



FX30 and FX30S CatM 9.1.1.013 Release Notes

Compatibility

Release 9.1.1.013 is compatible with Sierra Wireless FX30 and FX30S Cat M1/Cat NB1 Programmable IoT Gateway products (SKUs 1104086, 1104087, 1104228, 1104229).

Note: For this release, AVMS Bundle Updates (FOTA) do not work over the LTE-NB1 network.

Compatibility with Developer Studio

Release 9.1.1.013 is not officially supported in Developer Studio.

Radio Module Firmware Versions

This firmware is based on WP77 Release 9.1, however, the Radio Module firmware and Carrier configuration (PRI) is from the R9.2 release. For more information, see the [Release 9.1 Customer Release Notes](#).

Note: Release 9.1.1.013 is not certified with Verizon.

Carrier	Radio Module Firmware Version	Carrier PRI Version
Generic	SWI9X06Y_02.16.06.00	GENERIC_001.028_002
AT&T	SWI9X06Y_02.16.06.00	ATT_001.026_000
Sierra	SWI9X06Y_02.16.06.00	SIERRA_001.000_002

Build Contents

The fwupdate query command will return the following results:

Firmware Version	SWI9X06Y_02.16.06.00 7605a6 jenkins 2018/06/20 17:56:12
Bootloader Version	SWI9X06Y_02.16.06.00 7605a6 jenkins 2018/06/20 17:56:12
Linux Version	3.18.44 #2 PREEMPT Tue Jan 29 11:21:07 PST 2019
FX30 Version	R9.1.1.013
Legato Version	18.06.1_03c5394b4c271c054ae58a494f160e37

Source Code

The source code .tar file is available on the Source at: source.sierrawireless.com/resources/airlink/software_downloads/fx30-firmware/fx30-firmware/

The Source code .tar file now includes Legato source code for 18.06.1.

Note: There may be minor differences between the Legato source code included in the FX30 source code package and the Legato source code downloaded from legato.io.

The Source code build generates the full FX30 image (CWE binary) at the location `build_bin/images/public/FX30_WP77xx_full_R9.1.1.013_modified-<CARRIER PRI>.cwe`

The Source code for the Legato applications `columbiaAtService` and `factoryRecoveryService` are not supplied. These binaries must be installed manually using the Legato target tool: "update".

Note: Sierra Wireless supports building the Legato source code using Ubuntu 14.04 or Ubuntu 16.04 only. The Legato source code cannot be built using Ubuntu 18.04.

New Features and Bug Fixes

Radio Module and Radio Module Firmware

Integrated WP77 Release 9.1

Added R9.2 Generic and Sierra Carrier radio module FW and PRIs

Firmware Upgrade

Added AVMS Bundle image update support for FX30 and FX30S CatM

Serial

Added RS485 support for the FX30S CatM

Added UART2 support for flow control

Fixed issue with serial port when SIM card inserted

AT Commands

Fixed reading AT!FWD?USBMAC

Fixed FX30 Factory reset disable

General

Added forced Legato hash update

Removed mcufw from build (built into kernel)

Added iperf and tcpdump to build

Modified Legato version to include md5 hash in LWM2M messages

Updated cm tool to fix ping

Fixed Columbia version in Source code package

Added IPv6 firewall rules

Note: IPv6 rules are available at /etc/ip6tables.rules. The file located at /etc/ip6tables/rules.v6 applies to mangOH only and is not executed at run-time.

Disabled AVMS User Agreements by default

Note: User Agreements for AVMS bundle updates (AT+WDSC) are disabled by default.

Added building full image to Source code

Fixed cm tool "Testing Connection Failed"

Note: You may still observe a "Testing Connection Failed" message when using a private APN.

Added Legato to Source code tarfile

Enabled IPv6 NAT and Masquerading

Fixed AVMS Sync Warnings: Application unknown

Generated tarfile for R9.1.1.12 Source code

Disabled configuration of the APN by Legato

Fixed LE-11908: Suspend package download when curl retry fails

Note: The Legato cm tool is capable of establishing a data connection (cm data connect) but is not a full connection manager. If for any reason the data connection ends, the cm will not re-establish the data session. Users are recommended to write their own connection manager using the Legato dataConnectionService. Specifically, the le_data_Request() API should be used to establish a connection, while the le_data_Release() API should be used to disconnect. For data sessions started with cm data connect, you may observe a disconnect after the AVMS polling timer expires and the dataConnectionService determines there is no network activity.

Known Issues

GNSS

NMEA streaming to serial port cannot be stopped

Mount Command

Partitions of type ext3 and ext4 are not supported. External SD cards must be partitioned with type FAT32.

Warning: Do not execute the command "fdisk -l". This will cause the system to hang.

AVMS

Note: AVMS Bundle Updates (FOTA) do not work over the LTE-NB1 network.

Bundle install (FOTA) may need to be restarted if coverage is lost for five or more minutes.

After an AVMS Synchronize, the Technology may intermittently display incorrectly as WIFI instead of the cellular technology.

AV credentials and polling timer lost intermittently on AV connect.

SPI

Unable to use SPI device. The workaround is to first build the spisvc kernel object, and then, manually install:

```
insmod <file location>/spisvc.ko
```

which creates the device:

```
/dev/spidev1.0
```

Upgrade Procedures

Local Upgrade

SSH on USB:

1. Copy **FX30_WP77_full_R9.1.1.013.cwe** to the FX30 file system using scp.
2. Open an SSH session.
3. Execute **fwupdate download FX30_WP77_full_R9.1.1.013.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.