



P55H-CM

V : 1.0


SCHEMATICS TABLE:

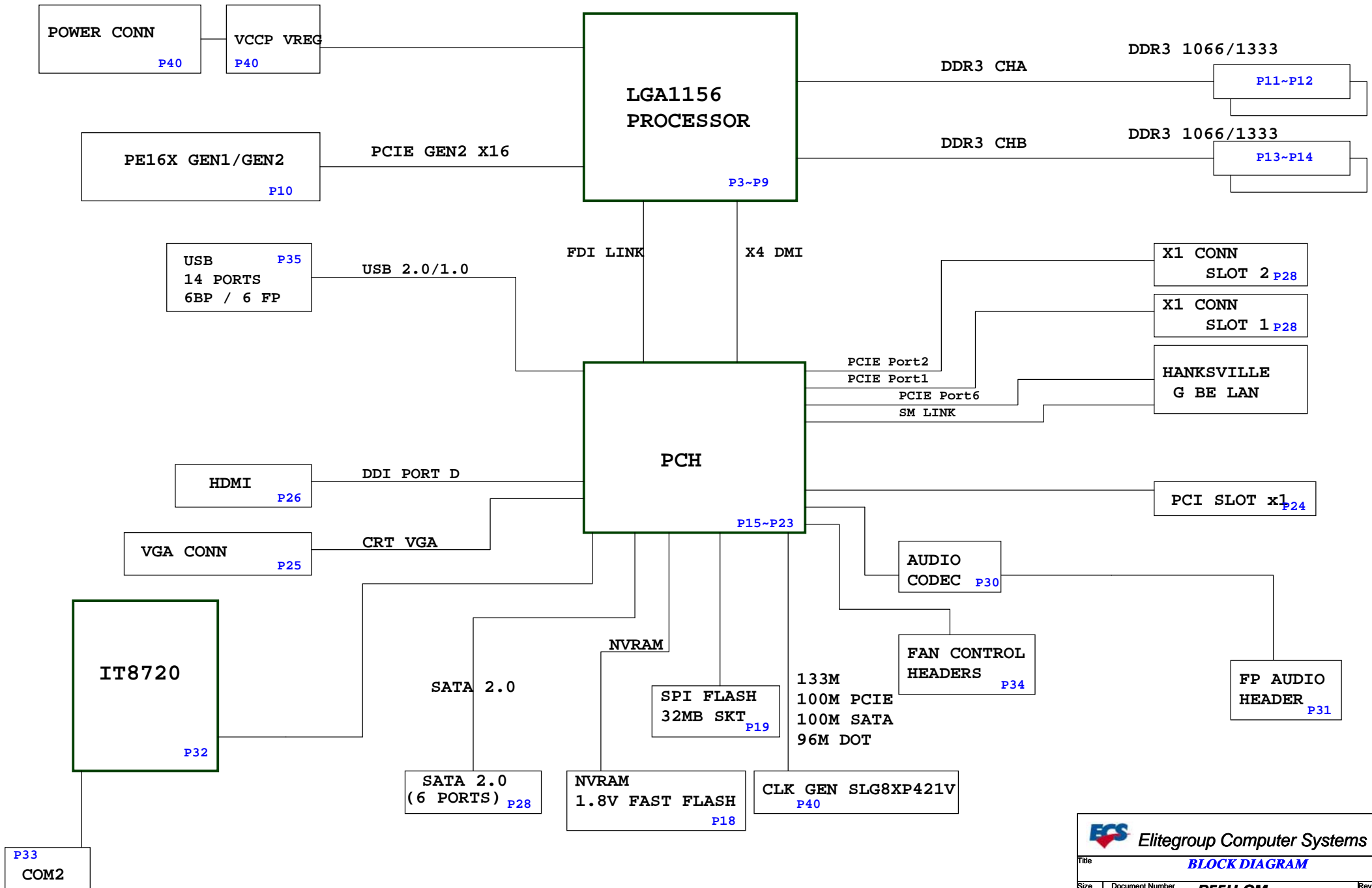
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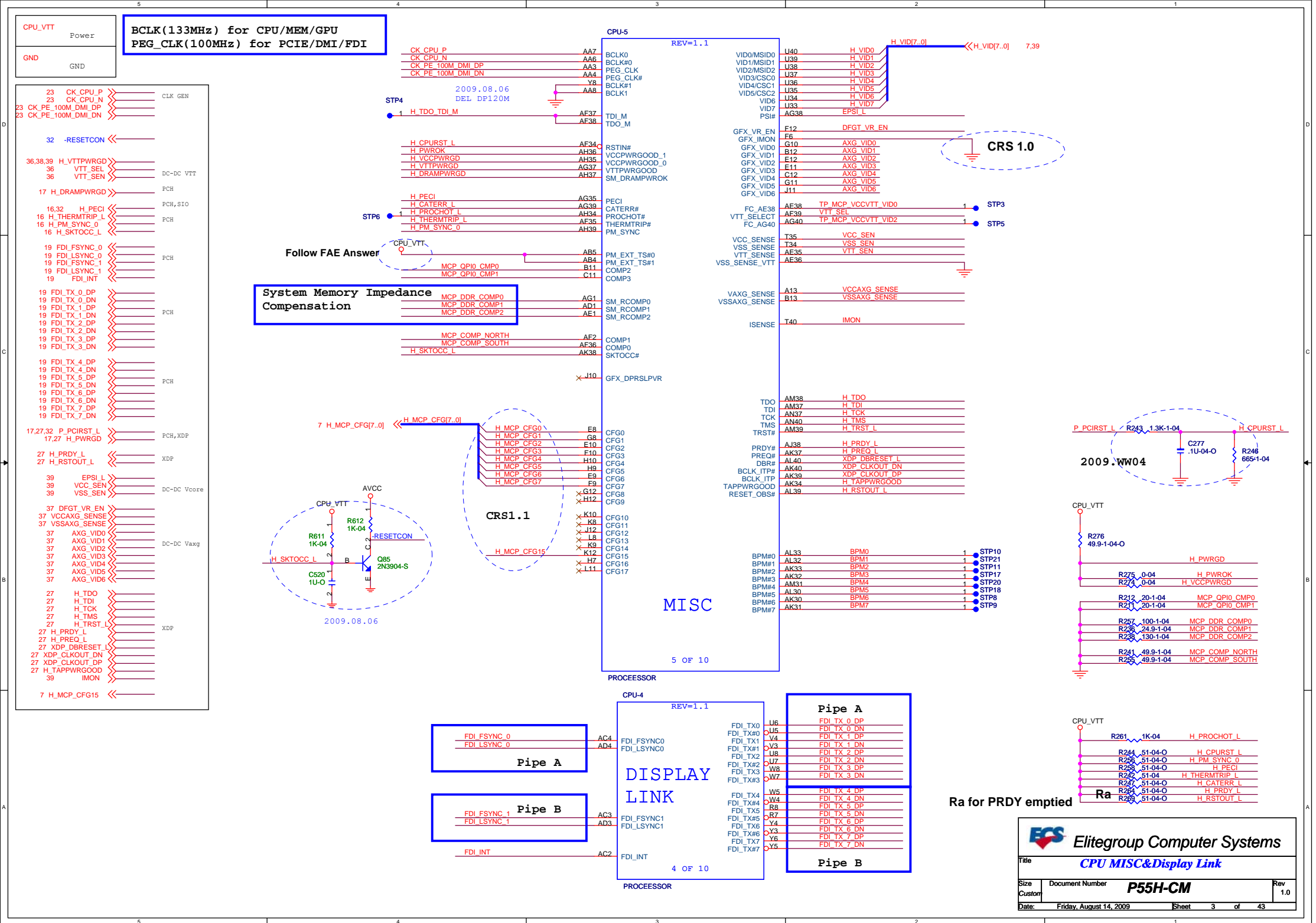
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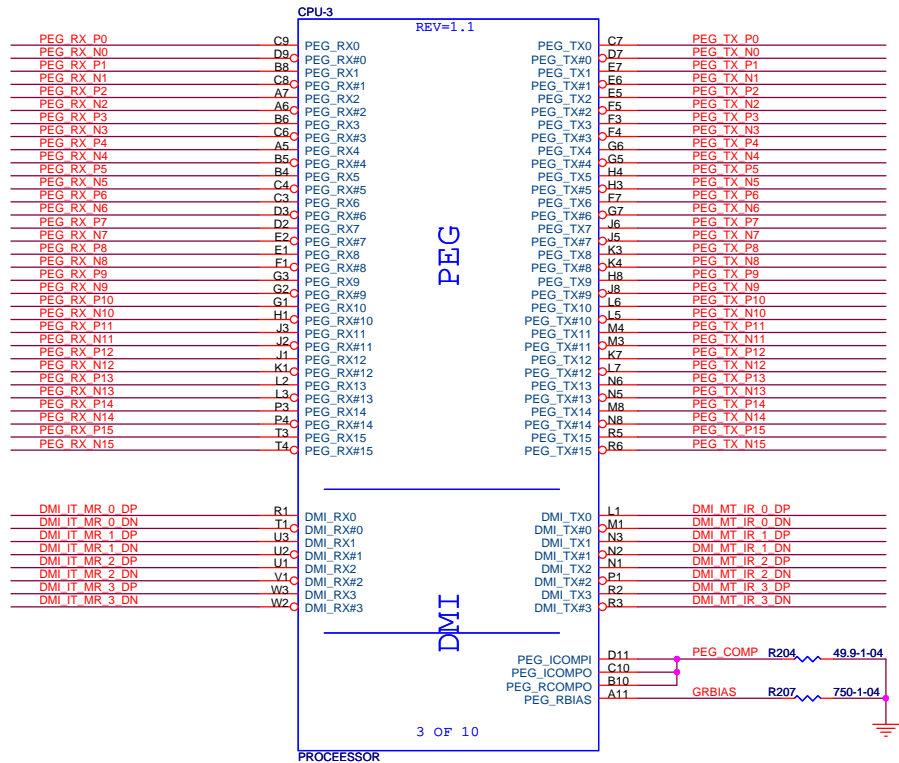
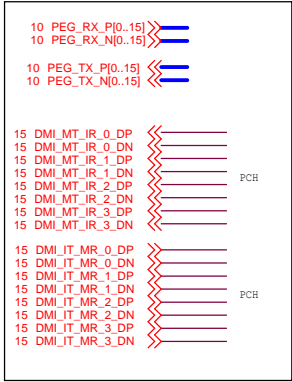
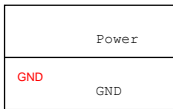
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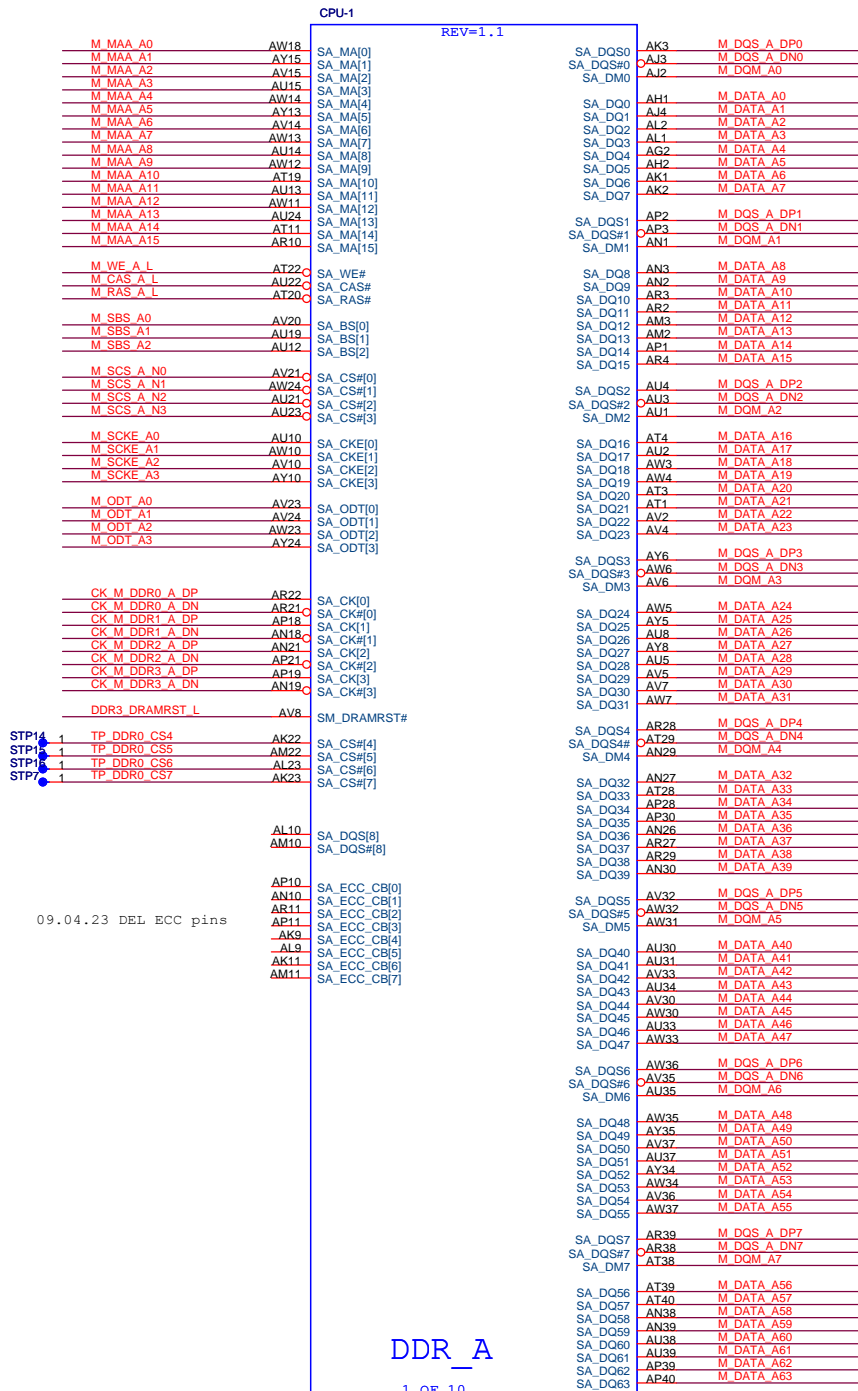
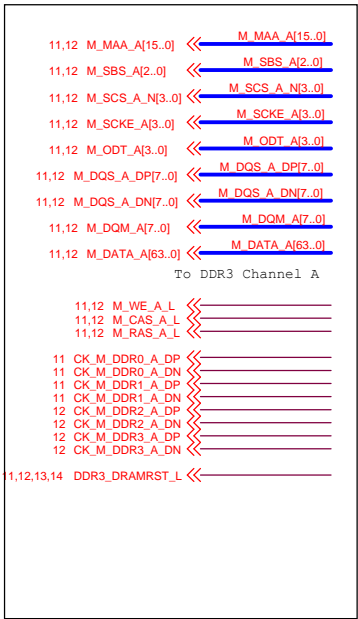
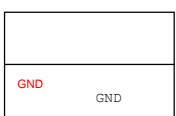
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DDR_A

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PROCESSOR



Elitegroup Computer Systems

Title

CPU DDR3-A

Size

Document Number

Rev

Custom

P55H-CM

1.0

Date:

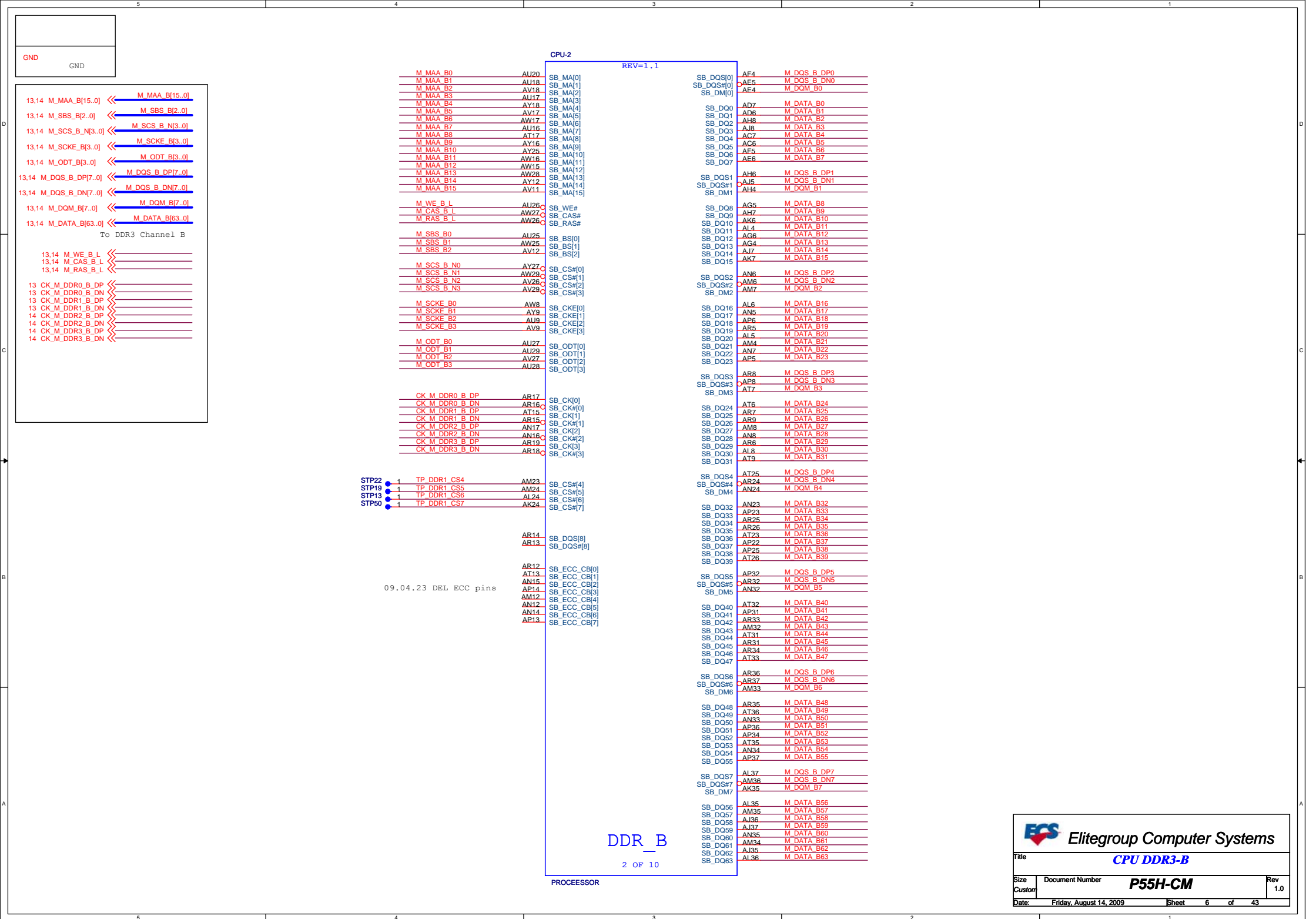
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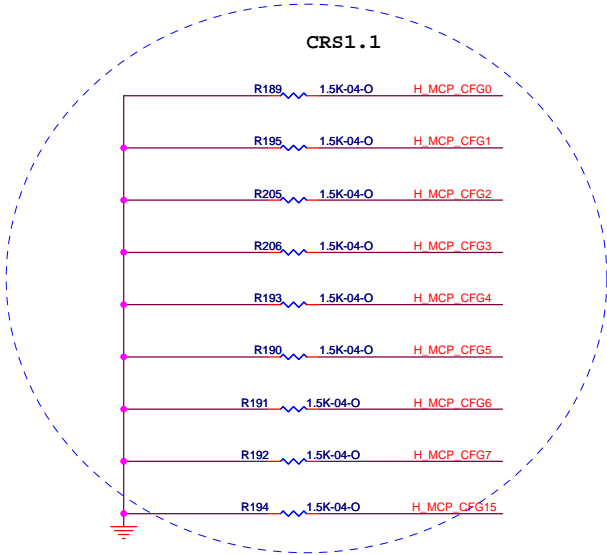
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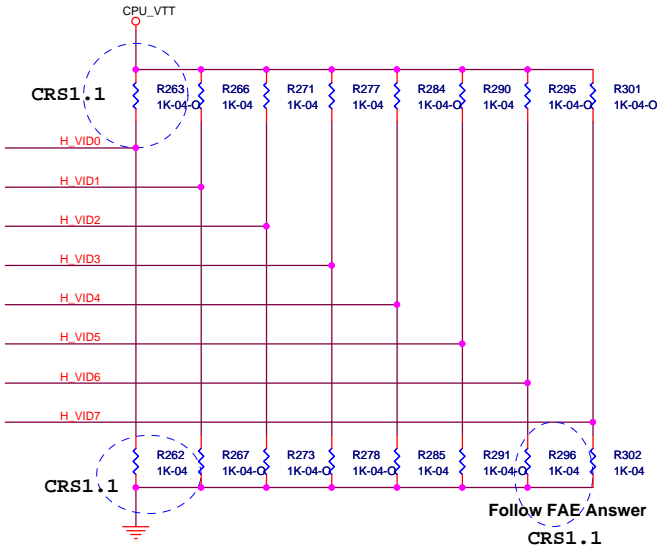


