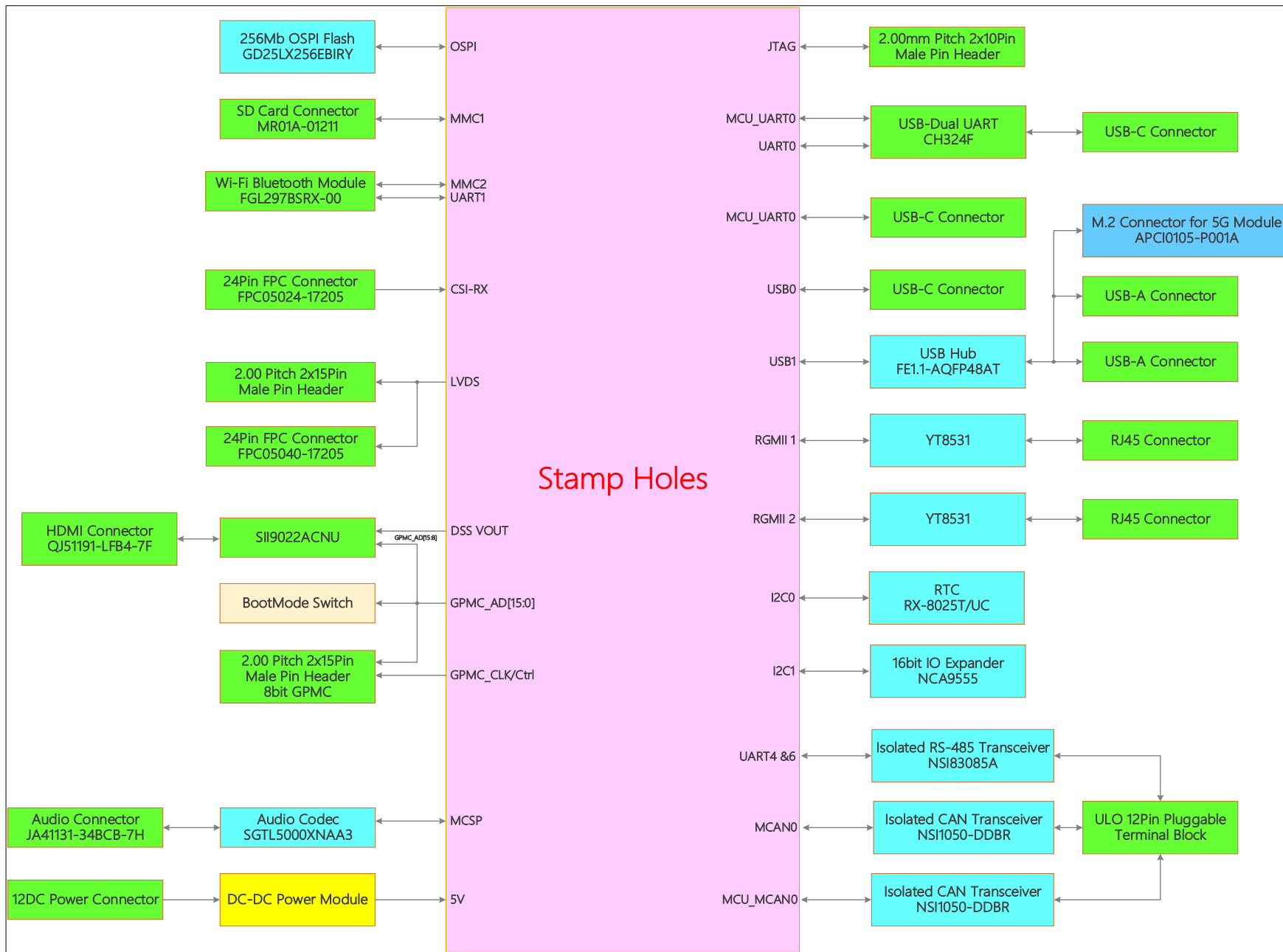


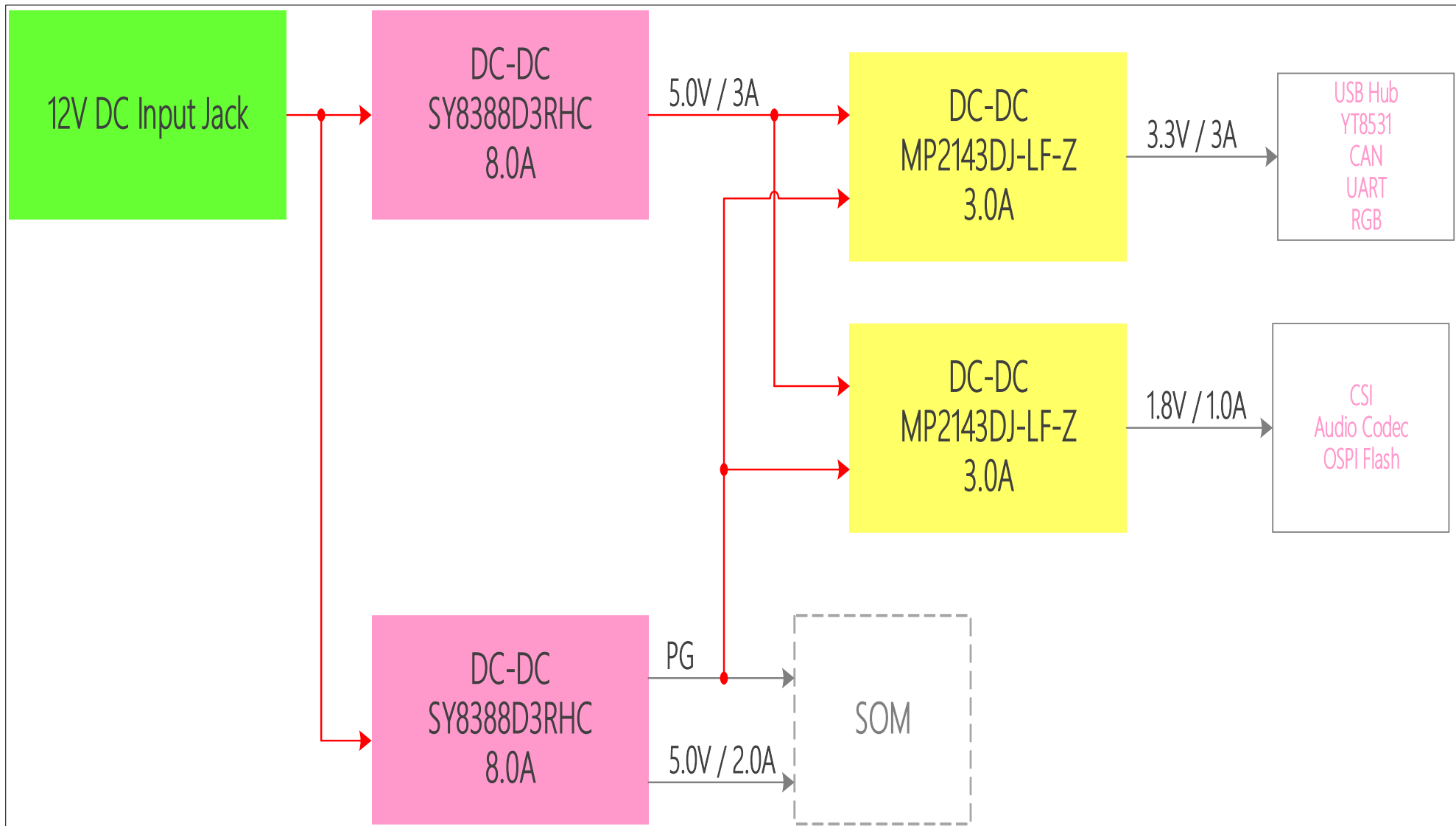
Revision History

Version	Description	Date	By
Ver 01	Initial Release.	2022-09-02	Toby


Schematic

Sheet NO.	Sheet Name
01	REVISION HISTORY
02	SYS BLOCK DIAGRAM
03	POWER BLOCK DIAGRAM
04	MAIN & SOM POWER
05	CARRIER BD POWER
06	SD CARD INTERFACE
07	OSPI FLASH INTERFACE
08	WIFI & BLE
09	JTAG BUFFER & CONN
10	DUAL CHANNELS LVDS
11	CSI - RX
12	HDMI & 8 BIT GPMC
13	BOOT MODE SWITCHES
14	USB2.0-UART DEBUG I/F
15	RS485
16	MCAN
17	AUDIO CODEC
18	USB2.0 HUB
19	M2 4G/5G MODULE
20	RGMI1_1 ETHERNET PHY
21	RGMI1_2 ETHERNET PHY
22	KEY & RTC
23	IO EXPANDER
24	SOM INTERFACE
25	ACCESSORIES

