AvL TECHNOLOGIES

Model 1278 Mobile VSAT 1.2m Motorized Transportable Vehicle-Mount Antenna

SPECIFICATIONS

Unique Features

- 1.2m AvL engineered composite reflector
- Zero backlash AvL cable drive
- Compact/rugged pol gear drive
- Optional rotary joint on pol axis with flex W/G to BUC
- "One button" auto-acquisition

Standard Rx/Tx Feed

- 2-Port Ku-Band precision (standard cross-pol comp.)

Polarization Adjustment

- Motorized worm gear drive

Standard Colorization

- AvL 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	1.2m single piece AvL engineered composite
Axis Travel	
• Azimuth	400° (±200°)
• Elevation	
- Mechanical	0-90° antenna 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 to controller
Manual/Emergency Drive	Handcrank on Az, El and Pol axes
Weight (approximate)	155 to 185 lbs. (70.5 to 84 kg) depending on options
Stowed Dimensions	68.5 L x 48 W x 18.5 H inches (174 L x 122 W x 47 H cm)
Time to Acquisition	Less than 10 minutes, 8 minutes typical
Mounting	Pallet for vehical roof mounting

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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)	0.5 dB typical
• 30 mph gusting to 45 mph (48 kph gusting to 56 kph)	1.0 db typical
Temperature	
• Operational	-22° to 125° F (-30° to 52°C)
• Survival	-40° to 140° F (-40° to 60° C)

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) (dBi)	41.6	41.3
Beamwidth		
• -3 dB (Degrees)	1.5	1.2
• -10 dB (Degrees)	2.7	2.2
Radiation Pattern Compliance	FCC § 25.209, ITU-R S.580-6	
Antenna Noise Temperature	54° K @ 20° elevations	
Allowable Input Power Density		FCC: -14 dBw/4 kHz ITC: -0 dBw/4 kHz
VSWR	1.30:1	1.30:1
Cross-Polarization Isolation (dB)		
• On Axis (minimum)	35	35
• Off Axis (within pointing cone)	27	28
• Feed Port Isolation	35	80

CONTROLLER

Standard Controller	One button auto-acquisition of selected satellites, including peaking and optimization of cross pol.
Standard Features	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 antenna running with max load

AVAILABLE OPTIONS, UPGRADES & SERVICES

Roof mounting kit (designed with interface for standard Thule Bar Kits: www.thule.com)
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
Custom Colorization (contact factory for available colors)
Add Custom Logo on Reflector Face (1- or 2-Color; per AvL Logo Policy)
Spare Parts Kit
Lightweigh antenna cowling