

CYBERSTARS
星玑智能

New Technology Pet Quadruped Robot

User Manual

Cyber 1



01 Legal Statement

Before using this product, users must carefully read the Product User Manual (hereinafter referred to as "this Manual"; the bionic quadruped robot is hereinafter referred to as "the robotic dog") and operate the product in strict accordance with the contents of this Manual. Our company shall not be liable for any property damage or personal injury caused by the use of the product in violation of the contents of this Manual.

This product is composed of multiple components. Please ensure that children cannot access this product to prevent accidents. This product is only for use by persons aged 18 and above.

To extend the service life of the product, do not use it in humid, high-temperature, or high-pressure environments.

This Manual contains, to the greatest extent possible, the functional introduction and usage instructions of this product. However, due to continuous functional improvements, design changes, and other reasons, there may be discrepancies between the physical product and the contents of this Manual. In case of any differences between the physical product and this Manual in terms of color, appearance, etc., the physical product shall prevail.

02 Usage Restrictions

This product shall not be used by persons with physical, sensory, or intellectual disabilities, nor by persons without relevant experience or knowledge (including children), unless under the supervision or guidance of a guardian to ensure safe use of the product.

- Do not allow children to treat this product as a toy. When the main unit is in operation, please supervise children and pets to keep them as far away as possible.
- If the power cord is damaged, it must be replaced with a dedicated cord or a dedicated component purchased from the manufacturer or its maintenance department. Do not use the product in a suspended environment without guardrails.
- If the product exhibits abnormal phenomena such as random leg movements or violent shaking during use, press the [Emergency Stop] button (the "L" button on the handle remote control; the "Emergency Stop" button is displayed on the screen of the screen-equipped remote control) to activate the soft emergency stop function and put it into a protective state. The product will automatically lie down; after troubleshooting, you can operate the product normally.
- Do not place the product upside down. Do not use the robot's legs as handles for carrying. Do not use the product in an environment where the temperature is above 40° C or below 0° C. Do not use the product in an environment with electromagnetic interference.
- Do not use the product in an environment with Wi-Fi or 2.4G signal interference.
- Before starting the product, ensure there is a space of at least 1 meter around it, and keep people or objects away from the movement path to avoid collisions.
- When the product passes through stairs or slopes, do not stand on the stairs, platforms, or slopes below it to prevent personal injury that may be caused by the product falling.
- Do not place children, pets, or any objects on the main unit (whether it is stationary or in operation).
- During transportation, do not put your hands into the range of joint movement to prevent pinching or even scratching.
- Keep body parts away from moving components.
- Before cleaning and maintaining the main unit, turn it off and unplug the power plug. Do not wipe the main unit with a damp cloth or rinse it with any liquid.
- Do not use any third-party chargers or power cords.
- Do not discard the main unit at will; it shall be handled by a professional recycling agency. If the product is not to be used for a long time, fully charge it, turn off the main unit, and store it in a cool and dry place. Charge it at least once every 3 months to avoid over-discharging of the battery.
- If the product needs to be transported, ensure the main unit is turned off, and it is recommended to use the original packaging box for packaging.
- Use this product in accordance with the instructions in the manual. The user shall bear all losses and injuries caused by improper use. This product is only for commercial, civilian, and scientific research scenarios; it is strictly prohibited for any military use.

(1)Joint and Wire Harness Inspection

Check whether foreign objects are interfering with each joint, whether the wire harness is damaged, and ensure the foot pads are intact and undamaged.

(2)Battery Level Check and Camera Cleaning

Check the battery level to ensure it is sufficient, preventing sudden toppling or falling. Meanwhile, keep the surface of the head camera clean; do not scratch the lens with hard objects. If there is dirt, wipe it promptly with a dry, soft cloth.

(3)Cautions for Product Cleaning

Do not use liquids containing dissolvable or corrosive components (such as alcohol) to clean this product.

