

# Radiation Monitoring Equipment

## ANMD-MRS23-223 · Nuclear & Fusion Technologies

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

### WHY THIS REPORT

Radiation monitoring equipment is the safety backbone of every nuclear, medical, industrial and security application that handles ionising radiation. Detector technologies — Geiger-Müller, scintillation and semiconductor — span personal dosimeters, area and fixed monitors, and contamination instruments that protect workers, the public and the environment. This decision-grade study sizes the global market three ways — value, unit count and dose-monitoring coverage — across detector type, product type and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

### SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond regulatory compliance, radiation monitoring delivers measurable worker protection, public-health safeguarding and environmental surveillance, while early-detection capability strengthens the safety-and-resilience story.

#### Mapped Sustainable Development Goals:

<b>SDG 3</b> Good Health & Well-being	<b>SDG 9</b> Industry, Innovation & Infrastructure	<b>SDG 7</b> Affordable & Clean Energy
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#### Measurable sustainability outcomes assessed:

- Worker protection and public-health safeguarding
- Environmental surveillance and emergency preparedness
- Instrument end-of-life and calibration-source handling as a material risk
- E-waste and supply security assessed

**Framework alignment:** Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

### WHAT'S INSIDE AT A GLANCE

<b>53</b> Chapters	<b>9</b> Report Parts	<b>7</b> Regions Covered	<b>40+</b> Country Markets
<b>2025–32</b> Forecast Horizon	<b>4</b> Forward Scenarios	<b>25+</b> Companies Profiled	<b>3</b> SDGs Mapped

### REPORT COVERAGE

**Geographic scope:** North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. North America leads on installed base; Europe is a standards anchor; Asia Pacific is the scale engine; other regions assessed on their own merits.

- Dose control, compliance and emergency preparedness
- Geiger-Müller, scintillation and semiconductor detectors
- Personal, area and contamination monitoring
- Instrument end-of-life, calibration and e-waste as risks

## MARKET OVERVIEW

**From periodic checks to continuous protection — where dose control, regulatory reporting and emergency readiness underpin recurring demand hardware sales alone do not capture.**

Radiation monitoring is growing steadily with nuclear new-build, medical isotope expansion and tightening safety regulation. Demand is driven by the nuclear renaissance, healthcare and homeland-security needs across North America, Europe and Asia Pacific. The market is read three ways — value, unit count and dose-monitoring coverage — and forecast under four scenarios, each region reported separately.

- **North America leads on installed base** — the United States and Canada, where nuclear fleets, medical imaging and security screening drive replacement and upgrade demand
- **Europe is a standards anchor** — Germany, France and the United Kingdom, combining strict radiation-protection regimes with a deep instrument manufacturing base
- **Safety and compliance are the differentiator** — dose control, regulatory reporting and emergency readiness underpin recurring demand that one-time hardware sales alone do not capture
- **Detector type and application segment the value** — Geiger-Müller, scintillation and semiconductor detectors across personal, area and contamination monitoring, each with distinct economics

## REGIONAL OUTLOOK

Across seven reporting regions, the report separates leading markets from high-growth and emerging ones — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Country Markets & Drivers
North America	Installed-base leader	United States, Canada — nuclear fleet, medical, security screening
Europe	Standards anchor	Germany, France, United Kingdom — protection regimes, manufacturing
Asia Pacific	Scale engine	China, Japan, South Korea — nuclear build-out, healthcare growth
Latin America	Emerging	Brazil, Argentina — medical imaging, industrial radiography
Africa	Frontier	South Africa, Egypt — medical, mining, research adoption
Middle East	Frontier	UAE, Saudi Arabia — new nuclear, security, healthcare

## KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> <li>• Nuclear new-build and fleet life-extension</li> <li>• Medical isotope and imaging expansion</li> <li>• Tightening radiation-protection regulation</li> <li>• Homeland-security and border screening</li> <li>• Semiconductor-detector technology gains</li> </ul>	<ul style="list-style-type: none"> <li>• Mature segments and price competition</li> <li>• Long replacement cycles in installed base</li> <li>• Calibration, servicing and certification burden</li> <li>• Niche, fragmented application demand</li> <li>• Component and rare-isotope supply constraints</li> </ul>

## SEGMENTATION SNAPSHOT

<b>By Detector Type</b>	Geiger-Müller · scintillation · semiconductor · ionisation chamber
<b>By Product Type</b>	Personal dosimeter · area / fixed monitor · contamination monitor
<b>By Application</b>	Worker dosimetry · area monitoring · contamination · environmental
<b>By End User</b>	Nuclear plants · medical · industrial · security · research
<b>By Business Model</b>	Hardware sale · calibration service · managed monitoring · data
<b>By Scale</b>	Portable · fixed installation · networked fleet

## TECHNOLOGY & APPLICATION FINDINGS

Where the category is differentiating fastest — the technology and application fronts that separate leaders from followers:

- **Worker dosimetry** — nuclear, medical and industrial workers rely on personal dosimeters for occupational dose tracking and compliance
- **Area monitoring** — fixed and portable monitors safeguard facilities, providing real-time dose-rate and contamination alerts
- **Environmental & security** — networked monitors support environmental surveillance, emergency response and radiological border security

## TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

### Part II — Market Intelligence, Sizing, Forecasting and Segmentation

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## COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans dedicated detection specialists, diversified instrument makers and dosimetry-service providers. Deal activity — service contracts, detector acquisitions and security-programme awards — signals a market consolidating around trusted, certified platforms.

### Representative players profiled in the full report:

Mirion Technologies, Inc. · Thermo Fisher Scientific Inc. · Fuji Electric Co., Ltd. · Hitachi, Ltd. · Berthold Technologies GmbH & Co. KG · Ludlum Measurements, Inc. · and 20+ further profiled players.

**Investment intelligence:** venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a conditional investment view.

## KEY QUESTIONS THIS REPORT ANSWERS

- How large is the global radiation monitoring equipment market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- Which technologies and platforms reshape the addressable market and the cost curve?
- Who leads, and where is the competitive and patent white space?
- Is the investment case bankable — and under what conditions?
- How does the category align with the SDGs and disclosure regulation?

## WHY ANMD — THE DIFFERENCE

*Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate and natural-capital intelligence and a decision-ready bankability view in a single architecture.*

- **Triangulated sizing** — every market read three ways so value, volume and the physical-unit views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

## WHO SHOULD BUY THIS REPORT

Nuclear plants, medical, industrial, security and research users, instrument suppliers, investors and policymakers, and strategic corporate planners and decision-makers.

### Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com) · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

### Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.