

EasyFLYSAT Terminal

◆ EasyFLYSAT , an “All In One Easy To Use” Compact Portable Satellite Terminal, introduces innovative concepts in Mobile Satellite Communications, opening Satellite Technology to applications where mobility and fast deployment are required also in extreme environmental conditions.



Featuring a flyaway system in a very compact quickly-on-the-air satellite package, it combines easy one-person operation with exceptional technical performances in a rugged design with state of the art technology.

EasyFLYSAT works as an “Integrated System” and it is totally autonomous by auxiliary external equipments. All the equipment, 19” standard (up to 3U x 40cm), are hosted inside the EasyFLYSAT case. An embedded control module provides a full management for all internal devices and their functionalities through a Web based interface. The unit can be customized for special requirements.

NO TOOLS REQUIRED

For deployment and pointing, no tools are required; all parts are assembled in very few operations with clean hands.

EASY TO CARRY & TRANSPORT

EasyFLYSAT is designed as a “Trolley” to be carried along by one person only. Dimensions and weight allow an easy transport in small car or by airlights. Featuring an external rugged carbon fiber material enclosure reinforced with kevlar, internal parts and equipment are hosted on a solid carbon fiber frame that warrants high stability.

Main features

- **easy one-person operation with exceptional technical features**
- **lightweight, robust, high-precision reflector ideal for extreme environmental conditions**
- **High Performance**
 - Low Sidelobes
 - High E.I.R.P. (65dBW Ku-Band with 200W Power Amplifier)
- **Compliances:**
EESS-502, IESS-601E,
MIL-STD-188-164B

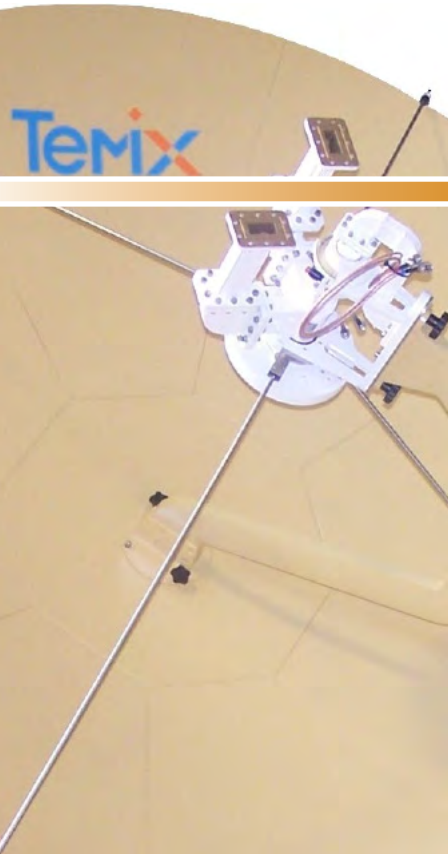
*The Information included in this data sheet may be changed without advise. rev_03/13



◆ TEMIX Communication Engineering

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EasyFLYSAT is provided with Manual Pointing Set-up or Fully Motorized 3-axes Autopointing System.

Manual Drive System:

a pointing support tool allows a reliable and secure pointing in any condition, with simple operations through an handheld touch screen terminal (ASAC200). It integrates built-in GPS, Compass, Inclinator, DVB-S Receiver and a Processor Module providing all the necessary instruction to drive manually the Flyaway Antenna to acquire the selected satellite with no need of supplementary equipment.



Main features

Antenna Optic:

- 130cm DualOptic Center
- 120cm PrimeFocus Offset
- 100cm PrimeFocus Offset

Antenna Drive System:

- 3-axes Fully Motorized
- 3-axes manual

Satellite Acquisition:

- 3-axes Fully Autopointing
- 3-axes manual and/or Assisted Satellite Acquisition Controller (ASAC200)

Fully 3-Axes Autopointing System:

The Full Motion EasyFLYSAT is fully motorized and together with the Antenna Control Unit can automatically perform the satellite Autopointing including Stow & Deploy, Peaking and Tracking (Step-Track, Memory Track); includes GPS, Compass & Inclinator, Angle Transducers and Hardware Limit Switches. On the side panel a green button enables the autopointing procedure on the selected satellite.

