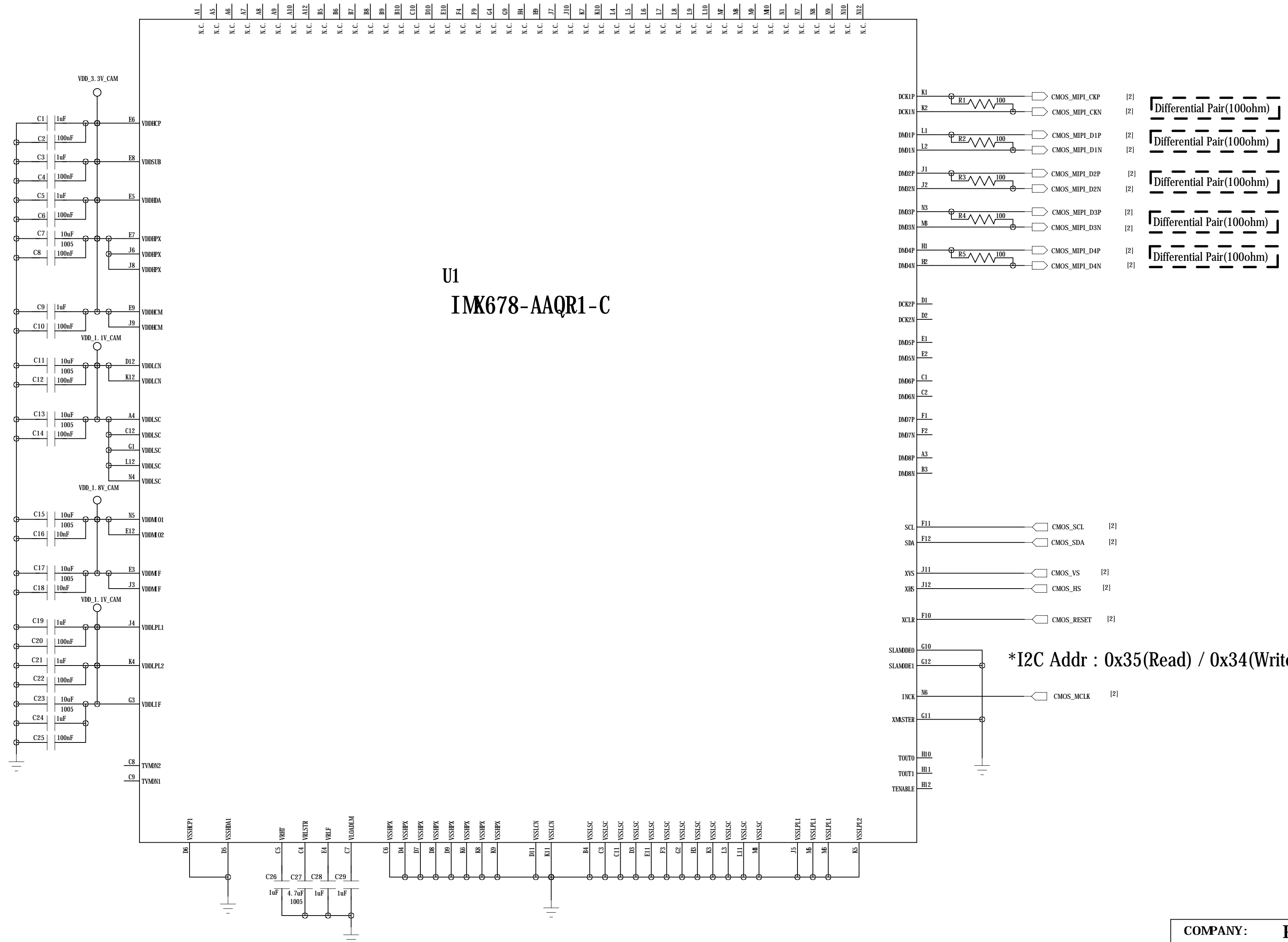
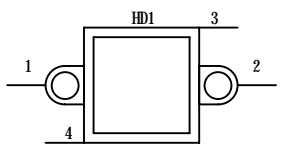


[CMOS 4K SENSOR(IMX678) IF]



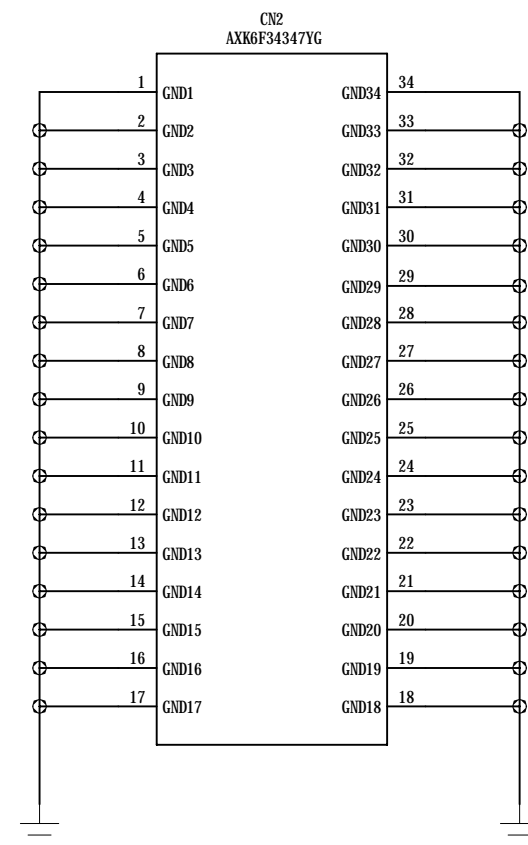
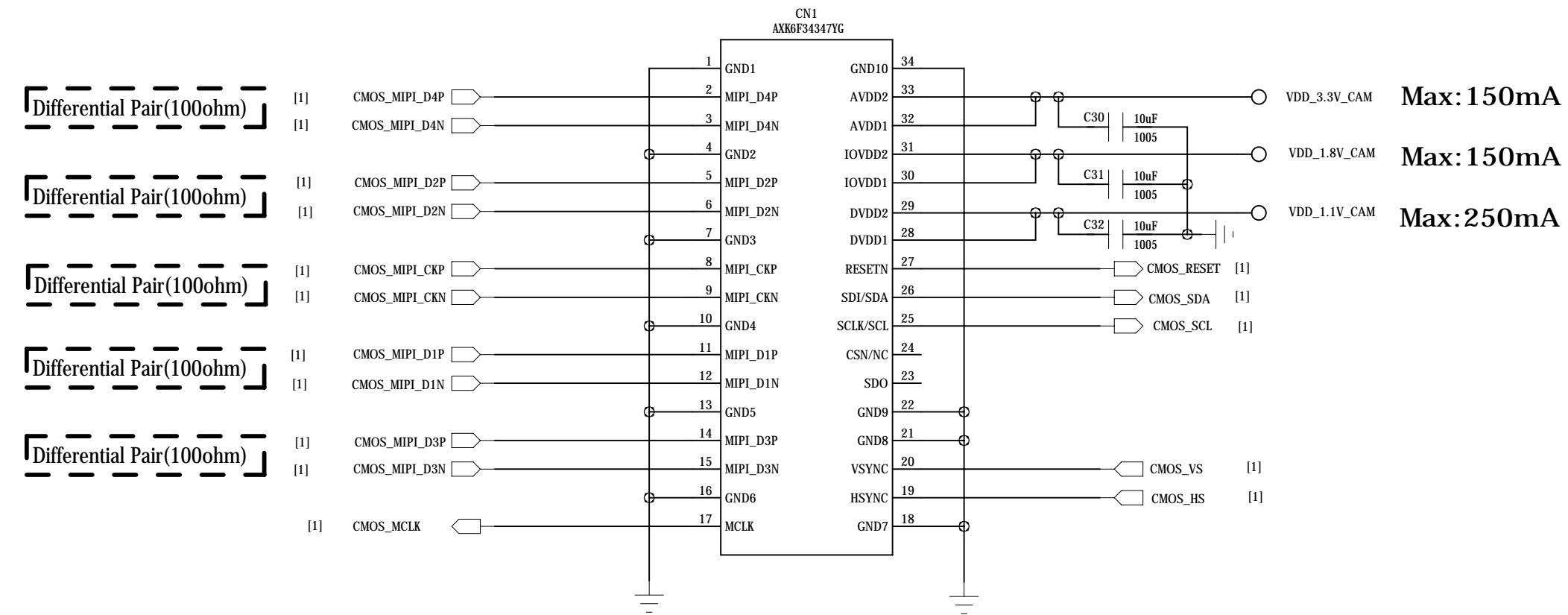
* Lens Holder



*I2C Addr : 0x35(Read) / 0x34(Write)

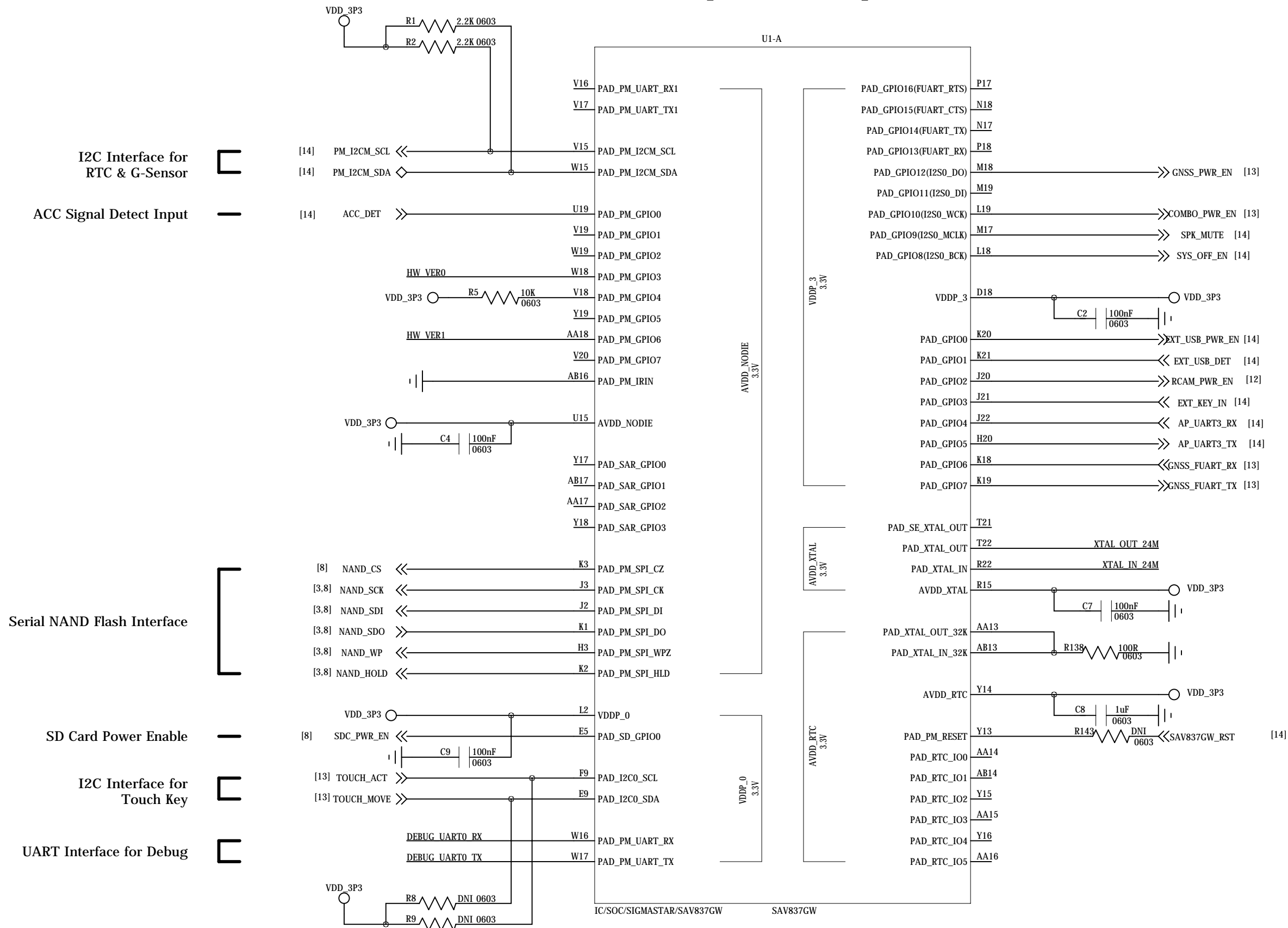
COMPANY:	PITTASOFT Co., Ltd		
TITLE:	IMX678		
MODEL NAME:	PCAM_MODULE (IMX678)	REV:	MP_V1.0
DATE:	2023-11-15	SHEET: 1	OF 2

[CONNECTOR I/O]

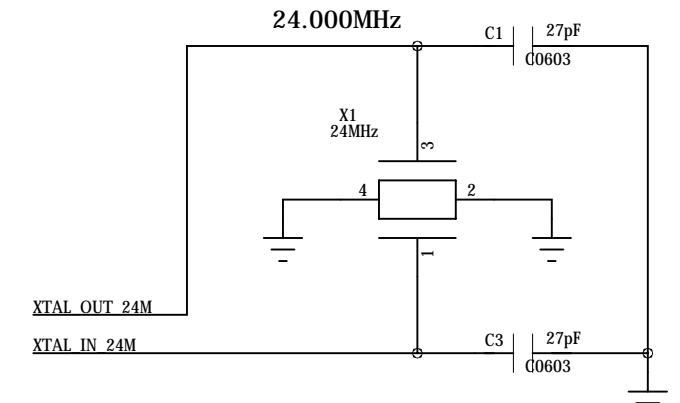


COMPANY:	PITTASOFT Co., Ltd		
TITLE:	CONNECTORS		
MODEL NAME:	IMCAM_MODULE (IMK678)	REV:	MP_V1.0
DATE:	2023-11-15	SHEET: 2	OF 2

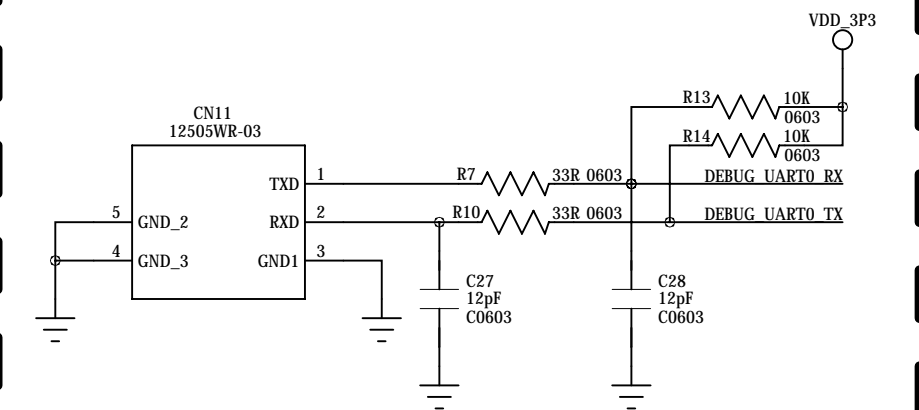
[CONTROL]



[CRYSTAL]



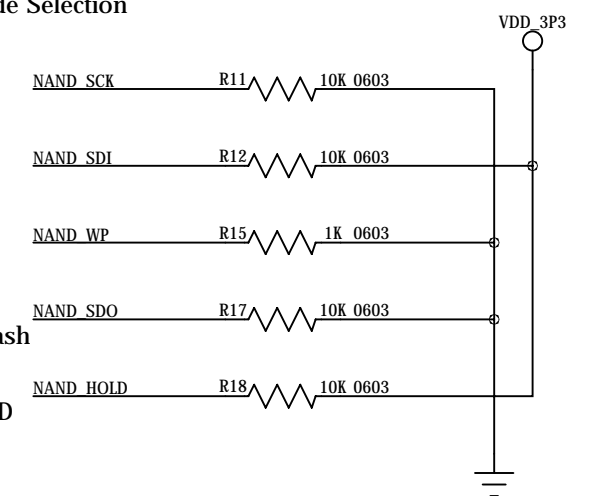
[UART(for debug)]



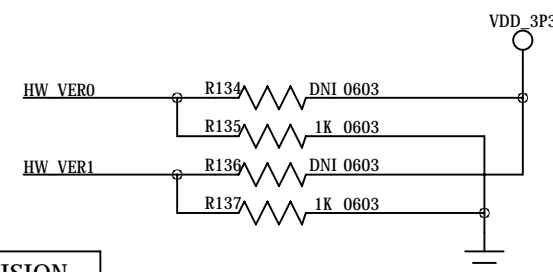
[BOOT Strap]

BOOT CONFIG[4:0] - BOOT Mode Selection

- BOOT CONFIG[0] High : Skip SD Boot
Low : SD Boot
- BOOT CONFIG[1] High : Normal Boot
Low : Secure Boot
- BOOT CONFIG[2] High : SPI NOR Boot
Low : ROM Boot
- BOOT CONFIG[3] High : SPI NOR Flash
Low : SPI NAND Flash
- BOOT CONFIG[4] High : NOR/NAND
Low : Non-NOR/NAND

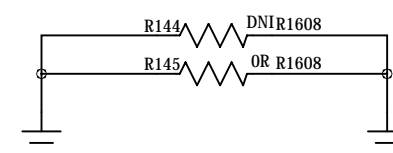


[HW Revision Configuration]



HW_VER1	HW_VER0	H/W REVISION
0	0	Rev 1.0 (Default)
0	1	-
1	0	-
1	1	-

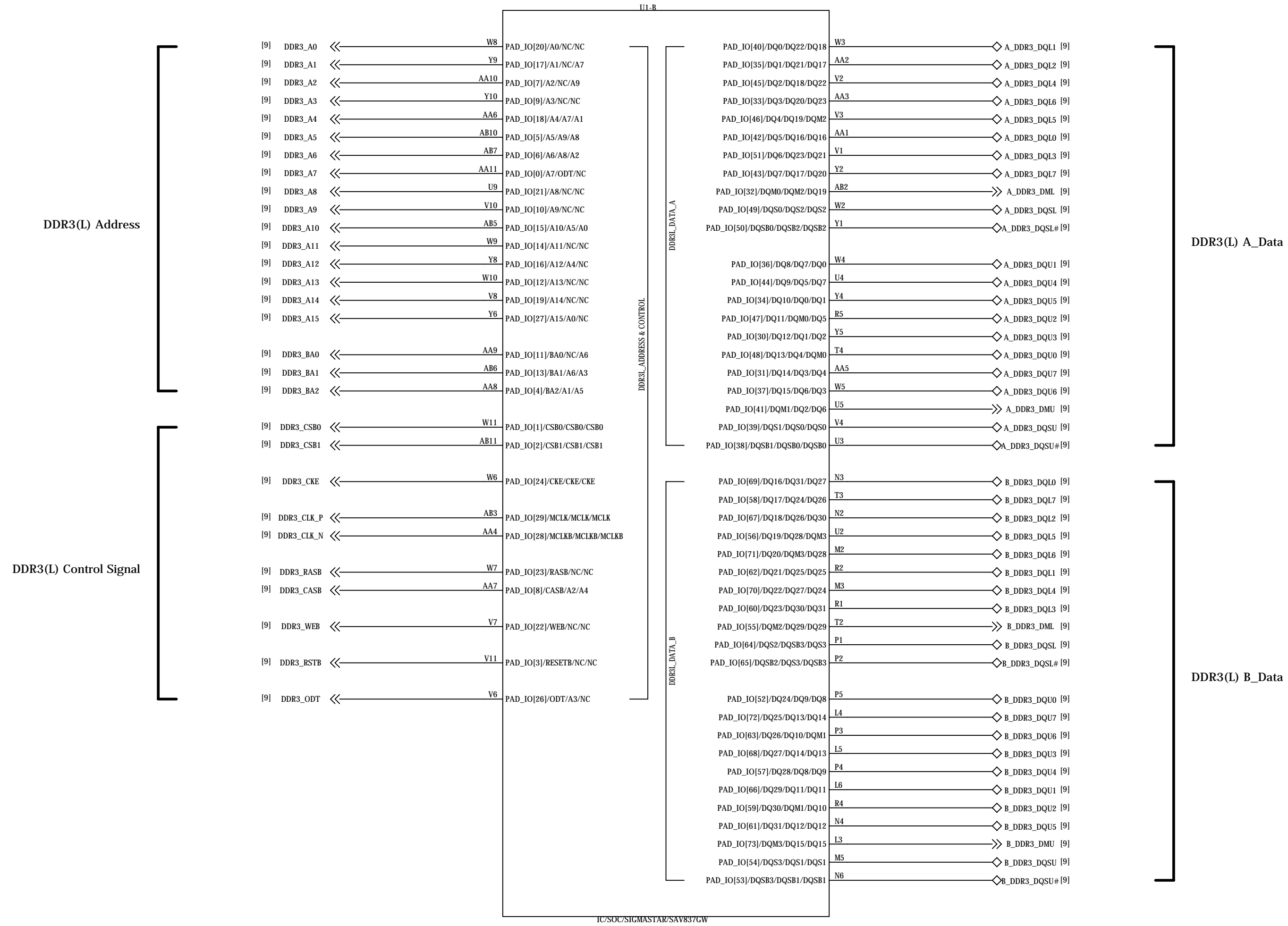
[MAIN B'd Distinction]



