SCENTROID

# GV2000

FIRST RESPONDER QUADRUPEDAL


# ADVANCED GROUND-BASED CBRNE & HAZARD MONITORING PLATFORM

## DESIGNED, BUILT, & SUPPORTED IN CANADA

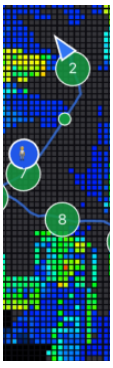
The Scentroid GV2000 First Responder Quadrupedal is a mission-critical force multiplier designed for the front lines of emergency response, tactical hazmat deployments, and defense applications. This agile quadruped platform provides real-time multi-sensor intelligence and situational awareness in complex, confined, or denied environments where traditional wheeled or aerial platforms cannot operate.

## MISSION CAPABILITIES & MOBILITY

### ALL-TERRAIN TACTICAL MOBILITY

The GV2000 is engineered for extreme agility, allowing it to navigate stairs, rubble, mud, and narrow passageways that are inaccessible to other robots.

- **Speed & Deployment:** Capable of reaching a top speed of 3.5 m/s for rapid response in active emergency scenarios.
- **Climbing Agility:** Can traverse slopes and stairs with a climb angle of up to 40°.
- **Obstacle Avoidance:** Features automatic obstacle detection to navigate steep off-road terrain and debris-filled disaster zones.



### COMPREHENSIVE SITUATIONAL AWARENESS

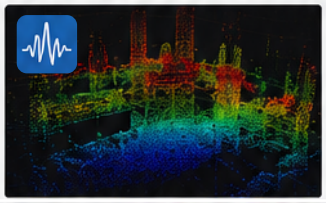
The platform integrates three core imaging technologies to deliver a 360° understanding of the environment.

- **3 Camera Options:** Integrated LiDAR, thermal, and optical cameras provide real-time mapping, hazard detection, and visual situational awareness.
- **Automatic Object Avoidance:** Advanced navigation algorithms automatically detect and avoid obstacles in confined, uneven, or debris-filled environments.
- **Mission Pinning & Hazard Mapping:** Operators can pin hazards, persons, and points of interest directly onto the live LiDAR mission map.

### RUGGEDIZED POWER & CONSTRUCTION

- **Build Quality:** Constructed with high-strength materials and triple mounting redundancy to ensure reliability in the harshest environments.
- **Smart Power System:** Powered by 15,000mAh smart batteries, providing 2 to 4 hours of continuous operation. The system supports rapid battery swapping for extended missions.

## ADVANCED IMAGING TECHNOLOGIES



### LIDAR

360° laser scanning builds a 3D point cloud of the environment for navigation, structural mapping, and obstacle avoidance.

### THERMAL CAMERA

Detects heat signatures to identify survivors, equipment, leaks, or anomalies through darkness and smoke.

### HIGH RESOLUTION OPTICAL CAMERA

Captures visual documentation of the scene and assets for real-time situational clarity and post-mission review.

## KEY PERFORMANCE HIGHLIGHTS

| | | |
|---|---|---|
| **TOP SPEED** 3.5 m/s | **CLIMB ANGLE** Up to 40° | **PAYLOAD CAPACITY** 8 - 12 kg |
| **BATTERY RUNTIME** 2 - 4 hours | **SMART BATTERY** 15,000 mAh | **RUGGED DESIGN** IP54 Rated |

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Future of Sensory Technology

