Updating the E5810B firmware

NOTE	Do not update your E5810B firmware unless you have a specific need to do so, such as defect repair or instrument enhancements. If the firmware update fails, the E5810B will revert to its original firmware version.

The E5810B uses a standard File Transfer Protocol (FTP) or via a connected USB drive to perform updates.

The E5810B acts as an FTP client and searches for an FTP server that contains the E5810B firmware image. Agilent maintains a publicly accessible FTP server that contains the latest E5810B firmware at:

ftp.agilent.com
Login: anonymous
Password: <your email address>

The latest E5810B firmware is located at /pub/e5810/e5810b/e5810_B_latest_firmware.hex. Prior versions are also available in this FTP directory.

If you cannot access the Agilent FTP server from your E5810B, you can use any standard FTP server that is available, provided you have an image of the firmware. The requirements are an FTP server, an image of the E5810B firmware, and a LAN connection between the E5810B and the FTP server.

The procedure to update the E5810B firmware depends on whether or not the Agilent FTP site is accessible from the E5810B or how your network is configured. The E5810B FTP client used to upload new firmware is a standard FTP client and currently does not support proxies. This means that anyone behind a firewall will most likely not be able to directly access the Agilent FTP site.

Updating the E5810B firmware via a connected USB drive

1 *Acquire an image of the E5810B firmware.*

Obtain the image from your Web browser. You may need to set up an FTP proxy on your Web browser.

i On your Web browser, type ftp://ftp.agilent.com/pub/e5810/e5810b/ to connect you to the Agilent FTP server. This page displays the files associated with the E5810B.

ii Select the file **e5810_B_latest_firmware.hex** and save it to the USB drive. For example, in the Internet Explorer, right-click the file and select **Copy to Folder**. Other Web browsers may have a different sequence.

> **NOTE**
>
> • Alternatively, you can directly FTP to the Agilent FTP server at ftp.agilent.com using the anonymous FTP, supplying the user login, and downloading the file at /pub/e5810/e5810b/e5810_B_latest_firmware.hex.
>
> • The E5810B supports the USB drive formatted in the FAT32 or XFAT32 format only.

2 *Verify that the E5810B is idle.*

Updating the E5810B is a significant activity. Ensure that no other users or programs are using the E5810B before you attempt to update the firmware. You can check the number of open sessions by displaying the E5810B LAN/GPIB/USB Gateway Status page. To open this page, select the **Session Status** tab on the Navigation Bar. It is recommended that you reboot the E5810B before performing the firmware update process.

3 *Open the Updating Firmware page.*

i Select **Updating the E5810B Firmware** in the E5810B Web Access Help Table of Contents to display the Updating your Firmware page.

ii Select the **Update the E5810B firmware** hyperlink on this page. You will be prompted for a password before the Update Firmware on your E5810B LAN/GPIB/USB Gateway dialog box is displayed as shown in Figure 1.
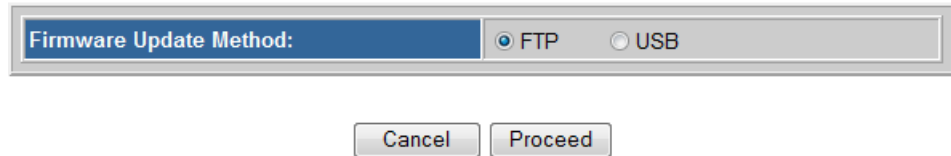
Update Firmware on your E5810B LAN/GPIB/USB Gateway

Firmware Update Method:	⦿ FTP	◯ USB

[Cancel] [Proceed]

Figure 1   E5810B LAN/GPIB/USB Gateway dialog box

    iii Select **USB** as the firmware update method and select **Proceed**.

<table>
<tr><td>NOTE</td><td>You can also directly access the Updating Firmware page on your E5810B LAN/GPIB/USB Gateway page at http://<IP_Address>/dynamicWebFile/firmware_update_login.php, where <IP_Address> is the IP address displayed on the front display panel of the E5810B.</td></tr>
</table>

