

FMC HPC BANK2,4,5 Q1 IO:141

34 LA pairs (LA00-LA33)  
24 HA pairs (HA00-HA23)  
2 Differential Clock  
3 GPIO

SFP\*2

POWER

Clock 50M BANK3 IO:1  
Differential Clock 200M  
BANK7,Q1 IO:4  
MGT SMA  
BANKQ1 IO:2  
SMA Clock  
BANKQ0 IO:2

GW5AST-138-FPBGA676

Switches LEDs, Buttons  
BANK3

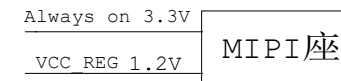
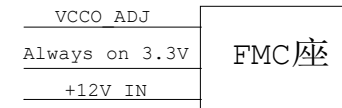
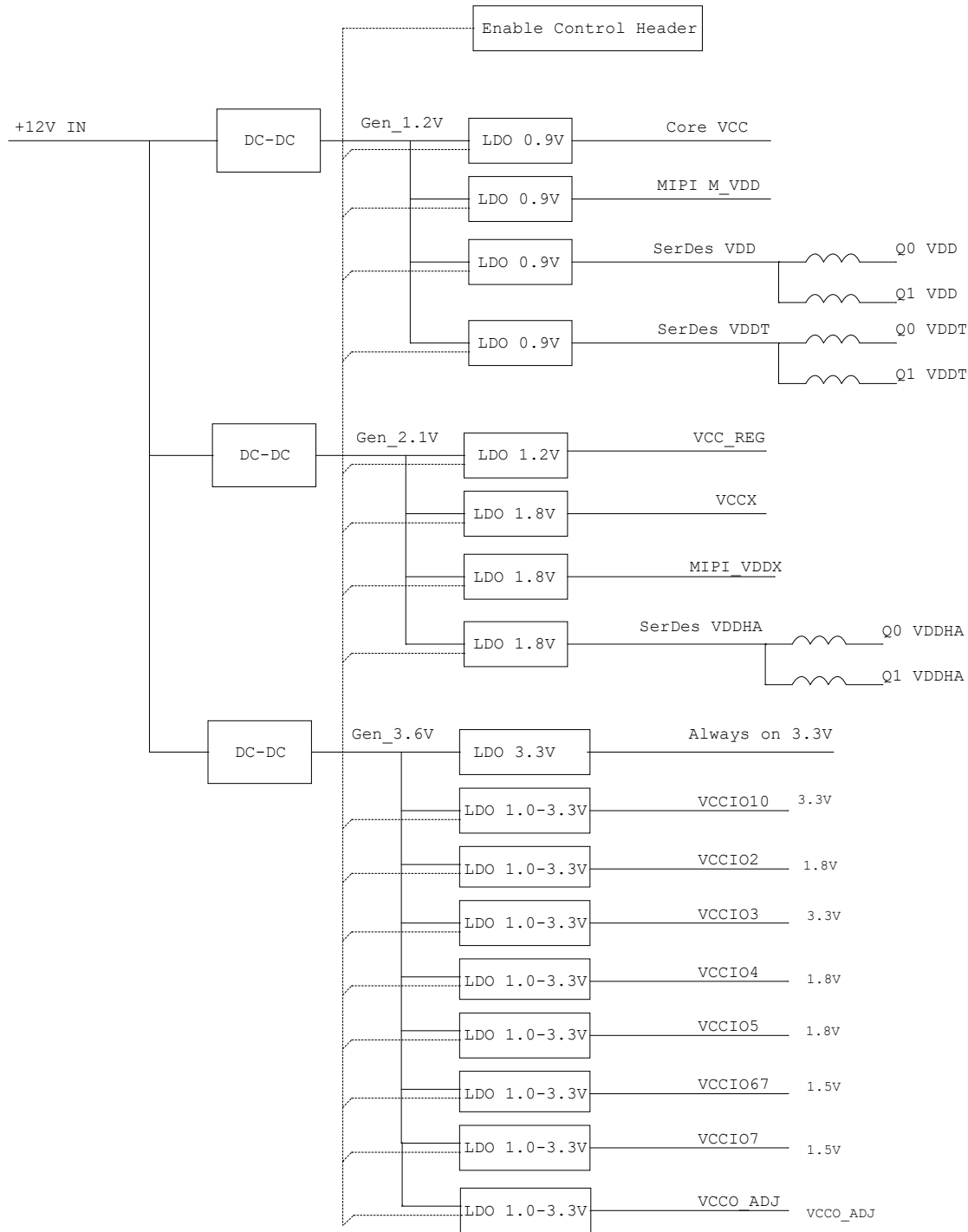
PCIe x4 Edge Connector  
BANK Q0 IO:20

JTAG ,SSPI, MSPI, CPU,  
SERIAL, I2C  
BANK10,3 IO:21

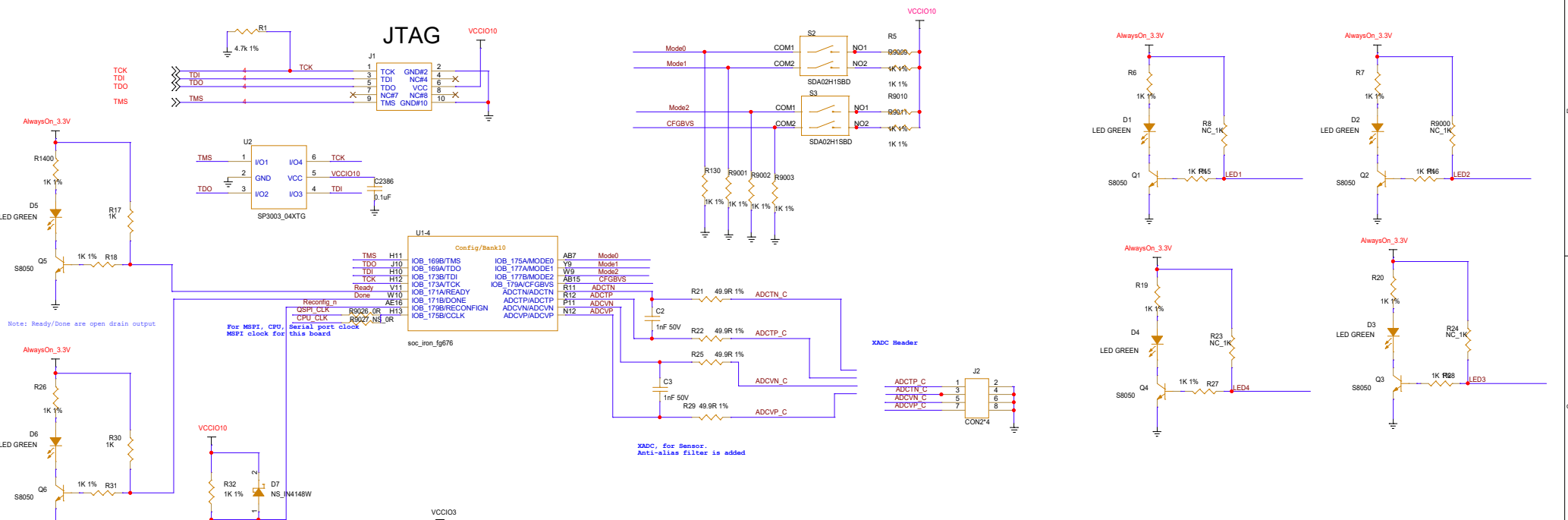
16bit 512M \*2 DDR3  
BANK6,7 IO:60

MIPI RX&TX  
MIPI BANK IO:20

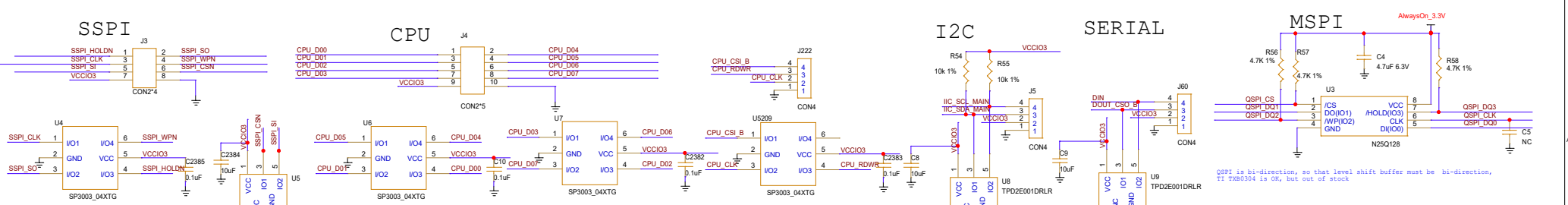
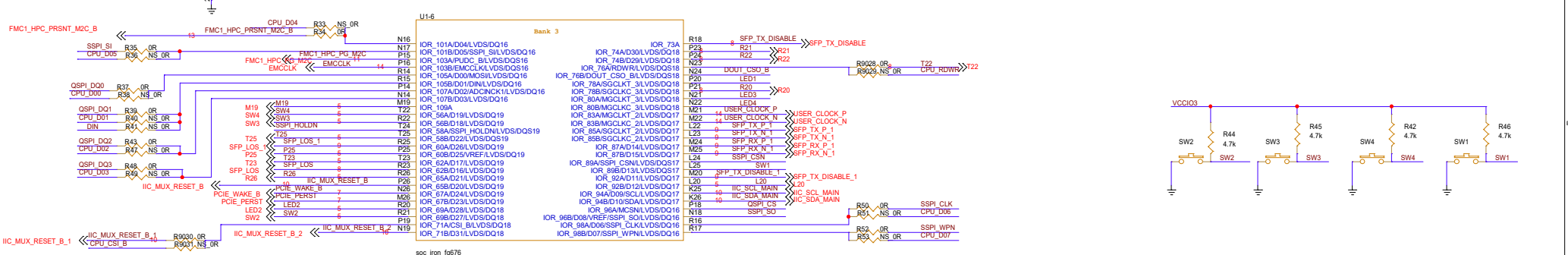
# Power Tree

