

STM32H7xxx-Disco

MB1381

Table of contents

Sheet 1: Project overview (this page)

Sheet 2: TOP

Sheet 3: STM32 microcontroller IOs

Sheet 4: STM32 microcontroller Power

Sheet 5: Ethernet

Sheet 6: PoE

Sheet 7: USB OTG FS

Sheet 8: FDCAN

Sheet 9: SDRAM

Sheet 10: eMMC

Sheet 11: QSPI

Sheet 12: LCD4.3

Sheet 13: Audio

Sheet 14: STMod+

Sheet 15: TAG

Sheet 16: Arduino Connector

Sheet 17: ST-LINK/V3E-SWD Module

Sheet 18: ST-LINK/V3E Power

Sheet 19: HW Mechanical parts

Top
TOP.SchDoc

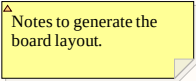


Legend

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

Text to be added to silkscreen.

Warning text.



OPEN PLATFORM LICENSE AGREEMENT

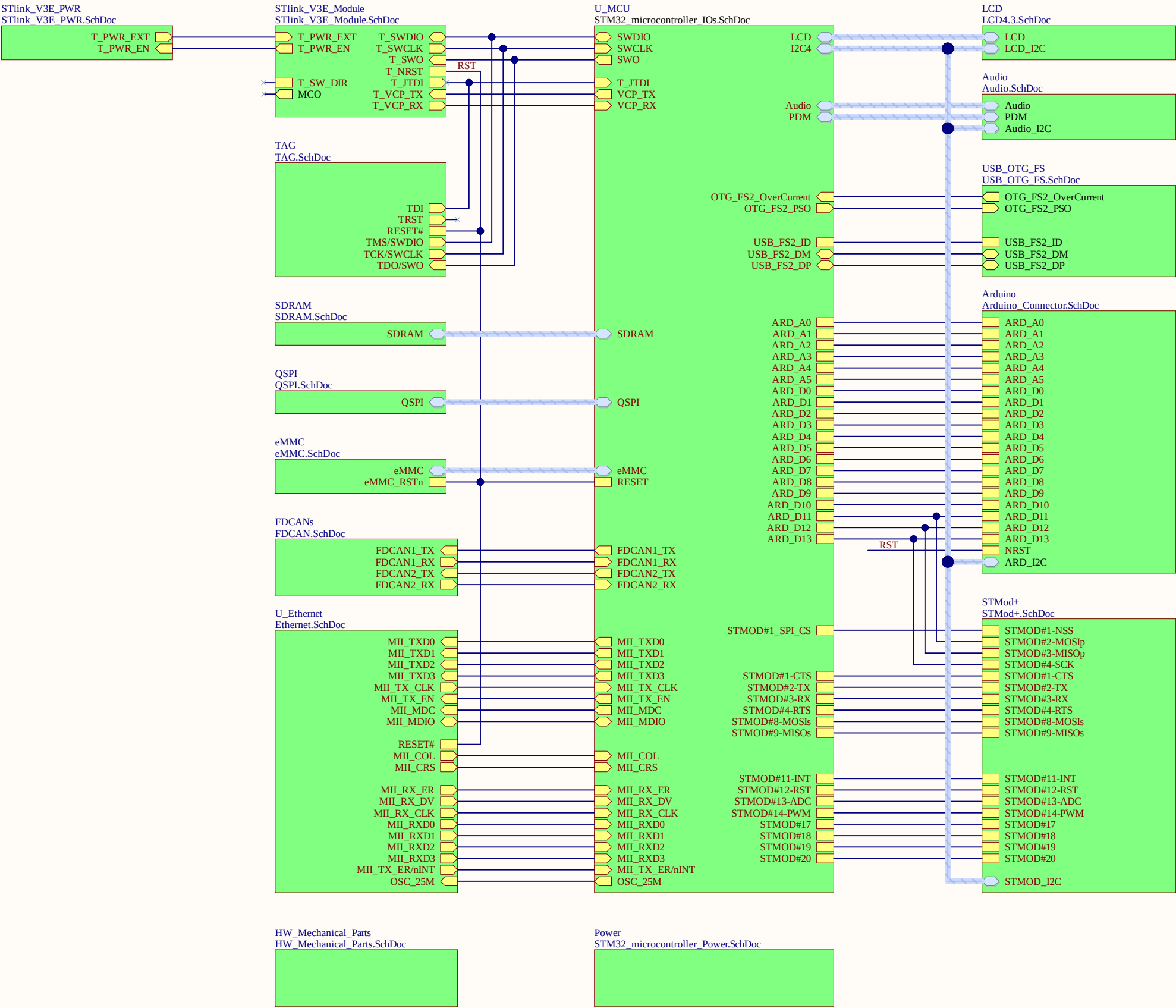
The Open Platform License Agreement (“Agreement”) is a binding legal contract between you (“You”) and STMicroelectronics International N.V. (“ST”), a company incorporated under the laws of the Netherlands acting for the purpose of this Agreement through its Swiss branch 39, Chemin du Champ des Filles, 1228 Plan-les-Ouates, Geneva, Switzerland.

