

GK107/GF108 GB4-128 sDDR3,128bit/64bit, 256M/128M/64Mx16  
DVI-I DL/VGA+HDMI/DP+VGA

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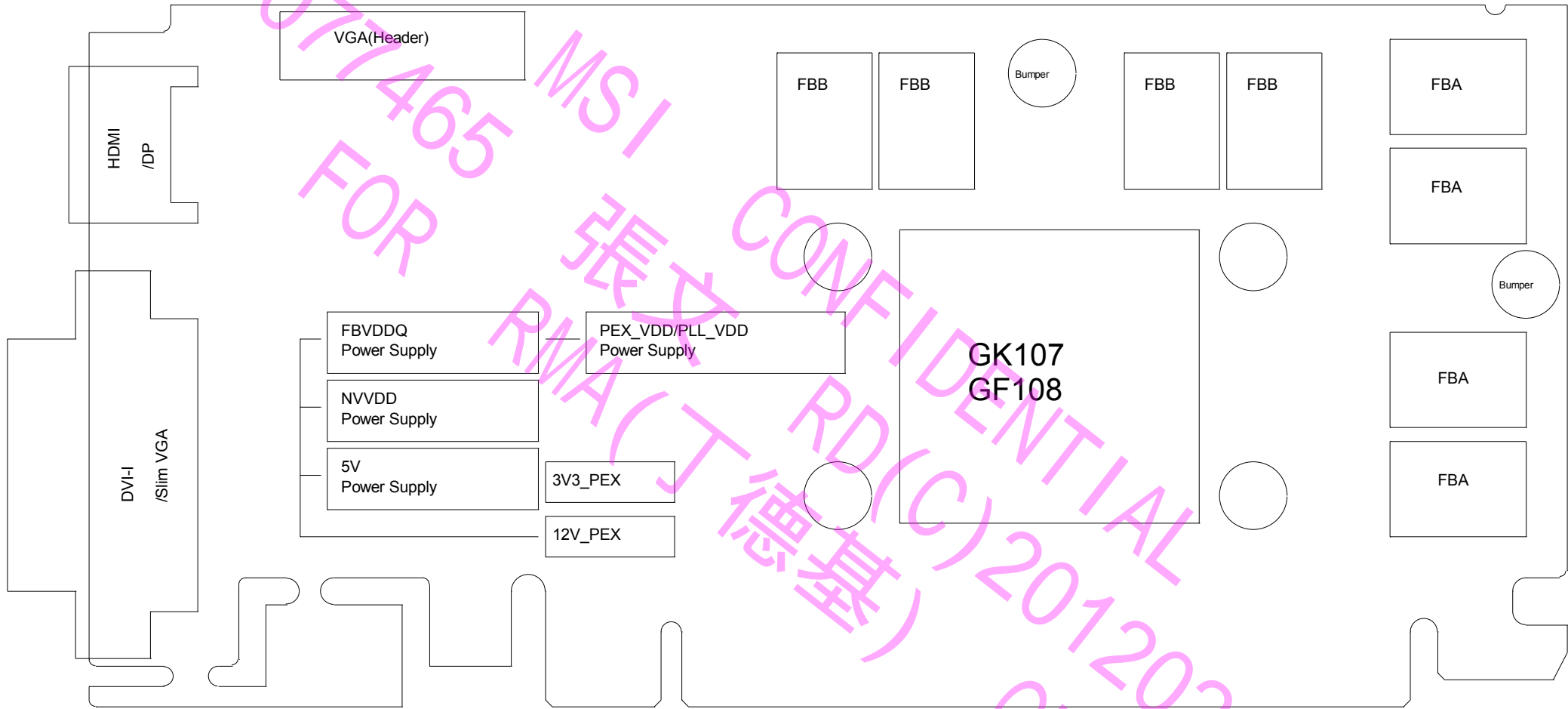
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Block Diagram

