

SUMMARY:

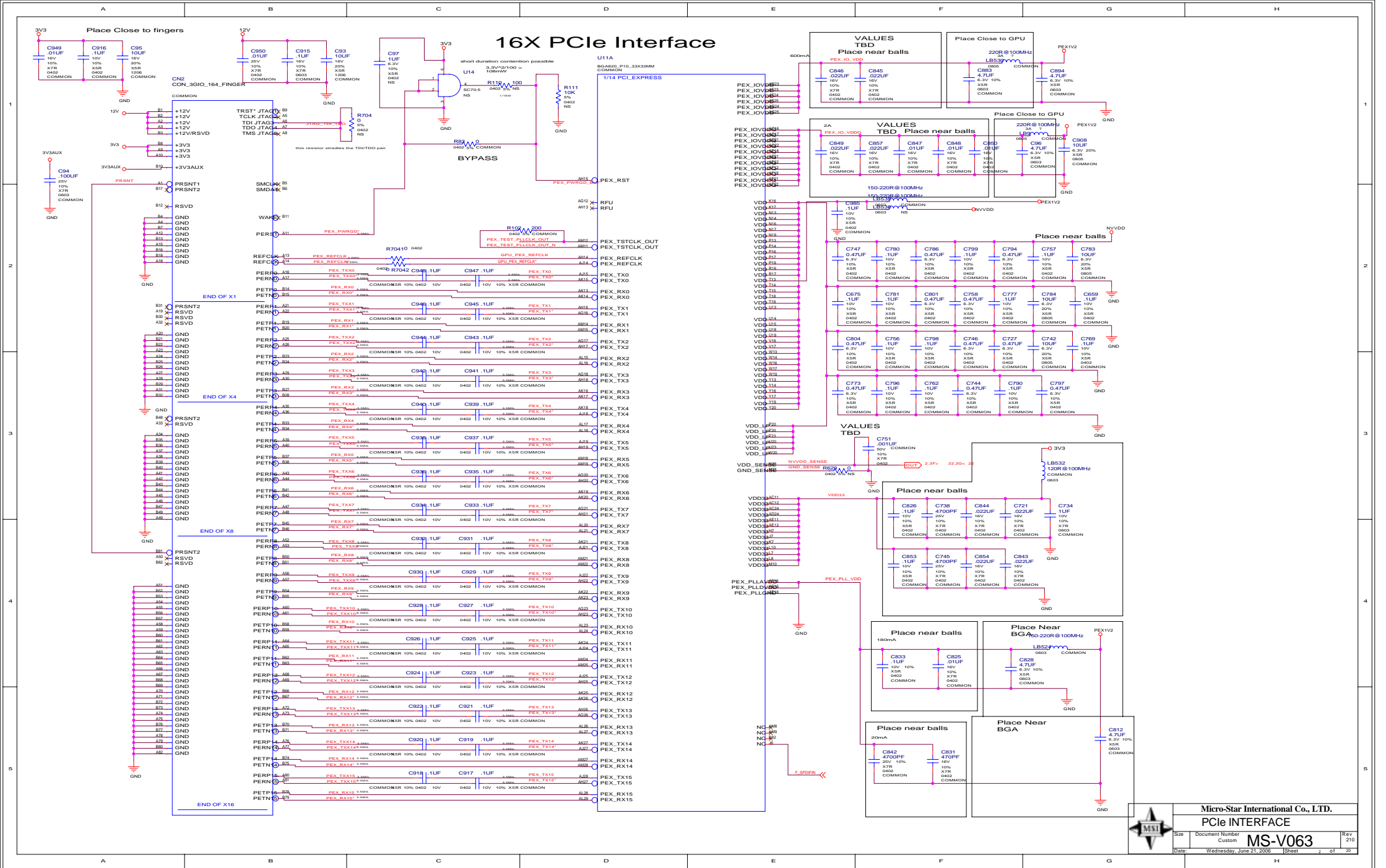
- 1. Base on V045-100 (P456-A02)to Modify
- 2. BGA-136 DDRIII

