

Digi ConnectPort® X4H Telit Modem Firmware Update - Verizon

Update Guide

Revision history—90002337

Revision	Date	Description
A	February 2019	Initial release.
B	February 2019	Additional edits.

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Verizon network changes: Digi ConnectPort® X4H

This document describes how to update cellular modem firmware to comply with Verizon network changes occurring on March 30th, 2019.

It applies to the Digi ConnectPort X4H (X4H-Z1U-L301-US) containing the following modem:

- Telit LE910-NA1 (single SKU, North America/AT&T and Verizon)

Determine if an update is needed

Prerequisites

- Digi ConnectPort X4H firmware version 2.22.1 or above installed on X4H (PN 82001536)
- Verizon SIM

The LE910 module has two firmware images. The modem revision of the relevant image can only be checked when a Verizon SIM is the active SIM in the product.

Step 1: Find the modem revision

Choose one interface from those below to retrieve the modem revision.

Method 1: Command line

1. Perform the command: `display mobile`
2. Take note of the **Revision ID** field in the output.

Method 2: Web interface

1. From the web interface, navigate to the **Administration -> System Information** page.
2. Open the **Mobile** header of the page.
3. In the **Mobile Information** section take note of the **Modem Revision** field.

Method 3: Digi Remote Manager

1. In the **Devices** tab in Digi Remote Manager, find your device. Double-click on the device entry to display the device properties.
2. Click the **Edit Device Configuration** button.
3. In the new window that opens, use the navigation menu in the upper right corner to select. **Status -> Mobile.**
4. Take note of the **Revision ID** field on the page.

Step 2: Determine if a modem firmware update is required

1. Make sure that your revision ID contains four groupings of digits, for example: 20.00.012.7.
2. The modem does not need to be updated if the first three groups are 20.00.015. Any other value indicates that an update is needed and you should select the process below which meets requirements.

Update the Modem Firmware

This section describes updating a module remotely. Physical access is not needed to perform the update in this fashion, but the device needs to exist in Digi Remote Manager and must have network access. Only the active firmware (Verizon or AT&T) of the module is able to be updated using this method.

Updating with this process is not recommended if the alternate wired approach will work. Due to the lack of feedback from the update this process will take significantly longer with no ability to report on progress and final status.

Choose one of the following options to update the modem firmware.

- [Method 1: Update the modem firmware using Digi Remote Manager](#)
- [Method 2: Update the modem firmware using a wired Ethernet connection](#)

Best practices

- Disable network clients, SureLink and Python applications.
- Ensure solid uninterrupted power. There is a small window during the update process where power loss may cause corrupted modem firmware.

Method 1: Update the modem firmware using Digi Remote Manager

This section describes updating a module remotely. Physical access is not needed to perform the update in this fashion, but the device needs to exist in Digi Remote Manager and must have network access. Only the active firmware (Verizon or AT&T) of the module is able to be updated using this method.


Updating with this process is not recommended if the alternate wired approach will work. Due to the lack of feedback from the update this process will take significantly longer with no ability to report on progress and final status.

Prerequisites

- Digi ConnectPort X4H firmware version 2.22.1 or above installed on X4H ([PN 82001536](#))
- Python update application ([PN 83000125-01](#))
- Digi Remote Manager (DRM) account
- Cellular connection with access to the server **ftp1.digi.com**

Step 1: Install Python update application

The 83000125-01 archive contains two files: `t_update.py` and `t_update.zip`. These files must be placed in the Python application storage of the gateway.

1. In the **Devices** tab of Digi Remote Manager find your device. Double-click on the device entry to display the device properties.
2. From the **Device** navigation options on the left select the **Python** settings group.
3. Upload `t_update.py` and `t_update.zip` with the  button.

Step 2: Configure Python auto-start

1. Verify you are still on the **Python** page in Digi Remote Manager.
2. Disable any currently configured Python scripts set to auto-start by de-selecting the **Enable** option.
3. In an unused field (or by replacing an existing entry) set up a command line to run:

```
t_update.py -c
```
4. Make sure that **On Program Exit** is set to **No action taken**.
5. Enable auto-start by clicking the **Enable** option.
6. Save changes by clicking the **Save** button on the bottom of the screen.

Step 3: Perform update

1. From the **Devices** tab summary display in Digi Remote Manager, select your device.
2. Use the right-click context menu and select **More -> Reboot...**. The script will run when the gateway boots.
3. Please be patient, the update process can take up to 20 minutes.
4. After waiting 20 minutes, verify the process was successful by using the [Find the modem revision](#) procedure. The process is successful when the correct revision is reported.

