
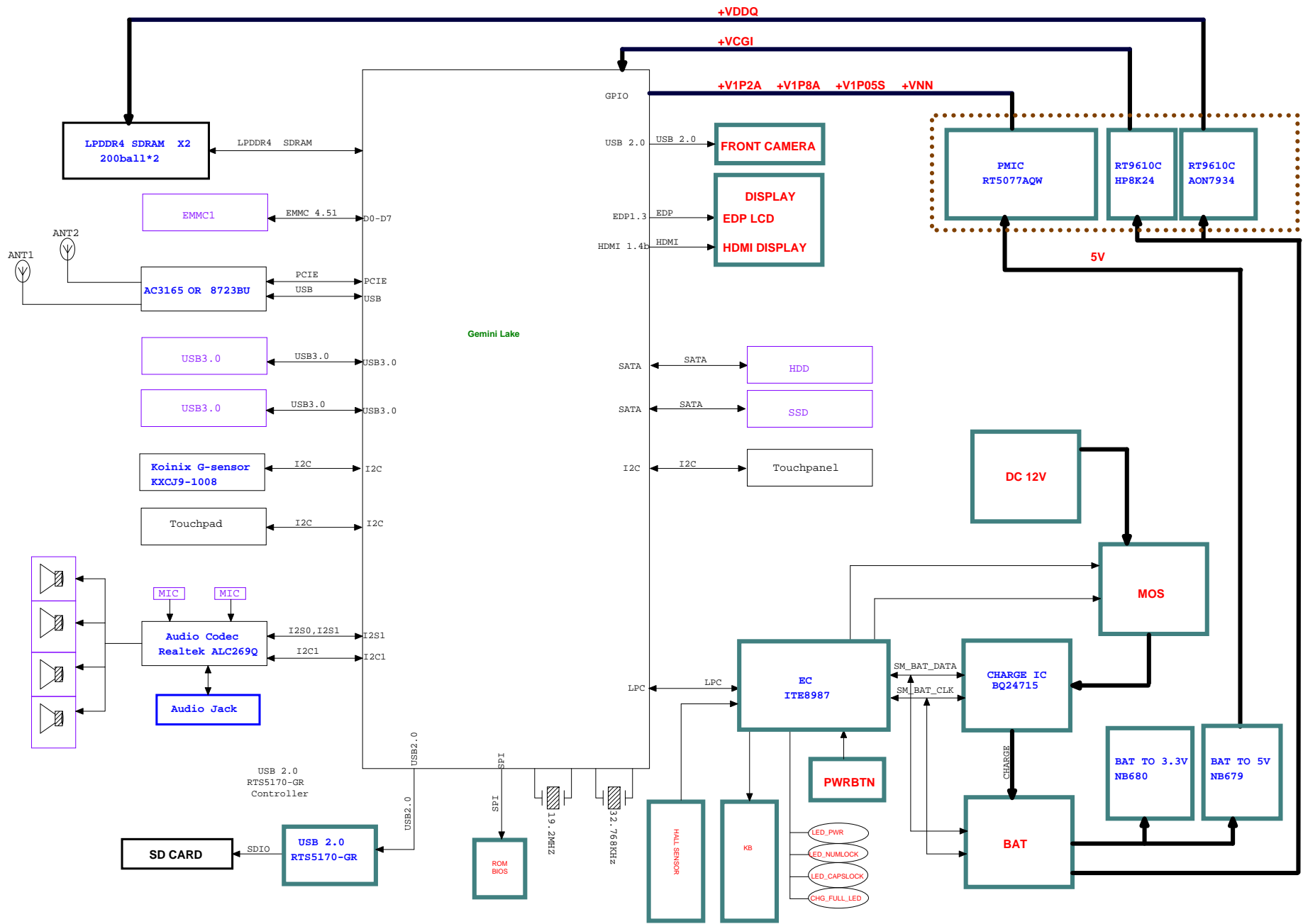


# Gemini Lake

## Y116GRX300

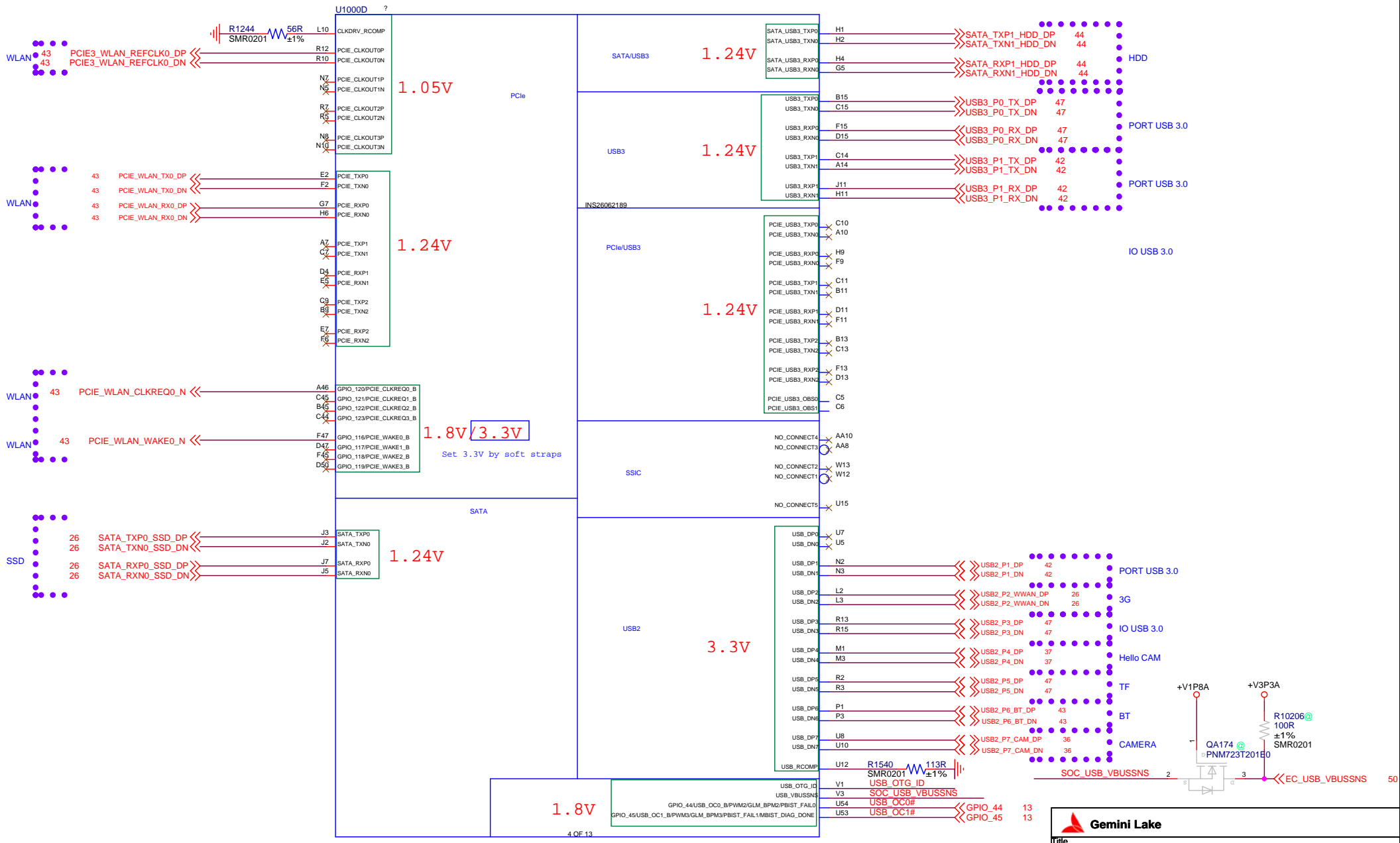
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|  <b>Gemini Lake</b> |                 |          |
| Title Gemini Lake  |                 |          |
| Size Custom  | Document Number | Rev R100 |
| <b>COVER PAGE</b>  |                 |          |
| Date: Monday, July 19, 2021  | Sheet 1         | of 57    |

