

# 8979-00A DESIGN BASE ON P216-A01 DESIGN

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PAGE SUMMARY:

PAGE11.Remove 1'st TMDS & Hotplug

PAGE11.Net name change from 5v\_ENBL\* to EN\_FBVDD\*

PAGE13.Remove feature connector

PAGE13.Change input power from MIOA\_2V5 to A3V3

PAGE15.Add Scart TV chip CX25874/5

PAGE15.Add Scart TV connector

PAGE16.Remove EXT 12pin PVA connector

PAGE17.Add 0 ohm to OPT GPIO 8 or 7 to control EXTENSE pin

PAGE20.Change all power(NVVDD,FBVDD/Q,A3V3,5V & ADD EXT PWR)

PAGE20.Add External Power Connector

PAGE20.PWR current share for FBVDD

PAGE14.Remove some pin

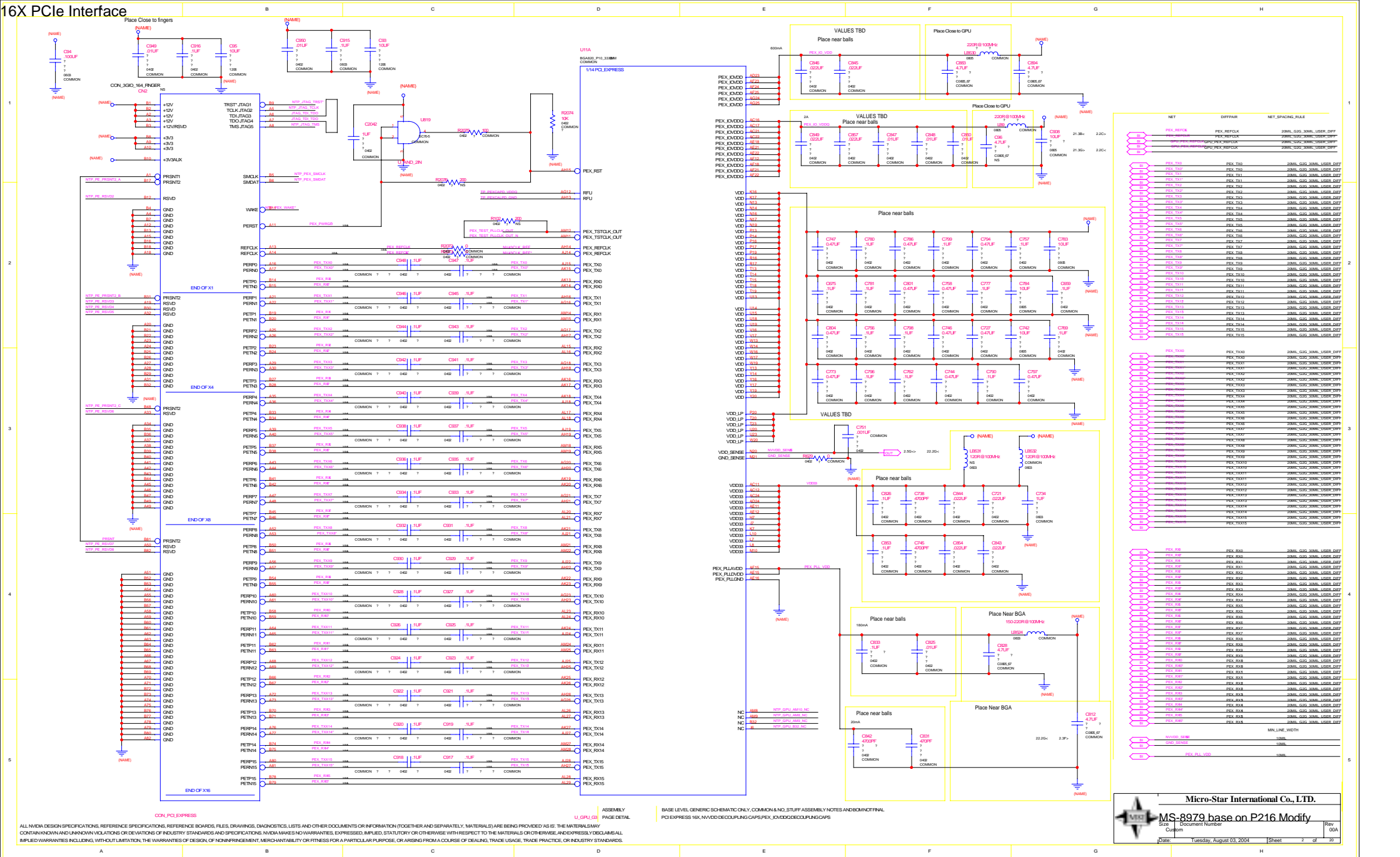
PAGE9.J8 change footprint

PAGE10.delete J6 location(slim type VGA)

