HP 1910-CMW520-R1511
Release Notes

HP 1910 Release Notes

Keywords: switch, resolved problems, software upgrading

Abstract: This release notes describes the HP1910 release with respect to hardware and software compatibility, released features and functions, software upgrading, and documentation.

Acronyms:

Acronym	Full spelling
ACL	Access Control List
CLI	Command line interface
DHCP	Dynamic Host Configuration Protocol
FTP	File Transfer Protocol
GARP	Generic Attribute Registration Protocol
HTTP	Hypertext Transfer Protocol
ICMP	Internet Control Message Protocol
IGMP	Internet Group Management Protocol
IP	Internet Protocol
LACP	Link Aggregation Control Protocol
MIB	Management Information Base
MSTP	Multiple Spanning Tree Protocol
NDP	Neighbor Discovery Protocol
NTP	Net Time Protocol
QoS	Quality of Service
RADIUS	Remote Authentication Dial-In User Service
RMON	Remote monitoring
RSTP	Rapid Spanning Tree Protocol
SNMP	Simple Network Management Protocol
SP	Strict priority
SSH	Secure Shell
STP	Spanning Tree Protocol
TFTP	Trivial File Transfer Protocol
UDP	User Datagram Protocol
VLAN	Virtual Local Area Network

Contents

List of Tables

Version information

Version number

Comware software, Version 5.20, Release 1511

Note: You can see the version number with the command summary in any view. Please see Note①.

Version history

Table 1 Version history

Version number	Last version	Release Date	Remarks
V1910-CMW520-R1511	V1910-CMW520-F1510	2012-5-25	None
V1910-CMW520-F1510	V1910-CMW520-R1112	2012-5-14	None
V1910-CMW520-R1112	V1910-CMW520-R1111P01	2012-4-11	None
V1910-CMW520-R1111P01	V1910-CMW520-R1111	2012-3-20	None
V1910-CMW520-R1111	V1910-CMW520-R1109	2012-1-4	None
V1910-CMW520-R1109	V1910-CMW520-R1108P01	2011-9-26	None
V1910-CMW520-R1108P01	V1910-CMW520-R1108	2011-8-17	None
V1910-CMW520-R1108	None	2011-5-13	First release

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 lastest 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

HP 1910	3Com 2900
1910-48G : JE009A	3Com Baseline Plus Switch 2952
1910-8G : JG348A	----
1910-8G-PoE+ (65W) : JG349A	----
1910-8G-PoE+ (180W) : JG350A	----

