

# ESP8266 and P10 LED Panels.

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## ESP8266 and P10 LED panels.

Hey Science Enthusiasts! Get ready to dive into the world of visual display projects with the ESP8266 and P10 LED panels. Today, we're building a dynamic scrolling text display that can show messages like "Learn Coding in English at Surin Learning Lab!" It's perfect for storefronts, classrooms, or even home decor. This guide will walk you through setting up and programming your LED panel to create eye-catching displays. Let's illuminate those LEDs!

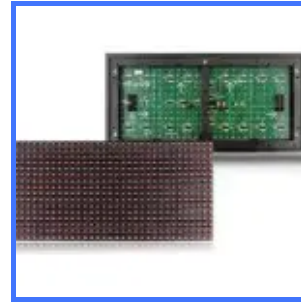
## Materials You'll Need:

- **ESP8266 Module:** The microcontroller that will drive our project.

- **P10 LED Panel(s)**: Depending on your display size, you can use 1 or more panels. The panels are 16 columns by 1 row.
- **DMDESP Library**: To control the P10 panels with the ESP8266.
- **Power Supply**: Suitable for powering the ESP8266 and your P10 panels.
- **Connecting Cables**: For connecting panels to the ESP8266.

 English

ESP8266 NodeMCU




P10 LED Panel



Power Supply

## Step 1: Connect the Hardware

Let's get everything connected correctly.

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- **Setup the P10 Panels:**

- Arrange your P10 LED panels in the desired configuration (2×1 in this guide).
- Connect the panels to each other, ensuring proper alignment of the data and power connectors.

- **Connect P10 to ESP8266:**

- Use the connecting cables to hook up the data input of the first P10 panel to the ESP8266.
- Ensure the ESP8266 is connected to a power source that can also adequately power the P10 panels.

P10 led panel input pins	ESP8266 pins
A	D0
B	D6
CLK	D5
SCK	D3
R	D7
NOE	D8
GND	GND

## Step 2: Software Setup

Now, let's program the ESP8266 to control the LED panels.

- **Install Arduino IDE:**

- If not already installed, download and install the Arduino IDE.

- **Configure the Arduino IDE:**

- Add the ESP8266 board to your Arduino IDE.
- Install the DMDESP library through the Library Manager.

- **Programming the ESP8266:**


- Open the Arduino IDE and create a new sketch.
- Copy the provided code into your IDE. This code initializes the P10 panels, sets brightness, and handles the scrolling text logic.

- **Customize Your Message:**

- Modify the teks array in the sketch to display your custom message or information.

- **Upload the Code:**

- Connect your ESP8266 to your computer via
- Select the correct board and port in the Arduino IDE.
- Upload the sketch to the ESP8266.

 English[🔗 Click here for Arduino Sketch](#)

## Step 3: Test and Deploy

Let's light it up and see the magic happen!

- **Power Everything Up:**

- Ensure that both the ESP8266 and the P10 panels are properly powered.

- **Watch Your Message Scroll:**

- Once powered on, your P10 display should start showing the scrolling text based on the settings in your sketch.

🌟 Congratulations! Your Scrolling Text LED Display is Ready! 🌟

## Troubleshooting Tips:


- **Text Not Displaying Correctly?** Check your connections between the ESP8266 and the P10 panels. Ensure that the data lines are not loose.
- **Display Not Powering On?** Verify that your power supply is adequate and correctly connected.
- **Garbled Text or Flickering?** Adjust the brightness in the sketch or check the refresh rate settings in the DMDESP library

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