Flex2PL User Manual

Revision 1.0

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1 Introduction

it is a remote start and security tracking device that uses a GPS satellite receiver to determine location information and an LTE transceiver to communicate information to and from a land based server. This document outlines the operation and configuration of the Nalaproduct line using the supplied tracking application. This document is user manual for Nala.

2 Physical and Electrical Specifications

Input Voltage: 10-30VDC
Power consumption:
- Active mode: 120mA @12VDC
- Low power mode: 15mA @ 12VDC

Operating temperature: -30℃ to 70℃
Storage temperature: -40℃ to 85℃

3 LED Indicators

There are 3 indicator LEDs on the device, which are used to indicate the status of cellular communications and GPS, and to indicate when messages are created and transmitted.

The **orange LED** indicates communications status:

- Off indicates modem is off
- The device enters a sleep low-power state

The **RED LED** indicates GPS status:

- Off indicates GPS is off
- Indicates network status
- The device starts normally

The **green LED** indicates GPS status:

- Instruct to turn on the GPS, and the GPS works normally.
- Implies that GPS has been successfully located

4 Tracking Behavior Summary

Nala applications address the needs of typical vehicle and asset tracking. Variations in functional behavior for specific applications is controlled via parameters in the settings file.

1) Power State Reporting

The Nala can be configured to report power up and rebooting behavior in a variety of ways depending on what is desired. Cold Boot, Warm Boot, and first GPS Acquisition are reported if so configured following Power Up events, power cycling, commanded reboots,

and configured periodic reboots. In addition, there is an option to report a Stop event following a reboot of a non-moving device to address some customer needs to ensure that the corner case of a reboot occurring at the end of a trip doesn't result in an error in trip or idle reporting by the server.

If the device is equipped with a backup battery, then it will also report Power Disconnected and Power Connected events when primary power is removed and restored.

2) Moving State

A device enters Moving state either due to detection of a hardwired Ignition signal, an increase in the supply voltage, detection of movement by the GPS, or an "Absolute G" detection. While in Moving state, the device reports periodically as configured. Both primary Moving interval reports with full data, and "minor intervals" (with only latitude, longitude, speed, and time) for data compression can be reported while in Moving state.

3) Sleeping State

A device enters Sleeping state from Stopped state when all of vibration, GPS movement, and primary voltage are quiescent for a sufficient duration. The qualifying duration of quiescence, and the degree of sleep encountered, are controlled by parameters in the Settings file.

4) Heartbeat Reporting

5.RF Exposure Information and Statement

The device reports a Heartbeat message at an interval specified regardless of state. If the device is sleeping when the Heartbeat timer expires, it will wake up and generate the Heartbeat message. Whether the device attempts a GPS fix for each Heartbeat message can be specified.

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with part 15 of the FCC rules and RSS-247 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help
- This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.