

RaySat ER7000

High-Gain SOTM Antenna

SOTM: For Quick, Continuous Communications

For many applications, Satcom On-The-Move (SOTM) is the only choice to establish reliable, continuous and quickly deployable broadband connectivity.

The RaySat ER7000 antenna is a reliable, low-profile, two-way antenna system that enables real-time broadband satellite communications for video, voice and data. Ideally suited for trains and large vehicles, the ER7000 has been successfully deployed worldwide in rail travel and Digital Satellite News Gathering (DSNG) applications, among others.

High Transmission Gain, Low-Profile

The ER7000 antenna maximizes throughput using high-efficiency waveguide panel technology and its light weight ensures easy and safe vehicle mounting. The antenna features multiple onboard tracking sensors, enabling accurate tracking, shortest initial acquisition and instantaneous reacquisition time after signal loss.

Modem Options

For maximum flexibility, the ER7000 can be deployed in 3 ways:

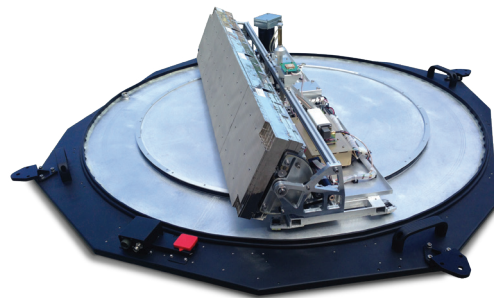
- Integrated modem, including seamless mechanical integration of Gilat's GLT1000 modem. This allows for operation in low SNR conditions.
- Gilat modem, as part of Gilat's SkyEdge II-c mobility modem, taking advantage of its management and mobility support.
- 3rd party modem, if it is OpenAMIP v1.17 certified. When integrated with 3rd party modems, the antenna is supplied with an Antenna Control Unit (ACU).

Environmental Robustness

The ER7000 is designed to withstand the harsh environmental conditions and extreme changes common to mobility applications. Using market-leading RF/IF components, this robust antenna operates in temperatures ranging from -40°F to $+131^{\circ}\text{F}$ (-40°C to $+55^{\circ}\text{C}$) and with relative humidity of up to 95%. Deployed on trains, buses, vans and cars, the ER7000 ensures a high performance and stable link in varying environmental conditions, as required for bandwidth-hungry SOTM applications.

Benefits

- High throughput connectivity
- Easy and quick installation and setup
- Rapid auto-acquisition, tracking, and re-acquisition
- Optional integrated terminal including an antenna, BUC, and modem
- Maintain reliable and continued satellite communication link
- Best panel antenna for SOTM applications to perform a stable and continued satellite link for all scanning angels, Az: 360° ; El: 90°
- OpenAMIP Protocol



RaySat ER7000

Technical Specifications

Mechanical

Antenna Size L x W x H*:

51.7 x 62 x 14 in /
131.2 x 157.4 x 35.52 cm

Antenna Weight:

79.3kg (BUC Included)

Electrical

Frequency Band**:

Rx: 10.95–12.75 GHz
Tx: 14.0–14.5 GHz

Polarization:

Linear

Tx Gain (typical):

36 dBi

G/T (typical):

13 dB/K @ 12.2–12.75 GHz
11.5 dB/K @ 10.95–12.2 GHz

Uplink Max EIRP**:

52 dBW (40W BUC)
53.7 dBW (60W BUC)
56 dBW (100W BUC)

Cross Pol (typical):

25 dB

IF Input (Tx):

1200–1700 MHz

IF Output (Rx):

950–2150 MHz

Nominal Power Consumption:

Antenna = 150W
Ku 60W BUC = 255W

Antenna Performance

Elevation Angle:

0°–90°
(automatic tracking up to 80°)

Azimuth Tracking Rate:

150°/s

Interfaces

Electrical Interfaces:

Tx Input:

Type N Female

Rx Output:

TNC–Female

OpenAMIP Protocol:

Version 1.17

Environmental

Temperature Range:

–40°F to +131°F (–40°C to +55°C)

Relative Humidity:

Up to 95%

BUC Options

BUC Options:

60W (optional 40W and 100W)

* Height excludes dampers, without BUC

** Factory selectable Rx sub-bands

*** Antenna only, without BUC