

# Template:Beacon List



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## Beacon Settings



### Beacon Detection

- Disabled - Functionality disabled.
- All - Any visible beacon is detected (Max. 100).
- Configured - Only data received from listed beacons in [Beacon List](#) is sent to server.

### Beacon Record

- Eventual - Record is sent after the scanning procedure is completed. This parameter depends on [Update Frequency](#) that is configured in [Bluetooth 4.0](#)
- Periodic - Record will be saved based on configured time period.
  - Record Period on Move - Timer for record generation when the device is moving.
  - Record Period on Stop - Timer for record generation when the device is staying at the place.
- No Send - Records will not be saved and sent. Could be used together with Beacon On Demand feature to avoid excess records of the beacons.

## Beacon On Demand

Beacon On Demand functionality can be triggered, by a Mandown, No Movement, Alarm event, Button press or SMS/GPRS command, after a trigger, device start scanning for the Beacons and sending found beacon data to the server according to the configured Interval and determined Duration. For beacon detection can be chosen - All or Configured beacons. When this scenario is activated, BLE scan and send time depends on Interval parameter and is repeated before Duration time is expired, additionally feature can be turned off by SMS/GPRS command or if Beacon On Demand OFF button is pressed.

**Beacon On Demand**

Beacon On Demand trigger event

Alarm	ManDown
No Movement	

Interval (s)

Duration (s)

### Example of use:

Set Beacon Detection settings All, then choose which event trigger is required or otherwise activate Beacon On Demand button functions in Keyboard section. Next step is to choose **Interval**, how often records have to be sent and **Duration** is how long interval will be repeating (ex. interval 30s and duration 300s, which should generate 10 records during this duration period of 300s). Beacon On Demand generates High Priority records, so a device will wake up when beacon on demand functionality is activated.

For commands control, after device receives SMS/GPRS command "beacon\_on\_demand#" where # is a number 0 or 1.

Possible # values are:

0 - Stops Beacon on Demand functionality.

1 - Starts Beacon on Demand functionality and Starts scanning for determined Duration.

**NOTE! At Beacon Settings, parameter (ID 134) Beacon detection, must be chosen in order Beacon On Demand to work.**

## Beacon List



List of authorized beacons. **Eddystone** and **iBeacon** protocols are supported.

Beacon IDs can be entered the following way:

- Namespace:InstanceID
- UUID:Major:Minor

Any of the ID parts can be omitted. Ex. Namespace:, UUID::, UUID::Minor, etc.

**Note!** *UUID, Namespace or Major/Minor for iBeacon and Namespace for Eddystone.*

If **Beacon Detection** selected as Configured, then beacons will be detected and their data transmitted to the server only if their IDs are included in **Beacon List**.

**iBeacon** and **Eddystone** data frame has the following structure:

- **iBeacon** - 20 Bytes (UUID(16 Bytes):major(2 Bytes):minor(2 Bytes))
- **Eddystone** - 16 Bytes (Namespace(10 Bytes):Instance ID(6 Bytes))

## BLE Devices Settings

**BLE Devices Table** can be used to read BLE packets coming from any device and deliver filtered data to the server as **AVL ID: 585** record. The device according to the entered **Manufacturer ID** searches BLE devices that have the same advertised constant data part as entered in the

configuration. Usually, **Manufacturer ID** is found after 5 bytes offset, but this filter allows to set any offset and size up to 8 bytes in size.

The **Main Data** parameter provides is used to determine and filter out only the desired part of the advertised data that will be sent to the server.

The **Additional data** parameter works the same as the Main Dara parameter, this way you can extract another data part from the packet.

Each filter/slot is independent. For example, each line in the table can be configured to take different or even the same information from the same beacon and we get separate data listing in the record according to the specific filter/slot number.



List of BLE devices settings:

- **Filter Switch** - Enables/disables filter
- **Manufacturer ID** - Match string in HEX. A constant value on the BLE device advertising frame.
- **Manufacturer ID Offset** - determines from which byte the match string starts.
- **Manufacturer ID Size** - determines match string size in bytes.
- **Main Data Offset** - determines how many bytes offset.
- **Main Data Size** - determines size in bytes.
- **Additional Data Offset** - determines how many bytes offset.
- **Additional Data Size** - determines size in bytes.