

# DIS-TURING

The DIS-Turing is an ultra-low-power, water-resistant tracking sensor designed for maximum efficiency and durability. Equipped with GPS and LBS (WiFi and Cell Tower Scanning), it ensures seamless connectivity through LTE Cat M1 and NB-IoT. Thanks to its innovative algorithm, the DIS-Turing boasts an impressive battery life of over 10 years, even with 5 messages sent daily.



## COVERAGE

In 25+ countries reach with the LTE-M/NB-IoT network



## BATTERY

The battery life is 10 years/5 messages a day



## DUST AND WATER SPLASHES

The device has an IP54 rating



## 10G READY

This device is 10G ready



## ACCURATE POSITION

Combination between LBS (Cell + WiFi), GPS and NB-IoT



## UNIQUE ALGORITHM

Due to its unique movement it has a lifetime of over 10 years



## UNIQUE IDENTIFIER

This device is equipped with a unique identifier, ensuring secure and traceable operation



## TAMPER DETECTION

Interrupt on loss of magnet

## OPTIONS



## BUZZER

85db buzzer



## BEACON RECEIVER

Gateway to receive our beacons



## TEMPERATURE MEASUREMENT

Be aware of the temperature of your asset

# DIS-TURING

## Overview

The DIS-Turing is an advanced asset tracking solution, delivering precise and reliable location data using GPS and LBS (WiFi and cell tower scanning). With LTE Cat M1 and NB-IoT connectivity, it ensures seamless communication. Remote firmware updates and configuration options make maintenance straightforward and efficient.



## Battery Performance

With ATEX certified batteries, the DIS-Turing excels even in extreme weather conditions. It offers an impressive battery life of up to 10 years (with 5 messages a day).

## Form Factor and Installation

With its compact form factor (86mm x 82mm x 29.5mm) and M4 bolt mounting options, installation is both convenient and secure.

## Security Measures

Robust security protocols are incorporated into the DIS-Turing and its firmware, safeguarding your telematics data. Data transmission uses 128-bit ECDH encryption, and memory-safe programming practices are employed to protect against potential threats.

## Widespread Coverage

The DIS-Turing extends its capabilities across 25+ countries, leveraging the LTE-M/NB-IoT network for widespread coverage. This ensures a reliable and expansive reach, allowing seamless connectivity in diverse geographical regions.

## Key features

- GPS, WiFi, and Cell Tower Scanning
- LTE-Cat M1 + NB-IoT Connectivity
- Remote Firmware Updates (OTA)
- Battery Life: Up to 10 years (with 5 messages a day)
- Tamper Detection
- Antennas are internal
- Compact Form Factor: 86mm x 82mm x 29.5mm
- ATEX Certified Batteries
- Secure Data Transmission (128-bit ECDH)
- Robust Firmware Security Practices
- CE, UKCA and EMC Certified

## Key data

### LTE-M

Frequency range: 800-2200 MHz  
 Certified LTE bands: B1-B5, B8, B12-B14, B17-B20, B25-B26, B28 and B66

Certified global operators:

AT&T, Bell, China Telecom, Deutsche Telekom, KDDI, Telstra, Verizon, Vodafone, etc.

### Sensors

GNSS: GPS / QZSS  
 WiFi: IEEE 802.11 b/g/n-compliant 2.4GHz up to 8 MAC addresses with RSSI.

Cell towers: CellId, TAC, RSSI up to 6 neighbors

Accelerometer: 3-axis motion detection  
 SubGHz Receiver: 868MHz beacon receiver

### Batteries

Chemical system: Lithium/Iron Disulfide (Li/FeS<sub>2</sub>) - non-rechargeable

Amount: 3 pcs  
 Lithium content: Less than 1 gram  
 Safety: Ex ia IIC Ga

### Operating conditions and package

Temperature: -20C +60C  
 IP-code: IP54  
 Casing: ABS, 86mm x 82mm x 29.5mm

## Baseline Functionality

The DIS-Turing is designed to operate primarily in a deep sleep mode to conserve battery life. It wakes up from this sleep state for several reasons, ensuring efficient tracking and reporting:

### Heartbeat Interval

The device reports at regular intervals known as the “heartbeat interval.” This interval is configurable, allowing you to set how often the device sends status updates to the server. It ensures you receive periodic updates on the device’s status.

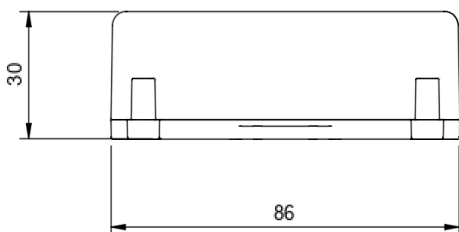
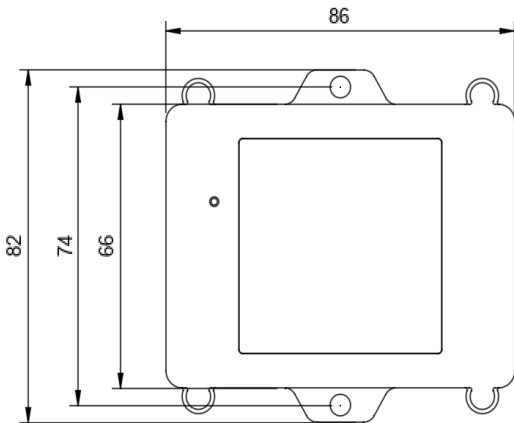
### Battery Performance

The DIS-Turing features ATEX-certified batteries, ensuring reliable operation even in harsh weather conditions, and boasts an impressive lifespan of up to 10 years (with 5 messages a day).

### Next-Gen Connectivity

The DIS-Turing is 10G-ready, ensuring compatibility with ultra-fast networks for seamless data transmission and enhanced performance in a rapidly evolving IoT landscape.

*By intelligently waking up and reporting based on these configurable criteria, the DIS-Turing ensures that you receive timely and relevant information about the status and location of your assets.*



## Configurable items

To optimize the performance of the DIS-Turing for your specific use case, a range of parameters can be customized to suit your tracking needs. Here are the key configurable items:

### Temperature Measurement

The DIS-Turing features optional precise temperature measurement capabilities, maintaining accuracy within 5 degrees. This functionality ensures reliable monitoring of environmental conditions, making it suitable for applications requiring temperature-sensitive data.

### Optional Gateway to our beacons

The DIS-Turing can effortlessly handle sending and receiving data with beacons, ensuring smooth communication.

### Heartbeat Interval

Define the frequency at which the device sends periodic status updates to the server. This is crucial for monitoring the device's normal operation.

### GPS Scanning

Enable or disable GPS scanning based on your tracking requirements.

### GPS Scan Time

Set the duration for which the device scans for GPS data when required.

### WiFi Scan Messages

Control the number of WiFi scan messages sent per interval to suit your needs. By configuring the scan frequency and setting a message budget, you can balance between tracking accuracy and battery efficiency.

### Server URL

Configure the URL or IP address of the server to which the device reports its data.

### Server Port

Specify the port on the server for communication.

### Acceleration Threshold (G-Force)

Define the G-force threshold that triggers a movement event, allowing you to adjust sensitivity to movement.

### Movement Trigger Time

Set the time interval for movement detection, including the number of samples required to classify an event as movement.

### Movement Stop Time

Configure the time period of no movement that triggers a stop movement event.

*These configurable parameters empower you to tailor the behavior of the DIS-Turing to your specific tracking and security needs, ensuring maximum efficiency and relevance in asset monitoring.*