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1 COMPONENTS

Components	Quantity
STM32f103c8t6	1
Raspberry Pi (2/3)	1
LED	1
Resistor	1
Jumper Wires	10

2 HARDWARE SETUP

The hardware connections between the Raspberry Pi and STM32 are available in Table I.

The hardware connections between STM32 and the breadboard are available in Table 2.

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Pin#	NAME	NAME	Pin#
01	3.3v DC Power	DC Power 5v	02
03	GPIO02 (SDA1 , I ² C)	DC Power 5v	04
05	GPIO03 (SCL1 , I ² C)	Ground	06
07	GPIO04 (GPIO_GCLK)	(TXD0) GPIO14	08
09	Ground	(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)	(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)	Ground	14
15	GPIO22 (GPIO_GEN3)	(GPIO_GEN4) GPIO23	16
17	3.3v DC Power	(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)	Ground	20
21	GPIO09 (SPI_MISO)	(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)	(SPI_CE0_N) GPIO08	24
25	Ground	(SPI_CE1_N) GPIO07	26
27	ID_SD (I ² C ID EEPROM)	(I ² C ID EEPROM) ID_SC	28
29	GPIO05	Ground	30
31	GPIO06	GPIO12	32
33	GPIO13	Ground	34
35	GPIO19	GPIO16	36
37	GPIO26	GPIO20	38
39	Ground	GPIO21	40

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Fig. 1: Raspberry Pi Pin Configuration

Raspberry Pi	STM32
GND (Pin 6)	GND
3.3V (Pin 1)	3.3V
GPIO 24	SWDIO
GPIO 25	SCLK
GPIO 18	RESET

TABLE I: Raspberry Pi and STM32 Connections

3 SOFTWARE SETUP

3.1 Installation and Configuration of OpenOCD

STM32 Pins	LED
PC13	+ve
GND	-ve (via resistor)

TABLE II: STM32 and LED connection

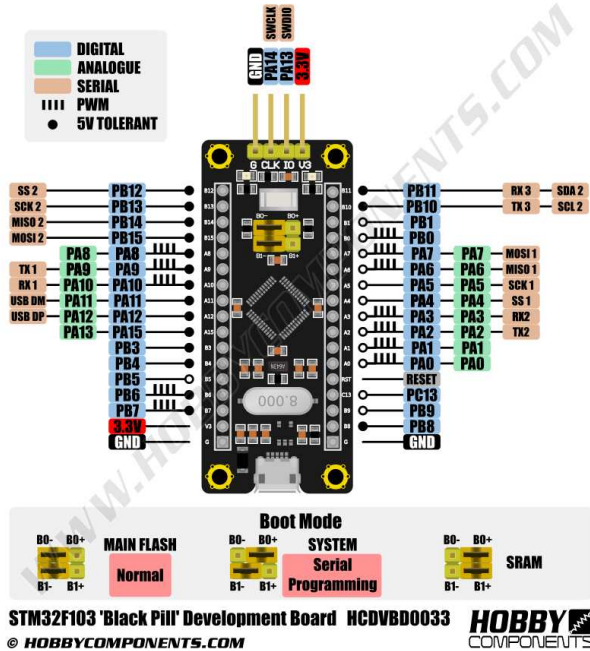


Fig. 2: STM32f103c8t6 Pin Configuration

make

sudo make install

4 MAKE FILE AND FLASHING

```
cd ~
git clone https://github.com/
alokkesari/STM32F103C8T6.git
cd STM32F103C8T6
sudo make flash
```

Note: Reset push button on the STM32 micro-controller needs to be pressed multiple times before flashing.

```
sudo apt-get install git
autoconf libtool make pkg-
config libusb-1.0-0 libusb-
1.0-0-dev

sudo apt install gcc-arm-none-
eabi

git clone git://git.code.sf.net
/p/openocd/code openocd-code

cd openocd-code

./bootstrap

./configure --enable-sysfsgpio
--enable-bcm2835gpio
```