

Installing an N11 Data Collection Module (DCM) in an 8-Port ANH

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This is to certify that the Bay Networks products in this book are shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022:1987 Class A (CISPR 22:1985/BS 6527:1988).

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Consequently, when this equipment is used in a residential area or in an adjacent area thereto, radio interference may be caused to equipment such as radios and TV receivers.

Compliance with the applicable regulations is dependent upon the use of shielded cables. The user is responsible for procuring the appropriate cables. Read instructions for correct handling.

Canada Requirements Only

Canada CS-03 Rules and Regulations

Note: The Canadian Department of Communications label identifies certified equipment. The certification means that the equipment meets certain telecommunications network protective operations and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent the degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Canada CS-03 — Règles et règlements

Note: L'étiquette du ministère des Communications du Canada indique que l'appareillage est certifié, c'est-à-dire qu'il respecte certaines exigences de sécurité et de fonctionnement visant les réseaux de télécommunications. Le ministère ne garantit pas que l'appareillage fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer l'appareillage, s'assurer qu'il peut être branché aux installations du service de télécommunications local. L'appareillage doit aussi être raccordé selon des méthodes acceptées. Dans certains cas, le câblage interne du service de télécommunications utilisé pour une ligne individuelle peut être allongé au moyen d'un connecteur certifié (prolongateur téléphonique). Le client doit toutefois prendre note qu'une telle installation n'assure pas un service parfait en tout temps.

Les réparations de l'appareillage certifié devraient être confiées à un service d'entretien canadien désigné par le fournisseur. En cas de réparation ou de modification effectuées par l'utilisateur ou de mauvais fonctionnement de l'appareillage, le service de télécommunications peut demander le débranchement de l'appareillage.

Pour leur propre sécurité, les utilisateurs devraient s'assurer que les mises à la terre des lignes de distribution d'électricité, des lignes téléphoniques et de la tuyauterie métallique interne sont raccordées ensemble. Cette mesure de sécurité est particulièrement importante en milieu rural.

Attention: Les utilisateurs ne doivent pas procéder à ces raccordements eux-mêmes mais doivent plutôt faire appel aux pouvoirs de réglementation en cause ou à un électricien, selon le cas.

Canada Requirements Only *(continued)*

D. O. C. Explanatory Notes: Equipment Attachment Limitations

The Canadian Department of Communications label identifies certified equipment. This certification meets certain telecommunication network protective, operational and safety requirements. The department does not guarantee the equipment will operate to the users satisfaction.

Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above condition may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

Notes explicatives du ministère des Communications: limites visant les accessoires

L'étiquette du ministère des Communications du Canada indique que l'appareillage est certifié, c'est-à-dire qu'il respecte certaines exigences de sécurité et de fonctionnement visant les réseaux de télécommunications. Le ministère ne garantit pas que l'appareillage fonctionnera à la satisfaction de l'utilisateur.

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Pour leur propre sécurité, les utilisateurs devraient s'assurer que les mises à la terre des lignes de distribution d'électricité, des lignes téléphoniques et de la tuyauterie métallique interne sont raccordées ensemble. Cette mesure de sécurité est particulièrement importante en milieu rural.

Attention: Les utilisateurs ne doivent pas procéder à ces raccordements eux-mêmes mais doivent plutôt faire appel aux pouvoirs de réglementation en cause ou à un électricien, selon le cas.

Canada Requirements Only *(continued)*

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Access Feeder Node, Access Link Node, Access Node, Access Node Hub, Access Stack Node, Backbone Concentrator Node, Backbone Concentrator Node Switch, Backbone Link Node, Backbone Link Node Switch, Concentrator Node, Feeder Node, Link Node) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Access Feeder Node, Access Link Node, Access Node, Access Stack Node, Backbone Concentrator Node, Backbone Concentrator Node Switch, Backbone Link Node, Backbone Link Node Switch, Concentrator Node, Feeder Node, Link Node) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

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Table 1-1. Model N11 DCM Shipment Contents 1-2

Table 2-1. Recommended SIMMs 2-4

About This Guide

If you are responsible for maintaining a Bay Networks™ Access Node Hub (ANH™), read this guide to

- Install an N11 Data Collection Module (DCM) upgrade
- Remove a previously-installed N11 DCM
- Upgrade the memory on an N11 DCM

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Chapter 1

Preparing for the DCM Upgrade

The Model N11 Data Collection Module (DCM) is a printed circuit board that gathers statistics for Ethernet remote monitoring (RMON) support. The DCM attaches to the baseboard of a Bay Networks[™] 8-port Access Node Hub (ANH[®]).



