

ThinSat[®] Commander

Integrated X/Ka-Band SATCOM On-the-Move



ThinKom

Global Connectivity

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Low-Profile, High Performance Dual-Band (X/Ka) Integrated Antenna/Terminal Subsystem Provides High Data Rate Satellite Communications for the On-the-Move Tactical Warfighter

ThinKom's ThinSat[®] Commander Integrated Antenna/Terminal Subsystem provides a high performance system capable of OTM operations for X/Ka supporting WGS, XTAR, Skynet, GX and other commercial Ka-Band, as well as future satellite constellations. Based on ThinKom's patented CTS antenna technology, the ThinSat[®] Commander combines an agile low-profile Integrated Antenna/ Terminal Subsystem design (< 13" high) with superior high latitude and skew angle performance, ruggedized for the demands of the military environment, optimized for multi-vehicle platform compatibility (wheeled and track vehicles), and built for unparalleled performance.

ThinSat® Commander

General Information (Integrated Antenna/Terminal Subsystem)

Dimensions: 30" L x 30" W x 13" H
(76cm x 76cm x 33cm)

System Weight: 193 lbs (88 kg)

Receive Band (X): 7.25-7.75 GHz

Transmit Band (X): 7.9-8.4 GHz

Receive Band (K): 19.2-21.2 GHz

Transmit Band (Ka): 29-31 GHz

G/T (X): 4.5 dB/K at 20° Elev

G/T (Ka): 10.5 dB/K at 20° Elev

EIRP (X): 42 dBW (with integrated 60W BUC)

EIRP (Ka): 51 dBW (with integrated 50W BUC)

Regulatory: Compliant to MIL-STD-188-164B and 47 CFR 25.138

Polarization: LHCP or RHCP (manually switchable)

Axial Ratio: 2.0 dB typical

Max Required Input Power: < 750W

Tracking

Azimuth Coverage: 360° continuous

Elevation Coverage: -10° to +90°

Agility: > 500°/sec, > 500°/sec²

Max Pointing Loss: < 1.0 dB

Environmental

Operational Temperature: -40°F to +131°F (-40°C to +55°C)

Storage Temperature: -58°F to +158°F (-50°C to +70°C)

Environmental Compatibility: MIL-STD-810

Churchville B compatible

Performance (40cm - 50cm Dish Equivalent)

Data Rates (Transmit/Receive): > 2 Mbps typical

Advantages and Benefits

- Dual Band integrated terminal package (includes all X and Ka-Band hardware except for modem)
- On-the-fly electronic switching between X and Ka-Band operation (No hardware changes)
- Terminal Compatibility: WGS, XTAR, GX & Commercial Ka-Band
- Compact footprint (30"x30"), low-profile (< 13")
- Affordable production cost for tactical and strategic deployment
- Optimized for hemispherical operations with superior high latitude performance (low elevation angle operation)
- Ruggedized: Designed to operate in and withstand harsh tactical environments, including EMI
- Vehicle Compatibility: Various military wheeled and track vehicles (FMTV, JLTV, HMMWV, Stryker & Bradley)
- High-reliability high-agility direct-drive gimbal



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