

## Model 1.2m 1098FA Mobile VSAT FlyAway Ku-Band Motorized Transportable Antenna



Photo shows 1.0m model

- Unique Features**
- 1.2m 2-Piece AvL Engineered Composite Reflector
  - Optional 1.2m 4-Piece Reflector
  - Compact Elevation-over-Azimuth Cable Drive Positioner
  - Case-Based System; 2 Case Configuration
  - 10-Minute Setup; "One-Button" Auto-Acquisition
- Standard Rx/Tx Feed**
- 2-Port Ku-Band Precision
- Optional Integration Support**
- Custom BUC Integration
  - Universal BUC Tray
- Polarization Adjustment**
- Compact/Rugged Gear Drive
- Standard Colorization**
- AvL Metallic Grey (optional colors available)

### Mechanical

Az/EI Drive	Motorized AvL Zero Backlash Cable Drive System (Patent Pending)
Polarization Drive System	Motorized Worm Gear
Reflector Construction	1.2m 2-Piece AvL Engineered Composite
Axis Travel	
Azimuth	400° (±200°)
Elevation (reflector boresight)	0°-90° antenna boresight (true elevation readout from calibrated inclinometer)
Polarization	± 95°
Az/EI Speed	
Slewing/Deploying (typical)	2°/second azimuth; 2°/second elevation; 2°/second polarization
Peaking	0.2°/second
Motors	24V DC variable speed, constant torque
Standard Integration Interfaces	
Tx Input @ Feed	Ku: WR 75 Cover Flange at Feed Tx Port; Type F coax from BUC to base
Rx Input (AvL-supplied coax)	Type F coax from LNB to base
BUC (& other CFE) Mounting	Feed boom (maximum weight 16 lbs. (7.3 kg))
Controller Interface	One 30-ft. (9.1m) cable with connector from base connector panel to controller
Manual/Emergency Drive	Common handcrank for azimuth, elevation and polarization axes
Size/Weight – Std. Positioner Case	21.4 H x 23 W x 22.5 L inches (54 H x 58 W x 57 L cm), weighs approx. 95 lbs. (43 kg)
Size/Weight	
Std. 2 Piece Reflector Case	13.5 H x 33 W x 52 L inches (34 H x 84 W x 132 L cm), weighs approx. 160 lbs. (73 kg)
Opt. 4 Piece Reflector Case	16.5 H x 37.5 W x 43.5 L inches (37 H x 95 W x 110.5 L cm), weighs approx. 160 lbs. (73 kg)

### Environmental

Wind – Survival	Anchored: deployed: 50 mph (80 kph), stowed (Fly&Drive option only): 100 mph (161 kph)
Wind - Operational	Anchored: 40 mph (64 kph)
Pointing Loss in Wind (Ku RX):	
20 mph (32 kph)	0.7 dB typical
25 gusting 40 mph (40/64kph)	1.5 dB typical
Temperature:	
Operational	-22°F to 125°F (-30°C to 52°C)
Survival	-40°F to 140°F (-40°C to 60°C)

# AvL TECHNOLOGIES

## Model 1.2m 1098FA Mobile VSAT FlyAway Ku-Band Motorized Transportable 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 (H/V)	
Gain (mid-band)	41.6 dBi	43.1 dBi
-3dB Beamwidth (Degrees)	1.5°	1.2°
-10dB Beamwidth (Degrees)	2.7°	2.2°
Radiation Pattern Compliance	FCC 25.209 and ITU-RS-580-6 Eutelsat	
Antenna Noise Temp. (mid-band, 20° el)	54K	--
Maximum Feed Transmit (Tx) Power	--	FCC: -14 dBW/4 kHz ITU: -0 dBW/4 kHz
VSWR	1.30:1	1.30:1
Axial Ratio (Ka and X only, within pointing cone)	--	--
Cross-Polarization Isolation		
On Axis (minimum)	35 dB	35 dB
Off Axis (within 1 dB BW)	27 dB	28 dB
Feed Port Isolation (Tx to Rx)	35 dB	80 dB

### Controller

Controller Type ▶	Standard: TracStar	Optional: AvL AAQ
Feature ▼	Auto-Acquire with Opt. Ethernet IP Interface	Enhanced Auto-Acquire with Std. Ethernet IP Interface
Integration	Embedded w/ Handheld, incl. Shelf-Mount P/S (optional 1RU w/ front-panel keypad + integral P/S)	Embedded w/ Ethernet IP Interface (P/S optional) (optional rack-mount P/S available)
User Interface	Menu-driven display w/ keypad	Intelligent/simple GUI for on-board or remote CFE laptop
Input Power	115/230 VAC (at rack); up to 200W	28V DC (at antenna positioner); optional 115/230 VAC rack-mount power supply; up to 200W
Software Upgrades/Options	Inclined orbit tracking (using step-track or TLE track); automatic band sensing	Inclined orbit tracking (using step-track, memory track, or TLE track); automatic band sensing

### Optional Configurations, Upgrades & Services

Reflector configurations	Standard: 1.2m 2-piece segmentation	Upgrade: 1.2m 4-piece segmented
Standard Feed	Standard: 2-Port Precision Ku-band	
Mechanical upgrades		Upgrade: BUC/HPA Mounting (minimum elevation may be restricted)
RF/Electrical upgrades		Upgrade: Custom RF/IF I/O cabling configurations
Control System upgrades	Standard: TracStar Auto-Acquire	Upgrade: AvL AAQ
Customization options	Standard colorization: AvL Metallic Grey	Upgrade: custom colorization and/or custom logo on reflector
Additional options & services		Power Supply for AAQ Controller
		Spare Parts Kit
		Factory Training
		Fly and Drive Upgrade Kit
Pack-up configurations	Standard: 2 Case Foam Pack-Up	Upgrade: Hard Mount 2 Case Pack-Up