

## Starwin 1.2M SMC VSAT Antenna Datasheet



**1.2m Ka/Ku Band Antenna**



**Ka Band OMT**

### Description

Starwin 1.2m SMC antenna delivers exceptional high performance for transmit/receive application in Ku, ka band in Tx/Rx 2 ports with high gain, low noise and low microwave interference.

Starwin 1.2m SMC antenna offers a fine reflector design with high qualified SMC panels, strong back struts and hub for easy of field alignment. The standard designed azimuth over elevation pedestal provides a cost-effective solution for ground or roof installation with high stiffness and stability, full orbital arc coverage and fine drive performance, and ensures the pointing and tracking accuracy.

The electrical performance is compliant with FCC and ITU-RS-580 sidelobe specifications and Intelsat, Eutelsat, INMARSAT, ASIASEAT, APT and CHINASAT, etc requirement.

### Key Features

- \* Meets or exceeds CCIR 580 and INTELSAT Requirements
- \* High G/T, excellent pattern characteristic
- \* Precision compression molded offset antenna
- \* CP/LP switchable feed
- \* Hot dip zinc steel pedestal, hub & back struts
- \* Galvanized stainless steel fasteners
- \* Foundation hardware kit provided
- \* Package suitable for air, ocean land transportation

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## Antenna Accessory

- \* Limit Switches (For motorized antenna)
- \* Foundation hardware Kit
- \* Grounding Kits Cable - Mounting kits
- \* Cable mounting kits
- \* ODU Support Kits
- \* Factory Feed System Testing and Documentation
- \* Ocean /Air/land Transport Packing

## Options

- \* L, S, C, X, Ku and DBS-band feed configurations
- \* 800MHz bandwidth is available
- \* Two -Tx/Rx port in linear or circular polarized feeds
- \* Motorization kits
- \* Feed blower or deicing with automatic controls
- \* Lightning Rod Kits
- \* Non-penetrating mount
- \* Integrated LNB or LNA systems
- \* HPAs, converters and M&C systems
- \* Turnkey installation & testing

## Electrical, Mechanical, Environmental Specification

### Electrical Specification

| Type                                           | SW12Ku                   |             | SW12Ka                                                                                                                        |          |
|------------------------------------------------|--------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------|----------|
| Operating Frequency, GHz                       | Ku-Band                  |             | Ka-Band                                                                                                                       |          |
|                                                | Receive                  | Transmit    | Receive                                                                                                                       | Transmit |
|                                                | 10.7~12.75               | 13.75~14.5  | 18.7~21.2                                                                                                                     | 27~31    |
| Gain, Mid-band, dBi                            | 41.5@12.5GHz             | 43@14.25GHz | 45.8                                                                                                                          | 49       |
| Polarization                                   | Linear                   |             | Circular                                                                                                                      |          |
| XPD (on Axis), dB                              | 30                       | 30          | 30                                                                                                                            | 35       |
| VSWR                                           | 1.25                     | 1.25        | 1.5                                                                                                                           | 1.3      |
| Beam Width (-3dB)                              | 1.47°                    | 1.22°       | 0.84°                                                                                                                         | 0.54°    |
| Tx. Power Capability, W                        |                          | 500W        |                                                                                                                               | 100W     |
| Feed Interface                                 | WR-75F                   | WR-75G      | WR42                                                                                                                          | WR28     |
| Feed Insertion Loss, dB                        | 0.2                      | 0.2         | 0.3                                                                                                                           | 0.3      |
| Isolation, Tx to Rx, dB<br>(Tx-Rx with Filter) | ≥85                      |             | ≥85                                                                                                                           |          |
| Side lobe (dBi)                                | 29-25logθ(100λ/D°≤θ≤48°) |             | 100λ/D < q ≤ 20° 29 - 25 Logθ dBi<br>20° < q ≤ 26.3° -3.5 dBi<br>26.3° < q ≤ 48° 32 - 25 Logθ dBi<br>θ> 48°-10 dBi (averaged) |          |

### Mechanical Specification

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|                                    |                                      |                                                                                                              |
|------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Antenna Diameter                   |                                      | 1.2m                                                                                                         |
| Antenna Type                       |                                      | Offset antenna                                                                                               |
| Antenna material                   |                                      | SMC -one piece of reflector<br>Hop dip zinc steel parts, spray coating<br>Mast Pipe size: 60mm/2.36inch      |
| Antenna<br>Pointing<br>Range       | Azimuth<br>Elevation<br>Polarization | 0°~360° (Continuous), Ku: 0°~15° Fine Tune; Ka: 0°~10° Fine Tune<br>30°~90°(Continuous)<br>±360°(Continuous) |
| Drive Mode                         |                                      | Manual                                                                                                       |
| <b>Environmental Specification</b> |                                      |                                                                                                              |
| Operational Wind Speed             |                                      | Ku: 35m/s; Ka: 20m/s                                                                                         |
| Survival Wind Speed                |                                      | 55m/s                                                                                                        |
| Temperature                        |                                      | -40°~+60°                                                                                                    |
| Rain<br>(Operational and survival) |                                      | 1/2"(13mm/hr)                                                                                                |
| Relative Humidity                  |                                      | 0%-100%                                                                                                      |
| Solar Radiation                    |                                      | 360BTU/h/ft <sup>2</sup>                                                                                     |
| Radial Ice                         |                                      | 2.5cm                                                                                                        |
| Atmospheric conditions             |                                      | Salt, Pollutant and Contaminants as Encountered in Coastal and Industrial Areas                              |