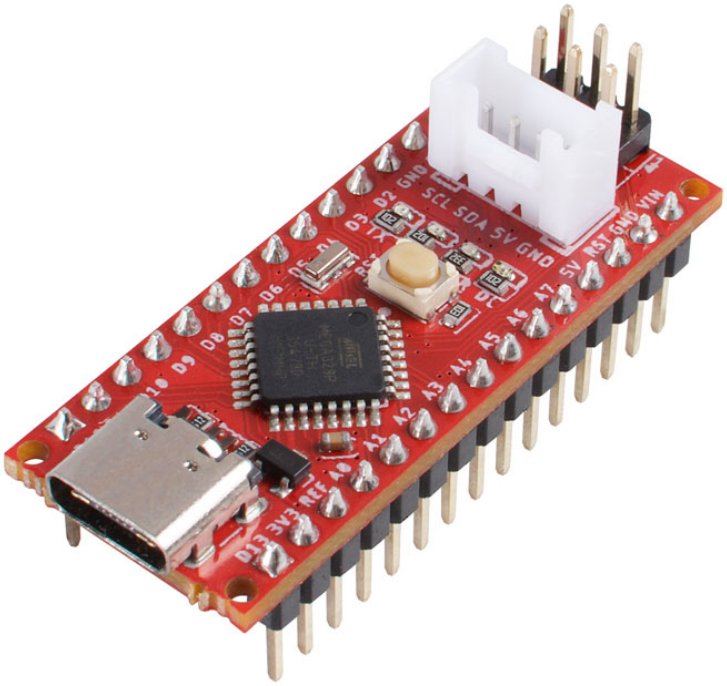
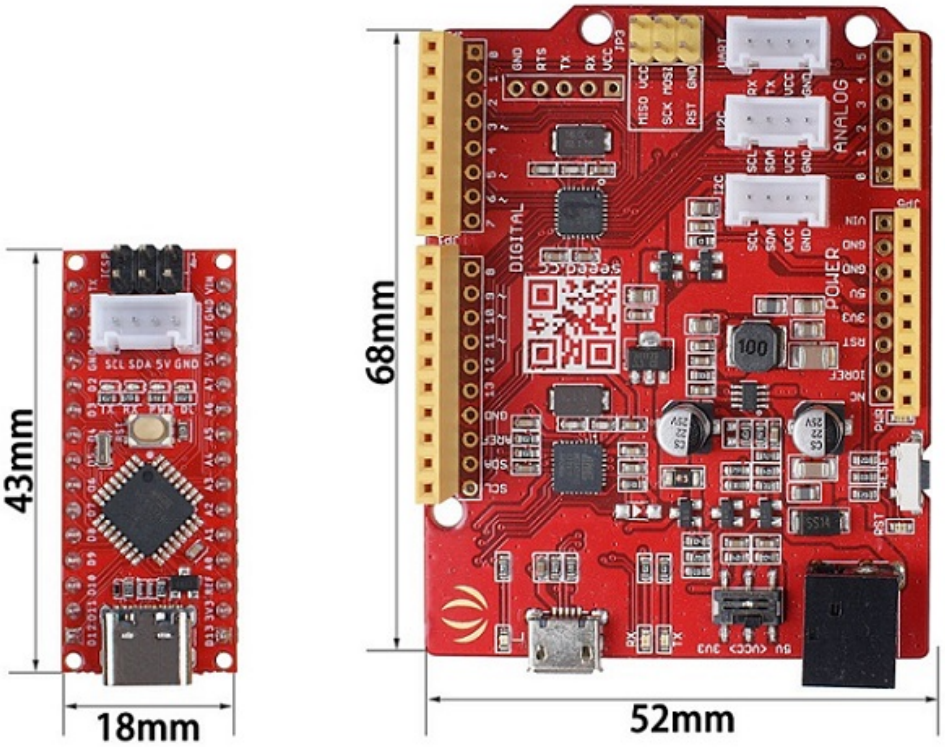
Seeeduino Nano



The Seeeduino Nano is a compact board similar to the Seeeduino V4.2 [https://www.seeedstudio.com/Seeeduino-V4-2-p-2517.html]/Arduino UNO, and it is fully compatible with Arduino Nano [https://store.arduino.cc/usa/arduino-nano] on pinout and sizes.

The same as Seeedunio V4.2, Seeeduino Nano is built around Atmega328P -- 8-bit AVR microcontroller. So you can use the same program code on both boards. However, the dimensions of the two are significantly different. Less than a quarter of the size, but with almost the same features, Seeeduino Nano will save more space for your project, more suitable for space-constrained scenes.



The Seeeduino Nano offers the same features and high-quality experience as the Arduino Nano in less than half the price. On the other hand, the Seeeduino Nano has also made the following improvements compared to the Arduino Nano. 1-Change the Mini-USB into Type-C, which is symmetrical and reversible. 2- Add one Grove I2C connector, with the help Grove system, you can play with hundreds of sensors and actuators simply by plugging.

One more thing, we know that only one on-board Grove connector may not be enough, so we made this Grove shield for Arduino Nano [https://www.seeedstudio.com/Grove-Shield-for-Arduino-Nano-p-4112.html], which has 3 Grove digital connectors, 3 Grove analog connectors, 1 Grove I2C connector, and 1 Grove UART connector.

[https://www.seeedstudio.com/Seeeduino-Nano-p-4111.html]

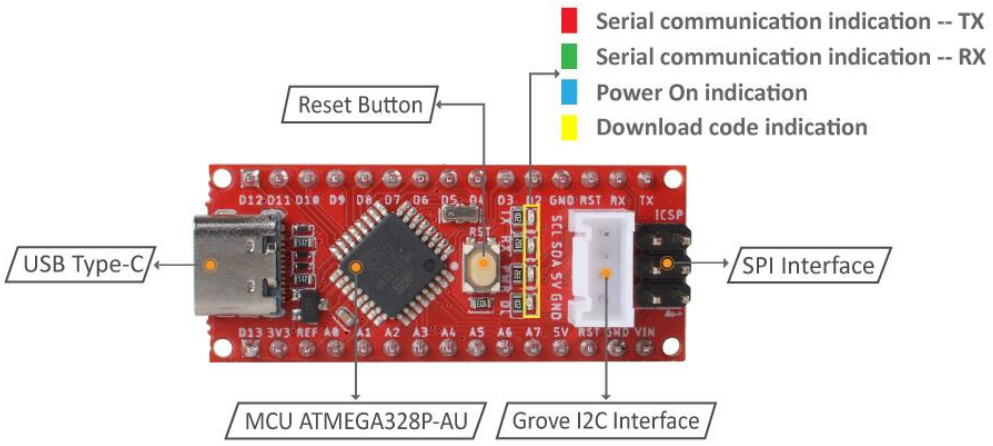
Feature

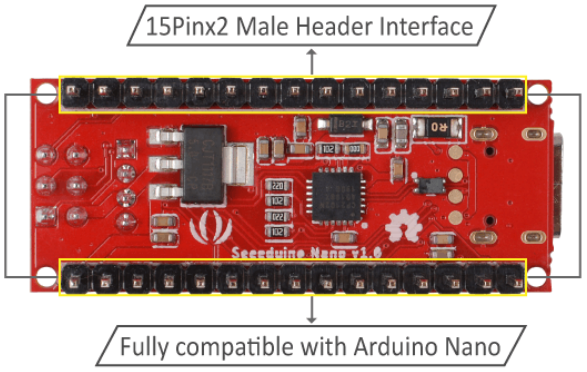
- 43mm*18mm Tiny board
- 16M ATmega328P
- Fully compatible with Arduino Nano
- USB Type C for Programming and power
- On-board Grove I2C connector
- Breadboard-friendly

Specification

Item	Value
Microcontroller	ATmega328P
Power Input	USB Type C
Operating Voltage	USB:5V
Digital I/O Pins	14
PWM Channels	6
Analog Input Channels	8
DC Current per I/O Pin	40 mA
IO Input Voltage	5V
SRAM	2 KB
Flash Memory	32KB
Maximum CPU frequency	16 MHz

