

P489-A02 DESIGN - G73, 128/256/512 MB DDR2

VGA, DVI-I, HDMI, SDTV, HDTV, SCART

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V058-0A History

- Page 2: reserved PCI-E B12 for M/B SPDIF IN
- Page 10: add DACC SYNC BUFFER parts for new slim VGA
- Page 14: add SCART J15 for 4073, removed SVIDEO/COMPOSIT connectors.
- Page 16: change J6_1 for MSI SPDIF IN housing
- Page 19: L10 co-layout L27 dip choke
- Page 11: add common mode choke
- Page 13: removed CN1 SLI CONNECTOR, change MIOA_IOVDD to 3V3_PEX
- Page 17: change MIOAD0/MIOAD2 to 3V3_PEX


Page 12: add HDMI using common mode choke

V058-10 History

Page 14: add SCART Vcc 2.5V.

| REV | VARIANT | NPVN | ASSEMBLY |
|-----|-------------|--------------------|--|
| B | BASE | 600-10489-9999-200 | G73 ALL COMPONENT BOM |
| 1 | 000 | 600-10489-0000-200 | G73 400/800MHz 256Mb 128Bk DDR2, DVI-I+HDMI+SDTV+SCART |
| 2 | 0001 | 600-10489-0001-200 | G73 400/800MHz 256Mb 128Bk DDR2, DVI-I+HDMI+SDTV+YPbP |
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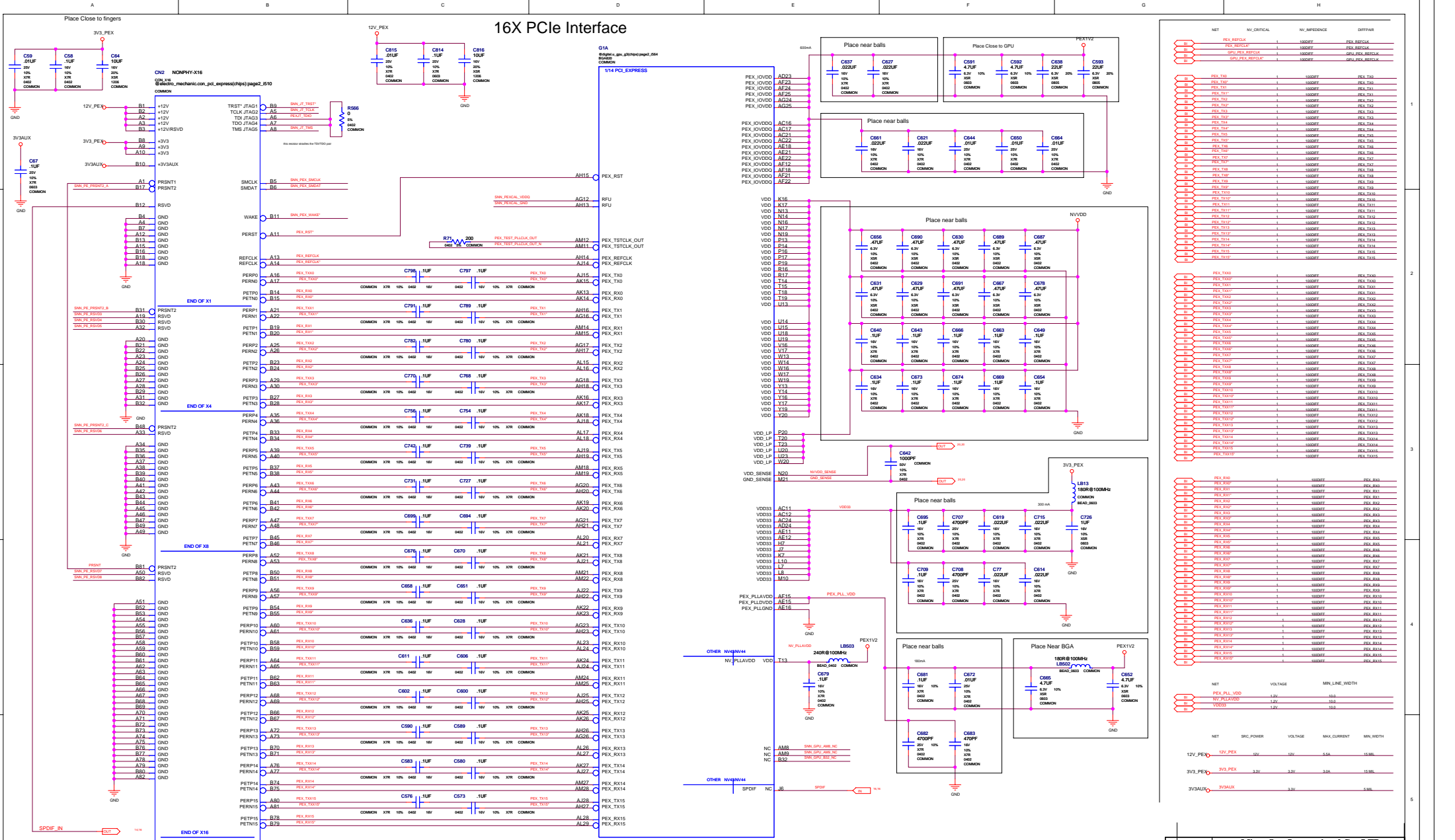


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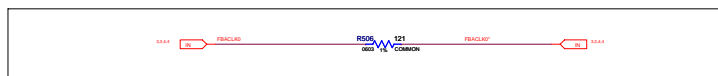
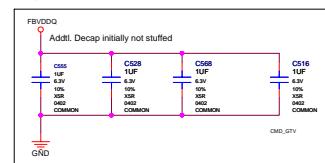
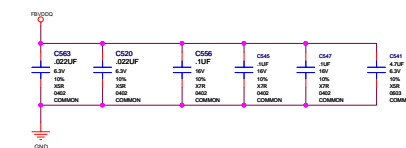
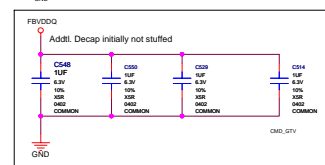
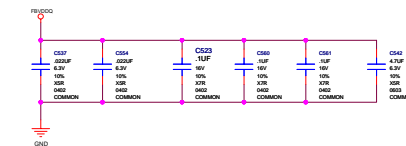
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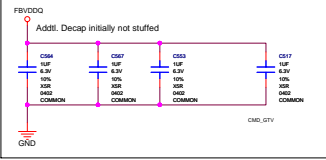
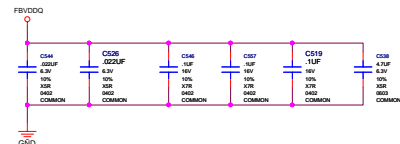
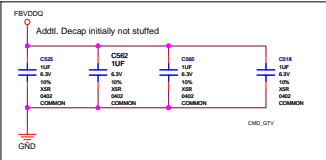
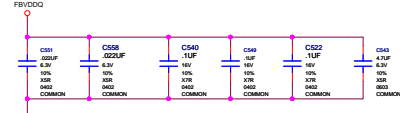
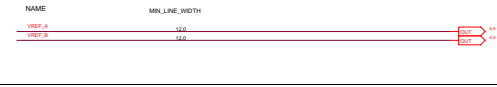
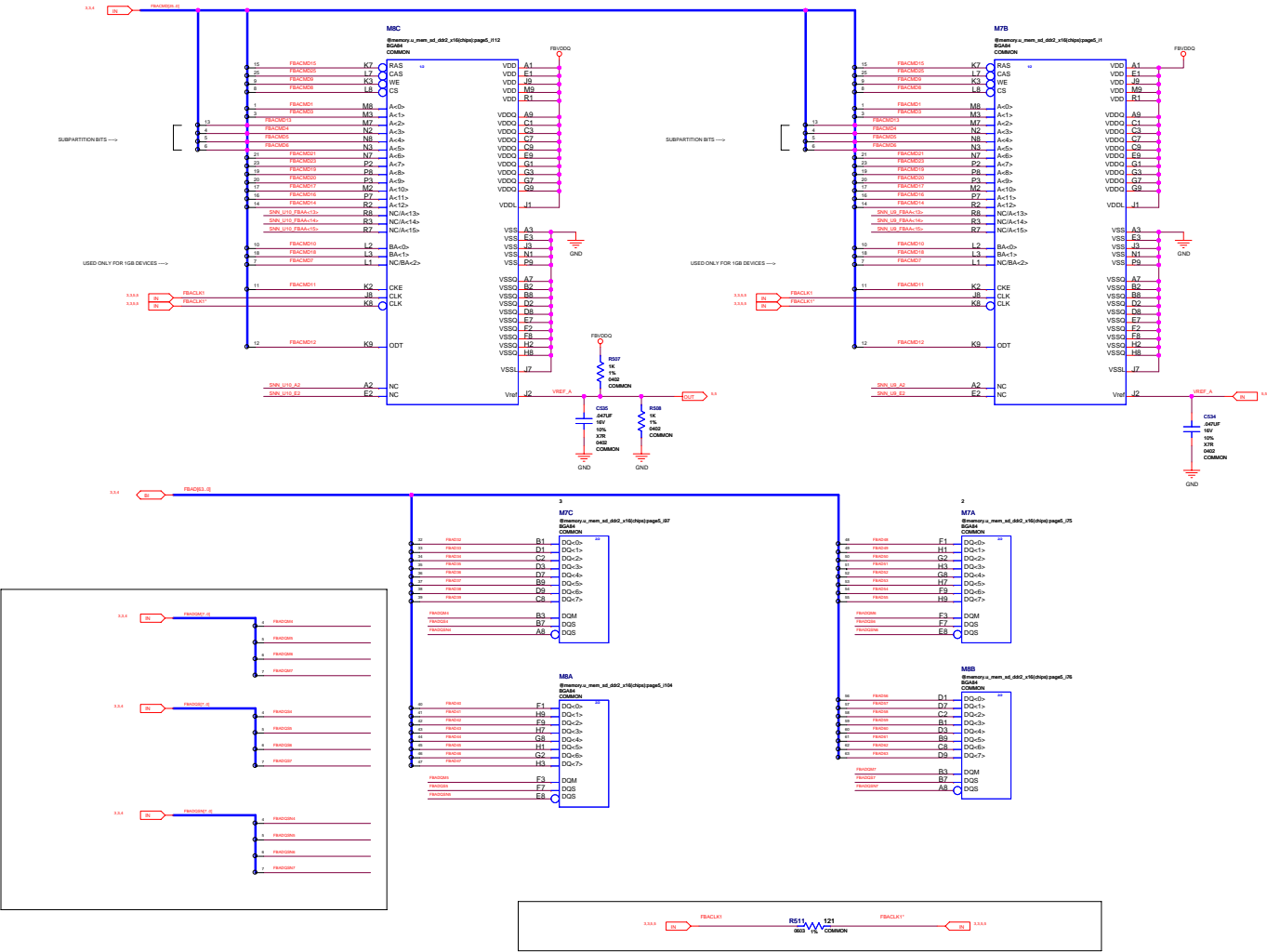


PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



FBA MEMORY 1st bank 32..63

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



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ASSEMBLY PAGE DETAIL

G73 ALL COMPONENT BOM

FBA 16M16 D0R2 MEMORIES, 1ST BANK 32..63



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V058

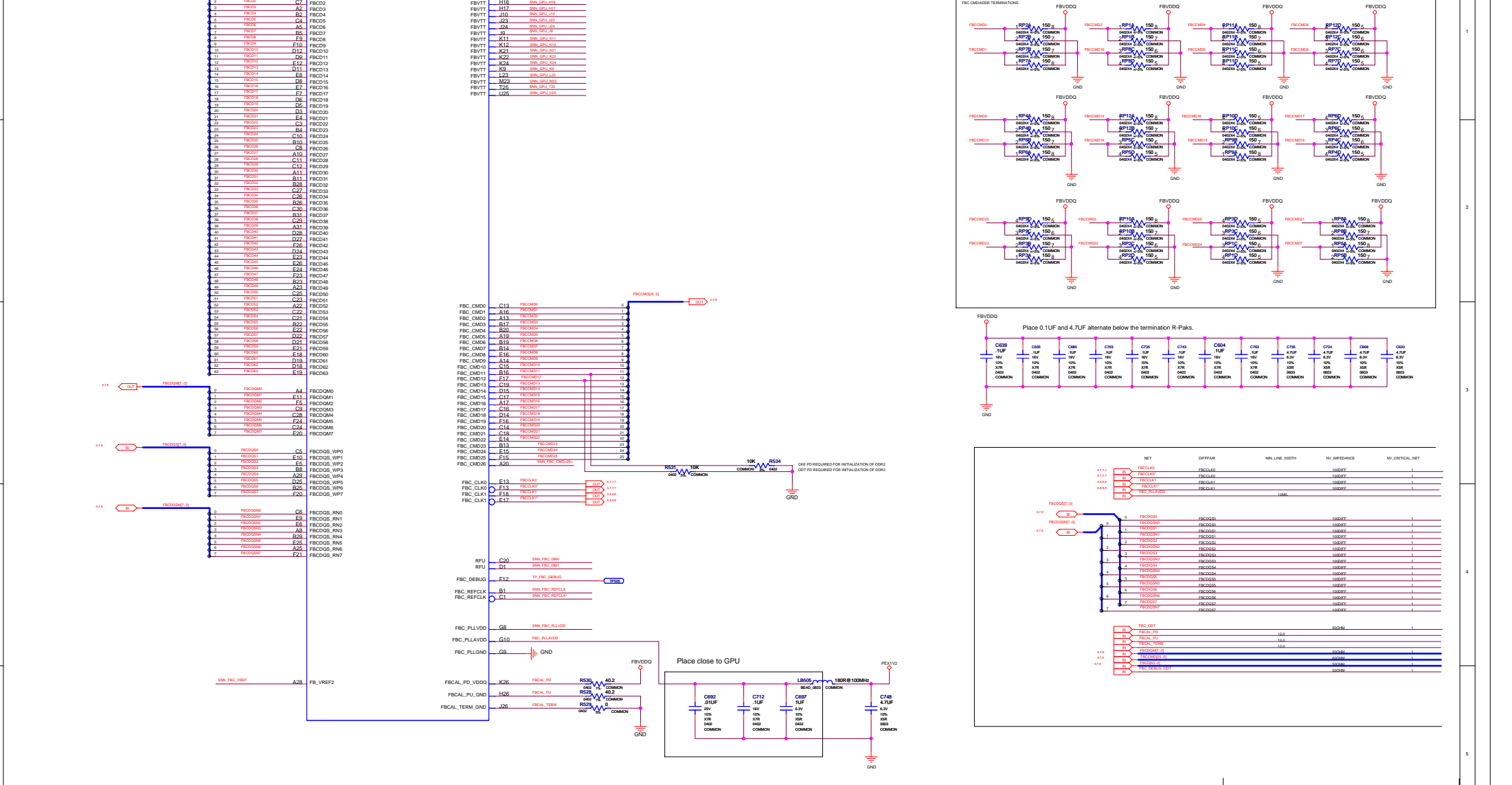
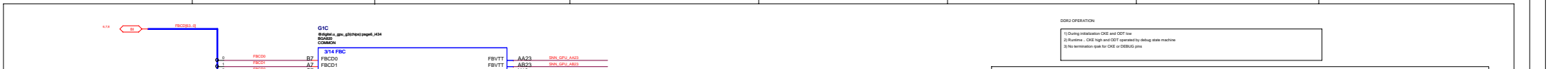
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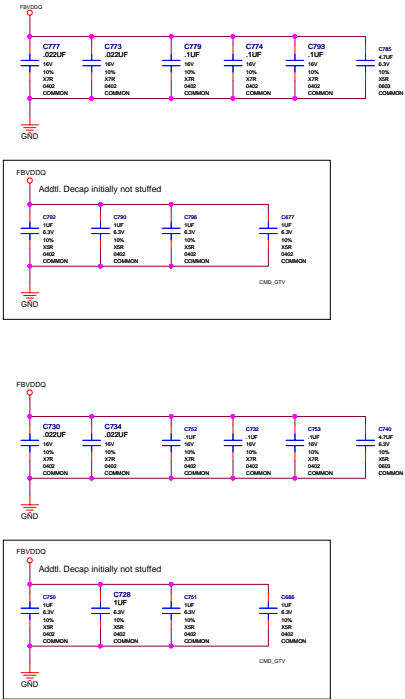
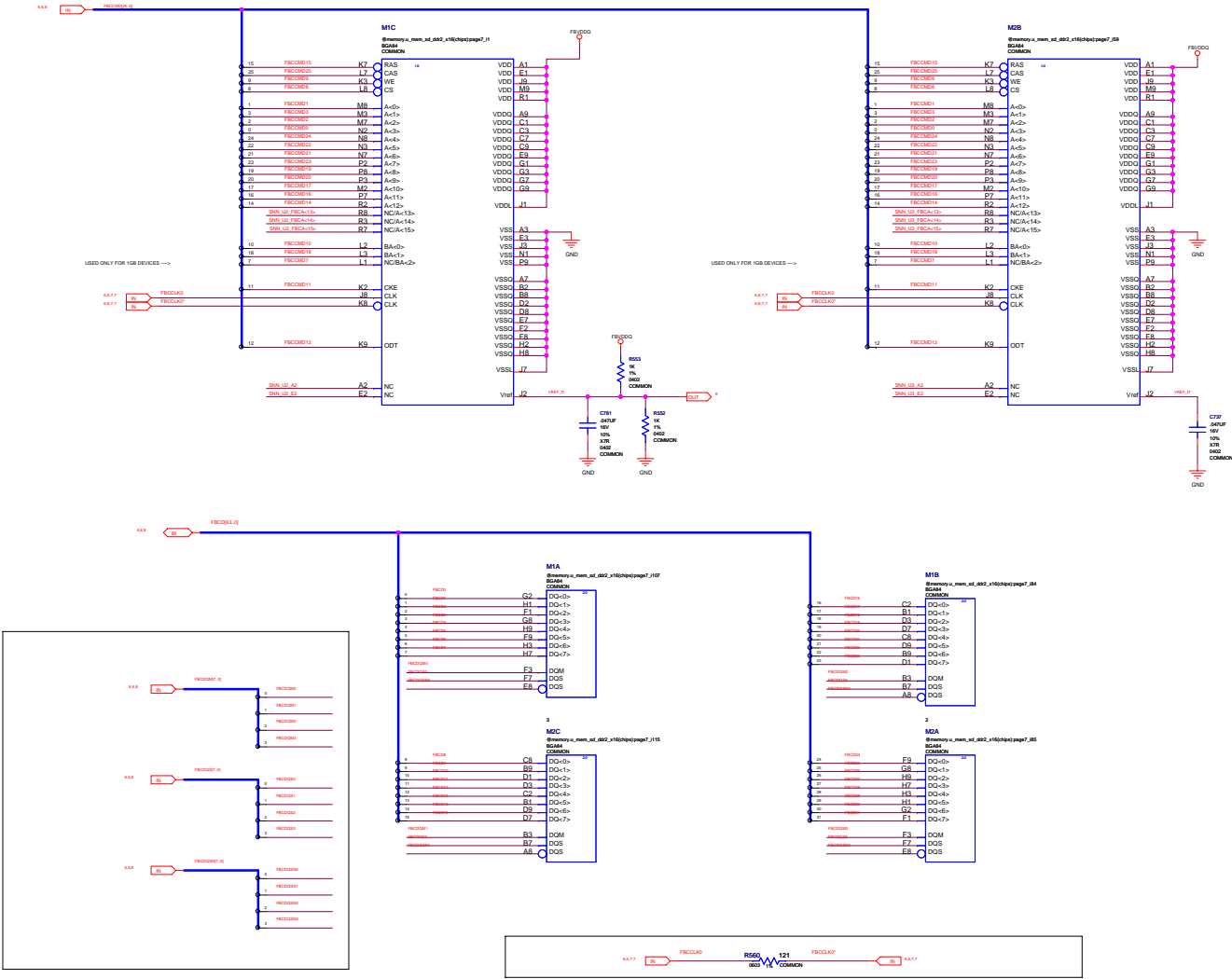
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FBC MEMORY 2nd bank 0.31

