BluePill+

STM32F103C8T6-based development board
72Mhz, 20KB RAM, 64KB ROM

STM32F103
PINOUT DIAGRAM

LEGEND

POWER
GROUND
MCU pin
PIN NAME
12-bit ANALOG
USB
USART
SPI
I²C
CAN BUS
SWD
JTAG
TIMER & CHANNEL
MISCELLANEOUS
BOARD CIRCUITRY
ARDUINO PIN

⚠ PC_13, PC_14, and PC_15:
- sink < 3 mA
- source 0 mA
- max 2 MHz
- max 30 pF

🔴 3.3V only pin
🟢 5V tolerant
∿ PMW pin
--- Alternative function

≤ 300mA source 3.3V
≤ 1A from USB (1N5819)
≤ 6V V_{IN}

Max 150 mA per MCU
Max ±20 mA per pin
±8 mA recommended

Left side (top to bottom):

Pin	#	Timer	Alt	Alt	SPI	Arduino
PB_12	28	T1BKIN	SMBA2	CK3	NSS2	25
PB_13	29	T1C1N		CTS3	SCK2	26
PB_14	30	T1C2N		RTS3	MISO2	27
PB_15	31	T1C3N			MOSI2	28
PA_8	8	T1C1		CK1	MCO	29
PA_9	9	T1C2		TX1		30
PA_10	10	T1C3		RX1		31
PA_11	11	T1C4	CANRX	CTS1	USB-	32
PA_12	12	T1ETR	CANTX	RST1	USB+	33
PA_15	15	T2C1E	NSS1	JTDI		38
PB_3	19	T2C2	SCK1	JTDO	SWO	39
PB_4	20	T3C1	MISO1	JTRST		40
PB_5	21	T2C2	MOSI1	SMBA1		41
PB_6	22	TX1	SCL1	T4C1		42
PB_7	23	RX1	SDA1	T4C2		43
PB_8	24	CANRX	SCL1	T4C3		45
PB_9	25	CANTX	SDA1	T4C4		46
VIN						
GND						
3V3						

BOOT0 button — BOOT0 — 44

Board edge labels (left): B12 B13 B14 B15 A8 A9 A10 A11 A12 A15 B3 B4 B5 B6 B7 B8 B9 5V G 3V3

BOOT0   NRST

PWR   KEY   PB2

SW 3V3 DIO SCK GND

Board edge labels (right): 5V G 3V3 R B11 B10 B1 B0 A7 A6 A5 A4 A3 A2 A1 A0 C15 C14 C13 VB

Right side (top to bottom):

Arduino	I²C	USART	Timer	Timer	#	Pin
						VIN
						GND
						3V3
7						RESET button — NRST
22	SDA2	RX3		T2C4N	27	PB_11
21	SCL2	TX3		T2C3N	26	PB_10
19	ADC9		T3C4	T1C3N	17	PB_1
18	ADC8		T3C3	T1C2N	16	PB_0
17	ADC7	MOSI1	T3C2	T1C1N	7	PA_7
16	ADC6	MISO1	T3C1	T1BKIN	6	PA_6
15	ADC5	SCK1		onboard flash W25Qxx in SOIC-8	5	PA_5
14	ADC4	NSS1		CK2	4	PA_4
13	ADC3	RX2	T2C4		3	PA_3
12	ADC2	TX2	T2C3		2	PA_2
11	ADC1	RST2	T2C2		1	PA_1
10	ADC0	CTS2	WKUP	T2C1E	KEY button	0	PA_0
4	OSC32 OUT		34	PC_15		
3	OSC32 IN		33	PC_14		
2	TAMPER RTC		32	PC_13		
1						V_{BAT}
20	BOOT1		USER LED	18	PB_2	

KEY pressed HIGH
Pull-down in code!

LED active HIGH

PA_13 — JTMS — SWDIO   3V3 🔴 34 🟢 37 🟢 GND ⚫   SWCLK — JTCK — PA_14