

Taller Inicial de Mecatrónica

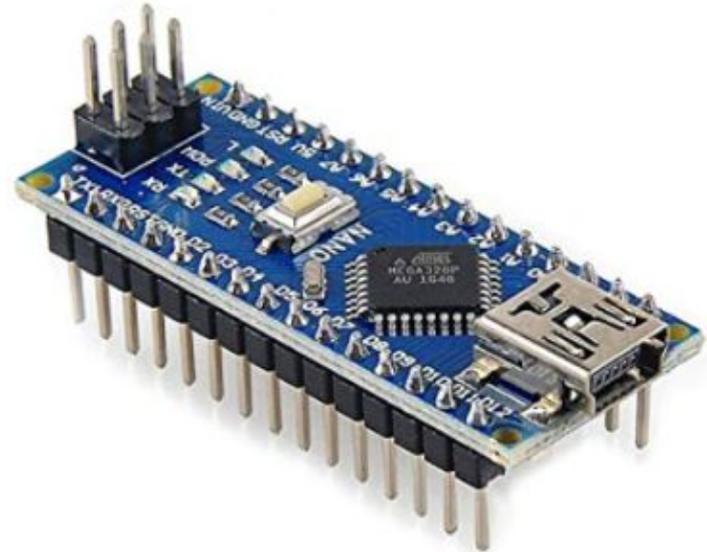
Facultad de Ingeniería
Universidad Nacional de Cuyo

