

PG174-A01

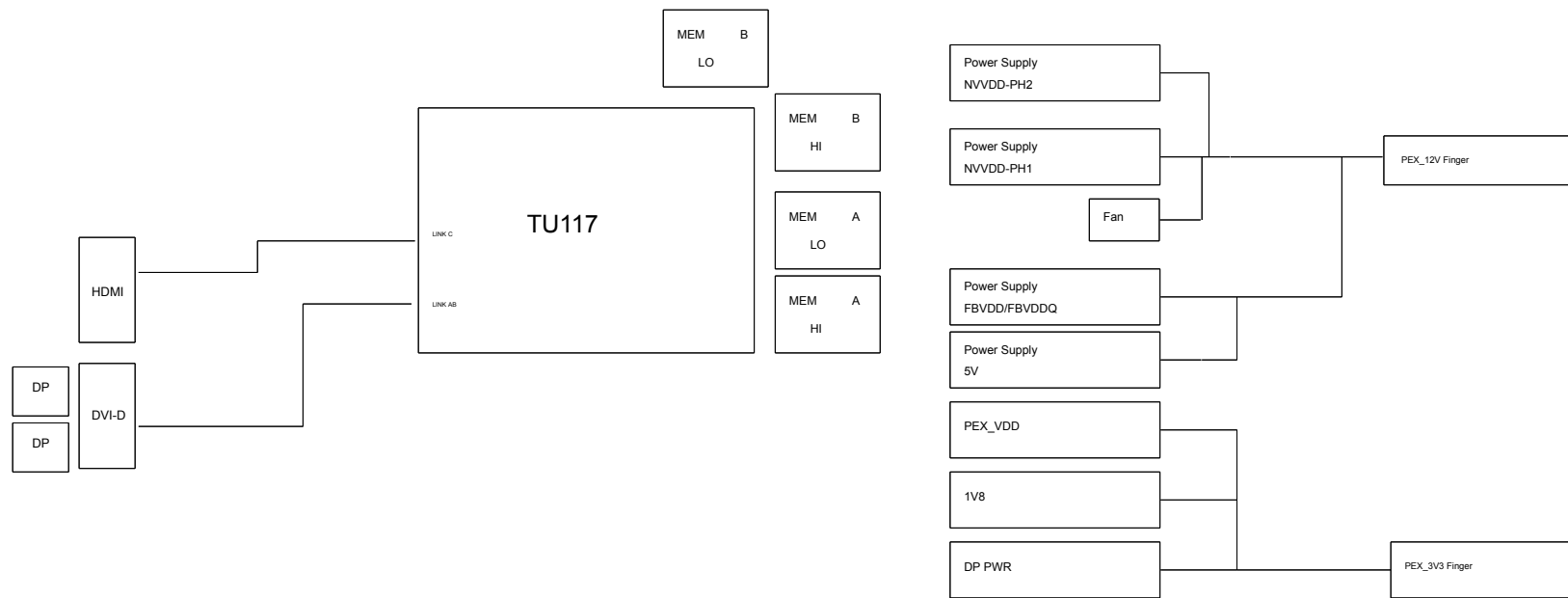
TU117, 128b GDDR5 x32, 75W
DVI-D DL/DUAL DP + HDMI

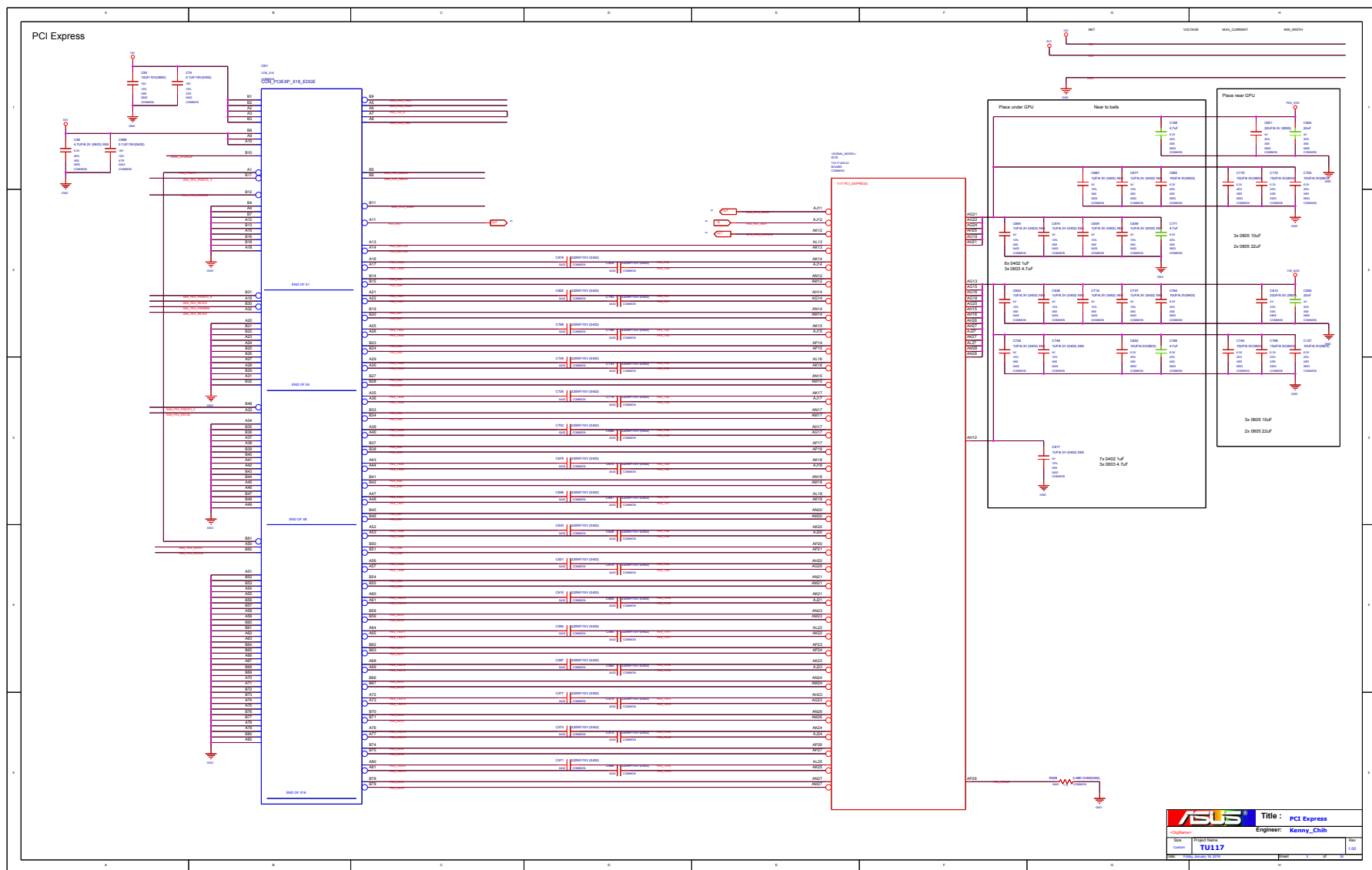
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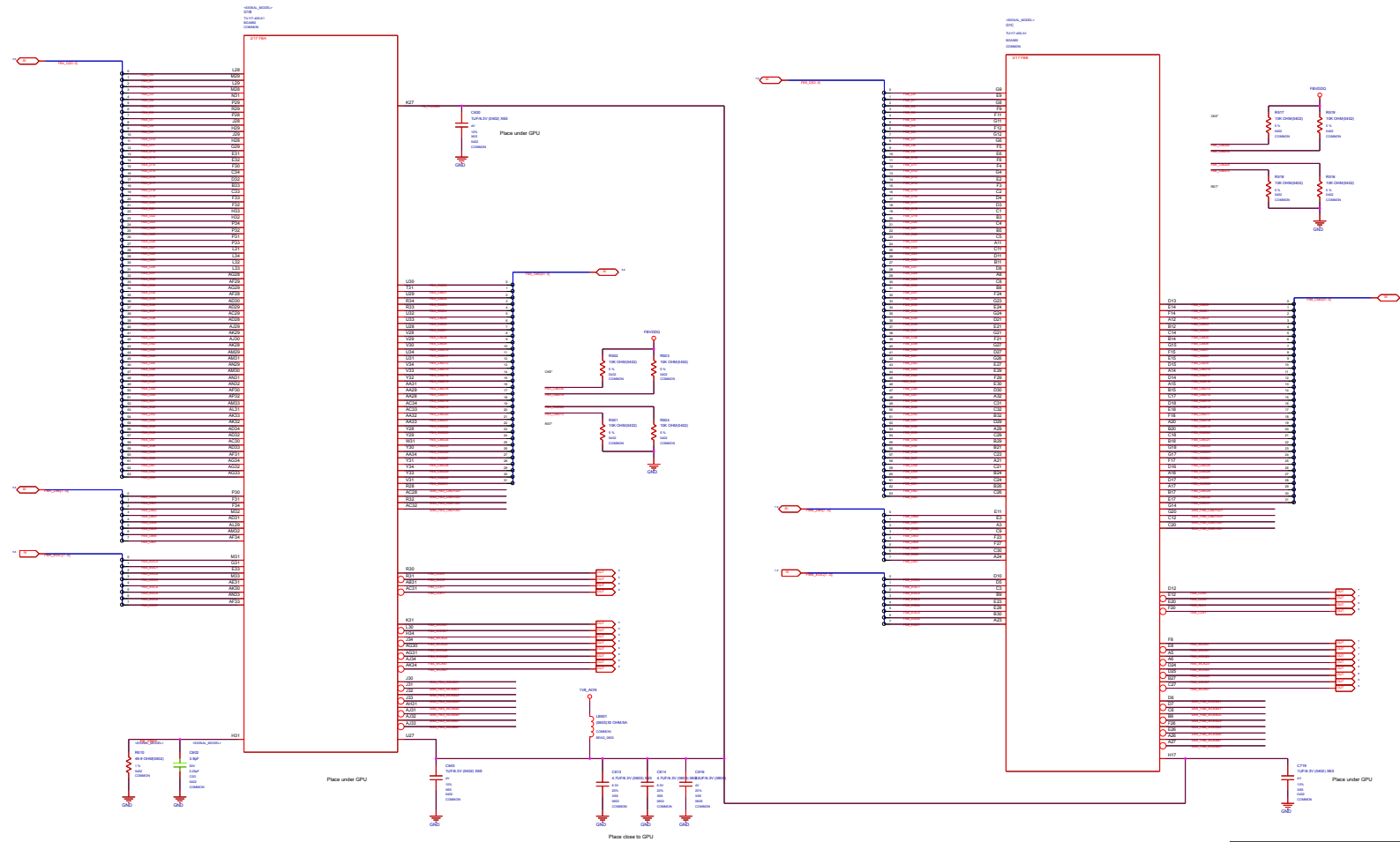
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Block Diagram





MEMORY: GPU Partition A/B

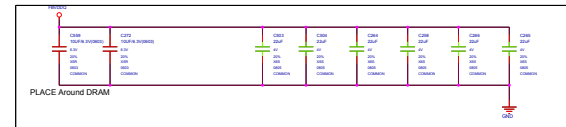
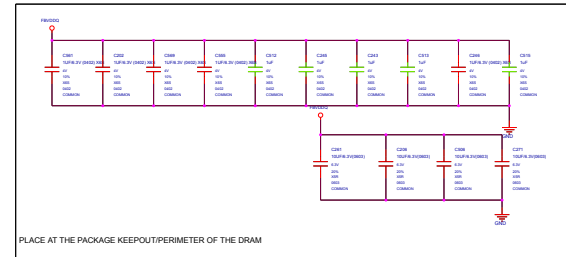
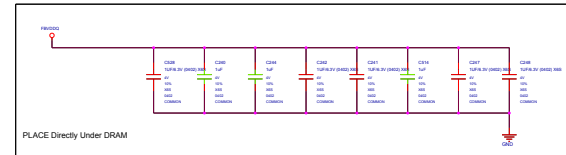
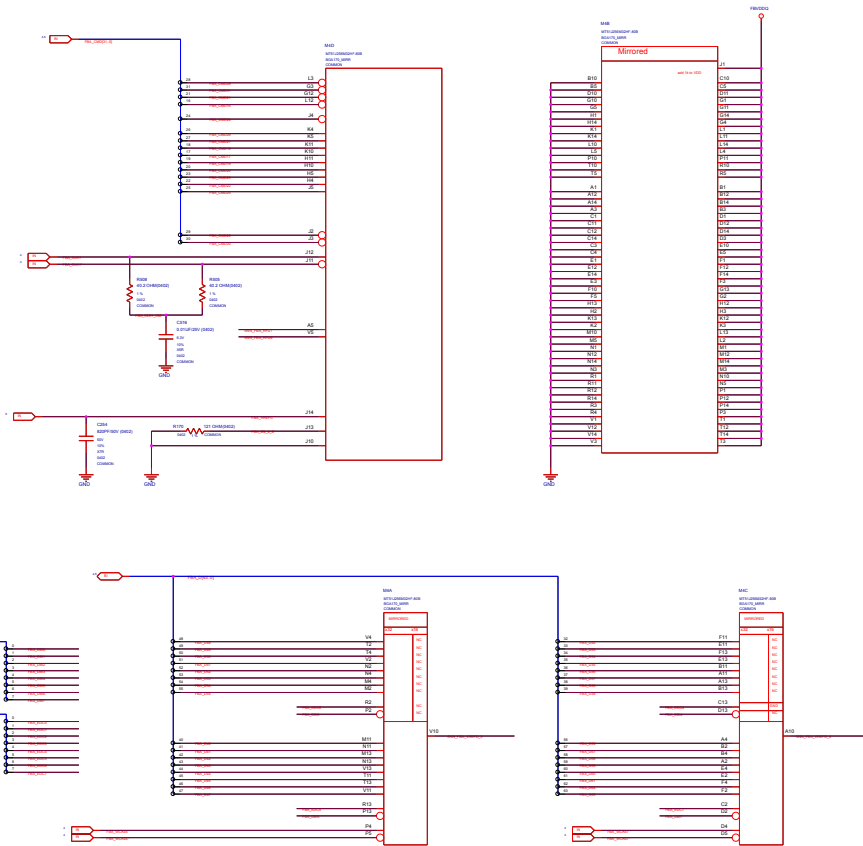


MEMORY: FBA Partition 31..0

| COMP | 0..31 | 32..63 |
|------|---------|--------|
| C000 | CP | |
| C001 | AL0A0 | |
| C002 | AL0A1 | |
| C003 | AL0A2 | |
| C004 | AL0A3 | |
| C005 | AL0A4 | |
| C006 | AL0A5 | |
| C007 | AL0A6 | |
| C008 | AL0A7 | |
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| C029 | AL0A28 | |
| C030 | AL0A29 | |
| C031 | AL0A30 | |
| C032 | AL0A31 | |
| C033 | AL0A32 | |
| C034 | AL0A33 | |
| C035 | AL0A34 | |
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| C037 | AL0A36 | |
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| C039 | AL0A38 | |
| C040 | AL0A39 | |
| C041 | AL0A40 | |
| C042 | AL0A41 | |
| C043 | AL0A42 | |
| C044 | AL0A43 | |
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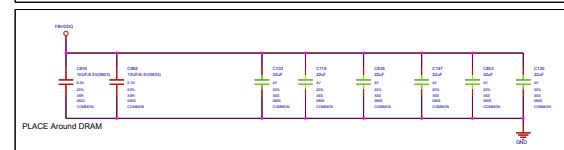
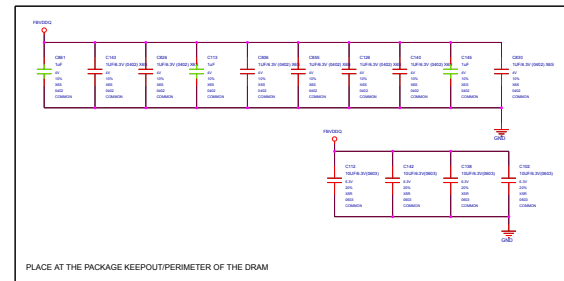
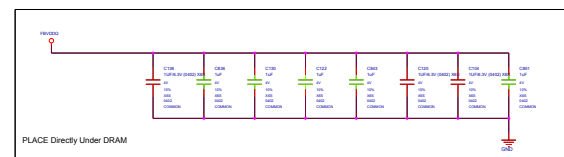
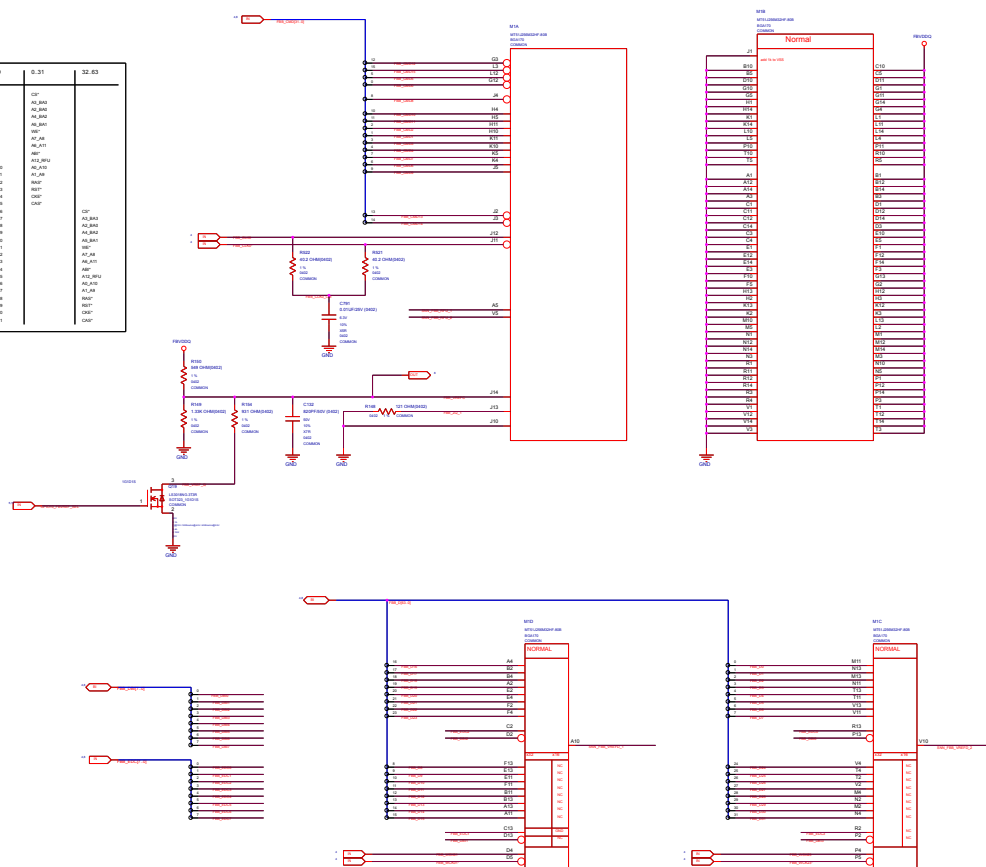
MEMORY: FBA Partition 63..32

