HP AdvanceStack Switch 100VG Module

Installation Guide

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Applicable Product

HP J3103A

Warranty

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See the warranty card included with the product.

A copy of the specific warranty terms applicable to your Hewlett-Packard product and replacement parts can be obtained from your HP sales and service office or HP-authorized reseller.

Hewlett-Packard Company
8000 Foothills Boulevard, m/s 5551
Roseville, California 95747-5551
http: //www.hp.com/go/network_city

HP Customer Support Services
How to get the latest software/agent firmware

You can download a compressed file (j3100a.exe) containing the latest version of the HP Switch 2000 software, proprietary MIB, and a software download utility file (update.exe) from the HP BBS, HP FTP Library Service, CompuServe, and the World Wide Web. After you download the file, extract the file by typing *filename* /x and pressing Enter. For example: j3100a.exe /x Enter.

HP BBS

Set your modem to N-8-1, set speed up to 14400 bps, and with your telecommunication program (e.g., Windows Terminal) dial (208) 344-1691 to get the latest software for your HP networking product.

HP FTP Library Service

1) FTP to Internet IP Address ftp ftp.hp.com
2) Log in as anonymous and press Enter at the password prompt.
3) Enter bin to set the transfer type to binary.
4) Enter cd /pub/networking/software
5) Enter get *filename* to transfer the file to your computer, then quit.

CompuServe

1) Login to CompuServe.
2) Go to the "hp" service.
3) Select "HP Systems, Disks, Tapes, etc".
4) Select "Networking Products" library.
5) Download the compressed file named J3100.exe, and then quit.

World Wide Web

http://www.hp.com/go/network_city
Select the Support section, then "Software Downloads and Patches".
Download the file you need and extract it by typing: *filename* /x

Do you have questions about designing your expanding network? From this web site, you can also download the *Designing HP AdvanceStack Workgroup Networks Guide* which addresses capacity planning, or dial 1-800-752-0900 to receive a copy through the mail.

(over for more services)

HEWLETT® PACKARD

Obtain the latest console code (j3100a.exe) from:

HP FTP Library:	ftp ftp.hp.com
World Wide Web:	http://www.hp.com/go/network_city
HP BBS:	(208) 344-1691

(over)

HP NETWORK CONNECTIVITY

HP FIRST Fax Retrieval Service

HP FIRST is an automated fax retrieval service that is available 24 hours a day, seven days a week. HP FIRST provides information on the following topics:

- Product information
- Troubleshooting instructions
- Technical reviews and articles
- Configuration information

To access HP FIRST, dial one of the following phone numbers:

Location	Phone Number
U.S. and Canada Only	Dial 1 (800) 333-1917 with your fax machine or touch-tone phone and press 1.
Outside the U.S. and Canada	Dial 1 (208) 344-4809 from your fax machine and press 9.

To receive a list of currently available documents, enter document number 19941. The information you requested will be sent to you by return fax.

Additional HP Support Services

In addition to the above services, you can purchase various HP telephone support services which provide you expert HP technical assistance:

- Network Phone-In Support provides you support at an hourly rate. In the USA, call 1-800-790-5544. In other countries, please contact your local HP Response Center to see if this service is available in your country.
- HP SupportPack Comprehensive Network Support provides complete problem resolution for medium to large interconnected local and wide area networks. Contact your HP Authorized Reseller or the nearest HP Sales and Support Office for more information.

CompuServe:	Go to the hp service Select HP Systems, etc Select Networking Products Download the file named J3100.exe
Network Phone-In Support (Hourly):	1-800-790-5544

HP AdvanceStack Switch 100VG Module

For the HP AdvanceStack Switch 2000

At A Glance

The HP AdvanceStack 2-Port 100VG Module (HP J3103A) is an optional component that you can add to an HP AdvanceStack Switch 2000 to provide up to two 100VG ports. Each port can use one of several 100VG transceivers designed for various 100VG media.

For information on transceiver types and availability, contact your Hewlett-Packard networking representative.

