

AR10 – Smart Antennas

Description



The AR10 is the ideal antenna for a wide range of high accuracy permanent and mobile base station applications. Using state-of-the-art technology it offers near choke-ring level performance but without the weight, size and cost. An all new antenna design, together with a large ground plane and integrated radome, ensures that the AR10 provides exceptional signal tracking, phase center accuracy and multipath suppression.

Features

- **Integrated Radome:** Thanks to the integrated radome, the AR10 prevents buildup of snow which could otherwise degrade signal quality. The non-spherical radome is designed for optimal signal quality and has the added benefit of discouraging birds from perching on the antenna, a common source of signal attenuation with rounded radomes. The aerodynamic shape of the antenna reduces wind loading and together with the light weight ensures that the AR10 can be used with a variety of antenna masts or as a field or campaign base on a tripod. Constructed using a robust and UV resistant enclosure the AR10 is made to withstand extreme temperature, humidity, dust, salt, solar radiation, pollution, shock and vibration.
- **Superior Performance:** Designed from the ground up for wideband tracking, the new wideband antenna technology introduced in the AR10 provides superior low elevation tracking, multipath suppression and antenna phase center accuracy across all frequency bands. An all new low noise amplifier (LNA) is used to provide exceptional low measurement noise for superior measurement quality. The new LNA technology also has excellent out of band rejection, helping to significantly reduce potential interference due to jamming. The AR10 is suitable for use with antenna cable lengths up to 70 m without the need for an in-line amplifier.
- **Future Proof:** With emerging satellite systems close on the horizon, such as the European Galileo system and the Chinese Compass (Beidou 2) system, it is more important than ever before to have a true GNSS antenna.

Specifications



Technical Specification	
Leica AR10	
Design	Planar structure with large ground plane
Signals tracked	GPS: L1, L2 (Including L2C), L5 GLONASS: L1, L2, L3, L5 Galileo: E1, E5a, E5b, E5ab (AltBOC), E6 BeiDou: B1, B2, B3 QZSS: L1, L1C, L2C, L5, L1-SAIF, LEX L-Band (Incl. SBAS, TERRASTAR and CDGPS)
Phase Centre	Accuracy: Typically less than 2 mm Repeatability: Within 1 mm
Dimensions	240 mm x 140 mm
Weight	1.12 kg
Supply Voltage Range	3.3 – 12 VDC
Connector	TNC
Mounting	Standard 5/8" Whitworth thread
Nominal Impedance	50 ohms
Gain (typically)	29 dBi or 40 dBi optional
Current	110 mA maximum
Noise Figure	less than 1.8 dB
Axial Ratio	less than 1.4 dB at zenith
Temperature Range	ISO9022
Operating	-40° C to +70° C
Storage	-55° C to +85° C
Environmental Protection	Humidity: up to 100% Rain, dust, sand, wind: IP67 – Protection against blowing rain and dust. Waterproof to temporary submersion into water (1 m)
RoHS complaint	Yes
Vibration	ISO9022-3, 10 to 55 Hz, 2 g, ±0.15 mm
Drop	Withstands 1.2 m drop onto hard surfaces
Antenna Cables	Are available in lengths of 1.2/2.8/10/30/50/70 metres. Longer cables available on request