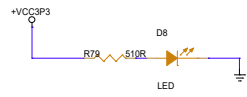
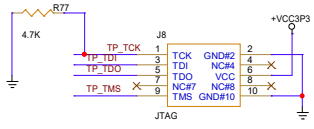
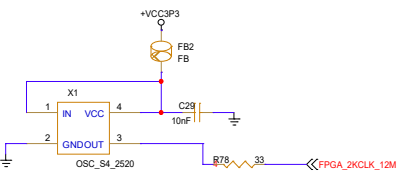
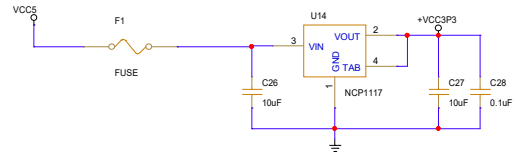
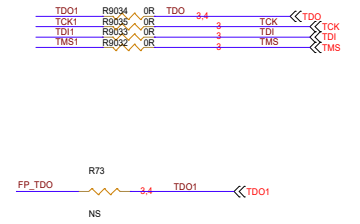
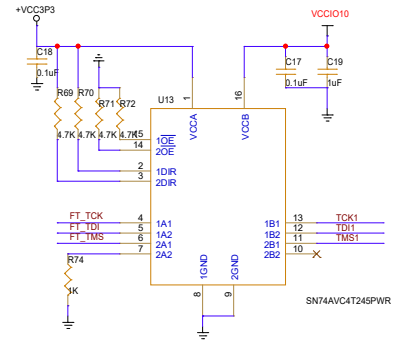
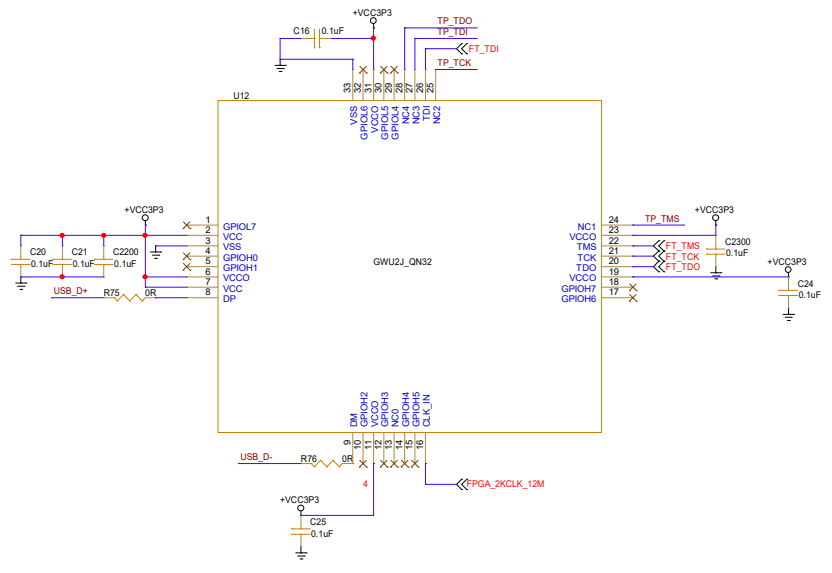
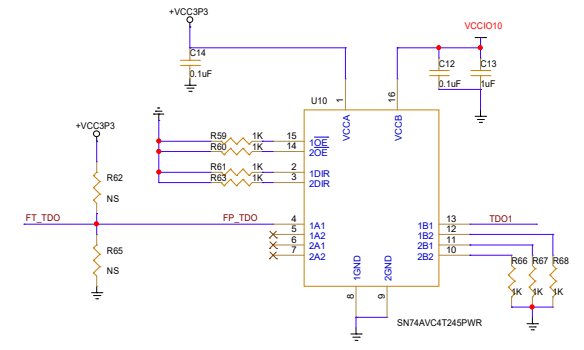
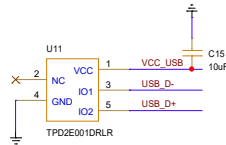
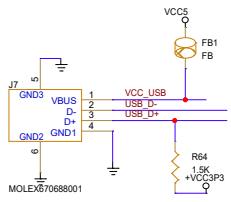


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| Size  | Document Number       | Rev                          |         |
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| Date: | Friday, July 19, 2024 | Sheet                        | 2 of 19 |



### JTAG, SSPI, MSPI, CPU, SERIAL, I2C





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| Title                        |                       |               |
| DK_START_GW5AST-LV138FPG676A |                       |               |
| Size                         | Document Number       | Rev           |
| C                            | <Doc>                 | V1.0          |
| Date:                        | Friday, July 19, 2024 | Sheet 4 of 19 |

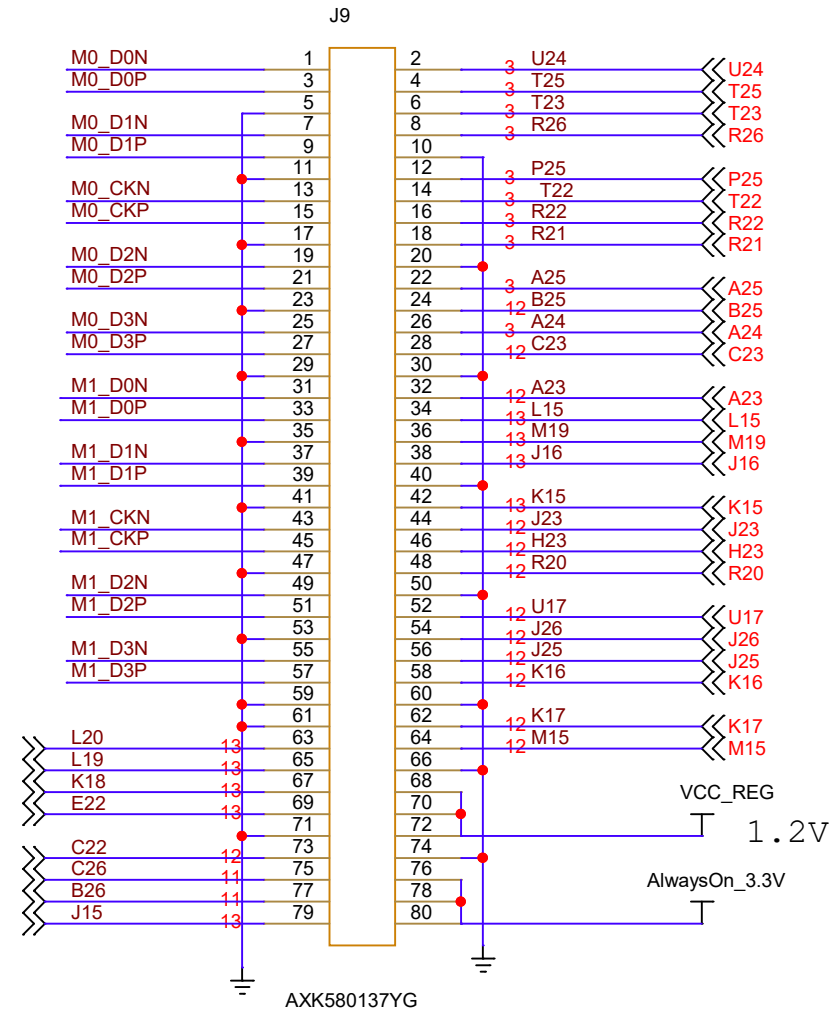
MIPI bank is for MIPI RX hard macro.  
 As the board is for characterization purpose, SMA connector is used.  
 MIPI bank only have SMA connectors. Length match rules:  
 1. M0/M1 length match for each intra group  
 2. M0 and M1 inter group length match is nice to have

# MIPI

| U1-1      |     |        |        |
|-----------|-----|--------|--------|
| MIPI Bank |     |        |        |
| M0_CKN    | AA3 | M0_CKN | M1_CKN |
| M0_CKP    | Y3  | M0_CKP | M1_CKP |
| M0_D0N    | W1  | M0_D0N | M1_D0N |
| M0_D0P    | V1  | M0_D0P | M1_D0P |
| M0_D1N    | AA2 | M0_D1N | M1_D1N |
| M0_D1P    | Y2  | M0_D1P | M1_D1P |
| M0_D2N    | W3  | M0_D2N | M1_D2N |
| M0_D2P    | V3  | M0_D2P | M1_D2P |
| M0_D3N    | W4  | M0_D3N | M1_D3N |
| M0_D3P    | V4  | M0_D3P | M1_D3P |

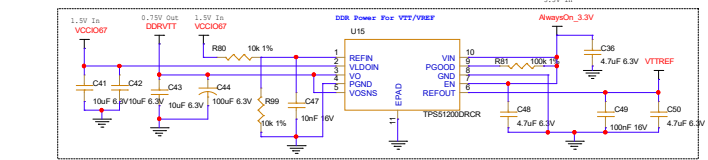
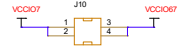
soc\_iron\_fg676

L20  
 L19  
 K18  
 E22  
 C22  
 C26  
 B26  
 J15

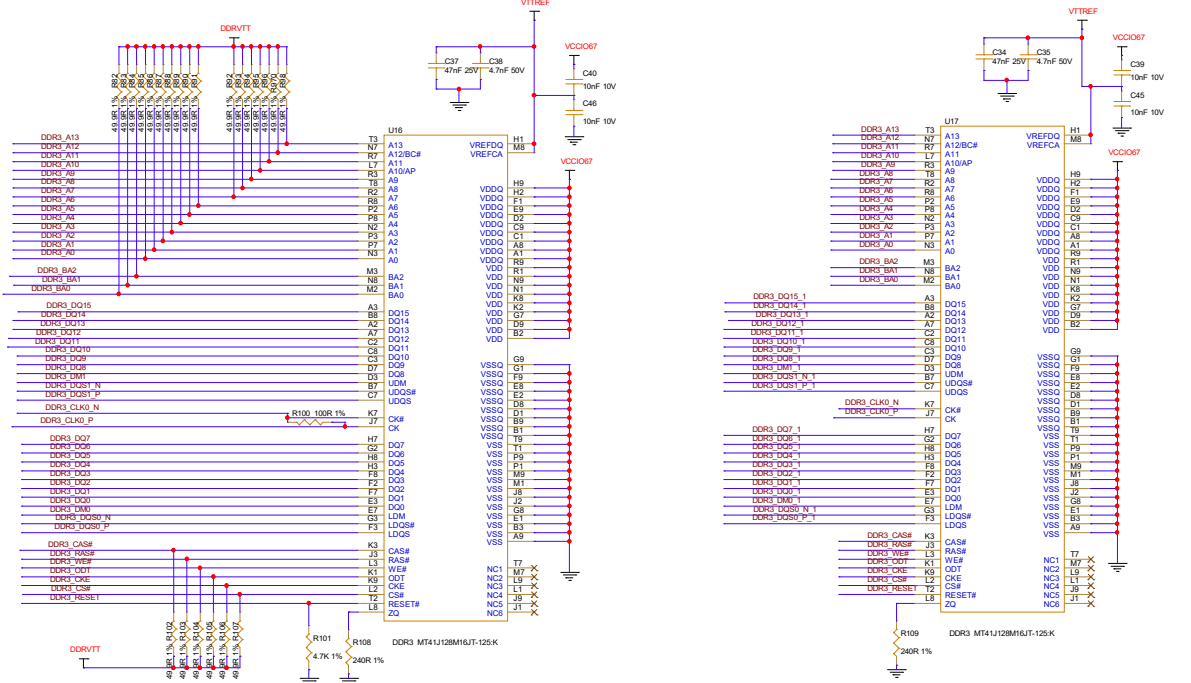
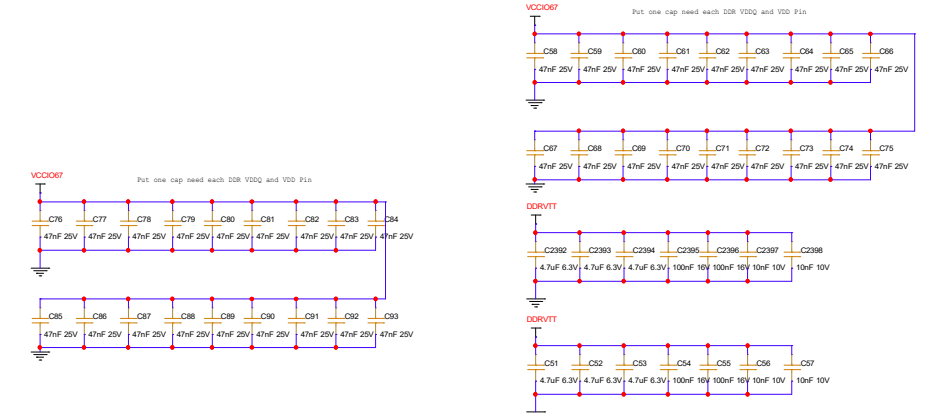