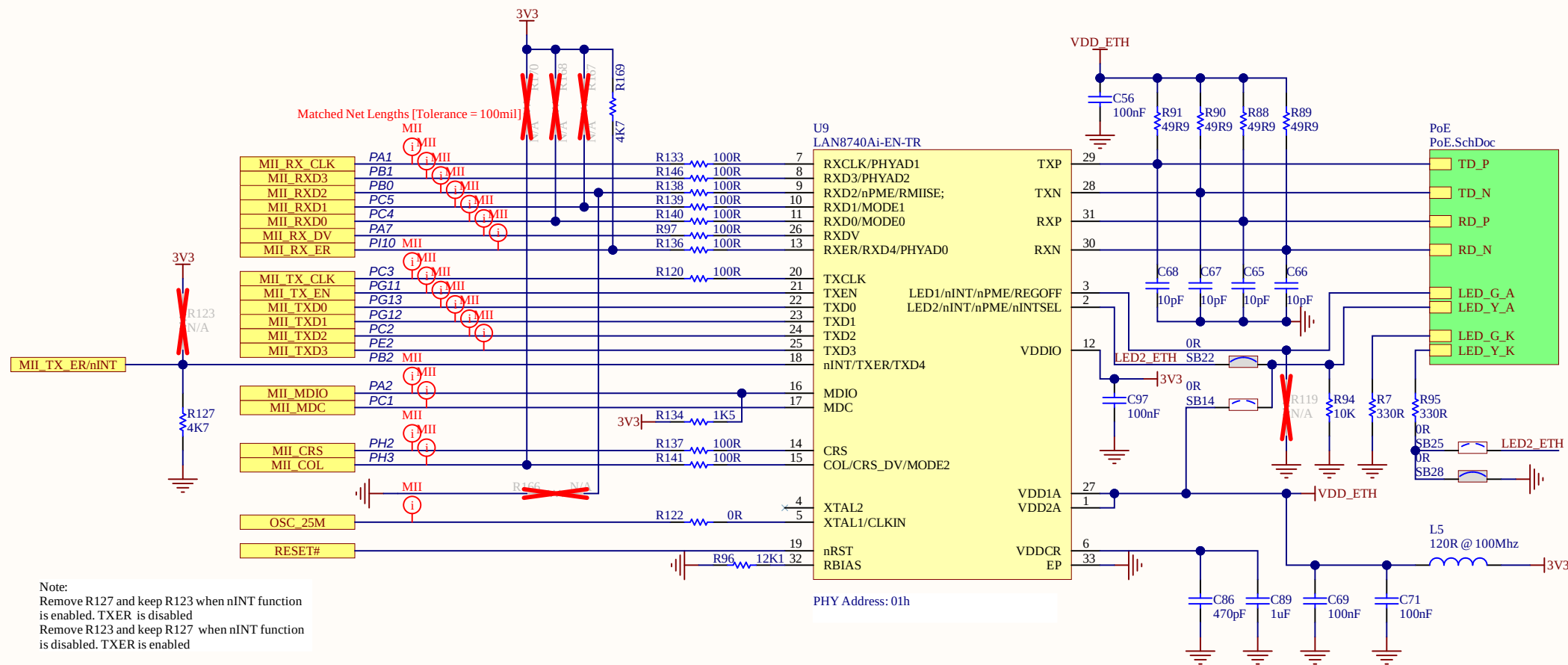
By using the enclosed reference designs, schematics, PC board layouts, and documentation, in hardcopy or CAD tool file format (collectively, the “Reference Material”), You are agreeing to be bound by the terms and conditions of this Agreement. Do not use the Reference Material until You have read and agreed to this Agreement terms and conditions. The use of the Reference Material automatically implies the acceptance of the Agreement terms and conditions.

The complete Open Platform License Agreement can be found on www.st.com/opla.