Instalación y configuración Arduino IDE y SimulIDE

Arduino UNO

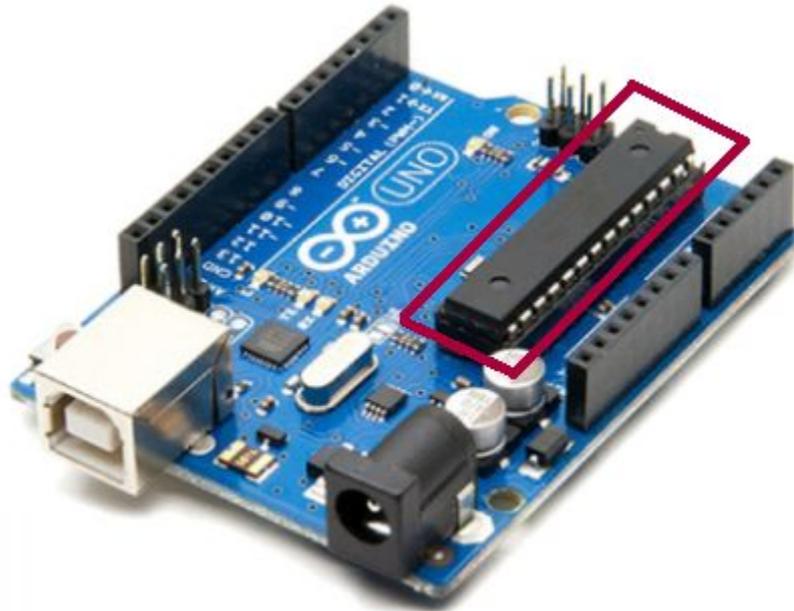


Arduino NANO

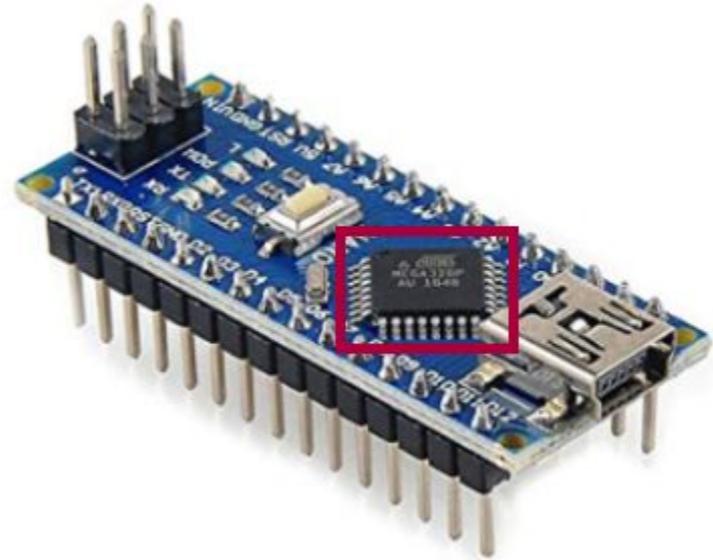


Microcontrolador: Atmega328p

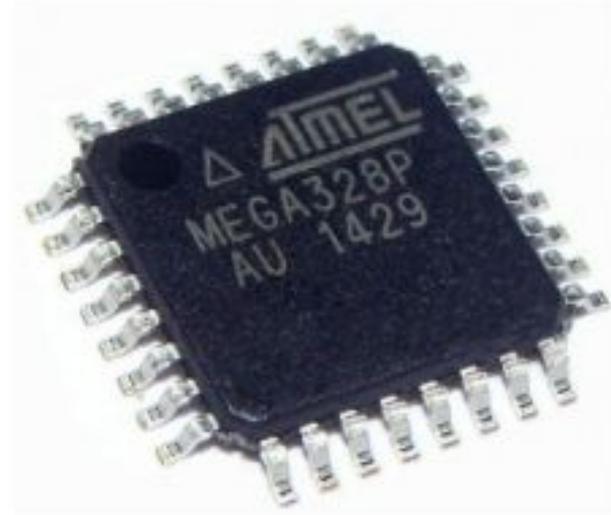
Arduino UNO



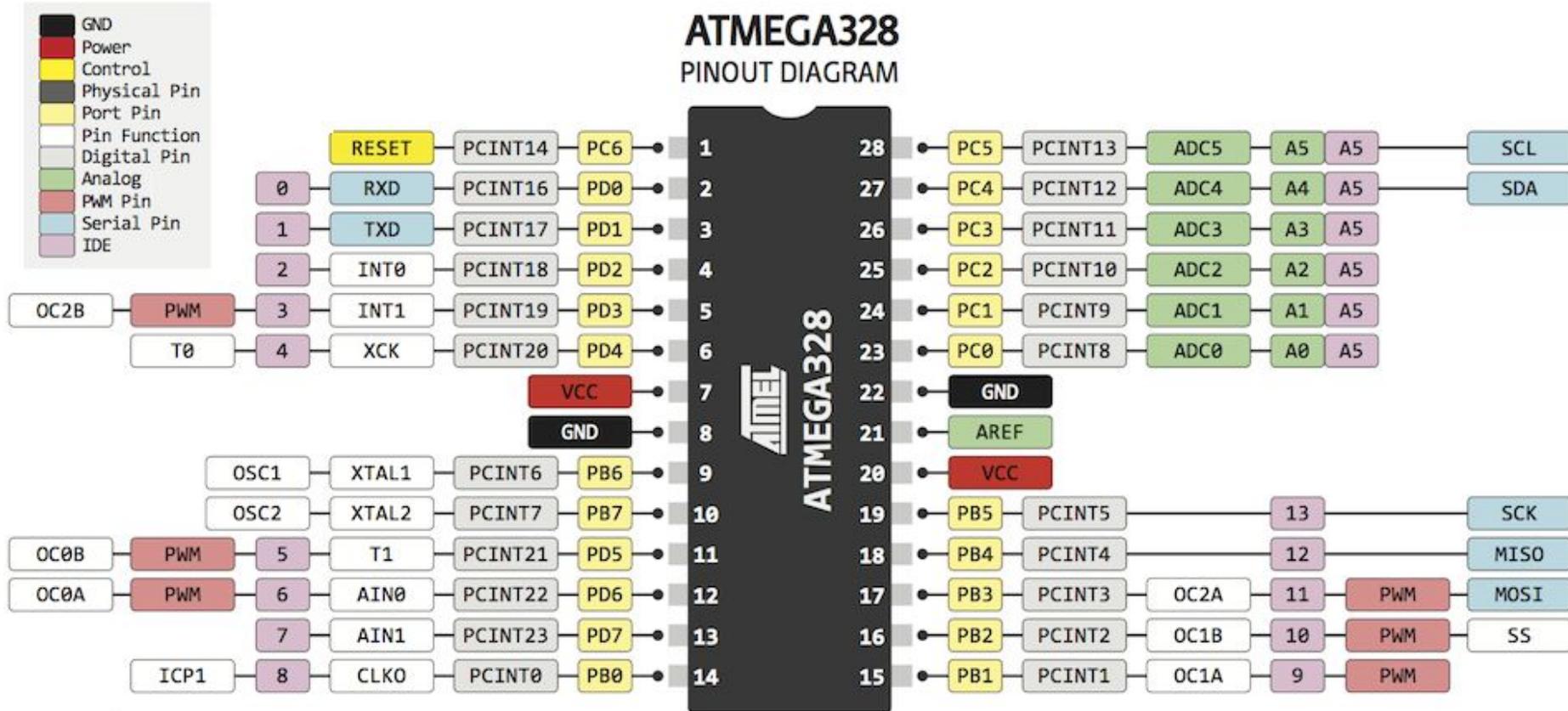
Arduino NANO



Microcontrolador: Atmega328p



Atmega328p PINOUT



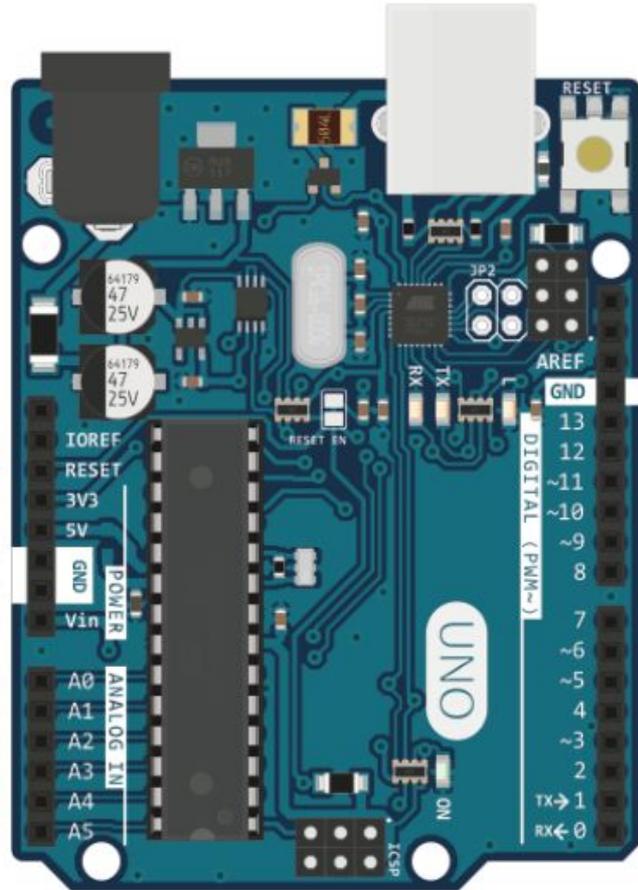
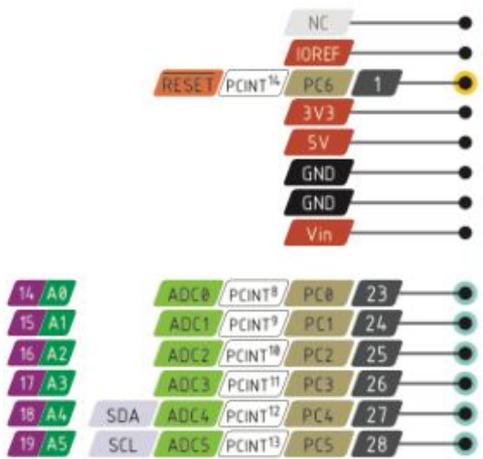
Arduino UNO PINOUT

- Power
- GND
- Physical PIN
- Port PIN
- Analog PIN
- Serial PIN
- PIN Function
- Interrupt PIN
- Control PIN
- IDE

