



# ANTENNA EXPERTS

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Model # ADSY-1060-12

1030-1090 MHz

12 dBi. Gain

## High Gain Yagi Directional Antenna for ADS-B Ground Station

**DESIGN FEATURES:** Antenna Experts ADS-B Yagi antenna design reflects innovative modern antenna construction. The unique design of the yagi antenna feed which works as matching device to keep the VSWR low resulting in increased efficiency of the yagi antenna. The mounting hardware supplied facilitates mounting on either vertical or horizontal members. The yagi antenna comes in pre-assembled condition with permanently welded/fixed elements in the support boom. The small surface area on the yagi antenna minimizes wind resistance and conserves tower loading capacity.

**CONSTRUCTIONS:** Radiating elements, supporting booms and adjoining metal castings of ADSY-1060-12 yagi antenna have been constructed in high quality 6063T6 aluminum alloys to prevent corrosion. The yagi antenna uses special feed which eliminates the use of folded dipole. The Yagi antenna is supplied with N termination fixed on the driven element. The feed point radiator is enclosed in a Nylon housing designed to protect against severe environmental conditions and minimize pattern distortion. This directional yagi antenna comes factory tuned and does not require any field adjustment. Antenna is supplied with Olive green color powder coating finish.

**RADOME:** The ADS-B Yagi antenna is completely protected within a high-tech ruggedized radome which is made of high strength fiber glass enclosure to ensure survivability in the worst environments conditions. The heavy duty fiber glass enclosure has excellent transparency for RF signals and enough strength to withstand more than specified wind loads. Cylindrical enclosure is used for low wind loading and for minimal effect of ice formation on the high power broad band antenna operation as well as providing an aesthetically pleasing appearance. The antenna is supplied with olive green MIL color finish. Other customized housing/radome color can also be supplied on request.

### ELECTRICAL SPECIFICATIONS:

|                                           |                        |
|-------------------------------------------|------------------------|
| Frequency Range                           | 1030 - 1090 MHz.       |
| Gain - Typical                            | 12 dBi. (10 dBd.)      |
| Bandwidth                                 | 1030-1090MHz.          |
| Polarization                              | Vertical or Horizontal |
| Input Impedance                           | 50 Ohms.               |
| Radiation Pattern                         | Directional            |
| Horizontal Beam-width –Half Power Points. | 55 Degrees Typical     |
| Vertical Beam-width –Half Power Points.   | 45 Degrees Typical     |
| Front to Back Ratio                       | 24 dB. Typical         |
| VSWR – Better Than                        | 1.5:1                  |
| RF Power Handling Capacity                | 250 Watts.             |
| Input Termination                         | N-Female               |

### MECHANICAL SPECIFICATIONS:

|                                                       |                               |
|-------------------------------------------------------|-------------------------------|
| Materials                                             | 6063T6 Aluminum Alloy         |
| Mounting Hardware -Materials                          | Marine Grade Stainless Steel  |
| Radome/Housing Materials                              | High Strength Fiberglass      |
| Final Finish/Color                                    | Olive Green or Customized     |
| Gross Weight                                          | 3.0 Kgs.                      |
| Wind Rating                                           | 200 Km/Hr.                    |
| Overall Length                                        | 900 mm.                       |
| Shipping Length                                       | 1000 mm                       |
| Support Boom-Materials -Cross Section-Outer Diameter. | Aluminum - Round Tube -25.4mm |
| Elements-Materials-Cross Section-Outer Diameter.      | Aluminum - Round Rod - 10.0mm |
| Maximum Mount Pipe Diameter                           | 52mm (2 Inches)               |

### 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.