

AVL TECHNOLOGIES

Model 2400C SNG

2.4 Meter Motorized Vehicular Antenna



Reflector	2.4 meter Dual-skin Aluminum
Feed	Precision Horn
Optics	Offset, Prime Focus, .6 F/D
Az/EI Drive System	Patented Roto-Lok®
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Rotation of Feed

Electrical RF

Receive

Transmit

Frequency	3.625 – 4.2 GHz	5.850 – 6.425 GHz
Gain (Midband)		
2-port	38.0 dBi	41.8 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	2.0	1.4
-10 dB	4.0	2.7
First Sidelobe Level (Typical)	-20 dB	-25 dB
Radiation Pattern Compliance		
Transmit – 1.5° to 30°		29-25 Log Ø
Receive – 2.4° to 30°	32-25 Log Ø	
Antenna Noise Temperature	45° K at 10° Elevation	
Polarization	Linear Standard, Optional Circular	
Power Handling Capability		1KW per port
Cross-Pol Isolation – On-axis		
Linear	35 dB	35 dB
Circular	19 dB	25 dB
Feed Port Isolation – TX to RX	70 dB	
Satellite System Compliance	Compatible for 2° Satellite Spacing	

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
Size	Two Rack Units for Semi-automatic & Automatic Controllers
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 10/5 A peak, 1A continuous

Mechanical

Az/EI Drive System	Patented Roto-Lok® Cable Drive System
Polarization Drive System	Non Back-driving Worm Gear
Travel	
Azimuth	400° with all 2-port and 4-port with HPA(s) on antenna, 270° Standard with 4-port and HPA(s) in Vehicle
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°, 100° Effective for 2-port Wideband and 4-port feeds
Speed	
Slewing/Deploying	1°/second
Peaking	0.1°/second
Motors	24V DC Variable Speed, Constant Torque
RF Interface	
HPA Mounting	Feed Boom, Rear of Reflector or Inside Truck
Axis Transition	Rotary Joints in Az ,EI, and Pol
Waveguide	WR 137 Groove Flange at Interface Point
Coax	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 EI Axii, Leads from 12VDC Pol Motor
Weight	640 lbs. (290 kg)
Stowed Dimensions	137½ L x 96 W x 23 H inches (349 L x 244 W x 58 H cm)

Environmental

Wind	
Survival	
Deployed	70 mph (113 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)	0.1 dB max
30 Gusting to 45 mph (48 to 72 kmph)	0.4 dB max
Temperature	
Operational	+5 to 125°F (-15° to 52° C)
Survival	-40° to 140°F (-40° to 60° C)