Note: *The N11 DCM does not support the monitoring of Token Ring networks.*

Before installing the N11 DCM upgrade, you must

- Verify the Upgrade Kit contents
- Attach an antistatic wrist strap
- Open the ANH unit
- Remove a previously-installed DCM (if applicable)

A single inline memory module (SIMM) provides 2 MB of memory for the DCM. You can increase the amount of memory by replacing the installed SIMM with one that provides more memory, as described in Chapter 2.

Verifying Shipping Contents

[Table 1-1](#) lists the shipping contents of the N11 DCM Upgrade Kit, Order No. AE0011015. Make sure you received everything you need for the installation before you begin.

If any parts are damaged or missing, call the Bay Networks Technical Response Center as described in the “How to Get Help” section earlier in this guide.

Table 1-1. Model N11 DCM Shipment Contents

Part No.	Item	Quantity
920-394-A	Data Collection Module	1
101050-08	4-40 x 0.50 panhead screws	3
104962	Antistatic bag and mat	1
107906	Antistatic wrist strap	1
112683	Upgrade instructions (this document)	1

To install the DCM, you need the following tools and equipment:

- A #1 Phillips screwdriver
- The three Phillips pan-head screws that were shipped with the DCM
- An antistatic mat and/or antistatic wrist strap



Note: When using an N11 DCM in the 8-Port ANH, the ANH requires Router Software Version 9.00 or higher and Site Manager Software Version 3.00 or higher.

Attaching an Antistatic Wrist Strap

An antistatic wrist strap ships with the upgrade kit. The wrist strap directs the discharge of static electricity from your body to the chassis of the ANH, thereby avoiding damage to sensitive electronic components.

You must wear the antistatic strap whenever you remove, install, and handle printed circuit boards and whenever you remove the ANH cover.



Caution: *Electrostatic discharge can damage hardware. Follow the procedure in this section to protect your equipment from damage.*

Attach the antistatic wrist strap by completing the following steps.

1. **Remove the strap from the upgrade kit.**
2. **Unwrap the first two folds of the band.**
3. **Wrap the exposed adhesive side of the band firmly around your wrist.**
4. **Unroll the rest of the band and peel the liner from the copper foil at the opposite end.**
5. **Attach the copper foil to the back metal panel on the ANH, or any other nonpainted and grounded metal surface.**

You can now safely perform the upgrade procedure.

Opening the ANH

Follow these steps to open the ANH.

1. **If your ANH has a power switch, turn off the power.**
2. **Disconnect the power cable.**