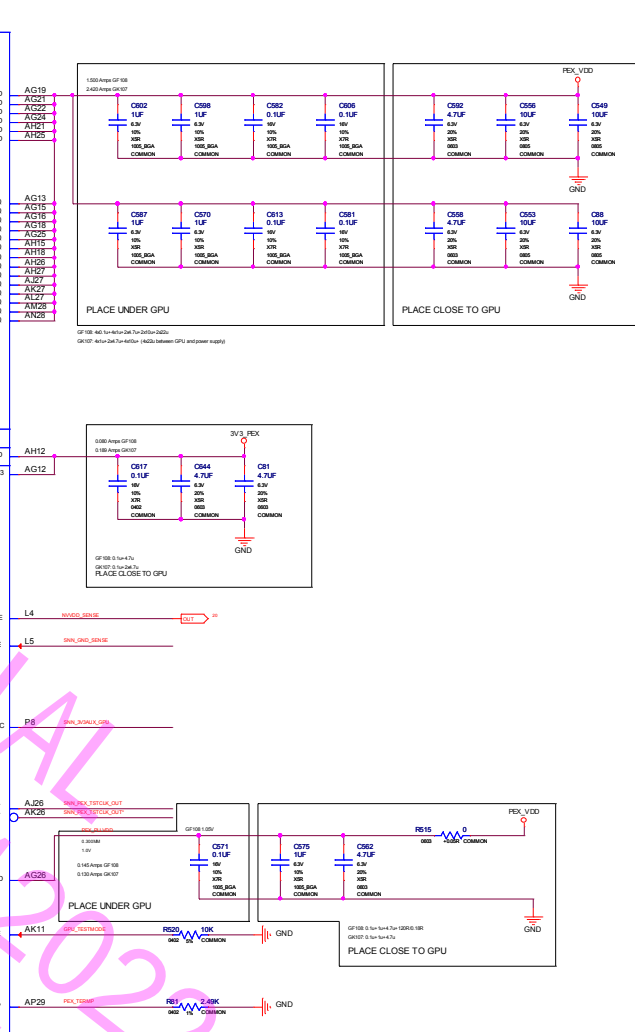
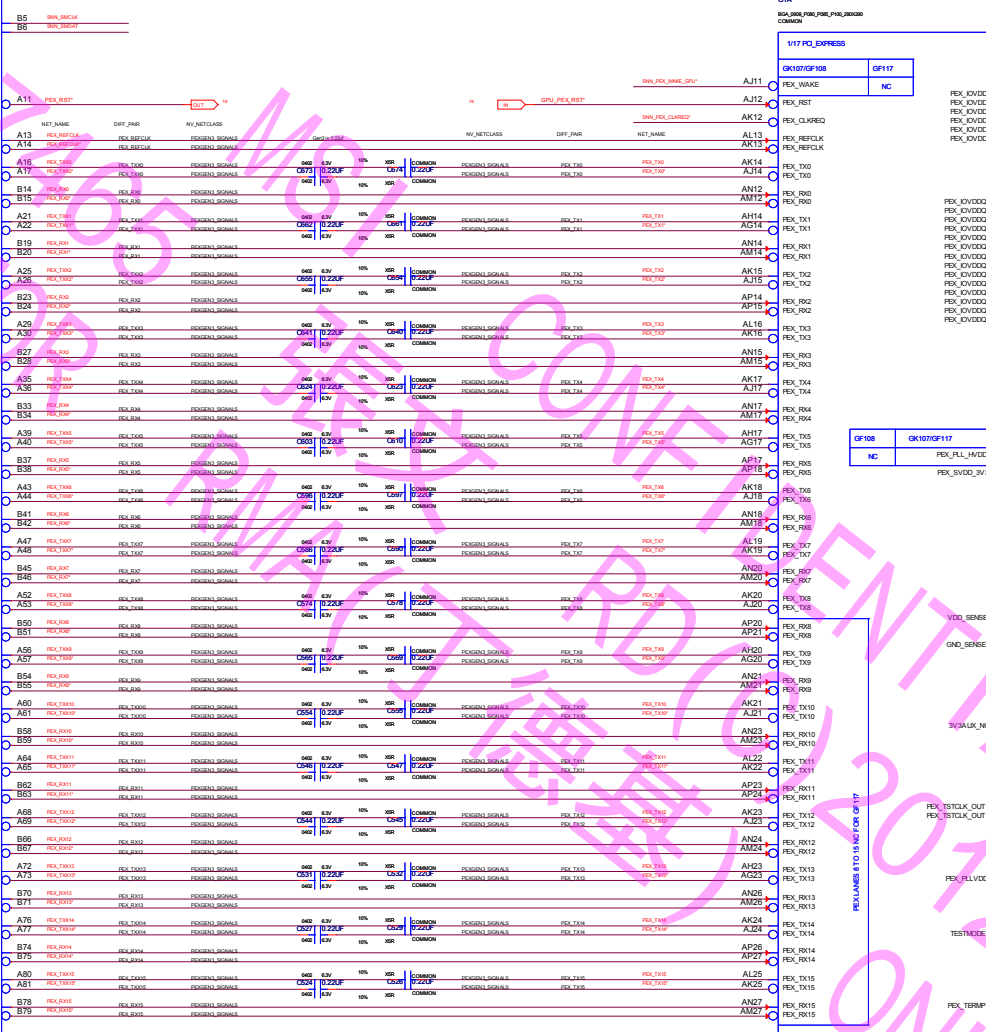
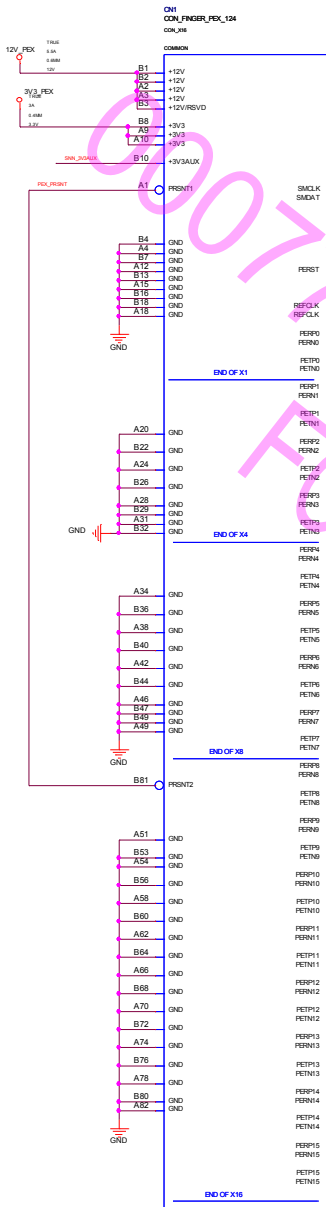
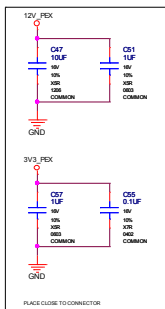


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PCI Express



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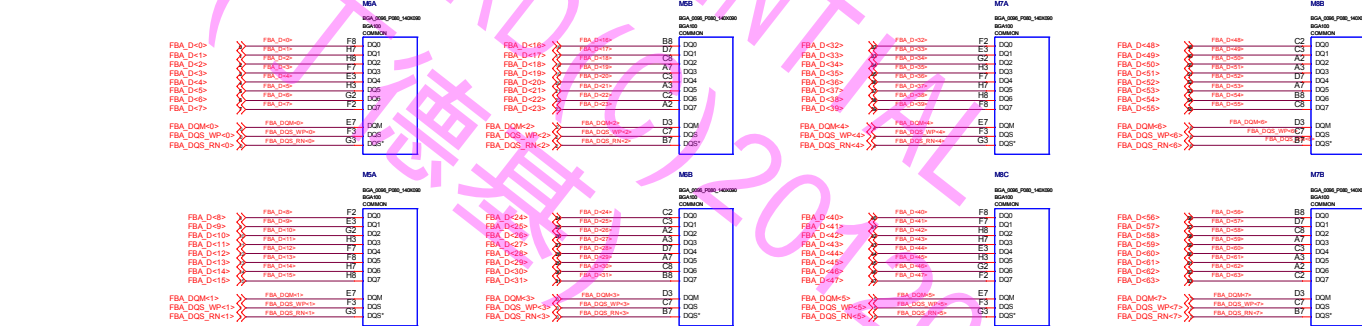
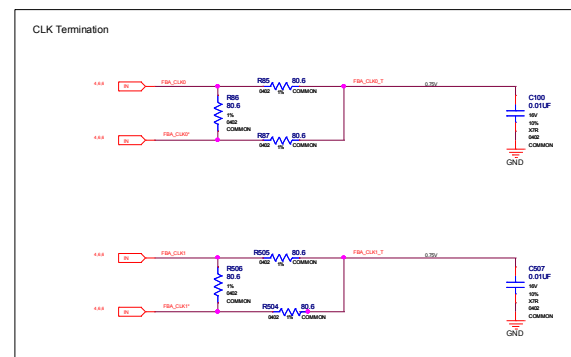
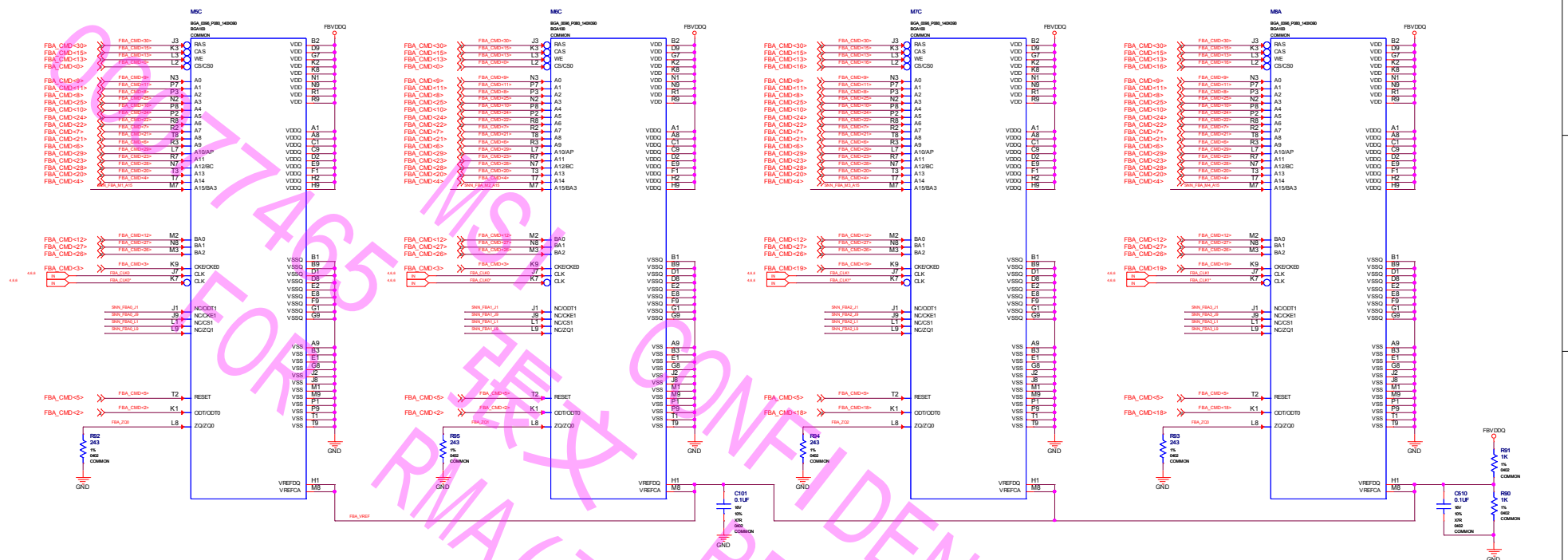


