

DIS-FRANKLIN

The DIS-Franklin is an ultra-low-power, water-resistant tracking sensor equipped with GPS and LBS capabilities (WiFi and Cell Tower Scanning). Featuring LTE Cat M1 and NB-IoT connectivity, it ensures reliable performance in diverse environments. Thanks to its innovative algorithm, the DIS-Franklin offers an impressive battery life of over 10 years (based on 5 messages per day).



COVERAGE

In 80+ countries reach with the LTE-M Cat 1 & NB-IoT



TAMPER DETECTION

Interrupt on loss of magnet



BATTERY

The battery life is 10 years/5 messages a day



DUST AND WATERPROOF

The device is IP66 & IP67 dust and waterproof



ACCURATE POSITION

Combination between LBS (Cell + WiFi) & GPS



UNIQUE ALGORITHM

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



UNIQUE IDENTIFIER

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



10G READY

This device is 10G-Ready

OPTIONS



BUZZER

85db buzzer



BEACON RECEIVER

Gateway to receive our beacons



RECOVERY MODUS

Sends multiple messages if recovery modus is active

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Overview

The DIS-Franklin IoT Tracking Device is a cutting-edge solution for asset tracking. Equipped with GPS and LBS (WiFi + cell tower scanning), which translates to a specific location. Its LTE-Cat M1 and NB-IoT connectivity ensures reliable data transmission. Its remote firmware updates and configurations allow for easy maintenance and operation.



Coverage

The DIS-Franklin extends its capabilities across 80+ countries, leveraging its LTE-Cat M1 and NB-IoT connectivity for widespread coverage. This ensures a reliable and expansive reach, allowing seamless connectivity in diverse geographical regions.

Battery Performance

With ATEX certified batteries, the DIS-Franklin excels even in extreme weather conditions. It offers an impressive battery life of up to 10 years depending on usage and network availability.

Form Factor and Installation

With its compact form factor of 108mm x 42mm x 25mm (without flanges 82mm x 42mm x 25mm) and M4 bolt mounting options, installation is both convenient and secure.

Security Measures

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

Dust and Waterproof

Featuring an IP66 + IP67 rating, the DIS-Franklin is dust-tight and water-resistant, capable of withstanding challenging conditions. Its robust design ensures reliable performance, making it suitable for various industry applications.

Key features

- GPS, WiFi, and Cell Tower Scanning
- LTE-Cat M1 and NB-IoT Connectivity
- Remote Firmware Updates (OTA)
- Battery Life: Up to 10 years (5 messages/day)
- Tamper Detection
- Antennas are internal
- Compact Form Factor: 108mm x 42mm x 25mm
- ATEX Certified Batteries
- Optional buzzer (85dB) for Local Recovery
- Secure Data Transmission (128-bit ECDH)
- Robust Firmware Security Practices
- CE certified
- SIM: MFF2

Key data

Frequency range:	700-2200MHz
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.
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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
Buzzer:	Up to 85dB
Accelerometer:	3-axis motion detection
SubGHz receiver	868 MHz beacon receiver

Batteries

Chemical system:	Lithium/Iron Disulfide (Li/FeS ₂) - non-rechargeable
Amount:	2
Lithium content:	Less than 1 gram
Safety:	Ex ia IIC Ga

Operating conditions and package

Temperature:	-20C +65C
IP-code:	IP66 + IP67
Casing:	PA-GF, 108mm x 42mm x 25mm

Baseline Functionality

The DIS-Franklin 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.

Tamper Sensor

If the tamper sensor is active, the device wakes up to report this event. Tampering could involve unauthorized access or removal of the device from its mounted position. Reporting tamper events helps in enhancing the security of your assets.

Movement Detection

The device also wakes up when it detects movement. The definition of movement is highly configurable and can be adjusted based on parameters such as G-force, the number of movement samples, and movement time. This flexibility allows you to tailor the device’s behavior to specific tracking scenarios.

Stop Movement Detection

Conversely, the device reports when it stops moving. Similar to movement detection, the definition of a stop movement event is configurable, typically based on a specified period of no movement. This feature is useful for tracking assets that should remain stationary and alerting you if they are moved.

Next-Gen Connectivity

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

Optional Gateway functionality

The DIS-Franklin offers an optional Sub GHz receiver with an 868.95 MHz band 50 beacon receiver, expanding its capabilities for long-range communication and precise location tracking. This enhancement enables users to customize their Franklin experience for enhanced versatility and functionality.

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.

Buzzer Active Time

Set the duration for which the device's buzzer generates audible alerts when needed.

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-Franklin to your specific tracking and security needs, ensuring maximum efficiency and relevance in asset monitoring.