PG611 C00

12GB GDDR5X, 384b, 256Mx32

TALL DVI-D + DP + DP + HDMI/DP + DP

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NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95051 USA

SIZE	DOCUMENT NUMBER	REV
A3	600-1G611-BASE-300	

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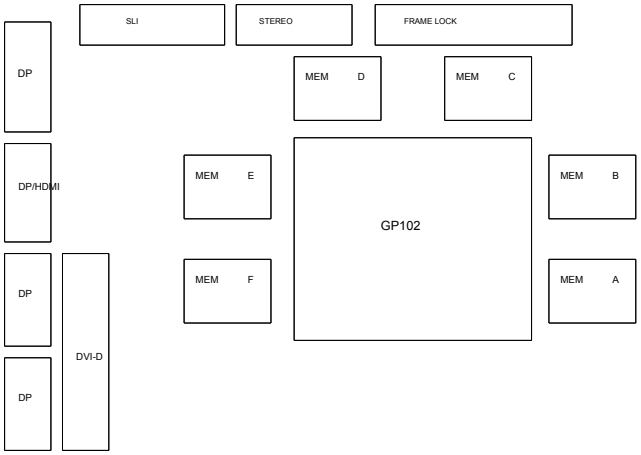
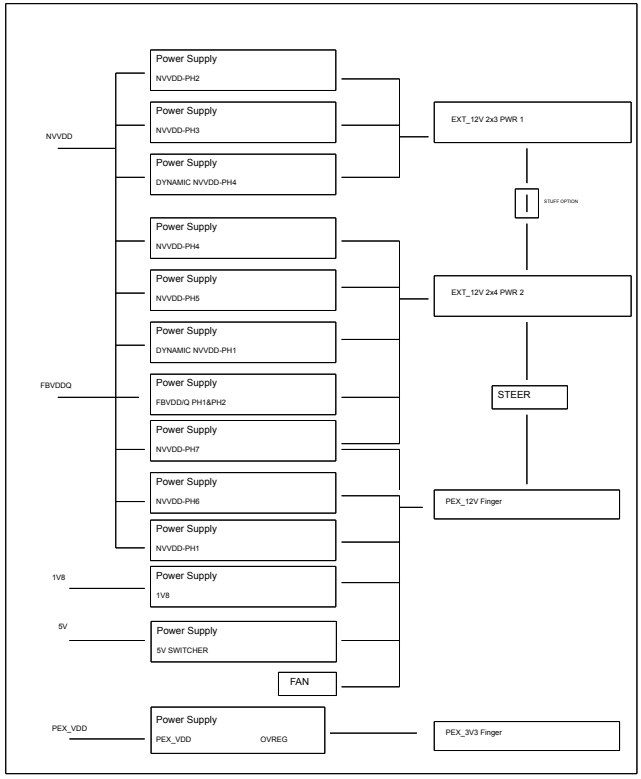
[illegible]	[illegible]	[illegible]	1 OF 49

DRAWN	DATE
[illegible]	28-SEP-2016

Page2: Block Diagram





DOCUMENT	ASSEMBLY_DESCRIPTION
PCB DETAIL	BLOCK DIAGRAM

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

PART_PN	600-1G611-BASE-300		
PCB REV	PCB611-1000	SIZE	SHEET
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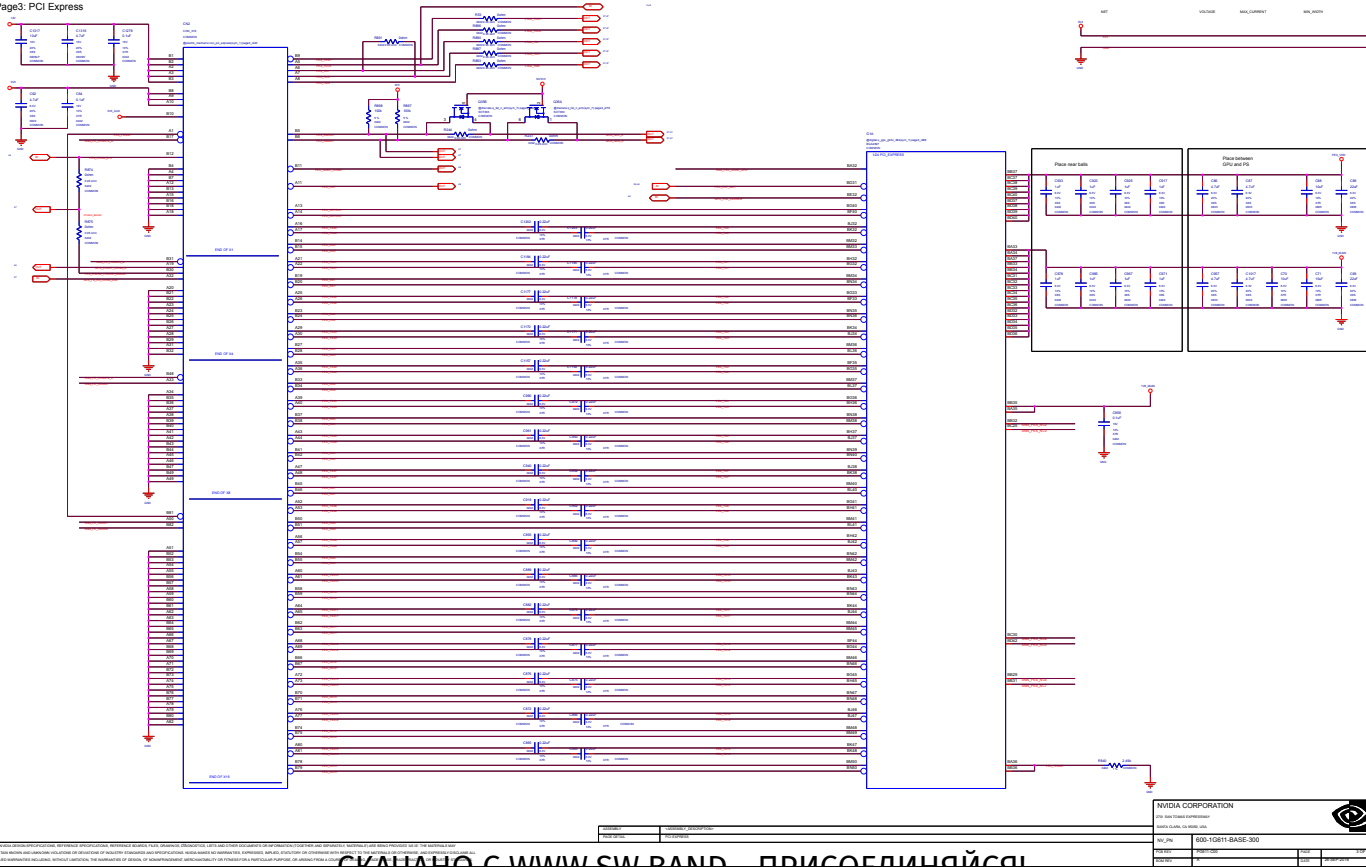

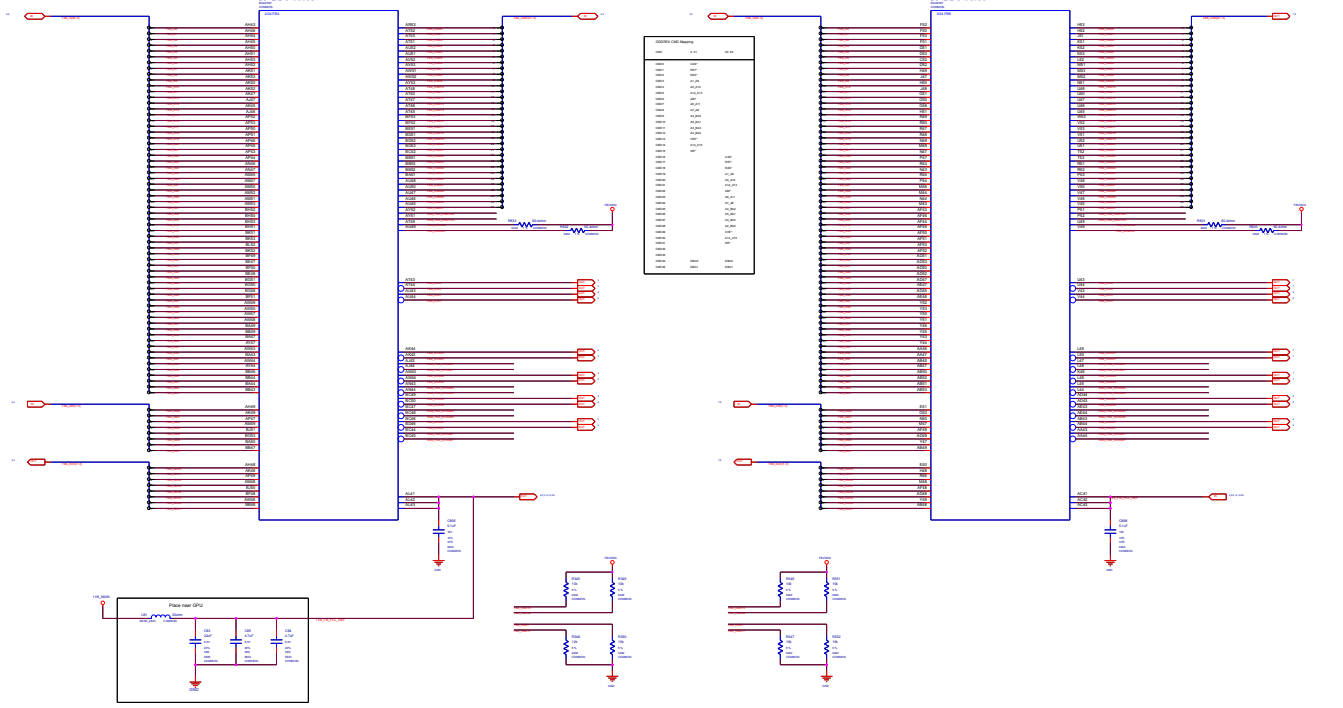

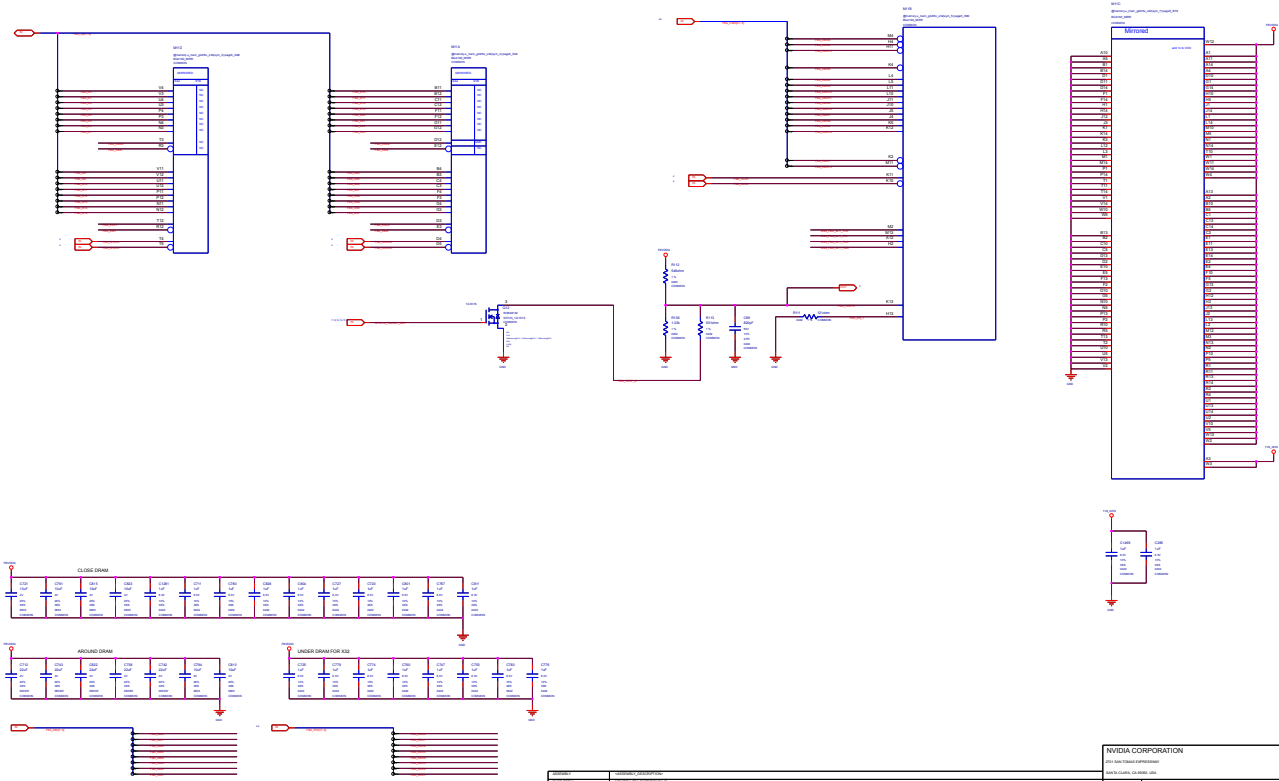

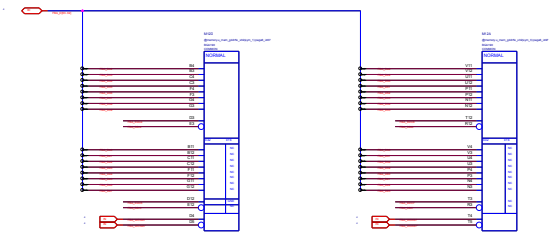

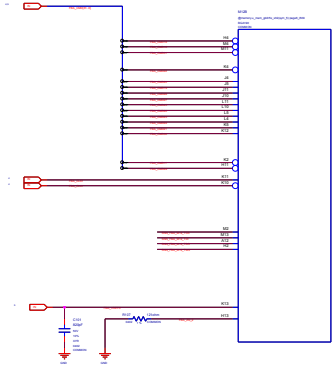

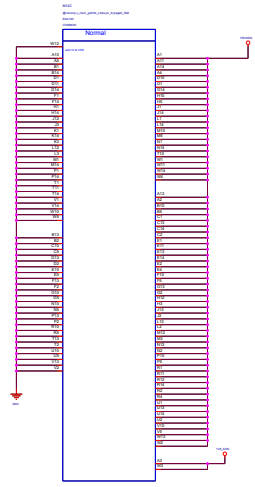

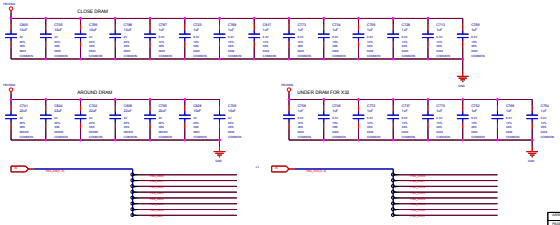

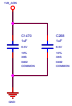

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2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

