

NUCLEO-C092RC

MB2046

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HW1

STICKER PRODUCT

N/A

HW2

STICKER BOARD

N/A

HW5

PCB

MB2046

U_TOP

TOP.SchDoc

Legend

- General comment such as function title, configuration, ...
- Text to be added to silkscreen.
- Warning text.
- Notes to generate the board layout.

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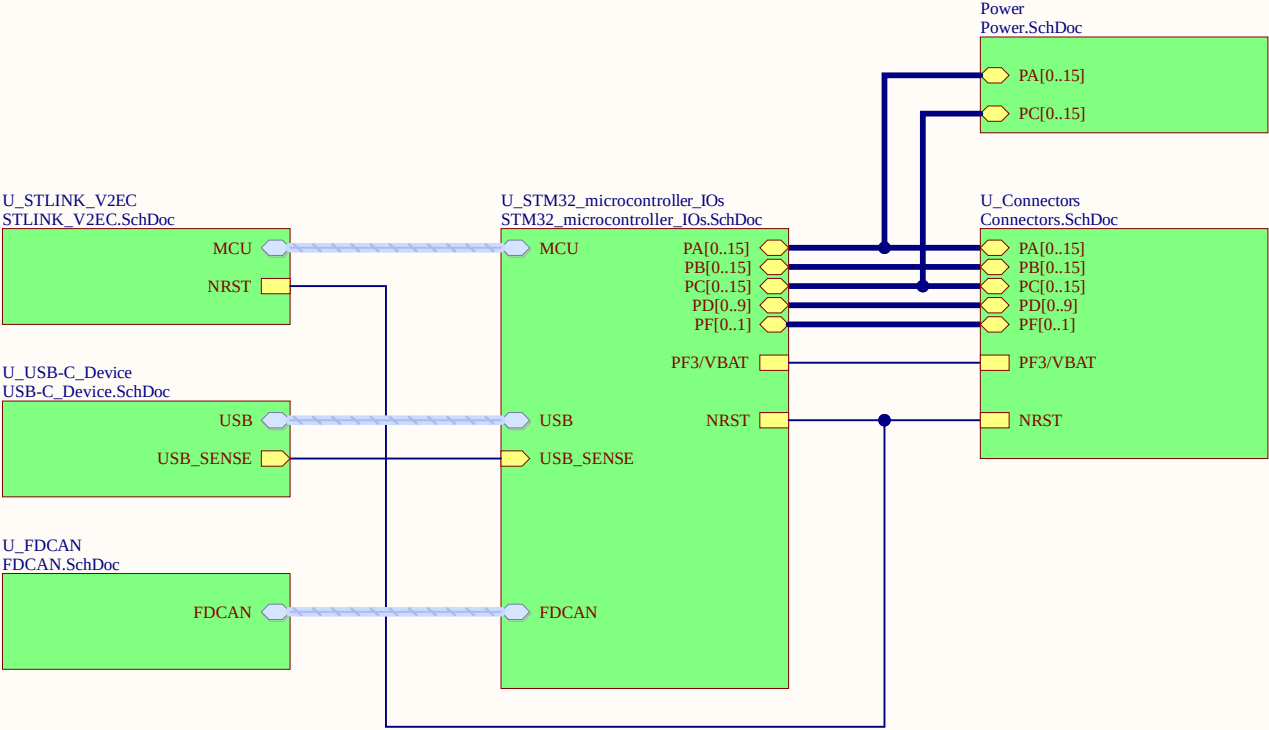
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Title: Project overview		
Project: NUCLEO		
Variant: C092RC		
Revision: B-03		Reference: MB2046
Size: A4	Date: 24-SEP-2024	Sheet: 1 of 8





USER BUTTON

3V3

R34 2.5k

B1 KSC721JLFS

1 2 3 4

USER

C29 100nF

R41 100k

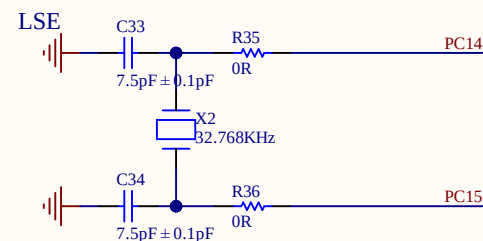
SB15

PC13

U13 ESDALC6V1-1U2

1 2

R34, R41, C29 = not fitted: default setting



HSE

MCU.MCO

C35 6pF

C32 6pF

X3 48MHz

R37 0R

R38 0R

PF0

PF1

SB20 = not fitted: MCO
SB20 = fitted: External crystal

MCU I/O

U14A

VCP_TX
VCP_RX

Close to MCU pad.