4 *Perform firmware update.*

    i You will be prompted with an update firmware (via USB) message dialog box as shown in Figure 2.
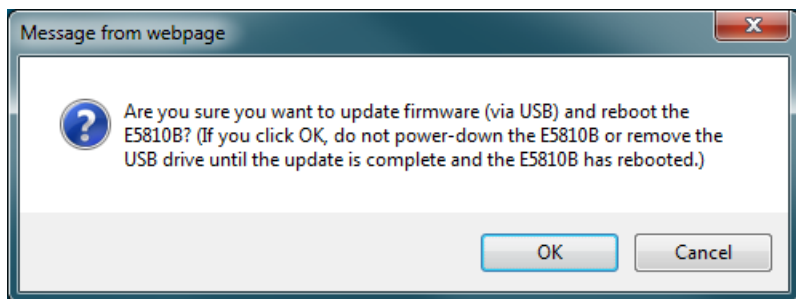
Message from webpage

Are you sure you want to update firmware (via USB) and reboot the E5810B? (If you click OK, do not power-down the E5810B or remove the USB drive until the update is complete and the E5810B has rebooted.)

[OK] [Cancel]

Figure 2   Update firmware (via USB) message dialog box

ii Ensure that the USB drive with the firmware image file is connected and select **OK**.

iii After you have confirmed the update, the E5810B front panel should display the **Updating firmware...** message.

iv The USB LED should flash, indicating USB activity is taking place.

v If the USB drive is not connected or there is no firmware image file found, you will be prompted by an error message dialog box as shown in Figure 3. Select **OK** and repeat step 3.
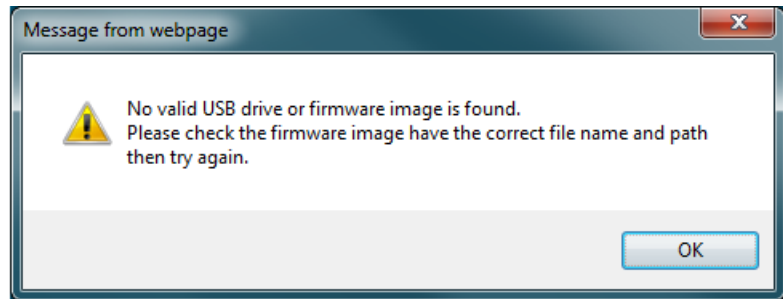

Figure 3   Error message dialog box

vi After the firmware image has been downloaded into the E5810B, the E5810B will automatically reboot and display the **Rebooting E5810B...** message. The E5810B will then begin a normal startup sequence.

5 *Verify the firmware revision.*

When the E5810B is successfully rebooted, verify that the firmware has been downloaded successfully by displaying the E5810B Welcome page and verify that the firmware revision number shows the correct version of the firmware.

Agilent FTP site is accessible from the E5810B

1 *Verify that the E5810B is idle.*

Updating the E5810B is a significant activity. Ensure that no other users or programs are using the E5810B before you attempt to update the firmware. You can check the number of open sessions by displaying the E5810B LAN/GPIB/USB Gateway Status page. To open this page, select the **Session Status** tab on the Navigation Bar. It is recommended that you reboot the E5810B before performing the firmware update process.

2 *Open the Updating Firmware page.*

i Select **Updating the E5810B Firmware** in the E5810B Web Access Help Table of Contents to display the Updating your Firmware page.

ii Select the **Update the E5810B firmware** hyperlink on this page. You will be prompted for a password before the Update Firmware on your E5810B LAN/GPIB/USB Gateway dialog box is displayed as shown in Figure 4.
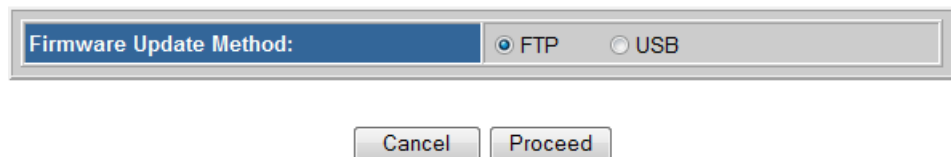
Update Firmware on your E5810B LAN/GPIB/USB Gateway

Firmware Update Method:	◉ FTP ○ USB

Cancel   Proceed

Figure 4   E5810B LAN/GPIB/USB Gateway dialog box

iii Select **FTP** as the firmware update method and select **Proceed** to display the page as shown in Figure 5.

Update Firmware on your E5810B LAN/GPIB/USB Gateway

Firmware FTP Server Hostname or IP Address:	ftp.agilent.com
User Login:	anonymous
Password:	•••••
Firmware File:	/pub/e5810/e5810b/e5810_B_latest_firmware.h

Cancel   Update Firmware

Figure 5   E5810B LAN/GPIB/USB Gateway dialog box (FTP)

NOTE

You can also directly access the Updating Firmware page on your E5810B LAN/GPIB/USB Gateway page at
http://<IP_Address>/dynamicWebFile/firmware_update_login.php, where <IP_Address> is the IP address displayed on the front panel display of the E5810B.

