AvL TECHNOLOGIES

MODEL 1610K AvL Carbon Fiber
1.6 METER MOTORIZED VEHICULAR SNG ANTENNA

Reflector	1.6 meter AvL Carbon-Fiber
Feed	Standard Feed (or precision feed)
Optics	Offset, Prime Focus, .8 f/d
Az/El Drive System	Patented Roto-Lok® LW 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)		
R/T	43.7 dBi	45.2 dBi
4-port	43.6 dBi	45.4 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.1°	0.95°
-10 dB	2.1°	1.80°
First Sidelobe Level (Typical)	-22 dB	-22 dB
Radiation Pattern Compliance	6 dB better than FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	40° K at 30° Elevation	
Polarization	Linear Orthogonal standard, Optional Co-pol	
Power Handling Allowed		200w at TX Port
Cross-Pol Isolation		
On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	27 dB	35 dB (± 20º Polarization Angle)
Off-Axis (peak)	20 dB	30 dB (± 20º Polarization Angle)
Feed Port Isolation – TX to RX	85 dB	
Satellite system Compliance	FCC, PanAmSat, Intelsat, Eutelsat, AsiaSat	

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
Auto-acquisition	One-button acquisition of selected satellite including peaking and optimization of cross-pol (certified for auto-commissioning on most satellite services)
Size	Two Rack Units for Semi-automatic & Automatic Controllers Single Rack Unit for Auto-acquisition
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 8/4A peak, 1A continuous

AVL 1.6m SNG 1610K Carbon Antenna


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TV


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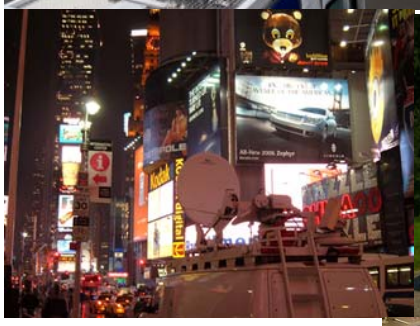


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Mechanical

Az/El Drive System	Patented Roto-Lok® Cable Drive System
Polarization Drive System	Non Back-driving Worm Gear
Travel	
Azimuth	400°
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° for 2-port Wideband and 4-port feeds
Speed	
Slewing/Deploying	2°/second
Peaking	0.5°/second
Motors	24V DC Variable Speed, Constant Torque
RF Interface	
HPA Mounting	Inside Vehicle
Axis Transition	Rotary Joints for Azimuth, Elevation, and Polarization
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	275 lbs (125 kg)
Stowed Dimensions	96 L x 73 W x 19 H inches (244 L x 190 W x 50 H cm)

Environmental

Wind	
Survival	
Deployed	80 mph (128 kmph)
Stowed	100 mph (161 kmph)
Operational	45 mph (72 kmph), Gusts to 60 mph (97 kmph)
Pointing Loss in Wind	
20 mph (32 kmph)	0.2 dB, 1 dB Maximum
30 Gusting to 45 mph (48 to 72 kmph)	0.8 dB, 3 dB Maximum
Temperature	
Operational	+5° to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)