



Size:

6.20m

PFMA-620

Precision-Engineered for TT&C & Multi-Band Applications

The PALS PFMA-620 is a servo-controlled, self-pointing antenna system built for Telemetry, Tracking & Command (TT&C), transmit/receive, and receive-only missions. Operating across C, X, Ku, and Ka bands, its precision-formed panels and machined hub assembly deliver high gain and controlled radiation patterns.

Full-Motion Flexibility

With 360-degree continuous azimuth rotation and 85 degrees of elevation, the system enables horizon-to-horizon satellite tracking. It supports TV distribution, contribution (SNG), data networks, emergency communications, and mobile deployments, serving both fixed and on-the-move connectivity requirements.

Integrated Control

The PALS Antenna Controller ensures reliable satellite acquisition and stable field performance. A complete range of accessories is available, including servo control systems, power modules, de-ice systems, BUCs, LNBS, modems, spectrum analyzers, and installation kits.

Key Features

- C, X, KU, DBS and KA Bands are available
- 2-Axes stability, 3-Axes tracking
- Servo Motor System (AZ, EL, POL Axes)
- High gain, High G/T
- Structure types: A+E type, A+E-T type, X-Y type
- Multiple tracking modes: Step, Memory, Program, Inclined Orbit, Beacon
- Optional Uplink Power Control System for
- Optional Waveguide switching for LNB/LNA
- Optional De-Ice System
- Optional Equipment Shelter



GENERAL SPECIFICATIONS

Reflector Diameter	6.2m, Ring Focus
Antenna Package	5 packages, 3590kg

RF CHARACTERISTIC

	C-Band	Ku-Band	Ka-Band
Frequency (GHz) Tx	10.7~11.7	13.75~14.5	27.5 ~ 31
Frequency (GHz) Rx	3.7~4.2	10.7~12.75	17.7 ~ 21.2
Antenna Gain (dBi) Tx	55.0@11.2GHz	55.96@12.5GHz	59.62@19.05GHz
Antenna Gain (dBi) Rx	56.30@13.0GHz	56.95@14.0GHz	63.27@29.0GHz
Axial Ratio (2 Port) (2 Part Feed) Tx/Rx	-	-	≤1.5 dB
Axial Ratio (2 Port) (2 Part Feed) Rx/Rx	-	-	≤1 dB
Cross Pol (On Axis)	≥30dB	≥30dB	-
Polarization	Linear	Linear	Circular
Antenna Noise Temperature (K)	10° Elevation	20° Elevation	40° Elevation
	62.5	62.5	126
	51.3	51.3	87.5
	44.5	44.5	61.8
VSWR Tx	1.3:1	1.3:1	1.35:1
VSWR Rx	1.3:1	1.3:1	1.35:1
Rx to Tx Isolation (dB)	85	85	85
Feed Insertion Loss Tx (dB)	≤0.3	≤0.3	≤0.5
Feed Insertion Loss Rx (dB)	≤0.4	≤0.4	≤0.6
Power Capability Tx (kW)	2	2	2
Antenna Pattern Compliancy	ITU-R S.580-6 & ITU-R S465-6		
Feed Interface Tx/Rx	WR-75	WR-75	WR42/WR28

MECHANICAL SPECIFICATIONS

	Azimuth	Elevation	Polarization
Antenna Travel Range	+70°Pedestal/5°~355°continuous	5°~90°	=90°
Antenna Structure	LMC/FMC		
Surface Accuracy(R.M.S)	≤0.5mm: ≤0.3mm(Ka)		

ENVIRONMENTAL SPECIFICATIONS

	PFMA-620
Wind Speed Operational	72 km/h
Wind Speed Survival	216 km/h
Humidity	100%
Ice Load	Icing 13mm: normal work / Icing 25mm, no damage
Temperature Range	-30~50℃
Seismic Capacity	Horizontal: 0.3G / Vertical: 0.1G

Specifications are subject to change.