R144	R145	MAIN B'd
DNI	0 ohm	DR770X
0 ohm	DNI	DR970X

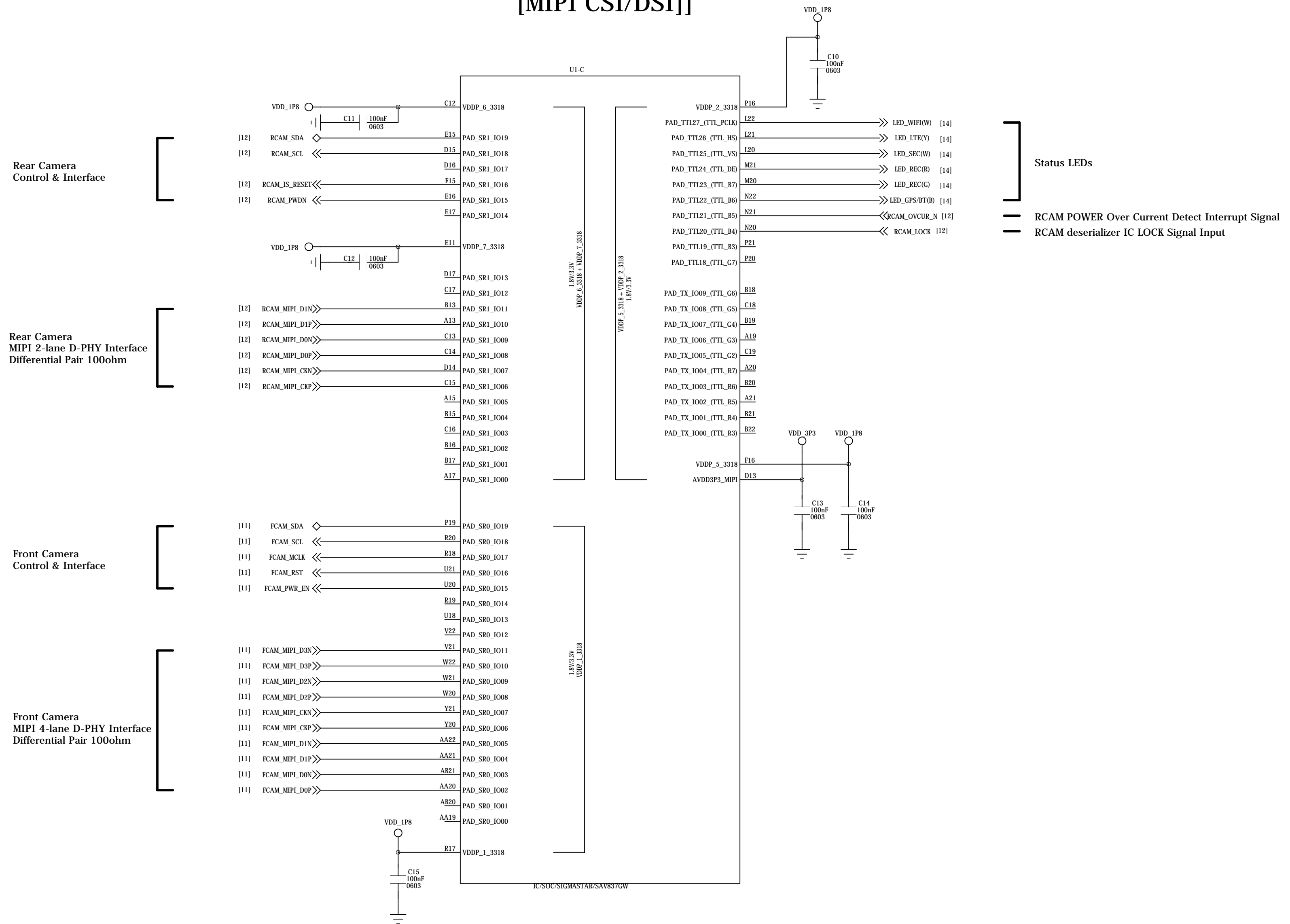
COMPANY:	PITTASOFT		
TITLE:	SAV837GW(CONTROL)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	3 of 14

[DDR3L INTERFACE]



COMPANY:	PITTASOFT		
TITLE:	SAV837GW(DDR3L)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	4 of 14

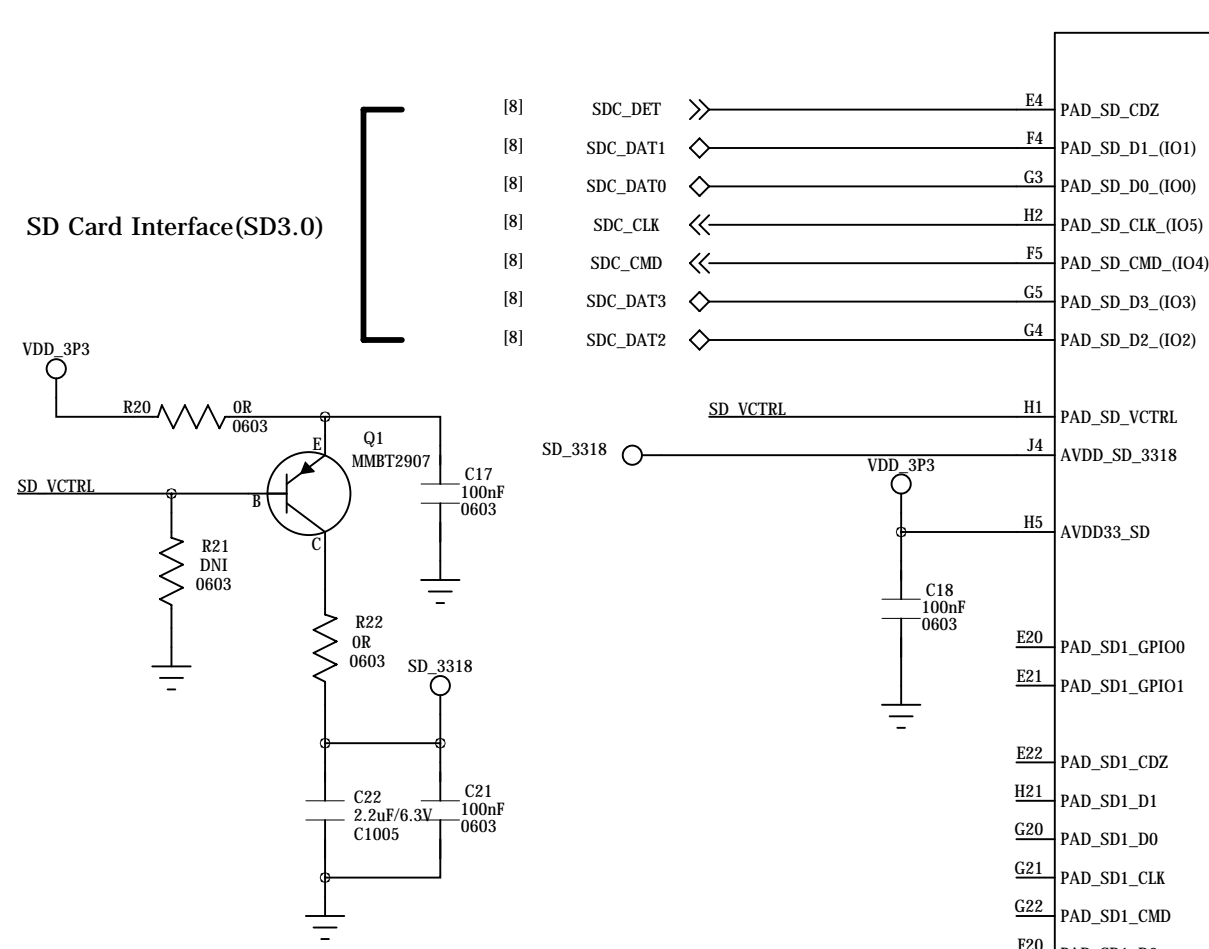
[MIPI CSI/DSI]



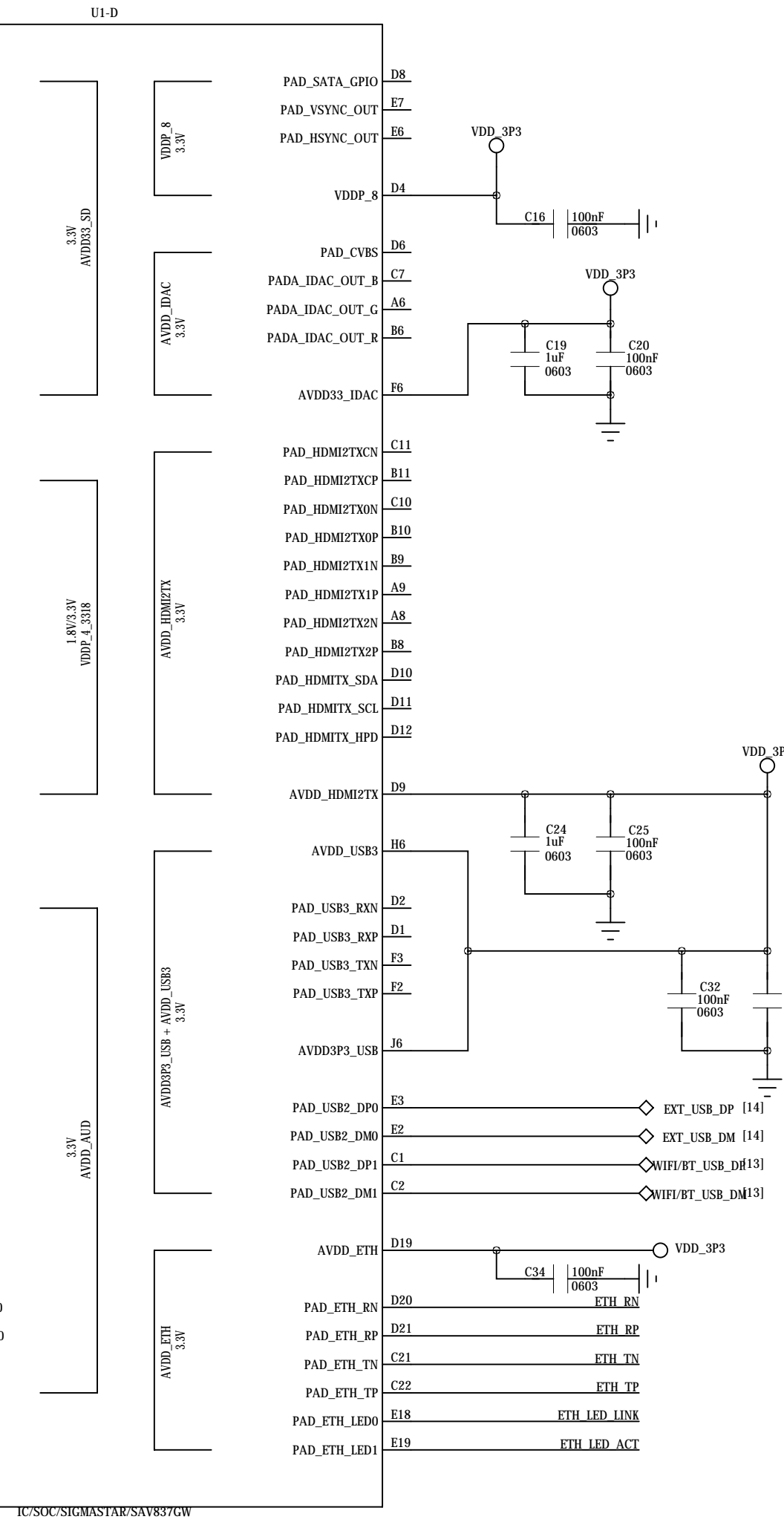
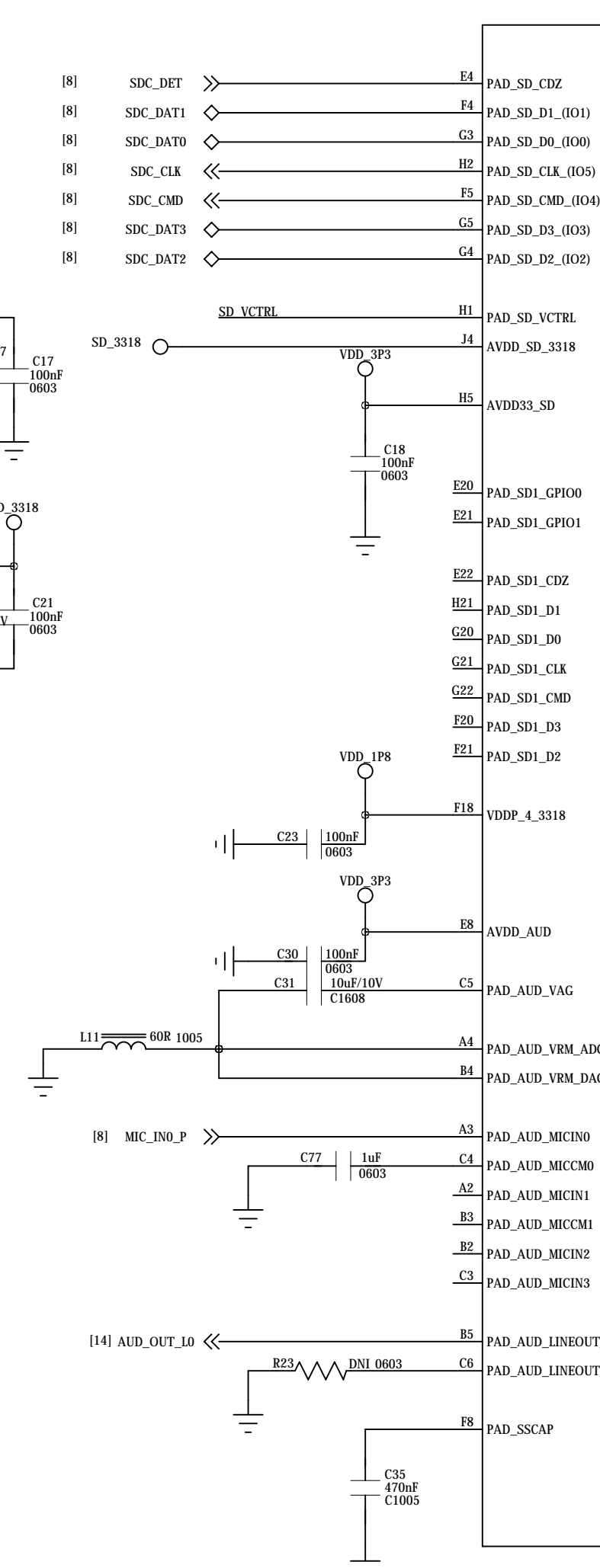
COMPANY:	PITTASOFT		
TITLE:	SAV837GW(VIDEO_IN/OUT)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	5 of 14

[PERIPHERAL INTERFACE]

SD Card Interface (SD3.0)

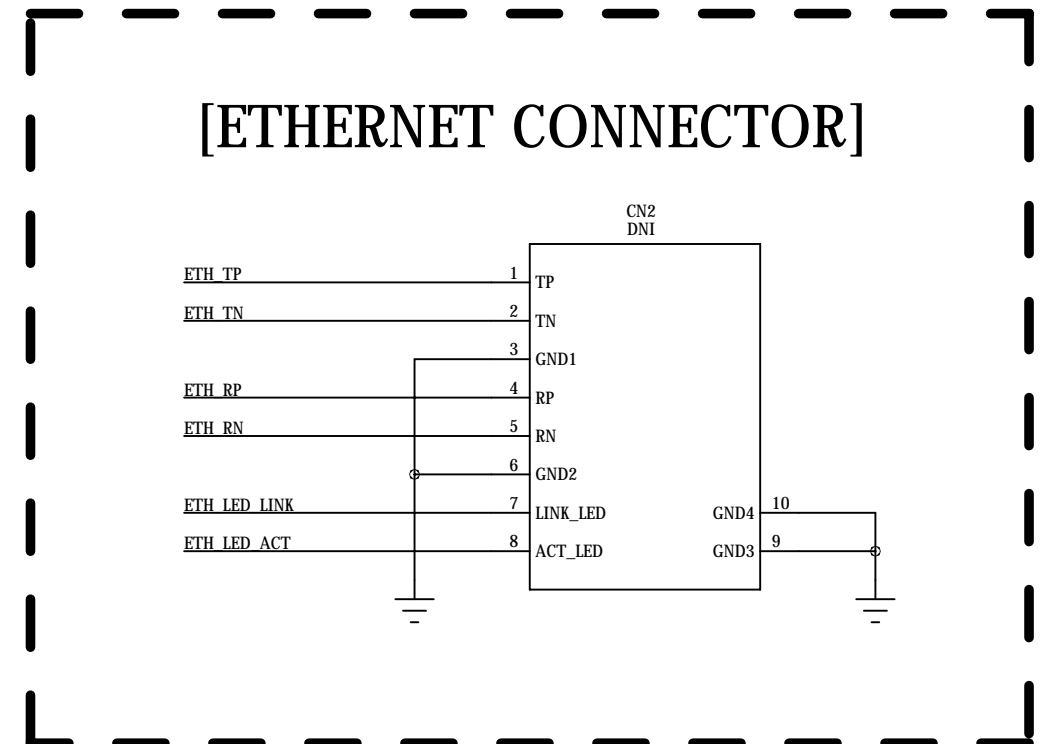


Audio In(MIC) / Audio Out(Speaker)



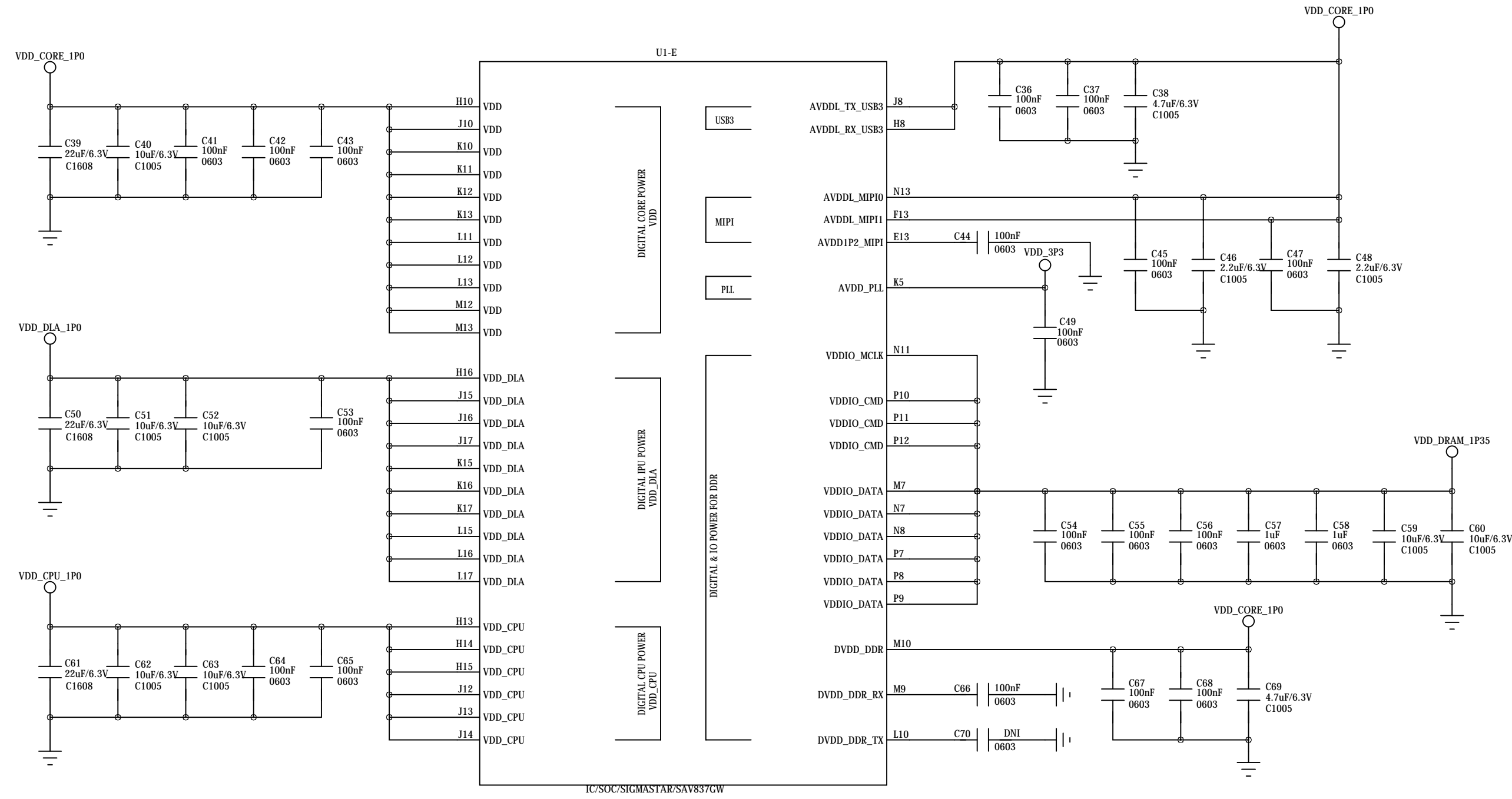
- External LTE Module USB Interface
Differential Pair 90ohm
- Internal Wi-Fi/BT Combo Module USB Interface
Differential Pair 90ohm
- Ethernet Interface
Differential Pair 100ohm

[ETHERNET CONNECTOR]

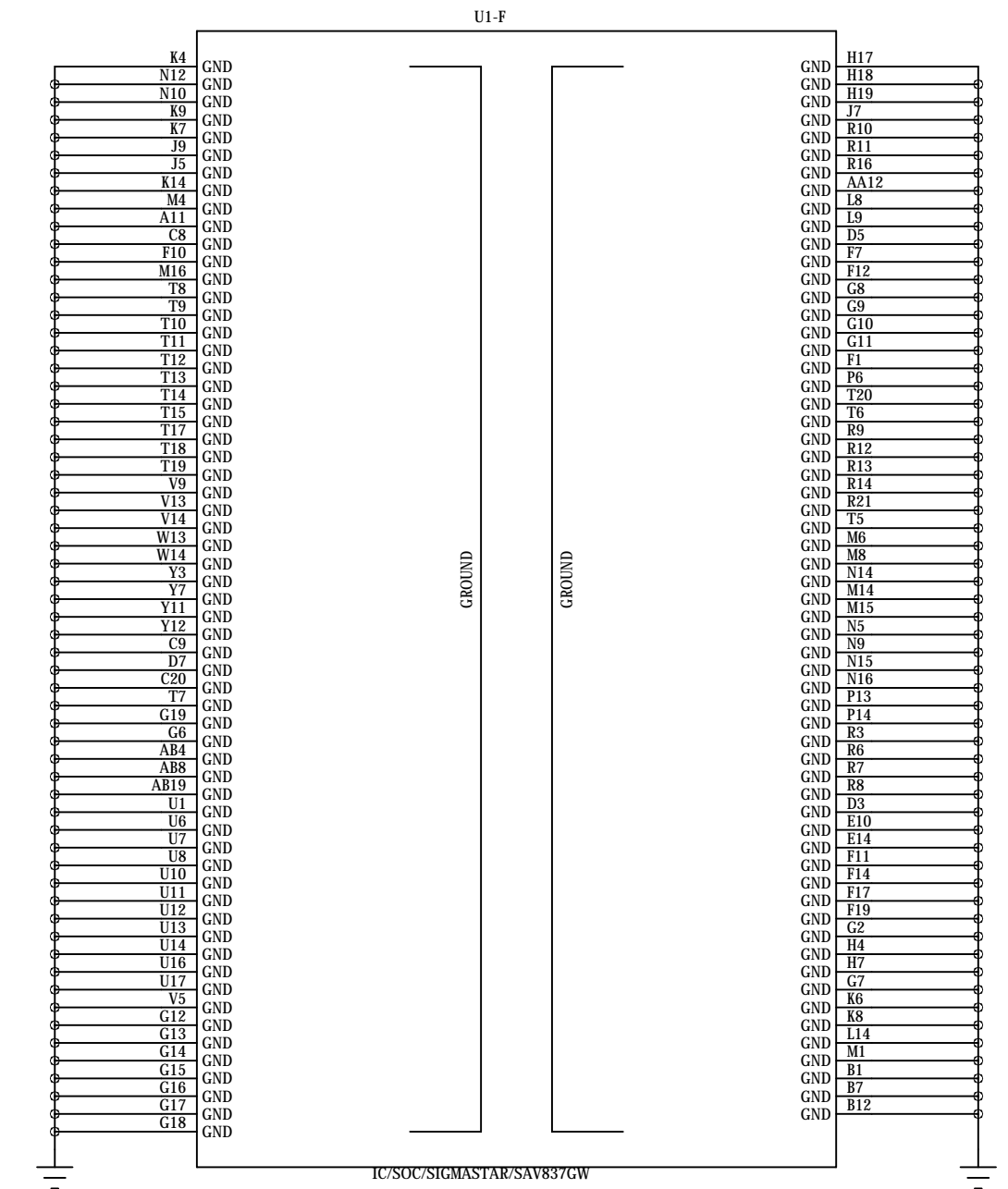


COMPANY:	PITTASOFT		
TITLE:	SAV837GW(PERIPHERAL)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	6 of 14

[POWER]

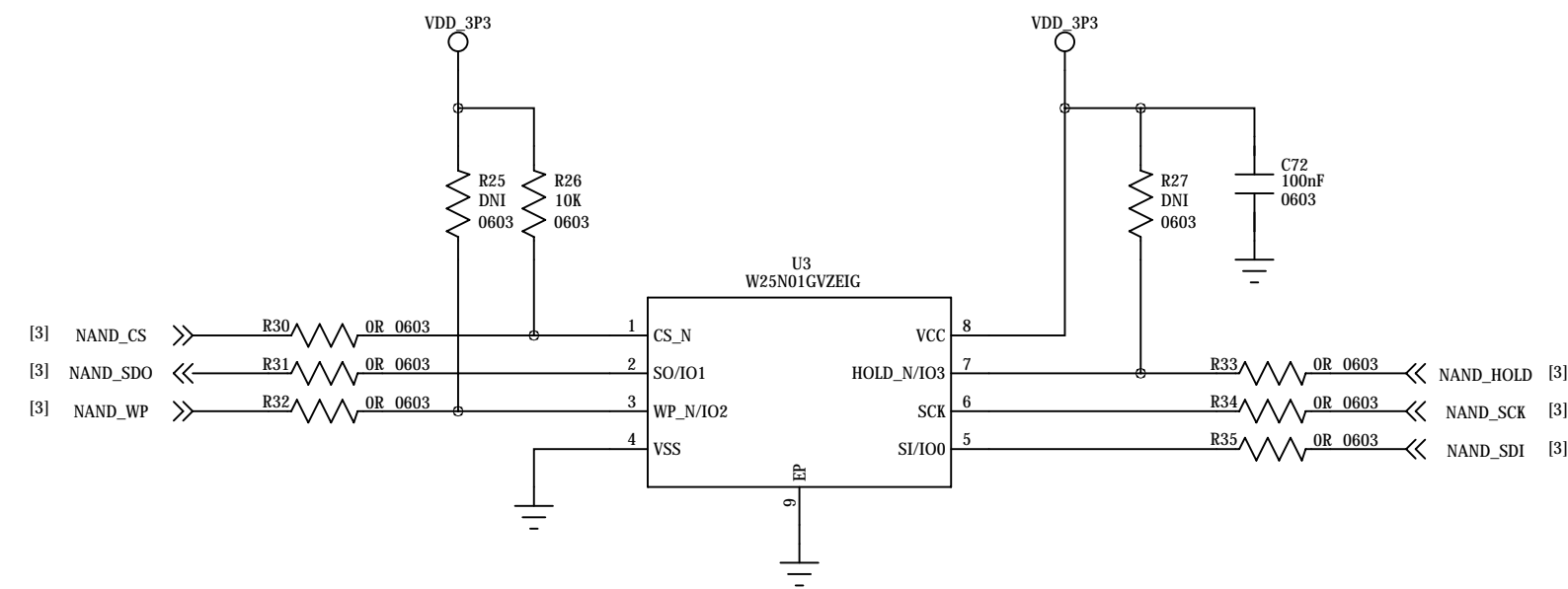


[GROUND]



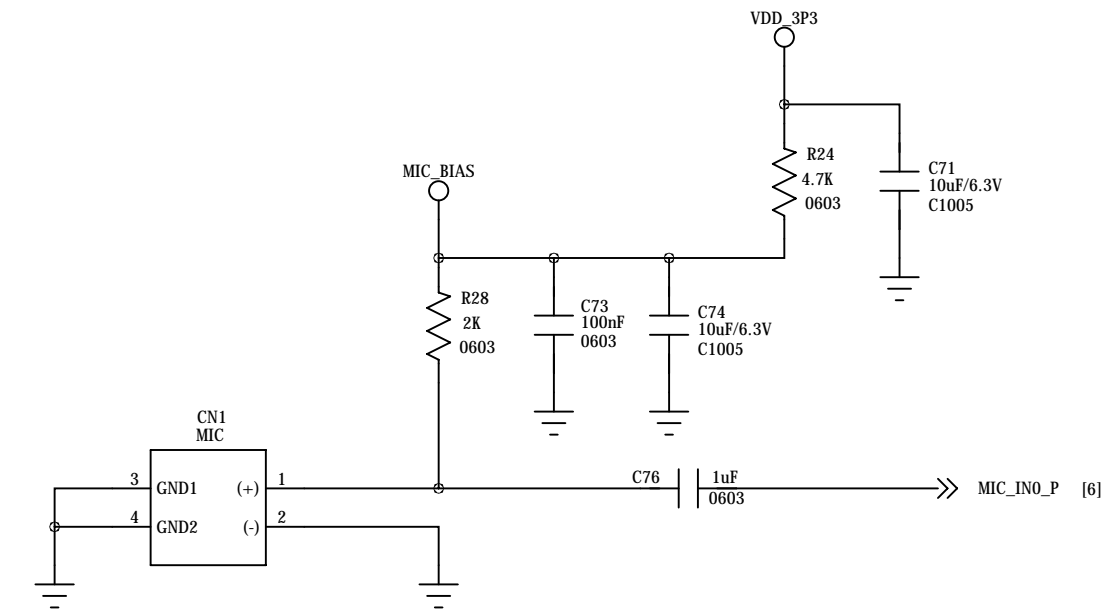
COMPANY:	PITTASOFT		
TITLE:	SAV837GW(PWR/GND)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	7 of 14

[Serial NAND Flash]

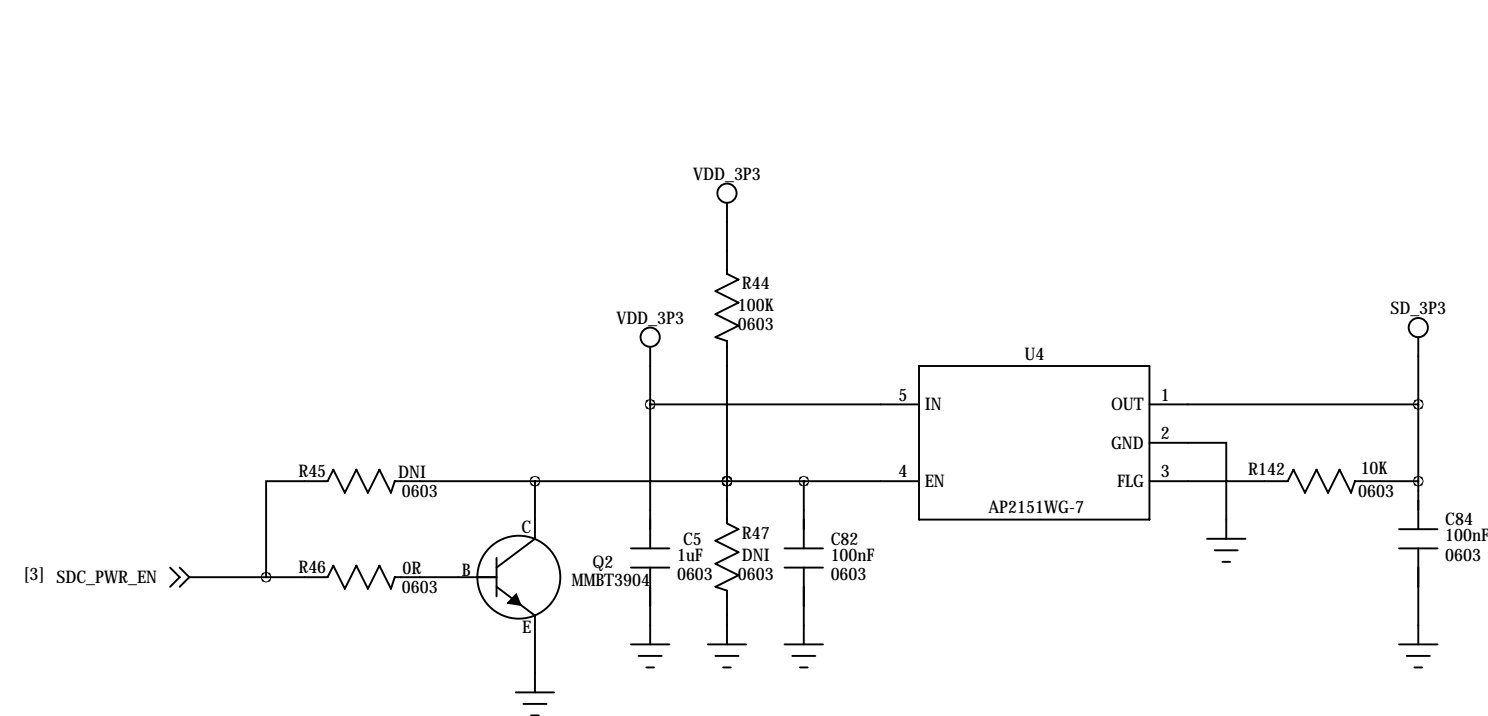


* DR770X/DR800/DR970X model use 128MB Nand Flash
 * DR970X Plus model use 256MB Nand Flash

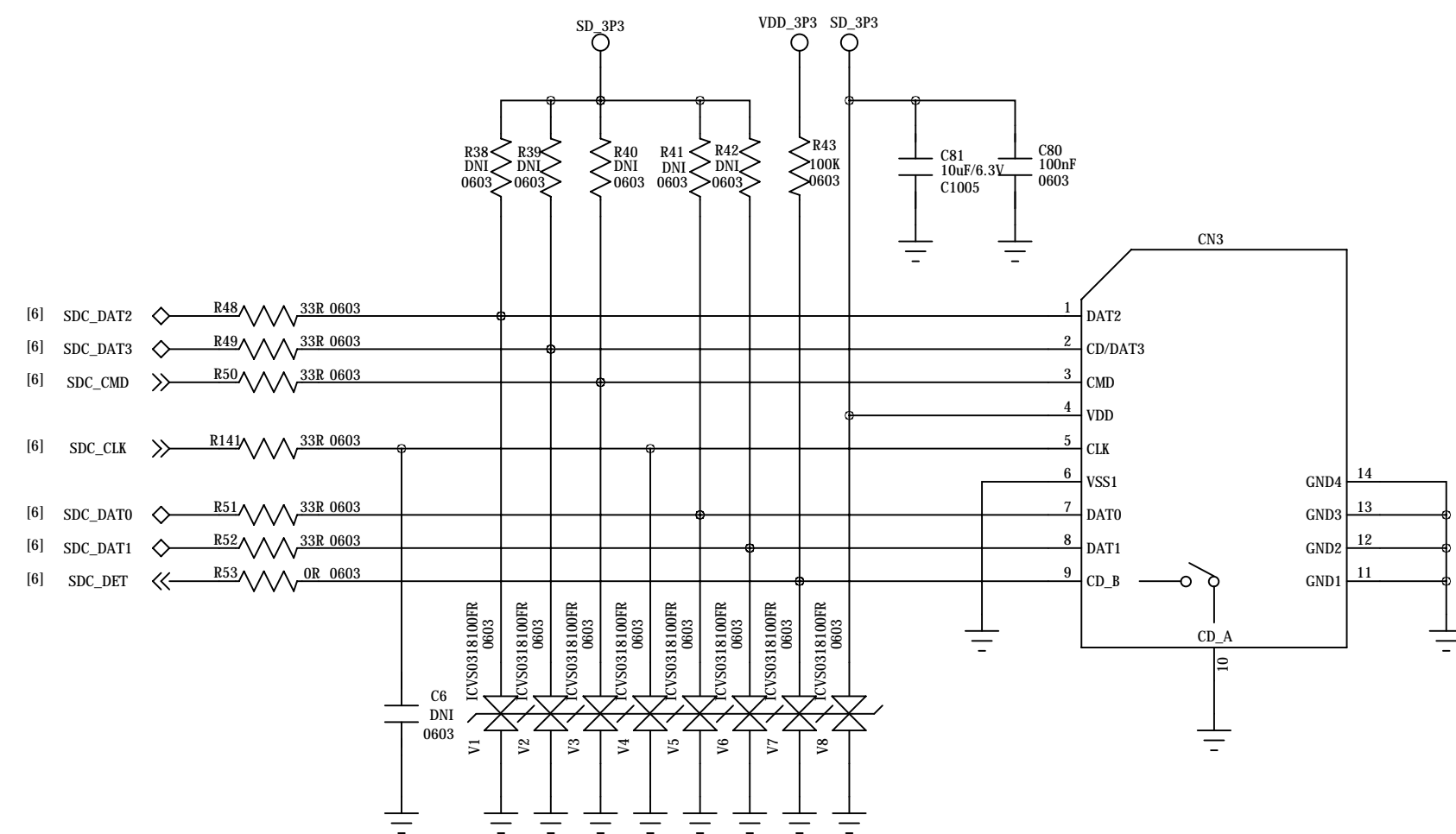
[AUDIO IN(MIC)]



[microSD CARD]

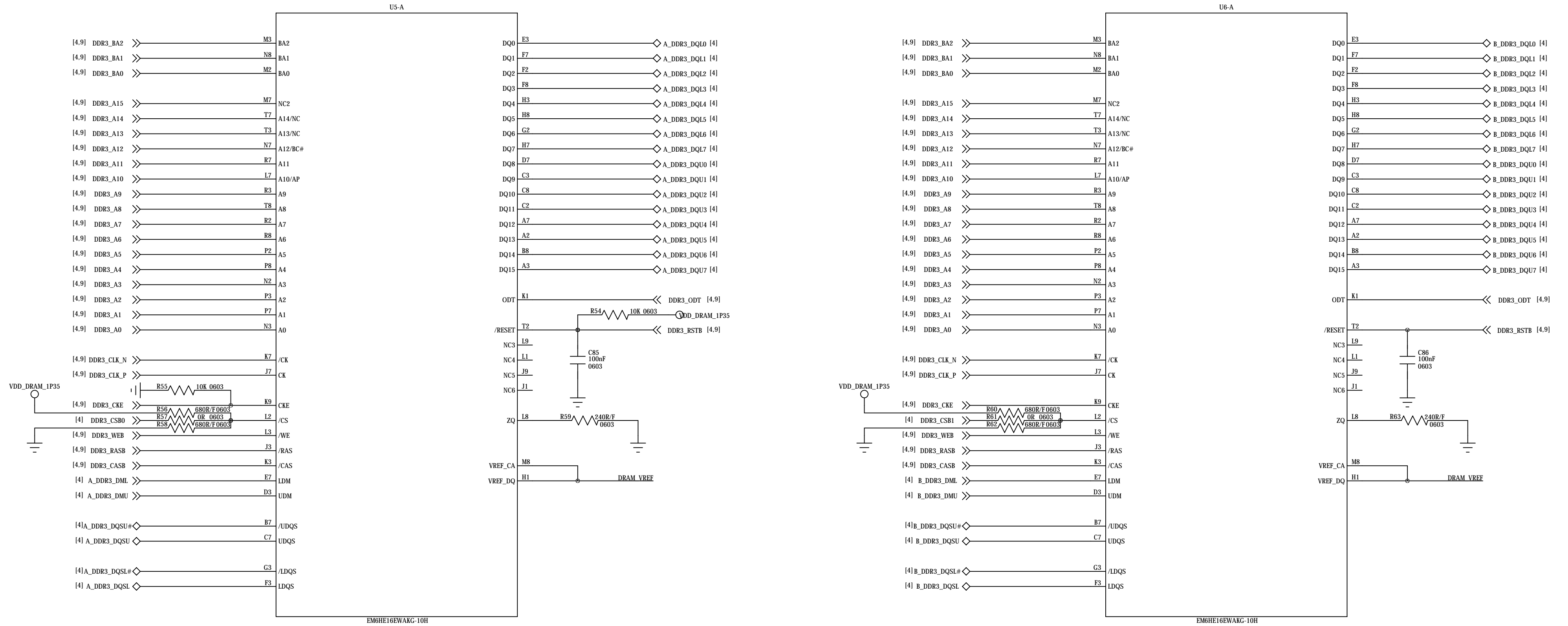


2021/07/01 - Load Switch IC 1/6±P1®A1 · Ī EUP3502A => AP2151 · Ī °İç° °°°æ



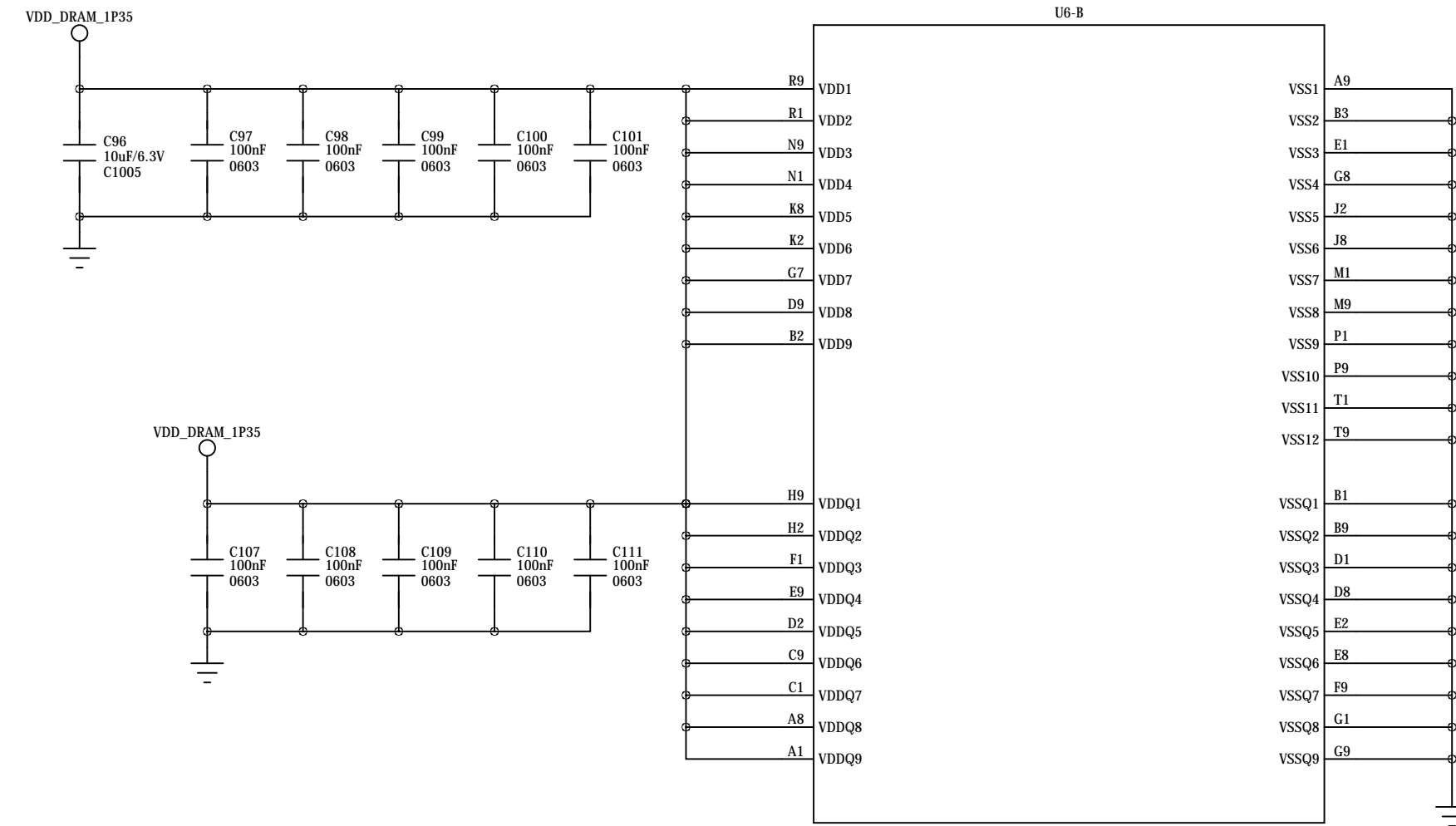
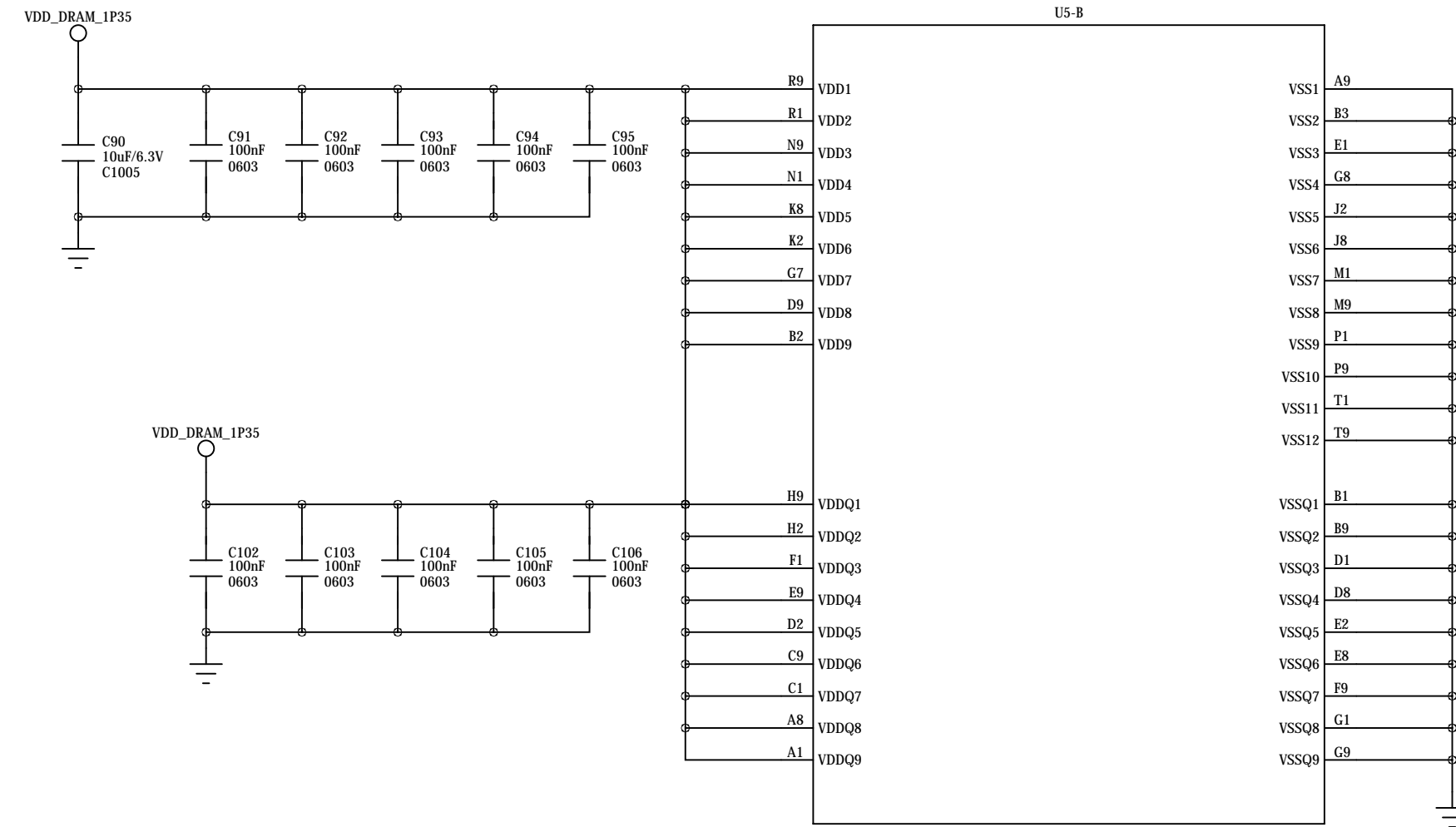
COMPANY:	PITTASOFT		
TITLE:	NAND/SDCARD/MIC		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	8 of 14

[DDR3L x2]



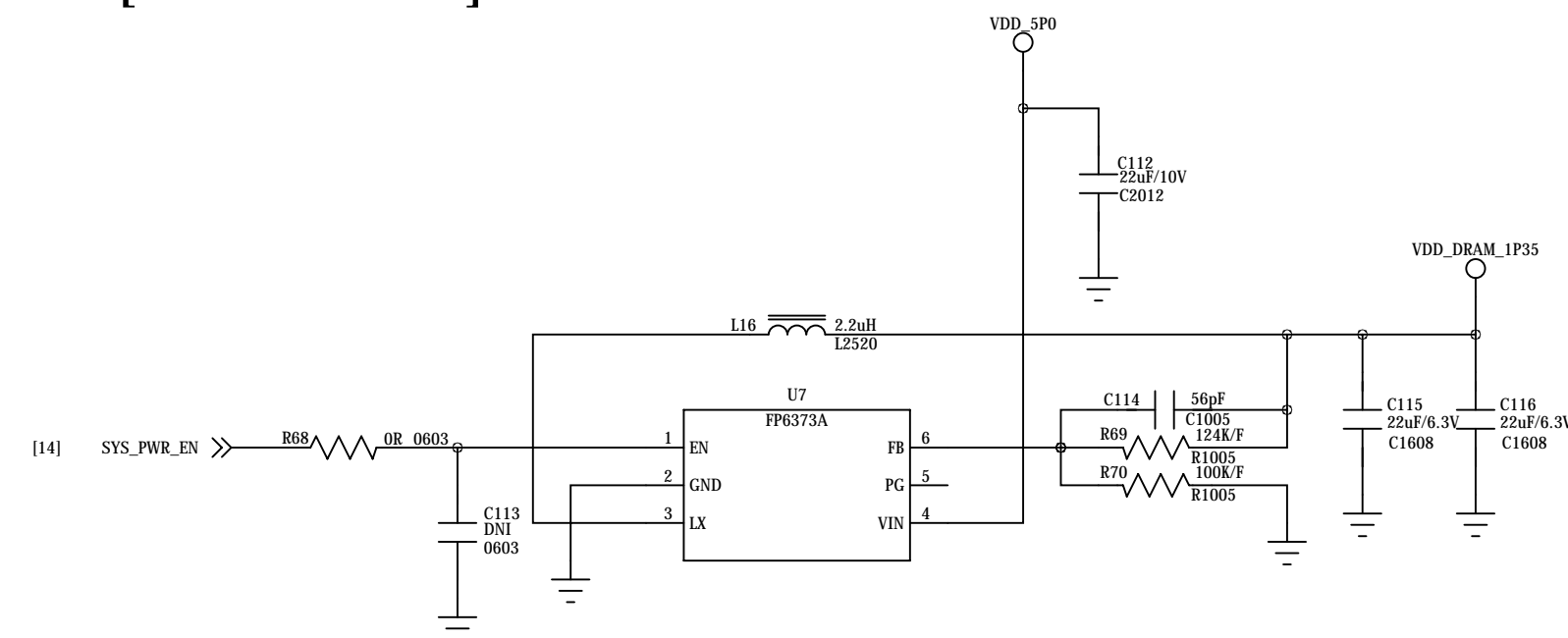
COMPANY:	PITTASOFT		
TITLE:	DDR3L_X2		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	9 of 14

[DDR3L x2 POWER & GND]



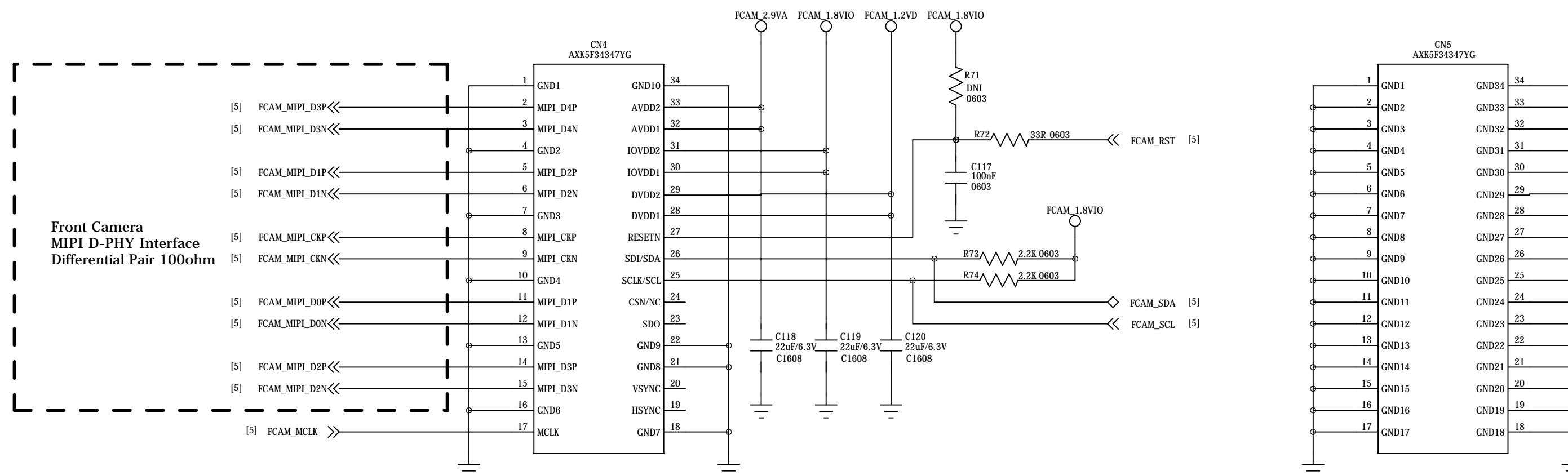
EM6HE16EWAKG-10H

[DDR POWER]

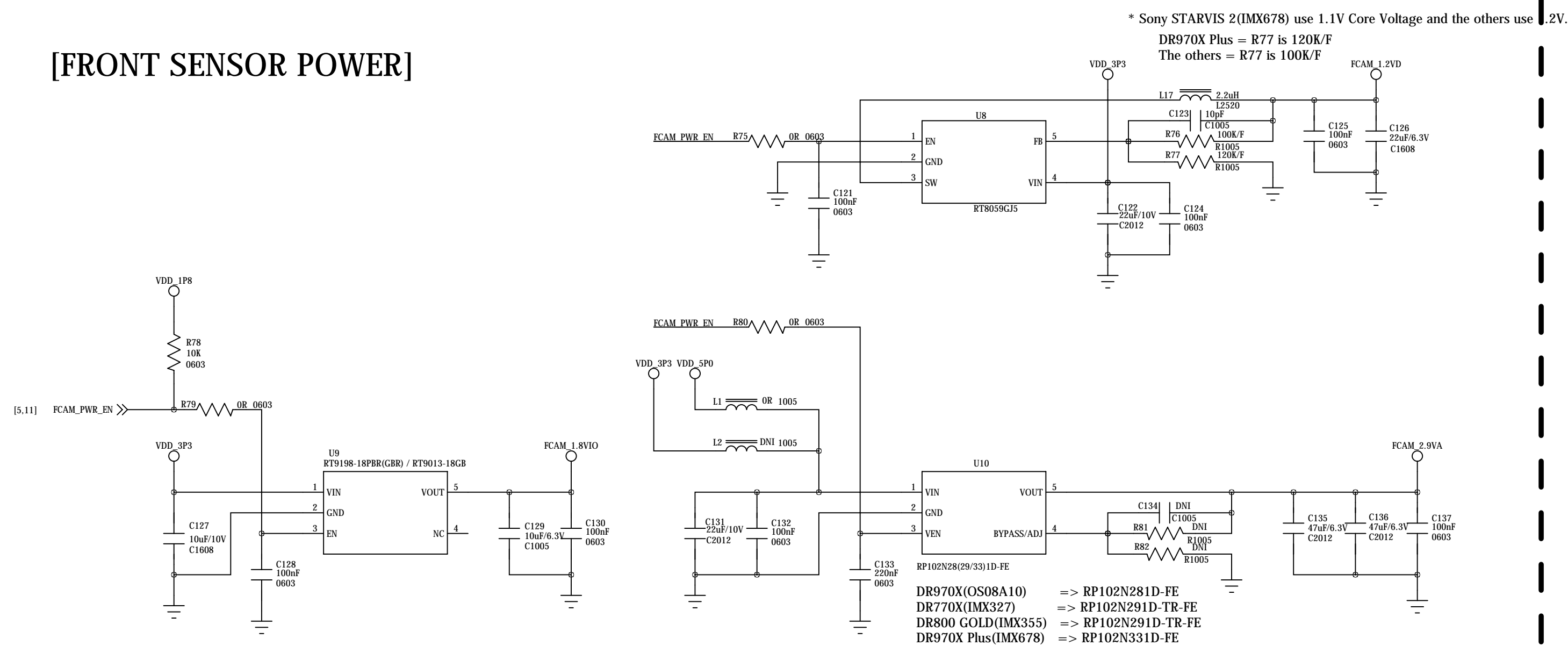


COMPANY:	PITTASOFT		
TITLE:	DDR3L_X2_POWER		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	10 14

[FRONT SENSOR INTERFACE]

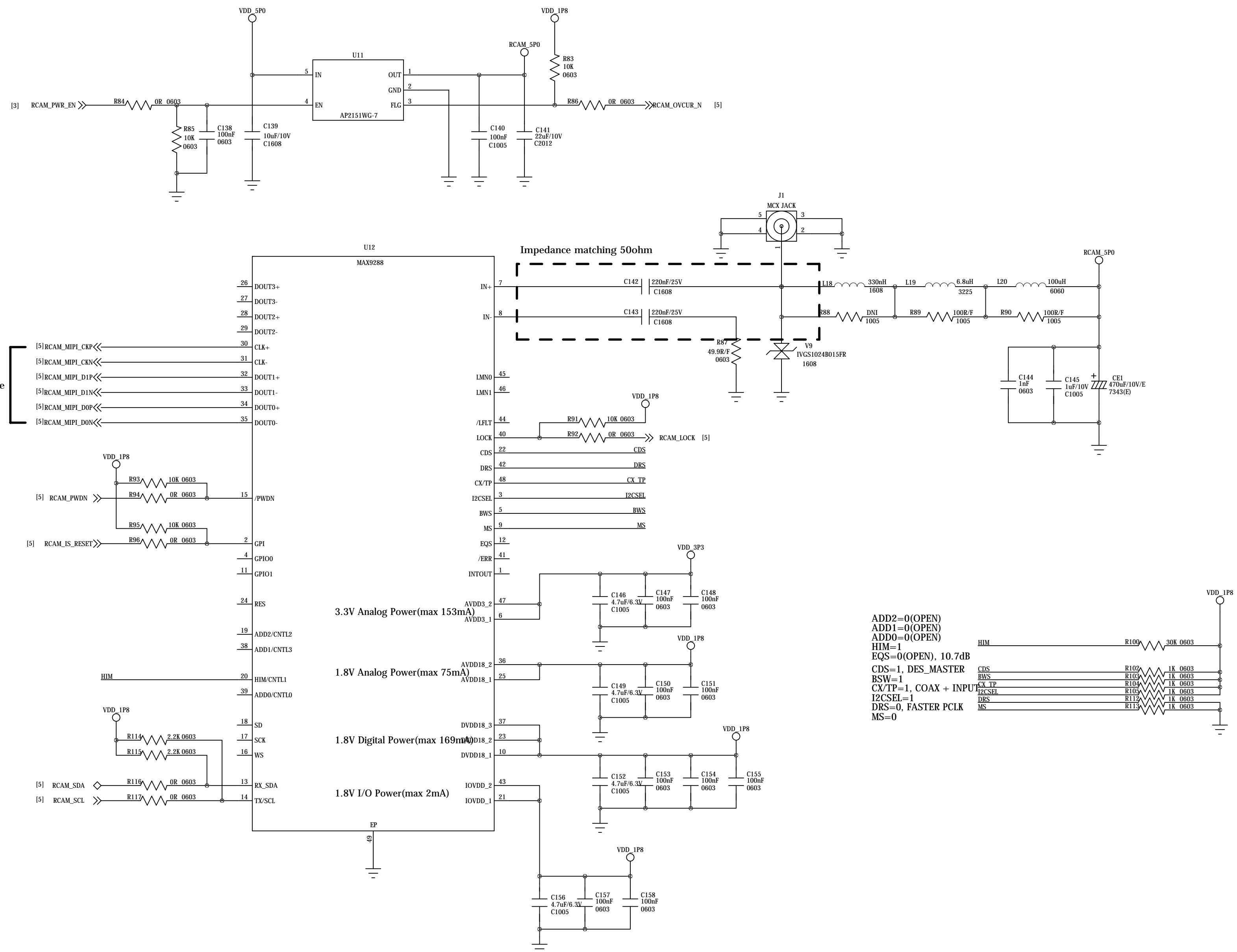


[FRONT SENSOR POWER]