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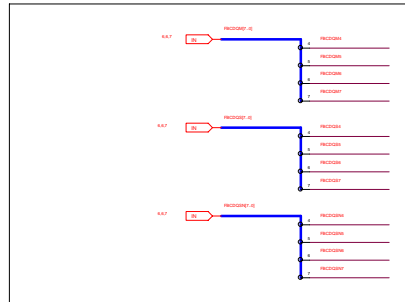
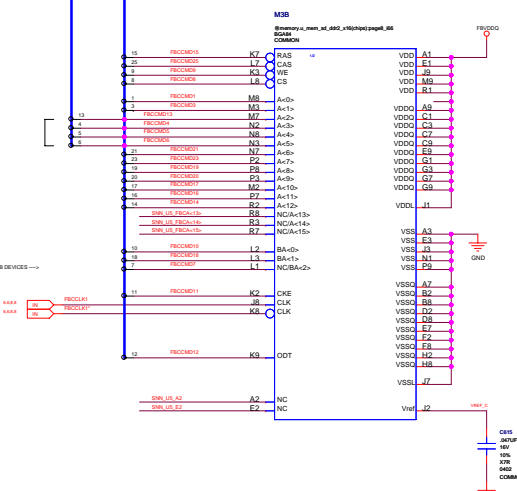
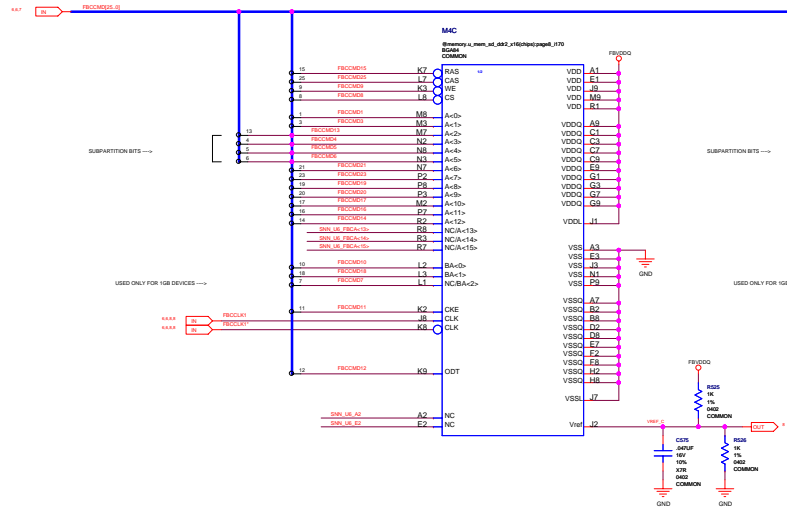


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FBC MEMORY 2nd bank 32..63

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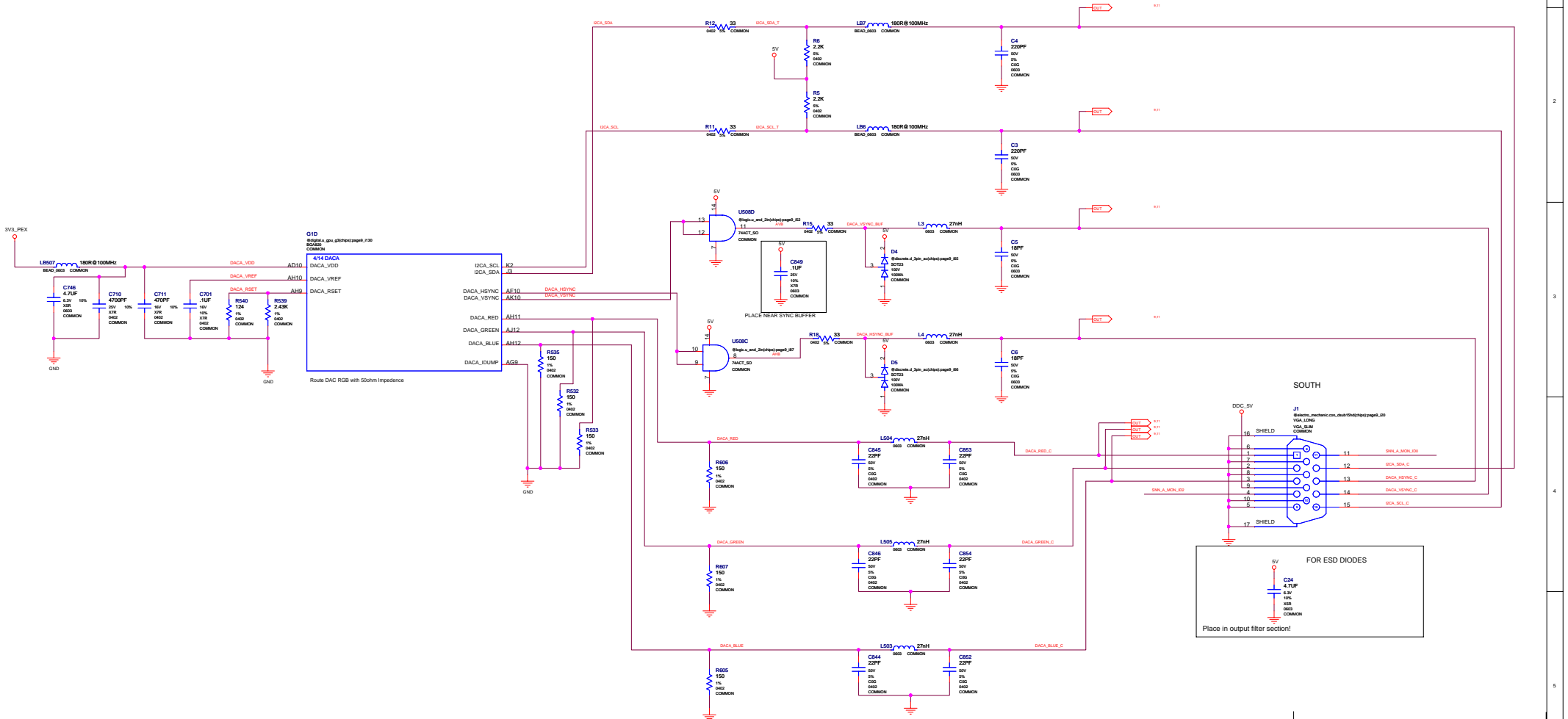


| | | | |
|-----|-------------|--------------|----------|
| NET | NV_CRITICAL | NV_IMPEDANCE | DIFFPAIR |
|-----|-------------|--------------|----------|

| | NET | VOLTAGE | MAX_CURRENT | MIN_WIDTH |
|---|----------|---------|-------------|-----------|
| 1 | DACA_VDD | 3.3000V | 0.07 | 16.0 |

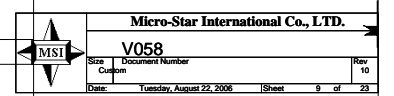
Primary Display (DACA), Slim DB15

DACA RGB-FILTER



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| | |
|-------------|--|
| ASSEMBLY | G73 ALL COMPONENT BOM |
| PAGE DETAIL | DACA FILTERS, DACA SYNC BUFFERS & DB15 SOUTH |



DACB for TVout, DACC unused.

