MS-V013 VER 0A

NV-AGP NV44A 128MB, BGA 8MX16 DDR,VGA,DVI-I,TV-OUT(HT-10)

P362: NV44A, TSOP MEMORY x16

SKU	VARIANT	NVPN	ASSEMBLY
B	BASE	600-Eppp-xxxx-vvv	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	0000	600-10362-0000-000	NV44A, 350/250, 128MB/64-bit, 16Mx16, VGA+DVI-I+HDTV-out
2	0001	600-10362-0001-000	<UNDEFINED>
3	0002	600-10362-0002-000	<UNDEFINED>
4	0003	600-10362-0003-000	NV44A, 350/250, 128MB/64-bit, 16Mx16, VGA+DVI-I+HDTV-out, VIDEO IN
5	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
6	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
7	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
8	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
9	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
10	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
11	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
12	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
13	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
14	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
15	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>

REV HISTORY

A01

- 1/31/2005:

1.PAGE12:VIDEO CAPTURE: SAA7115
Removed:
U2
C15,16,18,19,20,21,22,686,687,688,689,690,691,692,693,694,695,696,697,698,
699,700,701,702,703,704,705,708,709,710,711,712,713,714,715,716,717,718
R15,R16,R17,R20,R21,R653
LB9,LB10,LB511

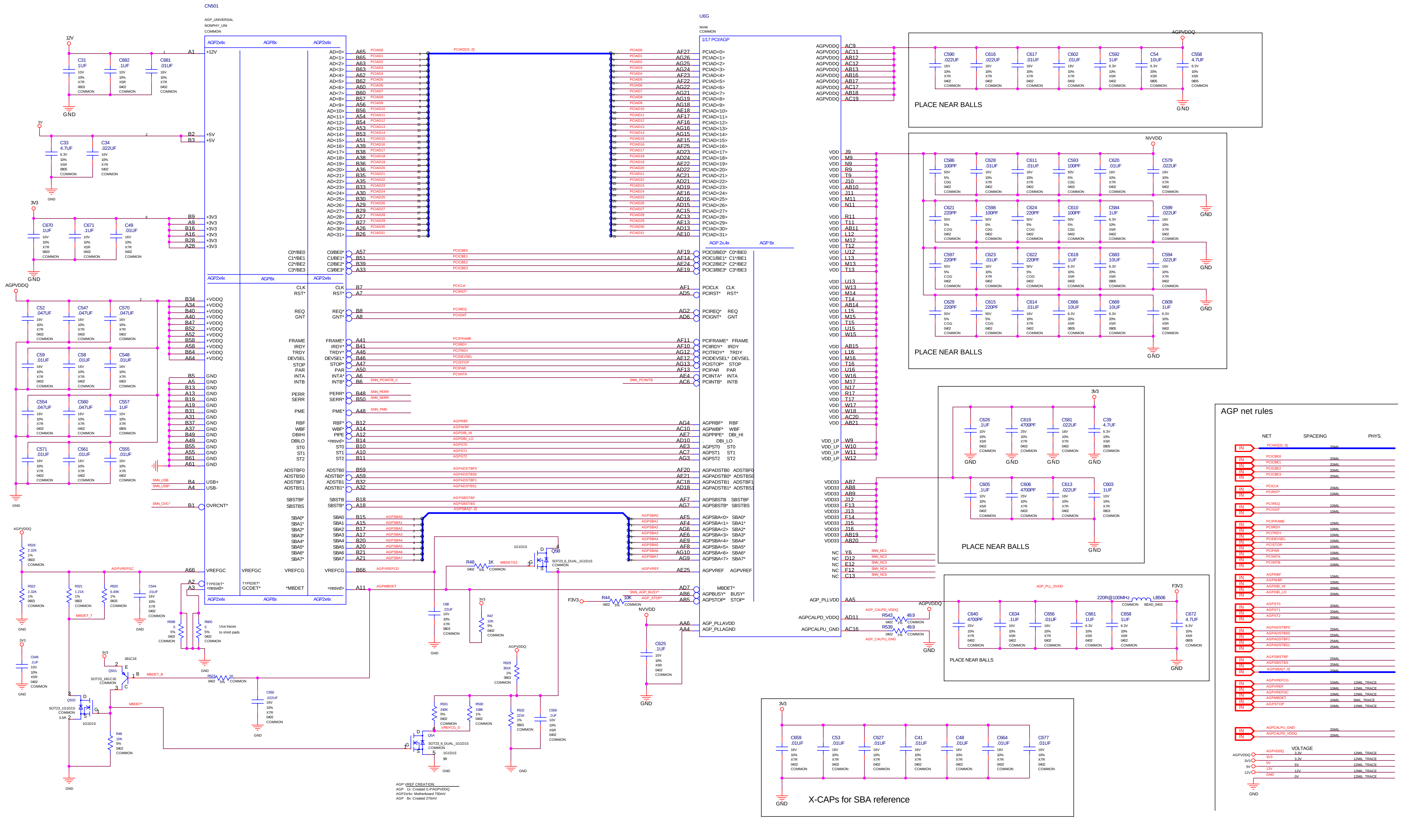
2.Changed Page6: DAC-A, DB15 Connector: DACA Sling-type CRT
Removed:
J4
Add:
J3001,J503

3.Changed Page7: DAC-B, MUX, DB15:DACB DVI-I
Removed:
J1

4.Removed Page15: VIDEO CONNECTORS: MiniDIN, 2x6 HDR: TV-IN(Pin1,2) Circuit
Removed:
LB3,LB4
C7,C8
R7,R8,R9,R10

Change Page10: STRAPS, Mechanical Parts: STRAPS Footprint
R640,641/ 595,601 / 596,602 / 643,644 / 651,652 / 647,648
/ 649,650 / 645,646 / 598,604 / 597,603 / 631,632 / 606,608

6.Changed Page14: PowerSupplyII: 5V, DDC5V, A3V3, F3V3, TMDS_PLLVDD :
PWM Circuit R,L,C,Mos Cost Down
Removed:
R525
L6,L7,L8
Q3,Q4,Q6
Add:
R999,R1000,R1001,R1002
C200,C201,C202,C203,C204,C205,C206,C207
C1501,C1502
Q10,Q11,Q12
L805,L602



