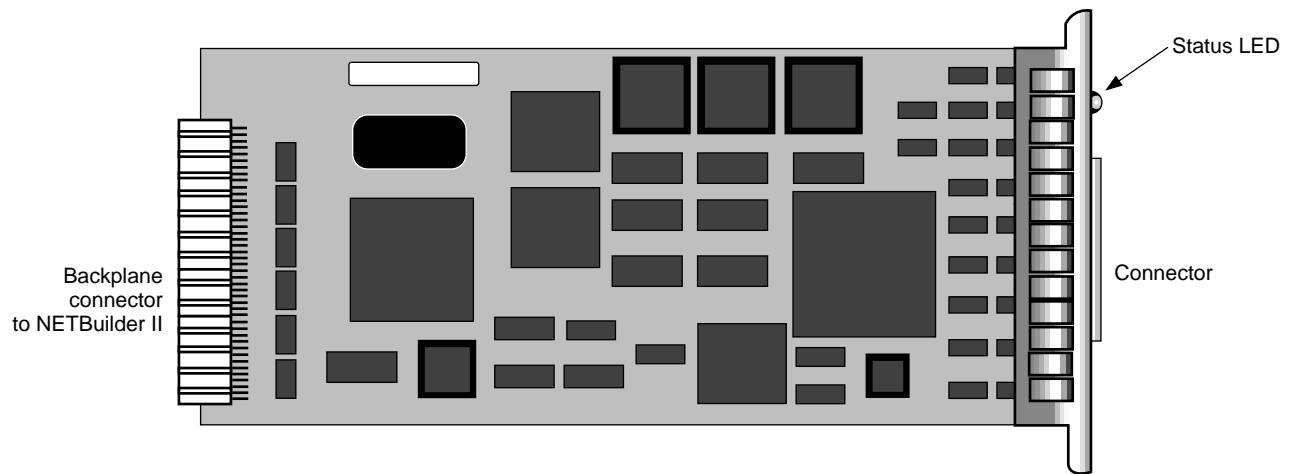
LED

Table A-1 explains the LED states.

Table A-1. LED states

LED	Normal Behavior	Color	Indicates
STATUS	on	green	normal operation
		off	module disabled
		yellow	self-test
		red	fault or reset

Connectors

Table A-2 and Table A-3 include the HSS V.35 3-Port module connector information and pinout information for the module and cable.

Table A-2. HSS V.35 3-Port Module Connectors

Location	Connector(s)	No. of Pins	Purpose
Backplane connector	J1 and J3	48-pin	connects module to the core bus
	J2	8-pin	power connector
Front LED/connector panel	68 pin cable connector	68-pin	connects module to HSS V.35 3-Port cable
HSS V.35 3-Port cable	three V.35 connectors	21-pin	connects module to V.35 interface

Table A-3. V.35 Cable and 68-pin Connector Pinout

Adapter Cable Pinout						
A	**B**	**C**	**Signal**	**I/O**	**Signal Description**	**V.35 pin**
57	46	35	GND	-	shield GND	A
28	17	6	SDB	output	transmit data, non-inverted	S
29	18	40	SDA	output	transmit data, inverted	P
32	20	8	RDB	input	receive data, non-inverted	T
66	54	42	RDA	input	receive data, inverted	R
58	47	36	RTS	output	request to send	C
60	49	37	CTS	input	clear to send	D
26	15	4	DSR	input	data set (DCE) ready	E
24	13	1	DTR	output	data terminal (DTE) ready	H
27	16	5	GND	-	signal GND	B
61	50	38	DCD	input	data carrier detect	F
34	22	10	SCTB	input	transmit clock, non-inverted	AA
68	56	44	SCTA	input	transmit clock, inverted	Y
33	21	9	SCRB	input	receive clock, non-inverted	X
67	55	43	SCRA	input	receive clock, inverted	V
25	14	2	LL	output	local loop back	L
59	48	3	RL	output	remote loop back	N
62	51	39	RI	input	ring indicator	J
30	19	7	SCTEB	output	ext. transmit clock, non-inverted	W
64	53	41	SCTEA	output	ext. transmit clock, inverted	U
23	12	11	TM	input	test mode	NN
65	52	45	GND	-	shield GND	
31	63		NC	-	not connected	

⚠️ *CAUTION: All interconnecting cables must be properly shielded to reduce the potential for interference. Only cables from 3Com are guaranteed to meet emissions standards. If other cables are used, 3Com cannot guarantee compliance.*

Specifications

Table A-4 and Table A-5 list the physical dimensions and the maximum current consumption of the HSS V.35 3-Port module.

