

SUMMARY:

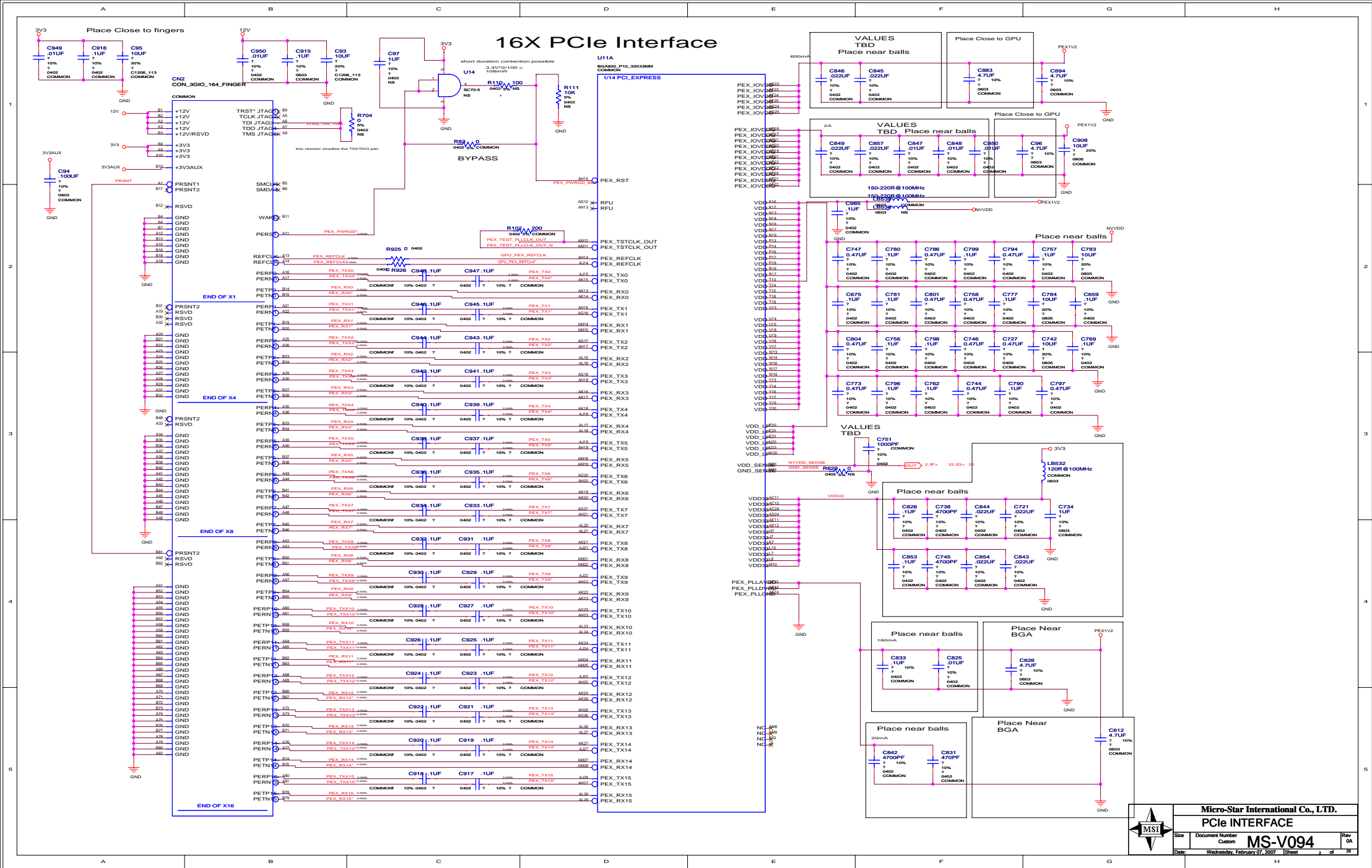
- 1. Base on P456-A02 to Modify
- 2. BGA-136 DDRIII

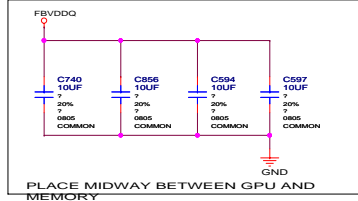
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Rev History

