

GNSS Antenna Catalog



Hi-Target Radio Anechoic Chamber

AT-45101CP

Choke Ring GNSS Antenna

AT-45101CP, the unique 3D choke ring design, ensures an excellent multipath reduction performance across all GNSS frequency bands including L-Band. It is ideal for applications of CORS station, bridge, and building deformation monitoring and geological monitoring due to its sub-millimeter phase center stability. AT-45101CP has been certified by IGS and NGS, and has participated in many large-scale projects, such as China Mobile HAP, China Power Grid and provincial CORS centers.



SPECIFICATIONS

Antenna Performance	Signal Tracking	GPS (L1, L2, L5) GLONASS (G1, G2, G3) BeiDou (B1, B2, B3) Galileo (E1, E5a, E5b, E6) QZSS, NAVIC, SBAS, L-Band
	Polarization Type	Right Handed Circular Polarization (RHCP)
	Antenna Axis Ratio	<2dB
	Nominal Impedance	50Ω
	Elevation Coverage	360°
	Maximum Gain	≥7dBi
	Phase Center Offset	≤±1mm
	LNA Performance	LNA Gain
Noise		≤2dB
VSWR		≤2
Pass-band Ripple		±1.5dB
Differential Propagation Delay		≤5ns
Operating Frequency Range	Lower Band	1160MHz - 1300MHz
	Upper Band	1521MHz - 1621MHz
Power	Working Voltage	3 - 16VDC
	Power Consumption	≤45mA
General	Environmental	IP67 environmental protection Temperature -45°C to 85°C operating -55°C to 85°C storage 95% Humidity
	Physical Properties	Dimension: Φ377mm * 271mm Weight: 5000g
	Connector	TNC

AT-4500

External GNSS Navigation Antenna

AT-4500 is a high-precision full-band navigation antenna that supports GPS, GLONASS, BDS, GALILEO, QZSS and other satellite signal reception, compatible with L-Band. Widely used in fields such as geodetic surveying, marine surveying and mapping, precision agriculture, deformation monitoring, vehicle-mounted high-precision positioning, etc.



SPECIFICATIONS

Antenna Performance	Signal Tracking	GPS (L1, L2, L5) GLONASS (G1, G2, G3) BeiDou (B1, B2, B3) Galileo (E1, E5a, E5b, E6) QZSS, NAVIC, SBAS, L-Band
	Polarization Type	Right-Handed Circular Polarization(RHCP)
	Antenna Axis Ratio	<3dB
	Nominal Impedance	50Ω
	Maximum Gain	≥5dBi
	Phase Center Offset	≤±3mm
	LNA Performance	LNA Gain
Noise		≤2dB
VSWR		≤2
Pass-band Ripple		±1.5dB
Differential Propagation Delay		≤10ns
Operating Frequency Range	Lower Band	1176MHz - 1278MHz
	Upper Band	1525MHz - 1612MHz
Power	Working Voltage	3 - 16VDC
	Power Consumption	≤35mA@3.3V
General	Environmental	IP67 environmental protection Temperature -40°C to 85°C operating -45°C to 85°C storage 95% Humidity
	Physical Properties	Dimension: Φ140mm*58.5mm Weight: 260g
	Connector	TNC

AT-35101H

Geodetic GNSS Antenna

AT-35101H supports receiving signals from GPS, GLONASS, BeiDou Galileo and L-Band simultaneously, which is widely used in geodetic surveying, road construction and marine surveying, etc..



SPECIFICATIONS

Antenna Performance	Signal Tracking	GPS (L1, L2, L5) GLONASS (G1, G2, G3) BeiDou (B1, B2, B3) Galileo (E1, E5A, E5B, E6) QZSS, NAVIC, SBAS, L-Band
	Polarization Type	Right-Handed circular polarization (RHCP)
	Antenna Axis Ratio	≤2dB
	Nominal Impedance	50Ω
	Elevation Coverage	360°
	Maximum Gain	≥5.5dBi
	Phase Center Offset	≤±1.8mm
	LNA Performance	LNA Gain
Noise		≤2dB
VSWR		≤2
Differential Propagation Delay		≤5ns
Operating Frequency Range	Lower Band	1176MHz - 1278 MHz
	Upper Band	1521MHz - 1621MHz
Power	Working Voltage	3 - 16VDC
	Power Consumption	≤35mA
General	Environmental	IP67 environmental protection Temperature -45°C to 85°C operating -55°C to 85°C storage 95% Humidity
	Physical Properties	Dimension: 160mm * 71.3mm * 39.6mm Weight: 460g
	Connector	TNC

AH-4236

GNSS Full Frequency Helix Antenna

AH-4236 supports receiving signals from GPS, GLONASS, Beidou, Galileo and L-Band. Its IP67 ruggedized structure and strong anti-interference ability make it available to endure in challenging operating environments and ideal to apply in the industry of drones, robots, high-precision equipment and so on.



