



TSM 301 **TRANSPORTABLE MULTIBAND SATELLITE TERMINAL**

The Multiband Satellite Terminal TSM 301 is a tri-band multi-channel terminal providing communications capability for Strategic and Tactical field operations.

The TSM 301 can be easily packed and transported by vehicle or aircraft. Set-up and operation in the field is achievable in a short time, generally under 2 hours.

It allows worldwide access to C and Ku band Domestic and International satellites for Data, Voice and Trunking applications, as well as X band for military satellites.

The TSM 301 offers multiple baseband traffic channel management and operates as a multiplexing, drop-insert, flexible cross-connect, voice and data switch.

Moreover it can be equipped with an ATM switch to provide integration of new ATM broadband services with existing narrowband military communication services.

An Advanced Monitor and Control system (MCS) provides local or remote control and monitor functions for the whole Terminal. A User-friendly Graphical Interface allows the Operator to configure the terminal, set carriers and frequency bands, and continuously monitor equipment status.

MAIN FEATURES

- Tri-band capability: C, X and Ku
- Interchangeable Feed and LNA> 2.4m integrated Antenna (C, X, Ku) and 2.4/1.5m Flyaway Antenna (Ku)
- Capable of simultaneous operation with Integrated and Flyaway Antennas;
- Rapid setup and tear down
- Easy acquisition and tracking using GPS receiver, electronic compass and inclinometer, software controlled by Antenna Control Unit (ACU).
- Satellite Specifications compliance:
- Integrated Antenna:
 - C band: Intelsat (Std H3)
 - X band: Sicral, Nato, DSCS, Skynet, Syracuse
 - Ku band: Eutelsat (Std M), Intelsat (Std E1)
- Satellite Specifications compliance:
 - Flyaway Antenna: Ku band: Eutelsat (Std M), Intelsat (2.4m Std E1, 1.5m Std K2)
- Satellite Link capacity: up to eight links (64 kbps to 2 Mbps)
- Satellite Access: FDMA & SCPC/DAMA
- Transportable: Mounted on UEO-2 shelter with loading capability on C-130 aircraft
- Very fast satellite band change (a few minutes)
- Automatic Redundancy for TWTA and converters
- GPS-based Frequency Reference
- Windows-based Management and Control System
- Analogue/Digital Voice/Data user interfaces
- ATM, Eurocom, Optical & Radio Link interfaces for Voice, Fax, Data and Video services

TECHNICAL SPECIFICATIONS

Terminal characteristics (integrated antenna)

Parameters	All Bands	C Band	X Band	Ku Band
Tx Frequency		5.85 - 6.425 GHz	7.9 - 8.4 GHz	14.0 - 14.5 GHz
Tx Antenna Gain (Midband)		41.6 dBi	44 dBi	48.1 dBi
EIRP (saturated)		64.8 dBW	68.1 dBW	70.2 dBW
Rx Frequency		3.625 - 4.2 GHz	7.25 - 7.75 GHz	10.95 - 12.75 GHz
Rx Antenna Gain (Midband)		38.4 dBi	43.8 dBi	46.7 dBi
G/T (LNA Temp.)		18.5 dB/K (40K)	22 dB/K (55K)	25.5 dB/K (70K)
Azimuth Range	± 130°			
Elevation Range	5° - 85°			

Terminal characteristics (flyaway antenna)

Parameters	2.4 meter antenna	1.5 meter antenna
Tx Frequency	14.0-14.5 GHz	14.0-14.5 GHz
Tx Antenna Gain (Midband)	49.2 dBi	45.5 dBi
EIRP (saturated)	60.9 dBW (16W)	60.9 dBW (40W)
Rx Frequency	10.95 - 12.75 GHz	10.95 - 12.75 GHz
Rx Antenna Gain (Midband)	47.6 dBi	43.2 dBi
G/T (LNA Temp.)	25.5 dB/K (85K)	21.3 dB/K (85K)

TSM 301 terrestrial user interfaces

5 off BCA Analogue channels
5 off V.10 Data channels
8 off 64 - 2048 kbps V36 links
1 off 512 - 2048 kbps Eurocom D/1 link
2 off Multimode fibre 50/125 Optical links, carrying:
1 off 512 - 2048 kbps Eurocom D/1
1 off 8 Mbps ATM ITU-T G.703

TSM 301 radio user interfaces

1 off 30 - 88 MHz VHF link carrying a 6-wire analogue channel
1 off 100 - 400 MHz V/UHFAM/FM link carrying a 6-wire analogue channel
1 off 1350 - 1850 MHz Radio link (LOS) carrying 1 off 512 - 2048 kbps Eurocom D/1
or 1 off 4400 - 5000 MHz carrying 1 off 8 Mbps ITU-T G.703

Environmental characteristics

Parameters	Performances
Weight	4000 Kg (Max.)
Power Dissipation	20 kW (Max)
Number of cases for the flyaway	8 of various sizes
Flyaway weight	250 Kg
Set Up Time (2 trained operators)	120 minutes
Temperature Range	-30 - +45° C
Sustained wind	45 mph (operational) 100 mph (stowed)

For more information please email infomarketing@selex-es.com

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