



ProSat-Solutions

D190M MOTORIZED SNG ANTENNA C-Band/Ku-Band

- ☒ Robust
- ☒ High performance
- ☒ Powerful
- ☒ Offset reflector
- ☒ Efficient
- ☒ Designed for C-Band or Ku-Band
- ☒ Easy to mount
- ☒ Eutelsat characterised Ku- / RF and autopointing performance configuration , Intelsat & Asiasat compliant



D190M is a high performing, powerful and efficient motorized SNG Antenna System. The antenna is designed for C-Band / Ku-Band uplink operations as part of dedicated integrated uplink vehicles. Designed for heavy duty conditions as a reliable system which has been field proven for several years. The D190M is an easy to mount, self-contained antenna system fitting on the roof of most vehicles thanks to its compact design. Once installed it offers trouble free usage for many years of operation.

32 selectable motor speeds, 3 axis simultaneous movement

Mechanical Limit Switches:

Provides movement limitation for the three axis, stow position and status control by eight limit switches.

ANTENNA CONTROL CAPABILITIES

AKS250 Antenna controller

Basic functions: Control of azimuth, elevation and polarization movements, automatic stow and deploy to preset position. Includes automatic antenna pointing to selected satellite using GPS and Fluxgate compass.

Options

- OPT-AKS-DVBS/S2 : DVB-S/S2 tuner card to identify satellite and for fine tuning
- OPT-EUT-AUTO: Eutelsat approved autopointing functionality for Ku band only (has to be selected at order, no field upgrade possible)
- OPT-D-HSNG: Aerodynamic enclosure with possibility to mount HPA(s) (picture include pod option)
- OPT-AKS-SPECT: Integrated spectrum monitoring, visible on front panel display
- OPT-3PRT-FEED: Co-pol reception, adds second receive port
- OPT-DEICE: De-icing, manual or automatic control
- OPT-AKS-ETH: Ethernet interface and PC control software for AKS250 (strongly recommended e.g. to enable remote diagnostics)

Compliance

Intelsat, Eutelsat and AsiaSat approvals, Eutelsat Type Approved reflector



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RF SPECIFICATIONS for Ku-Band

	Transmit	Receive
Frequency Band	13.75-14.5 GHz	10.70-12.75 GHz
Polarization	Linear Orthogonal	
Antenna Gain	46 dBi (typical) 45.5 dBi(minimum)	44 dBi (typical) 43.7 dBi(minimum)
Antenna Noise Temperature	-	48°K @ 10° elevation
Antenna Cross Pol, Isolation	35 dB	35 dB
Co-polar Sidelobe Envelope	1.7° < θ < 7° 29-25log θ dBi 7° < θ < 9.2° 8 dBi 9.2° < θ < 48° 32-25log θ dBi	- - -
VSWR	1.3:1 Max	-
Feed Interface	WR-75	WR-75
Tx to Rx Isolation	80 dB	40 dB
Insertion Loss	0.2 dB	0.3 dB
EIRP Capability	70.0 dBW with 400W TWTA (typical)	

RF SPECIFICATIONS for C-Band

	Transmit	Receive
Frequency Band	5.850-6.650 GHz	3.625-4.2 GHz
Polarization	Linear Orthogonal	
Antenna Gain	37.7 dBi at 5.85 GHz	33.6 dBi at 3.7 GHz
Antenna Noise Temperature	-	56°K @ 10° elevation
Antenna Cross Pol, Isolation	35 dB	35 dB
Off axis gain	For 90% of all sidelobes the antenna gain in a direction away from boresight is within the envelope	
	29-25 log θ dBi	3.5° < θ < 36.0°
	-10 dBi	36.0° < θ < 130.0°
	+5 dBi	130.0° < θ < 180.0°
VSWR	1.25:1 Max	1.40:1 Max
Feed Interface	WR-137	WR-137
Tx to Rx Isolation	>50 dB	>30 dB
Insertion Loss	0.1 dB	0.2 dB
EIRP Capability	63.0 dBW with 400W TWTA (typical)	

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MECHANICAL SPECIFICATIONS

Antenna Geometry	Offset Front Feed	
Antenna Reflector Effective Aperture	Diagonal: 1.9m, Across flats: 1.5m	
Ports	2 (optional 3 ports)	
Elevation Range	0°-90° (without housing) 10°-90° (with housing)	
Azimuth Range	>±180° (overlapping)	
Polarization Range	± 100°	
Weight	160 kg antenna (Pod 40 kg)	
Dimensions	Max 232 x 189 x 68 cm (with Pod)	
Reflector Material	Carbon Fiber	
Motor speed	Adjustable by user in 32 steps	
	Minimum	Maximum
Elevation	0.2 °/sec	2.3 °/sec
Azimuth	0.2 °/sec	2.3 °/sec
Polarization	0.2 °/sec	8 °/sec

One-piece Diamond shaped reflector constructed with carbon-fibre skins. All external surfaces are primed and finished in two-pack polyurethane white paint.

ENVIRONMENTAL SPECIFICATIONS

	Operational	Survival
Wind Load	typ. 60 km/h / 16,7m/sec max. 90km/h / 25m/sec	160 km/h / 44,5m/sec(stowed)
Ambient Temperature	-20 ° C to +50 ° C	-40 ° C to +60 ° C
Humidity	%0 - %100	%0 - %100