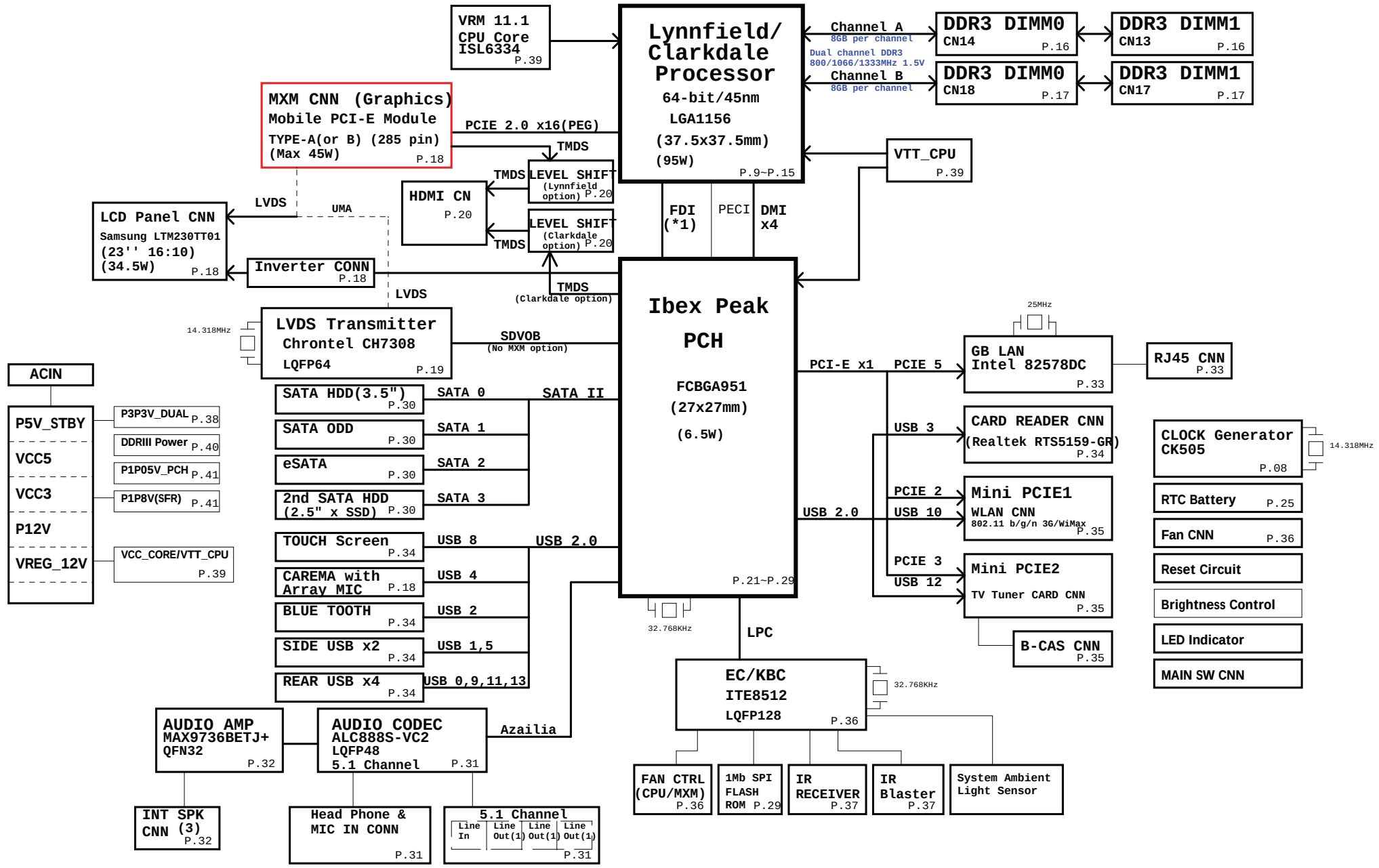
EL5 Block Diagram :



FDI - Used only for the Clarkdale processor.

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Title	BLOCK DIAGRAM	
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Net name Description :

Voltage Rails

P5V_STBY	5.0V always on power rail by LATCH or ACIN
P3P3V_STBY	3.3V always on power rail by LATCH or ACIN
P1P5V	1.5V switched power rail by SUSB#/PM_SLP_S3#
P2P5V	2.5V switched power rail by SUSB#/PM_SLP_S3#
VCC3	3.3V switched power rail by SUSB#/PM_SLP_S3#
VCC5	5.0V switched power rail by SUSB#/PM_SLP_S3#
P12V	12V switched power rail by SUSB#/PM_SLP_S3#
VREG_12V	12V switched power rail for CPU Vcore
VCCP	Core Voltage for CPU
P1V1_CPU_VTT	1.1V power rail for AGTL+ termination & PCH DMI I/F by SUSB#/PM_SLP_S3#
P1P05V_PCH	1.05V power rail for PCH Core;PCH I/O;DMI;PCIE;SATA by SUSB#/PM_SLP_S3#
P1P8_SFR	1.8V power rail for CPU PLL & PCH NAND I/F by SUSC#/PM_SLP_S4#
P1P5V_SUS	1.5V power rail for DDRIII by SUSC#/PM_SLP_S4#
0.75VDDT_DDR3	0.75V DDRIII Termination Voltage by SUSB#/PM_SLP_S3#

Part Naming Conventions

C = Capacitor
CN = Connector
D = Diode
F = Fuse
L = Inductor
Q = Transistor
R = Resistor
RP = Resistor Pack
U = Arbitrary Logic Device
Y = Crystal and Osc

Net Name Suffix

or _N = Active Low signal

Board Stack up Description

PCB Layers

Layer 1		Component Side, Microstrip signal Layer
Layer 2		Power Plane
Layer 3		Normal Signal / Ground 1 Plane
Layer 4		Stripline Layer(High Speed)
Layer 5		Ground Plane
Layer 6		Solder Side,Microstrip signal Layer

Layers : 6 Depth 1.2mm Impence 55 ohms +/- 10%

	Single End Impedance	Differential Impedance for Microstrip	Differential Impedance for Stripline
Host Clock	55 ohm +/- 15%	95 ohm +/- 15%	100 ohm +/- 15%
SRC Clock	55 ohm +/- 15%	95 ohm +/- 15%	100 ohm +/- 15%
Host Bus	55 ohm +/- 15%		
DDR3 CLK	42 ohm +/- 15%	70 ohm +/- 20%	70 ohm +/- 20%
DDR3 Strobe	55 ohm +/- 15%		85 ohm +/- 20%
DDR3 Bus	55 ohm +/- 15%		
DMI Bus	55 ohm +/- 15%	95 ohm +/- 15%	100 ohm +/- 15%
PCIE Bus	55 ohm +/- 15%	95 ohm +/- 15%	100 ohm +/- 15%
SATA		95 ohm +/- 15%	100 ohm +/- 15%
SDVO	55 ohm +/- 15%	95 ohm +/- 15%	100 ohm +/- 15%
LVDS		100 ohm +/- 15%	100 ohm +/- 15%
USB		90 ohm +/- 15%	90 ohm +/- 15%
Lan	50 ohm +/- 15%		

For no M3 support with Intel LAN:

-1.05 V ME powered by 1.05 V PCH
-3.3 V SPI (3.3 V EPW) powered by 3.3 V Main
-VCCLAN (LAN MAC well) is powered by 1.05 ME well (which is powered by 1.05 PCH)
-VCCLANPHY power is gated by SLP_LAN#

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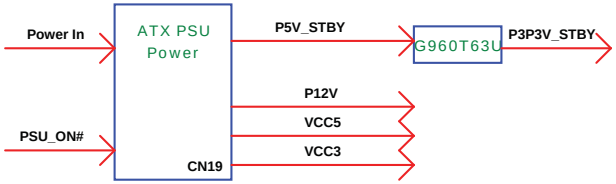
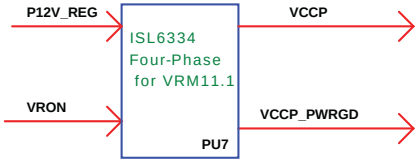
Power rail control

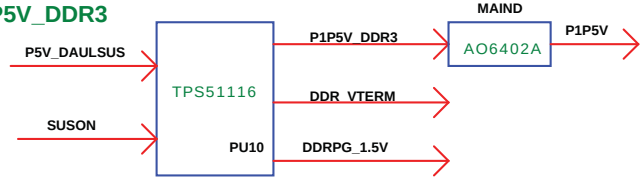
PSU



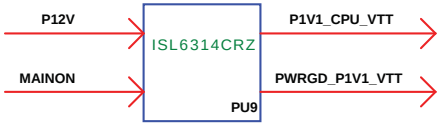
VCCP



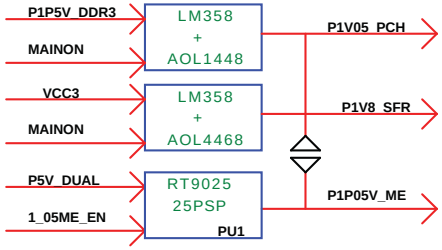
P1P5V_DDR3



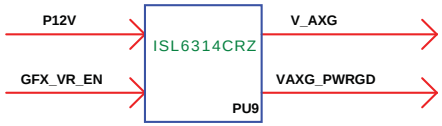
P1V1_CPU_VTT



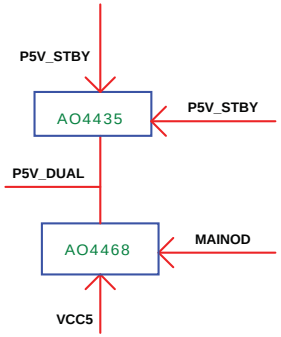
P1V05_PCH/P1V8_SFR/P1P05V_ME



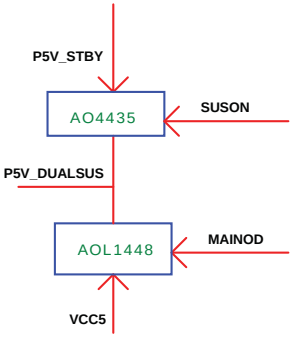
V_AXG



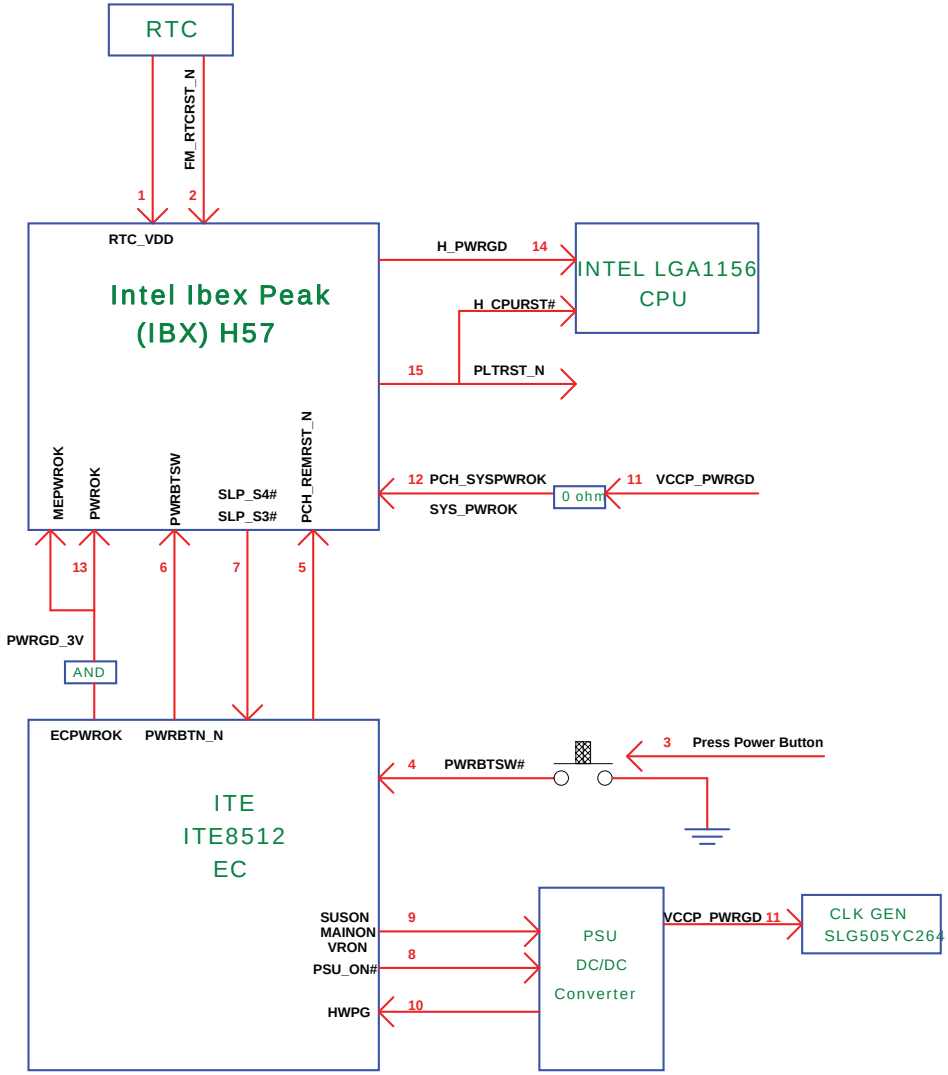
P5V_DUAL



P5V_DUALSUS



Power on Sequence



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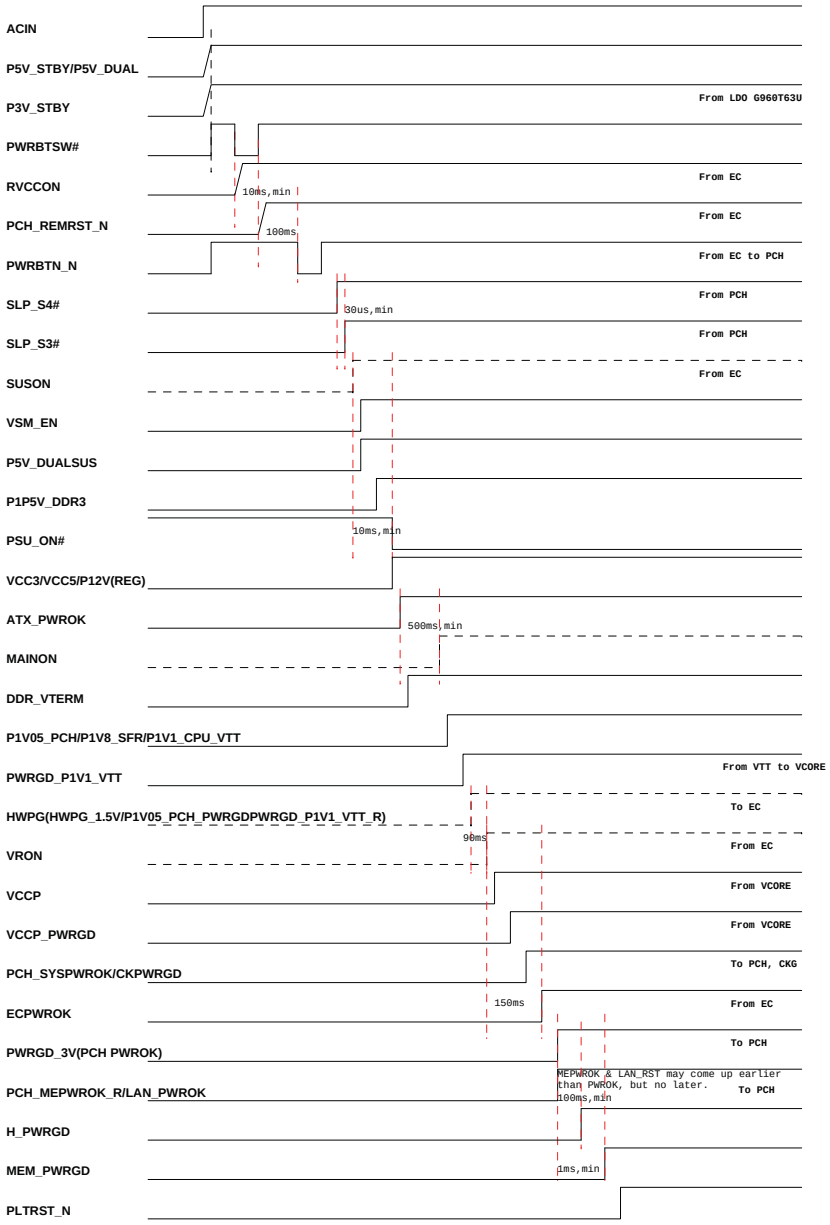
Title: Timing Diagram

