YOURRYONG 38P micro

YOURRYONG ESP32 Expansion Board (38P Micro) User Manual

Introduction

This user manual provides comprehensive instructions for the setup, operation, and maintenance of your YOURRYONG ESP32 Expansion Board (38P Micro). Please read this manual carefully before using the product to ensure proper functionality and safety.

Product Overview

The YOURRYONG ESP32 Expansion Board is designed to simplify the use of ESP32 development modules, specifically the 38-pin variant. It breaks out the General Purpose Input/Output (GPIO) pins, making them easily accessible for prototyping and project development. This board facilitates connections to various sensors, actuators, and other components, enhancing the versatility of the ESP32 module.



Image 1: The YOURRYONG ESP32 Expansion Board (38P Micro). This image displays the top view of the expansion board, highlighting the ESP32 module, USB port, reset button, and the dual rows of GPIO pins along the sides.

Features

- **GPIO Pin Breakout:** Provides easy access to all 38 GPIO pins of the ESP32 module.
- **Compact Design:** Space-efficient layout suitable for various projects.
- **Durable Construction:** Built for reliable performance in development environments.
- **Wide Compatibility:** Designed for ESP32 38-pin development boards.

Specifications

Manufacturer	YOURRYONG
Model	38P Micro ESP32 Expansion Board
ASIN	B0CQSVJHCG
Date First Available	December 22, 2023
Compatibility	ESP32 38-pin development modules

Setup

1. Connecting the ESP32 Module

1. Carefully align the 38 pins of your ESP32 development module with the corresponding female headers on the expansion board.
2. Gently press the ESP32 module into the expansion board until it is securely seated. Ensure all pins are correctly inserted and no pins are bent.

2. Power Supply

- The expansion board typically draws power through the ESP32 module's USB port or an external power supply connected to the ESP32 module.
- Connect a micro-USB cable to the ESP32 module's USB port and then to your computer or a suitable 5V power adapter.

3. Driver Installation (if necessary)

Depending on your operating system and the specific ESP32 module, you might need to install USB-to-Serial drivers (e.g., CP210x or CH340G drivers). These drivers are usually available from the ESP32 module manufacturer's website or common driver repositories. Install them before connecting the board to your computer for the first time.

Operating Instructions

1. Understanding GPIO Pins

The expansion board provides access to the ESP32's General Purpose Input/Output (GPIO) pins. These pins can be configured as inputs or outputs to interact with external components. Refer to the ESP32 datasheet or pinout diagrams for specific pin functionalities and limitations.

