

HP E-MSM720 Controllers Installation Guide

Abstract

This document describes how to install and initially configure the E-MSM720 Controllers. This document applies to the E-MSM720 Access Controller (J9693A) and the E-MSM720 Premium Mobility Controller (J9694A). These products are hereafter referred to as *controller*. See also the *MSM7xx Controllers Configuration Guide*.



© Copyright 2011 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Acknowledgments

Microsoft® is a U.S. registered trademarks of Microsoft Corporation.

Warranty

WARRANTY STATEMENT: See the warranty information sheet provided in the product box.

Contents

1	Identifying controller physical features.....	4
	Unpacking the controller.....	4
	Identifying front-panel features.....	4
	Resetting to factory defaults.....	6
	Using the console port.....	6
2	Installing the controller.....	7
	Installation procedures.....	8
	Installing optional accessories.....	15
3	Controller initial configuration.....	16
	Perform initial configuration.....	16
	Verify guest access (optional)	18
4	Support and other resources.....	23
	Online documentation.....	23
	Contacting HP.....	23
	HP websites.....	23
	Typographic conventions.....	23
A	Specifications.....	24
	Physical.....	24
	Electrical.....	24
	Environmental.....	24
	Acoustic.....	24
	Safety.....	24
	Emissions.....	24
	Immunity.....	24
	Ethernet.....	25
	Cabling and safety standards.....	25
	Cabling specifications.....	25
	Cabling distance specifications.....	26
B	Mode conditioning patch cord (fiber cables).....	27
	Installing the patch cord.....	27
C	Regulatory information.....	28
	FCC Class A Notice.....	28
	For Taiwan.....	28
	European Community Declaration of Conformity.....	29
D	Recycle statements.....	30
	Waste Electrical and Electronic Equipment (WEEE) statements.....	30

1 Identifying controller physical features

Unpacking the controller

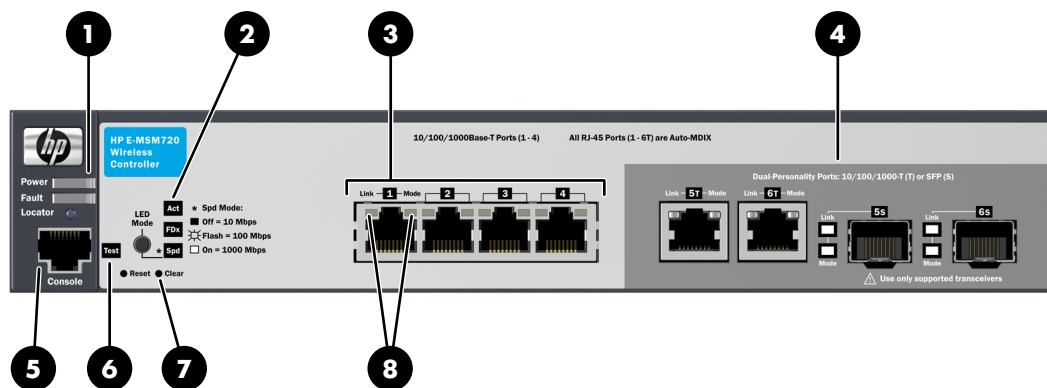
Unpack your controller and verify that you have received these items:

- Controller
- External AC/DC power adapter
- AC/DC power adapter power cord (for your region)
- Console port serial cable (DB-9 to RJ-45)
- Documentation including Safety and Regulatory information
- Software License, Warranty, and Support information
- Accessory kit comprised of:
 - Two wall-mount brackets
 - Two 19-inch rack-mount adapter brackets with four rack-mount screws
 - Eight bracket screws (used with both bracket types)
 - Four rubber feet (for tabletop installation)
 - Cable tie for power cord

Identifying front-panel features

It is important to be aware of the controller front panel features as they are referenced throughout this document.

Figure 1 Controller front-panel features



- | | |
|--|---|
| 1. Power, Fault, and Locator LEDs | 5. Console port |
| 2. LED Mode select button and Mode indicator LEDs | 6. Test LED |
| 3. Four 10/100/1000 ports | 7. Reset and Clear buttons |
| 4. Two dual-personality ports (RJ-45 or mini-GBIC) | 8. Port LEDs: Link (left), Mode (right) |

Network ports

- **Access network:** Four auto-sensing 10/100/1000Base-T ports. All these ports have the Auto-MDIX feature, which means that you can use either straight-through or crossover twisted-pair cables to connect any network devices to the controller.
- **Internet network:** Two dual-personality ports for either 10/100/1000Base-T RJ-45 (Auto-MDIX) uplinks, or optional mini-GBIC (SFP) slots for fiber uplinks.

LEDs

There are three groupings of LEDs on the controller:

- Status LEDs ([Table 1 \(page 5\)](#))
- Port LEDs ([Table 2 \(page 5\)](#))
- Port LED Mode indicator LEDs (near the Mode selector button) ([Table 3 \(page 6\)](#))

Table 1 Status LEDs

Status LEDs	State	Meaning
Power (green)	On	The controller is powered on.
	Off	No power connection. The controller is NOT receiving power.
Fault (orange)	On	The controller is beginning its boot sequence. Turns on for three seconds at power up or reset.
Locator (blue)	On	Lights briefly at power on. Otherwise not used.
Test (green/orange)	Off	The normal operational state; the controller is not undergoing self test.
	On (green)	Lights during power up self test and stays on until the controller is ready to receive traffic.

Port LEDs

The port LEDs provide information about the individual ports.

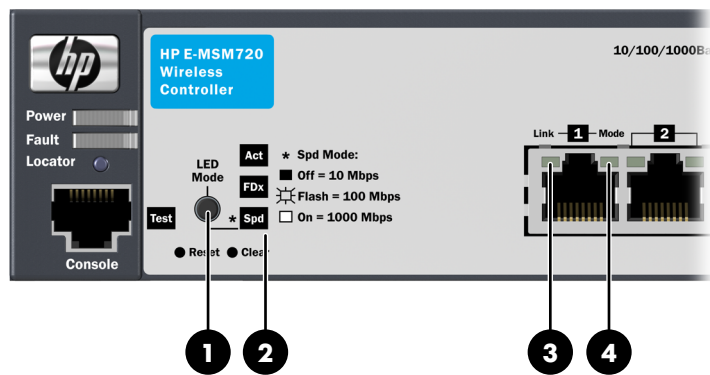
Table 2 Port LEDs

Status LEDs	State	Meaning
Port LEDs		
Link (green)	On	The port is enabled and receiving a link indication from the connected device.
	Off	One of these condition exists: <ul style="list-style-type: none">• No active network cable is connected to the port• The port is not receiving link beat or sufficient light• The port has been disabled through the controller console, the Web browser interface, HP Manager, or other network management tool
Mode (green)	Indicates Activity, Duplex, or Speed according to Mode selected. See “LED mode select button and indicator LEDs” (page 5) for details.	
Mini-GBIC LEDs		
Link	Blinking (green)	One of the following conditions exist: <ul style="list-style-type: none">• The mini-GBIC is not supported by the current software• The mini-GBIC is not a genuine HP Mini-GBIC and is not supported• The mini-GBIC is an “A” version in a controller that requires a “B” version or later
Link and Mode (green)	On for 2 seconds	Both the Link and Mode LED turn on solid for 2 seconds and then go to normal operation. This indicates the mini-GBIC has been recognized by the controller.

LED mode select button and indicator LEDs

The Port Mode LED shows Activity (Act LED on), Duplex (FDx LED on), or Speed (Spd LED on). Press the LED Mode Select button to sequence through the three modes.

Figure 2 LED mode select button and LEDs



1. LED Mode Select button
2. Mode Indicator LEDs (Act, FDx, Spd)
3. Port Link LED
4. Port Mode LED

Table 3 Port LED mode indicator LEDs

Mode	Meaning
Act	The Port Mode LED displays network activity.
FDx	The Port Mode LED is on when the port is in full-duplex mode.
Spd	The Port Mode LED indicates port speed. If the Port Mode LED is off, the port is operating at 10 Mbps. if the Port Mode LED is blinking, the port is operating at 100 Mbps. If the Port Mode LED is on continuously, the port is operating at 1000 Mbps.

