Release Bulletin

Intellian

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Date	Jun 11, 2025
Classification	External
Attn	Eutelsat OneWeb & Distribution Partners
Related Products	Flat Panel Enterprise & Compact Series
Subject	Flat Panel Compact Series Software Release Bulletin (i-ESA_2.0.6.1)

Dear valued customers,

The Release Bulletin includes details regarding the latest software bundle, i-ESA_2.0.6.1 for the Intellian's Flat Panel Series.

1. Software Release Summary

Software Release i-ESA_2.0.6.1 is now available for use with Intellian's Compact and Enterprise Series User Terminals, supporting land fixed, maritime and land mobile applications. This release brings significant performance improvements to the flat panel user terminals. Prior to applying this software bundle, please follow the instructions outlined in this document.

1.1 Software Release Details

Table 1.0

S/W Bundle File Name	Bundle Version
i-ESA_2.0.6.1_CNX-WIFI.tar.gz	i-ESA_2.0.6.1
i-ESA_2.0.6.1_CNX-MOBILITY.tar.gz	
i-ESA_2.0.6.1_CNX-RACK.tar.gz	
i-ESA_2.0.6.1_CNX-BB.tar.gz	

Table 1.1

UT Component	Version	LUI Version Display
Antenna Interface Module	1.0.1.182	Antenna>Software Version
SSM BSP	6.1.10	Diagnostics>UT Status>Current Linux BSP Version
SSM Application	6.1.47	Diagnostics>UT Status>SSM Software Version
Modem	4.1.3	Modem>Modem Info>About This Modem>Current Software Version
FTM	1.22	Modem>GNSS Statistics> GNSS Receiver Info>Software Version
KIM	2.4.1	Antenna>Software Version

Table 1.2

CNX Component	Version	LUI Version Display
CNX-WIFI	420.204.1.028	Diagnostics>UT Status>CNX Software Version (current)
CNX-Mobility	434.204.1.026	
CNX-Rack	0.2.11	
CNX-BB	0.0.0	

1.2 Software Changes

Component	Title	Summary
AIM	IUI-95	Short outages caused by spurious velocity while UT was stationary have been resolved.
	IUI-108	Improved UT stability and performance for Maritime applications, where outages occurred when the vessel was anchored or docked.
	OWIT-2115/ OWIT-2134	Implemented an automatic recovery mechanism for outages caused by MDM error related to tracking satellites below MEA.
	Tracking	Improved tracking performance in low or slow-motion movement conditions.
UT	Configuration	The CNX component will be set to 'managed' after the upgrade to i-ESA_2.0.6.1, allowing future updates of CNX software via DH bundle update.

1.3 Known Issues

Component	Title	Summary
AIM	IUI-18	Missing gain updates may result in minimal latency / jitter spikes. No intervention required. UT will recover on its own.
	IUI-65	Occasional *modem_timing_error_detected* faults observed during warm-start resulting in seconds of delay in acquisition. No intervention required. UT will recover on its own.
	IUI-99	UT Software upgrade fails occasionally on first attempt and upgrade may require another attempt. Issue occurs rarely and UT will recover from failure and will stay online.
CNX	IUI-111	CNX does not provide support for setting non-default SSM IP. This does not have any operation impact except that CNX is unable to send events and poll for connection status.
SSM / MDM	OWIT-1890/ OWIT-775	MDM resets due to csi_internal_error will cause a service outage of 30-45 seconds. No intervention required. UT will recover on its own.
	OWIT-1676/ OWIT-2131	On very rare occasions,modem_ephemeris_info_is_missing_or_corrupted may occur and result in service outage. Ephemeris must be loaded to the UT to recover from the problem.
	OWIT-2117	On very rare occasions, if all bundle downloads from DH attempts fail, it results in UT losing all configuration and loss of service. Recovery requires LUI bundle update to restore the cfg files and restore service.

2. Preparing the User Terminal for an OTA Software Bundle Update

It is recommended that software updates for all Eutelsat OneWeb User terminals are performed from Device Hub via the Over-the-Air process.

2.1 Determine if a Transition Bundle is required

When initiating an OTA upgrade, Device Hub will display ONLY the software bundles that are required for the user terminal being updated. For Device Hub, a minimum version of 2.0.0.9 is required due to compat matrix req of ssmv2_6. Therefore, if you were running 2.0.0.9T, you would have to upgrade one more time to 2.0.0.9 or greater before going to 2.0.6.1.