CPU_VTT	Power
GND	GND

3 H_MCP_CFG[7..0]	>> H_MCP_CFG[7..0]	CPU
3 H_MCP_CFG15	>> H_MCP_CFG15	
3.39 H_VID[7..0]	<< H_VID[7..0]	CPU, DC-DC Vcore

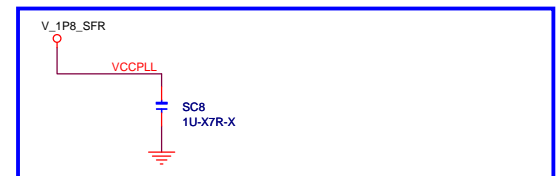
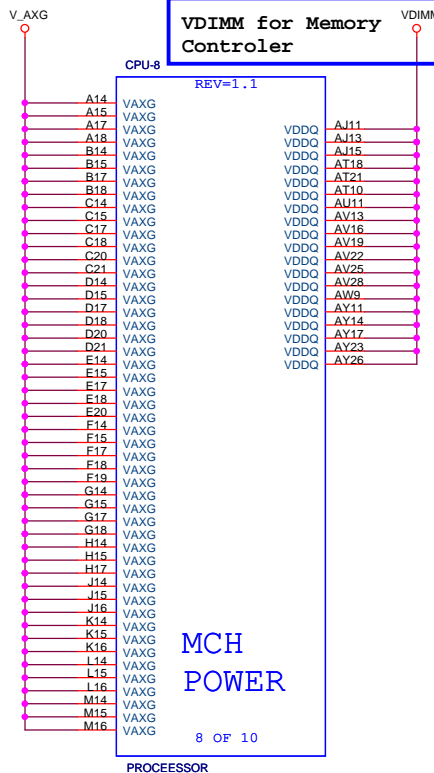
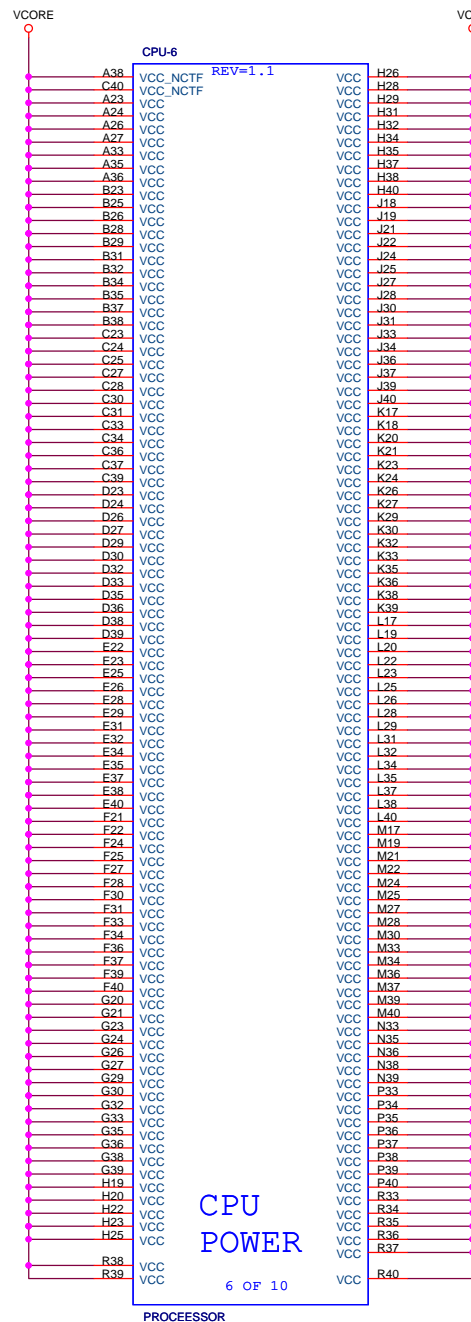


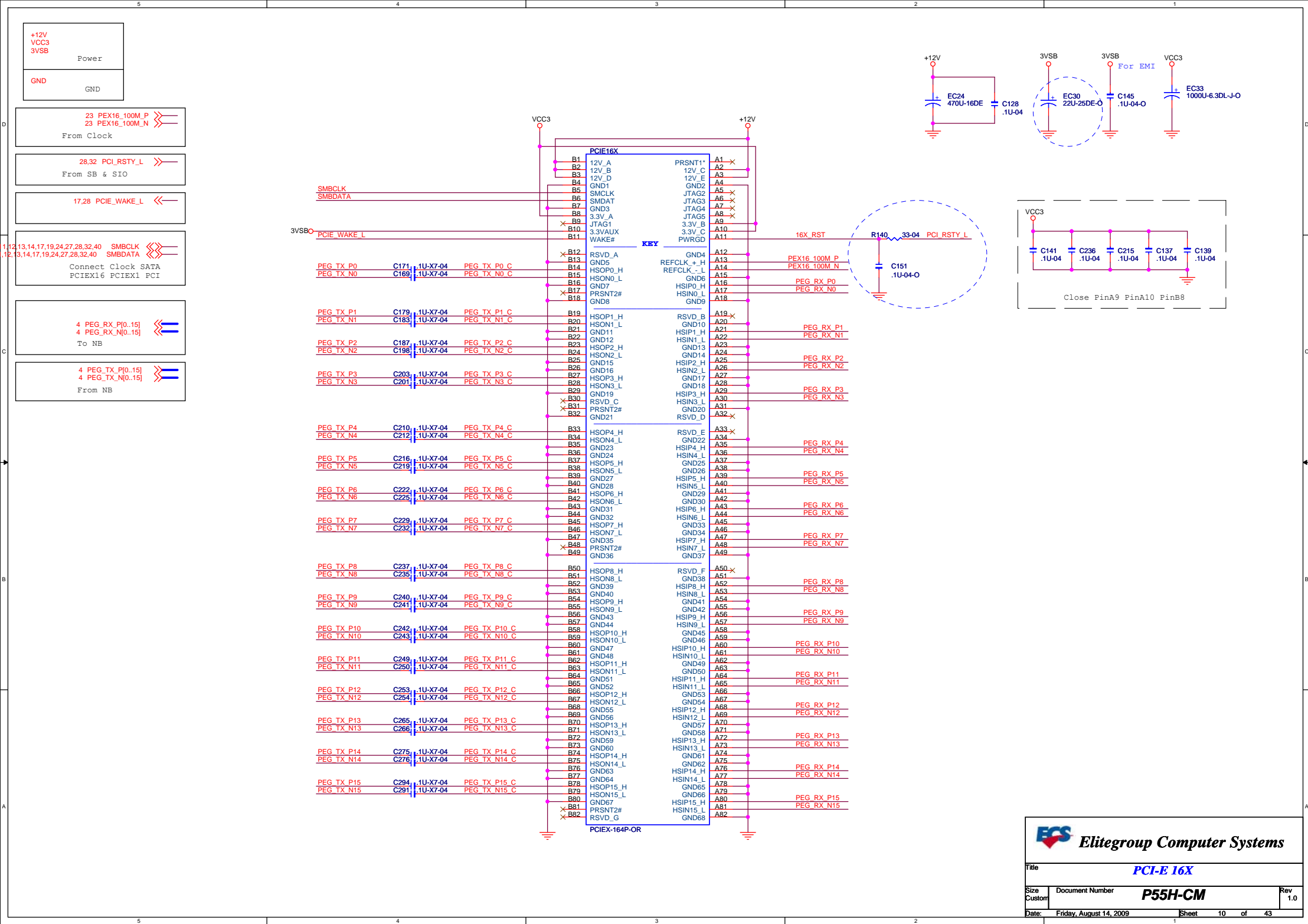
CFG	Havendale	Lynnfield			
0	REVERSED	1	11=1*16X	0	10=2*8X
1	REVERSED	1		1	
2	REVERSED			REVERSED	
3	Static Lane Number Reversal			REVERSED	
4	REVERSED			REVERSED	
6	REVERSED				
7	REVERSED				
15	REVERSED				
0,1,2,3,4,5 ALL HAVE INTERNAL PULL-UPS					

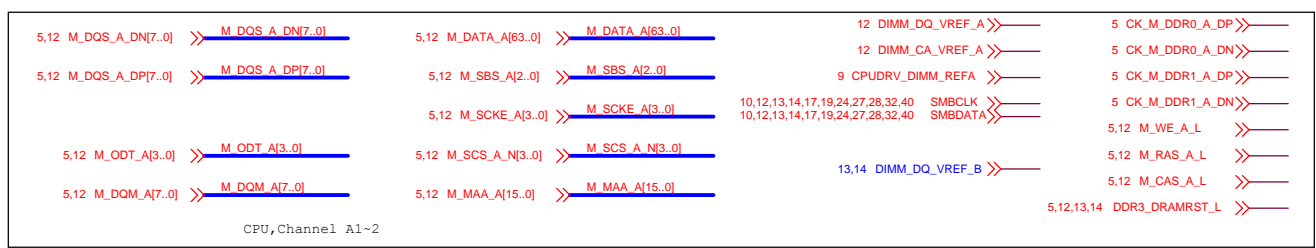
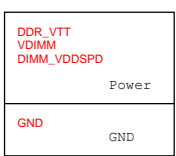


POWER ON CONFIGURATION (POC)TABLE

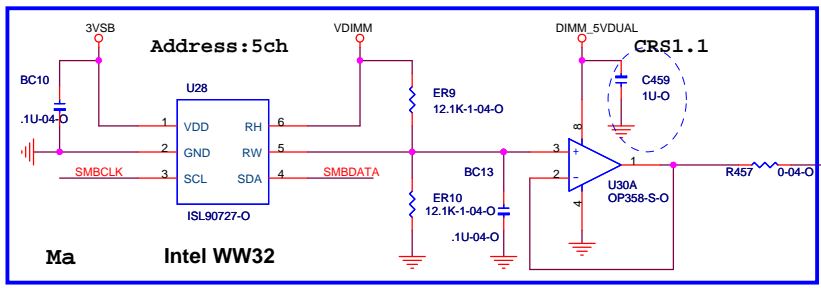
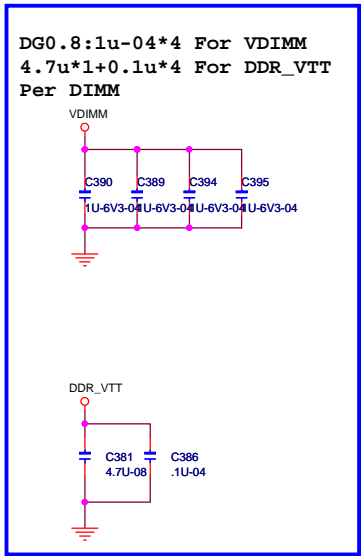
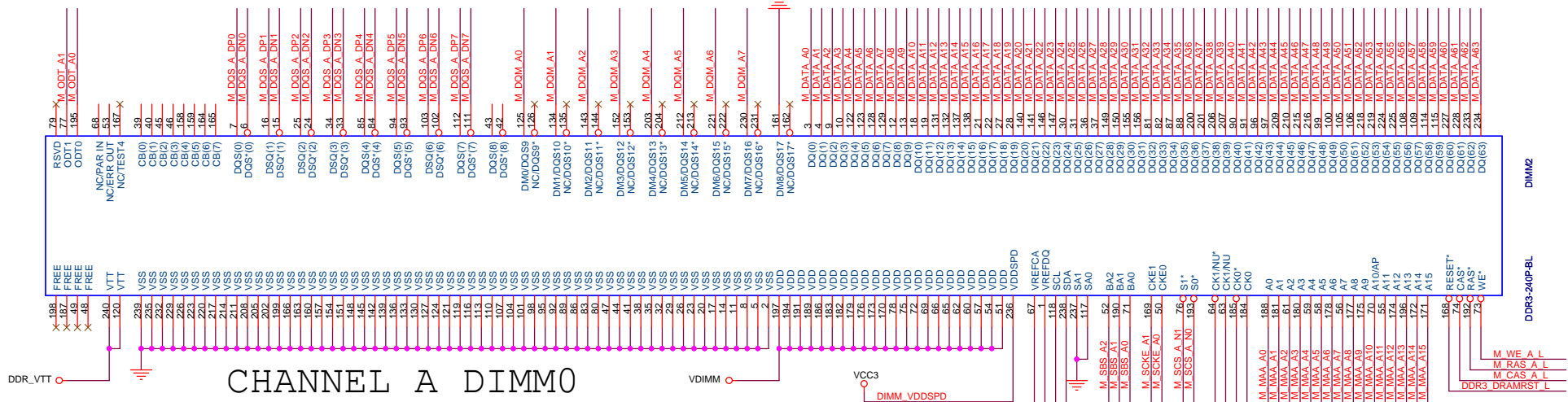
	FUNCTION	Setting	Havendale	Lynnfield
VID0	MIS0	0	Support	Support
VID1	MIS1	1		
VID2	MIS2	1		
VID3	IMON CONFIG0	1	Icc(MAX)=120A	Icc(MAX)=120A
VID4	IMON CONFIG1	0		
VID5	IMON CONFIG2	1		
VID6	RESERVED	0		
VID7	VID SELECT	0		
PSI#	RESERVED	LOW		



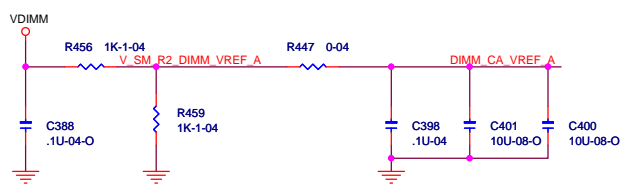
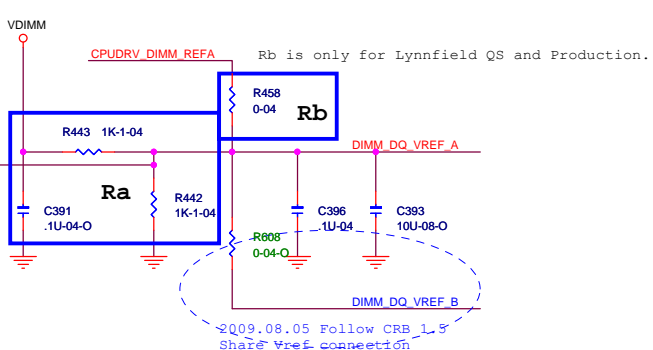


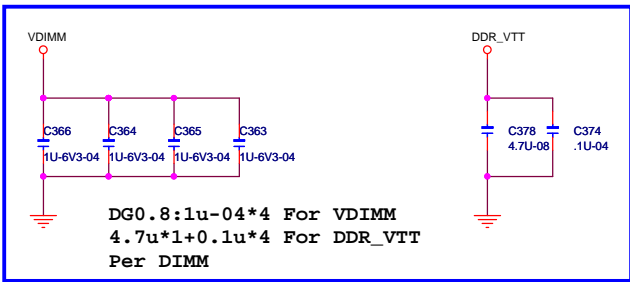
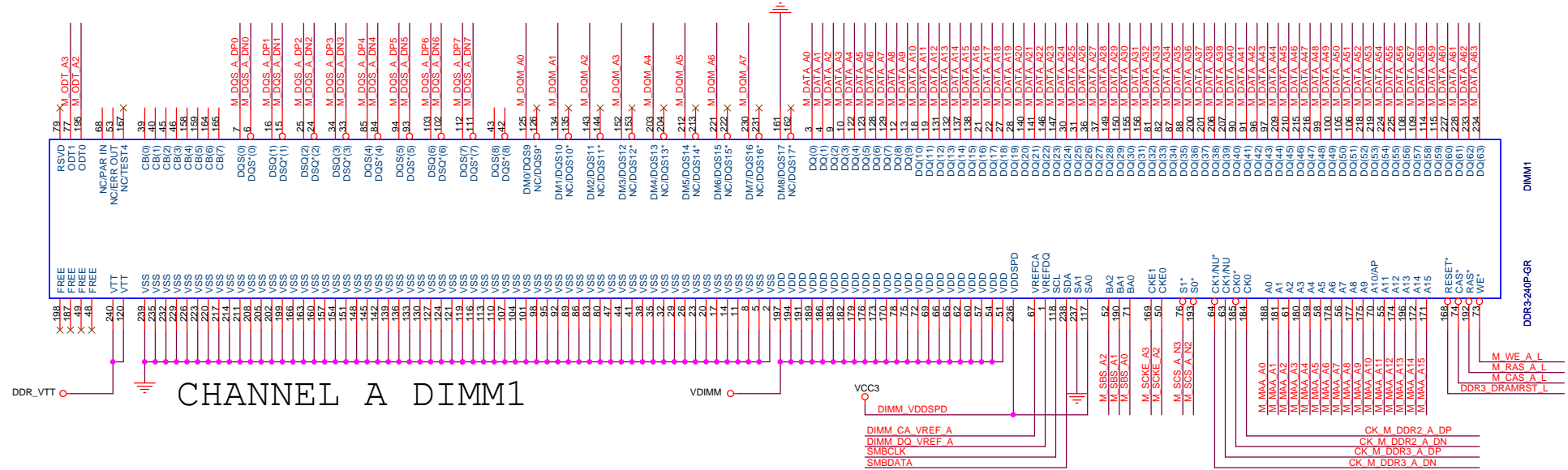
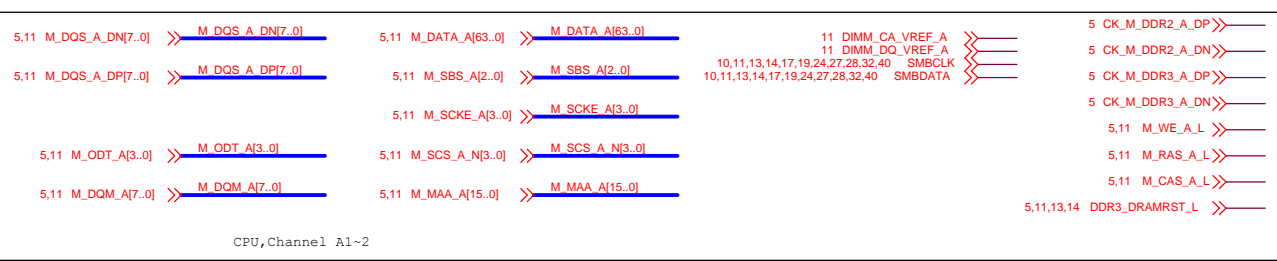
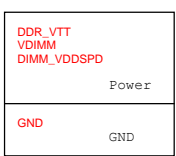


