TCA920 Choke Ring Antenna

TOKNAV TCA920 Choke Ring Antenna is a high performance GNSS antenna for base station that covers full frequency satellite signal tracking of GPS, GLONASS, GALILEO, BDS, QZSS, SBAS, IRNSS, as well as L-Band correction service. The 2D choke coil with strong multipath suppression performance that specifically designed for applications as land and marine surveying, channel surveying, earthquake and landslide monitoring, deformation monitoring, and wharf container operations that require absolute positioning accuracy and multi-constellation support.

Characteristic

High Phase Center Stability

The unique 2D choke ring design of TCA920 ensures an excellent multipath reduction performance across all GNSS frequency bands including L-Band. And the antenna features the patented multi-point feeding technology to achieve greater phase center stability and hence effectively improve measurement accuracy. It is ideal for applications of CORS stations, bridge and building deformation monitoring or geological monitoring due to its sub-millimeter phase center stability.

Track in Challenging Environments

The strong ability to receive low elevation signals with high gain and wide beam width makes TCA920 an excellent choice for tracking visible satellites and provide stable and precision GNSS data under complex environments, such as obstructed environment of tree lines or construction.

Strong Anti-Interference Performance

The antenna Lower Noise Amplifier (LNA) features an excellent out-of-band rejection performance, which can suppress the Electromagnetic Interference (EMI), providing the stability and reliability of GNSS signals. Also, it effectively avoids disconnection dangerous when receivers are being interfered by wireless communication systems, for example power grid, communication base station or radio modem applications.

More Ruggedized for Long Lasting Durability

The TCA920 cover is made of Glass Fiber Reinforced Polymer (GFRP) material and is structurally strong and reliable. The newly designed choke rings are treated with a more robust double treatment for longer lasting durability in harsh environments. The IP67 ruggedized cover is also designed for added protection for inside antenna avoid from dust and water. The antenna Mean Time Between Failures (MTBF) is over 30000 hours, which ensures long-time outdoor operation in challenging environments of high low temperature, high humidity and high salt fog.

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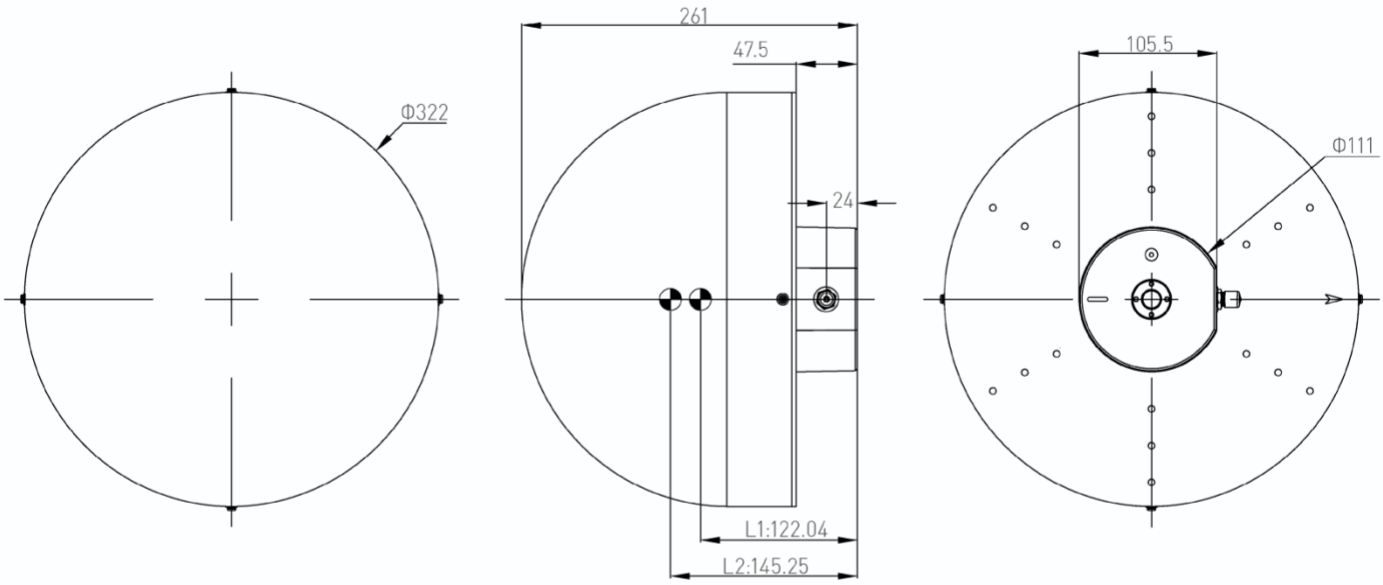
Structural dimension drawing

(Dimension tolerance: ±0.3mm)



Top view Side View Bottom View

ITEM		SPECIFICATION
SIGNAL TRACKING	GPS	L1/L2/L5/L-Band
	GLONASS	L1/L2/L3
	GALILEO	E1/E5a/E5b/E6
	BDS	B1/B2/B3
	QZSS	L1/L2/L5/L6
	SBAS	L1/L5
	NavIC (IRNSS)	L5
LNA	Nominal Impedance	50Ω
	Polarization	RHCP
	Axial Ratio	≤2dB
	Gain at Zenith (90°)	1205-1278MHz 6dBi(maximum) 1559-1615MHz 6dBi(maximum)
	LNA Gain	50dB(typical)
	Noise Figure	≤2dB
	Output/Input VSWR	≤2.0
	Operation Voltage	+3.3VDC to +12VDC
	Operation Current	60mA(maximum)
	Group Delay Ripple	＜5ns
PHYSICAL	Dimensions	¢322mm*261mm
	Connector	TNC female
	Weight	≤5.6kg
	Mounting	BSW5/8"-11 screw, depth≥22mm

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ENVIRONMENTAL	Temperature	Operating -40℃ to +85℃ Storage -55℃ to +85℃
	Humidity	95% non-condensing
	Protection	IP67
	Regulatory Compliance	NGS, CE, FCC, RoHS

▲ Manufacturers may update parameters at any time, please refer to the latest product information.

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