

STM32H7xxx-Disco

MB1381

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Top
TOP.SchDoc

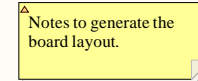


Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.



OPEN PLATFORM LICENSE AGREEMENT

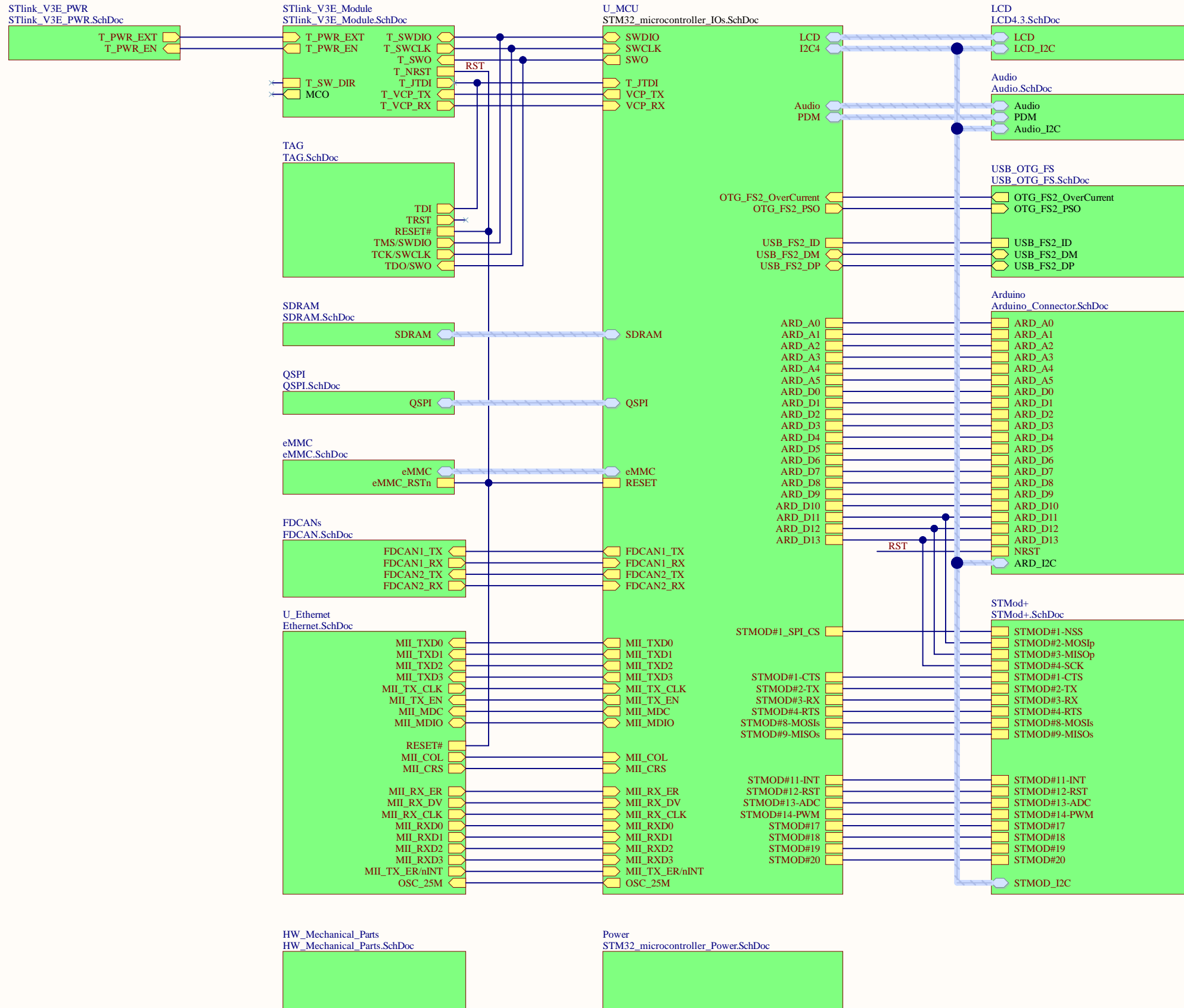
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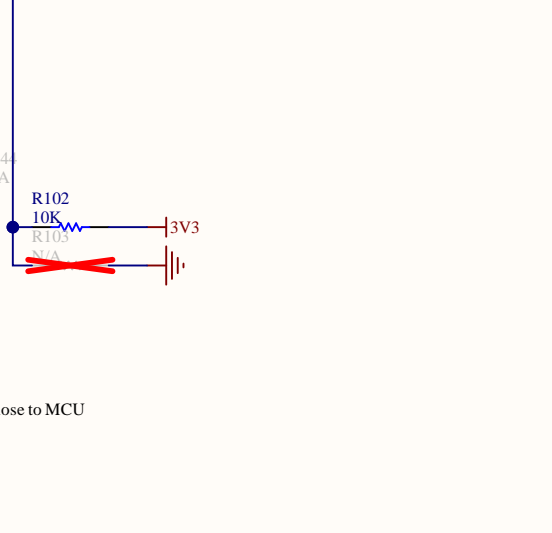
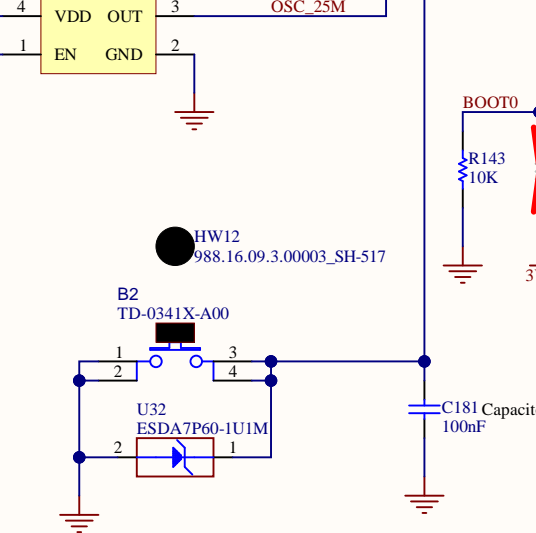
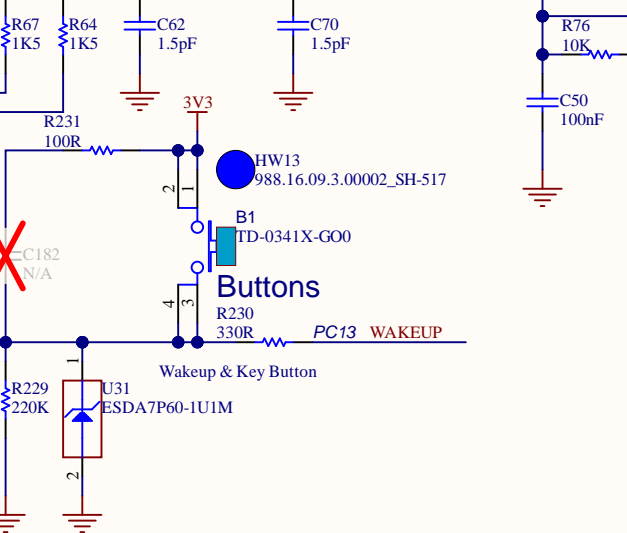
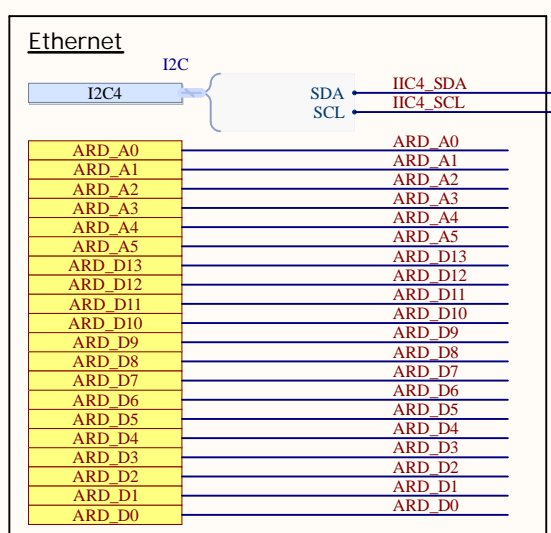
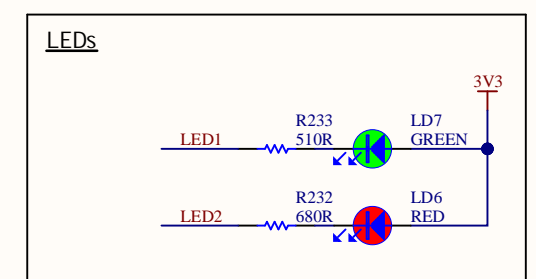
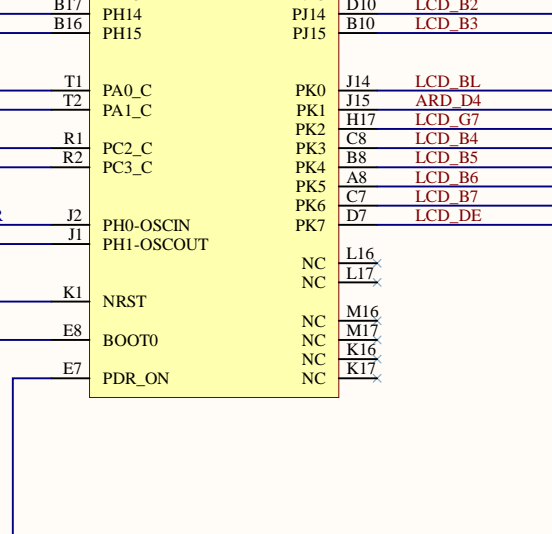
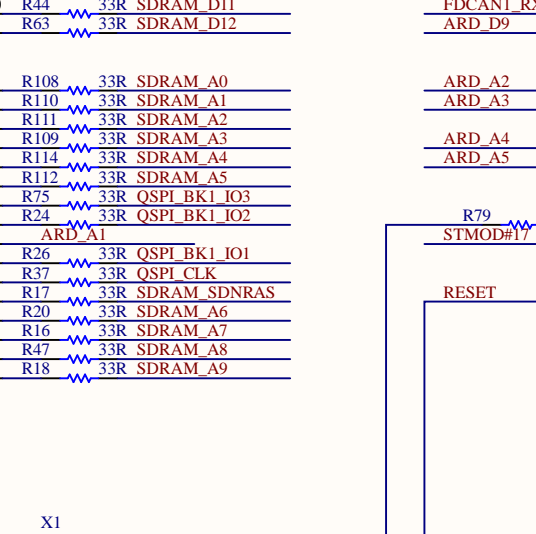
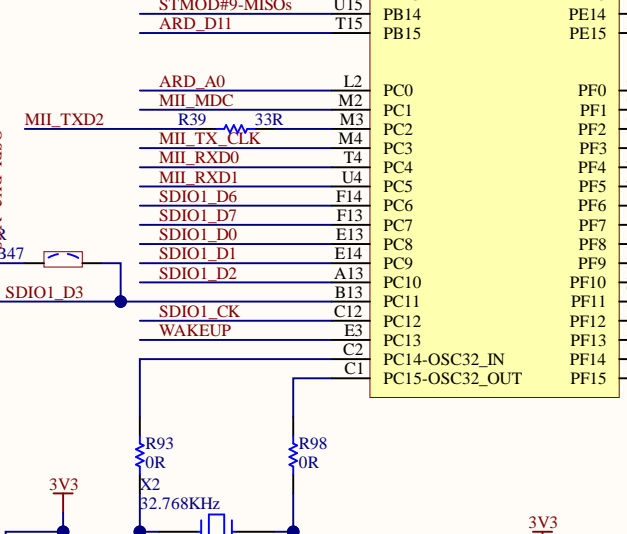
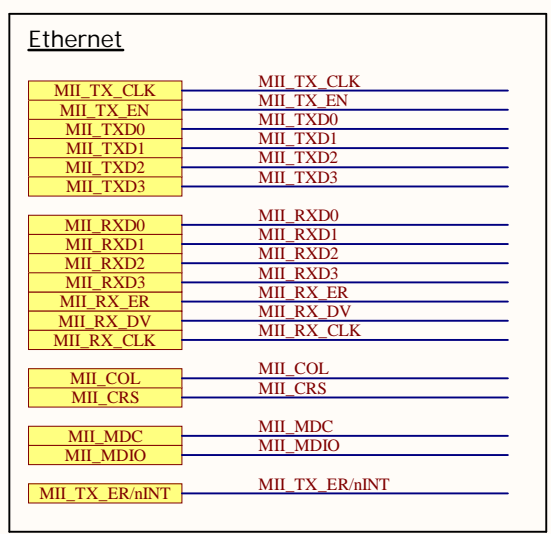
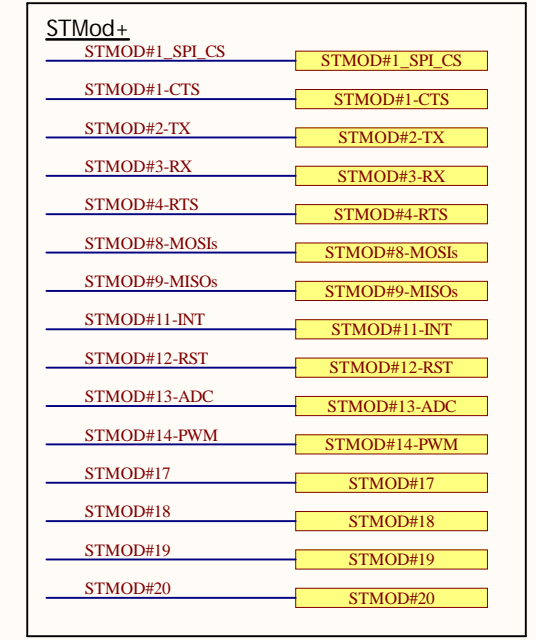
