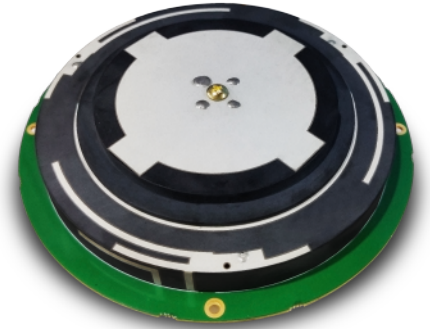


# X-Survey™ OEM Antenna HX-CSX100A

## INNOVATIVE 4in1 MULTIFUNCTION ANTENNA TO RTK APPLICATIONS

Harxon's 4in1 multifunctional X-Survey™ OEM antenna HX-CSX100A is an embedded multi-constellation multi-frequency GNSS antenna that integrates GNSS antenna, dual 4G antennas, BT, and WIFI in one compact enclosure. It's a highly integrated antenna that delivery high performance positioning accuracy while ensuring great anti-electromagnetic interference effect. Its compact integration and robust performance make it ideal to be adopted into applications as geodetic surveying, oceanic surveying, geologic surveying and geological disasters monitoring, smart port operations and etc.



### STABLE PHASE CENTER FOR ROBUST POSITIONING PERFORMANCE

The HX-CSX100A embedded antenna support multi-constellation full frequency satellite signal tracking, including GPS, GLONASS, Galileo, BeiDou, QZSS, IRNSS, SBAS and L-band correction service. It features Harxon X-Survey™ technology that support multi-point feeding capability, guaranteeing a reliable phase center for millimeter positioning accuracy.

### HIGHLY INTEGRATED LAYOUT FOR EASY INTEGRATION

The HX-CSX100A integrates GNSS antenna, dual 4G antennas, WIFI, and BT into one compact enclosure. Adopting multiple antennas in one solution greatly simplify the complexity of different types antennas integration for applications. Harxon employs self-developed microwave material for isolating interrelated effect among these antennas for reliable signal receptions. Meanwhile, the 4G antennas are evenly distributed at the outer layer of this structure for consistent signal availability while taking product dimension into consideration.

### 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 a 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.

### 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.

### EASY INTEGRATION DESIGN FOR PRECISION APPLICATIONS

The unique structure design simplifies the RTK integration, and minimizes the overall machine dimension, aiming to bring system integrators high efficiency performance of navigation and communication in surveying and precision agriculture applications.

### KEY FEATURES

- Supports GPS, GLONASS, Galileo, BeiDou, QZSS, IRNSS, SBAS and L-band correction service
- Supports Dual 4G, Wi-Fi, Bluetooth
- Stable phase center guarantees the accuracy of positioning within millimeter-level
- Powerful system compatibility, easy for machine integration

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## PERFORMANCE

### Signal Received

GPS	L1/L2/L5
GLONASS	L1/L2/L3
BDS	B1/B2/B3
GALILEO	E1/E5a/E5b/E6
QZSS	L1/L2/L5
IRNSS	L5
SBAS	L1/L5
L-Band	
Dual 4G / BT / WiFi	

**Nominal Impedance** 50Ω

**Polarization** RHCP

**Axial Ratio** ≤3dB

**Azimuth Coverage** 360°

**Output VSWR** ≤2.0

### Peak Gain

GNSS	1164MHz-1300MHz	5dBi
	1525MHz-1612MHz	5dBi
BT/WiFi	2.4-2.5GHz	1dBi
4G	790-960MHz	0.5dBi
	1710-2690MHz	0.5dBi

Phase Center Deviation ±2mm

## LNA

**LNA Gain** L2: 40±2dB

L1: 38±2dB

**Noise Figure** ≤2dB

**VSWR** ≤2.0

**Passband Ripple** ±2dB

**Operation Voltage** 3.3V to 12V DC

**Operation Current** ≤45mA

**Group Delay Ripple** ≤5ns

## MECHANICAL

**Dimensions** φ125 x 27.5mm<sup>②</sup>

**Weight** ≤220g

### Connector

GNSS MMCX-C-JW1.5

BT/WiFi MMCX-C-JW1.5

Dual 4G MMCX-C-JW1.5

**Mounting** 4 x M2.5 screws installation

## ENVIRONMENTAL

### Temperature

Operating -40°C to +85°C

Storage -55°C to +85°C

**Humidity** 95% non-condensing

For the most recent details of this product:

<http://en.harxon.com/products-detail.php?Prolid=172>

### en.harxon.com

sales@harxon.com

9/F, Block B, Building D3, TCL International

E City, NO.1001 Zhongshanyuan Road,

Nanshan District, Shenzhen, China

Tel: +86-755-26989948

Fax: +86-755-26989994

**Version 3** Specifications subject to change without notice.

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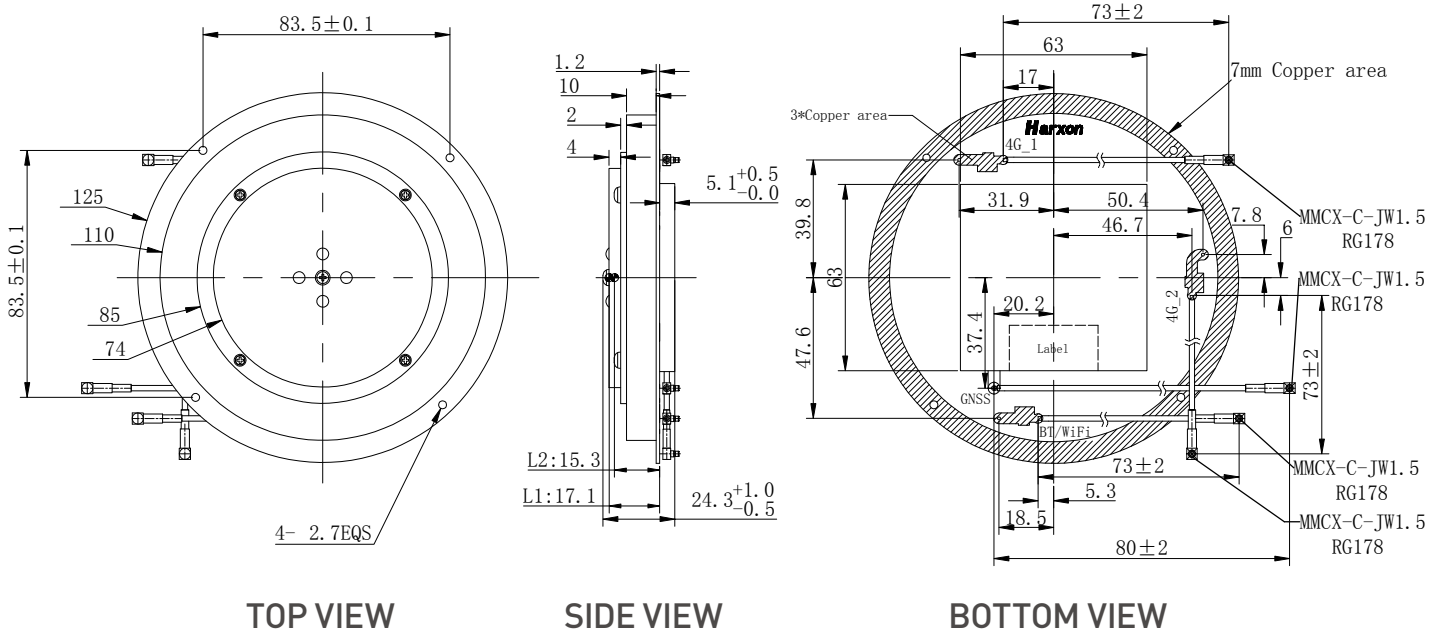
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①.4G bands: can be customized according to different countries and regions

②.Dimension: typical value, without connector, can be customized

## Structure & Phase Center Drawing (mm)



Undeclared Tolerance: ±0.3mm