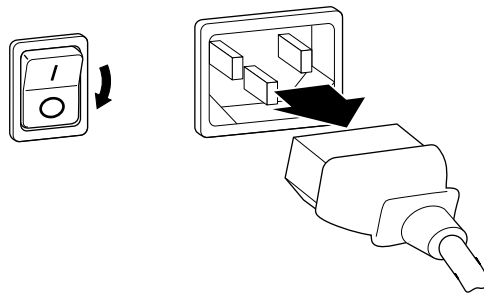


Figure 1-1. Turning off Power

3. **Remove the two back panel cover screws. ([Figure 1-2](#)).**

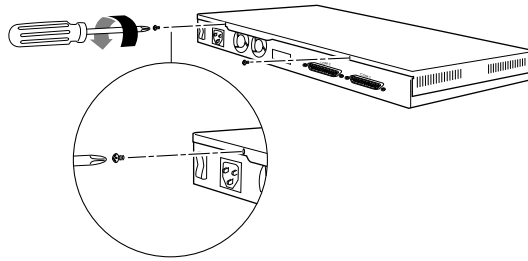


Figure 1-2. Removing the Back Panel Screws

4. Lift off the cover ([Figure 1-3](#)) and set it aside.

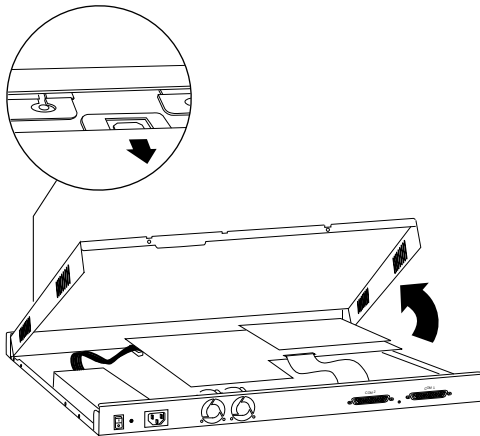


Figure 1-3. Accessing the Component Tray

5. If you are replacing an existing DCM, continue with Chapter 2. If you are installing a new DCM, continue with Chapter 3.

Chapter 2

Removing an Installed DCM

Complete the steps in the first section in this chapter to remove a Model N11 Data Collection Module (DCM) from an 8-port ANH.

The N11 DCM is shipped with 2 MB of memory in a single in-line memory module (SIMM). You can increase the memory by replacing the installed SIMM with one that provides more memory as described in the “[Replacing a SIMM on the DCM](#)” section.



Note: *If you replace an installed DCM that contains more than 2 MB of memory, be sure to remove the SIMM from the older module and install it on the replacement DCM as described in this chapter.*

Removing the DCM Board

Follow these steps to remove an installed DCM.

1. **Complete the steps in Chapter 1 to**
 - Verify that you have the correct shipping contents and tools
 - Attach an antistatic wrist strap
 - Turn off power to the ANH
 - Disconnect the power cable
 - Open the ANH
2. **Use the #1 Phillips screwdriver to remove the three panhead screws that secure the DCM to the ANH base board ([Figure 2-1](#)).**

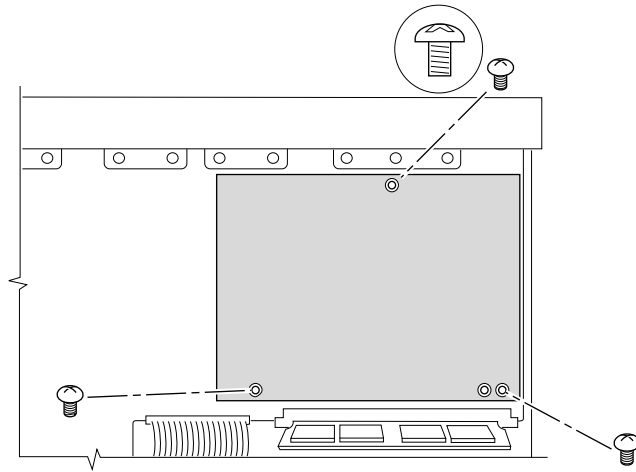


Figure 2-1. Removing the DCM Screws

3. **Hold the DCM at the corners of the connector edge. Pull gently upward and rock the module from side to side to loosen it from the baseboard connector ([Figure 2-2](#)).**

