

## PenguinWin - Ka Hybrid ESA COTP & FIXED Terminal Datasheet



Figure1. COTP



Figure2. Fixed

*- Versatile satcom terminals with affordability*

### General Description:

Starwin PenguinWin Ka Hybrid COTP & Fixed ESA Terminal is an innovative satcom terminal developed with Starwin cutting edge phased array and mechanical control technology, providing various COTP (communication on the pause) and Fixed applications and widely used in First response, Emergency relief, Grid, Public security, Defense, Scientific exploration, Media broadcasting, Oil & Gas, Mining, Logistic, Leisure tourism etc.

Combining the advantages of mechanical steering and electronic phased array technology, Starwin PenguinWin Ka Hybrid ESA COTP Terminal can be quickly deployed; fast capture the satellite with high accuracy and agility, and establish stable and reliable satellite communication links consistently even in the harshest environments.

The fixed version of Starwin PenguinWin Ka Hybrid ESA Terminal can be wildly used for LTE/5G applications, Internet of Things, Sensors and Field monitoring in rural area.

## Unique Features:

- Unique Design: With mechanic and electronic steering combined system, wider EL scan angle with low loss from EIRP and G/T in normal direction;
- High Integration: All in one, fully 2D phased array, ACU, satellite Modem, Up & Down converter are all integrated in one outdoor unit;
- Proven technology of beam forming to track and switch among multi orbit networks of GEO, LEO and MEO;
- Convenience: With ultra-portability without complex installation, cabling, connection and commission processing on site;
- Flexible and Scalable: Manifold application for mobile broadband connectivity under GEO, MEO and LEO.

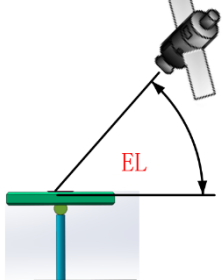
## Specifications:

Ka Band Hybrid ESA Terminal				
Overall Specifications of Terminal				
Model	COTP	HSA42084PAC	Static Capture Time of First Boot	≤ 2min
	Fixed	HSA42084FAC		
Name		PenguinWin		
Type		Ka band Hybrid ESA COTP and Fixed terminal	Mechanical Steering Type	Auto
Tx		27.5~31.0 GHz	Recapture Time After Loss	< 15sec (Duration of occlusion ≤5min)
Rx		17.7~21.2 GHz		<25sec (Duration of occlusion >5min)
Tracking Accuracy		≤ 0.2°	Applicable Satellite Type	HTS GEO, MEO and LEO
Rx LO.		16.75 GHz, 17.25 GHz, 18.25 GHz, 19.25 GHz	Tx LO.	26.55 GHz, 27.4 GHz, 28.05 GHz, 29.05 GHz
Scan Mode		Hybrid Steering (2D Electronic Steering + 2D Mechanical Steering)	Beam Switching Time	≤ 3ms
IF Specifications				
Input Power (Modem Output)			-35 ~ 0dBm	
IF Input (Modem Output)			0.95 GHz ~ 1.8 GHz, 0.95 GHz ~ 1.95 GHz	
IF Output (Modem Input)			0.95 GHz ~ 1.45 GHz, 0.95 GHz ~ 1.95 GHz	
Internal Modem		Customized	External Modem	Customized
RF Specifications				
EIRP		≥ 42dBW@ Normal	G/T	≥8.4dB/K@ Normal

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Polarization		Full polarization, automatic switching LHCP and RHCP	Azimuth Range	Unlimited
X-Pol Isolation		>30dB@90°	Hybrid Elevation Steering Range 	0°~ 180° (90° means the antenna is horizontal)
Interface				
Power Interface		Waterproof Quick Plug	Network Interface	Waterproof Quick Plug
IF Interface (Tx)		SMA	IF Interface (Rx)	SMA
Physical Dimensions and Electrical Specifications				
Outline Dimension	COTP	480x460x210mm	Power Input (With Adapter)	AC 90 ~ 264V/50Hz
	Fixed	480x460x170mm		
Weight	COTP	≤ 14 kg	Power Input (Without Adapter)	DC 28V±5%
	Fixed	≤ 12 kg		
Power Consumption		≤ 200W		
Environmental Specifications				
Wind Speed	COTP	The terminal works normally when the wind speed is in the range of 17.2-20.7m/s (61.92-74.52Km/h) (33.5-40.3 mph)	Ingress Protection	IP66
	Fixed	The terminal works normally when the wind speed is in the range of 24.5-28.4m/s (88.2-102.24Km/h) (47.5-55.3 mph)		
Operation Temperature		-25℃ ~ +55℃ (Standard) -40 ℃ ~ +70 ℃ (Customizable)	Storage Temperature	-40 ℃ to +85 ℃
Humidity		5 ~ 95%		