1.8 Mtr V-SAT MIL Grade Motorized

Auto Acquire Antenna Terminals

Description

The 1.8 Meter Motorized Vehicle/Platform/Trailor -Mount Antenna offers the rugged antenna of its type and size available. This antenna features a Single Pcs Aluminum reflector and back support structure designed to provide exceptional performance in a harsh weather conditions. The rugged designed motors for elevation-over-azimuth provides superior stiffness over existing products on the market. In addition, the antenna is designed to meet international performance specifications for commercial or military applications and is readily available in C, Ku and other bands.



Key Features

High strength Single Pcs Aluminum reflector

Rapid deployment

Single push-button automatic satellite acquisition

No special test equipment required

Integrated Antenna comes complete with RF/BUC, LNB, Antenna Control Unit ,Beacon Tracker Received ,Integrated Cables , Military Std Connector Port Panel for Power, M&C, ACU, IF Tx/Rx connectivity's and other as required.

System is easily installed using common materials on Vans, Trucks, Platform, Trailers

Applications

- Remote Satellite Communications
- Oil and Gas Exploration
- Satellite News Gathering
- Homeland Security and Disaster Recovery
- Mobile Office and Business Continuity



- Military Connectors Ports for M&C, Sensor, IF motor GPS.
- Special design allows easy installation as Compared to others.
- Feed Arm mounted BUC/ODU with Complete integration.

Specifications

RF Interface Radio Mounting Axis Transition Waveguide

Feed Arm / Rear of Base /. Inside vehicle Twist-Flex Waveguide WR75 Cover Flange Interface

Antenna system complies with Mild Std for Vibration, EMI/EMC and other standards.

The Antenna Control unit Ethernet port & USB allows full system access via a web page interface for initialization or can be controlled with simple Front Panel controls of ACU.



Electrical Interface Feed Motors Electrical Interface

Maximum Mount Rotation

Azimuth Elevation Polarization Elevation Deploy Speed Azimuth Deploy Speed Peaking Speed VSWR Mechanical Reflector

Mount Geometry Deployment Sensors

F/D Ratio Physical Mounting Plate Connectors for Controller, 10m ext. Cable 2 port – Xpol

12 VDC 15A Max

Full 360° in overlapping 200° sectors 0-80° ±90° Variable 2° /Sec typ Variable 15°/Sec typ, 10°/Sec typ 0.1°/Sec 1.3:1 Max

1.8m Offset Feed Elevation over Azimuth GPS Antenna Compass \pm 2° Tilt Sensor $\pm 0.2^\circ$ 0.61

52" x 28" W: 28° (711 mm)

olowed Dish Ext. Dinis	L: 98.1" (249 W· 74.3" (18	2mm) 387mm)
	H: 26.4" (67	'1mm)
Deployed Height	97.8" (2484	mm)
Weight Environmental Survival	341 lbs (15	ōkg)
Wind Deployed	70 mph (112	km/h)
Wing Stowed	140 mph (22	5km/ĥ)
Temperature	-40° F to 150 (-40°C to 65°	°F 'C)
Operational	(
Wind	45 mph (72 k	xm/hr)
Temperature	-26°F to 130°	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Ku-Band (Linear Orthogonal)	
Transmit Power 1 to 200	Watt*	Tronomit
Frequency 10.70-12	e 2.75 GHz	13.75 – 14.50 GHz
Feed Interface WR75		WR75
Efficiency 70% Midband Gain 45.0 /45	3 dBi	70% 47.0 dBi
Antenna Noise Temperature		
10° Elevation	55K	
Sidelebe Envelope Co Delu		
Sidelobe Envelope, Co-Pol (2°< Ø <20°	29-25 Log Ø
	20° < Ø <26.3°	3.5 dBi
	26.3 < Ø< 48° 48° < Ø	35 -25 Log Ø -10 dBi (averaged)
Cross-Polarization		
On Axis	30 dB	30 dB
Within 1 dB Beamwidth	22 dB	26 dB
C-Band (Linear)		
Frequency (Std.)	Receive 3.4 – 4.2 GH	I ransmit z 5-700 – 6.725 GHz
Frequency (INSAT) 4	.5- 4.8 GHz	6.725 – 7.025
GHz		
Feed Interface	WR229	WR137
Midband Gain	36.0 dBi	39.8 dBi
10° Elevation	55 K	
30° Elevation	50 K	
Sidelobe Envelope, Co $2.0^{\circ} < \emptyset < 20^{\circ}$	-Pol(dBl) 29 – 25 Loa (Ø
20° < Ø <26.3°	-3.5 dBi	
26.3 < Ø < 48° 48° < Ø	35-25 Log Ø -10 dBi (aver	aded)
Cross –Polarization		
On Axis (Std)	30 dB	30 dB
Within 1 db Beamwidth	22 dB	25 dB
C-Band (Circular)		
Frequency 3.625-4.200 GHz	: 5.850 - 6.425 (GHz WP107
Midband Gain	35.6 dBi	39.5 dBi
Antenna Noise Temperature		
10° Elevation	65 K 60 K	
Sidelobe Envelope, Co-Pol(dBi)	
$2.0^{\circ} < \emptyset < 20^{\circ}$	29-25 Log Ø	
26.3 < Ø < 48°	35 -25 Log Ø	í
48° < Ø	-10 dBi (aver	aged)
On Axis	15.3 dB	17.7 dB
Within 1 db Beamwidth	15.3 dB	17.7 dB
The Mil Std 1.8 Mtr is De	esigned for Ha	rsh Environment .lt Consist of All Mil

