AvL TECHNOLOGIES

Model 1268 PIB F/A

1.2M Ku/Ka Band Portable Auto-Acquisition Antenna

Reflector Type	1.2M 4-piece Carbon Fiber
Optics	Offset, Prime Focus, 0.8 F/D
Interchangeable Feeds	Ku LP, Ka CP
Positioner	Case-based
Az/El Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Motorized Rotation Feed
Military Standard	MIL-STD-188-164a Type E-V

Mechanical

Travel - Azimuth	±200°
- Elevation	0°-95° of boresight
- Polarization	±91° for Linear Feeds, Adjustable within <1°
Speed - Slewing/Deploying	2°/second
- Peaking	0.2°/second
- Tracking	0.1/second
Electrical Interface	32 ft. Cable with Connectors for Controller
Emergency Drive	Handcrank on Az, El; Knob on Pol
Wind - Operational-mph	
Without anchoring	30 mph
With anchoring	30 mph gusting to 45 mph
- Survival (anchored)	80 mph in zenith stowed position
Temperature - Operational	-20° to 125°F
- Survival	-40° to 140°F
Configuration - Rugged Cases	
Motorized Positioner	22” x 21” x 23”; less than 165 lbs.
Outriggers/Feed Boom/ Reflector	43” x 28” x 21; less than 110 lbs.
RF Interface	
BUC Mounting	Mounted on antenna feed boom
Set-up Time	Less than 15 minutes

Controllers

Type	Fully Automatic Satellite Acquisition, Peaking, and Cross-Pol Adjustment using GPS, Compass, Level Sensor Inputs and auto compensation with Entry of Desired Satellite.
Operator Interface	Front panel keyboard or hand-held remote
Auto Positioning Accuracy	± 0.2°
Input Power	90-256V AC power supply, 8A peak, 2A continuous

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Ku-Band	**Receive**	**Transmit**
Frequency	10.95-12.75 GHz	13.75-14.5 GHz
Gain (Midband)	41.6 dBi	43.1 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.5	1.2
-10 dB	2.7	2.3
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580	
Antenna Noise Temperature	54° K at 20° Elevation, 11.85 GHz	
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)	27 dB	28 dB (35dB with Mode-matched)
Port-to-Port Isolation	35 dB	85 dB
Satellite System Compliance	FCC, Intelsat, and PanAmSat	

Ka-Band	**Receive**	**Transmit**
Frequency	20.2-21.2 GHz	30.0-31.0 GHz
Gain (Midband)	46.2 dBi	49.5 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	0.9	0.6
-10 dB	1.5	1.1
Radiation Pattern Compliance	FCC and MIL-STD-188-164A	
Antenna Noise Temperature	107°K at 20° Elevation, 20.7 GHz	
Polarization	Circular convertible to either RHCP or LHCP	
Power Handling Capability		250 watts per port
Axial Ratio	1.5 dB	1.0 dB
Port-to-Port Isolation	35 dB	35 dB (85 dB with optional TX reject filter)

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