



GETTING STARTED GUIDE



Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter Getting Started Guide

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1 About This Guide

This guide provides instructions on how to install and manage your Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter—referred to as the *switch module*—in the IBM BladeCenter enclosure and how to set up and configure your switch module. The IBM BladeCenter—referred to as the *blade enclosure*—supports up to four Ethernet switch modules, which are installed in the interconnect bays of the blade enclosure.

For additional installation and configuration information about the switch module, see the switch module documentation on Cisco.com at:

http://www.cisco.com/en/US/products/ps8741/tsd_products_support_series_home.html

For blade enclosure compatibility, system requirements, important notes, limitations, open and resolved caveats, and last-minute documentation updates about the switch module, see the release notes, also on Cisco.com. When you use the online publications, refer to the documents that match the Cisco IOS software version that is running on the switch module.

For details on the number and location of blade enclosure bays and for additional information on the blade enclosure, see the *BladeCenter Installation and User's Guide* at:

<http://www-03.ibm.com/systems/bladecenter/>

Important: Be sure to read the multilingual safety instructions on the CD that came with your IBM BladeCenter enclosure before you use this product.

Before you continue with the installation, also read the release notes for the blade enclosure that are available on the IBM support website.

For translations of the warnings that appear in this publication and all safety and handling warnings for this product, see the *Regulatory Compliance and Safety Information for the Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter* on the documentation CD that ships with the switch module. For warranty information about the switch module, see the *Hardware Warranty Terms for the Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter*, also on the documentation CD.

2 Taking Out What You Need

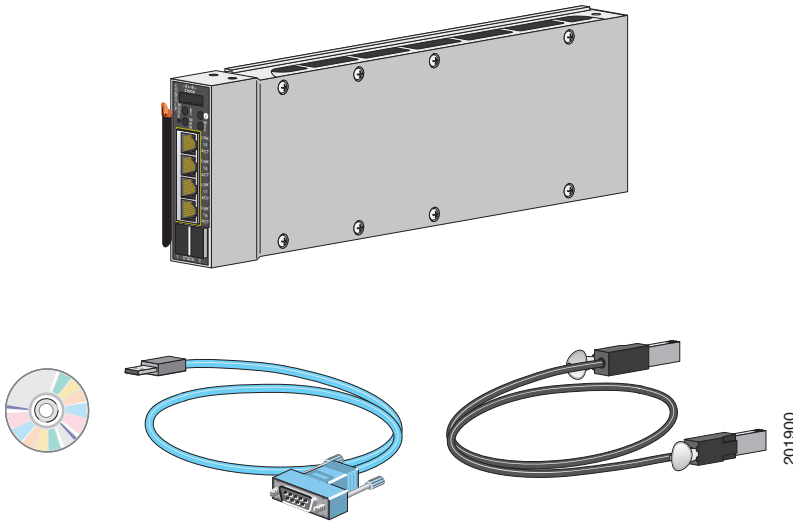
Follow these steps:

1. Unpack and remove the switch module and the accessory kit from the shipping box.
2. Return the packing material to the shipping container, and save it for future use.
3. Verify that you have received the items shown on page 3. If any item is missing or damaged, contact your supplier for instructions.

Shipping Box Contents

Figure 1 shows the Catalyst Switch Module 3110G as an example. Your switch module might look different from the one shown.

Figure 1 *Switch Module Box Contents*



Catalyst Switch Module Descriptions

These sections describe the switch modules:

- Catalyst Switch Module 3110G and 3110X, page 4
- Catalyst Switch Module 3012, page 5

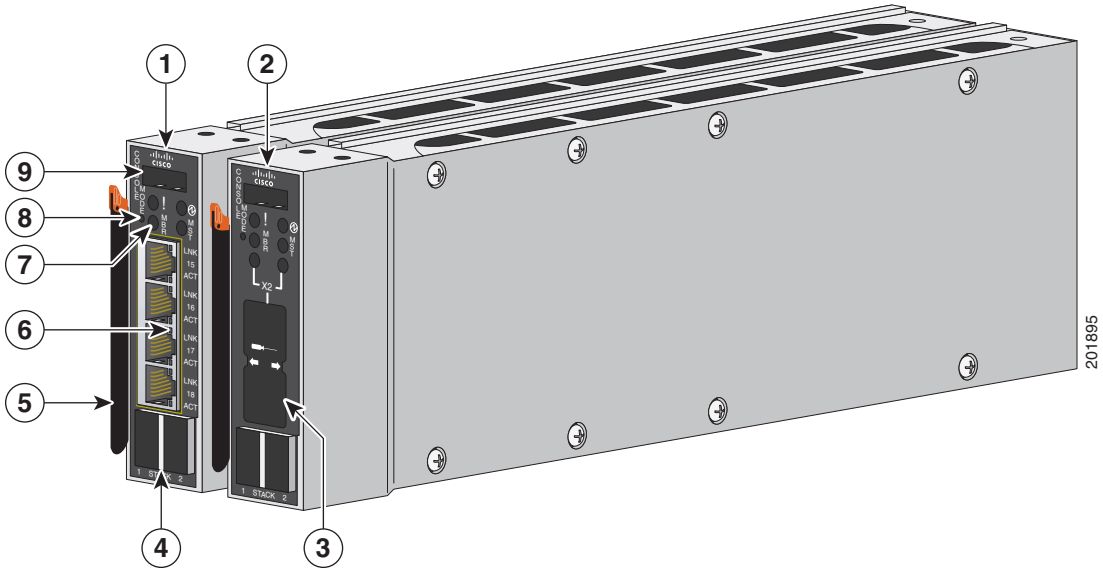
The switch module is powered from the blade enclosure backplane. The switch module does not have a fan. The blade enclosure provides temperature management.

