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› DIYables ESP32 38-Pin Expansion Board User Manual

DIYables DIY-ESP32-BREAKOUT-BOARD-38P

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Model: DIY-ESP32-BREAKOUT-BOARD-38P

1. PRODUCT OVERVIEW

The DIYables ESP32 38-Pin Expansion Board is designed to simplify development and prototyping with various 38-pin ESP32 modules, including NodeMCU-32S, ESP-WROOM-32D/32U, and ESP-WROVER. This breakout board provides convenient access to all ESP32 pins, offering multiple power input options and a solder-free setup for ease of use.

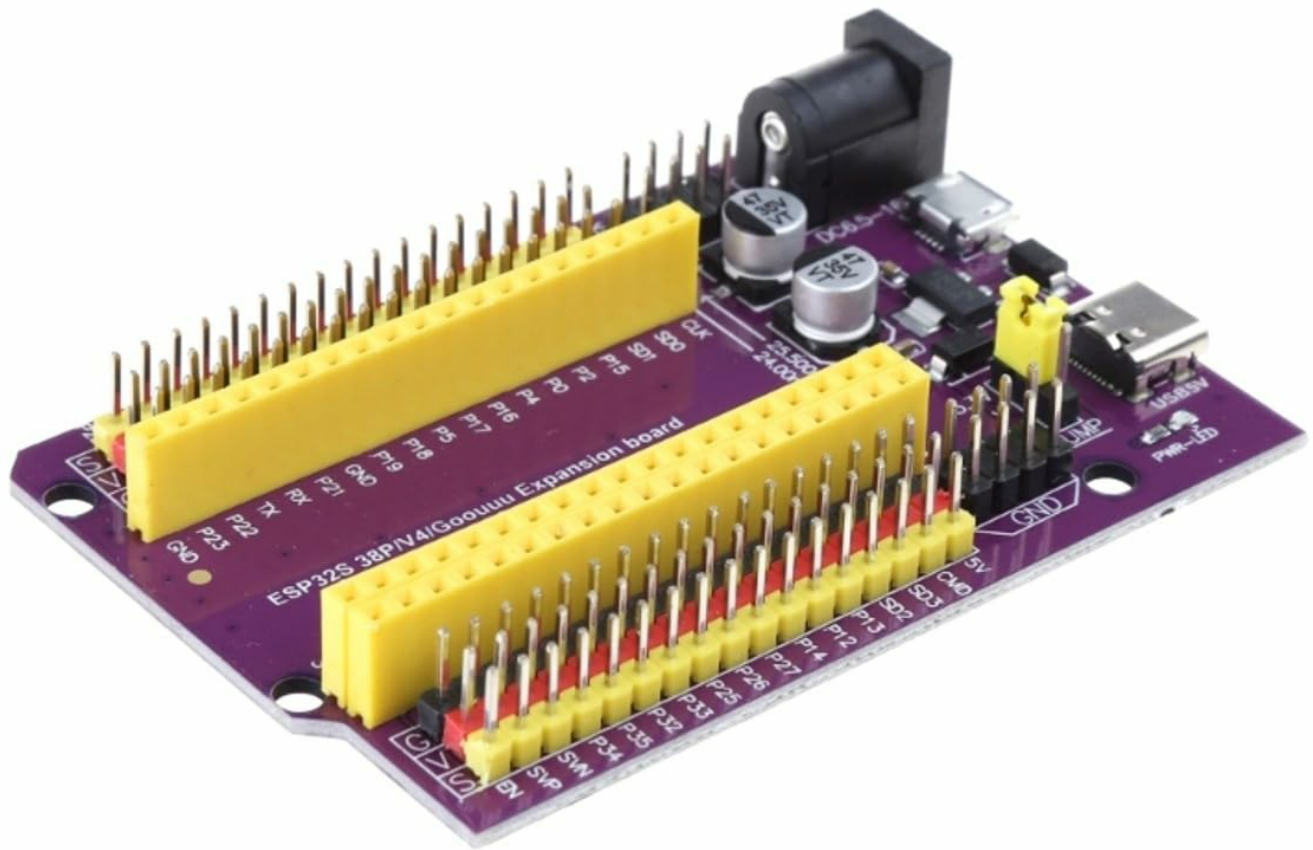


Figure 1: Top-down view of the DIYables ESP32 38-Pin Expansion Board, showing the dual pin headers and power input options.

