

## 3.0- Meter Dual-Reflector C-, Extended C-, Ku-Band



▶ 3.0m backview1



▶ 3.0m backview2



▶ 3.0m backview3



▶ 3.0m pedestal with bracket for ODU

## PERFORMANCE SPECIFICATIONS (APERTURE 3M)

★ R. F SPECIFICATIONS	C-Band		Ku-Band	
	RECEIVE	TRANSMIT	RECEIVE	TRANSMIT
1. Frequency	3.625-4.2Ghz *3.4-4.2Ghz	5.850-6.425Ghz 5.925-6.725Ghz	12.25 -12.75Ghz *10.95-12.75Ghz	14.0-14.5Ghz
2. Gain at Midband	39.89dB	43.67dB	49.71dB	50.94dB
3. VSWR	1.25:1	1.25:1	1.25:1	1.25:1
4. Beamwidth (-3dB)	1.68°	1.08°	0.54°	0.47°
5. Antenna Noise Temperature				
5° Elevation	41 °K		65 °K	
10° Elevation	28.5 °K		51 °K	
20° Elevation	24.7 °K		44 °K	
30° Elevation	23.7 °K		42 °K	
6. Typical G/T at 20° Elevation, Clear Horizon, 4Ghz with 55°K LNA	21 dB/°K		28.2dB/°K	
7. Power Handling Capability		5kW		2kW
8. Feed Interface	CPR-229F	CPR-137G	WR-75F	WR-75G
9. Feed Insertion Loss	0.15dB	0.18dB	0.25dB	0.4dB
10. Cross Polarization Isolation				
On Axis	35dB	35dB	35dB	35dB
Within 1 dB Beamwidth	30dB	30dB	30dB	30dB
11. Port to Port Isolation (Tx-Rx with Filter)	≥85dB		≥85dB	
12. Axial Ratio (Circular Polarization) 2 Port Tx/Rx	1.3	1.09	1.3	1.09
13. Sidelobes				
1st sidelobe		-14dB		-14dB
100°ND° ≤ θ ≤ 48°		29- 25Log θ dBi		29- 25Log θ dBi
* Provided according to User's requirement				
★ MECHANICAL SPECIFICATION			★ ENVIRONMENTAL SPECIFICATIONS	
1. Azimuth Travel	360°		1. Operational Wind Speed	35m/s
2. Azimuth Travel Rate	0.5 °/s		2. Survival Wind Speed	55m/s
3. Elevation Travel	5°-90° continuous		3. Ambient Temperature	-50°- 60°
4. Elevation Travel Rate	0.5 °/s		4. Rain ( operational and survival )	10cm/h
5. Polarization Travel	±90 °		5. Solar Radiation	1000kcal/hm <sup>2</sup>
6. Materials above the hub	fully-aluminum		6. Relative Humidity	0%-100%
7. Finish of Reflectors	white paint		7. Radial Ice	2.5cm
8. Finish of Steel parts	heating & soaking with zinc		8. Seismic(Survival)	0.3G's Horizontal 0.1G's Vertical
9. Weight (Gross / Net)	385kg/230kg			
10. Shipping Volume	2.7m <sup>3</sup>			

## APPROVALS

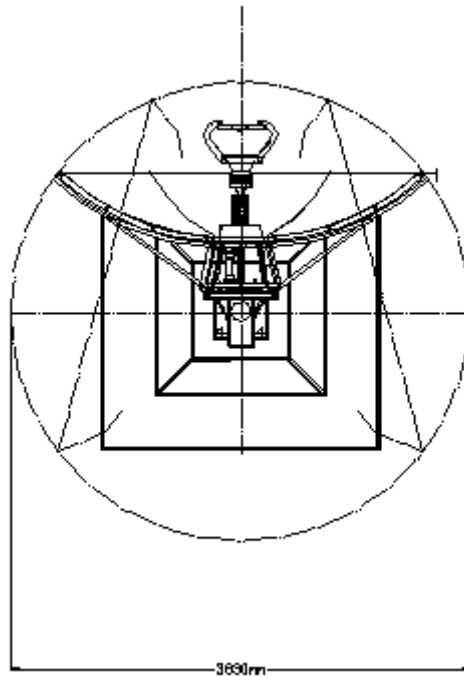
MODEL	DESCRIPTION	SATELLITE	APPROVAL ORGANIZATION	APPROVAL DATE
SM-T3.7R	3.7m C-Band	AsiaSat 1	Asia Sat.Telecomm. Co. Ltd.	13/07/1992
SM-T4.5R	4.5m C-Band	AsiaSat 1	Asia Sat.Telecomm. Co. Ltd.	13/07/1992
TP-T3.7R	3.7m C-Band	AsiaSat 2	Asia Sat.Telecomm. Co. Ltd.	10/04/1996

