

iBeacon based identification system

To implement an identification system using BLE technology, you only need UMKa trackers and iBeacon standard tags



How does the system work?

At the heart of the BLE identification system is a transmitter that periodically broadcasts an unchanged data packet on the air.

The iBeacon periodically transmits announcement packets that, in addition to the heading, contain: -UUID - a 128-bit unique beacon group identifier that determines their type or belonging to the same organization. -Major - a 16-bit unsigned value that can be used to group beacons with the same UUID. -Minor - 16-bit unsigned value that can be used to group beacons with the same UUID and Major. -Measured Power - 8-bit signed integer - the received signal strength indication (RSSI) value calibrated at 1 m from the receiver that is used to determine the proximity of the beacon to the receiver.

Trackers UMKa302 (from version 2.10.1) and UMKa310.B (from version 0.27.0) can emulate one iBeacon. Both trackers have four independent, flexibly configurable channels for listening to iBeacon signals.



iBeacon

Application of the iBeacon system in UMK trackers

Case №1

Driver Tracking

The solution is relevant for large fleets, including those divided into subdivisions.

By highlighting separate groups of UUID codes, you can eliminate false positives.

You also have the opportunity to adjust the tag detection distance based on the location and installation conditions of a particular tracker.



Case №2

Trailer Tracking

To prevent trailers from interfering with drivers, we recommend using your own UUID. Trailer identification can be configured on any free listening channel.

For trailers, it is worth setting a larger identification radius, which can be selected individually.

Case №3

Using the tracker as a tag

The use of additional tags is not always justified, for such cases we have provided the ability to use trackers as iBeacon tags.

All that is needed for this is to configure the beacon mode with the command “BleIdBeacon 1,UUID,Major,Minor” and restart the tracker.

Case №4

Mutual identification of trackers by BLE

The trackers can operate in the mutual identification mode, thanks to which you do not have to purchase additional tags.

For mutual identification of nearby UMKa302 and UMKa310.B trackers, you must simultaneously turn on the beacon mode and set up a listening channel on each of the trackers.

Case №5

Discrete output control by BLE tags

The discrete output control algorithm based on BLE tags can be implemented jointly with our specialists.