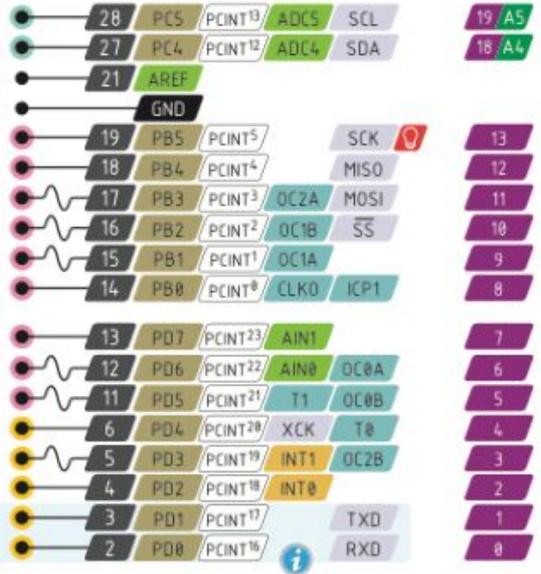
PWM Pin

Port power group

Vin
IOREF



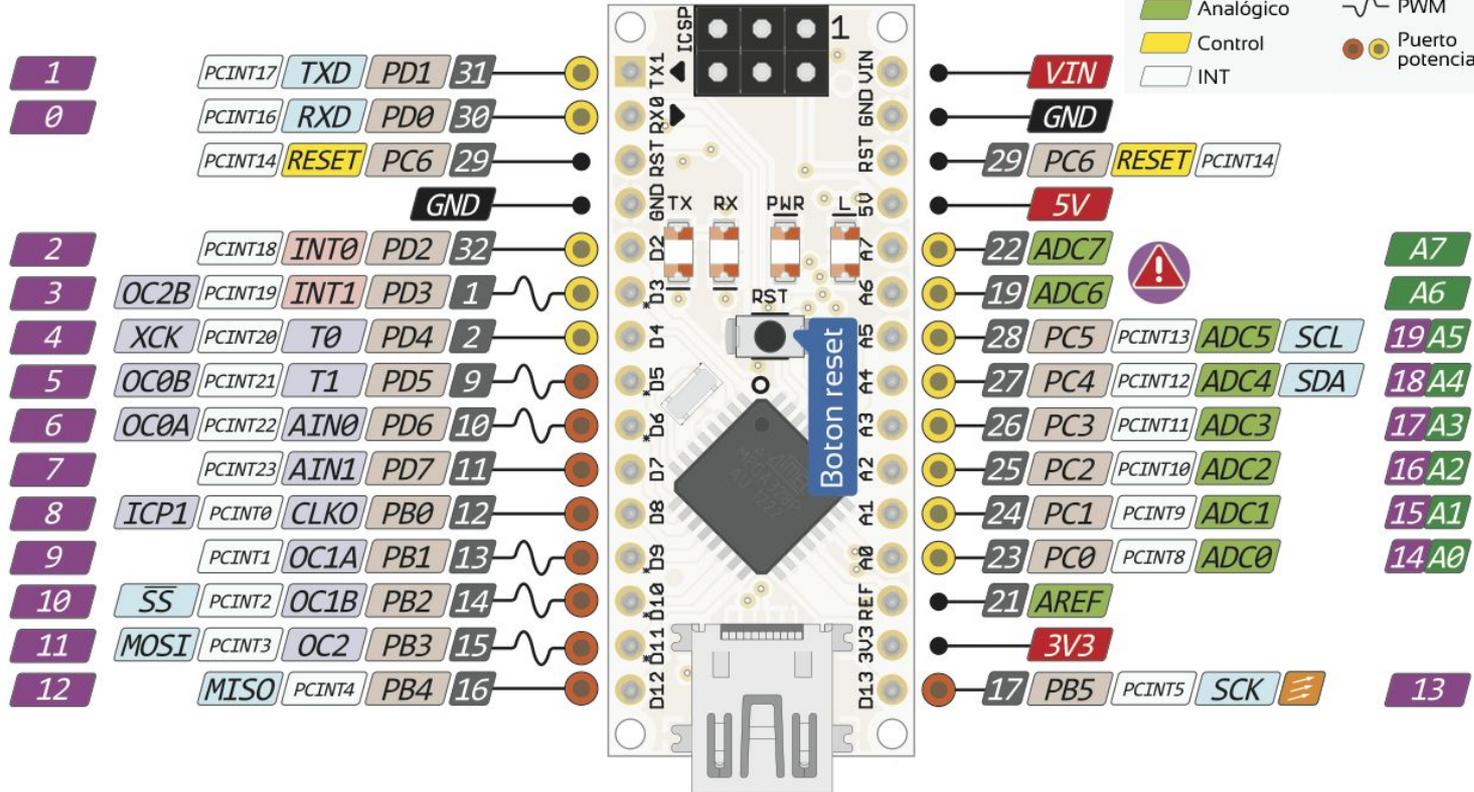
- Absolute** MAX per pin 40mA, 20mA recommended
- Absolute** MAX 200mA for the entire package
- The total current of each port power group **should not exceed** 100mA



Arduino NANO PINOUT

NANO PINOUT

	Alimentación		Pin físico
	GND		Puerto
	Comunicación		Interrupción
	Analógico		PWM
	Control		Puerto potencia
	INT		



Instalación Arduino IDE

Descarga Arduino IDE

<https://www.arduino.cc/en/software>

Downloads



Arduino IDE 2.3.2

The new major release of the Arduino IDE is faster and even more powerful! In addition to a more modern editor and a more responsive interface it features autocompletion, code navigation, and even a live debugger.

For more details, please refer to the [Arduino IDE 2.0 documentation](#).

Nightly builds with the latest bugfixes are available through the section below.

SOURCE CODE

The Arduino IDE 2.0 is open source and its source code is hosted on [GitHub](#).

DOWNLOAD OPTIONS

Windows Win 10 and newer, 64 bits

Windows MSI installer

Windows ZIP file

Linux AppImage 64 bits (X86-64)

Linux ZIP file 64 bits (X86-64)

macOS Intel, 10.15: "Catalina" or newer, 64 bits

macOS Apple Silicon, 11: "Big Sur" or newer, 64 bits

[Release Notes](#)

Descarga Arduino IDE

Stay in the Loop: Join Our Newsletter!

As a beginner or advanced user, you can find inspiring projects and learn about cutting-edge Arduino products through our **weekly newsletter!**



I confirm to have read the [Privacy Policy](#) and to accept the [Terms of Service](#) *