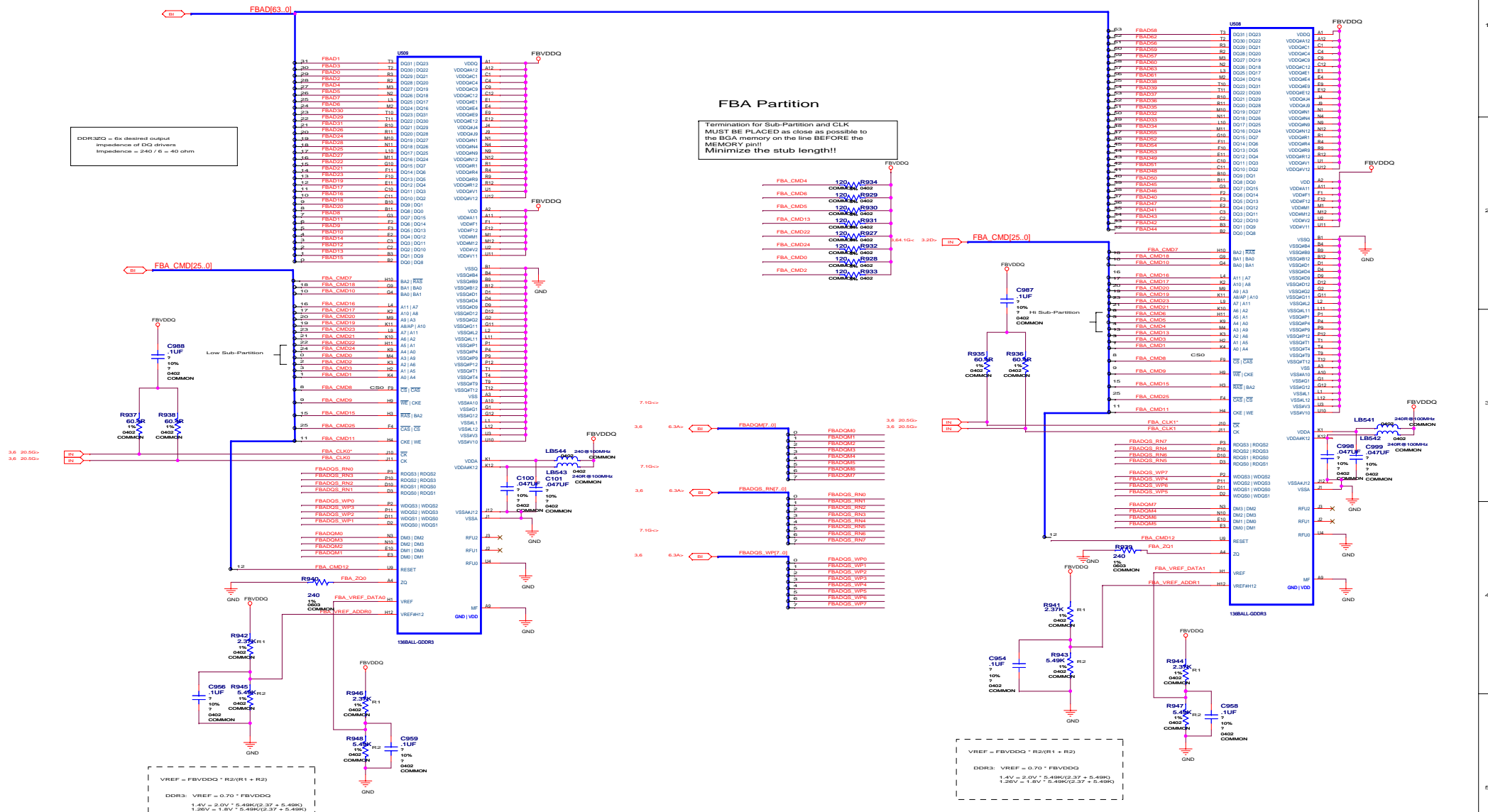
- 1.Remove VIDEO IN
- 2. Modify Page 9, Modify SLI circuit for G86
- 3.Modify Page 14, Remove TMDS LINK C&D circuit
- 4. Modify Page 15, Remove SPDIF circuit
- 5.Modify Page 20 FBVDDQ,PWM IC change to use 7210, Add LINEAR POWER & APW 7080





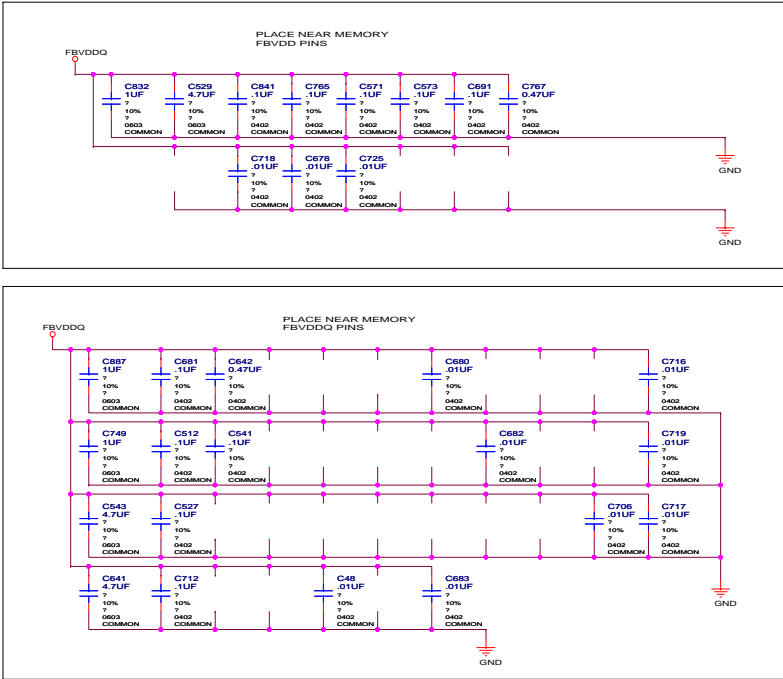
	Micro-Star International Co., LTD.		
	FBA INTERFACE		
	Size Custom	Document Number MS-V094	Rev 0A
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Framebuffer: Partition A
16Mx32 BGA136 DDR3