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
Minimum memory requirements	128 MB
Minimum Flash requirements	128 MB
Boot ROM version	Version 157 (Note: Perform the summary command in any view to view the version information. See Note②)
Host software	V1910-CMW520-R1511.bin
iMC version	iMC PLAT 5.1 (E0202) iMC QoSM 5.1 (E0201) iMC UAM 5.1(E0301)
iNode version	iNode PC 5.1 (E0301)
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-R1511.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 1511,        ------- 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 157                        ------ Note②
[SubSlot 0] 48GE+4SFP Hardware Version is REV.B
```

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.

5. 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.

Feature list

Hardware features

Table 4 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)
	43.6 × 300 × 260 mm (1.72 × 11.81× 10.24 in.) (1910-8G-PoE+ (180W))
Weight	≤ 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)
	≤ 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))
	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 5 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

Category	Features
	1K static MAC addresses
	Blackhole MAC addresses
	MAC address learning limit on a port
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

Category	Features
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
	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

Version updates

Feature updates

Table 6 Feature updates

Item	Description
V1910-CMW520-R1511	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: None
	Deleted features: None
	Modified features: None
V1910-CMW520-F1510	
Hardware feature updates	New features: Support new devices 1910-8G , 1910-8G-PoE+ (65W) and 1910-8G-PoE+ (180W)
	Deleted features: None
Software feature updates	New features: Portal、MLD Snooping、ipv6 routing、pingv6、tracertv6、Ipv6 acl
	See the HP 1910 Switch Series User Guide-Feature 1510 released with the software version.

Item	Description
	Deleted features: None
	Modified features: None
V1910-CMW520-R1112	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: None
	Deleted features: None
	Modified features: None
V1910-CMW520-R1111P01	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: None
	Deleted features: None
	Modified features: None
V1910-CMW520-R1111	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: None