PAGE12.Add Common Choke for EMI

Micro-Star International Co., LTD.	
MS-8979 base on P216 Modify	
Doc: Custom	Rev: 00A
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## 16X PCIe Interface





# 5 FrameBuffer: Partition A 8Mx32 BGA144 DDR3

A-CS0-LOW-32bit

FBA Partition

A-CS0-HI-32bit

LINE

U1C2

BGA\_24M00ND144\_P0L\_DDR0MEM0

BGA\_24M00ND144\_P0L\_DDR0MEM0

BGA144

BGA144

CS0

CS0

RAS

RAS

CAS

CAS

WE

WE

CS1

CS1

AD0

AD0

AD1

AD1

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AD3

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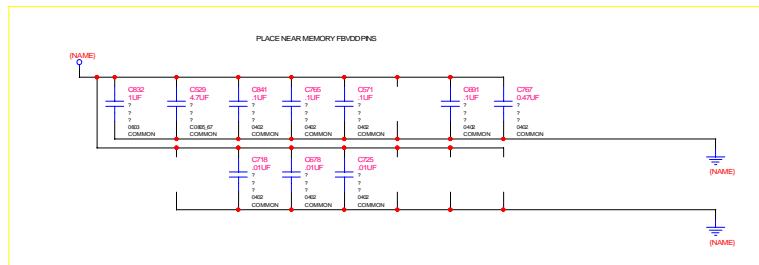
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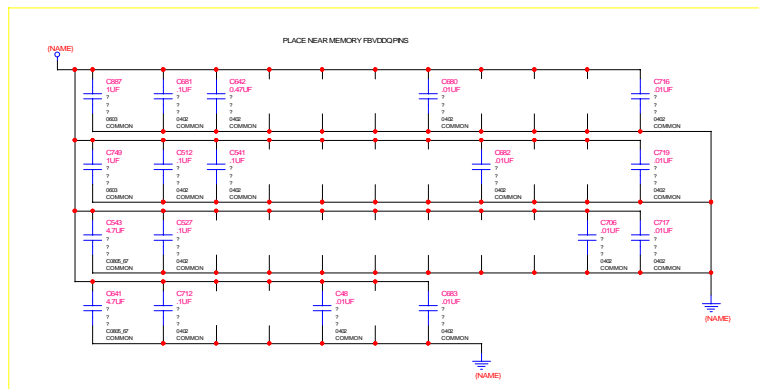
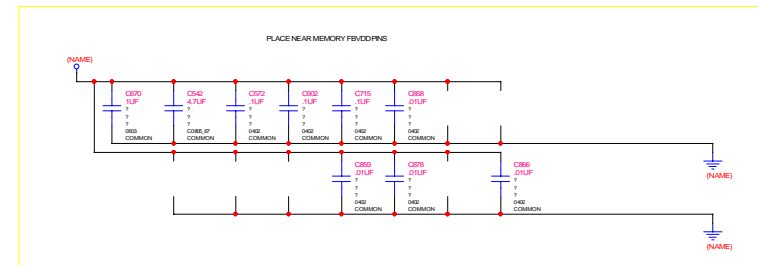
AD139