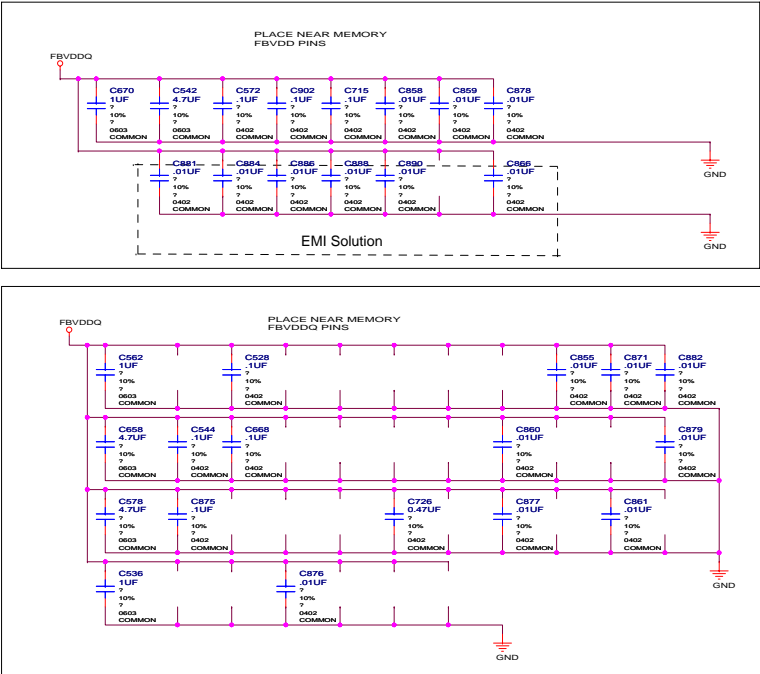


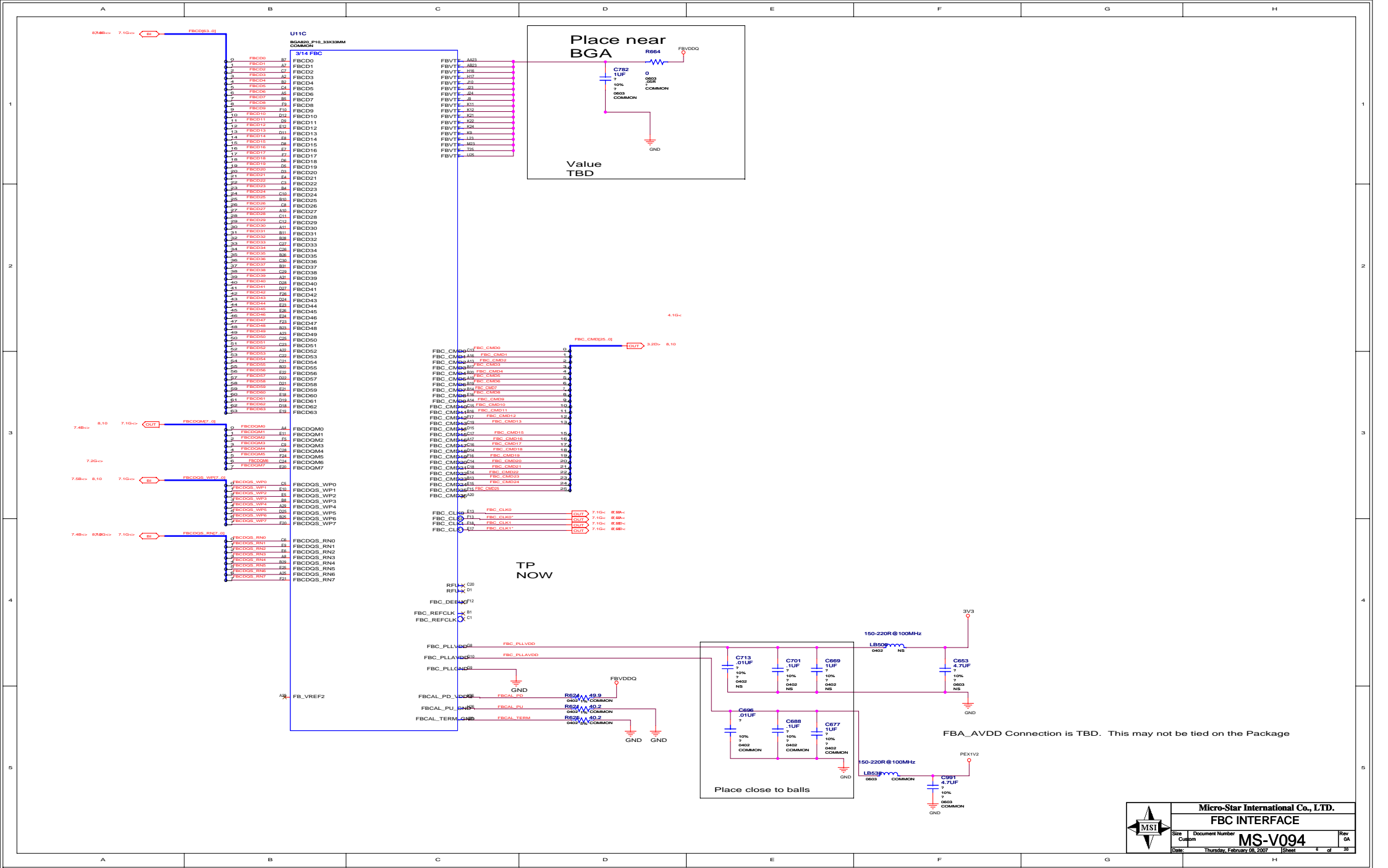
FRAME BUFFER: PARTITION A
DECOUPLING

Decoupling for FBA 0..31



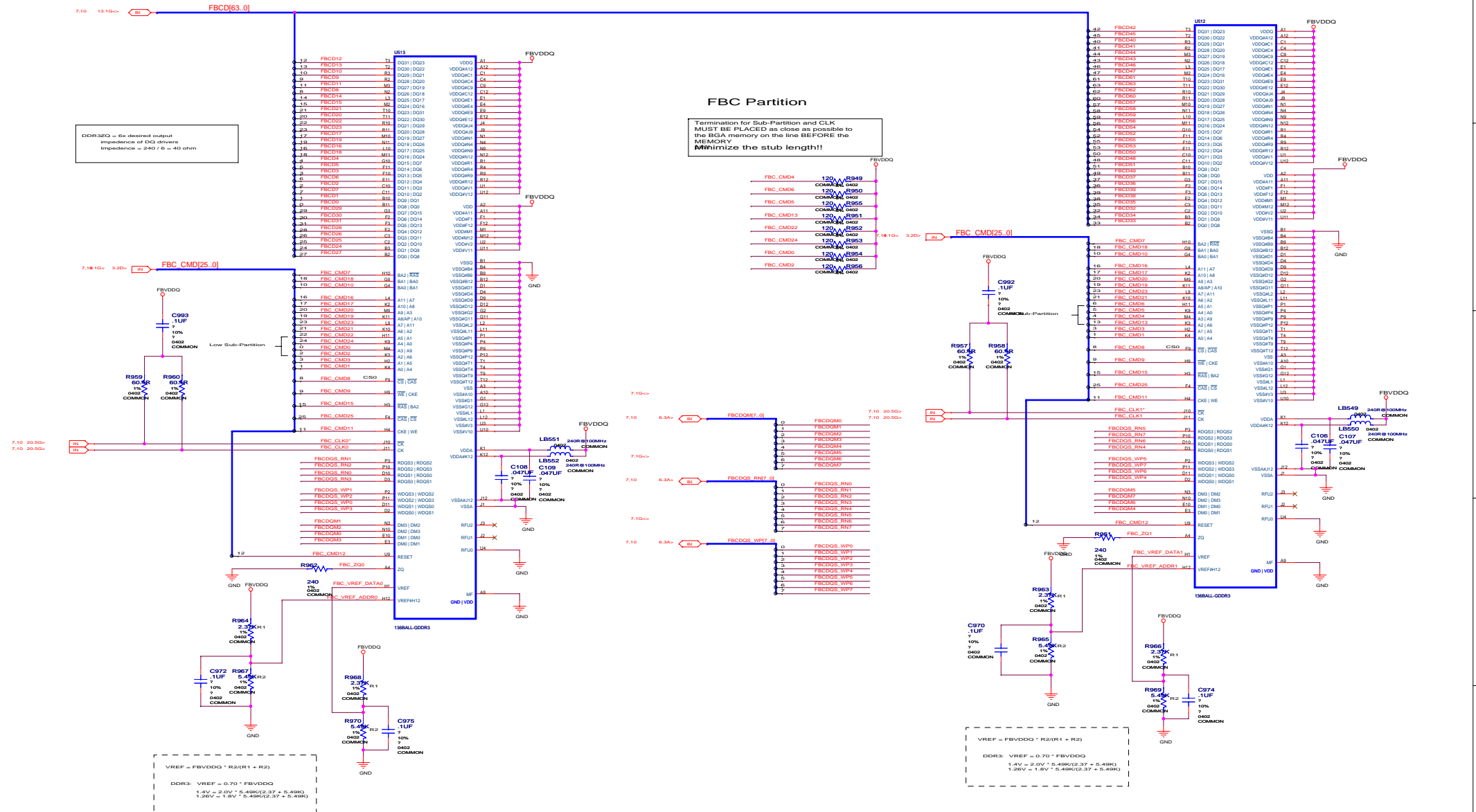