Std Rugged Connector for Power ,M&C, IF Tx/Rx. The System is Mil Std Vibration **Compliant**.

Complete Integrated System are provided which includes

BUC/ODU integration on Antenna Feed Arm

Transmit Reject Filter Included

LNB or LNA as required

Integration of Coaxial Cable, M&C , Power from BUC to Connector Port Panel at rear base side of Antenna

Antenna Control Unit and Beacon Tracker receiver works simultaneously to Provide Beacon &

- Typical satellite acquisition time in less than 2 minutes
- Ideal for applications that require a Quick, simple setup and reliable connection
- Internal DVB/CW receiver provides modem independence
- Based on an embedded software solution.

Antenna Control Unit Features

- One touch stand-alone solution
- Front Panel Configurable
- Compatible with all mobile platforms
- Support DVB-S1 and DVB-S/ACM,CW frequencies
- Optimal, high-precision antenna pointing
- Remote access and operation via Network, web and other Interfaces
- Built-in motion and movement protection for safely
- Supports inclined orbit satellites
- Integrated with multiple modems
- Works with GPS and GLONASS Satellite Navigation Systems
- Global Position Information available for external devices
- Easy to configure and operate
- · Interoperable with Uplogix's remote management appliances
- Integrated DVB-S2/ACM Tuner

The DVB-S2/ACM Tuner is an integrated part of all controllers. It allows the system the option to find the satellite with and without the use of a satellite modem. Compact and adaptable, this high performance tuner is programmable to any DVB-S or DVB-S2/ACM frequency and allows the user to pre-configure specific Satellite options

Modem Compatibility Certain service provider requires additional communications function for the satellite modem, such as GPS location, auto cross-pol and others. The controller has been fully integrated to provide these requirements for all modems.

. Interfaces

GPS Antenna	SMA Connector
RF Rx In	Type F/N Connector
RF Rx Out	Type F/N Connector
Sensor Input	DB26 Connector
Motor Control	9-Pin Circular AMP Connector
Network Interface	RJ45 Connector
USB 2.0 (Full Speed)	USB Type B Receptacle
Serial Port	DB9 Female Connector
Electrical	
LNB Power	13V, 14V, 18V, 19V, 20V,
	21 V @500mA (max.)
Universal AC Input	90 – 264VAC, 2.2 – 1.1A
	47 – 63 Hz
Elevation Power	12VDC@15A(MAX.)

12VDC@15A(MAX.)

12VDC@15A(MAX.)

12VDC@3A(MAX.)

12VDC@1A

19"1U Rack Mountable Unit Height: 4.5cm (1.75") Width: 43cm (17.1") Depth: 28cm (11.0") 4.5kg (9.9lbs)

Weight

Modem Lock

Web Interface for Antenna Control Unit Provided .

Special Rack mount power Supply for BUC/ODU which runs on DC and requires 10Mhz .*We provide Customized Solution as per need*

Antenna control unit



· Simple stand-alone rack mount or external mounted one touch operation to find satellite and stow antenna

Environmental

24VDC@8A(MAX.) **Azimuth Power**

24VDC@6A(MAX.) **Polarization Power**

24VDC@2A(MAX.) Idle Power Consumption

24VDC@0.5A

Physical

Standard

Dimensions

Operation Temperature -20° to +50°C (-4° - 122° F) Storage Temperature -40° to+ 60° C (- 40° - 140° F

Finding satellite with the Controller

- DVB Search Search directly for any DVB-S1 or DVB-S2 (ACM) carrier on the target satellite and peaks on it.
- DVB Search, Opposite polarity Searches for DVB-S1 or DVB-S2 carrier in the opposite polarity on target satellite, then rotates polarization axes enables transmitter if modem signal attained.