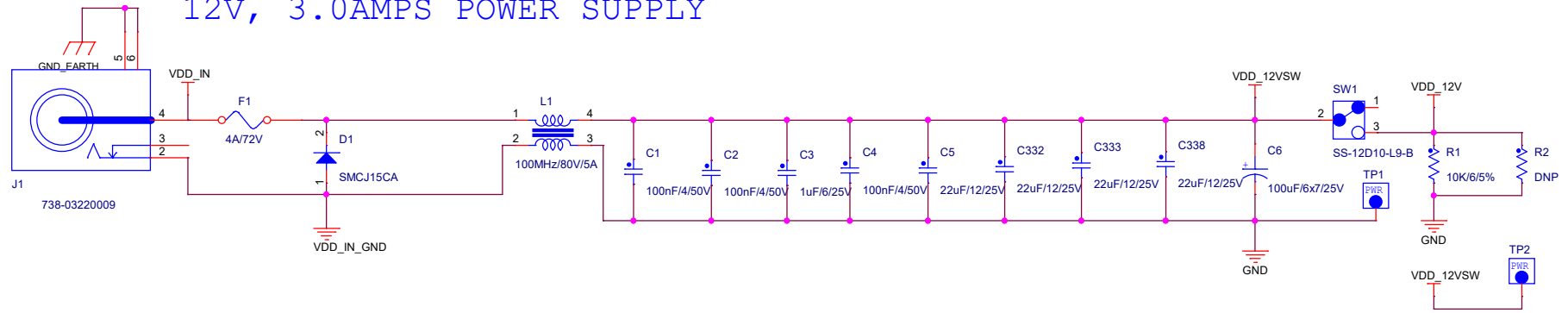




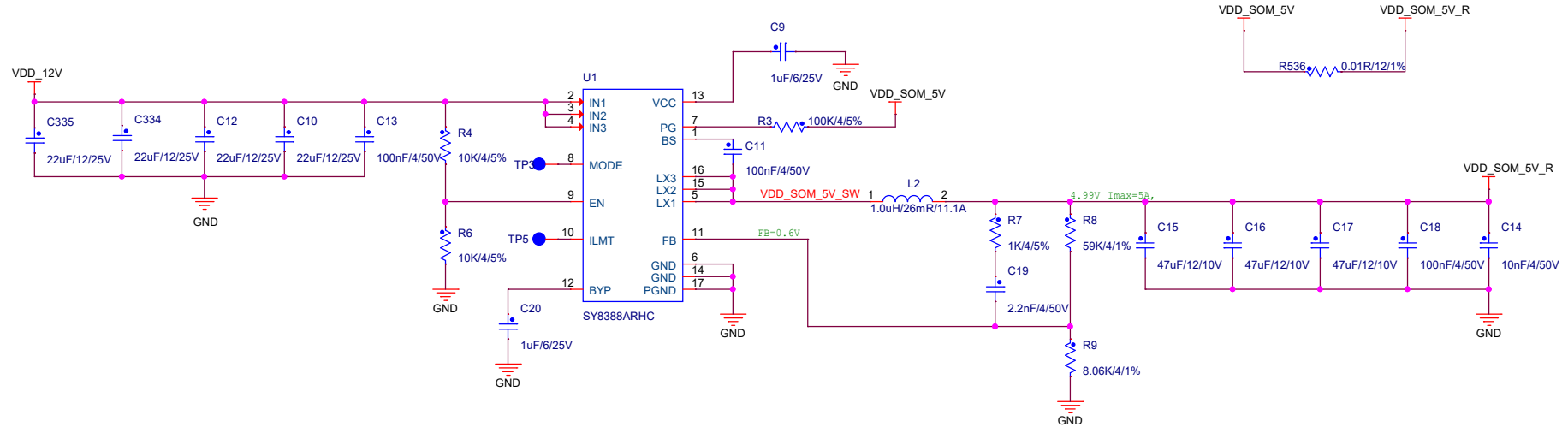
<Variant Name>

		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
		Title: MYB-Y62X-V01	
Size: A	Document Number: POWER BLOCK DIAGRAM	Rev: V1.0	
Draw By: MYiR	Date: Monday, August 07, 2023	Sheet: 3 of 24	

## 12V, 3.0AMPS POWER SUPPLY



## 5.0V, 3.0AMPS SOM POWER SUPPLY



<Variant Name>

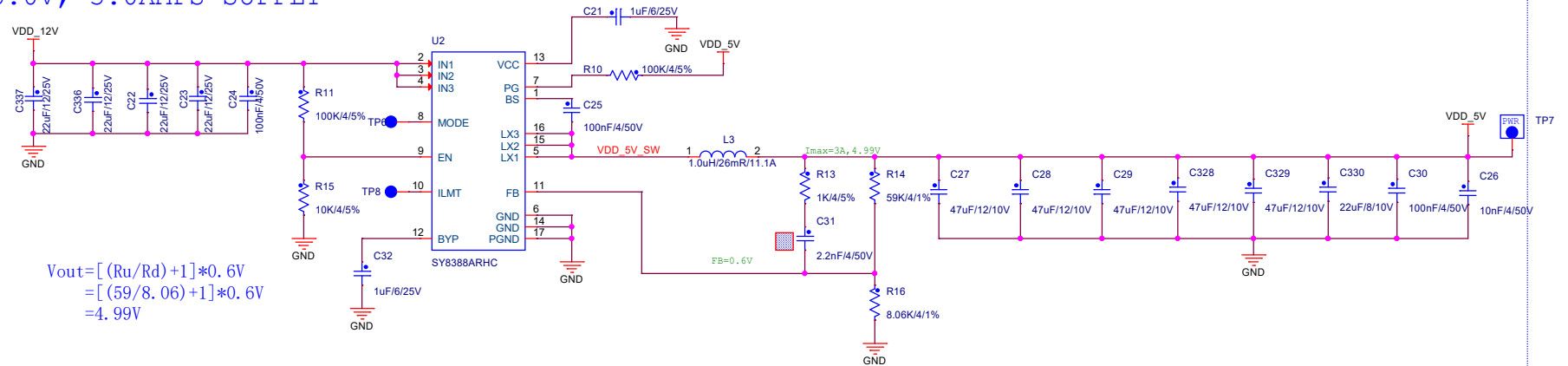


<http://www.myr-tech.com>

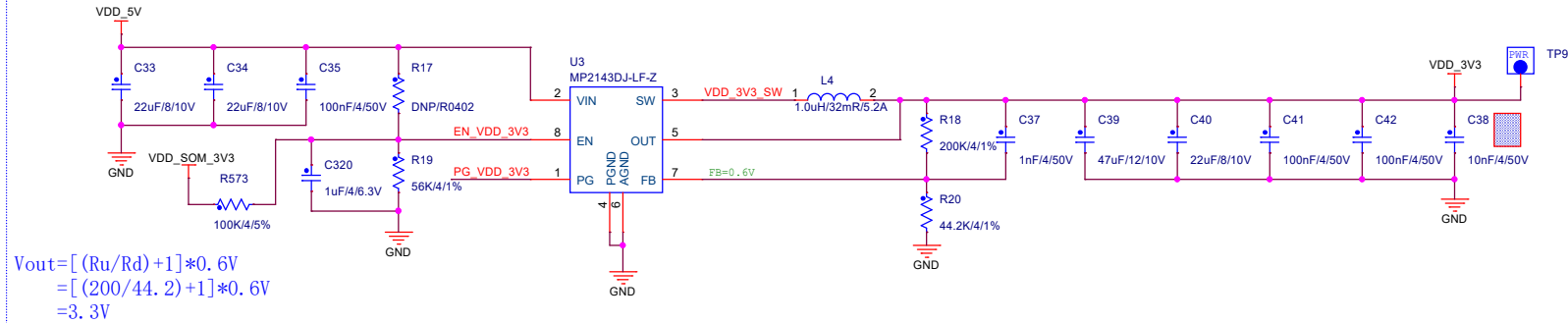
Title: MYB-Y62X-V01

Size: B	Document Number: MAIN & SOM POWER	Rev: V1.0
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 4 of 24

