

AvL TECHNOLOGIES

Model 1.2m 1030 FA SNG/Military DBS-Band Motorized Transportable FlyAway Antenna

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| Unique Features | <ul style="list-style-type: none"> • 1.2m Segmented 6-Piece AvL Carbon Fiber Reflector • Rugged AvL Cable Drive Positioner • Tripod Mount or optional Case-Based Mount • Offset Prime Focus Highly Efficient Optics • Interchangeable Feeds • 15-Minute Setup; One-Button Auto-Acquisition |
| Standard Rx/Tx Feed | <ul style="list-style-type: none"> • 4-Port DBS-Band CP |
| Optional Rx/Tx Feeds | <ul style="list-style-type: none"> • 2-Port Ku Precision (standard Cross-Pol comp.) • 2-Port Ku Mode-Match (enhanced Cross-Pol comp.) • 2-Port X-Band • 2-Port Ka-Band • 4-Port Ka-Band |
| Polarization Adjustment | <ul style="list-style-type: none"> • Ku LP: Motorized/Manual Options • Ka CP: Manual, Field-Reversible LH/RH • X CP: Manual, Field-Reversible LH/RH |
| Military Standard | <ul style="list-style-type: none"> • MIL-STD-188-164A Compliant |
| Standard Colorization | <ul style="list-style-type: none"> • White, OD Green or Desert Tan (optional colors available) |



Mechanical

Az/EI Drive	Motorized AvL Low Backlash Cable Drive System (Patent Pending)	
Polarization Drive System	Motorized/Manual Options depending on feed	
Reflector Construction	1.2m Segmented 6-Piece AvL Carbon Fiber Reflector	
Axis Travel	<u>Case-Based</u>	<u>Tripod</u>
Azimuth	±90° (CFE base dependent)	±90°*
Elevation (operational)	7°-95° (CFE base dependent)	0°-95°
Polarization (Ku only)	±95°	±95°
Az/EI Speed	Azimuth: 2°/sec Elevation: 1°/sec	
Slewing/Deploying (typical)	Azimuth: 0.2°/sec Elevation: 0.2°/sec	
Peaking (typical)		
Motor	24V DC variable speed, constant torque	
Manual/Emergency Drive	Handcrank for az and el, knob on pol	
Interfaces		
BUC Mounting	Feed boom or behind reflector (additional CFE case or optional case may be required)	
RF	Std. 50 ohm Coax (2) at base, cover flange at feed Tx port	
Electrical	30 ft. cable with connectors for controller	
Electrical Interface	Connectors on base	
Transit Configuration (Ku-band)	<u>Tripod</u>	<u>Case-Based</u>
Case 1: Positioner & Feed	31.3" x 20.4" x 15.5" (< 50 lbs)	29.0" x 20.3" x 16.9" (<70lbs)
Case 2: Reflector, Boom, Controls	31.3" x 20.4" x 15.5" (< 50 lbs)	31.3" x 20.4" x 15.5" (< 70 lbs)
Set-up Time	Less than 15 minutes	

Environmental

Wind – Survival (anchored)	80 mph in zenith position
Wind – Operational	
Without Anchoring	30 mph
With Anchoring	30 mph gusting to 45 mph
Pointing Loss in wind	
DBS-band	1.0 dB max
Temperature:	
Operational	-22° to 125°F (-30° to 52° C)
Survival	-40° to 140°F (-40° to 60° C)

*limited az travel between tripod legs when below 20° elevation

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RF/Electrical

Feed Type ▶	Std. 4-Port DBS		Opt. 2-Port Ku		Opt. 2-Port Ka	
RF Parameter ▼	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency Range (GHz)	12.2-12.7	17.3-17.8	10.95-12.75	13.75-14.5	20.2 - 21.2	30.0 - 31.0
Polarization Configuration	Circular		Linear Orthogonal standard, Optional Co-pol		Circular or Linear	
Gain (mid-band)	42.0 dBi	45.0 dBi	41.6 dBi	43.1 dBi	46.2 dBi	49.5 dBi
Beamwidth (midband) -3 dB	1.4°	1.0°	1.5°	1.2°	0.8°	0.6°
Radiation Pattern Compliance			FCC § 25.209, ITU-R S.580.6, IESS 208		Per MIL-STD-188-164A	
Antenna Noise Temp. at 20° Elevation	56° K		54° K at 11.85 GHz		107° K @ 20.2 GHz	
G/T with 50° LNB, midband, clear horizon	21.5 dB/K		21.3 dB/K		21.1 dB/K with 100°K LNB	
Power Handling Capability		750 watts max		500 watts per port		250 watts per port
VSWR	1.30:1	1.20:1	1.30:1	1.30:1	1.30:1	1.30:1
Axial Ratio						
CP only, within pointing cone	1.5 dB	1.0 dB			1.5 dB	1.0 dB
Cross-Polarization Isolation						
On Axis (minimum)			35 dB	35 dB		
Off Axis (in 1 dB BW)			28 dB	30 dB		
Port-to-Port Isolation – Rx/Tx, Tx/Rx	65 dB	100 dB	35 dB	85 dB	85 dB	85 dB (with filter)

Controller

Feature ▼	Controller Type ▶	Std. Auto-Acquire with Opt. Ethernet IP Interface	Opt. Enhanced Auto-Acquire with Ethernet IP Interface
Standard Features		Fully-automatic satellite acquisition, with automatic azimuth, elevation and cross-polarization peaking; includes on-board, one-button deploy/acquire interface for pre-configured systems; includes on-board GPS, electronic compass, level sensors and auto-compensation; customer-configurable satellite list. <i>Note: Beacon Receiver or Modem as acquisition signal source may be required for non-commercial satellites.</i>	
Integration		Embedded w/ Handheld, incl. Shelf-Mount P/S (optional 1RU w/ front-panel keypad + integral P/S)	Embedded w/ Ethernet IP Interface (P/S optional) (optional rack-mount P/S available)
User Interface		Menu-driven display w/ keypad	Intelligent/simple GUI for on-board or remote CFE laptop
Input Power		115/230 VAC (at rack); up to 200W	28V DC (at antenna positioner); optional 115/230 VAC rack-mount power supply; up to 200W
Software Upgrades/Options		Inclined orbit tracking (using step-track or TLE track); automatic band sensing	Inclined orbit tracking (using step-track, Predictive track, or TLE track); automatic band sensing

Available Options, Upgrades & Services

- BUC/HPA mounting
- Optional 75 ohm coax
- Waveguide interconnect options
- Beacon receiver – inclined orbit tracking – resolvers/upgrade
- Grounding options (lightning conductor)

- Anchoring kit options
- Custom logo on reflector face (1- or 2-color; per AvL Logo Policy)
- Controller options – see above
- Spare parts kit
- Custom pack-ups

