

AVL TECHNOLOGIES

MODEL 1278KFD Mobile VSAT Fly&Drive Antenna System



Reflector	1.2 Meter
Optics	Offset, Prime Focus, .8 f//d
Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization	Rotation of Feed

Electrical RF

Receive

Transmit

Frequency Range	10.95-12.75 Ghz	13.75-14.5 Ghz
Gain (Midband)	42.0 dBi	43.2 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.4	1.2
-10 dB	2.5	2.1
First Sidelobe Level (Typical)	-19 dB	-22 dB
Radiation Pattern Compliance	FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	30°K at 30° Elevation	
Polarization	Linear Orthogonal Standard, Optional Co-pol	
Power Handling Capability	40 Watts	
Cross Pol Isolation		
On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	26 dB	28 dB
Off-Axis (peak)	22 dB	25 dB
Feed Port Isolation - TX to Rx	75 dB	
Satellite System Compliance	FCC and PanAmSat Worldwide	

Controllers

Optional Upgrades
Auto-acquisition

One-button acquisition of selected satellite including peaking and optimization of cross pol (certified for auto-commissioning on most satellite services)
Standard: Power Supply and Hand-held
Optional: 1 Rack Unit
110/240 VAC, 1 ph, 50/60 Hz, 6/3A peak, 1A continuous

Size

Input Power

Reflector Options

2-piece molded reflector or 4-piece carbon fiber reflector

Mechanical

Az/EI Drive System
Polarization Drive System
Reflector Material
Travel

Patented Roto-Lok® Cable Drive System
Stainless Steel Chain Drive
Glass Reinforced Plastics or Carbon Fiber

 Azimuth

400°

 Elevation

True elevation readout from calibrated inclinometer

 Mechanical

0° to 90° of reflector boresight

 Electrical

Standard limits at 5° to 65° (CE Approval) or 5° to 90°

 Polarization

±95°

Speed

 Slewing/Deploying

2°/second

 Peaking

0.2°/second

Motors	24V DC Variable Speed, Constant Torque
RF Interface	
BUC Mounting	Feed Boom
Waveguide	Grove Flexible Waveguide From Feed
Coax	2-RG59 run from feed to base plus 25 ft. (8 m)
Electrical Interface	25 ft. (8 m) Cable with Connectors for Controller
Manual Drive	Handcrank on Az and El Axii
Weight Drive Configuration	140 lbs. (63.5 Kg)
Weight Flyaway Configuration	Case #1 185 lbs. (84 Kg) Motorized Auto Acquisition Positioner
	Case #2 45 lbs. (20.4 Kg) 2 piece Reflector
	Case #2 29 lbs. (13.2 Kg) 2 or 4 piece Carbon Fiber (Option)
Positioner	55 L x 21 W x 26 H inches (140 L x 53 W x 66 H cm)
2 Piece Reflector with Bag	52 L x 32 W x 6 H inches (132 L x 81 W x 15 H cm)
2 Piece Reflector Bag (Carbon Fiber) Option	52 L x 32 W x 6 H inches (132 L x 81 W x 15 H cm)
4 Piece Reflector Bag (Carbon Fiber) Option	27 L x 27 W x 6 H inches (Qty2) (69 L x 69 L x 15H cm)

Environmental

Wind

Survival	
Deployed	65 mph (121 kmph)
Stowed	80 mph (161 kmph)
Operational	45 mph (72 kmph)
Pointing Loss in Wind	
20 mph (32 kmph)	0.5 dB Typical
30 Gusting to 45 mph (48 to 72 kmph)	1.0 dB Typical
Temperature	
Operational	±5° to 125°F (-15° to 52° C)
Survival	-40° to 140°F (-40° to 60° C)