

V1910-CMW520-R1512P10 Release Notes

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This document describes the features, restrictions and guidelines, open problems, and workarounds for version V1910-CMW520-R1512P10. Before you use this version in a live network, back up the configuration and test the version to avoid software upgrade affecting your live network.

Use this document in conjunction with V1910-CMW520-R1512P10 Release Notes (Software Feature Changes) and the documents listed in "[Related documentation](#)."

Version information

Version number

Comware software, Version 5.20, Release 1512P10

Note: You can see the version number with the command **summary** in any view. Please see **Note**①.

Version history

Table 1 Version history

Version number	Last version	Release date	Release type	Remarks
V1910-CMW520-R1512P10	V1910-CMW520-R1512P05	2012-08-24	Release version	Fixes bugs.
V1910-CMW520-R1512P05	V1910-CMW520-R1511	2012-07-12	Release version	Fixes bugs.
V1910-CMW520-R1511	V1910-CMW520-F1510	2012-5-25	Release version	Fixes bugs. adds features
V1910-CMW520-F1510	V1910-CMW520-R1112	2012-5-14	Feature version	Fixes bugs. adds features
V1910-CMW520-R1112	V1910-CMW520-R1111P01	2012-4-11	Release version	Fixes bugs.
V1910-CMW520-R1111P02	V1910-CMW520-R1111P01	2012-6-19	Release version	Fixes bugs.
V1910-CMW520-R1111P01	V1910-CMW520-R1111	2012-3-20	Release version	Fixes bugs.
V1910-CMW520-R1111	V1910-CMW520-R1109	2012-1-4	Release version	Fixes bugs.
V1910-CMW520-R1109	V1910-CMW520-R1108P01	2011-9-26	Release version	Fixes bugs. adds features
V1910-CMW520-R1108P01	V1910-CMW520-R1108	2011-8-17	Release version	Fixes bugs.
V1910-CMW520-R1108	None	2011-5-13	Release version	Fixes bugs.

Hardware and software compatibility matrix

Please note that prior to October 2011, these products were shipped under the 3Com Baseline Plus 2900 series brand. The table below shows the mapping between the 3Com 2900 models and HP 1910 switches. Please note that the products are identical except for the branding. HP recommends that customers upgrade to the latest version of software to avail of the new software branding.

Table 2 HP 1910 product family matrix

HP 1910	3Com 2900
1910-16G : JE005A	3Com Baseline Plus Switch 2920
1910-24G : JE006A	3Com Baseline Plus Switch 2928
1910-24G-PoE (365W) : JE007A	3Com Baseline Plus Switch 2928 HPWR
1910-24G-PoE (170W) : JE008A	3Com Baseline Plus Switch 2928 PWR
1910-48G : JE009A	3Com Baseline Plus Switch 2952
1910-8G : JG348A	---
1910-8G-PoE+ (65W) : JG349A	---
1910-8G-PoE+ (180W) : JG350A	---

CAUTION:

To avoid an upgrade failure, use [Table 4](#) to verify the hardware and software compatibility before performing an upgrade.

Table 3 Hardware and software compatibility matrix

Item	Specifications
Product family	HP 1910 Switch series
Hardware platform	HP1910-16G : JE005A
	HP 1910-24G : JE006A
	HP 1910-24G-PoE (365W) : JE007A
	HP 1910-24G-PoE (170W) : JE008A
	HP 1910-48G : JE009A
	HP 1910-8G : JG348A
	HP 1910-8G-PoE+ (65W) : JG349A
	HP 1910-8G-PoE+ (180W) : JG350A
Memory	128 MB
Flash	128 MB
Boot ROM version	Version 158 (Note: Perform the summary command in any view to view the version information. See Note②)
Host software	V1910-CMW520-R1512P10.bin

Item	Specifications
iMC version	iMC PLAT 5.1 SP1 (E0202P05) iMC QoS 5.1 (E0201) iMC UAM 5.1 SP1 (E0301P03)
iNode version	iNode PC 5.1 (E0304)
Remarks	None

```
<HP V1910 Switch>summary
```

```
Select menu option:      Summary
IP Method:              Manual
IP address:             192.168.1.22
Subnet mask:            255.255.255.0
Default gateway:
```

```
Current boot app is: flash:/V1910-CMW520-R1512P10.bin
Next main boot app is: flash:/v1910-cmw520-R1511.bin
Next backup boot app is: NULL
```

```
HP Comware Platform Software
Comware Software, Version 5.20 Release 1512P10,      ----- Note①
Copyright (c) 2004-2012 Hewlett-Packard Development Company, L.P.
HP V1910-48G Switch uptime is 0 week, 0 day, 0 hour, 33 minutes
```

```
HP V1910-48G Switch
128M      bytes DRAM
128M      bytes Nand Flash Memory
Config Register points to Nand Flash
```

```
Hardware Version is REV.B
CPLD Version is 002
Bootrom Version is 158      ----- Note②
[SubSlot 0] 48GE+4SFP Hardware Version is REV.B
```

Upgrading restrictions and guidelines

Release F1510 or later adopts a new password encryption algorithm. The password saved in the configuration file has been processed by the new algorithm. If you roll back the software from Release F1510 or later to a version before F1510, the password cannot be restored, and login will fail.

Hardware feature updates

V1910-CMW520-R1512P10

None

V1910-CMW520-R1512P05

None

V1910-CMW520-R1511

None

V1910-CMW520-F1510

Support new devices 1910-8G , 1910-8G-PoE+ (65W) and 1910-8G-PoE+ (180W)

V1910-CMW520-R1112

None

V1910-CMW520-R1111P02

None

V1910-CMW520-R1111P01

None

V1910-CMW520-R1111

None

V1910-CMW520-R1109

None

V1910-CMW520-R1108P01

None

V1910-CMW520-R1108

None

Software feature and command updates

For more information about the software feature and command update history, see V1910-CMW520-R1512P10 Release Notes (Software Feature Changes).

MIB updates

Table 4 MIB updates

Item	MIB file	Module	Description
V1910-CMW520-R1512P10			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1512P05			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1511			
New	None	None	None
Modified	None	None	None
V1910-CMW520-F1510			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1112			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1111P02			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1111P01			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1111			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1109			
New	None	None	None
Modified	None	None	None
V1910-CMW520-R1108P01			
New	None	None	None

Item	MIB file	Module	Description
Modified	None	None	None
V1910-CMW520-R1108			
New	None	None	None
Modified	None	None	None

Operation changes

Operation changes in CMW-R1512P10

None

Operation changes in CMW-R1512P05

None

Operation changes in CMW-R1511

None

Operation changes in CMW-F1510

None

Operation changes in CMW-R1112

None

Operation changes in CMW-R1111P02

None

Operation changes in CMW-R1111P01

After you downgrade a 1910 switch from Release R1111P01 or above to an earlier version than Release R1111P01, its SysOid changes to identify the switch as a 3COM 2900 device, but the change does not affect the use of the switch. For the HP 1910 and 3Com 2900 switch mapping, see "HP 1910 product family matrix."