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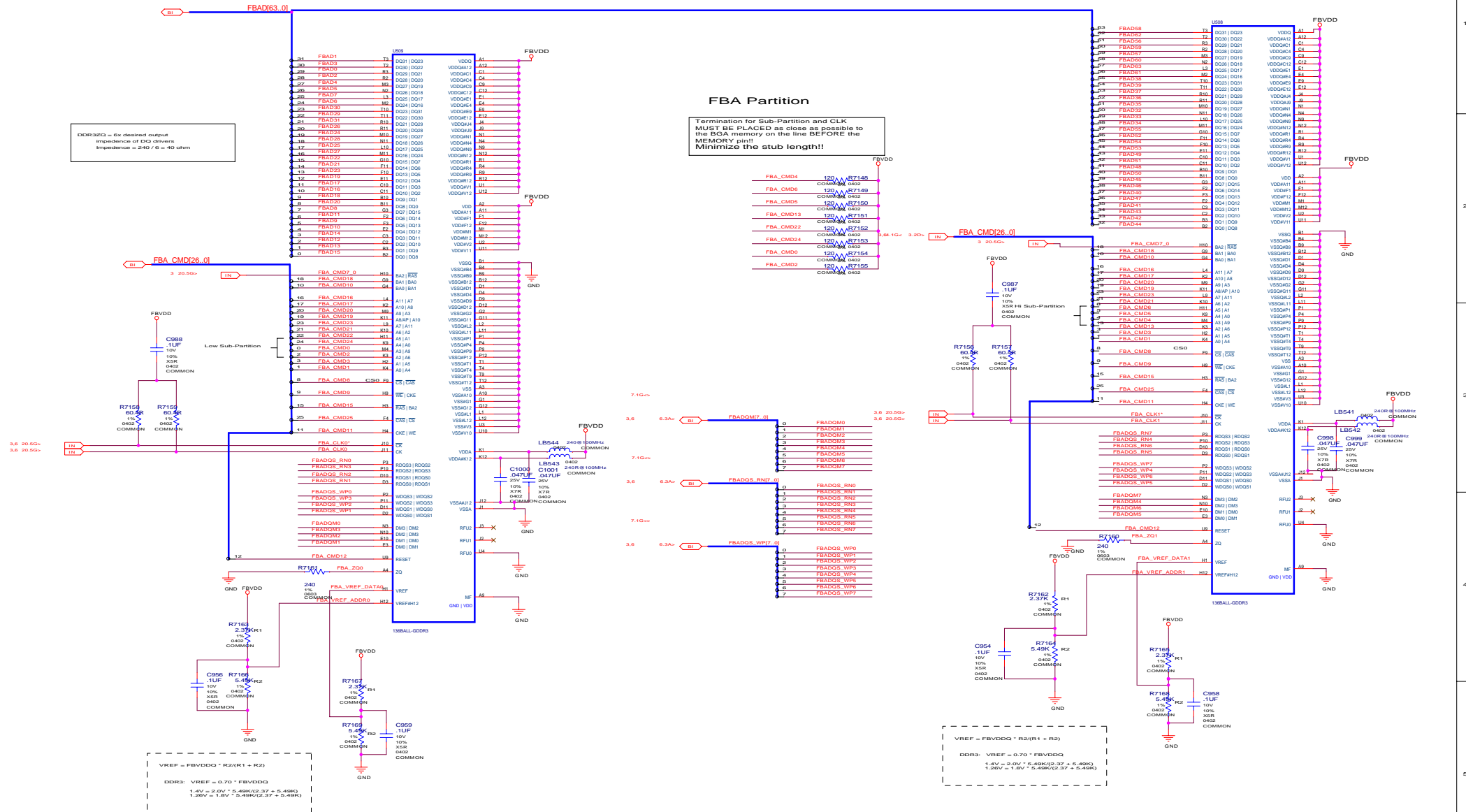
Rev History

- 1.Remove FBA2 and FBC2
  - 2.Modify Page 13 and 16 remove 4 pin VIDEO in circuit
  - 3.Modify Page 17 GPIO FAN control circuit
  - 4.Modify Page 20 NVVDD,FBVDD/Q,5V,A3V3 circuit
- 210
- 1.Modify A3V3 circuit all 3V3 use PEX3V3
  - 2. Add FBVDD POWER SEQUENCING
  - 3. Add L7001& L7002 BEAD and R7372 0ohm for NVVDD to PEX1V2 option
  - 4. Remove 5V and A3V3 OP/Mosfet circuit add 7805



