

# ED10W

## LoRaWAN Smart Watch User Manual

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V1.0.0

### Document Information

Version	Time	Description	Remark
V1.0.0	2019-04-18	Preliminary version	Mike

## Table of content

1. Description .....	- 2 -
2. Features & Application .....	- 2 -
3. Interface.....	- 2 -
4. Specification .....	- 2 -
5. Operation guide .....	- 5 -
5.1 Power on .....	- 5 -
5.2 Join the Network.....	- 5 -
5.3 Check system menu.....	- 5 -
5.4 Switch display.....	- 5 -
5.5 SOS .....	- 5 -
5.6 Check downlink information .....	- 5 -
5.7 Charging.....	- 5 -
5.8 Device positioning .....	- 5 -
5.9 Power off .....	- 5 -
6. Package .....	- 5 -

## 1. Description

ED10W is a smart wristband with GPS/ LoRa®/WI-FI functions. combined with motion sensors can achieve real-time positioning. With wearing detection, it can realize real-time collection of health data such as heart rate, body temperature, blood press number of steps. the detected data will be transmitted back to the server platform through the LoRaWAN base station.



### Application

- Smart safety solution for people working in industrial companies. Such as large oil&gas company, mining, smart cities, utilities.
- Smart senior care, Isolting people from airport, hospital.

## 2. Features & Application

- Communication via LoRa : communication range up to 1.5KM line-of-sight , 500 ~ 1000Meters in dense urban , compatible with any LoRaWANTM network.
- Build in GNSS+ WIFI chip, Indoor &outdoor real-time tracking
- Heart rate, body temperature, blood pressure, step monitor: the measurements are made at a configured frequency and automatically send to the LoRaWANTM network.
- Real-time Alarm: When the heart rate exceeds the standard, an alarm is sent.
- SOS in emergency
- Long Battery Life: Battery life as long as 7 days @ 15mins uplink duty cycle(Class A), a notification is sent when the battery power falls below 10%.

### 3. Interface



Function	Description
Display	Display detection parameters
Power On	Press and hold button A 3 seconds
Power Off	Press and hold button A 7 seconds
Switch the screen	When the screen is off or in host interface, Press button A to switch the screen
Check system manual	Press button B to view the system menu and turn the page
SOS	Press and hold Button B 3 seconds to trigger SOS, the sos alarm will display on host interface if sent successfully to the platform.
Check downlink message	Press button B to switch to the message page, then press button A to select the message. Press and hold button A to check the downlink message
Charging	Use the standard magnetic charging cable to charge the device, can be fully charged within 2 hours

### 4. Specification

Parameters	Specification
Modem	ISM Band LoRa®
Frequency	CN470MHz/AS923MHz, EU868MHz
Tx Power	Max +20dBm
Communication range	500~1000M in dense urban, 1.5KM los
Positioning	Build in GNSS, WiFi and accelerometer, Positioning accuracy:5~20 Meter (Indoor positioning accuracy varies depending on Wifi density) Bluetooth optional.
Operating mode	1、 The default positioning interval is 15mins, supports wear detection 2、 Automatically send a uplink message when power on the device, platform will send a downlink message. 3、 The default downlink interval $\geq 15s$ 4、 Trigger SOS will not change the positioning logic 5、 The wristband uplink positioning data, power information data, heart rate and blood pressure information according to the cycle 6、 Class C mode: support downlink message at any time
Bluetooth	Low power consumption Bluetooth for indoor positioning(opt.)
Display	240*240 TFT Display
Rubber strap	22mm standard size
Buttons	Two function buttons
Battery capacity	Polymer battery, 400mAh, 3.8V

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Charging	Magnetic charging cable
Operation time	Charging: 2 hours; 7 days standby; 10H (receiving mode)
Enclosure	IP65(IP67 opt.)
Electronic tags	Support RFID& NFC (not equipped by default)
Health data	Heart rate, body temperature, pedometer, blood pressure detection
SOS	Support
Alarm	SOS alarm, Low power alarm
Operation temperature	-20~60C°
Operation humidity	10% ~ 90%, Non-condensing
Dimensions	TYP. 48*52*14.5mm (W*L*H)
Weight	50g

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Table 4.1 specification

## 5. Operation guide

### 5.1 Power on

- In the shutdown state, the device automatically turns on when connected to the charging cable.
- Press and hold button A 3 seconds to power on the device.

### 5.2 Join the Network

After turning on the device, it starts to search the LoRaWAN network and register to the network, when successfully connected to the LoRaWAN Network, the device will request UTC time synchronization from the server. The host interface will display the network signal, time and other information in the current environment.

### 5.3 Check system menu

Press button B to view the system menu and turn the page

Host interface-Message-Heartrate-Body temperature -Steps-Themes-System Version

### 5.4 Switch display

When the screen is off or in host interface, Press button A to switch the screen

### 5.5 SOS

Press and hold Button B 3 seconds to trigger SOS, the SOS alarm will display on host interface if sent successfully to the platform. Press and hold again to exit. It will automatically quit after 20 minutes

### 5.6 Check downlink information

Press button B to switch to the message page, then press button A to select the message. Press and hold button A to check the downlink message, press and hold button A to exit.

### 5.7 Charging

Use the standard magnetic charging cable to charge the device, the smart wristband needs to be fully charged for the first time, and it takes about 2 hours.

### 5.8 Device positioning

The default GPS/WIFI positioning interval is 15mins, can be adjust. You also can set the positioning interval in different period, no more than 4 period.

### 5.9 Power off

Press and hold button A 7 seconds to power off the device.

## 6. Package

Item	Model .No	QTY	尺寸	N.W	Accessories
Smart wristband	ED10W	1pcs/Box	109*75*59*MM	190g	Charger*1,charging cable*1, User manual*1, Warranty card*1