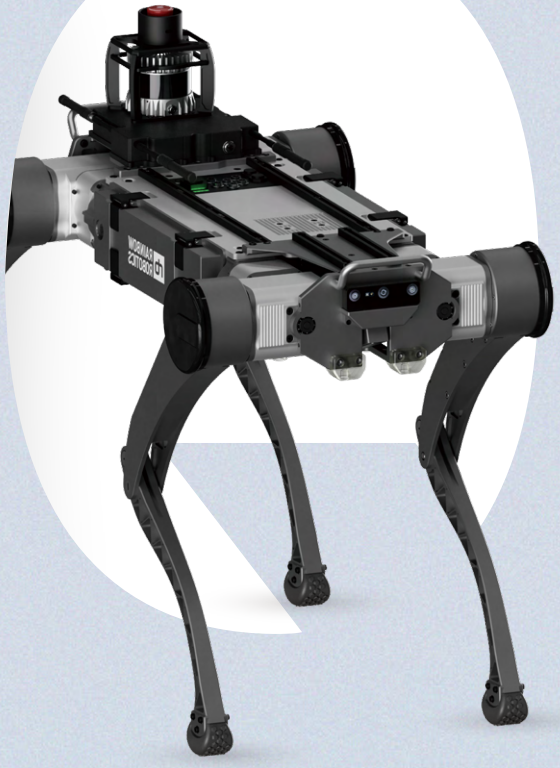
RBQ Series

Quadruped Robot



RAINBOW ROBOTICS

RBQ Series

AI Robot Platform Ready for Immediate Deployment in Outdoor Environments

The RBQ series is a quadruped robot platform designed for real-world deployment, integrating reinforcement learning-based locomotion control technology. It ensures stable mobility even in complex, unstructured environments such as uneven terrain, slopes, and staircases.
Built on a structurally stable system validated through extensive research and testing, it can effectively perform field-oriented tasks such as inspection, monitoring, and safety management. The platform also offers high flexibility through expandable sensor modules, allowing adaptation to a wide range of operational environments.

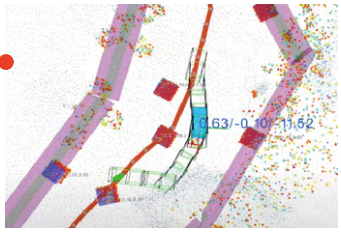
RBQ 10

Max Speed	Walking: 9 km/h
	Running: 14 km/h
Payload	15 kg
Mobility Performance	Slope: 45%
	Step Height: 25 cm

Surveillance & Security
Site Monitoring
Facility Inspection
Remote Site Operations

Environmental Perception

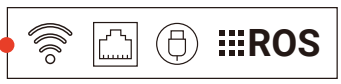
- Equipped with wide-angle depth cameras
- 3D LiDAR for autonomous navigation
- In-house developed PTZ camera module



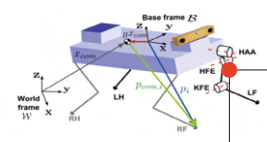
Autonomous Driving / Charging

- Scalable autonomous navigation
- Dynamic obstacle avoidance
- Autonomous charging capability

Interface

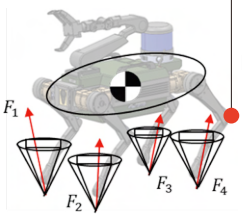


- Compatible with external devices
- Provides various interfaces for research and development platforms

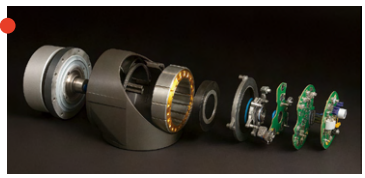


Locomotion Algorithm

- Robust reinforcement learning-based locomotion algorithm
- Easily customizable for diverse environments



Actuator



- Optimized design for motors, reducers, and controllers
- High durability and efficiency for internal transmission system

RBQ Series

Deployment Process

A structured, step-by-step process designed to successfully deploy a robot system optimized for the customer's environment.
From initial inquiry to operation and maintenance, we provide stable and efficient services through a systematic approach.

