



High Gain ADS-B Fiberglass Collinear Omni Antenna

ADS-B-1090-12

978-1090 MHz

12 dBi Gain

High-Performance ADS-B Ground Station Technology: The ADS-B-1090-12 is an advanced, high-gain fiberglass omni-directional collinear antenna engineered **specifically for critical ADS-B ground station air traffic monitoring systems**. Operating across the essential 978–1090 MHz frequency band with a **powerful 12 dBi gain**, this collinear dipole phased array uses a center-fed design to eliminate radiation pattern distortion, **guaranteeing a true, uniform horizontal pattern**. The internal architecture utilizes large-diameter brass radiating elements stacked vertically and fed in phase, controlled by specialized stub-matching networks for a smooth, consistent **low VSWR** and stable gain. This **ground-plane independent** antenna features a narrow operational bandwidth that acts as a natural filter, **eliminating Passive Intermodulation (PIM)** and adjacent-signal interference common in high-density urban RF environments, while the overall design safely dissipates friction-induced static electricity caused by dust and high winds.

Heavy-Duty Radome Construction & Marine-Grade Reliability: Engineered for ultimate environmental survivability, the ADS-B-1090-12 is housed in a **high-tech, ruggedized fiber glass radome tube** capable of withstanding extreme ice storms and severe wind loading. The base is constructed from **premium 6063-T6 ultra-corrosion-resistant architectural anodized aluminum** alloy, ensuring long-term structural integrity without requiring any field tuning or adjustments. All internal junctions are **fully welded** to maximize electrical conductivity and prevent signal degradation over time. **Optimized for shoreline, offshore, and desert deployments**, the antenna body is entirely sealed, enclosing the RF termination at the bottom for total weatherproofing. The system comes complete with **316 marine-grade stainless steel mounting hardware**, providing a highly reliable, maintenance-free solution for global aviation surveillance infrastructure.

Electrical Specifications:

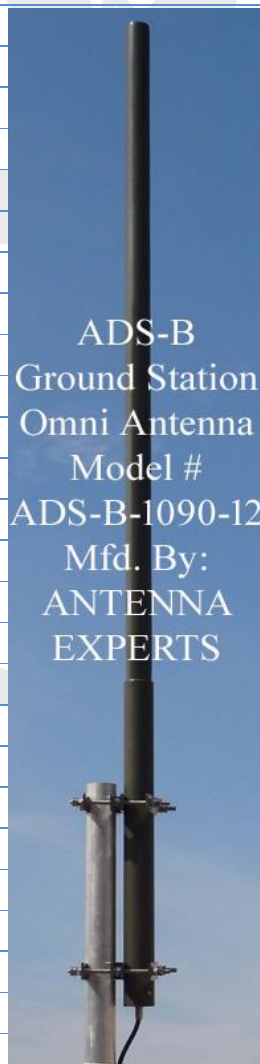
Frequency Range	978 - 1090 MHz.
Gain - Typical	12 dBi.
Bandwidth	Entire Band
Polarization	Vertical
Input Impedance	50 Ohms.
Radiation Pattern	Omni Directional
Vertical Beam-width –3dB.	9 Degrees
VSWR – Better Than	1.5:1
RF Power Handling Capacity	200 Watts.
Input Termination	N-Female

Mechanical Specifications:

Mounting Hardware	High Grade Stainless Steel
Gross Weight	5 Kgs.
Wind Rating	200 Km/Hr.
Overall Length	2.50 Meters
Shipping Length	2.65 Meters
Support Pipe Outer Diameter	51 mm
Support Pipe Materials	6063T6 Aluminum Alloy
Max Pipe Diameter	51 mm (2 Inches)
Enclosure Materials	Fiberglass
Enclosure Outer Diameter	45 mm
Finishing	Olive Green

Environmental Specifications:

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



Please contact us for further information like Azimuth & Elevation radiation patterns, Image and frequency Vs VSWR graph.