Ultra BLE
Bluetooth Low Energy high-end beacon with optional sensors
Data sheet

Key features

- **Suitable for indoor localization and tracking**
- **Based on Nordic nRF52832**
- **Simultaneous support of iBeacon and Eddystone**
- **Directive antenna for higher accuracy**
- **Enclosure suitable for wall/ceiling installation**
- **Optional versions with environmental sensors**
- **Powered by 4x alkaline batteries or USB**

GATT and advertising

Full support for specifications Eddystone Configuration GATT Service by Google	
Up to 4 slots configurable for Eddystone frame types: UID, URL, TLM, EID	
Up to 4 slots configurable for the following frame types: iBeacon, Quuppa (emulation mode), Sensors	
TX power	-40, -20 to 4 dBm (with 4 dB steps). Programmable for each slot
Advertising interval	0.1 to 60 secs. Programmable for each slot
Global configuration options	non-connectable mode, anonymous mode, programmable time period, locked/unlocked mode, change password
Firmware update	OTA (Over-the-Air) firmware update

Device specifications

Electrical specifications

Core module	Nordic nRF52832 SoC (MCU and radio transceiver)
MCU core	ARM Cortex-M4 32-bit CPU
Current consumption (25°C)	Radio TX: 7.1 mA (0 dBm TX) Radio RX: 6.5 mA Idle mode: 3 µA Idle mode with accelerometer ON: 7 µA

Radio specifications

Standard	Bluetooth 4.2 Bluetooth Low Energy (compatible with BLE 5.x)
Frequency band	2.402 to 2.480 GHz (according to Bluetooth 4.0 specifications)
Advertising channels	CH37 (2.402 GHz), CH38 (2.426 GHz), CH39 (2.480 GHz) (according to Bluetooth 4.0 specifications)
Channel spacing	2 MHz (according to Bluetooth 4.0 specifications)
TX power	Conducted: +4 dBm (max) EIRP (Equivalent Isotropic Radiated Power): +6 dBm (max)

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Antenna	
Type	Directive planar printed antenna
Gain	5 dB (max)
Radiation diagram	Directive with 10dB front-to-back ratio (FBR)

Power				
Version	ZERO	BASE	PLUS	DELUXE
Power supply	Battery	Battery and external 5Vdc		
Replaceable battery	Yes			
Battery type	4x AA (1.5V, alkaline)			
Model	Panasonic LR6 or equivalent (typical tot. capacity 5600 mAh @ 25°C)			
External supply		MicroUSB port (5Vdc)		

Sensors and interfaces				
Version	ZERO	BASE	PLUS	DELUXE
Sensors	-	-	Temperature Humidity	Temperature Humidity Pressure CO2
Interfaces	-	Button, LED		

Sensors specifications	
Temperature	±0.2°C (0-70°C), ±0.3°C (-40-100°C)
Humidity	3%RH (RH=0 to 85%RH), 4%RH (RH=85 to 95%RH),
Pressure	±9Pa (900-1100hPa, 25-40°C), ±50Pa (300-1100hPa, 0-65°C)
CO2	±40 ppm +5% (400 to 5000 ppm); range: 400 to 32768 ppm

Mechanical specifications	
Material	ABS plastic
Color	White
Size	100 x 100 x 35 mm (without flanges) 124 x 100 x 35 mm (including flanges)
Weight	197 gr
Fastening	Lateral flanges for 2x M4 screws (optional plastic holder available)
Opening	4 screws on back panel
Protection	IP40 (Ver. Zero); - (other versions)
Flammability	UL 94 V0

Environmental specifications	
Operating temperature	-20°C to +60°C (battery operating life sharply decreases under -10°C)
Storage temperature	+10°C to +30°C (with battery), -40°C to +85°C (without battery)

Certifications	
CE	