DACC NET RULES

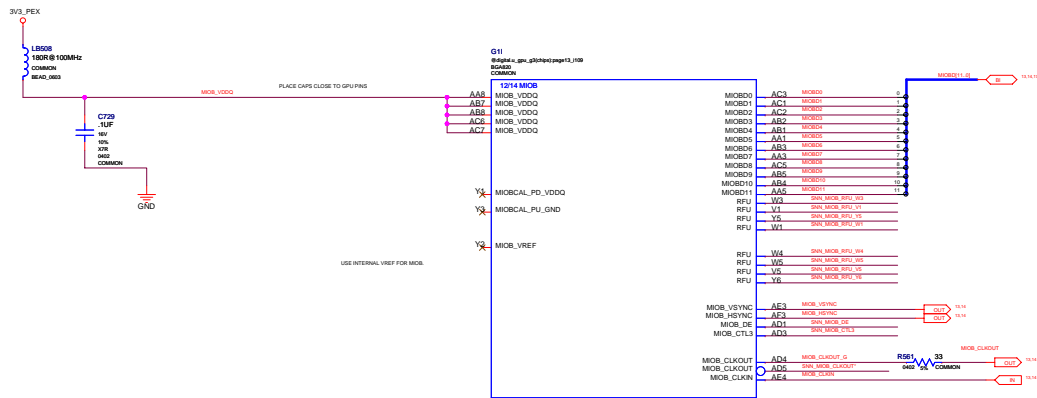
| NET | W1_CRITICAL | W1_SAFEDRIVE | DIFFPAIR |
|--------------|-------------|--------------|-----------|
| DACC_VDD | 1 | 200M | |
| DACC_VDDEN | 1 | 200M | |
| DACC_VREF | 1 | 200M | |
| DACC_VSET | 1 | 200M | |
| DACC_VDD_E | 1 | 200M | |
| DACC_VDDEN_E | 1 | 200M | |
| DACC_VREF_E | 1 | 200M | |
| DACC_VSET_E | 1 | 200M | |
| NET | VOLTAGE | MAX_CURRENT | MIN_WIDTH |
| DACC_VDD | 1.800V | 0.07 | 16.0 |

Page14 DC_C parts

SOUTH

FOR ESD DIODES
Place in output filter section!

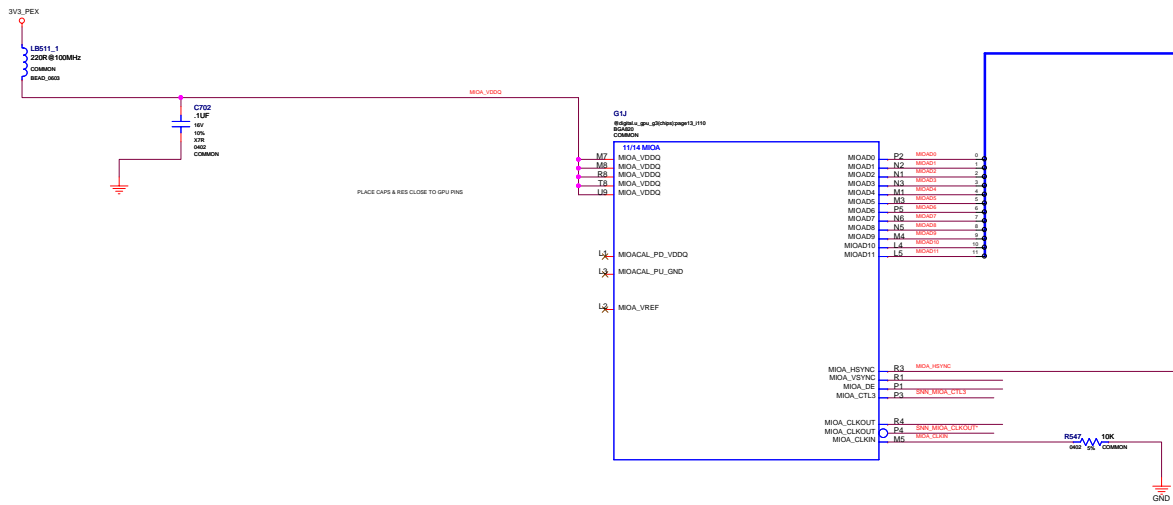
G73 VIP/MIOB



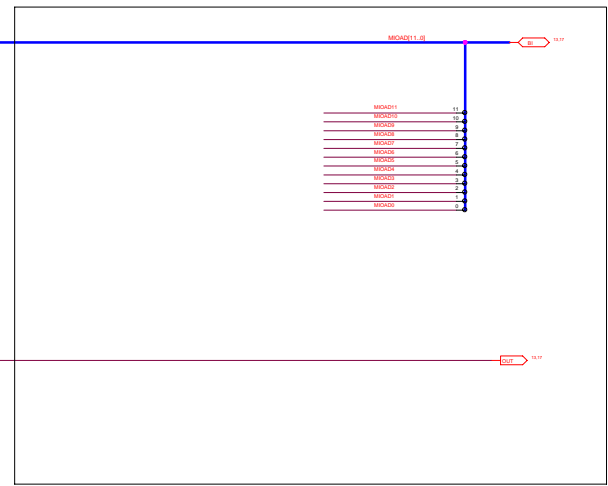
MIO NET RULES

| NET | NV_CRITICAL | NV_IMPEDANCE | DIFFPAIR |
|-------------|-------------|--------------|----------|
| MIOA001_0 | 2 | 50OHM | |
| MIOA001_1 | 2 | 50OHM | |
| MIOA001_2 | 2 | 50OHM | |
| MIOA001_3 | 2 | 50OHM | |
| MIOA001_4 | 2 | 50OHM | |
| MIOA001_5 | 2 | 50OHM | |
| MIOA001_6 | 2 | 50OHM | |
| MIOA001_7 | 2 | 50OHM | |
| MIOA001_8 | 2 | 50OHM | |
| MIOA001_9 | 2 | 50OHM | |
| MIOA001_10 | 2 | 50OHM | |
| MIOA001_11 | 2 | 50OHM | |
| MIOA001_12 | 2 | 50OHM | |
| MIOA001_13 | 2 | 50OHM | |
| MIOA001_14 | 2 | 50OHM | |
| MIOA001_15 | 2 | 50OHM | |
| MIOA001_16 | 2 | 50OHM | |
| MIOA001_17 | 2 | 50OHM | |
| MIOA001_18 | 2 | 50OHM | |
| MIOA001_19 | 2 | 50OHM | |
| MIOA001_20 | 2 | 50OHM | |
| MIOA001_21 | 2 | 50OHM | |
| MIOA001_22 | 2 | 50OHM | |
| MIOA001_23 | 2 | 50OHM | |
| MIOA001_24 | 2 | 50OHM | |
| MIOA001_25 | 2 | 50OHM | |
| MIOA001_26 | 2 | 50OHM | |
| MIOA001_27 | 2 | 50OHM | |
| MIOA001_28 | 2 | 50OHM | |
| MIOA001_29 | 2 | 50OHM | |
| MIOA001_30 | 2 | 50OHM | |
| MIOA001_31 | 2 | 50OHM | |
| MIOA001_32 | 2 | 50OHM | |
| MIOA001_33 | 2 | 50OHM | |
| MIOA001_34 | 2 | 50OHM | |
| MIOA001_35 | 2 | 50OHM | |
| MIOA001_36 | 2 | 50OHM | |
| MIOA001_37 | 2 | 50OHM | |
| MIOA001_38 | 2 | 50OHM | |
| MIOA001_39 | 2 | 50OHM | |
| MIOA001_40 | 2 | 50OHM | |
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| MIOA001_42 | 2 | 50OHM | |
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| MIOA001_57 | 2 | 50OHM | |
| MIOA001_58 | 2 | 50OHM | |
| MIOA001_59 | 2 | 50OHM | |
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| MIOA001_63 | 2 | 50OHM | |
| MIOA001_64 | 2 | 50OHM | |
| MIOA001_65 | 2 | 50OHM | |
| MIOA001_66 | 2 | 50OHM | |
| MIOA001_67 | 2 | 50OHM | |
| MIOA001_68 | 2 | 50OHM | |
| MIOA001_69 | 2 | 50OHM | |
| MIOA001_70 | 2 | 50OHM | |
| MIOA001_71 | 2 | 50OHM | |
| MIOA001_72 | 2 | 50OHM | |
| MIOA001_73 | 2 | 50OHM | |
| MIOA001_74 | 2 | 50OHM | |
| MIOA001_75 | 2 | 50OHM | |
| MIOA001_76 | 2 | 50OHM | |
| MIOA001_77 | 2 | 50OHM | |
| MIOA001_78 | 2 | 50OHM | |
| MIOA001_79 | 2 | 50OHM | |
| MIOA001_80 | 2 | 50OHM | |
| MIOA001_81 | 2 | 50OHM | |
| MIOA001_82 | 2 | 50OHM | |
| MIOA001_83 | 2 | 50OHM | |
| MIOA001_84 | 2 | 50OHM | |
| MIOA001_85 | 2 | 50OHM | |
| MIOA001_86 | 2 | 50OHM | |
| MIOA001_87 | 2 | 50OHM | |
| MIOA001_88 | 2 | 50OHM | |
| MIOA001_89 | 2 | 50OHM | |
| MIOA001_90 | 2 | 50OHM | |
| MIOA001_91 | 2 | 50OHM | |
| MIOA001_92 | 2 | 50OHM | |
| MIOA001_93 | 2 | 50OHM | |
| MIOA001_94 | 2 | 50OHM | |
| MIOA001_95 | 2 | 50OHM | |
| MIOA001_96 | 2 | 50OHM | |
| MIOA001_97 | 2 | 50OHM | |
| MIOA001_98 | 2 | 50OHM | |
| MIOA001_99 | 2 | 50OHM | |
| MIOA001_100 | 2 | 50OHM | |

