



Bomb RadWatch™ Overview

- Bomb RadWatch is comprised of Detection Units (DUs) with ATS Radiological Sensors deployed strategically to form a dynamic Gamma Radiation Surveillance Network around a suspect target item.
- The DUs are placed at the strategic locations manually by the Bomb Squad or robot. The DUs provide ground level radiation readings (ground truth) and monitor changes if an interruption or explosion occurs.
- The RadWatch Server Lite and RadWatch Manager are deployed together on the same laptop for use by the Bomb Squad.
- Bomb RadWatch can be fully integrated with Bomb RadCheck.

Automatic Targeted Spectroscopic™ Radiological Sensor

- The Automatic Targeted Spectroscopic (ATS) Radiological Sensor is capable of detecting Radiological Dispersal Devices (“dirty bombs”) and Radiological Exposure Devices (“silent bombs”), and distinguishing these malicious devices from acceptable radiation sources routinely found in any environment under surveillance.

Detection Unit

- The Detection Units (DUs) collect gross gamma counts and ATS gamma counts from the sensors, add location and timing data and send them to the RWS. The DU manages all encryption and communication to the RWS.
- The DUs are completely self-contained units that utilize battery power, determine location using onboard GPS and communicate via wireless network connection to the server.

RadWatch Server™ Lite

- The RadWatch Server Lite (RWS-Lite) simultaneously collects data from all DUs in the network, analyzes the “threat level” of the measurements based on background radiation determined from the location-based historical information and user defined criteria, and stores them in its database. This data is available to the RadWatch Manager.

RadWatch Manager™

- The RadWatch Manager (RWM) is dynamic, GIS-based software that graphically displays measurement, location, time, and color coded “threat level” information retrieved from the RWS-Lite. It provides complete radiological threat information, including visual and audio incident alerts, in real-time to the Bomb Squad members.

ATS Radiological Sensor

Spectroscopy: supports ATS detection
 Range: 610 m (3σ for 5 kCi Cs137)
 Volume: 0.1 L
 Physical Dimensions: 2” x 2” x 10”
 Weight: 2 lbs
 Operation Temperature: -40°C to +60°C

Detection Units

Supported Sensors:
 MDI ATS Radiological sensor
 any CBRNe RS232 sensor

Spectroscopy: supports ATS detection
 GPS Accuracy: <6m (50%), <9m (90%)
 Connectivity: Wireless (GPRS, UHF Radio)
 Sampling Rate: 1 second
 Power: 12V battery (8+ hours)
 current: 272 mA
 Physical Dimensions: 10”x 8” x 1”
 Weight: 2 lbs
 Operation Temperature: -40°C to +60°C

RadWatch Server Lite

Processor: Pentium 4+, Pentium M+
 Hard Disk Space :
 software: 1 GB
 data storage: 10-100 GB
 RAM: 1 GB
 Operating System: Windows 2000, XP;
 Windows Server 2000, 2003; RedHat Linux
 7.0+; AIX; Solaris
 Database Technology: SQL Server, MySQL,
 PostgreSQL
 Bandwidth Required: 2 kbps (per DU)
 Applications Installed: Relay Server, Data
 Manager, Location Manager, Database,
 RadWatch Manager

RadWatch Manager

Processor: Pentium III+, Pentium M+
 Hard Disk Space: 50 MB
 RAM: 256 MB – 1 G
 Operating System: Windows 98, NT, 2000,
 XP; RedHat Linux 7.0+; AIX; Solaris

Patents pending in US, Canada and Europe