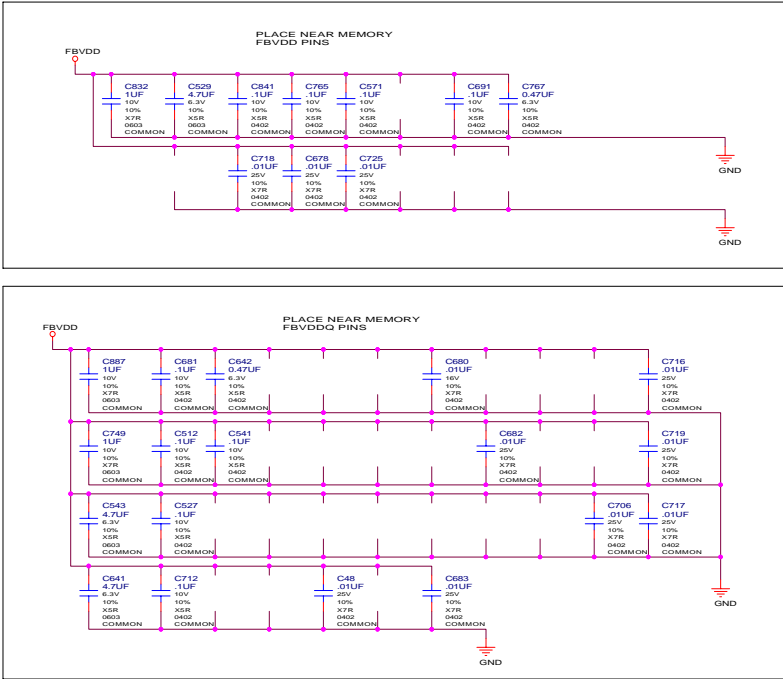


Framebuffer: Partition A  
16Mx32 BGA136 DDR3

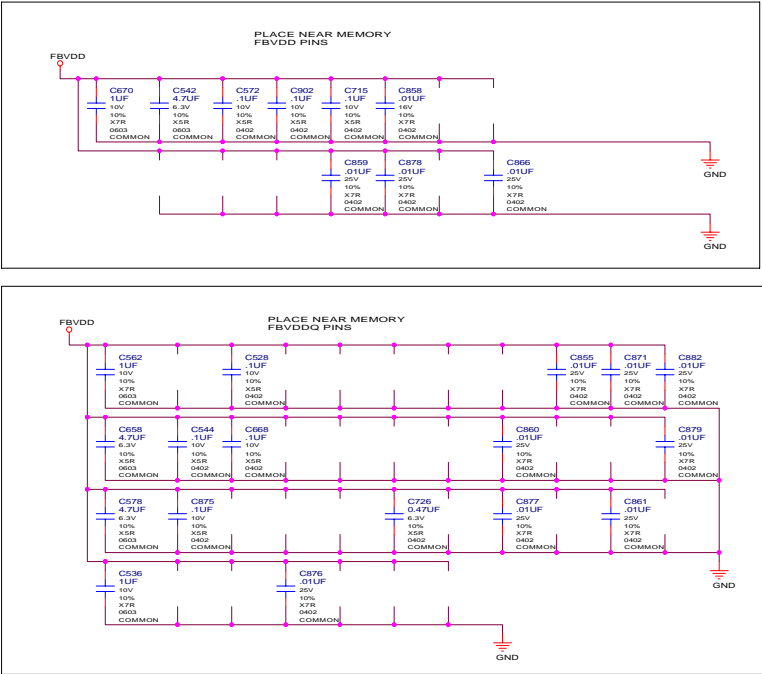


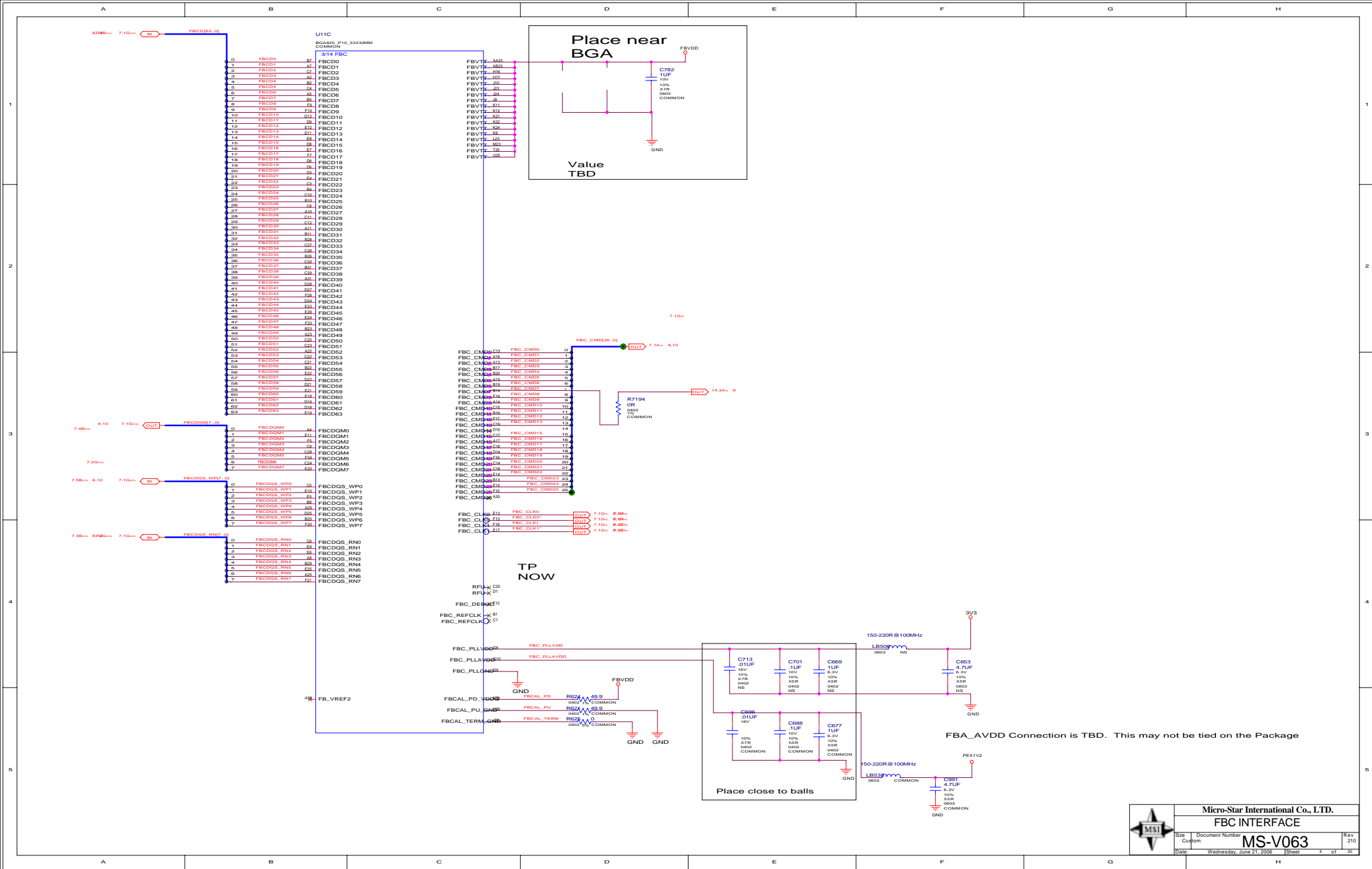
FRAME BUFFER: PARTITION A  
DECOUPLING