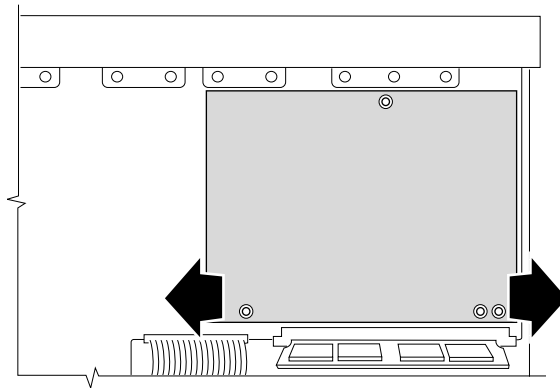


Figure 2-2. Loosening the DCM from the Base Board Connector

4. Tilt the module up and remove it from the base board ([Figure 2-3](#)).

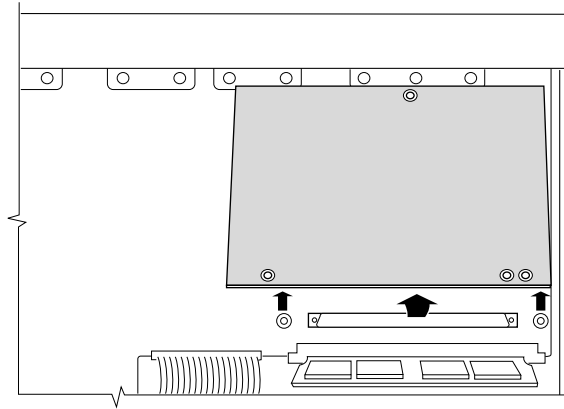


Figure 2-3. Removing the DCM

5. If the DCM you removed contains more than 2MB memory, remove its SIMM and install that SIMM on the replacement DCM as described in the next section.
6. Continue with Chapter 3 to install the replacement DCM.

Replacing a SIMM on the DCM

Complete the steps in this section to remove an existing SIMM from a DCM board and install a new SIMM.

These instructions assume that you have already removed the DCM from the ANH baseboard, as described in the previous section.

Recommended SIMMs

SIMMs must operate at 70 ns or faster and have gold-plated contacts. Table 2-1 lists specific SIMMs that are recommended for the N11 DCM.

Table 2-1. Recommended SIMMs

SIMM Capacity	Manufacturer	Manufacturer's Part No.
2 MB (512 Kb x 32)	Micron	MT4D51232G-7
	Motorola	MCM32512SG70
	NEC	MC-42512A32F-70
	Texas Instruments	TM512CBK32-70
	Toshiba	THM325120ASG-70
4 MB (1 Mb x 32)	Hitachi	HB56D132BA-7A
	Micron	MT8D132G-7
	Mitsubishi Electric	MH1M32ADJ-7
	Motorola	MCM32130SHG70
	NEC	MC-421000A32F-70
	Texas Instruments	TM124BBK32-70
	Toshiba	THM321000ASG-70
8 MB (2 Mb x 32)	Hitachi	HB56D232BS-7A
	Micron	MT16D232G-7
	Mitsubishi Electric	MH2M32EJ-7
	Motorola	MCM32230SHG70
	NEC	MC-422000A32F-70
	Texas Instruments	TM248CBK32B-70
16 MB (4 Mb x 32)	Hundai	HYM532410MG-70
	Micron	MT8D432G-7
	Mitsubishi Electric	MH4M32AATJ-7
	NEC	MC-424000A32F-70
	Samsung	KMM5324100VG-7
	Toshiba	THM324000SG-70

Removing an Installed DCM SIMM

Complete the steps in this section to remove an existing DCM SIMM.

1. **Look at the connector side of the DCM and identify the SIMM connector and installed SIMM near the edge of the board ([Figure 2-4](#)).**

Note the spring latch at each end of the SIMM connector.

