Digi Connect Sensor Telit Modem Firmware Update

Update Guide

Revision history-90002339

Revision	Date	Description
A	February 2019	Initial release.
В	February 2019	Additional edits.
С	November 2022	Documentation update.

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Update the cellular modem firmware over the air (FOTA)

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Digi Connect Sensor+ firmware and cellular modem firmware update

This document describes how to update Connect Sensor+ firmware and the cellular modem firmware to resolve cellular brown-out failures.

It applies to the Connect Sensor+ containing one of these LTE modems:

Model	Description	Revisions
Telit LE910-NA1	AT&T	20.00.524.0 20.00.525.2
Telit LE910-SV1	Verizon	20.00.012.3 20.00.015.0

Update process

The process is done in two steps:

Update the Connect Sensor firmware

In this step you will update the current Connect Sensor+ firmware.

Update Connect Sensor+ firmware from Digi Remote Manager

Update the cellular modem firmware

In this step you will update the cellular modem firmware.

• Update the cellular modem firmware over the air (FOTA)

Update Connect Sensor+ firmware from Digi Remote Manager

This section describes how to update the Connect Sensor+ firmware. The Connect Sensor+ firmware should be updated before updating the cellular modem firmware.

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
- Connect Sensor firmware update file
- Modem firmware update file name

Step 1: Open Remote Manager

- 1. Open a web browser and navigate to Remote Manager.
- 2. Log into your account.
- 3. Click Devices in the menu on the left side.
- 4. Find the device ID for the Connect Sensor+.
- Click the device ID to open your device. The **Device ID** looks like this string: 00010000-00000000-03566100-72829951.
- 6. Check the **Firmware Version** of the device. Connect Sensor+ firmware version 2.1.1.3 or later is needed to update the modem firmware.
 - If the firmware version is 2.1.1.3 or later, you do not need to update the firmware. Skip to updating the cellular modem firmware: Update the cellular modem firmware over the air (FOTA).
- 7. Review the **Device ID**, which looks like this string: 00010000-00000000-03566100-72829951. It contains the IMEI of the modem. Make note of the device ID. You will need the device ID later to start the modem firmware update process.

📃 Digi Remote Man	ager DIG	୍ର	
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🛃 Data Streams	Apply Cancel	Connection Status Actions -	
Configurations	Device Name	S Disconnected	
⚠ Alerts	Enter a device name	Last Known Primary IP	
D Activity	Enter notes	Device Id 00010000-00000000-03566100-72829951	
🛗 Events		Model Connect Sensor Plus	
© Automations	Group	Firmware Version 2.1.1.2	
🛆 Account 📢	Tags	Description	
Notifications	Add a tag	Cellular Modem ID 356610072829951	

Step 2: Update the Connect Sensor+ firmware

This step is needed if the Connect Sensor+ firmware is less than version 2.1.1.3.

- 1. Click Actions > Update Firmware. The Update Firmware screen displays.
- 2. Click Choose File.
- 3. Select the desired Connect Sensor+ firmware update file and click **Open**.
- 4. Click Update.

Update Firmware		×
	Update	Cancel
Connect Sensor Plus 1 device at 2.1.1.2		
Upload Firmware File		
Choose File No file chosen		

The next time the Connect Sensor+ is scheduled to connect to Remote Manager, it will start the 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 to do so.

Update the cellular modem firmware over the air (FOTA)

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+ that you wan to update
- Modem firmware update file name

Step 1: Open Remote Manager

- 1. Open a web browser and navigate to Remote Manager.
- 2. Log into your account.
- 3. Click **Devices** in the menu on the left side.
- 4. Find the device ID of your device.
- 5. Click the device ID to open your device and review the device ID.

The **Device ID** looks like this string: 00010000-00000000-03566100-72829951. It contains the IMEI of the modem. Make note of the device ID. You will need the device ID later to start the modem firmware update process.

Step 2: Confirm the current firmware revision

- 1. Click **Settings** from the tabs at the top of the page.
- 2. Click Status.
- 3. Review the information in **Mobile Information** panel. Note the current revision in the **Revision** field.

The desired revision is 20.00.527.0 for AT&T modems, or 20.00.017.0 for Verizon modems. If the modem is already at this revision or later, no firmware update is needed.

