

C X Ku Ka Band

Transportable Antenna, 2.4 Meters



Special Features

- ❖ Reflector: 2.4 Meter, 9 piece Carbon Fiber
- ❖ Optics: Offset, Prime Focus, 0.8 f/D
- ❖ Interchangeable Feeds: C, X, Ku, Ka
- ❖ Positioner Type: Travelling case
- ❖ Mount Geometry: Elevation over Azimuth
- ❖ Polarization: Rotation of Feed

Mechanical Specifications		
Travel		
	Azimuth	±200°
	Elevation	7° to 90° of reflector boresight from calibrated inclinometer
	Polarization	± 95°
Speed		
	Slewing/Deploying	2°/second Az, 1°/second El
	Peaking	0.2°/second
Motors		24V DC variable speed, constant torque
Emergency Axes Drives		Handcranks on Az and El; Knob on Pol
Stowed Configuration		Five or six rugged, weather-resistant plastic cases
	Positioner	26" x 24" x 30", 170 lbs.
	Outriggers/Feed Boom/Ku or Ka feed	71" x 18" x 19", 110 lbs. (includes Ku or Ka feed)
	Reflector (2)	38" x 38" x 22", 120 lbs.
	Additional Feeds	43" x 28" x 21", 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 Specifications		
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	1.3 dB typical, 2.4 dB max
	Ka-band Receive, Limited wind*	1.0 dB typical, 2 dB max, 20 mph gusting to 30 mph
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
Feed boom options		Grounding options (lightning conductor)
		*Active wind tracking required for Ka-band for higher winds

C X Ku Ka Band Transportable Antenna, 2.4 Meters

code-v9

C-Band	Receive		Transmit	
Polarization	Standard (LP or CP)	INSAT (LP)	Standard (LP or CP)	INSAT (LP)
Frequency (GHz) (extended band available on request)	3.625 - 4.20	4.50 - 4.80	5.85 - 6.425	6.725 - 7.025
Gain (Midband) (dBi)	38.0	39.2	41.8	42.6
VSWR	1.30:1		1.30:1	
Beamwidth (-3 dB)	2.2°	1.9°	1.4°	1.3°
Radiation Pattern Compliance (beyond mainbeam)	FCC 25.209, ITU- R S.580-6 IESS 207	ITU-R S.580-6	FCC 25.209, ITU-R S.580-6 IESS 207	ITU-R S.580-6
Ant Noise Temperature @ 20° EI, midband	49° K	48° K	-	-
G/T with 20° LNB, midband, clear horizon	19.5 dB/° K			
Axial Ratio (CP only, within pointing cone)	2.3 dB	-	1.3 dB	-
Cross Pol Isolation (on-axis/within pointing cone)	35 dB / 30 dB	35 dB / 30 dB	35 dB / 30 dB	35 dB / 30 dB
Feed Port Isolation – TX to RX (dB)	65	35	105 (includes filter)	70
Power Handling Capability			1000 watts per port	1000 w per port

X-Band	Receive	Transmit
Polarization	RHCP or LHCP	LHCP or RHCP
Frequency Range (GHz)	7.25 - 7.75	7.90 - 8.40
Gain (Midband) (dBi)	43.3	44.1
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	1.2°	1.1°
Radiation Pattern Compliance (beyond mainbeam)	MIL-STD-188-164A	MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	59° K	
G/T with 55° LNB, midband, clear horizon	22.7 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

C X Ku Ka Band Transportable Antenna, 2.4 Meters

code-v9

Ku-Band (DBS bands available on request)	Receive	Transmit
Polarization	Linear orthogonal standard, optional co-pol	
Frequency Range (GHz)	10.95 - 12.75	13.75-14.50
Gain (Midband) (dBi)	47.0	48.8
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	0.7°	0.6°
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	61° K	
G/T with 50° LNB, midband, clear horizon	26.5 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 optional MM feed
Feed Port Isolation – TX to RX (dB)	35	80 (includes filter)
Power Handling Capability		500 watts per port

Ka-Band	Receive	Transmit
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)	52.1	55.0
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	0.4°	0.3°
Radiation Pattern Compliance	FCC 25.209, MIL-STD-188-164A	FCC 25.209, MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	104° K	
G/T with 100° LNB, midband, clear horizon	29.0 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

Controller	
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