Operation changes in CMW-R1111

None

Operation changes in CMW-R1109

1. Merge the ".xml" configuration into the ".cfg" configuration.
2. The Key can be auto-generated for the SSH service on the **Web->Network->Service** page.
3. The PKI certificate can be auto-generated for HTTPS service on the **Web->Network->Service** page.

Operation changes in CMW-R1108P01

None

Operation changes in CMW-R1108

None

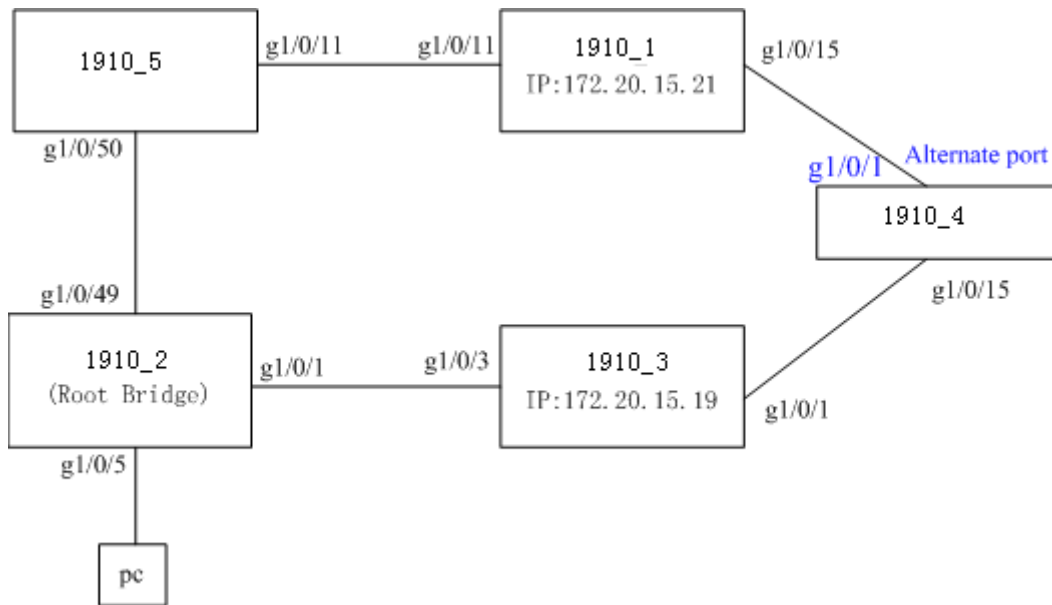
Restrictions and cautions

1. Do not power off the switch during a write operation, such as a save operation.
2. Displaying MAC addresses on a port does not show multicast MAC addresses.
3. Performing VCT check on an up port cannot detect the cable length.
4. The LED for a Gigabit SFP port blinks when the port is receiving packets, and is steady on when the port is sending packets.

Open problems and workarounds

LSD44945

- Symptom: In the following network diagram, a ping operation from the PC to 1910_1 experiences a 30-second interruption.
- Condition: This symptom might occur when the following conditions exist:
 - All 1910 switches and the PC are in the same subnet.
 - MSTP is configured to avoid loops and all 1910 switches belong to MSTP instance 0.
 - The port G1/0/49 of the root bridge 1910_2 is shut down.



- Workaround: Configure the **stp no-agreement-check** command on the root ports.

LSD070866

- Symptom: After the configuration file that contains the login password is saved and then the software is downgraded from the new version to a version earlier than F1510, a login attempt using the correct password fails.
- Condition: In this version of code, the password encryption within configuration files has been enhanced and cannot be interpreted by earlier revisions of the agent code. This means that if a unit is downgraded to earlier code, it may no longer be possible to login and manage the device.
- Workarounds:
 - Before upgrading to the new code, it is necessary to ensure password control is disabled. Execute the *"undo password-control enable"* and then save this configuration file as a backup in case you need to downgrade the software again. If it is later necessary to downgrade to earlier software, force the switch to use this backup configuration file by executing a *"startup saved-configuration (filename)"* command before rebooting to the old code. Then, after the code has been downgraded, the device can be logged in from the console or by Telnet, but not SSH. The SSH authentication details will need to be reset.
 - If no backup configuration has been saved but it is still possible to access the device management via some method while running the old code (e.g. Console, Telnet or SSH), then you can redefine all the device management passwords as required.
 - If after a downgrade it is impossible to login to the device via any method, then there are two ways to recover the switch:
 - From the BOOT menu, set the new code to run again and reboot the device. Disable Telnet authentication:


```
User-interface vty 0 4
Authentication mode none
```

 Then save the configuration and downgrade the code again, login via Telnet and reset all the passwords as required.
 - From the BOOT menu. On boot-up, use Ctrl+B to enter the Boot menu and then force the unit to use the factory default configuration (bypassing the user configuration). The unit will then need to be fully reconfigured.

LSD071592

- Symptom: When a GE copper port is connected to a device that uses a RealTek RTL8169 network chip, the port goes up and down twice, and then goes up.
- Condition: This symptom might occur when a GE copper port is connected to a device that uses a RealTek RTL8169 network chip.
- Workaround: None.

List of resolved problems

Resolved problems in CMW520-R1512P10

LSD072006

- Symptom: The IPv6 does not work.
- Condition: This symptom might occur after the switch is upgraded from a version earlier than F1510 to F1510 or later.

LSD070321

- Symptom: The switch runs out of memory when the configuration file is restored on the **Device > Configuration** Web page.
- Condition: This symptom might occur if a configuration file that is close to or exceeds the free Flash memory is restored on the **Device > Configuration** Web page.

LSD072080

- Symptom: The switch is vulnerable to HTTP session Hijack attacks.
- Condition: This symptom might be seen when HTTP session Hijack attacks exist.

Resolved problems in CMW520-R1512P05

LSD071395

- Symptom: When a GE copper port is connected to a device that uses the RTL8169 network chip of RealTek, the port repeatedly goes up and down.
- Condition: This symptom might occur when a GE copper port is connected to a device that uses the RTL8169 network chip of RealTek.

Resolved problems in CMW520-R1511

None

Resolved problems in CMW520-F1510

ZDD05100

- Symptom: The switch updates ARP entries for only 32 MAC addresses when a large number of MAC addresses are moved to different ports.
- Condition: This symptom might occur when a large number of MAC addresses are moved to different ports.

Resolved problems in CMW520-R1112

ZDD05003

- Symptom: The CLI does not respond.
- Condition: This symptom might occur when the switch is accessed through SNMPv3 using 3DES authentication.

ZDD04990

- Symptom: The switch might automatically close the HTTPS service (TCP port 443), and the web interface of the switch cannot be accessed through HTTPS (or SSH login fails).
- Condition: This symptom might occur if the following conditions exist:
 - HTTPS is enabled on the switch.
 - Use HTTPS to access the web interface of the switch.

ZDD04944

- Symptom: The switch reboots when it requests an IP address from a DHCP server.
- Condition: This symptom might occur if the following conditions exist:
 - The DHCP server assigns multiple DHCP options.
 - DHCP client debugging is enabled on the switch..

ZDD04931

- Symptom: The switch enabled with the DHCP server reboots when a PC accesses it through Web.
- Condition: This symptom might occur if the following conditions exist:
 - DHCP option 3 or 6 is configured as a string of 255 ASCII characters on the DHCP server.
 - A PC accesses the DHCP server through Web.

ZDD04865

- Symptom: The switch reboots when an SSH user logs in.
- Condition: This symptom might occur if the free memory space of the switch is insufficient.

ZDD04706

- Symptom: RADIUS authentication fails when the Vendor-Specific attribute sent by the RADIUS server is not in the standard TLV format.
- Condition: This symptom might occur when the Vendor-Specific attribute sent by the RADIUS server is not in the standard TLV format.

LSD69613

- Symptom: The device information on the **Summary > Device Information** web page does not show port states.
- Condition: None.

LSD69165

- Symptom: The GMT offset for Caracas is wrong on the **Device > System Time** time zone web page .
- Condition: None.

LSD47115

- Symptom: An error message might appear during an operation on the **PoE > PoE >Port Setup** web page.
- Condition: None.

Resolved problems in CMW520-R1111P02

LSD071600

- Symptom: A 1G port repeatedly goes up and down.
- Condition: This symptom might occur when a 1G port is connected to a device that uses an RealTek RTL8169 chip.

Resolved problems in CMW520-R1111P01

None

Resolved problems in CMW520-R1111

LSD65011

- Symptom: Garbled characters appear on the **Network > LLDP > Neighbor Summary** web page.
- Condition: This symptom exists in the **Network > LLDP > Neighbor Summary** Web page.

LSD64981

- Symptom: A newly configured gateway might not overwrite the previous one when the gateway is configured multiple times through the **Wizard** web page.
- Condition: This symptom might occur when the gateway is configured multiple times through the **Wizard** web page.

LSD47162

- Symptom: IMC might not display an error message when QoS application on IMC fails.
- Condition: This symptom might occur when QoS application on IMC fails.

LSD50868

- Symptom: The **Network > IGMP Snooping** Web page is not easy to use due to lack of operation help information.

- Condition: This symptom exists in the **Network > IGMP Snooping** Web page.

LS050752

- Symptom: 10K-long packets cannot be forwarded between two ports on a V1910-48G switch.
- Condition: This symptom might occur when the port number of one port is between 1 and 24 and that of the other is between 25 and 48.

LS064667

- Symptom: The CLI of the switch might not respond after an NMS running SNMPTest connects to the switch as an SNMPv3 user using the SHA-3DES encryption algorithm.
- Condition: This symptom might occur when the SNMPv3 user account uses the SHA-3DES encryption algorithm and the NMS runs SNMPTest to connect to the switch.

ZD04517

- Symptom: A DISMAN-PING-MIB::pingResultsOperStatus access failure occurs and the switch cannot recover from the failure and reboots occasionally.
- Condition: This symptom might occur when NQA operations continuously and quickly get or set the RPINGMib.

ZD04543

- Symptom: The switch running LLDP reboots when the **display lldp neighbor-information** command is executed.
- Condition: This symptom might occur if the **display lldp neighbor-information** command is executed after the switch receives an LLDP packet in which the LCI length in the location ID TLV is 0.

ZD04556

- Symptom: The switch running LLDP reboots when the **display lldp neighbor-information** command is executed.
- Condition: This symptom might occur if the **display lldp neighbor-information** command is executed after the switch receives an LLDP packet that has an organization-unknown TLV larger than 500 bytes.

ZD04569

- Symptom: The switch reboots when receiving large amounts of traffic.
- Condition: This symptom might occur when the **debugging vty negotiate** command is enabled.

ZD04596

- Symptom: The switch might reboot when it has large amounts of FTP traffic to process.
- Condition: None.

LS067635

- Symptom: Walking MIB node entPhysicalHardwareRev.15 returns an incorrect value.
- Condition: This symptom might occur during a walk on MIB node entPhysicalHardwareRev.15.

Resolved problems in CMW520-R1109

LSD63498

- Symptom: The gateway IP address could not be set in the web wizard.
- Condition: This symptom exists in the Web wizard.

LSD63499

- Symptom: The SSH service and HTTPS service are automatically enabled when the switch starts up (see the **Web > Network > Service** page), making key or PKI certificate key unable to be generated automatically.
- Condition: None.

LSD61667

- Symptom: The file list on the web page might contain an ".XML" file.
- Condition: None.

ZDD04165

- Symptom: The value of the Chassis ID field in the LLDP log information is garbled characters.
- Condition: This symptom might occur when the switch is connected to a Cisco IP phone and LLDP is enabled.

ZDD04178

- Symptom: The source MAC-based ARP attack detection function could not detect and protect the switch against ARP attacks from fixed MAC addresses. and might affect the normal ARP learning function.
- Condition: This symptom might occur when the attack sources reside on a different network segment than the interface.

ZDD04254

- Symptom: The FTP data session could not be established.
- Condition: This symptom might occur when the switch is used as the FTP client and the prompt of the FTP server is not that given in the RFC document.

Resolved problems in CMW520-R1108P01

LSD63812

- Symptom: The SFP ports are always down at the Link layer or the port statistics show the number of erroneous input packets constantly increase.
- Condition: This symptom might occur when the settings for the speed and duplex working mode parameters are both auto-negotiation.

Resolved problems in CMW520-R1108

- This is the first release version.

Related documentation

Documentation set

- *Read This First (5998-1520) 6P101*
- *HP Small Biz Feedback (5998-2984)-6P100*
- *HP 1910-8G Switch Series Compliance and Safety Manual-5PW101*
- *HP V1910 Switch Series Compliance and Safety Manual-5PW100*
- *HP 1910 Switch Series Getting Started Guide-6W101*
- *HP 1910 Switch Series User Guide-Release 1511-6W100*

Obtaining documentation

To find related documents, browse to the Manuals page of the HP Business Support Center website:

<http://www.hp.com/support/manuals>

Contacting HP

For worldwide technical support information, see the HP support website:

<http://www.hp.com/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

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

<http://www.hp.com/go/wwalerts>

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Appendix A Feature list

Hardware features

Table 5 1910 series hardware features

Item	Description
Physical dimensions (H × W × D)	43.6 × 440 × 160 mm (1.72 × 17.32 × 6.30 in.) (1910-16G)
	43.6 × 440 × 160 mm (1.72 × 17.32 × 6.30 in.) (1910-24G)
	43.6 × 440 × 260 mm (1.72 × 17.32 × 10.24 in.) (1910-48G)
	43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in.) (1910-24G-PoE (170W))
	43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in.) (1910-24G-PoE (365W))
	43.6 × 210 × 210 mm (1.72 × 8.27 × 8.27 in.) (1910-8G)
	43.6 × 300 × 260 mm (1.72 × 11.81 × 10.24 in.) (1910-8G-PoE+ (65W))
Weight	43.6 × 300 × 260 mm (1.72 × 11.81 × 10.24 in.) (1910-8G-PoE+ (180W))
	≤ 3 kg (6.61 lb) (1910-16G)
	≤ 3 kg (6.61 lb) (1910-24G)
	≤ 5 kg (11.02 lb) (1910-48G)
	≤ 6 kg (13.22 lb) (1910-24G-PoE (170W))
	≤ 7 kg (15.43 lb) (1910-24G-PoE (365W))
	≤ 2 kg (4.406 lb) (1910-8G)
Service ports	≤ 3 kg (6.61 lb) (1910-8G-PoE+ (65W))
	≤ 3 kg (6.01 lb) (1910-8G-PoE+ (180W))
Console port	1
Service ports	16 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces (1910-16G)
	24 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces (1910-24G)
	48 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces (1910-48G)
	24 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces (1910-24G-PoE (170W))
	24 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces (1910-24G-PoE (365W))
	8 × 10/100/1000Base-T autosensing Ethernet ports + 1 GE SFP interfaces (1910-8G)
	8 × 10/100/1000Base-T autosensing Ethernet ports + 1 GE SFP interfaces (1910-8G-PoE+ (65W))
Service ports	8 × 10/100/1000Base-T autosensing Ethernet ports + 1 GE SFP interfaces (1910-8G-PoE+ (180W))

