

## Forte+ BLE

### Bluetooth Low Energy beacon

### *Data sheet*



#### Key features

- Suitable for outdoor and industrial applications
- Based on Nordic nRF52832
- Simultaneous support of iBeacon and Eddystone
- 3-axis accelerometer for motion detection
- Rugged IP67 enclosure
- Powered by replaceable CR123A lithium battery

#### 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)<br>Radio RX: 6.5 mA<br>Idle mode: 3 µA<br>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<br>(according to Bluetooth 4.0 specifications) |
|----------------|-------------------------------------------------------------------|

|                      |                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Advertising channels | CH37 (2.402 GHz), CH38 (2.426 GHz), CH39 (2.480 GHz)<br>(according to Bluetooth 4.0 specifications) |
|----------------------|-----------------------------------------------------------------------------------------------------|

|                 |                                                   |
|-----------------|---------------------------------------------------|
| Channel spacing | 2 MHz (according to Bluetooth 4.0 specifications) |
|-----------------|---------------------------------------------------|

|          |                                                                                     |
|----------|-------------------------------------------------------------------------------------|
| TX power | Conducted: +4 dBm (max)<br>EIRP (Equivalent Isotropic Radiated Power): +6 dBm (max) |
|----------|-------------------------------------------------------------------------------------|

| <b>Antenna</b>                      |                                                                                     |
|-------------------------------------|-------------------------------------------------------------------------------------|
| Type                                | Integrated meandered planar inverted F-antenna (PIFA)                               |
| Gain                                | 2 dB (max)                                                                          |
| Radiation diagram                   | Omnidirectional                                                                     |
| <b>Power</b>                        |                                                                                     |
| Power supply                        | Battery                                                                             |
| Replaceable                         | Yes                                                                                 |
| Type                                | CR17345 (3V, lithium)                                                               |
| Model                               | Panasonic Industrial CR123A (typical capacity 1500 mAh @ 25°C)                      |
| <b>Sensors and interfaces</b>       |                                                                                     |
| Sensors                             | 3-axis MEMS linear accelerometer                                                    |
| Interfaces                          | -                                                                                   |
| <b>Mechanical specifications</b>    |                                                                                     |
| Material                            | Polycarbonate plastic                                                               |
| Color                               | Light grey RAL7035                                                                  |
| Size                                | 50 x 52 x 35 mm (version without flanges)<br>50 x 80 x 35 mm (version with flanges) |
| Weight                              | 60 gr (version without flanges)<br>67 gr (version with flanges)                     |
| Fastening                           | Screws (not included), silicone glue, double side tape                              |
| Opening                             | Front cover with two screws                                                         |
| Protection                          | IP67/NEMA6                                                                          |
| Flammability                        | UL 94 HB                                                                            |
| <b>Environmental specifications</b> |                                                                                     |
| Operating temperature               | -30°C to +70°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)                     |
| <b>Certifications</b>               |                                                                                     |
| CE (RED), FCC                       |                                                                                     |

## Versions

### NF



Standard version, without flanges  
 Front cover allows an easy battery replacement.

Size: 50 x 52 x 35 mm

### WF



Standard version, with flanges  
 For fast and robust wall installations.  
 Front cover allows an easy battery replacement.

Size w/o flanges: 50 x 52 x 35 mm

Size w flanges: 50 x 80 x 35 mm