Table A-4. Physical Dimensions

Attribute	Description
Length	8.8 in (22.25 cm)
Width	3.9 in (9.9 cm)
Height	0.6 in (1.5 cm)
Weight	8.47 oz (0.24 kg)

Table A-5. Maximum Current Consumption

+5 Volts	+12 Volts	-12 Volts
2.0 amps	0.3 amps	0.4 amps

Specifications

Appendix B

Displaying the MAC Addresses

After you have installed the HSS V.35 3-Port module, use this procedure to display the MAC addresses.

This method of accessing the monitor can be done only from the NETBuilder software. To find out about other methods of accessing the monitor utility, refer to the *NETBuilder Family Bridge/Router Guide*.

NOTE: Using the MONitor command halts the normal operation of the bridge/router software.

1. **Access the monitor utility.**

   a. **Enter mon.**

      The following message appears:

      ```
      WARNING: Monitor mode halts normal operation. Confirm (Y/N)
      ```

   b. **Enter Y.**

      The following message appears:

      ```
      3Com Corporation NETBuilder II Monitor
      ```

      The angle bracket (>) prompt indicates you are in monitor mode.

2. **Enter si to display the System Information menu.**

   The following is displayed:

   ```
   System Information

   1. Display System Information Summary
   2. Display Repair Data
   3. Display I/O Module Information

   Enter display number or press Q to quit:
   ```

4. **Enter 3 to access the three MAC addresses of the HSS V.35 3-Port module.**

   The *Assigned MAC addresses* field lists the three MAC addresses that have been assigned to the interface on the I/O module.

   This display is a few screens long. Once the first screen is displayed, press the Return key to display the next screen.

5. **When you are finished with the display of I/O module information, enter Q.**

   This will exit the monitor mode and return you to the bridge/router software interface.

Appendix C
Technical Support

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Automated Fax Service

3Com's interactive fax service, 3ComFacts℠, provides technical information on 3Com products 24 hours a day, seven days a week. To access this service, dial 1-(408)-727-7021 from anywhere in the world using your touch tone telephone. In Europe, call (44) 442 278279.

Free local access is available within the following countries by using the numbers listed:

France	05 90 81 58
Germany	0130 81 80 63
Italy	1678 99085
Netherlands	06 0228049
Sweden	020 792954
U.K.	0800 626403

Within this service, you may choose to access CardFacts℠, containing adapter information, or NetFacts℠, containing network system product information.

- CardFacts provides adapter installation diagrams, configuration drawings, troubleshooting instruction, and technical articles. Document 9999 provides you with an index of adapter documents.

- NetFacts provides data sheets and technical articles on 3Com's hub, bridge, router, terminal server, and software products. Document 8888 provides you with an index of system product documents.

On-line Technical Services

You can access the following on-line services for software updates, drivers, technical tips, and product information.

3Com Product Information Service

Ask3Com℠ is a CompuServe℠-based service containing patches and drivers, technical articles about all 3Com products and an interactive forum for technical questions. To use Ask3Com, you need a CompuServe account. Log in to CompuServe, type GO THREECOM and press [Enter] to see the Ask3Com main menu.

Adapter-Specific Bulletin Board System (BBS)

This private BBS, called CardBoard℠, contains patches and drivers for 3Com adapter products, as well as technical articles. To access CardBoard, call the CardBoard telephone number nearest to your location:

France   (33) (1) 69 86 69 54
Modem set up to 9600 baud, 8 data bits, no parity, 1 stop bit.

Germany   (49) 89 62732-188 or (49) 89 62732-189
Modem set up to 9600 baud, 8 data bits, no parity, 1 stop bit.

Italy   (39) (2) 27 30 06 80
Modem set up to 9600 baud, 8 data bits, no parity, 1 stop bit.

