

## RGM-4600 Operational Manual

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Prepared by RoyalTek Company LTD.

4F., No.188, Wen Hwa 2nd Rd., Kuei Shan,  
Tao Yuan 333, Taiwan

TEL: 886-3-3960001

FAX: 886-3-3960065

<http://www.royaltek.com/contact>

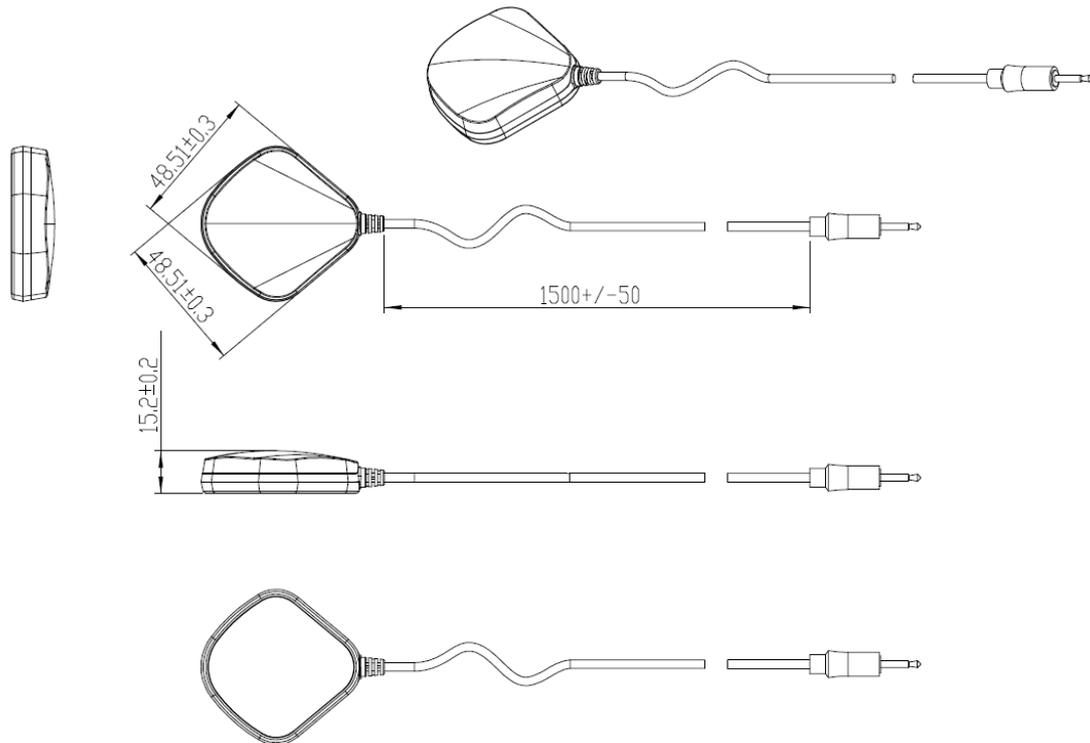
## 1. Overview

RGM-4600 G-Mouse GPS Receiver using SiRF Star IV extreme fast TTFF GPS engine that has lower power consumption, extremely high sensitivity, and more rapid time-to-fix. Connecting to the notebook PC or Handheld PC implementing map or navigation software, RGM-4600 helps you locate one or multiple objects, conduct personal & vehicle navigation, and/or apply for geographical surveys.

## 2. Specification

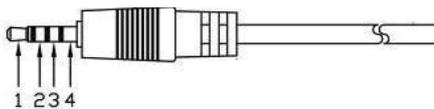
<b>GPS Receiver</b>	
Chipset	SiRF Star IV, GSD4e ROM
Frequency	L1, 1,575.42 MHz
Channels	48 track verification channels
C/A Code	1,023 MHz
Chipset Sensitivity	- Tracking Sensitivity -163dBm - Autonomous Acquisition -148dBm
Chipset Fix time (Open SKY, typical)	- Reacquisition: less than 1s - Hot start: less than 1s - Warm start: less than 35s - Cold start: less than 35s
Accuracy	Position: within 10m for 90% (24hr static, -130dBm)
Interface Protocol	Default 9600bps GGA(1),GSA(1),GSV(5),RMC(1)
Altitude / Velocity	18000 meter maximum ; 515 meter/second maximum
<b>Power /Connection cable</b>	
Voltages	DC 5V $\pm$ 5%
Current	TTL Mode: Tracking : 60mA(Typical) HW SKU Optional (RS232 Mode: Tracking : 70mA(Typical))
Interface output	TTL or RS232
Connection cable	Optional (mini-USB or USB or PS2)
Backup battery	Build in 3.3mAh backup battery
<b>Size/Environment</b>	
Size (mm)	48.5 x 48.5 x 15.1mm
Weight	$\leq$ 60g
Temperature	- Operating: -20 ~ 60°C - Storage: -20 ~ 60°C
Humidity	$\leq$ 95%

### 3. Outline dimension



### 4. Product Pin definition

Pin define: EARPHONE-2.5(1500MM, 4P)



WIRE CONNECTION

P1
1(VCC)
2(RXD)
3(GND)
4(TXD)

■ **VCC(5V DC power Input)**

This is the main DC power supply input pin. It provides voltage to G-Mouse.

■ **GND**

System Power Ground

■ **RX**

This is the main receiver channel and is used to receive software commands to the board from SIRF demo software or from user written software.

■ **TX**

This is the main transmitting channel and is used to output navigation and measure data to SiRF demo or user written software

## 5. GPS Receiver User's Tip

- A. GPS signals are affected by weather and environmental conditions. It is suggested to use the GPS receiver under less shielding environments to ensure GPS receiver has better receiving performance.
- B. When GPS receiver is in moving condition, it will prolong the time to fix the position. It is suggested to wait for the satellite signals to be locked at a fixed point when first power-on the GPS receiver before using.
- C. The following situations will affect the GPS receiving performance:
  - i. Solar control filmed windows.
  - ii. Metal shielded, such as umbrella, or in vehicle.
  - iii. Among high buildings.
  - iv. Under bridges and tunnels.
  - v. Under high voltage cables and near by radio wave sources, such as mobile phone base stations.
  - vi. Bad and heavy cloudy weather.
- D. If the satellite signals can not be locked or have encountered receiving problem (within the urban area), the following steps are suggested:
  - i. Plug the external active antenna into the GPS receiver and set the antenna outdoor or on the roof of the vehicle for better receiving..
  - ii. Move to another open space or reposition the GPS receiver towards the direction with fewer blockages.
  - iii. Move the GPS receiver away from sources of interference
  - iv. Wait until the weather condition has improved.
- E. With a backup battery, the GPS receiver can fix a position immediately at next power-on if the built-in backup battery is fully charged.

## 6. Contact Information

Contact: [sales@royaltek.com](mailto:sales@royaltek.com)

Headquarter:

Address: 4F., No.188, Wen Hwa 2nd Rd., Kuei Shan, Tao Yuan 333, Taiwan

TEL: 886-3-3960001

FAX: 886-3-3960065

Web Site: <http://www.royaltek.com>

Web Site Customer Service: <http://www.royaltek.com/contact>