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| Date:                        | Friday, July 19, 2024 | Sheet 5 of 19 |

# DDR3\*2

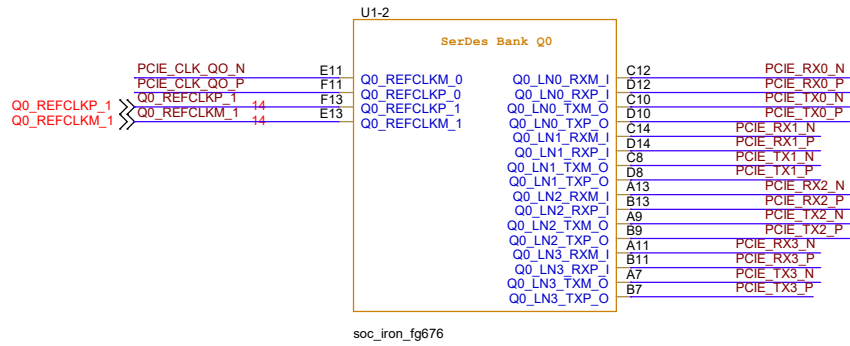


Size for de-cap

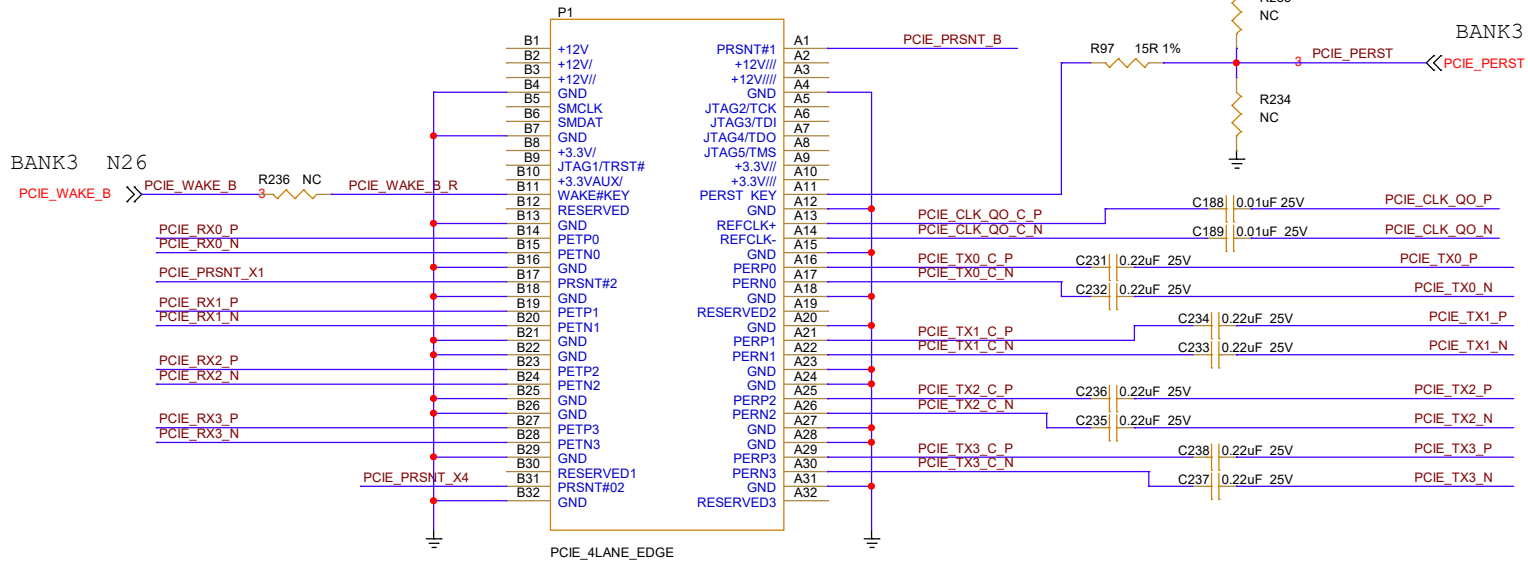
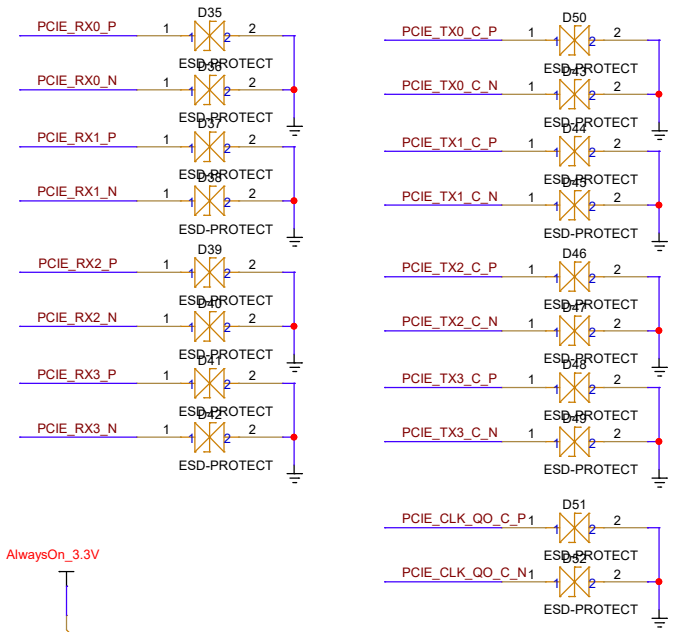


# PCIe

SerDes to SMP pin order could be swapped.



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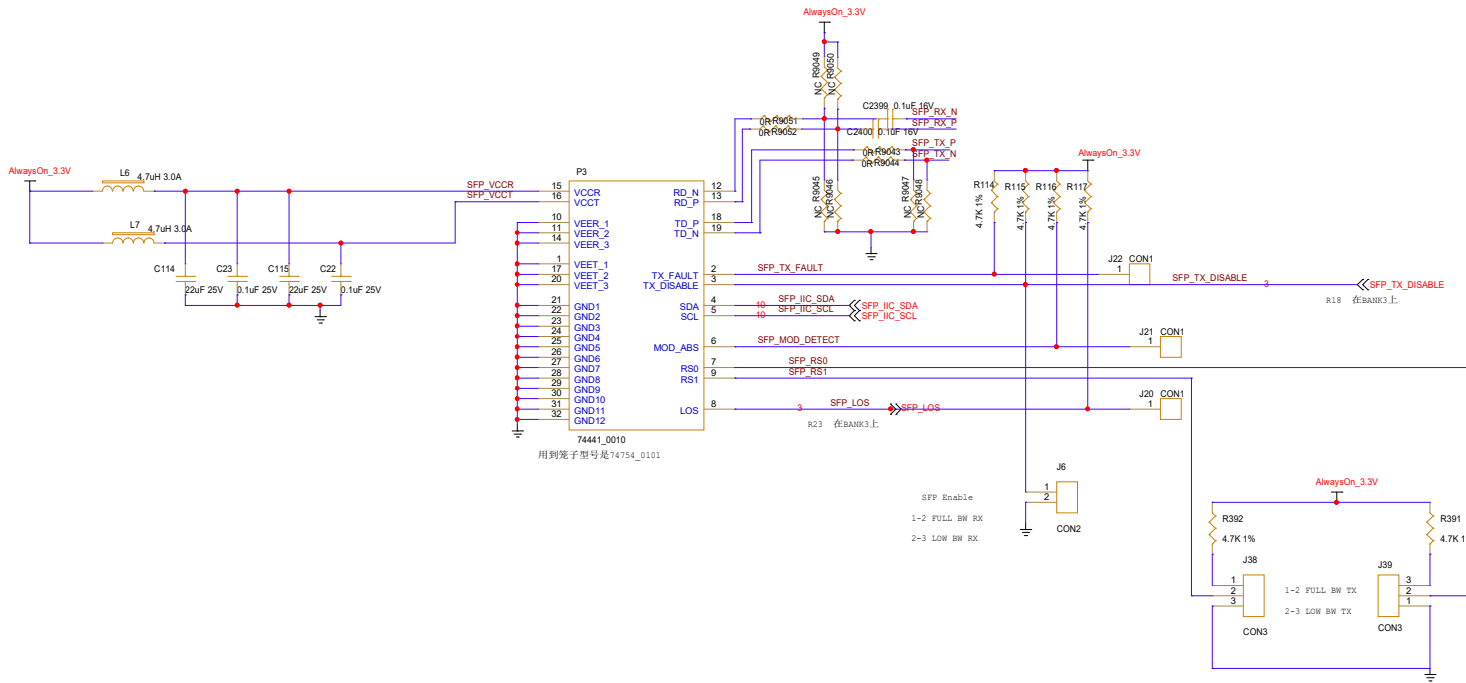
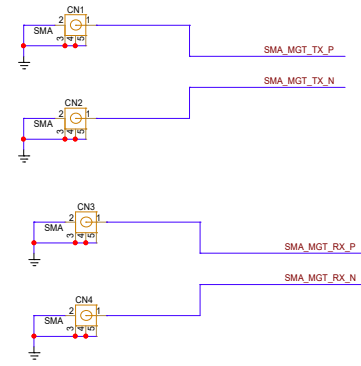
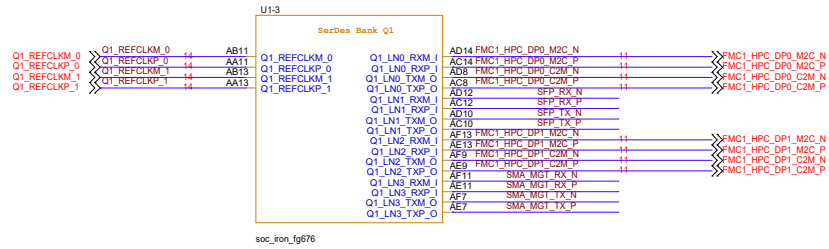
AlwaysOn\_3.3V

