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GODIYMODULES EC11

GODIYMODULES 1.3 inch White OLED Display with EC11 Rotary Encoder Module User Manual

Model: EC11 | Brand: GODIYMODULES

1. PRODUCT OVERVIEW

The GODIYMODULES 1.3 inch White OLED Display combined with an EC11 Rotary Encoder Module is an integrated component designed for microcontroller projects, particularly with Arduino. This module features a 1.3-inch OLED display with an IIC (I2C) interface and an EC11 rotary encoder for user input. It also includes independent return and confirmation buttons, offering a compact and versatile user interface solution.

2. WHAT'S IN THE BOX

- 1 x 1.3 inch White OLED Display with EC11 Rotary Encoder Module
- 1 x Rotary Encoder Knob
- 1 x Set of Mounting Hardware (Nut and Washer for encoder)
- 1 x 9-pin Header (for connections)

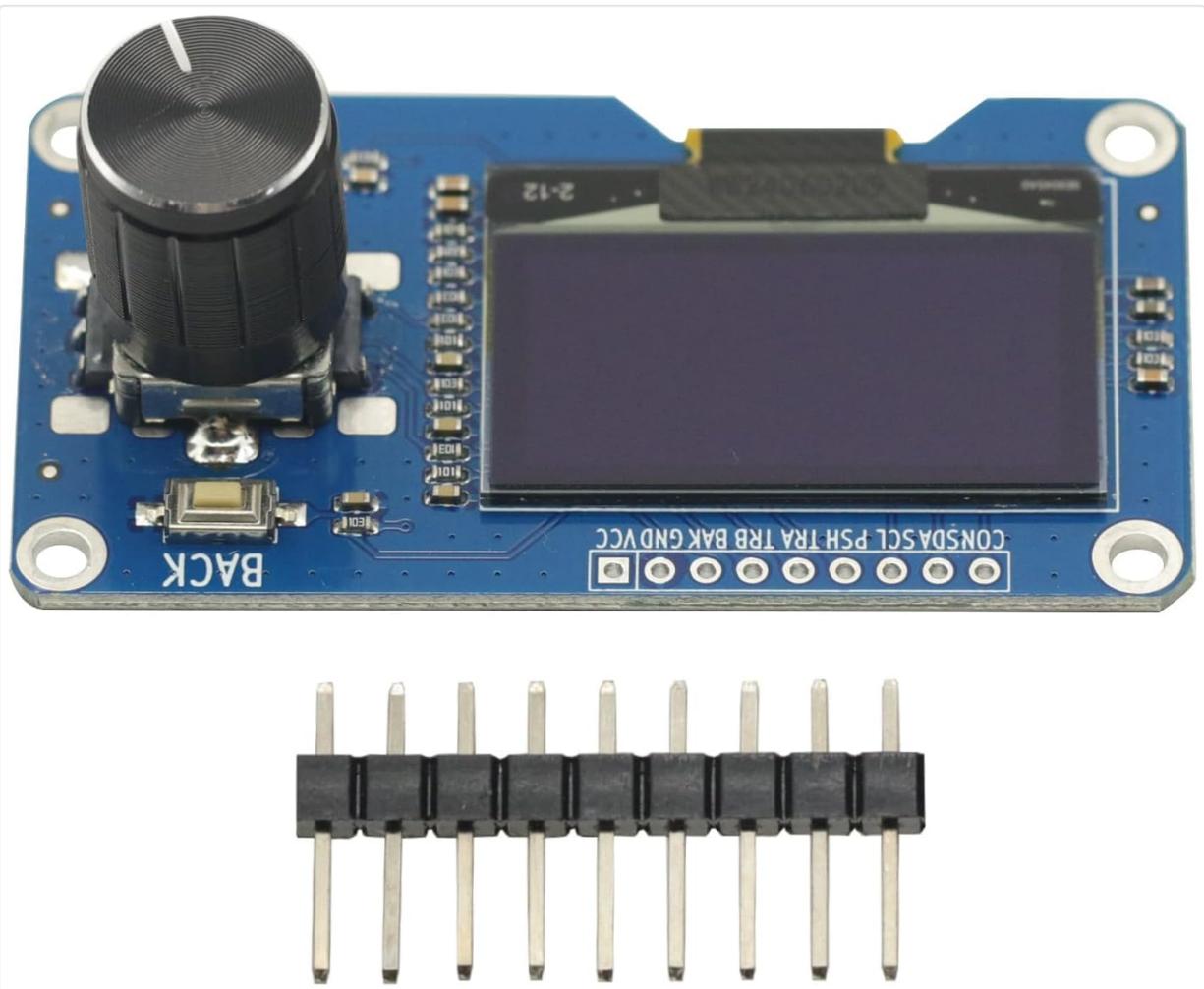


Image: The 1.3 inch White OLED Display with EC11 Rotary Encoder Module, along with its rotary knob and separate header pins.