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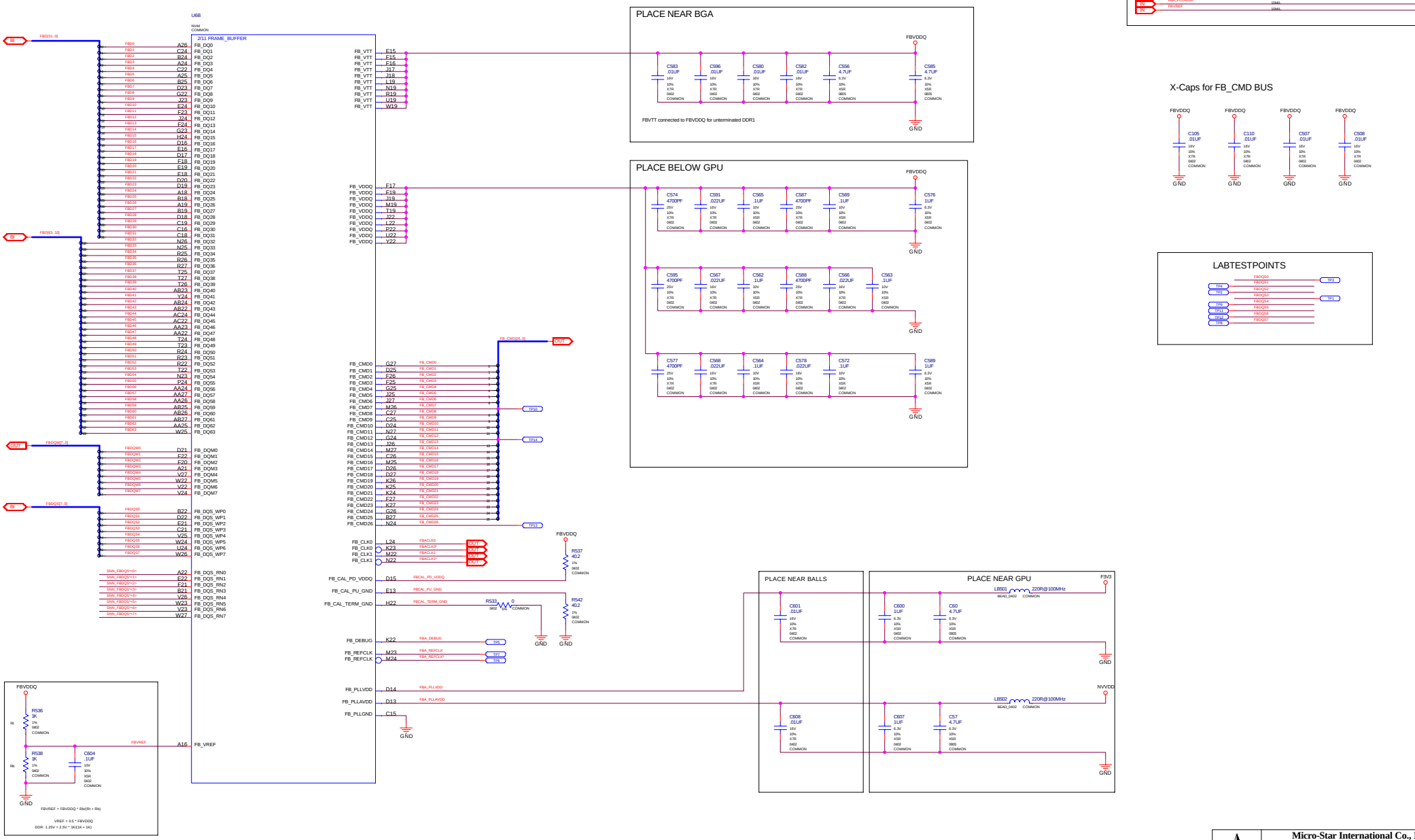
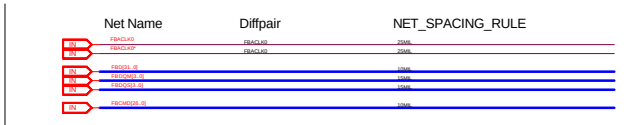
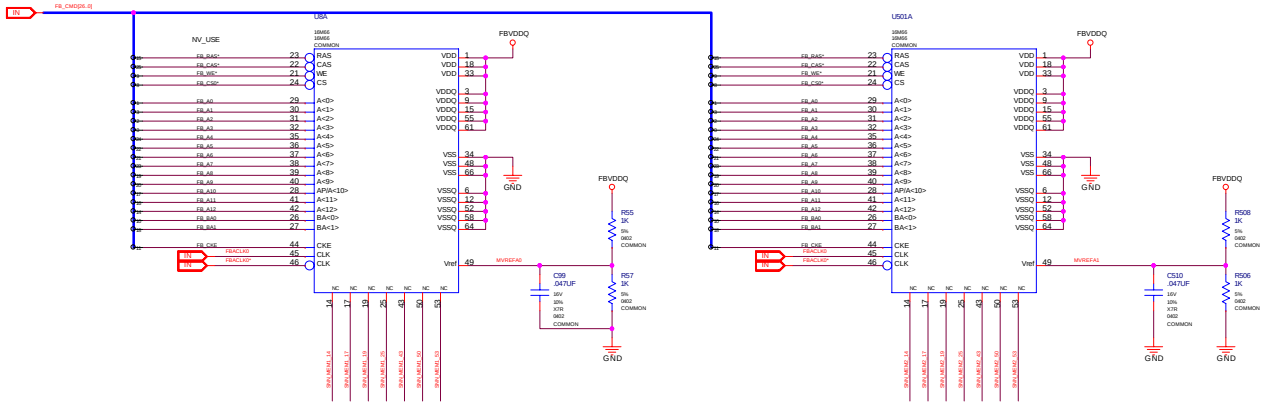
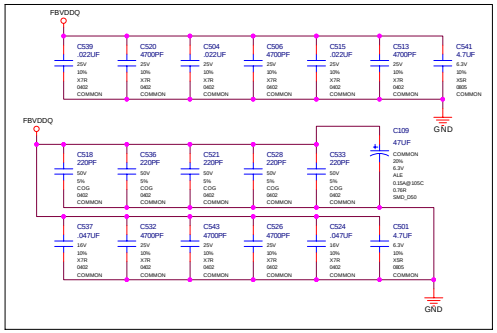
GPU: FB-Interface

