

X/Ka band 13m ANTENNA SYSTEM

Antenna	X/Ka band 13m Antenna System	
	Rx	Tx
Antenna Diameter	13 m	
Antenna Type	Ring Focus	
Surface Accuracy	RMS \leq 0.25 mm Main reflector; \leq 0.15 mm Sub reflector	
Frequency (GHz)*	X band: 7.25 – 7.75 Ka band: 20.2 – 21.2	X band: 7.9 – 8.4 Ka band: 30 – 31
Gain (dBi) at Feed Interface	X band: \geq 59.1 Ka band: \geq 68.0	X band: \geq 59.9 Ka band: \geq 71.5
Feed	X/Ka-dualband Feed System: X-Rx: LHCP & RHCP - X-Tx: LHCP & RHCP Ka-Rx: LHCP & RHCP - Ka-Tx: LHCP & RHCP Ka-TRK: LHCP & RHCP	
VSWR	\leq 1.3:1	
G/T @ 20° El, clear sky (X band)	\geq 35.4 dB/K	
G/T @ 20° El, clear sky (Ka band)	\geq 42 dB/K	
EIRP X band (Single Carrier)	\geq 89 dBW	
EIRP Ka band (Single Carrier)	\geq 94.4 dBW	
Feed interface	WR112 WR42	WR112 WR34
Feed Insertion Loss	X band: \leq 0.6 dB Ka band: \leq 0.6 dB	X band: \leq 0.6 dB Ka band: \leq 0.6 dB
Axial Ratio on axis	\leq 0.55 dB	\leq 0.55 dB
Isolation (dB)	X band: Tx/Tx or Rx/Rx \geq 18 Ka-Band: Tx/Tx or Rx/Rx \geq 18 X band: Tx/Rx \geq 120 Ka band: Tx/Rx \geq 120	
Radiation Pattern	Compliant to ITU-R S.465-6 / ITU-R S.580-6	
Mechanical		
Mount Type	Elevation over Azimuth	
Antenna Travel	Azimuth: $\pm 95^\circ$	Elevation: -1° to 90°
Drive Mode	Motorized with brushless motors	
Speed	AZ: $1^\circ/s$ max.	EL: $1^\circ/s$ max.
Acceleration	AZ: $1^\circ/s^2$ max.	EL: $1^\circ/s^2$ max.
Environmental		
Wind Speed	72 km/h operational, 97 km/h gusting 200 km/h survival (stow position)	
Ambient Temperature	-30° C to $+50^\circ$ C (operational) -40° C to $+60^\circ$ C (survival)	
Relative humidity	0 to 100% with condensation	
Rain fall	100 mm/h continuous	
Solar Radiation	1200 W/m ²	
Atmospheric Condition	Salt, pollutants, and corrosive contaminants as conditions found in coastal and industrial area	

*Available for different frequencies f.e. Ku-/Ka-, C-/Ku- and X-bands



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