# FRAME BUFFER: PARTITION A DECOUPLING

Decoupling for FBA 0..31



Decoupling for FBA 32..63





# FRAMEBUFFER: PARTITION C 8Mx32 BGA144 DDR3

## A-CS0-LOW-32bit

USE

BGA DIAMOND144\_P08\_DDRMB02

COMMON

15 F15G 6.30u

16 F16G 6.30u

17 F17G 6.30u

18 F18G 6.30u

19 F19G 6.30u

20 F20G 6.30u

21 F21G 6.30u

22 F22G 6.30u

23 F23G 6.30u

24 F24G 6.30u

25 F25G 6.30u

26 F26G 6.30u

27 F27G 6.30u

28 F28G 6.30u

29 F29G 6.30u

30 F30G 6.30u

31 F31G 6.30u

32 F32G 6.30u

33 F33G 6.30u

34 F34G 6.30u

35 F35G 6.30u

36 F36G 6.30u

37 F37G 6.30u

38 F38G 6.30u

39 F39G 6.30u

40 F40G 6.30u

41 F41G 6.30u

42 F42G 6.30u

43 F43G 6.30u

44 F44G 6.30u

45 F45G 6.30u

46 F46G 6.30u

47 F47G 6.30u

48 F48G 6.30u

49 F49G 6.30u

50 F50G 6.30u

51 F51G 6.30u

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247 F247G 6.30u

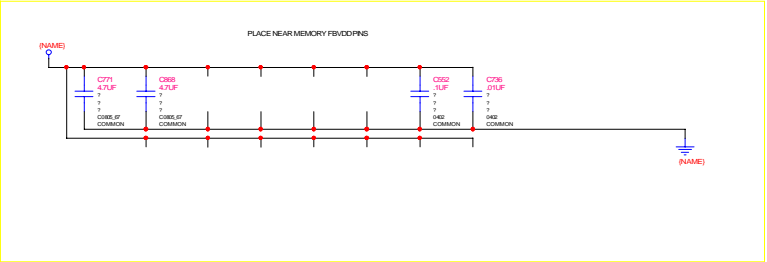
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249 F249G 6.30u

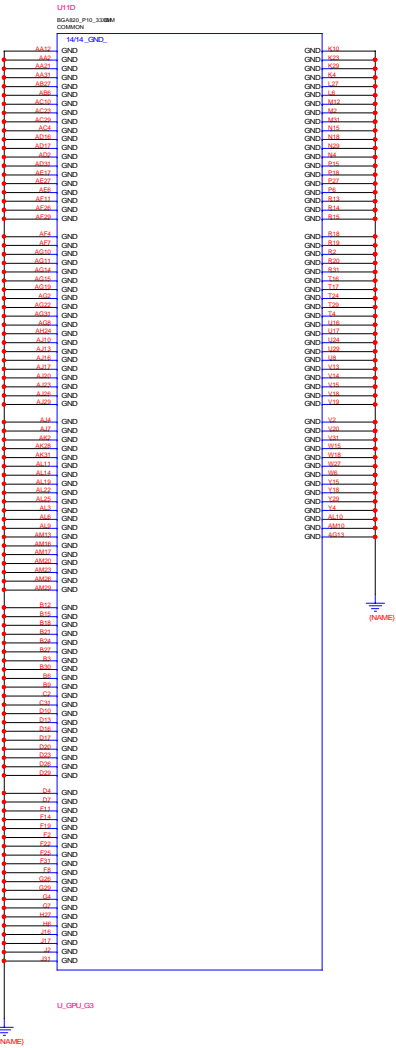
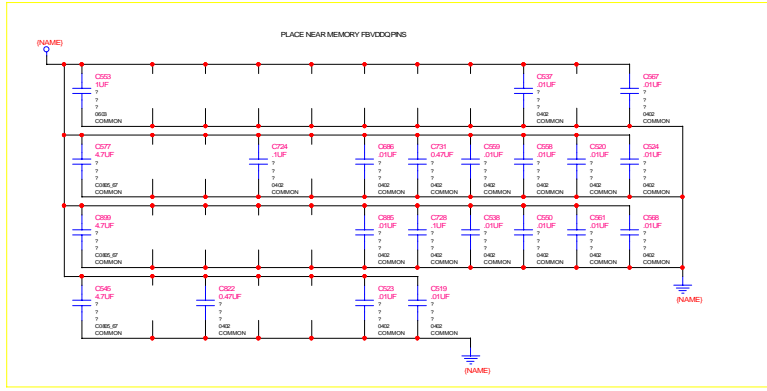
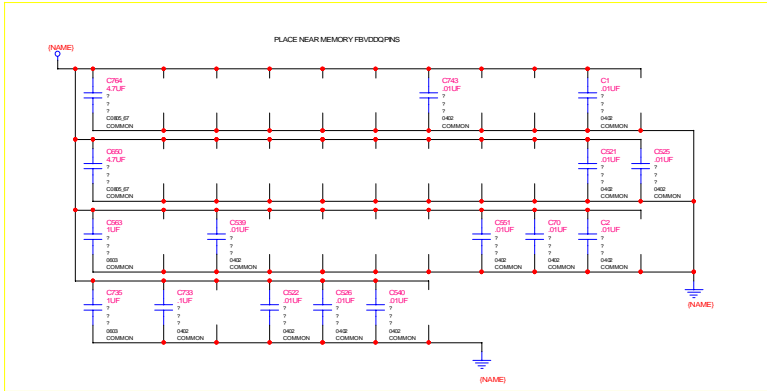
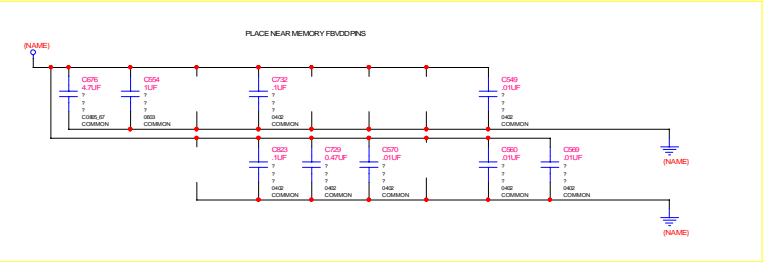
250 F250G