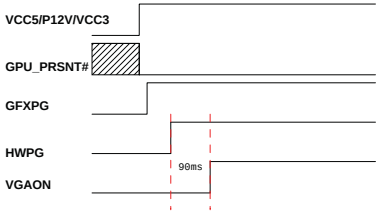
Size: Custom | Document Number: ELS | Rev: A02

Date: Thursday, March 04, 2010 | Sheet 3 of 43

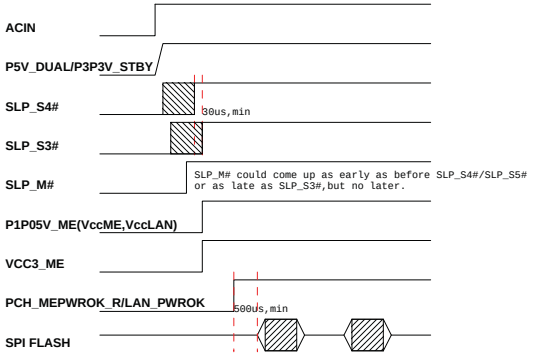
Power on Sequence :



MXM POWER ON



SLP_M#, M3 ON



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Title: Timing Sequence		
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Power Rail	Destination	Voltage	S0 Current	
VCC_CORE	Lynnfield : Default for initial power up	0.65V~1.4V 1.1V	90A(TDC)	Max:110A
VTT_CPU	Lynnfield : Memory controller & shared cache	1.045V~1.1V~1.155V	30A(TDC)	Max: 35A
	Ibex Peak : DMI	1.1V	0.065A	
	Ibex Peak : CPU_IO	1.05V~1.1V~1.16V	0.001A	
P1P8V(SFR)	Lynnfield : Internal processor PLL	1.71V~1.8V~1.89V	1.1A	
	Ibex Peak : Internal PLL & VRMs	1.71V~1.8V~1.89V	0.196A	
	Ibex Peak : Dual channel NAND I/F	1.71V~1.8V~1.89V	0.156A	
	NVRAM : VCCQ			
	NVRAM : VREF			
P1P5V_SUS	Lynnfield : CPU I/O Voltage for DDRIII DIMM :	1.425V~1.5V~1.575V	6A	
0.75VDDT_DDR3	DDRIII Terminator:	0.75V	?A	
P1P05V_PCH	Ibex Peak : VccCore	0.998V~1.05V~1.1V	1.629A	
	Ibex Peak : Vcc core I/O buffer	0.998V~1.05V~1.1V	3.251A	
	Ibex Peak : DMI buffer voltage	0.998V~1.05V~1.1V	0.065A	
	Ibex Peak : Intel Management Engine	0.998V~1.05V~1.1V	2.222A	
	Ibex Peak : Display PLL A power	0.998V~1.05V~1.1V	0.075A	
	Ibex Peak : Display PLL B power	0.998V~1.05V~1.1V	0.075A	
	Ibex Peak : LAN	0.998V~1.05V~1.1V	0.372A	
P1P5V	Mini PCIE : +1.5V(WLAN)			
	Mini PCIE : +1.5V(TV)			
P2P5V	CH7308 : DVDD			
VCC3	Ibex Peak : I/O buffer voltage	3.14V~3.3V~3.47V	0.357A	
	Ibex Peak : Display DAC Analog power	3.14V~3.3V~3.47V	0.069A	
	CLK Gen.CK505 : VDD			
	NVRAM : VCC			
	MXM : 3V3			
	CH7308 : LVDD			
	ALC888S : DVDD			
	Mini PCIE : +3.3V(WLAN)			
	Mini PCIE : +3.3V(TV)			
	Bluetooth : +3.3V			
	Media Card : +3.3V(JMB385)			
	EC(IT8512) : VCC			
	CAREMA			
VCC5	Ibex Peak : Core well Ref. voltage	4.75V~5V~5.25V	0.001A	
	MXM : 5V			
	SATA ODD			
	SATA HDD(2.5" x SSD)			
	ALC888S : AVDD			
	Audio AMP(MAX9736BETJ) :			
	Touch Screen			
	LCD Panel			
	USB: x 5 ports	5V	2.5A	
P3P3V_STBY	Ibex Peak : Intel Management Engine	3.14V~3.3V~3.47V	0.086A	
	Ibex Peak : Suspend well I/O Buffer	3.14V~3.3V~3.47V	0.168A	
	Ibex Peak : HD Audio controller Suspend Voltage	3.14V~3.3V~3.47V	0.006A	
	LAN RTL8111DL : VDD			
	IR Receiver			
	EC(IT8512) : VSTBY			
	SPI FLASH ROM			
P5V_STBY	Ibex Peak : Suspend well Ref. Voltage	4.75V~5V~5.25V	0.001A	
P12V	MXM : 12V			
	INVERTER : Vin			
	FAN_CPU			
	FAN_MXM			
	Audio AMP(MAX9736BETJ) : PVDD			

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Title: Power Budget

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Schmatic Change List:

Date	Change Item Description	Note
11/13	1.PAGE25 ADD R766 SLP_S4#	
	2.PAGE29 ADD R767、R768、R769	
11/24	1.PAGE38 ADD PC179、PR157	
11/26	1.PAGE9 ADD C601、C602、C603、R770、R771	
11/30	1.PAGE34 ADD R772、C604	
12/01	1.PAGE18 Del R49、R53、R54、C120，Add U2、R773、R774、R775、R776、C605、C606、C607、C608、U26、Q46。For EDID	
12/03	1.PAGE41 Add PR85、PR158	
	2.PAGE19 Add PU12、PR159、PR160、PR161、PC180、PC181、PC182、PC183、PC184 For P2P5V	
	3.PAGE20 Add U25、L29、R49、R54、R55、R67、R68、R349、R681、R682、R712、R724、R725、R779、R780、R781、R782、R783、R784、R785、R786、R787、R788、R789、R790、R791、R792、R793、C19、C21、C22、C120、C609、C610、C611 for MXM HDMI Repeater	
12/04	1.PAGE18 Add C617	
VER:C		
12/22	1.PAGE18 Del U26、R774、C606、Q46、C608、R776、R773、R775、C605、C607,Add R318、R696、R314、C605。For EDID	
	2.PAGE34 Change CN33 to 5PIN CONN	
01/05	1.PAGE39 Add PR163、R800、R801。	
01/07	1.PAGE34 Del R1、R2、 Add L30。For EMI	
	2.PAGE33 ADD R802、D47。For LAN Wake up	
	3.PAGE40 PC160 connector to P1P5V_DDR3。	
01/11	1.PAGE35 Add R803、R804、R805、R806。For PCI_E detect	
	2.PAGE33 Add R807。 For LAN LED	
VER:D		

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Title	SCREW HOLD, M/E, EMI	
Size C	Document Number EL5	Rev A02
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Schmatic Change List:

Date	Change Item Description	Note

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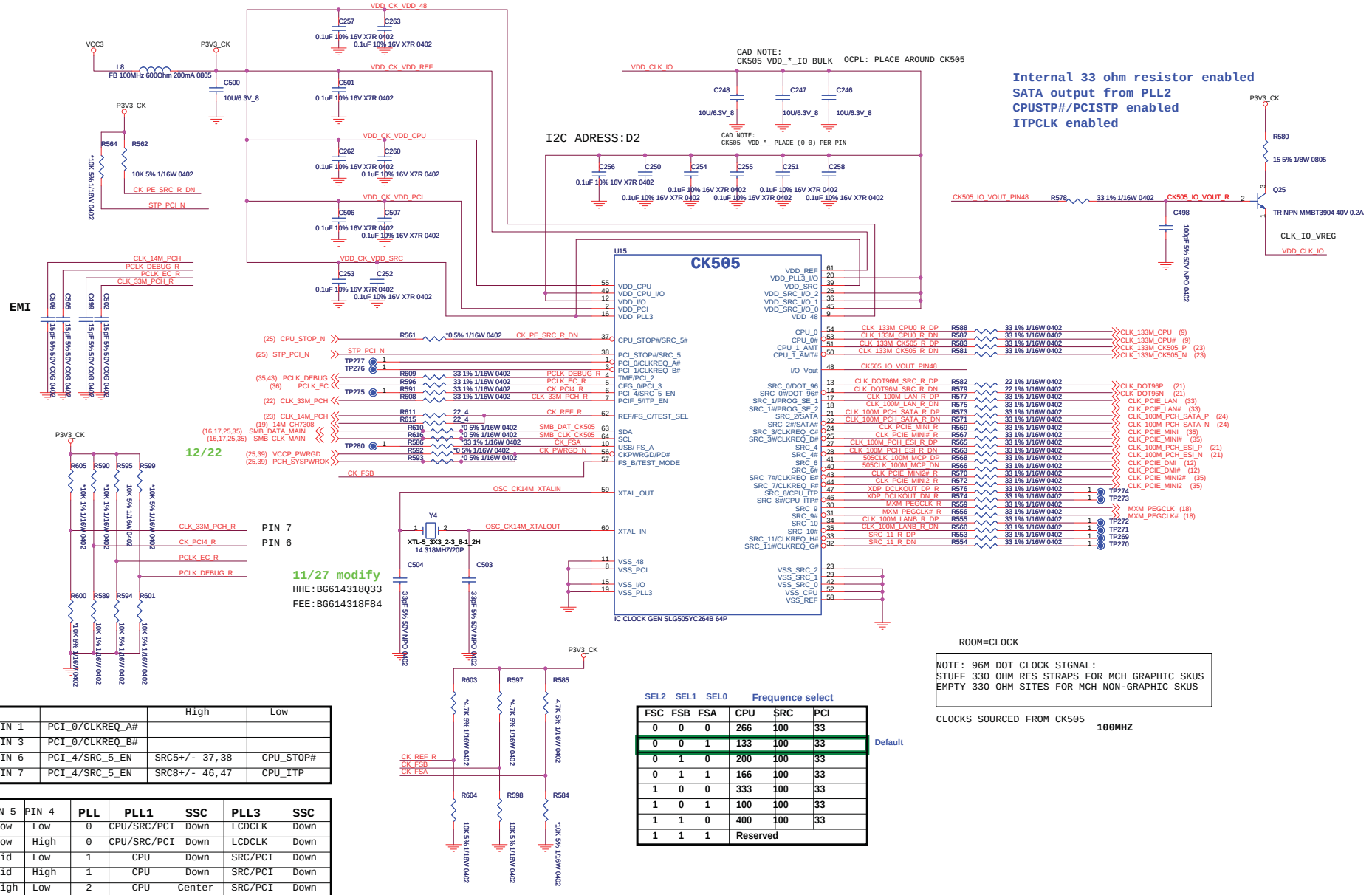
Title: MODIFY CHANGE LIST

Size: C | Document Number: EL5 | Rev: A02

Date: Thursday, March 04, 2010 | Sheet 7 of 43



		High	Low
PIN 1	PCI_0/CLKREQ_A#		
PIN 3	PCI_0/CLKREQ_B#		
PIN 6	PCI_4/SRC_5_EN	SRC5+/- 37,38	CPU_STOP#
PIN 7	PCI_4/SRC_5_EN	SRC8+/- 46,47	CPU_ITP

PIN 5	PIN 4	PLL	PLL1	SSC	PLL3	SSC
Low	Low	0	CPU/SRC/PCI	Down	LCDCLK	Down
Low	High	0	CPU/SRC/PCI	Down	LCDCLK	Down
Mid	Low	1	CPU	Down	SRC/PCI	Down
Mid	High	1	CPU	Down	SRC/PCI	Down
High	Low	2	CPU	Center	SRC/PCI	Down
High	High	3	CPU	Center	SRC/PCI	Down

PIN 17/18 SRC1 SSC

FSC	FSB	FSA	CPU	SRC	PCI
0	0	0	266	100	33
0	0	1	133	100	33
0	1	0	200	100	33
0	1	1	166	100	33
1	0	0	333	100	33
1	0	1	100	100	33
1	1	0	400	100	33
1	1	1	Reserved		

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Title: CK505_B CLOCK GENERATOR

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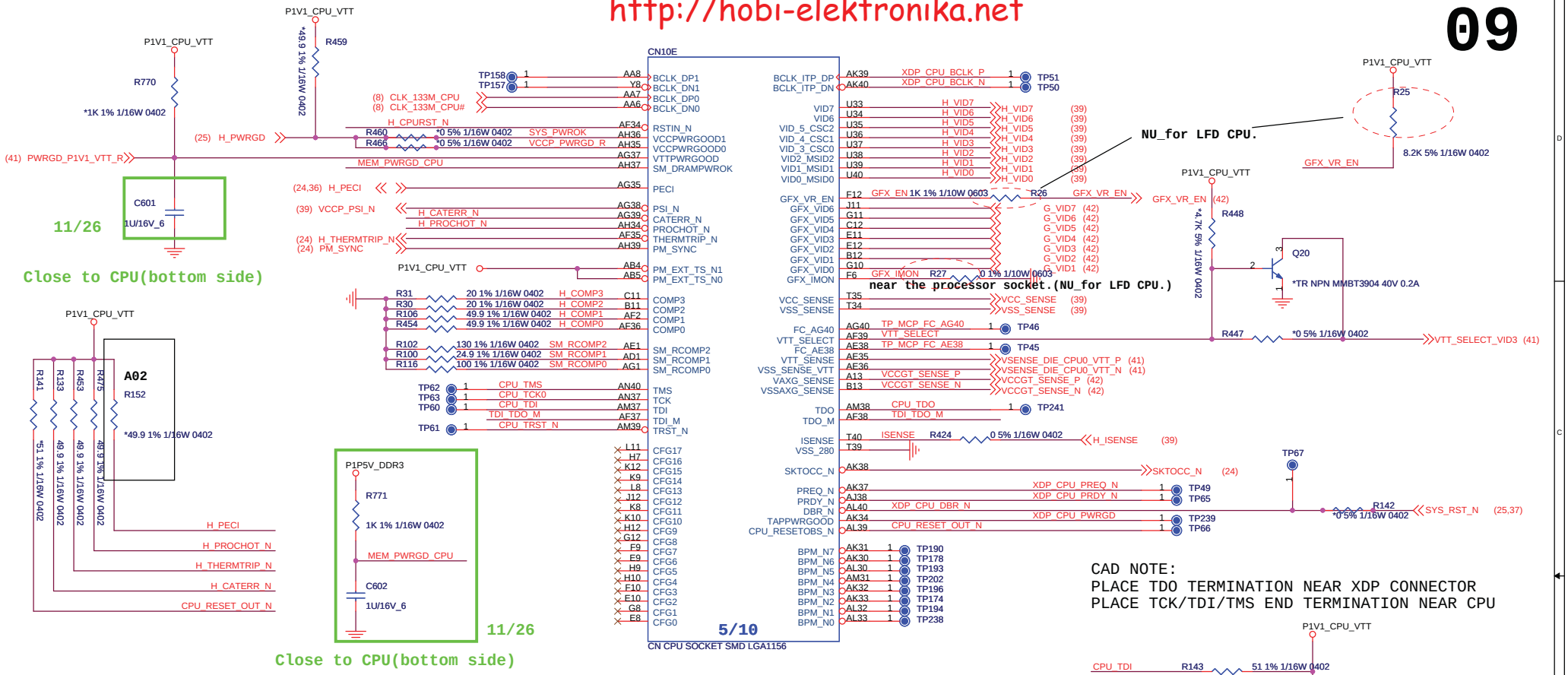
Date: Thursday, March 04, 2010 | Sheet 8 of 43