COMPANY:	PITTASOFT		
TITLE:	FCAM(POWER/CON)		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	14 14

[REAR CAMERA DESERIALIZER(POC)]

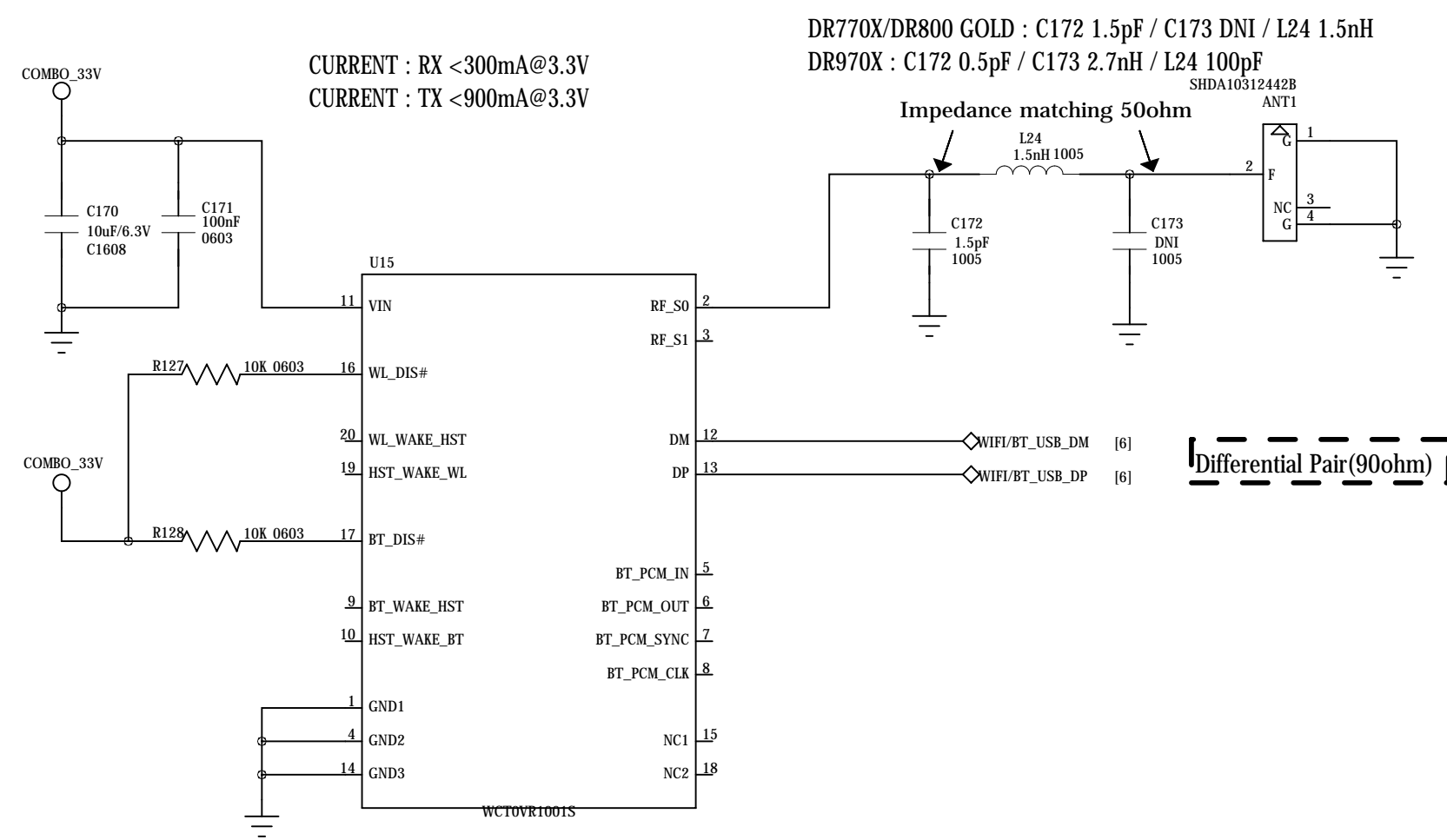
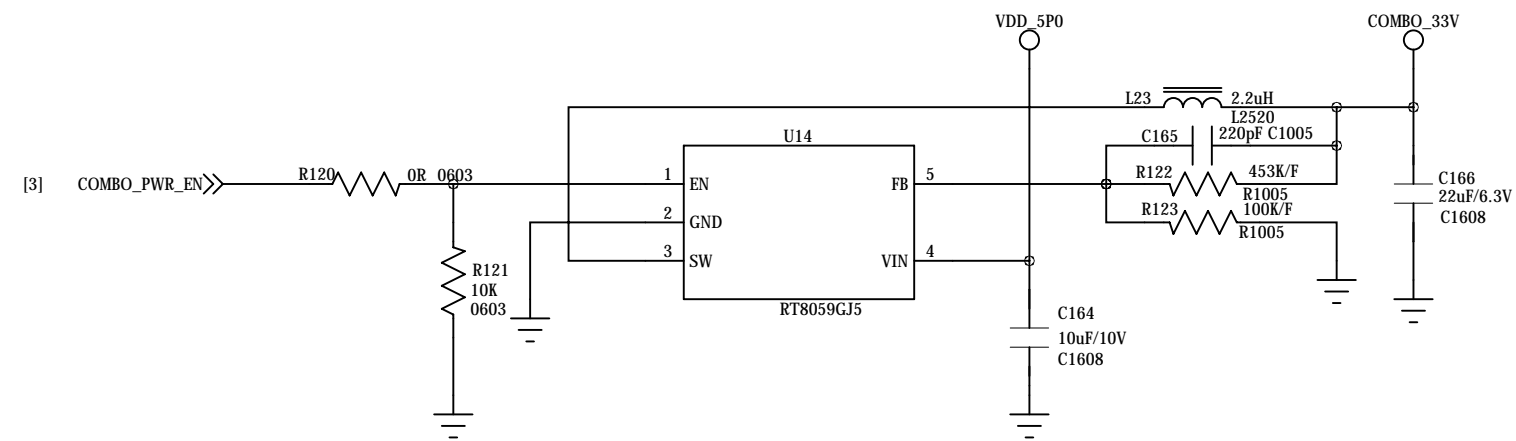


Rear Camera
MIPI 2-lane D-PHY Interface
Differential Pair 100ohm

ADD2=0(OPEN)
ADD1=0(OPEN)
ADD0=0(OPEN)
HIM=1
EQS=0(OPEN), 10.7dB
CDS=1, DES_MASTER
BSW=1
CX/TP=1, COAX + INPUT
I2CSEL=1
DR=0, FASTER PCLK
MS=0

COMPANY:		PITTASOFT	
TITLE:		RCAM(POWER/DESERIALIZER)	
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	18 14

[WIFI/BT COMBO MODULE]



CURRENT : RX <300mA@3.3V
CURRENT : TX <900mA@3.3V

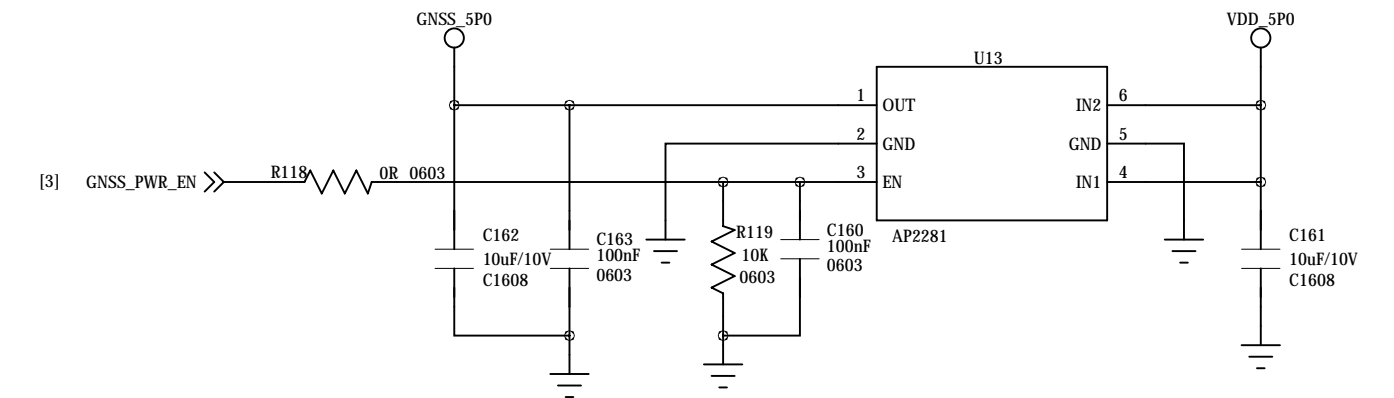
DR770X/DR800 GOLD : C172 1.5pF / C173 DNI / L24 1.5nH
DR970X : C172 0.5pF / C173 2.7nH / L24 100pF

Impedance matching 50ohm

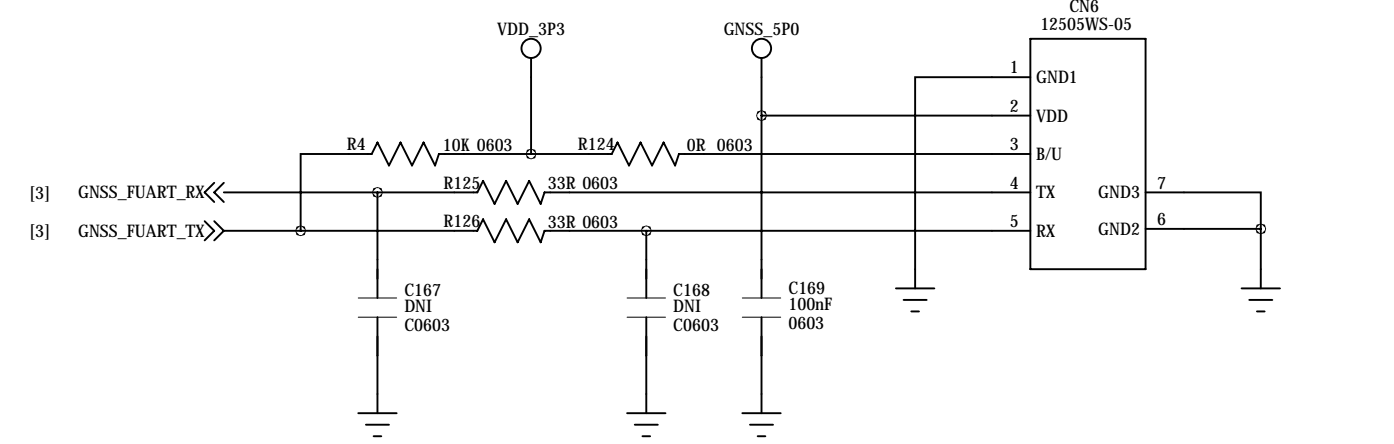
Differential Pair(90ohm)

<WiFi Module Selection>
DR970X : WCT0VR1001S / (2.4G, 5G)
DR770X/DR800 GOLD : WT85R1200(T) / (2.4G)

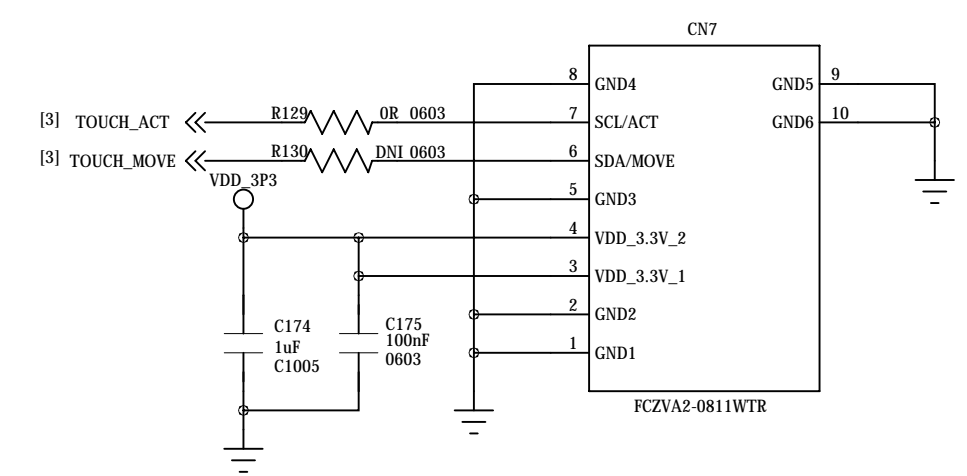
[GNSS MODULE CONNECTOR]



2021/07/01 - Load Switch IC 1/6±P10A1 - EUP3502A => AP2281 - I 0IC 0-0ae

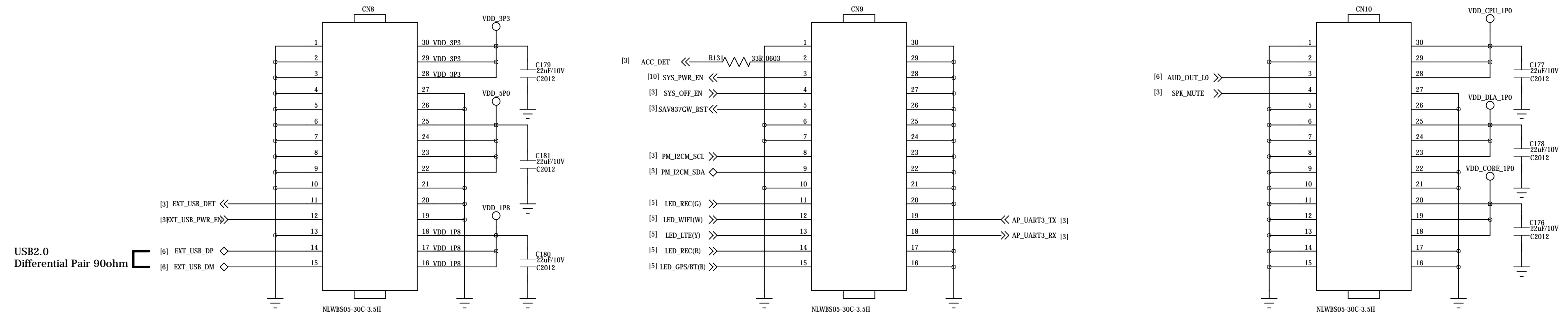


[TOUCH KEY SENSOR CONNECTOR]

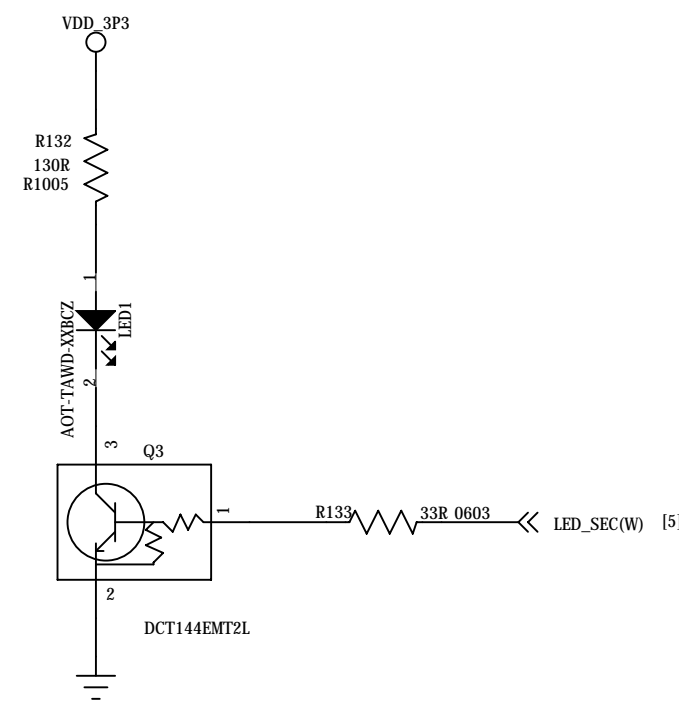


COMPANY:	PITTASOFT		
TITLE:	WIFI+BT/GNSS/TOUCH		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	13 14

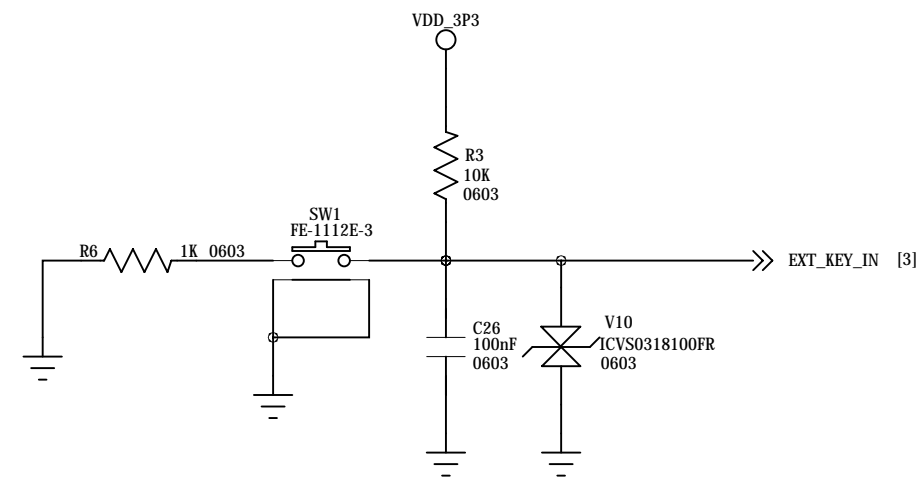
[BOARD TO BOARD CONNECTORS]



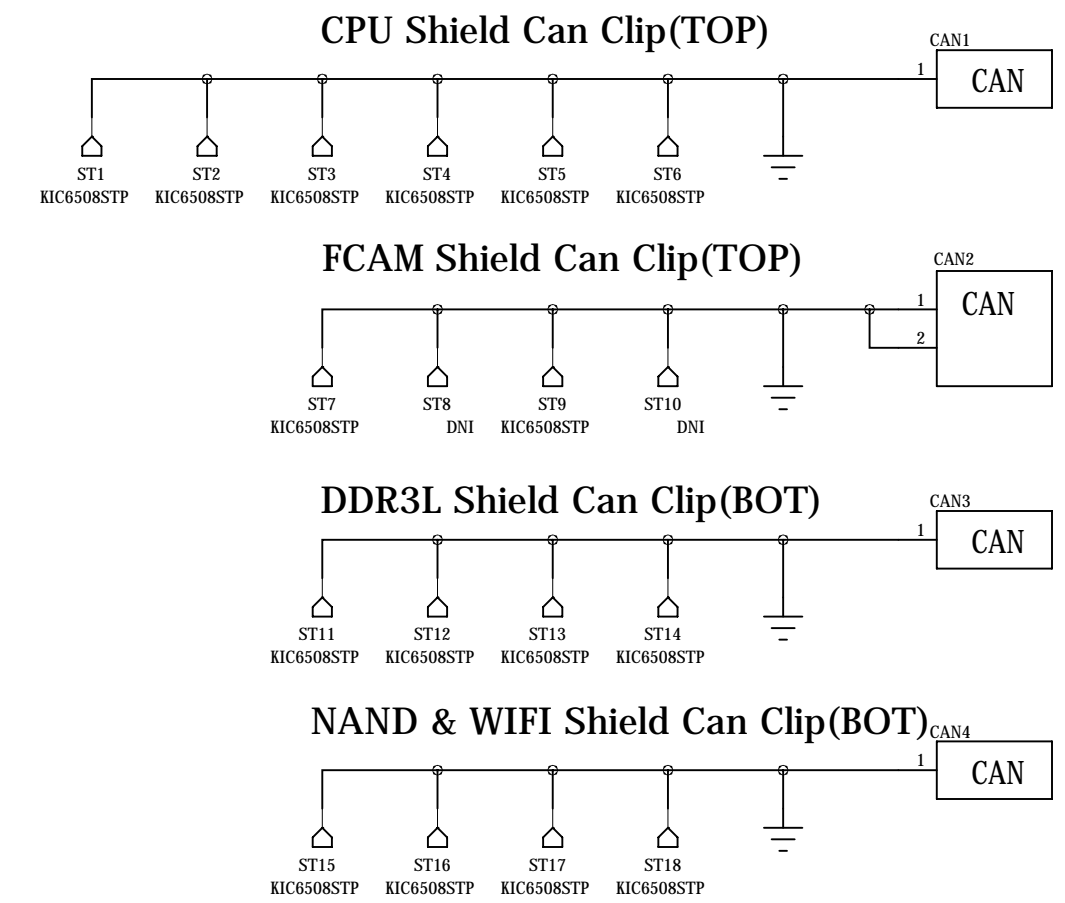
[FRONT SECURITY LED(WHITE)]