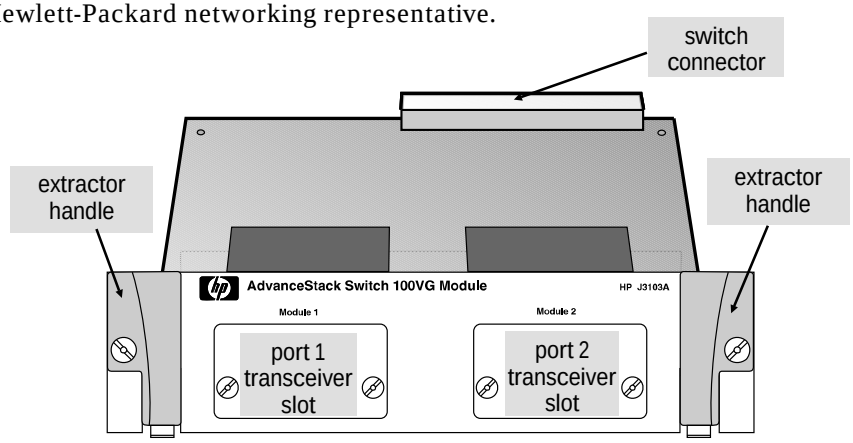

Figure 1. The HP AdvanceStack Switch 100VG Module

Features: The HP AdvanceStack 2-Port 100VG Module can enhance your Switch 2000 in the following ways:

- You can use the module to connect different 100VG media types to your Switch 2000.
- You can add, change, or remove either the module itself or a transceiver in the module without shutting down the entire switch.
- You can install up to six 100VG modules in your Switch 2000, enabling you to “fully load” the switch with up to 12 100VG ports for high-speed networking.

Contents

Overview

Note

Before you install the HP AdvanceStack Switch 100VG Module into the Switch 2000, you should install an optional HP 100VG Transceiver module in one or both of the 100VG transceiver slots in the module. (Refer to the instructions you received with the transceiver.)

You can install a 100VG Module into the Switch 2000 in any one of the six module slots, as follows:

1. Install the 100VG Module in a Switch 2000 slot (page 2).
2. Customize the configuration for the module ports (unless the default port configuration is satisfactory for your network application - see page 7).
3. Reboot the switch (page 8).

Other, optional procedures include:

- Hot-Swapping one module for another; that is, replacing one module with another without turning off power to the switch (page 9)
- Using the hot-swap process to install a transceiver into a module that has already been installed in the switch (page 11)

Caution

Static electricity can severely damage the sensitive electronic components on the HP AdvanceStack Switch 100VG Module. When handling and installing the module in your switch, follow these procedures to avoid damage from static electricity:

- Handle the module by its edges and avoid touching the components and the circuitry on the board.
- Equalize any static charge difference between your body and the switch by wearing a wrist strap and attaching it to the switch's metal body, or by frequently touching the switch's metal body while you are installing the module.

For proper cooling and reduction of electromagnetic emissions, ensure that slot covers (provided with your Switch 2000) are installed on any unused ports or transceiver slots.

Installing a Module in an Unused Slot

This procedure assumes that you have already installed the HP 100VG Transceiver(s) you plan to use in the 100VG module. (The module operates properly with either one or two HP 100VG transceivers installed.)

1. Slide out the blank LED label strip from the label slot corresponding to the physical slot in which you will install the module. The LED label strips have a small loop on the left end. Use your fingernail or a small implement to catch the loop and slide the label to the left and out of the label slot. Then insert the LED label strip you received with the 100VG Module. For example, if you are going to install the module in slot "A", you would replace the blank LED label strip in label slot "A" with the new LED label strip for the 100VG Module. (Refer to Figure 1, on the next page.)

   Save the blank LED label strip in case you ever want to remove the module and its LED label strip.

2. Using a Torx T-10 or slotted screw driver, unscrew the screws in the cover plate over the slot you want to use, and remove the cover. Store the cover plate with its screws for possible future use. For example, to install a module in slot A, see Figure 1.

