

STM32MP13XXAF_STPMIC1LD (up to 1000 MHz)

Schematics and layout only for example

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Notes

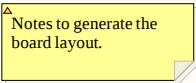
- This reference design is based on Discovery kit with STM32MP135F MPU (STM32MP135F-DK):
- The STPMIC1DPQR replaced by STPMIC1LDPQR
- It is applicable to STM32MP13xD and STM32MP13xF (CPU freq up to 1000 MHz)

Legend

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

Text to be added to silkscreen.

Warning text.



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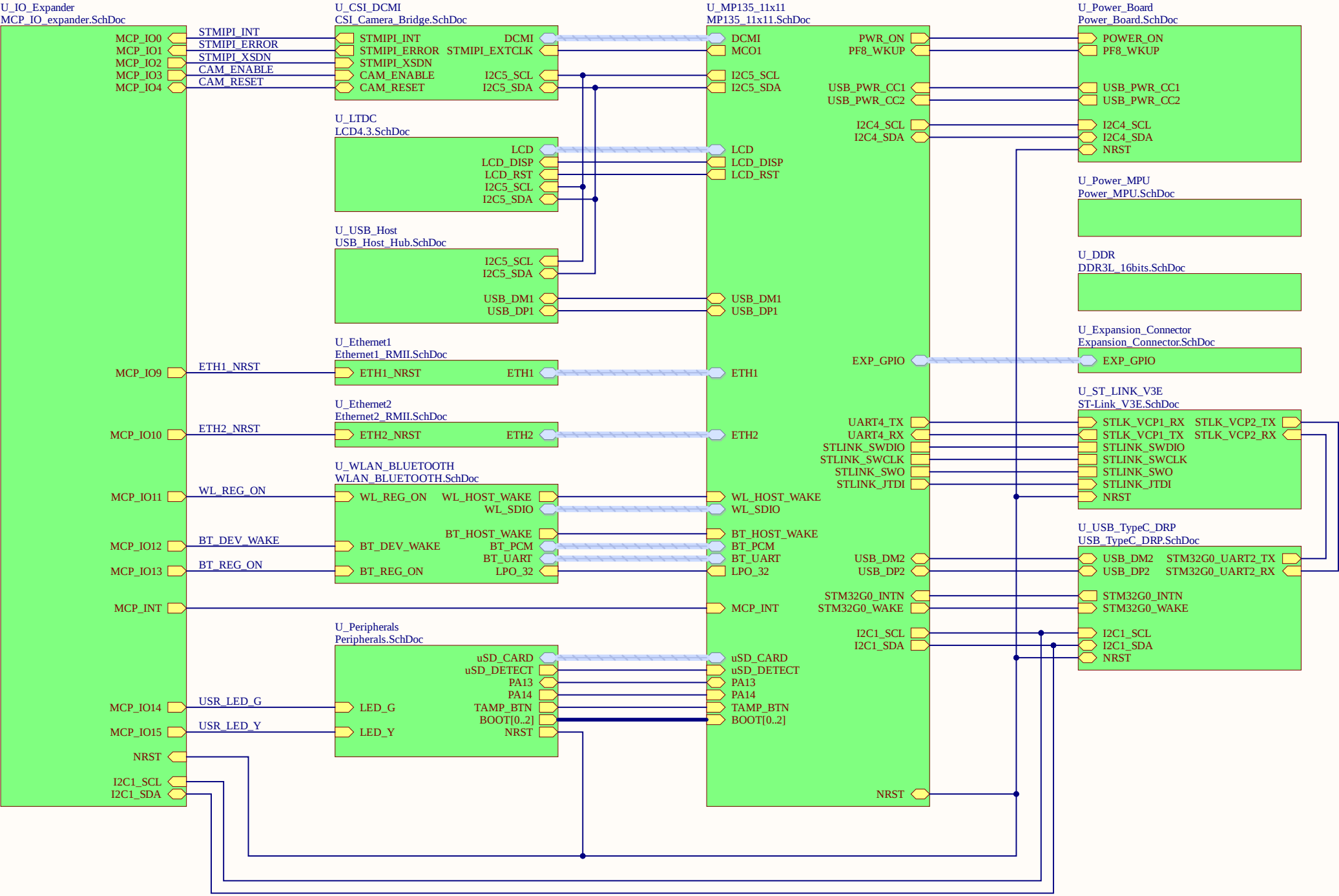
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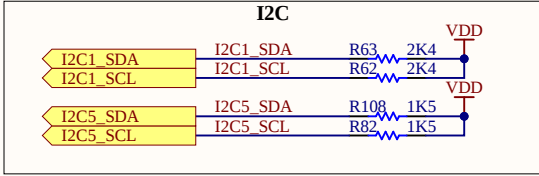
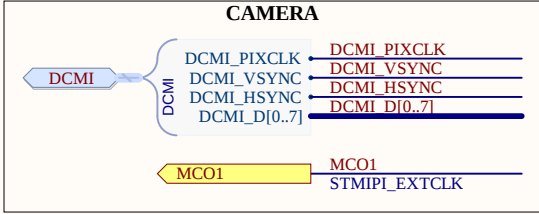
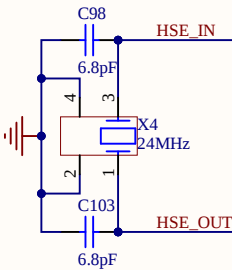
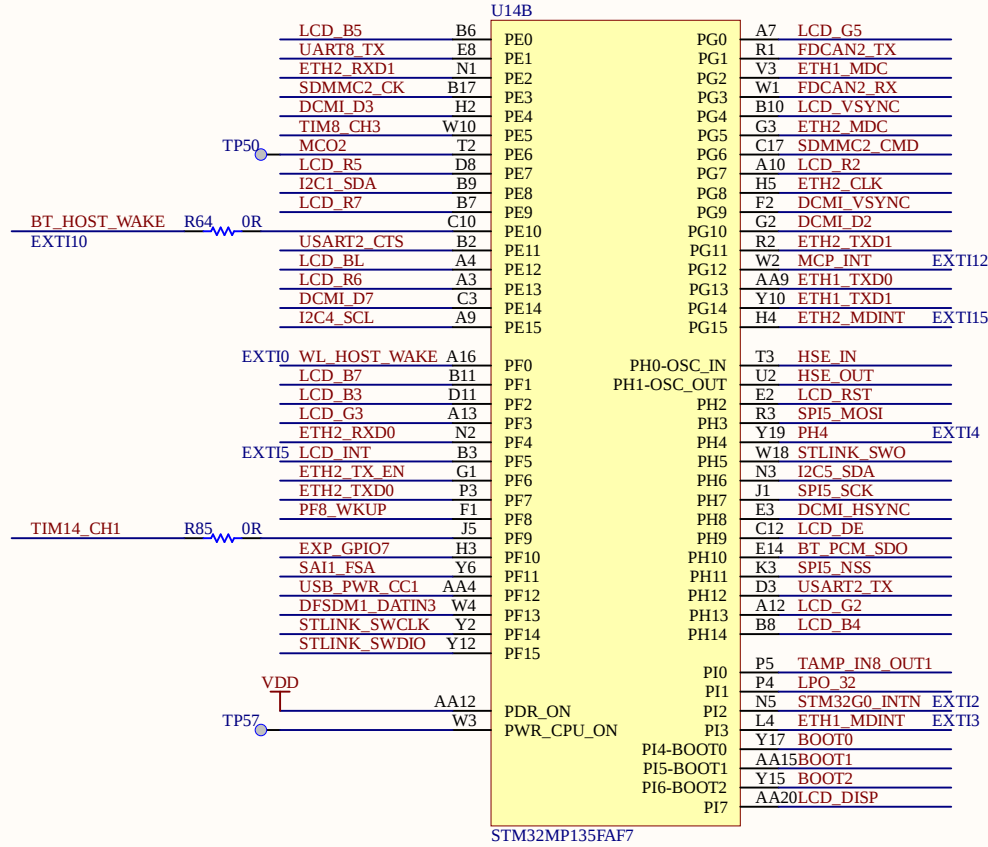
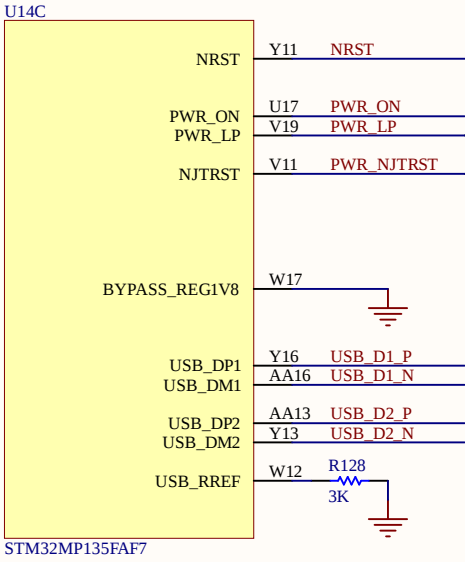
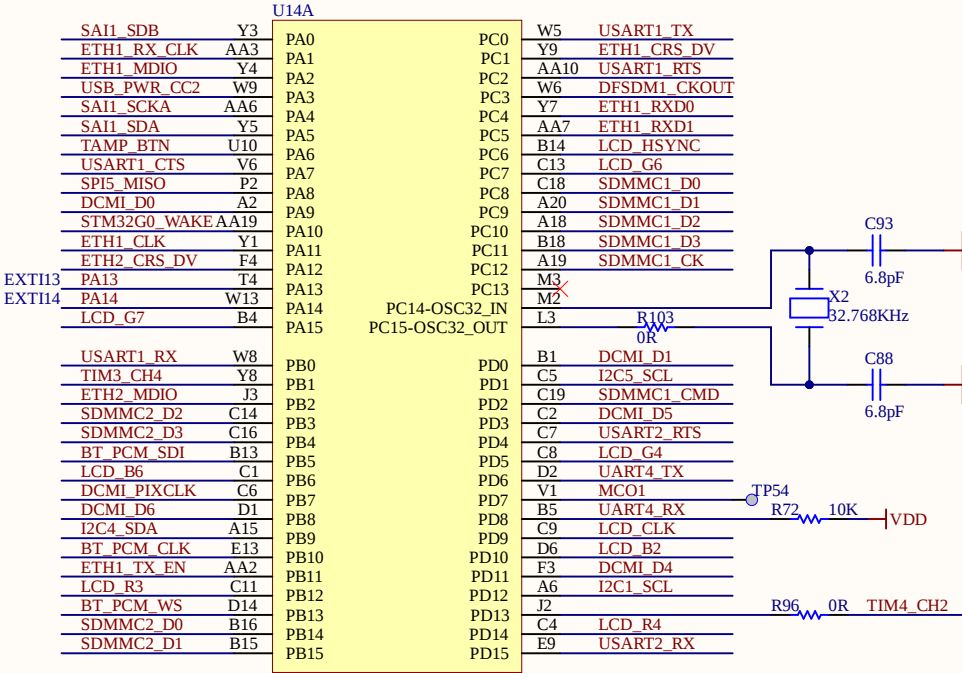
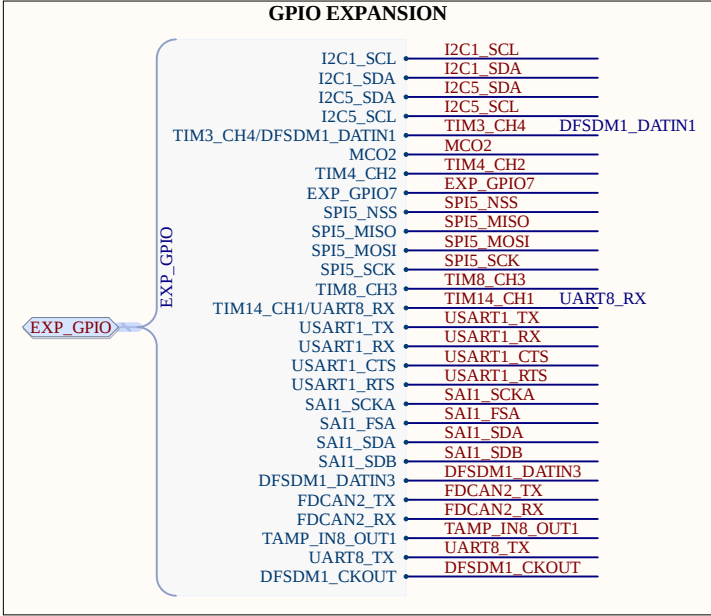
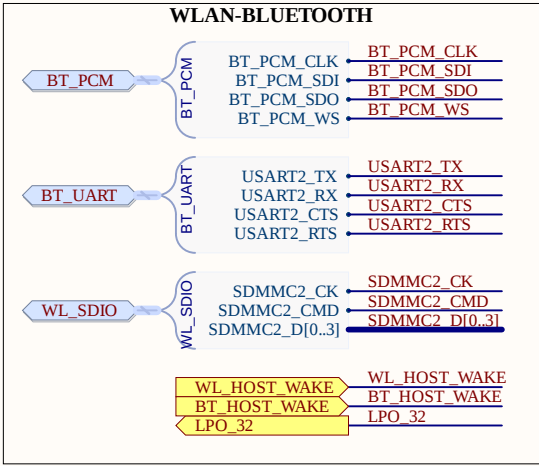
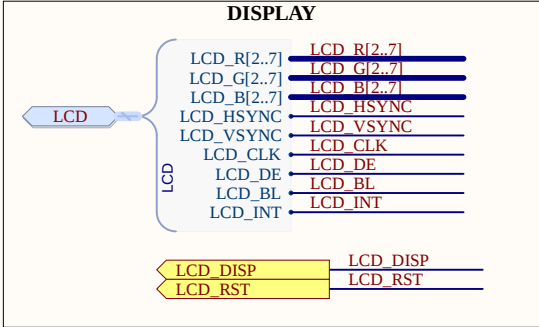
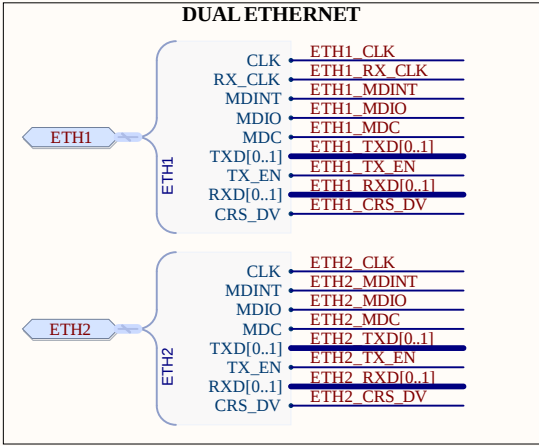
U_Top
Top.SchDoc