**CG14D01 Circuit diagram**

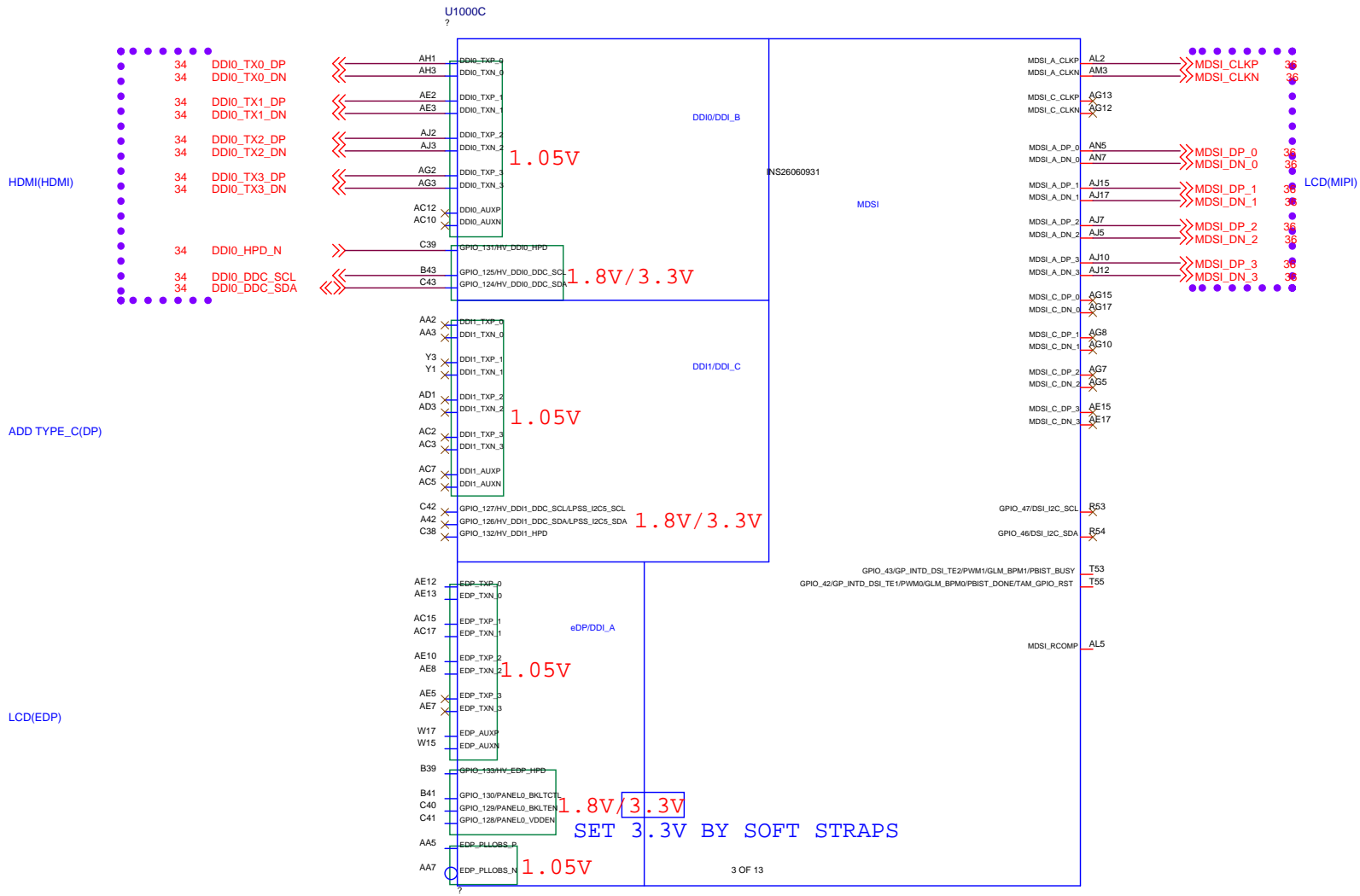


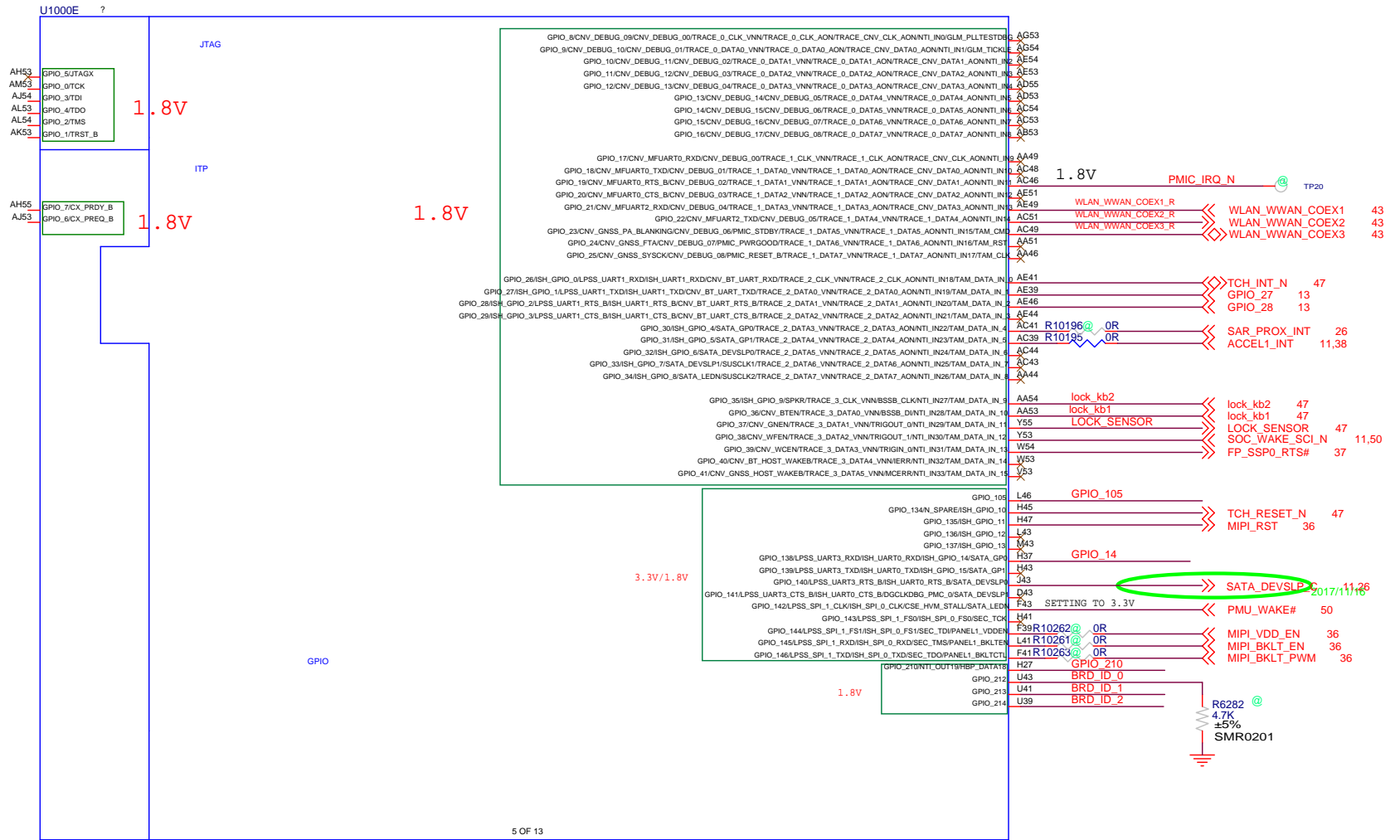
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|------|------------------------------|----------------------------------|--|
| AY3  | DDR1CH0DQ0_DQ40_DQ88_DQ88    | DDR1CH0DQSP0_DQSP0_DQSPA0_DQSPA0 | BJ24                                   |
| BD3  | DDR1CH0DQ1_DQ41_DQ89_DQ89    | DDR1CH0DQSN0_DQSN0_DQSPA0_DQSPA0 | BK25                                   |
| BD1  | DDR1CH0DQ2_DQ42_DQ810_DQ810  |                                  |  |
| BC3  | DDR1CH0DQ3_DQ43_DQ811_DQ811  | DDR1CH0DQSP1_DQSP1_DQSPA1_DQSPA1 | BD25                                   |
| AY1  | DDR1CH0DQ4_DQ44_DQ812_DQ812  | DDR1CH0DQSN1_DQSN1_DQSPA1_DQSPA1 | BF25                                   |
| BA3  | DDR1CH0DQ5_DQ45_DQ813_DQ813  |                                  |  |
| BA2  | DDR1CH0DQ6_DQ46_DQ814_DQ814  | DDR1CH0DQSP2_DQSP2_DQSPA2_DQSPA2 | BL18                                   |
| BE2  | DDR1CH0DQ7_DQ47_DQ815_DQ815  | DDR1CH0DQSN2_DQSN2_DQSPA2_DQSPA2 | BL18                                   |
| AR8  | DDR1CH0DQ8_DQ32_DQ80_DQ80    |                                  |  |
| AN15 | DDR1CH0DQ9_DQ33_DQ81_DQ81    | DDR1CH0DQSP3_DQSP3_DQSPA3_DQSPA3 | AV19                                   |
| AN7  | DDR1CH0DQ10_DQ34_DQ82_DQ82   | DDR1CH0DQSN3_DQSN3_DQSPA3_DQSPA3 | AV21                                   |
| AU12 | DDR1CH0DQ11_DQ35_DQ83_DQ83   |                                  |  |
| AN2  | DDR1CH0DQ12_DQ36_DQ84_DQ84   | DDR1CH0DQSP1_DQSP4_DQSPB0_DQSPB0 | AR13                                   |
| AN3  | DDR1CH0DQ13_DQ37_DQ85_DQ85   | DDR1CH0DQSN1_DQSN4_DQSNB0_DQSNB0 | AR15                                   |
| AU13 | DDR1CH0DQ14_DQ38_DQ86_DQ86   |                                  |  |
| AU15 | DDR1CH0DQ15_DQ39_DQ87_DQ87   | DDR1CH0DQSP0_DQSP5_DQSPB1_DQSPB1 | BB3                                    |
| AP3  | DDR1CH0DQ16_DQ56_DQ824_DQ824 | DDR1CH0DQSN0_DQSN5_DQSNB1_DQSNB1 | BC2                                    |
| AU2  | DDR1CH0DQ17_DQ57_DQ825_DQ825 |                                  |  |
| AV3  | DDR1CH0DQ18_DQ58_DQ826_DQ826 | DDR1CH0DQSP3_DQSP6_DQSPB2_DQSPB2 | AW7                                    |
| AV3  | DDR1CH0DQ19_DQ59_DQ827_DQ827 | DDR1CH0DQSN3_DQSN6_DQSNB2_DQSNB2 | AW8                                    |
| AN2  | DDR1CH0DQ20_DQ60_DQ828_DQ828 |                                  |  |
| AR1  | DDR1CH0DQ21_DQ61_DQ829_DQ829 | DDR1CH0DQSP2_DQSP7_DQSPB3_DQSPB3 | AT1                                    |
| AR3  | DDR1CH0DQ22_DQ62_DQ830_DQ830 | DDR1CH0DQSN2_DQSN7_DQSNB3_DQSNB3 | AT3                                    |
| AV1  | DDR1CH0DQ23_DQ63_DQ831_DQ831 |                                  |  |
| AR5  | DDR1CH0DQ24_DQ48_DQ816_DQ816 | DDR1CH0CA7_MA0_CAB972_NCNC       | BH9                                    |
| BA8  | DDR1CH0DQ25_DQ49_DQ817_DQ817 | DDR1CH0CA3_MA1_CAB890_NCNC       | BC13                                   |
| AU7  | DDR1CH0DQ26_DQ50_DQ818_DQ818 | DDR1CH0CA8_MA2_CAB554_CAB554     | BD11                                   |
| AU5  | DDR1CH0DQ27_DQ51_DQ819_DQ819 | DDR1CH0CA4_MA3_NCNCNC_NCNC       | BD13                                   |
| BA5  | DDR1CH0DQ28_DQ52_DQ820_DQ820 | DDR1CH0CA6_MA10_CAB763_NCNC      | BF11                                   |
| BA7  | DDR1CH0DQ29_DQ53_DQ821_DQ821 | DDR1CH0CA0_MA13_CAB009_CAB000    | BE5                                    |
| AU8  | DDR1CH0DQ30_DQ54_DQ822_DQ822 | DDR1CH0CA9_MA16_CAB336_CAB333    | BH5                                    |
| BA10 | DDR1CH0DQ31_DQ55_DQ823_DQ823 | DDR1CH0CA10_BA0_CAB427_CAB444    | BH6                                    |
|      |                              | DDR1CH0CA5_BA1_CAB681_NCNC       | BF13                                   |
|      |                              | DDR1CH0CA1_BG1_CAB245_CAB222     | BG4                                    |
|      |                              | DDR1CH0CA2_ACTN_CAB118_CAB111    | BE7                                    |
| BZ6  | DDR1CH1DQ0_DQ0_DQA0_DQA0     |                                  |  |
| BL26 | DDR1CH1DQ1_DQ1_DQA1_DQA1     |                                  |  |
| BZ2  | DDR1CH1DQ2_DQ2_DQA2_DQA2     |                                  |  |
| BK27 | DDR1CH1DQ3_DQ3_DQA3_DQA3     |                                  |  |
| BZ3  | DDR1CH1DQ4_DQ4_DQA4_DQA4     | DDR1CH1CA1_MA11_CAA763_NCNC      | BK11                                   |
| BK33 | DDR1CH1DQ5_DQ5_DQA5_DQA5     | DDR1CH1CA7_MA12_CAA654_NCNC      | BL12                                   |
| BZ2  | DDR1CH1DQ6_DQ6_DQA6_DQA6     | DDR1CH1CA3_MA14_CAA891_NCNC      | BK9                                    |
| BL22 | DDR1CH1DQ7_DQ7_DQA7_DQA7     | DDR1CH1CA0_MA15_CAA890_NCNC      | BJ11                                   |
| BD27 | DDR1CH1DQ8_DQ8_DQA8_DQA8     | DDR1CH1CA2_BG0_CAA572_CAA555     | BJ10                                   |
| BF27 | DDR1CH1DQ9_DQ9_DQA9_DQA9     | DDR1CH1CA4_MA4_NCNCNC_NCNC       | BJ4                                    |
| BH27 | DDR1CH1DQ10_DQ10_DQA10_DQA10 | DDR1CH1CA10_MA5_CAA027_CAA02     | BL6                                    |
| BC27 | DDR1CH1DQ11_DQ11_DQA11_DQA11 | DDR1CH1CA8_MA6_CAA209_CAA21      | BJ5                                    |
| BH21 | DDR1CH1DQ12_DQ12_DQA12_DQA12 | DDR1CH1CA5_MA7_CAA436_CAA43      | BJ9                                    |
| BF23 | DDR1CH1DQ13_DQ13_DQA13_DQA13 | DDR1CH1CA9_MA8_CAA318_CAA30      | BL6                                    |
| BD23 | DDR1CH1DQ14_DQ14_DQA14_DQA14 | DDR1CH1CA6_MA9_CAA145_CAA14      | BJ8                                    |
| BF21 | DDR1CH1DQ15_DQ15_DQA15_DQA15 |                                  |  |
| BK19 | DDR1CH1DQ16_DQ16_DQA16_DQA16 | DDR1CH0CKP_CKP0_CKP0B_CKP0B      | BF17                                   |
| BL20 | DDR1CH1DQ17_DQ17_DQA17_DQA17 | DDR1CH0CKN_CKN0_CKN0B_CKN0B      | BD17                                   |
| BL20 | DDR1CH1DQ18_DQ18_DQA18_DQA18 |                                  |  |
| BJ21 | DDR1CH1DQ19_DQ19_DQA19_DQA19 | DDR1CH1CKP_CKP1_CKP1A_CKP1A      | BF15                                   |
| BJ17 | DDR1CH1DQ20_DQ20_DQA20_DQA20 | DDR1CH1CKN_CKN1_CKN1A_CKN1A      | BH15                                   |
| BJ16 | DDR1CH1DQ21_DQ21_DQA21_DQA21 |                                  |  |
| BK15 | DDR1CH1DQ22_DQ22_DQA22_DQA22 | DDR1CH0CKE0_NC_CKE0B_CKE0B       | BJ13                                   |
| BL16 | DDR1CH1DQ23_DQ23_DQA23_DQA23 | DDR1CH0CKE1_NC_CKE1B_CKE1B       | BL12                                   |
| BA21 | DDR1CH1DQ24_DQ24_DQA24_DQA24 | DDR1CH0CSB0_NC_CSB0B_CSB0B       | BF1                                    |
| AY23 | DDR1CH1DQ25_DQ25_DQA25_DQA25 | DDR1CH0CSB1_CS1N_CSB1B_CS1B      | BF2                                    |
| BA23 | DDR1CH1DQ26_DQ26_DQA26_DQA26 | DDR1CH0ODT_ODT1_ODTB_CS0B        | BC7                                    |
| BA17 | DDR1CH1DQ27_DQ27_DQA27_DQA27 |                                  |  |
| AY21 | DDR1CH1DQ28_DQ28_DQA28_DQA28 | DDR1CH1CSB0_CSB0_CSB0A_CS0A      | BH2                                    |
| AY17 | DDR1CH1DQ29_DQ29_DQA29_DQA29 | DDR1CH1ODT_ODT0_ODTA_CS1A        | BC8                                    |
| AY19 | DDR1CH1DQ30_DQ30_DQA30_DQA30 | DDR1CH1CSB1_CS1N_CSB1A_CS1A      | BC22                                   |
| BA19 | DDR1CH1DQ31_DQ31_DQA31_DQA31 | DDR1CH1CKE0_CKE0_CKE0A_CKE0A     | BK13                                   |
|      |                              | DDR1CH1CKE1_CKE1_CKE1A_CKE1A     | BJ14                                   |
|      |                              |                                  |  |
|      |                              | DDRRPDEXT_RPDEXT_RPDEXT          | AY29 DDR0_RCOMP R6287 SMR0201 110R ±1% |
|      |                              | DDR1RESETB_NC                    | BC15                                   |
|      |                              | DDR1RPDEXT_NC                    | AY27 DDR1_RCOMP R6288 SMR0201 110R ±1% |
|      |                              | DDR1VREFCA_VREFCA_NC             | AV27                                   |
|      |                              | DDR1VREFDQ_VREFDQ_NC             | AV25                                   |
|      |                              |                                  |  |
|      |                              | DDRRESETB_NC_RESETB              | BC43 MO_DRAMRST_N >>> MO_DRAMRST_N 19  |

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|                               |                       |
| Title                         | Gemini Lake           |
| Size B                        | Document Number       |
| Date                          | Monday, June 21, 2021 |
| Rev                           | C110                  |
| <b>GEMINI LAKE SOC-LPDDR4</b> |                       |
| Sheet                         | 4 of 57               |



|  |                 |
|--|-----------------|
| <b>Gemini Lake</b>                       |                 |
| Title Gemini Lake                        |                 |
| Size B                                   | Document Number |
| <b>GEMINI LAKE SOC-3 of 12 (PC R100)</b> |                 |
| Date: Monday, July 19, 2021              | Sheet 5 of 57   |





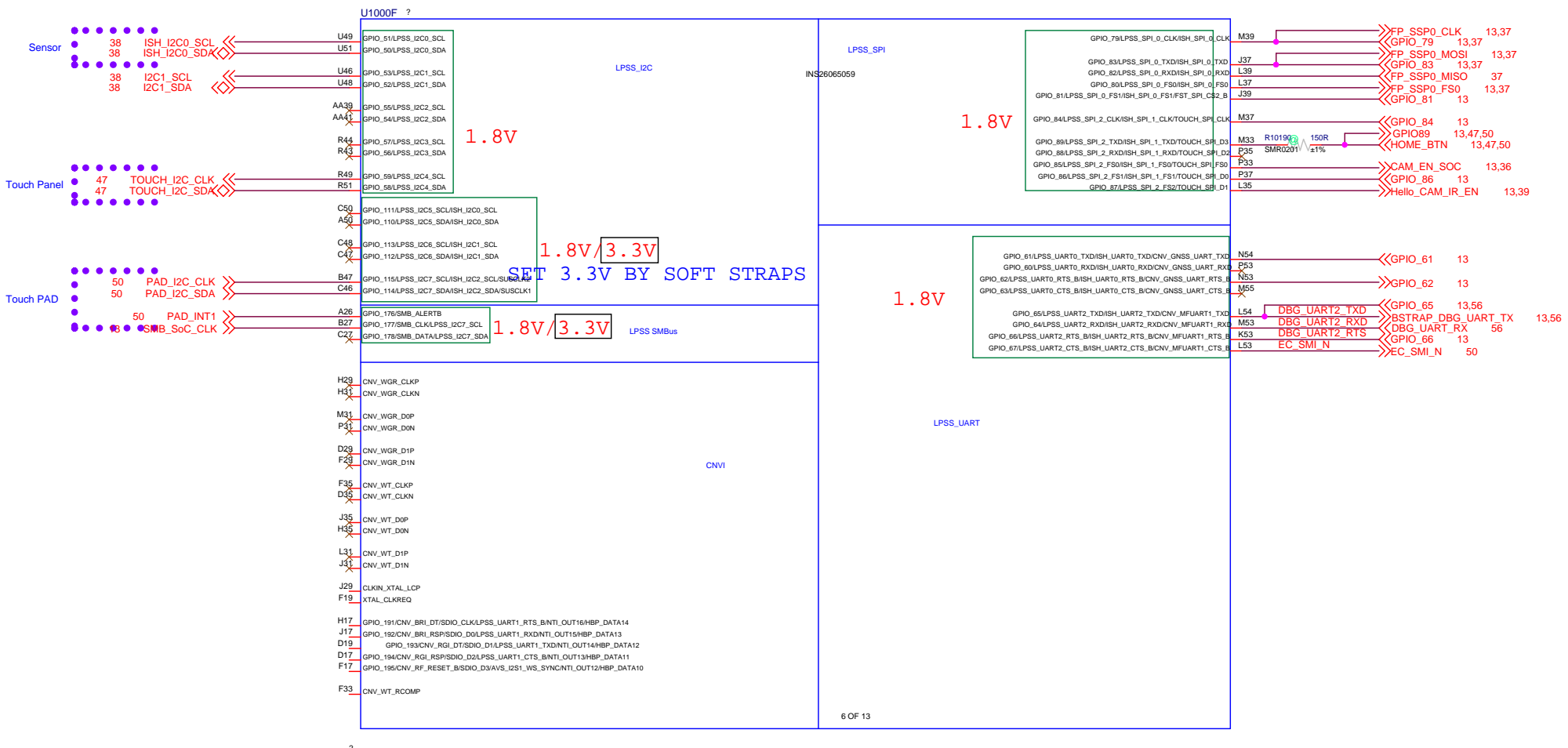
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**Gemini Lake**

