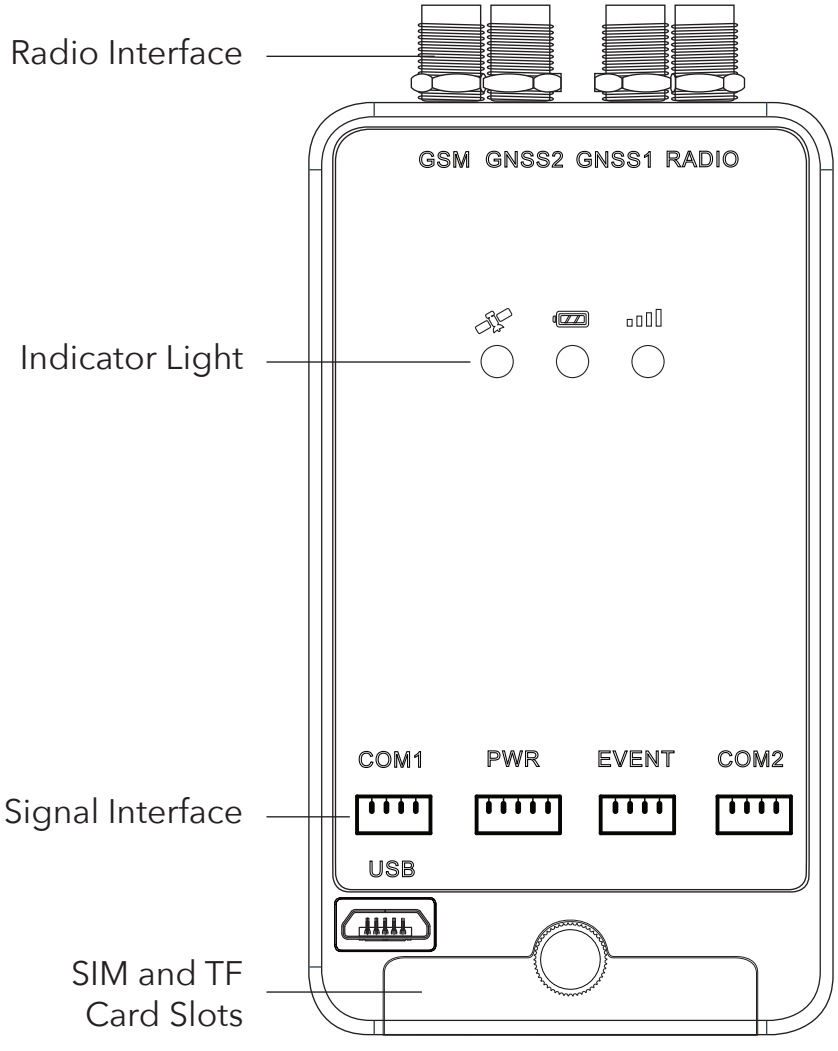
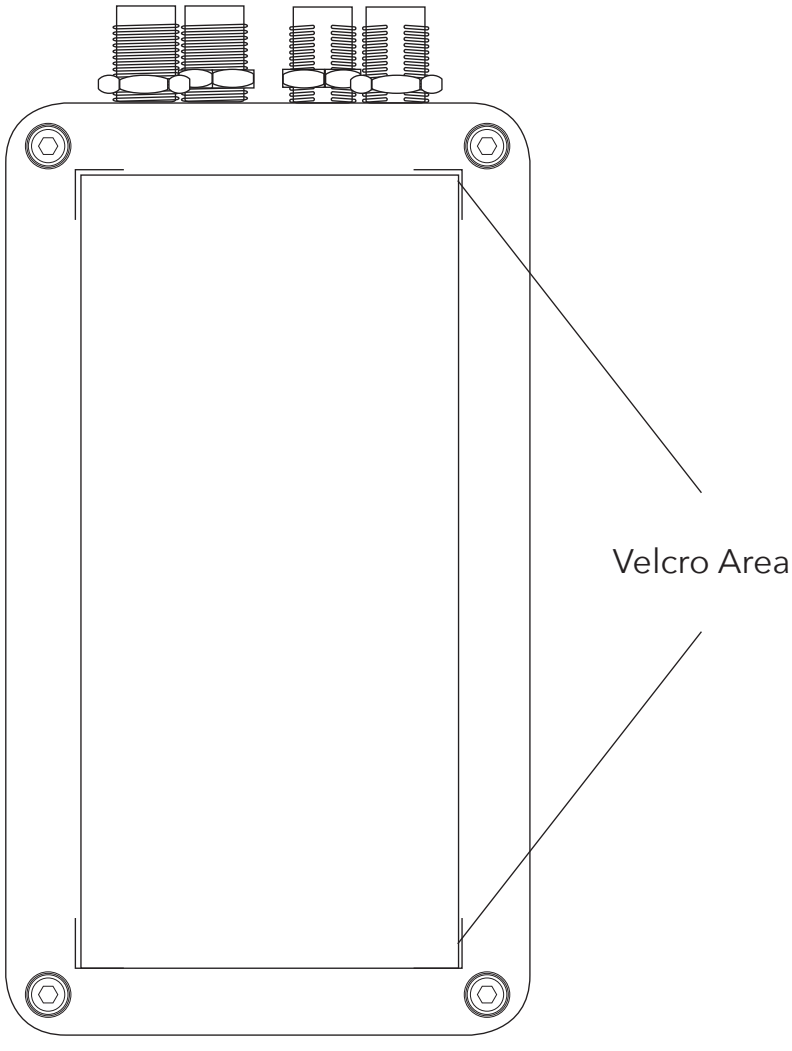
SATLAB®
GEOSOLUTIONS

