

P2131_A00

GK208 GDDR5 X16 64BIT
DVI-I/SlimVGA + HDMI

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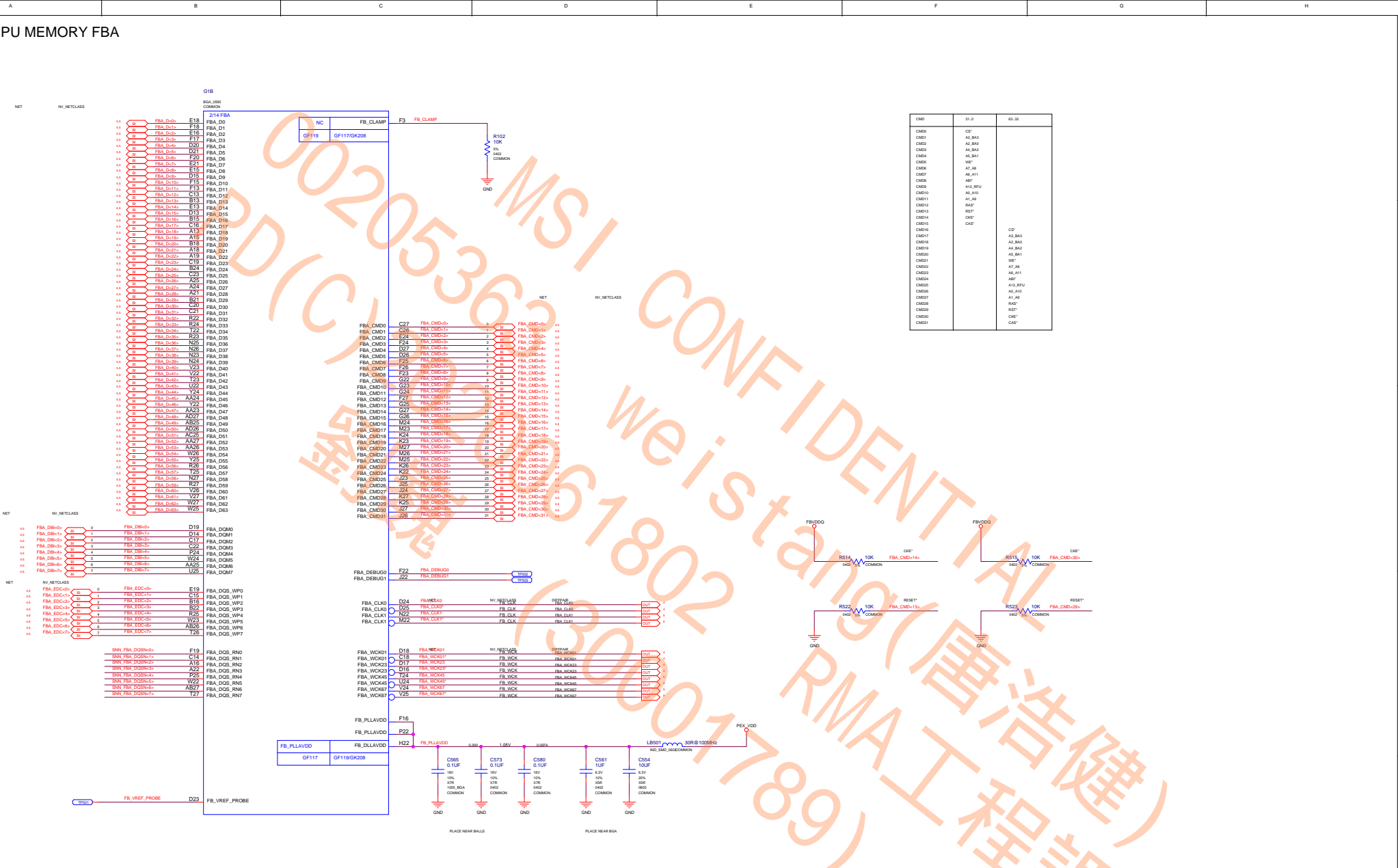
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PAGE DETAIL	PCI EXPRESS

