

Starwin 0.35m Airborne Antenna Datasheet



Introduction:

Starwin SW035 Ku/Ka band airborne antenna is widely used on various UAV (Unmanned Aerial Vehicle) platforms to enhance team mobility and stay informed of on-site conditions; It is also can be used in emergency command and communication departments such as public security, fire protection, transportation and safety supervision, to improve the ability of relevant departments to deal with emergencies such as flood fighting and emergency rescue, earthquake rescue, forest fire alarm, fire protection, and citizen protection.

Features:

- Support Ku and Ka band.
- Utilizing hat-shaped feed design for higher efficiency and better side lobe characteristics.
- Fast initial pointing time to satellite: GPS/Beidou GNSS module cold start positioning time to satellite <90s, hot start (or manual input) <60s.
- High tracking accuracy: Tracking error <0.2dB (RMS) without occlusion.
- Excellent Tracking Stability: The azimuth adopts a closed-loop stability algorithm, which can accurately track the satellite even during rapid turning or "S" move.
- Fast occlusion recovery time: Occlusion time <5min, recovery time <3s; Occlusion time <20min, recovery time <5s.

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- Rapid satellite switching: switching time between different satellites<8s.
- High reliability: Using self-developed transceiver to reduce weight and improve reliability.
- Easy to operate: It can achieve dynamic satellite alignment, dynamic satellite switching, and other functions during move.
- Standardized modular components: system modular design, simple interface specification, convenient fault diagnosis and maintenance.
- Three-axis stabilization system, the tracking stability is strong.

Specifications:

SW035 Ku/Ka Band Airborne Antenna Datasheet					
Overall Specifications					
Model		SW035	Type		Carbon fibre, circularly symmetrical reflector and hat-shaped feed
Working Frequency, Ku Band	Tx	13.75 ~ 14.5 GHz	Antenna Gain, dBi Ku Band	Tx	≥32.3+20lg(f/14.0)
	Rx	10.7 ~ 12.75 GHz		Rx	≥31.1+20lg(f/12.25)
Working Frequency Ka Band	Tx	27.4 ~ 31.0 GHz	Antenna Gain, dBi Ka Band	Tx	≥38.7+20lg(f/29.4)
	Rx	17.7 ~ 21.2 GHz		Rx	≥35.2+20lg(f/19.6)
Polarization Mode	Ku	Linear Polarization	XPD, Ku Band		35 dB, on axis
	Ka	Circular Polarization	Axis Ratio, Ka Band		1.5 dB
VSWR Ka/Ku Band	Tx	1.4:1	Tx – Rx Isolation		85 dB
	Rx	1.5:1	Rx – Tx Isolation		30 dB
Mechanical Specifications					
Rotation Range	Az	N×360°, unlimited			
	EI	-8°~ 100°			
	Roll	±20°			
	Pol	±110°			
Rotation Speed	Az	100°/s			
	EI	100°/s			
Acceleration	Az	200°/s ²			
	EI	200°/s ²			
Pointing Accuracy		≤ 0.2° (R.M.S)			
Capture Time of First Boot		<90s			

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Recapture Time After loss		≤5s (Occlusion 20min)	
Weight		≤6.5Kg (Including antenna system, 16W BUC, LNB, and IQ200 modem)	
Overall Dimension		≤Φ412 × H398mm	
Electrical Specifications			
System Power Supply	DC18-60V	Positioning Method	GPS+Beidou
Power Consumption	80W	Stable Mode	Three-axis stabilization
Environmental Specifications			
Operating Temperature	-40℃~+55℃	Storage Temperature	-55℃~+70℃