| CMD | 0.31 | 32.63 |
|-------|------|-------|
| CMD0 | 000 | |
| CMD1 | 001 | |
| CMD2 | 010 | |
| CMD3 | 011 | |
| CMD4 | 100 | |
| CMD5 | 101 | |
| CMD6 | 110 | |
| CMD7 | 111 | |
| CMD8 | 000 | |
| CMD9 | 001 | |
| CMD10 | 010 | |
| CMD11 | 011 | |
| CMD12 | 100 | |
| CMD13 | 101 | |
| CMD14 | 110 | |
| CMD15 | 111 | |
| CMD16 | 000 | |
| CMD17 | 001 | |
| CMD18 | 010 | |
| CMD19 | 011 | |
| CMD20 | 100 | |
| CMD21 | 101 | |
| CMD22 | 110 | |
| CMD23 | 111 | |
| CMD24 | 000 | |
| CMD25 | 001 | |
| CMD26 | 010 | |
| CMD27 | 011 | |
| CMD28 | 100 | |
| CMD29 | 101 | |
| CMD30 | 110 | |
| CMD31 | 111 | |



MEMORY: FBB Partition 31..0

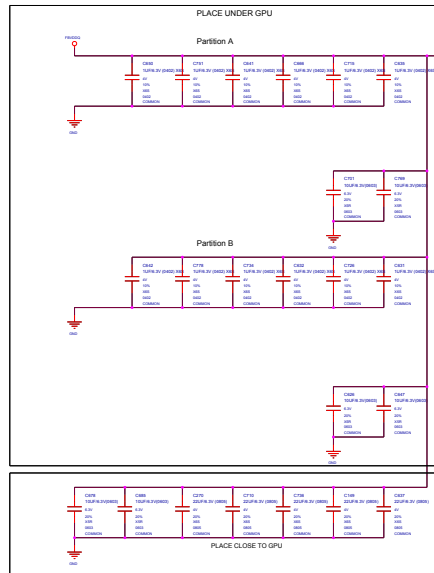
| CMD | 0.31 | 32.63 |
|-------|--------|-------|
| CMD0 | CSP | |
| CMD01 | AL_B0A | |
| CMD2 | AL_B0A | |
| CMD3 | AL_B0A | |
| CMD4 | AL_B0A | |
| CMD5 | WSP | |
| CMD6 | WSP | |
| CMD7 | AT_AB | |
| CMD8 | AL_A1B | |
| CMD9 | WSP | |
| CMD10 | AT_A1B | |
| CMD11 | AT_AB | |
| CMD12 | WSP | |
| CMD13 | WSP | |
| CMD14 | CSP | |
| CMD15 | CSP | |
| CMD16 | | CSP |
| CMD17 | | |
| CMD18 | | |
| CMD19 | AL_B0A | |
| CMD20 | AL_B0A | |
| CMD21 | AL_B0A | |
| CMD22 | WSP | |
| CMD23 | AT_AB | |
| CMD24 | WSP | |
| CMD25 | AT_A1B | |
| CMD26 | AL_A1B | |
| CMD27 | WSP | |
| CMD28 | WSP | |
| CMD29 | CSP | |
| CMD30 | CSP | |
| CMD31 | | |



MEMORY: FBB Partition 63.32

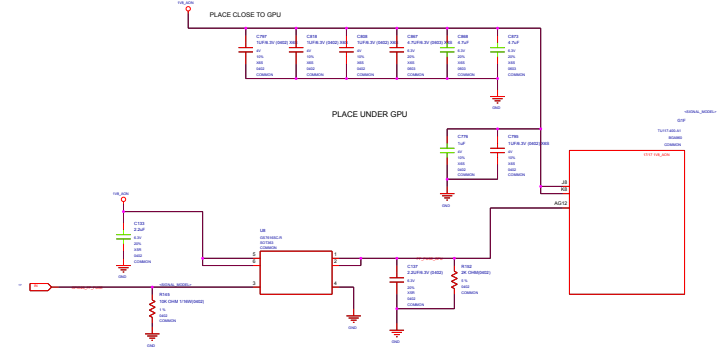
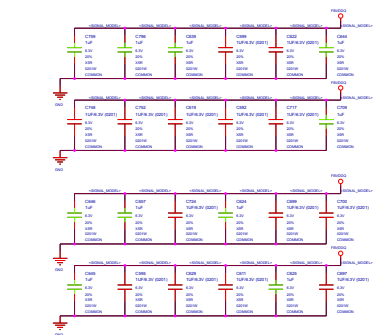
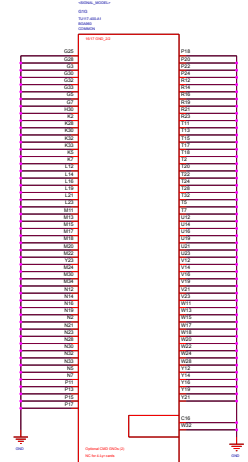
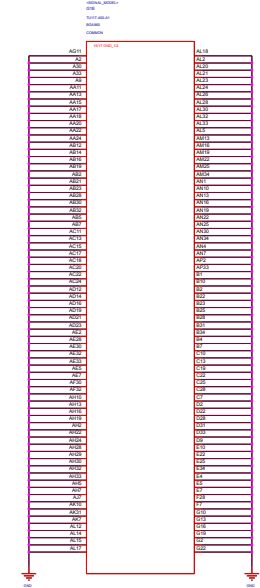
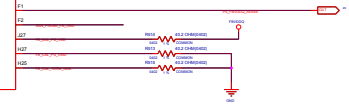
| CMD | 0-31 | 32-63 |
|--------|---------|-------|
| CMD0 | 00 | |
| CMD1 | AL_B0A | |
| CMD2 | AL_B0B | |
| CMD3 | AL_B0C | |
| CMD4 | AL_B0D | |
| CMD5 | 00 | |
| CMD6 | AL_A0 | |
| CMD7 | AL_A1 | |
| CMD8 | AL_A2 | |
| CMD9 | AL_A3 | |
| CMD10 | AL_A4 | |
| CMD11 | AL_A5 | |
| CMD12 | AL_A6 | |
| CMD13 | AL_A7 | |
| CMD14 | AL_A8 | |
| CMD15 | AL_A9 | |
| CMD16 | AL_A10 | |
| CMD17 | AL_A11 | |
| CMD18 | AL_A12 | |
| CMD19 | AL_A13 | |
| CMD20 | AL_A14 | |
| CMD21 | AL_A15 | |
| CMD22 | AL_A16 | |
| CMD23 | AL_A17 | |
| CMD24 | AL_A18 | |
| CMD25 | AL_A19 | |
| CMD26 | AL_A20 | |
| CMD27 | AL_A21 | |
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GPU FBVDDQ & 1V8 Decoupling