	Deleted features: None
	Modified features: None
V1910-CMW520-R1109	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: Gateway settings on the **Web->wizard->IP Setup** page. Deleted features: None Modified features: None
V1910-CMW520-R1108P01	
Hardware feature updates	New features: None
	Deleted features: None
Software feature updates	New features: None Deleted features: None Modified features: None
V1910-CMW520-R1108	
Hardware feature updates	New features: None
	Deleted features: None

Item	Description
Software feature updates	New features: None
	Deleted features: None
	Modified features: None

Command line updates

Item	Description
V1910-CMW520-R1511	
New commands	See the HP 1910 Switch Series User Guide-Release 1511 released with the software version.
Removed commands	See the HP 1910 Switch Series User Guide-Release 1511 released with the software version.
Modified commands	See the HP 1910 Switch Series User Guide-Release 1511 released with the software version.
V1910-CMW520-F1510	
New commands	See the HP 1910 Switch Series User Guide-Feature 1510 released with the software version.
Removed commands	See the HP 1910 Switch Series User Guide-Feature 1510 released with the software version.
Modified commands	See the HP 1910 Switch Series User Guide-Feature 1510 released with the software version.
V1910-CMW520-R1112	
New commands	None
Removed commands	None
Modified commands	None
V1910-CMW520-R1111P01	
New commands	None
Removed commands	None
Modified commands	None
V1910-CMW520-R1111	
New commands	None
Removed commands	None
Modified commands	None
V1910-CMW520-R1109	
New commands	None
Removed commands	None

Item	Description		
Modified commands	None		
V1910-CMW520-R1108P01			
New commands	None		
Removed commands	None		
Modified commands	None		
V1910-CMW520-R1108			
New commands	None		
Removed commands	None		
Modified commands	None		

MIB updates

Table 8 MIB updates

Item	MIB file	Module	Description
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-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
Modified	None	None	None

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

Configuration changes

Configuration changes in CMW520-R1511

None

Configuration changes in CMW520-F1510

None

Configuration changes in CMW520-R1112

None

Configuration changes in CMW520-R1111P01

None

Configuration changes in CMW520-R1111

None

