

RaySat ER5000-M

Ruggedized Ka- and Ku-Band SOTM Antenna

Versatile Platform for SOTM

For many defense and security applications, Satcom On-The-Move (SOTM) is the only choice for reliable, continuous, quickly deployable broadband communications.

SOTM provides a significant communications advantage for defense and security applications, such as military C4I on-the-move, homeland and national security applications, as well as wide-scale backup communications for rescue services and emergency responders.

The RaySat ER5000-M is a MIL-STD compliant, lightweight, low-profile, two-way antenna system that enables real-time Ka and Ku-band satellite communications for video, voice and data transfer. Its sturdy structure and size allow installation on a wide range of vehicles and vessels.

ER5000-M: Maximum Throughput; Maximum Ruggedness

The ER5000-M antennas maximize throughput using high-efficiency waveguide panel technology. They feature multiple onboard tracking sensors, which enable accurate tracking, short initial acquisition and instantaneous re-acquisition after signal loss.

Enhanced antenna ruggedness makes the system particularly suitable for operation in harsh environments.

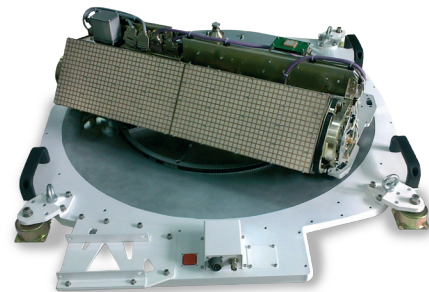
Integrated Terminal Option

The ER5000-M can be offered as part of a complete, integrated SOTM terminal, with a unified management system. The terminal includes seamless mechanical integration of a Gilat/Wavestream BUC and a Gilat MLT1000 modem. The integration with Gilat's special-purpose SOTM modem allows for operation in low SNR conditions.

When integrated with 3rd-party modems, the antenna is supplied with an Antenna Control Unit (ACU).

Benefits

- Supports standard and extended Ku-band
- Supports commercial and military Ka-band
- MIL-STD compliant
- Easy and quick installation on small vehicles and vessels
- Rapid auto-acquisition, tracking and re-acquisition
- Optional integrated terminal including an antenna, BUC and modem



RaySat ER5000-M

Technical Specifications

Mechanical

Antenna Size L x W x H*:

RaySat ER5000Ku-M:

33 x 40.03 x 10 in
83.8 x 101.6 x 25.4 cm

RaySat ER5000Ka-M:

33 x 37.8 x 10 in
83.8 x 95.9 x 25.4 cm

Antenna Weight:

RaySat ER5000Ku-M:

128 lb (58.1 kg) incl. BUC 40W

RaySat ER5000Ka-M:

115 lb (52.2 kg) incl. BUC 12W

Electrical

Frequency Band**:

RaySat ER5000Ku-M:

Rx: 10.95–12.75 GHz

Tx: 13.75–14.5 GHz

RaySat ER5000Ka-M:

Rx: 19.2–21.2 GHz

Tx: 29–31 GHz

Polarization:

RaySat ER5000Ku-M:

Linear

RaySat ER5000Ka-M:

Circular

Tx Gain (typical):

RaySat ER5000Ku-M:

31 dBi

RaySat ER5000Ka-M:

36 dBi

G/T (typical):

RaySat ER5000Ku-M:

9 dB/K

RaySat ER5000Ka-M:

12 dB/K

Uplink max EIRP:

RaySat ER5000Ku-M:

48.7 dBW (60W BUC)

RaySat ER5000Ka-M:

53dBW (50W BUC)

Cross Pol (typical): 25 dB

IF Input (Tx):

RaySat ER5000Ku-M:

950–1700 MHz

RaySat ER5000Ka-M:

950–2000 MHz

IF Output (Rx):

RaySat ER5000Ku-M:

950–2150 MHz

RaySat ER5000Ka-M:

950–1950 MHz

Power Consumption***:

RaySat ER5000Ku-M:

120 W

RaySat ER5000Ka-M:

120 W

Antenna Performance

Elevation Angle:

0°–90° (automatic tracking up to 80°)

Tracking Rate:

150°/s

Electrical Interfaces

Tx Input:

RaySat ER5000Ku-M:

WR75

RaySat ER5000Ka-M:

WR28

Rx Output:

RaySat ER5000Ku-M:

TNC-Female

RaySat ER5000Ka-M:

TNC-Female

Environmental

Temperature Range:

–40° to +131°F (–40° to +55°C)

Relative Humidity:

Up to 95%

Military Specification

Environmental:

MIL-STD-810G, IP66

EMI/RFI:

MIL-STD-461F

DC Characteristics ***:

MIL-STD-1275

BUC Options

RaySat ER5000Ku:

40W, 60W

RaySat ER5000Ka:

12W, 20W, 40W, 50W

* Height excludes dampers, including BUC 40W(Ku) or 12W(Ka)

** Factory Selectable

*** In case of GLT1000 modem, without BUC