Decoupling for FBA 32..63





FRAMEBUFFER: PARTITION

C 16Mx32 BGA136 DDR3



1	
2	
3	
4	
5	

1	
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4	
5	

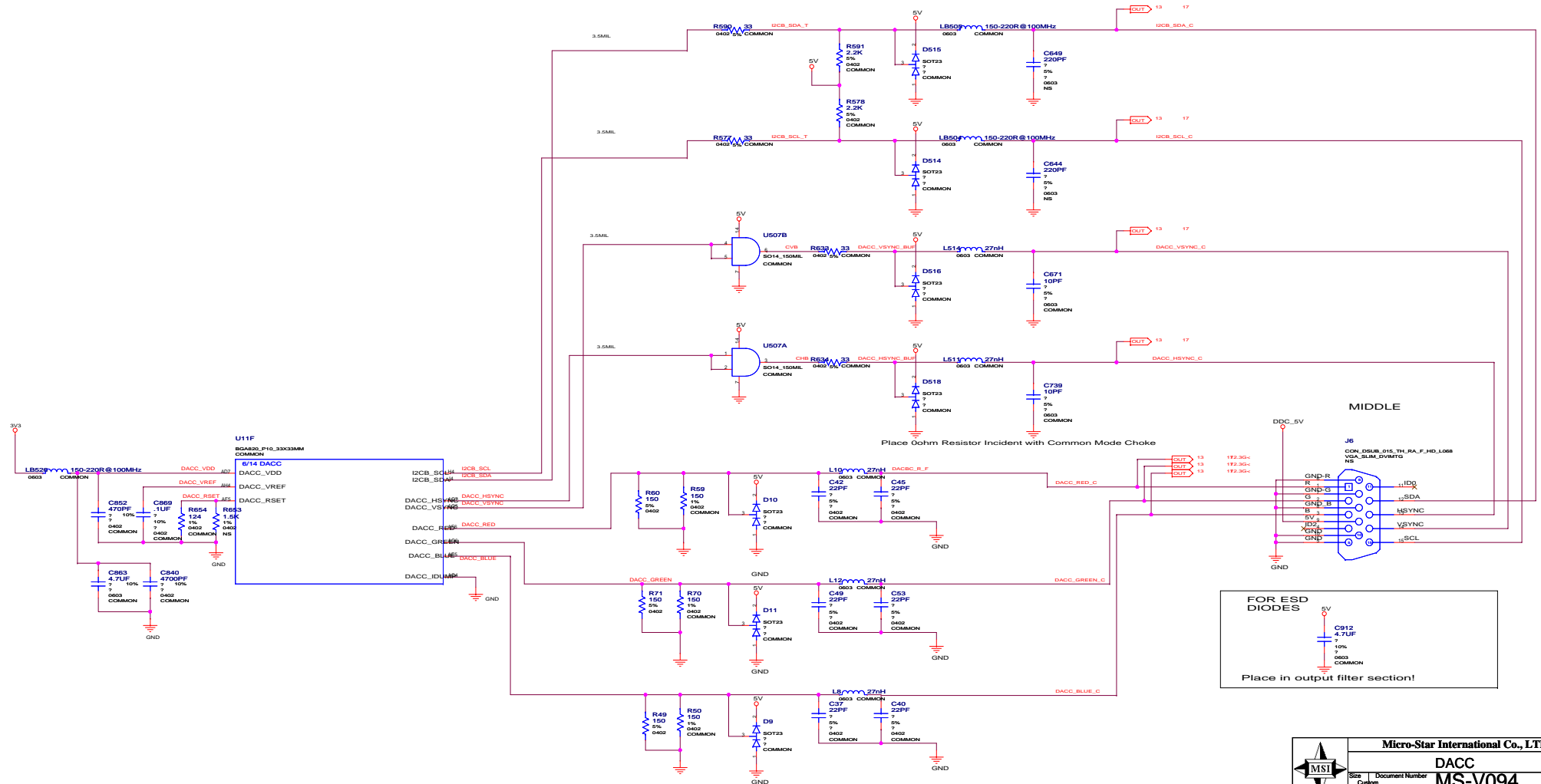


1	
