

Cisco USB BLE Beacon

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The Cisco® USB BLE Beacon expands the Cisco Aironet® 1800, 2800, and 3800 Series Wave 2 11ac access point platforms to add Bluetooth Low Energy (BLE) radio capability. The addition of a BLE radio to an access point enables a new array of use cases, including the ability to transmit a BLE beacon for proximity messaging and wayfinding and the ability to receive a BLE message from an asset tag for asset-tracking applications.

Product Overview

The Cisco USB BLE Beacon provides a mechanism to enhance the capabilities and value to Cisco wireless Access Points (APs) deployed in your network. The beacons can attach to any of the USB-enabled APs, such as the Aironet 1850, 2800, or 3800 Series, which do not have an integrated BLE radio. USB BLE beacons are managed by Cisco DNA Spaces. The BLE management application under Cisco DNA Spaces allows you to control both the receive and transmit capabilities of the beacon. As a transmitter, the USB BLE beacon provides the capability to transmit in an iBeacon, Eddystone URL, or Eddystone UID format. As a receiver, the USB BLE beacon can receive packets in iBeacon, Eddystone URL, Eddystone UID, or Cisco Location Telemetry and Exchange (LTX) format. When receiving in the Cisco LTX format, additional telemetry information can be derived from Cisco LTX compatible beacons and provided to Cisco or third-party applications, example include floor beacon battery levels.

The ability to receive or transmit BLE packets opens up a new ecosystem of capabilities for your Cisco wireless access points. They can be used to provide proximity messaging to applications that use BLE core location APIs on mobile phones, to facilitate indoor wayfinding, and to track BLE asset tags.

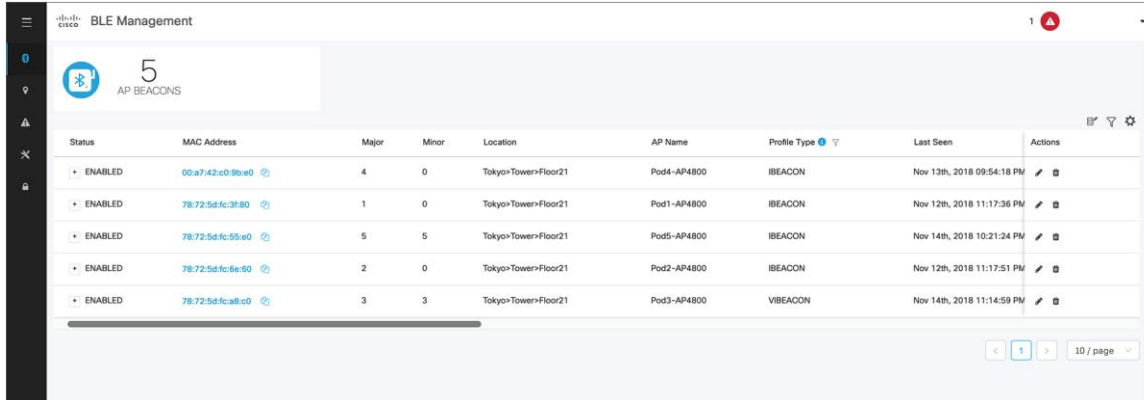
The addition of a cloud-managed USB BLE beacon in your network will enable a new set of use cases and augment the feature-rich capabilities of Cisco wireless access points.



Figure 1.
Visual of Cisco USB BLE Beacon

Cisco DNA Spaces BLE Manager

Configuration and setting for the USB BLE Beacon are set in Cisco DNA Spaces – BLE Manager in the cloud. The BLE Manager requires that the customer have installed and deployed an on premise CMX and a PI/DNAC server. The configuration of the USB BLE Beacon is only possible via the BLE Manager on the GUI shown below.



Features and Functions

Feature	Function
BLE transmit formats	iBeacon Eddystone URL Eddystone UID
BLE receive formats	iBeacon Eddystone URL Eddystone UID Cisco LTX
Maximum number of BLE signals that can be transmitted	5 iBeacons
Primary use cases	Indoor wayfinding Proximity messaging Asset tracking
Management method	Cisco DNA Spaces ACT – BLE Manager

Use Cases

Asset Tracking: Used in conjunction with Cisco DNA Spaces, determine the location of BLE based asset tags.

