

RaySat SR300-M

Compact and Ruggedized SOTM Antenna

SOTM: For Quick, Continuous Communications

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

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

The RaySat SR300-M antennas offer compact size and are lightweight and MIL-STD compliant. They feature a reliable, two-way antenna system that enables real-time broadband satellite communications, primarily for voice and data on-the-move or on-the-pause.

RaySat SR300-M: Rugged and Compact

The RaySat SR300-M antennas feature an advanced flat panel array, which covers both the Rx and Tx bands. Minimal size, weight and power (SWaP) permits installation on small vehicles and marine vessels. The antenna system's light weight ensures easy and safe mounting for quick and easy operation by non-technical personnel.

The antennas feature multiple onboard tracking sensors, enabling accurate tracking, short initial acquisition and instantaneous re-acquisition.

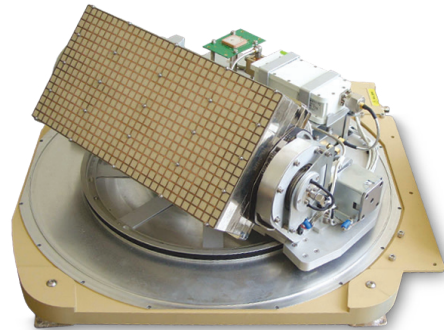
Integrated Terminal Option

The SR300-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 the Gilat special-purpose SOTM modem allows for operation at low SNR conditions.

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

Benefits

- Compact SWaP
- Ku- and Ka-band support
- 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 SR300-M

Technical Specifications

Mechanical

Antenna Size L x W x H*:**RaySat SR300Ku-M:**

20.4 x 19.3 x 10.3 in

51.9 x 49 x 26.2 cm

BUC size

11 x 5.4 x 4.4 in

28 x 13.7 x 11.1 cm

RaySat SR300Ka-M:

20.4 x 19.3 x 10.3 in

51.9 x 49 x 26.2 cm

BUC size

14.3 x 5.5 x 4.1 in

36.3 x 14.0 x 10.4 cm

RaySat SR300X-M:

20.6 x 19.3 x 10.3 in

52.2 x 49 x 26.2 cm

BUC size

5.5 x 4.4 x 11 in

13.97 x 11.18 x 27.94 cm

Antenna Weight:**RaySat SR300Ku-M:**

35.3 lb (16 kg) – Antenna

7.3 lb (3.3 kg) – BUC

RaySat SR300Ka-M:

35.3 lb (16 kg) – Antenna

14.1 lb (6.4 kg) – BUC

RaySat SR300X-M:

33 lb (15 kg) – Antenna

11 lb (5.0 kg) – BUC

Electrical

Frequency Band:****RaySat SR300Ku-M:**

Rx: 10.95–12.75 GHz

Tx: 13.75–14.5 GHz

RaySat SR300Ka-M:

Rx: 19.2–21.2 GHz

Tx: 29–31 GHz

RaySat SR300X-M:

Rx: 7.25–7.75 GHz

Tx: 7.9–8.4 GHz

Polarization:**RaySat SR300Ku-M:** Linear**RaySat SR300Ka-M:** Circular**RaySat SR300X-M:** Circular**Tx Gain (typical):****RaySat SR300Ku-M:** 28 dBi**RaySat SR300Ka-M:** 33 dBi**RaySat SR300X-M:** 23 dBi**G/T (typical):****RaySat SR300Ku-M:** 6 dB/K**RaySat SR300Ka-M:** 9 dB/K**RaySat SR300X-M:** 2 dB/K**Peak Uplink EIRP****:****RaySat SR300Ku-M:**

45.5 dBW (60W BUC)

RaySat SR300Ka-M:

48.5 dBW (40W BUC)

RaySat SR300X-M:

40.5 dBW (65W BUC)

Cross Pol (typical):**RaySat SR300Ku-M:** 20 dB**RaySat SR300Ka-M:** 22 dB**RaySat SR300X-M:** 22 dB**IF Input (Tx):****RaySat SR300Ku-M:**

950 – 1700 MHz

RaySat SR300Ka-M:

950 – 2000 MHz

RaySat SR300X-M:

950–1450 MHz

IF Output (Rx):**RaySat SR300Ku-M:**

950–2150 MHz

RaySat SR300Ka-M:

950–2000 MHz

RaySat SR300X-M:

950–1450 MHz

Nominal Power Consumption:

Antenna = 50W

Ku-band 60W BUC = 255W

Ka-band 40W BUC = 300W

X-band 65W BUC = 280W

Antenna Performance

Elevation Angle:

0°–90°

(automatic tracking up to 80°)

Azimuth Tracking Rate: 60°/s

Electrical Interfaces

RaySat SR300Ku-M:

Tx Input: Type N Female

Rx Output: TNC–Female

RaySat SR300Ka-M:

Tx Input: Type N Female

Rx Output: TNC–Female

RaySat SR300X-M:

Tx Input: Type N Female

Rx Output: TNC–Female

Environmental

Temperature Range:

–40° to +131°F (–40° to +55°C)

Relative Humidity: Up to 95%

Military Specification

Environmental:

MIL-STD-810G, IP67

EMI/RFI:

MIL-STD-461F

DC Characteristics *:**

MIL-STD-1275

BUC Options

RaySat SR300Ku-M:

60W (Main option)

RaySat SR300Ka-M:

12W, 20W, 40W (Main option)

RaySat SR300X-M:

65W (Main option)

* Height excludes dampers

** Factory Selectable

*** In case of GLT1000 modem Could

**** Could vary in case BUC is not installed next to the antenna