

# RSN 5110

## Remote Sensor Nodes for CBRN Monitoring

### Multi-Functional CBRN Solutions



*The RSN 5110 CBRN Detector*

**The RSN 5110** is a compact, light-weight, portable CBRN monitoring detector that uses multiple technologies to monitor for the presence of chemical, biological, radiological, and nuclear threats. It integrates detection technologies from the world's leading detector suppliers to create a total CBRN monitoring solution. A modular design approach allows significant customizing of features for customers with differing needs.

The individual CBRN detectors are internally bound together with custom embedded software. The overall device is compact and can be easily mounted in a vehicle or deployed as a man-portable remote field monitor. Field data can be stored internally or wirelessly transmitted in real-time to a central location. At that location, RI's ASAP Sentry™ monitoring software can handle inputs from up to 62 remotely placed 5110 devices. Each can be interrogated from a distance of up to 2 km.

The RSN 5110 CBRN system is a flexible design and can be configured to include only those threats the customer wants to detect, for example, only chemical and biological, or only biological and radiological.

The RSN 5110 is ideal for CBRN protection of internal facilities such as sports arenas, large buildings, and subways. It is designed to function over a wide range of environmental conditions, and can also be used to protect outdoor sports stadiums, military bases, airports, and other large-scale outdoor facilities.

### KEY FEATURES

- Light-weight
- Compact
- Portable
- Configurable design
- Networkable

### MONITORS AND DETECTS

- Biological threats
- Chemical warfare
- Toxic industrial chemicals
- Flammable explosive gases
- Nuclear threats

### APPLICATION AREAS

- Indoor or outdoor use
- Sports stadiums & arenas
- Subways
- Military bases
- Airports

**RSN 5110 General Specifications<sup>1</sup>**

Component/Feature Options	Function
Air sampling rate	2.2 liters/minute, typ.
Chemical warfare agent detector <sup>2</sup>	Identification of chemical warfare or toxic industrial gases using IMS technology. Several optional IMS approaches available.
Toxic industrial chemical detector	IMS or 6-channel electrochemical gas detector array: large list of TIC options
Combustible gases	Pellistor sensor, 0 to 100% Lower Explosive Limit range
Bioaerosol detector <sup>2</sup>	Detects sudden changes in biological aerosols. Detection limit is 10-25 bio-particles per liter of air at a 90% confidence level.
Radiation detector	Sensitive gamma ray monitor employing both a CsI (TI) scintillator and GM tube. Detection down to 0.01uSv/hr. Maximum level = 1.0 Sv/Hr. Gamma photon range is 0.05-3.0 MeV.
Sensor Data fusion	Embedded industrial process control computer collects and stores sensor data using ASAP Sentry™ software
Digital communication	RS-232, Ethernet
Body size	35.8 cm W x 25.0 cm H x 17.2 cm D
Weight	Without battery: 7.9 kg    With battery: 8.9 kg
Operating temperature range	-30°C to 60°C
Operating time	8-24 hours on rechargeable battery; continuous operation if vehicle or mains power is available.
Consumables	None or replacement of IMS cartridge every 150-200 hours, depending on chemical warfare agent detector used.
Wireless capability	Embedded wireless access point; TCP/IP protocol, 2.4 MHz ISM band with 2 km range.
Location determination	GPS module
<i>Research International reserves the right to change specifications without prior notice.</i>	

- (1) Most of the detection/identification features and capabilities listed in this Table are optional. The features actually incorporated are determined through discussions with the customer.
- (2) May be export controlled.

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