VCC

SWD_PIN
1
2
3
RESET
GND

SWD_PIN1
1
2
3
VCC
RESET
GND

SWD_PIN2
1
2
3
VCC
RESET
GND

OSCOUT
22pF
C3
GND

Q1
8MHz
OSCIN
22pF
C4
GND

BOOT0
3 2 1
BOOT0

BOOT1
3 2 1
BOOT1
GND

USB_PROGRAM
VBUS
D+
D-
ID
GND
VBUS
D+CHG
D-CHG
N$13
GND

VCC
LEDPWR
R2
10K
GND

STM32-M-48

S2
3   1
4   2
C5
100nF
GND
VCC
10K
R

VCC
OSCIN
OSCOUT
RESET
GND

1 VBAT
2 PC13-TAMPER-RTC
3 PC14-OSC32_IN
4 PC15-OSC32_OUT
5 PD0-OSC_IN-CANRX
6 PD1-OSC_OUT-CANTX
7 NRST
8 VSSA
9 VDDA

18 PB0-ADC8/TIM3CH3-TIM1CH2N   PB0
19 PB1-ADC9/TIM3CH4-TIM1CH3N   PB1
20 PB2/BOOT1   BOOT1
39 PB3/JTDO--TIM2CH2/TRACESWO/SPI1SCK SWO
40 PB4/JNTRST--TIM3CH1/SPI1MISO   PB4
41 PB5-I2C1SMBAI-TIM3CH2/SPI1MOSI PB5
42 PB6-I2C1SCL/TIM4CH1-USART1TX   PB6
43 PB7-I2C1SDA/TIM4CH2-USART1RX   PB7

PORTA
PA0   1
PA1   2
TX2   3
RX2   4
PA4   5
PA5   6
PA6   7
PA7   8
PA8   9
TX1   10
RX1   11
GND   12
GND   13
SWDIO 14
SWCLK 15
PA15 16

VCC
10K
RPULL_SWIO
SWDIO

PA0   10 PA0-WKUP/USART2CTS/ADC0/TIM2CH1ETR
PA1   11 PA1-USART2RTS/ADC1/TIM2CH2
TX2   12 PA2-USART2TX/ADC2/TIM2CH3
RX2   13 PA3-USART2RX/ADC3/TIM2CH4
PA4   14 PA4-SPI1NSS/ADC4/USART2CK
PA5   15 PA5-SPI1SCK/ADC5
PA6   16 PA6-SPI1MISO/ADC6/TIM3CH1-TIM1BKIN
PA7   17 PA7-SPI1MOSI/ADC7/TIM3CH2-TIM1CH1N

VCC

PA8   29 PA8-USART1CK/MCO/TIM1CH1
TX1   30 PA9-USART1TX/TIM1CH2
RX1   31 PA10-USART1RX/TIM1CH3
CTS1 32 PA11-USART1CTS/CANRX/USBDM/TIM1CH4
RTS1 33 PA12-USART1RTS/CANTX/USBDP/TIM1ETR
SWDIO 34 PA13/JTMS/SWDIO
SWCLK 37 PA14/JTCK/SWCLK
PA15 38 PA15/JTDI-TIM2CH1ETR/SPI1NSS

44 BOOT0   BOOT0

48 VDD3
36 VDD2
24 VDD1
23 VSS1
35 VSS2
47 VSS3

C1
10nF
VCC
GND

45 PB8-TIM4CH3-I2C1SCL/CANRX   CANRX
46 PB9-TIM4CH4-I2C1SDA/CANTX   CANTX
21 PB10-I2C2SCL/USART3TX-TIM2CH3 PB10
22 PB11-I2C2SDA/USART3RX-TIM2CH4 RX3
25 PB12-SPI2NSS/I2C2SMBAI/USART3CK/TIM1BKIN PB12
26 PB13-SPI2SCK/USART3CTS/TIM1CH1N PB13
27 PB14-SPI2MISO/USART3RTS/TIM1CH2N PB14
28 PB15-SPI2MOSI/TIM1CH3N PB15

IC1

VCC
10K
LED2
10K
LED3
10K
R7 LED4
R8 LED5

CN1
VBUS
D+
D-
ID
GND
GND

22R
22R
VBUS
D+
D-
RUSBD+
RUSBD-
GND
CTS1
RTS1

VCC
1K5
RUSB

VBUS
IN   OUT
ADJ
VCC
C2
10nF
GND
AMS1117-3.3

XI7   XI8
Q2
12MHz
C8   C9
22pF 22pF
GND_SIGNAL

GND
RX1
TX1
GND
D+CHG
D-CHG
GND XI7
XI8

C10
0.1uF

U2
1 D3   VCC 16 VCC
2 D2   D4   15
3 D1   D5   14
4 D0   D6   13
5 Y   D7   12
6 W   A   11
7 OE   B   10
8 GND   C   9

SN74HC251_SMD

U1
MCP2551-SOIC8
1 TXD   RS   8
2 VSS   CANH 7
3 VDD   CANL 6
4 RXD   VREF 5
CANTX
GND
VCC
CANRX

C6
100uF

RCAN1
1K5
RCAN2
1K5
RCAN3
61
RCAN4
61
CANL
C7
4.7uF
GND

CANOUT
1 CANH
2
3 CANL
GND

PORTB
PB0   1
PB1   2
BOOT1 3
SWO   4
PB4   5
PB5   6
PB6   7
PB7   8
CANRX 9
CANTX 10
PB10   11
RX3   12
PB12   13
PB13   14
PB14   15
PB15   16

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