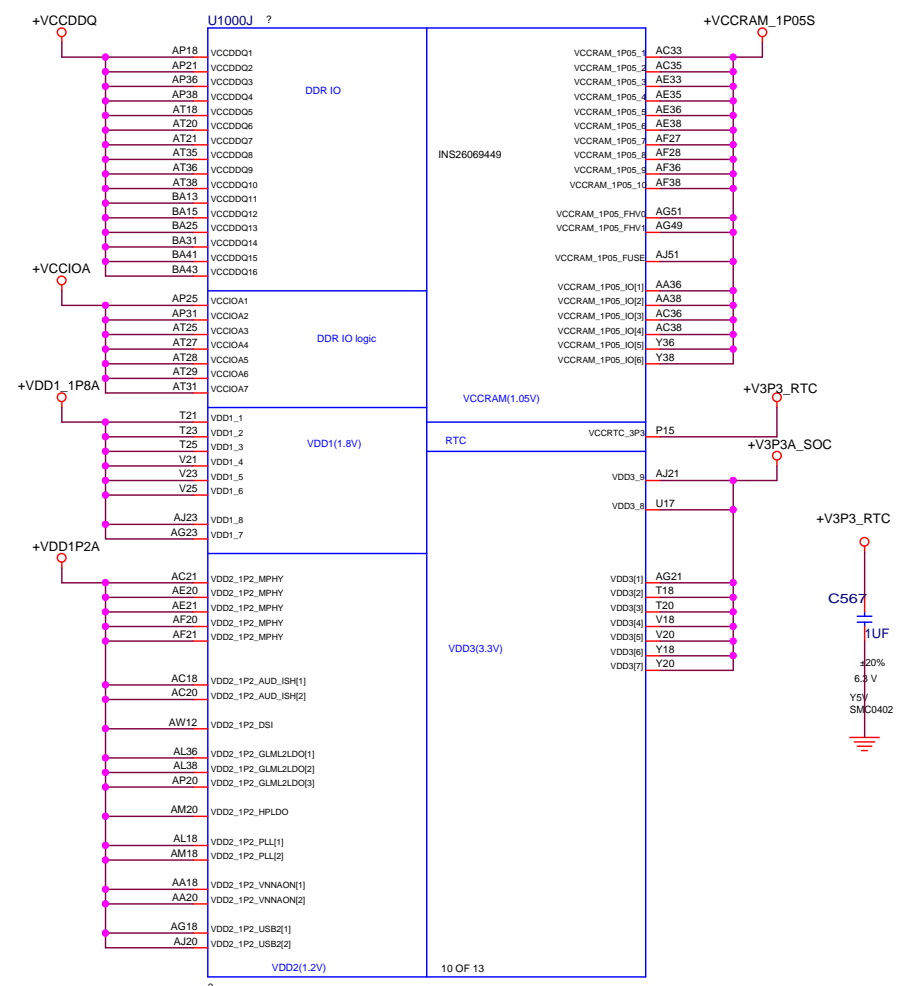
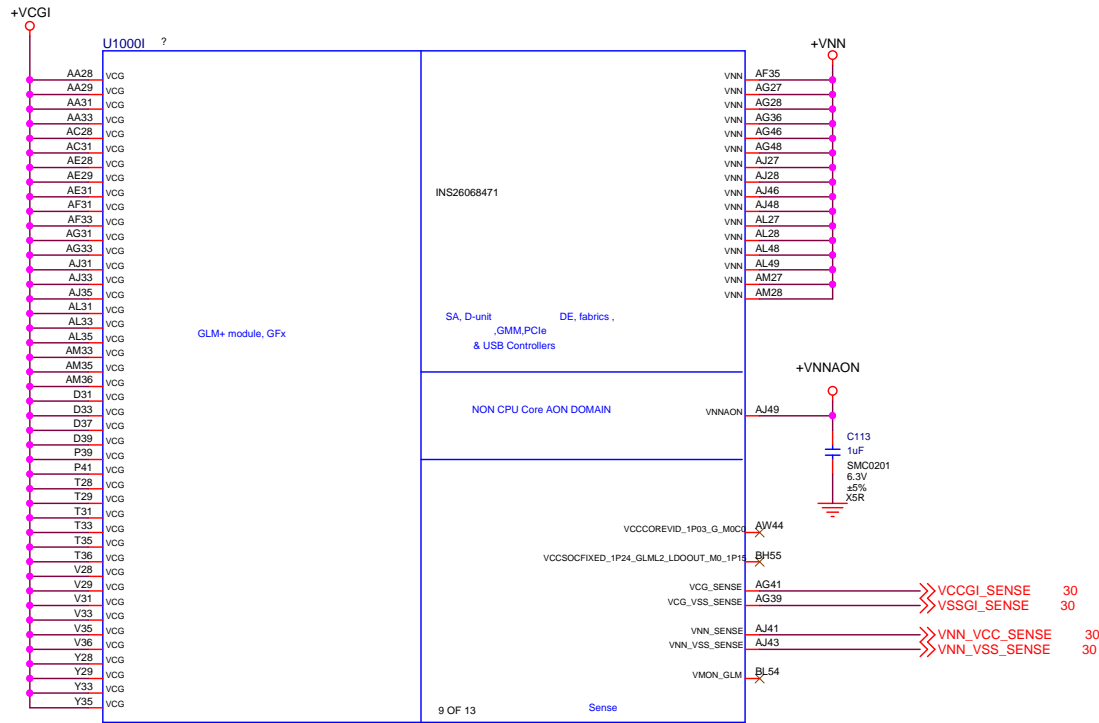
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Size B: Document Number **GEMINI LAKE SOC-5 of 12 (EM)** Rev R100

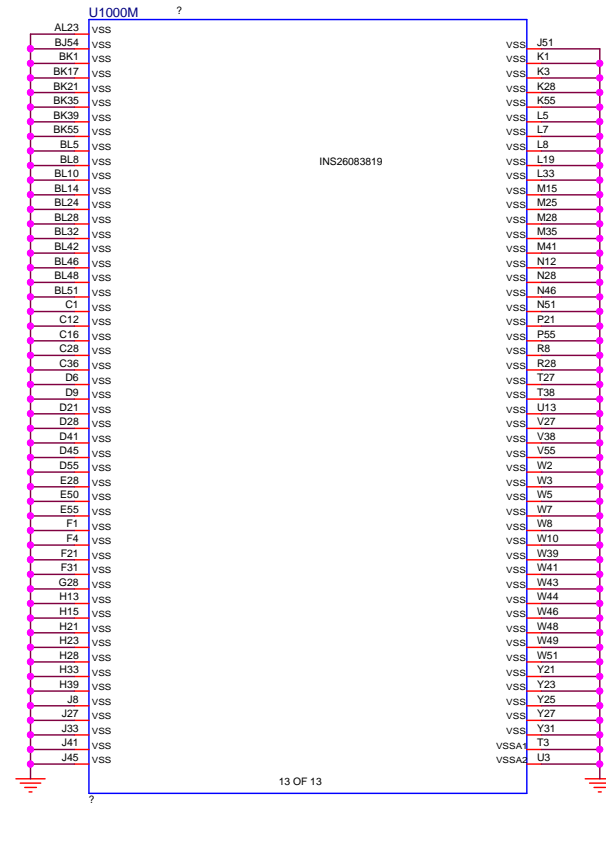
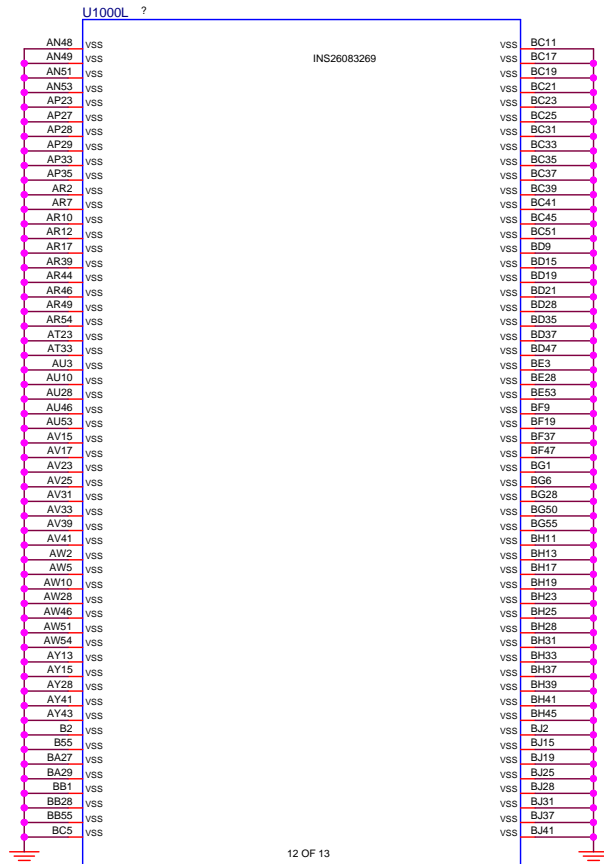
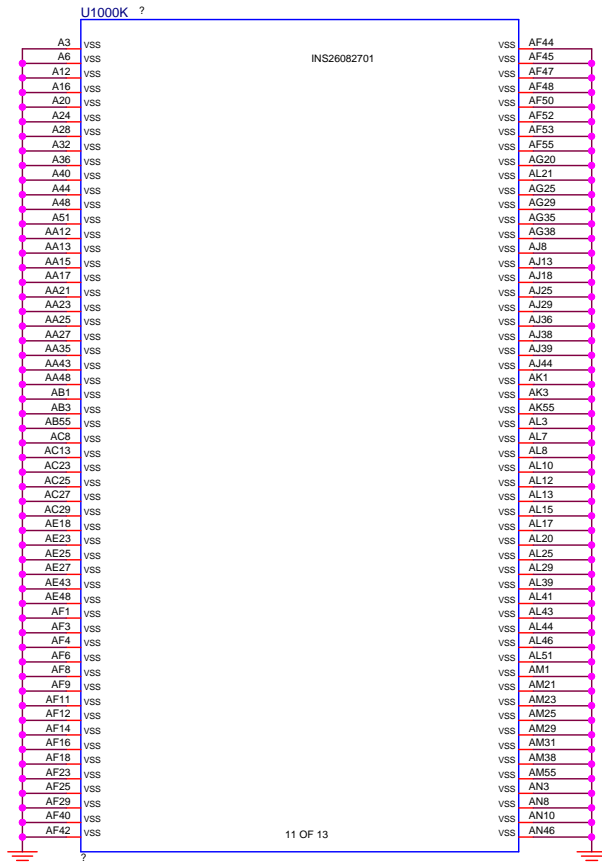
Date: Monday, July 19, 2021 Sheet 7 of 57