Decoupling for FBA 0..31

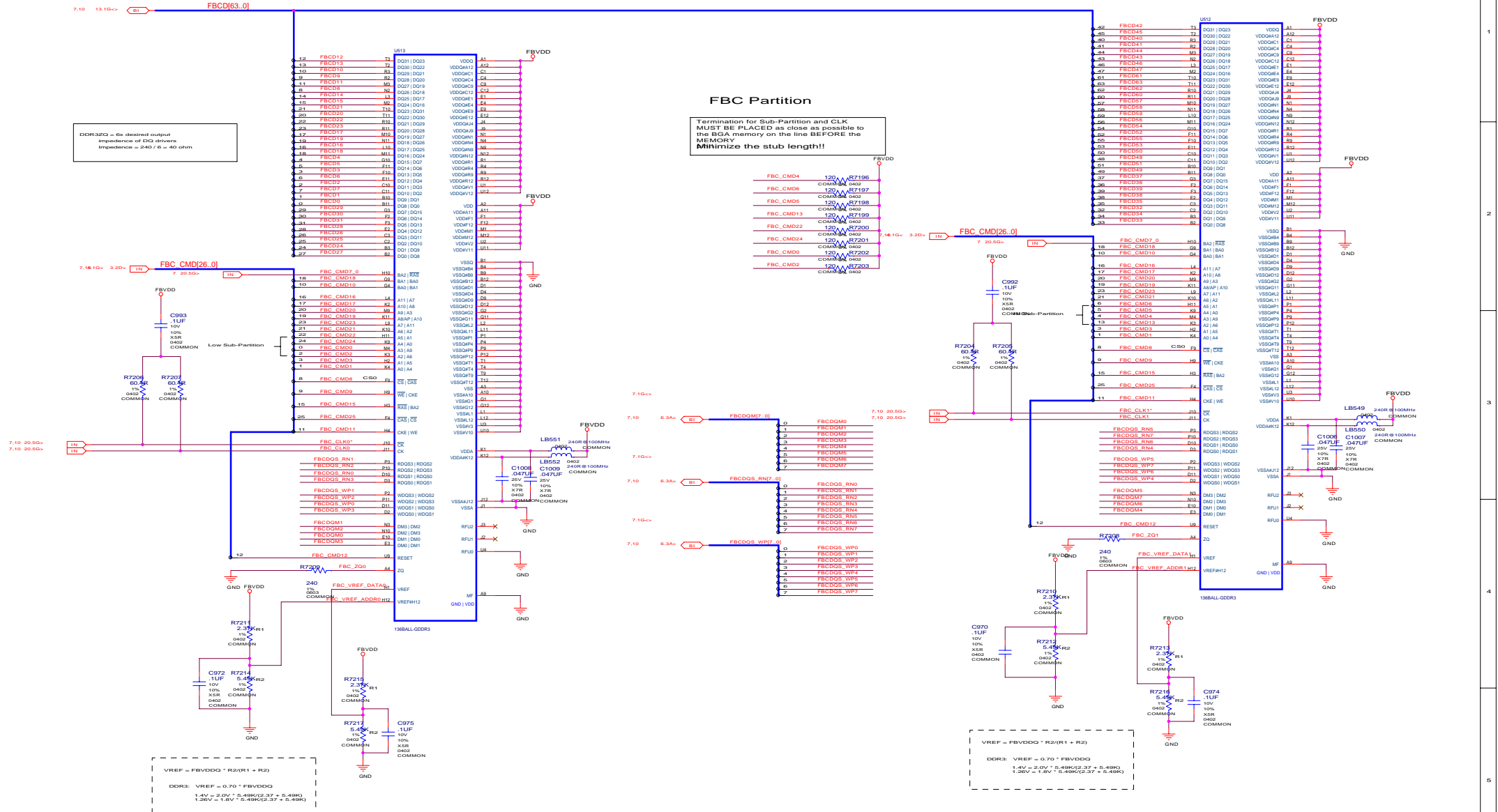


Decoupling for FBA 32..63



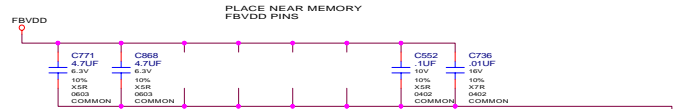


FRAMEBUFFER: PARTITION  
C 16Mx32 BGA136 DDR3

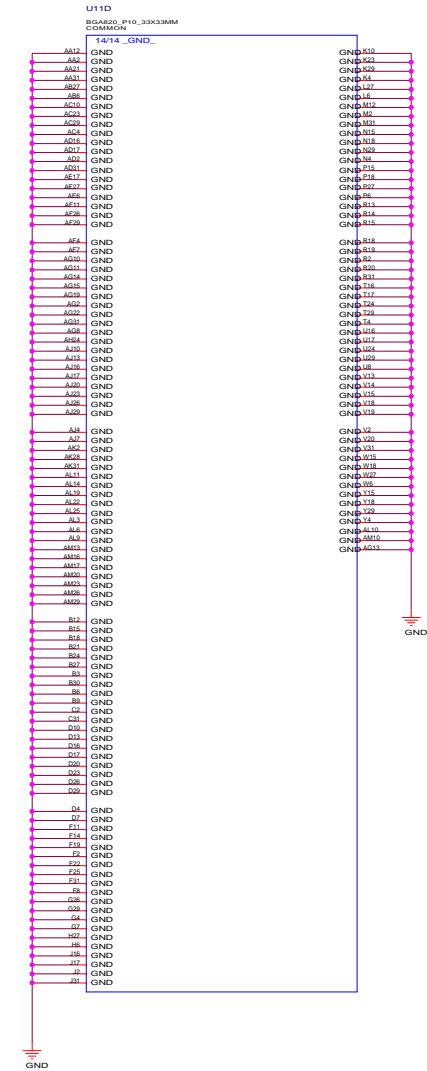