Hardware Overview

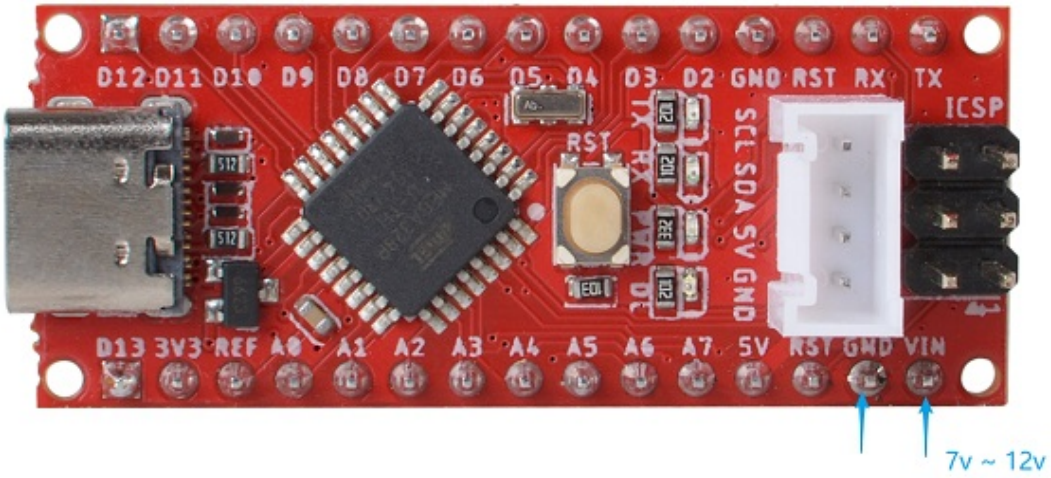




Attention
The I2C interface is not equipped with a pull-up resistor. It is recommended to use a 4.7k resistor to pull up to VCC when using it.

Power

Instead of supply power by the **Type C** port, you can also use the **VIN** and **GND** pins to power Seeeduino Nano. Then input range of VIN is 7V ~ 12 V.



The max power parameter

Item	Value
The max. input circurt of USB Type C	2A
The max. output circurt of VCC	1A
The max. output circurt of 3V3 pin	200mA

Getting Started

Hardware

Materials required

- Seeeduino Nano x1
- Computer x1
- USB typc cable x1

Tip
Some USB cables can only supply power and cannot transfer data. If you don't have a usb cable or don't know if your usb cable can transmit data, you can check seeed USB type C support USB 3.1 [https://www.seeedstudio.com/USB-Type-C-to-A-Cable-1Meter-p-4085.html].

Connect the Seeeduino Nano to your computer using the USB cable. The blue power LED (labelled **PWR**) should light on.

Software

- **Step 1. You need to Install an Arduino Software.**

Download Arduino IDE

[https://www.arduino.cc/en/Main/Software]

Launch the Arduino application

Double-click the Arduino application (arduino.exe) you have previously downloaded.

Note
If the Arduino Software loads in a different language, you can change it in the preferences dialog. See the Arduino Software (IDE) page [https://www.arduino.cc/en/Guide/Environment#languages] for details.

- **Step 2. Open the Blink example**
  Open the LED blink example sketch: **File > Examples >01.Basics > Blink**.

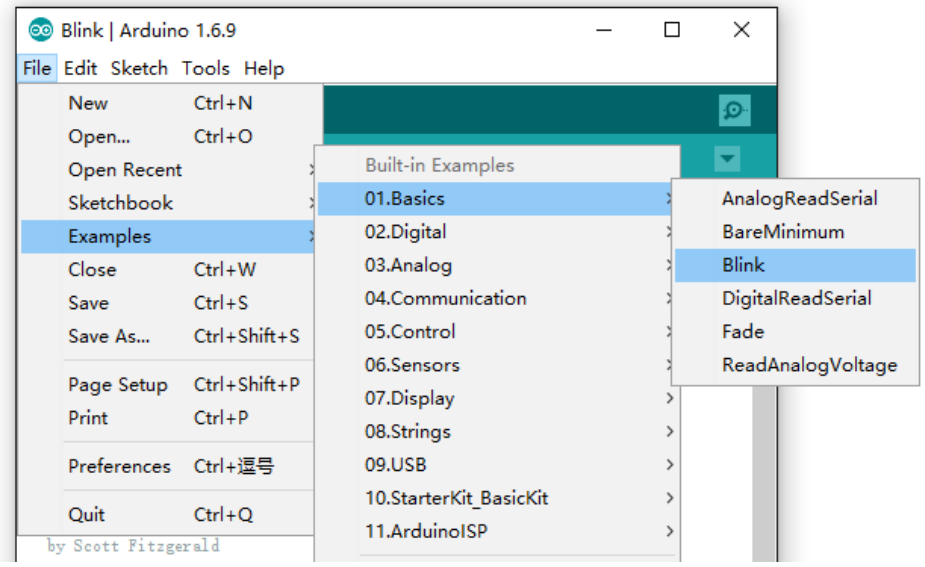


Figure 9. *Blink Path*

- **Step 3. Add the Seeed Board**

  Please follow the Seeed Board Intallation Guide [https://wiki.seeedstudio.com/Seeed_Arduino_Boards/] and serch the key word **Seeeduino AVR** to add the **Seeeduino Nano** into your Arduino IDE.

