



SML 180DA

1.8 m Driveaway Antenna

Satmission SML 180DA antenna offers the most robust and light-weight antenna of its type and size available.

This antenna features a carbon fiber composite reflector and backbeam structure designed to provide exceptional performance in a lightweight package.

The custom-designed elevation-over-azimuth cable drive pedestal provides superior stiffness over existing products on the market.

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



Multiple feed configurations are available.

- Intelsat and Eutelsat Compliant
- Multi-Band C, X, Ku or Ka band Frequencies
- Multiple Integration Options
- Integrated Controller with Tracking Options Available
- Carbon Fiber Reinforced Polymer Structure – Lightweight and Stiff
- Low Profile and Space-Optimizing Stow Position
- Cable Drive Positioning System
- Superior Stability in Wind
- Excellent Reliability
- Minimal Maintenance

Technical Specifications

Electrical Specifications	2 Port Cross-Pol C Band Extended Linear Feed		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 Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	3.40 - 4.20	5.85 - 6.725	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	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	35.2	39.6	35.6	39.8	35.4	39.7	41.3	42.0	45.0	47.1	49.6	53.0
Noise Temperature (*K)												
10 deg El	48		45		55		56		54		145	
20 deg El	43		40		50		52		48		125	
Cross Pol												
On Axis	-30 dB	-30 dB	-30 dB	-30 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-26 dB	-26 dB	-26 dB	-26 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-25 dB	-35 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 ITU 580 Beyond Mainbeam		Meets DSCS		Meets ITU, FCC 25.209,		Mil-Std 188-164A	
VSWR	1.40:1	1.30:1	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
Isolation												
Tx/Rx	-85 dB	0 dBm input	-70 dB	0 dBm input	-70 dB	0 dBm input	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-35 dB	0 dBm input	-35 dB	0 dBm input	-35 dB	0 dBm input	-110 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

Mechanical/Environmental Specifications

Reflector	1,8 meters - Carbon Fiber
Reflector Offset Angle (deg)	17,8
Antenna Travel	
Azimuth	± 200° continuous
Elevation	0 - 90° of reflector boresight
Polarization	±- 90°
Antenna Drive Rate	
Azimuth	1.5°/sec
Elevation	1.5°/sec
Polarization	2°/sec
Temperature	
Operational	-30 to 60°C
Survival	-40 to 70°C
Tracking Loss (operational winds)*	2dB peak (Ku-band Rx)
Winds ¹	
Operational	72 kph Gusting to 96 kph
Survival	128 kph any position 145 kph stowed
Antenna Stowed Dimensions	Length: 242,3 cm Width: 180,3 cm Height: 47,0 cm
Weight	110 kg - without integration
Integration ²	
Feedboom Mounted	45 kg
Positioner Mounted	113 kg
Rain	
Operational	10 cm/h
Survival	15 cm/h
Relative Humidity	0 - 100%
Solar Radiation	1000 Kcal/h/m ²
Radial Ice (survival)	25,4 mm
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

Note: Specifications subject to change without notice

* Using appropriate tracking controller ** Contact Factory
 1 Dependent on vehicle capabilities
 2 Dependent on mounting position relative to elevation axis

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