H-RTK M8P GNSS

Descriptions

H-RTK M8P is the latest differential high-precision GNSS positioning system from Holybro. It uses a UBLOX M8P module, a IST8310 compass, and a tri-colored LED indicator. It also has a integrated safety switch for a simple and convenient operation.

Features

We have designed three models of H-RTK M8P for you to choose, each with different antenna design to meet different customer needs.

1) _H-RTK M8P Rover lite (SKU12019)_ - This model is lower cost, light weight, and has high performance, It can meet the needs of general DIY users. Due to the lower cost, this model can also greatly minimize the cost of large swarm drone projects such as swarm light shows. It has a integrated safety switch and a tri-colored LED indicator, and it is compatible with the open source _Pixhawk_ series flight controller.

2) _H-RTK M8P Helical (SKU12020)_ - This model uses a helical antenna, which has better performance than the lite version. This model can be used both on rover (aircraft) or as base station. The aluminum alloy shell design also has a integrated safety switch and a tri-colored LED indicator, and it is compatible with the open source _Pixhawk_ series flight controller.
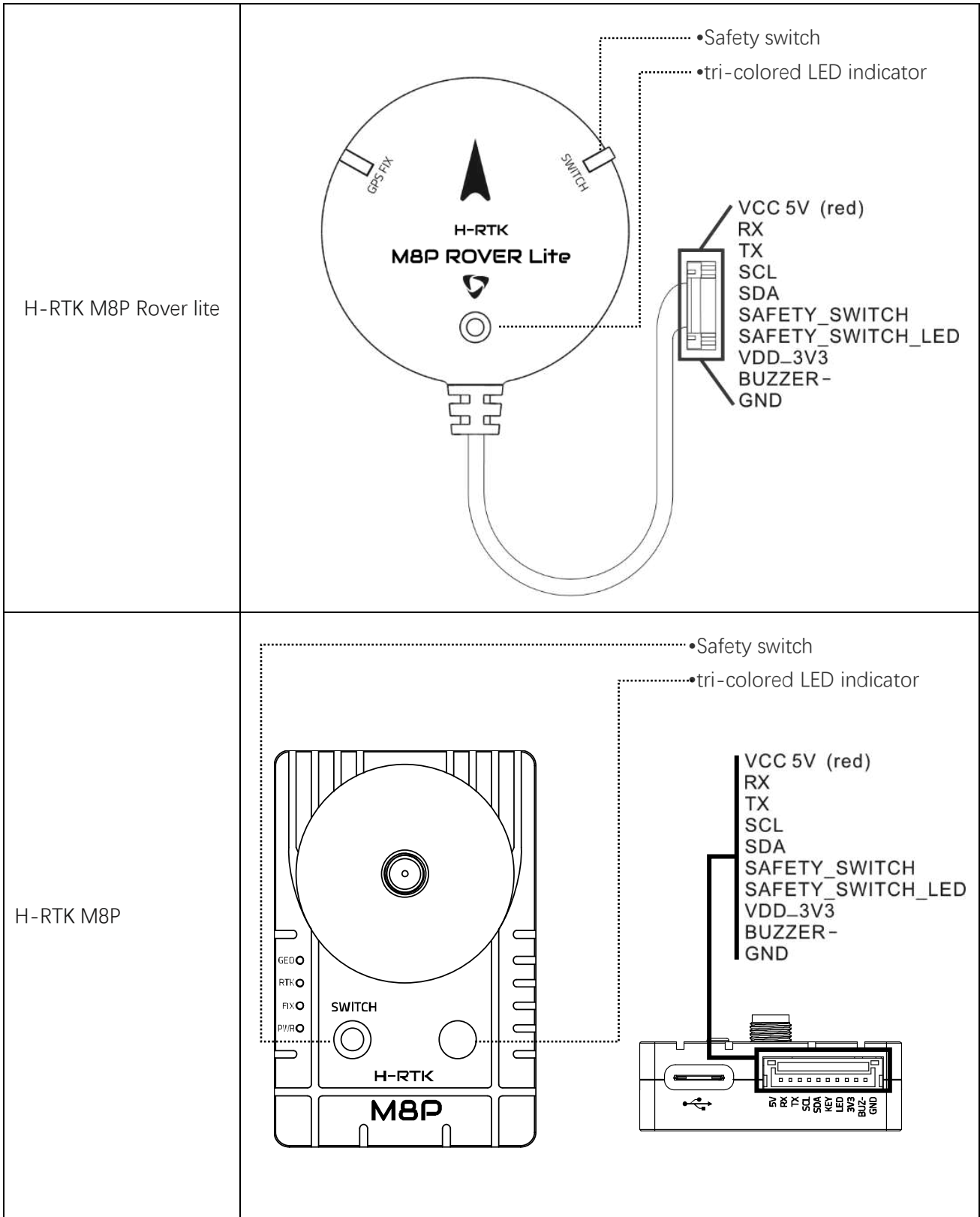

