

SCENTROID ^{TR10} WARDEN

MULTI-THREAT DETECTION PLATFORM



PORTABLE MULTI-THREAT DETECTION PLATFORM

DESIGNED, BUILT, & SUPPORTED IN CANADA

The TR10 Warden is a universal multi-threat detection platform engineered for rapid deployment in hazardous and CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) operational environments. This reliable, lightweight solution provides critical situational awareness for industrial safety and emergency response teams through high-precision integrated gas and radiation monitoring.



» OPERATIONAL DEPLOYMENT MODES



PORTABLE MODE

Utilizes an integrated heavy-duty padded shoulder strap to facilitate hands-free mobile operations during active surveys, leak detection, and perimeter sweeps.



STATIONARY MODE

Integrated kickstand for rapid placement on flat surfaces or a standard 3/8" - 16UNC (ISO 1222:2010) tripod mount for temporary fixed-point monitoring and area protection.

» INTEGRATED SENSOR SUITE

The platform utilizes a high-precision sensor suite tailored for the detection of chemical and radiological threats.

TECHNICAL SENSOR SPECIFICATIONS

THREAT CATEGORY	SENSOR ID	SENSOR TECH.	DETECTION RANGE	RESOLUTION
Volatile Organics (VOCs)	PD2	PID (10.7 eV)	0 – 2000 ppm	10 ppb
Gamma Radiation	RD1	Geiger Counter	0 – 200 µRem/h	1 µRem/h
Combustable Gas (LEL)	MT1	NDIR	0 – 100% LEL	0.1% LEL
Carbon Monoxide (CO)	CO1	Electrochemical	0 – 500 ppm	0.1 ppm
Oxygen (O2)	O2	Electrochemical	0 – 25% Vol	200 ppm
Hydrogen Sulfide (H2S)	HS3	Electrochemical	0 – 200 ppm*	0.2 ppm*

*H2S features a selectable range mode: 0-10 ppm with 0.01 ppm resolution for high-sensitivity trace detection, or 0-200 ppm with 0.2 ppm resolution for standard monitoring.

» CORE PLATFORM SPECIFICATIONS



INGRESS PROTECTION

IP64-rated enclosure, ensuring protection against dust ingress and water splashes from all directions.



OPERATING TEMPERATURE

Performance verified across a range of -50°C to +50°C, suitable for extreme Canadian climates.



DIMENSIONS & WEIGHT

Highly portable at 221 x 168 x 64 mm with an operational weight of under 1kg (<980g)



CONSTRUCTION

Ruggedized enclosure featuring a rubberized impact bumper for enhanced durability and shock resistance.



INTERFACE

Designed for Level A/B PPE compatibility, the unit features a glove-friendly large-button physical interface paired with a high contrast backlit LCD touchscreen for intuitive navigation.



ALERTS

Integrated safety system including a 95 dB at 30cm audible buzzer and high-visibility visual hazard indication lighting for immediate notification in loud industrial environments



70 Innovator Avenue, Unit 7
Stouffville, ON, L4A 0Y2



416-479-0078
1-888-988-IDES (4337)



info@scentroid.com
www.scentroid.com

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Future of Sensory Technology



ADVANCED POWER MANAGEMENT

The TR10 Warden features a triple-redundant power architecture to ensure continuous uptime during extended periods and multi-day CBRNE deployments.



PRIMARY INTERNAL POWER

The device is powered by a high-capacity internal rechargeable Lithium-Ion battery, providing a minimum of 12 hours of continuous operation under standard monitoring conditions.



V-MOUNTED SYSTEM

For missions requiring extreme longevity, the unit includes a ruggedized V-mount chassis. This allows operators to hot-swap high-density power packs without interrupting device operation or losing critical data.



ALKALINE BACKUP

A 2-slot alkaline battery adapter serves as a critical failsafe. This allows the device to operate on standard, off-the-shelf alkaline batteries when charging facilities or dedicated Li-Ion packs are unavailable.



POWER TELEMETRY

The on-board software provides advanced battery telemetry, displaying real-time remaining capacity and an estimated "time-to-empty" for both the primary internal battery and any attached backup power source.



RUGGED



LIGHTWEIGHT
<1 KG



RAPID BOOT
<10 SEC



MULTI-THREAT
DETECTION



EXTREME
CONDITIONS



CONNECTIVITY AND COMMUNICATIONS

BLE

lte

LoRa

WiFi

GPS

WIRELESS NETWORKING

The platform is equipped with comprehensive wireless capabilities to facilitate real-time data transmission and location tracking:

- LTE, LoRa Mesh, BLE, and WiFi.
- Integrated GPS for precise positioning, mapping of sensor data, and responder tracking.



WIRELESS

HARDWIRED CONNECTIVITY AND CHARGING

The TR10 Warden maintains clear separation between power and data interfaces for increased reliability:

- **Charging Interface:** All charging and external power interfacing is conducted via a reinforced external pin connector.
- **Data Interface:** The unit features a USB-C interface utilized for high-speed data transfer. Through a USB-C to Ethernet dongle, the device provides standard internet connectivity and Modbus peer-to-peer communication for remote monitoring and integration with existing networks.



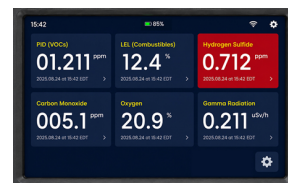
HARDWIRED



SCENTROID SOFTWARE ECOSYSTEM

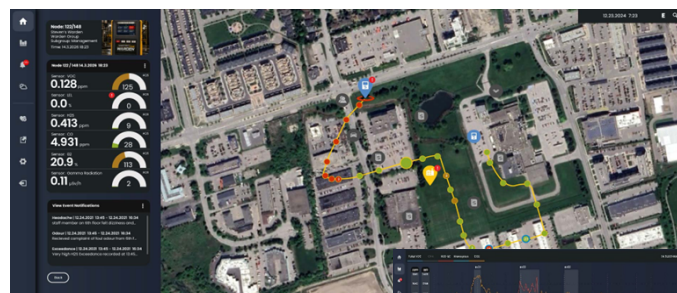
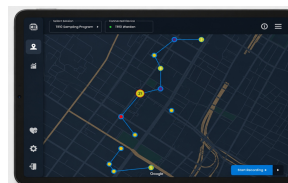
ON-BOARD INTERFACE

Provides real-time visualization of gas concentrations, radiation levels, and alarm status directly on the device touchscreen, featuring historical trend graphs and sensor diagnostics.



GROUND STATION GIS

Field tablet software that offers a live geographic overview of device positioning, recorded sampling routes, and the identification of high-risk zones through a GIS-based interface.



SIMS3 SOFTWARE + ANALYTICS

A comprehensive environmental intelligence platform for advanced data processing and automated reporting.



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