TagX SHT Wirepas

Wirepas Mesh 2.4GHz temperature and humidity sensor

Data sheet

Key features

- **Suitable for outdoor and industrial applications**
- **Based on Nordic nRF52832**
- **Firmware based on Wirepas libraries**
- **3-axis accelerometer for motion detection**
- **Temperature and Humidity sensors**
- **2x high-visibility LEDs**
- **Enclosure with flanges for flexible fastening**
- **Powered by replaceable CR2477 lithium battery**

Wirepas Specifications	
Based on Wirepas Mesh 2.4GHz stack v5.x	
Available applications: Wirepas PosApp, BlueUp PosApp	
Wirepas PosApp	
Configuration and diagnostics	WNT (Wirepas Network Tool)
Operating modes	Opportunistic anchor
BLE beaconing	iBeacon, Eddystone UID, Eddystone URL (fixed packet)
BlueUp PosApp	
Configuration and diagnostics	WNT (Wirepas Network Tool) / BlueUp MeshCube
Operating modes	Opportunistic anchor (Low Energy or Low Latency)
BLE beaconing	iBeacon, Eddystone UID (configurable packet)
Sensor interval	Configurable (from 1 minute to 1 hour)

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	Wirepas Mesh 2.4GHz (stack v5.x)
Frequency band	2.402 to 2.480 GHz
Channel spacing	2 MHz
BLE beaconing channels	CH37 (2.402 GHz), CH38 (2.426 GHz), CH39 (2.480 GHz)
TX power	Conducted: +4 dBm (max) EIRP (Equivalent Isotropic Radiated Power): +6 dBm (max)

Antenna	
Type	Integrated meandered planar inverted F-antenna (PIFA)
Gain	2 dB (max)
Radiation diagram	Omnidirectional

Power	
Power supply	Battery
Replaceable	Yes
Type	CR2477 (3V, lithium)
Model	Panasonic Industrial CR2477 (typical capacity 1000 mAh @ 25°C)

Sensors and interfaces	
Sensors	3-axis MEMS linear accelerometer Temperature Humidity
Interfaces	2x high-visibility LEDs (yellow, red)

Sensors specifications	
Temperature	$\pm$0.2°C (0-70°C), $\pm$0.3°C (-40-100°C)
Humidity	3%RH (RH=0 to 85%RH), 4%RH (RH=85 to 95%RH)

Mechanical specifications	
Material	ABS plastic
Color	White
Size	77 x 46 x 16 mm (including flanges)
Weight	27 gr
Fastening	Screws (max. M3.5), cable-ties
Opening	Back lid with four screws
Protection	-
Flammability	UL 94 HB

Environmental specifications	
Operating temperature	-20°C to +60°C (battery operating life sharply decreases under 0°C)
Storage temperature	+10°C to +30°C (with battery), -40°C to +85°C (without battery)

Certifications	
CE	