

NWIEE 6M EARTH STATION ANTENNA



NWIEE designed and manufactured in batches 6-meter Dual-shaped Compact Cassegrain all aluminum reflector antenna for VSAT applications in both C band(Model C3956T) and Ku band(Model K6T).

C3956T and K6T adopt precision-formed reflector mounted on a Az.over El. pedestal providing necessary stiffness and pointing accuracy required in C and Ku band operation. It is provided with a feed with corrugated horn and OMT and is of optimized R.F.specifications, operates in circular or linear polarization selectable manually and meets any requirements of customers for particular applications.

C6T and K6T antennas meet the regulations of CCIR 580-4 and have been approved by ASIAT, INTELSAT, CHINASAT, etc.

Key Features

- CP/LP switchable feed for C-band
- Galvanized steel parts
- High RF performance
- Extended C-band feeds
- AC motor drive per Az., El. and Pol. axes with single speed
- Elevation over azimuth pedestal with jackscrew drive
- Different frequency ranges from many feed configurations

Options

- Auto-tracking control system
- Hot-dipped galvanized steel parts
- Two Tx/Rx port in linear or circular polarized feed for C-band
- Two or four Tx/Rx port in linear polarized feeds

NWIEE 6M C -BAND ANTENNA WITH 2-PORT FEED				
R.F. SPECIFICATION	C-BAND		Ku-BAND	
	RECEIVE	TRANSMIT	RECEIVE	TRANSMIT
Frequency in GHz*	3.625-4.200	5.850-6.425	10.95-12.75	14.0-14.5
Gain	46.6	49.7	55.4	56.5
Antenna Noise Temp.				
10°Elevation	40K		65K	
20°Elevation	30K		50K	
40°Elevation	22K		41K	
Sidelobe Pattern	First sidelobe level ≤-14dB Beyond first sidelobe meet IESS(Intelsat) or CCIR 580-4 Recommendation			
Cross Polarization Discrimination	35dB (On axis) 30dB (within 1 dB Beamwidth)			
Axial Ratio(CP only)	1.5dB	1.0dB		
VSWR	1.3:1	1.3:1	1.3:1	1.3:1
Feed Insertion or Ohmic Loss	0.20dB	0.20dB	0.35dB	0.35dB
Power Handling Capability	3 Kw		1 Kw	
Port to Port Isolation	85dB		85 dB	
Typical G/T at mid band	28.4dB/k at 20 El with 35k LNA		34.8dB/k at 20 El with 70k LNA	
Feed Interfaces	CPR-229F	CPR-137F	WR75	WR75

NOTE: All values are tested at the feed output and input port.

* NWIEE antennas operation in C band Rx: 3.4-3.7GHz/Tx: 6.424-6.725GHz or Rx: 3.4-4.2GHz

/Tx:5.85-6.650GHz are available in NWIEE and optional for customer.

NWIEE 6M C- OR KU -BAND ANTENNA WITH 4-PORT FEED				
R.F. SPECIFICATION	C-BAND		Ku-BAND	
	RECEIVE	TRANSMIT	RECEIVE	TRANSMIT
Frequency in GHz*	3.625-4.200	5.850-6.425	10.95-12.75	14.0-14.5
Gain	46.5	49.6	55.3	56.4
Antenna Noise Temp.				
10°Elevation	45K		65K	
20°Elevation	35K		50K	
40°Elevation	27K		41K	
Sidelobe Pattern	First sidelobe level ≤-14dB			
	Beyond first sidelobe meet IESS(Intelsat) or CCIR 580-4			
	Recommendation			
Cross Polarization Discrimination	35dB (On axis) 30dB (within 1 dB Beamwidth)			
VSWR	1.3:1 (LP) 1.25:1 (CP)	1.3:1 (LP) 1.25:1 (CP)	1.3:1	1.3:1
Axial Ratio(CP only)	1.0dB	1.0dB		
Feed Insertion or Ohmic Loss	0.25dB	0.20dB	0.50dB	0.50dB
Power Handling Capability	3 Kw		1 Kw	
Port to Port Isolation				
Tx/Rx	85dB		85 dB	
Rx/Rx ,Tx/Tx	20dB (CP) 30dB(LP)		30dB	
Typical G/T at mid band	28.1dB/k with 35k LNA		34.5dB/k with 70k LNA	
Feed Interfaces	CPR-229F	CPR-137F	WR75F	WR75F

NOTE: All values are at the rear feed output flange.

* The frequency range are Rx: 3.4-3.7GHz/Tx: 6.424-6.725GHz or Rx:3.4-4.2GHz /Tx:5.85-6.650GHz optional.

** The other operational frequency bands of NWIEE VSAT antennas can be of 10.95- 11.7GHz or 11.7-12.2GHz, even extended as 10.95-12.75GHz. They are available in NWIEE and an option for customers when order.

MECHANICAL SPECIFICATIONS	
Azimuth Travel	120°continuous (180° in two sector)
Elevation Travel	0° to 90° continuous
Az and El Travel Rate	0.01/second (with motor for ku band, option)
Polarization Travel	± 90°
Reflector	Aluminum
Backup Structure	Steel
Pedestal Structure	Steel
Finish	
Reflector Surface	Aluminum panels with heat-diffusing white paint
Pedestal and Steel Structure	Sand blast and hot spray galvanized and two times paint
Antenna drive mode	Manual , Motorization drive optional

ENVIRONMENTAL SPECIFICATIONS	
Operation Wind	72km/h gusts to 97km/h
Survival Wind	200km/h
Ambient Temperature	-40℃ to 60℃
Rain	10cm/h
Relative Humidity	0% to 100% without condensation
Solar Radiation	1000 kcal/M2/h
Radial Ice (Survival)	2.5cm radial
Shock and Vibration	As encountered during shipment by commercial air, sea or truck
Corrosive atmosphere	As encountered in coastal regions and/or heavily industrialized areas
Seismic(Survival)	0.3G's horizontal 0.1G's vertical