∞ waveplayer Ardui	ino 1.8.2			
File Edit Sketch To	ols] Help			
Waveplayer // Initiali if ('flash.	Auto Format Archive Sketch Fix Encoding & Reload Serial Monitor Serial Plotter	Ctrl+T Ctrl+Shift+M Ctrl+Shift+L		
Serial.pr while(1);	WiFi101 Firmware Updater	[_	▲
}	Board: "Adafruit Metro M0 Express"	,		Adafruit SAMD (32-bits ARM Cortex-M0+) Boards
Serial.prin // First ca	Port: "COM110 (Adafruit Circuit Playground Express) Get Board Info	")		Adafruit Feather M0 Adafruit Feather M0 Express
<pre>// to make if (!fatfs.</pre>	Programmer: "Atmel EDBG"	,		Adafruit Circuit Playground Express
Serial.pr	Burn Bootloader			ESP8266 Modules

Arduino IDE for Feather M0 Express

Install and configure the Arduino IDE environment to support development with the Feather M0 Express. (version 0.1)

Traduit par MicroControleur Hobby (shop.mchobby.be)

Compilé depuis la traduction maintenue sur https://wiki.mchobby.be/index.php?title=ENG-CANSAT-ARDUINO

Les hyperliens sont disponibles sur la version en ligne du document.

Translated by MicroControleur Hobby (shop.mchobby.be)

Compiled from online translation available at https://wiki.mchobby.be/index.php?title=ENG-CANSAT-ARDUINO

Hyperlinks are available on the online version of this document.



- 1 Getting prepared for a Training
- 2 Install Arduino IDE (the .CC version)
- 3 Register Additional Boards
- 4 Install the Feather M0 board
 - 4.1 Install the SAMD boards
 - 4.2 Install the ADAFRUIT SAMD board
 - 4.3 Check installed boards
- 5 Test with BLINK
- 6 Install the Windows Driver (Win 7 only)

Getting prepared for a Training

Installing the Arduino IDE environment + dependencies would involve more than 220 Mb download (100 Mb for Arduino, 120 Mb for Arduino SAMD support, 20 Mb for Adafruit SAMD support).

It is important to get prepared before the training. It is not possible to rely on the guest network to download such amount of data for each of the participant.

So, if you intend to follow a training, get prepared by downloading and installing the complete environment as suggested here follow.

Install Arduino IDE (the .CC version)

As first operation, you have to install the **Arduino IDE from Arduino.CC** (not Arduino.ORG). To follow this guide, you must have the **version 1.8** or higher.



Register Additional Boards

Once the **last version of Arduino IDE** installed, open the IDE and select the **Preference** menu (available in the **File** menu for *Windows* and *Linux* --or-- under the **Arduino** menu for *OS X*).



Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

You should see a dialog box like the following.

	Prefer	rences	
Sketchbook location:			
/Users/todd/Docum	ents/Arduino		Browse
Editor language: Sy	stem Default	:	(requires restart of Arduino)
Editor font size: 10	(requires restart of Arduin	0)	
Show verbose output	during: Compilation Un	head	
Compiler warnings:	None *		
Compiler warnings.	None +		
Display line numb	pers		
Verify code after u	ipload		
Use external edito	or -		
Check for updates	s on startup		
✓ Update sketch file	es to new extension on save (.pd	de -> .ino)	
Save when verifying	ng or uploading		
Proxy Settings			
Server (HTTP):	Port (HTTP):	8080	
Server: (HTTPS)	Port (HTTPS):	8443	
Username:	Password:		
Additional Boards Mar	nager URLs:		
More preferences can	be edited directly in the file		
/Users/todd/Library/	Arduino15/preferences.txt		
(edit only when Arduir	to is not running)		OK Cancel
			Cancer

Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

We will add an URL in the new option Additional Boards Manager URLs (the URL to handle additional boards).

This field contains an URL list (coma separated). Each new URL can only be added once in this list.

This new Adafruit's board and updates of existing boards will be collected by the "Board Manager" (each time you open it). The URLs point to the index files used by the board manager to build the list of the board available to download.

If you want to know the Arduino IDE's supported boards then browse the list of URLs of managed boards https://github.com/arduino/Arduino/Arduino/Wiki/Unofficial-list-of-3rd-party-boards-support-urls/Hist-of-3rd-party-boar

For this Feather M0 Express, we only need to add a single URL. However, it is possible to add several URLs separated by a coma.

Copy/paste the link here below in the field Additional Boards Manager URLs (of the Arduino IDE "preference" window).

F	
	1
https://adafruit_github_ic/arduing_board_index/package_adafruit_index_icon	1
Anceps://adairuit.github.io/arduino-board-index/package adairuit index.json	1
	1
1	

incurore incurore			
Sketchbook location:			
C:\Users\Jadyada\Dropbox\A	rduinoSketches		Browse
Editor language:	System Default 🔹	(requires restart of Arduino)	
Editor font size:	12		
Interface scale:	Automatic 100 - % (requires restart of Arduino)	
Show verbose output during:	Compilation v upload		
Compiler warnings:	None 👻		
Display line numbers			
Enable Code Folding			
Verify code after upload			
Use external editor			
Check for updates on sta	rtup		
Update sketch files to new	v extension on save (.pde -> .ino)		
Save when verifying or up	ploading		_
Additional Boards Manager UR	Ls: https://adafruit.com/package_adafruit_index.json		
More preferences can be edit	ed directly in the file	Enter a comma separated list of urls	
C: Users Vadyada AppData Lo	cal\Arduino15\preferences.txt		

Here follows a small description of the boards available with the URLs:

- Adafruit AVR Boards support for Flora, Gemma, Feather 32u4, Trinket and Trinket Pro.
- Adafruit SAMD Boards support for the Feather M0, Metro M0, Circuit Playground Express, Gemma M0 and Trinket M0

Arduino Leonardo & Micro MIDI-USB - Add the MIDI over USB support for Flora, Feather 32u4, Micro & Leonardo (use the projet arcore https://github.com/rkistner/arcore).

Once the "OK" button pressed, the new preferences are saved.

We can now install the needed board into the Board Manager.

Install the Feather M0 board

Open the Boards Manager available via the menu Tools->Board.

sketch_nov27a A Edit Sketch To	rduino 1.6.5 ols Help		
sketch_nov27a	Auto Format Archive Sketch Fix Encoding & Reload Serial Monitor	Ctrl+T Ctrl+Shift+M	
	Board: "Arduino/Genuino Ur	10" I	Boards Manager
i }	Port	1	Arduino AVR Boards
7 // put y	Programmer: "USBtinyISP" Burn Bootloader		Arduino/Genuino Uno Arduino Duemilanove or Diecimila

Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Once the *Boards Manager* opened, select the *Contributed* type. Once done, you will be able to install the board attached to package_adafruit_index.json URL.

Install the SAMD boards

Now, we will install the Arduino SAMD board version 1.6.15 or higher.

You can type in the Arduino SAMD in the search box to quickly find the package, then press the Install button.

co Boards Manager	x
Type All	
	*
Arduino SAM Boards (32-bits ARM Cortex-M3) by Arduino version 1.6.6 INSTALLED Boards included in this package: Arduino Due. Online help More info	E
Arduino SAMD Boards (32-bits ARM Cortex-M0+) by Arduino Boards included in this package: Arduino/Genuino Zero. Online help More info	.6.2 V Install
Intel i586 Boards by Intel Boards included in this package: Galileo. More info	
	Close

Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Install the ADAFRUIT SAMD board

After the SAMD board, it's time to install the "Adafruit SAMD" package to support the Adafruit boards.

You can type in the Adafruit SAMD in the search field to find the package. Once located, press the Install button.

💿 Boards Manager		x
Type All	Filter your search	
Boards included in th Adafruit Flora, Adafru SV/16MHz (USB), Ada (FTDI), Adafruit Trink <u>Online help</u> <u>More info</u>	is package: it Gemma BMHz, Adafruit Bluefruit Micro, Adafruit Feather 32u4, Adafruit Metro, Adafruit Pro Trinket afruit Pro Trinket 3V/12MHz (USB), Adafruit Pro Trinket 5V/16MHz (FTDI), Adafruit Pro Trinket 3V/12MHz cet BMHz, Adafruit Trinket 16MHz.	*
Adafruit SAMD Boar Boards included in th Adafruit Feather M0. <u>Online help</u> <u>More info</u>	ds by Adafruit iis package: Instal	
Leonardo & Micro MI Boards included in th Arduino Leonardo (M <u>Online help</u> <u>More info</u>	DI-USB (arcore) by Ralf Kistner iis package: IDI), Arduino Leonardo (MIDI, iPad compatible), Arduino Micro (MIDI).	H
	Clos	æ

Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

We strongly recommand to restart the Arduino IDE (it is not required but it is better to do it anyway).

Check installed boards

Once the Arduino IDE restarted to be sure that boards are properly installed, you should be able to select the new boards in the interfaces (and to upload code) via the menu *Tools -> Board*.

Select the board for the kit among those now available:

- Feather M0 (for the Feather M0 boards other than Feather M0 Express)
- Feather M0 Express
- Metro M0 Express
- Circuit Playground Express
- Gemma M0
- Trinket M0



Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Test with BLINK



Now, we can upload your first sketch to the board (the "blink" sketch)!

Wire your board to the computer and wait for the operating system to identify it (this may take few seconds). Once identified, the Serial port/COM is available in the list of serial port available.



Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

It is now time to upload the Blink sketch

```
void setup() {
 // init the digital pin #13 as OUTPUT
 pinMode(13, OUTPUT);
// the "loop" function is executed again and again (in a infinite loop)
void loop() {
 digitalWrite(13, HIGH);
                        // Light up the LED (HIGH level = 3.3v)
 delay(1000);
                        // Wait 1 second
 digitalWrite(13, LOW);
                        // Switch off the LED (LOW level = OV)
 delay(1000);
                        // Wait 1 second
    _____
```

Then click on the "upload" button! You should be able to see the board LED blinking. You can tune the blink speed by updating the value for the delay() function.



If you get upload issue then you should check if you selected the proper board type.

Install the Windows Driver (Win 7 only)

You will certainly have to install Windows Driver before plugin the board on the computer.

You can download the Windows Driver from the Adafruit Industries server :

Download the A https://github.com/adafruit/Adafruit_Windows_	Adafruit Drivers v2.0.(Drivers/releases/download/2.0.0.0/adafruit_drivers_2.0.0.0.exe
Download and start the setup software.	
Opening adafruit_drivers.exe	x
You have chosen to open:	
adafruit_drivers.exe	
which is: Binary File (13.6 MB)	
from: https://github-cloud.s3.amazonaws.com	
Would you like to save this file?	
Save File Can	cel

Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Execute the setup software! It will be necessary to review the licensing instruction as it contains the SiLabs setup and FTDI driver.



Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Select the driver you want to install, the default selection would be perfect for the Adafruit boards!



Crédit: AdaFruit Industries www.adafruit.com http://www.adafruit.com

Push the 'Install button to proceed.

Show <u>d</u> etai	s	

Written by Meurisse D. from MC Hobby http://shop.mchobby.be - License: CC-SA-BY.