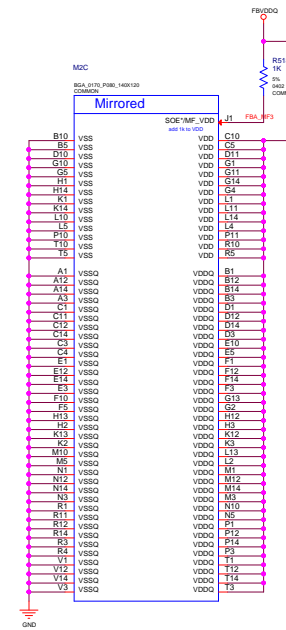
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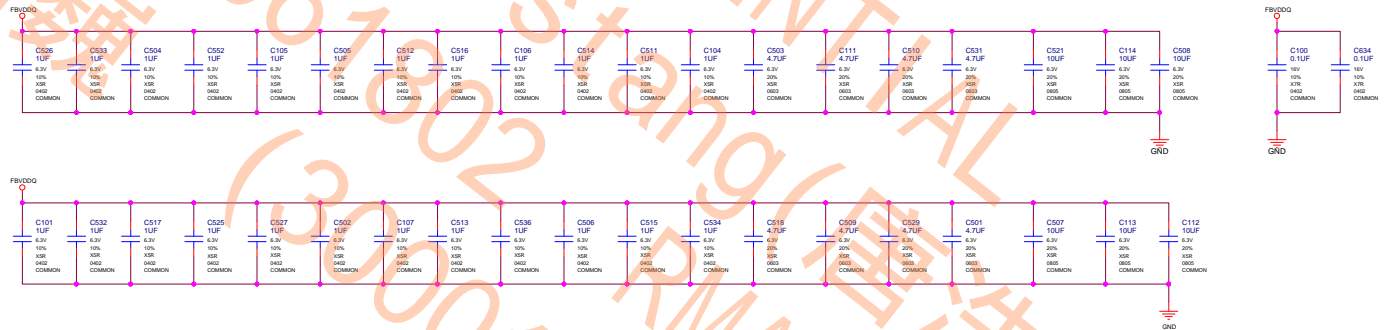
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DECOUPLING FOR M2 and M502 DEVICE



PLACE LARGER CAPACITORS SLIGHTLY FARTHER AWAY

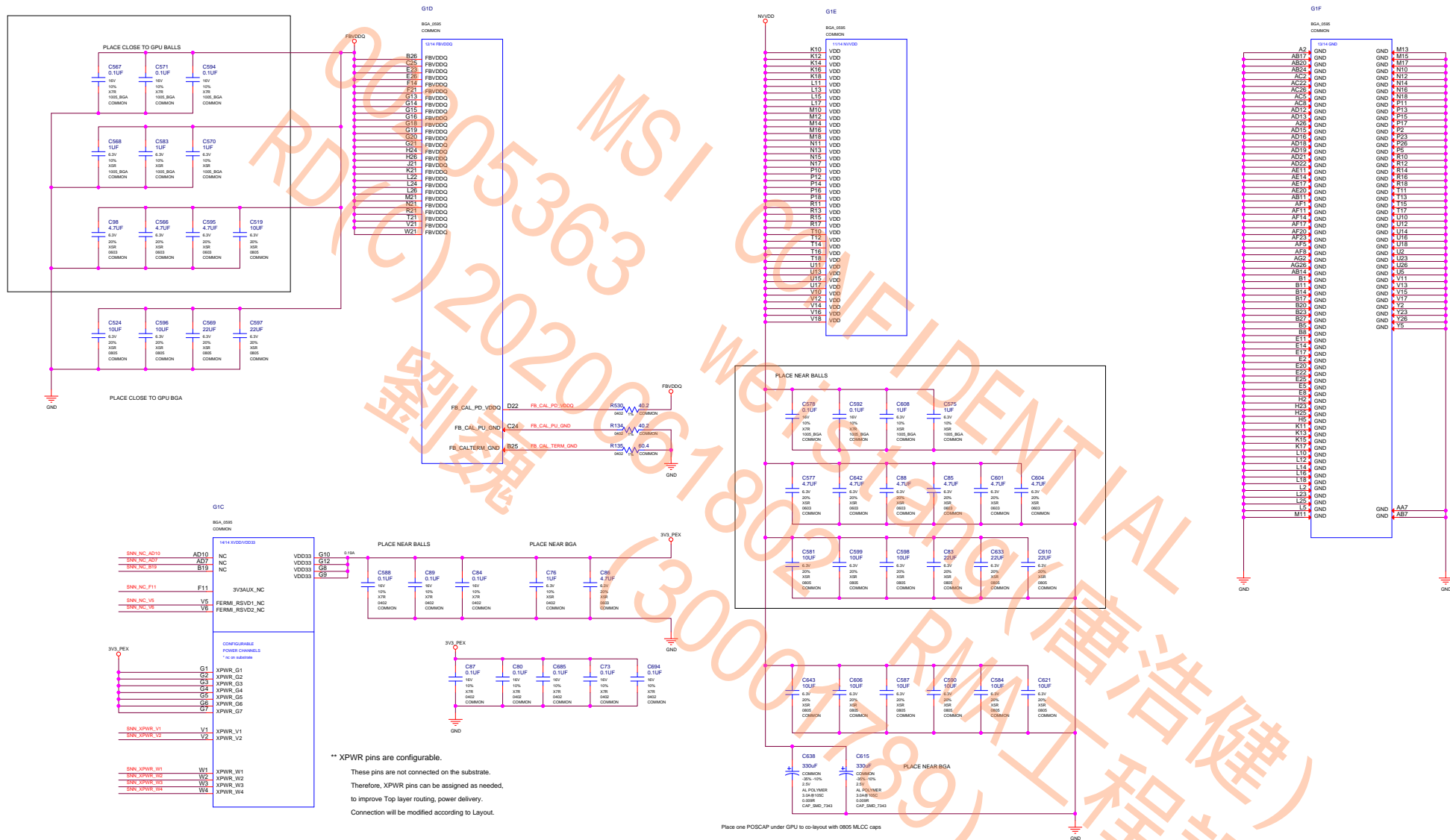
ASSEMBLY	
PAGE DETAIL	DECOUPLING for DRAMs