Inquiry

Understanding customer requirements and deployment objectives

Technical Meeting

Discussion on detailed technical specifications and implementation plans

PoC & Pilot Test (if required)

Proof of concept validation and pilot operation

Contract & Order

Formal contract execution and product ordering

System Integration

System setup and integration tailored to the customer's environment

Operation & Maintenance

Continuous operational support and maintenance services

Site Analysis

On-site assessment and analysis of the actual operating environment
Evaluation of environmental characteristics and development of operation scenarios Review of existing workflows and manpower Verification of infrastructure, system integration conditions and safety/regulatory requirements

RBQ Soultions

From Facility Inspection to Hazardous Area Response
Explore a Wide Range of Operational Scenarios Enabled by RBQ

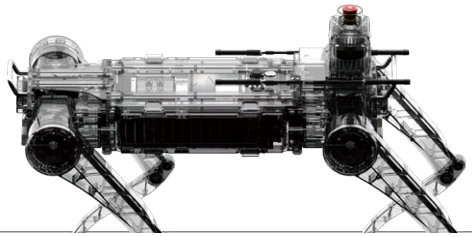
RBQ is a quadruped robot designed to perform reliably even in environments that are difficult for humans to access—such as disaster sites, hazardous zones, and confined spaces. Powered by reinforcement learning-based locomotion control and a robust mechanical structure, it adapts flexibly to diverse field scenarios and sets a new standard for future on-site operations.

1 Stable Mobility in Complex Environments

2 Enhanced Safety Through Unmanned Operation in Hazardous Areas

3 Scalable Architecture for Expanding Task Capabilities

INDUSTRY	Environment	Applications	Expected Benefits
Manufacturing / Plant	Equipment-dense areas and production lines	Thermal inspection, anomaly detection, facility inspection	Automated inspections, accident prevention improved operational efficiency
Energy / Power Generation	Power plants and outdoor equipment zones	leak/anomaly detection remote monitoring	Minimized risk exposure, enhanced safety management systems
Residential / Smart City	Apartment complexes and large-scale residential areas	Autonomous patrol, anomaly detection, integration with video-based surveillance	Reduced security blind spots, improved operational efficiency



Quadruped Robot Applications

Facility Inspection
Monitoring equipment status in factories and plants
Hazard detection solutions

Security Patrol
Autonomous patrol operations and control system integration
Indoor and outdoor surveillance

Hazardous Area Response
Patrol in residential areas, minimizing blind spots in human detection

Disaster Response
Early fire detection, hazardous environment response,
nitial response support

Industrial Safety Management
Worker safety monitoring, hazard zone inspection
safety compliance support

Defense / Military
Military operations support, reconnaissance and surveillance
rapid response in combat environments

Technical Specifications & Expansion Options

RBQ-10

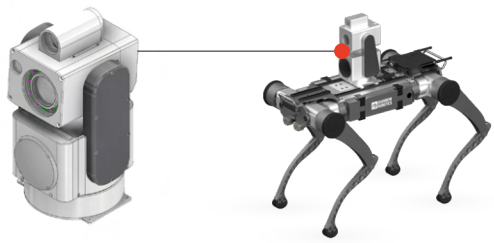
Size (cm)	98x43x62 (WxDxH)
Weight	42kg
Payload	15kg
Operating hours	2 hours (Up to 4 hours)
IP grade	IP54
Speed	9 km/h (Max 14km/h in Driving Mode)
Step walking ability	Max. 25cm
Max. Climbing ability	Longitudinal Slope 45%, Lateral Slope 20%
Battery	Swappable / Independent Charging / Auto-charging Support
Internal Sensors	IMU / (RGB + Depth) x 2 / Depth x 4 / 3D LiDAR(Optional)
Communication	IMU / (RGB + Depth) x 2 / Depth x 4 / 3D LiDAR (Optional)
Monitoring Sensors	4K Visual Image & Thermal Camera
External Interface	54 V, 12 V, CAN (1 ch), Gigabit LAN x 3

※ Some specifications may change for performance improvements.

