

Alcatel-Lucent OmniAccess Stellar BLE Beacons

Bluetooth 4.0 Low Energy
Beacon with iBeacon technology

The Alcatel-Lucent OmniAccess® Stellar LBS solution provides comprehensive indoor location services which includes way-finding, location-based push notifications and location analytics. [OmniAccess Stellar BLE Beacons](#) are a key component of OmniAccess Stellar Location Services. In conjunction with OmniAccess Stellar Cloud Manager, the beacons provide location information which can be integrated into a customer facing mobile app to provide location-based services with a high level of accuracy.



OmniAccess Stellar BLE Beacons provide location notifications whenever a mobile device powered with OmniAccess Stellar LBS SDK comes within range and based on their opt-in preference. This enables public facing enterprises to provide a personal and customized experience for the individual user.

Key features

- Broadcasts Bluetooth 4.0 Low Energy signals for location services
- Compatible with Apple iBeacon technology¹
- Customizable advertising capability to handle various proximity beacon formats (for example, Eddystone and AltBeacon)²
- Compatible with all Bluetooth Smart 4.0 devices
- Five-plus years of battery life³
- Useable indoors and outdoors
- Configurable and upgradable over-the-air
- Monitoring and management with the OmniAccess Stellar LBS Cloud platform

¹ iBeacon technology creates a small area of detection where customized notifications can be sent to iBeacon-enabled apps on iPhone, iPad, or iPod touch devices that support Bluetooth 4.0 technology. See <https://developer.apple.com/ibeacon/>

² Limited to a static message such as EDY-UID or EDY-URL as a replacement for the factory default iBeacon message.

³ Running with two 2500 mAh batteries, 24/7/365, 20°C, with the standard configuration profile (1s interval advertising, full RF power).

* Future availability

Datasheet

[Alcatel-Lucent OmniAccess Stellar BLE Beacons](#)

OmniAccess Stellar BLE Beacons

OmniAccess Stellar BLE Beacons are available in three physical form factors.

- OmniAccess Stellar AP123x have a built-in BLE beacon.*
- OmniAccess Stellar BLE Dongle (USB) beacons can be plugged into OmniAccess Stellar Access Points, OmniAccess Access Points, or other devices which have a USB port (for power only).
- Standalone, battery-powered, OmniAccess Stellar BLE Beacons provide flexibility, enabling them to be placed anywhere in a building. OmniAccess Stellar BLE Beacons provide five years of worry-free service.

Plug & play. Compliant with the Apple iBeacon technology, OmniAccess Stellar BLE Beacons come with factory-set identifiers for instant operation: Insert the batteries, clip the cap and stick the unit on the indoor wall using the provided adhesive tape. The beacon is now set to provide accurate indoor location, proximity detection and interactions with OmniAccess Stellar LBS Cloud and SDK. Various fastening options, such as screws and straps, are also available for more durable installation. The OmniAccess Stellar BLE Dongle can be plugged into an Access Point or devices having a USB interface, to enable instant location services.

Long lifetime. OmniAccess Stellar BLE Beacons are powered by industrial grade Lithium batteries, ensuring five years of continuous operation under a broad temperature range.

Designed to run in harsh environments. OmniAccess Stellar BLE Beacons meet IP54 requirements: Dustproof and water resistant. An optional housing is available to extend the protection (IP65 grade) for rugged outdoor use.

Activation and maintenance. Correct operation and health status of the OmniAccess Stellar BLE Beacons are visually confirmed when inserting the batteries. Thanks to the clip-able body/cap system, battery replacement is easy, quick, and does not require the beacon to be uninstalled. After installation, health status and battery life are remotely monitored through the Alcatel-Lucent Enterprise SDK and centralized on the OmniAccess Stellar LBS Cloud platform.

Remote configuration. Relying on a secured remote access, your beacon identifiers, RF parameters such as the advertising rate and transmit power, can be configured over-the-air to best fit both your application requirements and lifetime expectations. Advertising content can be replaced to support Eddystone™, an open beacon format from Google, or any other custom format like AltBeacon.