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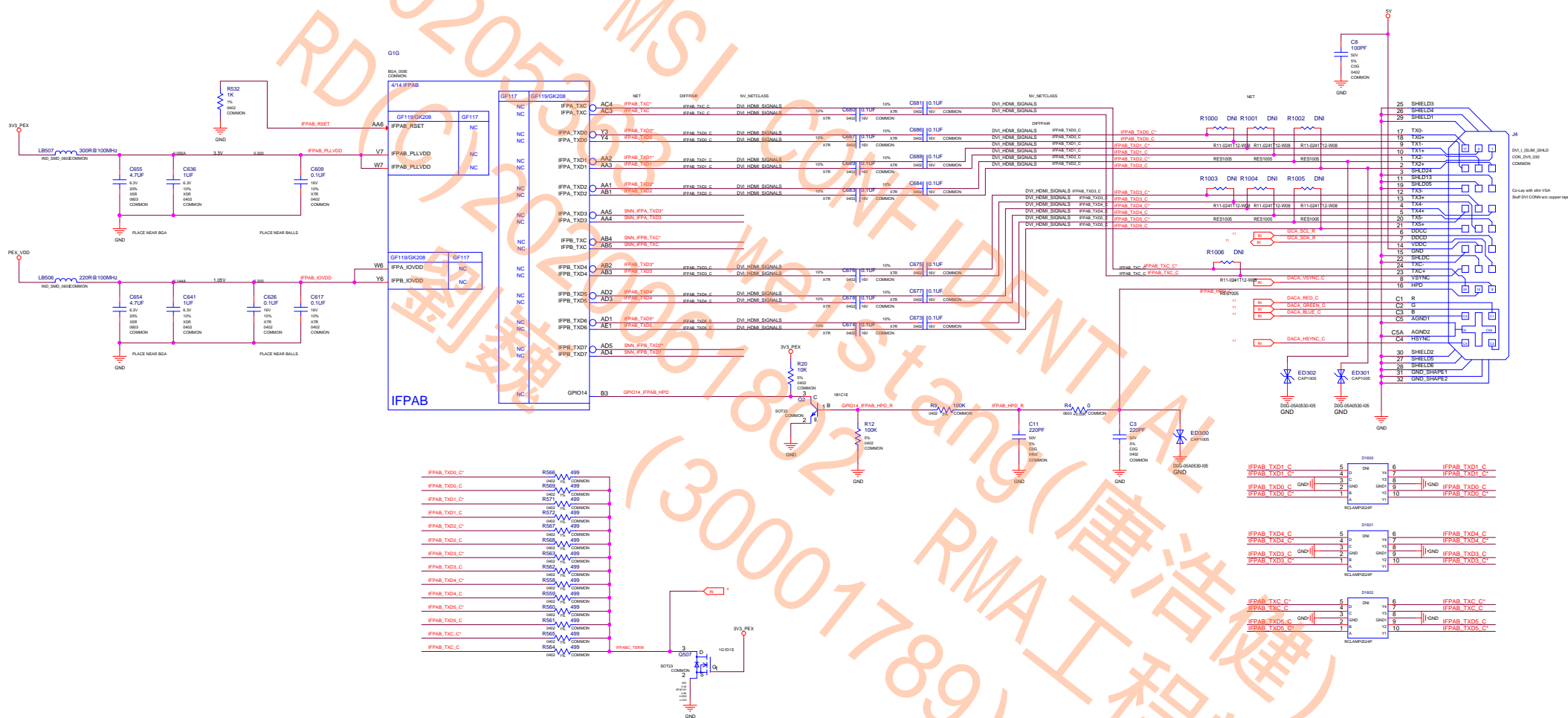