The switch module connects internally to the blade enclosure management module through 100BASE-T Ethernet links. You can manage the switch modules through the IBM advanced Management Module (aMM) on a management network that is isolated from other switch traffic. You can also manage the switch module through the console port on the switch module front panel or through any of the external uplink ports.

Catalyst Switch Module 3110G and 3110X

The Catalyst Switch Module 3110G and 3110X are stackable, 12- to 18-Gigabit Ethernet port, Layer 3 switch modules. The number of ports depends on the type of switch module. Up to 14 of the Gigabit Ethernet ports are internal 1000BASE-X downlink ports that connect to the blade enclosure. Figure 2 shows the two switch modules, and Table 1 describes the switch module ports.

Figure 2 Catalyst Switch Module 3110G and 3110X



1	Catalyst Switch Module 3110G	6	10/100/1000 Ethernet ports
2	Catalyst Switch Module 3110X	7	Switch module LEDs
3	10-Gigabit Ethernet module slot ¹	8	Mode button
4	StackWise Plus ports	9	Console port
5	Release latch		

1. For use with Cisco X2 transceiver modules.

For more information about the features of each switch module, see the hardware installation guide and the software configuration guide on Cisco.com.

Table 1 Catalyst Switch Module 3110G and 3110X Port Descriptions

Port	Description
Ports 1 to 14 ¹	Internal Gigabit Ethernet 1000BASE-X downlink ports that connect to the blade enclosure.
Ports 15 to 18 (Switch module 3110G)	External 10/100/1000BASE-T copper Gigabit Ethernet uplink ports that support auto-MDIX and autonegotiation.
Port 1 (X2) (Switch module 3110X)	External 10-Gigabit Ethernet module slot for use with Cisco X2 transceiver modules.
Internal 100BASE-T Ethernet port	The Ethernet management port (Fa0) is used only for switch module management traffic, not for data traffic. It is connected to the aMM through the blade enclosure backplane connector. Traffic to and from this port is isolated from the switch ports. This port only supports autonegotiation with 100 Mb/s and full-duplex mode.
StackWise Plus ports	Stacking cable ports.
Console port	Switch module management port (USB-to-DB-9connector).

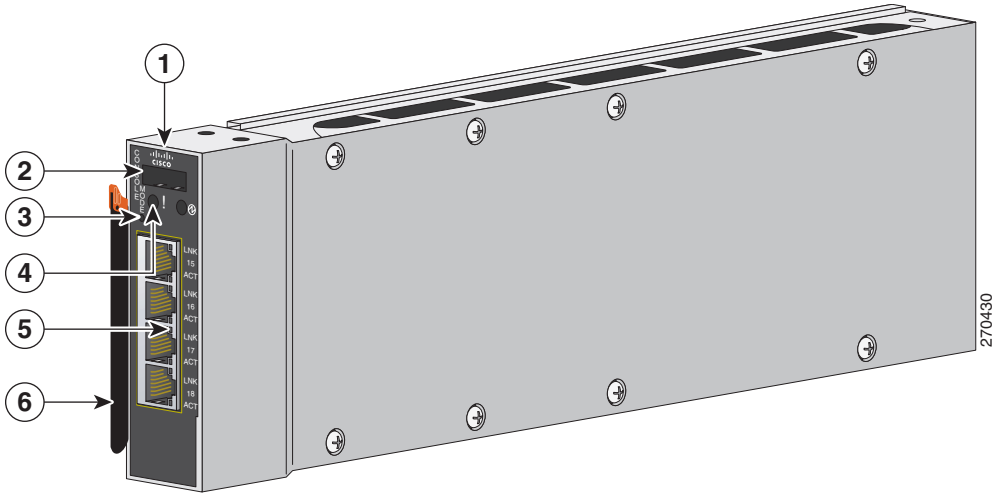
1. The number of internal ports is determined by the blade enclosure model. See the blade enclosure documentation for more information about internal port numbering.

Catalyst Switch Module 3012

The Catalyst Switch Module 3012 is an 18-Gigabit Ethernet port, Layer 3 switch module. Up to 14 of the Gigabit Ethernet ports are internal 1000BASE-X downlink ports that connect to the blade enclosure. The other four Gigabit Ethernet ports are external uplink ports that provide connections to other switches or routers. Figure 3 shows the switch module, and Table 2 describes the switch module ports.

For more information about the features of the switch module, see the hardware installation guide and the software configuration guide on Cisco.com.

