



AD-493 ANTENNA

L-BAND ANTENNA OPTIMISED FOR LOW ELEVATIONS

The AD-493 antenna has outstanding L-Band reception on low satellite elevations, excellent onboard interference suppression and GNSS optimisation.

DETAILED DESCRIPTION

A combined GNSS and L-Band antenna for high latitude areas is not practical due to the tracking properties required for each. Whereas the L-Band antenna is required to track the communications satellite at very low elevations, this is not a desirable property for a GNSS antenna, as it may introduce multipath interference into the satellite measurements. This challenge is resolved by a dual antenna solution of a dedicated GNSS antenna combined with the AD-493. The AD-493 is optimised for L-Band reception on board vessels, as it provides excellent performance down to zero degrees elevation. When combined with a second antenna optimised for GNSS signal tracking, this offers a robust GNSS

and L-Band tracking solution with a single cable run to feed the GNSS Receiver.

A second unique feature of the AD-493 is the use of low-loss inter-digital air filters, which guarantee both excellent out-of-band interference suppression and a low noise figure, improving overall performance.

FEATURES:

- Outstanding reception on all satellite elevations (0-90deg)
- Optimal GNSS / L-Band system for marine use when combined with GNSS Antenna (single cable run)
- Excellent interference suppression even close to interfering sources
- Excellent L-band reception
- Pass-band flatness
- Low noise figure
- Robust design for maritime environments

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Technical Specifications

Electrical Specification

Quadrifilar

Antenna Type

Helix antenna

Antenna pass-bands

L-Band 1525 – 1555 MHz

External input pass-bands

GPS/GLONASS/L1 1559 – 1615 MHz
 GPS L2/L5 / GLONASS L2 1115 – 1317 MHz

LNA

LNA Gain 45 dB (typical)
 Total Noise Figure (NF) with pre-LNA band-pass filter <2.5 dB

Connectors

External antenna N-type
 GNSS receiver N-type
 Nominal impedance 50 ohms

Power requirements

Input voltage +6V to +20 VDC
 Power consumption
 AD493 only 50mA
 AD493/AD492 80mA

Material

Hard anodised and dichromate nickel acetate-sealed aluminium, with GRP pressure-moulded radome, rated to IP67

Dimensions

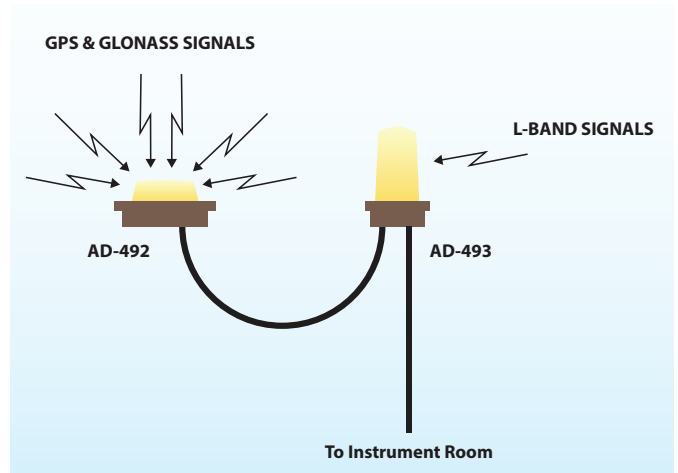
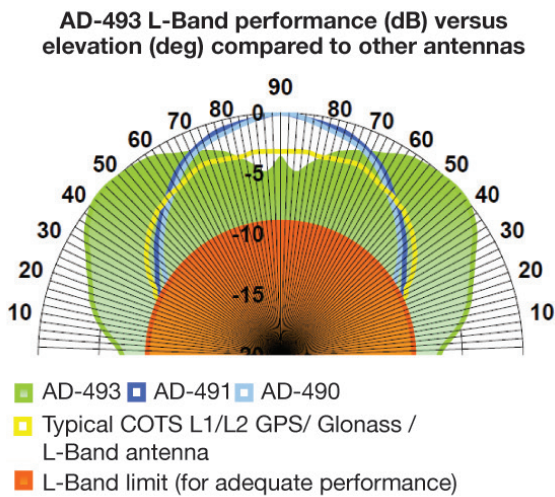
Ø225mm x 226mm

Weight

4.9 Kg

Environmental

Operating temperature -30°C to +70°C
 Storage temperature -40°C to +100°C



AD-493 - L-Band antenna optimised for low elevations

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