



## Underwater RadCheck™ Overview

- Underwater RadCheck is comprised of a Detection Unit (DU) with a TAGS™ Radiological Sensor deployed on a submersible remote operated vehicle (ROV) to investigate a suspect target vessel or underwater locale.
- The DU and Sensor are mounted on the submersible ROV to provide threat assessment as the ROV investigates the suspect target.
- The RadCheck Server Lite and RadCheck Monitor are deployed together on one laptop for use by the operators.

## Targeted Automatic Gamma Spectroscopy™ Radiological Sensor

- The Targeted Automatic Gamma Spectroscopy™ (TAGS) Radiological Sensor is capable of detecting Radiological Threat Agents and distinguishing these malicious radioactive sources from normal radiation sources routinely found in any environment under survey.

## Detection Unit

- The Detection Unit (DU) collects gross gamma counts and TAGS gamma counts from the sensors, augments these with location and timing data and sends them to the RCS-Lite. The DU manages all encryption and communication to the RCS-Lite.
- The DU is integrated with the ROV's power, networking and location determination functionality.

## RadCheck Server™ Lite

- The RadCheck Server Lite (RCS-Lite) simultaneously collects data from the DU, 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 RadCheck Monitor and other linked security systems.

## RadCheck Monitor™

- The RadCheck Monitor (RCM) is dynamic software that displays the current color coded "threat level" information provided by the RCS-Lite. It provides complete radiological threat information, including visual and audio incident alerts, in real-time to the operators.

## TAGS Radiological Sensor

Spectroscopy: supports TAGS detection  
 Underwater Range (3s for 5 kCi Cs137): 6m  
 Volume: 0.5L or larger  
 Physical Dimensions: 3.25"OD x 10.5"  
 Weight: 4.2lbs, neutral buoyancy  
 Operation Temperature: -40°C to +60°C  
 Depth Rating: 150m

## Detection Units

Supported Sensors:  
 MDI TAGS Radiological sensor  
 any CBRNe RS232 sensor  
 Spectroscopy: supports TAGS detection  
 Connectivity: ROV RS232  
 Sampling Rate: 1 second  
 Power:  
 12V DC from ROV (10.5V-16V, unregulated)  
 Physical Dimensions: 10" x 8" x 1"  
 Weight: 1 lbs  
 Operation Temperature: -40°C to +60°C  
 Depth Rating: 150m

## 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)*