SEGMIC
ENGINEERING

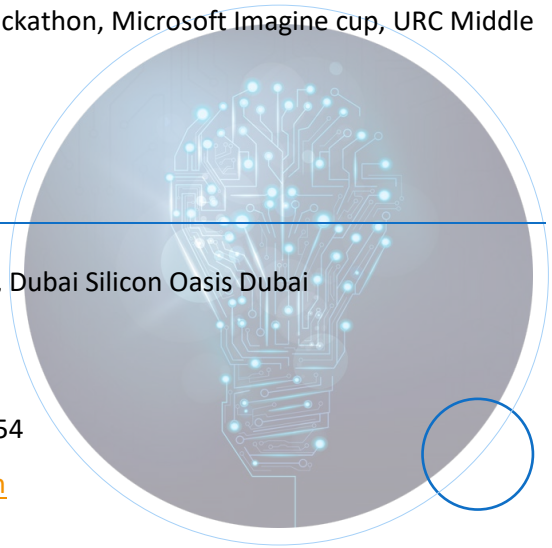
Who we are

Segmic is an engineering company that focuses on different market verticals from engineering development and projects, our educational department pioneers in training students in secondary schools and undergraduate engineers by focusing on the reinforcement of innovative thinking.

Our educational department provides product lines ranging from Arduino boards, smart kits with different applications, shields, sensor modules, Raspberry Pi, and Micro:bit extension boards to complete starter kits designed for customers of any level to learn Arduino knowledge.

All the products comply with international quality standards and are greatly appreciated in a variety of different markets throughout the world.

Our Engineers won more than 15 local and international competitions such as Hackathon, Microsoft Imagine cup, URC Middle East, IEEE, UGSRC... etc.



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Creativity & innovation

Segmic Engineering

Educational Department

SEGMIC ENGINEERING

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Our Products & Services

Training Sessions

Taking schools to another level by providing training sessions for students in secondary schools that give them the self-assurance to select an engineering college as their area of concentration through strengthening their logical and creative thinking, And training undergraduate engineers in the Automation and artificial intelligence fields, mechanical engineering, Renewable energy… etc.

Educational Kits

Targeting a project-based learning approach, Segmic provides educational training kits in programming Arduino, Raspberry pie or Micro:bit along with up to 53 tutorial sample codes per kit and assembly catalogs, or even students or undergraduate students can use their imagination to develop the code and debug it.

Competitions & Certificates

Organizing competitions in the programming Automation field and applying the gained knowledge to real projects with prizes enhance the spirit of challenge, team coordination and leadership.

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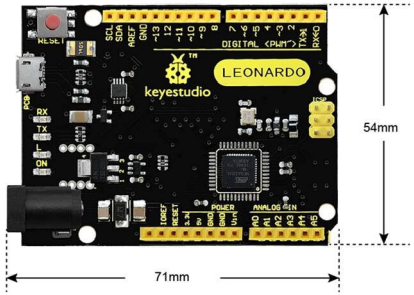
Leonardo Arduino R3 Development Board

The Leonardo is a microcontroller board based on the ATmega32u4 (datasheet). It is easy-to-use open-source hardware.
It has 20 digital input/output pins (of which 7 can be used as PWM outputs), 12 analog inputs, a 16 MHz crystal oscillator, a micro-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 an AC-to-DC adapter or battery to get started.
The Leonardo can be powered via the micro-USB connection, via an external power supply jack (DC 7-12V) or even with female headers Vin /GND (DC 7-12V).



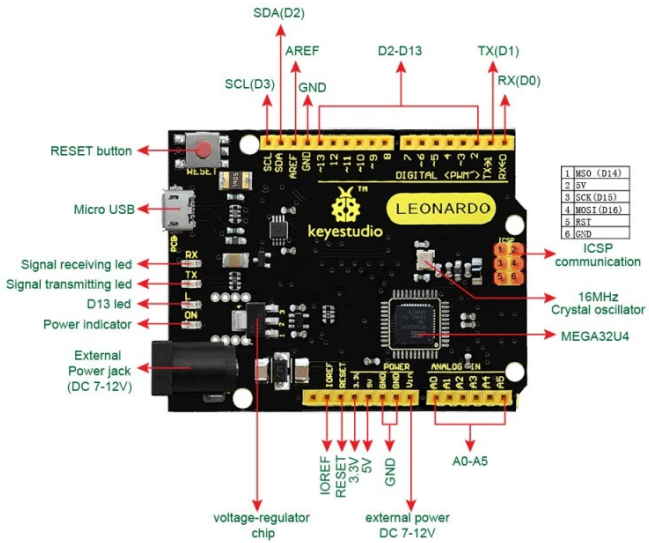
The Leonardo differs from other Arduino boards using separate USB-Serial chips in that the ATmega32u4 has built-in USB communication, eliminating the need for a secondary processor. This allows Leonardo to appear on a connected computer with a mouse and keyboard.

Extra Features

The Arduino Nano is designed in a way that it allows reset by software running on a connected computer and Leonardo has refusable poly fuses that protect your computer's USB ports from shorts and overcurrent.

Specifications

1. Microprocessor: ATmega32u4
2. Operating Voltage: 5V
3. Recommended Input voltage: DC 7V – 12V
4. Digital I/O Pins: 20 (of which 7 provide PWM output)
5. PWM Digital I/O Pins: 7
6. Analog Input Pins: 12
7. DC Current per I/O Pin: 40mA
8. DC Current for 3.3V Pin: 50mA
9. Flash Memory: 32KB (ATmega32u4) of which 4KB is used by the bootloader
10. SRAM: 2.5 KB (ATmega32u4)
11. EEPROM: 1KB (ATmega32u4)
12. Clock Speed: 16MHz
13. LED Built-in: D13
14. Dimensions: 71mm * 54mm * 15mm
15. Weight: 18.4 g



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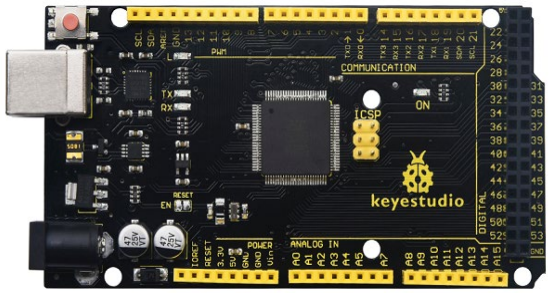
Mega 2560 Arduino R3 Development Board

Mega 2560 R3 is a microcontroller board based on the ATMEGA2560-16AU, fully compatible with ARDUINO MEGA 2560 R3. It has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, 1 ICSP header, and a reset button. The built-in ICSP port can burn the firmware for ATMEGA2560-16AU directly. This chip burnt the firmware well before leaving the factory, therefore, we hardly use it. We can power on by USB wire, DC head and Vin GND pins. To facilitate wiring, a 0.5 m USB wire is provided for you.

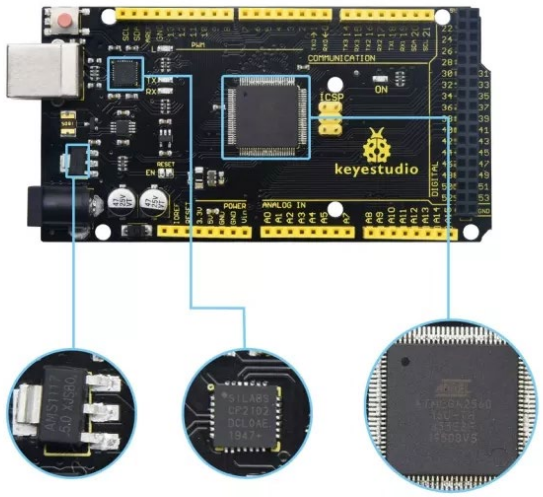


Extra Features

Support TWI communication using the Wire library. The SPI pins are also broken out on the ICSP header, which is physically compatible with the Arduino Uno. External Interrupt Pins can be configured to trigger an interrupt on a low level, a rising or falling edge, or a change in level.

Specifications

1. Microprocessor: ATmega2560 – 16AU
2. Operating Voltage: 5V
3. Recommended Input voltage: DC 7V – 12V
4. Digital I/O Pins: 54 (D0 – D53)
5. PWM Digital I/O Pins: 15(D2-D13 D44-D46)
6. Analog Input Pins: 16(A0-A15)
7. DC Current per I/O Pin: 20mA
8. DC Current for 3.3V Pin: 50mA
9. Flash Memory: 256KB of which 8KB is used by the bootloader
10. SRAM: 8 KB
11. EEPROM: 4KB
12. Clock Speed: 16MHz
13. LED Built-in: D13
14. USB Serial Chip: CP2102



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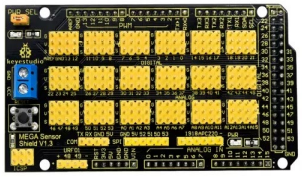
Mega Sensor Shield V1 for Arduino Mega

The Mega Sensor Shield is an Arduino shield that allows you to easily connect a wide variety of sensors and other peripherals to your Arduino Mega board. The Mega Sensor Shield also has a built-in voltage regulator, which can be used to power your sensors and other devices. It is a useful tool for prototyping and building projects with the Arduino Mega board.



When connecting a couple of sensor modules to the MEGA 2560 control board, sometimes power output interfaces are not enough, so need to use the breadboard and the wiring is rather troublesome. Now don't worry about that. You can use this MEGA sensor shield.

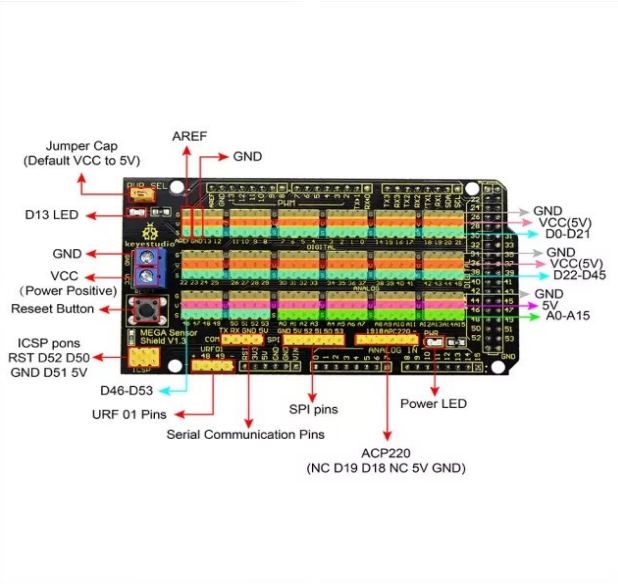
It is fully compatible with the MEGA 2560 control board so you can easily stack the MEGA sensor shield onto the MEGA 2560 control board.

Extra Notes

For the 3-pin interface, the voltage of Analog pins (labelled V) is 5V; while the voltage of Digital Pins (labelled V) is VCC, that is, the voltage input via a blue terminal block, default by jumper connected, connecting the voltage to 5V on the shield.

Features

1. Plugged into the Mega 2560 Control Board.
2. Reset Button
3. Power LED
4. D13 Indicator
5. Extends digital and analog interface of Mega into 3Pin
6. Serial Communication Interface
7. Extends an ICSP Interface
8. Extends a SPI Interface
9. Extends a URF01 Interface
10. Extends an APC220 interface
11. Supply the voltage to sensor modules via the terminal block



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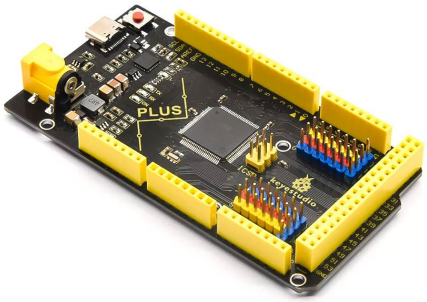
Mega 2560 Plus Arduino Development Board

Mega 2560 plus Board, whose processor core is ATMEGA2560-16AU, is fully compatible with ARDUINO MEGA 2560 REV3.

USB to TTL chip adopts more economic and stable CP2012.

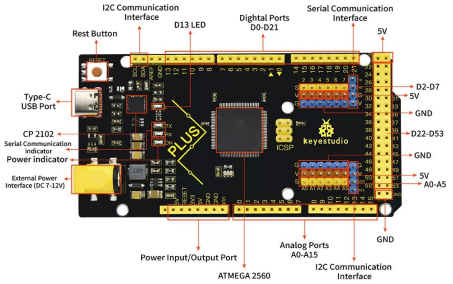
This plus board consists of 54-channel digital input and output ports, of which 15 pins are served as PWM output, 16 analog inputs, 4 serial communication ports, one 16MHz crystal oscillator, 1 USB port, 1 power socket, 1 ICSP interface and 1 reset button.

One of the primary uses of the Arduino Mega 2560 Plus is to control large-scale projects that require a lot of I/O pins and processing power. It is commonly used in robotics, home automation systems, and other projects that require multiple sensors and actuators to be connected and controlled.



Features

1. Microcontroller: ATMEGA2560-16AU
2. USB to TTL chip： CP2102
3. Operating Voltage: 5V
4. Input Voltage (recommended):DC 7-12V
5. Digital I/O Pins: 54 (D0-D53)
6. PWM Digital I/O Pins： 15(D2-D13 D44-D46)
7. Analog Input Pins: 16(A0-A15)
8. DC Current per I/O Pin: 20 mA
9. DC Current for 3.3V Pin: 50 mA
10. Flash Memory: 256 KB of which 8 KB used by the bootloader
11. SRAM: 8 KB
12. EEPROM: 4 KB
13. Clock Speed: 16 MHz
14. LED_BUILTIN:D13



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CH340 Nano 3.0 Controller Board

Nano CH340 is a small, complete and breadboard-friendly board based on the ATmega328P-AU. Compared with ARDUINO NANO, the USB-to-serial port chip used in Nano is CH340G, so the using method is the same except for the driver installation file.
It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 8 analog inputs, a 16 MHz crystal oscillator, a mini USB port, an ICSP header and a reset button.

Extra Notes

ICSP (In-Circuit Serial Programming) header is used to program the firmware to ATMEGA328P-AU, but generally, the chip has been pre-burned before leaving the factory. So, use it less.
The Nano can be powered via the Mini-B USB connection, or female headers Vin/GND (DC 7-12V).

Features

1. Microcontroller: ATMEGA328P-AU
2. Operating Voltage: 5V
3. Input Voltage (recommended): DC7-12V
4. Digital I/O Pins: 14 (D0-D13) (of which 6 provide PWM output)
5. PWM Digital I/O Pins: 6(D3,D5,D6,D9,D10,D11)
6. Analog Input Pins: 8(A0-A7)
7. DC Current per I/O Pin: 40 mA
8. Flash Memory: 32 KB of which 2 KB is used by the bootloader
9. SRAM: 2 KB
10. EEPROM: 1 KB
11. Clock Speed: 16 MHz
12. LED_BUILTIN: D13

NRF24L01 2.4GHz Wireless RF Transceiver Module

The NRF24L01 chip used in the module is a single-chip wireless transceiver chip operating in the 2.4~2.5GHz worldwide ISM band. The output power, channel selection and protocol settings can be set via the SPI interface. The supply voltage for this NRF24L01 wireless module is DC 3.3 V. The maximum transmission power is 0 dBm. The maximum data transfer rate is 2000 kbps. The current consumption in transmitting mode (0 dBm) is 11.3 mA. The current consumption in receiving mode (2000 kbps) is 12.3 mA. The sensitivity is -85 dBm when the data transfer rate is at 1000 kbps in receiving mode. The current consumption is 900 nA in power-down mode.

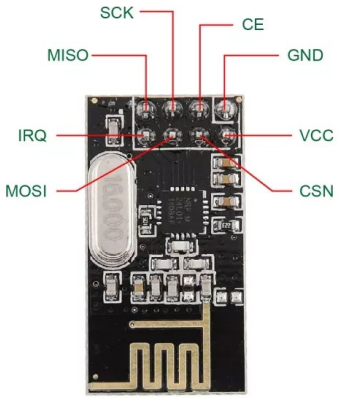
The module comes with a curved antenna, set as 0 dBm, the communication distance can reach about 20-25m in an open field.

Extra Notes

The NRF24L01 wireless module is a transmission module. Each module is both a transmitter and a receiver. So in general, you need to use two NRF24L01 wireless modules and two Arduino control boards to make a test.

Features

1. Supply Voltage: DC 3.3V
2. Maximum transmit power: 0 dBm
3. Maximum data transfer rate: 2000kbps
4. Current consumption in transmit mode (0dBm): 11.3 mA
5. Current consumption in receive mode (2000kbps): 12.3 mA
6. The sensitivity is -85 dBm when the data transfer rate is at 1000 kbps in receiving mode
7. Current consumption is 900nA in power-down mode
8. Module comes with a curved antenna, set as 0 dBm, the communication distance can reach about 20-25m in an open field.



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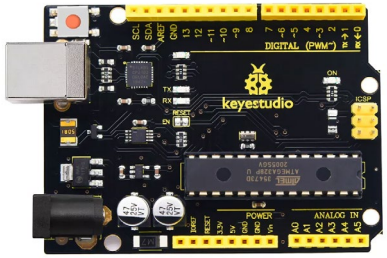
V4.0 Development Board

The processor core of the V4.0 development board is ATMEGA328P-PU, fully compatible with ARDUINO UNO REV3. It is designed to be used with the Arduino Integrated Development Environment (IDE) and can be programmed using the Arduino programming language. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, 1 ICSP header, and a reset button. The built-in ICSP port can burn the firmware for ATMEGA328P-PU directly. We can plug in power by USB wire, DC head and Vin GND pins.

The V4.0 Development Board is an open-source hardware platform, which means that the design and schematics are freely available and can be modified by anyone. This allows users to customize the board to meet the specific needs of their projects.



Features

1. Microcontroller: ATMEGA328P-PU
2. USB Serial Chip: CP2102
3. Operating Voltage: 5V
4. Input Voltage (recommended): DC7-12V
5. Digital I/O Pins: 14 (D0-D13)
6. PWM Digital I/O Pins: 6(D3,D5,D6,D9,D10,D11)
7. Analog Input Pins: 6(A0-A5)
8. DC Current per I/O Pin: 20 mA
9. DC Current for 3.3V pin: 50 mA
10. Flash Memory: 32 KB (ATMEGA328P-PU) of which 0.5 KB is used by the bootloader
11. SRAM: 2 KB (ATMEGA328P-PU)
12. EEPROM: 1 KB (ATMEGA328P-PU)
13. Clock Speed: 16 MHz
14. LED_BUILTIN: D13

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Basic Raspberry Pi Starter Kit

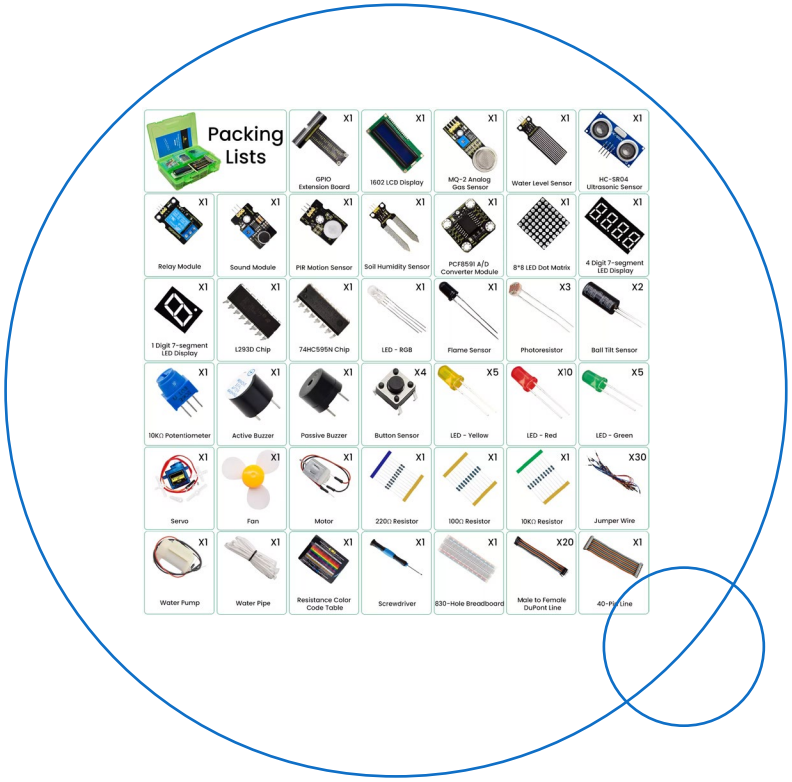
The Raspberry Pi is a low-cost, credit-card-sized computer. It can be taken as a personal server and router. You could get a camera monitor by plugging the camera into it, equally, the voice interactive function could be achieved if the microphone and speaker are connected to the Raspberry Pi.
Raspberry Pi extends 40 Pins to link with sensors and modules, whic h contributes to making all kinds of experiments.
This kit is produced for Raspberry Pi enthusiasts. You could acquire knowledge of Linux, Python and other programming, as well as the application of sensors/ modules. We control Raspberry Pi and electronic components via C language.

Notes and Extra Features

Raspberry Pi is Not Included!!! All the items you need to get started making with Raspberry Pi 4 4B / 3B+ / 3B / 3A+ / 2B / 1B+ / 1A+ / Zero W / Zero. (NOT contained in this kit). The tutorial provides a wiring diagram, and C code and python code to run the project is also included.

Features

1. Programming: Totally 3 programming languages: 28 Python lessons, 28 lessons in C language, 18 processing lessons in Java.
2. High-Quality Components.
3. Ideal/ Purpose-built kit for Beginners.



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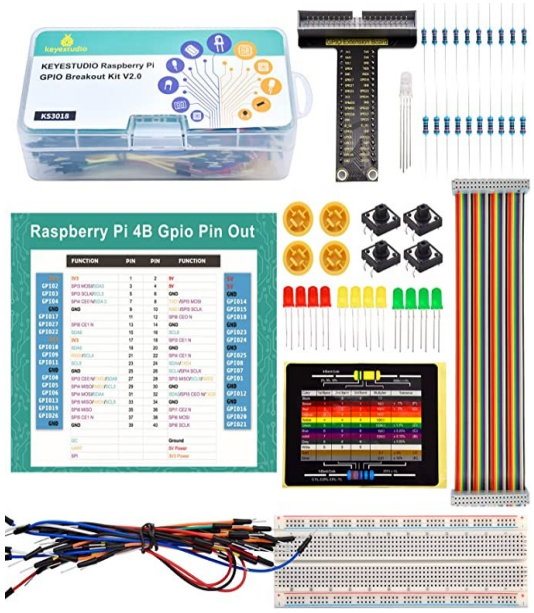
GPIO Breakout Kit

This basic GPIO extension board kit includes an 830-hole breadboard, T-type breakout adapter, LEDs, male-to-male jumper wires and more to complete the projects. The circuits are easy to set up with lots of detail, pictures, explanations and diagrams on how to assemble them. The package includes a small card for simple resistor color identification and GPIO Pinout functions.

A good starter kit for the raspberry pi and plenty of tutorials to help you along the way to learning electronics and coding. When you look for the Raspberry Pi, you should get it with a starter kit. We have a professional support team to solve any problems.



Notes and Extra Features

Raspberry Pi 400 / 4B / 3B+ / 3B / 3A+ / 2B / 1B+ / 1A+ / Zero W / Zero (NOT contained in this kit)

Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support

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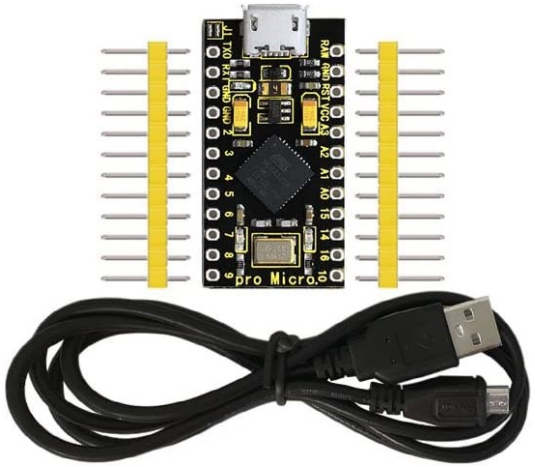
Pro Micro Atmega32U4

The processor core of the PRO MICRO development board is ATMEGA32U4-MU, fully compatible with ARDUINO. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable to get started. It has 18 digital input/output pins (of which 5 can be used as PWM output), 9 analog inputs, a 16 MHz crystal oscillator and a micro-USB port. In addition, its working voltage is 5V and we can supply power via micro-USB cable and port RAW GND (DC 7-9V). It is easy to integrate this Micro into everyday objects to make them interactive.

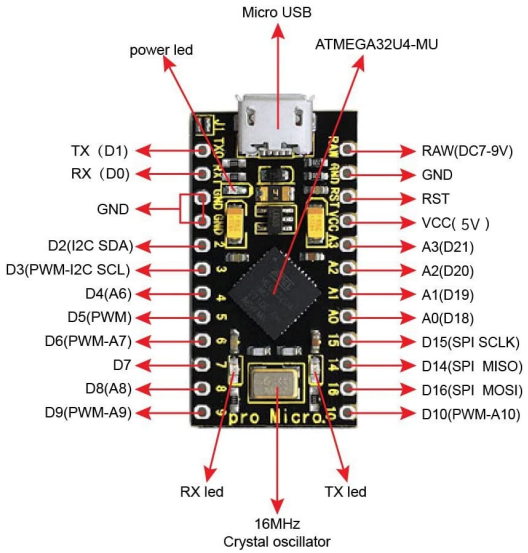


Notes

To facilitate the physical design, the board is not welded with pin headers, so you can solder the pin headers by yourself. And the package includes 2pcs of yellow 1*12 2.54 straight pins and 1m black micro-USB cable. We also added a PTC fuse and diode to protect the power supply circuit.

Specifications

1. Microcontroller: ATMEGA32U4-MU
2. RAW: DC 7-9V
3. VCC: 5V at 500mA
4. Digital I/O Pins:18 (of which 5 provide PWM output)
5. Analog Input Pins:9
6. Maximum current for the chip: 200mA
7. Maximum current per pin: 40mA
8. Recommended current per pin: 20mA
9. 8-bit Atmel AVR
10. Flash Program Memory: 32kB
11. EEPROM: 1kB
12. Internal SRAM 2.5kB
13. ADC:10-bit
14. PWM:8bit



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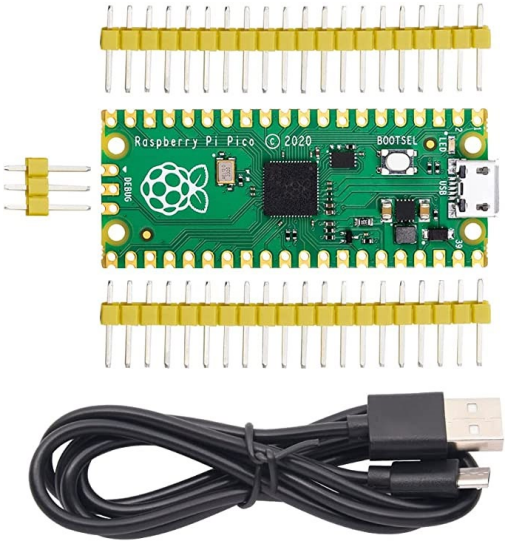
Raspberry Pi Pico Developing Board

Raspberry Pi Pico is a tiny, fast, and versatile board. It's based on the RP2040 chip, which features a dual-core Arm Cortex-M0+ processor with 264KB internal RAM and support for up to 16MB of off-chip Flash, a flexible clock running up to 133 MHz. Raspberry Pi Pico has rich and complete software support and community resources. Programmable in C and Micro Python. Drag-and-drop programming using mass storage over USB.

The Raspberry Pi Pico series is a range of tiny, fast, and versatile boards built using RP2040, the flagship microcontroller chip designed by Raspberry Pi.

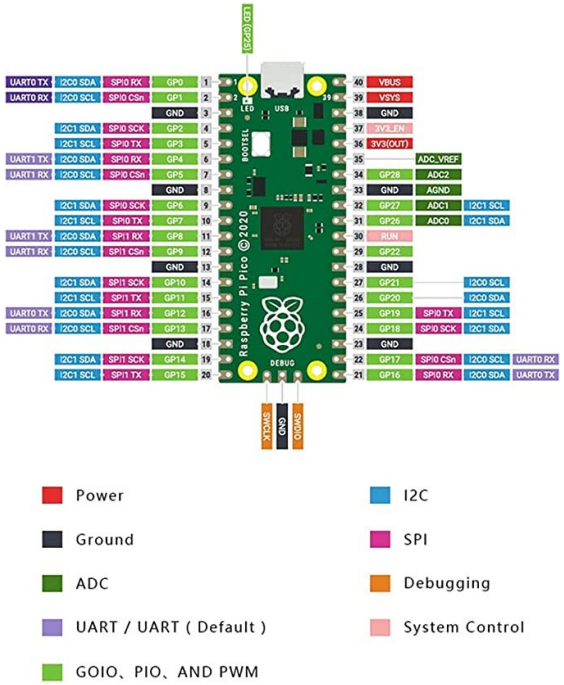


Extra Features

It has 26 multifunction GPIO pins, including 3 analog inputs, 2 × UART, 2 × SPI controllers, 2 × I2C controllers, 16 × PWM channels. A wide range of flexible I/O options includes I2C, SPI, and uniquely 8 × Programmable I/O (PIO) state machines for custom peripheral support.

Features

1. Flexible Microcontroller Board
2. Multi-function GPIO pins
3. Rich peripheral set
4. Multiple software support
5. Low-powered sleep and dormant modes
6. Accurate on-chip clock



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Raspberry Pi Complete RFID Starter Kit

A Raspberry Pi complete RFID starter kit is a bundle of hardware and software components that allow you to use radio frequency identification (RFID) technology with a Raspberry Pi single-board computer. The kit typically includes an RFID reader/writer, RFID tags or cards, and software for interacting with the RFID reader/writer and tags.

The starter kit can be useful for learning about RFID technology and building prototypes of RFID-based projects.

Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support

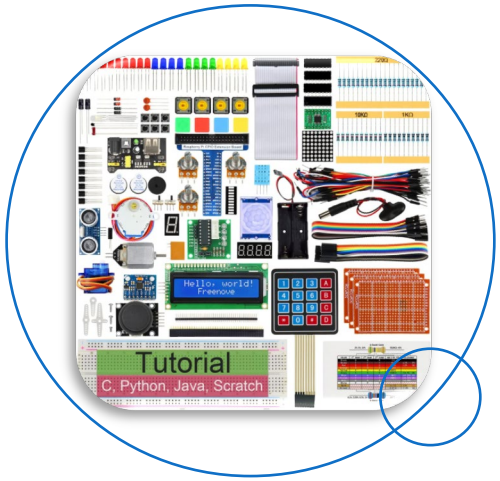
Notes

Not included the Raspberry Pi 4B Board in this kit.

Ultimate Starter Kit for Raspberry Pi

An Ultimate Starter Kit for Raspberry Pi is a comprehensive package designed to help users learn about electronics, programming, and physical computing using the Raspberry Pi microcontroller board. The kit is designed for users of all skill levels, including beginners, and is intended to help users learn about Raspberry Pi, programming with Python, and building interactive projects.

With a wide range of components and a detailed tutorial book, the kit is suitable for users of all skill levels and provides a strong foundation for learning about the Raspberry Pi and building interactive projects.

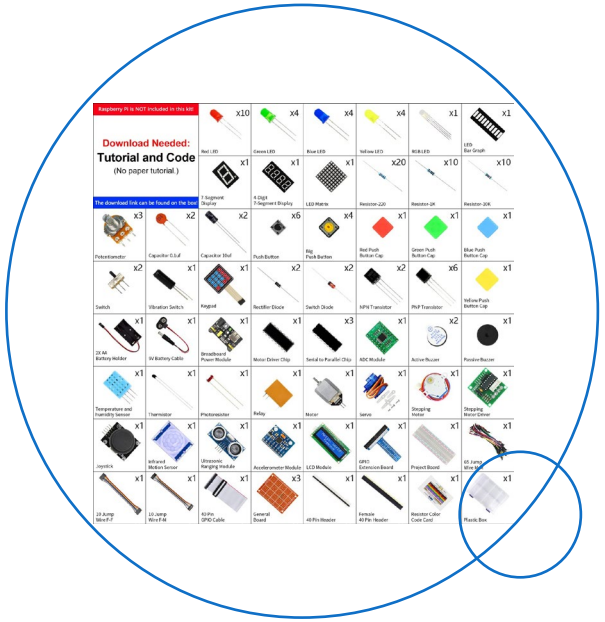


Notes

Compatible models -> Raspberry Pi 400 / 4B / 3B+ / 3B / 3A+ / 2B / 1B+ / 1A+ / Zero W / Zero. (NOT included in this kit.) Detailed tutorial (including basic electronics knowledge) is included to give you proper guidance in projects and programming.

Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Supports 4 programming languages
5. 104 interesting projects
6. Detailed Tutorial



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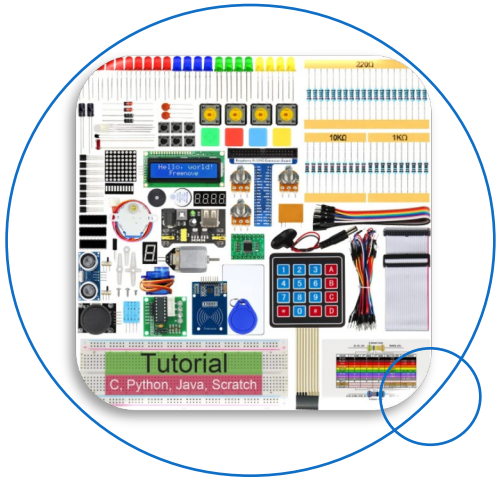
RFID Starter Kit for Raspberry Pi

An RFID Starter Kit for Raspberry Pi is a collection of electronic components and modules designed to help users learn about RFID (radio-frequency identification) technology and build interactive projects using the Raspberry Pi microcontroller board. The kit includes a variety of hardware components such as RFID reader/writer modules, RFID tags and cards, and other electronic modules, as well as a detailed tutorial book with interesting projects.

RFID Starter Kit for Raspberry Pi is a comprehensive and well-rounded package that provides users with everything they need to learn about RFID technology and build interactive projects using Raspberry Pi.

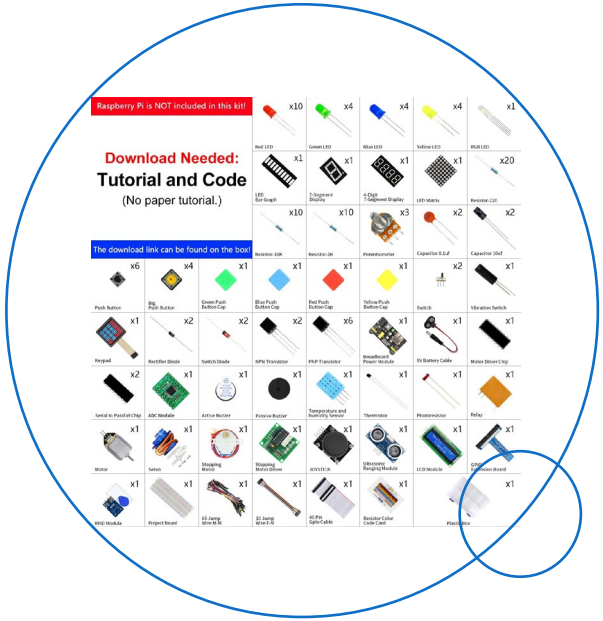


Notes

Compatible models -> Raspberry Pi 400 / 4B / 3B+ / 3B / 3A+ / 2B / 1B+ / 1A+ / Zero W / Zero. (NOT included in this kit.) Detailed tutorial (including basic electronics knowledge) is included to give you proper guidance in projects and programming.

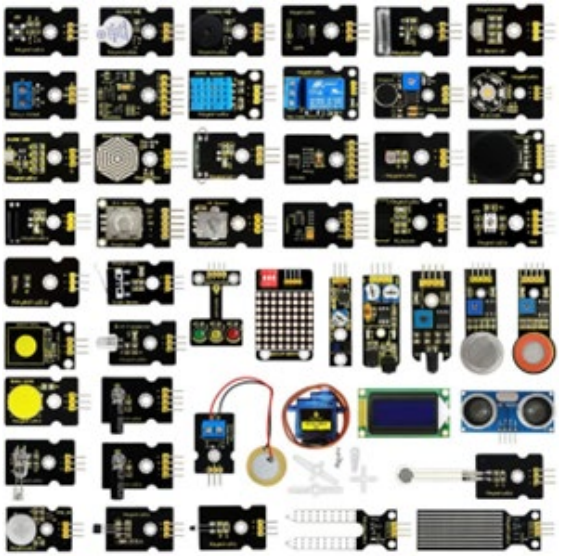
Features

1. Supports 4 programming languages
2. 97 interesting projects
3. High-Quality Components
4. Ideal/ Purpose-built kit for Beginners
5. Online Support
6. Detailed Tutorial



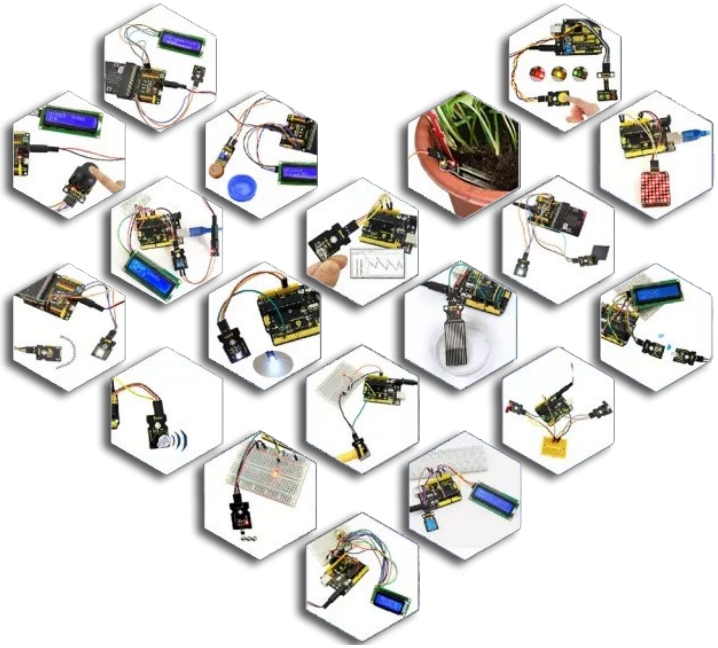
48-in-1 Sensors Kit

This sensor kit which is compatible with various microcontrollers and Raspberry Pi contains 48 commonly used sensors and modules including an active buzzer module, a 5V relay module, a temperature and humidity module and others. At the same time, some detailed projects for each sensor based the development board are also provided, such as wiring methods and test code. With the help of this kit, you could not only obtain interesting knowledge about them but also make substantial interactive projects.

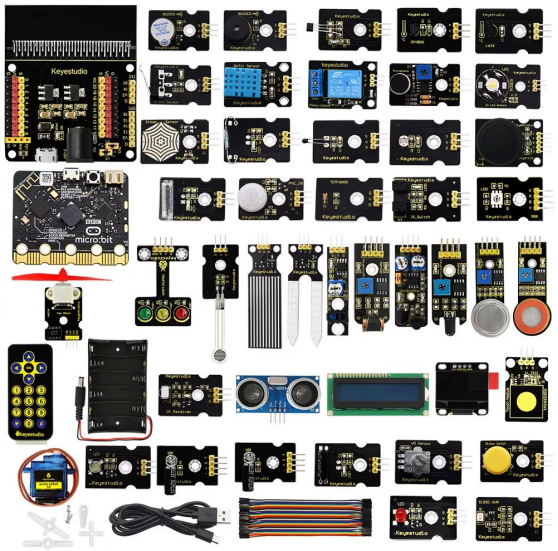


Documents and Extra Items

53 learning projects will guide you on how to make various projects on your own and introduce detailed knowledge about sensors. These 48 various projects will emphasize the enthusiasm for implementation. There are hundreds of additional libraries available on the Internet for download. You can either aim for a more comprehensive one that integrates the majority of these components or starts with the simpler ones, such as learning how to control.



45-in-1 Sensors Kit



Micro: bit is a powerful hand-held, fully programmable, computer designed by the BBC. It is only half the size of a credit card, available for children's programming education. The Onboard comes with Bluetooth, an accelerometer, a compass, three buttons, a 5x5 LED matrix, a USB interface, and connection pins. In order to learn a micro bit easier, we particularly make this kit, which includes a keyestudio sensor shield fully compatible with micro bit and other commonly used sensor modules. In addition, this sensor kit also provides various learning projects for you, including a wiring diagram, source code and more. It can help you make learning easy and fun to enjoy the programming.

Documents and Extra Items

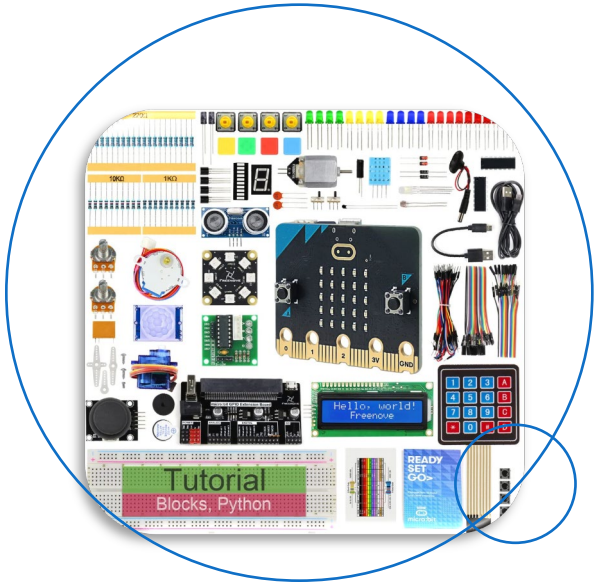
Learning projects will guide you on how to make various projects on your own and introduce detailed knowledge about sensors. These various projects will emphasize the enthusiasm for implementation. There are hundreds of additional libraries available on the Internet for download. You can either aim for a more comprehensive one that integrates the majority of these components or starts with the simpler ones, such as learning how to control.

SEGMIC ENGINEERING

Ultimate Starter Kit for Micro:bit (BBC micro:bit V2 included)

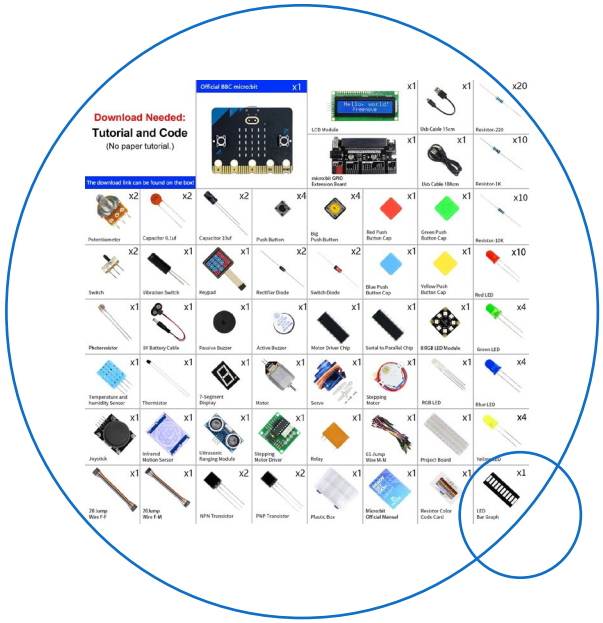
An Ultimate Starter Kit for Raspberry Pi is a comprehensive package designed to help users learn about electronics, programming, and physical computing using the Raspberry Pi microcontroller board. The kit is designed for users of all skill levels, including beginners, and is intended to help users learn about Raspberry Pi, programming with Python, and building interactive projects.

The tutorial is available for download and the link can be found on the product box. It is important to note that there is no paper tutorial available. The tutorial comes with 224 common items that are necessary to complete the projects within it.



Features

1. 225 High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Supports programming languages
5. 44 Interesting projects
6. Detailed Tutorial



SEGMIC ENGINEERING

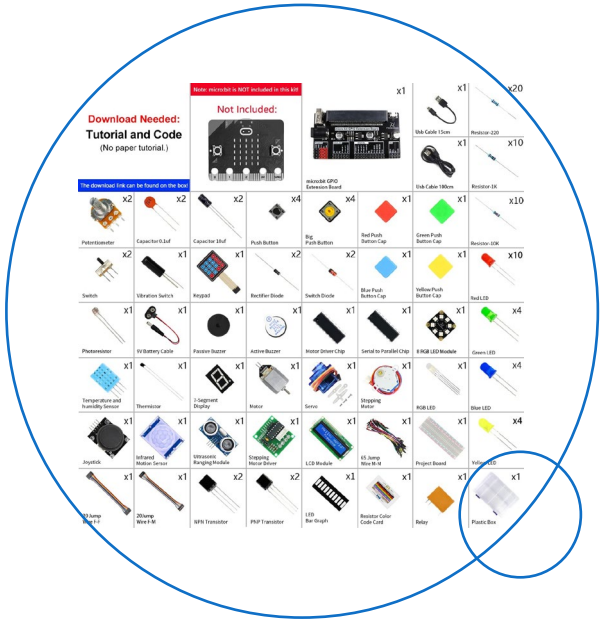
Ultimate Starter Kit for Micro:bit (V2 not included)

An Ultimate Starter Kit for Raspberry Pi is a comprehensive package designed to help users learn about electronics, programming, and physical computing using the Raspberry Pi microcontroller board. The kit is designed for users of all skill levels, including beginners, and is intended to help users learn about Raspberry Pi, programming with Python, and building interactive projects.

The tutorial is available for download and the link can be found on the product box. It is important to note that there is no paper tutorial available. The tutorial comes with 224 common items that are necessary to complete the projects within it.

Features

1. 224 High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Supports programming languages
5. 44 Interesting projects
6. Detailed Tutorial



SEGMIC ENGINEERING

ESP32-WROVER Board

ESP32-WROVER is a powerful and small controller with an onboard camera and wireless. It is a generic Wi-Fi + Bluetooth + Bluetooth LE MCU module that targets a wide variety of applications, ranging from low-power sensor networks to the most demanding tasks, such as voice encoding, music streaming and MP3 decoding.

The guide includes detailed explanations, diagrams, and code snippets to help you understand how the components work and how to use them in your own projects.

The kit is designed for users of all skill levels, including beginners, and is intended to help users learn to program and build interactive projects.

Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Tutorials available
5. Easy to use

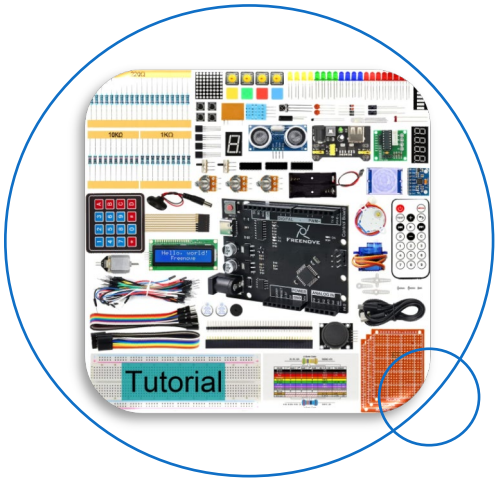
SEGMIC ENGINEERING

Ultimate Starter Kit for Raspberry Pi

An Ultimate Starter Kit for Raspberry Pi is a comprehensive collection of components and tutorials designed to help beginners and hobbyists learn how to use Raspberry Pi and build electronic projects. The kit includes a variety of sensors, actuators, and other components, as well as a detailed guide with tutorials and projects.

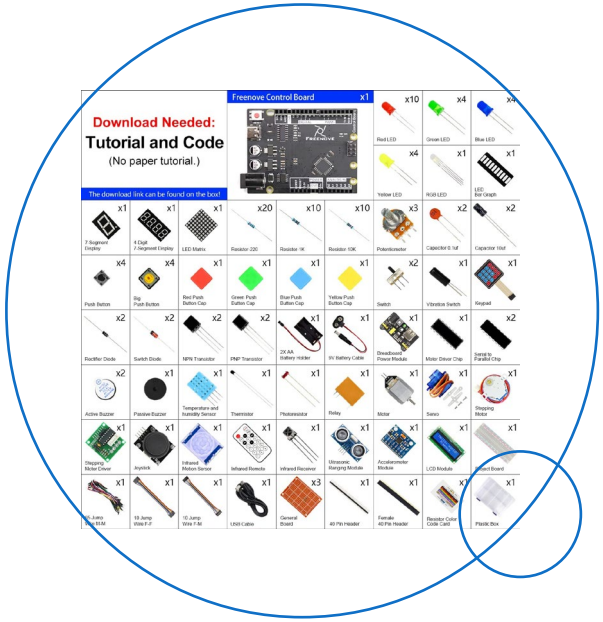
The guide included in the kit covers a wide range of topics, including basic electronics concepts, circuit diagrams and Python code for the projects. The guide includes detailed explanations, diagrams, and code snippets to help you understand how the components work and how to use them in your own projects.

Excellent choice for anyone looking to learn about electronics and how to use Raspberry Pi to build projects. With a wide range of components and a comprehensive guide, it makes it easy to get started and explores the many possibilities of the Raspberry Pi.



Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Interesting projects
5. Detailed Tutorial



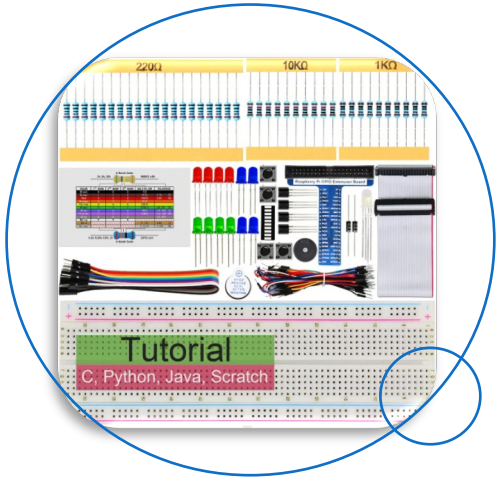
SEGMIC ENGINEERING

Basic Starter Kit for Raspberry Pi

Basic Starter Kit for Raspberry Pi is a collection of components and tutorials designed to help beginners and hobbyists learn how to use Raspberry Pi and build electronic projects. The kit includes a Raspberry Pi 4 Model B, a breadboard, a set of jump wires, and a detailed guide with projects and tutorials.

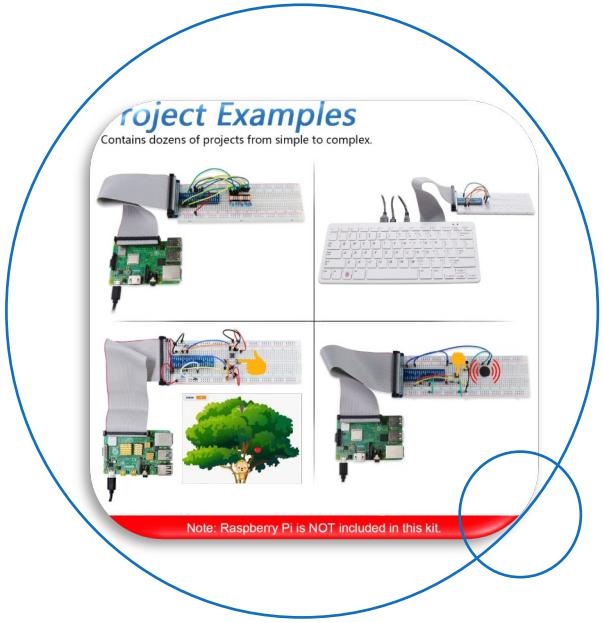
The kit contains all the essential components for beginner-level Raspberry Pi projects such as LED blink, button control, sensor data reading and more. The guide included in the kit covers a wide range of topics such as basic electronics concepts, circuit diagrams and Python code for the projects. The guide also includes detailed explanations, diagrams, and code snippets which help to understand the use of components, how they work and how to use them in your own projects.

An ideal choice for anyone who wants to start learning electronics and programming with Raspberry Pi. The kit is easy to use and comes with a comprehensive guide which makes it easy to get started with your own Raspberry Pi projects. It is perfect for beginners who are new to both Raspberry Pi and electronics, as it comes with all the necessary components and clear tutorials.



Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Multiple projects

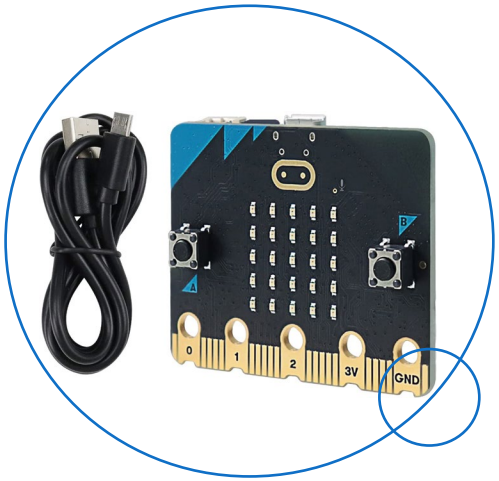


SEGMIC ENGINEERING

BBC Micro: bit V2

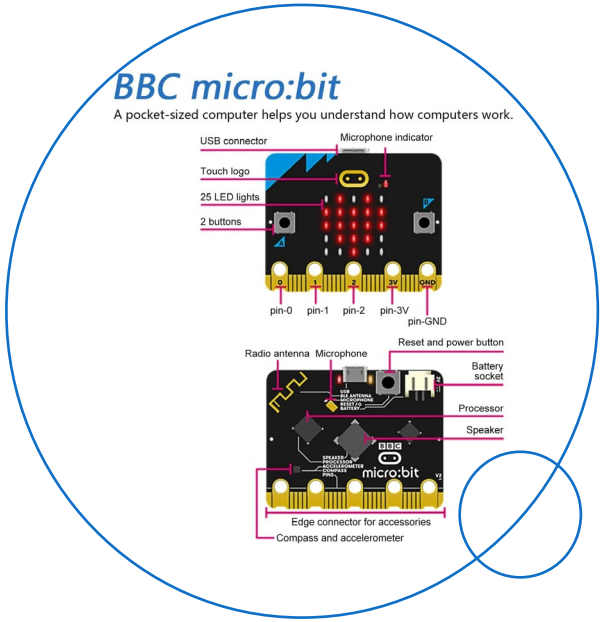
BBC Micro:bit V2 is a microcontroller board based on the BBC Micro:bit V2 developed by the British Broadcasting Corporation (BBC). The board is designed for beginners and hobbyists to learn programming and electronics. It features an Arm Cortex-M0 processor, 256KB flash memory and 24KB RAM. The board also includes a variety of on-board components, such as a 5x5 LED matrix, 2 buttons, a built-in compass, accelerometer, and thermistor sensor, an I2C, SPI, and UART interface, and a USB connector for power and data transfer. The board runs on 3V voltage rail, and also includes a battery management for portable use.

A great choice for anyone looking to get started with microcontroller programming and electronics projects. It is small, inexpensive, and offers a wide range of features and capabilities that make it suitable for a wide range of projects, from simple to more advanced projects.



Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Supports programming languages
5. Interesting projects
6. Detailed Tutorial



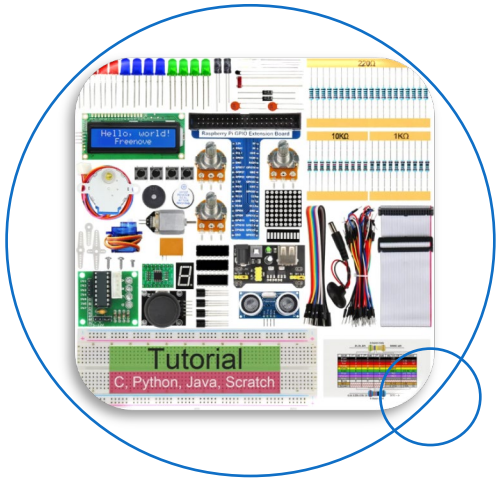
SEGMIC ENGINEERING

Ultrasonic Starter Kit for Raspberry Pi

Ultrasonic Starter Kit for Raspberry Pi is a collection of components and tutorials that are designed to help beginners and hobbyists learn how to use ultrasonic sensors with the Raspberry Pi. The kit includes an ultrasonic sensor module, a breadboard, a set of jump wires, and a detailed guide with projects and tutorials.

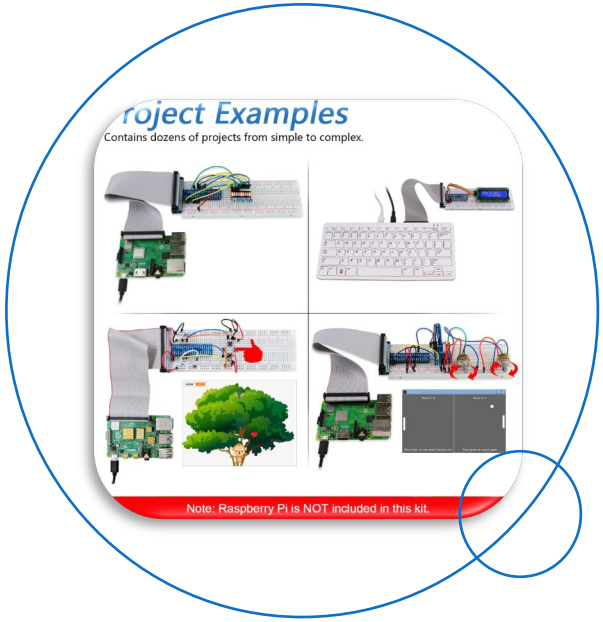
The ultrasonic sensor module included in the kit can measure the distance of an object by emitting a high frequency sound wave and measuring the time it takes for the sound wave to bounce back. The sensor is compatible with a wide range of applications, including distance measurement, obstacle avoidance, and automated parking systems.