G73 MIOA



SLI Connector



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ASSEMBLY
PAGE DETAIL
G73 ALL COMPONENT BOARD
MIOA & MIOB, SLI CONNECTOR

Micro-Star International Co., LTD.

V058

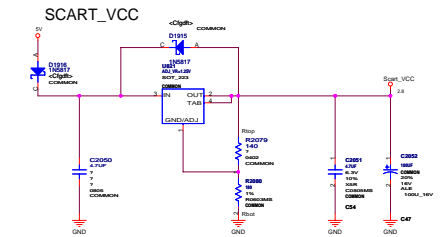
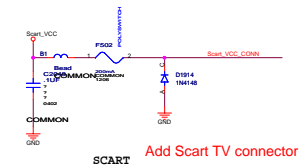
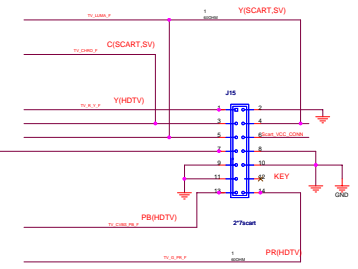
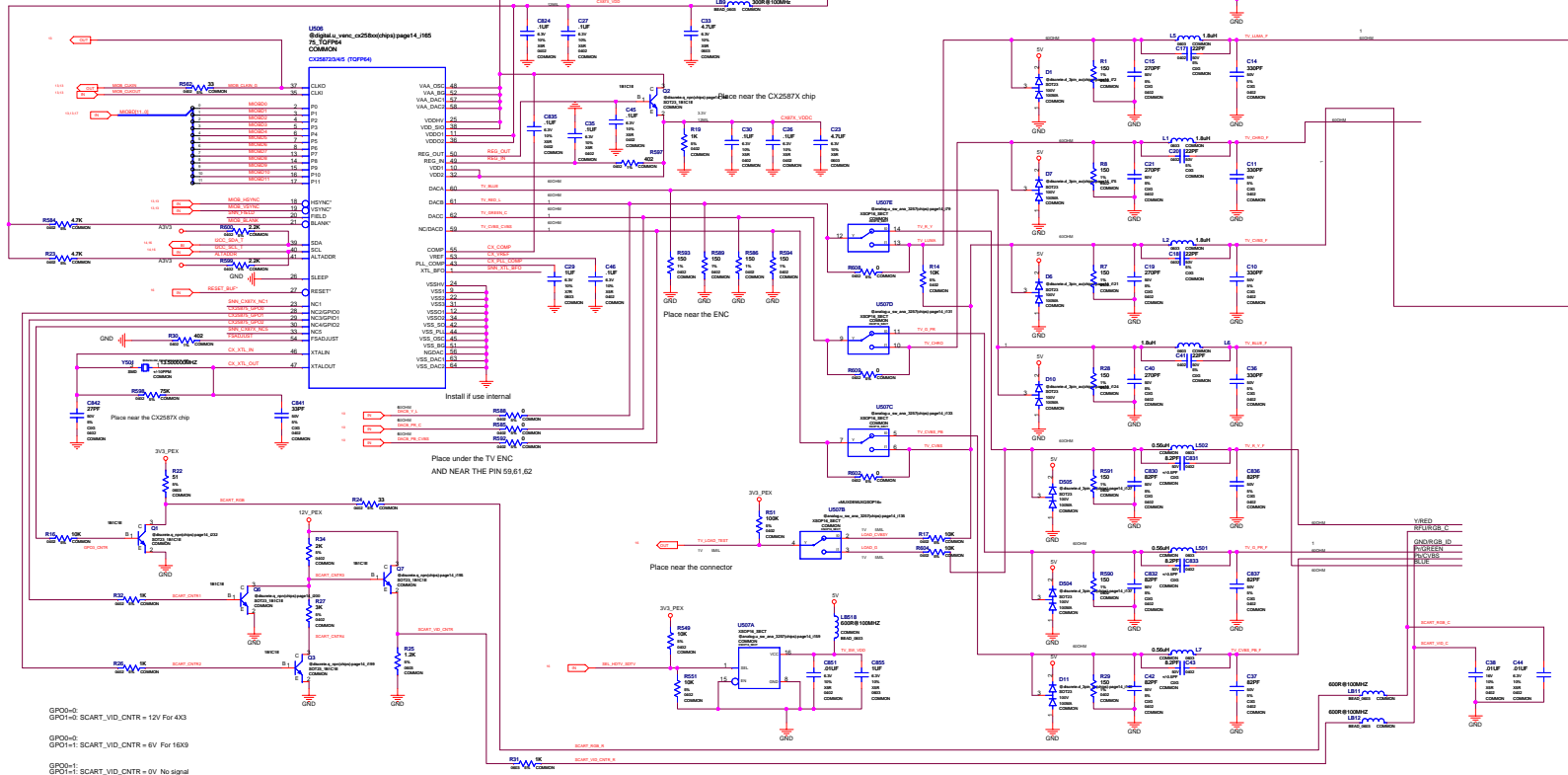
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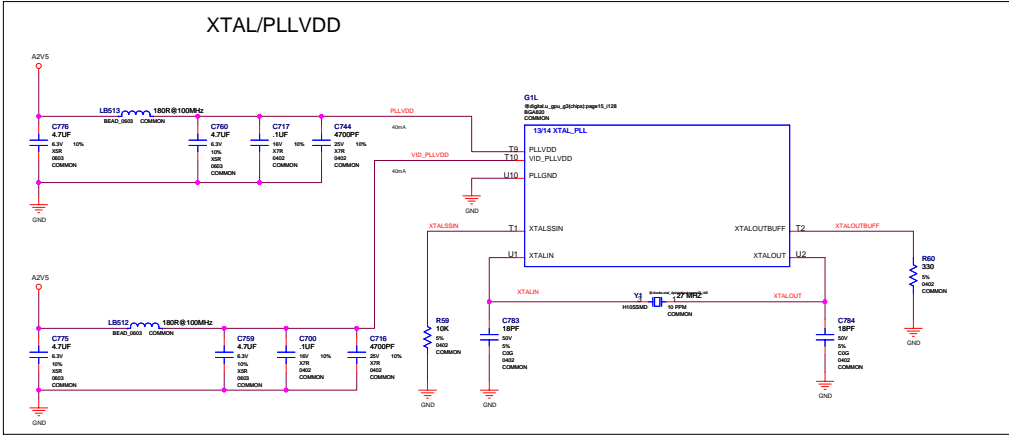
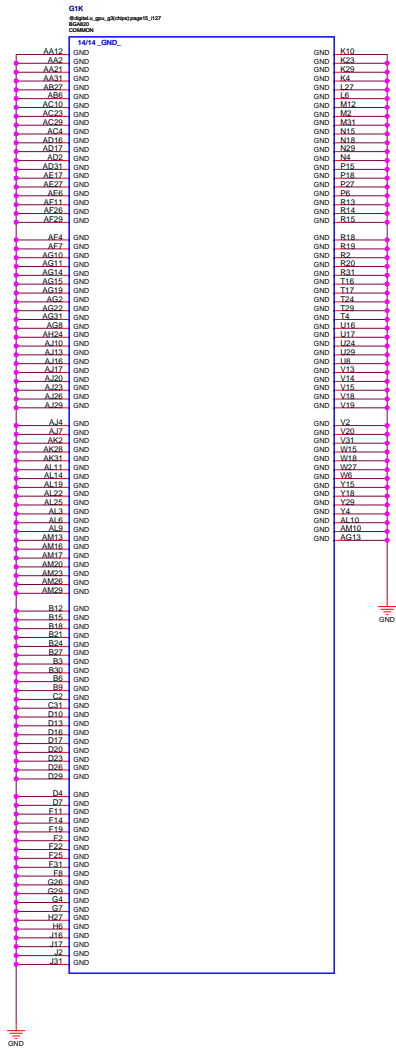
Rev: 10

VIDEO ENCODER

CX25874/5

I2C ADDRESS = 0X8A





| NET | IV_CRITICAL | IV_IMPEDANCE | DIFFPAIR |
|----------------|-------------|--------------|----------|
| 16 XTALSSN | 1 | 200m | |
| 16 XTALIN | 1 | 200m | |
| 16 XTALOUTBUFF | 1 | 200m | |
| 16 | | | |

| NET | VOLTAGE | MAX_CURRENT | MIN_WIDTH |
|--------------|---------|-------------|-----------|
| 16 PLL_VDD | 2.5V | 0.3 | 12mil |
| 16 VID_PLLVD | 2.5V | 0.3 | 12mil |

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ASSEMBLY
PAGE DETAIL

073 ALL COMPONENT BOM
GPU GND CONNECTION, XTAL

Micro-Star International Co., LTD.