Configuration changes in CMW520-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.

Configuration changes in CMW520-R1108P01

None

Configuration changes in CMW520-R1108

None

Operation changes in CMW520-R1112

None

Operation changes in CMW520-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 CMW520-R1111

None

Operation changes in CMW520-R1109

None

Operation changes in CMW520-R1108P01

None

Operation changes in CMW520-R1108

None

Open problems and workarounds

LSD44945

- First found-in version: CMW520-R1108
- Description: In the following network diagram, all 1910s and the PC are in the same subnet. MSTP is configured to avoid loops and all 1910s belong to instance 0. Shut down G1/0/49 of the Root Bridge (1910_2 in this illustration) and ping 1910_1 from the PC. The ping breaks off for about 30s.
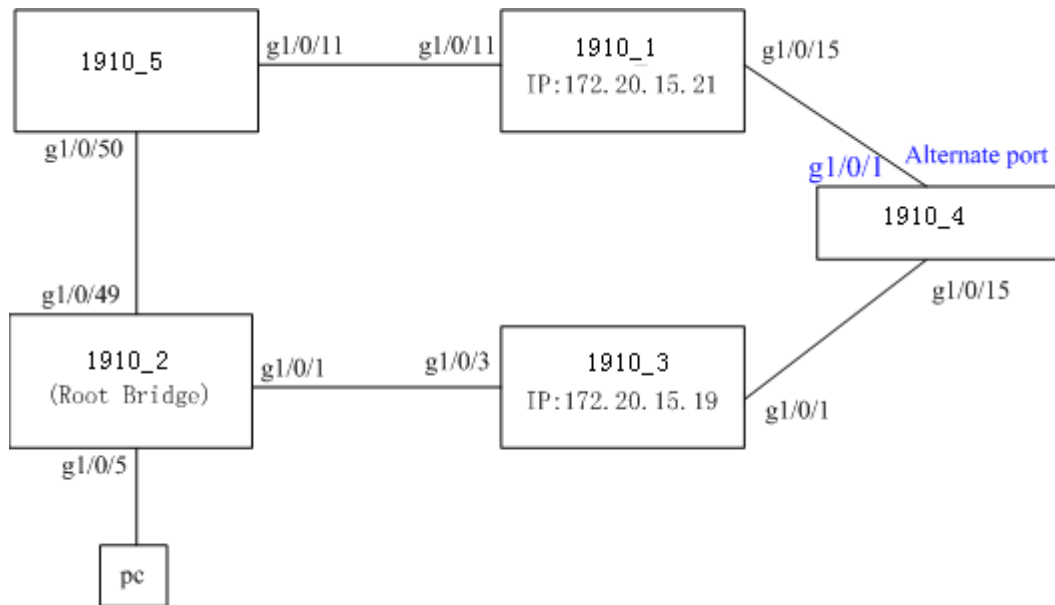
- Workaround: Configure the stp no-agreement-check command on the root ports.

LSD070321

- First found-in version: CMW520-F1510

- Description: Use the Web interface to upload a configuration file that is larger than or near the free memory size.

- Workaround: The memory is used up.

LSD070866

- First found-in version: CMW520- F1510

- Description: 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:

  ○ <u>Before</u> 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)" c*ommand 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 <u>old</u> 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 <u>new</u> 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.

List of resolved problems

Resolved problems in CMW520-R1511

None

Resolved problems in CMW520-F1510

ZDD05100

- First found-in version: CMW520-R1112

- Condition: A large number of MAC addresses transition among switch ports.

- Description: The switch updates ARP entries for 32 MAC addresses. ARP entries for other MAC addresses are not updated.

Resolved problems in CMW520-R1112

ZDD05003

- First found-in version: CMW520-R1109

- Condition: Access the device through SNMPv3 using 3DES authentication.

- Description: The device CLI does not respond any more.

ZDD04990

- First found-in version: CMW520-R1109

- Condition: Enable HTTPS on the device. Use HTTPS to access the web interface of the device.

- Description: The device might automatically close the HTTPS service (TCP port 443). The HTTPS access fails and the web interface cannot be accessed again.