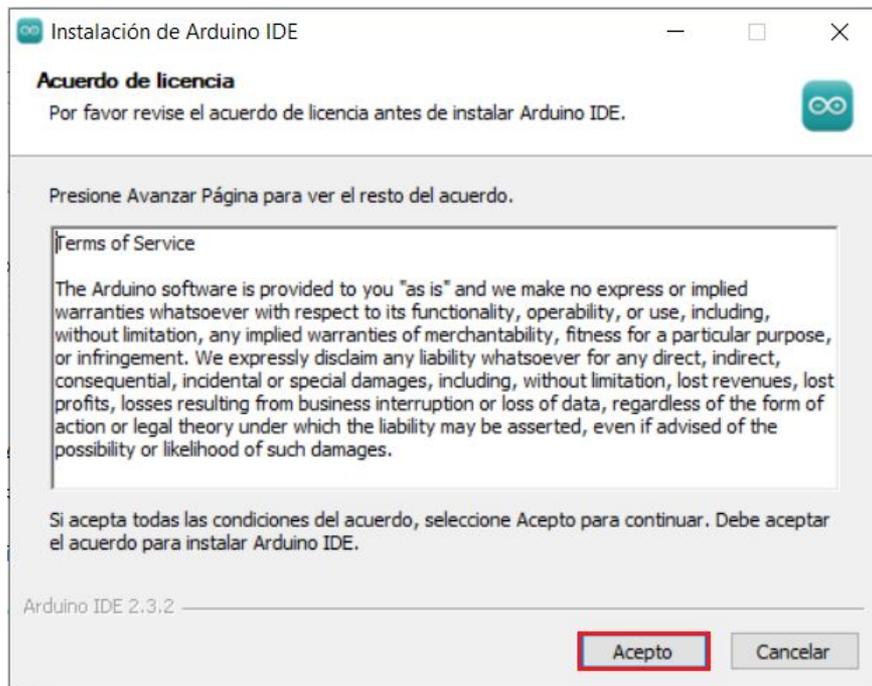
I would like to receive emails about special deals and commercial offers from Arduino.

SUBSCRIBE & DOWNLOAD

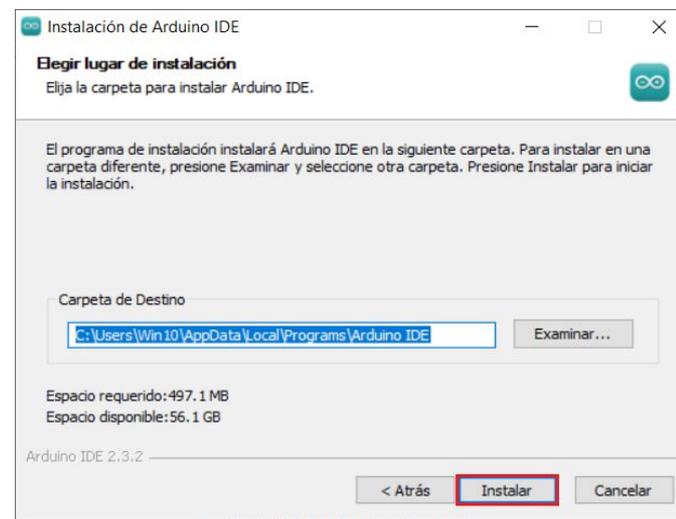
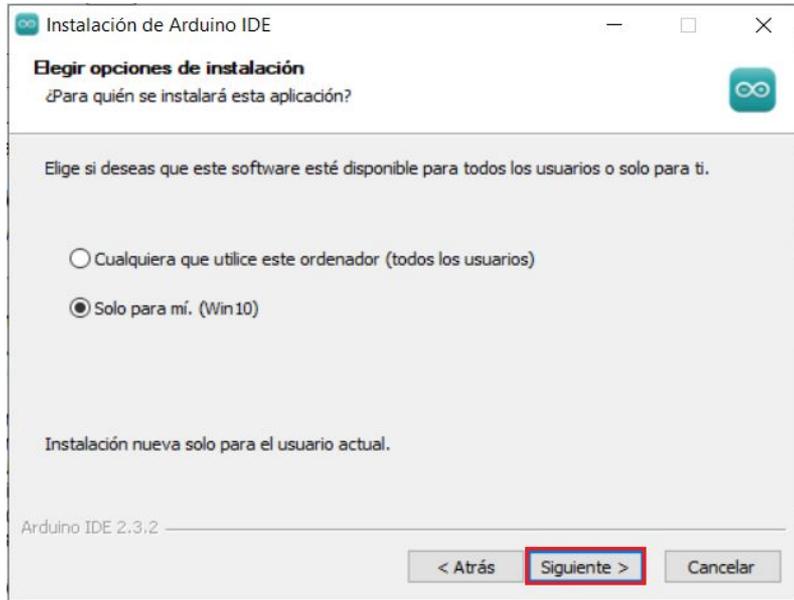
or

JUST DOWNLOAD

Instala Arduino IDE

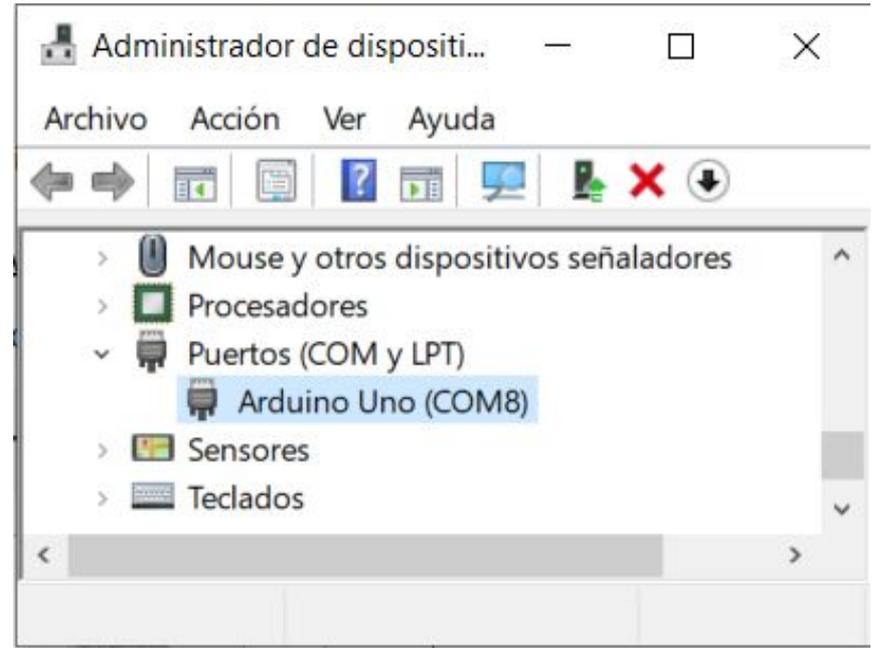
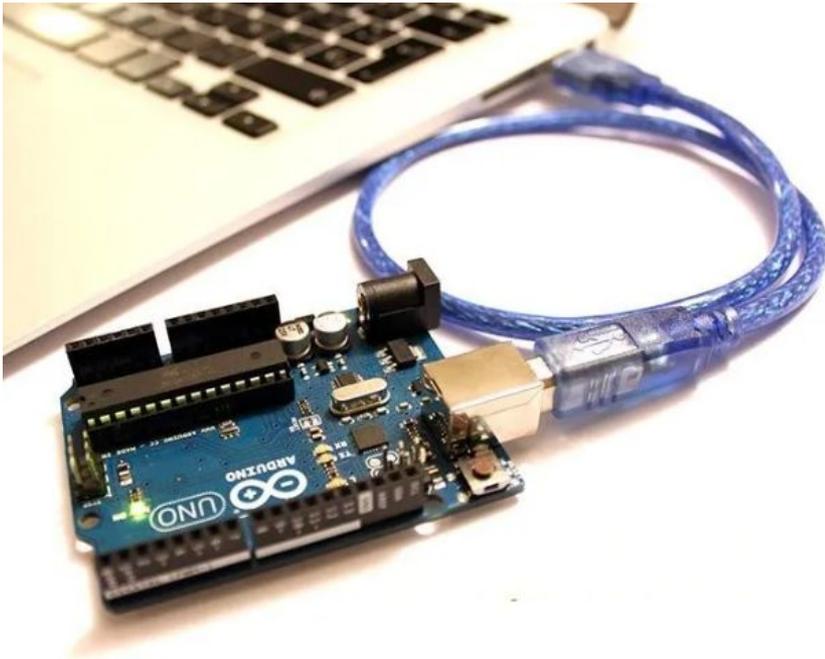