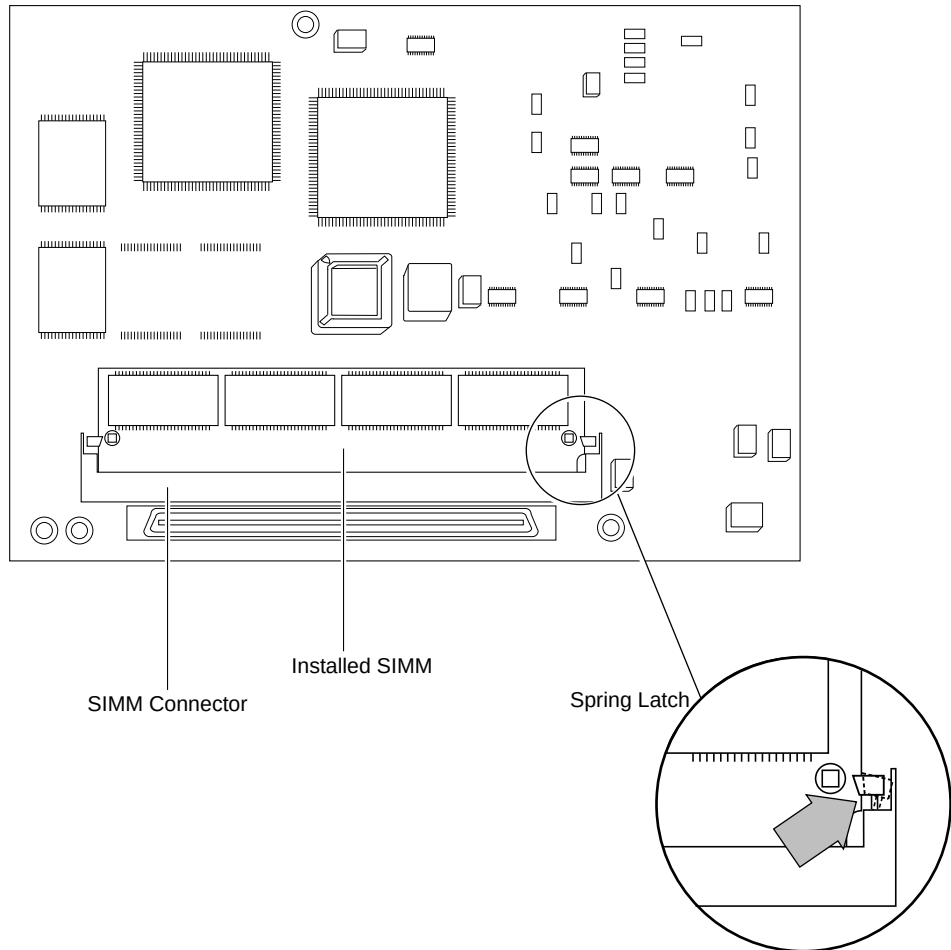


Figure 2-4. Location of SIMM on DCM Board

2. Carefully press outward on the two spring latches until the SIMM ejects from the locking studs ([Figure 2-5](#)).

Apply simultaneous pressure to both spring latches.

