### This is a UPDATED document is based on the following document:

https://www.electronicshub.org/how-to-upload-stm32f103c8t6-usb-bootloader/



#### Configuring Arduino IDE to Program STM32F103C8T6 Blue Pill

I am sure you already have Arduino IDE installed on your PC (or Laptop). If not, then install it first. After than open your Arduino IDE and select File -> Preferences. You will find a tab called "Additional Boards Manager URLs". Copy the following link and paste it there.

" https://github.com/stm32duino/BoardManagerFiles/raw/master/STM32/package\_stm\_index.json "

Preferences			×
Settings Network			
Sketchbook location:			
C:\Users\TrailBlazer\Documer	nts\Arduino		Browse
Editor language:	System Default		
Editor font size:	12		
Interface scale:	Automatic 100 +% (requires restart	of Arduino)	
Theme:	Default theme 👻 (requires restart of Arduin	10)	
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	V Save when verifying or uploading	
Use accessibility features			
Additional Boards Manager UR	Ls: https://github.com/stm32duino/BoardMana	gerFiles/raw/master/STM32/package_stm_index.json	
More preferences can be edite	ed directly in the file		

	👳 Boards Manager	×
	Type All 🗸 STM32	
i.	[DEPRECATED - Please use new package index] STM32 Cores	^
a.	by STMicroelectronics version 1.8.0 INSTALLED DEPRECATED Boards included in this package: DEPRECATED - Please use new package index: https://github.com/stm32duino/BoardManagerFiles/raw/main/package_stmicroelectronics_index.json. Online Help Mase Jofe	
eı	Select version v Install Update Remove	
11		
	Install this []]	



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	Auto Format	Ctrl+T	Archive Sketch		
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modified .	Manage Libraries	Ctrl+Shift+I	Serial Monitor	Ctrl+Shift+M	
modified 8	Serial Monitor	Ctrl+Shift+M	Serial Plotter	Ctrl+Shift+I	
by Colby 1	Serial Plotter	Ctrl+Shift+L		Curr Shirt' E	
mh i a ann an	WiFi101 / WiFiNINA Firmware Updater		WiFi101 / WiFiNINA Firmware Updater		
Inis examp	Board: "Generic STM32F1 series"	>	Board: "Generic STM32F1 series"	>	
https://ww	Board part number: "BluePill F103C8"	> <u>k</u>	Poord part number: "PlueDill E102C0"	\$	
*/	U(S)ART support: "Enabled (generic 'Serial')"	>	Board part number: BidePill ProsCo		<u>k</u>
	USB support (if available): "None"	>	U(S)ART support: "Enabled (generic 'Serial')"	>	
// the setup	USB speed (if available): "Low/Full Speed"	> ower the board	USB support (if available): "None"	>	
void setup()	Optimize: "Smallest (-Os default)"	>	USB speed (if available): "Low/Full Speed"	>	ower the board
// initia	C Runtime Library: "Newlib Nano (default)" Upload method: "Maple DFU Bootloader 2.0"	>	Optimize: "Smallest (-Os default)"	>	
pinMode (LI	Port: "COM24"	>	C Runtime Library: "Newlib Nano (default)"	>	
,	Get Board Info		Upload method: "Maple DFU Bootloader 2.0"	;	STM32CubeProgrammer (SWD)
// the loop	Programmer	>	Port: "COM24"	>	STM32CubeProgrammer (Serial)
void loop() digitalWrite	Burn Bootloader	ne ner on (nIGH is the voltage level)	Get Board Info		STM32CubeProgrammer (DFU)
delay(100);	// wait f	or a second			BMP (Black Magic Probe)
digitalWrite	(LEDBUILTIN, LOW); // turn t	he LED off by making the voltage LOW	Programmer	2	
delay(2000);	// wait	for a second	Burn Bootloader		HID Bootloader 2.2
}			ce under the second sec		<ul> <li>Maple DFU Bootloader 2.0</li> </ul>

Select the Maple DFU Bootloader 2.0.

