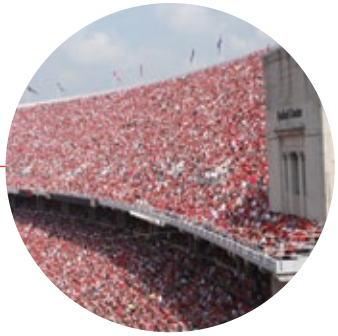
Thermo Scientific
Radiation Measurement
and Security Instruments

Radiation Detection Solutions for Safety and Security

Thermo SCIENTIFIC

Thermo Scientific has been providing dependable safety and security solutions to the nuclear power, medical, defense, first responder, homeland security and law enforcement industries for approximately 50 years. Our radiation detection instruments and systems are working in medical and research laboratories, power plants, waste treatment facilities, airports, shipyards, at borders and in the field around the world.

We're constantly advancing technology to protect against the threat of radiation and radioactive material with real-time detection and immediate results. From personal detection devices, mobile and portal detection systems, to food, structure and environmental contamination monitors, Thermo Scientific has the solution for every scenario.



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Go to: **thermoscientific.com/rmp**

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Personal Detection Monitors

Contamination Monitor

Mobile Detection

Portal Monitor

Environmental and Infrastructure Monitors

Trace Detection

The Scenario:

Any environment or situation where personnel may be at risk for exposure to radiation.

The Solution:

Thermo Scientific personal detection monitors, for definitive detection with the lowest degree of false positives/negatives.

RadEye™ GN Gamma Neutron Pager

For the best search and find capability for gamma and neutron detection.

Very high gamma and neutron sensitivity that exceeds the time to alarm requirements of ANSI™ 42.32 and IEC 62401. Can be fitted with a Bluetooth™ back set to talk to a PC or to other devices for networking.

- Immediate classification of gamma source (NORM/non-NORM)
- Energy-compensated gamma dose rate
- Minimal false neutron alarms for even intense gamma sources
- Cost effective - gamma and neutron monitoring in one unit

Applications:

- Law Enforcement
- First Responders
- Coast Guard
- Customs
- Border Patrol

RadEye™ GN+

This is an enhanced version of the currently available RadEye GN which is a Personal Radiation Detector (PRD) with Gamma and Neutron detection capabilities with high sensitivity for search and find usage.

NEW!

The RadEye GN+ using CLYC as the detector material enables Thermo Scientific to provide a unit with greater energy resolution and almost zero crosstalk between the gamma and neutron channels even when detecting large quantities of high energy isotopes such as Cobalt 60 or Thorium.

Using CLYC has enabled TFS to produce a unit with even lower neutron backgrounds than the original RadEye GN, which was already exceptionally low for a scintillation based Neutron detector. The lower background and crosstalk allow even lower set points to be utilized effectively giving the user more sensitivity.

The superior detection characteristics of the CLYC material allow the RadEye GN+ to exceed the US Customs and Border Patrol sensitivity requirements with a very small detector in a pager sized device.

RadEye™ PRD

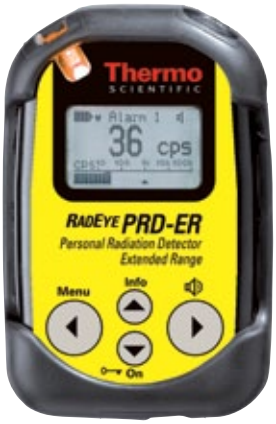
For the best search and find capabilities.

Sensitive and fast detection of gamma radiation with accurate dose rate measurement capabilities to hazmat levels. Detector is 5,000 to 100,000 times more sensitive than a typical electronic dosimeter.

- Measuring range: 1µR/h - 25mR/h [0.01µSv/h – 250µSv/h]
- Overrange indication: Tested up to 1,000 R/h [10Sv/h]
- Energy range (+/- 30%): 60keV - 1.3MeV, excellent detection from 30keV

RadEye™ PRD-ER

For the best search and find capabilities.



Sensitive and fast detection of gamma radiation with accurate dose rate measurement capabilities to safety turnaround levels.

- Measuring range: 1µrem/h - 10rem/h [0.01µSv/h – 100mSv/h]
- Overrange indication: Tested up to 10,000rem/h [100Sv/h]
- Doserate energy range (+/- 30%): 60keV - 1.3MeV, excellent detection from 30keV

RadEye* NBR

The most sensitive handheld search and find device with discrimination between artificial and natural radiation.

Portable high-sensitivity gamma radiation monitor.
Ideal for detection of shielded sources.

- Detection Sensitivity: approx. 40cps per uR/hr at 662keV, highly sensitive from 15keV (front), 30keV (side)
- Energy response (H*[10]): Exceeds IEC 62533 requirements (+/- 30% for Am-241, Cs-137, Co-60)
- Dose rate range: (Cs-137) 0.01µSv/h to 100µSv/h

RadEye* G-EX and GF-EX

For intrinsically safe safety and survey measurements in explosive environments.

Designed for ultimate safety and accurate dose rate. Intrinsically safe according to ATEX standards.