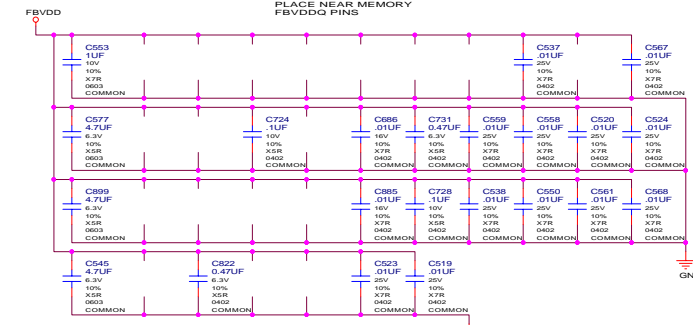
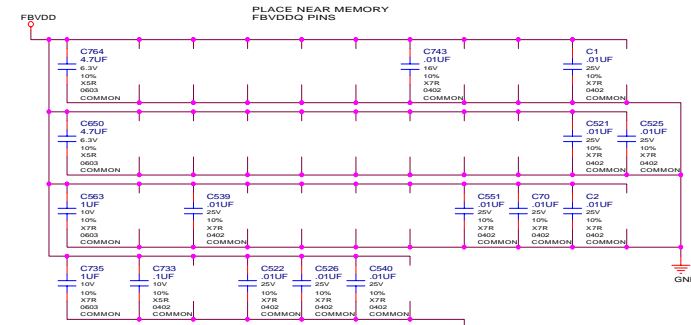


# FRAMEBUFFER: PARTITION C DECOUPLING

## Decoupling for FBC 0..31

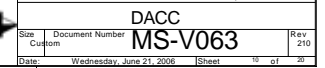
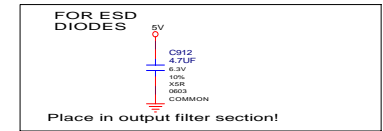


