

# AVL TECHNOLOGIES

## 2.4M SNG ANTENNA SYSTEM



### **Mechanical**

Reflector Type	2.4M Prime Focus Offset
Mount Geometry	Elevation over Azimuth
Polarization	Rotation of Feed
Travel	
Azimuth	400° with 2-Port and HPA's in Vehicle 400° with 4-Port and HPA's on Antenna 240° for 4-Port
Elevation	
Operational	0-90° or 0-65° of reflector boresight
Total	0-160°
Polarization	±50° for 4-Port or ±95° for 2-Port
Speed	
Slewing/Deploying	1°/second
Peaking	0.1°/second
Drive System	Roto-Lok ®
Motors	24V DC Variable Speed, Constant Torque
RF Interface	
Waveguide	WR 75 Cover Flange at center of azimuth axis
Coax	RG59
Electrical Interface	25 ft. Cable with Connectors for Controller
Manual	Manual Handcrank on Az and El Azis, 12VDC motor leads from pol motor
Weight	640 lbs.

### **Environmental**

Wind	
Survival	
Deployed	70 mph
Stowed	80 mph
Operational	
Tracking	45 mph gusting to 65 mph at 60° F
Temperature	
Operational	-20°F to 125°F
Survival	-40°F to 140°F

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<u>Electrical RF</u>	<u>Receive</u>	<u>Transmit</u>
Frequency	11.7-12.2 GHz	14.0-14.5 GHz
Gain (Midband)		
R/T	47.7 dBi	49.3 dBi
4-Port	47.4 dBi	49.0 dBi
VSWR		1.30:1
Beamwidth (degrees)		
-3 dB	.73	.61
-15 dB	1.34	1.41
First Sidelobe Level	-20 dB	-20 dB
Radiation Pattern	Meets FCC requirements for 2° Spacing	
Antenna Noise Temperature		
10° Elevation Angle	45°K	
Polarization	Linear	Linear
Power Handling Capability		1KW per port
Cross-Pol Isolation		
On-Axis	35 dB	35 dB
Off-Axis (within .5 dB BW)	27 dB	29 dB
Off-Axis (within 1 dB BW)	25 dB	27 dB
Feed Port Isolation - 4-Port Feed		
RX/RX	30 dB	
TX/TX	30 dB	
TX/RX	60 dB	60 dB
 <u>Controller</u>		
RC3000A	Full-function controller with opt. GPS and Flux-Gate	
Size	Two rack units high	
Input Power	110V AC, 1 ph, 60 Hz, 15 amp	