Great tool for anyone looking to learn about ultrasonic sensor technology and how to use it with the Raspberry Pi. It is easy to use and comes with a comprehensive guide that makes it easy to get started with your own ultrasonic sensor projects.



Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support

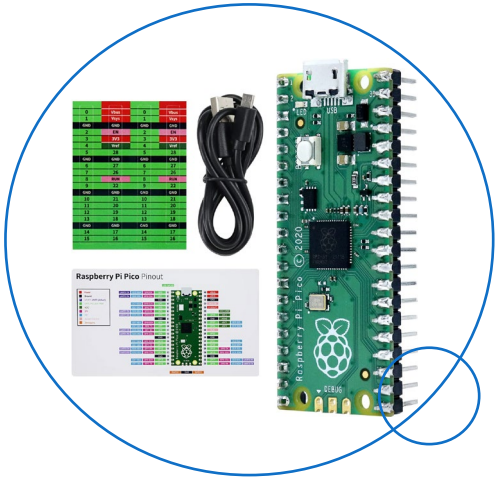


SEGMIC ENGINEERING

Raspberry Pi Pico Board

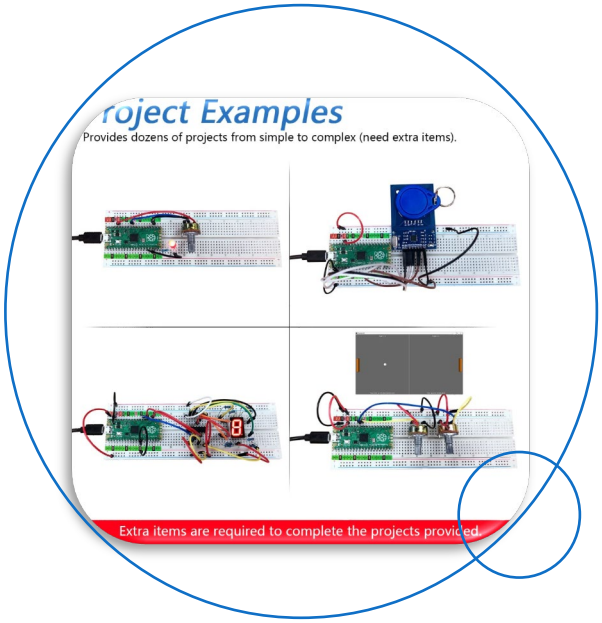
Pi Pico board is a microcontroller board based on the RP2040 chip developed by the Raspberry Pi Foundation. It is a small and inexpensive board that is ideal for beginners and hobbyists who want to start learning to program and building electronics projects. The board also supports several programming languages, such as Micro Python, C/C++ and Circuit Python, which make it easy to start programming and controlling the board.

Raspberry Pi Pico board is a great choice for anyone looking to get started with microcontroller programming and electronics projects. It is affordable, easy to use, and offers a wide range of features and capabilities that make it suitable for a wide range of projects, from simple LED blinker to more complex projects.



Features

1. High-Quality Components
2. Ideal/ Purpose-built kit for Beginners
3. Online Support
4. Detailed Tutorial

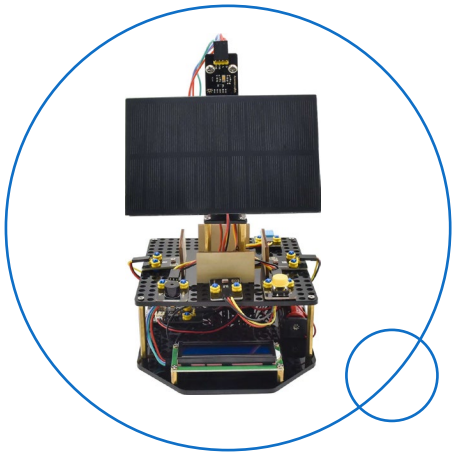


SEGMIC ENGINEERING

Educational Kits

1. Smart Solar Tracker System

The solar tracking kit is based on Arduino. It consists of 4 ambient light sensors, 2 DOF servos, a solar panel and so on, aiming at converting light energy into electronic energy and charging power devices.



It boasts a smartphone charging module, a temperature and humidity sensor, a BH1750 light sensor, a buzzer, an LCD1602 display, a push button module, an LED module and others, enriching the tutorial and making the projects more interesting.

Documents and Extra Items

11 projects included, from simple to complex, guide you step by step. You can either start from those basic ones like learning how to control a signal module or sensor or aim at a more sophisticated one, the one integrating most of these components.

Additionally, you can also alter the code or connect it with other sensors or modules through the Lego parts reserved to conduct your experiments

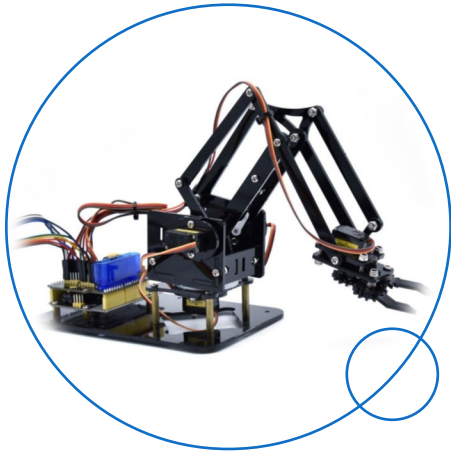
Features

This is a great spot for a mission statement

1. Multiple functions: track light automatically, read the temperature, humidity and light intensity, button control, 1602 LCD display and charge by solar energy.
2. Easy to build: insert into Lego jack to install and no need to fix with screws and nuts or solder circuit, also easy to dismantle.
3. Novel style: adopt acrylic boards and copper pillars, sensors or modules connected to acrylic boards via Lego jacks; LCD 1602 modules and solar panels add technologies to it.
4. High extension: preserve IIC, UART, SPI ports and Lego jacks, and extend other sensors and modules.
5. Basic programming: program in C language with Arduino IDE.

2. 4 DOF Robot Mechanical Arm Kit + Mobile Application

DIY is the activity of making or repairing things yourself, especially in your home. Historically, it has been popular all over the world since the 1960s, making our routine life interesting. Combined with STEM education, DIY products can greatly cultivate teenagers' imagination and creativity.



Therefore, introducing an amazing 4DOF mechanical arm kit, which contributes to improving kids' hands-on ability, logical thinking and observation ability.

The four servos of this robot arm are controlled by a V4.0 control board and two joystick modules. What's more, detailed tutorials are provided for you even if you are a starter.

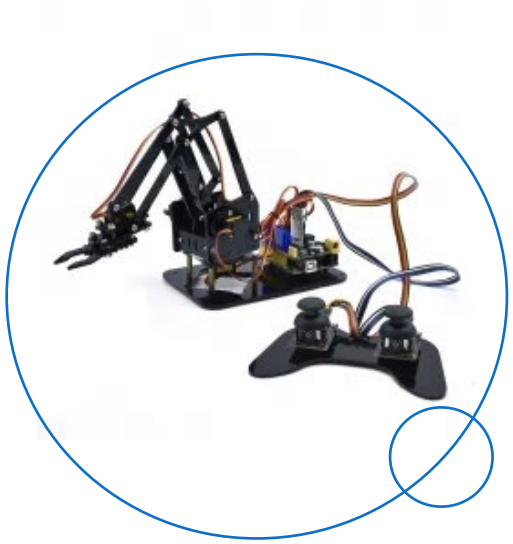
For this mechanical robot arm, there are three methods to Control it. The first one is the controller handle we provide (joystick modules), the second one is App, and the third one is a wireless PS2 joystick module (not included in this kit).

Documents and Extra Items

There are 3 servo codes for 80, 0 and 180 along with 13 project codes. Libraries such as Servo and PS2X lib have been used. You can either aim for a more comprehensive one that integrates the majority of these components or starts with the simpler ones, such as learning how to control.

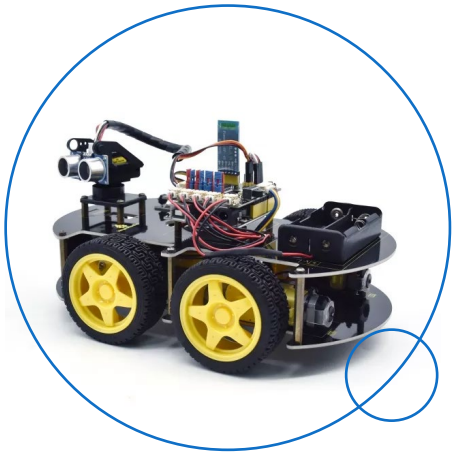
Features

1. Detailed installation instructions.
2. Detailed debugging methods, starting Arduino from entry.
3. Three controlling methods: Wired Joystick Control; Phone Bluetooth Control; Wireless PS2 Joystick Control.



3. 4WD BT Multi-purpose Robot Car + Mobile Application

Nowadays, technological education such as VR, kids programming, and artificial intelligence, has become mainstream in the educational industry. Arduino is notable in Maker education. Arduino is an open-source electronics platform based on easy-to-use hardware and software.



Arduino boards can read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn them into an output - activating a motor, turning on an LED, or publishing something online.

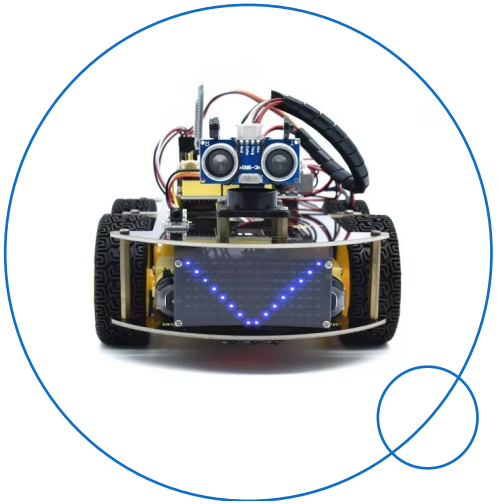
Contains a processor which is programmable using the Arduino IDE, to map its pins to sensors and actuators by a shield that plugs into the processor, it reads sensors and controls the actuators and decides how to operate.

Documents and Extra Items

15 learning projects, from simple to complex, will guide you on how to make a smart 4wd robot on your own and introduce detailed knowledge about sensors and modules. Simultaneously,the best choice if you intend to obtain a DIY r obot for learning
programming, entertainment and competition requirements.

Features

1. Multi-purpose function: Obstacle avoidance, following, IR remote control, Bluetooth control, ultrasonic following and facial emoticons
display.
2. Easy to build: No soldering circuit is required, complete assembly easily.
3. High Tenacity: Aluminum alloy bracket, metal motors, high quality
wheels and tracks.
4. High extension: expand other sensors and modules through motor
driver shield and sensor shield.
5. Multiple controls: IR remote control, App control (iOS and Android
system)
6. Basic programming: C language code of Arduino IDE.



4. Smart Home using Micro:bit + Mobile Application

This smart home kit is based on the open-source hardware of Micro:bit and is designed for those who dream of living a more comfortable life with the help of technology.

This smart home system, with Micro:bit as its control board, is equipped with a 1602 LCD, a DHT11 temperature and humidity sensor, an analog gas sensor (MQ_2), a PIR motion sensor, a 6812 RGB module, a servo, a steam sensor, a Micro:bit BT and other sensors.

With the help of these sensors, this kit can be applied to detect temperature, humidity and the concentration of flammable gases in your home and open and close doors. Furthermore, all the information detected can display on 1602 LCD in real time available for you to check and monitor via smartphone or iPad. By the way, it supports powered by solar energy or via a USB cable.

Documents and Extra Items

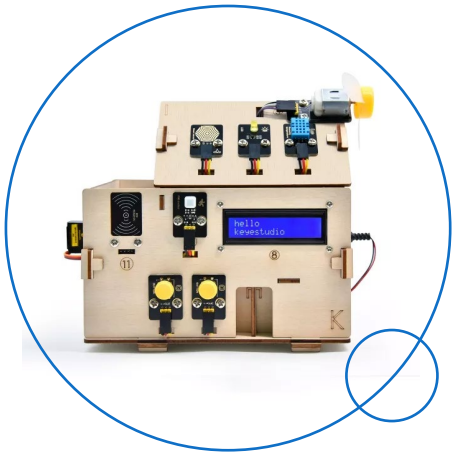
This tutorial will guide you to make and control the smart home kit by the code written in the online graphical programming platform Make code. In this process, not only can you enhance your ability to make projects but also learn skills in programming. Make code for Micro:bit is the most widely used graphical programming environment on the Micro:bit official website. The combination of codes makes it very convenient and easy to learn. 18 projects included in performing various functions.

Features

1. Graphical Programming.
2. Micro Python Programming.
3. Numerous Projects.
4. Bluetooth Compatible.
5. Support Solar Energy/USB Charging.
6. Fresh Appearance.

5. IoT Smart Home + Mobile Application

As the rapid development of the Internet grows, various intelligent devices are gradually integrated into our daily life. For example, we can use RFID to open the door. In addition, the kitchen is equipped with a gas detection alarm, which alerts people to the danger when dangerous gas and large smoke are detected. When it detects rain, it can automatically collect clothes and close windows. All kinds of electrical equipment can be controlled by mobile phones, control lights, fans, air conditioning and so on. In this connection, we seek to launch this smart home product with ESP32 control, which has a host of sensors and modules as well as networking functions, making the relevant knowledge of the Internet more accessible to you.



Documents and Extra Items

Simply this IoT Smart Home is a host of projects. Various numerous projects in this project itself help to explore the scientific and intelligent development of the personnel who is into the IoT project implementation. BT and Wi-Fi connections are the two connection modes.

Features

1. Temperature and Humidity Sensor.
2. Solid and Elegant Appearance.
3. Automatically close windows when raining.
4. Android App and IOS App.
5. Morse Password Door.
6. RFID function.
7. A Host of Projects.

6. 4WD Mechanical Robot Arm Smart Car + Mobile Application

As science and technology develop by leaps and bounces, human society moves toward an era of intelligence and automation as well. Our hands are weak and unresistant to ultra-cold and high-temperature environments. In this regard, mechanical arms can totally supplant our hands and work for people. Designed this kind of smart mechanical arm
car to tackle the shortcomings of most robot arms, clumsy and fixed. This mechanical smart car reacts and performs its functions by following commands sent by the cellphone connected.

Documents and Extra Items

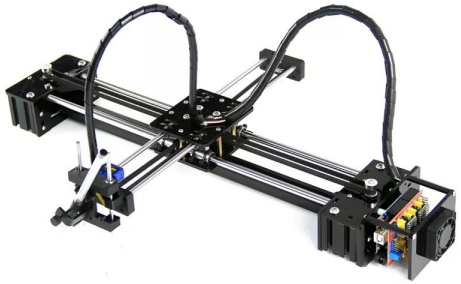
18 learning projects with various functions, will guide you on how to make a smart 4wd mechanical robot arm smart car on your own and introduce detailed knowledge about sensors and modules. Best choice if you intend to obtain a DIY robot for learning programming, entertainment and competition requirements.

