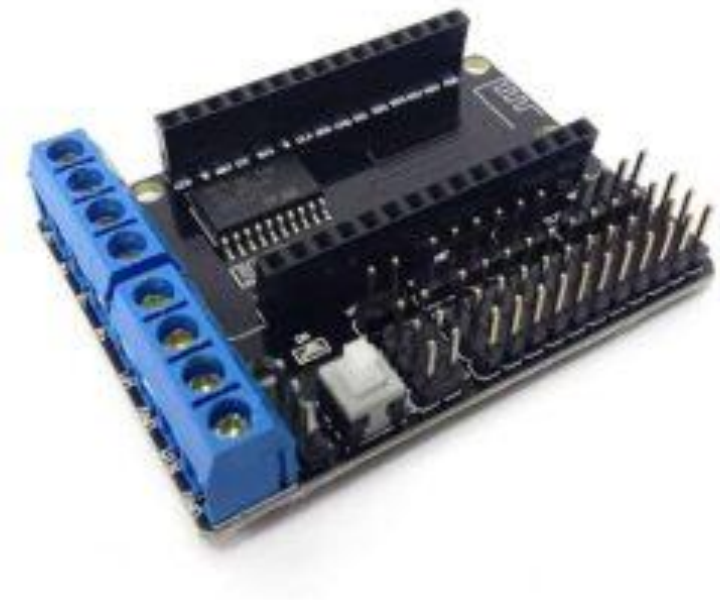
L293D Motor Driver Shield for NodeMCU ESP12E

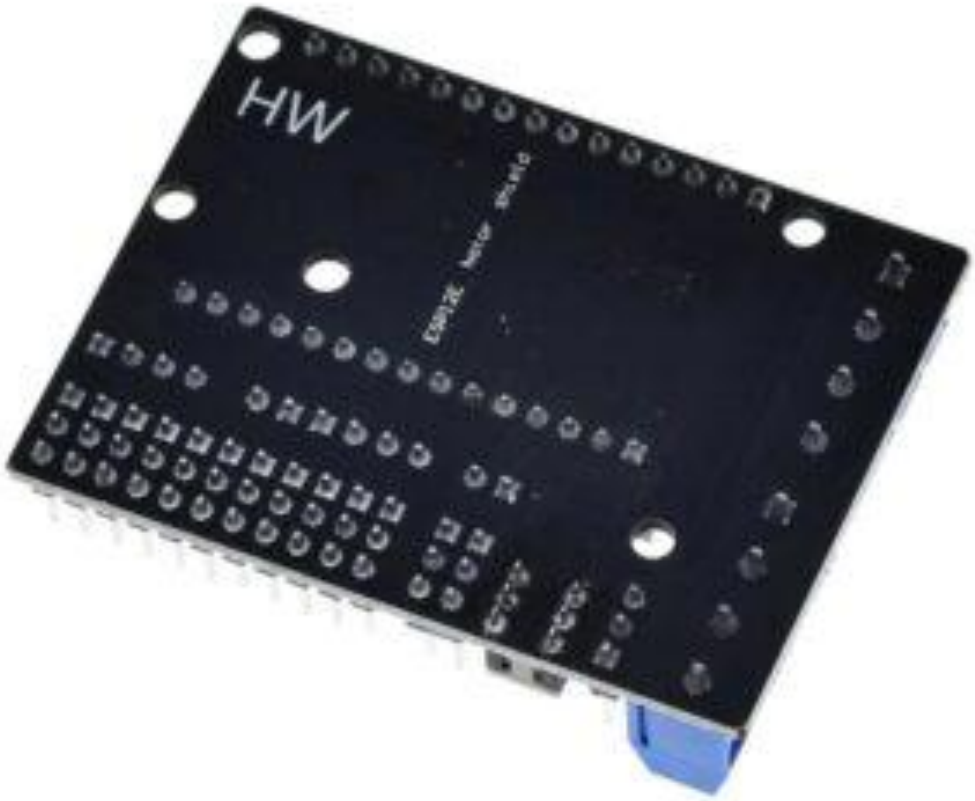
The **L293D Motor Driver Shield for NodeMCU ESP12E** is a powerful and compact motor control expansion board designed specifically for **ESP8266 NodeMCU Wi-Fi development boards**. Using the **L293D motor driver IC**, this shield makes it easy to control **DC motors, stepper motors, and servo motors** directly from your NodeMCU board. With built-in support for **Wi-Fi connectivity**, this combination is perfect for creating **IoT-based robotics and automation projects**.