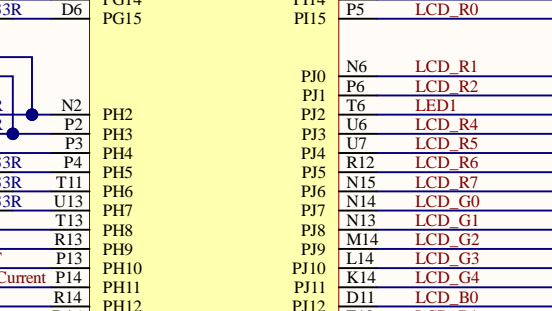
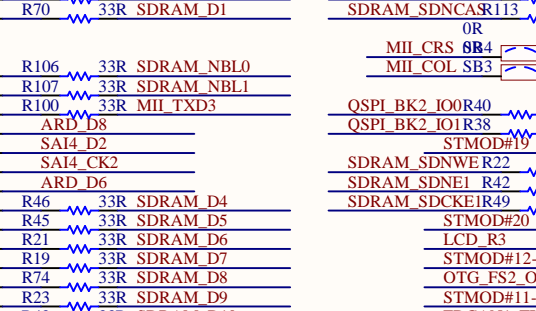
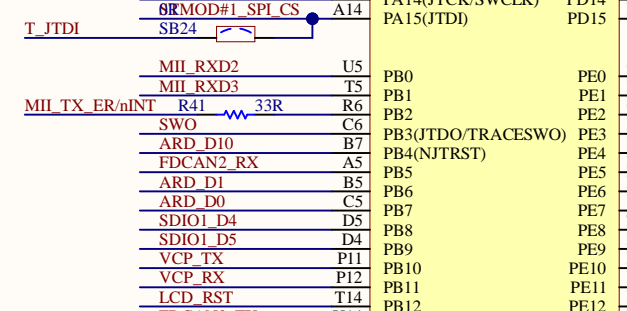
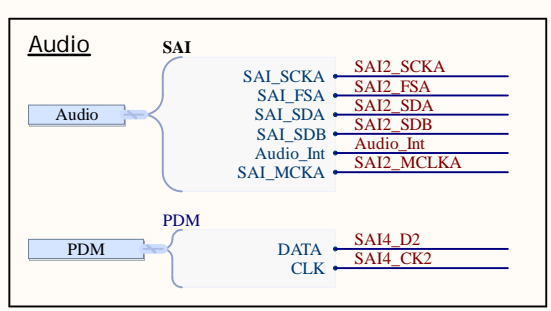
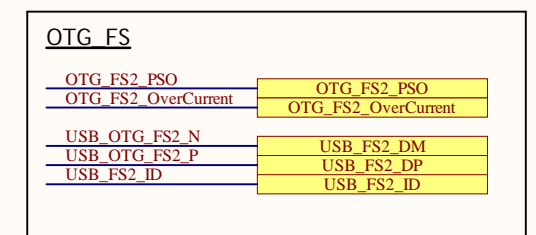
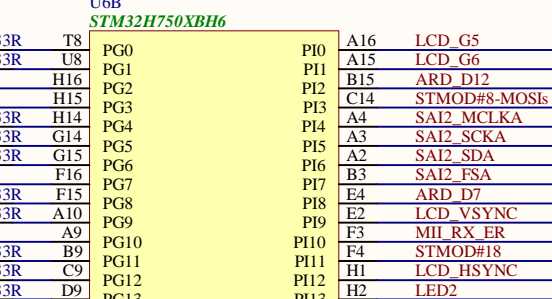
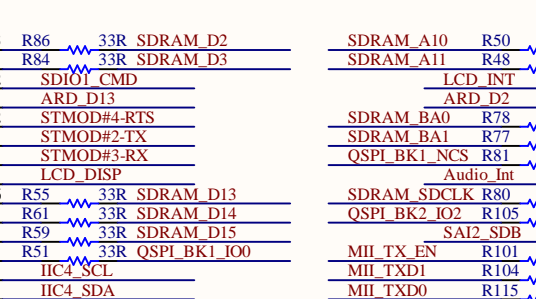
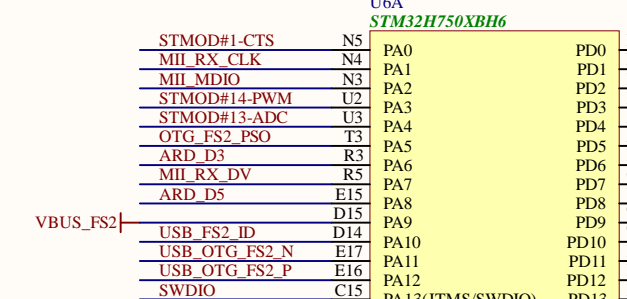
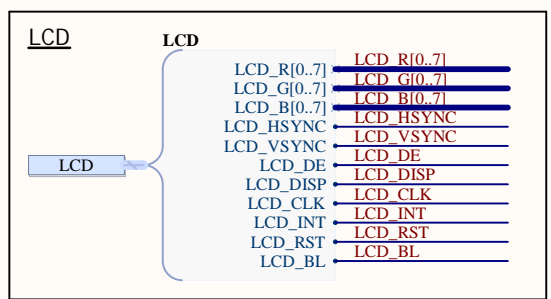
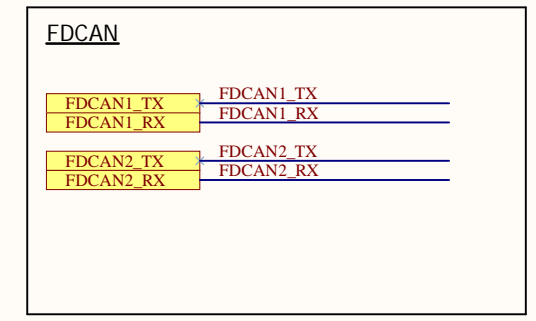
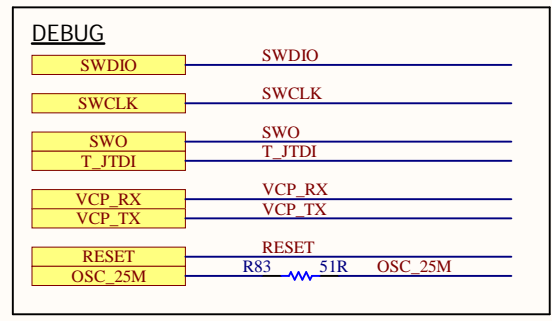
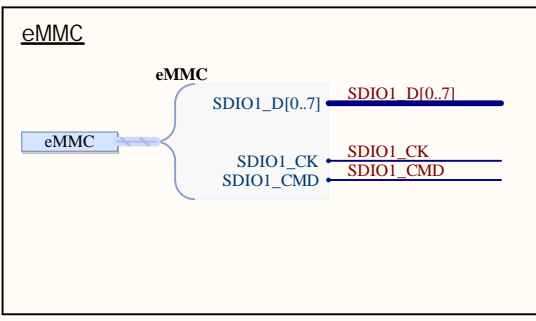
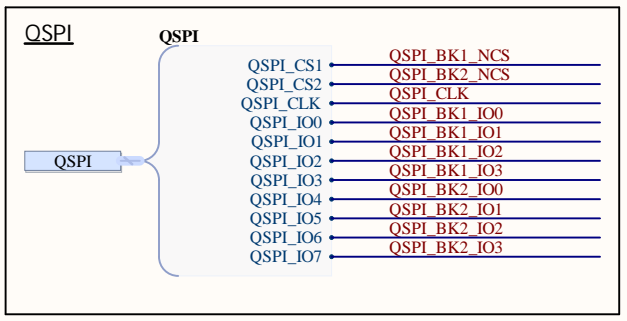
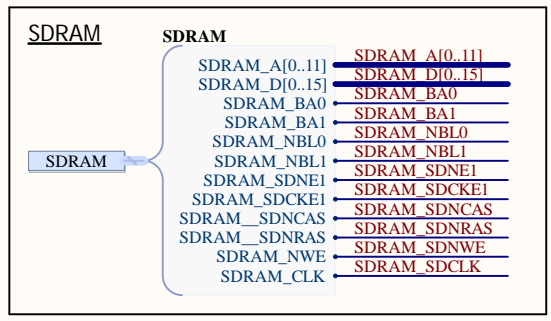
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Title: Project overview		
Project: STM32H7xxx-Disco		
Variant: H750XB		
Revision: B-04		Reference: MB1381
Size: A4	Date: 27-Sep-2024	Sheet: 1 of 19

