



High-Accuracy GNSS Active Antenna

Model: TL-125H

Highest accuracy antenna supporting GPS/GLONASS/BEIDOU/GALILEO and the latest QZSS system, supporting ultra precise applications such as automatic driving, high-rise building urban areas with poor signals, high precision requirements from agriculture and construction applications and land and marine applications.



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IP67 / Shock/ Vibration/ ESD Test / UV / Chemical Resistance

Overview:

TL-125H integrates high performance GNSS ceramic patch antenna and unique filtering features with innovative proprietary circuit design and advanced double filters, which reduce interference from out-of-band signals. The design of the ceramic antenna element also helps to reduce the multipath effect. With especially-designed rugged/IP67 water ingress enclosure, the GNSS antenna is suitable for installing in harsh environment. The high-performance active antenna is compatible with most GNSS receivers with 3.3~15V DC input power. TL-125H receives all existing public GNSS signals, including GPS, GLONASS, Galileo and BeiDou as well as GPS L2C/L5, QZSS L1, GLONASS G1/G2 and BDS B1/B2, which provides better positioning accuracy for a variety of GNSS applications such as AVL, vehicle navigation, aviation, and military.







Features:

- Substantial and environmental-resistance structure
- Proprietary antenna design provides the flexibility to reach a range of operational goals
- IP67 grade waterproof
- Supports GPS, QZSS, GLONASS, Galileo, and BeiDou systems
- Multi-Constellation and Signal-Frequency for faster initialization

Applications:

- Geospatial Surveys / Single & Multiple frequencies RTK positioning / Vehicle Tracking / Security Surveillance / Precise Guidance / Machine Control / AVL

 <p>IT Construction</p>	 <p>High-precision Location</p>
 <p>Advanced Automotive Support</p>	 <p>Smart Agriculture</p>

Specification:

Physical Condition		
Dimension	Diameter:140mm High:49mm	
Weight	407 grams	
Patch Antenna		
GNSS Reception	GPS L1/L2/L5 & BDS B1/ B2 GLONASS G1/G2 Galileo E1 & QZSS L1	
Polarization	R.H.C.P.(Right Hand Circular Polarization)	
Absolute Gain @ Zenith	1559~1610 MHz	+3 dBi Typ.
	1227 MHz	+3 dBi Typ
	1176 MHz	-5.2 dBic Typ
	Mounted on the 100 mm x 100 mm square ground plane with Coupler	
Axial Ratio	3.0 dB typical	
Output VSWR	2 dB typical	
Low Noise Amplifier		
Frequency	1561~1602 MHz	1227 MHz / 1176MHz
LNA Gain	43 dB Typ.	43 dB Typ.
Noise Figure	3.6 dB Typ.	1.6 dB Typ.
Supply Voltages	3.3~15V DC	
Current Consumption	30 mA Typ @5V DC	
Output VSWR	2.0 Max.	
Output Impedance	50 ohm	
Cable and Connector		
Output Impedance	50 ohm	
VSWR	2.0 max.	
Cable	RG-58 (3~5M is recommended)	
Connector	TNC (Straight Female)	
Mount	5/8 inch female thread	
Environmental Conditions		
Operation temperature	-40°C to +85°C	
Storage temperature	-40°C to +85°C	
Relative Humidity	+40±2 °C,90~95%R.H	
Electronic Discharge	EN61000-4-2: 20KV Air-discharge ; 8KV Contact-discharge	

Enclosure Rating	IEC 60529 standard: IP67
Solar Radiation	MIL-STD 810E, SAE 1961
Mechanical Shock	MIL-STD-810G, Method 516.6 a. Procedure I, Functional shock
Vibration	Antenna Non-Working 5G/30min Antenna Working 2.5G/30min
Chemical Resistance	Alcohol 、 Plastic and Vinyl cleaner 、 Glass cleaner 、 Saline Solution 、 Soapy water

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Mechanical Diagram:

