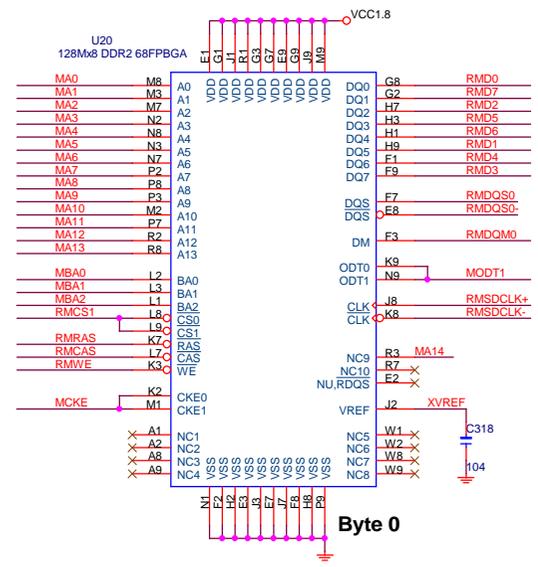
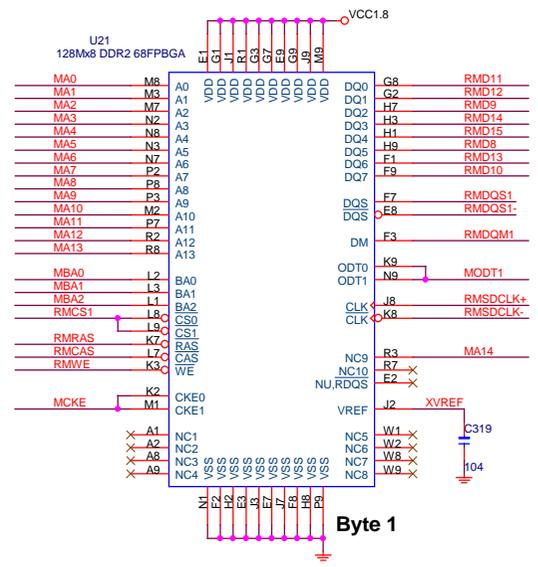


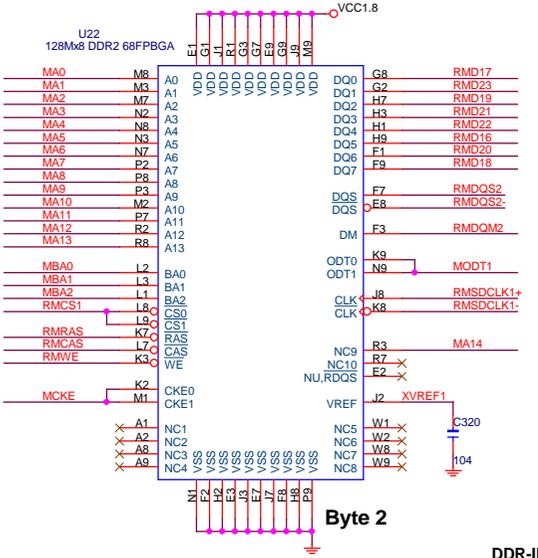
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- XVREF1 << XVREF1 1
- MCKE << MCKE 1
- MODT1 << MODT1 1
- MBA[0..2] << MBA[0..2] 1
- MA[0..14] << MA[0..14] 1
- RMD[0..31] << RMD[0..31] 1
- RMSDCLK+ << RMSDCLK+ 1
- RMSDCLK- << RMSDCLK- 1
- RMSDCLK1+ << RMSDCLK1+ 1
- RMSDCLK1- << RMSDCLK1- 1
- RMDQS0 << RMDQS0 1
- RMDQS0- << RMDQS0- 1
- RMDQS1 << RMDQS1 1
- RMDQS1- << RMDQS1- 1
- RMDQS2 << RMDQS2 1
- RMDQS2- << RMDQS2- 1
- RMDQS3 << RMDQS3 1
- RMDQS3- << RMDQS3- 1
- RMCAS << RMCAS 1
- RMRAS << RMRAS 1
- RMWE << RMWE 1
- RMCS1 << RMCS1 1
- RMDQM0 << RMDQM0 1
- RMDQM1 << RMDQM1 1
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- RMDQM3 << RMDQM3 1



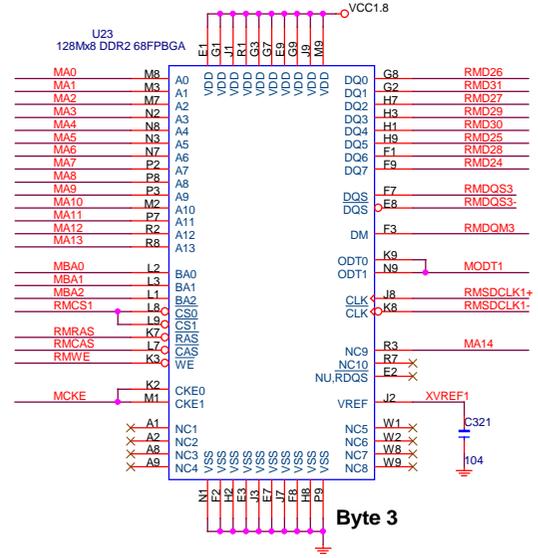
Byte 0



Byte 1



Byte 2

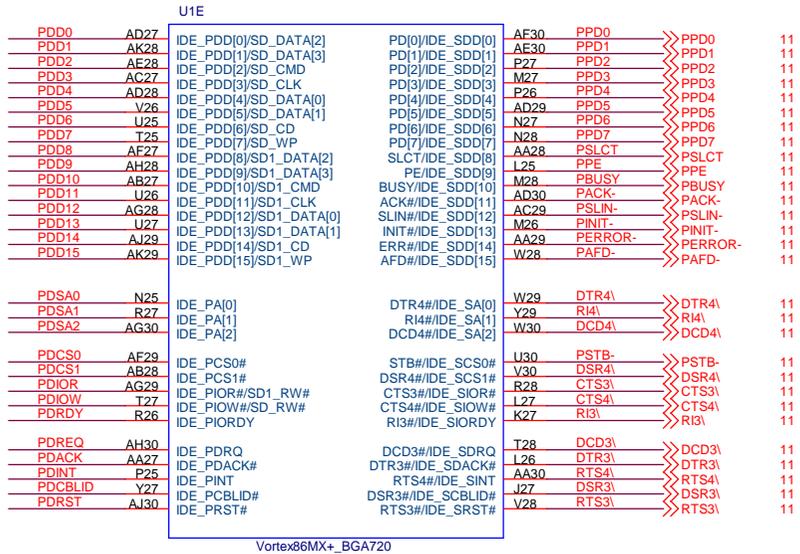


Byte 3

DDR-II DRAM
64Mx8x4 =256MB
128Mx8x4 =512MB
256Mx8x4 =1GB
Bank 1

DMP ELECTRONICS INC.		
File: Vortex86MX+ (32Bit) DDR-II Memory-2		
Size: DM159B	Document Number: DM159B	Rev: 0.4
Date: Monday, October 25, 2010	Sheet: 2	of 17

IDE1

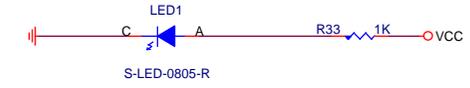


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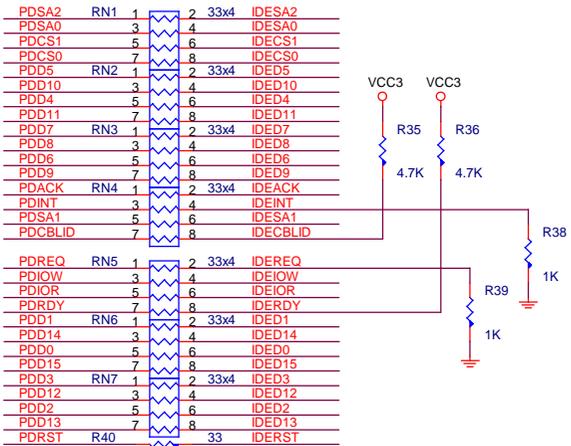
COM3

COM4

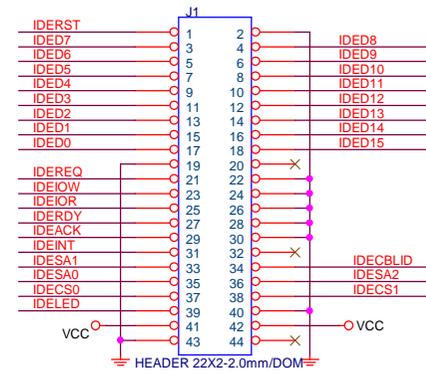
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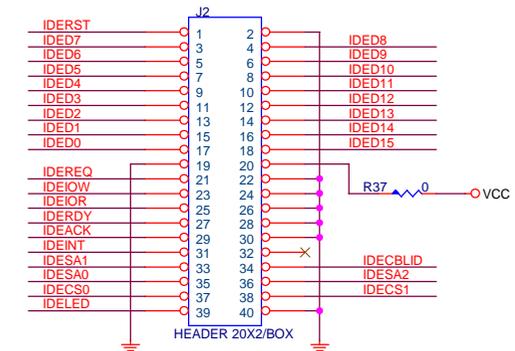
IDE LED



IDE 44PIN/DOM



IDE 40PIN



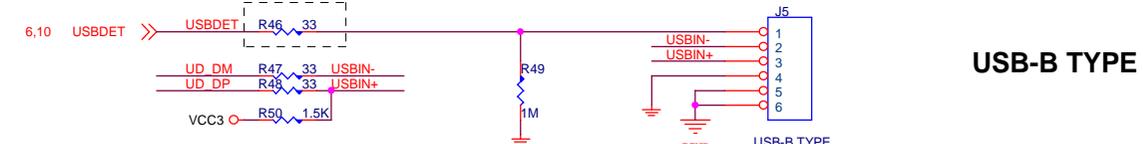
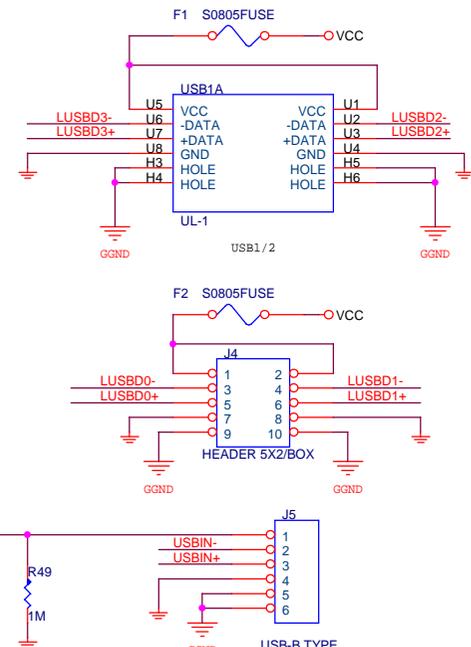
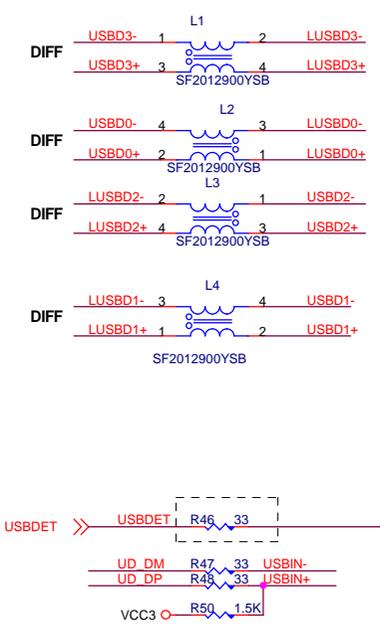
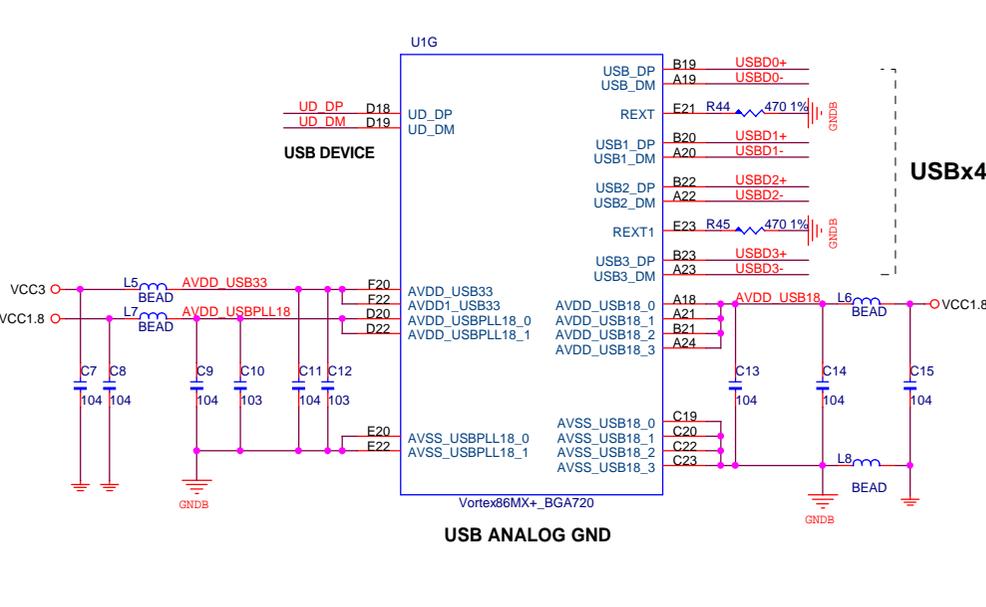
DMP ELECTRONICS INC.

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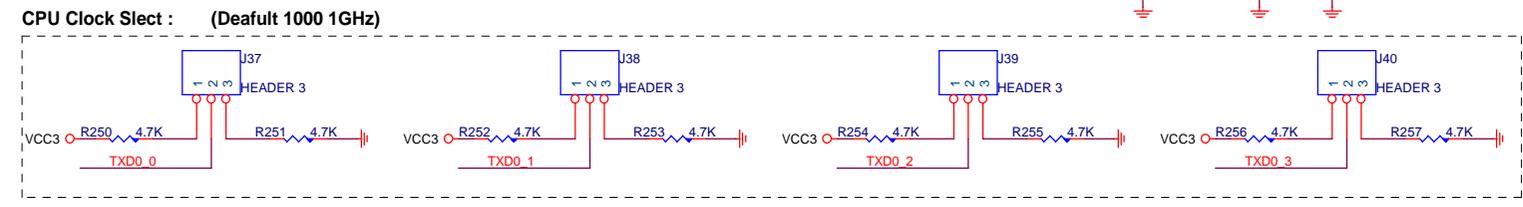
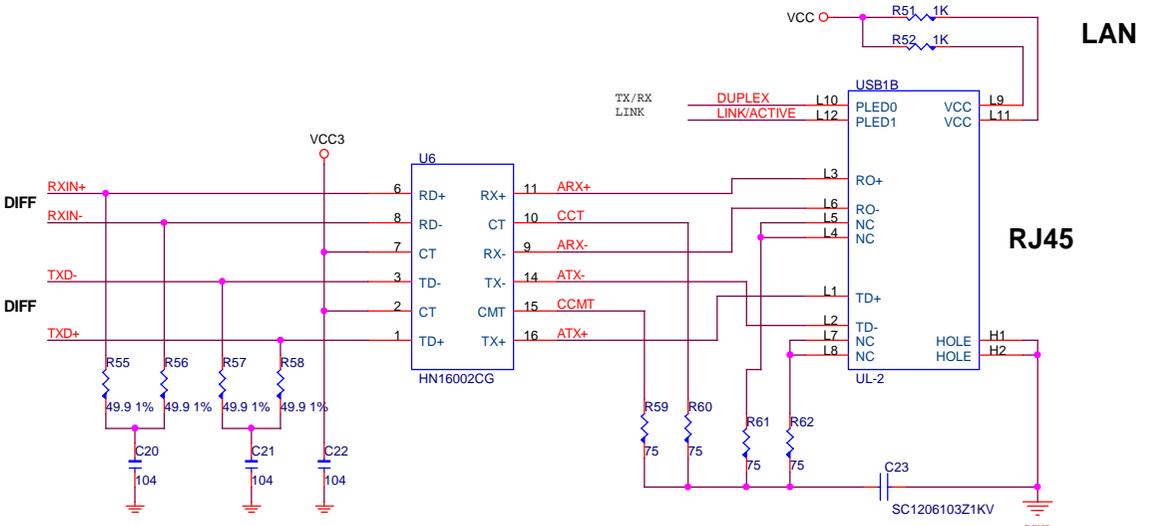
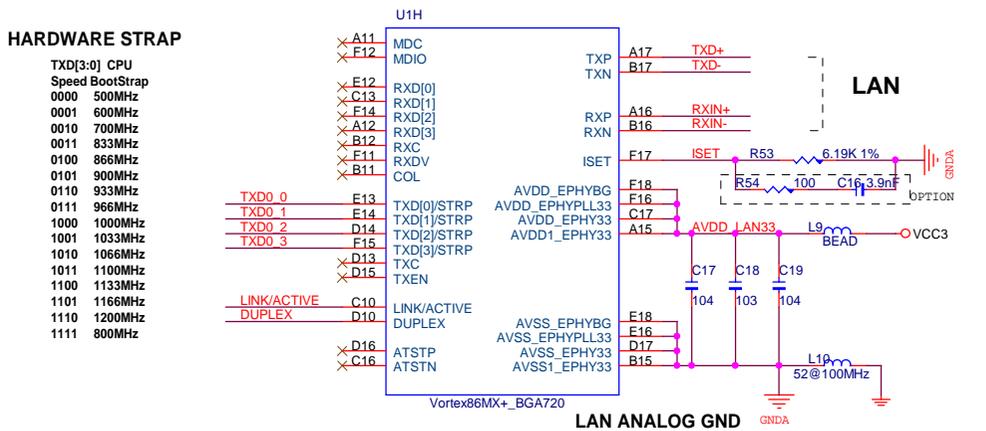
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Date: Monday, October 25, 2010 Sheet 3 of 17

USBx4



LAN



DMP ELECTRONICS INC.

