

AvL TECHNOLOGIES

Model 2.4m Manual FlyAway Quad-Band SNG / Military Antenna

Unique Features

- Ultra Lightweight Manual Antenna with Integral Base and Extending Stabilizer Legs
- 2.4m, 9 piece Carbon Fiber Reflector
- Unique Azimuth Mechanism and Elevation ACME Screw Manual Actuators Allow Full Range of Motion for Both Coarse and Fine Adjustment
- 15-Minute Setup

Standard Rx/Tx Feed

2-Port Ku-Band Precision (standard Cross-Pol comp.)

Optional Rx/Tx Feeds

- 4-Port Ku-Band Precision (standard Cross-Pol comp.)
- 2- or 4-Port Ku-Band Mode-Match (enhanced Cross-Pol comp.)
- 2- or 4-Port C-Band CP
- 2- or 4-Port C-Band LP
- 2-Port C-Band Troposcatter
- 2-Port X-Band with optional Rx/Tx reject filter kit
- 2- or 4-Port Ka-Band (MIL or Commercial)

Military Standard

MIL-STD-188-164A

Polarization Adjustment

Rotation of Feed

Standard Colorization

White, OD Green or Desert Tan (optional colors available)



Mechanical

Reflector Construction		Carbon Fiber
Travel		
Azimuth	Coarse	360° Continuous
	Fine	± 10°
Elevation	Coarse	0 - 90°
	Fine	0 - 90°
Polarization (Ku)		± 95°
RF Interface		
BUC Mounting		Feed Boom, Rear of Reflector, or Remote
Coax		Two connectors at Amplifiers
Electrical Interface		Connectors at Amplifiers
Set-up Time		Less than 15 minutes
Stowed Configuration & Weights		
Positioner, Boom, Struts		Positioner 37" x 18" x 9", 84 lbs.; In one transit case: 37.25" x 27.2" x 15.44", 120 lbs. max
Tripod		26" x 24" x 60", 94 lbs. Not including ballast required in center column. In one transit case: 30" x 27" x 63", 180 lbs. max
Reflector		Two Cases: 38" x 38" x 22", 120 lbs. each
Feed		One Case: 43" x 28" x 21", 70 lbs.
Total Weight		Antenna only = 330 lbs., with cases = 610 lbs.

Environmental

Wind – Survival (anchored)		80 mph in zenith (90° elevation) position
Wind - Operational		
	Without anchoring	25 mph
	With anchoring	30 mph gusting to 45 mph
Pointing Loss in Wind		
	C-band Receive, Operational Winds	0.8 dB typical, 2.0 dB max
Temperature:		
	Operational	-40° to 155° F (-40° to 68° C)
	Survival	-60° to 160° F (-51° to 71° C)

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RF/Electrical

Feed Type ►	Std. 2-Port Precision Ku <i>DBS bands available upon request</i>		Opt. 2-Port C		Opt. 2-Port C - INSAT		Opt. 2-Port X (Military/WGS)		Opt. 2-Port Ka	
RF Parameter ▼	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency Range (GHz)	10.95-12.75	13.75-14.5	3.625 - 4.20	5.85 - 6.425	4.50 - 4.80	6.725 - 7.025	7.25 - 7.75	7.9 - 8.4	20.2 - 21.2 (military) or 17.7 - 20.2 (commercial)	30.0 - 31.0 (military) or 27.5 - 30.0 (commercial)
Polarization Configuration	Orthogonal Linear, Optional Co-pol Linear		Linear or Circular Options				Circular RHCP or LHCP		Circular or Linear	
Gain (mid-band, dBi)	47.0	48.8	38.0	41.8	39.2	42.6	43.3	44.1	52.1	55.0
VSWR	1.30:1		1.30:1				1.30:1		1.30:1	
-3dB Beamwidth (mid-band)	0.7°	0.6°	2.2°	1.4°	1.9°	1.3°	1.2°	1.1°	0.4°	0.3°
Radiation Pattern Compliance	FCC 25.209, ITU-R S.580-6, IESS 208		FCC 25.209, ITU-R S.580-6, IESS 207		ITU-R S.580-6		MIL-STD-188-164A		FCC 25.209, MIL-STD-188-164A	
Antenna Noise Temp. (mid-band, 20° el)	61° K		49° K		48° K		59° K		104° K	
Power Handling Capability		500 watts per port		1000 watts per port		1000 watts per port		1000 watts per port		250 watts per port
G/T with LNB, Midband	26.5 dB/° K (with 50°K LNB)		19.5 dB/° K (with 20°K LNB)				22.7 dB/° K (with 55°K LNB)		29.0 dB/° K (with 100°K LNB)	
Axial Ratios										
Axial Ratio within Tracking Cone			2.3 dB (CP only)	1.3 dB (CP only)			1.21 dB (CP only)	2.0 dB (CP only)	1.5 dB (CP only)	1.0 dB (CP only)
Cross-Pol Isolation										
On-axis within pointing cone	35 dB	35 dB	35 dB / 30 dB	35 dB / 30 dB	35 dB / 30 dB	35 dB / 30 dB				
Within Pointing Cone	28 dB standard	30 dB standard								
Within Pointing Cone	25 dB MM option	35 dB MM option								
Feed Port Isolation – TX to RX (dB)	35	80 (includes filter)	65	105 (includes filter)	35	70	115 (includes filter)	115 (includes filter)	30	80 (includes filter)

Available Options, Upgrades & Services

- Standard feed is 2-Port Ku-Band Precision (standard Cross-Pol comp.); optional feeds include 4-Port Ku-Band Precision, 2- or 4-Port Ku-Band Mode Match (enhanced Cross-Pol comp.), 2- or 4-Port C-Band CP, 2- or 4-Port C-Band LP, 2-Port C-Band Troposcatter, 2- or 4-Port Ka-Band Commercial, 2- or 4-Port Ka-Band MIL (WGS) and 2-Port X-Band MIL (WGS) with optional Rx/Tx Reject Filter Kit
- BUC/LNB mounting
- Waveguide interconnect options
- Wind anchoring options: ground stakes, sand bags
- Computer Assisted Pointing (CAP)