[EXTERNAL KEY INPUT(FORMAT)]

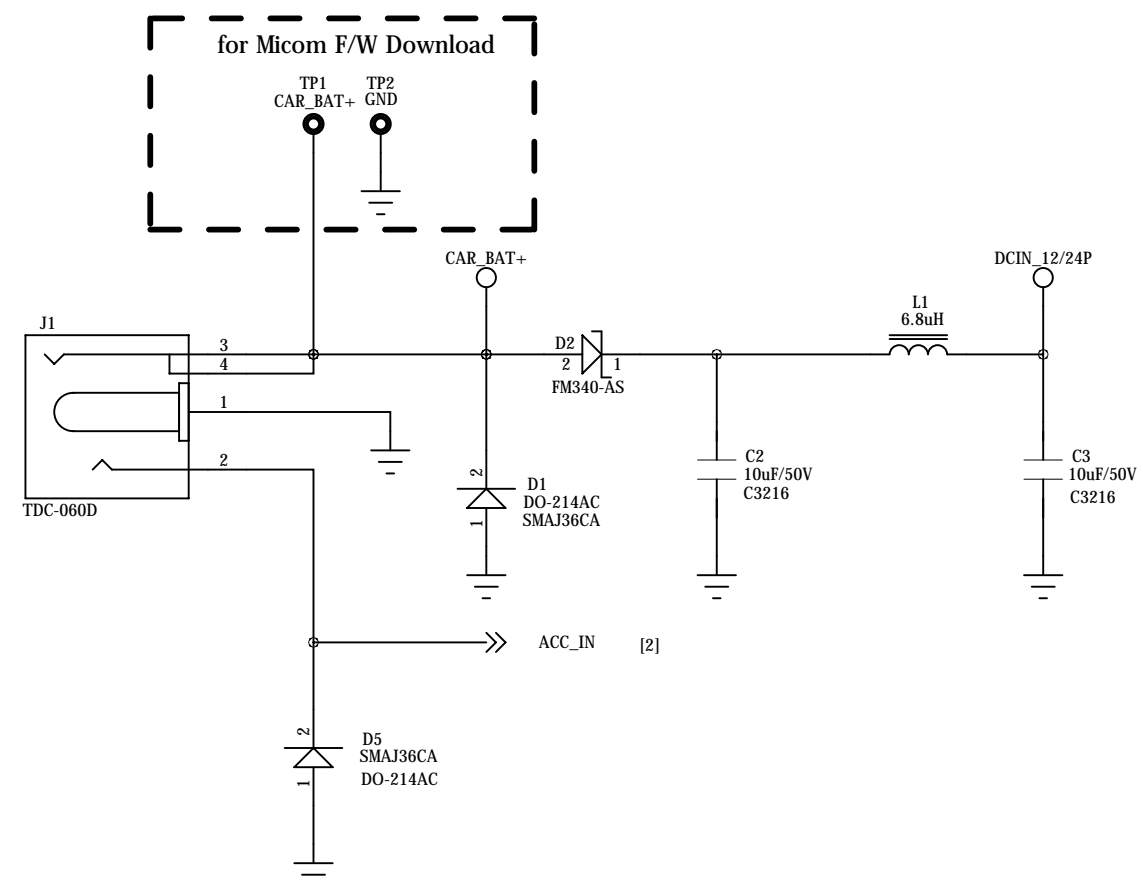


[SHIELD CAN & CLIP]



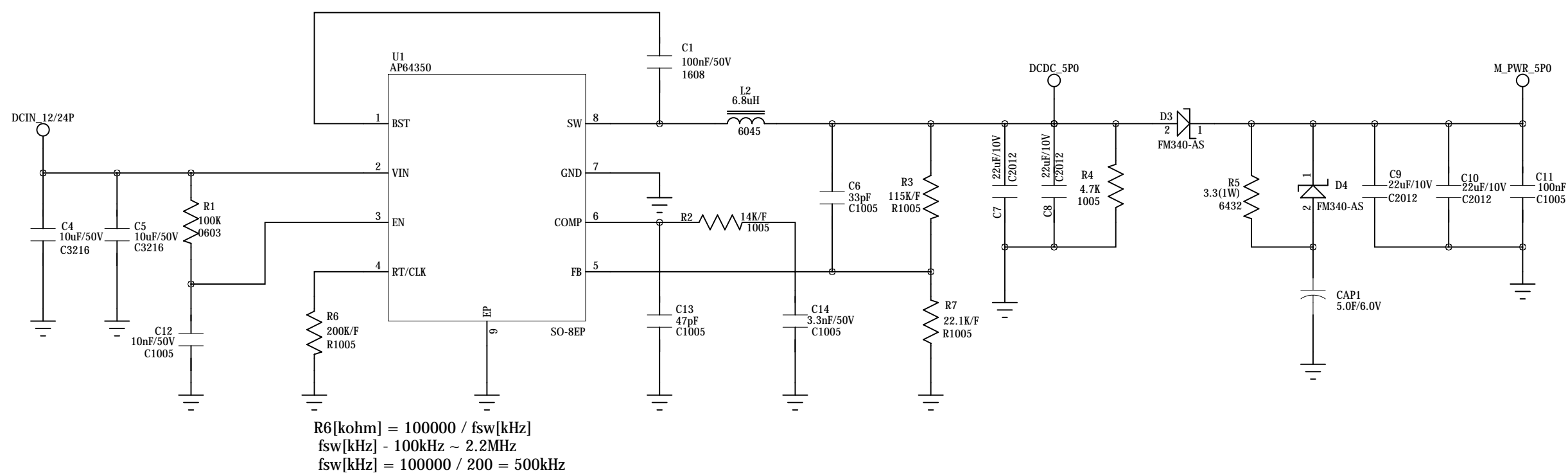
COMPANY:	PITTASOFT		
TITLE:	B-TO-B/LED/CAN&CLIP		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	14 14

[DC JACK POWER INPUT]



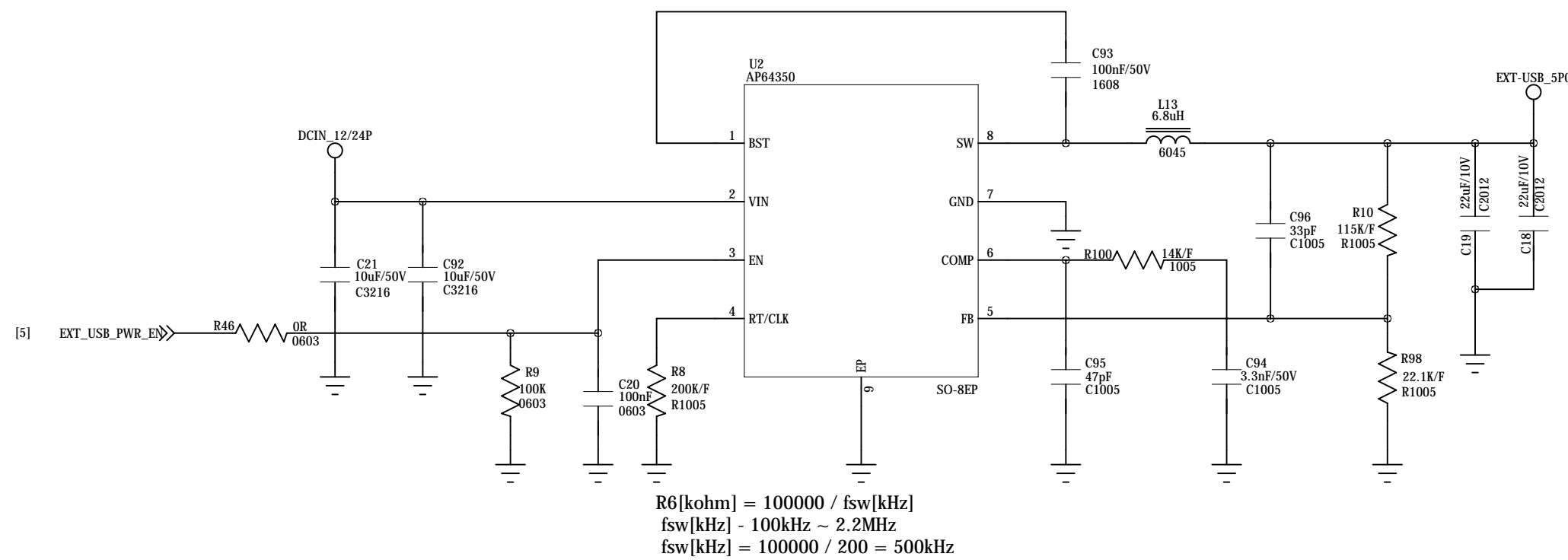
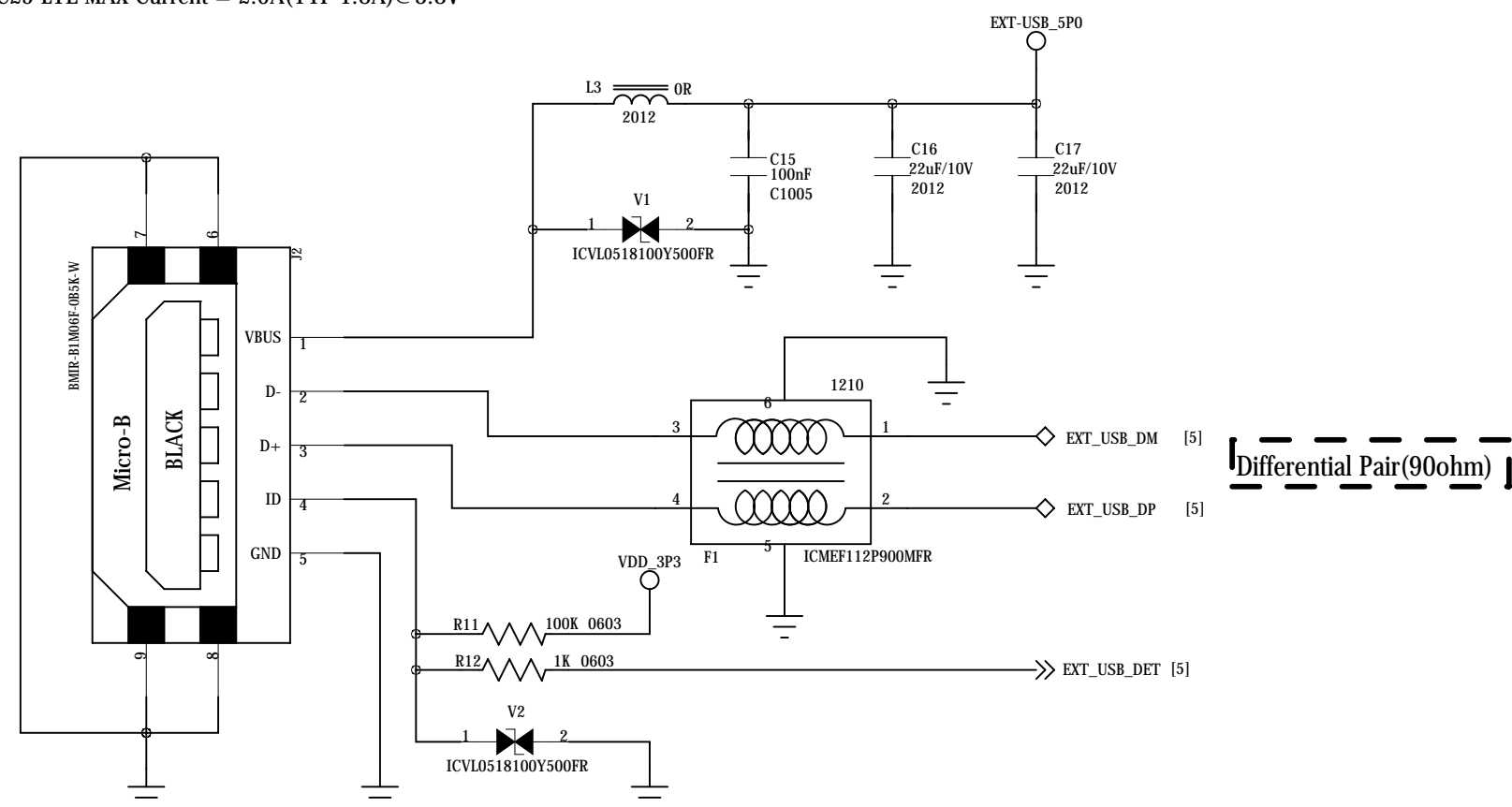
[MAIN DCDC 5V@3.5A]

3.8V ~ 40V INPUT, 3.5A OUTPUT CURRENT



[EXT MICRO USB CON]

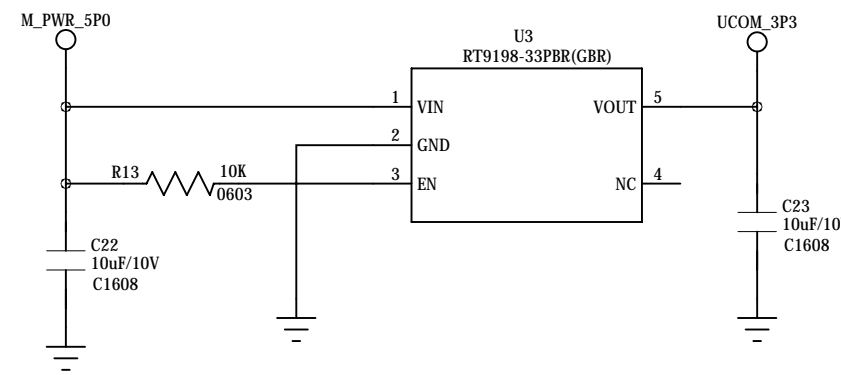
EC25 LTE MAX Current = 2.0A(TYP 1.8A)@3.8V



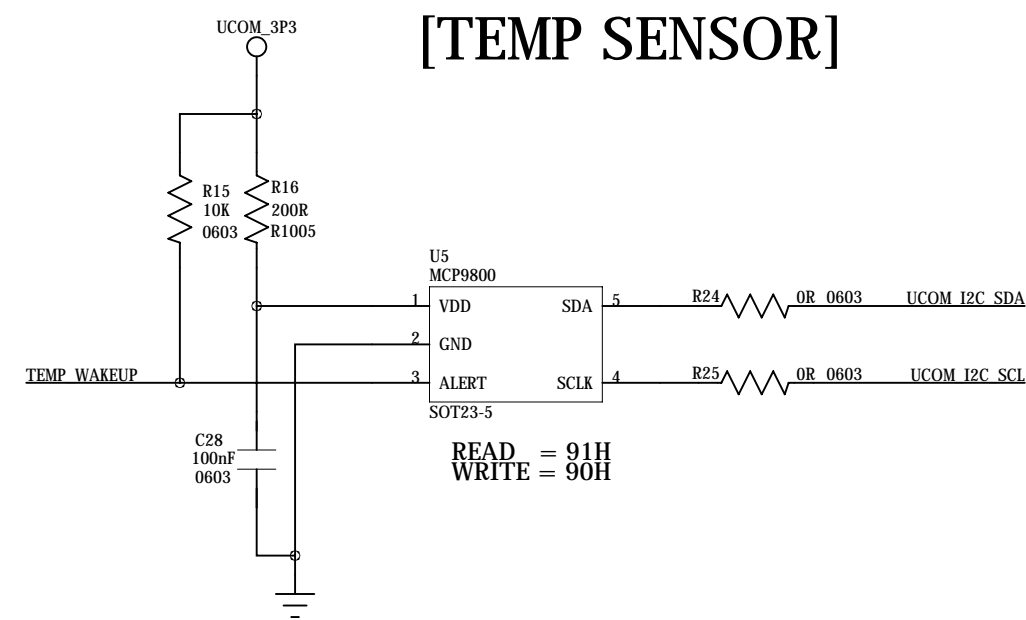
2021/07/08 - Load Switch IC => DCDC · 1 °1ç° 0 °°æ

COMPANY:	PITTASOFT		
TITLE:	MAIN_DC_PWR/EXT_USB		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	1 of 5

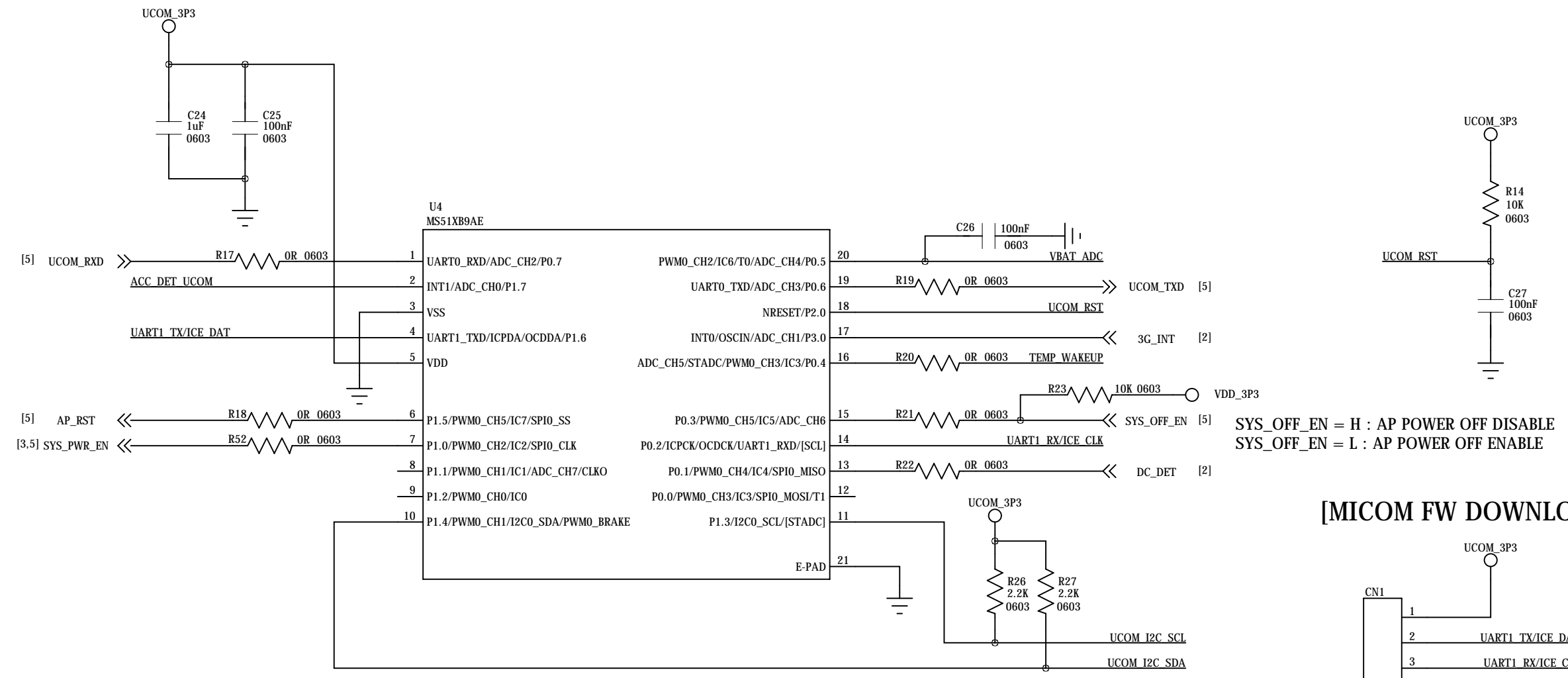
[MICOM POWER]



[TEMP SENSOR]