Title: Vortex86MX+ LAN/USB

Size	Document Number DM159B	Rev 0.4
Date: Monday, October 25, 2010	Sheet 5	of 17

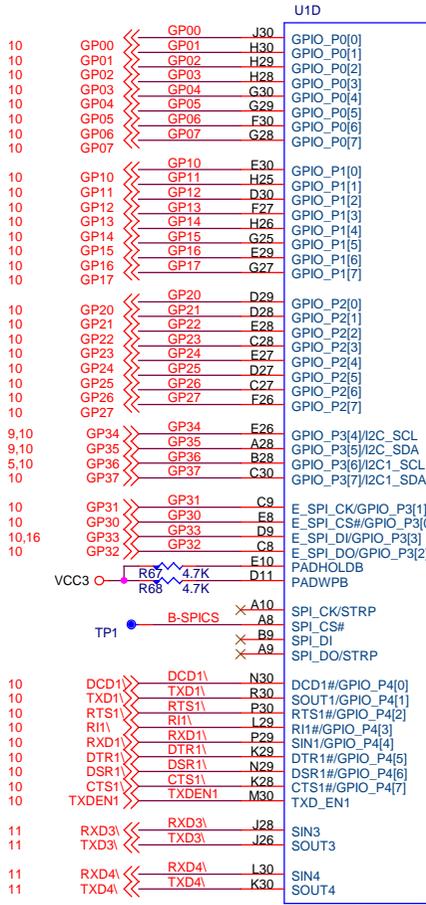
P0/8051P0/PWM

P1/8051P1/PWM

P2/8051P2/PWM

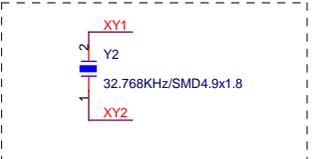
P3/8051P3/SPI/I2C

P4/8051P4/COM1/PWM

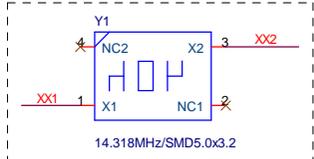


Vortex86MX+ BGA720

32.768KHz SMD TYPE

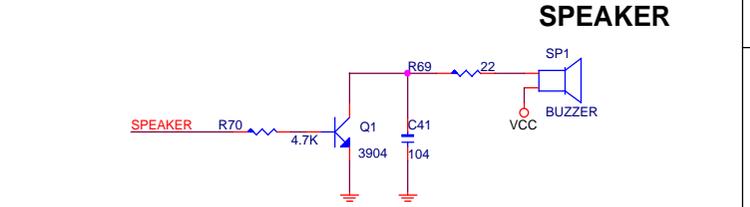
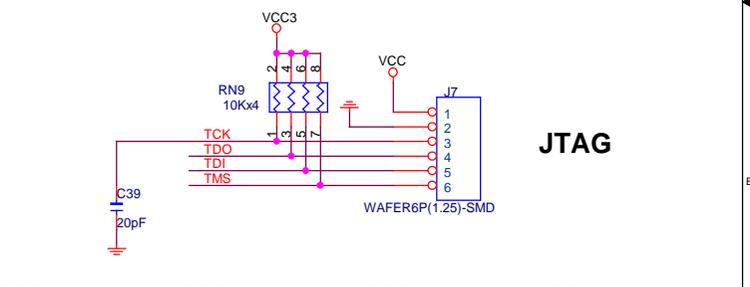
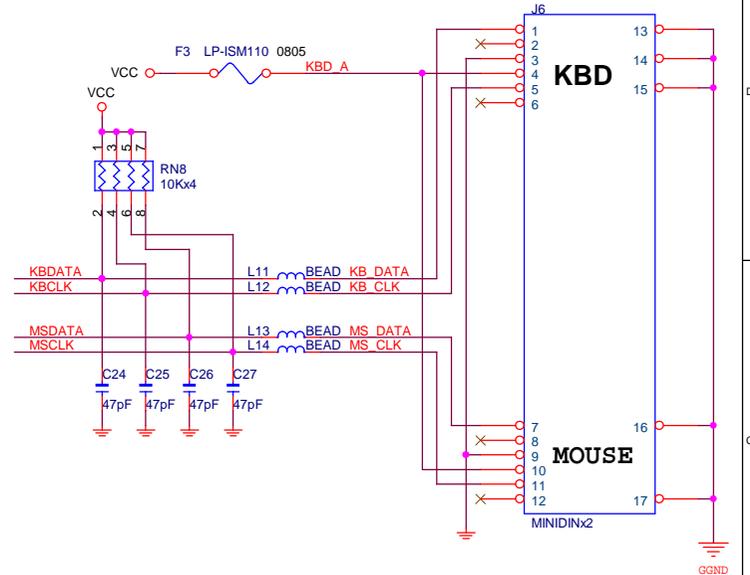


14.318MHz SMD TYPE



KBD/MOUSE

HD AUDIO

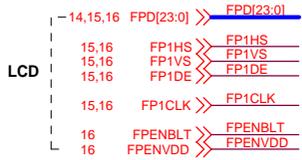


DMP ELECTRONICS INC.

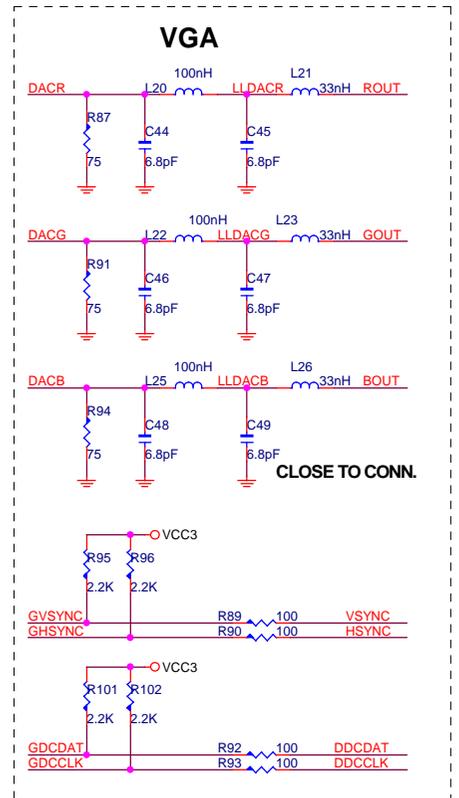
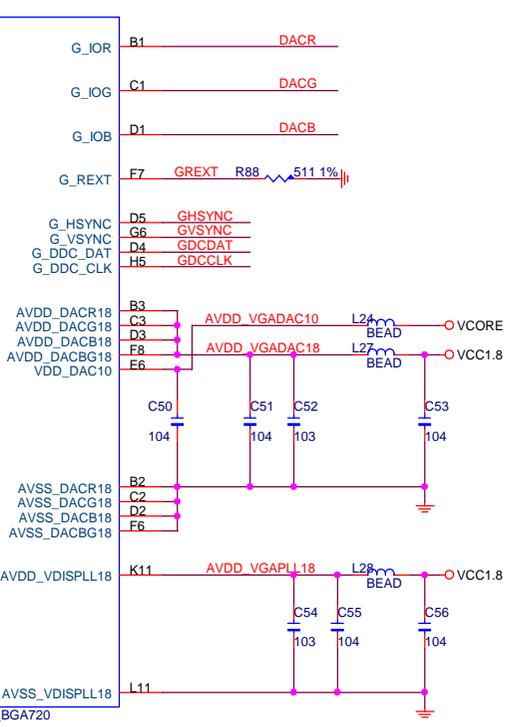
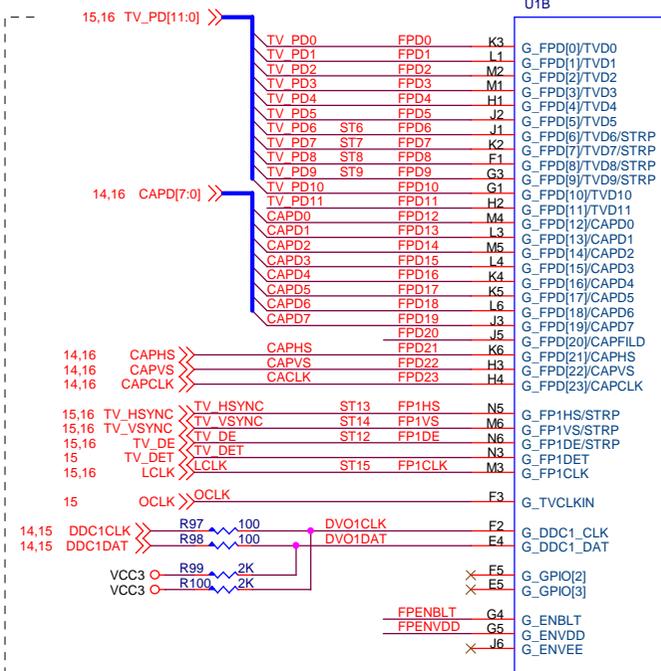
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Size: Document Number DM159B Rev: 0.4

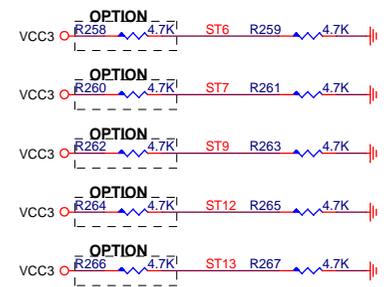
Date: Monday, October 25, 2010 Sheet: 6 of 17



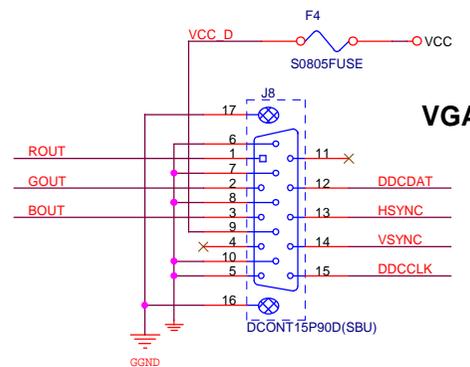
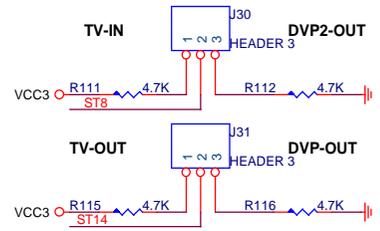
DVO/TV-IN/TV-OUT



DISPLAY STRAP SETUP:



DISPLAY STRAP SETUP:

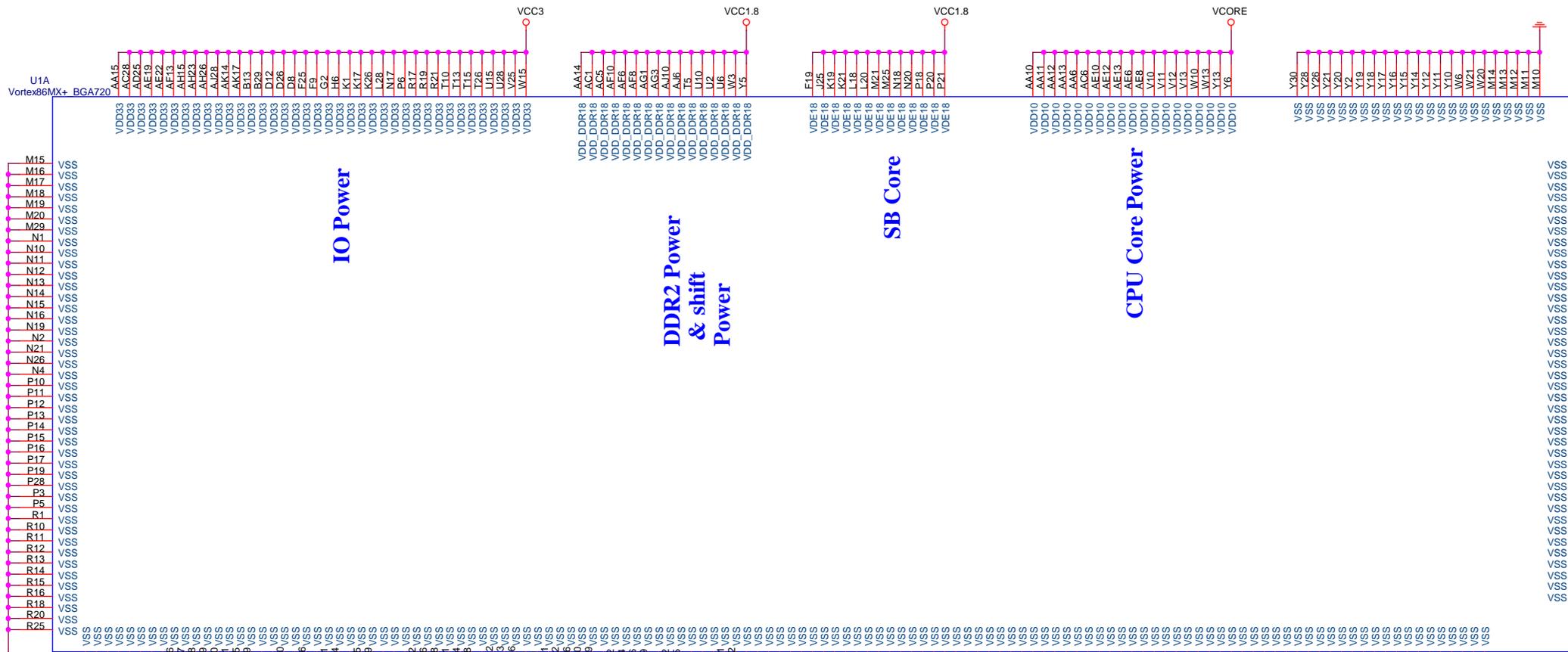


DMP ELECTRONICS INC.

Title: Vortex86MX+ VGA/ PLL

Size: Document Number DM159B Rev 0.4

Date: Monday, October 25, 2010 Sheet 7 of 17



IO Power

DDR2 Power & shift Power

SB Core

CPU Core Power

DMP ELECTRONICS INC.

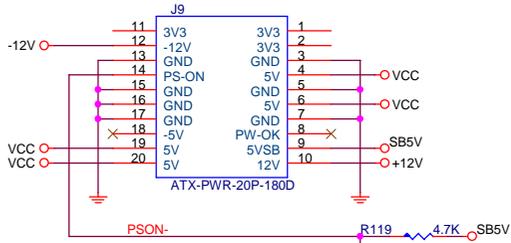
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Size: Document Number DM159B Rev 0.4

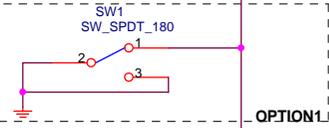
Date: Monday, October 25, 2010 Sheet 8 of 17



ATX POWER



POWER SW1



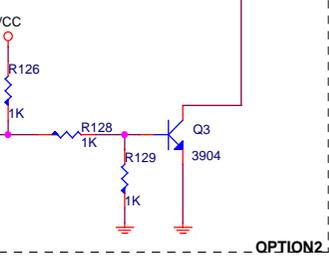
POWER SW2



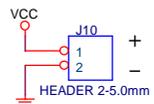
INPUT



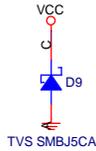
OUTPUT



POWER CONNECTOR

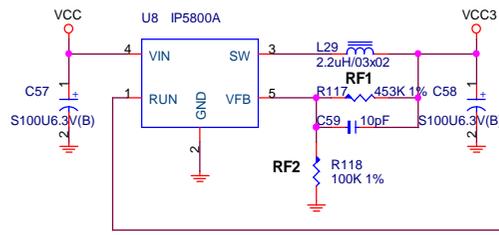


TVS



5V/600W/Vbr=6.4-7.23V/Vc=9.2V

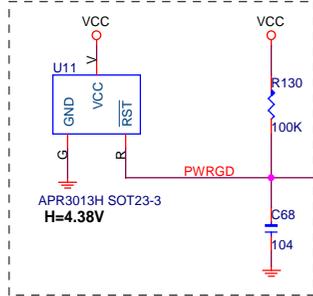
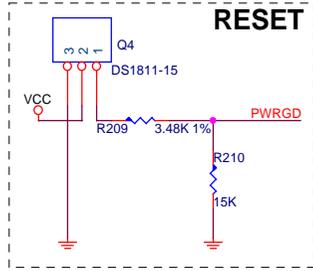
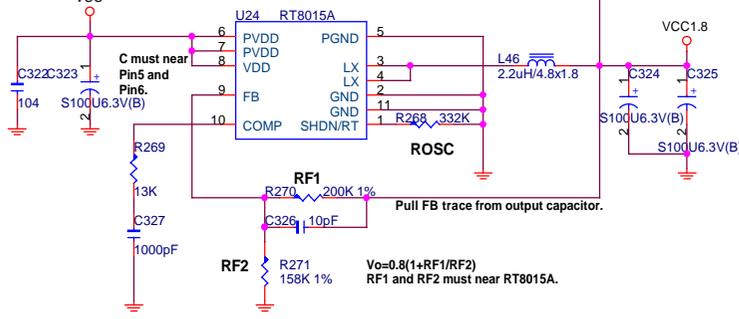
$$V_{OUT} = 0.6 \cdot (1 + R_{F1}/R_{F2}) \quad 800\text{mA}$$



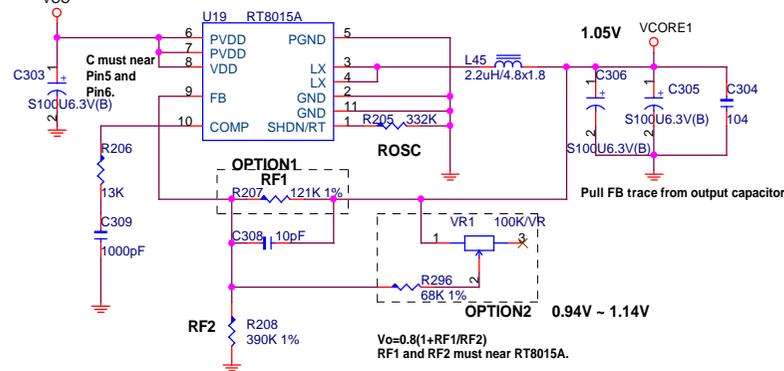
VCC 3.3V

VCC 1.8V

$$V_{OUT} = 0.8 \cdot (1 + R_{F1}/R_{F2}) \quad 3\text{A}$$

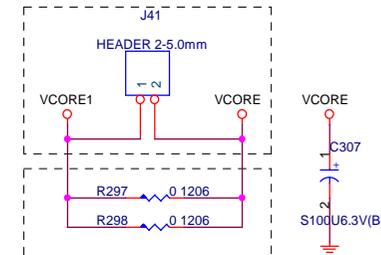


$$V_{OUT} = 0.8 \cdot (1 + R_{F1}/R_{F2}) \quad 3\text{A}$$



VCORE

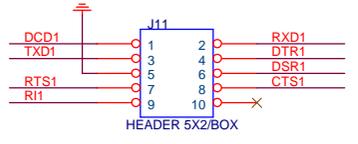
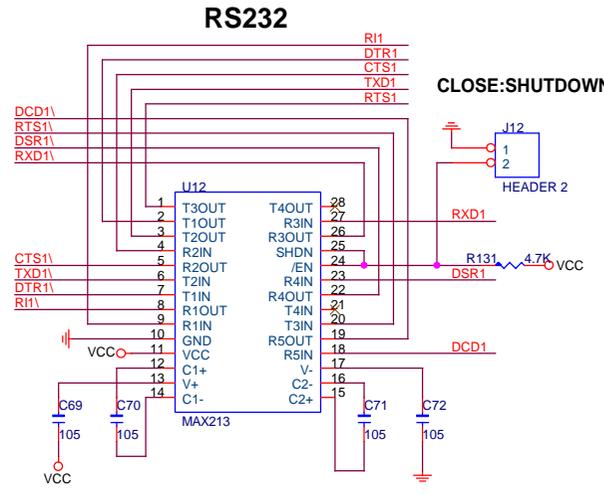
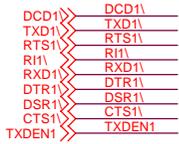
OPTION2



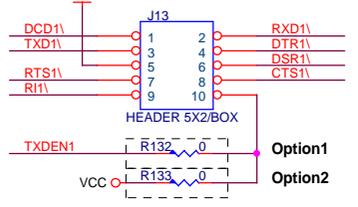
DMP ELECTRONICS INC.