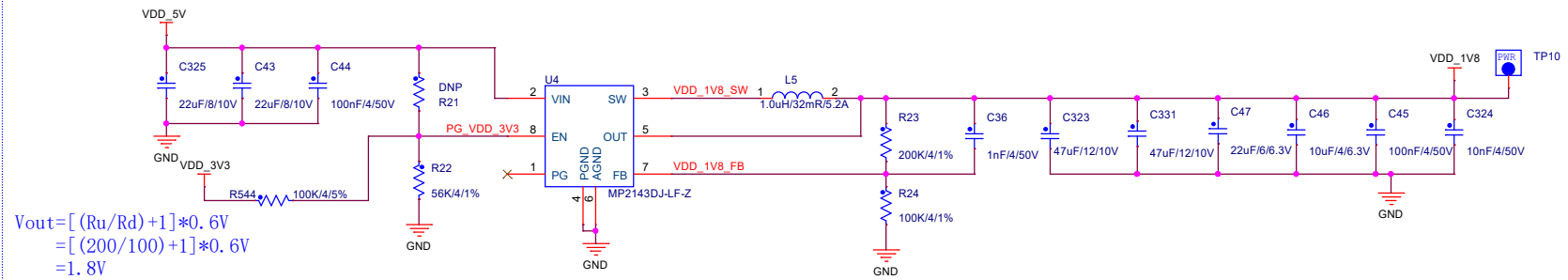
## 5.0V, 3.0AMPS SUPPLY



## 3.3V, 3.0AMPS SUPPLY

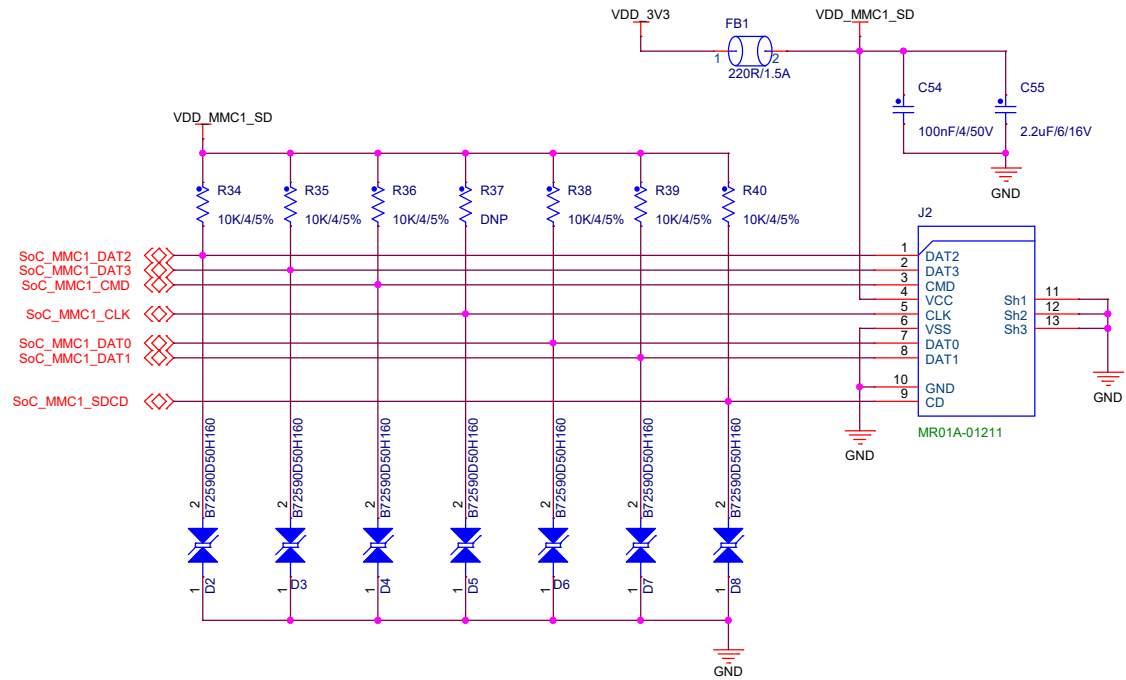


## 1.8V, 3AMPS SUPPLY



<Variant Name>

## SD CARD I/F



**<Variant Name>**



<http://www.myir-tech.com>

**Title:**

MYB-Y62X-V01

Size:  
B

Document Number:  
**SD CARD INTER**

Rev:  
V1.0

Draw By: MYIR

Date: Monday, August 07, 2023

Sheet: 6 of 24

## OSPI Flash

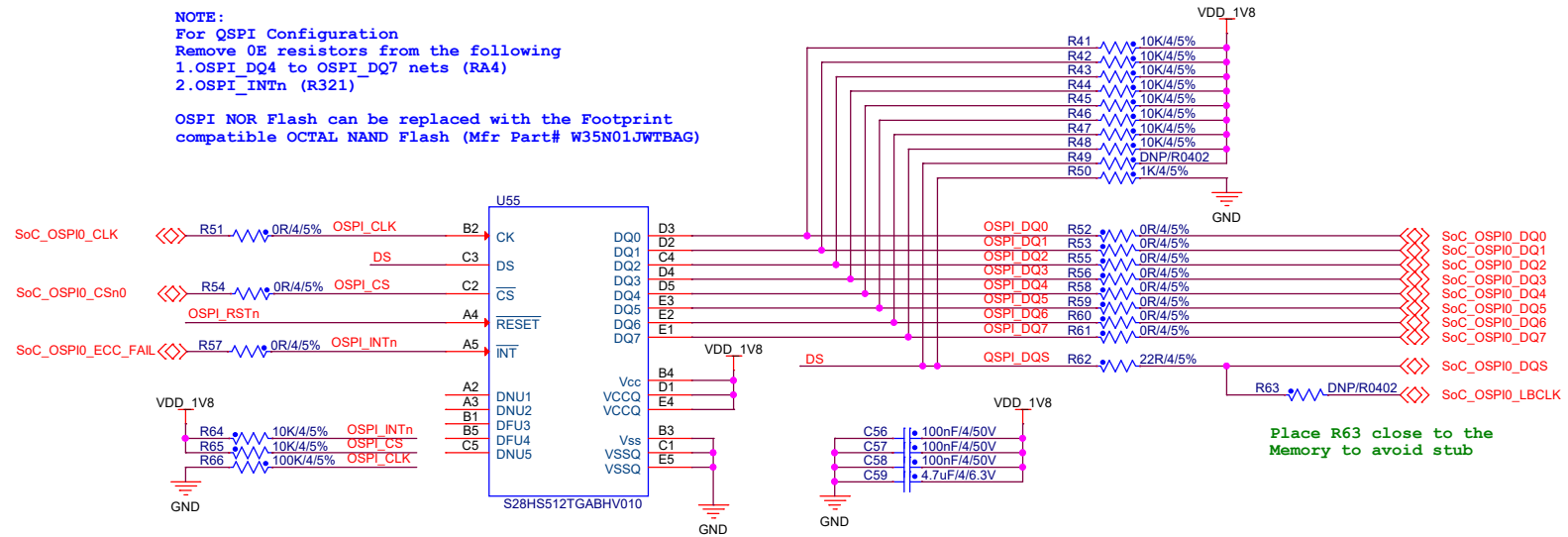
### NOTE:

#### For QSPI Configuration

Remove 0E resistors from the following

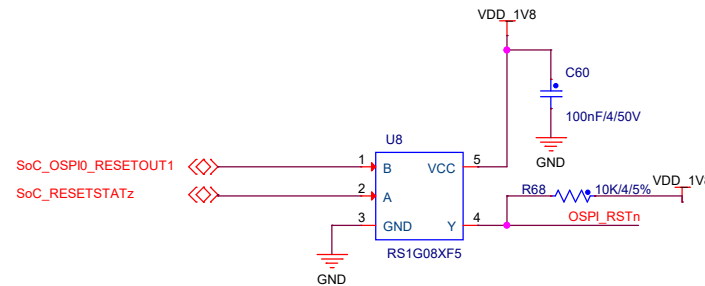
- 1.OSPI\_DQ4 to OSPI\_DQ7 nets (RA4)
- 2.OSPI\_INTn (R321)

OSPI NOR Flash can be replaced with the Footprint compatible OCTAL NAND Flash (Mfr Part# W35N01JWTBAG)



Place R63 close to the Memory to avoid stub

## OSPI Flash Reset



<Variant Name>

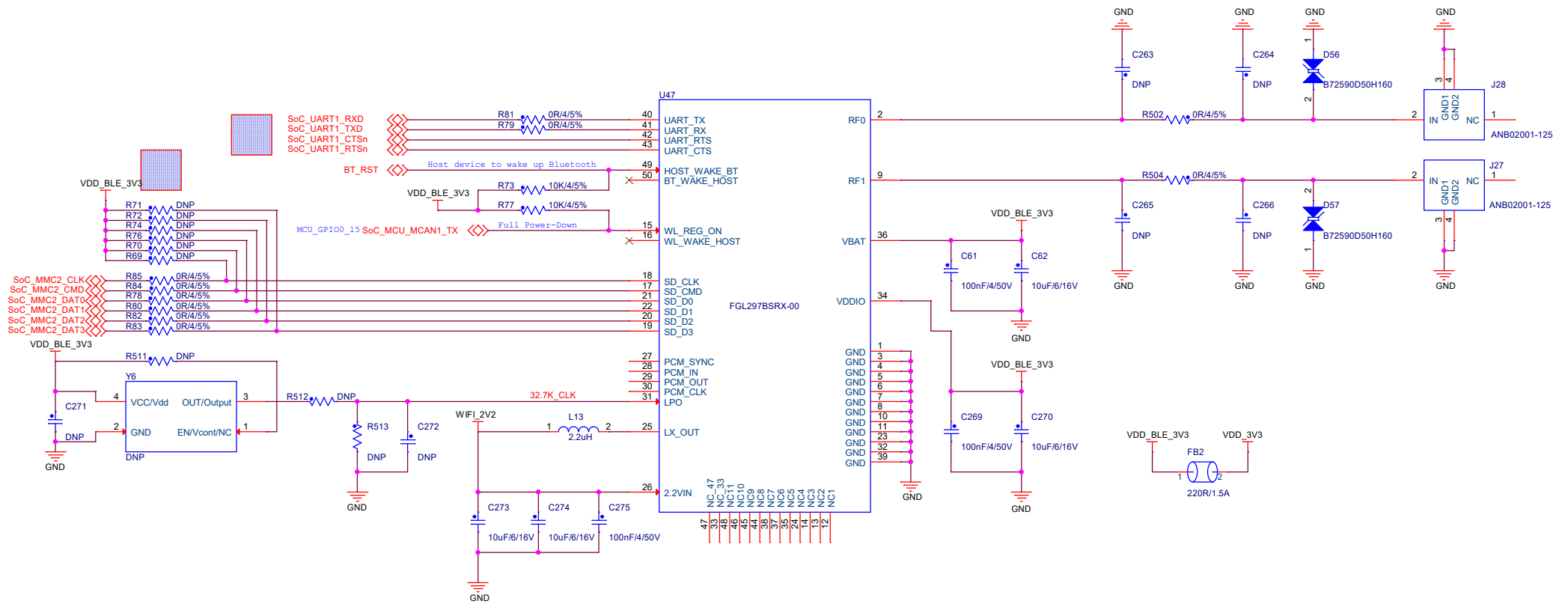


<http://www.myir-tech.com>

Title: MYB-Y62X-V01

Size: B	Document Number: OSPI INTERFACE	Rev: V1.0
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 7 of 24

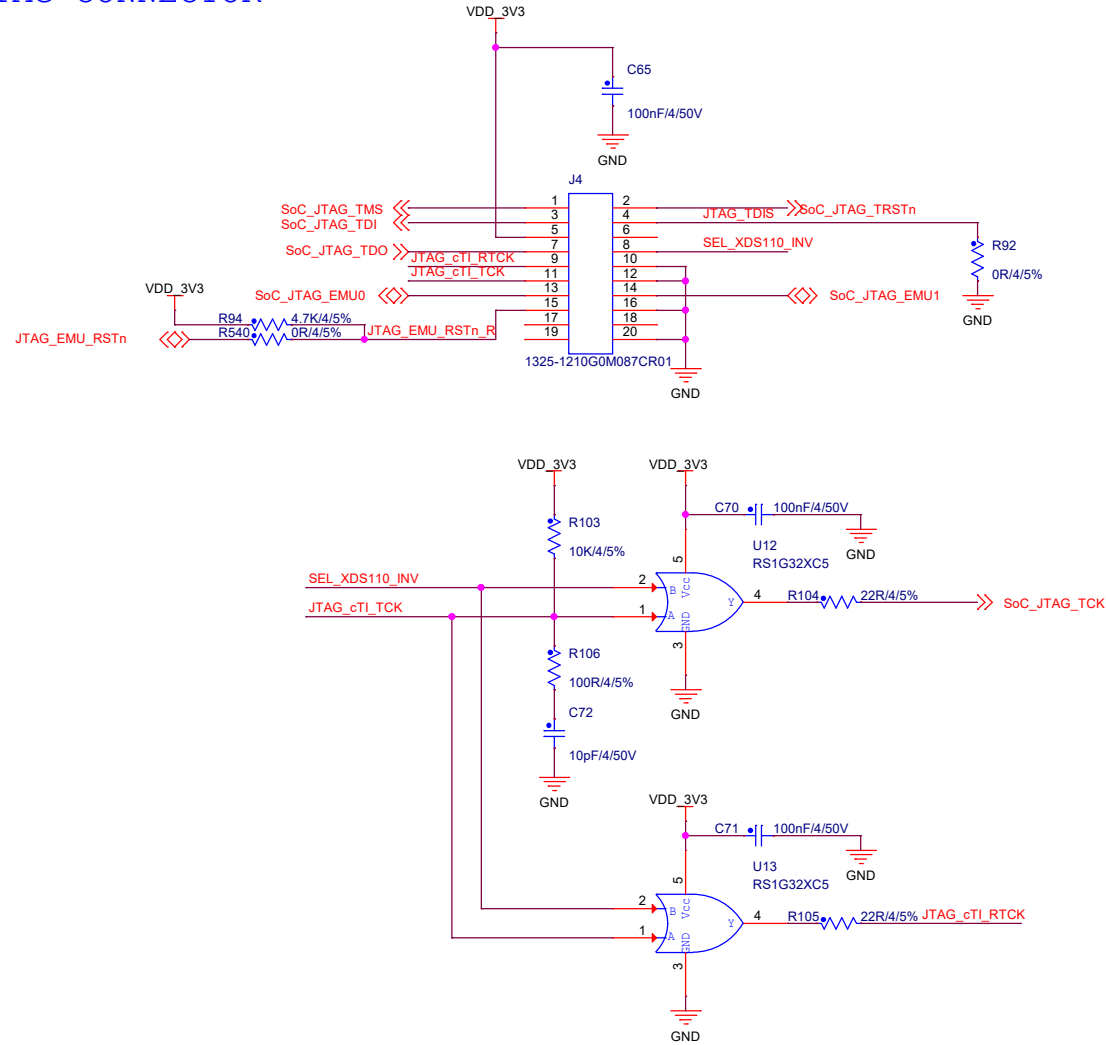
# Wi-Fi & Bluetooth



<Variant Name>

<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Title:		MYB-Y62X-V01	
Size: A3	Document Number: WIFI & BLE	Rev: V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 8 of 24	