If it is determined that the user terminal requires a Transition Bundle (i-ESA_2.0.0.9T) in order to ensure a successful update to the latest available software bundle, it will be visible in the drop down selection on Device Hub.

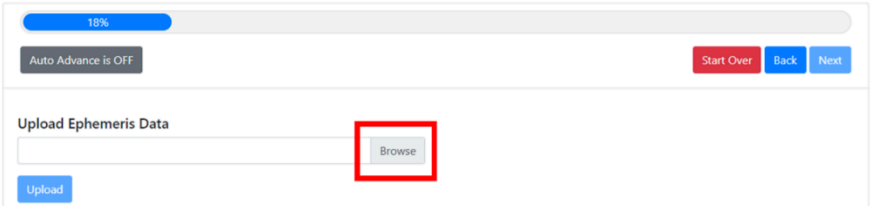
The LUI may also be used to determine if a transition bundle is required. See Section 3 for more details.

2.2 Loading the Ephemeris File

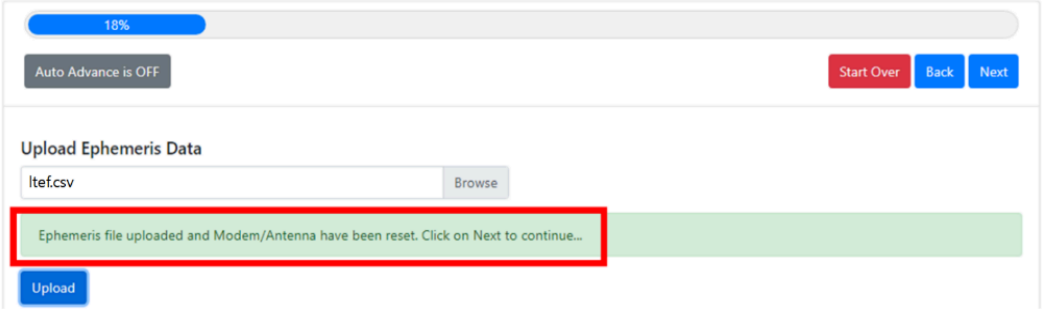
In the case of new installations or updating user terminals that have not come online in over 30 days, the Ephemeris File may require updating. Ephemeris Data contains current information about the orbits of the satellites in the Eutelsat OneWeb constellation. The User Terminal uses ephemeris data to determine the positions of the satellites in the sky at any given time.

If updating the Ephemeris file is required, the following steps should be followed to complete the commissioning process and allow the UT to connect to the Eutelsat OneWeb network:

1) From a web browser, navigate to https://ephemeris.oneweb.net/ltef/
2) Select the **ltef.csv** file to download.
3) Go to the LUI main page and select **Install** from the menu.
4) Select the **Next** button skip to the step where you can upload the Ephemeris Data.
5) Select the **Browse** button on the Upload Ephemeris page.



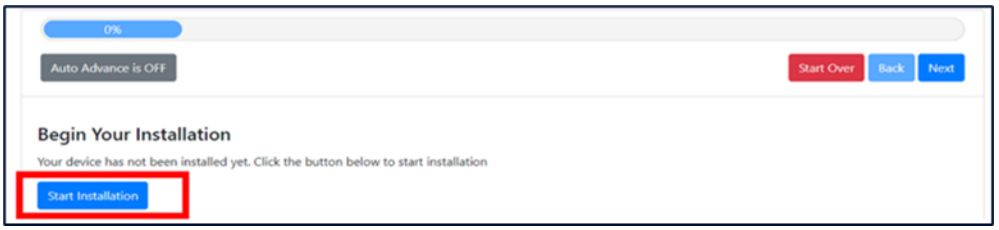
6) Select the **ltef.csv** file and click **Open**.
7) Select the **Upload** button.
8) When the upload has completed, a message will display that Ephemeris file uploaded.
9) The UT is now ready to go OTA.



