



GPS Beacon LoRaWAN "Smartico BCN-LR" is a device for geolocation and data transmission of the location and status of the device through LoRaWAN networks. The device is equipped with a modern GPS-receiver, providing a high-quality signal even in dense urban areas. For motion detection, a sensitive accelerometer is built into the device, which allows optimizing energy consumption. The GPS beacon has a magnetic field sensor, which allows it to be used in various scenarios, for example, monitoring the location of the container and opening doors. The built-in temperature sensor allows you to track the temperature out of bounds during the transport of goods and foods. The device is powered by an internal battery and allows you to work up to several years offline.

Specifications	
Compliance with LoRaWAN	1.0.2 Class A
Frequency plan of LoRaWAN	EU868/US915
Power of transmitter, mW	25/100
GPS receiver channels	66
Magnetic sensor	Built-in
Accelerometer	Built-in
Temperature sensor	Built-in
Archive of geopoints	8000
Antenna Type	Built-in
Ambient temperature, °C	-30 ...+75°C
Built-in battery	Li-SOCI2 A
Battery capacity, mAh	3400
Weight, g	130
Dimensions, WxDxH mm	60x80x30
Ingress protection	IP67



KEY FEATURES:

- Monitoring and transmission of the following parameters:
 - latitude, longitude, altitude, speed, direction;
 - the presence of an external magnetic field;
 - battery discharge;
 - monitoring the performance of internal sensors;
 - motion and fall detector;
- Scheduled and event triggering;
- Flexible configuration of operating modes and energy saving;
- Request geoposition on command from the server;
- Emergency tracking mode;
- The presence of built-in non-volatile memory, archiving, built-in real-time clock;
- Data transmission in the unlicensed frequency range;
- Possibility of positioning through the LoRaWAN network without using GPS;
- Small dimensions;
- Battery life up to 2 years.

FIELDS OF APPLICATION:

- equipment location control;
- geoobjects visit control;
- warehouse logistics;
- railway transport;
- cargo safety control;
- foods & goods temperature control.



ADVANTAGES OF THE SYSTEM BASED ON LoRaWAN:

- Unlimited network scaling;
- Long range communications (up to 15 km with direct visibility);
- Autonomy of the end devices (more than 10 years from the built-in batteries);
- Adaptive data transmission rate and power trim to save battery;
- Interference immunity (the possibility of demodulating a signal with a level of up to 20 dB below noise and interference);
- The use of an unlicensed frequency range that does not require additional costs;
- Two-level data encryption at the gateway and application level;
- The ability to expand and change functionality without significant investments;
- Flexible adjustable functionality reporting and software analytics;
- Export data to any analytical and billing systems.