U.K.   (44) (0) 442 278278
Modem set up to 9600 baud, 8 data bits, no parity, 1 stop bit.

U.S.   (1) (408) 980-8204
Modem set up to 14400 baud, 8 data bits, no parity, 1 stop bit.

3Com Documentation on CD-ROM

An extensive library of 3Com product documentation is available in CD-ROM format through Support On-Site for Networks™ subscription service. This multivendor CD-ROM service, offered by Computer Library, a division of Ziff Communication, contains technical information and documentation from major data networking hardware and software manufacturers. Stand-alone and concurrent user subscriptions are available. For more information, call Computer Library at (800) 827-7889, extension 515. Outside the U.S., call (212) 503-4400 or use fax number (212) 503-4487.

Warranty Information

3Com's warranty varies by product. For warranty information on your product, refer to your purchase agreement. If you are a non-contracted end customer, refer to the warranty card accompanying the product, or contact your authorized 3Com network supplier for assistance.

Additional Technical Support Services

Additional information about obtaining technical support follows, broken down into three sections:

- U.S. and Canada
- Europe and Africa
- Australia, New Zealand, Asia, Japan, Central America, and South America

Refer to the section that contains information relevant to your location.

U.S. and Canada

Authorized 3Com network suppliers are qualified to provide network planning, installation, hardware maintenance, application training, and support services. Many 3Com network suppliers are uniquely qualified to provide on-site services for products from multiple vendors. Contact your 3Com network supplier first for assistance. If you do not know who this is,

contact your nearest 3Com sales office. To find the 3Com sales office nearest you, call 1-800-NET3Com (638-3266).

Before Contacting Your Network Supplier

Before you talk to your network supplier, make sure that you have detailed information about the problem, including:

- A complete description that includes:

    - The sequence of events or actions that led to the problem
    - The nature, symptoms, and duration of the problem
    - The system components involved
    - Whether or not you can reproduce the problem

- A list of all the 3Com products you have, including:

    - Hardware models and serial numbers
    - Software part numbers and revision levels

- A list of all other products involved in the problem, including:

    - Hardware products (types and model numbers) such as personal computers, monitors, fixed disks, and modems
    - Software products, including operating systems and applications

- A list of all recent system configuration changes, including:

    - Hardware
    - Operating system and application software
    - Network and system administration procedures

Your network supplier will determine what action needs to be taken to resolve the problem.

Returning Products for Repair

If you need to have a product repaired, local 3Com authorized service partners are good sources for quality repairs and spare parts. However, a situation may arise in which you need to return a product directly to 3Com for service. Before doing this, you must obtain a Return Materials Authorization (RMA) number.

Obtaining an RMA Number. To obtain an RMA number, contact 3Com Customer Repair Services at 800-876-3Com. If you have a touch-tone phone, select hardware repair, option #2. If you do not have a touch-tone phone, remain on the line for assistance. You also can fax your repair request to 3Com at 408-764-7120. In order to obtain an RMA number, you must provide the following information:

- Name and phone number of technical contact at your company
- Company name
- Company shipping address
- Product name
- Model and serial numbers of the main unit
- Failed subassembly name and serial number, if applicable

- Failure symptoms with diagnostic error messages, if applicable
- Proof of purchase for warranty repairs

If you send a product to 3Com for repair without an RMA number displayed clearly on the outside of the box, it will be returned to you unopened.

Paying for Repairs. You may pay for repairs by C.O.D., MasterCard®, or VISA®. Terms are available only if you have prearranged a special authorization with the 3Com credit department and you enclose a copy of the purchase order with the equipment.

3Com reserves the right to charge for "no problem found," regardless of the product warranty status.

Packing and Shipping Products to 3Com. To ensure the safe arrival and speedy repair of your equipment, follow these packing and shipping guidelines:

- Package carefully, using the original container if possible.

- Wrap controller boards and adapters in antistatic material.

- Do not include cables, software, or documentation.

- Include any problem diagnostic information.

- Include a packing list, purchase order, and other repair documentation.

- Print the RMA number clearly on the outside of the box. (If you send a product to 3Com for repair without an RMA number displayed clearly on the outside of the box, it will be returned to you unopened.)

