

Features:

- Elevation Fan Beam (Wide RF FOV)
- High Antenna Gain (16 dBi)
- Flexible Control Interfaces
- TCDL Frequencies
- Low SWaP Design
- Low Profile Radome (Optional)
- Single Axis Direct Drive
- Brushless DC Motor
- CP Polarizer
- Airborne Qualified
- Transmit and Receive



The AT-10 single axis fan beam antenna is designed for use in airborne and ground Tactical Common Data Link (TCDL) applications. The AT-10 features a wide angle elevation fan beam antenna using a unique horn/RF interferometer design approach. It is ideal for aircraft/helicopter applications where a lightweight and simple control interface is necessary.

A brushless DC motor and servo provide speeds of up to 80°/second and operate off 28 VDC.

Servo controls are configured with full motion controllers which can be configured to operate in torque, velocity or position mode via serial (RS-422) or analog (+/-VDC) interface. High accuracy (16 bit) position resolution provided. Additionally, the AT-10 features a constant antenna gain over the rated elevation beamwidth.

Related Data Sheets

- **AT-20 Dual Axis Directional Antenna**

- **AT-23 Dual Axis Directional Antenna**

- **HD-30T Dual Axis Ground Data Terminal**

Model **AT-10 Series**
Single Axis Directional Antenna



Model **AT-10** Single Axis

Specifications*

KEY PERFORMANCE VALUES WITH STANDARD HARDWARE COMPLEMENT

RF/Electrical Parameters		Ku-band
Frequency Range		14.40 - 15.35 GHz
VSWR		1.8:1 Maximum
Antenna Gain (Nominal)		16 dBi
Antenna Type		Horn/RF Interferometer
Beamwidth Azimuth		14.0° nominal
Beamwidth Elevation		48.0° nominal
Axial Ratio		<2.0 dB
Polarization		RHCP (Tx/Rx)
Sidelobe Performance		≤-13 dBp AZ / ≤-12 dBp EL
Front to Back Ratio		≥ 20 dB
Tested Certification		MIL-STD-810F MIL-STD-461E
Mechanical Parameters (Nominal @ 20°C)		
Positioner Type		Direct Drive; Brushless DC Motor
Velocity		≤80° second
Acceleration		≤120° second ²
Travel		Azimuth 360° continuous
Weight		< 7 lbs.
Compliance Gear		0° - Direct Drive
Mounting Flange Diameter/Antenna Height (No Radome)		8 inches / 4 inches
Control Interface Connector		1 MIL control; Type "N" RF
Environmental Parameters & Control Interface		
Temperature	Operating	-40°C to +55°C (Enhanced Version Available)
	Storage/Transit	-40°C to +71°C
Control Interface		RS-422; Analog
Operating Voltage		+28 VDC
Inrush Current		≤ 5 A
Relative Humidity		up to 100% Non-Condensing (In-Radome)
Altitude	Operating	up to 20,000 ft. (Enhanced Version Available)
	Storage/Transit	up to 40,000 ft.
Pointing Accuracy		0.1° rms

*Specifications subject to change.

Model **AT-10** Series Single Axis Directional Antenna