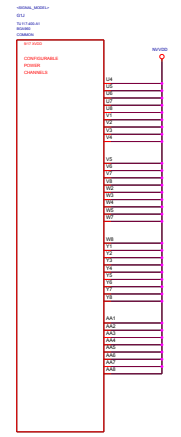
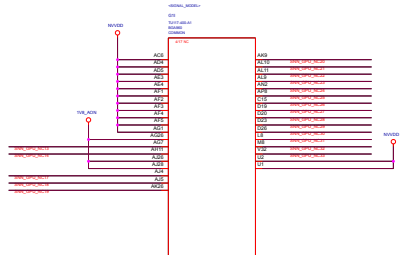
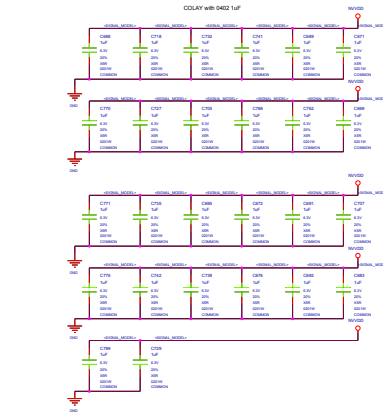
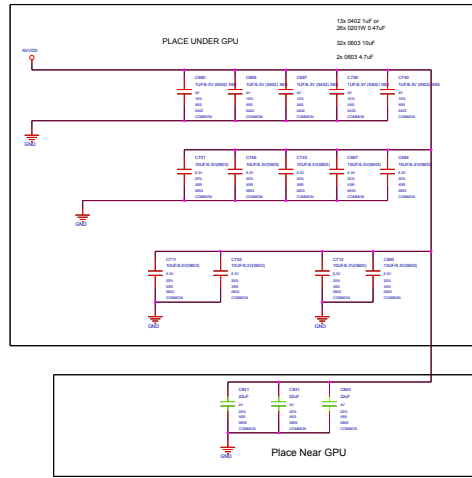
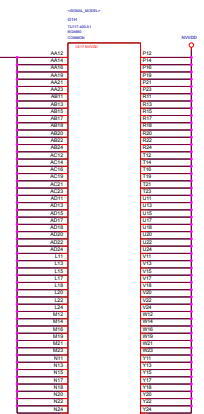
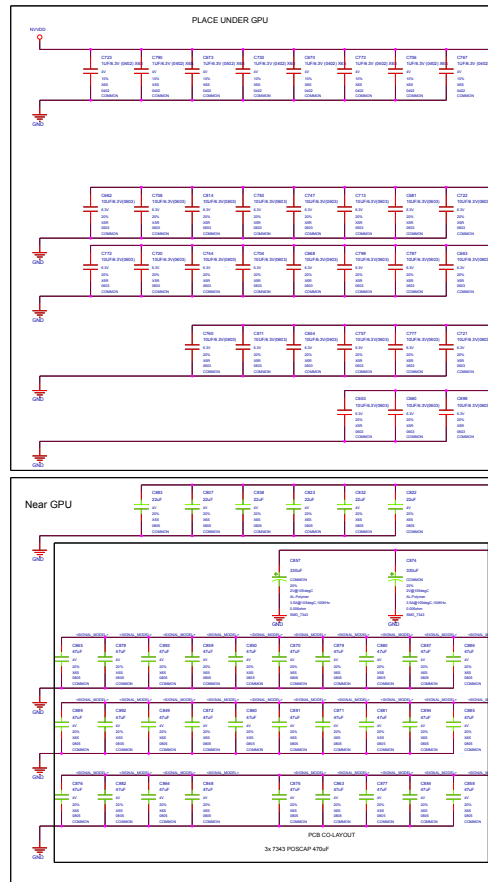


Pin List:

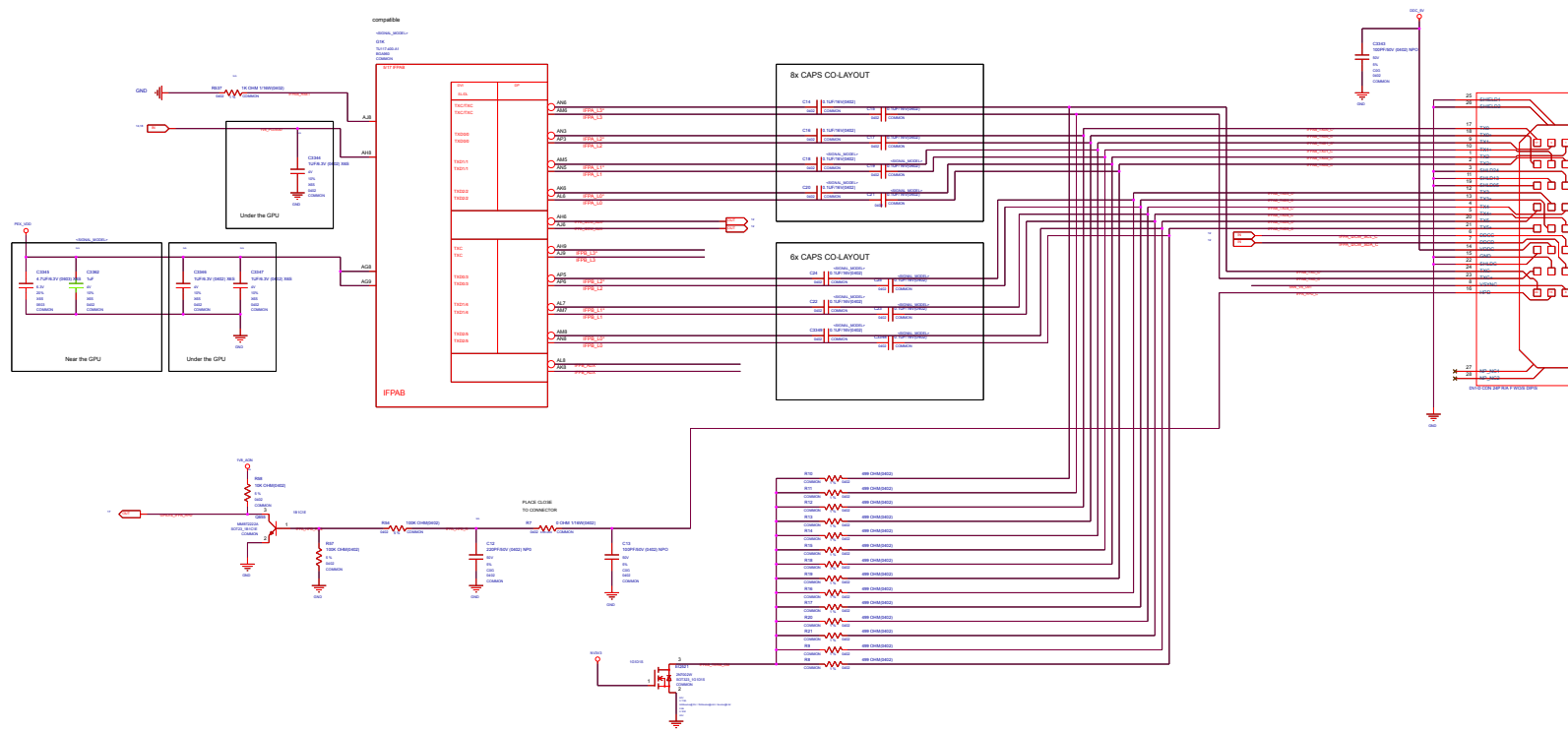
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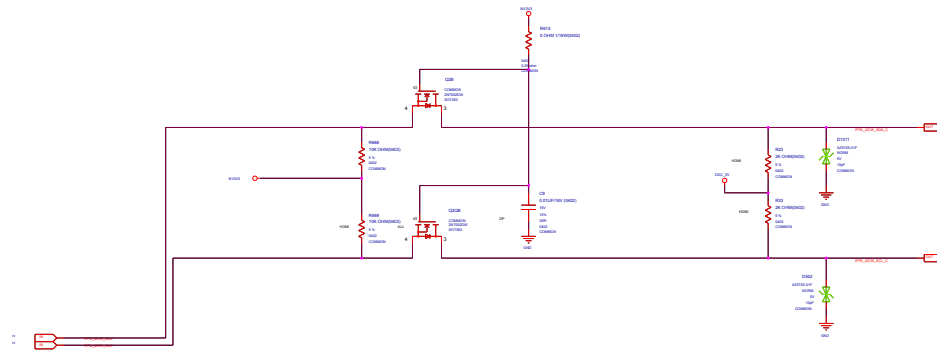


