

2.4 Meter Flyaway Engage™ Class High Performance Satcom Terminal Solution

- X, Ku, or Ka-Band terminal
- Bandwidth efficient triple access modem technology or
- Optional Two modems built-in, for two separate independent links
- Second Generation GaN based SSPB
- Built in Assisted Pointing, Orientation Sensors and Beacon Receiver
- XTAR Certified.

Overview

The New Engage™ Class High Performance, 2.4m Flyaway SATCOM Terminal Solution from Advantech Wireless Technologies is based on a high efficiency, ruggedized tri-band ready 2.4 Meter Flyaway Antenna, which can cover X-Band, Ku-Band, or Ka-Band, by replacing the feed only. The antenna is optionally fully motorized with an integrated satellite finding controller.

The terminal is modem agnostic and can be integrated with any third party modem hardware. Two independent modems can be incorporated, to allow better reach within the network.

The terminal can be configured for SCPC STAR, TDM/TDMA, or Mesh Centric Hubless Network Configuration.

For ease of operation, the antenna includes Assisted Pointing with Orientation Sensors and Beacon Receiver even in the manual configuration.

The RF section includes the Advantech's award winning Second Generation GaN technology based SSPA/SSPBs.

- X-Band from 20W to 200W
- Ku-Band from 16W to 250W
- Ka-Band from 10W to 50W

The entire terminal is fully compliant with:

- MIL-STD-188-164a
- MIL-STD-810F
- NATO STANAG 4484
- IP65.



Features

- Flexible and Mobile Solution
- Built in Assisted Pointing with Orientation Sensors and Beacon Receivers for manual pointing
- Fully integrated system for easy deployment and use
- Quick two-persons installation
- Multi Band Frequency X, Ku or Ka-Band operation
- Up to two independent third party modems
- Compact ruggedized packaging, IP65 compliant
- State-of-the-art Second Generation GaN based Solid State Power Amplifier
- Excellent Reliability
- Minimal Maintenance

Options

- High Performance Motorization Package
- Integrated Control System for Acquire
- Routers and Management PoE Switch
- Location finding tool set (Compass, GPS, Clinometer)
- Hand held spectrum analyzer
- UPS with Battery set and NMS Ethernet Card
- Power generator with Automatic Transfer Switch
- IP Phone
- Ruggedized laptop
- Android Application for fast satellite acquisition
- Anti GPS Jamming capabilities

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RF Performance						
	20W to 200W X-Band		16W to 250 Ku-Band		10W to 50W Ka-Band	
Frequency (GHz)	7.900 – 8.400		13.75-14.5		30.0 – 31.0	
EIRP	55 dBW to 65 dBW		60 dBW to 72 dBW		64dBW to 70 dBW	
Antenna Electrical Specifications						
	2 Port X-Band Circular Polarization		2 Port Cross Pol Ku Band Linear Mode Matched Feed Polarization		2 Port Cross Pol Ka Band Circular Polarization	
	RX	TX	RX	TX	RX	TX
Frequency (GHz)	7.250 – 7.750	7.900 – 8.400	10.70-12.75	13.75-14.5	20.2 – 21.2	30.0 – 31.0
Gain (Midband, dBi)	43.2	43.8	47.1	49.1	51.7	54.9
Noise Temperature (°K)						
10 deg El	78		64		130	
20 deg El	74		60		110	
Axial Ratio	0.8dB	0.8dB			<1.5dB	<1.0dB
Cross Pol						
On Axis	-30.0 dB	-30.0 dB	-32 dB	-35 dB	-21.3 dB	-24.8 dB
In 1 dB contour	-30.0 dB	-30.0 dB	-32 dB	-35 dB	-21.3 dB	-24.8 dB
Side lobe Compliances		Meets DSCS		Meets ITU Eutelsat		Meets DSCS
VSWR	1:30:1	1:30:1	1.40:1	1.30:1	1:30:1	1:30:1
Isolation						
Tx/Rx	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-110 dB	0 dBm input	-35 dB	0 dBm input	-70 dB
Antenna Mechanical / Environmental Specifications						
Reflector	2.4 meters (96 in) Carbon Fibre					
Antenna Travel						
Azimuth	360° with fine adjustment					
Polarization Skew Adjust. (Linear Pol)	± 90°					
Elevation	0° - 90°					
Weight	626 Kg (1590 lb) – 11 ruggedized cases (with 3 cases for feeds)					
Temperature						
Operational	-30 to 60°C (-22°F to 140°F)					
Survival	-40 to 70°C (-40°F to 158°F)					
Winds						
Operational	Gusting 30mph to 45 mph (40 km/h to 72Km/h) with ballast or anchors					
Survival	60 mph (96 km/h) with tie downs/ any position					
Rain						
Operational	2 in/h (5 cm/h)					
Survival	4 in/h (10 cm/h)					
Relative Humidity	Operational humidity up to 100% condensing					
Solar Radiation	360 btu/h/ft ² (1000 Kcal/h/m ²)					
Radial Ice (survival)	½ in (12.7 mm)					
Portable Cases						
Sealing Class	IP65 (IEC 60529)					
Temperature	-40°C to +60°C					
Weight & Dimensions						
	Case 1,2,3 - Antenna Reflector Cases (3) –Roto molded with handles - each case :					67.7Kg (172 lb)
	Case 4,5,6 - Leg and feed arms Cases (3), Compression Mold ed/Handles- each case :					55.3Kg (140 lb)
	Case 7,8,9 - Integrated Feed and Boom packages with Amps –each case					43Kg (94.8lb)
	Case 10,11 - Pedestal and Back structure- each case					64.2Kg (165 lb)
Features						
	Corrosion proof and Resistant to solvents and acids					
	Rounded edges and corners					
	Fit in a built-in axle, for ease of handling with heavy payloads					
	Lock system with padlock holder					

Ref.: PB-2.4m-FlyAway-Terminal-21126

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