

GM-40L antenna

Ka-band satellite antenna for mobility



The Viasat GM-40L Ka-band satcom antenna enables global broadband connectivity services for commercial and government users on worldwide high-capacity and conventional satellite networks. Capable of delivering the industry's highest data speeds, the antenna is interoperable with any modem, satellite network, and with multiple switched modems/networks. It tracks GEO, MEO, and LEO orbits from a platform that is in motion or stationary. The antenna is designed for high reliability aircraft and large UAV use but is also well suited for maritime or land mobile environments. The GM-40L antenna is a single unit with integrated RF electronics and antenna control.

Compatible networks

With support for the full ITU Ka-band frequency range and any satellite polarization, the GM-40L antenna is compatible with a broad range of networks:

- › ViaSat-1, ViaSat-2, ViaSat-3
- › Hughes JUPITER 1 and JUPITER 2
- › Inmarsat GX
- › SES O3b and mPower
- › Eutelsat KA-SAT
- › Avanti HYLAS
- › Wideband Global SATCOM (WGS)
- › Geostationary Defense and Strategic Communications (SGDC-1)
- › nbn Sky Muster
- › Telesat LEO
- › Amazon Project Kuiper

GM-40L antenna at-a-glance

PRIMARY APPLICATIONS

- › Aircraft: fuselage mount
- › Large class UAVs
- › Maritime
- › Ground mobile (improved roads)

HIGH-SPEED CONNECTIVITY

- › Supports the full ITU Ka-band spectrum to maximize operational flexibility, throughput, and capacity
- › Enables access to the highest capacity Ka-band satellites

MISSION SETS

- › Airline in-flight connectivity (IFC)
- › Real-time broadband ISR
- › Maritime connectivity
- › MedEvac/telemedicine
- › Search & rescue
- › Border/maritime surveillance

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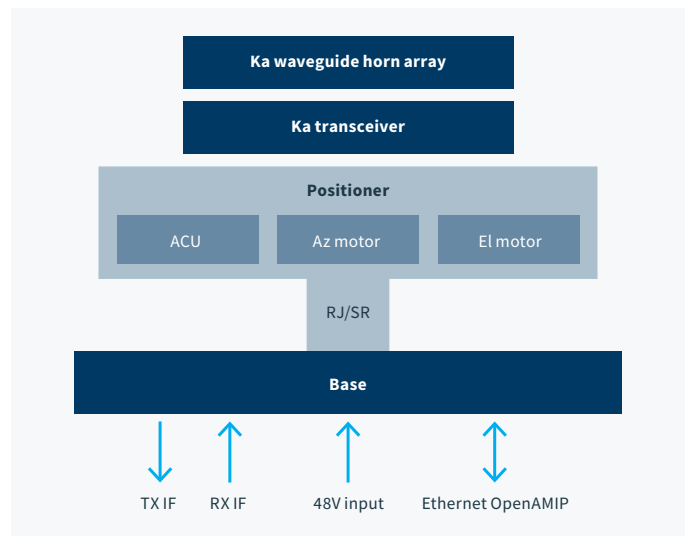
Specifications

ANTENNA

Class	Medium profile mechanically steered horn array
Aperture	Waveguide horn array with circular polarization, electronically switchable, all combinations of R, L, co-pol, or cross-pol
Frequency	Full ITU Ka, commercial and military <ul style="list-style-type: none">› Tx: 27.5 – 31.0 GHz› Rx: 17.7 – 21.2 GHz
EIRP	53.0 dBW
G/T	15.0 dB/K
Power (SSPA)	20W
RF electronics	Integrated into antenna assembly
Antenna control	Integrated into antenna assembly
Elevation coverage	0° to 90°
Azimuth coverage	0° to 360°
Power consumption	370 W max at 48V
Swept volume (D×H)	Ø37.3 × 8.6 in.; Ø94.7 × 21.8 cm
Weight	75 lb.; 34 kg
Operating temperature	-55°C to +70°C
MTBF	36,000 hours
Interface (IF)	L-band, OpenAMIP
LEO handover time	2 seconds or less
Velocity	95°/sec
Initial acquisition time	<30 sec
Tracking accuracy	0.3°

QUALIFICATIONS/CERTIFICATIONS

Environmental/EMC	<ul style="list-style-type: none">› RTCA/DO-160G› Sea State 5› Water resistant› Salt and fog qualified› FCC 47 CFR 25.138› ETSI EN 303-978
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