- Intrinsically safe for use in explosive environments
- Large, clear and backlit display for error-free readings
- Low power technology

Applications:

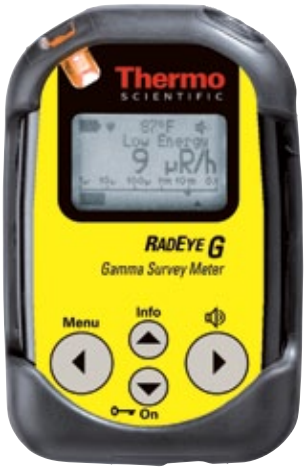
- Emergency responders
- Firefighters
- Hazmat teams
- Defense personnel
- Refineries
- Oil platforms

RadEye* G

For safety and survey dose rate measurements up to turnaround safety levels.

Designed for quick and reliable measurement of gamma dose rates. Modern electronic circuitry guarantees excellent linearity over six decades of radiation intensity.

- Measuring range: 1uR/hr - 10R/hr
- Overrange indication: Tested up to 10,000R/hr
- Energy range +30%: 45keV - 3MeV
- Count rate for Cs-137 (66keV): 17cps per mR/h [1.7cps per µSv/h]

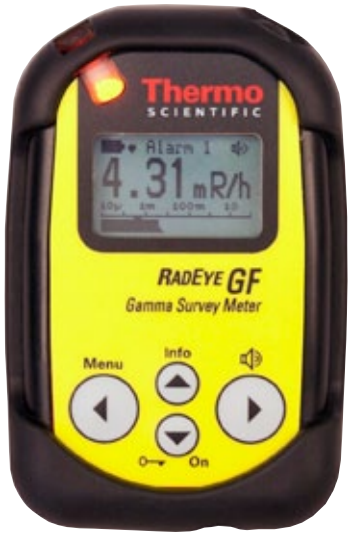


RadEye* GF

High range gamma survey meter.

Detects even the smallest changes in dose rate immediately, while effectively suppressing random fluctuations.

- Measuring range: 500µR/h - 300R/h
- Overrange indication: Tested up to 100Sv/h
- Energy range +30%: 45keV - 3MeV
- Count rate for Cs-137 (662keV): 1.3cps per mR/h

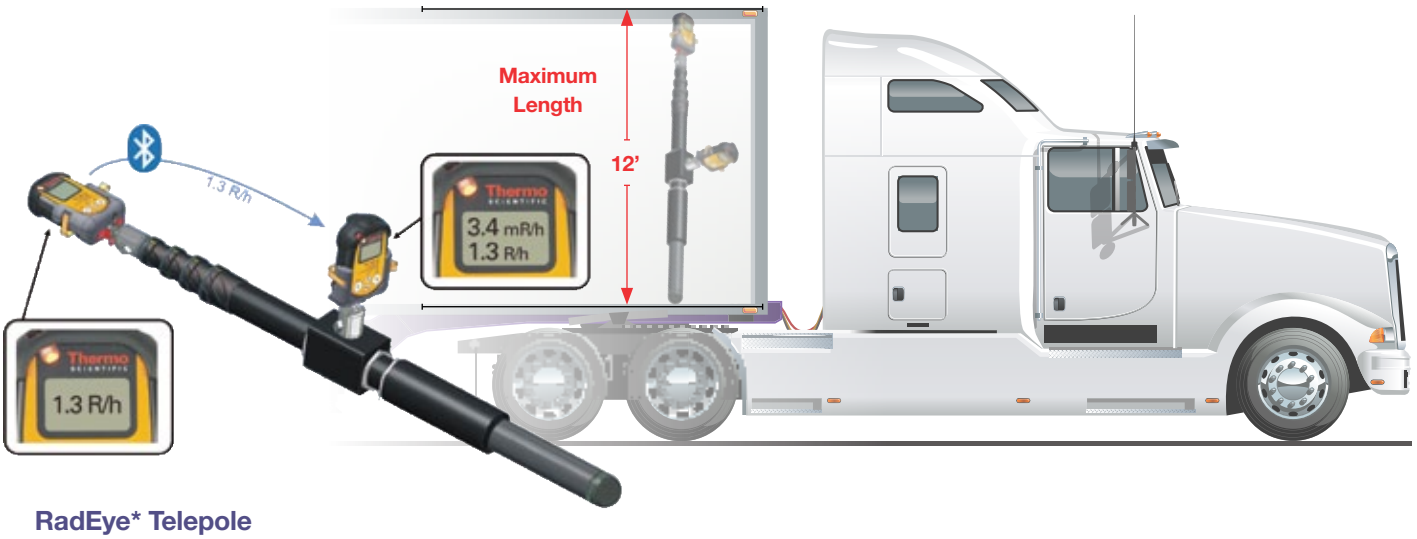


RadEye* NL and Moderator

For neutron detection with the lowest gamma crosstalk.

Ideal for rapid warning and verification of neutron fields when dealing with unknown radiation sources. Can be used as an area monitor.

- Sensitivity when worn at the body (RadEye NL): Approx. 0.2 cps per µSv/h (2cps per mRem/h) for Cf-252; detects 0.01µg Cf-252 in typically 2 - 3 sec. for 25cm (10") distance
- Background: Approx. 0.003cps at 300m above sea level
- Gamma spill-over < 0.2cps at 10mSv/h (1R/h) Cs-137 radiation



RadEye* Telepole

For safe, convenient detection at a distance via Bluetooth*.

High-quality, durable material. Segments are freely adjustable.
For two RadEye units with Bluetooth communication capability.

- 2.3 and 4.0m extended length versions available

FH 40 G Multi-Purpose Digital Survey Meter

Wide-range digital survey meter suitable for nearly all measurement tasks arising in radiation protection.

Versatile, user-friendly, handheld radiation measurement system designed for many different radiation protection applications. For use with external detectors for portable and remote area monitoring applications (cable of up to 50m can be used).

- Simultaneous operation of internal and external smart FH family detectors
- Internal detector choice of background levels to max doserate of 10R/hr or 100R/hr
- Storage of up to 256 data records
- Smart plug-and-play detectors for detection, contamination and dose rate

FHG40 NBR Survey Meter

1,000 times more sensitive than normal gas-filled detectors.

Detects the most minute amounts of artificial radiation.
With the high-efficiency FHZ 672 E-10 detector for rapid results.

- An artificial contribution of 1uR/h can be detected even in severely fluctuating background radiation fields
- High gamma sensitivity: 28cps per uR/h
- Measuring range of 0.1uR/h up to 10mR/h and simultaneous measurement with FH40G up to 100R/h

The Scenario:

Areas where radioactive material can be contaminating items or surfaces.

The Solution:

Thermo Scientific portable radiation detection systems.

RadEye* B20 and B20 ER

For sensitive measurement of alpha/beta/gamma surface contamination.

Measures alpha, beta, gamma and X-ray radiation. Can also be used for accurate dose rate surveys if used with correct energy compensated dose rate filter (17keV – 3MeV). B20 is for normal measurements; B20-ER is for high range measurements.

- Measuring range (gamma dose rate), uncompensated (662keV) or with optional energy filter:
  - B20: 0 - 200mrem/h [0 - 2mSv/h]
  - B20-ER: 0 - 10rem/h [0 - 100mSv/h]
- Measuring range (contamination):
  - B20: 0 - 10kcps
  - B20-ER: 0 - 500kcps
- 2 π efficiency (ref. to 50mm diameter without rubber sleeve): Am-241: 28%; Co-60: 2 %; Sr/Y-90: 36%; C-14: 19%
- Energy range (with gamma energy filter) [H*(10) and H′(0.07)] 17keV – 3MeV

FH 40 G Emergency Kits

For a variety of basic emergency scenarios.

Kit includes the FH 40 survey meter and FHZ 732 GM probe for alpha/beta contamination measurements of food stuff, soil or filter materials. Different configurations are available using a number of unique probes. Components include:

- FH 40 G survey meter
- FHZ 512 1 x 1" NaI detector
- FHZ 732 GM pancake detector
- FHZ 380AB Alpha/Beta 100cm^2 detector
- Detector cable
- Rugged electromagnetic/RF shielded carrying case (EN50 081-1, EN50 082-2)
- Optional RIIDEye Handheld Radiation Isotope Identification

High-Sensitivity Gamma Food Monitor

For gamma detection in food in the field or in the lab.

Economical, user-friendly food monitor typically yields results in less than one minute.

- High throughput
- 1L sample volume Marinelli system
- Highly gamma sensitive NaI (Tl), 2 x 2" crystal detector
- Datalogger for 1,000 sample measurements
- Battery power supply supports field operation

Lead Shielding Kit for Marinelli Beaker

Shielding to reduced background.

The shielding kit provides 15 mm lead around the Marinelli Beaker improving the detection limit of the High Sensitivity Gamma Food Monitor.

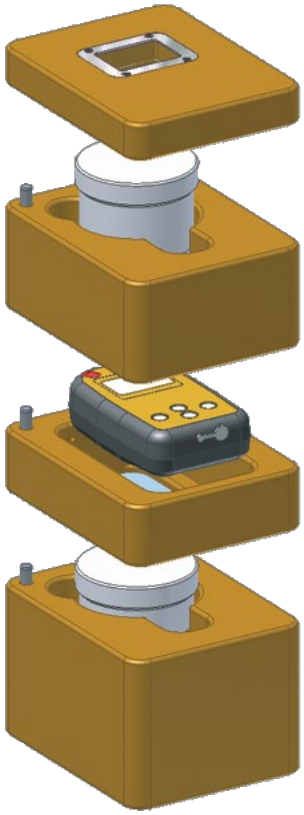
- Supplied in its own transport case
- Easy to install

RadEye* Gross Gamma Food Monitor

Portable solution for food monitoring applications.

Fast, reliable detection of radioactivity in food. Consists of the RadEye PRD-S Gamma Pager (available separately) and the Gamma Laboratory Kit. Portable solution for food and liquid monitoring applications

- Monitors small food or liquid samples for gamma radiation
- Two samples can be measured simultaneously
- Typical Detection Limit (Measurement time: 300s): I-131: 140Bq/L; Cs-mix (50% Cs-134, 50% Cs-137): 115Bq/l
- Calibration Factor provided for I-131, Cs-137, Cs-134



RadEye* G20 and G20-ER

For accurate gamma measurements down to X-ray energies.

Flat energy response curve from 17keV to 3MeV according to ambient equivalent dose H*(10). Suitable for dose rate measurements for X-ray scanner and for medical isotopes including I-125.