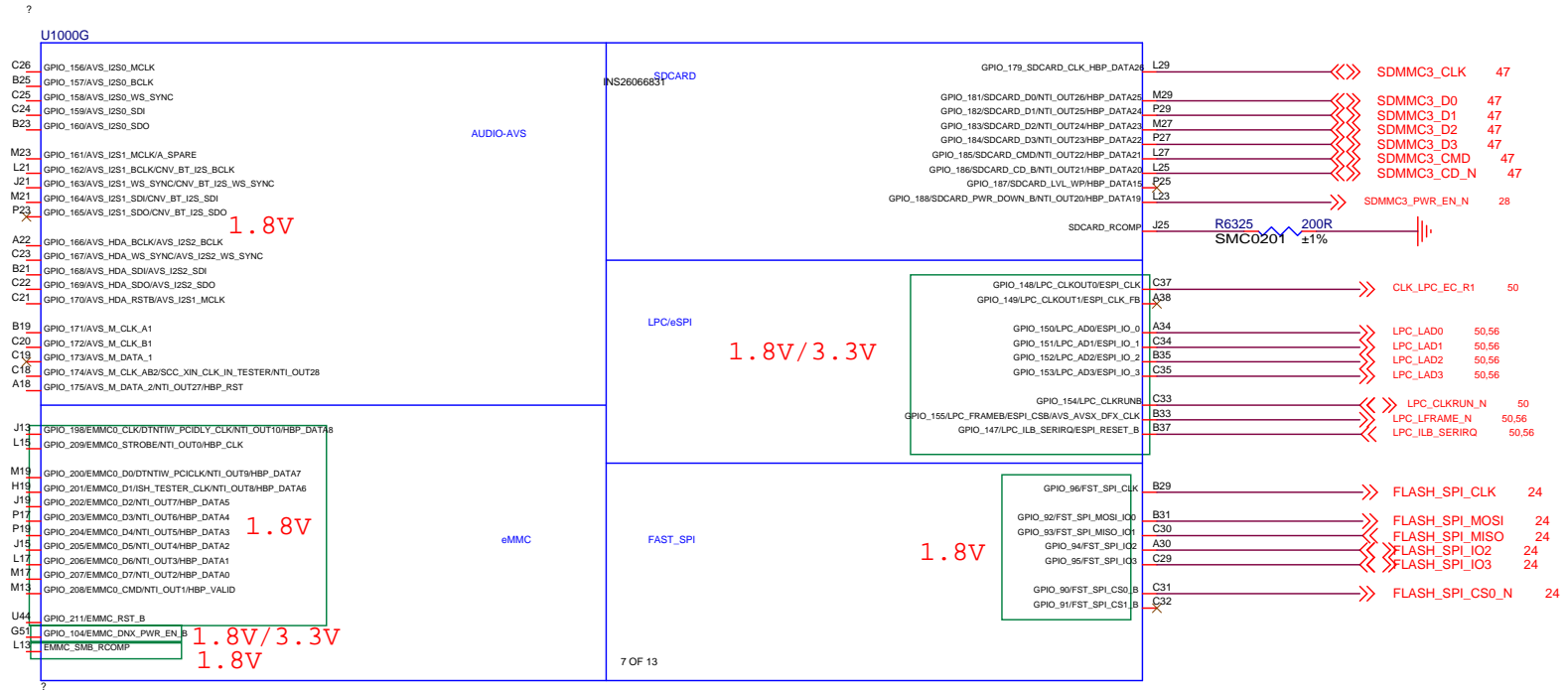


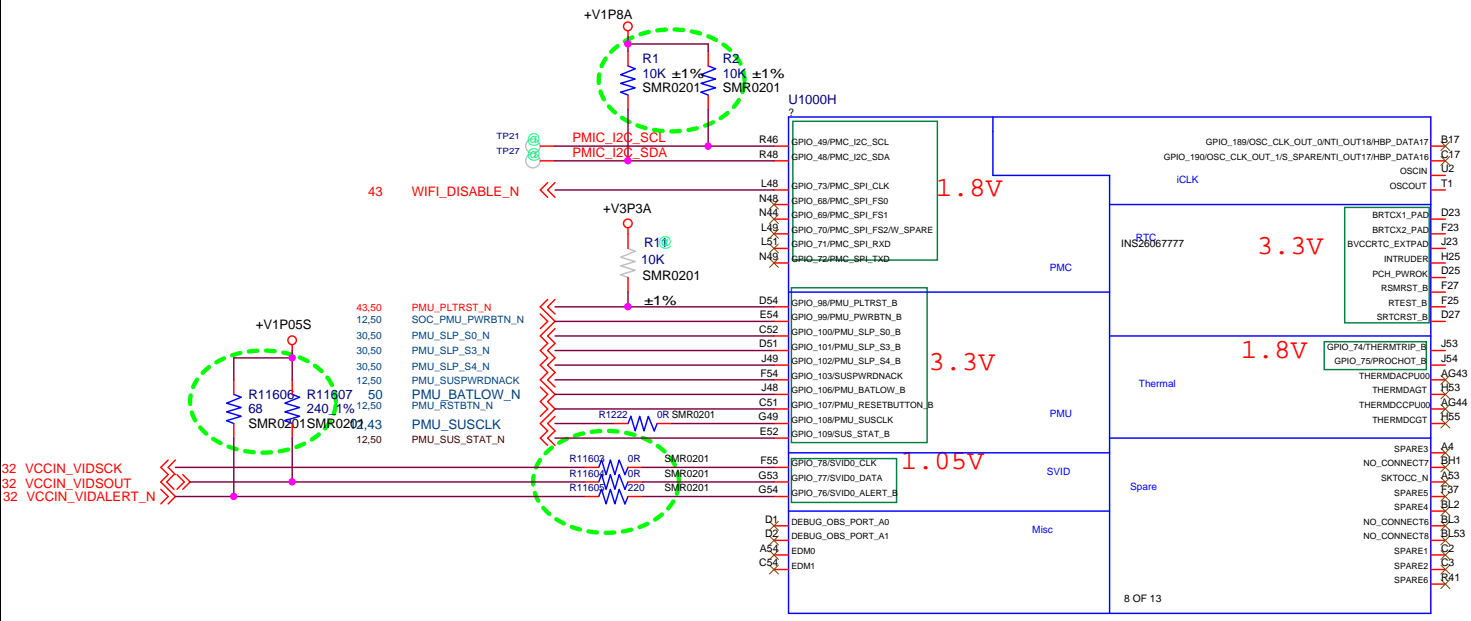
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| Size B                       | Document Number | Rev R100 |  |
| GEMINI LAKE SOC-6 of 12 (PM) |                 |          |  |
| Date: Monday, July 19, 2021  | Sheet 8 of 57   |          |  |



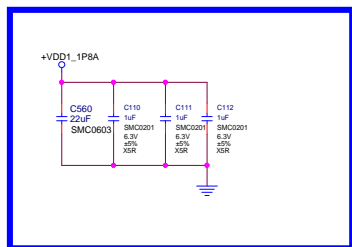
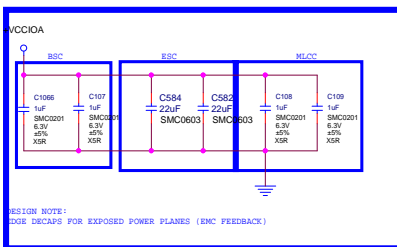
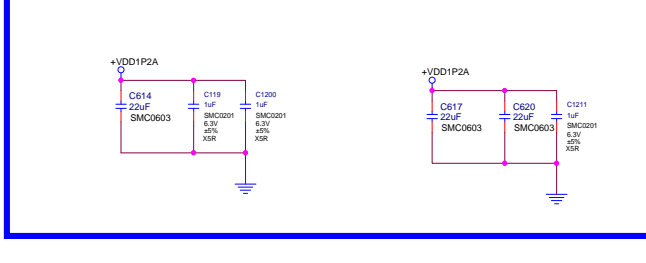
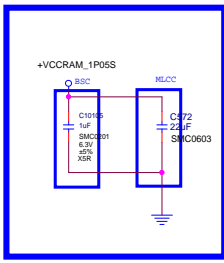
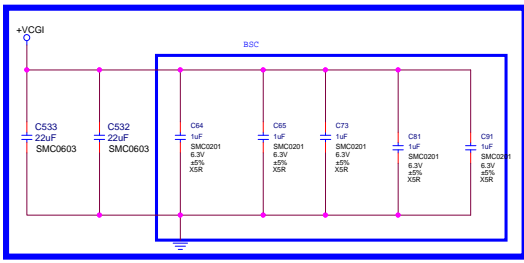
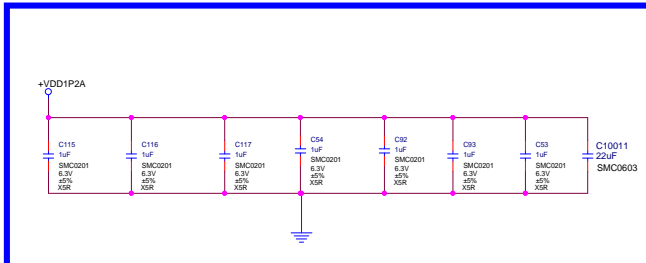
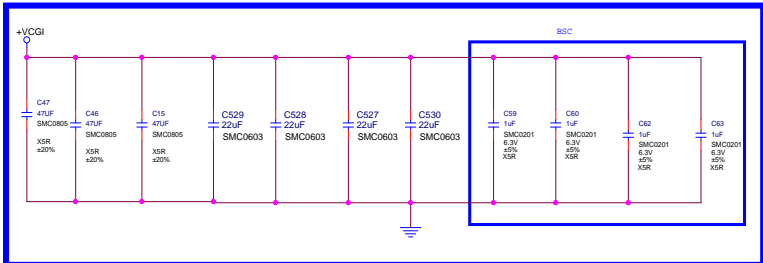
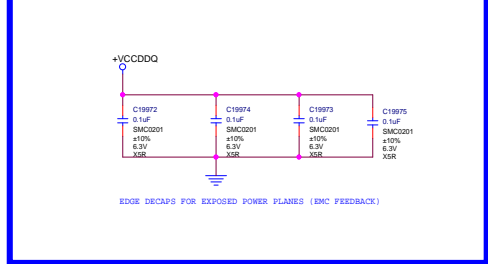
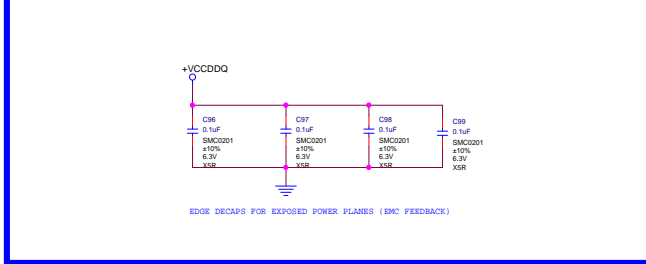
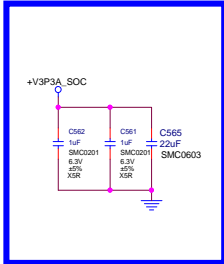
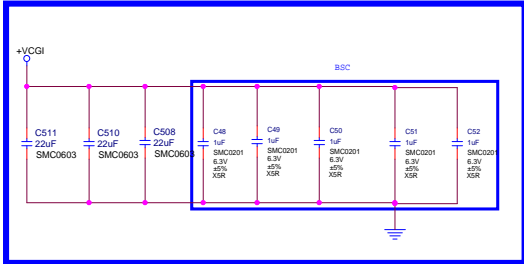
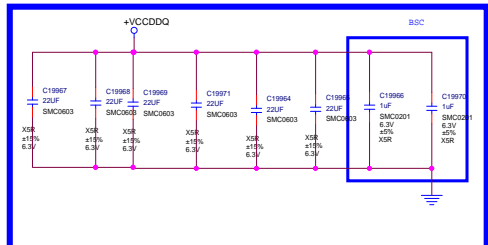
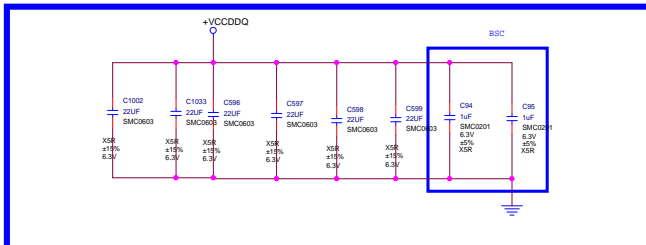
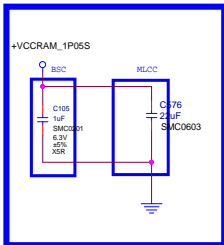
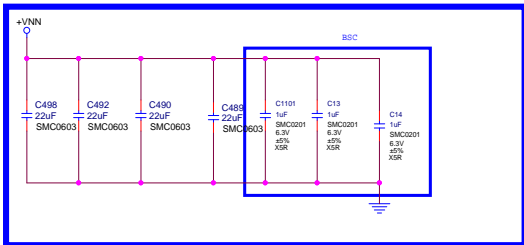




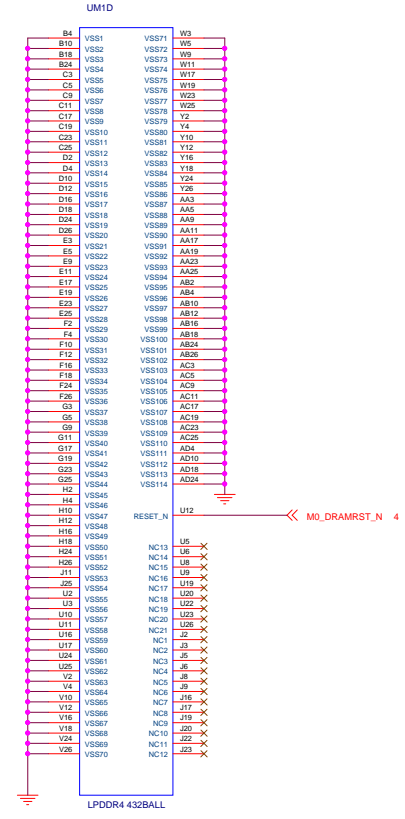
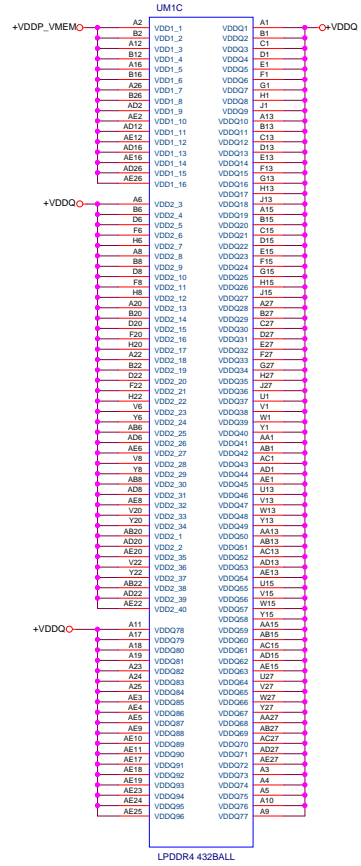
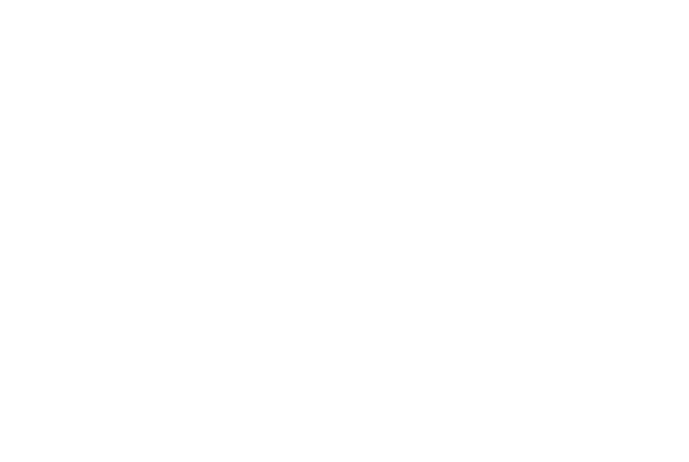
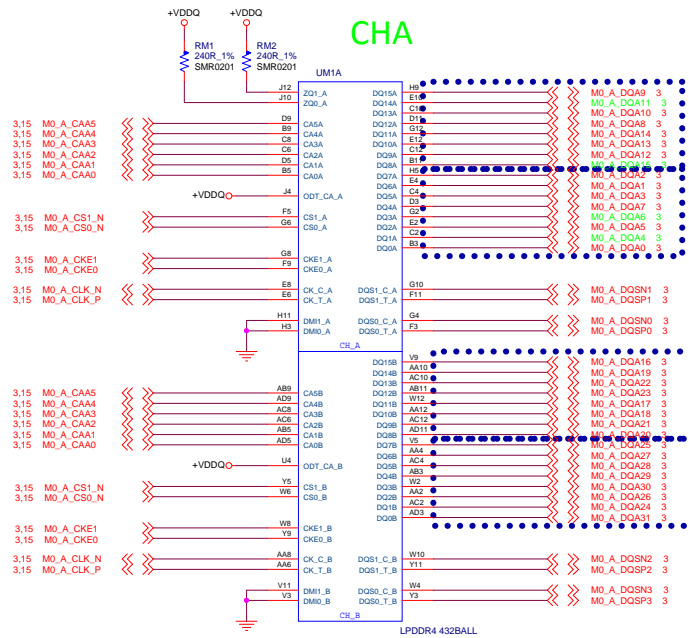


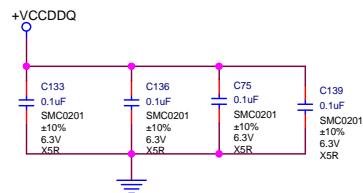
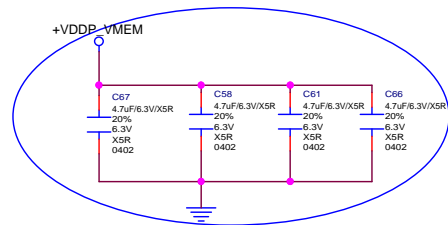


