

2.4m Ku band cable-drive driveway antenna

A2400DA driveway antenna system is a 2.4m vehicle mounted antenna system designed by BCS. The antenna system can be applied for C and Ku band and it has excellent electrical properties, high driving precision, and high adaptability. Different types of BUC and antenna controller can be equipped according to customers' requirement.



Antenna deployed



Antenna stowed

Major features:

- Applied for C and Ku band satellite communication;
- 70% of the structure is made of carbon fiber material, with light weight and high strength;
- Steel wire rope driver, with high driving precision;
- High reliability, over 730h operation test without malfunction.
- 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.

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- 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.

A2400DA 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	49.1dBi+20Log (f/14.25)	
	Receive	47.8dBi+20Log (f/12.5)	
Cross isolation	Axis direction	≥ 35dB	
	1dB point	≥ 30dB	
Tx-Rx isolation	≥ 85dB (including Tx-blocking wave filter)		
VSWR	≤ 1.25: 1		
The first side-lobe level	<-20dB		
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	41.76dBi	
	Receive	37.38dBi	
Cross polarization Isolation	Axis direction	≥ 35dB	
	1dB point	≥ 30dB	
Tx-Rx isolation	≥ 85dB		
VSWR	≤ 1.25:1		
The first side-lobe level	<-14dB		
Side-lobe properties	29-25 lg Φ dBi	$\alpha \leq \Phi \leq 20^\circ$	
	Φ is the angle between deviation direction and wave beam axis direction	-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	3250mm×1820mm×590mm
Weight	≤ 280kg (without BUC)
Driving range	Azimuth ± 270°
	Elevation 0°—90°
	Polarization ± 95°
Driving speed	Azimuth 0. 1—3° /s (adjustable)
	Elevation 0. 1—3° /s (adjustable)
	Polarization 1-4°/s (adjustable)
Control parameters	
Configuration	Select C301DA or C302DA antenna controller
Power supply	AC220V(± 10%), 50Hz
Cable	Four cables (including BUC and LNB power supply and RF)
Environmental adaptability	
Working temperature	-40—60℃ (antenna)
	-10—55℃ (antenna controller)
Storage temperature	-55—70℃
Humidity	95% (30℃)
Height	≤ 5000m
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	≥ 2000h