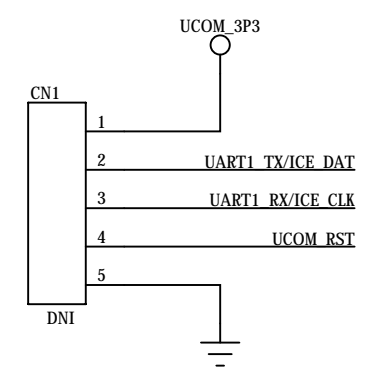


[8-BIT MICOM]

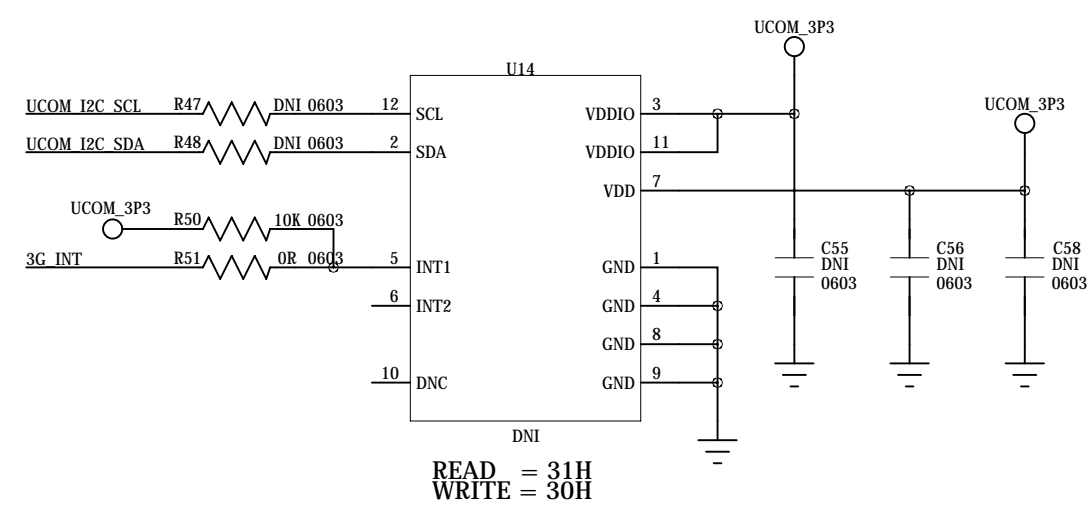


2021/06/22 - Micom Port

[MICOM FW DOWNLOAD CON]

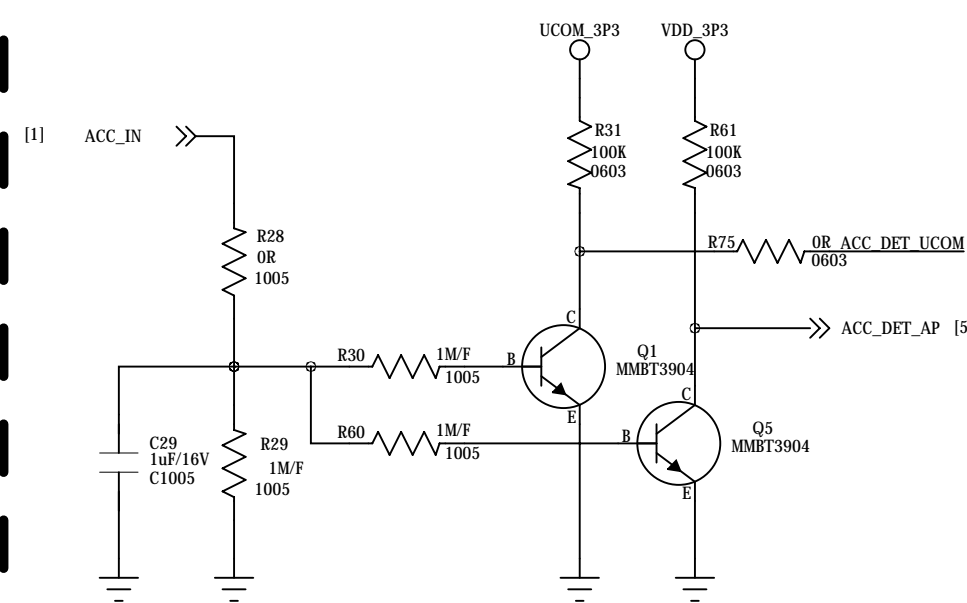


[G-SENSOR(UCOM)]



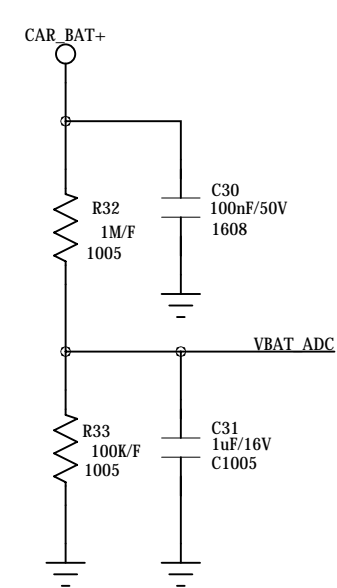
2021/06/22 - G-Sensor

[ACC DETECT]

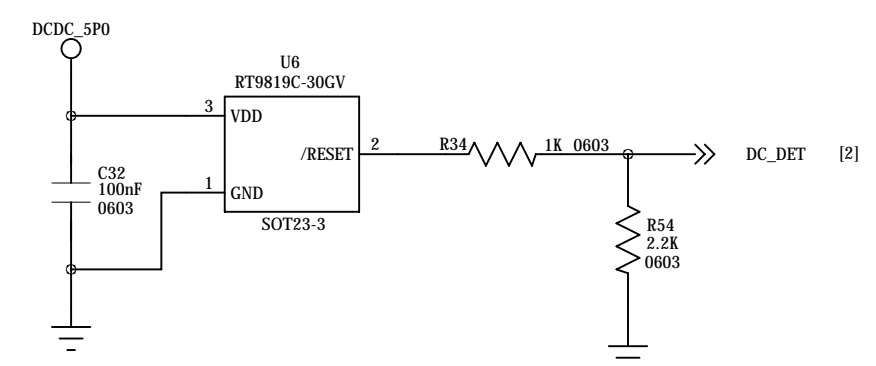


2021/06/22 - ACC Detect for AP

[BATTERY MONITER]

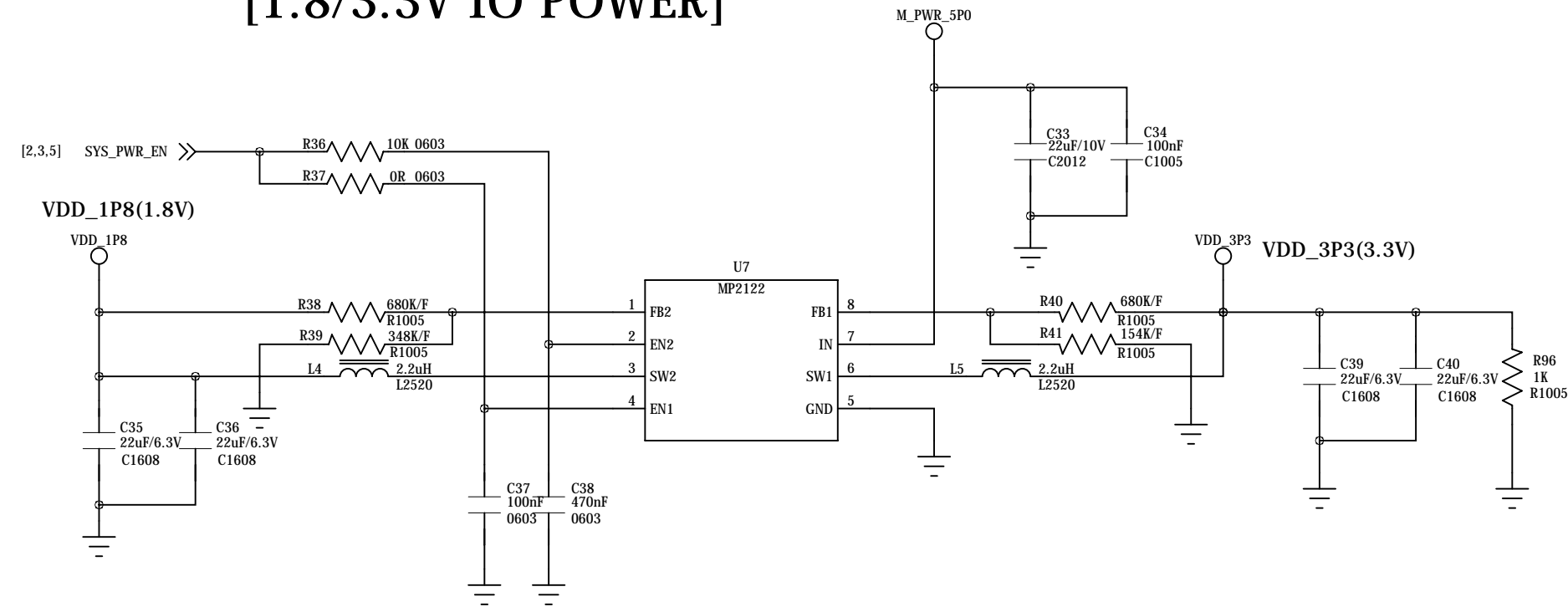


[DC JACK DETECT]

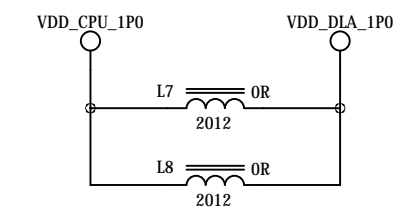
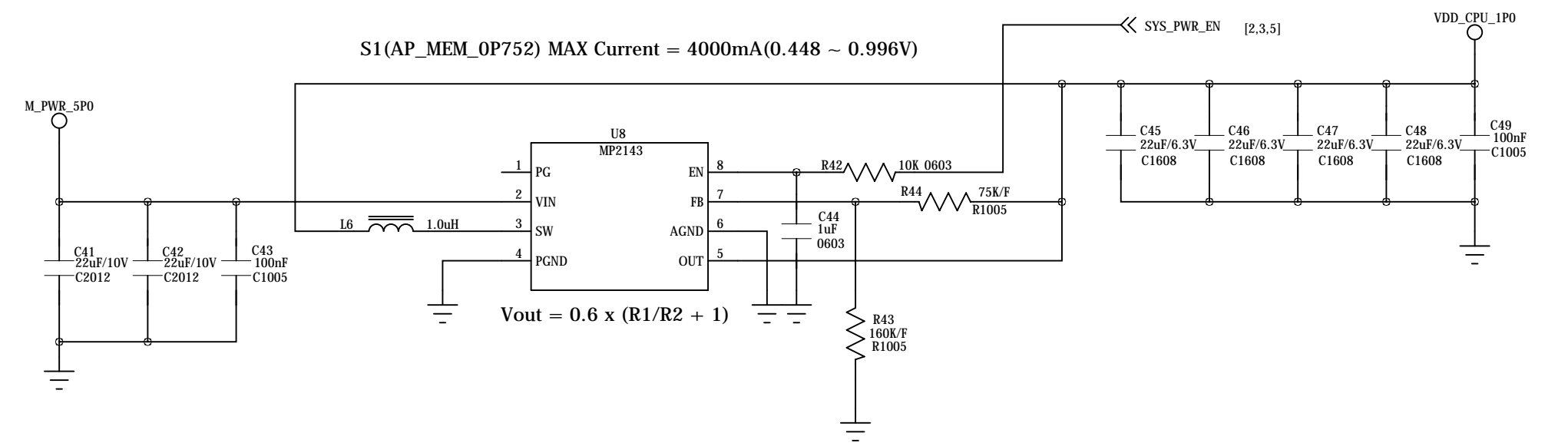


COMPANY:	PITTASOFT		
TITLE:	MICOM/TEMP		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	2 of 5

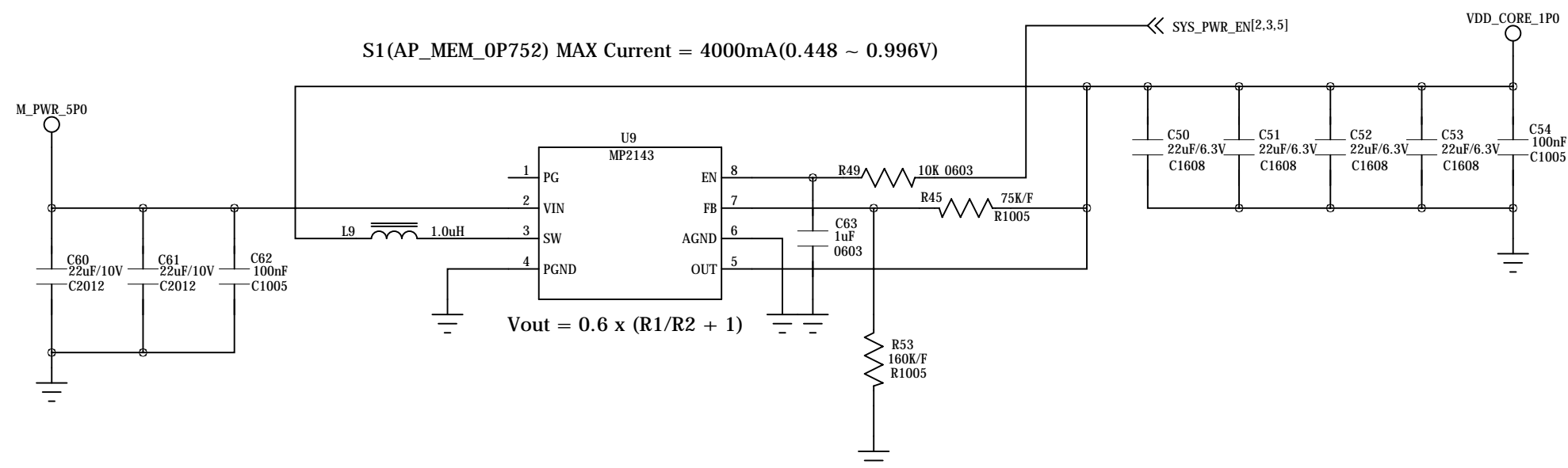
[1.8/3.3V IO POWER]



[1.0V CPU POWER]

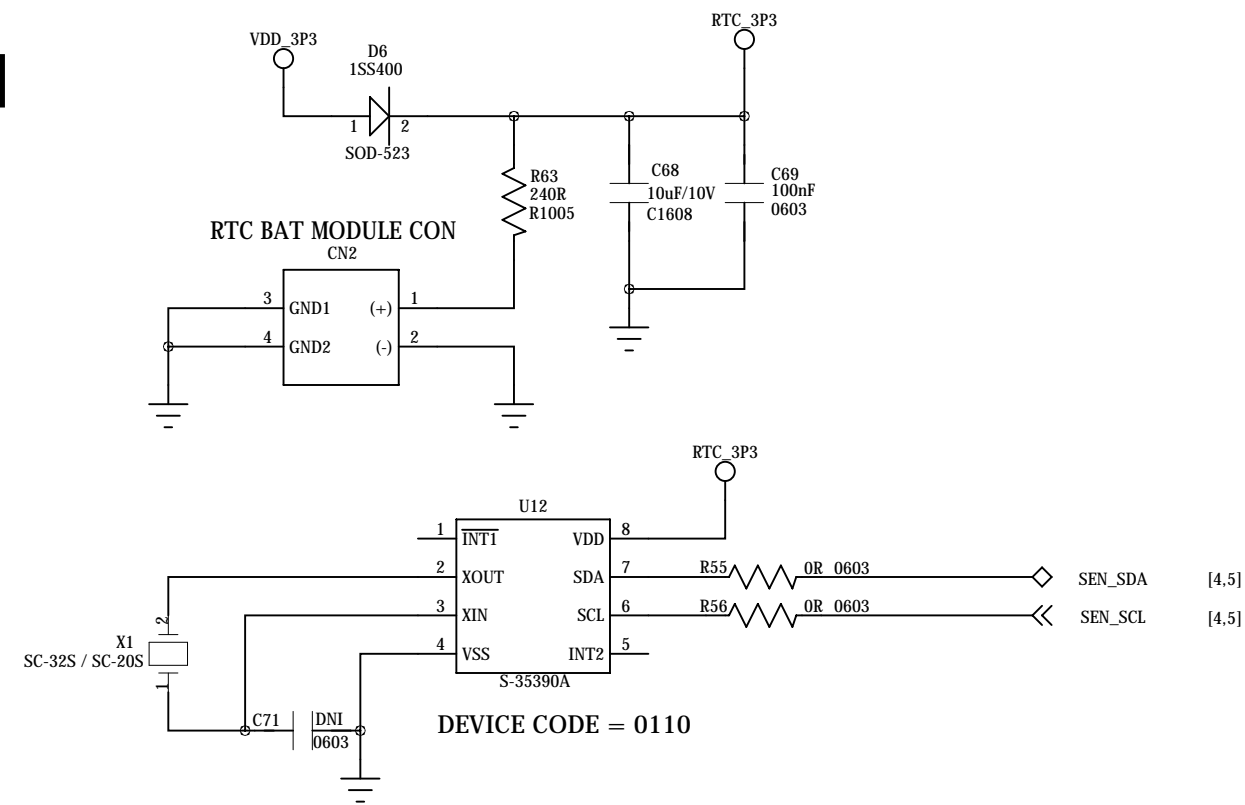


[1.0V CORE POWER]

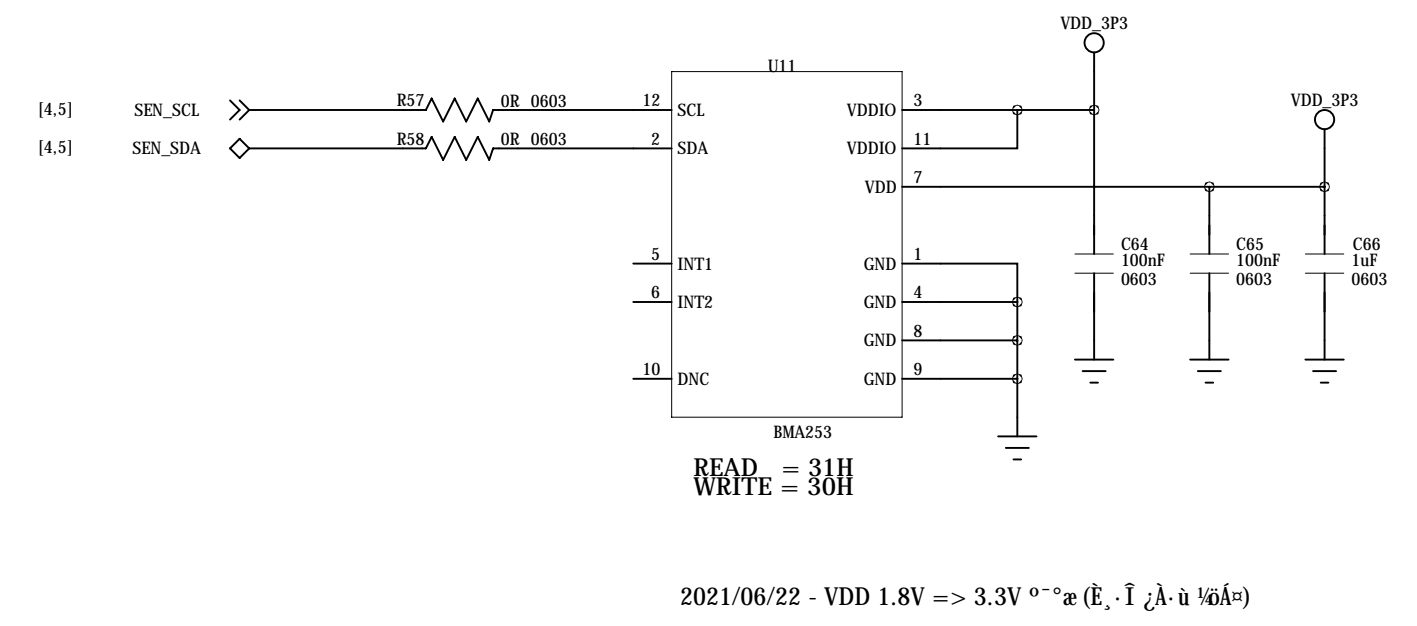


COMPANY:	PITTASOFT		
TITLE:	SYS_POWER		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	3 of 5