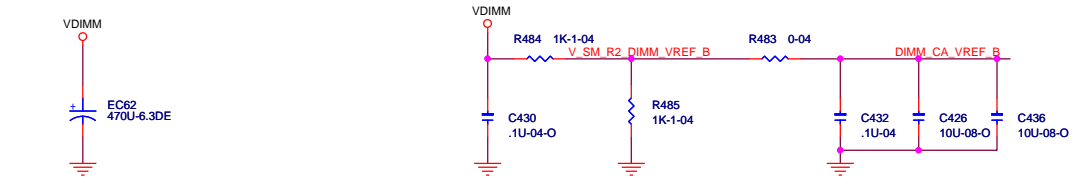
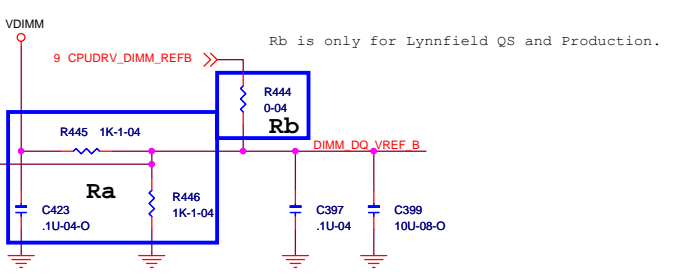
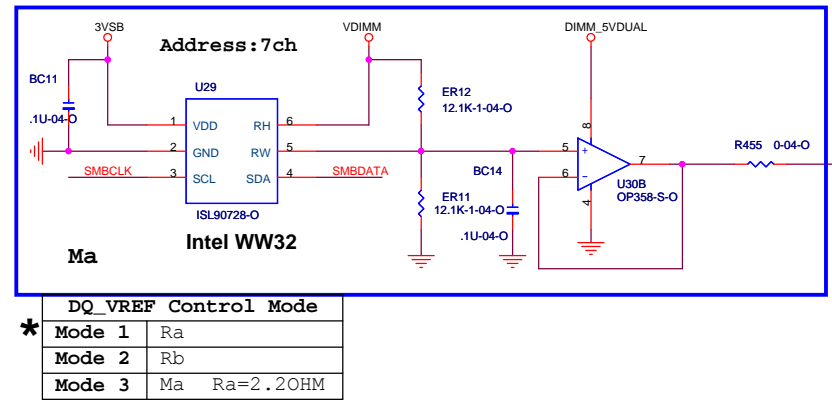
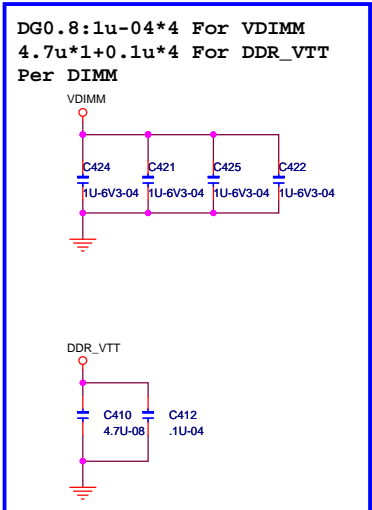
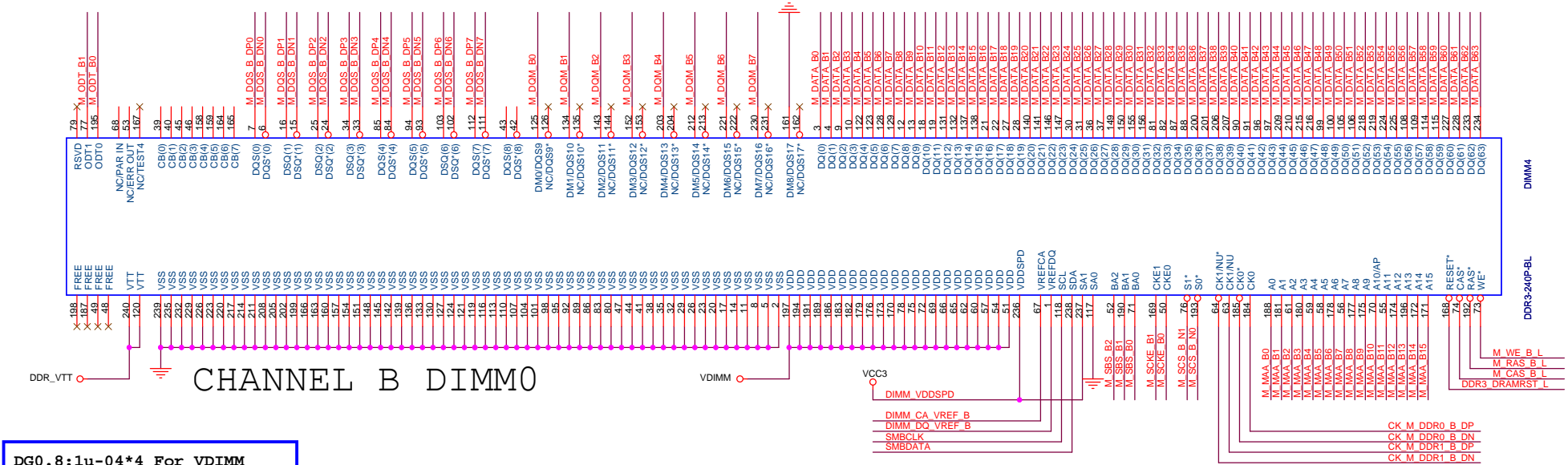
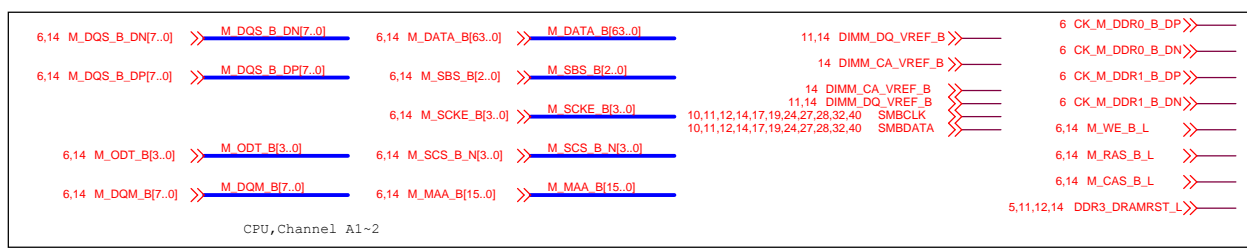
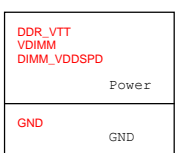
CPU,Channel A1~2

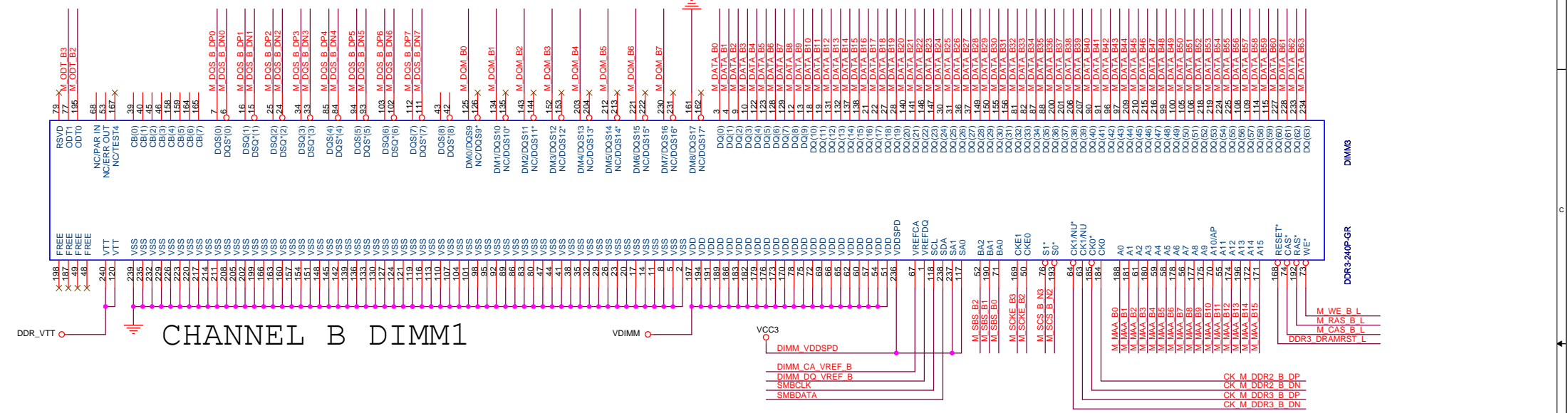
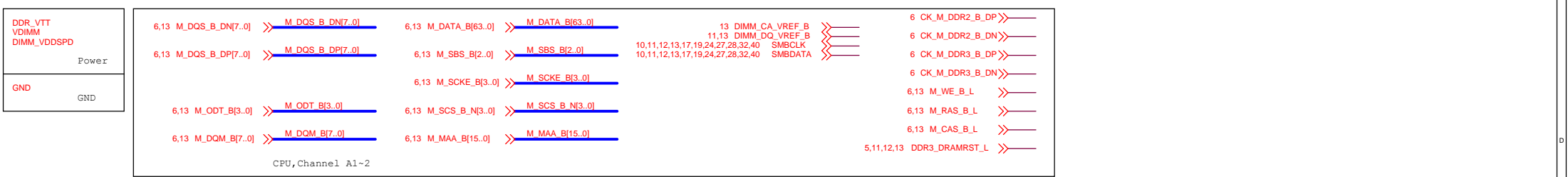


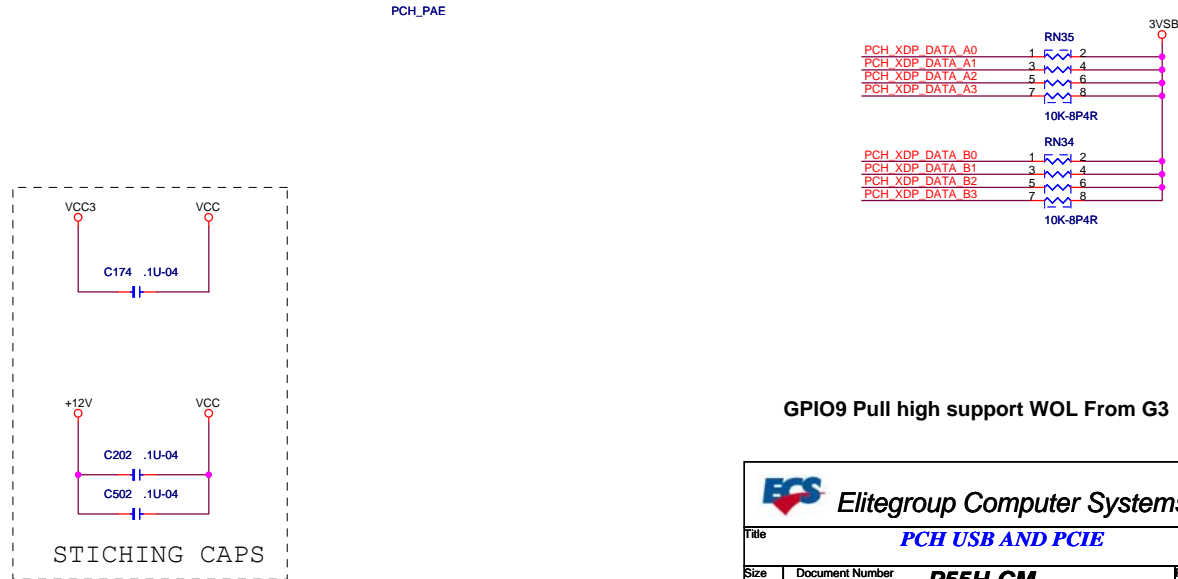
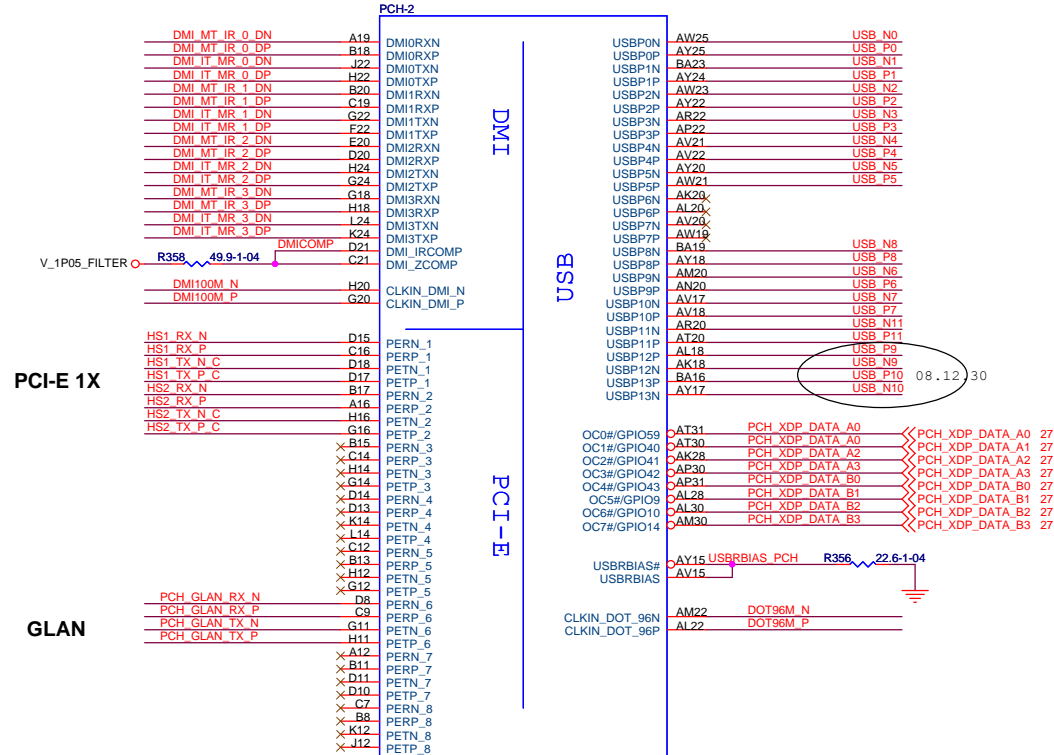
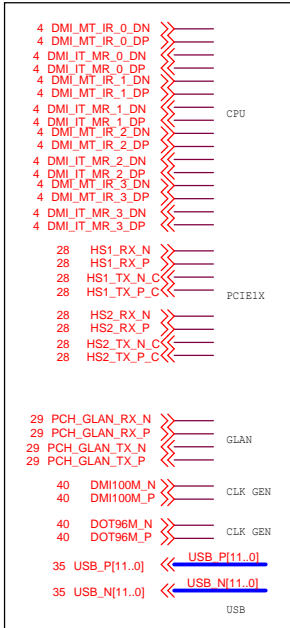
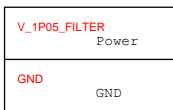
DQ_VREF Control Mode	
Mode 1	Ra
Mode 2	Rb
Mode 3	Ma Ra=2.2OHM

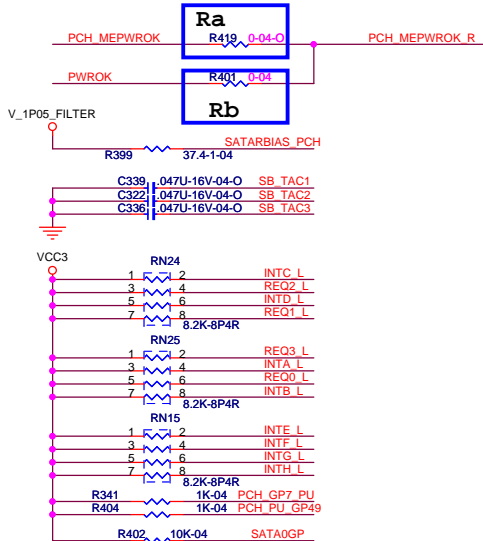
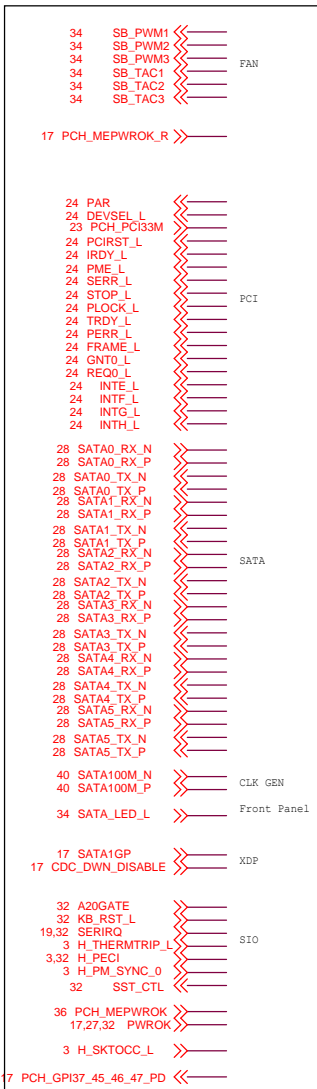
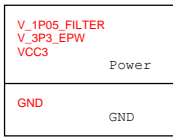




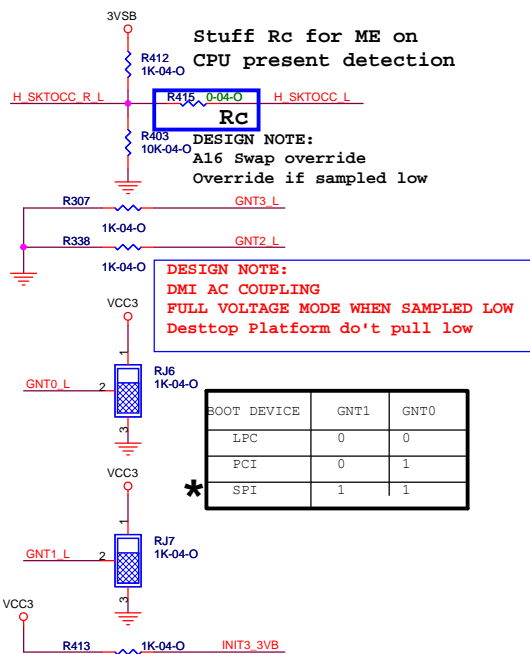
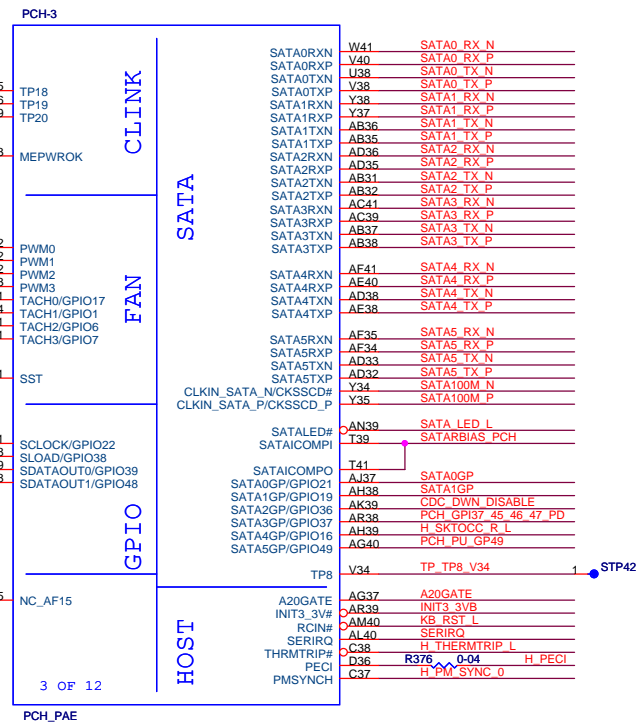
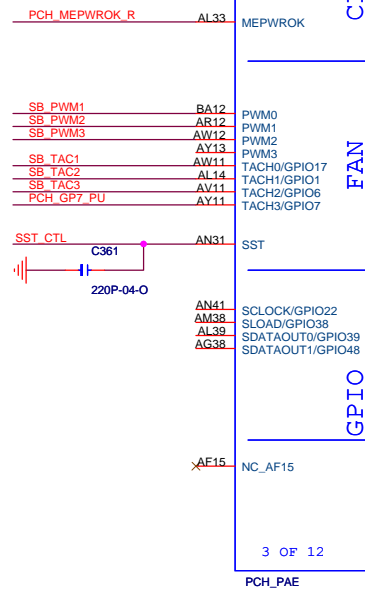