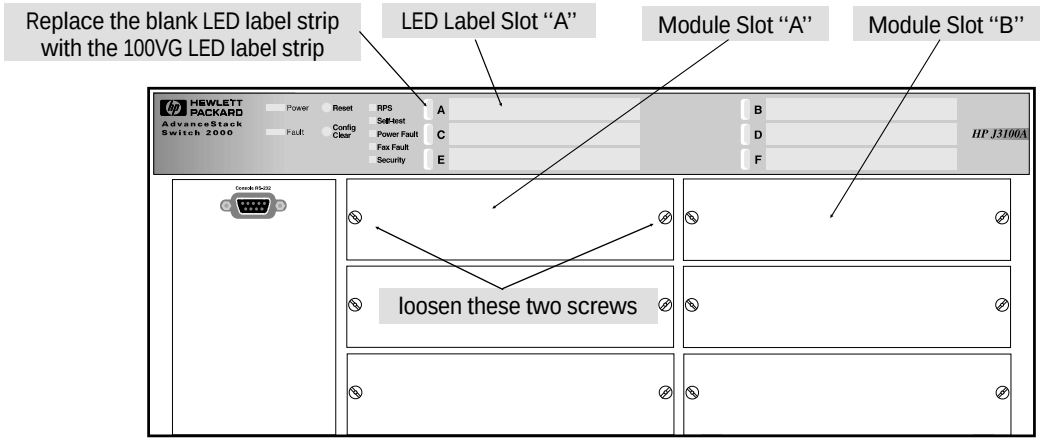

Figure 1. Remove the Cover Plate from an Unused Switch Port

3. Holding the module by its edges—taking care not to touch the metal connectors—position the module in front of an open slot on the switch by aligning the edges of the module with the small grooves near the bottom of the slot, as shown in the next illustration.

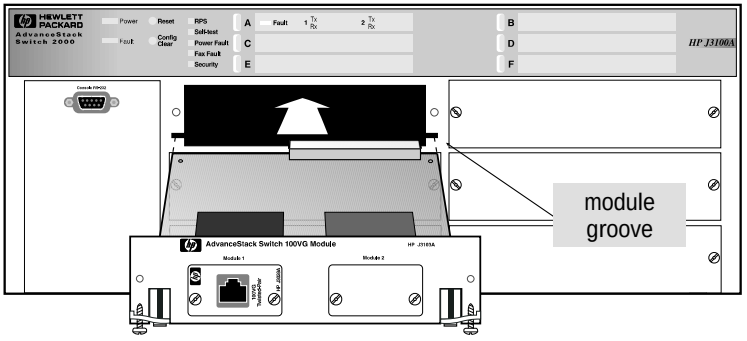

Figure 2. Extractor Handles in the Lowered (Open) Position

4. Make sure the extractor handles on each side of the module are in the open position (rotated away from the face plate), then push the module into the slot until you feel the extractor handles contact the switch chassis. (The handles will move slightly upwards when they contact the chassis.)

5. Seat the module in the slot by simultaneously raising both extractor handles to their full vertical position, and pressing them against the module face plate. Note that the handles will remain a little loose until you complete step 6.

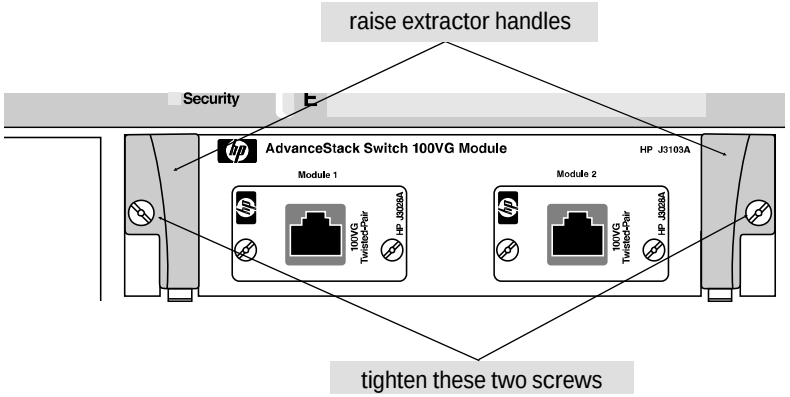

Figure 3. Extractor Handles in the Raised (Closed) Position

6. Tighten the captured screw in each handle by using a flat-blade or Torx-10 screwdriver. *Be careful not to overtighten the screws.*

If the switch has power during module installation, the LEDs will behave as described on the next page. *If you have not already done so, install the LED label strip as described in step 1.*