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4	
5	



Secondary Display (DACC), Slim DB15

DACC RGB-FILTER



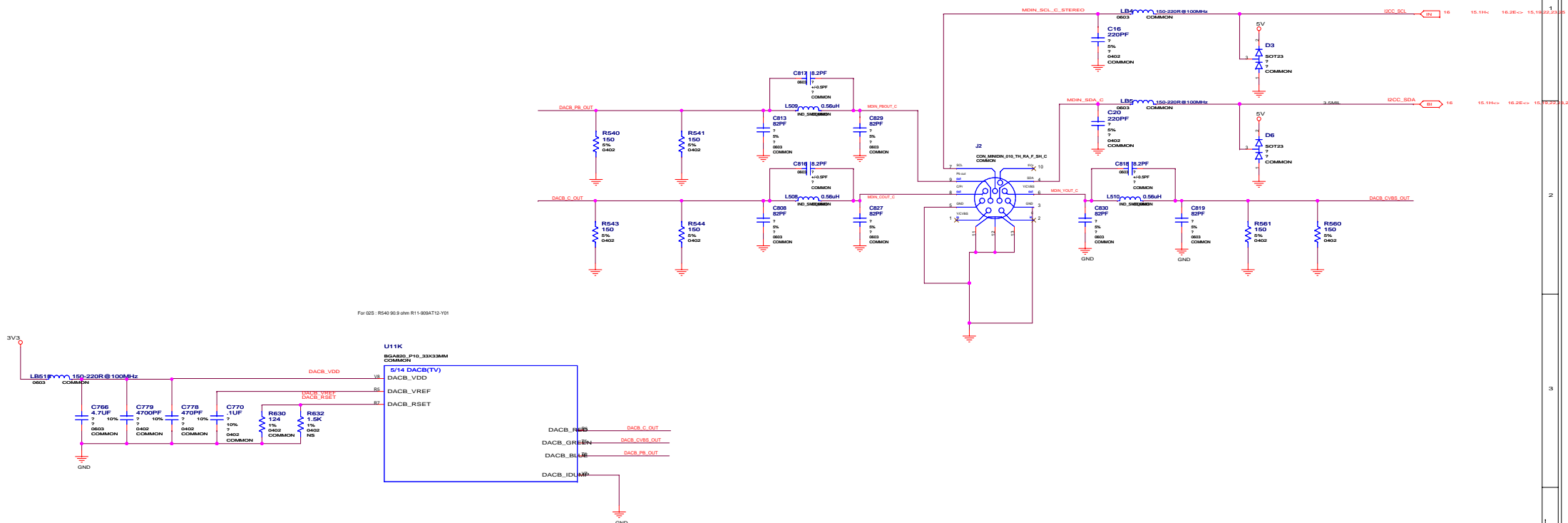
FOR ESD
DIODES

Place in output filter section!