Instala Arduino IDE



Prueba conexión

Conecta la placa a tu PC mediante el cable USB



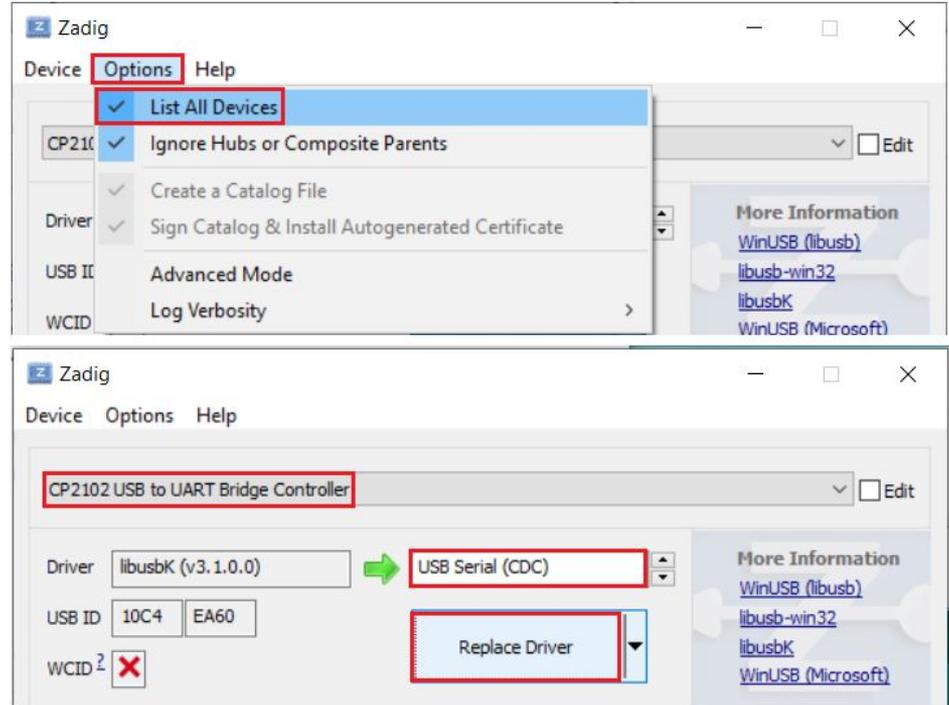
DRIVERS

Si el Driver no se instaló correctamente, descarga e instala el Driver adecuado.

Puede ser CP2102, CH340 u otras variantes.

ZADIG es un programa que facilita el cambio de hardware.

¡Pídenos ayuda para estos pasos!



