Digitalcom

1.2 m off-set Ku Band Tx&Rx Antenna

Model:1.2KU-VSAT

1. Summary

The 1.2 m off-set satellite communication antenna is the leading production of my corporation, which adopts of totally molding production, advanced technology, superior manufacture, and with ascendant performance index. This production has spacious market demand all the world. and even be sold in the Southeast Asia, Africa and Europe, as in favors.

The antenna is mostly composed of the pedestal mount, reflector, back support strut, elevation adjusting lead screw, feed strut, feed bracket,feed OMT and so on.

1.1 pedestal mount

The antenna adopt the kingpost structure, which is composed of kingpost (φ76 steel tube), rib plate (used to fix the foundation),supporting parts in the middle and basement in the top. The pedestal can be unloaded, installed simply and carried conveniently.

Azimuth adjusting mechanism adopt double half- rotation and lock structure .The center of the top of the pedestal mount is fixed by anchor bolts ,which would be adjusted conveniently, locked reliably, and have strong capability of wind-loading.

Elevation adjusting mechanism and locking mechanism are special and proper. The locking mould is press into arc. In any elevation angle, the anchor nut can stick flexibility to the locking mould ,which make it have the high adjusting and locking character.

Compare with similar production, our pedestal mount has the high intensity, stability, wind –loading and adjusting capability.

1.2 The reflector of the antenna.

Main reflector with high precision (σ≤0.4mm) adopt the high quality anti-rust alloy aluminumwhich is stretch-formed once .The edge of the reflector is

Rolled repetitious ,which enhances the strength of reflector ;The main reflector adopting the square tube structure is fixed onto the rolling position with the 2 pieces feed struts, which bears the accuracy of position and convenience of installation, and can guarantee the electric capability completely. To guarantee the strength of the whole reflector , the supporting struts(adjustable up and down) are install between the feed strut and kingpost .Compare with the similar product ,the reflector bears high strength and surface precision character.

1.3 Surface coating of antenna

To outdoor antenna using as unit, the environmental condition is severe, so the surface must be dealed with spray plastic or static spray. The black metal structure dealing with galvanization bears anti-rust and long lifetime.

2. The specification of antenna

SPECIFICATIONS	C-RECEIVE	C-TRANSMIT	Ku-RECEIVE	Ku-TRANSMIT
Frequency(GHz)	3.625-4.2 (3.4-4.2)	5.85-6.4 (5.8-6.625)	12.25-12.75 (10.95-12.7)	14-14.5 (13.75-14.5)
Polarization mode	linear polarization			
Typical Gain(± 3dBi)	32.35dBi@ 4GHz	35.68dBi@ 6GHz	41.71dBi @12.5GHz	42.47dBi@ 414.25GHz
VSWR	≤1.3:1		≤1.25:1	
Beamwidth:-3dB	3.96°	2.7°	1.349°	1.236°
Noise Temperature(°K)	36°k@10EL		58°k@10°EL	
Feed interface	CPR-229G	CPR-137G	WR-75	WR-75
Tx-Rx	≥85dB			
Cross Polarization Isolation(on axis)		≥32dB		≥32dB
Side lobes	Main side lobe: 1°□θ□20° 29-25logθ 20°□θ□26.3° -3.5 26.3°□θ□48° 29-25logθ 48°□θ□180° -10			
Azimuth Travel	360°adjustable continuously			
Elevation Travel	10°to 90°adjustable continuously			
Operational Winds	72km/h			

Survival Winds	200km/h
Atmosphere environment	Salty air and pollution environment
Temperature	-50° c to 80°c
Relative humidity	0% to 100%
Shake and strike	Adapt all kinds of transport and operation

3. Packing List

Part No	Title	Qty	Remark
1	Panel	1	
2	Radial beam	1	Having been installed with the panel before leaving factory
3	Earing	2	
4	Kingpost	1	
5	Rib plate	4	
6	Azimuth bracket	1	According to user's foundation condition
8	Half	2	
9	Pedestal mount strut	2	
10	Foundation	1	
11	Feed strut	1	
12	Feed strut	2	
13	Feed bracket	1	
14	Feed clip	1	
15	Feed	1	
16	OMT	1	
17	Azimuth fine adjusting mechanism	1	
	Fastener	1	
	Manual	1	
	Certification of quality	1	

3. Operation and maintenance of antenna

3.1 Loosening the connecting bolts of feed clip slightly, adjust the feed focus and polarization angle to the proper angle .

3.2 Loosening clip bolts of the half of the kingpost , rotate the bolts of elevation lead screw up and down , elongate and shorten the length of elevation lead screw to the angle coincident with the satellite's , then, rotate the clip bolts of half of kingpost .

3.3. Loosening the fastening bolts of bracket and kingpost, rotate azimuth to the angle of the satellite needed.

3.4. According to the singles, re-adjust the azimuth, the elevation angle, the position of feed and polarization angle continuously to gain the best signals. At this time, pointing the satellite is successful , then , fasten all the loosen bolts .

3.5. The antenna should be inspected and maintenance periodically after using, which can guarantee the operation capability and prolong the lifetime.

3.6. Fastener should be inspected per 2 to 3 month in normal condition, Replace promptly the fastener with the same specification if damaged or brush off. Especially, before and after severe weather .

3.7. Surface coating should be inspected periodically , re-paint the damage position promptly

3.8. After the severe weather, clear the accumulation of the antenna surface (such as sand , dust , snow and so on)