

ELSAT 2000E

Compact, low-profile Ku SATCOM antenna for tactical vehicles



The ELSAT-2000E is a highly ruggedized, field-proven military SATCOM on-the-move (SOTM) antenna particularly suited for land platforms. The 50cm, low-profile antenna delivers high performance in Ku band, ensuring continuously connected voice, video and data communications while the platform is in motion.

The antenna is based on Elbit Systems' unique planar array passive waveguide technology, which offers best-in-class RF performance for every given size. With support for high data rates, the ELSAT-2000E can be fully integrated with all types of broadband satellite communications systems, maximizing C⁴ effectiveness and situational awareness in real-time and under the most demanding combat conditions.

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Continuously connected voice, video and data communications

The antenna supports high data rates and delivers seamless broadband satellite communications to mobile and maneuvering ground military forces. The ELSAT 2000E maintains accurate satellite pointing, acquisition and re-acquisition while on the move (OTM), utilizing advanced triple tracking mechanisms with control of the azimuth, elevation and polarization angles.

Ruggedized to military standards

Designed for Ku and Extended Ku Band, the antenna offers high availability in all weather and combat conditions and is fully compliant with military standards. The antenna's small footprint and very low profile provides for reduced vulnerability from enemy or obstacle damage, increased maneuverability in challenging terrain, and low wind resistance.

Highly flexible and suitable for a range of modems

The antenna can be easily mounted on a wide range of OTM platforms including wheeled and tracked vehicles, and both airborne and maritime vessels. The antenna is compatible with multiple modems, providing a high level of design flexibility to support an uninterrupted flow of accurate communications in real-time.

Key Features

- OTM broadband SATCOM transmit and receive capabilities
- Best-in-class planar array passive waveguide technology
- Modem independent
- Always on – no user intervention required
- Support for high downlink (OB) and uplink (IB) rates
- Superior SOTM quad tracking and relocking mechanism: GPS, RSSI, Gyro, satellite beacon signal receiver
- Rapid satellite acquisition and reacquisition after blockage
- Elevation from -5 to +100 degrees
- 12/24 VDC vehicle-powered

Key Benefits

- Lightweight and compact – suitable for a wide range of vehicles
- Low-profile antenna
 - Reduced vulnerability
 - Unhindered maneuverability
 - Low wind resistance
- On-demand uninterrupted SOTM connectivity over vast terrain types
- Best RF performance for given panel size
- Highly-ruggedized and reliable MIL specification antennas
- Suitable for all manned and unmanned ground vehicles, as well as airborne and maritime vessels

Technical Specifications

Physical Characteristics	ELSAT 2000E
Diameter	50cm
Height	25cm
Weight	15kg
Locking and tracking system	Based on RSSI, Gyros, GPS, satellite beacon signal
Frequency range	Ku and Extended Ku
Receive	10.7 to 12.75GHz
Transmit	13.75 to 14.5GHz
Azimuth tracking rate	60 deg/sec
Elevation range	0 to 100 degrees
Acceleration	Az=300 El=250 deg./sec ²
Input voltage	12/24 VDC
RF performance @ whole band	
Total G/T at 30 deg. elevation	>7 dB/°K
Antenna gain Rx:	Rx: 28.6 dBi @ 12.5GHz
Antenna gain Tx:	Tx: 29.3 dBi @ 14.25GHz
Environmental	
Operating temperature range	-20 to +50 degrees C
Environmental and EMC	Compliant with MIL-STD-810 (incl. 40G shocks for tracked vehicle), MIL-STD-461, MIL-STD-1275



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