GPU NVVDD Decoupling



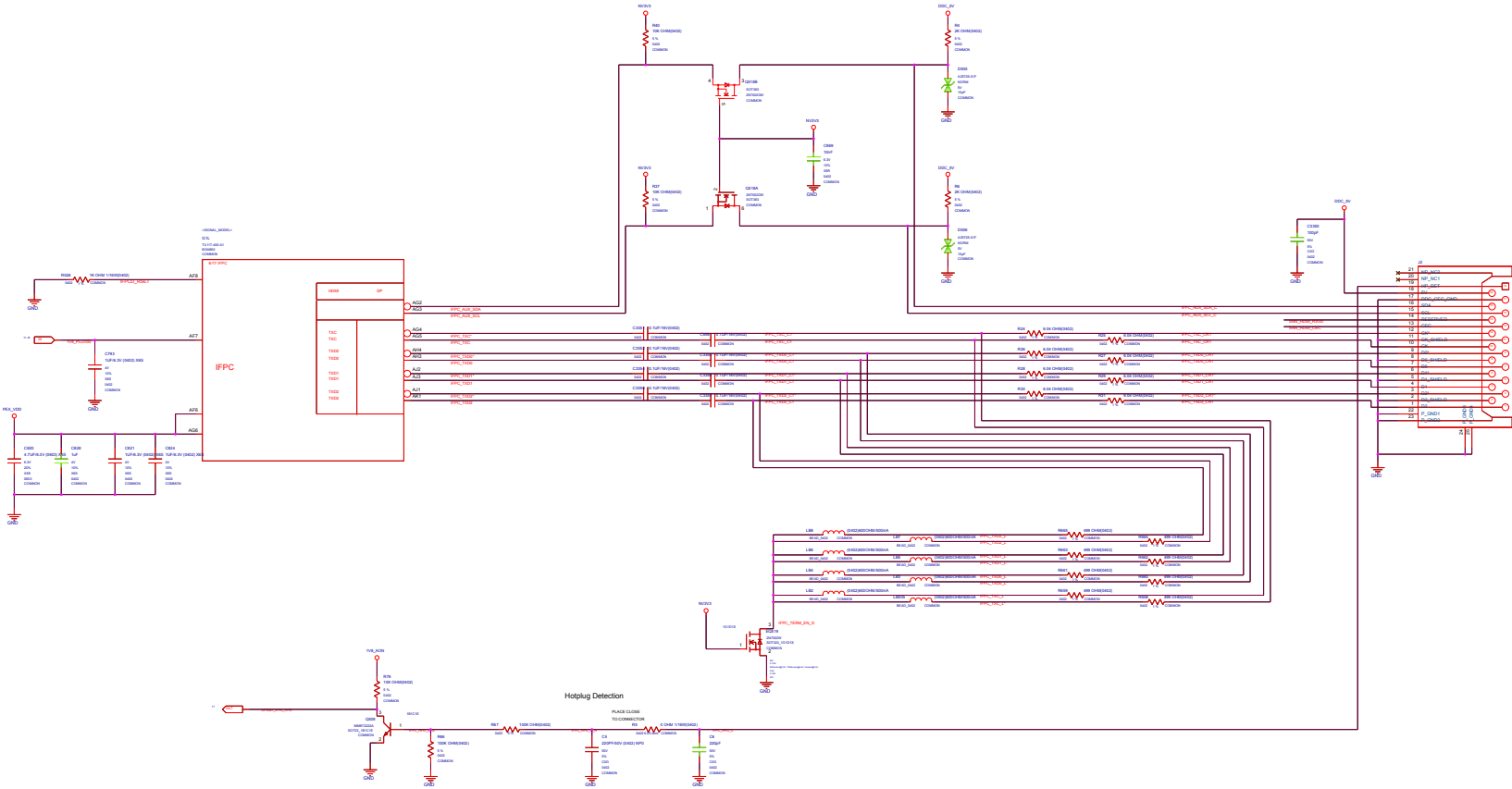
IFPAB DVI-D-DL CO-LAYOUT WITH 2x DP



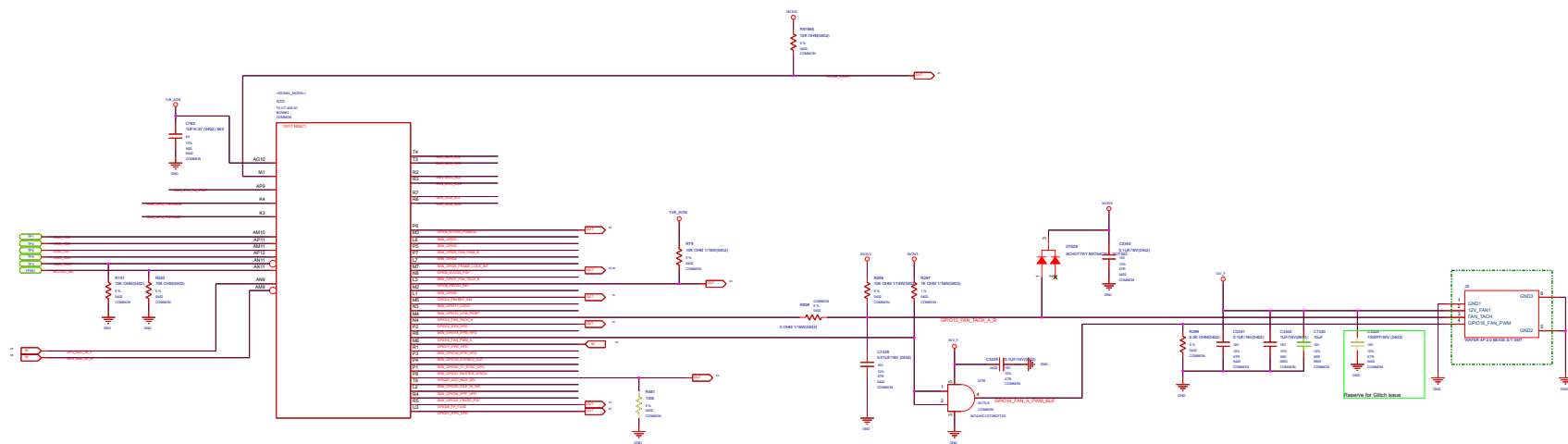


IFPA DP CO-LAYOUT WITH IFPAB DVI-D-DL

IFPC HDMI



MISC1: GPIO, Fan, Thermal, JTAG



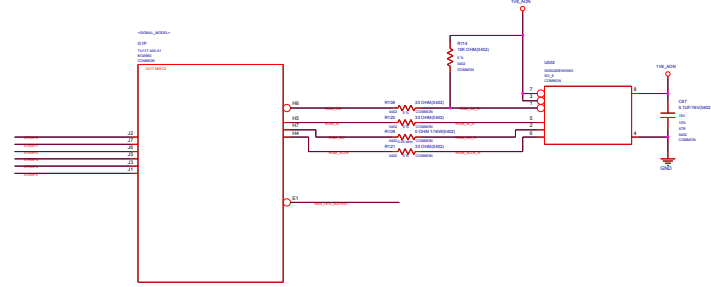
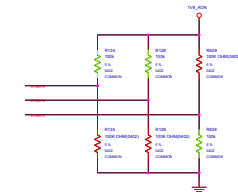
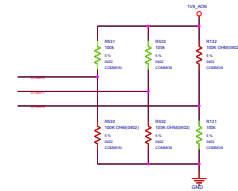
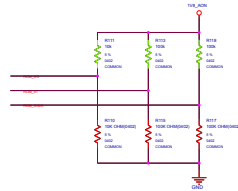
MISC2: ROM, XTAL, Straps

| ROM_ID | ROM_R | ROM_CLK | DUMMY2G_FS_OVERT | 1 ENABLE 0 DISABLE | |
|--------|-------|---------|------------------|--------------------|---------|
| L | L | L | xxx1 | FS_OVERT ENABLE | Default |
| L | L | M | xxx0 | FS_OVERT DISABLE | |

