

Cuifati Cuifatiu0cks8mzpe1290

# Cuifati 16-Channel USB Controlled Opto-Isolated Relay Module User Manual

## 1. PRODUCT OVERVIEW

This manual provides essential information for the proper setup, operation, and maintenance of the Cuifati 16-Channel USB Controlled Opto-Isolated Relay Module. This device is designed for simple ON/OFF switching of electrical equipment, making it suitable for various applications including robotics and home automation projects.

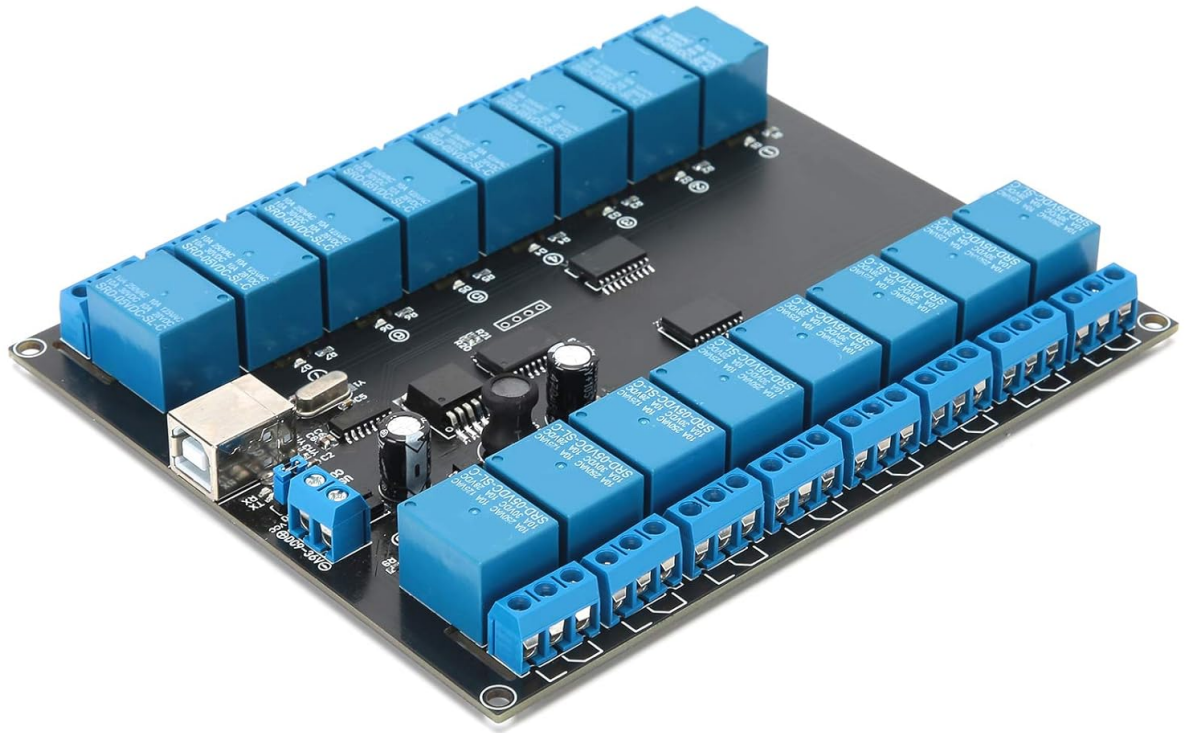


Figure 1: Top-down view of the Cuifati 16-Channel USB Controlled Opto-Isolated Relay Module, showing the 16 blue relays, USB port, and terminal blocks.

## 2. KEY FEATURES

The Cuifati 16-Channel USB Controlled Opto-Isolated Relay Module offers the following features:

- **16 SPDT Relays:** Equipped with sixteen Single-Pole Double-Throw (SPDT) relays for versatile switching applications.
- **USB Control:** Designed for control via a USB interface, allowing integration with various computer systems.
- **Opto-Isolated Design:** Features opto-isolation to protect the control circuit from high-voltage relay circuits, enhancing safety and reliability.
- **LED Indicators:** Includes an LED power indicator and individual LEDs for each relay output, providing clear status feedback.
- **High Load Capacity:** Each relay supports a maximum load of 10A at 250V AC or 10A at 30V DC.