## Memory FBA Partition

GK107/GF-108		
CMD Mapping		
CMD	45.23n	45.23Dn
CMD00	CSD?	N/A
CMD1	N/A	N/A
CMD2	ODT	N/A
CMD3	CMD	N/A
CMD4	ASL	N/A
CMD5	REST	REST
CMD6	AS	AS
CMD7	A7	A7
CMD8	A2	A2
CMD9	AS	AS
CMD10	AS	AS
CMD11	A1	A1
CMD12	SAO	SDO
CMD13	SEC	SEC
CMD14	N/A	N/A
CMD15	CAP?	CAP?
CMD16	N/A	CMD
CMD17	N/A	N/A
CMD18	ODT	ODT
CMD19	N/A	CMS
CMD20	A13	A13
CMD21	AS	AS
CMD22	AS	AS
CMD23	A11	A11
CMD24	AS	AS
CMD25	AS	AS
CMD26	SAO	SAO
CMD27	SA1	SA1
CMD28	A12	A12
CMD29	A15	A15
CMD30	SAF?	SAF?
CMD31	N/A	N/A

SKU0,2 128Mb16  
1st: Samsung 161-0089-600  
2nd: Hynix 161-0082-100  
3rd: Micron 161-0037-900

SKU1 64Mx16  
1st: Hynix 161-0096-100  
2nd: Samsung 161-0097-600  
3rd: Micron 161-0036-900

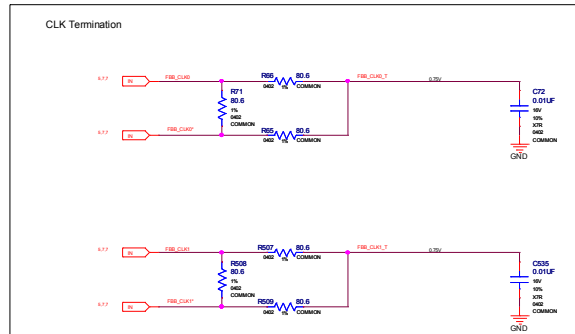
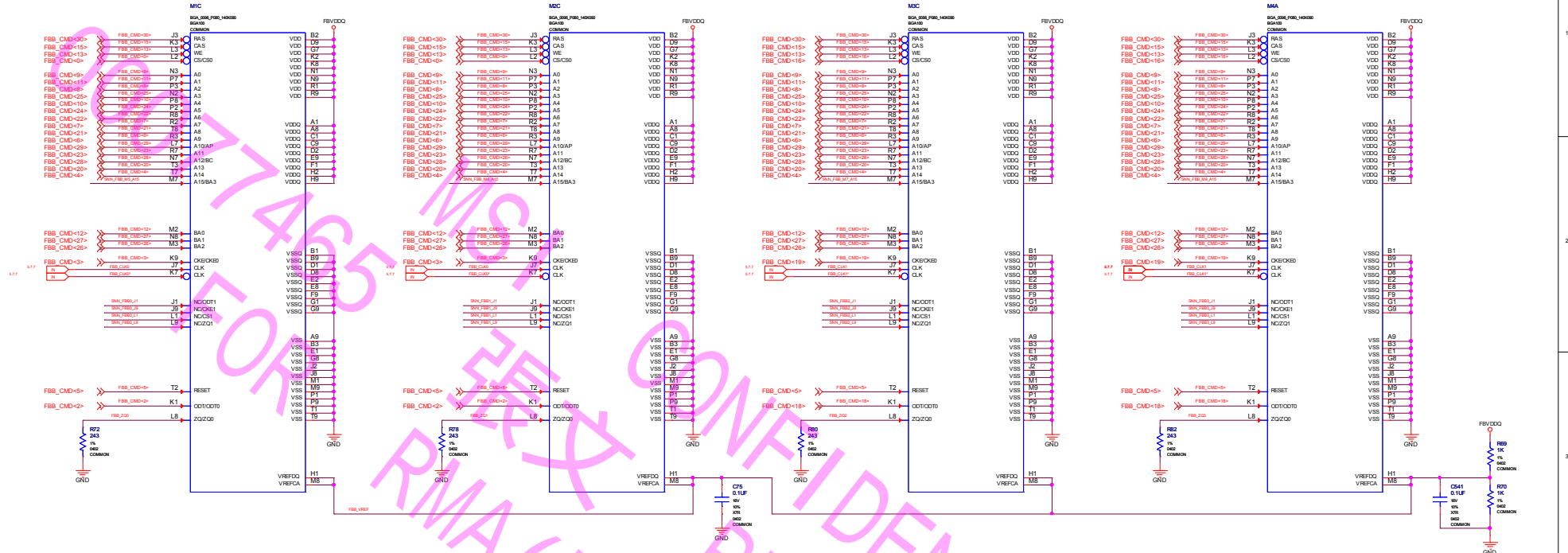


## Memory FBB Partition

CK107/GF108		
CMD Mapping		
CMD	<E-31s	<E-23s
CMD0	CSP	N/A
CMD1	N/A	N/A
CMD2	OST	OST
CMD3	CDE	N/A
CMD4	A16	BA2
CMD5	RST	RST
CMD6	A5	A5
CMD7	A7	A7
CMD8	A2	A2
CMD9	A0	A0
CMD10	A4	A4
CMD11	A1	A1
CMD12	BA2	BA2
CMD13	HEC	HEC
CMD14	N/A	N/A
CMD15	CMP	CMP
CMD16	N/A	OST
CMD17	N/A	N/A
CMD18	N/A	CCT
CMD19	N/A	N/A
CMD20	A13	A13
CMD21	A6	A6
CMD22	A6	A6
CMD23	A11	A11
CMD24	A5	A5
CMD25	A3	A3
CMD26	BA2	BA2
CMD27	BA1	BA1
CMD28	A13	A13
CMD29	A10	A10
CMD30	BA2	BA2
CMD31	N/A	N/A

