AvL TECHNOLOGIES

Model 1578 MVSAT
1.5m Motorized Transportable
Vehicle-Mount Antenna

Unique Features
- 1.6 x 1.2m 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

Optics
- Offset, Prime Focus, 0.8 f/D

Standard RX/TX Feed
- 2-Port Ku-Band Precision (standard Cross-Pol comp.)

Polarization Adjustment
- Rotation of Feed with Motorized Worm Gear Drive

Standard Colorization
- Metallic Gray (optional colors available)

Mechanical

AZ/EL Drive	Motorized AvL Zero Backlash Cable Drive (Patent Pending)
Polarization Drive System	Motorized Worm Gear Drive
Reflector Construction	1.6 x 1.2m AvL Engineered Composite Single Piece Reflector (Upgradable to Carbon Fiber)
Axis Travel	
Azimuth	400° (±200°)
Elevation	
Mechanical	0° to 90° of Reflector Boresight
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 25 lbs (11.3 kg))
Max dimensions for BUC mounting on Feed Boom	22 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	Handcrank for AZ and EL and Pol Axes
Weight (approximate)	165 to 195 lbs. (75 to 87 kg) depending on options
Stowed Dimensions	68.5 L x 65.1 W x 19.9 H inches (174 L x 165.4 W x 50.5 H cm)
Time to Acquisition	Less than 15 minutes, 8 minutes typical
Mounting	Pallet for vehicle roof mounting

Environmental

Wind – Survival	Deployed: 65 mph (105 kph); Stowed: 80 mph (129 kph)
Wind - Operational	45 mph (72 kph)
Pointing Loss in Wind (Ku RX):	
20 mph (32 kph)	0.9 dB typical
30 mph gusting to 45 mph (48 kph gusting to 72 kph)	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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Model 1578 MVSAT 1.6 x 1.4m Motorized Transportable Vehicle-Mount Antenna

RF/Electrical

Feed Type ▶		Std. 2-Port Precision Ku	
RF Parameter ▼		**Receive**	**Transmit**
Frequency Range (GHz)		10.95 - 12.75	13.75 - 14.50
Polarization Configuration		Linear Orthogonal Standard, Optional Co-Pol	
Gain (mid-band)		42.9	44.5
Beam width (Degrees)	-3 dB	1.3	1.1
	-10 dB	2.3	1.9
Radiation Pattern Compliance		FCC §25.209, ITU-R S.580-6	
Antenna Noise Temperature		54° K @ 20° elevation	
Allowable Input Power Density			FCC: -14 dBw/4 kHz, ITU: -0 dBw/4 kHz
VSWR		1.30:1	1.30:1
Cross-Polarization Isolation (dB)			
On Axis		35	35
Off-Axis (within Pointing Cone)		27	28
Feed Port Isolation – TX to RX (dB)		35	80

Controller

Standard Controller	
Standard Features	One button auto-acquisition of selected satellites, including peaking and optimization of cross pol. Internal movement detector and automatic stow. Includes a hand-held control and separate power supply. Certified for auto-commissioning on most satellite services.
Size	10 x 9 x 2.5 inch power supply
Input Power	100 - 240 VAC 50/60 Hz 4 A peak, 190 W Antenna running with max load

Available Options, Upgrades & Services

- Upgrade to embedded controller with optional Ethernet remote interface and GUI. Consult Sales for details and optional features.
- 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