GH5200 General description

GH5200 is a tracking terminal with GNSS and GSM connectivity, which is able to collect device coordinates and transfer them via GSM network to a server. This device is perfectly suitable for applications, which require the location acquirement of remote objects.

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Contents

Package contents

The GH5200 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- GH5200 device;
- 3.7 V 1050 mAh rechargeable Li-ion battery;
- USB cable.

Basic characteristics

GSM / GPRS / GNSS features:

- Teltonika TM2500 quad band module (GSM 850 / 900 / 1800 / 1900 MHz);
- GPRS class 12 (Up to 85.6 kbps);
- SMS (text, data);
- Integrated GNSS receiver;
- Up to -165 dBm GNSS receiver sensitivity.

Hardware features:

- Built-in movement sensor;
- Built-in Bluetooth® 4.0;
- Internal High Gain GNSS antenna;
- Internal High Gain GSM antenna;
- Slim design;
- Alarm button;

- 1050 mAh Li-ion rechargeable 3.7 V battery.

Special features:

- Fast position fix;
- High Quality track even in high density urban canyon;
- 5 configurable buttons;
- 3 LED status indication;
- Two-way voice communication;
- Man-Down&No movement events
- Real time tracking;
- Smart data acquisition based on:
  - Time;
  - Distance;
  - Angle;
  - Speed;
  - Movement or any other I/O event;
- Sending acquired data via GPRS;
- GPRS and SMS I/O events;

Technical features

Part name	Physical specification
Status indication	3 LEDs
USB	USB cable
USB	USB socket
Button	5 configurable buttons

Technical details	
2 W max. **Current consumption at 4.2 V**	Data sending/gathering every 5 sec. in performance mode: 107.50 mA Data sending/gathering every 30 sec. in performance mode:: 69.60 mA Data sending/gathering every 60 sec. In Low Power Mode on movement: 61.18 mA Data sending/gathering every 120 sec. In Low Power Mode on movement: 34.94 mA Data sending/gathering every 60 sec. In Low Power Mode on stop: 17.93 mA Data sending/gathering every 120 sec. In Low Power Mode on stop: 12.38 mA GNSS sleep: average 14.63 Deep Sleep: average 4.28 mA Online Deep Sleep: average 4.96 mA Ultra Deep Sleep: average 2.78 mA
Battery charge current	Average 425 mA
Operating temperature	Charging 0..+45°C Discharge -20..+58°C
Storage temperature	-20 to +60°C for 1 month -5 to +30°C for 6 months
Storage relative humidity	5..95% (no condensation)
Device + case + battery weight	80 g

Dimensions	95 x 64 x 11 mm (L x W x H)
Maximum output power	**Bluetooth®:** 5.22dBm **Bluetooth® LE:** -9.43dBm **GSM/GPRS 900**: 32.84dBm **GSM/GPRS 1800:** 29.75dBm

