

NWIEE 3M ANTENNA



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
- Type approval from Intelsat/Asiasat/APT/Chinasat

NWIEE designed and manufactured in batches 3-meter aluminum reflector antenna for VSAT applications in C band (Model C53T) and Ku band (Model K53T).

3m antenna adopts Dual Shaped Compact Cassegrain 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 Rx/Tx (2 ports) feed with corrugated horn and OMT and is of optimized R.F. specification, operates in circular or linear polarization selectable manually and meets any requirements of customers for particular applications.

3m antenna meet the regulations of CCIR 580-4 and have been type approved by ASIASAT and INTELSAT. NWIEE 3m antenna can enter ASIASAT-2 and INTELSAT Network without the need of certification test after installation on sites.

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

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NWIEE 3M C / KU BAND ANTENNA IN				
R.F. SPECIFICATION	C-BAND		Ku-BAND	
	RECEIVE	TRANSMIT	RECEIVE	TRANSMIT
Frequency in GHz*	3.625-4.200	5.850-6.425	12.20-12.75	14.0-14.5
Gain	39.9	43.6	49.45	50.64
Antenna Noise Temp.	37K 32K 27K		60K	
10°Elevation				
20°Elevation				
40°Elevation				
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)	1.25:1	1.25:1
Axial Ratio(CP only)	1.5dB	1.0dB		
Feed Insertion or Ohmic Loss	0.20dB	0.10dB	0.30dB	0.30dB
Power Handling Capability	1 Kw		1 Kw	
Port to Port Isolation	80dB		80 dB	
Feed Interfaces	CPR-229F	CPR-137G	WR75F	WR75F

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

* 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.

MECHANICAL SPECIFICATIONS	
Azimuth Travel	120°continuous, 360° in total
Elevation Travel	0° to 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	50km/h gusts to 97km/h
Survival Wind	200km/h , 80m/s optional
Ambient Temperature	-40℃ to 60℃
Rain (Operation and Survival)	up to 100mm/h
Relative Humidity	0% to 100%
Solar Radiation	1000 kcal/M2/h
Radial Ice (Survival)	25mm on all surface or 13mm on all surface with 130km/h wind gusts
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