नीति आयोग
National Institution for Transforming India

ATAL INNOVATION MISSION

PHYSICAL COMPUTING

GETTING STARTED GUIDE PART 1

CONTENTS

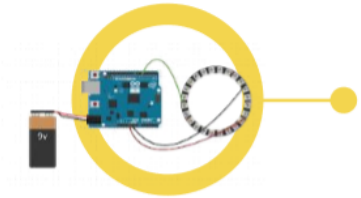
Please Read...

- Operating Voltage
- Serial ports on the 101
- Upload Procedure
- Drivers

KEY FEATURES OF INTEL GENUINO 101 DEVELOPMENT BOARD

- Fast, robust feature-set surpassing competitive offerings in its price range
- Bluetooth connectivity enabling the device to connect to the world around it
- On-board accelerometer and gyroscope to support mobile use cases
- Easy-to-use developer tools and online community
- Simple circuit board, making it easy to learn about electronics
- Start programming with the open source development environment from the founders of Arduino using a Windows, Mac OS or Linux computer
- Powered by the Intel® Curie™ Compute Module
- Low-power, 32-bit Intel Quark™ SE SoC
- 384kB flash memory, 80kB SRAM
- Bluetooth Low Energy
- Low-power, integrated DSP sensor hub
- 6-axis combo sensor with accelerometer and gyroscope

SETTING UP/ GETTING STARTED



The Genuino 101 is a learning and development board which contains the Intel® Curie™ Module, designed to integrate the core's low power-consumption and high performance with the Arduino's ease-of-use.

It adds Bluetooth Low Energy capabilities and has an on-board 6-axis accelerometer/gyroscope, providing exciting opportunities for building creative projects in the connected world.

This board is programmed using the Arduino Software (IDE), our Integrated Development Environment common to all our boards and running both online and offline.

USE YOUR GENUINO 101 ON THE ARDUINO WEB IDE

All Arduino and Genuino boards, including this one, work out-of-the-box on the Arduino Web Editor, no need to install anything.

The Arduino Web Editor is hosted online, therefore it will always be up-to-date with the latest features and support for all boards.

For more detail refer this link...
https://create.arduino.cc/projecthub/Arduino_Genuino/getting-started-with-the-arduino-web-editor-4b3e4a

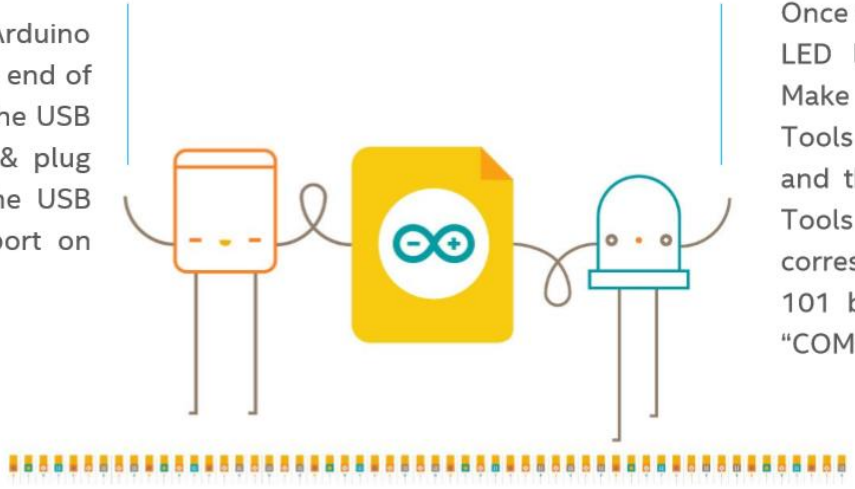
ARDUINO
CREATE

USE YOUR GENUINO 101 ON THE ARDUINO DESKTOP IDE

- Install the Arduino Desktop IDE
- To get step-by-step instructions select one of the following link accordingly to your operating system.
- https://www.arduino.cc/en/Guide/MacOSX
- https://www.arduino.cc/en/Guide/Windows
- https://www.arduino.cc/en/Guide/Linux
- Choose your board in the list here on the right to learn how to get started with it and how to use it on the Desktop IDE.

