

ANTENNA FEATURES

- 1.2m carbon fiber single piece reflector
- Zero-backlash AvL cable drive
- Compact/rugged polarization worm gear drive
- One-button auto-acquisition
- Two-Port Ku-Band Precision Feed (standard cross-polarization composition)



MECHANICAL SPECIFICATIONS

Az/EI Drives		Motorized AvL zero backlash cable drive
Polarization Drive System		Motorized worm gear drive (standard)
Reflector Construction		1.2m single piece carbon fiber
Axis Travel	Azimuth	400° (± 200°)
	Elevation	0° to 90° of reflector boresight; electrical standard Limits at 5° to 65° (CE approval) or 0° to 90°
	Polarization	± 95°
Axis Speed	Slewing/Deploying	2°/second azimuth; 1°/second elevation
	Peaking	0.2°/second
Motors		24 VDC variable speed, constant torque
RF Interface	BUC/HPA Mounting	Feed boom (maximum weight 15 lbs. (6.7 kg)); maximum dimensions for BUC mounting on feed boom 22 L x 13.8 W x 8.5 H in. (56 L x 35 W x 22 H cm)
	Waveguide	WR75 cover flange at interface point
	Coax	Two Type F connectors at antenna base
Electrical Interface		One 25 ft. (8 m) cable with connectors for controller
Manual/Emergency Drive		Hand crank on azimuth, elevation, and polarization
Weight (approximate)		100 to 120 lbs. (46 to 55 kg), depending on options
Stowed Dimensions		70 L x 48 W x 15 H in. (178 L x 122 W x 38 H cm)
Time to Acquisition		Less than 10 minutes; eight minutes typical
Mounting		Pallet for vehicle roof mounting or specialized case

ENVIRONMENTAL SPECIFICATIONS

Wind – Survival	Deployed	55 mph (105 km/h)
	Stowed	80 mph (129 km/h)
Wind – Operational		45 mph (72 km/h)
Pointing Loss in Wind (RX)	20 mph (32 km/h)	0.5 dB typical
	30 mph gusting to 45 mph (48 km/h to 72 km/h)	1.4 dB typical
Temperature	Operational	-22° to 125° F (-30° to 52° C)
	Survival	-40° to 140° F (-40° to 60° C)

RF PARAMETERS: KU-BAND (TWO-PORT PRECISION)

		Receive	Transmit
Frequency Range (GHz)		10.95 – 12.75	13.75 – 14.50
Polarization Configuration		Linear orthogonal standard, optional co-polarization	
Gain (dBi)	Two-Port	41.6	43.1
Beamwidth (Degrees)	-3 dB	1.5	1.2
Radiation Pattern Compliance		FCC 25.209, ITU-R S.580-6	
Antenna Noise Temperature (Midband, 20° EI)	Two-Port	54° K	--
Allowable Input Power Density			FCC: -14 dBw / 4 KHz ITU: -0 dBw / 4 KHz
Feed Port Isolation (Tx to Rx, dB)		35	80
VSWR		1.30:1	1.30:1

CONTROLLER – AAQ1500

Features	Compact, modular environmental enclosures (ACU, NAV RIOM). Distributed I/O utilizes multiple processors communication over Ethernet. 8 GB micro-SD, 2 GB RAM. One-button deployment and acquisition; one-button stop/stow. Includes AvL 250 W AAQ CIP power supply (1RU rack mount). Auto-acquisition sensor package – includes GPS (GLONASS compliant), compass, and tilt sensors. Integrated RF receiver for robust automatic satellite acquisition
Software / GUI	AAQRemote / AAQ WebUI
CIP Input Power	120-240 VAC 50/60 Hz 4A peak to standard AvL 250 W 28 VDC (190 W antenna running with maximum load)

OPTIONS – UPGRADES AND SERVICES

- Add universal BUC mounting kit
 - Add universal BUC mounting kit with factory integration (of CFE BUC/LNB) by AvL
 - Add factory system modem integration and network testing by AvL
 - Add dedicated BUC power/M&C cabling, including embedded cabling (I/O panel to BUC) and remote BUC cable kit (25 ft. or 8 m); including I/O panel upgrade
 - Add custom logo on reflector face (one- or two-color, as per AvL Logo Policy)
 - Increase remote cable length (to 50 ft. or 15 m)
 - Add aerodynamic cowling
 - Custom colorization (contact AvL for available colors)
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