- Menu-driven user interface results in low training cost and immediate familiarity
- Huge internal data memory for both scaler results and continuous data recording

RadEye* Gamma Laboratory Kit

For radiation measurement in soils, food and swipes.

Pelican case containing sample changer for use with the RadEye B20, sample planchets with different lip heights, disposable gloves, sample measurement syringes and liquid sample holders and 50mm paper filters.

Has space for:

- Data cable and desktop holder
- User manual
- Lutetium-Oxide test adapter
- RadEye B20/B20-ER
- Additional RadEye (PRD or N)
- Two removable doserate filters

Thermo Scientific
Radiation Dosimetry

The Scenario:

Any environment or situation where personnel are exposed to radiation.

The Solution:

Thermo Scientific personal radiation dosimeters, for rapid analysis and remediation.

Applications:

- Airports
- Railway stations
- Buildings
- Big events
- Access and exit controls

EPD Mk2* Electronic Personal Dosimeters

For exceptional radiation safety accuracy in dosimetry and record-keeping.

Can be a single stand-alone dosimeter or part of a comprehensive dosimetry management system, such as webREMS or ViewPoint Enterprise.

- Multiple diode-based detector technology
- Audible and visual alarms for dose, dose rate, countdown time, read time and failure modes; Hp(10) dose chirp settable from 0.01µ to 100µSv/chirp (1µrem to 10µrem/chirp)
- Communications: IR interface up to 1m (39") range
- Advanced radiological performance, 15keV to 10MeV
- Sensitive to X and µ radiation, ß particles
- Direct readout of dose equivalents Hp (10) (deep/whole body) and Hp (0.07) (shallow/skin)
- Settable interval from 2 seconds to 35 hours
- Stores transitions of Hp(10) and Hp(0.07) at a resolution of 1µSv (0.1µrem)
- Stores up to 579 records for transitions up to 127µSv or less

Harshaw TLD* Model 6600 Plus Automated Reader Instrument

One dosimetry solution for whole body betas, photons and neutrons.

Built-in automatic dosimeter calibration capability. No requirement for separate extremity measurement.

- Extensive built-in automatic QC tests and high MTBF
- High sensitivity LiF material allows extended monitoring periods
- LiF has excellent energy response due to being near tissue equivalent, unlike Al_2O_3 or $CaSO_4$

Other models available on thermoscientific.com/rmp:

- Harshaw TLD* Model 3500 Manual Readers
- Harshaw TLD* Model 4500 Manual Reader
- Harshaw TLD* Model 5500 Manual Readers
- Harshaw TLD* Model 8800 Plus Automatic Card Reader Instruments

Thermo Scientific Beta & Photon Extremity Dosimeter

- Environmental monitoring
- Plant site boundary
- Personnel monitoring
- Neutron monitoring

- Passes ANSI N545-1993 requirements and tested to draft N13.37
- Based on LiF:Mg,Cu,P
- Measures:
  – Hp(10) – deep dose
  – Hp(3) – lens of the eye dose
  – Hp(0.07) – shallow dose
  – Neutron dose
  – H*(10) – ambient dose equivalent
  – H'(0.07) – directional dose equivalent

- Belt or strap versions available
- Filters 100% eddy current tested
- Hinged cover and gasketed to prevent internal environmental contamination
- Visible barcode window for continuous chain of custody
- Symmetric holder design
- Several color bars available for different issue periods or other site-specific requirements
- Dose algorithm available
- Visible barcode window for continuous chain of custody
- Several color bars available for different issue periods or site specific requirements
- Dose conversion algorithm available
- Belt or strap versio ns available for whole body monitoring and neutron monitoring
- Hinged cover and gasketed to prevent internal environmental contamination
- Neutron Monitoring
  – Two pairs of 6Li/7Li to measure: Thermal neutrons and Fast neutrons
  – Based on LiF:Mg,Ti
  – Fast neutrons measured using albedo design

Beta & Photon Extremity Dosimeter

Extremity dosimeters are invaluable for personal dosimetry throughout the nuclear power industry. Extremity dosimeters are used for accuratel measuring skin dose during operations.

Technical Characteristics

- Passes ANSI N13.32-1995 requirements for DOELAP & NVLAP
- Hot and cold sterilizable
- Adjustable for wearer comfort
- Ring may be used for both photon and beta dosimeters
- Compatible with existing instrumentation and software
- 42 mg/cm2 window for photons
  – TLD-100 100 mg/cm2
  – TLD pellet 3 mm x 0.4 mm
- 3.3 mg/cm2 window for betas
  – TLD-100H/700H 7 mg/cm2
  – TLD powder of 50-90 m
- Ring comes in four colors
- Dose algorithm available
- Tested to ANSI N545 requirements
- Based on LiF:Mg,Cu,P
- Measures:
  – H*(10) – Ambient dose equivalent
  – H'(0.07) – Directional dose equivalent

Neutron Monitoring TLD Badges

Monitor thermal and fast personnel neutron doserate with Thermo Scientific Neutron Monitoring TLD badges.

- Two pairs of 6Li/7Li to measure:
  – Thermal neutrons
  – Fast neutrons
- Based on LiF:Mg,Ti
- Fast neutrons measured using albedo design

Environmental Monitoring TLD Badges

Monitor environmental doserate with Thermo Scientific Environmental Monitoring TLD Badges.