# JTAG CONNECTOR



<Variant Name>



<http://www.myr-tech.com>

Title: MYB-Y62X-V01

Size: B	Document Number: JTAG CONNECTOR	Rev: V1.0
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 9 of 24

1




1

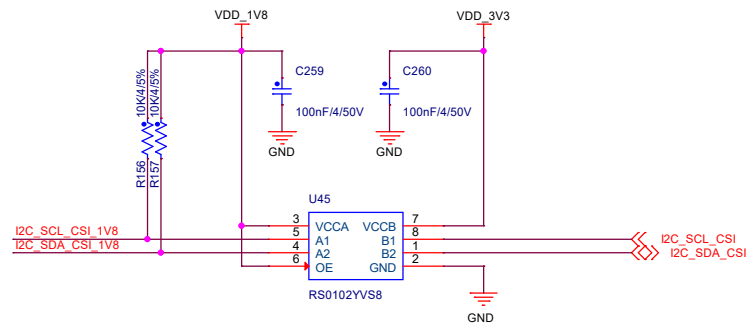
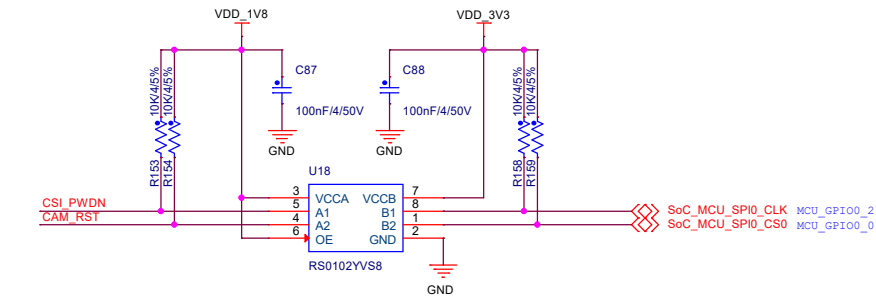
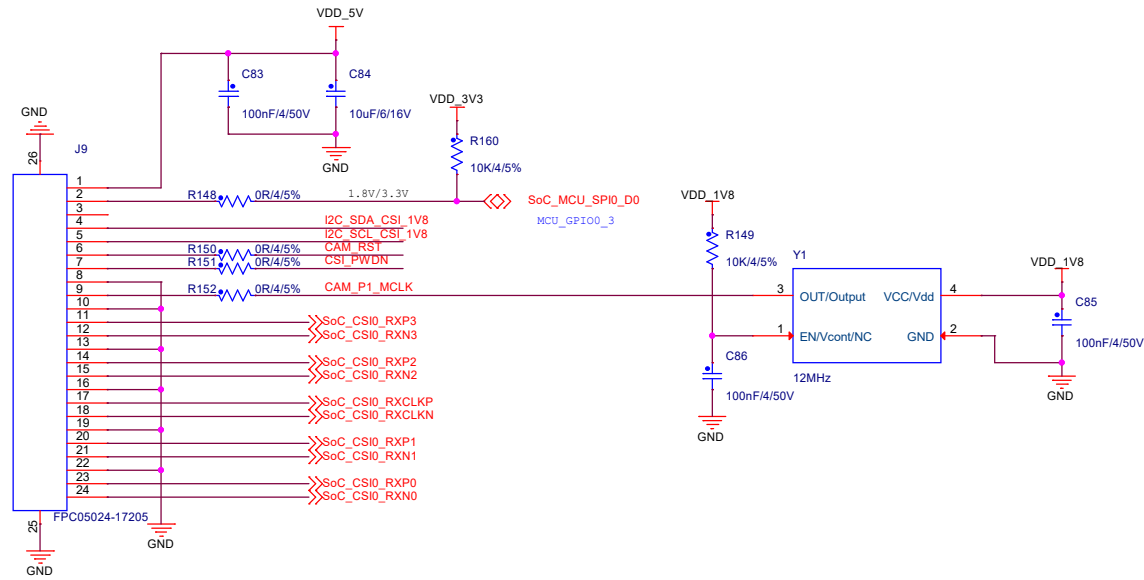


1



		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
		Title: MYB-Y62X-V01	
Size: A3	Document Number: LVD1S & LVD52	Rev: V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 10 of 24	

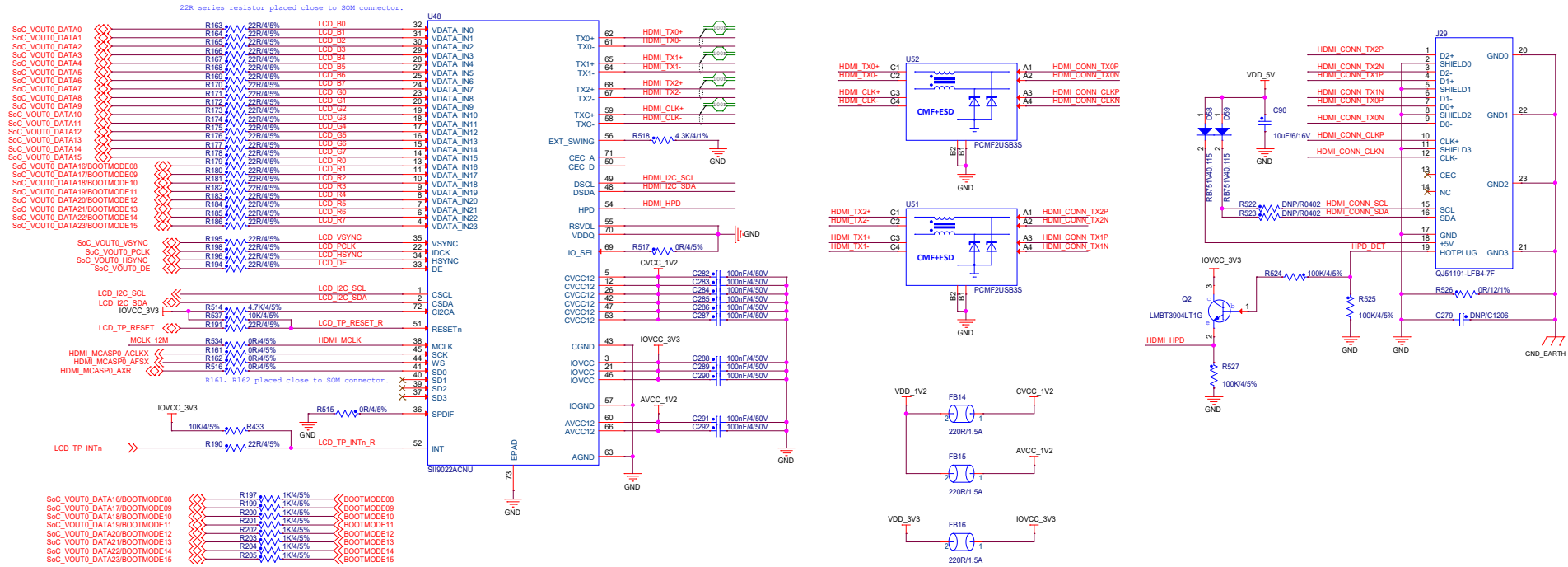
# Camera Interface



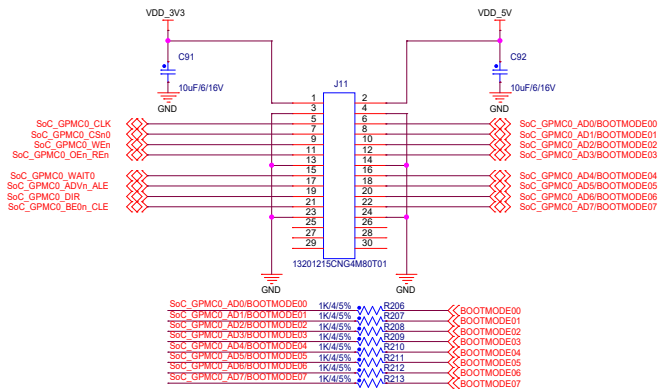
<Variant Name>

<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Title:		MYB-Y82X-V01	
Size:	Document Number:	Rev:	
A3	CSI - RX	V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 11 of 24	

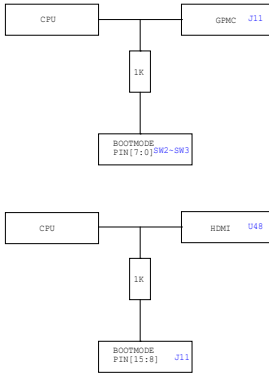
## RGB TO HDMI



## 8 bit GPMC



NOTE: Resistors are used to isolate the BOOTMODE control logic after the value is latched