Proximity Messaging: Used in conjunction with Cisco DNA Spaces, the USB BLE beacon can send out a configurable signal and provide a message based on proximity to the beacon.

Indoor Way Finding: Used in conjunction with Cisco or third party software, USB BLE beacon can provide an indoor way finding solution.

Integrated USB BLE Beacon

A cloud-managed integrated USB BLE beacon provides enterprise customers with a set of BLE capabilities that is unmatched by any other methods. Generally, BLE capabilities have been deployed primarily by a battery-powered BLE overlay network. This has proven to be difficult to manage at scale and expensive to maintain, since dedicated infrastructure is required. An AP-based BLE beacon provides all of the native capabilities of BLE, including the ability to wake up applications that subscribe to the iBeacon and to be used to aid indoor navigation without the burden of consuming battery power.

The primary benefits of cloud-managed, AP-powered BLE beacons are:

- Ease of configuration at scale: You can now manage thousands of BLE beacons at scale just as easily as you can manage APs at scale
- AP powered: Since the USB BLE beacon takes power from the AP, there are no issues related to power management on the beacons
- Reduced chance of theft or movement of the beacon: Because the beacon is part of the wireless AP infrastructure, there is a reduced possibility of the beacon being lost or removed

Platform Support

Product family	Platforms supported	Cisco IOS® Software images (feature sets) supported	Minimum software version for CMX on premises	Minimum software version for prime
Aironet 1800 Series	1830 and 1850 Series	Cisco WLC 8.8MR2 or later	10.6	PI 3.6
Aironet 2800 Series	All models	Cisco WLC 8.8MR2 or later	10.6	PI 3.6
Aironet 3800 Series	All models	Cisco WLC 8.8MR2 or later	10.6	PI 3.6

The Cisco USB BLE Beacon can be added to the Cisco APs that have an available USB slots and support the correct software.

Product Specifications

BLE standard	4.1 and 5.0 ready
Maximum transmit power	5 dBm
Maximum open aired detection distance	150 feet

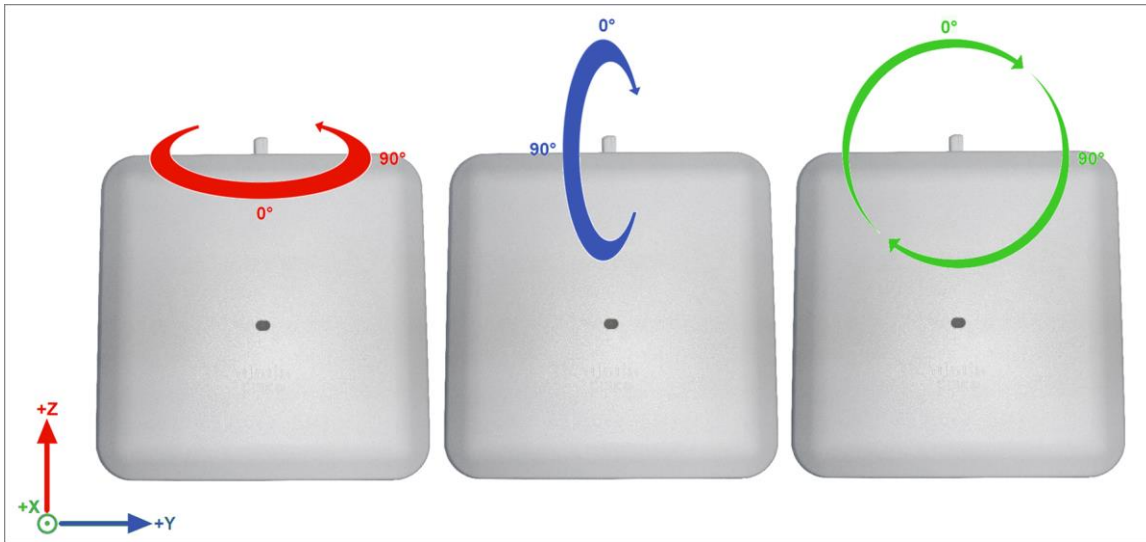


Figure 2.
Example of the pattern orientation on Aironet 2800

This plot represents the radiated power in function of the angular position and the radial distance from the BLE dongle. Directivity and radiated power are derived based on the radiation fields, polarization and other antenna characteristics such as gain.

