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

**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

![Diagram of AD-492 antenna with frequency vs distance graph](image)

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