CONNECTING THE BOARD TO COMPUTER

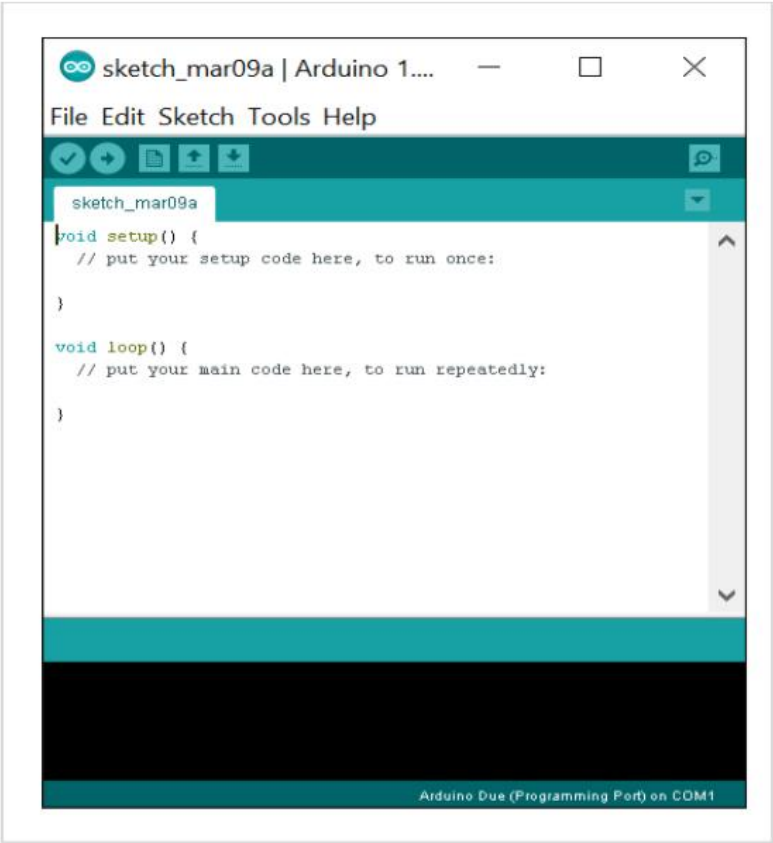
Use a standard Arduino USB Cable. Plug one end of the USB cable into the USB port on the board & plug the other end of the USB cable into a USB port on your computer.



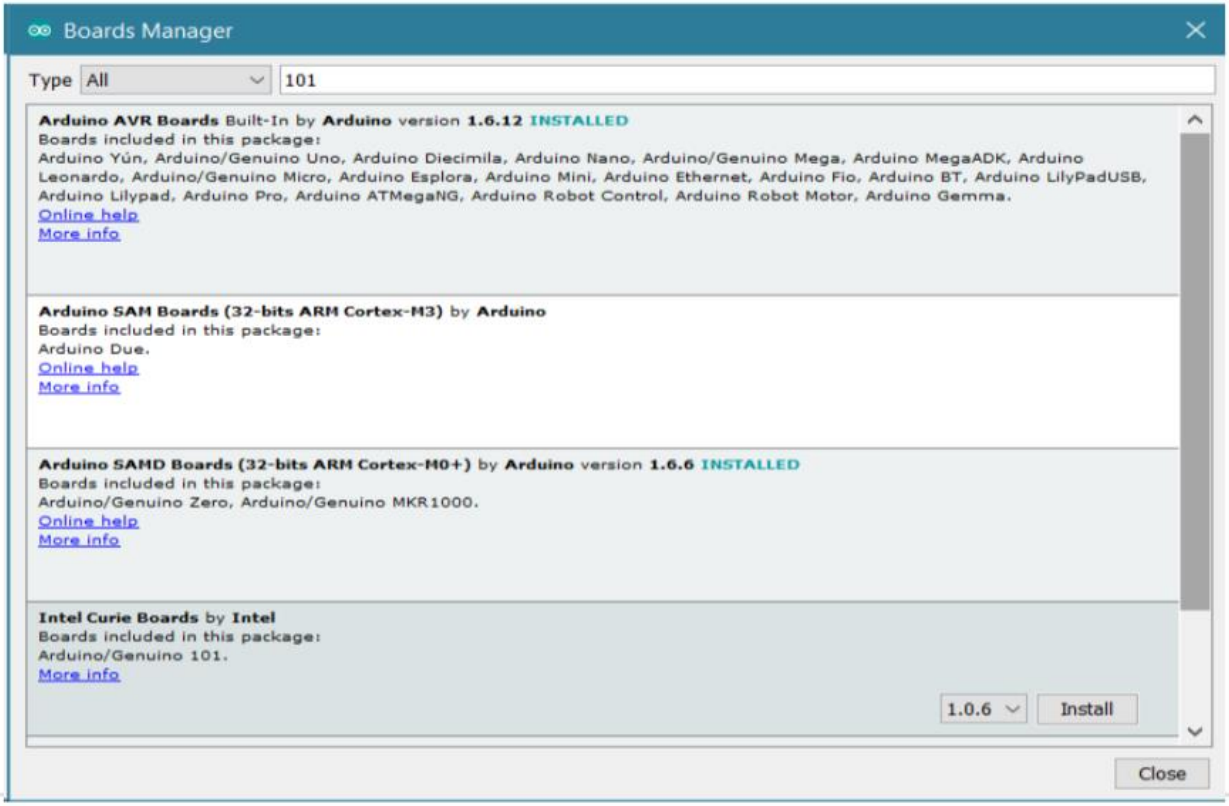
Once connected, the green power LED labelled 'on' should glow. Make sure you have selected Tools >> Boards >> Genuino 101 and that a COM port is selected Tools >> Port (select the port corresponding to your Genuino 101 board - it should look like "COM* (Genuino 101)"

CONNECT YOUR GENUINO 101 BOARD TO YOUR PC VIA USB CABLE

Open Arduino IDE



- If you want to program your 101 while offline you need to install the Arduino Desktop IDE and add the Intel Curie Core to it. This simple procedure is done selecting Tools menu, then **Boards** and last **Boards Manager**, as documented in the Arduino Boards Manager page.

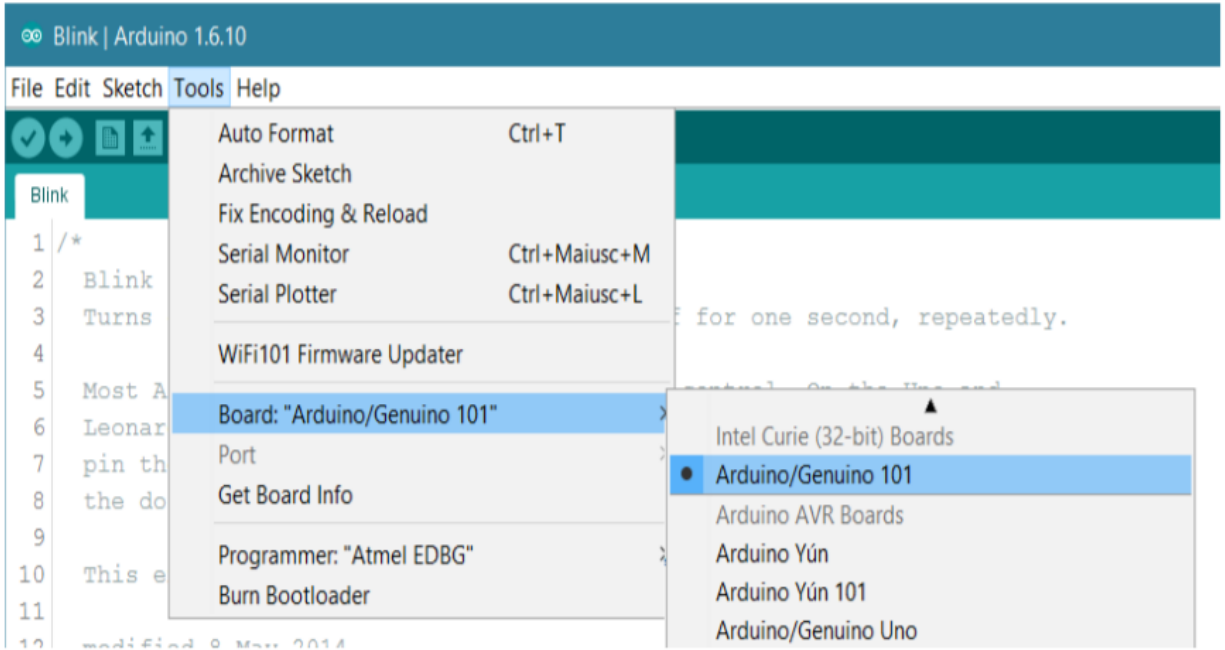


- **Installing Drivers for the Genuino 101**

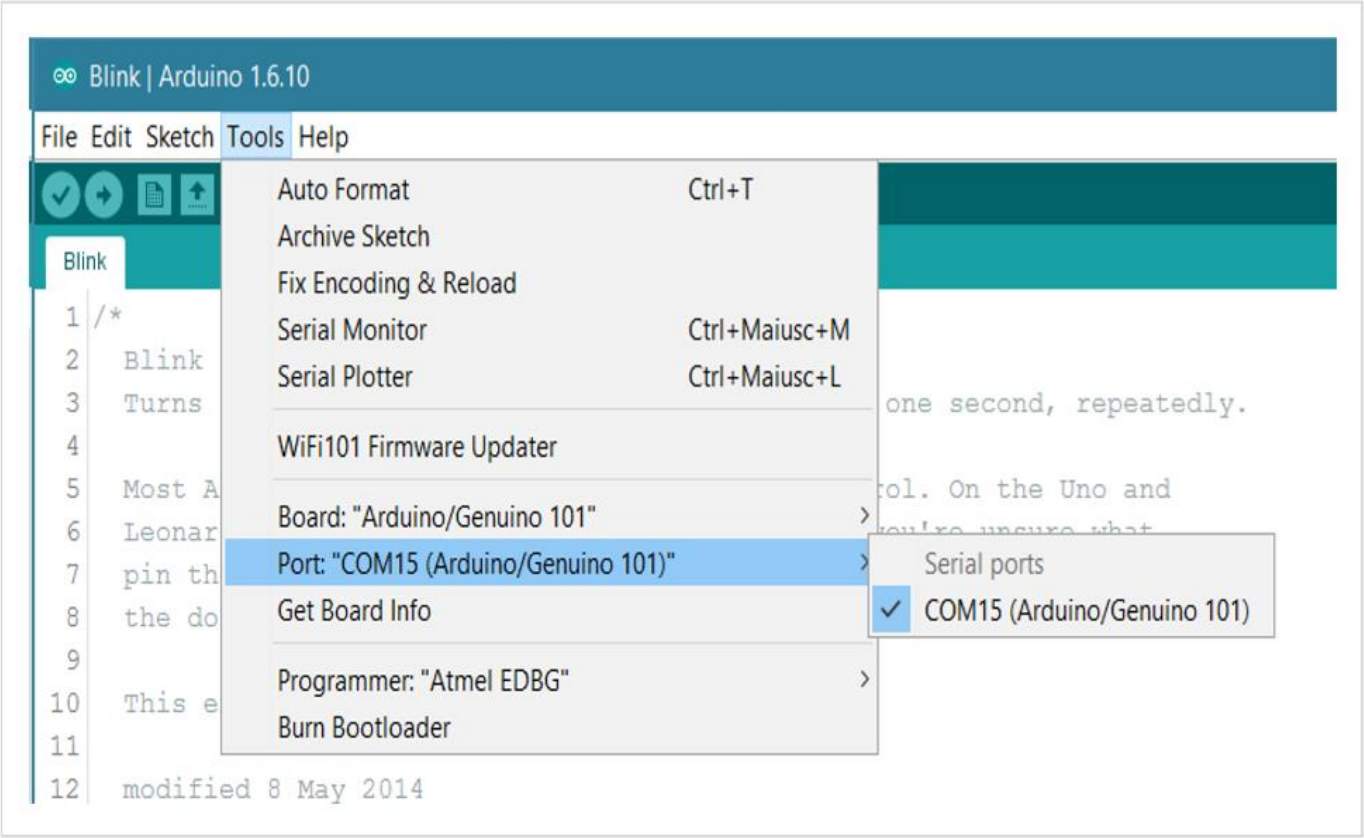
- Now that the Curie Core is installed, you can connect the board to the computer using a standard USB cable. The very first time your computer may go through the new hardware installation process.

