



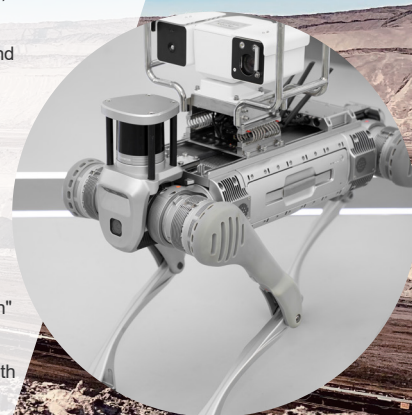
The routine inspections required for the normal operation of industries such as coal mine, steel plant, port, cement plant, and power plant involve both daily data collection and equipment safety checks, often consuming a large amount of manpower and resources.

To address these repetitive daily tasks, BOTON has independently developed a quadruped inspection robot equipped with advanced robotic bodies and sensing devices. It can be customized according to specific industrial scenarios to perform tasks such as meter reading, inspections, gas and liquid leak detection, and simple maintenance operations. The robot can replace manual inspections in hazardous environments, adapt to complex terrains for rapid patrols, and operate continuously 24/7, making it an effective tool for reducing manual inspection needs and alleviating labor shortages in industrial settings.

Quadruped inspection robot

Functional Features

- **Intelligent Perception:** integrates AI vision recognition, multi-sensor fusion perception, and a modular design for rapid deployment.
- **Autonomous Inspection:** utilizes LIDAR SLAM navigation in coordination with a dual-spectrum gimbal (visible light + infrared) to replace traditional high-risk manual inspections, achieving a hazard detection accuracy rate of 99.2%.
- **Scenario-Based Customization:** covers intelligent meter reading, gas and liquid leak detection, fire warning, equipment sound pattern analysis, on-site broadcasting, and simple maintenance operations.
- **All-Terrain Robustness:** adapts to dusty, snowy, and rocky terrains as well as climbs 40cm steps; features IP65 protection rating and stable operation in environments from -20°C to 55°C.
- **Flexible Expansion:** supports modular equipment extensions with a maximum payload capacity of up to 20 kg (including robotic arm interface).
- **Smart Central:** automatically generates standardized inspection reports in the cloud and pushes predictive maintenance recommendations to the management platform.
- **Efficient Management Platforms:** the "Tongxun" platform enables task scheduling and motion planning, while the "Tongguan" platform provides real-time monitoring, data analysis, and digital twin visualization.
- **Multi-Mode Control:** seamless switching between scheduled tasks, emergency call response, and manual remote control with one click.



Key Technical Specifications

(Standard Monitoring Module Parameters;
Customized Scenario Parameters Tailored According to Specific Use Cases)

Category	Parameter
Thermal Imaging Resolution	384 × 288
Temperature Measurement Range	-20°C - 550°C
Temperature Measurement Accuracy	±2°C
Visible light camera resolution	4 mp
Gas Sensor Measurement Accuracy	≤ ±3% (F.S./year)
Gas Sensor Response Time	T90 < 20 s
Gas Sensor Zero Drift	≤ ±1% (F.S./year)

Category	Parameter
Working temperature	-20 ~ 55°C
Protection Rating	IP65
Comprehensive Patrol Capability	4-6h * Continuous walking time without a load: over 5 hours, with an endurance range exceeding 20 km. * Continuous walking time with a 20 kg load: over 4 hours, with an endurance range exceeding 15 km.
Continuous Walking Load Capacity	≥40kg
Obstacle-Crossing Capability	40cm
Climbing Ability	45°
Power Supply Method	Built-in battery with autonomous charging capability.

The inspection robot is a highly customized product developed according to on-site scenario requirements. For related inquiries, please contact our sales representatives.

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