



Communications
& Technology

PDA-120-MIL

High Performance in Military Conditions



STANDARD
MIL-STD
461F

STANDARD
MIL-STD
188-164A

STANDARD
MIL-STD
810G

PDA-120-MIL

The PDA-120-MIL is a compact and sophisticated design for Military Communications. Aerodynamic design of PDA-120MIL provides wind load resistance due to its highly durable zero-backlash elevation over azimuth and polarisation motorised chassis.

PALS offers auto-acquisition satellite tracking with Beacon receiver. It's possible to operate with minimal training by "One Touch" feature. The extreme ease and acquisition speed will guarantee that you will not lose the connection, even in rugged environmental conditions.

The PDA-120-MIL Drive-Away Antenna's precision, accurate reflector surface and dual optic design provides remarkably low sidelobes and excellent cross-polar performance. It has a three axes positioner which provides full antenna rotation and entirely backlash-free drive system. High precision pointing via resolver, boosted with 16 bit chip sets.

COMPATIBILITY

- MIL-STD-810G Compliant
- MIL-STD-461F 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
- High EIRP, high performance 1.2m Gregorian offset antenna with dual optics and very low sidelobes
- Carbon-Fiber composite reflector supported with lightweight mount
- High gain and very good cross-polar rejection (> 35 db)
- Integrated DVB-S/S2 & Beacon Receiver
- De-Ice (Optional)
- Antenna pod is designed to accommodate outdoor HPAs / SSPAs
- 0,01° pointing accuracy with resolvers at 3 axes
- Manual drive tool kit for emergency situations
- Optional hand-held control unit
- One-Button Operation
- Supports OpenAmip



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		1.3:1	1.3:1	1.119:1
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		$\pm 220^\circ$	Up to 90°	$\pm 115^\circ$
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	%95 Aggravated	
Solar Radiation	Compliant with MIL-STD-810g Method 505.5	1120 W/m ² (A1 Cycle)	
Low Pressure	Compliant with MIL-STD-810g Method 500.5	4500 mt	
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	-40/70 Cyclic	
Icing	Compliant with MIL-STD-810g Method 521.3	Min 37 mm Survival	
Acoustics	Compliant with MIL-STD-1472	<65 db(A) from 1.5 mt	
Electromagnetic Compatibility	Compliant with CE102, CS101, CS114, CS115, CS116, RE102, RS103		

Compliances / Certificates



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