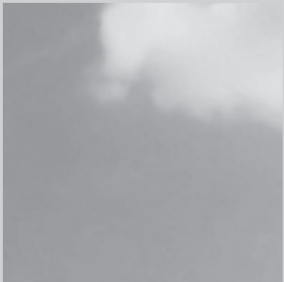
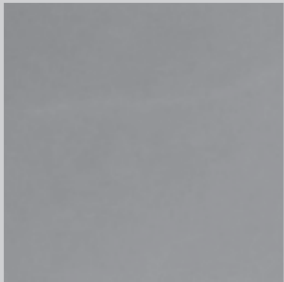
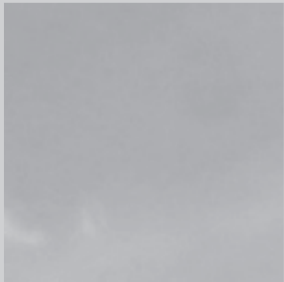
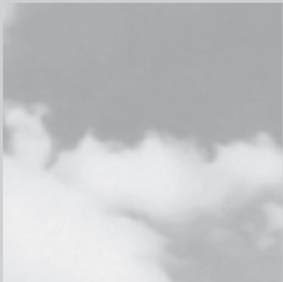




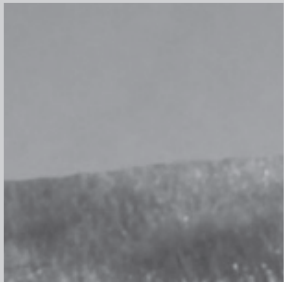
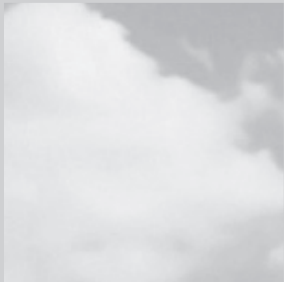
COMPANY PROFILE



DETECTION & MEASUREMENT
OF IONIZING RADIATIONS



RADIOLOGICAL MONITORING
SYSTEMS



ENVIRONMENTAL
MONITORING



HEALTH AND
ENVIRONMENTAL
SAFETY







COMPANY PROFILE

RTS Instruments Srl (RTS) is an expert and qualified company that provides radiation measuring equipment and radiological monitoring systems to nuclear, research and environmental customers worldwide. The company is based in Rome, Italy, and its staff has been working in the field since long time. The products, developed and manufactured by RTS, are exclusive property of the company and include devices and systems for measuring and monitoring all types of radioactive contaminants of air and water as well as radioactive emissions including gamma dose-rate, neutrons and natural radioactivity.

The main customer groups include nuclear power plants and facilities, research centers, civil defense, military organizations, health and environmental institutions.

RTS equipment has been supplied all over the world with satisfied customers and repetitive business indicative of field-proven, advanced, and reliable technologies. RTS uses highly qualified subcontractors for basic manufacturing activities and for overseas site assistance, while directly controls the key phases of production, tests and project management. Large projects are implemented with highly qualified partners.



MISSION

With environmental and security questions in the various fields becoming ever more pressing, the issue of safe nuclear power, safe decommissioning, safe waste storage, safe transportation, safe use of radioactive sources, is actually one of the key tasks. Radiation Monitoring, a very important means from the environmental as well as from the safety and security points of view, involves new and demanding challenges for everyone in this sector. RTS is well placed to meet these challenges. Comprehensive product lines, modern instruments, innovative R&D operations, and an increasing worldwide marketing with customer support, are some of the key factors. This also ensures that RTS will be able to maintain its company goal of providing customers with sound products and systems, reliable devices, service support and long-time spares, expert consulting services and, above all, the safety, security and efficiency of its operations.

CERTIFICATION

RTS takes care of continuous development activity is focused on technology and quality tasks, also conforming to ISO, ANSI and NQA standards.

RTS is a QA certified company for ISO 9001:2015 and ISO 45001:2018 (EA19, EA33 - Design and production of systems for measuring and monitoring radiation including after sales assistance).



PRODUCT LINES AND TECHNOLOGIES

AREAS

RTS main activities are focused in the following areas:

- Systems and Instruments for monitoring α , β , γ and neutron radiation in air and gases, water/ liquids and soils or fixed materials, to protect workers and population.
- Radiological surveillance of territories (atmosphere, water bodies, buildings, etc.) and plants (site boundaries, indoor areas, plant elements, effluents, etc.).
- Applications concerning stand-alone operation as well as centralized systems and networks.