Whether you are a **beginner experimenting with motor control** or an **advanced developer building a smart robot or home automation system**, this shield provides the reliability and performance needed for efficient motor management.



Key Features of L293D Motor Driver Shield for NodeMCU ESP12E

- **Motor Driver IC (L293D)**: Dual H-Bridge motor driver for controlling up to **2 DC motors or 1 stepper motor**.
- **Servo Support**: Dedicated pins for controlling up to **2 servo motors**.
- **NodeMCU Compatibility**: Designed to fit **ESP8266 NodeMCU ESP-12E** boards seamlessly.
- **Wi-Fi Based Motor Control**: Combine motor driving with Wi-Fi connectivity for **IoT and remote control projects**.
- **Power Input Flexibility**: Supports **external power supply** for motors up to 36V (depending on motor requirements).
- **Compact Design**: Stacks directly on top of the NodeMCU, saving space in robotics projects.
- **Easy to Use**: No soldering required – simply plug and play with NodeMCU.
- **Wide Application**: Perfect for **smart cars, IoT-controlled robots, stepper-driven automation, and DIY electronics projects**.



Technical Specifications

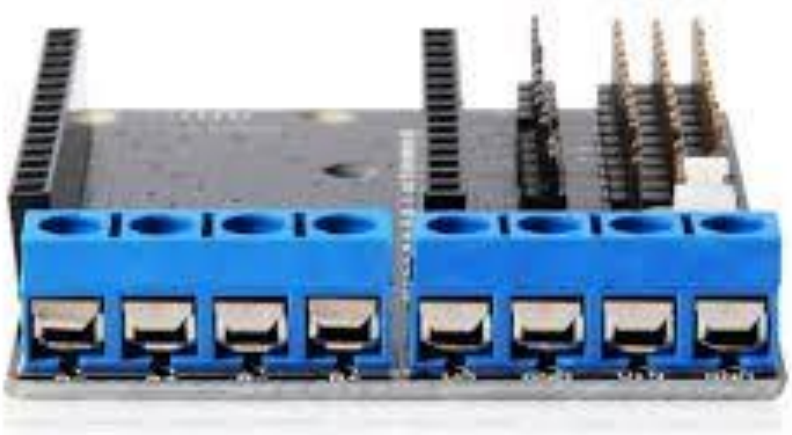
- **Motor Driver IC**: L293D dual H-bridge
- **Operating Voltage (Logic)**: 5V from NodeMCU
- **Motor Supply Voltage**: 4.5V – 36V (external power supply required for motors)
- **Current per Channel**: Up to 600mA continuous (peak 1.2A per channel)
- **Supported Motors**:
  - 2 DC motors (forward & reverse control)
  - 1 stepper motor (bipolar or unipolar)
  - Up to 2 servo motors
- **Communication Interface**: GPIO pins from NodeMCU
- **Compatibility**: ESP8266 NodeMCU ESP-12E and ESP-12F boards
- **Dimensions**: Compact shield form factor for stacking
- **Additional Features**: Onboard power selector jumper for easy switching between logic and motor supply

Why Choose the L293D Motor Driver Shield for NodeMCU ESP12E?

1. **Seamless Integration with NodeMCU** – Designed specifically for ESP8266 NodeMCU boards, ensuring easy connectivity.
2. **Multiple Motor Control** – Drive **DC motors, stepper motors, and servo motors** all from one shield.
3. **IoT & Robotics Ready** – Combine Wi-Fi capabilities of NodeMCU with motor control for **remote-controlled smart robots**.
4. **Compact and Efficient** – Saves space with stackable shield design, making it ideal for small robotic projects.
5. **Beginner-Friendly** – Easy to set up with Arduino IDE or NodeMCU firmware (such as ESPHome or MicroPython).

