STM32 Microcontroller Development Platform with application modules

Nvis 5007

Nvis 5007 STM32 Microcontroller Development Platform offers a comprehensive learning experience, enabling developers to explore core microcontroller concepts such as interfacing sensors, displays, and communication modules. With easy-to-understand tutorials and practical projects, learners will gain proficiency in C/C++ programming and real-time embedded applications, preparing them for advanced technical challenges in the field of electronics and embedded systems. Perfect for both classroom and individual learning.

Scope of Learning

- 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 Buzzer Interface.

  Learn how to connect and control a buzzer using GPIO pins, generating sound alerts through software.
- 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 Laser and LDR Interface.

  Explore light-based communication by interfacing a laser and 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

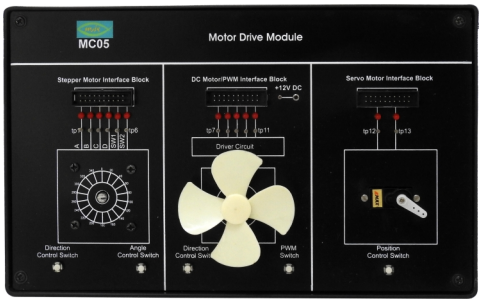
- On-board 12V, 5V and 3.3V supply for powering various components.
- On-board TFT display for real-time data visualization and graphical projects.
- On-board potentiometer for analog input testing and signal variation.
- On-board GPIO pins for interfacing with external sensors, modules, and peripherals.
- On-board USB interface for programming, power supply, and data communication.
- On-board Sensors (Temperature and LDR) modules for experimenting with real-world applications and projects.
- On board 2 FRC connectors for interfacing Micorcontroller 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	:	STM32F103C8T6
Dev board	:	STM32 blue pill
Clock frequency	:	72 MHz
Architecture	:	ARM Cortex-M3 core
On board GPIO	:	4 nos.
Communication	:	ST-Link
Programming Port	:	USB-B (female)
Programming Software	:	Arduino Ide



Subject to change - Version 1.0

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