Title			DC to DC
Size	Document Number	Rev	
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Date:	Monday, October 25, 2010	Sheet	9 of 17

P4/8051P4/COM1/PWM

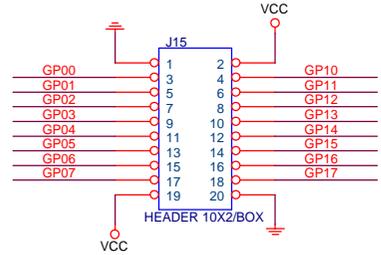
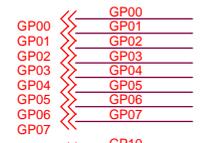


COM1 RS232

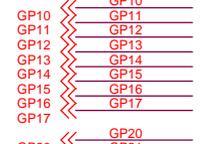


COM1/P4/PWM

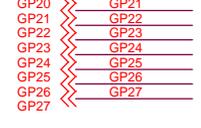
P0/8051P0/PWM



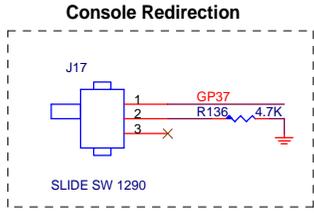
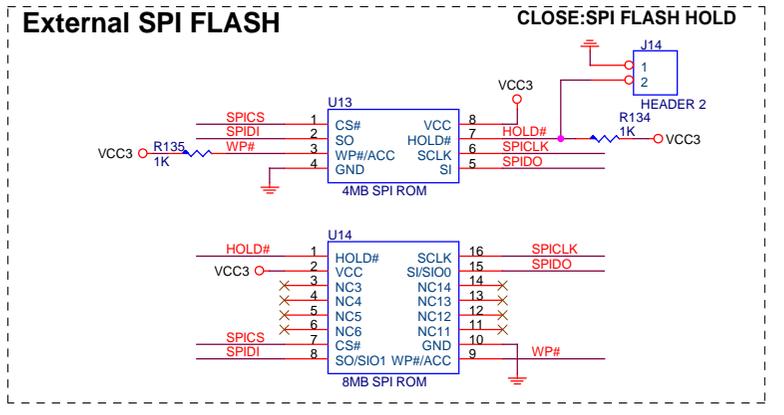
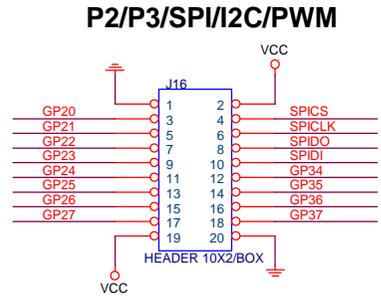
P1/8051P1/PWM



P2/8051P2/PWM



P3/8051P3/SPI/I2C



DMP ELECTRONICS INC.

