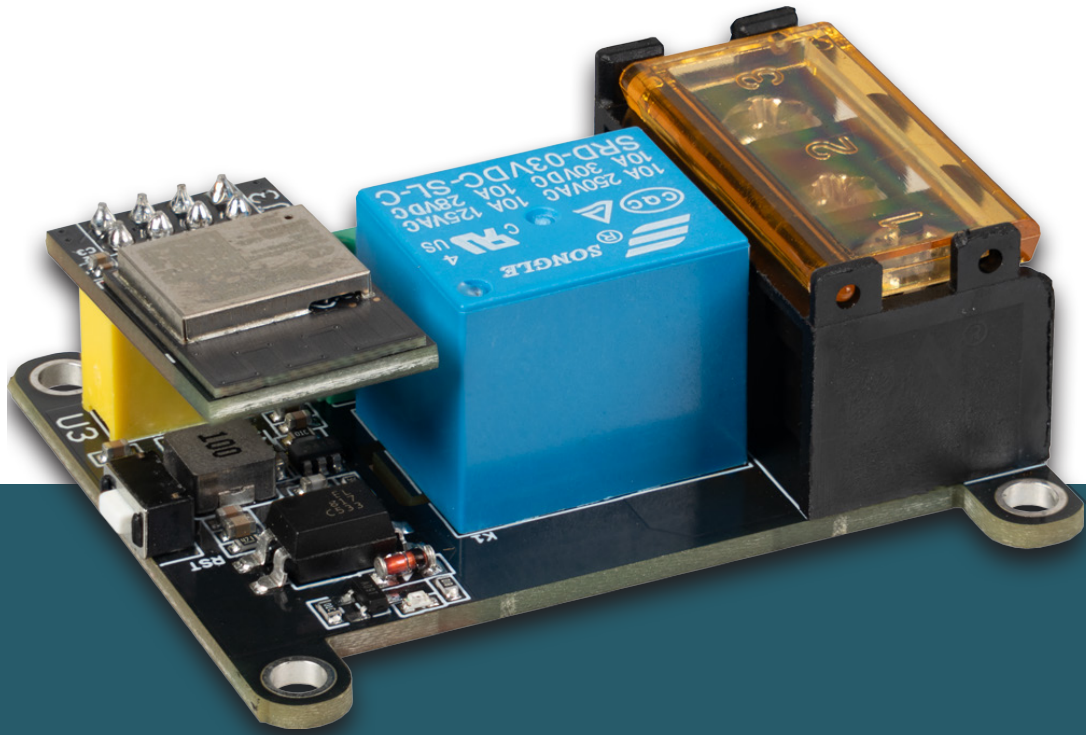




ESP32 RELAY MODULE

SBC-ESP32-RM01

1. GENERAL INFORMATION

Dear customer,
thank you for purchasing our product. In the following we will show you what you need to bear in mind when commissioning and using.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

2. SAFETY INSTRUCTIONS

Risk of electric shock! The relay terminals may carry dangerous mains voltage when used to switch AC loads. Touching live parts can cause severe injury or even death. Always disconnect power before wiring or handling the module.

This device is designed for low-voltage control (5–12 V DC) on the logic side, but the relay output may switch high-voltage circuits. Ensure safe separation and proper insulation between control and load circuits at all times.

All wiring involving mains voltage must be carried out by qualified and authorized electricians only. Incorrect wiring may cause fire, electric shock, or permanent damage to the device.

Never operate the module without a secure mounting or housing. Ensure that no conductive objects can come into contact with exposed terminals or solder joints.

The module is intended for indoor and dry environments only. Do not use the module in wet, humid, or explosive environments. Liquids, condensation, or dust can lead to short circuits or electric arcing.

The module must not be used in medical, life-support, or safety-critical systems where failure could endanger people or property.

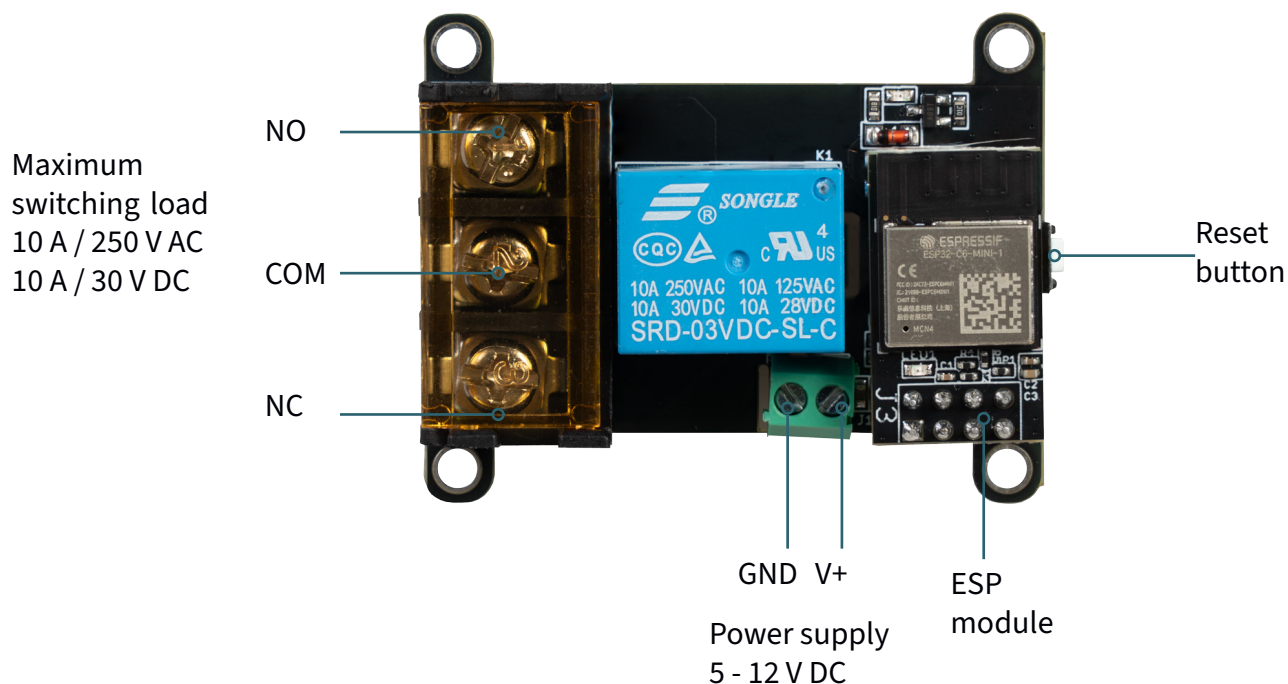
Use only loads within the specified relay ratings (max. 10 A / 250 V AC or 10 A / 30 V DC). Overloading the relay can cause overheating, contact welding, or fire.