3 *Check that all the default parameters are correct.*

- **Firmware FTP server Hostname or IP Address:** ftp.agilent.com

- **User Login:** Enter the login name for the FTP server.

- **Password:** Enter the password associated with the login name.

- **Firmware File:**
  /pub/e5810/e5810b/e5810_B_latest_firmware.hex

4 *Perform firmware update.*

   i Select **Update Firmware** to display the password dialog box. Select **OK** to confirm the update and the E5810B will attempt to download the firmware from the FTP site.

   ii After you have confirmed the update, the E5810B front panel should display the **Updating firmware...** message.

   iii The LAN LED should flash, indicating LAN activity is taking place. The firmware for the E5810B is approximately 12 MB and downloading time may vary, depending on network connections.

   iv After the firmware image has been downloaded into the E5810B, the E5810B will automatically reboot and display the **Rebooting E5810B...** message. The E5810B will then begin a normal startup sequence.

5 *Verify the firmware revision.*

When the E5810B is successfully rebooted, verify that the firmware has been downloaded successfully by displaying the E5810B Welcome page and verify that the firmware revision number shows the correct version of the firmware.

Agilent FTP site is not accessible from the E5810B

1 *Acquire an image of the E5810B firmware.*

If the Agilent FTP site is not accessible from the E5810B, you may still be able to get the image from your Web browser. You may need to set up an FTP proxy on your Web browser.

   i On your Web browser, type ftp://ftp.agilent.com/pub/e5810/e5810b/ to connect you to the Agilent FTP server. This page displays the files associated with the E5810B.

   ii Select the file **e5810_B_latest_firmware.hex** and save it. For example, in the Internet Explorer, right-click the file and select **Copy to Folder**. Other Web browsers may have a different sequence.

NOTE	Alternatively, you can directly FTP to the Agilent FTP server at ftp.agilent.com using the anonymous FTP, supplying the user login, and downloading the file at /pub/e5810/e5810b/e5810_B_latest_firmware.hex.

2 *Install FTP server program, if needed.*

You will need to access a standard FTP server program. Refer to "Troubleshooting guidelines" on page 11 for tips to access a standard FTP server.

3 *Set up the user account information for the FTP server.*

Refer to the FTP server documentation on creating a user account and a password. The user account is used for the login name.

4 *Copy the E5810B firmware image to the FTP directory.*

Once you have an FTP login, copy the E5810B firmware image to the directory on the FTP server's file system that is associated with the user account as set up in step 3. Manually start the FTP server, if needed.

5 *Verify that the E5810B is idle.*

Updating the E5810B is a significant activity. Ensure that no other users or programs are using the E5810B before you attempt to update the firmware. You can check the number of open sessions by displaying the E5810B LAN/GPIB/USB Gateway Status page. To open this page, select the **Session Status** tab on the Navigation Bar. It is recommended that you reboot the E5810B before performing the firmware update process.

6 *Open the Updating Firmware page.*

  i Select **Updating the E5810B Firmware** in the E5810B Web Access Help Table of Contents to display the Updating your Firmware page.

  ii Select the **Update the E5810B firmware** hyperlink on this page. You will be prompted for a password before the Update Firmware on your E5810B LAN/GPIB/USB Gateway dialog box is displayed as shown in Figure 6.

Update Firmware on your E5810B LAN/GPIB/USB Gateway

Firmware Update Method:	⦿ FTP ○ USB

Cancel   Proceed

Figure 6   E5810B LAN/GPIB/USB Gateway dialog box

iii Select **FTP** as the firmware update method and select **Proceed** to display the page as shown in Figure 7.

Update Firmware on your E5810B LAN/GPIB/USB Gateway

Firmware FTP Server Hostname or IP Address:	ftp.agilent.com
User Login:	anonymous
Password:	•••••
Firmware File:	/pub/e5810/e5810b/e5810_B_latest_firmware.h

Cancel   Update Firmware

Figure 7   E5810B LAN/GPIB/USB Gateway dialog box (FTP)

NOTE	You can also directly access the Updating Firmware page on your E5810B LAN/GPIB/USB Gateway page at http://<IP_Address>/dynamicWebFile/firmware_update_login.php, where <IP_Address> is the IP address displayed on the front display panel of the E5810B.

