AvL TECHNOLOGIES

MODEL 2410K SNG
2.4 METER MOTORIZED VEHICULAR ANTENNA

Reflector	2.4 Meter Carbon Fiber
Feed	Precision Feed
Optics	Offset, Prime Focus, .8 F/D
Az/El Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Rotation of Feed

Electrical RF

	Receive	Transmit
Frequency	10.95 - 12.75 GHz	13.75 -14.5 GHz
Gain (Midband)		
2-port	47.7 dBi	49.3 dBi
4-port	47.4 dBi	49.0 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	0.73	0.61
-15 dB	1.34	1.41
First Sidelobe Level (Typical)	-22 dB	-25 dB
Radiation Pattern Compliance	FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	45° K at 10° Elevation	
Polarization	Orthogonal std., Optional Co-pol (3-port) & 4-port	
Power Handling Capability	1KW per port	
Cross-Pol Isolation		
On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	25 dB	27 dB
Feed Port Isolation – TX to RX	75 dB	
Satellite System Compliance	FCC, Intelsat, PanAmSat, SES Americom, etc.	

Controllers

Standard	Three-axis Jog Control & Display with Auto-stow
Optional Upgrades	
Semi-automatic Operation	Drive to calculated position based on operator entered vehicle location, heading, plus satellite (longitude or listed)
Automatic Operation	Drive to calculated position based on auto GPS and Flux-Gate Compass data and satellite peaking with LNB signal
Size	Two Rack Units for Semi-automatic & Automatic Controllers
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 10/5 A peak, 1A Continous

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Mechanical

Az/El Drive System	Patented Roto-Lok® Cable Drive System
Polarization Drive System	Non back-driving Worm Gear
Travel	
Azimuth	400° with all 2-port and 4-port with HPA(s) on antenna, 270° Standard with 4-port and HPA(s) in Vehicle
Elevation	True elevation readout from calibrated inclinometer
Mechanical	0° to 90° of Reflector Boresight
Electrical	Standard limits at 5° to 65° (CE Approval) or 5° to 90°
Polarization	±95° for 2-port and 3-port Feeds ±50°, 100º Effective for 2-port Wideband and 4-port feeds
Speed	
Slewing/Deploying	1°/second
Peaking	0.1°/second
Motors	24V DC Variable Speed, Constant Torque
RF Interface	
HPA Mounting	Feed Boom, Rear of Reflector or Inside Truck
Axis Transition	Twist-Flex or Rotary Joints
Waveguide	WR 75 Cover Flange at Interface Point
Coax	RG59 run from feed to base plus 25 ft. (8 m)
Electrical Interface	25 ft. (8 m) Cable with Connectors for Controller
Manual Drive	Handcrank on Az and El Axii, Leads from 12VDC Pol Motor
Weight	640 lbs. (290 kg)
Stowed Dimensions	137½ L x 96 W x 23 H inches (349 L x 244 W x 58 H cm)

Environmental

Wind	
Survival	
Deployed	70 mph (113 kmph)
Stowed	100 mph (161 kmph)
Operational	45 mph (72 kmph), Gusts to 60 mph (97 kmph)
Tx Pointing Loss in Wind	
20 mph (32 kmph)	0.1 dB Typical
30 Gusting to 45 mph (48 to 72 kmph)	0.6 dB Typical
Temperature	
Operational	+5° to 125°F (-15° to 52° C)
Survival	-40° to 140°F (-40° to 60° C)

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