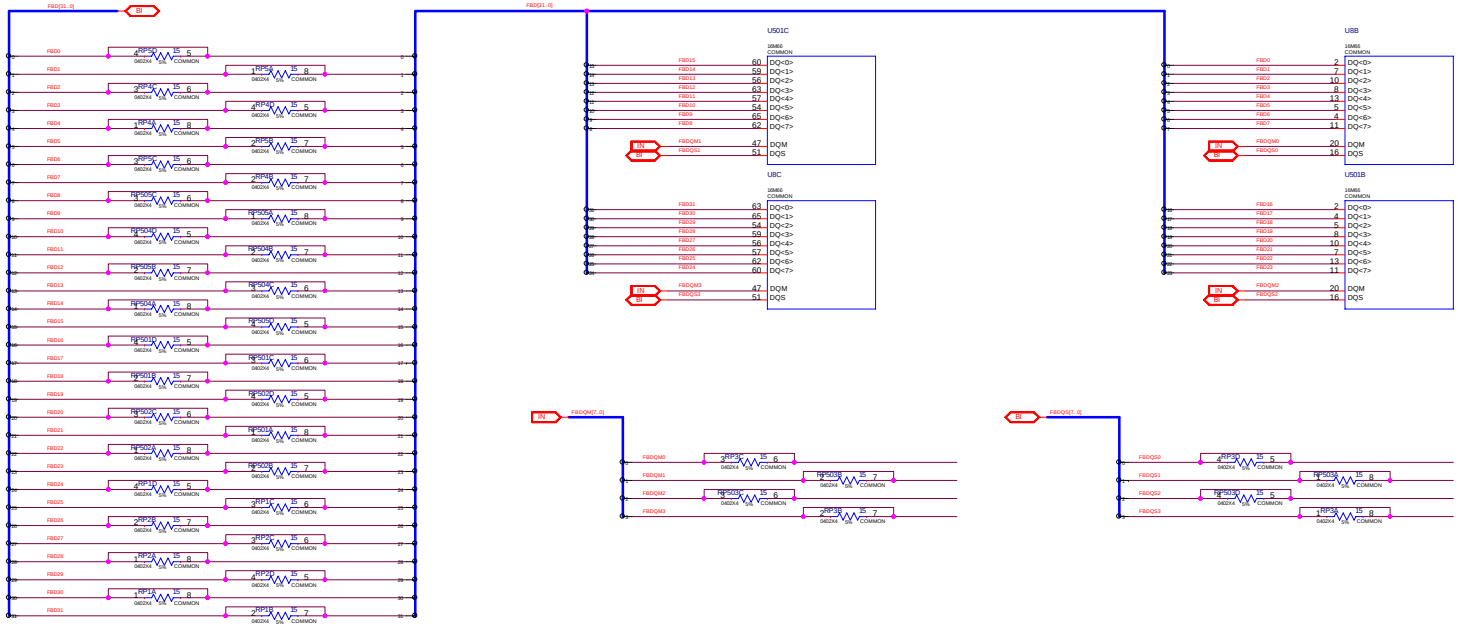


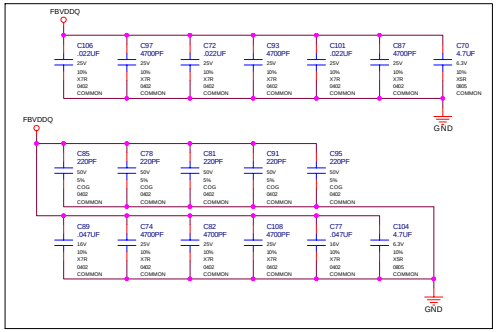
Memory Bit 0..31

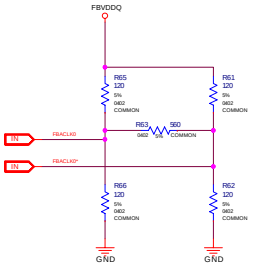












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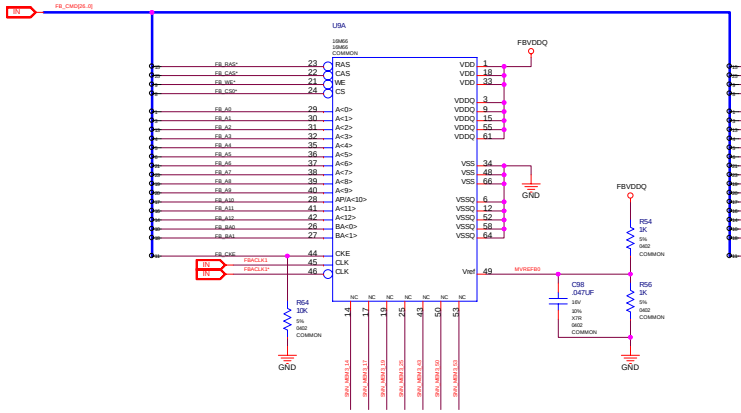
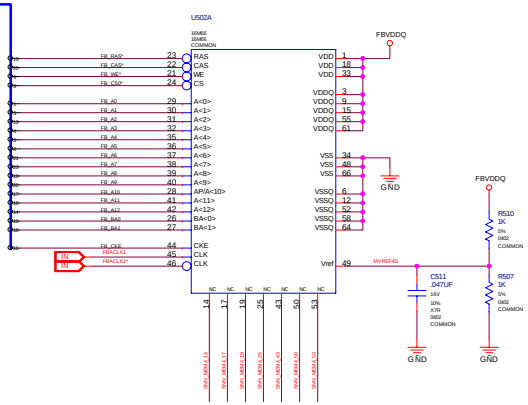
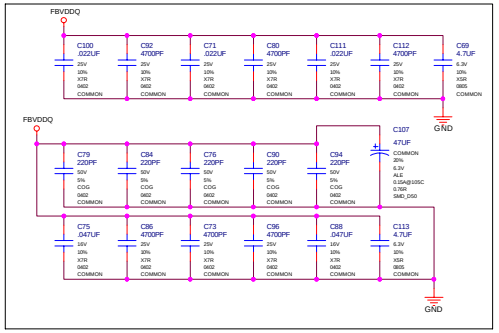
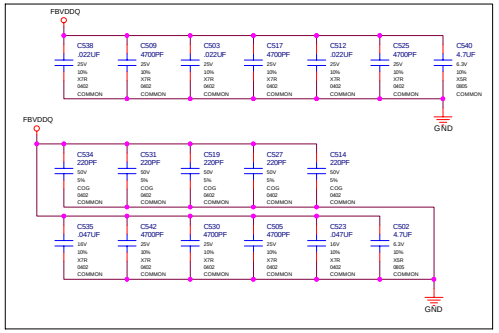
Memory Bit 32..63

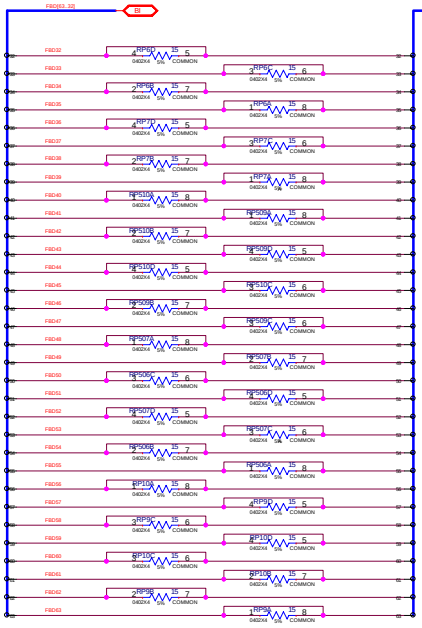
Net Name	Diffpair	NET_SPACING_RULE
IN FBACLK1	FBACLK1	25MIL
IN FBACLK1*	FBACLK1	25MIL
IN FBDI[63..32]		10MIL
IN FBDQM[7..4]		10MIL
IN FBDQS[7..4]		10MIL