Resetting to factory defaults

To reset the controller to its factory default configuration:

1. Using a paperclip, press and release the Reset button.
2. Immediately press and hold the Clear button until the LEDs above the Clear button blink three times, then release the Clear button.

Using the console port

The Console port is used to connect a console to the controller by using the supplied RJ-45 to DB9 cable. This is used for the CLI (Command Line Interface). See the *MSM7xx Controllers CLI Reference Guide*.

2 Installing the controller

WARNING!

- For indoor use only. The controller, AC power adapter, and all connected cables are not designed for outdoor use.
 - The HP mini-GBICs are Class 1 laser devices. Avoid direct eye exposure to the beam coming from the transmit port.
 - The rack or cabinet should be adequately secured to prevent it from becoming unstable and/or falling over.
 - Devices installed in a rack or cabinet should be mounted as low as possible, with the heaviest devices at the bottom and progressively lighter devices installed above.
 - Wall-mount the controller with network ports facing up (away from the floor). Do not wall-mount the controller with the network ports facing down (toward the floor) or ventilation ducts facing up or down.
 - LAN cables may occasionally be subject to hazardous transient voltages (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.
-

CAUTION:

- Use only the AC/DC power adapter supplied with the controller for connection to an AC power source.
 - Ensure the power source circuits are properly grounded, then use the power cord supplied with the controller to connect it to the power source.
 - Use only the AC/DC power adapter and power cord supplied with the controller. Use of other adapters or improper power cords, including those that came with other HP Networking products, may result in damage to the equipment.
 - If your installation requires a different power cord than the one supplied with the controller, ensure the cord is adequately sized for the controller's current requirements. In addition, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the controller. If the supplied power cord does not fit, contact HP Networking support.
 - When installing the controller, the AC outlet should be near the controller and should be easily accessible in case the controller must be powered off.
 - Do not install the controller in an environment where the operating ambient temperature might exceed 45°C (113°F). This includes a fully-enclosed rack. Ensure the air flow around the sides and back of the controller is not restricted.
 - Hot swapping transceivers is supported. You can install or remove a transceiver with the controller powered on, a reset will not occur. However, rapid hotswaps are not recommended. Wait a few seconds for the Mode LED to turn on (during initialization) and then turn off.
 - Use only supported genuine HP mini-GBICs with your controller. Non-HP mini-GBICs are not supported and their use may result in product malfunction. Should you require additional HP mini-GBICs, contact your HP Networking Sales and Service Office or authorized dealer.
-



CAUTION:

- Ensure all port covers are installed when the port is not in use.
- There are no user-serviceable parts inside these products. Any servicing, adjustment, maintenance, or repair must be performed only by service-trained personnel.
- These products do not have a power switch; they are powered on when the power cord is plugged in.

Installation procedures

These steps summarize your controller installation. The rest of this chapter provides details on these steps.

- [“Prepare the installation site” \(page 8\)](#). Make sure the physical environment into which you will be installing the controller is properly prepared, including having the correct network cabling ready to connect to the controller and having an appropriate location for the controller.
- [“Verify the controller passes self test” \(page 8\)](#). Plug the controller into a power source and observe that the LEDs on the controller front panel indicate correct controller operation.
- [“Mount the controller” \(page 10\)](#). The controller can be mounted in a 19-inch telco rack, in an equipment cabinet, on a wall, or on a horizontal surface.
- [“Connect the controller to a power source” \(page 12\)](#). Once the controller is mounted, plug it into the main power source.
- [“Connect the network cables” \(page 13\)](#). Using the appropriate network cables, connect the network devices to the controller ports.
- [“Installing or removing optional mini-GBICs” \(page 13\)](#). The controller has two slots for installing mini-GBICs. Depending on where you install the controller, it may be easier to install the mini-GBICs first.

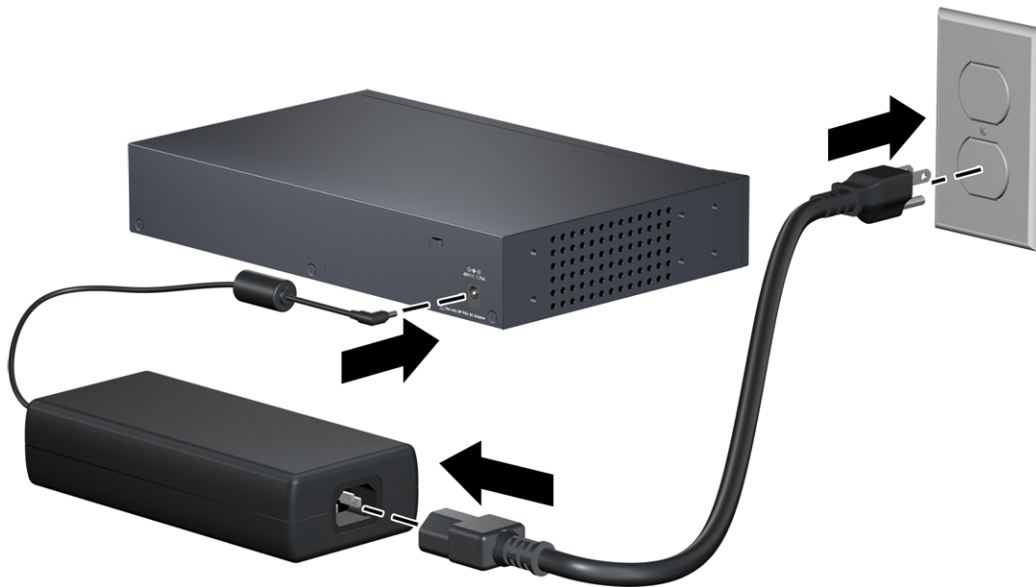
Prepare the installation site

- Ensure the cabling infrastructure meets the necessary network specifications.
- Before installing the controller, plan its location and orientation relative to other devices and equipment:
 - In front of the controller, leave at least 7.6 cm (3 inches) of space for the twisted-pair and fiber-optic cabling
 - Behind the controller, leave at least 3.8 cm (1 1/2 inches) of space for the power cord.
 - On each side of the controller, leave at least 7.6 cm (3 inches) for cooling.

Verify the controller passes self test

1. Before mounting the controller in its network location, verify that it passes its self test.
2. Connect the AC/DC adapter's power cord to the power connector on the back of the controller and then plug the AC/DC power adapter into a nearby properly grounded electrical outlet.

Figure 3 Connecting the power cord

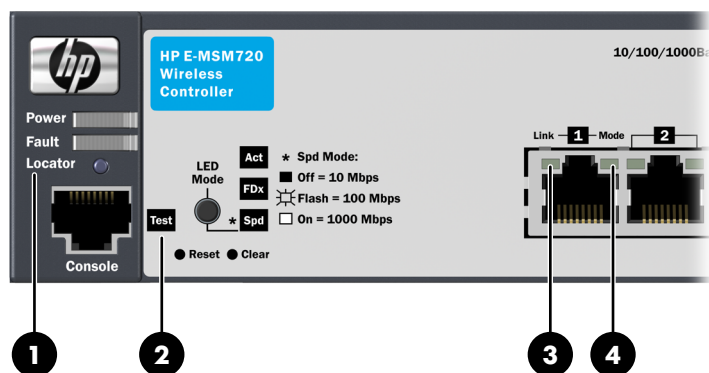


CAUTION: Use only the AC/DC power adapter and power cord supplied with the controller. Use of other adapters or power cords, including those that came with other HP Networking products, may result in damage to the equipment.

NOTE: The controller does not have a power switch. It is powered on when the external AC/DC power adapter is connected to the controller and the adapter power cord is connected to a power source. The external AC/DC power adapter automatically adjusts to any voltage between 100-240 volts and either 50 or 60 Hz. The E-MSM720 cannot be powered by Power over Ethernet (PoE).

Check the LEDs on the controller as described below.