ZDD04944

- First found-in version: CMW520-R1109

- Condition: Enable debugging when the device is requesting an IP address as a DHCP client from a DHCP server where multiple options are configured.

- Description: The device reboots.

ZDD04931

- First found-in version: CMW520-R1109
- Condition: Configure DHCP option 3 or 6 as a string of 255 ASCII characters on the DHCP server. Then access the web interface of the device.
- Description The device reboots.

ZDD04865

- First found-in version: CMW520-R1109
- Condition: Use SSH to log in to the device when the free memory resources of the device are insufficient.
- Description: The device reboots.

ZDD04706

- First found-in version: CMW520-R1109
- Condition: The Vendor-Specific attribute sent by the RADIUS server is not in standard TLV format.
- Description: RADIUS authentication fails.

LSD69613

- First found-in version: CMW520-R1111
- Condition: View device information in the web page Summary > Device Information.
- Description: The device information does not show port states.

LSD69165

- First found-in version: CMW520-R1111
- Condition: View system time zone information in the web page Device > System Time.
- Description: The System time Zone offset from GMT is wrong.

LSD47115

- First found-in version: CMW520-R1101P09
- Condition: Perform operations on the web page PoE > PoE >Port Setup.
- Description: An error prompt message might appear.

Resolved problems in CMW520-R1111P01

None

Resolved problems in CMW520-R1111

LSD65011

- First found-in version: CMW520-R1109

- Condition: View neighbor information in the web page Network > LLDP > Neighbor Summary.
- Description: The web page displays garbage characters.

LSD64981

- First found-in version: CMW520-R1109
- Condition: Configure a gateway multiple times in the Wizard web page.
- Description: A newly configured gateway cannot overwrite the previous one.

LSD47162

- First found-in version: CMW520-R1108
- Condition: Using IMC to assign QoS configuration fails.
- Description: IMC does not display error prompt information.

LSD50868

- First found-in version: CMW520-R1108
- Condition: Configure IGMP snooping in the web page Network > IGMP Snooping.
- Description: The web page is not easy to use.

LSD50752

- First found-in version: CMW520-R1108
- Condition: The 1910-48G switch perform an inter-chip forwarding. (Ports 1 through 24 belong to a chip; ports 25 through 48 belong to the other chip.)