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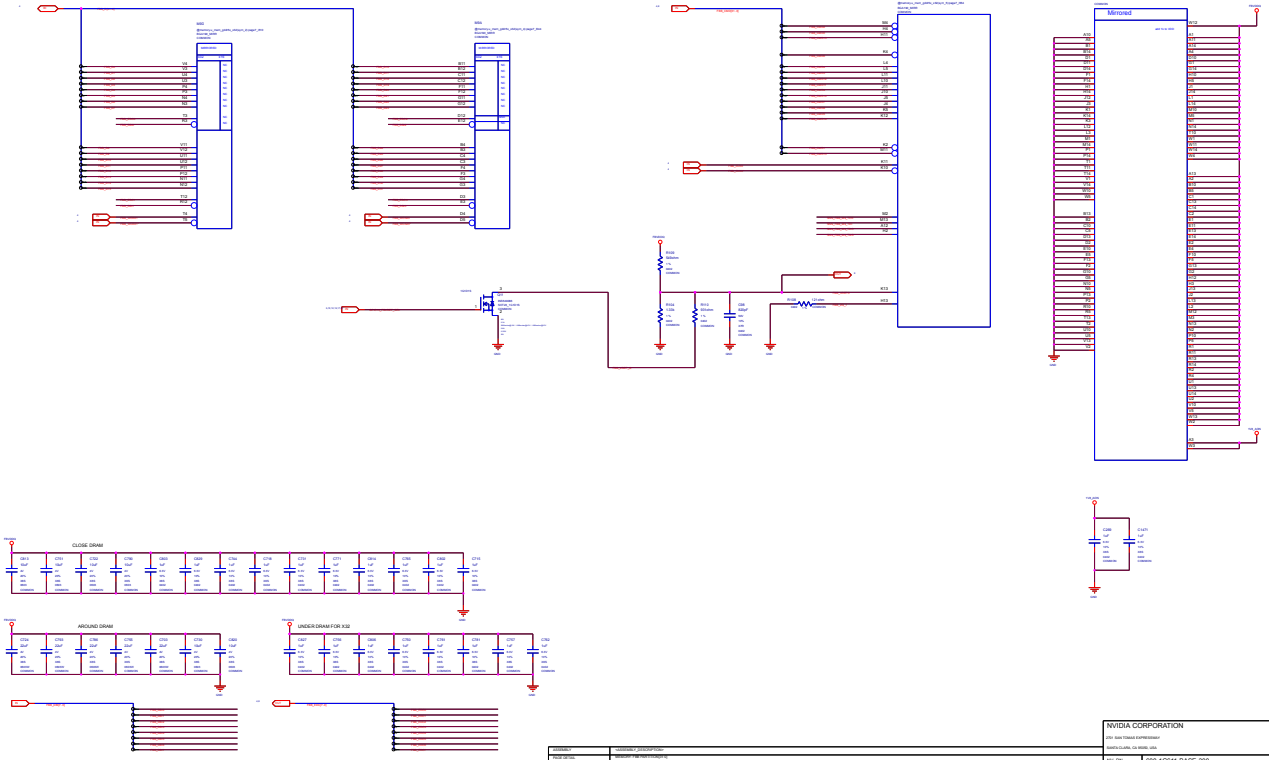
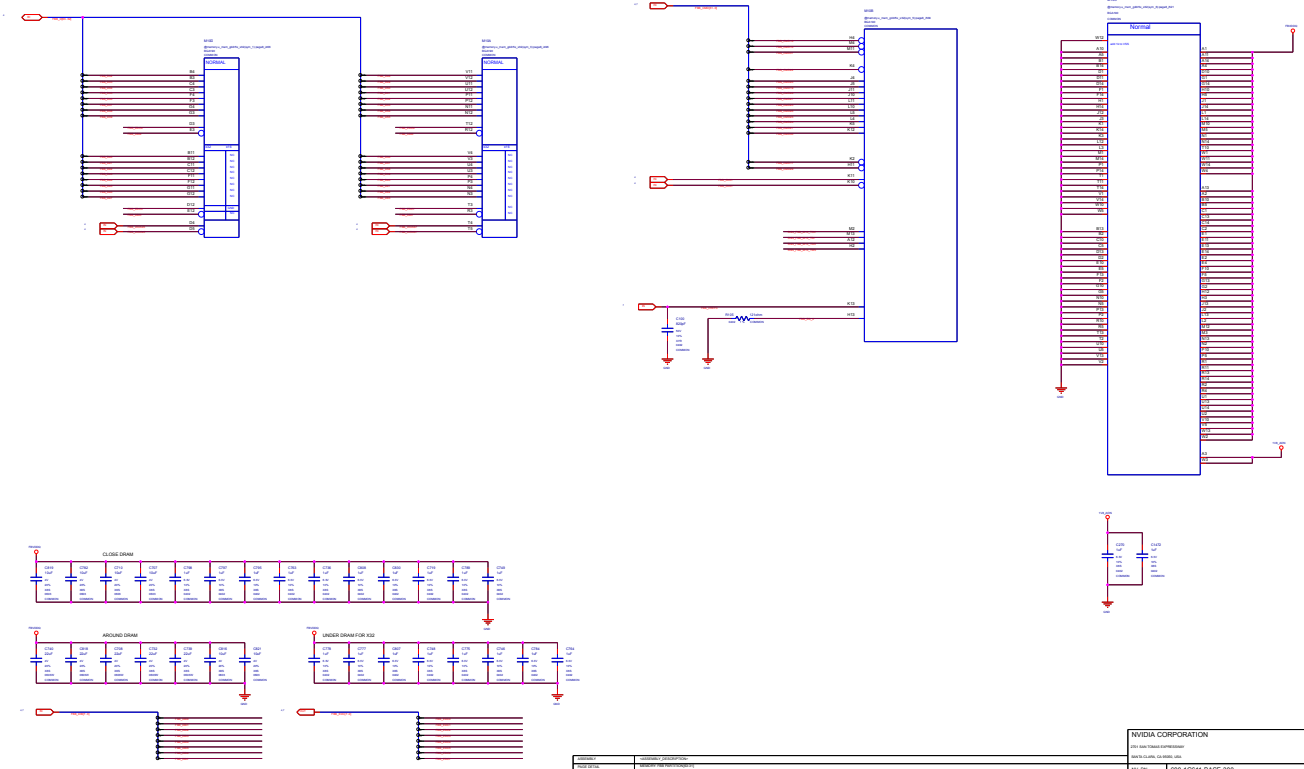
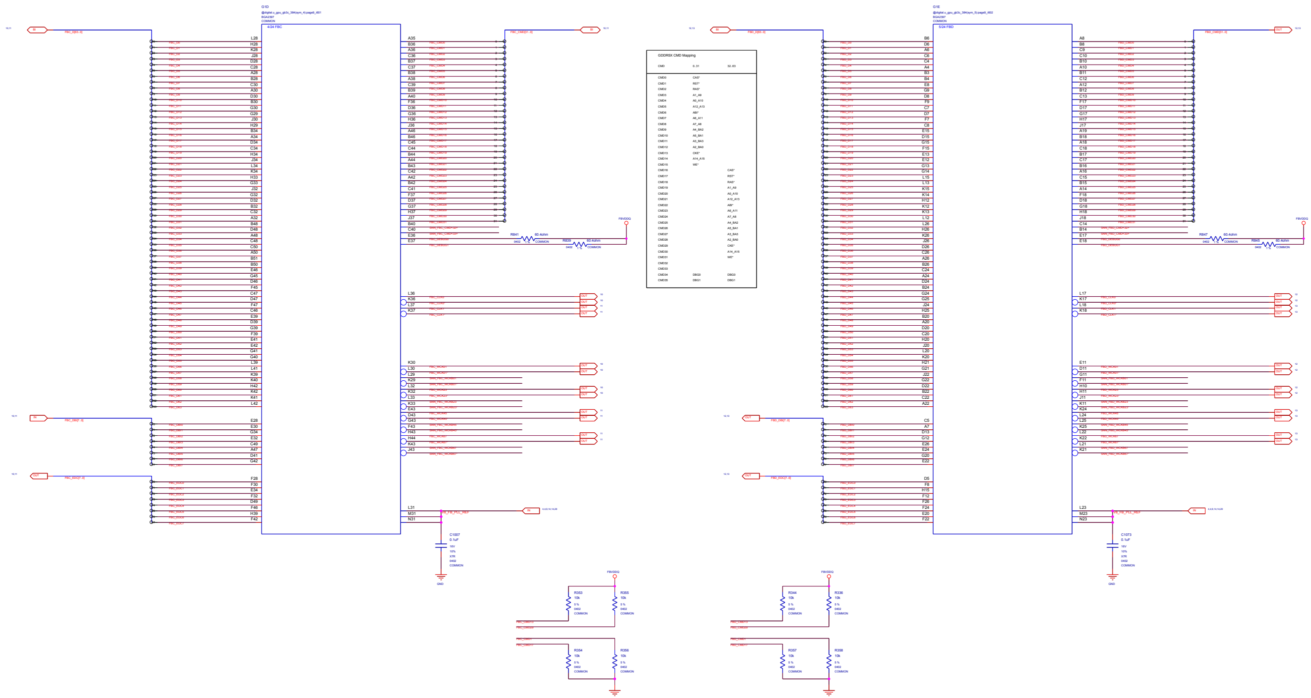




Page9: MEMORY: GPU Partition C/D



GDDR5X CMD Mapping		
CMD	0..31	32..63
CMD0	CAS*	
CMD1	RST*	
CMD2	RAS*	
CMD3	A1_A9	
CMD4	A0_A10	
CMD5	A12_A13	
CMD6	ABI*	
CMD7	A6_A11	
CMD8	A7_A8	
CMD9	A4_BA2	
CMD10	A5_BA1	
CMD11	A3_BA3	
CMD12	A2_BA0	
CMD13	CKE*	
CMD14	A14_A15	
CMD15	WE*	
CMD16		CAS*
CMD17		RST*
CMD18		RAS*
CMD19		A1_A9
CMD20		A0_A10
CMD21		A12_A13
CMD22		ABI*
CMD23		A6_A11
CMD24		A7_A8
CMD25		A4_BA2
CMD26		A5_BA1
CMD27		A3_BA3
CMD28		A2_BA0
CMD29		CKE*
CMD30		A14_A15
CMD31		WE*
CMD32		
CMD33		
CMD34	DBG0	DBG0
CMD35	DBG1	DBG1

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	MEMORY: GPU PARTITION C/D

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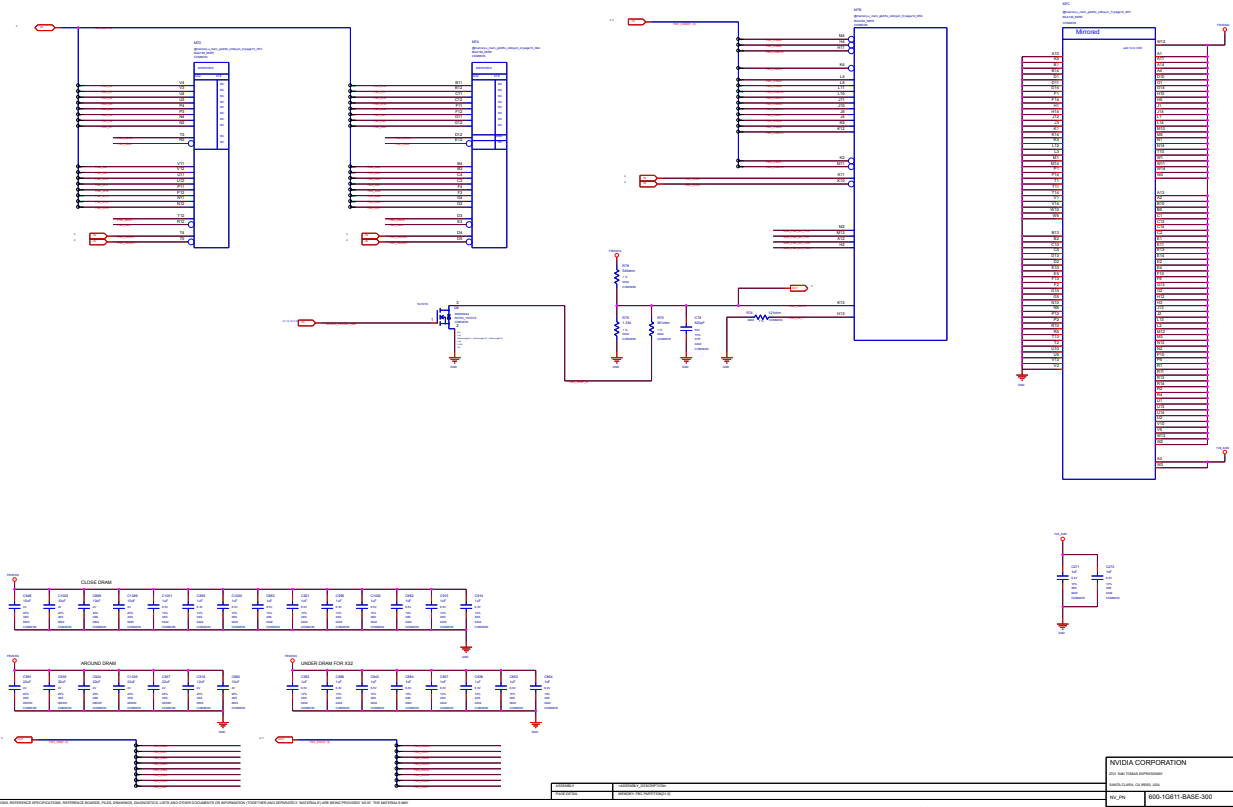