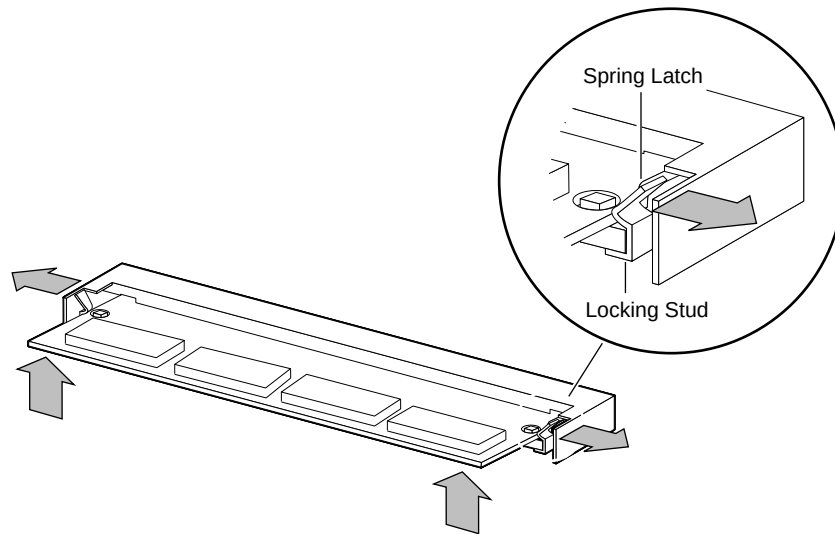


Figure 2-5. Ejecting the Installed SIMM

3. Rotate the SIMM upward and lift it out of its socket ([Figure 2-6](#)).

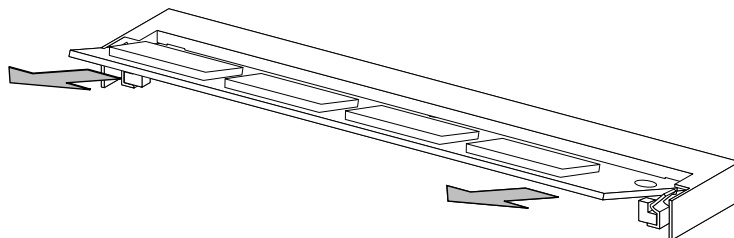


Figure 2-6. Removing the SIMM

4. As you remove the SIMM, note the location and orientation of the SIMM guide notch on one end of the SIMM connector edge ([Figure 2-7](#)).

When you install the replacement SIMM, the guide notch must match the position of the guide notch on the SIMM you just removed.

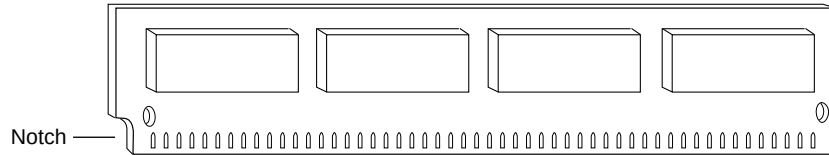


Figure 2-7. Location of SIMM Connector Guide Notch

5. Place the removed SIMM in an antistatic bag, or set it on an antistatic mat.

Installing a DCM SIMM

1. Hold the replacement SIMM by its top corners, away from the connector edge. Orient the guide notch as noted in [Step 4](#).
2. Slip the SIMM into the connector socket and push in gently to seat the SIMM firmly in the socket ([Figure 2-8](#)).



Caution: The SIMM is keyed with the guide notch to prevent incorrect insertion. Do not force the SIMM if it does not go easily into the socket.

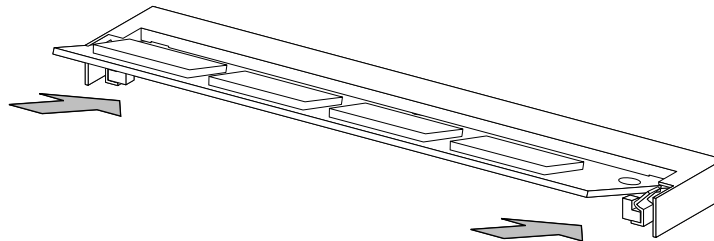


Figure 2-8. Inserting a New SIMM

3. **Tilt the SIMM down into its locked position** ([Figure 2-9](#)).

You may hear a “click” as the spring latches engage the ends of the SIMM.



Caution: *It is normal to feel a slight resistance as the SIMM comes to its locked position, but be careful not to use too much force. It is easy to damage the SIMM socket by forcing it into the locked position.*

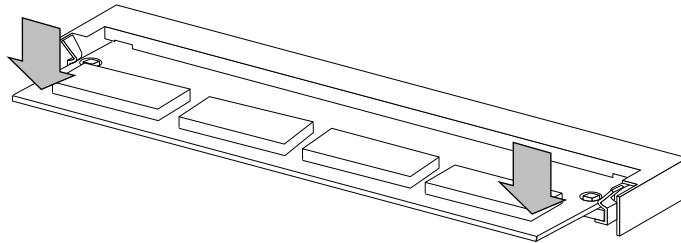


Figure 2-9. Securing the New SIMM

The final SIMM position is horizontal to the DCM printed circuit board.

4. **If the SIMM does not lock, remove the SIMM, check the orientation of the guide notch, reinsert the SIMM, wiggle it gently as you press it into the socket. Then try again to tilt it into its locked position.**

Chapter 3

Installing the DCM Upgrade

Follow these steps to install the DCM printed circuit board and close the ANH.

