



**SE100**  
**(M8N GPS)**



**USER MANUAL**

**Radiolink M8N GPS SE100**

**RADIOLINK ELETRONIC LIMITED**

More details: [www.radiolink.com](http://www.radiolink.com)

# CONTENTS

Introduction.....	1
Be Suitable for Flight Controller.....	2
Radiolink M8N GPS SE100 Configuration.....	2
Performance.....	2
Positioning Indicate.....	3
Definition of Connector.....	3
Direction Indicate.....	4
Parameter.....	4

# INTRODUCTION

Thank you for purchasing Radiolink M8N GPS SE100.

**Suggestion:** In order to fully enjoy the benefits of this GPS, please read the manual carefully and set up the device as described below.

Please refer to the manual or call our after-sales (+86-0755-88361717) or log in <https://www.facebook.com/Radiolink-1455452961436694/> to check the issues related answer to questions if you have any questions.

Due to unforeseen changes in production procedures, the information contained in this manual is subject to change without notice.

More information please check our website as below:

<http://www.radiolink.com>

Support and Service:

It is recommended to have your Radiolink equipment serviced annually during your hobby' s "off season" to ensure safe operation.

Please be sure to regularly visit the Service and Support website at [www.radiolink.com](http://www.radiolink.com). This page includes extensive programming, use, set up and safety information.

Any technical updates and manual corrections will be available on this web pages. If you do not find the answers to your questions there, please see the end of our contact area for information on contacting us via email for the most rapid and convenient response.

FOR AFTER-SALES SERVICE:

Please start here for getting more service.

[www.radiolink.com](http://www.radiolink.com)

Phone:+86-755-88361717

Email: [after\\_service@radiolink.com.cn](mailto:after_service@radiolink.com.cn)/[after\\_service1@radiolink.com.cn](mailto:after_service1@radiolink.com.cn)

FOR TECHNIQUE SUPPORT:

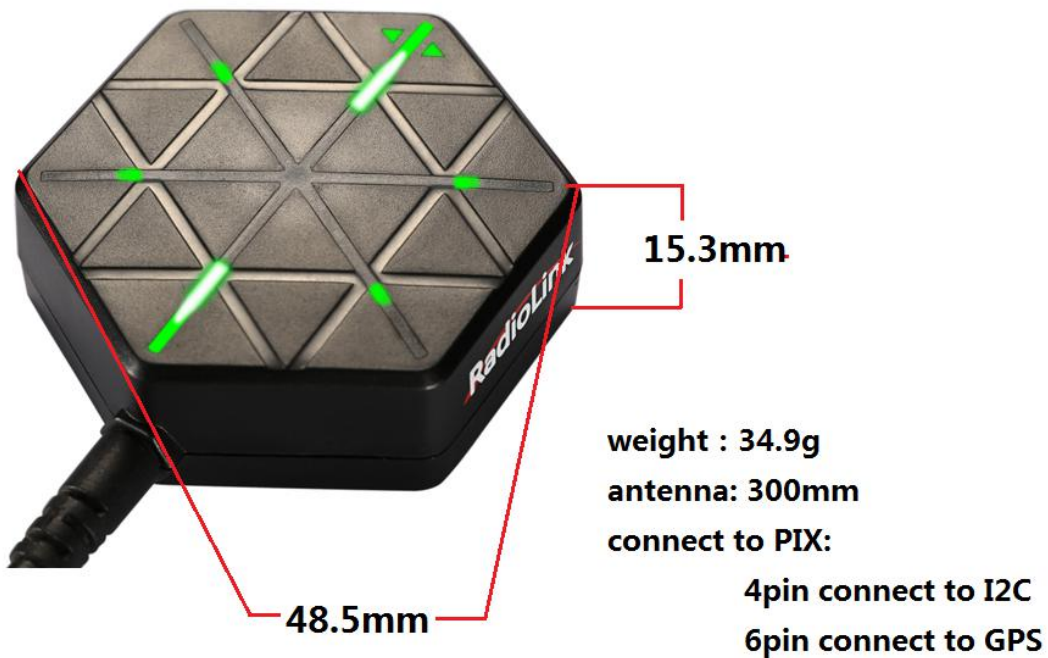
Please start here for answers to technique questions:

[www.radiolink.com](http://www.radiolink.com)

Phone:86-755-88361717

Email: [alice@radiolink.com.cn](mailto:alice@radiolink.com.cn)

# SE100



## Be Suitable for Flight Controller

Suitable for all the open source flight controller such as PIX, APM, NAZE32 and so on.

