



# ANTENNA EXPERTS

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Model # ADS-B-1090

1090 MHz.

12dBi. Gain

## OMNI-DIRECTIONAL FIBER GLASS COLLINEAR ADS-B GROUND STATION ANTENNA

**DESIGN FEATURES:** ADS-B-1090 Fiberglass Omni-directional Collinear Antenna is rugged all weather model uses high class brass and 6063T6 ultra corrosion resistant architectural anodized aluminum alloy and does not require any field tuning or adjustments. No ground plane is required to operate this antenna. The ADS-B-1090 antenna is an Omni-directional narrowband, higher performance, collinear dipole type phased array designed specifically for use as a ADS-B ground station antenna. All junctions are fully welded to prevent RF inter-modulation and antenna is completely protected within a high-tech ruggedized fiber glass radome to ensure survivability in the worst environments. The design of antenna allows controlling friction induced static, which could be created by wind and dust. The compact size of fiber glass collinear antenna allows easy handling and shipping.

**CONSTRUCTIONS:** The ADS-B-1090 antenna is a center fed design which eliminates the distortion of the radiation pattern and ensures a true omni-directional horizontal pattern. The special stub matching is used for smooth VSWR and constant gain over the specified frequency band. The bandwidth of the ADS-B antenna is fairly narrow, which can help to eliminate inter-modulation problems from adjacent strong signals in urban areas. The ADS-B collinear antenna consist of large diameter brass radiating elements stacked vertically, fed in phase and enclosed in fiber glass tube. The antenna termination is enclosed at bottom of the antenna for complete weather protection. ADS-B antenna is strong enough to withstand an ice storm, and will also do well in a shoreline environmental conditions. The marine grade type 316 stainless steel mounting hardware is supplied with the antenna.



### ELECTRICAL SPECIFICATIONS:

Frequency Range	1090 MHz.
Gain	12 dBi
Bandwidth	+/-10 MHz.
Polarization	Vertical
Input Impedance	50 Ohms.
Radiation Pattern	Omni Directional
Vertical Beam-width –Half Power Points	7 Degrees
VSWR – better than	1.5:1
RF Power Handling Capacity	200 Watts.
Input Termination	N-Female

### MECHANICAL SPECIFICATIONS:

Mounting Hardware	Marine Grade Stainless Steel
Gross Weight	8 Kgs.
Wind Rating	200 Km/Hr.
Overall Length	3 Meters
Shipping Length	3.1 Meters
Support Pipe Outer Diameter	51 mm
Support Pipe Materials	6063T6 Aluminum Alloy
Maximum Mount Pipe Diameter	51 mm (2 Inches)
Enclosure Materials	Fiberglass
Enclosure Outer Diameter	45 mm

### ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-) 30 to +70 Degrees Celsius
Storage Temperature	(-) 40 to +80 Degrees Celsius
Humidity	0 to 95% RH

Note: All information contained in the datasheet is subject to change without any prior notice.