

ESA04 Ka Band Electrically Steering Phased Array Terminal Datasheet



(Photos for Reference)

Steerwin ESA04 Phase Array Vsat Terminal

Starwin Ka band electronically steering phased array terminal (Steerwin ESA04) with unique performance multi-function chipset, addressing the need of high speed tracking, high integration, high reliability, lower profile etc, delivering fully smart & economical VSAT terminal solution.

Starwin Electronically Steering Phase Array Terminal (Steerwin ESA04) is highly integrated of Electronically steering phase array antenna, control unit, Up&Down converter into one unit under one radome and the wireless access function is also included, which makes the product very easy to deploy and use and full electronically steering satellite beam enables high speed tracking, no moving mechanical parts inside ESA delivers high reliability, these special features enable Starwin Electronically Steering Phase Array Terminal (Steerwin ESA04)- delivers a innovative universal broadband solution for COTM(Communication On The Move) and COTP (Communication On The Pause) to make Satellite Communication simple & easy .

Features

- High Speed Tracking: Fully electronically steering satellite beam
- High Reliability: Solid State circuit, no moving mechanical parts inside
- Simple Setting Up: No need satellite technician for installation, cabling, connection

China Starwin Science&Technology Co., Ltd.

Tel:+8629-88664381,E-mail:sales@starwincom.com,<http://www.starwincom.com>

Copyright © Starwin

and commission etc.

- Easy Operation: Access satellite broad band in wireless way by smartphone or laptop.
- Scalable Option: Can be scalable per request;
- Wide application: Work for mobile broadband connectivity under Geo, Meo and Leo.
 - Land (Fixed Platform-COTP)
 - Mobile (Vehicle&Train -COTM)
 - Maritime (Shipping Vessels-COTM)
 - Aero (Airplane and UAV-COTM)
- Lower profile: Smaller size less than 60×56×7.5cm
- Light weight: Less than 30Kg
- Cost Effectiveness: Fully R&D and production by Starwin come down production cost

Ka Band Electronically Steering Phase Array Terminal Specifications

RF Operating Frequency Band:

Tx: 27.5GHz~30GHz

Rx: 17.7GHz~20.2GHz

IF Operating Frequency Band: 950~2450MHz;

Passband Ripples: $\leq \pm 1\text{dB}$ @70MHz Band;

Channels:

Tx: 2048

Rx: 2048

Beam Width: $\leq 3.2^\circ$ at Boresight

EIRP (Include Radome): $\geq 46\text{dBW}$ @ Boresight, $\geq 41.5\text{dBW}$ @ 30° (Boresight offset 60°);

G/T (Include Radome): $\geq 9\text{dB/K}$ @ Boresight, $\geq 4.5\text{dB/K}$ @ 30° (Boresight offset 60°);

Sidelobe Suppression (Boresight): $\geq 13\text{dB}$;

Polarization:

Rx: LHCP

Tx: RHCP

Axial Ratio: $< 1\text{dB}$ @ at Boresight, $< 5\text{dB}$ @ 30° (Boresight offset 60°);

Beam Scanning Range:

Azimuth: $0\sim 360^\circ$

Elevation: $30\sim 90^\circ$

Beam Adjustment Time: $\leq 1\text{ms}$

Tracking Accuracy: $\leq 0.2^\circ$;

Gain Adjustment Range: $\geq 30\text{dB}$;

Gain Adjustment Step: 0.5dB ;

China Starwin Science&Technology Co., Ltd.

Tel:+8629-88664381,E-mail:sales@starwincom.com,<http://www.starwincom.com>

Copyright © Starwin

Phase Noise:

- $\leq -60\text{dBc/Hz}$ (@100Hz);
- $\leq -80\text{dBc/Hz}$ (@1kHz);
- $\leq -90\text{dBc/Hz}$ (@10kHz);
- $\leq -95\text{dBc/Hz}$ (@100kHz);
- $\leq -110\text{dBc/Hz}$ (@1MHz);

Tx Stray: $\leq -55\text{dBc}$;

Initial Alignment Time: <120s (Dynamic), <30s (Static);

Lock Loss Re-capture Time: <5s (Block Time <60s);

Power Supply: 44~58VDC;

Power Consumption: $\leq 500\text{W}$;

IF Interface: SMA;

Control Interface: Aviation Plug;

Power Supply Interface: Aviation Plug;

Overall Dimensions: $\leq 600\text{mm} \times 560\text{mm} \times 75\text{mm}$;

Weight: $\leq 30\text{kg}$;

Operating Temperature: $-40 \sim 55^\circ\text{C}$;