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# **Multi - Function Shield**



## **DESCRIPTION:**

Multifunctional Expansion Board Shield kit Based Learning for Arduino UNO R3 with good price, This is an open-source code base and Simple i / o platform, and with the use of a similar java, C language development environment. So you can quickly use the language with Flash or Processing ... and other software to make interactive works . Can be used to complete the development of electronic components such as Switch or Sensors or other controllers , LED, stepper motor or other output device . You can also operate independently as a software platform that can communicate with , for example , said : flash processing Max / MSP VVVV or other interactive software ... to develop an open-source IDE interface is based on the principle that allows you to download free of charge to develop more surprising interactive work.

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Arduino is an open-source physical computing platform based on a simple i/o board and a development environment that implements the Processing/Wiring language. Arduino can be used to develop stand-alone interactive objects or can be connected to software on your computer (e.g. Flash, Processing, MaxMSP). The open-source IDE can be downloaded for free (currently for Mac OS X, Windows, and Linux).

The Arduino Mega is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4

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UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. The Mega is compatible with most shields designed for the Arduino Duemilanove or Diecimila.

The Mega 2560 R3 also adds SDA and SCL pins next to the AREF. In addition, there are two new pins placed near the RESET pin. One is the IOREF that allow the shields to adapt to the voltage provided from the board. The other is a not connected and is reserved for future purposes. The Mega 2560 R3 works with all existing shields but can adapt to new shields which use these additional pins.

This Arduino Uno and Leonardo compatible multifunction experimenter shield (HCARDU0085) has a large range of features which makes it ideal for beginners who just want to experiment and learn, or just as a general purpose shield for more advanced uses. Besides the feature rich range of components fitted to the shield, there are also a range of expansion...

This Arduino Uno and Leonardo compatible multifunction experimenter shield (HCARDU0085) has a large range of features which makes it ideal for beginners who just want to experiment and learn, or just as a general purpose shield for more advanced uses. Besides the feature rich range of components fitted to the shield, there are also a range of expansion headers for convenient interfacing of external modules and components. The shield includes R3 type headers for easy connection to your Arduino board. If you have a pre R3 design Arduino, please check for compatibility before purchase.

Please note: Before applying power to your Arduino board check that other than the header pins, no part of the underside of this shield is in contact with the host board.

Multi function experimenter shield features:

- 4 digit 7-segment LED display module driven by two serial 74HC595's
- 4 x surface mount LED's in a parallel configuration
- 10K adjustable precision potentiometer
- 3 x Independent push buttons
- Piezo buzzer
- DS18B20 temperature sensor interface
- LM35 temperature sensor interface
- Infrared receiver interface
- Serial interface header for convenient connection to serial modules such as Bluetooth,
- wireless interface, voice module, a voice recognition module etc

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## **FEATURES:**

- With the market, 2009 UNO LENARDO 2560 controller seamlessly mainstream
- 4 -way LED indicator ( LED indicator to know the importance , in the actual doing projects , with this indicator can be used directly working status LED indicates the procedure to facilitate debugging.
- DS18B20 temperature sensor interface that can be done to measure the temperature of the experiment, this price does not include the DS18B20 Oh, needed another shot.
- LM35 temperature sensor interface that can be done to measure the temperature of the experiment , this price does not include LM35 Oh, needed another shot .
- 3296 precision adjustable potentiometer, analog input port ( can be used for controlling LED brightness, turn the steering angle, the digital voltage, etc. )
- Integrated infrared receiver that can fit any infrared remote control experiments, the price also does not include the integrated receiver and needed another shot.
- Four digital tube ( using 74HC595 driver provincial IO learning SPI), you can do digital display experiment ( can display temperature , voltage, counter value , etc. ) .
- Three separate buttons, a reset button, the button can do experiments (HMI).
- Sound can be used for experiments. (Can call the police, pronunciation, etc.)
- Bluetooth, wireless interfaces, voice module , voice recognition module can be used for wireless communication experiment
- Servo interface, easy to drive servos
- Infrared detection interface, easy and infrared docking realization of human traffic statistics, etc.

## **Specifications:**

- Dimensions: 69 x 54 x 11 (L / W / H)
- Weight: 27g

## **Applications :.**

- The buzzer sound can be used for experiments. (Can call the police, pronunciation etc.)
- Bluetooth, wireless interfaces, voice module , voice recognition module can be used for wireless communication experiment
- Servo interface, easy to drive servos
- Infrared detection interface, easy and infrared docking realization of human traffic statistics, etc.