

BlueBeacon Brick

Bluetooth Low Energy industrial rugged outdoor beacon

Data sheet v. 1.0



BlueBeacon Brick is high-end long-life industrial rugged outdoor beacon, based on Bluetooth5-ready nRF52832 chipset with simultaneously supports of iBeacon, Eddystone (full support, with GATT and EID), Quuppa (emulation mode).

BlueBeacon Brick is perfectly suitable for all installations where protection from environmental factors and long operating life are critical parameters. Typical scenarios are logistics, outdoor installations, industrial plants, automotive.

BlueBeacon Brick has a rugged IP67/NEMA6 enclosure, includes an accelerometer and is powered by a replaceable lithium thionyl chloride battery pack ER14505 1S2P with more than 5Ah capacity and extended operating temperature range.

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, -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	
iBeacon: UUID = ACFD065E-C3C0-11E3-9BBE-1A514932AC01, major = 12, minor = S/N ADV interval = 400 msec, TX power = -8dBm	
Global configuration	connectable, locked

Device specifications	
Electrical specifications	
Core module	Nordic nRF52832 SoC (MCU and radio transceiver)
MCU core	64MHz ARM Cortex-M4 32-bit CPU, 512/256 KB Flash, 64/32 KB RAM
Current consumption (25°C)	Radio TX: 7.1mA (0dBm TX) Radio RX: 6.5 mA Idle mode: 3 uA Idle mode with accelerometer ON: 7 uA
Radio specifications	
Standard	Bluetooth 4.2 Bluetooth Low Energy (BT5-ready)
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 3.6V Lithium Thionyl Chloride LiSoCl ₂
Model	Battery pack 2x HBC ER14505 1S2P (3.6V, Lithium Thionyl Chloride LiSoCl ₂ , 5200 mAh typ. capacity @ 25°C)
Expected life	2.5 years to 25+ years, 24/7 at room temperature (25°C) 8.5 years with default settings, 24/7 at room temperature (25°C)
Sensors and interfaces	
Sensor	3-axis linear accelerometer
Interface	Led (internal, on PCB)
Mechanical specifications	
Material	Polycarbonate plastic
Color	Light grey RAL7035
Size	64 x 58 x 35 mm (standard enclosure version) 94 x 58 x 35 mm (flanged version)
Wall fastening	Screws (invisible wall-mounting within the base part or flanges), silicone glue, double side tape
Opening	Front cover with screws
Protection	IP67 / NEMA6
Flammability	UL94-HB (UL94-V0 on demand)
Environmental specifications	
Operating temperature	-40°C to +75°C (contact us for battery life at extreme conditions)
Storage temperature	0°C to +30°C, RH<75% (with battery)
Certifications	
CE (Directive 2014/53/EU RED, 2011/65/UE RoHS2, in progress) iBeacon, Eddystone	

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