

Leica AR10

Future Proof GNSS Antenna with Integrated Radome



High Performance GNSS Reference Station Antenna

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 centre accuracy and multipath suppression.

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Future Proof GNSS Infrastructure

Integrated Radome

Thanks to the integrated radome, the AR10 prevents build-up 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 centre 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.

Additional power surge protection

The innovative integrated multi-stage power surge arrester for the AR10 enhances protection against power surges in the electrical system, typically caused by lightning or any other source of high voltage.

Future Proof

With emerging satellite systems close on the horizon, such as the European Galileo system and the Chinese BeiDou system, it is more important than ever before to have a true GNSS antenna. In line with Leica Geosystems "future proof" philosophy, the AR10 has been designed for all existing and currently planned signals of the GPS, GLONASS, Galileo and BeiDou global navigation satellite systems and the SBAS, QZSS, Gagan, TERRASTAR and other L-band augmentation systems.



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, L6 NavIC: L5 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 dB or 40 dB optional
Current	100 mA maximum
Noise Figure	less than 1.8 dB
Axial Ratio	less than 1.4 dB at zenith
Lightning Protection	Integrated 3 stages surge protector to comply with at least 4kV surge waveform (IEC 61000-4-5 class 4 voltage level)
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