

E-LynX™ SAT

Tactical satellite communications for voice and data transmission



- **On the move** - Automatic electronic satellite tracking using **phased-array antennas**
- **LPI/LPD** - Low Probability of Interception / Low Probability of Detection - using Direct Sequence Spread Spectrum (DSSS)
- **Enables connection to secured VHF/UHF military radio equipment for voice and data**
- Suitable for a wide range of tactical platforms
- Standard IP protocols and interfaces
- Lightweight, small form factor

E-LynX SAT

Tactical satellite communications for voice and data transmission

Part of the E-LynX family, the E-LynX SAT tactical solution provides satellite on-the-move secure communication (SATCOM) using standard Ka-band GEO satellites.

Utilising active Ka-band phased-array antennas for both transmission and reception, the E-LynX SAT eliminates the need for mechanical tracking systems. The system's LPI/LPD – Low Probability of Interception / Low Probability of Detection is achieved by using Direct Sequence Spread Spectrum (DSSS) modulation, making this solution both secure and immune. Lightweight, ruggedised and versatile, the E-LynXSAT is well suited for deployed maneuvering forces and for installation on vehicular, airborne and maritime platforms. The solution facilitates seamless communication across any geographic location and in any terrain type, while supporting various military scenarios.

The E-LynX SAT can be easily integrated into any VHF/UHF tactical radio, providing secure communication from the individual soldier to regional command posts, while supporting stationary or **on-the-move** configurations.

E-LynX SAT consists of two main units: a mobile end user terminal, and a hub at the stationary satellite ground station. The system can operate in a variety of modes:

- From mobile terminal to the hub at a satellite ground station, and from the hub through existing communications infrastructure (Ethernet IP) to any location
- Between multiple mobile terminals - double hop
- Several mobile terminals concurrently, to the hub

Technical Specifications

General

Modem Data Rates	4Kbps ~ 40Kbps – depending on satellite performance
Modem Modulations	BPSK, OQPSK, QPSK
Spreading Factor	5 to 20dB
Receiver Lock Time	50msec
Frequency Switching Time	1msec
Modem Board Power Consumption	< 5W
Transmission Power	30dBm (1W) Max
Receiver Eb/No	2dB
Transmit Antenna Frequency Range	27.5GHz to 30GHz
Receive Antenna Frequency Range	17.7GHz to 20.2GHz
Angle Coverage (from the horizon)	AZ: 360° EL: 30° to 90°
Transmit / Receive Antenna Gain	≥21dBi at 90° ≥19dBi at 40°
Transmit / Receive Antenna Beamwidth	13° at 90° EL/AZ 18° at 40° EL/AZ
Operating Temperature	-20°C to 50°C