

# iBKS USB Datasheet



## ABSTRACT

iBKS USB Technical Data

## AUDIENCE

This document is primarily focused for engineers or other users with a technical profile

## FEATURES

- Advertising **Beacon** Device
- **Bluetooth Low Energy**®
- Full **Eddystone** & **iBeacon** compatible
- 100% Configurable Parameters
- USB Serial Communication
- Firmware update **Over The Air** (OTA)
- Logo and color customizable (MOQ)
- Provided with your own configuration (MOQ 50 units)
- No tools needed for maintenance
- Additional optional sensors available
- **FCC** & **CE** Certifications

**Revision 2 | January 2017**

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## FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:

Changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

FCC Statement:

"This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help."

RSS-Gen & RSS-210 statement:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2)

l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-102 Statement:

This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment.

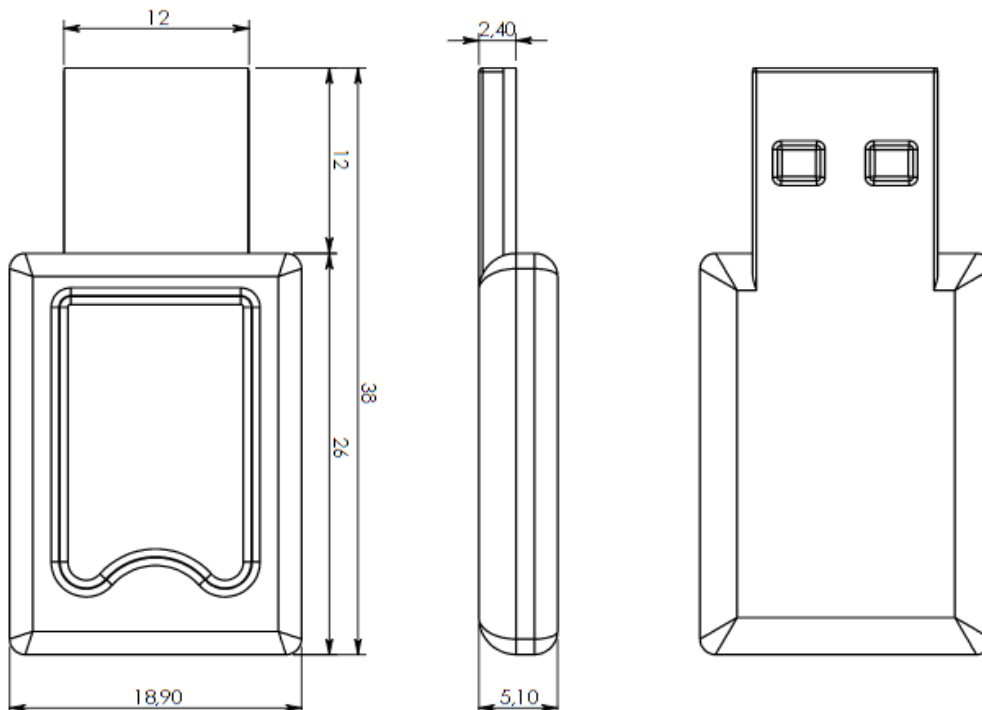
Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

## 1. Specifications

This section contains electrical, mechanical and software specifications for iBKS USB

<b>Dimensions</b>	38 x 18.9 x 5.1 mm	<b>Case material</b>	ABS
<b>Weight</b>	3g	<b>Case finish</b>	Matte white
<b>Core</b>	Nordic nRF51822	<b>Fixing method</b>	USB connector
<b>Radio Protocol</b>	Bluetooth® Low Energy	<b>Operating Temperature</b>	-25 to +75°C
<b>Distance Range</b>	Up to 100m	<b>Storage Temperature</b>	-40 to +125°C
<b>Power Supply</b>	USB 5V	<b>Beacon Protocols</b>	iBeacon Eddystone: UID, URL, TLM & EID
<b>Optional Sensors</b>	Temperature	<b>Firmware Update</b>	OTA (Over The Air)
<b>Certifications</b>	FCC & CE		