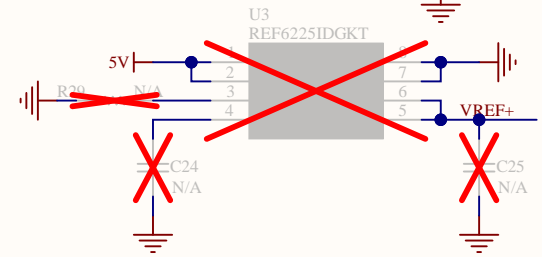
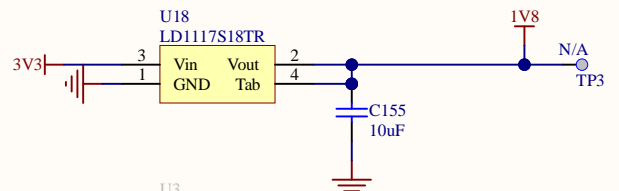
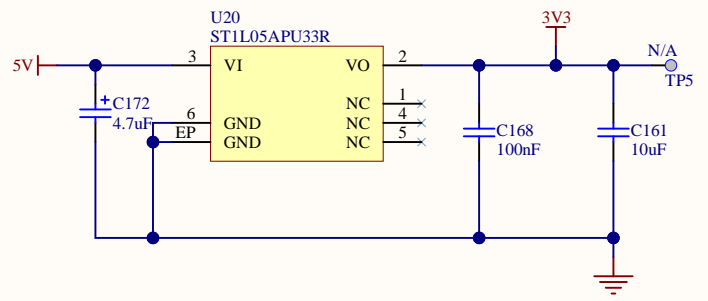
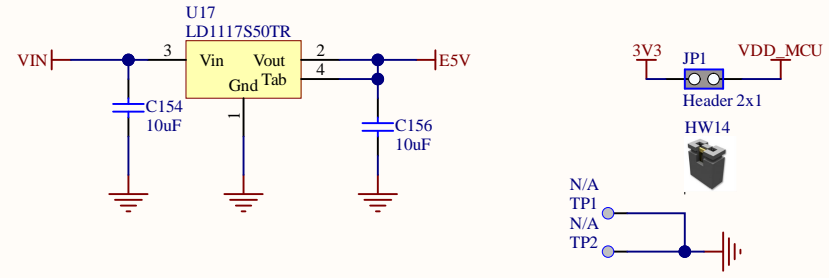
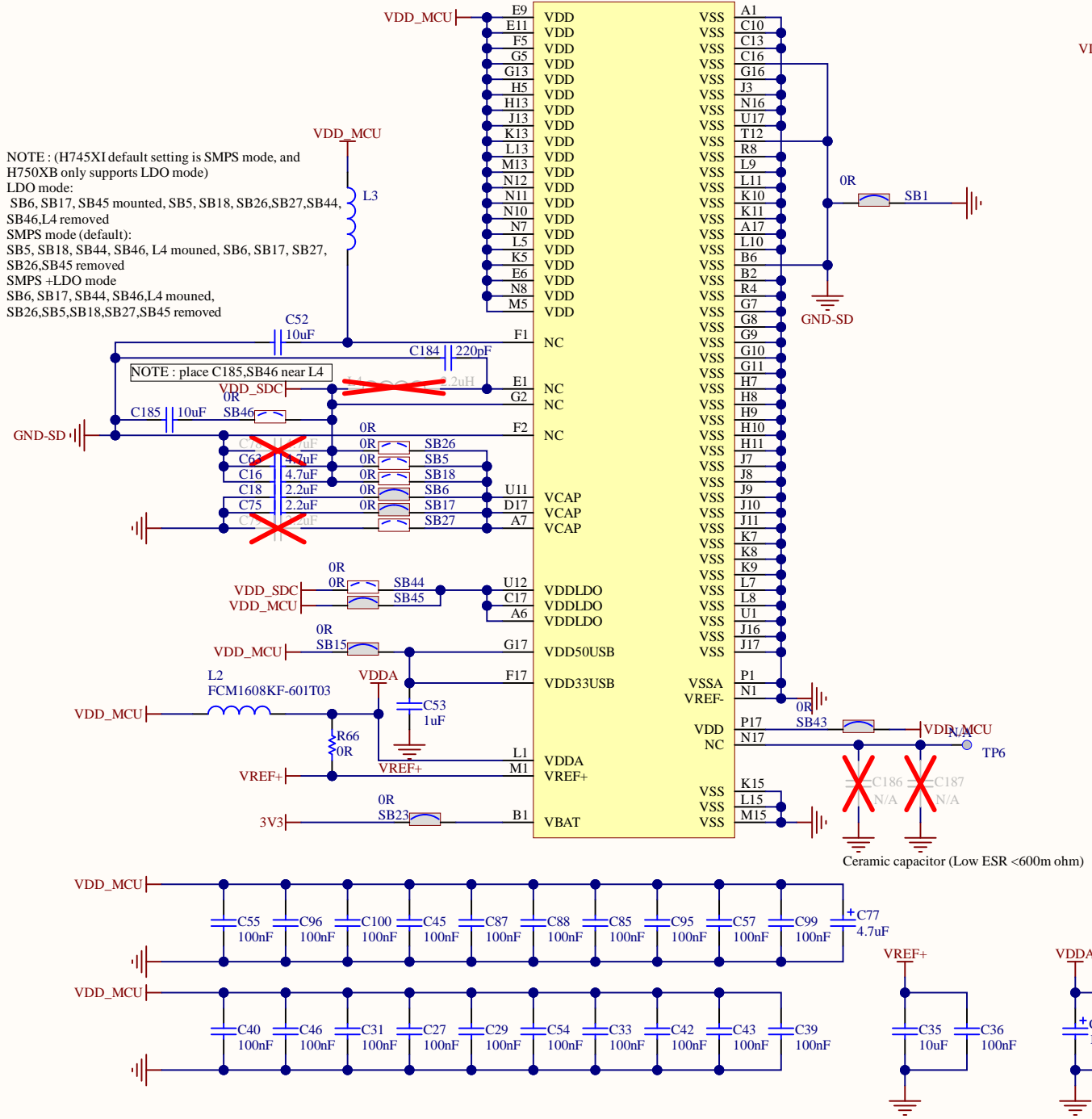






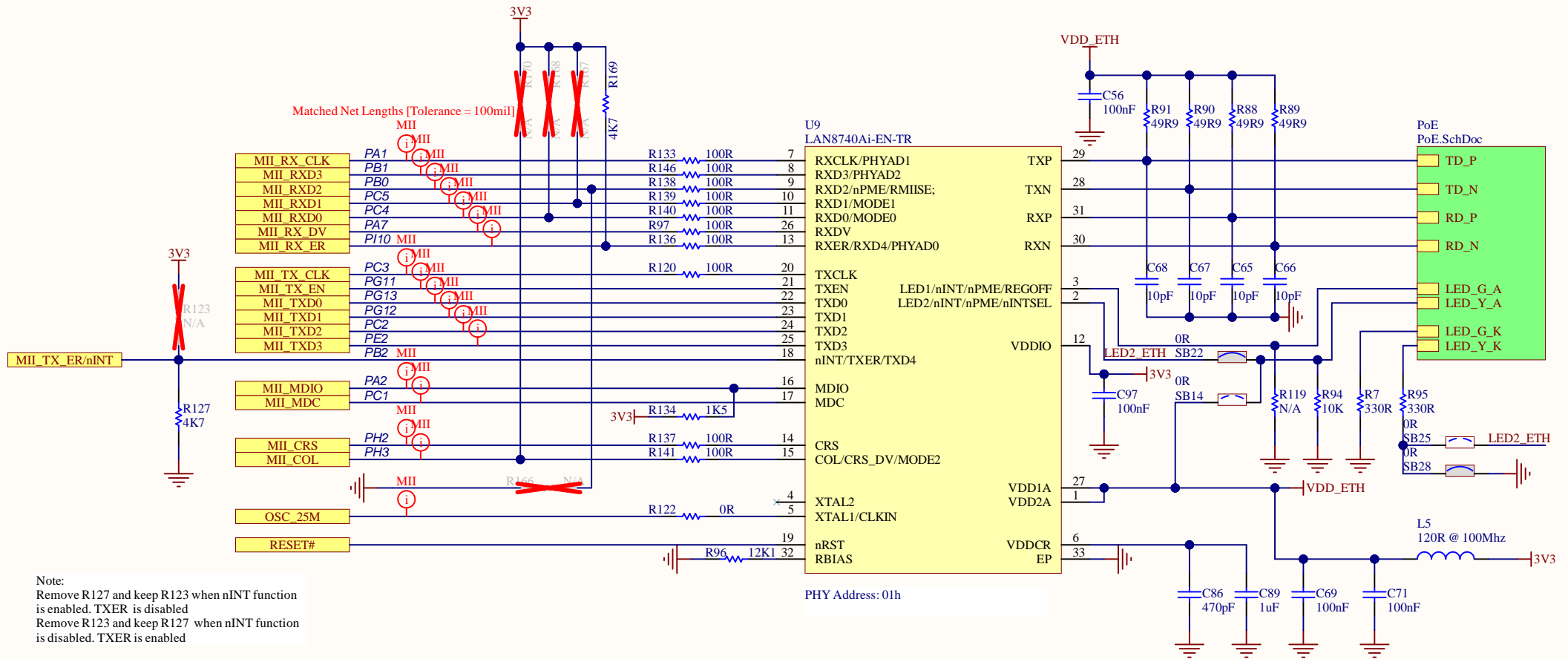
U6C
STM32H750XBH6

NOTE : (H745X1 default setting is SMPS mode, and H750XB only supports LDO mode)
LDO mode:
SB6, SB17, SB45 mounted, SB5, SB18, SB26, SB27, SB44, SB46, L4 removed
SMPS mode (default):
SB5, SB18, SB44, SB46, L4 mouned, SB6, SB17, SB27, SB26, SB45 removed
SMPS +LDO mode
SB6, SB17, SB44, SB46, L4 mouned, SB26, SB5, SB18, SB27, SB45 removed



Ceramic capacitor (Low ESR <600m ohm)