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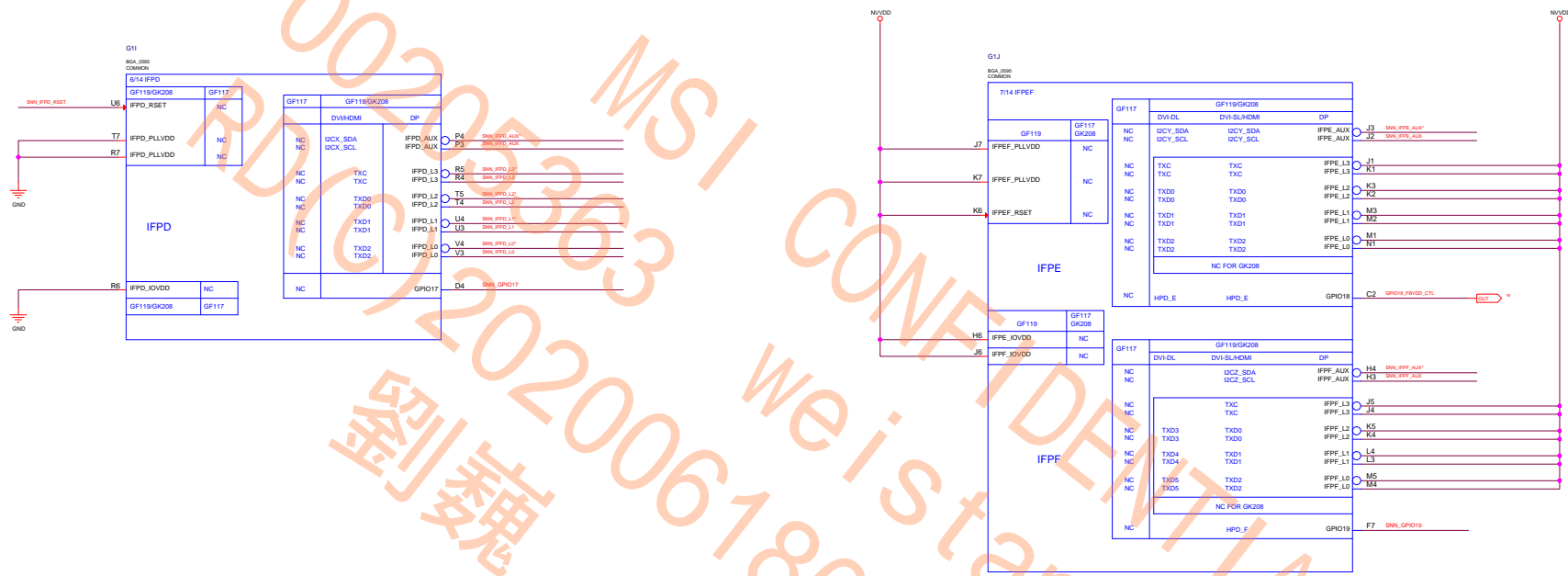
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