FRAMEBUFFER: PARTITION C DECOUPLING

Decoupling for FBC 0..31



Decoupling for FBC 32..63



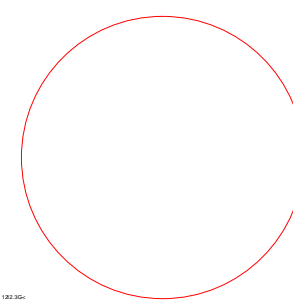


(NAME)  DDC\_5V 12800

## DACA RGB-FILTER

BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO\_STUFF ASSEMBLY NOTES AND BOM NOT FINAL  
DACA FILTERS, DACA SYNC BUFFERS & DB15 SOUTH

12.3G<  
10.4G>  
10.4G>  
12.3G<



FOR ESD DIODES

The diagram shows a circuit for ESD protection. It features a diode labeled C912 with a part number 1N713F. The diode is connected with its cathode to a common ground, labeled 'COMMON OR GROUND'. The anode is connected to a point labeled '(NAME)'. The entire circuit is enclosed in a yellow rectangular box.

Place in output filter section!

1

2

3

4

5

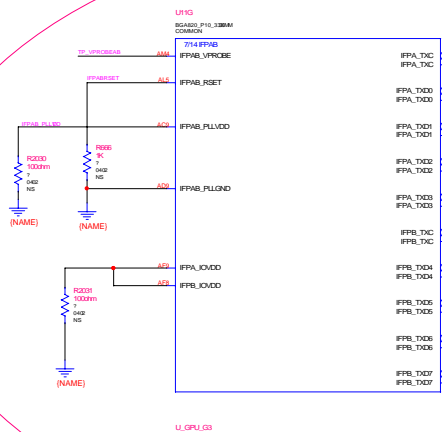


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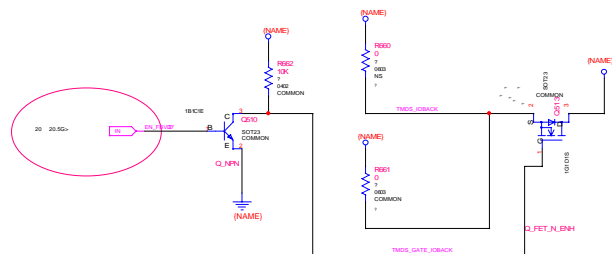
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# INTERNAL TMDS .. LINK A & B