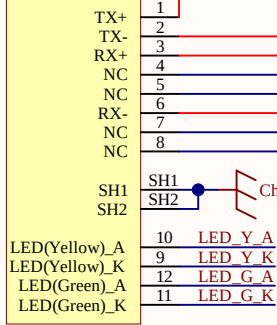
Title: Project overview		
Project: STM32H7xxx-Disco		
Variant: H745XI		
Revision: B-04		Reference: MB1381
Size: A4	Date: 27-Sep-2024	Sheet: 1 of 19



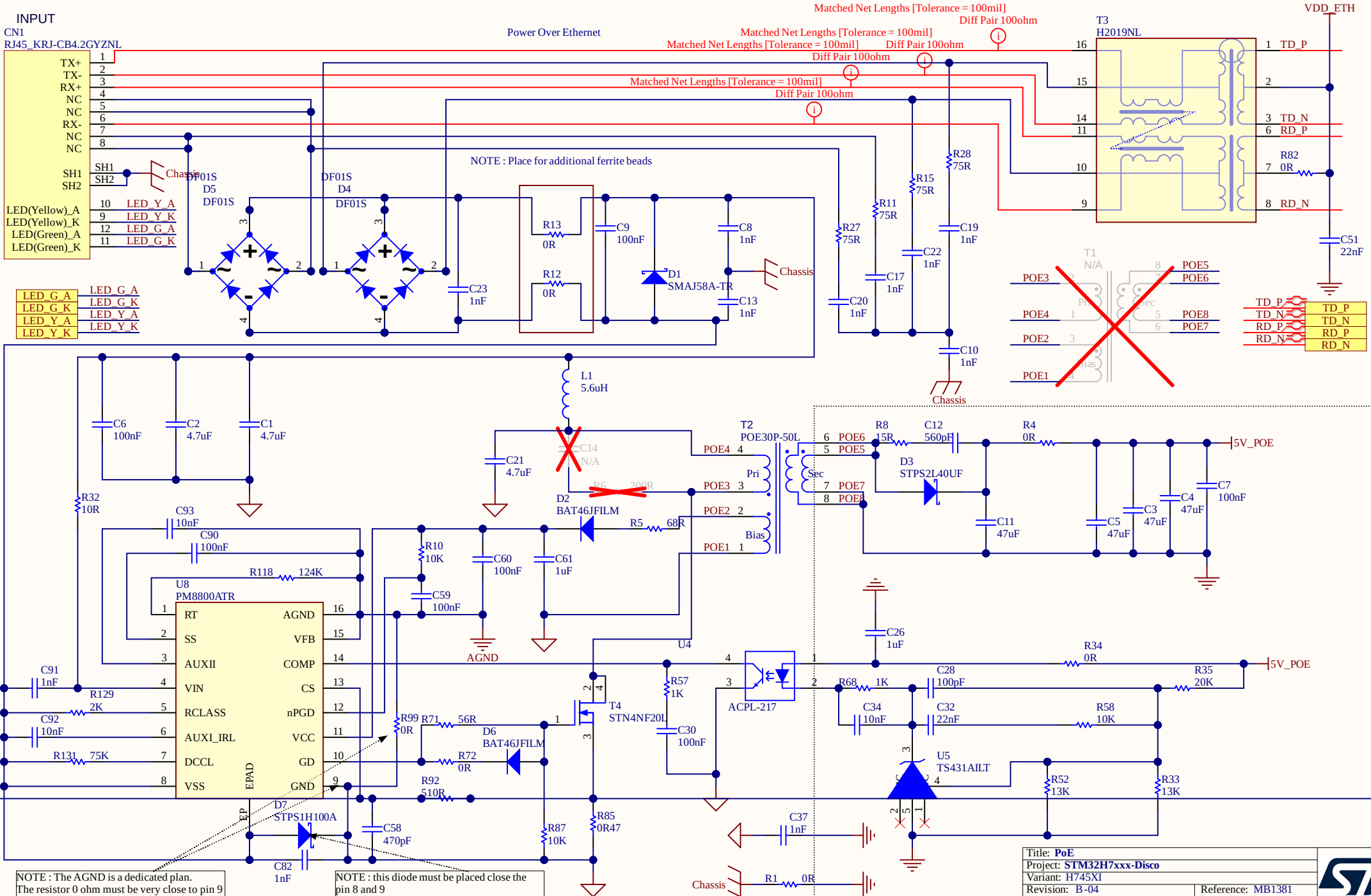




INPUT
CN1
RJ45_KRJ-CB4.2GYZNL