Input voltage	AC: Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz Maximum voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz DC: Use the external RPS unit provided by HP only, with the rated voltage ranging from –52 VDC to –55 VDC Only 1910-24G-PoE (365W) supports RPS DC input
Power consumption (full configuration)	25.1 W (1910-16G) 31.5 W (1910-24G) 59.8 W (1910-48G) 255 W (85 W for system power consumption and 170 W for PoE power consumption) (1910-24G-PoE (170W)) AC power input: 528 W (158 W for system power consumption and 370 W for PoE power consumption) (1910-24G-PoE (365W)) DC power input: 832 W (92 W for system power consumption and 740 W for PoE power consumption) (1910-24G-PoE (365W)) 14.4 W (1910-8G) 95W (1910-8G-PoE+ (65W)) 230W (1910-8G-PoE+ (180W))
Operating temperature	0°C to 45°C (32°F to 113°F)
Operating humidity (noncondensing)	10% to 90%

Software features

Table 6 Software features of the V1910 series

Category	Features
Link aggregation	Dynamic aggregation of Gigabit Ethernet (GE) ports Dynamic link aggregation through Link Aggregation Control Protocol (LACP) Manual link aggregation Supports up to (total number of ports/2) link aggregation groups, each supporting up to eight GEs
Flow control	IEEE 802.3x flow control and back pressure
Jumbo Frame	Maximum frame size of 10 KB
MAC address table	8K MAC addresses 1K static MAC addresses Blackhole MAC addresses MAC address learning limit on a port

Category	Features
VLAN	Port-based VLANs (256 VLANs) Voice VLAN
ARP	256 entries 64 static entries
VLAN virtual interface	8
IP Unicast route	Support IPv4 / IPv6 static route
Multicast	IGMP Snooping MLD Snooping
DHCP	DHCP client DHCP snooping DHCP relay agent
Broadcast/multicast/unicast storm control	Storm control based on port rate percentage PPS-based storm control bps-based storm control
MSTP	STP/RSTP/MSTP protocol Up to four spanning tree instances STP root protection BPDU protection
QoS/ACL	802.1p/DSCP precedence marking Four queues per port SP, WRR, and SP+WRR queue scheduling algorithms Port-based rate limit, with a minimum granularity of 64-kbps Flow-based traffic redirecting Time ranges Support IPv6 ACL
Mirroring	Port mirroring
Security features	Hierarchical management and password protection of users AAA authentication RADIUS authentication Port isolation 802.1X Portal
802.1X	Up to 1024 users Port-based and MAC address-based authentication Guest VLAN
Loading and upgrade	Loading and upgrade through XModem protocol Loading and upgrade through trivial file transfer protocol (TFTP)
Management	Simple Network Management Protocol (SNMP) Remote Monitoring (RMON) alarm, event and history recording

Category	Features
	DM NMS Web NMS System log Hierarchical alarms Stacking management NTP Power, fan, and temperature alarms pingv6 tracertv6
Maintenance	Debugging information output ping and tracert Virtual cable test

Appendix B Upgrading software

You can access the Boot menu or CLI to download system software and Boot ROM images to Flash memory by using XMODEM, TFTP, or FTP.

Table 7 Approaches to loading software on the switch

Approach	Section
Upgrading at the Boot menu	XMODEM download through the console port
	TFTP download through an Ethernet port
	FTP download through an Ethernet port
Upgrading at the CLI	Upgrading at the CLI

The system software and Boot ROM images for the HP V1910 Switch Series are packaged in a .bin file. You can download this file to upgrade both Boot ROM and system software, or upgrade only Boot ROM.

The Boot ROM image in the .bin package file comprises a basic section and an extended section. The basic section is the minimum boot image. The extended section enables the Boot ROM to bootstrap the system and upgrade system software.

! IMPORTANT:

When upgrading Boot ROM, upgrade both sections to ensure the functionality of the entire system.

Upgrading at the Boot menu

Accessing the Boot menu

Power on the switch (for example, an HP 1910-16G Switch), and you can see the following information:

Starting.....

```
*****
*
*
*           HP V1910-16G Switch BOOTROM, Version 154
*
*
*****
```

Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.

Creation Date : Mar 19 2012

CPU L1 Cache : 32KB

CPU Clock Speed : 333MHz
Memory Size : 128MB
Flash Size : 128MB
CPLD Version : 002
PCB Version : Ver.B
Mac Address : 00E0FC003620

Press Ctrl-B to enter Extended Boot menu...0

When "Press Ctrl-B to enter Extended Boot menu" appears, press **Ctrl + B** within five seconds.

Please input BootRom password:

NOTE:

- The system by default starts up in normal (full) mode, and you must press **Ctrl + B** within five seconds to enter the Boot menu. In fast startup mode, you must press **Ctrl + B** within one second to enter the Boot menu.
 - If you fail to press **Ctrl + B** within the time limit, the system starts decompressing files, and you must restart the switch to access the Boot menu.
-

At the prompt, enter the Boot ROM password (no password is required by default) to access the Boot menu:

BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify BootRom password
6. Enter BootRom upgrade menu
7. Skip current system configuration
8. Set BootRom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):

Table 8 Boot menu options

Item	Description
1. Download application file to flash	Download a .bin software package file to Flash memory. You can choose this option to upgrade both system software and Boot ROM.
2. Select application file to boot	Select the software package file to boot.
3. Display all files in flash	Display all files in Flash memory.
4. Delete file from flash	Delete files from Flash memory.

Item	Description
5. Modify BootRom password	Modify the Boot ROM password.
6. Enter BootRom upgrade menu	Access the Boot ROM update menu. You can choose this option to separately upgrade Boot ROM.
7. Skip current system configuration	Start the switch with the default empty configuration. This is a one-time operation and does not take effect at the next reboot. You use this option when you forget the console login password.
8. Set BootRom password recovery	Disable or enable the Boot ROM password recovery function. By default, Boot ROM recovery is enabled. You can disable this function to protect system security.
9. Set switch startup mode	Set the switch in normal (full) or fast startup mode. The system by default starts up in normal (full) mode, and you must press Ctrl + B within five seconds to enter the Boot menu. In fast startup mode, you must press Ctrl + B within one second to enter the Boot menu.
0. Reboot	Restart the switch.