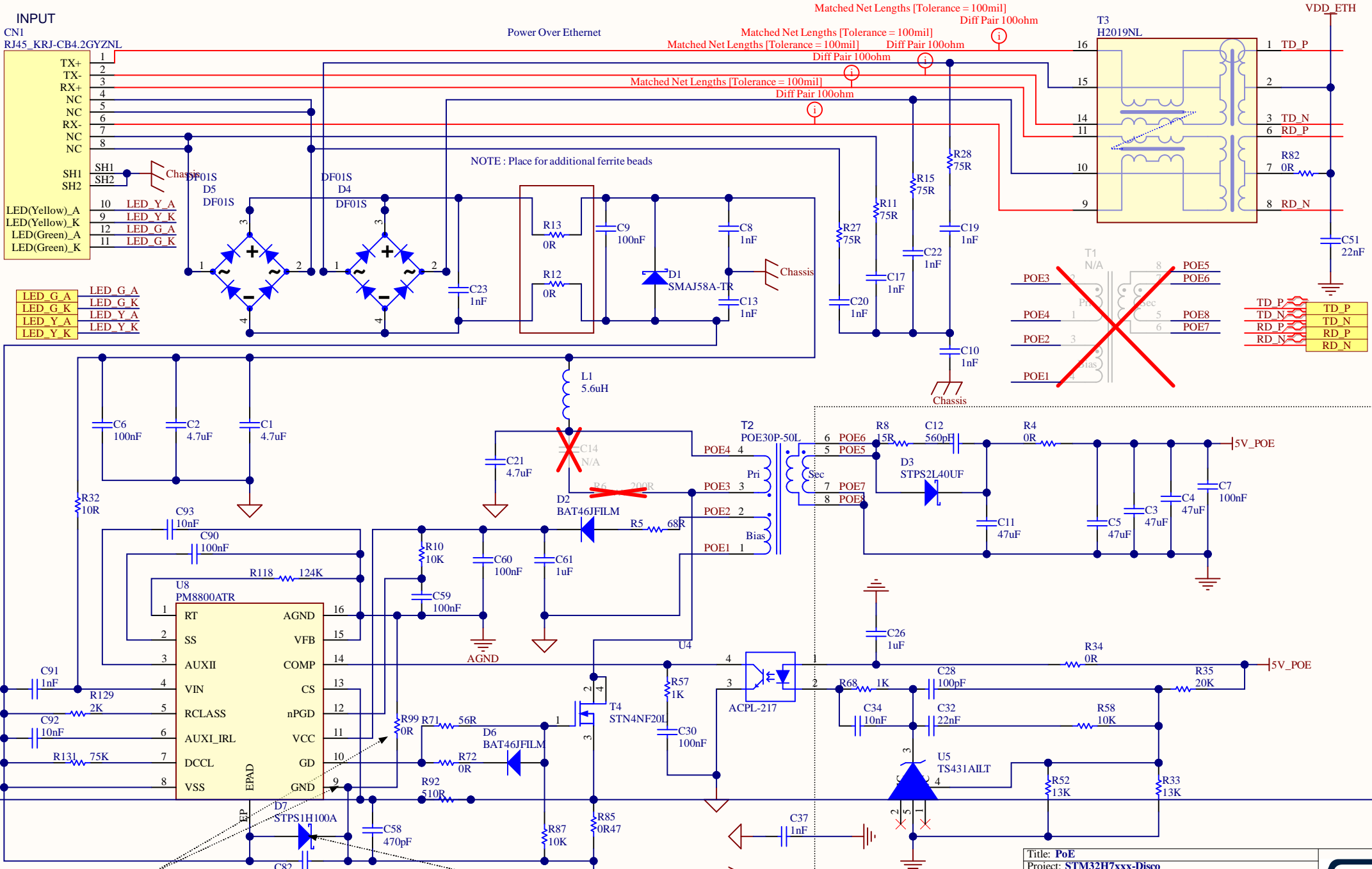
Note:
 keep R94 to enable the TXER function, and close SB22,SB28,open SB14,SB25 for LED2
 Remove R94 and SB14 to enable nINT function, and close SB14,SB25, open SB22,SB28 for LED2



INPUT
CN1
RJ45_KRJ-CB4.2GYZNL

TX+ 1
TX- 2
RX+ 3
NC 4
NC 5
RX- 6
NC 7
NC 8
SH1 SH1
SH2 SH2
LED(Yellow)_A 10 LED_Y_A
LED(Yellow)_K 9 LED_Y_K
LED(Green)_A 12 LED_G_A
LED(Green)_K 11 LED_G_K

LED_G_A LED_G_A
LED_G_K LED_G_K
LED_Y_A LED_Y_A
LED_Y_K LED_Y_K



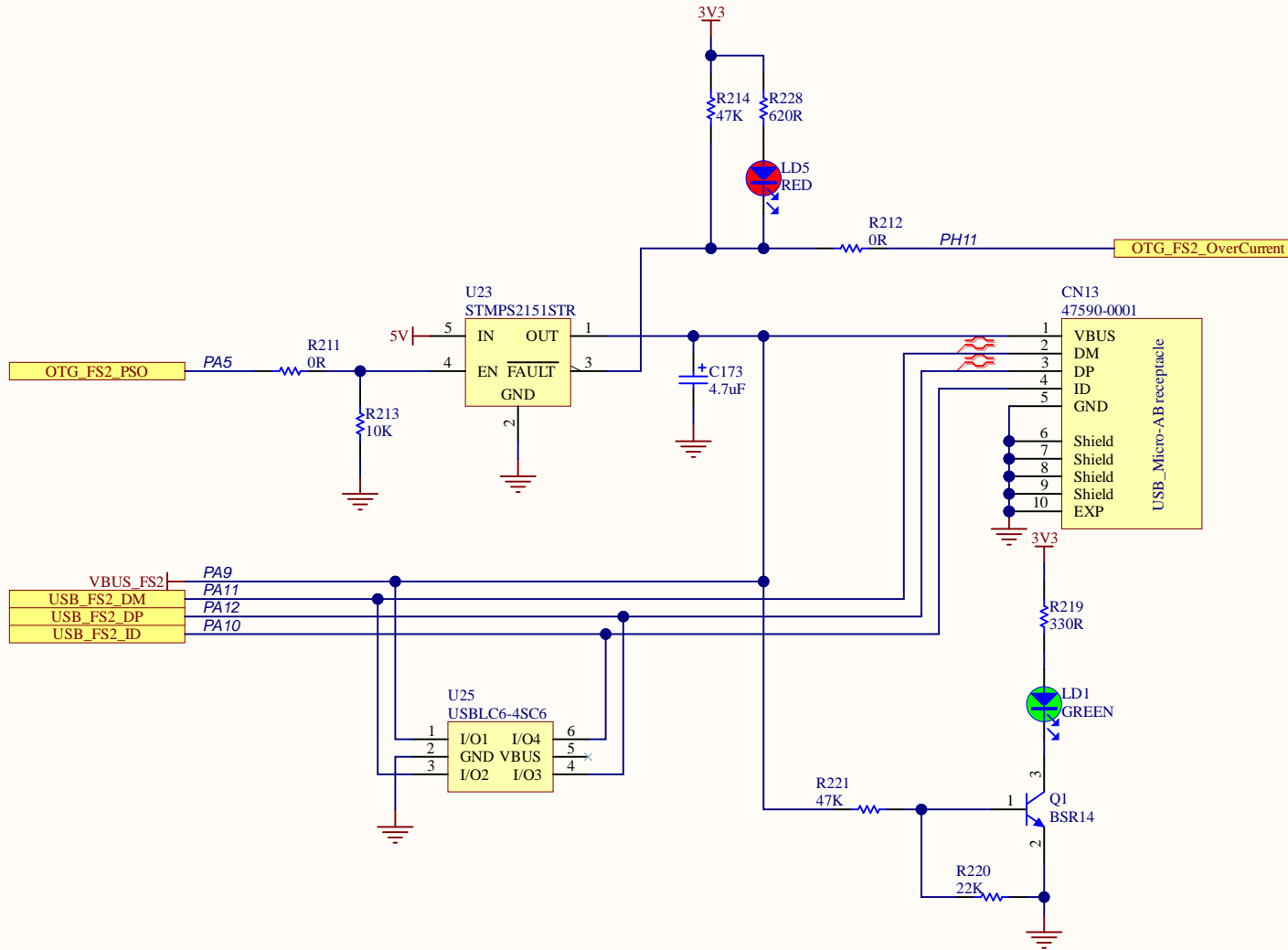
NOTE : Place for additional ferrite beads

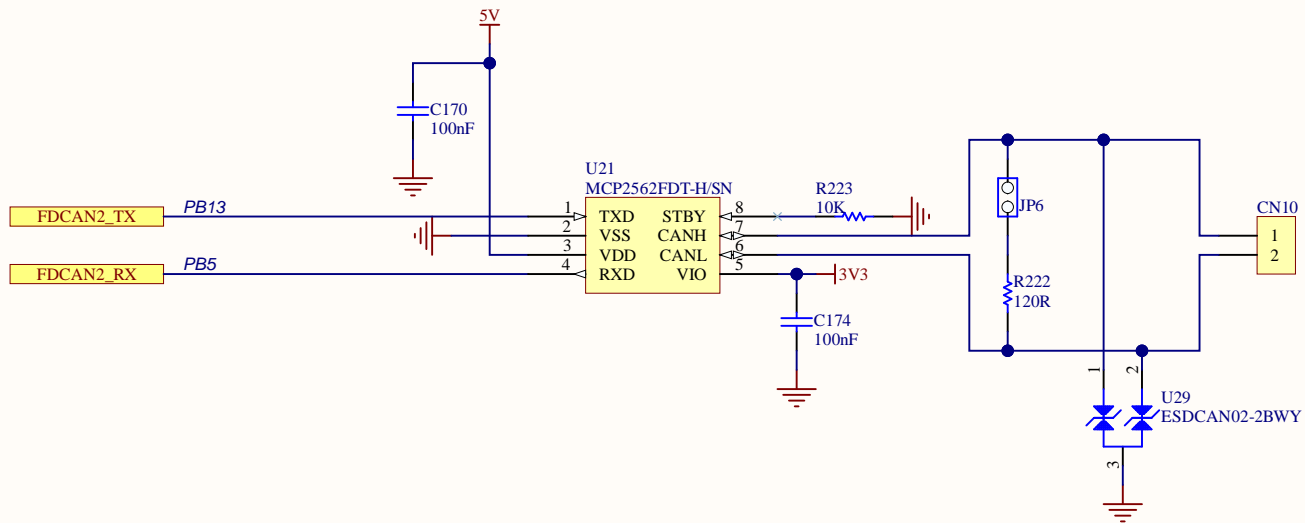
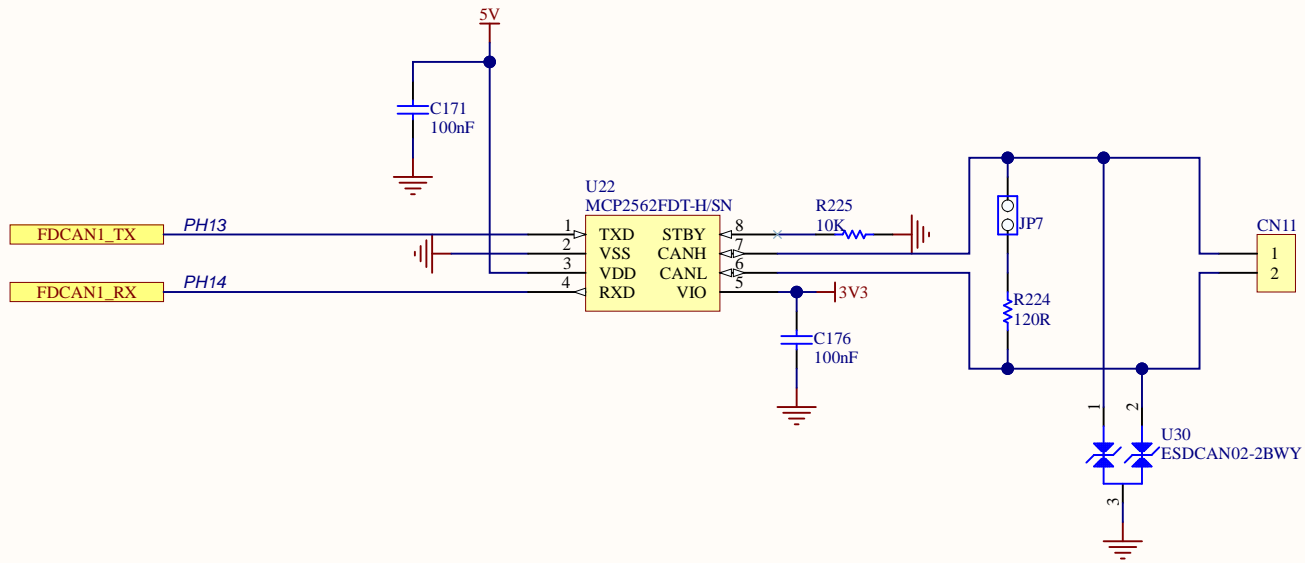
NOTE : The AGND is a dedicated plan.
The resistor 0 ohm must be very close to pin 9

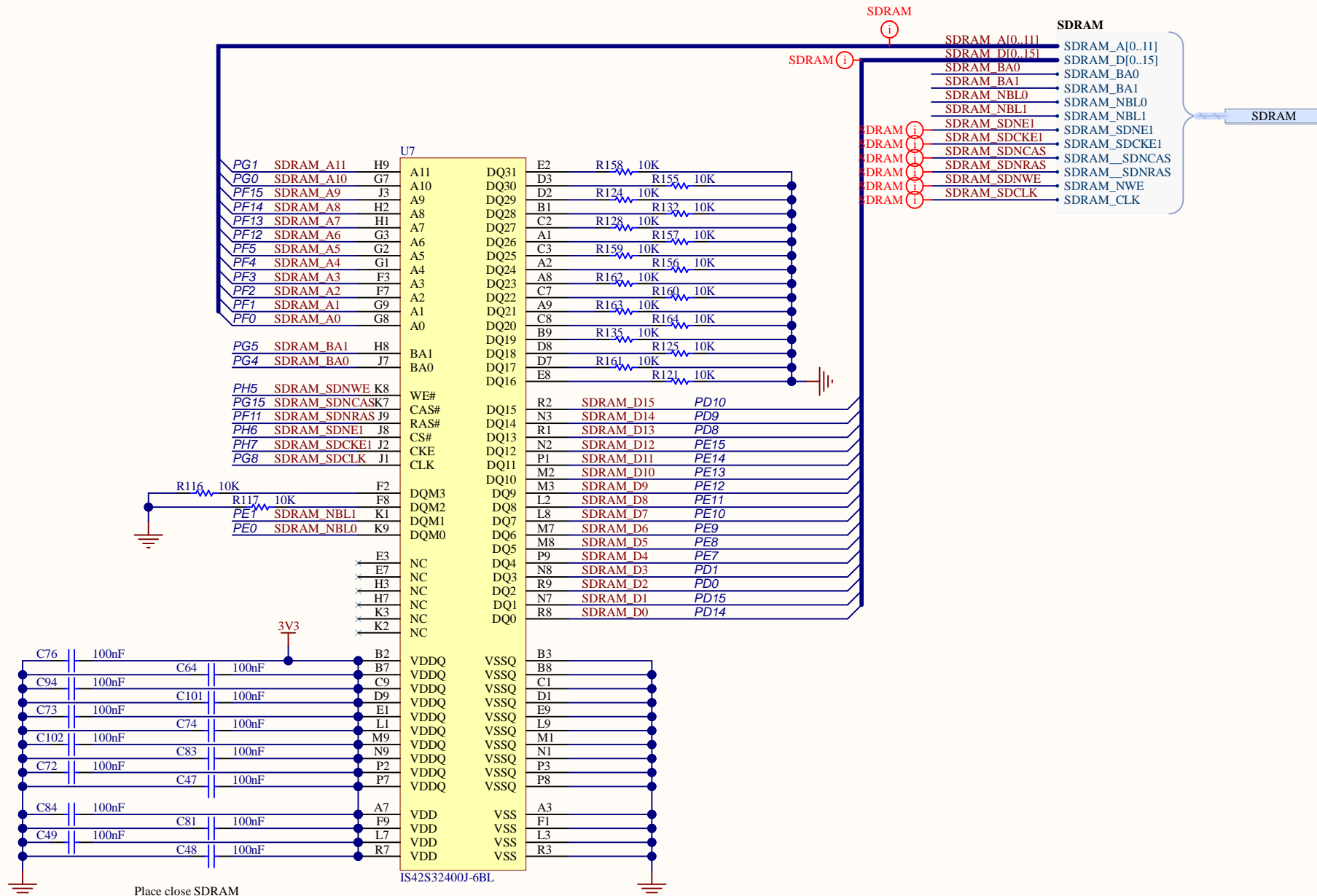
NOTE : this diode must be placed close the
pin 8 and 9

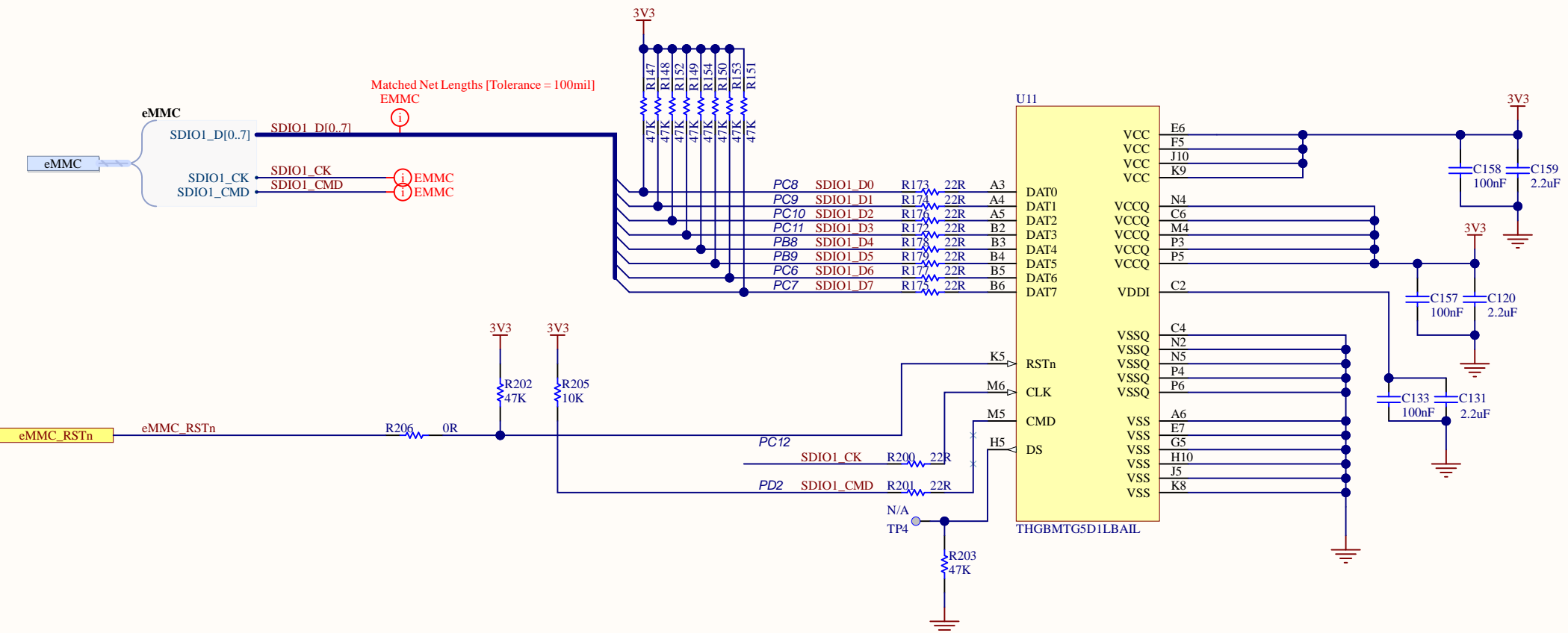
Title: PoE	
Project: STM32H7xxx-Disco	
Variant: H750XB	
Revision: B-04	
Size: A4	Reference: MB1381
Date: 27-Sep-2024	Sheet: 6 of 19



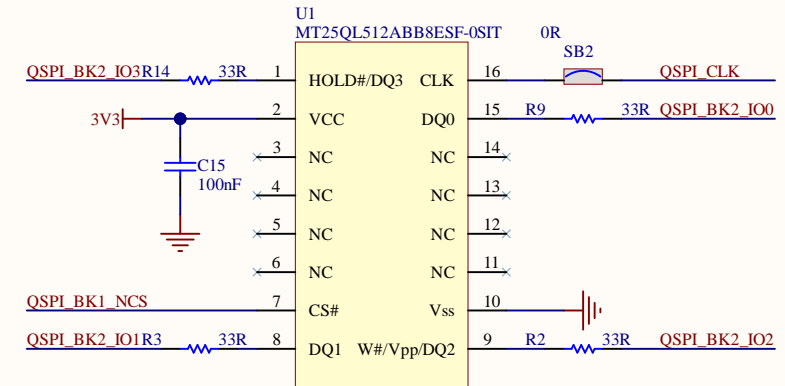
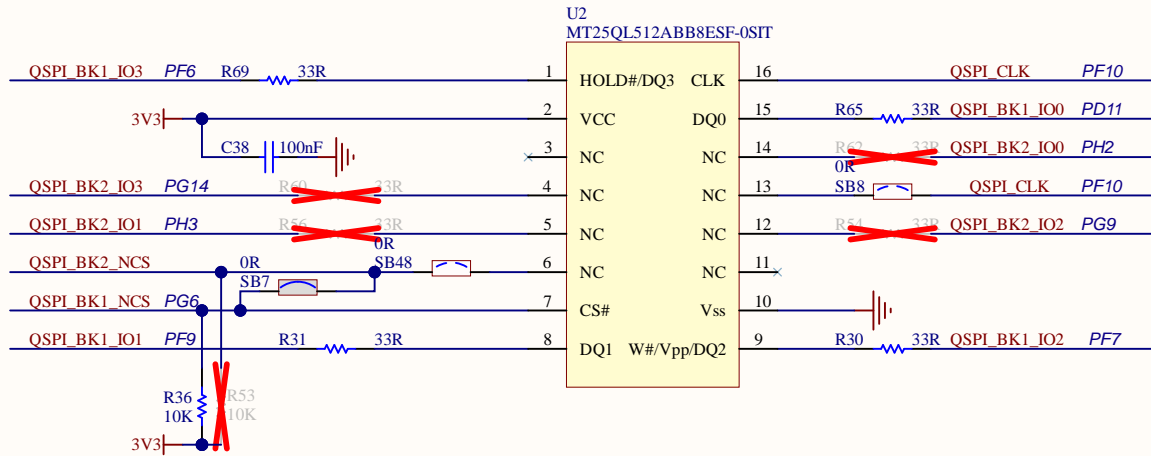
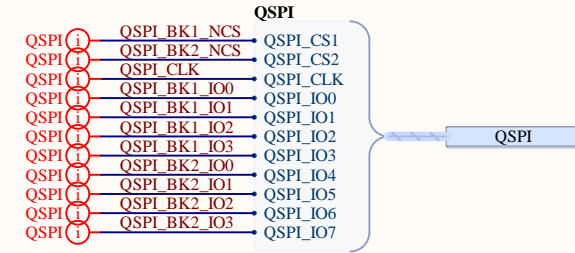