(4)Proper Placement and Ground Environment

When placing the product, ensure the legs are in a natural, unloaded state to avoid damage to the leg joints caused by the body's weight. Do not place the product in a prone position on hard, sharp, or excessively bumpy ground to prevent scratches on the body.

(5)Foot Pads and Wear

Foot pads are consumables; pay attention to their wear condition during use. If wear, damage, or increased noise from the robotic dog's impact on the ground is detected, replace the foot pads promptly to avoid impairing the robotic dog's movement.

(6)Safe Use and Terrain Adaptability

During use, keep the product within your line of sight and maintain a sufficient safety distance, staying away from obstacles and objects that may cause collisions. Although the product has good terrain adaptability, still verify that the terrain meets the requirements.

(7)Speed, Turning, and Complex Terrain

Rapid turns may easily lead to loss of control, especially on steep slopes, uneven, or unknown terrain. Avoid risky operations and reduce the speed.

(8)Steep Slopes and Climbing Angle

Limit use to within the rated forward climbing angle, and avoid turning directly at large climbing angles to prevent the robotic dog from becoming unstable. Properly control operations on steep slopes and terrain with large gradients.

(9)Maximum Speed and Prohibited Usage Scenarios

The maximum available speed on flat terrain can reach 3 m/s. Do not use this product on complex ground, slippery ground, ground with debris, terrain with slopes exceeding specifications, or in areas with sharp objects nearby.

(10)Joint and Battery Status Inspection

If loose joints, inability to stand normally, or excessive operating noise are detected, stop using the product immediately, turn it off for inspection, and seek professional maintenance.

(11)Low Battery Warning

When the battery level indicator shows low power, the product may not have enough power to perform movements. Charge it promptly to avoid hazards.

(12)Safety Cautions

Avoid contact between hands or body parts and the robotic dog's moving components to prevent pinching or bruising. Meanwhile, avoid touching the metal parts on the surface of the joint motors to prevent scalding.

(13)Product Heat Dissipation and Cleaning

Prolonged continuous use may cause the motors to overheat; allow regular rest periods. If the product is contaminated, clean it promptly.

(14)Power Connection Specifications

Use a charger that meets the specifications to connect this product.

(15)Shutdown Caution

After use, turn off the product immediately.

04 Cautions for Battery and Charging

(1)Adapter and Cleaning

Do not use alcohol or other flammable agents to clean the power adapter, as this may pose potential safety risks.

(2)Response to Battery Leakage

If battery leakage occurs and electrolyte enters the eyes, do not rub the eyes. Immediately rinse the eyes with clean water, then seek medical treatment.

(3)Abnormal Conditions

If the battery emits an unusual odor, smokes, deforms, or exhibits other abnormal conditions during charging, immediately unplug the power adapter and conduct an inspection.

(4)Safe Temperature

The power adapter may generate high temperatures during charging. Avoid touching it for extended periods to prevent scalding.

(5)Power Adapter

Do not use a damaged power adapter; only use the official power adapter. Unofficial power adapters may cause lithium battery leakage, overheating, fire, or explosion.

(6)Charging Time

The battery charging time should not exceed 24 hours; overcharging may shorten the battery lifespan.

(7)Abnormal Protection Alerts

Flashing 1st and 2nd LEDs: Indicates that the charging overcurrent protection has been triggered.

Flashing 1st and 3rd LEDs: Indicates that the discharging overcurrent protection has been triggered.

Flashing 1st and 4th LEDs: Indicates that the short-circuit protection has been triggered.

(8)Power-Off Protection

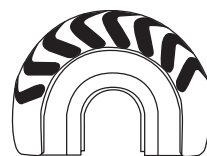
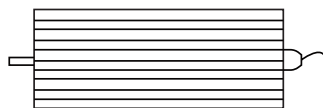
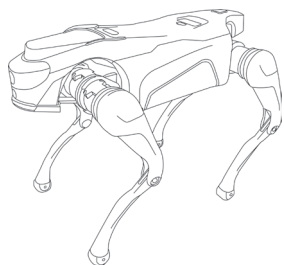
The temperature of the battery cells is detected via a thermistor. If the temperature exceeds the operating temperature range, the power-off protection will be activated.

