



AD-492 ANTENNA

COMBINED L1/L2/L5 GPS / GLONASS AND L-BAND ANTENNA

The AD-492 is a combined L1/L2 GPS, Glonass and L-Band antenna providing unprecedented suppression of on-board interference sources, such as Inmarsat communication systems, typical of offshore survey vessels.

DETAILED DESCRIPTION

Antennas in the marine environment are often subject to high levels of electromagnetic interference due to the proximity of other transmitting antennas, particularly Inmarsat communication systems, which transmit in a band adjacent to the Glonass L1 receive band. This can cause the LNA to saturate and wipe out the reception of all signals received by the antenna. Commercial off-the-shelf antennas are generally not designed to cope with these special conditions, but the high-gain AD-492 is a robust alternative. It uses low-loss, inter-digital, double notch air filters for effective suppression of interference sources, while maintaining excellent GNSS pass-band flatness and low noise figures.

A combined GNSS and L-Band antenna for high latitude areas is impractical 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. Combining a dedicated GNSS antenna with the L-Band-optimised AD-493 provides excellent performance down to zero degrees elevation, offering a robust GNSS and L-Band tracking solution with a single cable run to feed the GNSS receiver.

FEATURES:

- Supports all current and known future GNSS signals (including Galileo and BeiDou)
- Excellent interference suppression even close to interfering sources
- Excellent GNSS receive characteristics
 - Pass-band flatness
 - Low noise figure
 - Phase centre stability
- Excellent low elevation L-Band tracking when combined with AD-493
- Robust design

AD-492 ANTENNA

Technical Specifications

Electrical Specification

Dual patch stacked antenna elements

Antenna type

RH-circular (+/- 0.5 dB at zenith) and Omni-directional in azimuth

Antenna pass-bands

L-Band/GPS/GLONASS L1	1525 – 1611 MHz
GPS L2/L5/GLONASS L2	1166 – 1254 MHz

Out of band rejection

Inmarsat	>55dB 1626 – 1660 MHz
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Phase centres above base

GPS L1	67mm
GPS L2	72mm
GLONASS L1	64mm
GLONASS L2	73mm

LNA

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

Connector

N-type, 50 Ohm

Power

Input voltage	+6V to +20 VDC
Power consumption	50mA (typical)
Nominal impedance	50 ohms

Material

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

Dimensions

Ø210mm x 110mm

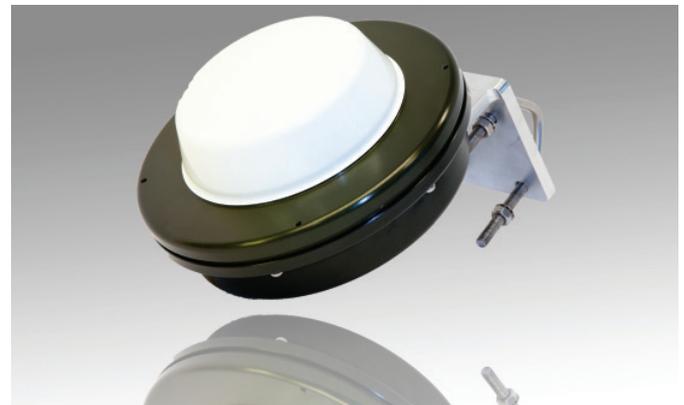
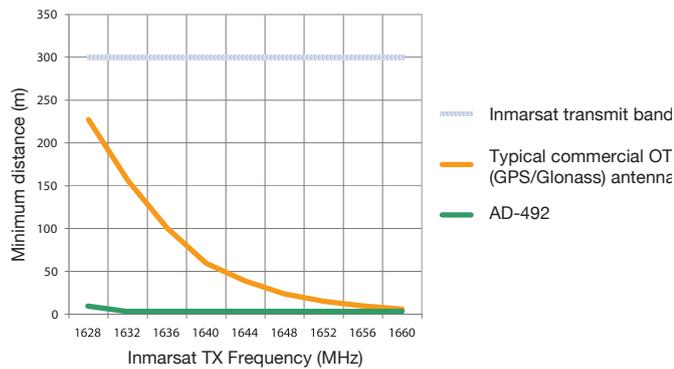
Weight

3.2 Kg

Environmental

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

Minimum required distance of GNSS antennae to Inmarsat (B,C,M) antenna to avoid interference



AD-492 - Combined L1/L2/L5 GPS / Glonass and L-Band antenna

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