

# ThinAir® Eagle-Ka1000

Office-in-the-Air Connectivity



## ThinKom

Global Connectivity

[www.thinkom.com](http://www.thinkom.com)

### Delivering General Business Aviation, Transport and Government Users Broadband Connectivity in a Low-Profile, Small Form-Factor Fuselage Mount Antenna

ThinKom's agile, low-profile, high-efficiency antenna provides high throughput (up to 20 Mbps Downlink at 11.5 dB/K G/T and 8 Mbps Uplink at 44dBW EIRP) and highly efficient use of transponder bandwidth (1-2 bits/Hz). Our small swept volume, enables a similarly small form-factor fuselage mount radome which reduces fuel costs and provides flexibility for installation to a broad range of General Business Aviation and Government users looking for an effective alternative to a 30cm parabolic tail pod installation. The superior high latitude and skew angle performance improves flexibility of fleet operations throughout the world. The *ThinAir® Eagle-Ka1000* supports dual-use and global applications including WGS and all Commercial Ka-band services.

# ThinAir® Eagle-Ka1000

## General Information (Antenna)

**Swept Volume Dimensions:** 26" D x 6.5" H  
(66 cm x 16.5 cm)

**Transmit Band:** 28.1-31.0 GHz

**Receive Band:** 18.3-21.2 GHz

**G/T:** 11.5 dB/K (20.2 GHz, cruise)

**EIRP:** 44.5 dBW (30 GHz, 12W BUC -  
up to 61 dBW w/ 600W HPA)

**Transmit Power Spectral Density:** (per 47 CFR 25.138)

21 to 25 dBW/40 kHz at High Latitudes (to 65° N/S)

21 to 25 dBW/40 kHz PSD over CONUS (83W to 118W)

17 to 23 dBW/40 kHz PSD over Equator (Longitude +/- 35°)

**Geo-Plane Beamwidth (Typ):** 1.7° Transmit & 2.5° Receive  
(18" diameter dish equivalent)

**Geo-Plane Patterns (Typ):** First Sidelobe -20 dB

**Polarization:** Fixed or Switchable Circular (Orthogonal-Pol)

**Axial Ratio:** < 2.0 dB Typical

## Tracking

**Azimuth Coverage:** 360° (continuous)

**Elevation Coverage:** -10° to +90°

**Agility (ARINC 429 Nav):** >100°/sec, >100°/sec<sup>2</sup>

**Tracking Accuracy:** < 0.2°

## Environmental

**Operational Temperature:** -55°C to +74°C (External)

**Environmental Compatibility:** RTCA/DO-160G & MIL-STD-810G

## Performance (Dependent on Modem, Waveform & Bandwidth)

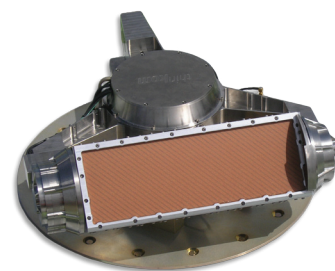
**Data Rates (Forward Link/Receive):** up to 20 Mbps

**Data Rates (Return Link/Transmit):** up to 8 Mbps

(up to 200 Mbps at 61 dBW EIRP)

## Advantages and Benefits (relative to high profile radome antennas)

- Superior high latitude performance (low elevation angle operation)
- Small form-factor (26" Dia) and low-profile (6.5" H) fuselage-mount compatible with nearly all aircraft types
- Equivalent performance to a 45 cm (18") Ka-Band Parabolic Dish
- Up to 70% lower transponder cost (\$/Mb) as compared to 30cm Ka-Band Parabolic Dish
- 70% lower profile than fuselage-mount 30cm Ka-Band Parabolic Dish
- Dual-use Commercial and Government Ka-band
- High-reliability direct-drive gimbal / Flight-proven!



Antenna Subsystem



Antenna Control Unit



High Power Transceiver



Modem Unit

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