

Studuino Library

Setup (Windows)

Ver0.9.4

Feb. 6, 2014



This manual explains how to setup the Studuino Library. Use this manual to setup Arduino Language Development Environment before using the following processes:

- Controlling the accelerometer using Arduino language
- Editing source code converted to Arduino language in Studuino Programming Environment

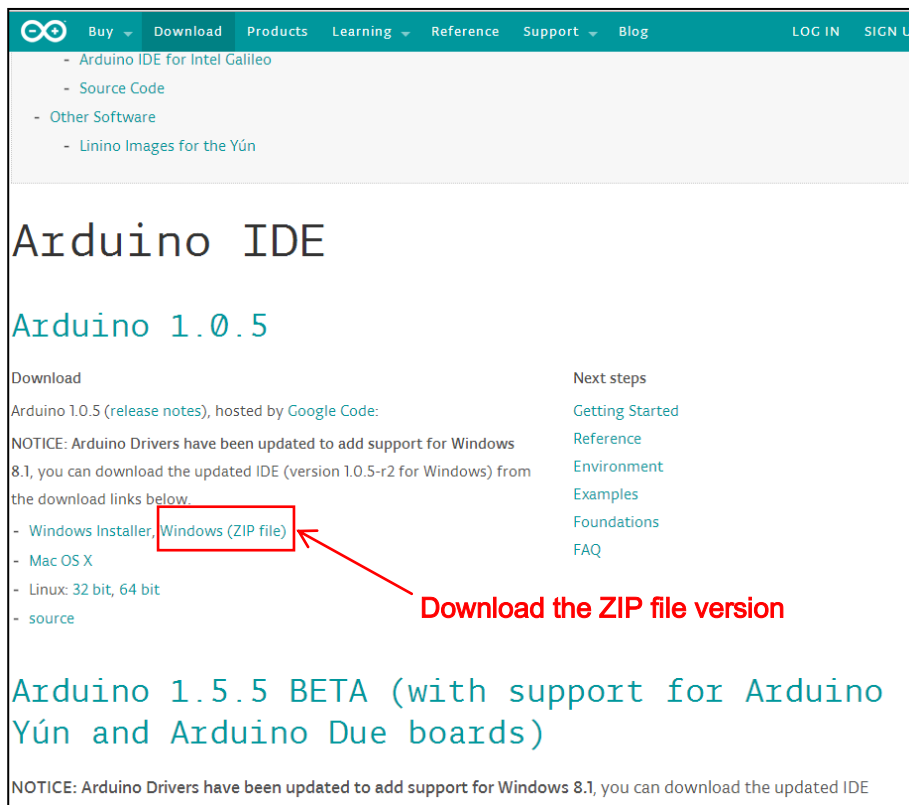
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1. Installing Arduino IDE

Arduino IDE (Integrated Development Environment) is the software that is used when creating a program in Arduino language. If the PC you are using already has Arduino IDE installed, please proceed to **Environment Settings** in **2. Arduino IDE**.

1. Go to the Arduino webpage (<http://arduino.cc/en/Main/Software>) , and download the latest version of Arduino IDE.



2. Decompress the downloaded file **arduino-1.0.5-windows.zip**.
3. After decompression, an **arduino-1.0.5** folder will be created. Move the **arduino-1.0.5** folder to any folder of your liking.

Installation of Arduino IDE is now complete.

2. Arduino IDE Settings

Now we'll setup Arduino IDE in order to create programs using Studuino Library. The instructions in this section are for installing Arduino 1.0.5.

2.1. Microcontroller File Settings

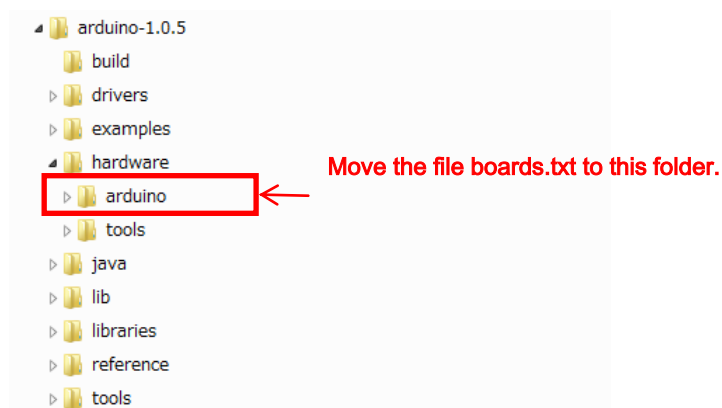
In order for Studuino and Arduino to communicate, you'll need to configure the microcontroller files for Arduino IDE.