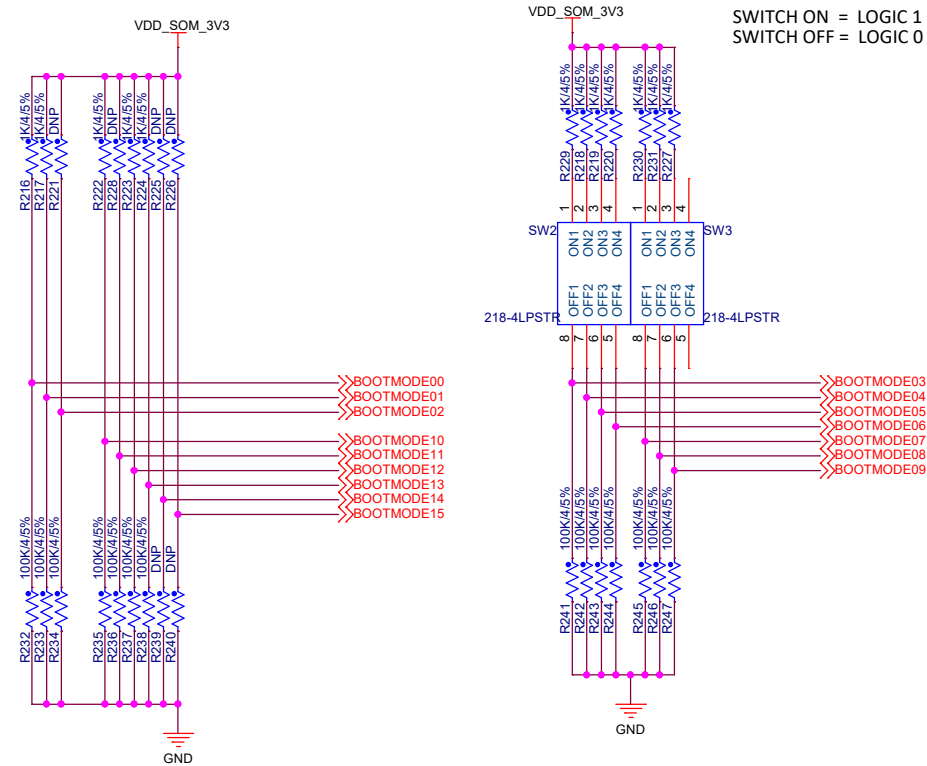
## GPMC IO Switch



<Variant Name>

<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Title:		MYB-Y62X-V01	
Size:	Document Number:	Rev:	
C	DSS RGB	V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 12 of 24	

## BOOT MODE SWITCHES



<Variant Name>



<http://www.myir-tech.com>

Title:

MYB-Y62X-V01

Size:  
B

Document Number:  
BOOT MODE SWITCHES

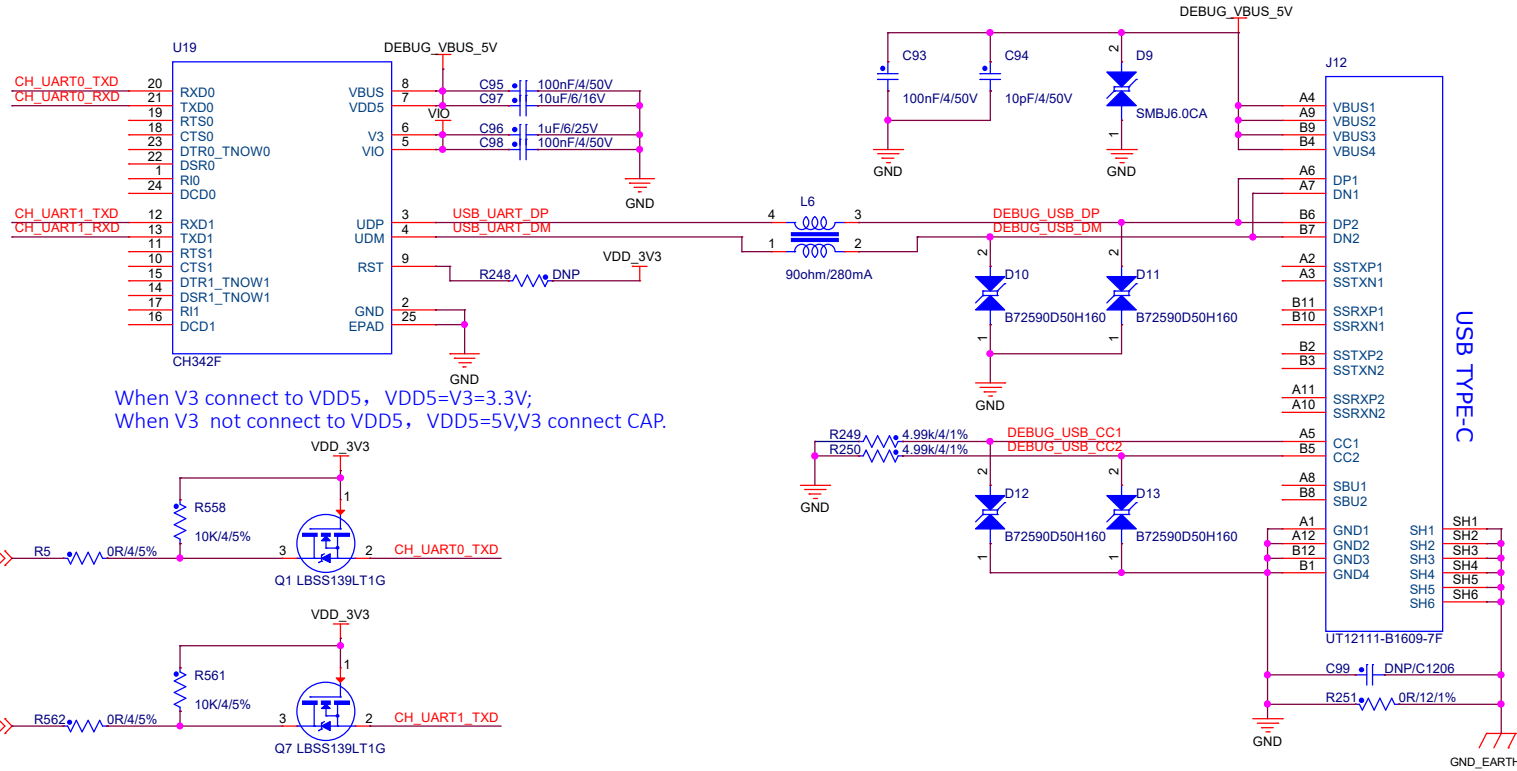
Rev:  
V1.0

Draw By: MYIR

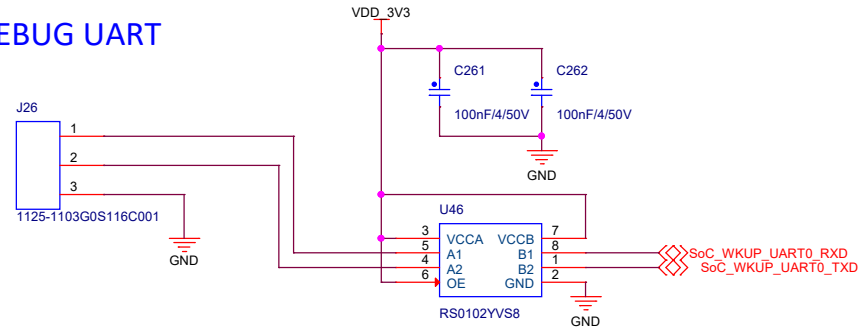
Date: Monday, August 07, 2023

Sheet: 13 of 24

# USB2.0 - UART DEBUG I/F



## R5 DEBUG UART

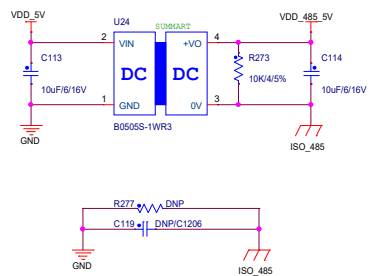
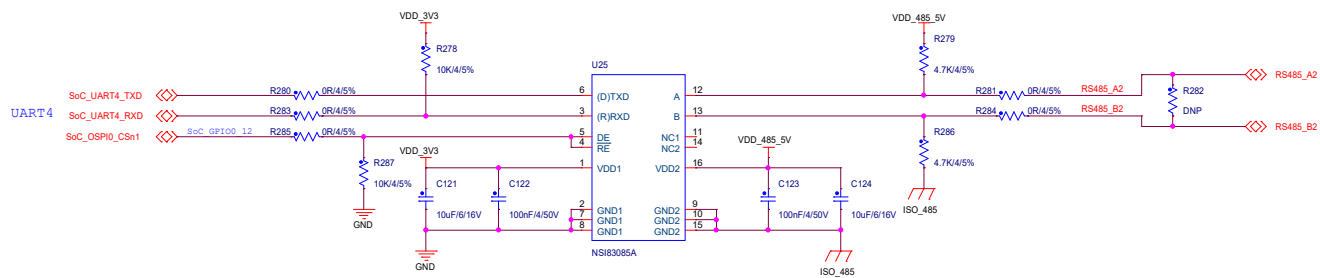
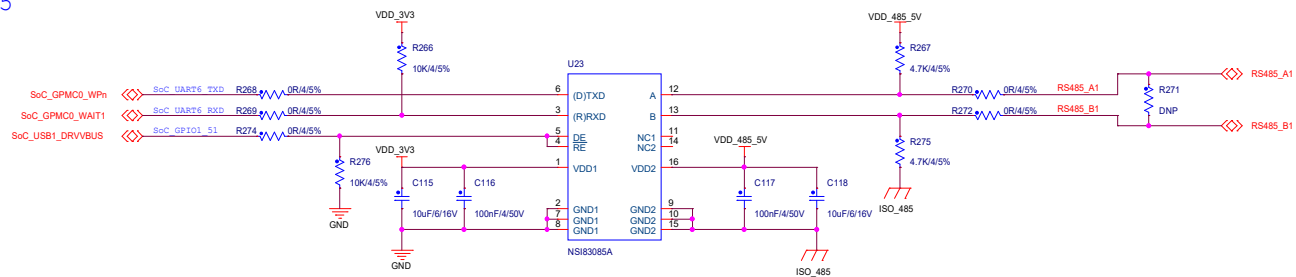


<http://www.myr-tech.com>

Title: MYB-Y62X-V01

Size: B	Document Number: UART2USB DEBUG I/F	Rev: V1.0
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 14 of 24

