

V157-10

P976: G96, DDR2 MEMORY 32MX16/16MX16

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REV HISTORY

- 06/10
1. Remove SLI circuit P13
2. Remove 2V5 U6,R148,R149
3. Modify PEXVDD circuit
- Remove U7,R703,R704,R705,R706,R707,R708
- Remove C201,C202,C203,C204,C205,C206,C207,C208
- 7/2
- 1.Modify NVVDD circuit

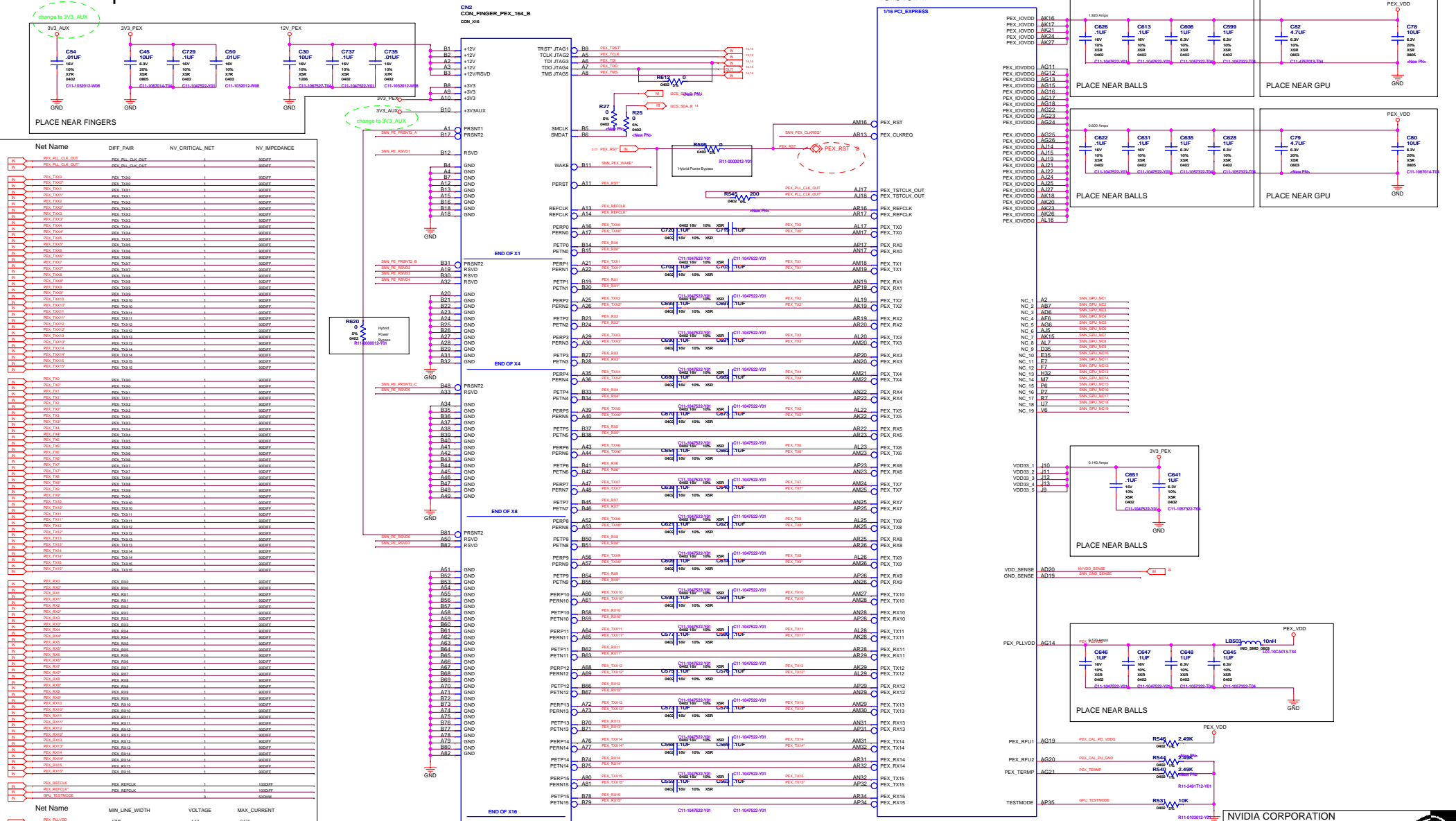
REV	VARIANT	W/P/N	ASSEMBLY
0	BASE	600-10729-xxxx-000	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0000	600-10729-0000-000	G96-300-A1, 550/500MHz, 512MB 32Mx16 DDR2 BGAB4 DVI-DL+VGA+HDTV
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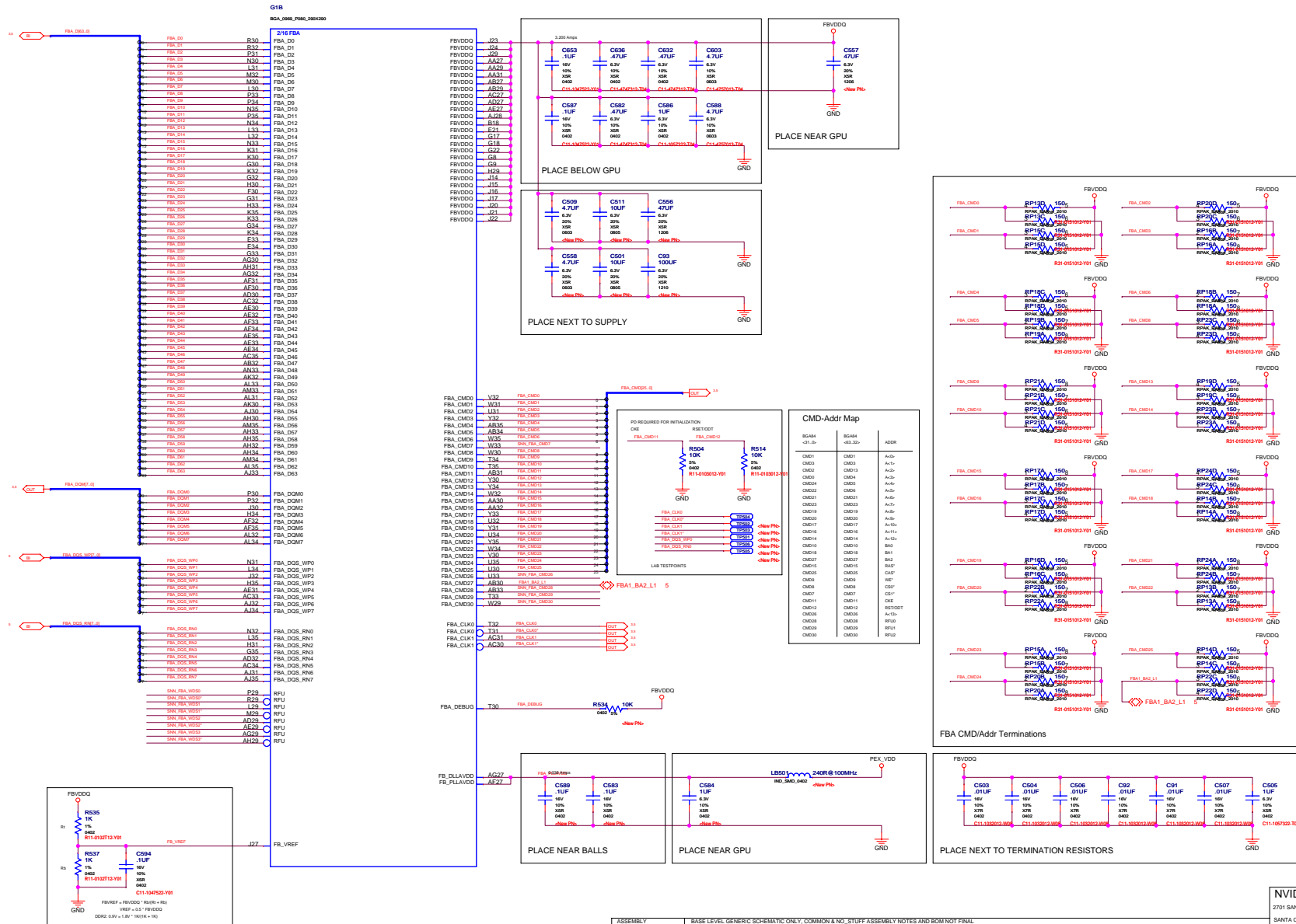
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PAGE DETAIL	P976 Overview