7 *Configure the FTP parameters and filename:*

- **Firmware FTP server Hostname or IP Address:** Enter the IP address of the FTP server (for example, 192.6.143.21) or enter the FTP server domain name, if a DNS server is available and configured in the E5810B (for example, ftp.agilent.com).

- **User Login:** Enter the login name for the FTP server.

- **Password:** Enter the password associated with the login name.

- **Firmware File:** Enter the filename of the E5810B firmware. The default filename is e5810_B_latest_firmware.hex. You may also need to add the appropriate directory information to locate the file on the FTP server.

8 *Perform firmware update.*

  i Select **Update Firmware** to display the password dialog box. Select **OK** to confirm the update and the E5810B will attempt to download the firmware from the FTP site.

  ii After you have confirmed the update, the E5810B front panel should display the **Updating firmware...** message.

  iii The LAN LED should flash, indicating LAN activity is taking place. The firmware for the E5810B is approximately 12 MB and downloading time may vary, depending on network connections.

  iv After the firmware image has been downloaded into the E5810B, the E5810B will automatically reboot and display the **Rebooting E5810B...** message. The E5810B will then begin a normal startup sequence.

9 *Verify the firmware revision.*

When the E5810B is successfully rebooted, verify that the firmware has been downloaded successfully by displaying the E5810B Welcome page and verify that the firmware revision number shows the correct version of the firmware.

Troubleshooting guidelines

The E5810B records information on the firmware update process in a system log that is viewable through the E5810B Web access or through the E5810B Telnet interface.

1 *View the system log from the E5810B Web access.*

To view the system log information on the E5810B Web access, on your Web browser address line, type: `http://<IP Address>/systemLog.htm` where `<IP Address>` is the IP address displayed on the E5810B front panel display and select **Enter** to display the system log. After a successful firmware update, the E5810B systems log should show normal startup messages as shown below.

(00:00:00.00) Selftest Passed

(00:00:00.00) Searching for DHCP Server

(00:00:00.00) GPIB initialized with name : [gpib0]

(00:00:00.00) RS232 initialized with name : [COM1]

(00:00:00.00) USB initialized with name : [usb0]

2 *View the system log from Telnet.*

To view the system log from Telnet, click **Start** and select **Run...**, or right-click the bottom-left corner of the Desktop and select **Run** (Windows 8). Type `telnet <IP_Address>` on the Run dialog box line, where `<IP_Address>` is the IP address displayed on the E5810B front panel display.

Refer to the *E5810B User's Guide* for more information on the Telnet utility. When the Telnet client is launched, you can view the system log by typing `syslog-display`. After a successful firmware update, the E5810B systems log should show normal startup messages as shown below.

(00:00:00.00) Selftest Passed

(00:00:00.00) Searching for DHCP Server

(00:00:00.00) GPIB initialized with name : [gpib0]

(00:00:00.00) RS232 initialized with name : [COM1]

(00:00:00.00) USB initialized with name : [usb0]

3 *If the update is unsuccessful.*

If the last message in the system log indicates the E5810B was trying to update firmware, the firmware process was not successful and the E5810B will display a message dialog. In this case, try the following:

i *Verify the FTP server address.*

Verify that the firmware FTP server domain name is correct and fully qualified. A domain name is a symbolic name for an IP address. For example, **ftp.agilent.com** is the domain name for IP Address 192.6.143.21. Try to manually use the FTP to access the FTP server that contains the E5810B firmware. Verify that the firmware file is in the proper directory and that the firmware file has the correct name.

ii *Manually enter the DNS server address.*

For the firmware update process to use a domain name, the E5810B must have a DNS setup. If you statically configured the IP address for the E5810B, you will need to manually enter the DNS server address in the Configuring your E5810B LAN/GPIB/USB Gateway page.

iii *Use the IP address.*

Try using the IP address of the FTP server instead of the domain name.

4 *Check login, password, and firmware name entries.*

Ensure that the login, password, and firmware filename are entered correctly and that the login name and password match a valid user account on the FTP server.

iv *Check directory information.*

Ensure that the correct directory information is present (if needed), such as /pub/e5810/e5810b/e5810_B_latest_firmware.hex. If you use the directory information, make sure that the directory designator character is correct for your FTP server. Some FTP servers use / (forward slash) and others use \ (backslash).

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