

# Eco-Friendly Radiation Detector (EFRD)

Satrec Initiative (SI) offers its Eco-Friendly Radiation Detector (EFRD), a compact environmental radiation monitoring system. Derived from its satellite system development experience, the EFRD has two unique functions: discrimination of artificial radiation from background sources and temperature stabilization of the acquired spectrum. The EFRD system can be installed in an open environment without any additional shelter or air-conditioning. SI has installed EFRD systems in China, Thailand, Malaysia, Qatar and South Korea for a diverse range of applications including powerplant and oil processing/mining facility monitoring.

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# Eco-Friendly Radiation Detector



[www.satreci-us.com](http://www.satreci-us.com)



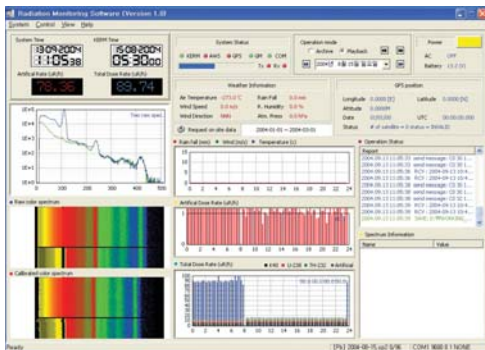
The Eco-Friendly Radiation Detector (EFRD) acquires the dose-rate of environmental radiation through the analysis of the gamma-ray spectrum with NaI(Tl) and G-M detectors. The product's capabilities include the discrimination of artificial radiation from the natural background and the temperature-stabilization of the acquired spectrum. The product has been utilized in multiple countries for security-related applications include homeland security, border monitoring, and power plant monitoring.

Features of the EFRD include the following:

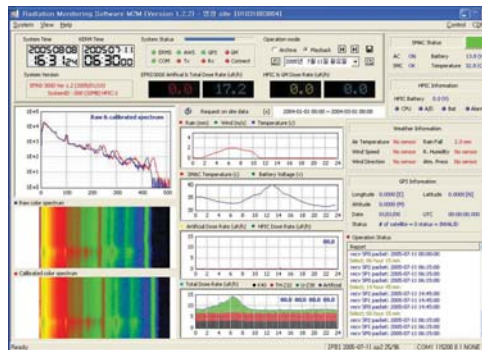
- 3" X 3" NaI(Tl) detector for spectrum acquisition and radionuclide identification
- Autonomous temperature stabilization
- Built-in UPS and solid-state memory
- Prepared against power outage (adjustable for up to over 20 hours)
- No loss of collected data against communication interruption (adjustable for up to 256 days)
- Wireless telecommunication (GSM or CDMA or any)
- RaMon SW (Bundle OS for single point control)
- Built-in LCD display for on-site inspection (Optional)
- Built-in GM counter in case of high-dose rate (Optional)
- Weather sensors for reliable data interpretation (Optional)
- RaMon SW for multi-point control (Optional)



### Identification of Radiation Source



### Dose Rate Change during Rainfall



Based in Daejeon, Republic of Korea (South Korea), Satrec Initiative (SI) is the one of the world's leading companies in high performance Earth observation small satellite solutions. SI was founded in 1999 by engineers who had developed the first South Korean satellite and a series of advanced small satellites at the Korean Advanced Institute of Science and Technology (KAIST). SI has a successful track record serving more than 20 global customers in the Middle East, Asia and Europe. The company's portfolio of high quality satellite solutions includes integrated turnkey satellite systems, satellite components, platforms, electro-optical instruments, ground stations, satellite operations, image processing and image applications, and spin-off technologies. The company also offers training and consultancy services. SI is publicly listed on the South Korean KOSDAQ exchange.



Based in Washington, D.C., SpaceWorks Commercial, a division of SpaceWorks Engineering, Inc. (SEI), advances innovative ideas, solutions, and partnerships aimed at maturing near and far term commercial and international space ventures. The firm works with entrepreneurial ventures to enhance existing or to facilitate new business opportunities as well providing consulting and advocacy services to help bring space projects to maturation. The division's capabilities include: strategic and quantitative-based insight, technical aerospace systems analysis and design services (utilizing its sister division, SpaceWorks Engineering), financial engineering, and space media. SEI is privately held. SpaceWorks Commercial is an official representative of Satrec Initiative's product lines in the United States.



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