From the Web Interface on the PMU it is possible to monitor and enter antenna presets, move the antenna UP/DOWN/CCW/CW and the polarization (if required) CCW/CW, by clicking on the respective button. It is also possible to select the Station Status (Stow, Deploy, Feed Mount) and the desired Tracking Mode (Autopointing, Step Track, Memory Track, Program Track).



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Features:

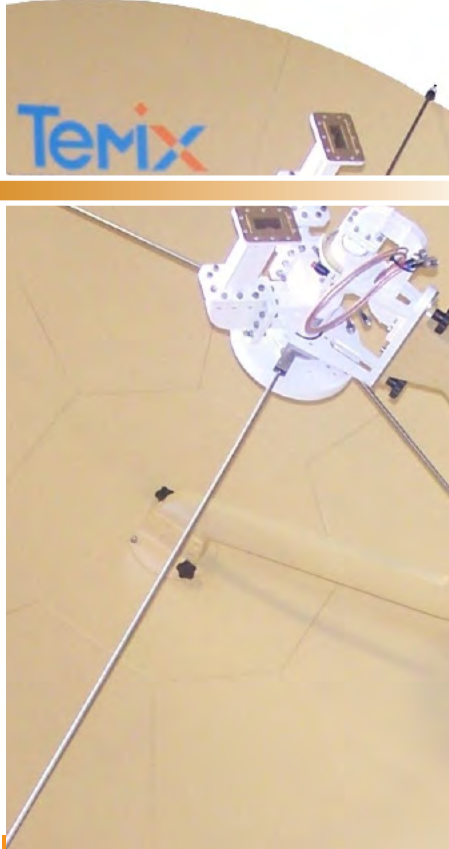
Ku-Band	130cm	120cm	100cm
Features:			
Frequency Range	Rx: 10.95-12.75GHz; Tx: 13.75-14.50GHz (standard)		
Gain (mid band)	Rx: 42.2 dBi Tx: 43.7 dBi	Rx: 41.3 dBi Tx: 42.8 dBi	Rx: 39.4 dBi Tx: 40.9 dBi
Max EIRP (*)	65.0 dBW (200W TWT)	58.5 dBW (40W BUC)	57.1 dBW (40W BUC)
G/T (40K, 20° EL) (**)	20.0 dB/K	19.3 dB/K	17.7 dB/K
Cross Pol Isolation	>35dB 1dB Contour	>33dB on axis >28dB 1dB Contour	>30dB on axis >26dB 1dB Contour
Polarization	Linear Orthogonal		
Isolation Tx/Rx	85 dB	85/30 dB	85/30 dB
Insertion Loss Tx/Rx (*)	1.5/0.25 dB	0.6/0.25 dB	0.4/0.25 dB
Physical:			
Optic Geometry	Prime or Dual Optic Center Focus	Offset prime focus	Offset prime focus
Mount Geometry	Elevation over Azimuth		
Travel Range	AZ: +/-170°; EL: 0° to 90°; POL: +/-110°		
Drive Speed (***)	2°/sec deploy; 0.2°/sec peaking		
Controller	Advanced Satellite Acquisition Controller (for manual drive system) or Fully Automatic Autopointing		
Weight	from 49Kg up to 85Kg depending on configuration		
Dimensions	74x99x68 cm	74x99x68 cm	74x99x59 cm
Environmental:			
Wind	Operational 80km/h; Survival 100km/h deployed; 150km/h stowed (with ballasts or anchors)		
Temperature	Operational -20°/50°C; Storage -30°/60°C; (optional: -32°/55°C Operational, -40°/70°C Storage)		
Humidity	100% Condensing		
Altitude	up to 5000m		