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V 🛃 DESKTOP-DKHDHNE						
> 4 Audio inputs and outputs						
> 🧽 Batteries						
> 🚯 Bluetooth						
> 💻 Computer						
> 👝 Disk drives						
> 🥁 Display adapters						
> 🔐 DVD/CD-ROM drives						
> 🎮 Human Interface Devices						
> 📷 IDE ATA/ATAPI controllers						
> 🚠 Imaging devices						
> 🔤 Keyboards						
> 🚍 Lenovo Vhid Device						
> III Mice and other pointing dependence	evices					
> 💻 Monitors						
> 🚍 Network adapters						
✓ I Other devices						
😧 Wireless iAP v2						
🗸 🛱 Ports (COM & LPT)						
Maple Serial (COM24)						
🛱 Standard Serial over Blu	uetooth link (COM18)					

Computer USB

STM32F103C8T6 Board

NB: the First Time when the Board is connected to the computer it shows:e.g: Maple Serial (COM 24)

h	Tools	Help				
		Auto Format	Ctrl+T			
		Archive Sketch				
		Fix Encoding & Reload				
-		Manage Libraries	Ctrl+Shift+I			
0		Serial Monitor	Ctrl+Shift+M			
1		Serial Plotter	Ctrl+Shift+L			
		WiFi101 / WiFiNINA Firmware Updater				
mj		Board: "Generic STM32F1 series"	:	>		
W		Board part number: "BluePill F103C8"	2	>		
		U(S)ART support: "Enabled (generic 'Serial')"	:	>		
		USB support (if available): "CDC (generic 'Serial' supersede U(S)ART)"	3	>		
սյ		USB speed (if available): "Low/Full Speed"	3	>	CHEC	K and Update
DI		Optimize: "Smallest (-Os default)"	3	>		
C		C Runtime Library: "Newlib Nano (default)"	3	>		
a.		Upload method: "Maple DFU Bootloader original"	3			1
		Port: "COM24"	2		Serial ports	
		Get Board Info			COM18	
p		Programmer	3	~	COM24	

NB: the first time with IDE use the MAPLE Port, e.g: COM 24 - Ref to device manager for port

## 1. Use the Blink example and Update it as shown here

	Blink§	
it as shown here:	modified 2 Sep 2016	
	by Arturo Guadalupi	
	modified 8 Sep 2016	
	by Colby Newman	
	This example code is in the publ	lic domain.
	https://www.arduino.cc/en/Tutori	al/BuiltInExamples/Blink
	*/	
	<pre>// the setup function runs once wh #define LEDBUILTIN PC13 void setup() { // initialize digital pin LED_BU pinMode(LEDBUILTIN, OUTPUT); }</pre>	nen you press reset or power the board WILTIN as an output.
	<pre>// the loop function runs over and woid loop()</pre>	d over again forever
	<pre>digitalWrite(LEDBUILTIN, HIGH); delay(1000);</pre>	<pre>// turn the LED on (HIGH is the voltage level) // wait for a second</pre>
	<pre>digitalWrite(LEDBUILTIN, LOW); delay(1000);</pre>	<pre>// wait for a second // turn the LED off by making the voltage LOW // wait for a second</pre>
	}	,, male lot a become

2. Upload the sketch to the STM32 Board and Check to see that the LED blink above pattern.

Blink | Arduino 1.8.19 File Edit Sketch Tools Help

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**PS:** You will now get a notification sound and will loose COM 24

### 1. Use the Blink example and Update it again as shown here:



Blink | Arduino 1.8.19

File Edit Sketch Tools Help



# Check with Device Manager which New Port is available, it should named STM Serial (Com xx): e.g: STM Serial (Com34)

Device Manager

Ports (COM & LPT)
 Standard Serial over Bluetooth link (COM18)
 STM Serial (COM34)

Blink | Arduino 1.8.19
File Edit Sketch Tools Help

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	Auto Format	Ctrl+T		
	Archive Sketch			
Blink§	Fix Encoding & Reload			
modified 2	Manage Libraries	Ctrl+Shift+I		
by Arturo	Serial Monitor	Ctrl+Shift+M		
modified 8	Serial Plotter	Ctrl+Shift+L		
by Colby 1			-	
	WiFi101 / WiFiNINA Firmware Updater			
This examp	Dearch "Comparing STM00E1 angles"			
	Board: Generic STM32FT series			
https://w	Board part number: "BluePill F103C8"	2	>	
*/	U(S)ART support: "Enabled (generic 'Serial')"	:	>	
	USB support (if available): "CDC (generic 'Serial' supersede U(S)ART)"	3	>	
// the setur	USB speed (if available): "Low/Full Speed"	3	>	
#define LED	Optimize: "Smallest (-Os default)"	:	>	
<pre>void setup()</pre>	C Runtime Library: "Newlib Nano (default)"	2	>	
// initia	Upload method: "Maple DFU Bootloader original"	2	>	
pinMode (Li	Port: "COM34"	:		Serial ports
1	Get Board Info			COM18
// the loop	Drogrammer	-	~	COM34

2. Select the new Com Port

3. Upload the newly modified sketch and all other sketches to the STM32 Board in the future using this Port.