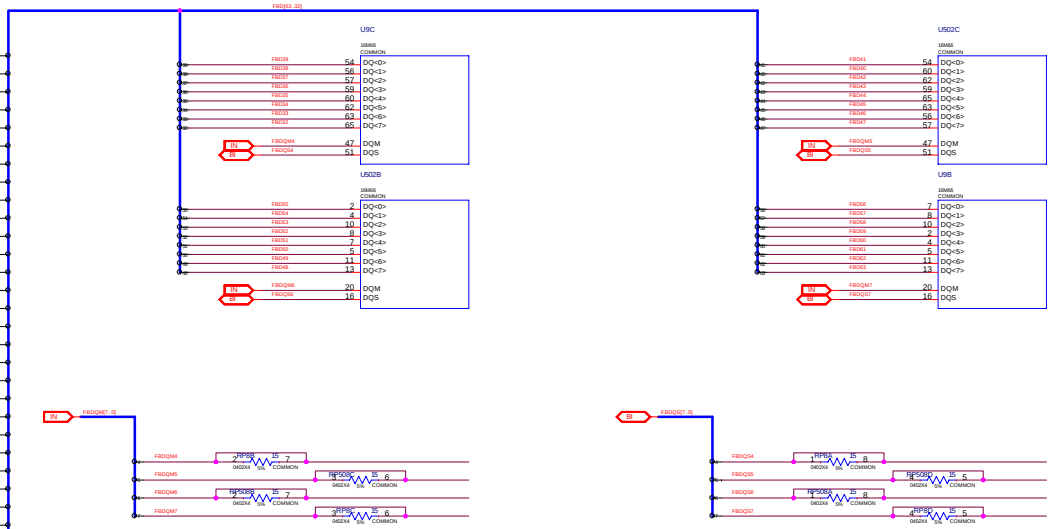


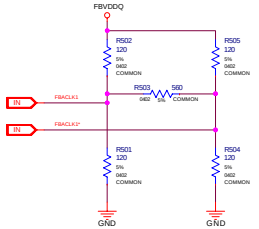












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MS-V013			
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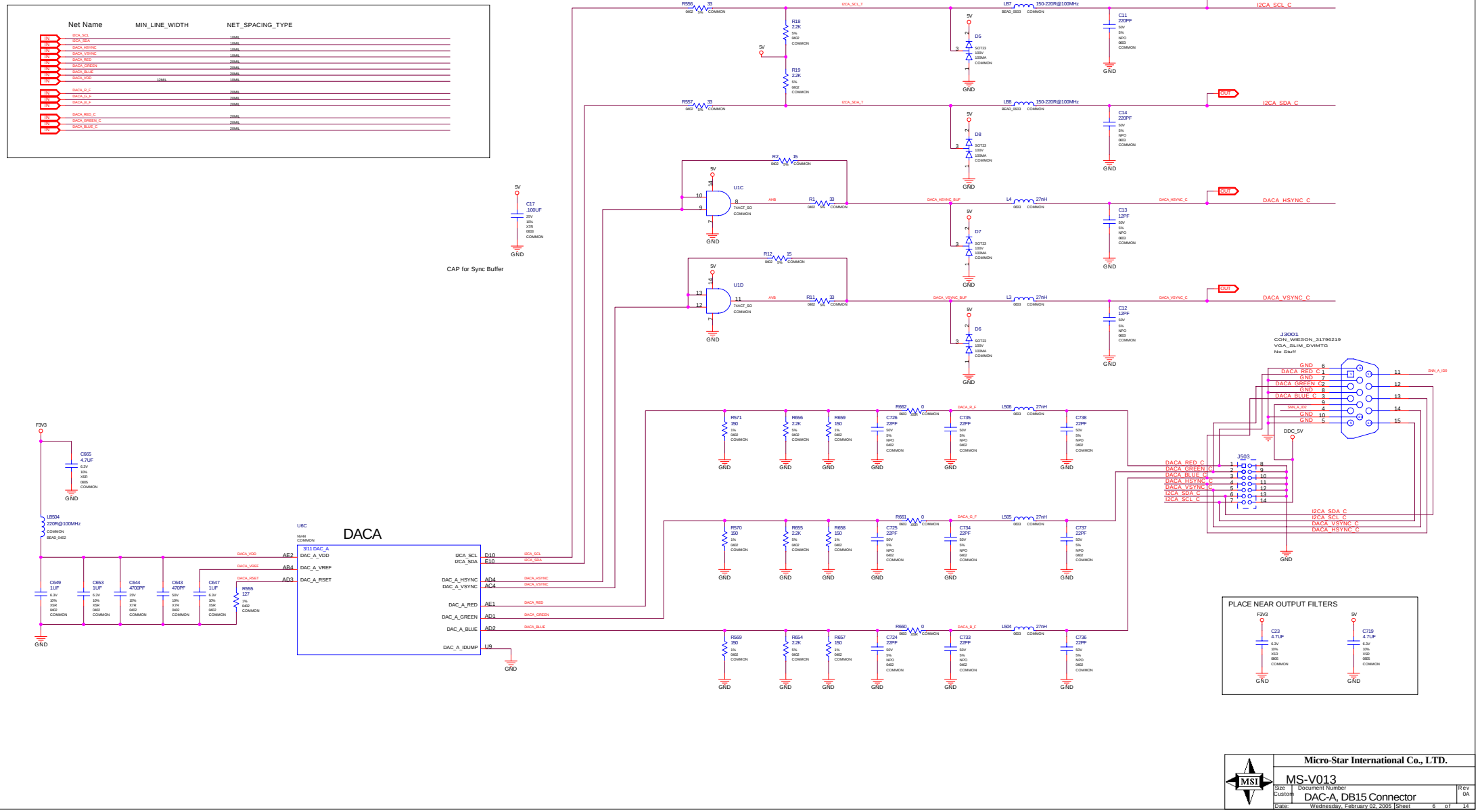
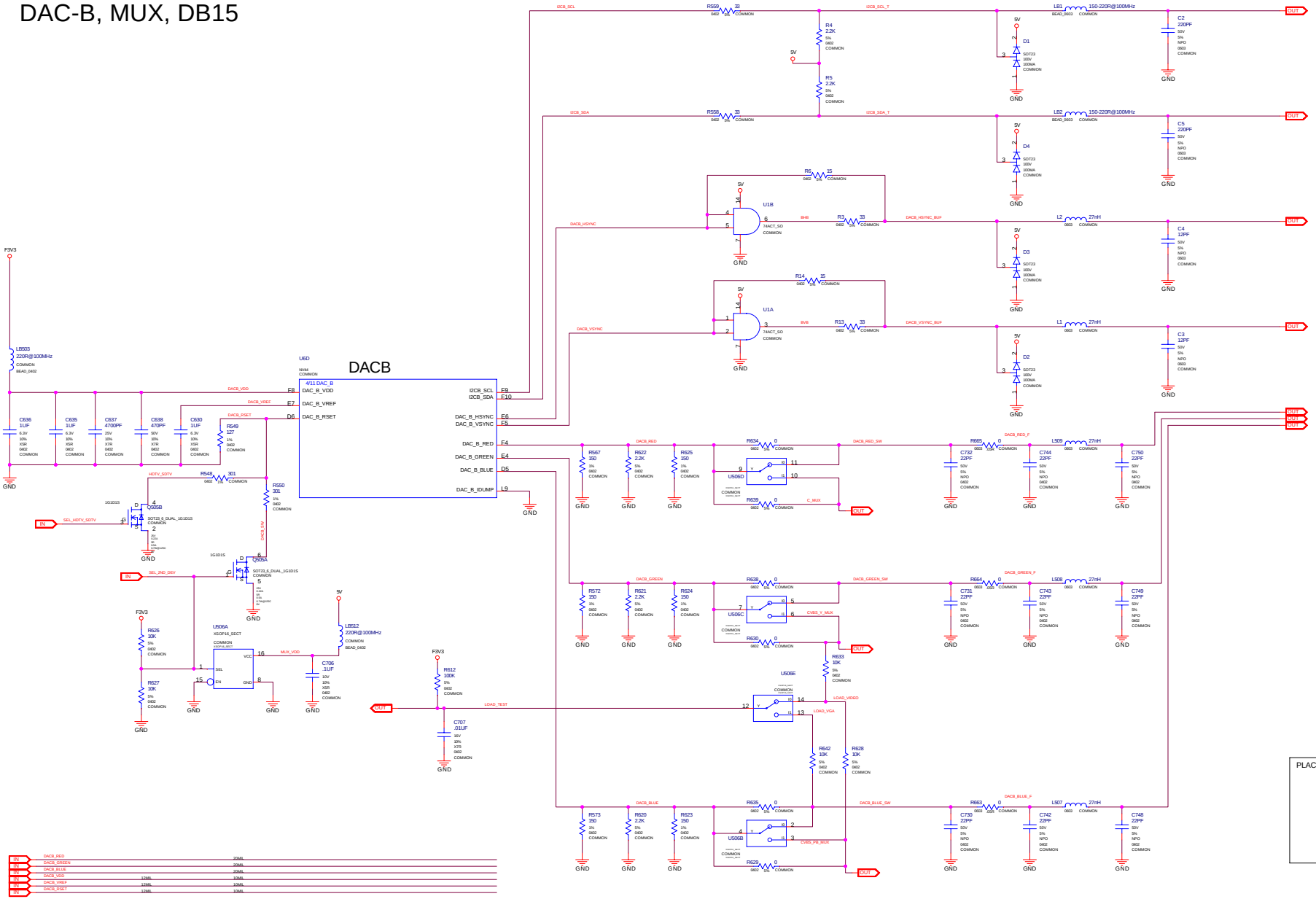
DAC-A, DB15 Connector



