Myriota

Sense&Locate

Operating Manual

MYRIOTA-TEC-083

Version 1.0

19 September 2019

Revision History

Rev	Date	Author	Changes
1.0	19 Sep 2019	Nicole Russo	Preliminary version

Table of Contents

Introduction

The Myriota Sense&Locate is designed to accelerate the development of remote IoT sensing devices by providing a ready-to-go, Myriota-enabled product for tracking and monitoring applications.

The Sense&Locate has a highly rugged and resilient IP67-rated, UV resistant enclosure, and access to the Myriota Network, allowing it to be deployed for extended use in harsh and remote conditions. Direct-to-orbit communication with the Myriota nanosatellite constellation removes the need to be within range of a tower, gateway or other land based infrastructure for data transmission.

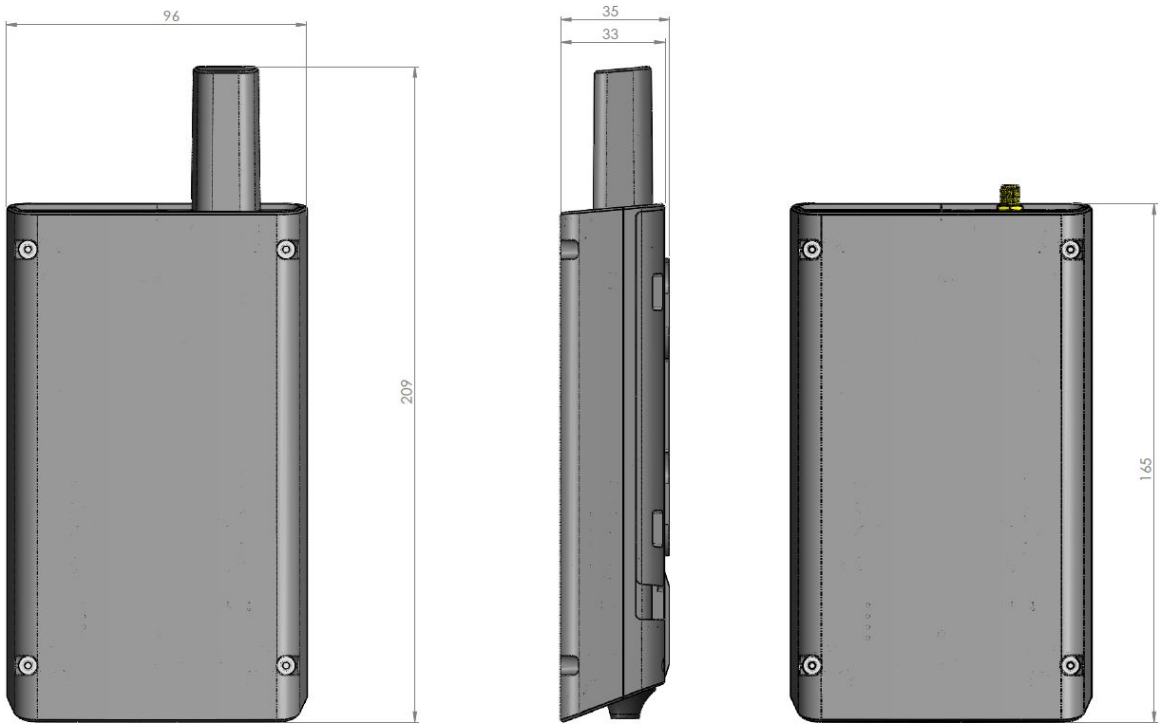
The device offers multi-year life from 2 AA lithium batteries (e.g. Energizer L91), with easy field access to the battery compartment and micro USB port.

Specifications

Product Variants

Product Number	Transmit Band	Revision
SL1	VHF	1
SL2	400 MHz / 434 MHz	1

Device Dimensions

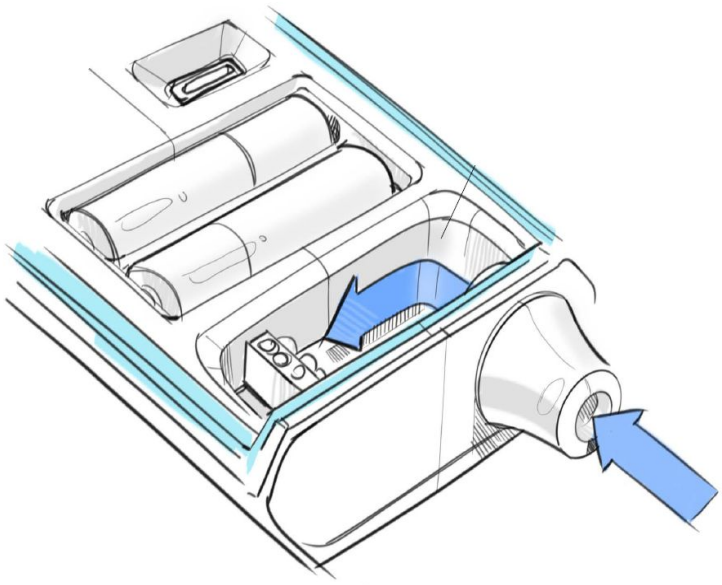


Other Specifications

Weight	TBC
Compliance	FCC, RCM, RoHS
Power Supply	2 x AA lithium batteries
Storage Temperature	-30ºC to +70ºC
Operational Temperature	-30ºC to +70ºC
Humidity	TBC
Field update	Serial port via micro USB

Assembly

1. Unscrew the front plate and remove to reveal the internal compartment
2. Install the external 4-20mA sensor (if required) via the gland at the bottom of the enclosure and connect to the terminal block
3. Insert 2x AA lithium batteries into the battery compartment to activate the unit
4. Replace the front plate and resecure the screws



Mounting

Mounting hardware is provided for installation to a vertical structure, using cable ties or by screwing to the surface.