BANK3

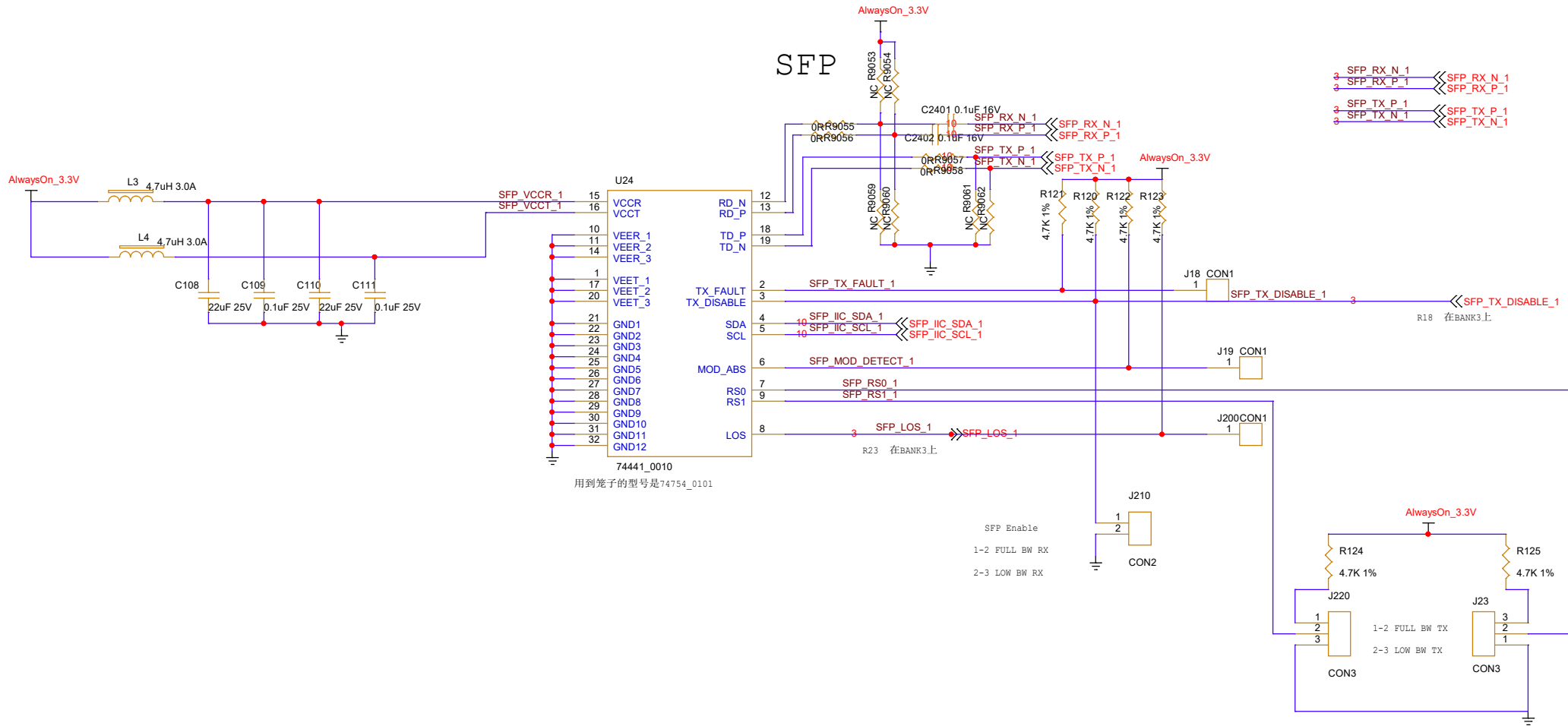
M26

|                              |                       |               |
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| Date:                        | Friday, July 19, 2024 | Sheet 7 of 19 |

# SFP



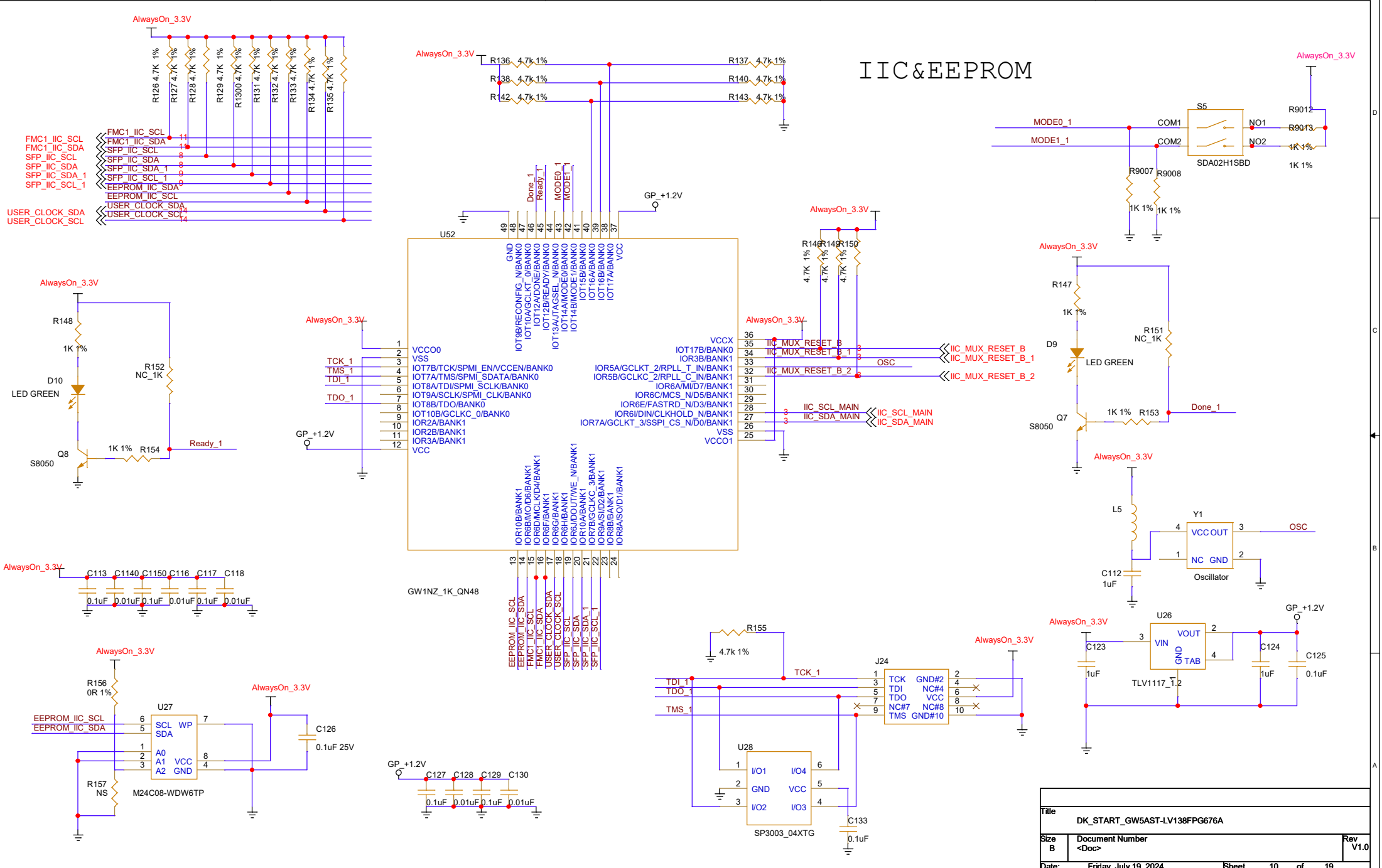




74441\_0010  
 用到笼子的型号是74754\_0101

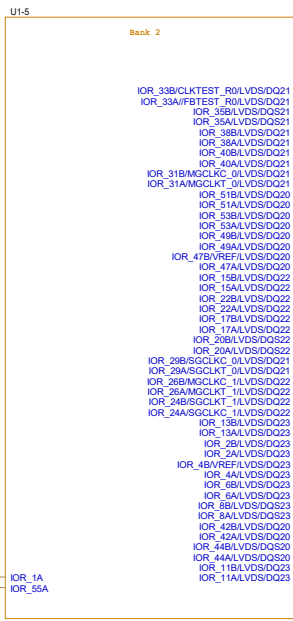
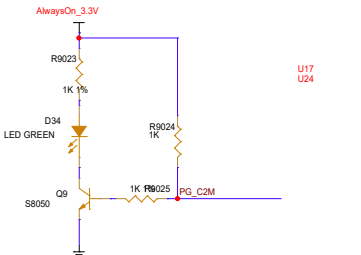
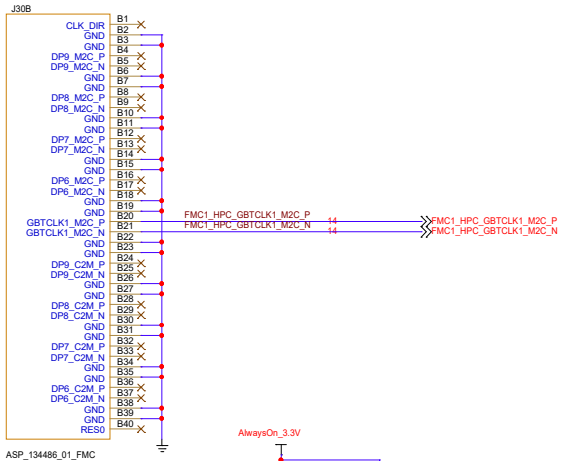
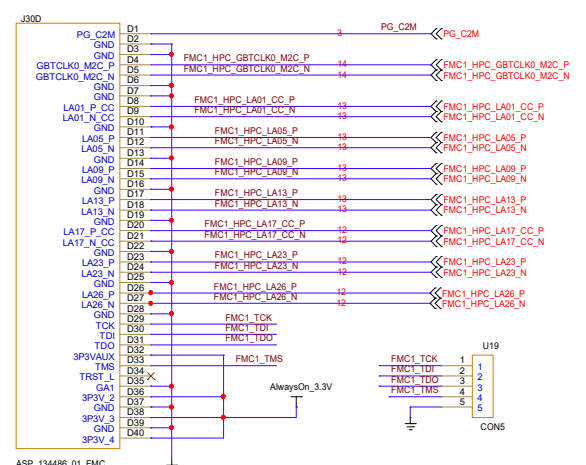
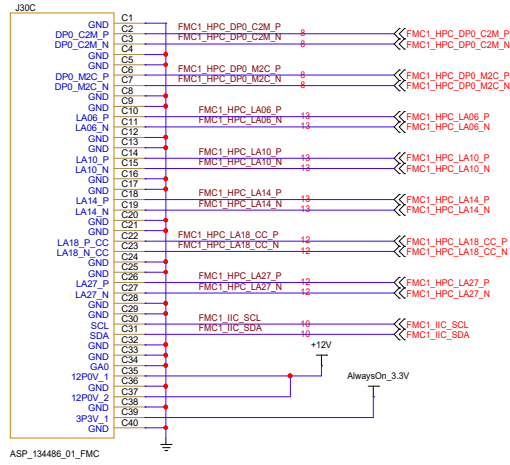
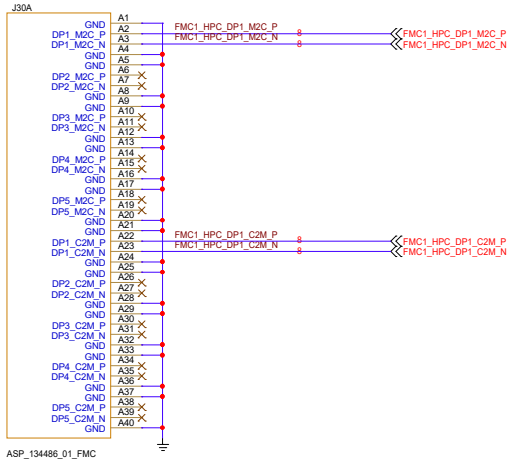
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| Date:                        | Friday, July 19, 2024 | Sheet 9 of 19 |