DAC-B, MUX, DB15



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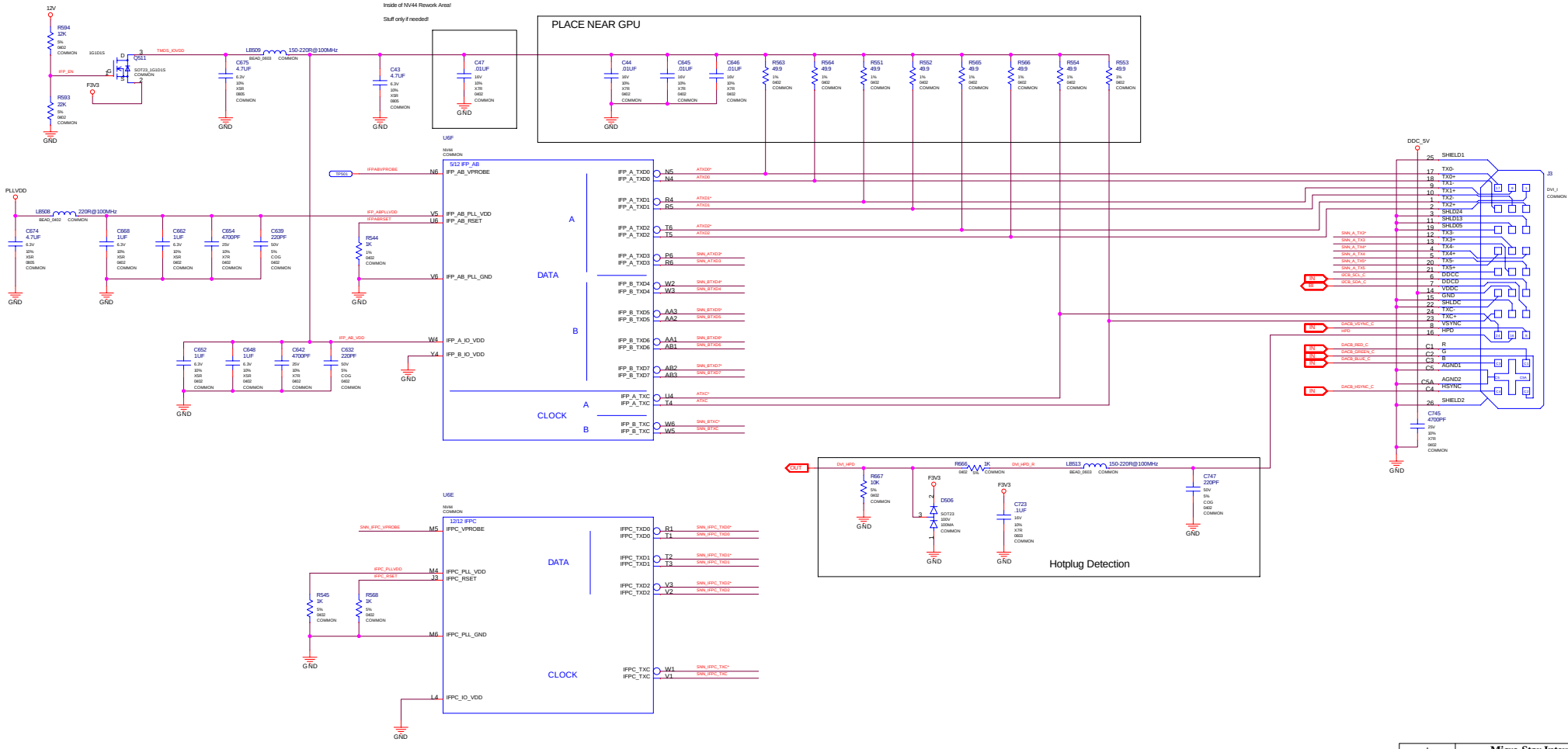
Internal TMDS, DVI-Connector