Upgradability. The beacon firmware for all OmniAccess Stellar BLE Beacons can be upgraded over-the-air to benefit from upcoming features. Configuration and firmware upgrades are secured to protect from hacking. Updates and upgrades are managed by the OmniAccess Stellar LBS Cloud platform and deployed on compatible devices using the OmniAccess Stellar LBS Installer application.

RF performance. The beacons are field proven, with best-in-class RF performance, sustainability and optimal scan performance, on the device side.

Quality first. OmniAccess Stellar BLE Beacons are fully tested before delivery and benefit from a one-year warranty.

Main specifications

BLE advertising

Default advertising mode

- Apple® iBeacon mode
- Serialized major/minor (factory set)

Default iBeacon UUID

- 759D2E0A-AAEE-4F0C-B767-A1A346B89400

Advertising customization

- Custom iBeacon UUID, major, minor.
- Custom static advertising frames.

Additional data broadcast

- Secured AD identifier (proprietary)
- Health monitoring data (proprietary) including remaining lifetime, system flags)
- RF Transmit power

RF performance

Range (typical)

- 100 m+ (outdoors, free spaces)
- 25 m (indoors), variable.

Transmitted RF power

OAL-BT-10

- -27 dBm to +3 dBm max.

OAL-BT-USB-10

- -27dBm to + 0dBm max.

RSSI readings

-51 dBm measured at 1 meter⁴

Dimensions and weight

OAL-BT-10

- Height: 20 mm
- Width: 45 mm
- Depth: 60 mm
- Weight: 25 grams, 60 grams (2 batteries included)

OAL-BT-USB-10

- Height: 6 mm
- Width: 14 mm
- Depth: 18 mm

Mounting

Material

- ABS (UV resistant)

Color

- White (RAL9003)

Mounting options

- Indoor: Adhesive tape (included):
28 mm x 48 mm screws (included):
x2, Ø 3 mm, countersunk, cross type
- Outdoor (optional): Silicon housing to meet IP65, strap mount kit to mount it on a pole

Device identification

- 6 digits unique gencode identifier

Power supply

OAL-BT-10

- Format
 - AA Size (x2), Replaceable
- Technology
 - Li-SoCl₂ Primary cells

Voltage and capacity

OAL-BT-10

- 3.6V, 2500 mAh

OAL-BT-USB-10

- -3.6V to +5.5V, +33 mA to +44 mA

Battery life

Standard profile (iBeacon)

- 5+ years (850 ms interval, + 3 dBm, 20°C)

Apple iBeacon profile

- 1.5+ year (0.1s interval, -10 dBm, 20°C)

Peripherals

Operating light (LED)

- Missing/failing battery detection
- Hard-ware/software issue detection
- Remote visual identification

Temperature sensor

- ± 5°C

Environmental

Temperature

OAL-BT-10

- -20°C/+60°C

OAL-BT-USB-10

- -40°C/+85°C

Humidity

- 0 to 99 %

Flame resistance

- V0 flammability class

Protection

- IP54
- IP65 using the optional housing

Regulatory

OAL-BT-10

- RoHS/REACH
 - Compliant
- European certifications
 - EN301489-1/-17, EN300328, EN62479, EN60950-1
- US certifications
 - FCC Part 15, Subpart C (FCC ID:QOQBLE112)
 - FCC Part 15, Subpart B, Class B
- Canada certifications
 - ICES-003:2012 Issue 5, Class B

OAL-BT-USB-10

- European certifications
 - EN301489-1/-17, EN300328, EN62479, EN60950-1
- US certifications
 - FCC Part 15, Subpart C (FCC ID:QOQBLE112)
- Canada certifications
 - Canada license-exempt RSS standard(s)
- South-Korea
 - KCC-CRM-BGT-BLED112
- Brazil
 - ANATEL BLED112 0521-14-3402
- Japan
 - MIC Japan 003WWA111471

Regulatory model numbers

- OAL-BT-10: BSR112-R-A and NAO BlueSpot V3
- OAL-BT-USB-10: BLED112

Ordering information

Part number	Description
OAL-BT-10	OmniAccess Stellar BLE Beacon - Battery powered beacons - 10 pack
OAL-BT-USB-10	OmniAccess Stellar BLE USB dongle - 10 pack
OAL-BT-MNT-10	Outdoor mount kit for OmniAccess Stellar BLE Beacons - 10 pack