3) _H-RTK M8P Base (SKU12021)_ - The board is the same as number 2 above, but it is equipped with a high-gain antenna. This model is best suited to use as base station. The search speed and positioning accuracy are the highest among the three models.
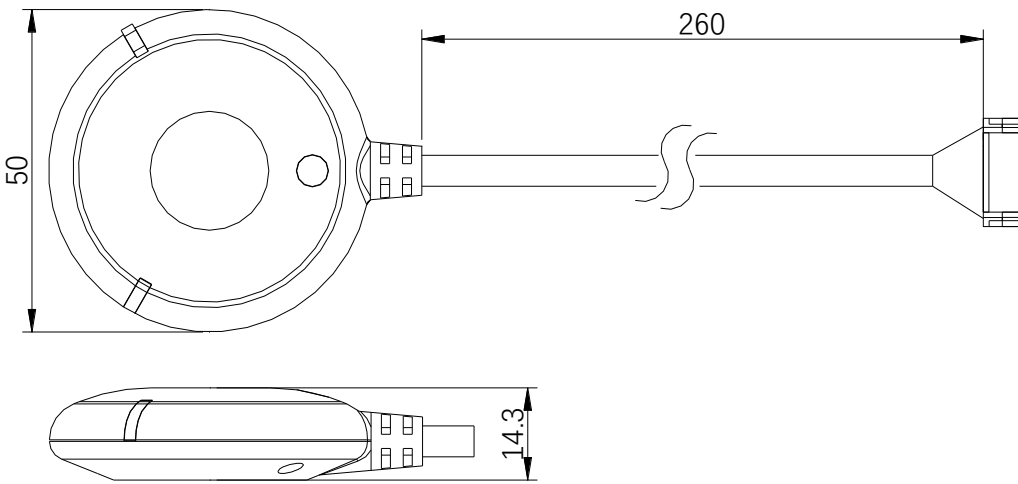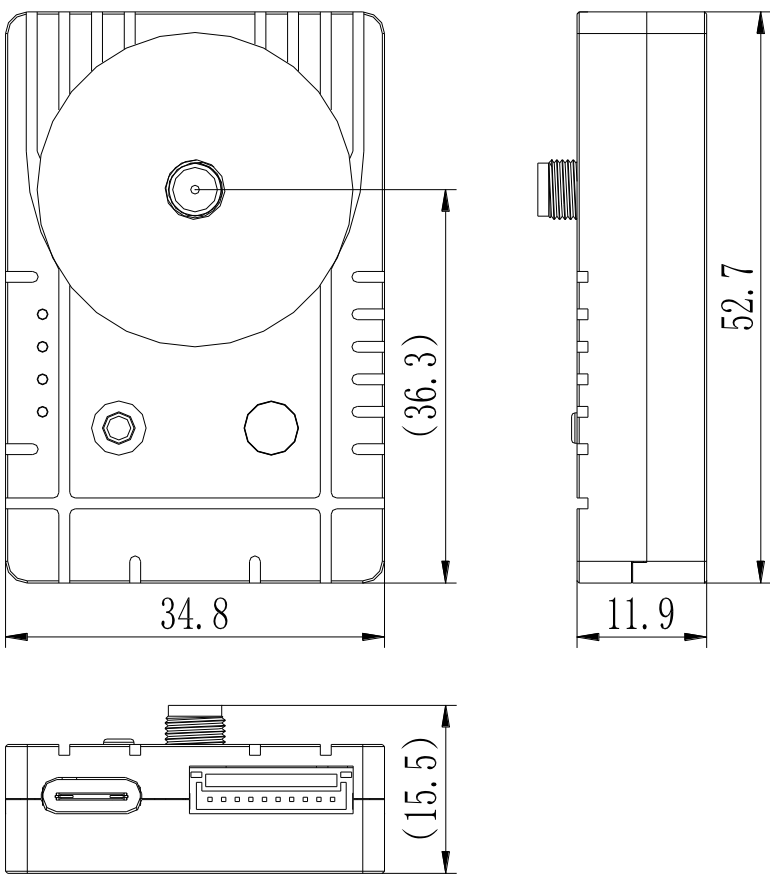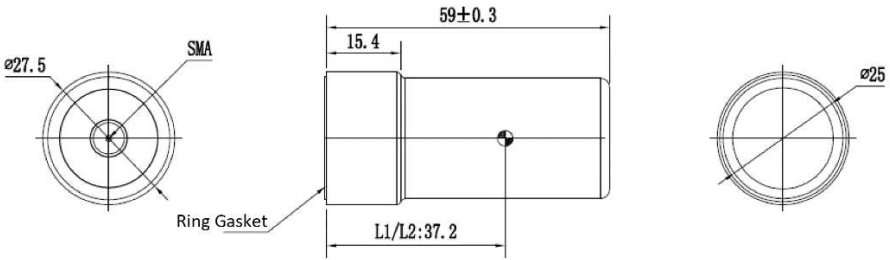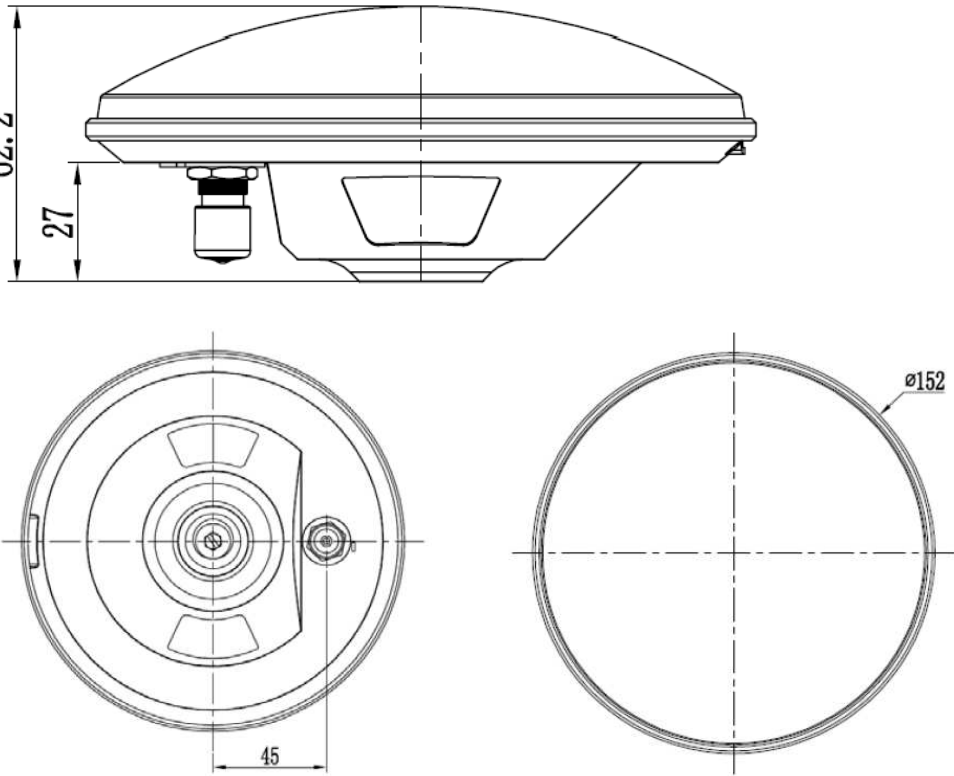
Specification

