



Bomb RadWatch™ Overview

- Bomb RadWatch is comprised of Detection Units (DUs) with TAGS™ 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.

Targeted Automatic Gamma Spectroscopy™ Radiological Sensor

- The Targeted Automatic Gamma Spectroscopy™ (TAGS) 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 TAGS 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.

TAGS Radiological Sensor

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

Detection Units

Supported Sensors:

MDI TAGS Radiological sensor
 any CBRNe RS232 sensor

Spectroscopy: supports TAGS 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: 1+ GHz 32-bit or 64-bit
 RAM: 2 GB
 Hard Disk: 100+ GB
 Operating System: Windows XP/7+
 Database Technology: SQL Server, MySQL, PostgreSQL
 Bandwidth Required: 128+kbps
 Applications Installed: Relay Server, Data Manager, Location Manager, Database

RadWatch Manager

Processor: 1+ GHz 32-bit or 64-bit
 RAM: 1 GB
 Operating System: Windows XP/7+
 Bandwidth Required: 128+ kbps

Patents pending in US, UK, Germany, France, Canada.

Patents granted in US(8,026,846); UK, Germany, France (1,692,672)