- Tested to ANSI N545 requirements
- Based on LiF:Mg,Cu,P
- Measures:
  – H*(10) – ambient dose equivalent
  – H'(0.07) – directional dose equivalent
- Symmetric holder design

The Scenario:

Locations where radioactive material can be transported or concealed.

The Solution:

Thermo Scientific mobile radiation detection systems.

Mobile ARIS* Detection System

For real-time, mobile and sensitive radiation detection, surveying and isotope identification.

Detect and analyze low-level threats in real time and identify isotope spectrum with superior speed, sensitivity and flexibility. ViewPoint* Enterprise real-time monitoring and analysis software delivers system integration, operator interface and data storage.

- Advanced Radio Isotope System
- Natural background rejection (NBR) technology minimizes false alarms and missed threats
- Superior Isotopic identification
- Mounts in a standard SUV, boat or other vehicle for unobtrusive surveillance
- Frees operators from constant monitoring, prevents human error
- Accurate and comprehensive background contours saved during surveys
- Increased incident response accuracy resulting from determination of alarm conditions before events occur
- Advanced technology — NBR, ARIS, RadReachBack* and ViewPoint — integrated to produce a fast, mobile and intelligent system

Applications:

- Borders
- Airports and seaports
- Streets and bridges
- Parks, recreational and rest areas
- Power plant sites
- High profile public events
- Military bases
- Postal and courier facility sites
- Public utility sites
- Government building sites
- Tunnels and subways

MDS G(N)

The MDS G(N) is used as mobile radiation reconnaissance system for ground, marine or air based operation by vehicle or helicopter. The radiation generated by gamma radiating radio nuclides and/or neutron sources is measured with discrimination between natural and artificial sources. The tracking program MDS_S determines the current location based on GPS data and displays the measurement points (MP) with the appropriate dose rate (DR) as a coloured spot on the map.

Each MP is linked in chronological order to form a path and is displayed as track on screen. The colour of the MP indicated the level of DR. All measuring data are recorded continuously together with GPS data, displayed, and stored in a secured History file on the PC. After a reconnaissance mission, it is possible to carry out an offline additional evaluation with the aid of the History file and MDS_S software.

Optionally (additional hard and software necessary) the possibility exists to transmit the data already during collection to a control centre for storage and analysis. Transmission can be done by:

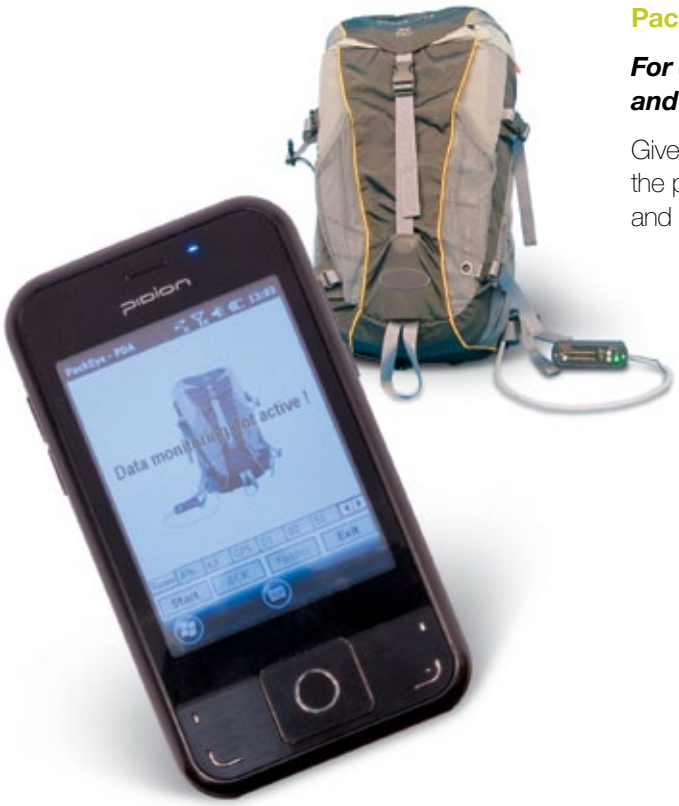
- Wired LAN connection
- Wirelessly over public radio network such as WLAN, GSM, UMTS, GPRS or
- Proprietary RDT (radio data transmission) networks above or below the waterline.

Matrix Maritime RADspec

For mobile detection and automatic isotope identification from a boat.

The RADspec Series of detection units has been designed primarily for fixed wired installations. The cylinder-shaped housing is made of PVC and is both dust- and moisture- proof, having optional internal or external He^3 neutron detector with moderator. RADspec detection units and systems are designed to detect the covert movement of special nuclear material used for weapons of mass destruction or a radiological dispersal device into populated or other areas of concern and to identify the radionuclide. These units can be mounted topside,above or below the waterline.

- Gamma Energy Range: 20keV to 3MeV
- Energy Resolution: < 8% FWHM @ 662keV
- Neutron Detector: He_3 Gas-filled ionization neutron detector with 10mm thick PE moderator (opt.)
- He_3 Detector: 0.75 x 3", 8 atm pressure Neutron Sensitivity per IAEA specifications for Border Monitoring Equipment; Neutron Energy 0.025eV to 15MeV



PackEye* Radiation Detection Backpack

For search and detection of gamma and neutron radiation over large areas.