SKU	SKU12019	SKU12020	SKU12021
Photo			
Product Model	H-RTK M8P Rover lite	H-RTK M8P Helical	H-RTK M8P Base
Application	Rover (aircraft) only	Rover (aircraft) or base station	Base station only
GNSS	GPS L1 GLONASS L1 BeiDou L1	GPS L1 GLONASS L1 BeiDou L1	GPS L1 GLONASS L1 BeiDou L1
Antennas Peak Gain (MAX)	1.5dBi	2dBi	5.5dBi
LNA Gain(typical)	20.5±1dB	33±2dB	40±2dB
Time-TO-First Fix	Cold start:≤35s Hot start:≤1s	Cold start:≤29s Hot start:≤1s	Cold start:≤25s Hot start:≤1s
RTK-SurveyIn-Time	N/A	≤5 minute @2.5mCEP	≤5 minute @2.0mCEP
Data and Update Rate	RAW:10Hz Max RTK:5Hz Max	RAW:10Hz Max RTK:5Hz Max	RAW:10Hz Max RTK:5Hz Max
Port	26cm Pixhawk4 compatible GH1.25 10-pin cable included	Port 1:GH1.25 10-pin Port 2:USB Type-c	Port 1:GH1.25 10-pin Port 2:USB Type-c
Antenna Connection Type	N/A	Board: SMA female Antenna: SMA male	Board: SMA female Antenna: TNC female Male-male SMA-TNC cable length: 5m (included)
Baud rate:	38400 5Hz (default) can be set	38400 5Hz (default) can be set	38400 5Hz (default) can be set
Working voltage:	4.75V~5.25V	4.75V~5.25V	4.75V~5.25V
Dimensions	Diameter: 50mm Height: 14.5mm	Board: 34.8*36.3*11.9mm Antenna Diameter: 27.5mm Antenna height: 59mm	Board: 34.8*36.3*11.9mm Antenna Diameter: 152mm Antenna height: 62.2mm
Weight	32g	49g	469g

