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)* & *H-RTK M8P Rover lite-2nd GPS (SKU12026)* - 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.
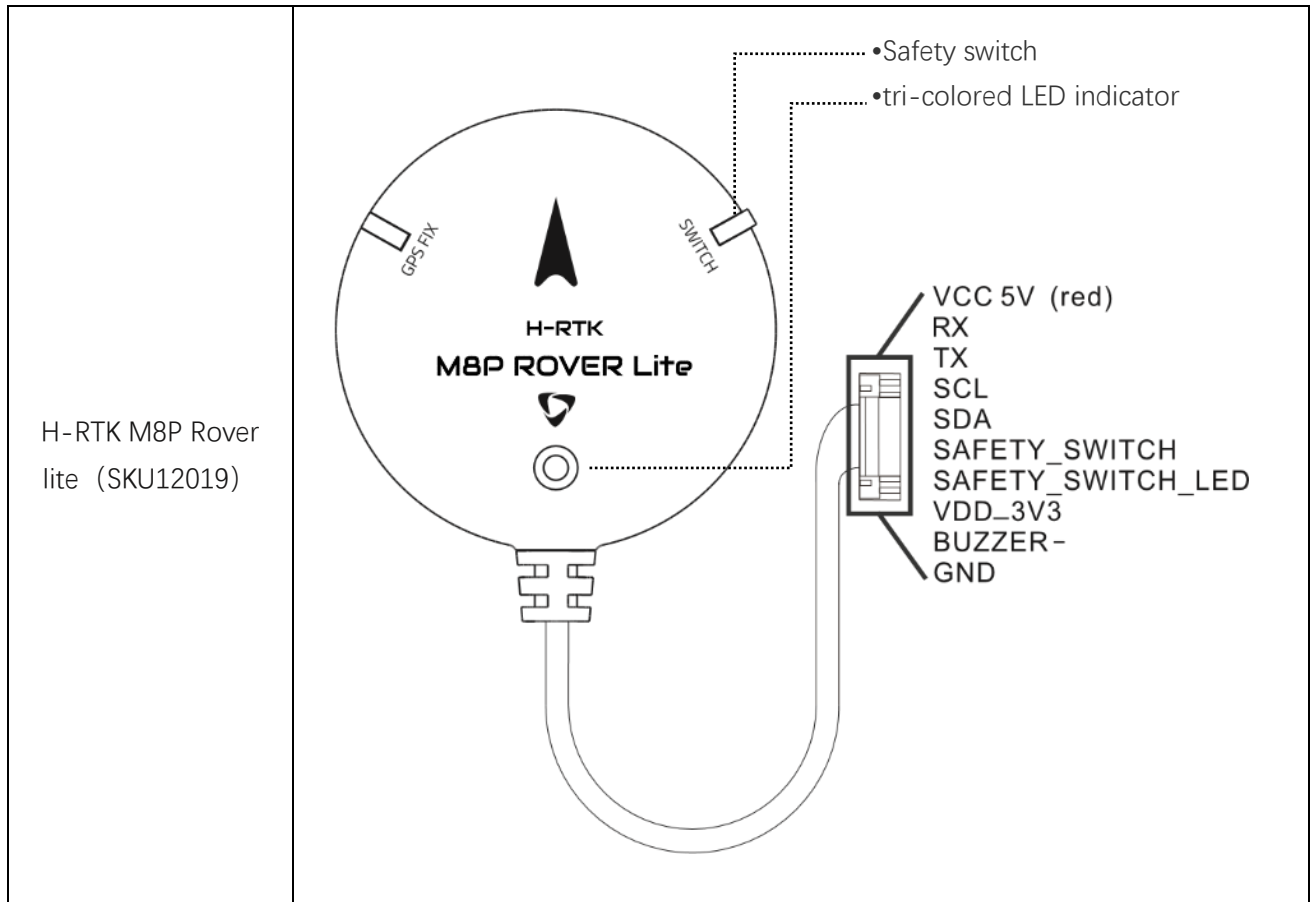

3) *H-RTK M8P Base (SKU12021)* - The board is the same as number 2 above, but it is equipped with a high-gain antenna. This model is best suited to use as base station. The search speed and positioning accuracy are the highest among the three models.
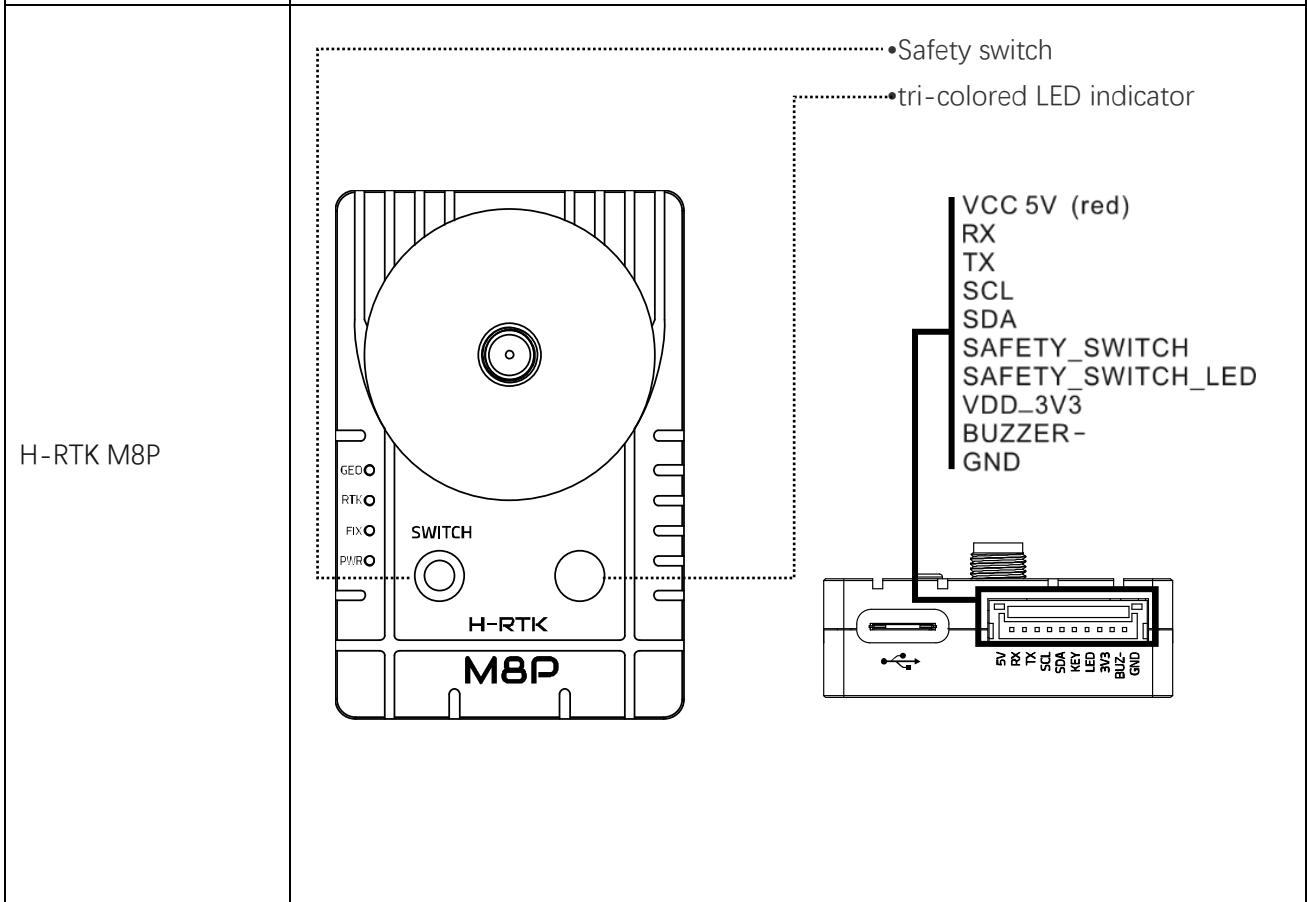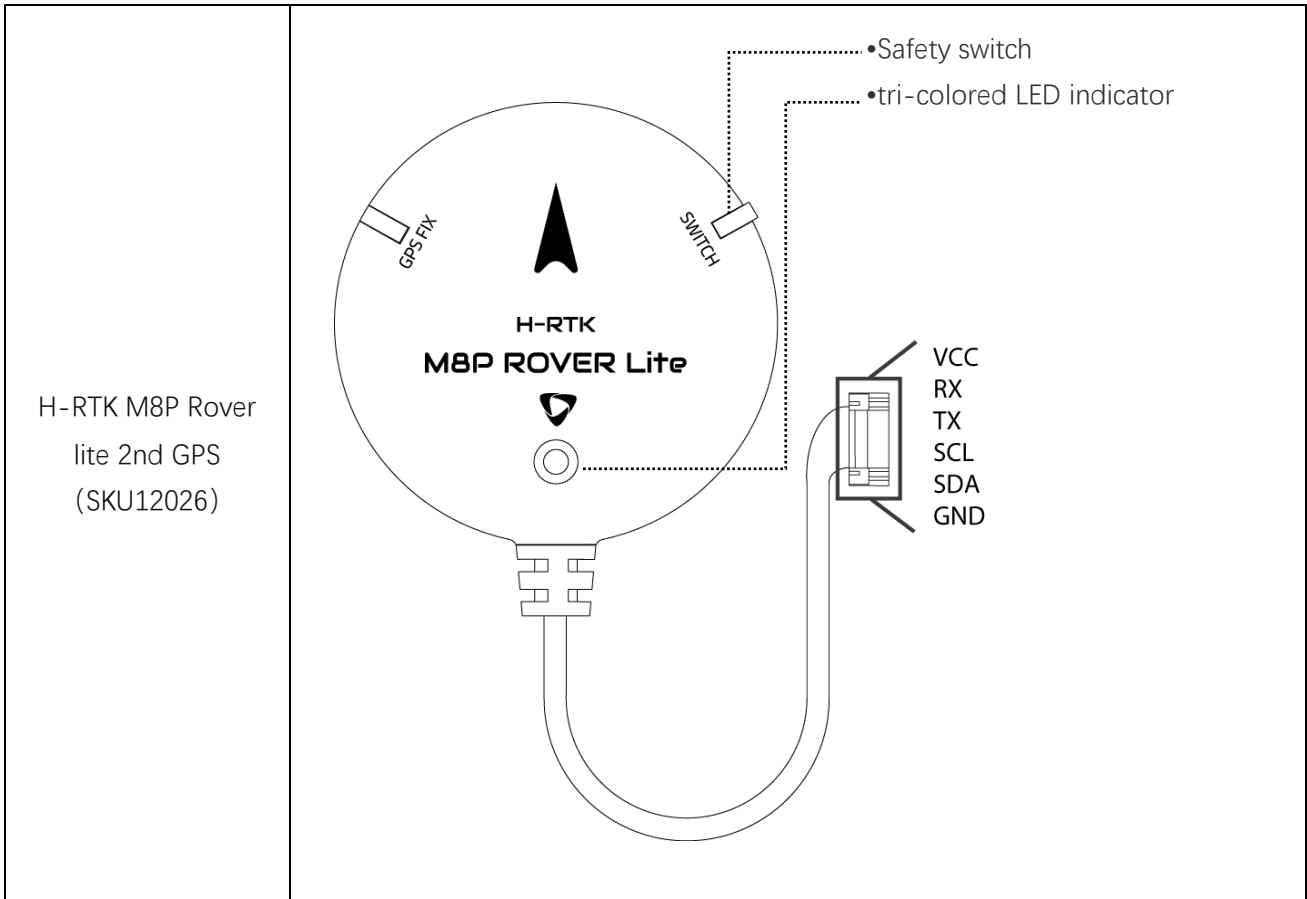
Specification

