



Antenna Development Corporation
151 S. Walnut St., Suite B-6, Las Cruces, NM 88001

Medium Gain X-band Antennas

Antenna Development Corporation, Inc. (AntDevCo) has designed and developed X-band medium gain spacecraft microstrip patch antennas. These antennas are capable of supporting high data rates and up to an estimated 25 Watts of transmitted power.

This single-band unit operates in the NASA Deep Space Network center frequency of about 8100 MHz – other, custom, center frequencies are available.

The antennas options include LHCP, RHCP, or linear polarizations. All antennas include extensive testing data including principal plane radiation pattern plots, gain bounds plots, and coverage statistics.

Simulations of the expected performance of the antenna on your satellite are also available.

- Space qualified by similarity
- Conformal form factor
- Low mass

Two versions are available – a +11 dB gain unit and a +16.5 dB gain unit.



16 dB gain antenna



11 dB gain antenna

Performance – +16 dB Gain Unit

- Gain: 16.5 dB nominal
- HPBW: 16 X 30 degrees full width (Example at ~ 8100 MHz)
- Impedance: 50 Ohms
- Axial Ratio: < 2 dB on axis
- Connector: SMA Female
- Dimensions: 4.1” X 5.9” X 0.315”
- Mass: ~ 300 grams

The 16 dB gain unit can be supplied without the aluminum back plate. This will significantly reduce the mass. Please contact AntDevCo to discuss the mounting arrangements for that option.

Performance – +11 dB Gain Unit

- Gain: 10 dB nominal
- HPBW: 50 degrees full width
- Impedance: 50 Ohms
- Axial Ratio: < 6 dB on axis
- Connector: SMA Female
- Dimensions: 2.7” X 2.5” X 0.25” nominal
- Mass: < 53 grams

Common Characteristics

- VSWR: < 1.5
- Polarization: Options: Linear or Circular
- Bandwidth: > 100 MHz
- Temperature: -40 C to +70 C
- Power: up to 10 Watts CW (estimated)
- IR properties: Depends on radome option

Please call or message for more information.

AntDevCo is ISO 9001-2008 certified

www.AntDevCo.com (575) 541-9319
BBlevins@AntDevCo.com (575) 635-3528
TGreenling@AntDevCo.com (575) 644-1527

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Precision Antennas for Spacecraft, Rockets, and Missiles

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