



MultiLink Ethernet Switch Firmware Upgrade Procedure

This document describes the process for upgrading the firmware on a GE Multilin MultiLink Ethernet switch. The methods described for updating the Multilink firmware either locally using the console port or remotely over the network using FTP or TFTP.

The following equipment and software will be required for loading the MultiLink Ethernet Switch with the new firmware version.

- 1) A female-female null modem cable. (Only necessary when upgrading using the MultiLink console port)
- 2) PC Serial port if your PC does not have a serial port, a USB to serial converter will be required (Only necessary when upgrading using the MultiLink console port)
- 3) A PC (or a workstation/computer) with a terminal emulation program such as HyperTerminal (included with Windows) or Teraterm-pro or other equivalent software. Verify that the software supports Xmodem protocol
- 4) Enough disk space to store and retrieve the configuration files as well as copy of the MultiLink Firmware. We recommend that at least 15MB of disk space is available for this purpose.
- 5) Manager level account name and password for the switch being upgraded
- 6) Connection to the Internet. Ensure the connection does not block ftp file transfers

The latest version of the MultiLink firmware can be downloaded from the GE Multilin website at the following link:

http://www.geindustrial.com/multilin/catalog/ethernet.htm

To determine the version of firmware currently installed on you switch perform the following:

Using the command line interface, log into the switch using "Manager" Access rights. In the Command line prompt, enter the command 'show version'.

Using the EnerVista Web Interface, enter the IP address of the switch in the address bar of a web browser. The firmware version installed on the switch will appear in the lower left corner of the screen.





Upgrading Using a Serial Connection – Command Line Interface

Use the following steps to load firmware to the Multilink with the serial port.

- 1) Download the Multilink firmware from the GE Multilin web site to a convenient location on your hard drive.
- 2) Use the null-modem cable to connect to the serial port of the switch.
- 3) Login at the manager level with the proper password.
- 4) It is recommended that the switch configuration be saved before upgrading the firmware.

If the current firmware is older than 1.7 3, use the *saveconf* command as shown below.

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File Edit View Call Transfer Help
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Computer Software clause at 52.227-7013.
GE Multilin 215 Anderson Ave. Markham, Ontario Canada L6E 1B3
www.gemultilin.com
MultiLink MNS Version: 1.6.2
NOTE: System TCP/IP (ip/mask/gateway) is not configured yet.
Login : manager
ML2400#saveconf mode=serial
Do you wish to upload the configuration? ['Y' or 'N'] Use XMODEM to download config file.
Connected 2:05:32 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo

If the current firmware is 1.7.3 or above, enter the *xmodem* command as shown below.



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File Edit View Call Transfer Help	
D# 93 0B 5	
ML2400#xmodem put type=config Do you wish to export configuration file? Use XMODEM to export config file	Γ 'Ψ' or 'N'I ΨES
Connected 1:08:27 Auto detect 39400 6/N-1 SCBOLL CAPS NUM	Lachae Partasha

Click on the Transfer menu item and select 'Receive File'.

Receive File			?
Place received fil	e in the following fo	older:	
C:\My Documen	ts\Multilink	1	Browse
Use receiving pro	otocol:		
Xmodem			
	Beceive	Close	Cancel

Enter the path to which the configuration file will be stored. Select Xmodem for the receiving protocol.

Recei	ve Filenam	e	?
Xmodem filename	never sends for storing the	a filename, so you e received file.	must specify a
Folder:	C:\My Docu	uments\Multilink	
Filename	Config file 1	1	
		OK	Cancel





Enter a name for the configuration file. Click OK and the configuration file will be stored to the specified location. Verify that the configuration file has been created and stored correctly. This completes the save configuration procedure.

5) Below will show how to upgrade the firmware.

If the current firmware is older than 1.7.3, use the *upgrade* command. ML2400# upgrade mode=serial

Do you wish to upgrade the image? [Y or N] Y
See figure below.
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File Edit View Call Transfer Help
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GE Multilin 215 Anderson Ave. Markham, Ontario Canada L6E 1B3
www.gemultilin.com
MultiLink MNS Version: 1.6.2
NOTE: System TCP/IP (ip/mask/gateway) is not configured yet.
Login : manager
Password : analase mode=serial
Do you wish to upgrade the image? ['Y' or 'N'] Please start XModem file transfer now.
Connected 2:20:44 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo

If the current firmware is 1.7.3 or above, use the *xmodem* command,

ML2400# xmodem get type=app Do you wish to upgrade the image? [Y or N] Y See figure below.





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File Edit View Call Ti	Transfer Help	
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ML2400#xmode Do you wis Please sta	em get type=app sh to upgrade the image? ['Y' or 'N'] YES art XModem file transfer now.§§§§	
Connected 1:08:56	Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo	'J_

6) Select the Transfer menu item and choose the 'Send File' option.

Send File			<u>?</u> ×
Folder: C:\My Do	cuments\Multilink'	1.7.x	
<u>F</u> ilename:			
C:\My Document	ts\Multilink\1.7.x\M	4L_Rel1.7.3.bir	Browse
Protocol:			
Xmodem			•
	Send	<u>C</u> lose	Cancel

Enter the location of the firmware file that is to be loaded into the switch. Select Xmodem for the protocol. Click on the Send button and the file will start to load as shown below.