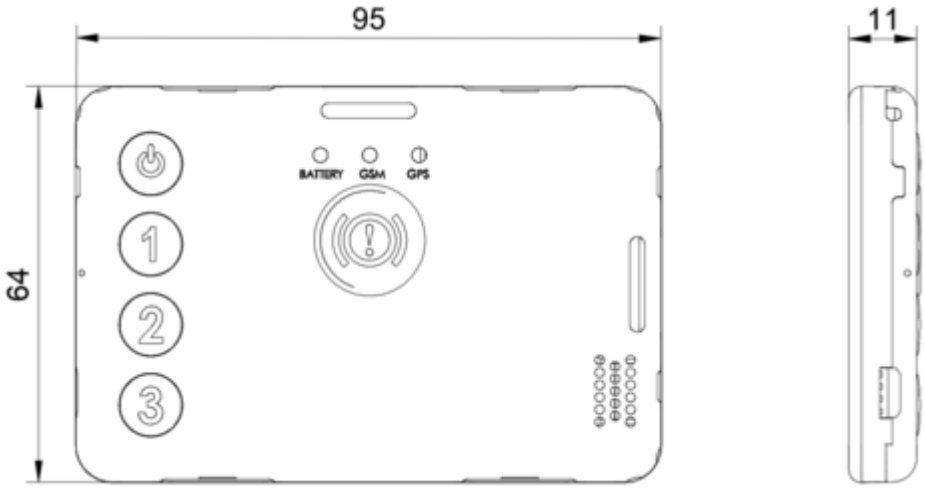
GH5200 working time

GNSS/GPRS reporting	Working mode	Movement	GH5200 working time
0 min	Ultra-Deep Sleep	No	320 hours
0 min	Deep Sleep	No	210 hours
0 min	Online Deep Sleep	No	180 hours
0 min	GNSS Sleep	No	60 hours
5 sec	Performance mode	Yes	8 hours
10 sec	Performance mode	Yes	10 hours
1 min	Performance mode	Yes	12 hours
1 min	Low power mode	No	50 hours
2 min	Low power mode	No	72 hours
10 min	Low power mode	No	120 hours
1 min	Low power mode	Yes	14 hours
2 min	Low power mode	Yes	25 hours
10 min	Low power mode	Yes	57 hours

Testing conditions	Room temperature: 20–25°C Good GSM signal level Good connection with a server Number of visible satellites at least: 15 Number of used satellites at least: 10 Firmware: 55.02.01 Rev:00

	Band	Tx (MHz)	Rx (MHz)
GSM/GPRS Operating Frequency Range	**GSM** 900	880 ~ 915	925 ~ 960
	GSM 1800	1710 ~ 1785	1805 ~1880
Bluetooth® & Bluetooth® LE Operating Frequency Range		2402 ~ 2480	2402 ~2480
GPS L1/GLONASS G1/Beidou/Galileo E1 Operating Frequency Range			1559 ~ 1610

Dimension drawing:



Technical information about internal battery

Internal back-up battery	Battery voltage (V)	Nominal capacity (mAh)	Power (Wh)	Charge temperature (°C)	Discharge temperature (°C)	Storage temperature (°C)
Li-ion rechargeable battery	3.7	1050	3.885	0 to +50	-20 to +58	-20 to +60 for 1 month -5 to +30 for 6 months

Batteries are covered by 6 month warranty support.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Battery should not be disposed of into general household waste.
Bring damaged or worn-out batteries to your local recycling center or dispose them into a battery recycle bin commonly found in supermarkets.

Electrical characteristics

Characteristic description	Value			
	Min.	Typ.	Max.	Unit
Supply Voltage from USB:				
Supply Voltage (Recommended Operating Conditions)	+4.5	+5	+5.5	V

IC Notice

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
This Class B digital apparatus complies with Canadian ICES-003.

IC: 27304-GH5200
IC Radiation Exposure Statement

This EUT is in compliance with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with minimum distance of 0 cm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Radio frequency (RF) energy

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the United States and Industry Canada.
During SAR testing, this device is set to transmit at its highest certified power level in all tested frequency bands, and placed in positions that simulate RF exposure in usage against the head with no separation, and near the body with the separation of 0 mm. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.
The exposure standard for wireless devices employing a unit of measurement is known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg and 1.6 W/kg by Industry Canada.
This device is in compliance with SAR for general population /uncontrolled exposure limits in ANSI/IEEE C95.1-1992 and Canada RSS 102 and had been tested in accordance with the measurement methods and procedures specified in IEEE1528 and Canada RSS 102. This device has been tested and meets the FCC and IC RF exposure guidelines when tested with the device directly contacted to the body.
For this device, the highest reported SAR value for usage near the body is 1.179 W/kg.
While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.
SAR compliance for body-worn operation is based on a separation distance of 0 mm between the unit and the human body. Carry this device at least 0 mm away from your body to ensure RF exposure level compliant or lower to the reported level. To support body-worn operation, choose the belt clips or holsters that do not contain metallic components to maintain a separation of 0 mm between this device and your body.
RF exposure compliance with any body-worn accessory, which contains metal, was not tested and certified, and using such body-worn accessory should be avoided.