Remove 1'st TMDS & Hotplug



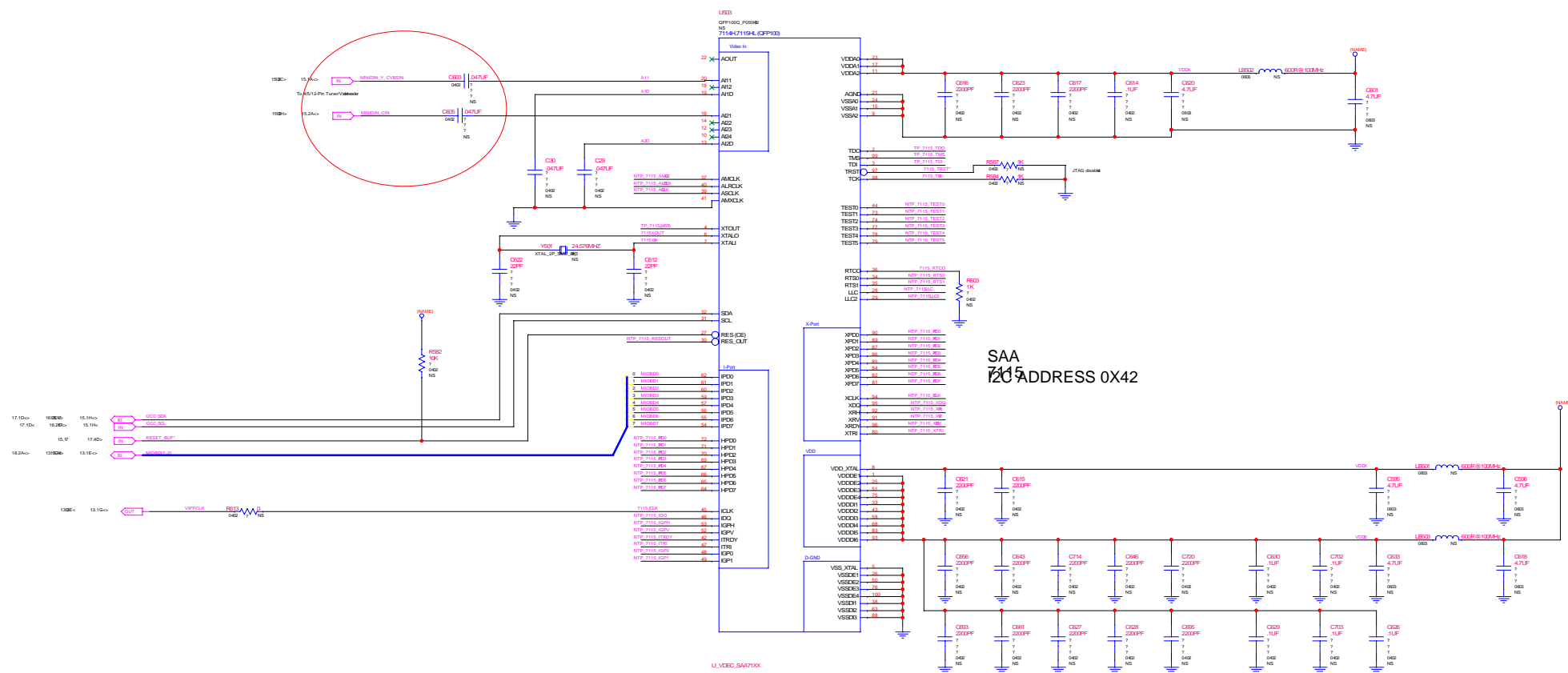
Net name change from 5v\_ENBL\* to EN\_FBVDD\*

NETNAME	MIN_LINE_WIDTH	VOLTAGE
IFPA_TDC	12MIL	3.3V
IFPA_TDC0	12MIL	3.3V
IFPA_TDC1	12MIL	3.3V
IFPA_TDC2	12MIL	3.3V
IFPA_TDC3	12MIL	3.3V
IFPA_TDC4	12MIL	3.3V
IFPA_TDC5	12MIL	3.3V
IFPA_TDC6	12MIL	3.3V
IFPA_TDC7	12MIL	3.3V
IFPB_TDC	12MIL	3.3V
IFPB_TDC0	12MIL	3.3V
IFPB_TDC1	12MIL	3.3V
IFPB_TDC2	12MIL	3.3V
IFPB_TDC3	12MIL	3.3V
IFPB_TDC4	12MIL	3.3V
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IFPB_TDC6	12MIL	3.3V
IFPB_TDC7	12MIL	3.3V



