



TRK Black Panther

DATASHEET

NB-IoT / LTE-M / EGPRS Low Power Tracker

Rev. TRK Black Panther V1

Date: 2020-02-06

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<https://accent-systems.com/support/>

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History

Revision	Date	Description
TRK Black Panther_VI	2020-02-06	Initial



TRK Black Panther

Features

- ✓ NB-IOT / LTE-M (CAT-M1) / EGPRS
- ✓ Multiband
- ✓ GPS receiver for precise outdoor location
- ✓ Wi-Fi Location
- ✓ Cell ID location
- ✓ BLE indoor micro-location
- ✓ SOS Button
- ✓ Battery status LED
- ✓ Internal temperature sensor
- ✓ Shock detection
- ✓ Movement detection
- ✓ Internal buzzer
- ✓ Micro-USB for battery recharging
- ✓ Micro Sim (3FF)
- ✓ Low power management for ultra-long battery life applications
- ✓ Bluetooth Low Energy interface
- ✓ Compact size
- ✓ Shockproof
- ✓ Easy to install with 4 bolt fixing or sticker
- ✓ Customisation available under request
- ✓ BLE firmware update
- ✓ Firmware update over cellular
- ✓ End to end encryption
- ✓ Water and dust resistant: IP67 certification (pending)
- ✓ CE and FCC certification in progress

Applications

- Logistics
- Cold chain monitoring
- Asset tracking
- Fleet management
- Agriculture
- Industry
- Smart buildings

1. Specifications

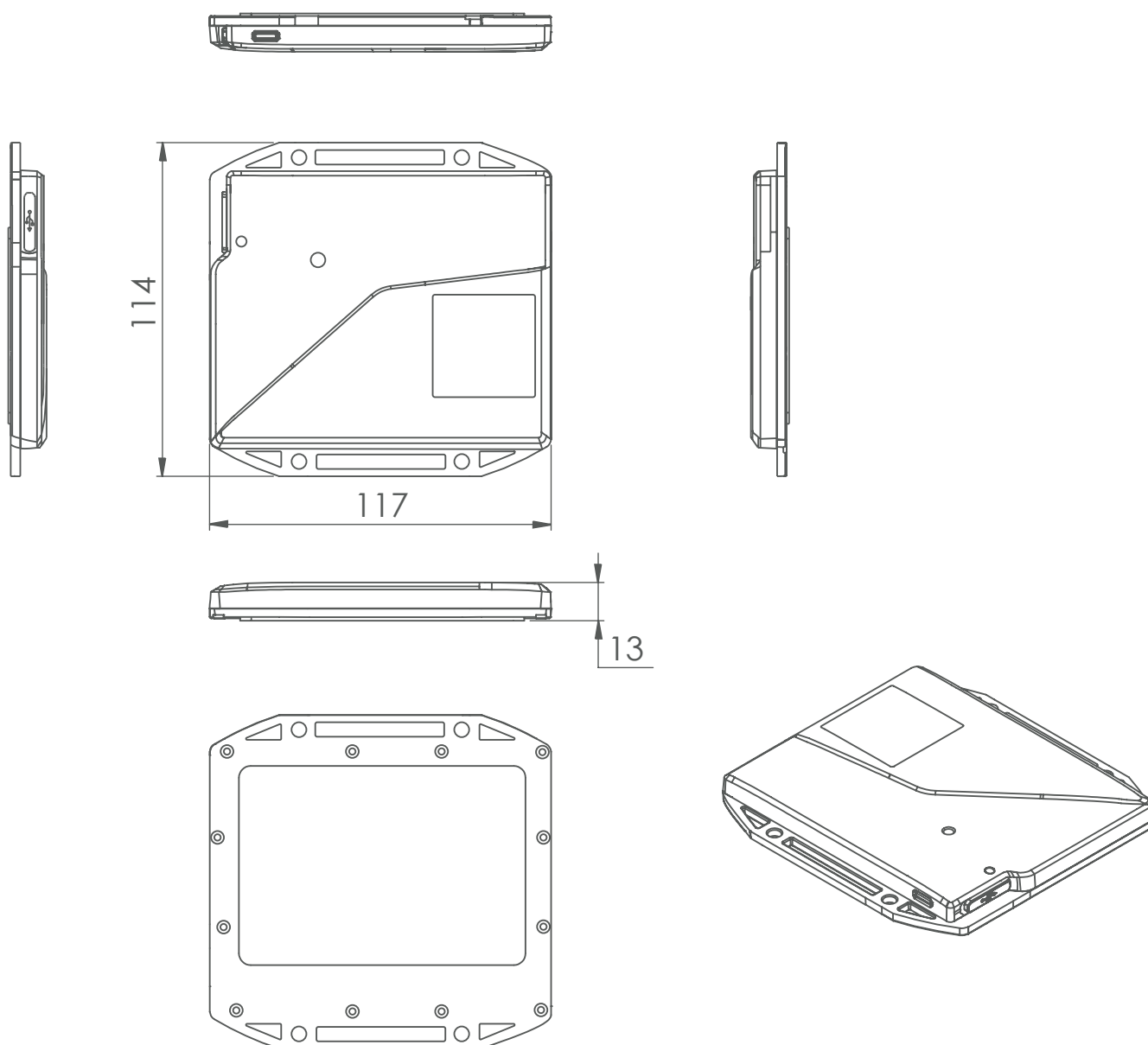
Dimensions	117 mm x 114 mm x 13 mm
Weight	160, 8 grams
LPWAN technologies	NB-IoT / LTE-M (CAT-M1) / EGPRS
NB-IoT bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B26/B28
LTE-M bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B26/B28/B39
EGPRS bands	GSM-900 / GSM-1800 / GSM-850 / GSM-1900
SIM card holder	Micro Sim (3FF)
Location methods	GPS / Wi-Fi / Cell ID / Bluetooth Low Energy Beacons
GPS antenna pattern	Omnidirectional
Secondary wireless interface	Bluetooth Low Energy
Battery	LiPol rechargeable battery. Micro-USB connector for battery recharging
Battery capacity	3000 mAh
Low battery indication	Reported to cloud platform LED sequence
Sensors	Accelerometer, temperature
Human interfaces	Push Button Buzzer RGB Led
Firmware update	Over Bluetooth update / Over cellular update
Operating temperature	-10°C to 50°C
Case material	ABS
Button material	TPU
Fixing methods	4 M3 bolts Sticker External flange