Abre Arduino IDE

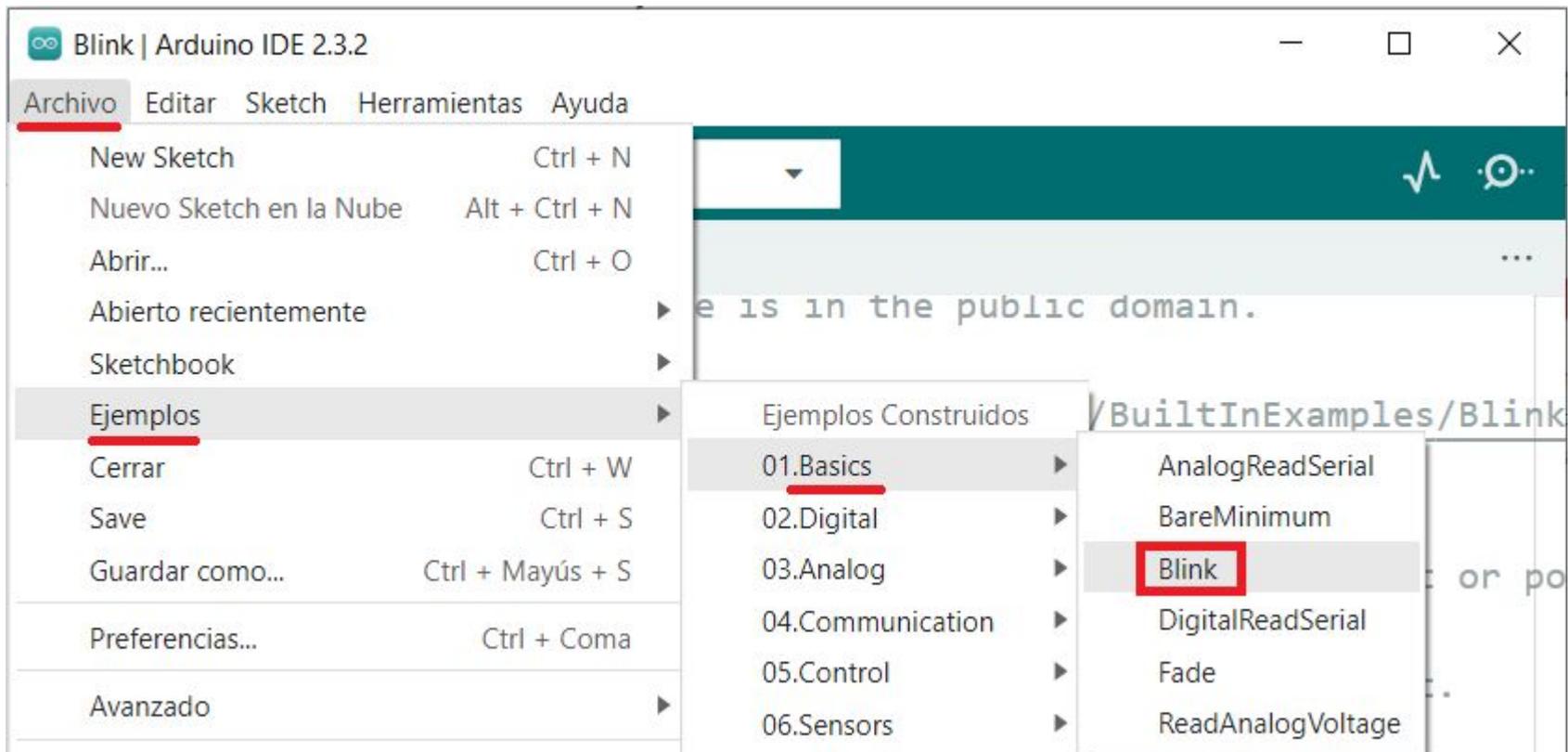


The screenshot shows the Arduino IDE window titled "sketch_apr13a Arduino 1.8.9". The menu bar includes "Archivo", "Editar", "Programa", "Herramientas", and "Ayuda". The toolbar contains icons for checkmark, right arrow, document, upload, and download. The sketch name "sketch_apr13a" is displayed in the top bar. The main editor area contains the following code:

```
1 void setup() {  
2   // put your setup code here, to run once:  
3  
4 }  
5  
6 void loop() {  
7   // put your main code here, to run repeatedly:  
8  
9 }
```

The status bar at the bottom displays: "macros for IRAM/PROGMEM, 4MB (FS:2MB OTA:~1019KB), v2 Lower Memory, Disabled, None, Only Sketch, 115200 en COM7".

Abre el ejemplo básico Blink



Ejemplo básico Blink

```
// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(1000);                       // wait for a second
  digitalWrite(LED_BUILTIN, LOW);    // turn the LED off by making the voltage LOW
  delay(1000);                       // wait for a second
}
```

Elige tu Placa en Herramientas

Blink | Arduino IDE 2.3.2

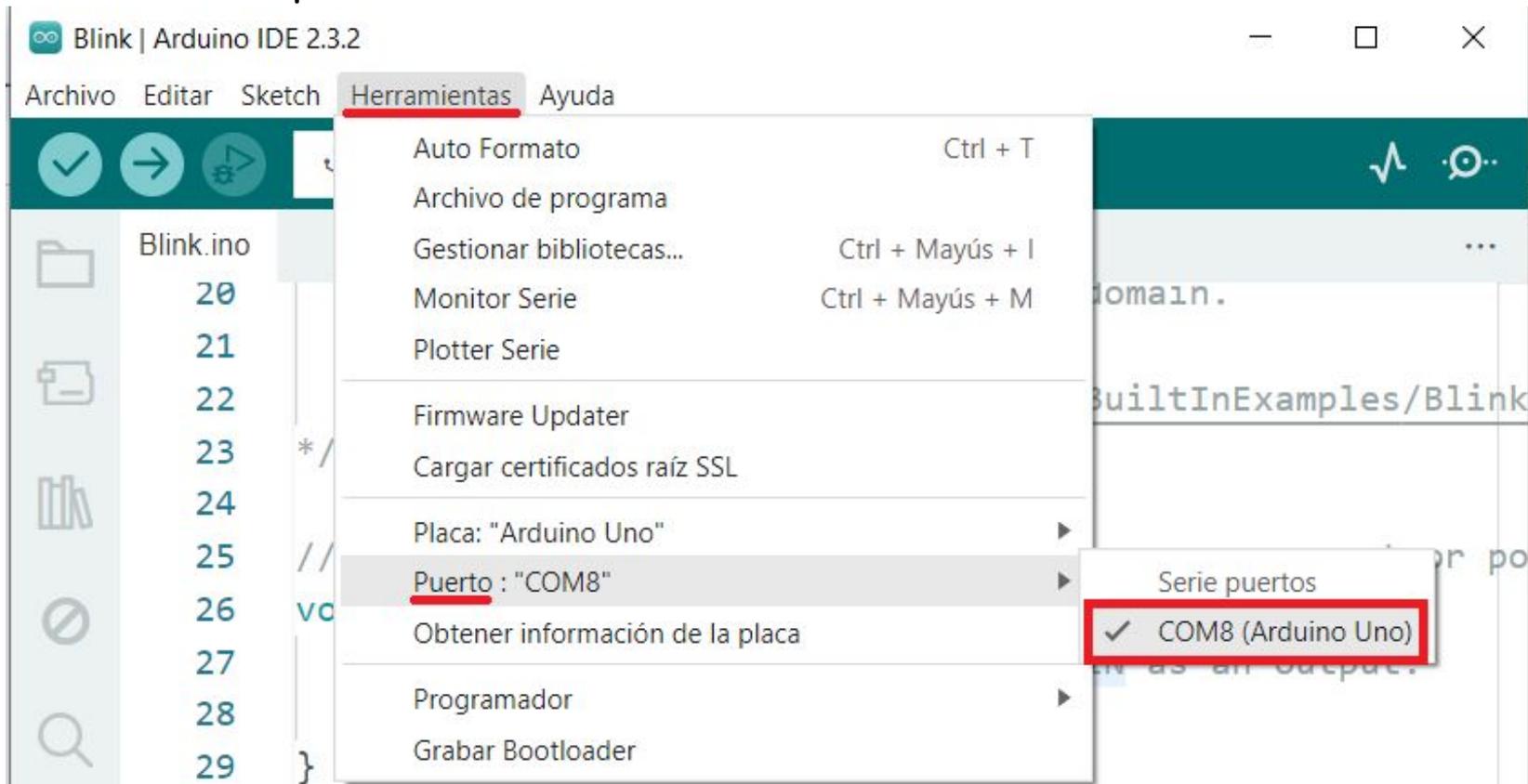
Archivo Editar Sketch **Herramientas** Ayuda

Auto Formato
Archivo de programa
Gestionar bibliotecas...
Monitor Serie
Plotter Serie
Firmware Updater
Cargar certificados raíz SSL
Placa: "Arduino Uno" ▶
Puerto : "COM8" ▶
Obtener información de la placa
Programador ▶
Grabar Bootloader