Figure 4 LEDs



1. Power, Fault, and Locator LEDs
2. Test LED
3. Port LED: Link
4. Port LED: Mode

When the controller is powered on, it performs a self test.

LED behavior

During the self test:

- Initially, all the controller and port LEDs are on. Most of the LEDs turn off and then may turn on again during phases of the self test.
- For the duration of the self test, the Test LED stays on.

When the self test completes successfully:

- The Power LED remains on.
- The Fault, Locator and Test LEDs stay off.
- The Act LED remains on indicating the default port LED mode.
- The port LEDs on the front of the controller go into their normal operational mode:
 - If the ports are connected to active network devices, the Link LEDs stay on and the Mode LEDs behave according to the mode selected. In the default mode (Act), the Mode LEDs blink to indicate port activity.
 - If the ports are not connected to active network devices, the Link and Mode LEDs will stay off.

Mount the controller

After the controller passes self test, it is ready to be mounted in a stable location. The controller can be mounted in these ways:

- In a rack or cabinet
- On a horizontal surface
- On a wall

Rack or cabinet mounting

The controller is designed to be mounted in any EIA-standard 19-inch telco rack or communication equipment cabinet. The controller can also be mounted in a cabinet with the provided brackets.

Note that the mounting brackets have multiple mounting holes and can be rotated allowing for a wide variety of mounting options. Secure the rack in accordance with the manufacturer's safety guidelines.

NOTE: The 12-24 screws supplied with the controller are the correct threading for standard EIA/TIA open 19-inch racks. If installing the controller in an equipment cabinet such as a server cabinet, use the clips and screws that came with the cabinet in place of the 12-24 screws that are supplied with the controller.

NOTE: Optional accessories have to be mounted at the same time as the mounting brackets. See [“Installing optional accessories” \(page 15\)](#).

1. Use a #1 Phillips (cross-head) screwdriver and attach the mounting brackets to the controller with the included 8 mm M4 screws.

Figure 5 Attaching mounting brackets



⚠ WARNING! For safe reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the controller.

NOTE: The mounting brackets have multiple mounting holes and can be rotated allowing for a wide variety of mounting options. These include mounting the controller so that its front face is flush with the face of the rack, or mounting it in a more balanced position.

2. Hold the controller with attached brackets up to the rack and move it vertically until rack holes line up with the bracket holes, then insert and tighten the four number 12-24 screws holding the brackets to the rack.

Figure 6 Mounting in a rack



Wall mounting

⚠ WARNING! The network ports must be facing up. Do not mount the controller with ports facing down.

⚠ CAUTION: The controller should be mounted on a wall or wood surface that is at least 12.7 mm (1/2 inch) plywood or its equivalent.

1. Use a #1 Phillips (cross-head) screwdriver and attach the mounting brackets to the controller with the included 8 mm M4 screws.

2. Attach the controller to the wall or wood surface with two 15.9 mm (5/8 inch) number 12 wood screws (not included).

Figure 7 Wall mounting the controller



Using on a table

For table top use, attach the provided rubber feet to the four underside corners of the controller. To reduce risk of someone tripping on the cables, consider anchoring the cables to a table leg.

CAUTION: Ensure the air flow is not restricted around the sides and back of the controller.

Using a Kensington security cable

To prevent unauthorized removal of the controller, you can use a Kensington Slim MicroSaver security cable (not included) to attach the controller to an immovable object.

Figure 8 Using a security cable

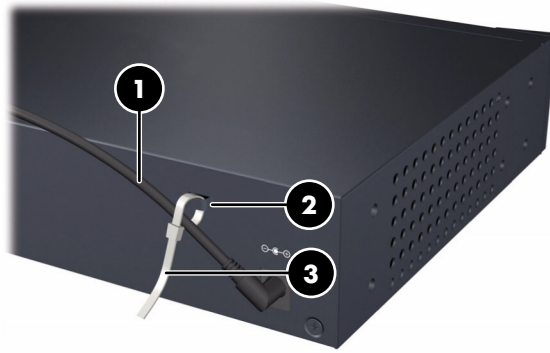


Connect the controller to a power source

1. Plug the AC/DC adapter's power cord into the controller and then plug the AC/DC power adapter into a nearby AC power source.
2. Re-check the LEDs during self test. See "LED behavior" (page 10).

3. Secure the power cord to the controller with the provided cable tie.

Figure 9 Securing the power cord to the controller



1. Power cable 2. Cable tie 3. Cable tie anchor

Connect the network cables

Connect the network cables from the network devices or patch panels to the controller.

Using the RJ-45 connectors

To connect:

Push the RJ-45 plug into the RJ-45 port until the tab on the plug clicks into place. The Link LED lights when the devices at either end of the cables are powered on.

To disconnect:

Press the small tab on the plug and pull the plug out of the port.

Installing or removing optional mini-GBICs

You can install or remove an optional mini-GBIC from a mini-GBIC slot without having to power off the controller. Use only HP mini-GBICs.

Mini-GBIC information

Dual-personality ports use either the 10/100/1000Base-T RJ-45 connector, or a supported HP mini-GBIC (Small Form Factor Pluggable (SFP)) for fiber-optic connection. By default, the RJ-45 connectors are enabled.

The optional mini-GBICs add support for these speeds and technologies:

Table 4 Optional network speeds and technologies

Speed	Technology	Cabling*
100 Mbps	100-FX	Fiber (multimode)
	100-BX	Fiber (single mode)
1 Gbps	1000-SX	Fiber (multimode)
	1000-LX	Fiber (multimode or single mode)
	1000-LH	Fiber (single mode)
	1000-BX	Fiber (single mode)

*See also "Cabling and safety standards" (page 25).

The controller supports these mini-GBICs:

- HP X112 100M SFP LC BX-D Transceiver J9099B
- HP X112 100M SFP LC BX-U Transceiver J9100B
- HP X111 100M SFP LC FX Transceiver J9054B
- HP X121 1G SFP LC SX Transceiver J4858C
- HP X121 1G SFP LC LX Transceiver J4859C
- HP X122 1G SFP LC BX-D Transceiver J9142B
- HP X122 1G SFP LC BX-U Transceiver J9143B
- HP X121 1G SFP LC LH Transceiver J4860C

⚠ CAUTION: Hot swapping of transceivers is supported. You can install or remove a transceiver with the controller powered on, a reset will not occur. However, rapid hotswaps are not recommended. Wait a few seconds for the Mode LED to turn on (during initialization) and then turn off.

CAUTION: Use only supported genuine HP mini-GBICs with your controller. Non-HP mini-GBICs are not supported and their use may result in product malfunction. Contact your HP Networking Sales and Service Office or authorized dealer for additional HP mini-GBICs.

NOTE:

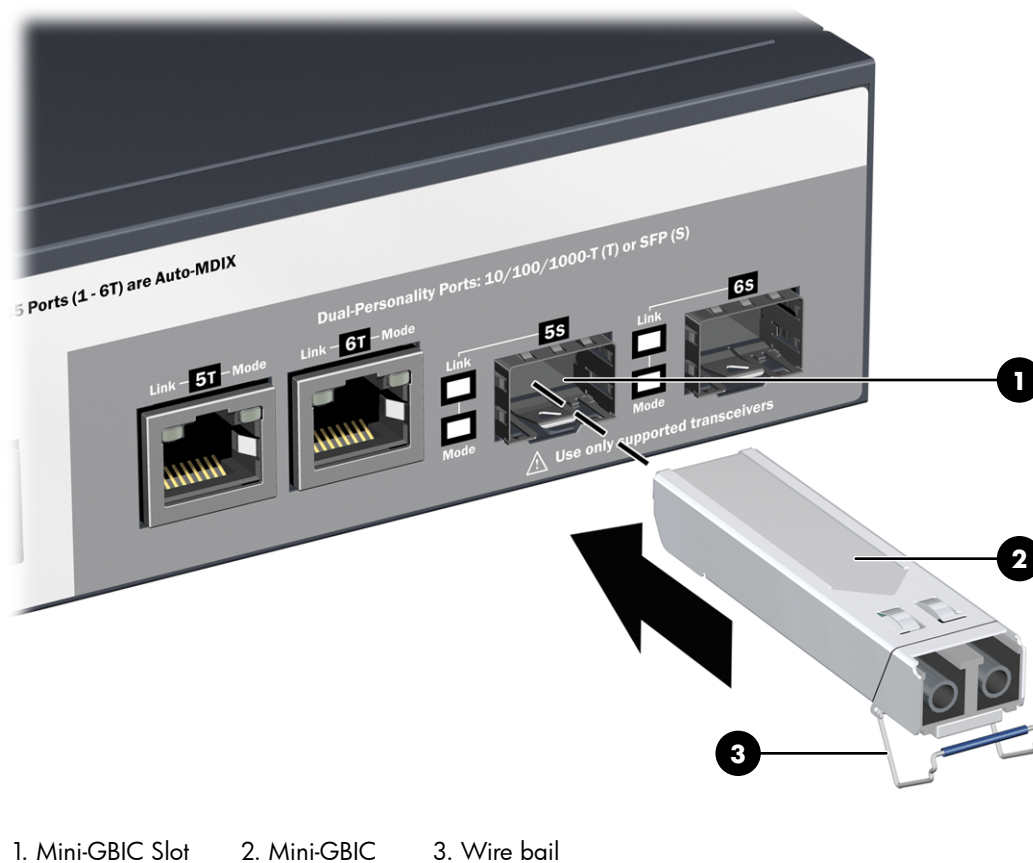
- The mini-GBIC slots are shared with 10/100/1000Base-T RJ-45 ports. When a mini-GBIC is installed in a slot, the associated RJ-45 port is disabled and cannot be used.
 - Ensure the fiber network cable is NOT connected when you install or remove a mini-GBIC.
-

Installing the mini-GBICs

Remove the protective plastic cover and retain it for later use. Hold the mini-GBIC by its sides and gently insert it into either of the slots on the controller until the mini-GBIC clicks into place.

⚠ WARNING! The HP mini-GBICs are Class 1 laser devices. Avoid direct eye exposure to the laser beam coming from the transmit port.

Figure 10 Installing a mini-GBIC



Removing the mini-GBICs

NOTE: You should disconnect the network cable from the mini-GBIC before removing it from the controller.

Depending on when you purchased your HP mini-GBIC, it may have one of three different release mechanisms: a plastic tab on the bottom of the mini-GBIC, a plastic collar around the mini-GBIC, or a wire bail.

To remove the mini-GBICs that have the plastic tab or plastic collar, push the tab or collar toward the controller until you see the mini-GBIC release from the controller (you can see it move outward slightly), and then pull it from the slot.

To remove the mini-GBICs that have the wire bail, lower the bail until it is approximately horizontal, and then using the bail, pull the mini-GBIC from the slot.

Replace the protective plastic cover on the mini-GBIC.

Installing optional accessories

Two optional controller accessories are available from HP.

HP X510 1U Cable Guard (J9700A): Mounts to the front of the controller to help stabilize and support the networking cables and provide extra security against tampering or theft.

HP X520 1U Power Adapter Shelf (J9701A): Holds the power supply adapter at the back of the controller.

Install these optional accessories according to the instructions provided with them. Accessory documentation is available online (search by product number).

3 Controller initial configuration

Perform initial configuration

NOTE: A factory-default controller is assumed. Ports 1 to 4 are available at 192.168.1.1.

NOTE: Do not connect power or network cables to the controller until directed to do so in this procedure. If cables are connected, temporarily disconnect them.

To initially configure the controller:

1. Configure your computer to use a static IP address in the range **192.168.1.2** to **192.168.1.254** and set the subnet mask to **255.255.255.0**. Set the default gateway to **192.168.1.1** and DNS server to **192.168.1.1**.
2. Connect network cables as follows:
 - a. Disconnect any cable from your computer Ethernet ports and disable any wireless connection.
 - b. Connect controller port 1 (ports 2 to 4 can also be used) (the Access network) to your computer Ethernet port.
 - c. Connect controller port 5T or 6T (or if enabled, port 5S or 6S) (the Internet network) to a network with Internet access or to the PC port of a DSL modem or equivalent.
3. Power on the controller and wait approximately 90 seconds until the Test LED turns off.
4. Perform initial login tasks:
 - a. Using Microsoft Internet Explorer 8+ or Mozilla Firefox 3+, open page: **https://192.168.1.1**.
 - b. A security certificate warning may be displayed the first time you connect to the management tool. This is normal. Select whatever option is needed in your Web browser to continue to the management tool.
 - c. On the Login page, enter **admin** for **Username** and **admin** for **Password** and then select **Login**.
 - d. On the HP End User License Agreement page, read the agreement and then select **Accept HP End User License Agreement**.
 - e. On the product registration page it is recommended that you register your product now by selecting **Register Now**. If the controller is not connected to the Internet or you prefer not to register now, select **Register Later**. Registration is available at any time by selecting **Maintenance > Registration**.
 - f. In some regions, a **Country** prompt appears. Choose the country in which this product will be used and select **Save**.

⚠ CAUTION: To maintain regulatory compliance, the country must be set accurately to the country in which the controller and any controlled access points (APs) will operate.

- g. At the Administrator password prompt it is recommended that you change the password. Select **Save** to save the new password or **Cancel** if you choose to keep the default password.

5. Follow the **Configure initial controller settings** workflow.

Automated workflows

These workflows help you quickly configure common controller settings. Changes are not saved to the controller until you click Apply on the workflow summary page.

Select a workflow and click Start to begin.

- Configure initial controller settings** (selected)
- Create a wireless network for employees
- Create a wireless network for guests

Description
This workflow helps you define basic operational settings for the controller, including network connections, security settings, and system time. It is recommended that you run this workflow before any other workflow.

Prerequisites
None

Home Start

- a. It is highly recommended that you follow the **Configure initial controller settings** workflow. This workflow is selected by default. Select **Start** to launch this workflow. If you choose not to run a workflow at this time, select the **Home** button to exit the workflow page.
- b. The **Configure initial controller settings** workflow provides instructions and prompts you for options. Read the instructions and respond to the prompts as desired, selecting **Next** to get to the next workflow page. Context-sensitive online help is also available for each page of the workflow.
- c. The last page in the workflow lists all configuration settings that will be applied. For example:

Configure initial controller settings
System attributes > Manager password > Management interfaces > Networking > Date and time > **Summary**

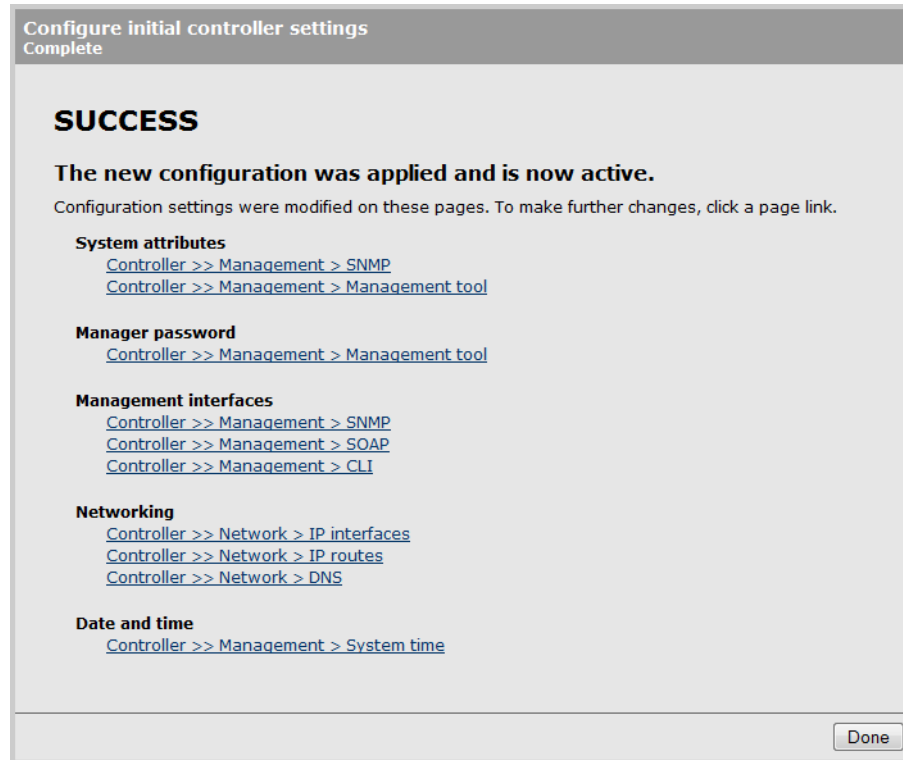
Summary of configuration changes.
The following configuration changes will be applied to the controller.