- Description: Packets with a length of 10K cannot be forwarded.

LSD64667

- First found-in version: CMW520-R1108P01
- Condition: Use SNMPtest SHA-3DES mode to access the device.
- Description: The CLI of the device does not respond.

ZDD04517

- First found-in version: CMW520-R1109
- Condition: Use NQA to perform continuous and fast SNMP operations to get or set RPINGMib.
- Description: An error occurs to DISMAN-PING-MIB::pingResultsOperStatus and cannot be recovered. The device may reboot abnormally.

ZDD04543

- First found-in version: CMW520-R1109
- Condition: Inject LLDP packets in which the LCI length in the location ID TLV is 0. Then display neighbor information.
- Description: The device reboots abnormally.

ZDD04556

- First found-in version: CMW520-R1109

- Condition: Inject LLDP packets with an organization-unknown TLV larger than 500 bytes. After the neighbor relationship is established, display neighbor information.
- Description: The device reboots abnormally.

ZDD04569

- First found-in version: CMW520-R1109
- Condition: Issue the debugging vty negotiate command and then perform stress testing.
- Description: Memory application fails and the device reboots.

ZDD04596

- First found-in version: CMW520-R1109
- Condition: Inject a large amount of FTP traffic to the device.
- Description: The device reboots abnormally.

LSD67635

- First found-in version: CMW520-R1109
- Condition: Read the MIB node entPhysicalHardwareRev.15.
- Description: The displayed information is incorrect.

Resolved problems in CMW520-R1109

LSD63498

- First found-in version: CMW520-R1108
- Condition: Use WEB page.
- Description: The gateway address could not be setup in the wizard.

LSD63499

- First found-in version: CMW520-R1108
- Condition: Apply SSH or HTTPS service on the **Web->Network->Service** page.
- Description: The corresponding Key or PKI certificate could not be generated automatically.

LSD61667

- First found-in version: CMW520-R1108
- Condition: Use WEB page.
- Description: There is always an ".XML" file.

ZDD04165

- First found-in version: CMW520-R1108
- Condition: When the LLDP function is enabled, displays LLDP log information or connects with Cisco IP phone and configures LLDP.
- Description: The LLDP output information contains unrecognized characters in Chassis ID field.

ZDD04178

- First found-in version: CMW520-R1108
