

BlueBeacon Forte

Bluetooth Low Energy proximity-beacon

Data sheet v. 3.0



BlueBeacon Forte is a battery-powered BLE beacon for outdoor and industrial applications. It supports advertising of multiple frames with iBeacon, Eddystone (full support) and/or Quuppa format, at the same time.

BlueBeacon Forte is perfectly suitable for all installations where protection from environmental factors is critical. Typical scenarios are gardens, parks, open-air installations, industrial plants.

BlueBeacon Forte is powered by a CR17345 lithium battery, with extended operating temperature range, easily replaceable by removing the front cover.

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	CR17345 (3V, lithium)
Model	Panasonic Industrial CR123A (typical capacity 1500 mAh @ 25°C)
Expected life	11 months to 8 years, 24/7 at ambient temperature 2.5 years with default settings
Mechanical specifications	
Material	Polycarbonate plastic
Color	Light grey RAL7035 (silk-screen printing available on demand)
Size	50 x 52 x 35 mm
Wall fastening	Screws (invisible wall-mounting within the base part), silicone glue, double side tape
Opening	Front cover with screws
Protection	IP65 / NEMA4
Flammability	UL 94 HB
Environmental specifications	
Operating temperature	-40°C to +75°C (battery operating life sharply decreases under -10°C)
Storage temperature	-40°C to +85°C (without battery)
Certifications	
CE (Directive 1995/5/CE R&TTE, 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	11	28	41	50	62	102
-8 dBm	12	30	43	53	65	104
-20 dBm	13	32	46	57	68	106

*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%*

BlueUp reserves the right to change product specifications at any time without prior notice.

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