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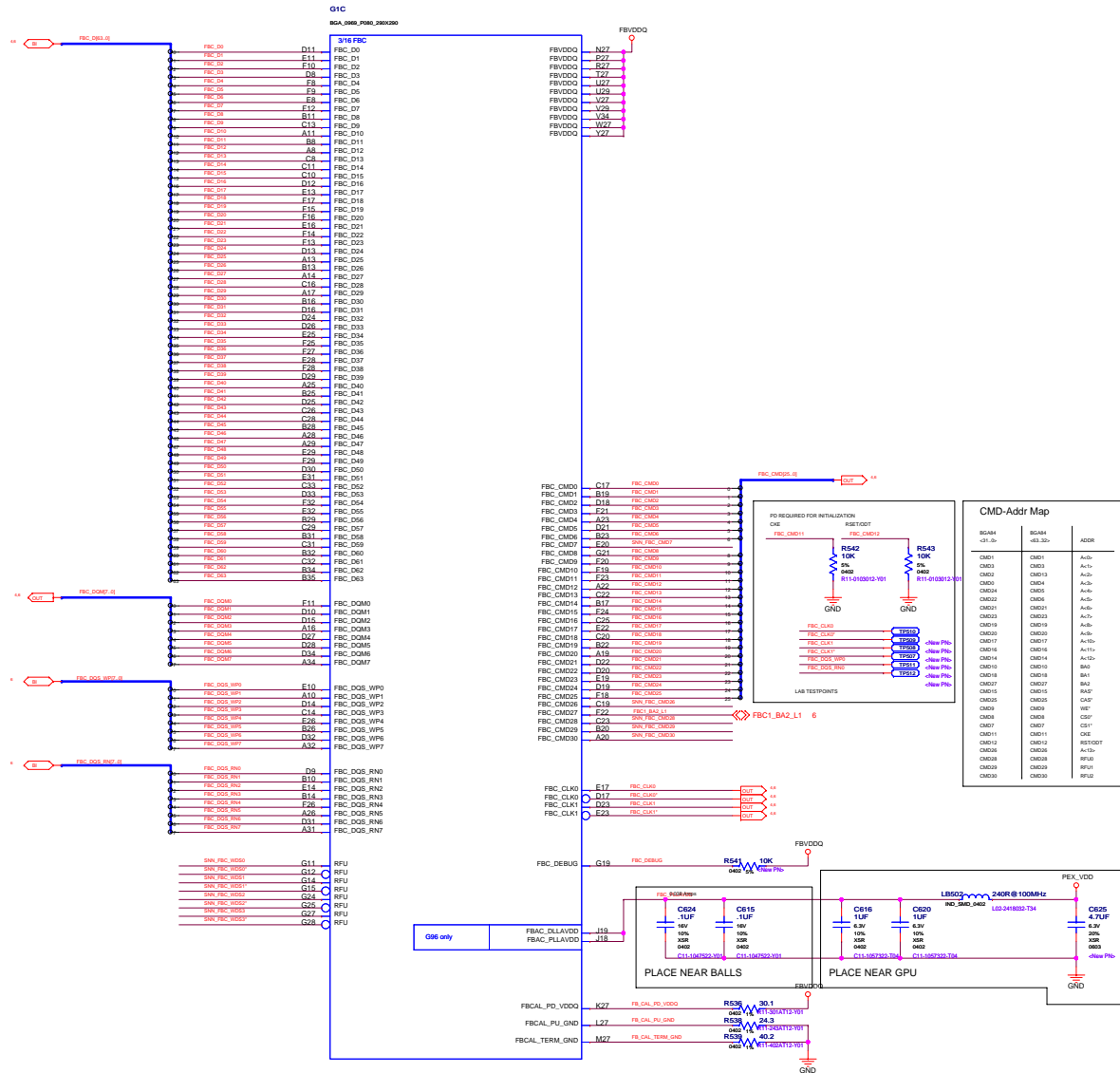
PCI Express Interface