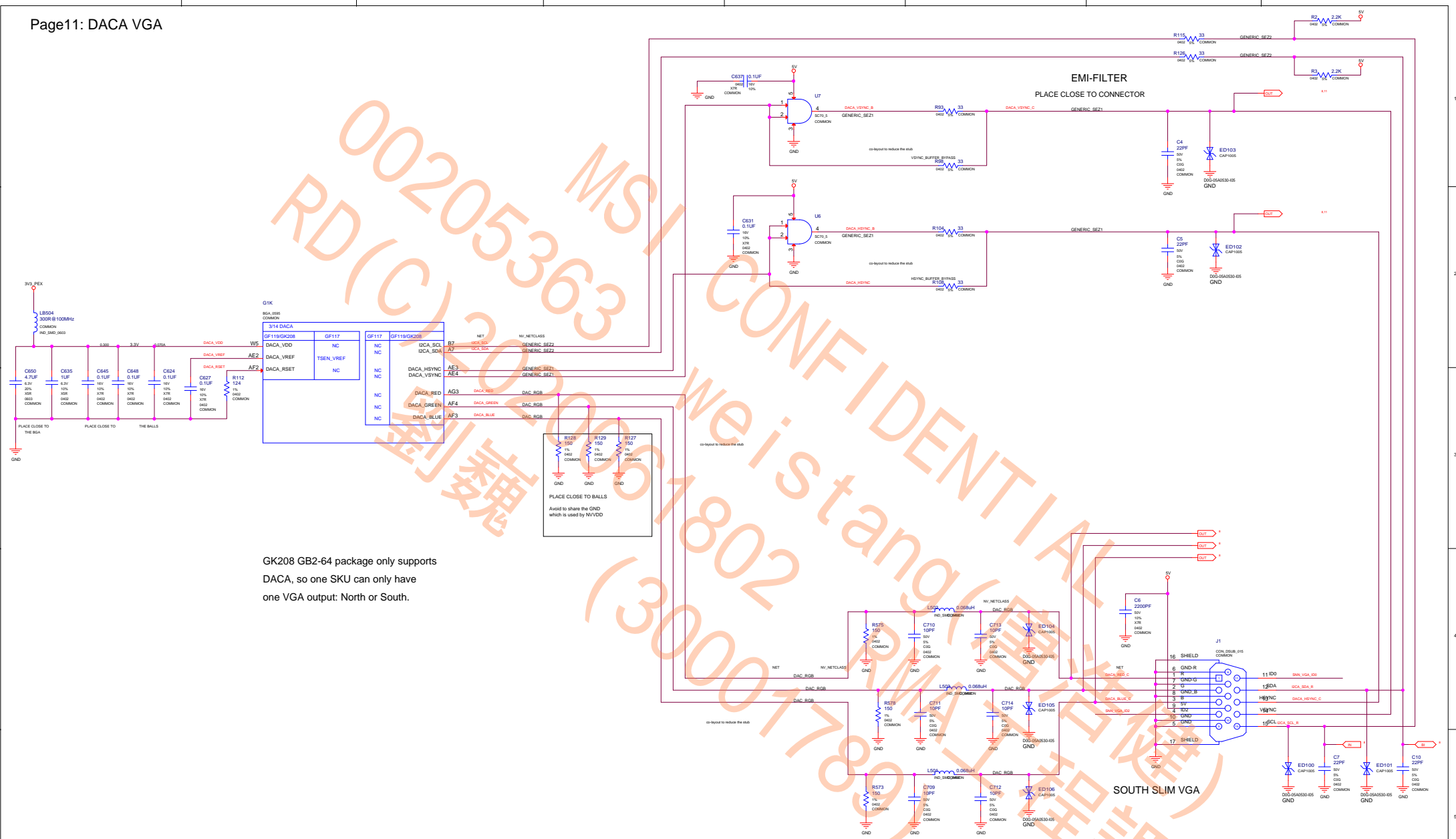
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PAGE DETAIL	UNUSED IFPD, IFPE & IFPF

