

# Tactical Transportable TROPO (3T)

Delivering Mission Critical Bandwidth in Today's Challenging AOR

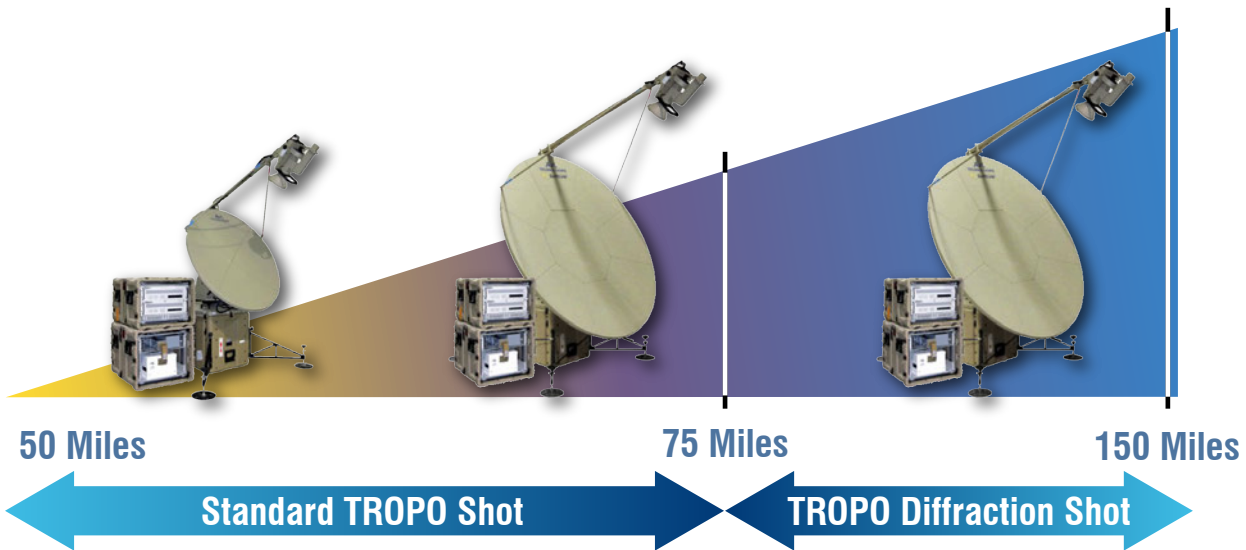


## Why TCS TROPO?

- Provides throughput up to 22 Mbps
- Establishes communication links at distances up to 150 miles
- Overcomes terrain challenges of current AOR
- Joint solution for backwards compatibility with legacy AN/TRC-170(V)3 systems
- Transit case design allows for flexibility & mobility
- Reduces recurring satellite airtime costs

The TCS Tactical Transportable TROPO (3T) solution enhances the TCS Government Solutions product portfolio by adding Beyond Line-of-Sight (BLOS) capability to its battle proven flyaway VSAT family. Designed for long-haul, over-the-horizon communication where line-of-sight is obstructed, the TCS 3T solution provides secure IP connectivity to command and control elements using proven troposcatter technology.

Delivered as part of TCS's Everything-Over-IP (EoIP) communication on the quick halt solution set, the 3T solution is the first choice for long haul, high bandwidth, low latency tactical communications. The 3T solution uses a C-Band feed to deliver Troposcatter communications utilizing the common TCS VSAT platforms. The 3T solution is available in TCS's 1.2M and 2.0M VSAT antennas.



See TCS' complete line of products and services at [www.telecomsys.com](http://www.telecomsys.com).

#### Your Established Partner

TCS brings proven, technology problem-solving expertise to its professional service offerings for the public sector. From continuity of operations and information assurance, to cyber security and integrated logistics support, TCS solves the toughest technical challenges, under conditions that demand the highest level of reliability, availability, and security. As an ISO 9000-certified provider with many consultants holding active security clearances, TCS has an established track record over the past decade as a trusted partner providing mission continuity for the Department of Defense, Special Operations and intelligence communities, the Department of Homeland Security and the Department of State.

TeleCommunication Systems, Inc.  
275 West Street  
Annapolis, MD 21401 USA  
Toll Free: 1.888.728.8797  
Outside US: +1.410.263.7616  
[www.telecomsys.com](http://www.telecomsys.com)

Enabling Convergent Technologies® and SwiftLink® are registered trademarks of TCS. All other trademarks are the property of their respective companies. Information subject to change without notice. | NasdaqGM: TSY5 | 120323



The 3T solution incorporates Comtech Systems' industry leading TROPO modem technology. The Comtech Systems modem utilizes dynamic bandwidth allocation to maximize link quality and minimize operator configuration. The 3T solution provides joint interoperability with existing U.S. DoD TROPO systems. Easy to use path analysis software with integrated maps gives the warfighter the necessary tools for comprehensive mission planning.

#### What is Troposcatter?

Troposcatter is a beyond line-of-sight microwave communications methodology that uses diffraction to achieve high-bandwidth, low latency connectivity over the horizon. The troposphere, the lowest atmospheric layer surrounding Earth, contains humidity, precipitation and heat currents that allow refraction of radio signals. In essence, the microwave signals are bounced off of these refractive index gradients, allowing participants to connect where normal terrestrial line-of-sight is obstructed (and communication extremely difficult or impossible). Troposcatter performs well in adverse atmospheric conditions and is optimized when deployed in mountainous regions.

3T combines advances in modem and antenna technology and delivers a viable alternative for high data rate tactical communications.

Capabilities	
Data rate	Up to 22 Mbps
C-band operation	4.4 to 5 GHz
Upgrade Kit	Field upgradeable software and hardware
Mechanical and Environmental	
Operational	Operational Temperature: -10° C to +52° C
Wind	30 mph (45 mph gusts)
Dimensions and Weight	
Tropo Modem case	39 in x 24 in x 18 in (173 lbs)
Amplifier case	39 in x 24 in x 21 in (220 lbs)
1.2 M VSAT Cases	Antenna Positioner Case: 24 x 26 x 26 in. (154 lbs)
	Antenna Reflector/ Boom Case: 43 x 27 x 20 in. (110 lbs)
2.0 M VSAT Cases	Antenna Positioner: 24 x 26 x 26 in. (174 lbs)
	Antenna Stabilizers/ Boom: 71 x 18 x 18 in. (101 lbs)
	Antenna Reflector Case: 25 x 40 x 39 in (165 lbs)
	Feed Case: 19 x 15 x 7 in. (20 lbs)