

KuKarray-2L antenna

Hybrid Ka-band/Ku-band satellite antenna for mobility



The Viasat KuKarray-2L hybrid Ka- and Ku-band aviation 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, this antenna is interoperable with any modem, satellite network, and with multiple switched modems/networks. The KuKarray-2L 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 KuKarray-2L is a single unit with integrated RF electronics and antenna control.

Compatible networks

With support for Ku-band and the full ITU Ka-band frequency range as well as any satellite polarization, the KuKarray-2L antenna is compatible with a broad range of networks:

- › Viasat worldwide Ku-band network
- › ViaSat-1, ViaSat-2, ViaSat-3
- › Hughes JUPITER 1 and JUPITER 2
- › Inmarsat GX & HCX
- › Intelsat Epic Flex Network
- › SES O3b and mPower
- › Eutelsat Ku-band and KA-SAT
- › Avanti Hylas
- › Wideband Global SATCOM (WGS)
- › Geostationary Defense and Strategic Communications (SGDC-1)
- › nbn Sky Muster
- › StarLink
- › Telesat LEO
- › Oneweb
- › Amazon Project Kuiper

KuKarray-2L antenna at-a-glance

FULL HORIZON-TO-HORIZON COVERAGE

- › Dual Ka-band and Ku-band apertures with 0-90 degree elevation and 360 degree azimuth motion
- › Electronic linear polarization tracking in Ku band
- › Circular Ka-band polarization (co-pol and cross-pol, RHCP, LHCP, switchable)
- › Integrated RF electronics for both bands
- › Integrated ACU with built-in GEO/MEO/LEO TLE tracking
- › Best-in-class G/T and EIRP, with no scan loss at the horizon

PRIMARY APPLICATIONS

- › Fuselage mount commercial and government aircraft
- › Large class UAVs
- › Ground mobile (improved roads)

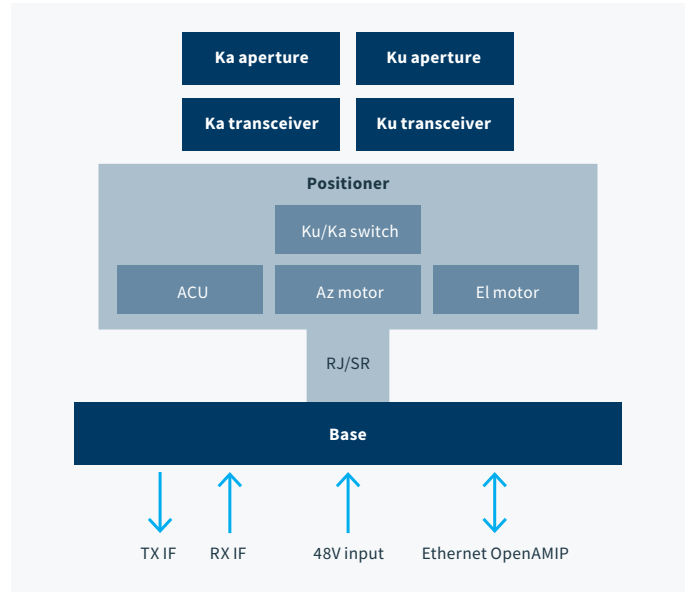
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Specifications

ANTENNA	
Class	Medium profile, mechanically steered waveguide horn arrays
Ka-band aperture	Circular polarization, electronically switchable, all combinations of RHCP, LHCP, co-pol, or cross-pol
Ku-band aperture	Linear polarization with electronic polarization tracking to satellite orientation. Horizontal, vertical, co-pol or cross-pol
Ka-band 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
Ku-band frequency	<ul style="list-style-type: none">› Tx: 14.0 – 14.5 GHz› Rx: 10.95 – 12.75 GHz
Ka-band EIRP	52.5 dBW
Ku-band EIRP	47.0 dBW
Ka-band G/T	14.5 dB/K
Ku-band G/T	11.0 dB/K
Power (SSPA)	20W for Ka-band, 25W for Ku-band
RF electronics	Integrated into antenna assembly
Antenna control	Integrated into antenna assembly
Elevation coverage	0° to 90°
Power consumption	465W max at 48V
Swept volume (D×H)	Ø39.25 × 11.3 in.; Ø99.7 × 28.7 cm
Weight	163.0 lb.; 73.9 kg
Operating temperature	-61°C to +70°C
MTBF	50,000 hours
Interface (IF)	L-band, OpenAMIP
LEO handover time	2 seconds or less
Velocity	100°/sec
Initial acquisition time	<30 sec
Tracking accuracy	0.3°

QUALIFICATIONS/CERTIFICATIONS

Environmental/EMC	<ul style="list-style-type: none">› RTCA/DO-160G, MIL-STD-810, MIL-STD-461› Sea State 5› Water resistant› Salt and fog qualified› Fluid inert› FCC 47 CFR 25.138› ETSI EN 303-978
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Global headquarters

6155 El Camino Real, Carlsbad, CA 92009-1699, USA

Sales

TEL +1 888 842 7281 (US Toll Free)
+1 678 924 2400

EMAIL VASTsales@viasat.com

WEB viasat.com/antenna-systems