UAV/RTK
User Manual

1- Appearance



Front Side



Back Side

2- LED Indication

SATELLITE

POWER SUPPLY

SIGNAL

■ **Green:**
Solid: Tracked, fixed
Flash: Tracking, non-fixed
Slow Flash: Acquiring

■ **Yellow:**
Solid: Normal power supply

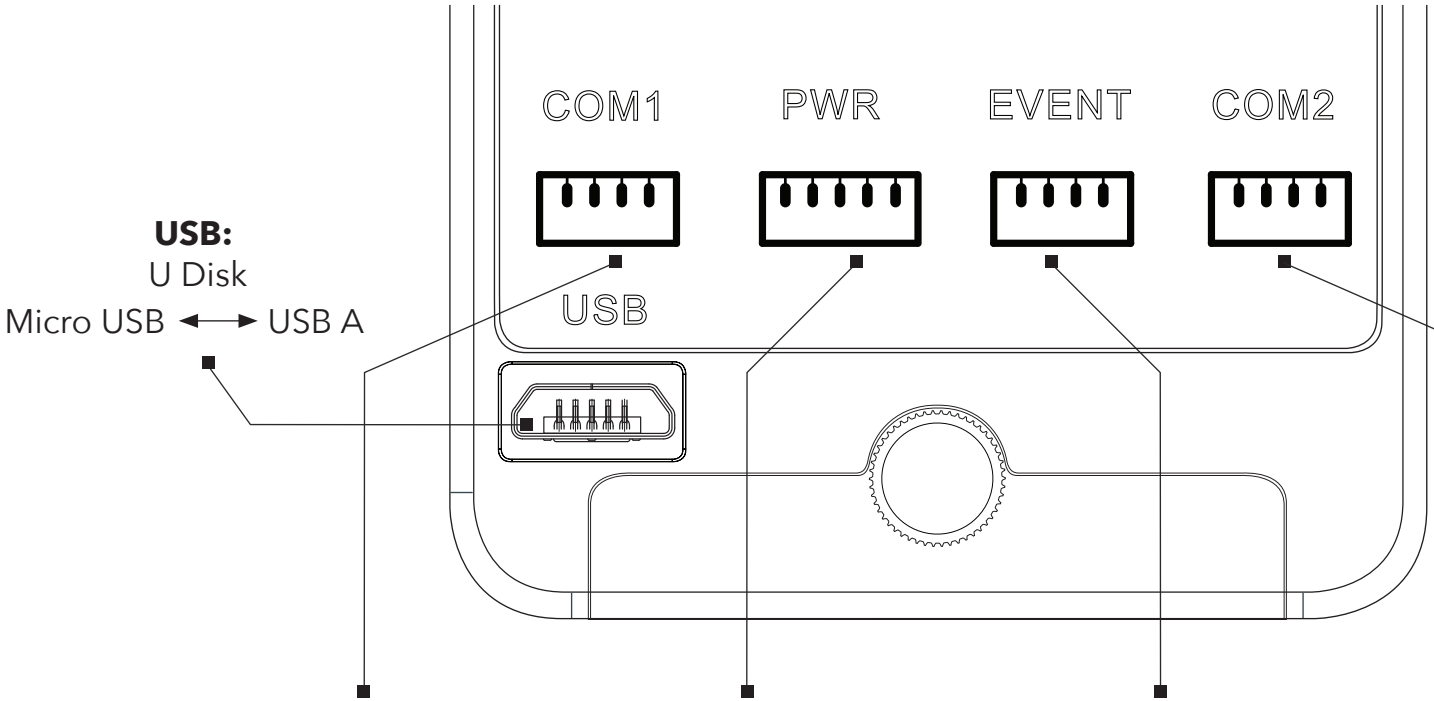
■ **Red:**
Solid: Low voltage power supply

■ **Red:**
Solid: Data link open
Flash: Diff Tx

■ **Green:**
Flashing: Diff Rx

To ensure maximum accuracy, be sure the position is fixed.