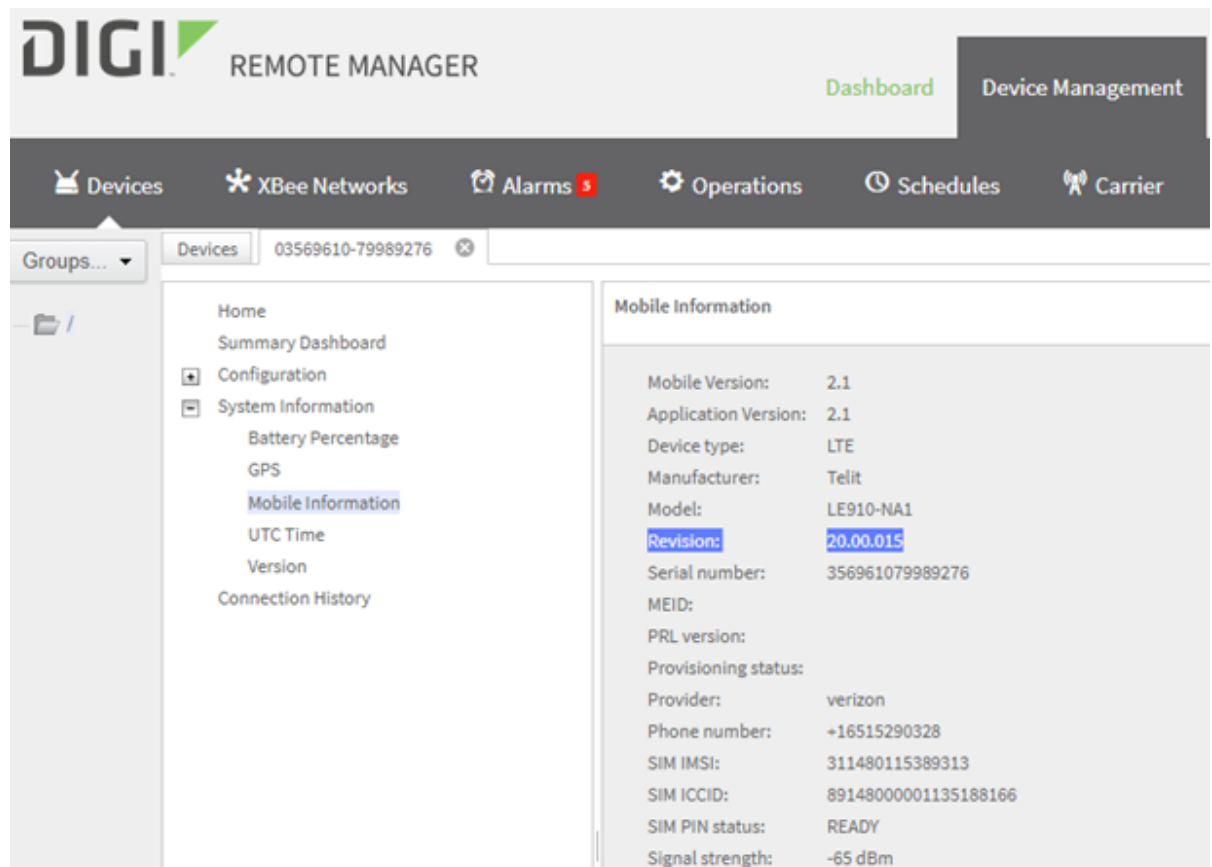
Note You can close and open a new configuration window to retrieve a non-cached revision number.

Step 4: Finalize

1. Disable Python auto-start for the `t_update.py` script, as execution on boot will extend boot times significantly by performing the module update queries.
2. Restore any settings or files changed while preparing to update.
3. Right-click on the device and select **More -> Reboot...**
4. Once the gateway has reconnected to Digi Remote Manager the new patch level should once again be confirmed using the [Find the modem revision](#) procedure.
5. If the update process succeeded it is safe to remove `t_update.py` and `t_update.zip`.

Step 5: Verify that the update was successful

1. In the Remote Manager, click on the **Device Management** tab.
2. Display the device properties.
3. Click **Refresh** at the bottom of the device page.
4. Close the **Device** tab.
5. Re-open the device tab by double-clicking on your device.
6. Select **System Information > Mobile information**.
7. Note the new value for **Revision**, which should now be 20.00.015.



