



PRODUCT SPECIFICATION

Optical HRM & Health & Activity Tracking

Device

LW-360HR

VER: 0.5



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General Description

GlobalSat LW-360HR supports optical Heart rate monitor, physiological measure and activity tracking functions as wearable personal belongings. It is adopted for people who need to measure his/her physiological information. It can be also used to know and record your real-time heart rate without wireless heart rate belt. And it can monitor your daily actions such as steps, calories and sleep status. It is convenient for people who are in exercise, daily activities and doing physiological measurement and transfer record data by LoRaWAN.

Feature

- Built-in optical heart rate monitor module. Easy to show your heart rate status when you want to know.
- It uses motion filter to remove motion signal from PPG. Heart rate is easily to figure out in filtered PPG.
- Accuracy : (Based on HRM Module)
 - +/- 3 bpm in rest
 - +/- 10 bpm in motion (<10km/hr)
- Support BLE function
 - Link distance : 10M
- Supported NFC function is optional
- LoRa Transport distance : 1 - 10 KM
 - Open Space : 10 KM
 - City : 1 KM
- Battery life(Watch Mode) : 4 Days
- With built-in 250mAh lithium battery.
- Interval report data include GPS/HRM/Beacon ID(By On/Off Setting)
- Report interval time setting : 10 min (Default)
- Help Alarm report data : GPS/HRM/Beacon ID (enforce ON)
- Built-in clock function.
- Globalsat owned development pedometer algorithm
- Watch, Alarm with vibrator and buzzer

Accessories

- Quick Start Guide
- Clip Cable

System Specification

Item	LW-360HR
Display Type	FSTN
Display Size	Round shape, D = 0.96 inch
Display Resolution	128*128 pixel
Real Key	5 Key
Unit Weight	30 g
Total Weight	45 g
Waterproof Standard	5 ATM
Unit Size	45*45*14 mm
Band width	22 mm
Operating Temperature	-10 ° to 60 ° C
Charging Temperature	0 ° to 45 ° C
Humidity	5% to 95% Non-condensing
Voltage	4.35V
Battery	250 mAh
Battery life (Watch Mode)	4 Days
Battery Charging Time	3 Hours
Vibrator	YES
Buzzer	YES
Optical HRM	YES
BLE 4.0	YES
BLE Link Distance	10 M
Beacon ID format	iBeacon / ALTBeacon / Eddystone
LoRa	LoRaWAN (Interval report)
LoRa Link Distance	> 1 KM (city)
G-sensor	YES
Skin Temperature Sensor	YES
GPS	YES
Upgrade FW	Mass Storage
Charge Interface	Charging Cable (4 pin)

FW Function

Item	LW-360HR
HRM Detection	YES
Fall Advisory	YES
Skin Temperature Detection	YES
Beacon search	YES
LoRa Connection	YES
GPS	YES
Help alert	YES (30 second interval report) (LoRa on)(GPS/HRM/Beacon ID on)
RSSI	YES

LoRa/GPS/HRM/BLE setting(Version 0.3)

LoRa Setting	LoRa on : Interval report by LoRa LoRa off : No interval report
GPS Setting	GPS on : GPS pre-on 40 seconds before LoRa transfer GPS off : Interval report w/o GPS data
BLE Setting	BLE on : Beacon search pre-on 5 seconds before LoRa transfer BLE off : Interval report w/o Beacon ID data
Optical HRM Setting	HRM on : HRM pre-on 20 seconds before LoRa transfer HRM off : Interval report w/o HRM data

User Scenario (Battery Life)

- OHR for each 15min working 15sec of day.
- Support Activity Tracking.
- Panel refresh 1 time/minute
- GPS on 1 hour of a day.
- Backlight works 30 sec/day.
- Alert vibrator is 15 times/day and each time works 2sec.
- Report time by LoRaWAN is 3600 sec/day.
- Use 250mAh lithium battery
- **Battery life : Around 4 days**

LW-360 Report Format

LoRa Commands (Version 0x0C)

Command Format:

Command Protocol Version	Command ID	Command Parameters
1 Byte	2 Bytes	0-76 Bytes

Field Description :

Field	Description
Command protocol Version	0x00 : LT-100 0x0A ~ 0x7F : Standard command (Current Version : 0x0C) 0x80 ~ : Short command (Current Version : 0x80)
Command ID	0x0001 - 0x02FF : MOST-Link Commands 0x0301 - 0x04FF : iMOST Commands 0x1001 - 0x2FFF : Reserve 0x3001 - 0xFFFF : Custom commands *0x01F1~0x01FF For single HTTP request API
Command Parameters	Command parameters. Please refer to Command ID and Command Parameters table below

Device Outline & UI

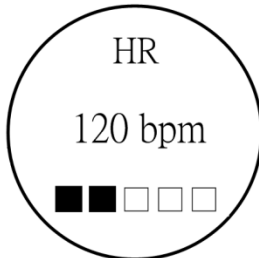


UI Example :

1. Time of date:



2. Heart rate:



3. Step:



4. Alarm:

