

BC-30 ROB/AIBO (Robotic)

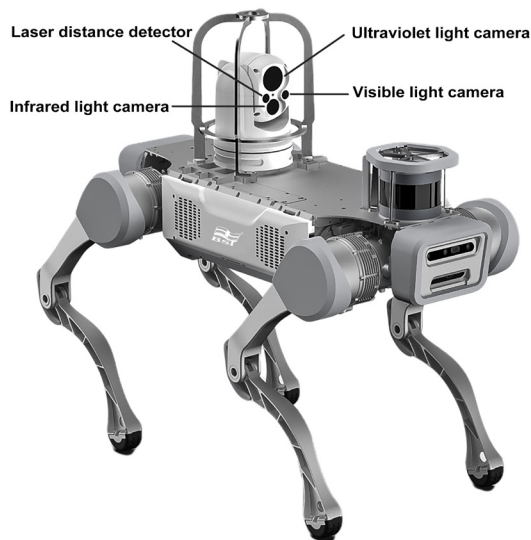
Substation UV+IR+VIS Inspection Automation

BC-30 ROB & BC-30 AIBO is an intelligent robotic corona detecting tool with UV, IR and VIS multiple spectrum imaging systems integrated with robot (ROB) and robot dog (AIBO). It can simultaneously detect the invisible corona of the human eye or the faint UV rays radiated by the partial discharge of the surface. The IR rays emitted by the current heating and the high-definition VIS 24 hours a day perform real-time positioning observation and quantitative indication through the image. The intelligent inspection management platform includes a smart robot body, robot self-management system, inspection management system, and remote centralized control management system. Personnel deployment, reliability of results, fault handling, information exchange, operation and maintenance efficiency make all power defects nowhere to hide.

We can load our UV Camera set on the robot wheel (30-ROB) and robot dog (30-ROB-AIBO). The bundle package will give a hassle-free turnkey solution for your robotic project. You may also recruit your choice of robots to match our camera system as a custom option.



BC-30 ROB (Robot Wheel)



BC-30 AIBO (Robot Dog)

Real-time photon counting of corona for quantitative analysis
Out-of-band rejection filter technology, not affected by sunlight
IP 55 protection, high sensitivity dynamic obstacle avoidance ability
IR temperature measurement with high precision and a wide range
One-stop intelligent inspection management platform
Multi-spectral image auto-focusing and taking photos to facilitate real-time observation
Powerful 8- drive chassis facilitates multi-directional driving
Using a 2.4GHZ high-frequency radio communication range
Multi-spectral synchronization, no delay and tailing, accurate positioning corona
Endurance time is more than eight hours, meeting the demand of daytime operation
PC, remote control, manual and automatic integrated control, humanized design
Stable working temperature from -20°C ~ +60°C
High-precision LIDAR navigation to accurately locate the driving route
Customized to specific applications

1. FEATURES

Super Protection Ability for harsh environment

Designed for substation working environment, with superior protection ability, equipped with obstacle avoidance system, extreme anti-collision protection system and anti-drop system. No fear of harsh environment, super anti-plateau wind and sand, anti-electromagnetic interference, anti-high noise capabilities, waterproof and wading capabilities.

Intelligent Inspection Management Platform

Intelligent inspection robot self-management system, smart inspection management system, inspection remote centralized control management system and other systems integrated to solve the problem of personnel deployment, result reliability, fault handling, information delay, operation and maintenance in the traditional inspection efficiency etc.

Multi-sensor, Multi-spectrum, Integrated Intelligent Technology

Advanced audio and video recognition technology, capture abnormalities, accurately and efficiently. Using high resolution IR imaging system with a temperature range of -20 to 650°C, accurate IR image temperature measurement and analysis ability. Smart camera with 30 times optical zoom, 1080P high resolution. Use high sensitivity UV detection sensor.