DACA
RGB-FILTER



DACB .. MiniDIN VIDEO IN/OUT CONNECTOR /STEREO GLASSES



1

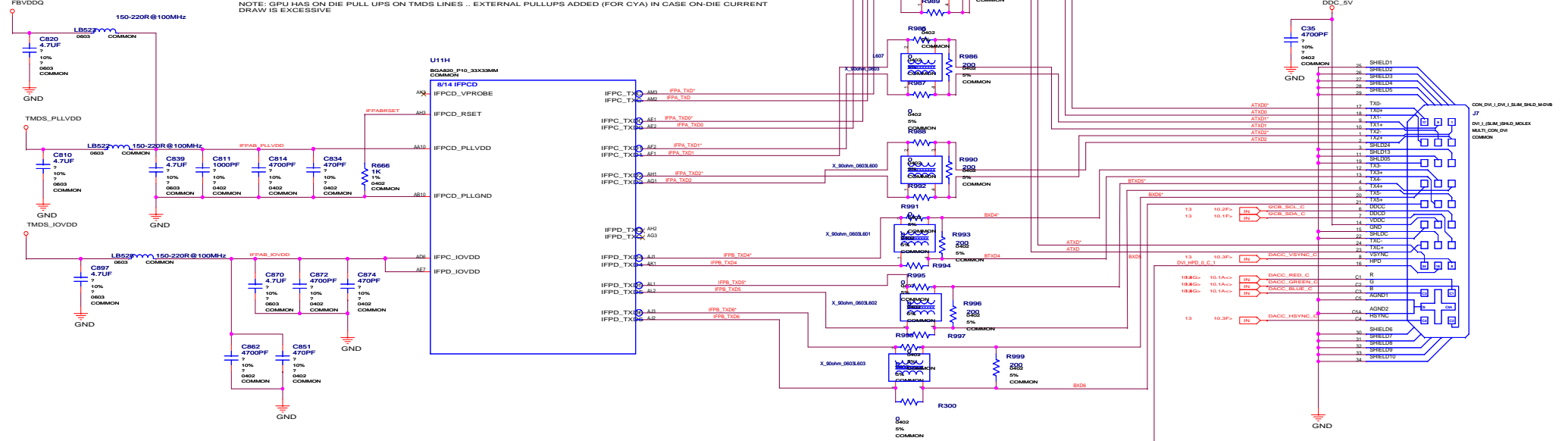


G73 - UNSTUFF PU's

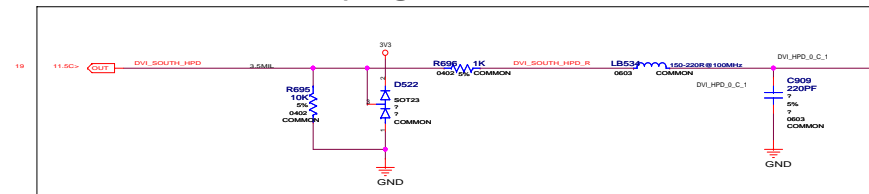
G73 - UNSTUFF PU'2



NOTE: GPU HAS ON DIE PULL UPS ON TMDS LINES .. EXTERNAL PULLUPS ADDED (FOR CYA) IN CASE ON-DIE CURRENT DRAW IS EXCESSIVE



Hotplug Detection

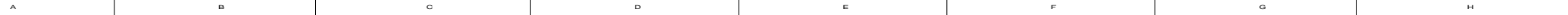


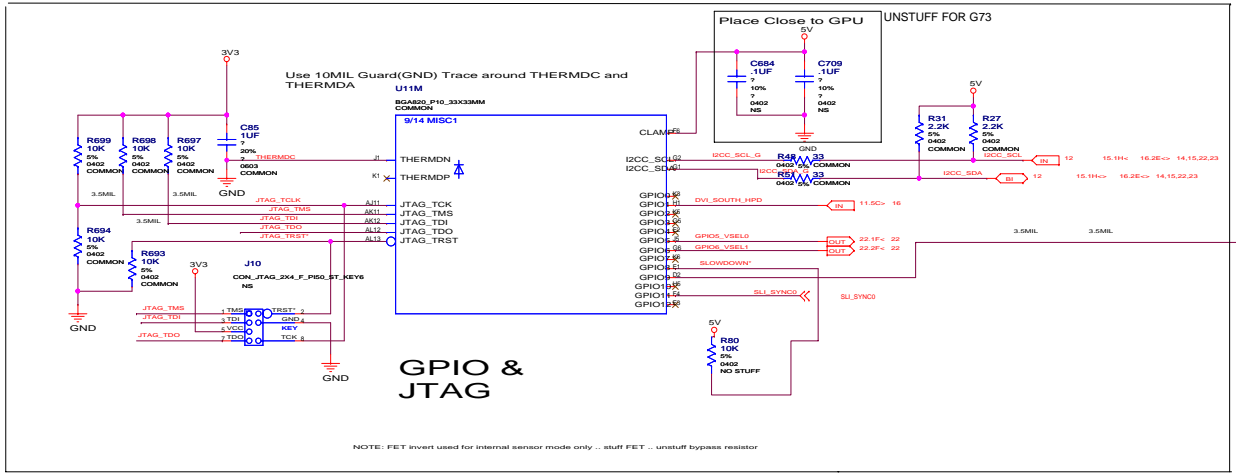
Micro-Star International Co., LTD.