32 VCCIN\_VIDSCK  
32 VCCIN\_VIDSOUT  
32 VCCIN\_VIDALERT\_N

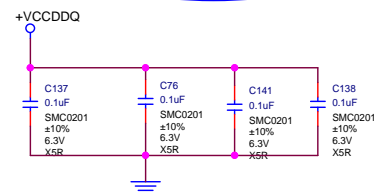
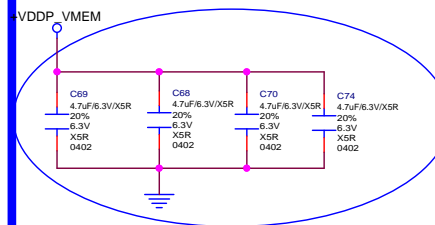


# CHA




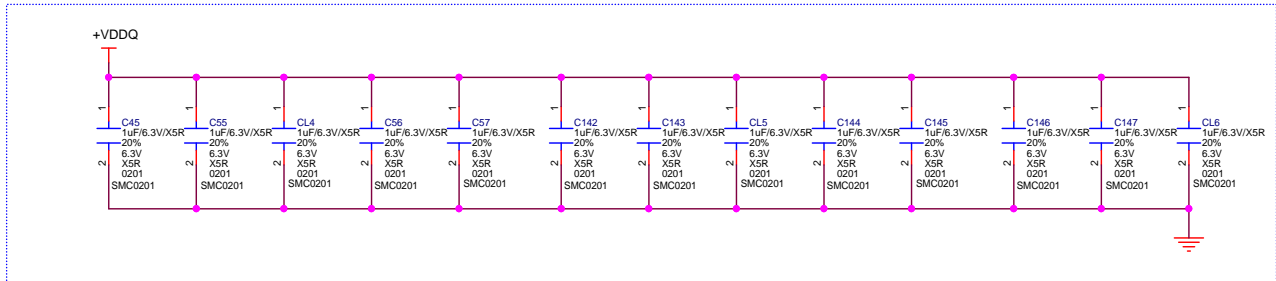
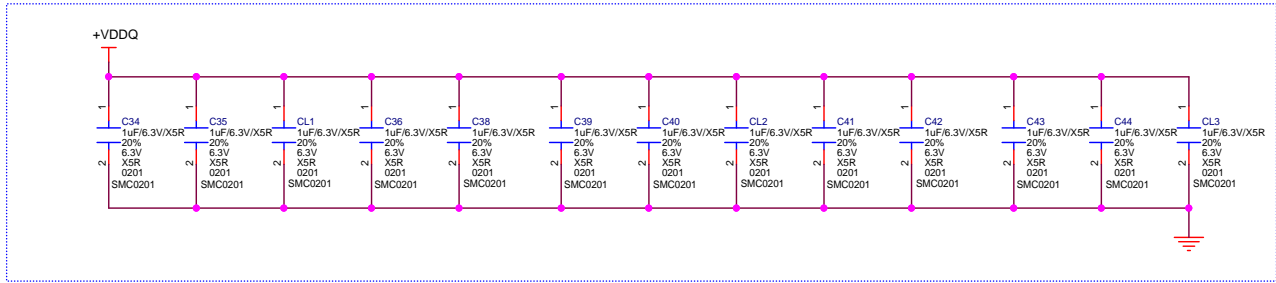



EDGE DECAPS FOR EXPOSED POWER PLANES (EMC FEEDBACK)

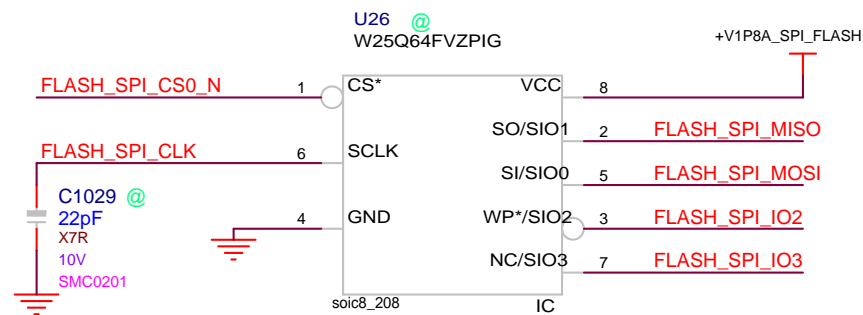
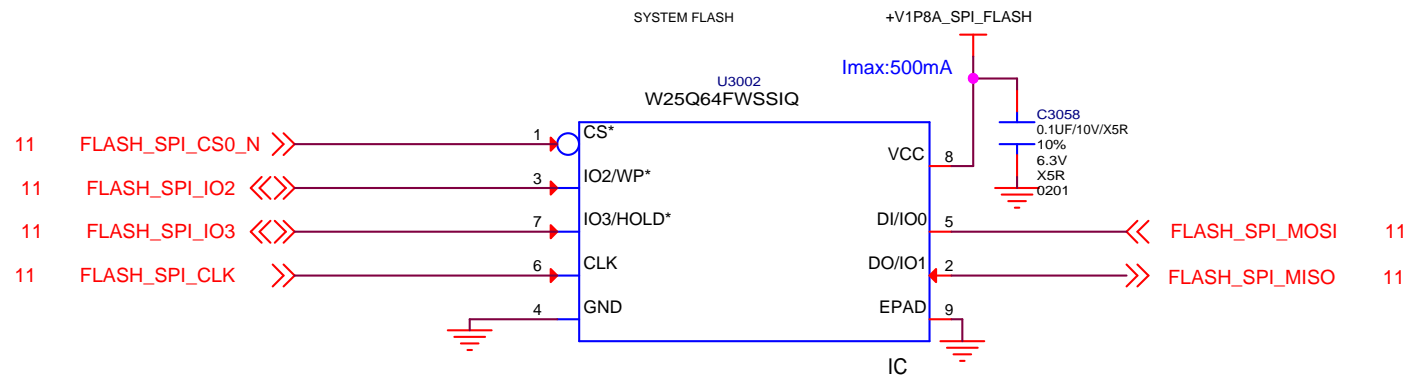


EDGE DECAPS FOR EXPOSED POWER PLANES (EMC FEEDBACK)

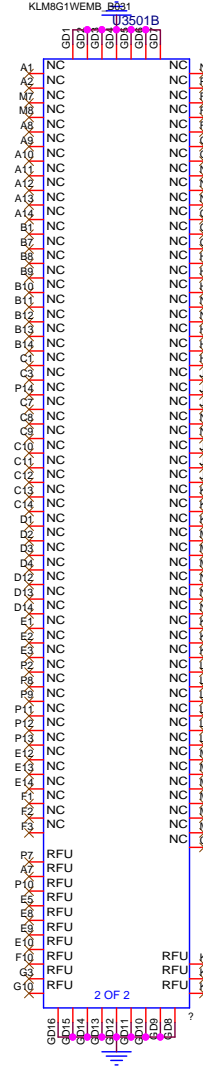
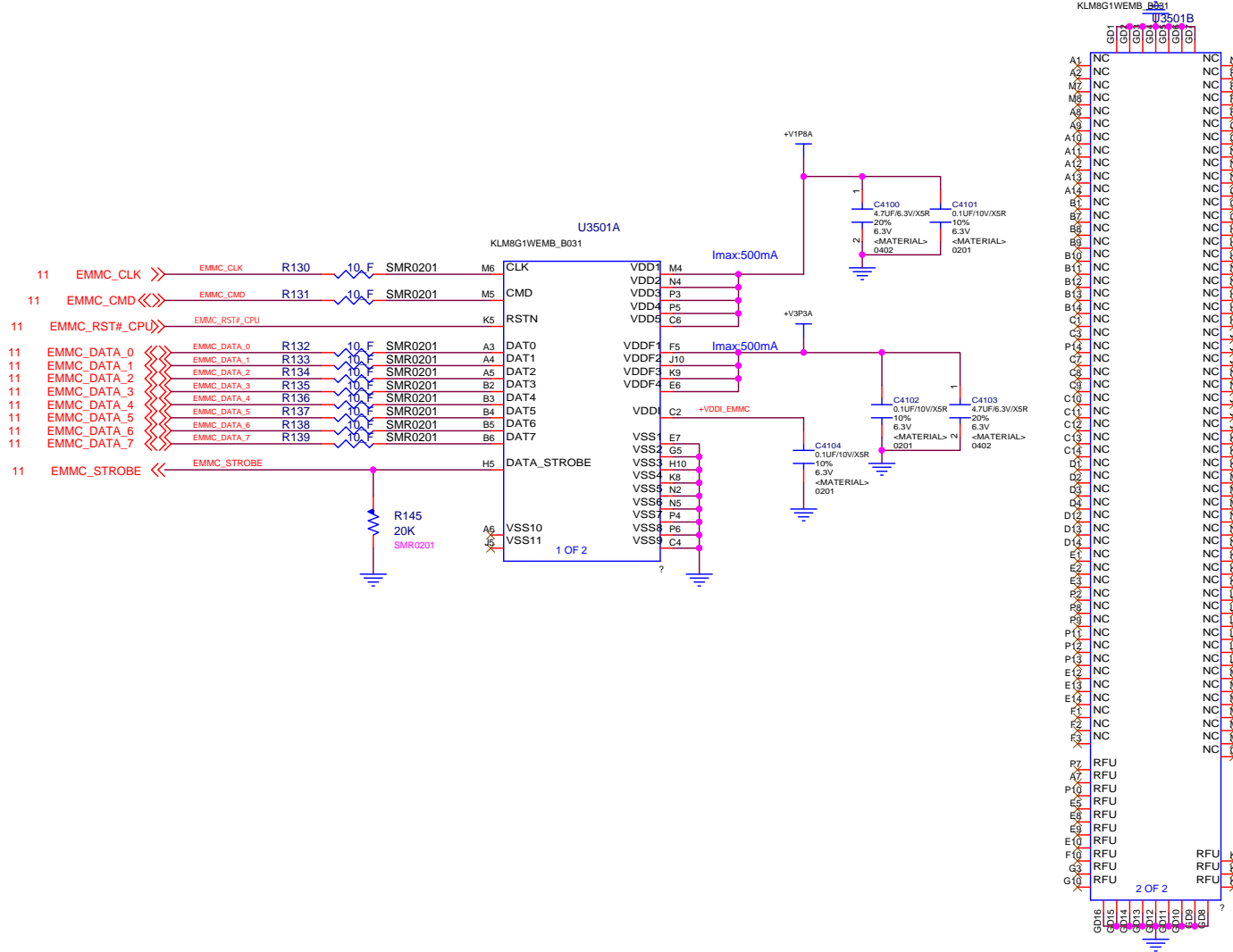
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| Size B   | Document Number | Rev R100 |
| <b>LPDDR4 CH-D DEVICE-0</b>  |                 |          |
| Date: Monday, June 21, 2021  | Sheet 22        | of 57    |




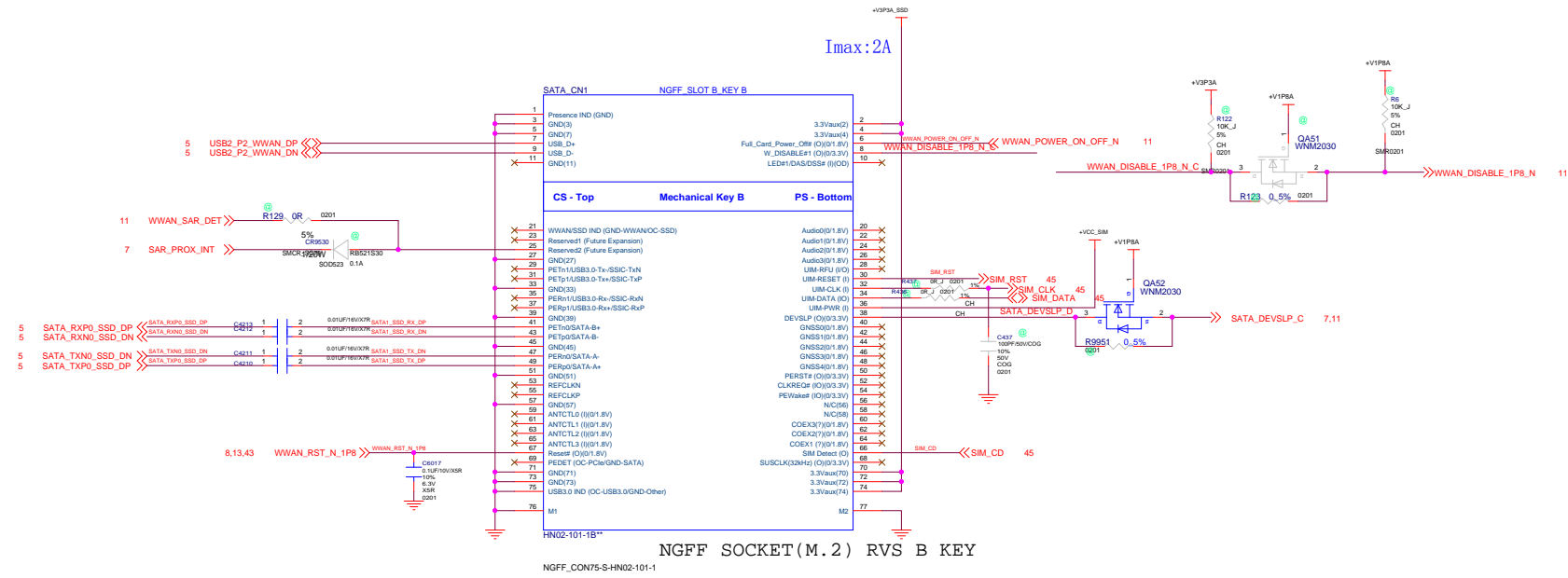
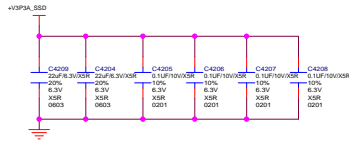
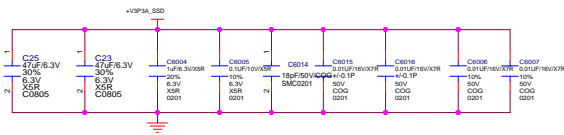
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| Size<br>B  | Document Number<br><b>LPDDR3 DECOUPLING</b> | Rev<br>R100 |
| Date:<br>Monday, June 21, 2021   | Sheet<br>23                                 | of<br>57    |