V058

Size: Custom

Document Number

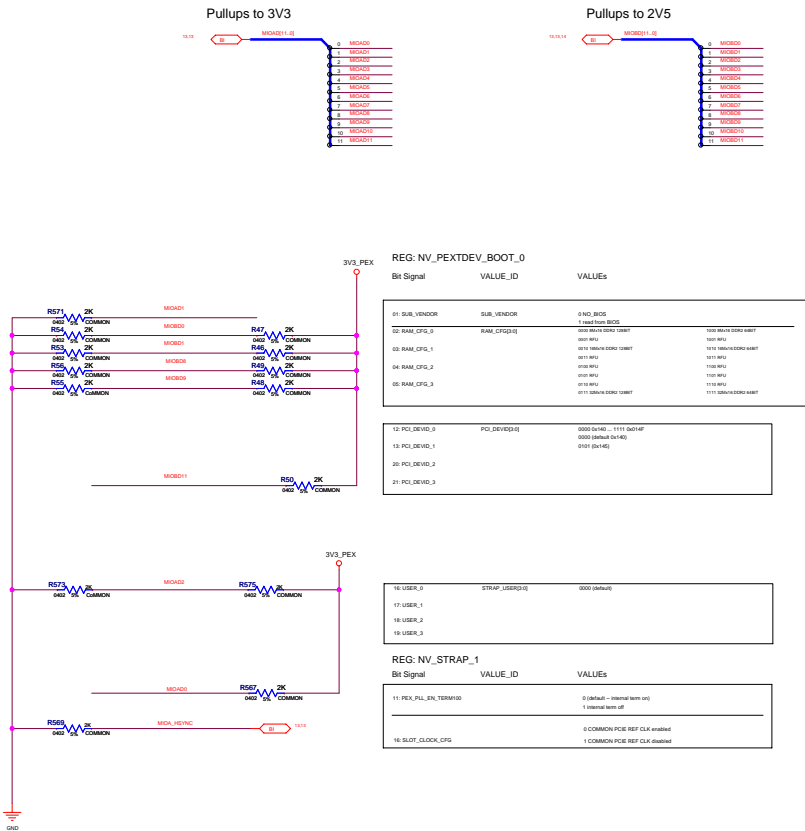
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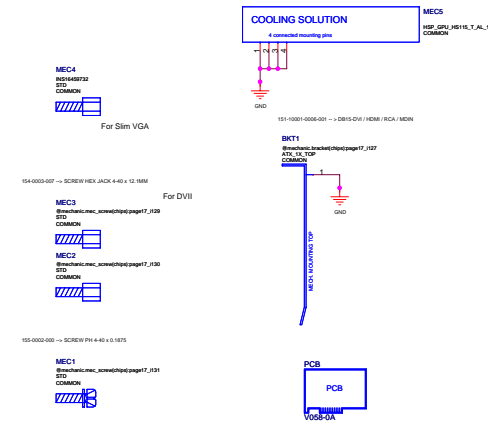
Rev: 10

BIOS, Strapping options, Misc

Straps



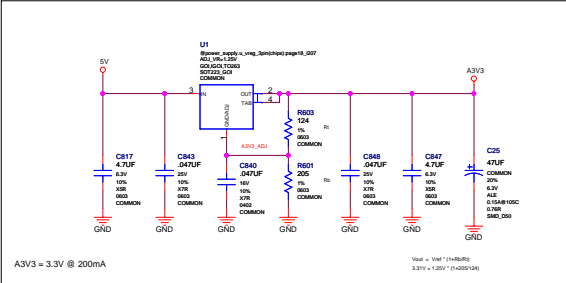
Mechanical parts



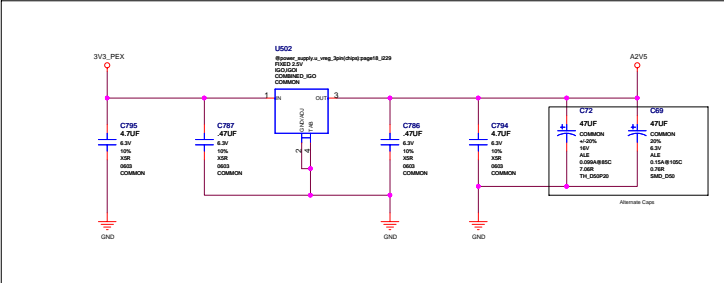
Power Supply I: TMD5/A3V3/A2V5

| NETNAME | MAX_CURRENT | MIN_LINE_WIDTH | VOLTAGE |
|------------|-------------|----------------|---------|
| 5V_FUSED | 0.1 | 12 MIL | 5V |
| DDC_5V | 0.1 | 12 MIL | 5V |
| A3V3 | 0.08 | 12 MIL | 3.3V |
| HDMI_IOVDD | 0.05 | 12 MIL | 3.3V |
| TMD5_IOVDD | 0.24 | 12 MIL | 3.3V |
| A2V5 | 0.4 | 12 MIL | 3.3V |
| 3V3_PEX | | 10 MIL | 3.3V |