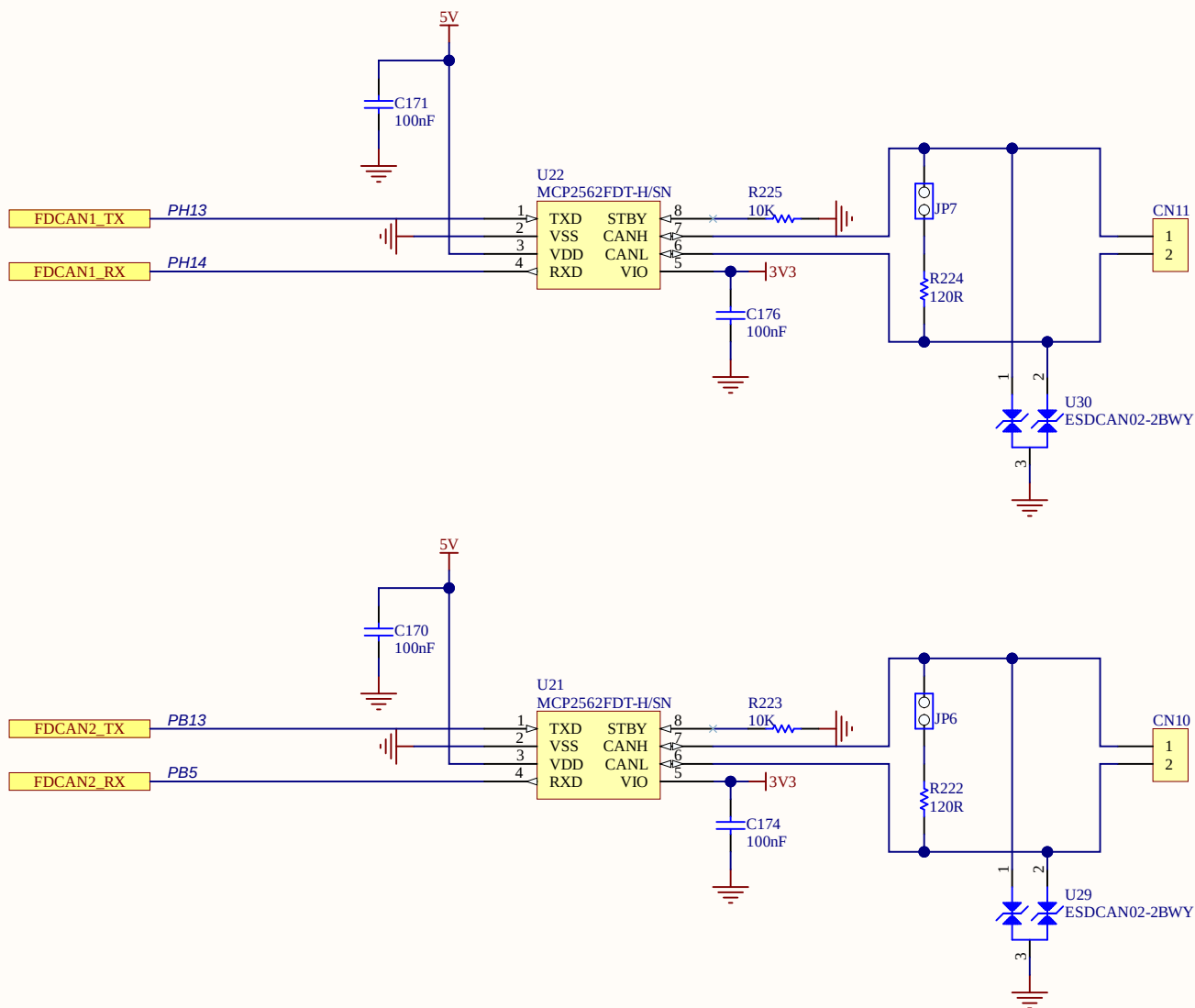


LED_G_A LED_G_A
LED_G_K LED_G_K
LED_Y_A LED_Y_A
LED_Y_K LED_Y_K



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

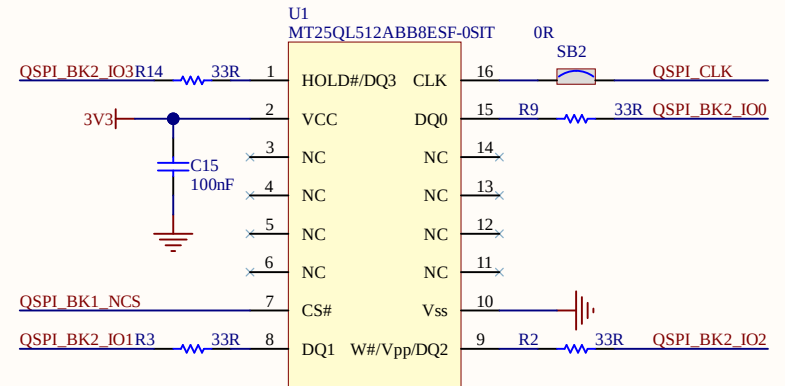
NOTE : this diode must be placed close the
pin 8 and 9



