



**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

## 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
- Manual drive tool kit for emergency situations
- One-Button Operation
- Optional Beacon Tracking
- Optional 4G / 5G/ LTE supported modem for load balancing and bonding solutions
- Optional De-Ice System



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
Frequency (GHz)	Tx	13.75 - 14.50	17.7 - 21.2
	Rx	10.70 - 12.75	27.5 - 31
Antenna Gain ( $\pm 0.2$ dBi)	Tx	43.0 (Midband)	48.7+20log(f/29.25)
	Rx	41.8 (Midband)	45.3+20log(f/19.45)
Polarization		2 Port Linear (3 Port Optional)	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	
Antenna Pattern Compliancy		ITU-R S.580-6 and ITU-R S.465-6	
MECHANICAL SPECIFICATIONS			
		Azimuth	Elevation
Drive Rates	Slow	0.4° / sec	0.1° / sec
	Medium	2.5° / sec	1.5° / sec
	Fast	4.5° / sec	3.0° / sec
Antenna Travels		± 195°	Up to 90°
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		Stowed 120 km/h Unstowed 150 km/h	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	
Tempreture Shock		Compliant with MIL-STD-810g Method 503.5	
Icing		Compliant with MIL-STD-810g Method 521.3	
Acoustics		Compliant with MIL-STD-1472	

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