3- Signal Interface



USB:
U Disk
Micro USB ⟷ USB A

COM1:
Position Data
VCC
TXD
RXD
GND

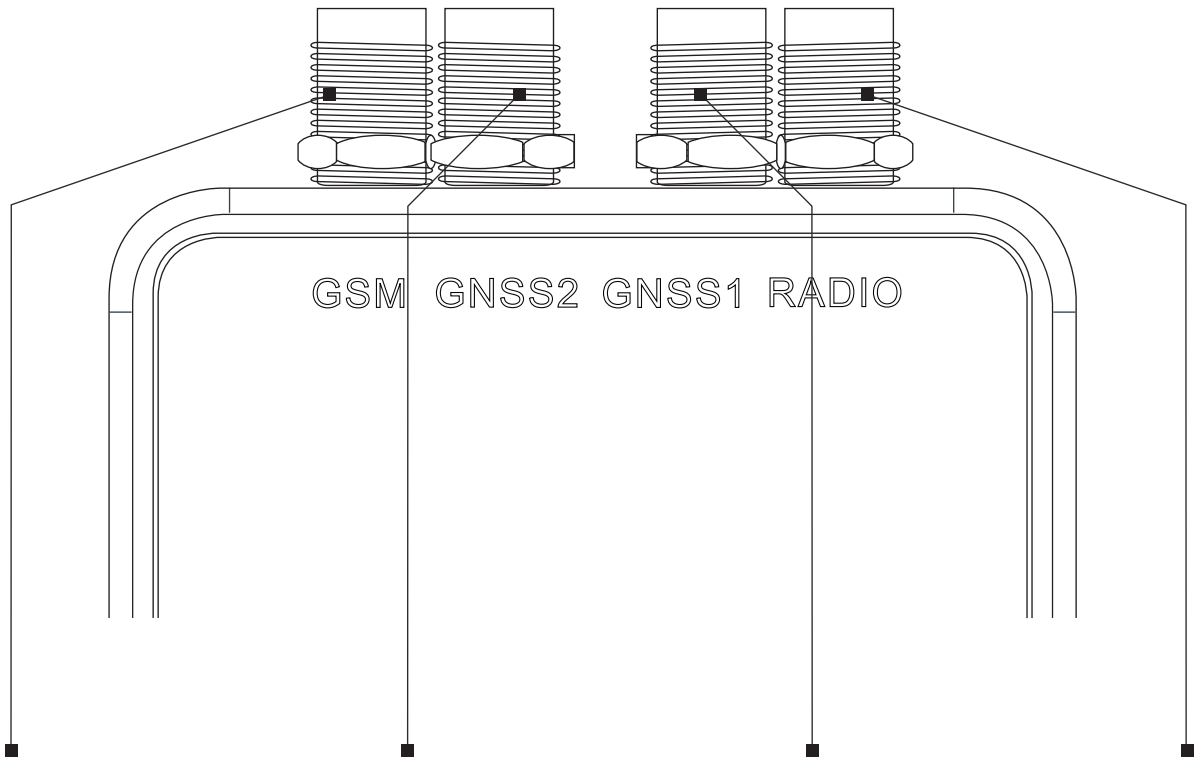
PWR:
Power Input
\+
\-
XT60 Male

EVENT:
Event Input / PPS Output
PPS
EVENT1
EVENT2
GND

COM2:
Differential Data
EN
TXD
RXD
GND

COM1 and COM2 is CMOS 3.3V level.
Please ensure the connection signal level is matching.

4- RF Interface



GSM:
3G Communication
820~960MHz;
1700~2200MHz; ≥2dBi

GNSS2:
GNSS Antenna Input 2
Dual Band;> 26dB
[Directional Use]

GNSS1:
GNSS Antenna Input 1
Dual Band;> 26dB
(Location Only)

RADIO:
Radio Communication
840~845MHz; ≥2dBi

5 - Configuration

• Configure the output and input data of COM1 and COM2 ports using a serial setting software application such as SSCOM.

• Configuration will be according to the application needs and is set using connection to the COM1 port.

• After the configuration is completed, connect the relevant input/output COM ports on the UAV/RTK sensor to the corresponding ports on hardware such as a flight controller.

Important Note: Signal interface electrical characteristic is CMOS 3.3V level. Pay attention to the connection signal level match to prevent burning the equipment.

RTK reliability is greater than 99.8%. Application sensors in flight control and other sensor equipment can be used to improve data error filtering.

6 - Specifications

Product Name	: Automated GNSS Sensor
Model	: UAV/RTK
Weight	: 180g
Size (Without Interface)	: 93.4x51.8x27.8mm
Working Temperature	: -25 ~ + 55 °C
Supply Voltage	: 6 ~ 36V
Working Power Consumption	: 4.0W (Max)
Data Update Rate	: 5Hz
Positioning Accuracy	
Horizontal	: 2 cm + 1 x 10-6D RMS
Vertical	: 4 cm + 1 × 10-6D RMS
Heading Accuracy	: 0.2 ° RMS@1.0m Baseline
Radio Frequency Range	: 840 ~ 845MHz
Radio Communication Distance	: 3km

7 - Limitation of Liability

Before use, please be sure to read the instruction manual, which will help you make better use of this product. If you do not follow instructions when operating the receiver, or fail to understand the requirements of the specification and the proper use of this product, any resulting loss or damages resulting from the misuse are limited to the terms of SatLab's International Warranty 'Limitation of Liability' clause.

SatLab is committed to continuous improvement of product functionality and performance, and accordingly reserves the right to make changes to the product and contents of this manual without prior notice. We have reviewed the contents of this publication in conjunction with the hardware and software to ensure consistency, however, this does not exclude the possibility of errors. The User's Guide is for reference only, if it deviates from the actual product then the actual product version prevails.

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