

AVL TECHNOLOGIES

MODEL 1260 / 1050 PIB F/A

1.2M Tri-Band Portable Auto-Acquisition Antenna

Reflector	1.2 Meter, 4 piece Carbon Fiber
Optics	Offset, Prime Focus, 0.8 f/D
Interchangeable Feeds	X-CP, Ku-LP, Ka-CP, Ka-LP
Positioner Type	Case-based Pack-in-the-Box
Drive System	Patented Roto-Lok® Positioner
Mount Geometry	Elevation over Azimuth
Polarization	Rotation of Feed



Mechanical

Travel

Azimuth	± 200°
Elevation	0° to 90° of reflector boresight from calibrated inclinometer
Polarization	± 95°

Speed

Slewing/Deploying	2°/second Az, 1°/second EI
Peaking	0.2°/second

Motors

Emergency Axes Drives Handcranks on Az and EI; Knob on Pol

Stowed Configuration

Positioner	Two rugged, weather-resistant plastic cases, total weight: 200 lbs.
Outriggers/Feed Boom/Reflector	23" x 19" x 19", 100 lbs.
Additional Feeds	30" x 30" X 16", 100 lbs. (includes Ku or Ka feed)
	43" x 27" x 20", 70 lbs. typical, dependent on feed options selected

Set-up Time

Less than 15 minutes

RF Interface

BUC Mounting	Feed boom or behind reflector (additional case required)
Coax	Two connectors at positioner base

Electrical Interface

Connector at positioner base

Environmental

Wind

Operational	
Without anchoring	30 mph
With anchoring	30 mph gusting to 45 mph
Survival (anchored)	80 mph in zenith (90° elevation) position

Pointing Loss in Wind

Ku-band Receive, Operational winds	0.1 dB typical, 0.5 dB max
Ka-band Receive, Operational winds	0.3 dB typical, 1.0 dB max

Temperature

Operational	-22° to 125° F (-30° to 52° C)
Survival	-40° to 140° F (-40° to 60° C)

Options

BUC/HPA mounting	Controller options- see below
Stabilization leg options	Beacon receiver – inclined orbit tracking – resolvers/upgrade
Waveguide interconnect options	High wind options – ground stakes
	Grounding options (lightning conductor)

<u>X-Band</u>	<u>Receive</u>	<u>Transmit</u>
Polarization	RHCP or LHCP	LHCP or RHCP
Frequency Range (GHz)	7.25 - 7.75	7.90 - 8.40
Gain (Midband) (dBi)	37.6	38.1
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	2.3°	2.1°
Radiation Pattern Compliance (beyond mainbeam)	MIL-STD-188-164A	MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	52° K	
G/T with 55° LNB, midband, clear horizon	17.3 dB/° K	
Axial Ratio (CP only, within pointing cone)	1.21 dB	2 dB
Feed Port Isolation – TX to RX (dB)	115 (includes optional filter)	115 (includes optional filter)
Power Handling Capability		1000 watts per port
<u>Ku-Band</u> (DBS bands available on request)	<u>Receive</u>	<u>Transmit</u>
Polarization	Linear orthogonal standard, optional co-pol	
Frequency Range (GHz)	10.95 - 12.75	13.75-14.50
Gain (Midband) (dBi)	41.6	43.1
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	1.5°	1.2°
Radiation Pattern Compliance	FCC 25.209, ITU-R S.580-6, IESS 208	FCC 25.209, ITU-R S.580-6, IESS 208
Ant Noise Temperature @ 20° EI, midband	54° K	
G/T with 50° LNB, midband, clear horizon	21.3 dB/° K	
Cross Pol Isolation, on-axis	35 dB	35 dB
Cross Pol Isolation, within pointing cone	28 dB standard, 25dB optional MM feed	30 dB standard, 35 dB optional MM feed
Feed Port Isolation – TX to RX (dB)	35	80 (includes filter)
Power Handling Capability		500 watts per port
<u>Ka-Band</u>	<u>Receive</u>	<u>Transmit</u>
Polarization	Circular or Linear	
Frequency Range (GHz)	20.2 - 21.2 (military) or 17.7 - 20.2 (commercial)	30.0 - 31.0 (military) or 27.5 - 30.0 (commercial)
Gain (Midband military) (dBi)	46.2	49.5
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	0.8°	0.6°
Radiation Pattern Compliance	FCC 25.209, MIL-STD-188-164A	FCC 25.209, MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	107° K	
G/T with 100° LNB, midband, clear horizon	23.0 dB/° K	
Axial Ratio (CP only, within pointing cone)	1.5 dB	1.0 dB
Feed Port Isolation – TX to RX (dB)	30	80 (includes filter)
Power Handling Capability		250 watts per port
<u>Controller</u>	Fully Automatic Satellite Acquisition, Peaking, and Cross-Pol Adjustment with GPS, Compass, Level Inputs and auto compensation with Entry of Desired Satellite. Select 10"x9"x2.5" power supply/hand-held controller or 1 RU P.S. controller or 2 RU controller option. With 2 RU additional options include inclined orbit tracking, resolvers, hand-held remote, remote GUI, waveguide switch control. A 2 RU jog controller is also offered.	
Positioning Accuracy ±0.2°	±0.2°	
Input Power	95-250VAC auto-ranging or 2 RU option 110/240 VAC, 1 phase, 50/60 Hz, 6/3 A peak, 1 A continuous	