Ruggedized GNSS Antenna HX-CVX603A

Harxon
a BDStar company

HIGH PERFORMANCE ANTENNA FOR AUTONOMOUS APPLICATIONS

The Harxon HX-CVX603A high performance GNSS antenna is designed with rugged housing, high reliability and easy integration for applications that require ultimate accuracy. It offers full support for reliable and consistent satellite signals tracking, including GPS, GLONASS, Galileo, BeiDou, QZSS, IRNSS, SBAS as well as L-Band correction service. It is ideal for unmanned vehicles, autonomous driving, mobile mapping system and solution of mobile laser scanning system for unmanned vehicles or applications where precision matters.



RELIABLE PHASE CENTER

The high precision HX-CVX603A antenna features high gain, wide beam width as well as outstanding wide-angle circular polarization (WACP) performance. It exhibits a very stable phase center by adopting multipoint feeding technology, which ensures smaller phase center variation (PCV) for more precise positioning accuracy.

TRACKING IN COMPLEX ENVIRONMENTS

The high gain and wide beam width features ensure exceptional low elevation signal tracking performance, which make sure the antenna receives reliable and consistent signals even under harsh environment where blockage exists.

STRONG ANTI-INTERFERENCE PERFORMANCE

The advanced LNA (Low Noise Amplifier) of the antenna excels in improved signal filtering and out-of-band rejection by restraining unwanted electromagnetic interferences, providing strong anti-interference performance for consistent and reliable GNSS signals and avoiding the risk of loss tracking even under complicated environments such as overcrowded urban areas or communication base stations where profound electromagnetic interference exist.

RUGGED ENCLOSURE FOR TOUGH ENVIRONMENTS

The antenna, adopts a compact design (Φ90.6×26mm), is built into a rugged IP67 rating housing that withstand exposure against dust, rain, splash or sunlight. The standard TNC female connector ensures easy integration. It is also a low power consumption antenna, which make sure long endurance for field operations.

KEY FEATURES

- Comprehensive GNSS support: GPS, GLONASS, Galileo, BeiDou and QZSS, IRNSS, SBAS as well as L-Band correction service
- Reliable phase center, low elevation signal tracking, strong anti-interference performance
- Low profile, rugged IP67 housing idea for harsh environments
- Weight 250g only, low power consumption, autonomous vehicle mounting

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PERFORMANCE

Signal Received	
GPS	L1/L2/L5
GLONASS	L1/L2/L3
GALILEO	E1/E5a/E5b/E6
BDS	B1/B2/B3
QZSS	L1/L2/L3/L6
SBAS	L1/L5
IRNSS	L5
L-Band	
Nominal Impedance	50Ω
Polarization	RHCP
Axial Ratio	≤3dB
Azimuth Coverage	360°(omni-directional)
Output VSWR	≤2.0
Peak Gain	4.0dBi

LOW NOISE AMPLIFIER

LNA Gain	40±2dB
Noise Figure	≤2dB
Output VSWR	≤2.0
Passband Ripple	±2dB
Operation Voltage	+3.3～+16VDC
Operation Current	≤45mA
Differential Propagation Delay	≤5ns
EMC(RF Input Static)	Connected 8KV, Air 15KV, 10times

MECHANICAL

Dimensions	Φ90.6×26mm
Connector	TNC Female
Weight	≤250g
Water/Dust Resistance	IP67
Mounting	Screws Mount: M18 screws

ENVIRONMENTAL

Temperature	
Operating	-45°C～+85°C
Storage	-55°C～+85°C
Humidity	95% no-condensing

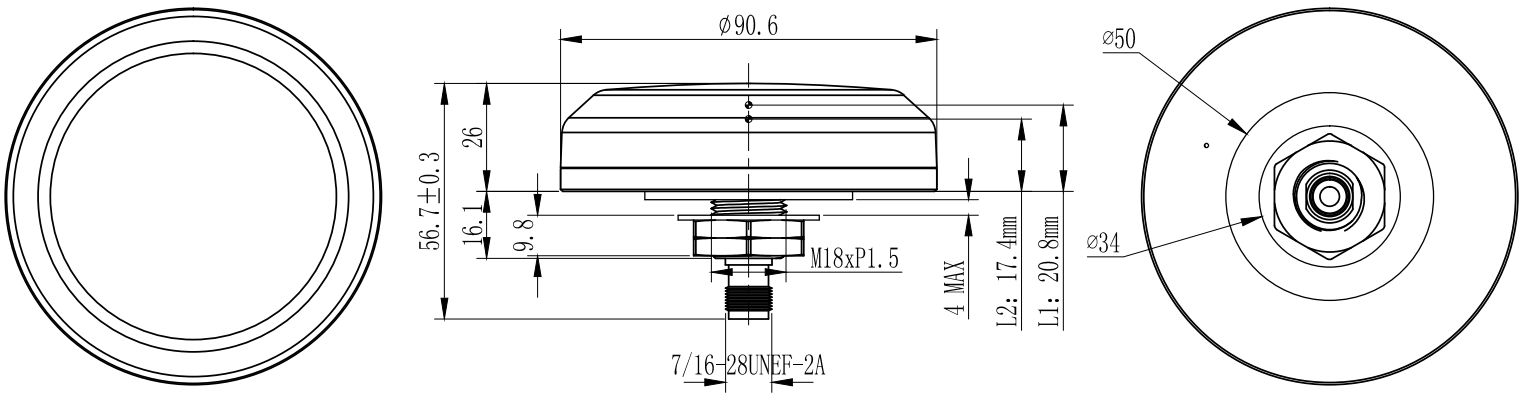
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Version 1 Specifications subject to change without notice.

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Structure & Phase Center Drawing (mm)



TOP VIEW SIDE VIEW BOTTOM VIEW

Undeclared Tolerance: ±0.3mm

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