



SML 180FA

1.8 m Flyaway Antenna

Satmission Model SML 180FA flyaway antenna offers superior performance in a lightweight, portable package. This antenna features a 7 piece carbon fiber segmented reflector designed to provide high gain and low cross pol characteristics. The custom-designed elevation-over-azimuth tripod pedestal provides high stiffness with minimal weight. The antenna components are modular in design which provides options for motorization and tracking requirements. High performance molded cases are included.

The antenna is designed to meet international performance specifications for commercial or off-the-shelf military applications and is readily available in C, X, Ku, DBS and Ka band frequencies.

Multiple feed and integration packages are available with a quick change / quick pack configuration. The integrated boom assembly with BUC and LNB packs in a single case for quick installation.

Integrated feedbooms can be supplied which will allow a quick change from one frequency band to another.



- Intelsat & Eutelsat Compliant
- Multi-Band C, X, Ku, DBS and Ka Band Frequencies
- Integrated Feedboom Assembly Option
- Compact Packaging
- Superior Stability in Wind
- Excellent Reliability
- Minimal Maintenance
- Less than 15 min Assembly Time

Technical Specifications

Electrical Specifications	2 Port Cross-Pol C Band Std. Linear Feed		2 Port Cross-Pol C Band Circular Feed		2 Port X Band Circular Polarization		2 Port Cross-Pol Ku Band Linear / Mode Matched Feed		2 Port Cross-Pol DBS Band Linear Feed		2 Port Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	3.625 - 4.2	5.85 - 6.425	3.625 - 4.2	5.85 - 6.425	7.25 - 7.75	7.9 - 8.4	10.95 - 12.75	13.75 - 14.5	10.70 - 12.75	17.3 - 18.4	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	35.6	39.8	35.4	39.7	41.3	42.0	45.0	47.1	44.8	48.5	49.6	53.0
Noise Temperature (*K)												
10 deg EI	45		55		56		54		60		145	
20 deg EI	40		50		52		48		54		125	
Cross Pol												
On Axis	-35 dB	-35 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-26 dB	-26 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-25 dB	-35 dB	-27 dB	-27 dB	-21.3 dB	-24.8 dB
Axial Ratio			3 dB	2.3 dB	1.5 dB	1.5 dB					1.5 dB	1 dB
Sidelobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets DSCS		Meets ITU, FCC 25.209, Eutelsat		Meets ITU		Meets ITU	
VSWR	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.35:1	1.30:1	1.35:1	1.30:1	1.35:1	1.30:1
Isolation												
Tx/Rx	-85 dB	0 dBm input	-85 dB	0 dBm input	-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	-30 dB	0 dBm input	-30 dB	0 dBm input	-110 dB	0 dBm input	-30 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

Mechanical / Environmental Specifications

Reflector	1,8 meters Carbon Fiber
Reflector Configuration	Parabolic Single Offset, 0.8 F/D (7 pieces)
Antenna Travel	
Azimuth	360° continuous with fine adjust
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Antenna Packaging	
Case 1 - Backbeam & Legs	114 cm x 64,3 cm x 41,9 cm (45,4 kg)
Case 2 - Az Hub, EI Strut, Foot Pads	95,3 kg x 69,9 cm x 36,8 cm (44,5 kg)
Case 3 & 4 - (7 piece reflector)	106,7 cm x 33 cm x 87,6 cm (34,5 kg ea.)
Total Weight (less feed options)	168 kg
Temperature	
Operational	-30 to 60°C
Survival	-40 to 70°C
Pointing Loss (operational winds)**	2dB peak (Ku-band Rx)
Winds	
Operational	40 kph Gusting to 72 kph with ballast or anchors
Optional Wind Strut Accessory	72 kph
Survival	96 kph with tie downs / any position
Feedboom Mounted Integration***	27,2 kg
Rain	
Operational	5 cm/h
Survival	10 cm/h
Relative Humidity	0 - 100% (condensing)
Solar Radiation	1000 Kcal/h/m ²
Radial Ice (survival)	12,7 mm
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

Note: Specifications subject to change without notice

- * Feed packaged separately dependent on options ordered
- ** Performance dependent on proper installation and ballast/anchors
- *** Dependent on position of weight. Consult Engineering for details

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