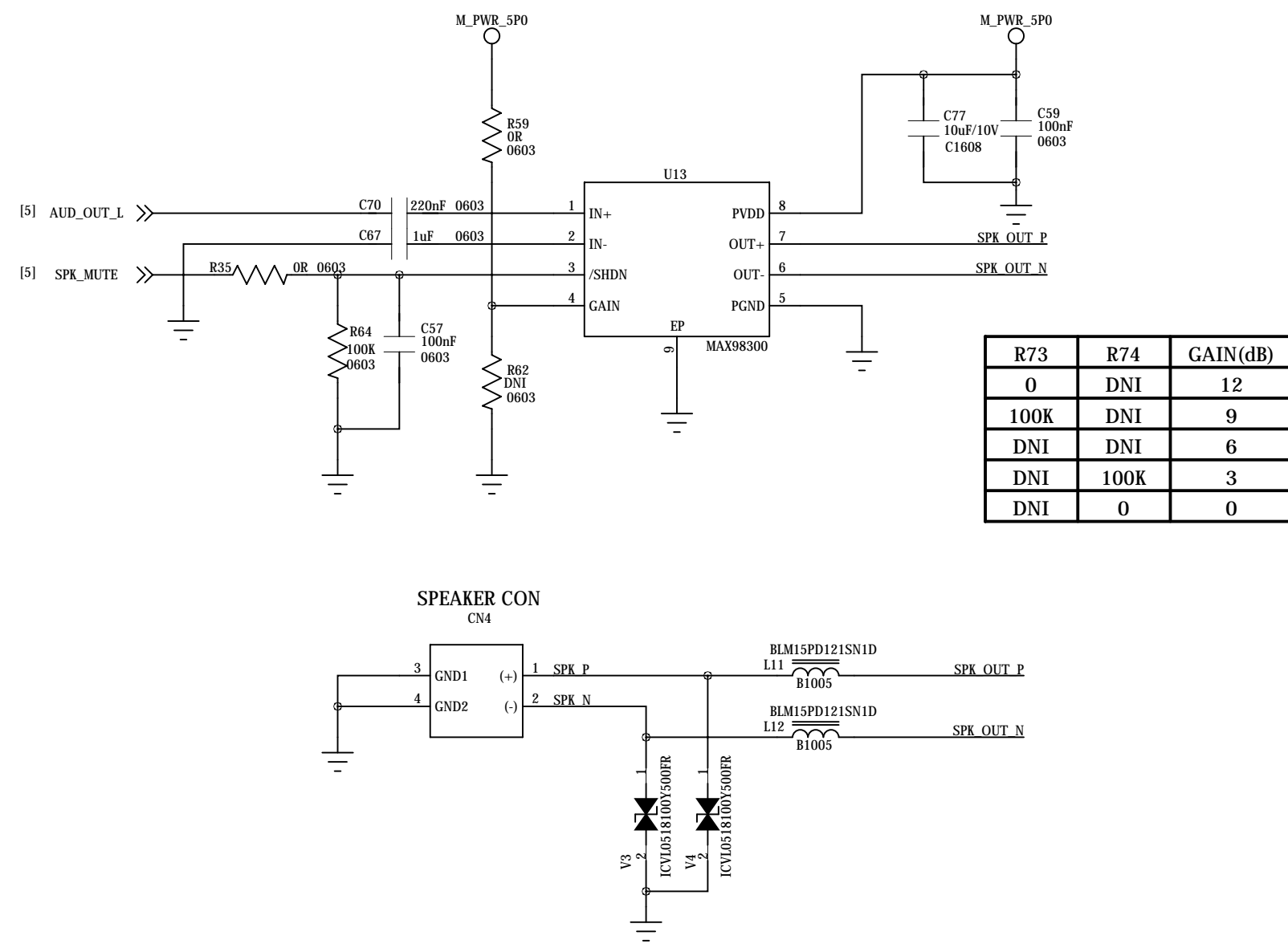
[RTC]



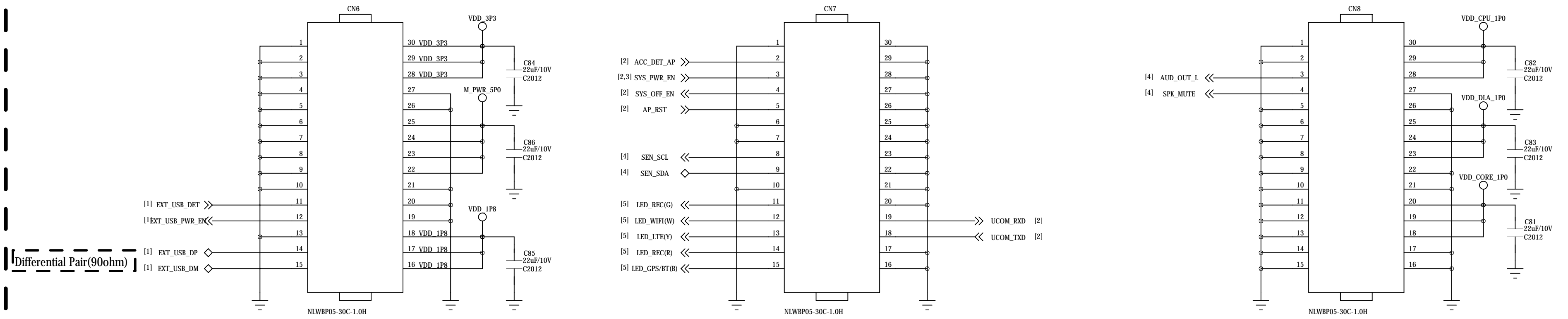
[G-SENSOR(AP)]



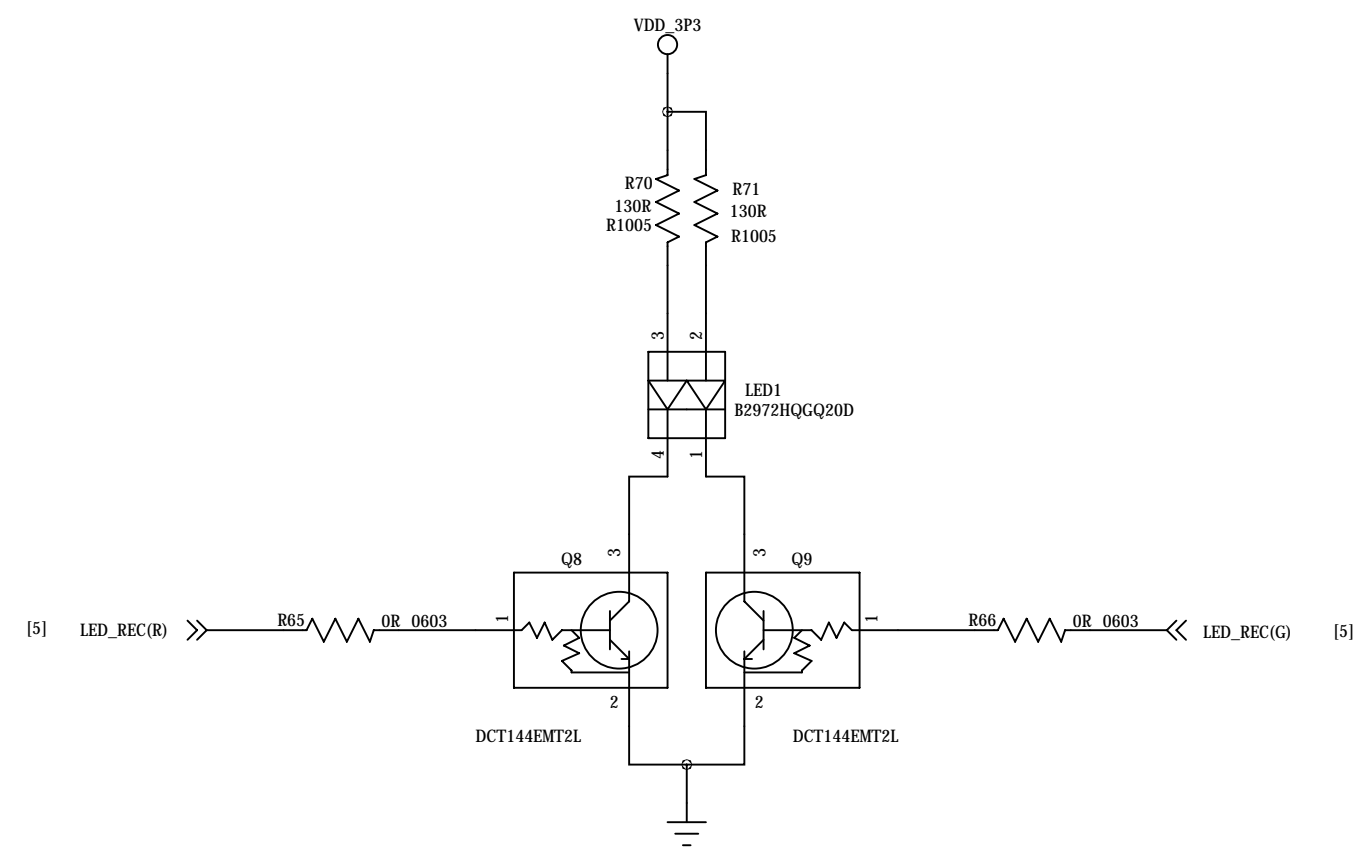
[AUDIO OUT(SPEAKER)]



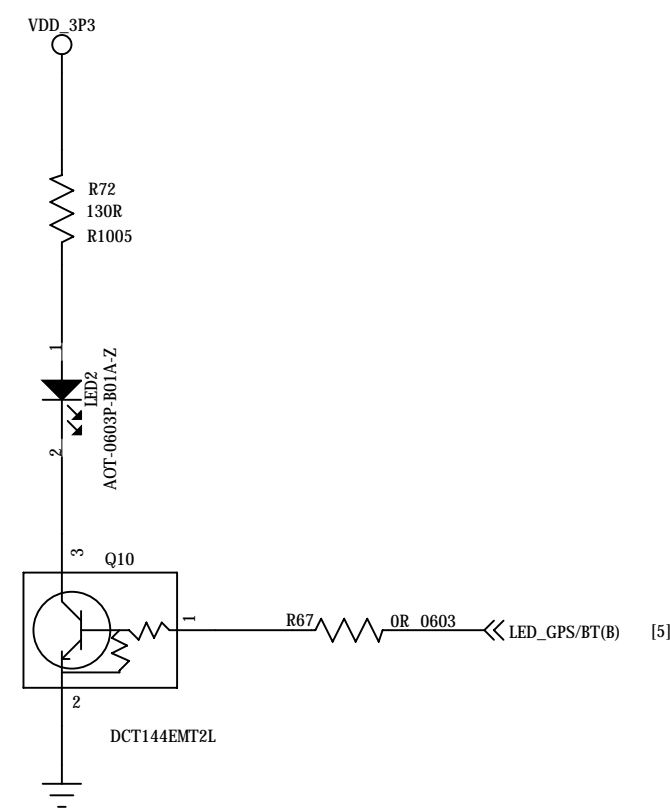
[BOARD TO BOARD CONNECTORS]



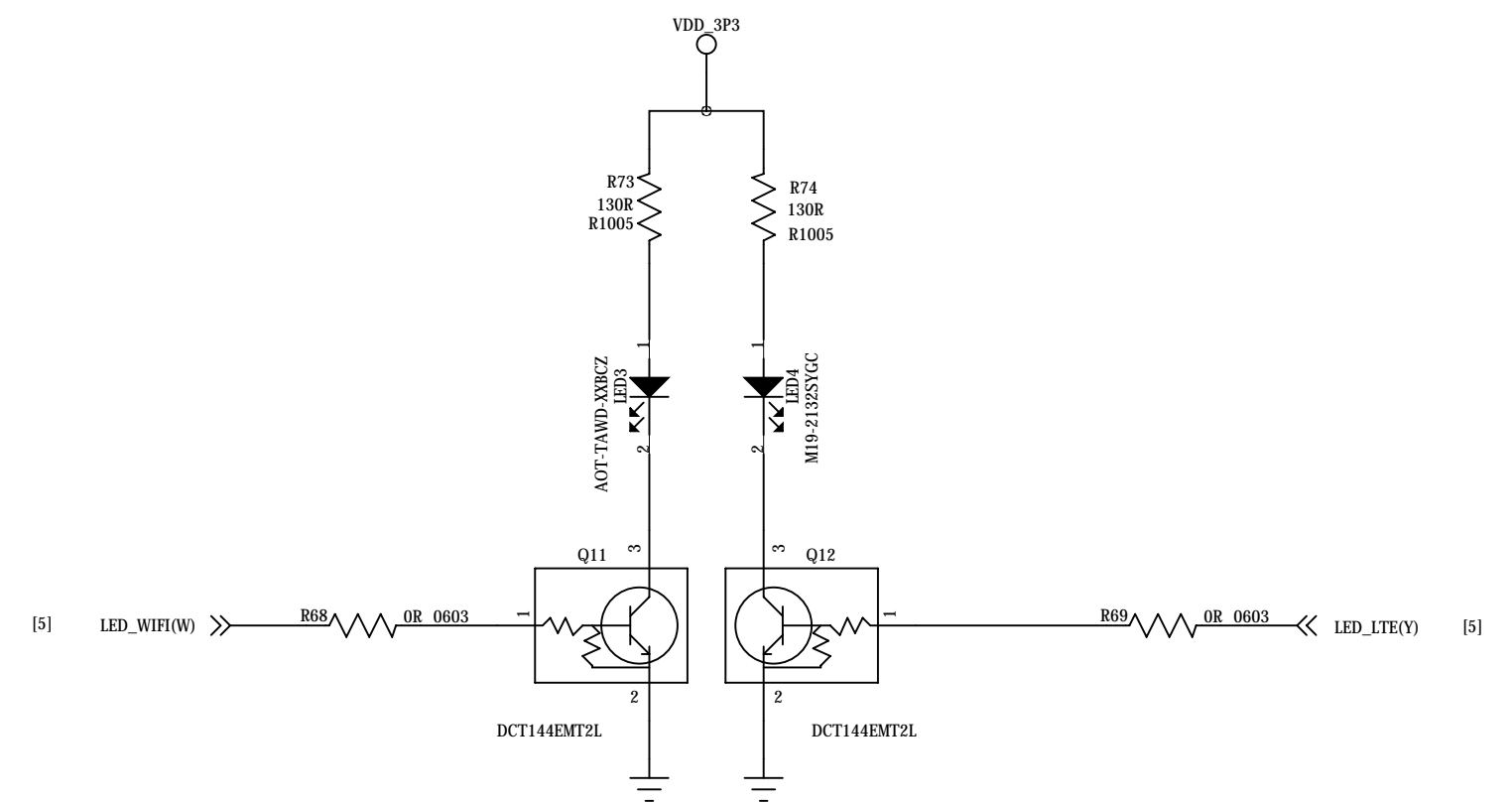
[REC LED(R/G)]



[GPS/BT LED(BLUE)]



[LTE(YELLOW)/WIFI(WHITE)/BT(BLUE) LED]



2021/07/01 - 1.0 Rev. 1.0

COMPANY:	PITTASOFT		
TITLE:	B-TO-B/LED		
MODEL NAME:	DR970X Plus	REV:	MP_V1.0
DATE:	2023-11-15	SHEET:	5 of 5

6

5

4

3

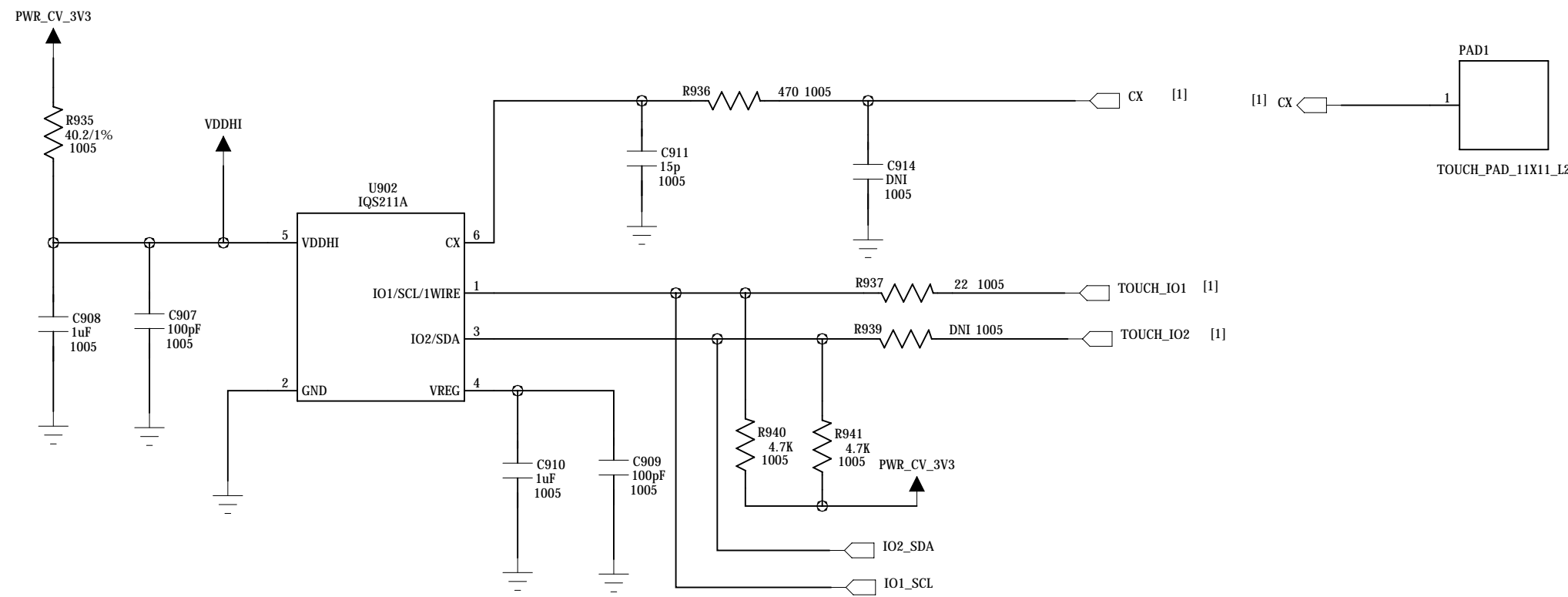
2

1

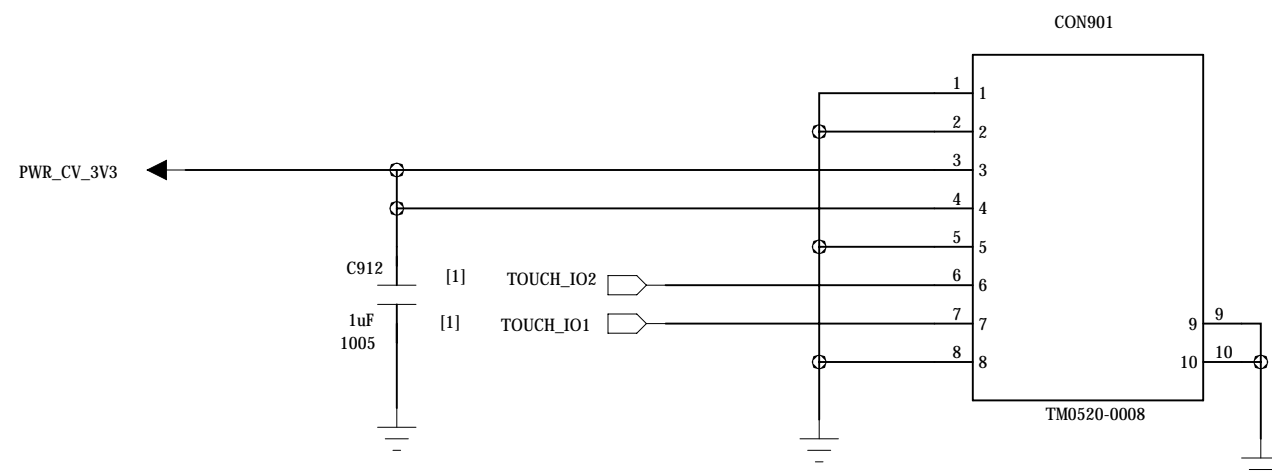
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

[TOUCHPAD_PCB]

[TOUCH IC]



0.5mm pitch, FFC connector



COMPANY:				PITTASOFT Co.,Ltd			
TITLE:				DR TOUCH MODULE			
DRAWN:	DATED:	CODE:	SIZE:	DRAWING NO:	REV:	MP_V1.0	
CHECKED:	DATED:	C					
QUALITY CONTROL:	DATED:						
RELEASED:	DATED:						
SCALE:				SHEET: 01 1			

D

D

C

C

B

B

A

A