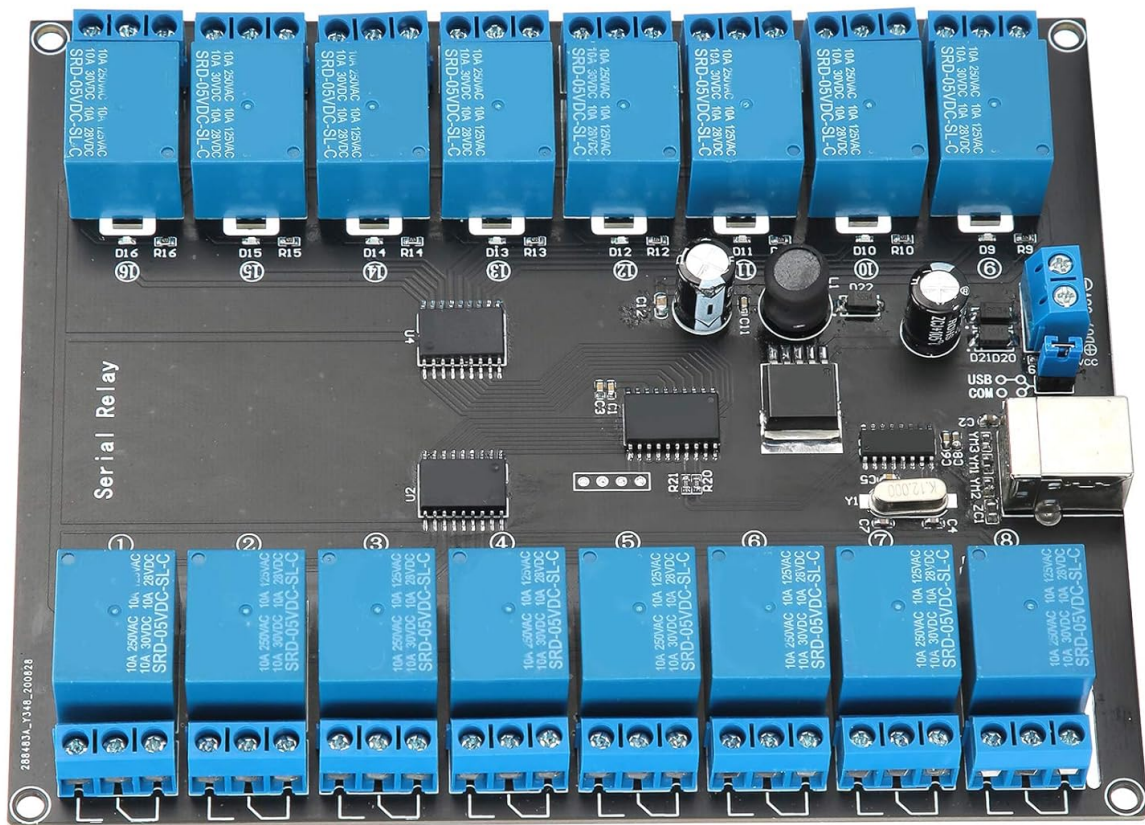


Figure 2: Close-up view highlighting the USB controlled, opto-isolated nature of the board with its 16 SPDT relays.

### 3. SETUP INSTRUCTIONS

Follow these steps to set up your Cuifati Relay Module:

1. **Power Supply Connection:** Connect a DC power supply within the range of 7V to 38V to the designated power input terminals on the module. Ensure correct polarity.
2. **USB Connection:** Connect the module to your computer using a standard USB cable. The USB port is located on the side of the board.
3. **Driver Installation (if required):** Depending on your operating system, you may need to install specific drivers for the USB interface. Refer to your operating system's documentation or the manufacturer's website for driver availability.
4. **Load Connection:** Connect the electrical equipment you wish to control to the relay terminal blocks. Each relay has three terminals: Common (COM), Normally Open (NO), and Normally Closed (NC). Refer to the circuit diagram for your specific application.