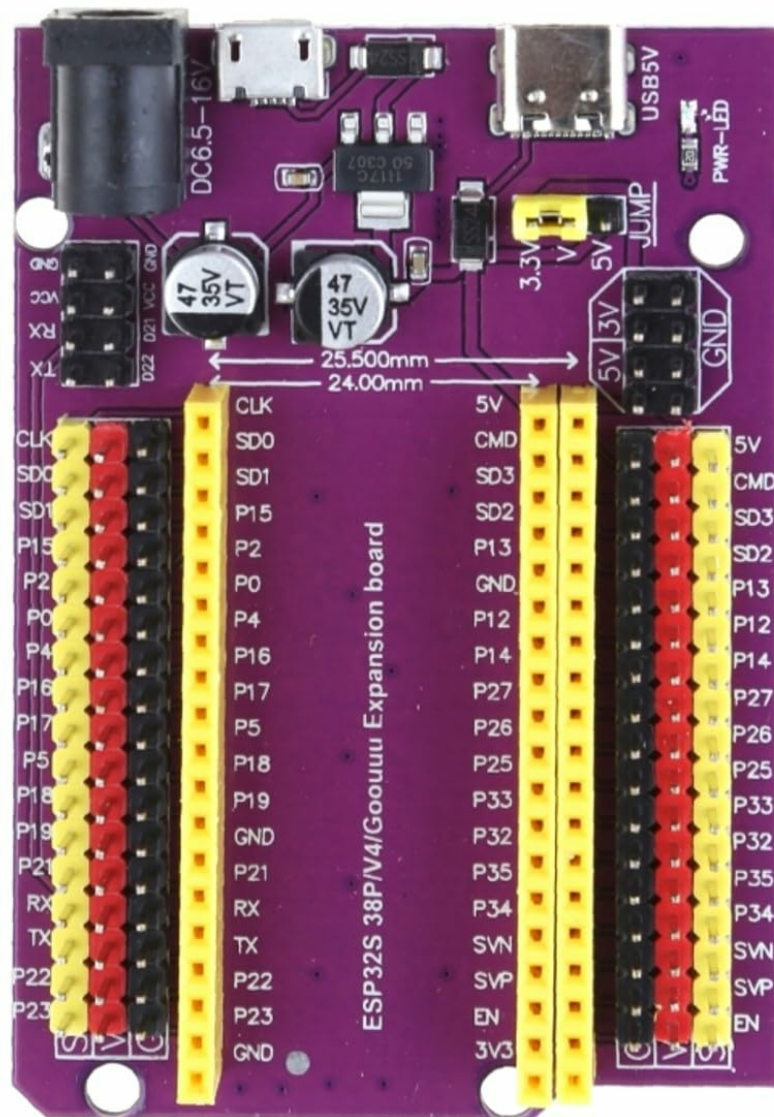
2. SETUP INSTRUCTIONS

Follow these steps to set up your ESP32 38-Pin Expansion Board:

1. **Insert ESP32 Module:** Carefully align your 38-pin ESP32 development board (e.g., NodeMCU-32S, ESP-WROOM-32D/32U, ESP-WROVER) with the two yellow pin headers on the expansion board. Gently press the ESP32 module into the headers until it is securely seated. No soldering is required for this step.
2. **Select Power Input:** The expansion board offers three flexible power input options:
 - **DC Barrel Jack:** Connect a 6.5V to 16V DC power adapter to the barrel jack.
 - **Micro USB:** Connect a Micro USB cable to the Micro USB port.
 - **Type-C USB:** Connect a Type-C USB cable to the Type-C port.

Choose only one power source at a time. The board will automatically select the appropriate voltage (3.3V or 5V) based on the input and internal regulation.

3. **Connect Peripherals:** Once the ESP32 module is installed and power is supplied, you can connect your sensors, actuators, and other peripherals to the clearly labeled GPIO pins on the expansion board.