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GK208 GB2-64 package only supports
DACA, so one SKU can only have
one VGA output: North or South.

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PAGE DETAIL	DACA VGA

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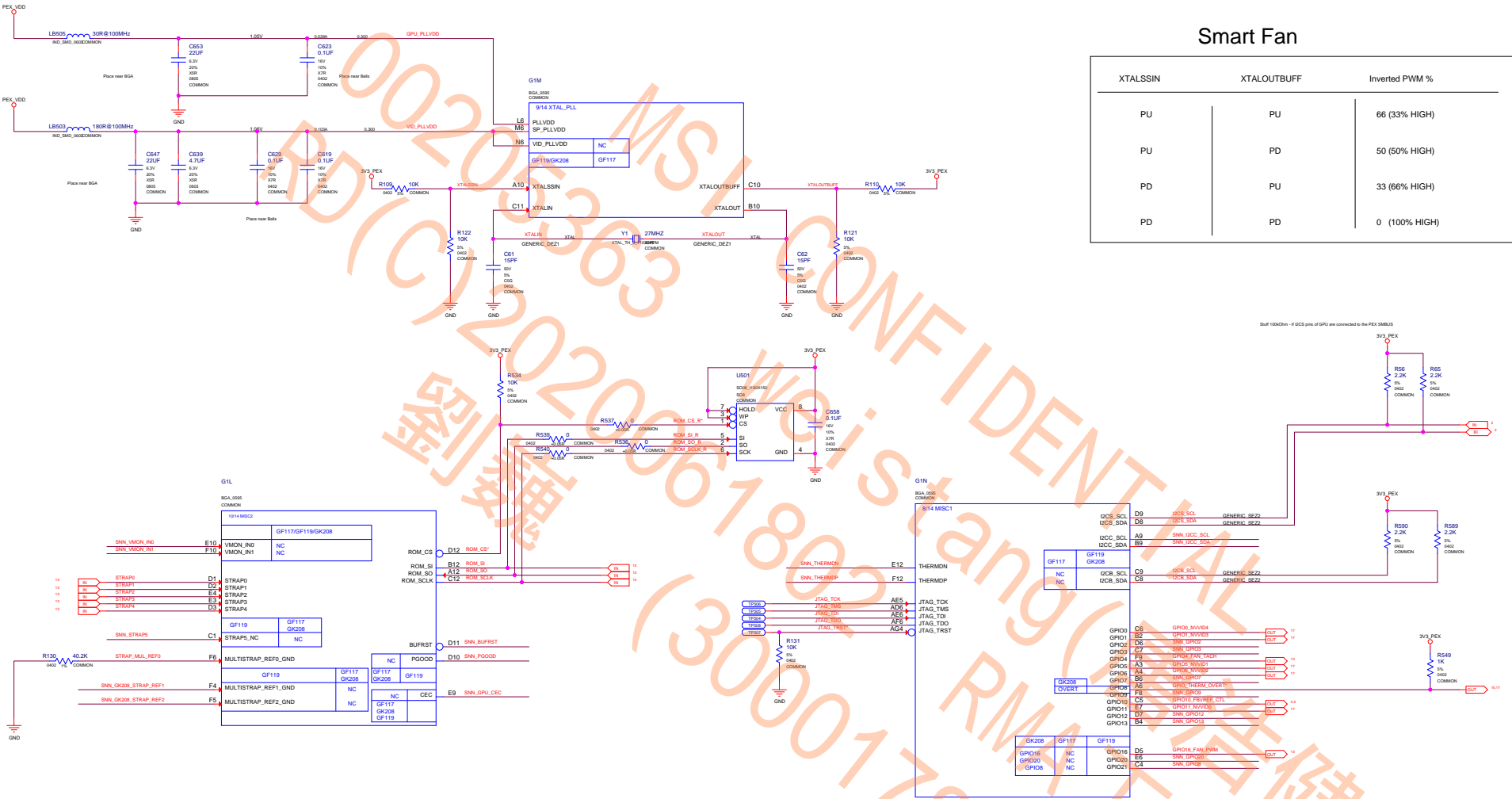
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Multilevel Straps

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	40.2K to GND	1111	40.2K to VCC