NOTE:

The procedure of upgrading Boot ROM is the same as upgrading system software. This guide takes upgrading Boot ROM as an example.

XMODEM download through the console port

You can connect a PC or terminal to the console port to download files to the switch by using XMODEM. XMODEM supports 128-byte data packets and provides the reliability mechanisms including checksum, CRC, and retransmissions (up to 10).

Setting terminal parameters

Run a terminal emulator program on the console terminal, for example, a PC.

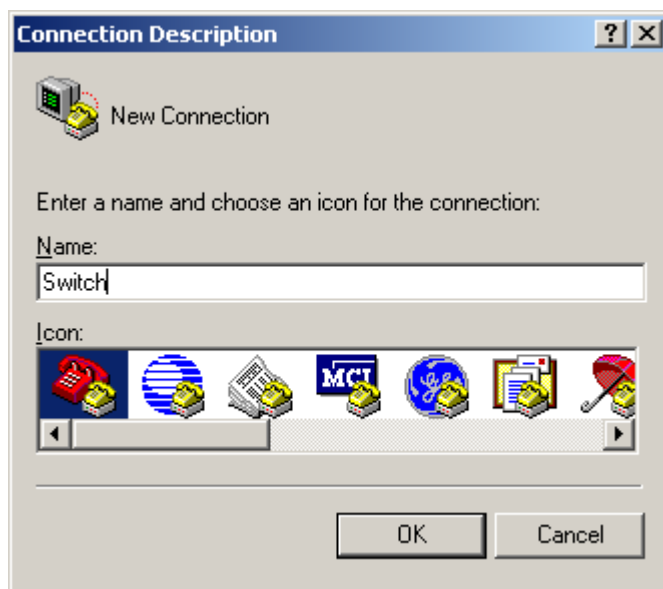
The following are the required terminal settings:

- Bits per second—38,400
- Data bits—8
- Parity—None
- Stop bits—1
- Flow control—None
- Emulation—VT100

Follow these steps to set terminal parameters, for example, on a Windows XP HyperTerminal:

- Step1** Select **Start > All Programs > Accessories > Communications > HyperTerminal**, and in the **Connection Description** dialog box that appears, type the name of the new connection in the **Name** text box and click **OK**.

Figure 1 Connection description of the HyperTerminal



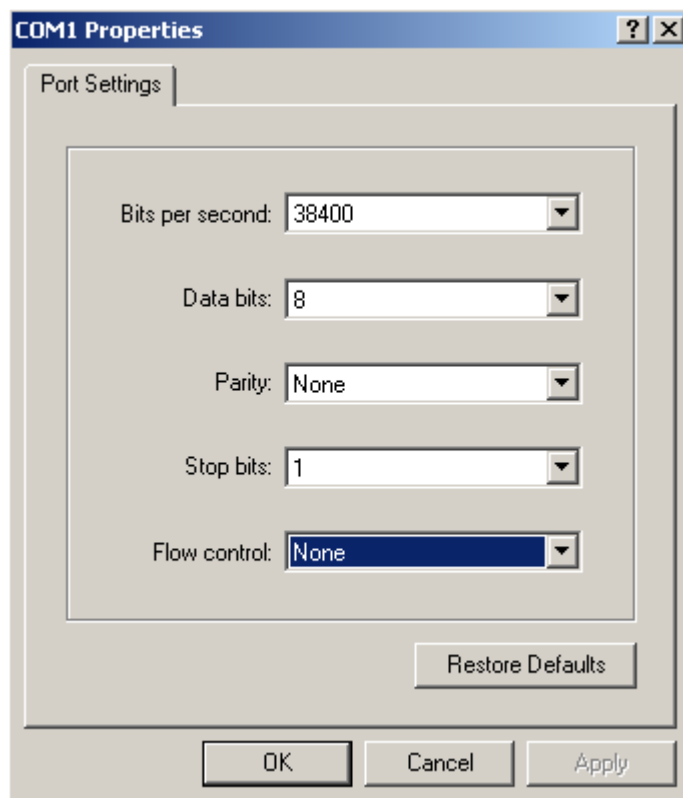
Step2 Select the serial port to be used from the **Connect using** drop-down list, and click **OK**.

Figure 2 Set the serial port used by the HyperTerminal connection



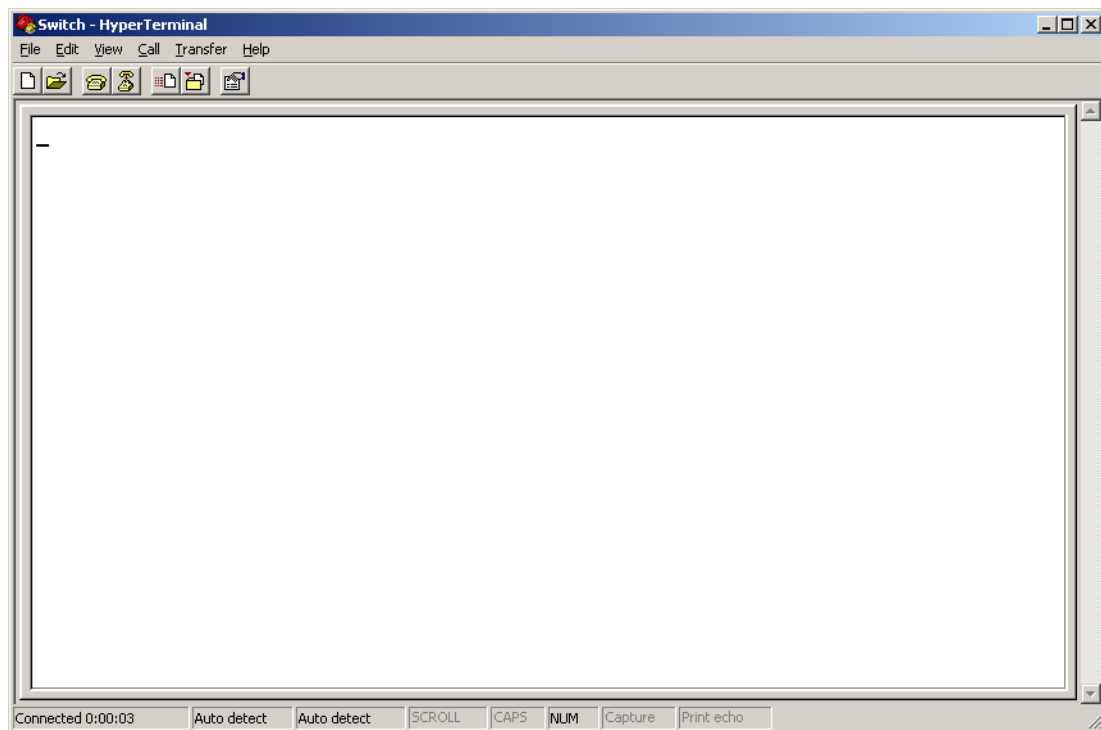
Step3 Set **Bits per second** to **38400**, **Data bits** to **8**, **Parity** to **None**, **Stop bits** to **1**, and **Flow control** to **None**, and click **OK**.