TMD5 LINK C & D

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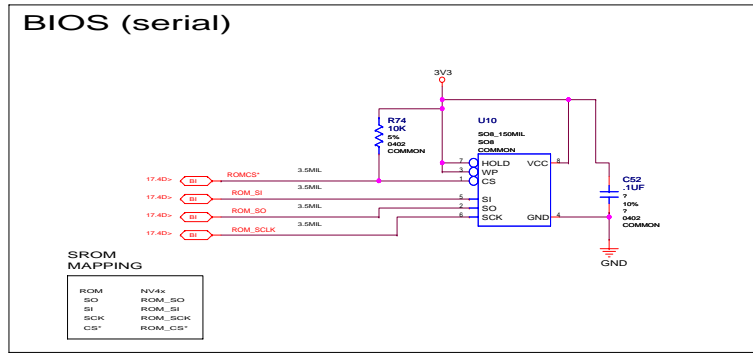
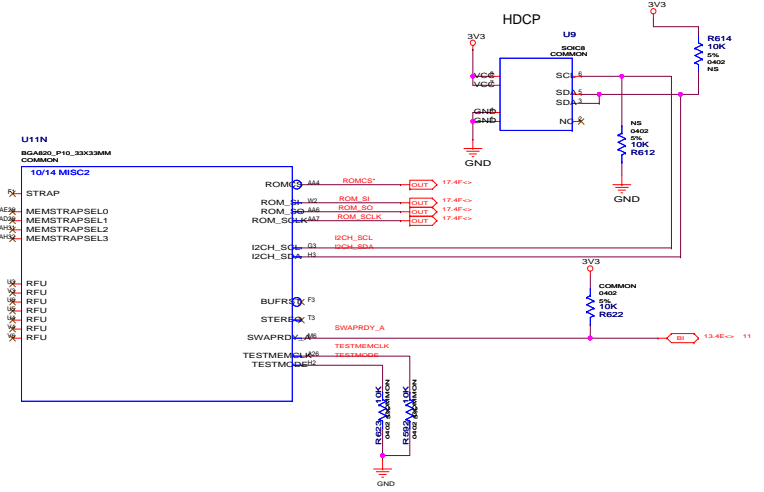
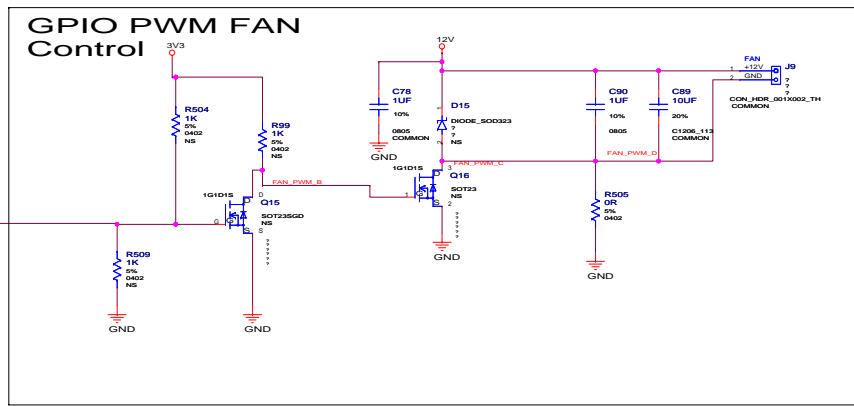
A	B	C	D	E	F	G	H
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GPIO Assignment Table

GPIO I/O	FUNCTION
0	IN DVI MID HOTPLUG DET
1	IN DVI SOUTH HOTPLUG DET
2	IN RESERVED
3	IN RESERVED
4	IN TUNER IRQ
5	OUT NVVDD VOLTAGE SELECT 0
6	OUT NVVDD VOLTAGE SELECT 1
7	IN RESERVED
8	IN RESERVED
9	OUT PWM FAN
10	IN RESERVED
11	IN TVRSET
12	IN RESERVED

