



CoreBuilder[®] 5000 Advanced DMM Quick Start and Reference

1.0 Introduction

The 3Com CoreBuilder[®] 5000 Advanced Distributed Management Module (A/DMM) combines all advanced DMM and hub controller functions on a module that installs in the 3Com CoreBuilder 5000 Integrated System Hub controller bay.

Before you unpack the module, read Section 5.0, "Installation Precautions".



WARNING: CoreBuilder 5000 hubs and modules must be installed only by trained service personnel.

2.0 Learning About the Advanced DMM

This document provides the basic information that you need to install and begin to use the A/DMM. For detailed information about using this module, see the following documents:

- *CoreBuilder 5000 Distributed Management Module User Guide* for software Version v6.00 or later
- *CoreBuilder 5000 Integrated System Hub Installation and Operation Guide*

You can view these documents on the 3Com *DocsOnCD* CD-ROM that ships with this product.

To order paper documents, contact your network supplier, or call 3Com Corporation at 1-800-724-2447 and choose option 3.

3.0 Software Version Information

If you plan to install the CoreBuilder 5000 A/DMM in the same hub with a CoreBuilder 5000 Fault-Tolerant Controller Module (Model Number 3C96000M-RCTL), ensure that the Fault-Tolerant Controller Module is running software Operational Version v1.15 or later and Boot Version v1.04.

3Com recommends that all DMMs that are installed in the same hub with the A/DMM run software Version v6.0 or later.



Before you install the A/DMM into a hub that contains an RCTL and DMM or DMM-EC, make sure that the RCTL is running Version v1.15 code or later and that the installed DMM or DMM-EC modules are running Version v6.00 or later.

To manage the A/DMM through SNMP, use 3Com Transcend[®] Network Control Services for UNIX, Version v5.00, or 3Com CoreBuilder 5000 Manager for Windows.

4.0 Power Budget Information

The CoreBuilder 5000 A/DMM consumes power as follows:

- 12 W @ +5 V
- 1.0 W @ +12 V
- 0.25 W @ -5 V
- 0.50 W @ -12 V
- 0 W @ +2 V

5.0 Installation Precautions

Electrostatic discharge (ESD) can damage static-sensitive devices on circuit boards. Follow these precautions:

- Do not remove the module from its antistatic bag until you are ready to inspect or install it.
- Handle the module by the front panel only.
- Use proper grounding techniques when you install the module. These techniques include using a foot strap and grounded mat, wearing a grounded static discharge wrist strap, or touching the grounded rack or other grounded source just before you handle the module.

When you handle CoreBuilder 5000 modules, follow these precautions to avoid component damage:

- Do not twist or otherwise force CoreBuilder 5000 modules into the hub when you insert modules into the module guides.
- Match the upper and lower module guides while you slide the module into place.
- Do not push the module all the way into the hub until the module ejectors (if any) are open.

6.0 Unpacking Procedure

Follow this procedure to unpack your module:

- 1 Verify that the module is the model that you ordered by examining the model number on the side of the shipping carton.
- 2 Remove the module, in its antistatic bag, from the shipping carton.
- 3 Following the instructions in Section 5.0, "Installation Precautions", remove the module from the antistatic bag and inspect it for damage.

If the module appears to be damaged, return it to the antistatic bag, repack it in the shipping carton, and contact your local supplier.

Keep the shipping carton and antistatic bag in which your module was shipped so that you can repackage the module for storage or shipment.

- 4 Record the serial number of your module. Use the HubPlanning Charts, which are located in the *CoreBuilder 5000 Integrated System Hub Reference Library* that is shipped with the CoreBuilder 5000 A/DMM Kit.

- 5 Ensure that the CoreBuilder 5000 A/DMM Kit contains the following items:

- CoreBuilder 5000 A/DMM (Model Number 3C96000M-CMGT)
- CoreBuilder 5000 A/DMM Adapter Cable



To order an additional A/DMM Adapter Cable, call Allied Electronics nationwide number, 1-(800)-433-5700 and order Part Number CA111972-35.

