



Digi ConnectPort® X4/X4H

Telit HE910-D Modem Firmware Update
Guide

Revision history—90002414

Revision	Date	Description
A	September 2020	Initial release.

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Digi ConnectPort® X4/X4H: Upgrade the Telit HE910-D modem firmware

This document describes how to update the cellular modem firmware of a Digi ConnectPort X4/X4H device that contains a Telit HE910-D modem. The update fixes an issue where it is possible for the Telit HE910-D modem to permanently stop connecting to the network.

To fix this issue, you should update the Telit modem from revision 12.00.028 or 12.91.028 to revision 12.01.020.

Step 1: Find the Telit modem revision to determine if an update is needed

You need to perform this update only for Telit HE910-D modems at revision 12.00.028 or 12.91.028. This section explains how to determine the revision of the Telit HE910-D modem on your device. You can use one of the following methods to determine the revision.

Note If the revision is not 12.00.028 or 12.91.028, you do not need to perform this update.

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Method 1: Command line

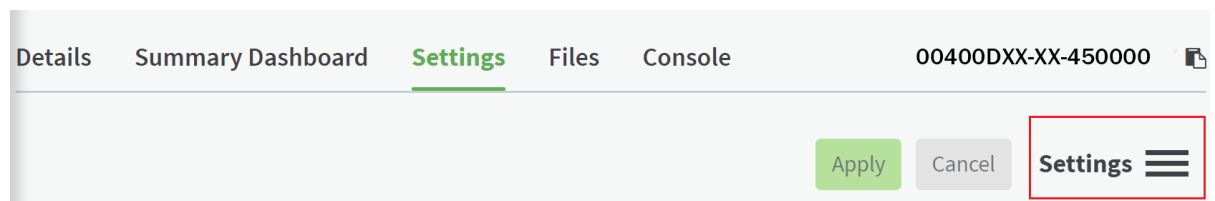
1. Perform the command: `display mobile`
2. The revision number is in the **Revision ID** field in the output.

Method 2: Web interface

1. Open the web interface.
2. Click **Administration > System Information**.
3. Open the **Mobile** header of the page.
4. In the **Mobile Information** section, the revision number is in the **Revision ID** field.

Method 3: Digi Remote Manager

1. Open Digi Remote Manager and log in.
2. Click **Devices** in the left-hand pane and find your device.
3. Double-click on the device entry to display the **Devices** page.
4. Click **Settings** in the toolbar.
5. On the right side of the page, click the **Settings** icon.



6. From the drop-down menu, click **Status > Mobile**. The **Mobile** page displays.
7. Scroll down to view the revision number in the **Revision ID** field.

Step 2: Update the Digi ConnectPort X4/X4H firmware

Before you can update the HE910-D Telit modem firmware, the Digi ConnectPort X4/X4H device firmware must be at version 2.26.0 (PN 82001536_W) or later.

To update the XBee firmware on a gateway:

1. Download the appropriate firmware file from the Digi Support site.
 - a. Navigate to the [Digi Support site](#).
 - b. Download this file: **Gateway OS Firmware: ConnectPort X4 V2.26.0 (EOS)**
2. [Access the web interface](#).
3. From the web interface, select **Configuration > XBee Network > XBee Configuration** and then click the **Gateway Firmware Update** link.
4. The **Gateway Firmware Update** page shows the type of XBee radio in the gateway and the current firmware level.
5. Type or browse to the file name containing the firmware update for the gateway's XBee module.
6. Click the **Update** button. After the firmware loads successfully, the XBee module will be restarted.

Step 3: Update the Telit modem firmware

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

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Method 1: Update the Telit modem firmware using Digi Remote Manager

This section describes how to remotely update the Telit modem firmware on a device. 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.

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 2.26.0 (PN 82001536_W) or later installed on X4H (PN 82001536)
- Python update application (PN 83000129) downloaded onto your hard drive.
- Digi Remote Manager (DRM) account
- Cellular connection with access to the server **ftp1.digi.com**

Step 1: Install Python update application

The 83000129 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. Make sure you have downloaded the Python update application (PN 83000129) onto your hard drive.
2. Open Digi Remote Manager and log in.
3. Click **Devices** in the left-hand pane and find your device.
4. Double-click on the device entry to display information about the device.
5. Click the **Files** tab.
6. Click the Python folder.

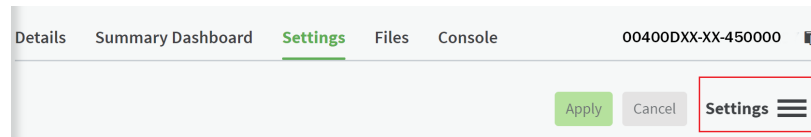


7. Click the **Upload** icon to upload the *t_update.py* and *t_update.zip* files that you had previously downloaded onto your hard drive.

Step 2: Configure Python auto-start

1. Navigate to the Python auto-start page.
 - a. Click **Devices** in the left-hand pane and find your device.
 - b. Double-click on the device entry to display information about the device.
 - c. Click **Settings** in the toolbar.

- d. On the right side of the page, click the **Settings** icon.