3. SPECIFICATIONS

Feature	Description
Display Type	1.3 inch White OLED
Encoder Type	EC11 Rotary Encoder
Interface	IIC (I2C)
Operating Voltage	3.3V (as per product description)
OLED Driver Chip	SH1106
Encoder Handle Length	15mm
Encoder Pulses	20 pulses per rotation
Encoder Switch	Integrated push-button switch
Additional Buttons	Confirm and Back buttons

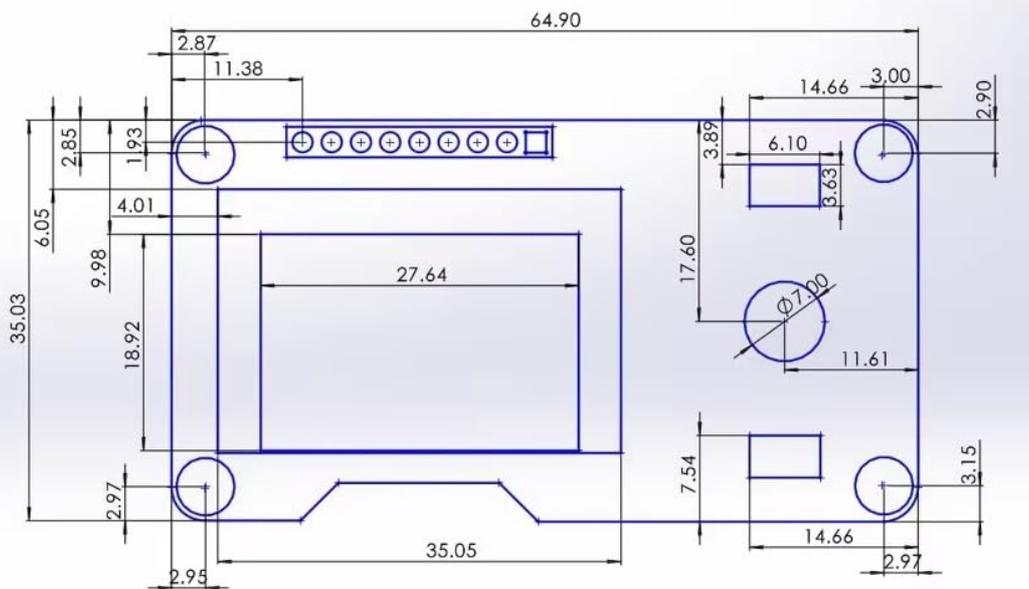


Image: Module dimensions for integration into projects.

4. SETUP

4.1 Pinout Diagram

Refer to the following diagram for the module's pin assignments to ensure correct wiring with your microcontroller.

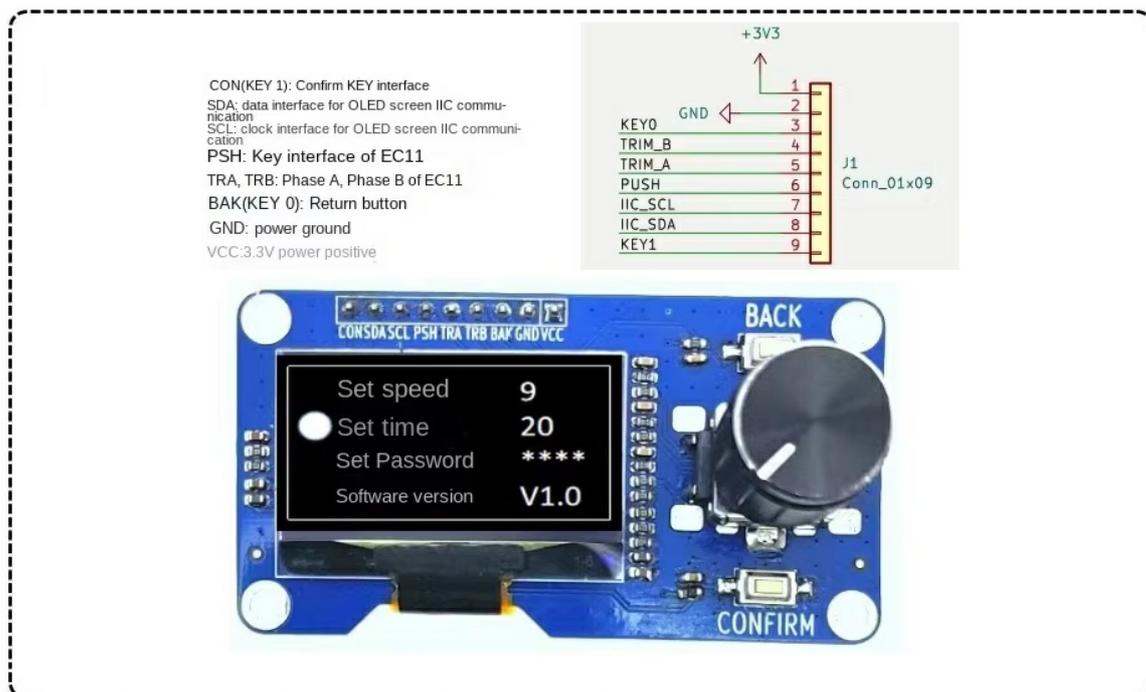


Image: Detailed pinout for connecting the module to a microcontroller.

- **CON (KEY 1):** Confirm Button Interface
- **SDA:** IIC Data Interface for OLED Screen Communication

- **SCL:** IIC Clock Interface for OLED Screen Communication
- **PSH:** Key Interface of EC11 (Push-button switch)
- **TRA, TRB:** Phase A, Phase B of EC11 (Rotary encoder outputs)
- **BAK (KEY 0):** Return Button
- **GND:** Power Ground
- **VCC:** 3.3V Power Positive

4.2 Attaching the Rotary Knob

To use the rotary encoder, attach the provided knob to the encoder shaft. Ensure it is firmly seated for proper operation.

Your browser does not support the video tag.

Video: Demonstration of attaching a rotary knob to an encoder module. This process is similar for the EC11 module.

5. OPERATING INSTRUCTIONS

5.1 Rotary Encoder Functionality

- **Rotation:** The EC11 rotary encoder provides incremental feedback when rotated clockwise or counter-clockwise. This can be used for menu navigation, value adjustment, or other continuous input.
- **Push-Button:** The encoder shaft can be pressed down, acting as a push-button switch. This is typically used for selection or confirmation.

5.2 Dedicated Buttons

- **Confirm Button (CON/KEY 1):** Activates a selected option or confirms an action.
- **Back Button (BAK/KEY 0):** Navigates back in a menu or cancels an action.

5.3 OLED Display Usage

The 1.3 inch White OLED display communicates via the IIC (I2C) interface. It can be programmed to display text, graphics, and user interface elements. Libraries such as Adafruit_SH110X (as noted by a user review for SH110X driver) are commonly used for controlling SH1106-based OLED displays with microcontrollers like Arduino.



Image: Example of a menu interface displayed on the OLED screen, demonstrating typical usage.

6. MAINTENANCE

- Keep the module clean and free from dust and moisture.
- Avoid exposing the OLED display to direct sunlight for extended periods to prevent screen degradation.
- Handle with care to prevent physical damage to the display or encoder components.
- Ensure proper power supply (3.3V) to avoid damage to the module.

7. TROUBLESHOOTING

- **Display Not Lighting Up:**
 - Verify power connections (VCC and GND) are correct and providing 3.3V.
 - Check IIC (SDA, SCL) connections for continuity and correct pin assignment.
 - Ensure the correct display library (e.g., Adafruit_SH110X) is installed and initialized in your code.
 - Confirm the IIC address of the OLED module. Common addresses are 0x3C or 0x3D.
- **Rotary Encoder Not Responding:**
 - Check connections for TRA, TRB, and PSH pins to your microcontroller.
 - Ensure your code correctly reads the encoder's state changes and button presses.
 - Verify the knob is securely attached to the encoder shaft.
- **Buttons Not Working:**
 - Confirm the CON and BAK pins are correctly wired and configured as inputs in your code.
 - Ensure pull-up resistors are enabled for the button pins if not externally provided.

8. WARRANTY AND SUPPORT

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. For technical support, troubleshooting assistance, or warranty claims, please contact GODIYMODULES customer service through your purchase platform. Please provide your order number and a detailed description of the issue.