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Title	MCP - CLK,CTRL,MISC,DEBUG		
Size: Custom	Document Number: EL5		Rev: A02
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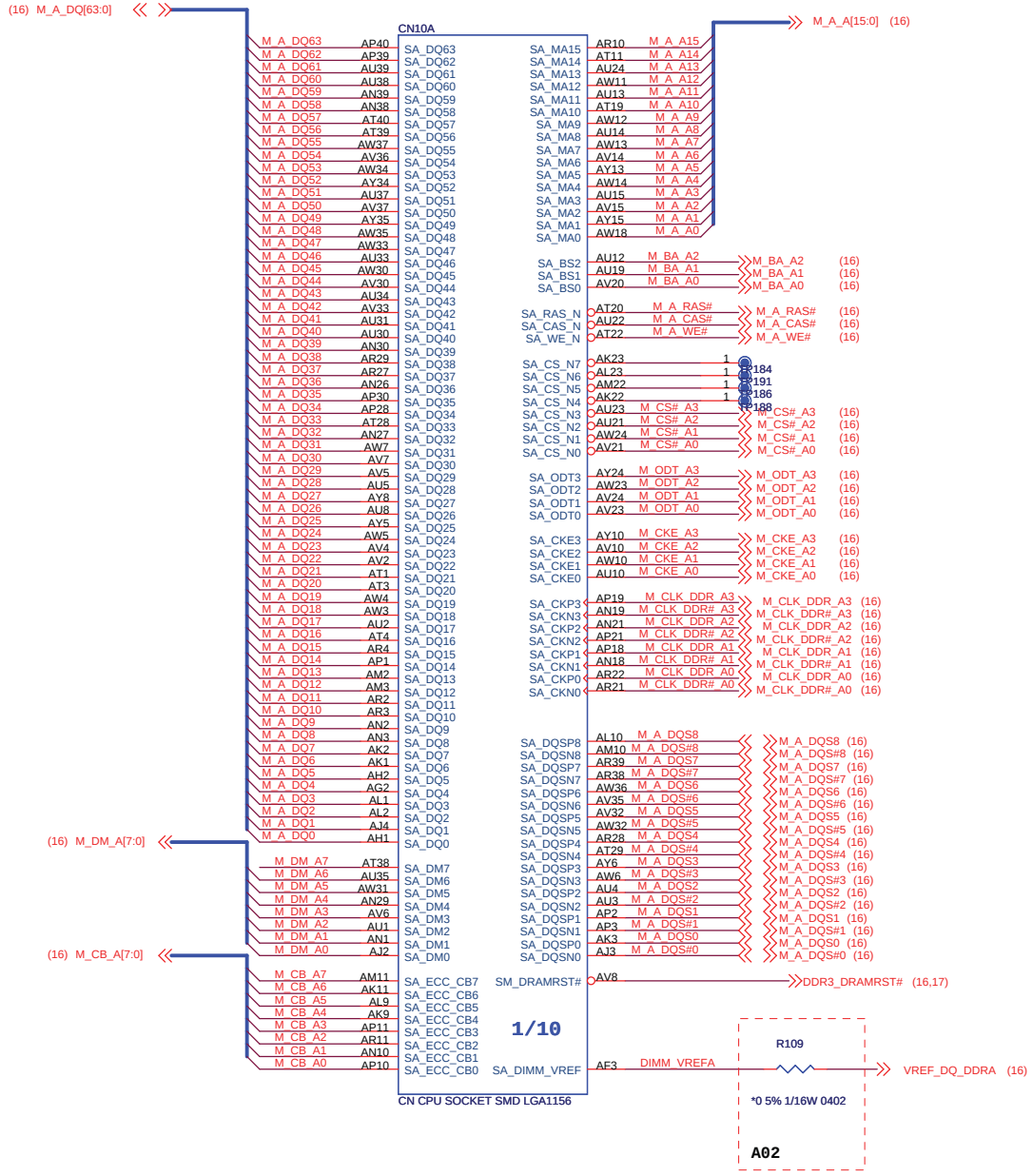

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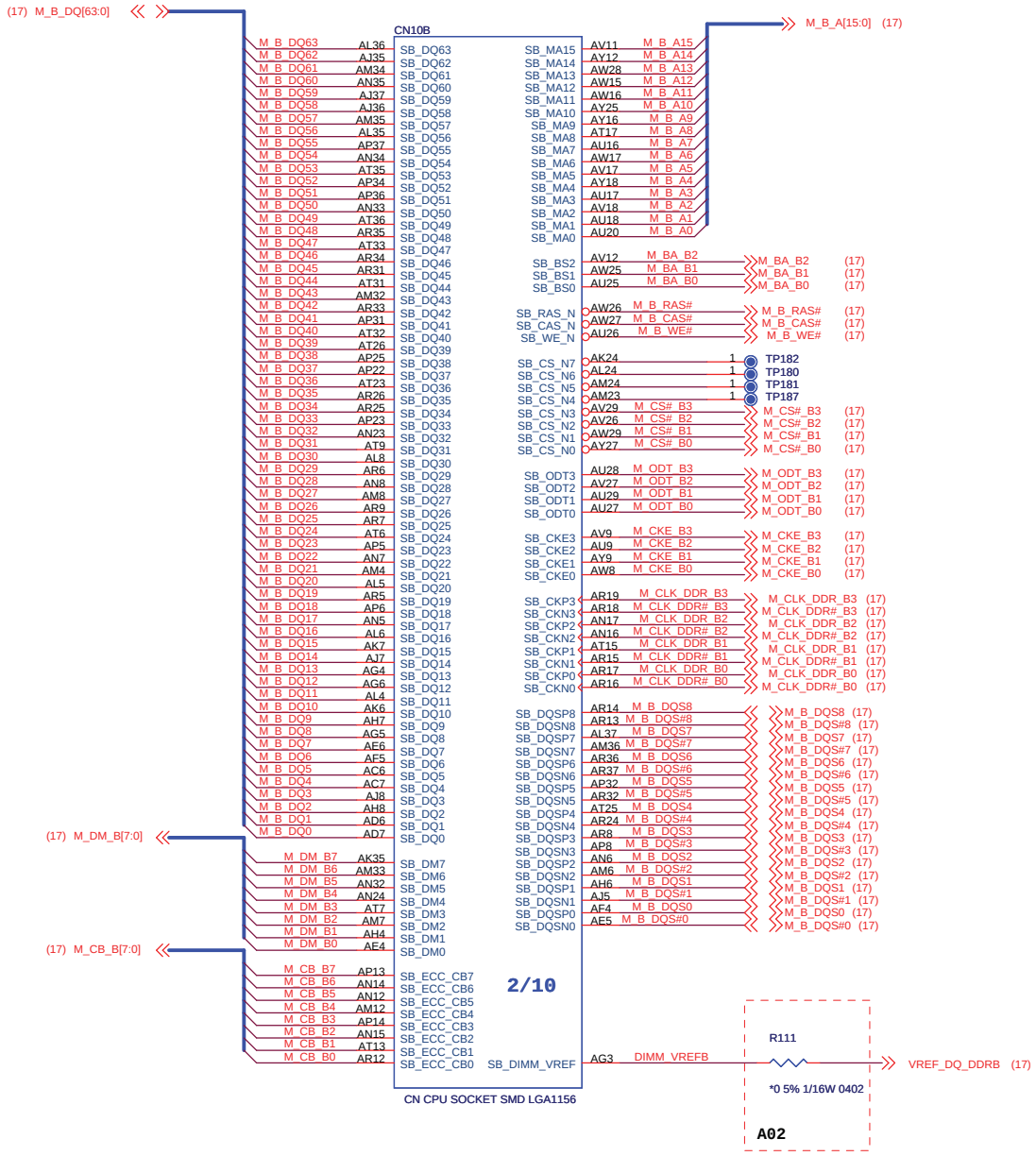
Title	MCP - DDR3 CHANNEL A	
Size: Custom	Document Number: EL5	Rev: A02
Date: Thursday, March 04, 2010	Sheet 10 of 43	



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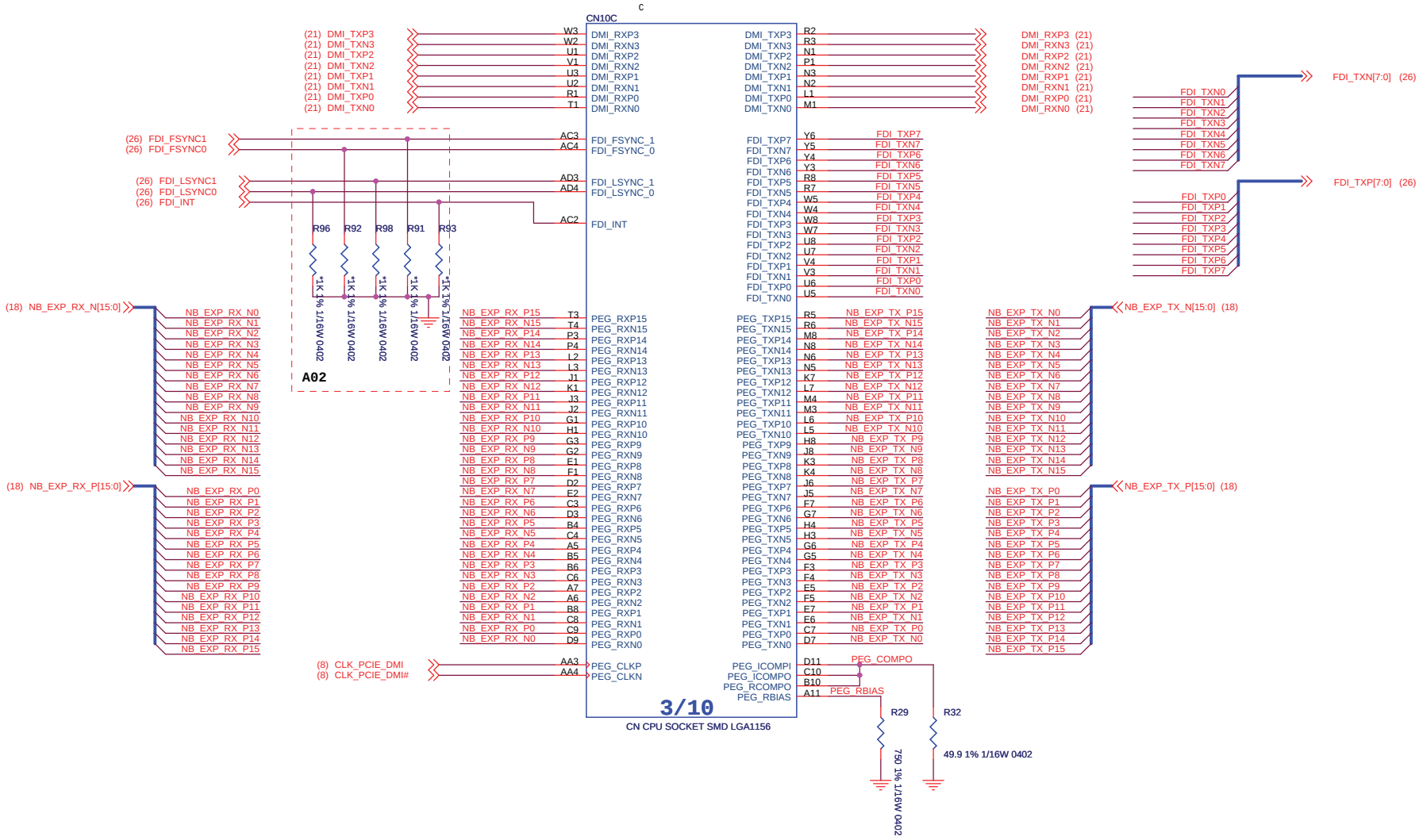
Title	MCP - DDR3 CHANNEL B	
Size: Custom	Document Number: EL5	Rev: A02
Date: Thursday, March 04, 2010	Sheet 11 of 43	



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Title	MCP - PCIE, DMI	
Size: Custom	Document Number: EL5	Rev: A02
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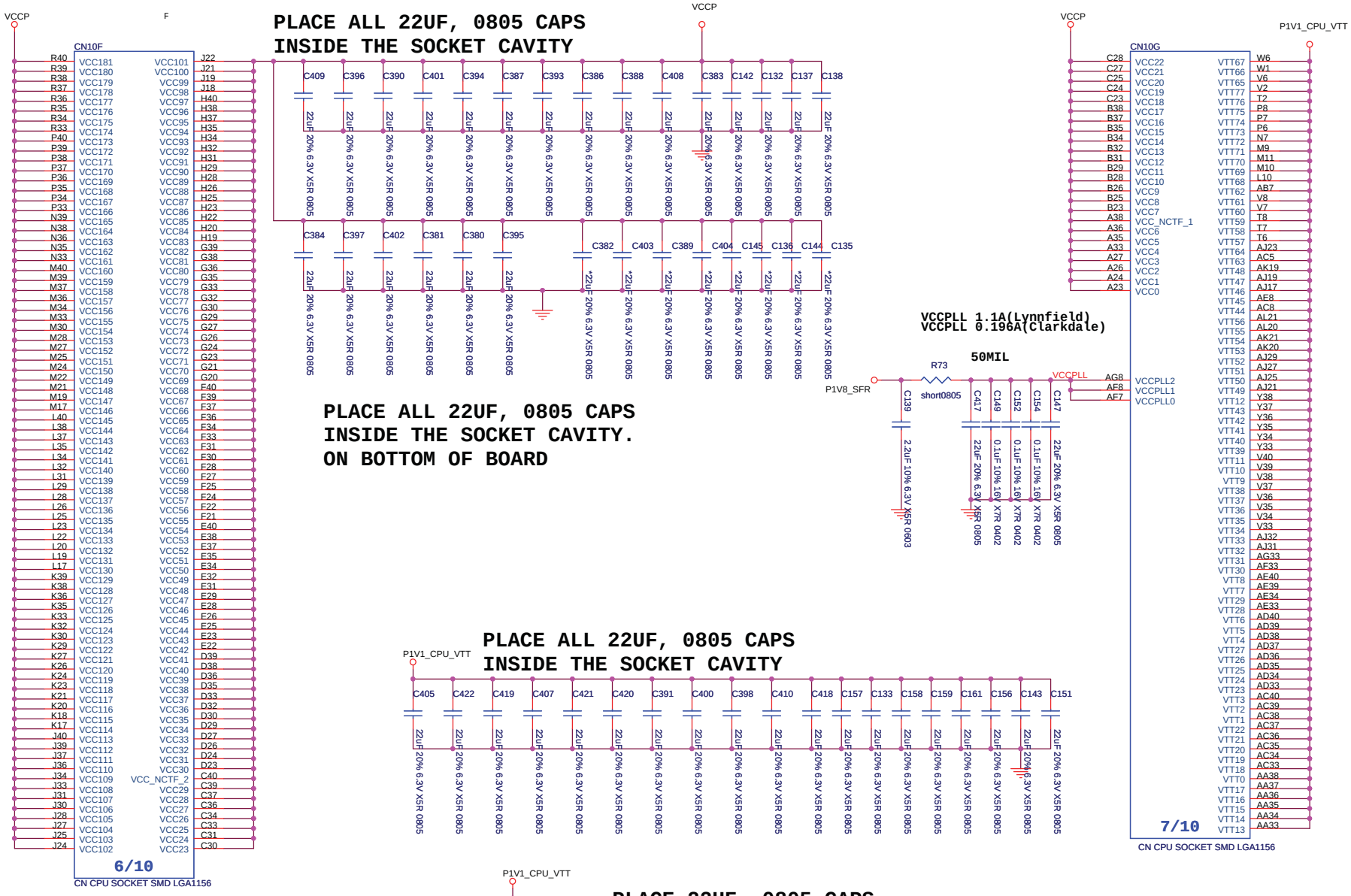