SPECIFICATIONS

Antenna Performance	Signal Tracking	GPS(L1, L2, L5) GLONASS(G1, G2, G3) BeiDou(B1, B2, B3) Galileo(E1, E5a, E5b, E6) QZSS, NAVIC, SBAS, L-Band
	Polarization	Right-Handed Circular Polarization(RHCP)
	Antenna Axis Ratio	<3dB
	Nominal Impedance	50Ω
	Elevation Coverage	360°
	Maximum Gain	≥4dBi
	LNA Performance	LNA Gain
Noise		≤1.5dB
VSWR		≤2
Operating Frequency Range	Lower Band	1160MHz - 1280MHz
	Upper Band	1515MHz - 1615MHz
Power	Working Voltage	3 - 16VDC
	Power Consumption	≤35mA
General	Environmental	IP67 environmental protection Temperature -45°C to 85°C operating -55°C to 85°C storage 95% Humidity
	Physical Properties	Dimension: Φ48mm * 32mm Weight: 50g
	Connector	SMA

AH-3232

GNSS Dual-band Helix Antenna

The antenna LNA features an excellent out-of-band rejection performance, which can suppress electromagnetic interference, providing stable and reliable GNSS signals. 27.8mm*54.7mm in size and 18g in weight, AH-3232's compact design makes it popular to apply in UAV, USV, AGA and in any applications which require high precision operations.



SPECIFICATIONS

Antenna Performance	Signal Tracking	GPS (L1, L2) GLONASS (G1, G2) BeiDou (B1, B2, B3) Galileo (E1, E5b, E6) QZSS, NAVIC, SBAS
	Polarization Type	Right Handed Circular Polarization (RHCP)
	Antenna Axis Ratio	<3dB
	Nominal Impedance	50Ω
	Elevation Coverage	360°
	Maximum Gain	≥2dBi
	LNA Performance	LNA Gain
Noise		≤1.5dB
VSWR		≤2
Operating Frequency Range	Lower Band	1197MHz - 1278MHz
	Upper Band	1559MHz - 1609MHz
Power	Working Voltage	3 - 16VDC
	Power Consumption	≤35mA
General	Environmental	IP67 environmental protection Temperature -40°C to 85°C operating -55°C to 85°C storage 95% Humidity
	Physical Properties	Dimension: Φ27.8mm * 54.7mm Weight: 18g
	Connector	SMA

Hi-Target GNSS antenna LNA has excellent out-of-band suppression performance, which can suppress electromagnetic interference, thereby ensuring the stability and reliability of GNSS signals. The IP67 reinforced case can also protect the inside of the antenna from dust and water. The design of the Hi-Target GNSS antenna has higher phase center stability, excellent multipath rejection and axial ratio, linear phase response, and tight phase center variation (PCV). It effectively improves measurement accuracy and provides better positioning solutions.

Antenna Specification Comparison

Products							
Model		AT-45101CP	AT-4500	AT-35101H	AH-4236	AH-3232	
Signal Tracking	GNSS	MHz	1160 - 1300 1521 - 1621	1176-1278 1525-1612	1176 - 1278 1521 - 1621	1160 - 1280 1515 - 1615	1197 - 1278 1559 - 1609
	GPS-L1	1575.420	●	●	●	●	●
	GPS-L2	1227.600	●	●	●	●	●
	GPS-L5	1176.450	●	●	●	●	—
	Glonass-G1	1598.0625-1609.3125	●	●	●	●	●
	Glonass-G2	1242.9375-1251.6875	●	●	●	●	●
	Glonass-G3	1202.025	●	●	●	●	●
	BDS2-B1I	1561.098	●	●	●	●	●
	BDS2-B2I	1207.140	●	●	●	●	●
	BDS2-B3I	1268.520	●	●	●	●	●
	BDS3-B1C	1575.420	●	●	●	●	●
	BDS3-B2a	1176.450	●	●	●	●	—
	BDS3-B2b	1207.140	●	●	●	●	●
	Galileo-E1	1575.420	●	●	●	●	●
	Galileo-E5a	1176.450	●	●	●	●	—
	Galileo-E5b	1207.140	●	●	●	●	●
	Galileo-E6	1278.750	●	●	●	●	●
	QZSS-L1	1575.420	●	●	●	●	●
	QZSS-L2	1227.600	●	●	●	●	●
	QZSS-L5	1176.450	●	●	●	●	—
QZSS-L6	1278.750	●	●	●	●	●	
SBAS-L1	1575.420	●	●	●	●	●	
SBAS-L5	1176.450	●	●	●	●	—	
L-Band		●	●	●	●	—	
Specification	Maximum Gain(dBi)	≥7	≥5	≥5.5	≥4	≥2	
	Typical Axial Ratio (dB)	<2	<3	≤3	<2	<3	
	LNA Gain (dB)	45±3	36±3	43±3	35±3	35±3	
	Size (mm)	Φ377*271	Φ140*58.5	160*71.3*39.6	Φ48*32	Φ27.8*54.7	
	Weight (g)	5000	260	460	50	18	
	Environmental	IP67	IP67	IP67	IP67	IP67	
	Connector	TNC	TNC	TNC	SMA	SMA	
	Others	Support Customization					



AUTHORIZED DISTRIBUTION PARTNER

21J107

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