

ANTENNA FEATURES

- 1.2m carbon fiber single piece reflector
- Zero-backlash AvL cable drive
- Rotary joint on polarization axis with flexible waveguide to BUC (Ku-Band)
- One-button auto-acquisition
- Offset, prime focus, 0.8 f/D
- Standard Two-Port Ku-Band Precision Feed (standard cross-polarization composition)
- Optional:
 - Two-Port Ku-Band Mode-Match (enhanced cross-polarization composition)
 - Four-Port Ku-Band Wideband
 - ViaSat Ka-Band TRIA
 - Two- or Four-Port Ka-Band
 - Two-Port X-Band
- Standard motorized worm gear drive



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° for Two-Port and Three-Port Feeds; ± 50° for Two-Port Wideband and Four-Port Feeds
Axis Speed	Slewing/Deploying	2°/second azimuth; 1°/second elevation
	Peaking	0.2°/second
Motors		28 VDC variable speed, constant torque
RF Interface	BUC/HPA Mounting	Feed boom (35 lbs. (16 kg); maximum BUC envelope: 18 L x 13.75 W x 8.5 H in. (46.7 L x 34.9 W x 21.6 H cm), or inside truck; optional oversized amplifier mounting (note that BUC mounting can impact elevation or stow height)
	Axis Transition	Twist-flex or rotary joints
	Waveguide	WR75 cover flange at interface point
	Coax	RG59 run from feed to base plus 25 ft. (8 m)
Electrical Interface		One 25 ft. (8 m) cable with connectors for controller
Manual/Emergency Drive		Hand crank on azimuth, elevation, and polarization
Weight (approximate)		125 - 175 lbs. (57 - 79 kg) depending on options selected
Stowed Dimensions		69 L x 48 W x 19 H inches (175 L x 122 W x 48 H cm)

ENVIRONMENTAL SPECIFICATIONS

Wind – Survival	Deployed	75 mph (121 km/h)
	Stowed	100 mph (161 km/h)
Wind – Operational		30 mph (48 km/h), gusts to 45 mph (72 km/h)
Pointing Loss in Wind (RX)	20 mph (32 km/h)	0.2 dB typical
	30 mph gusting to 45 mph (48 km/h to 72 km/h)	0.8 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, MM)

<i>DBS Bands available upon request.</i>		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, IESS 208	
Antenna Noise Temperature (Midband, 20° EI)	Two-Port	54° K	--
Power Handling Capability		--	1000 W per port
Feed Port Isolation (Tx to Rx, dB)		35	80 (including filter)
Axial Ratio, CP Only, Within Pointing Cone (dB)		--	--
VSWR		1.30:1	1.30:1
G/T (dB/°K) with LNB at Midband, Clear Horizon		21.4 dB/°K with 50° LNB	--

Contact AvL Technologies for specifications of additional feeds.

CONTROLLER – AAQ1500

The **AAQ Antenna Controller** is a flexible, cost-effective embedded control system designed for transportable satellite antennas operating in harsh environments.

Its compact pedestal mounted architecture streamlines cabling and supports a broad range of antenna types while enabling fully automatic acquisition - including one-button deploy/acquire and automated azimuth, elevation, and cross-polarization peaking.

Integrated GPS, electronic compass, and attitude sensors with auto compensation ensure accurate pointing, and a built-in receiver provides precise peaking on satellite beacons or live data carriers.

Customer-configurable target profiles, OpenAMIP support, and both Web-based and .NET GUI control interfaces give users a flexible, modern operating environment tailored for rapid and reliable operation.

OPTIONS – UPGRADES AND SERVICES

- Upgrade feed to Two-Port Ku-Band Mode-Match, Four-Port Ku-Band Wideband, Two- or Four-Port Ka-Band, ViaSat TRIA, Two-Port X-Band
- Optional H/V switch (Ku-Band Wideband)
- Optional rotary joint on polarization axis with optional flexible waveguide to BUC
- Add co-polarization kit (for Two-Port Ku-Band Feeds only) - configures receive and transmit to same polarization
- Mounting pallet (adds 2.0 in. (5 cm) to stow height)
- Add BUC/HPA mounting (note that minimum elevation may be restricted by these options)
- Upgrade to custom RF/IF I/O cabling configurations available
- Custom colorization (contact AvL for available colors)
- Add custom logo on reflector face (one- or two-color, as per AvL Logo Policy)
- Spare parts kit