



Qualcomm® Bluetooth® Low Energy Solutions

Proximity Beacon Development Kit

Bluetooth Low Energy Proximity Beacon Development Kit and Expansion Kit

The Proximity Beacon Development Kit provides a simplified yet comprehensive platform and reduced development time for product designers prototyping Bluetooth low energy beacons in real world use cases for the Internet of Things (IoT).

The Proximity Beacon Development Kit provides a complete set of tools for software development and evaluation of Bluetooth low energy (LE) beacons.

A beacon is a small, battery-powered, wireless device that uses Bluetooth low energy technology to advertise its presence and services. It does this by repeatedly broadcasting or advertising a beacon identifier to compatible smartphones or tablets within its proximity. The smartphone or tablet can then use the beacon's information to determine its location and services, and act accordingly. Beacons enable proximity-based customized experiences for users.

Beacons have the ability to provide important "context" to smart devices, which plays into the larger vision for the IoT. By knowing the context, an IoT device can start to anticipate the user's needs, no longer relying on the user to manage every aspect of their connected world. With proximity beacons, content and experiences are delivered to users based on precise proximity to things in the physical world.

Platform for developing and prototyping Bluetooth low energy beacons for the IoT

Kit Contents

Full Proximity Beacon Development Kit

- Beacon Development Boards (x3)
- Plastic Beacon Enclosures (x3)
- Debugging programmer (x1) and interface cables (x2)
- AA alkaline batteries (3 pairs)
- Setup guide

Proximity Beacon Expansion Kit

Intended for customers who have already purchased the full development kit but require more beacons for their development.

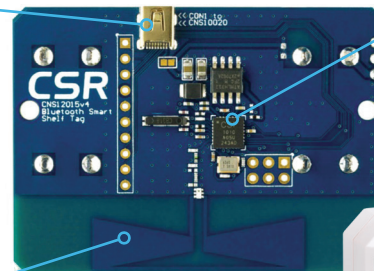
- Beacon Development Boards (x3)
- Plastic Beacon Enclosures (x3)
- AA alkaline batteries (3 pairs)

Beacon Development Board

Debug
Connector

CSR1010 IC

Directional
Antenna



Beacon
Enclosure



- CSR1010 IC
- Directional "bowtie" antenna (patent pending)
- 2x AA battery holders on reverse

Enclosure:
58.5 x 80 x 29.6 mm



Stadiums



IoT



Museums



Amusement Parks



Retail

Features

- **Generic Beacon example** - The generic beacon application available in the SDK is a simple example which advertises basic information that can be recognized by a smartphone. The example application allows for easy configuration of the payload and advertising intervals.
- **iBeacon BDK** - For iBeacon licensees, the iBeacon BDK enables development and deployment of iBeacon compatible devices with a minimum of code development.
- **Expandable network** - The Proximity Beacon Expansion Kit provides additional boards for making a larger deployment.
- **Start developing** - Kits are available to purchase online from our Sales and Solution Providers and network of distributors, representatives, module suppliers and design houses.

Product	Part Number
Proximity Beacon Dev Kit	DK-CSR1010-10232-1A
Proximity Beacon Expansion Kit	DK-CSR1010-10233-1A
CSR1010 Dev Kit	DK-CSR1010-10136
CSR1011 Dev Kit	DK-CSR1011-10138

Related Products

CSR1010/1011 Development Kits
 CSRmesh™ Development Kit
 Environmental Sensor Boards
 CSR101x Starter Development Kit

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Beacons



- **Beacons & why they are important** - A Beacon is a device that uses Bluetooth low energy advertising to periodically transmit a small amount of data. A smartphone or tablet can scan for these advertising messages. Upon receiving the advertising message from the Beacon, the smartphone can initiate an event, as well as measure the receive signal strength, to give an indication of range. Many beacons may be distributed in a system, and the application running on the handset can use the contents of the advertising packet to determine what action to take.

Smart beacons have the ability to provide that all important “context” to your smart device. This all plays in to the bigger picture and vision for the Internet of Things. By knowing your context, your IoT devices can start to anticipate your needs, no longer relying on the user to have to micro manage every aspect of the new connected world.
- **iBeacon** - iBeacon is a protocol developed by Apple to be used with Bluetooth Low Energy. It allows developers to create mobile apps that are aware of the location context provided by the beacons.

Software Development Kit

Once you purchase the Proximity Beacon full development kit, you can download the latest SDK with a valid activation code. The SDK includes a simple beacon example and provides a complete graphical code development environment for the Bluetooth low energy IC products using its xIDE environment with breakpoint, variable viewing, memory viewing, etc. The SDK is based on a GCC compiler tool chain, and command line build and make tools are available for reducing development time and regression builds.

