



# RPC-1000

## Radiation Process Controller

The RPC-1000 is a modern detection processing unit that has been designed to work with a variety of radiation detectors. To date, the primary application of the RPC-1000 has been to interface with the radial Beta/Gamma particulate detector head to ensure continuous airborne radioactivity concentrations are maintained at safe levels (DAC, DAC-hr, etc.) Future development will allow for additional detector heads to be used with the system.

### VALUE PROPOSITION

#### DETECTOR VERSATILITY

- Backward Compatibility with Thermo Scientific™ AMS-4 Radial Heads
  - Allows maximum use of existing instrument inventory
  - Easy 'plug and play' legacy Thermo Scientific™ AMS-4 Radial Head with new RPC-1000
- Minimal Training and Operating Procedural Changes required; can use existing AMS-4 Procedures in most cases
- Promotes ALARA Dose Savings; Real-Time Alarm Capability allows for personnel to safely work without respiratory protection
  - Minimizes time in work area, resulting in reduced external dose and minimized risk for internal radionuclide uptakes

#### SOFTWARE CAPABILITY

- Addition of large area 7" touchscreen display directly reduces risk of configuration error and erroneous false alarms
- Turn-key wireless interface allows for easy integration to legacy telemetry systems (i.e. Mirion, BHI, etc.)
- Streamlined Calibration Process results in significant time savings



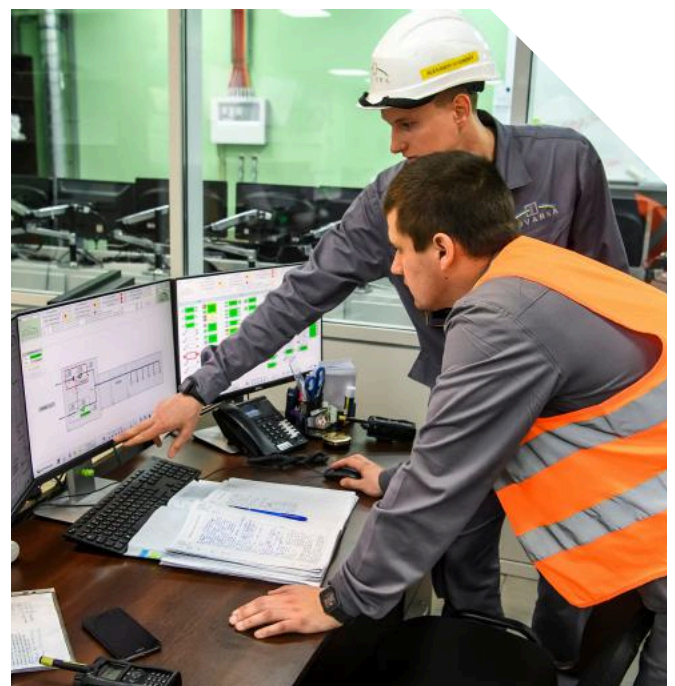
## USER APPLICATIONS

Real-time Continuous Air Monitor (CAM);  
Ensure worker breathing zone is below  
radioactive airborne contamination levels

- Job coverage monitoring  
(i.e. outage support, reactor cavity decon,  
general area deconning, rad waste  
activities, etc.)
- Permanent or fixed monitor location  
(i.e. effluent pathways, etc.)

### Emergency Plan Response

- Command and control center monitoring  
(EOF, TSC, etc.)
- Emergency response vehicle; ensure  
response personnel breathing zones are  
below airborne respiratory



**KEY FEATURES**

- Full backward compatibility with Thermo Scientific™ AMS-4 Radial Detector; Plug and Play legacy head functionality
- Compatibility with Charthouse SMART Radial Detector Head;
  - Use of SMART Head provides inter-operability (hot swap capability) between detector heads for easy in-field detector head replacement
- Large 7" Touch Screen Display
  - High visibility display that provides monitor data/readings, alarm parameters, and system configuration parameters
- Highly visible alarm strobe and loud alarm
- Additional display option for gamma area monitoring (mR/hr readout)
- Integrated pump control switch; allows for direct power supply for vacuum pump
- Integrated wireless connectivity
  - 900 MHz and Wi-Fi options
  - compatibility with 3rd Party remote monitoring systems (i.e. Mirion and BHI/Bartlett, etc.)
- Wireless encryption ensures secure data transmission

**PRODUCT INFORMATION**

<b>RPC-1000</b>	CDM74000
<b>Radial Head</b>	CDM91042
<b>Vacuum Pump</b>	CDM91040
<b>AMS-4 SMART Head Upgrade Kit</b>	CDM91015



**PRODUCT SPECIFICATIONS**

POWER REQUIREMENTS	<b>AC Power</b>	120-240 VAC
	<b>Dimensions (HxWxL)</b>	32 x 28 x 23 cm
GENERAL	<b>Weight</b>	5 lbs
	<b>Operating Temperature</b>	-20°C to 40°C
DISPLAY	<b>Type</b>	7" LCD touchscreen
	<b>USB</b>	USB configuration port
	<b>DE-9</b>	RS-232/RS-485
EXTERNAL CONNECTIONS	<b>RJ-45</b>	Ethernet
	<b>Control of external devices</b>	4-12mA relay signal, 3-Internal Contacts (Dry or Live)
	<b>Analog Output</b>	4-20mA/0-5V
	<b>Optional Radios can be ordered</b>	None Wi-Fi (worldwide) 900MHz 1W (USA) 900MHz 250mW (USA) 2.4 GHz (CE)
ALARMS	<b>Dual Alarm Set Points</b>	Low-warning, High-Alarm
	<b>Dual Alarm Indications</b>	85 dB (A) siren and high intensity LED strobe
MODULAR DESIGN	<b>Add or remove features as needed</b>	

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