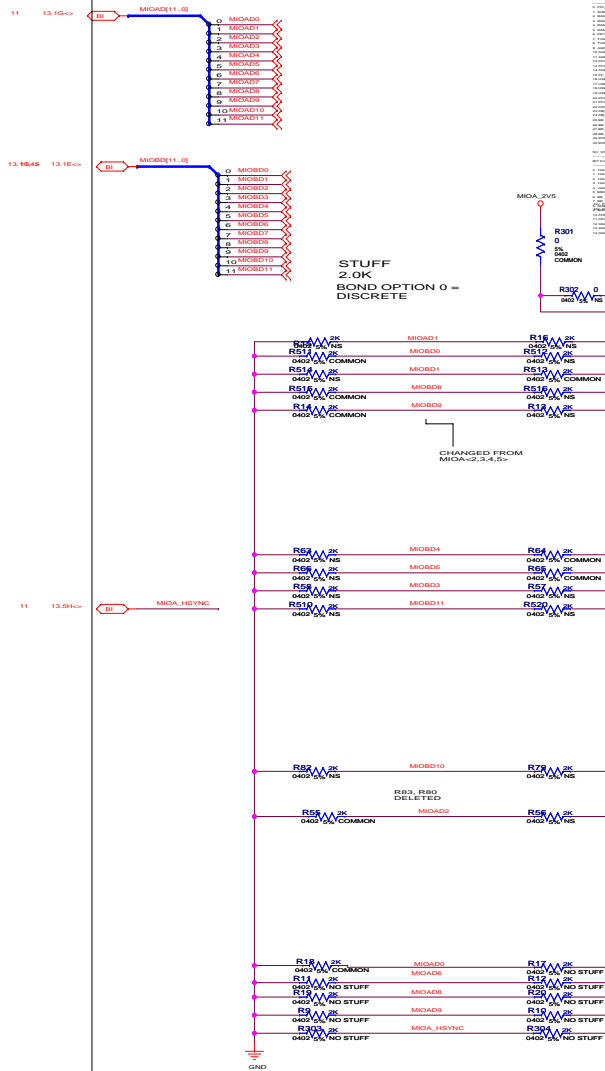


SRAM MAPPING

ROM	NV4x
SO	ROM_SO
SI	ROM_SI
SCK	ROM_SCK
CS*	ROM_CS*

BIOS, Straps, Misc

Assembly:
BIOS



REG: NV_PEXTREV_BOOT_0

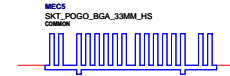
Bit	Signal	VALUE_ID	VALUES
00	PCI_AD_SWAP	0	REVERSED
01	SUB_VENDOR	0	0x5020 BIOS
02	RAM_CFG_0	0000	0000
03	RAM_CFG_1	0000	0000
04	RAM_CFG_2	0000	0000
05	RAM_CFG_3	0000	0000
06	CRYSTAL_0	01	14.31818 Mhz
07	TV_MODE_0	00	TV
08	TV_MODE_1	00	TV
09	AGP_ENABLE	0	disabled
10	AGP_SBA0	0	disabled
11	AGP_FASTWR	0	disabled
12	PCI_DEVID_0	0000 0x140 - 1111 0x014F	0000 (default 0x140)
13	PCI_DEVID_1	0101 (0x145)	0101 (0x145)
14	BUS_TYPE	0	PCI
15	FP_IFACE	0	0
16	FB_0	0	0
17	FB_1	0	0
18	BR	0	0
19	BR_128M	0	0
20	BR_AGP	0	0
21	BR_IO	0	0
22	ROM_TYPE_0	00	Parallel
23	ROM_TYPE_1	01	Serial AT25F
24	STRAP_USER3_0	0000 (default)	0000 (default)
25	USER_1	0	0
26	USER_2	0	0
27	USER_3	0	0

REG: NV_STRAP_1

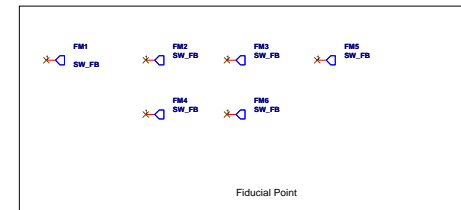
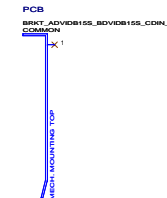
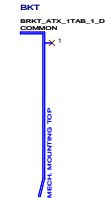
Bit	Signal	VALUE_ID	VALUES
11	PEX_PLL_EN_TERM100	0	(default -- internal term on)
12	JGIO_PADCFG_LUT_ADR[0]	0	0
13	JGIO_PADCFG_LUT_ADR[1]	0	0
14	JGIO_PADCFG_LUT_ADR[2]	0	0
15	SLOT_CLK_CONFIG	0	0

Mechanical parts

- MEC2
- MEC1
- MEC4
- MEC3



155-00002-0000-000 SCREW PHIL PAN HD SS MACH 4-40
3/16



DDC 5V

5V

DDC_5V

F1
200mA
COMMON
POLYBUTYL
5V_FUSED

1

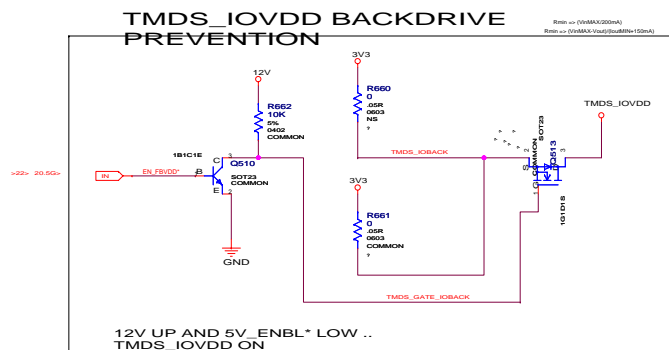
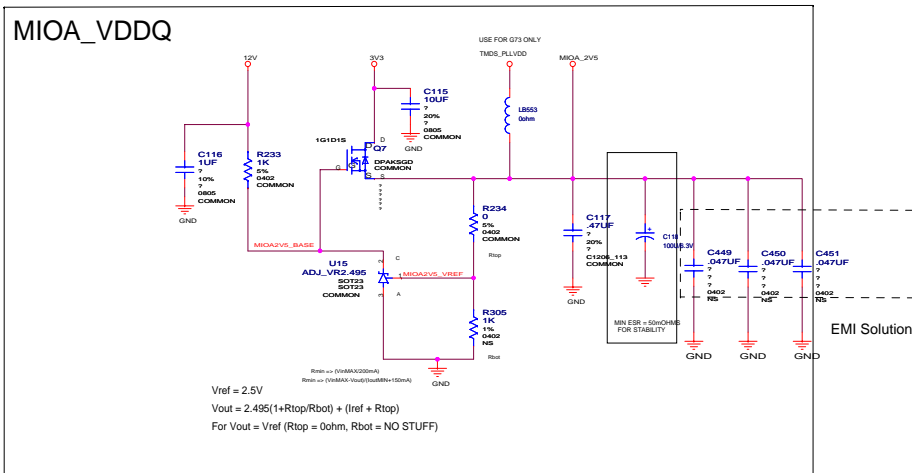
2

LIB40
220R @ 100MHZ
COMMON
0805

C443
4.7UF
COMMON
0805

C444
220PF
COMMON
0803

POWER_DDC5V



NVVDD ,FBVDD, 5V,A3V3 POWER SUPPLY

NVVDD ,FBVDD, 5V,A3V3 POWER SUPPLY