1. Go to the Studuino webpage, (<http://www.artec-kk.co.jp/studuino>) , and download the microcontroller file **boards.zip**.



2. Decompress the **boards.zip** file.

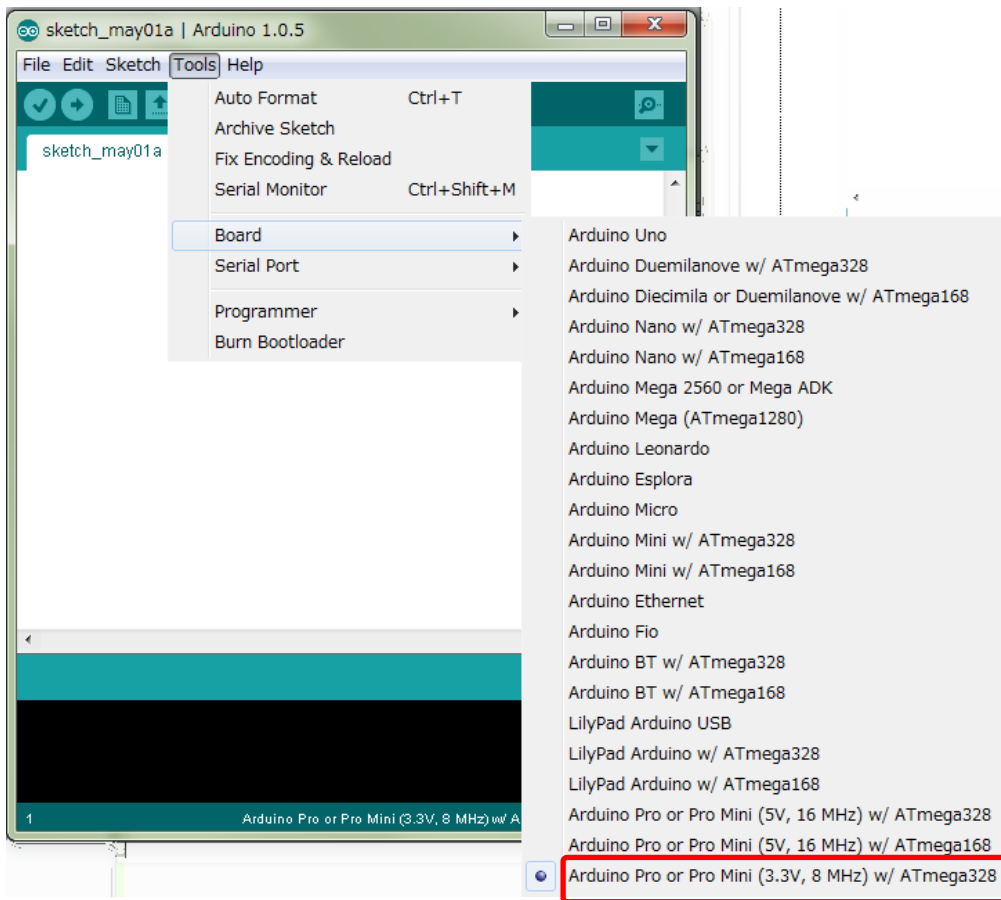
3. After decompressing, a file named **boards.txt** will be created. Move the file **boards.txt** in (\arduino-1.0.5\hardware\arduino) that was created in the Arduino IDE folder.



4. Start Arduino IDE.

(Double-click the file (\arduino-1.0.5) arduino.exe in the Arduino IDE folder.)

5. In the Arduino menu, select **Tools > Board > [Studuino (3.3V, 8MHz) w/ ATmega168]**.



Now Studuino and Arduino IDE can successfully communicate.

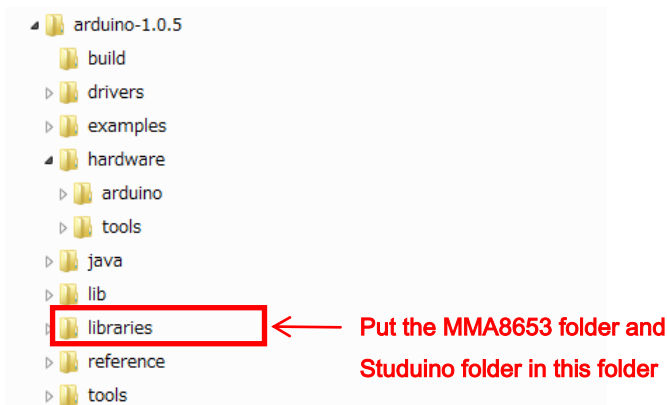
2.2. Registering Studuino Library

Next, you will need to register the Studuino Library in order to control functions of Studuino in Arduino IDE.

