



## Underwater RadCheck™ Overview

- Underwater RadCheck is comprised of a Detection Unit (DU) with an ATS 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.

## Automatic Targeted Spectroscopic™ Radiological Sensor

- The Automatic Targeted Spectroscopic (ATS) 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 ATS 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.

## ATS Radiological Sensor

Spectroscopy: supports ATS detection  
 Underwater Range (3s for 5 kCi Cs137): 6m  
 Volume: 0.5L  
 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 ATS Radiological sensor  
 any CBRNe RS232 sensor  
 Spectroscopy: supports ATS 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

## RadCheck 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  
 Applications Installed: Relay Server, Data 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*