



## PRODUCT DATASHEET



# Ultra-Wideband Proximity Tag

P/N: PP-TB

PP-TB is a compact, low-power UWB Tag designed for continuous or event-driven proximity signaling to PX-A Anchors. Based on IEEE 802.15.4ab draft-clause 3, the tag transmits optimized UWB bursts to enable reliable detection, zone entry/exit events, and interaction logging. The PP-TB architecture emphasizes ultra-low energy consumption, stable transmission characteristics, and form-factor flexibility for integration into wristbands, wearables, ID badges, or equipment-mounted housings.

The tag incorporates configurable transmission intervals, adaptive power control, Wi-Fi or provisioning, and onboard telemetry such as battery level reporting.

## Radio Specification:

Parameter	Value / Description
Location Technology	Ultra-Wideband (UWB), 6.7–9.2 GHz center frequency
Standard Compliance	IEEE 802.15.4ab draft-clause 33
Channel Bandwidth	500 MHz
Antenna	Integrated miniature UWB PCB antenna
Transmit Interval	Configurable; typical design supports 1 Hz flash/transmit
LED Indicators	RGB LED (fully configurable via firmware)

## Electrical Specification:

Parameter	Value / Description
Primary MCU	STM32 ultra-low-power MCU
Power Supply	Replaceable CR2450 coin cell
Typical Operating Time	~1.2 years at 1 Hz flash/transmit frequency
Average Consumption	Optimized for ultra-low duty cycle bursts
LED Indicators	RGB LED, firmware-controlled

## Mechanical Specification:

Parameter	Value / Description
Dimensions	35.3 × 31.2 × 11.2 mm
Weight	12 g (with battery), 16.6 g (with battery + clip)
Enclosure	ABS/PC wearable enclosure
Mounting Options	Clip, adhesive mounts, or wristband mounting depending on accessory

## Environmental Conditions:

Parameter	Value / Description
Operating Temperature	0°C to 50°C
Storage Temperature	-25°C to 70°C
Operating Humidity	20–95% RH (non-condensing)

Storage Humidity	0-95% RH (non-condensing)
Environmental Rating	Indoor/near-body wearable, non-condensing
Compliance	RoHS, REACH, In preparation CE, FCC, UKCA

**HOUSING PICTURE:**



**PCBA PICTURES:**