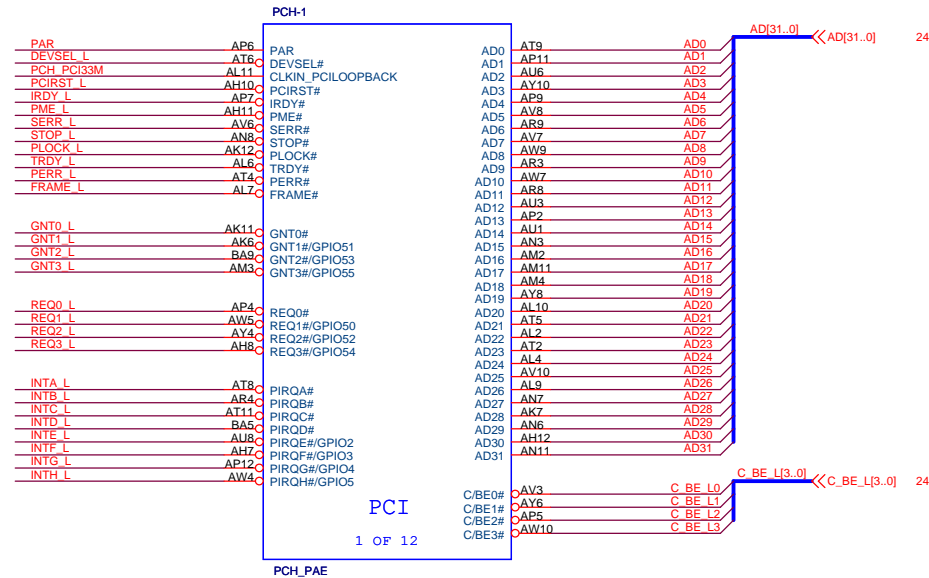


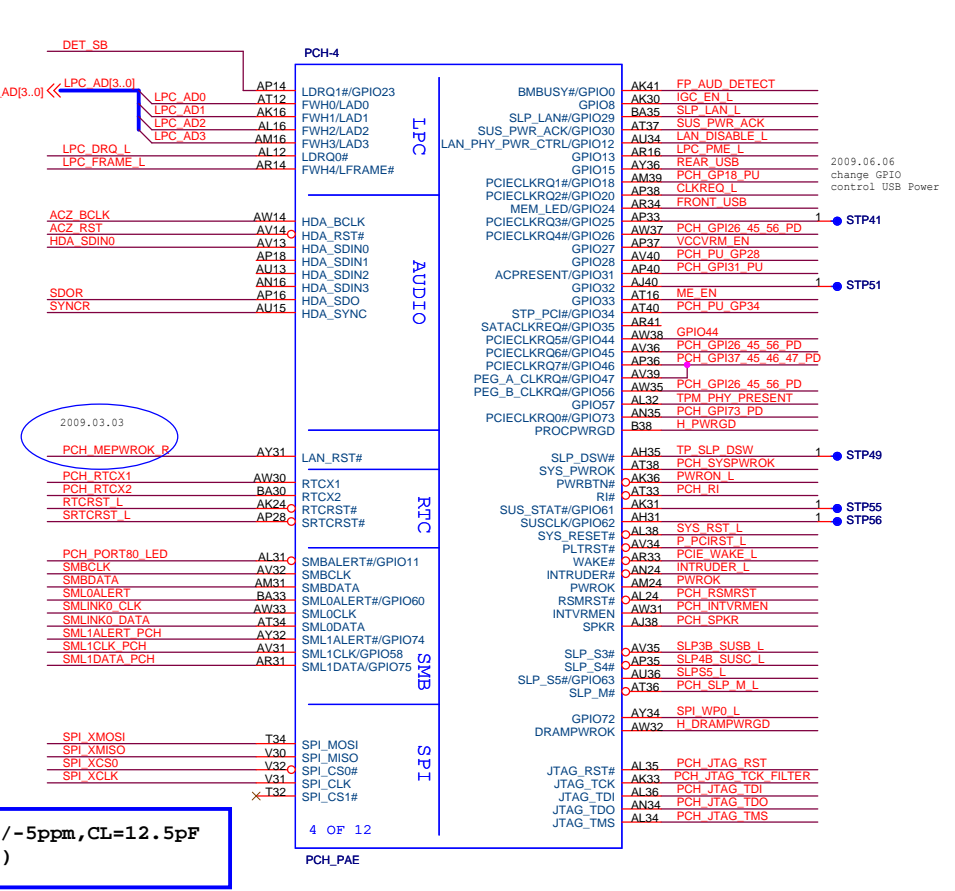
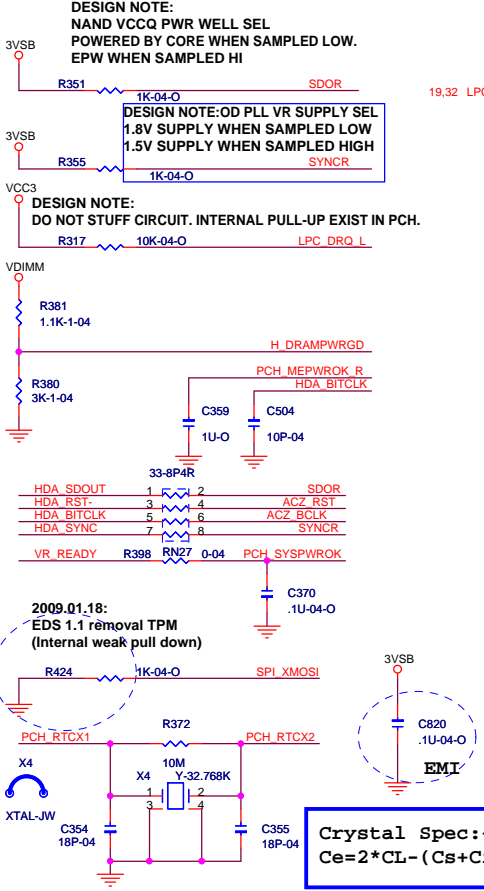
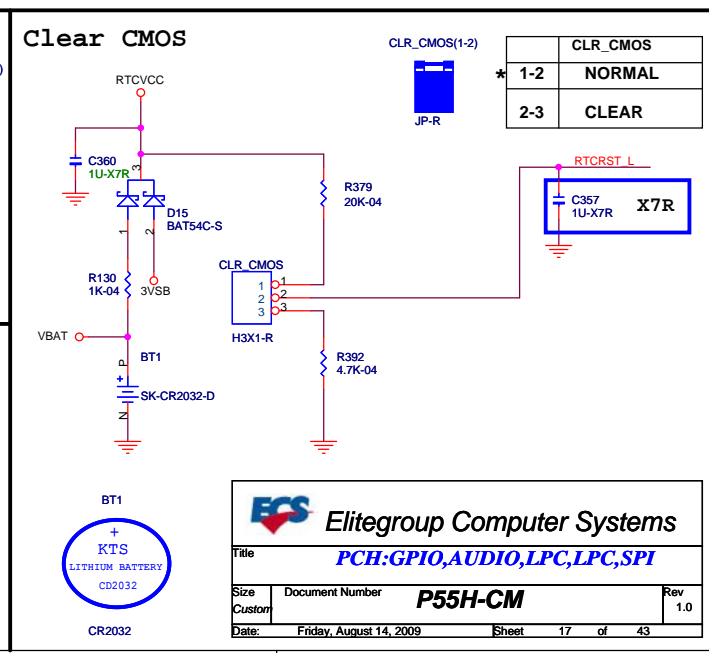
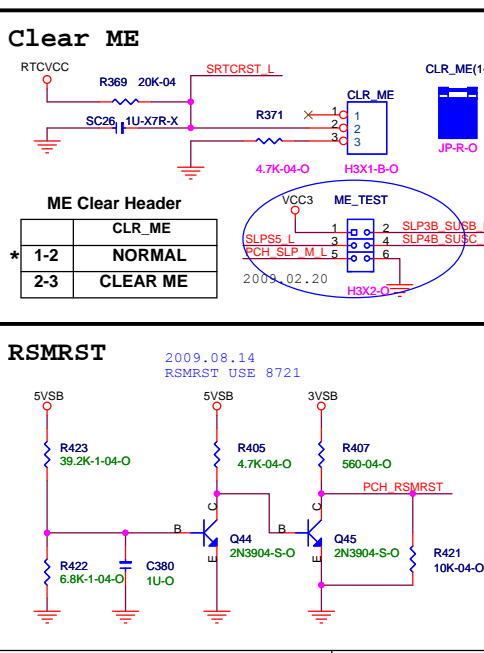
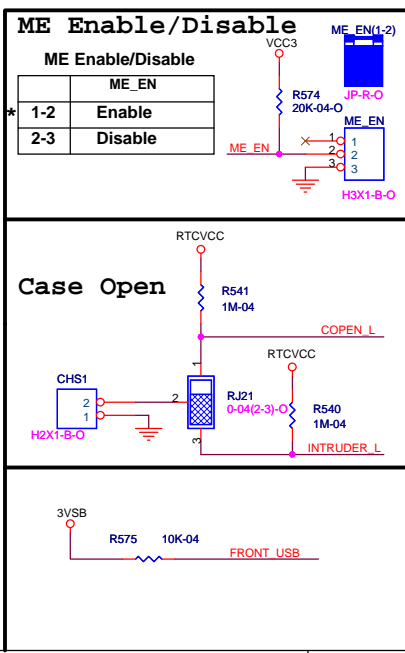
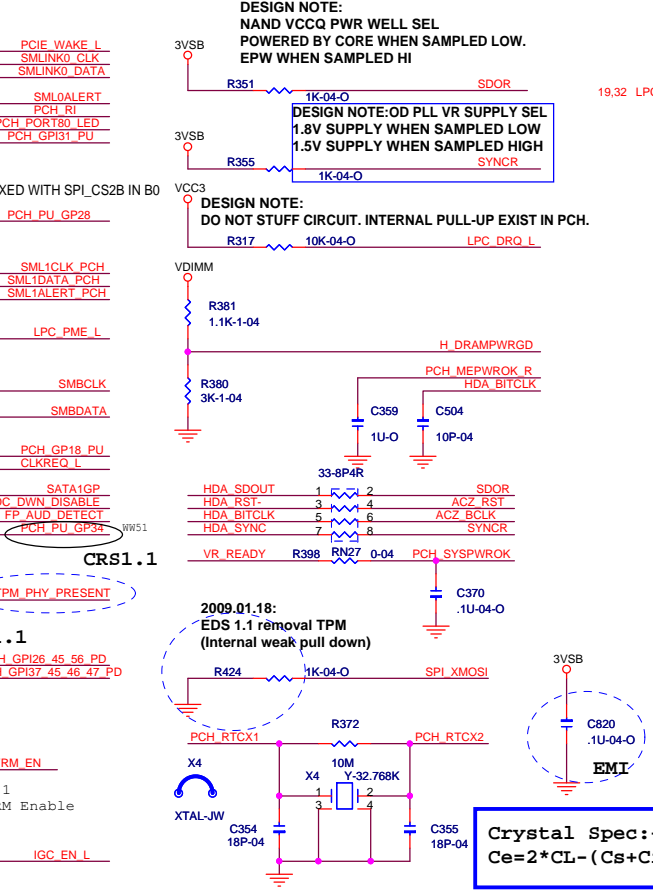
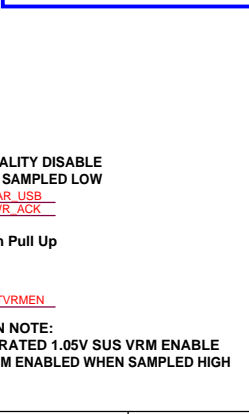
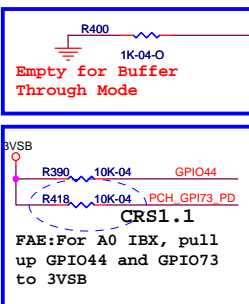
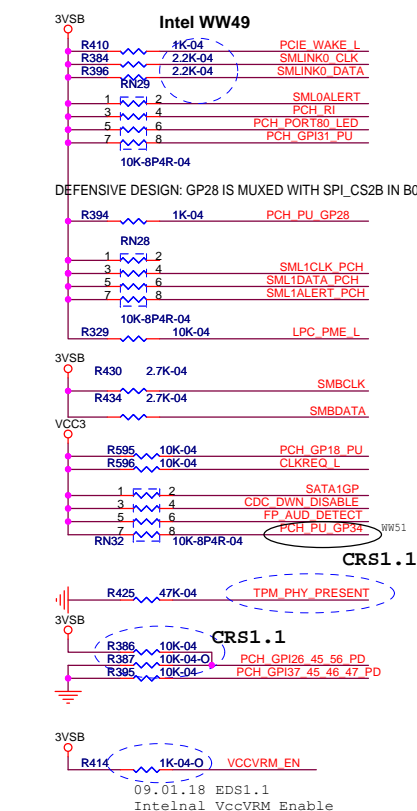
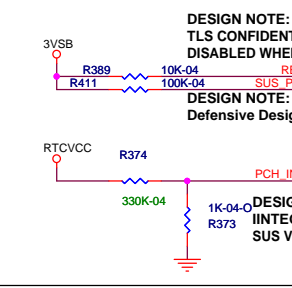
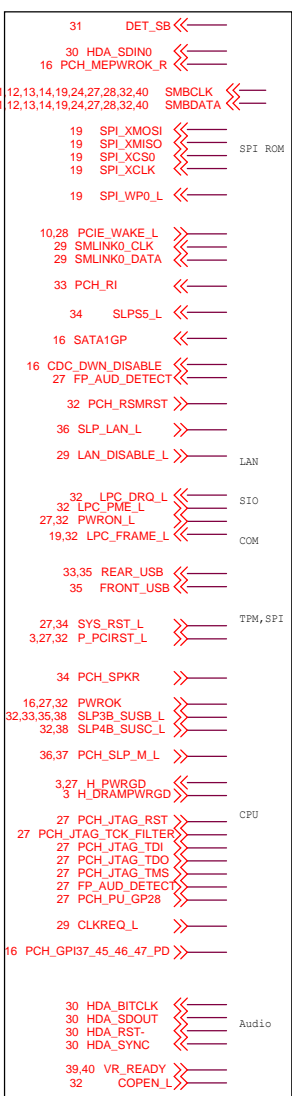
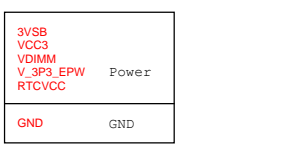


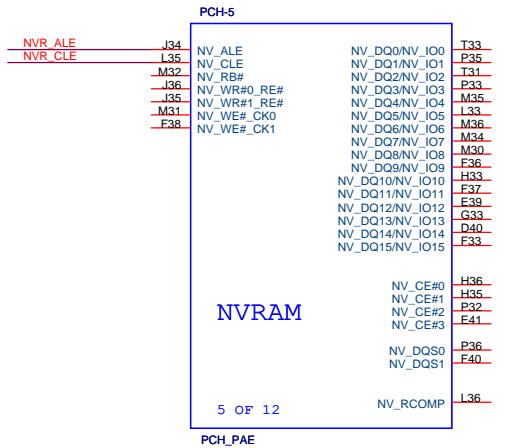
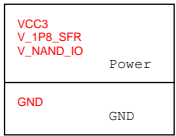
ME_PWROK	
AMT	Ra
Non-AMT	Rb

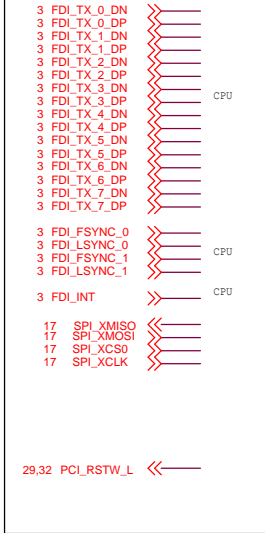
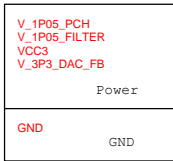


BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1



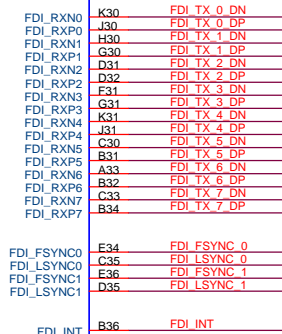






PCH-7

FDILINK



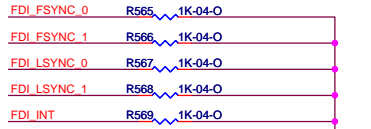
Pipe A

Pipe B

Pipe A

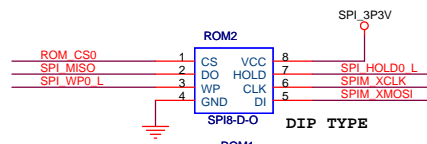
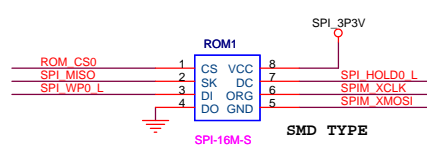
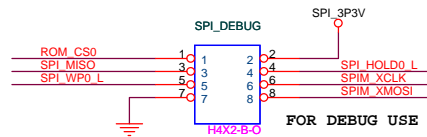
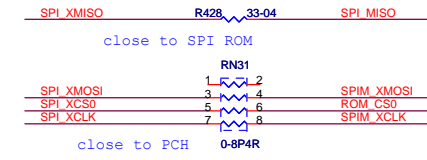
Pipe B

PCH_PAE



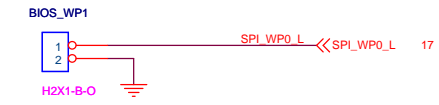
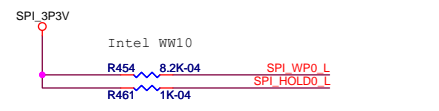
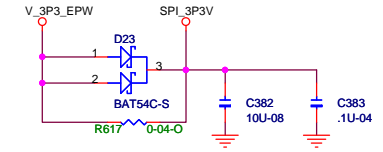
Stuff for Disable FDI

PCH FDI Link

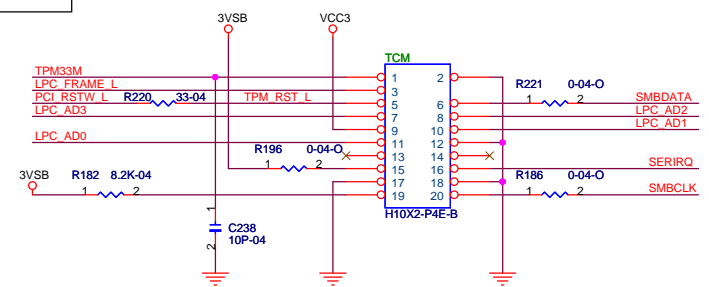
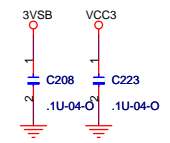
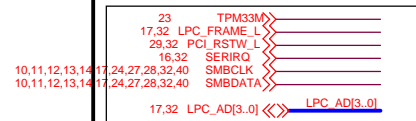


SPI-ROM-4x2

SPI ROM



	BIOS_WP
Short	Protect
Open	Unprotect

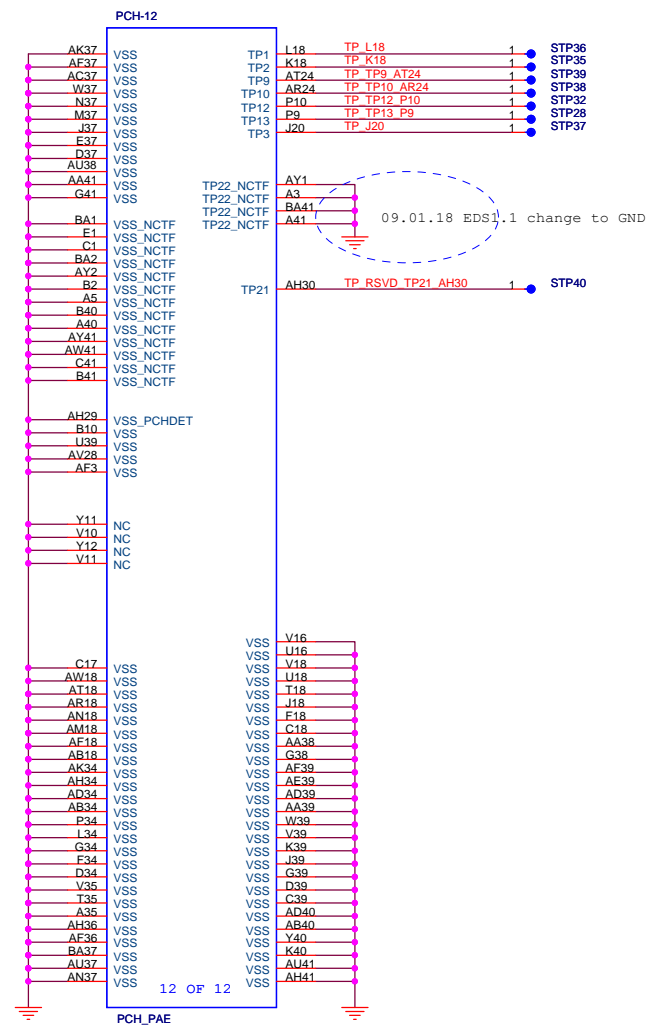
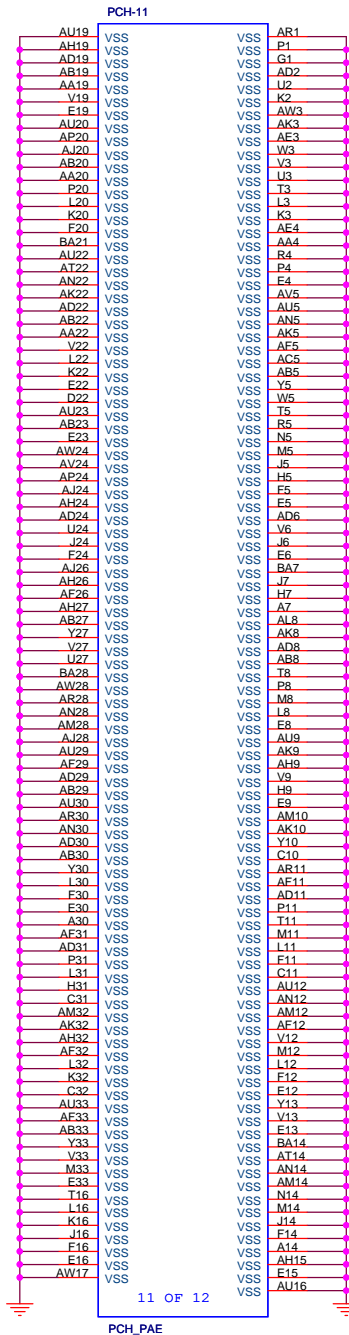


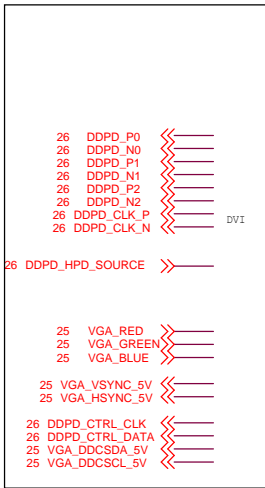
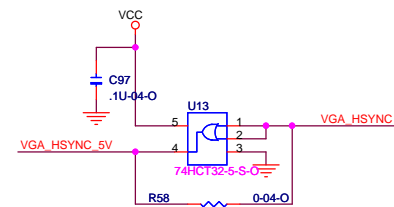
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Title **PCH FDLINK & SPI ROM**

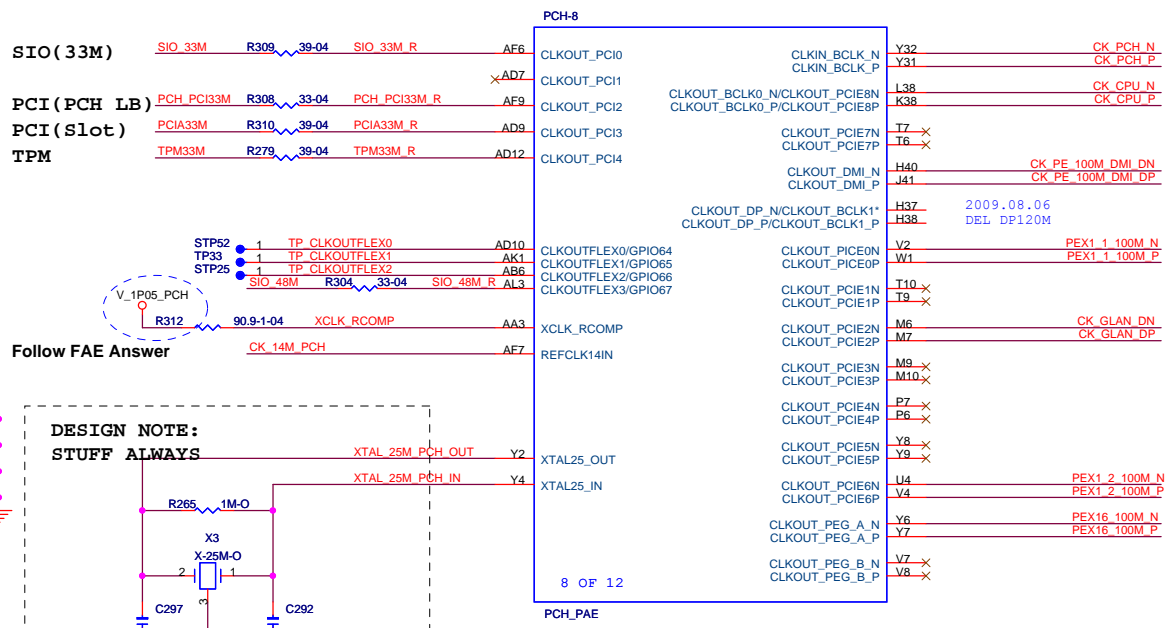
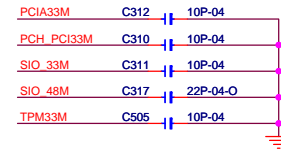
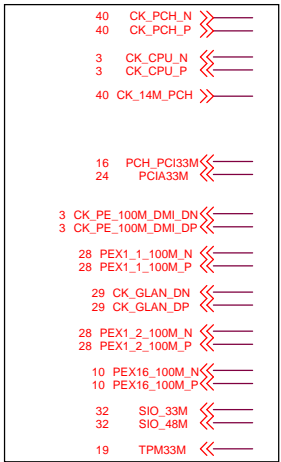
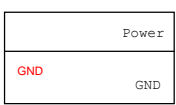
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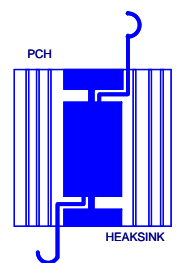
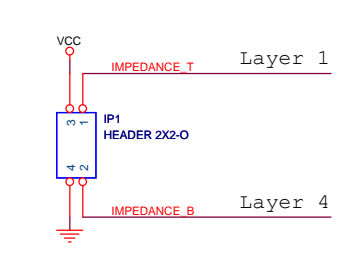
 <i>Elitegroup Computer Systems</i>					
Title <i>PCH VIDEO AND DDSP</i>					
Size	Document Number				Rev
Custom	<i>P55H-CM</i>				<i>1.0</i>
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DESIGN NOTE:
STUFF ALWAYS

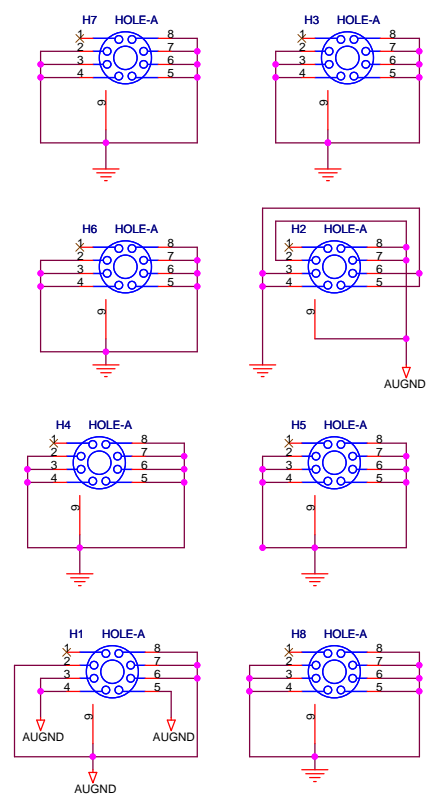
DESIGN NOTE:
R128 DAMPING RESISTOR
DO NOT CHANGE TO 0402

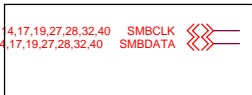
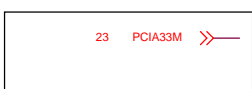
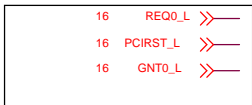
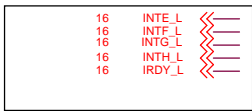
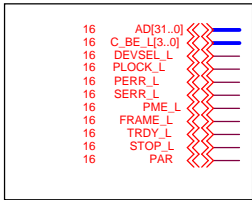
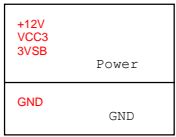
Crystal Spec: +/- 30ppm, CL=20pF
Ce=2*CL (Cs+Ci)



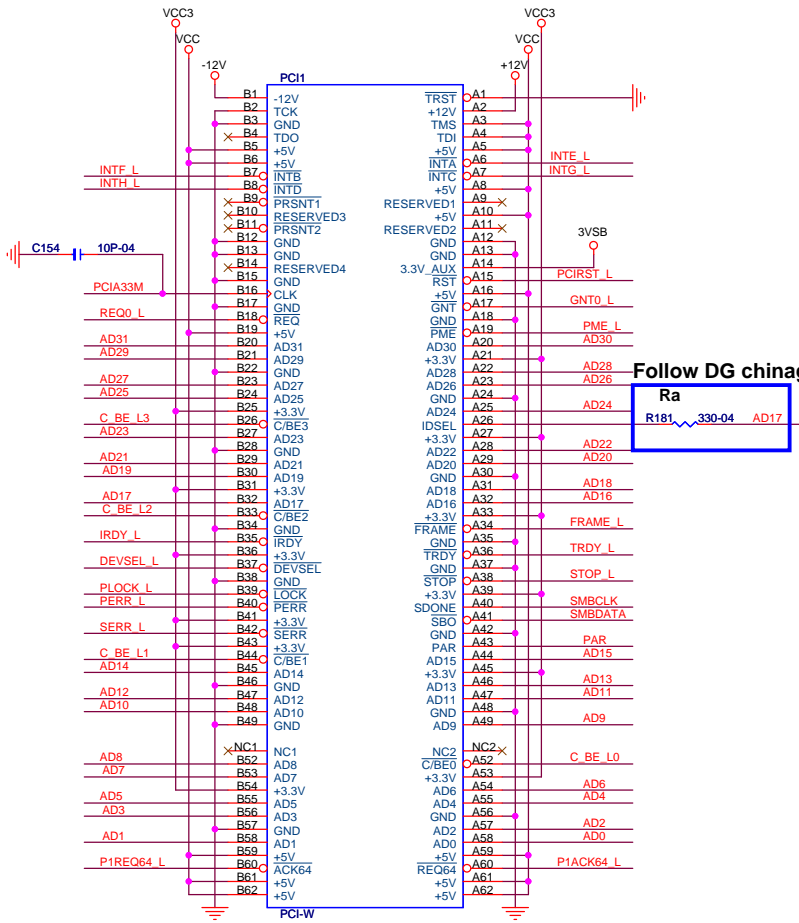
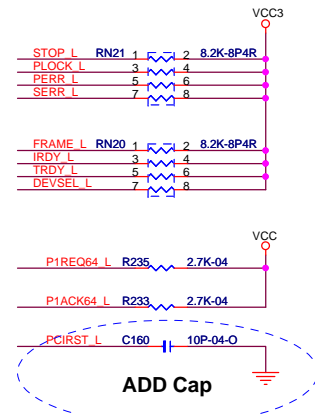
Main Part:20-120-013522
Substitute:20-120-013523

1080 : trace width 4 mil 50 ohm
Trace Length 3150 mils
Spacing: 1.clearance to itself 50/4/50 (S:W:S)
2.clearance to other signal 3W





	PCI1	
INT	E	
IDSEL	AD17	
Ra	330-04	



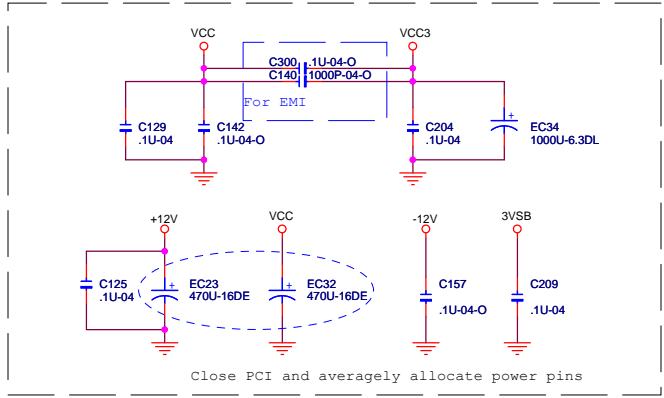
Follow DG chinage to 300-900 ohm

Ra

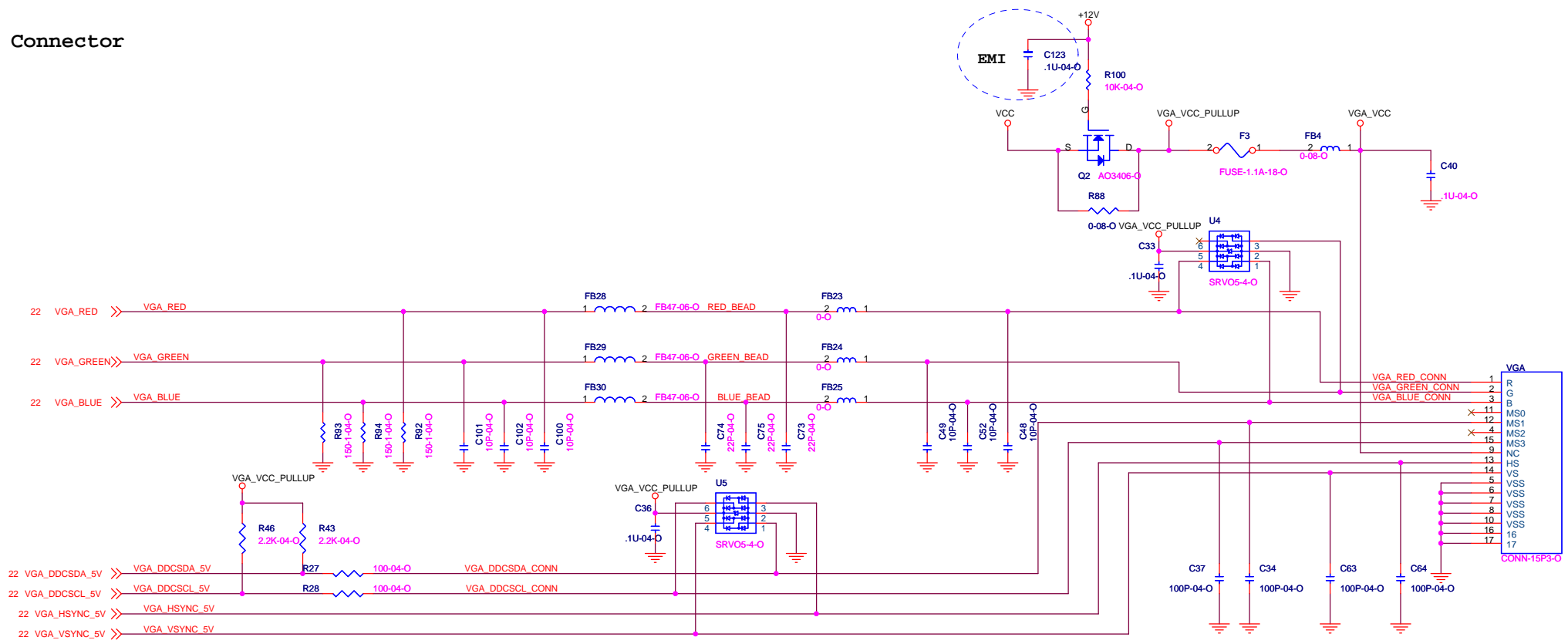
R181 330-04 AD17

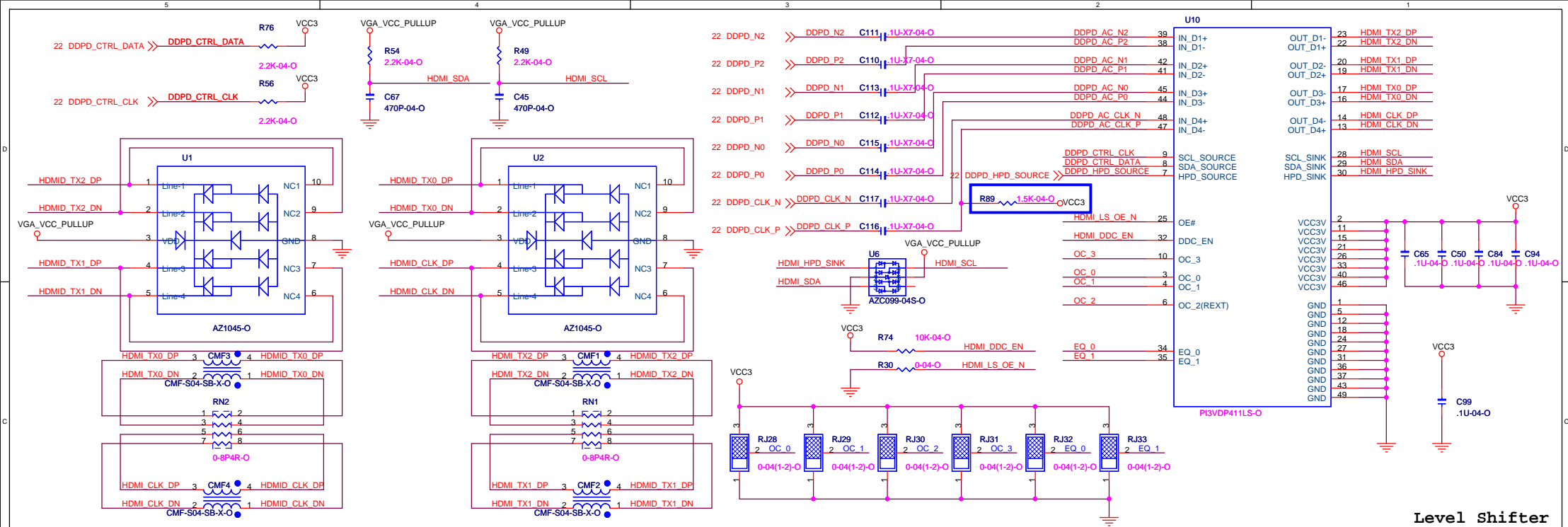
INT:E

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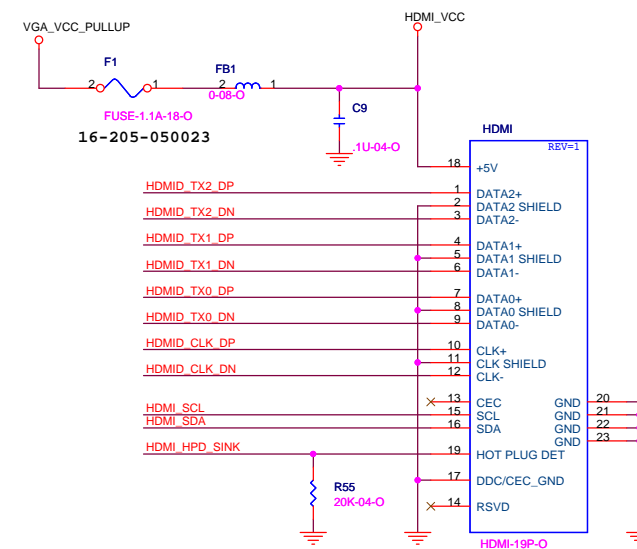


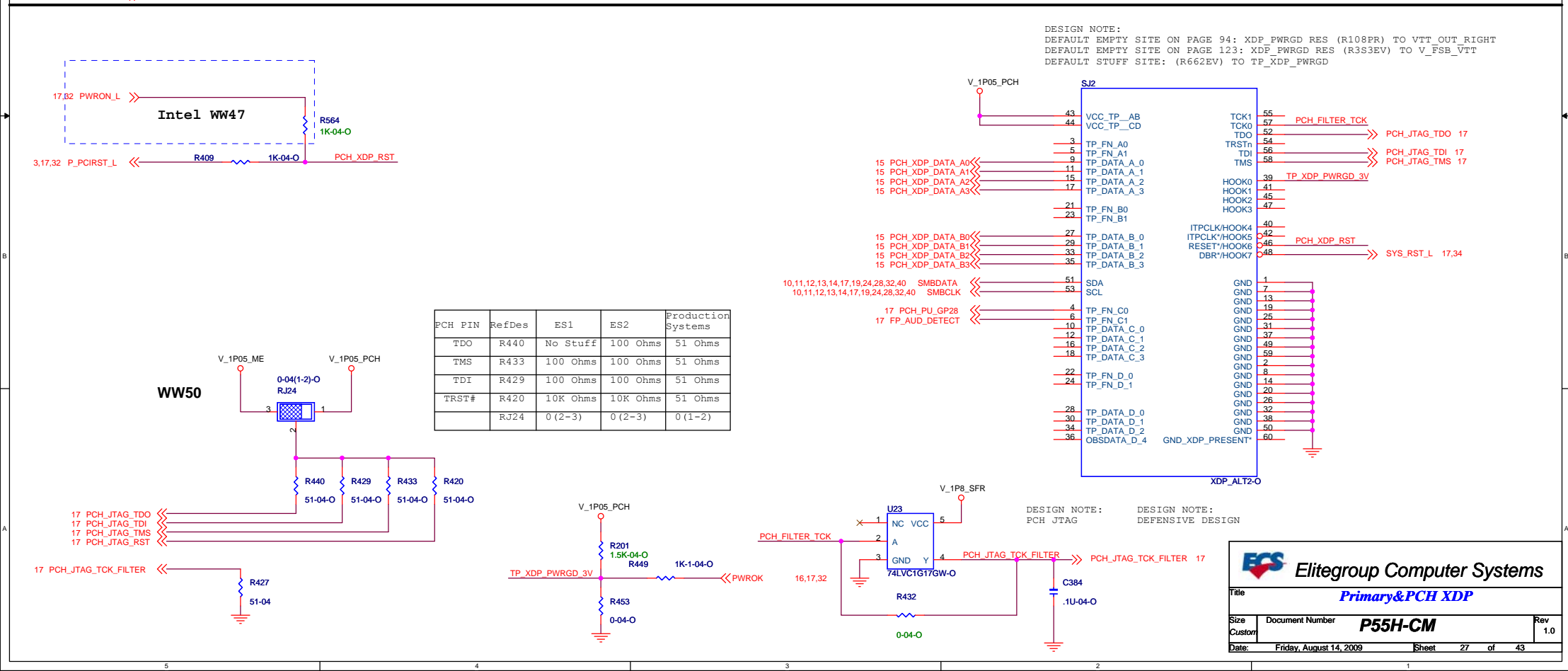
VGA Connector

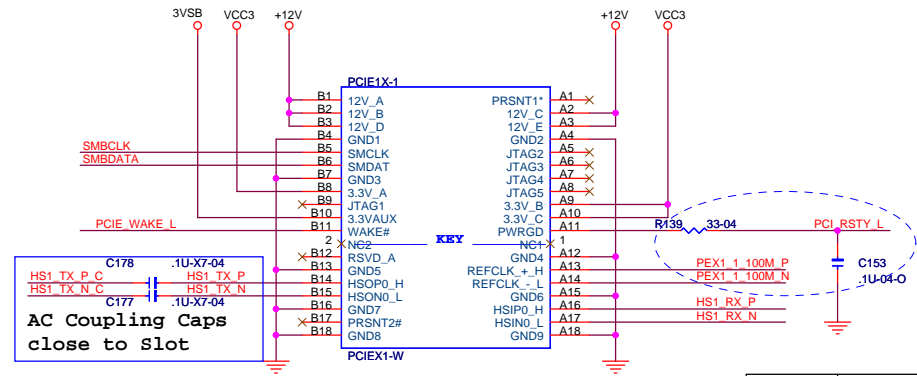
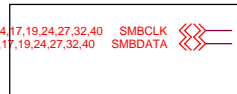
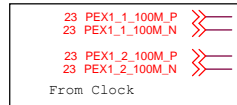
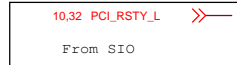
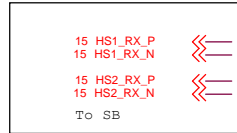
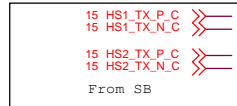
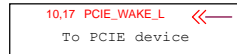
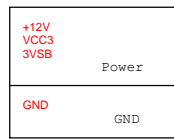
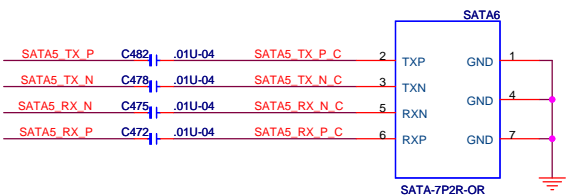
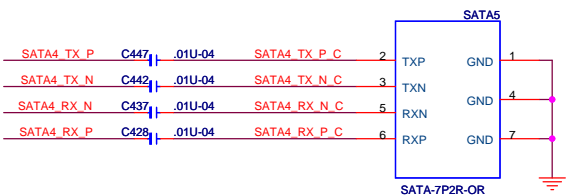
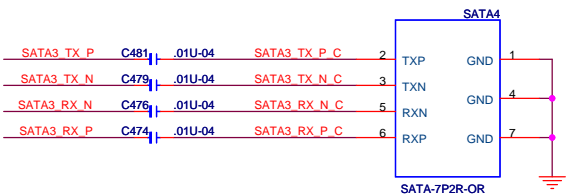
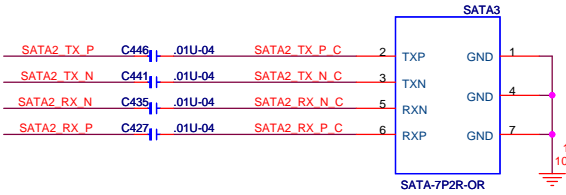
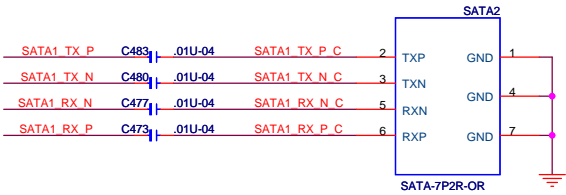
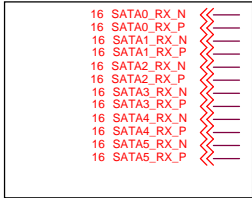
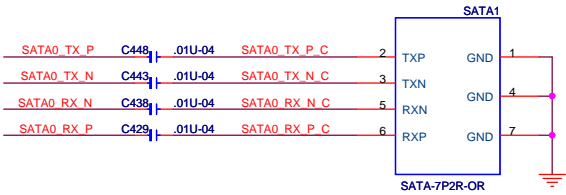
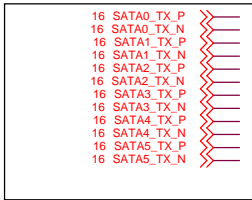