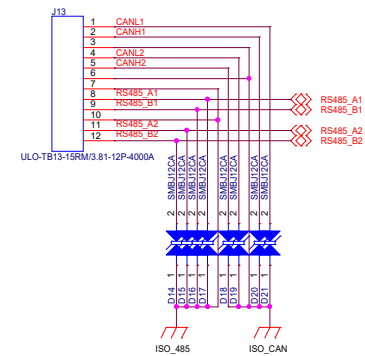
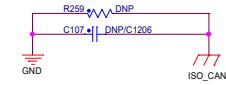
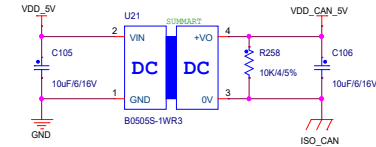
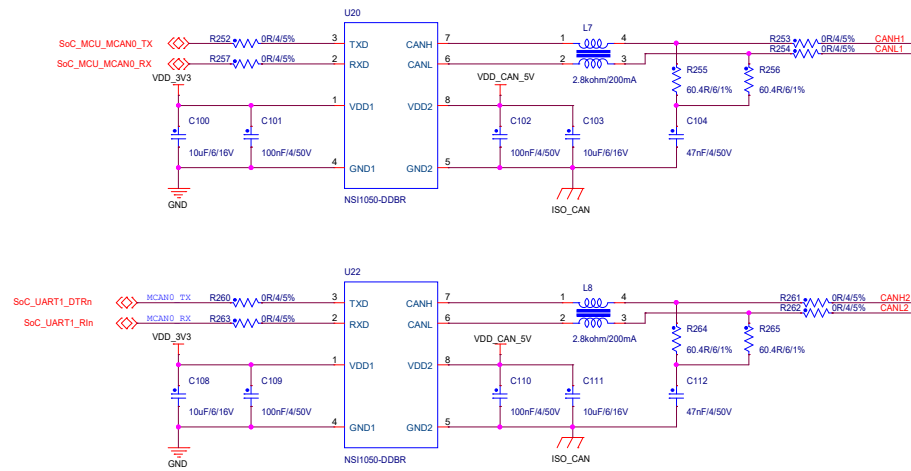
# RS-485



<Variant Name>

<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Size: C		Title: MYB-YB2X-V01	
Document Number: RS485 & MCU_MCAN		Rev: V1.0	
Draw By: MYIR		Date: Monday, August 07, 2023	
		Sheet: 15 of 24	

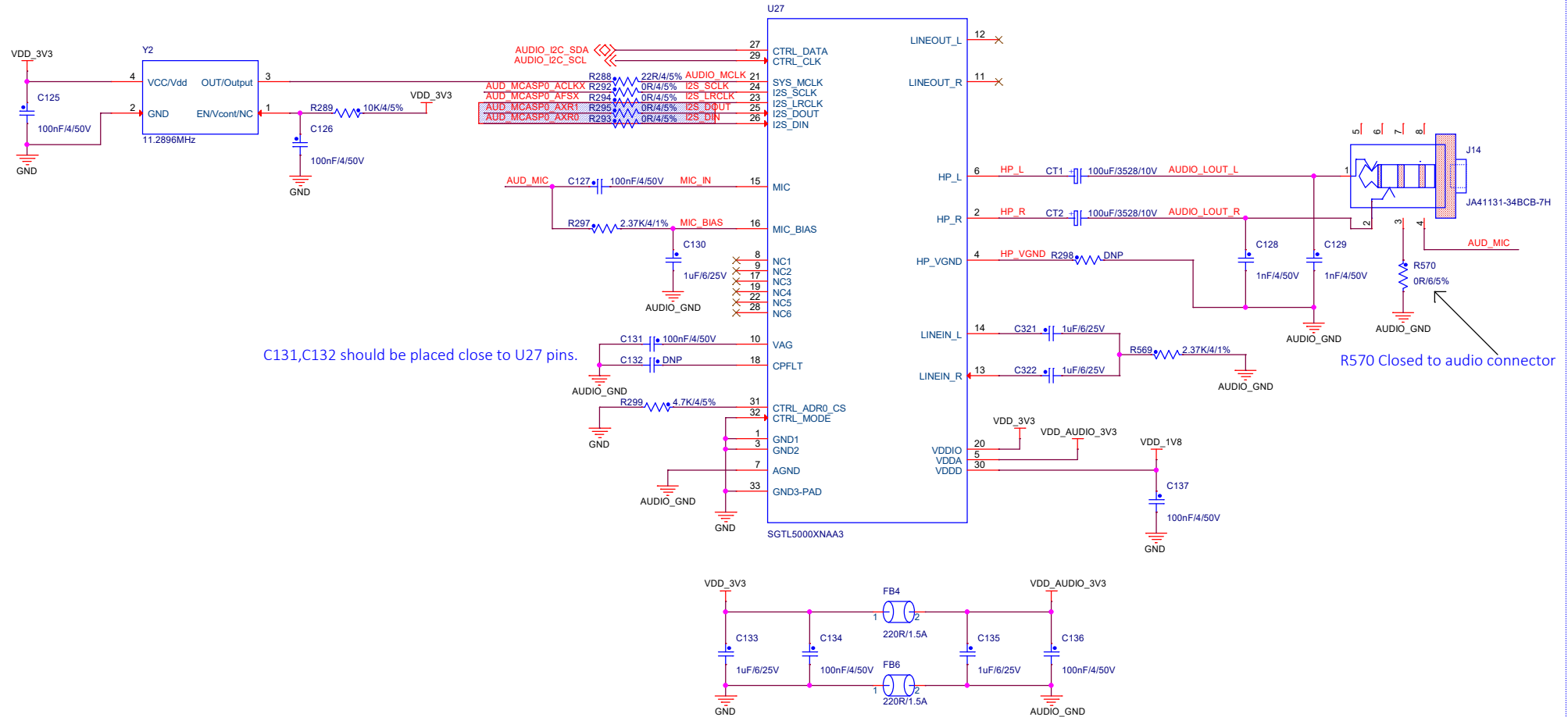
# MCAN



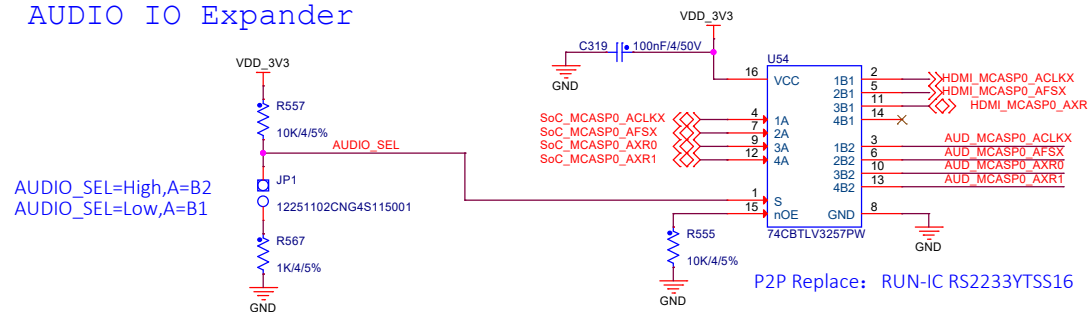
<Variant Name>

<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Size: C		Title: MYB-YB2X-V01	
Document Number: RS485 & MCU_MCAN		Rev: V1.0	
Draw By: MYIR		Date: Monday, August 07, 2023	
		Sheet: 15 of 24	

## Audio Codec



## AUDIO IO Expander

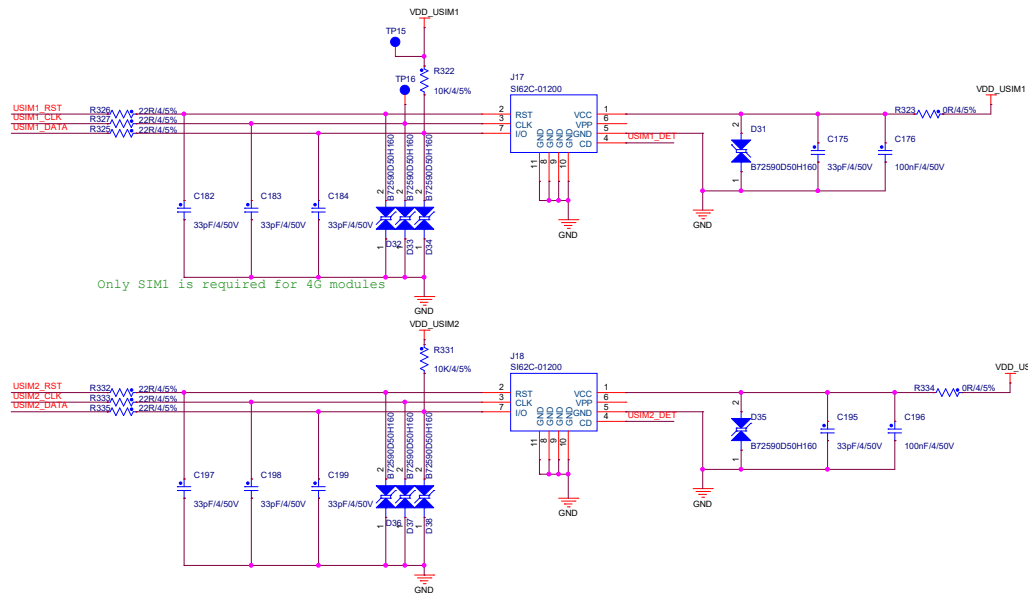


<Variant Name>

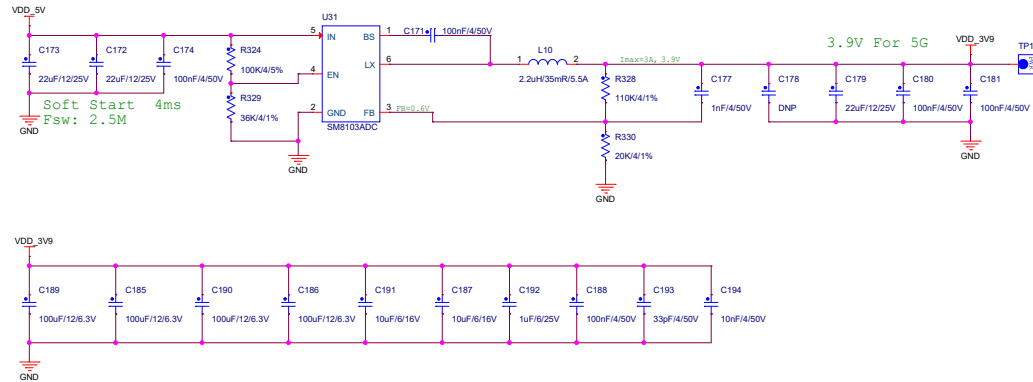
<b>MYIR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Title:		MYB-Y62X-V01	
Size: A3	Document Number: AUDIO	Rev: V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 16 of 24	