QSPI

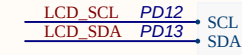
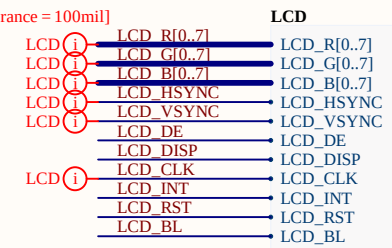
QSPI_1	QSPI_BK1_NCS	QSPI_CS1
QSPI_2	QSPI_BK2_NCS	QSPI_CS2
QSPI_3	QSPI_CLK	QSPI_CLK
QSPI_4	QSPI_BK1_IO0	QSPI_IO0
QSPI_5	QSPI_BK1_IO1	QSPI_IO1
QSPI_6	QSPI_BK1_IO2	QSPI_IO2
QSPI_7	QSPI_BK1_IO3	QSPI_IO3
QSPI_8	QSPI_BK2_IO0	QSPI_IO4
QSPI_9	QSPI_BK2_IO1	QSPI_IO5
QSPI_10	QSPI_BK2_IO2	QSPI_IO6
QSPI_11	QSPI_BK2_IO3	QSPI_IO7

QSPI



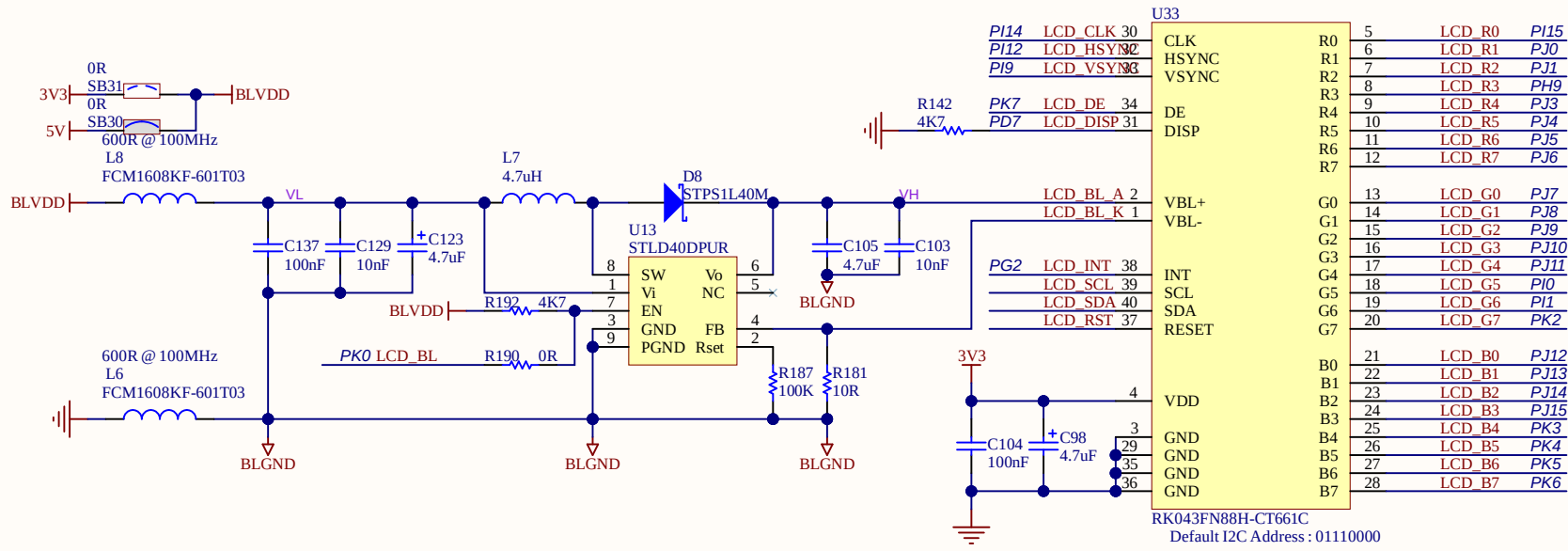
One Twin Quad SPI Fllash	U2:MT25TL01GHBB8ESF-0SIT	U1:NA	R53/R62/R54/R56/R60/SB8/SB48 ON	R14/R3/R2/R9,/SB2,/C15 OFF
Two Quad SPI Fllash	U1:MT25QL512ABB8ESF-0SIT	U2:MT25QL512ABB8ESF-0SIT	R14/R3/R2/R9,/SB2,/C15 ON	R53/R62/R54/R56/R60/SB8/SB48 OFF

Matched Net Lengths [Tolerance = 100mil]



