ESP32 Microcontroller Development Platform with application modules

Nvis 5006

New

Nvis 5006 ESP32 Microcontroller Development Platform is design for developers to master IoT and wireless communication using a single-core 32-bit processor. This platform offers hands-on experience with integrated Wi-Fi and Bluetooth, allowing then to dive into projects like smart automation, sensor interfacing, and cloud connectivity. With detailed tutorials and practical exercises, learners will develop strong skills in C/C++ programming, IoT systems, and wireless networking, making it ideal for both structured classroom learning and individual exploration.

Scope of Learning

- Experiment with wi-fi and bluetooth for communication.
- Study and use of Relay module interface control high-voltage devices by interfacing a relay module and switching appliances on/off.
- Study and use of LED Interface.

  Understand the working of LEDs by toggling them on/off and creating patterns using GPIO pins.
- Study and use of LDR Interface.

  Explore light-based communication by interfacing an LDR, detecting light intensity changes.
- Study and use of Temperature Sensor Interface.

  Measure ambient temperature by interfacing a temperature sensor and displaying data on the TFT/LCD.
- Study and use of LCD Interface.

  Learn how to display text and data on an LCD by connecting it to GPIO pins and controlling it via code.
- Study and use of Potentiometer Interface.

  Understand analog input by interfacing a potentiometer, reading voltage changes, and adjusting output accordingly.

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Features

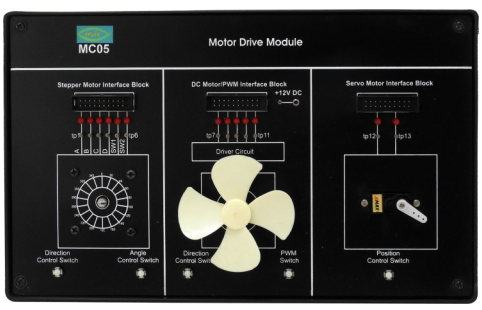
- On-board 12V, 5V and 3.3V supply for powering various components.
- On-board TFT display for real-time data visualization and graphical projects.
- On-board potentiometer for analog input testing and signal variation.
- On-board GPIO pins for interfacing with external sensors, modules, and peripherals.
- On-board USB interface for programming, power supply, and data communication.
- On-board Sensors (Temperature and LDR) and modules for experimenting with real-world applications and projects.
- On board 2 FRC connectors for interfacing microcontroller modules.

Suggested modules (optional)

- Nvis MC01-Input interface module
- Nvis MC04 - Display module
- Nvis MC05 - Motor drive module
- Nvis MC10 - Display and switches module
- Nvis MC20BT - Bluetooth module
- Nvis MC20RFID - RFID module

Technical Specifications

MCU	:	ESP32
Dev board	:	ESP32 dev board
Clock frequency	:	240MHz
Architecture	:	32-bit Single-core
On board GPIO	:	10 Nos.
Communication	:	USB
Programming Port	:	USB-B (female)
Programming Software	:	Arduino Ide



Subject to change - Version 1.0

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