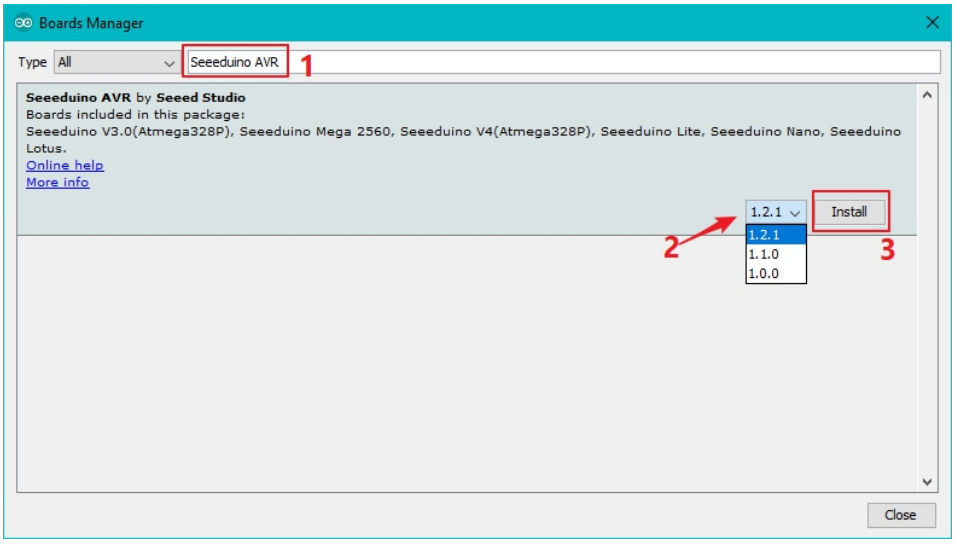


Figure 10. *The key word is **Seeeduino Nano***

Tip

When you install the Seeeduino AVR board, please make sure to select the Version 1.2.1 or above.

- **Step 4. Select your board and port**
  You'll need to select the entry in the **Tools > Board** menu that corresponds to your Arduino. Selecting a **Seeeduino Nano**.

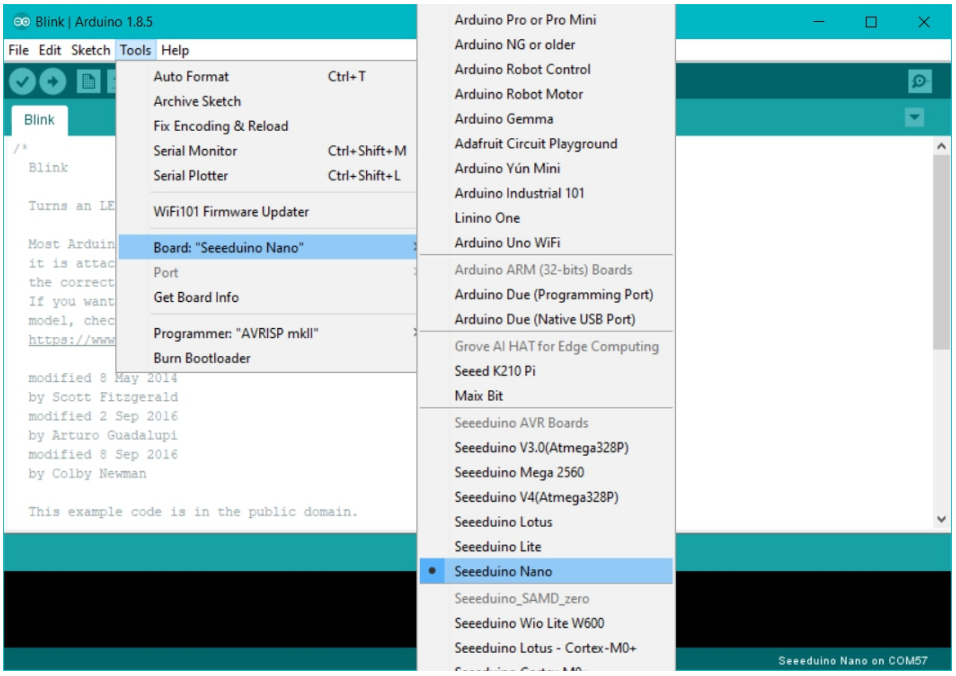


Figure 11. *Choose the right board*

Select the serial device of the Arduino board from the Tools | Serial Port menu. This is likely to be COM3 or higher (**COM1** and **COM2** are usually reserved for hardware serial ports). To find out, you can disconnect your Arduino board and re-open the menu; the entry that disappears should be the Arduino board. Reconnect the board and select that serial port.

