

PRODUCT DATASHEET

CHESTER Radon

Continuous, cloud-connected radon monitoring — the long-term data your client needs for compliance, without manual testing visits.

REFERENCE NUMBER HPD.260706.15-R1 DATE July 6, 2026

**20–100 000**Bq/m³ measuring range**approx. 12 yrs**

detector lifespan

IP67

electronics rating

Why integrators pick it

■ High-precision radon sensing

A semiconductor photodetector-based probe measures Rn-222 concentration from 20 to 100 000 Bq/m³, with a detector lifespan of approximately 12 years — a permanent installation, not a consumable.

■ Compliance-grade trending

Records hourly, daily, and long-term average radon levels — the evidence base for regulatory reporting under the EU BSS Directive and national action plans, and for remediation validation.

■ Multi-zone from one device

Up to 32 probes connect to a single CHESTER device over an RS-485 bus — basements, ground-floor workspaces, and multiple rooms monitored through one connectivity point.

■ Combined environmental data

Also measures temperature, humidity, and atmospheric pressure — the factors that influence radon levels — and transmits everything to the cloud via NB-IoT, LTE-M, or LoRaWAN. No local data collection visits needed.

Where it fits

CHESTER Radon replaces periodic spot tests with continuous evidence: compliance monitoring in schools, workplaces, and residential buildings; post-remediation verification that proves a mitigation system performs as designed; new-construction assessment before handover; and workplace health and safety in underground facilities and basements — with alerts if concentrations exceed action levels.



From detector chamber to your client's compliance report — radon trends and environmental context in one automated data feed.

The device is powered from an external DC supply and keeps running through outages on its backup Li-Ion battery — for up to a few weeks — so long-term averages stay unbroken. Local commissioning and firmware updates run over Bluetooth Low Energy from a phone with HARDWARIO Manager; fleets are managed remotely through HARDWARIO Cloud with data handover via REST API or HTTP callbacks to any platform you run.

Technical specification

MEASUREMENT

Measured value	Radon (Rn-222) concentration
Scope of measurement	20 to 100 000 Bq/m ³
Radon probe	Semiconductor photodetector, connected via RS-485 bus
Probes per device	Up to 32
Detector lifespan	Approx. 12 years
Chamber relative humidity	± 2 % (from 10 to 90 %)
Trending	Hourly, daily, and long-term average radon levels
Environmental parameters	Temperature, humidity, atmospheric pressure

CONNECTIVITY

Cellular	LTE-M / NB-IoT
LoRaWAN	Public and private LoRaWAN networks
Local access	Bluetooth Low Energy — configuration and firmware updates via HARDWARIO Manager

POWER

External power	DC 6 V to 28 V
Backup battery	Rechargeable Li-Ion — up to a few weeks of operation

ENVIRONMENT & MECHANICAL

Operating temperature	–20 to +60 °C
Storage temperature	–30 to +70 °C
Ingress protection	IP67 (electronics)
Enclosure	130 × 175 × 45 mm
Radon probe dimensions	Ø 80 × 175 mm

Ordering information

CHESTER Radon is configured to order. The number of probes (up to 32 per device), probe placement, cabling, and connectivity are scoped per building — tell us about the site and we will specify the exact bill of materials for your project, from a single-room installation to a multi-zone deployment across floors.

COMPLIANCE**CE****UKCA**

CHESTER Radon conforms to the Radio Equipment Directive 2014/53/EU — including the EN 18031-1 cybersecurity requirements mandatory since August 2025 — and the RoHS Directive 2011/65/EU, and to the equivalent UK statutory requirements. The built-in radio modules additionally carry FCC certifications for the US market.

Declaration of Conformity: HDC.260706.14

Scope a radon monitoring pilot

A CHESTER Radon evaluation setup delivers continuous radon data from your client's building within days. Tell us about the site — the number of zones, the building type, and the connectivity available — and we will configure a pilot that matches it, including integration support for your first deployment.

- [Explore CHESTER in the HARDWARIO store](#)
- [Learn more about the CHESTER platform](#)

ABOUT HARDWARIO

HARDWARIO a.s. designs and manufactures industrial IoT devices in Liberec, Czech Republic. Founded in 2016 and listed on the Prague Stock Exchange, the company does more than 80 % of its business through its partners.

HARDWARIO a.s.

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