



## High Gain DME Fiberglass Collinear Omni Antenna

DME-960-1240-12

960-1240 MHz

12 dBi Gain

**High-Gain DME Performance & Phased Array Technology:** The DME-960-1240-12 is an ultra-wideband, high-gain collinear antenna engineered specifically for aviation **Distance Measuring Equipment (DME)** and ground-based navigation systems. Operating within the **960–1240 MHz** frequency band with an impressive **12 dBi gain**, this collinear dipole phased array features a center-fed design that eliminates radiation pattern distortion to guarantee a true, **omni-directional horizontal pattern**. The internal architecture consists of large-diameter brass radiating elements stacked vertically and fed in phase, utilizing specialized stub-matching networks to maintain a smooth, **low VSWR** and constant gain across the entire operational spectrum. Additionally, this ground-plane independent antenna features fully **welded junctions** to **prevent Passive Intermodulation (PIM)** and is designed to dissipate friction-induced static electricity caused by high winds and dust storms.

**Heavy-Duty Fiber Glass Construction & Environmental Survivability:** Engineered to withstand catastrophic weather conditions, the DME-960-1240-12 is completely **enclosed in a high-tech, ruggedized fiber glass radome** that provides superior protection against severe ice storms and high-wind environments. The antenna base is constructed from **6063-T6 ultra-corrosion-resistant architectural aluminum** alloy, treated with an epoxy-based powder coating to defend against UV radiation, acid rain, salt spray, and desert sandstorms. All critical RF terminations are sealed at the bottom of the structure for **complete weatherproofing**, and the unit comes equipped with **316 marine-grade stainless steel** mounting hardware for coastal deployments. For advanced system telemetry, an optional integrated coupler and dual monitoring probes can be supplied, providing a calibrated probe output level of  $-25 \text{ dB} \pm 1 \text{ dB}$  relative to the main RF input for **real-time signal diagnostics**.

### Electrical Specifications:

|                            |                  |
|----------------------------|------------------|
| Frequency Range            | 960 - 1240 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         | 2:1              |
| RF Power Handling Capacity | 150 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.