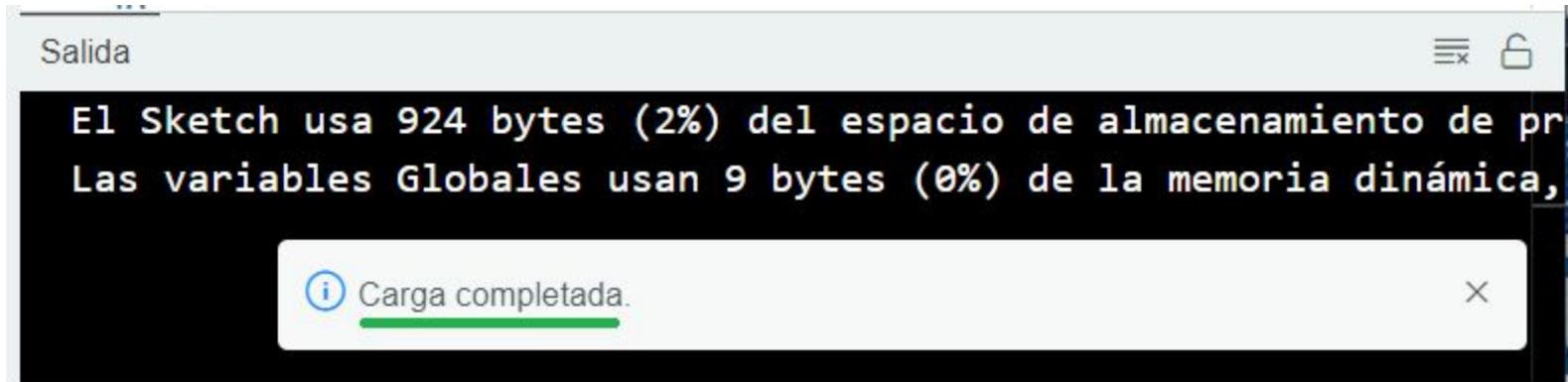
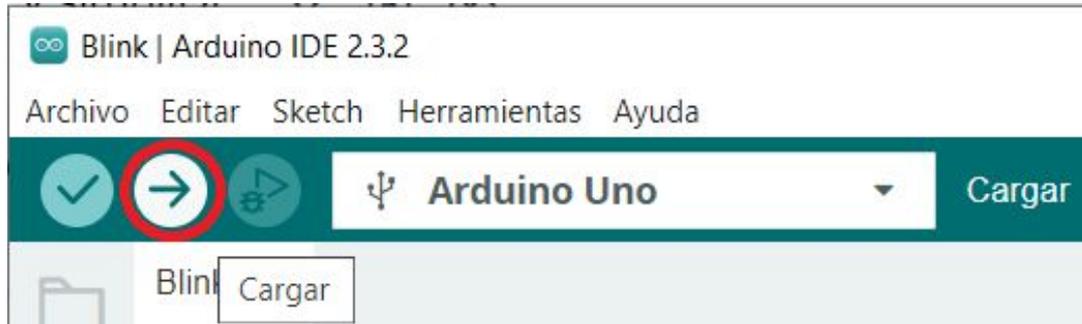
Gestor de placas...
• **Arduino AVR Boards** ▶
esp32 ▶
esp266 ▶

Arduino Yún
✓ **Arduino Uno**
Arduino Uno Mini
Arduino Duemilanove or Diecimila
Arduino Nano
Arduino Mega or Mega 2560

Selecciona el puerto COM



Carga tu programa



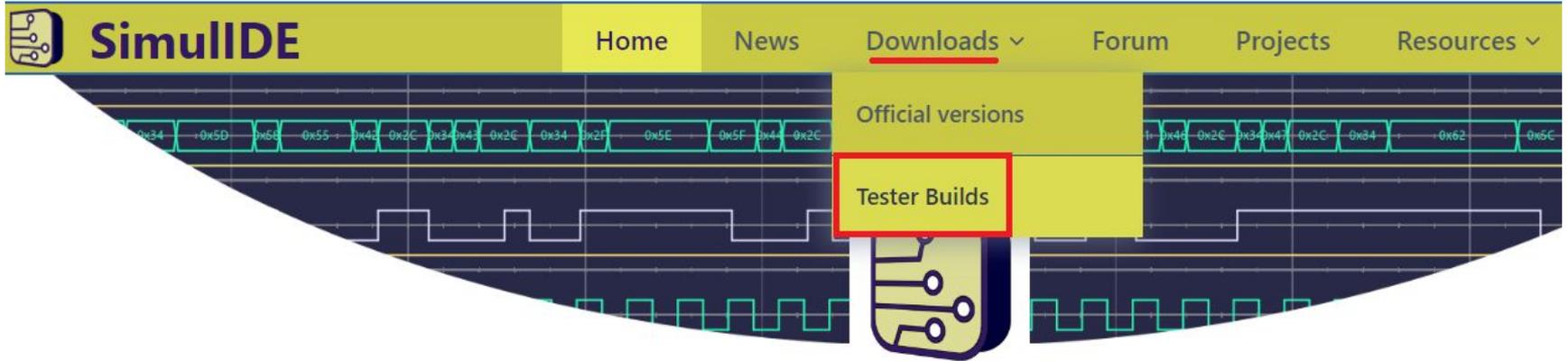
Verifica el parpadeo del LED interno cada 1 segundo



Instalación SimulIDE

Descarga simul IDE

<https://simulide.com/p/>



SimulIDE Circuit Simulator

SimulIDE is a simple real time electronic circuit simulator, intended for hobbyist or students to learn and experiment with analog and digital electronic circuits and microcontrollers.

It supports PIC, AVR , Arduino and other MCUs and MPUs.

Descarga simul IDE



Master

Updated July 3 2024.

This is the development branch. It can be very unstable.

Use ONLY FOR TESTING.