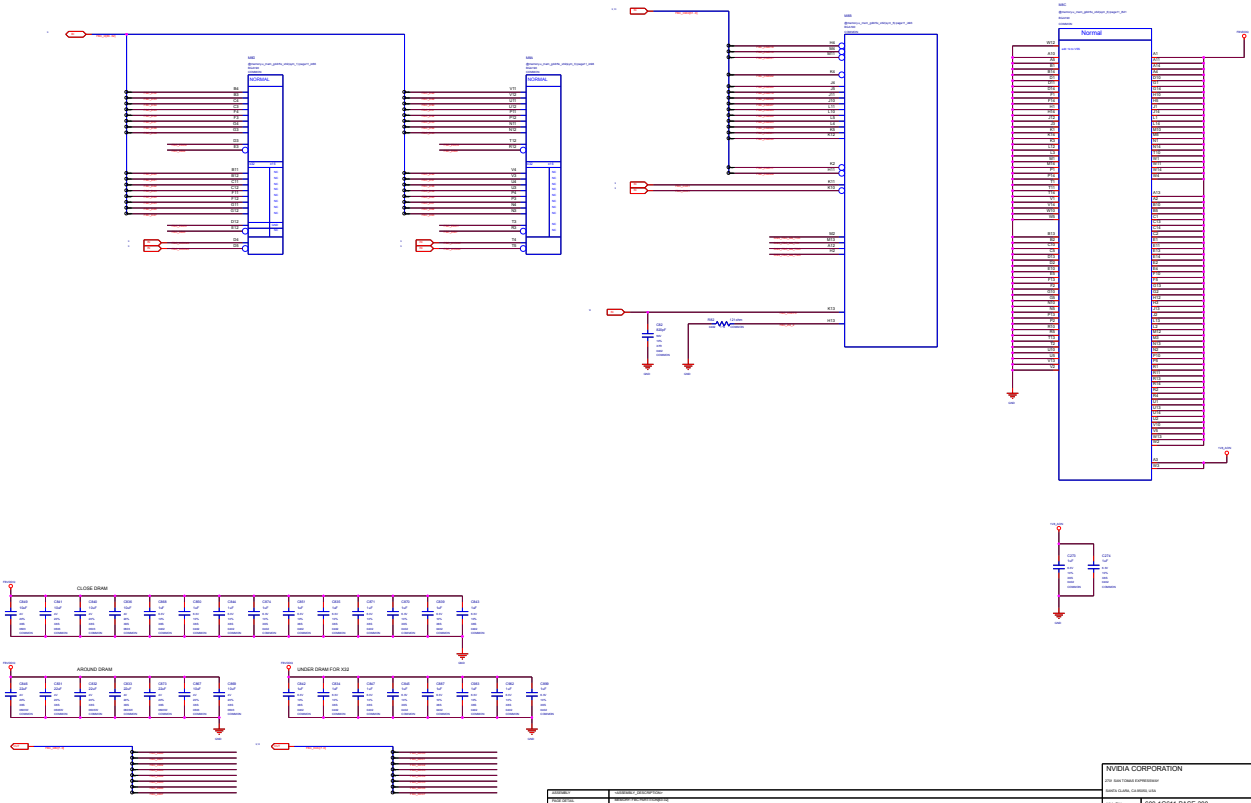

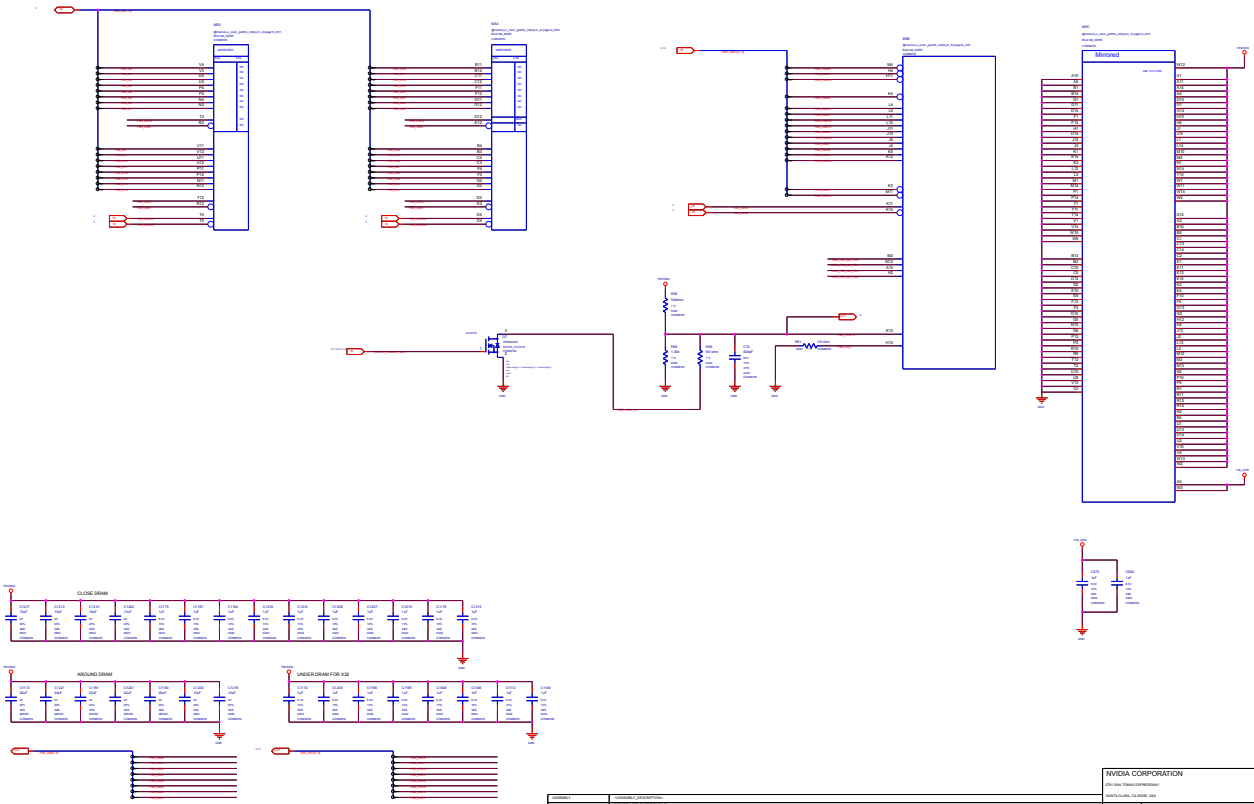

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2701 SAN TOMAS EXPRESSWAY

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TITLE	FBD Partition 31..0
SIZE	C
DOC NO	1G811-1000
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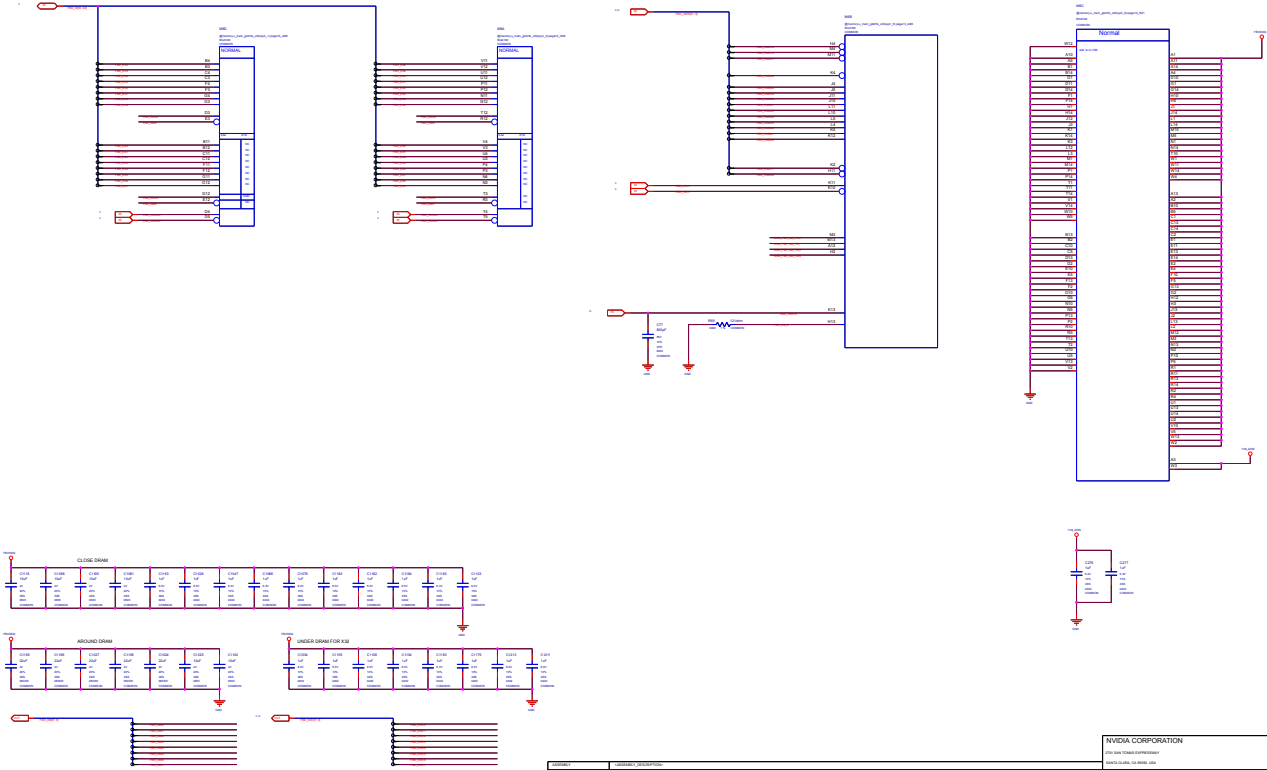
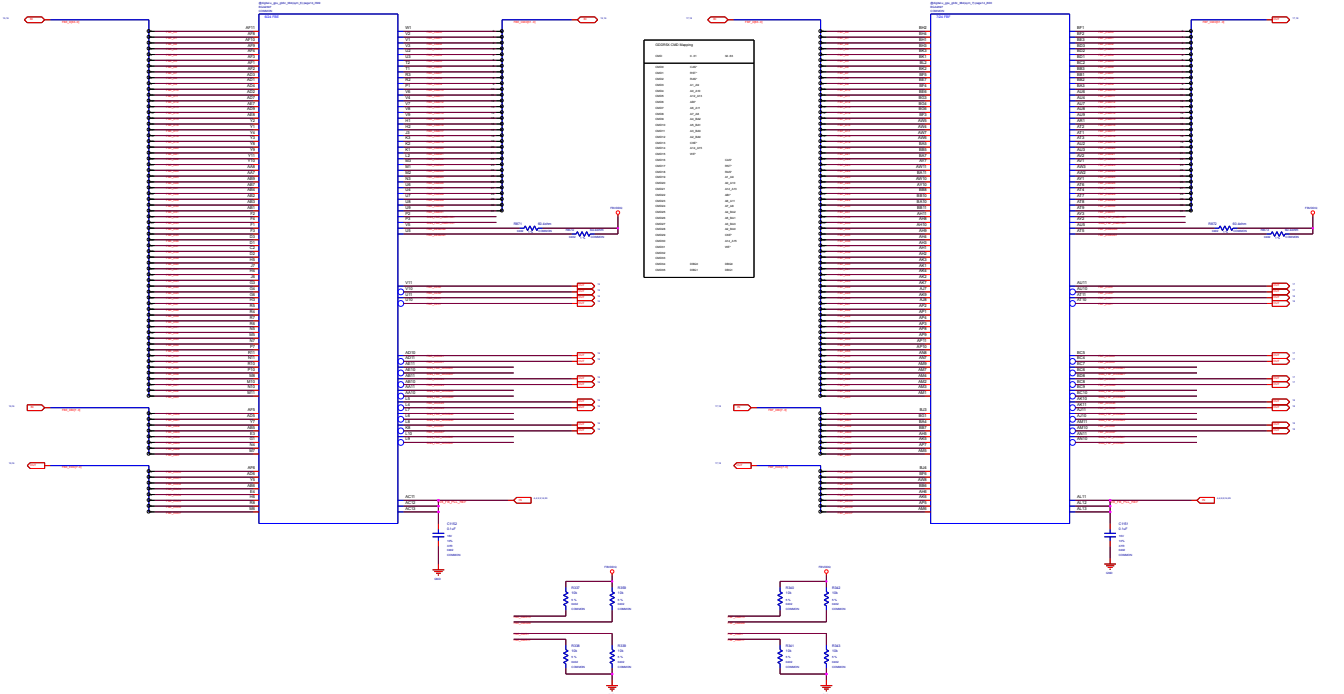
DATE	28 SEP 2010





NVIDIA CORPORATION	
2701 SAN TOMAS EXPRESSWAY	
SANTA CLARA, CA 95051 USA	
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ENGINEER	
DRAWN BY	
CHECKED	
SIZE	D
DATE	08-SEP-2016
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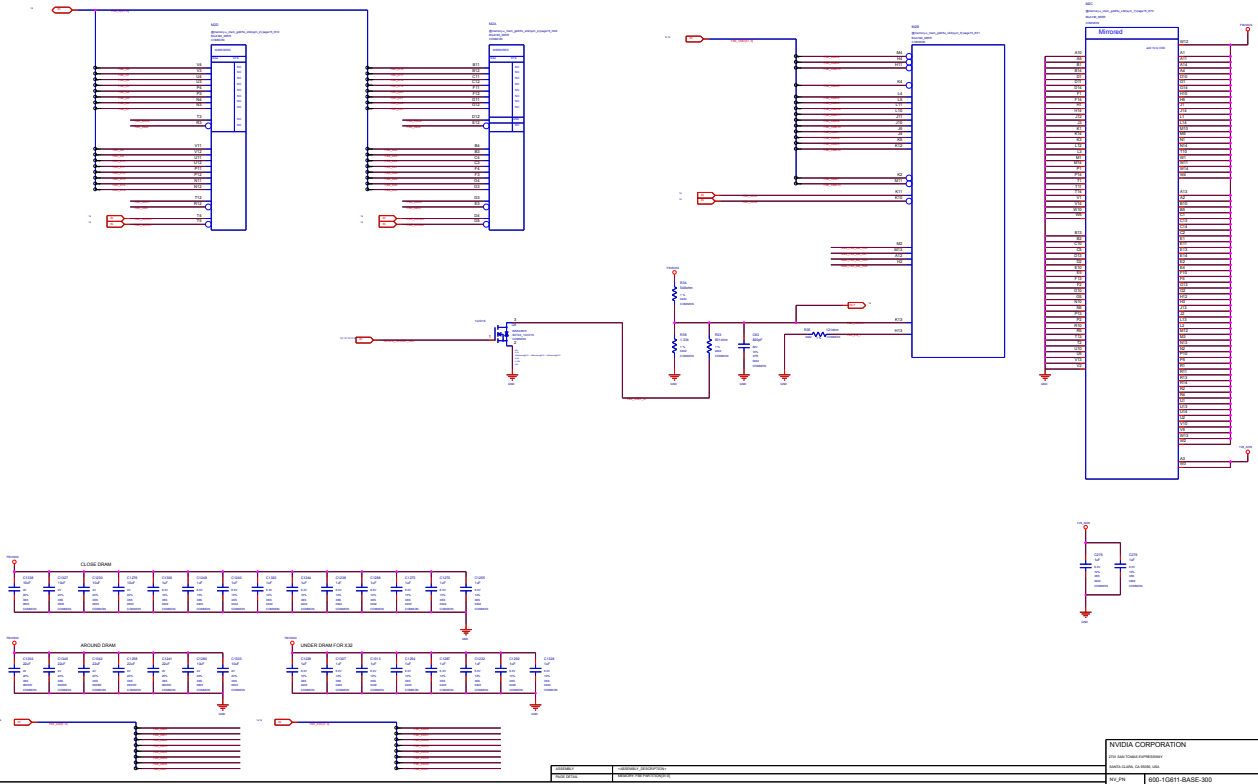
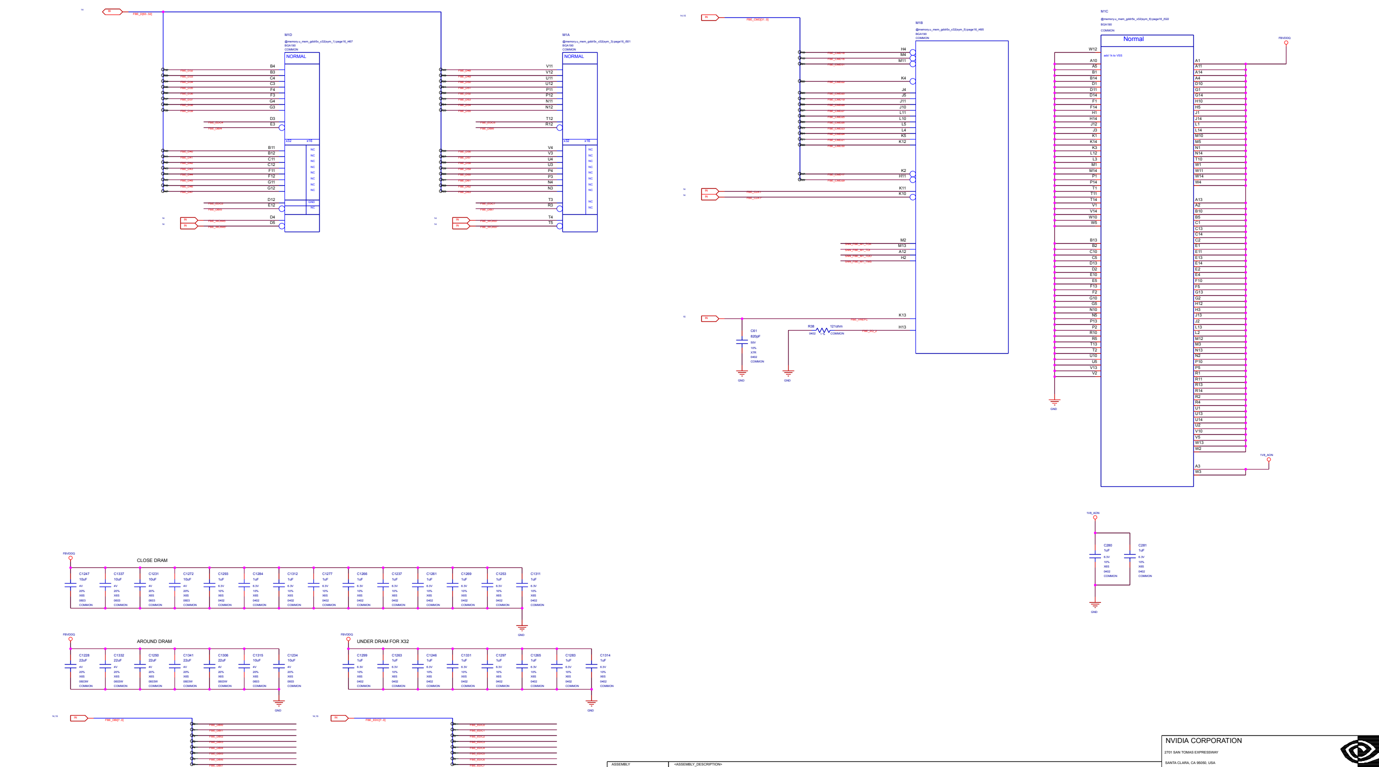


Page16: MEMORY: FBE Partition 63..32



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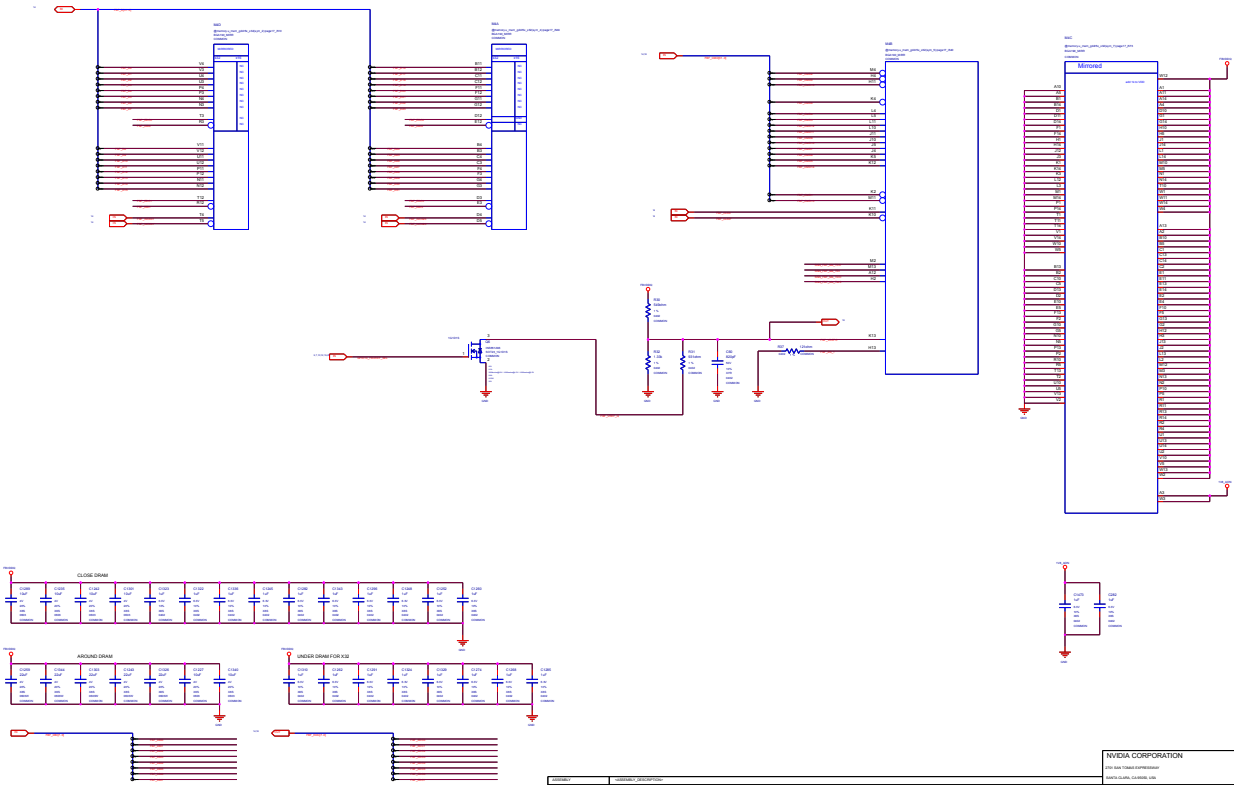