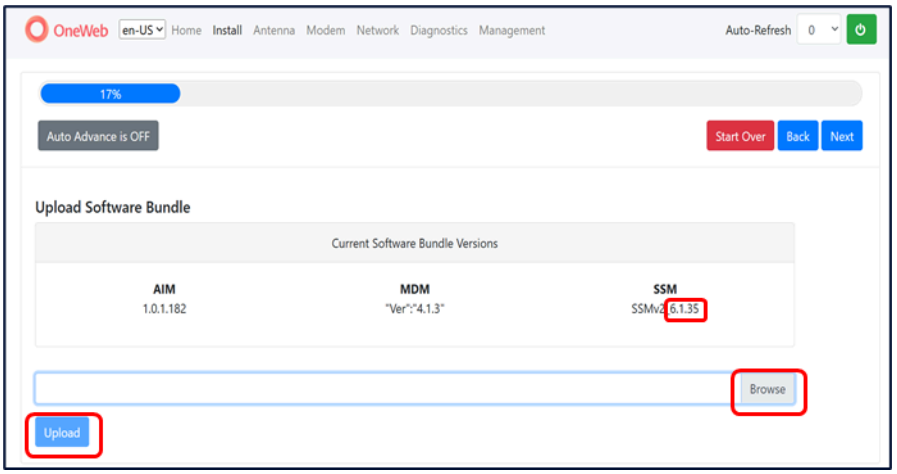
3. Performing a Local Bundle Upgrade

The software bundle on the user terminal may also be updated using the Local User Interface (LUI). This process is recommended for recovery purposes only. It can also be followed for new installations if desired.

1. Go to the LUI main page (192.169.100.1) and select Install from the top menu. Select the Start Installation button on the Begin Your Installation page



2. The Current Software Bundle Versions will display. If the SSM version is older than 5.0.65 then a Transition Bundle is required.



3. Select the desired file using the Browse button and then select the Upload button on the Upload Software Bundle page.
   i. The Transition Bundle is available here: i-ESA_2.0.0.9T.
   ii. Prior to selecting the i-ESA_2.0.6.1 bundle, ensure you have selected the appropriate release based on the CNX version.
4. Verify the New Software Bundle Versions, and to continue to the software installation, select Yes.

5. The screen will display the progress of the update and application of new software.
6. Once the software has been updated, a “Software has been updated!” message will display. The system will automatically reboot. The page will automatically refresh, when complete.

4. CNX-WIFI New Modes of Operation

In the software bundle i-ESA_2.0.5.0 for the Compact Series and i-ESA_2.0.5.1 for the Enterprise Series, Intellian introduced a new firmware update for the CNX-WIFI. This same firmware version is included in i-ESA_2.0.6.1_CNX-WIFI, for partners that either have not updated their UTs or their CNX-WIFIs to the previous version.
Firmware version 420.204.1.028 delivers new modes of operation to CNX-WIFI users, including:

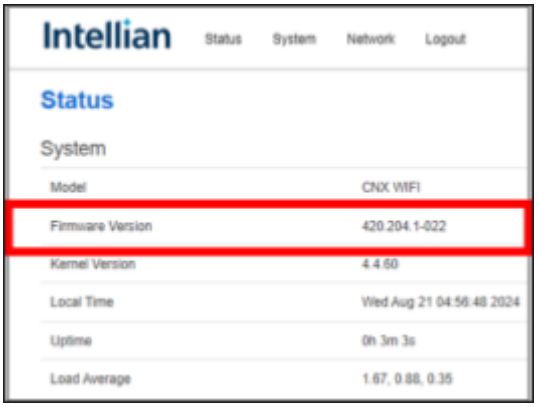
- WiFi Router mode
- Switch / AP mode
- Single Port mode
- Multi-APN Router mode
- Multi-APN Switch mode

After performing an upgrade of the CNX-WIFI, the new mode of operation will be reflected as Switch / AP mode. The CNX-WIFI will continue to operate as before, and no human intervention is required. For more details regarding the new modes of operation, refer to the Compact Series or Enterprise Series User Guides.

4.1 Upgrading the CNX-WIFI

To determine the software version on the CNX-WIFI, log into the CNX-WIFI LUI (192.168.100.3) by using the default username “root” and password “admin”.

From the **Status** page, determine the current release on the CNX-WIFI.