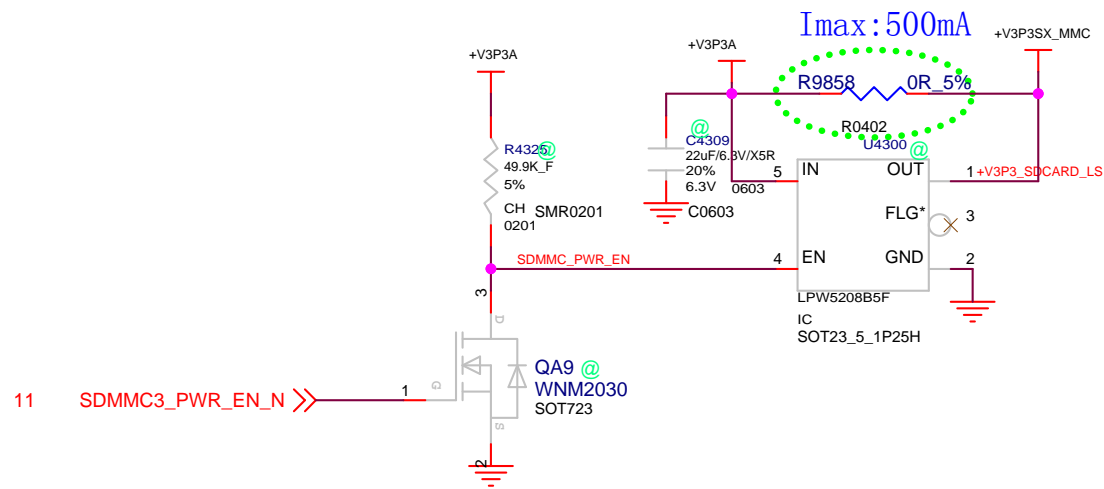



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| Title<br>Gemini Lake   |                                |             |
| Size<br>B  | Document Number<br><b>EMMC</b> | Rev<br>R100 |
| Date:<br>Monday, July 19, 2021   | Sheet<br>25                    | of<br>57    |

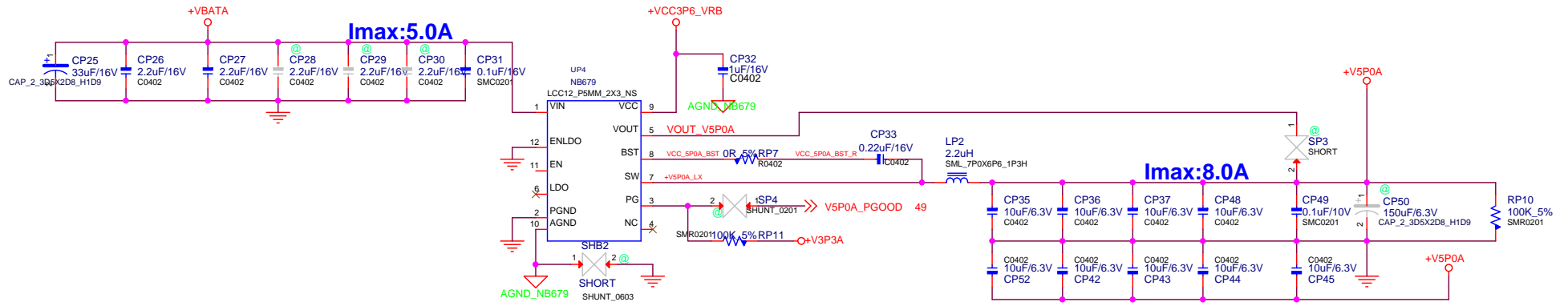
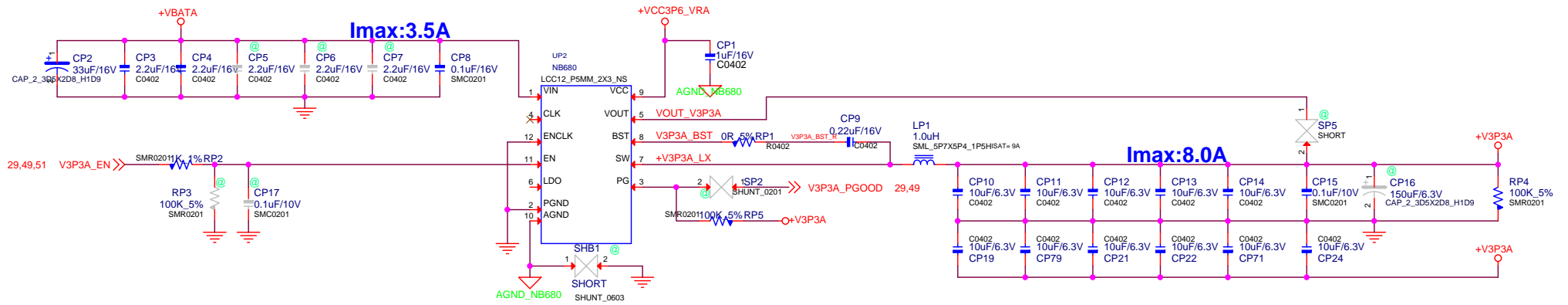



NGFF SOCKET (M.2) RVS B KEY  
NGFF\_CON75-S-HN02-101-1

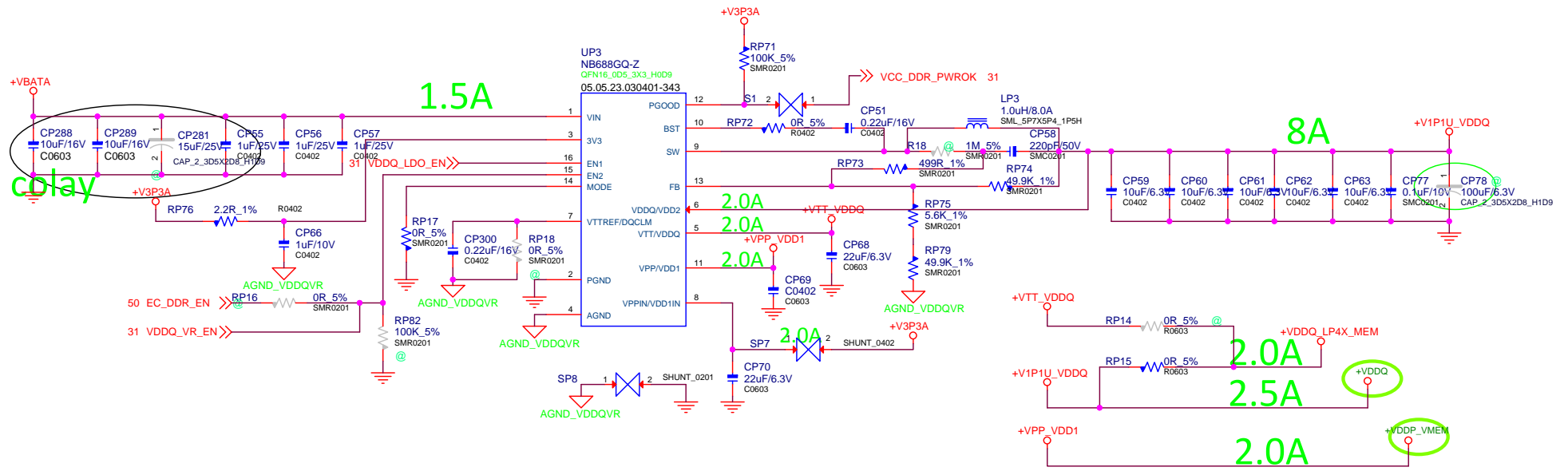
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|  <b>Gemini Lake</b> |   |             |
| Title<br>Gemini Lake   |   |             |
| Size<br>B  | Document Number<br><b>MICRO-SD CARD</b> | Rev<br>R100 |
| Date: Monday, June 21, 2021  | Sheet 27 of 57                          |             |




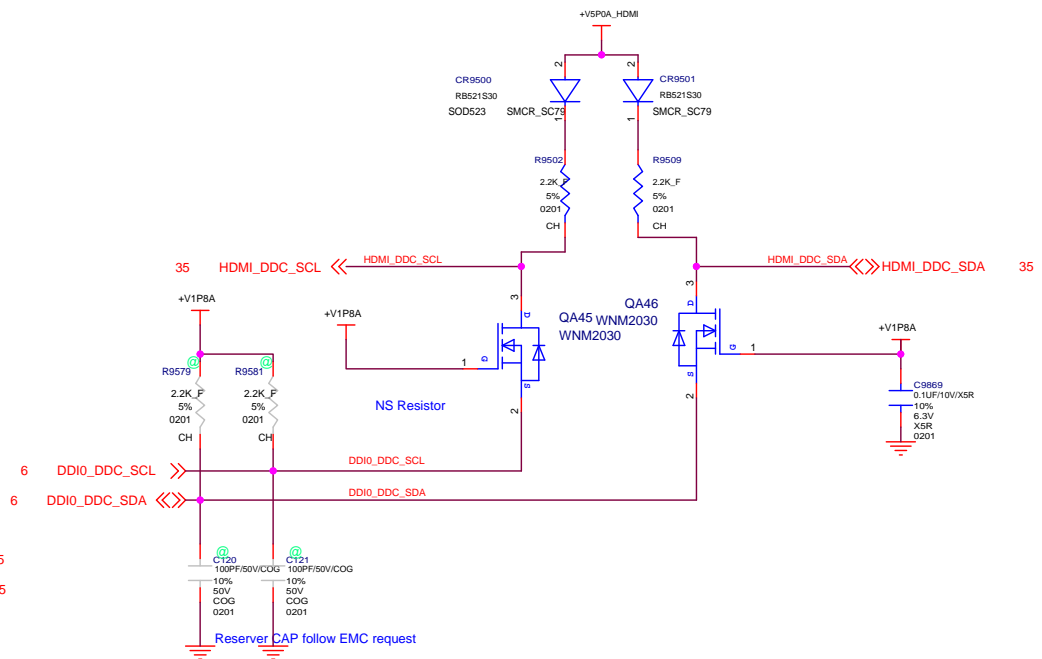
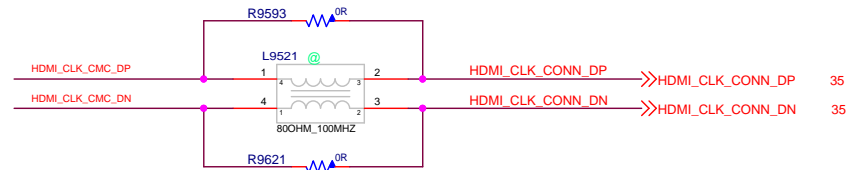
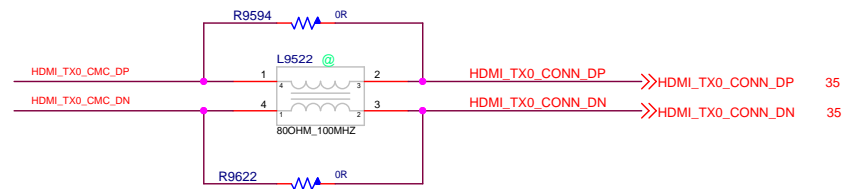
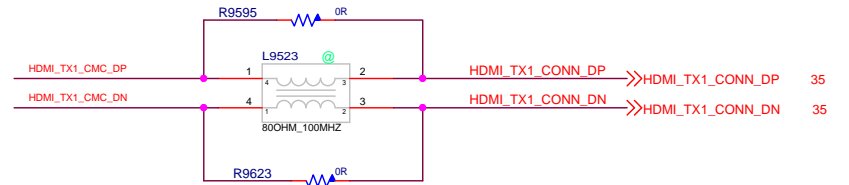
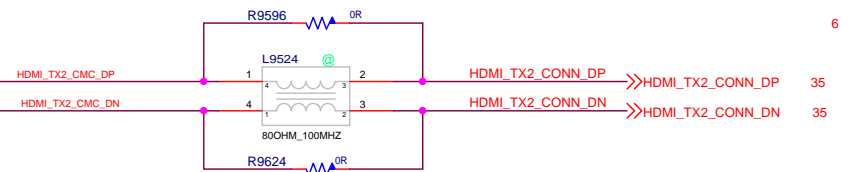
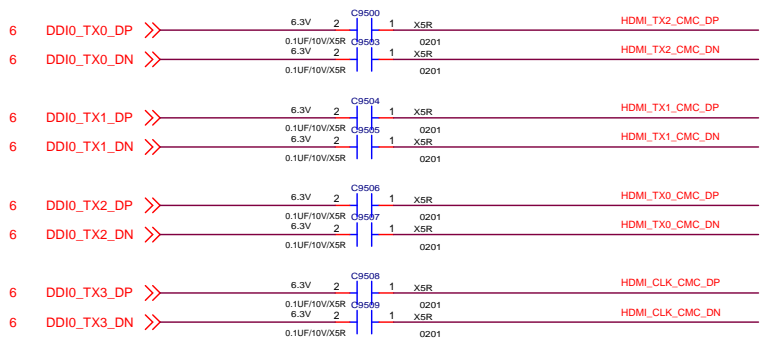
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|  <b>Gemini Lake</b> |  |                    |
| Title<br>Gemini Lake   |  |                    |
| Size<br>A  | Document Number<br><b>SDCARD POWER</b> | Rev<br><b>R100</b> |
| Date:  | Monday, June 21, 2021                  | Sheet 28 of 57     |



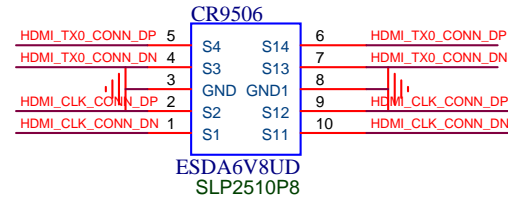
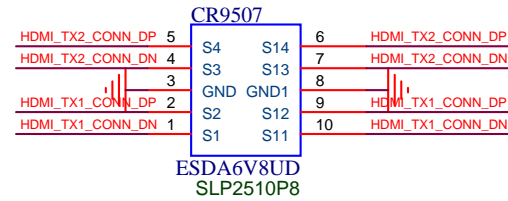
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| Title<br>Gemini Lake  |  |             |
| Size<br>B   | Document Number<br><b>POWER DELIVERY 5V AND 3.3V</b> | Rev<br>R100 |
| Date:<br>Monday, July 19, 2021  | Sheet<br>29  | of<br>57    |