System attributes	
System name:	CN1ZF2D061
System location:	IT Closet 2
System contact:	IT Admin
Login message:	Authorized access only. This system is property of Corp. Contact it@corp.com for more information.
Manager password	
Change current password:	No
Management interfaces	
Simple Network Management Protocol (SNMP):	On
Simple Object Access Protocol (SOAP):	On
Remote CLI Access (SSH):	On
Networking	
Static Access network IP address	192.168.1.1/24
Internet network addressing method	Keep current configuration (DHCP client)
Date and time	
Date:	10/05/2011
Time:	19:25:00
Timezone:	GMT-05:00 Eastern US
Daylight savings adjustment:	On

Cancel Click **Apply** to save these settings or click **Cancel** to discard all settings. Back Apply

Review the settings before you select **Apply** to save and activate the new configuration on the controller. Alternatively, select **Back** to go to the previous workflow page or select **Cancel** to discard your workflow settings and exit the workflow.

- d. After applying your changes, a confirmation page appears showing the menu paths to each configuration page associated with the **Configure initial controller settings** workflow. For example:



- e. If desired, select a page link to make additional configuration changes and then select **Automated workflows** above the Network Tree to return to this page.
- f. Select **Done**.
- g. If desired, start one of these other workflows:
- **Create a wireless network for employees:** This workflow helps you create a new wireless network to provide wireless access for employees. It lets you define how employee traffic will be distributed onto your wired infrastructure and configure wireless security settings to safeguard network traffic.
 - **Create a wireless network for guests:** This workflow helps you create a new wireless network to provide wireless access for guests. It lets you define how guests will be authenticated (using a RADIUS server or the local user accounts feature on the controller) and how guests will receive an IP address.
- h. Select any menu to exit the workflow.

Verify guest access (optional)

Although optional it is recommended that you perform a simple verification of the guest access interface using a local guest account. This verification uses the **Create a wireless network for guests** workflow. Sample values are used. Substitute your own values if desired.

Configure basic guest access

1. To configure basic guest access, follow the **Create a wireless network for guests** workflow. Select **Start** to launch this workflow.

Automated workflows

These workflows help you quickly configure common controller settings. Changes are not saved to the controller until you click Apply on the workflow summary page.

Select a workflow and click Start to begin.

- Configure initial controller settings
- Create a wireless network for employees
- Create a wireless network for guests**

Description

This workflow helps you setup a new wireless network to provide wireless access for guest users.

Prerequisites

You should define and configure groups for your controlled APs.

Home Start

2. On the Create a new wireless network for guests page, in **Wireless network name (SSID)** enter **Guests**, then select **Next**.

Create a new wireless network for guests

Wireless network > Authentication > DHCP addressing > AP groups > Summary

Create a new wireless network for guests.

Wireless network name (SSID):

If you change the following settings they also apply to any other wireless networks that you have created for guest access.

Redirect guests to the Login page using: ☒ HTTP ☐ HTTPS

Support guests that use a proxy server: ☐ On ☒ Off

Cancel For help, click the ? in the top right corner. Back Next

3. On the Configure guest authentication page, select the **Use the user account feature on the controller** option, then set both **Username** and **Password** to **guest1**. Leave all other options at their defaults, then select **Next**.

Create a new wireless network for guests
Wireless network > Authentication > DHCP addressing > AP groups > Summary

Configure guest authentication.
Define how login credentials for guests will be validated.

☐ Create an open network
☒ Use the user accounts feature on the controller
 ☒ Create a common username and password to use with this network
 Username:
 Password:
☐ Create user accounts later
☐ Use a third-party RADIUS server:

Primary RADIUS server

Server address:

Secret:

Confirm secret:

Secondary RADIUS server (optional)

Server address:

Secret:

Confirm secret:

Cancel For help, click the ? in the top right corner. Back Next

4. On the Guest DHCP addressing page, select **DHCP server**.

a. Define the DHCP server **IP address** range:

- Set **Start address** to **192.168.1.1**
- Set **End address** to **192.168.1.254**
- Set **Netmask** to **255.255.255.0**

NOTE: The first address in the range is reserved for the controller gateway and DNS (192.168.1.1 in this example). The DHCP server assigns addresses to clients at Start address + 1, (192.168.1.2 in this example).

b. Select **Next**.

Create a new wireless network for guests
Wireless network > Authentication > DHCP addressing > AP groups > Summary

Guest DHCP addressing.

The controller will function as a: ☐ DHCP relay ☒ DHCP server

IP address

Start address:

End address:

Netmask:

Cancel For help, click the ? in the top right corner. Back Next

5. On the Apply guest access settings to your APs page, select **Next** to accept the defaults.

6. The last page in the workflow lists all configuration settings that will be applied.

Create a new wireless network for guests
Wireless network > Authentication > DHCP addressing > AP groups > **Summary**

Summary of configuration changes.
The following configuration changes will be applied to the controller.

Wireless network	
Wireless network name (SSID):	Guests
Redirect guests to the Login page using:	HTTP
Support guests that use a proxy server:	No
Authentication	
Use the user accounts feature on the controller:	Yes
Created a new user account named:	guest1
Addressing	
The controller will function as a:	DHCP server
Address pool starting address:	192.168.1.2
Address pool ending address:	192.168.1.254
Mask:	255.255.255.0
DNS name server address:	192.168.1.1
Gateway address:	192.168.1.1 (first address in range)
AP groups	
Default Group	

Cancel Click **Apply** to save these settings or click **Cancel** to discard all settings. Back Apply

Verify the settings and then select **Apply**.

- After applying your changes, a confirmation page appears showing the menu paths to each configuration page associated with the **Create a wireless network for guests** workflow. For example:

Create a new wireless network for guests
Complete

SUCCESS

The new configuration was applied and is now active.
Configuration settings were modified on these pages. To make further changes, click a page link.

Wireless network
Controller >> VSCs > Guests
Controller >> Public Access > Web content
Controller >> Public Access > Access control
Authentication
Controller >> VSCs > Guests
Controller >> Users > User accounts
Addressing
Controller >> VSCs > Guests
Controller >> Networking > Address allocation > DHCP server
AP groups
Controller >> Controlled APs > Default Group > VSC Bindings
Accounts
Controller >> Users > User accounts

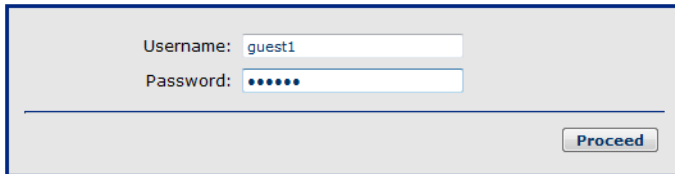
Done

- Select **Done**.

Perform the verification

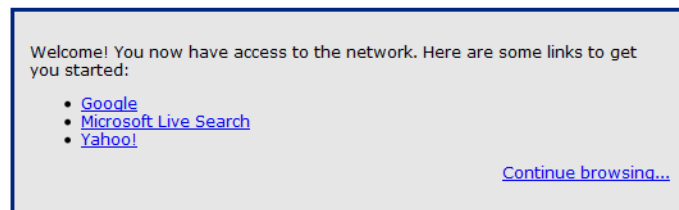
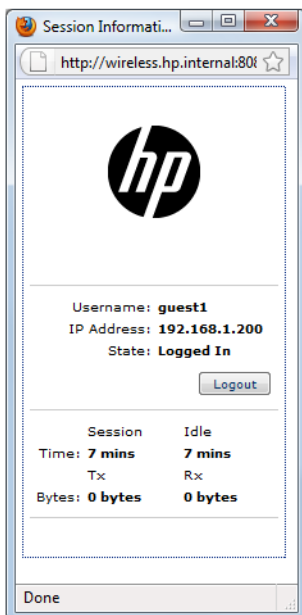
This test uses your existing wired connection to controller port 1 (or any of 2/3/4) to test the public access interface that is used for guest access. Controller port 5T (or any of 6T/5S/6S) must be connected to the Internet for this test to be successful.