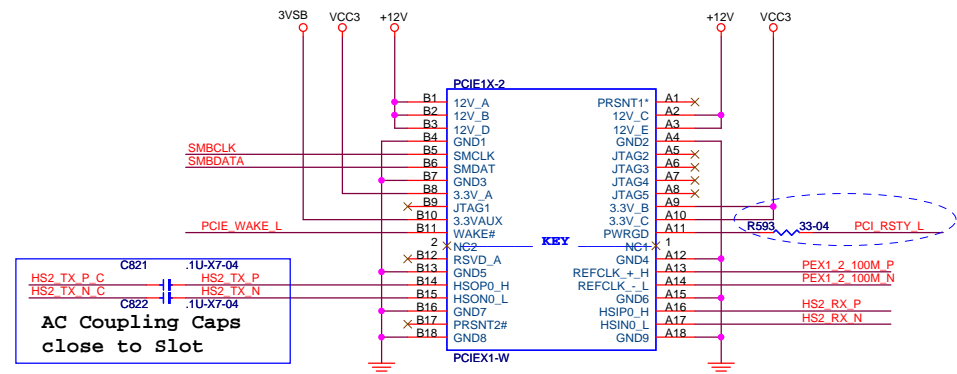
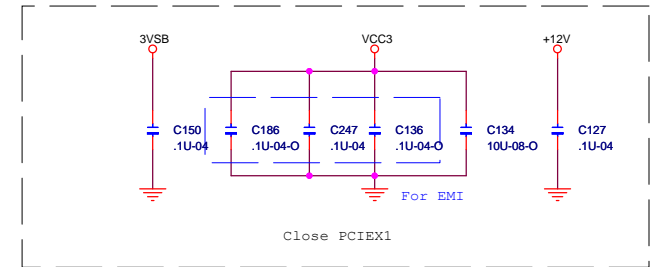
Level Shifter





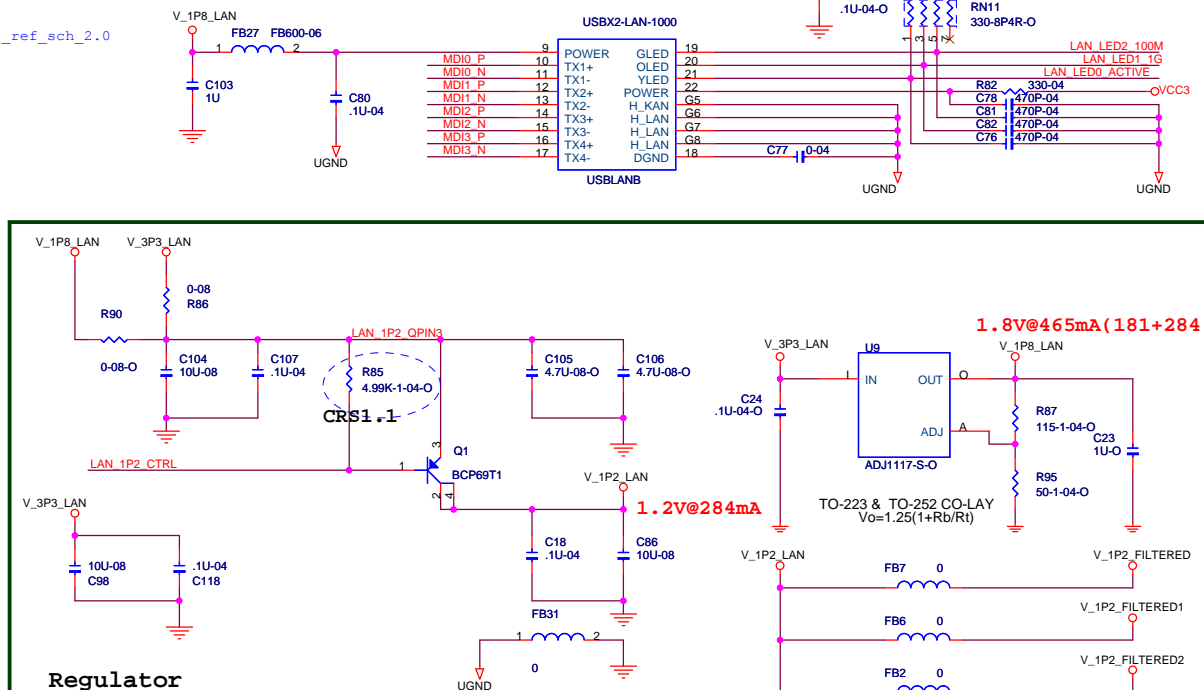
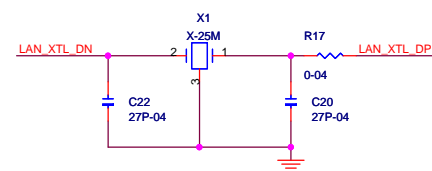
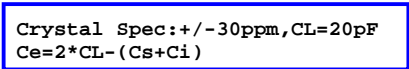
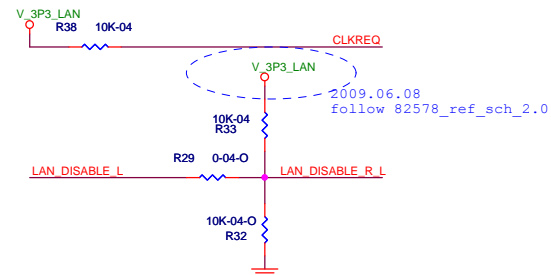
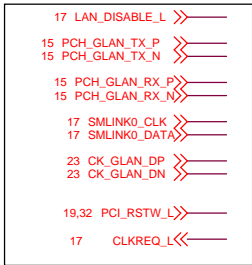


	PC_RST
INTEL	SIO:PCI REST
AMD	NB:PCIE REST
NV?	

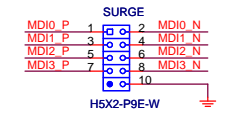
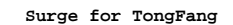
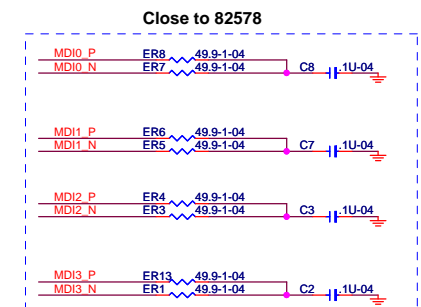
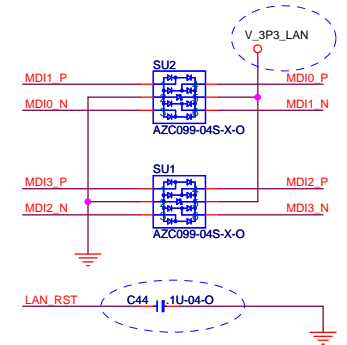


Elitegroup Computer Systems

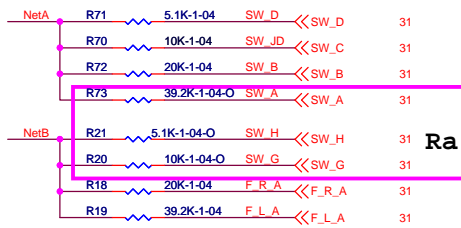
Title	SATA, PCI-E IX		
Size Custom	Document Number	P55H-CM	Rev 1.0
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Remark: Y/G/O-->Color, B-->Blinking

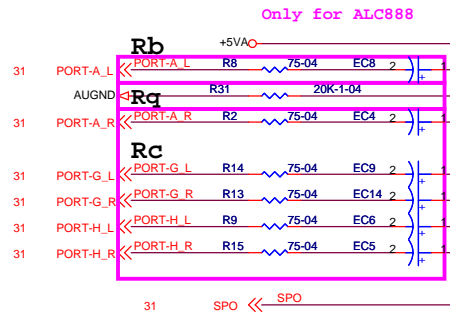


Resistors Networks

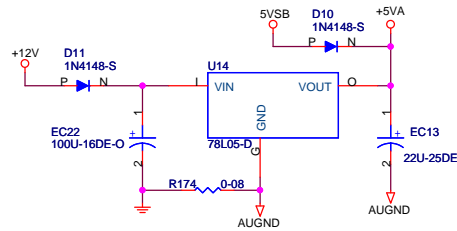


Only for ALC888

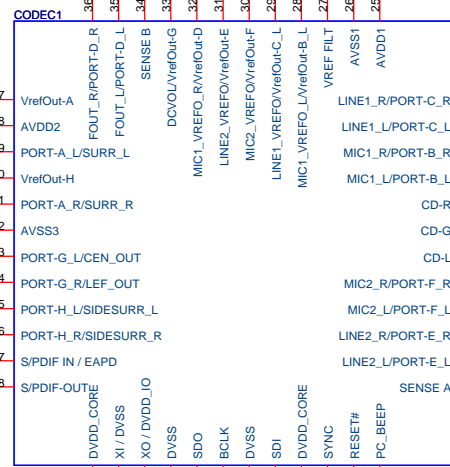
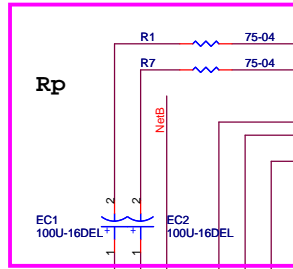
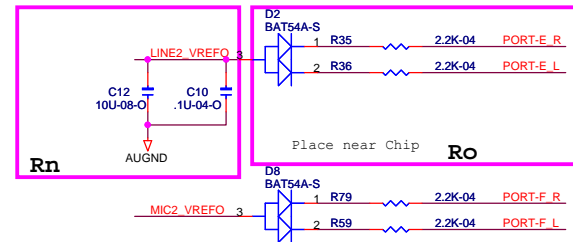
Place near Chip



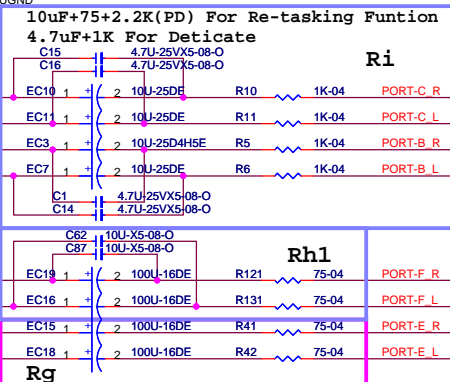
Only for ALC888



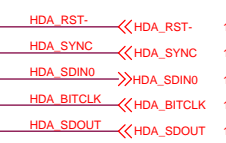
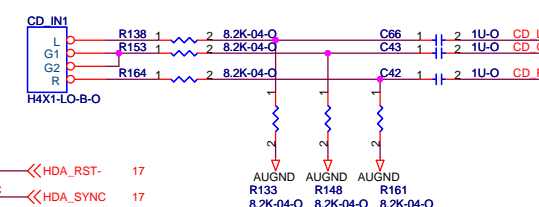
Verfourt bias for stereo microphone.

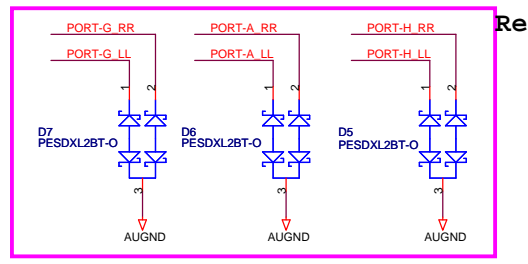
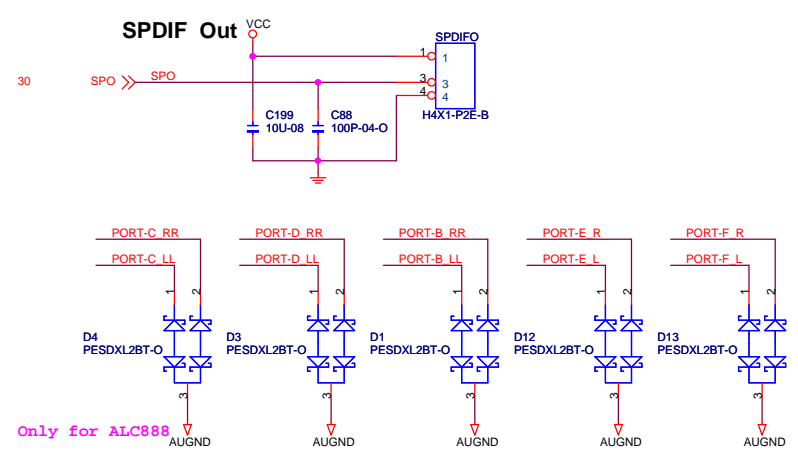
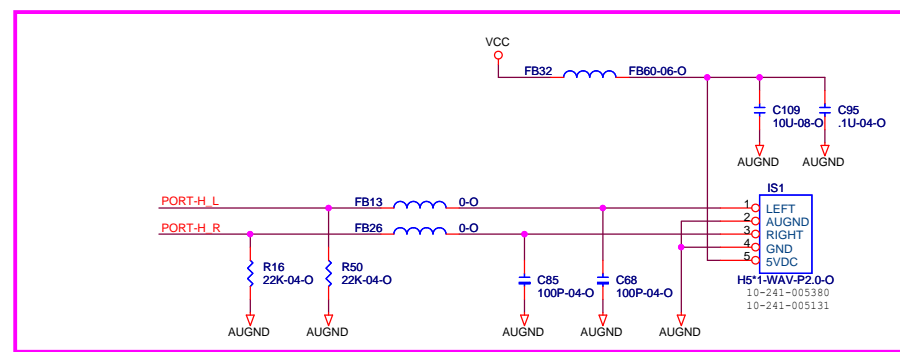
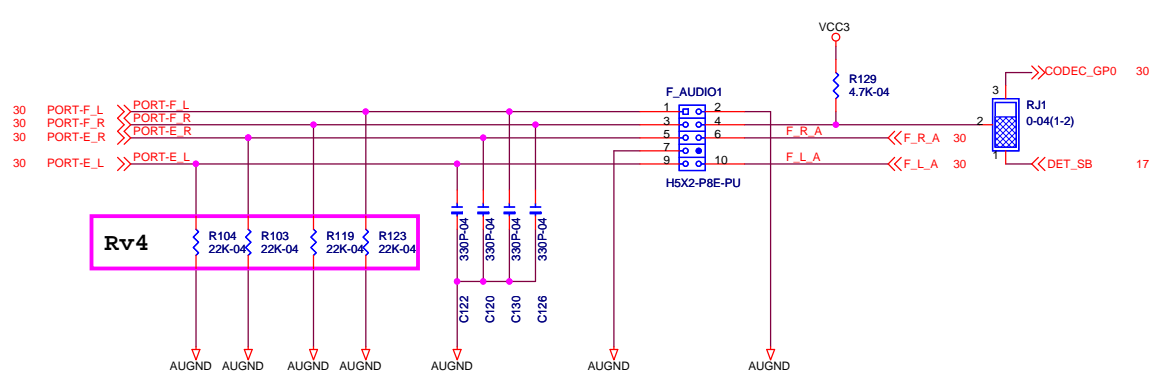
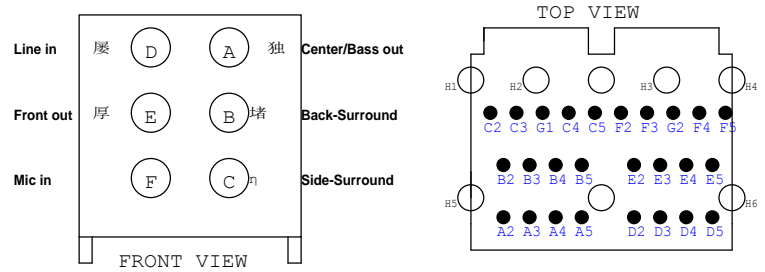
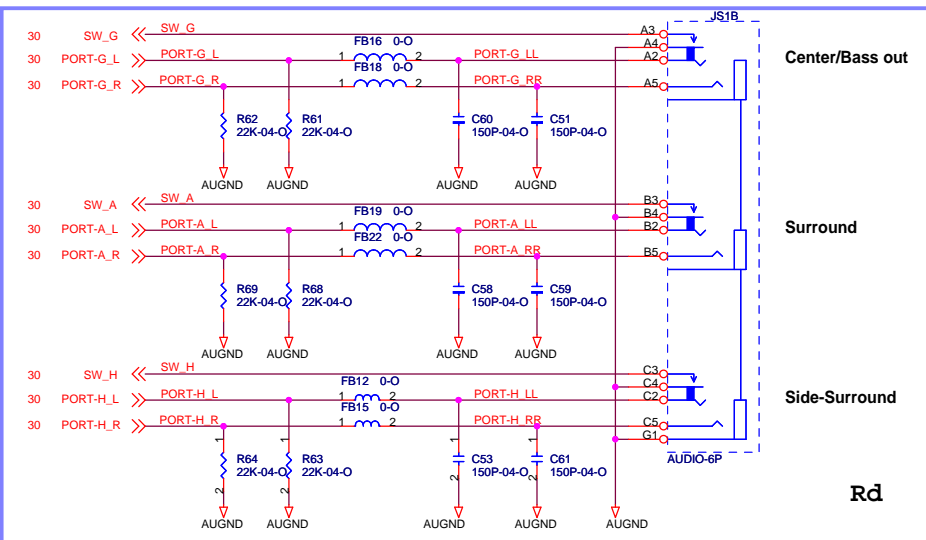
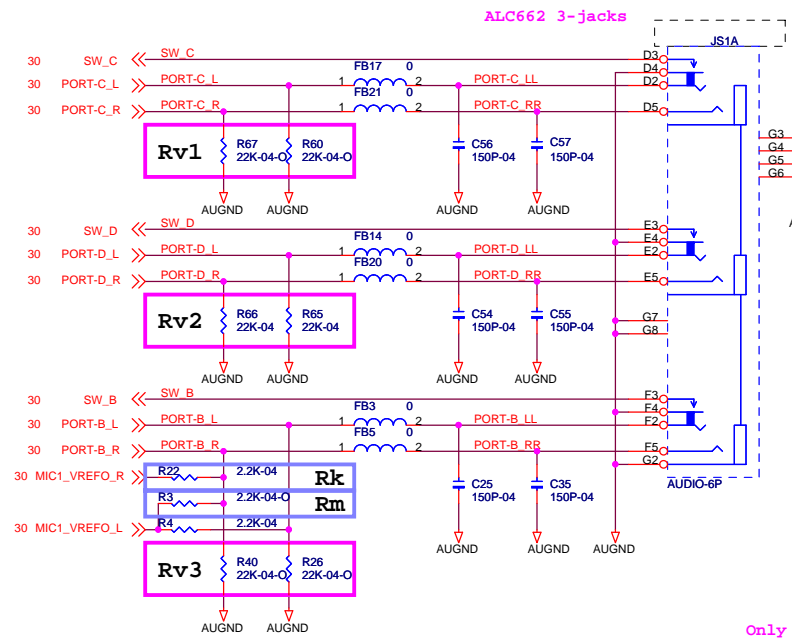


