

1.5m C/Ku band cable-drive driveaway antenna

A1500DA satellite communication antenna system is a 1.5m vehicle mounted antenna system especially designed for SUV. The system has excellent electrical properties, high driving accuracy, and outstanding adaptability. Different types of BUC, shroud and antenna controller can be equipped according to customers' requirement.



The antenna is equipped on vehicle



Antenna deployed (without shroud)

Major Features:

- Dual-reflector Gregory antenna feed system, with high cross polarization isolation and side lobe properties.
- Designed for SUV.
- 80% of structures are made of carbon fiber material, light weight and high strength.
- Steel wire rope driver, high driving precision.
- Easy assembly and disassembly, low requirement for vehicle modification.
- Compatible with C and Ku band satellite communication.
- High reliability, over 730h operation test without malfunction.
- Easy operation, with one button satellite acquisition and satellite stowing.
- BUC 1:1 backup installation can be realized.
- High adaptability, shroud can be equipped according to customers' requirement.
- C301DA and C302DA antenna controller can be used.
- Has passed China Satellite Network Accessing Test.

A1500DA satellite communication system meets GJB367A-2001 military communication equipment standard and has passed A, B, C, D four strict units of military test. It can be widely used in national security, emergency communication, telecommunication, news and broadcasting, petroleum and petrochemical, scientific exploration etc.

Specifications

Electrical properties for Ku band		
Working frequency	Transmit	13.75—14.5GHz
	Receive	10.95—12.75GHz
Gain	Transmit	44.8dBi
	Receive	43.65dBi
Cross isolation	Axis direction	$\geq 35\text{dB}$
	1dB point	$\geq 30\text{dB}$
Tx-Rx isolation	$\geq 85\text{dB}$ (including Tx-blocking wave filter)	
VSWR	$\leq 1.3: 1$	
The first side-lobe level	$< -20\text{dB}$	
Side-lobe properties	29-25lg Φ dBi	$\alpha \leq \Phi \leq 7^\circ$
	8dBi	$7^\circ < \Phi \leq 9.2^\circ$
	32-25 lg Φ dBi	$26.3^\circ < \Phi \leq 48^\circ$
	-10 dBi	$48^\circ < \Phi$
Electrical properties for C band		
Working frequency	Transmit	5.85—6.725GHz
	Receive	3.4—4.2GHz
Gain	Transmit	37.67dBi
	Receive	33.3dBi
VSWR	$\leq 1.3:1$	
The first side-lobe level	$< -14\text{dB}$	
Side-lobe properties	29-25 lg Φ dBi	$\alpha \leq \Phi \leq 20^\circ$
	-3.5 dBi	$20^\circ < \Phi \leq 26.3^\circ$
	32-25 lg Φ dBi	$26.3^\circ < \Phi \leq 48^\circ$
	-10 dBi	$48^\circ < \Phi$
Structural parameters		
Antenna stowed size	2300×1650×430mm	
Weight	$\leq 100\text{kg}$	

Driving range	Azimuth	$\pm 270^{\circ}$
	Elevation	$0^{\circ}-90^{\circ}$
	Polarization	$\pm 95^{\circ}$
Driving speed	Azimuth	0. 1—3° /s (adjustable)
	Elevation	0. 1—3° /s (adjustable)
	Polarization	4°/s
Control parameters		
Configuration	Select C301DA or C302DA antenna controller	
Power supply	AC220V($\pm 10\%$), 50Hz	
Cable	Four cables (including BUC and LNB power supply and RF)	
Environmental adaptability		
Working temperature	-40—60°C (antenna)	
	-10—55°C (antenna controller)	
Storage temperature	-55—70°C	
Humidity	95% (30°C)	
Height	$\leq 5000\text{m}$	
In the rain	6mm/min	
Salt fog	Meet military standard of GJB367A-2001	
Vibration	Meet military standard of GJB367A-2001	
Sand storm	Meet military standard of GJB367A-2001	
Wind speed	20m/s stable wind working status	
	30m/s gust wind working status	
	60m/s vehicle moving status	
Reliability	$\geq 2000\text{h}$	