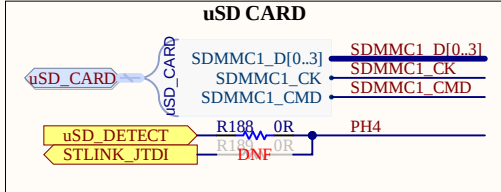
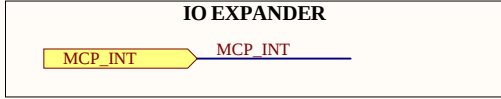
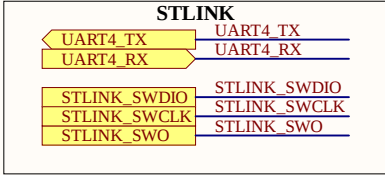
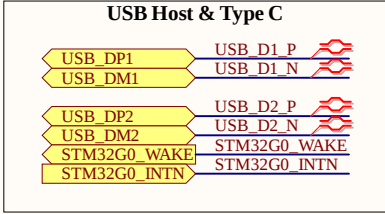
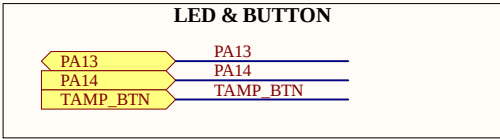
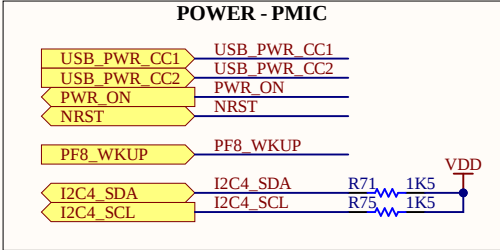
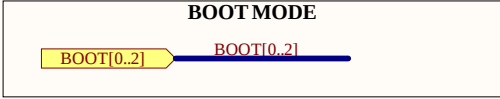
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Project: STM32MP13XXAF_STPMIC1LD (up to 1000 MHz)		
Variant: MP135F		
Revision: A-01		Reference: MB2503
Size: A4	Date: 14-OCT-2025	Sheet: 1 of 17