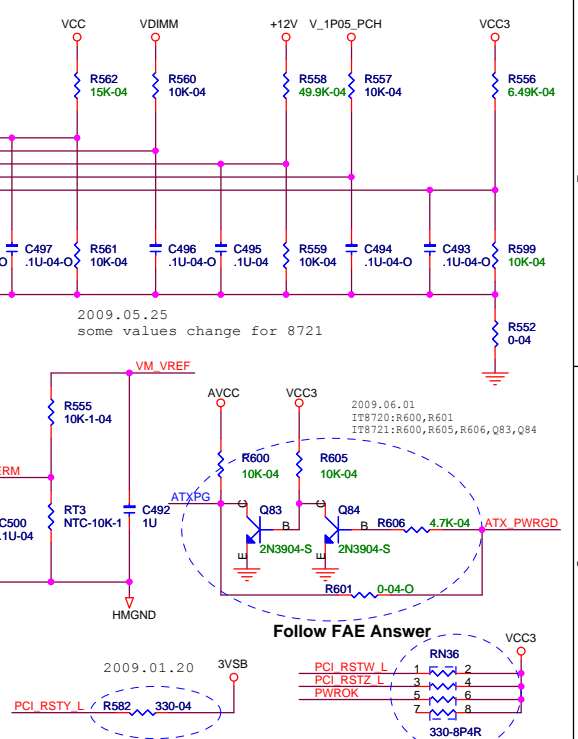
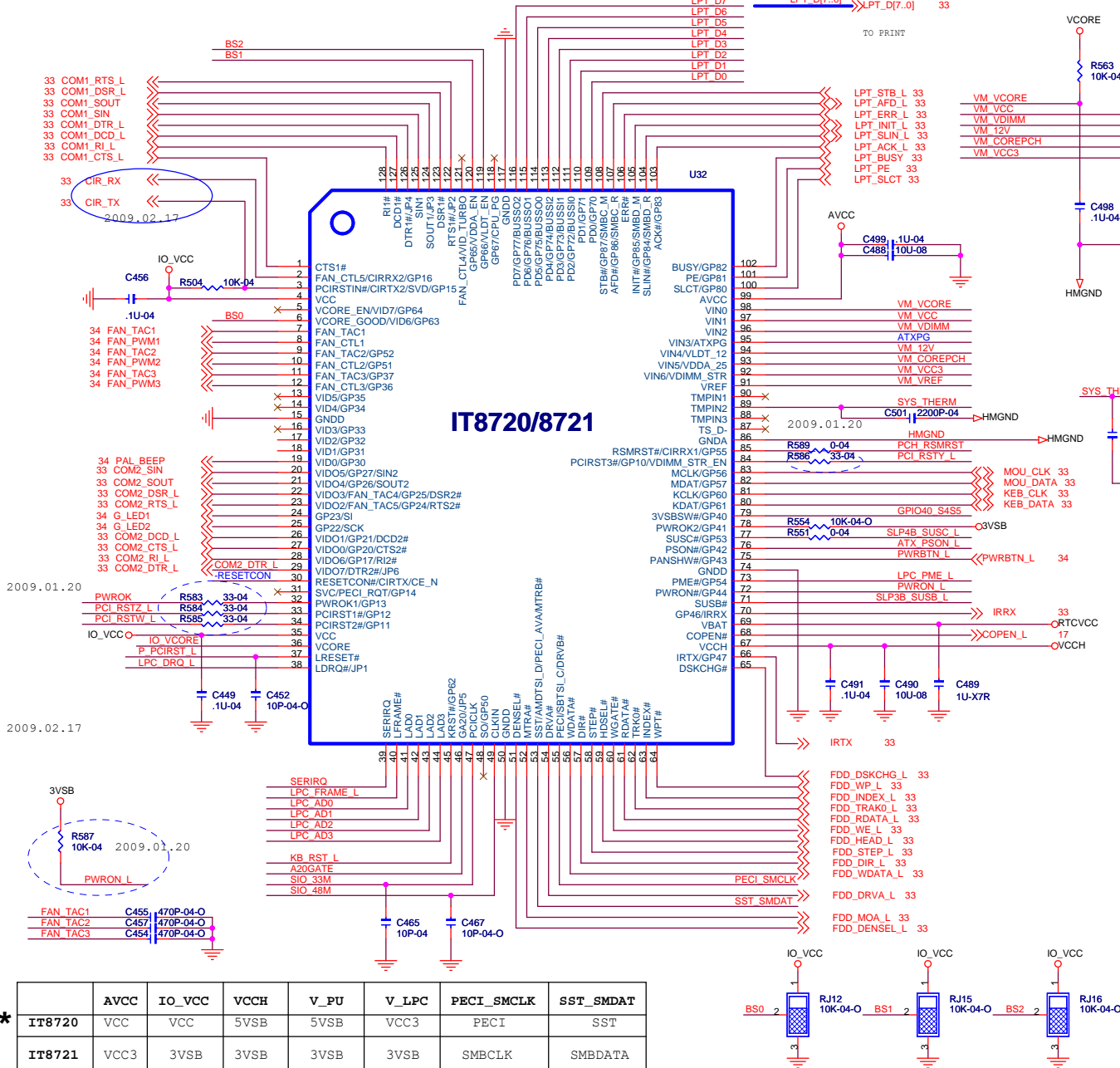
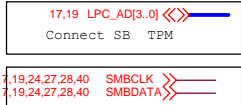
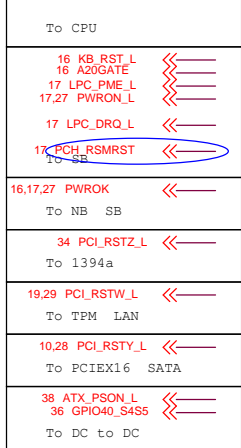
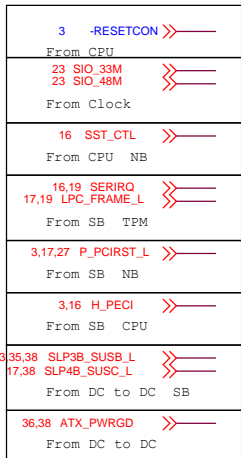
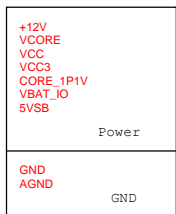
ALC888-GR C2S
02-301-888696



	ALC888-VC	ALC662-VC	VT1708B
Ra	Stuff	Open	Open
Rb	0 OHM	0 OHM	0 OHM
Rc	100u+75	100u+75	220u+0
Rd	100u+75	100u+75	10u+0
Re	10u+75	10u+75	10u+0
Rf	10u	10u	10u+0.1u
Rg	2.2K	2.2K	Open
Rh1	Open	Open	2.2K
Rh2	Open	Open	Stuff
Rh3	Open	Open	Open
Rh4	Open	Open	Open
Rh5	Open	Open	Open
Rh6	Open	Open	Open
Ri	100u+75	100u+75	220u+0
Rj	20K	20K	5.1K
Rk	2.2K	2.2K	Open
Rl	2.2K	2.2K	Open

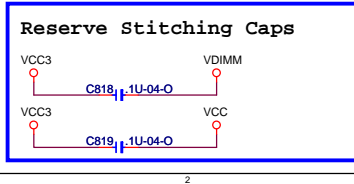
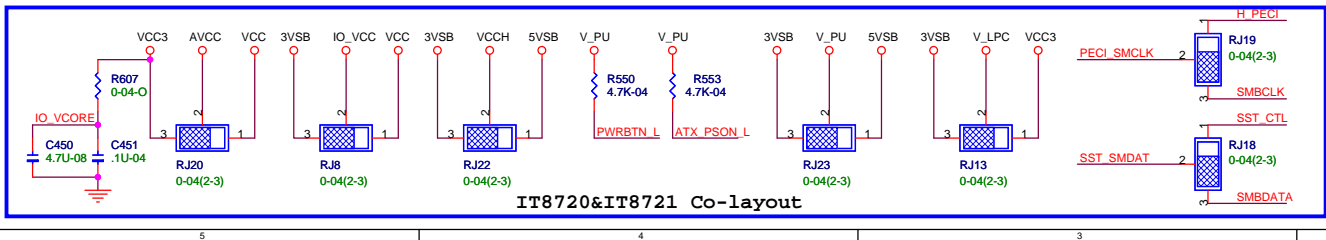






IT8721 Power On Strapping Options

Symbol	value	Description
JP2	11	Disable VID output pins
Pin 122	01	Intel Platform Enable VID output pins
JP6	10	AMD Platform Enable SVD/SVC Output
Pin29	00	AMD Platform Enable VIDO0-7
JP3	1	Disabled.
Pin 124	0	Flash I/F Address Segment 1 is enabled
JP4	1	K8 power sequence function is disabled
Pin 126	0	K8 power sequence function is enabled
JP3	11	Default Index 15h/16h/17h is 40h 50%
Pin 124	10	Default Index 15h/16h/17h is 7Fh 0%
JP5	01	Default Index 15h/16h/17h is 00h 100%
Pin 46	00	Default Index 15h/16h/17h is 20h 75%
JP5	1	Disable WDT to rest PWROK
Pin46	0	Enable WDT to rest PWROK



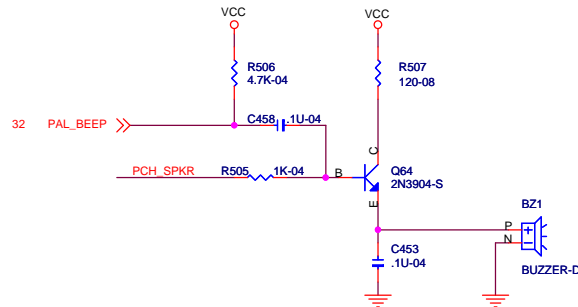
Elitegroup Computer Systems

SIO 8720F/CM

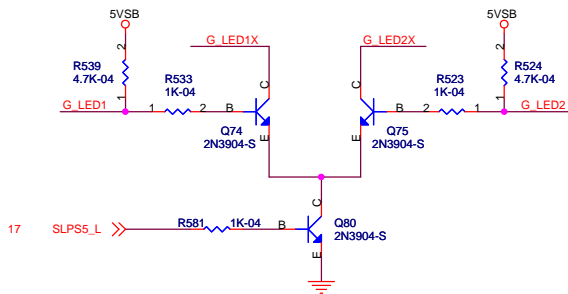
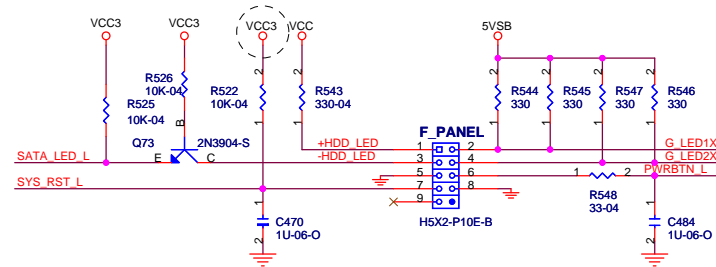
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Size: **Document Number** **P55H-CM** **Rev 1.0**

Date: **Friday, August 14, 2009** **Sheet 32 of 43**

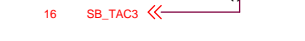
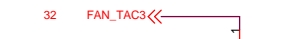
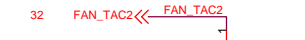


WW41 SYS_RST_L should
pull high to VCC3 not 3VSB



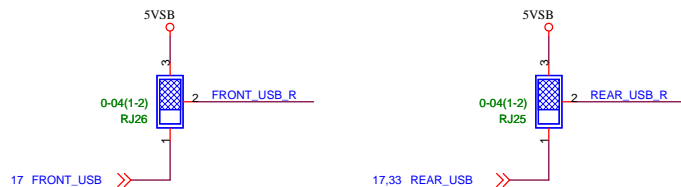
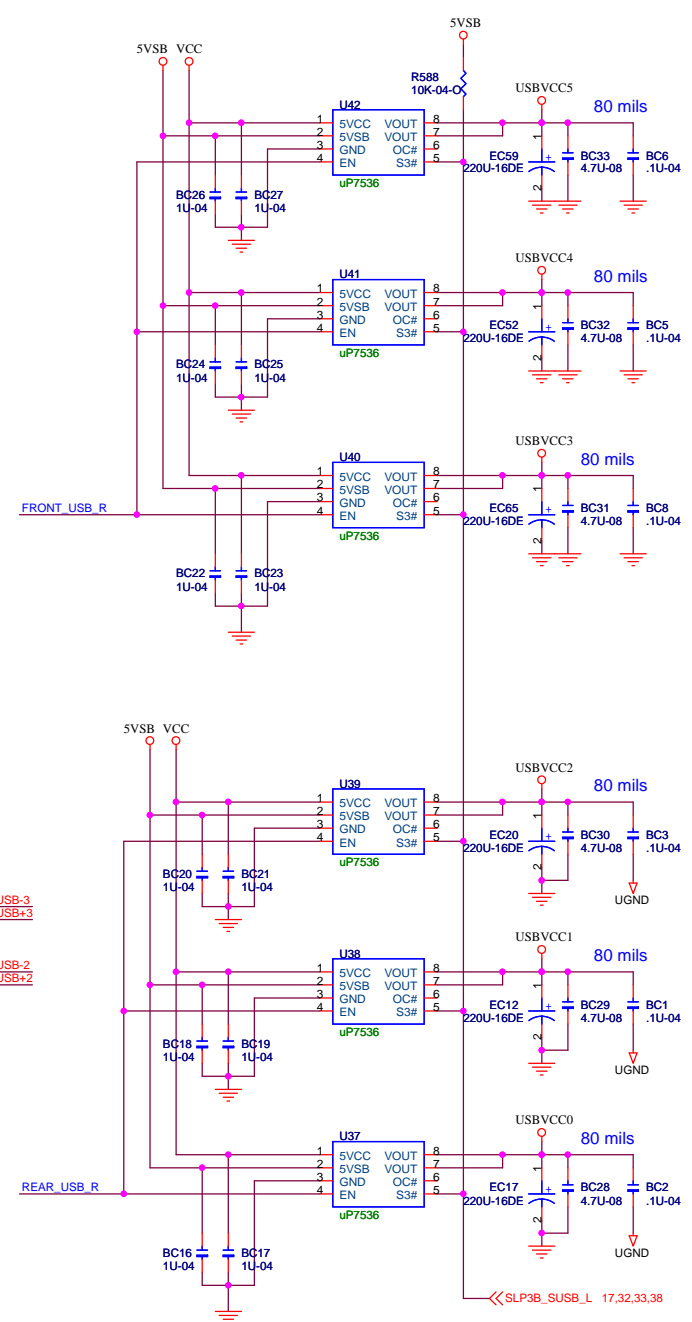
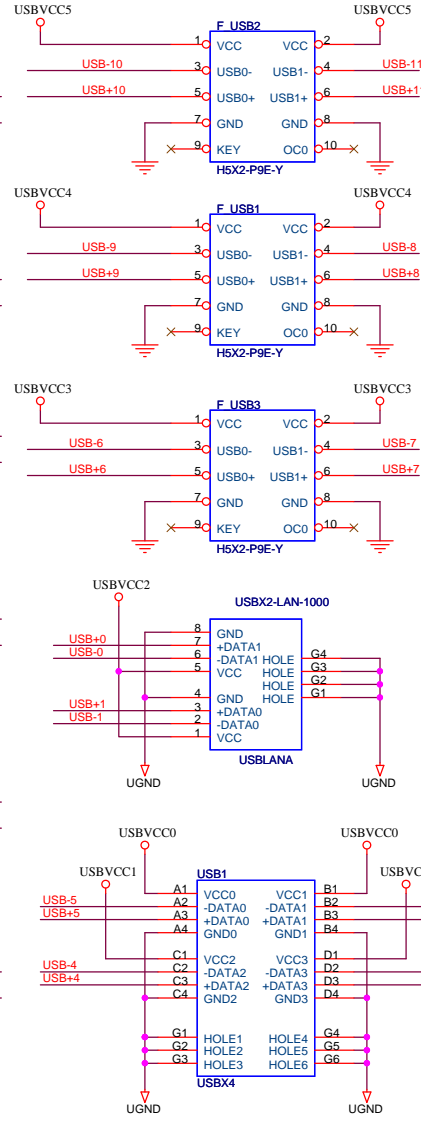
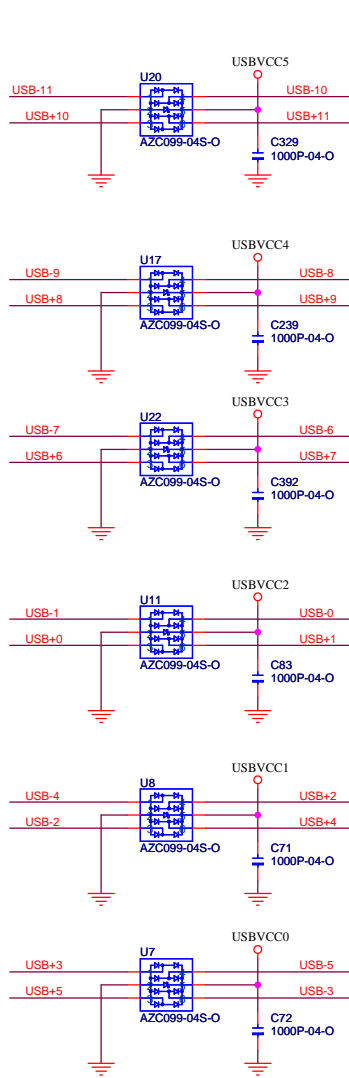
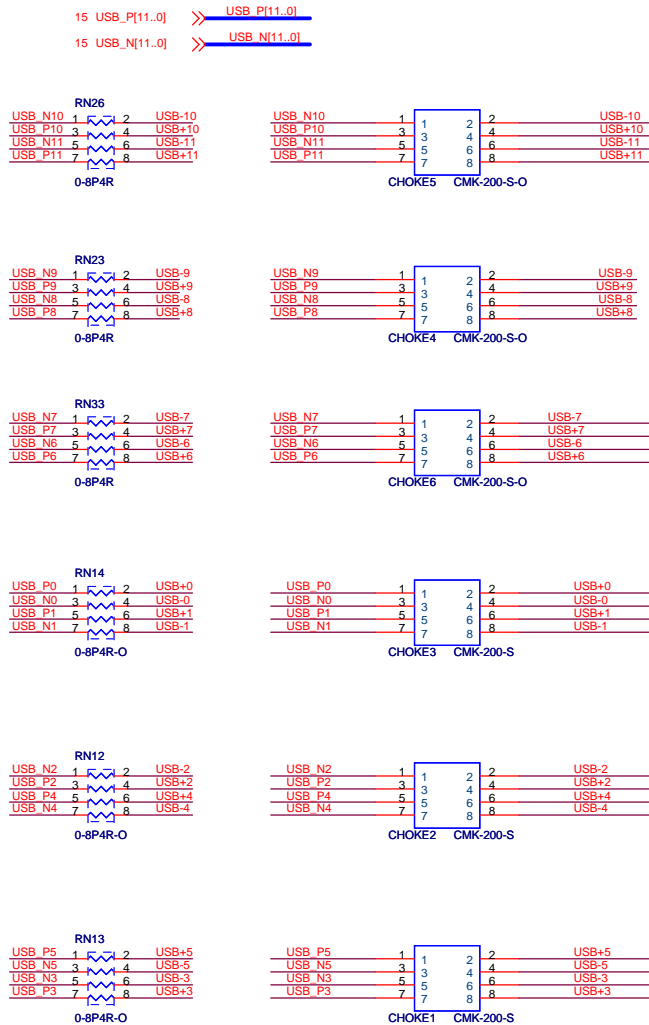
16 SB_PWM1
16 SB_PWM2
16 SB_PWM3
16 SB_TAC1
16 SB_TAC2
16 SB_TAC3