## Radiolink M8N GPS SE100 Configuration

GPS decoder chip: Radiolink M8N GPS, with u-blox UBX-M8030(M8), 72-channel, MMIC BGA715L7 from Infineon, is much better than single GNSS 7N.

Concurrent reception of GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1, two GNSS working at the same time.

SBAS L1 C/A: WAAS, EGNOS, MSAS

Geomagnetic: HMC5983 from Honeywell

Antenna : 2.5dbI high gain and selectivity ceramic antenna

Power amplify IC: MMIC BGA715L7 from Infineon

Double Filter: SAWF(Surface acoustic wave filter) form Murata

## Performance

Radiolink M8N GPS, benefits from 13 years of professional wireless experiences of Radiolink engineers, exceed the limitation of IC sensitivity index from circuit schematic design to PCB placement.

50 centimeter position accuracy.

Positioning 20 satellites in 6 seconds at open ground.

Valley station-keeping ability.

Appearance patent.

## Positioning Indicate

Humanized positioning green LED indicate.



**the green LED near antenna  
will on when SE100 power on**

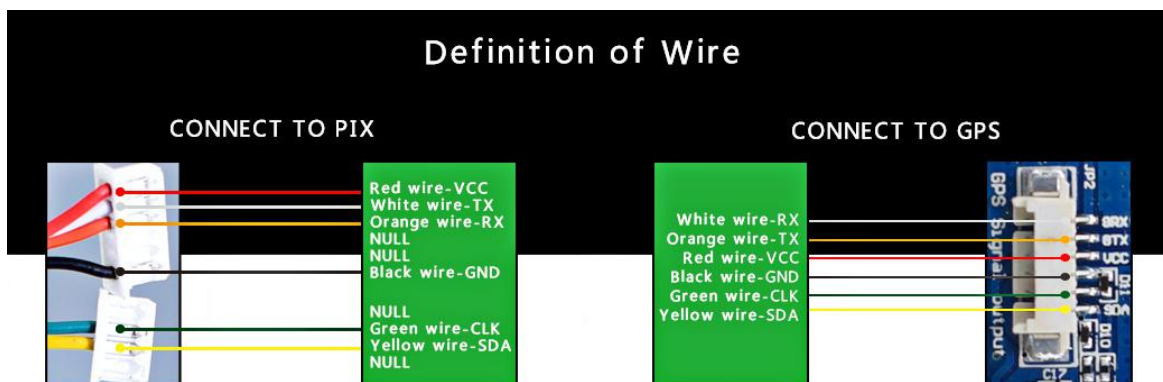


**the LED near antenna always  
on and other LED flicker when  
SE100 have positioning**

## Definition of Connector

Connect to GPS: White wire-RX; Orange wire-TX; Red wire-VCC; Black wire-GND; Green wire-CLK; yellow wire-SDA

Connect to PIX: Red wire-VCC; White wire-TX; Orange wire-RX; Black wire-GND; Green wire-CLK; yellow wire-SDA



## Direction Indicate

Arrows shows the front, point to the same direction as the flight controller.



## Parameter

- 1) Positional Accuracy: 50 centimeter precision when working with concurrent GNSS.
- 2) Velocity precision: 0.1m/s
- 3) Max height: 50000m
- 4) Max speed: 515m/s
- 5) Max acceleration: 4G
- 6) Max update rate: up to 18Hz
- 7) Sensitivity  
Tracking & Nav.: -167dBm; Reacquisition:-163dBm; Cold start:-151dBm; Hot start:-159dBm.
- 8) Time to first fix: Cold start: 26s, Hot start:1s.
- 9) Connect ports  
Power supply: voltage 5VDC, current 50~55mA
- 10) Ports
  - A. GPS UART interface, baud rate: 1.2K/4.8K/9.6K/19.2K/38.4K/57.6K/112.5K
  - B. Geomagnetic I2C interface