Real-time report, Intelligent prediction based on big data

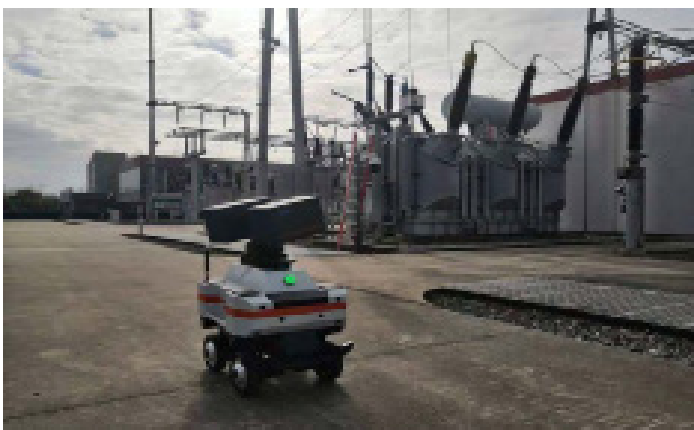
The self-developed advanced data model generates visual data analysis reports in real time. Combining previous data, environmental data and other sensors of the entire network, etc. Multi-dimensional integrated calculations to realize intelligent trend prediction and real-time abnormal warning.

Autonomous Intelligent Inspection without Manual Intervention

Fully automatic round-the-clock inspection, intelligent navigation, route planning, independent charging, without conventional human intervention.

Network-wide Linkage for all Substation Information, Intelligent Diagnosis

Real-time linkage of all the information of entire network, fully supporting compatible sharing of information with different suppliers and manufacturers, uninterrupted communication, overview of the whole, and intelligent decision-making.



2. TECHNICAL SPECIFICATIONS

CHARACTERISTICS OF UV CHANNEL

Field Of Vision (W x S)	12.6° x 7.2° & 5.0° x 3.75°
Range of Wavelength	240nm ~ 280nm
Minimum Discharge Sensitivity	1Pc/10m
Minimum UV Sensitivity	2 x 10 ⁻¹⁸ watt/cm ²
Pixel	1280 x 720

CHARACTERISTICS OF IR CHANNEL

Image Resolution	640 x 480
Focusing Method	Auto / Manual Focus
Field Of Vision (W x S)	25° x 19°
Range & Accuracy of Temperature Measurement	-20°C ~ 650°C, ±2°C/2%

CHARACTERISTICS OF VIS CHANNEL

Image Resolution	1920 x 1080
Focusing Method & Zoom	Auto / Manual Focus, Optical; x 30, Digital x 20

PARAMETER OF PAN-TILT

Horizontal & Vertical Scanning Range	360°, -10° ~ 90°
Preset Points	>8000 (Customizable)

CONTROL MODE

Control Mode	Auto / Manual Control
Control Terminal	PC, Remote Control

NAVIGATION SYSTEM

Navigation Method / Accuracy	Lidar, ±10mm
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COMMUNICATION CAPABILITIES (CUSTOMIZABLE)

Wireless Communication	2.4GHz High-Frequency Radio Station
Maximum Communication Bandwidth & Distance	20Mbps, 1000m

MOVEMENT & WADE BARRIER ABILITY

Vehicle Speed	1m/s°
Parking Positioning Accuracy	±10mm
Gradeability	>15°
Obstacle Crossing Ability	50mm
Wading Ability	Ground Ponding<100mm

PROTECTION ABILITY

Body Protection Level	IP55
Extreme Anti-Collision & Anti-Drop Collision System	Support
Dynamic Obstacle Avoidance System	Mechanical, Ultrasonic, Multi-Lidar Stereo Avoidance

BATTERY

Maximum Battery Life	>8 Hours
Battery Capacity & Life	36AH, Charge & Discharge Cycle≥1000 Times

2. TECHNICAL SPECIFICATIONS

SYSTEM WORKING ENVIRONMENT & PHYSICAL PARAMETERS

Working Temperature	-20°C ~ +60°C
Working Voltage	Alternating Current 220V, 50Hz
Physical Dimension	815mm x 580mm x 930mm
Weight	90kg

3. ACCESSORIES

- Communications Cables
- SDK
- Carrying Case
- Robot Wheel (ROB) - (Options)
- Robot Dog (AIBO) - (Options)
- Manual



Cables



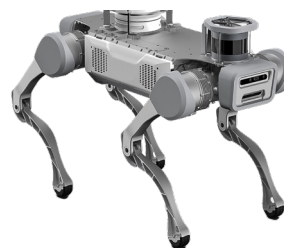
Carrying Case



SDK



Robot Wheel (ROB)
(Options)



Robot Dog (AIBO)
(Options)

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