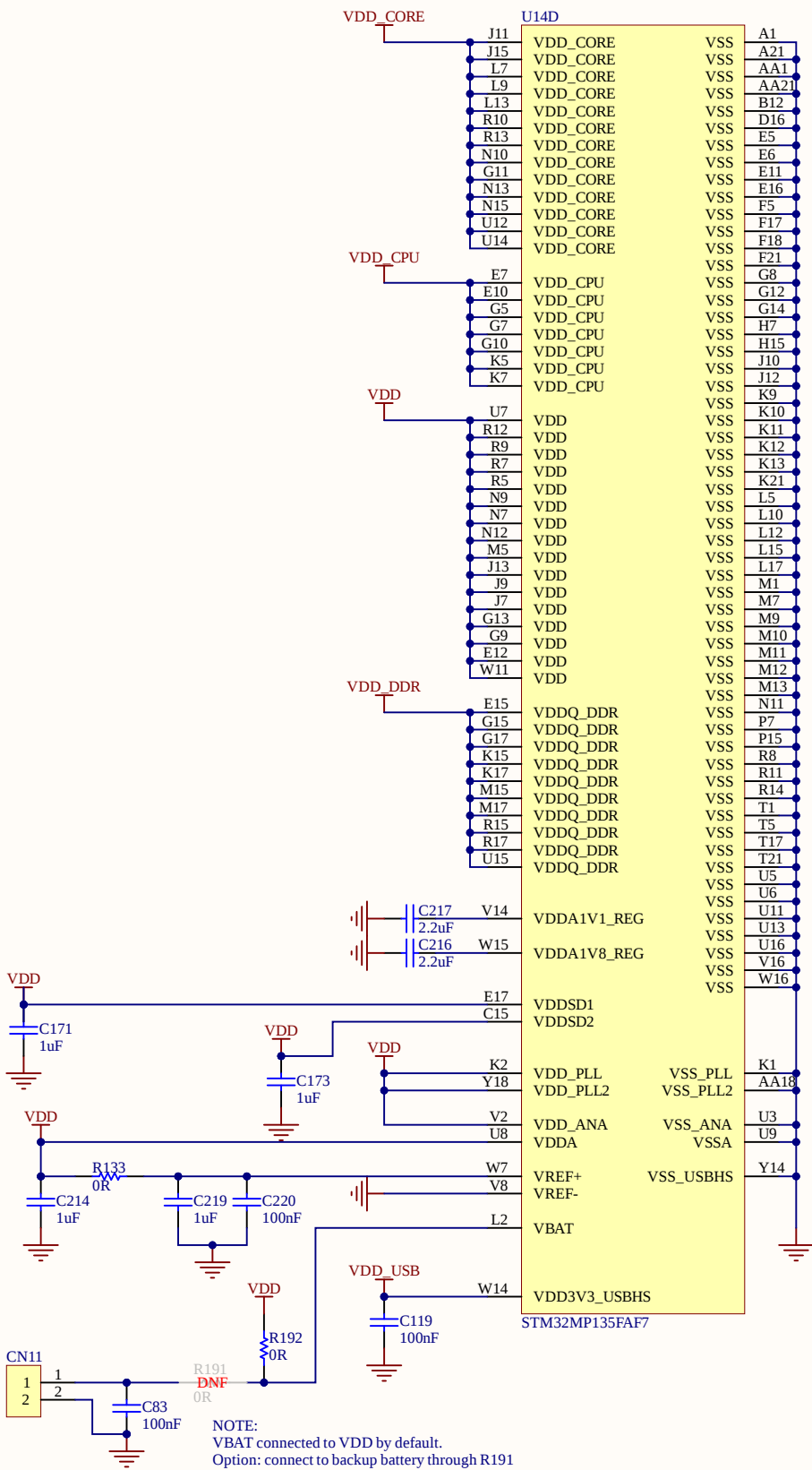
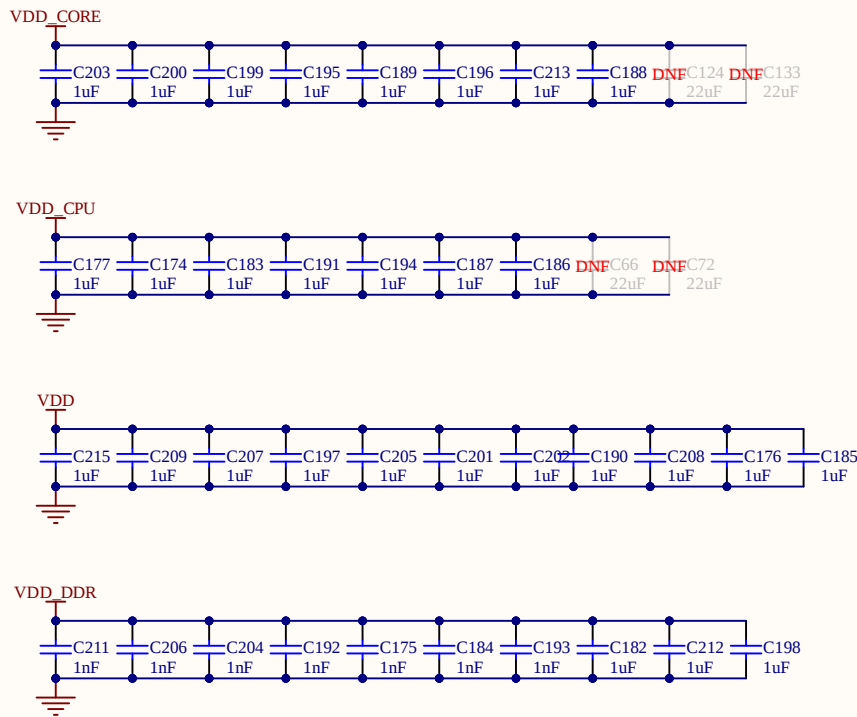




I2C PERIPHERAL	ADDRESS	I2C
IO expander	0100001X	I2C1
USB Type C	1010001X & 1010011X	I2C1
STPMIC	0110011X	I2C4
STMIPID02	0010100X	I2C5
ST camera module	0111100X	I2C5
USB HUB Type A	1010000X	I2C5
Touchscreen	1011101X	I2C5
Expansion connector	Shield dependant	I2C1&5



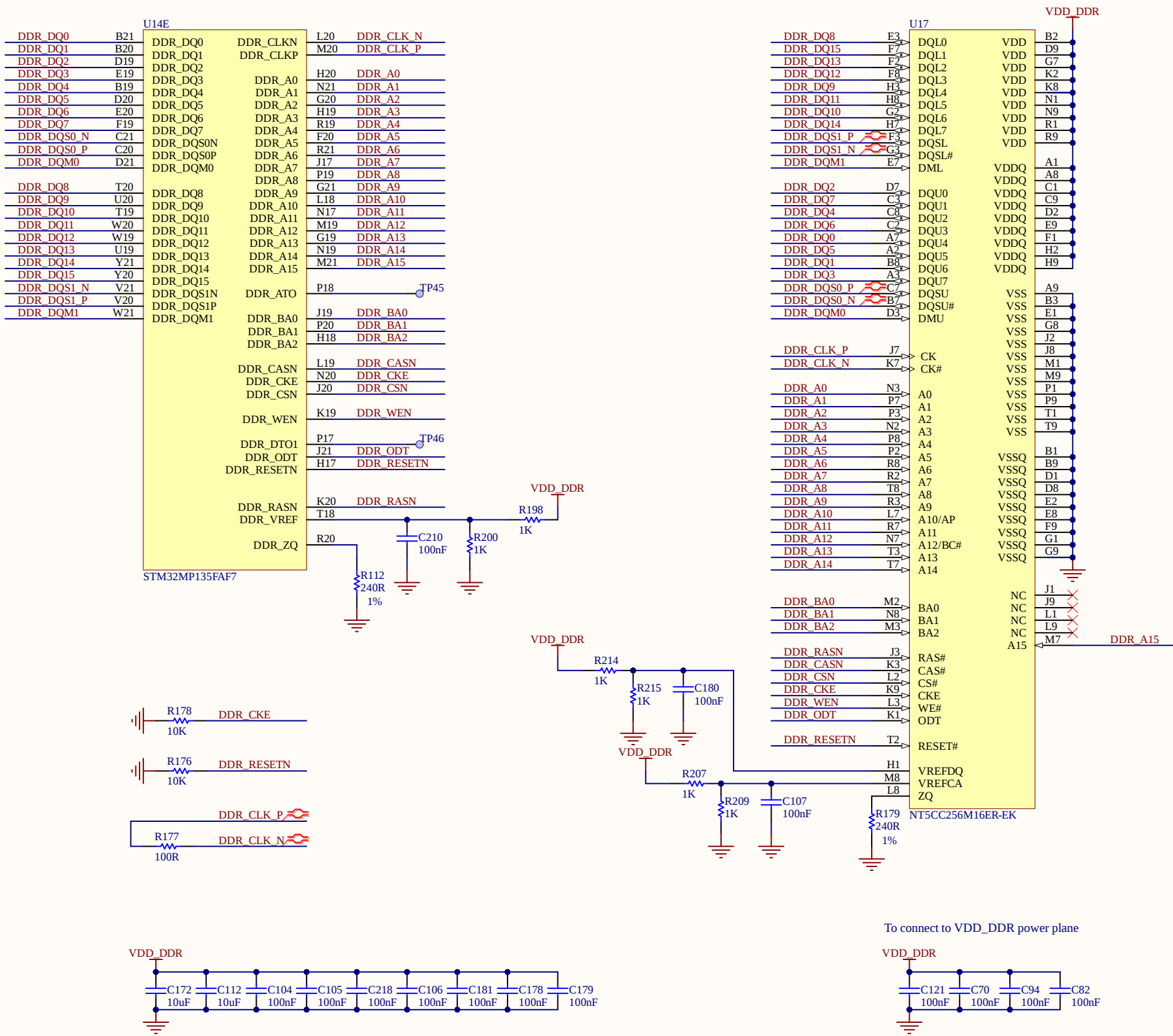
STM32 Power

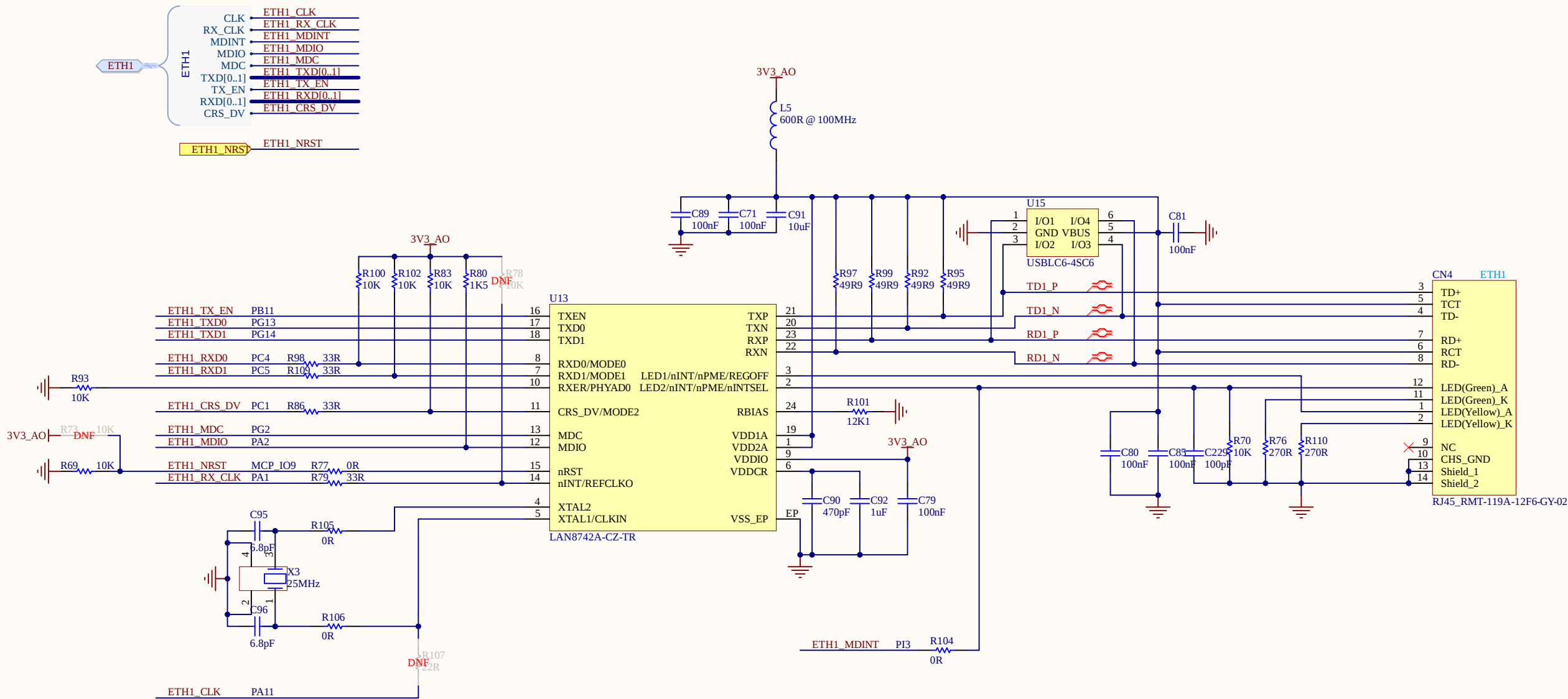


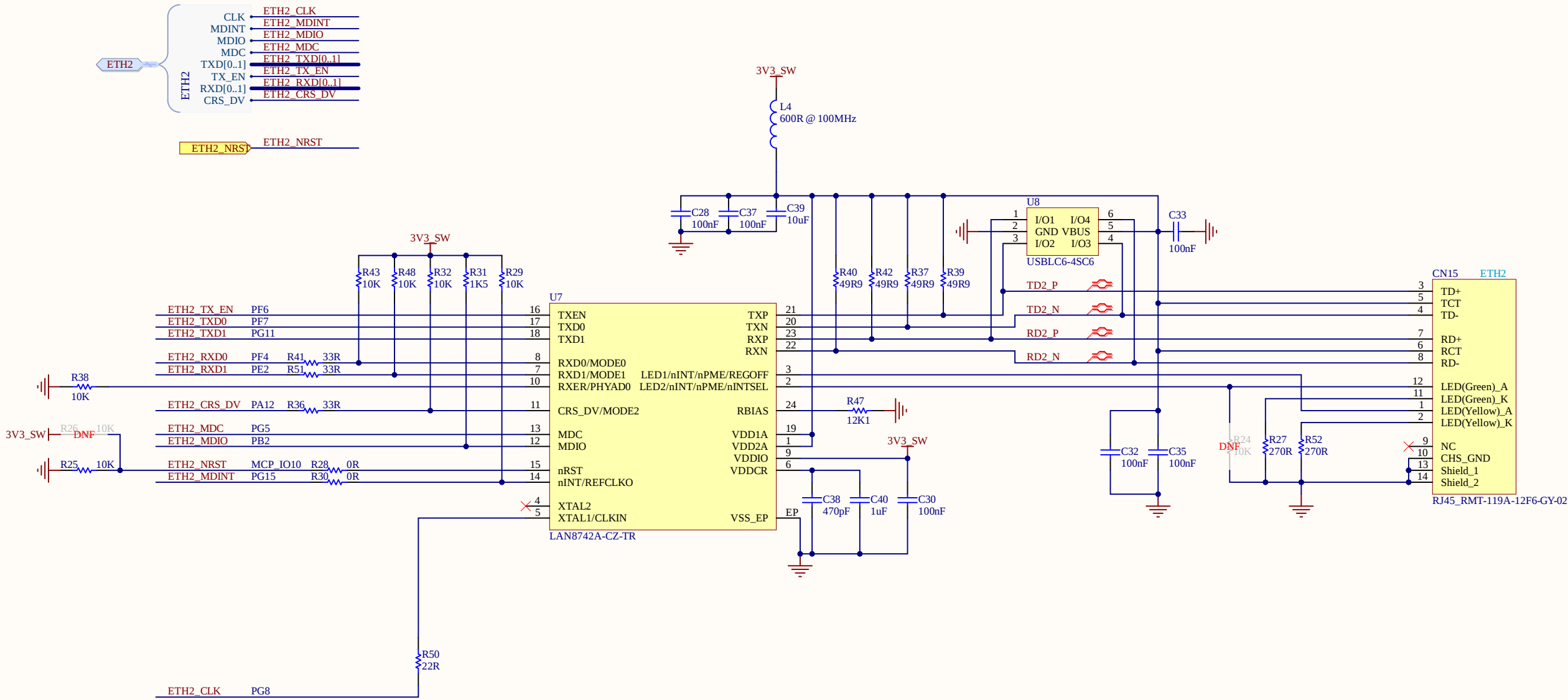
Board Power



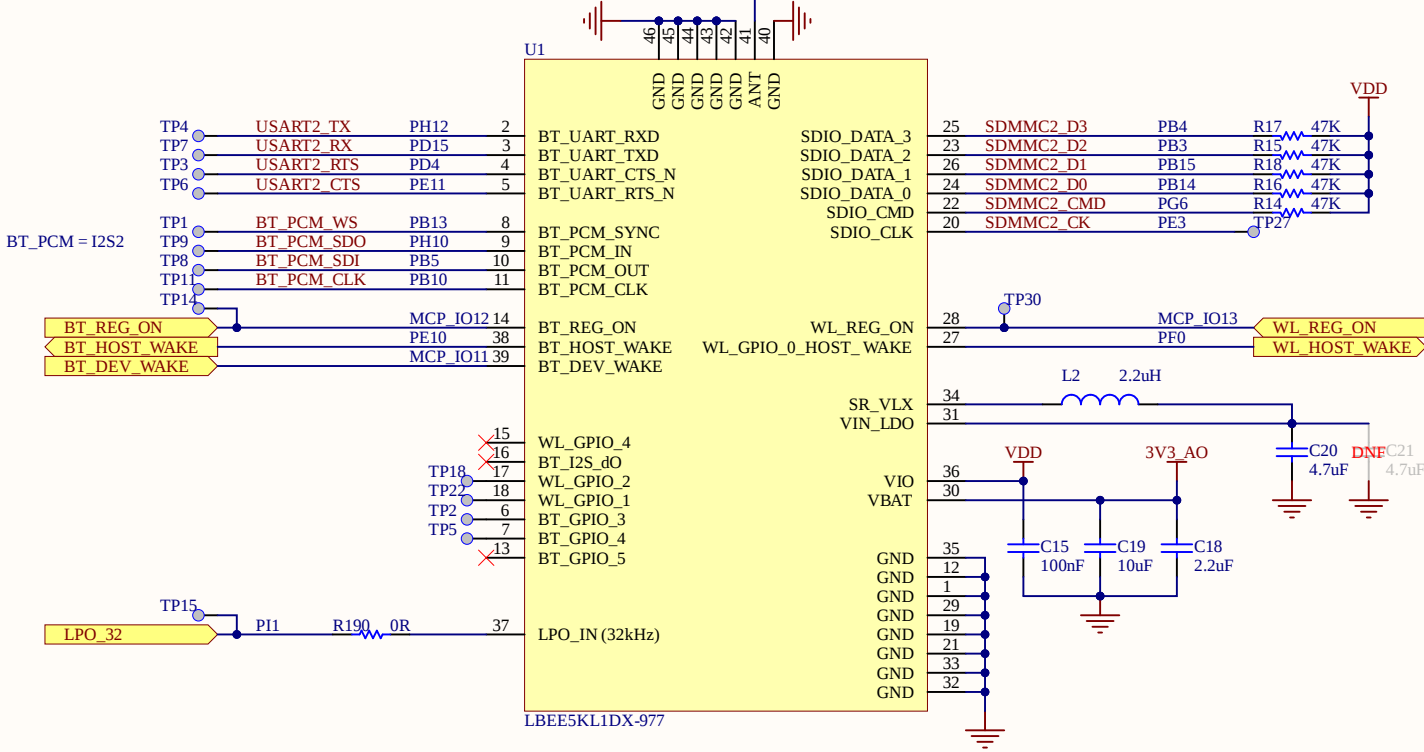
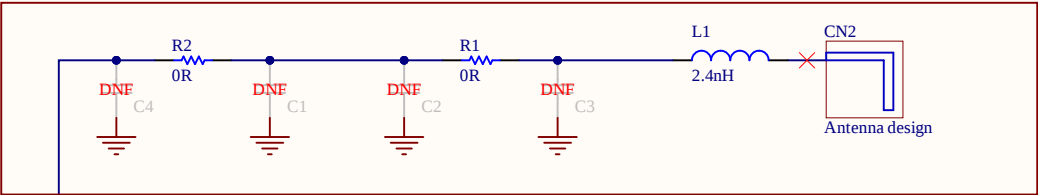
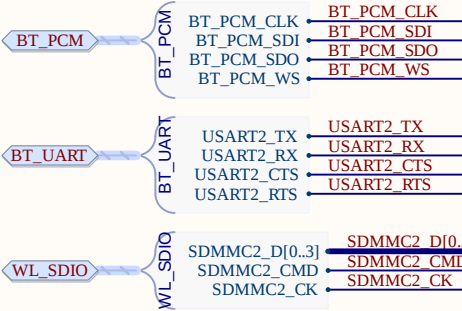
VDD_CPU can be used to save the VDD_DDR discrete regulator (U45). In that case, VDD_CPU should be set at 1.35V