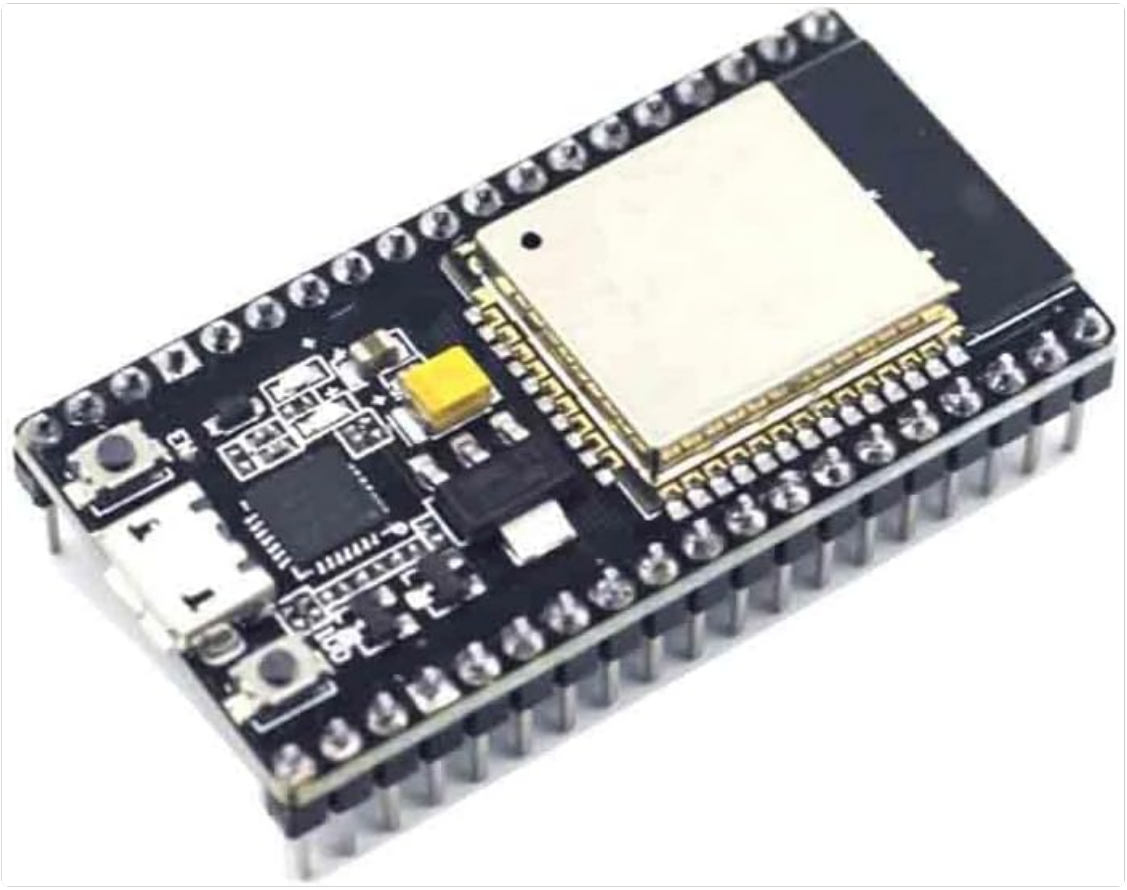


Image 2: Close-up view of the ESP32 Expansion Board showing the GPIO pins. This image provides a detailed look at the pin headers, which are clearly labeled for easy identification and connection to external circuits.

2. Programming Environment Setup

To program the ESP32 module mounted on the expansion board, you will need a development environment. Popular choices include:

- **Arduino IDE:** Install the ESP32 board package through the Boards Manager.
- **ESP-IDF:** Espressif's official IoT Development Framework, offering more advanced control.
- **PlatformIO:** An open-source ecosystem for IoT development, compatible with various IDEs.

Follow the specific installation guides for your chosen environment to set up the toolchain and libraries.

3. Basic Usage Example (Conceptual)

Once your environment is set up, you can upload code to your ESP32. For instance, to blink an LED connected to a GPIO pin:

1. Connect an LED (with a current-limiting resistor) to a suitable GPIO pin on the expansion board.
2. Write a simple program in your chosen IDE to set the GPIO pin as an output and toggle its state (HIGH/LOW) with a delay.
3. Select the correct board and COM port in your IDE.
4. Upload the code to the ESP32 module.

Maintenance

Cleaning

- Ensure the board is powered off and disconnected from all power sources before cleaning.
- Use a soft, dry, anti-static brush or compressed air to remove dust and debris.
- For stubborn grime, lightly dampen a cotton swab with isopropyl alcohol (99% pure) and gently clean the affected areas, avoiding connectors and sensitive components. Allow to dry completely before re-powering.

Storage

- Store the expansion board in a cool, dry place, away from direct sunlight and extreme temperatures.
- Keep it in an anti-static bag or container to prevent electrostatic discharge damage.

Troubleshooting

Board Not Detected by Computer

- **Check USB Cable:** Ensure the USB cable is functional and securely connected to both the ESP32 module and your computer. Try a different cable.
- **Install Drivers:** Verify that the correct USB-to-Serial drivers (e.g., CP210x, CH340G) are installed for your operating system.
- **Restart IDE/Computer:** Sometimes a simple restart of your IDE or computer can resolve detection issues.
- **Check COM Port:** Ensure you have selected the correct COM port in your programming environment.

Code Not Uploading

- **Correct Board Selection:** Confirm that the correct ESP32 board type is selected in your IDE.
- **Boot Mode:** For some ESP32 modules, you may need to manually put the board into "bootloader" or "download" mode by holding down the BOOT button (if present on your ESP32 module) while pressing and releasing the RESET button, then releasing BOOT.
- **Power Supply:** Ensure the board is receiving adequate power.
- **Serial Monitor Interference:** Close any open serial monitors before attempting to upload code.

Unexpected Behavior / Instability

- **Power Supply:** Insufficient or unstable power can cause erratic behavior. Use a reliable 5V power source.
- **Wiring:** Double-check all connections to external components for shorts or loose wires.
- **Code Errors:** Review your code for logical errors or resource conflicts.
- **Component Compatibility:** Ensure all connected components are compatible with the ESP32's voltage levels and current capabilities.

Safety Information

- Always handle electronic components with care to avoid damage from static electricity.
- Ensure proper ventilation when operating the board, especially if it's enclosed.
- Do not expose the board to moisture, extreme temperatures, or corrosive environments.
- Only use power supplies that meet the specified voltage and current requirements.
- Keep out of reach of children.

Warranty and Support

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or contact YOURRYONG customer support. For technical assistance, troubleshooting, or further inquiries, please visit the YOURRYONG official website or contact their support channels.

© 2023 YOURRYONG. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question