- **Select your board type and port**

- From **Tools** select the **Board Genuino 101**

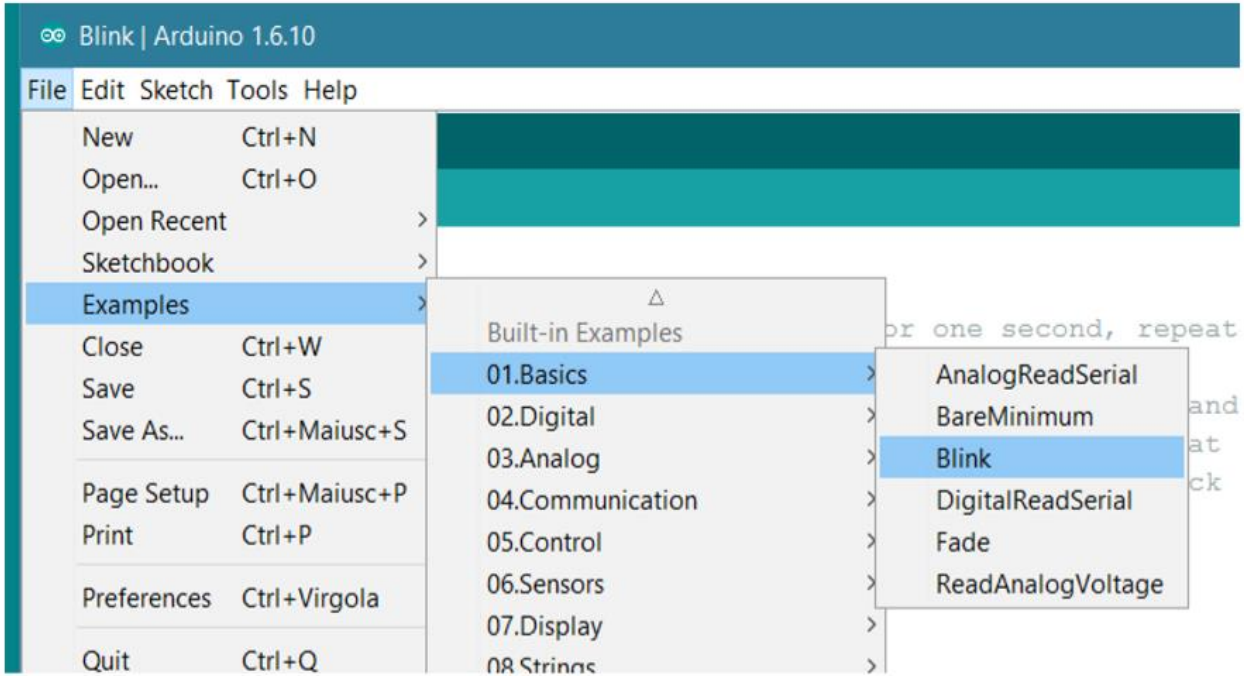


and then
the Port that is
labeled with the
same name.



Open your first sketch

Everything is now ready to upload your first sketch. Go to File on the Arduino Software (IDE) and open the Examples tree; select 01. Basic and then Blink.



This sketch just flashes the built in LED connected to Digital pin 13 at one second pace for on and off, but it is very useful to practice the loading of a sketch into the Arduino Software (IDE) and the Upload to the connected board.