Figure 3 Set the serial port parameters



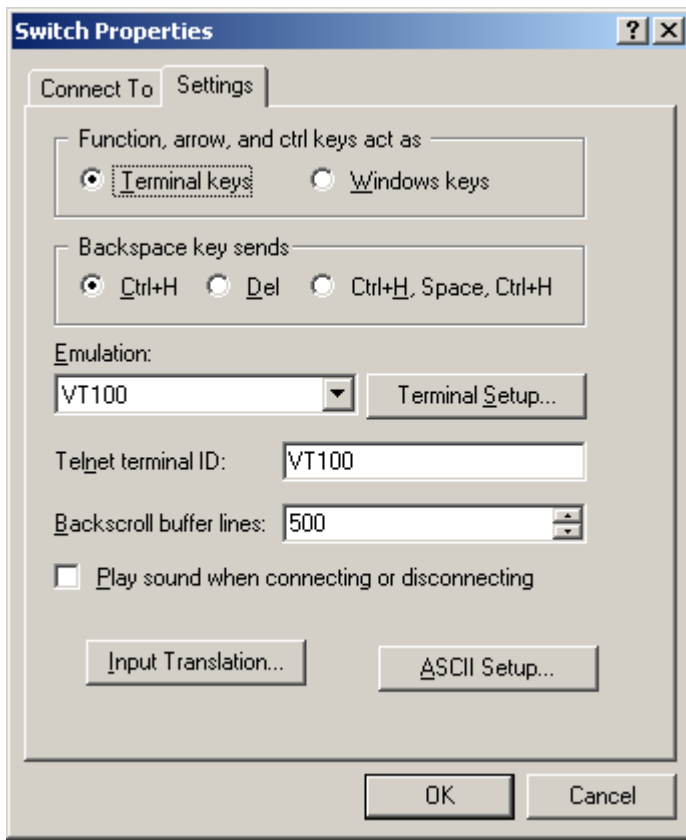
Step4 Select **File > Properties** in the HyperTerminal window.

Figure 4 HyperTerminal window



Step5 Click the **Settings** tab, set the emulation to **VT100**, and click **OK** in the **Switch Properties** dialog box.

Figure 5 Set terminal emulation in Switch Properties dialog box



Upgrading Boot ROM

Perform the following tasks to upgrade Boot ROM by using XMODEM through the console port:

1. Access the Boot menu, and enter **6** or press **Ctrl + U** to enter the Boot ROM update menu:

1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu

Enter your choice(0-3):

! IMPORTANT:

Always select option **1** to upgrade the entire Boot ROM. You can use option **2** or option **3** only under the guidance of an HP engineer.

2. Enter **1** at the Boot ROM update menu to set the protocol parameters.

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

Enter your choice(0-3):

3. Enter **3** to set the XMODEM download baud rate.

Please select your download baudrate:

1. 9600
2. 19200
3. *38400
4. 57600
5. 115200
0. Return

Enter your choice (0-5):

4. Select an appropriate download rate, for example, enter **5** to select 115200 bps.

Download baudrate is 115200 bps

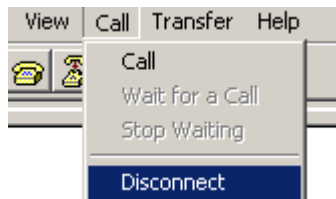
Please change the terminal's baudrate to 115200 bps and select XMODEM protocol

Press enter key when ready

5. Set the serial port on the terminal to use the same baud rate and protocol as the console port. If you select 38400 bps as the download rate for the console port, skip this task.

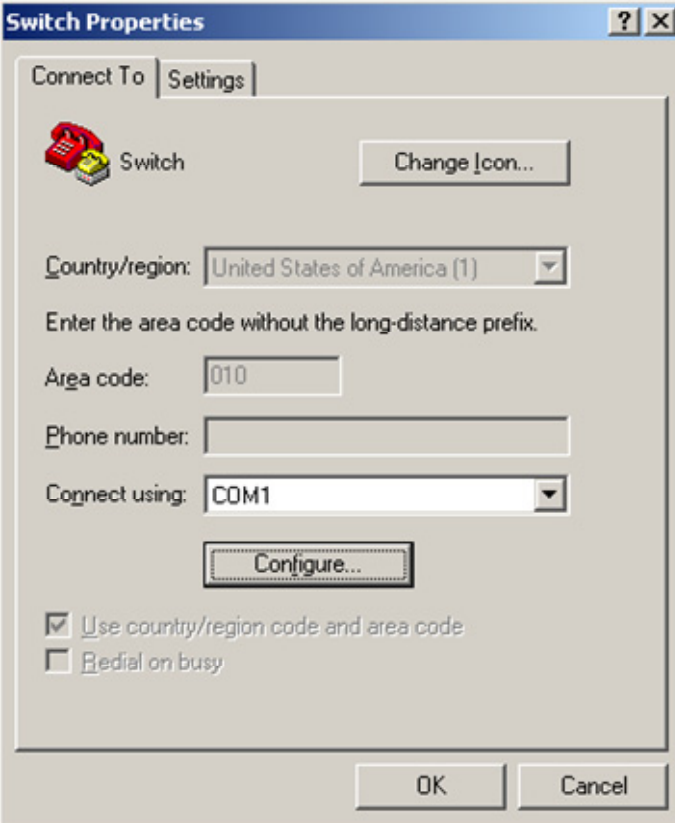
Step1 Select **Call > Disconnect** in the HyperTerminal window to disconnect the terminal from the switch.

Figure 6 Disconnect the terminal from the switch



Step2 Select **File > Properties**. In the **Properties** dialog box, click **Configure** (see [Figure 7](#)), and then select **115200** from the **Bits per second** drop-down list box (see [Figure 8](#)).

Figure 7 Properties dialog box



The image shows a Windows-style dialog box titled "Switch Properties". It has two tabs: "Connect To" and "Settings", with "Settings" currently selected. The dialog is divided into a main content area and a footer area. In the main area, there is a "Switch" icon (a red telephone handset on a yellow base) followed by the text "Switch" and a "Change Icon..." button. Below this is a "Country/region:" dropdown menu showing "United States of America (1)". A text instruction reads "Enter the area code without the long-distance prefix." Below this is an "Area code:" text box containing "010". Below that is a "Phone number:" text box which is empty. Then is a "Connect using:" dropdown menu showing "COM1". Below this is a "Configure..." button. At the bottom of the main area are two checkboxes: "Use country/region code and area code" (checked) and "Redial on busy" (unchecked). The footer area contains "OK" and "Cancel" buttons.

Switch Properties

Connect To | Settings

Switch Change Icon...

Country/region: United States of America (1)

Enter the area code without the long-distance prefix.