1. **Unpack the DCM and identify the 130-position connector at the edge of the board.**

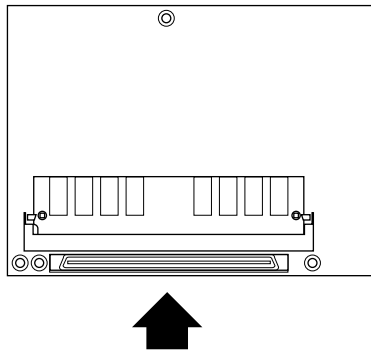


Figure 3-1. DCM connector

2. **Locate the 130-pin DCM connector on the ANH base board ([Figure 3-2](#))**

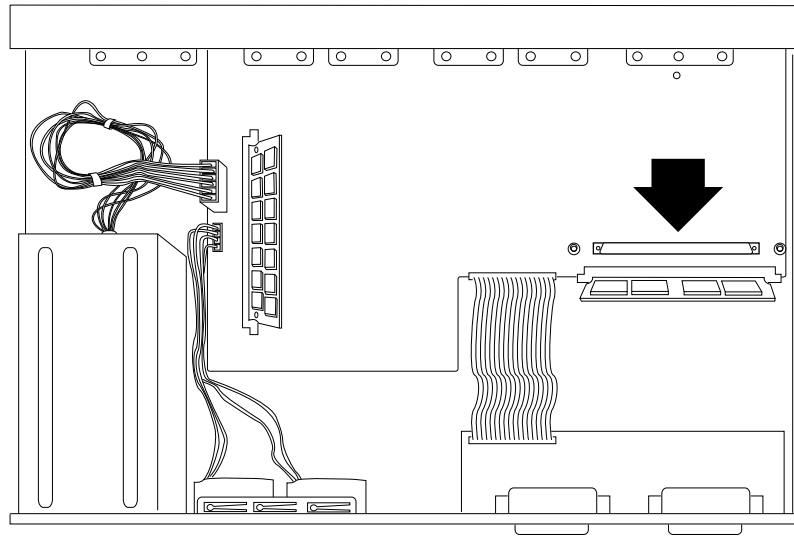


Figure 3-2. Base Board DCM Connector

3. **Hold the DCM over the connector on the ANH baseboard. Align the module connector and mounting holes with the baseboard connector and the stand-offs [\(Figure 3-4\)](#).**
4. **Lower the DCM into position.**

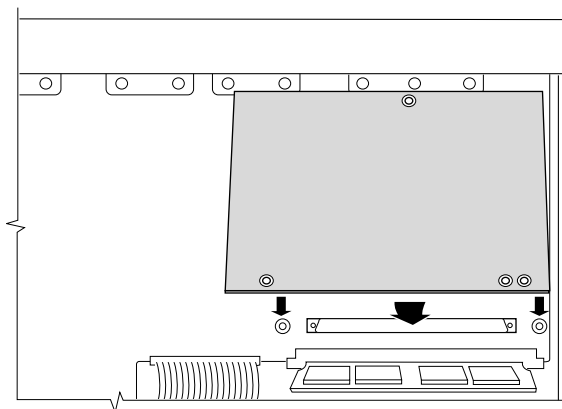


Figure 3-3. Aligning the DCM with the Base Board Connector

5. Press down firmly on the DCM at each end of the connector to seat the module securely in the base board connector ([Figure 3-4](#)).

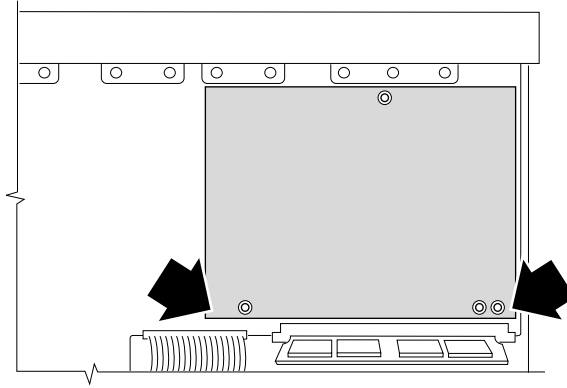


Figure 3-4. Seating the Module

6. Insert the three Phillips panhead screws through the plated-through holes on the DCM and into the bracket standoffs ([Figure 3-5](#)).