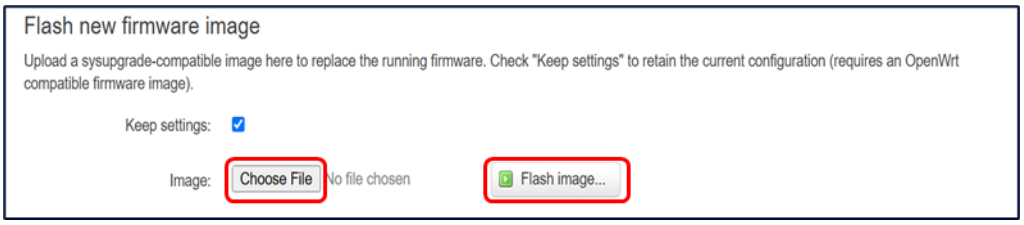


To update the CNX-WIFI firmware locally, follow the below steps.

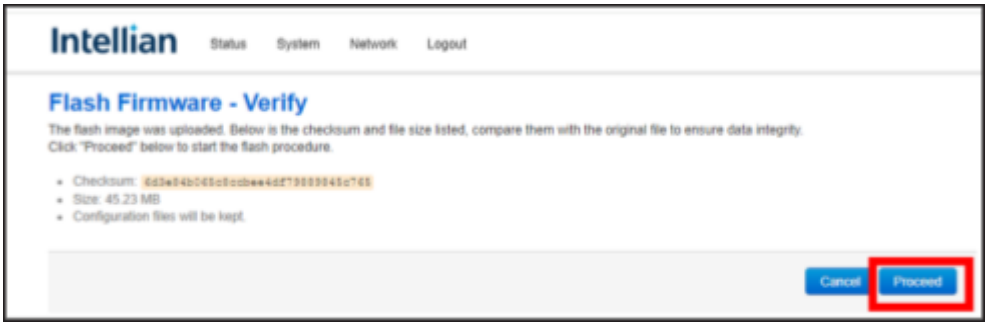
1. From the **System** menu, select **Backup / Flash Firmware**.

2. Go to the Flash new firmware image section and select the **Choose File** button to get the appropriate file.
3. The file name will display next to the **Choose File** button. CNX-WIFI v28 is available here.

4. Select the **Flash image** button to begin the upgrade.



5. The **Flash Firmware - Verify** page displays with the file information. Select the **Proceed** button.



6. The System Flashing screen will display while the updates are being done.

7. Once the update is complete, log back into the system and verify that the software has been updated on the **Status** page.

Contact Information

If any issues or difficulties are encountered during this process, please submit a ticket to support@intelliantech.com for assistance.

Please contact your regional product management team, if you have any questions or require any additional information regarding this document.

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Appendix. Revision History

Version	Component	Item	Description
2.0.6.1	AIM	IUI-95	Short outages caused by spurious velocity while UT was stationary, have been resolved.
		IUI-108	Improved UT stability and performance for Maritime applications, where outages occurred when the vessel was anchored or docked.
		OWIT-2115/ OWIT-2134	Users will no longer experience disruptions by implementing an automatic recovery mechanism for outages previously caused by MDM errors
		Tracking	Improved tracking performance in low or slow-motion movement conditions.
	UT	Configuration	The CNX component will be set to managed after the upgrade to i-ESA_2.0.6.1, eliminating the need of manual configuration.
2.0.5.0 / 2.0.5.1	CNX	IUI-75	New CNX-WIFI firmware enables new modes of operation, including router mode and multi-apn support.
	AIM	IUI-36	Resolved GNSS uninitialized issue.
		IUI-44	Resolved blockage zone issue ensuring Tx Mute automatically enables.
		IUI-57	Modem reset issue resolved that was causing 2 ~ 3 minutes of outage.
		IUI-62	Addressed SINR drops due to incorrect motion detection during slow motion, which resulted in intermittent connection.
		IUI-63	Addressed high HARQ retransmissions due to fluctuating SNR which resulted in lower throughput.
		IUI-64	Resolved performance issues noticed at GEO arc.
		IUI-65	Addressed timing error issue that caused up to a minute of outage.
		IUI-66	Resolved timing error associated with KIM
		IUI-76	Updated velocity config inaccuracy in KIM
		IUI-77	Resolved calibration processing error that resulted in degradation of return SNR.
		IUI-78	Updated LUI to support user configurable R-GNSS setting
		IUI-79	Auto-detect support for R-GNSS support.
		IUI-81	Optimized AIM log download speed.
		IUI-83	Improvement to internal GNSS performance.
		IUI-84	Auto retry when 25 MHz PLL is not locked
		IUI-89	Resolved issue of delayed KIM convergence by presence of too many GNSS satellites in view
		IUI-90	Blockage Configuration Support added to LUI
		IUI-91	Resolved issue where UT was detecting false motion
		IUI-94	Resolved consecutive outages caused from aim_hw_fault
		IUI-96	Resolved prolonged outages caused by timing / synchronization issue
2.0.2.1	AIM	IUI-56	Enablement of 40Hz beam forming to optimize mobility performance.
		IUI-63	OW11Fx RTN SNR fluctuation causes high HARQ retransmissions and lower throughput.
		IUI-62	SINR drops due to incorrect motion detection during slow motion. When UT is slowly moved, connection can become intermittent.
		IUI-64	Improved tracking and performance in the GEO arch region
		IUI-44	Blockage zone detected and Tx Mute is automatically enabled upon entrance
		Improvements	Stability improvements to KIM

