



# KIT FOR THE STUDY OF MICROCONTROLLERS



DL 3155BRS-M24

### LEARNING EXPERIENCES

#### **DIGITAL IN/OUT**

- Exercise 01: Turn ON and OFF a LED by pressing a button
- Exercise 02: Displays the values read from Digital Inputs
- Exercise 03: Turns on LEDs two by two when some buttons are pressed
- Exercise 04: Counts in binary mode up to 1111
- Exercise 05: Turns ON LEDs one by one.

#### SENSORS

- Exercise 01: Displays the value of Vin
- Exercise 02: Displays the Temperature value
- Exercise 03: Displays the value of Light intensity
- Exercise 04: Displays the value from PTC sensor

#### D/A & A/D CONVERTER

- Exercise 01: Displays the value that is set with the potentiometer on the D/A Converter
- MEMORY
- Read or write the memory of the microcontroller MOTOR CONTROL
- Exercise 01: Change the speed and the direction of rotation od DC motor
- Exercise 02: Increase or decrease the stepper speed

#### OPTO IN/OUT (PIC16; PIC18; PIC24; PIC32)

• Exercise 01: Display the status of the optoisolated inputs

## **CIRCUIT BLOCKS**

• PIC 16 mini board

and computer engineering.

fundamentals and

microcontrollers.

- PIC 18 mini board
- PIC 24 mini board
- PIC 32 mini board
- Digital IN/OUT mini board
- TTL IN/OUT mini board
- Sensors mini board
- D/A A/D converters mini board
- Memory (EEPROM & RAM) mini board

The design and construction of electronic circuits to solve practical problems is an essential technique in the fields of electronic engineering

With this board the students can study the

the

characteristics

of

- Motor control mini board
- Opto IN/OUT mini board
- SPI-UART interfaces mini board
- LCD display mini board

Complete with theoretical and practical manual. Dimensions of the board: 297x260m





#### SPI-UART

- Exercise 01: Display the status of inputs
- Exercise 02: Enables the use in binary mode depending on the decimal value set on display
- Exercise 03: Sends through RS232 a string of characters viewed on hyperterminal
- Exercise 04: The microcontroller receives a string of characters sent by hyperterminal through RS232 and allows displaying them on LCD

## ACCESSORY INCLUDED: DL 2555ALG - DC POWER SUPPLY



• ± 5 Vdc, 1 A • ±15 Vdc, 1 A