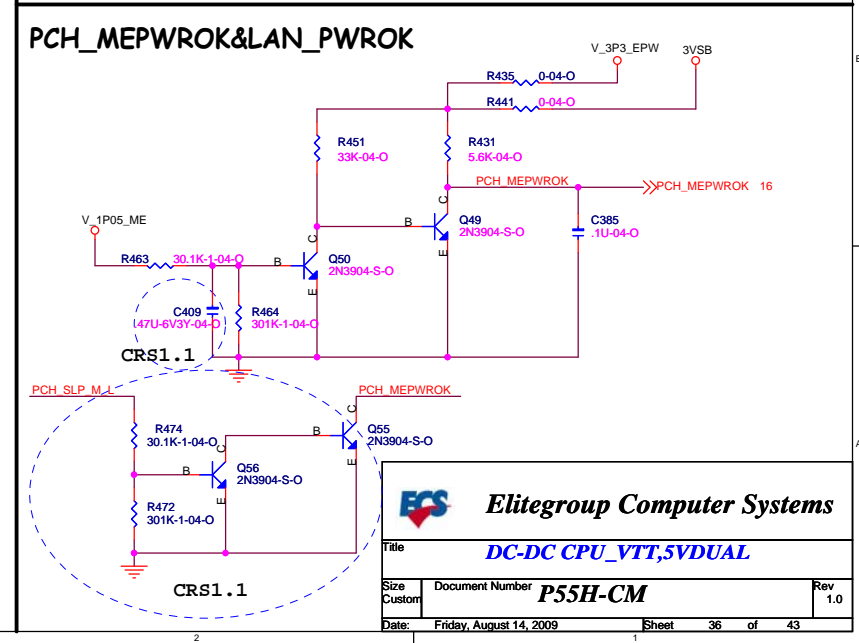
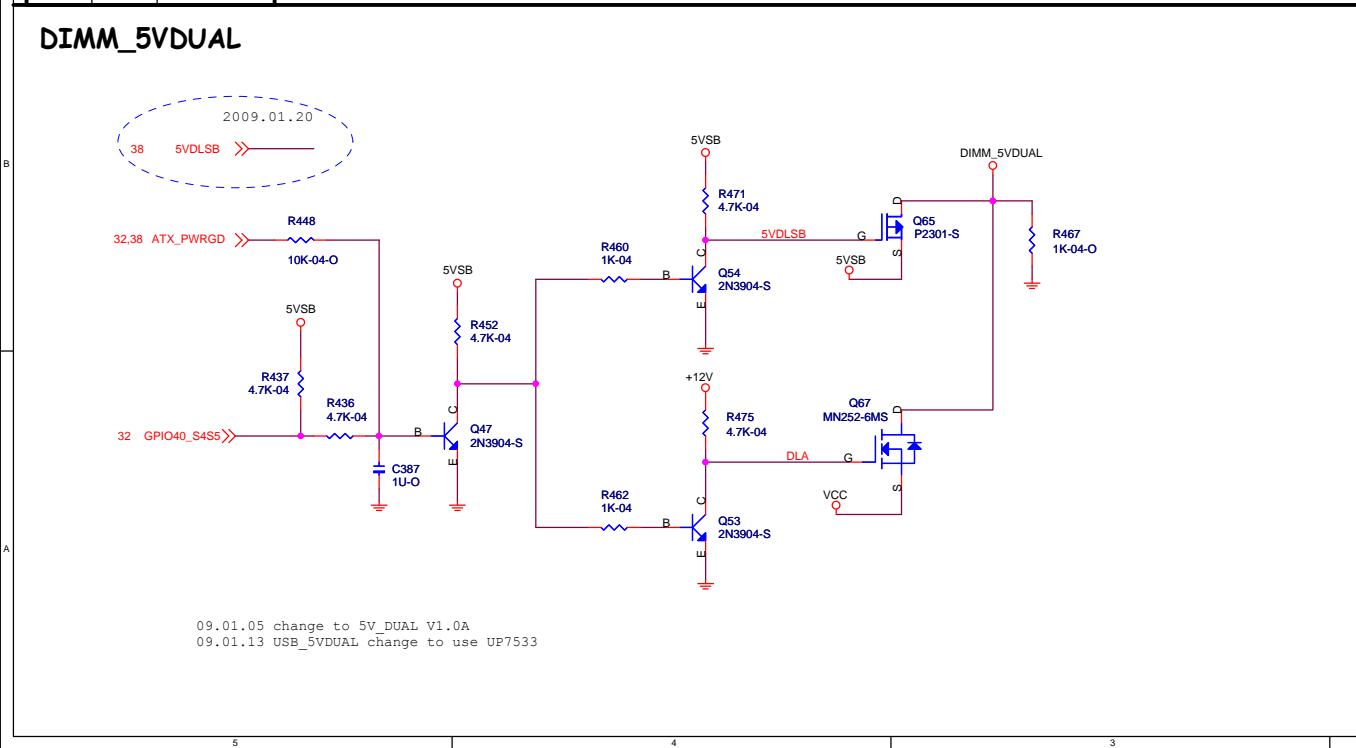
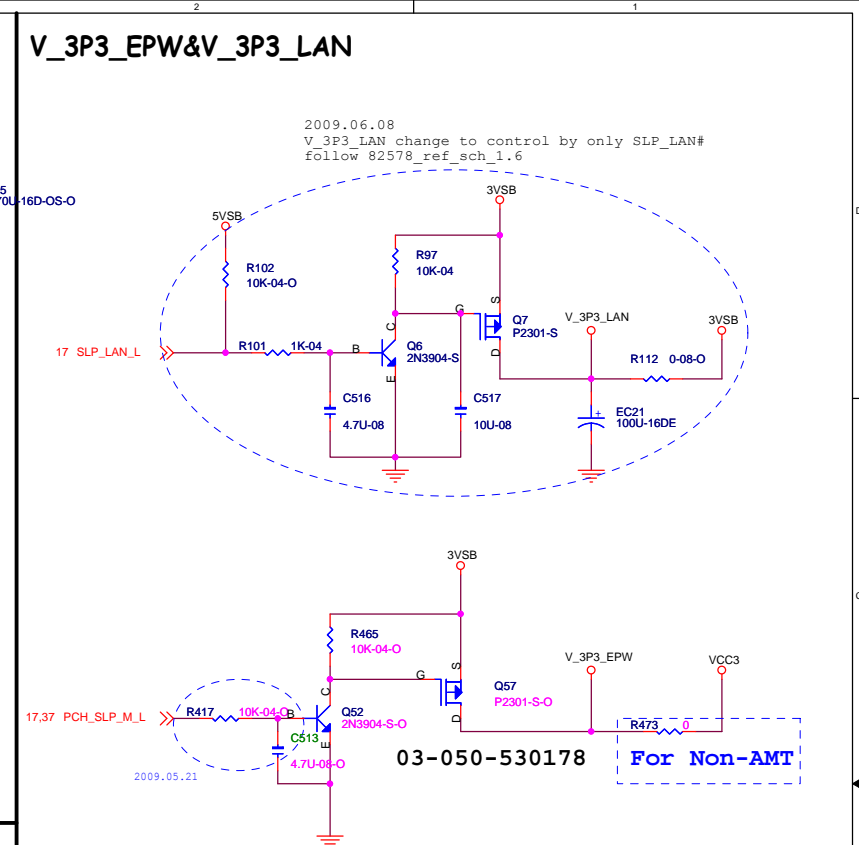
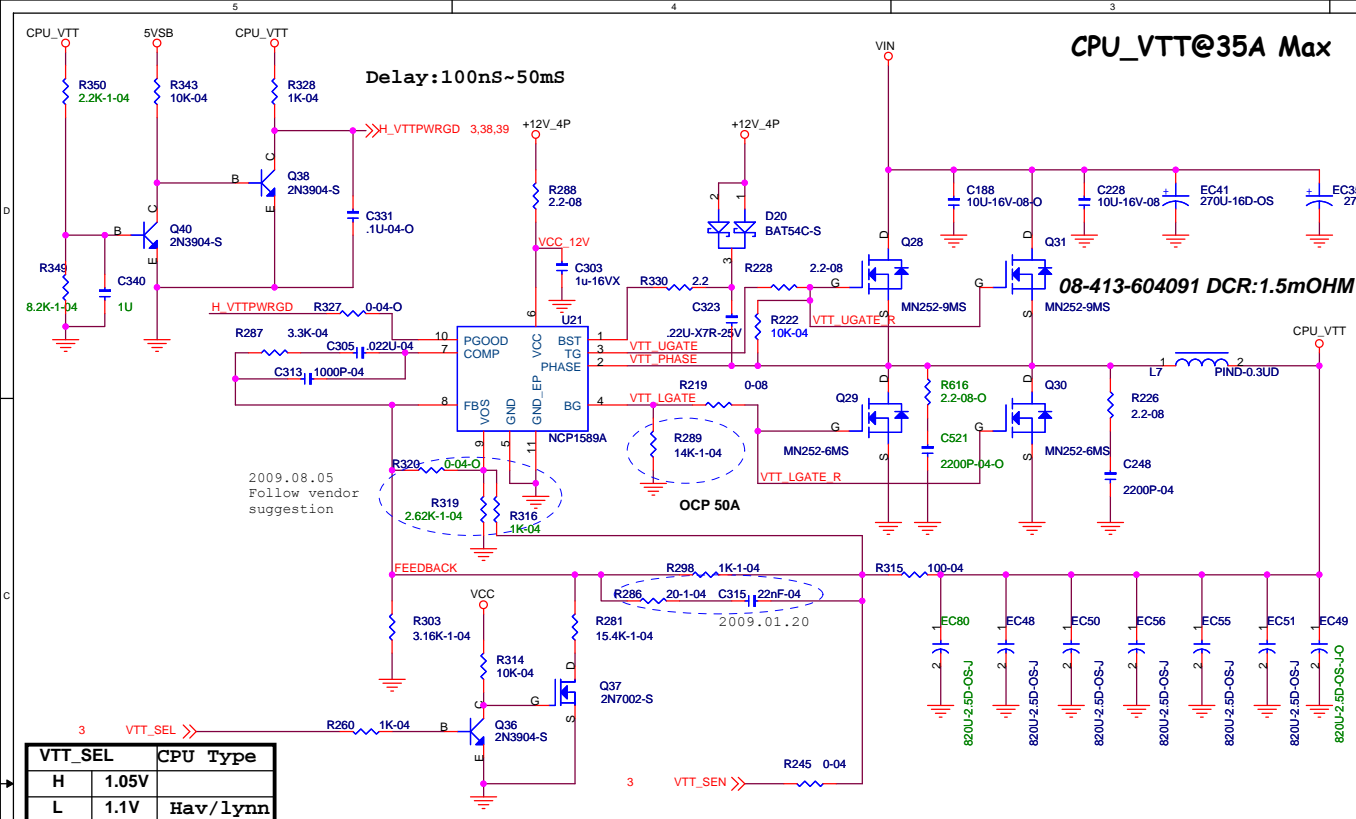
From SB



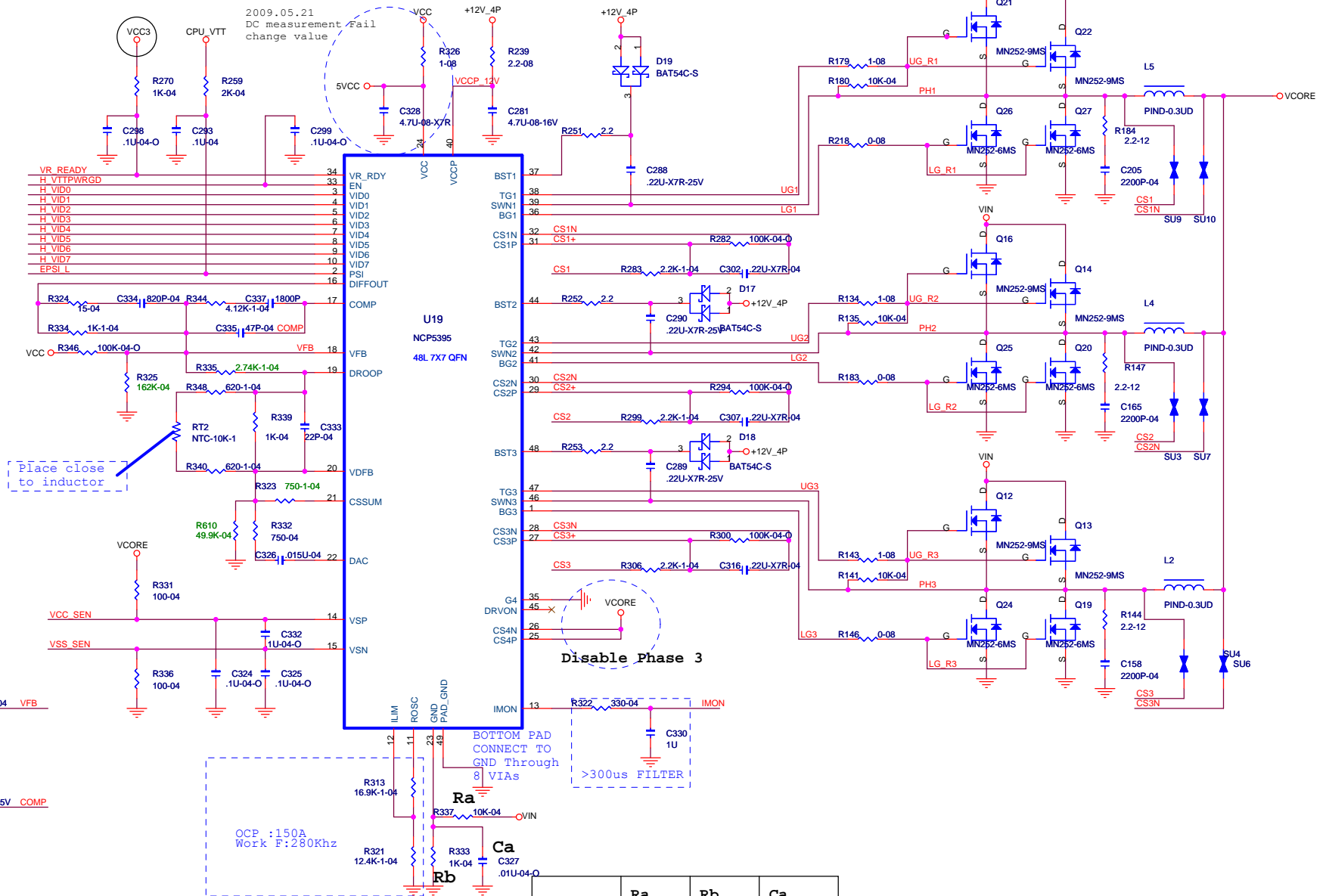
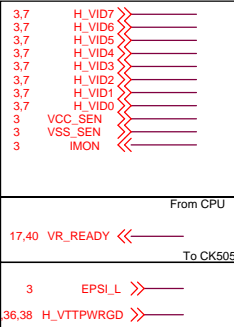
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Custom		

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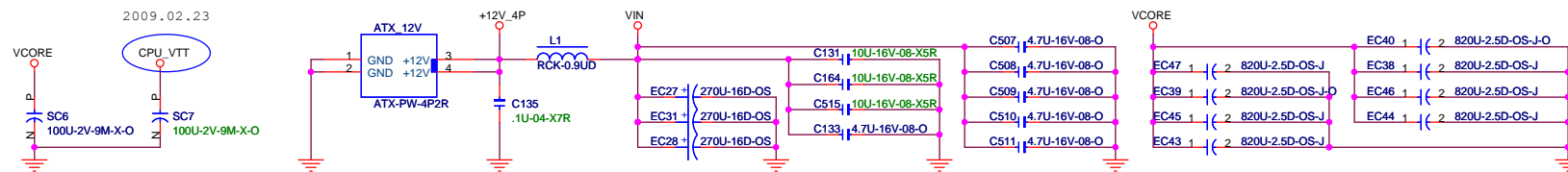


VCORE VCC CPU_VTT	POWER
GND	GND

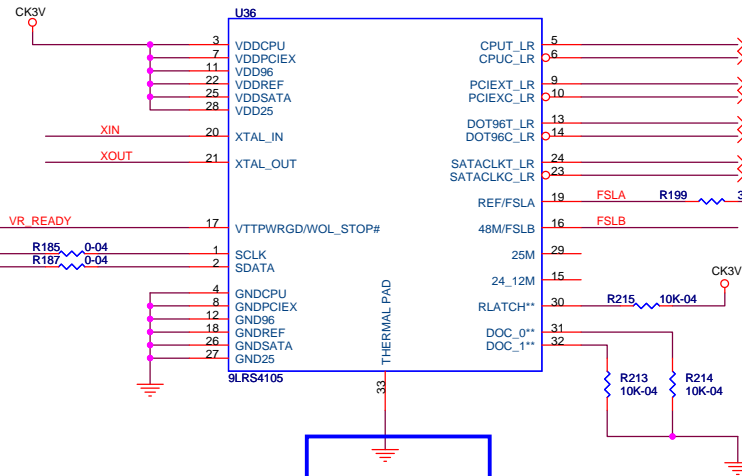
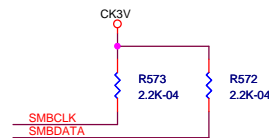
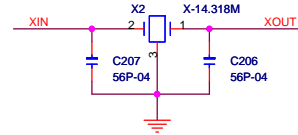


		Ra	Rb	Ca
*	NCP5359	Open	0 ohm	Open
	NCP5359T	10K	1K	Reserve

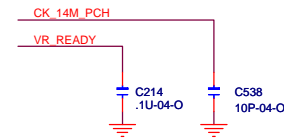
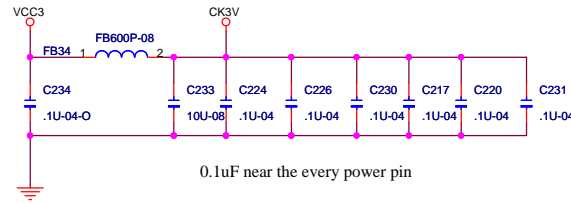
PS:NCP5359T is new IC for
PSI transient improvement



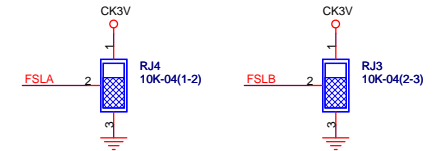
The C206/C207 value depend on CL of X2 crystal
 if CL=20pf C206/C207=33pf
 if CL=32pf C206/C207=56pf



BOTTOM PAD
 CONNECT TO GND
 Through 8 VIAs



PCH
 PCH (DMI)
 PCH (VGA)
 PCH (SATA)



FSLB,FSLA = 01, CPU_CLK = 133MHz

Bit1 FSLB	Bit0 FSLA	CPU CLOCK (MHZ)
0	0	266.66
0	1	133.33
1	0	200.00
1	1	166.66

ATX P/S WITH 1A STBY CURRENT				
5VSB +/-5%	5V +/-5%	3.3V +/-5%	12V +/-5%	-12V +/-5%

ATX4P1
12V +/-5%

CONTROL

AO4609

5VDIAL 5V

SWITCH ISL6545
SWITCH RT13214

CPU_VTT 1.1V

VCC_SM 1.5V

SWITCH ISL6314

0.65V~1.4V

0.8V~1.3V

Intel Havendale/Lynnfield CPU		
VCCP	V1D 0.65~1.4	120A
VAXG	V1D 0.8~1.3	15A/20A
VTT	1.1V	35A
VDDQ	1.5V	2.8A
VCCPLL	1.8V	0.8A
Vsm_Vtt	0.75V	1A

Fans
V12 200mA

SPI
V3.3S_LAN

CRT
V5 1A fuse

HDMI/DP
V3.3 0.5A fuse x 2

HDMI L.S.
V3.3 180mA

SATA Drives
V5 1A
V12 1A

HD Audio
V5AUD-Analog IO
V3.3[V1.5]-Link

Flash/NVM
V3.3 0.3A
V1.8 0.1A

Intel Ixex Peak		
VccCore	1.1V	1.7481A
VccIO	1.1V	3.4059A
VccDMI	1.1V	0.0655A
VccAPLLEXP	1.1V	VccVRM
VccSATAPLL	1.1V	VccVRM
VccADPLLA	1.1V	0.0782A
VccADPLLB	1.1V	0.0782A
VccVRM	1.8/1.5V	0.1829A
VCCPNAND	1.8V	0.1559A
_V5REF	5V	2.4uA
_V5REF_SUS	5V	6uA
VCCSUS3_3	3.3V	0.1680A
VccSusHDA	3.3V	0.0060A
V_CPU_IO	1.1V	33uA
VccME3.3	3.3V	0.0862A
VCC_ME	1.05V	2.4072A
VccLAN	1.1V	0.4002A
Vcc3_3	3.3V	0.3572A
VCCRTC	3.3V	0.0022A
VccADAC	3.3V	0.0691A
VccFDIPLL	1.1V	VccVRM
VccACIK	1.1V	0.034A

VCCRTC 3.3V

BATTERY

LAN INTEL 82578		
VDD3	3.3V	0.199A
A/DVDD1P2	1.2V	0.284A
A/DVDD2P5	2.5V	
A/DVDD2P5 Internal LVR Output		
VCT 1.8V Internal LVR Output		

CONN1P8 1.8V

1.8V	0.181A
LAN CONNECTOR	
CONN1P8	

AUDIO RTL662-VC2/888S-VC2		
DVDD 3.3V	3.3V	40mA
AVDD	5V	51mA

SUPER I/O IT8720F-CX		
5VSB	5V	15mA
VCC	5V	60mA
BAT 3.3V	3.3V	2uA

1394 VT6315N		
3.3V	3.3V	82.68mA
CONN, 12V	12V	1.5A

USB X10 FR	USB X4 IO	2XPS/2
VDD 5VDual 2.0A	VDD 5VDual 2.0A	5VDual 1.0A

PCI Slot (per slot)	X1 PCIe per	X16 PCIe per
5V 5.0A 3.3V 7.6A 12V 0.5A 3.3Vaux 0.375A -12V 0.1A	3.3V 3.0A 12V 0.5A 3.3Vaux 0.375A	3.3V 3.0A 12V 5.5A 3.3Vaux 0.375A