Expansion Modules

The RBQ series features a modular platform that allows the addition of various components—such as cameras, sensors, and manipulators—depending on the operating environment.

● PTZ Camera



Specifications	
Dimensions (W × L × H)	160 x 160 x 320 mm
Weight	5.5 kg
Microphone	External 3.5 mm input supported
Speaker	Output: 2.5W / Frequency Range: 100–20,000 Hz
Pan/Tilt Range	Pan: ±165° / Tilt: +90° to -90°
Thermal Camera	Resolution: 640 × 512 Field of View: 48.7° × 38.6° Operating Temperature: -20°C to +550°C

● Docking Station

Specifications	
Power (Output / Rated Voltage & Current)	57.6V, 10.5A
Input (Power / Voltage Range)	7A / 63Vac, 3.3A / 230Vac, 2.9A / 277Vac
Operating Environment (Temperature / Humidity)	-40 ~ +70°C, 20 ~ 95% RH (non-condensing)
Storage Conditions	-40 ~ +85°C, 10 ~ 95% RH (non-condensing)
Safety / Certification	UL62368-1, TUV BS EN/EN62368-1 EAC TP TC 004 Certification

● **LiDAR Sensor** — The RBQ series supports flexible selection and mounting of LiDAR sensors based on the operating environment and customer requirements

● **Customization** — The RBQ series can be customized to meet various environmental conditions and customer needs (e.g., gas detection, radiation detection, etc.)

RAINBOW ROBOTICS

History

2026.04	Relocation to new headquarters in Sejong Tech Valley
2026.02	Opening of Pangyo AI Research Center(2nd Pangyo, Gyeonggi)
2026.01	Business restructuring and expansion
2025.12	Awarded "$3 Million Export Tower" at the 62nd Trade Day
2025.11	RBQ Series: Korea Top 10 Mech-Tech Winner
2025.04	Launch of RBQ quadruped robot AI demonstration project
2025.02	Partnered in Samsung AI Humanoid R&D
2025.01	Launch of RBM Mobile Robot series
2024.12	Investment by Samsung Electronics
2024.09	Contract with Korea Astronomy and Space Science Institute
2024.08	Launch of Mobile Dual-Arm Robot RB-Y Series
2024.03	Supplied collaborative robot drilling automation solution to KAI
2023.12	Awarded "$2 Million Export Tower" at the 60th Trade Day
2023.04	Establishment of U.S. Sales Corporation (Schaumburg, Illinois)
2023.01	Increased investment from Samsung and subsidiary inclusion
2022.12	Awarded "$1 Million Export Tower" at the 59th Trade Day
2022.10	17th Korea Robot Awards - Presidential Commendation
2021.03	RB-N Series NSF Certification (NSF/ANSI 169)
2021.02	Listed on KOSDAQ (277810)
2020.08	Delivery of inner gimbal actuator assembly to LIG Nex1
2020.04	ISO 9001:2015 Quality Management System Certification
2019.07	Launch of Collaborative Robot RB Series
2018.02	PyeongChang 2018 Humanoid Service Provider
2017.07	Venture capital investment of KRW 10 billion
2016.04	Presidential Creation Medal, Science & Technology
2016.02	Delivery of mount & actuator to LIG Nex1
2015.12	Export of DRC-HUBO + to U.S. Naval Research Laboratory
2015.09	KASI Space Surveillance Mount Operation
2015.06	1st place at DARPA Robotics Challenge Finals
2014.01	Venture company certification
2013.09	Export of HUBO II to Google Inc. USA
2011.12	Export of HUBO II to MIT et al., supported by U.S. NSF
2011.05	Establishment of corporate research institute
2011.02	Founded as Rainbow Co., Ltd. (now Rainbow Robotics Co., Ltd.)

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