

Consumer Digital Radon Monitors and Their Uses

Consumer digital radon monitors (CDRM's) are a class of digital-readout radon monitors designed for residential, non-professional use. These devices have not undergone the necessary evaluation by the National Radon Proficiency Program (NRPP, [<https://nrpp.info/>]) to become listed as a professional-grade continuous radon monitor (CRM) [<https://nrpp.info/devices/approved-devices/>].

As these devices have not been evaluated for their accuracy and precision by an U.S. Environmental Protection Agency (EPA)-recognized evaluation program, it is difficult to provide guidance related to 1) any specific device listed below and 2) their functionality.

The Kansas Radon Program (KRP) [<https://kansasradonprogram.org/home>], the National Radon Program Services NRPS) [<https://sosradon.org/>], the U.S. EPA [<https://www.epa.gov/radon>] and the American Association of Radon Scientists and Technologists (AARST) [<http://aarst-nrpp.com/wp/>] all recommend confirming any elevated radon results from a CDRM with an NRPP-approved radon measurement device [<https://nrpp.info/devices/approved-devices/>].

CDRM's and CRM's Compared

A professional-grade continuous radon monitor (CRM) is a digital radon monitor that has been approved by NRPP for use in professional settings, such as during radon testing conducted during real estate purchases. CRM devices have 1) passed a NRPP evaluation process conducted per the ANSI/AARST MS-PC standard Performance Specifications for Instrumentation Systems Designed to Measure Radon Gas in Air [<https://standards.aarst.org/MS-PC-2015/index.html>], or 2) a previous EPA evaluation process. Professional CRM's 1) measure the radon on AT LEAST an hourly basis and report hour-by-hour sample results and 2) some may report both an overall radon average for the sampling period and an EPA protocol average for the sampling period (disregarding the first four hours of deployment).

Consumer digital radon monitors (CDRM's) vary in their reporting frequency and the data presented to the user. Some CDRM devices only report a single average radon value after some period of exposure (generally between 2-7 days before reporting a radon value). Some CDRM devices will provide multiple average radon reported values, such as a 7-day average and a 'long-term' average. Some CDRM devices will provide hourly sampling data as well as the average for any given sampling period. However, as stated above, these devices HAVE NOT been evaluated for their precision and accuracy, and it is recommended that any elevated radon results reported by a CDRM be confirmed with a professional-grade radon measurement device, such as an activated charcoal (AC) device from a NRPP-accredited laboratory or other device from the approved list.

CDRM's and Long-Term Accuracy

The standard in the United States (U.S.) for professional-grade CRM's is for CRM's to be calibrated every 365 days (annually) by either the manufacturer or an NRPP-certified/state-certified secondary radon chamber. The function of the calibration is to ensure that the results from the CRM's when used in professional settings are as accurate as possible.

CDRM devices, as non-NRPP approved devices, do not have specific calibration requirements. It is recommended that CDRM owners follow the calibration guidance provided by the manufacturer. If no specific calibration guidance for a device is available, it is recommended to occasionally check the accuracy of the CDRM against an NRPP-approved device (such as an activated charcoal device).

The listing of CDRM's that follows are those for which we could identify a manufacturer's web site. There may be other CDRM's we have not listed which are available. Prices were taken from online ordering sites June 2021. We do not endorse any CDRM on this list.

CDRM Devices

Single-Result CDRM Devices

Airthings Corentium Home
<https://www.airthings.com/home>
Cost: \$179.99



SafetySiren Pro Series 4
<https://www.familyproductsinc.com/radon-detector>
Cost: \$219.99



SunRadon Luft
<https://sunradon.com/products/luft>
\$249

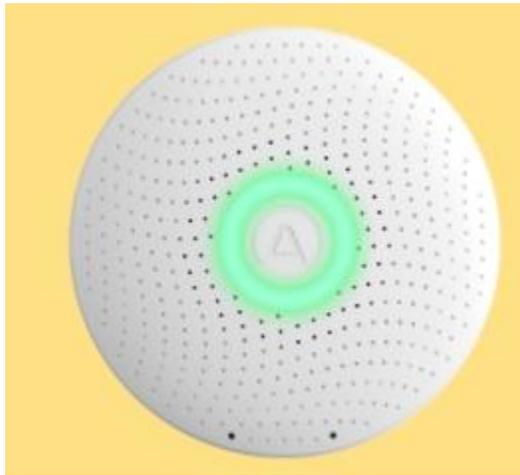


CDRM Devices with Hourly and Sample Period Average Reporting

Airthings Wave Plus

<https://www.airthings.com/wave-plus>

\$229.99



Airthings Wave Mini

<https://www.airthings.com/wave-mini>

\$79.99



Ecosense EcoQube

<https://ecosense.io/pages/ecoqube>

\$182.99



Ecosense Radon Eye

<https://ecosense.io/pages/radoneye>

\$172



Pylon Electronics Radon Scout Home

Pylon Electronics Radon Scout

Pylon Electronics Radon Scout PLUS

<https://pylonelectronics-radon.com/residential-detectors/>

Pricing by contact only – firm located in Canada



Quarta Radon Monitor

<https://quartarad.com/product-category/radon-monitor/>

\$293.95