LCD

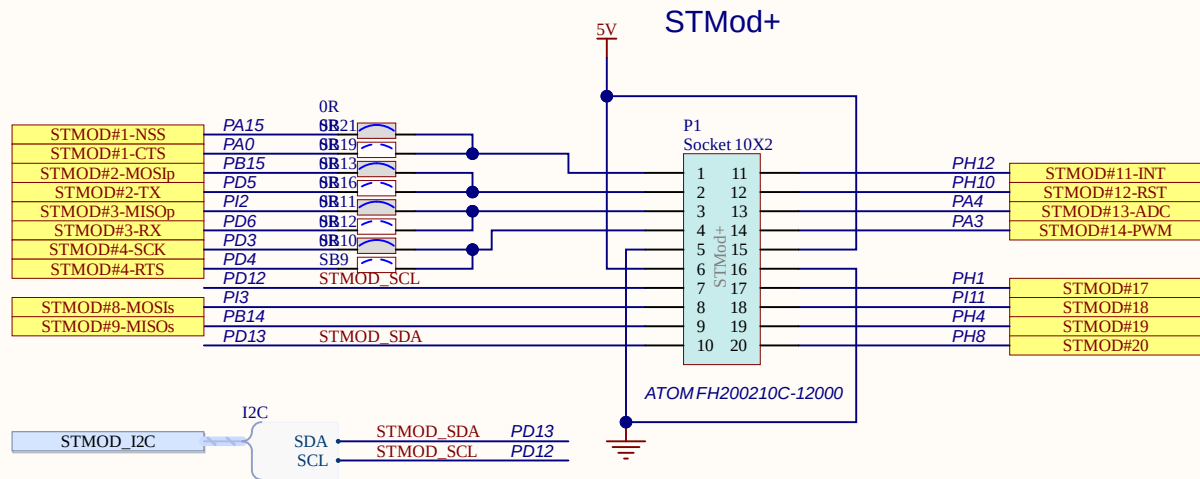
LCD_I2C

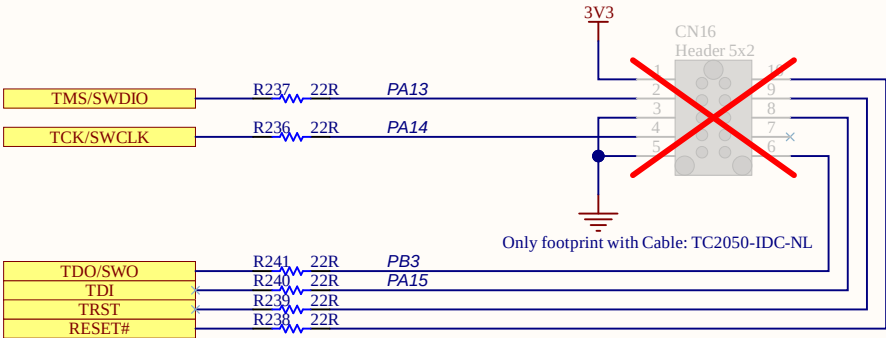


Backlight driver & PFC of LCD panel





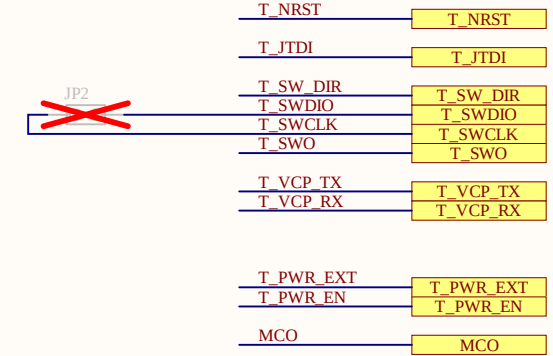
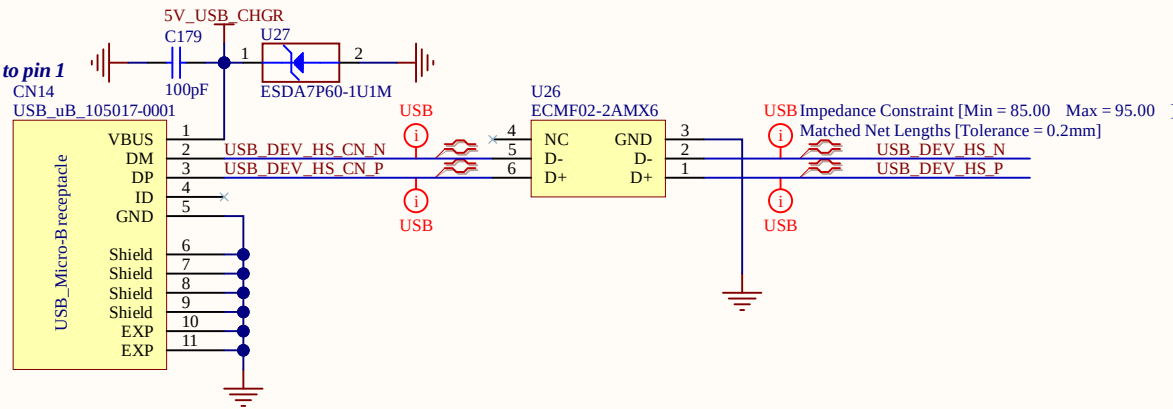