Proprietary technologies

- Methods for low and wide range gamma monitoring with Geiger Muller tubes, Ion Chambers, Silicon / Solid-state Detectors and Scintillation detectors
- Radiation Detectors active management
- Nuclear electronics for pulse management, shaping, counting and analysis
- Single-channel and Multi-channel techniques
- Air flow-rate measurement and regulation
- Radon/Thoron measurement and compensation
- Automatic movement/replacing techniques for filters, cartridges and samples
- Automatic gas and water sampling
- Isokinetic sampling from ducts/stacks
- Special shields and measurement chambers
- Dust measuring techniques for both radioactivity and mass
- SW simulated monitoring equipment and modeling
- Algorithms for alpha, beta and gamma monitoring
- Central Software and Data communication

MAIN PRODUCTS

AEROSOL MONITORS

Aerosol Monitors with single-multiple-tape filter:

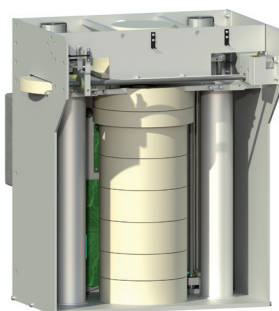
- RAM Series
- CAM/CCAM Series



RAM - 31



CCAM - 12



RIM - 14



CCAM - TF STT

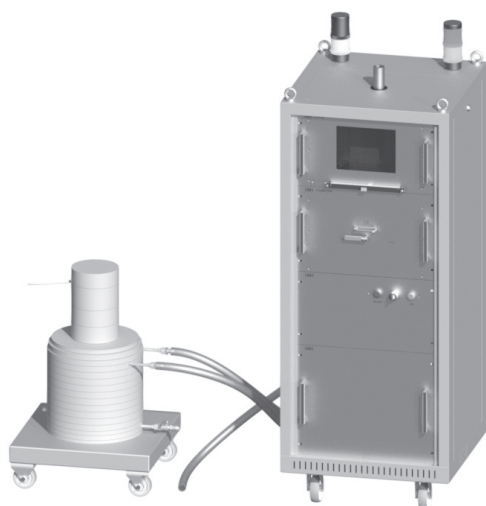
IODINE MONITORS

Iodine Monitors with single-multiple cartridge; fixed and portable; single and dual monitoring units:

- RIM Series
- CCIM Series

GAS MONITORS

- Gas Monitors
- RGM Series

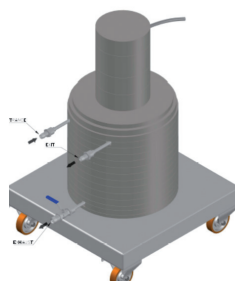


RGM - 02

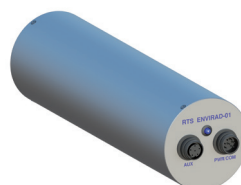
LIQUID MONITORS

Water and Liquid Monitors:

- RWM Series
- SMU Series



RWM - 02



ENVIRAD - 01

GAMMA MONITORS

Area, Process and Environmental

Smart Gamma Monitors:

- Local Control Units
- LCU Series

Smart Monitors:

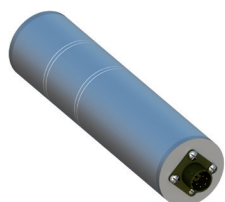
- SMU Series
- ENVIRAD Series



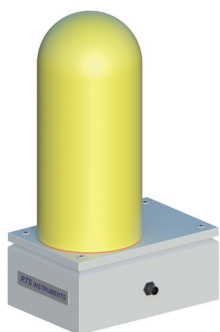
LCU - 05

DETECTOR & PROBES

- HNQ Series
- GAMS Series
- SDA/DDA Series
- MAG (IC based) Series
- Special Detectors



HNQ - 24



MAG - 02

KEY COMPONENTS

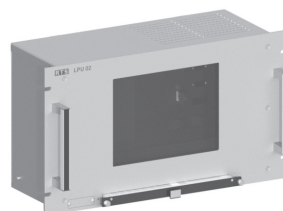
- Electronic Assemblies and (Preamplifiers, Amplifiers, Display Units, Alarm Units, Analog/Digital I/O)
- Monitoring Processors & MCA/SCA Units
- Flow Control Units
- Moving Devices for Filters, Cartridges & Samples
- Stack/Duct Probes

SOFTWARE

- Central Application Software
- CSW-UCG Series
- Monitoring SW & FW

LOCAL & CENTRAL PROCESSING

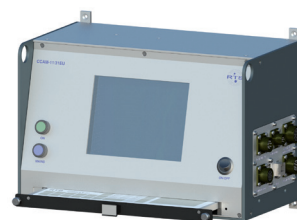
- Local Processing Unit
- LPU Series
- Data Concentrators
- Dedicated Workstation
- Central Servers