# IIC & EEPROM

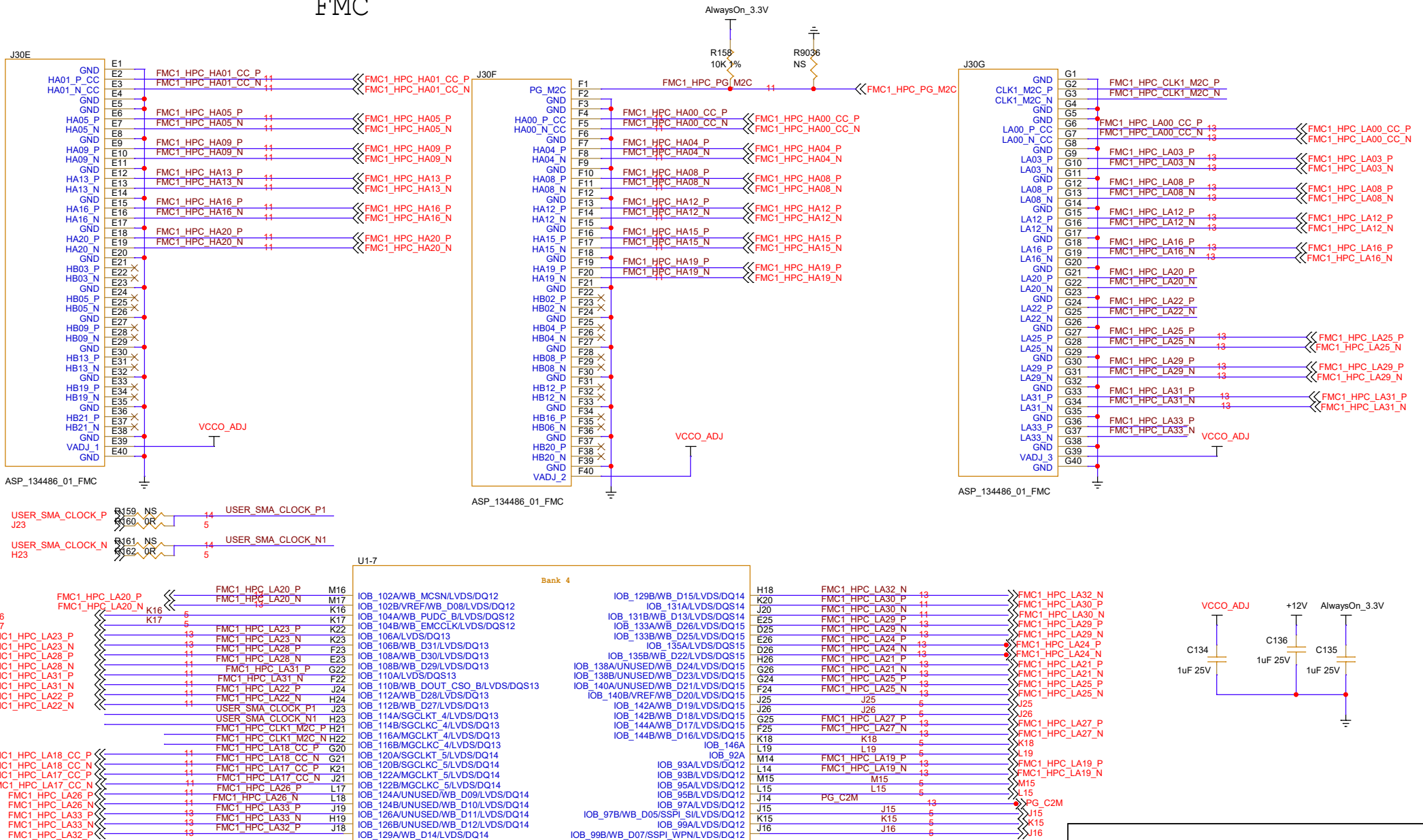


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| Date:                        | Friday, July 19, 2024 | Sheet 10 of 19 |

# FMC

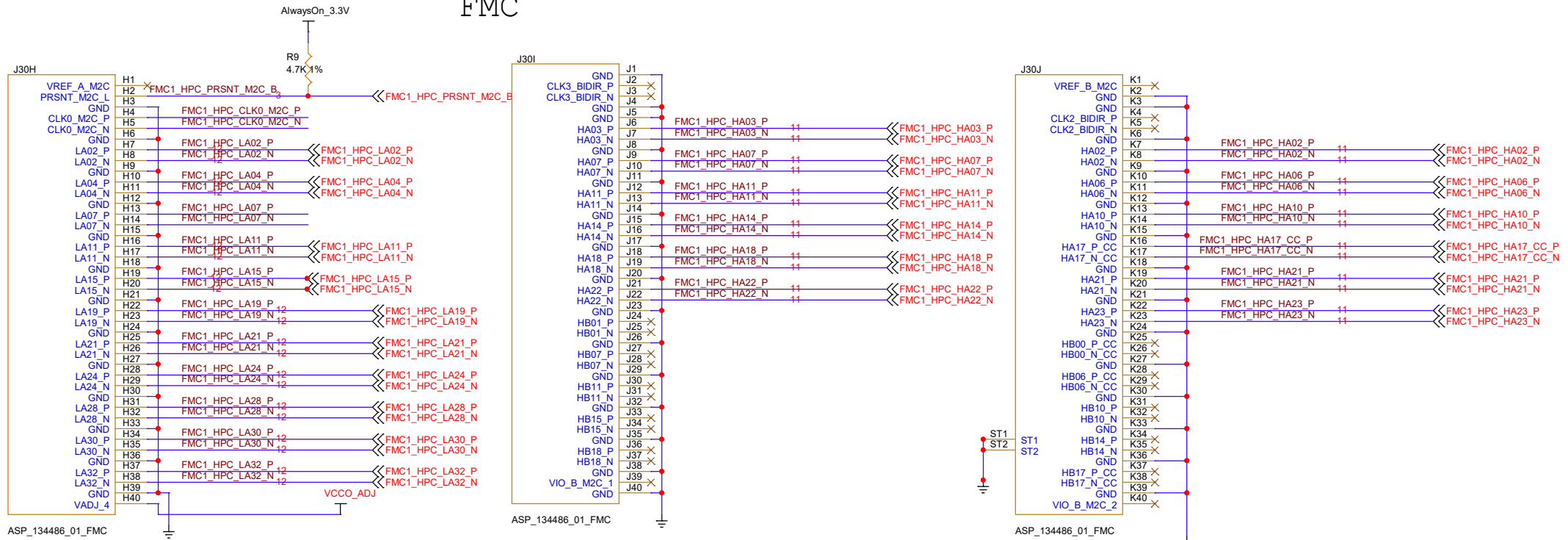


# FMC



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| Date:                        | Friday, July 19, 2024 | Sheet 12 of 19 |

