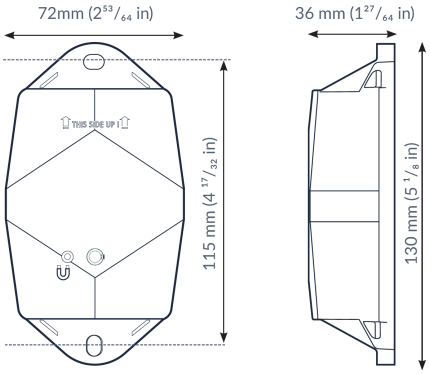
TRACK 1101 IF White

GNSS/Wi-Fi/BLE - NB-IoT

The rugged low-power tracker with long battery life with NB-IoT connectivity and guaranteed data recovery. The tracker provides general localization, zone and high precision. The tracker comes with an onboard temperature sensor and shock detection. Compatible with multiple external environmental sensors. The tracker firmware can be upgraded over the air. This tracker is DO-160 certified.



130×72×36 mm
212g (7.6 oz)

- GNSS
- Wi-Fi scanning
- Bluetooth geobeacon for zone precision

- NB-IoT
- In flight certified
- Europe and North America
- Data recovery

- IP69K & IP68
- IK 09
- Flame retardant

Connectivity

NB-IoT

- Energy efficient transceiver
- Internal omnidirectional antenna
- Bi-directional communication
- NB-IoT bands: 8,12,20
- Data recovery
- OTA firmware upgrade (NB-IoT)

Bluetooth Low Energy (BLE)

Bluetooth Low Energy 5.0

Geolocalization

GNSS

Multi GNSS constellation chipset (GPS+GALILEO)

Wi-Fi scanning

- Wi-Fi based geolocalization
- Wi-Fi 2.4 GHz

BLE

- Sensolus proximity beacon detection
- Detectable by zone anchors

Sensing

Internal

- Activity monitoring
- Orientation monitoring
- Virtual tamper detection
- Temperature monitoring
  - range: -20°C till 60°C (-4°F to 140°F)
  - typical accuracy: +/- 0.25°C (+/- 0.45°F)
  - worst case accuracy: +/- 1°C (+/- 1.8°F)
- Configurable shock detection

Activation and mounting

- Activation and mounting (https://doc.sensolus.com/docs/sensolus_internal/installation-manuals/track1101_if)
- Instructions for mounting the device on an ULD are available in the Sensolus documentation center (https://doc.sensolus.com/docs/sensolus_internal/installation-manuals/track1101_if_ULD).

Mechanics & Design

Antennas

All antennas are internal

Size

130x72x36 mm
(5⅛ x $2^{53}/_{64}$ x $1^{27}/_{64}$ in)

Weight

200 gram (7 oz)

Color

White

Water & dust resistance

IP68 & IP69K

Impact resistance

IK09

Drop shock and vibration

EN 60068

Operating temperature

-20°C to 60°C
(-4°F to 140°F)*

The specifics regarding operational temperature are contingent upon the application, installation circumstances, and environmental factors such as sunlight exposure. For further information, please reach out to Sensolus. Battery life can be affected when devices function for extended periods at the extremes of this range.

Casing

- Shell: PBT/PC 29 TM-Z2 FR UV LS
- Flame retardant
- UV-stabilized

Battery

Standard 3 cell

- User replaceable battery pack (Li-SoCl2) 5200mAh + hybrid capacitor
- 1.44 gram (0.0507 oz) lithium, 2 cells of 0.72 gram (0.0253 oz)
- Compliant with 49 CFR 172.102 Special Provision 388

Certifications

Regulatory

- CE
- FCC
- IC

Bluetooth 5.0

Declaration ID D068598

DO-160

AMC1 CAT.GEN.MPA.140 (d)(3)(iii) Emissions <100mW

Electrical safety

EN 62368-1

Battery certifications

- UN 38.3
- UL 1642

User Interaction

Device activation

Magnetic activation

LED feedback

Green & red LED feedback on the device

Synchronize remote settings

- Instant: Magnet activation
- Periodic: No user interaction needed

Management Services

Diagnostics

- Battery lifetime prediction
- Detailed energy consumption
- Geolocation diagnostics
- Installation
- Communication quality

Management

- OTA firmware updates over NB-IoT and BLE
- Remote configuration
- Tracker usage profiles
- External environmental sensors

Application services

- Localization
- Journeys
- Activity
- Utilization
- Temperature detection
- Tilt detection
- Shock detection

Firmware configuration

Communication service

- Data recovery strategy
- Communication conditions

Location service

- Motion based,context based, periodic or scheduled
- Configurable update rate and journey detection
- Priority sequence (GNSS, Wi-Fi scanning , Bluetooth geobeacon)
- GNSS fix parameters
- Indoor detection algo
- Wi-Fi scan strategy
- BLE scan strategy

General configuration

- Rule engine configuration
- Diagnostic levels
- Boot methods
- Accurate time synchronization

Orientation service

Orientation detection parameters

Environmental sensing

- Polling and aggregation strategy
- Alerts
- Edge processing parameters

Activity service

Activity detection parameters

Tamper service

Virtual tamper algo configuration

Shock detection

Shock algo detection parameters

Security

- Device unique encryption keys
- End to end payload encryption Chacha 20
- AES encrypted firmware
- Firmware upgrade allows only signed firmware images