Micro SIM Card



3.9V Power Supply



M.2 Key-B 5G/4G

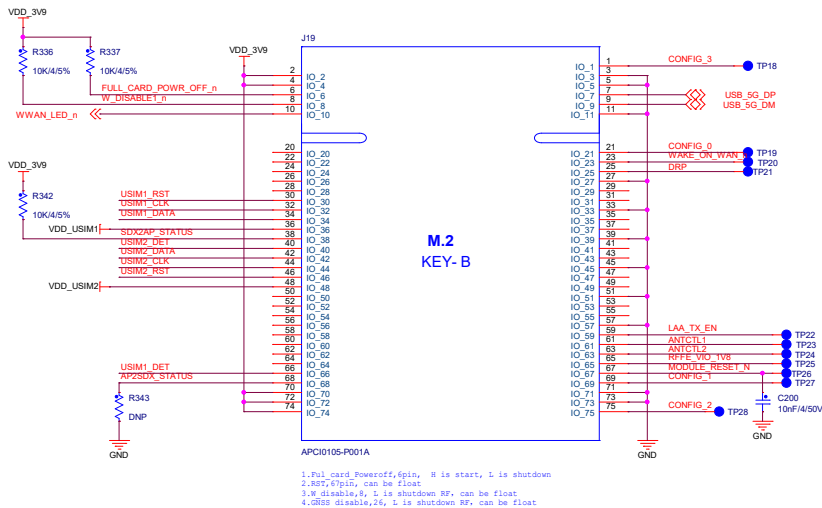
FULL\_CARD\_POWER\_OFF\_n:  
Internally pulled down with a 100 kΩ resistor.  
When it is at low level, the module is turned off.  
When it is at high level, the module is turned on.

W\_DISABLE1\_n:  
Airplane mode control.  
Active LOW.

SDX2AP\_STATUS:  
Status indication to AP.

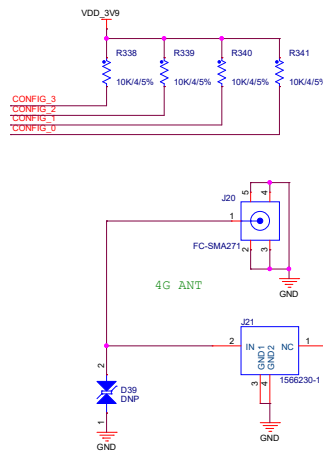
AP2SDX\_STATUS:  
Status indication from AP

H: USB BOOT  
Riz / Floating PCIe boot

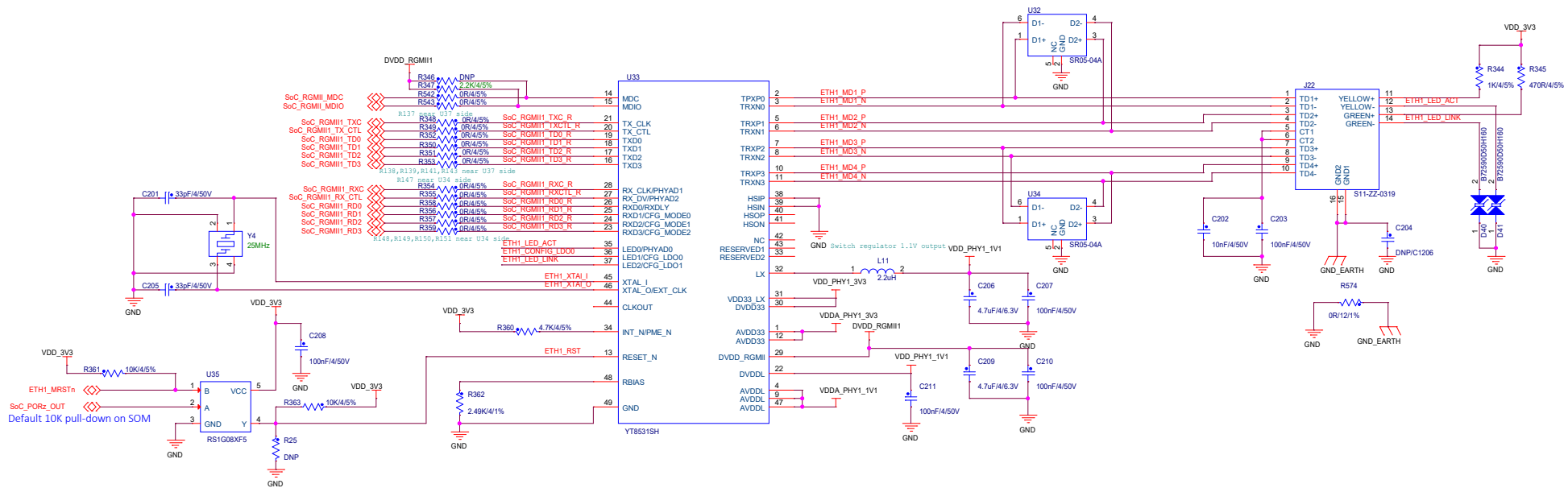


WAKE\_ON\_WAN\_n:  
Wake up the host.  
Open drain  
Active LOW.

DRP:  
Dynamic power reduction.  
High level by default.



<Variant Name>



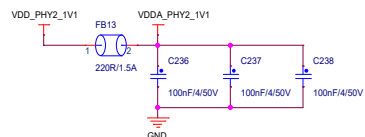
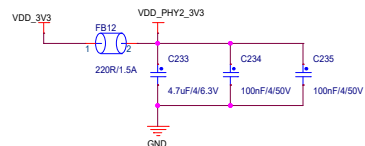
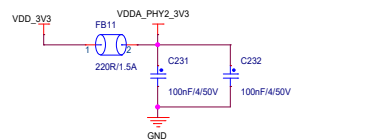
When connect an external 25MHz oscillator or clock from another device to XTAL\_I pin, keep the XTAL\_O pin floating.  
 When connect an external 25MHz oscillator or clock from another device to XTAL\_O pin, XTAL\_I must be shorted to GND.  
 If RESET, LED0, CFG\_LDO[1:0] need to be pulled up, they should be pulled up to DVDD33.  
 If RXD[3:0], RX\_CLK, RX\_DV need to be pulled up, they should be pulled up to DVDD\_RGMII.  
 If the LED pin is pulled high, it will be an active low output. And if the LED pin is pulled low, it will be an active high output.

&lt;Variant Name&gt;

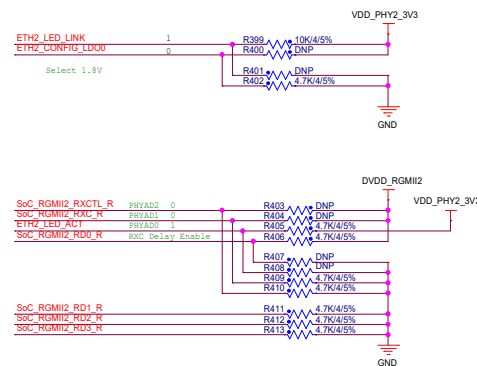


Power	Description
DVDD33	Digital non-RGMII IO Power.3.3V
VDD REG	3.3V Power for Switching Regulator
DVDD_RG	Digital RGMII I/O,NDIO,WDC Pad Power
REG OUT	Switching Regulator 1.0V Output.Connect to a 2.2uH inductor.

CFG LDO[1:0]	Voltage Selection
2'b00	External 3.3V
2'b01	Internal 2.5V
2'b10	Internal 1.8V
2'b11	Not Available



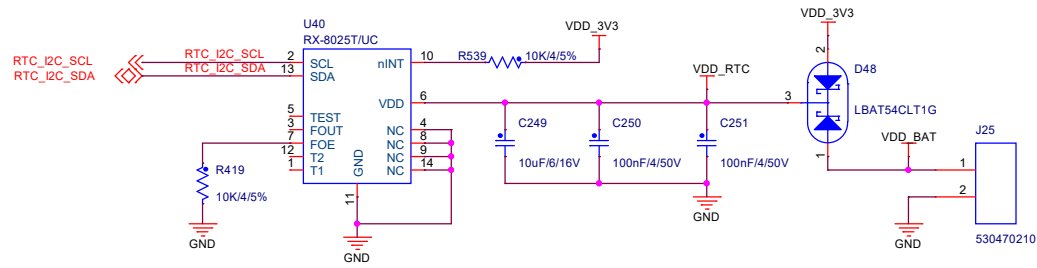
RXD[3:1]	Operation Mode
3'b000	UTP <=> RGMII
3'b001	FIBER <=> RGMII
3'b010	UTP/FIBER <=> RGMII
3'b011	UTP <=> SGMII
3'b100	SGMII (PHY) <=> RGMII
3'b101	SGMII (MAC) <=> RGMII
3'b110	UTP <=> FIBER (AUTO)
3'b111	UTP <=> FIBER (FORCE)



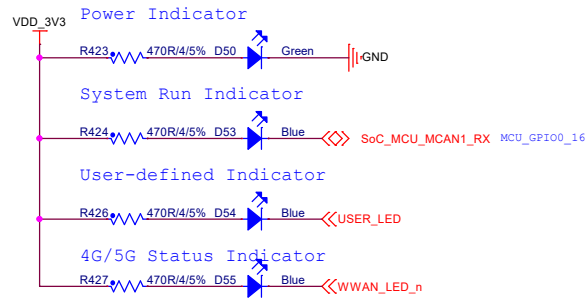
When connect an external 25MHz oscillator or clock from another device to XTAL\_I pin,keep the XTAL\_O floating.  
When connect an external 25MHz oscillator or clock from another device to XTAL\_O pin,XTAL\_I must be shorted to GND.