Figure 3 Catalyst Switch Module 3012



1	Catalyst Switch Module 3012	4	Switch module LEDs
2	Console port	5	10/100/1000 Ethernet ports
3	Mode button	6	Release latch

Table 2 Catalyst Switch Module 3012 Port Descriptions

Port	Description
Ports 1 to 14 ¹	Internal Gigabit Ethernet 1000BASE-X downlink ports that connect to the blade enclosure.
Ports 15 to 18	External 10/100/1000BASE-T copper Gigabit Ethernet uplink ports that support auto-MDIX and autonegotiation.

Table 2 **Catalyst Switch Module 3012 Port Descriptions (continued)**

Port	Description
Internal 100BASE-T Ethernet port	The Ethernet management port (Fa0) is used only for switch module management traffic, not for data traffic. It is connected to the aMM through the blade enclosure backplane connector. Traffic to and from this port is isolated from the switch ports. This port only supports autonegotiation with 100 Mb/s and full-duplex mode.
Console port	Switch module management port (USB-to-DB-9 connector).

1. The number of internal ports is determined by the blade enclosure model. See the blade enclosure documentation for more information about internal port numbering.

3 Installing the Switch Module

This section covers switch module installation. The illustrations in this section show the Catalyst Switch Module 3110G as an example. The instructions are the same for the Catalyst Switch Module 3110X and 3012.

Installation Guidelines

Consider these guidelines before you install the switch module:

- Fill any unoccupied interconnect bays or any unoccupied power module bays in the blade enclosure with filler modules.
- Identify the bays in which you will insert the switch modules. Plan to install the first switch module in bay 1, the second in bay 2, and so on up to bay 4, if possible.

See the IBM blade enclosure documentation for more information about the specific enclosure model, the interconnect bay options, and the port mapping between the blade enclosure and the switch modules. Also see the blade enclosure compatibility table in the switch module release notes on Cisco.com.

- For switch stacks, you should first install and configure the switch module that will be the stack master before installing any additional switch modules. See the “Creating Switch Stacks” section on page 21 for more information.
- Review and become familiar with the safety guidelines in the *Regulatory Compliance and Safety Information for the Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter* on the documentation CD.
- Review and become familiar with the safety guidelines, and the temperature, power, and grounding requirements specified in the IBM blade enclosure installation and user’s guide.

Installing the Switch Module



Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals. Statement 43



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001



Warning

Class 1 laser product. Statement 1008



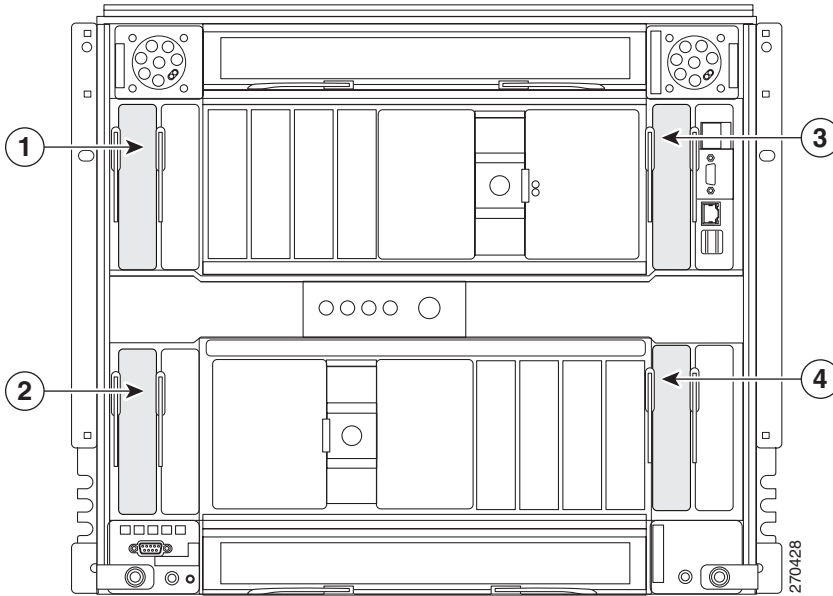
Caution

To prevent electrostatic-discharge (ESD) damage when installing switch modules, follow your normal board and component handling procedures.

Follow these steps:

- Step 1** Remove the acoustic attenuation module, if one is installed, from the rear of the blade enclosure.
- Step 2** Select the blade enclosure bay in which to install the switch module (Figure 4).

Figure 4 IBM BladeCenterH Rear-Panel View



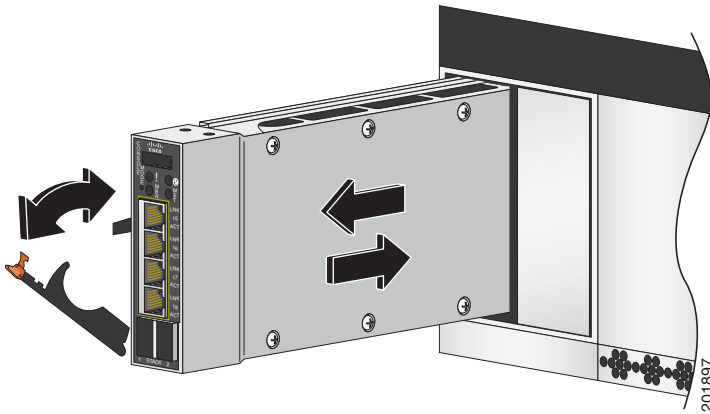
1	I/O module bay 1	3	I/O module bay 3
2	I/O module bay 2	4	I/O module bay 4

- Step 3** Remove the filler module from the selected bay. Store the filler module for future use.
- Step 4** If you have not already done so, touch the static-protective package that contains the switch module to any unpainted metal surface of the blade enclosure or any unpainted metal surface on any other grounded rack component for at least 2 seconds.
- Step 5** Remove the switch module from its static-protective package.