Place this connector close to STDC, they will share the same ESD components

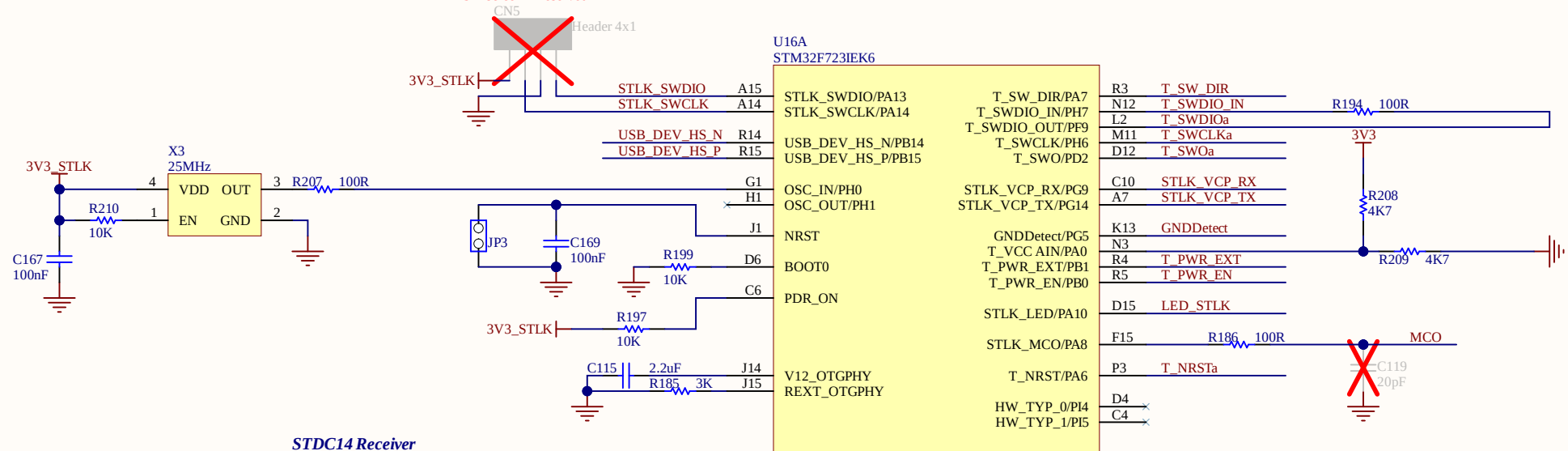


Capacitor Close to pin 1



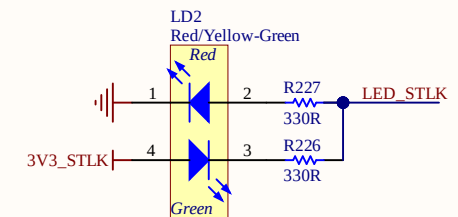
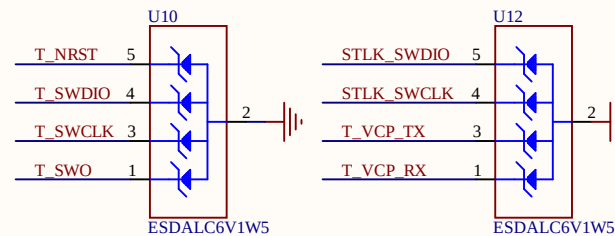
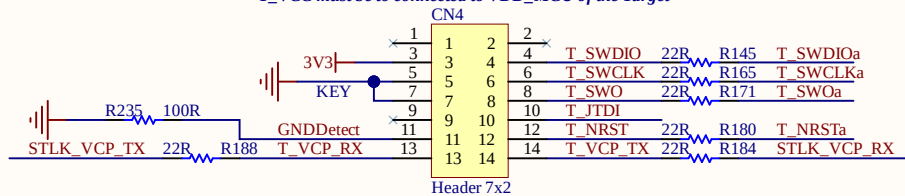
Must be on a border or the PCB.

Silkscreen = Reserved

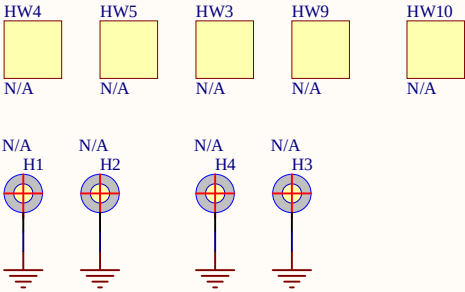


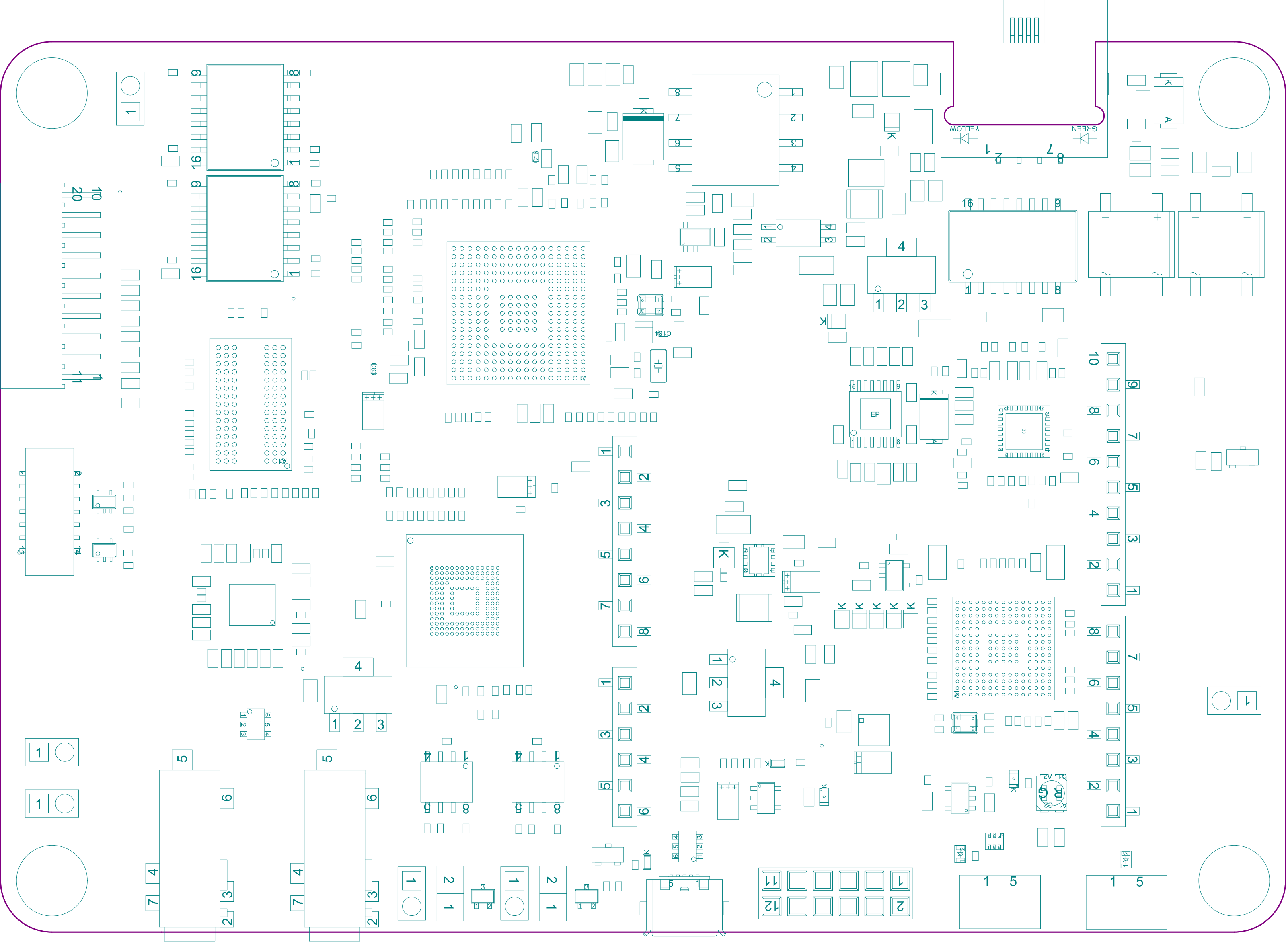
STDC14 Receiver

T_VCC must be connected to VDD_MCU of the Target



HW Mechanical parts





2

LAYER 2 (GND PLANE)

FAB DARWING & DRILL LEGEND