- 4 MB DRAM Memory Expansion Card
- *Release Note for CoreBuilder 5000 Management Products*
- 3Com *DocsOnCD* CD-ROM
- *CoreBuilder 5000 DMM Command Quick Reference Guide*
- *CoreBuilder 5000 Advanced DMM Quick Start and Reference* (this document)
- *CoreBuilder 5000 Integrated System Hub Reference Library*

7.0 Installing Expansion Memory

To install expansion memory on the A/DMM:

- 1 Locate the Expansion Memory Card holder on the A/DMM.



CAUTION: *To avoid damage due to static discharge, handle the A/DMM by the front panel or edges only.*

- 2 Insert the Expansion Memory Card into the Expansion Memory Card holder as shown in the following figures. Press the memory card in so that it is firmly seated.

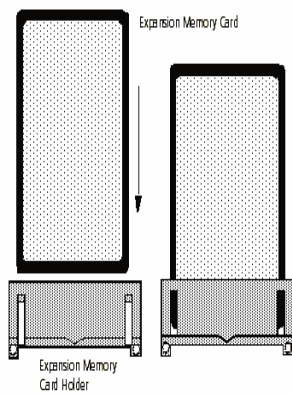
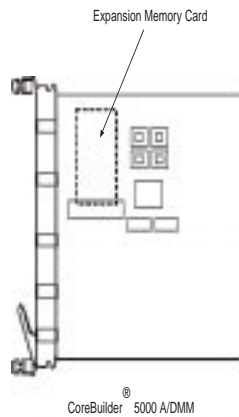


The memory card is keyed to ensure that you insert it correctly.

If the Character Display shows 'DRAM' after the Expansion Memory Card is installed, the following may have occurred:

- The Expansion Memory Card was not properly installed or failed.
- The on-board DRAM failed.

If these conditions exist, reinstall the Expansion Memory Card.



8.0 Installing the A/DMM

You do not need to power off the CoreBuilder 5000 Integrated System Hub to install or remove the module. You can insert the module while the hub is operating (this is called a *hot swap*).

To install the module:

- 1 Before you start the installation process, read Section 5, "Installation Precautions".
- 2 To expose a slot for the module, remove a blank faceplate on the hub controller bay (which is below the main module bay). You can install the module in either slot.
Make certain that the Expansion Memory Card is properly seated on the Expansion Memory Card holder.
- 3 Insert the module into the module guides at the top and bottom of the controller bay slot and slide it into the hub by pressing firmly at the top and bottom of the front panel.

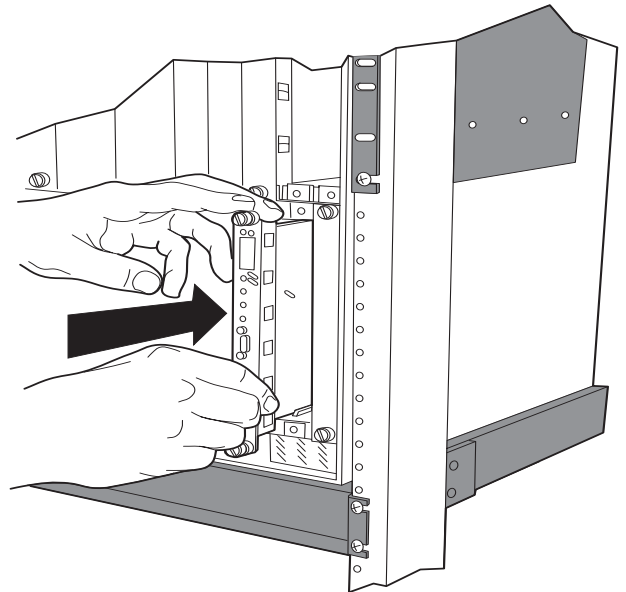


CAUTION: Be careful not to twist or bend the module while you insert it.



WARNING: Hazardous energy levels exist inside of the hub. Do not place hands or objects into the hub or touch components on an inserted module.

The following figure shows the installation of the module in a 17-slot hub.



Installing the A/DMM in a 17-slot Hub

- 4 Lock the module into place by applying pressure to the module front panel with both hands while you push the ejector handle inward toward the front panel with your thumb. Ensure that the module remains fully seated in the backplane connector while you close the ejector handle. Lift the end of the ejector handle until it locks into place.
- 5 To secure the module front panel to the front of the hub, use a flat-blade screwdriver to tighten the top and bottom screws to torque specification 3 to 5 inch-pounds.