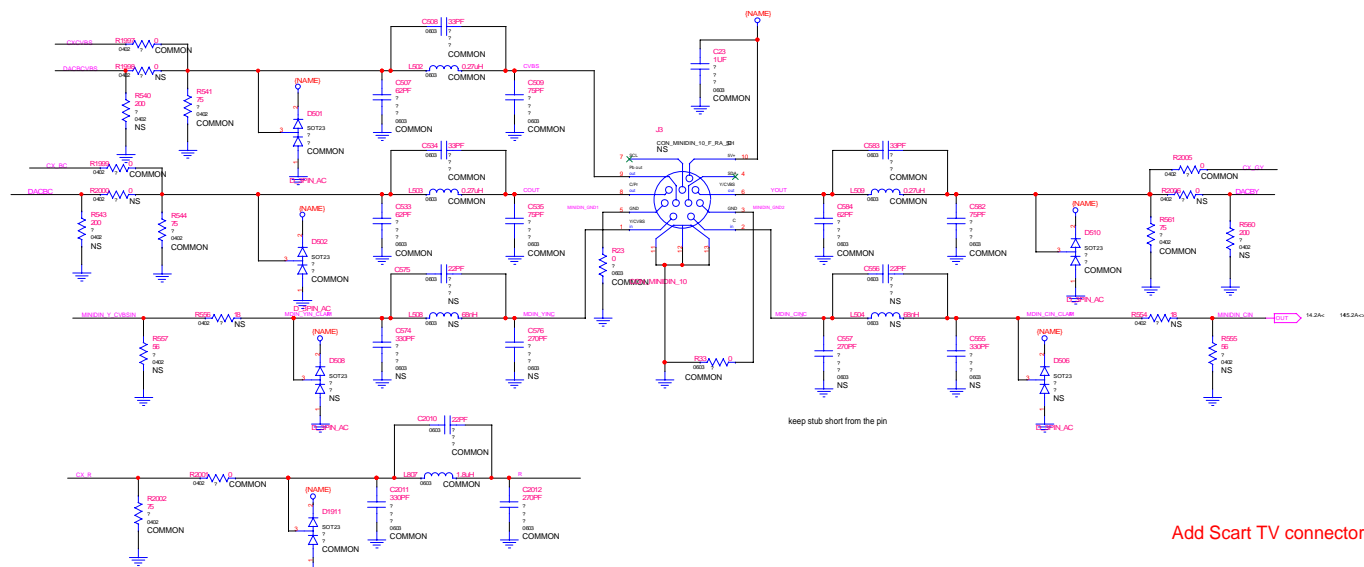


	NETNAME	MN_LINE_WIDTH
51	VDDK	12MIL
52	VDDK	12MIL
53	VDDK	12MIL



SAA  
7145  
I2C ADDRESS 0X42

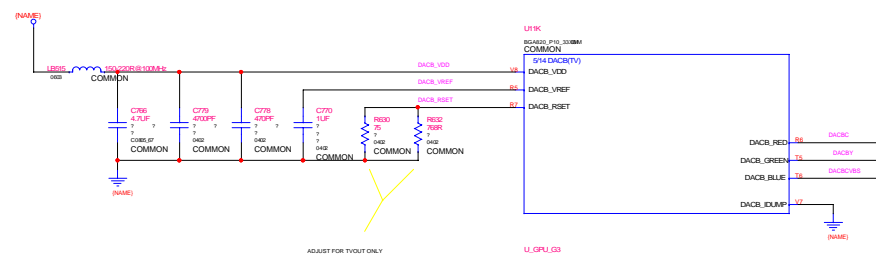
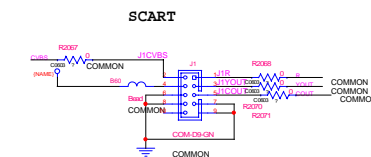
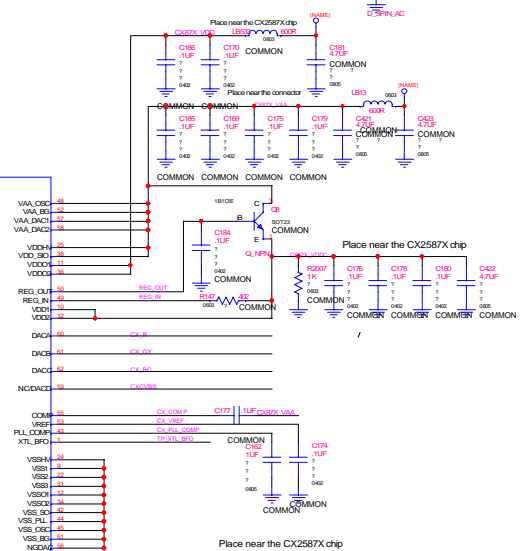
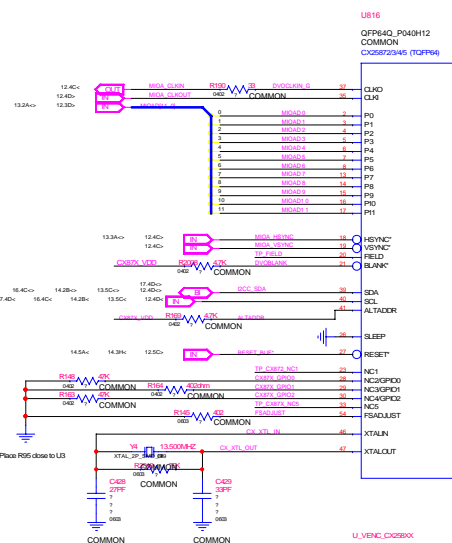
## DACB .. MiniDIN VIDEO IN/OUT CONNECTOR /STEREO GLASSES

[illegible]


keep stub short from the pin

### Add Scart TV connector

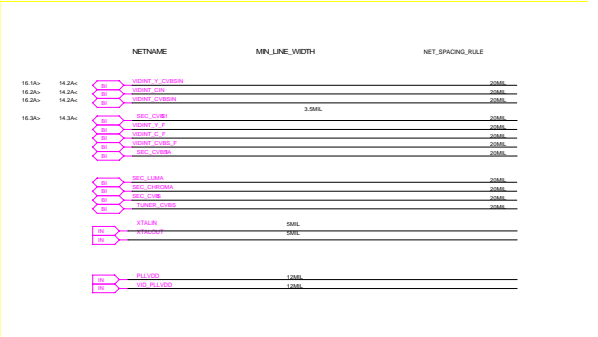
**Add Scart TV chip CX25874/5**



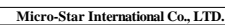
Remove EXT 12pin PVA connector



**DEL EXT 4-PIN CONNECTOR**



	NETNAME	MIN_LINE_WIDTH	NET_SPACING_RULE
1	UNDEF 0: UNDEF0		20MIL
2	UNDEF 0: UNDEF0		20MIL
3	UNDEF 0: UNDEF0		20MIL
4	UNDEF 0: UNDEF0		20MIL
5	UNDEF 0: UNDEF0		20MIL
6	UNDEF 0: UNDEF0		20MIL
7	UNDEF 0: UNDEF0		20MIL
8	UNDEF 0: UNDEF0		20MIL
9	UNDEF 0: UNDEF0		20MIL
10	UNDEF 0: UNDEF0		20MIL
11	UNDEF 0: UNDEF0		20MIL
12	UNDEF 0: UNDEF0		20MIL
13	UNDEF 0: UNDEF0		20MIL
14	UNDEF 0: UNDEF0		20MIL
15	UNDEF 0: UNDEF0		20MIL
16	UNDEF 0: UNDEF0		20MIL
17	UNDEF 0: UNDEF0		20MIL
18	UNDEF 0: UNDEF0		20MIL
19	UNDEF 0: UNDEF0		20MIL
20	UNDEF 0: UNDEF0		20MIL
21	UNDEF 0: UNDEF0		20MIL
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23	UNDEF 0: UNDEF0		20MIL
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MS-8979 base on P216 Modify

