

ANTENNA FEATURES

- 4.6m 17-piece Reflector comprising carbon fiber with axis-symmetric-shaped axially displaced ellipse (ADE)
- Zero-backlash AvL Cable Drive
- Tilted axis to eliminate keyhole effect (tracking interruption as satellite passes overhead) during operation
- Folded optics with Sub-Reflector
- Standard Three-Port S-Band Feed
- Standard AvL White colorization



MECHANICAL SPECIFICATIONS

Az/EI/Pol Drives		<ul style="list-style-type: none"> ▪ Motorized elevation jack screw over azimuth cable drive ▪ Motorized worm gear drive
Reflector Construction		4.6m 17-piece AvL carbon fiber reflector
Axis Travel	Tilt	±135°, full hemispheric coverage
	Azimuth	±135°
	Elevation	<ul style="list-style-type: none"> ▪ 0° to 90° (7° over leg) of reflector boresight from calibrated inclinometer ▪ 5° to 90° standard limits or 5° to 65° (CE approval)
	Polarization	±95° S-Band
Axis Speed	Slewing/Deploying	10°/second azimuth, 10°/second elevation with 15°/second acceleration
	Tracking	Up to 2°/second
	Peaking	0.2°/second
Motors		Servo motors, 200 VDC variable speed
RF Interface	BUC/HPA Mounting	On Azimuth Positioner
	BDC Mounting	Behind Reflector
	ACU	On Quadpod
	Waveguide / Coax	Cover flanges at interface points on S-Band Feed and equipment; connectors bulkhead on S-Band Feed
Electrical Interface		Connectors on ODU on Quadpod Leg
Manual/Emergency Drive		Removal of motor and insertion of power drill with adapter coupling (only adapter coupling provided by AvL Technologies)
Weight (approximate)		Maximum weight is 310 lbs. (140.6 kg); see OM for individual case details
Stowed Dimensions		Ships on standard FedEx 48" L x 72" W x 60" H (122cm L x 183cm W x 152cm H) pallets or configured to fit onto two U.S. MIL 463-L pallets; base antenna packs on four standard FedEx pallets

ENVIRONMENTAL SPECIFICATIONS

Wind – Survival	Deployed	95 mph (153 km/h) in 90° elevation position
	Stowed	125 mph (201 km/h)
Wind – Operational		45 mph (48 km/h), gust to 65 mph (105 km/h)
Pointing Loss in Wind (RX)	10 mph (16 km/h)	< 0.8 dB
Temperature	Operational	-31° to 125° F (-35° to 52° C)
	Survival	-40° to 140° F (-40° to 60° C)
Shock and Vibration		Designed for transport via rough roads, rail, sea and air
Corrosion Protection		For all regions from coastal to industrial, some periodic maintenance required for appearance
Humidity, Rain, Blowing Sand		Sealed to withstand 0-100% with condensation, >4 inches/hour (102 mm/hr), blowing to 40 mph (64 km/h)

RF PARAMETERS: S-BAND (3-PORT)

		Receive	Transmit
Frequency Range (GHz)		2.20 - 2.40	2.0 - 2.16
Polarization Configuration		Circular	
Gain (dBi)		38.0	36.4
VSWR		1.4:1	
Beamwidth (Degrees)	-3 dB	2.0	2.2
	-10 dB	3.6	4.0
Radiation Pattern Compliance		FCC §25.209	
Antenna Noise Temperature (Midband, 20° EI)		30° K	-
Power Handling Capability		-	2500W per port
G/T Midband (Clear Horizon, Typical)		20.9 dB/°K with 30°K LNB	--
Feed Port Isolation (Tx to Rx, dB)		100	100
Circular Axial Ratio (Within Pointing Cone, dB)		3	2.5