Gives survey teams a highly sensitive tool for effectively addressing the problems of orphaned sources, radiological contamination and maliciously introduced sources.

- Natural Background Rejection (NBR) has rapid response time and discriminates between natural (NORM) and artificial sources
- No false alarms on NORM and natural background changes
- High neutron detection sensitivity
- Optional Remote monitoring with Handheld Device
- Non He3 variants available
- With your handheld device you can remote monitor PackEye, in an environmentally protective Pelican case, from mobile and maritime vehicles on (not from) mobile and marine vehicles
- Light weight - all variants less than 17lbs
- Simple to operate, data can be tied with GPS from handheld

Matrix MRDS*

For multiple and flexible mobile detection systems.

Provides real-time detection, analysis and location of radiation threats across a predetermined area. Scalable, flexible platform provides a clear path to additional centralized detection and analysis.

- Rugged and secure wireless network
- Highly sensitive probes provide fast detection of hidden radioactive sources
- Self-diagnostic capabilities

The Scenario:

Vulnerable ports of entry and public buildings, where radioactive contraband can be concealed.

The Solution:

Thermo Scientific highly sensitive fixed or portable radiation detection systems.

Portable TPM-903B Transportable Portal Monitors

For the fastest transportable portal monitoring of large pedestrian crowds.

Designed for rapid radiation screening of personnel in an emergency response scenario or temporary security event. Accommodates pedestrians, wheelchairs, walkers, ambulance gurneys and strollers; can also be easily adapted as a vehicle monitor.

- Very sensitive, highly uniform responses to gamma radiation
- Fast head-to-toe coverage for maximum throughput
- Detects shielded sources
- Monitors gamma radiation to FEMA required levels
- Vehicle monitoring option

Safety-Guard Series I System

For portal monitoring of small cargo, light vehicles and pedestrians.

High detection sensitivity for screening packages, people or vehicles for incident prevention and response. Configurable design allows for maximum protection for any situation.

- Natural Background Reduction (NBR) technology minimizes false alarms
- Large-area, premium-grade scintillation detectors
- Optional neutron detectors enhance detection of Special Nuclear Materials (SNM)

Safety–Guard Series II (SGS II)

Detection solutions for containerized cargo and larger vehicles.

- Modular system components for maximum protection
- Natural Background Reduction (NBR) technology
- Large-area, premium-grade scintillation detectors
- Optional neutron detectors enhance detection of Special Nuclear Materials (SNM)
- Self-shielding algorithm
- Enhanced neutron alarm
- Sum channels
- External modem support
- Camera (optional)

ARIS* 1024

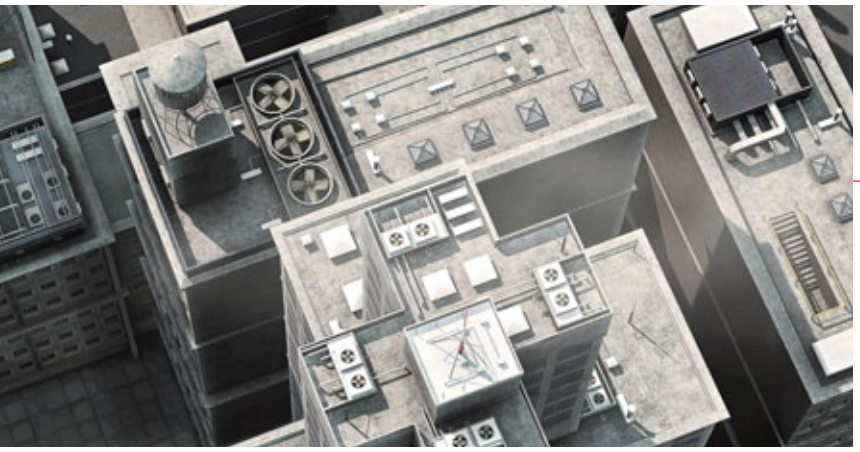
For portal monitoring with automatic isotope identification of containerized cargo and larger vehicles.

Completely enclosed and secure system with high sensitivity allows fully remote command-center control. First detects the presence of gamma and neutron radiation, then identifies the radioisotope(s).

- Each gamma detector panel contains four 2 x 4 x 16" NaI(Tl)
- Each neutron detector panel contains two 2" dia. x 59" long 3He proportional counter tubes
- Portal Control Computer controls operation and transfers data and results to remote supervisory computer

The Scenario:

Populated areas that are vulnerable to a radiation release incident from an improvised nuclear device or radiological dispersal device.



The Solution:

Thermo Scientific environmental radiation monitoring systems.

RADspec* REMS System

For detecting dispersed radiation from rooftops.

Convenient rooftop environmental monitoring system that detects radiation and identifies the significant radionuclides of interest.

- Doserate range from background levels to 100R/hr
- Integrated monitoring solution for decision support with actionable information and reachback capability
- Engineered for rooftop installation with power over Ethernet or hardwire
- ViewPoint* software connectivity to standard communication networks
  - Remote monitoring capability
  - Remote alerts to smart phones, PDAs, PCs, etc.
- Standardized communication protocol (N25, N42.42, Custom)
- WAN and Connection to MCM (Mission Critical Messaging)
- Immediate audible alarm upon detection of radioactivity
- Automatic Isotope Identification utilizing a dynamic algorithm
- Black box approach to Radiation Monitoring Networks
- Ability to integrate a number of different sensors for each location

RADspec* Spectral Pedestrian Radiation Monitor

For detecting covert movement of special nuclear material or weapons into populated areas and identifying radionuclides.