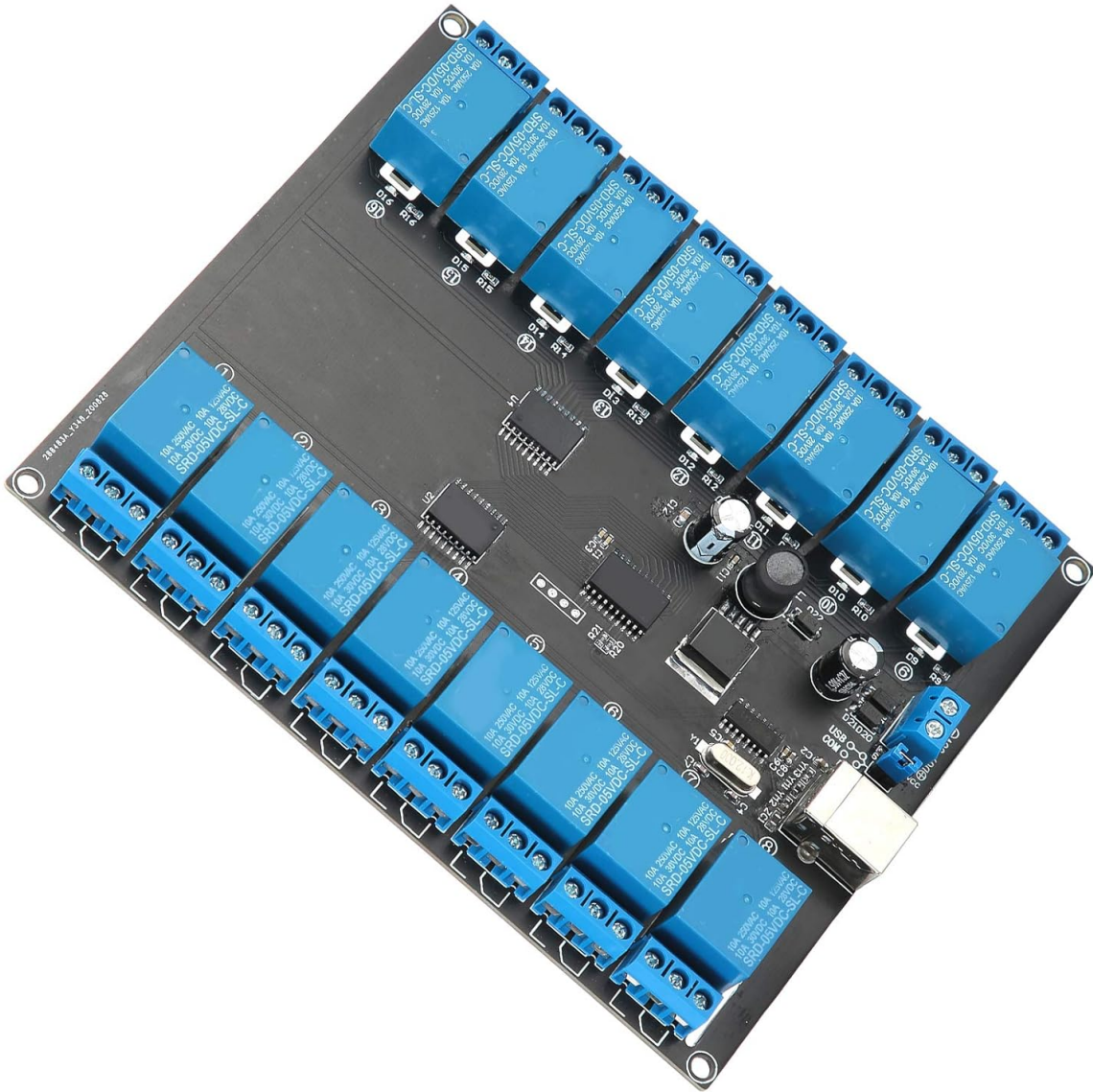


Figure 3: Angled view of the module, illustrating the USB port and power input terminals for connection.

## 4. OPERATING THE MODULE

Once the module is set up, you can operate it via your computer:

- **Software Control:** The module is controlled via USB. You will need to use compatible software or develop custom code to send commands to the module and activate/deactivate the relays. This manual does not provide specific software or programming instructions.
- **LED Indicators:** Observe the LED indicators for operational status. The power LED indicates that the module is receiving power. Each relay has an associated LED that illuminates when the relay is activated.
- **Relay Switching:** When a relay is activated, its contacts will switch from their default state (Normally Closed to Common) to the activated state (Normally Open to Common).