## 2. iBKS USB Mechanical Draws

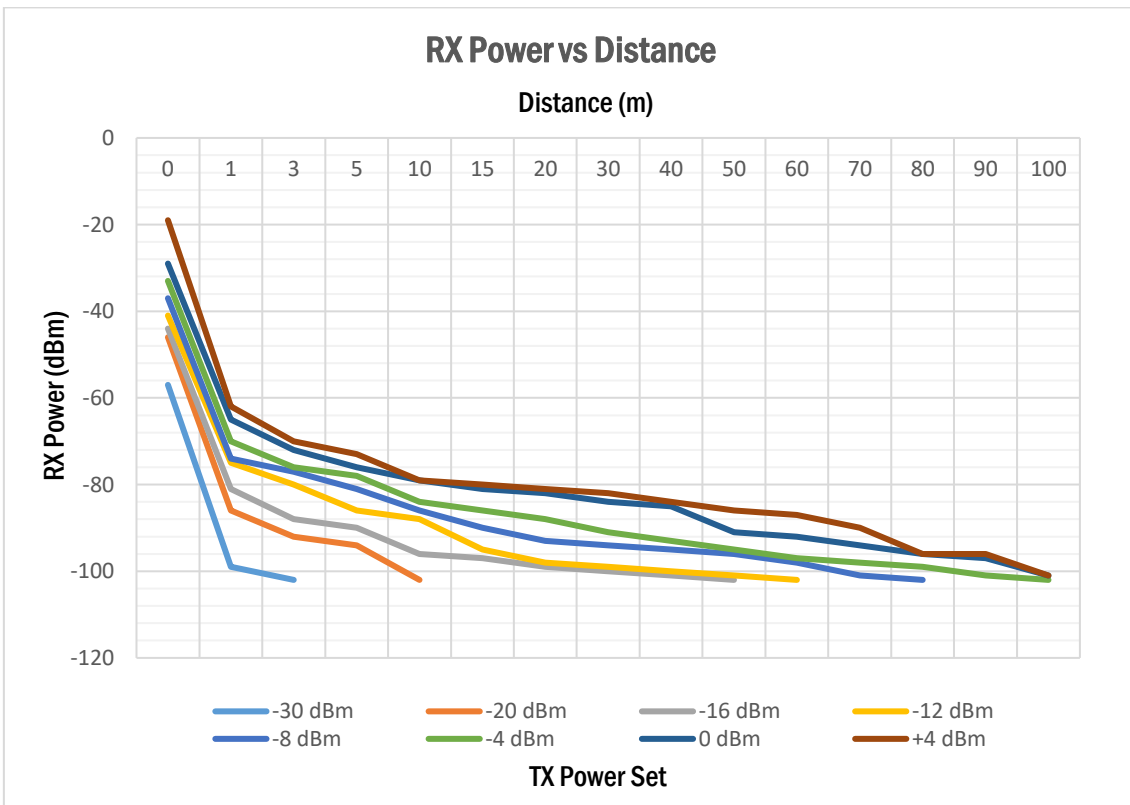


All dimensions in mm

### 3. RX Power (dBm) vs Distance

The following table and graph show the RX power received (dBm) in comparison with distance (m) for all configurable TX powers.

Distance (m)	TX Power (dBm)							
	-30	-20	-16	-12	-8	-4	0	+4
0	-57	-46	-44	-41	-37	-33	-29	-19
1	-99	-86	-81	-75	-74	-70	-65	-62
3	-102	-92	-88	-80	-77	-76	-72	-70
5		-94	-90	-86	-81	-78	-76	-73
10		-102	-96	-88	-86	-84	-79	-79
15			-97	-95	-90	-86	-81	-80
20			-99	-98	-93	-88	-82	-81
30			-100	-99	-94	-91	-84	-82
40			-101	-100	-95	-93	-85	-84
50			-102	-101	-96	-95	-91	-86
60				-102	-98	-97	-92	-87
70					-101	-98	-94	-90
80					-102	-99	-96	-96
90						-101	-97	-96
100						-102	-101	-101



IMPORTANT:

This chapter applies from firmware version EDSTEID V5.2016.06.29.1 onwards.

**Notice all values shown in this chapter have been tested in an open field of a city. Depending on the environment where the iBKS USB is placed these values might differ.**

## Revision History

The following revision history table summarizes changes contained in this document.

Revision Number	Revision Date	Description of Changes
Rev 0	10/2015	Initial Release
Rev 1	08/2016	<ul style="list-style-type: none"><li>Design changed</li><li>Specifications updated</li><li>Added mechanical draws</li><li>Added RX Power vs Distance</li></ul>
<b>Rev 2</b>	01/2017	<ul style="list-style-type: none"><li>Added FCC Statement</li><li>Added Certifications in the specifications</li></ul>





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