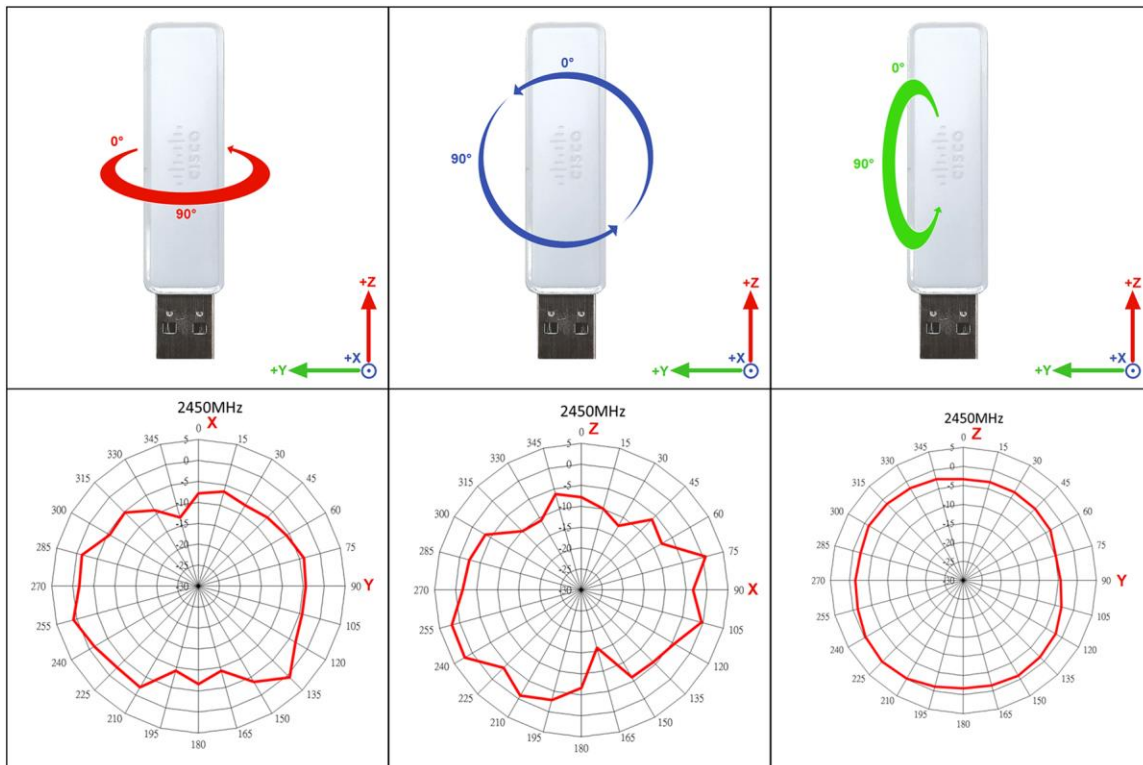


Figure 3.
2D radiation pattern

Environmental Requirements

Operating temperature	-20° to 50°C (-4° to 122°F)
Operating humidity	10% to 90% (noncondensing)
Nonoperating temperature	-30° to 70°C (-22° to 158°F)
Operating altitude	Up to 3000 meters (9850 ft)

Ordering Information

The Cisco USB BLE Beacon can be ordered in 10 packs or 50 packs. If the customer already has Cisco DNA Spaces ACT licenses, no additional licensing is required. If the customer does not have a Cisco DNA Spaces ACT license for the AP that the Cisco USB BLE Beacon will be placed in, a license is required.

Part number	Product description
AIR-BLE-USB-10	Cisco USB BLE Beacon 10 Pack
AIR-BLE-USB-50	Cisco USB BLE Beacon 10 Pack x 5 = total quantity = 50

Warranty Information

The Cisco USB BLE Beacon comes with a 1-year limited warranty that provides full warranty coverage of the hardware. The warranty includes 10-day advance hardware replacement and ensures that software media is defect-free for 90 days. For more details, visit <https://www.cisco.com/go/warranty>. Find warranty information on Cisco.com at the [Product Warranties](#) page.

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