These are last builds of master branch at **0703**:

- [Windows 64](#)
- [Windows 32](#)
- [Linux 64](#)

1.1.0

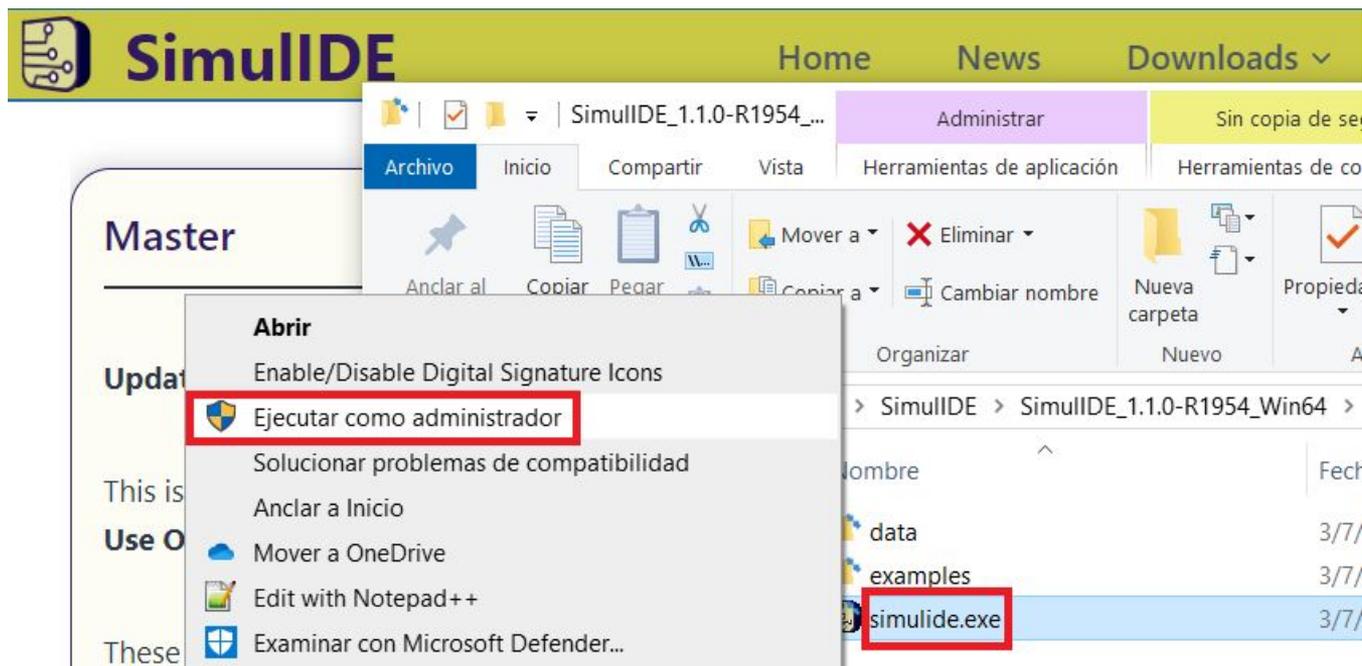
Updated July 3 2024.

Stable release, last bug fixes.

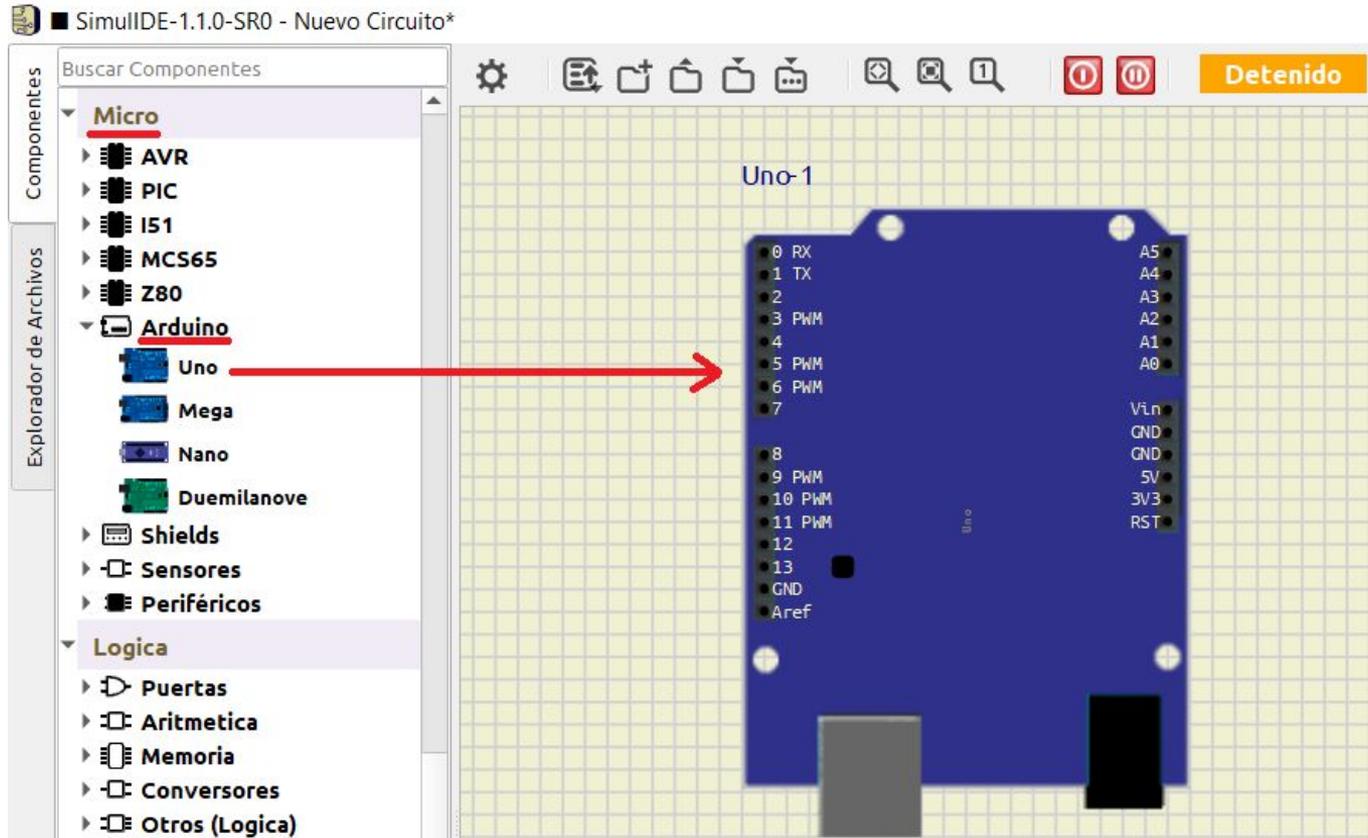
These are last builds of 1.1.0 branch at **Revision 1954**:

- [Windows 64](#)
- [Windows 32](#)
- [Linux 64](#)

Descarga simul IDE



Ejemplo: arrastra un Arduino UNO



Ejemplo: arrastra un Arduino NANO y crea tu circuito de prueba