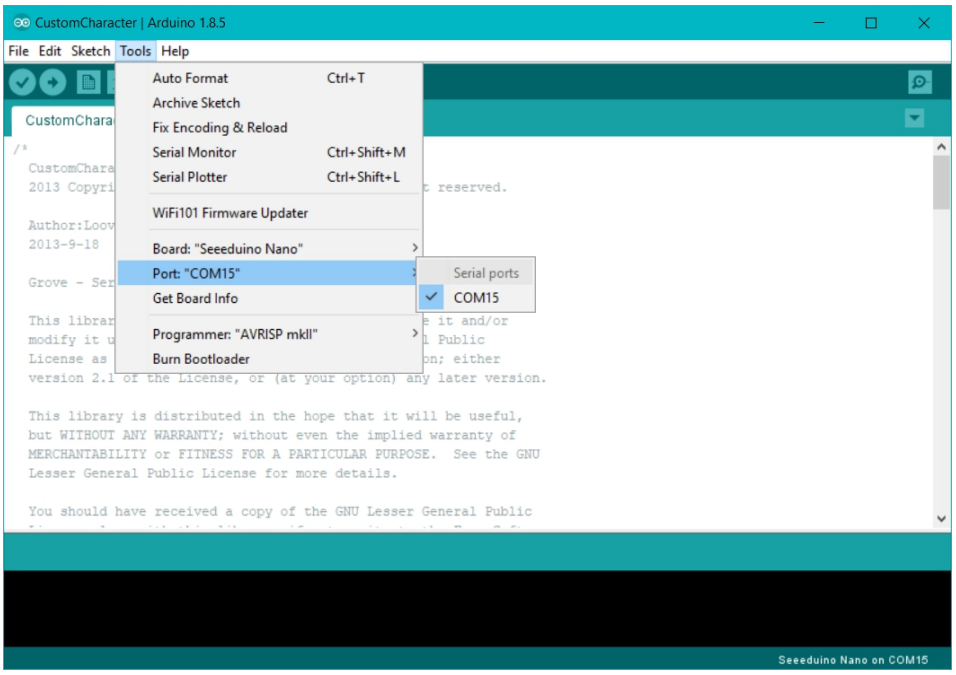


Figure 12. *Choose the right port*

- **Step 5.Upload the program**
  Now, simply click the "Upload" button in the environment. Wait a few seconds and if the upload is successful, the message "Done uploading." will appear in the status bar.

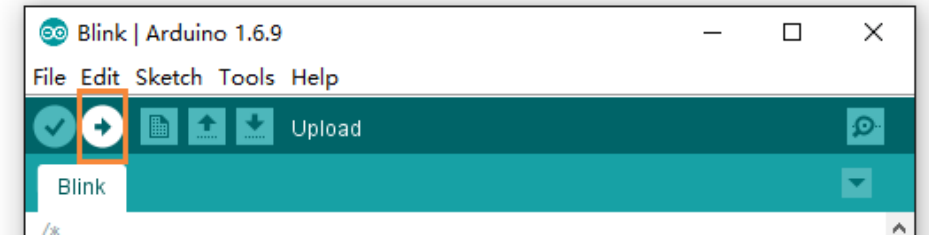


Figure 13. *Upload the code*

A few seconds after the upload finishes, you should see the pin 13 (L) LED on the board start to blink (in orange). If it does, congratulations! You've gotten Arduino up-and-running. If you have problems, please see the troubleshooting suggestions.

Schematic Online Viewer

Resources

- **[ZIP]** Seeeduino nano Eagle file [https://files.seeedstudio.com/wiki/Seeeduino-Nano/res/Seeeduino%20nano.zip]
- **[PDF]** ATmega328-datasheet [https://files.seeedstudio.com/wiki/Seeeduino-Nano/res/ATmega328-datasheet.pdf]

Tech Support

Please submit any technical issue into our forum [https://forum.seeedstudio.com/].

[https://www.seeedstudio.com/act-4.html?utm_source=wiki&utm_medium=wikibanner&utm_campaign=newproducts]