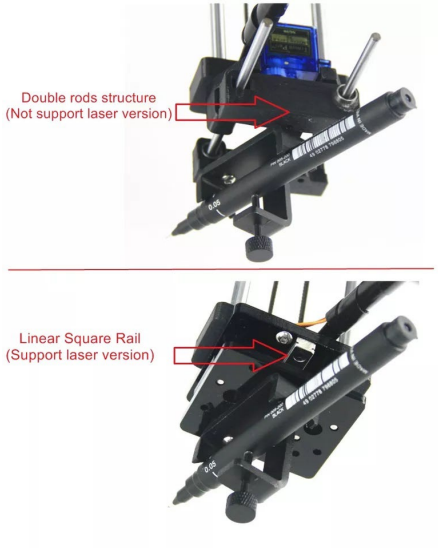
Features

1. Multi-purpose Function: Anti-fall, obstacle avoidance, following, IR remote control, line tracking, automatic convey and so on.
2. Easy to Build: soldering circuit is not required.
3. High Tenacity: high-performance car baseplate and the metal mechanical arm
4. High Extension: expand other sensors and modules through the motor driver shield.
5. Multiple Controls: IR remote control, fully automatic and App control (iOS and Android system)
6. Basic Programming: C language code learning.

7. Writing Machine for Arduino DIY

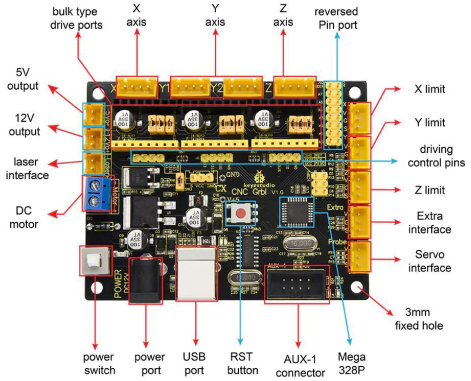
This is a CoreXY writing machine. It is compatible with distinct styles of fonts like hollow, filled, and monoline. A unique customized signature is not a dreamy reverie for you. In addition, it can draw and outline sleek and beautiful lines. With this amazing machine, you can create the artwork yourself.





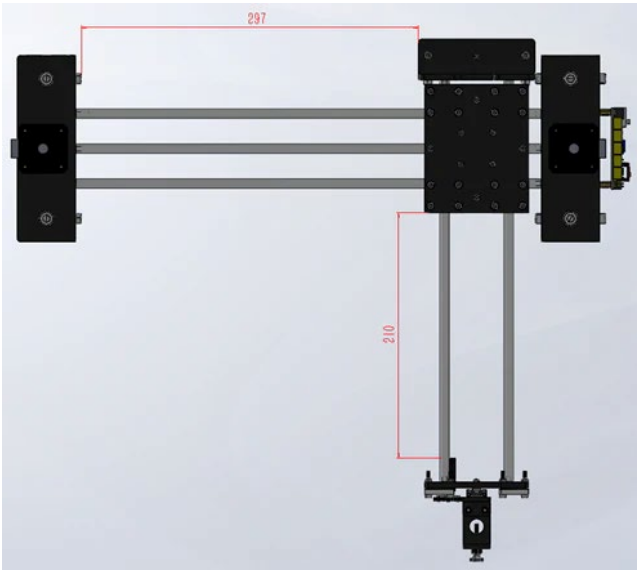
Extra Features

Control chip: The machine brain is a Mega328P developer board.



Features

1. Core XY parallel motion
2. Simple and stable structure
3. Highly precise rail
4. Sophisticated writing and drawing
5. Simple control software



8. Smart Home Kit for Arduino + Mobile App

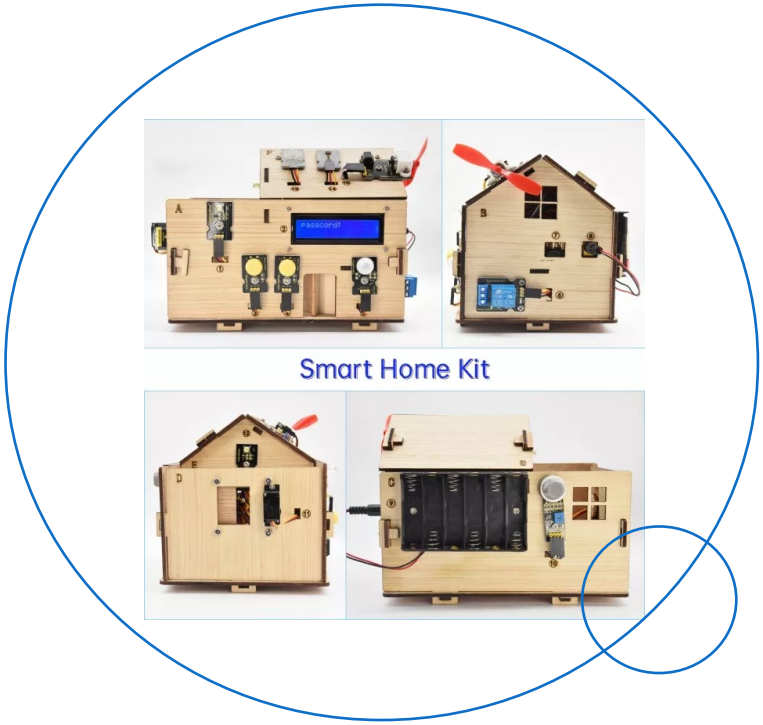
A smart home is a trend in the future. Imagine that you lie on the sofa and control everything with an ordinary cell phone. So incredible! The curtains can be switched automatically, the water temperature can turn into temperature mode when you're ready for a cozy bath. Alternatively, you could obtain a distinct light scene in your home. I believe that you can't wait to live life like this. In fact, logic programming, an invisible hand, controls everything in a smart home: it turns on the air conditioner, boots up the water heater, secures your home with an electronic lock, and sets your LED lights and smart curtains to turn on automatically when you get home. Meanwhile, the intelligent lighting system allows you to create a comfortable, tranquil atmosphere. Everything is finished with a remote control or your own cellphone. In this lesson, we simulate the smart home to make a DIY smart home kit with Arduino software.

Extra Features

Learn programming with the 14 projects in this one kit. In this process, not only can you enhance your ability to make projects but also learn skills in programming. The combination of codes makes it very convenient and easy to learn.

Features

1. Onboard ATmega328 microcontroller
2. Power supply options
3. Programming Interface
4. Onboard peripherals
5. Compatible with Arduino
6. Connectivity

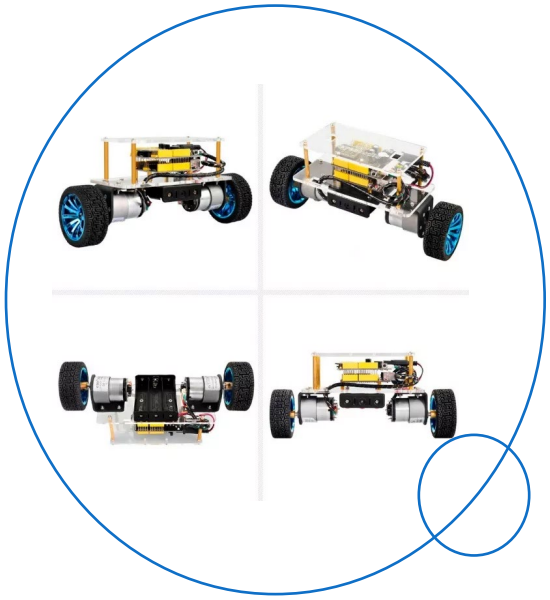


9. Self-Balancing Car Kit

We mainly use REV4 as the core and balance shield with built-in MPU-6050 as the driver board to test the car's body posture. The balance shield comes with a Bluetooth interface, fully compatible with the Bluetooth XBee module (only compatible with the Android system). When connecting to Bluetooth, you can easily control the moving direction of the balance car with the Bluetooth APP, making a variety of unique postures. Bluetooth APP has both key and gravity control modes to facilitate operation control. Moreover, it adds the function of adjusting the balance angle and PID parameters as well, so you can perfectly adjust and control the balance car. We can provide you with all assembly components and the corresponding installation, debugging method and program.

Features

1. Balance Control
2. Speed Control
3. Direction Control
4. Operating voltage: DC12V
5. Working Voltage: DC 9-12V
6. Motor drive chip: TB6612FNG
7. Body posture detection: MPU-6050
8. Comes with power control switch
9. Comes with Bluetooth control switch for controlling serial communication

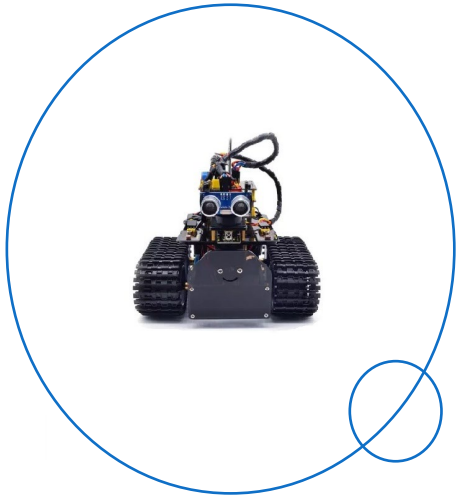


10. Mini Tank Robot Kit

Here comes a mini tank robot upgraded to V2. This tank robot is essentially a two-drive tracked vehicle. The tank robot platform mainly uses the V4.0 control board and L298P driver shield and sensor shield, with no soldering and is easy to play.
Mini tank robot is a learning application development system of microcontrollers based on Arduino and Mixly blocks. The tank robot kit is designed specifically for those who are interested in learning about Arduino and electronics.

Apart from the ultrasonic sensor and Bluetooth module, we add an infrared receiver module, an infrared remote control, two photocell modules, and more. So, you are able to make a light following or infrared remote control tank robot. Add more functions to your tank robot than the first version.

In all robot projects, you are able to learn the Mixly blocks coding and Arduino program. It allows you to quickly learn graphic programming in entertaining, nurturing your interest in science and logical thinking.

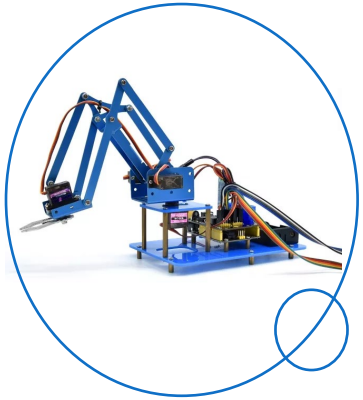


Features

1. Motor parameters: 6V, 150rpm/min.
2. Motor control by L298P driver shield with power switch.
3. Equipped with Bluetooth wireless module, can remotely control the robot after pairing with mobile phone Bluetooth. Only support Android system.
4. With the IR receiver module, pair the infrared remote control to control the tank robot.
5. With the Photocell module, detect the light intensity on both sides of the tank robot to control the tank robot.
6. With the ultrasonic module, measure the distance between the obstacles and the tank robot.
7. Can access to external 7~12V power supply; match various sensor modules to realize various functions according to your imagination.
8. Provide the Mixly software and test code, easy to play and simple.

11. Mechanical PS2 Joystick Metallic Robot Arm Kit

On the Internet, we often see DIY robotic arms complete various actions. Do you want to have one? I believe that you'll make your own robotic arm by learning about our projects.
This kit includes Arduino single-chip microcomputer, 2 joystick modules and 4 servos and so on.
Next, we'll teach you how to install and debug the robotic arm.
There are three methods to control it as follows:
First, we can a wired homemade joystick controller (included in the kit); secondly, the App control is adopted; thirdly, we also can use a wireless PS2 joystick (not included in the kit).
Detailed codes and projects are provided for you.
Come and let's get started with this kit.

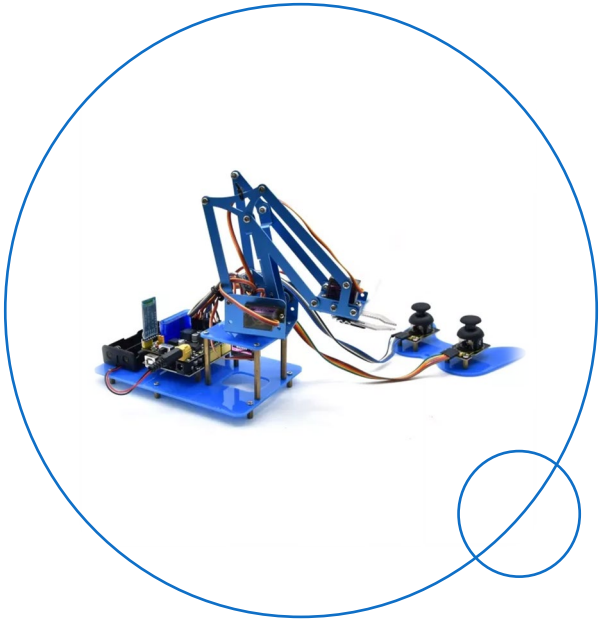


Notes

You must connect a DC 7-15V power to the VIN port of the shield when wiring the servo to the shield.

Features

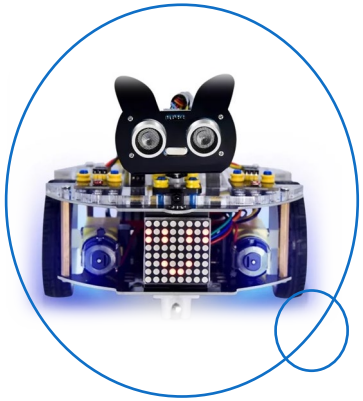
1. Detailed installation method
2. Detailed bugging methods, even you're a beginner
3. 3 control methods: wired joystick control, Bluetooth control, wireless PS2 joystick control
4. PS2 interface: Compatible with Sony PS2 receiver, can be plugged directly into the shield



12. Bettlebot Robot Kit

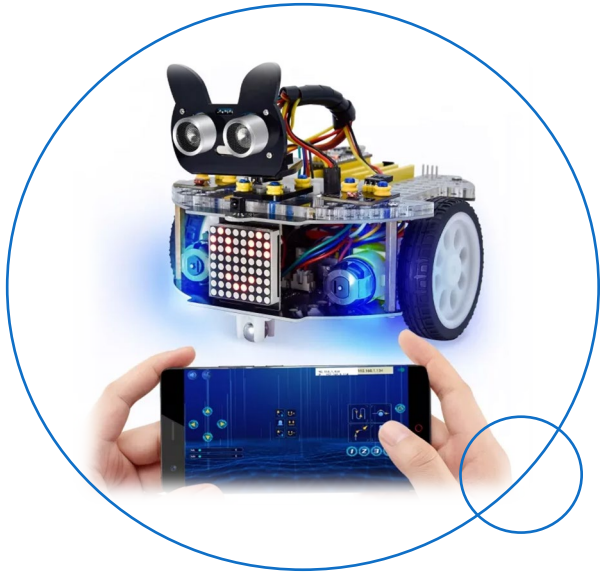
The Beetlebot smart robot, compatible with LEGO building blocks, is a STEM educational product which can automatically dodge obstacles, and follow black lines and light to move. This kit helps you to generate diverse forms with LEGO blocks and sensors. The kit has three forms: a soccer robot, a siege engine and a handling robot. This Robot kit is highly compatible with Android and iOS systems, with an aesthetic page and a flexible control system.

