



M10HCT-A-TNC

L1-L2-L5 ACTIVE GNSS ANTENNA
Part #: 100-00282-01

Description

M10HCT-A-TNC is a L1-L2-L5 active antenna solution intended to cover all GPS, Galileo, Glonass, BeiDou bands including L-Band correction services coverage. Low profile RHCP, wide band antenna is ideal solution for high-precision applications, such as autonomous vehicle navigation, smart survey devices, and maritime positioning. This antenna is built on proprietary Maxtena Helicore® technology. This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor. Low axial ratio ensures that the antenna captures RHCP signal well and mitigates the reflected LHCP signals. Antenna ensures high signal-to-noise ratio (SNR) and GNSS signal tracking from all elevation angles in all types of environments. The antenna is ground plane independent and comes in three versions: Screw mount, magnet mount and embedded. The embedded version is custom tuned to the applications enclosure.

Active Circuit Performance

Parameter	Specification
Conducted gain	34.5 dB @ upper band 35.4 dB @ lower band
Noise figure	3.1 dB @ upper band 2.9 dB @ upper band
Voltage	2.3 V - 16 V
Current	40 mA (max.)
Out of band rejection	≥ 70 dB @ ≥ 1700 MHz ≥ 35 dB @ ≥ 1650 MHz ≥ 35 dB @ 1450 - 1520 MHz ≥ 60 dB @ 1350 - 1450 MHz ≥ 80 dB @ ≤ 1125 MHz
Group delay variation	< 3 ns @ L1 < 4 ns @ L2 < 22 ns @ L5
EMI Immunity Out of Band	30 kV
Output P1dB	12.5 dBm @ upper band 13.1 dBm @ lower band



Features

- Full GPS, Galileo, Glonass, BeiDou bands coverage including L-Band correction services coverage
- Low Axial Ratio
- Low Noise Figure
- Ground plane independent
- Low power consumption
- Low phase center variation over azimuth and elevation and among different samples
- Rugged IP67 rating
- RoHs compliant
- Automotive grade electronics

Applications

- UAV/Drones
- Unmanned Ground Vehicles (UGV)
- Unmanned Systems
- High Precision Navigation
- Military & Security
- Agriculture & FarmTech
- Marine systems

Passive antenna performance

Parameter	Specification
Frequency Range	1164 - 1300 MHz 1539 - 1610 MHz
Peak gain	3.4 dBic @ upper band 3.3 dBic @ lower band
Peak efficiency	80 % @ upper band 75 % @ lower band
Axial Ratio	0.5 dB (max.) @ zenith
Polarization	RHCP
Beamwidth	120°

Mechanical specification

Parameter	Specification
Antenna Dimensions	Ø80 x 40 mm
Weight	114 g
Operating Temperature	-40 °C to 85 °C
Mounting Type	Connector Mount
Connector	TNC
Radome/Color	Black
Housing material	ABS/PC
Certificates	IP67



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