AvL TECHNOLOGIES

MODEL 1012K SNG Global

1.0M AUTO-ACQUISITION MINI- FLYAWAY ANTENNA

Reflector	1.0 meter, 4-Piece AvL Carbon Fiber
Optics	Offset, Prime Focus, .8 f/d
Feed	Mode Match
Drive System	Patented Roto-Lok® 3-axis Positioner
Configuration	Two case Motorized Flyaway
Controller	Auto-acquisition

Electrical RF	**Receive**	**Transmit**
Frequency	10.95-12.75 GHz	13.75-14.5 GHz
Gain (Midband)		
R/T	39.8 dBi	41.5 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.6	1.4
-10 dB	2.8	2.3
First Sidelobe Level	-22 dB	-25 dB
Radiation Pattern Compliance > 1.5°		
Standard Feed	FCC §25.209, ITU-R S.528.5	
Precision and Mode-Matched	3dB Better than FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	46° K at 30° Elevation	
Polarization	Orthogonal standard, Optional Co-pol	
Power Handling Capability	40 watts	
Allowable Power	-14dBw/4kHz per FCC, -0dBw/4kHz per ITU	

Cross-Pol Isolation	Std.	Precision	Mode-Matched
On-Axis (minimum)	35 dB	35 dB	35 dB
Off-Axis (within 0.3°)	25 dB	28 dB	32 dB
Peak	22 dB	24 dB	24 dB

Feed Port Isolation – TX to RX	75 dB
Satellite System Compliance	
Mode Match	FCC, PanAmSat, Intelsat, Eutelsat, AsiaSat

Controller

Type	Fully Automatic Satellite Acquisition, Peaking, and Cross-Pol Adjustment using GPS, Compass, and Level Sensor Inputs with Entry of Desired Satellite
Auto Pointing Accuracy	≤ ±0.2 degree
Size	
Standard	Two Cases 6 x 6 x 3.5 in (15 x 15 x 9 cm)
Optional Rack Mounted Config.	1 RU Chassis 8 in (20 cm) deep, Weight 3.75 lbs. (1.7 kg)
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 6/3A peak, 1A continuous

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Mechanical

Az/El/Pol Drive System	Patented Roto-Lok® Cable Drive System
Travel	
Azimuth	400°
Elevation	True elevation readout from calibrated inclinometer
Mechanical	0° to 90° of reflector boresight
Electrical	Standard limits at 15° to 65° (CE Approval) or 15° to 90°
Polarization	±75° Motorized, H/V Switching Manual
Speed	
Slewing/Deploying	8°/sec. in Azimuth, 5°/sec. in Elevation, 5°/sec. in Polarization
Peaking	0.2°/second
Motors	24V DC Variable Speed with Optical Encoders
RF Interface	
BUC/HPA Mounting	
2 watt	Feed Boom
4 watt	Base of Feed Boom or Rear of Reflector
8-40 watt	In Reflector Case
Waveguide	WR 75 Cover Flange at Feed Interface Point
Coax (L-band TX & RX)	RG59 with Type-F at Base of Case Interface Point
Electrical Interface	15 ft. (5 m) Removable Cables for Controller
Manual Drive	Handcrank on Az, El, Pol Axis

Shipping Configuration

Standard (Platt) Cases	
Positioner Case	98 lbs. (43 kg.), 23 x 33 x 13.5 in (58 x 84 x 34 cm)
Reflector/Feed/Controller/BUC Case	70 lbs. (32 kg.), 23 x 33 x 13.5 in (58 x 84 x 34 cm)
Optional Rugged (Hardigg) Cases	
Positioner Case (with Shock Mounting)	140 lbs. (64 kg.), 27 x 37 x 16 in (69 x 94 x 41 cm)
Reflector/Feed/Controller/BUC Case	80 lbs. (36 kg.), 27 x 37 x 16 in (69 x 94 x 41 cm)

Environmental

Pointing Loss in Wind (with Cases anchored)	
20 mph (32 kmph)	0.1 dB, 0.15 degrees Maximum
30 Gusting to 45 mph (48 to 72 kmph)	0.6 dB, 0.30 degrees Maximum
Temperature	
Operational	+5° to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)

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