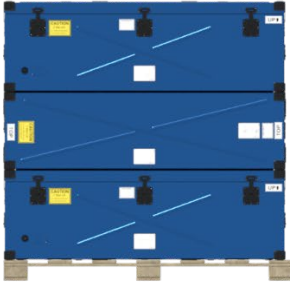
CONTROLLER - ITC

Features	AvL Technologies Intelligent Terminal Controller (ITC) and embedded Antenna Control Unit (ACU) in enclosure with fixture for mounting on Quadpod. One-button auto-acquisition of selected satellites, including peaking and optimization of cross-polarization. Internal movement detector and automatic stowing. Optional handheld control and separate power supply. Certified for commissioning on most satellite services.
Interface	Web-based GUI software (ITC Explorer) via Ethernet on AIU. Customizable power cable for use with NEMA 120/240V outlets.
Input Power	120/240 VAC 60/50 Hz, 6/3 A typical. 30-amp breaker recommended.

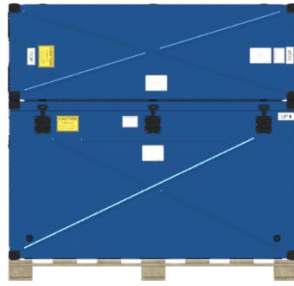
OPTIONS – UPGRADES AND SERVICES

- Optional feeds compatible with the **4670HS** and available for order from AvL Technologies:
 - Two-Port Ku-Band Mode-Match (Enhanced Off-Axis Cross-Polarization)
 - Four-Port Ku-Band Precision or Mode-Match
 - Two-Port Ka-Band (Linear Polarization or Circular Polarization)
 - Four-Port Ka-Band (Linear Polarization or Circular Polarization)
 - Two-Port C-Band (Linear Polarization or Circular Polarization)
 - Three-Port C-Band (Linear Polarization or Circular Polarization)
 - Four-Port C-Band (Linear Polarization or Circular Polarization)
 - Two-Port Extended C-Band (Linear Polarization)
 - Two-Port X-Band
 - Two-Port C-Band Troposcatter Feed
 - Two-Port S/L-Band
- Ku-Band H/V Switch (only for systems equipped with Ku-Band Feeds)
- Upgrade to custom RF/IF I/O cabling configurations
- Custom colorization (contact factory for available colors)
- Add custom logo on Reflector face (one- or two-color, as per AvL Logo Policy)
- Spare Parts Kit

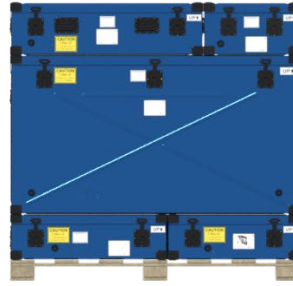
PACKAGING CONFIGURATION



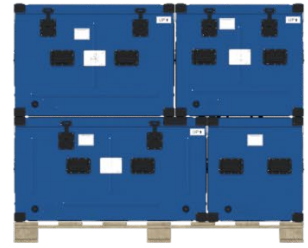
PALLET 1



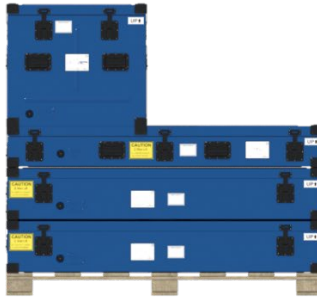
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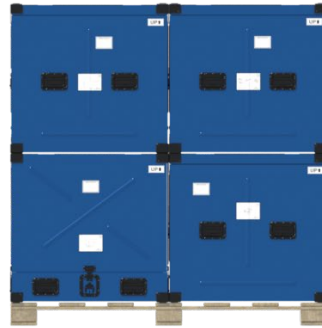
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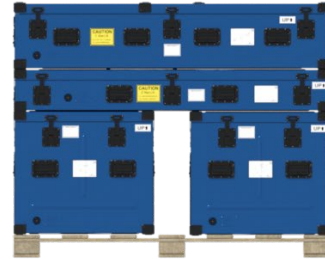
PALLET 4



PALLET 5



PALLET 6



PALLET 7