2.0.2.0	AIM	IUI-36	Resolved the need for a power cycle due to a GNSS uninitialized issue
		IUI-45	Resolved update failure of KIM GPX during bundle update
		IUI-48	Corrected the version string of CNX WiFi
		IUI-51	Resolved incorrect motion calculation which resulted in UT losing network acquisition
		IUI-52	Timing messages does not increment in time.
		IUI-53	Improved time it takes to download AIM log
		IUI-54	COTP improvements that caused mis-pointing
		KIM Improvements	GPS CN0 updates before 3D fix
			Optimized baseline constraints to improved convergence time
			Improved false detection of GPX GNSS receiver
			Optimized compass tuning to improve convergence stability
2.0.0.9	AIM	IUI-4	MDM resets due to TOD Sync lost
		IUI-23	Erroneous status from UCM/DCM causing unnecessary soft resets in OW11Fx series
		IUI-25	Delay in the tune activation time
		IUI-26	RCMB task is scheduling delays, causing occasional tune activation error
		IUI-29	SPI beam resets due to an unknown reason
		IUI-30	SPI beam module crash
		IUI-47	Stop TN calibration upon motion detection and KIM convergence
		ESA1W-5089	HD Spibeam not allowing beamforming when missing ConfigSet from aim_manager
		ESA1W-5135	Remove RCM TX_ON always ON from release
		ESA1W-5119	VAIC low power mode for TX did not set complete.
		Auto Recovery	Added auto-recovery for invalid/missing time_sync messages from SSM
		Improved motion	Improved motion detection on non-stationary models
		Handover improvements	Fixed SINR drops during hard handovers
		Beamforming improvements	Optimized 50Hz beamforming
		YAW fixes	Fixed YAW drifting issue on stationary models.
		GPX stability	Added a new cltool to fix GPX update failures.
		GPX issue	Fixed GPX version parsing issues
		Tilt Calibration improvements	Improved tilt calibration to avoid SINR drops during motion changes.
2.0.0.7	MDM	Mobility Support	Half Duplex mobility support
	AIM	IUI-25	Delay in the tune activation time
		IUI-30	SPI beam module crash
1.0.0.10	AIM	IUI-23	Erroneous status from UCM/DCM causing unnecessary soft reset
		IUI-36	Fix for Fx/Hx GNSS uninitialized issue
		IUI-34	Fix for Fx throughput issue with better program track ability
		IUI-32	Fix for Fx pwr per RB variation (Power Headroom)

		IUI-31	Fix for Fx potential ConScan issue (RSRP,RSSI, SINR, Path loss Spikiness)
		IUI-29	Fix for Fx SPI beam resets due to unknown reason
		IUI-26	Fix for RCMB task scheduling delays cause occasional tune activation errors
		IUI-4	Fix for MDM resets due to KIM time being stuck causing ToD sync lost
1.0.0.7	AIM	IUI-27	Auto configuration error for mobility
1.0.0.6	AIM	IUI-1	SINR degradation for first beam at handover potentially impacting throughput
		IUI-2	The iESA software bundle is too large impacting OTA upgrade
		IUI-3	Sudden drift in motion when vehicle is parked causes outage on Mobile UT
		IUI-6	Constant GNSS error messages observed although they are cleared shortly, potentially impacting UT stability
		IUI-7	Multiple unexpected MDM resets observed impacting UT stability
		IUI-12	Incorrect AIM outage times observed (iESA99 vs iESA98)
		IUI-13	CNX-WIFI goes into non-responsive state
		IUI-14	Increased EIRP should be set to 0