- Prepay the shipping costs to 3Com.

Ship your products to:

3Com Corporation
5400 Bayfront Plaza
RMA Receiving, Attention: RMA *(your RMA number)*
Santa Clara, CA   95052-8145

3Com returns products by air freight, priority 2, and pays all return shipping costs.

Repair Timeframes. Repairs may take up to thirty (30) working days in-house. A 24-hour turnaround option, which includes priority 1 return air freight, is available for an additional expedite charge.

Additional 3Com Support Services

If you want to supplement your network supplier's service, 3Com offers a variety of technical support services including:

- Network Integration Service, a set of professional services that can assist you with large-scale, complex projects

- Annual on-site support contracts

- Annual hardware maintenance contracts

- Technical support service by telephone

- Factory repair service

- Spare parts

- Software update service

You can receive information about these programs and services from your authorized 3Com network supplier or directly from 3Com by calling 1-800-NET-3Com or the 3Com sales office nearest you.

Europe and Africa

Authorized 3Com network suppliers often are equipped to provide repair service. Contact your network supplier first for assistance. If your equipment needs repairs that are not available from your network supplier, or if you purchased your equipment directly from 3Com, you or your network supplier usually will send the equipment to the 3Com Europe repair center in England.

Equipment Warranties and Repair Services

3Com's warranty varies by product. For warranty information on your product, refer to your purchase agreement. If you are a non-contracted end customer, refer to the warranty card accompanying the product, or contact your authorized 3Com network supplier for assistance.

3Com Europe offers a 30-day exchange/repair service (in-house) for most products. A standard charge is made on all items returned for exchange or repair when the product's warranty has expired, whether or not the item is found to be faulty.

When you send items to 3Com Europe for repair, you are responsible for paying all shipping or freight charges. 3Com Europe pays all return freight charges.

3Com Europe may exchange your equipment for an identical part. If you require that your original equipment be repaired rather than exchanged, please note this on the documents you send with your equipment.

Returning Products for Repair

Before you return any product for repair, contact 3Com's European Repair Services by phone or fax with your purchase order or reference number, and include shipping and flight information with the shipping date.

- Phone: (44) 44 2 278 125
- Fax: (44) 44 2 236 824

The account administrator for your country will assist you with your repair needs.

Preparing Your Equipment for Shipment

To ensure that your equipment arrives without damage and can be traced through the repair process, please prepare it in the following manner:

- Attach a reference number to equipment that is under warranty.

- Include a purchase order for the repair work if the equipment is not under warranty.

- Make sure that the packing list you include with your equipment has the following information on it:

  – Reference number you assigned to the equipment (for equipment under warranty)
  – Model, item, or part number
  – Unit or board serial number (for warranty repairs only)
  – Proof of purchase (for end customer warranty repairs)
  – Fault diagnosis attached to each unit

- Pack equipment carefully.

- Enclose all network adapters and units that have exposed boards in Faraday cage-type shielding material to prevent electrostatic damage.

Send equipment to:

European Repair
3Com Europe Ltd.
ISOLAN House
Brindley Way
London Road
Hemel Hempstead
Hertfordshire
HP39 XJ England

If you are sending equipment from outside England, please contact European Repair Services to determine your nearest logistics centre.

Australia, New Zealand, Asia, Japan, Central America, and South America

3Com's warranty varies by product. For warranty information on your product, refer to your purchase agreement. If you are a non-contracted end customer, refer to the warranty card accompanying the product, or contact your authorized 3Com network supplier for assistance.

Authorized 3Com network suppliers are qualified to provide network planning, installation, hardware maintenance, application training, and support services. Contact your 3Com network supplier first for assistance. If you do not know who this is, contact your nearest 3Com sales office.

For Australia and New Zealand:
3Com Intercontinental sales office (Sydney, Australia) 61 2 9593020

For Asia:
3Com Asia, Ltd.

     Hong Kong office 852 8489200
     Singapore office 65 3218929
     Taiwan office 886 2 7754352

For Japan:
3Com KK (81) 3 3243-9234

For Central America and South America:
Icon Support in the U.S. (fax) 408 7645742