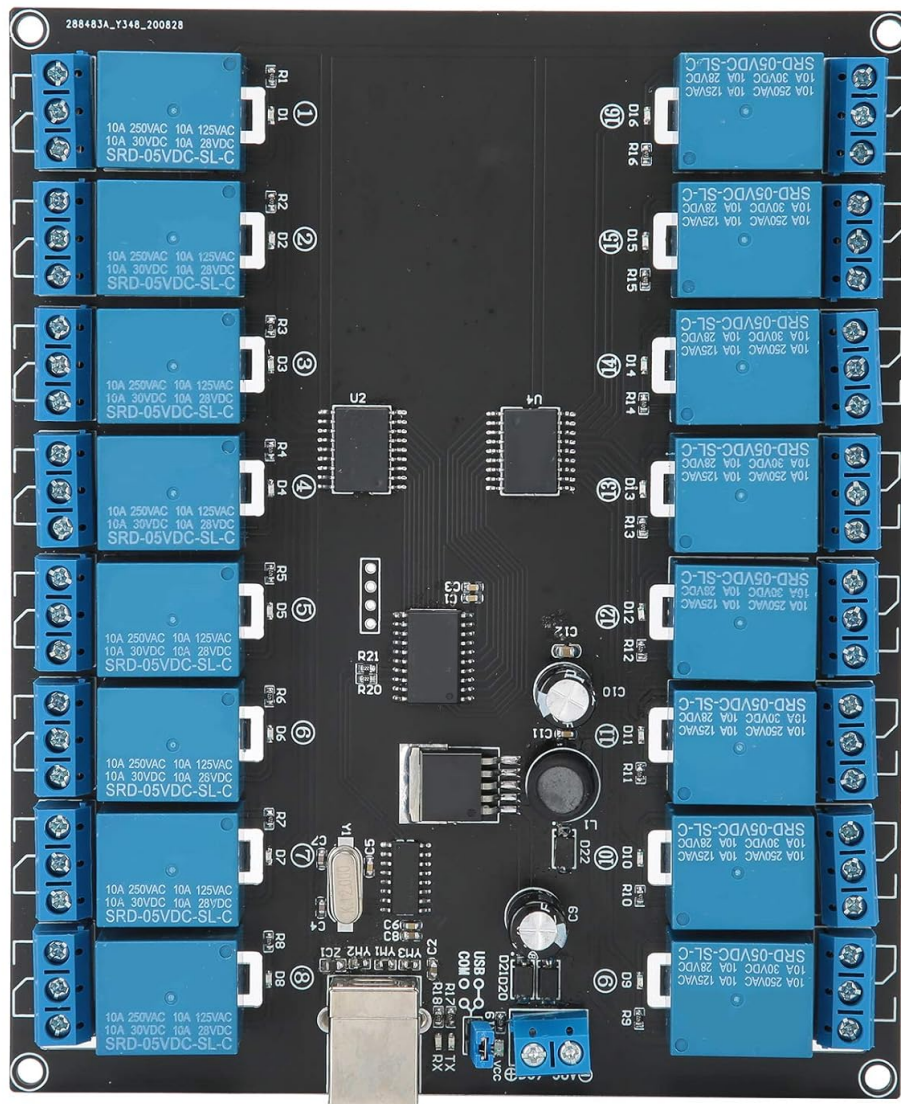


Figure 4: Detailed top-down view of the relay module, showing the layout of relays, control chips, and connection points.

## 5. MAINTENANCE

To ensure the longevity and reliable operation of your relay module, consider the following maintenance guidelines:

- **Keep Clean:** Regularly clean the module with a soft, dry cloth to remove dust and debris. Avoid using liquid cleaners.
- **Avoid Moisture:** Protect the module from moisture and extreme temperatures. Operate it in a dry environment.
- **Proper Handling:** Handle the module with care to prevent physical damage to components or connections.
- **Inspect Connections:** Periodically check all power and load connections to ensure they are secure.

## 6. TROUBLESHOOTING

If you encounter issues with your Cuifati Relay Module, consider the following troubleshooting steps:

- **No Power Indicator LED:**

- Check the power supply connection and ensure it is within the 7V-38V DC range.
- Verify that the power supply is functioning correctly.

- **Relays Not Activating:**

- Ensure the module is properly connected via USB to your computer.
- Confirm that the necessary drivers are installed and recognized by your operating system.
- Verify that your control software or code is sending the correct commands to the module.
- Check the load connections to the relay terminals.

- **Module Not Recognized by Computer:**

- Try a different USB port on your computer.
- Use a different USB cable.
- Reinstall or update the USB drivers for the module.

- **General Operation:** Note that this manual does not include specific software or programming instructions for controlling the module. Users are expected to source or develop their own control interface.

## 7. SPECIFICATIONS

Feature	Specification
Model Number	Cuifatiu0cks8mzpe1290
Number of Relays	16
Relay Type	SPDT (Single-Pole Double-Throw)
Control Interface	USB
Isolation	Opto-isolated
Max Load per Relay	10A / 250V AC, 10A / 30V DC
Power Supply	7V - 38V DC
Indicators	Power LED, 16 Relay Status LEDs, USB LED
Dimensions (L x W x H)	Approximately 1 x 1 x 1 cm (Product dimensions from source: 1 x 1 x 1 cm)
Weight	Approximately 392 grams
Manufacturer	Cuifati
Country of Origin	China



Figure 5: Bottom view of the Printed Circuit Board (PCB) for the relay module.

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided at the time of purchase or contact the seller/manufacturer directly. This manual does not include specific warranty terms or support contact details.