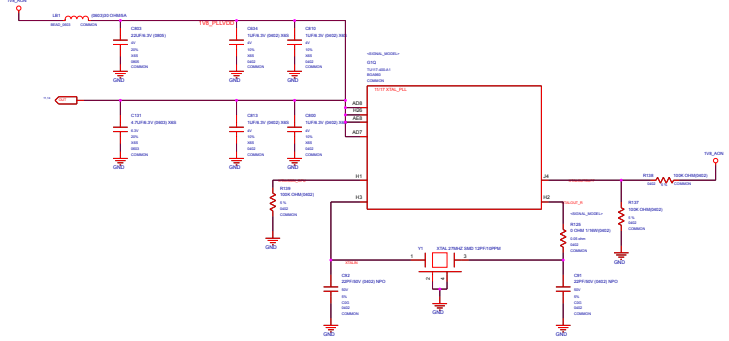
| STRAP2 | STRAP1 | STRAP0 | RAMCFG4-Q | |
|--------|--------|--------|-----------|---------------------------------------|
| L | L | L | 0000 | Samsung K9s 256Mx32 K4G08320FC-HC25 |
| L | L | H | 0001 | Micron B0s 256Mx32 MT51J256M32HF-80-B |
| L | H | L | 0010 | Hynix B0s 256Mx32 H5GCBQ4LUR-R2C |
| L | H | H | 0011 | Hynix B0s 256Mx32 H5GCBQ4LUR-R4C |
| H | H | L | 0110 | |
| H | H | H | 0111 | |
| L | L | M | 1000 | |
| L | M | L | 1001 | |

| STRAP5 | STRAP4 | STRAP3 | SMB_ALT_ADDR | DEVID_SEL | POE_CFG | VGA_DEVICE |
|--------|--------|--------|--------------|-----------|---------|------------|
| M | H | H | 1 | 1 | 1 | 1 |
| M | H | L | 1 | 1 | 1 | 0 |
| M | L | H | 1 | 1 | 0 | 1 |
| M | L | L | 1 | 1 | 0 | 0 |
| L | H | M | 1 | 0 | 1 | 1 |
| L | M | H | 1 | 0 | 1 | 0 |
| L | M | L | 1 | 0 | 0 | 1 |
| L | L | M | 1 | 0 | 0 | 0 |
| H | H | H | 0 | 1 | 1 | 1 |
| H | H | L | 0 | 1 | 1 | 0 |
| H | L | H | 0 | 1 | 0 | 1 |
| H | L | L | 0 | 1 | 0 | 0 |
| L | H | H | 0 | 0 | 1 | 1 |
| L | H | L | 0 | 0 | 1 | 0 |
| L | L | H | 0 | 0 | 0 | 1 |
| L | L | L | 0 | 0 | 0 | 0 |

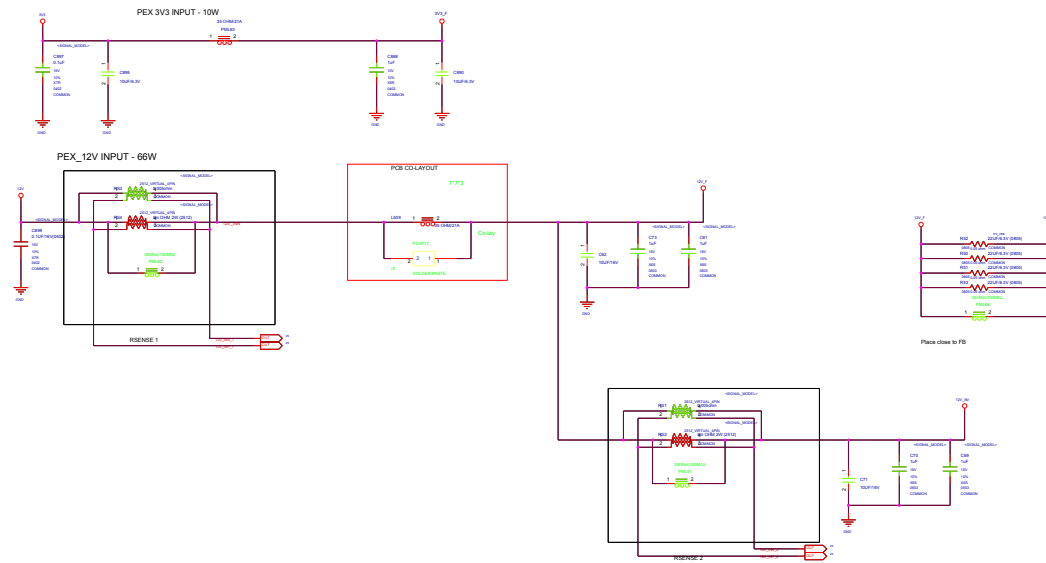
1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE
1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGINAL
1:POE_CFG LOW POWER
0:POE_CFG HIGH POWER
1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE

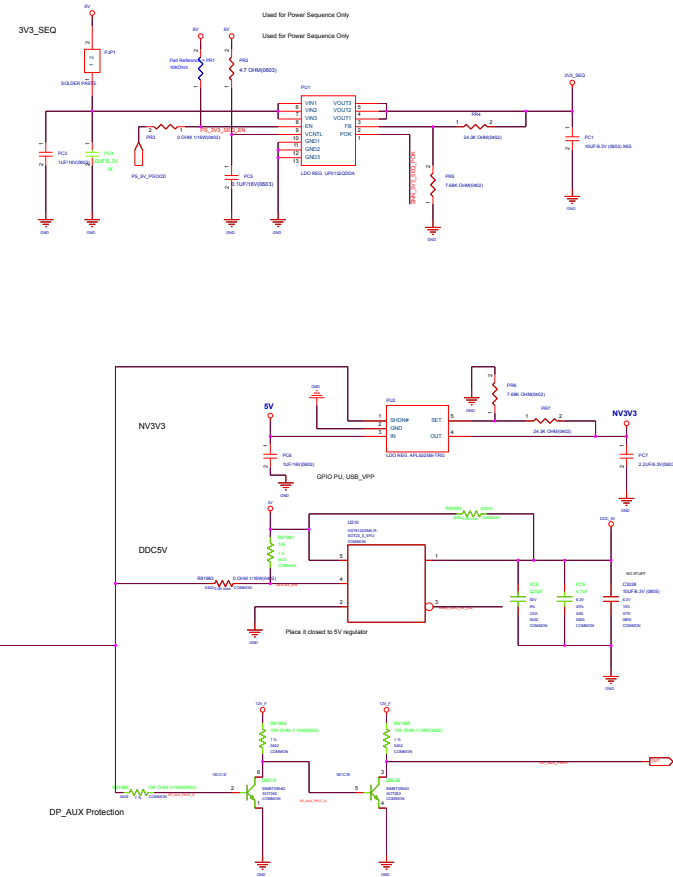
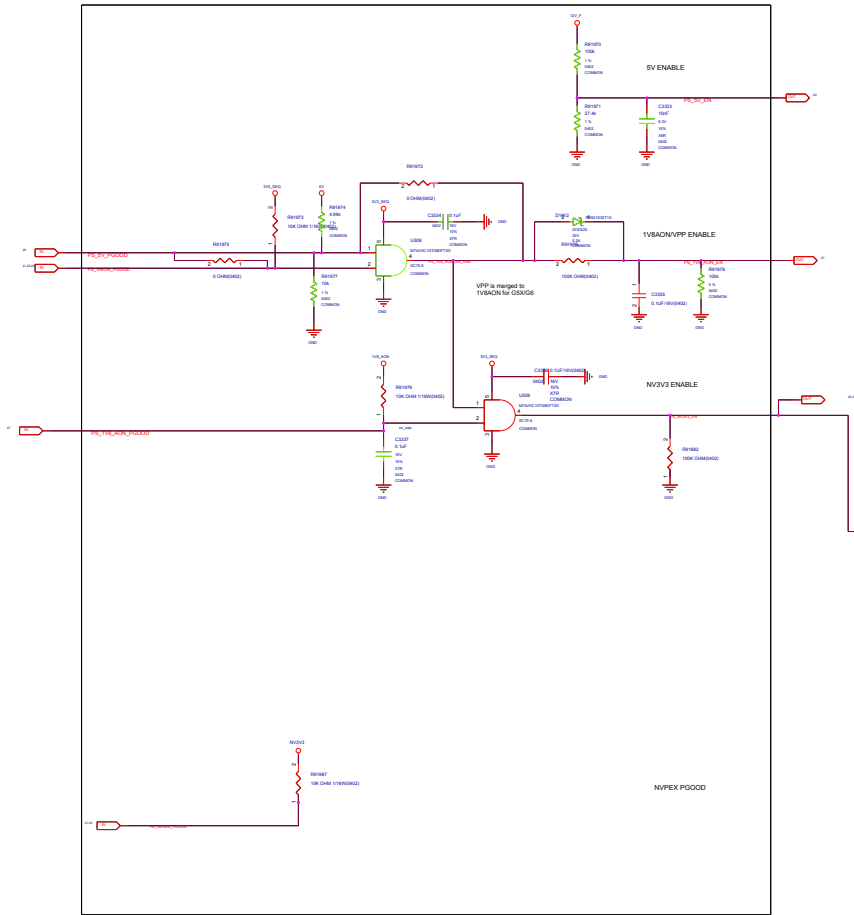


| XTALOUTBUFF | Voltage | SmartFan PWM | GPIO/PWM at the FAN |
|-------------|---------|---------------|---------------------|
| Low | 0V | GPIO Disabled | 100% |
| Midle | 0.9V | 80% PWM | 33% PWM (Typical) |
| High | 1.8V | 33% PWM | 80% PWM |