Step 6 Move the switch module release latch to the open position (perpendicular to the switch module).

Step 7 Slide the switch module into the bay until it stops (Figure 5).

Figure 5 *Installing the Switch Module*



Step 8 Move the switch module release latch to the closed position. After you insert and lock the switch module, it turns on, and the power-on self-test (POST) runs to verify that the switch module is operating correctly.

The system power LED blinks green while POST is running, and then turns solid green when POST is finished.

Step 9 Confirm that the system power LED is green. For a complete description of the switch module LEDs, see the hardware installation guide on Cisco.com.

Step 10 Replace the acoustic-attenuation module, if applicable.

4 Configuring the Switch Module

When you first set up the switch module, you should use the blade enclosure advanced Management Module (aMM) to enter the initial IP information and the Cisco device manager Express Setup screen to configure the switch module password and Telnet access. You can then access the switch module through the IP address for further configuration.

Before running the setup procedures, observe these cautions:



Caution

Do not connect devices to the switch module external ports until you have completed the setup procedures and your configuration matches that of the upstream network.



Caution

For Catalyst 3110G and 3110X switch modules, make sure that no StackWise Plus cables are connected to the switch module when running the setup procedures. If StackWise Plus cables are connected, you cannot access the switch module by using the aMM.

If you have already connected StackWise Plus cables, remove the cables, and then restart the switch modules by removing and inserting the modules in the blade enclosure.

Assigning the Switch Module IP Address

To complete this procedure, you will need this information from your system administrator:

- Static IP address
- Default gateway IP address

Follow these steps:

Step 1 Connect and log on to the aMM as described in the *IBM BladeCenter Advanced Management Module User's Guide*.



Note

The aMM web interface refers to the switch module as the *I/O module*.

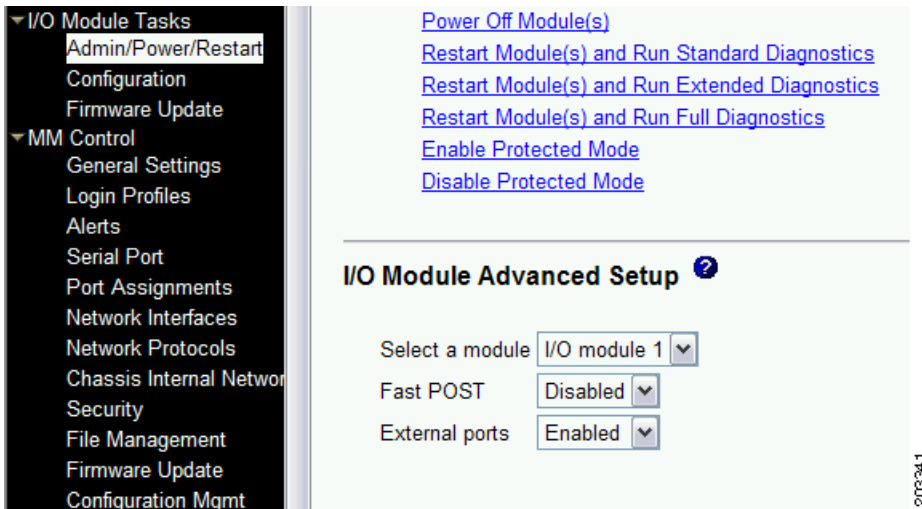
Step 2 From the *I/O Module Tasks* menu, click **Admin/Power/Restart**.

Step 3 In the *I/O Module Advanced Setup* section, use the **Select a module** pull-down menu to select the *I/O module* (switch module) to configure (Figure 6).

Use the **External ports** pull-down menu and select **Enabled** to enable the switch module external ports.

Step 4 Click **Save** to save your settings.