TP-T2.4R	2.4m C-Band	AsiaSat 1	Asia Sat.Telecomm. Co. Ltd.	15/041996
SM-T4.5R	4.5m C-Band	AsiaSat 2	Asia Sat.Telecomm. Co. Ltd.	20/09/1996
TP-T3.0R	3.0m Ku-Band	AsiaSat 2	Asia Sat.Telecomm. Co. Ltd.	05/12/1996
SM-T3.0R	3.0m C-Band	AsiaSats	Asia Sat.Telecomm. Co. Ltd.	18/09/1998
SM-T3.7RK	3.7m Ku-Band	AsiaSats	Asia Sat.Telecomm. Co. Ltd.	18/09/1998
SM-T2.4R	2.4m C-Band	AP Stars	APT Sat. Co., Ltd.	18/07/1995
SM-T3.7RC	3.7m C-Band	AP Stars	APT Sat. Co., Ltd.	25/07/1997
SM-T4.5RC	4.5m C-Band	AP Stars	APT Sat. Co., Ltd.	25/07/1997
SM-T3.0R	3.0m C-Band	AP Stars	APT Sat. Co., Ltd.	12/10/1998
TP-T3.0R	3.0m Ku-Band	AP Stars	APT Sat. Co., Ltd.	12/10/1998
SM-T3.7RK	3.7m Ku-Band	AP Stars	APT Sat. Co., Ltd.	12/10/1998
SM-T4.5R	4.5m C-Band	Military Sat.	General Staff of PLA	03/06/1993
TP-T3.0R	3.0m Ku-Band	China Stars	China Telecomm. Broadcast Sat. Co.	10/12/1998
SM-T3.0R	3.0m C-Band	China Stars	China Telecomm. Broadcast Sat. Co.	10/12/1998
SM-T3.7RK	3.7m Ku-Band	China Stars	China Telecomm. Broadcast Sat. Co.	10/12/1998
SM-T3.0R	3.0m C-Band	ChinaSat 1	China Orient Telecomm Sat. Co.	02/12/1998
SM-T3.7R	3.7m Ku-Band	ChinaSat 1	China Orient Telecomm Sat. Co.	02/12/1998
SM-T3.0RC	3.0m C-Band	SinoSat 1	SINO Satellite Communications Company Ltd.	04/1999
SM-T3.0RK	3.0m Ku-Band	SinoSat 1	SINO Satellite Communications Company Ltd.	04/1999
SM-T3.7RC	3.7m C-Band	SinoSat 1	SINO Satellite Communications Company Ltd.	04/1999
SM-T3.7RK	3.7m Ku-Band	SinoSat 1	SINO Satellite Communications Company Ltd.	04/1999
SM-T1.8RK	1.8m Ku-Band	SinoSat 1	SINO Satellite Communications Company Ltd.	08/1999
SM-T1.2RK	1.2m Ku-Band	SinoSat 1	SINO Satellite Communications Company	11/2000

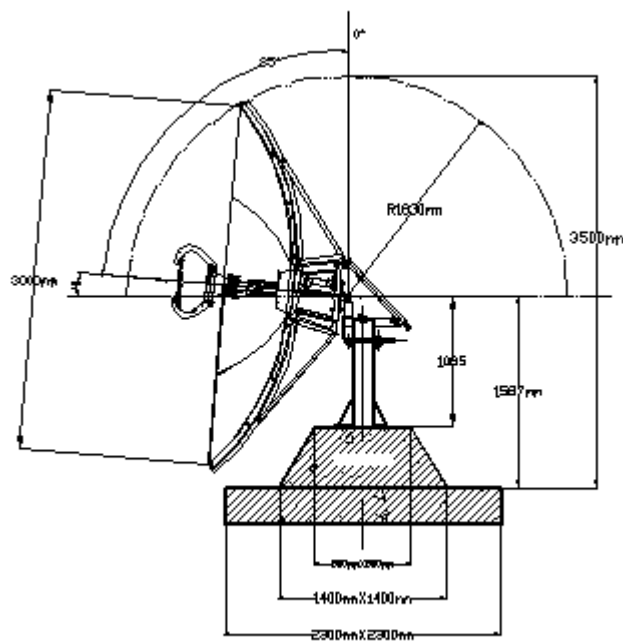
			Ltd.	
SM-T1.8RK	1.8m Ku-Band	AsiaSats	Asia Sat.Telecomm. Co. Ltd.	12/04/2000

