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WeAct Black Pill V2.0

STM32F411CEU6

Board

Name	WeAct Black Pill V2.0
Part	Unknown
Brand	WeAct Studio
Origin	China

Microcontroller

Part	STM32F411CEU6
Manufacturer	ST-Microelectronics
Core	Arm Cortex-M4
Max. Clock Speed	100MHz
Package	<u>UFQFPN</u> 48 pins

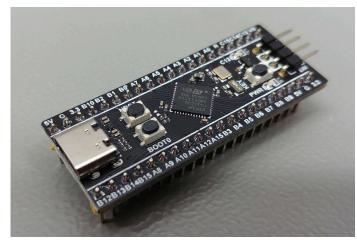
Internal memories

FLASH	512KiB
SRAM	128KiB

小 Oscillators

HSI	16MHz
LSI	32kHz
HSE	25MHz
LSE	32.768kHz

Pictures



WeAct Black Pill V2.0: Perspective view



WeAct Black Pill V2.0: Top view

Power

Sources	Any +3.3V pin (+3.3V) Any +5V pin (+5V) USB connector (+5V)
V_{DDA} pin	No
V _{SSA} pin	No
V _{REF-} pin	No
V _{REF+} pin	No
Backup battery	Pin

≯ Regulator

Manufacturer	Diodes Incorporated
Part	АР7343 (6т)
Package	X2-DFN1010-4 4 pins
Input	+3.52V to +5.25V
Output	+3.3V @ 300mA
Datasheet	AP7343.pdf

PCB

Color	Black
Size (w x I)	20.78mm x 52.81mm
Mounting	Breadboard

Remarks

 Warning: The +5V pins on this board are directly connected to the +5V pin of the USB connector. There is no protection in place. Do not power this board through USB and an external power supply at the same time.



WeAct Black Pill V2.0: Bottom view

Resources

- Perspective view
- Top view
- Bottom view
- Original schematic
- Original dimensions drawing
- Source files on Github

↓ Inputs

↑ Outputs

Connectors



C Reset button

User button

O Power LED

→ Header 1

Generic

EEPROM

★ BOOT0 button

User LED

→ Header 2

◆ USB connector

* SWD header

Inputs & outputs

C Reset button

少 Power LED

0
C

Name	PWR
Reference	-
Туре	LED
Connected to	+3.3V rail
Mode	N.A.

★ BOOT0 button

User LED

Name	воото
Reference	-
Туре	Button
Connected to	BOOT0
Mode	Active high

Name	PC13
Reference	-
Туре	LED
Connected to	PC13
Mode	Sink

User button

KEY
-
Button
PA0
Active low

Connectors & headers

≓ Header 1 properties

Name	Unknown	
Reference	None	
Туре	pin header (2.54mm, 20x1, male)	

#	Name	Function	Connected to
1	5V	-	+5V rail
2	G	-	Ground plane
3	3.3	-	+3.3V rail
4	B10	-	PB10
5	B2	-	PB2
6	B1	-	PB1
7	В0	-	PB0
8	A7	-	PA7
9	A6	-	PA6
10	A5	-	PA5
11	A4	-	PA4
12	А3	-	PA3
13	A2	-	PA2
14	A1	-	PA1
15	Α0	-	PA0
16	R	-	NRST
17	C15	-	PC15
18	C14	-	PC14
19	C13	-	PC13
20	VB	-	V_{BAT}

Name	Unknown
Reference	None
Туре	pin header (2.54mm, 20x1, male)

#	Name	Function	Connected to
1	B12	-	PB12
2	B13	-	PB13
3	B14	-	PB14
4	B15	-	PB15
5	A8	-	PA8

6	A9	-	PA9
7	A10	-	PA10
8	A11	-	PA11
9	A12	-	PA12
10	A15	-	PA15
11	В3	-	PB3
12	B4	_	PB4
13	B5	_	PB5
14	B6	_	PB6
15	B7	-	PB7
16	B8	-	PB8
17	B9	-	PB9
18	5V	-	+5V rail
19	G	-	Ground plane
20	3.3	-	+3.3V rail

USB connector properties

Name	Unknown
Reference	None
Туре	USB C

← USB connector pins

#	Name	Function	Connected to
A1/B12	-	GND	Ground plane
A4/B9	-	VBUS	+5V rail
B8	-	SBU2	Ground plane via 5.1 k Ω (R8)
A5	-	CC1	Ground plane via 5.1 k Ω (R8)
В7	-	D-	PA11 via 10Ω (R9)
A6	-	D+	PA12 via 10Ω (R7)
A7	-	D-	PA11 via 10Ω (R9)
В6	-	D+	PA12 via 10Ω (R7)

A8	_	SBU1	Ground plane via 5.1 k Ω (R8)
B5	-	CC2	Ground plane via 5.1 k Ω (R8)
B4/A9	-	VBUS	+5V rail
B1/A12	-	GND	Ground plane

* SWD header properties

Name	SW
Reference	None
Туре	pin header (2.54mm, 4x1, male)

亲 SWD header pins

#	Name	Function	Connected to
1	3.3V	VCC	+3.3V rail
2	SWDIO	SWDIO	PA13
3	SWCLK	SWCLK	PA14
4	GND	GND	Ground plane

Devices

Generic EEPROM properties footprint

Name Unknown Reference U3 Manufacturer Unknown Generic EEPROM Part **Marking** Unknown Unavailable Datasheet **Package** SOP 8 pins Generic I2C EEPROM Description

Generic EEPROM pins footprint

#	Name	Function	Connected to
1	-	/CS	PA4
2	-	DO	PB4
3	-	/WP	+3.3V rail
4	-	GND	Ground plane
5	-	DI	PA7
6	-	CLK	PA5
7	-	/HOLD	+3.3V rail
8	-	VCC	+3.3V rail

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