The screenshot displays the Digi Remote Manager interface. The top navigation bar includes the Digi logo and 'REMOTE MANAGER' text, with 'Dashboard' and 'Device Management' tabs. Below this is a secondary navigation bar with icons for 'Devices', 'XBee Networks', 'Alarms', 'Operations', 'Schedules', and 'Carrier'. The main content area shows a breadcrumb trail: 'Groups...' > 'Devices' > '03569610-79989276'. A left sidebar contains a menu with options: 'Home', 'Summary Dashboard', 'Configuration', 'System Information', 'Battery Percentage', 'GPS', 'Mobile Information' (highlighted), 'UTC Time', 'Version', and 'Connection History'. The 'Mobile Information' section on the right lists various device details:

Field	Value
Mobile Version:	2.1
Application Version:	2.1
Device type:	LTE
Manufacturer:	Telit
Model:	LE910-NA1
Revision:	20.00.015
Serial number:	356961079989276
MEID:	
PRL version:	
Provisioning status:	
Provider:	verizon
Phone number:	+16515290328
SIM IMSI:	311480115389313
SIM ICCID:	89148000001135188166
SIM PIN status:	READY
Signal strength:	-65 dBm

Method 2: Update the modem firmware using a wired Ethernet connection

This section describes updating a module when a physical wired connection is available. This process may be used at any time and will be able to be used after the March 30th deadline to perform updates to modules that may not be able to register on the cellular network due to the issue. The update will attempt to update both firmware images (Verizon and AT&T) on the module.

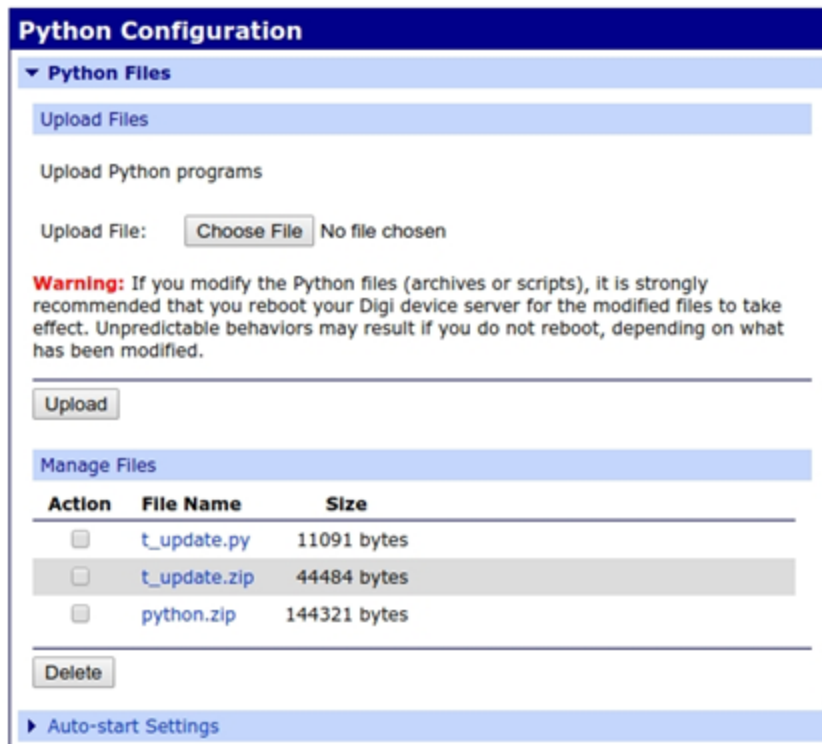
Prerequisites

- Digi ConnectPort X4H firmware version 2.22.1 or above installed on X4H (PN 82001536)
- Python update application (PN 83000125-01)
- Wired Ethernet connection with access to the server **ftp1.digi.com**

Step 1: Install Python update application

The 83000125-01 archive contains two files: *t_update.py* and *t_update.zip*. These files must be placed in the Python application storage of the gateway.

1. Open a browser and navigate to the web interface of the gateway.
2. From the navigation pane on the left side of the page click the **Python** link in the **Applications** section.
3. Upload the *t_update.py* and *t_update.zip* files to the Python storage location.



4. In the **Auto-start settings** section, disable any Python applications set to run, as the update process and these applications may interfere with each other.

Step 2: Manually run the update application

1. Telnet or SSH to gateway.
2. At the command prompt, type: `python t_update.py`
The script will run and report its progress to the terminal. There are two images on the module that it will query and update if necessary.
3. Success will be indicated in the output by the message “Firmware was successfully updated!”.
Because there are two images, look for this output in the processing of each image. Some units do not need an update to one or both of the images. If this is the case you may see the message “Firmware update not needed...”.

Step 3: Verify the update was successful

A successful update is verified in [Step 2](#), above, as indicated in the output by the message “Firmware was successfully updated!”.

You can use the process in [Find the modem revision](#) to verify the correct revision has been released.

Step 4: Remove update application

After you have verified that the update was successful, you should remove the update application.

1. Open a browser and navigate to the web interface of the gateway.
2. From the navigation pane on the left side of the page click the **Python** link in the **Applications** section.
3. Select the checkboxes for `t_update.py` and `t_update.zip`.
4. Click **Delete**.