

# Helix Antenna HX-CHX603A

Harxon Patented D-QHA<sup>①</sup> Technology Inside

**Harxon**  
a *BDStar* company

SMALL AND LIGHT ANTENNA WITH  
INNOVATIVE D-QHA TECHNOLOGY  
FOR UAV



## ADVANCED D-QHA TECHNOLOGY

Harxon's D-QHA technology ensures HX-CHX603A more stable performance of wide-angle circular polarization (WACP), and smaller antenna phase center deviation (PCV), which ensures a more precise positioning accuracy.

## TRACKING IN CHALLENGING ENVIRONMENTS

HX-CHX603A is able to track visible satellites under challenging conditions, providing the positioning solutions with high precision and reliable data. Its stable phase center guarantees the accuracy of positioning within millimeter level, that can be widely used in plant protection, tree lines, UAV power patrol, and GIS surveying where high precision operations are needed.

## STRONG ANTI-INTERFERENCE PERFORMANCE

The antenna LNA features excellent out-of-band rejection performance, which can suppress the electromagnetic interference, providing the stability and reliability of GNSS signals. Also, it effectively avoids disconnection dangerous when UAVs are operated under tower and electric power patrol.

## SMALL SIZE AND LIGHT WEIGHT

The light weight and small size HX-CHX603A antenna can lighten the loads of UAVs, with a standard SMA male connector for easy integration. Its IP65 ruggedized design can protect it from dust and water.

## KEY FEATURES

- Support GPS, GLONASS, Galileo and BeiDou signal reception
- Stable phase center guarantees the accuracy of positioning within millimeter level
- Strong anti-interference ability to endure the harsh operating environments
- 25g light weight for lower power consumption
- IP65 ruggedized protection

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## PERFORMANCE

### Signal Received

GPS	L1/L2/L5
GLONASS	L1/L2/L3
GALILEO	E1/E5a/E5b
BDS	B1/B2/B3

Nominal Impedance 50Ω

Polarization RHCP

Axial Ratio ≤3dB

Azimuth Coverage 360°

Output VSWR ≤2.0

Peak Gain 2dBi

## LNA

LNA Gain 23±2dB

Noise Figure ≤2dB

Output/Input VSWR ≤2.0

Passband Ripple ±2dB

Operation Voltage +3.3 to +12VDC

Operation Current ≤35mA

Group Delay Ripple ≤5ns

## MECHANICAL

Dimensions Ø27.5\*59mm

Connector SMA Male Connector

Weight ≤25g

### Installation

Please refer to the installation instructions

## ENVIRONMENTAL

Operating Temperature -40°C~+70°C

Storage Temperature -55°C~+70°C

Humidity 95% non-condensing

Water/Dust Resistance IP65

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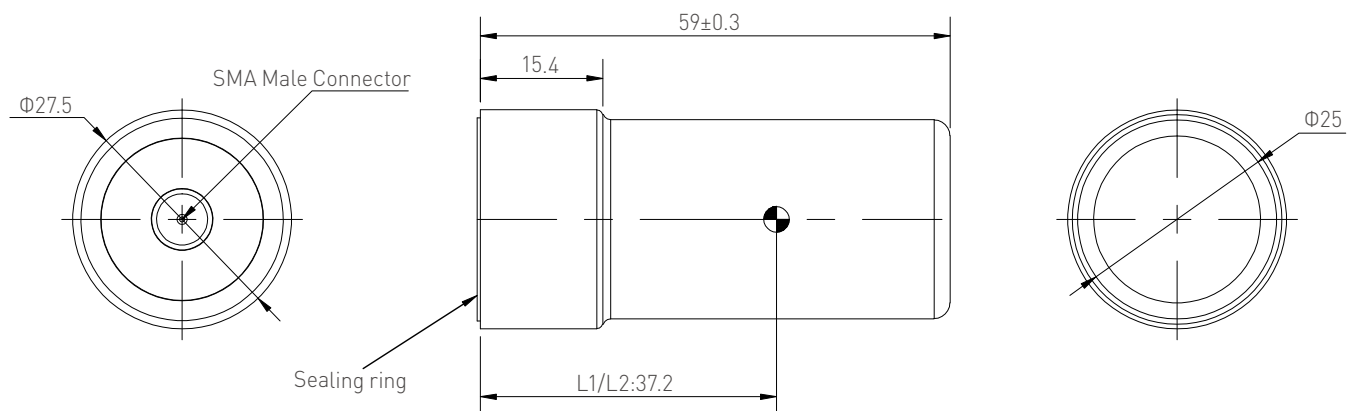
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1.D-QHA: Dual Quadrifilar Helix Antenna

## Structure & Phase Center Drawing (mm)



TOP VIEW

SIDE VIEW

BOTTOM VIEW

Undeclared tolerance:  $\pm 0.3$ mm