

# AvL TECHNOLOGIES

## Model 1478 MVSAT 1.4m Motorized Transportable Vehicle-Mount Antenna



- Unique Features**
- 1.4m AvL Engineered Composite Single Piece Reflector
  - 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.)
- Standard RX/TX Feed**
- Motorized Worm Gear Drive
- Polarization Adjustment**
- Metallic Gray (optional colors available)
- Standard Colorization**

### Mechanical

AZ/EL Drive	Motorized AvL Low Backlash Cable Drive System (Patent Pending)
Polarization Drive System	Motorized Worm Gear Drive
Reflector Construction	1.4m Single Piece AvL Engineered Composite
Axis Travel	
Azimuth	400° (±200°)
Elevation	
Mechanical	0° to 90° of Reflector Bore sight (may be limited by BUC integration and/or cowling)
Electrical	Standard Limits at 5° to 65° (CE approval) or 0° to 90°
Polarization	±95° for 2-port and 3-port Feeds; ±50° for 2-port Wideband and 4-port Feeds
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	25 ft. (8m) or 30 ft. Cable with Connectors for Controller
Manual/Emergency Drive	Hand crank on AZ and EL and Pol Axes
Weight (approximate)	165 - 195 lbs. (75 - 88 kg) depending on options selected
Stowed Dimensions	77 L x 56 W x 18.3 H inches (196 L x 142 W x 47 H cm)

### Environmental

Wind – Survival	Deployed: 60 mph (96 kph); Stowed: 100 mph (161 kph)
Wind - Operational	30 mph (48 kph), Gusts to 45 mph (72 kph)
Pointing Loss in Wind (Ku RX):	
20 mph (32 kph)	0.9 dB typical
30 mph gusting to 45 mph	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	
RF Parameter ▼	Receive	Transmit
Frequency Range (GHz)	10.95 - 12.75	13.75 - 14.50
Polarization Configuration	Linear Orthogonal Standard	
Gain (mid-band)	43.0	44.5
Beam width (-3dB) (Degrees)	1.3	1.1
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580-6, IESS 208	
Antenna Noise Temperature	54° K	
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	28	30
Feed Port Isolation – TX to RX (dB)	35	80 (includes filter)
Satellite System Compliance	Intelsat and all other major service providers	

### Controller

Controller Type ►	Three-axis Jog Control & Display with Auto-Stow
Feature ▼	
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

- Thule Bar roof mounting kit
- 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