

HX-CSX329A is an embedded multi-constellation multi-frequency GNSS antenna that covers GPS, GLONASS, BDS, and GA LILEO and is also compatible with Bluetooth. It can be widely used in geodetic surveying, marine surveying, channel

surveying, dredging surveying, seismic monitoring, bridge deformation monitoring, landslide monitoring, port container operations, and other occasions.

GREAT COMPATIBILITY FOR SOLID RELIABILITY

This versatile antenna adopts a compact design that combines GNSS antenna, WiFi antennas and Bluetooth antenna, delivering great compatibility to be integrated into RTK applications. The layout of this multifunction antenna is specifically designed for realizing a perfect isolation effect among the different antennas embedded and ensuring outstanding reduction of interrelated influence.

STABLE PHASE CENTER FOR REMARKABLE PERFORMANCE

It features multi-point feeding capability, guaranteeing a reliable phase center for millimeter positioning accuracy. The BT antenna is placed around the GNSS, ensuring good structural symmetry, and ensuring the consistency of the positioning antenna's phase center.

KEY FEATURES

- · Supports GPS, GLONASS, Galileo, BeiDou,
- QZSS, IRNSS and L-band correction service
- Supports Bluetooth
- Strong anti-Interference performance
- Powerful system compatibility, easy for

machine integration

TRACKING IN COMPLEX ENVIRONMENTS

This antenna exhibits superior high gain performance with ultralow signal loss, ensuring reliable satellite signal tracking. It also delivers wide beam width that covers wide frequencies with high marginal gain. These features in turn ensure the antenna a robust signal availability even in low elevation, making the antenna a perfect option in complex environments that have blockage, such as tree canopy and buildings.

RELIABLE AND ROBUST STRUCTURE

Utilizing self-developed air-spaced technology and low consumption microwave materials, GNSS antenna substrate is molded integrally through a mold, resulting in lower loss, lighter weight, smaller antenna dimensions, higher precision, good consistency, and more stable and reliable electrical performance.

STRONG ANTI-INTERFERENCE PERFORMANCE

The advanced LNA (Low Noise Amplifier) excels in improved signal filtering and out-of-band rejection and restraints unwanted electromagnetic interferences, plus strong multi-path reduction capacity over all GNSS frequency bands, providing strong anti-interference performance for consistent and reliable GNSS signals, even under complicated environments such as power grids, communication base stations, and broadcast stations.

Specifications

PERFORMANCE					
Frequency	GPS L1/L2/L5 BDS B1I/B2I/B3I/B1C/B2a/B2b GLONASS L1/L2/L3 GALILEO E1/E5a/E5b/E6 QZSS L1、L2、L5、L6 IRNSS L5 L-Band BT				
Nominal Impedance	50 Ω				
Polarization	RHCP				
Axial Ratio	≤3dB				
Azimuth Coverage	360°				
Azimuth Coverage	≤2.0				
Peak Gain	GNSS:4.7dBi				
Phase Center Deviation	±2mm				
Phase Center	L1 : 2.3mm				
	L2 : 4.3mm				

L2:34±2dB LNA Gain L1:32±2dB Noise Figure ≤2dB VSWR ≤2.0 Passband ±2dB Ripple Passband +3.3~+12VDC Ripple Operation ≤45mA Current Group Delay ≤5ns Ripple MECHANICAL Dimensions Φ92.4*H13.4mm Connector GNSS&BT: SMP **ENVIRONMENT** Operating -40°C ~ +85°C Temperature Storage -55℃~+85℃ Temperature Humidity 95% non-condensing

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LOW NOISE AMPLIFIER



Frequency (MHz)	1176	1227	1268	1559	1575	1607
Gain (dBi)	1.9	4.1	2.4	3.5	4.7	3.4



1176MHz





1268MHz

1559MHz







1557MHz

1607MHz

BT Antenna Performance

Frequency (MHz)	2400	2450	2500	5200	5400	5600	5800
Gain (dBi)	1.27	2.24	1.46	1.48	1.37	0.21	-2.24



BT Antenna VSWR



300

240

270



2400MHz

2450MH



2500MHz





Structure & Phase Center Drawing (mm)



Undeclared Tolerance:±0.3

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