

기 안	검 토	승 인
강 수 범	이 창 열	

Date	Revision	Description
2022.11.29	Rev. A1	- EMU150 208량 LED_Controller 최초 설계.
2023.02.03	Rev. A2	- PHY Chip 변경 설계 ( DP83826I ==> DP83848I )

STM32F407VGT6 CPU

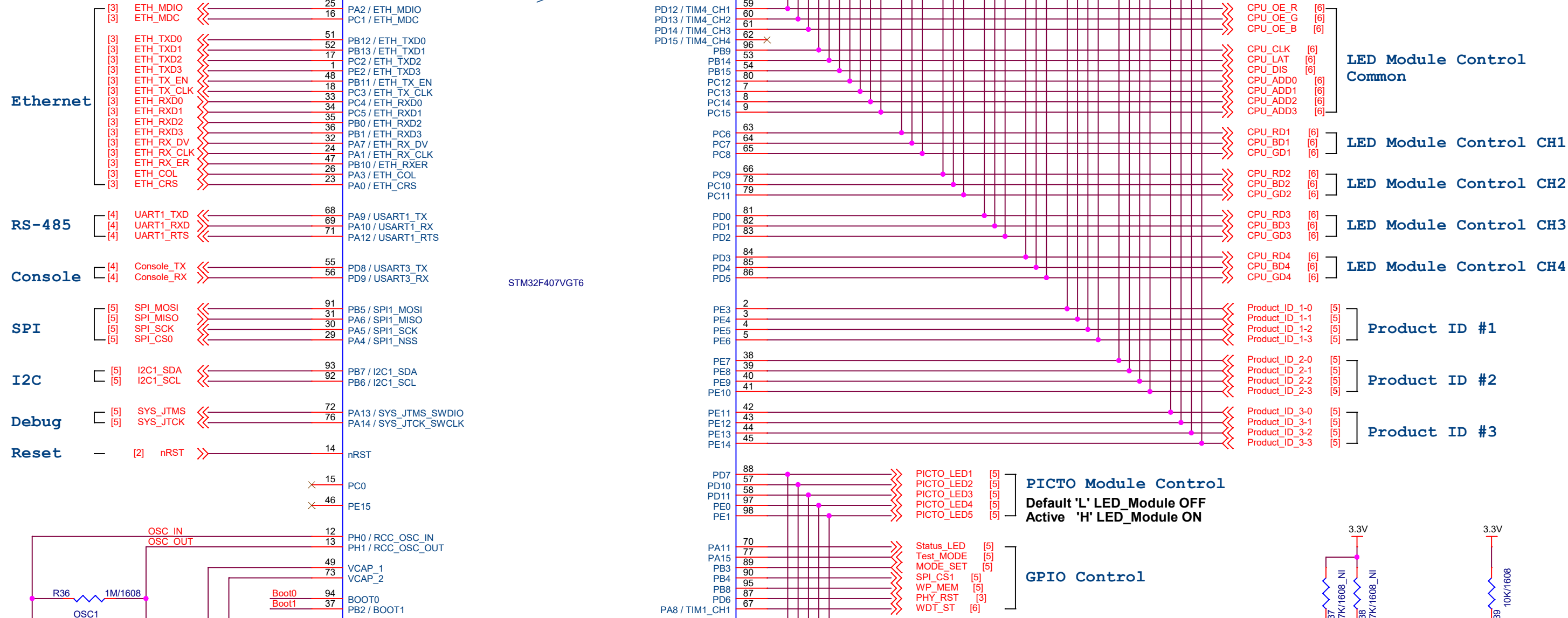
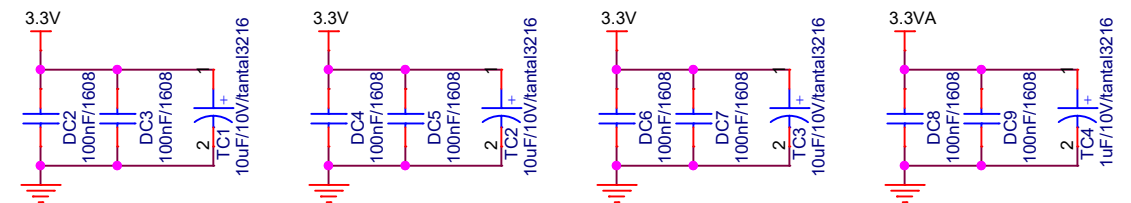
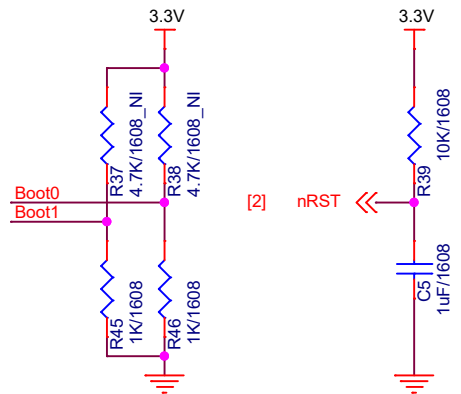


