

Macro Tracker

Built for multi-year, zero-maintenance deployments, the Lansitec Cat-1 Macro Tracker fuses dual-constellation GNSS, BLE 5.0 scanning and LTE Cat-1 connectivity inside a rugged IP66 enclosure. A massive 38 000 mAh Li-SOCI2 battery powers up to 7 years of adaptive reporting, while edge-side filters, offline caching and motion-driven autonomy turn raw pings into actionable asset intelligence—no external power, no data waste.



Global Cat-1 Bands

LTE bands with MQTT/HTTP(S)/TCP/UDP back-haul.

GNSS + BLE Dual Mode

< 2.5 m CEP outdoors; 3 m RSSI indoors for seamless hand-off.

Ultra-Long Autonomy

38 000 mAh field-replaceable pack; 25 µA sleep current.

Edge Smart Rules

Geo-fence, idle/motion timers, offline cache (40 positions).

Industrial IP66 Shell

-45 °C...+85 °C, 0-95 % RH, PC/ABS housing, waterproof PCB.

Asset BLE Tag Sync

Inventories nearby tags/beacons for granular container contents.

Easy-Fit Mounting

160 × 160 × 55 mm, 530 g; strap, bolt or magnet in minutes.

FOTA & NFC Provisioning

Wireless firmware updates and tap-to-pair setup.

iBeacon Broadcasting

The device supports Bluetooth broadcasting using the iBeacon protocol, with a default UUID of F2-A5-2D-43-E0-AB-48-9C-B6-4C-4A-83-00-14-67-FD, and Major/Minor values are the last 4 bytes of the device's DevEUI. The UUID, Major, Minor, Interval, and TX power in the broadcast are all configurable.

SCENARIO



VEHICLE TRACKING

Real-time GNSS/BLE telemetry guides fleet dispatch, reduces idle time and boosts safety KPIs.



PERSONNEL TRACKING

Track lone or remote workers; SOS and movement rules trigger instant Cat-1 alerts.



HOSPITAL ASSET TRACKING



MINING & OILFIELD ASSETS

Locate mobile diagnostic gear and auto-inventory BLE-tagged consumables for zero loss.

IP66, -45 °C resilience protects pumps and tools in harsh, remote environments.

SPECIFICATIONS

Bluetooth

| | |
|---------------------------------------|---|
| Bluetooth Protocol | 5.0, iBeacon, Eddystone, private |
| Bluetooth TX Power | -20 to +4 dBm TX power, configurable in 4 dBm steps |
| Bluetooth Sensitivity | -96dBm |
| Bluetooth Positioning Accuracy | 3m |
| Advertise Interval | 100ms ~ 10s adjustable |
| Coverage Range | 150m sight distance |

Cat-1

| Regions | North America | Europe / Africa | China / India | Latin America |
|-----------------|-------------------------|--------------------|---------------------|---------------------------|
| FFD | B2/B4/B5/B12/B13/B66 | B1/B3/B5/B7/B8/B20 | B1/B3/B5/B8 | B2/B3/B4/B5/B7/B8/B28/B66 |
| TTD | N/A | N/A | B34/B38/B39/B40/B41 | N/A |
| SIM Card | Nano or eSIM | | | |
| Protocol | MQTT, HTTP(S), TCP, UDP | | | |

GNSS

| | |
|-------------------------------|---|
| GNSS | BEIDOU/GALILEO/GPS/GLONASS/QZSS/SBAS (WAAS, EGNOS, GAGAN, MSAS) |
| GNSS Position Accuracy | <2.5m CEP |
| Cold Start Duration | 30s to 60s |
| AGPS | Support |

Physical Parameters

| | |
|------------------------------|---------------------------|
| Dimension | 160*160*55mm |
| Operating Temperature | -45°C ~ +85°C |
| Storage Temperature | -60°C ~ +90°C |
| Operating Humidity | 0% ~ 95% (non-condensing) |
| Weight | 530g |
| Ingress Protection | IP66 |

Functions

| | |
|--|---|
| Adjustable Position Report Interval | 5s x n (1 to 65536) |
| Heartbeat Report Interval | 30s x n (1 to 255) |
| GNSS Position Report Interval | 5s x n (1 to 65536) |
| FOTA over Bluetooth | Support |
| Temperature Report | Optional, please advise Lansitec upon ordering |
| Temperature Sensor Range | -40°C~+85°C |
| Temperature Accuracy | Chamber temperature in the beacon, ±5°C |
| Temperature Resolution | 0.25°C |
| Cellular-based Positioning | Support |
| Configurable Bluetooth data filter and payload report | Filter any data bytes in a Bluetooth payload and report any via Cat-1 |
| Bluetooth data compression | Support |

Power

| | |
|------------------------|---|
| Standby Current | 25µA |
| Switch | Support |
| Status LED | Support |
| Battery | Li-SoCl ₂ Battery, 2×19000mAh (optional: 4×19000mAh) |
| Certification | CE, FCC |

ORDERING INFORMATION

| Product Description | Part Number |
|---|-------------|
| Macro Tracker, built-in antenna, Cat-1, Bluetooth 5.0, GNSS, 160x160x55mm, IP66, 38000mAh | 100-00C13 |