

Digi Connect[®] Sensor Telit Modem Firmware Update - Verizon

Update Guide

Revision history—90002339

Revision	Date	Description
A	February 2019	Initial release

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Verizon network changes: Digi Connect® Sensor

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 Connect Sensor+ containing one of these LTE modems:

Model	Description	Revisions
Telit LE910-NA1	Single SKU AT&T and Verizon	20.00.012.4 20.00.012.7 20.00.522.4
Telit LE910-SV1	Verizon	20.00.522.7

Determine if an update is needed

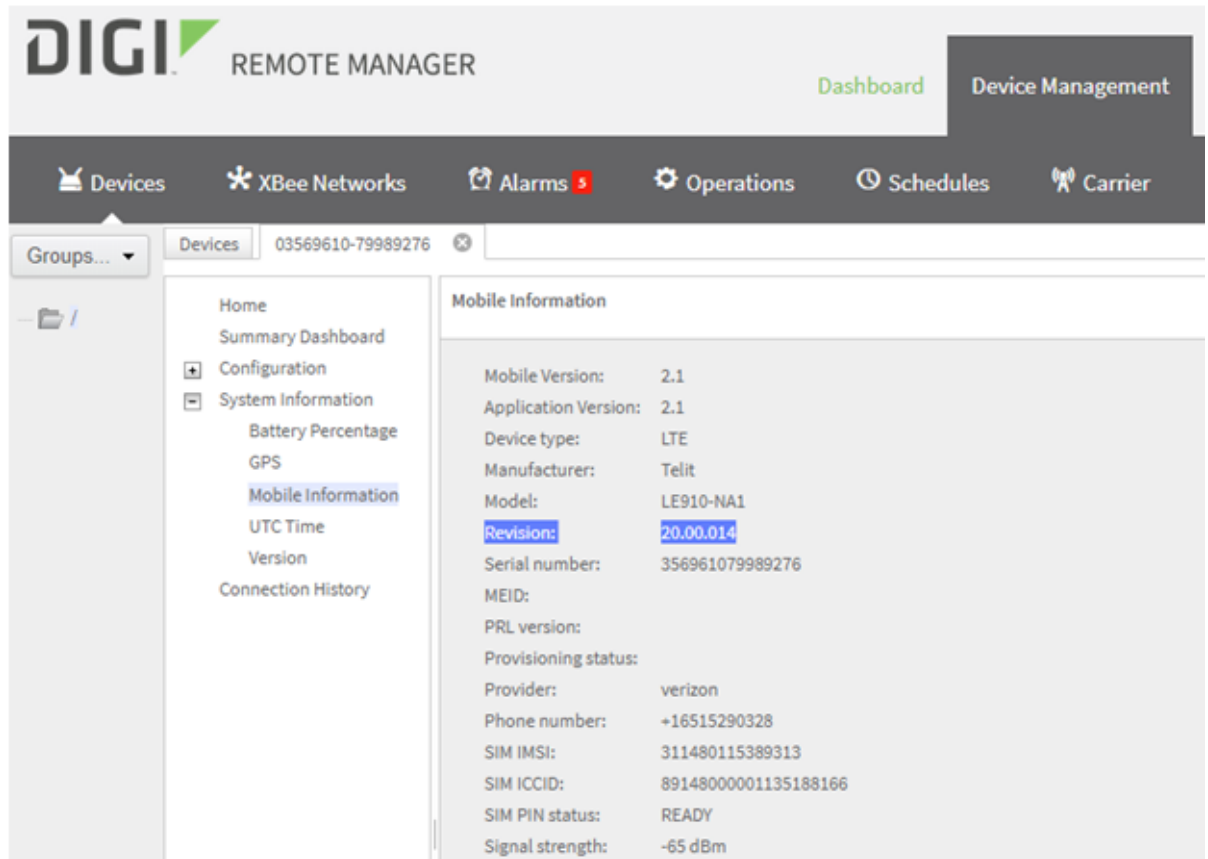
This process is done in Digi Remote Manager.

Prerequisites

- Remote manager account
- Device ID of the Connect Sensor to update

Step 1: Find the modem firmware revision

1. Open a web browser and navigate to <https://remotemanager.digi.com>.
2. Log into your account.
3. Click on the **Device Management** tab.
4. Find your device using the device ID.
5. Double-click on the device ID to open the device properties.
6. Select **System Information > Mobile Information**.
7. Note the current revision number in the **Revision** field.