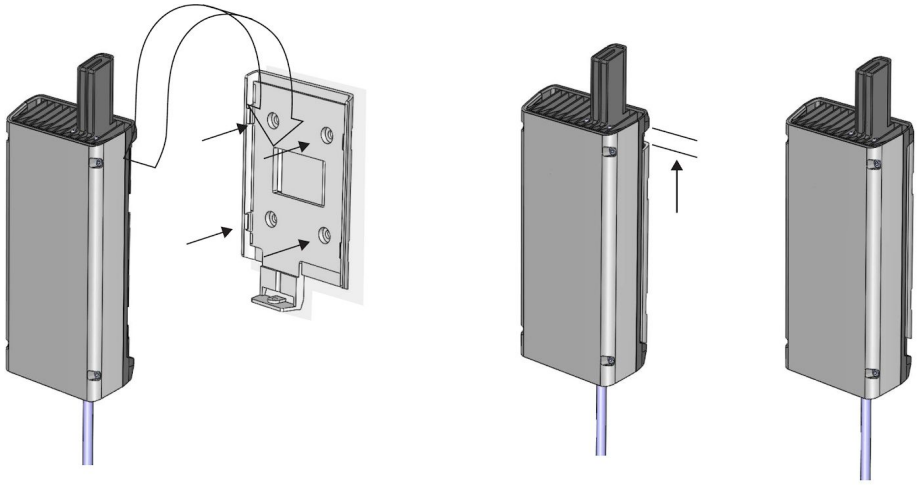
Orientation

The Sense&Locate should be mounted vertically with the antenna having a clear view of the sky in all directions.

Note: Antenna performance can be impacted by being placed near a metallic structure. Avoid mounting such that the antenna is touching, or is enclosed by metal and/or other electronic equipment.

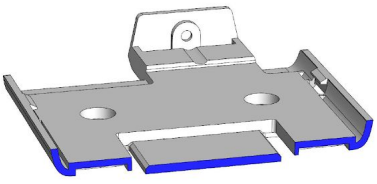
Using Screws

1. Position the mount plate against the required structure
2. Fasten the plate using screws
3. Slide the enclosure onto the mount plate and press down to lock
4. Insert the bottom screen to secure the unit to the base plate

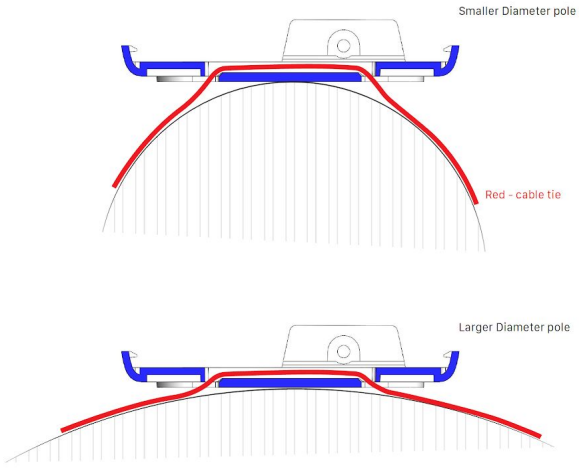


Using Cable Ties

1. Pull the cable ties through the opening in the base plate
2. Position against the required structure and secure the ties firmly
3. Slide the enclosure onto the mount plate and press down to lock
4. Insert the bottom screen to secure the unit to the base plate



Cross section of mount bracket



FCC Compliance Information

This equipment has been tested and found to comply with part 15 of the FCC Rules. 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

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.

WARNING: Changes or modifications not expressly approved by Myriota may render the device non-compliant to FCC and other regulatory body standards for operation and may void the user's authority to operate the equipment.

Operation under the provisions of this section is restricted to devices that use radio frequency energy to identify the contents of commercial shipping containers. Operations must be limited to commercial and industrial areas such as ports, rail terminals and warehouses.

Two-way operation is permitted to interrogate and to load data into devices. Devices operated pursuant to the provisions of this section shall not be used for voice communications.

To prevent interference to Federal Government radar systems, operation under the provisions of this section is not permitted within 40 kilometers of the following locations:

DoD Radar Site	Latitude	Longitude
Beale Air Force Base	39°08′10″ N	121°21′04″ W
Cape Cod Air Force Station	41°45′07″ N	070°32′17″ W
Clear Air Force Station	64°55′16″ N	143°05′02″ W
Cavalier Air Force Station	48°43′12″ N	097°54′00″ W
Eglin Air Force Base	30°43′12″ N	086°12′36″ W

ISED Compliance Information

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

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.

RF Exposure Compliance Information

This equipment complies with the FCC §2.1091 and ISED RSS-102 RF Exposure Limits. A minimum of 13 centimeters (5 inches) separation between the device and the user and all other persons should be maintained.