05 Product Introduction

5.1 Product Overview

This product features 12 degrees of freedom and offers various movement gaits and actions.

5.2 Product List



Robot dog×1 (Contains battery) Power Adapter×1 Adapter Power Cord×1 Non-slip sole×4



Toolkit×1



Remote Control×1



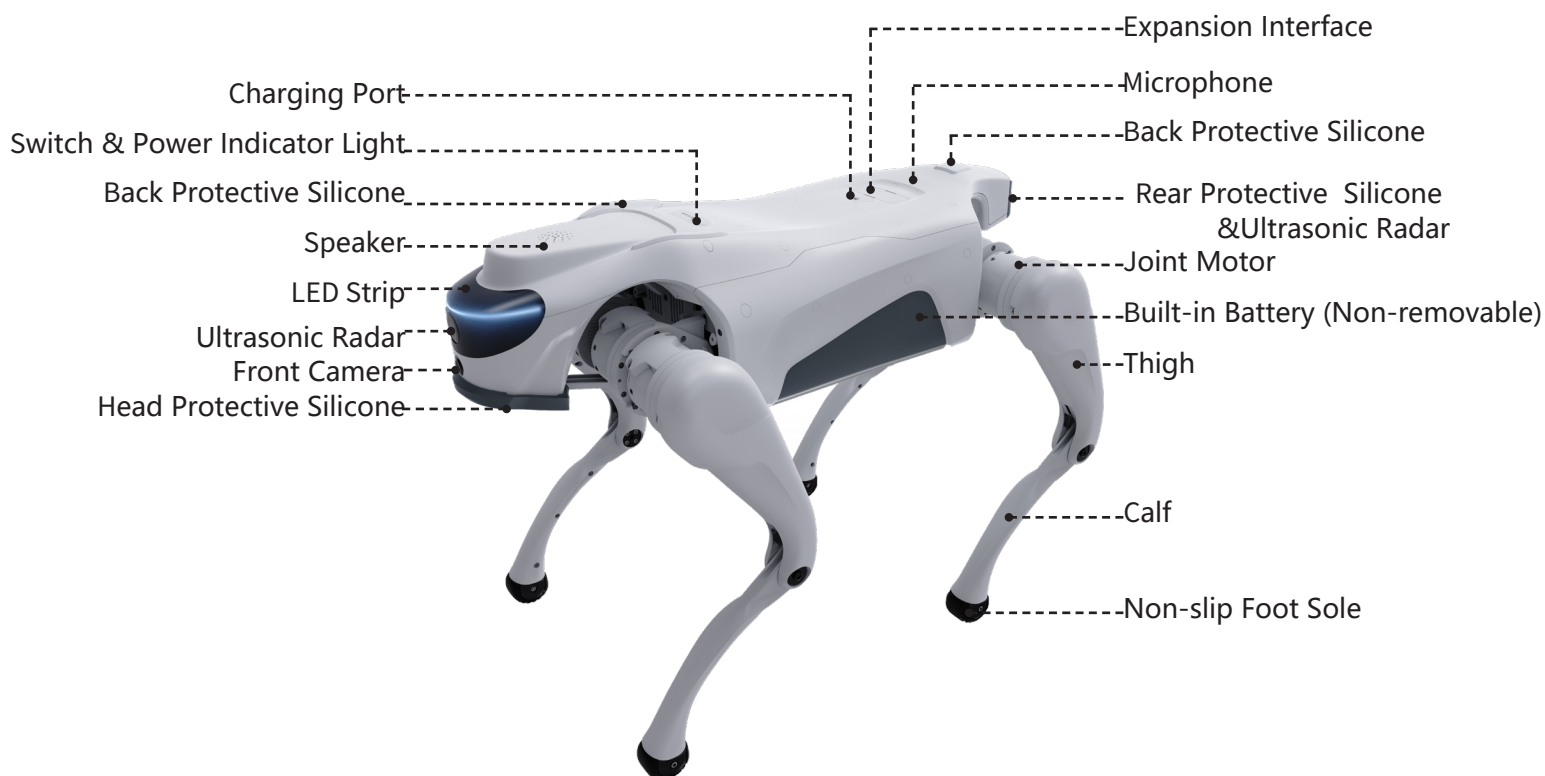
Instruction Manual×1



Transport Case×1

