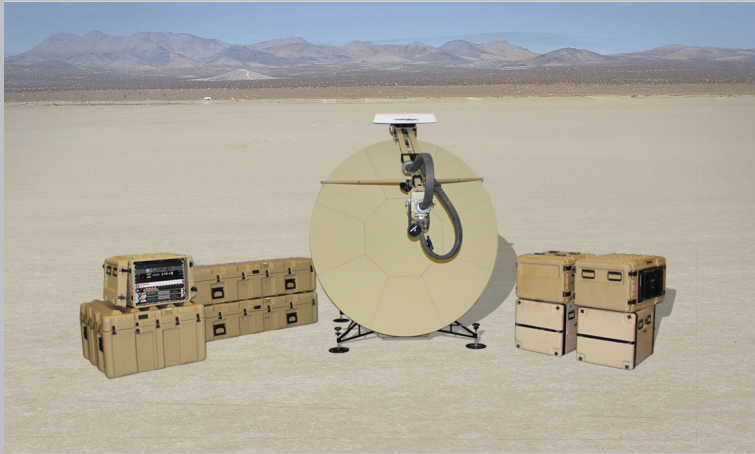




## BLOS-T

### Beyond Line of Sight – Troposcatter Communications (C-band)



The BLOS-T C-band troposcatter product line features state-of-the-art technologies to set new milestones for troposcatter communications in terms of range and stability, with up to 100 Mbps throughput in a man-portable solution.

#### Benefits

- Automatic link alignment
- Automatic mission planning software
- Small footprint for mobile or fixed systems
- Unique waveform for multipath cancellation and optimized algorithms for fading immunity
- Up to 100 Mbps using advanced RTM-100® Tropo Modems
- Up to 50 Mbps using advanced RTM-40® or RTM-50® Tropo Modems
- No recurring satellite bandwidth costs
- No satellite latency or vulnerability

#### Product Description

The recent trend in military communications relies on tactical satellite communications and/or aerial relay of wideband traffic for BLOS-T reachback connectivity. The Raytheon BLOS-T troposcatter system provides complementary capabilities and should be considered as part of a comprehensive military communications architecture.

The increased need for high-capacity bandwidth reachback from the company level has shown scalability challenges due to limited satellite communications/air-level resources, as well as capability and operational limitations of available High Capacity Line-of-Sight (HCLOS) systems. BLOS-T is designed to alleviate bandwidth constriction in

current tactical networks without increasing operations and maintenance costs.

The BLOS-T Beyond Line of Sight Troposcatter communications solution provides up to 100 Mbps throughput at distances of >100 nm using Raytheon's RTM-100 troposcatter modem.

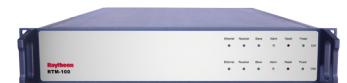
BLOS-T includes new solid state power amplifier technology to reduce overall size and weight while increasing performance. Standard amplifier size is 1 kW, but amplifiers can be sized to meet the needs of customer configurations.

The standard antenna configuration for BLOS-T includes 2.0 m C-band fly-away antennas. Other options include antennas ranging from 1.0 to 9.0 m as well as fixed,

trailer- or vehicle-mounted, trailer-equipment bay, and fly-away antennas.

The BLOS-T system includes an Automated GUI used to guide a non-technical operator in fast and efficient setup and link acquisition—LOS, diffraction or tropo mode can be automatically acquired.

A simple modem modification kit is also available to upgrade fielded AN/TRC-170 V3/V5 systems to the latest BLOS-T configuration and achieve current levels of performance with the latest technology.



**RTM-100 100Mbps  
Troposcatter Modem**

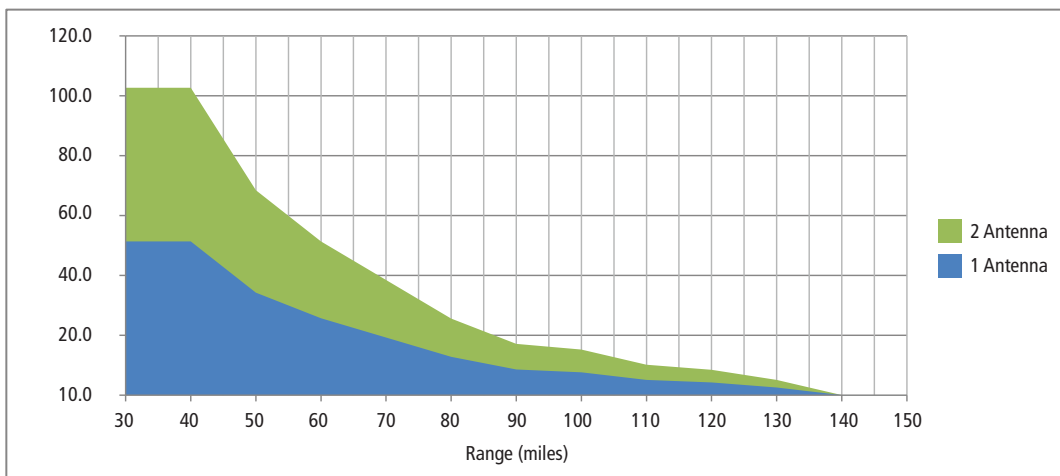
## BLOS-T Technical Specifications

Configuration	One antenna	Two antenna
C-band operation (Frequency)	4.4 GHz – 5.0 GHz	
Throughput	Up to 50 Mbps	Up to 100 Mbps
Operating mode	Point to Point	
Amplifier size	(2) Each 1 kW transceiver	
Mechanical		
Antenna size	2.0 m	
Weight	840 lb	1200 lb
Environmental		
Power	180 - 240 VAC, 47 - 63 Hz, <10 kW	
Operating temperature	-10 to 55°C, 95% humidity (non-condensing)	
Storage temperature	-32 to +71°C, 99% humidity (non-condensing)	
Humidity	MIL-STD-810G Method 507.5	
Altitude	3000 m (operational) 15,000 m (non-operational)	
Vibration	MIL-STD-810G Method 514.6 Procedure II	
Sand and dust	MIL-STD-810G Method 510.5 Procedure I & II	
Salt fog	MIL-STD-810G Method 509.5	
Wind loading	Wind speeds up to 30 mph (operational) 45 mph (gusts)	
Interfaces		
Transmit IF	2×, ~70 MHz, BNC	
Receive IF	4×, ~70 MHz, BNC	
Ref in	~10 MHz, BNC	
Ref out	~10 MHz, BNC	
IP data and control ports	Ethernet 10/100/1000, RJ45	
Modem Waveform		
Channel Bandwidth	2 to 16 MHz	
FEC	1/5, 1/4, 1/3, 1/2, 2/3	
Time-interleaving	0 to 200 ms	
Constellation	QPSK, 16QAM, 64QAM	

## About Raytheon Intelligence, Information and Services

Raytheon Intelligence, Information and Services is a leader in intelligence, surveillance and reconnaissance; advanced cyber solutions; weather and environmental solutions; information-based solutions for law enforcement and homeland security; and training, logistics, engineering, product support, and operational support services and solutions for the Mission Support, homeland security, space, civil aviation, counterproliferation and counterterrorism markets.

Achievable Data Rates for 2.0m, 1 kW Links, Temperature Climate (95%), Smooth Earth



For further information contact:

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