WARNING: For safety reasons and to ensure adequate cooling airflow, install blank faceplates over all empty slots.

3Com recommends that, after you install the A/DMM, you make it the *master*. Issue a RESET MASTERSHIP command from either the A/DMM, DMM, or the DMM-EC module.

9.0 A/DMM Front Panel Features

This section describes the A/DMM LEDs and front panel.

9.1 LEDs

The Active or Standby (STBY) LED lights to indicate whether the controller function is in Active or Standby mode:

- **Active mode** — Provides timing and synchronization to all installed modules, and reports hub operating conditions to the master A/DMM. Shares most other hub monitoring and control responsibilities with a standby controller module, if one is installed.
- **Standby mode** — Monitors and shares control of all system activity so that it can instantly take over for a faulty active controller module. Does not provide timing and synchronization to installed modules.

9.2 Character Display and Display Button

During normal operation, the character display shows the status of A/DMM functions and the CoreBuilder 5000 hub environment. Indications include:

- **RDY** — A/DMM is the master management module, which provides configuration and monitoring services for the entire hub.
- **STBY** — A/DMM is in Standby mode, so that it is prepared to take over as master management module if necessary.

The A/DMM can display the following indications only if the A/DMM is the master management module:

- **PWR1 to PWR4** — Power supply fault detected. The number indicates which power supply is faulty.
- **FAN1 to FAN3** — Fan fault detected. The number indicates which fan is faulty.
- **TEMP** — Hub is overheating.

If the A/DMM detects multiple faults, the character display shows each fault indication for a few seconds.

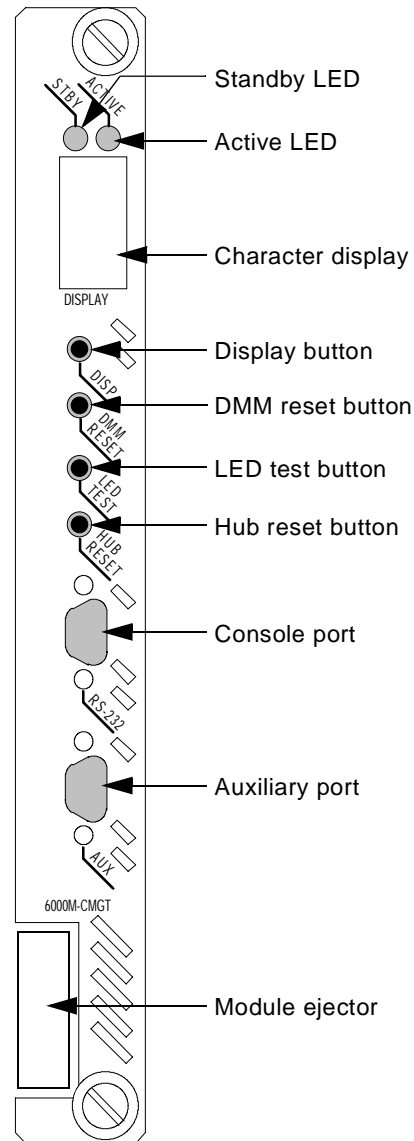
Press the Display (DISP) button to view the following alternate displays:

- Network assignment of ports, connectors, and modules in the hub (CoreBuilder 5000 modules only)
- Version number of the A/DMM-embedded software

For complete instructions on using the character display and Display button, see the *CoreBuilder 5000 Distributed Management Module User Guide*.

9.3 DMM Reset Button

Press the DMM reset button *only* if you suspect a problem with the DMM (or A/DMM).



To press the recessed A/DMM Reset button, use a thin, blunt object such as a pen tip or other non-metallic tool.



CAUTION: If you have made configuration changes but have not yet saved them, save the changes before you reset the A/DMM functions or the changes will be lost.

Pressing the DMM Reset button causes the A/DMM to perform a hard reset. It is similar to a reset device but cold boot diagnostics run if diagnostics are enabled.