LED Blink Example sketch look like this

Blink | Arduino 1.8.1

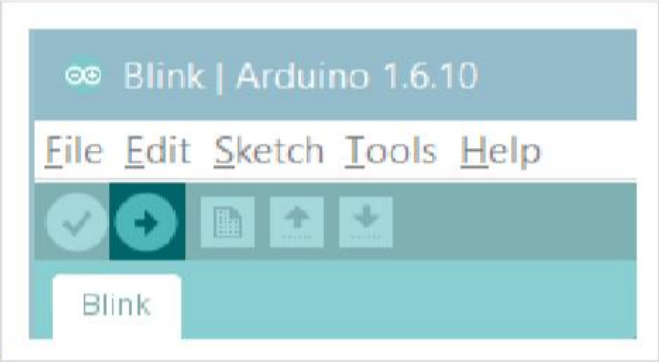
File Edit Sketch Tools Help

Blink

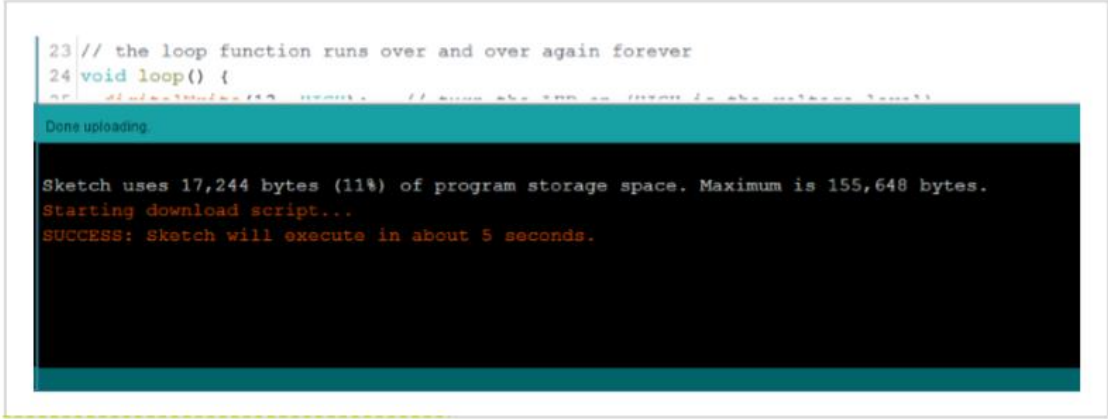
```
  modified 8 Sep 2016
  by Colby Newman
*/


// 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
}
```

Upload the program

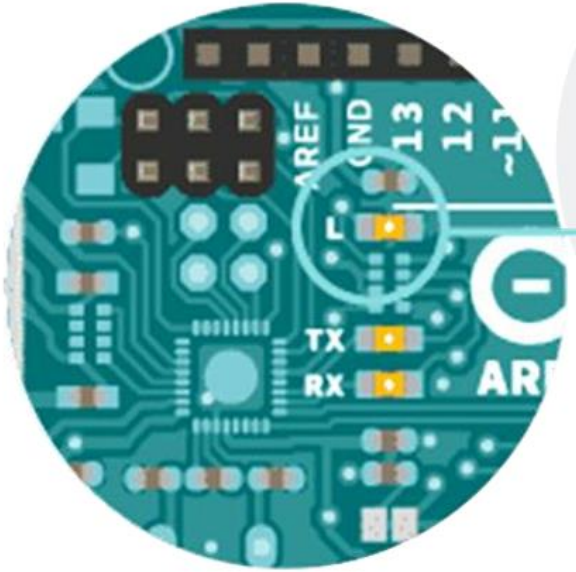
Press the second round icon from left on the top bar of the Arduino Software (IDE) or press Ctrl+U or select the menu Sketch and then Upload.



The sketch will be compiled and then uploaded. After a few seconds the bottom bar should show Done Uploading.



After this process the Genuino101 board takes around 5 seconds to reset and restart, then the built in LED should start blinking.



BLINK

THANK YOU