SKU0,2 128Mx16  
1st: Samsung 161-0089-600  
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SKU1 64Mx16  
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2nd: Samsung 161-0097-600  
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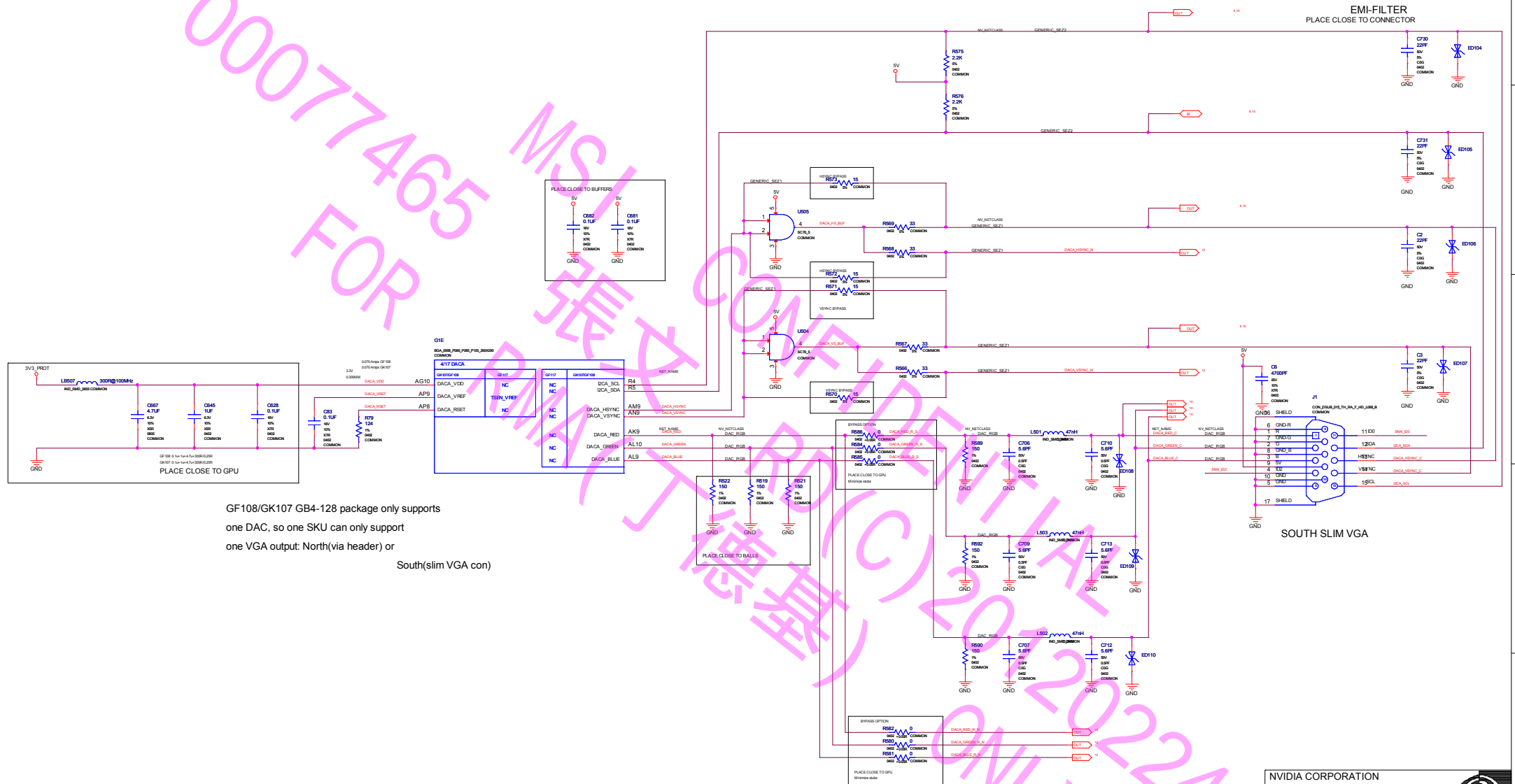








## DACA Slim VGA (South)



GF108/GK107 GB4-128 package only supports  
one DAC, so one SKU can only support  
one VGA output: North(via header) or  
South(slim VGA con)

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PAGE DETAIL	DACA Slim VGA (South)

