

## 2.4 Meter Flyaway Engage™ Class High Performance Satcom Terminal Solution

- X, Ku, or Ka-Band terminal
- Bandwidth efficient digital modem access technology or
- Optional two modems built in, for two separate independent links
- Second Generation GaN based SSPB
- XTAR Certified.

### Overview

The 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 has built-in either:

- A multi waveform-access mode satellite modem.
- Mil 165A Grade Technology Modem

The digital multi waveform-access technology allows the terminal to operate different access wave forms, and achieve efficient bandwidth utilization:

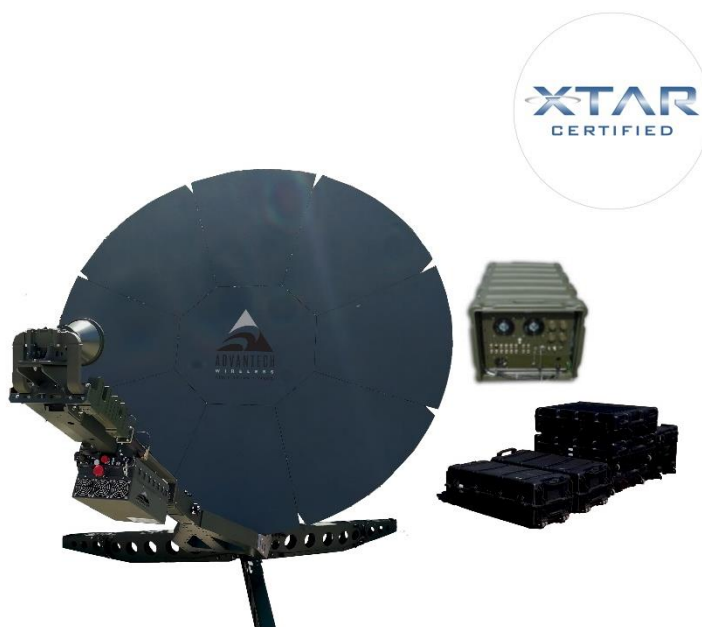
- STAR Mode MF-TDMA for low data rate, high bandwidth efficient traffic
- MESH mode MF-TDMA with multichannel demod built-in
- HUBLESS TDMA
- SCPC for high data rate traffic, with dedicated bandwidth and maximum QoS

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

- X-Band from 20W to 100 W
- Ku-Band from 16W to 125W
- Ka-Band from 10W to 40W

The entire terminal is fully compliant with:

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



### Features

- Flexible and Mobile Solution
- Fully integrated system for easy deployment and use
- Quick two-persons installation
- Modem with multi access mode
- DVB-S/S2X compliant
- Two modems for two independent links
- Multi Band Frequency X, Ku or Ka-Band operation
- Compact ruggedized packaging, IP65 compliant
- State-of-the-art Second Generation GaN based Solid State Power Amplifier
- Excellent Reliability
- Minimal Maintenance

### Options

- Modem Agnostic
- High Performance Motorization Package
- Integrated Control System for 1 Button Auto 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 C4I hardware platform
- Anti GPS Jamming

## 2.4 Meter Flyaway Engage™ Class High Performance Satcom Terminal Solution

### Product Features & Specifications

#### Technical Specifications

##### Modem Specifications

Network Architecture	Point- to- Point , Star, Mesh
Security	Optional AES 256 and Transec

##### RF Performance

	20W to 100W X-Band	16W to 125 Ku Band	10W to 40W Ka Band
Frequency (GHz)	7.900 – 8.400	13.75-14.5	30.0 – 31.0
EIRP	55 dBW to 62 dBW	60 dBW to 69 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	0.5dB	0.5dB			<1.5dB	<1.0dB
Cross Pol						
On Axis	-30.0 dB	-30.0 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
In 1 dB countour	-30.0 dB	-30.0 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
Sidelobe 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 Fiber
Antenna Travel	
Azimuth	360° with fine adjustment
Polarization	± 90°
Elevation	5° - 90° of reflector bore sight
Weight	640 Kg (1400 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/ft² (1000 Kcal/h/m²)
Radial Ice (survival)	½ in (12.7 mm)

#### Portable Cases

Sealing Class	IP65 (IEC 60529)
---------------	------------------

#### Weight & Dimensions

<b>Case 1,2,3</b> - Antenna Reflector Cases (3) –Rotomolded with wheels and handles - each case :	39Kg (85lb)
<b>Case 4,5,6</b> – Pedestal Cases (3), Compression Molded/Wheels/ Handles- each case :	66Kg (145.4lb)
<b>Case 7,8,9</b> – Integrated Feed and Boom packages with Amps	43Kg (94.8lb)
<b>Case 10,11</b> - Portable Racks	75Kg (165.3lb)

Ref: PB-2.4m-FlyAway-Terminal-20007

#### NORTH AMERICA

**USA**  
info.usa@advantechwireless.com

**CANADA**  
Info.canada@advantechwireless.com

#### EUROPE

**UNITED KINGDOM**  
info.uk@advantechwireless.com

**RUSSIA & CIS**  
info.russia@advantechwireless.com

#### SOUTH AMERICA

info.latam@advantechwireless.com

**BRAZIL**  
info.brazil@advantechwireless.com

#### ASIA

info.asia@advantechwireless.com

**INDIA**  
info.india@advantechwireless.com