If RESET, LED0, CFG\_LDO[1:0] need to be pulled up,they should be pulled up to DVDD33.  
If RXD[3:0], RX\_CLK, RX\_DV need to be pulled pulled up,they should be pulled up to DVDD\_RGMII.  
if the LED pin is pulled high,it will be an active low output. And if the LED pin is pulled low,it will be an active high output

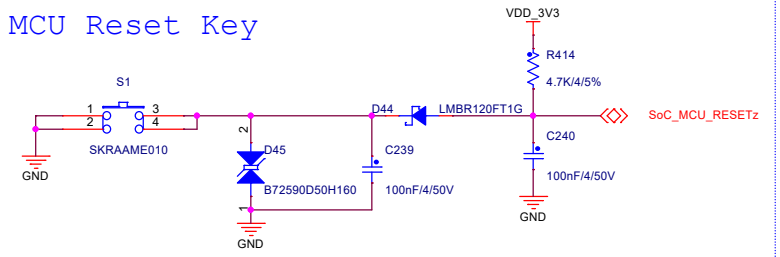
## RTC



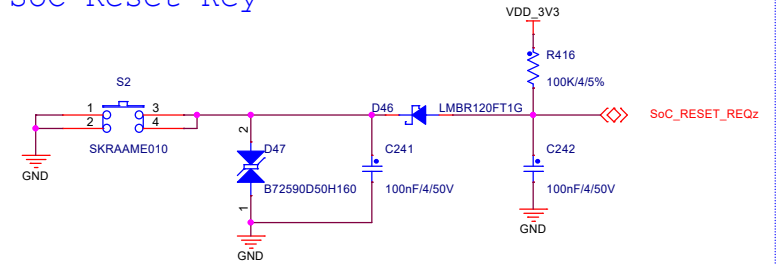
## LED



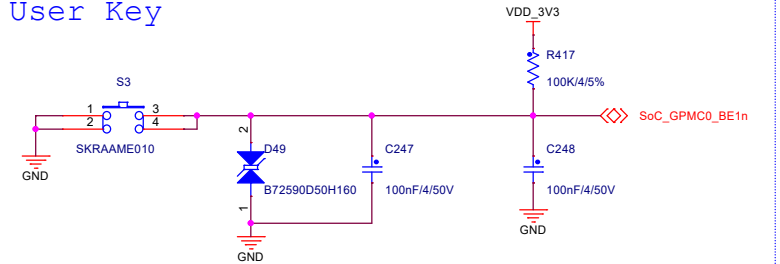
## MCU Reset Key



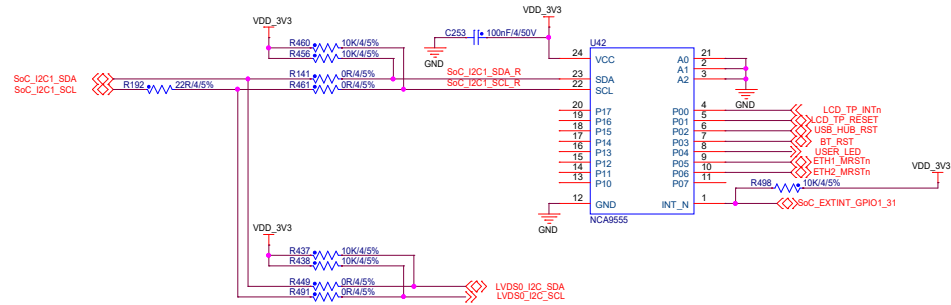
## SoC Reset Key



User Key

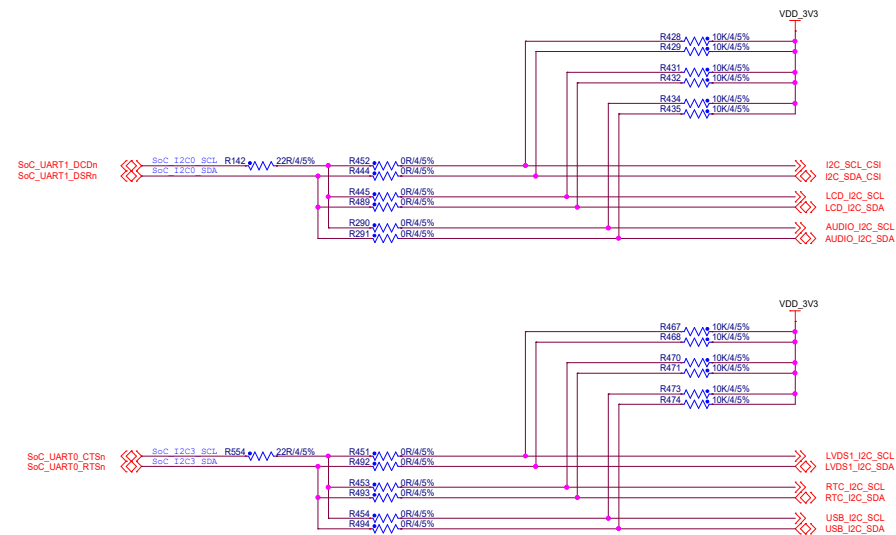


## I2C IO Expander



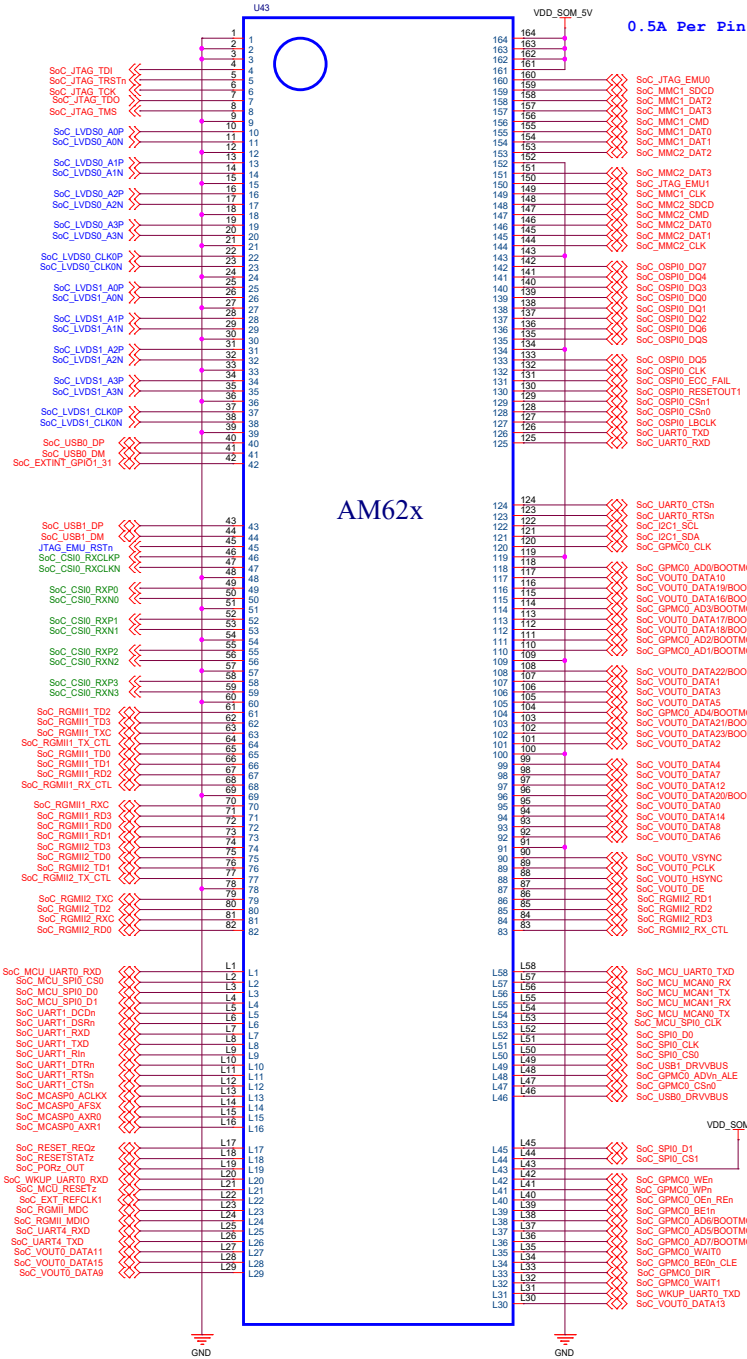
INTn output is activated when changes state and the pin is configured as an input. A pin configured as an output cannot cause an interrupt.

## I2C SHARE



22R Series resistors placed close to SOM connector.  
0R Series resistors placed in cross poin,close to slave device.

# MYC-Y62X I/F



<Variant Name>

<b>MYiR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Title:		MYB-Y62X-V01	
Size:	Document Number:	Rev:	
C	EXTERNAL INTERFACE	V1.0	
Draw By: MYIR	Date: Monday, August 07, 2023	Sheet: 23 of 24	

## HARDWARE SCHEMATICS

### ASSEMBLY NOTES

1. All MSL components should be baked as per JEDEC standard.
2. PCB should be baked at 120 degree for 8 hours.
3. Board assembly must comply with workmanship standards. IPC-A-610 Class 2, unless otherwise specified.
4. These assemblies are ESD sensitive, ESD precautions shall be observed.
5. These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
6. Provide serial numbers to the assembled boards for identification.
7. The assembled board are wrapped in ESD Covers(individual) and packed securely before shipment.

### BARE PCB

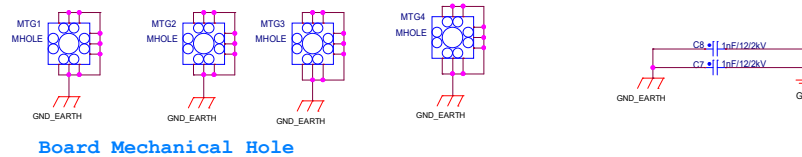
### LOGOs

### LABELS

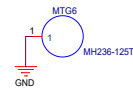
Board Serial No.

Assembly Revision

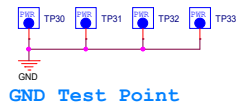
## FIDUCIALS



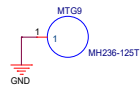
Board Mechanical Hole



Mechanical Hole for Mounting RaspberryPi Board



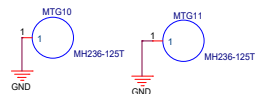
GND Test Point



Mechanical Hole for Mounting 5G Module



MYIR PCB Template



Mechanical Hole for the radiator

<Variant Name>

<b>MYiR</b>		<a href="http://www.myir-tech.com">http://www.myir-tech.com</a>	
Size: C		Title: MYB-YB2X-V01	
Document Number: ACCESSORIES		Rev: V1.0	
Draw By: MYIR		Date: Monday, August 07, 2023	
		Sheet: 24 of 24	