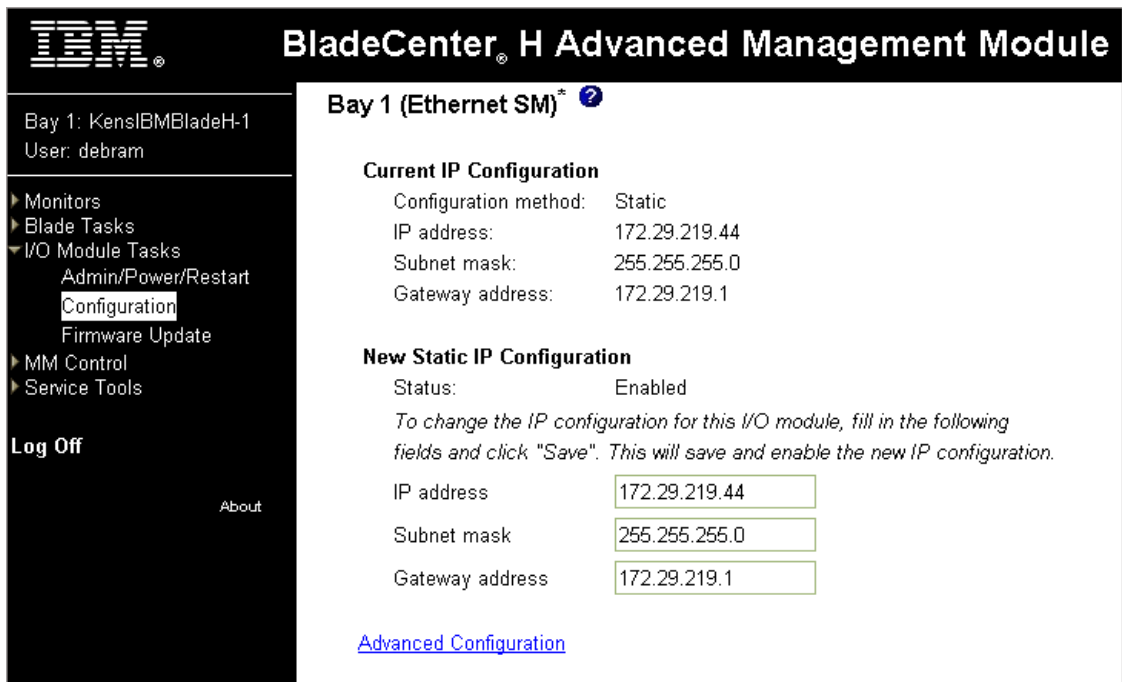
Figure 6 *AMM I/O Module Admin/Power/Restart Window*



Step 5 From the I/O Module Tasks menu, click **Configuration**.

Step 6 In the I/O Module Configuration section, click the bay number that corresponds to the location of the I/O module (switch module) that you are configuring. The applicable bay number appears in the window, followed by other related I/O-module information, including the IP address. The I/O-module information is divided into two sections: **Current IP Configuration** and **New Static IP Configuration** (Figure 7).

Figure 7 AMM I/O Module Configuration Window



Step 7 In the **New Static IP Configuration** section, enter the new IP address, the subnet mask, and the gateway address. Click **Save**.

The IP address for the I/O module must be on the same subnet as the management module. The management module does not check for invalid IP addresses.

Step 8 Click **Advanced Configuration**, and enable these switch module features:

- a. External management over all ports
- b. Preserve new IP configuration on all resets

The default setting is **Disabled** for these features.



Note If you have connected the StackWise Plus cables, the Advanced Configuration settings are not available. To access the Advanced Configuration settings, disconnect the StackWise Plus cables.

Step 9 Click **Save** to save your settings.

Step 10 Exit the aMM web interface.

Step 11 Go to “Running Express Setup” to complete the switch module setup.

Running Express Setup

To complete the Express Setup program, you will need this information from your system administrator:

- Switch module password
- Telnet access password
- Names of the SNMP read and write community strings if you are going to use a network-management program like CiscoWorks (optional)
- Host name, system contact, and system location (optional)

Follow these steps:

Step 1 Launch a web browser on a PC that is connected to the Internet. Enter the IP address that you assigned in Step 7 of the “Assigning the Switch Module IP Address” procedure in the web browser, and press **Enter**.

Step 2 The switch module device manager page appears (Figure 8). If it does not appear, see the “In Case of Difficulty” section on page 26.

Figure 8 Switch Module Device Manager Page

Step 3 Select **Configure > Express Setup** from the menu. The **Express Setup Basic Settings** screen appears (Figure 9).

Figure 9 *Express Setup Basic Settings Screen*

The screenshot shows the 'Express Setup Basic Settings' screen with the following fields and values:

- Network Settings:**
 - Management Interface (VLAN ID): 1
 - IP Address: 172.29.219.44
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 172.29.219.1
 - Switch Password: (empty)
 - Confirm Switch Password: (empty)
- Ethernet Management Port Settings:**
 - IP Address: (empty)
 - Subnet Mask: 255.255.255.0
- Optional Settings:**
 - Host Name: Switch
 - System Date (DD/MMM/YYYY): 6 Sep 2006
 - System Time (HH:MM): 09:56 PM
 - Time Zone: (GMT + 05:30) Bombay, Calcutta, Madras, New Delhi
 - Daylight Saving Time: Enable

186708

Step 4 Enter this information in the **Network Settings** fields.

- In the **Switch Password** field, enter your password. The password can be from 1 to 25 alphanumeric characters, can start with a number, is case sensitive, allows embedded spaces, but does not allow spaces at the beginning or end.
- In the **Confirm Switch Password** field, enter your password again.

You can enter the **Optional Settings** information now or enter it later by using the switch module device manager interface.

Step 5 In the **Host Name** field, enter a name for the switch module. The host name is limited to 31 characters; embedded spaces are not allowed.

Step 6 In the **System Date** and **System Time** fields, enter the current date and time, or use the down arrows to select them.

Step 7 In the **Time Zone** field, use the down arrow to choose your time zone.

Step 8 Click **Enable** in the **Daylight Savings Time** field to enable this feature.

Step 9 Select the **Advanced Settings** tab on the Express Setup screen. The **Advanced Settings** screen appears (Figure 10).

