exelonix

5G SENS
Powerful Tracking & Monitoring Solution

Tracking of assets and their conditions with a compact flat device

Whether you work in manufacturing, security, health or logistics and have valuable mobile assets such as machinery, pallets, containers or even electric vehicles, it is essential to track & monitor them in order to reduce loss. Optimise your costs and increase your efficiency while gaining peace of mind that your freight is safe and secure during its journey.

Sensors

- Up to six sensors on board
  - Outdoor Location
  - Indoor Location via BLE
  - Temperature
  - Humidity
  - Air Pressure
  - 6D-Acceleration
  - Light
- External sensors can be connected via Bluetooth Low Energy (BLE)
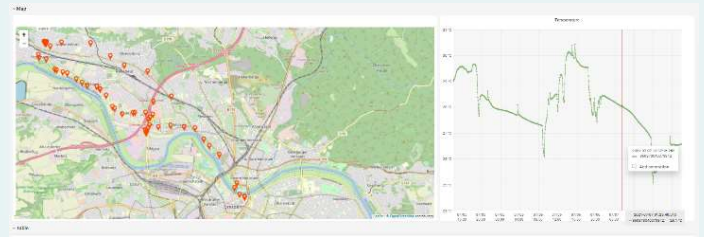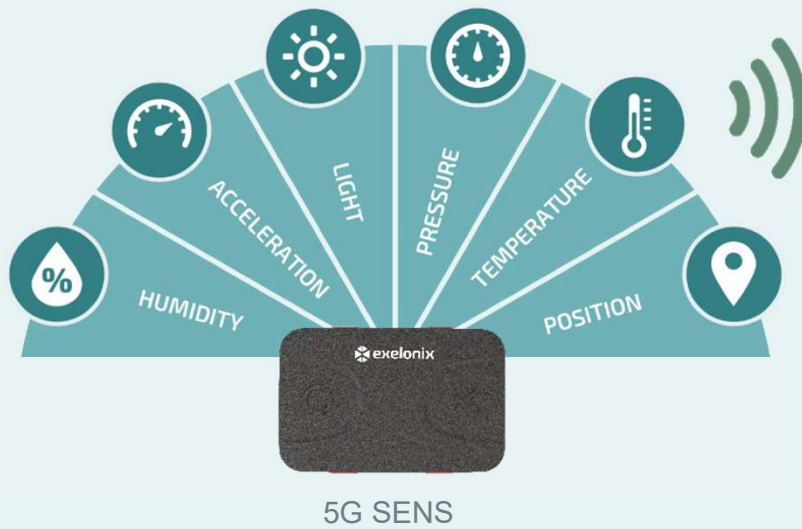
Long Battery Lifetime

- Two power supplies options
  - Rechargeable battery
  - 3AA Primary batteries
- Low Power wireless technology
- Over 5.000 position messages (per battery capacity)
- Up to 5 years of operation

Flexibility

- Various parameter can be adapted
  - Time between periodic messages
  - Time between motion triggered messages
  - Daily tracking schedule
- Remote device management service
  - Parameter Update
  - Firmware update
  - Battery monitoring
  - Coverage monitoring

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Cloud Backend

5G SENS

Clip Holder*

USB-C Charger

Connectivity:
3GPP Release 14 LTE Cat NB2
3GPP Release 13 LTE Cat M1
Bands: B3/B8/B20
GPRS Bands: 900/1800MHz
SIM-Card: 3FF (Micro SIM)

Location Services
GNSS (GPS, Galileo)
QuecLocator* (positioning via cellular base stations)
Quuppa Support (BLE indoor Tracking)

Local Connectivity:
Bluetooth Low Energy Rx
Bluetooth Low Energy Rx/TX

Chipset
Qualcomm MDM9205

Data Transfer Protocols
TCP/ SSL/ TLS/ HTTPS

Security Features
Protected device memory
Secure communication via transport level security (TLS)
Device authentication via ECDSA signatures

Certifications
CE-RED, GCF, Vodafone
RoHS, REACH, WEEE
Battery: EC 62368-1, UN38.3, 2006/66/EC, UL1642,
IEC62133 -2, IEC 62321-4, IEC 62321-5

Sensors
Acceleration & Gyrosensor: 6 – axis
Temperature: -10 ºC … 70 ºC ± 1 ºC
Humidity: 5% - 95% RH ± 5%
Barometer: 260 to 1260 hPa ± 1 hPa
Real-Time Clock: max. 20ppm at 25°C
Light sensor: approx. 0,2 Lux and above

Interfaces
4 I/O Ports (via USB-C)

Indicator/Buttons
3 LEDs
2 Buttons

Electrical data
Power Supply via USB-C
Rechargeable LiPo battery 3.7V, 2.750 mAh
Primary Cells: 3AA Batteries

Housing:
Housing: IP40, IP65
Dimension:
• 90x58x25 mm (with LiPo battery)
• 90x58x34 mm (with 3 AA-Type battery)
Weight 120g (LiPo battery)

Environmental Conditions
Min/Max. Temperature:
• Rechargeable -10 ° C to +70 ° C
• 3AA Battery -40° C to +80 ° C

5G SENS

Features	STANDARD	MAX	CUSTOM
Connectivity			
NB-IoT	X	X	X
LTE-M	X	X	X
GSM	-	X	Your Choice
Localization			
Cell ID	X	X	X
GNSS	X	X	X
QuecLocate*	-	X	Your Choice
Quuppa AoA	-	X	Your Choice
Sensors			
Acceleration	X	X	X
Gyroscope	-		Your Choice
Temperature	-	X	X
Humidity	-	X	Your Choice
Air Pressure	-	X	Your Choice
Light Sensor	-	X	Your Choice
4 External GPIO Ports	-	X	Your Choice

Preinstalled Tracking Use Cases:
1. Inventory Track
- Periodic messages
  (at configured time of the day)
- Alarm messages on motion detection
  (configurable)

2. Theft Track
- Alarm messages on motion detection within
  configured time of the day (configurable)

Remote parameter setting allows tracking
configuration directly from the cloud.

Customized Device Software
5G SENS can be programmed freely and easily
to **support your specific use case**. Ask us for a
device set-up, that is tailored to your specific
requirements.

* Options on request

Estimated Battery Life
more than 5000 messages
(in typical tracking scenarios)

OTA (Over-The-Air) Configuration
Remote update of
- Application parameters
- Device application SW
- Complete firmware
- Modem firmware

Cloud Support
- Exelonix IOT Cloud & Grafana
- Vodafone IoT Tracking
- Telekom Cloud of Things*
- BOX-ID*
- Others on request