

AvL TECHNOLOGIES

Model 2060 / 1220 PIB F/A

Auto Acquire Tri-Band Motorized FlyAway Antenna

Reflector Type	2.0M 9 Segment AvL Carbon Fiber
Optics	Offset, Prime Focus, 0.8 F/D
Interchangeable Feeds	C LP or CP, X CP, Ku LP
Positioner	Case-based Pack-in-the-Box
Az/EI Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Motorized Rotation of Linear Feeds



Mechanical

Travel	- Azimuth	±200°
	- Elevation (Operational)	5°-90° with ±200° Az Travel
		0°-90° with ±15° Az Travel
	- Polarization (LP Feeds)	±95° Adjustable within <1°
Speed	- Slewing/Deploying	2°/second Az; 1°/second EI
	- Peaking	0.2°/second
	- Tracking	0.1°/second

Emergency Drive Hand Crank on Az, EI; Hand Knob on Pol

Configuration – Rugged Cases, 1 each Positioner, Outriggers/Boom, Reflector:

-1220 Motorized Positioner	26" x 24" x 30"	150 lbs.
-Outriggers/Feed Boom	71" x 18" x 17"	105 lbs. (includes Ku feed)
-Reflector Panels	39" x 39" x 24"	170 lbs. Std. 150 lbs. Optional
-C/X Feeds (up to 3/case)	43" x 27" x 20"	70 lbs. typical

Interfaces

-HPA Mounting	Feed boom or behind reflector (additional CFE case or optional case required)
-RF	Coax (2) at base, Flex Waveguide from feed with groove
-Electrical	25 ft. Cable with Connectors for Controller

Set-up Time Less than 30 minutes

Environmental

Wind	- Operational	30 mph gusting to 45 mph
	- Survival	Anchoring required when gusts exceed 35 mph
		80 mph (With anchoring in zenith stowed position)
Pointing Loss		1 dB typical, 2 dB max in operational wind (Ku-band)
Temperature	- Operational	+14° to 125°F (-10° to 52°C)
	- Survival	-40° to 140°F (-40° to 60°C)

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All specifications subject to change without notice.

Rev A 1/09

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Controllers

Auto-Acquisition	One-button deploy with auto acquisition, peaking, and cross-pol adjustment using GPS, compass, and level-sensor inputs; certified for auto-commission on certain satellite systems
Tracking	Inclined orbit step-tracking with CFE or optional beacon receiver
Operator Interface	Front panel or Hand Held Remote or Remote PC options
Positioning Accuracy	± 0.2°
Input Power	Single phase 110/240 60/50 Hz 10 A peak, 2 A continuous

C-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency	3.625-4.20 Ghz	5.85 -6.425 Ghz
Polarization	Linear or circular options	
Gain (Midband)	36.4 dBi	40.3 dBi
Antenna Noise Temperature @ 20° EI	49° K	
G/T with 20°K LNB, Midband	17.9 dB/° K	
Radiation Pattern Compliance	IESS-601 and FCC 47CFR25.209	
Circular Axial Ratio (within Pointing Cone)	2.3 dB	1.3 dB
Linear Cross Pol Isolation (in Ptg. Cone)	>30 dB	>30 dB
Power Handling Capability		1000 watts per port

X-Band

	<u>Receive</u>	<u>Transmit</u>
Frequency	7.25 7.75 Ghz	7.9 - 8.4 Ghz
Polarization	Circular RHCP or LHCP	
Gain (Midband)	42.0 dBi	42.8 dBi
Antenna Noise Temperature @ 20° EI	50° K	
G/T with 55°K LNB, Midband	21.7 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)	46.0 dBi	47.6 dBi
Antenna Noise Temperature @ 20°	57° K	
G/T with 50°K LNB, Midband	25.7 dB/° K	
Radiation Pattern Compliance	IESS-601 Std. G and FCC 47CFR25.209	
Cross Pol Isolation - on-axis	35 dB	35 dB
- within pointing cone	28 dB standard	30 dB standard
- within pointing cone	25 dB MM option	35 dB MM option
Power Handling Capability		500 watts per port

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