DVB Search, Reference Satellite – Searches for a DVB-S1 or DVB-S2 carrier on ANY configured reference satellite then moves to the target satellite and peaks on modem signal.

- RF Automatic Search The system will stop and search for modem signal when it senses an increase in RF energy received through the DVB tuner as it passes by the target satellite. If the modem signal is found, the system will begin the peak process.
- RF Override Search The user specifies an RF Threshold such that the system stop when it reaches an area above the threshold and looks for modem signal to peak on.
- Beacon Receiver The Controller works seamlessly with the optional Beacon Receiver by searching for a specified beacon frequency and then peaks on it(search gain level can be adjusted).
- Auto Deploy Method Peaks on a reference satellite then uses precise pointing mechanism to locate the target satellite, even when no modem RF or beacon signal is available to peak on.

Antenna Controller Unit

- Can be operated from a PC application using the USB port.
- network connection
- Can be completely configured from the front panel with a password protected configuration menu.

Via its web interface, it can be operated remotely or locally over IP

- It includes motion and movement protection as well.
- Provides automatic re-peaking if signal degradation occurs
- Works correctly even when deployed while on an incline (in any direction) of up to 15⁰
- Can search for both CW, DVB-S and DVB-S2/ACM carriers
- Supports full automatic and manual control
- Allows the users to select from multiple speed levels for both azimuth and elevation
- Allows the system to operate unattended in remote locations
- Is able to upload the recorded log information (maximum of 12 hours) from the controller to the PC for troubleshooting
- Supports full tracking of inclined Orbit satellite by both signal strength and timed function
- Is capable of powering the LNB with 13-21 Volts, selectable in software
- Provides the option of saving the setting to a configuration file that can be used to configure additional controllers with the same configuration parameters
- Works seamlessly with Uplogix Remote Managements Appliances
- Support both GPS and GIONASS Satellite navigation systems
- Supports Electronic Flux Gate Compass for increased speed of acquisition
- Designed and Manufactured to the highest standard of quality and reliability.

Beacon Tracking Receiver



The Rack mount Beacon Receiver is a high performance unit designed to track the power density of a satellite beacon in real time. It supplies a DC voltage output that is linearly proportional to the beacon power by utilizing a true, RMS – responding power detector.

System level Adjust Frequency Stability Frequency Reference Phase Noise Alarms Alarm Relay External LNB Power

Front Panel Display M&C

M&C Connector

Environmental Specifications

Operating Temperature Storage Temperature Humidity

Physical Specifications Size

Weight Primary Power 1.75" (H) x16" (D) x 19" (W) 48 cm (19") W 3.63 Kg (8lbs) 90-264 VAC 47 – 63 Hz

0° to +50° C (32° to 122°F)

-40° to +70° C (-40° to +158° F)

0 to 60dB, 0.5dB steps

>75 dB-Hz, 1 kHz from Carrier

RS-422/485 switched on rear

+18VDC, Switched, In/Out, 500mA,

<1ppm, 0°C to 0°C

Vacuum Fluorescent

10 MHz (Internal)

Unit Lock

RS-232 or

DB-9, Female

95% RH @ 40° C

1.4A Autosensing,

panel

Form-C

max

Hand –Held Motor Controller for 1.8M Antenna.



The Hand-Held Manual Controller allows you to operate the platform without having the auto-pointing controller or PC attached to it. In addition, this controller makes it possible to operate the mobile antenna at variable speeds.

A useful tool for conducting demonstrations, installations, testing or for emergency backup situations

Features

- Jog control on 3 axis
- Compatible with all Mobile Platforms
- Ability to raise, stow, and move the Mobile Platform during demos, installations, trouble-shooting etc.
- Compact, ergonomic case design
- LCD display for operation and limits status
- 10-speed operation
- Directly attachable to any 12VDC power supply
- Enhanced operation with feedback control

System Specifications

Input Frequency Pre-detection Bandwidth Input Level Frequency tuning Frequency Adjust AFC Threshold Input Impedance Input Connector Output Impedance Output Connector Tracking Gradient Tracking Response System Ievel Range 930MHz to 2300MHZ 50 kHz -90 dBm(min.), -30dBm(max.) 10 kHz steps Front Panel or remotely ±23kHz steps 45dB-Hz, for acquisition 75 Ohm Type F, Female 100 Ohm, Signal ended Terminal Plug &BNC Female 0.5 V/dB 0 to +10 VDC 60dB

Electrical Motor

Sensor

9 pin, 4.5m (15ft) cable DC-26,4.5m (15ft) sensor cable

1.8M Motorized Antenna Mechanical Sizes