Step 2: Determine if a modem firmware update is required

The desired revision is 20.00.015 or later. If the modem is already at this revision, no firmware update is needed.

Note If you have version 20.00.52x on your modem, it is using AT&T firmware and the Verizon firmware update will not work. Verizon service is required to make this update.

Update the modem firmware over the air (FOTA)

This section describes how to update the modem over the air. The update process is initiated from the Digi Remote Manager. It requires a working cellular connection. It does not require physical access to the device.

Prerequisites

- Remote manager account
- Device ID of the Connect Sensor to update
- Modem IMEI
- fota.exe application ([PN 80010027](#))

Step 1: Find the modem firmware revision

1. Open a web browser and navigate to <https://remotemanager.digi.com>.
2. Log into your account.
3. Click on the **Device Management** tab.
4. Find your device using the device ID.
The device ID looks like: 00010000-00000000-03569610-79989276. It contains the IMEI of the modem. You will need the device ID later in the FOTA process.
5. Double-click on the device ID to open the device properties.
6. Select **System Information > Mobile Information**.
7. Note the current revision number in the **Revision** field.

Step 2: Determine the update string

Find the firmware revision below, and copy the corresponding update string.

Model LE910-SV1 and Revision 20.00.012.2

Update file name: UpdPkg_LE910_SV1_1G_20.00.012.2_20.00.015.0.bin

Patch size: 4228650

Update string:

ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlbGl0AFVwZFBzZ19MRTkxM
F9TVjFfMjUdfMjAuMDAuMDEyLjJfMjAuMDAuMDE1LjAuYmlu

Model LE910-SV1 and Revision 20.00.012.3**Update file name:** UpdPkg_LE910_SV1_1G_20.00.012.3_20.00.015.0.bin**Patch size:** 4232406**Update string:**

ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlOGl0AFVwZFBzZ19MRTkxMF9TVjFfMUdfMjAuMDAuMDEyLjNmMjAuMDAuMDE1LjAuYmlu

Model LE910-SV1 and Revision 20.00.012.8**Update file name:** UpdPkg_LE910_SV1_1G_20.00.012.8_20.00.015.0.bin**Patch size:** 4165114**Update string:**

ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlOGl0AFVwZFBzZ19MRTkxMF9TVjFfMUdfMjAuMDAuMDEyLjhmMjAuMDAuMDE1LjAuYmlu

Model LE910-NA1 and Revision 20.00.012.4 or 20.00.522.4**Update file name:** UpdPkg_LE910_SV1_1G_SKU_20.00.012.4_20.00.015.0.bin**Patch size:****Update string:**

ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlOGl0AFVwZFBzZ19MRTkxMF9TVjFfMUdfU0tVXzlwLjAwLjAxMi40XzlwLjAwLjAxNS4wLmJpbG==

Model LE910-NA1 and Revision 20.00.012.7 or 20.00.522.7**Update file name:** UpdPkg_LE910_SV1_1G_SKU_20.00.012.7_20.00.015.0.bin**Patch size:** 4167370**Update string:**

ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlOGl0AFVwZFBzZ19MRTkxMF9TVjFfMUdfU0tVXzlwLjAwLjAxMi43XzlwLjAwLjAxNS4wLmJpbG==

Generate update strings for other revisions

If your firmware version is not listed above, run the fota application from a Windows command prompt. For example:

```
C:\>fota ftp1.digi.com 21 anonymous test support/telit UpdPkg_LE910_SV1_1G_20.00.012.2_20.00.015.0.bin
```

```
ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlOGl0AFVwZFBzZ19MRTkxMF9TVjFfMUdfMjAuMDAuMDEyLjJfMjAuMDAuMDE1LjAuYmlu
```

The above strings obtain the modem update file from the Digi FTP server. The APN configured on the modem must have access to the Internet to use this server. This is usually the case if no APN is configured.