PA11 SB7 USB.D_N 43
PA12 SB6 USB.D_P 44
SWDIO PA13 45
SWCLK/BOOT0 PA14 46
PA15 47

PA0 17
PA1 18
PA2 19
PA3 20
PA4 21
PA5 22
PA6 23
PA7 24
PA8 36
PA9 37
PA10 42
PA11 43
PA12 44
PA13 45
PA14 46
PA15 47

PB0 27
PB1 28
PB2 29
PB3 57
PB4 58
PB5 59
PB6 60
PB7 61
PB8 62
PB9 63
PB10 30
PB11 31
PB12 32
PB13 33
PB14 34
PB15 35

PC0 13
PC1 14
PC2 15
PC3 16
PC4 25
PC5 26
PC6 38
PC7 39
PC8 48
PC9 49
PC10 64
PC11 1
PC12 2
PC13 3
PC14 4
PC15 5

PD0 50
PD1 51
PD2 52
PD3 53
PD4 54
PD5 55
PD6 56
PD8 40
PD9 41

PF0 10
PF1 11

NRST 12

PC14-OSC_X_IN
PC15-OSC_X_OUT

PD8/VSS
PD9/VDDIO2

PF0-OSC_IN
PF1-OSC_OUT

PF2-NRST

SB5, SB8 = not fitted: pin40/41 as GPIO2
SB5, SB8 = fitted: pin40/41 as VDDIO2

SB8 DNF
SB5 DNF

C26 100nF
C43 4.7uF

VDD

NRST

STM32C092RCT6

MCU PWR

SB16, C37 = not fitted: C0 MCU without VBAT
 SB16, C37 = fitted: G0 MCU with VBAT

VDD

SB16

DNE

PF3/VBAT

VDD

U14B

8

6

7

VSS

9

DNE

C37

1uF

VREFP

R42

0R

STM32C092RCT6

BOOT MODE

PA14 SB3

TP4 N/A

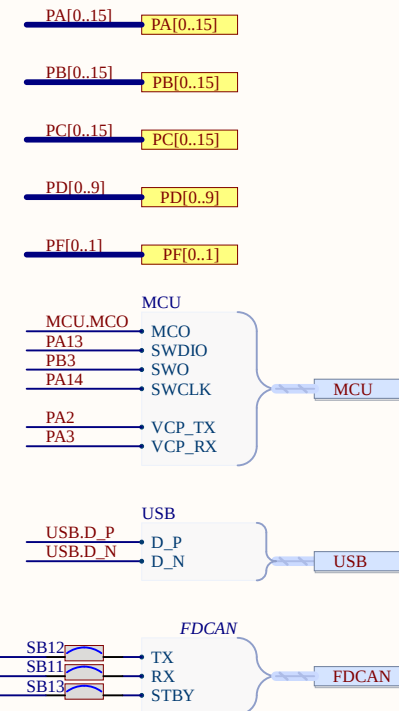
BOOT B3 KMR231GLFS

3V3

R32 10K

U11 ESDALC6V1-1U2

DEFAULT (0) = INTERNAL FLASH
B3 PRESSED DURING RESET (1) = BOOTLOADER



MCU DECAPS

Ceramic capacitor (Low ESR, ESR<1ohm)

VDD VDD VREFP

C28 4.7uF C27 100nF C31 1uF C30 100nF

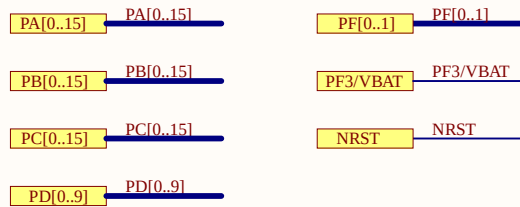
HW7

DNF

Socket LOFP64



CONNECTORS

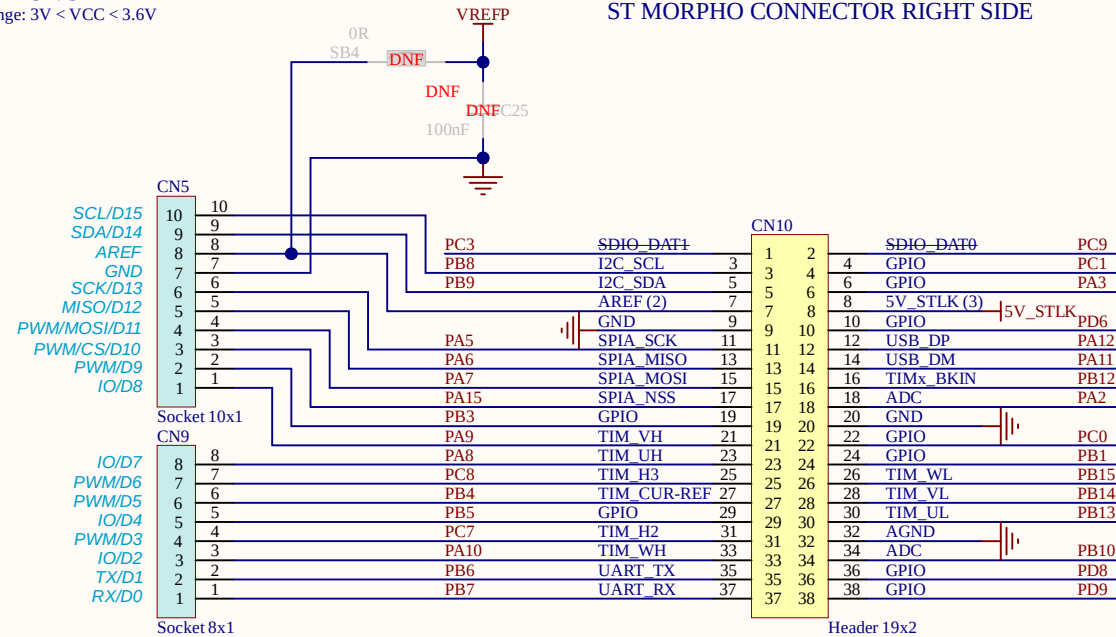
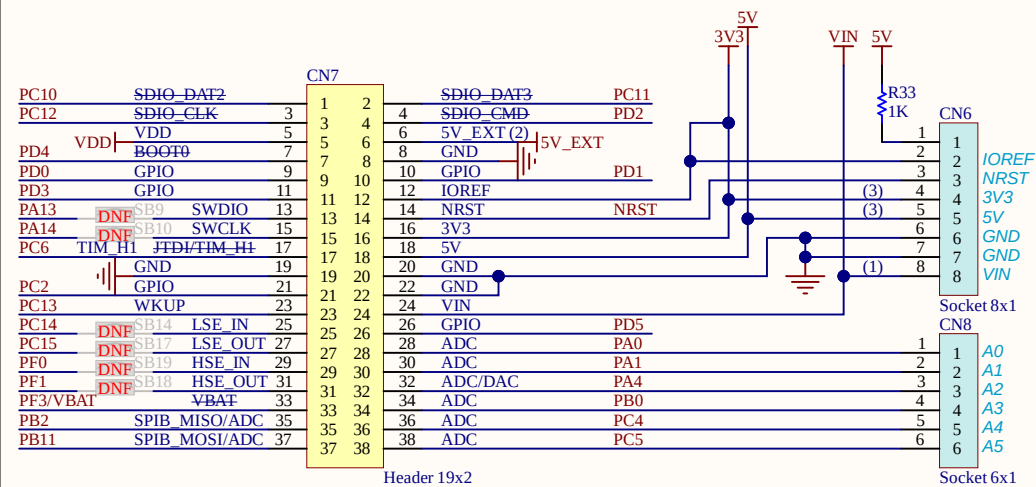


COLOR LEGEND
MORPHO SPECIFICATION
ARDUINO SPECIFICATION
STM32 ALTERNATE FUNCTION
STM32 IO PORT
FUNCTION NOT AVAILABLE

ST MORPHO CONNECTOR LEFT SIDE

ARDUINO V3
Operating range: 3V < VCC < 3.6V

ST MORPHO CONNECTOR RIGHT SIDE



(1): VIN (NUCLEO INPUT) WARNING voltage applied to 7V < VIN < 12V
(2): 5V_EXT, AREF (NUCLEO INPUT)
(3): 5V, 3V3, IOREF, 5V_STLK (NUCLEO OUTPUT, SHIELD INPUT)

[illegible]