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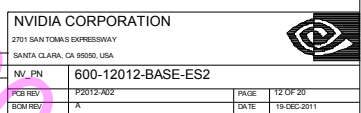
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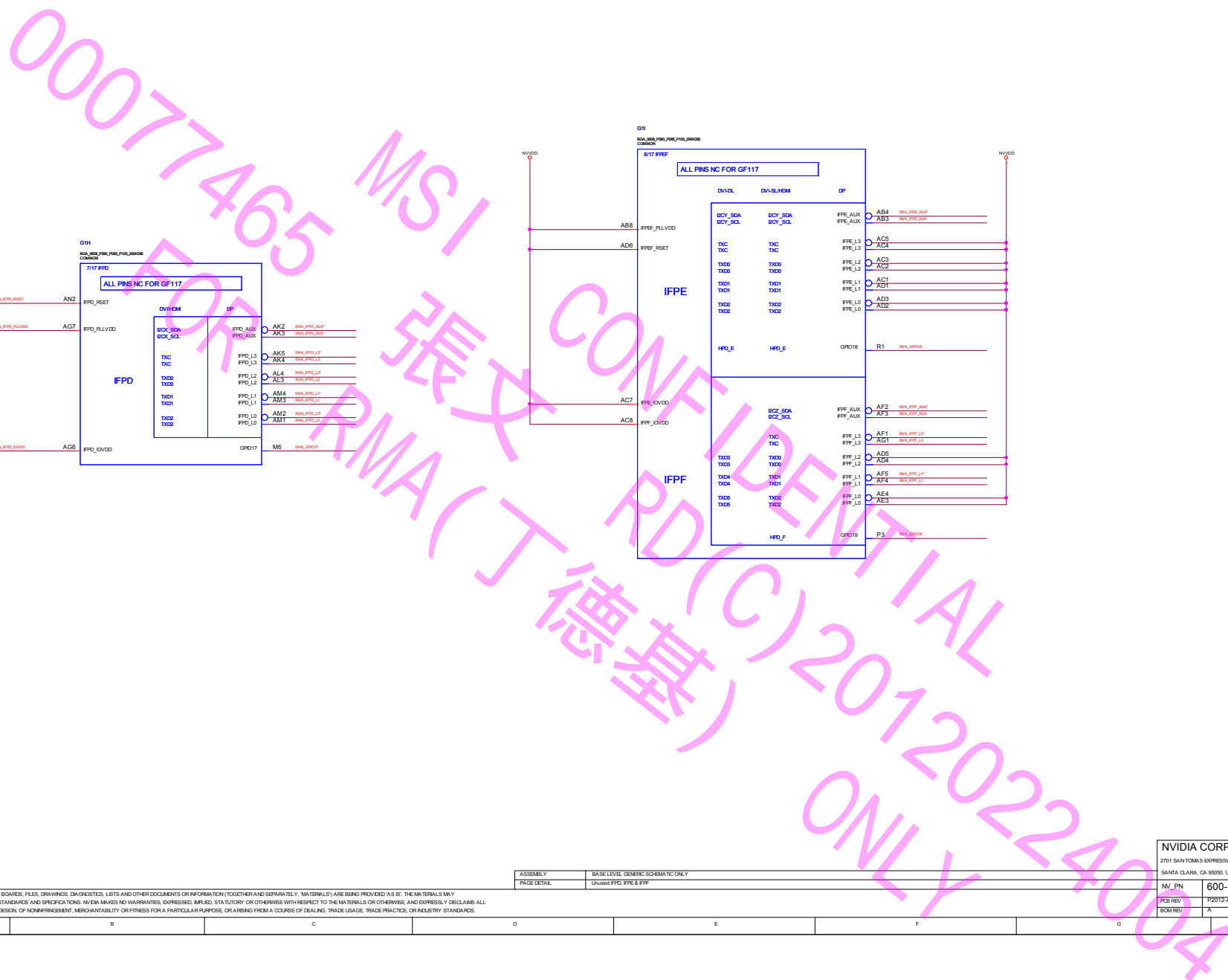
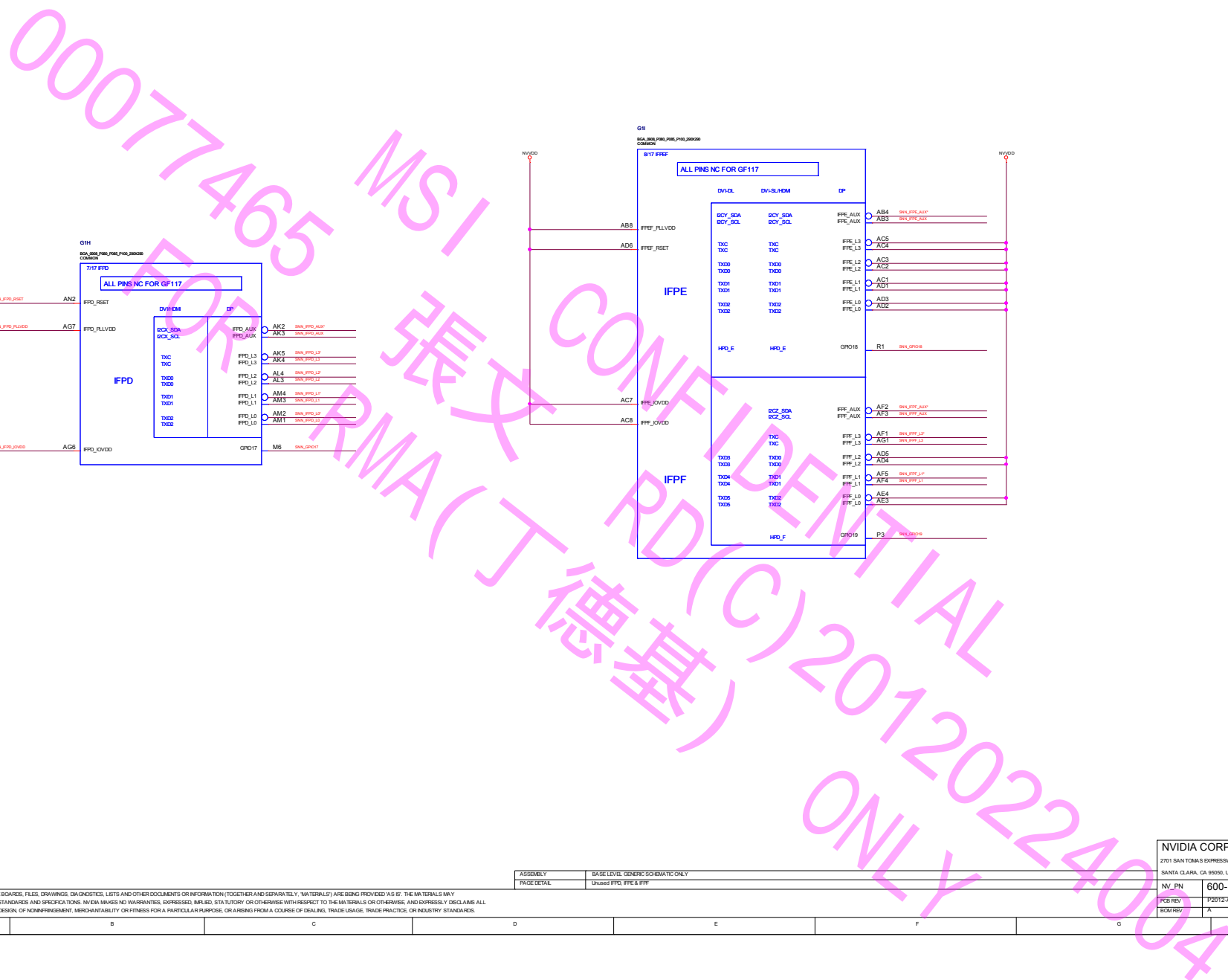
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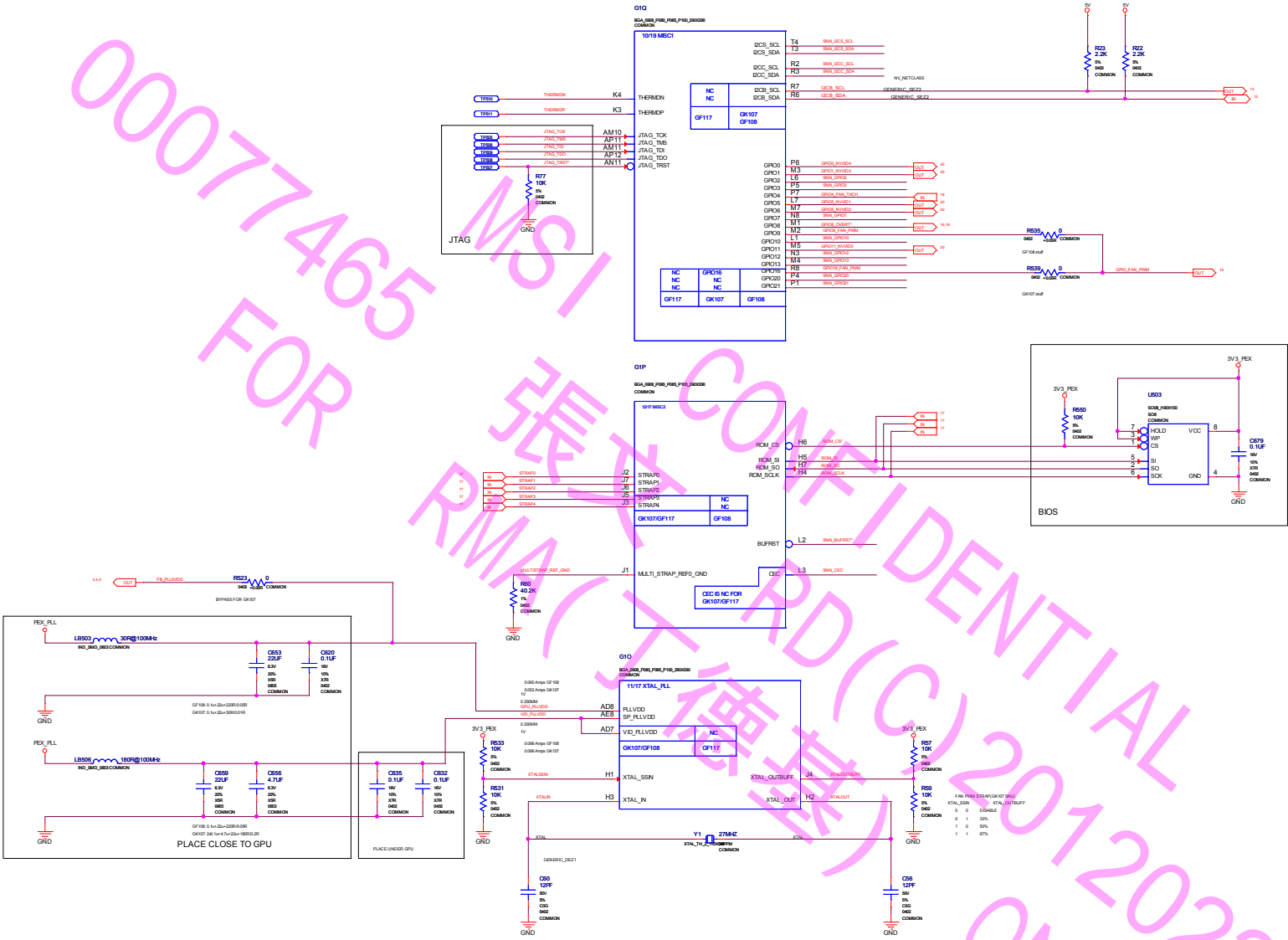