Fits both Narrow and Wide ESP32 boards

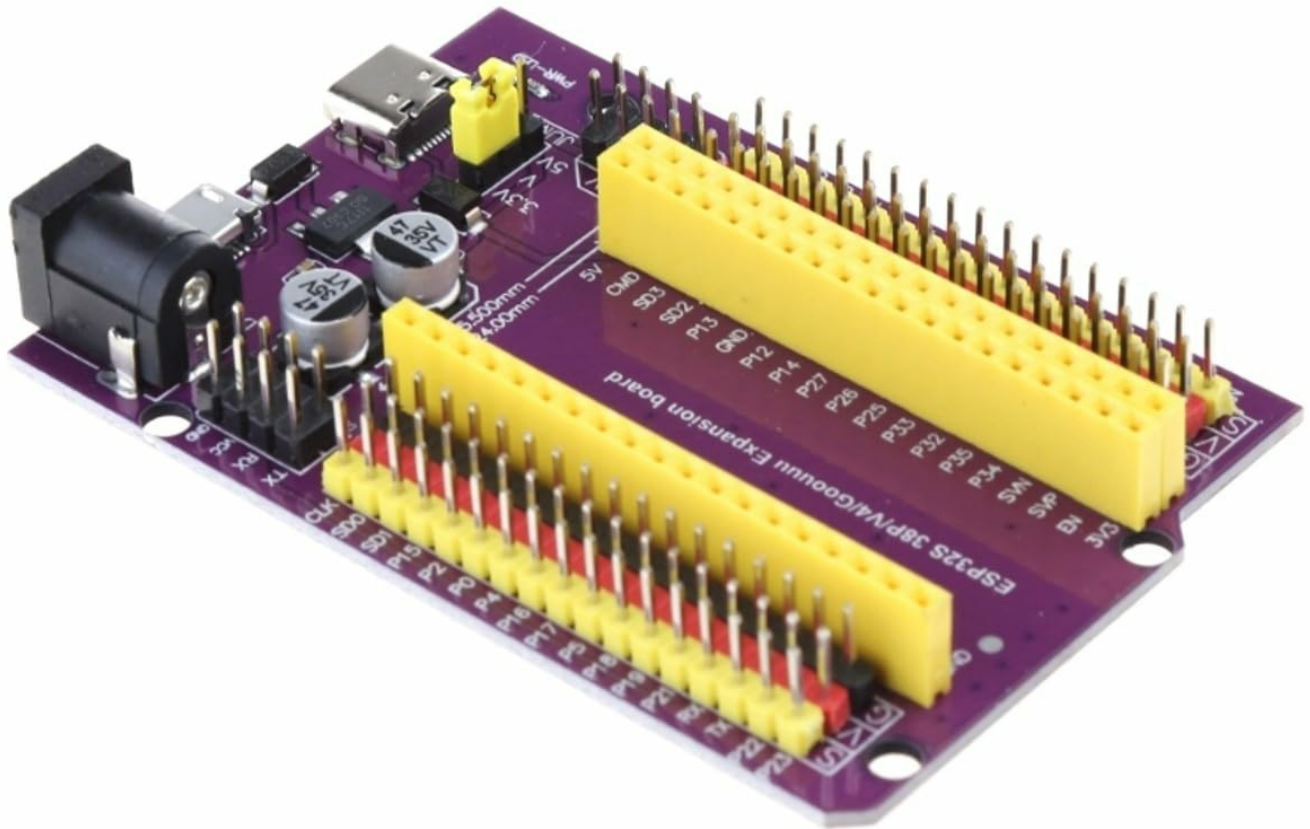
Figure 2: Detailed view of the expansion board's pin labels and various power input options (DC barrel, Micro USB, Type-C USB).

3. OPERATING INSTRUCTIONS

The DIYables ESP32 38-Pin Expansion Board facilitates easy access to the ESP32's functionalities. After successful setup, you can proceed with programming your ESP32 module.

- **Pin Access:** All 38 pins of the ESP32 module are broken out to standard 2.54mm (0.1 inch) headers, making them compatible with breadboards and jumper wires. The double-layer PCB design ensures stable signal transmission and clear pin labeling.
- **Power Indicators:** The board may include an LED indicator to confirm power supply.
- **Development Environment:** Use your preferred ESP32 development environment (e.g., Arduino IDE, ESP-IDF, MicroPython) to upload code to your ESP32 module. The expansion board does not interfere with the

programming process.



- **No Power Indicator:**
 - Ensure the power source is correctly connected and providing the specified voltage.
 - Verify that only one power input (DC barrel, Micro USB, or Type-C USB) is connected at a time.
 - Check the power cable for damage.
- **ESP32 Module Not Functioning:**
 - Confirm the ESP32 module is correctly seated in the expansion board's headers.
 - Ensure your ESP32 module is a 38-pin variant compatible with this board.
 - Test the ESP32 module independently if possible to rule out module-specific issues.
- **Intermittent Connections:**
 - Check all jumper wire connections for secure contact.
 - Inspect the pin headers on both the expansion board and the ESP32 module for any bent or damaged pins.

6. SPECIFICATIONS

Feature	Detail
Model Name	DIY-ESP32-BREAKOUT-BOARD-38P
Compatibility	38-Pin ESP32 Boards (NodeMCU-32S, ESP-WROOM-32D/32U, ESP-WROVER)
Power Input Options	DC Barrel Jack (6.5-16V), Micro USB, Type-C USB
Connectivity Technology	GPIO, USB
Operating System Compatibility	FreeRTOS, Linux (for ESP32 module)
Package Dimensions	3.9 x 2.8 x 0.67 inches
Item Weight	1.13 ounces
Design	Double-Layer PCB, Solder-Free Setup

7. WARRANTY AND SUPPORT

For warranty information, product support, or technical assistance, please refer to the official DIYables website or contact their customer service directly. You can also visit the [DIYables Store on Amazon](#) for additional resources and contact options.

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.

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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