LPU - 02



LPU - 01



LOW BACKGROUND

- Low Background Radiometers
- FMD Series

MONITORING SYSTEMS

- Fixed/Distributed Radiation monitoring stations and systems
- Mobile Radiological Laboratories





Key components based on RTS technology

The SDA/DDA series of radiation probes are based on scintillation detectors, with or without a second different detector, developed and manufactured by RTS. This family is employed in several applications when the use of a stabilized scintillator is needed. These applications include the RADNET stations of the US EPA, the RIM series of Iodine Monitors, the Gamma head (GAM-01) for the RAM-01NA or RAM-31NA Aerosol Monitors, the RGM and RWM/UWM series of gas and water monitoring units, some unit of the SMU series of smart Gamma Monitors.

The MAB series includes Monitoring Processors with up to 2048 channels MCA functions developed and produced by RTS. This type of device is present in all the RTS products using silicon detectors, scintillation detectors, PIN diode detectors, etc.. This means in all Aerosol and Iodine Monitors, all Gas and Water Monitors, some Gamma Monitors. In special applications a Dual MAB Unit is used with one unit for Alpha/Beta and the other one for Gamma. MAB-01 and MAB-02 are Monitoring Processor for Gamma dose-rate monitoring. MAB-05 is the filter/cartridge changing processor for RAM-31 and RIM-14.

The LPU-02 is a Local Processing Unit belonging to the LPU/LCU series of local display and controlling units for radiation monitoring, developed and produced by RTS.

The LPU-02 is the 'core' of the RADNET stations, of all RAM Aerosol Monitors, all RIM Iodine Monitors, all RGM and RWM Gas and Water Monitors. In almost all the other RTS Monitors, components of this family (LPU-01, LPU-05, MiniLPU, LCU-05, etc.) are in any case employed.

The NFC flow controllers have been developed to ensure actively regulated constant or isokinetic air flow-rate for aerosol sampling in the environment or from ducts and stacks.

In all the projects included in the reference list, some or all of the above mentioned units are employed. In most of the projects listed below a networking is provided with one or more communication links, one or more central computers and related SW packages. Software and Firmware development and qualification is a very important RTS capability.

SHORT OVERVIEW OF PAST EXPERIENCE

- Radiation Monitoring Systems and Electronic Dosimetry Systems for the former ENEL Nuclear Power Plants (NPPs) in Italy.
- Radiation Monitoring Systems for the main Research Centers in Italy.
- Air Pollution and Radon analyses for urban areas and Environmental Impact Studies for large programmed structures.
- Research & Development Contracts included in CNR and ENEA National Programs, concerning new systems and stations for environmental and radiation monitoring.
- Mobile and Fixed Monitoring and Control Stations for Civil Defense.
- Radiation Monitoring Systems for the former RBMK and VVER NPPs.

Beside the above overview some recent results in America, Asia and Europe may be considered significant: among them it is to be noted that RTS equipment has been selected by USEPA for implementing the National Air Radiation Monitoring Network (RADNET) with 180 stations over the whole US territory and some central control stations (RTS supply value over 2.5 million dollars).