Pin Map

H-RTK M8P Rover lite	

Diagram labels: GPS FIX, SWITCH, H-RTK M8P ROVER Lite

•Safety switch
•tri-colored LED indicator

VCC 5V (red)
RX
TX
SCL
SDA
SAFETY_SWITCH
SAFETY_SWITCH_LED
VDD_3V3
BUZZER-
GND

H-RTK M8P

Diagram labels: GEO, RTK, FIX, PWR, SWITCH, H-RTK, M8P

•Safety switch
•tri-colored LED indicator

VCC 5V (red)
RX
TX
SCL
SDA
SAFETY_SWITCH
SAFETY_SWITCH_LED
VDD_3V3
BUZZER-
GND

Connector pins: 5V, RX, TX, SCL, SDA, KEY, LED, 3V3, BUZ-, GND

Dimensions

H-RTK M8P **Rover lite**	50 260 14.3 DIMENSIONS IN MILLIMETERS
H-RTK M8P	(36.3) 34.8 52.7 11.9 (15.5) DIMENSIONS IN MILLIMETERS

Holybro

H-RTK

Antennas: CH-3602A (Applicable for H-RTK M8P Helical)	ø27.5 SMA 59±0.3 15.4 ø25 Ring Gasket L1/L2:37.2 DIMENSIONS IN MILLIMETERS
Antennas: GPS500 (Applicable for H-RTK M8P Base)	62.2 27 45 ø152 DIMENSIONS IN MILLIMETERS