5.3 Component Introduction

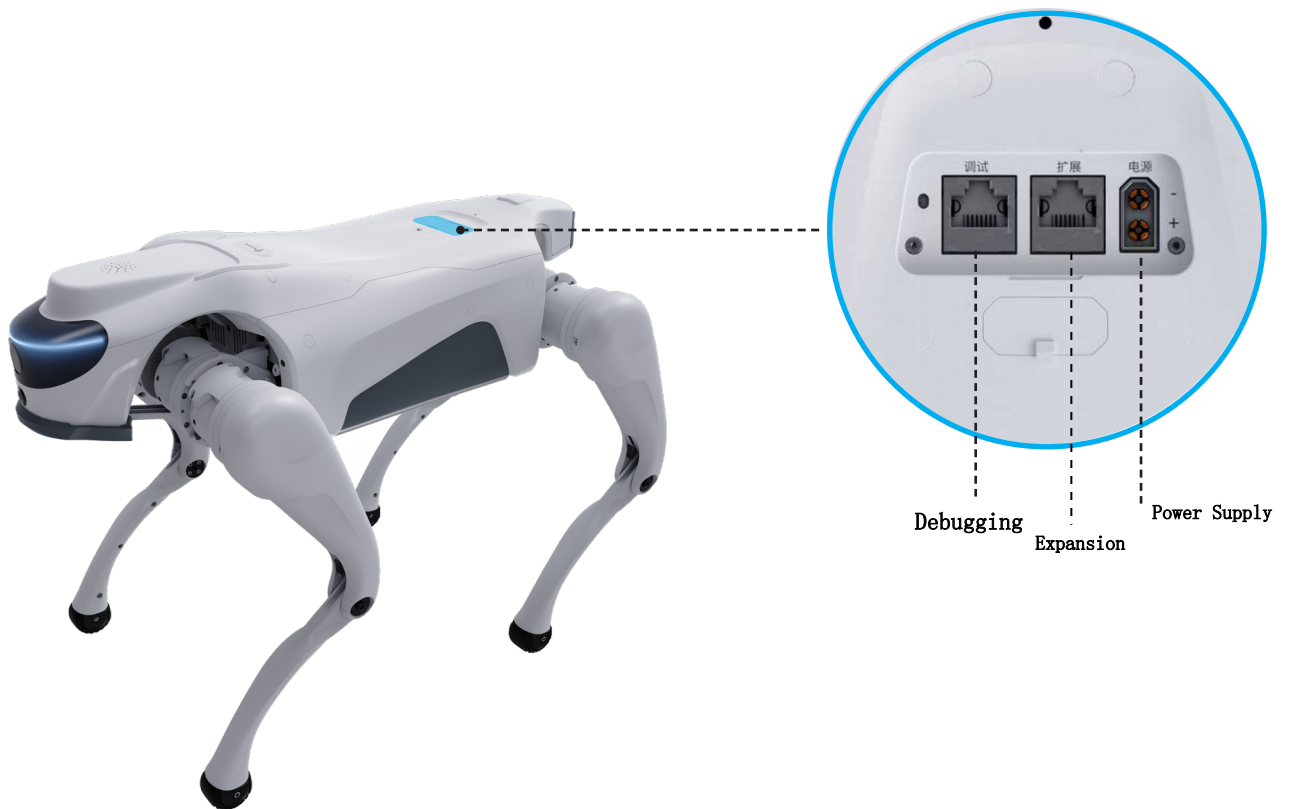
5.3.1 Introduction to the Main Body



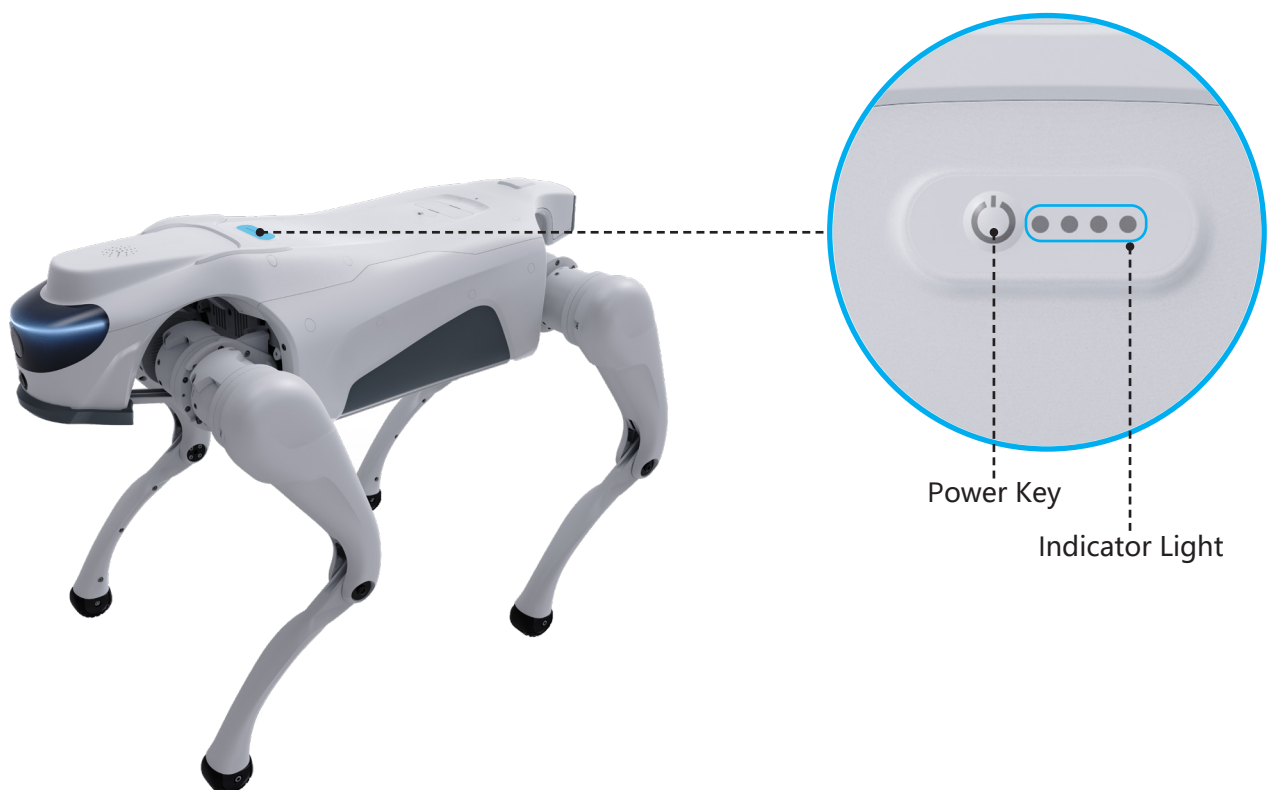
5.3.2 Expansion Interface

Interface Name	Instructions
Debugging Ethernet Port	RJ45 Interface, supporting a transmission rate of 100 Mbps, for SSH functionality.
Expansion Ethernet Port	RJ45 Interface, supporting a transmission rate of 1000 Mbps for high-speed data transfer, and compatible with applications such as network connection, remote monitoring, and data transmission.
Power Interface	Standard DC Power Interface, providing stable power supply, supporting a voltage output of 28~33.6V and a current output of 10A, which meets the power requirements of the quadruped robot's expansion devices.