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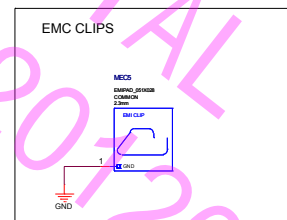
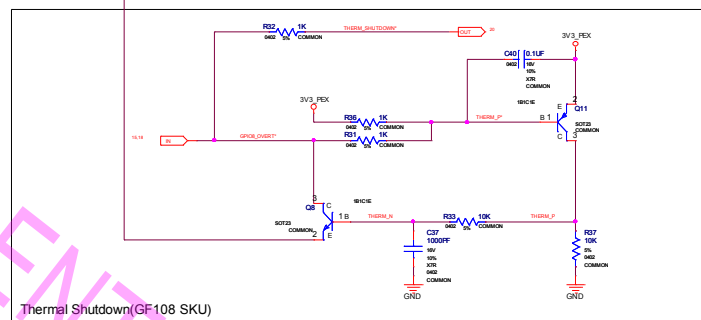
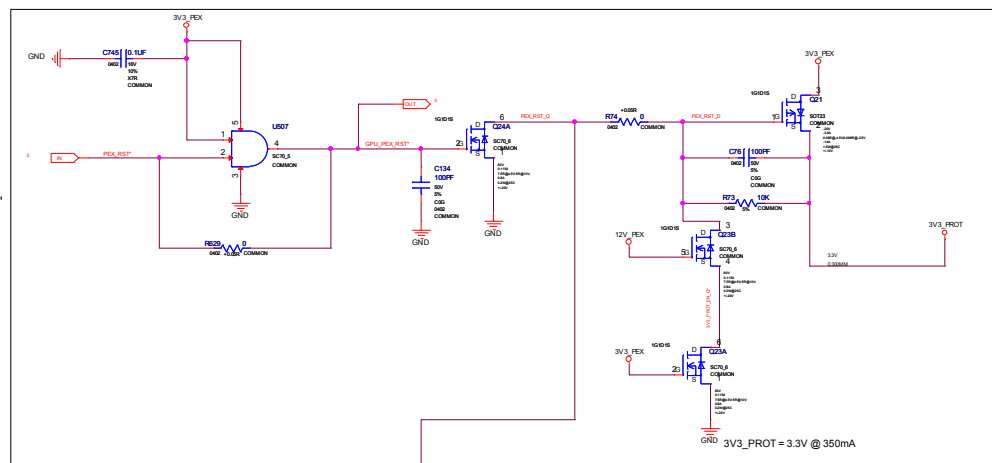
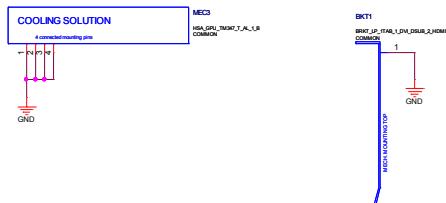
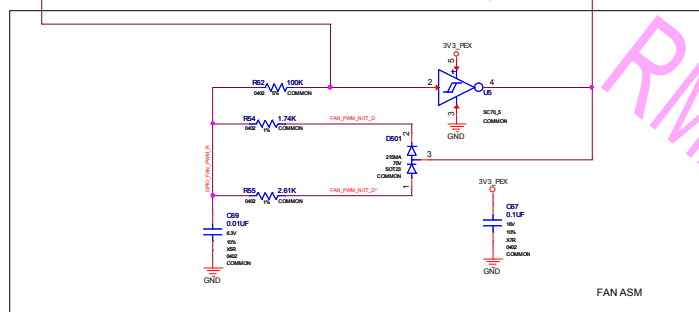
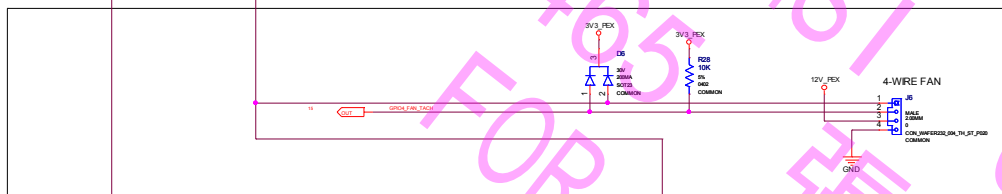
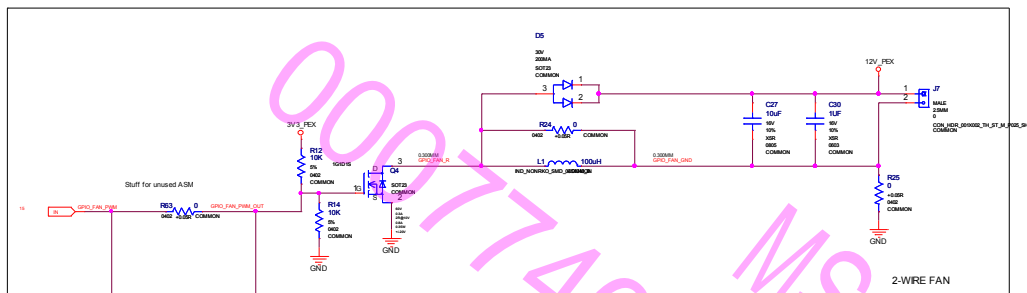
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PAGE DETAIL	Misc Interfaces

