



RELEASE NOTES

FX30 and FX30S 16.0.2 Release Notes

Compatibility

Release 16.0.2 is compatible with Sierra Wireless FX30 and FX30S Cat1 Programmable IoT Gateway products.

Build Contents

Modem Version	SWI9X07Y_02.37.03.00 73df45 jenkins 2020/04/08 10:59:14
MCU	002.015
FX30 Version	R16.0.2.004
Linux Version	SWI9X07Y_02.37.10.04 2023-04-17_09:47:01
Linux Kernel Version	Linux version 3.18.140 (oe-user@oe-host) (gcc version 7.3.0 (GCC)) #1 PREEMPT Mon Apr 17 09:10:04 UTC 2023
Legato Version	19.11.5

Supported Images

To obtain carrier-specific FX30 firmware images, please go to the [FX30 Cat1 Firmware page](#) on the Sierra Wireless Source. Firmware is available for the carriers listed below.

Note: These are full firmware images, which include all components (Linux, radio module firmware, and Legato).

Carrier	Radio Module Firmware Version	Carrier PRI Version
AT&T	SWI9X07Y_02.37.00.00	ATT_002.098_003
Generic	SWI9X07Y_02.37.03.00	GENERIC_002.095_003
Sierra	SWI9X07Y_02.37.03.00	SIERRA_001.060_003
Sprint	SWI9X07Y_02.37.02.00	SPRINT_001.027_003
TMO	SWI9X07Y_02.35.02.00	TMO_001.017_001
Verizon	SWI9X07Y_02.37.06.00	VERIZON_002.107_003

Source Code

To obtain the source code, use the [Leaf Workspace Manager](#) with the identifier **swi-fx30-cat1_2.0.1**.

Note: The Legato source code included in the FX30 source code package includes modifications that do not appear in the corresponding Legato source code available from [legato.io](#) or other Leaf packages. For details, refer to item descriptions in the [New Features and Bug Fixes](#) sections, below.

The Source code build generates the full FX30 image (CWE binary) at the location:

```
build_bin/images/public/FX30_WP76xx_full_<FX30 VERSION>-<CARRIER>-<RMFW VERSION>.cwe
```

(e.g. build_bin/images/public/ FX30_WP76xx_full_R16.0.2.004-sierra- SWI9X07Y_02.37.03.00.cwe)

To pull the full yocto environment, use the following command sequence:

1. Create a new folder:

```
mkdir my_workspace
cd my_workspace
```
2. Initialize the Leaf workspace:

```
leaf init
```
3. Set up the workspace:

```
leaf setup fx30-cat1-new -p swi-fx30-cat1_2.0.1
```
4. Pull the source code:

```
leaf getsrc swi-linux
```
5. Build:

```
make PROD=fx30
```

Notes

- `leaf getsrc swi-linux` pulls the entire FX30 yocto environment, allowing the full image to be built. Some additional Legato framework patches (customizations) are added to the legato-af recipe.
- `leaf getsrc legato` results in pre-patched Legato framework source code with FX30 customizations corresponding to the legato-af yocto recipe.

Important: Do not execute `repo sync` in `swi-linux` or `legato` workspaces. This can result in a corrupted workspace.

New Features

Radio Module FW

None

General

None

Bug Fixes

General		Impacted Domain
QT19X07-5444	Add the IDs of these alternate memory sources: New Micron / ESMT / JSC	Support new memory
QT19X07-5524	Implement the anti-rollback mechanism to prevent from downgrading to the firmware in which alternate memory sources (New Micron / JSC / ESMT) are not supported	Support anti-rollback to old FW on new memory HW

Known Issues

Changing the AirVantage Lifetime value (also known as heartbeat or AV poller) using a template may report success. However, AirVantage disables the heartbeat instead.

This will cause the FX30 to no longer check-in with AirVantage.

The FX30 has a built-in mechanism checking once daily to re-enable the AV poller to 60 minutes, if found to be disabled.

AVC can fail to establish network connection for up to 6 hours due to Legato Wi-Fi services. As a workaround, disable or uninstall all related Wi-Fi services.

When `UIMAUTOSWITCH` is enabled by `AT!CUSTOM="UIMAUTOSWITCH", 02`, the module SIM slot will be changed from External (UIM1) to eSIM (UIM2).

RS-485 terminator resistor can be enabled in RS232 mode.

General

Some devices are unable to access GPIO8 from sysfs

These devices require configuration using the AT command: AT+WIOCFG=8,16,1,0

configTree entries related to system settings that are modified could be lost after a firmware update. Please ensure to back up any system setting changes and then re-apply after the firmware updates to R16.0.1

An issue in the Legato framework during migration of secure storage contents occurs after multiple upgrades and downgrades, causing secure storage keys to no longer be accessible.

Customers must avoid downgrading from R16.0.1 or newer to R10.1.1 or older.

An issue exists where GNSS fix is inaccurate. This issue will be faced by customers in marginal GNSS signal areas.

Upgrade Procedures

Local Upgrade

SSH on USB:

1. Copy **FX30_WP76xx_full_<FX30 VERSION>-<CARRIER>-<RMFW VERSION>.cwe** to the FX30 file system using scp.
2. Open an SSH session.
3. Execute **fwupdate download /<PATH>/FX30_WP76xx_full_<FX30 VERSION>-<CARRIER>-<RMFW VERSION>.cwe**.

Note: Ensure that you specify the full path to the file. For example:

```
fwupdate download /tmp/FX30_WP76xx_full_<FX30 VERSION>-<CARRIER>-<RMFW VERSION>.cwe
```

*Note: Legacy firmware images will still have the filename format **mcu-rmfw-boot-yocto-legato_wp77.cwe**. The contents of the old filename format and the new filename format are identical.*

Remote Upgrade

Using AirVantage. See [AirVantage FOTA Edition Getting Started](#) and [How to upgrade Firmware on my AirPrime module or AirLink programmable modem?](#)