The multi-functional kit is a perfect fit for every enthusiastic person and its functionality includes LED Blinking, 6812 RGB, Play music, 8*8 Dot Matrix, Servo Rotation, Ultrasonic Ranging, Obstacle avoidance, Tracking etc.



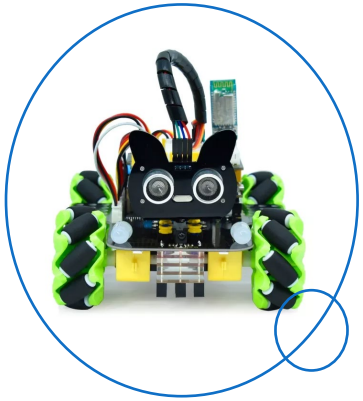
Features

1. Compatible with LEGO building blocks
2. Three forms: a soccer robot, a siege engine, a handling robot
3. Various functions like Pictures display, atmosphere light control, line tracking, obstacle avoidance, light following, IR control and WIFI control.
4. Easy to build
5. High compatibility
6. Charging function
7. Wi-Fi Control
8. Compatible with Android and iOS systems



13. 4WD Mecanum Robot Car Kit

When it comes to programming, many consider it difficult. However, a 4WD Mecanum Robot Kit is to cope with this problem. This product not only allows your child to learn the knowledge of programming, but also electronics, mechanics, control logic and computer science.



This is a low-cost, easy-to-operate and open-source programming kit. In fact, it is also simple to install and connect from complex electronics integrated into a backplate and a 2.54 anti-plug terminal, which solely needs a few simple assembly steps to build your own Mecanum Robot car.

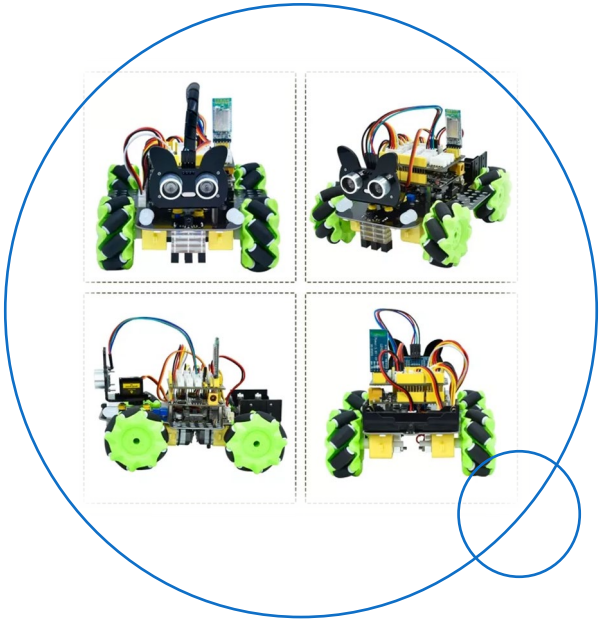
It contains an IR remote control, 7-color LEDs, RGB2812, a line tracking sensor, a servo, motors and Mecanum wheels, an ultrasonic module, etc.

Extra Features

Learn programming with the 12 projects in this one kit. The detailed projects will guide you to learn the working principle of sensors and modules. In this process, not only can you enhance your ability to make projects but also learn skills in programming. The combination of codes makes it very convenient and easy to learn.

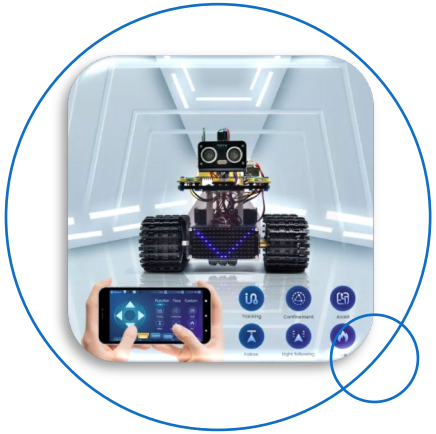
Features

1. Multi-purpose function
2. Easy to build
3. Novel style
4. High extension
5. Basic programming learning



14. Mini Caterpillar Tank Robot V3.0 Kit

This STEM educational V3.0 tank robot is newly upgraded, adding a live-tracking and a fire- extinguishing function. It vigorously enhances the relationship between kids and parents and sparks children's imagination through programming and coding.



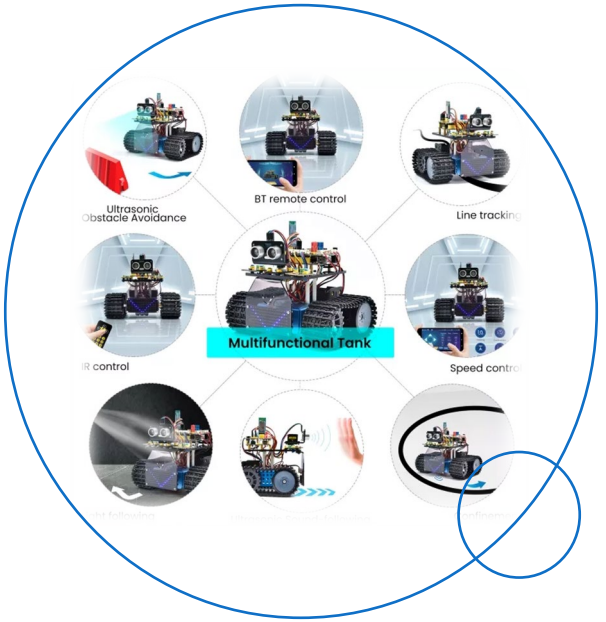
In the course of the assembly process, you can see its multiple functions like the light following, line tracking, IR and BT remote control, speed adjustment and so on. Additionally, there are some small parts that can help you assemble the robot car. There are basic sensors and modules, such as a flame sensor, a BT sensor, an obstacle avoidance sensor, a line tracking sensor and an ultrasonic sensor are included.

Notes

The two tutorials for C language and Arduino are also suitable for enthusiasts of different ages. In this process, not only can you enhance your ability to make projects but also learn skills in programming. The combination of codes makes it very convenient and easy to learn.

Features

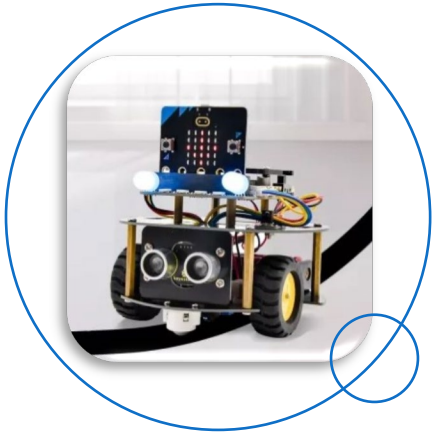
1. Multiple functions
2. Easy to build
3. High tenacity
4. High extension
5. Multiple controls
6. Basic programming



15. Mini Smart Tortoise Car Kit

With the popularity of programming like Python, a large number of parents enrol their children in STEM lessons to stimulate their interest and creativity.

Micro Python is a tiny open-source Python programming language interpreter that runs on small embedded development boards. With Micro Python you can write clean and simple Python code to control hardware instead of having to use complex low-level languages like C or C++ (what Arduino uses for programming).



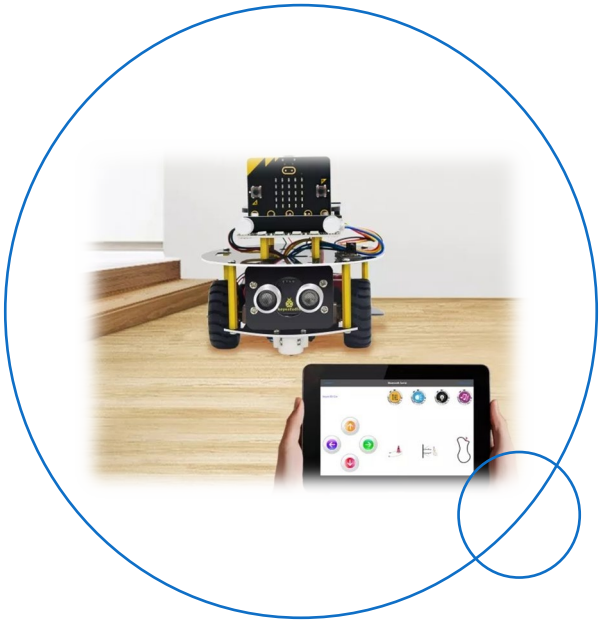
Micro: bit smart car integrates obstacle avoidance, line tracking and IR and Bluetooth control. It is made up of DC-geared motors, wheels, sensors and acrylic boards. In addition, it cooperates with a passive buzzer with a music play function, 4 pcs WS2812RGB LEDs and 2 pcs RGB lights.

Notes

Imagination and creativity can be stimulated through DIY smart cars and acquiring how to code through Makecode, a new method to program. The Test codes and projects provided will help you to understand better about Python programming.

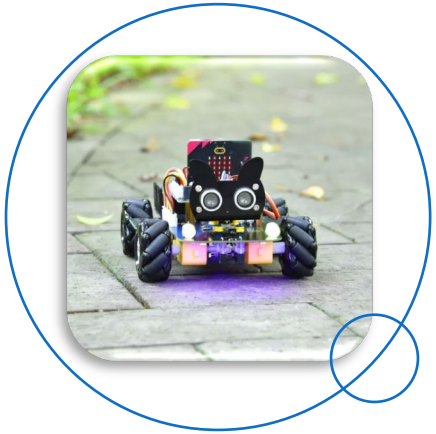
Features

1. Multiple functions
2. Easy to build
3. Basic programming



16. 4WD Mecanum Wheel Robot Car Kit

This product is a smart car based on Micro: bit. It boasts multiple functions including ultrasonic sound following, line tracking, infrared control and Bluetooth control. It comes with a passive buzzer which is able to play music, 4 WS2812RGB LEDs to display different colours, and 2 colourful lights to make direction lights for the car.



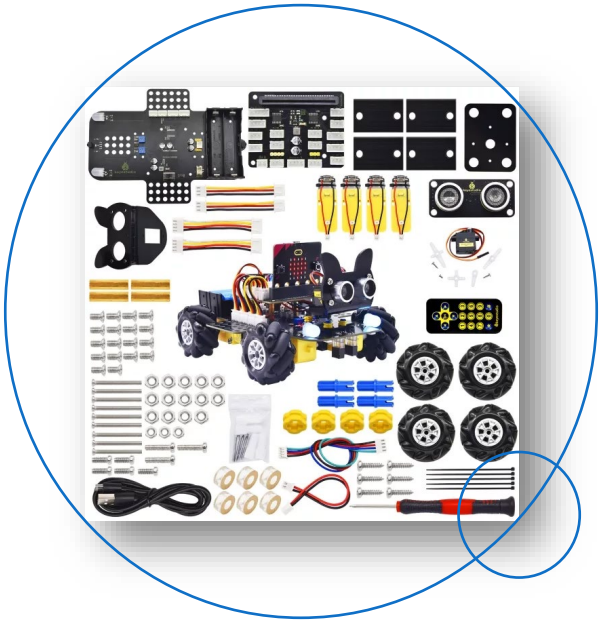
This product uses two 18650 lithium batteries for power supply. In order to provide you with a better experience, corresponding documents about installation and test code are also provided.

Notes

When installing and disassembling the battery, please card attention to the positive and multiple poles of the battery, and be sure not to reverse them. By the way, the motor speed of this product is adjustable.

Features

1. Multiple functions
2. Easy to build
3. Basic programming
4. Control methods



17. 7-inch Screen kit for Raspberry Pi

A 7-inch screen kit for the Raspberry Pi is a set of hardware and software components that allow you to connect a 7-inch display screen to a Raspberry Pi single-board computer. The kit typically includes a display panel, a display controller board, a set of cables, and an installation guide.

The display controller board communicates with the Raspberry Pi over a high-speed interface such as HDMI or DPI, and it converts the Raspberry Pi's video output into a format that the display panel can understand.

The screen kit can be useful for creating portable or standalone projects such as media centers, game consoles, or kiosks.

Notes

Install Raspberry Pi Desktop system, otherwise the desktop won't be shown. To use the kit, need to connect the display controller board to the Raspberry Pi using the provided cables.

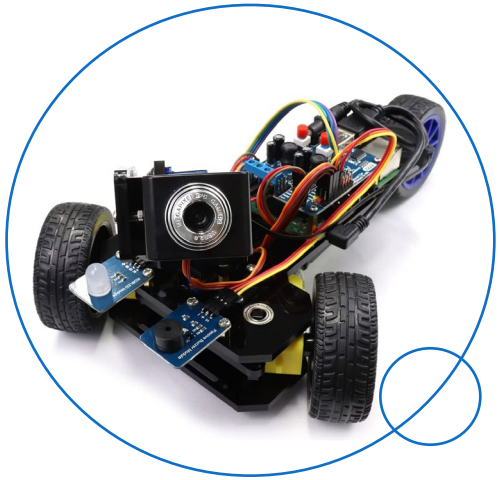
Features

1. High resolution
2. Touch screen capability
3. Wide viewing angle
4. Easy installation
5. Compatibility

18. Three-Wheeled Smart Car Kit

This Three-Wheeled Smart Car kit is a DIY robotics kit that allows you to build and program a 3-wheeled robot car. The kit comes with all the necessary components.

You can use the included instructions to assemble the robot car and then use programming languages like Python to write code to control the robot's movements and behaviours. You can also customize the robot by adding your own sensors or components to expand its capabilities.