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Thermal,Mechanical, Fan Control,Backdrive



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PAGE DETAIL	Thermal Mechanical, Fan Control Backdrive

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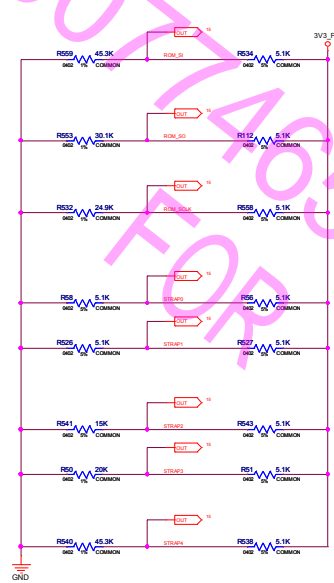
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## Straps



## GK107 Straps

Bit Signal		Values					
00	RAMC[0]	0000	RAMC0_C0B0	Reserved	1000	RAMC0_C0B8	Reserved
01	RAMC[0]	0001	RAMC0_C0B1			RAMC0_C0B9	
02	RAMC[0]	0010	RAMC0_C0B2			RAMC0_C0BA	
03	RAMC[0]	0011	RAMC0_C0B3			RAMC0_C0BB	
04	RAMC[0]	0100	RAMC0_C0B4			RAMC0_C0BC	
05	RAMC[0]	0101	RAMC0_C0B5	Reserved	1010	RAMC0_C0BD	Reserved
06	RAMC[0]	0110	RAMC0_C0B6			RAMC0_C0BE	
07	RAMC[0]	0111	RAMC0_C0B7			RAMC0_C0BF	
08	RAMC[0]	1000	RAMC0_C0B8			RAMC0_C0C0	
09	RAMC[0]	1001	RAMC0_C0B9			RAMC0_C0C1	
10	RAMC[0]	1010	RAMC0_C0BA			RAMC0_C0C2	
11	RAMC[0]	1011	RAMC0_C0BB			RAMC0_C0C3	
12	RAMC[0]	1100	RAMC0_C0BC			RAMC0_C0C4	
13	RAMC[0]	1101	RAMC0_C0BD			RAMC0_C0C5	
14	RAMC[0]	1110	RAMC0_C0BE			RAMC0_C0C6	
15	RAMC[0]	1111	RAMC0_C0BF			RAMC0_C0C7	
00	FEI1	01	C0B4				
01	FEI1	10	C0B5				
02	MEM_AT_ADDR	0	DISABLED	1	ENABLED		
03	MEM_VISA_OVERRIDE	0	DISABLED	1	ENABLED		
04	PCL_DEV0_EXT	0	SRU1 C0A10P-200-A01	1	SRU1 S01 C0A10P-400-A01		
05	PCL_DEV0_EXT	0	SRU1 C0A10P-300-A01	1	SRU1 S02 C0A10P-400-A01		
06	BUL_MEM0	0	NO_B0S	1	B0S		
07	PCL_DEV0_EXT_01T5	0	SRU1 C0A10P-200-A01	1	SRU1 S01 C0A10P-400-A01		
08	PCL_DEV0_EXT_01T5	0	SRU1 C0A10P-300-A01	1	SRU1 S02 C0A10P-400-A01		
09	PEX_PU_1N_T0R0_00	0	DISABLED	1	ENABLED		
00	USER0	0000	USER0_0				
01	USER0	0001	USER0_1				
02	USER0	0010	USER0_2				
03	USER0	0011	USER0_3				
04	USER0	0100	USER0_4				
05	USER0	0101	USER0_5				
06	USER0	0110	USER0_6				
07	USER0	0111	USER0_7				
08	USER0	1000	USER0_8				
09	USER0	1001	USER0_9				
10	USER0	1010	USER0_10				
11	USER0	1011	USER0_11				
12	USER0	1100	USER0_12				
13	USER0	1101	USER0_13				
14	USER0	1110	USER0_14				
15	USER0	1111	USER0_15				
00	USER1	0000	USER1_0				
01	USER1	0001	USER1_1				
02	USER1	0010	USER1_2				
03	USER1	0011	USER1_3				
04	USER1	0100	USER1_4				
05	USER1	0101	USER1_5				
06	USER1	0110	USER1_6				
07	USER1	0111	USER1_7				
08	USER1	1000	USER1_8				
09	USER1	1001	USER1_9				
10	USER1	1010	USER1_10				
11	USER1	1011	USER1_11				
12	USER1	1100	USER1_12				
13	USER1	1101	USER1_13				
14	USER1	1110	USER1_14				
15	USER1	1111	USER1_15				
0							

