# Beacon / iBeacon / MiniBeacon

# Datasheet V1.0

The diamond MiniBeacon LPBCN01 is a modern and stylish iBeacon with ARM core chipset nRF51822 and leverage BLE 4.0 technology; it has a stylish case, structured hardware kernel and robust firmware. It is designed for the commercial advertising and indoor location-based service.

Minew Beacons broadcast 2.4GHz radio signals at regular and adjustable intervals. MiniBeacon can be heard and interpreted by iOS and Android BLE-enabled devices that are equipped with many mobile apps.

## FEATURES

- **Programmed MiniBeacon standard firmware**
- **Included 1pcs 1000mAh coin batteries, replaceable**
- **The max. 100 meters advertising distance**
- **Ultra-low power consumption chipset nRF51822 with ARM core**
- **External hidden ON/OFF button**
- **Weather-proof case suitable for outdoor application**

iBeacon

Image 1

## CERTIFICATIONS

- **iBeacon MFi License (iBC-14-00582)**
- **FCC Regulation (FCC Part 15.)**
- **CE Regulations (Included EN300328/301489/60950/62479**)

## SPECIFICATION

### Compatibility

- Supported iOS 7.0+ and Android 4.3+ system;
- Compatible with Apple iBeacon$^{TM}$ standard;
- Compatible with all Bluetooth 4.0 (BLE) devices;

### Long Battery Lifetime and Battery Level

- 12 months, with the default settings;
- LED will be flashing when battery low;
- Easy to get the real-time battery level notification;

### Soft-reboot

- Reboot the device via command without any tools;

### OTA and J-Link

- Supported upgrade via Over-The-Air;
- Reserved J-Link port on the board for programming;

### Connection Mode

- Advertising mode, non-connectable;
- Configuration mode, connectable;

### Configurable Parameters

- UUID, Major, Minor, Device Name, Password etc.
- Special Configuration APP;

### Transmission Power Levels

- 8 adjustable levels, range from 0 to 7

### Long Range

- The max. Range 100 meters in the open space;
- The range depends on the physical environment;

### Security

- 8 characters password (Lock/Unlock parameters);
- Broadcast the encrypted data if needed;
- AES HW encryption

### Mounting

- 3M branded adhesive for direct mounting to wall;

## TECHNICAL SUPPORT

| Item | Version | File Name | Updated Date |
|---|---|---|---|
| Datasheet | V2.03 | LPBCN01_MiniBeacon | 25th May, 2015 |
| SDK | V1.0 | Android Reference Source Code; iOS Reference Source Code; | 28th February, 2015 |
| APP Tools | V2.0 | iBeaconCFG; iBeaconDFU; | 3rd March, 2015 |

\* Minew sales team will send you these documents after the sample arrived.

## CONFIGURABLE PARAMETERS

| Parameters | Item | Default Settings |
|---|---|---|
| 0xFFF1 | UUID | E2C56DB5-DFFB-48D2-B060-D0F5A71096E0 (Proximity) |
| 0xFFF2 | Major | 0 |
| 0xFFF3 | Minor | 0 |
| 0xFFF4 | Measured Power | -59 (0xC5) |
| 0xFFF5 | Transmission Power | -- |
| 0xFFF6 | Change Password | minew123 (Must be 8 characters) |
| 0xFFF7 | Broadcasting Interval | 9(900mS) |
| 0xFFF8 | Serial ID | Random (Unique serial ID for beacon) |
| 0xFFF9 | iBeacon Name | MiniBeacon_ (the maximum 14 characters) |
| 0xFFFE | Connection Mode | 0 (connectable, configuration mode) |
| 0xFFFF | Soft Reboot | minew123 (it is same as the value of Change Password) |

## ELECTRONIC PARAMETERS

| Item | Value | Remarks |
|---|---|---|
| Case Color | Blue, pink | Other colors can be customized |
| Battery Model | 1 x CR2477 | 1pc CR2477 coin battery, 1000mAh, 3.0V |
| Operation Voltage | 1.8-3.6V | DC |
| Transmission Circuit | 10.5mA (Max.) | Tested at 0dBm transmission power |
| Transmission Range | 100 meters | Maximum |
| Antenna | 50ohm | On board / PCB Antenna |
| Accessories | Double adhesive | 1pc, high-strength, 3M brand; |
| Net Weight | 35.0g | Including the battery but without packing |
| iBC08 Size | 33 x 24 x 15mm | iBeacon kernel, without silicon case |
| Size | 43 x 43 x 21mm | With silicon case |

## APPDENDIX

1. J-LINK Programmer Kit;
2. Over-the-Air Function;

Please contact Minew sales team to ask more related information if needed.

## DECLARATION

The contents of this datasheet are subject to change without prior notice for further improvement. Minew team reserves the right to explain all the terms of this datasheet.

## IC NOTE

This device complies with Industry Canada's licence-exempt RSSs. 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.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada . Son fonctionnement est soumis aux deux conditions suivantes :
( 1 ) Ce dispositif ne peut causer d'interférences ; et
( 2 ) Ce dispositif doit accepter toute interférence , y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

## FCC WARNING

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.

Note: 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 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.

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

## <END>