For DMI bus split power plane

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Title	MCP - VCCP/ VTT	
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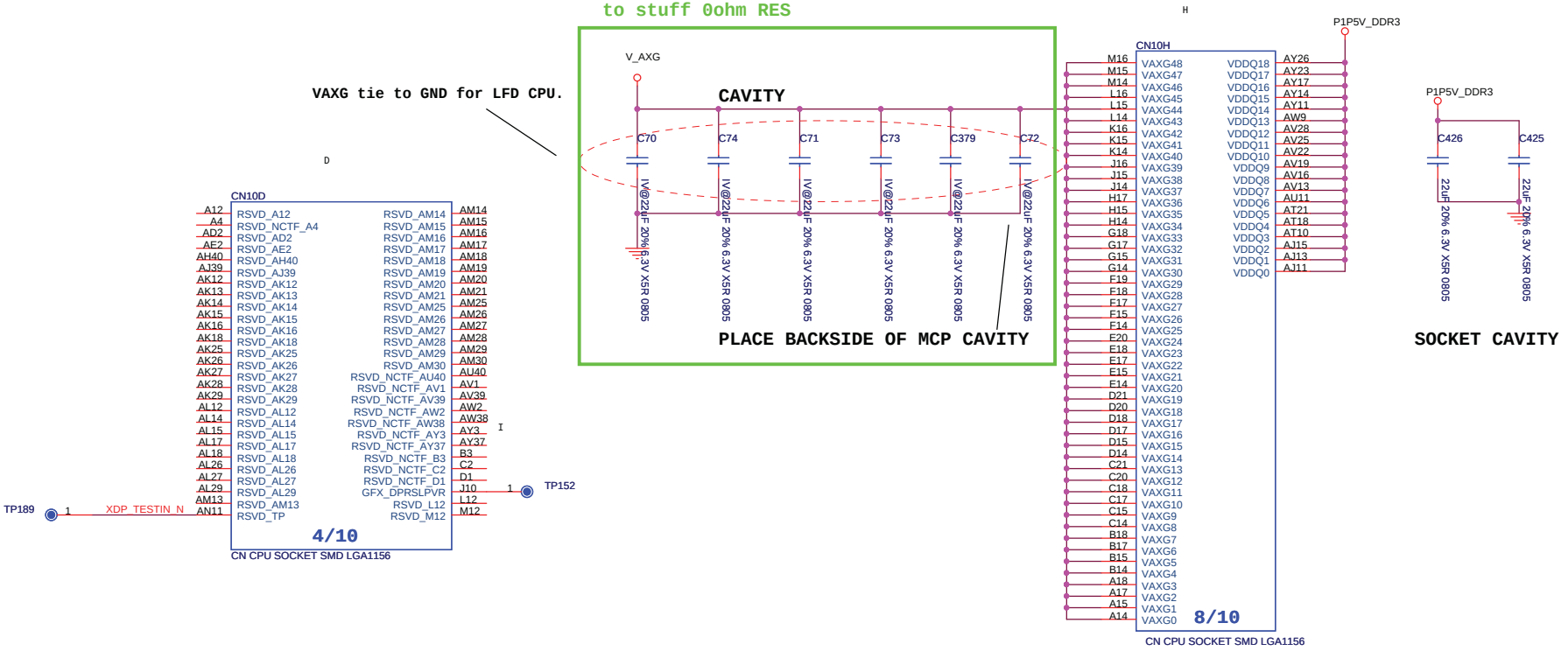
BOM note:
EV@C70、C71、C72、C73、C74、C379 need to stuff 0ohm RES

VAXG tie to GND for LFD CPU.



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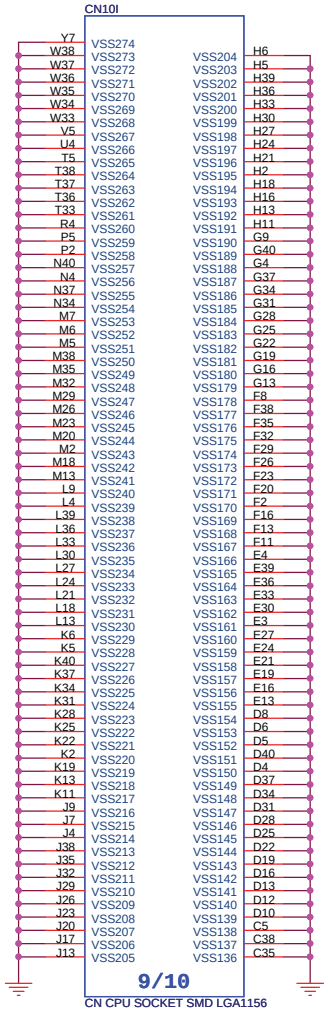
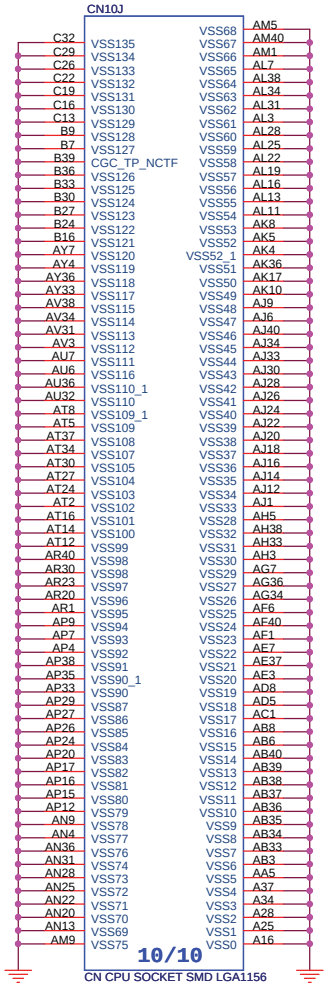
Title: MCP - V_AXG/ P1P5V_DDR3		
Size: Custom	Document Number: EL5	Rev: A02
Date: Thursday, March 04, 2010	Sheet 14 of 43	





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Title	MCP - GND	
Size: Custom	Document Number: EL5	Rev: A02
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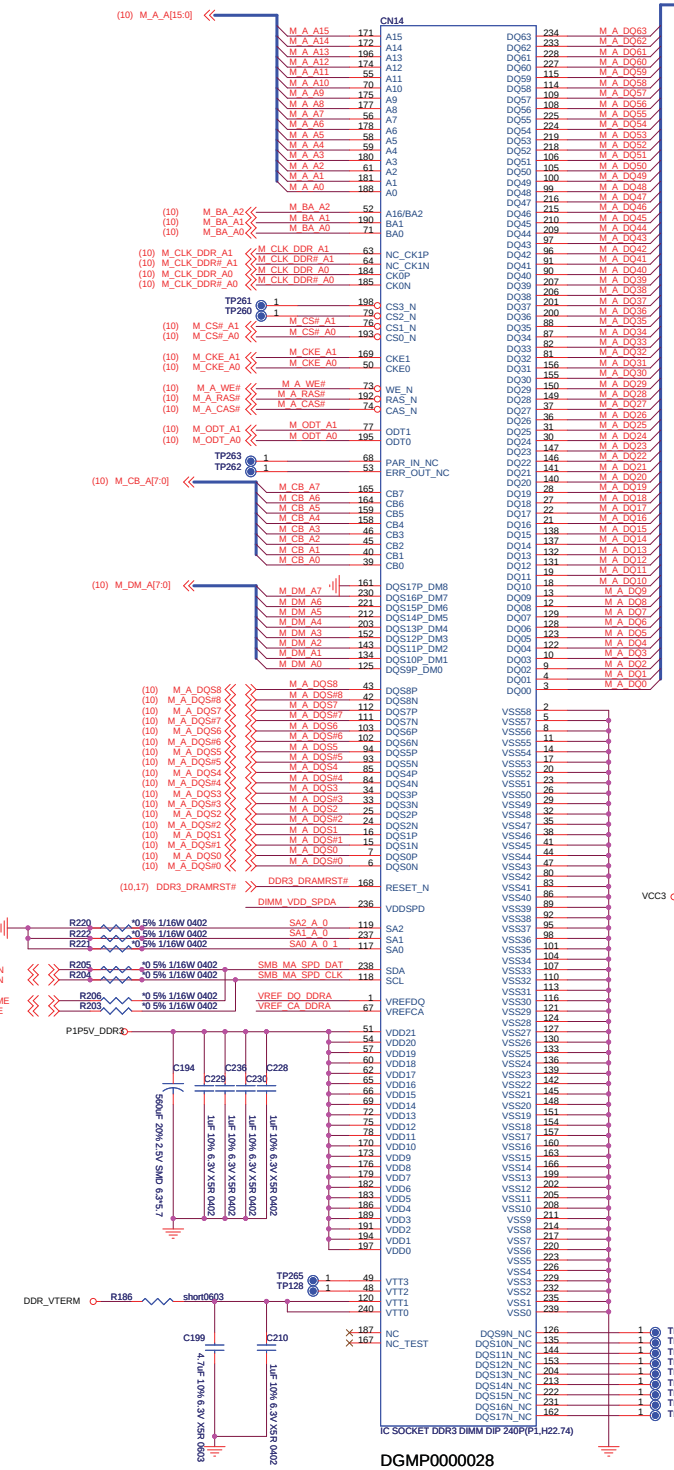
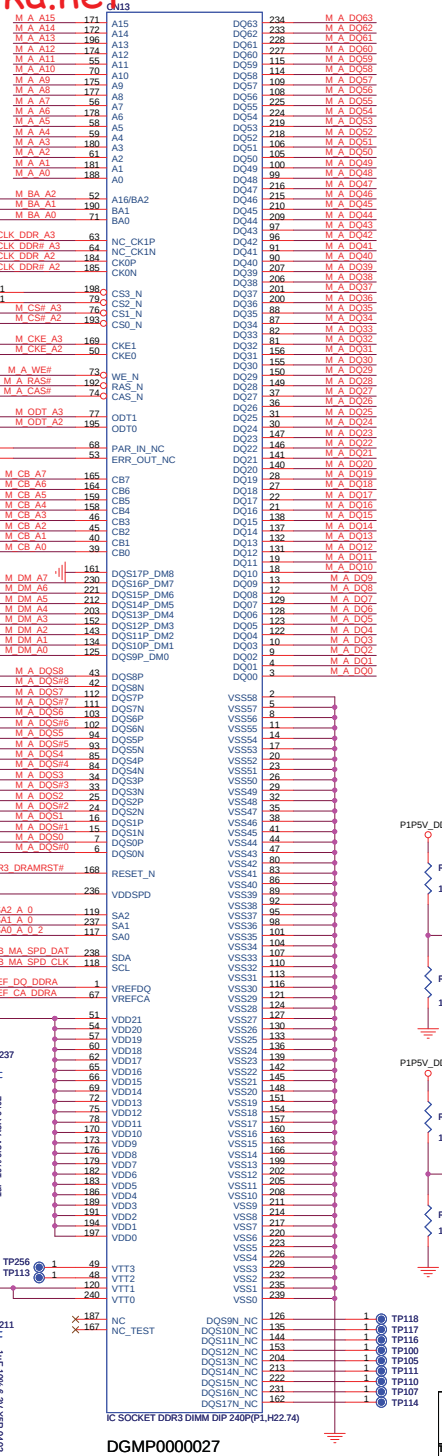
CHANNEL A DIMM 0



CHANNEL A DIMM 1



Close to CN13

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Title	DDRIII CHANNEL A		
Size C	Document Number EL5		Rev A02
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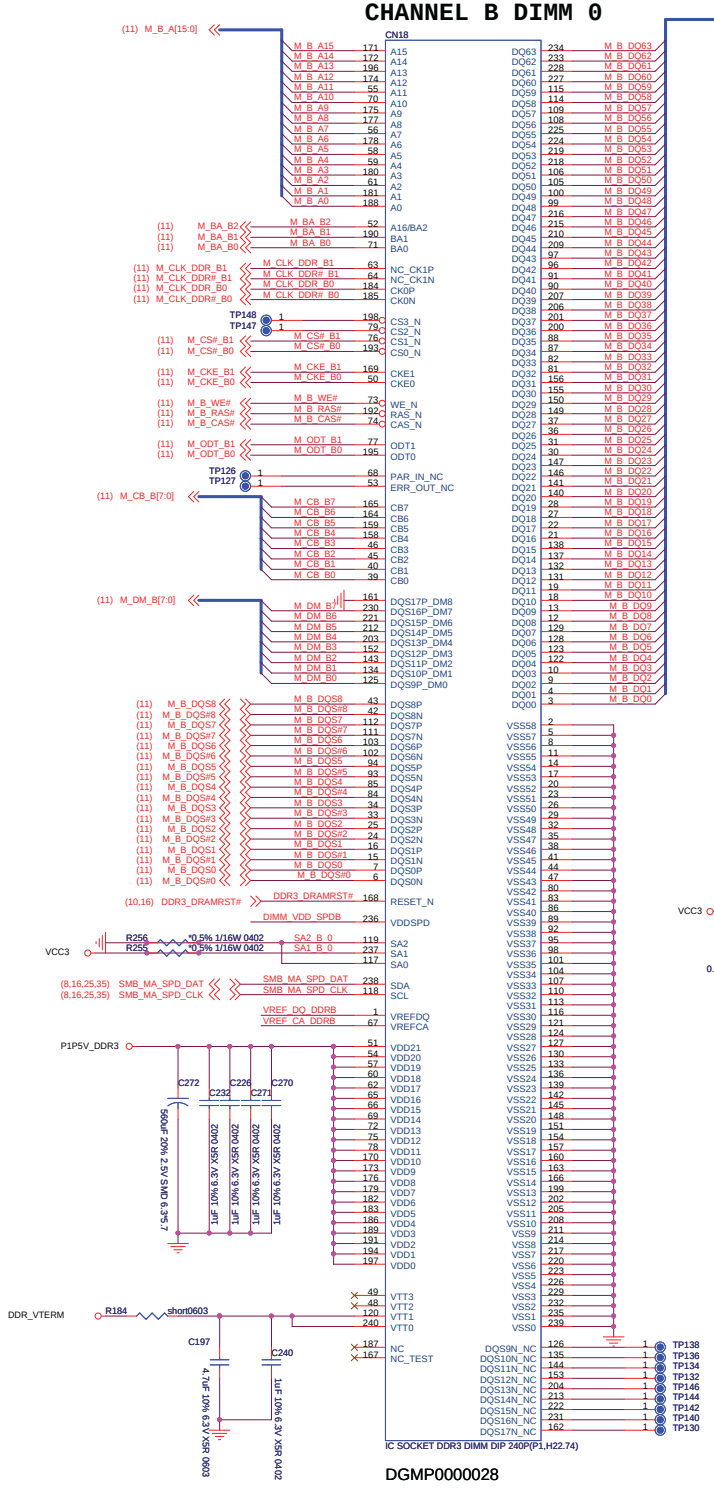
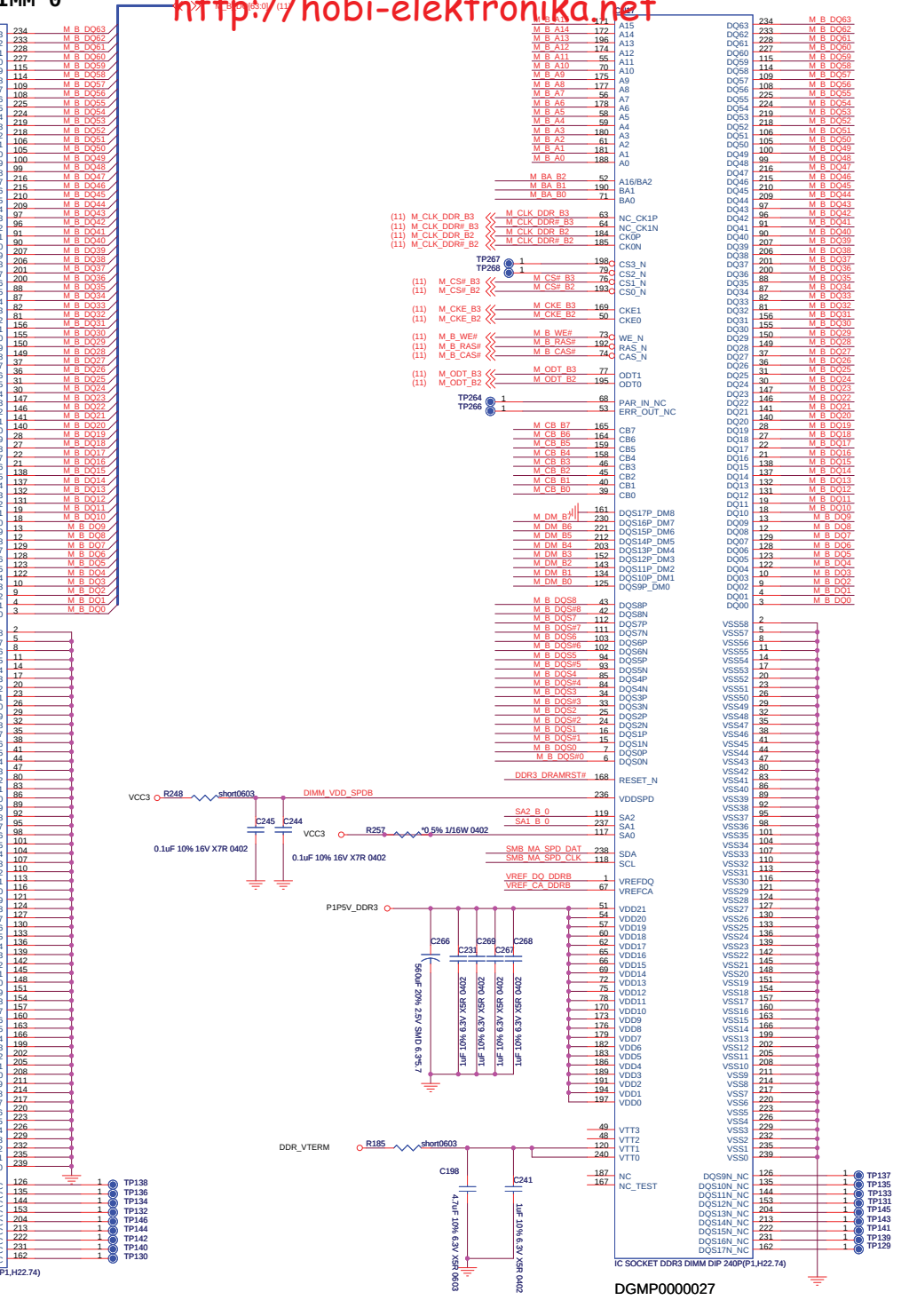
CHANNEL B DIMM 0