Area code: 010

Phone number:

Connect using: COM1

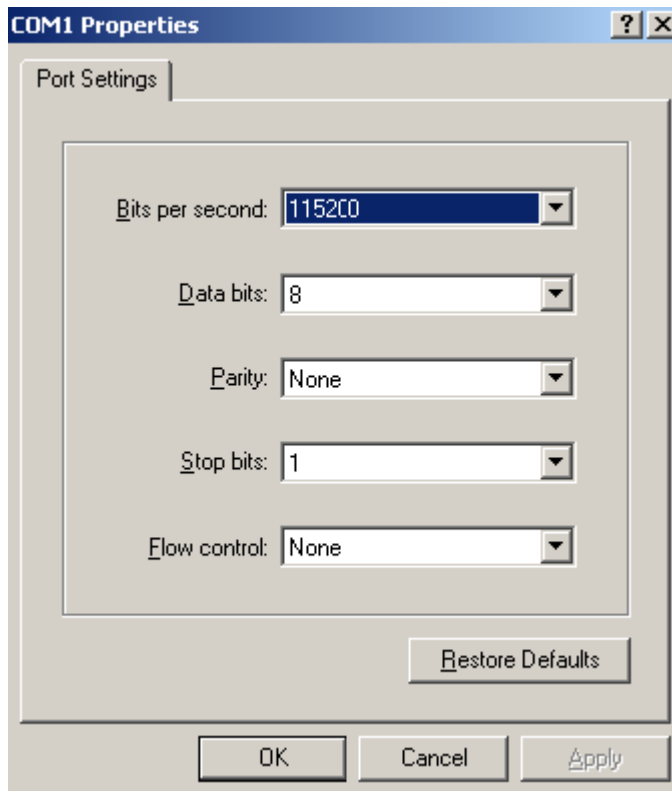
Configure...

☒ Use country/region code and area code

☐ Redial on busy

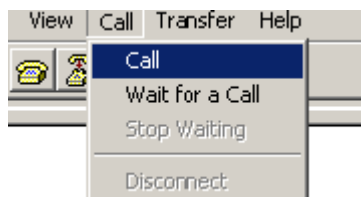
OK Cancel

Figure 8 Modify the baud rate



Step3 Select **Call** > **Call** to reestablish the connection.

Figure 9 Reestablish the connection



NOTE:

The new settings can take effect only after you reestablish the connection.

6. Upload the software package file from the terminal to the switch.

Step4 After establishing a connection between the terminal and the switch, press **Enter** in the HyperTerminal window.

Now please start transfer file with XMODEM protocol.

If you want to exit, Press <Ctrl+X>.

Loading ...CCCCCCCCC

Step5 Select **Transfer** > **Send File** in the HyperTerminal window (see [Figure 10](#)), and click **Browse** in the pop-up dialog box (see [Figure 11](#)) to select the source file (for example, **update.bin**), and select **Xmodem** from the **Protocol** drop-down list.

Figure 10 Transfer menu

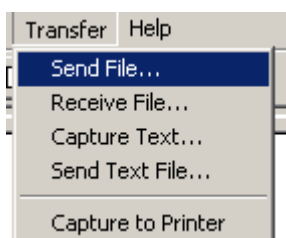
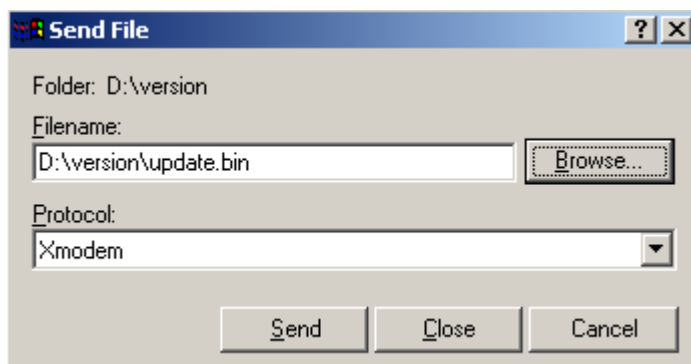
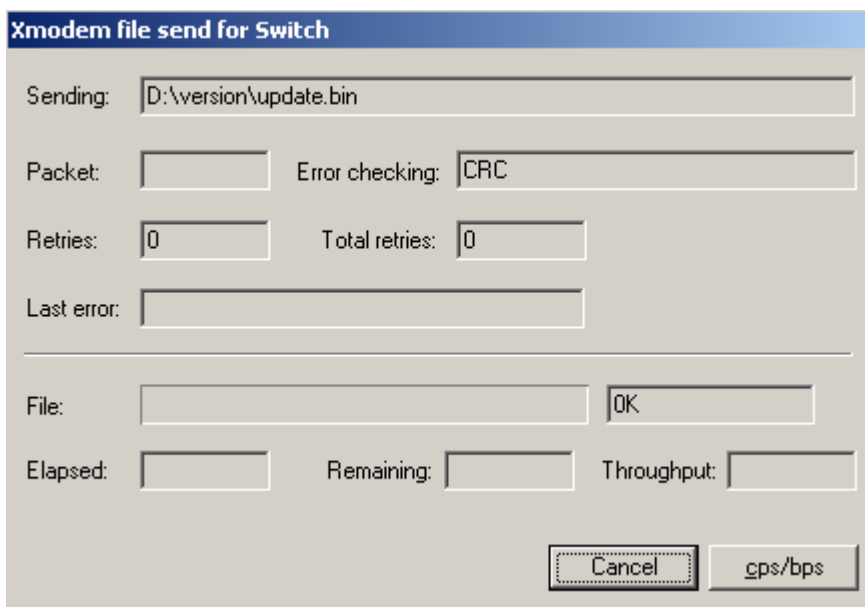


Figure 11 File transmission dialog box



Step6 Click **Send**. The following dialog box appears:

Figure 12 Send the application file using XMODEM



7. Upgrade Boot ROM on the switch.

When the terminal displays the following prompt, enter **Y** to update the basic Boot ROM section:

```
Loading ...CCCC Done!
```

```
Will you Update Basic BootRom? (Y/N):Y
```

When the terminal displays the following prompt, enter **Y** to update the extended Boot ROM section:

```
Updating Basic BootRom.....Done!
```

```
Updating extended BootRom? (Y/N):Y
```

When the Boot ROM upgrade is completed, the terminal displays the following information:

```
Updating extended BootRom.....Done!
```

```
Please change the terminal's baudrate to 38400 bps, press ENTER when ready.
```

8. If you are using a download rate other than 38400 bps, restore the baud rate of the serial port on the terminal to 38400 bps. If the baud rate is 38400 bps, skip this step.

9. Press any key to return to the Boot ROM update menu and enter **0**. On the Boot menu that appears, enter **0** to restart the switch so the updated image can take effect. The following is the Boot ROM update menu:

1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu

```
Enter your choice(0-3):
```

Upgrading system software

To upgrade system software, enter **1** at the Boot menu, and the following menu appears:

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

```
Enter your choice(0-3):
```

Enter **3** to set the XMODEM parameters for downloading the software package file.

The subsequent procedure is the same as loading Boot ROM images, except that you must set the attribute of the file as **main**, **backup**, or **none** to complete the file loading.

```
Writing flash.....  
.....Done!
```

```
Please input the file attribute (Main/Backup/None) M
```

```
Done!
```

NOTE:

- The switch always attempts to boot first with the main file, and if the attempt fails for example, because the main file is not available, the switch tries to boot with the backup file. A file with the **none** attribute is just stored in Flash memory for backup and you must change its attribute to make it usable at reboot.
 - If a file with the same attribute as the file you are loading is already in the Flash memory, the attribute of the old file changes to **none** after the new file becomes valid.
 - The switch automatically updates Boot ROM when loading system software.
-

TFTP download through an Ethernet port

The switch can work as a TFTP client to download files from a TFTP server.