9.4 LED Test Button

When you press the LED Test button:

- 1 All functioning LEDs on all installed modules light for approximately 5 seconds.
- 2 Port Status LEDs on installed ONline™ Media Modules blink to indicate port network assignments:
 - For ports that are connected to networks, the number of blinks equals the number of the network that the port is assigned to.
 - For ports that are not connected to networks, the Port Status LEDs remain unlighted.
 - If the network assignment is per-module rather than per-port, all port status LEDs on that module blink to indicate the network assignment.

The ONline Port Status LEDs complete the network assignment indication in approximately 30 seconds. During this time, Port Status LEDs on CoreBuilder 5000 modules remain lighted.

9.5 Hub Reset Button

To reset all modules in the hub, use a thin, blunt object such as a pen tip or other non-metallic tool to press the recessed Hub Reset button.

The Hub Reset button has no effect unless the controller is in active mode.



CAUTION: *If you have made configuration changes but have not yet saved them, save the changes before you reset the hub or the changes will be lost.*

Using the Hub Reset button has the same effect as entering the RESET HUB management command.

9.6 Console and Auxiliary Ports

The Console (RS-232) and Auxiliary (AUX) ports support RS-232 terminal and modem connections for local and dial-up management.

For pinouts, see the *CoreBuilder 5000 Distributed Management Module User Guide*.

10.0 Connecting a Terminal to the Advanced DMM

This section describes how to connect a terminal or terminal emulator to the A/DMM. After you connect to the A/DMM, you can enter A/DMM management commands from the terminal.

This section provides basic instructions for connecting a terminal using RS-232 at 9600 bps. For information on using optional configurations, see the *CoreBuilder 5000 Distributed Management Module User Guide*.

To connect a terminal or terminal emulator to the A/DMM:

- 1 Connect the supplied A/DMM adapter cable to the Console or Auxiliary port on the A/DMM front panel.
- 2 Using a null modem cable (crossover cable), connect the terminal to the free end of the A/DMM adapter cable.

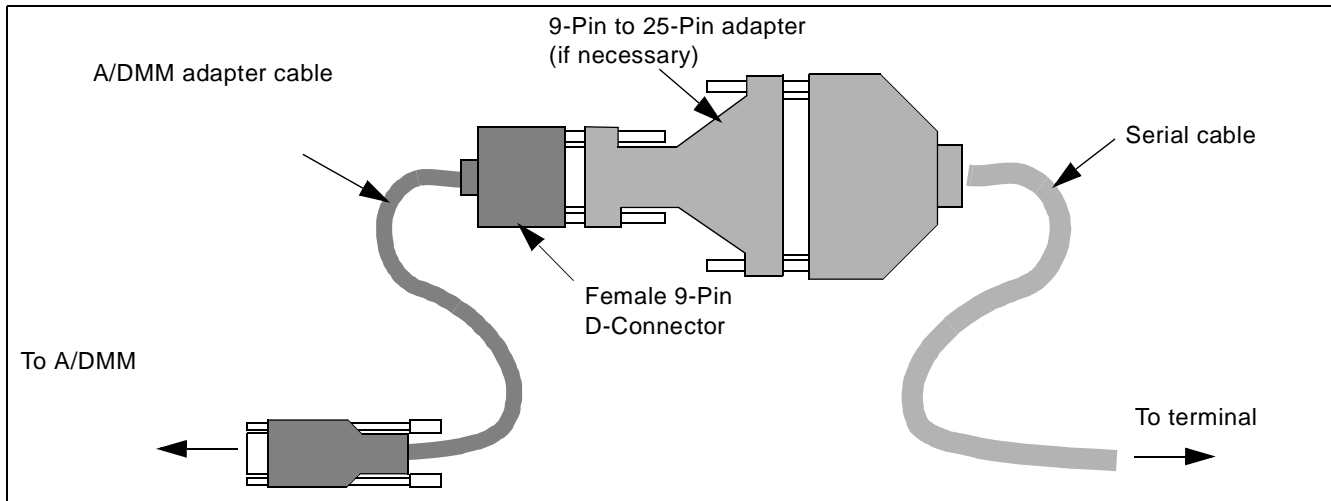
If necessary, use an adapter to convert the end of the null modem cable to a female 9-pin D-connector. See the diagram on the next page.

