



SMP 120MFA

1.2 m Motorised Flyaway Antenna

Satmission Model SMP 120MFA motorised carbon fiber flyaway antenna is highly portable, compact, light-weight, and can be assembled by one person in less than 15 minutes.

The antenna features a 4 piece segmented carbon fiber composite reflector designed to provide exceptional performance in a lightweight package.

The motorized elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite. The antenna packs in 3 ruggedized shipping cases and includes options for integration kits.

In addition, the antenna is designed to meet International performance specifications for commercial or military applications and is readily available in X, Ku and/or Ka band frequencies.

Multiple feed configurations and paint schemes are readily available.



- Intelsat and Eutelsat Compliant
- Multi-Band X, Ku or Ka band Capable
- 4 Piece Segmented Carbon Fiber Reflector
- Compact Pedestal featuring easy point and peak control
- Ships in 3 Ruggedized Cases
- High Gain / Low Cross Pol Design
- Superior Stability in Wind
- Multiple Integration Options
- Excellent Reliability
- Minimal Maintenance

Technical Specifications

Electrical Specifications	2 Port X Band Circular		2 Port Cross Pol Ku Band Linear / Standard Feed		2 Port Cross Pol Ku Band Linear / Mode Matched Feed		2 Port Cross Pol Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	7.25 - 7.75	7.9 - 8.4	10.70 - 12.75	13.75 - 14.5	10.95 - 12.75	13.75 - 14.5	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	37.3	37.9	41.6	43.4	41.6	43.4	46.1	49.3
Noise Temperature (K)								
10 deg EI	77		69		66		155	
20 deg EI	61		59		58		106	
Axial Ratio	1.5 dB	1.5 dB					1.5 dB	1.0 dB
Cross Pol								
On Axis	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Sidelobe Compliances		Meets DSCS		Meets ITU 580 FCC		Meets ITU 580 FCC		Meets ITU 580
VSWR	1.30:1	1.30:1	1.35:1	1.30:1	1.50:1	1.30:1	1.35:1	1.30:1
Isolation								
Tx/Rx	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-110 dB	0 dBm input	-30 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

Mechanical / Environmental Specifications	
Reflector	1.2 meters Carbon Fiber Reinforced Polymer
Reflector Configuration	4 Piece Segmented Single Offset
Antenna Travel	
Azimuth	400° continuous
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Packaging (3 Cases)	
Pedestal Case (Compression Molded)	80 cm x 52cm x 40 cm 32 Kg
Motorization Case (Compression Molded)	80 cm x 52cm x 40 cm 32 Kg
Reflector Case (Roto Molded)	76 cm x 76 cm x 40.5 cm 32 Kg
Temperature	
Operational	-30 to 60°C
Survival	-40 to 70°C
Winds	
Operational	48 kph Gusting to 72 kph
Integration	
Feedboom Mounted	16 Kg
Rain	
Operational	10 cm/h
Survival	15 cm/h
Relative Humidity	0 - 100%
Solar Radiation	1000 Kcal/h/m ² ²⁾
Radial Ice (survival)	25.4 mm
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

Note: Specifications subject to change without notice

1 Dependent on mounting position relative to elevation axis

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