Net Name	Diffpair	NET_SPACING_RULE	Voltage
IFP_ABPLLVDD			3.3V
IFP_AB_VDD			3.3V
ATXC	ATXC	20MIL_G2G_30MIL	
ATXC*	ATXC	20MIL_G2G_30MIL	
ATXD0	ATXD0	20MIL_G2G_30MIL	
ATXD0*	ATXD0	20MIL_G2G_30MIL	
ATXD1	ATXD1	20MIL_G2G_30MIL	
ATXD1*	ATXD1	20MIL_G2G_30MIL	
ATXD2	ATXD2	20MIL_G2G_30MIL	
ATXD2*	ATXD2	20MIL_G2G_30MIL	



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MS-V013		
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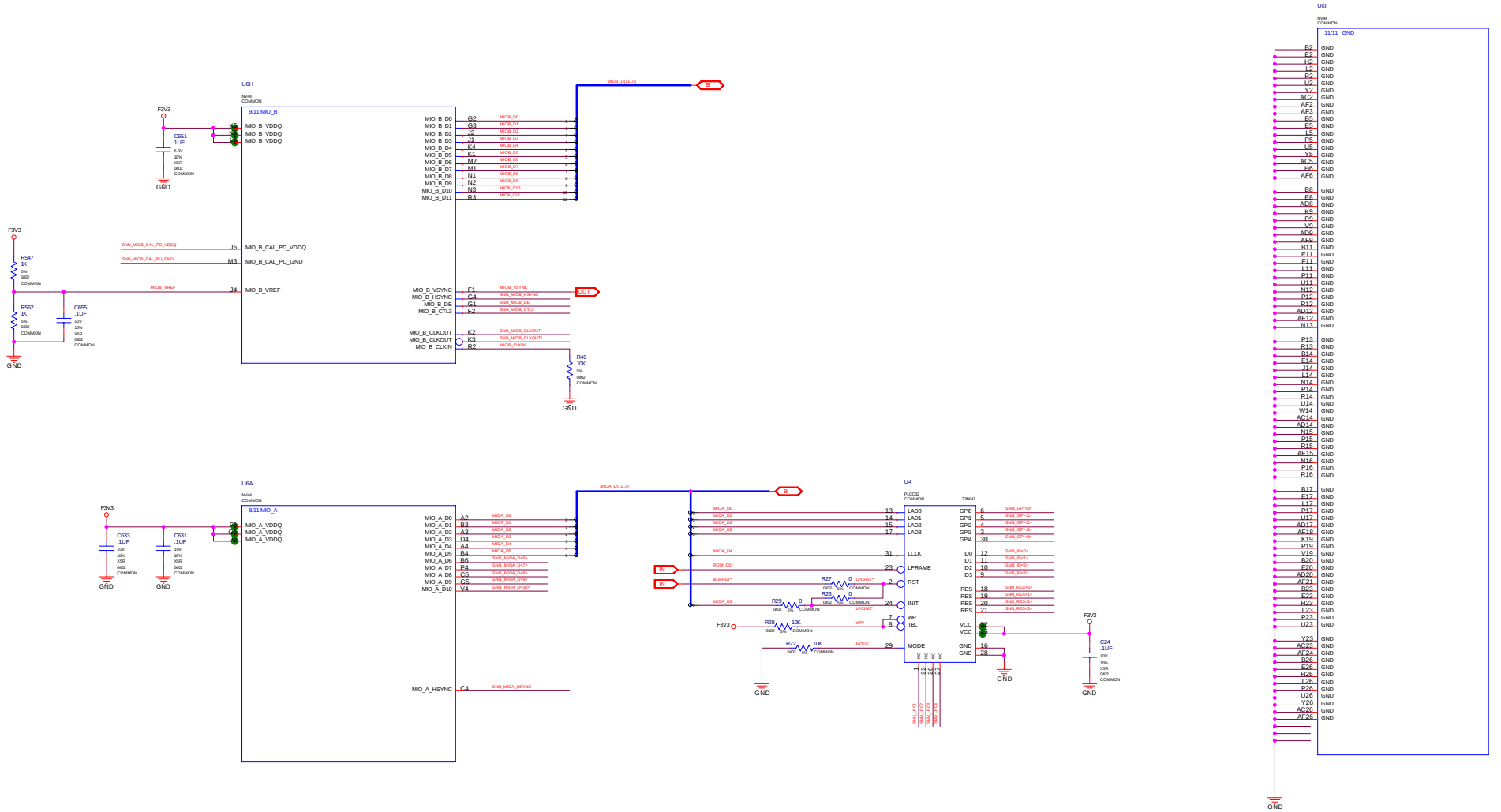
MIOA, MIOB Interface, LPC-ROM



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MS-V013		
Size: Custom	Document Number: MIOA, MIOB Interface,LPC-ROM	Rev: 0A
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STRAPS, Mechanical Parts

Overlap pads to save space and to prevent assembly of both resistors.

Layout

Ground — High logic voltage

Signal

IN MIOA_DI[11..0]

IN MIOB_DI[11..0]

IN MIOB_VSYNC

NV44 STRAPS

F3V3

R627	1.8K	MIOA_DI1	R629	1.8K	COMMON
R636	10K	MIOB_DI0	R637	10K	COMMON
R640	10K	MIOB_DI1	R641	10K	COMMON
R595	10K	MIOB_DI8	R601	10K	COMMON
R596	10K	MIOB_DI9	R602	10K	COMMON
R643	1.8K	MIOB_DI2	R644	1.8K	COMMON
R651	1.8K	MIOB_DI6	R652	1.8K	COMMON
R647	1.8K	MIOB_DI4	R649	1.8K	COMMON
R649	1.8K	MIOB_DI5	R650	1.8K	COMMON
R645	1.8K	MIOB_DI3	R646	1.8K	COMMON
R598	1.8K	MIOB_DI11	R604	1.8K	COMMON
R597	1.8K	MIOB_DI10	R603	1.8K	COMMON
R631	1.8K	MIOB_VSYNC	R632	1.8K	COMMON
R606	10K	MIOA_DI2	R608	10K	COMMON