1. Open your Web browser and enter the address of an Internet site, for example www.hp.com. The controller intercepts the URL and displays the public access interface Login page.
2. Enter the **Username** and **Password** for the test account you created earlier and then select **Proceed**.



A screenshot of a web browser showing a login page. It has two input fields: 'Username:' with 'guest1' entered, and 'Password:' with six dots. Below the fields is a 'Proceed' button.

Both the interface session page (shown on left) and the public access welcome page (shown on right) open.



3. Select **Continue browsing** to launch desired web page.
For additional configuration and operating information, see the *MSM7xx Controllers Configuration Guide*.

4 Support and other resources

Online documentation

You can download documentation from the HP Support Website at: www.hp.com/support/manuals. Search by product number or name.

Contacting HP

For worldwide technical support information, see the HP support Website: www.hp.com/networking/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

HP websites

For additional information, see the following HP Websites:

- www.hp.com/networking
- www.hp.com

Typographic conventions

Convention	Element
Blue text: "Controller initial configuration" (page 16)	Cross-reference links and e-mail addresses
Blue, underlined text: www.hp.com	Website addresses
Bold text	<ul style="list-style-type: none">• Keys that are pressed• Text typed into a GUI element, such as a box• GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes

 **WARNING!** Indicates that failure to follow directions could result in bodily harm or death.

 **CAUTION:** Indicates that failure to follow directions could result in damage to equipment or data.

 **IMPORTANT:** Provides clarifying information or specific instructions.

NOTE: Provides additional information.

A Specifications

Physical

Width	Depth	Height	Weight
25.4 cm (10 in)	16.5 cm (6.5 in)	4.4 cm (1.73 in)	0.91 kg (2.25 lbs)

Electrical

AC voltage	Maximum current	Frequency range
100-240 volts	.24A	50/60 Hz

Environmental

	Operating	Non-Operating
Temperature	5°C to 45°C (41°F to 113°F)	-40°C to 70°C (-40°F to 158°F)
Relative humidity (non-condensing)	15% to 95% at 40°C (104°F)	15% to 95% at 65°C (149°F)
Maximum altitude	3.0 Km (10,000 ft)*	4.57 Km (15,000 ft)
*The operating maximum altitude should not exceed that of any accessory being connected to a controller.		

Acoustic

Acoustic Power: 0 dB, Pressure: 0 dB

Safety

- CE Labeled and UL Listed.
- Complies with:
 - EN 60950-1:2001 + A11:2009
 - IEC 60950-1:2005
 - EN 60825-1:2007
 - cUL (CSA 22.2 No. 60950)
 - UL 60950-1 2nd Edition, 2007-03-27
 - CAN/CSA 22.2 No. 60950-1-07, 2nd Edition, 2007-03
 - AS/NZS 60950

Emissions

FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; AS/NZS CISPR 22; ICES-003

Immunity

- Generic: EN 55024, CISPR 24
- EN: EN 55024:1998 +A1:2001 +A2:2003
- ESD: IEC 61000-4-2
- Radiated: IEC 61000-4-3

- EFT/Burst: IEC 61000-4-4
- Surge: IEC 61000-4-5
- Conducted: IEC 61000-4-6
- Power frequency magnetic field: IEC 61000-4-8
- Voltage dips and interruptions: IEC 61000-4-11
- Harmonics: EN 61000-3-2, IEC 61000-3-2
- Flicker: EN 61000-3-3, IEC 61000-3-3

Ethernet

- Four RJ-45 auto-sensing 10/100/1000 (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only.
- Two dual-personality ports: each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or as a SFP slot (for use with SFP transceivers)
- IEEE 802.3ad Link Aggregation Protocol (LACP) supported on all ports

Cabling and safety standards

		Laser safety information	
Technology	Compatible with these IEEE standards	EN/IEC standard compliance	SFP ("mini-GBIC") Lasers
10-T	IEEE 802.3 10BASE-T	not applicable	not applicable
100-TX	IEEE 802.3u 100BASE-TX		
1000-T	IEEE 802.3ab 1000BASE-T		
100-FX	IEEE 802.3u 100BASE-FX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
100-BX	IEEE 802.3ah 100BASE-BX10	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000-SX	IEEE 802.3z 1000BASE-SX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000-LX	IEEE 802.3z 1000BASE-LX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000-BX	IEEE 802.3ah 1000BASE-BX10	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1

Cabling specifications

Twisted-pair copper	10 Mbps Operation	Category 3, 4 or 5, 100-ohm unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable, complying with IEEE 802.3 10BASE-T specifications.
	100 Mbps Operation	Category 5, 100-ohm UTP or STP cable, complying with IEEE 802.3u 100BASE-TX specifications.

	1000 Mbps Operation	Category 5, 100-ohm 4-pair UTP or STP cable, complying with IEEE 802.3ab 1000BASE-T specifications—Category 5e or better is recommended. See Note on 1000BASE-T Cable Requirements below.
Multimode fiber		2.5/125 mm or 50/125 mm (core/cladding) diameter, low metal content, graded index fiber-optic cables, complying with the ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a standards respectively.*
Single mode fiber		9/125 um (core/cladding) diameter, low metal content fiber-optic cables, complying with the ITU-T G.652 and ISO/IEC 793-2 Type B1 standards.
*A mode conditioning patch cord may be needed for some Gigabit-LX installations. See “Mode conditioning patch cord (fiber cables)” (page 27) for more information.		

NOTE: Note on 1000BASE-T Cable Requirements:

The Category 5 networking cables that work for 100BASE-TX connections should also work for 1000BASE-T, as long as all four-pairs are connected. But, for the most robust connections, you should use cabling that complies with the Category 5e specifications, as described in Addendum 5 to the TIA-568-A standard (ANSI/TIA/EIA-568-A-5). Because of the increased speed provided by 1000BASE-T (Gigabit-T), network cable quality is more important than for either 10BASE-T or 100BASE-TX. Cabling plants being used to carry 1000BASE-T networking must comply with the IEEE 802.3ab standards. In particular, the cabling must pass tests for Attenuation, Near-End Crosstalk (NEXT), and Far-End Crosstalk (FEXT). Additionally, unlike the cables for 100BASE-TX, the 1000BASE-T cables must pass tests for Equal-Level Far-End Crosstalk (ELFEXT) and Return Loss. When testing your cabling, be sure to include the patch cables that connect the controller and other end devices to the patch panels on your site. The patch cables are frequently overlooked when testing cable and they must also comply with the cabling standards.

Cabling distance specifications

Technology	Supported cable type	Multimode fiber modal bandwidth	Supported distances
100-FX	multimode fiber	any	up to 2,000 meters
100-BX	single mode fiber	N/A	0.5 - 10,000 meters
1000-T	twisted-pair copper	N/A	up to 100 meters
1000-SX	multimode fiber	160 MHz*km	2 - 220 meters
		200 MHz*km	2 - 275 meters
		400 MHz*km	2 - 500 meters
		500 MHz*km	2 - 550 meters
100-LX	multimode fiber	400 MHz*km	2 - 550 meters
		500 MHz*km	2 - 550 meters
	single mode fiber	N/A	2 - 10,000 meters
1000-LH	single mode fiber	N/A	10 - 70,000 meters*
1000-BX	single mode fiber	N/A	0.5 - 10,000 meters
*For distances less than 20km, a 10dB attenuator must be used. For distances between 20km and 40km, a 5dB attenuator must be used. Attenuators can be purchased from most cable vendors.			

