

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

Update Guide

Revision history—90002339

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

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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

You can determine the modem firmware version on the device by using the IMEI look-up tool.

1. Make sure you have the IMEI number from the device.
2. Navigate to the Digi Verizon Upgrade page: <https://www.digi.com/verizon-upgrade>
3. In the IMEI look-up tool window, enter the IMEI number from the device.
4. Click **Find**. The modem firmware version number displays in the field.
5. Make a note of the version number.

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 version

You need to determine the modem firmware version on the device by using the IMEI look-up tool. This information is used to [determine the update string](#) in the next step.

1. Make sure you have the IMEI number from the device.
2. Navigate to the Digi Verizon Upgrade page: <https://www.digi.com/verizon-upgrade>
3. In the IMEI look-up tool window, enter the IMEI number from the device.
4. Click **Find**. The modem firmware version number displays in the field.
5. Make a note of the version number to use in the [next step](#).

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
F9TVjFfMUdfMjAuMDAuMDEyLjJfMjAuMDAuMDE1LjAuYmlu

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

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.
4. Copy the code below and paste it into the **API Explorer** window.

```
<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>
```

5. Update the code with new values:
 - Patch the **#Device ID#** with the correct value from [step 1](#).
 - Patch the **#Update string#** with the value from [step 2](#).
6. Click **Send**
7. Enter your user name and password.

The screenshot shows the DIGI Remote Manager interface. At the top, there are navigation links for 'Dashboard' and 'Device Management'. Below that, there are tabs for 'Resources' and 'API Explorer'. The 'API Explorer' tab is active, showing a list of buttons: 'SCI Targets', 'Examples', 'Export', 'Send', and 'Clear'. The 'Send' button is highlighted. Below the buttons, there is a form for defining an API request. The 'Path' field is set to '/ws/sci'. The 'HTTP Method' is set to 'POST'. The request body is a JSON document:


```

1 <sci_request version="1.0">
2   <data_service allowOffline="true" synchronous="false">
3     <targets>
4       <device id="00010000-00000000-03569610-79989276"/>
5     </targets>
6     <requests>
7       <device_request target_name="FTP_OTA" format="base64">
8         ZnRwMS5kaWdpLmNvbQAyMQ8hbm9ueWlvdXMAAGVzdABzdXBwb3J0L3R1bG10AFVwZFBzZ19MRTkx
9         MF9TVjFfFTkExXzFHX1NlLVV8yMC4wMC4wMTQuNF8yMC4wMC4wMTUuMC5iaH4=
10        </device_request>
11      </requests>
12    </data_service>
13  </sci_request>
14
  
```

 On the right side, there is a 'Web Services Responses' section showing 'POST /ws/sci 202'. Below that, there is a 'Documentation' section 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**.
7. Note the new value for **Revision**, which should now be 20.00.015.

The screenshot displays the Digi Remote Manager interface. At the top, the logo 'DIGI REMOTE MANAGER' is visible, along with navigation tabs for 'Dashboard' and 'Device Management'. Below this is a dark 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 sidebar on the left lists navigation options: 'Home', 'Summary Dashboard', 'Configuration', 'System Information' (expanded), 'Battery Percentage', 'GPS', 'Mobile Information' (highlighted), 'UTC Time', 'Version', and 'Connection History'. The 'Mobile Information' panel on the right lists various device 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:

1. 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.
2. Repeat [step 4](#) to refresh the modem firmware revision on the device page.
3. Try the FOTA update again.
4. If none of the above work, contact Digi Tech support at tech.support@digicom.com.