40 YEARS OF TECHNOLOGY



MAIN REFERENCES

RECENT LIST OF RADIATION MONITORING SYSTEMS FOR ENVIRONMENTAL & PLANT APPLICATION		
CLIENT	ACTIVITY	PERIOD
Gulf Advanced Control Systems GACS (Saudi Arabia)	Supply of RADON/SEISMIC MONITORING SYSTEM, part of NEOM Climate & Environmental Quality Monitoring Stations with Installation, and Data Management Support Project. The system includes: n. 1 RTS RAM-TF Multifunction Air Monitor, dedicated to the on-line detection and quantification of alpha/beta/gamma emitting radioactive aerosols present in the environmental air and to the continuous measurement of Radon (Rn-222) / Thoron (Rn-220) and related Uranium/Thorium chains, also equipped with: RTS AIR SAMPLING PROBE and circuit RTS ENVIRAD-01 GDR, External Gamma Dose-rate Smart Probe RTS WTS-19 Weather Substation SEISMIC SET with a couple of seismic sensors (Seismometer and Accelerometer).	2025
Sogin SpA (Italy)	Supply and installation of the required devices for the updating of the instrumentation of the radiological environmental monitoring network huts at the Garigliano Power Station. The system includes: n. 4 RTS RAM-TF-GD (Sampling and measurement stations), Remote management system of measured data and sampling station and photovoltaic Power systems.	2025
RIVM, National Institute for Public Health and the Environment (The Netherlands)	Supply and installation of radioactivity monitors for the Dutch National Radioactivity Monitoring Network (NMR): supply and installation of n. 9 outdoor $\alpha\beta\gamma$ Aerosol Monitoring stations RAM-TFCB and n.1 Reference station with the nuclide specific aerosol monitor RAM-TFGE, also including Front-End Central Control & Management Station.	2022-2025
IAEA (for Lithuania)	Supply and installation of n. 1 Gaseous Iodine Monitor RTS RIM-01 Single cartridge – Manual changing.	2025
IAEA (for Sri Lanka)	Supply and installation of the RTS RGMS (Remote Gamma Monitoring Station). The System includes one (1) Network Monitoring Centre NMC, with associated one (1) IT package for provision of data to IRMIS, and a set of six (6) Remote Gamma Monitoring Stations RGMSs (5 fixed and 1 mobile).	2025
Sogin SpA (Italy)	Maintenance contract of all RTS Monitoring Systems installed at EUREX Plant (Saluggia). This also includes one RAM-31 Alpha/Beta Aerosol Monitor with automatic filter changing and several CCAM-11 Alpha Beta Aerosol Monitors single filters manual changing, apart other Gamma Monitoring Systems.	2017-2025

RECENT LIST OF RADIATION MONITORING SYSTEMS FOR ENVIRONMENTAL & PLANT APPLICATION

CLIENT	ACTIVITY	PERIOD
EPA, Environmental Protection Agency (Ireland)	Supply and maintenance of aerosol monitors and aerosol samplers for radioactive aerosols for National Radiation Monitoring Network of Ireland: supply and installation of n. 12 Outdoor Monitoring Stations with RTS Alpha/Beta Aerosol Monitors RAM-TFD tape filter automatic changing for long time autonomy with prompt and delayed measurements and n. 12 Outdoor Sampling Stations with RTS Smart Continuous Aerosol Samplers SCAS-12, including Front-End Central HW/SW.	2020-2024
Samina/Murad Ltd for Government of Pakistan	Supply of n.1 RTS RAM-TF (for Stack Monitoring) with spares and consumables; supply of n. 1 Alpha Beta Particulate Monitors RTS CCAM – TFSTT Trolley mounted with Shrouded Probe -Single Nozzle- for Stack Sampling; supply of several spare parts and consumables.	2024
IAEA (for Malta)	Supply and installation of Gaseous Iodine Monitor RTS RIM-01 Single cartridge – Manual changing.	2023
ENVIRONMENT & RESOURCES AUTHORITY -ERA (Malta)	Upgrade and maintenance of n. 3 Radiation Monitoring Stations. Since 2013, RTS has provided of Environmental Radiation Monitoring Network composed by 3 Multifunction Air Monitoring Stations (3 x Outdoor Shelters, 3 x RAM-31NA Alpha/Beta/Gamma Aerosol Monitors, 3 x Gamma Smart Probes SMU-01) and a HW/SW Control & Coordination Centre. Since then RTS has provided and is actually providing spare parts and continuous assistance for repair as well as for periodical calibration.	2023
Ansaldo Nucleare for SOGIN (ITEA) (Italy)	Supply of n.2 Air Contamination Monitoring Systems, both including Central Front-End HW/SW, one including six CCAM-TF Long Autonomy Alpha/Beta Aerosol Monitors tape filter automatic changing for rooms and pipes, the other including one RAM-TF Alpha/Beta Long Autonomy Aerosol Monitor tape filter automatic changing with stack sampling complete management for stack monitoring as per the applicable IEC/ISO/ANSI standards.	2023
Sogin SpA (Italy)	Maintenance continuous contract, jointly with Else Nuclear, of all RTS Monitoring Systems installed at Trino NPP, Garigliano NPP, Latina NPP and Caorso NPP, all in decommissioning. This includes 21 CCAM-TFSTT Long Autonomy Alpha/Beta Aerosol Monitors tape filter automatic changing, delivered in 2018, apart other Air, Gamma & Safety Monitoring Systems delivered previously. Four preventive interventions per year plus calls.	2021-ongoing

RTS INSTRUMENTS SRL
Via Adriano Olivetti 24/26 (Tecnopolo Tiburtino)
001131 Roma - Italy
+39 06 22420490 Mobile +39 349 6358412
E-mail: rtsinfo@rtsinstruments.com
IVA/VAT: IT05274261006
www.rtsinstruments.com