If your APN does not provide Internet access, you can use an FTP server on your private network. Place the modem update file on the FTP server. Run the command below to generate the update string. Be sure to substitute your FTP server parameters.

```
C:\>fota ftp.example.com 21 login password /path/to/directory UpdPkg_LE910_SV1_1G_20.00.012.2_20.00.015.0.bin
```

```
ZnRwLmV4YW1wbGUuY29tADlxAGxvZ2luAHBhc3N3b3JkAC9wYXR0L3RvL2RpcmVjdG9yeQBvcGRQa2dfTEU5MTBfU1YxXzFhXzlwLjAwLjAxMi4yXzlwLjAwLjAxNS4wLmJpbG==
```


Step 3: Initiate the firmware update

1. In the Remote Manager, select **Documentation > API Explorer**.
2. Select **Examples/SCI/Data Service/Send Binary Request**.
3. A template request (in XML) will appear. Delete the template and replace with XML below.
 - Patch the **#Device ID#** with the correct value from [step 1](#).
 - Patch the **#Update string#** with the value from [step 2](#).

```
<sci_request version="1.0">
  <data_service allowOffline="true" synchronous="false">
    <targets>
      <device id="#Device ID#"/>
    </targets>
    <requests>
      <device_request target_name="FTP_OTA" format="base64">
        #Update string#
      </device_request>
    </requests>
  </data_service>
</sci_request>
```

4. Click **Send**
5. Enter your user name and password.

The screenshot shows the Digi Remote Manager interface. The top navigation bar includes the Digi logo, "REMOTE MANAGER", and links for "Dashboard" and "Device Management". Below this is a secondary navigation bar with "Resources" and "API Explorer". The main content area features a toolbar with "SCI Targets", "Examples" (dropdown), "Export" (dropdown), "Send", and "Clear" buttons. A "Path:" field is set to "/ws/sci". The "HTTP Method:" section has radio buttons for GET, POST (selected), PUT, DELETE, and HEAD. The XML request is displayed in a code editor with line numbers 1 through 14. The XML content is identical to the one provided in the previous block, but with a specific device ID and a base64-encoded update string. On the right side, there are two panels: "Web Services Responses" showing "POST /ws/sci 202" and "Documentation" with a link to "See: Programming Guide".

The next time the Connect Sensor is scheduled to connect to Remote Manager, it will start the modem firmware update process. To cause the device to connect immediately, press the Wake button on the device.

Once started, the update will take a few minutes to complete. After the device completes the update, it will reconnect to the Remote Manager the next time it is scheduled.

Updating multiple devices

The above example shows how to update a single Connect Sensor. More than one device can be updated with a single Remote Manager request.

To update a list of devices, add their device IDs to `<targets>` in the request. For example:

```
<targets>
  <device id="00010000-00000000-03566100-79000697"/>
  <device id="00010000-00000000-03566100-79000698"/>
  <device id="00010000-00000000-03566100-79000699"/>
  <device id="00010000-00000000-03566100-7900069A"/>
  <device id="00010000-00000000-03566100-7900069B"/>
</targets>
```

To update all devices in a Remote Manager group, add the group name to `<targets>`. For example:

```
<targets>
  <group path="my_group"/>
</targets>
```

Note All devices in the request must have the same modem revision and update string. Devices will individually connect as scheduled and perform the update.

See the *Digi Remote Manager User Guide* and *Digi Remote Manager Programming Guide* on the **Remote Manager Documentation** tab for more information.

Step 4: Verify that the update was successful

1. In Remote Manager, click on the **Device Management** tab.
2. Display the device properties.
3. Click **Refresh** at the bottom of the device page.
Click **Yes** if prompted to send as an offline operation.
The information will update the next time the device is scheduled to connect to the Remote Manager.
4. Close the **Device** tab.
5. Re-open the device tab by double-clicking on your device.
6. Select **System Information > Mobile information**.

- Note the new value for **Revision**, which should now be 20.00.015.

The screenshot shows the DIGI Remote Manager interface. The top navigation bar includes 'Dashboard' and 'Device Management'. Below this is a secondary navigation bar with icons for 'Devices', 'XBee Networks', 'Alarms', 'Operations', 'Schedules', and 'Carrier'. The main content area is divided into a left sidebar with a 'Groups...' dropdown and a central pane. The central pane shows a breadcrumb trail: 'Home' > 'Summary Dashboard' > 'Configuration' > 'System Information' > 'Mobile Information'. The 'Mobile Information' section is expanded, displaying the following details:

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

Troubleshooting the FOTA update

If the device does not report the expected revision, follow these steps:

- Check if the device has connected to the Remote Manager since the firmware update was initiated. Select **Connection History** on the Remote Manager **Device** page.
- Repeat [step 4](#) to refresh the modem firmware revision on the device page.
- Try the FOTA update again.
- If none of the above work, contact Digi Tech support at tech.support@digi.com.