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NV_PN	600-10611-BASE-300
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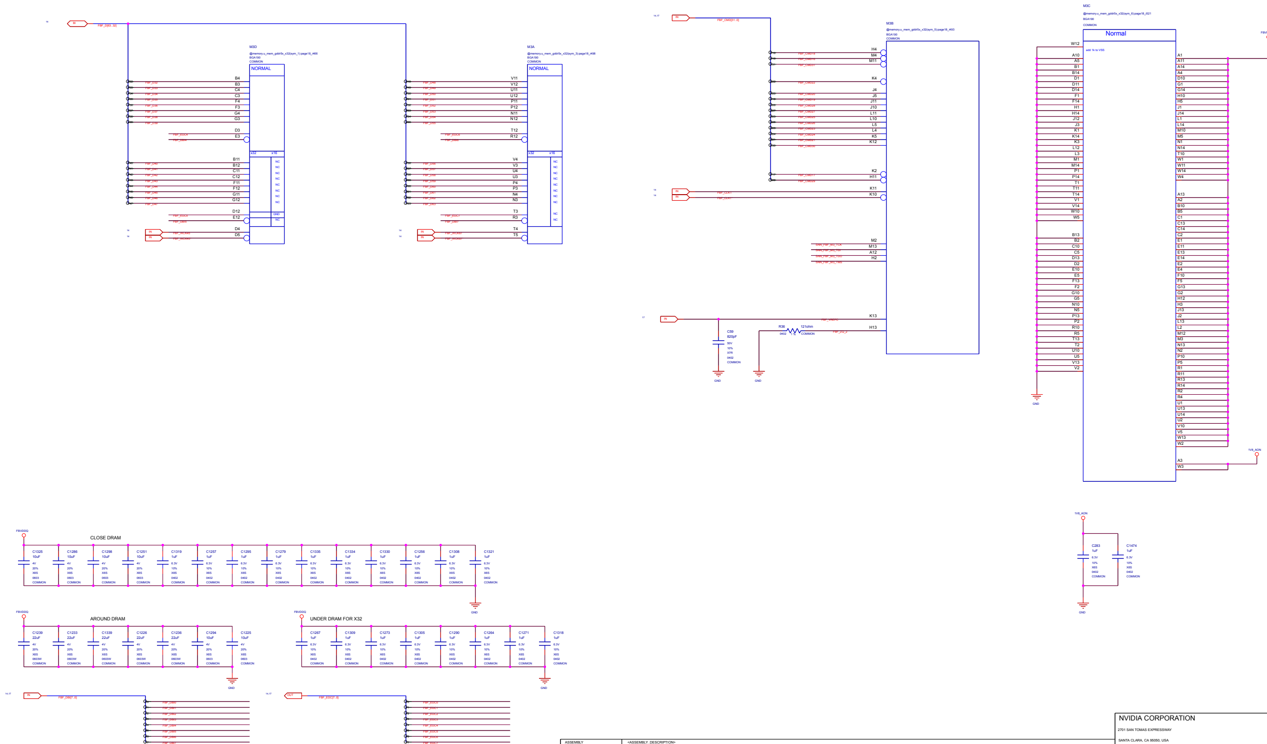
Page18: MEMORY: FBF Partition 63..32



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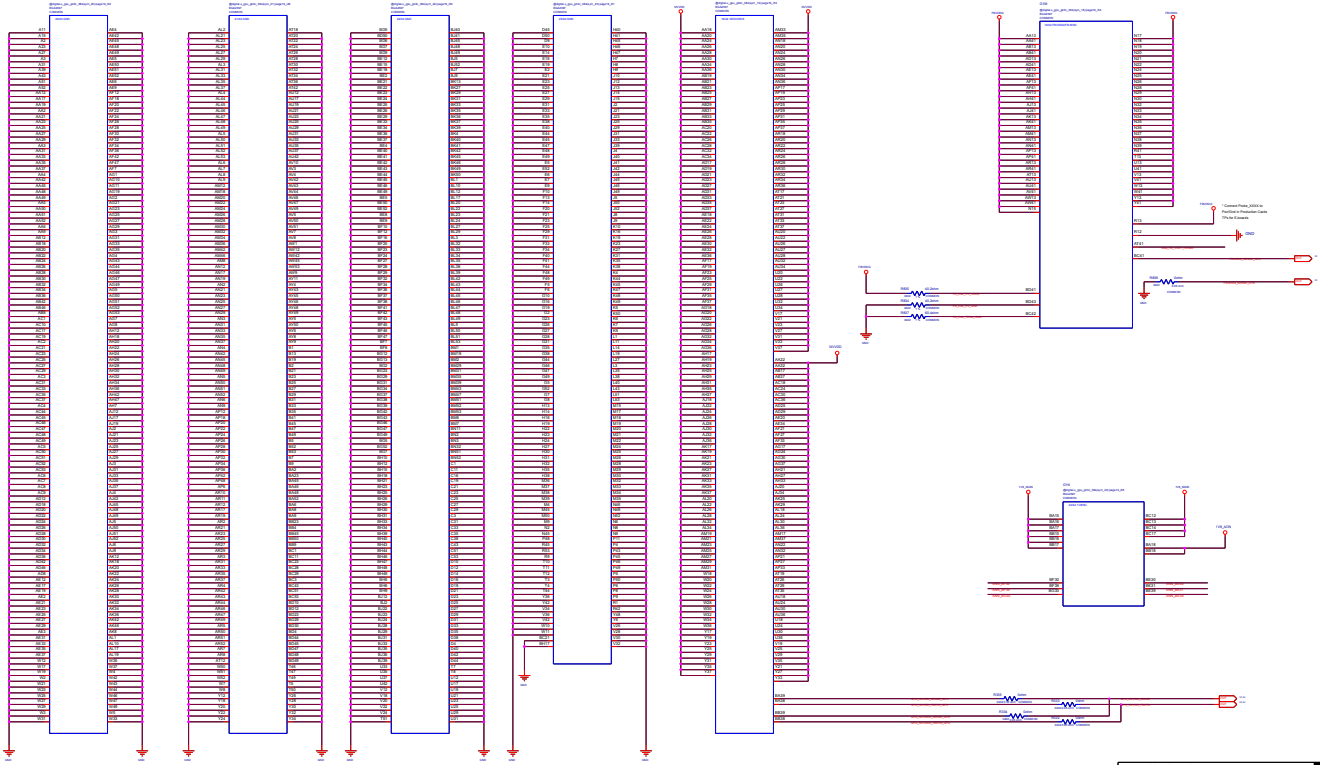
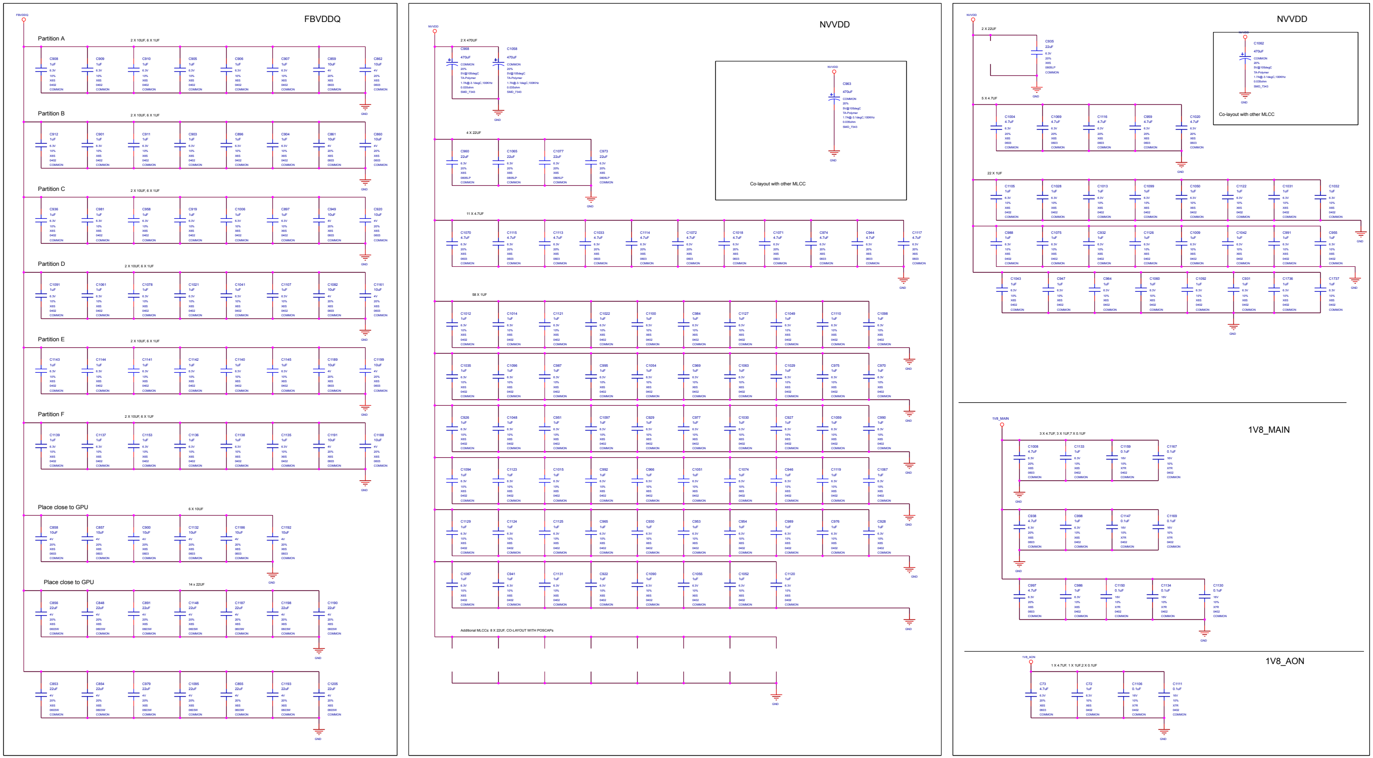


Page20: GPU Decoupling



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PAGE DETAIL	GPU DECOUPLING

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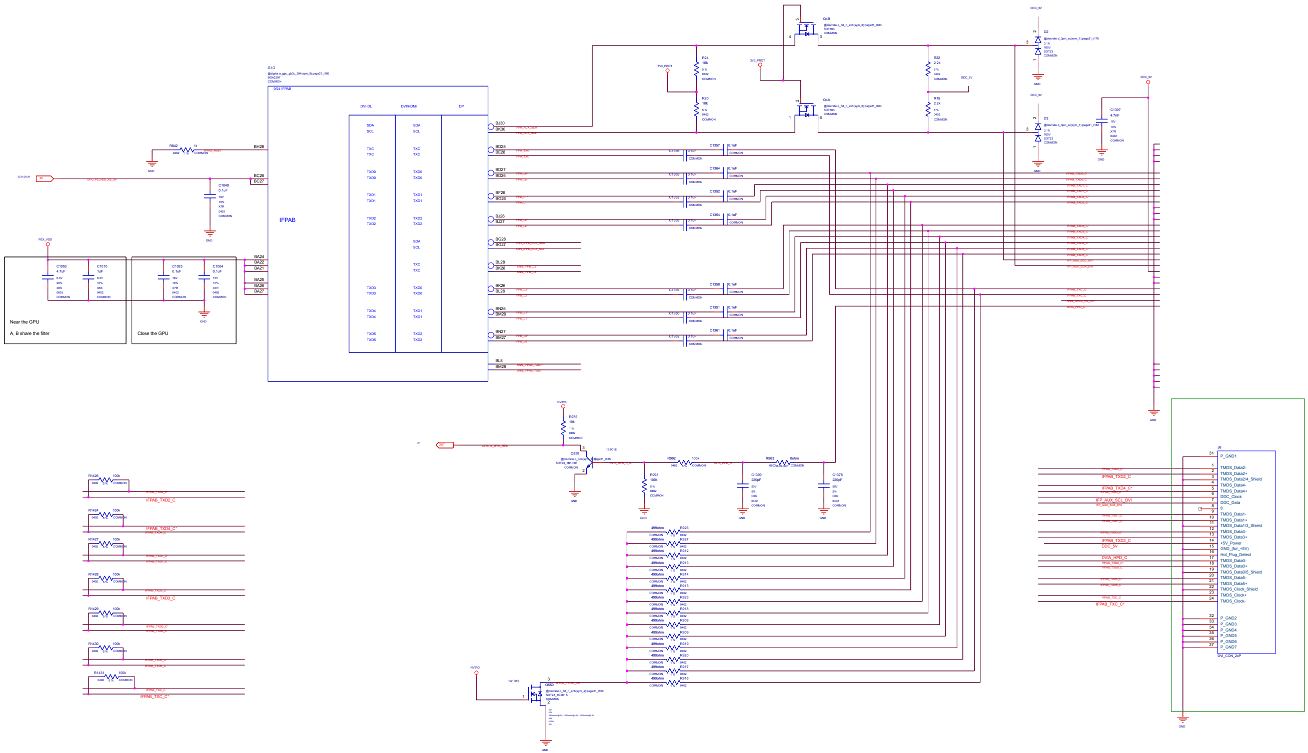
Page21: IFPAB DVI-D-DL



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NV_PN	600-1G611-BASE-300		
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2701 SAN TOMAS EXPRESSWAY
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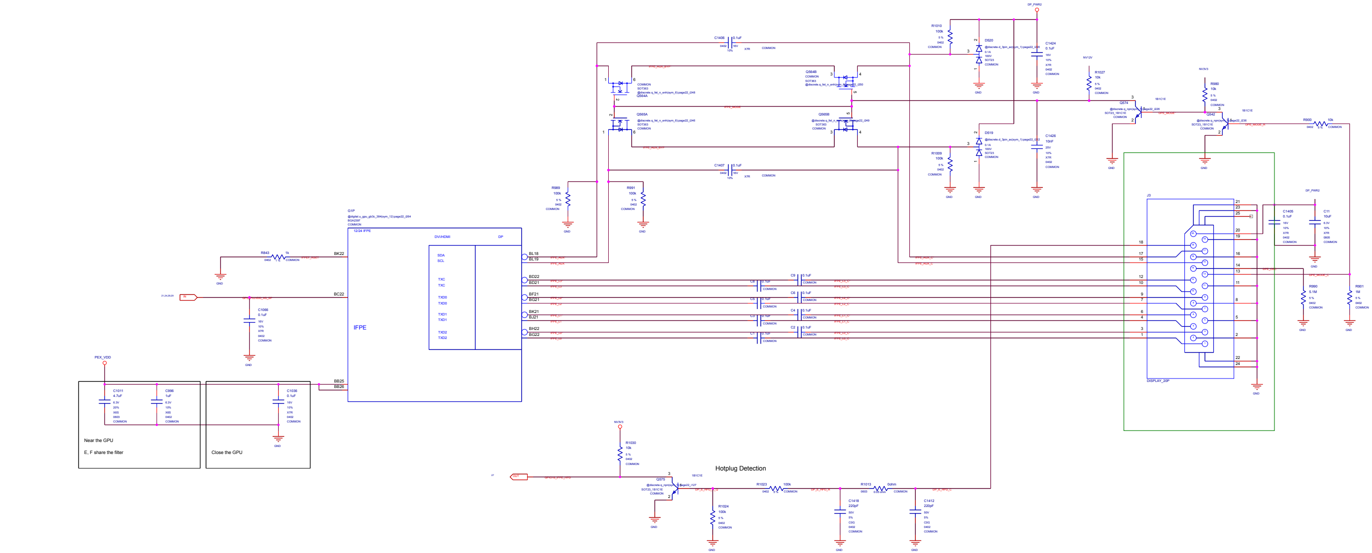
Page22: IFPE DP