1. Go to the Studuino webpage, (<http://www.artec-kk.co.jp/studuino>) , and download the Studuino Library set named **libraries.zip**.



2. Decompress **libraries.zip** after downloading.
3. After decompressing a libraries folder will be created. In the libraries folder, there should be two folders named **MMA8653** and **Studuino**. Be sure to put these folders in the Arduino IDE folder (`\arduino-1.0.5\libraries`).

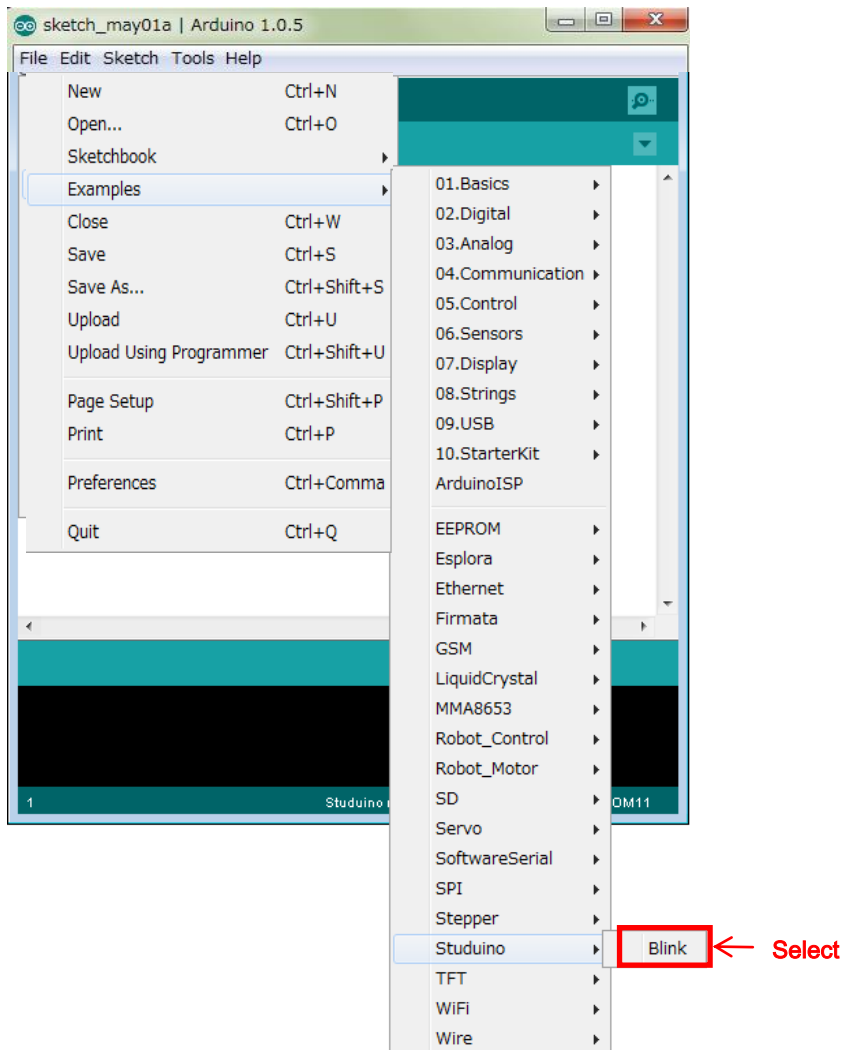



The **MMA8653** folder contains a library to control the accelerometer in Arduino language. The **Studuino** folder contains a library to control Studuino in Arduino language.

Now an environment for programs created in Studuino Library using Arduino Language is set. Next, we'll confirm that programs can be created and transferred from Arduino to Studuino using the Studuino Library.

4. Start Arduino IDE using `arduino.exe` from the Arduino IDE folder (`\arduino-1.0.5`).

5. Select **Blink** in the Arduino IDE menu from **File > Examples > Studuino**



The program will make the LED connected to Studuino on A5 blink in 1 second intervals. Make sure the LED is connected to A5 and the Studuino is connected to the PC via USB. Click the Arduino IDE  button to transfer the program to your Studuino. The LED connected to the Studuino board will blink in 1 second intervals after the program transfer is complete.



Refer to the Studuino Library Function Reference for details on programming using Studuino IDE.