VBUS OVP

5V USB

U17

FPF3380UCX

TP5

Vo=(680+180)/180*1.2=5.73V

5V_USB

R40
> 53K

DNF

PC0

USB_SENSE

R39
> 62K

DNF

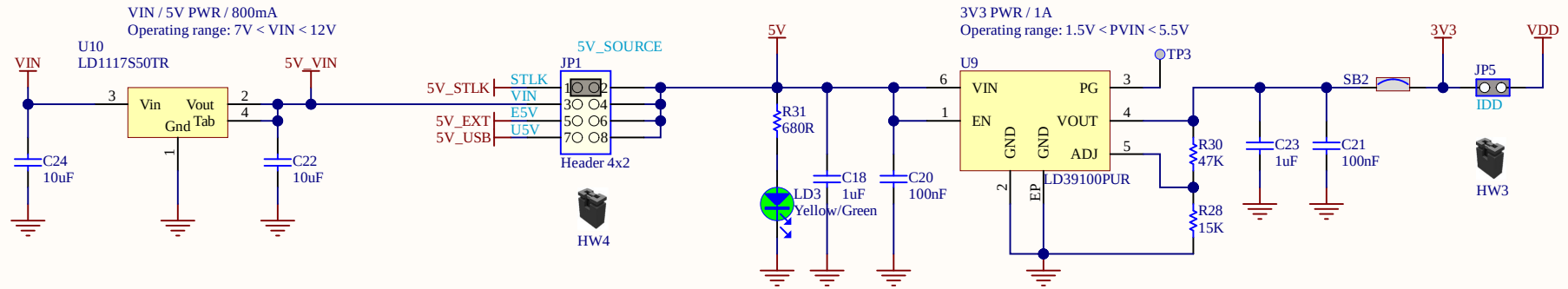
Ground



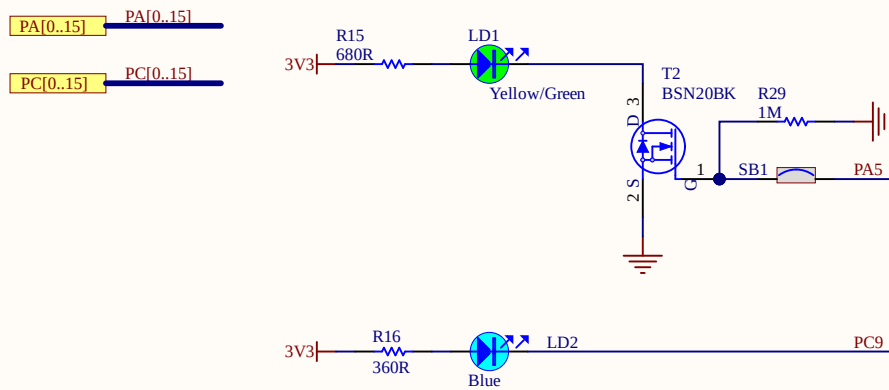
Title: FDCAN		
Project: NUCLEO		
Variant: C092RC		
Revision: B-03		Reference: MB2046
Size: A4	Date: 24-SEP-2024	Sheet: 6 of 8



POWER SOURCES

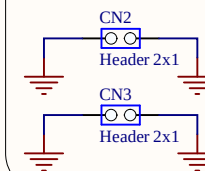


USER LED

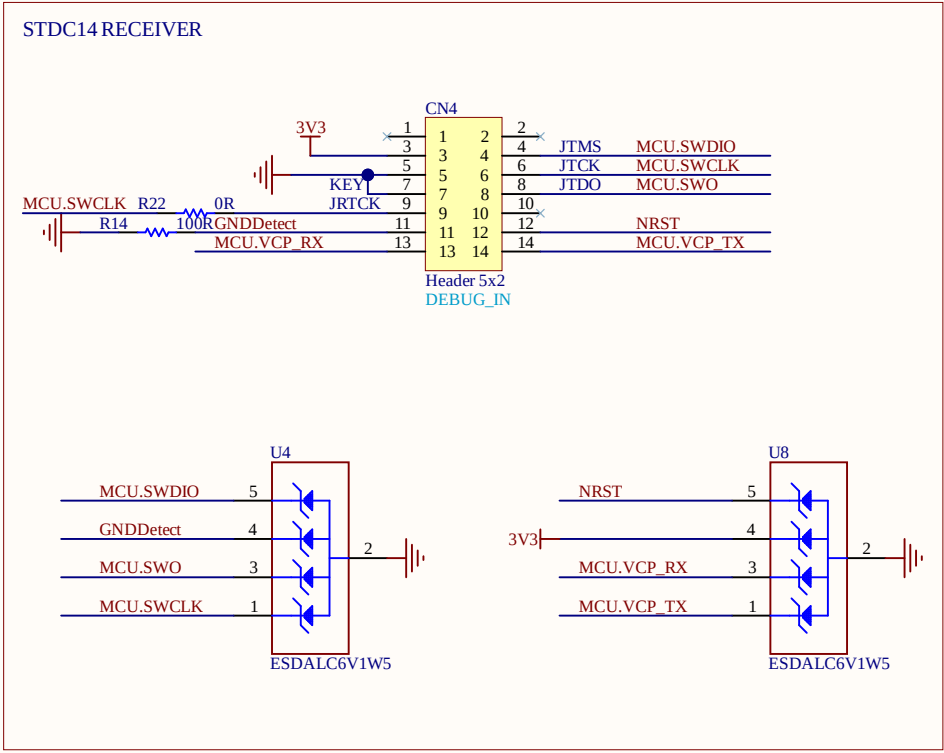
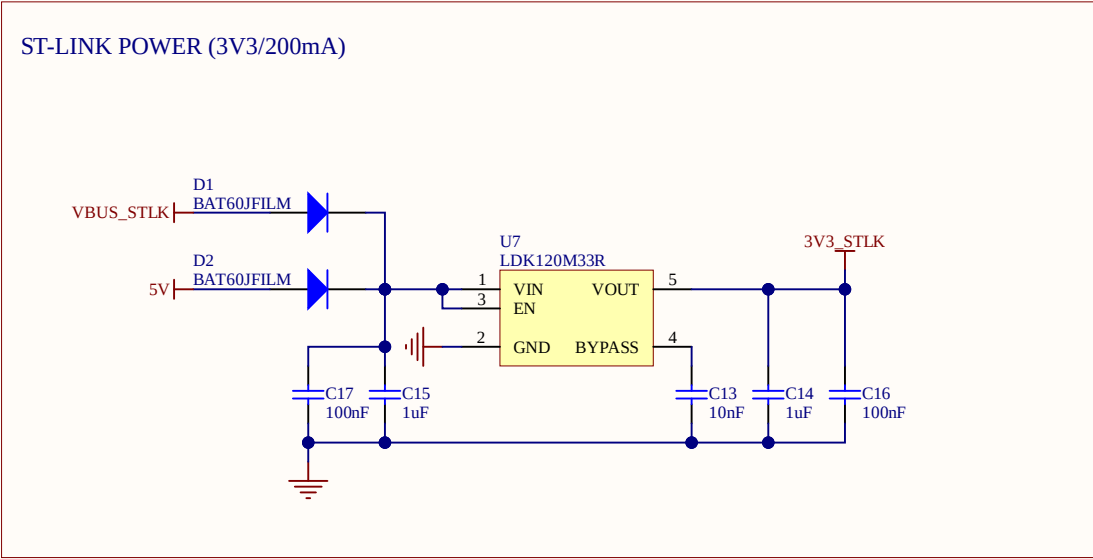
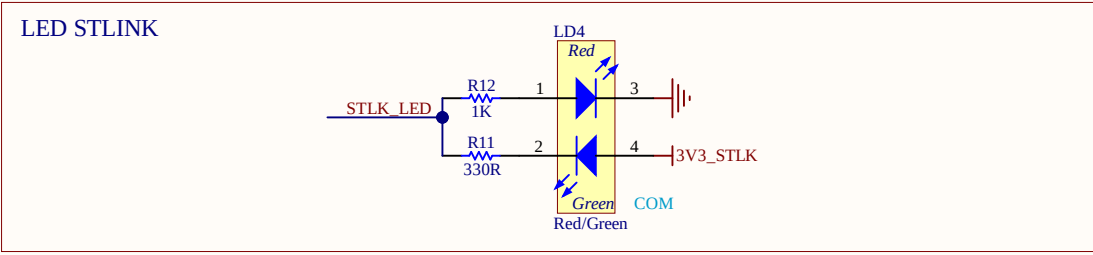
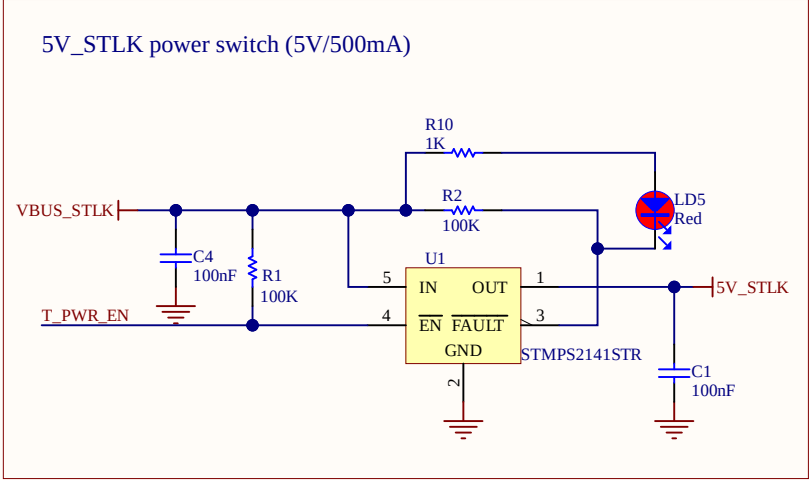
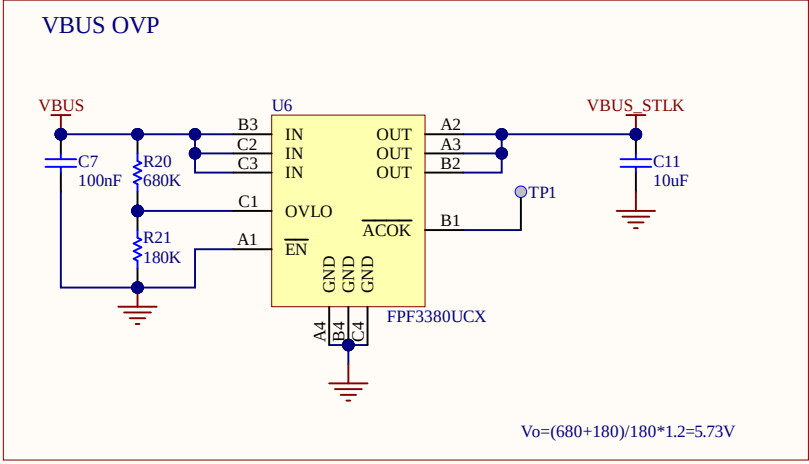
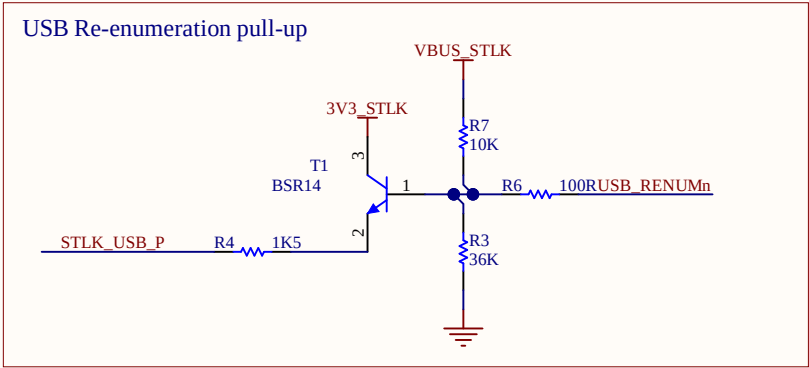


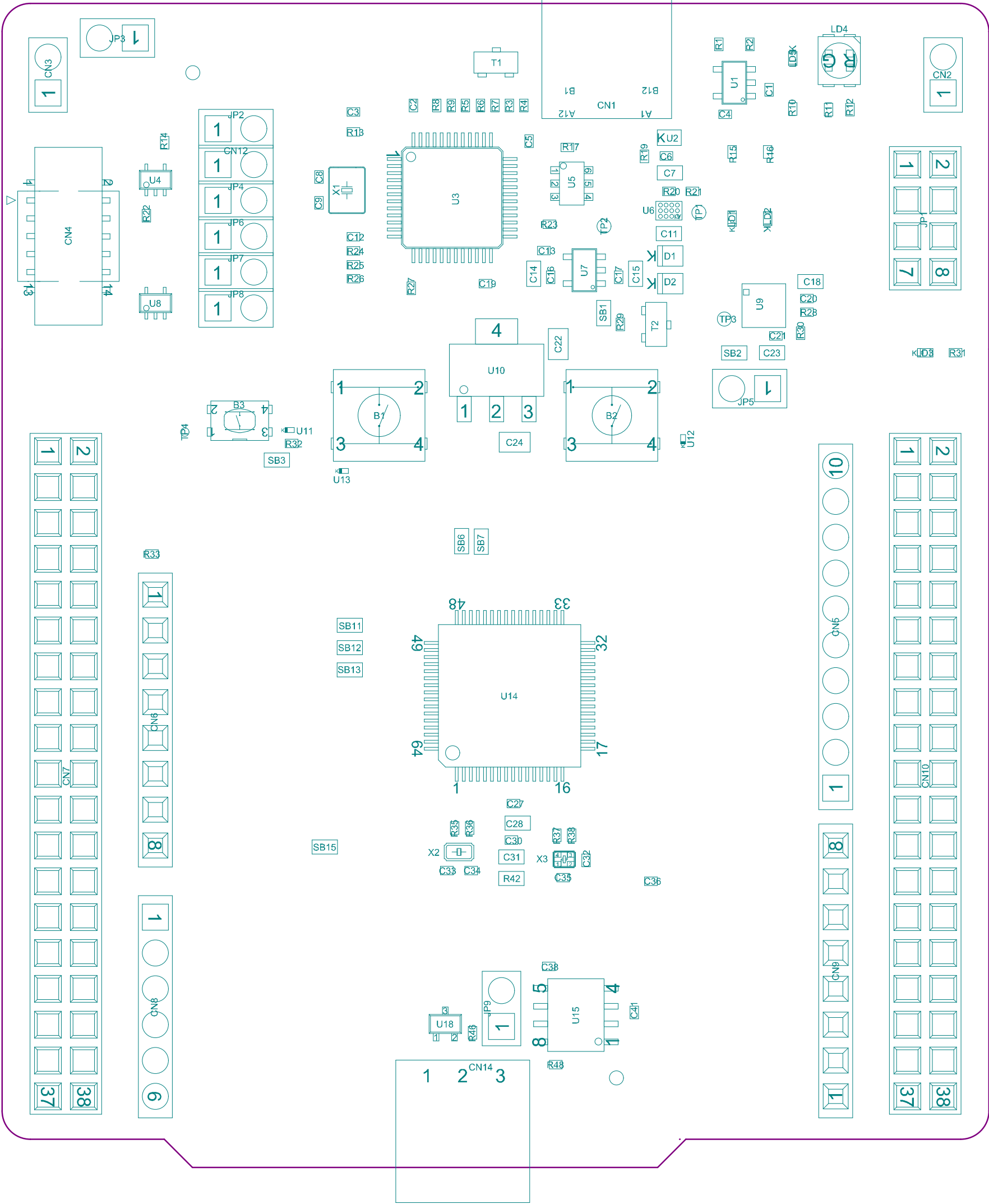
GND HEADERS

Wired on Solder Side

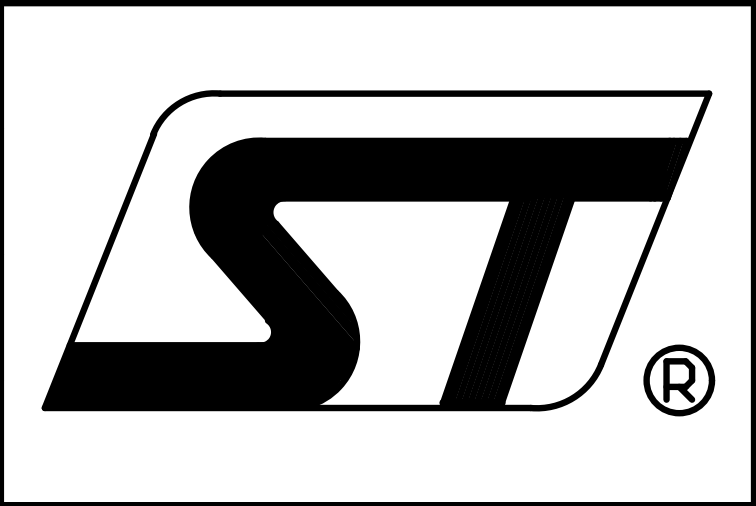


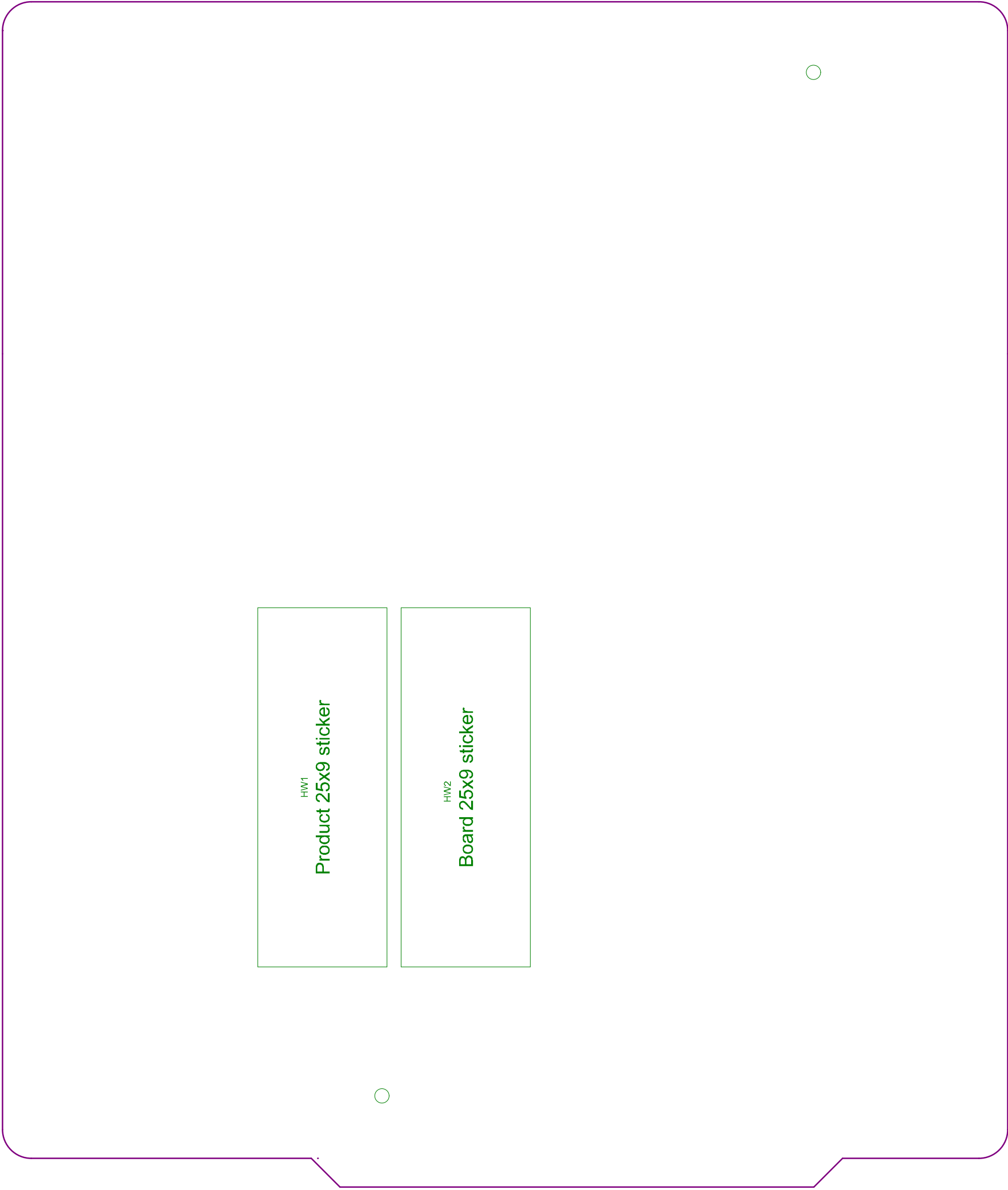
STLINK-V2EC





Project: NUCLEO	
Layer: M14-Top Assembly	Gerber: .GM14
Variant: C071RB	MB2046
Date: 24-SEP-2024	Rev: B





Project: NUCLEO

Layer: M15-Bottom Assembly

Variant: C071RB

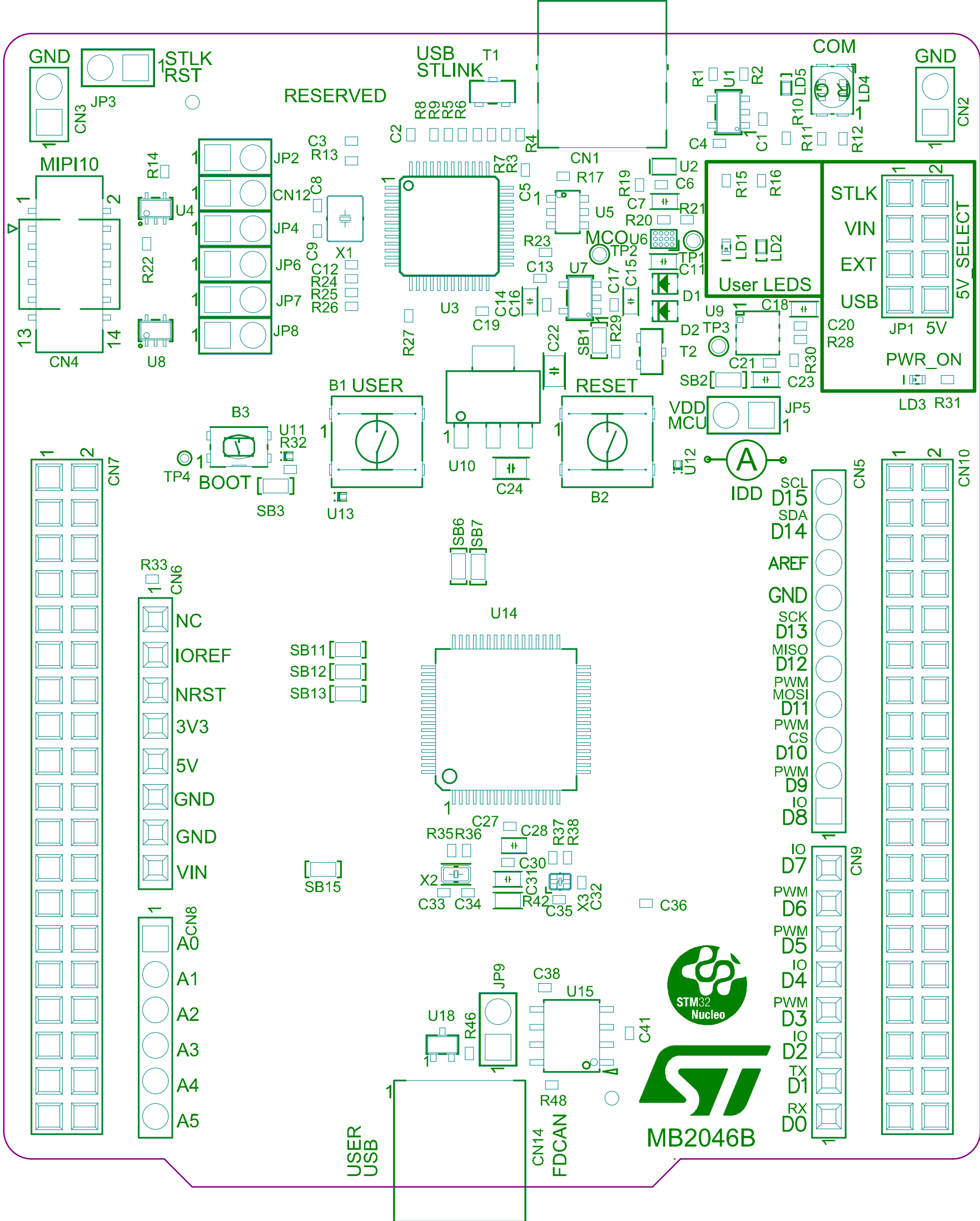
Date: 24-SEP-2024

Gerber:.GM15

MB2046

Rev: B





SCL
D15
SDA
D14
AREF
GND
SCK
D13
MISO
D12
PWM
MOSI
D11
PWM
CS
D10
PWM
D9
IO
D8
IO
D7
PWM
D6
PWM
D5
IO
D4
PWM
D3
IO
D2
TX
D1
RX
D0

HW1



Product 25x9 sticker



Board 25x9 sticker

HW2



NC
IOREF
NRST
3V3
5V
GND
GND
VIN
A0
A1
A2
A3
A4
A5