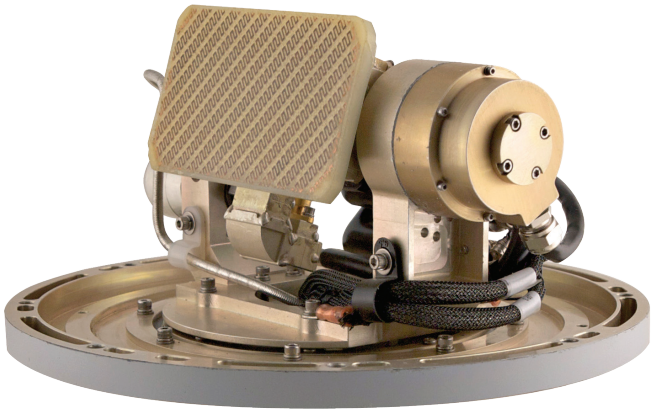
Model **AT-20 Series**

Dual Axis Directional Antenna

Product Data Sheet

Features:

- Slotted Waveguide Array
- Flexible Control Interfaces
- TCDL Frequencies
- Low SWaP Design
- Low Profile Radome (Optional)
- Direct Drive (Both Axes)
- Brushless DC Motor
- RH Circular Polarization
- Transmit and Receive



The AT-20 Dual Axis slotted waveguide array is designed for use in airborne and ground Tactical Common Data Link (TCDL) applications. The AT-20 features a Dual Axis Positioner and a slotted waveguide array antenna. The slotted waveguide array has antenna gain of 17 dBi at the user output connector.

The system's brushless DC motors and servo controls have been sized to accommodate the various array configurations.

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.

The AT-20 has the ideal performance qualities for a small ground terminal or a moderate airborne terminal with the flexibility of the slotted array and various antenna gains.

Related Data Sheets

- **AT-10 Single Axis Directional Antenna**
- **AT-23 Dual Axis Directional Antenna**
- **HD-30T Dual Axis Ground Data Terminal**

Model **AT-20 Dual Axis**

Specifications*

KEY PERFORMANCE VALUES WITH STANDARD HARDWARE COMPLEMENT

RF/Electrical Parameters		Ku-band
Frequency Range		14.40 - 15.35 GHz
VSWR		2:1 Maximum
Antenna Gain		17 dBi nominal
Antenna Type		Slotted Waveguide Array
Beamwidth Azimuth / Elevation		18° nominal
Front to Back		≥ 20 dB
Axial Ratio		<2.0 dB over 3 dB beamwidth
Polarization		RHCP (Tx/Rx)
Sidelobe Performance		≤-12 dBp
Tested Certification		MIL-STD-810F MIL-STD-461E
Mechanical Parameters (Nominal @ 20°C)		
Positioner Type		Direct Drive; Brushless DC Motor
Velocity		≤ 40°/sec
Acceleration		≤ 120°/sec^2
Travel		Azimuth 360° continuous / Elevation -20° to +95°
Weight		< 9.0 lbs.
Compliance Gear		0° - Direct Drive Both Axes
Mounting Flange Diameter/Antenna Depth (No Radome)		8 inches / 9.5 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		up to 35,000 ft. (Enhanced Version Available)
Pointing Accuracy		0.2° rms

*Specifications subject to change.