## Decoupling for FBC 32..63







DACC  
RGB-FILTER

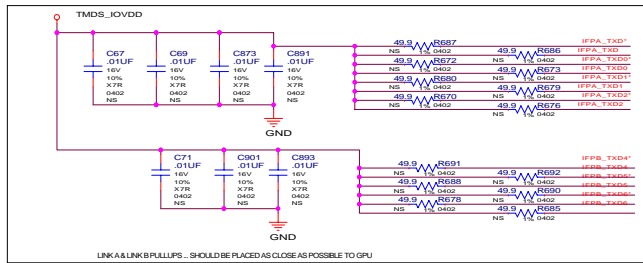




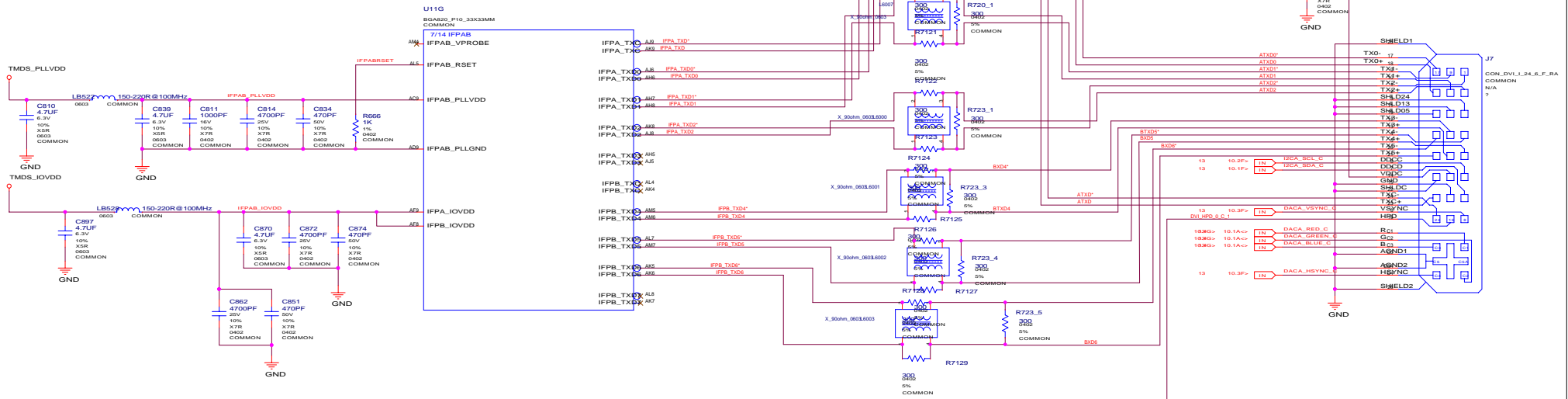


# INTERNAL TMDS .. LINK A & B

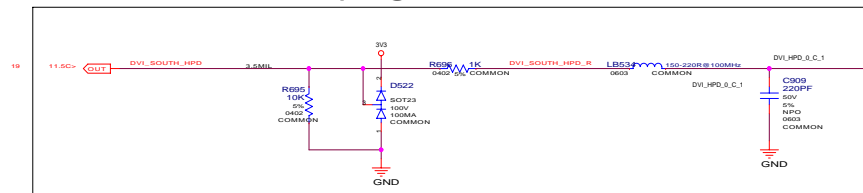
073 - UNSTUFF FU2



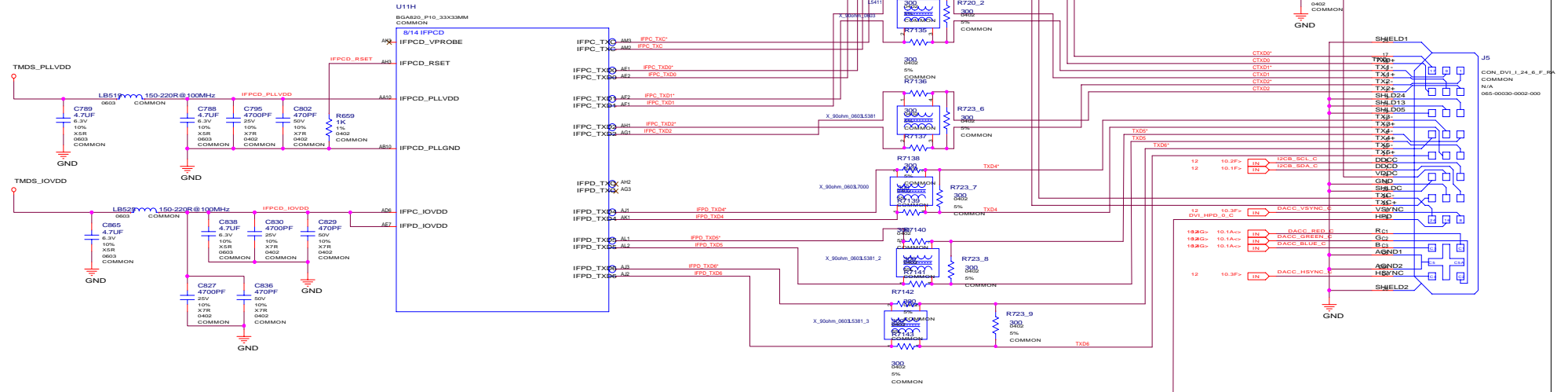
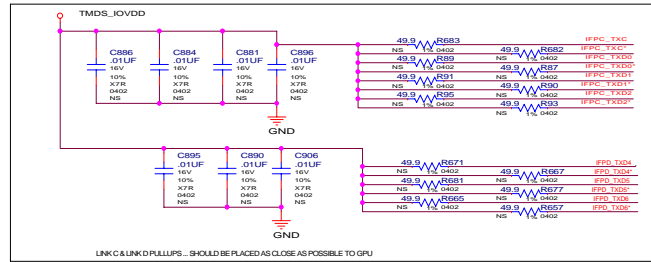
NOTE: GPU HAS ON DIE PULL UPS ON TMDS LINES .. EXTERNAL PULLUPS ADDED (FOR CYA) IN CASE ON-DIE CURRENT DRAW IS EXCESSIVE



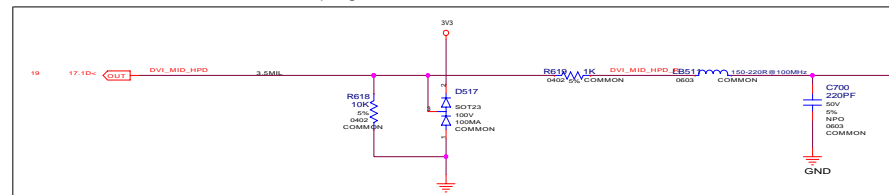
## Hotplug Detection



INTERNAL TMDS  
.. LINK C & D



## Hotplug Detection



Micro-Star International Co., LTD.