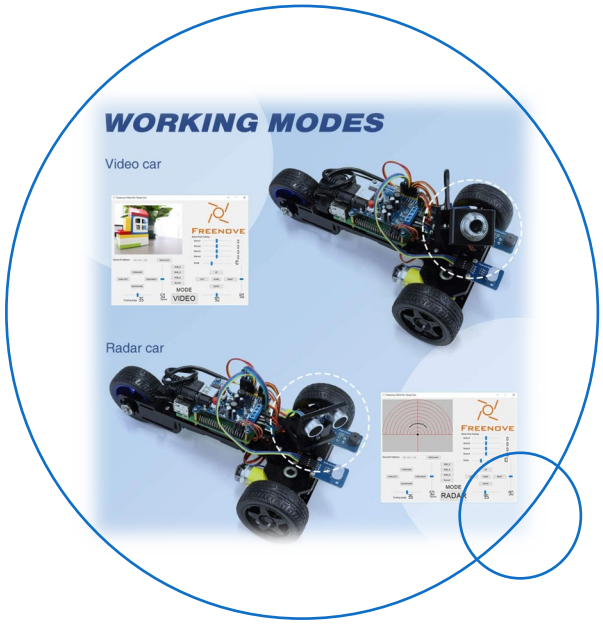


Notes

Compatible models -> Raspberry Pi 4B / 3B+ / 3B / 3A+. (2B / B+ is also compatible but needs extra parts) (NOT included in this kit.)

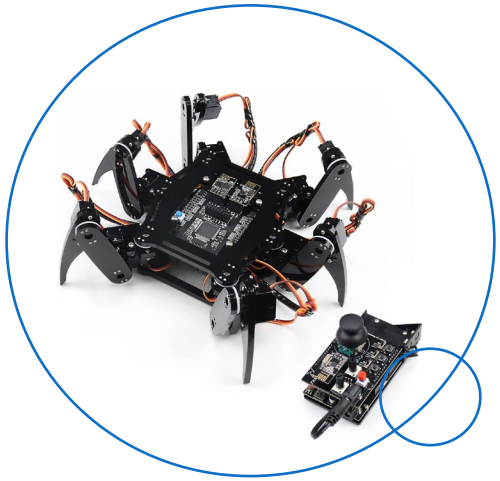
Features

1. Two working modes
2. Control methods
3. Programmable



19. Hexapod Robot Kit

This Hexapod Robot kit is a DIY robotics kit that allows you to build and program a hexapod robot, which is a type of robot with six legs. The kit comes with all the necessary components, including a Raspberry Pi board, servo motors, and a variety of sensors. You can use the included instructions to assemble the hexapod robot and then use programming languages like Python to write code to control the robot's movements and behaviours. Some possible applications for the hexapod robot include walking, dancing, and exploring. You can also customize the robot by adding your own sensors or components to expand its capabilities.

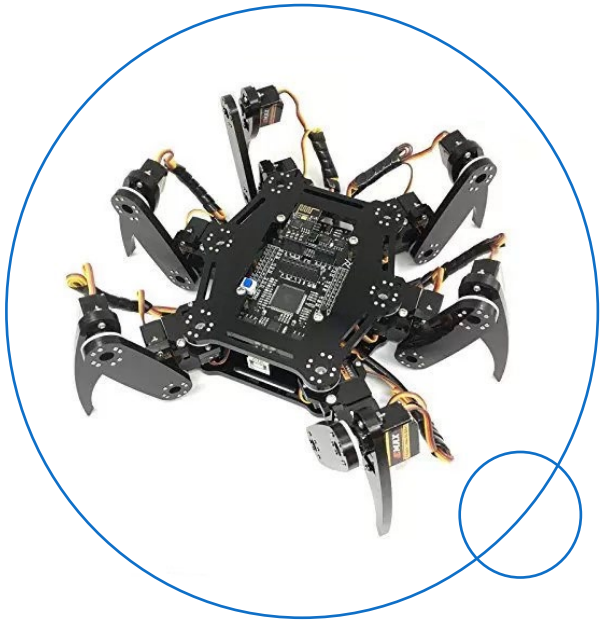


Notes

Needs Battery. Refer the tutorial for the battery requirements.

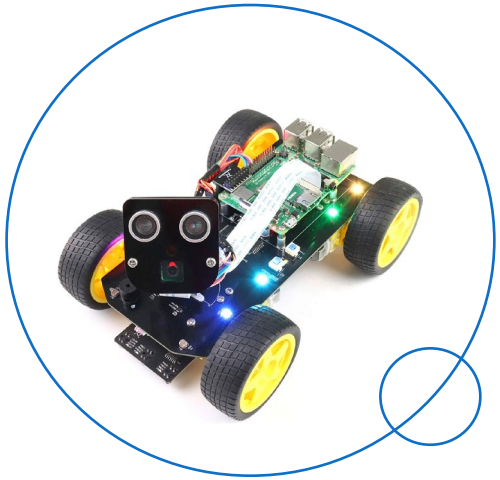
Features

1. Servo motors
2. Sensors
3. Control methods
4. Instructions and Programming resources
5. Customization options
6. Two working modes



20. 4WD Smart Car Kit

This 4WD smart car kit is a DIY robotics kit that allows you to build and program a 4-wheeled robot car. The kit comes with all the necessary components You can use the included instructions to assemble the robot car and then use programming languages like Python to write code to control the robot's movements and behaviours. Some possible applications for the 4WD smart car include autonomous navigation, obstacle avoidance, and line following. You can also customize the robot by adding your own sensors or components to expand its capabilities. The 4WD feature of the kit refers to the fact that the robot has four wheels and can drive in any direction, providing greater manoeuvrability and stability compared to a robot with just two wheels.

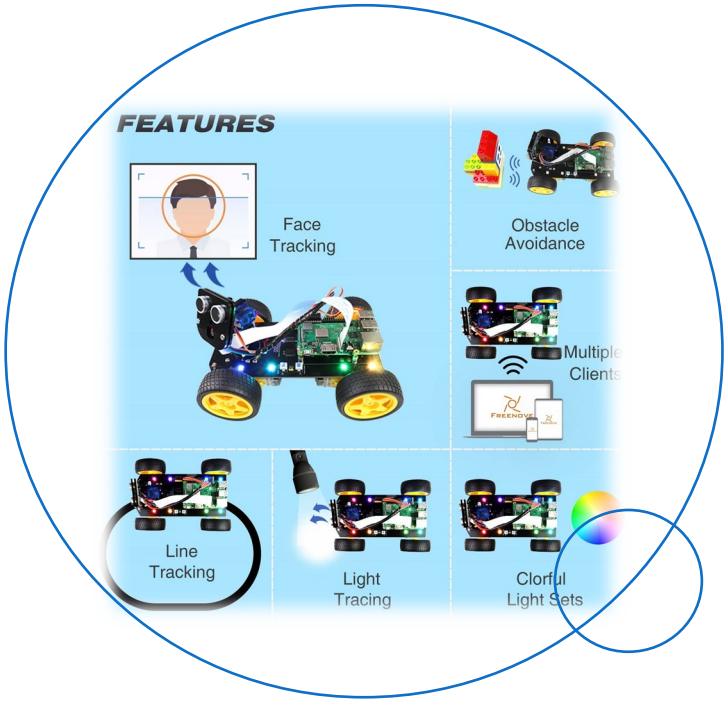


Notes

Needs Battery. Refer to the tutorial for the battery requirements. Compatible models -> Raspberry Pi 4B / 3B+ / 3B / 3A+. (2B / B+ / A+ / Zero 1.3 / Zero W is also compatible but needs extra parts.) (Raspberry Pi is NOT included in this kit.)

Features

1. Face Tracking
2. Obstacle avoidance
3. Multiple clients
4. Line and Light Tracking
5. Programmable
6. Colourful light sets



21. Robot Ant Kit

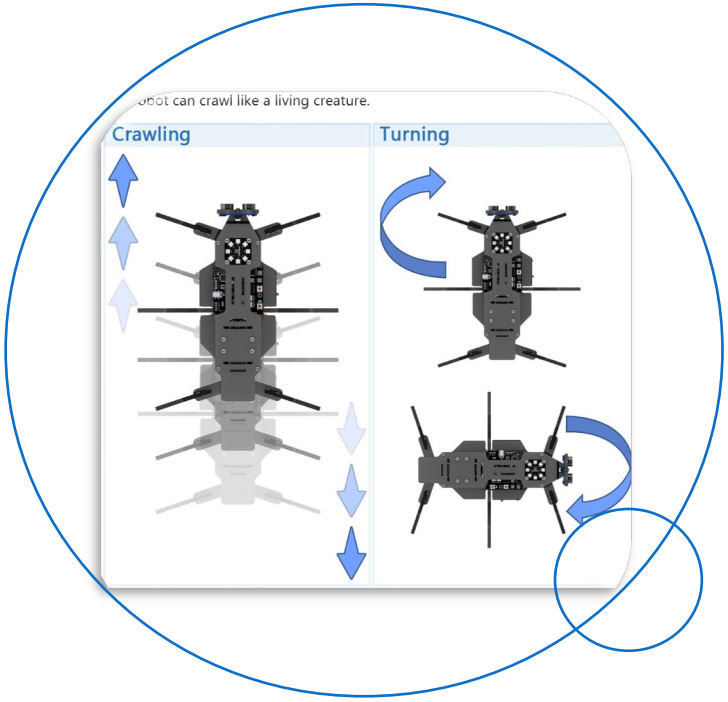
This Robot ant kit is a DIY robotics kit that allows you to assemble and program. The kit comes with all the necessary components You can use the included instructions for programming languages like Python to write code to control the robot's movements and behaviours. You can also customize the robot by adding your own sensors or components to expand its capabilities. This robot can crawl like a living creature. This kit includes detailed assembly tutorial and complete code.

Notes

Needs Battery. Refer the tutorial for the battery requirements.

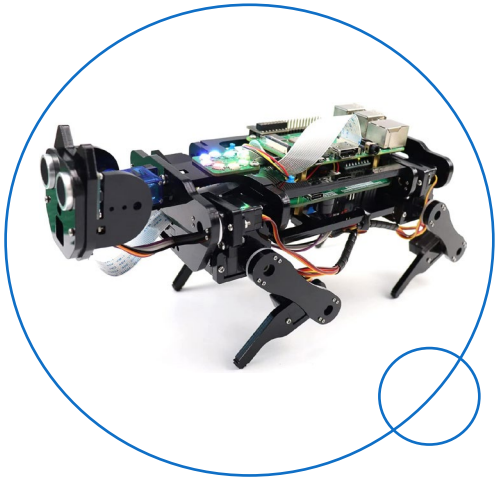
Features

1. Dot Matrix Expressions
2. Expression control
3. Colourful lights
4. Obstacle avoidance
5. Multiple control methods



22. Robot Dog Kit

This Robot dog kit is a DIY robotics kit that allows you to assemble and program. The kit comes with all the necessary components You can use the included instructions for programming languages like Python to write code to control the robot's movements and behaviours. You can also customize the robot by adding your own sensors or components to expand its capabilities. This robot has multiple functions. This kit includes detailed assembly tutorial and complete code.

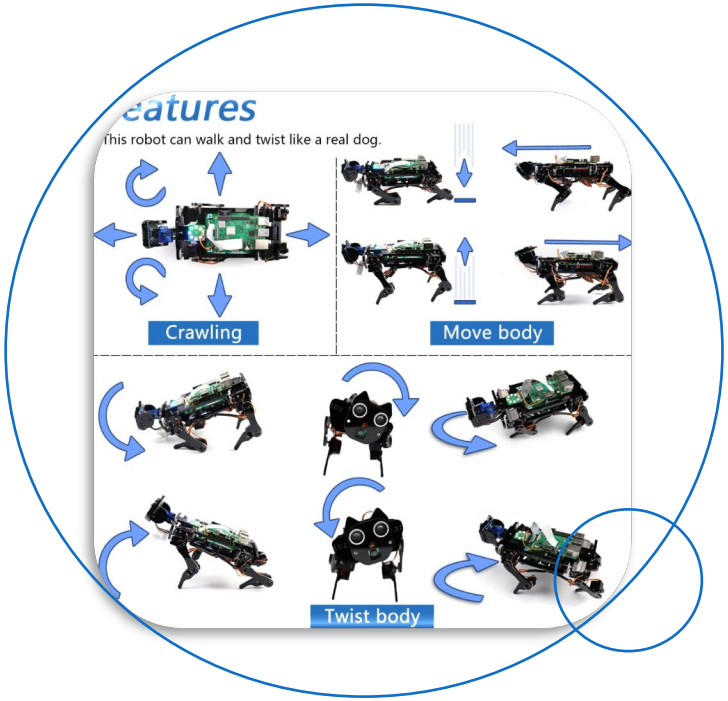


Notes

Needs Battery. Refer the tutorial for the battery requirements. Compatible models -> Raspberry Pi 4B / 3B+ / 3B / 3A+. (2B / B+ / A+ / Zero 1.3 / Zero W is also compatible but needs extra parts.) (Raspberry Pi is NOT included in this kit.)

Features

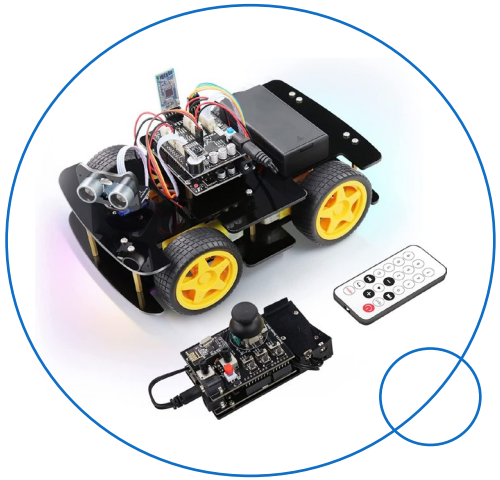
1. Self-Balancing
2. Ball Tracking
3. Face Recognition
4. Real time video
5. Ultrasonic ranging
6. Distance measurement
7. App and Remote Control



23. 4WD Smart Car Kit with RF Remote

The 4WD Smart Car Kit with RF Remote is a DIY robotics kit that allows you to build and program a remote-controlled four-wheel drive (4WD) car. To build the car, you'll need to follow the instructions provided in the kit, which involve assembling the various components and wiring them together according to the schematic. Once the car is built, you can use the RF remote to control its movement, turning, and other functions.

In addition to the hardware components, the kit also includes software resources, such as sample code and libraries, that you can use to program the car to perform various tasks.



Features

1. RF remote
2. Programmable
3. Expandable
4. Educational
5. Comprehensive

Notes

Needs Battery. Refer to the tutorial for the battery requirements.
Compatible models -> Raspberry Pi 4B / 3B+ / 3B / 3A+. (2B / B+ / A+ / Zero 1.3 / Zero W is also compatible but needs extra parts.)
(Raspberry Pi is NOT included in this kit.)