GND

Bit	Signal	Values
00:	PCI_AD_SWAP	0 REVERSED 1 NORMAL
01:	SUB_VENDOR	0 NO_BIOS 1 READ FROM BIOS
02:	RAM_CFG_0	See http://sysengi/PerforceProjects/... .../Mem/QuadStrap_Tables/ for details!
03:	RAM_CFG_1	
04:	RAM_CFG_2	
05:	RAM_CFG_3	
06:	CRYSTAL_0	00 13.500 MHz 01 14.31818 MHz 10 27.000 MHz
22:	CRYSTAL_1	11 UNKNOWN
07:	TV_MODE_0	00 SECAM 01 NTSC 10 PAL 11 CRT
08:	TV_MODE_1	
09:	AGP_30_8x	0 AGP8x ENABLED 1 AGP4x DISABLED
10:	AGP_SBA	0 SBA ENABLED 0 SBA DISABLED
11:	AGP_FASTWR	0 FW ENABLED 0 FW DISABLED
12:	PCI_DEVID_0	0000 default by silicon straps
13:	PCI_DEVID_1	
20:	PCI_DEVID_2	
21:	PCI_DEVID_3	
14:	BUS_TYPE	0 PCI 1 AGP
15:	FP_IFACE	0 24Bit 1 12Bit (DEFAULT)
23:	FB_0	00 64M 01 128M 10 256M (DEFAULT) 11 512M
24:	FB_1	
25:	BR	0 BRIDGE DISABLED 1 BRIDGE ENABLED
26:	BR_128M	BR BITS IGNORED IF BRIDGE IS DISABLED
27:	BR_AGP	
28:	BR_IO	
29:	ROM_TYPE_0	00 PARALLEL 01 SERIAL_AY25F 10 SERIAL_SST45VF
30:	ROM_TYPE_1	11 LPC
16:	USER_0	0000 (DEFAULT)
17:	USER_1	
18:	USER_2	
19:	USER_3	
	PEX_PLL_EN_TERM100	
	3GIO_PADCFG_LUT_ADDR[0]	
	3GIO_PADCFG_LUT_ADDR[1]	

MEC6

GPU COMMON

BKT1

ATX_1X_TOP_ALT2 COMMON

1

GND

MECH_MOUNT PAD TOP

MEC5 STD COMMON

MEC3 STD COMMON

MEC4 STD COMMON

MEC1 STD COMMON

MEC2 STD COMMON

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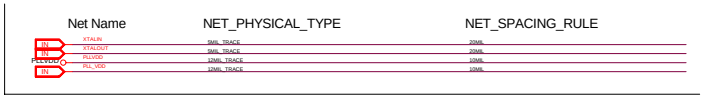
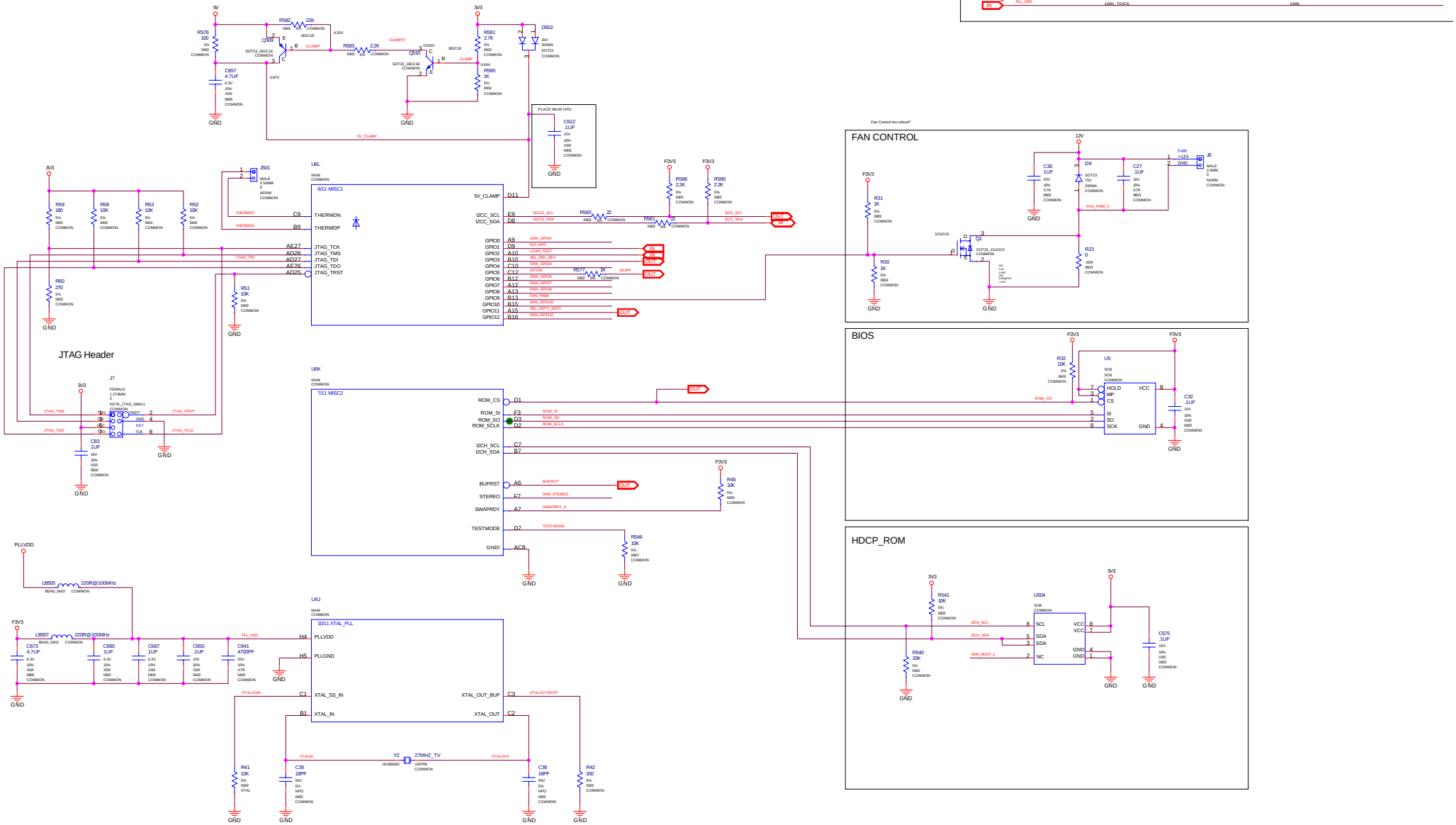
XTAL, GPIO, BIOS, Fan Control, JTAG Headers





PowerSupplyI:
NVVDD, FBVDDQ

I_bypass = (1.7V * Rbot/(Rtop+Rbot)-0.7V)/ R_emitter

1A = (1.7V * 205/(100+205)-0.7V)/ 0.44 ohm

Stuff bypass if NVVDD current exceeds 10A!