CHANNEL B DIMM 1



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Title	DDRIII CHANNEL B	
Size: C	Document Number: EL5	Rev: A02
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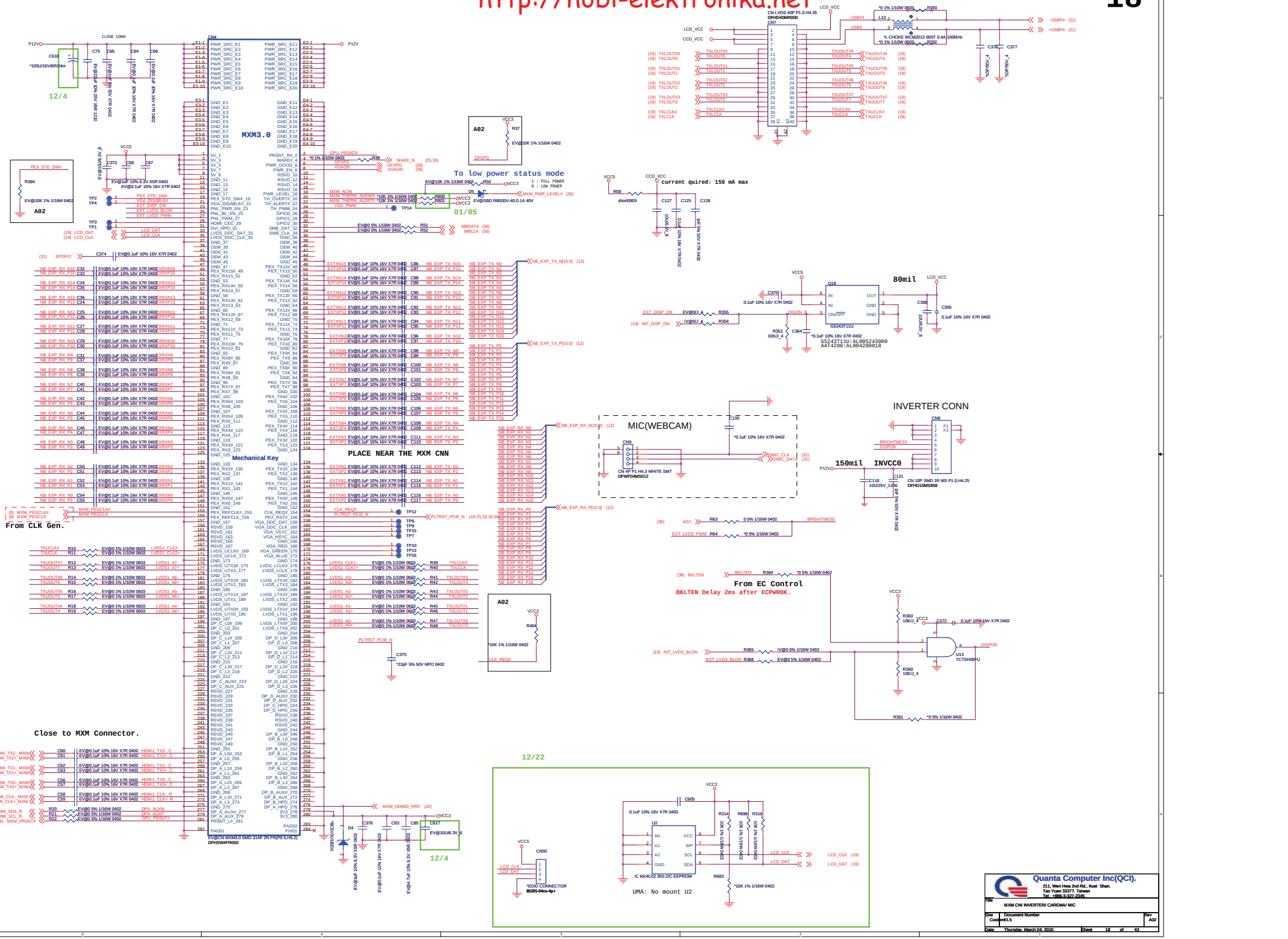
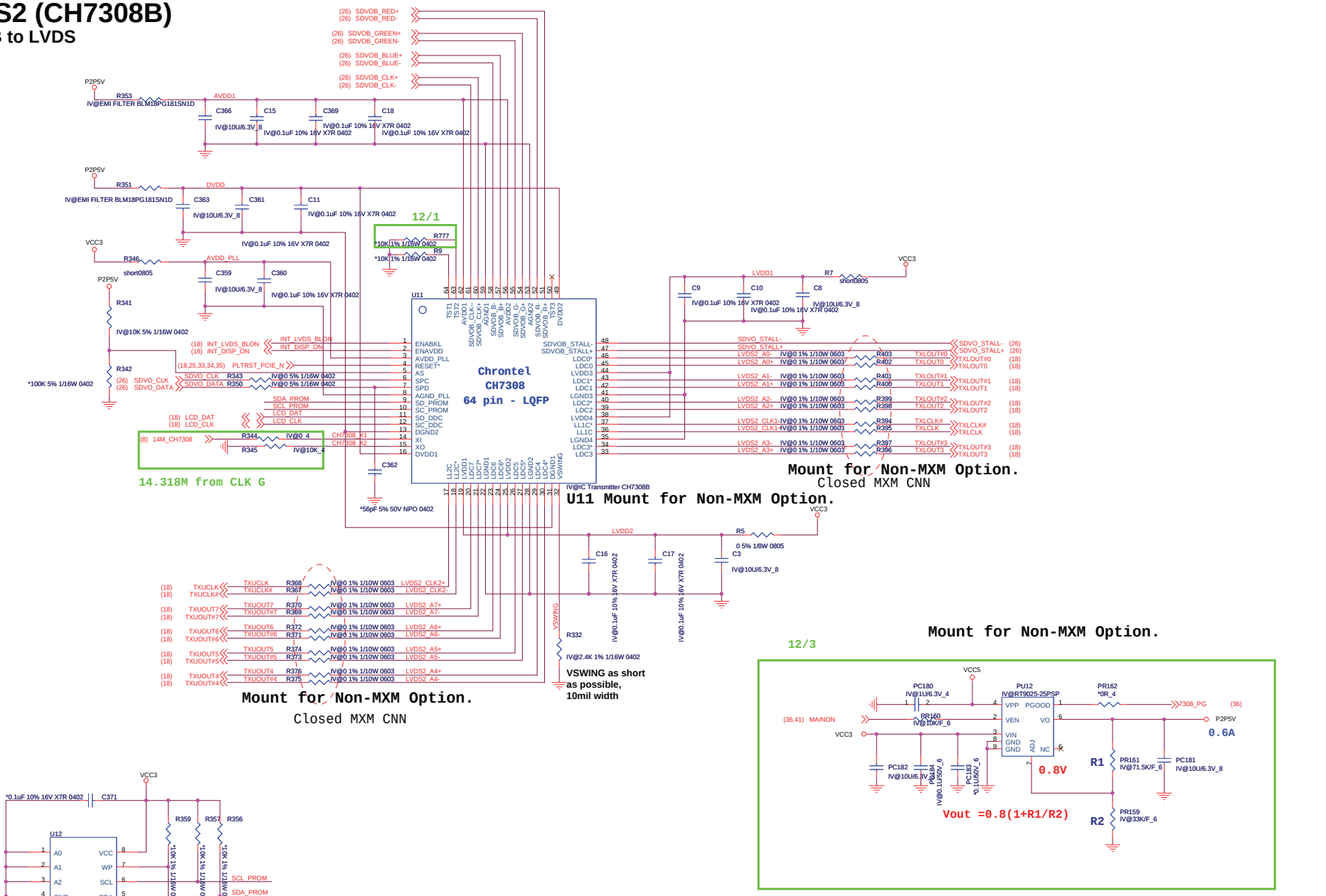


LVDS2 (CH7308B)

SDVOB to LVDS



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Title	LVDS TRANSMITTER-CH7308	
Size C	Document Number EL5	Rev A02
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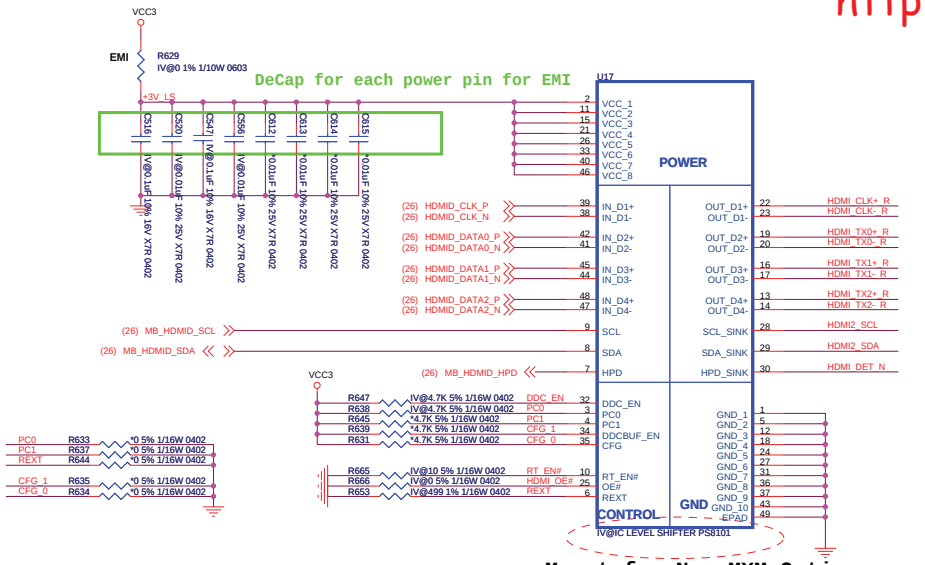
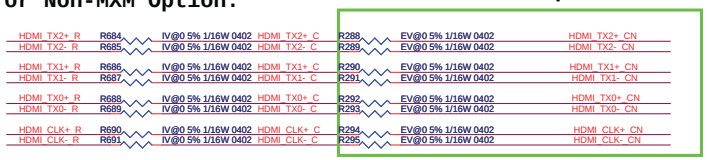


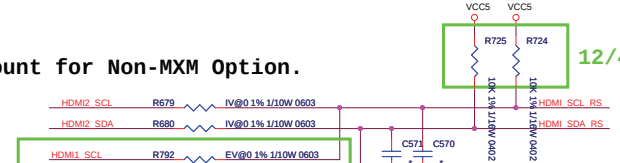
EQUALIZATION SETTING
PC1:PC0=0:0 8dB
PC1:PC0=0:1 4dB Recommanded
PC1:PC0=1:0 12dB
PC1:PC0=1:1 0dB

Mount for Non-MXM Option.

Mount for MXM Option.

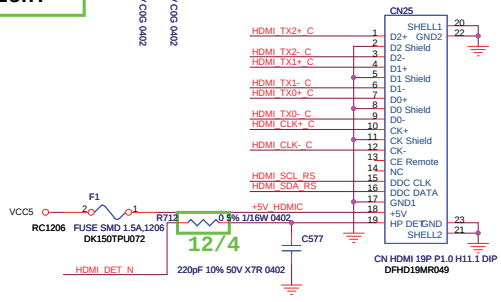


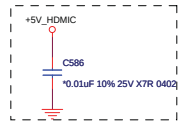
Mount for Non-MXM Option.



Mount for MXM Option.

12/3

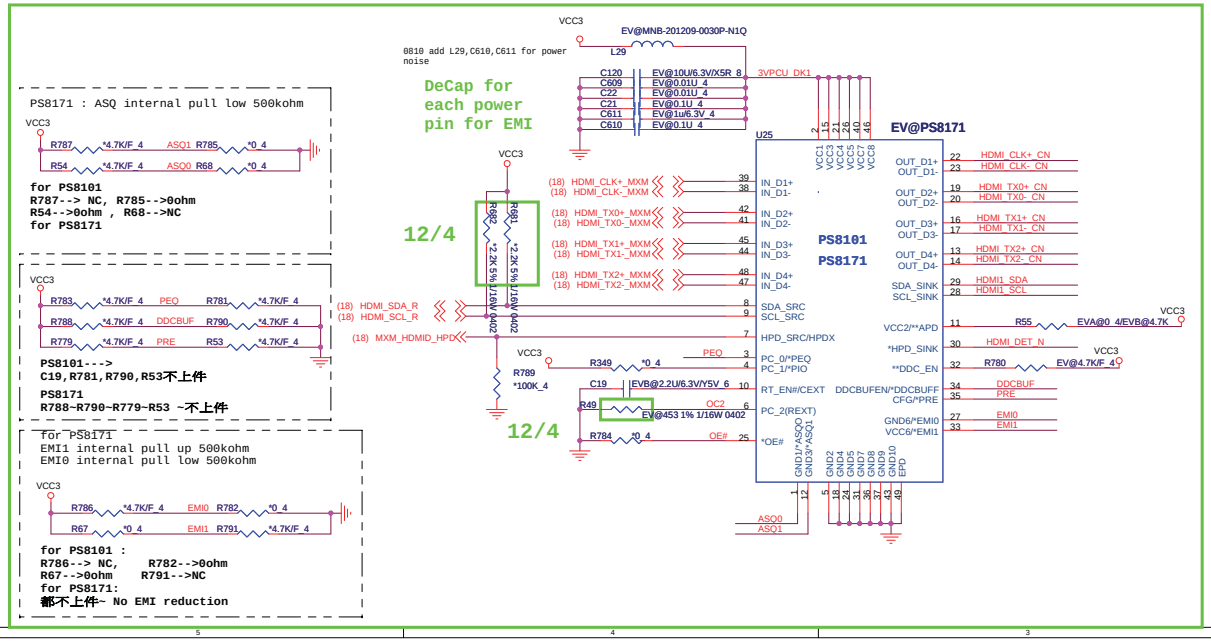




for EMI request

EVA@: PS8101
EVB@: PS8171
EV@MXM
IV@UMA

12/3



PS8171 EMI		
EMI0	EMI1	EMI reduction and filter setting
L	L	
L	H	※ no EMI reduction
H	L	
MID	MID	

PS8171 HPDX		
PIN4	LEVEL	HPDX Output
PIO	L	※ HPD_Sink = HPD
	H	HPD=HPD_SINK#

PS8171 APD (ASQ internal pull low 500kohm)		
PIN11	LEVEL	Description
APD	HIGH	Automatic power down enable
	MID	
	LOW	Automatic power down disable

PS8171 ASQ (ASQ internal pull low 500kohm)		
PIN1 PIN12	LEVEL	Automatic Squelch
ASQ[1,0]	HL	No automatic squelch
	LL	※ Level=100mVpp,default timer
	LH	Level=150mVpp,default timer
	HH	Level=200mVpp,default timer
	ML	Level=120mVpp,extended timer
	MH	Level=160mVpp,extended timer
	LM	Level=80mVpp,extended timer
	HM	Reserved
	MM	Reserved

PRE internal pull low 500kohm

PS8171 DDCBUF (DDCBUF internal pull low 500kohm)		
PIN34	LEVEL	Description
DDCBUF	HIGH	Active DDC buffer enable;Setting 1
	MID	Active DDC buffer enable;Setting 2
	LOW	※ No DDC active buffer,passive DDC level shifting

PS8171 EQ		
PIN3	LEVEL	EQ
PEQ	HIGH	7dB
	MID	※ 2dB
	LOW	4dB

PS8171 SWING		
PIN35	LEVEL	dB
PRE	HIGH	1.2dB
	MID	2dB
	LOW	※ 0dB

PC1	PC0	EQUALIZATION
0	0	8dB
0	1	※ 4dB
1	0	12dB
1	1	0dB

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Title		
HDMI, LEVEL SHIFTER-PS8101		
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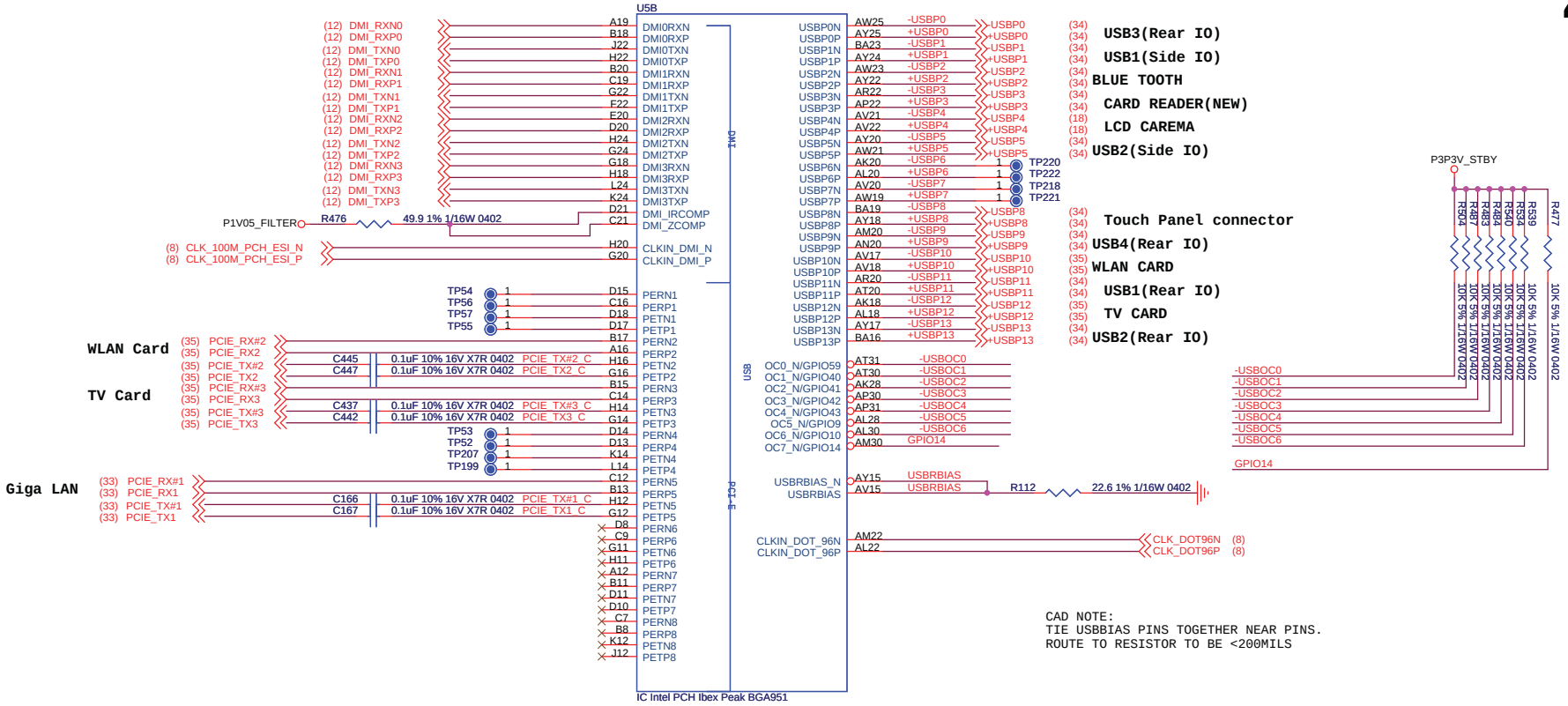

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Title	PCH-DMI, PCI-E, USB	
Size: Custom	Document Number: EL5	Rev: A02
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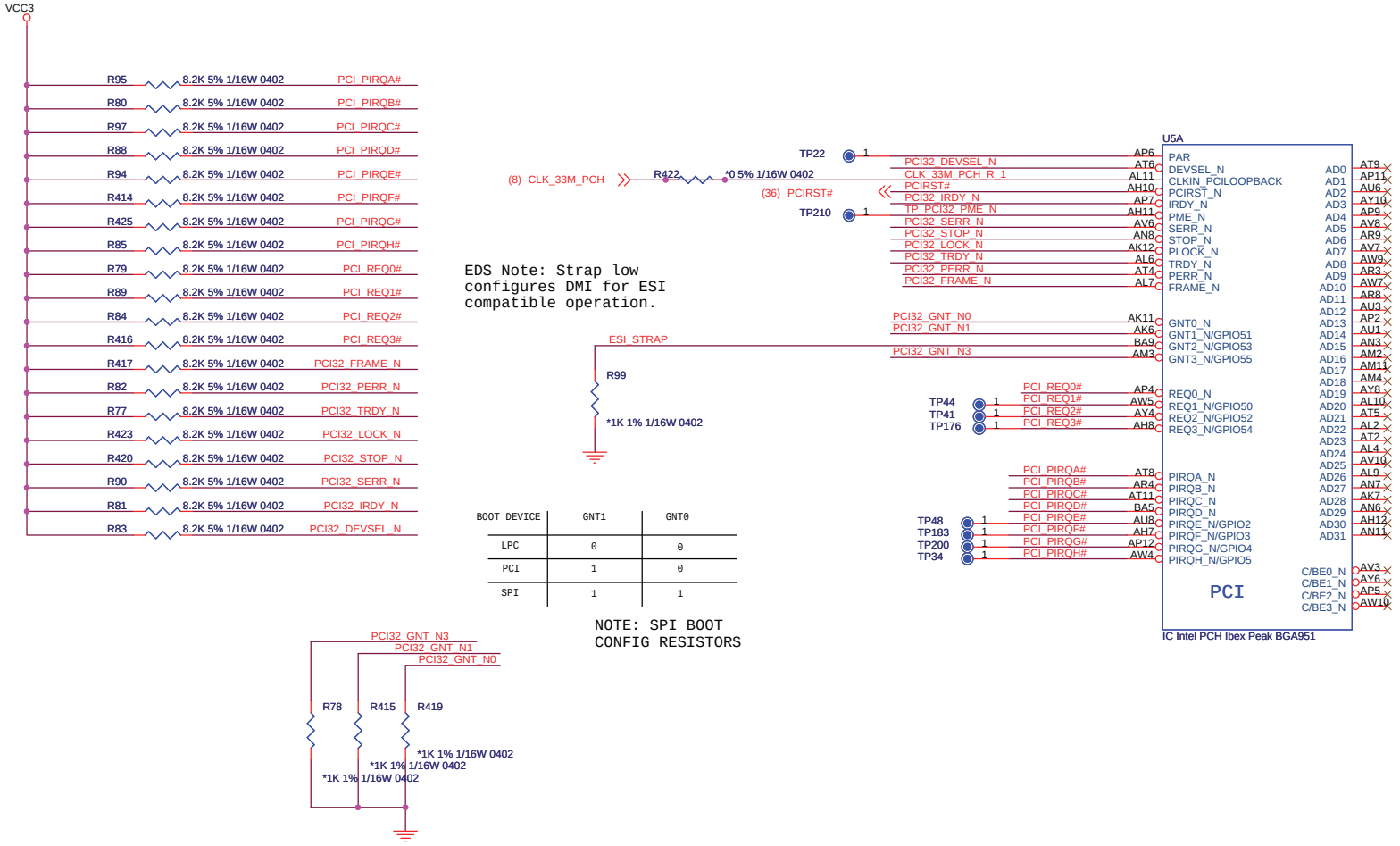

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Title	PCH-PCI	
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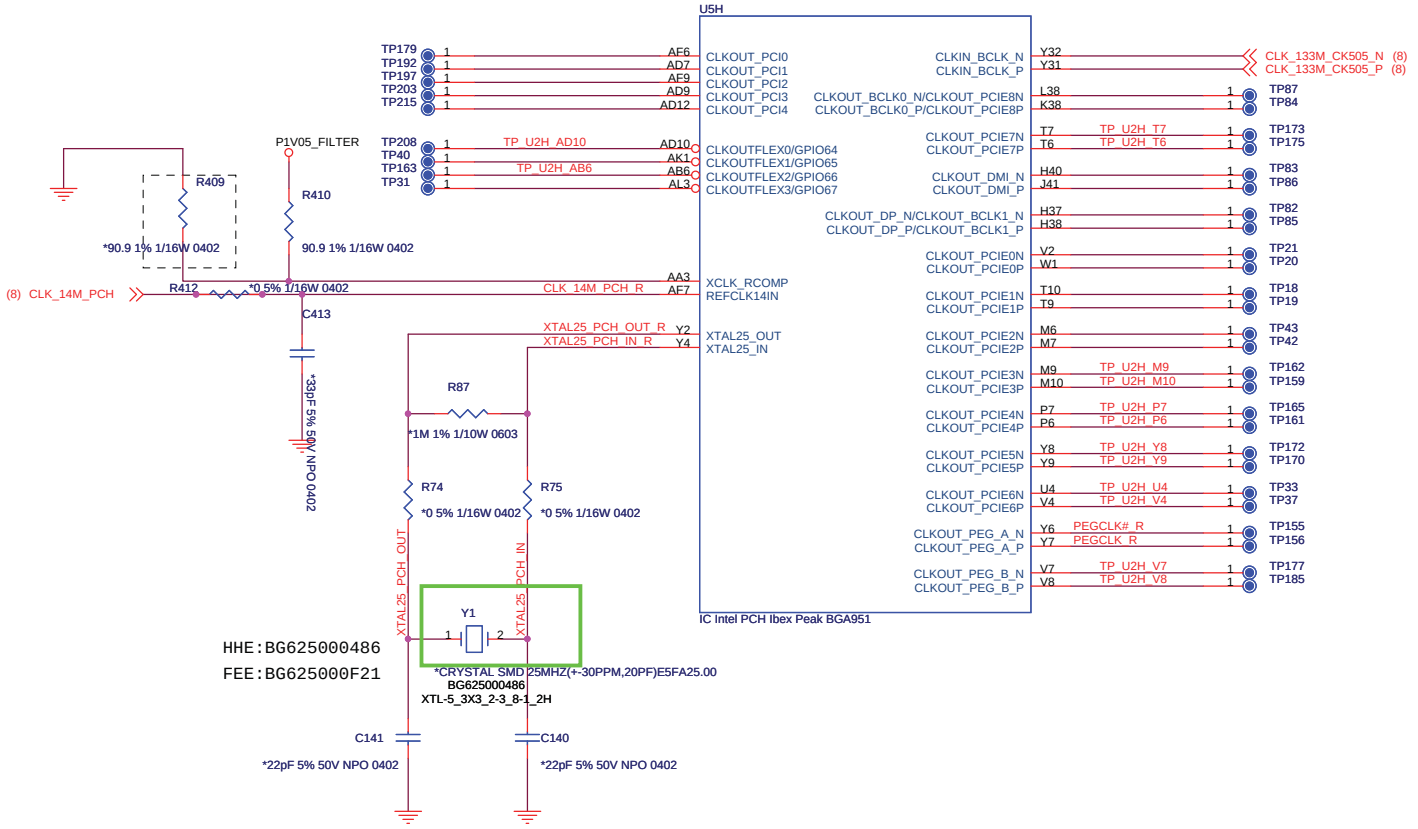

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Title	PCH-CLOCK DISTRIBUTION	
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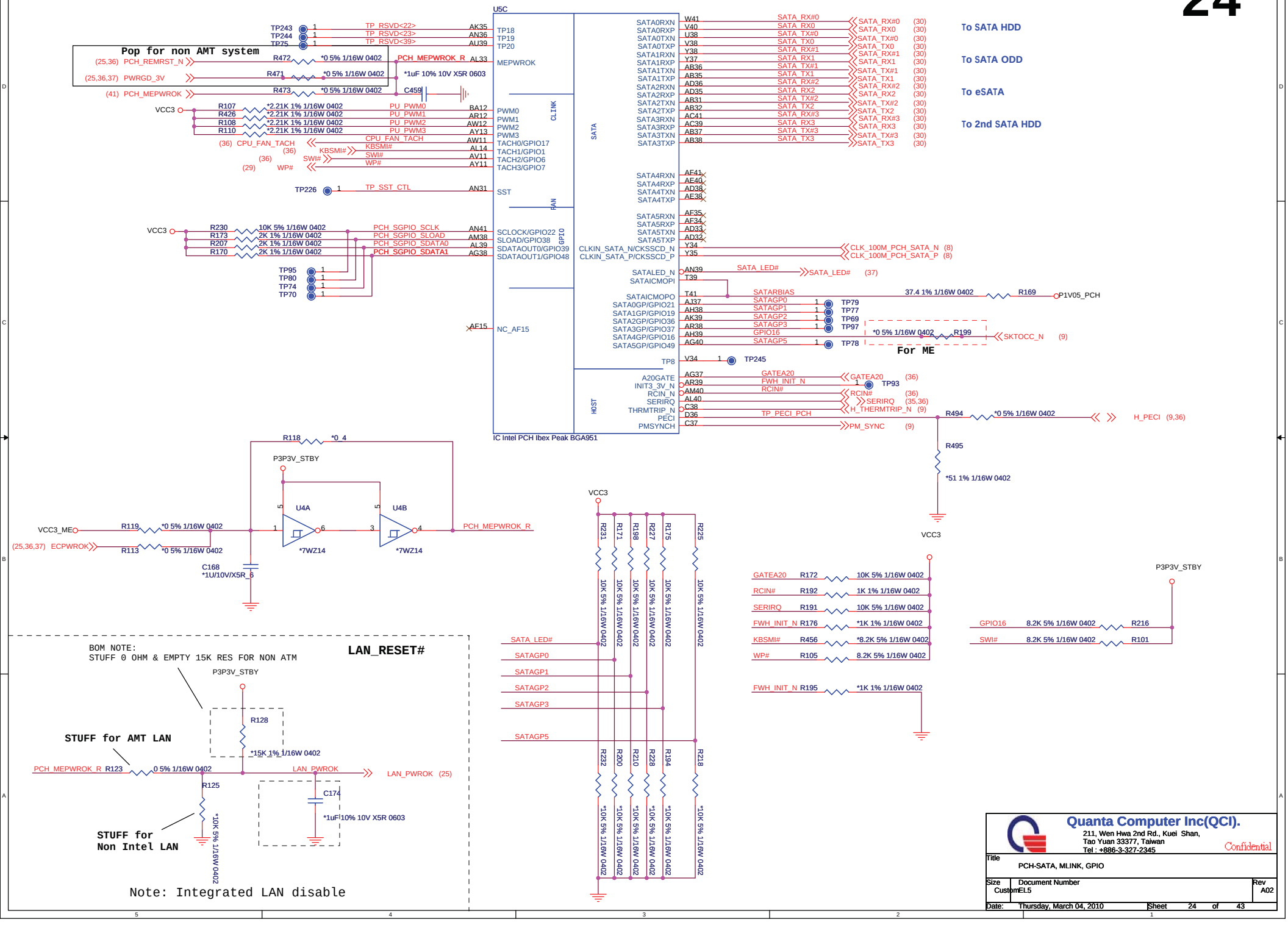

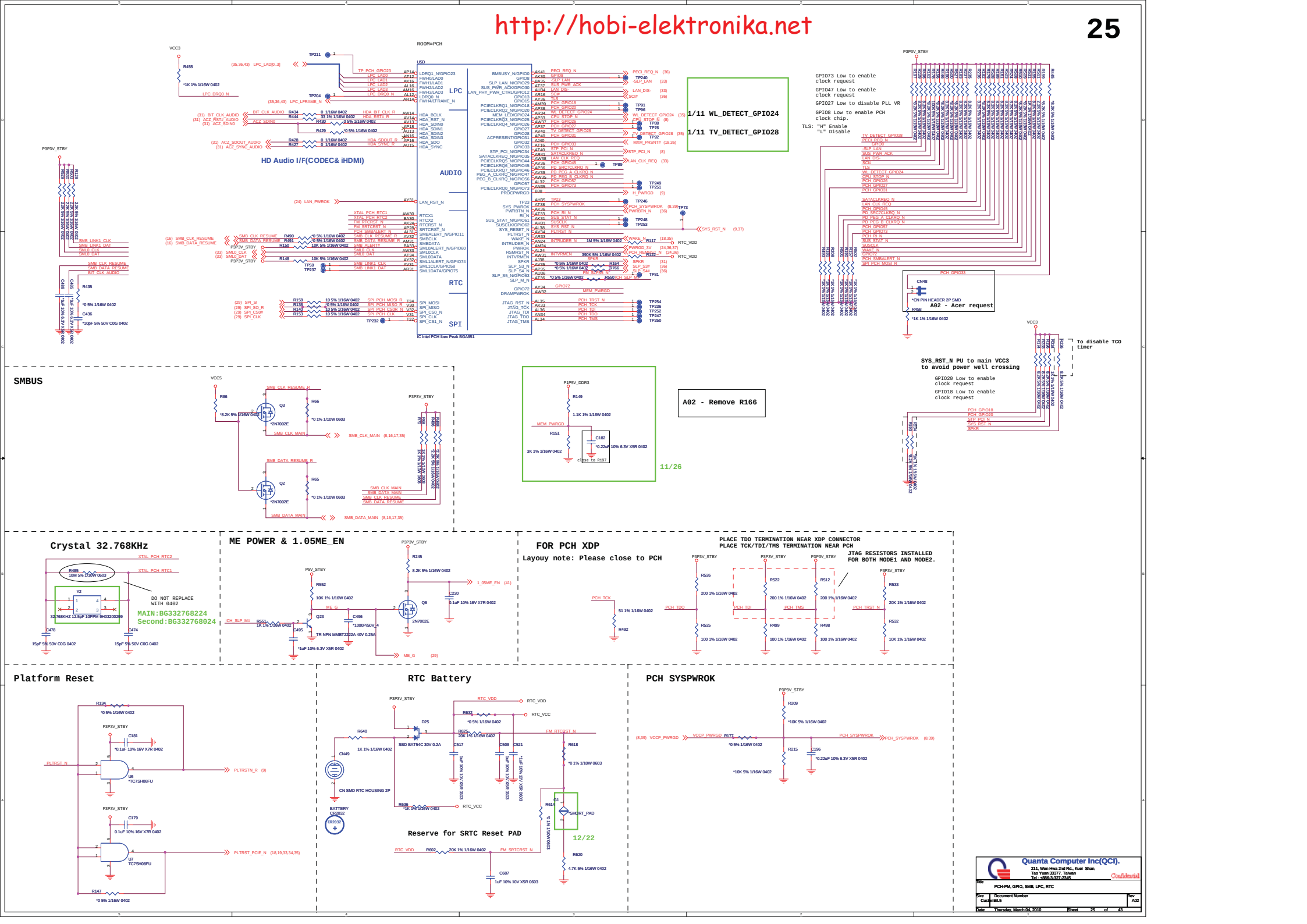

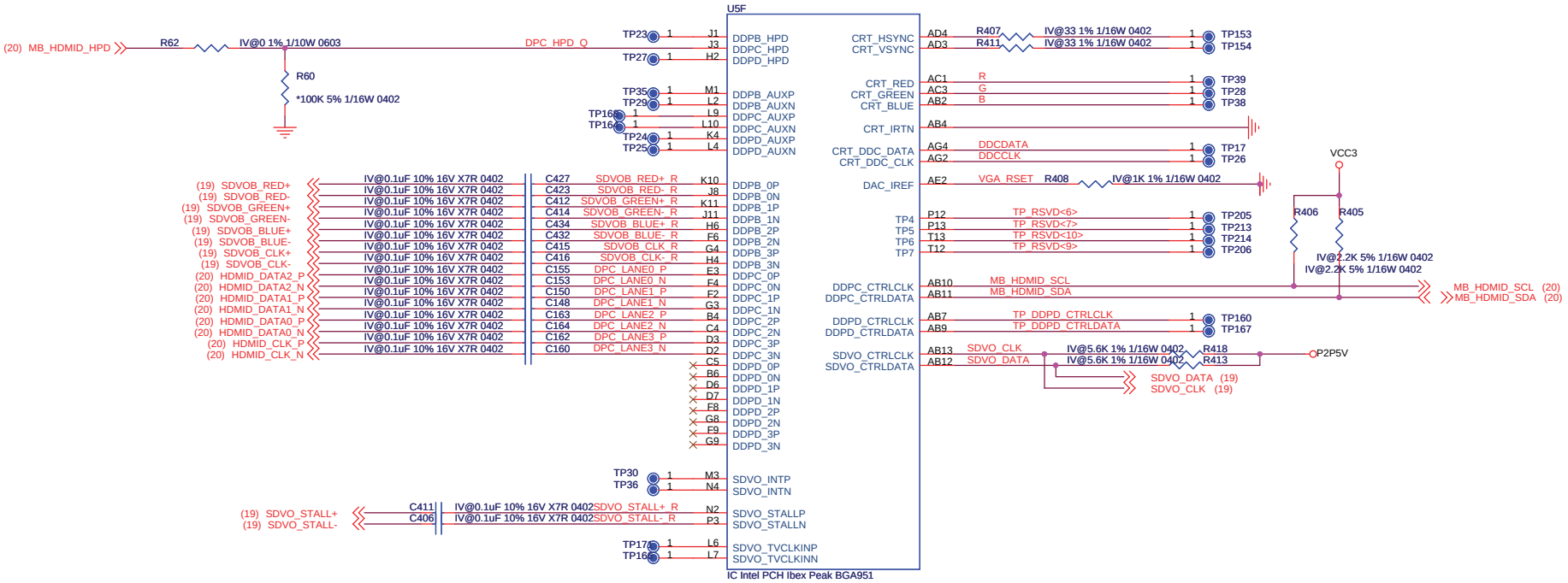

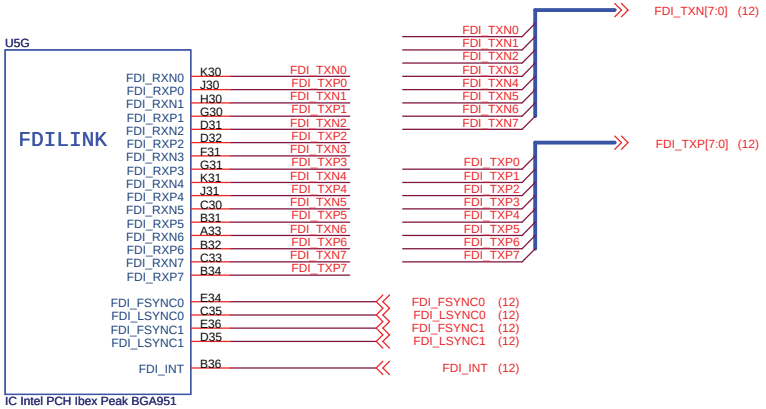

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Title	PCH-DISPLAY , FDILINK	
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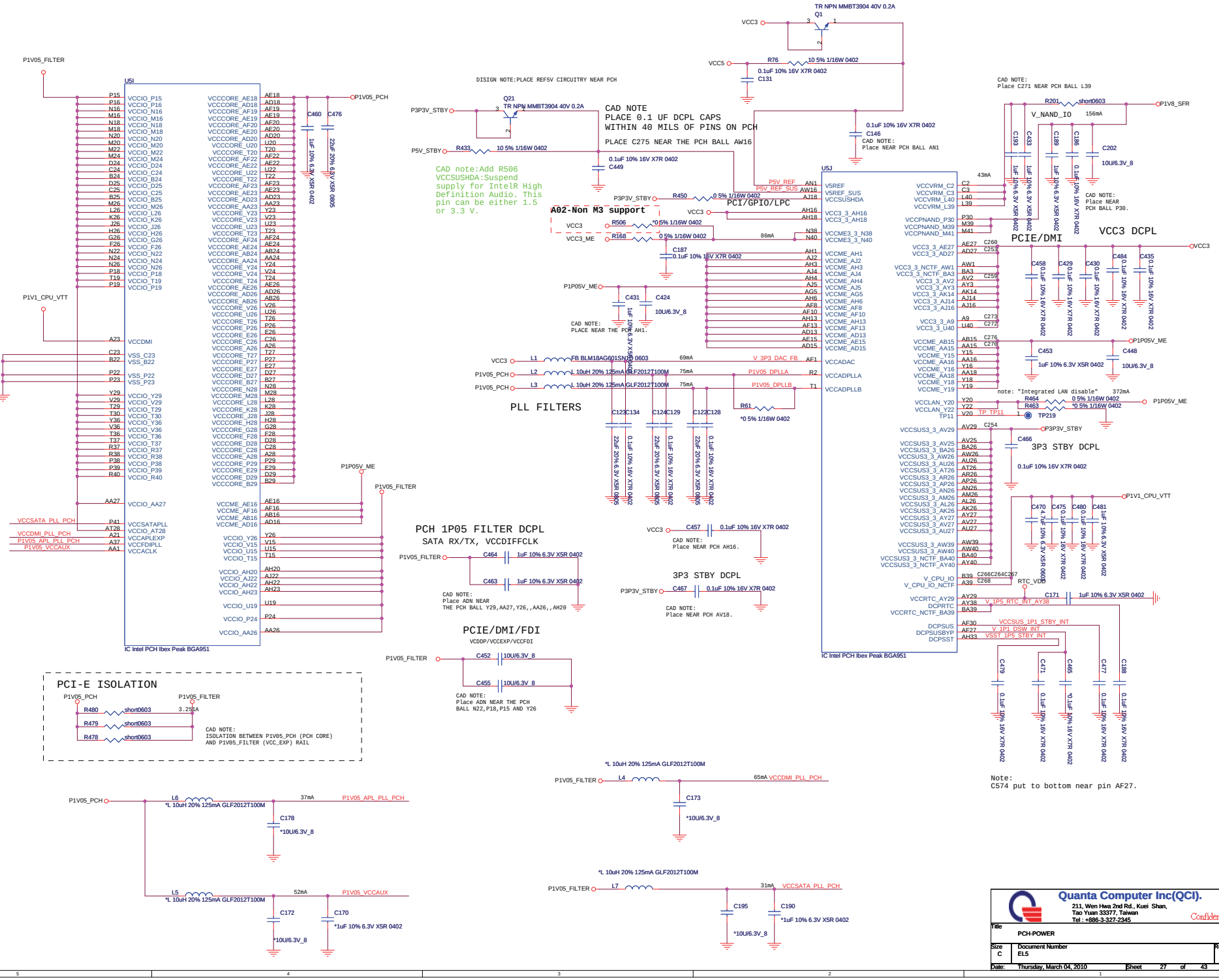

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Title	PCH-POWER	
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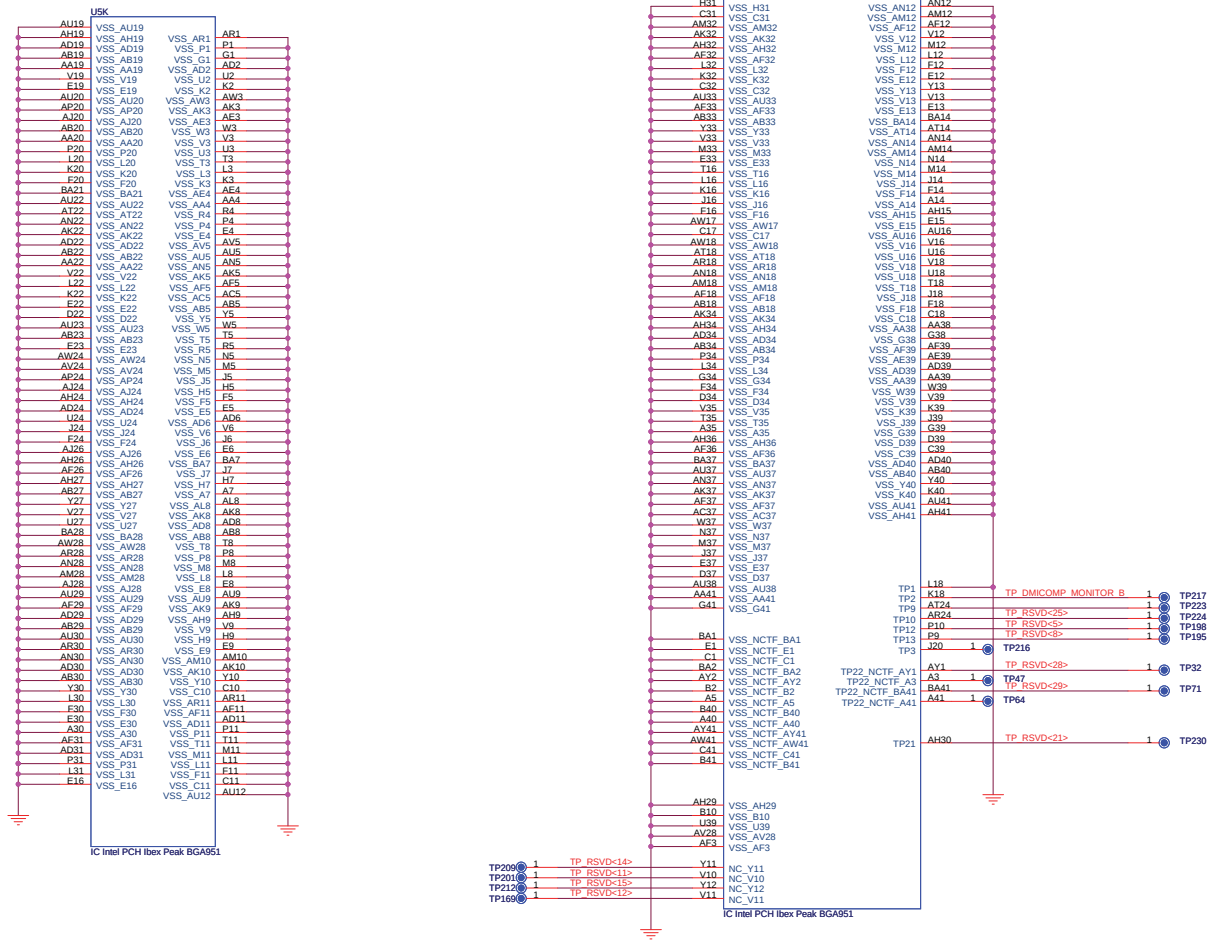