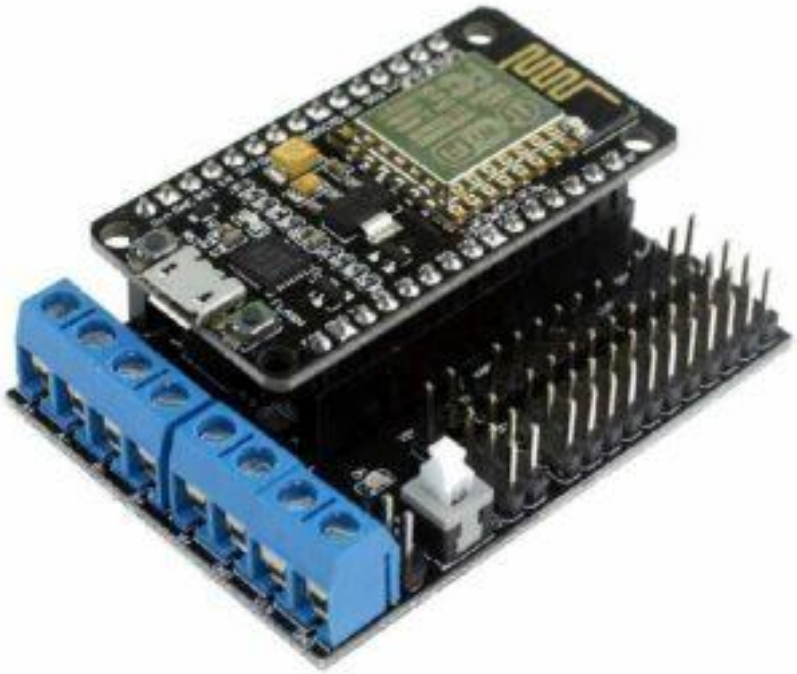
Applications of L293D Motor Driver Shield for NodeMCU ESP12E

- **IoT-Controlled Smart Cars** – Build Wi-Fi controlled robotic vehicles.
- **Home Automation Projects** – Automate curtains, fans, and appliances with motorized systems.
- **Stepper Motor Applications** – Control CNC mini machines, 3D printers, and precise stepper-based devices.
- **Robotics** – Drive robot wheels, robotic arms, and servo-based projects.
- **IoT Experiments** – Learn wireless motor control using ESP8266 and L293D.
- **Smart Agriculture Projects** – Automate irrigation pumps and moving parts in greenhouse systems.



How to Use the L293D Motor Driver Shield with NodeMCU ESP12E

1. **Mount the Shield** – Place the L293D shield directly on top of your **NodeMCU ESP-12E board**.
2. **Connect Motors** – Attach your DC motor, stepper motor, or servo motor to the output pins.
3. **Provide Power** – Use an external power supply for motors (if required) to handle higher voltage or current.
4. **Upload Code** – Use Arduino IDE, MicroPython, or NodeMCU firmware to program motor behavior.
5. **Control via Wi-Fi** – Use ESP8266's Wi-Fi features to control motors remotely via smartphone or web applications.



This combination allows you to build **powerful IoT-based motor control systems** quickly and effectively.

Package Includes

- 1 × **L293D Motor Driver Shield for NodeMCU ESP12E**

Conclusion

The **L293D Motor Driver Shield for NodeMCU ESP12E** is the perfect solution for controlling **DC motors, stepper motors, and servo motors** using your NodeMCU development board. With **Wi-Fi connectivity, compact design, and versatile motor control support**, it is widely used in **IoT robotics, automation systems, smart vehicles, and DIY electronic projects**.

If you want to build **Wi-Fi-controlled robots or smart automation projects**, this shield provides the **simplicity, performance, and flexibility** you need.