Power Supply

VBUS

U1
AMS1117-3.3
VI GND VO

+3.3V

D1
RED
PWR_LED_K

C1
22u

C2
22u

R1
1k5

VBUS from USB connector (nom. +5V) Min. 22uF inp./outp. caps

Mounting Holes

H1
MountingHole

H2
MountingHole

H3
MountingHole

H4
MountingHole

M2

Microcontroller (and USB)

1 x 100nF per VDD pin   PWR_FLAG   +3.3V   +3.3VA   PWR_FLAG

FB1
Ferrite_Bead
+3.3V

C3
10u

C4
100n

C5
100n

C6
100n

C7
100n

C8
10u

C9
1u

C10
1u

VDDA Filtering

NRST

NRST 7

VBAT VDD VDD VDD VDDA U2

C11
100n

+3.3V   SW1
SW_SPDT

R2
10k

BOOT0 44
BooT0

PD0 5
HSE_IN

PD1 6
HSE_OUT

CL = 2*(CL0−Cs)=2*(10−5)pF=10pF

Y1
16MHz

PC13 2
PC14 3
PC15 4

C12
10p

C13
10p

PB0 18
PB1 19
PB2 20
PB3 39
PB4 40
PB5 41

USART1_TX 42 PB6
USART1_RX 43 PB7

PB8 45
PB9 46

I2C2_SCL 21 PB10
I2C2_SDA 22 PB11

PB12 25
PB13 26
PB14 27
PB15 28

PA0 10
PA1 11
PA2 12
PA3 13
PA4 14
PA5 15
PA6 16
PA7 17
PA8 29
PA9 30
PA10 31
PA11 32 USB_D−
PA12 33 USB_D+
PA13 34 SWDIO
PA14 37 SWCLK
PA15 38

VSS VSS VSS VSSA
23 35 47 8

STM32F103C8T6

USB App note AN4879

+3.3V

R3
1k5

VBUS

J1
VBUS
D+
D−
ID
GND Shield
USB_B_Micro

J2
+3.3V
4
3
2
Conn_01x04_Male 1

+3.3V

+3.3V
R4
1k5
R5
1k5
J4
1
2
3
Conn_01x04_Male 4

+3.3V
1
2
3
J3
Conn_01x04_Male
4

Pin-out using STM32CubeIDE

Besong J. E
Sheet: /
File: STM32-project.sch
Title: STM32 PCB
Size: A4   Date: 2022-03-05   Rev: 0.1
KiCad E.D.A. kicad (5.1.6)-1   Id: 1/1

STM32 Demo PCB