

## NWIEE 3.7M ANTENNA



NWIEE designed 3.7-meter aluminum reflector antenna for VSAT applications in C band (Model C37T) and Ku band (Model K37T).

3.7M 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.

3.7M antenna meets the regulations of CCIR 580-4 and has been type approved by ASIAsat and INTELSAT. NWIEE 3.7M antenna can enter ASIAsat-2 and INTELSAT Network without the need of certification test after installation on sites.

NWIEE 3.7M COMPACT CASSEGRAIN ANTENNA IN C- OR Ku- BAND 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	12.20-12.75	14.0-14.5
Gain	41.8+ $20\lg[f(\text{GHz})/4]$	45.4+ $20\lg[f(\text{GHz})/6.2]$	51.2+ $20\lg[f(\text{GHz})/12]$	52.3+ $20\lg[f(\text{GHz})/14]$
Antenna Noise Temp.				
10° Elevation	37K		51K	
20° Elevation	32K		44K	
40° Elevation	27K		38K	
Sidelobe Pattern	First sidelobe level $\leq -14\text{dB}$ 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	3 Kw		1 Kw	
Port to Port Isolation	80dB		85 dB	
Feed Interfaces	CPR-229F	CPR-137F	WR75	WR75

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

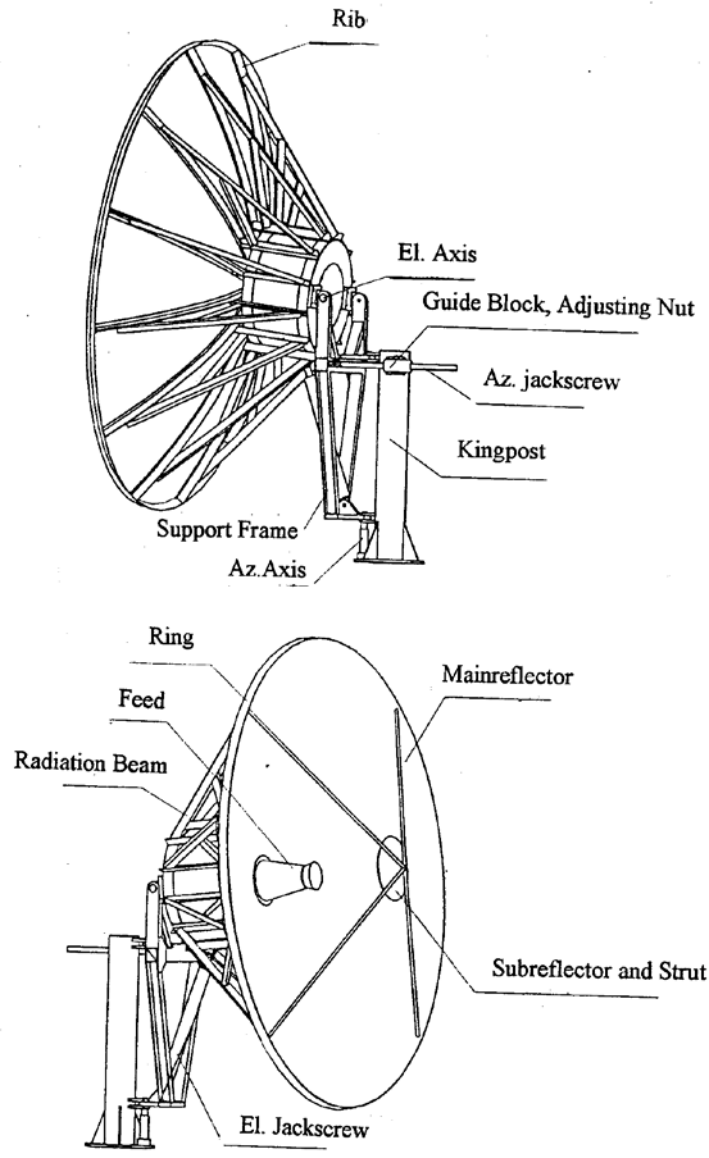
/Tx:5.85-6.650GHz optional.

\*\* 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.

NWIEE 3.7M ANTENNA MECHANICAL SPECIFICATIONS	
Azimuth Travel	120° continuous, 360° in total
Elevation Travel	0° to 90°
Shipping Weight	1500kg
Shipping Volume	8.2m <sup>3</sup>
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
Foundation	5.0m x 5.0m
Antenna drive mode	Manual , Motorization drive optional

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**The Structure of NWIEE K53T 3M and K37T 3.7M Ku-Band Antenna**