

HT_Pi&Pi Plus Voice Control Quick Deployment User Manual

I. Hardware Preparation and Connection



科大讯飞 远场麦克风环形
阵列模块ROS六麦语音板 ...

¥529

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② 打开App扫码可见



[Taobao] Price Protection During Big Promotion <https://e.tb.cn/h.SpMm2tPDuQ6P0ib?tk=5NUohPAttN> MF287 「IFLYTEK Far-field Circular Microphone Array Module ROS 6-Mic Voice Board, 6-Mic Sound Source Localization and Navigation」 Click the link to open directly or search on Taobao to open

1. USB Extension Cable Connection

- Use a USB extension cable to connect the voice control board.
- Refer to the wiring diagram provided by the merchant for assembly.
- Connect the USB cable to any USB port on the robot's back panel.

2. External Device Connection

- Prepare a keyboard, mouse, and display screen.
- Use an HDMI cable to connect the display screen to the HDMI port on the robot's back panel.
- Connect the keyboard and mouse to the USB ports.

II. Software Installation Steps

Code Download Link: [语音控制代码包下载](#)

1. Install System Dependencies

Open the terminal and execute the following commands in sequence:

代码块

```
1 # Update system packages
2 sudo apt update
3
4 # Install audio processing and Python dependencies
5 sudo apt install -y alsa-utils sox libsox-fmt-all python3-pip
6
7 # Update Python security library
8 sudo pip3 install --upgrade pyOpenSSL
9
10 # Install voice recognition related libraries
11 pip3 install vosk numpy webrtcvad
12 pip install vosk
```

2. Deploy the Voice Control Program

代码块

```
1 # Extract the voice control program package
2 unzip voice.zip
```

3. Start the Voice Control System

```
代码块 Enter the program directory
2   cd ~/voice_control
3
4   # Start the microphone voice recognition service
5   python3 offline_control.py
```

4. Robot Operation Preparation

Follow the joystick operation guide in the product manual:

- a. Make the robot complete the standing action.
- b. Unlock the robot to enter the walking state.
- c. Ensure the robot is in a controllable state.

III. Basic Movement Commands

- Forward Control: "Forward", "Move forward", "Go forward"
- Backward Control: "Backward", "Move backward", "Go backward"
- Steering Control:
 - Left Turn: "Turn left", "Left side"
 - Right Turn: "Turn right", "Right side"
- Emergency Stop: "Stop", "Halt", "Cease", "Brake"

IV. Notes

- Ensure the voice recognition program is successfully launched before using voice command control.
- In a noisy environment, you may need to increase the command volume or move closer to the microphone.
- It is recommended to leave an interval of 1-2 seconds between each command to ensure accurate recognition by the system.
- If you encounter recognition difficulties, try adjusting the microphone sensitivity or restarting the program.

This voice control system provides an intuitive way to operate the robot. Basic movement control of the robot can be achieved through simple voice commands.