TMD5 LINK C &amp; D

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# SPDIF IN

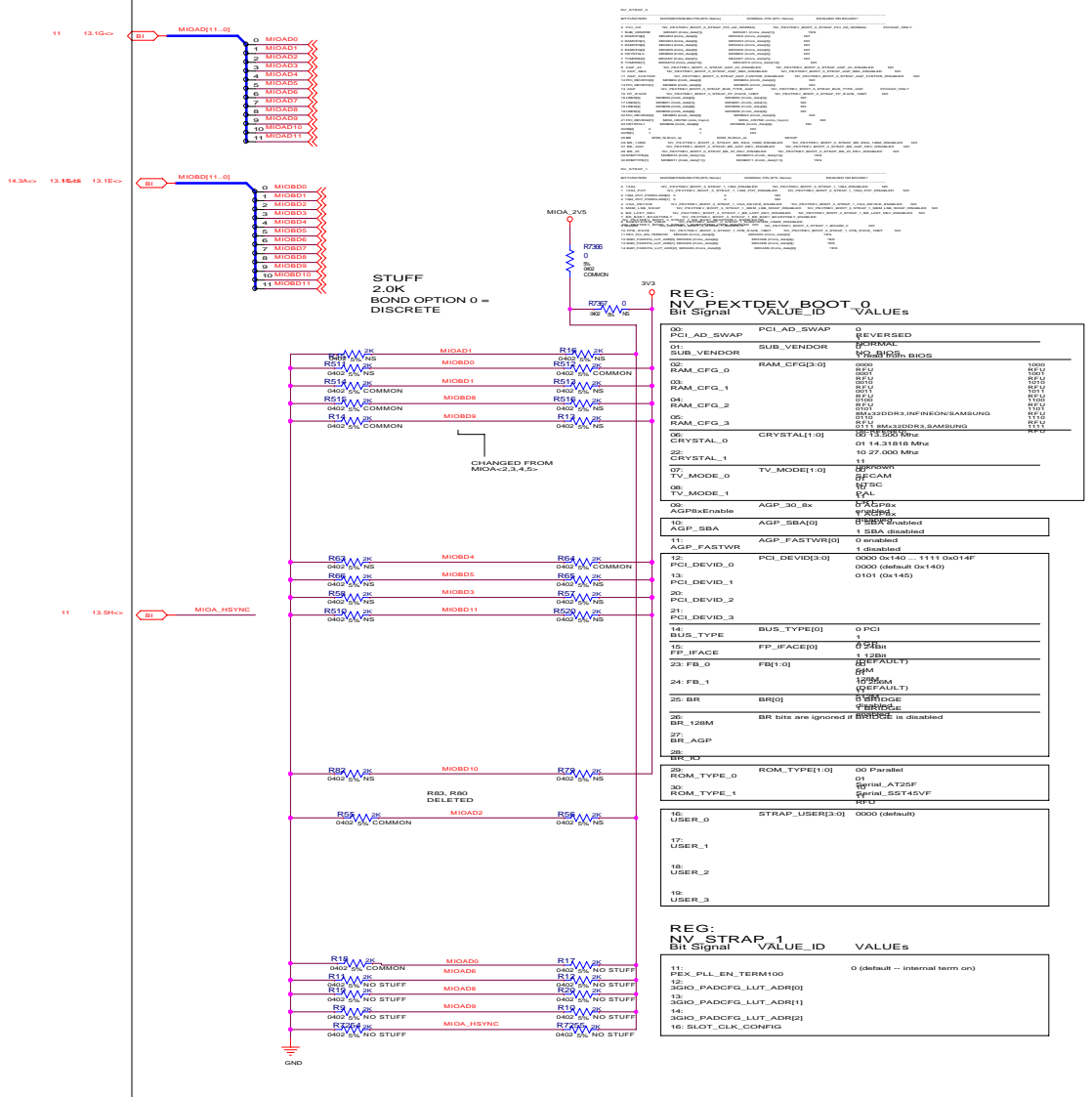






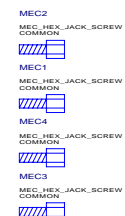
BIOS,  
Straps,  
Straps  
Misc

Assembly:  
BIOS

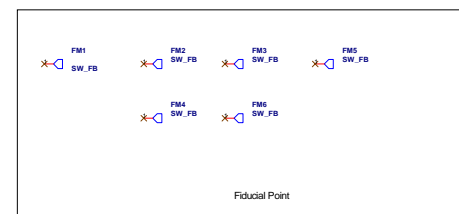
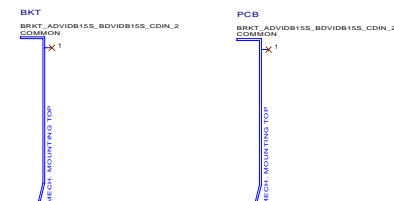


