DRS
DEFENSE SOLUTIONS

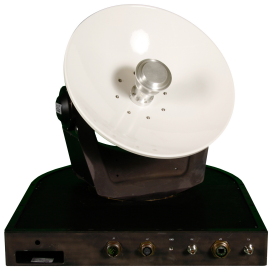
X-BAND ON-THE-MOVE ANTENNA SYSTEM

RHIB photo courtesy of the U.S. Navy

DRS's X-Band Satellite Communications On-The-Move (XOTM) Antenna System is designed for continuous high bandwidth voice, video and data in a highly dynamic environment. The design approach provides an affordable on-the-move solution combining a rugged mechanical architecture with highest quality Commercial-Off-The-Shelf (COTS) components for vehicle, shipboard and aircraft applications.

The design is based on proven technologies integrated into a complete on-the-move package. Integrating navigation sensors, control electronics and Radio Frequency (RF) equipment on the pedestal provides improved stabilization, acquisition and tracking performance. The combination of open-loop pointing, closed-loop tracking and software algorithms for sensor fusion enable high performance in an affordable architecture.

This solution is also available in Ku-Band upon request.



X-Band On-The-Move Antenna

X-Band On-The-Move Antenna with Radome

HIGHLIGHTS

- **Affordable architecture**
- **Modular RF packages for X-Band**
- **Meets MIL-SPEC requirements**
- **Integrated inertial navigation**
- **Ethernet remote control and diagnostics**
- **LEOs and GEOs on-the-move**
- **Direct drive elevation over azimuth pedestal**
- **Designed to Churchville B dynamics**
- **Open-loop pointing and closed-loop tracking**
- **High-resolution position feedback**
- **Sealed and protected against environment per MIL-STD-810**
- **Optional Ku-Band RF kit**

Optional Low Cost Sensor Box

PHYSICAL SPECIFICATIONS (46 CM) 18 INCH DISH

Dimensions	(59.69 H x 67.31 D x 59.69 W cm)
	23.5 H x 26.5 D x 23.5 W inches
Weight	(34 kg) 75 lbs.

ELECTRICAL SPECIFICATIONS

Power - amp on,	
both axis moving	500 watts peak

RF SPECIFICATIONS

RF frequency	
RX	7.25 to 7.75 GHz
TX	7.9 to 8.4 GHz
IF frequency	
RX	950 to 1,450 MHz
TX	950 to 1,450 MHz
Data rate	
Transmit	up to 1.544 Mbps
Receive	256 kbps to 1.54 Mbps
G/T	8.5 dB/K
EIRP	42 dBW
Transmit gain	30.2 dBi
Receive gain	29.2 dBi
Beamwidth	3 dB: 5°
Polarization	
Switchable	circular, RH/LH
Cross-pol isolation	25 dB
TX/RX isolation	110 dB

PEDESTAL SPECIFICATIONS

Velocity	EL: 200°/sec
	AZ: 300°/sec
Acceleration	EL: 2,000°/sec^2
	AZ: 2,000°/sec^2
Coverage	EL: 0° to 90°
	AZ: 360° continuous
Pointing error	< 1 dB under Churchville B
	on HMMWV
	< 0.5 dB under Sea State 4 (see note)
Acquisition time	30 seconds
Re-acquisition time	5 seconds

Note: Stabilization to Sea State (SS) 3 for 11M to SS 4 for 15M platform

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