AvL TECHNOLOGIES

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

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 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 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		Hand crank 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 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)	0.4 dB typical
30 mph gusting to 45 mph (48 kph gusting to 56 kph)	0.8 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, optional co-pol	
Gain (mid-band) (dBi)	41.6	43.1
Beam width -3dB (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° 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 (minimum)	35	35
Off Axis (within pointing cone)	27	28
Feed Port Isolation	35	80

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

- 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
- 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
- Lightweight antenna cowling

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