Title: Vortex86SX/DX GPIO/COM/PWM

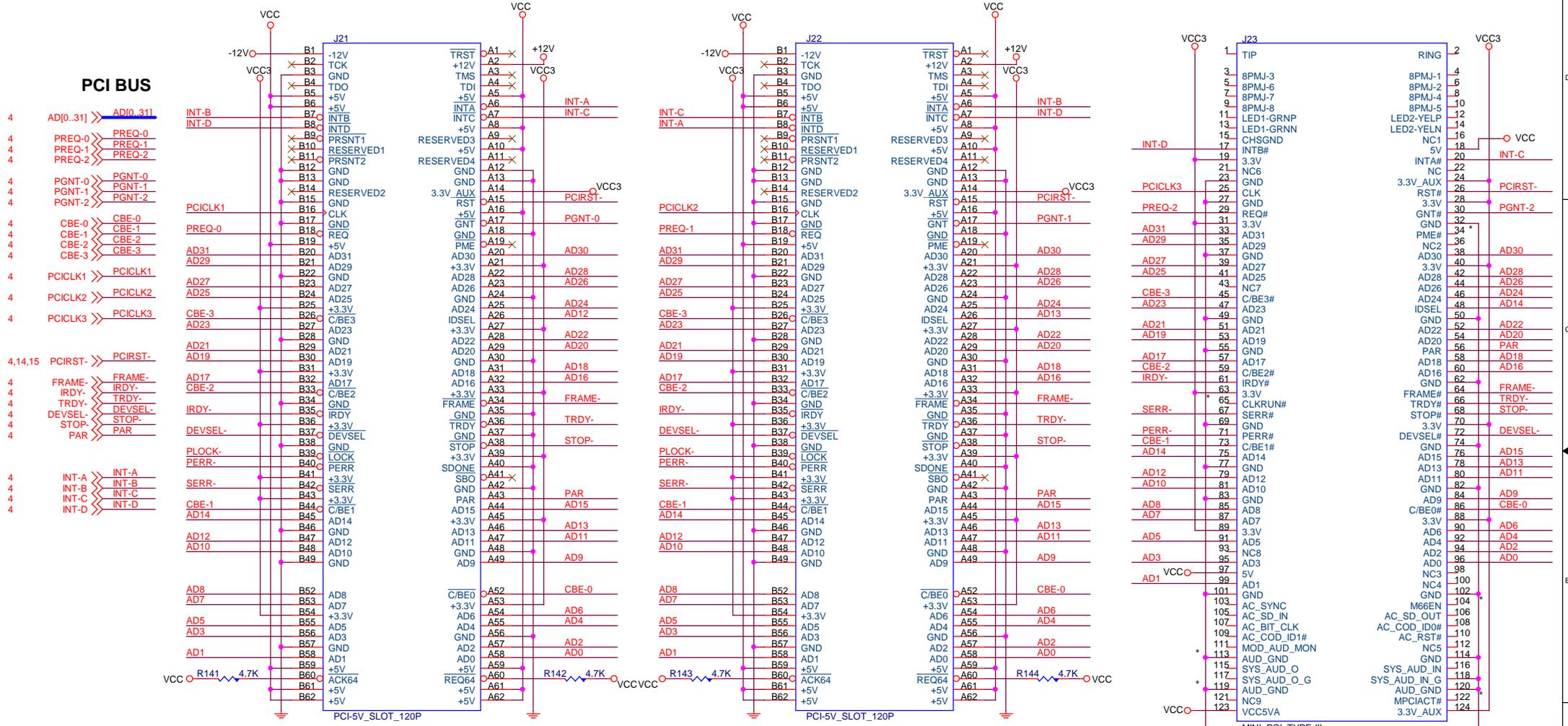
Size	Document Number	Rev
	DM159B	0.4

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PCI1

PCI2

MINI-PCI TYPE-III



VCC3 R145 4.7K PLOCK-
 VCC3 R146 4.7K PERR-
 VCC3 R147 4.7K SERR-

AD12
 PGNT-0
 PREQ-0
 INT-A/B/C/D

AD13
 PGNT-1
 PREQ-1
 INT-B/C/D/A

AD14
 PGNT-2
 PREQ-2
 INT-C/D

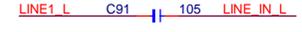
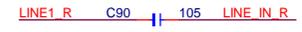
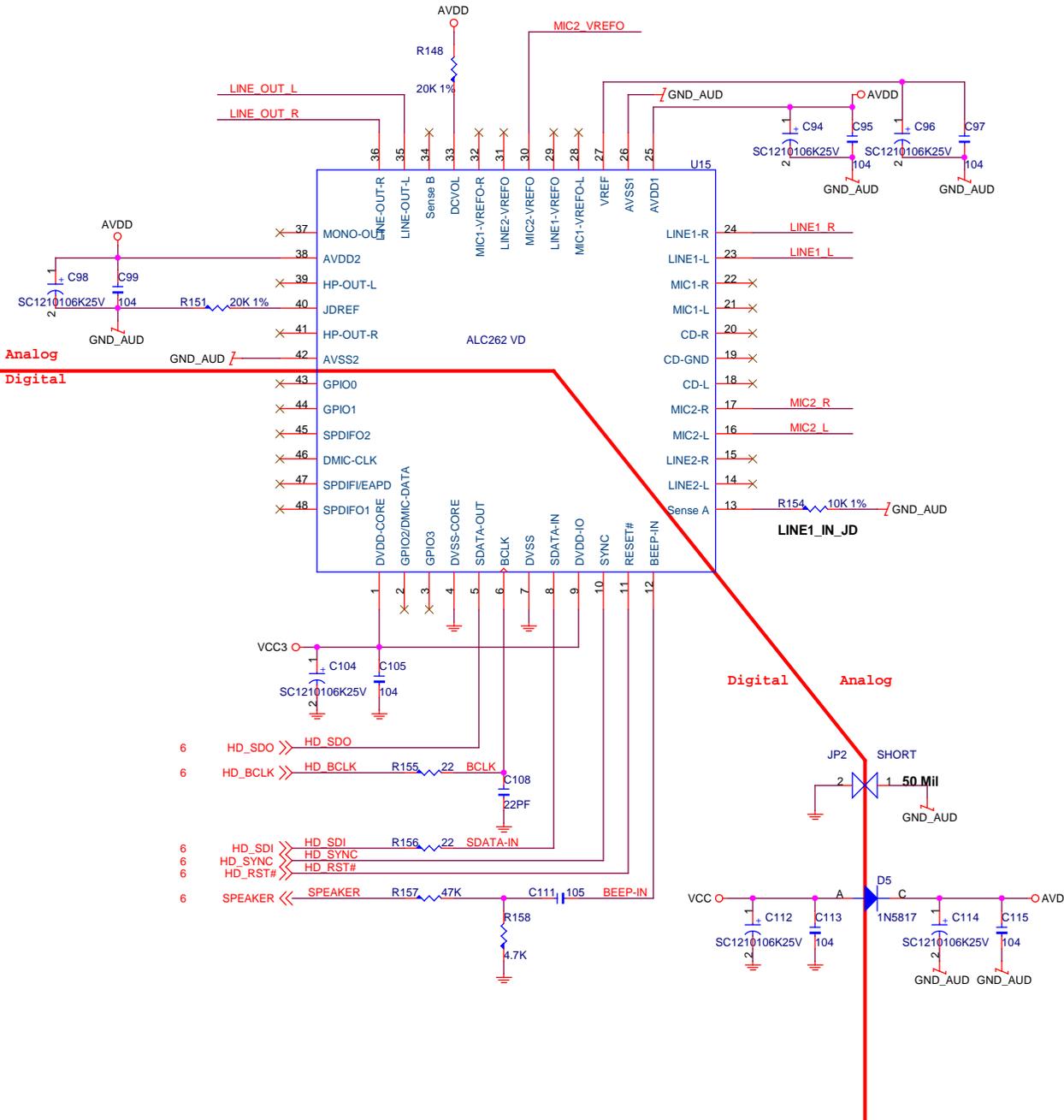
DMP ELECTRONICS INC.

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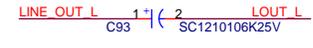
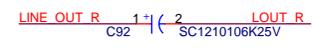
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Date: Monday, October 25, 2010 Sheet 12 of 17

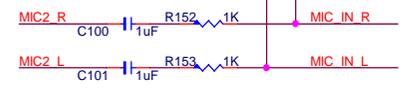
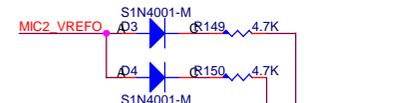
HD AUDIO



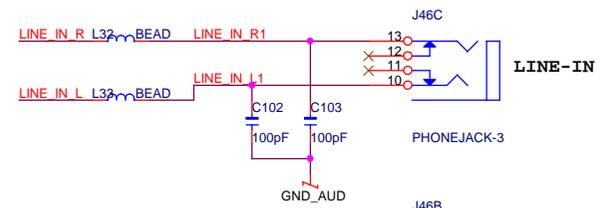
LINE1-IN



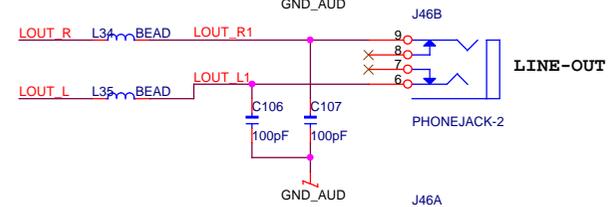
LINE-OUT



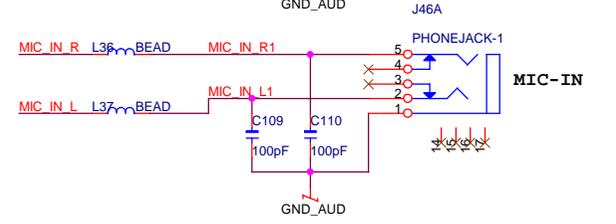
MIC2-IN



LINE-IN



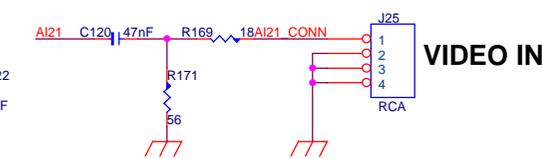
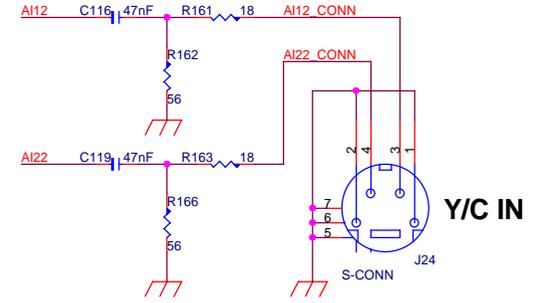
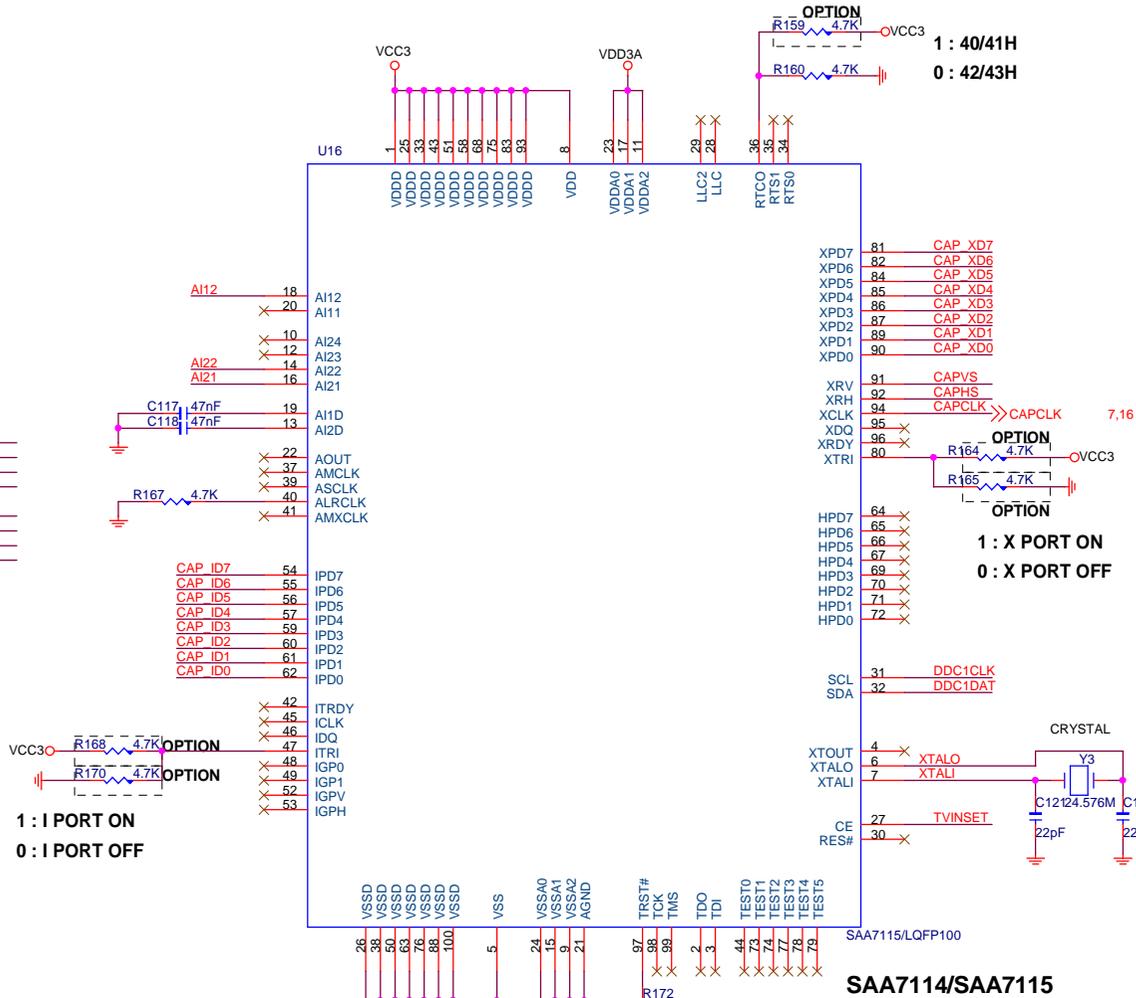
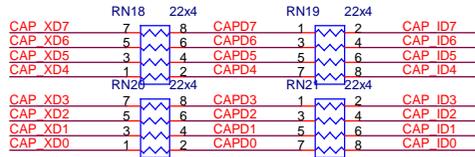
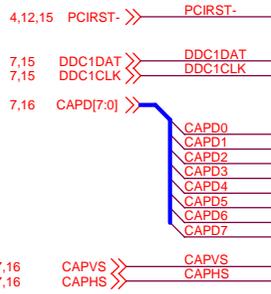
LINE-OUT



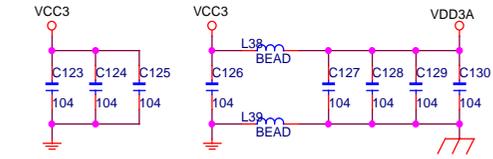
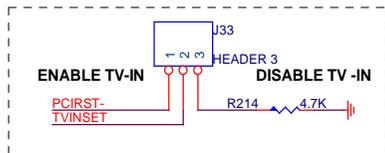
MIC-IN

DMP ELECTRONICS INC.		
Title: HD AUDIO ALC262		
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TV-IN



TV-IN SETUP



SAA7114/SAA7115

DMP ELECTRONICS INC.