2. Order information

TRK Black Panther

Global version (works in all countries)

3. Mechanical drawings



Black Panther mechanical drawings, units in mm

4. Location methods overview

TRK Black Panther have 4 methods for establish the position of the device:

- GPS: for outdoor location with high accuracy.
- Wi-Fi: for urban or indoor areas, less accuracy than GPS but more efficient in terms of energy consumption. The position is calculated in Accent Systems Inmolecular cloud platform.
- Cell ID based location: coarse location implicit in every data upload to cloud by the device. The position is calculated in Accent Systems Inmolecular cloud platform.
- Bluetooth Low Energy: optional location method using BLE beacons for indoor micro-location. The position is calculated in Accent Systems Inmolecular cloud platform.

5. Energy consumption

TRK Black Panther is designed to provide very high efficiency in terms of power consumption and be able to be active in long periods.

6. Basic functions

The device is connected to Inmolecular cloud platform using NB-IOT, LTE-M or EGPRS and there are 4 different modes:

- **Interval:** period of time to send data defined by the user, could be defined two different intervals in function if the device is moving or not. Every time that **TRK Black Panther** connects to the Inmolecular platform sends information of coarse location (Cell ID), fine location if is available (GPS/Wi-Fi), ambient temperature and battery level.
- **SOS button:** every time that the SOS button is pressed **TRK Black Panther** connects to the cloud server and sends a SOS alarm with the current position..
- **Temperature alarm:** if the temperature is out of the limits set by the user the device sends temperature alarm to Inmolecular platform. This alarm could be disabled by the user.
- **Shock detection alarm:** every time that a shock above the threshold defined by the user, the devices send the event to Inmolecular platform. This alarm could be disabled by the user.



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