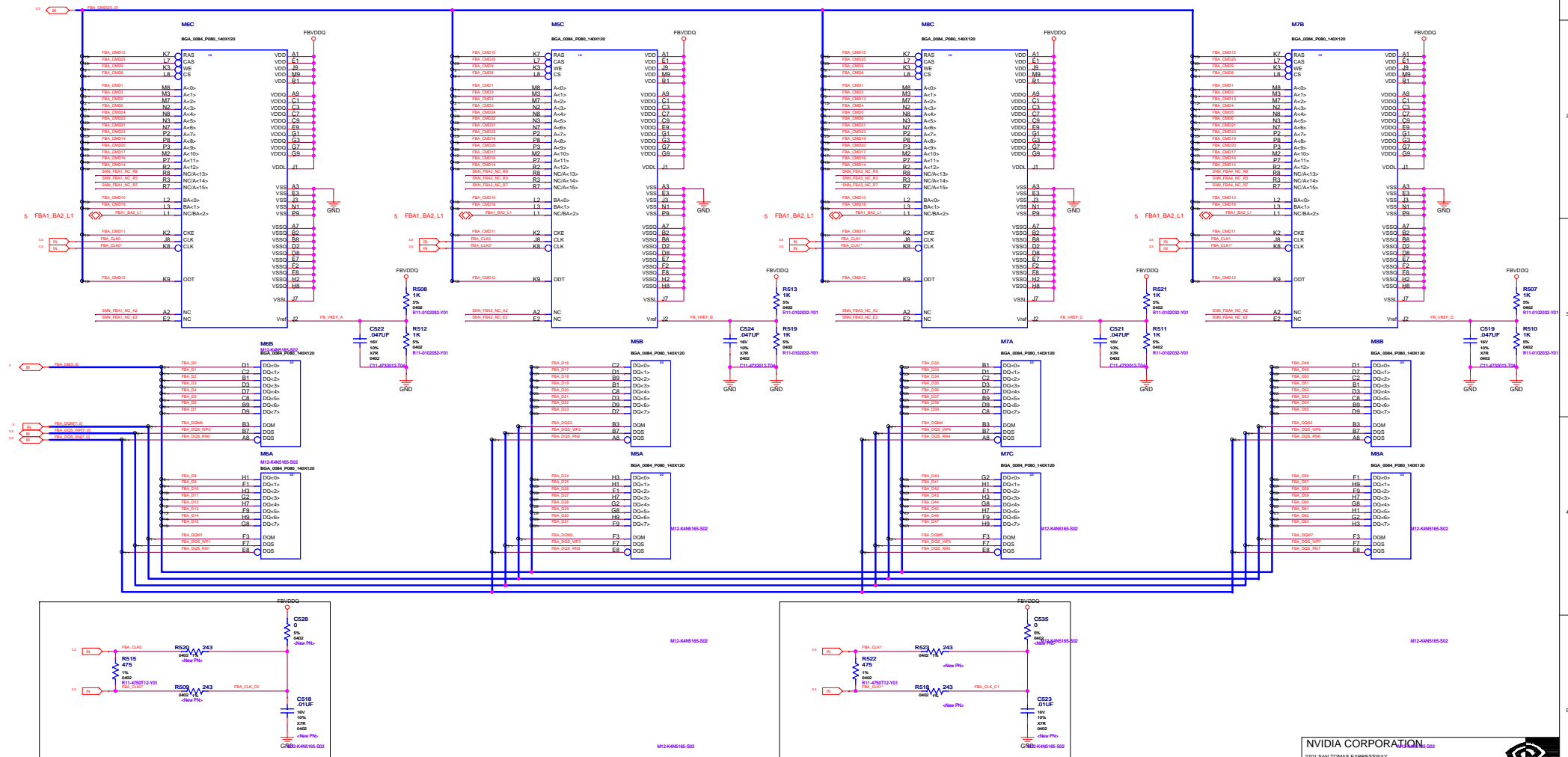
Partition A Frame Buffer Interface



Partition C Frame Buffer Interface



Partition A Memories



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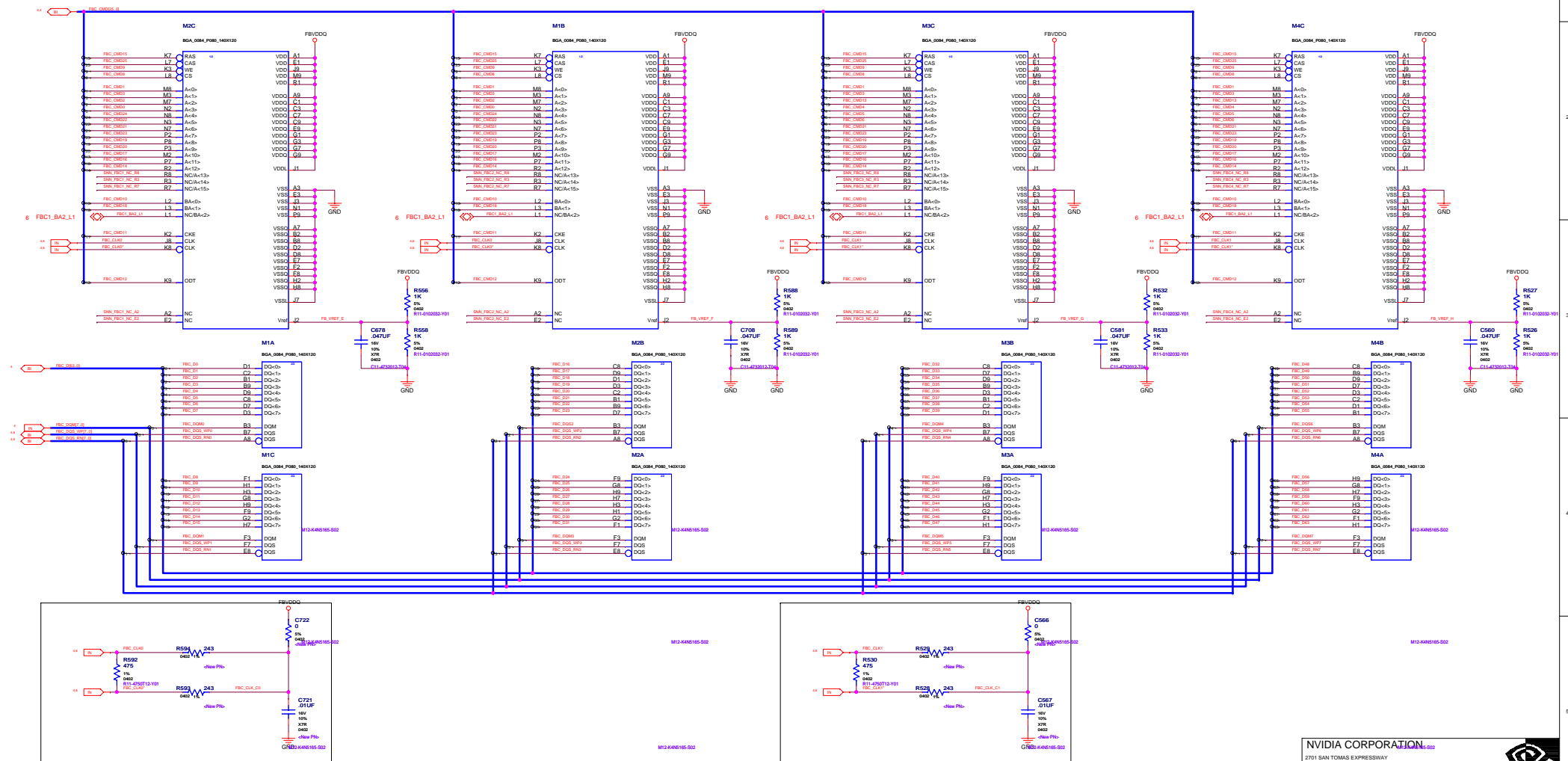
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PAGE DETAIL	Partition A Memories

Partition C Memories



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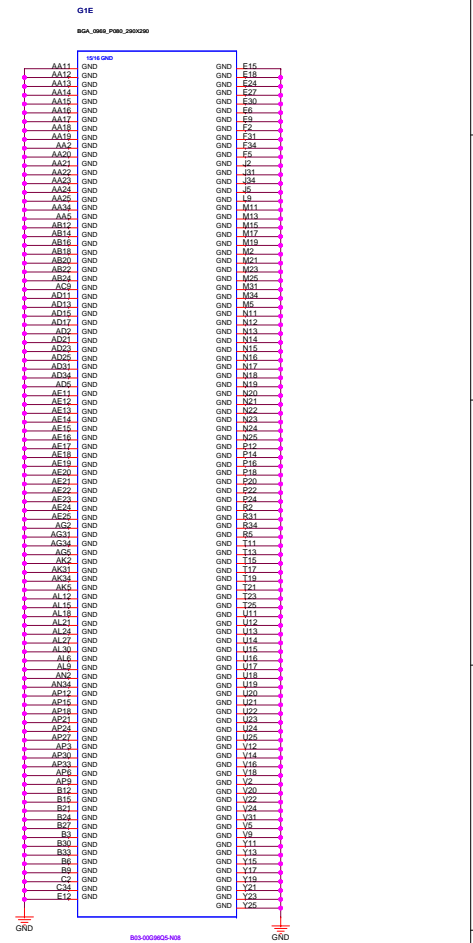
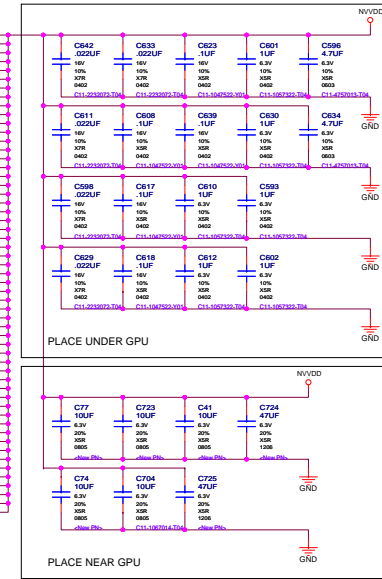
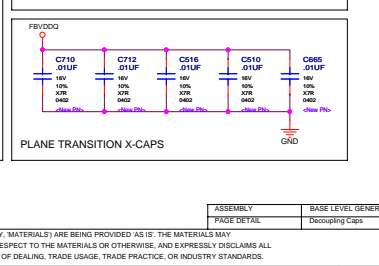
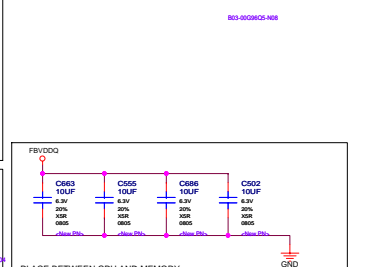
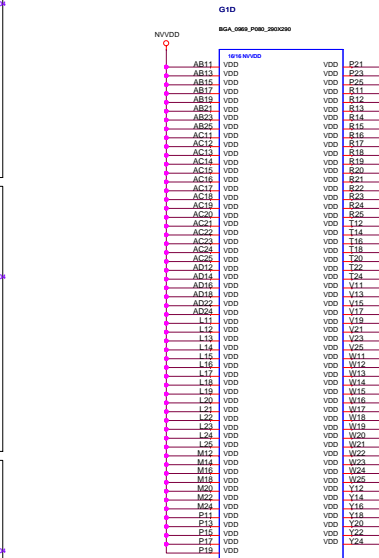
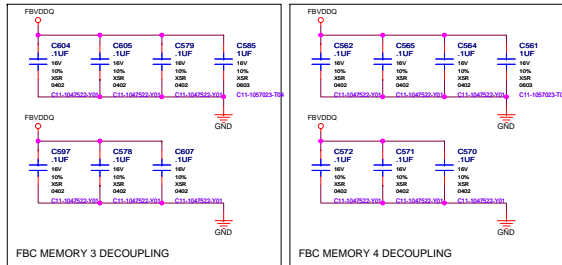
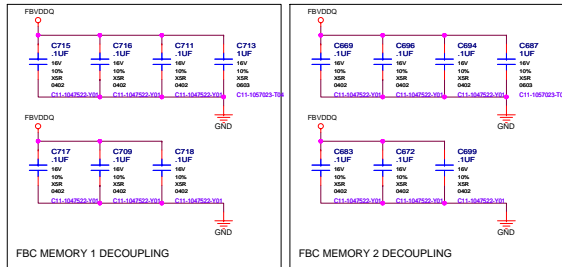
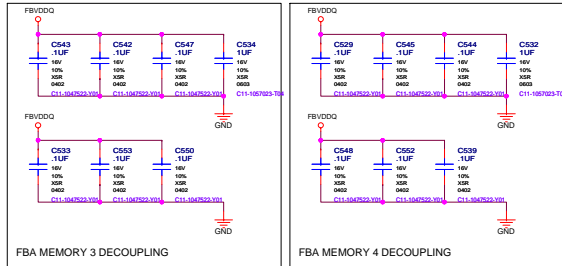
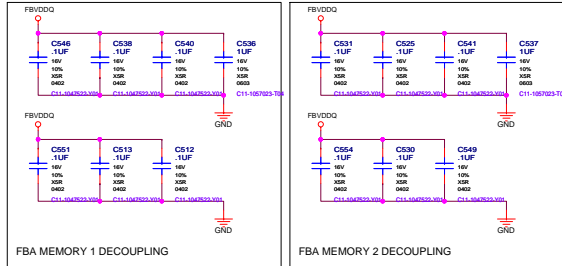


