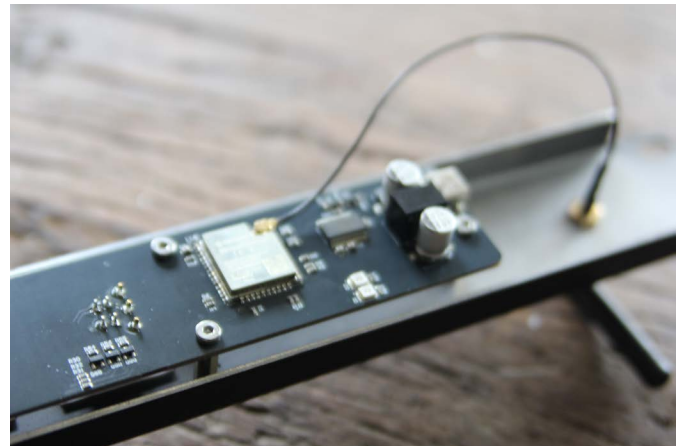# ESP32-8SW

TENSORY

Note:
The real-life colors are more intense and vibrant than captured on camera.

Ultra-slim 1U profile — perfect for shallow rack systems.

Removable key caps allow for easy labeling with user-defined paper inserts.

Powered via USB-C simple and modern.

Overview:

This RGB button panel features 8 industrial-grade push buttons with integrated RGB lighting.
Each button can be individually monitored and controlled via Home Assistant
using ESPHome.

Specifications:

- Microcontroller: ESP32-WROOM
- Button Inputs: 8 (GPIO, external pulldown)
- RGB Control: 2x PCA9685 (24 PWM channels)
- Power: 5V via USB-C
- Communication: Wi-Fi (Home Assistant via ESPHome API)
- Fallback Hotspot: Enabled (for reconfiguration)
- Firmware upload: USB-C (ESPHome or Arduino project)

Installation:

- Mounting: Optional 19" 1U rack front panel (1.5mm steel)

Software Features:

- Color control per button (RGB)

Example Use Cases:

- Mood lighting controller
- Scene selector

ARDUINO

ESPHome

ESP8-SW - Setup Guide for New Users

Step 1: Power On the Device
Plug in the ESP8-SW controller. If it doesn't detect a known Wi-Fi network, it will automatically start fallback mode

Step 2: Connect to the Fallback Hotspot
1. On your phone or computer, go to your Wi-Fi settings.
2. Connect to the Wi-Fi network named: ESP8-SW Fallback Hotspot
3. Password: ODESSA!!

Step 3: Open the Setup Portal
1. Open your web browser.
2. Go to: http://192.168.4.1
3. The Wi-Fi setup screen will appear.

Step 4: Enter Your Home Wi-Fi Details
1. Select your home Wi-Fi network.
2. Enter the correct password.
3. Click "Save".
The device will now reboot and try to connect to your network.

Step 5: Add the Device to Home Assistant
Once connected:
1. Open Home Assistant.
2. You should see: "New device discovered: ESP8-SW"
3. Click Configure and follow the instructions.

This gives you:
- 8 switch sensors (Key 1-8)
- 8 RGB light controls (per key)

Troubleshooting:
If the ESP8-SW fails to connect to your network, it will automatically return to fallback mode after a failed attempt.