

# AvL TECHNOLOGIES

## Model 2010 Premium SNG 2.0m Motorized Transportable Vehicle-Mount Antenna

<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• 2.0m AvL Single Piece Carbon Fiber Reflector</li> <li>• Optional three-piece carbon fiber reflector with manually folding hinged wings or motorized folding hinged wings</li> <li>• Zero Backlash AvL Cable Drive</li> <li>• Compact/Rugged Pol Gear Drive</li> <li>• "One-Button" Auto-Acquisition</li> </ul>
<b>Optics</b>	Offset, Prime Focus, 0.8 f/D
<b>Standard Rx/Tx Feed</b>	2-Port Ku-Band Precision (LP) (standard Cross-Pol comp.)
<b>Optional Feeds</b>	<ul style="list-style-type: none"> <li>• 4-Port Ku-Band Precision (LP) (standard Cross-Pol comp.)</li> <li>• 2-, 3- or 4-Port Ku-Band Wideband (LP)</li> <li>• 2- or 4-Port Ka-Band Commercial (CP)</li> <li>• 2- or 3-Port C-Band (CP or LP)</li> <li>• 2-Port C-Band INSAT (LP)</li> </ul>
<b>Polarization Adjustment</b>	Motorized Worm Gear Drive
<b>Standard Colorization</b>	AvL White or Metallic Gray (optional colors available)



### Mechanical

Az/EI Drive	Motorized Zero Backlash AvL Cable Drive (Patent Pending)	
Polarization Drive System	Motorized Worm Gear Drive	
Reflector Construction	2.0m Single Piece AvL Carbon Fiber; Optional three-piece carbon fiber reflector with manually folding hinged wings or motorized folding hinged wings	
Axis Travel		
Azimuth	±200° Standard; 270° with dual waveguide to vehicle, options include dual Ku, single C + single Ku	
Elevation	Mechanical	0°-90° antenna bore sight
	Electrical	5° to 90° Standard limits or 5° to 65° (CE Approval)
Polarization	±95° for 2-port and 3-port Feeds; ±50° for 2-port Wideband and 4-port Feeds	
Az/EI Speed		
Slewing/Deploying (typical)	2°/second	
Peaking (typical)	0.2°/second	
Motors	24 VDC Variable Speed, Constant Torque	
RF Interface	HPA Mounting	Feed boom, rear of reflector or inside truck
	Axis Transition	Twist-flex or optional rotary joints for Ku-Band; Pol rotary joint standard for C-Band
	Waveguide	Cover Flange at Interface Point
	Coax	RG59 run from feed to base plus 25 ft. (8m)
Electrical Interface	25 ft. (8 m) Cable with Connectors for Controller	
Manual/Emergency Drive	Hand crank on Az, EI and Pol axes	
Time to Acquisition	Less than 15 minutes, 8 minutes typical	
Weight (approximate)	400 lbs. (182 kg)	
Stowed Dimensions	108.5 L x 79.3 W x 18.3 H inches (276 L x 202 W x 46 H cm)	
Mounting	Azimuth ring bolts directly to vehicle	

### Environmental

Wind – Survival	Deployed: 60 mph (121 kph); Stowed: 100 mph (161 kph)		
Wind - Operational	30 mph (48 kph), gusts to 45 mph (72 kph)		
Pointing Loss in Wind*	<u>Ku-Band Rx</u>	<u>Ka-Band Rx</u>	<u>C-Band Rx</u>
30 mph gusting to 45 mph (48 kph gusting to 72 kph)	1.7 dB	2.0 dB	0.25 dB
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**		Opt. 2-Port C-Band	
RF Parameter ▼	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency Range (GHz)	10.95 - 12.75	13.75 - 14.50	17.7 - 20.2**	27.5 - 30.0**	3.625 - 4.2	5.850 - 6.425
Polarization Configuration	Linear Orthogonal Standard, Optional Co-Pol		CP or LP**		Linear or Circular Options	
Gain (mid-band) (dBi)	46.0	47.6	49.9	53.4	36.4	40.3
Beam width -3 dB (Degrees)	0.86	0.72	0.5	0.3	2.5	1.7
-10 dB (Degrees)	1.65	1.4			4.8	3.2
Radiation Pattern Compliance Transmit – 100Λ/D to 20° Receive – 100Λ/D to 20°	FCC §25.209, ITU-R S.580.6		FCC §25.209		ITU-R S.580.6 29-25 Log Ø 32-25 Log Ø	
Antenna Noise Temperature	57° K @ 20° EI		106° K @ 20° EI		49° K @ 20° EI	
G/T, Midband (dB/°K)	25.7 with 43°K LNB		26.7 with 100°K LNB, 20.7 GHz		17.9 with 20°K LNB	
Power Handling Capability		500 watts per Port		250 watts per Port		1000 watts per Port
Circular Axial Ratio (within pointing cone) (dB)			1.5	1.0	2.3	1.3
Cross-Polarization Isolation (dB)						
On-Axis (minimum)	35	35				
Off Axis (within 1 dB BW)	28	30				
On Axis Linear					35	35
On Axis Circular					19	25
Feed Port Isolation – Tx to Rx (dB)	35	80 (includes filter)				70

### 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

- Optional feeds: 4-port Ku-band Precision (LP), 2-, 3- or 4-port Ku-band Wideband (LP), 2- or 4-Port Ka-Band (CP), 2- or 3-Port C-Band (CP or LP), or 2-Port C-Band INSAT (LP)
- Add co-polarization kit (for 2-port Ku feeds only) – configures Rx and Tx to same polarity
- Optional waveguide rotary joint with flex on pol axis for Ku-Band
- Optional H/V switch (Ku Wideband)
- Optional wave guide cross axis kits
- Optional Dual/Redundant HPA high power integration
- Optional mounting pallet (adds 4.62" (11.8 cm) to stow height)
- Add BUC/HPA mounting (NOTE: minimum elevation may be restricted by these options)
- Upgrade to custom RF/IF I/O cabling configurations available
- Optional coax cables 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

\* Assumes stable platform.

\*\* Contact Sales for commercial Ka-band frequency range options and circular or linear polarization options.