



Communications  
& Technology

# PDA-120

Go Anywhere with High Performance



**STANDARD**  
**MIL-STD**  
**1472**

**STANDARD**  
**MIL-STD**  
**810G**

## PDA-120

PDA-120 is a fully motorized Gregorian offset Antenna System with a 1.2m and a perfectly shaped Carbon-Fiber POD (Shell) protection for the antenna and BUC against weather influences and to improve the aerodynamics of the vehicle.

The PDA-120 Antenna System includes precision-made and accurate Carbon-Fiber Reflector surface, combined with the Dual Optic design provides remarkably low sidelobes and excellent cross-polar rejection performance with the specially designed feed-horn system.

The lightweight construction and compact installation on top of any kind of vehicle make it the ideal choice for fast Newsgathering (SNG) for broadcasters and VSAT applications (Disaster Relief Emergency Communications, Corporate Networks, Military satellite communications).

## COMPATIBILITY

- MIL-STD-810G Compliant
- MIL-STD-1472 Compliant
- MIL-STD-188-164A Compliant
- ITU-RS-580 Compliant
- ITU-RS-465-6 Compliant
- EUTELSAT Compliant

## Key Features

- X, Ku, Ka, DBS Band options are available
- Strong yet lightweight Carbon-Fiber design which rigorously tested to operate in the toughest environments (wind, rain, sun...)
- Entirely zero-backlash mechanical drive system
- Carbon-Fiber
- Easy vehicle integration
- Optional Beacon Tracking
- Optional De-Ice
- 0,01° pointing accuracy with resolvers at 3 axes
- Manual drive tool kit for emergency situations
- Optional hand-held control unit
- One-Button Operation



## GENERAL SPECIFICATIONS

Reflector Diameter	1.2m
Reflector Type	Gregorian Offset
Operation On-Air Time	~3 Minutes
Antenna Concept	Gregorian dual offset antenna with 1.2m elliptical main reflector, folding feed-arm, fixed sub-reflector

## RF CHARACTERISTIC

		Ku-Band	Ka-Band	X-Band
Frequency (GHz)	Tx	13.75 - 14.50	17.7 - 21.2	7.9 - 8.4
	Rx	10.70 - 12.75	27.5 - 31	7.25 - 7.75
Antenna Gain (±0.2 dBi)	Tx	43.0 (Midband)	48.7+20log(f/29.25)	38.0+20log(f/8.25)
	Rx	41.8 (Midband)	45.3+20log(f/19.45)	37.4+20log(f/7.5)
Polarization		2 Port Linear (3 Port Optional)	Circular	Circular
TX/RX Isolation		85 dB		
Satellite Operator Compliancy		Compliant with most of satellite operator requirements		
VSWR		1.3		
Cross Polar Rejection		>35 dB within 1 dB beamwidth		
Side Lobe		-14 dB (First Side Lobe)		

## MECHANICAL SPECIFICATIONS

		Azimuth	Elevation	Polarization
Drive Rates	Slow	0.4° / sec	0.1° / sec	0.4° / sec
	Medium	2.5° / sec	1.5° / sec	1.9° / sec
	Fast	4.5° / sec	3.0° / sec	3.42° / sec
Antenna Travels		± 195°	Up to 90°	± 115°
Manual Override Mechanism		Manual override for elevation and azimuth drive system		

## ENVIRONMENTAL SPECIFICATIONS

Temperature	Compliant with MIL-STD-810g Method 501.5 and 502.5	Operational	-30°C to 55°C
		Survival	-40°C to 70°C
Wind Speed	Compliant with ESOG-120	Operational	72 km/h
		Survival	180 km/h
Rain	Compliant with MIL-STD-810g Method 506.5	Survival in heavy rainstorm	
Humidity	Compliant with MIL-STD-810g Method 507.5	Up to 100% with condensation	
Solar Radiation	Compliant with MIL-STD-810g Method 505.5		
Low Pressure	Compliant with MIL-STD-810g Method 500.5		
Shock	Compliant with MIL-STD-810g Method 516.5		
Sand and Dust	Compliant with MIL-STD-810g Method 510.5		
Temperature Shock	Compliant with MIL-STD-810g Method 503.5		
Icing	Compliant with MIL-STD-810g Method 521.3		
Acoustics	Compliant with MIL-STD-1472		

Compliances / Certificates



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