RT9218 (optional)

Inductor Bypass

ISL6549 (SC2621(A))

FBVDDQ

Vout = VRef * (1+Rtop/Rbot)

2.5V = 0.8V * (1+(2.37/1.13k)) (ISL6549)

2.5V = 0.5V * (1+(4.02k/1k)) (SC2621A)

NVVDD

Vout = VRef * (1+Rtop/Rbot)

1.2V = 0.8V * (1+(1.54k/3.09k)) (ISL6549)

1.26V = 0.8V * (1+(2.67k/3.09k)) (ISL6549)

1.2V = 0.5V * (1+(1.43k/1.02k)) (SC2621A)

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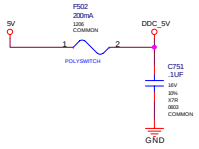
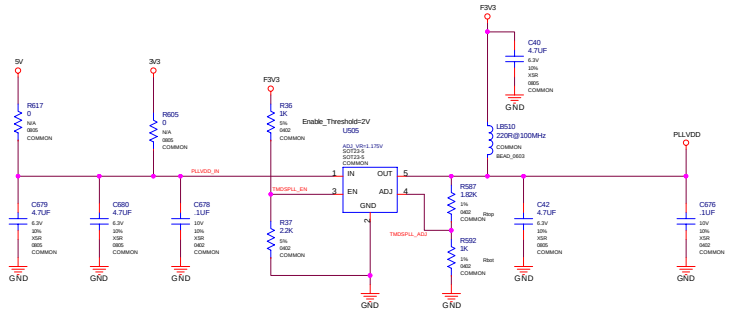
PowerSupplyII: DDC5V, F3V3, TMDS_PLLVDD

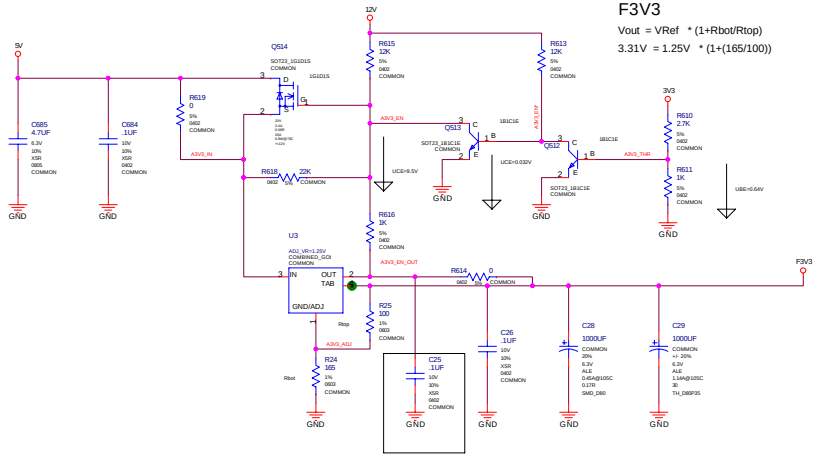




TMDS_PLLVDD

Vout = VRef * (1+Rtop/Rbot)

3.31V = 1.175V * (1+(1.82k/1k))



Ramp Up CAP for AQT1541

Net Name	NET_PHYSICAL_TYPE	Voltage
5V	12MIL	5V
DDC_5V	12MIL	5V
F3V3	12MIL	3.3V
PLLVDD	12MIL	3.3V
12V_IN	12MIL	12V

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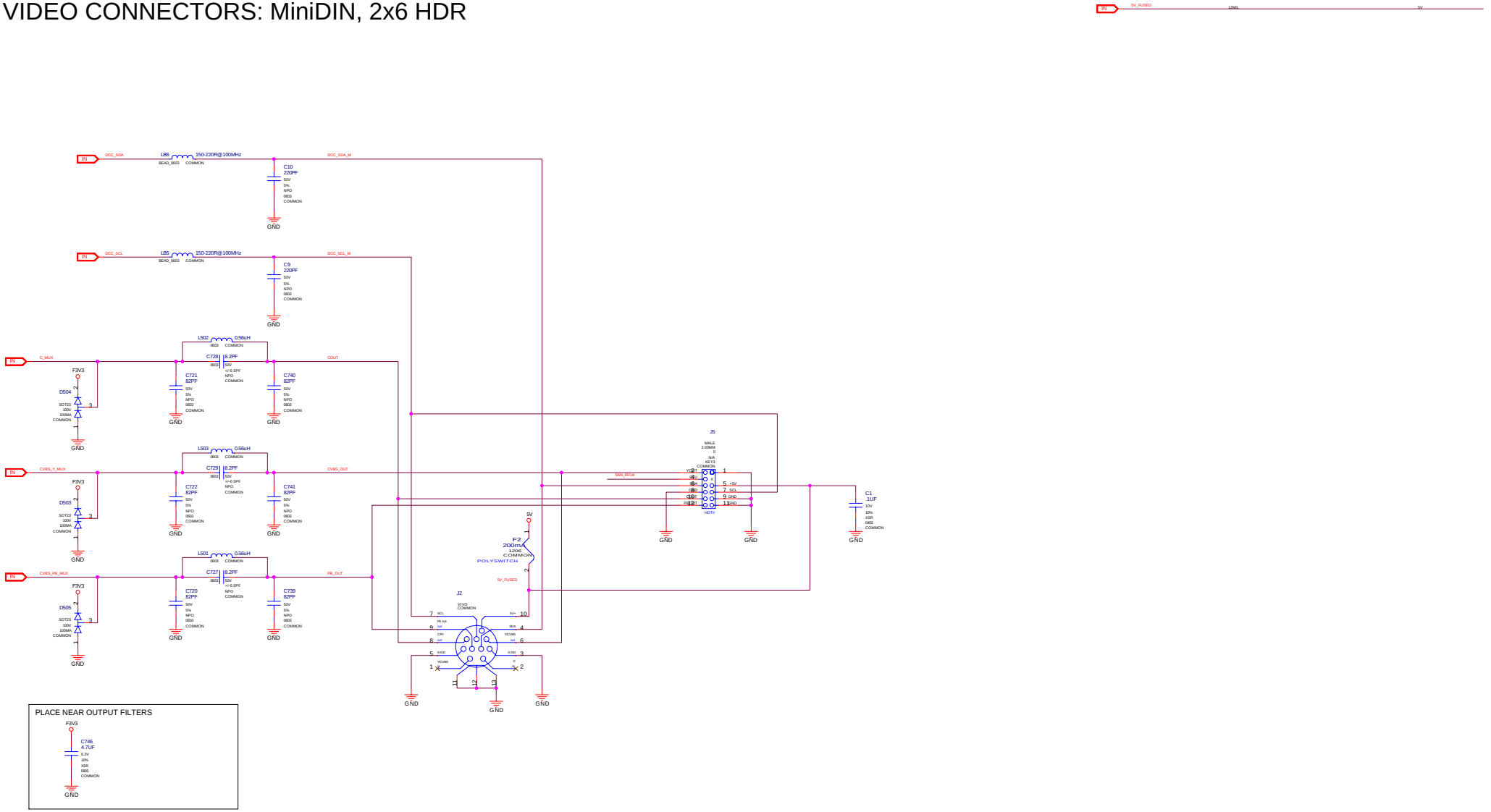
VIDEO CONNECTORS: MiniDIN, 2x6 HDR



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Size: Custom	Document Number: VEDIO CONNECTORS: MiniDIN	Rev: 0A
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