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PAGE DETAIL	IFPE DP

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SANTA CLARA, CA 95050, USA

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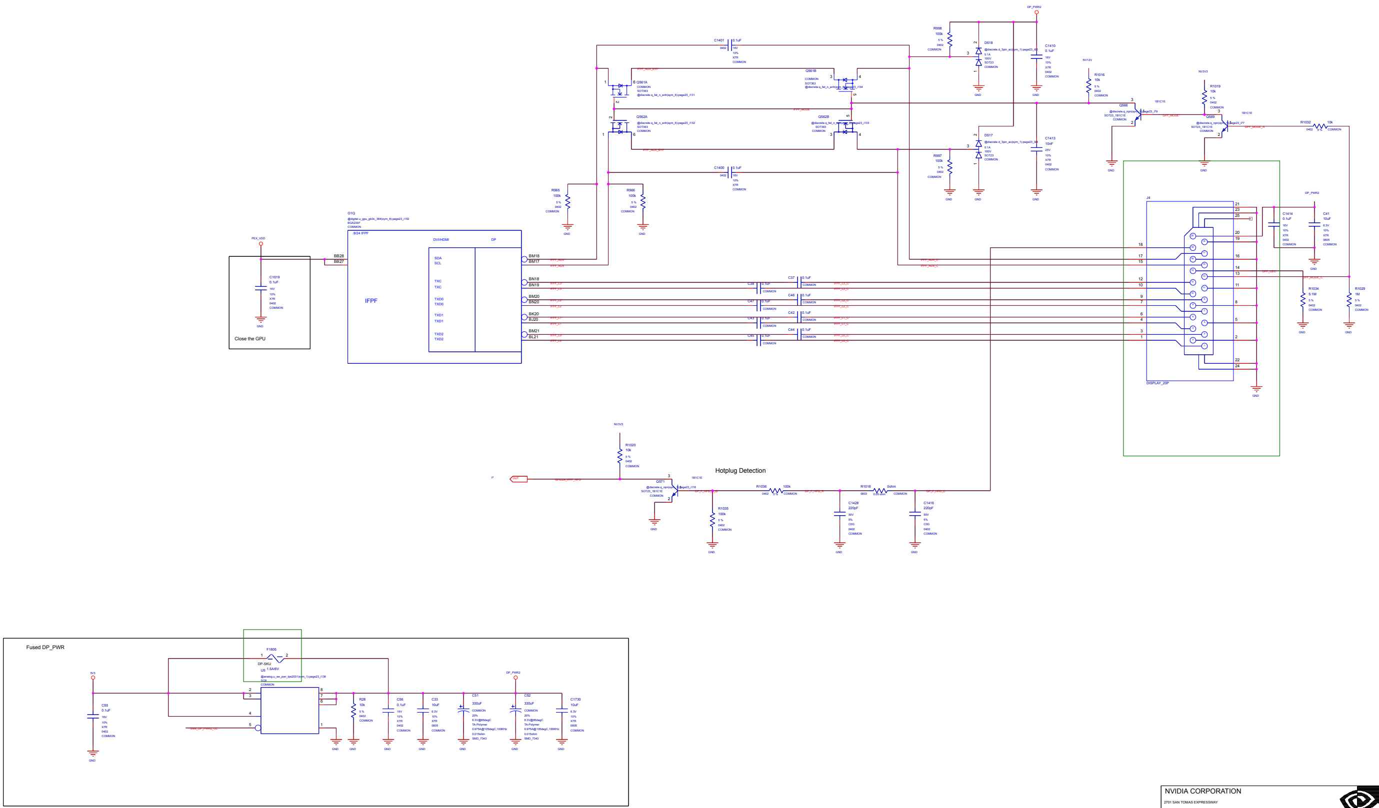
Page23: IFPF DP



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PAGE DETAIL	IFPF DP

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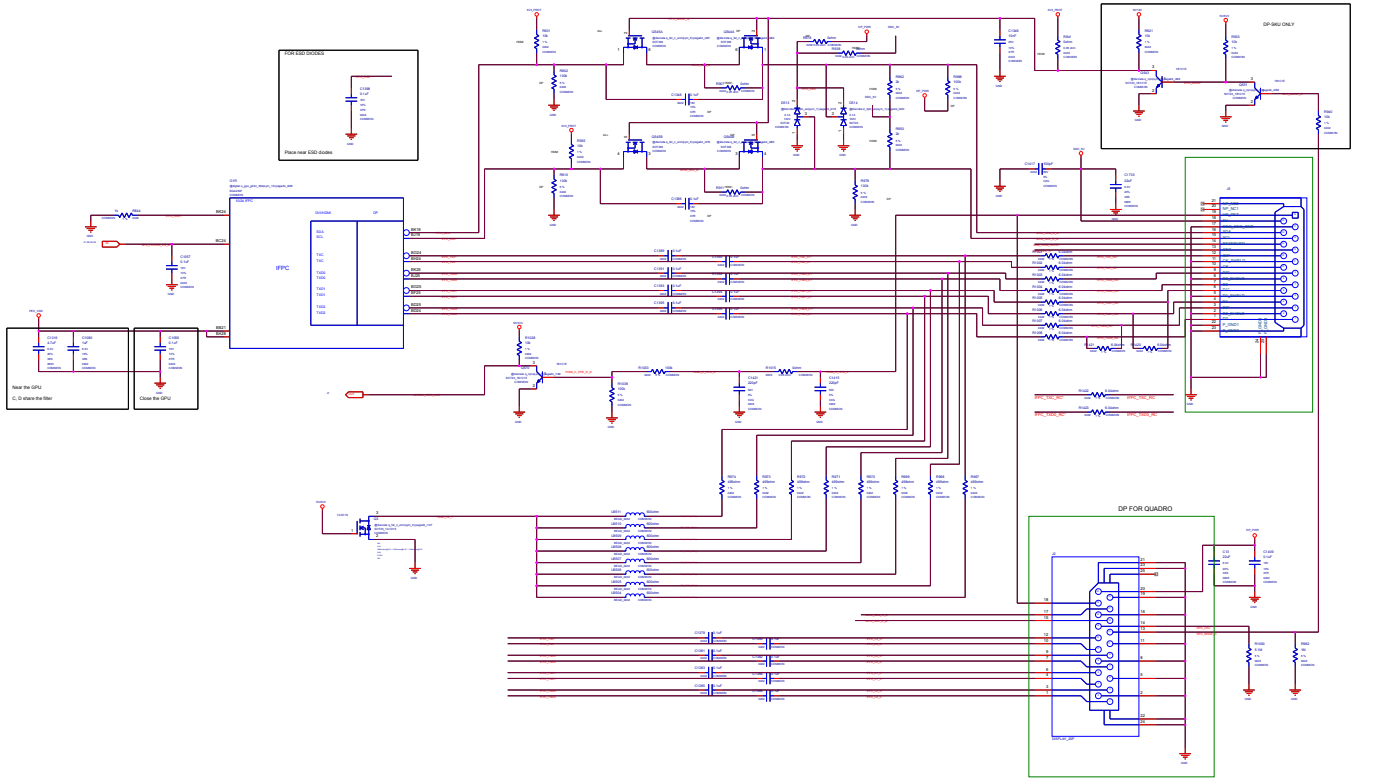
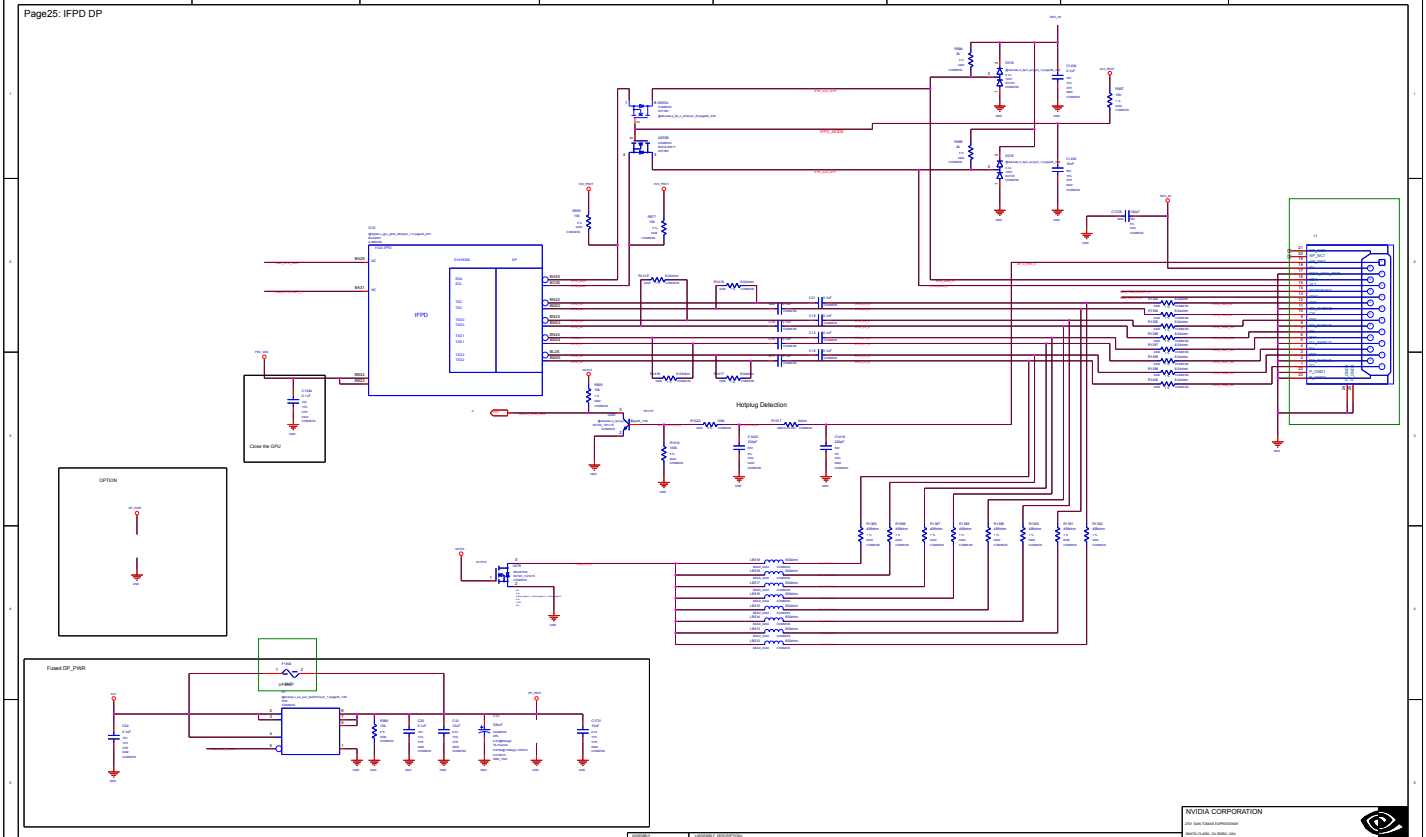
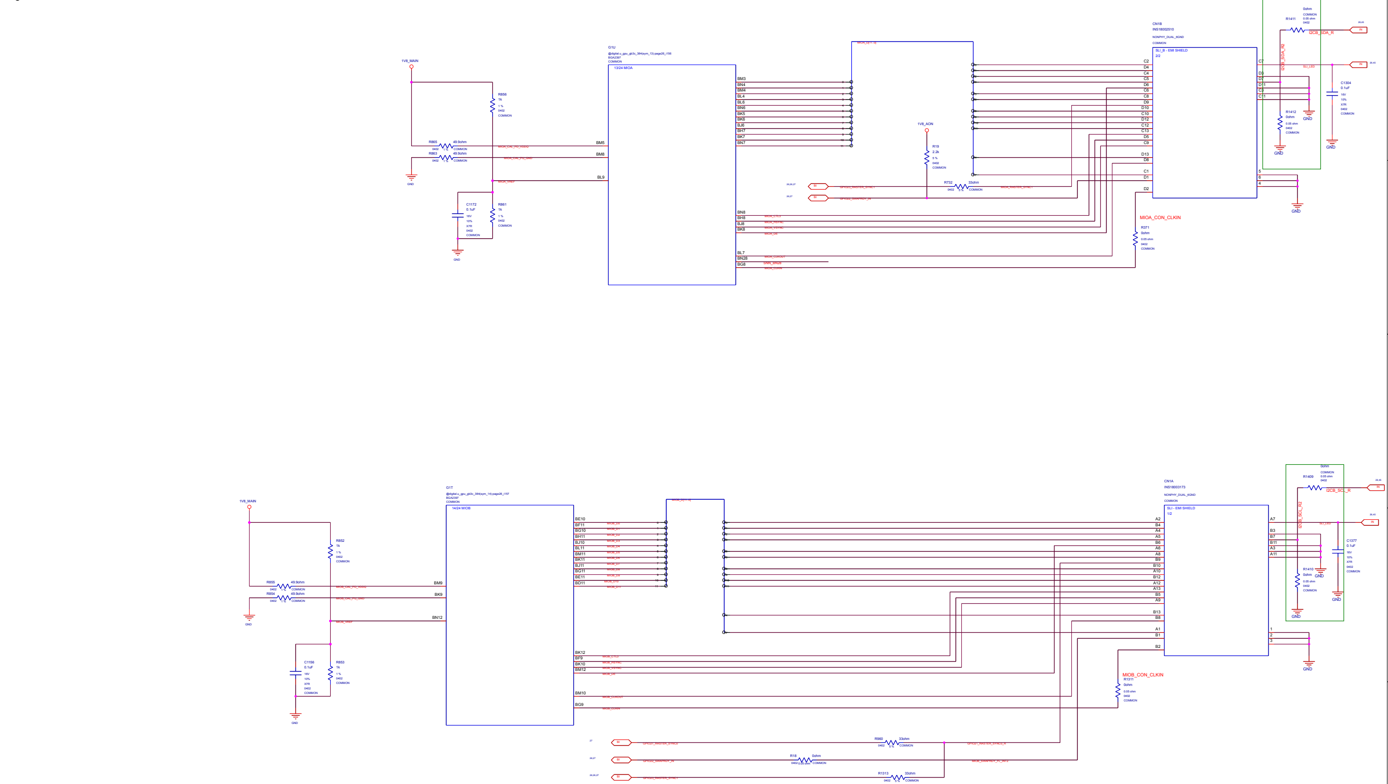




Page26: MIOA/B Interface and FRAME LOCK



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PAGE DETAIL	MIOA/B INTERFACE & FRAME LOCK

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
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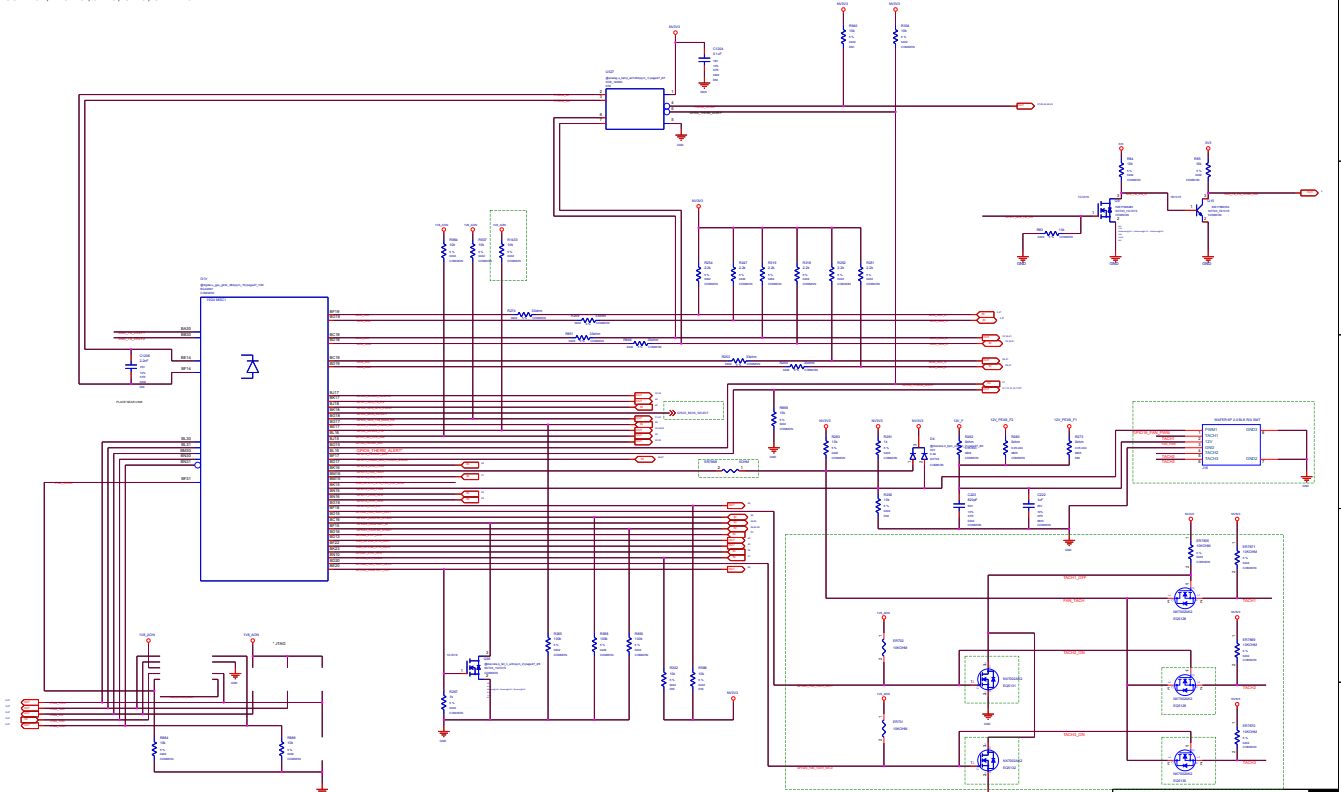


