

BlueBeacon Maxi

Bluetooth Low Energy proximity-beacon

Data sheet v. 3.1



BlueBeacon Maxi is our longest-life battery-powered BLE beacon. It supports advertising of multiple frames with iBeacon, Eddystone (full support) and/or Quuppa format, at the same time. BlueBeacon Maxi is perfectly suitable for all those installations where battery operating life is a main concern (large installations with many beacons for museums, malls, trade shows, events). It is ideal for indoor navigation and localization systems. BlueBeacon Maxi is powered by two replaceable standard AA alkaline batteries, and it comes in 3 versions: two with flanges (snap-fit cover or cover with back screws), one without flanges (cover with back screws).

Advertising	
Up to 4 slots configurable for Eddystone frame types: UID, URL, TLM, EID. Full support for specifications Eddystone Configuration GATT Service by Google	
Up to 4 slots configurable for the following frame types: iBeacon, Quuppa, Sensors	
TX power	-40, -30, -20 to 4 dBm (with 4dB steps). Programmable for each slot
Advertising interval	0.1 to 5 secs. Programmable for each slot
Global configuration options	non-connectable mode, anonymous mode, programmable time period, locked/unlocked mode, change password
Default settings	
Eddystone-URL: URL = https://www.blueupbeacons.com , ADV interval = 1000 msec, TX power = -8dBm	
iBeacon: UUID = ACFD065E-C3C0-11E3-9BBE-1A514932AC01, major = 0, minor = S/N, ADV interval = 400 msec, TX power = -8dBm	
Global configuration	connectable, locked

Device specifications	
Electrical specifications	
Core module	Nordic nRF51822 SoC (MCU and radio transceiver)
MCU core	ARM Cortex-M0 32-bit CPU
Current consumption	Radio TX: 8mA (@ 0dBm); Radio RX: 9.7 mA Idle mode: 3 uA; Sleep mode: 1.5 uA
Radio specifications	
Standard	Bluetooth 4.0 (Bluetooth Low Energy or Bluetooth Smart)
Frequency band	2.402 to 2.480 GHz (according Bluetooth 4.0 specifications, worldwide ISM band)
Advertising channels	CH37 (2.402 GHz), CH38 (2.426 GHz), CH39 (2.480 GHz) (according Bluetooth 4.0 specifications)
Channel spacing	2 MHz (according Bluetooth 4.0 specifications)

Radio specifications (cont'd)	
TX power	Conducted: +4 dBm (max) EIRP (Equivalent Isotropic Radiated Power): +6 dBm (max)
Antenna	
Type	Integrated meandered planar inverted F-antenna (PIFA)
Gain	2dB (max.)
Radiation diagram	Omnidirectional
Power	
Power supply	Battery
Replaceable	Yes
Type	2x AA 1.5V (LR6 alkaline or FR6 lithium)
Model	VARTA Industrial 4006 (typical capacity 2600 mAh @ 25°C)
Expected life	18 months to 10 years, 24/7 at ambient temperature 4 years with default settings
Mechanical specifications	
Material	ABS plastic
Color	White (silk-screen printing available on demand; custom color on demand)
Size	70 x 50 x 27 mm (version without mounting flanges) 90 x 50 x 29 mm (versions with mounting flanges) (see next page)
Wall fastening	Lateral flanges or double-sided tape or dual-lock
Opening	Snap-fit front cover or back screws (depending on enclosure model)
Protection	IP54
Flammability	UL 94 HB
Environmental specifications	
Operating temperature	-20°C to +60°C (battery operating life sharply decreases under 0°C)
Storage temperature	-40°C to +85°C (without battery)
Certifications	
CE (Directive 2014/53/EU RED, 2011/65/UE RoHS2) iBeacon, Eddystone, Quuppa	

Expected battery life-time (in months)						
TX power	Advertising interval					
	100 msec	300 msec	500 msec	700 msec	1000 msec	5000 msec
0 dBm	18	45	63	75	89	130
-8 dBm	20	48	66	79	92	131
-20 dBm	22	52	70	83	95	132

Expected battery life-time is estimated assuming nominal battery capacity, self-discharge and ambient operating temperature.
 Enabling Eddystone-EID and eTLM advertising reduce battery life-time of about 15/20%

Enclosure versions

With flanges (snap-fit front cover)



With lateral flanges for fast and robust wall installations.
 The snap-fit front cover allows for an easy battery replacement.

Size w/ flanges: 90 x 50 x 29 mm
 Size w/o flanges: 70 x 50 x 29 mm

Typical applications:
 - indoor navigation and positioning
 - long-term fixed installations
 - asset identification

With flanges (back screws)

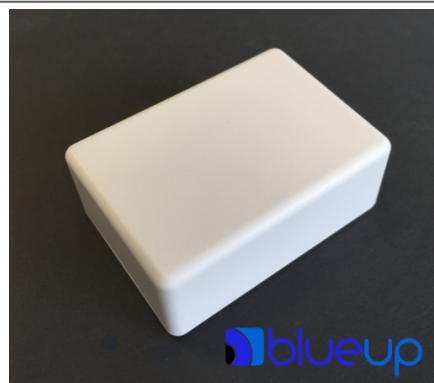


With lateral flanges for fast and robust wall installations.
 The cover with back screws ensures maximum security against tampering.

Size w/ flanges: 90 x 50 x 29 mm
 Size w/o flanges: 70 x 50 x 29 mm

Typical applications:
 - indoor navigation and positioning
 - long-term fixed installations
 - asset identification

Without flanges (back screws)



Elegant multi-purpose corner-rounded enclosure.
 Battery replacement can be easily performed by unscrewing the back panel.

Size: 70 x 50 x 27 mm

Typical applications:
 - proximity applications
 - long-term installations

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