

ULTRA N+ 1101

GNSS / WI-FI / BLE — NB-IOT

REFERENCE

1101

The rugged, low-power GPS tracker with very long battery life. General, zone and high-precision location. Onboard temperature sensor and shock detection. Compatible with a wide range of external Bluetooth environmental sensors. Firmware can be updated remotely over the air.



130 × 72 × 36 mm

Dimensions L × W × D

212 g

Weight

IP68 / IP69K

Ingress protection · IK09

≤ 10 years

Battery life

- GNSS GPS + GALILEO
- Europe / North America
- Replaceable
- Wi-Fi Scanning
- IP68 / IP69K
- Battery life ≤ 10 years
- BLE 5.0
- IK09
- NB-IoT
- Data recovery

Connectivity

NB-IoT

- Energy-efficient transceiver
- Internal omnidirectional antenna
- Bi-directional communication
- Europe / North America
- Data recovery
- OTA firmware upgrade (NB-IoT)

BLE — BLUETOOTH LOW ENERGY

- Bluetooth Low Energy 5.0

Geolocation

GNSS

- Multi-constellation chipset (GPS + GALILEO)

WI-FI SCANNING

- Wi-Fi based geolocation
- Wi-Fi 2.4 GHz

BLE

- TRAKmy proximity beacon detection
- Detectable by zone and high-precision anchors

BATTERY

10,500 mAh Li-SoCl₂ · replaceable

- Up to 10 years depending on reporting frequency
- User-replaceable 3-cell pack
- 2.94 g of lithium

Mechanics & Design

Antennas	All internal
Ingress protection	IP68 / IP69K
Impact resistance	IK09
Dimensions L × W × D	130 × 72 × 36 mm
Weight	212 g
Drop and vibration	EN 60068
Colour	White
Operating temperature	-20 °C → +60 °C
Housing	PBT + PC / PBT GF30 % + TPE
Treatments	Flame retardant · UV stabilised
SIM card	No (eSIM)

Sensors

INTERNAL

- Activity monitoring
- Orientation monitoring
- Virtual tamper detection
- Temperature monitoring : -20 °C → +60 °C — typical accuracy ±0,25 °C (±1 °C worst case)
- Configurable shock detection

EXTERNAL BLE SENSORS

- Temperature, humidity
- Fill level, contact, magnet
- Other BLE sensors can be added

Certifications

REGULATORY

- CE
- FCC
- IC

BLUETOOTH 5.0

- Declaration ID D068598

ELECTRICAL SAFETY

- EN 62368-1

User interaction

ACTIVATION

- Magnetic activation

LED FEEDBACK

- Green and red LED feedback on the device

SYNCHRONISATION

- Instant: magnet activation
- Periodic: no user interaction needed

Security

- Device-unique encryption keys
- End-to-end payload encryption ChaCha20
- AES-encrypted firmware
- Signed firmware images only

Management services

DIAGNOSTICS

- Battery lifetime prediction
- Detailed energy consumption
- Geolocation diagnostics
- Installation · communication quality

MANAGEMENT

- OTA firmware updates (NB-IoT, BLE)
- Remote configuration
- Tracker usage profiles
- External environmental sensors

APPLICATION SERVICES

- Localisation · journeys · activity · utilisation
- Temperature · tilt · shock detection

Firmware configuration

COMMUNICATION

- Data recovery strategy · communication conditions

LOCATION

- Motion-based, context-based, periodic or scheduled
- Configurable update rate · journey detection
- Priority sequence: GNSS, Wi-Fi, BLE geobeacon
- Quuppa-tested for high precision
- Indoor detection algorithm · Wi-Fi & BLE scan strategy

SENSORS & RULES

- Polling, aggregation & alerts (edge processing)
- Orientation · activity · tamper · shock
- Rule engine · diagnostics · time synchronisation

Activation & mounting

- Magnetic activation
- Holes 7 × 9 mm — centres 115 mm