



## Oil Facility RadWatch™ Overview

- Oil Facility RadWatch is comprised of Mobile and Static Detection Units (DUs) with TAGS™ Radiological Sensors deployed together to form a dynamic TAGS Radiological Surveillance Network over the entire Oil Facility.
- Static DUs are positioned in covert locations in the Oil Facility to provide targeted surveillance of stationary assets and entry/exit points, while person-carried DUs add resolution and redundancy. Vehicle-mounted DUs provide mobile and redeployable dynamic surveillance of the exterior Oil Facility areas.

## 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, augment these with location and timing data and send them to the RWS. The DU manages all encryption and communication to the RWS.

## RadWatch Server™

- The RadWatch Server (RWS) 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 and other linked security systems.

## 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. It provides complete radiological threat information, including visual and audio incident alerts, in real-time to Oil Facility operations, security and emergency staff.

## TAGS Radiological Sensor

Spectroscopy: supports TAGS detection  
 Range: 640 m (3σ for 5 kCi Cs137)  
 Volume: 2 L  
 Physical Dimensions: 4” x 4” x 19.5”  
 Weight: 7.5 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, WiFi), Ethernet

Sampling Rate: 1 second

Power:

- stationary units: 120V AC
- vehicle units: 12V DC (10.5V-16V, unregulated)
- person-carried units: 12V battery (8+ hours) current: 272 mA

Physical Dimensions: 10”x 8” x 4”

Weight: 12 lbs

Operation Temperature: -40°C to +60°C

## RadWatch Server

Processor: Xeon dual-core +

RAM: 4 GB

Hard Disk : 100+ GB

Operating System: Windows Server 2003+;  
Debian Linux 6.0+

Database Technology: MySQL, SQL Server, Oracle, DB2

Bandwidth Required: +1 Mbps

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)*