## GF108 Straps

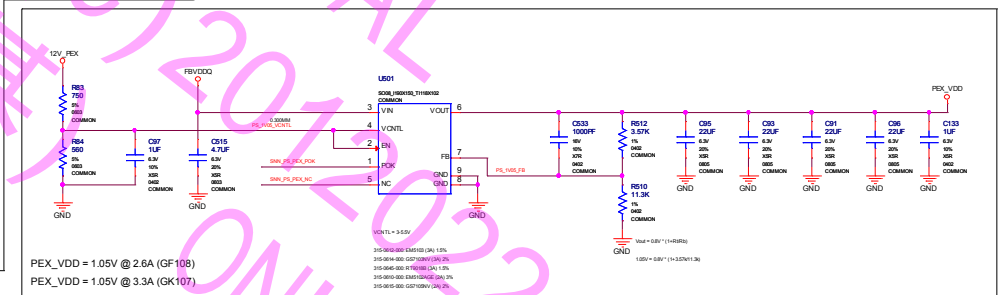
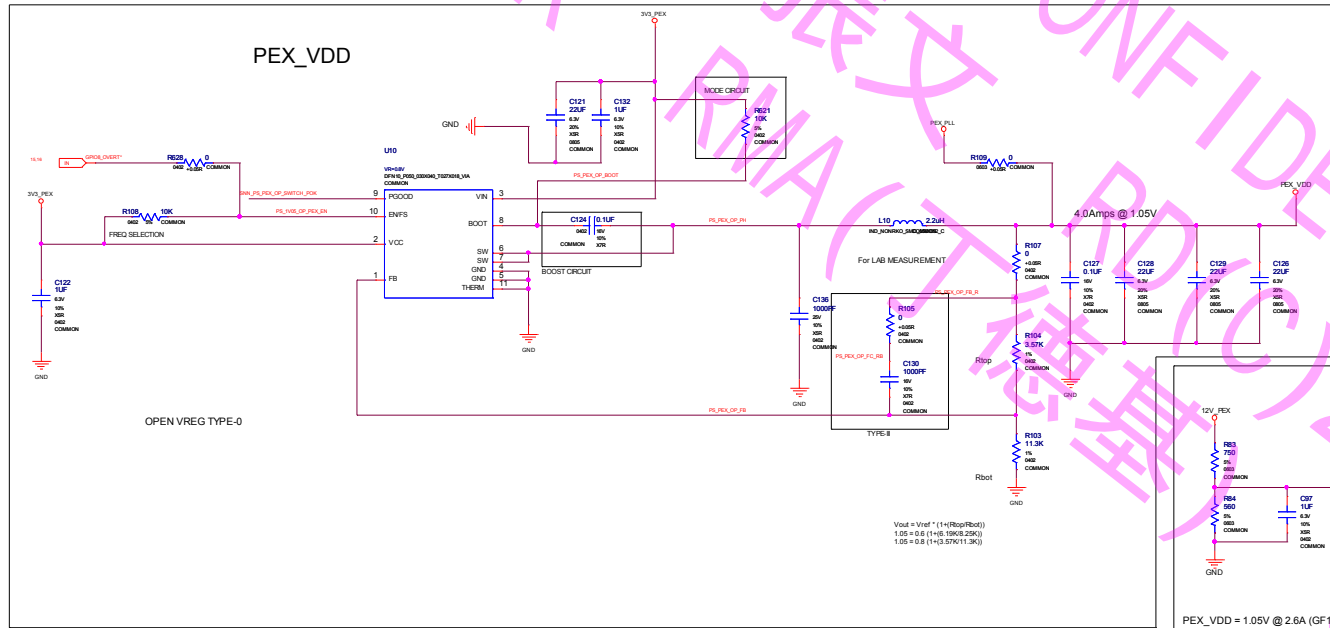
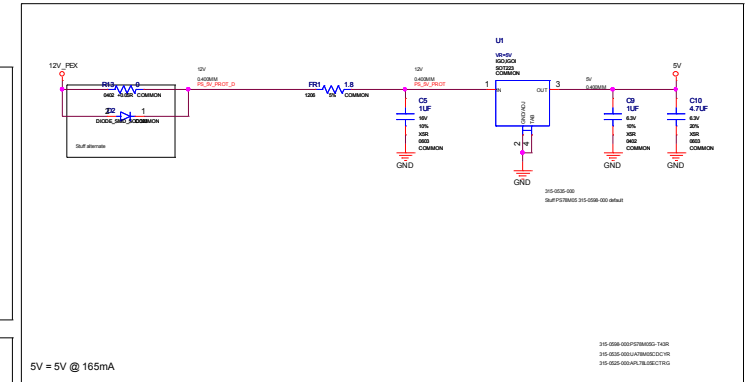
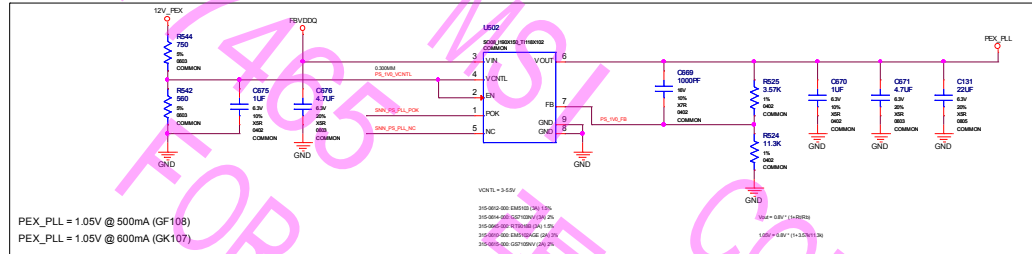
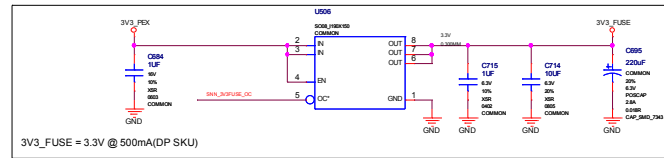
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10	RAMPQ[0]	010	RAMQ0_000/010		100	RAMQ0_000/010	
11	RAMPQ[0]	011	RAMQ0_000/011		101	RAMQ0_000/011	
00	RAMPQ[1]	000	RAMQ1_000	Reserved	100	RAMQ1_000	Reserved
01	RAMPQ[1]	001	RAMQ1_000/001		101	RAMQ1_000/001	
10	RAMPQ[1]	010	RAMQ1_000		110	RAMQ1_000	
11	RAMPQ[1]	011	RAMQ1_000/011		111	RAMQ1_000/011	
00	ICGA_1[0]	0	ENGALED_0	1	ENGALED_1	ENGALED_0	ENGALED_1
00	FB[0]	1	IGM				
01	SMB_AL1_ADDR	0	ENGALED_0	1	ENGALED_1	ENGALED_0	ENGALED_1
00	VGA_DEVICE	0	ENGALED_0	1	ENGALED_1	ENGALED_0	ENGALED_1
00	PCU_VIDEN[0]	0	GP100_000				
01	SUB_VENDOR	0	NCL_BIOS	1	BIOS		
00	SLOT_CLK_CFG0	0	ENGALED_0	1	ENGALED_1	ENGALED_0	ENGALED_1
00	PCU_PL1_THERM100	0	ENGALED_0	1	ENGALED_1	ENGALED_0	ENGALED_1
00	USER[0]	0000	INIT				
01	USER[0]						
10	USER[0]						
11	USER[0]						
00	XSQI_PROD[PL1_INT_ADDR]	0000	DSBTP0_INT_DEFAULT	0000	DSBTP0_INT_HVDS		
0001	XSQI_PROD[PL1_INT_ADDR]	0001	MOBILE_DEFAULT	0001	MOBILE_INT_HVDS_INAMP		
0010	XSQI_PROD[PL1_INT_ADDR]	0010	MOBILE_INT_HVDS_INAMP	0010	MOBILE_INT_HVDS_INAMP		
0011	XSQI_PROD[PL1_INT_ADDR]	0011	MOBILE_INT_HVDS_INAMP	0011	MOBILE_INT_HVDS_INAMP		
0100	XSQI_PROD[PL1_INT_ADDR]	0100	MOBILE_INT_HVDS_INAMP	0100	MOBILE_INT_HVDS_INAMP		
0101	XSQI_PROD[PL1_INT_ADDR]	0101	MOBILE_INT_HVDS_INAMP	0101	MOBILE_INT_HVDS_INAMP		
0110	XSQI_PROD[PL1_INT_ADDR]	0110	MOBILE_INT_HVDS_INAMP	0110	MOBILE_INT_HVDS_INAMP		
0111	XSQI_PROD[PL1_INT_ADDR]	0111	MOBILE_INT_HVDS_INAMP	0111	MOBILE_INT_HVDS_INAMP		
00	PCU_VIDEN[0]	0000	GP100_000-0				
01	PCU_VIDEN[0]						
10	PCU_VIDEN[0]						
11	PCU_VIDEN[0]						

### Multilevel Straps

0000	5.1K to GND	1000	5.1K to VCC
0001	10K to GND	1001	10K to VCC
0010	15K to GND	1010	15K to VCC
0011	20K to GND	1011	20K to VCC
0100	24.9K to GND	1100	24.9K to VCC
0101	30.1K to GND	1101	30.1K to VCC
0110	34.8K to GND	1110	34.8K to VCC
0111	45.3K to GND	1111	45.3K to VCC



Power Supply I: PEX\_VDD, PEX\_PLL, 5V



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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Power Supply I: PEX_VDD, PEX_PLL, 5V





Power Supply III: NVVDD