Upgrading Boot ROM

1. Connect an Ethernet port of the switch to the server and connect the console port of the switch to a PC

NOTE:

- The PC and the TFTP/FTP server can be co-located.
 - The HP V1910 Switch Series do not come with any TFTP server program, and you must install one yourself.
-

2. Run the TFTP server program on the server and specify the source file path.
3. Run a terminal emulator program on the PC, power on the switch, access the Boot menu, and enter **6** to access the following Boot ROM update menu:

1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu

Enter your choice(0-3):

4. Enter **1** to upgrade the entire Boot ROM and access the following protocol parameter setting menu:

Bootrom update menu:

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

Enter your choice(0-3):

5. Enter **1** to set the TFTP parameters.

Load File Name :update.bin
Server IP Address :10.10.10.2
Local IP Address :10.10.10.3
Gateway IP Address :

Table 9 Description of the TFTP parameters

Item	Description
Load File Name :	Name of the file to be downloaded (for example, update.bin)
Server IP Address :	IP address of the TFTP server (for example, 10.10.10.2)
Local IP Address :	IP address of the switch (for example, 10.10.10.3)
Gateway IP Address :	IP address of the gateway (in this example, no gateway is required because the server and the switch are on the same subnet)

NOTE:

If the switch and the server are on different subnets, you must specify a gateway address for the switch.

6. Enter all required parameters.

```
Loading.....
.....
.....Done!
Will you Update Basic BootRom? (Y/N):Y
```

Enter **Y** at the prompt to upgrade the basic Boot ROM section.

```
Updating Basic BootRom.....Done!
Updating extended BootRom? (Y/N):Y
```

Enter **Y** at the prompt to upgrade the extended Boot ROM section.

When the upgrade is completed, the following information appears:

```
Updating extended BootRom.....Done!
```

7. Press any key to return to the Boot ROM update menu, enter **0** to return to the Boot menu, and enter **0** to restart the switch from the Boot menu so the upgraded Boot ROM can take effect.

```
Press enter key when ready
1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu
Enter your choice(0-3):
```

Upgrading system software

To upgrade switch software, enter **1** at the Boot menu to access the following menu:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
Enter your choice(0-3):
```

Enter **1** to set the TFTP parameters.

The subsequent procedure of is the same as upgrading Boot ROM, except that you must set the attribute of the file as **main**, **backup**, or **none** to complete the file loading.

```
Writing flash.....
.....Done!
Please input the file attribute (Main/Backup/None) M
Done!
```

NOTE:

- If a file with the same attribute as the file you are loading is already in the Flash memory, the attribute of the old file changes to **none** after the new file becomes valid.
 - The switch automatically updates Boot ROM when loading system software.
-

FTP download through an Ethernet port

The switch can work as an FTP server or FTP client to download files through an Ethernet port. This section uses the switch as an FTP client to describe the procedure.

Upgrading Boot ROM

NOTE:

When upgrading Boot ROM, the switch can work only as an FTP client.

1. Connect an Ethernet port of the switch to the server and connect the console port of the switch to a PC.
2. Run an FTP server program on the server, configure an FTP username and password, and specify the source file path.
3. Run a terminal emulator program on the PC, power on the switch, access the Boot menu, and enter **6** to access the following Boot ROM update menu:

```
1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu
```

Enter your choice(0-3):

4. Enter **1** to upgrade the entire Boot ROM and access the following protocol parameter setting menu:

Bootrom update menu:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
```

Enter your choice(0-3):

5. Enter **2** to set the FTP parameters.

```
Load File Name      :update.bin
Server IP Address   :10.10.10.2
Local IP Address    :10.10.10.3
Gateway IP Address  :0.0.0.0
FTP User Name       :V1910
FTP User Password   :V1910
```

Table 10 Description of the FTP parameters

Item	Description
Load File Name :	Name of the file to be downloaded (for example, update.bin)
Server IP Address :	IP address of the FTP server (for example, 10.10.10.2)
Local IP Address :	IP address of the switch (for example, 10.10.10.3)

Item	Description
Gateway IP Address :	IP address of the gateway (in this example, no gateway is required because the server and the switch are on the same subnet)
FTP User Name	Username for accessing the FTP server, which must be the same as configured on the FTP server.
FTP User Password	Password for accessing the FTP server, which must be the same as configured on the FTP server.

NOTE:

If the switch and the server are on different subnets, you must specify a gateway address for the switch.

6. Enter all required parameters.

Will you Update Basic BootRom? (Y/N):Y

Enter **Y** at the prompt to upgrade the basic Boot ROM section.

Updating Basic BootRom.....Done!

Updating extended BootRom? (Y/N):Y

Enter **Y** at the prompt to upgrade the extended Boot ROM section.

When the upgrade is completed, the following information appears:

Updating extended BootRom.....Done!

7. Press any key to return to the Boot ROM update menu, enter **0** to return to the Boot menu, and enter **0** to restart the switch from the Boot menu so the upgraded Boot ROM can take effect.

Press enter key when ready

1. Update full BootRom
2. Update extended BootRom
3. Update basic BootRom
0. Return to boot menu

Enter your choice(0-3):

Upgrading system software

To upgrade switch software, enter **1** in the Boot menu to access the following menu:

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

Enter your choice(0-3):

Enter **2** to set the FTP parameters.

The subsequent procedure is the same as upgrading Boot ROM, except that you must set the attribute of the file as **main**, **backup**, or **none** to complete the file loading.

Writing flash.....

.....Done!

Please input the file attribute (Main/Backup/None) M

Done!

NOTE:

- If a file with the same attribute as the file you are loading is already in the Flash memory, the attribute of the old file changes to **none** after the new file becomes valid.
 - The switch automatically updates Boot ROM when loading system software.
-

Upgrading at the CLI

You can remotely download Boot ROM and system software images from a TFTP server at the CLI as follows.

Step 1: Configure an IP address for the switch

```
<HP V1910 Switch>ipsetup ip-address 192.168.1.2 24
```

Step 2: Download the system software image file from the TFTP server.

```
<HP V1910 Switch>upgrade 192.168.1.1 update.bin runtime
```

```
The file flash:/ main.bin exists. Overwrite it? [Y/N]:y
```

```
Verifying server file...
```

```
Deleting the old file, please wait...
```

```
File will be transferred in binary mode
```

```
Downloading file from remote TFTP server, please wait.../
```

```
TFTP: 10262272 bytes received in 104 second(s)
```

```
File downloaded successfully.
```

```
The specified file will be used as the boot file at the next reboot.
```

Step 3: Download and load the Boot ROM file.

```
<HP V1910 Switch>upgrade 192.168.1.1 update.btm bootrom
```

```
File will be transferred in binary mode
```

```
Downloading file from remote TFTP server, please wait...|
```

```
TFTP: 259324 bytes received in 2 second(s)
```

```
File downloaded successfully.
```

```
BootRom file updating finished!
```

Step 4: Reboot the device to validate the new system software.

```
<HP V1910 Switch> reboot
```

Note that if flash memory is insufficient, load the Boot ROM image first and delete useless files to free up Flash memory before you load the system software image.