

RadSITE™

Radiation Source Identification and Targeting Equipment

A Transportable, Remotely Operable Radiation Detection System that provides Source Localization and Isotope Identification

The Radiological Hazard Situation

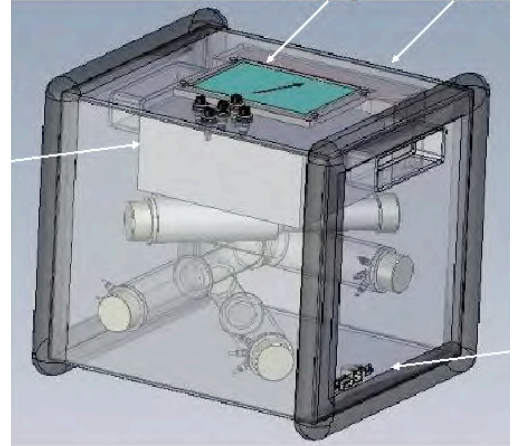
The need to protect against radiation hazards is well known. Federal policies and guidelines are in place to provide some level of protection, but the First Responders (including Police, Fire Fighters, Border Patrol, Customs, TSA, and Coast Guard personnel) need systems that to help them detect and respond to local radiation hazards.

Radiation detection systems currently deployed are unable to locate a radiation source from a distance, most only inform the user when a source is nearby. Uranium and Plutonium, the “Nuclear Bomb” type materials, emit very little radiation that can be detected from a distance. However, the typical “Dirty Bomb” type materials are readily detectable with RadSITE™, as are the large number of medical and industrial radiation sources in use every day that are far more likely to create a local radiation hazard.

The needs of the First Responder to identify threats, assess a situation, and do what is possible to protect life and property require real-world tools that get information about radiological hazards into their hands quickly. That is the purpose of RadSITE™, the *Radiation Source Identification and Targeting Equipment* system.

Main Benefits

- Detects small quantities of ANSI N42.34 isotopes at ranges between 10 and 100 meters.
- Determines the azimuth bearing (relative angle) to the source.
- Calculates the location and strength of the source(s) using position and orientation sensors.
- Identifies the specific radioactive isotope(s) that are present.
- Displays all detected sources for the system operator via a local display.
- Permits the operator to work remotely from the RadSITE™ base system using a hand-held PDA communicating over an encrypted Wi-Fi link.
- Retains detailed on-board archives of at least the last 24 hours of system operation
- Provides for future “reach-back” communication links to higher-level emergency response command and control systems.
- Retains detailed on-board archives of at least the last 24 hours of system operation.



The size and weight of RadSITE™ allows for the detection and identification of radiation sources in places previously not possible.

SDTI An SMI Company

10401 Roselle Street
Suite 400
San Diego, CA 92121

Phone: 858-332-0700
Fax: 858-332-0709
www.sdtechnologiesinc.com



Other Benefits

- Provides for future RadSITE™ mesh sensor capability, where local RadSITE's communicate with each other, providing data for an overview of the entire incident area.
- Provides backup battery operation when primary external power is lost.
- Occupies a volume of no more than one cubic foot.
- Has a splash-proof enclosure.
- Various configurations, none weighs more than 30 pounds (13.6 kg).
- Operates over a wide temperature and humidity range.
- Permits straightforward installation and easy relocation.

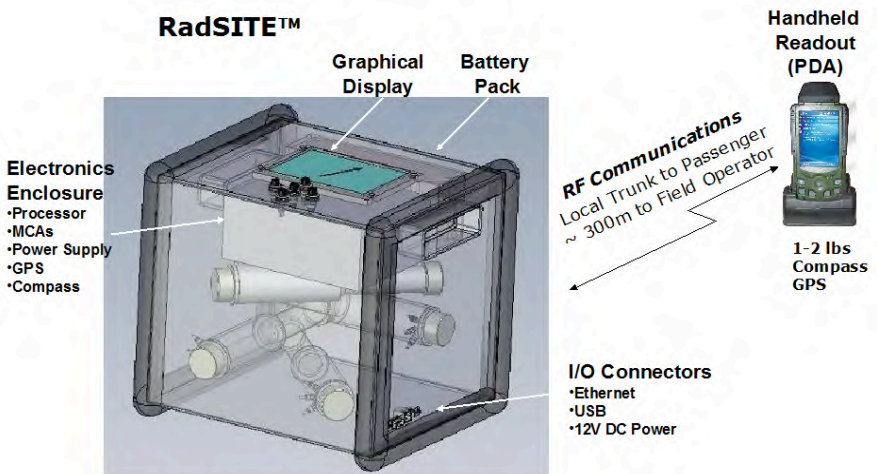
Safety and Security Applications

Fixed Portal Protection Application

RadSITE, when mounted in a fixed, major ingress/egress location, or portal, can remotely inform monitoring stations of the location and nature of the radiological threats. This is the most natural application because RadSITE can be very unobtrusively mounted due to its compactness and distance sensitivity.

First Responder Application

Most current radiological equipment is targeted primarily toward one issue or the other. For example, the personal radiation detectors/dosimeters worn by many First Responders can inform the wearer only that they have entered the scene of a radiological incident. They are primarily Safety devices. These devices do not provide advance warning, nor do they help determine the location of the radioactive source, so even their Safety role is limited, and they have no role in providing Security.



An overview of the RadSITE™ system that shows its major components.

First Responders are in our communities every hour of every day, serving their primary missions. Given the right radiation detection equipment with sensitive performance at 100-foot (30 meter) detection range, every First Responder vehicle could also meet a radiological security mission, continually surveying the environment for radioactive sources. The moment such equipment detects a source of radiation, it could provide the detailed information needed to make the First Responders aware of the specific characteristics of the detected material.

This capability would not only permit First Responders to improve local Safety, it would also provide Security against local radiological threats, forming the backbone of a system for national radiological incident Security.