Page28: MISC2: ROM, Straps

STRAP2	STRAP1	STRAP0	RAMCFG[4:0]	
L	L	L	00000	
L	L	H	00001	
L	H	L	00010	MICRON 12Gbps REV.B
L	H	H	00011	
H	L	L	00100	

ROM_SO	ROM_SI	ROM_SCLK	SOR_EXPOSED[3:0]	1:ENABLE 0:DISABLE
L	L	L	1111 DEFAULT	SOR0/1/2/3 ENABLE
L	L	H	1110	
L	H	L	1101	
L	H	H	1100	
H	L	L	1011	
H	L	H	1010	
H	H	L	1001	
H	H	H	1000	
L	L	M	0111	
L	M	L	0110	
L	M	H	0101	
L	H	M	0100	
H	L	M	0011	
H	M	L	0010	
H	M	H	0001	
H	H	M	0000	

STRAP5	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCIE_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 DEFAULT
L	L	L	0	0	0	0

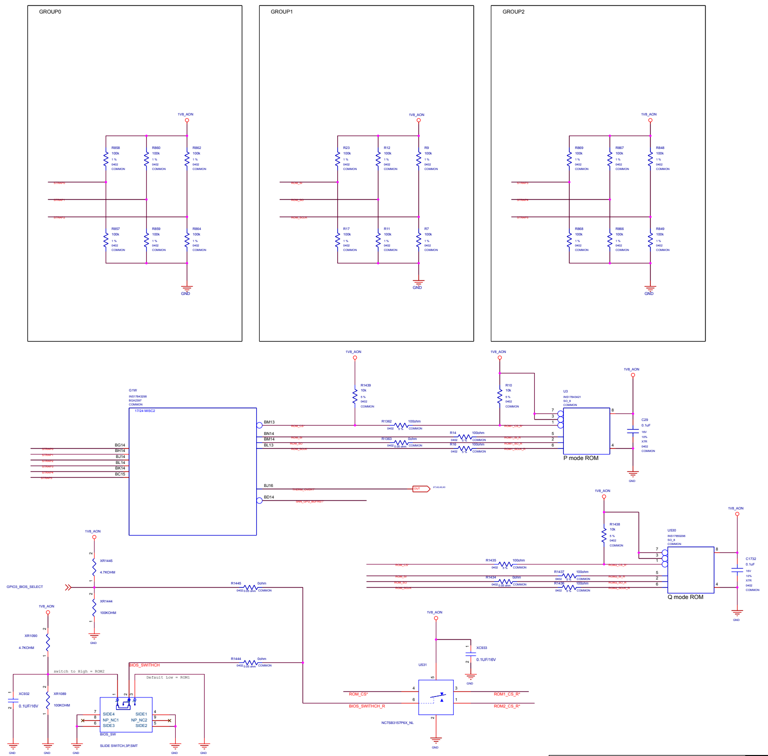
H=High :Tied to 1.8V
M=Middle:Tied to 0.9V
L=Low :Tied to 0V

1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE

1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGNAL

1:PCIE_CFG LOW POWER
0:PCIE_CFG HIGH POWER

1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE



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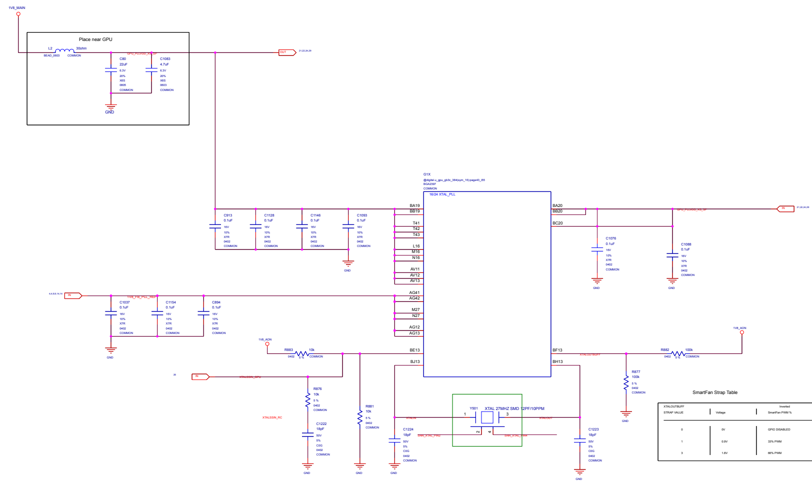
PAGE DETAIL	MISC: ROM, STRAPS



SmartFan Strap Table

XTALOUTBUFF STRAP VALUE	Voltage	Inverted SmartFan PWM %
0	0V	GPIO DISABLED
1	0.9V	33% PWM
3	1.8V	66% PWM

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	MISC: XTAL, PLL

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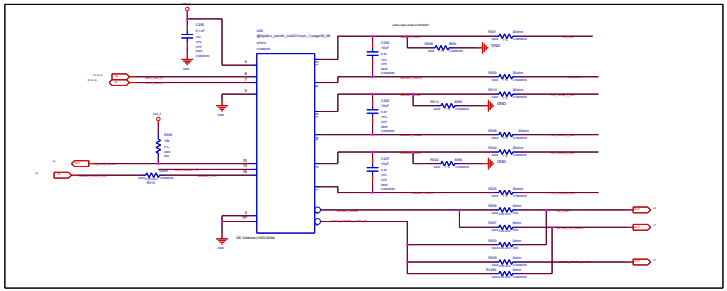
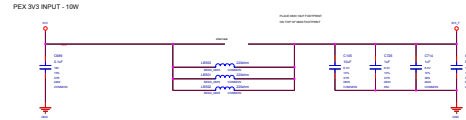
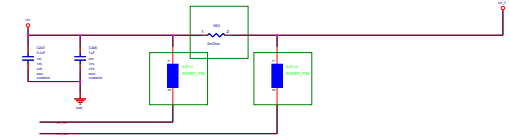
Page41: PS: Inputs, Filtering, and Monitoring

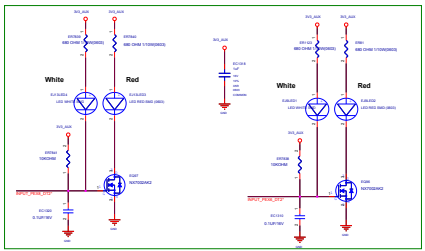


PEX 3V3 INPUT - 10W



PEX_12V INPUT - 66W





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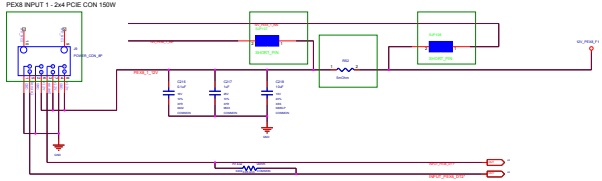
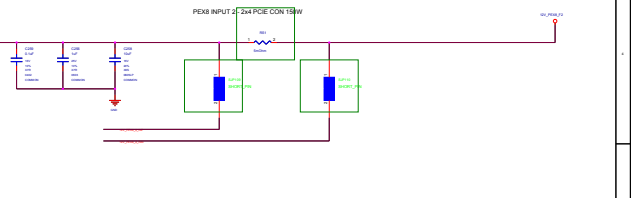


PEX8 INPUT 2 - 2x4 PCIE CON 150W



ASSEMBLY	ASSEMBLY_DESCRIPTION
PAGE TITLE	PS: Inputs, Filtering, and Monitoring

NVIDIA CORPORATION
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NV_PN	600-10611-BASE-300
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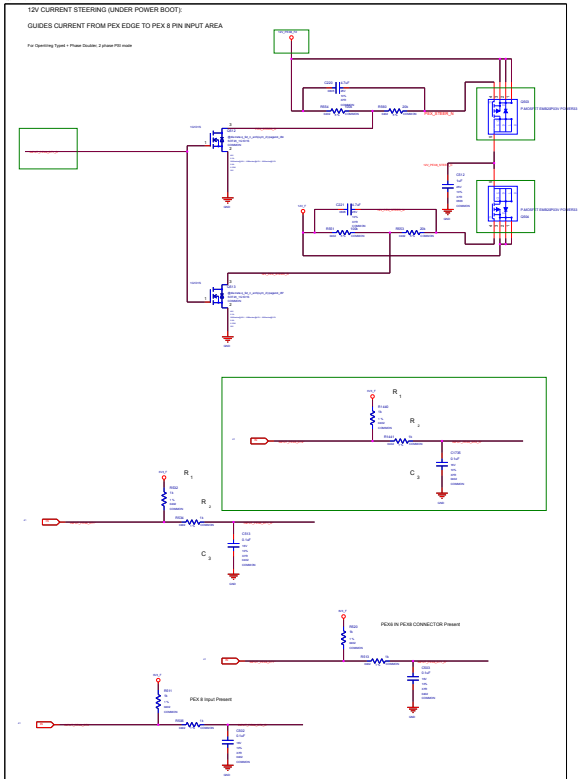
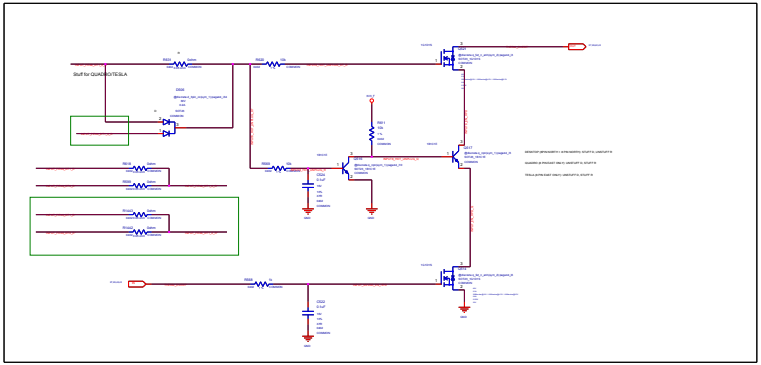
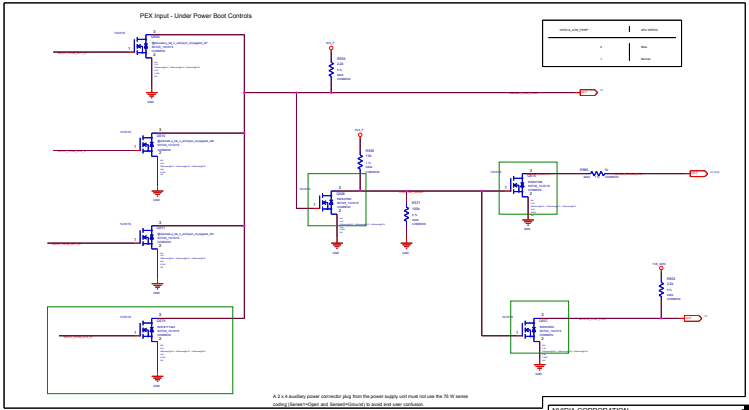
Page42: PS: 12V Current Steering & Hot Unplug Detect



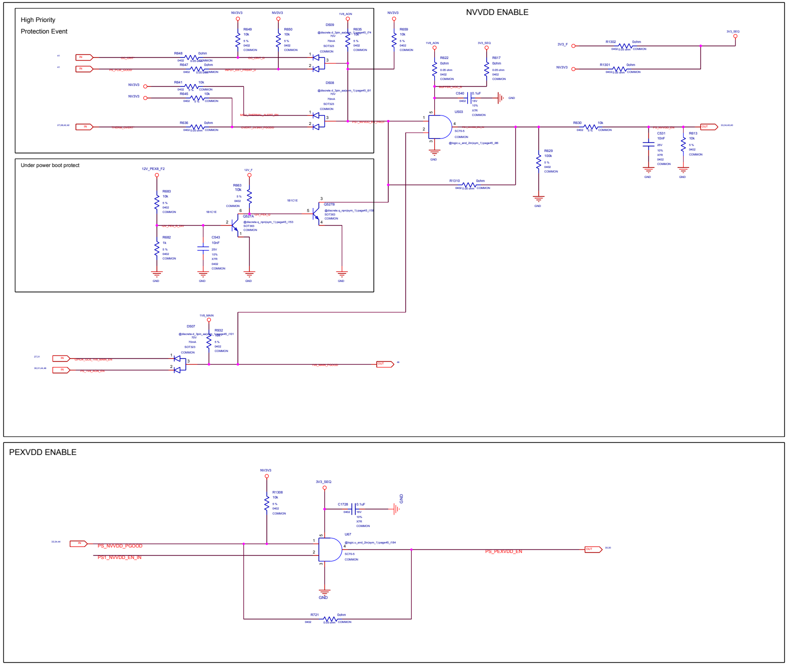




NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95051, USA

DOCUMENT NUMBER	600-1G611-BASE-300
SIZE	D
REVISION	A01
SHEET	42 OF 48
DRAWN BY	
DATE	08-SEP-2015

Page43: PS: NVVDD ENABLE

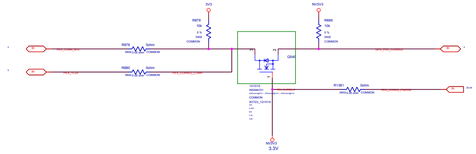


ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: NVVDD ENABLE

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

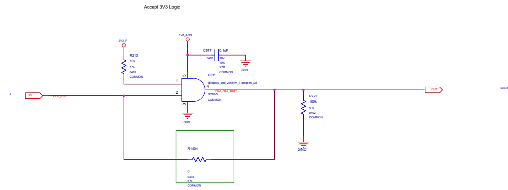
NV_PN	600-1G611-BASE-300		
PCB REV	PG611-C00	PAGE	43 OF 49
BOM REV	A	DATE	26-SEP-2016

PEX_CLKREQ*

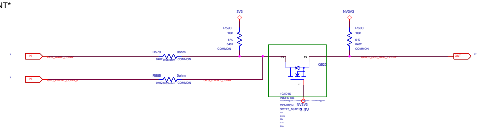


PEX_RST# LOGIC

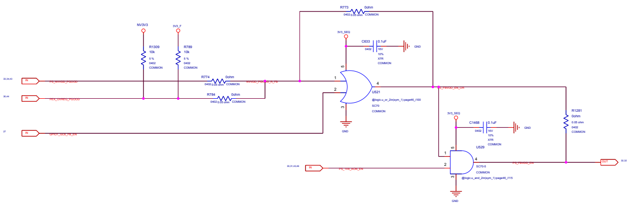
Accept 3V3 Logic



GPU_EVENT*



FBVDD/Q ENABLE



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: GC6 MISC

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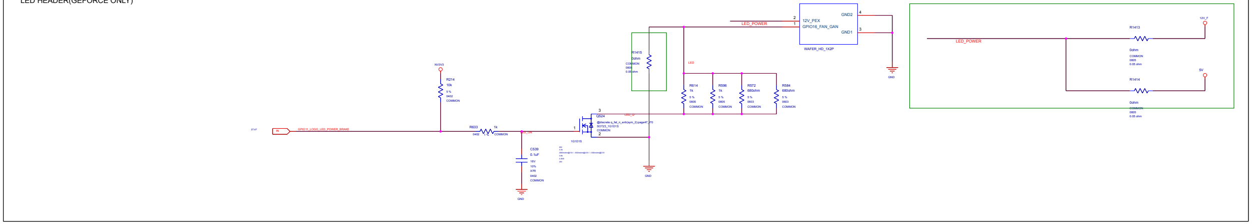
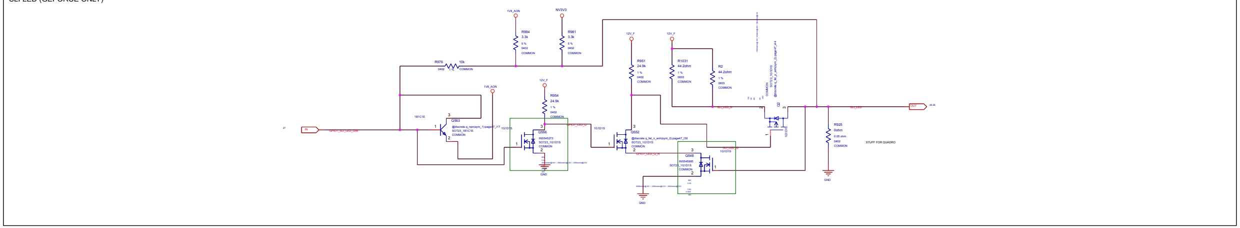
NV_PN	600-1G611-BASE-300		
PCB REV	PG611-C00	PAGE	44 OF 49
BOM REV	A	DATE	26-SEP-2016

Page45:GEFORCE LED & SLI LED

LED HEADER(GEFORCE ONLY)



SLI LED (GEFORCE ONLY)

