Leica AR20

Visionary 3D GNSS Antenna
Matchless multipath suppression

SPIDER

Visionary 3D GNSS Choke Ring Antenna

The Leica AR20 is a new innovative design antenna that brings new levels of performance for reference station and monitoring applications. The AR20 contains a new 3D design choke ring for improved tracking performance, excellent phase centre symmetry and unmatched multipath supression across all GNSS frequency bands.

PART OF HEXAGON

- when it has to be **right**

Leica Geosystems

Leica AR20
Future-proof GNSS infrastructure

New innovative design choke ring antenna
The AR20 is a newly designed 3D GNSS choke ring antenna with variable choke rings for superior tracking performance. The precision design also allows for very low and stable phase centre offsets and very smooth symmetry of the phase centre variations versus azimuth and elevation.

More robust for longer durability
The newly designed AR20 choke rings are treated with a newer and more robust double treatment for longer lasting durability in all environments. An optional radome cover is also available for added protection.

Additional power surge protection
The innovative integrated multi-stage power surge arrestor for the AR20 enhances protection against power surges in the electrical system, typically caused by lightning or any other source of high voltage.

Superior multipath performance
The AR20 has excellent Axial Ratio at low elevations which results in superior multipath rejection across all GNSS frequency bands including L5, due to the new 3D (inside) design. Traditional 2D choke ring designs are typically optimised for a single frequency band, while the AR20 has been optimised for superior multipath performance across all GNSS frequency bands.

Technical Specification	
Design	Planar structure with 3D choke ring 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 1 mm Repeatability: Within 1 mm
Dimensions (H x W)	163 mm x 320 mm
Weight	5.9 kg
Supply voltage range	3.3 – 12 VDC
Connector	N-Type (female)
Mounting	Standard 5/8" whitworth thread
Nominal impedance	50 ohms
Current	100 mA maximum
Gain (typically)	29 dB or 40 dB optional
Noise figure	Less than 2.0 dB

Technical Specification	
Axial ratio	Less than 1.2 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 and MIL-STD-810G Operating: –55° C to +85° 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 depth)
RoHS complaint	Yes
Vibration	ISO9022-36-05, 10 to 55 Hz; ± 0.15 mm, 5 cycles
Drop	Withstands 1.0 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
Radome	Available as option

Swiss Technology by Leica Geosystems

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