



Agroplanning

Implement ID

Technical specifications. v.1.0



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Radio specifications(cont'd)	
TX power	Conducted: +4 dBm(max) EIRP (Equivalent Isotropic Radiated Power):+6dBm(max)
Antenna	
Type	Integrated meandered planar inverted F-antenna(PIFA)
Gain	2cB(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 month to 8 years, 24/7 at ambient temperature 2.5 years with default settings

Advertising	
Up to 4 slots configurable for Eddystone frame types: UID, URL, TLM, EID. Full support for specifications Eddystone Configurable 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(with4dBm steps). Programmable for each slot
Advertising interval	0.1 to 10 secs. Programmable for each slot
Global configurable options	non-connectable mode, anonymous mode, programmable

	time period, locked/unlocked mode, change password
Default settings	
eddytone-URL: URL = https://www.blueupbeacons.com , ADV interval = 1000 msec, TX power = -8dBm	
iBeacon: UUID = ACFD065E-C3C0-11E3-9BBE91A51493AC01, major = 4, 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 (2.426GHz), CH39 (2.480 GHz) (according Bluetooth 4.0 specifications)
Channel spacing	2MHz(according Bluetooth 4.0 specifications)

Mechanical specifications	
Material	Polycarbonate plastic (standard enclosure version)
Color	Light grey RAL7035 (standard enclosure version)
Size	50 x 52 x 35 mm (standard enclosure version) 50 x 80 x 35 mm (flanged version)
Wall fastening	Screws (invisible wall-mounting within the base part), silicone glue, double side tape
Protection	IP65 / SEMA4 (IP67 / NEMA 6 on demand)
Opening	Front cover with screws
Flammability	UL94HB
Environmental specifications	
Operating temperature	-30°C to +70°C (battery operating life sharply decreases under -10°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)						
Advertising interval						
TX power	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%.

Enclosure versions	
Standard (without flanges)	
	Front cover allows for an easy battery replacement. Size: 50 x 52 x 35 mm

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Technical support

www.agroplanning.com

