

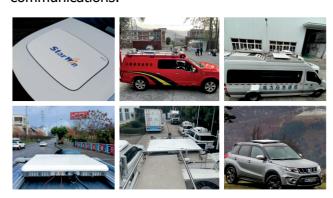
Ka Band Full Dimensional Electronic Steering Phased Array Terminal Datasheet





Starwin Shark Ka-band Full Dimension ESA Terminal

Starwin Shark Ka-band Full Dimension ESA Terminal is a high-performance, multi-functional VSAT solution designed to meet the demands of high-speed satellite tracking, seamless integration, and exceptional reliability, all within a compact form factor. This terminal offers a smart and cost-effective solution for satellite communications.



This terminal integrates a fully electronic steering phased array antenna, control unit, up/down converter, and satellite router into a single unit, all housed under one radome. Additionally, it includes wireless access functionality, making deployment easy and efficient. The electronic steering beam ensures high-speed satellite tracking, while the absence of mechanical moving parts quarantees robust reliability.

Starwin Shark Ka-band ESA terminal provides an innovative, universal broadband solution for Communication On The Move (COTM) and Communication On The Pause (COTP), simplifying satellite communication and making it accessible to a wide range of users.

Features

- High-Speed Tracking: Fully electronic steering of the satellite beam ensures fast and precise tracking.
- High Integration: Combines phased array antenna, ACU, satellite modem, and up/ down converter in a single outdoor unit.
- High Reliability: Solid-state circuitry and no moving parts for dependable operation.
- Simple Setup: Installation doesn't require a satellite technician; no complex cabling or commissioning needed.
- Easy Operation: Access satellite broadband wirelessly via smartphone or laptop.
- Scalable Options: Customizable to meet specific needs.
- Wide Application: Ideal for mobile and fixed broadband connectivity in GEO, MEO, and LEO orbits.
 - Land (Fixed Platform COTP)
 - Mobile (Vehicle & Train COTM)
 - Maritime (Shipping Vessels COTM)
 - Aero (Aircraft & UAV COTM)
- Cost-Effective: Fully designed and manufactured by Starwin for reduced production costs.

Ka Band Full Dimensional Electronic Steering Phased Array Terminal Specifications

Ta Baria Fair Birrich Storial Er	Overall Specifications
Model No.	ESA54130MAC
Antenna Type	Electronic Steering Phased Array
	RF Performance
Frequency Range	TX 27.5~31.0 GHz, RX 17.7~21.2 GHz
	≥ 54 dBW @ Normal
	(Normal direction = Elevation 90°)
EIRP	≥ 53 dBW@ 30° (30°off axial angle= Elevation 60°)
	≥ 49.5 dBW@ 60°
	(60°off axial angle= Elevation 30°)
	≥ 13.0 dB/K @ Normal (Normal direction =Elevation 90°)
G/T	$\geq 12.0 \text{ dB/K} \odot 30^{\circ}$
G/1	(30°off axial angle= Elevation 60°)
	≥ 8.5 dB/K@ 60°
Applicable Satellite Type	(60°off axial angle≃ Elevation30°) for GEO (HTS), MEO and LEO (Optional)
Polarization	LHCP/RHCP Switchable
Axis Ratio	≤3dB (Electronically Controlled)
X-Pol Isolation	>30dB@ Normal
	0-360° @ azimuth, Off axis Angle 0° to 60°
Coverage	
	grated Tracking System
Tracking Accuracy	≤0.2°
Integrated Tracking Type	DVB-S, DVB-S2, DVB-S2X
Beam Switching Time	≤3ms (any position)
Dynamic Capture Time of First Boot	≤ 120s
Static Capture Time of First Boot	≤ 30s
	<15sec (Duration of occlusion ≤5min)
Recapture Time After Loss	<25sec (Duration of occlusion >5min)
Scan Mode	Electronic Steering
	tegrated Ka Up-Down Converter
In	tegrated Ka Up-Down Converter RX: 950 ~ 1450 MHz, 950 ~ 1950 MHz
IF Frequency	tegrated Ka Up-Down Converter RX: 950 ~ 1450 MHz, 950 ~ 1950 MHz TX: 950 ~ 1800 MHz, 950 ~ 1950 MHz
In	tegrated Ka Up-Down Converter RX: 950 ~ 1450 MHz, 950 ~ 1950 MHz TX: 950 ~ 1800 MHz, 950 ~ 1950 MHz -35 ~ 0dBm
IF Frequency IF Input Power (Modem Output)	tegrated Ka Up-Down Converter RX: 950 ~ 1450 MHz, 950 ~ 1950 MHz TX: 950 ~ 1800 MHz, 950 ~ 1950 MHz -35 ~ 0dBm Rx: 16.75/17.25/18.25/19.25 GHz
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