

AvL TECHNOLOGIES

Model 1510 SNG 1.5m Motorized Transportable Vehicle-Mount Antenna



- Unique Features**
- 1.5m AvL Engineered Composite Single Piece Reflector (Upgradable to Carbon Fiber)
 - AvL Cable Drive Positioner
 - Optional Rotary Joint on Pol Axis with Flex W/G to BUC
 - “One-Button” Auto-Acquisition
 - Offset, Prime Focus, 0.8 f/D
- Optics**
- 2-Port Ku-Band Precision (standard Cross-Pol comp.)
 - 2-Port Ka-Band
- Standard RX/TX Feed**
- Rotation of Feed with Motorized Worm Gear Drive
- Optional Feed**
- Metallic Gray (optional colors available)
- Polarization Adjustment**
- Standard Colorization**

Mechanical

AZ/EL Drive	Motorized AvL Zero Backlash Cable Drive (Patent Pending)
Polarization Drive System	Motorized Worm Gear Drive
Reflector Construction	1.5m AvL Engineered Composite Single Piece Reflector (Upgradable to Carbon Fiber)
Axis Travel	
Azimuth	400° (±200°)
Elevation	
Mechanical	0° to 90° of Reflector Bore sight
Electrical	Standard Limits at 5° to 65° (CE approval) or 0° to 90°
Polarization	±95°
AZ/EL Speed	
Slewing/Deploying (typical)	2°/second
Peaking (typical)	0.2°/second
Motors	24 VDC Variable Speed, Constant Torque
RF Interface	
BUC/HPA Mounting	Feed Boom (maximum weight 50 lbs (11.3 kg))
Max dimensions for BUC mounting on Feed Boom	27 L x 13.8 W x 8.5 H inches (56 L x 35 W x 22 H cm)
Feed Tx	WR75 Flat Flange; Optional Polarization Rotary Joint w/flex waveguide from feed, WR75
Coax	Two Type F connectors at antenna base
Electrical Interface	One 25 ft. (8 m) Cable with Connectors for Controller
Manual/Emergency Drive	Hand crank for AZ and EL and Pol Axes
Weight (approximate)	165 to 195 lbs. (75 to 87 kg) depending on options
Stowed Dimensions	83.5 L x 61.7 W x 15.7 H inches (212 L x 157 W x 40 H cm)
Time to Acquisition	Less than 15 minutes, 8 minutes typical
Mounting	Pallet for vehicle roof mounting (Optional; Adds 2 inches to stow height)

Environmental

Wind – Survival	Deployed: 65 mph (105 kph); Stowed: 80 mph (129 kph)	
Wind - Operational	30 mph (48 kph) gusting to 45 mph (72 kph)	
Pointing Loss in Wind: 30 mph gusting to 45 mph (48 kph gusting to 72 kph)	<u>Ku-Band (Rx)</u> 1.0 dB Typical	<u>Ka-Band (Rx)</u> 1.8 dB Typical
Temperature:		
Operational	-22° to 125° F (-30° to 52° C)	
Survival	-40° to 140° F (-40° to 60° C)	

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RF/Electrical

Feed Type ►	Std. 2-Port Precision Ku-Band		Opt. 2-Port Ka-Band	
RF Parameter ▼	Receive	Transmit	Receive	Transmit
Frequency Range (GHz)	10.95 - 12.75	13.75 - 14.50	19.2 – 20.2	29.0 – 31.0
Polarization Configuration	Linear Orthogonal Standard, Optional Co-Pol		Circular	
Gain (mid-band)	43.5	45.1	48.0	51.2
Beam width (Degrees)	-3 dB	1.2	0.7	0.45
	-10 dB	2.1	1.2	0.80
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580-6		FCC §25.209, ITU-R S.580-6, MIL STD 488-164B	
Antenna Noise Temperature	54° K @ 20° elevation	-	106K @ 20°elevation	-
Allowable Input Power Density	-	FCC: -14 dBw/4 kHz, ITU: -0 dBw/4 kHz	-	-
VSWR	1.30:1	1.30:1	1.30:1	1.30:1
Cross-Polarization Isolation (dB)				
On Axis	35	35	21.3 (1.5dB Axial Ratio)	25 (1.0dB Axial Ratio)
Off-Axis (within Pointing Cone)	27	28	-	-
Feed Port Isolation – TX to RX (dB)	35	80	85	85

Controller

Controller ►	AvL AAQ
Features	AvL one button auto-acquisition of selected satellites, including peaking and optimization of cross pol. Internal movement detector and automatic stow. Optional hand-held control and separate power supply. Certified for auto-commissioning on most satellite services.
Size	Embedded ACU with separate 1 Rack Unit Controller Interface Panel (CIP) power supply with LCD and keypad. 250 W and 500 W (1.6m and larger antennas) versions available.
CIP Input Power	120/240 VAC 60/50 Hz, 6/3 A Max. Power consumption is antenna size dependent: During acquisition 150 W or 300 W is typical, ~ 50 W Idle

Available Options, Upgrades & Services

- Add BUC/HPA Mounting (NOTE: minimum elevation may be restricted by these options)
- Rotary Joint on Pol Axis with Flex W/G to BUC
- Upgrade to Custom RF/IF I/O cabling configurations available
- Custom Colorization (contact factory for available colors)
- Add Custom Logo on Reflector Face (1- or 2-Color; per AvL Logo Policy)
- Spare Parts Kit

Request A Quote