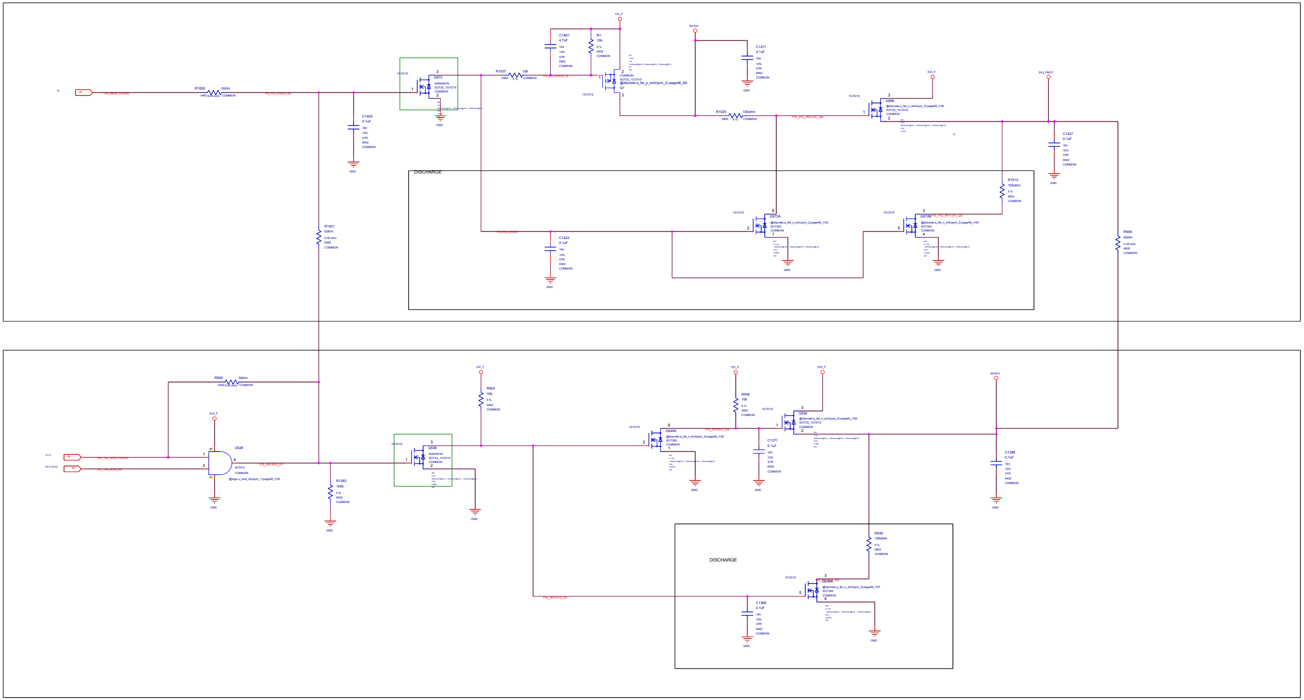


ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	GEFORCE LED AND SLI LED

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-1G611-BASE-300		
PCB REV	PG611-C00	PAGE	45 OF 49
BOM REV	A	DATE	26-SEP-2016

Page46:NV3V3, NV12V



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: NV3V3, NV12V

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
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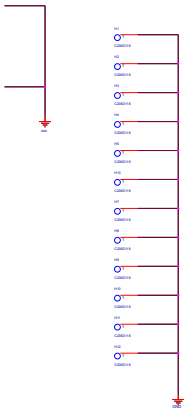
NV_PN	600-1G611-BASE-300		
PCB REV	PG611-C00	PAGE	46 OF 49
BOM REV	A	DATE	26-SEP-2016

Brackets:



Bracket Screw

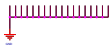
GPU Stiffener (BRING-UP COOLER)

QUAL COOLER STIFFENER

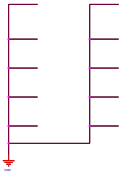
GPU HEATLINK

STIFFENER

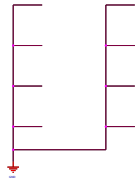
BOARD BACK PLATE



Mechanical Holes Symbol



GPU HOLES SYMBOL



CONTRACT	<ASSEMBLY_DESCRIPTION>
PWB DATA#	N/A

NVIDIA CORPORATION
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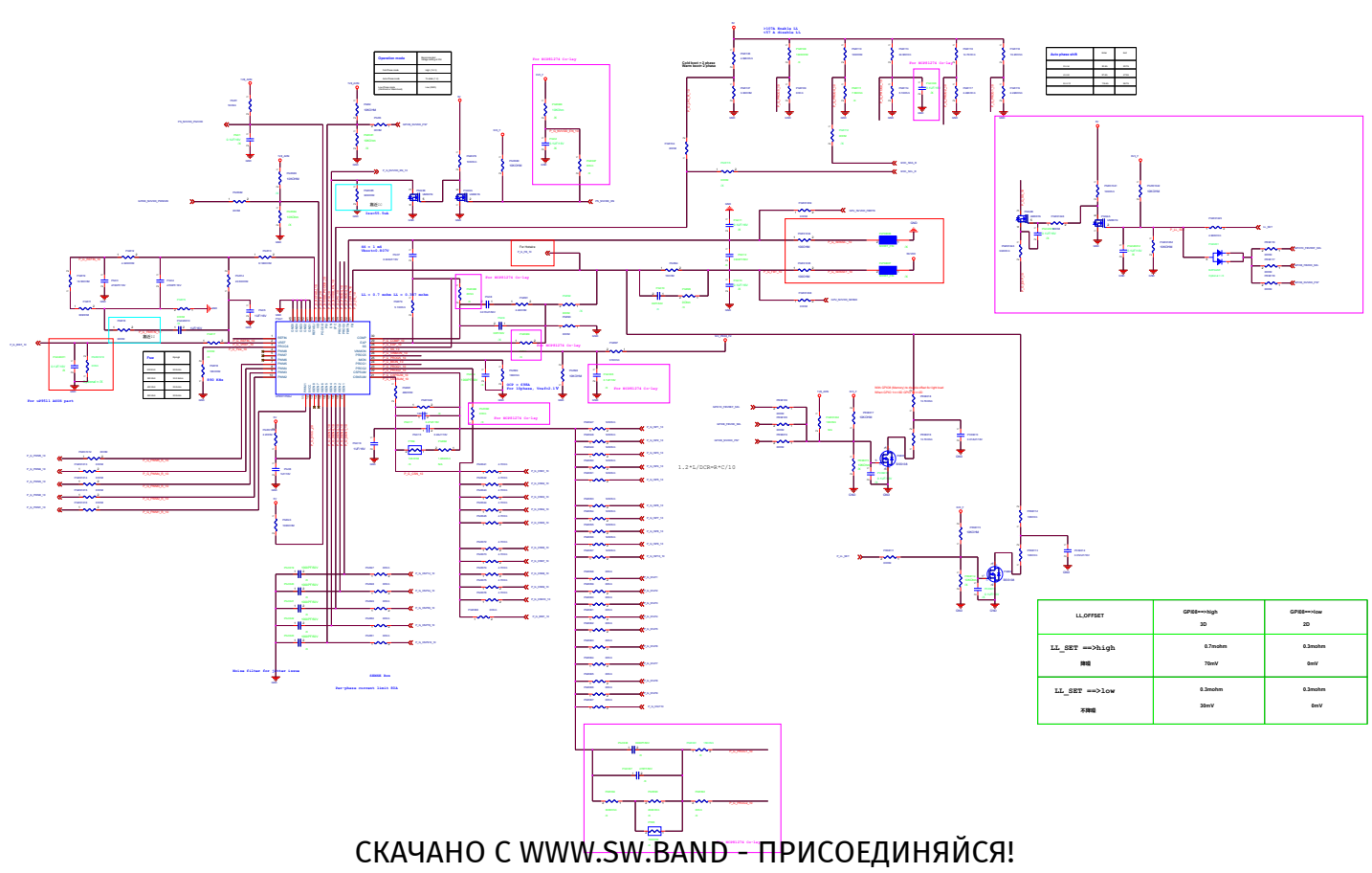
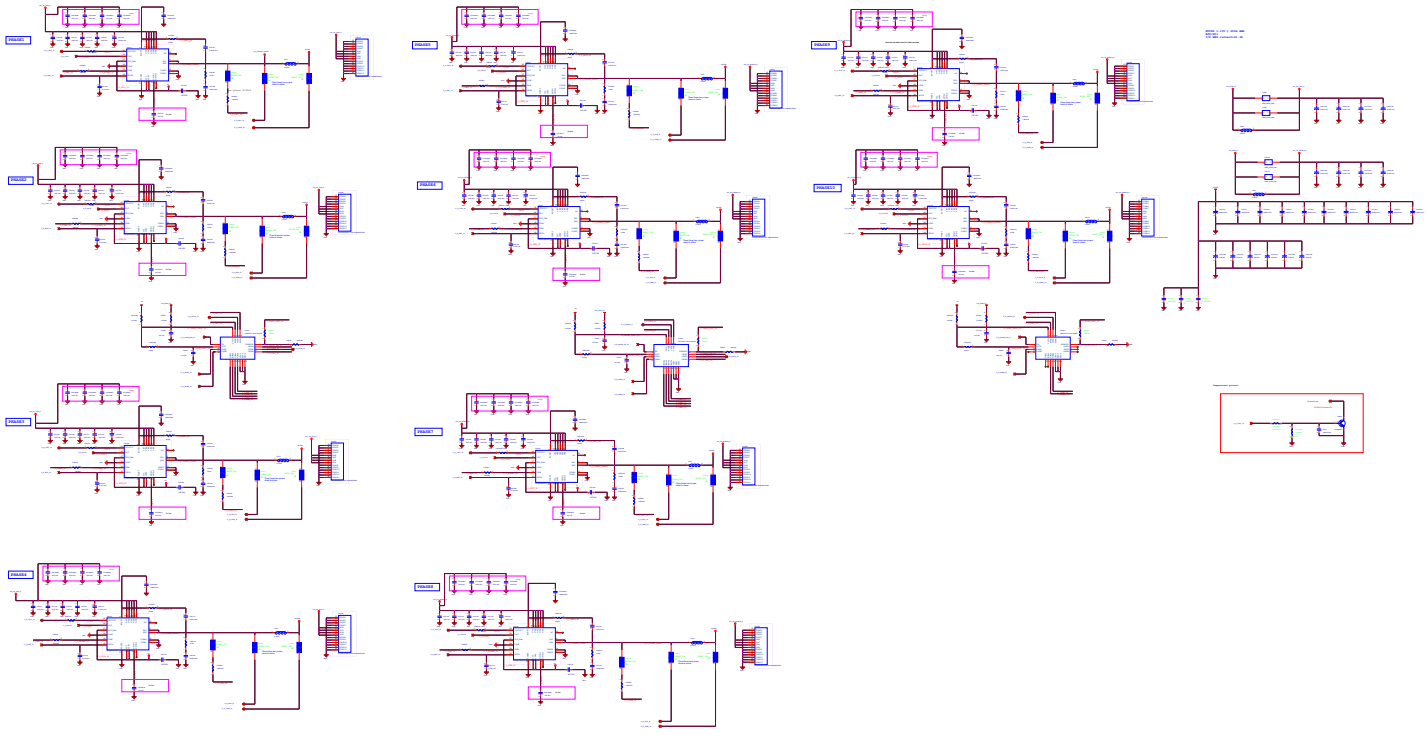
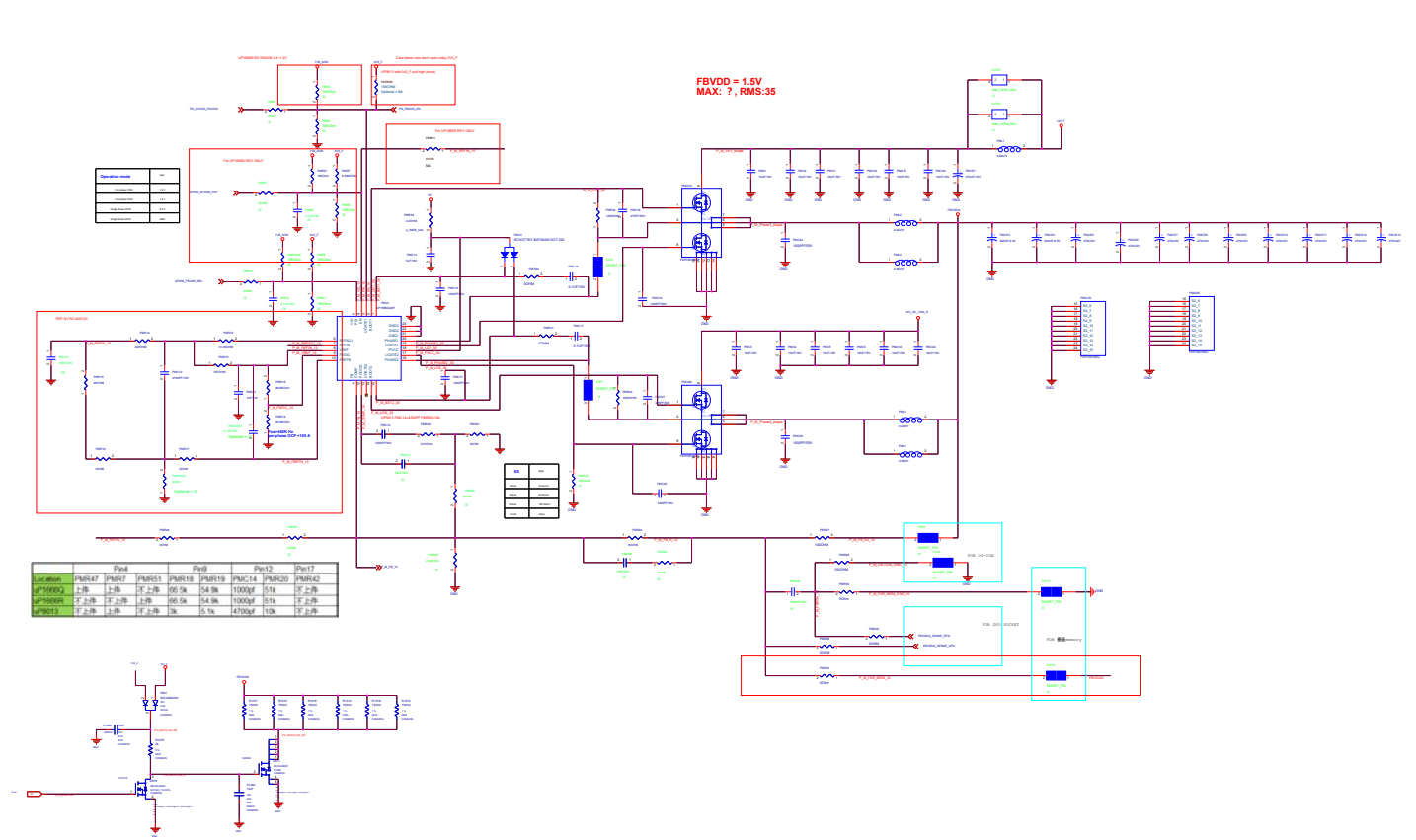
SANTA CLARA, CA 95050, USA

