MEITRACK GPS antenna Specification

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Document Revision History

Version	Date	Modification
1.0	2026-01-28	Initial Draft

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1 Product Overview

The Meitrack GPS antenna adopts a diversity of forms to guarantee the most suitable polarization type. Meitrack's positioning products support single-band or multi-band operation modes to meet various high- precision positioning requirements of customers' products. Meitrack provides both passive and active antennas to satisfy the customer demand for high gain. Such antenna supports different installation or connection methods such as pin mount, surface mount, magnetic mount, internal cable, and external SMA. Customized connector type and cable length are provided according to requirements.

2 Product Specifications

Item		Parameter Description
General	Dimensions	45.4 * 36 * 15.2mm
	Weight	55.9g
	Casing Material & Color	ABS & Black
	Cable Type & Color & Length	RG174 & Black & 3000mm
	Connector Type	SMA Male
	Mounting Type	Magnet
Passive Electrical Specifications	Frequency Range	1575.42±5MHz；1561.098±5MHz
	Input Impendence	50 Ω
	VSWR	≤ 2.0
	Gain	≤ 2.0 dBi
	Polarization Type	Circular
Low Noise Amplifier Electrical Specifications	Frequency Range	1561±5MHz， 1575±5MHz
	Input Impendence	50 Ω
	Output VSWR	≤ 2.0
	LNA Gain	18±2dB
	Voltage Range	3.0 V ~ 3.6 V
Operation Temperature	Operation Temperature	-20 °C to +85 °C
	RoHS Compliant	Yes

Detailed Passive Electrical Specifications								
Frequency Range(MHz)	698-960	1556-1566	1570-1580	1710-2170	2170-2690	3300-4000	4000-5000	5000-6000
VSWR(Max.)	-	1.35	1.2	-	-	-	-	-
Average Efficiency (%)	-	63.6	62.55	-	-	-	-	-
Max. Peak Gain (dBi)	-	1.38	1.13	-	-	-	-	-

3 Function of the GPS antenna

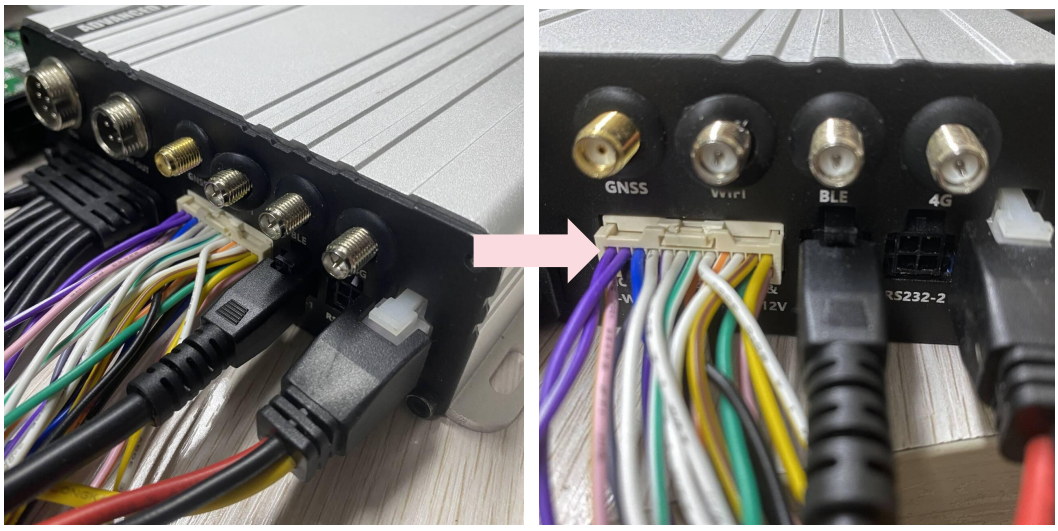
The GPS antenna is a core component for MDVR/Tracker to realize satellite positioning and time synchronization, with the following key functions:

1. Signal Reception: Captures GNSS satellite signals (including GPS, BEIDOU, etc.) stably and transmits them to the positioning module of the host device.
2. Positioning & Tracking: Supports real-time vehicle positioning and continuous tracking, providing accurate location data for fleet management.
3. Trajectory Recording: Assists the host device in recording historical driving trajectories for subsequent query and analysis.
4. Time-Space Stamp Synchronization: Synchronizes video data with time and location information to ensure the accuracy of video evidence.
5. Driving Behavior Monitoring: Cooperates with the host device to monitor driving behaviors (such as overspeeding, irregular route) based on positioning data.
6. Alarm Linkage: Triggers position-related alarms (such as geo-fencing alarm) in linkage with the host device, enhancing safety management.

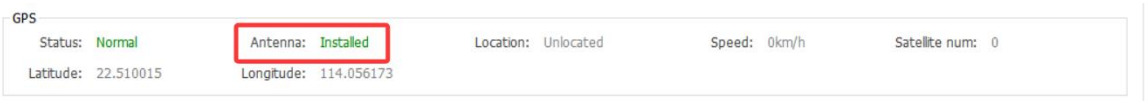
4 GPS antenna usage

4.1 Connection Steps

1. Identify the Interface: Locate the GPS antenna interface on the host device (take MD600 as an example; the interface is usually marked with "GNSS" or corresponding logos).



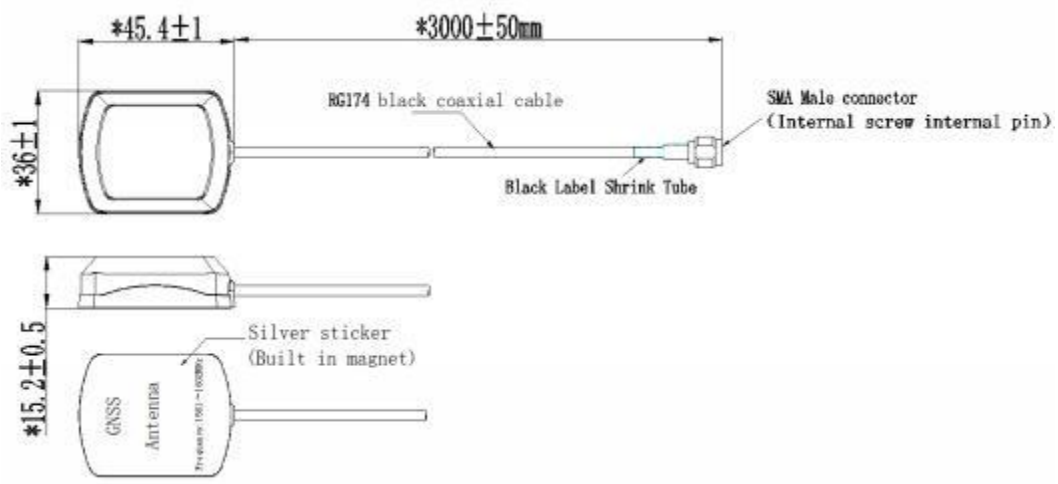
2. Secure Connection: Insert the SMA Male connector of the GPS antenna into the host interface and fasten it tightly to ensure a stable connection (avoid loose contact).
3. Verify Connection: Log in to the MM platform to check the antenna status. The "Antenna: Installed" prompt indicates a successful connection.



4.2 Usage Notes

1. Install the antenna in an open area (such as the top of the vehicle) without obstructions (e.g., metal shielding, dense buildings) to ensure unobstructed signal reception.
2. Ensure the antenna's magnetic base is attached to a flat, clean metal surface for firm fixation and optimal signal performance.
3. Avoid bending or pulling the cable excessively to prevent damage to the cable or connector.
4. Operate the antenna within the specified voltage and temperature ranges to avoid performance degradation or device damage.

5 Product size



If you have any further inquiries, please send an email to our mailbox info@meitrack.com. We are dedicated to providing you with assistance.