



Communications & Power Industries



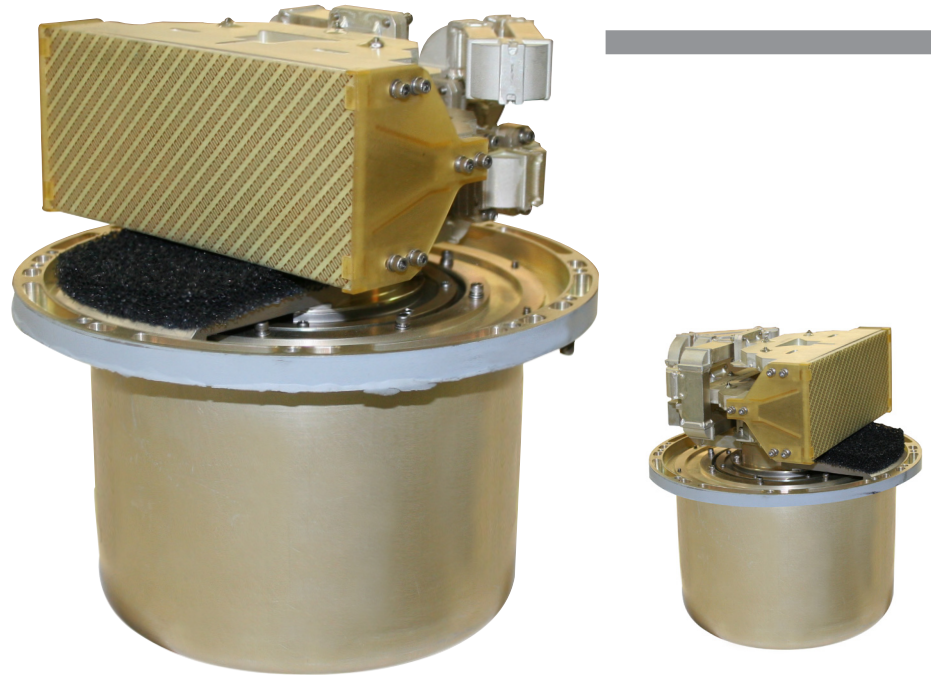
malibu division

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

Product Data Sheet

Features:

- Elevation Fan Beam (Wide RF FOV)
- High Antenna Gain (17 dBi)
- Flexible Control Interfaces
- TCDL Frequencies
- Low SWAP Design
- Low Profile Radome
- Single Axis Direct Drive
- Brushless DC Motor
- CP Polarizer



The AT-10 single axis fan beam antenna is designed for use in Airborne Tactical Common Data (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 are necessary.

A brushless motor and servo provide provide speeds of > 60deg/second and operates off 28 VDC.

Control interfaces for the AT-10 are RS-422, analog input, +/- VDC or the servo can be controlled as a simple step and direction interface. Additionally the AT-10 features a constant antenna gain over the rated elevation beamwidth.

Related Data Sheets

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

• **TT-10 Omni Directional Antenna**

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

Model AT-10 Single Axis

Specifications

KEY PERFORMANCE VALUES WITH STANDARD HARDWARE COMPLEMENT

RF/Electrical Parameters		Ku-band
Frequency Range	Receive	15.15 - 15.35 GHz
Swapable	Transmit	14.40 - 14.85 GHz
VSWR		1.8:1 Maximum
Antenna Gain (Nominal)		17dBi
Antenna Type		Horn/RF Interferometer
Beamwidth Azimuth		14.0°
Beamwidth Elevation		48.0°
Axial Ratio		<2.0 dB
Polarization		RHCP (Tx/Rx)
Sidelobe Performance		-13 dBc
Tested Certification		MIL-810 F MIL-461 E
Mechanical Parameters (Nominal @ 20°C)		
Positioner Type		Direct Drive; Brushless DC Motor
Velocity		60° second
Acceleration		>60° second ²
Travel		Azimuth 360° continuous
Weight		< 6.5 lbs.
Power Consumption		0.260 Amperes @ 28 VDC
Compliance Gear		0° - Direct Drive
Mounting Flange Diameter/Antenna Depth (No Radome)		8 inches / 8 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	-55°c to +71°c
Control Interface		RS422; Analog +/- VCD; Step & Direction
Input Power		+28 VDC
Relative Humidity		up to 100% Non-Condensing (In-Radome)
Altitude	Operating	up to 40,000 ft (Enhanced Version Available)
	Storage/Transit	0° - Direct Drive
Pointing Accuracy		~0.05deg

