

Overview

Aruba Location Services

Powered by Aruba Beacons



Aruba Battery-Powered Beacon

Product overview

The flagship product of the Aruba Location Services product line is Aruba Beacons. When Aruba Beacons are used in conjunction with the Meridian mobile app platform, they enable public-facing enterprises to infuse their mobile apps with innovative, location-based services.

Aruba Beacons leverage Bluetooth Low-Energy (BLE) technology, also known as Bluetooth 4.0, to provide indoor location data for mobile devices. This data is critical for indoor wayfinding, proximity-aware push notifications, and other types of location services in mobile apps

Aruba Beacons

Small, low-power wireless transmitters, Aruba Beacons broadcast 2.4-GHz radio signals at regular intervals. Beacons can be heard and interpreted by iOS and Android devices that are also equipped with Aruba Meridian-powered mobile apps.

Aruba Beacons come in two physical forms. Aruba USB Beacons plug into a Wi-Fi access point (AP) or other USB-enabled device while standalone Aruba Battery-Powered Beacons can be placed anywhere within a venue.

When a mobile device with a Meridian-powered app is within range of Aruba Beacons, guests can receive personalized, proximity-aware push notifications based on their opt-in preferences and see a glowing blue dot that shows their real-time location on a venue's map.

Aruba Beacons content and actions

Aruba USB Beacons and Aruba Battery-Powered Beacons can be configured for either location-based wayfinding or for proximity-aware notifications so that corresponding actions are triggered on a venue's Meridian-powered mobile app.

Overview

Specifications

Aruba Beacons

BLE data packets

- Every Aruba Beacon ID is 20 bytes long and contains three values:
 - ProximityUUID: Universally Unique Identifier shared among related beacons
 - Major number: 16-bit integer value
 - Minor number: 16-bit integer value

Range

- Aruba Beacon signals can be read from as far away as 200 feet, and proximity can be detected down to a few inches away.
- Maximum signal range depends on the physical environment.
- Aruba Beacons operate on the same type of radio waves as 2.4-GHz Wi-Fi routers. As a result, the signal can be diffracted, interfered or absorbed by materials in the space such as metal, wood or water.

Aruba Beacons app for management

Supported OS

- iOS 7 or newer

Supported devices

- iPhone 4S or newer
 - iPod touch, fifth generation
 - iPad, third generation or newer
 - iPad mini and iPad mini with retina display
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Delivery Options

Aruba Battery-Powered Beacons

- Power
 - Two coin-cell batteries within enclosure: CR2477 type
 - Average power consumption: 0.22 mW (estimated)
 - Battery capacity 1,000 mAh/each: Total capacity of 2,000 mAh
 - Battery voltage: 3 volts
 - Unique on/off capabilities can be used to turn down the network when not in use and consequently keep the batteries fresh for many years.
- Mounting
 - Included with Aruba Beacons
 - High-strength indoor/outdoor 3M adhesive for direct mounting to wall
 - Optional
 - NMEA 66-rated outdoor case with magnetic brackets for mounting on steel beam
 - Bracket for mounting on non-metal wall via two-screw holds

Aruba USB Beacons

- Power
 - Charges from an Aruba access point USB port or any powered USB slot on TVs, computers, wall plugs and other devices.
 - Deployment/hardware options
 - These beacons install into existing Aruba access points via USB ports for data connectivity
-

Overview

Aruba Beacons compatible devices and operating systems

Android

- New smartphones and tablets with a dual-mode Bluetooth 4.0 chip running the latest version of the Android OS are Bluetooth Smart Ready.
- Android-powered Bluetooth Smart Ready devices running the latest OS will be compatible with virtually any Bluetooth enabled product, including Aruba Beacons.

iOS

- iOS 7 or later on the following compatible devices:
 - iPhone (fourth generation or later)
 - iPad (third generation or later)
 - iPad mini
 - iPod touch (fifth generation or later)

BLE must be turned on to work on any BLE-enabled device.

Wireless Radio specifications

- Compliant with BLE standard based on BT version 4.0
- GFSK modulation @ 2.4-GHz ISM band
- Support adaptive frequency hopping (FH)
 - 3 2-MHz advertisement channels (channels 37, 38, 39) 2,402 MHz, 2,426 MHz, 2,480 MHz
 - x37 2-MHz data channels (channels 0 to 36, from 2,404 MHz to 2,478 MHz)
- TX power: 0 dBm max
- RX sensitivity: -94 dBm

Mechanical

- Dimensions
 - 47 mm (W) x 47 mm (L) x 16 mm (H), 1.8 " (W) x 1.8" (L) x .63" (H)
 - 37.5 g/1.3 oz

Antennas	
Electrical characteristics	
	Specification
Working frequency range	2,450 +/- 50Mhz
Gain (dBi)	2 (typical)
VSWR	2 max

Overview

Environmental

- Operating
 - Temperature: 0° C to +50° C (+32° F to +122° F)
 - Humidity: 5% to 95% non-condensing
- Storage and transportation
 - Temperature: -40° C to +70° C (-40° F to +158° F)

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1995/5/EC
- Low Voltage Directive 72/23/EEC

For country-specific regulatory information and approvals, please see your Aruba representative.

Regulatory Model Number

- ARBT0200

Ordering Information

Description	Part Number
Beacons	
Aruba LS-BT1-NEMA Outdoor Mounting Bracket for Battery Powered Beacon	JW144A
Aruba LS-BT1-MNT-50 50-pack of Indoor Mounting Brackets for Battery Powered Beacon	JW145A
Aruba LS-BT1-5 5-pack of Battery Powered Aruba Beacons	JW313A
Aruba LS-BT1-50 50-pack of Battery Powered Aruba Beacons	JW314A
Aruba LS-BT1USB-5 5-pack of USB Powered Aruba Beacons	JW315A
Aruba LS-BT1USB-50 50-pack of USB Powered Aruba Beacons	JW316A

Summary of Changes

Date	Version History	Action	Description of Change
10-Mar-2017	From Version 1 to 2	Added	Configuration section added
		Changed	Changes made on Overview
01-Nov-2016	Version 1	Created	Document creation.



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