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Sending:	C:\My Docu	ments\Multilink\1.7	.x\ML_Rel1.7	13.bin
Packet:	2389	Error checking:	Checksum	
Retries:	0	Total retries:	0]
Last error:				
File:				298k of 1421K
	00:02:16	Bemaining:	00:08:33	Throughput: 2240 cps

7) Once the file transfer is completed reboot the switch with the 'reboot' command or by cycling power.

ML2400# reboot

Proceed on rebooting the switch? [Y or N] Y Rebooting now.....

8) Login to the switch and use the 'show version' command to verify the version. ML2400# show version

If necessary upload the configuration file using the following commands. If the showing version is older than 1.7.3, use the *loadconf* command as shown below,



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mle Edit New Call Transfer Help
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GE Multilin 215 Anderson Ave. Markham, Ontario Canada LGE 1B3
www.gemultilin.com
MultiLink MNS Version: 1.6.2
NOTE: System TCP/IP (ip/mask/gateway) is not configured yet.
Login : manager Password : ****** ML2400#show version
MultiLink MNS Ver: 1.6.2 Date: May 12 2005 Time:18:43:35 Build ID 11159486
ML2400#loadconf mode=serial
Do you wish to upgrade the configuration? ['Y' or 'N'] Please start XModem file transfer now.\$
4
Connected 2:28:01 Auto detect 38400 8-0-1 SCRCLL CAPS NUM Copture Print etho

If the showing version is 1.7.3 or above, enter the *xmodem* command as shown below,







Select the Transfer menu item and choose the 'Send File' option.

Send File			<u>? ×</u>
Folder: C:\My D Filename:	ocuments\Multilink		
C:\My Docume	nts\Multilink\config	1	Browse
Protocol:			
Xmodem			•
	Send	Close	Cancel

Enter the location of the configuration file and select Xmodem for the protocol. Click on the Send button and the file will start to load as shown below.

C:\My Docur	ments\Multilink\cor	ifig 1	
153	Error checking:	Checksum	
0	Total retries:	0	1
			1
			19k of 30K
00:00:09	Remaining:	00:00:04	Throughput: 2147 cps
	C:\My Docur 153 0 0 0 00:00:09	C:\My Documents\Multilink\cor 153 Error checking: 0 Total retries: 00:00:09 Remaining:	C:\My Documents\Multilink\config 1 153 Error checking: 0 Total retries: 0 Total retries: 0 Remaining: 00:00:09 Remaining:

Once the transfer has completed the switch will have to be rebooted either by entering 'reboot' at the command line or by cycling power to the relay.

ML2400# reboot Proceed on rebooting the switch? [Y or N] Y Rebooting now.....

9) Once the switch has rebooted login and verify that the configuration was loaded correctly. This completes the upgrade process.





Upgrading Using the EnerVista Web Interface Software

Use the following steps to load the firmware to the Multilink using the EnerVista Web Interface Software.

- 1) Download the Multilink firmware from the GE Multilin web site to a convenient location on the hard drive.
- 2) Ensure that you have an ftp or tftp server installed and running on your computer. If you are using ftp, make sure you also have the ftp login name and password information ready.
- 3) Select the switch you want to upgrade. Make sure you have system administration rights and privileges available on that switch.
- 4) Open a SWM session with the switch by typing in the URL <u>https://<IPaddress></u> of the switch.

Using FTP

It is always a good idea to save the configuration before an upgrade. So GE Multilin recommends a two-step update. First save the configuration to the ftp server. Then load the new image and restart the switch. To save the configuration using FTP, select the 'Config Upload' Transfer Type in the FTP window.

Load the new firmware file as shown below.

Please note that the FTP is located under Configuration -> File Mgmt -> FTP, if the current firmware is older than 1.7.3.







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Land Cancel									18	1	. de	4																																28				
Cancel									- 1			8																									- 22							1				
Cancel									. 1		-	3.																																				
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As the file is being loaded, you will see the file transfer in progress image show up

Once the transfer is completed, the switch needs to be restarted.







After the restart the new version of MultiLink firmware is ready for use.

Using TFTP

It is always a good idea to save the configuration before an upgrade. So GE Multilin recommends a two-step update. First save the configuration to the TFTP server. Then load the new image and restart the switch. The save configuration process is described in chapter 5.

Follow the steps below to load the firmware.

Please note that the TFTP is located under Configuration -> File Mgmt -> TFTP, if the current firmware is older than 1.7.3.







Please Wait

As the file is being loaded, you will see the file transfer in progress image show up

Once the transfer is completed, the switch needs to be restarted.

O Graphical Display	TFTP	Loqout 🗍 💭 🤣 😮
 Graphical Display Administration File Mgmt FTP FTP Ping System Set Telnet User Mgmt Reboot Configuration 	Warning Warning Are you sure you want to reboot the switch? Cancel OK	
		OK

After the restart the new version of Multilink firmware is ready for use.