Figure 10 Express Setup Advanced Settings Screen

Basic Settings **Advanced Settings**

Telnet Access: Enable Disable

Telnet Password: Confirm Telnet Password:

SNMP: Enable Disable

SNMP Read Community: SNMP Write Community:

System Contact: System Location:

IPv6 Settings

Enable IPv6

157718

- Step 10** In the **Telnet Access** field, click **Enable** if you are going to use Telnet to manage the switch module by using the CLI. If you enable Telnet access, you must enter a Telnet password.
- Step 11** In the **Telnet Password** field, enter a password. The Telnet password can be from 1 to 25 alphanumeric characters, is case sensitive, allows embedded spaces, but does not allow spaces at the beginning or end. In the **Confirm Telnet Password** field, re-enter the Telnet password.
- Step 12** In the **SNMP** field, click **Enable** to enable Simple Network Management Protocol (SNMP). Enable SNMP only if you plan to manage switch modules by using CiscoWorks 2000 or another SNMP-based network-management system.
- Step 13** If you enable SNMP, you must enter a community string in the **SNMP Read Community** field, the **SNMP Write Community** field, or both. SNMP community strings authenticate access to MIB objects. Embedded spaces are not allowed in SNMP community strings. When you set the SNMP read community, you can access SNMP information, but you cannot modify it. When you set the SNMP write community, you can both access and modify SNMP information.
- Step 14** In the **System Contact** field, enter the name of the person who is responsible for the switch module. In the **System Location** field, enter the wiring closet, floor, or building where the switch module is located.

Step 15 (Optional) You can enable IPv6 in the **IPv6 Settings** section. Click **Enable IPv6** to enable it. In the Interface column, choose the interface for which you want to set an IPv6 address, and complete the other fields in this table.

Step 16 Click **Submit** to save your settings, or click **Cancel** to clear your settings. When you click **Submit**, you have completed the switch module initial configuration.

To install and configure additional switch modules, repeat the steps in the “Installing the Switch Module” through the “Configuring the Switch Module” sections.

See “Connecting Devices” for more information about connecting to network devices.

See “Creating Switch Stacks” for more information about creating switch stacks.

Designating the Switch Stack Master

This section is only for the Catalyst Switch Module 3110G and 3110X and is optional.

If you plan to create a switch stack, we recommend that you set the switch module that you first configure as the stack master. To do this, you must assign the highest priority value to this switch module after installation and setup.

Follow these steps:

Step 1 Start a Telnet session from a remote management station and connect to the switch module.

Step 2 At the prompt, enter **enable**.

Step 3 Enter **configure terminal**.

Step 4 Enter **switch 1 priority 15**.

Step 5 At the prompt, press **Return**.

Step 6 Enter **end**.

Step 7 Enter **copy running-configuration startup-configuration** to save this setting.

Step 8 At the prompt, press **Return**.

Step 9 To verify that this switch module is set as the stack master, enter the **show switch** user EXEC command.

See “Creating Switch Stacks” for more information about creating switch stacks.

5 Managing the Switch Module

After you complete the initial switch module configuration, use the aMM, the CLI, the switch module device manager, or the other management options described in this section for further configuration.

Blade Enclosure Advanced Management Module

For standalone switch modules, you can use the aMM to configure and manage the switch module. See the *IBM BladeCenter Advanced Management Module User's Guide* for more information. For stacked switch modules, use the CLI, the switch device manager, or the Cisco Network Assistant to configure and manage the switch stack.

Command-Line Interface

You can enter Cisco IOS commands and parameters through the CLI. You can access the CLI by connecting your management station directly to the switch module console port or by using Telnet from a remote management station.

To connect to the switch module console port, follow these steps:

1. Connect the supplied USB-to-DB-9 adapter cable to the serial port on the PC. Connect the USB end of the cable to the console port on the switch module.
2. Start a terminal-emulation program on the PC.
3. Configure the PC terminal emulation software for 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control.
4. Use the CLI to enter commands to configure and manage the switch module and switch stacks. See the software configuration guide and the command reference on Cisco.com for more information.

Switch Module Device Manager

You can use the device manager (Figure 8) that is in the switch module memory to manage a standalone switch module or a switch stack. You can access the device manager from anywhere in your network through a web browser.

Follow these steps:

1. Launch a web browser on your PC or workstation.
2. Enter the switch module IP address in the web browser, and press **Enter**. The device manager page appears.
3. Use the device manager to perform basic switch module configuration and monitoring. Refer to the device manager online help for more information.

Cisco Network Assistant

Cisco Network Assistant is a software program that you download from Cisco.com and run on your PC. It offers advanced options for configuring and monitoring multiple devices, including switch modules, switch clusters, routers, and access points. Network Assistant is free—there is no charge to download, install, or use it.

Follow these steps:

1. Go to this web address: <http://www.cisco.com/go/NetworkAssistant>.
You must be a registered Cisco.com user, but you need no other access privileges.
2. Find the Network Assistant installer.
3. Download the Network Assistant installer, and run it. (You can run it directly from the web if your browser offers this choice.)
4. When you run the installer, follow the displayed instructions. In the final panel, click **Finish** to complete the Network Assistant installation.

Refer to the Network Assistant online help and the getting started guide for more information.

Other Management Options

You can use SNMP management applications such as CiscoWorks Small Network Management Solution (SNMS) and IBM Director to configure and manage the switch module.