Designed primarily for pedestrian security installations. Covert installation as an unobtrusive stanchion. Units are available in a wired or wireless version. Typical time to identify a nuclide can be as little as a number of seconds. Can be used in a stand-alone mode or combined with other stanchions to form a network.

- Gamma Detector: NaI (Tl) 2 x 3" (50 x 76mm)
- Gamma Energy Resolution: 20 keV to 3 MeV
- Energy Resolution: < 8% FWHM @ 662 keV
- Neutron Sensitivity: per IAEA specifications for Border Monitoring Equipment
- Neutron Energy Range: 0.025 eV to 15 MeV
- Rapid detection of the presence of radioactivity or radioactive materials
- Nuclide identification
- Categorizes radiation as innocent, suspicious or threat
- Visible and audible alarm annunciators
- Remote alerts to PCs, PDAs and other computing devices utilizing RadReachback to ViewPoint Enterprise for central monitoring of multiple detectors

Applications:

- Airports
- Railway stations
- Buildings
- Public events
- Access and exit controls
- Doorways

FHT 6020 Area Monitor Display and Alarms

For alarming and communicating a radiation threat.

Display with communication capability and audible and visible alarms. Capable of stand-alone operation.

- Up to 16 measurement channels (intelligent dose rate probes and two FH 40 G series probes)
- Measurement memory for probes of the FH 40 G range
- Analog input/output (option); digital bit input/output for monitoring of conditions and alarms

ALPHA-7A Alpha Air Monitors

For on-vehicle or installed alpha air monitoring.

PC-based continuous air monitor provides faster, more powerful algorithms for the identification and quantification of airborne releases of alpha-emitting radionuclides, primarily transuranics such as 238Pu and 239Pu. Excellent for monitoring work areas, stacks and ducts.

- Can serve as a stand-alone CAM or be incorporated into Ethernet-based network
- Simultaneously monitors up to eight isotopes
- Advanced peakshape algorithms; calculates isotopic activity by mapping peaks rather than using regions of interest (ROI)
- Alpha-spectral data updated every second
- Concentration, dose and activity alarms

AMS-4 Beta Air Monitors

For on-vehicle or installed beta air monitoring.

Lightweight robust design accommodates both fixed and portable use applications. Continuous air monitor (CAM) offering beta particulate, radioiodine or noble gas detection.

- Detachable sampling head
- Reports both DAC and cpm
- Real-time gamma background subtraction
- Mass flow measurements
- Fast and slow concentration alarms, cpm alarm, DAC-hour alarm

The Scenario:

Any environment where commercial or military explosives can be concealed.

The Solution:

Thermo Scientific explosives trace detection technology.

EGIS* Plus Explosives Trace* Detection System

Cutting-edge technology provides extremely low false positives for high inspection throughput.

Highly sensitive device detects various types of commercial and military explosives. High-speed gas chromatography (HSGC) with chemiluminescence and differential ion mobility spectrometry (DMS) detects nitrates (AN/UN) and plastics such as EGDN, NG, DNT/TNT, PETN, RDX, TATP, HMTD, Tetryl, Taggants, C4, Demex and SEMTEX with an air sampler, providing an even greater probability of detection.

- High performance and fast results (15-20 seconds)
- Accurate analysis with highest sensitivity and lowest false alarm rate
- Remote diagnostics
- Simultaneous vapor/particle collection
- Go/No-Go audible and visual alarms
- Highly specific detection through high-speed gas chromatography

Applications:

- Borders
- Airports
- Seaports
- Government buildings
- Power plants
- Financial institutions
- Banks
- Mints
- Military bases
- Postal facilities
- Courier facilities
- Public utilities
- Embassies
- Stadiums, arenas, convention halls

EGIS* Defender Portable Desktop Explosives/Narcotics Trace Detection System

The Thermo Scientific EGIS Defender Explosives/Narcotics Trace Detection system combines cutting edge technology and performance with rugged packaging, portability, reliability and ease of use. The highly flexible dual technology platform provides extremely low false positives for high inspection throughput to assure the success of security missions around the world.

The Thermo Scientific next generation chemical detection system is based on our high-speed gas chromatography (HSGC) technology combined with micro differential on mobility spectrometry (DMS), setting a new benchmark for performance in the highend chemical trace detection system market. The combination of the HSGC-DMS technologies, the Thermo Scientific EGIS Defender offers the highest performance available to simultaneously detect explosives and illicit drugs in a portable package. Among the most significant features of the EGIS™ Defender is its ability to detect new and emerging threats through its built-in scientific viewing windows and easily expandable threat library, eliminating the risk of technology obsolescence.

Features and Benefits

- Low cost of ownership
- Reduced obsolescence
- High performance & fast results
- Accurate analysis with highest sensitivity and lowest false alarm rate
- Ease of use and operation
- Ease of maintenance
- Remote diagnostics
- Large color touch screen display
- Expandable library for explosives & narcotics
- Selectable modes of operation
- Storage for 75,000 analyses

EGIS* Defender Narcotics Trace* Detection System

For detecting trace amounts of narcotics using high-speed gas chromatography and micro differential ion mobility spectrometry.