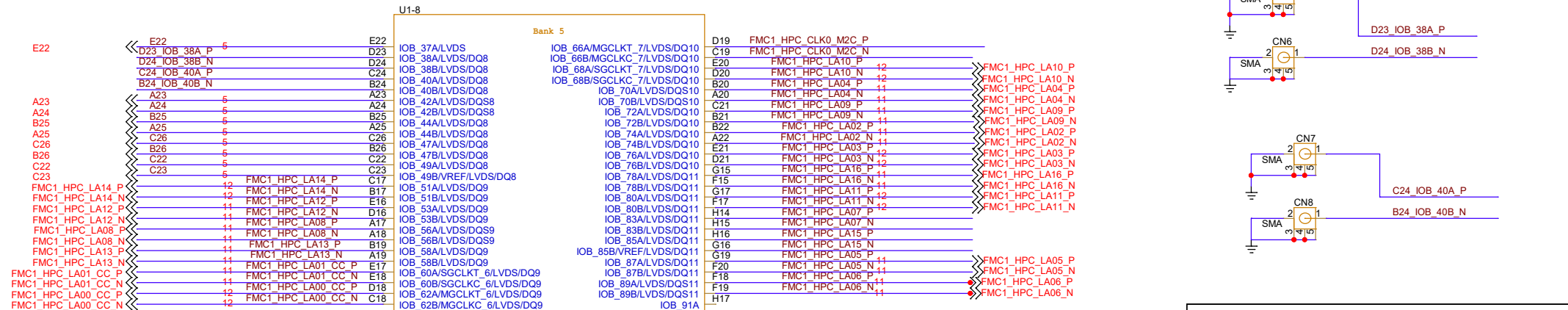
# FMC



ASP\_134486\_01\_FMC

ASP\_134486\_01\_FMC

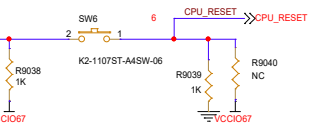
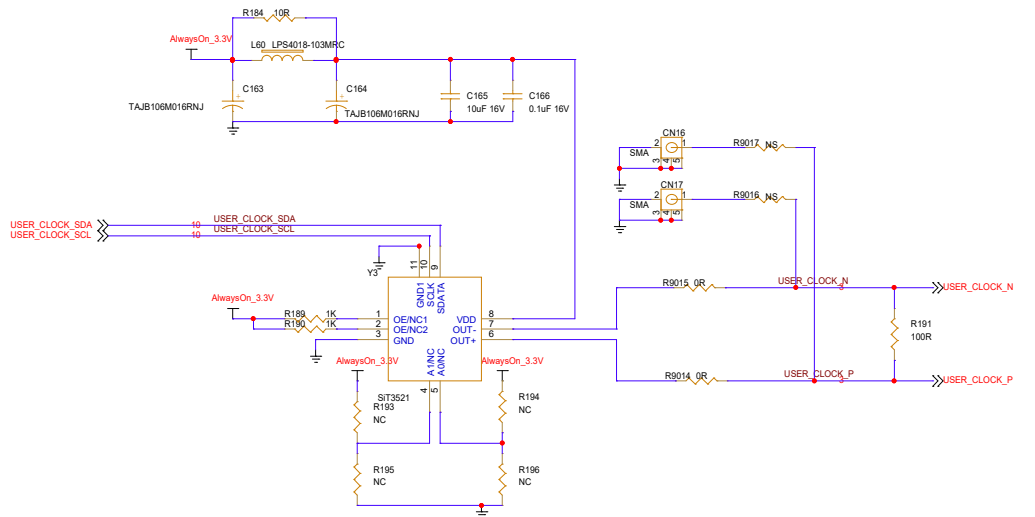
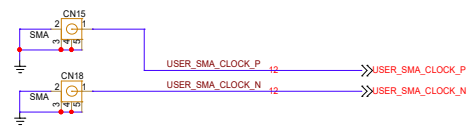
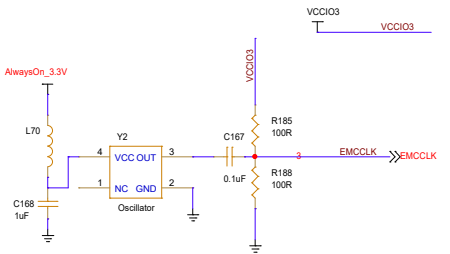
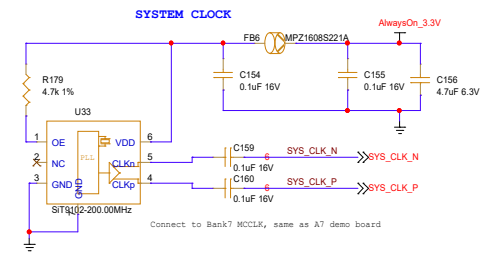
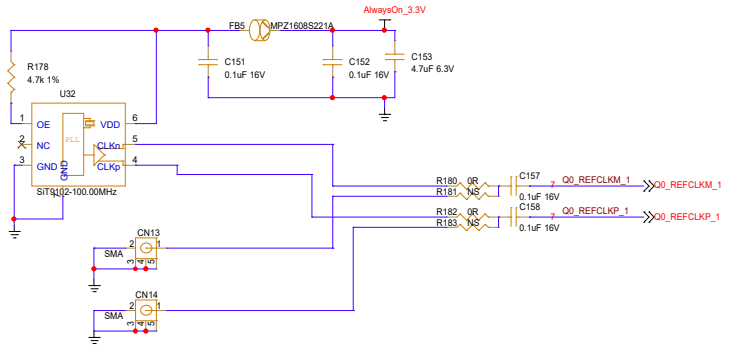
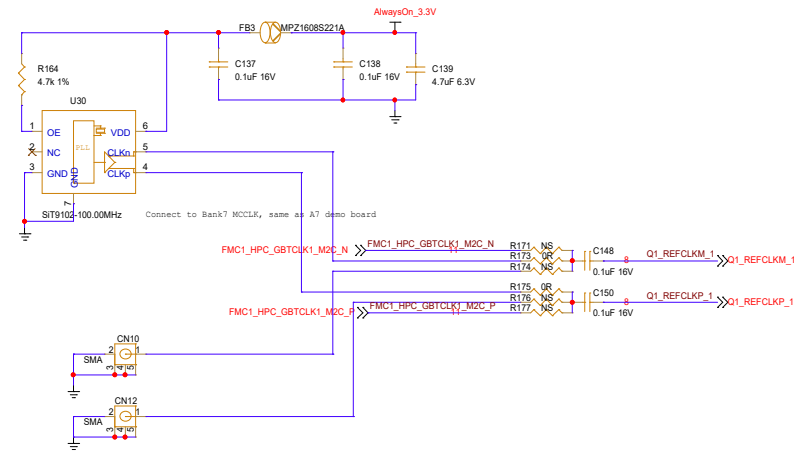
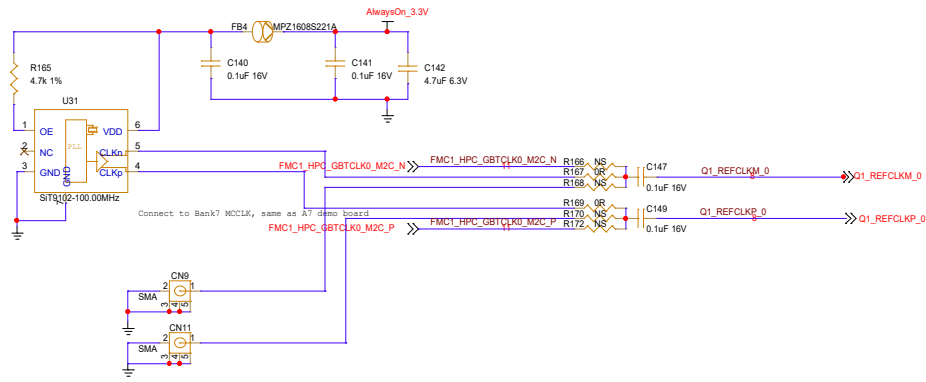
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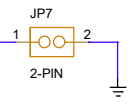
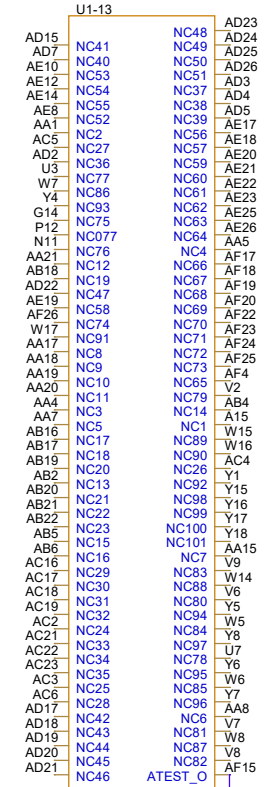
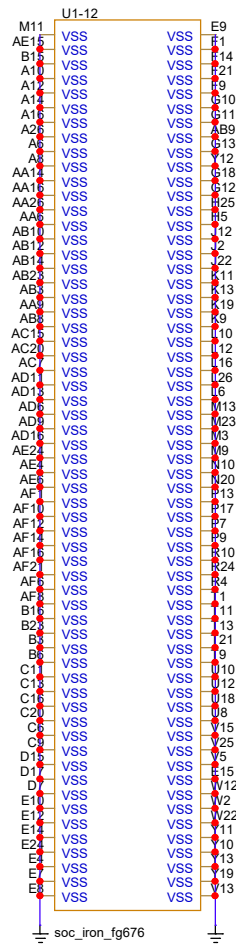
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| B                            | <Doc>                 | V1.0           |
| Date:                        | Friday, July 19, 2024 | Sheet 13 of 19 |

# CLOCK



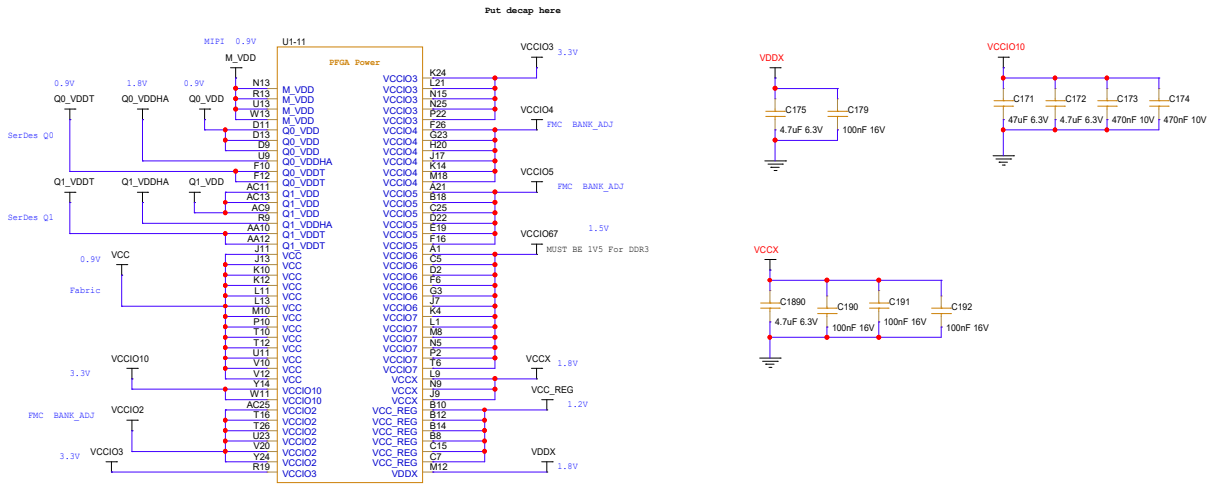
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| Date:                        | Friday, July 19, 2024 | Sheet 14 of 19 |

# GND&NC

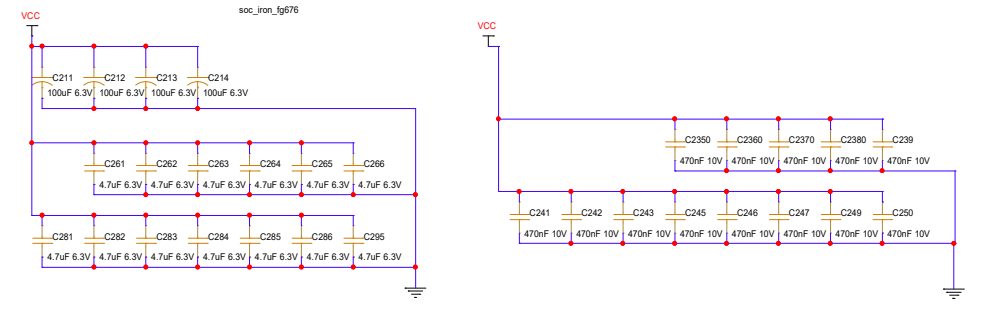
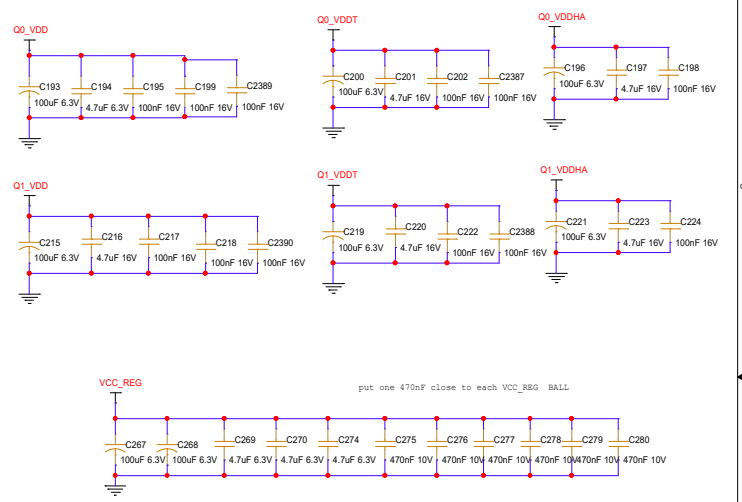
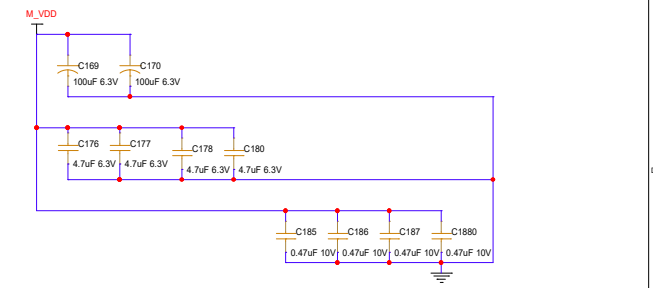


