

LORAWAN® SAFETY SMARTWATCH · ROUND TOUCH DISPLAY

Personnel Tag Watch-1-LoRa

A worker-safety wearable that looks and feels like an ordinary watch. The Watch-1-LoRa reports **GPS position** and raises a **one-touch SOS** over LoRaWAN — with a full round touch display, **10+ days** of standby and **no SIM card** and **no cellular subscription**.

LORAWAN

GPS · GLONASS

1.3" TOUCH DISPLAY

SOS & GEOFENCE ALARMS

450 MAH · 10 DAYS

IPX7



POWERED BY 4MTRACKING

A safety device your people actually wear.

Panic buttons only work if they are on the wrist when it matters. The Watch-1-LoRa shows the time, the date and messages from the control room — so it stays on, shift after shift, while GPS position and SOS alerts flow into 4MTracking over your own LoRa network.



Technical Specifications

LoRaWAN wearable with round touch display, multi-source positioning and one-touch SOS.

Specification	Personnel Tag Watch-1-LoRa
LORA WIRELESS	
Network	LoRaWAN® — no SIM card required
Frequency bands	862–870 MHz (EU868) · 902–928 MHz (US915 · AU915 · AS923 · KR920) 470–510 MHz (CN470) · 433 MHz (public band, most regions)
POSITIONING	
Satellite	GPS / Glonass — 5–20 m in open sky*
Wi-Fi positioning	10–50 m, depending on surrounding Wi-Fi density
BLE positioning	1–3 m with beacons deployed at 6–8 m spacing
DISPLAY & CONTROLS	
Display	1.3" round IPS TFT · 240 × 240 px
Input / feedback	Capacitive touch panel · 2 side keys · vibration motor
HARDWARE	
Dimensions / weight	48 × 52 × 15.5 mm · 50 g · PC + ABS housing
Strap	Standard 22 mm, removable · silicone, leather or metal · black or red
Platform	BLE 5.1 Cortex-M4 SOC · 32 Mbit Flash · OTA update · G-sensor
POWER	
Battery	450 mAh Li-ion · 3.7 V · magnetic USB charging, approx. 2 h
Runtime	> 10 days standby · 5–7 days at 10-minute position reporting
ENVIRONMENT	
Temperature	–10 °C ... +60 °C operating · –30 °C ... +80 °C storage
Humidity / protection	10 % ... 85 % RH · IPX7 waterproof



Standard 22 mm strap. Removable and freely replaceable — silicone, leather, metal or an optional RFID tag strap.



Magnetic charging. Contact pads and the optional sensor window sit in the sealed rear shell — no open ports, nothing to plug in.

• Optional Extensions

Health monitoring — heart rate, blood oxygen (SpO₂) and body temperature

Wear detection — reports put-on / taken-off and drops to ultra-low power when not worn

NFC / RFID strap — M1 tag strap for access control and checkpoint reading

*Satellite accuracy assumes at least a quarter of the sky is unobstructed. LoRa range depends on environment, antenna gain and LoRaWAN gateway placement.

Key Features

Wide-area personnel safety on your own LoRa network — without a mobile contract per worker.

LoRaWAN without a SIM — positions and alarms travel over your own gateways straight into 4MTracking. No cellular subscription, no monthly cost per device.

One-touch SOS plus automatic alarms — a single button raises an emergency; geofence entry or exit, low battery and power-off alert automatically. Zones are drawn in 4MTracking and every crossing is recorded.

No dead zones — out of coverage the watch stores position and status on board and sends the backlog once a gateway is in reach; over 100 days of track history stay queryable.

Worn like a normal watch — 1.3" round touch display with time, date and messages from the control room; standard 22 mm strap in silicone, leather or metal.

10+ days on a charge — 450 mAh battery, contactless magnetic charging and IPX7 waterproofing for full-shift, all-weather use.

Optional health monitoring — heart rate, blood oxygen and body temperature plus wear detection, for heat stress, exhaustion and man-down situations.

APPLICATIONS



On the wrist, all shift. Familiar form factor, real display — the reason it stays on when a clip-on tag ends up in a locker.

• Mining & Quarries

Personnel visibility across pits, haul roads and processing plant, with SOS in reach at all times.

• Lone Workers

Staff working alone or out of sight — position, panic button and optional man-down indication.

• Construction Sites

Wide outdoor sites covered by a handful of gateways; restricted areas enforced by geofence.

• Security & Guarding

Patrol tracking with checkpoint reading via the optional RFID tag strap.