Title TV IN SAA7115/7114

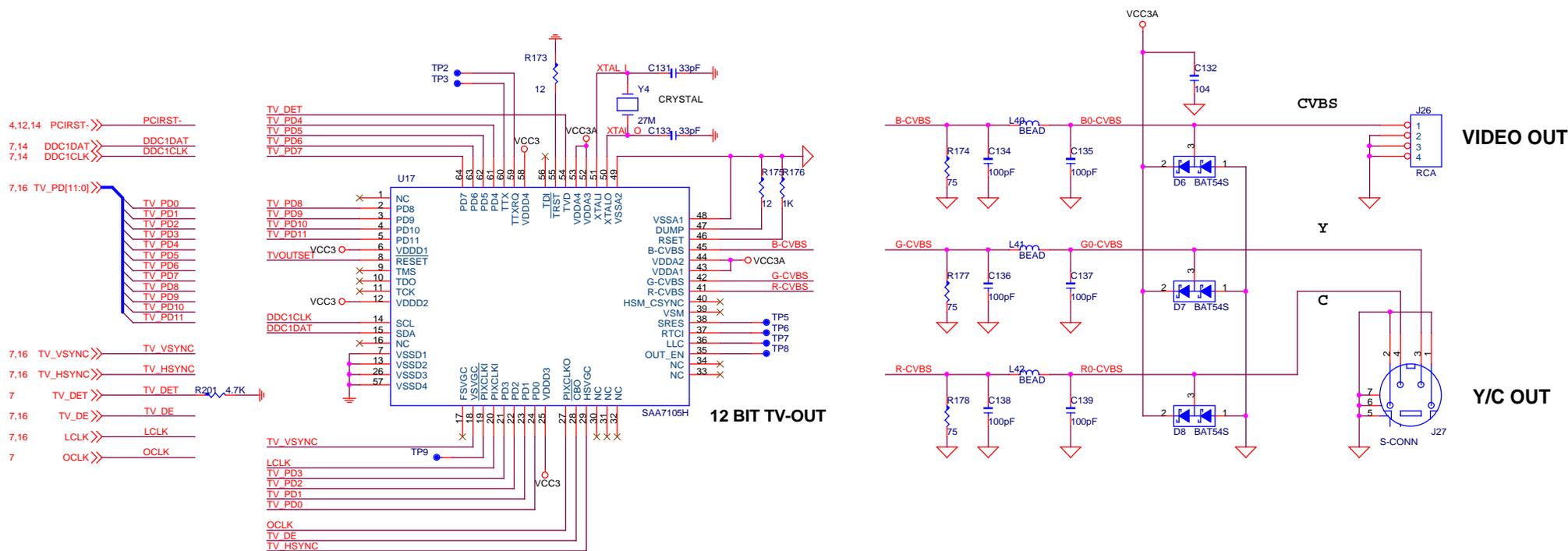
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Rev 0.4

Date: Monday, October 25, 2010

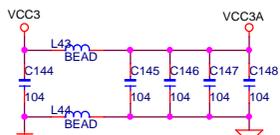
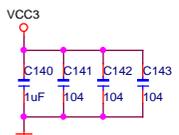
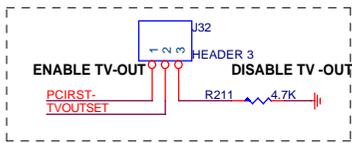
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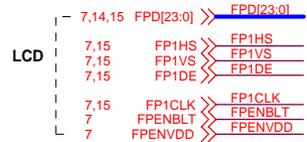
TV-OUT