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# TECHNICAL SPECIFICATIONS AND SENSOR SUITE


DESIGNED, BUILT & SUPPORTED IN CANADA

## MECHANICAL & PHYSICAL SPECIFICATIONS

| | |
|---|---|
| QUADRUPED DIMENSIONS | 70 x 31 x 40 cm |
| QUADRUPED WEIGHT | Approximately 15 kg (with battery) |
| PAYLOAD CAPACITY | Supports 8 to 12 kg, offering high stability for heavy and critical sensor arrays. |
| CASE DIMENSIONS | 23 x 10.8 x 10.3 cm |
| CASE WEIGHT | 1.2 kg (fully loaded) |
| CONSTRUCTION | High-Strength materials with triple mounting redundancy |
| INGRESS PROTECTION | IP54 rated |
| OPERATING TEMPERATURE | -40° C to 50° C |
| CLIMBING CAPABILITY | Climb angle of up to 40° |
| TOP SPEED | Up to 3.5 m/s |
| BATTERY RUNTIME | Up to 2 to 4 hours of continuous operation using 15,000mAh smart batteries |
| BATTERY SYSTEM | Smart battery with rapid swap capability |
| TERRAIN CAPABILITIES | Auto obstacle detection; traverses rubble, mud, stairs, and steep off-road terrain |
| SAMPLING RATE | Approximately 1 sample / second |
| ON-BOARD STORAGE | 16 GB SD Card |
| POSITIONING | GPS Based location tracking with barometric pressure augmentation |
| CONNECTIVITY | LoRa, GSM, and WiFi |
| CALIBRATION | Auto-zero before usage, full sensor calibration recommended once annually |

## CBRNE ENVIRONMENTAL SENSOR SUITE

The GV2000 acts as a vital ground-based CBRNE monitor, supporting up to 18 simultaneous sensors. It utilizes a combination of PID, NDIR, EC, and Laser Particulate Counters to detect a wide range of chemical, biological, radiological and environmental threats in real-time.

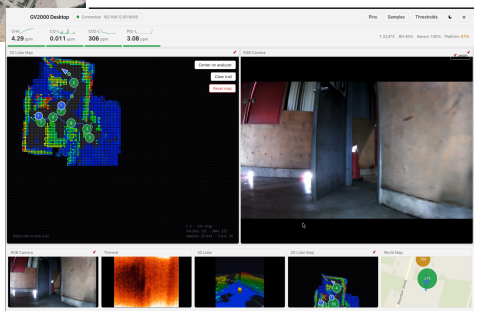
| THREAT CATEGORY | THREATS AND POLLUTANTS DETECTED |
|---|---|
| Chemical Agents | VX, Sarin (GB), Soman (GD), Mustard Gas (HD) |
| Toxic Industrial Chemicals | Chlorine (Cl2), Phosgene (COCl2), Hydrogen Cyanide (HCN), Ammonia (NH3), Arsine (AsH3), Hydrogen Fluoride (HF) |
| Combustables and Gases | Methane, Combustibles, Carbon Monoxide (CO), Carbon Dioxide (CO2), Oxygen (O2) |
| Environmental Hazards | Radiation, Hydrogen Sulfide (H2S), Sulfur Dioxide (SO2), Nitrogen Dioxide (NO2) |
| Particulate Matter | PM 1, PM 2.5, PM 10 (via Laser Particulate Counter) |

## DATA CONNECTIVITY AND CALIBRATION

- **Real Time Data:** Secured transmission via LoRa, GSM, and WiFi for field connectivity and cloud access
- **On-Board Storage:** Includes a 16 GB SD card for redundant data logging
- **Positioning:** GPS-based location tracking with barometric pressure augmentation for altitude accuracy
- **Calibration:** Features auto-zeroing before use to ensure data integrity

### SIMS3 SOFTWARE + ANALYTICS

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



## SITUATIONAL AWARENESS AND MISSION INTELLIGENCE

### MISSION CONTROL SOFTWARE

Real-time visualization of gas concentrations, environmental data, and sensor readings. Live mapping, historical trends, and sensor health monitoring for complete situational awareness

### LIVE GIS MAPPING

GIS-based interface provides live position tracking, route playback, and hazard heatmaps to identify high-risk zones and support informed operational decisions

### SECURE CONNECTIVITY

LoRa, GSM, and WiFi connectivity enables secure data transmission, cloud integration, and team coordination across extended operational ranges

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