Table 1. Boot modes

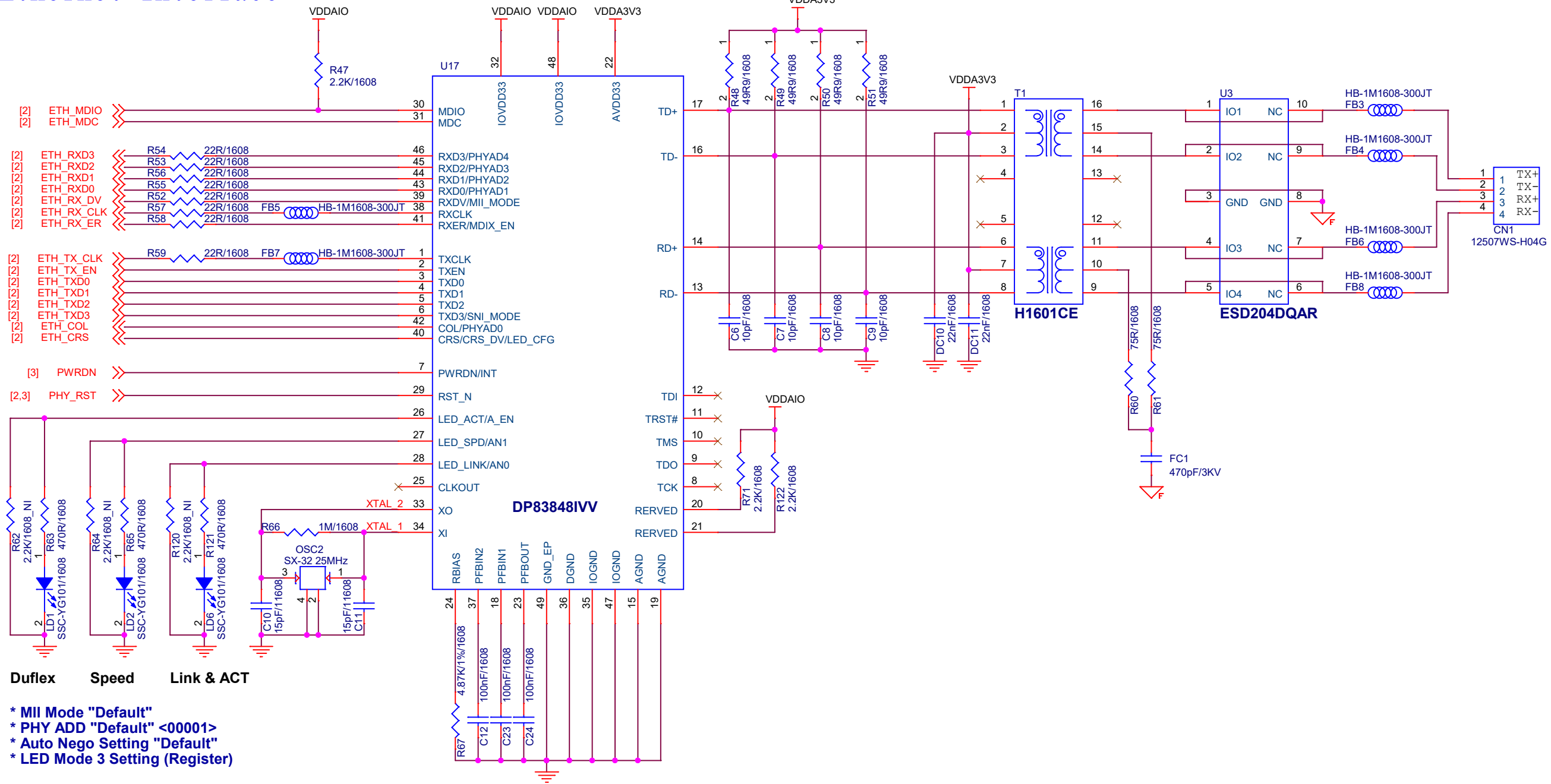
BOOT mode selection pins		Boot mode	Aliasing
BOOT1	BOOT0		
x	0	Main Flash memory	Main Flash memory is selected as boot space
0	1	System memory	System memory is selected as boot space
1	1	Embedded SRAM	Embedded SRAM is selected as boot space



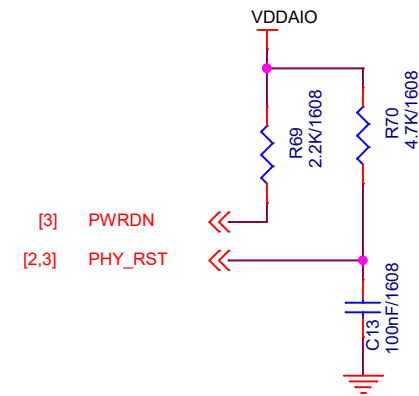
Decoupling CAP은 최대한 VDD 핀과 가깝게 VDDA / VREF+



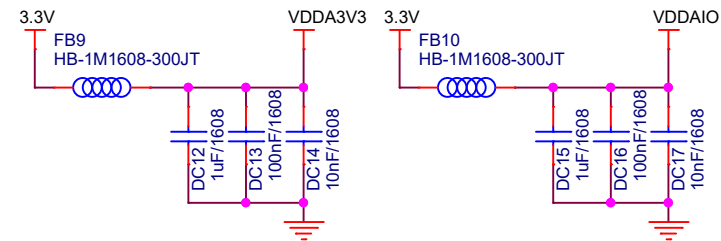
# Ethernet Interface



## PHY Control



## Ethernet Power



Piranti Co., Ltd.

Title Ethernet Interface

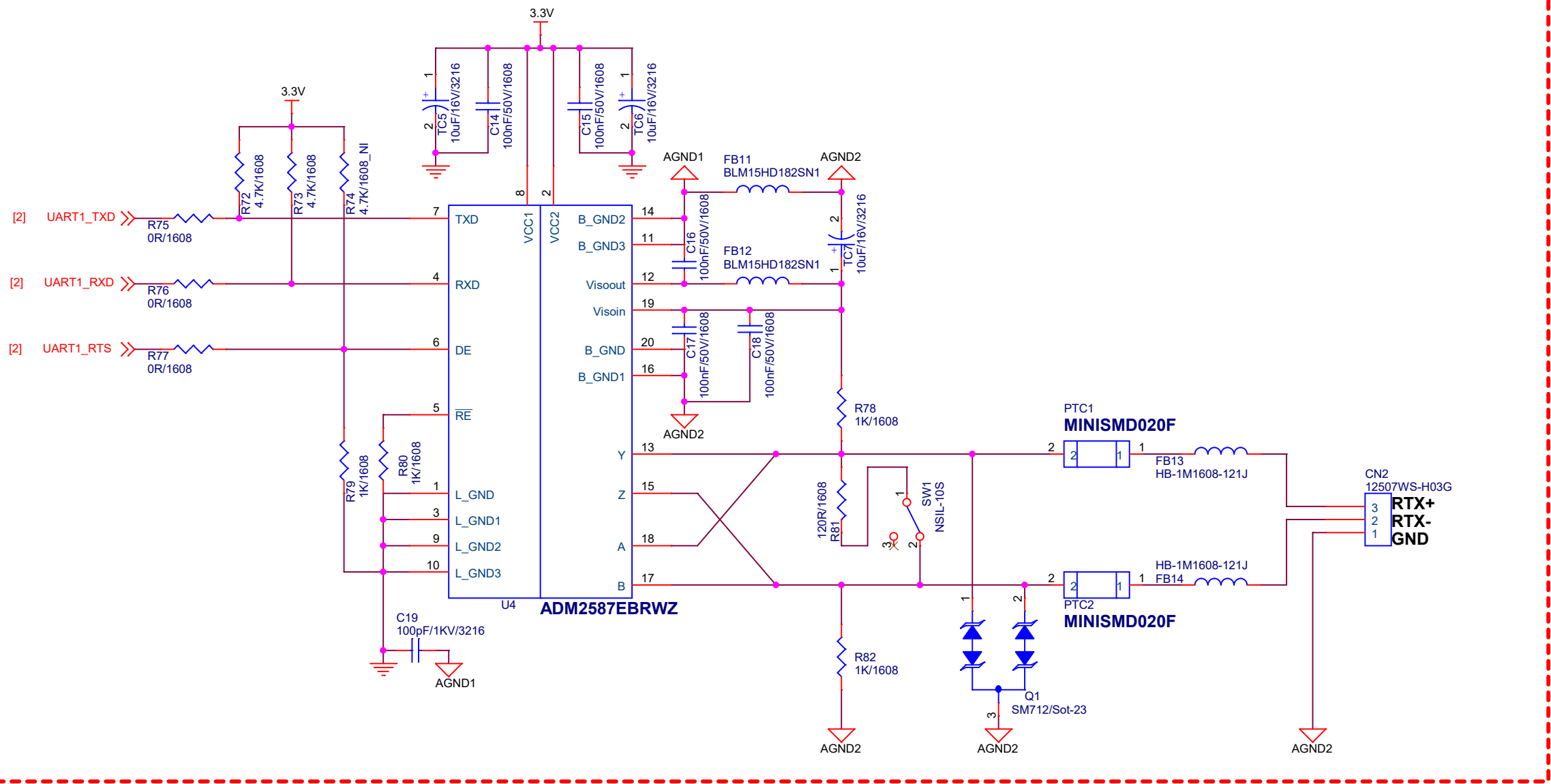
Size A3 Document Number EMU150\_LED\_Controller