SKU	SKU12019 / SKU12026	SKU12020	SKU12021
Photo			
Product Model	H-RTK M8P Rover lite / H-RTK M8P Rover lite 2nd GPS ※	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 / GH1.25 6-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:	115200 5Hz (default) can be set	115200 5Hz (default) can be set	115200 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*52.7*12.9mm Antenna Diameter: 27.5mm Antenna height: 59mm	Board: 34.8*52.7*12.9mm Antenna Diameter: 152mm Antenna height: 62.2mm
Weight	32g	49g	469g

Note：

※SKU12019 H-RTK M8P Rover lite: GH1.25 10-pin cable included. connect to Pixhawk4 GPS port

SKU12026 H-RTK M8P Rover lite 2nd GPS: GH1.25 6-pin cable included. connect to Pixhawk4 UART&I2C B port
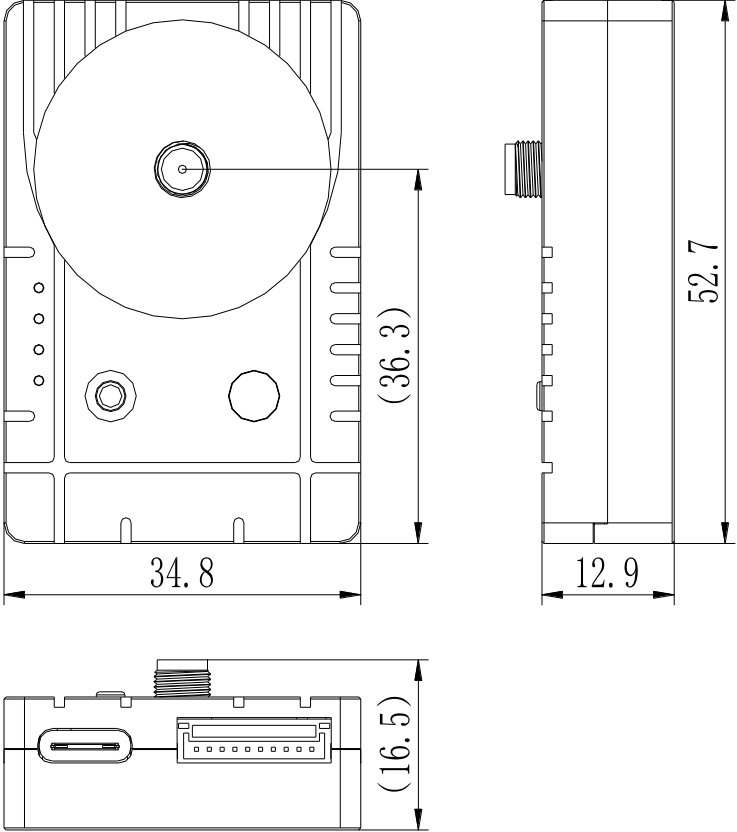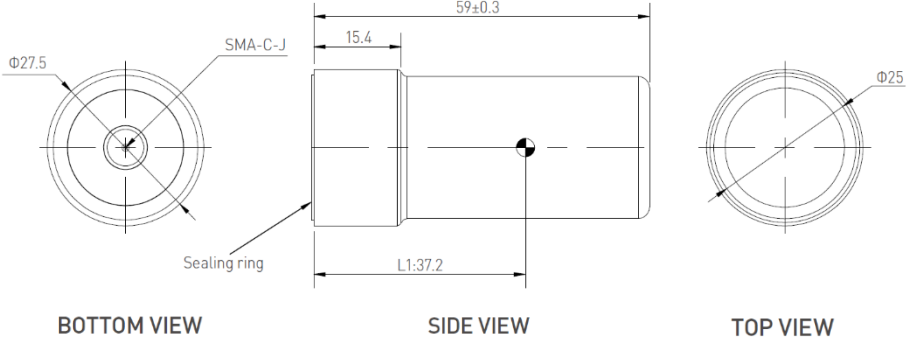
Pin Map

