

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



Reflector Type	1.2M, AvL 2-piece GRP
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**

Frequency	10.95-12.75 GHz
Gain (Midband) - R/T	41.6 dBi
VSWR	1.30:1
Beamwidth (degrees)	
-3 dB	1.25
-10 dB	2.1

**Receive**

Frequency	10.95-12.75 GHz
Gain (Midband)	41.6 dBi
VSWR	1.30:1

**Transmit**

Frequency	13.75-14.5 GHz
Gain (Midband)	43.2 dBi
VSWR	1.30:1

First Sidelobe Level (Typical)

-22 dB	-25 dB
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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	32 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	400°
- Azimuth	
- Elevation	True elevation readout from calibrated inclinometer
Mechanical	-0° -90° of reflector boresight
Electrical	Standard limits at 15° to 65° (CE Approval) or 15° to 90°
- Polarization	±95°
Speed	8°/second in azimuth, 5°/second in elevation, 5°/second in polarization
- Slewing/Deploying	0.2°/second
- Peaking	
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	170 lbs. (77 kg.) - 42" x 27" x 20" (102 x 61 x 46 cm)
Reflector/Feed	90 lbs. (50 kg.) - 52" x 31" x 12" (132 x 79 x 30 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)