(*): at Feed input Flange

(**): at LNB output Flange

(***): motorized Terminal

1.0m EasyFLYSAT Terminal



Main features

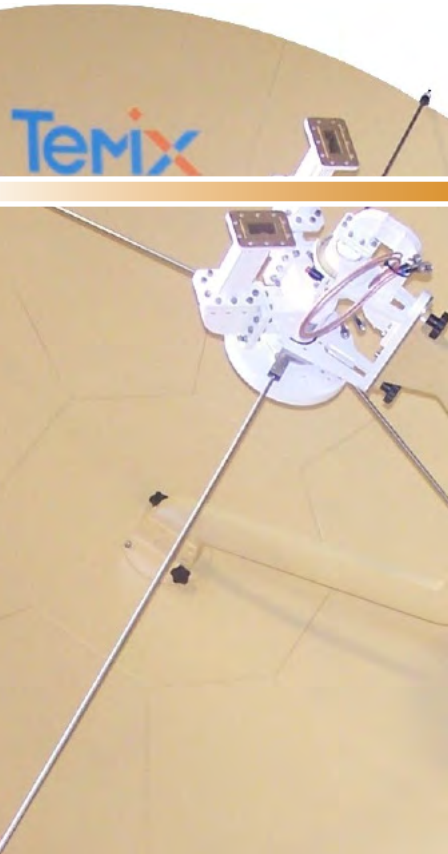
Optional 1+1 Redundant Hot Standby System:

- up to 2x 40W Ext. Ku-band integrated BUCs & Controller

Optional Full Ku-band Receive System:

- DUAL PLL Ku-band LNB (10.95-12.75 GHz)

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EasyFLYSAT Terminal

EasyFLYSAT is a high-tech complex system designed to work in extreme conditions, where reliability is the must. To answer to this mandatory requirement Temix has adopted the most advanced technologies and the state-of-the-art materials. EasyFLYSAT adopts an innovative Process Control Module (PCM), for monitoring and managing all critical parameters, with embedded software and various interfaces for acquisition and control through a user-friendly interface.

The user interfaces is Web based with an embedded Web Server via the Console Ethernet port or via Wi-Fi.

Features (X/Ka-band):

Dish Size	130cm	120cm	100cm
Features:			
X-Band Terminal			
Frequency Range	Rx: 7.25-7.75 GHz; Tx: 7.9-8.4 GHz		
Gain (mid band)	Rx: 38.3 dBi Tx: 39.0 dBi	Rx: 37.6 dBi Tx: 38.3 dBi	Rx: 36.0 dBi Tx: 36.7 dBi
Max EIRP (with 20W BUC) (*)	50.4 dBW	50.4 dBW	48.7 dBW
G/T (40K, 20° EL) (**)	16.2 dB/K	15.3 dB/K	13.7 dB/K
Axial Ratio	< 2 dB		
Polarization	Circular LHCP/RHCP		

Ka-Band Terminal	Commercial & Military Bands		
Frequency Range	Rx: 19.7-21.2 GHz; Tx: 29.5-31.0 GHz		
Gain (mid band)	Rx: 47.0 dBi Tx: 50.4 dBi	Rx: 46.0 dBi Tx: 49.4 dBi	Rx: 44.0 dBi Tx: 47.7 dBi
Max EIRP (with 10W BUC) (*)	59.8 dBW	58.7 dBW	57.0 dBW
G/T (40K, 20° EL) (**)	22.6 dB/K	21.4 dB/K	19.8 dB/K
Axial Ratio	< 0.75 dB		
Polarization	Circular LHCP/RHCP		

(*): at Feed input Flange

(**): at LNB output Flange



Main features

Optional: Integrated Communication Systems

- **Wireless BTS PTMP**
700MHz, 900MHz, 1.2GHz
2.4GHz, 3.5GHz, 5.8GHz,
or any other on request)
- **VHF/UHF Repeater**
- **GSM BTS/PicoCell**
- **TETRA**

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