

# ELSAT 2000E

Compact, low-profile Ku/Ka/X Bands 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 C<sup>4</sup> effectiveness and situational awareness in real-time and under the most demanding combat conditions.



# ELSAT 2000E

## Compact, low-profile Ku SATCOM antenna for tactical vehicles

### 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.

## 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	Ka	X
Receive	10.7 to 12.75GHz	19.2 ~ 21.2GHz	7.25 ~ 7.75GHz
Transmit	13.75 to 14.5GHz	29 ~ 31GHz	7.9 ~ 8.4GHz
Azimuth tracking rate	60 deg/sec		
Elevation range	0 to 100 degrees		
Acceleration	Az=300 El=250 deg./sec <sup>2</sup>		
Input voltage	12/24 VDC		
RF performance @ whole band			
Total G/T at 30 deg. elevation	>7 dB/°K	10.5dB/°K	4dB/°K
Antenna gain Rx:	Rx: 28.6 dBi @ 12.5GHz	32.5dBi @ 20.2GHz	25dBi @ 7.5GHz
Antenna gain Tx:	Tx: 29.3 dBi @ 14.25GHz	36dBi @ 30GHz	25.7dBi @ 8.15GHz
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		

### 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 0 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



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