- e. From the drop-down menu, click **Config > Python auto-start**.
2. Disable all currently configured Python scripts that are set to auto-start.
 - a. Expand a Python script.
 - b. De-select the **Python auto-start enable** option.
 3. Set up a command line to run at startup.
 - a. Expand a Python script, either an unused field or replace an existing entry.
 - b. In the **Python command to run at startup** field, enter: `t_update.py -c`
 - c. Make sure that the value for the **Action taken on exit of program** field is set to **No action taken**.
 - d. Select the **Python auto-start enable** option to enable auto-start.
 4. Click **Apply** to save the changes.

Step 3: Perform update

1. Click **Devices** in the left-hand pane and find your device.
2. Click the check box next to the device.
3. Click **Actions > Reboot** to reboot the device and start the update process.
4. Please be patient, as the update process can take up to 30 minutes.

Step 4: Verify that the update was successful

After waiting about 30 minutes, you can verify that the process was successful.

1. Click **Devices** in the left-hand pane and find your device.
2. Double-click on the device entry to display information about the device.
3. Click **Settings** in the toolbar.
4. On the right side of the page, click the **Settings** icon.
5. From the drop-down menu, click **Status > Mobile**. The **Mobile** page displays



6. Click the **Refresh** button twice.

Note that the button is at the top of the screen and you may have to scroll up to see it.

7. Locate the **Revision ID** field. If the revision ID is:
 - **12.01.020**: The update was successful. Move on to Step 5.
 - **A revision earlier than 12.01.020**: Click the **Refresh** button again, to make sure the page has updated.
 - **12.00.028**: The update has most likely failed. Review the device logs to determine why the update was not successful.
 - **12.91.028**: The update may have partially succeeded or the update may still be in progress. Review the device logs for more information.

Step 5: Finalize

1. Navigate to the Python auto-start page.
 - a. Click **Devices** in the left-hand pane and find your device.
 - b. Double-click on the device entry to display information about the device.
 - c. Click **Settings** in the toolbar.
 - d. On the right side of the page, click the **Settings** icon.
 - e. From the drop-down menu, click **Config > Python auto-start**.
2. 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.
 - a. Expand the *t_update.py script* Python script.
 - b. De-select the **Python auto-start enable** option.
3. Click **Apply** to save the changes.
4. Restore any settings or files changed while preparing to update.
5. Reboot the device.
 - a. Click **Devices** in the left-hand pane and find your device.
 - b. Click the check box next to the device.
 - c. Click **Actions > Reboot** to reboot the device.
6. 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. The revision number for the Telit firmware should be 12.01.020.

7. If the update process succeeded it is safe to remove *t_update.py* and *t_update.zip*.
 - a. Click **Devices** in the left-hand pane and find your device.
 - b. Double-click on the device entry.
 - c. Click the **Files** tab.
 - d. Click the Python folder.
 - e. Click the check boxes next to the files that you want to delete: *t_update.py* and *t_update.zip*
 - f. Click the **Remove** icon.

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

This section describes how to update the Telit modem firmware when a physical wired connection is available.

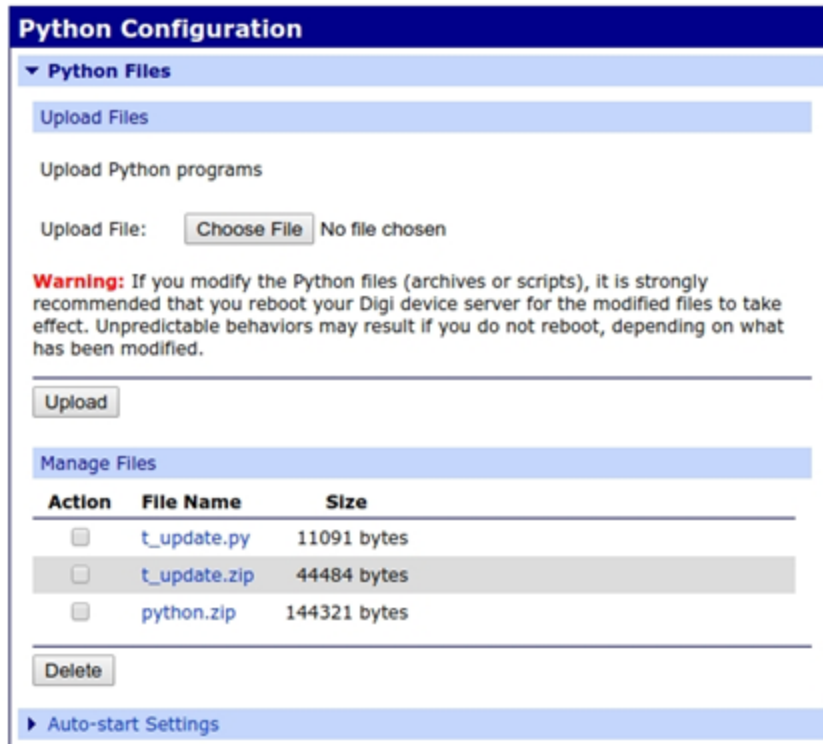
Prerequisites

- Digi ConnectPort X4H firmware version 2.26.0 (PN 82001536_W) or above installed
- Python update application ([PN 83000129](#))
- Wired Ethernet connection with access to the server **ftp1.digi.com**

Step 1: Install Python update application

The 83000129 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 **Applications > Python**.
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 is at the latest version 12.01.020.”

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 is at the latest version 12.01.020”.

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 **Application > Python**.

*Step 3: Update the Telit modem
firmware*

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

3. Select the checkboxes for *t_update.py* and *t_update.zip*.
4. Click **Delete**.