

**AvL TECHNOLOGIES**  
**Model 1296K iSNG**  
**1.2M AUTO-ACQUISITION FLYAWAY ANTENNA**



Reflector Type	1.2M
Standard	2-piece SMC reflector
Optional	AvL 4-piece carbon fiber
Feed - Standard	2-port standard feed
- Optional	2-port global mode-matched 3-port (co-pol)
Optics	Offset, Prime Focus, .8f/d
Drive System	Patented Roto-Lok® 3-axis positioner
Configuration	Two-case motorized flyaway
Controller	One-button auto-acquisition

**Electrical RF**

**Receive**

**Transmit**

Frequency	10.95-12.75 GHz	13.75-14.5 Ghz
Gain (Midband) - R/T	41.6 dBi	43.2 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3 dB	1.25	1.1
-10 dB	2.1	1.8
First Sidelobe Level (Typical)	-22 dB	-25 dB
Radiation Pattern Compliance	Better than FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	43° K at 30° elevation	
Polarization	Linear Orthogonal standard, Optional co-pol	
Power Handling Capability		0.5 KW per port
Cross-pol Isolation		
On-Axis (minimum)	35 dB	35 dB
Off-Axis (within 1 dB BW)	30 dB	27 dB (35 dB with mode-matched)
Off-Axis (peak)	22 dB	25 dB (32 dB with mode-matched)
Feed Port Isolation - TX to RX	75 dB	
Satellite System Compliance	FCC, Intelsat, and PanAmSat	

**Controller**

Type	Fully-automatic satellite acquisition, peaking, and cross-pol adjustment using GPS, compass, and level sensor inputs with entry of desired satellite
Positioning Accuracy	≤±0.1 degree
Size	
Standard	Two cases 6" x 6" x 3.5" (15 cm x 15 cm x 9 cm)
Optional Rack-Mounting	1 RU chassis 8" (20 cm) deep, weight 3.75 lbs. (1.7 kg)
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 6/3A peak, 1A continuous

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## **Mechanical**

Az/EI Drive System	Patented Roto-Lok® cable drive system
Polarization Drive System	Patented Roto-Lok® cable drive system rotates reflector/feed
Travel - Azimuth	400°
- Elevation	True elevation readout from calibrated inclinometer
Mechanical	0° to 80° of reflector boresight
Electrical	Standard limits at 15° to 65° (CE Approval) or 15° to 80°
- Polarization	±95°
Speed - Slewing/Deploying	8°/second in azimuth, 5°/second in elevation, 5°/second in polarization
- Peaking	0.2°/second
Motors	24V DC variable speed, constant torque
RF Interface	
BUC/HPA Mounting	
2-watt	Feed boom
4-watt	Base of feed boom or rear of reflector
8-watt	Rear of reflector
8-40 watt	In reflector case
Waveguide (BUC)	WR 75 cover flange at feed interface point
Coax (L-band TX & RX)	RG59 with Type-F at base of case interface point
Electrical Interface	10 ft. (3 m) removable cables for controller
Manual Drive	Handcrank on Az, EI, and Pol Axis

## **Shipping Configuration**

Positioner Case	173 lbs. (78 kg.) - 43" x 28" x 21" (109 x 71 x 53 cm)
Reflector/Feed	102 lbs. (47 kg.) - 43" x 28" x 21" (109 x 71 x 53 cm)

## **Environmental**

Pointing Loss in Wind (with cases anchored)	
20 mph (32 kmph)	0.3 dB, 0.2° typical
30 mph (48 kmph)	0.8 dB, 0.3° typical

### Temperature

Operational	+5° to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)