



## **ACS-COTM-300**

### **Satellite Comms-On-The-Move Antenna System**



The ACS-COTM-300 satellite antenna system is an affordable, low-profile (11cm), high data rate (up to 10 Mbps 2-way) highly efficient and rugged vehicle roof-mounted Ku-Band satellite Comms-On-The-Move product which provides continuous broad-band connectivity (voice, video and data) at highway speeds without antenna deployment delays.

The ACS-COTM-300 antenna system is based on Variable Inclination Continuous Transverse Stub (VICTS) Array technology developed by ThinkKom. VICTS provides superior side lobe performance opposed to other On-The-Move (OTM) array technology which typically requires signal spreading in order to meet Adjacent Satellite Interference (ASI) requirements. Elimination of the necessity of spreading allows the ACS-COTM-300 to be more easily adapted to a broader range of satellites on a global basis. In addition, the ACS-COTM-300 has an excellent On-Axis Cross-Pol Isolation of - 30 dB or greater.

The ACS-COTM-300 can steer 360° in azimuth and 90° in elevation, allowing continuous and reliable tracking. The ACS-COTM-300 automatically acquires and tracks the desired satellite using open-loop and closed-loop tracking algorithms and interfaces to the users modem installed in the vehicle.

The ACS-COTM-300 is ideal for all mobile applications including government operations, forward reconnaissance missions, transportation, satellite news gathering, enterprise (petroleum, insurance), state, and local emergency response teams that need to stay in constant communications without interruption.

#### **Price Efficiency**

**3x to 10x Higher Spectral (MB/\$) Efficiency than Competing OTM products**  
**iDirect, DVB RCS and Point to Point Configurations Available**  
**HDTV Capable – up to 10 Mbps Operation**

The ACS-COTM-300 provides extremely efficient tracking while on-the-move. Due to its low profile the ACS-COTM-300 will not block other vehicle mounted communications systems. Unlike other COTM products the ACS-COTM-300 does NOT require spread spectrum in order to close the Satcom link, thus resulting in dramatic bandwidth reduction and reduced overall project costs.

#### **Security**

When configured with a TRANSEC capable Modem the system is compliant with the highest military security requirements, featuring embedded AES encryption and TRANSEC with advanced FIPS 140-2 certification, X.509 digital certificate encryption and automatic over the air key exchange.

#### **Major Features**

- SIGNAL SPREADING NOT REQUIRED
- Full International (Ku-Band) Frequency Coverage
- 3x to 10x Higher Spectral (MB/\$) Efficiency than Competing OTM products
- Return Link Equivalent to 88cm x 36cm (35" x 14") "Pop-Up" Parabolic
- 40% to 65% Lower Profile than other OTM Products
- Supports WGS IF ranges: 950 – 2000 MHz

#### **Related Products**

- ACS 12MSQD-XK Super Quick Deploy Antenna System
- ACS MST-60m-XK 60 cm Man-pack Antenna System
- ACS MST-100 Man-pack Terminal (KU-Band)
- ACS MST-100M Motorized Man-pack Terminal (KU-Band)
- ACS-4120R Rugged DVB RCS Satellite Modem
- ACS e850MPR Rugged iDirect Modem
- ACS UPS-XXXX-R Universal AC& DC Input Power Supply



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## Satellite Comms-On-The-Move Antenna System

### Specifications and Features

#### Performance

- Polarization: Dual Tracking Linear
- Transmit Band: (13.75) 14.0-14.5 GHz (Extended)
- Receive Band: 10.95-12.75GHz
- G/T (mid-band): 10-13 dB/K (8 dB/K at 20° Elev)
- EIRP: 47-50 dBW (45 dBW at 20° Elev, 25W BUC)
- On-Axis Cross-Pol Isolation 30 dB (minimum)
- Interoperability: Equiv. to 88cm x 36cm Parabolic
- Data Interface: Ethernet (RJ45)

#### Acquisition and Track

- Controller: Fully Integrated
- Initial Acquisition: 60 seconds (Cold-Start with GPS)
- Re-Acquisition after 3 minute blockage: 1 second
- Track Speed/Agility: > 100 %/sec, 300 %/sec<sup>2</sup>
- Meets FCC Part 25.222

#### Mechanical

- Total Weight: 130 lbs. (42 Kg. including BUC/SSPA)
- Size: 59" x 39" x 4.3" (150cm x 100cm x 11cm)
- Rack-Mount compatible: 36" to 44" (90cm to 110cm)

#### Environmental

- Operational Temperature: -30°C to +55°C
- Storage Temperature: -30°C to +70°C

#### Voltage / Power

- 12VDC (220W Avg., 295W Peak w/25W BUC)

#### Cabling

- IF Interface: 75 Ohm N-type (Transmit and Receive)

#### Additional Antenna Features and Benefits

- *SIGNAL SPREADING NOT REQUIRED*
- Broadest Global Coverage and Availability
- 40% to 65% Lower Profile than other OTM Products
- Lowest Cost...Lowest Drag...Lowest Visibility Installation
- Lowest Operating Costs
- 3x to 10x Higher Spectral (MB/\$) Efficiency than Competing OTM products
- Return Link Equivalent to 88cm x 36cm (35" x 14") "Pop-Up" Parabolic
- Highest Data Rates
- 4x to 10x Higher Return Link Data Rates than other OTM Products
- 49 to 52 dBW EIRP with Internal 40W BUC
- HD Back-Haul Capable Broadest World-Wide Coverage and Availability
- 40% to 60% Larger Scan Volume than other on-the-move products
- Full International (Ku-Band) Frequency Coverage
- All-Latitude Availability with Full Equatorial, High-Skew, and Near- Zenith Ops
- Agile Proprietary Closed-Loop Tracker
- Instant-On...No Setup...No Takedown

*\* All specifications subject to change without notice*