Date: Friday, February 03, 2023

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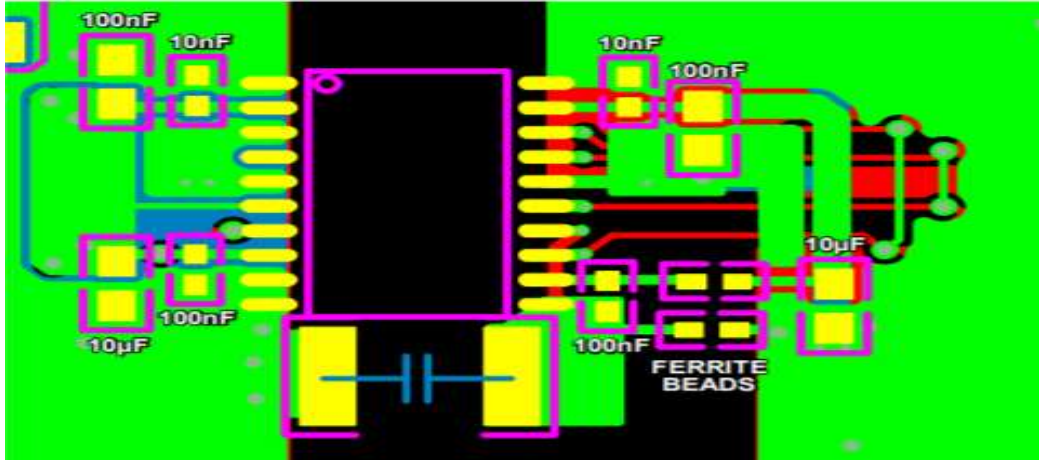
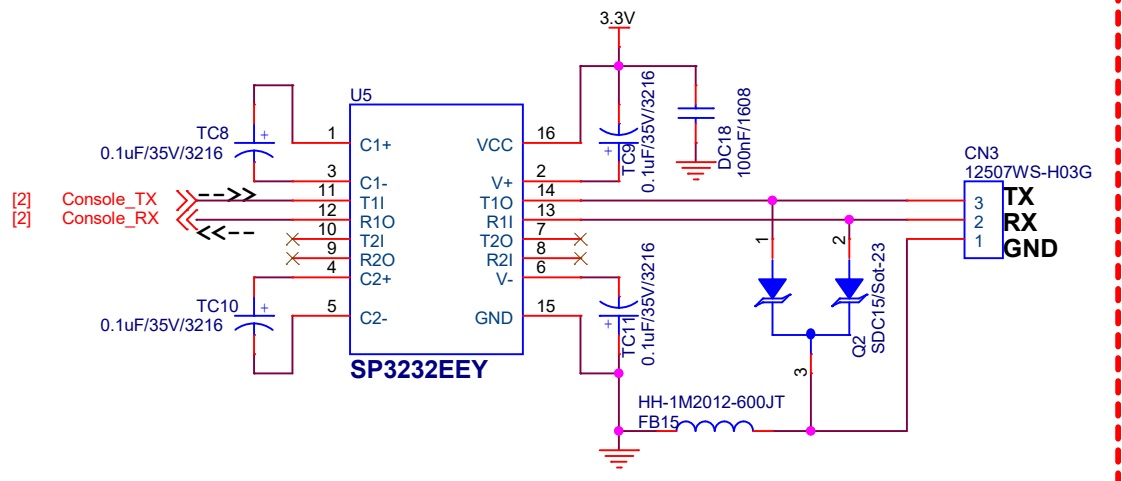
Rev A2