H-RTK M8P Rover lite（SKU12019）	

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

•Safety switch
•tri-colored LED indicator

H-RTK M8P Rover lite 2nd GPS （SKU12026）	•Safety switch •tri-colored LED indicator H-RTK **M8P ROVER Lite** GPS FIX　　SWITCH VCC RX TX SCL SDA GND
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 GEO RTK FIX PWR SWITCH H-RTK **M8P** 5V RX TX SCL SDA KEY LED 3V3 BUZ- GND

Pin	Signal	Volt
1(red)	VCC	Power +5V
2	RX (in)	TTL 3.3V
3	TX (out)	TTL 3.3V
4	SCL1	TTL 3.3V
5	SDA1	TTL 3.3V
6	SAFETY_SWITCH	TTL 3.3V
7	SAFETY_SWITCH_LED	TTL 3.3V
8	VDD_3V3	Power +3.3V
9	BUZZER-	Open drain Output 0~5V
10	GND	GND

GPS Port

Dimensions

H-RTK M8P
Rover lite

260

50

14.3

DIMENSIONS IN MILLIMETERS
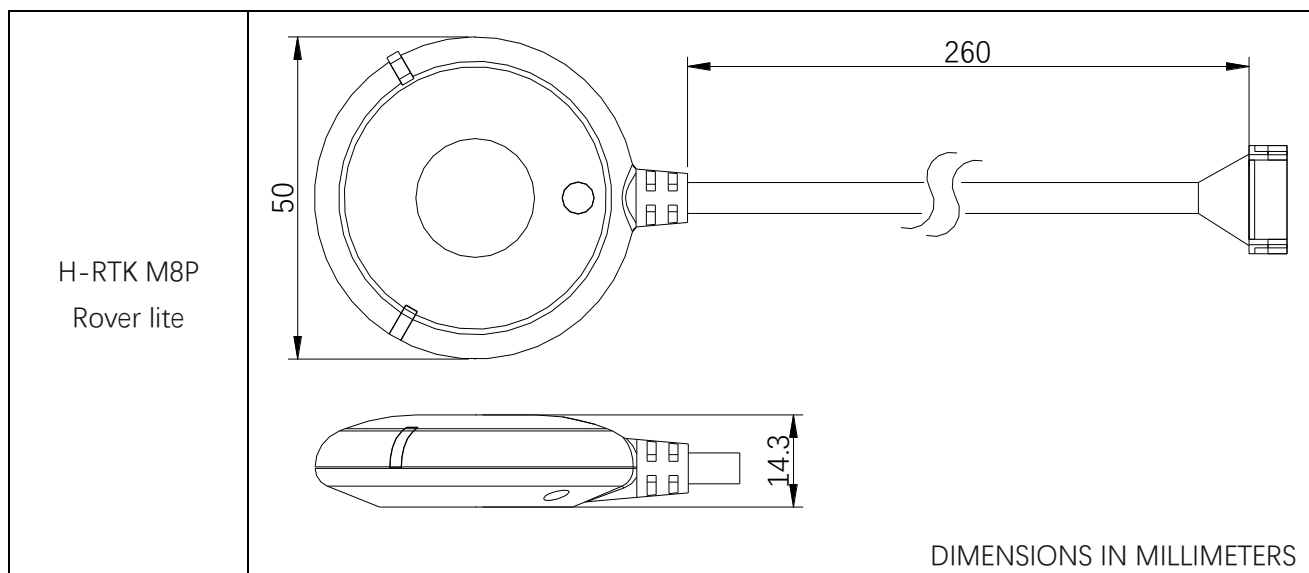
H-RTK M8P	DIMENSIONS IN MILLIMETERS
Antennas: CH-3602A (Applicable for H-RTK M8P Helical)	DIMENSIONS IN MILLIMETERS