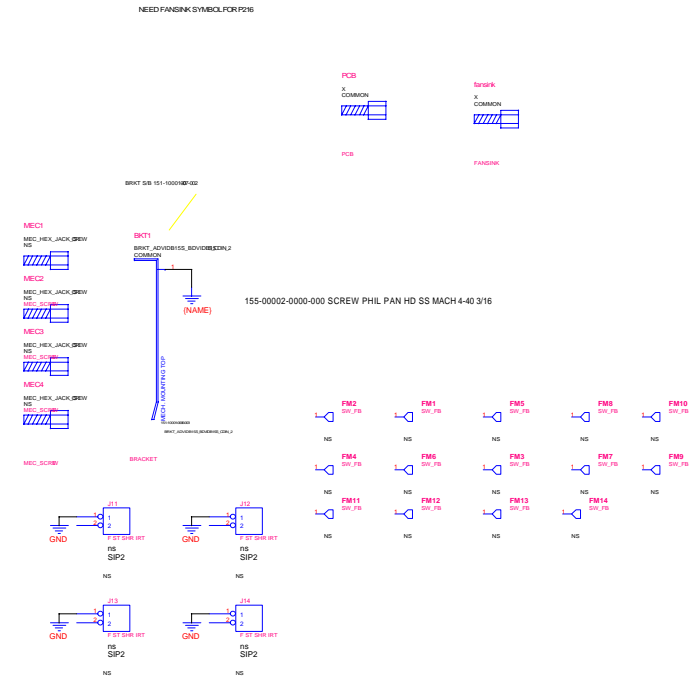
Date: Tuesday, August 03, 2004 Sheet 16 of 16



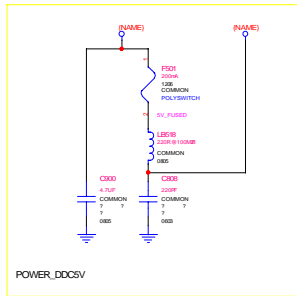


## Straps

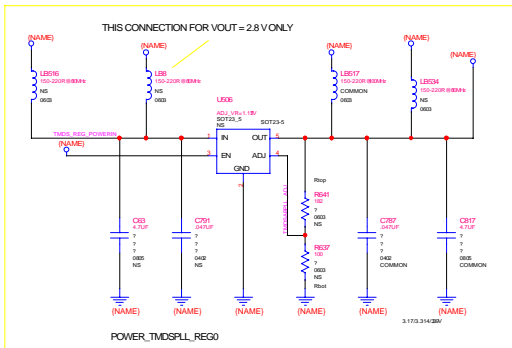
## Mechanical parts



## DDC 5V



TMDS AB/CD PLL Supply

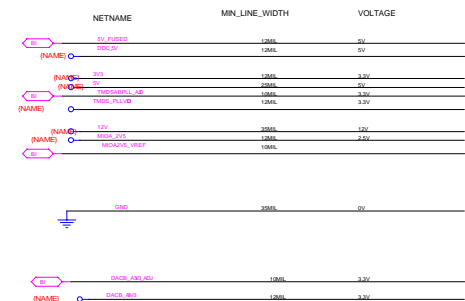


$$V_{out} = V_{Ref} * (1 + R_{top}/R_{bot})$$

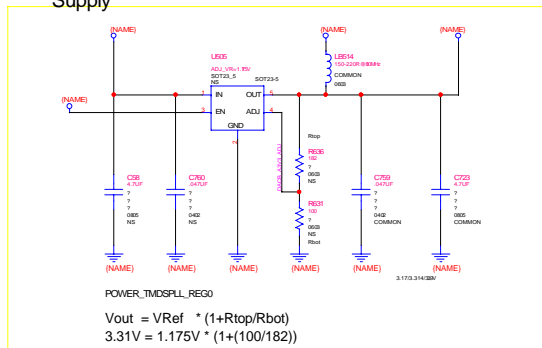
$$3.31V = 1.175V * (1 + (100/182))$$

## MIOA\_VDDQ

Delete MIOA\_2V5 PWR



DACB  
Supply



## ISL6549 for Nvidia NV4x Graphic card power ckt