RS-485 Transceiver



\* RS-485의 AGND1 & AGND2 연결시 참조!!!

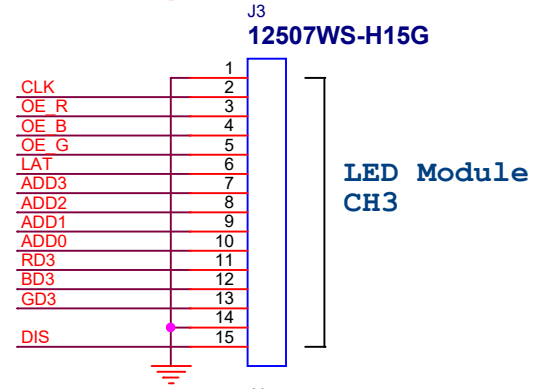
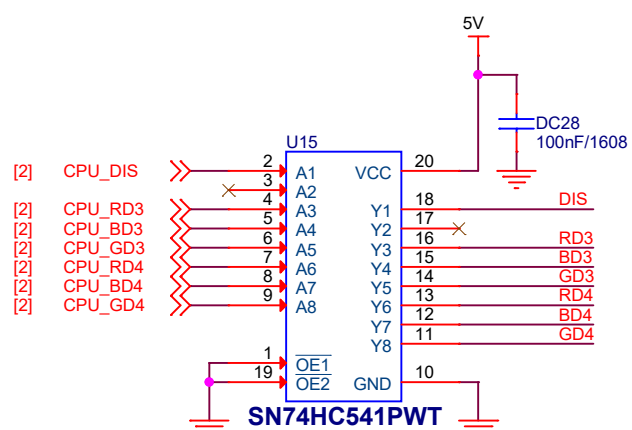
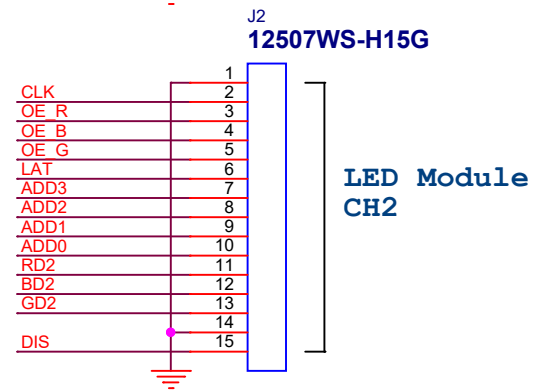
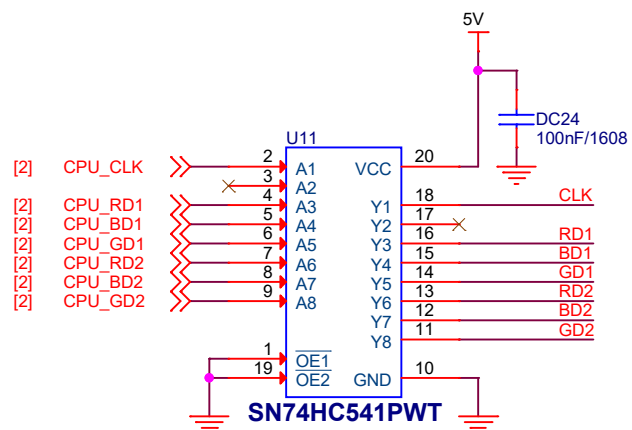
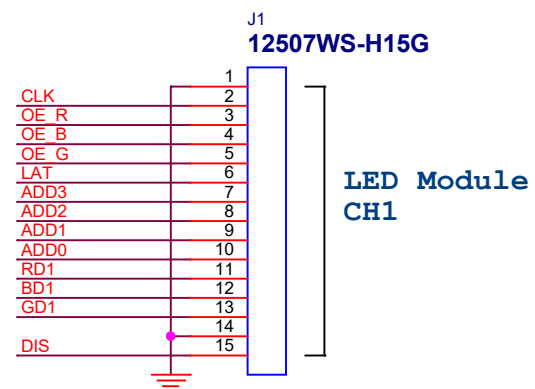
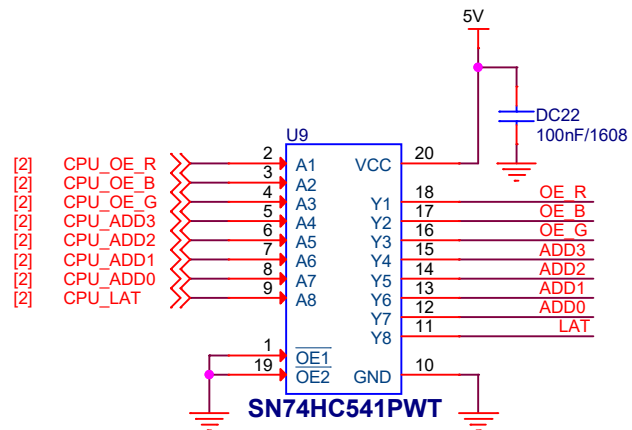
RS-232 Transceiver (for Console)



