

DATA SHEET

ARUBA BEACONS

BLE-powered Location and Proximity Services

Aruba Beacons provide location services, either built into APs or as standalone devices. When 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, the current version is Bluetooth 5.0, to provide indoor location data for mobile devices. This data is critical for indoor wayfinding, proximity-aware 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 Meridian-powered mobile apps. Aruba Beacons come in two physical formats. All newer Aruba Access Points (AP) have beacons built in. Standalone battery powered Aruba 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, Aruba Beacons proximity-aware 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 CONFIGURABILITY

All Aruba 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.

KEY FEATURES

- Software configurable for location or proximity mode
- SDK support for iOS and Android mobile devices
- Remote beacon management support
- Easy to deploy – no infrastructure wiring required!
- Install in any size/shaped room
- Work both indoors and outdoors



Figure 1. The Aruba Beacon above is battery-powered



SPECIFICATIONS

Aruba Beacons

BLE data packets

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

Range

- 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 or newer
- iPad, third generation or newer
- iPad mini and iPad mini with retina display or newer

DELIVERY OPTIONS

Battery-Powered Beacons

- Power
 - Two coin-cell batteries
 - Average power consumption: 0.22 mW (estimated)
 - Battery capacity 1,000 mAh/each: Total capacity of 2,000 mAh
 - Battery voltage: 3 volts
- Mounting
 - Included with Aruba Beacons
 - > High-strength indoor/outdoor 3M adhesive for direct mounting to wall
 - Optional
 - > IP67 rated outdoor case
 - > Bracket for mounting on non-metal wall via two-screw holds

SUPPORTED MOBILE 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

- Dimension for 4-year beacon
 - 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

ENVIRONMENTAL

- Operating
 - Temperature: 0° C to +50° C (+32° F to +122° F)
 - Humidity: 5% to 95% non-condensing
- 4-year battery 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

- 4-year battery: ARBT0200

ANTENNAS

Electrical Characteristics

| | |
|-------------------------|-----------------|
| Working frequency range | 2,450 +/- 50Mhz |
| Gain (dBi) | 2 (typical) |
| VSWR | 2 max |

ORDERING INFORMATION

| Part Number | Description |
|----------------|--|
| Beacons | |
| JW144A | Aruba LS-BT1-NEMA Outdoor Mounting Bracket for Battery Powered Beacon |
| JW145A | Aruba LS-BT1-MNT-50 50-pack of Indoor Mounting Brackets for Battery Powered Beacon |
| JX984A | Aruba LS-BT20-5 BLE 5-pack of Battery Powered Aruba Beacons |
| JX985A | Aruba LS-BT20-50 BLE 50-pack of Battery Powered Aruba Beacons |