Antennas:
CS7624A
(Applicable for
H-RTK M8P
Base)

SIDE VIEW

L2:50

L1:46

62.2±0.3

27±0.5

TNC female

BOTTOM VIEW

45±0.2

BSW5/8''-11

TOP VIEW

Φ152±1

DIMENSIONS IN MILLIMETERS
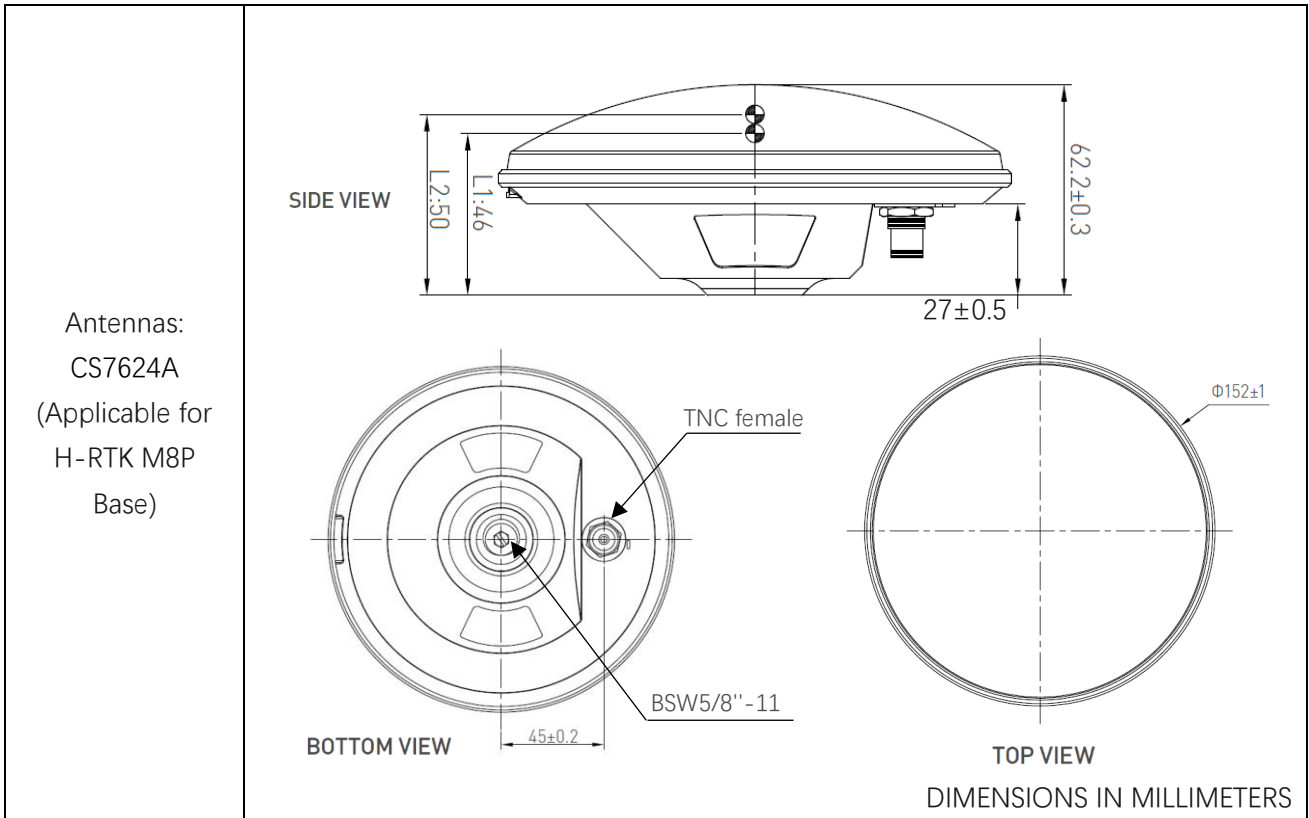
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