Note: To accommodate standoffs on different base boards, the Model N11 DCM has two plated-through holes at one side of the module. Use the hole that matches the standoff on the ANH base board.

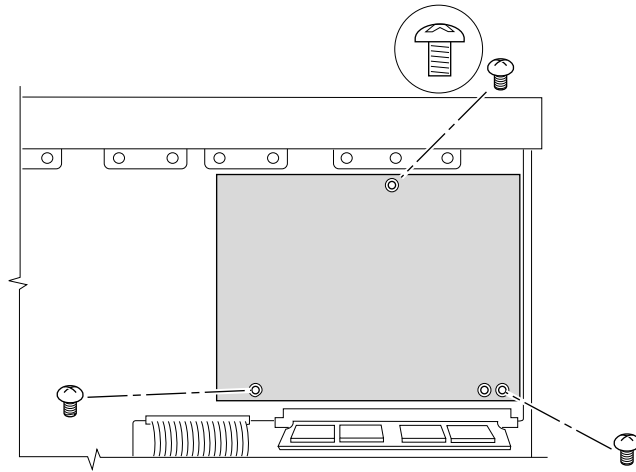


Figure 3-5. Securing the DCM

7. Use the #1 Phillips screwdriver to tighten the screws
8. Align the holes in the ANH cover and enclosure and slide the cover onto the enclosure ([Figure 3-6](#)).

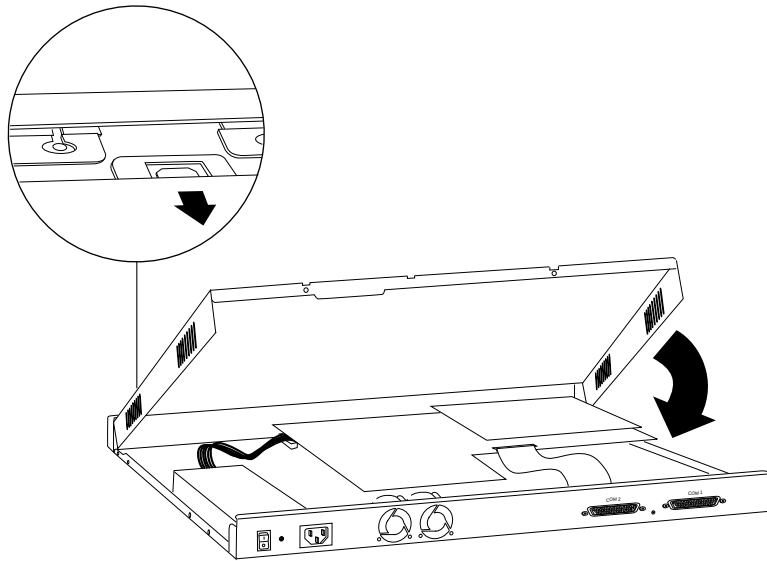


Figure 3-6. Closing the ANH

9. Insert and tighten the two back panel screws.

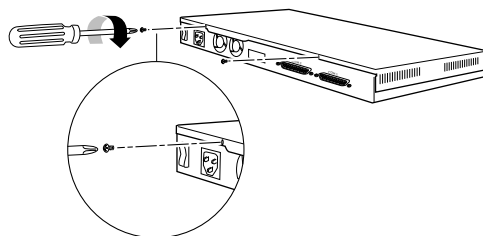


Figure 3-7. Inserting the Back Panel Screws

10. Reconnect the power cable and turn on the power to the unit.

11. Refer to *Connecting AN and ANH Systems to a Network* to enable the DCM.

The DCM board will not function in the ANH until you set it up using Site Manager software.



Note: When using an N11 DCM in the 8-Port ANH, the ANH requires Router Software Version 9.00 or higher and Site Manager Software Version 3.00 or higher.