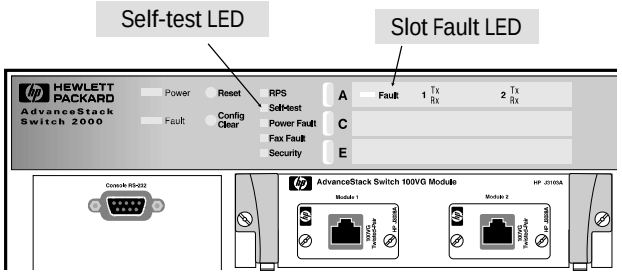

Figure 4. Self-Test and Fault LEDs on the Switch 2000

Slot and Port LED Behavior

LED	Pattern
Slot Fault (for the slot in which you are installing the module)	1 FLASHING RAPIDLY if the module is not properly seated 2 ON for less than 1 second after the module has been properly seated 3 OFF during normal switching operation 4 FLASHING SLOWLY if there is a self-test failure. Check the switch event log through the console interface for more information. 5 FLASHING SLOWLY if an incorrect transceiver (e.g., a 100Base-T transceiver) was installed in either of the 100VG transceiver slots. **Note:** If the Fault LED for the module slot continues flashing rapidly, the module may not be completely seated in the slot. Ensure that the handles on the module are fully in the "closed" position and the screws in the handles are tightened. If the module slot Fault LED continues flashing, unscrew the screws, open the handles, remove the module, and re-install it. If the Fault LED continues flashing, remove the module and contact your HP-authorized LAN dealer or HP networking support representative. If a module is not installed properly, and the module slot Fault LED continues rapid flashing, normal switch operation halts until the module is removed or properly installed (the other modules in the switch do continue to forward packets normally).
Self-test (for the Switch 2000)	1 ON for up to 40 seconds after the module has been properly seated 2 OFF during normal switching operation 3 FLASHING simultaneously with slot Fault LED if the slot has failed self-test. Check the event log.

7. Connect the appropriate 100VG network cable(s) to the transceiver(s) installed in the module.

Note

There are some specific suggestions that you should observe when connecting your switch to other 100VG networking devices. See the *Connectivity Quick Reference*, included with the module, for 100VG connection information.

8. Check the port LEDs for the newly-installed module to ensure that the port(s) connected in the preceding step are up (the port is enabled and has a good 100VG link). *If you have not already done so, install the LED label strip for the 100VG module, as described in step 1.* The "port-enabled" LED (**1**, **2**) will be lit for each port that is up. The transmit (Tx) and/or receive (Rx) LEDs for each port that is transmitting and/or receiving packets will flash when traffic is detected on the port.

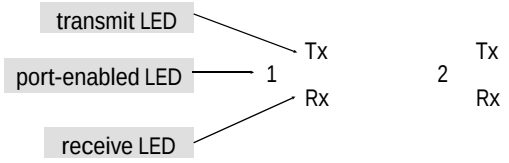

Figure 5. Port LEDs for the Switch 100VG Module

9. Customize the port configuration, if necessary. (See "Customizing the Port Configuration" on the next page.)

10. Reboot the switch, since this is a new module being installed. (See "Rebooting the Switch" on page 8 for more information on when the switch must be rebooted.)

Customizing the Port Configuration

If the slot in which you installed the Switch 100VG Module was empty the last time the switch was either rebooted or reset (or the power to the switch was cycled), then the module will use preconfigured default parameter values that will work for most networks.

The 100VG port default configuration is:

- Enabled: Yes
- Mode: Master (MAC)
- Trunk (port trunking): None
- Broadcast Limit: 0

If necessary, configure the port(s) in the module by using the switch console interface. (See the *Console User's Guide* shipped with the Switch 2000, and the online Help provided in the console interface itself.)

If the default port configuration, shown above, is correct for your network, then skip this process.

Rebooting the Switch

You can reboot the switch by using the Reboot Switch command in the console Main menu, or by pressing the recessed Reset button located to the right of the Power LED.