NV_PN	600-1G611-BASE-300
PCB REV	<PCB PN> DASH
SCM REV	A
PAGE	48 OF 48
DATE	30 SEP 2016

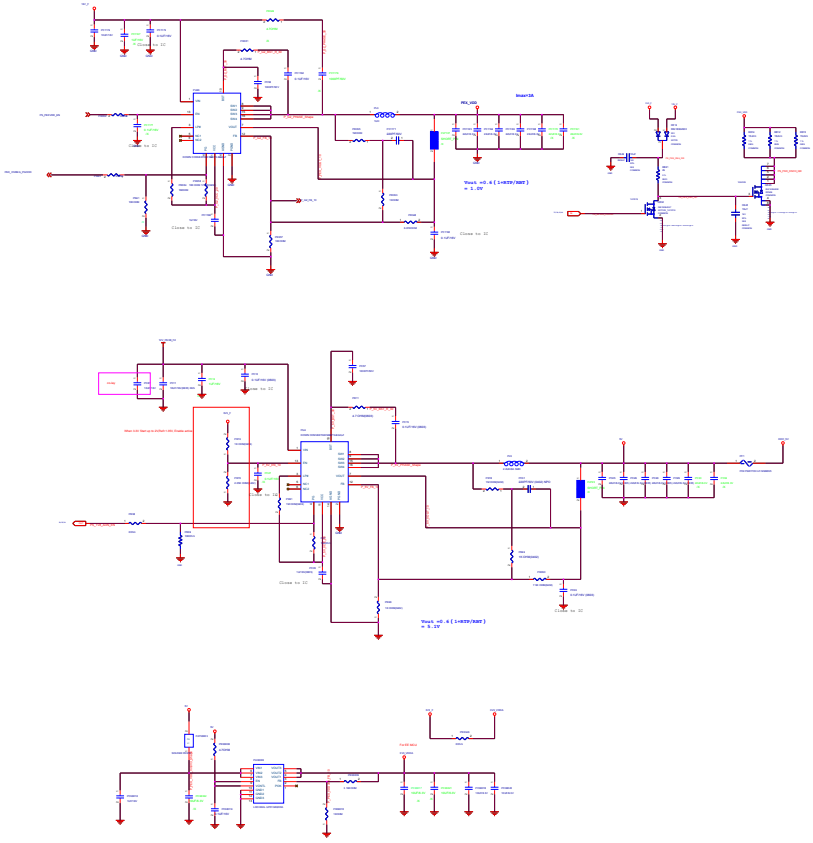


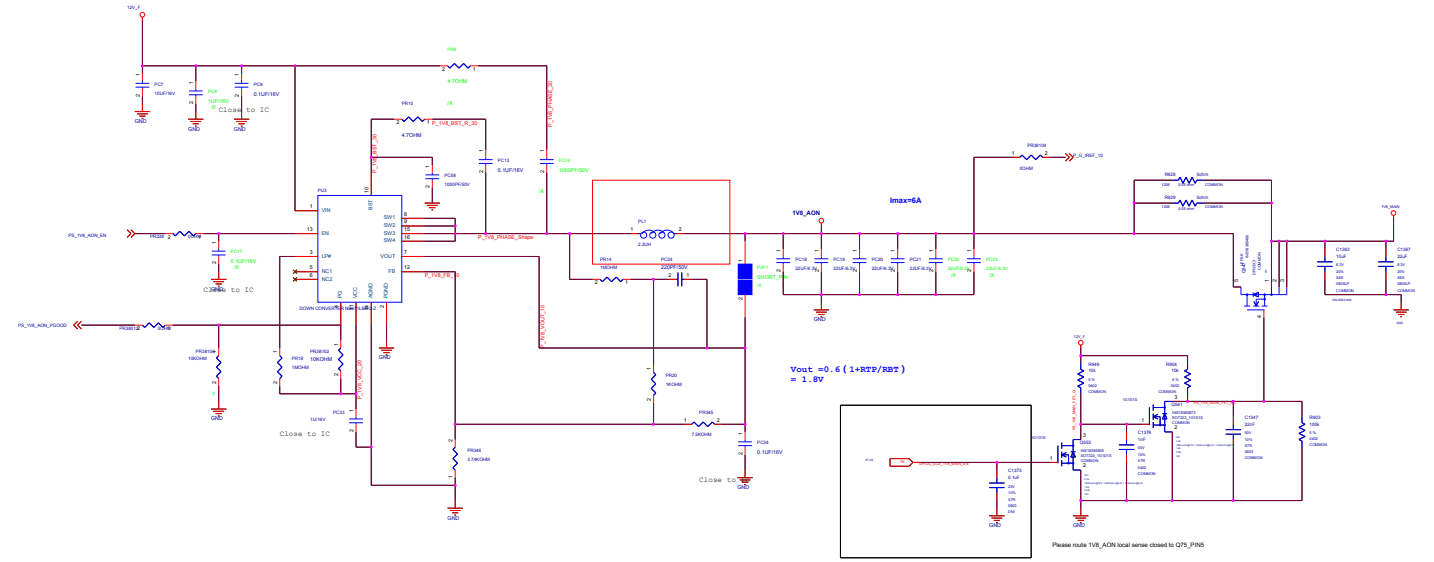
LL_OFFSET	GPIO0==high 3D	GPIO0==low 2D
LL_SET ==>high 降低	0.7mohm 70mV	0.3mohm 0mV
LL_SET ==>low 不降低	0.3mohm 30mV	0.3mohm 0mV

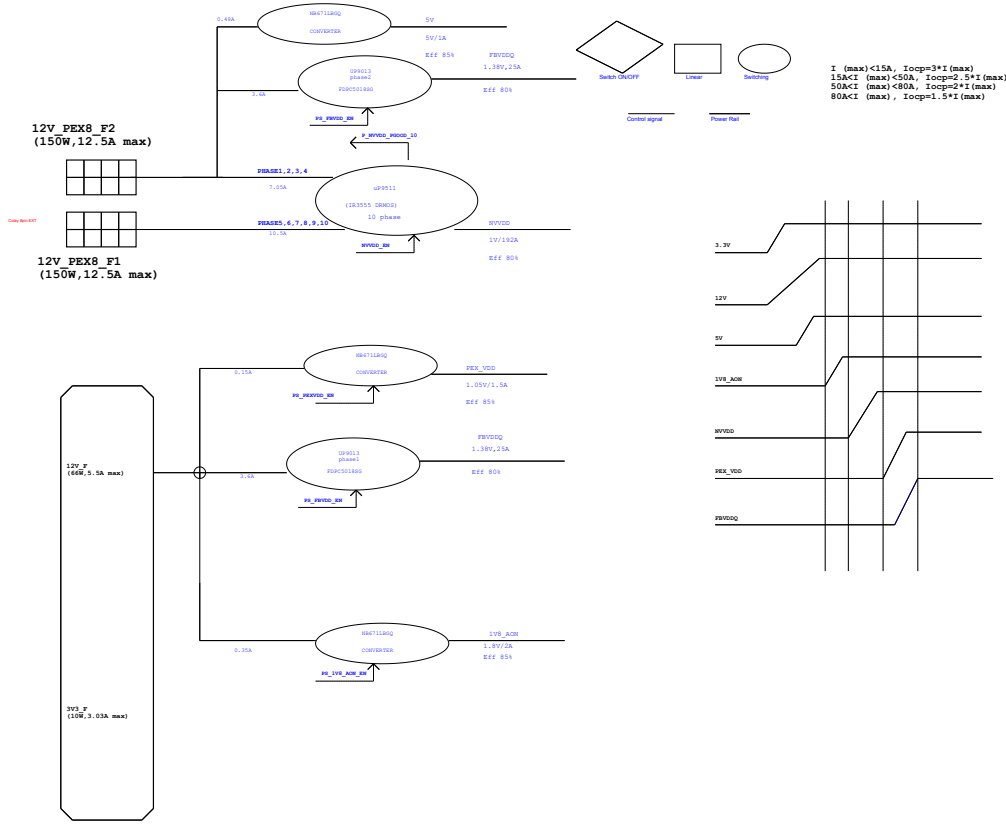


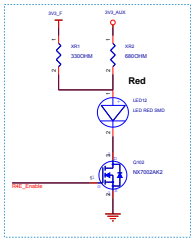


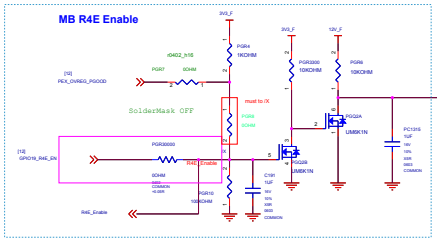
	Pin4			Pin9		Pin12		Pin17
Location	PMR47	PMR7	PMR51	PMR18	PMR19	PMC14	PMR20	PMR42
uP1666Q	上件	上件	不上件	66.5k	54.9k	1000pf	51k	不上件
uP1666R	不上件	不上件	上件	66.5k	54.9k	1000pf	51k	不上件
uP9511	不上件	上件	不上件	3k	5.1k	4700pf	10k	不上件











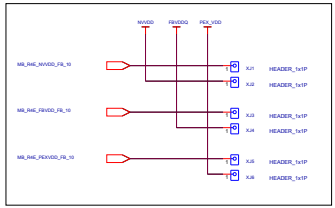
SOFT START (VR11)

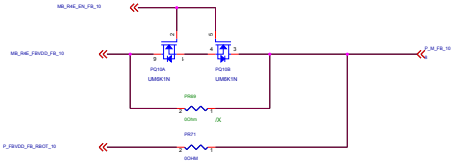
P-STATE VOLTAGES

1. P0 at 1.05V to 1.15V (depending on VB)
2. P8/P12 at 0.80V

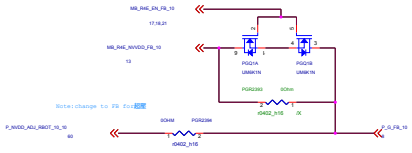
1. Ramp 0V to 1.10V in ~2mS
2. Hold at 1.10V for 170uS
3. Read VID
4. VID set to 0.9V during GPIO tri-state
   VID[5:1]=11000 to set 0.9125V

MB VGA Hotwire

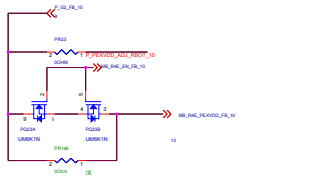




For MB R4E的預留超壓電路

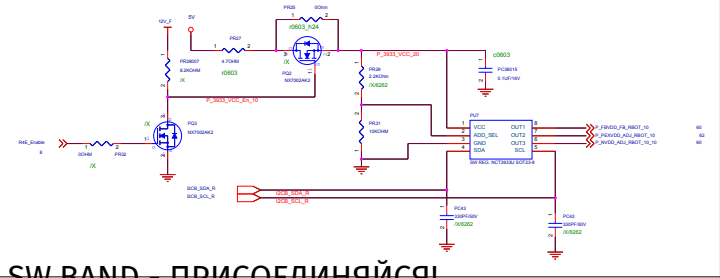


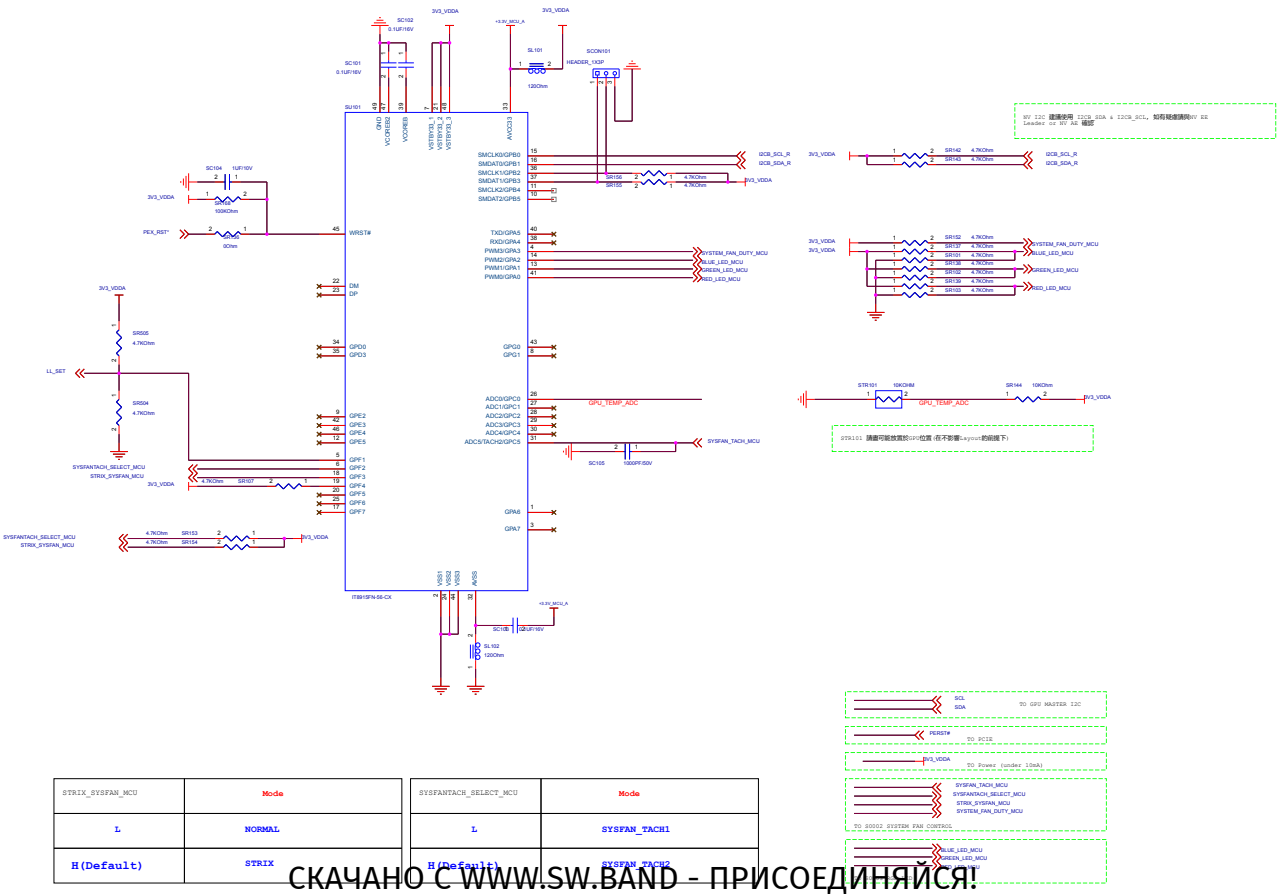
Note:change to LL for超壓 (RESERVE)



NCT3933U Over Voltage

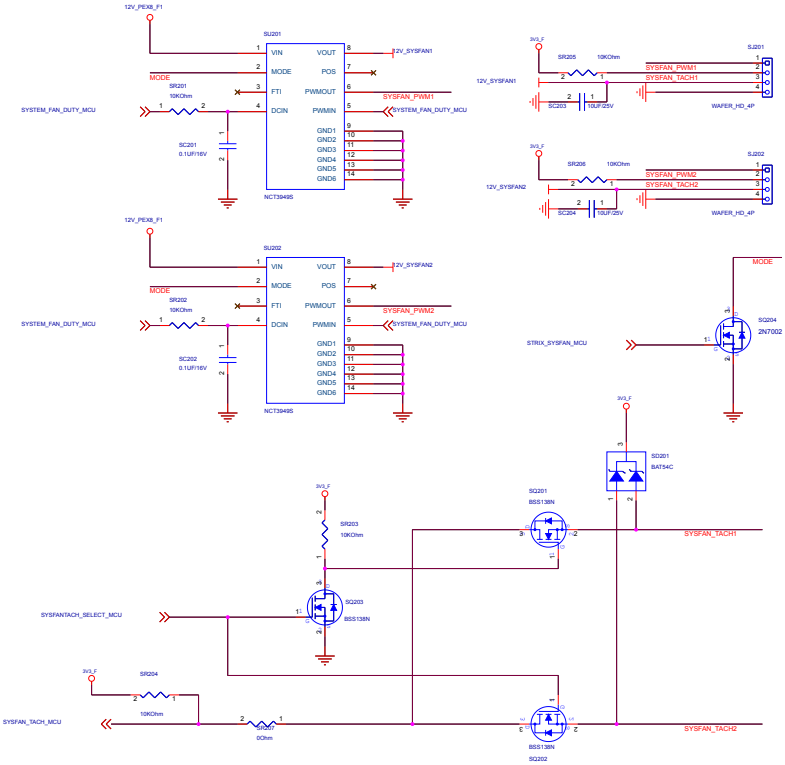
Address : 0x2A

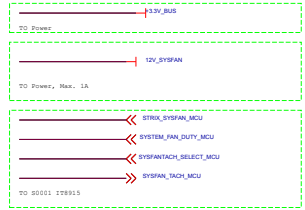




STRIX_SYSFAN_MCU	Mode
L	NORMAL
H(Default)	STRIX

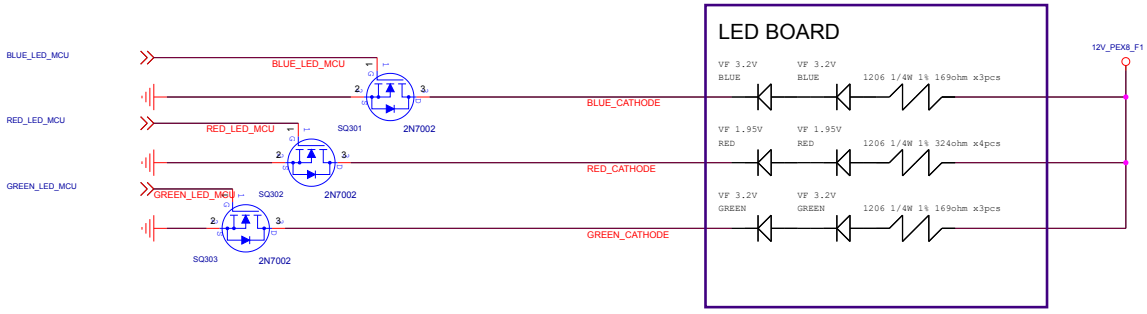
SYSFANTACH_SELECT_MCU	Mode
L	SYSFAN_TACH1
H(Default)	SYSFAN_TACH2

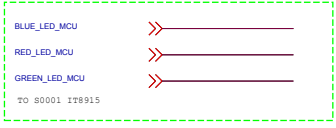


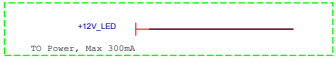


STRIX_SYSFAN_MCU	Mode
L	NORMAL
H (Default)	STRIX

SYSFANTACH_SELECT_MCU	Mode
L	SYSFAN_TACH1
H (Default)	SYSFAN_TACH2



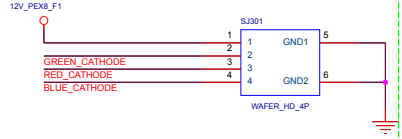




COVER LED線路

示意圖

連接座旁請註明 12V G R B



背板ROG LED線路

5V_LED

TO Power

BLUE_LED_MCU

RED_LED_MCU

GREEN_LED_MCU

TO S0001 IT8915