Matched Net Lengths [Tolerance = 100mil]



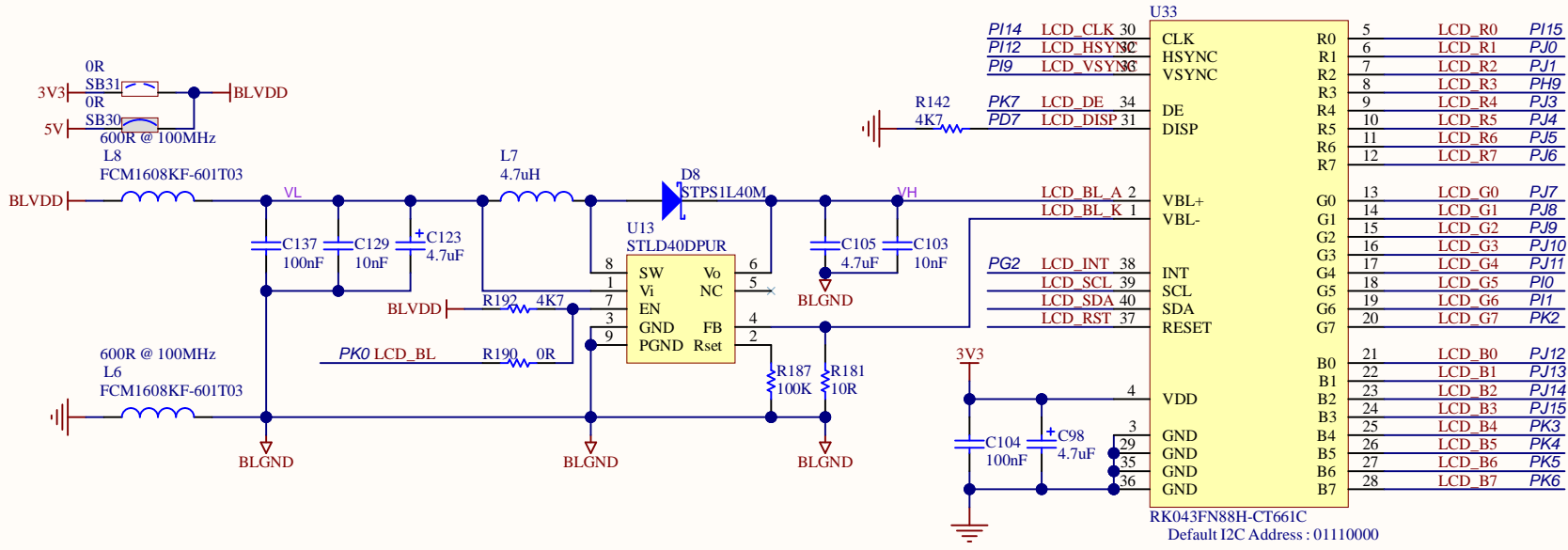
Twin Quad SPI Flash solutions:

One Twin Quad SPI Flash	U2:MT25TL01GHBB8ESF-0SIT	U1:NA	R53/R62/R54/R56/R60/SB8/SB48 ON	R14/R3/R2/R9/SB2/C15 OFF
Two Quad SPI Flash	U1:MT25QL512ABB8ESF-0SIT	U2:MT25QL512ABB8ESF-0SIT	R14/R3/R2/R9/SB2/C15 ON	R53/R62/R54/R56/R60/SB8/SB48 OFF



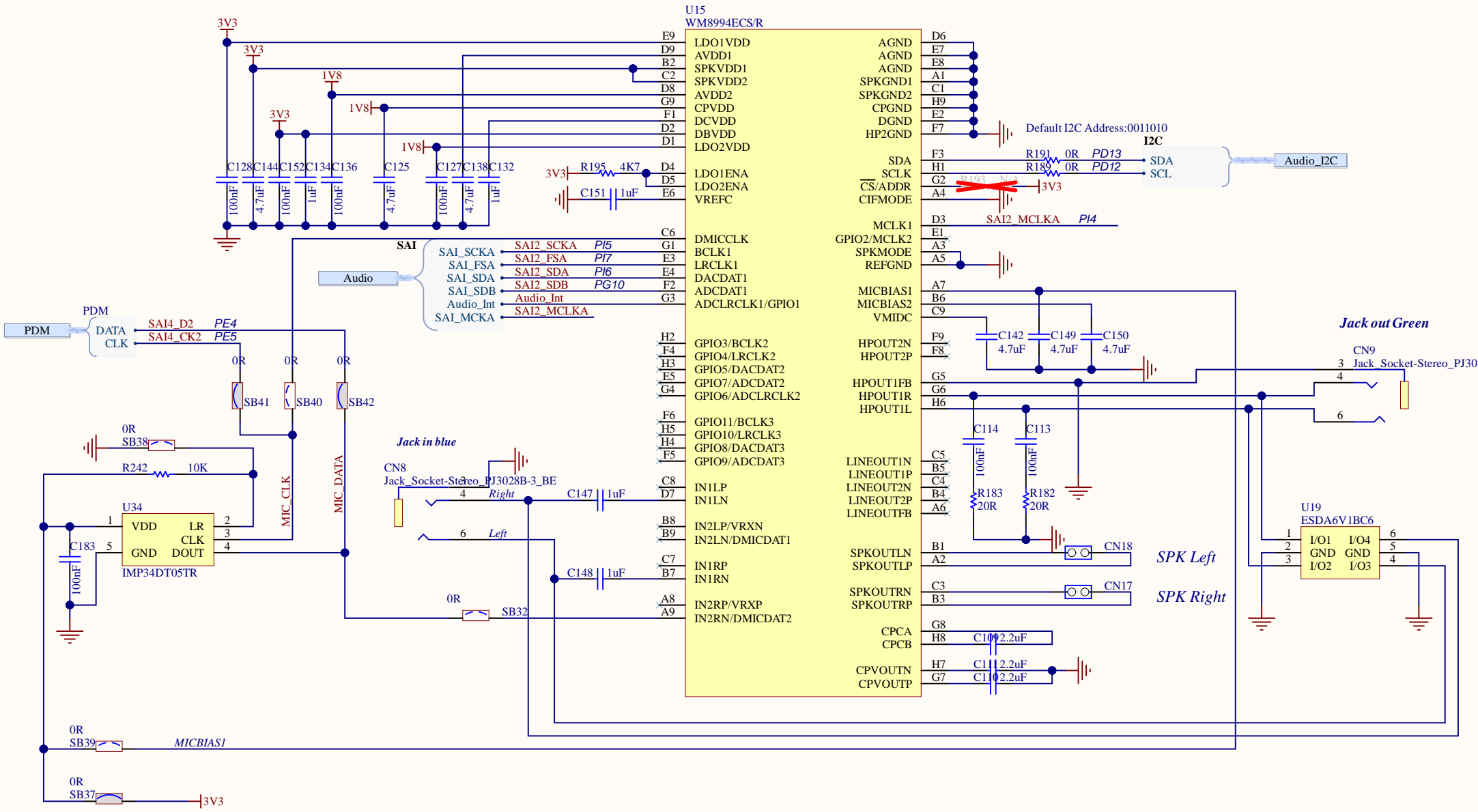
LCD	
LCD [1]	LCD_R[0..7] → LCD_R[0..7]
LCD [1]	LCD_G[0..7] → LCD_G[0..7]
LCD [1]	LCD_B[0..7] → LCD_B[0..7]
LCD [1]	LCD_HSYNC → LCD_HSYNC
LCD [1]	LCD_VSYNC → LCD_VSYNC
LCD [1]	LCD_DE → LCD_DE
LCD [1]	LCD_DISP → LCD_DISP
LCD [1]	LCD_CLK → LCD_CLK
LCD [1]	LCD_INT → LCD_INT
LCD [1]	LCD_RST → LCD_RST
LCD [1]	LCD_BL → LCD_BL

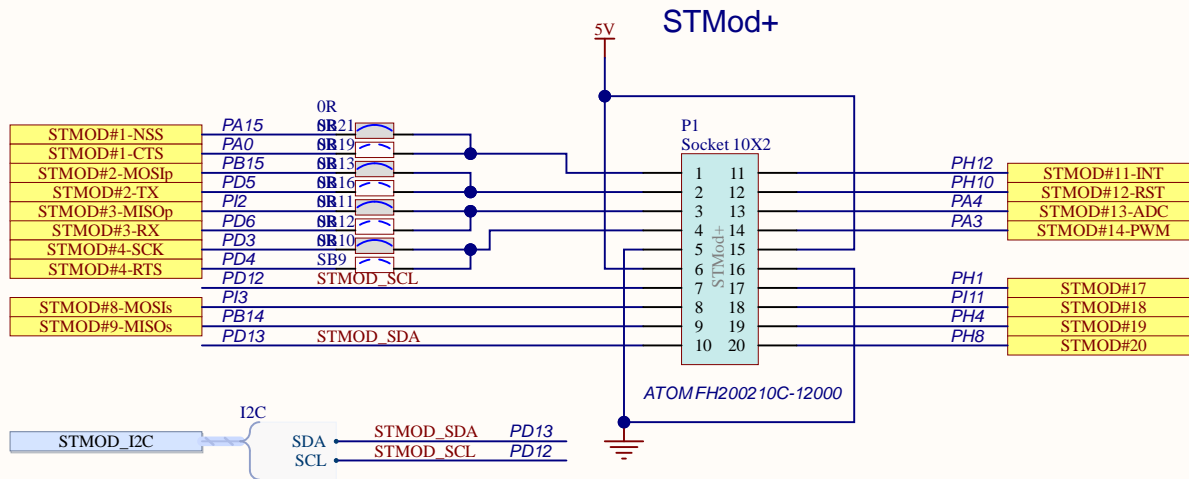
I2C	
LCD_SCL	PD12 → SCL
LCD_SDA	PD13 → SDA

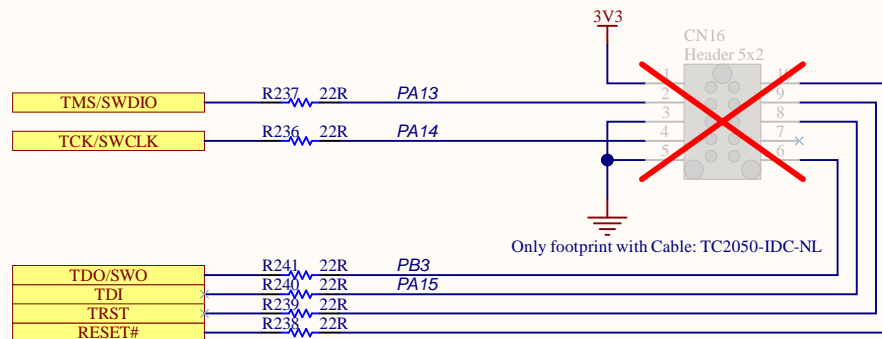


U33		
5	LCD_R0	PJ15
6	LCD_R1	PJ0
7	LCD_R2	PJ1
8	LCD_R3	PH9
9	LCD_R4	PJ3
10	LCD_R5	PJ4
11	LCD_R6	PJ5
12	LCD_R7	PJ6
13	LCD_G0	PJ7
14	LCD_G1	PJ8
15	LCD_G2	PJ9
16	LCD_G3	PJ10
17	LCD_G4	PJ11
18	LCD_G5	PI0
19	LCD_G6	PI1
20	LCD_G7	PK2
21	LCD_B0	PJ12
22	LCD_B1	PJ13
23	LCD_B2	PJ14
24	LCD_B3	PJ15
25	LCD_B4	PK3
26	LCD_B5	PK4
27	LCD_B6	PK5
28	LCD_B7	PK6

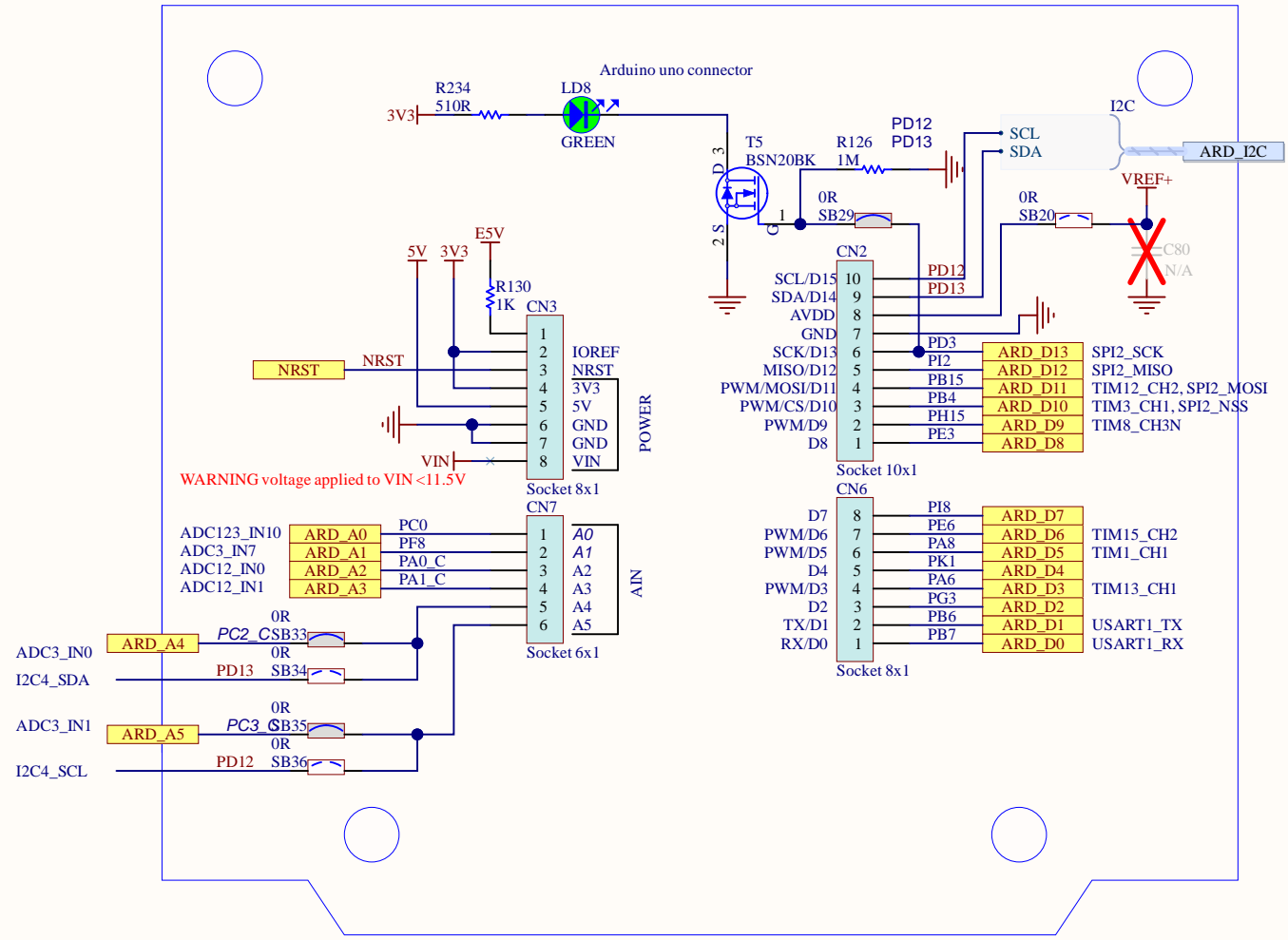
RK043FN88H-CT661C
 Default I2C Address : 01110000
 Backlight driver & PFC of LCD panel





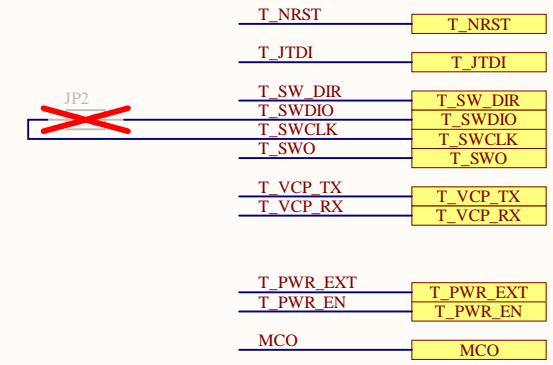
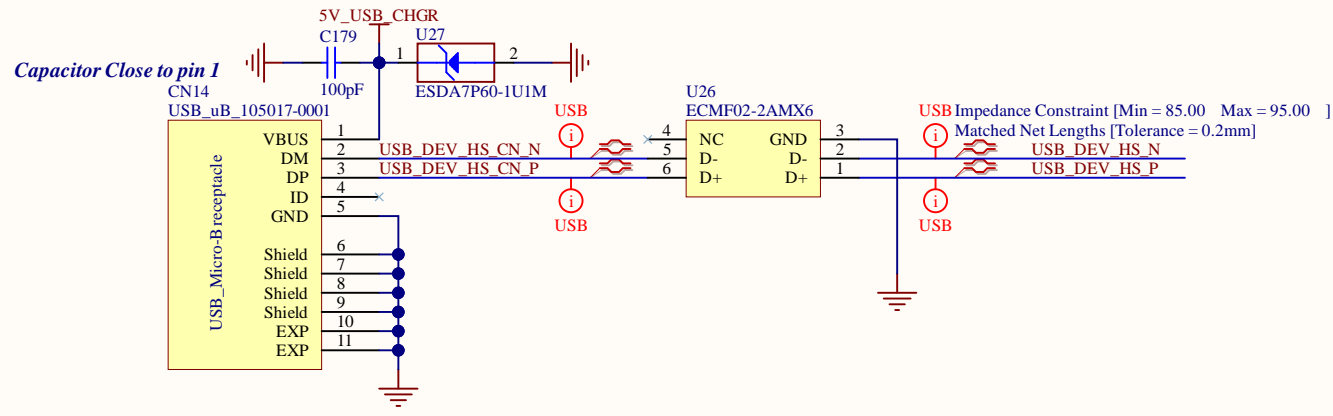


Place this connector close to STDC, they will share the same ESD components

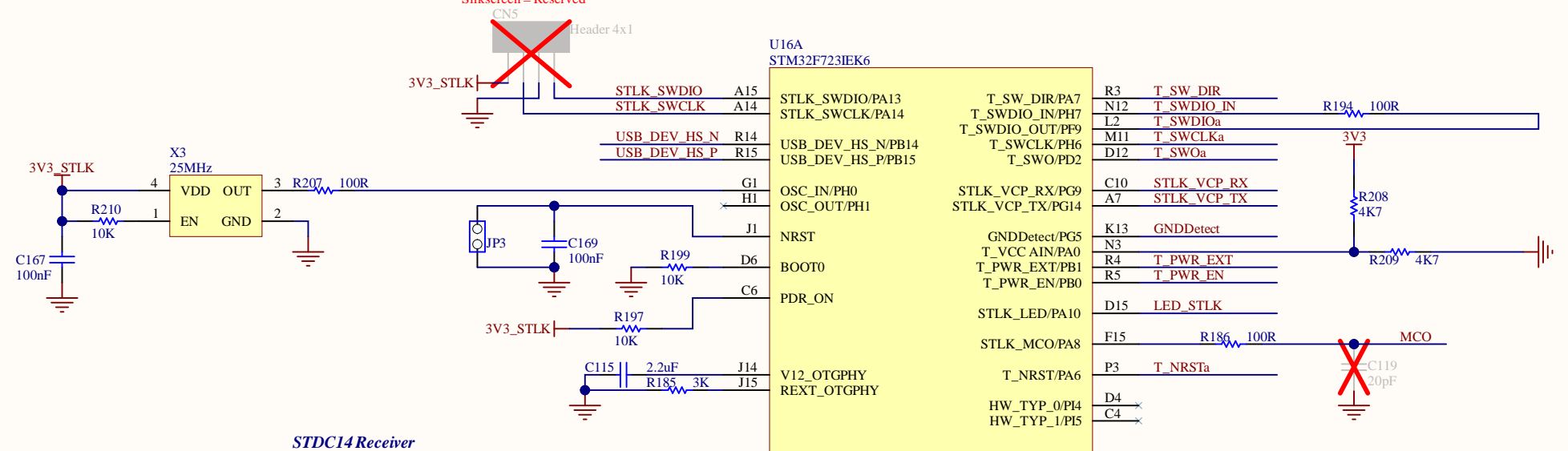


WARNING voltage applied to VIN <11.5V

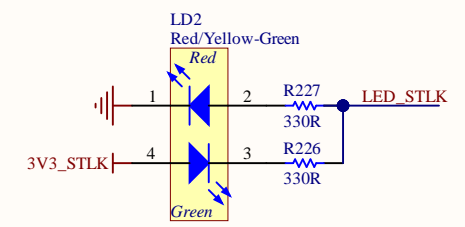
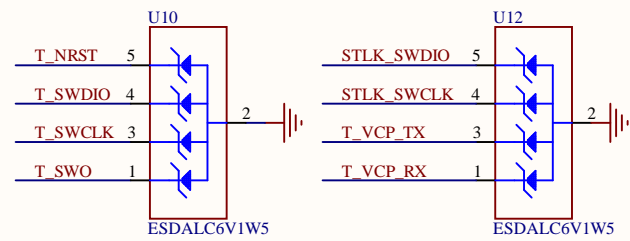
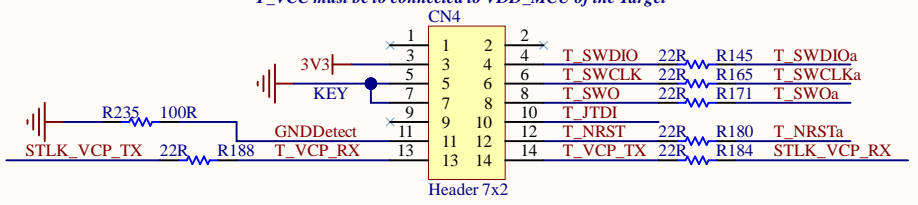