- 3 Configure the terminal to use the following settings:
 - 9600 bps (baud)
 - 8 data bits
 - No parity
 - 1 stop bit
- 4 Make sure that the terminal and CoreBuilder 5000 hub are powered on.
- 5 Press the Enter key on the terminal once or twice.

The login prompt is displayed as follows:

Login:

The following figure shows how to use an adapter to convert the end of the null modem cable to a female 9-pin D-connector.



11.0 Configuring In-band Access to the A/DMM

This section describes how to configure in-band access to the A/DMM. In-band access allows you to manage the CoreBuilder 5000 hub from a remote terminal or Simple Network Management Protocol (SNMP) manager, as shown in the figure on the next page.

The Network Monitor Card (NMC) provides network connectivity for the A/DMM. The NMC is a daughtercard that installs on a DMM-EC or media module.

To configure in-band access to the A/DMM:

- 1 If the hub does not have an NMC installed, install one. Install the NMC on a media module or on a DMM-EC, and then install the module in the hub.
- 2 Log in to the A/DMM using a terminal connected to one of the serial ports. The default login name is *system* (all lowercase) with a blank password. For example:

```
Login: system
Password: [press Enter]
```

- 3 Select a backplane network to use for the in-band connection. The examples in this procedure use `ethernet_2`.
- 4 Make sure that the device that you plan to use for remote management has connectivity to the selected network.

For example, you can assign a media module port to the selected network and connect the port to a router that has connectivity to your SNMP management workstation.

- 5 Use the `SET PORT` command to assign a port to a network. For example:

```
CB5000> set port 8.5 network ethernet_2
```

- 6 Use the `SHOW INTERFACE` command to verify that the operational status of the interface (NMC) for the selected network is *up*.

If the operational status is not *up*, use the `SET MODULE INTERFACE` command to enable the interface. For example:

```
CB5000> set module 4.2 interface enable
```

- 7 Set the IP subnet mask for the selected network. For example:

```
CB5000> set ip subnet_mask ff.ff.ff.0 ethernet_2
```

- 8 Set the IP address for the selected network. For example:

```
CB5000> set ip ip_address 155.104.10.2 ethernet_2
```

- 9 Set the A/DMM IP default gateway for the selected network. For example:

```
CB5000> set ip default_gateway 155.104.10.7 ethernet_2
```

- 10 Set the NMC to the selected network. For example:

```
CB5000> set module 4.2 network ethernet_2
```

i You can use the `SHOW INTERFACE` command to display information about NMCs, including the `slot.subslot` location.

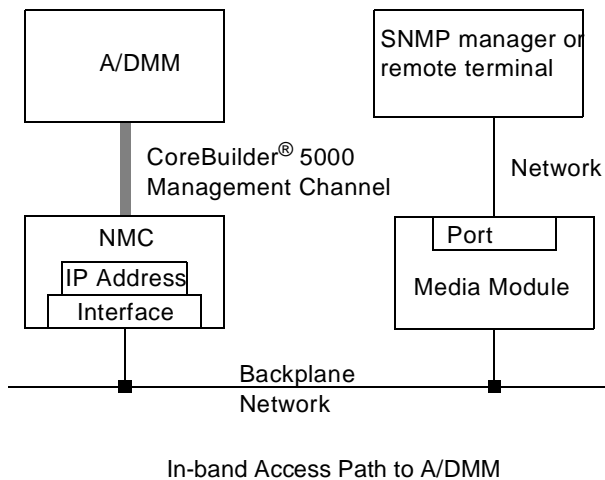
- 11 Set the default gateway for the selected network to be the active default gateway for the A/DMM. For example:

```
CB5000> set ip active_default_gateway 155.104.10.7
```

- 12 Save the default gateway using either the `save ip` command or the `save all` command.
- 13 Use the `SHOW IP` command to verify the subnet mask, IP address, default gateway, and active default gateway.
- 14 If you plan to use an SNMP manager to manage the CoreBuilder 5000 hub, use the `SET COMMUNITY` command to create an entry for the manager in the A/DMM community table.

The following example creates a community named `mgt`. This community provides all access privileges for an SNMP manager with IP address 155.104.10.9:

```
CB5000> set community mgt 155.104.10.9 all
```



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CoreBuilder® 5000 Advanced DMM

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