B Mode conditioning patch cord (fiber cables)

The following information applies to installations in which multimode fiber-optic cables are connected to a Gigabit-LX port. Multimode cable has a design characteristic called “Differential Mode Delay” which requires the transmission signals be “conditioned” to compensate for the cable design and thus prevent resulting transmission errors.

Under certain circumstances, depending on the cable used and the lengths of the cable runs, an external Mode Conditioning Patch Cord may need to be installed between the Gigabit-LX and the multimode network cable to provide the transmission conditioning. If you experience a high number of transmission errors on those ports, usually CRC or FCS errors, you may need to install one of these patch cords between the fiber-optic port in your controller and your multimode fiber-optic network cabling, at both ends of the network link.

The patch cord consists of a short length of single mode fiber cable coupled to graded-index multimode fiber cable on the transmit side and only multimode cable on the receive side. The section of single mode fiber is connected in such a way that it minimizes the effects of the differential mode delay in the multimode cable.

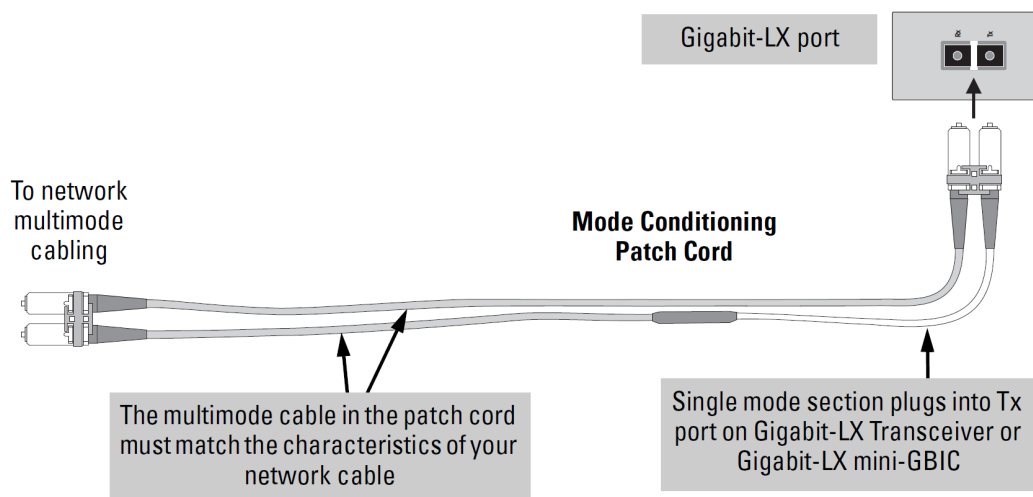
NOTE: Most of the time, if you are using good quality graded-index multimode fiber cable that adheres to the standards listed in Appendix B, there should not be a need to use mode conditioning patch cords in your network. This is especially true if the fiber runs in your network are relatively short.

Installing the patch cord

As shown in the illustration below, connect the patch cord to the HP transceiver with the section of single mode fiber plugged in to the Tx (transmit) port. Then, connect the other end of the patch cord to your network cabling patch panel, or directly to the network multimode fiber.

If you connect the patch cord directly to the network cabling, you may need to install a female-to-female adapter to allow the cables to be connected together.

Figure 11 Example: connecting a mode conditioning patch cord for Gigabit-LX



Make sure you purchase a patch cord that has appropriate connectors on each end and has multimode fibers that match the characteristics of the multimode fiber in your network. Most important, the core diameter of the multimode patch cord must match the core diameter of the multimode cable infrastructure (either 50 or 62.5 microns).

C Regulatory information

FCC Class A Notice

Operation is subject to the following two conditions: 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 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. Operation of this equipment in a residential area may cause interference in which case the user will be required to correct the interference at their own expense.

For Taiwan

Safety Information (Taiwan)

HP 網路產品使用安全指南

本安全指南含有網路設備安裝和維護過程中應遵守的重要說明。

使用須知

歡迎使用惠普網路產品，為了您及設備的安全，請您務必注意以下事項：

1. 請使用隨產品所附的電源適配器以及電源線，並使用標準的 110V 或 220V 電源。
2. 本設備為室內使用，避免高溫及塵埃過多的環境，否則易造成設備內部件損壞。
3. 避免接近高溫，避免接近直接熱源，如直射太陽光、暖氣等其他發熱體。
4. 不要讓異物或液體落入機內，以避免部件短路。
5. 不要將磁性物體置於設備附近。

警告

為避免火災或觸電危險，請不要將設備放置於淋雨或潮濕處。

安裝

安裝輔助管理模組，請參照安裝指南。

請勿變更或改裝本設備，可能會使保固失效。

European Community Declaration of Conformity



DECLARATION OF CONFORMITY

according to ISO/IEC 17050-1 and EN17050-1

Supplier's Name: Hewlett-Packard Company **DOC#:** MRLBB-1101_06142011

Supplier's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5502 U.S.A.

declares, that the product

Product Name²: HP E-MSM720 Access Controller (WW), HP E-MSM720 Premium Mobility Controller (WW), HP E-MSM720 TAA Access Controller, HP E-MSM720 TAA Premium Mobility Controller

Product Model(s): J9693A, J9694A, J9695A, J9696A

Regulatory Model Number¹: MRLBB-1101

Product Options: 0957-2361 - Power Adapter , J9697A, J9698A

conforms to the following Product Specifications and Regulations:

EMC: Class A

EN 55022:2006 +A1 :2007

EN 55024:1998 +A1:2001 +A2:2003

EN 61000-3-2:2006

EN 61000-3-3:1995 +A1:2001 +A2 :2005

FCC CFR47 Part 15 2008

Safety:

EN 60950-1:2006+A11:2009

IEC 60950-1:2005

EN 60825-1:2007

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.

The product herewith complies with the requirements of the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, and carries the CE-marking accordingly.

Additional Information:

- 1) This product is assigned a Regulatory Model Number which stays with the regulatory aspects of the design. The Regulatory Model Number is the main product identifier in the regulatory documentation and test reports. This number should not be confused with the marketing name or the product numbers.
- 2) This product was tested with HP branded products only.

Roseville, 14-June-2011


Michael E. Avery, Regulatory Eng. Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE, Herrenberger Straße 140, D-71034 Böblingen (FAX: + 49-7031-14-3143)

D Recycle statements

Waste Electrical and Electronic Equipment (WEEE) statements

English recycling notice

Disposal of waste equipment by users in private household in the European Union



This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service

Bulgarian recycling notice

Изхвърляне на отпадъчно оборудване от потребители в частни домакинства в Европейския съюз



Този символ върху продукта или опаковката му показва, че продуктът не трябва да се изхвърля заедно с другите битови отпадъци. Вместо това, трябва да предпазите човешкото здраве и околната среда, като предадете отпадъчното оборудване в предназначен за събирането му пункт за рециклиране на неизползваемо електрическо и електронно борудване. За допълнителна информация се свържете с фирмата по чистота, чиито услуги използвате.

Czech recycling notice

Likvidace zařízení v domácnostech v Evropské unii



Tento symbol znamená, že nesmíte tento produkt likvidovat spolu s jiným domovním odpadem. Místo toho byste měli chránit lidské zdraví a životní prostředí tím, že jej předáte na k tomu určené sběrné pracoviště, kde se zabývají recyklací elektrického a elektronického vybavení. Pro více informací kontaktujte společnost zabývající se sběrem a svozem domovního odpadu.

Danish recycling notice

Bortskaffelse af brugt udstyr hos brugere i private hjem i EU



Dette symbol betyder, at produktet ikke må bortskaffes sammen med andet husholdningsaffald. Du skal i stedet den menneskelige sundhed og miljøet ved at afl evere dit brugte udstyr på et dertil beregnet indsamlingssted for af brugt, elektrisk og elektronisk udstyr. Kontakt nærmeste renovationsafdeling for yderligere oplysninger.

