

ESR 2030Ku

High Performance Antenna for Superior In-Flight Connectivity for All Aviation Markets

Introducing Gilat's ESR2030Ku: a compact, lightweight, aviation-grade Electronically Steerable Antenna (ESA) for high-performance in-flight connectivity (IFC) over LEO satellite systems.

This advanced antenna supports diverse connectivity applications in commercial, business, and defense aviation.

OneWeb-Compatible Full-Duplex Antenna

The ESR2030 Ku antenna is compatible with the OneWeb Ku-band LEO satellite constellation, designed to support full-duplex connectivity for ultimate communication performance. The low-profile design minimizes drag and, combined with its low weight, reduces operational overhead without compromising on performance. These features make the ESR2030 Ku suitable for a wide range of aircrafts

Innovative Single LRU Solution

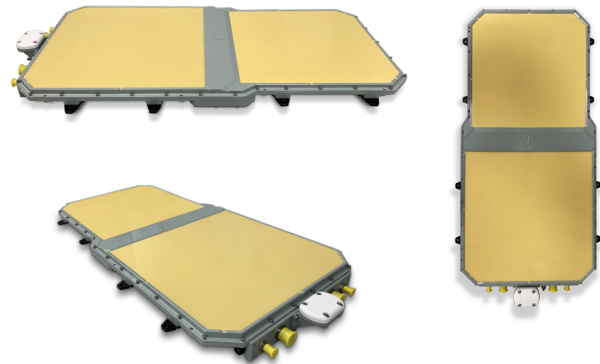
The ESR2030 Ku is a fully integrated Line Replaceable Unit (LRU), consolidating multiple key functions into a single, compact unit. The design incorporates:

- Active transmit and receive apertures
- Frequency conversion unit
- Antenna control unit
- OneWeb GPS receiver

In addition, the ESR2030 Ku boasts a highly efficient aperture design, resulting in smaller aperture size and lower power consumption.

Benefits

- **Reduced Complexity:** all-in-one design simplifies IFC system architecture, reduces installation time and cost
- **Improved Reliability:** With fewer individual components and interconnects, the single LRU design enhances system robustness and MTBF
- **Simplified installation and maintenance:** shorter aircraft downtime due to fewer components onboard the aircraft
- **Optimized SWaP:** The compact form factor and efficient power consumption translate to lower drag and reduced fuel consumption, improving overall aircraft efficiency
- **Reduced total cost of ownership**



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Technical Specifications

Throughputs:

230Mbps Download / 30Mbps
upload (over the OneWeb system)

Power Supply:

28V, DC

Power Consumption:

200W

Weight:

10 Kg

Dimensions (H x W x L):

5.1 x 39 x 81 cm (antenna LRU only)

Environmental specifications:

DO160 compliant

Tracking Accuracy:

0.2°

Instantaneous Bandwidth:

Tx: 500 MHz, Rx: 250 MHz per
beam

Beam Switching Time:

<0.4 mSec

Transmit Band:

13.75–14.5 GHz

Receive Band:

10.7–12.75 GHz

G/T:

10.0 dB/K @ 11.7GHz, 90° elevation

EIRP:

41 dBW @ 14.25GHz, 90° elevation

Field of View:

0°–360° azimuth, 15°–90° elevation