- Condition: When there exist ARP attacks sending to the device from a single source MAC and the source network different from the interface network.
- Description: Even source MAC based ARP detection is enabled, the ARP packets still can't be filtered by the device

ZDD04254

- First found-in version: CMW520-R1108
- Condition: When the device is used as the FTP client, and the prompt of the FTP server is not same as that the RFC suggest.
- Description: The FTP connection could not be created.

Resolved problems in CMW520-R1108P01

LSD63812

- First found-in version: CMW520-R1108
- Condition: The SFP ports work in default configuration (auto negotiation mode).
- Description: The SFP ports cannot linkup or have continually abort input Error.

Resolved problems in CMW520-R1108

- This is the first release version.

Related documentation

Documentation set

Table 9 Documentation set

Document title	Version
Read This First (5998-1520)	6P101
HP 1910-8G Switch Series Compliance and Safety Manual	5PW100
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

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 10 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 11 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.

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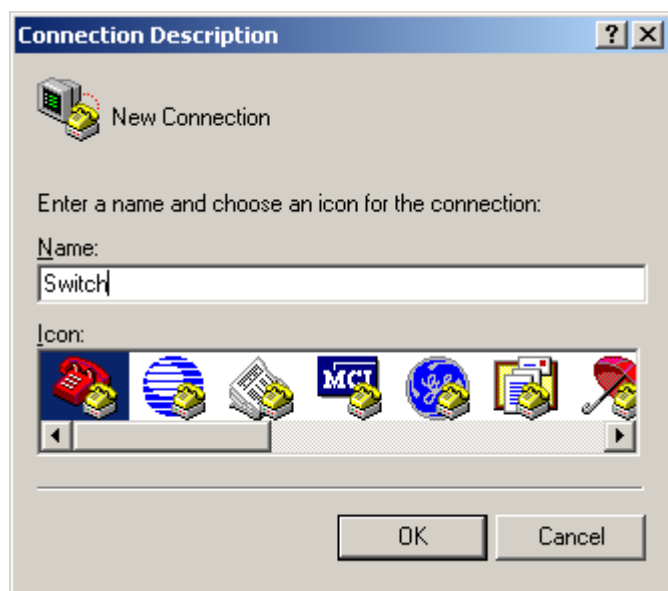
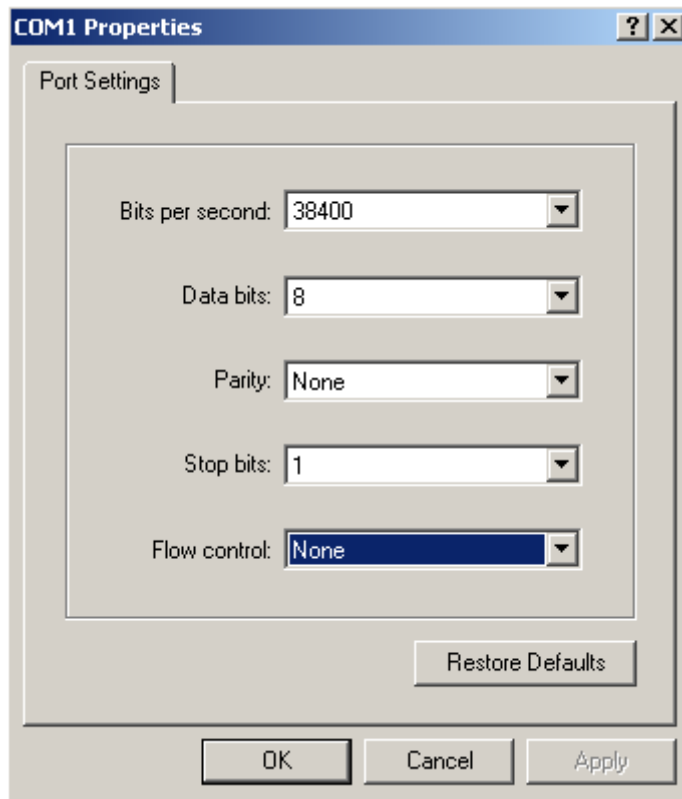Step2 Select the serial port to be used from the Connect using drop-down list, and click OK.

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

Select File > Properties in the HyperTerminal window.

Figure 4 HyperTerminal window
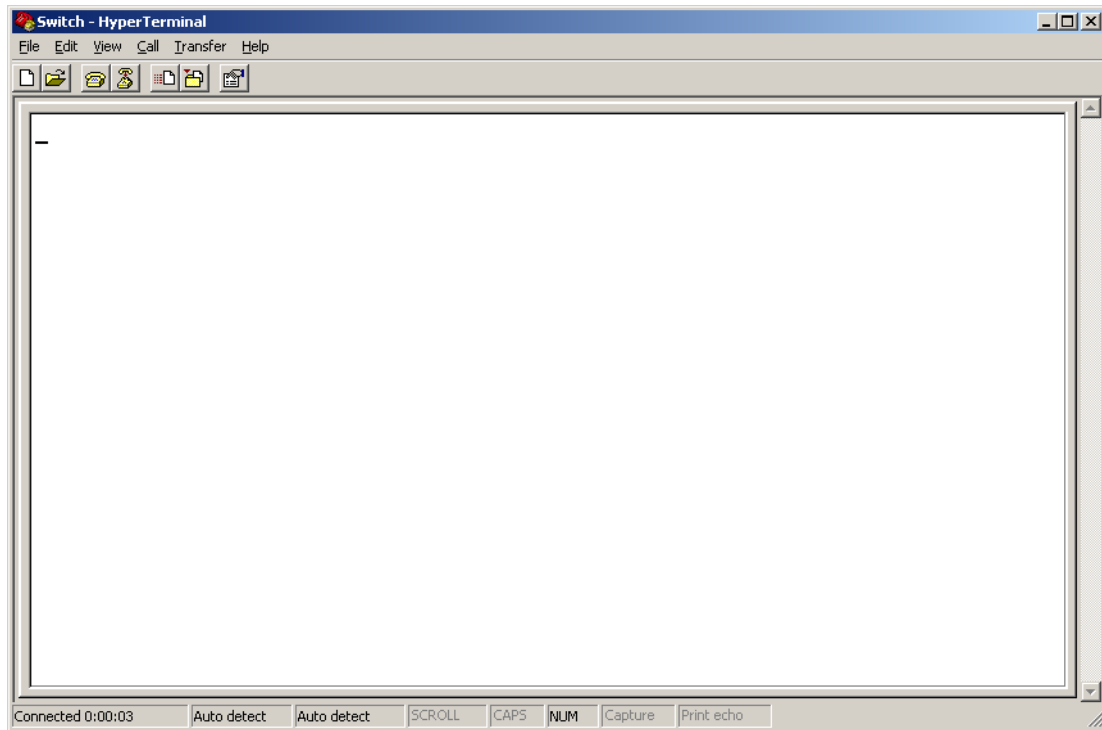
Step5 Click the Settings tab, set the emulation to VT100, and click OK in the Switch Properties dialog box.

Figure 5 Set terminal emulation in Switch Properties dialog box
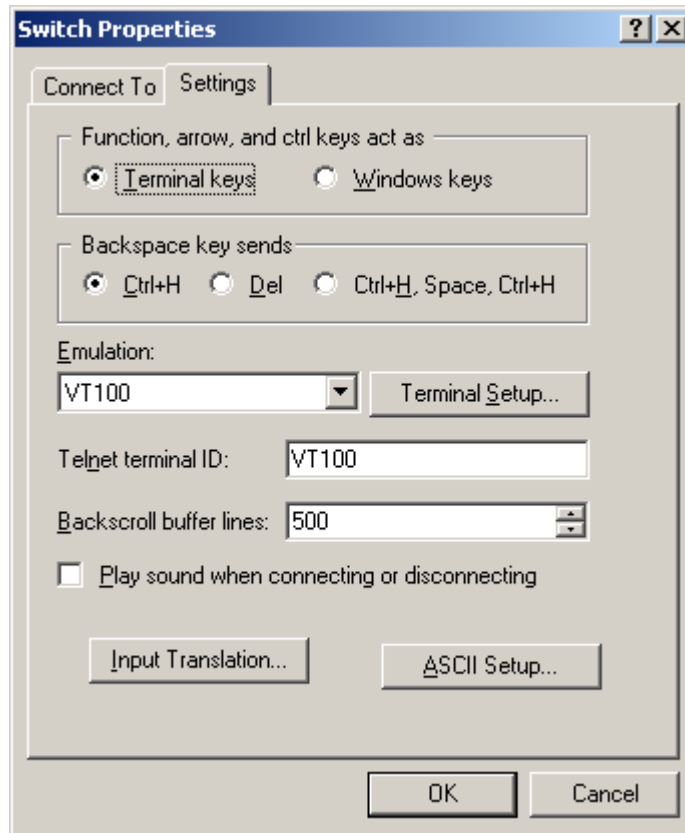
Upgrading Boot ROM

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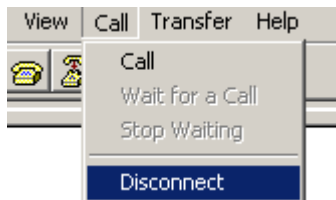
Step2   Select File > Properties. In the Properties dialog box, click Configure (see Figure 7), and then select 115200 from the Bits per second drop-down list box (see Figure 8).

Figure 7 Properties dialog box

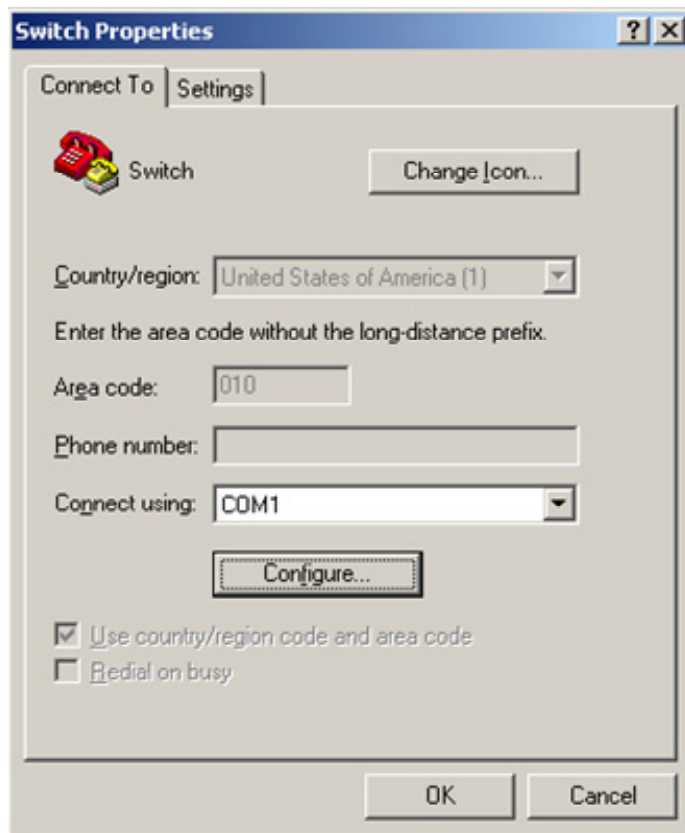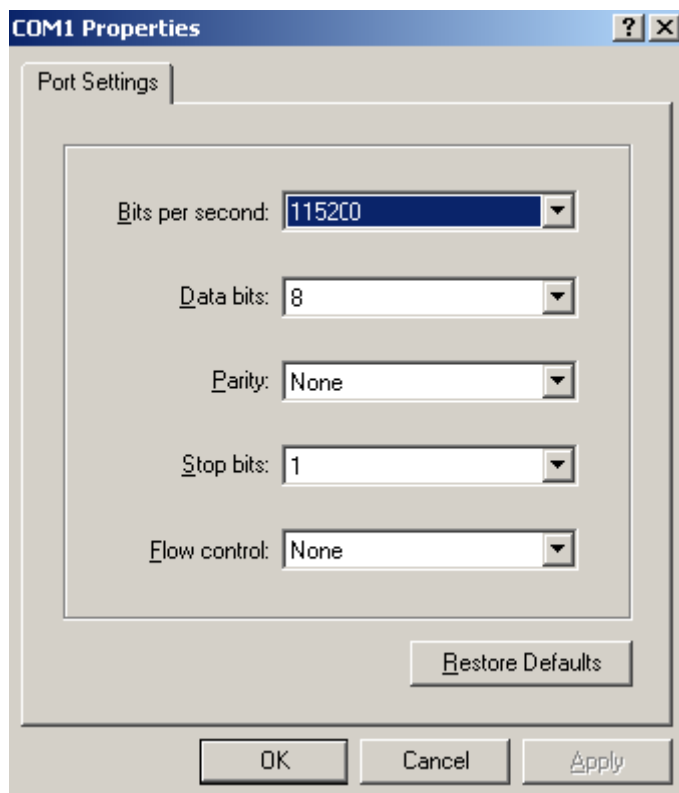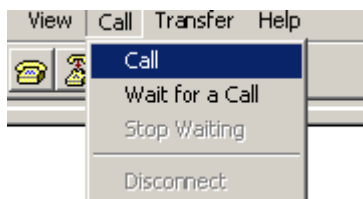Figure 8 Modify the baud rate

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 ...CCCCCCCCCC
```