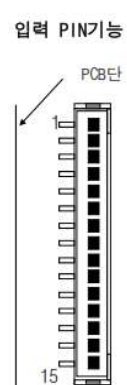




## LED Control Interface



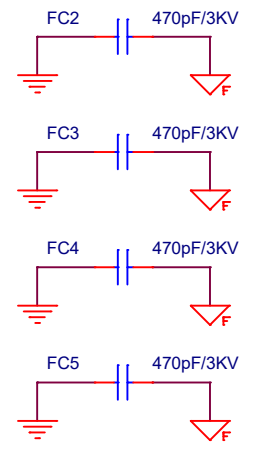
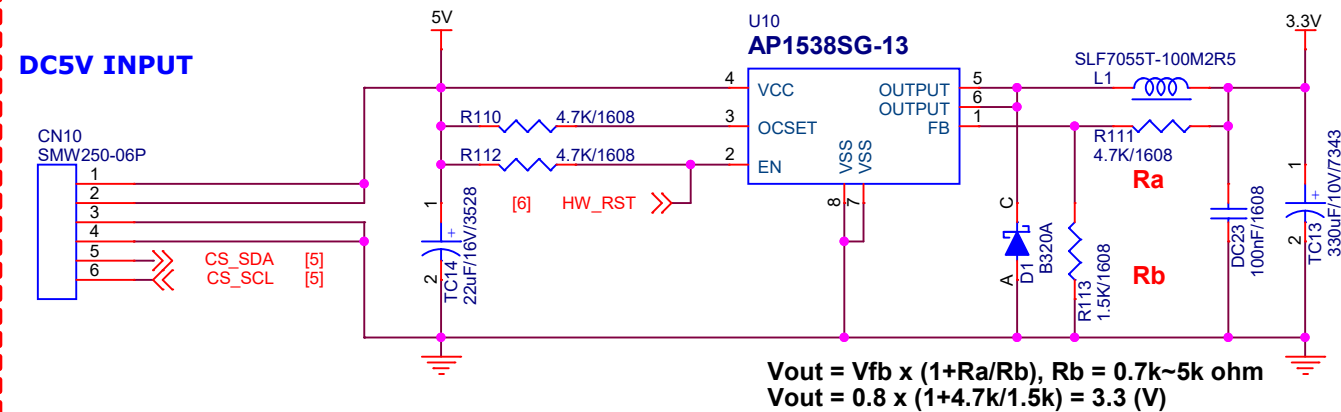
LED Module P/N  
ODTLM-048CF-16B21  
ODTLM-064CF-16B21