GK208 Straps

Bit Signal

Values

03	RAMCFG0	0000	Reserved			
02	RAMCFG0	0001	1GB/4K GDDR5 x16/32bit Explicit			
01	RAMCFG0	0010	1GB/4K GDDR5 x16/32bit Explicit			
00	RAMCFG0	0011	1GB/4K GDDR5 x16/32bit Explicit			
03	FBT0	00	12000			
02	FBT0	01	12000			
01	SMR_ALT_ADDR	0	DISABLED	1	ENABLED	
00	VGA_DEVICE	0	DISABLED	1	ENABLED	
03	PCI_DEV0_EXT	0000	0	0001	TBD	
02	SUB_VENDOR	0	NO_BIOS	1	BIOS	
01	PCI_DEV0_EXT_BTS	0000	0	0001	TBD	
00	PEX_FAL_EN_TERMINO	0	DISABLED	1	ENABLED	
03	USER0	0000	NOT			
02	USER0					
01	USER0					
00	USER0					
03	3G0_PADCFG_LUT_ADDR0	0000	DISKTOP_DEFAULT	1000	DISKTOP_JTHRS	
02	3G0_PADCFG_LUT_ADDR0	0001	MOBILE_DEFAULT	1001	MOBILE_JTHRS_LAMP	
01	3G0_PADCFG_LUT_ADDR0	0010	MOBILE_JTHRS_LAMP	1010	MOBILE_JTHRS_LAMP	
00	3G0_PADCFG_LUT_ADDR0	0011	MOBILE_JTHRS_LAMP	1011	MOBILE_JTHRS_LAMP	
03	3G0_PADCFG_LUT_ADDR1	0100	MOBILE_JTHRS_LAMP	1100	MOBILE_JTHRS_LAMP	
02	3G0_PADCFG_LUT_ADDR1	0101	MOBILE_JTHRS_LAMP	1101	MOBILE_JTHRS_LAMP	
01	3G0_PADCFG_LUT_ADDR1	0110	MOBILE_JTHRS_LAMP	1110	MOBILE_JTHRS_LAMP	
00	3G0_PADCFG_LUT_ADDR1	0111	MOBILE_JTHRS_LAMP	1111	MOBILE_JTHRS_LAMP	
03	PCI_DEV00	0000	0010			
02	PCI_DEV00					
01	PCI_DEV00					
00	PCI_DEV00					
03	SC0L_EXP0SD	0	DISABLED	1	ENABLED	
02	SC0L_EXP0SD	0	DISABLED	1	ENABLED	
01	SC0L_EXP0SD	0	DISABLED	1	ENABLED	
00	SC0L_EXP0SD	0	DISABLED	1	ENABLED	
03	PCI_SPEED_CHANGE_GEN0	0	DISABLED	1	ENABLED	
02	PCI_SPEED_CHANGE_GEN0	0	GEN1	1	GEN2	
01	PCI_SPEED_CHANGE_GEN0	0	USE V0	1	USE V0	
00	PCI_SPEED_CHANGE_GEN0	0	USE V0	1	USE V0	