6 Creating Switch Stacks

This section is only for the Catalyst Switch Module 3110G and 3110X and is optional.

A switch *stack* is a set of up to nine stacking-capable switch modules that are connected through their StackWise Plus ports. One switch module controls the operation of the stack and is called the stack master. The stack master and the other switch modules in the stack are stack members. Layer 2 and Layer 3 protocols present the entire switch stack as a single entity to the network. When switch modules are not stacked, each acts as a standalone switch module.



Caution

The Catalyst Switch Module 3110G and 3110X do not support switch stacks with other types of blade switches as members. Combining the switch module with other types of blade switches in a switch stack might cause the switch module to work improperly or to fail.

Stacking Guidelines

Before you connect the switch modules in a stack, observe these stacking guidelines:

- You should install the stack master switch module and run the initial setup program on that switch module before you connect the StackWise Plus cables to other stack members. We recommend that you assign the highest priority value to the switch module that you prefer to be the stack master. This ensures that the switch module is re-elected as stack master if a re-election occurs. As you add new switch modules to the stack, they automatically become stack members.

To assign a priority value after you have installed and initially configured the first switch module, see the “Designating the Switch Stack Master” section on page 18.

- When you connect the StackWise Plus cables and create a stack, only the status of the stack master Fa0 interface appears in the switch module configuration, and it will show that the port is shut down while in stack mode.
- You can stack a combination of up to nine switch modules. You can stack only the Catalyst Switch Modules 3110G and 3110X; other blade switches are not supported.
- For conditions that might cause a stack master re-election and for general concepts and procedures to manage switch stacks, see the “Managing Switch Stacks” chapter in the switch module software configuration guide on Cisco.com.

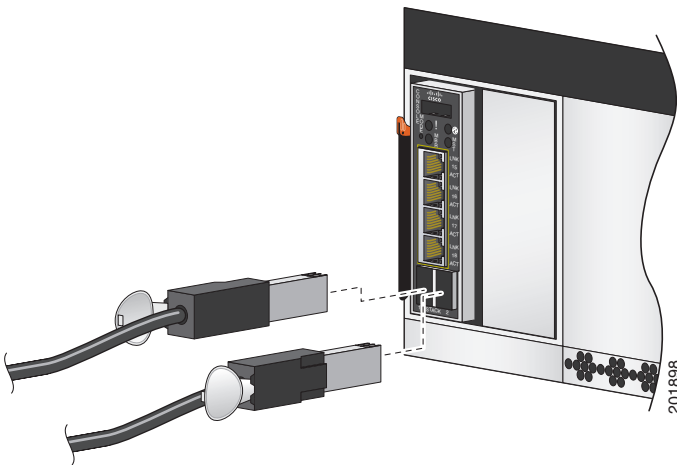
- Before connecting, verify the StackWise Plus cable length. Depending on your configuration, you might need different sized cables. If you do not specify the length of the StackWise Plus cable when you order your product, the 1-meter cable is supplied. If you need the 0.5-meter cable or the 3-meter cable, you can order these StackWise Plus cables from your supplier:
 - CAB-STK-E-0.5M= (0.5-meter cable)
 - CAB-STK-E-1M= (1-meter cable)
 - CAB-STK-E-3M= (3-meter cable)

Connecting a Switch Stack

Follow these steps:

-
- Step 1** Install the member switch modules if you have not already done so.
 - Step 2** Remove the dust covers from the StackWise Plus cables, and store them for future use.
 - Step 3** Verify that cables are aligned as shown in Figure 11. (The cables are keyed for correct insertion.)

Figure 11 Connecting the StackWise Plus Cables



Step 4 Insert the cable into the StackWise Plus port on the front panel of the switch module. Insert the other end of the cable into the connector of the other switch module.

Always use a Cisco-approved StackWise Plus cable to connect the switch modules.



Caution

The new stack-member switch module restarts when you connect the StackWise Plus cables.

Step 5 Configure the member switch modules through the master switch by using the CLI through the console port of any stack member.

To remove the StackWise Plus cables, grasp the tab on the cable connector, and gently pull straight out. When you remove the StackWise Plus cables, replace the dust covers to protect them from dust.



Caution

Removing and installing the StackWise Plus cable can shorten its useful life. Do not remove and insert the cable more often than is absolutely necessary.

Switch Stack Cabling Example

Figure 12 shows a single blade enclosure with two switch modules that create one stack. The stack uses the 1-meter StackWise Plus cables to make redundant connections between two switch modules. Other types of configurations are possible if you stack no more than nine switch modules. Although the StackWise Plus ports are numbered (1 and 2), you do not need to make specific port connections between switch modules.

For more stacking configuration examples, see the switch module hardware installation guide and the software configuration guide on Cisco.com.

Figure 12 Switch Stack Cabling Example



7 Connecting Devices

This section describes how to connect to the fixed switch module ports and to the 10-Gigabit Ethernet module slot.

Connect to 10/100/1000 Ports

The 10/100/1000 Ethernet ports use standard RJ-45 connectors with Ethernet pinouts. The maximum cable length is 328 feet (100 meters). The 100BASE-TX and 1000BASE-T traffic requires Category 5, Category 5e, or Category 6 UTP cable. The 10BASE-T traffic can use Category 3 or Category 4 cable.

The autonegotiation feature is enabled by default on the switch module. At this setting, the switch module ports configure themselves to operate at the speed of attached devices. If the attached device does not support autonegotiation, you can explicitly set the switch module port speed and the duplex parameters. To maximize performance, either allow the ports to autonegotiate both speed and duplex, or set the port speed and duplex parameters on both ends of the connection.

For simplified cabling, the automatic medium-dependent interface crossover (auto-MDIX) feature is enabled by default on the switch module. With auto-MDIX enabled, the switch module detects the required cable type for copper Ethernet connections and configures the interface accordingly. Therefore, you can use either a crossover or a straight-through cable for connections to a switch module 10/100/1000 Ethernet port, regardless of the type of device on the other end of the connection.

For more information about enabling or disabling autonegotiation and auto-MDIX, see the switch module software configuration guide or the command reference on Cisco.com.

Install and Connect to Devices in the 10-Gigabit Ethernet Slot

The switch module 10-Gigabit Ethernet module slot is used for connections to other switches and routers. The module slot operates in full-duplex mode and uses the hot-swappable Cisco X2 transceiver module. The X2 transceiver module has SC connectors to connect to multimode fiber (MMF) and single-mode fiber (SMF) cables.

Use only Cisco X2 transceiver modules with the switch module. Each Cisco module has an internal serial EEPROM that is encoded with security information. This encoding provides a way for Cisco to identify and validate that the module meets the requirements for the switch module.

Verify Port Connectivity

After you connect a device to a switch module port, the port LED is off while the switch module establishes a link. This process takes about 30 seconds. Then the LED turns green when the switch module and the attached device have an established link. If the LED is off, the device might not be turned on, there might be a cable problem, or there might be a problem with the adapter installed in the device. See the “In Case of Difficulty” section on page 26 for more information.

8 In Case of Difficulty

If you experience difficulty, help is available in this section and also on Cisco.com. You can access the Cisco Technical Support and Documentation website for a list of known hardware problems and extensive troubleshooting documentation at:

<http://www.cisco.com/en/US/support/index.html>

For more information about the IBM blade enclosure, see the IBM blade enclosure website at:

<http://www-03.ibm.com/systems/bladecenter/>

Troubleshooting Switch Module Setup

Review this section if you are having trouble running the initial setup procedures:

- Did you try to access the switch module through the aMM before installing the switch module in the blade enclosure? If yes, install the switch module as described in the “Installing the Switch Module” section on page 7.
- Did you verify that POST successfully ran on the switch module before accessing the switch through the aMM? If not, make sure that the switch module System power LED is green before using the aMM to access the switch module.
- Did you try to access the switch module through the aMM after connecting the StackWise Plus cables? If yes, disconnect the StackWise Plus cables. Remove the switch module, and then reinstall the switch module. Follow the procedures described in the “Configuring the Switch Module” section on page 11.
- When accessing the switch module device manager, did you enter the wrong address in the browser, or is there an error message? If yes, re-enter the switch module IP address in the browser, and press **Enter**.

Resetting the Switch Module

For a standalone switch module, you can perform these functions by using the aMM web interface:

- Reboot the switch module
- Restore factory defaults
- Set or reset the IP address, netmask, and default gateway
- Enable or disable external ports
- Enable or disable management through the external ports
- Change configuration
- Change or update firmware

For a switch stack, you can use the CLI to perform the same functions. For more information, see the switch module software configuration guide and command reference on Cisco.com.

Using the Mode Button to Reset the Switch Module

You can use the Mode button to reset a standalone switch module.



Caution

For a standalone switch module, resetting the switch module deletes the configuration and reboots the switch module.

For a standalone switch module, use a small pointed object to press and hold the Mode button on the switch module front panel. The switch module LEDs begin blinking after about 3 seconds. Continue holding down the Mode button. The LEDs stop blinking after 7 more seconds, and then the switch module reboots.

The switch module is now unconfigured. You can enter the switch module IP information by following the procedures described in the “Configuring the Switch Module” section.

For switch stacks, pressing and holding the Mode button on a member switch module causes the stack to reboot. It does not remove the configuration from any member switch.

For More Information

For more information about the switch module, see these documents on Cisco.com:

- *Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter Software Configuration Guide*. This guide provides a product overview and detailed descriptions and procedures for the switch module software features.
- *Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter Command Reference*. This reference provides detailed descriptions of the Cisco IOS commands specifically created or modified for the switch module.
- *Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter System Message Guide*. This guide provides descriptions of the system messages specifically created or modified for the switch module.
- *Cisco Software Activation Document for IBM BladeCenter*. This document describes the supported feature sets, software licenses, and information about using software activation in mixed software switch stacks.
- *Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter Hardware Installation Guide*. This guide provides complete hardware descriptions and detailed installation procedures.
- *Regulatory Compliance and Safety Information for the Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter*. This guide contains agency approvals, compliance information, and translated warning statements.
- *Release Notes for the Cisco Catalyst Switch Module 3110G, 3110X, and 3012 for IBM BladeCenter*. The release notes include the system requirements, important notes, limitation, open and resolved caveats, and documentation updates.

9 Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New* in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>



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