Always ensure sufficient ventilation to prevent overheating.

Avoid frequent or rapid relay switching of high-power loads, as this may reduce relay lifespan and lead to arcing damage.

Always verify correct polarity and wiring before connecting the power supply. Reverse connection or short circuits may destroy the module or the power source.

3. DEVICE OVERVIEW

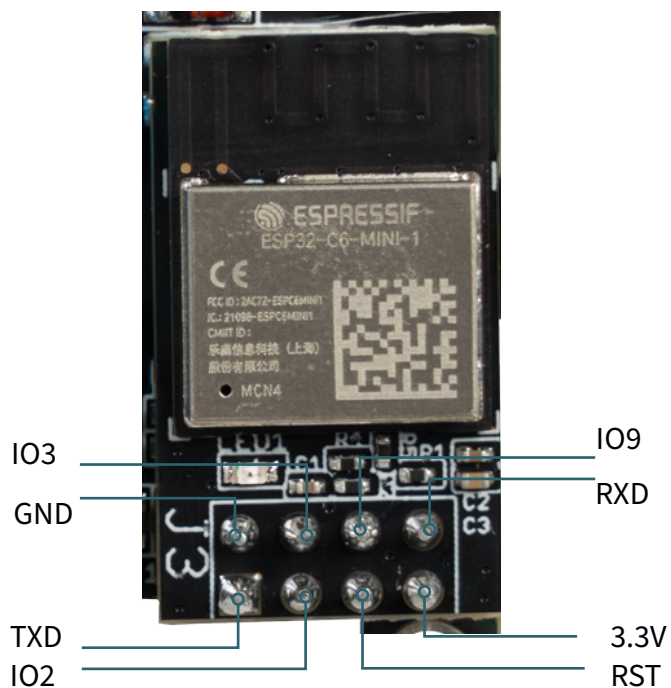


COM (Common): The common connection point of the relay.

NO (Normally Open): Disconnected from COM when the relay is inactive; connected when the relay is activated.

NC (Normally Closed): Connected to COM when the relay is inactive; disconnected when the relay is activated.

Pinout ESP32 module



4. SOFTWARE SETUP

The Arduino IDE is usually used to program the board.

You can download it here:

<https://www.arduino.cc/en/software>

Once you have downloaded and installed the software, you can start it.

Before you can load a sketch, you need to make a few settings for the board.

First you need to add an additional board manager. Got to **File -> Preferences** add the following link to the **Additional boards manager URLs**:

https://dl.espressif.com/dl/package_esp32_index.json

Now go to **Tools -> Board -> Boards Manager...** enter ESP32 in the searchbar and install **esp32 by Espressif Systems**.

To upload a sketch to your module you need to select the right board.

Go to **Tools -> Board -> esp32** and choose the **ESP32C6 Dev Module**.

To connect the module to your PC, you can use a programmer like our [SBC-ESP8266-Prog](#), or use an UART-USB adapter to connect the RXD and TXD pins of the module to your PC.

5. CODE EXAMPLE

In this example code, a web server is created that can be used to control the relay.

You can download the code example from our product page at

www.joy-it.net/products/SBC-ESP32-RM01

After downloading and unzipping the file, you can open it in your Arduino IDE.

Now you can enter the SSID and the password of your WiFi network in line 5 and 6 within the quotation marks.

After you added your WiFi data, you can upload the code to your module. The Module will output the IP-Adress of the webserver in the serial monitor.

You can enter the IP-Adress in the browser of a device in the same network as the ESP module to enter the webserver.

6. INFORMATION & TAKE-BACK OBLIGATIONS

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)



Symbol on electrical and electronic equipment:

This crossed-out garbage can means that electrical and electronic appliances do not belong in household waste. You must hand in the old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed by the old appliance.

Return options:

As an end user, you can hand in your old appliance (which essentially fulfills the same function as the new appliance purchased from us) for disposal free of charge when purchasing a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities regardless of whether you have purchased a new appliance.

Possibility of return at our company location during opening hours:

SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Return option in your area:

We will send you a parcel stamp with which you can return the device to us free of charge. To do so, please contact us by e-mail at Service@joy-it.net or by telephone.

Packaging information:

Please pack your old appliance securely for transportation. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

7. SUPPORT

We are also there for you after your purchase. If you still have any questions or problems arise, we are also available by e-mail, telephone and ticket support system.

E-Mail: service@joy-it.net

Ticket-System: <https://support.joy-it.net>

Phone: +49 (0)2845 9360 - 50

For further information, please visit our website:

www.joy-it.net