ROM_SI

ROM_SO

ROM_SCLK

Strap0

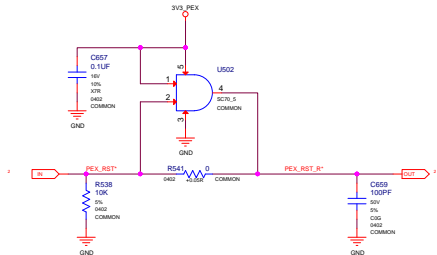
Strap1

Strap2

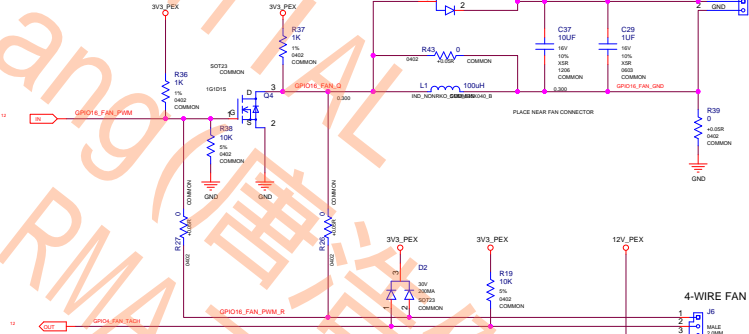
Strap3

Strap4

PCI-E Reset

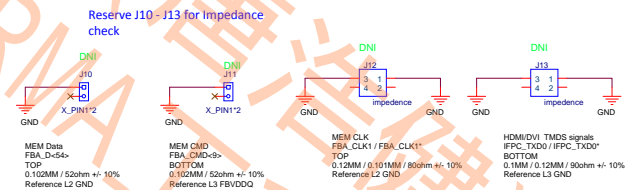
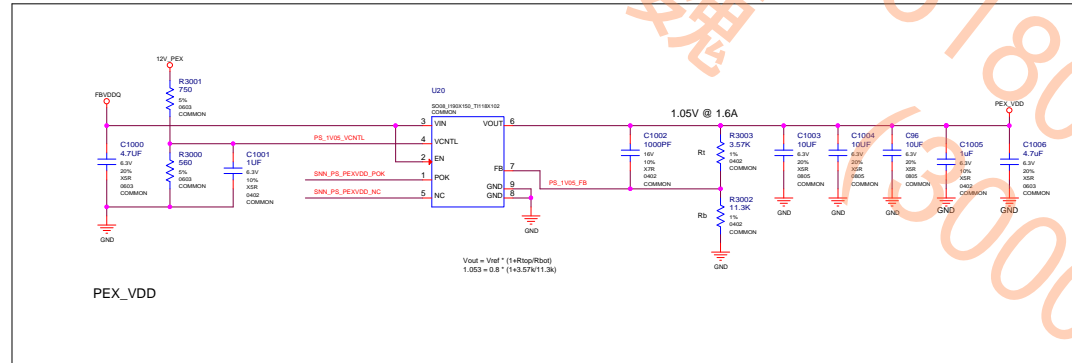
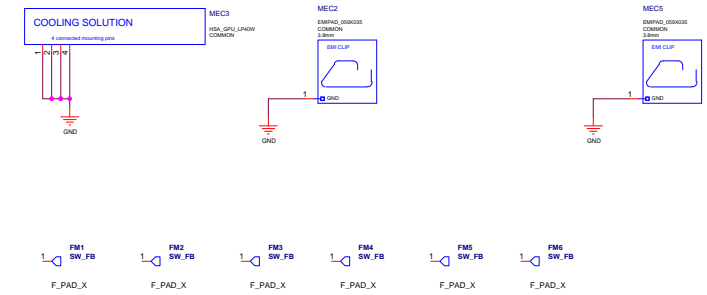
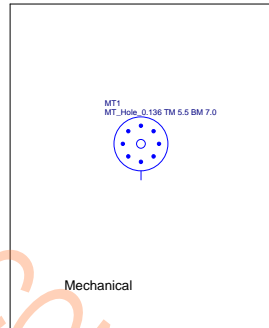
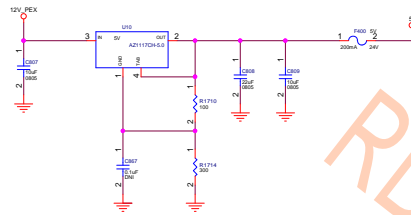


FAN CIRCUIT



5V Power

STUFF FOR DVI/HDMI/VGA DISPLAY SKU



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PAGE DETAIL	PS: 5V, PEXVDD

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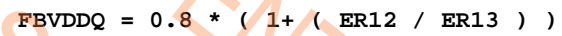


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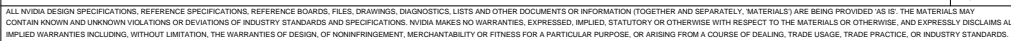
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A	B	C	D	E	F	G	H	I
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Bootup Voltage set to 0.9000V as for primary value
It will be changed when POR is ready

PWM	Freq	Vref(V)
RT8123AG5:	300kHz, 0.6V	
EMS303AG5:	300kHz, 0.6V	
RT8105G5:	300kHz, 0.8V	
RT8101:	300kHz, 0.8V	
APW7165AKAE:	300kHz, 0.8V	
APW7120KE:	300kHz, 0.8V	
NCP1158DR2G:	275kHz, 0.8V	

$$0.775V = 0.5V * (1 + 1.542k)$$

Vref	Rb1	Rb2	Rb3	Rb4	Rb5
0.5V	61.9k	30.9k	15.4k	7.68k	3.83k
0.6V	60.4k	29.4k	14.3k	7.15k	3.57k

values for Rb1, Rb2
Rb3, Rb4 and Rb5
will be calculated based
on the needed voltages