## GEOMETRY

**MODEL: SM-T3.0RC SM-T3.0RC/E SM-T3.0RK**



**PLAN VIEW**

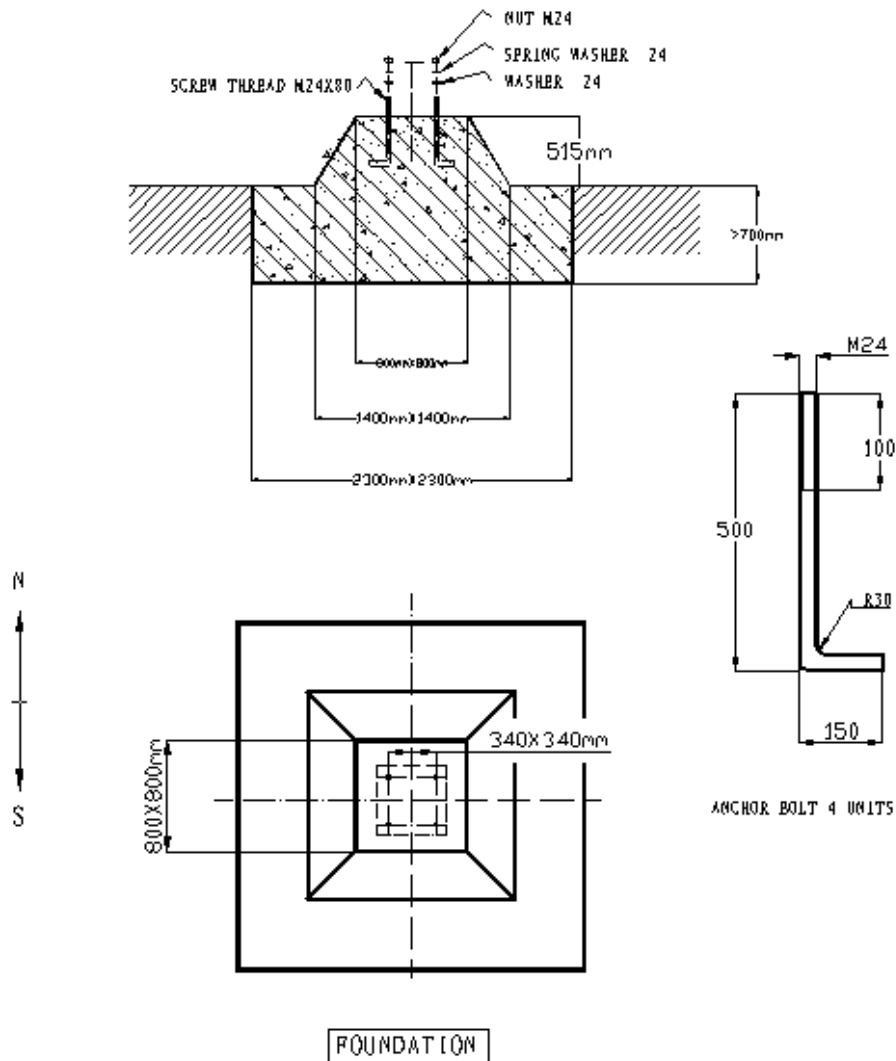


**SIDE VIEW**

### 3.0- Meter Dual-Reflector C-, Extended C-, Ku-Band (foundation drawings)

C-Band Extended C-Band Ku-Band  
SUMAN SATELLITE COMMUNICATION ANTENNA  
MODEL: SM-T3.0RC SM-T3.0RC/E SM-T3.0RK

#### 3.0M FOUNDATION DRAWING (For the Ground)

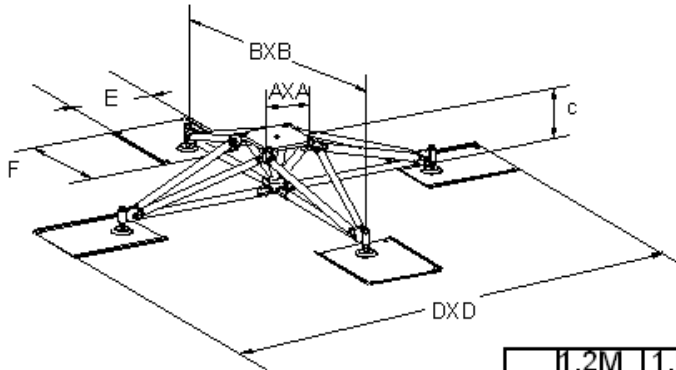


#### Remark:

1. The foundation is specially designed and made for SM-T3.0R 3.0m antenna.
2. Quality concrete should be used to make this foundation.
3. The foundation is designed to withstand the wind speed of 55m/s and the antenna should be locked to the sky when the wind speed over 55m/s.
4. Load capability of this foundation:  
Pulling-out force ----- 2200kg max.  
Pressure force ----- 6500kg max.
5. This foundation is suitable for the ground only and other design should be needed to erect the antenna on top of buildings.

## OPTIONS

### NON-PENETRATING MOUNT FOR SUMAN SERIES ANTENNA



	1.2M	1.8M	2.4M	3.0M	3.7M	4.5M
A	300	300	300	340	340	420
B	2245	2245	2245	2495	2495	4500
C	380	380	380	410	410	600
D	3258	3258	3258	3535	3535	5700
F×E	500*500	500*500	500*500	700*560	700*560	700*560
* Q	180	180	180	200	200	340
** Q	120	120	180	405	552	1023

- \* N.W.:Net self-weight of Non-penetrating mount
- \*\* Q: Load weight for each bottom plate

