

PRODUCT BRIEF

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Next-Generation Electronic Radon Monitor

The new RAD8 reimagines scientificgrade electronic radon monitors with complete top-to-bottom upgrades in comparison to the venerable RAD7, the industry-standard instrument for applications including oceanography, hydrogeology, geology, health physics, environmental remediation, radon testing, metrology, and more.

With its cutting-edge features and optimizations for outdoor use, RAD8 revolutionizes radon/thoron monitoring in the field and the lab.



RAD8 Specifications Overview	
Principle of Operation	Electrostatic collection with silicon detector and alpha spectrometry
Analysis Modes	 Rapid: Fast response and rapid recovery radon and thoron measurement Precise: High sensitivity radon measurement Auto: Automatic switch from Rapid to Precise after three hours
Radon Sensitivity	Precise Analysis Mode: 0.82 cpm/(pCi/L), 0.022 cpm/(Bq/m³) Rapid Analysis Mode: 0.40 cpm/(pCi/L), 0.011 cpm/(Bq/m³)
Measurement Range	0 - 67,500 pCi/L (0 - 2,500,000 Bq/m³)
Intrinsic Background	0.0015 ± 0.0004 pCi/L (0.06 ± 0.02 Bq/m³) for the life of the instrument
Built-In Air Pump	0.6 L/min flow rate with bypass option for external pumping or flows
Sensors	3 temperature sensors, RH sensor, barometer, accelerometer
Control Panel	IPS full color touchscreen with wide viewing angle, and physical buttons
Connectivity	Wi-Fi, 2 USB ports, COM port, Accessory port
Data Storage	16 GB storage for millions of records with full sensor and spectrum data
Power Input and Battery	11-15V DC input, Rechargeable lithium ion battery for 3 days of operation
Enclosure	Lockable, IP67 (when open or closed) MIL-SPEC certified
Weight and Dimensions	7.4 pounds (3.35 kg) 12.5" x 10.1" x 6" (31.8 x 25.7 x 15.2 cm)

RAD8 Summary of Benefits

An environment-proof, super portable design with long battery life and IP67 water/dust resistance **even when the case is open** means you can use RAD8 conveniently and worry-free whether you work near water, on rugged terrain, in a dusty mine, or in the gentle confines of a lab.

In keeping with the transparent data approach pioneered by RAD7, there is no mystery to how RAD8 measurements are calculated - it's the opposite of a "black box". RAD8 provides unparalleled access to spectrometry data (including raw sensor counts) so users can analyze and verify measurements in detail without doubting or questioning "what's going on inside?" RAD8 is fully compatible with Durridge Capture® software to provide our customers the ultimate tool for analyzing and understanding their data.

Speaking of data, RAD8 comes with more memory than can be used in a lifetime, so there is never any worry about running out of storage. Data quality is also vastly improved through technology advances that significantly improve sensitivity and resolution.

Thanks to these innovations and alpha spectrometry enabled by the best available silicon detectors, data collected with RAD8 has greater statistical certainty and higher resolution, making your analysis much more accurate and insightful.

A blazing fast microprocessor and sunlight-readable color touchscreen with wide viewing angle bring RAD8's state-of-the-art user interface to life with easy navigation and critical information available at your fingertips. Advanced menu options display radon/thoron progeny spectra, test status information, and graphs of radon, thoron, temperature, humidity, and other information, providing a wealth of data in great detail, even as a test is running. See the menu options below.

RAD8 features built-in Wi-Fi and two USB ports, plus COM and accessory ports for fast and easy connections to computers, or directly to the internet for remote control/monitoring or cloud storage of data files. In addition, RAD8 is compatible with all Durridge accessories including RAD AQUA, RAD H₂O, Soil Gas Probes, DRYSTIK, and others.

Advanced Menu Options

Real-time information about the current radon test in progress:



Alpha spectrometry measurements are used to determine radon and thoron concentrations:









