

## Forte+ LED Quuppa

Quuppa Intelligent Locating System® asset tag with RGB LED

### Data sheet



#### Key features

- Suitable for outdoor and industrial applications
- Based on Nordic nRF52832
- Firmware based on Quuppa libraries
- 3-axis accelerometer for motion detection
- Rugged IP67 enclosure
- High-visibility RGB LED
- Powered by replaceable CR123A lithium battery

#### Quuppa Specifications

|                                                                                                                                                                     |                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Quuppa Approved: based on Quuppa libraries and certified by Quuppa                                                                                                  |                                                                                                                                                 |
| Full support of Quuppa Intelligent Locating System® functionalities: BLE and proprietary channels, back-channel communication, profile configuration, OTA FW update |                                                                                                                                                 |
| Configuration and diagnostics                                                                                                                                       | QSP (Quuppa Site Planner), QPE (Quuppa Positioning Engine)                                                                                      |
| Advertising interval                                                                                                                                                | 0.1 to 10 secs (BLE channel)<br>0.01 to 10 secs (Quuppa proprietary channel)                                                                    |
| Advertising channels                                                                                                                                                | BLE (CH37 – 2.402 GHz) or Quuppa proprietary                                                                                                    |
| Quuppa ID                                                                                                                                                           | MAC address or custom ID                                                                                                                        |
| Custom features                                                                                                                                                     | Advanced motion detection (intensity/duration, shock, free-fall, man-down)<br>Back-channels commands for configuration and trigger notification |

#### 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        | Quuppa Intelligent Locating System®                                 |
| Frequency band  | 2.401 to 2.481 GHz (Bluetooth LE 4.0 + Quuppa proprietary channels) |
| Channel spacing | 2 MHz                                                               |
| TX power        | -40, -20 to 4 dBm (with 4 dB steps)                                 |
| RX sensitivity  | -94 dBm                                                             |

| <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                          | RGB LED                                                                             |
| <b>Mechanical specifications</b>    |                                                                                     |
| Material                            | Polycarbonate plastic                                                               |
| Color                               | Body: light grey RAL7035<br>Lid: transparent                                        |
| 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                       |                                                                                     |

BlueUp reserves the right to change product specifications at any time without prior notice.  
 Quuppa and Quuppa Intelligent Locating System are trademarks of Quuppa Oy,  
 Bluetooth is a trademark of Bluetooth SIG, ARM and Cortex are trademarks of ARM Inc.