

# Seeeduino Lotus



Seeeduino Lotus is an ATMEGA328 Microcontroller development board. It is a combination of Seeeduino and Base Shield. Seeeduino Lotus v1.0 uses an Atmel ATMEGA328P-MU and CH340. ATMEGA328P-MU is a high performance, low power AVR 8-Bit Microcontroller. CH340 is a USB bus converter chip that can realize a USB to serial interface. Seeeduino Lotus v1.1 replace CH340 with CP2102N to enable the compatibility with MAC, there is nothing other change compared to Seeeduino Lotus v1.0. Seeeduino Lotus has 14 digital input/outputs (6 of which can output PWM) and 7 analog input/outputs, a micro USB connection, an ICSP header, 12 Grove connections, a reset button.

## **Warning**

Seeeduino Lotus 1.0 works at Windows Operating System ONLY. Seeeduino Lotus 1.1 works with Window and Mac.

## Application Ideas

- DIY
- IoT and Smart Home
- Robot
- Learning
- Toy

## Features

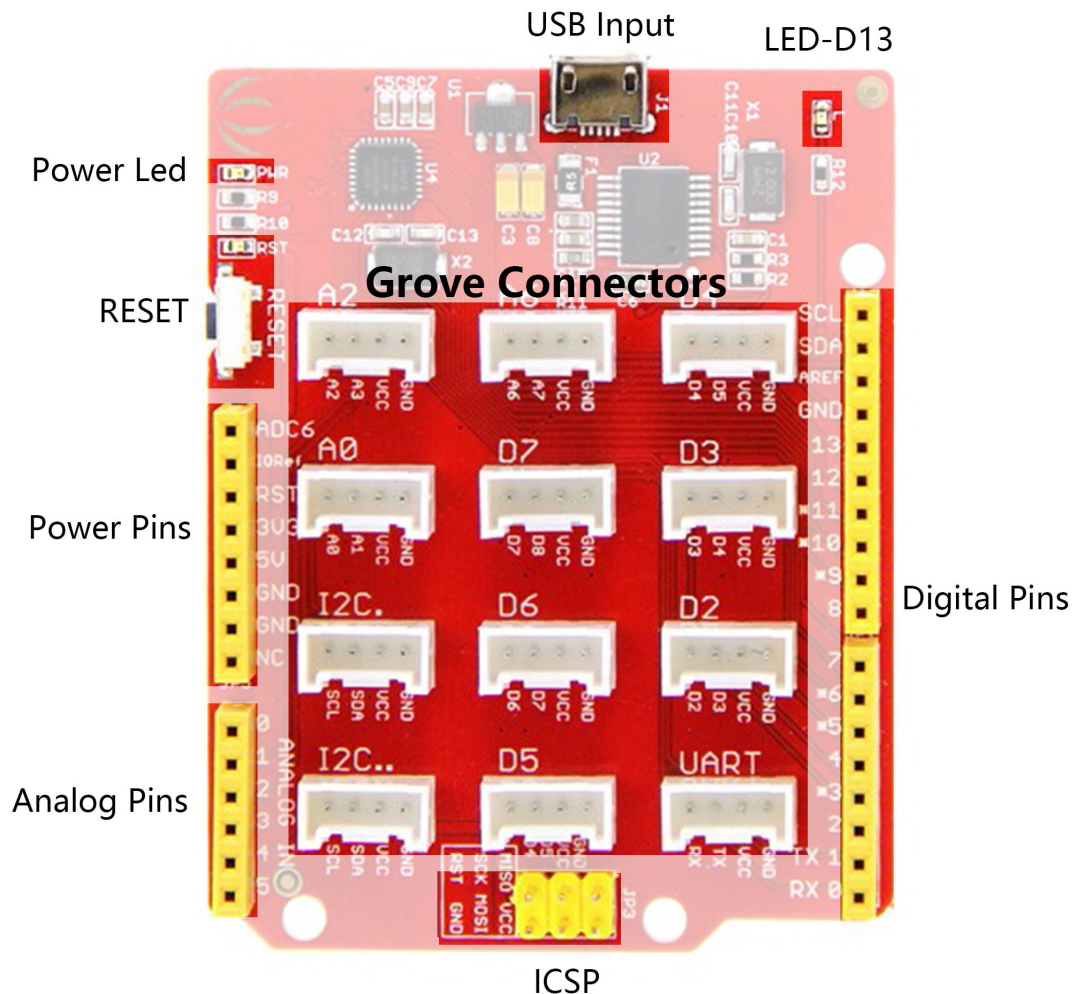
- Fully compatible with Arduino UNO
- ATmega328 microcontroller
- 12 on-board Grove connectors
- 14 Digital I/O Pins (6 PWM outputs)
- 6 Analog Inputs
- ISP Header
- Arduino UNO-R3 Shield Compatible
- Micro USB programming and power supply
- 5V Operating Voltage

## Specification

Microcontroller	ATmega328P-MU
Operating Voltage	5V
Digital I/O Pins	14
PWM Channels	6
Analog Input Channels	7
DC Current per I/O Pin	40 mA
Flash Memory	32 KB
RAM	2 KB
EEPROM	1 KB
Clock Speed	16 MHz

## Hardware Overview [1](#)

The images below show an overview of Seeeduino Lotus hardware features. The pin-out and alternate functions of various pins of Seeeduino Lotus are shown in the pin-out diagram. This could be used as a quick reference.



- **LED-D13** An LED is connected to D13 pin of the board. This can be used as an on-board LED indicator for programs/sketches.
- **USB Input** USB Port is used to connect the board to your PC for programming and for powering up. Micro USB is the ubiquitous version of USB, found in most Android phones, and other devices. You probably have dozens of these cables laying around your house.
- **Reset** This button is conveniently placed on the side to allow you to reset the Seeeduino board even when a shield is placed on top. This is not the case in

other Arduino boards where the button is placed on top making it hard to access.

- **Power Pins & Analog Pins** Just like the extra Digital header pads, these extra connections are something we have personally come to realize people need in their projects, especially the power connections if you want to power more than one sensor/device without the use of a breadboard.
- **Grove Connectors** SeeedStudio has a variety of sensors/devices that can make use of this Analog, Digital, I2C and UART connection. In addition, we sell independent Grove connectors to help you make our own sensor connections.
- **ICSP** This is the ICSP connection for the ATmega328P, it is located in the standard ICSP/SPI position for Arduino Uno, Due, Mega, and Leonardo compatible hardware (e.g. shields) that may use this connector. The SPI pins in this port: MISO, SCK, and MOSI, are also connected to digital pins 12, 13, and 11 respectively just like those of the Arduino Uno.
- **USB 2 Uart** Pinout of USB-2-Uart. These pads can be used to interact with other UART devices by putting the on-board ATmega328 in reset mode. This makes Seeeduino Lotus to be used a USB2UART utility board.

### **Warning**

Take gentle care in handling micro USB socket, or you might break the socket off.