05 Product Introduction



5.4 Power Supply Introduction



- When the device is powered off, press the Power Key briefly (for less than 2 seconds). The Indicator Light will show the current battery level and turn off after 5 seconds.
 - Press and hold the Power Key for more than 2 seconds to turn the battery on or off.
 - When the battery level is less than 5%, pressing and holding the Power Key will not turn it on.
- * A short press is defined as pressing the key for longer than 30ms but less than 2s; a long press is defined as pressing the key for more than 2s.

5.4.1 Battery Display in Power-On State

LED Strip Light	Light Code
Blink	Power On Complete
Steady On	Powering On

- When the remaining battery level is less than 5%, the battery will automatically shut down. At this point, pressing and holding the button will not turn it on, and a brief press of the button will only make the LED display the battery level for 5 seconds before it turns off.
- When the voltage of a single cell is less than 2.6V, the battery enters undervoltage protection mode. No operation will trigger the battery to display the remaining power or power on. The battery must be charged to above 2.6V before it can operate normally.

5.4.2 Battery Display in Charging State

- Battery Display in Charging State
- Press and hold the button to turn the battery on/off. In the powered-on state, the 4 indicator lights remain steady on to display the battery level (a brief press of the button has no effect).

Battery Capacity LED Indication (Idle and Discharging)				
SOC(%)	LED1	LED2	LED3	LED4
0~5	Blink	Go Out	Go Out	Go Out
5~20	Blink	Blink	Blink	Blink
20~25	Steady On	Go Out	Go Out	熄灭
25~50	Steady On	Steady On	Go Out	Go Out
50~75	Steady On	Steady On	Steady On	Go Out
75~100	Steady On	Steady On	Steady On	Steady On

Power On and Power Off States

- Power Off State: When the charger is plugged in, there is no output from the discharge port, and the running light illuminates normally; when the charger is unplugged, there is no voltage at the output port.
- Power On State: The discharge port has output; plugging in the charger does not affect the output of the discharge port, and the running light illuminates; when the charger is unplugged, there is still voltage at the output port.

05 Product Introduction

5.4.3 Power Adapter

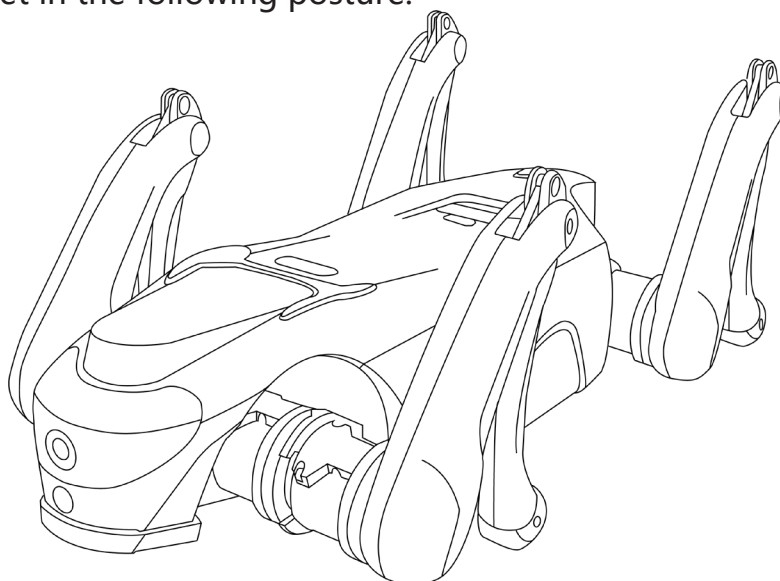


No Light Illuminated	No Power
Lights Up	Connect to Mains Power (100V~240V)

06 Product Usage

6.1 Preparation Before First Use

Please ensure that all on-site operators and non-operators have carefully read this manual and understood the basic operating specifications and safety precautions. Remove the robotic dog from the packaging box, place it on a flat surface, and position its feet in the following posture.



Press and hold the power button for more than 2 seconds. The robotic dog will perform a startup check and will be ready for use after approximately 1 minute.