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.
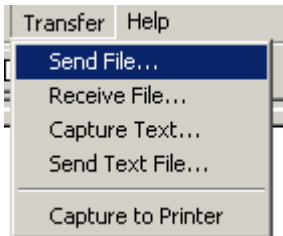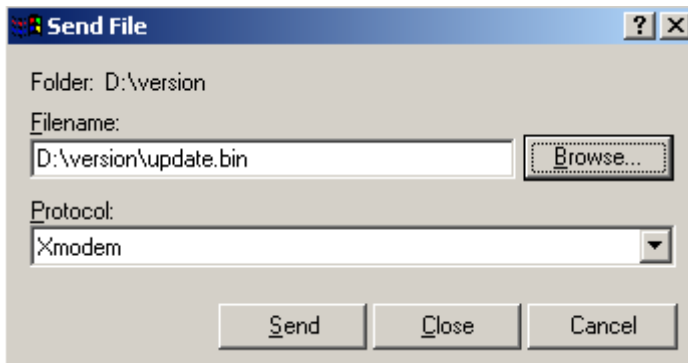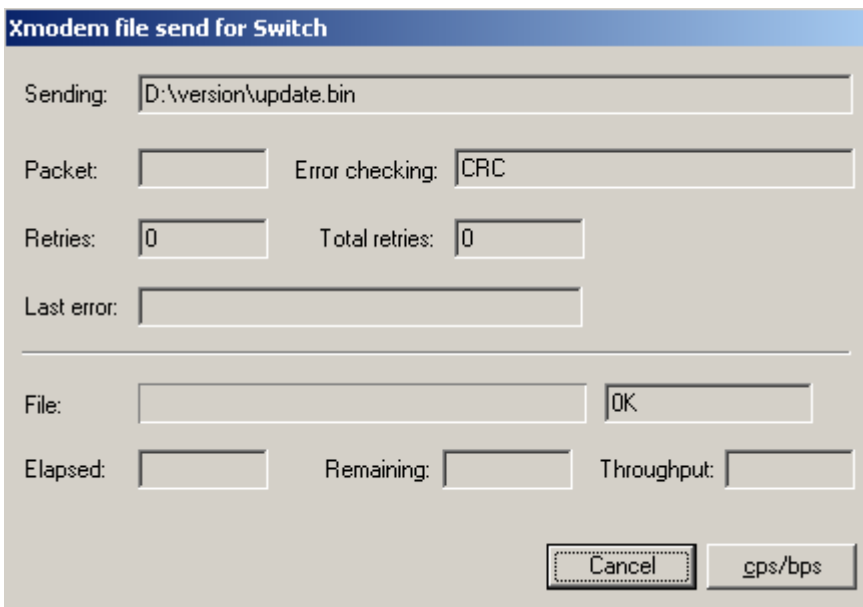
Figure 10 Transfer menu

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 Switche 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 12 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

Item	Description
	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 13 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)
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.