Portable lightweight desktop Narcotics Trace detection system based on our proprietary high-speed gas chromatography (HSGC) technology combined with micro differential ion mobility spectrometry (DMS). Detects cocaine, heroin, cannabis, amphetamine-based drugs, PCP and others within 20 seconds.

- Accurate analysis with highest sensitivity and lowest false alarm rate
- Remote diagnostics
- Integrated touch screen
- Expandable narcotics library
- Enhanced sensitivity

EGIS* III Explosives Detection System

For detecting plastic, commercial and military explosives, as well as ICAO marker compounds, without using a radioactive source.

Combines forensic laboratory instrument performance with operationally tested reliability and application knowledge. Portable benchtop system detects plastic, commercial and military explosives, as well as ICAO marker compounds without using a radioactive source.

- Identification of explosive classes
- High sensitivity and very low false alarm rate
- High passenger throughput
- Simultaneous vapor/particle collection
- Detects ICAO taggants
- Go/No-Go alarms

The Scenario:

When it's critical to know the exact isotope and precise location of the radioactive material to quickly initiate a plan of action.

The Solution:

Thermo Scientific's highly sensitive radiation isotope identification (RIID) system.

RIIDEye X Series: Handheld Radio-Isotope Identification Device

For faster, more precise and comprehensive identification of Radioactive materials. Leading to quicker, more accurate assessments.

The RIIDEYE X enables the user to find and identify the exact isotope and precise dose-rate of any radioactive material and plan the next course of action. Its patented Quadratic Compression Conversion (QCC) technology along with the large scintillation detector provides the industry's fastest, most accurate, real-time gamma source isotopic identifications. All in an easy-to read, full spectrum color coded format

RIIDEye X-G

Gamma radiation identification with a 2x2" NaI detector.

RIIDEye X-H

High resolution Gamma radiation identification with a LabR (Lanthanum Bromide) detector

RIIDEye X-GN

Gamma Radiation identification with a 2x2" NaI detector And CLYC Neutron detector.

RIIDEye X-HN

High resolution Gamma radiation identification with a LabR (Lanthanum Bromide) detector And CLYC Neutron detector

RIIDEye M

Modular versions of the RIIDEYE variants with external removeable Gamma detector.

- Superior performance for ID
- Patented QCC algorithm allows fast ID even at low activities
- Rugged, passes 5' droptest criteria
- Environmentally sealed, exceeds IP65 rating
- Clear, bright oversized display
- Weight balance handle ensures continuous comfort
- Easy to use
- SNM Assist feature helps user perform the best analysis for SNM
- Intuitive interface with color coded spectrum peaks
- Raised buttons enable easy gloved use of keypad
- Removable memory card, for easy spectrum downloads
- Rad-reachback is easy for further remote analysis
- Continuous gain stabilization with no integral Cs137 source
- Gives less false ID's and better detection sensitivities

ViewPoint™ Enterprise

For complete customizable solutions for remote monitoring and remote real-time command and control.

ViewPoint Enterprise is a robust secure and scalable data system, which is able to centrally process and analyze instrument/detector data from radiation, environmental and general purpose detectors.

- Integrates multiple types of instruments
- Sophisticated real-time graphing/trending
- Historical data retention
- Robust and scalable system architecture
- Centralization of data for operational management
- Highly secure, with encryption technology
- User-friendly, customizable with open system architecture

ViewPoint Data Manager

For operational situational awareness via a management console / control center .

- Full view of events as they occur, a real time solution
- Local and Global situational awareness
- Facilitates the mission of first responders, HAZMAT teams and security personnel

ViewPoint Web Mapping Client

For easily deployable mapping and display of instrument data.

- Secure browser based application
- Simple and easy mapping and visual tool for instrument data
- Full server application, no local mapping client required
- Provides visual location, readings, alarms and instrument icons

ViewPoint Survey Client

For operational tracking, recording and mapping of data from mobile and stationary instruments.

- Fully customizable Graphical User Interface (GUI)
- Co-ordinates and maps instrument data
- Alarm alerts shown on maps
- Maps and data saved as surveys for comparisons to baseline surveys

VP-SaT™ Viewpoint Standalone Terminal

For use as a management center /base station, for a portable network of wireless devices.

- Rugged standalone base station / data management center
- Flexible portable response, field teams can be outfitted quickly
- Used in urban or remote environments
- Works with a CNET 3000 device to connect a network of wireless devices
- Used with a CNET 1000 Tranceiver it wirelessly connects any device with serial data outputs
- One or more VPSats can create a distributed network

CNET 3000 Reachback Communications Hub

For connecting to the internet for communications and transmission of radiological, environmental and other data.

- Rugged and portable base station and data management center
- Battery or line powered
- Uses Thermo Scientific RadReachback system to transmit data to operations and reachback support
- Conectivity through GSM Modem, LAN and satellite terminal with optional handset
- Smart switch technology maintains connections for internet, email and data reachback
- Used with a CNET1000 Transceiver it wirelessly connects with any device with serial data outputs
- Devices have a direct connection through the CNET3000

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