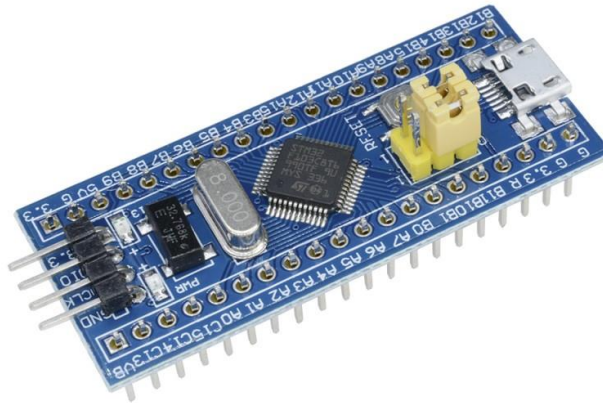


# Arduino STM32F103C8T6 Arm Cortex 32Bit Processor Development Board

## Introduction:



The STM32F103xx medium-density performance line family incorporates the high performance ARM® Cortex®-M3 32-bit RISC core operating at a 72 MHz frequency, high speed embedded memories (Flash memory up to 128 Kbytes and SRAM up to 20 Kbytes), and an extensive range of enhanced I/Os and peripherals connected to two APB buses. All devices offer two 12-bit ADCs, three general purpose 16-bit timers plus one PWM timer, as well as standard and advanced communication interfaces: up to two I2Cs and SPIs, three USARTs, an USB and a CAN. The devices operate from a 2.0 to 3.6 V power supply. They are available in both the -40 to +85 °C temperature range and the -40 to +105 °C extended temperature range. A comprehensive set of power-saving mode allows the design of low-power applications.



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## **Specifications:**

- ARM® 32-bit Cortex® -M3 CPU Core
- 72 MHz maximum frequency, 1.25 DMIPS/MHz (Dhrystone 2.1) performance at 0 wait state memory access
- Single-cycle multiplication and hardware division
- Memories § 64 or 128 Kbytes of Flash memory
- 20 Kbytes of SRAM
- Clock, reset and supply management
- 2.0 to 3.6 V application supply and I/Os
- POR, PDR, and programmable voltage detector (PVD)
- 4-to-16 MHz crystal oscillator
- Internal 8 MHz factory-trimmed RC

## **Applications:**

- Industrial automation
- Medical devices
- Robotics
- Automotive applications

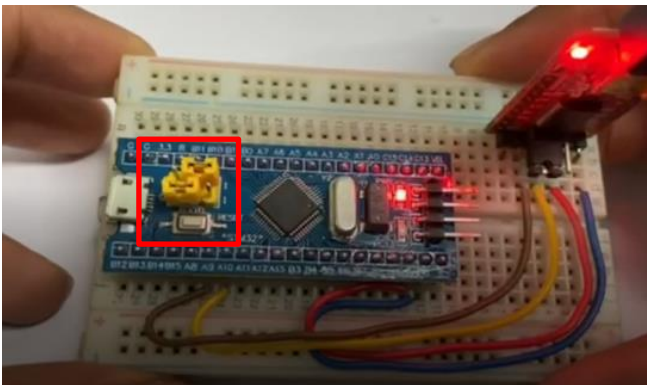
## Objectives:

This tutorial will show you a few simple steps about how to use Arduino STM32F103C8T6 Arm Cortex 32Bit Processor Development Board. At the end of this tutorial, you will get a result by LED blinking.

## Components needed:

- USB Cable
- Power supply
- Breadboard
- Wire
- Arduino STM32F103C8T6 Arm Cortex 32Bit Processor Development Board
- FT32RL 3.3V 5.5V FTDI USB TO TTL SERIAL CONVERTER ADAPTER

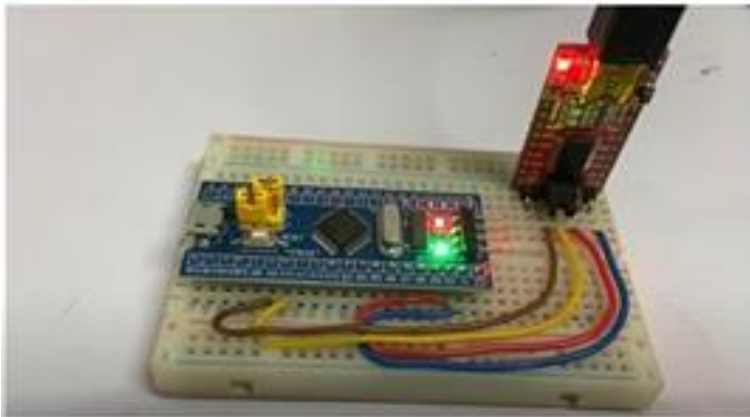
## Procedures:



1. Simply change jumper to program mode.

```
1 // Blink
2 //
3 // Turns on an LED on for one second, then off for one second, repeatedly.
4
5 // When Ardunio have an on-board LED you can control. On the Duin and
6 // Leonardo, it is attached to digital pin 13. If you're using some
7 // pin the on-board LED is connected to on your Arduino board, check
8 // the documentation of ArduinoBoardName.
9
10 // This example code is in the public domain.
11
12 modified 8 May 2014
13 by Jack Fitzpatrick
14
15 Modified by Super Circuit: www.super-circuit.com for Maple Mini (20th April 2015), where the LED is on pin 13
16
17
18
19
20
21 // the setup function runs once when you press reset or power the board
22 void setup() {
23   // initialize digital pin 13 as an output.
24   pinMode(13, OUTPUT);
25 }
26
27
28 // the loop function runs over and over again forever
29 void loop() {
30   digitalWrite(13, HIGH); // turn the LED on (HIGH is the voltage level)
31   delay(1000); // wait for a second
32   digitalWrite(13, LOW); // turn the LED off by making the voltage LOW
33   delay(1000); // wait for a second
34 }
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100
```

## 2. Upload LED blinking coding.



## 3. LED will start blinking.



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## **Conclusion:**

- Arduino STM32F103C8T6 board is a powerful and affordable microcontroller development board that is based on the ARM Cortex-M3 processor
- It offers a wide range of features and capabilities
- The board offers a wide range of connectivity options, including USB, UART, I2C, and SPI, making it easy to integrate with other devices and sensors