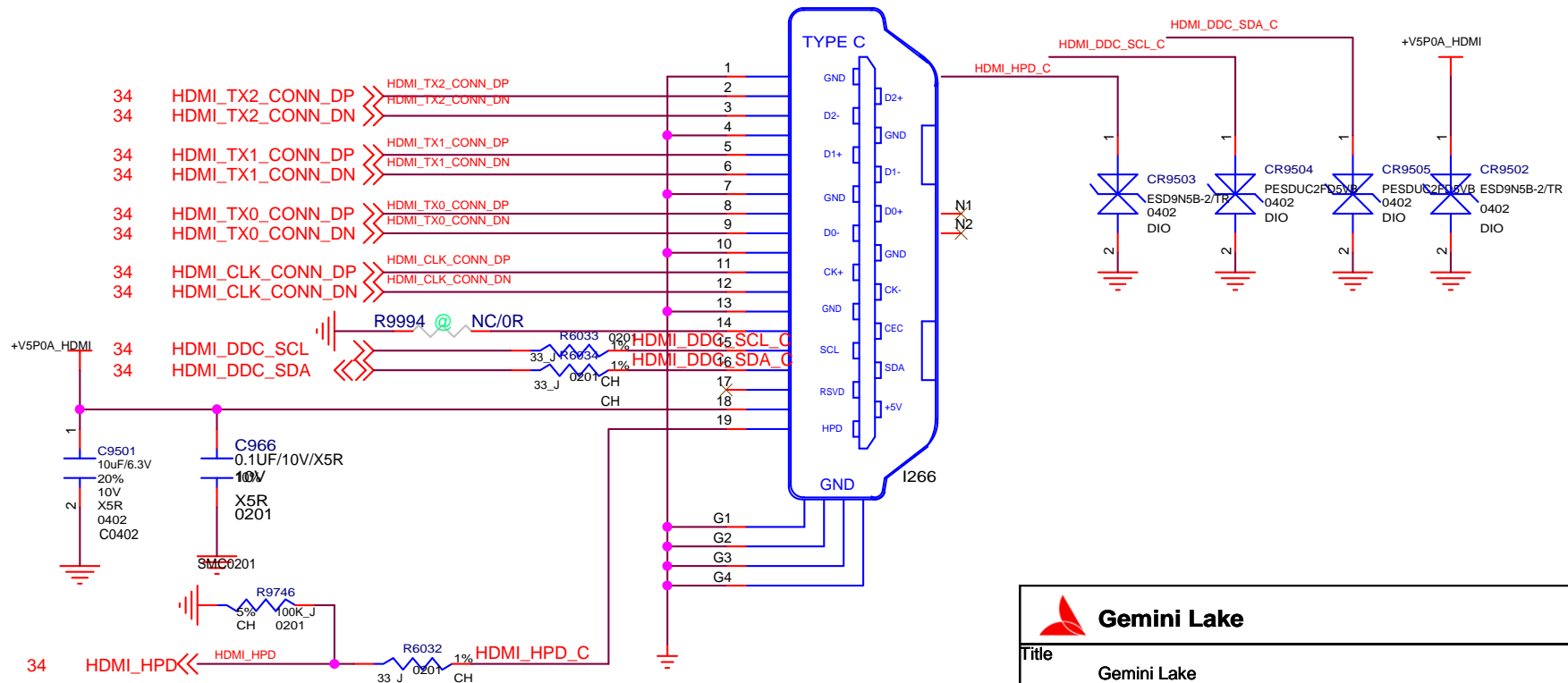
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|  <b>Gemini Lake</b> |                              |                    |
| Title<br>Gemini Lake   |                              |                    |
| Size<br>B  | Document Number<br><b>NC</b> | Rev<br><b>R100</b> |
| Date:<br>Monday, July 19, 2021   | Sheet<br>32                  | of<br>57           |




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|-----------------------------|-----------------|----------|
|                             |                 |          |
| Title Gemini Lake           |                 |          |
| Size B                      | Document Number | Rev R100 |
| <b>HDMI LEVEL SHIFTERS</b>  |                 |          |
| Date: Monday, July 19, 2021 | Sheet 34        | of 57    |



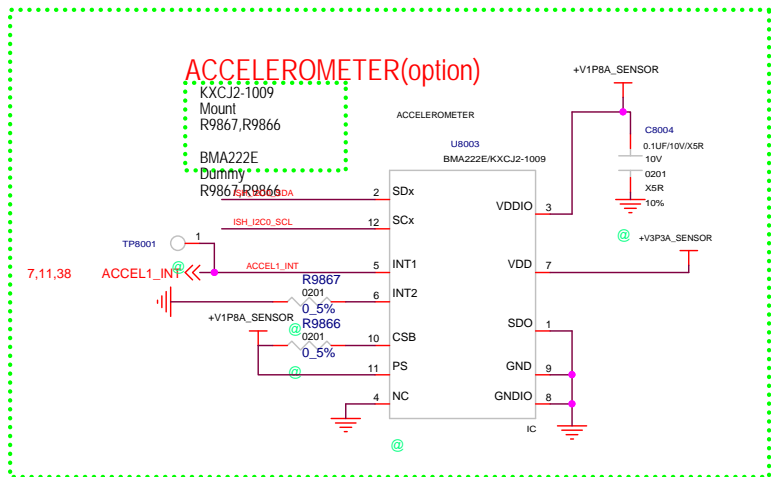
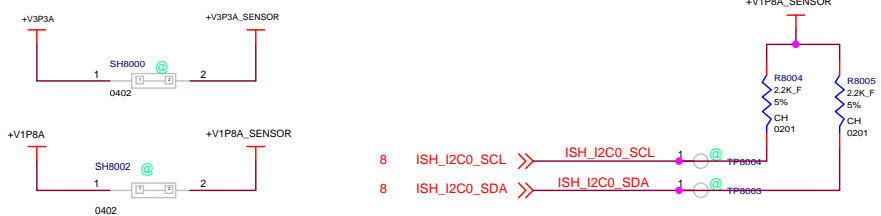
HDMI1  
CON19\_P4MM\_MICROHDMI  
minihdmi\_19p\_HM16



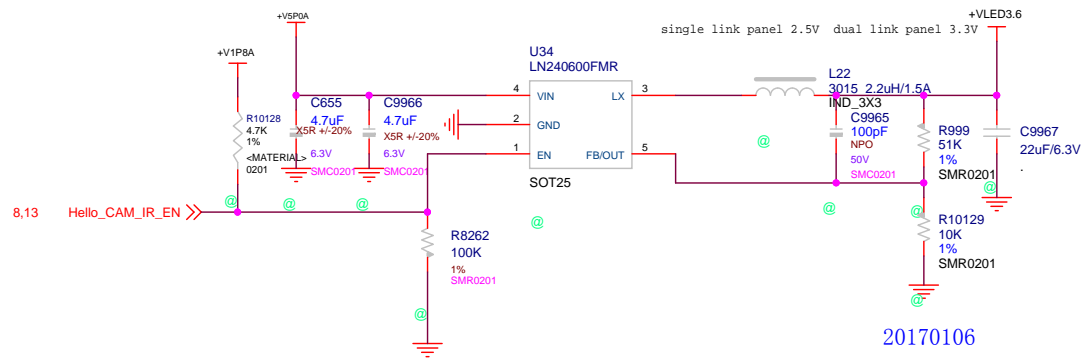
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|  <b>Gemini Lake</b> |  |                    |
| Title<br>Gemini Lake   |  |                    |
| Size<br>A  | Document Number<br><b>HDMI CONNECTOR</b> | Rev<br><b>R100</b> |
| Date:<br>Monday, July 19, 2021   | Sheet<br>35                              | of 57              |



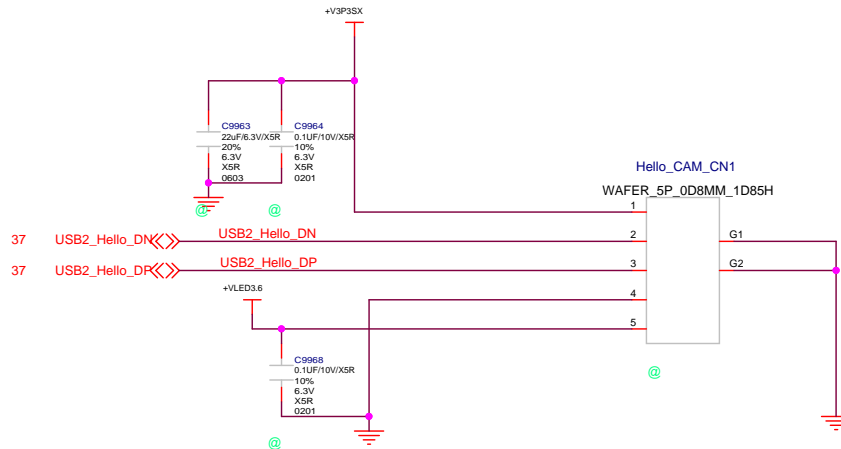





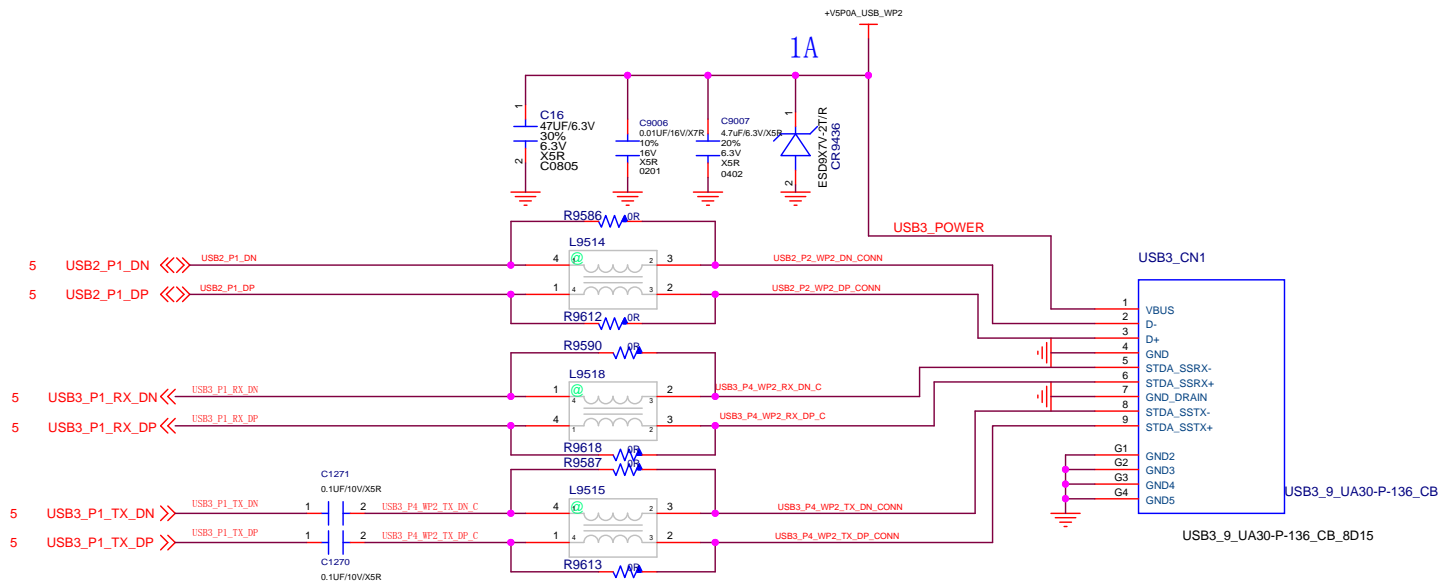
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| <b>Gemini Lake</b>             |                                   |                    |
| Title<br>Gemini Lake           |                                   |                    |
| Size<br>B                      | Document Number<br><b>SENSORS</b> | Rev<br><b>R100</b> |
| Date:<br>Monday, July 19, 2021 | Sheet<br>38                       | of<br>57           |




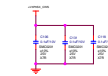
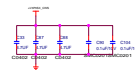
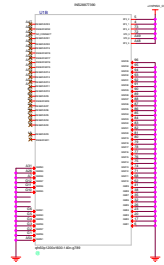
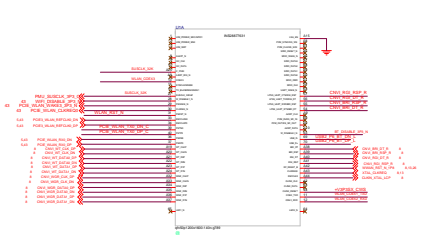
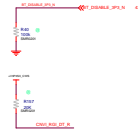
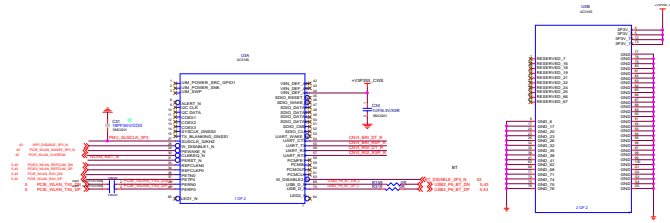
Add Hello CAM

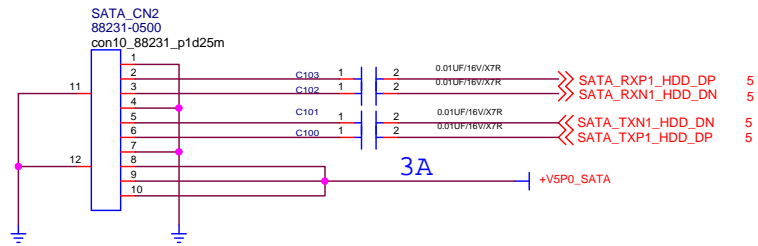



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|  <b>Gemini Lake</b> |  |             |
| Title<br>Gemini Lake   |  |             |
| Size<br>B  | Document Number<br><b>FRONT AND REAR CAMERA CONN</b> | Rev<br>R100 |
| Date:<br>Monday, June 21, 2021   | Sheet<br>39  | of<br>57    |

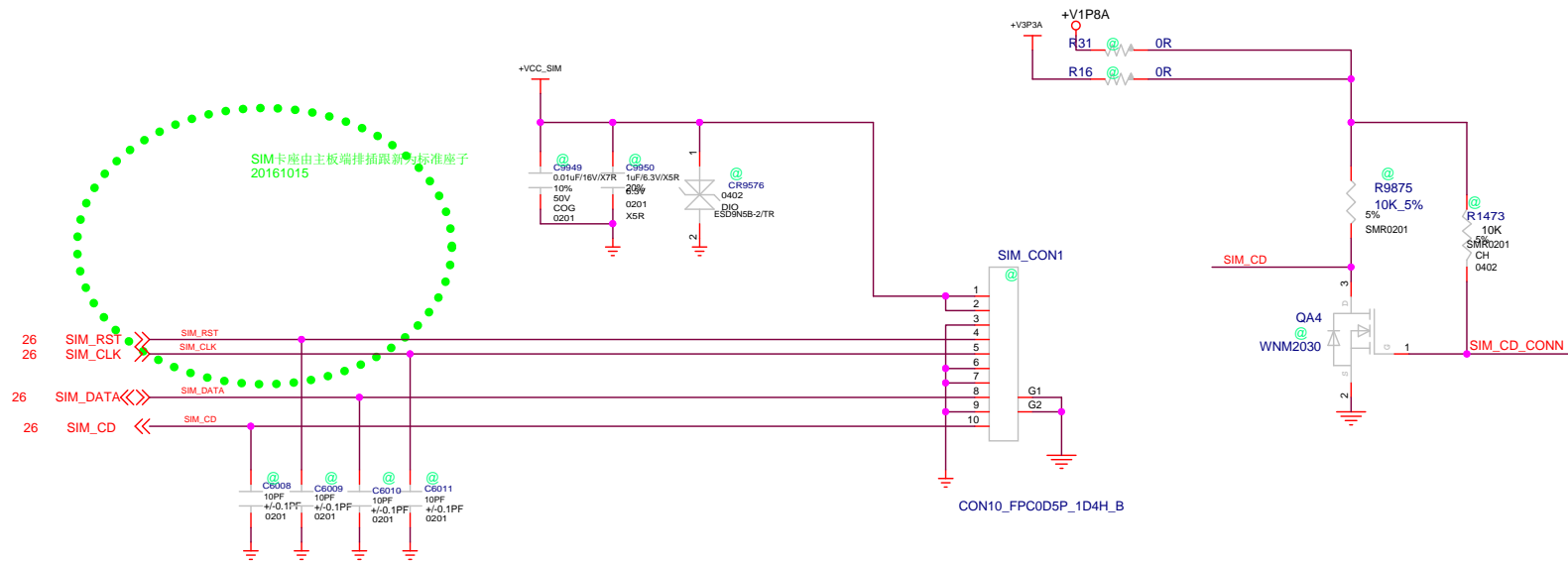



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|  <b>Gemini Lake</b> |                                       |             |
| Title<br>Gemini Lake   |                                       |             |
| Size<br>B  | Document Number<br><b>USB3.0 CONN</b> | Rev<br>R100 |
| Date:<br>Monday, July 19, 2021   | Sheet<br>42                           | of<br>57    |