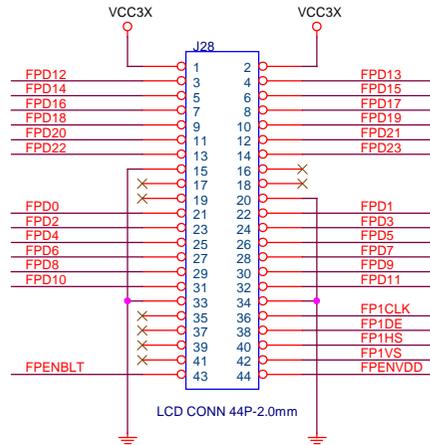
12 BIT TV-OUT

TV-OUT SETUP

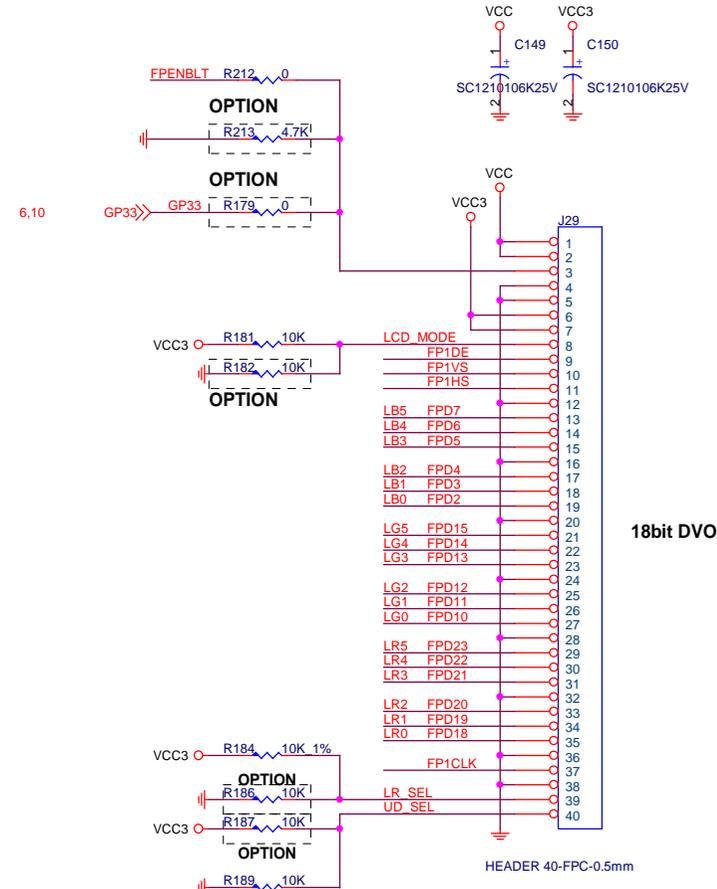




LCD Support 24BIT/18BIT/DSTN



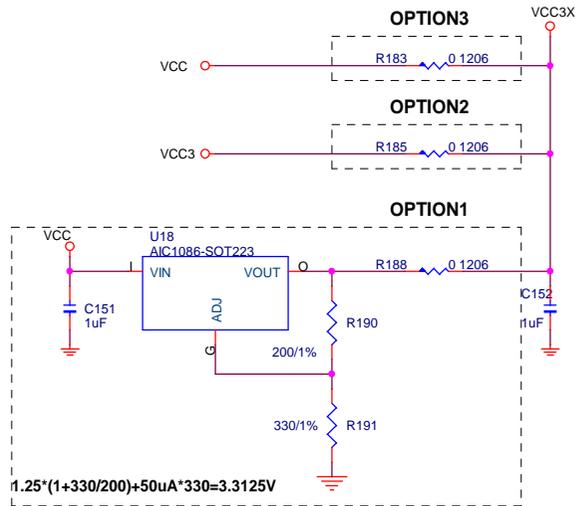
Vortex86MX+ LCD Connector Pin Define



18bit DVO

DVO definition table

Port	LVDs:24bit	TTL-18bit	LVDs-12bit	CAP+TV-12bit	DSTN
Name / DMP LCD pin	SDR		DDR+CAP		Color
FPD23/LR5	LVD23:R7	D17:R5	CAPCLK	CAPCLK	
FPD22/LR4	LVD22:R8	D16:R4	VSYNC	VSYNC	
FPD21/LR3	LVD21:R5	D15:R3	HSYNC	HSYNC	
FPD20/LR2	LVD20:R4	D14:R2	CAP_FILD	CAP_FILD	
FPD19/LR1	LVD19:R3	D13:R1	CAPD07	CAPD07	LD7
FPD18/LR0	LVD18:R2	D12:R0	CAPD06	CAPD06	LD6
FPD17	LVD17:R1		CAPD05	CAPD05	LD5
FPD16	LVD16:R0		CAPD04	CAPD04	LD4
FPD15/LG5	LVD15:G7	D11:G5	CAPD03	CAPD03	LD3
FPD14/LG4	LVD14:G6	D10:G4	CAPD02	CAPD02	LD2
FPD13/LG3	LVD13:G5	D09:G3	CAPD01	CAPD01	LD1
FPD12/LG2	LVD12:G4	D08:G2	CAPD00	CAPD00	LD0
FPD11/LG1	LVD11:G3	D07:G1	LVD11:G3R7	TVD11	
FPD10/LG0	LVD10:G2	D06:G0	LVD10:G2R6	TVD10	
FPD09	LVD9:G1		LVD09:G1R5	TVD09	
FPD08	LVD8:G0		LVD08:G0R4	TVD08	
FPD07/LB5	LVD7:B7	D05:B5	LVD07:B7R3	TVD07	HD7
FPD06/LB4	LVD6:B6	D04:B4	LVD06:B6R2	TVD06	HD6
FPD05/LB3	LVD5:B5	D03:B3	LVD05:B5R1	TVD05	HD5
FPD04/LB2	LVD4:B4	D02:B2	LVD04:B4R0	TVD04	HD4
FPD03/LB1	LVD3:B3	D01:B1	LVD03:B3R7	TVD03	HD3
FPD02/LB0	LVD2:B2	D00:B0	LVD02:B2R6	TVD02	HD2
FPD01	LVD1:B1		LVD01:B1G5	TVD01	HD1
FPD00	LVD0:B0		LVD00:B0G4	TVD00	HD0
FP1DE	LWDE	DE	LWDE	TVDE	DISP
FP1HS	LWHS	HS	LWHS	TVHS	LOAD
FP1VS	LWVS	VS	LWVS	TVVS	FRM
FP1CLK	LWCLK	CLK	LWCLK	TVCLK	CP
TVCLKIN				TVCLKIN	
FP1DET	DVDET	DVDET	DVDET	TVDET	DVDET
ENVEE	ENVEE	ENVEE	ENVEE		ENVEE
ENPVDD	EPVDD	EPVDD	EPVDD		EPVDD
ENBLT	ENBL	ENBL	ENBL		ENBL



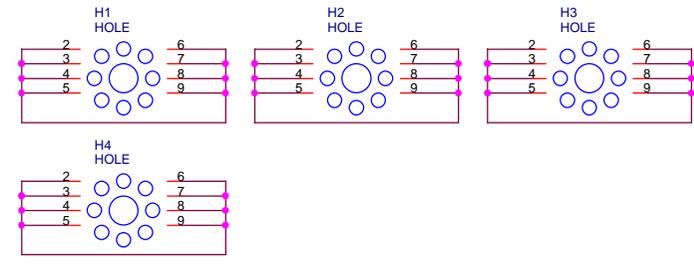
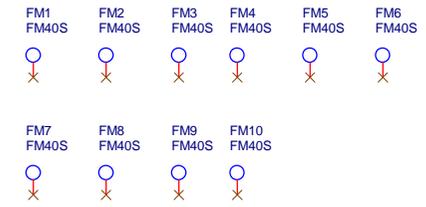
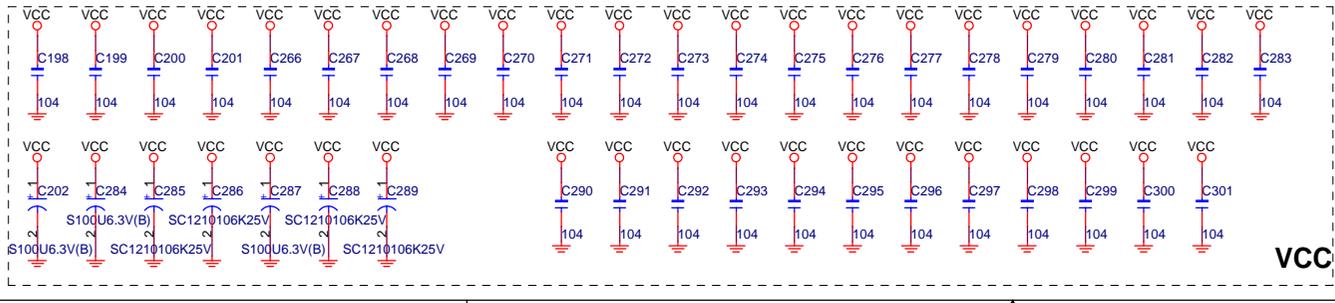
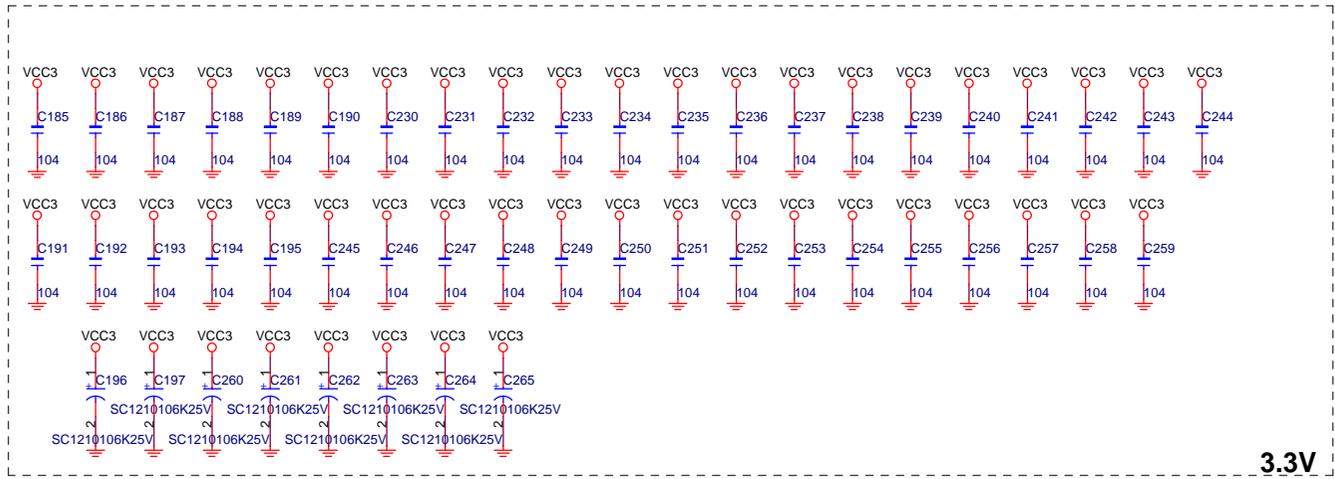
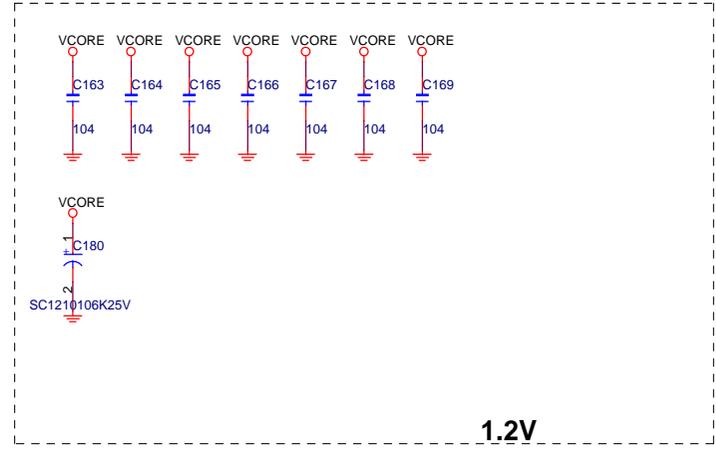
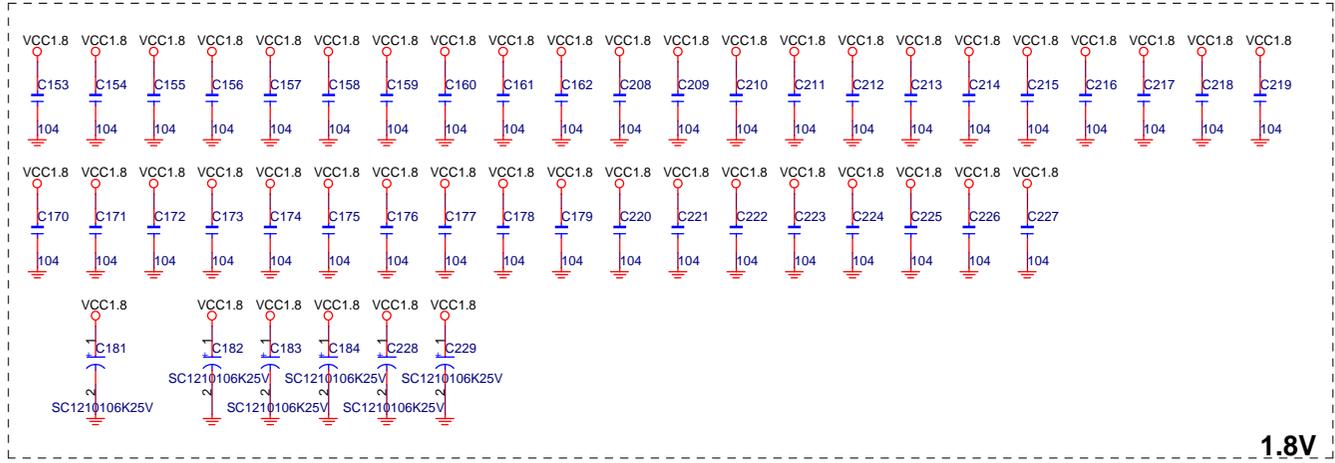
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BYPASS



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