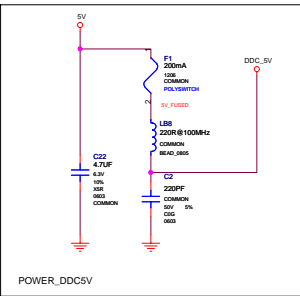
A3V3 Power Supply



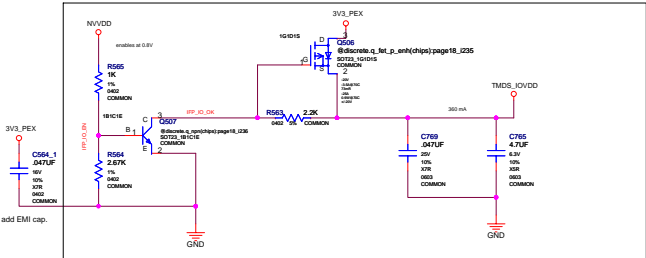
A2V5 Power Supply



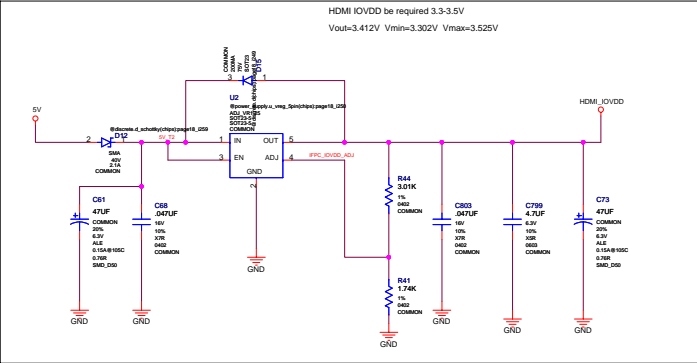
DDC 5V



TMD5 IO SUPPLY WITH BACKDRIVE PROTECTION

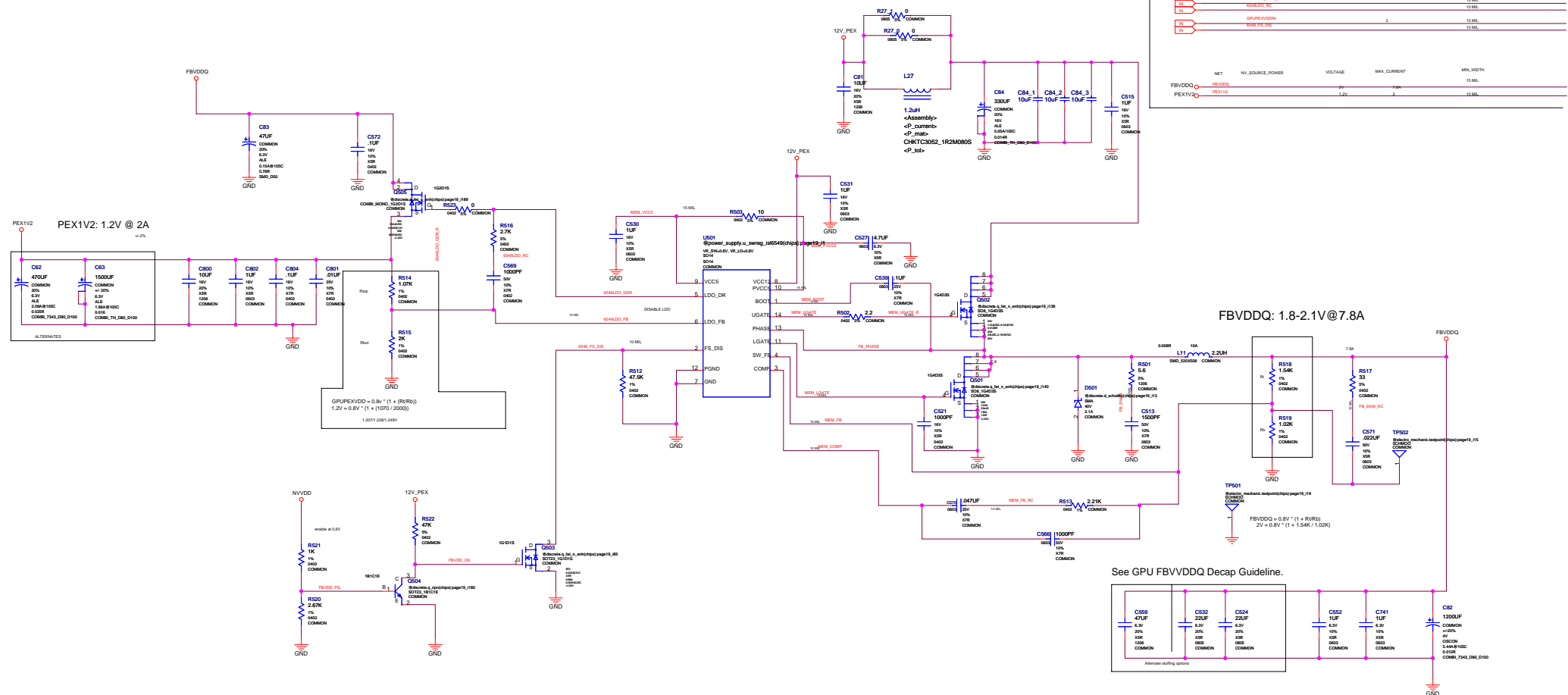


HDMI IO SUPPLY WITH BACKDRIVE PROTECTION

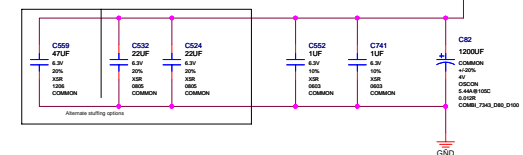


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PowerSupply II: ISL6549 FBVDDQ/PEX1V2



See GPU FBVVDDQ Decap Guideline.



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| PAGE DETAIL | POWER SUPPLY II: ISL6549 FBVDDQ, PEX1V2 |



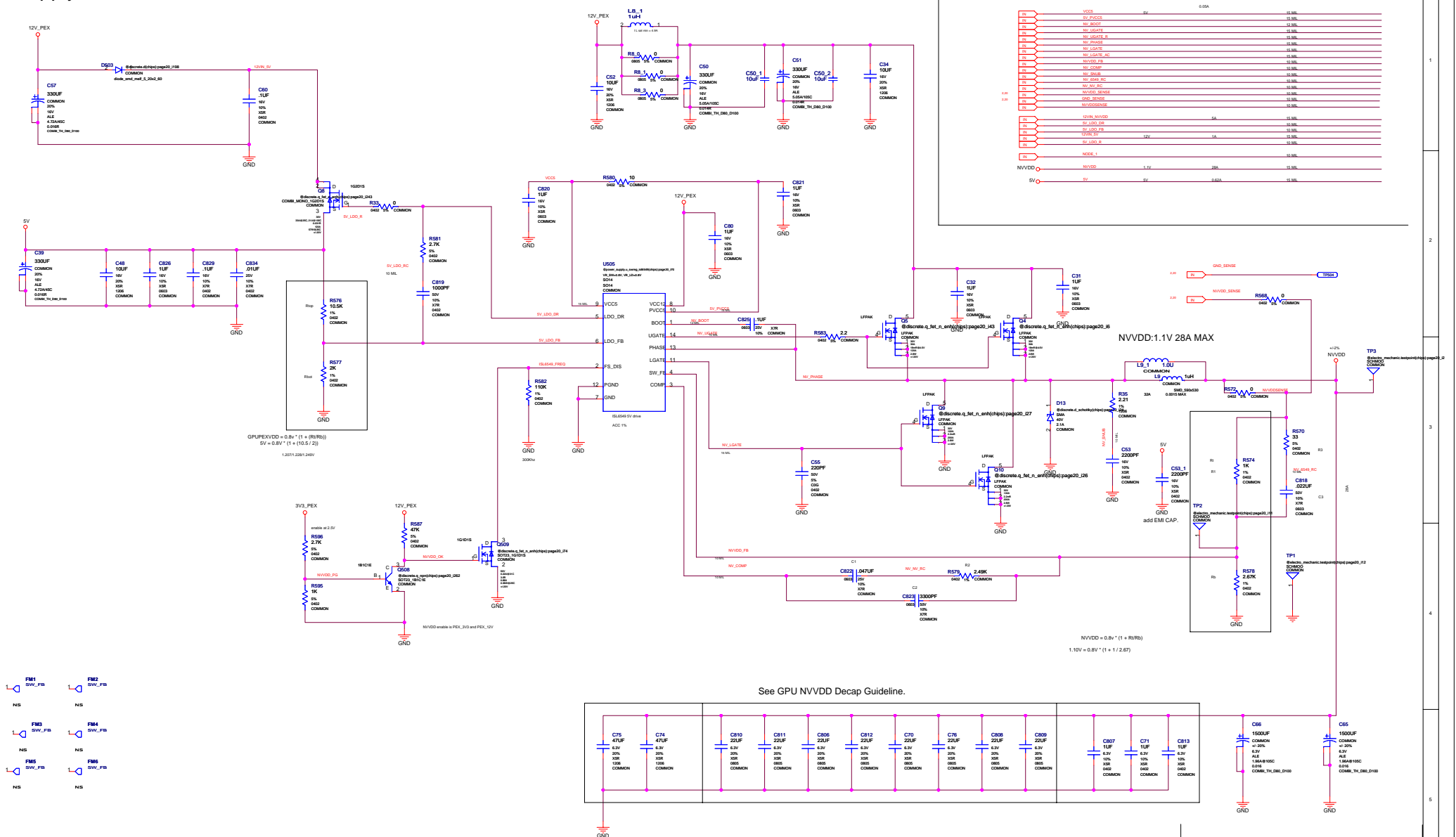
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Power Supply III: ISL6549 NVVDD,5V



See GPU NVVDD Decap Guideline.

The schematic diagram illustrates the power supply section of the PCB, organized into three main functional blocks. Each block contains a voltage regulator IC, a feedback network, and several decoupling capacitors connected to a common ground (GND).

- 5V Regulator Section:** This section includes the 5V regulator IC (U1), a feedback network consisting of resistors R75, R74, and R73, and decoupling capacitors C75 (47uF), C74 (47uF), and C73 (10uF).
- 3.3V Regulator Section:** This section includes the 3.3V regulator IC (U2), a feedback network consisting of resistors R810 through R809, and decoupling capacitors C810 (22uF), C811 (47uF), C808 (22uF), C812 (22uF), C70 (22uF), C76 (22uF), C806 (22uF), and C809 (22uF).
- 1.8V Regulator Section:** This section includes the 1.8V regulator IC (U3), a feedback network consisting of resistors R807, R71, and R813, and decoupling capacitors C807 (10uF), C71 (10uF), and C813 (10uF).

