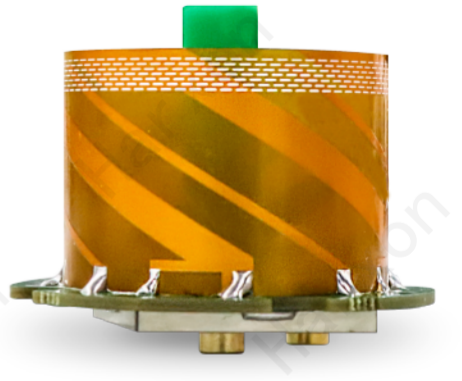
D-Helix™ Antenna HX-CUX005A

Harxon Patented D-QHA Technology Inside

Harxon
a BDStar company

HX- CUX005A Embedded Helix Antenna with WiFi & BT Antenna

Harxon HX- CUX005A is an embedded helix antenna designed for high-precision positioning. It offers superior satellite signal tracking, including GPS, GLONASS, GALILEO, and Beidou as well as L-Band correction service. Upgraded with WiFi and BT antenna for better integration, this product is ideal for surveying, UAV, personnel and vehicle monitoring and many more applications. It's regarded as an all-in-one solution for integrated helix antenna needs.



ADVANCED D-QHA TECHNOLOGY FOR CONSISTENT PERFORMANCE

HX-CUX005A features a multi-point feeding technology that ensures a high phase center stability for outstanding positioning accuracy. Meanwhile, adopting advanced patented D-QHA technology and covering a wider frequency band, HX-CUX005A achieves extraordinary 2.5dBi gain for reliable and consistent performance. Its high gain with ultralow signal loss, wide beam width for exceptional low elevation satellite tracking with symmetric radiation patterns deliver consistent performance even under challenge environment that has serious blockage.

STRONG ANTI-INTERFERENCE PERFORMANCE

HX-CUX005A optimizes circuit layout and equips a robust pre-filtered LNA that features an excellent out-of-band interference rejection performance and restraints possible unwanted electromagnetic interference, providing reliable GNSS signals for easy integration into positioning solutions.

SMALL FORM FACTOR, LIGHT WEIGHT, DESIGNED FOR INTEGRATION

Weighting only 10g, the light HX-CUX005A embedded antenna has a compact dimension of Φ 44*H37mm, making it ideal to be integrated into UAVs, surveying and monitoring devices. It reduces the overall weight of applications and increases service time.

ALL-IN-ONE HELIX ANTENNA INTEGRATED WITH WIFI & BT ANTENNA

HX-CUX005A is designed with the integration of WiFi and BT antenna (2.4GHz/5.8GHz). On the one hand, its 1dBi gain (typical value) enables easy connection and configuration for mobile device users; on the other hand, its highly integrated design simplifies development and reduces costs for device engineers.

KEY FEATURES

- Comprehensive GNSS support: GPS, GLONASS, Galileo, BeiDou as well as L-Band correction service
- Centimeter phase center repeatability, high gain at low elevation
- Improved signal filtering and excellent multipath rejection
- 10g, small form factor facilitates easier integration
- Integrated with WiFi and BT antenna (2.4GHz/5.8GHz)

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PERFORMANCE

Signal Received	
GPS	L1/L2/L5
GLONASS	L1/L2
GALILEO	E1/E5a/E5b
BDS	B1/B2/B3
QZSS	L1/L2/L5/L6
IRNSS	L5
SBAS	L1/L5
L-Band	
WiFi/BT	2.4GHz/5.8GHz
Nominal Impedance	50Ω
Polarization	RHCP
Axial Ratio	≤3dB
Azimuth Coverage	360°(Omni-directional)
Output VSWR	≤2.0
Gain RHCP(maximum)	2.5dBi

LOW NOISE AMPLIFIER

LNA Gain	33±2dB
Noise Figure	≤2dB
Output VSWR	≤2.0
Operation Voltage	+3.3V to +5V DC
Operation Current	≤55mA
Passband Ripple	±2dB

MECHANICAL

Dimensions	¢44*37mm
Connector	GNSS: MCX-50KE, WIFI: MCX-50KE
Weight	≤10g
Mounting	Customizable

ENVIRONMENTAL

Temperature	
Operating	-40°C to +70°C
Storage	-55°C to +70°C
Humidity	95% non-condensing

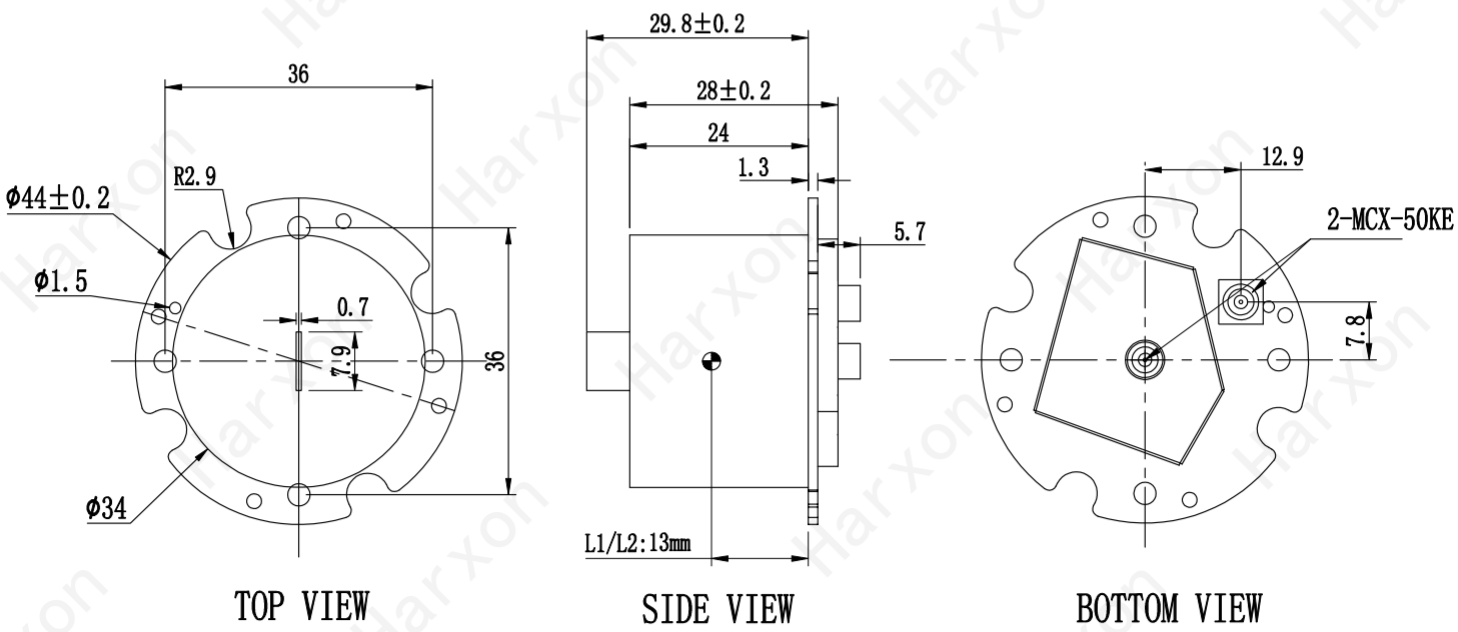
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Structure& Phase Center Drawing (mm)



Undeclared tolerance:±0.3mm

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