

AvL TECHNOLOGIES

Model 2260

Quad-Band Motorized FlyAway Antenna System



Reflector Type	2.0M segmented carbon fiber
Optics	Offset, Prime Focus, 8 F/D
Interchangeable Feeds	CLP, CCP, XCP, XLP, Ku LP, Ka CP
Positioner	Case-based Jack-in-the-Box
Az/EI Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Motorized Rotation of Linear Feeds
Military Standard	MIL-STD-188-164a Type E-V

Mechanical

Travel	- Azimuth	400°
	- Elevation: Operational	15-90° of boresight with 400° Az Travel
		0-90° of boresight with ± 15° Az Travel
	- Polarization	±95° of Linear Feeds, Adjustable within <1°
Speed	- Slewing/Deploying	2°/second
	- Peaking	0.2°/second
	- Tracking	0.1°/second
Electrical Interface		25 ft. Cable with Connectors for Controller
Emergency Drive		Handcrank on Az, EI; 12V leads on pol
Wind - Operational-mph		
	Without anchoring	35 mph
	With anchoring	45 mph
	- Survival	80 mph in zenith stowed position
Temperature - Operational		+15° to 125°F
	- Survival	-40°F to 140°F
Configuration - Rugged Cases		
	Motorized Positioner	26" x 27" x 25" 148 lbs.
	Outriggers/Feed Boom	
	Ku-LP Feed	20" x 59" x 12" 105 lbs.
	Reflector Panels	36" x 34" x 12" 148 lbs.
	Feeds	
	C-CP and C-LP	30" x 30" x 16" 60 lbs.
	X-CP, X-LP and Ka-CP	30" x 30" x 16" 60 lbs.
RF Interface		
	HPA Mounting	Separate CFE case or rear of reflector
Set-up Time		Less than 30 minutes

Controllers

Auto-Acquisition	One-button deploy with full-automatic satellite acquisition, peaking, and cross-pol adjustment using GPS, compass, and level-sensor inputs; certified for auto-commission on certain satellite systems.
Tracking	Step-tracking with CFE beacon receiver to reduce gain loss to 0.8dB without wind and 2.0dB with operational winds
Operator Interface	Front panel keyboard with 4-line display or remote PC
Auto Positioning Accuracy	±0.2°
Input Power	90-256V AC power supply, 10A peak, 2A continuous

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C-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency	3.40-4.20 Ghz	5.85 -6.65 Ghz
Polarization	Linear or circular, convertible to either RCP or LHCP	
Gain (Midband)	36.1 dBi	40.5 dBi
Antenna Noise Temperature @ 30°	50°K	
G/T with 20°K LNB	17.0 dB/° K	
Radiation Pattern Compliance	IESS-601 and FCC 47CFR25.209	
Axial Ratio within Tracking Cone		1.3 dB
Linear Polarization with Tracking Cone		>30 dB
Power Handling Capability		1000 watts per port

X-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency	7.250-7.750 Ghz	7.900-8.400 Ghz
Polarization	Linear or circular, convertible to either RCP or LHCP	
Gain (Midband)	41.9 dBi	42.6 dBi
Antenna Noise Temperature @ 30°	47°K	
Minimum G/T with 45° K LNA	21.8 dB/° K	
Radiation Pattern Compliance	MIL-STD-188-164A	
Axial Ratio within Tracking Cone	<1.21 dB	<2.0 dB
Power Handling Capability		1000 watts per port

Ku-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency	10.95-12.75 Ghz	13.75-14.5 Ghz
Polarization	Orthogonal Linear, Optional Co-pol Linear	
Gain (Midband)	45.7 dBi	47.5 dBi
Antenna Noise Temperature @ 30°	47°K	
G/T with 43°K LNB	25.4 dB/° K	
Radiation Pattern Compliance	IESS-601 Std. G and FCC 47CFR25.209	
Cross-Pol Isolation	35 dB within cone of tracking error	
Power Handling Capability		500 watts per port

Ka-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency (Commercial)	17.7-20.2 Ghz	27.5-30.0 Ghz
Frequency (Military)	20.2-21.2 Ghz	30.0-31.0 Ghz
Polarization	Circular	RHCP and LHCP
Gain (Midband)	49.5 dBi	54.0 dBi
Antenna Noise Temperature @ 30°	47°K	
G/T with 100° LNB	27.5 dB/° K	
Radiation Pattern Compliance	FCC and MIL-STD-188-164A	
Axial Ratio	<1.5 dB	<1.0 dB
Power Handling Capability		250 watts per port