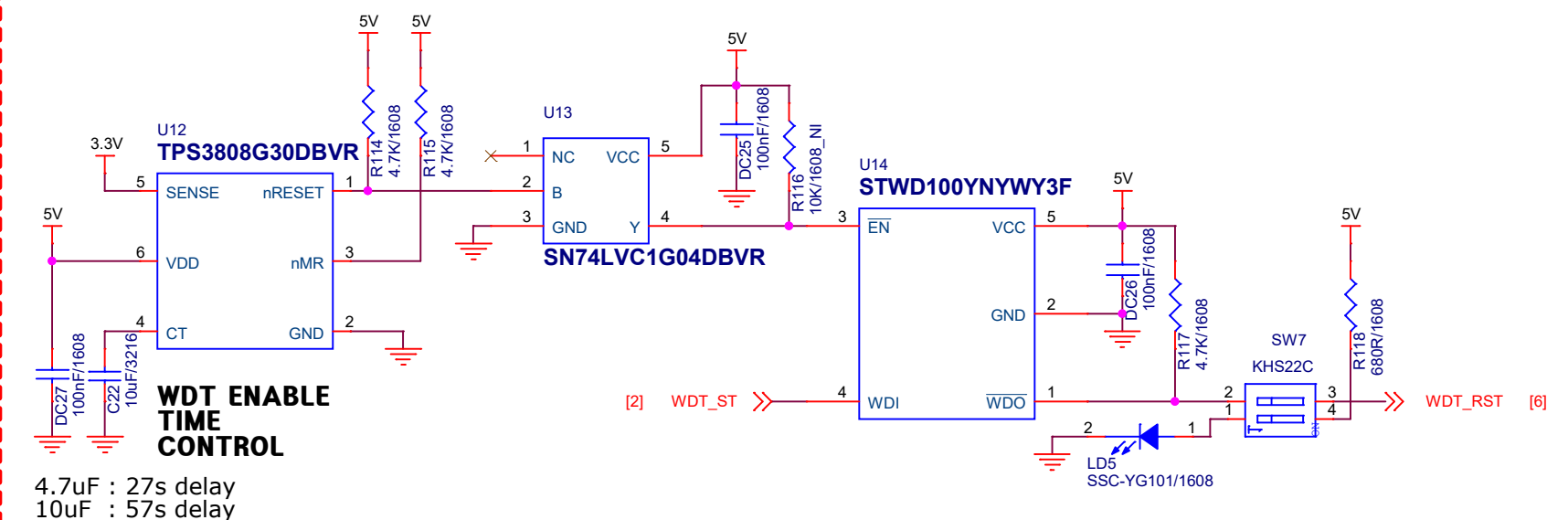
PIN번호	신호	신 호 기 능
1	GND	GROUND
2	CLK <sub>i</sub>	DATA 전송 CLOCK 신호
3	OE <sub>R</sub> <sub>i</sub>	GRAY PWM CLOCK 신호
4	OE <sub>B</sub> <sub>i</sub>	GRAY PWM CLOCK 신호
5	OE <sub>G</sub> <sub>i</sub>	GRAY PWM CLOCK 신호
6	LT <sub>i</sub>	표시DATA LATCH 신호
7	A3 <sub>i</sub>	LINE ADDRESS 지정신호
8	A2 <sub>i</sub>	LINE ADDRESS 지정신호
9	A1 <sub>i</sub>	LINE ADDRESS 지정신호
10	A0 <sub>i</sub>	LINE ADDRESS 지정신호
11	RD <sub>i</sub>	청색 DATA 신호
12	BD <sub>i</sub>	녹색 DATA 신호
13	GD <sub>i</sub>	적색 DATA 신호
14	GND	GROUND
15	DIS	DISPLAY ON/OFF

## DCDC Converter (3.3V / 3A)

### DC5V INPUT



## WATCHDOG RST



## Manual RESET