Dutch recycling notice

Inzameling van afgedankte apparatuur van particuliere huishoudens in de Europese Unie



Dit symbool betekent dat het product niet mag worden gedeponeerd bij het overige huishoudelijke afval. Bescherm de gezondheid en het milieu door afgedankte apparatuur in te leveren bij een hiervoor bestemd inzamelpunt voor recycling van afgedankte elektrische en elektronische apparatuur. Neem voor meer informatie contact op met uw gemeentereinigingsdienst.

Estonian recycling notice

Äravisatavate seadmete likvideerimine Euroopa Liidu eramajapidamistes



See märk näitab, et seadet ei tohi visata olmeprügi hulka. Inimeste tervise ja keskkonna säästmise nimel tuleb äravisatav toode tuua elektriliste ja elektrooniliste seadmete käitlemisega egelevasse kogumispunkti. Küsimuste korral pöörduge kohaliku prügikäitlusettevõtte poole.

Finnish recycling notice

Kotitalousjätteiden hävittäminen Euroopan unionin alueella



Tämä symboli merkitsee, että laitetta ei saa hävittää muiden kotitalousjätteiden mukana. Sen sijaan sinun on suojattava ihmisten terveyttä ja ympäristöä toimittamalla käytöstä poistettu laite sähkö- tai elektroniikkajätteen kierrätyspisteeseen. Lisätietoja saat jätehuoltoyhtiöltä.

French recycling notice

Mise au rebut d'équipement par les utilisateurs privés dans l'Union Européenne



Ce symbole indique que vous ne devez pas jeter votre produit avec les ordures ménagères. Il est de votre responsabilité de protéger la santé et l'environnement et de vous débarrasser de votre équipement en le remettant à une déchetterie effectuant le recyclage des équipements électriques et électroniques. Pour de plus amples informations, prenez contact avec votre service d'élimination des ordures ménagères.

German recycling notice

Entsorgung von Altgeräten von Benutzern in privaten Haushalten in der EU



Dieses Symbol besagt, dass dieses Produkt nicht mit dem Haushaltsmüll entsorgt werden darf. Zum Schutze der Gesundheit und der Umwelt sollten Sie stattdessen Ihre Altgeräte zur Entsorgung einer dafür vorgesehenen Recyclingstelle für elektrische und elektronische Geräte übergeben. Weitere Informationen erhalten Sie von Ihrem Entsorgungsunternehmen für Hausmüll.

Greek recycling notice

Απόρριψη άχρηστου εξοπλισμού από ιδιώτες χρήστες στην Ευρωπαϊκή Ένωση



Αυτό το σύμβολο σημαίνει ότι δεν πρέπει να απορρίψετε το προϊόν με τα λοιπά οικιακά απορρίμματα. Αντίθετα, πρέπει να προστατέψετε την ανθρώπινη υγεία και το περιβάλλον παραδίδοντας τον άχρηστο εξοπλισμό σας σε εξουσιοδοτημένο σημείο συλλογής για την ανακύκλωση άχρηστου ηλεκτρικού και ηλεκτρονικού εξοπλισμού. Για περισσότερες πληροφορίες, επικοινωνήστε με την υπηρεσία απόρριψης απορριμμάτων της περιοχής σας.

Hungarian recycling notice

A hulladék anyagok megsemmisítése az Európai Unió háztartásaiban



Ez a szimbólum azt jelzi, hogy a készüléket nem szabad a háztartási hulladékkal együtt kidobni. Ehelyett a leselejtezett berendezéseknek az elektromos vagy elektronikus hulladék átvételére kijelölt helyen történő beszolgáltatásával megóvja az emberi egészséget és a környezetet. További információt a helyi köztisztasági vállalatától kaphat.

Italian recycling notice

Smaltimento di apparecchiature usate da parte di utenti privati nell'Unione Europea



Questo simbolo avvisa di non smaltire il prodotto con i normali rifiuti domestici. Rispettare la salute umana e l'ambiente conferendo l'apparecchiatura dismessa a un centro di raccolta designato per il riciclo di apparecchiature elettroniche ed elettriche. Per ulteriori informazioni, rivolgersi al servizio per lo smaltimento dei rifiuti domestici.

Latvian recycling notice

Europos Sąjungos namų ūkio vartotojų įrangos atliekų šalinimas



Šis simbolis nurodo, kad gaminio negalima išmesti kartu su kitomis buitinėmis atliekomis. Kad apsaugotumėte žmonių sveikatą ir aplinką, pasenusią nenaudojamą įrangą turite nuvežti į elektrinių ir elektroninių atliekų surinkimo punktą. Daugiau informacijos teiraukitės buitinės atliekų surinkimo tarnybos.

Lithuanian recycling notice

Nolietotu iekartu iznīcināšanas noteikumi lietotājiem Eiropas Savienības privātajās mājāsaimniecībās



Šis simbols norāda, ka ierīci nedrīkst izmantot kopā ar citiem mājāsaimniecības atkritumiem. Jums jā rūpējas par cilvēku veselības un vides aizsardzību, nododot lietoto aprīkojumu otrreizējai pārstrādei īpašā lietotu elektrisko un elektronisko ierīču savākšanas punktā. Lai iegūtu plašāku informāciju, lūdzu, sazinieties ar savu mājāsaimniecības atkritumu likvidēšanas dienestu.

Polish recycling notice

Utylizacja zużytego sprzętu przez użytkowników w prywatnych gospodarstwach domowych w krajach Unii Europejskiej



Ten symbol oznacza, że nie wolno wyrzucać produktu wraz z innymi domowymi odpadkami. Obowiązkiem użytkownika jest ochrona zdrowia ludzkiego i środowiska przez przekazanie zużytego sprzętu do wyznaczonego punktu zajmującego się recyklingiem odpadów powstających ze sprzętu elektrycznego i elektronicznego. Więcej informacji można uzyskać od lokalnej firmy zajmującej wywozem nieczystości.

Portuguese recycling notice

Descarte de equipamentos usados por utilizadores domésticos na União Europeia



Este símbolo indica que não deve descartar o seu produto juntamente com os outros lixos domésticos. Ao invés disso, deve proteger a saúde humana e o meio ambiente levando o seu equipamento para descarte em um ponto de recolha destinado à reciclagem de resíduos de equipamentos eléctricos e electrónicos. Para obter mais informações, contacte o seu serviço de tratamento de resíduos domésticos.

Romanian recycling notice

Casarea echipamentului uzat de către utilizatorii casnici din Uniunea Europeană



Acest simbol înseamnă să nu se arunce produsul cu alte deșeuri menajere. În schimb, trebuie să protejați sănătatea umană și mediul predând echipamentul uzat la un punct de colectare desemnat pentru reciclarea echipamentelor electrice și electronice uzate. Pentru informații suplimentare, vă rugăm să contactați serviciul de eliminare a deșeurilor menajere local.



Slovak recycling notice

Likvidácia vyradených zariadení používateľmi v domácnostiach v Európskej únii



Tento symbol znamená, že tento produkt sa nemá likvidovať s ostatným domovým odpadom. Namiesto toho by ste mali chrániť ľudské zdravie a životné prostredie odovzdaním odpadového zariadenia na zbernom mieste, ktoré je určené na recykláciu odpadových elektrických a elektronických zariadení. Ďalšie informácie získate od spoločnosti zaoberajúcej sa likvidáciou domového odpadu.



Spanish recycling notice

Eliminación de los equipos que ya no se utilizan en entornos domésticos de la Unión Europea



Este símbolo indica que este producto no debe eliminarse con los residuos domésticos. En lugar de ello, debe evitar causar daños a la salud de las personas y al medio ambiente llevando los equipos que no utilice a un punto de recogida designado para el reciclaje de equipos eléctricos y electrónicos que ya no se utilizan. Para obtener más información, póngase en contacto con el servicio de recogida de residuos domésticos.



Swedish recycling notice

Hantering av elektroniskt avfall för hemanvändare inom EU



Den här symbolen innebär att du inte ska kasta din produkt i hushållsavfallet. Värna i stället om natur och miljö genom att lämna in uttjänt utrustning på anvisad samlingsplats. Allt elektriskt och elektroniskt avfall går sedan vidare till återvinning. Kontakta ditt återvinningsföretag för mer information.