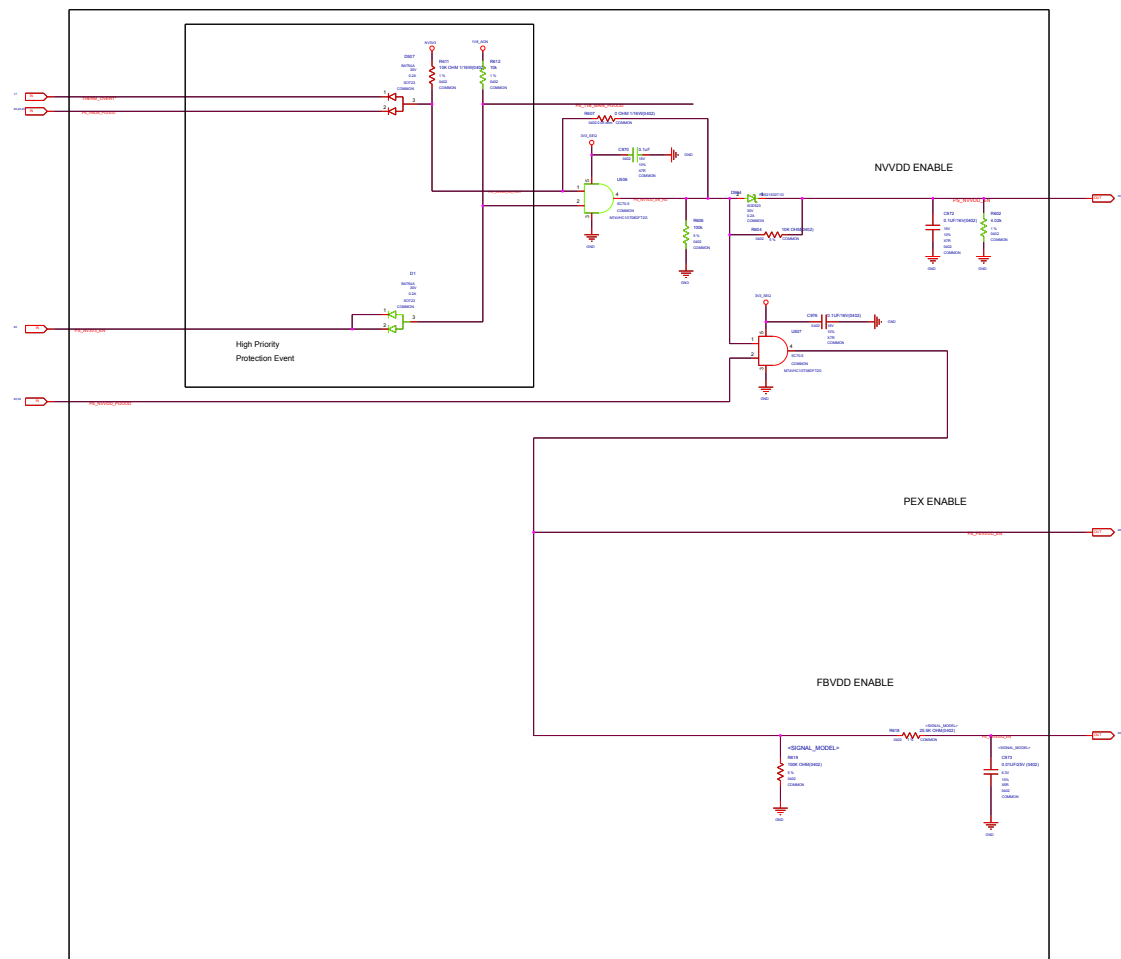


Power Inputs and Filtering

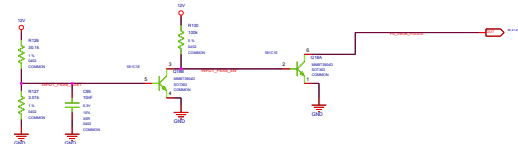




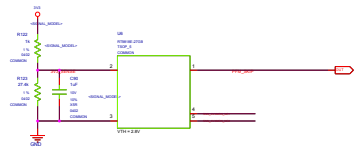
SEQ:NV,PEX,FB ENABLE



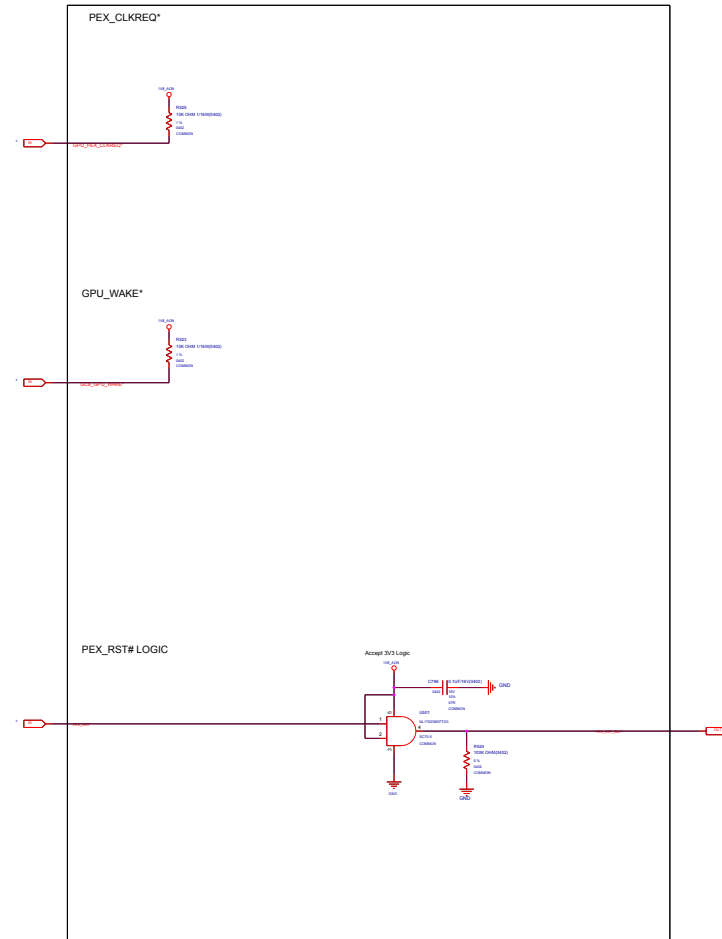
SEQUENCE:Voltage Monitor



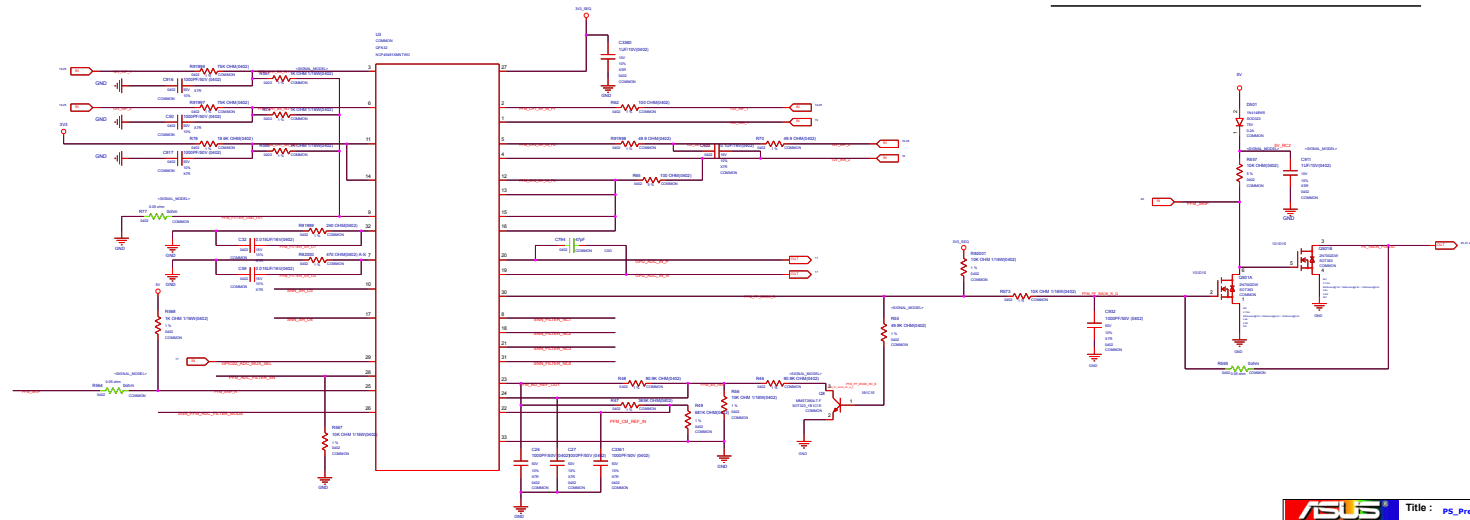
Power On Delay to POC Delay Time



SEQUENCE:MISC

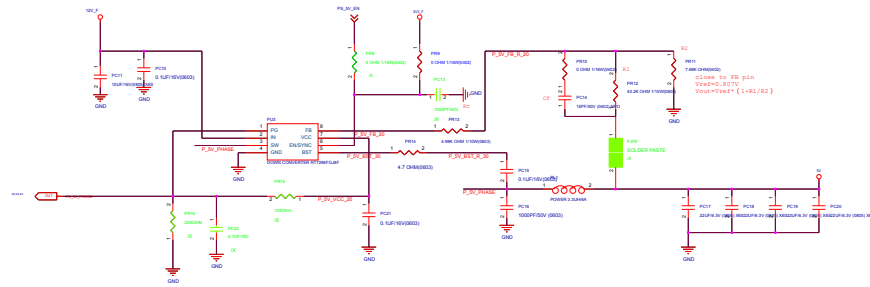


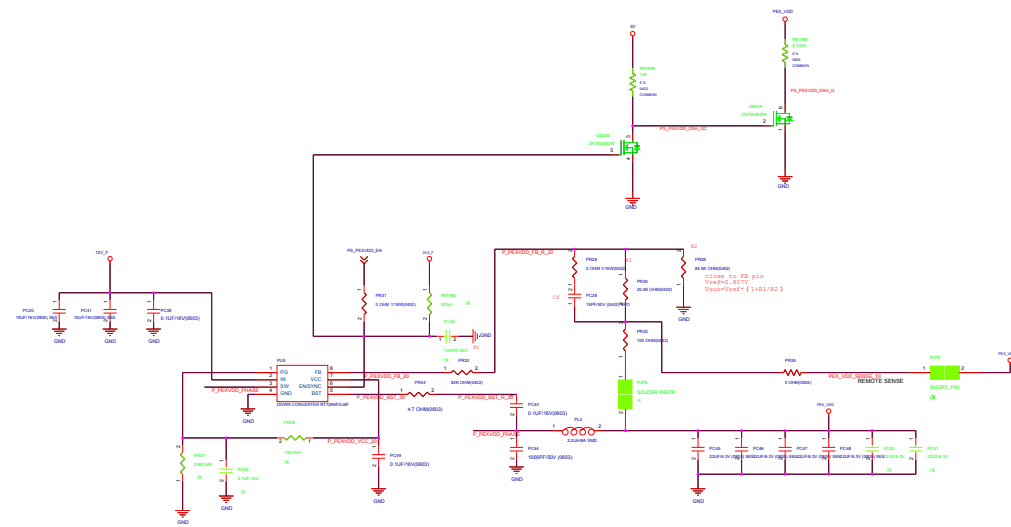
PWR SENSE

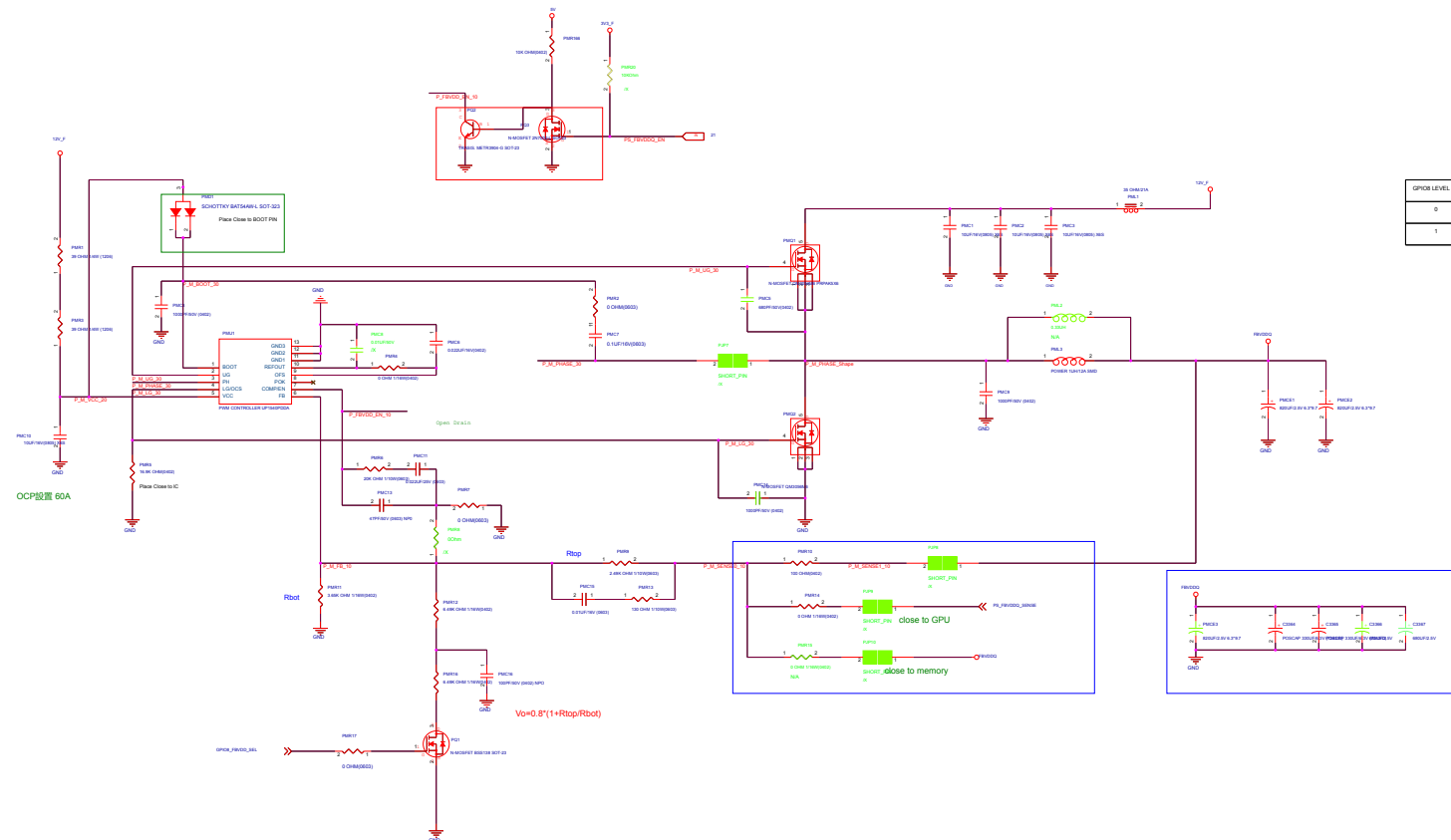


| MODE PIN STATUS | MULTIPLEXER OPERATION |
|---------------------|-----------------------|
| LOW | DEVICE A |
| TRI-STATE(FLOATING) | STAND-ALONE |
| HIGH | DEVICE B |

| ENABLE PIN STATUS | MULTIPLEXER OPERATION |
|---------------------|-----------------------|
| LOW | FULLY FUNCTIONAL |
| TRI-STATE(FLOATING) | LIMITED FUNCTION |
| HIGH | STANDBY |







| GPIO LEVEL | PSVDDQ OUTPUT VOLTAGE |
|------------|-----------------------|
| 0 | 1.35V |
| 1 | 1.5V |

Mechanical: Bracket/Thermal Solution

Brackets:

