# What Exactly Is Arduino?

Arduino is definitely an open-source, programmable microcontroller and software depending on the ATMega chip. Even though the Arduino was made as being a prototyping platform, quite a few in various electronics projects whether temporary or embedded. The Arduino board might be programmed with all the Arduino software. The syntax because of this is similar to C/C++ and Java. It can be made to the simple and easy to make use of, and is run by anyone, from beginners to experts alike.

As Arduino can be an free platform, you can find hold of the foundation code and schematics for this. Which means you can delve as far involved with it as you wish, even creating your own personal Arduino boards. Additionally there is a large community behind it, and you will find many tutorials and projects throughout the entire world online.
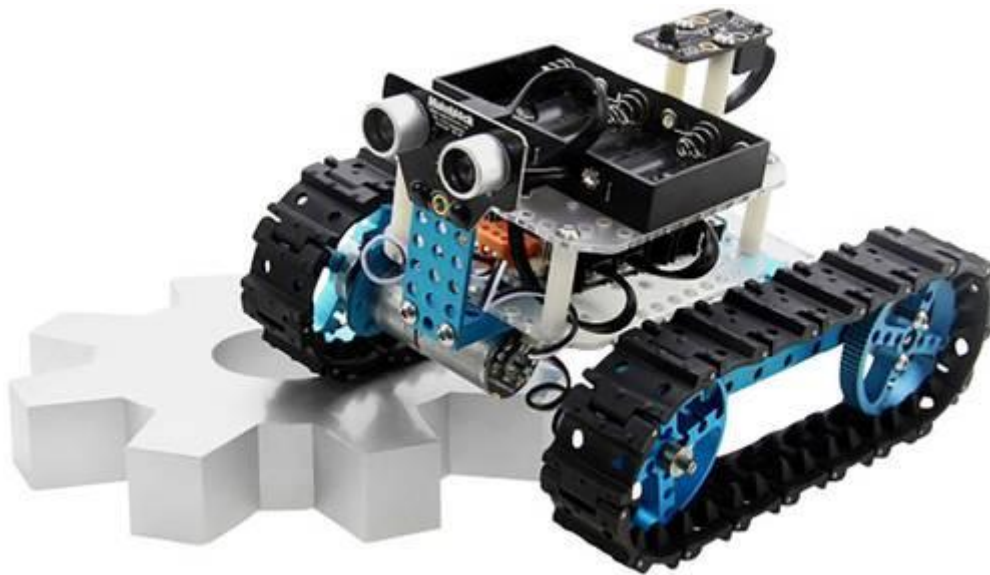
Exactly what can I really do having an Arduino? Basically anything! It's been employed in so many different ways as the choices virtually unlimited. Past projects include robots, art installations, in-car computers, MIDI controllers, cocktail makers, human-computer interfaces, Facebook 'like' counters, advertising displays, clocks, music instrument, custom keyboard and mouse, home automation... Other great tales and also on!

The key top features of an Arduino board are it's capacity to read data from sensors, to deliver

and receive digital signals and may connect via serial to your computer. It is possible to control lots of things, from LEDs and LCDs, to motors and relays. You can even read values from sensors including potentiometers, light dependent resistors (LDRs) and piezos.

The digital pins by using an Arduino allow you to read or write 5v values. You can use a pin to make with an LED (having a resistor). You are able to send a transmission to a relay to work higher voltage appliances like televisions and house lights. You can send messages to motors to change don and doff. You can check to ascertain if a button has become pressed. You may even send and receive serial data, parallel data and digital pulse width modulation. Basically anything that might be controlled by way of a little bit of current may be used.

The analog pins enable you to read an incoming voltage between 0v and 5v. This can be how we read from sensors. There are a plethora of sensors available, from simple hands-on pressure sensors and rotary potentiometers, to environment sensors like pressure, gas, temperature and even alcohol. If you have, for example, a slider set to exactly 1 / 2 of its range, it will output a voltage of 2.5v. The Arduino are able to look at this and employ the worth to manipulate something more important.

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