

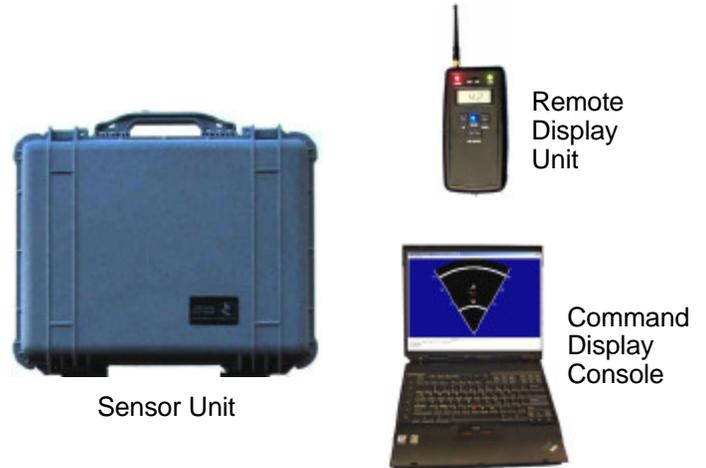
Enhanced Motion And Ranging System (EMARS)

Raytheon

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VENDOR DESCRIPTION

The Raytheon Enhanced Motion And Ranging System (EMARS) is a low-frequency Sense Through The Wall (STTW) sensor designed for detecting motion behind walls. The system reports the range to motion of up to 16 targets detected in front of the sensor. The system is made up of three units: Sensor Unit (SU), Remote Display Unit (RDU), and Command Display Console (CDC). The SU contains the STTW antennas, transmitter, receiver, signal processor and wireless data link. The RDU is a hand-held unit that provides range to closest target data to a single user. The CDC provides system control, allows multiple SU deployment, and provides a user display of range vs. time for use at a command center. The most basic EMARS deployment will consist of a single SU and a single RDU. The SU, RDU and CDC are equipped with integrated wireless control and data link functions.



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Business Category: Large Business

Hardware	
Power: Battery, commercial or military, rechargeable	Operating Speed: N/A, sensor must be stationary
Sensor Unit packaged in rugged briefcase: Weight: ~14 lbs Dimensions: 19.2 in x 15.2 in x 7.3 in Total Volume: 1.2 ft ³	Operating Temp.: 0°C to 50°C Storage Temp.: TBD
Remote Data Unit Weight: 0.7 lbs (including 4 AA batteries) Dimensions: 7.5 in x 3.6 in x 1.7 in (case) Antenna: 4 in (L) x 0.4 in (diameter)	Interfaces: PC RS-232 (CDC) and Wireless 2.4 GHz FHSS (CDC-SU-RDU)

Performance	
Sensor Battery Life (continuous operation): > 4 hours with low-capacity commercial battery > 16 hours with high-capacity military battery (UBI-2590)	Remote Display Unit Battery Life (continuous operation): > 4 hours on 4 AA Li/MnO ₂ batteries
Detects motion < 3 in (< 8.33 cm) of range change	CDC Software runs on Windows 2000
Reports the range to motion in 1 ft (0.33 m) increments	
Penetrates non-metallic walls	
Sensor Antenna Pattern: 60° azimuth, 100° elevation	
Maximum Range: 100 ft (30 m)	
Target Resolution: 3 ft (1 m)	Wireless data link range: Distance between units (CDC-SU-RDU): > 300 m (line of sight)