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ASSEMBLY
PAGE DETAIL

BASE LEVEL GENERIC SCHEMATIC ONLY; COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
Partition C Memories

Decoupling Caps



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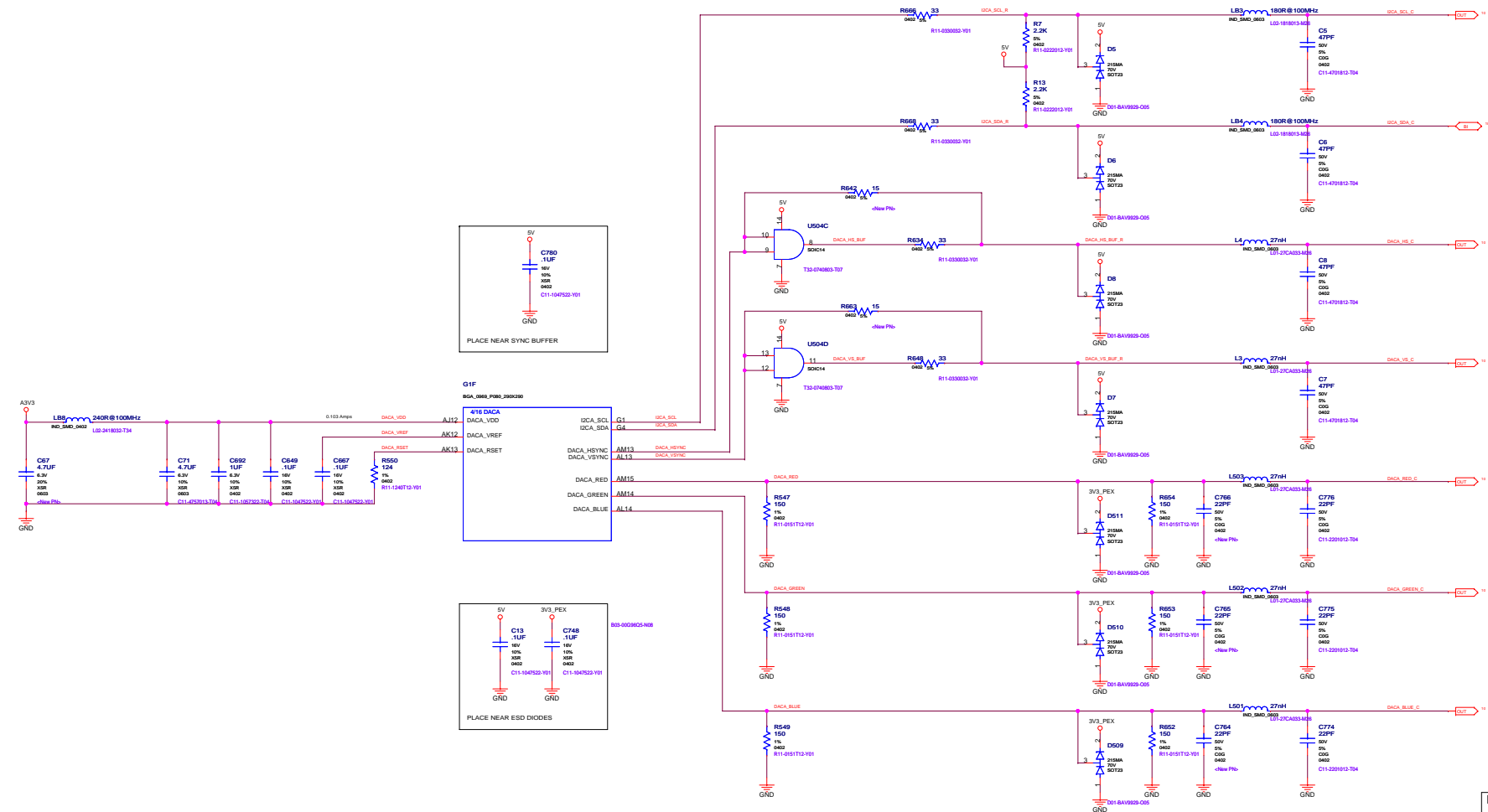
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ASSEMBLY BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO-STUFF ASSEMBLY NOTES AND BOTTOM FINAL

PAGE DETAIL Decoupling Caps

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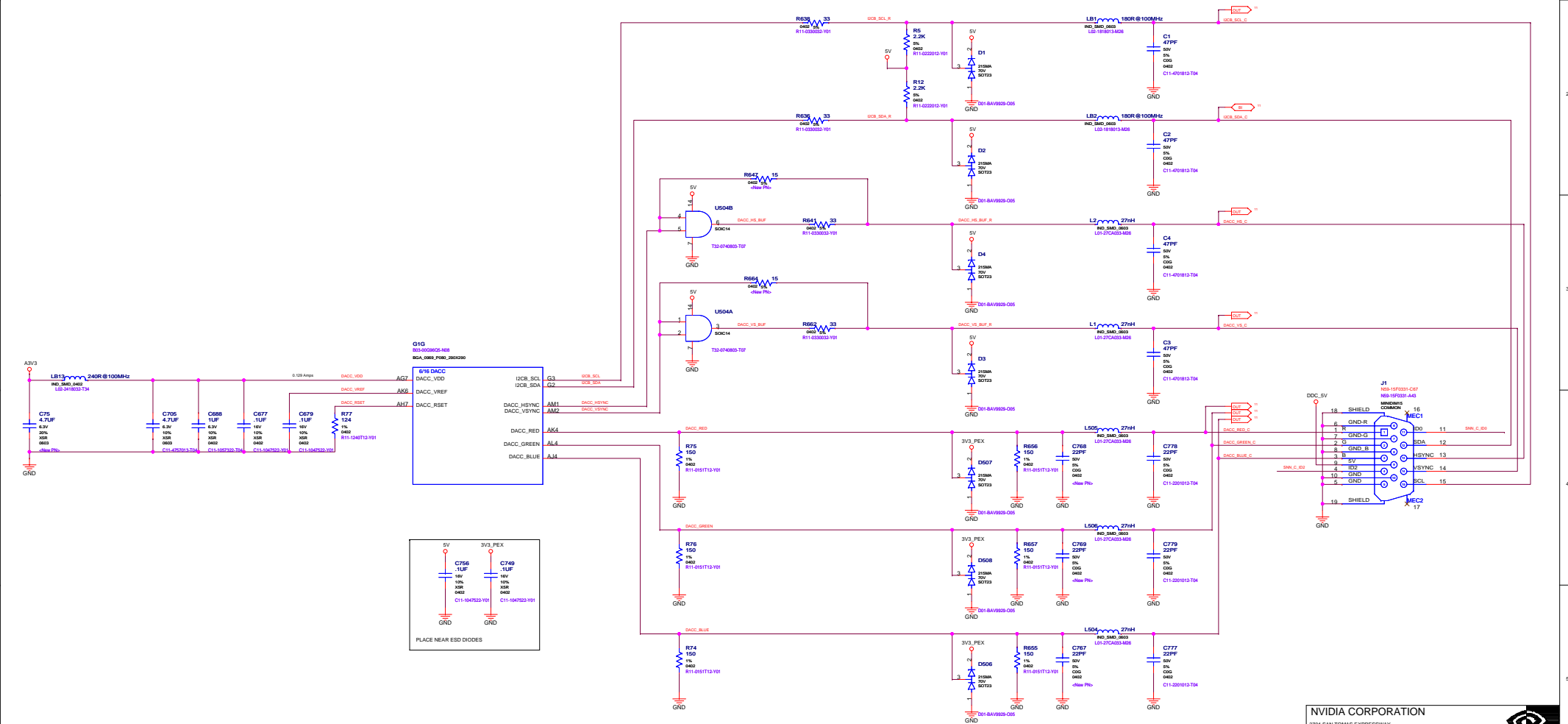
DACA



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DACC, Slim DB15 Connector




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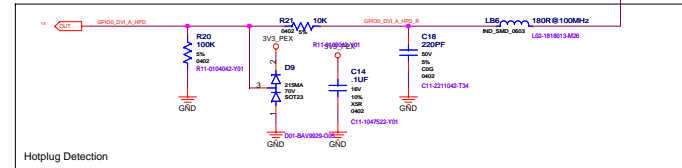
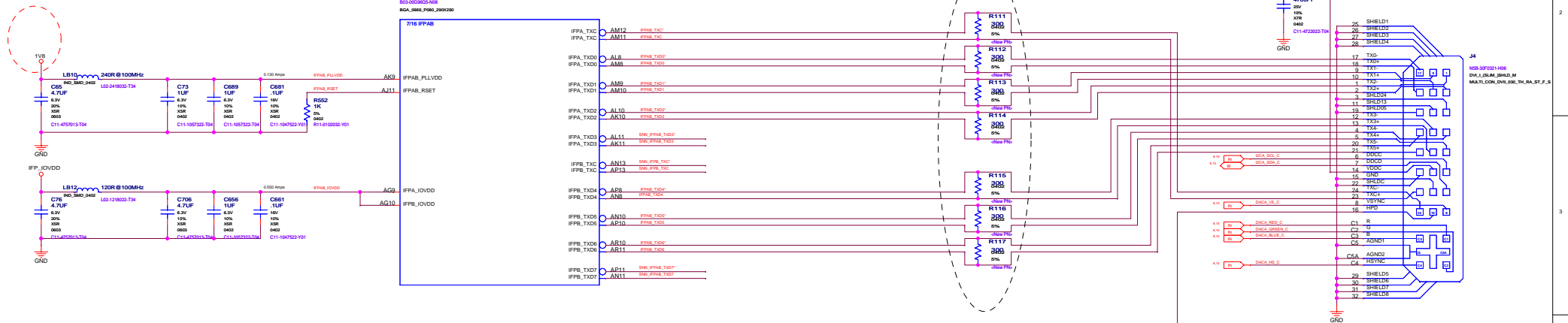
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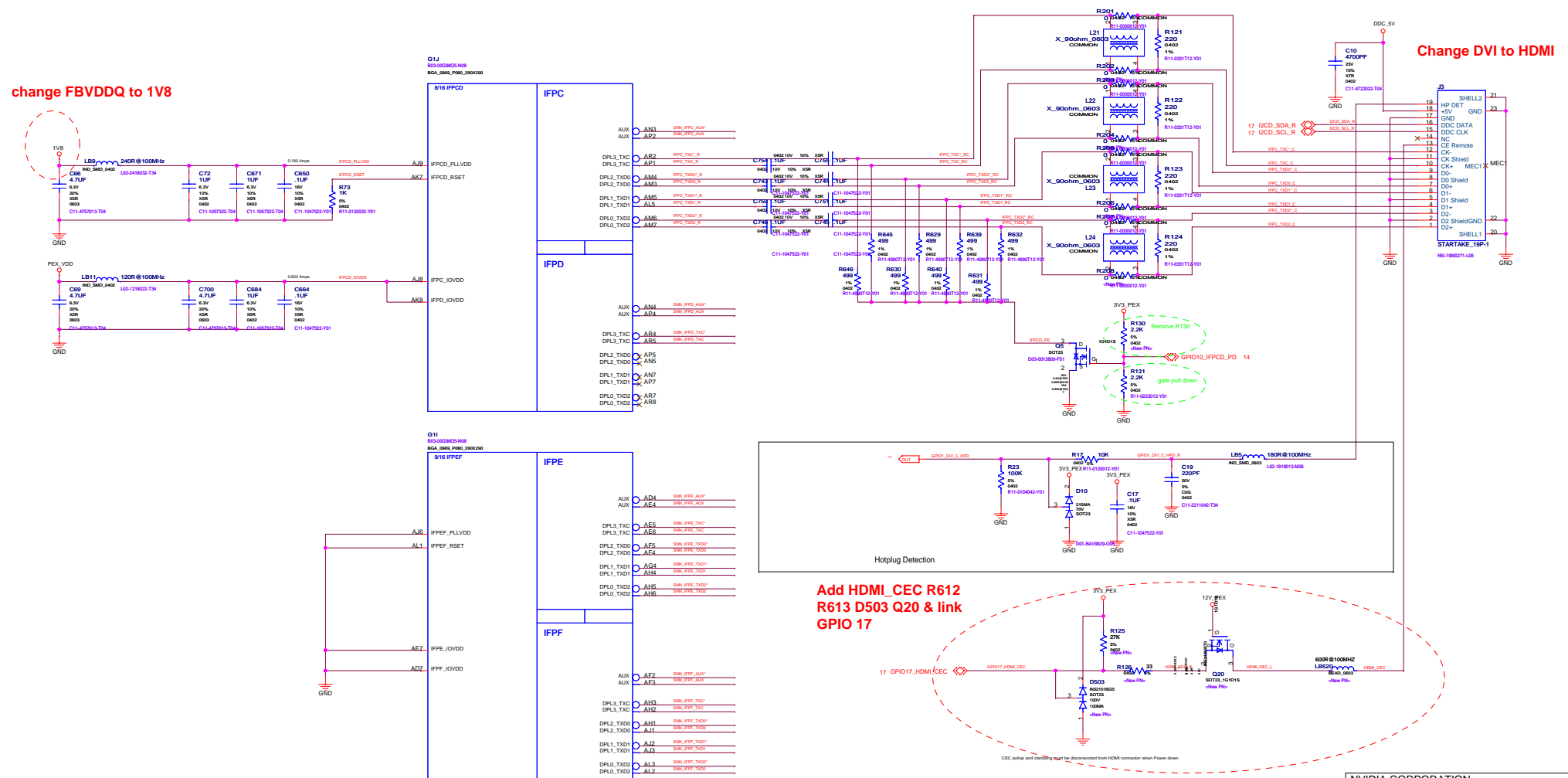
Internal TMDS .. Link A & B




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Internal TMDS .. Link C & D

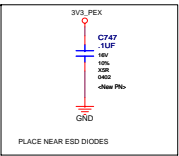
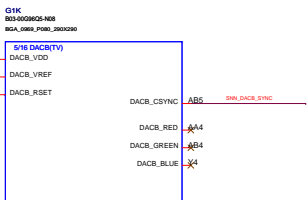
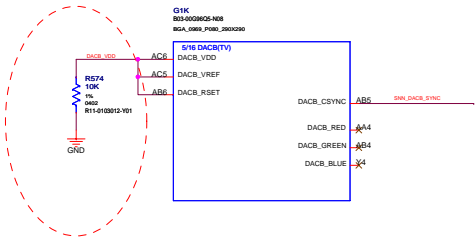


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DACB, MINIDIN Connector

Change R574 to 10K



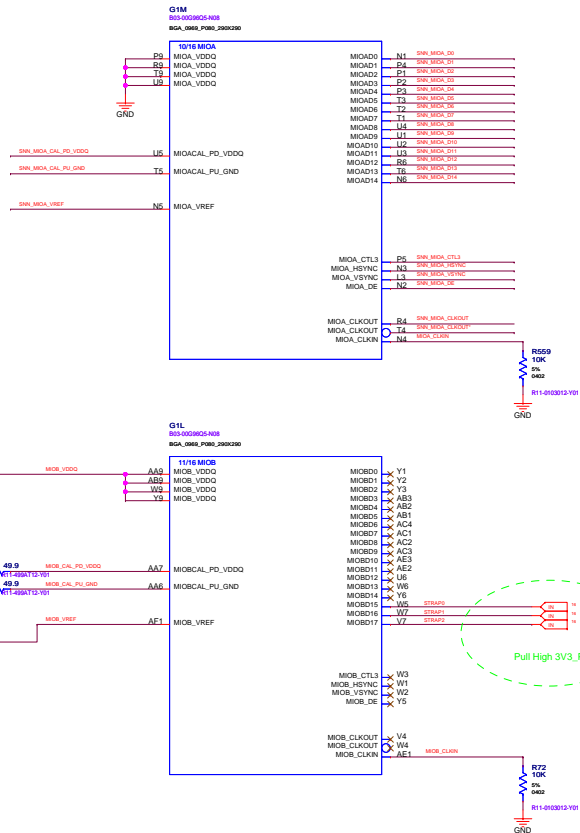
Remove TV-OUT

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PAGE DETAIL	DACB, MINIDIN Connector

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MIOA, MIOB Interface



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PAGE DETAIL	MIOA, MIOB Interface

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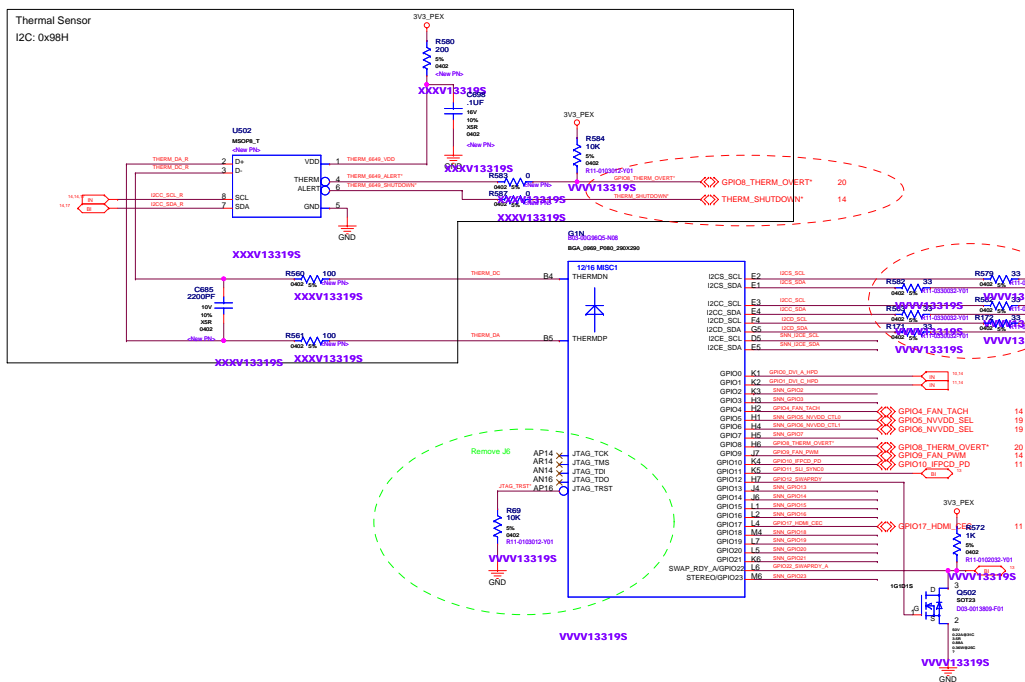


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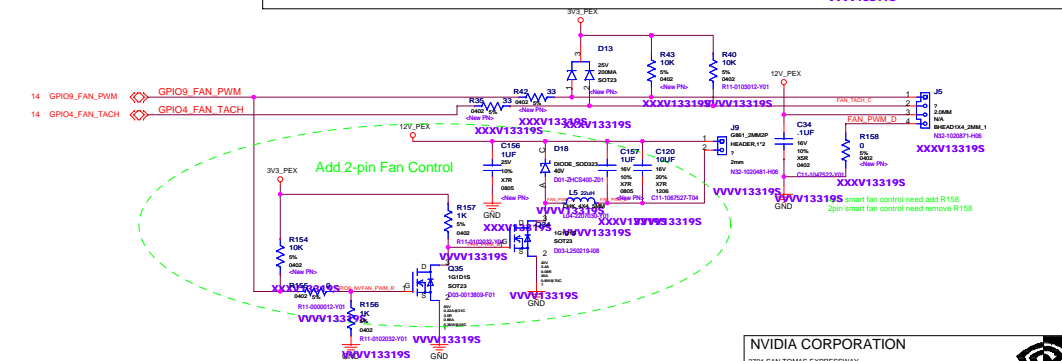
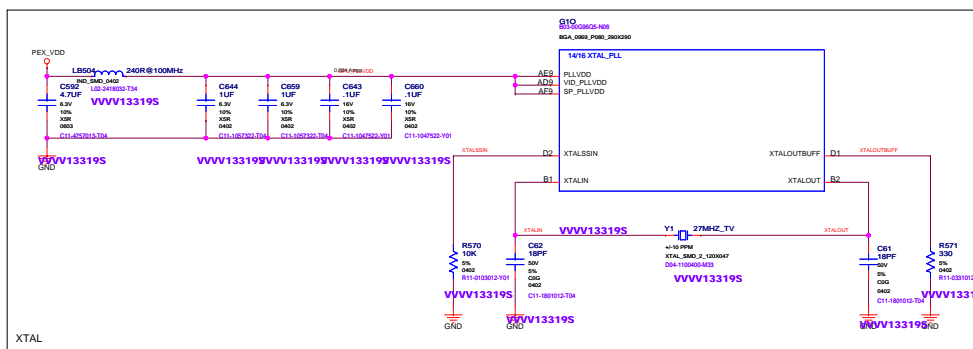
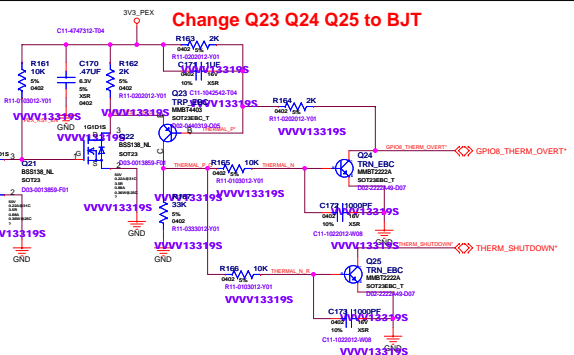
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Thermal Sensors, GPIOs, XTAL, JTAG, Fan



GPIO Table		
GPIO	IO	Function
0	IN	DVS SOUTH HOTPLUG DETECT
1	IN	DVI MD HOTPLUG DETECT
2		
3		
4	OUT	PWM FAN
5	OUT	INVID VOLTAGE SELECT 0
6	OUT	INVID VOLTAGE SELECT 1
7	OUT	INVID VOLTAGE SELECT 2
8	IN	THERMAL SHUTDOWN
9	IN	FAN TACH
10		
11	IN/OUT	RASTER SYNC 0
12		
13	OUT	SWAP READY 0
14		
15		
16		
17		
18		
19		
20		
21	IN	SWAP READY IN
22		
23		



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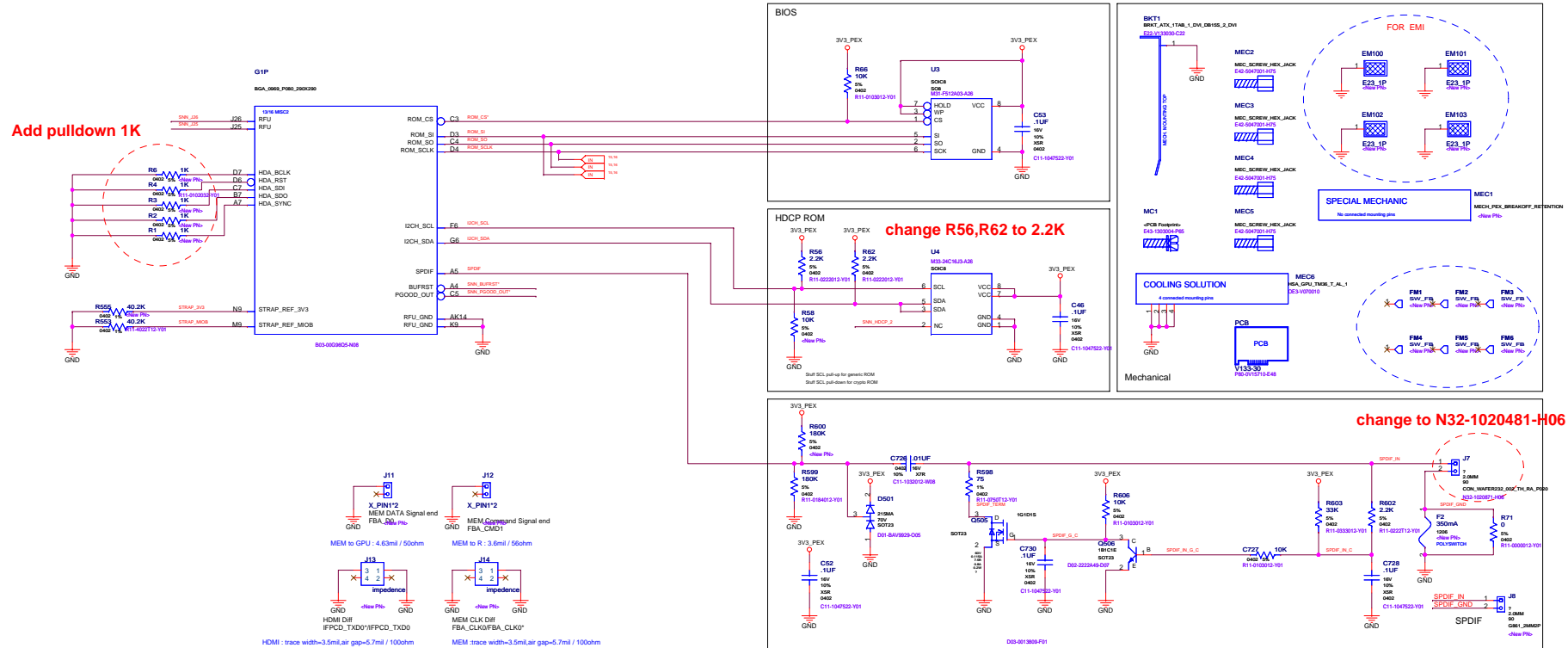
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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Thermal Sensors, GPIOs, XTAL, JT4G, Fan

BIOS, HDCP, SPDIF, HDA, Mechanical



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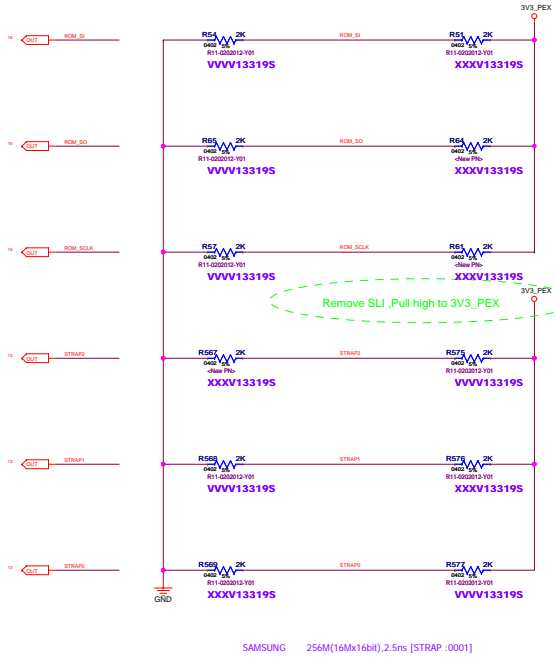
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PAGE DETAIL	BIOS, HXCP, SPDIF, HDA, Mechanical

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Straps



G94 Straps
Multilevel Mode

Bit Signal

Values

03	ACLK_277	0 DISABLED 1 ENABLED
02	TVMODE[2]	000 NTSC_A 001 NTSC_J 010 PAL_M 011 PAL_N 100 PAL_CK 101 PAL_BSDI 110 RESERVE[0] 111 RESERVE[1]
01	TVMODE[1]	
00	TVMODE[0]	
03	PCL_DEV[0_EXT]	1 G96-300-A1
02	SUB_VENDOR	0 NO BIOS 1 BIOS
01	SLOT_CLK_CFG	0 DISABLED 1 ENABLE
00	PEX_PULL_EN_TERM[0]	0 DIS 1 EN

Multilevel Straps

5K to GND	0000
10K to GND	0001
15K to GND	0010
20K to GND	0011
25K to GND	0100
30K to GND	0101
35K to GND	0110
40K to GND	0111
5K to VCC	1000
10K to VCC	1001
15K to VCC	1010
20K to VCC	1011
25K to VCC	1100
30K to VCC	1101
35K to VCC	1110
40K to VCC	1111

03	RAMCFG[2]	0000 32Mx16/16Mx16 DDR2 128-64 Ewin 0001 16Mx16 DDR2 128-64 Samsung, Micron 0010 16Mx16 DDR2 64-64 Gmem 0011 16Mx16 DDR2 128-64 Hynix 0100 32Mx16/16Mx16 DDR2 128-64 Nanya 0101 32Mx16 DDR2 128-64 Hynix 0110 32Mx16 DDR2 64-64 Samsung 0111 32Mx16 DDR2 64-64 Hynix
02	RAMCFG[1]	
01	RAMCFG[0]	
00	RAMCFG[3]	

1000 32Mx16/16Mx16 DDR2 64-64 Ewin	
1001 16Mx16 DDR2 64-64 Samsung, Micron	
1010 16Mx16 DDR2 64-64 Gmem	
1011 16Mx16 DDR2 128-64 Hynix	
1100 32Mx16/16Mx16 DDR2 128-64 Nanya	
1101 32Mx16 DDR2 128-64 Hynix	
1110 32Mx16 DDR2 64-64 Samsung	
1111 32Mx16 DDR2 64-64 Hynix	

03	PCL_DEV[3]	0001 G96-300-A1
02	PCL_DEV[2]	
01	PCL_DEV[1]	
00	PCL_DEV[0]	

03	SGIO_PACCFG_LUT_ADR[2]	0000 DSKTOP_DEFAULT 0001 MOBILE_JITTERS_SWAMP 0010 MOBILE_JITTERS_LLAMP 0011 MOBILE_JITTERS_LAMP 0100 MOBILE_JITTERS_SWAMP 0101 MOBILE_JITTERS_SWAMP 0110 MOBILE_JITTERS_SWAMP 0111 MOBILE_JITTERS_SWAMP
02	SGIO_PACCFG_LUT_ADR[1]	
01	SGIO_PACCFG_LUT_ADR[0]	
00	SGIO_PACCFG_LUT_ADR[3]	

1000 DSKTOP_JITTERS	
1001 MOBILE_JITTERS_SWAMP	
1010 MOBILE_JITTERS_LLAMP	
1011 MOBILE_JITTERS_LAMP	
1100 MOBILE_JITTERS_SWAMP	
1101 MOBILE_JITTERS_SWAMP	
1110 MOBILE_JITTERS_SWAMP	
1111 MOBILE_JITTERS_SWAMP	

03	USER[3]	0000 DEFAULT
02	USER[2]	
01	USER[1]	
00	USER[0]	

G94 Straps
Binary-Bringup Mode

Bit Signal

Values

SUB_VENDOR	0 NO BIOS 1 BIOS
SLOT_CLK_CFG	0 DISABLED 1 ENABLE
SGIO_PACCFG_LUT_ADR[2]	0000 DSKTOP_DEFAULT 0001 MOBILE_DEFAULT 0010 MOBILE_JITTERS_LLAMP 0011 MOBILE_JITTERS_LAMP 0100 MOBILE_JITTERS_SWAMP 0101 MOBILE_JITTERS_SWAMP 0110 DSKTOP_JITTERS 0111 MOBILE_JITTERS_SWAMP 1000 DSKTOP_JITTERS 1001 MOBILE_JITTERS_SWAMP 1010 MOBILE_JITTERS_SWAMP 1011 MOBILE_JITTERS_SWAMP 1100 MOBILE_JITTERS_SWAMP 1101 MOBILE_JITTERS_SWAMP 1110 MOBILE_JITTERS_SWAMP 1111 MOBILE_JITTERS_SWAMP
SGIO_PACCFG_LUT_ADR[1]	
SGIO_PACCFG_LUT_ADR[0]	
SGIO_PACCFG_LUT_ADR[3]	

G94 Straps
Binary-Production Mode

Bit Signal

Values

SLOT_CLK_CFG	0 DISABLED 1 ENABLE
PCL_DEV[0_EXT]	10 G96-300-A1
PCL_DEV[3]	
RAMCFG[2]	000 32Mx16/16Mx16 DDR2 Ewin 001 16Mx16 DDR2 Samsung, Micron 010 16Mx16 DDR2 Gmem 011 16Mx16 DDR2 Hynix 100 32Mx16/16Mx16 DDR2 Nanya 101 32Mx16 DDR2 Samsung 110 32Mx16 DDR2 Gmem 111 32Mx16 DDR2 Hynix
RAMCFG[1]	
RAMCFG[0]	
RAMCFG[3]	

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ASSEMBLY	BASIC LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Straps

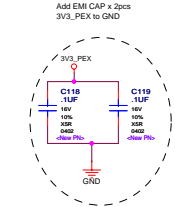
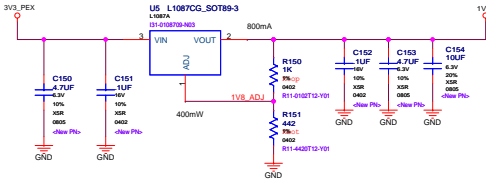
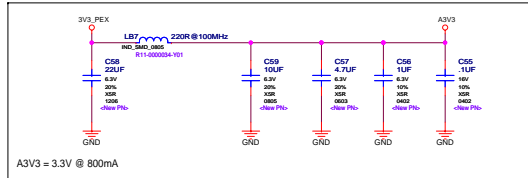
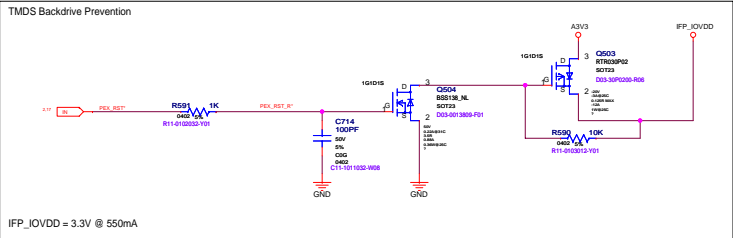
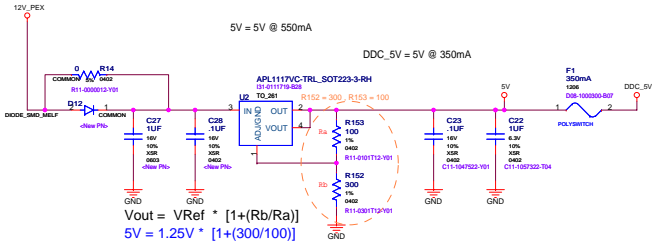
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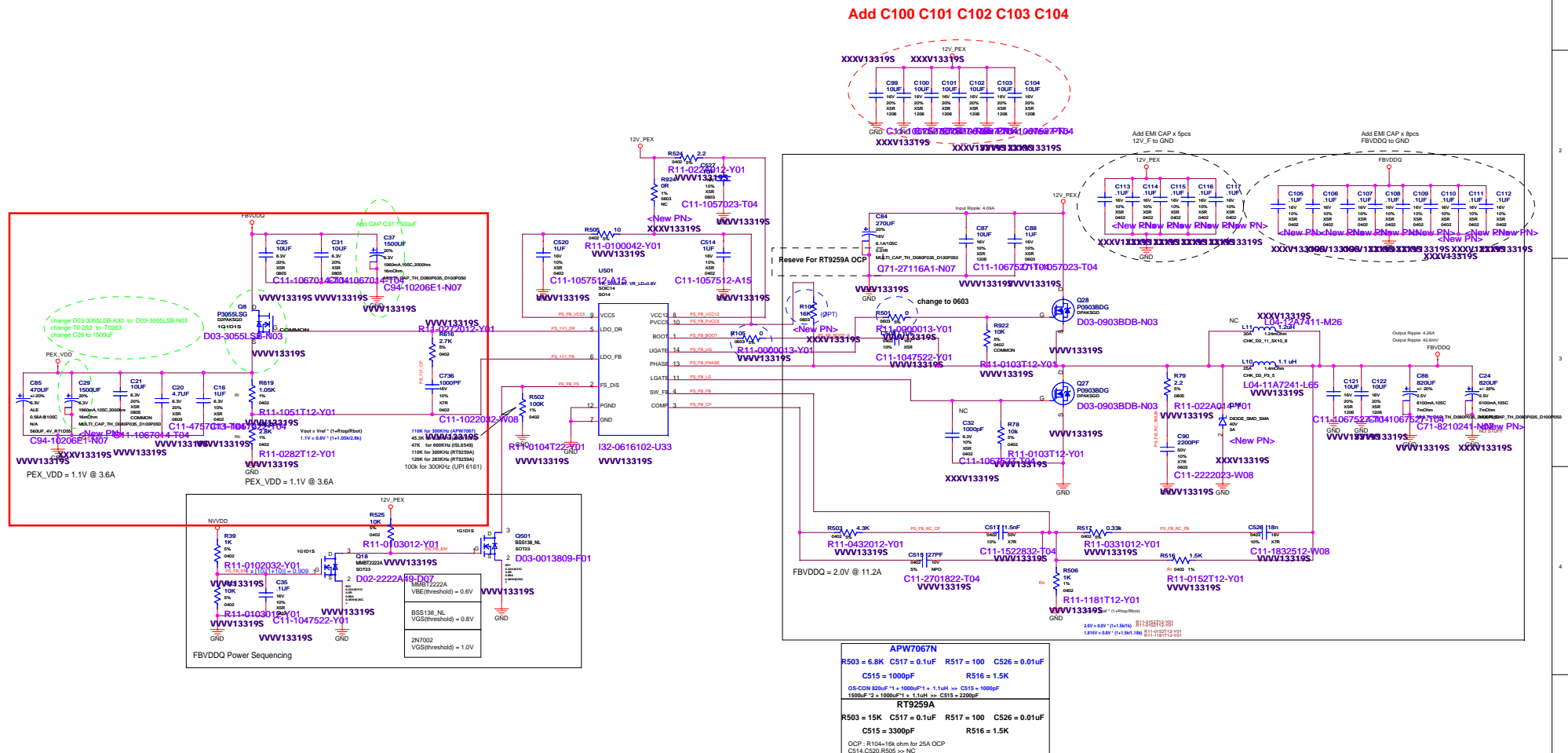
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Power Supply I: 2V5, 3V3, 5V, IFP_IOVDD



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Power Supply II: FBVDDQ



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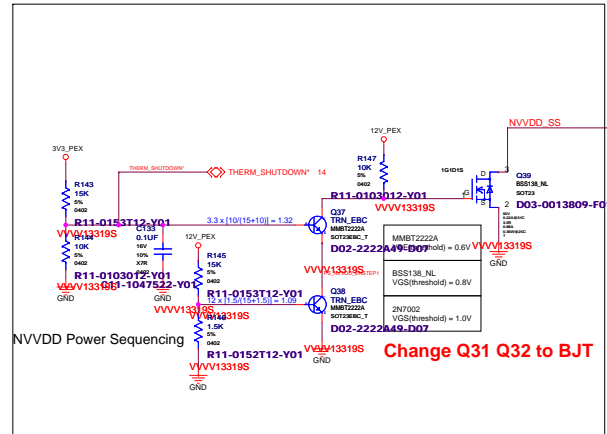
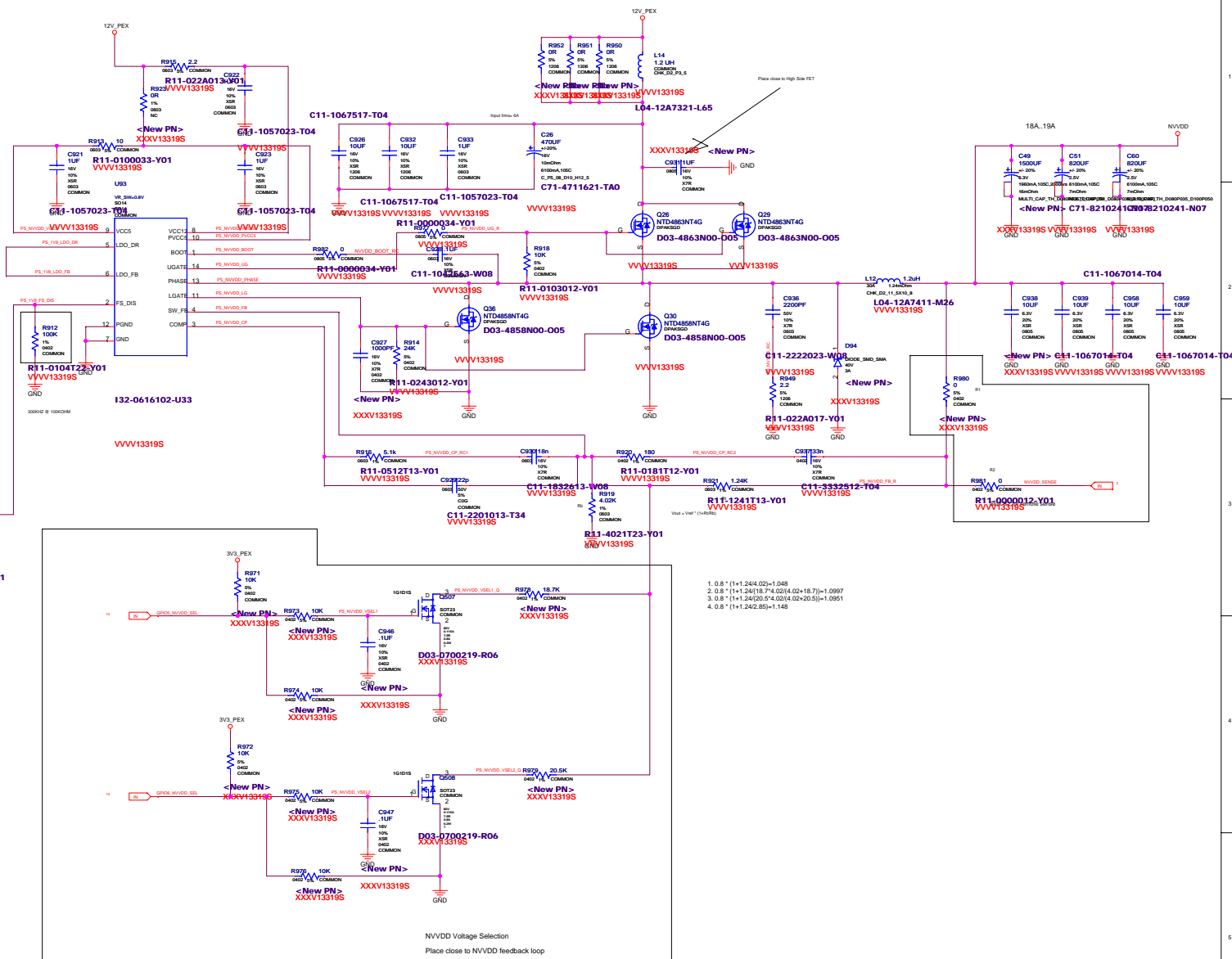


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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Power Supply II: FBVDDQ

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Power Supply III: NVVDD

[illegible]