all the time; except in STANDBY DDR OFF low power mode (suspend to flash).
WARNING: setting VDD_CPU at 1.35V continuously reduces the STM32MP13 lifetime. See AN5438 or STM32MP13 series lifetime estimates ¹ for details.



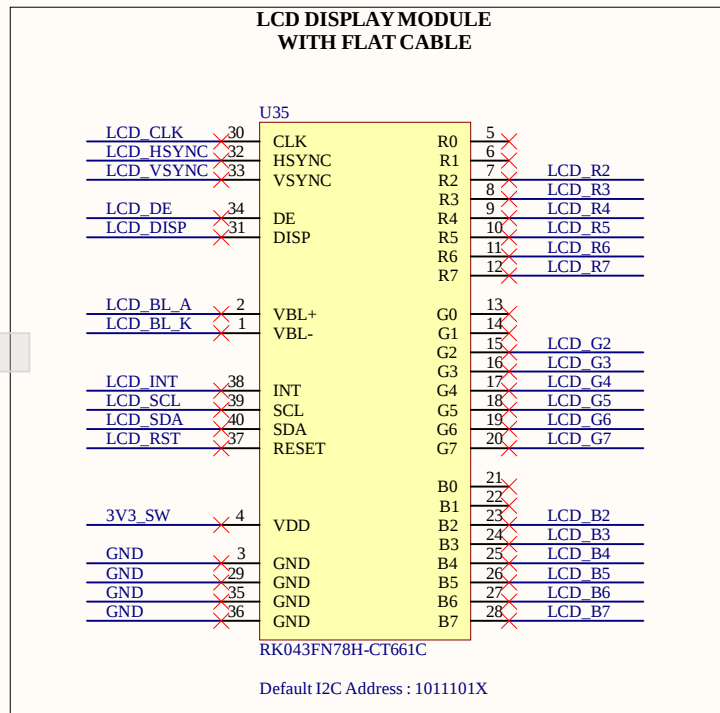
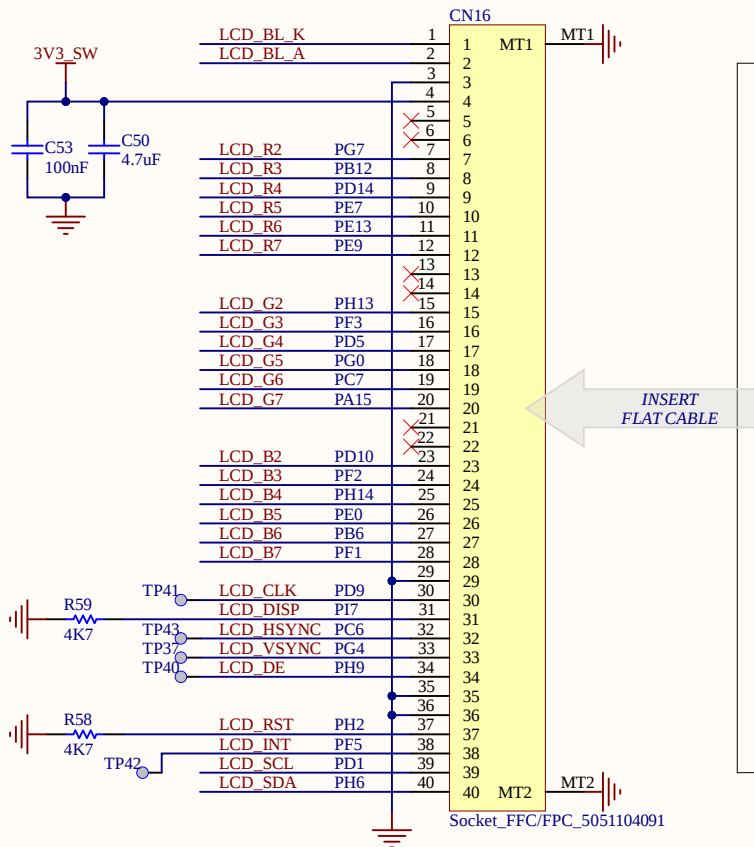
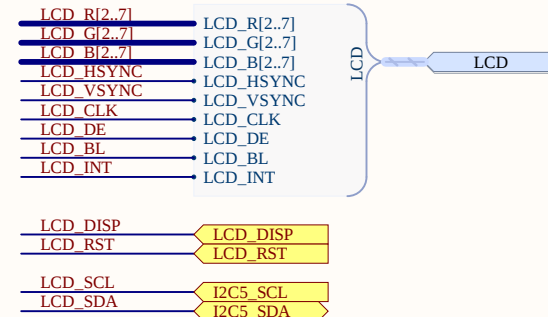
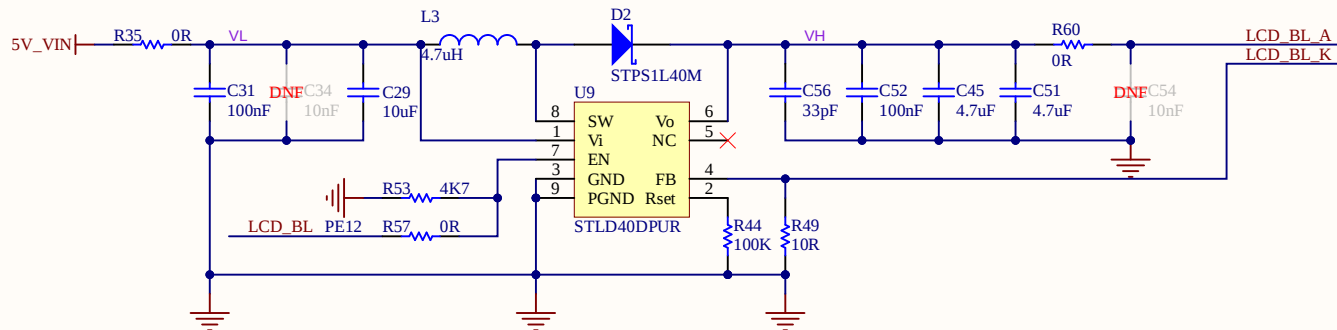


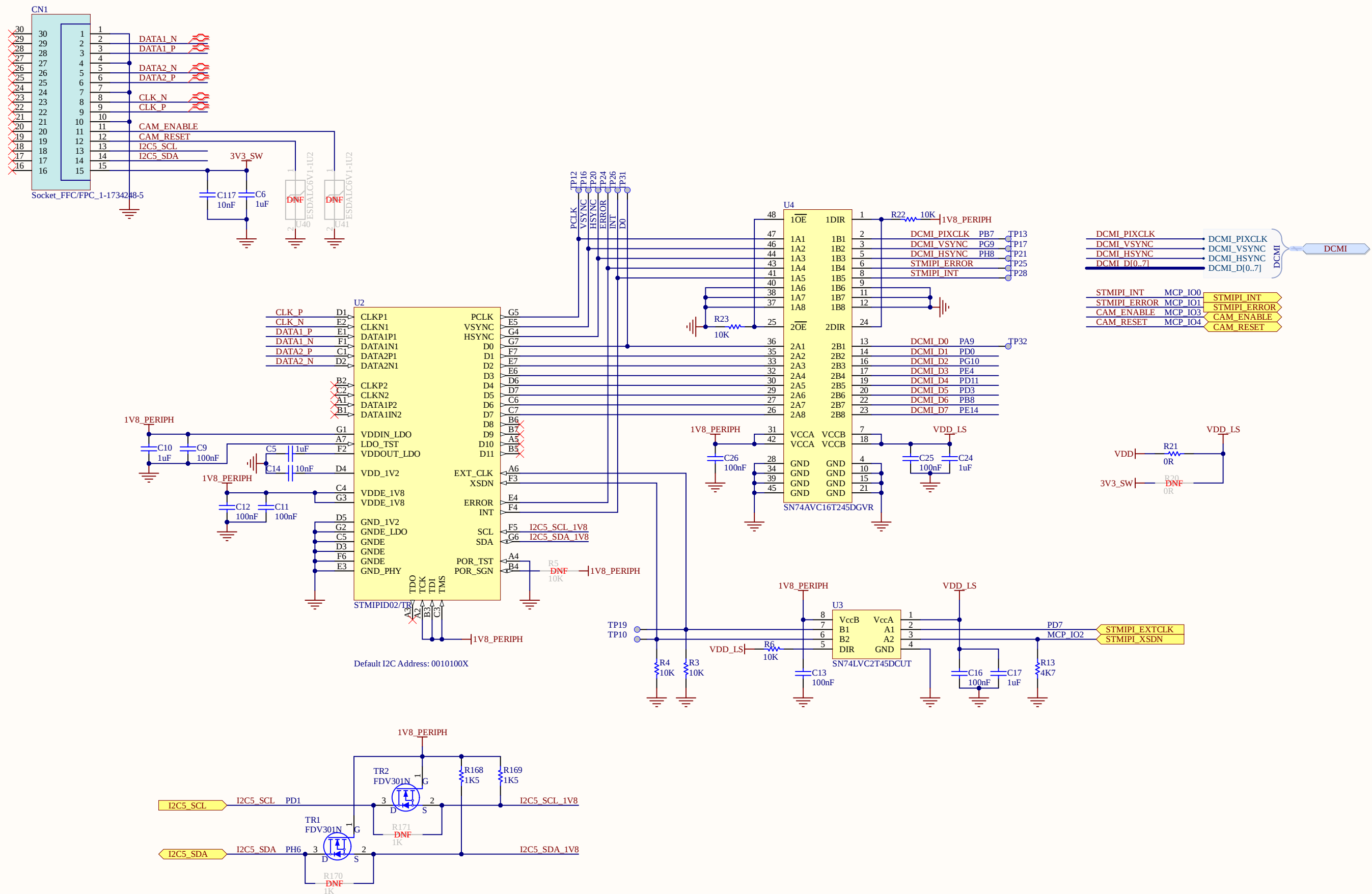


WLAN & Bluetooth

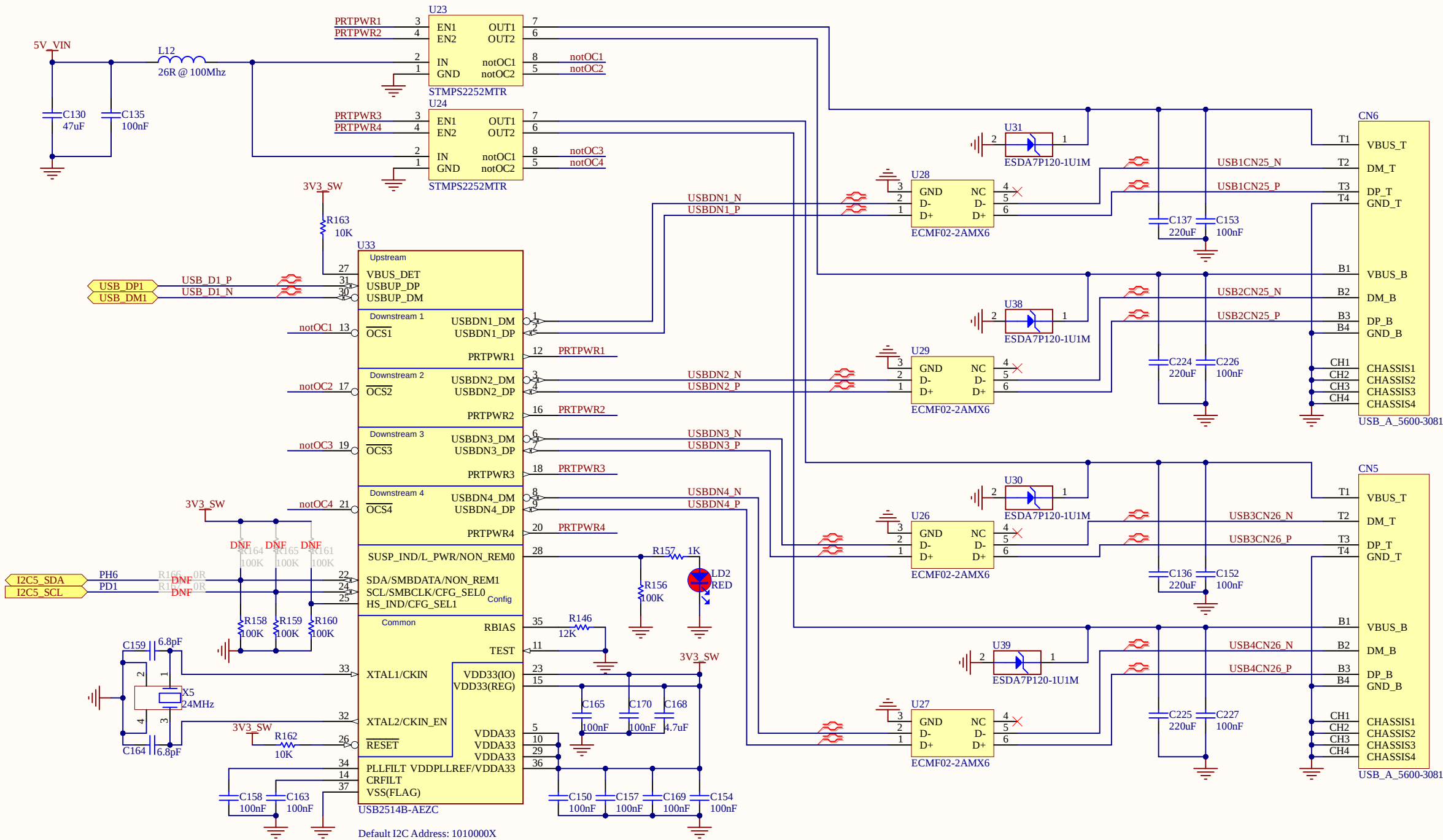


LCD 4.3"

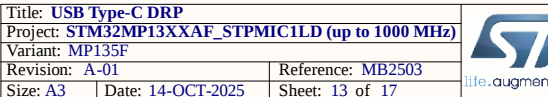




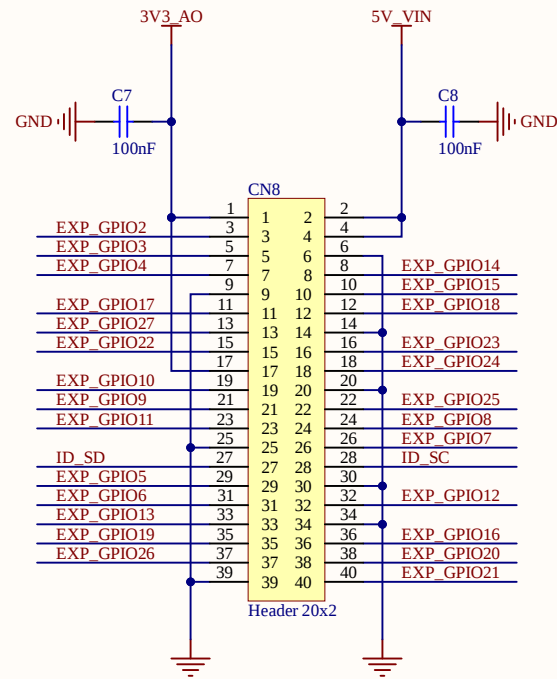
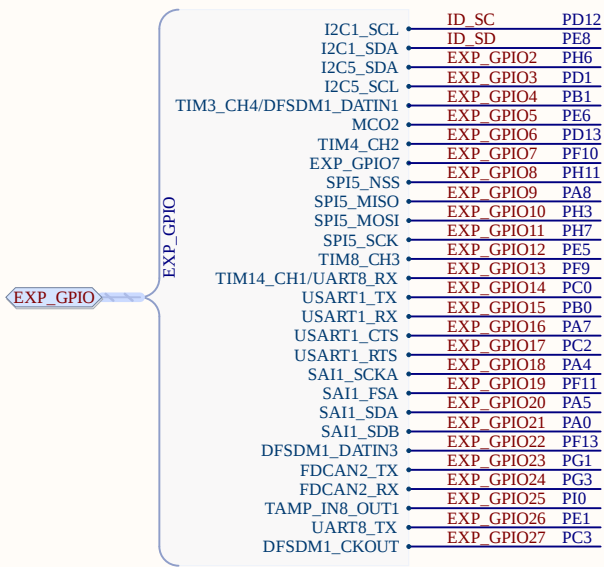
USB HOST HUB



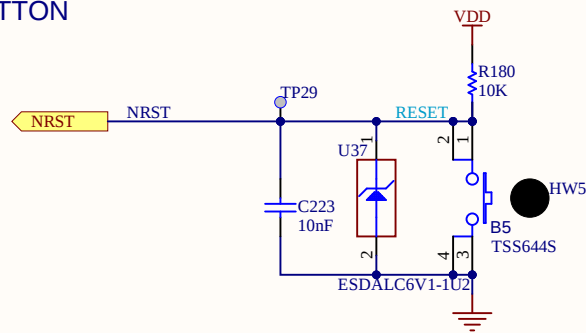
Source/Sink



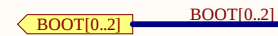
EXPANSION CONNECTOR



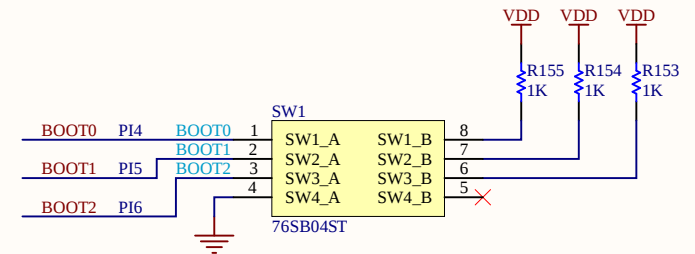
RESET BUTTON



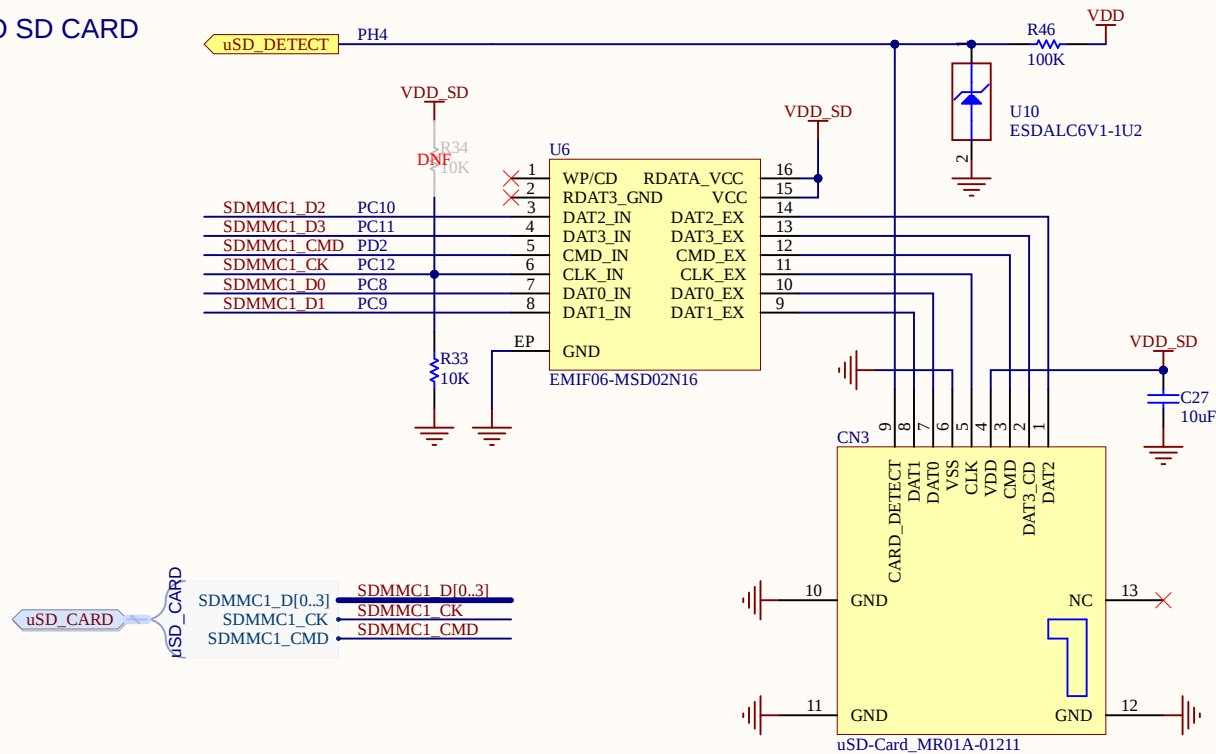
BOOT MODE



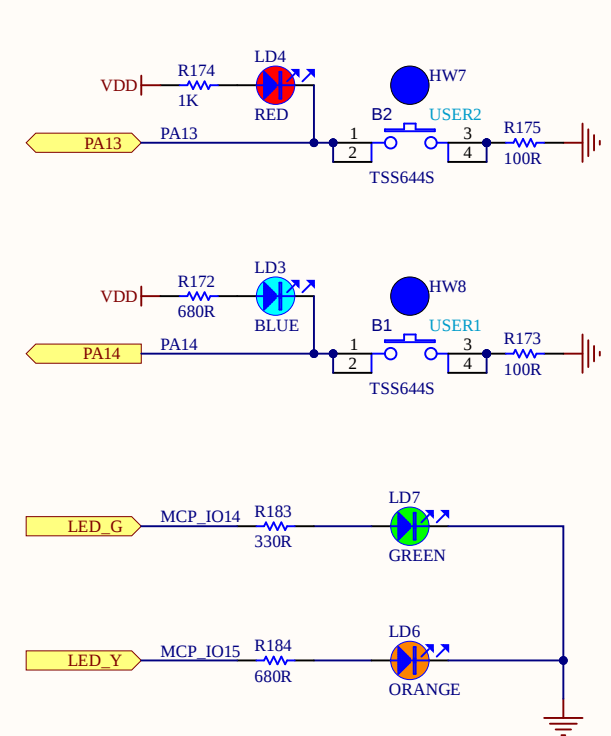
BOOT MODE	BOOT2	BOOT1	BOOT0
SD-Card	1	0	1
Forced UART/USB	0	0	0
Reserved	1	0	0



MICRO SD CARD



LED & BUTTONS



HW3

STICKER PRODUCT

N/A

HW2

STICKER BOARD

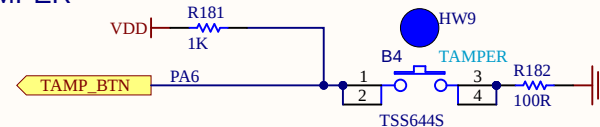
N/A

HW4

BCB

10

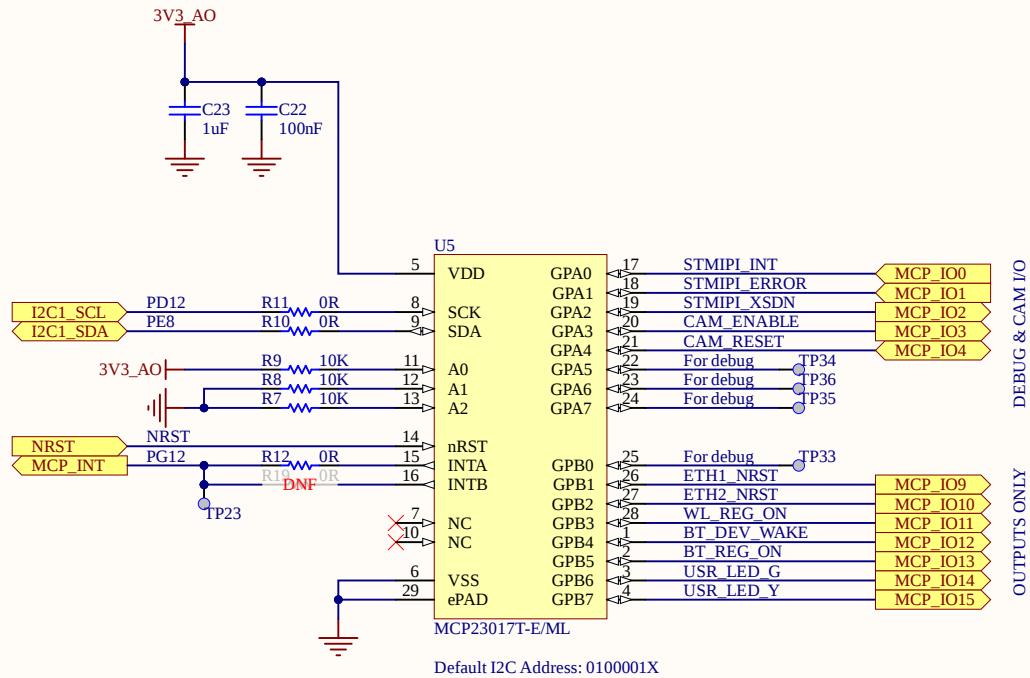
TAMPER



Title: Peripherals		
Project: STM32MP13XXAF_STPMIC1LD (up to 1000 MHz)		
Variant: MP135F		
Revision: A-01		Reference: MB2503
Size: A4	Date: 14-OCT-2025	Sheet: 15 of 17

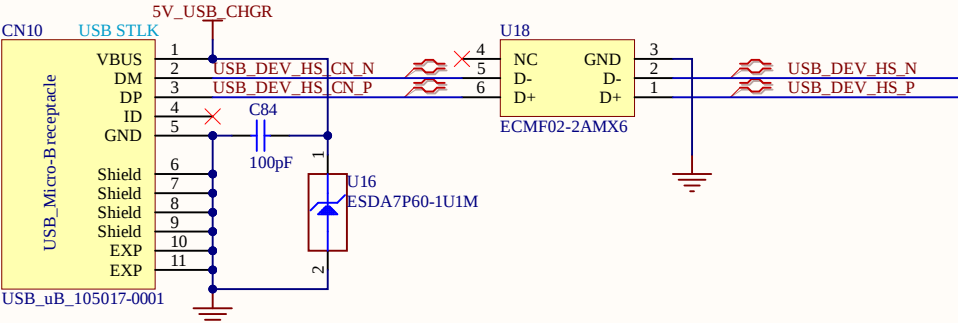


IO expander

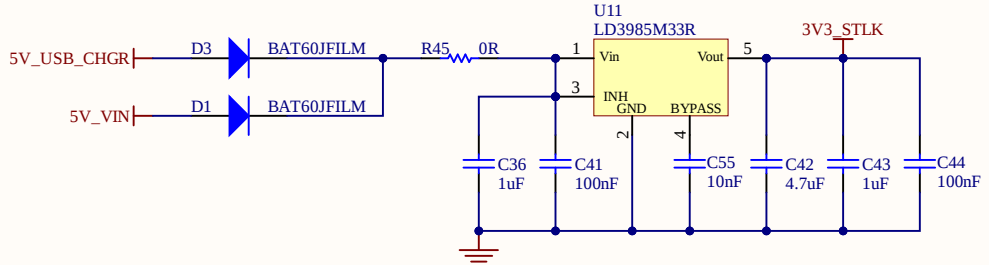


ST-LINKV3E

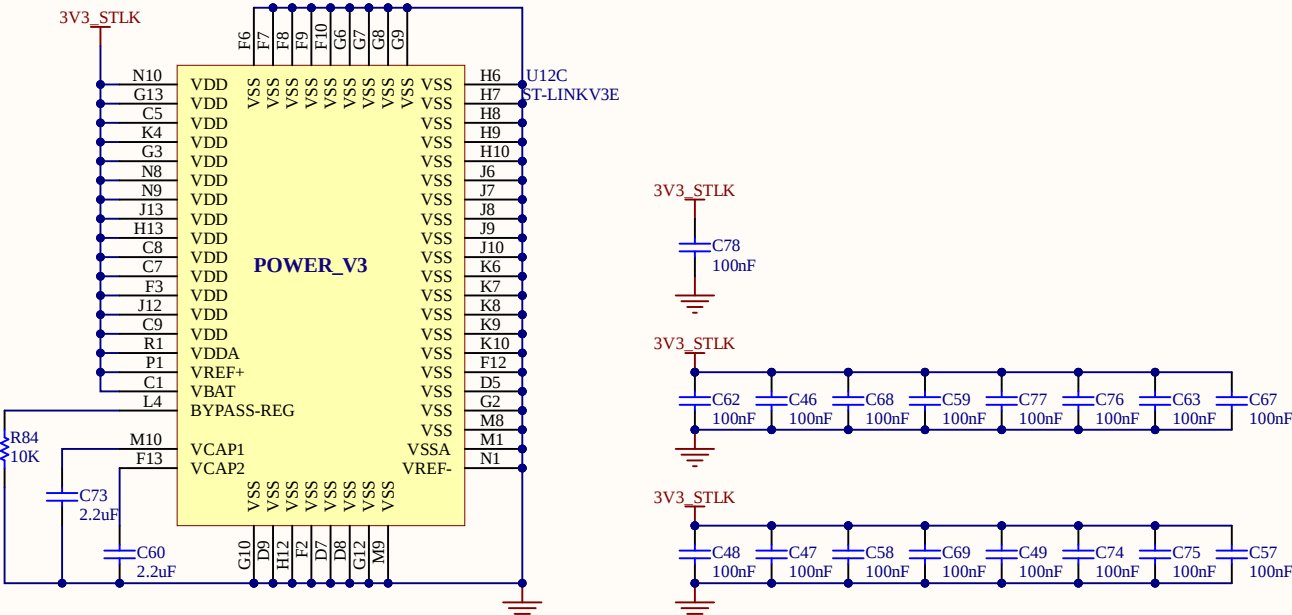
ST-LINKV3E USB HS & 5V USB CHARGER



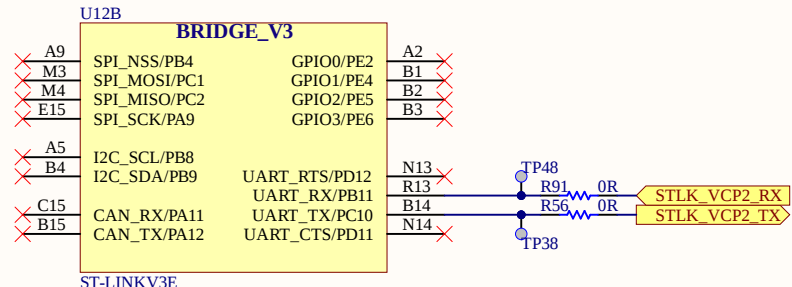
3V3 for ST-LINKV3E Only



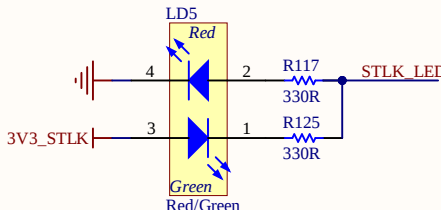
ST-LINKV3E MCU POWER



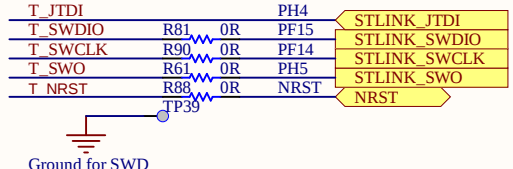
ST-LINKV3E Bridges (SPI/I2C/CAN/USART/GPIOs)



ST-LINKV3E Communication LEDs



SWD INTERACE



ST-LINKV3E JTAG/SWD/SWIM Debug Module