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		¢	Reports	Version	Revision	20.00.017.0

Step 3: Determine the Update String

Find the firmware revision in this table, and copy the corresponding update string:

Model and string	Revision	Update file name	Patch size			
LE910-SV1	20.00.012.3	UpdPkg_LE910_SV1_ 1G_20.00.012.3_ 20.00.017.0.bin	4,277,678			
ZnRwMS5kaWdpLmNvb0 MF9TVjFfMUdfMjAuMDA	QAyMQBhbm9ueW1vdXMA uMDEyLjNfMjAuMDAuMDE	dGVzdABzdXBwb3J0L3Rll 3LjAuYmlu	oGl0AFVwZFBrZ19MRTkx			
LE910-SV1 20.00.015.0 UpdPkg_LE910_SV1_ 506,950 1G_20.00.015.0_ 20.00.017.0.bin						
ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlbGl0AFVwZFBrZ19MRTkx MF9TVjFfMUdfMjAuMDAuMDE1LjBfMjAuMDAuMDE3LjAuYmlu						
LE910-NA1 20.00.524.0 UpdPkg_LE910_NA1_ 932,846 1G_20.00.524.0_ 20.00.527.0.bin 932,846						
ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlbGl0AFVwZFBrZ19MRTkx MF9OQTFfMUdfMjAuMDAuNTI0LjBfMjAuMDAuNTI3LjAuYmlu						

Model and string	Revision	Update file name	Patch size			
LE910-NA1	20.00.525.2	UpdPkg_LE910_NA1_ 1G_20.00.525.2_ 20.00.527.0.bin	877,554			
ZnRwMS5kaWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J0L3RlbGl0AFVwZFBrZ19MRTkx MF9OQTFfMUdfMjAuMDAuNTI1LjJfMjAuMDAuNTI3LjAuYmlu						

Step 4: Initiate the firmware update

- 1. In the Remote Manager, click **API Explorer**.
- 2. Select Examples > SCI > Data Service > Send Binary Request.
- 3. A template request (in XML) displays. Delete the template and replace with the XML below.
 - Patch the **#Device ID#** with the correct value from Step 1.
 - Patch the **#Update string#** with the value from Step 3.

```
<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 if prompted.

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	Devices	History	Clear	Examples • POST •	/ws/sci	Send	Clear
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U	Configurations			Body			
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ా	Activity			4 <device id<br="">5 6 - <requests></requests></device>	1= "00010000-00000000-03566100-72829951"/>		
	Events			7 - <device_re 8 ZnRwMS5k 9 <td>equest target_name="FTP_OTA" format="base64" caWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J request></td><td>> 0L3R1b0</td><td>G10AF</td></device_re 	equest target_name="FTP_OTA" format="base64" caWdpLmNvbQAyMQBhbm9ueW1vdXMAdGVzdABzdXBwb3J request>	> 0L3R1b0	G10AF
00	Automations			10 11 12	>>		
8	Account <			4			+
	Notifications			Response			
	API Explorer			Body Headers	Status: 202	Time: 64	ms
				2 - <data_service> 3 <jobid>76338: 4 </jobid></data_service> 5	39281 >		

The next time the Connect Sensor+ is scheduled to connect to Remote Manager, it will start the 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 to do so.

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="00010000-0000000-03566100-79000697"/>
        <device id="00010000-00000000-03566100-79000698"/>
        <device id="00010000-00000000-03566100-79000698"/>
        <device id="00010000-00000000-03566100-79000698"/>
        <device id="00010000-00000000-03566100-79000698"/>
        <device id="00010000-00000000-03566100-79000698"/>
        </targets>
```

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

For example:

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

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 Manger 3 User Guide* for more information.

Step 5: Confirm the new firmware revision

- 1. In the Remote Manager, click **Devices** in the menu on the left.
- 2. Click on your device to open it.
- 3. Click **Settings** from the tabs at the top of the page.
- 4. Click Status.
- 5. Review the information in Mobile Information panel.
- 6. Click the refresh arrow at the top of the page to update the fields.
- The new revision value displays the **Revision** field. It should should now be 20.00.017.0 (Verizon) or 20.00.527.0 (AT&T).

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<u> </u>	Events	Mobile Information	Device ty Manufact Model	pe urer	LTE Telit LE910-SV1
Ģ	Reports	Version	Revision		20.00.017.0

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. In Remoter Manager, click **Devices** to display the device page. Click **Summary Dashboard**.
- Repeat Step 5 to refresh the modem firmware revision on the device page.
- Try the FOTA update again.