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| Date:                        | Friday, July 19, 2024 | Sheet 15 of 19 |

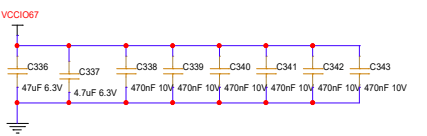
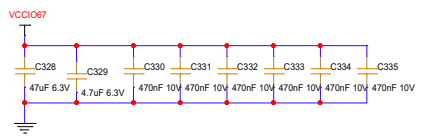
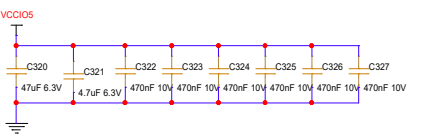
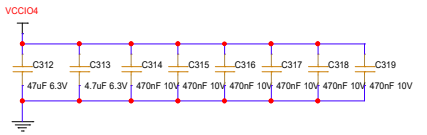
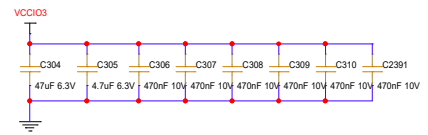
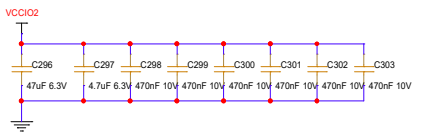
# FPGA\_POWER



2x100uF, 4x4.7uF, 4x0.47uF



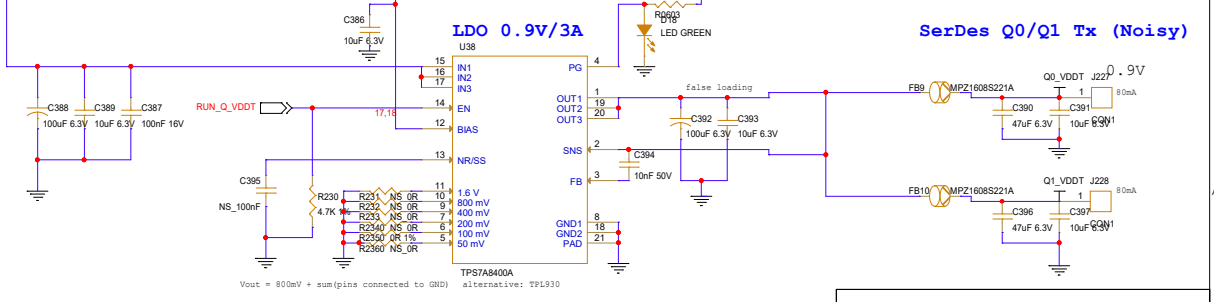
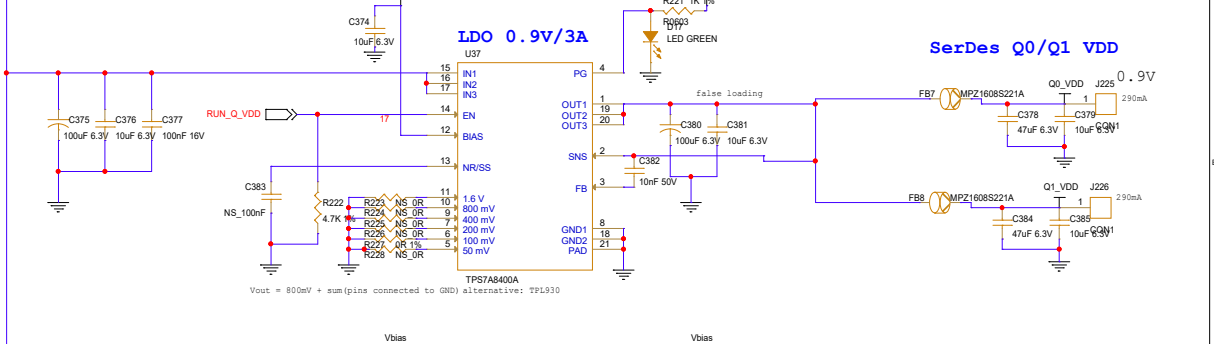
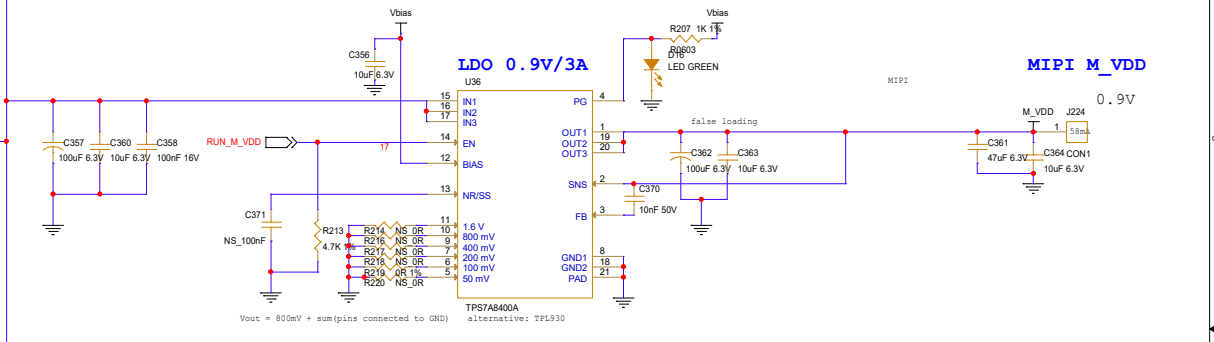
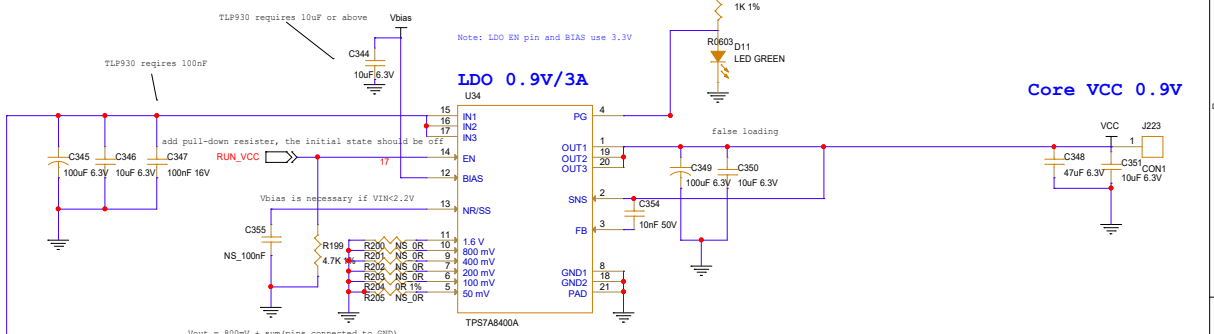
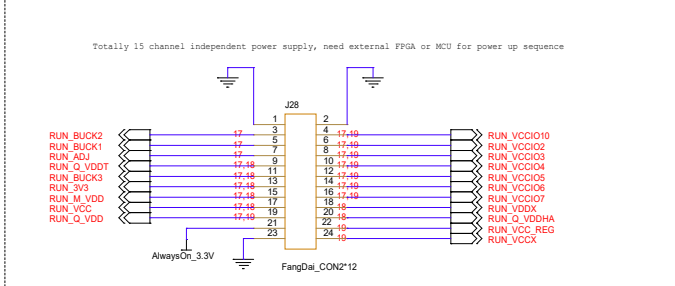
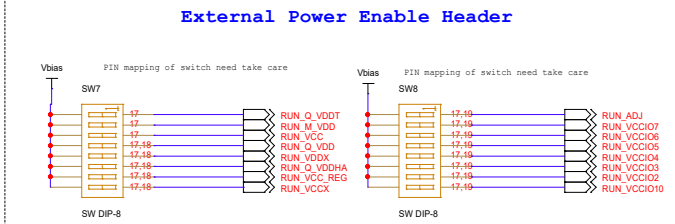
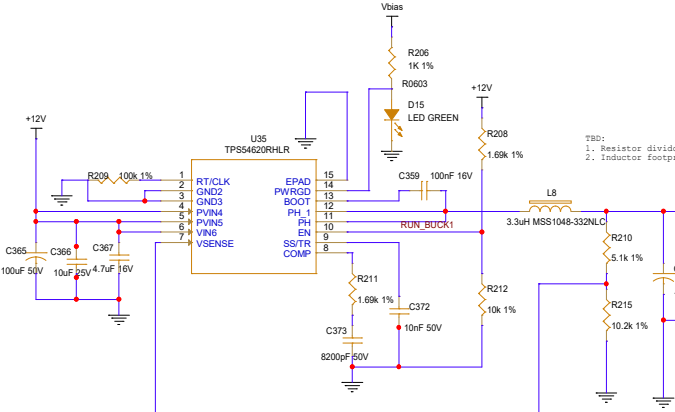
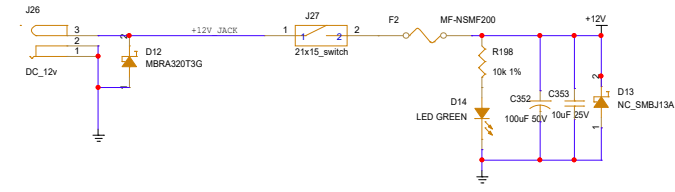
4x100uF, 13x4.7uF, 26x0.47uF



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| Date: | Friday, July 19, 2024 | Sheet | 16 of 19                     |

