

AVL TECHNOLOGIES

MODEL 1212KFD GLOBAL

1.2 METER MOTORIZED FLY & DRIVE ANTENNA



Reflector	1.2 meter, AVL 4-piece Carbon-fiber
Feed	Mode-matched with Rotary Joint
Optics	Offset, Prime Focus, .8 f/d
Drive System	Patented Roto-Lok® Positioner
Shipping	Three overnight shippable cases
Operating scenarios	Case-based Flyaway or Vehicle Mounted

Electrical RF



Receive

Transmit

Frequency	10.95-12.75 GHz	14.0-14.5 GHz
Gain (Midband)		
R/T	41.7 dBi	43.2 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.3	1.2
-10 dB	2.4	2.0
First Sidelobe Level (Typical)	-22 dB	-25 dB
Radiation Pattern Compliance	>3 dB better than FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	43° K at 30° Elevation	
Polarization	Linear Orthogonal Standard, Optional Co-pol	
Power Handling Capability		0.5KW per port
Cross-Pol Isolation		
On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	30 dB	32 dB
Off-Axis (peak)	22 dB	25 dB
Feed Port Isolation – TX to RX	75 dB	
Satellite System Compliance	Eutelsat, Intelsat, PanAmSat, FCC, Loral Skynet	

Controllers

Standard	Three-axis Jog Control & Display with Auto-stow
Optional Upgrades	
Semi-automatic Operation	Drive to calculated position based on operator entered vehicle location, heading, plus satellite (longitude or listed)
Automatic Operation	Drive to calculated position based on auto GPS and Flux-Gate Compass data and satellite peaking with LNB signal
Auto-acquisition	One-button acquisition of selected satellite including peaking and optimization of cross-pol (certified for auto-commissioning on select services)
Size	Two Rack Units for Semi-automatic & Automatic Controllers Single Rack Unit for Auto-acquisition
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 6/3A peak, 1A continuous

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Mechanical

Az/EI Drive System	Patented Roto-Lok® Cable Drive System
Polarization Drive System	Feed rotated by Non back-driving Worm Gear
Travel	
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° for 2-port and 3-port Feeds ±50° for 2-port Wideband and 4-port feeds
Speed	
Slewing/Deploying	2°/second
Peaking	0.2°/second
Motors	24V DC Variable Speed, Constant Torque
RF Interface	
HPA Mounting	Feed Boom, Inside Vehicle, or Separate
Axis Transition	Rotary Joint for Az, Flexible waveguide for EI & Pol
Waveguide	WR 75 Cover Flange at Pallet Interface Point
Coax	RG59 with Type-N at Pallet Interface Point
Electrical Interface	10 ft. (3 m) Removable Cables for Controller
Manual Drive	Handcrank on Az and EI Axii, Leads from 12VDC Pol Motor

Shipping Configuration

Main Pallet/Container with Positioner	105 lbs. (48 kg.), 59 x 25 x 21 in (150 x 64 x 53 cm)
Reflector Panel Container	55 lbs. (25 kg.), 29 x 29 x 27 in (74 x 74 x 69 cm)
Feed & Vehicle Attachment Components	100 lbs. (45 kg.), 59 x 25 x 21 in (150 x 64 x 53 cm)

Environmental

Wind	
Survival	
Deployed	75 mph (121 kmph)
Stowed	100 mph (161 kmph)
Operational	45 mph (72 kmph), Gusts to 60 mph (97 kmph)
Pointing Loss in Wind	
20 mph (32 kmph)	0.2 dB, 0.15 degrees Typical
30 Gusting to 45 mph (48 to 72 kmph)	0.8 dB, 0.30 degrees Typical
Temperature	
Operational	+5° to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)