## Mechanical parts

NEED FANSINK SYMBOL  
FOR P216



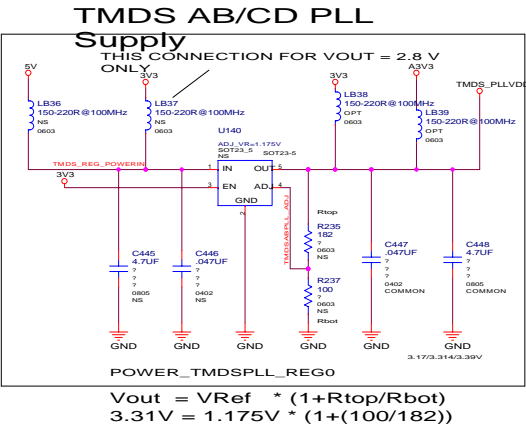
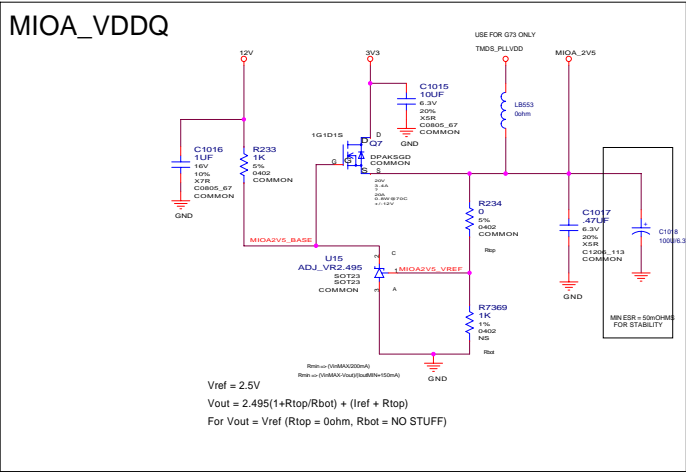
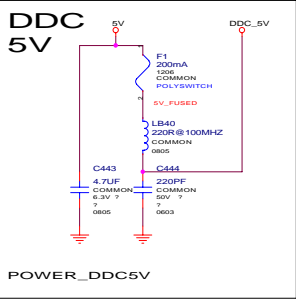
155-00002-0000-000 SCREW PHIL PAN HD SS MACH 4-40  
3/16



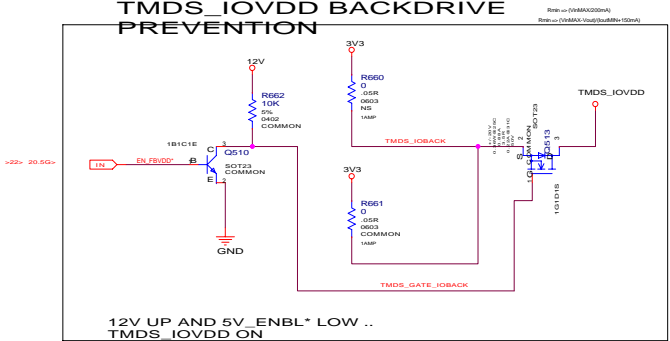
Micro-Star International Co., LTD.

Straps/Mechanical		Document Number	MS-V063	Rev	210
Customer					
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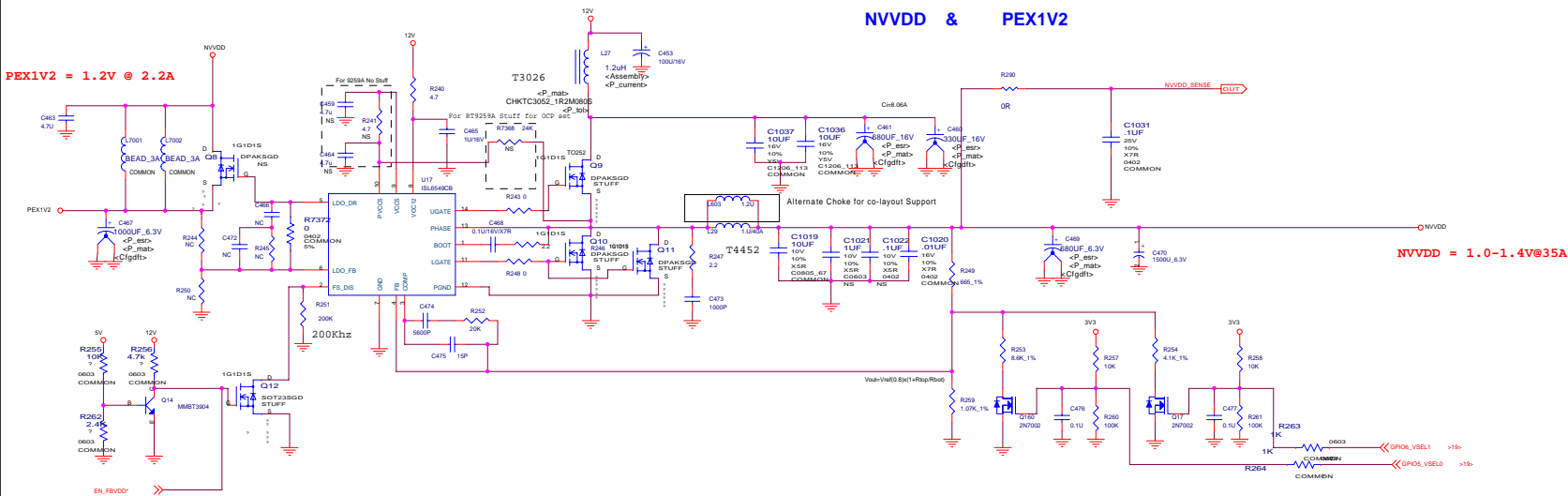
Power Supply TMD5/MIOA/DDC



TMD5\_IOVDD BACKDRIVE PREVENTION



## NVVDD ,FBVDD, 5V,A3V3 POWER SUPPLY



5V & A3V3