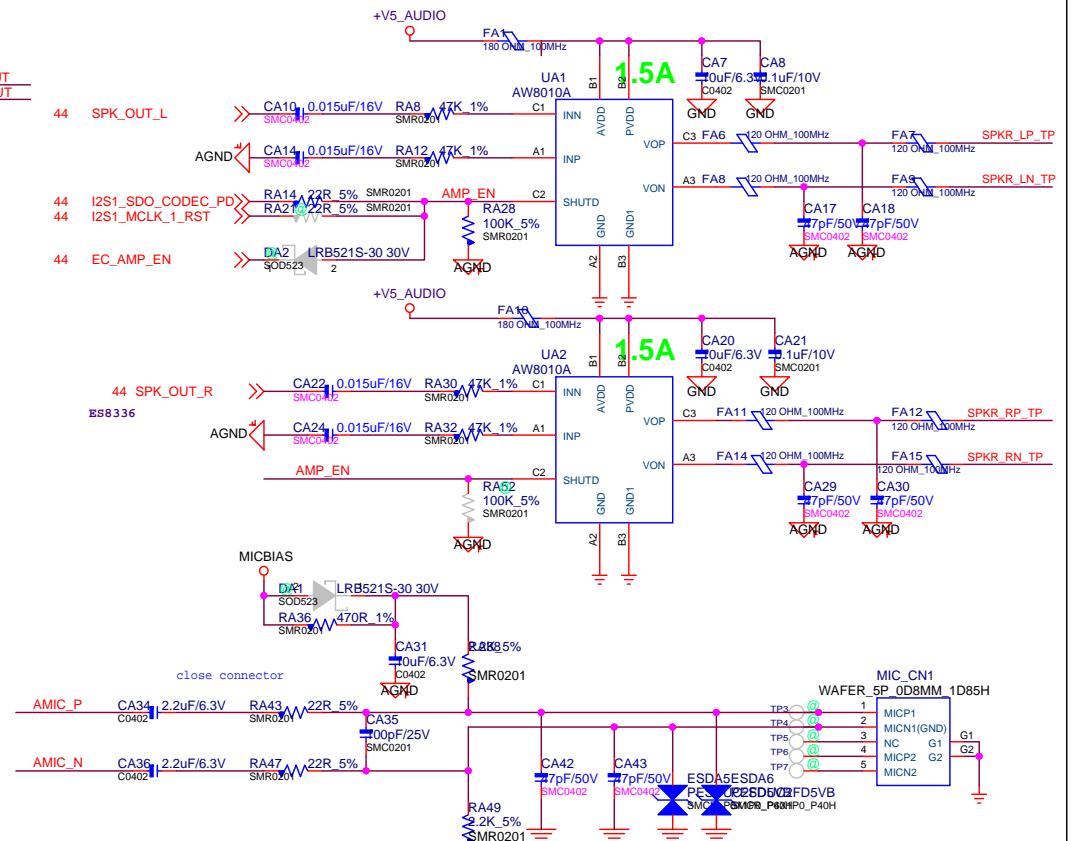
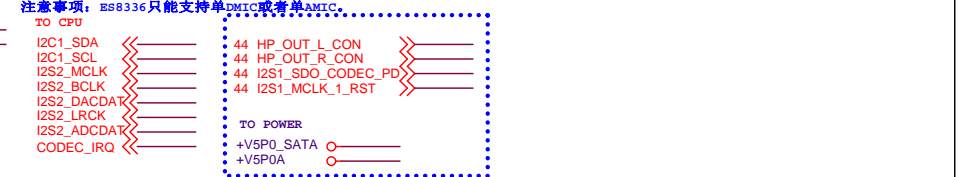
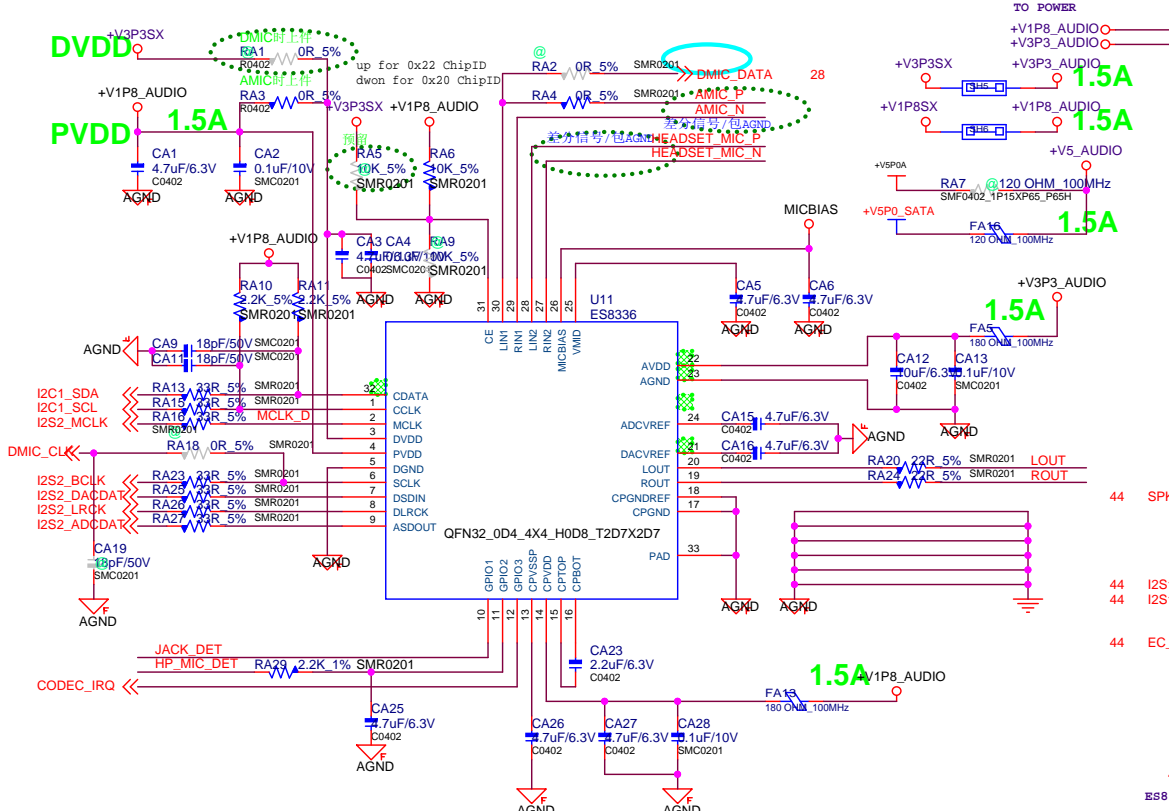




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|  <b>Gemini Lake</b> |                                    |          |
| Title Gemini Lake  |                                    |          |
| Size B   | Document Number <b>WWAN MODULE</b> | Rev R100 |
| Date: Monday, July 19, 2021  | Sheet 44 of 57                     |          |

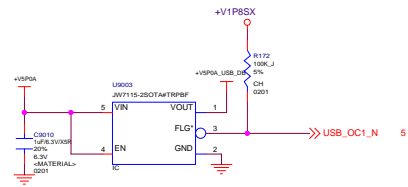


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|  <b>Gemini Lake</b> |                                    |             |
| Title<br>Gemini Lake   |                                    |             |
| Size<br>B  | Document Number<br><b>SIM CONN</b> | Rev<br>R100 |
| Date:<br>Monday, June 21, 2021   | Sheet<br>45                        | of<br>57    |

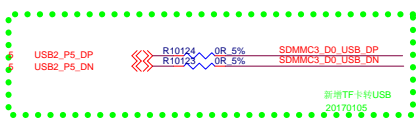
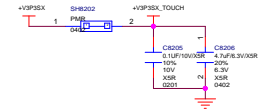
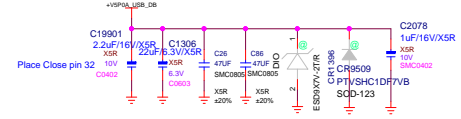
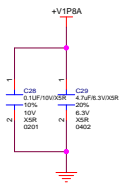
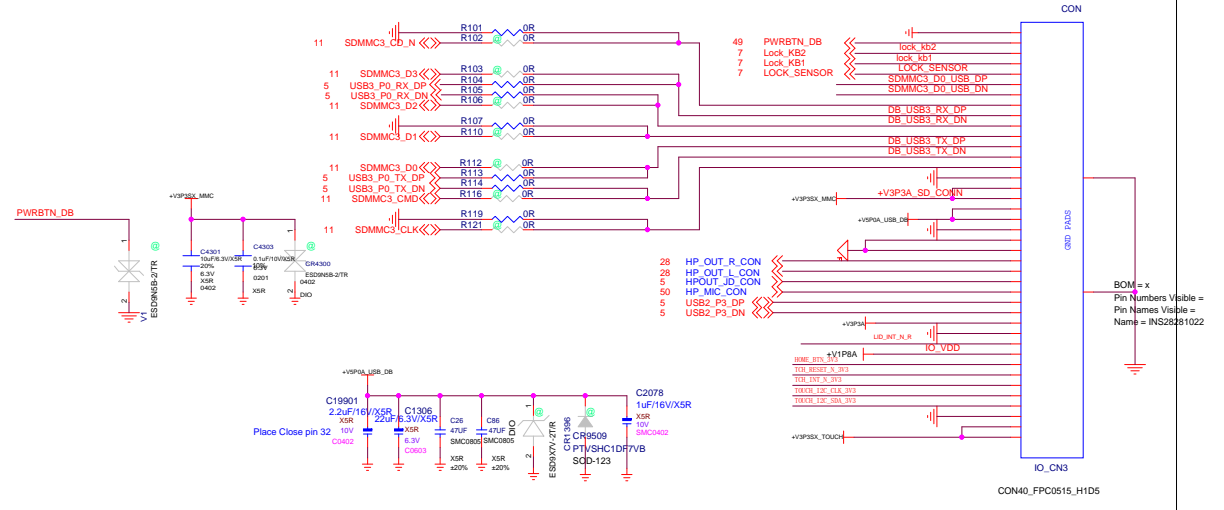
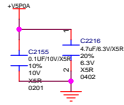


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| <b>Gemini Lake</b> |                       |       |          |
| Title              | Gemini Lake           |       |          |
| Size               | Document Number       | Rev   |          |
| B                  | <b>AUDIO CODEC</b>    | R100  |          |
| Date:              | Monday, July 19, 2021 | Sheet | 46 of 57 |



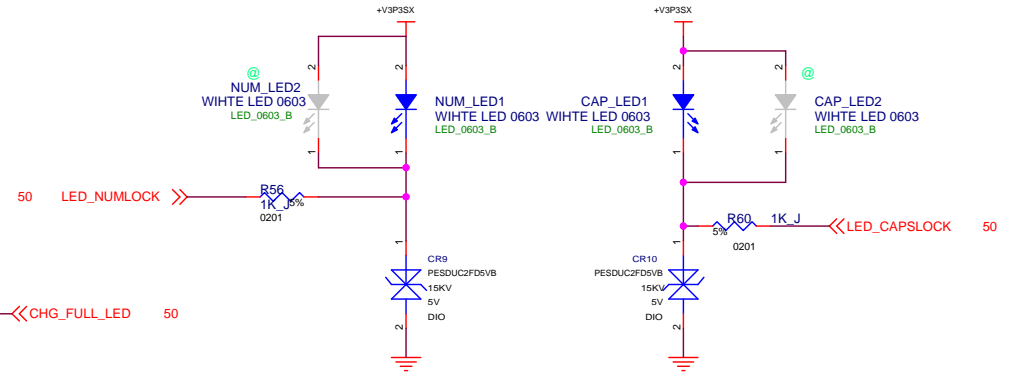
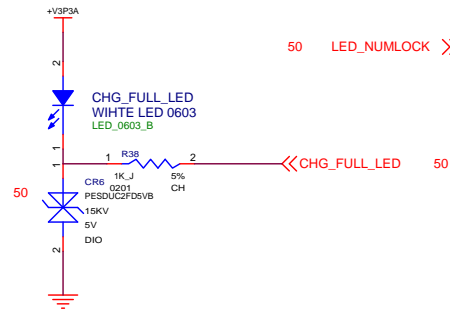
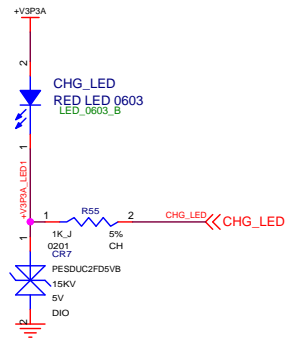
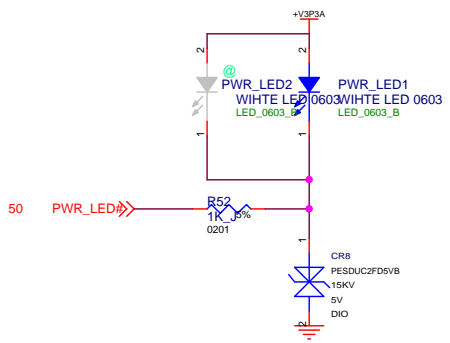



Change from LPW5208 To WS4601E



BOM = x  
Pin Numbers Visible =  
Pin Names Visible =  
Name = INS28281022





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|--|--|-------------|
|  <b>Gemini Lake</b> |  |             |
| Title<br>Gemini Lake   |  |             |
| Size<br>B  | Document Number<br><b>BUTTONS LEADS AND MISC</b> | Rev<br>R100 |
| Date:<br>Monday, July 19, 2021   | Sheet<br>49                                      | of<br>57    |