The ground connection for all capacitors is labeled GND.

| | |
|-------------|-------------------------------------|
| ASSEMBLY | G73 ALL COMPONENT BOM |
| PAGE DETAIL | POWER SUPPLY III: ISL6549 NVVDD, 5V |



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| A | | B | | C | | D | | E | | F | | G | | H | |
|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|
| <div>SEL_HDTV_SDTV 14.5C< 16.2D></div> <div>SNN_4PIN_FAN 16.1H</div> <div>SNN_SV 14.2H</div> <div>SNN_ATA2D3 11.3D</div> <div>SNN_ATA2D3* 11.3D</div> <div>SNN_A_MON_2D5 9.4H</div> <div>SNN_A_MON_E2 8.4F</div> <div>SNN_BTIC 11.3D</div> <div>SNN_BTIC* 11.3D</div> <div>SNN_BTICD7 11.3D</div> <div>SNN_BTICD7* 11.3D</div> <div>SNN_CLAMP 16.2C</div> <div>SNN_C8XFX_MCI 14.3B</div> <div>SNN_C8XFX_MCS 14.3B</div> <div>SNN_DACC_BLUE 16.4D</div> <div>SNN_DACC_GREEN 16.4D</div> <div>SNN_DACC_HSYNC 16.4D</div> <div>SNN_DACC_IRED 16.4D</div> <div>SNN_DACC_ISET 16.4C</div> <div>SNN_DACC_VREF 16.4C</div> <div>SNN_DACC_VSYNC 16.4D</div> <div>SNN_DTIC 12.3D</div> <div>SNN_DTIC* 12.3D</div> <div>SNN_DTICD4 12.3D</div> <div>SNN_DTICD5 12.3D</div> <div>SNN_DTICD6* 12.3D</div> <div>SNN_DTICD6 12.3D</div> <div>SNN_FBA_CMD2B< 3.3C</div> <div>SNN_FBA_DBG 3.4C</div> <div>SNN_FBA_DBG1 3.4C</div> <div>SNN_FBA_DBG1 3.4C</div> <div>SNN_FBA_VREF 3.5B</div> <div>SNN_FBC_CMD2B< 6.3D</div> <div>SNN_FBC_DBG 6.4C</div> 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3.1C</div> <div>SNN_GPU_819 6.1C</div> <div>SNN_GPU_822 3.1C</div> <div>SNN_GPU_825 6.1C</div> <div>SNN_GPU_828 3.1C</div> <div>SNN_GPU_831 6.1C</div> <div>SNN_GPU_834 3.1C</div> <div>SNN_GPU_837 6.1C</div> <div>SNN_GPU_840 3.1C</div> <div>SNN_GPU_843 6.1C</div> <div>SNN_GPU_846 3.1C</div> <div>SNN_GPU_849 6.1C</div> <div>SNN_GPU_852 3.1C</div> <div>SNN_GPU_855 6.1C</div> <div>SNN_GPU_858 3.1C</div> <div>SNN_GPU_861 6.1C</div> <div>SNN_GPU_864 3.1C</div> <div>SNN_GPU_867 6.1C</div> <div>SNN_GPU_870 3.1C</div> <div>SNN_GPU_873 6.1C</div> <div>SNN_GPU_876 3.1C</div> <div>SNN_GPU_879 6.1C</div> <div>SNN_GPU_882 3.1C</div> <div>SNN_GPU_885 6.1C</div> <div>SNN_GPU_888 3.1C</div> <div>SNN_GPU_891 6.1C</div> <div>SNN_GPU_894 3.1C</div> <div>SNN_GPU_897 6.1C</div> <div>SNN_GPU_900 3.1C</div> <div>SNN_GPU_903 6.1C</div> <div>SNN_GPU_906 3.1C</div> <div>SNN_GPU_909 6.1C</div> <div>SNN_GPU_912 3.1C</div> <div>SNN_GPU_915 6.1C</div> <div>SNN_GPU_918 3.1C</div> <div>SNN_GPU_921 6.1C</div> <div>SNN_GPU_924 3.1C</div> <div>SNN_GPU_927 6.1C</div> <div>SNN_GPU_930 3.1C</div> <div>SNN_GPU_933 6.1C</div> <div>SNN_GPU_936 3.1C</div> <div>SNN_GPU_939 6.1C</div> <div>SNN_GPU_942 3.1C</div> <div>SNN_GPU_945 6.1C</div> <div>SNN_GPU_948 3.1C</div> <div>SNN_GPU_951 6.1C</div> <div>SNN_GPU_954 3.1C</div> <div>SNN_GPU_957 6.1C</div> <div>SNN_GPU_960 3.1C</div> <div>SNN_GPU_963 6.1C</div> <div>SNN_GPU_966 3.1C</div> <div>SNN_GPU_969 6.1C</div> <div>SNN_GPU_972 3.1C</div> <div>SNN_GPU_975 6.1C</div> <div>SNN_GPU_978 3.1C</div> <div>SNN_GPU_981 6.1C</div> <div>SNN_GPU_984 3.1C</div> <div>SNN_GPU_987 6.1C</div> <div>SNN_GPU_990 3.1C</div> <div>SNN_GPU_993 6.1C</div> <div>SNN_GPU_996 3.1C</div> <div>SNN_GPU_999 6.1C</div> | | <div>SNN_GPU_V4_RFU 16.4A</div> <div>SNN_GPU_V6_RFU 16.4A</div> <div>SNN_GPU_V3D 3.1C</div> <div>SNN_HDCP 16.3C</div> <div>SNN_HDM_RESERV 12.2D</div> <div>SNN_JCH 14.2H</div> <div>SNN_JT_TCLK 2.1B</div> <div>SNN_JT_TMS 2.1B</div> <div>SNN_JT_TRST* 2.1B</div> <div>SNN_JYH 14.2G</div> <div>SNN_MEMSTRAPSEL0 16.4A</div> <div>SNN_MEMSTRAPSEL1 16.4A</div> <div>SNN_MEMSTRAPSEL2 16.4A</div> <div>SNN_MEMSTRAPSEL3 16.4A</div> <div>SNN_MOA_CLKOUT* 13.3D</div> <div>SNN_MOA_CTL3 13.3D</div> <div>SNN_MOB_CLKOUT* 13.3D</div> <div>SNN_MOB_CTL3 13.2D</div> <div>SNN_MOB_DE 13.2D</div> <div>SNN_MOB_RFU_V1 13.2D</div> <div>SNN_MOB_RFU_V5 13.2D</div> <div>SNN_MOB_RFU_W1 13.2D</div> <div>SNN_MOB_RFU_W9 13.2D</div> <div>SNN_MOB_RFU_W4 13.2D</div> <div>SNN_MOB_RFU_W5 13.2D</div> <div>SNN_MOB_RFU_Y5 13.2D</div> <div>SNN_MOB_RFU_W6 13.2D</div> <div>SNN_MOB_VREF 13.2B</div> <div>SNN_PENCAL_GND 2.2C</div> <div>SNN_PENCAL_VDDO 2.2C</div> <div>SNN_PEX_SMDX 2.1B</div> <div>SNN_PEX_SMDAT 2.1B</div> <div>SNN_PEX_WAKE* 2.2B</div> <div>SNN_PE_PBSMT2_A 2.1A</div> <div>SNN_PE_PBSMT2_B 2.2A</div> <div>SNN_PE_PBSMT2_C 2.3A</div> <div>SNN_PE_RSVD2 2.2A</div> <div>SNN_PE_RSVD3 2.2A</div> <div>SNN_PE_RSVD4 2.2A</div> <div>SNN_PE_RSVD5 2.2A</div> <div>SNN_PE_RSVD6 2.3A</div> <div>SNN_PE_RSVD7 2.4A</div> <div>SNN_PE_RSVD8 2.4A</div> <div>SNN_SCAL_RFU_A9 13.4F</div> <div>SNN_SCAL_RFU_A13 13.4F</div> <div>SNN_SCAL_RFU_B8 13.4F</div> <div>SNN_STRED 16.4B</div> <div>SNN_STRAP 16.4A</div> <div>SNN_SYNC_BUF1 9.4C</div> <div>SNN_SYNC_BUF2 9.5C</div> <div>SNN_U2_A2 7.2B</div> <div>SNN_U2_E2 7.2B</div> <div>SNN_U2_FBCA<13> 7.2B</div> <div>SNN_U2_FBCA<14> 7.2B</div> <div>SNN_U2_FBCA<15> 7.2B</div> <div>SNN_U3_A2 7.2E</div> <div>SNN_U3_E2 7.2E</div> <div>SNN_U3_FBCA<13> 7.2E</div> <div>SNN_U3_FBCA<14> 7.2E</div> <div>SNN_U3_FBCA<15> 7.2E</div> <div>SNN_US_A2 8.2D</div> <div>SNN_US_E2 8.2D</div> <div>SNN_US_FBCA<13> 8.2D</div> <div>SNN_US_FBCA<14> 8.2D</div> <div>SNN_US_FBCA<15> 8.2D</div> <div>SNN_US_A2 8.2B</div> <div>SNN_US_E2 8.2B</div> <div>SNN_US_FBCA<13> 8.2B</div> <div>SNN_US_FBCA<14> 8.2B</div> <div>SNN_US_FBCA<15> 8.2B</div> <div>SNN_U7_A2 4.2D</div> <div>SNN_U7_E2 4.2D</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> 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4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> <div>SNN_US_A2 4.2B</div> <div>SNN_US_E2 4.2B</div> <div>SNN_US_FBA<13> 4.2B</div> <div>SNN_US_FBA<14> 4.2B</div> <div>SNN_US_FBA<15> 4.2B</div> <div>SNN_U7_FBA<13> 4.2D</div> <div>SNN_U7_FBA<14> 4.2D</div> <div>SNN_U7_FBA<15> 4.2D</div> | | | | | | | | | | | | | |