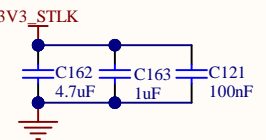
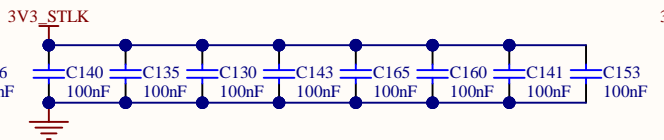
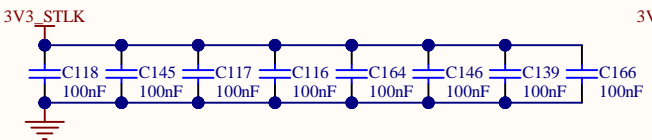
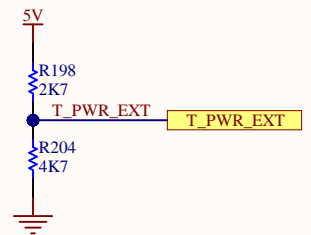
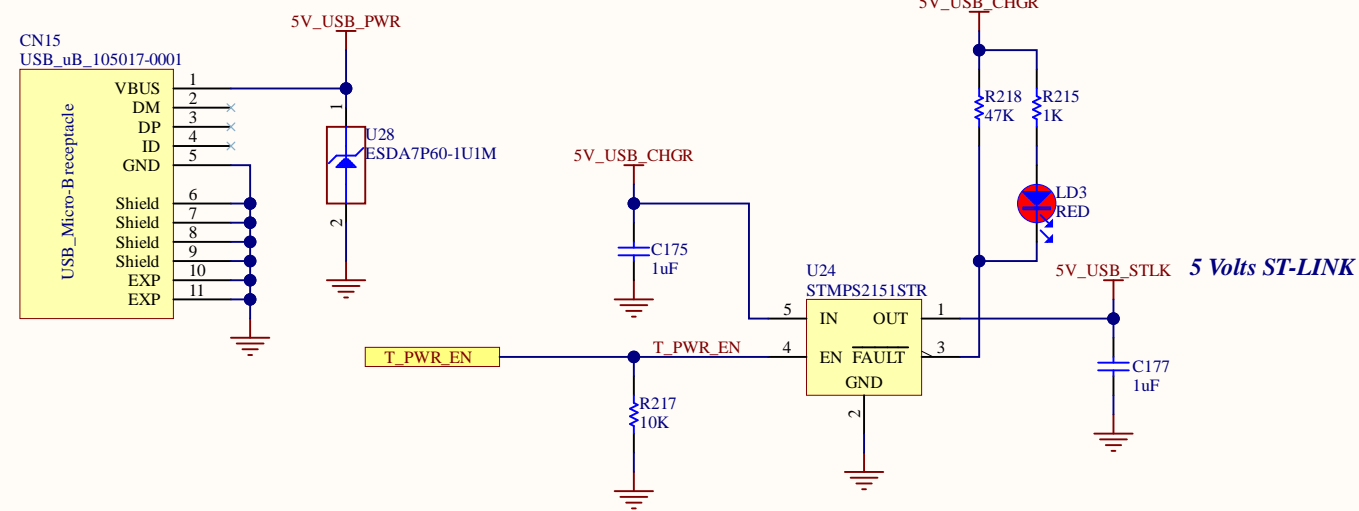
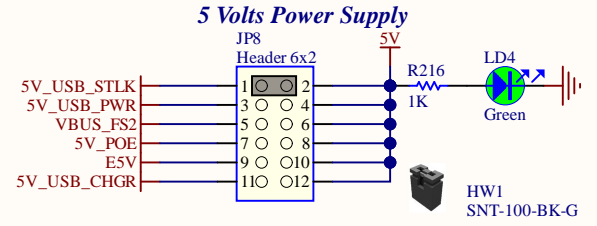
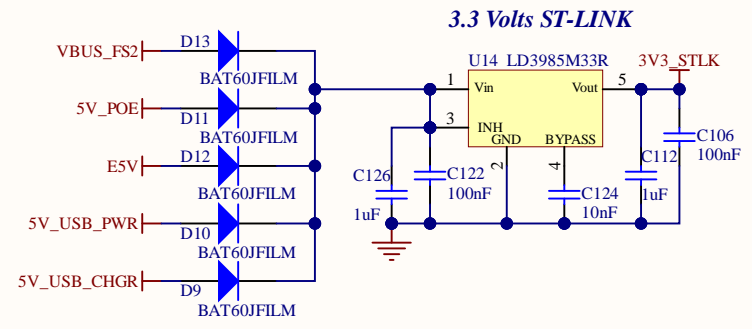
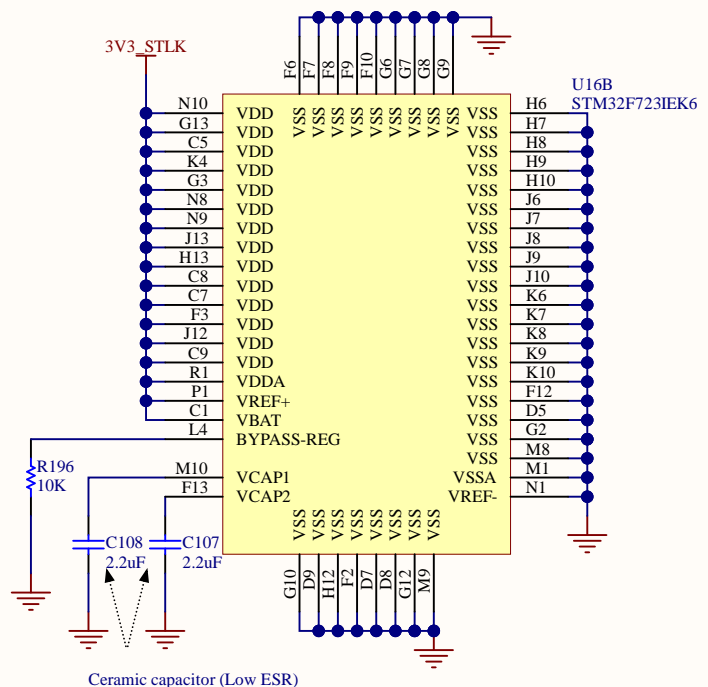


Must be on a border or the PCB.
Silkscreen = Reserved



STDC14 Receiver
T_VCC must be connected to VDD_MCU of the Target





Title: ST-LINK/V3E-SWD Power Module		
Project: STM32H7xxx-Disco		
Variant: H750XB		
Revision: B-04		Reference: MB1381
Size: A4	Date: 27-Sep-2024	Sheet: 18 of 19



HW Mechanical parts

HW6
N/A

PCB

HW7
N/A

BOARD REF

HW8
STM32H745I-Disco

BOARD CPN

HW4



N/A

HW5



N/A

HW3



N/A

HW9



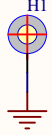
N/A

HW10

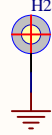


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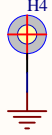
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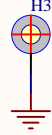
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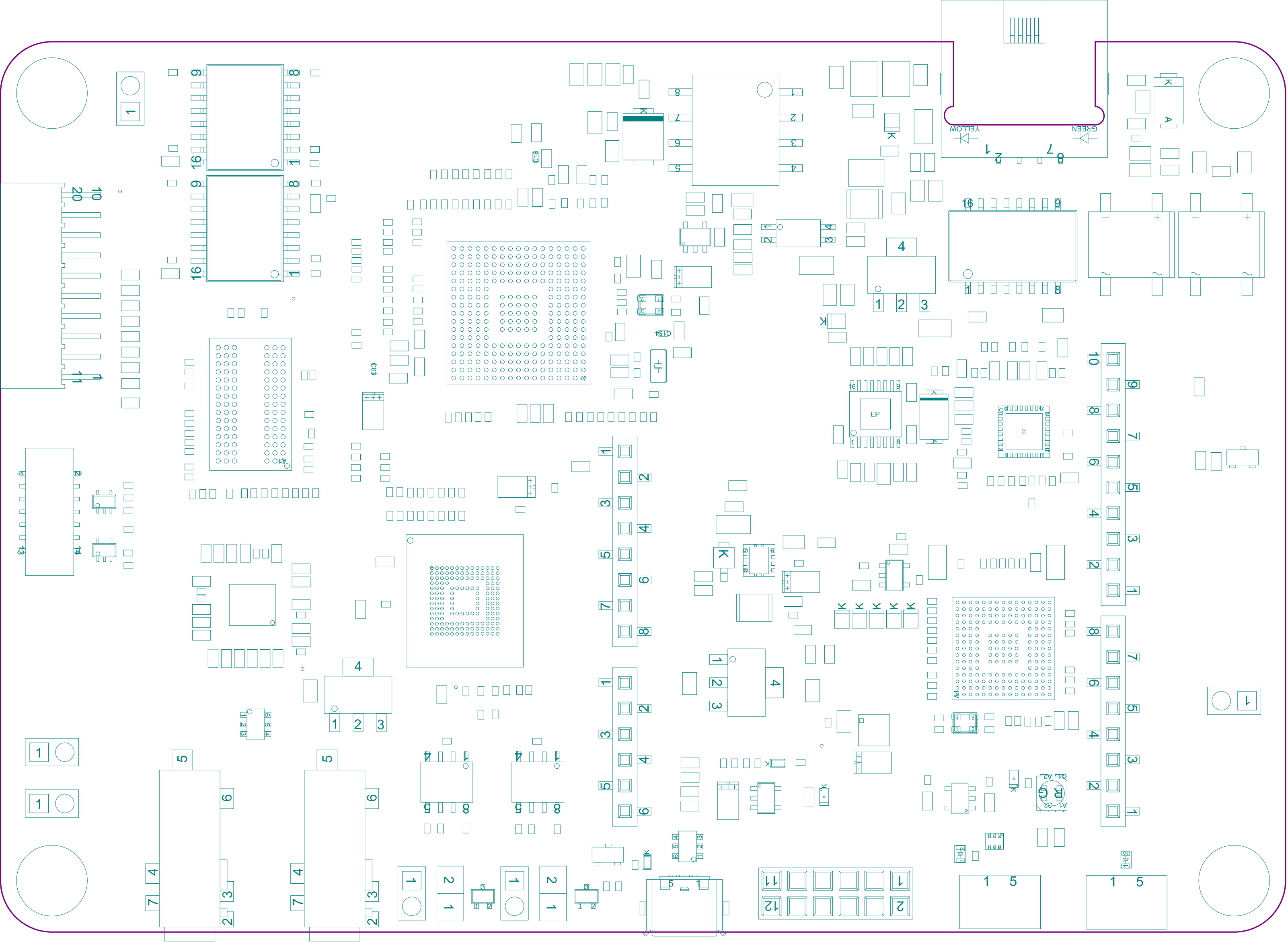


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N/A

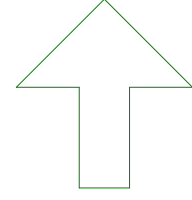




2

LAYER 2 (GND PLANE)

4,3 INCH WQVGA
480x272 DOTS



Viewing direction
12:00 O'clock