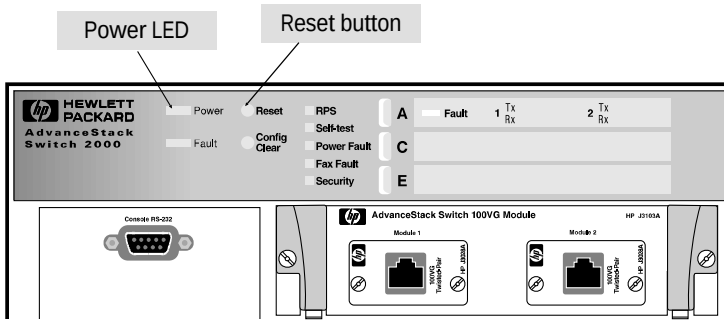

Figure 6. Location of the Reset Button

Generally, you only need to reboot the switch when it needs to recognize a change in its hardware or software (console) configuration. Some circumstances under which you will need to reboot the switch are:

- Adding new modules or moving modules to unused slots (page 2)
- Installing a module in a slot that was previously occupied by a different type of module (for example, installing a 100VG module in a slot that was previously used for an Ethernet module—page 9)
- Changing certain switch configuration parameters through the console interface—in this case, the console provides messages indicating when the switch must be rebooted for the configuration change to be activated

You do not need to reboot the switch when:

- Replacing a module with the same type of module, or moving a module to a slot that was previously occupied by the same type of module (page 9)
- Adding or changing a transceiver in the switch module—in this case, you must remove the module from the switch, and when it is reinstalled, the switch recognizes the transceiver change (page 11)

Removing or Replacing a Module

Use this section to do either of the following:

- Replace one module with another
- Remove a module without replacing it

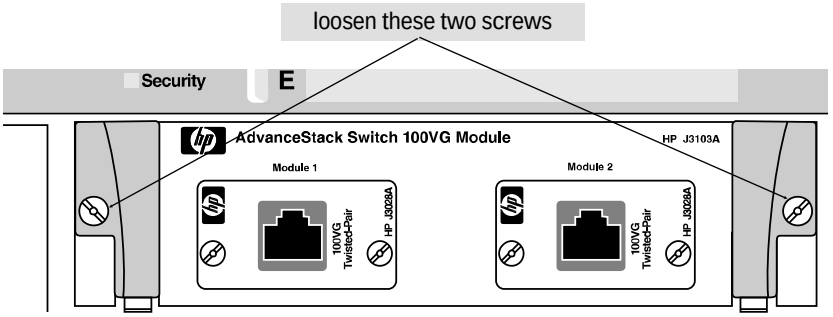

Figure 7. Removing the Module from the Slot

1. Remove any network cables from the ports on the module.

2. Loosen the screws in the extractor handles of the module you want to remove from the switch.

3. Simultaneously rotate both extractor handles downward and pull the module toward you until it releases from the slot and the Fault and status LEDs for that slot are off.

Note

During removal (or installation) the module and switch connectors will momentarily be only partially connected. The fault LED for the slot flashes rapidly to indicate this state, and normal switch operation is temporarily suspended until the module connector is completely separated from the switch connector. The other switch modules will continue to forward packets normally, though.

4. Slide the module out of the slot.

5. Do one of the following:

   - If you will be installing another module in the slot, go to "Installing a Module in an Unused Slot" on page 2 and begin with step 3.

     Make sure that you install the proper LED label strip for the new module you are installing, as described in step 1 on page 2. If you do not install the correct LED label strip for the module you have installed, the LED display will be incorrect for that module.

   - If you will not install another module in the slot (that is, you leave it empty), then re-attach a slot cover plate over the empty slot opening and replace the LED label strip for that slot with a blank LED strip saved previously.

6. If you are removing a module, or replacing a module with a different type (for example, replacing an Ethernet module with a 100VG module), then reboot the switch as described under "Rebooting the Switch" on page 8.

Caution

For proper cooling and reduction of electromagnetic emissions, ensure that a slot cover (provided with your Switch 2000) is installed on any unused port or transceiver slot.

Caution

When adding, removing, or replacing a transceiver from a module, always remove the module from the Switch 2000 first. Otherwise, you might interrupt proper switch operation and/or damage the module or transceiver circuitry.

For proper cooling and for reduction of electromagnetic emissions, ensure that a slot cover (provided with your Switch 2000) is installed on any unused port or transceiver slot.

