Unitree G1

Unitree G1 Humanoid Robot Instruction Manual

Model: G1 | Brand: Unitree

1. Introduction

The Unitree G1 Humanoid Robot is an advanced robotic platform designed for various interactive and demonstrative purposes. Constructed with aerospace-grade aluminum alloy and carbon fiber, it features a sleek and durable design. The robot stands at 132cm tall and weighs approximately 35kg, incorporating a full joint hollow internal wiring system, dual encoders, and a localized air-cooling system for high operational precision and stability. It offers high flexibility with 23 joint degrees of freedom, enabling a wide range of movements.

Figure 1: Front view of the Unitree G1 Humanoid Robot.

2. Setup

2.1 Unboxing and Initial Inspection

Carefully remove all components from the packaging. Verify that all items listed in the 'What's in the Box' section are present. Inspect the robot for any visible damage during transit.

2.2 Battery Installation and Charging

The Unitree G1 comes with a smart quick-release battery. Ensure the battery is securely installed in its designated compartment. Connect the provided charger to the robot and a power outlet. Allow the battery to fully charge before initial use. A full charge provides approximately 2 hours of endurance.

Figure 2: Close-up view of the Unitree G1's battery compartment.

2.3 Power On

Once the battery is charged, press the power button located on the robot's main body to power it on. The robot will perform a self-check and enter a standby state.

3. Operating Instructions

3.1 Basic Movements

The Unitree G1 supports basic movements such as walking, rotating, and handshakes. These movements can be controlled via the handheld remote control included with the product. Refer to the remote control's specific instructions for detailed button functions.

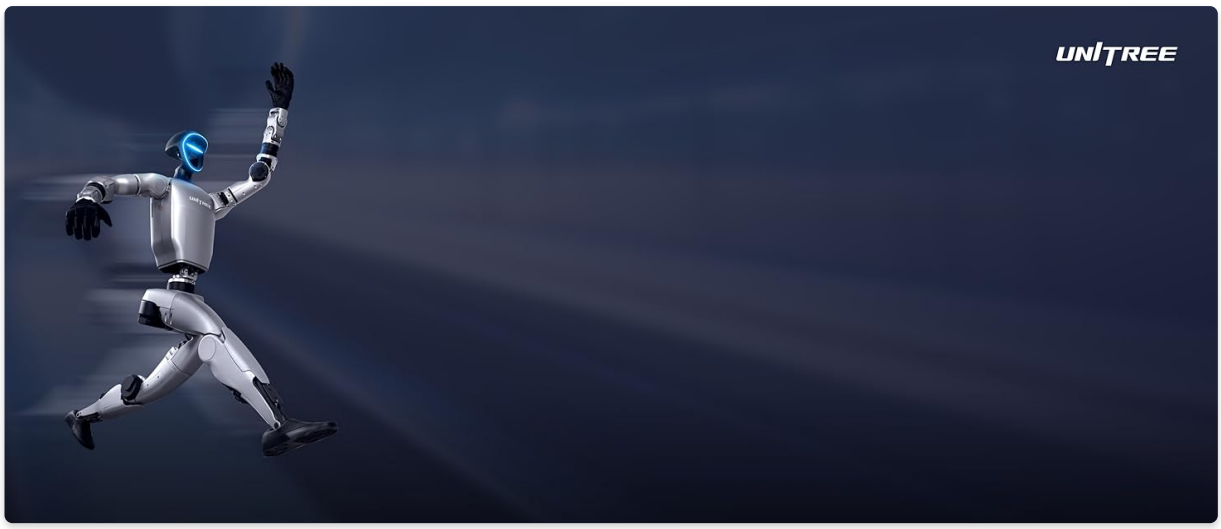

Figure 3: The Unitree G1 demonstrating dynamic movement.

3.2 Smart Interaction and Connectivity

The G1 is equipped with an 8-core high-performance CPU, a depth camera, and 3D LiDAR for smart interaction. It supports Wi-Fi 6 and Bluetooth 5.2 for fast data exchange. Voice interaction features allow for engaging demonstrations, entertainment, and companionship. Future OTA updates will expand the robot's movement library and capabilities.

Video 1: Demonstration of AI vision, voice control, and interaction capabilities.

4. Maintenance

To ensure the longevity and optimal performance of your Unitree G1 Humanoid Robot, regular maintenance is recommended:

- **Cleaning:** Gently wipe the robot's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials that could damage the finish.
- **Storage:** Store the robot in a cool, dry place away from direct sunlight and extreme temperatures. Ensure it is powered off when not in use for extended periods.
- **Battery Care:** Follow the battery charging guidelines. Do not overcharge or completely drain the battery frequently.

5. Troubleshooting

5.1 Important Purchase Note: No Secondary Development

This G1 model does **NOT** support secondary development or programming. If you require SDK/API access or programmable features, this version is not suitable. Please contact customer service to inquire about the "G1 Edu" customized version if these features are needed.

5.2 General Issues

- **Robot not powering on:** Ensure the battery is fully charged and correctly installed. Verify the power button is pressed firmly.
- **Movement issues:** Check for any obstructions around the robot. Ensure the remote control has fresh batteries and is properly paired.
- **Connectivity problems:** Verify Wi-Fi and Bluetooth settings on both the robot and your controlling device. Ensure they are within range.

6. Specifications

The following table outlines the key specifications for the Unitree G1 Humanoid Robot:

Figure 4: Key components and specifications of the Unitree G1.

Feature	Detail

Feature	Detail
Brand Name	Unitree
Model Name	Unitree G1
Model Number	G1
Manufacturer Part Number	G10001
Item Dimensions (L x W x H)	18"L x 8"W x 52"H (approx. 45.7 x 20.3 x 132 cm)
Weight	Approx. 35kg
Material Type	Aerospace-grade Aluminum Alloy, Carbon Fiber
Degrees of Freedom (DOF)	23 (6 per leg, 5 per arm)
CPU	8-core high-performance
Sensors	Depth Camera, 3D LiDAR, Dual Encoders
Connectivity	Wi-Fi 6, Bluetooth 5.2
Battery Type	Smart Quick-Release (Rechargeable Lithium-ion, 13 series)
Battery Endurance	Approx. 2 hours
Included Components	Remote Control, Charger
Age Range Description	Adult

7. Warranty Information

Specific warranty details for the Unitree G1 Humanoid Robot are not provided in the product information. Please refer to the official Unitree Robotics website or contact their customer service for comprehensive warranty terms and conditions.

8. Support

For technical assistance, operational queries, or to inquire about the "G1 Edu" customized version (which supports secondary development and programming), please contact Unitree Robotics customer service. Support contact information can typically be found on the product packaging, the official Unitree Robotics website, or through your point of purchase.