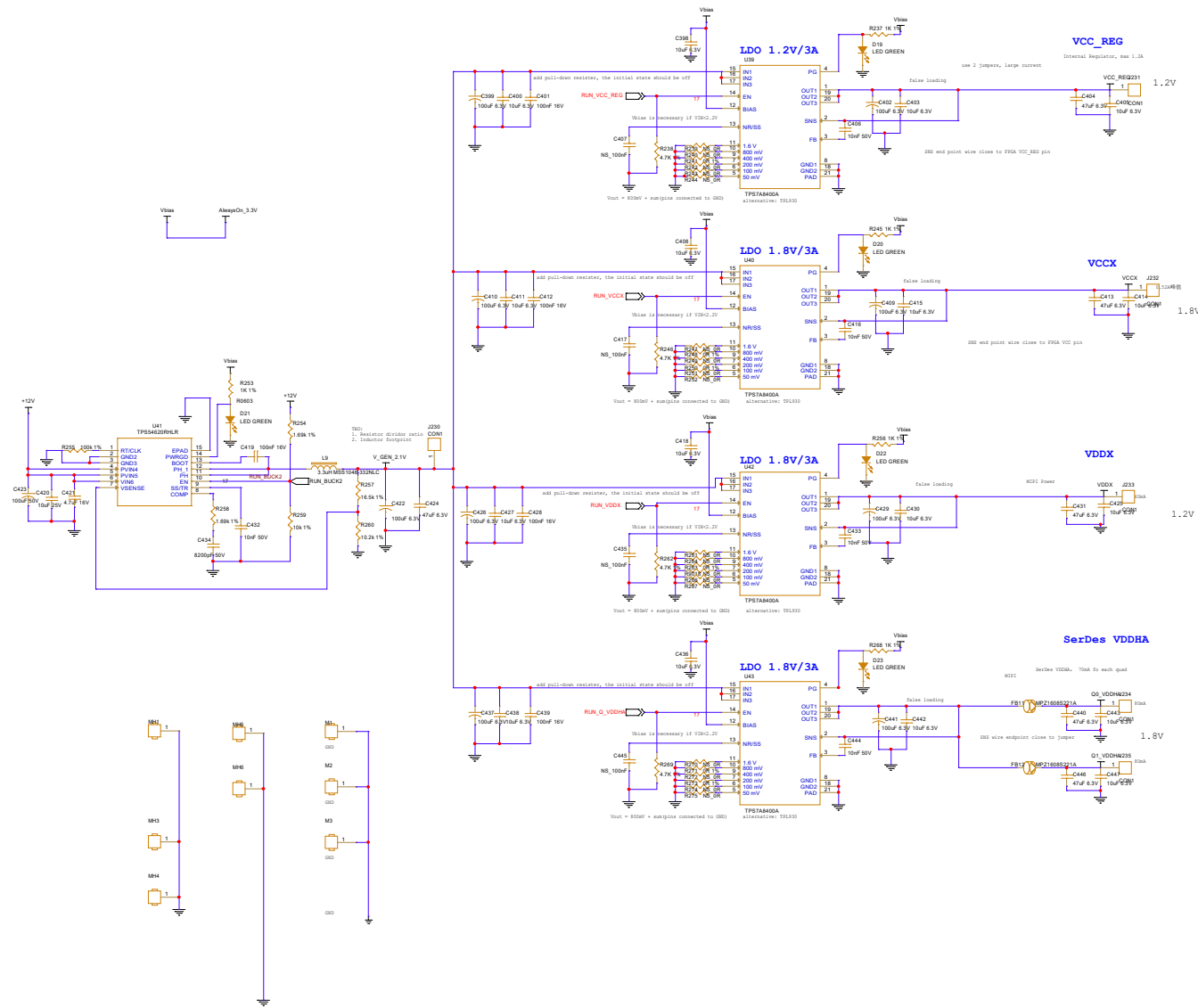


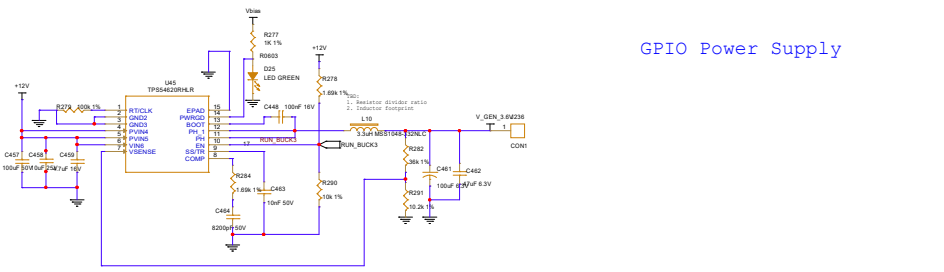
# 0.9V Power Supply



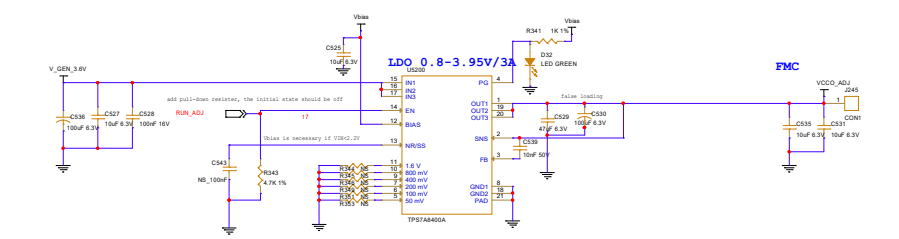
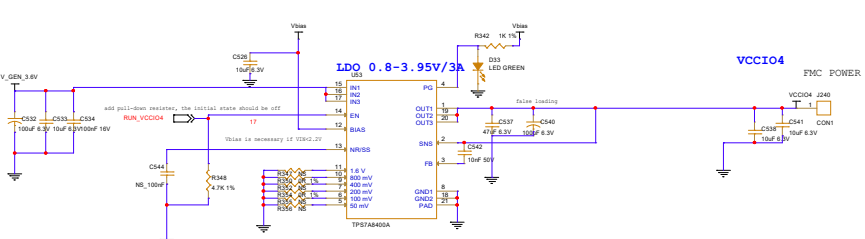
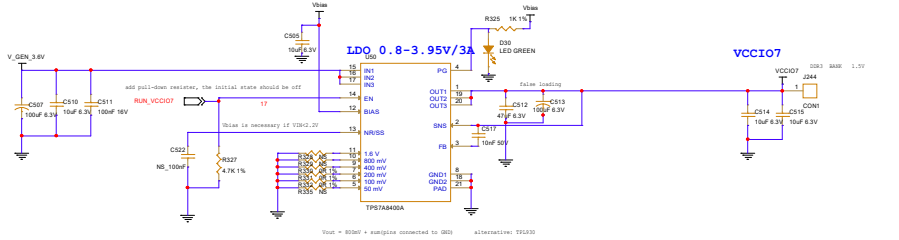
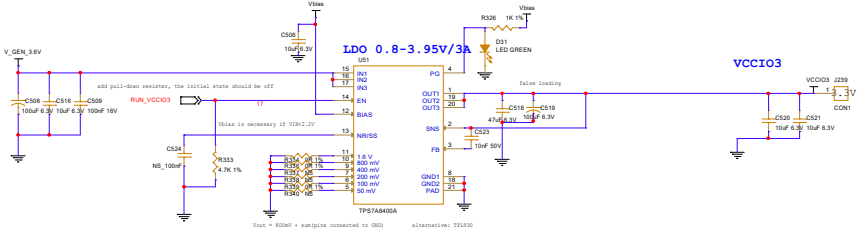
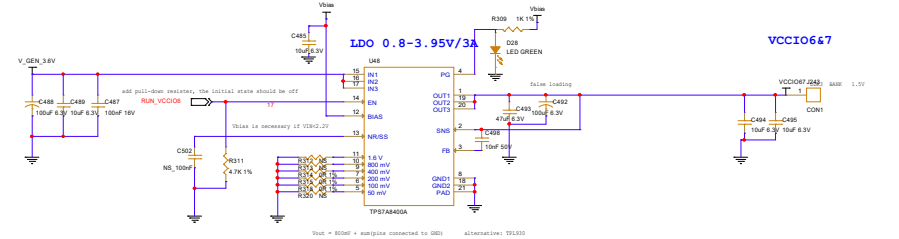
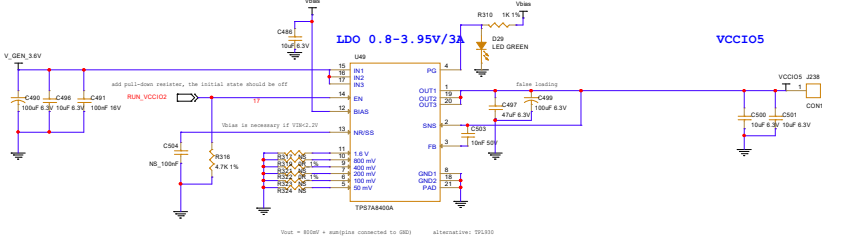
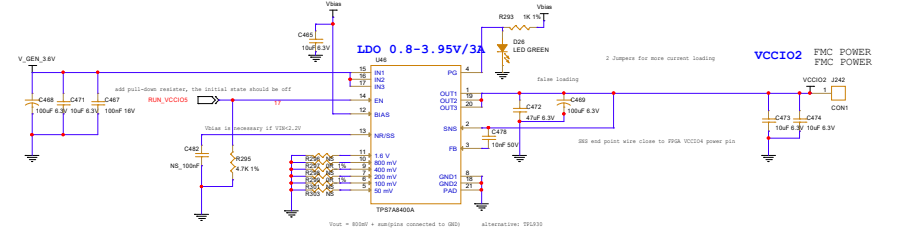
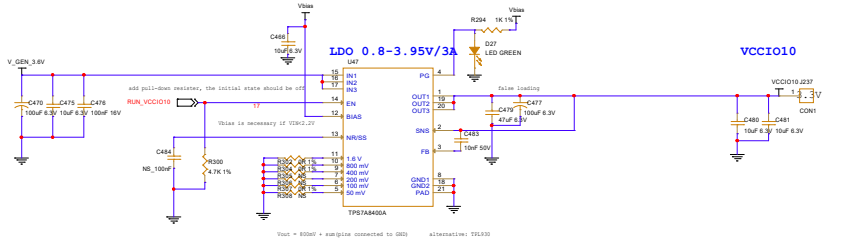
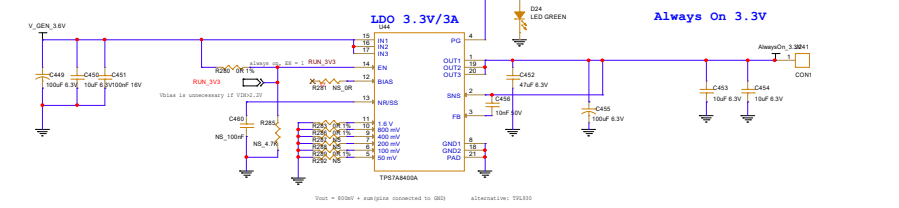
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| Title |                       | DK_START_GWSAST-LV138FPG678A |          |
| Size  | Document Number       |                              |          |
| C     | <Doc>                 |                              |          |
| Date: | Friday, July 19, 2024 | Sheet                        | 17 of 19 |
|       |                       | Rev                          | V1.0     |

# 1.2V & 1.8V Power Supply





Provide 3.3V Bias Always On LDO



|       |                            |
|-------|----------------------------|
| File  | DK_START_OVSAST4V13MPPG26A |
| Rev   | Document Number            |
| D     | 0000                       |
| Rev   | 0                          |
| Date  | 2024-03-19                 |
| Sheet | 10 of 19                   |