1. Disconnect any network cables attached to the module for which you will add, replace, or remove a transceiver.

2. Remove the module from the Switch 2000.

   a. Loosen the screws in the extractor handles of the module.

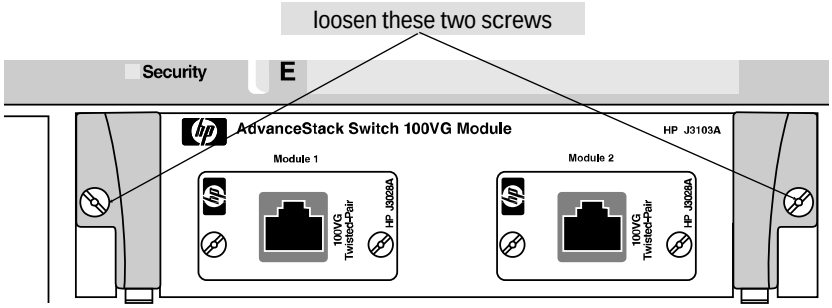

Figure 8. Removing the Module from the Slot

   b. Simultaneously rotate both extractor handles downward and pull the module toward you until it releases from the slot and the Fault and status LEDs for that slot are off.

   c. Slide the module out of the slot.

3. Do one of the following:

   - If you are adding a transceiver: Loosen the captured screws on the cover plate over the transceiver slot until they disengage from the module, then remove the cover plate and store it for possible future use.
   - If you are removing a previously installed transceiver:

     1) Use a flat-bladed or Torx T-10 screwdriver to loosen the spring-loaded retaining screws on the transceiver bulkhead.

     2) Slide the transceiver out of the module and place it in an anti-static container for protection from electrostatic discharge (ESD).

4. Do one of the following:

   - If you are adding a new transceiver or replacing one transceiver with another:

     1) Use the instructions provided with the transceiver to install it in the module.

     2) Re-Install the module in the Switch 2000 using the instructions under “Installing a Module in an Unused Slot” on page 2 and begin with step 3.

   - If you are removing a transceiver without replacing it with another transceiver:

     1) Use a flat-bladed or Torx T-10 screwdriver to install an HP 100VG transceiver cover plate over the transceiver slot in the module.
     2) Re-Install the module in the Switch 2000 using the instructions under “Installing a Module in an Unused Slot” on page 2 and begin with step 3.

Troubleshooting

The primary tools for troubleshooting the Switch 100VG Module are the LEDs on the front of the Switch 2000. Refer to “Slot and Port LED Behavior” on page 5. Also, refer to the installation guide shipped with the Switch 2000, for more detailed troubleshooting information.

Customer Support Services

Hewlett-Packard offers support 24 hours a day, seven days a week through the use of automated electronic services including:

- Hewlett-Packard BBS and World Wide Web
- Hewlett-Packard FTP Library Service on the Internet
- CompuServe
- HP Network Phone-In Support (NPS)
- HP FIRST FAX Retrieval Service

These services are described on the card at the front of this manual.

Specifications

Physical

Dimensions

Width:	16.5 cm (6.5 in)
Depth:	25.0 cm (9.9 in)
Height:	4.3 cm (1.7 in)
Weight:	0.33 kg (0.73 lbs)

Environmental

Operating temperature:	0°C to 55°C (32°F to 131°)
Relative humidity:	15% to 95% at 40°C (104°F) non-condensing
Maximum altitude:	4.6 km (15,000 feet)

Electromagnetic

Emissions
FCC part 15 Class A
CISPR-22 (1985) Class A EN55022 (1988) Class A
VCCI Class 1
Complies with Canadian EMC Class A requirements.

Immunity
See the Declaration of Conformity in the installation guide for the HP J3100A AdvanceStack Switch 2000.

Regulatory Statements

FCC Statement (U.S.A.)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

VCCI (Japan)

注意

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

注意

この装置は、第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-1

European Community

This equipment complies with CISPR22/EN55022 Class A.

Note This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Declaration of Conformity

This product is designed for operation with the J3100A HP AdvanceStack Switch 2000 and is listed in the Declaration of Conformity included in the *HP AdvanceStack Switch 2000 Installation Guide.*

DOC Statement (Canada)

Complies with Canadian EMC Class A requirements.

Manual Part Number
5966-5117