PCH - GND

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Title	PCH-GND	
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11/13

VCC3 — R767 *8.2K 5% 1/16W 0402 — NV_ALE, NV_CLE, NV_R_B#

U5E

NV_ALE	J34	
NV_CLE	L35	
NV_RB_N	M32	
NV_WR_N0_RE_N	J36	
NV_WR_N1_RE_N	J35	
NV_WE_N_CK0	M31	
NV_WE_N_CK1	F38	
NV_DQ0/NV_IO0		T33
NV_DQ1/NV_IO1		P35
NV_DQ2/NV_IO2		T31
NV_DQ3/NV_IO3		P33
NV_DQ4/NV_IO4		M35
NV_DQ5/NV_IO5		L33
NV_DQ6/NV_IO6		M36
NV_DQ7/NV_IO7		M34
NV_DQ8/NV_IO8		M30
NV_DQ9/NV_IO9		F36
NV_DQ10/NV_IO10		H33
NV_DQS1		F40
NV_DQ12/NV_IO12		E39
NV_DQ13/NV_IO13		G33
NV_DQ14/NV_IO14		D40
NV_DQ15/NV_IO15		F33
NV_CE_N0		H36
NV_CE_N1		H35
NV_CE_N2		P32
NV_CE_N3		E41
NV_DQS0		P36
NV_DQ11/NV_IO11		F37
NV_RCOMP		L36

NVRAM

IC Intel PCH Ibex Peak BGA951

NV_RCOMP — R497 *32.4 1% 1/16W 0402 — Place near to PCH

DMI Termination Voltage	
NV_CLE	Set to Vcc when LOW Set to Vcc/2 when HIGH

P1V8_SFR

NV_ALE — R768 *8.2K 5% 1/16W 0402

NV_CLE — R769 *8.2K 5% 1/16W 0402

Danbury Technology Enabled	
NV_ALE	High = Enable Low = Disable

Default Hi , drive Lo to disable AT-D function.

Note: For NV_ALE, Intel Anti-Theft Technology is enabled when sampled high . pulling the signal low disable Intel Anti-Theft Technology

Note: NV_CLE signal should not be pulled low during the time the strap is sampled

11/13

iTPM ENABLE/DISABLE

VCC3_ME — R166 *1K 1% 1/16W 0402 — SPI_SI

TPM Function	JP12
Enable	1-2
Disable	1-x (Default)

PCH SPI ROM(8MB)

*0 1% 1/10W 0603 — R131 — P3P3V_STBY

0 1% 1/10W 0603 — R165 — VCC3_ME

R132 1K 1% 1/16W 0402

R163 1K 1% 1/16W 0402

(25) SPI_CS0# — SPI_CS0#

(25) SPI_CLK — SPI_CLK

(25) SPI_SI — SPI_SI

(25) SPI_SO_R — SPI_SO_R

U8

CE#	1	VDD	8
SCK	6		
SI	5		
SO	2	HOLD#	7
WP#	3	VSS	4

W25Q64BV

C183 22pF 5% 50V NPO 0402

C185 0.1uF 10% 16V X7R 0402

(24) WP# — TR PNP MMBT3906 -40V -0.2A — Q4

11/13

EC ROM(1MB)

short0603 — R154 — P3P3V_STBY

*0 1% 1/10W 0603 — R160 — VCC3_ME

R188 1K 1% 1/16W 0402

R167 1K 1% 1/16W 0402

(36) 8512_SCE# — 8512_SCE#

(36) 8512_SCK — 8512_SCK

(36) 8512_SI — 8512_SI

(36) 8512_SO — 8512_SO

U9

CE#	1	VDD	8
SCK	6		
SI	5		
SO	2	HOLD#	7
WP#	3	VSS	4

W25X80

C184 0.1uF 10% 16V X7R 0402

Mount R558 for Non-M3 support

R558 0 1% 1/4W 1206

P3P3V_STBY — Q24 *TR M-FET-P AO4435L 30V 10A — VCC3_ME

C497 0.1uF 10% 16V X7R 0402

C493 *100U/6.3V

C492 10U/6.3V_8

C494 0.1uF 10% 16V X7R 0402

(25) ME_G

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Title	PCH-NV RAM (ONFI)/FLASH	
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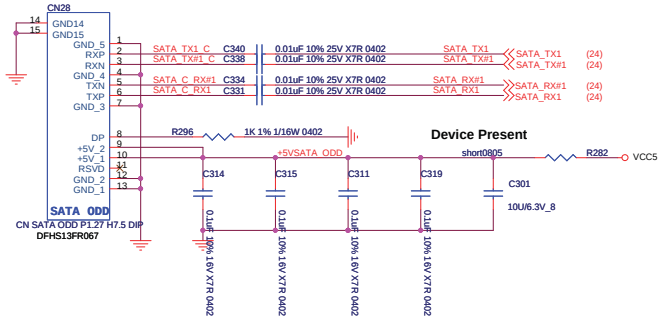
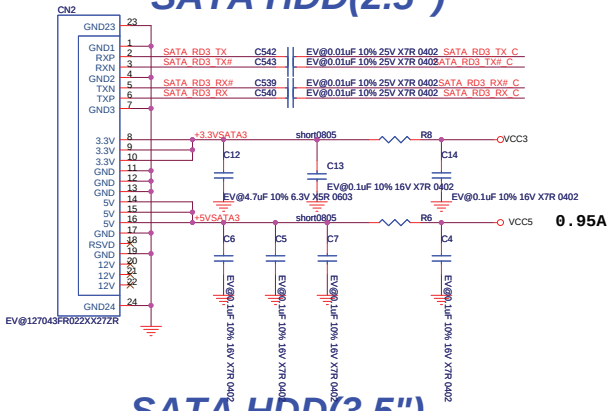
SATA ODD

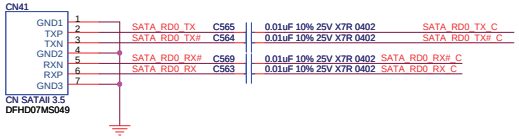
2.1A



SATA HDD(2.5")

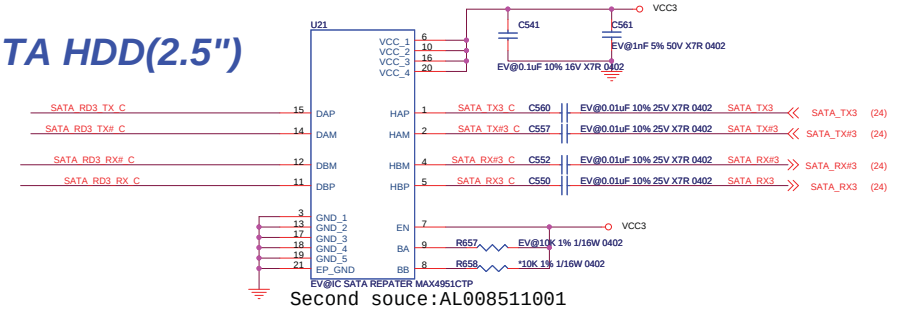


SATA HDD(3.5")



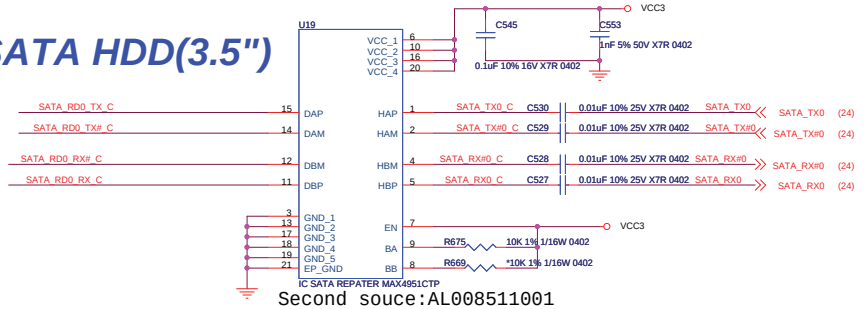
ESATA CONN

SATA HDD(2.5")



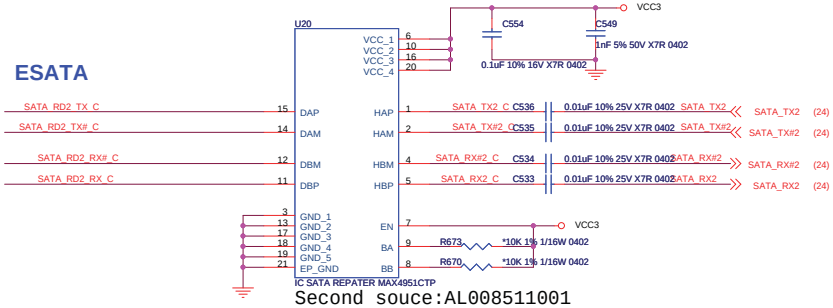
Second souce:AL008511001

SATA HDD(3.5")



Second souce:AL008511001

ESATA



Second souce:AL008511001

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Title	ESATA,ODD,2.5/3.5HDD	
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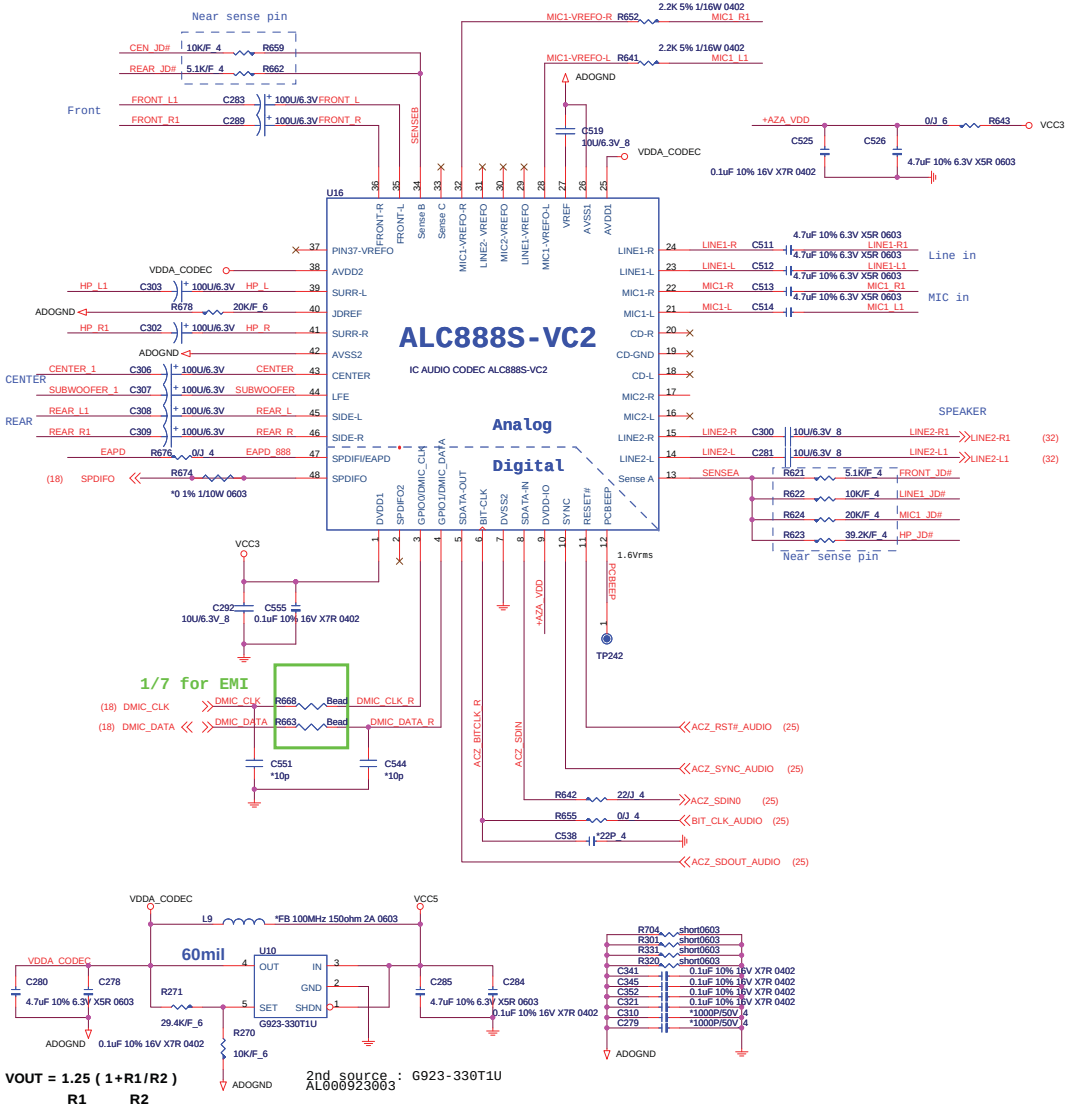
CODEC

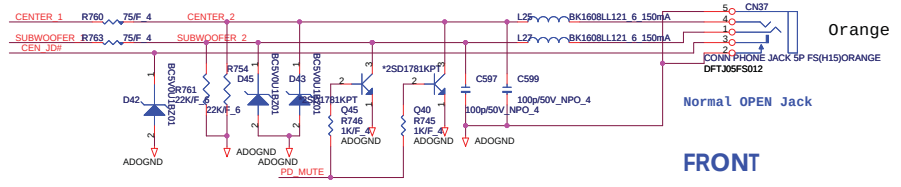


VOUT = 1.25 (1+R1/R2)

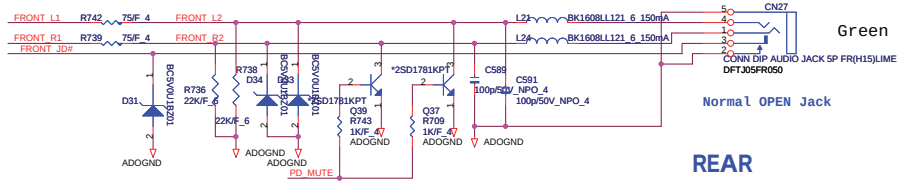
R1	R2
4.8375V 28.7K	10K

2nd source : G923-330T1U
AL000923003

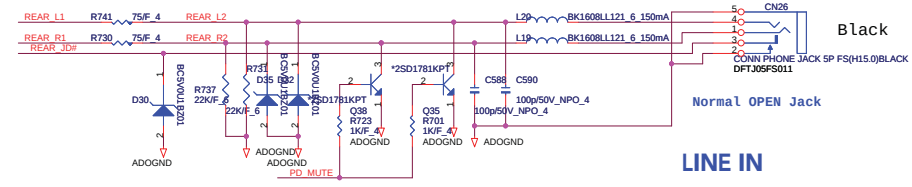
CENTER & SUBWOOFER



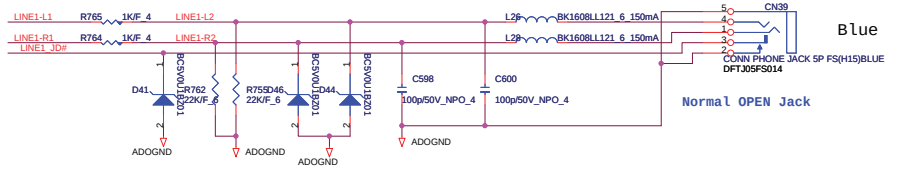
FRONT



REAR

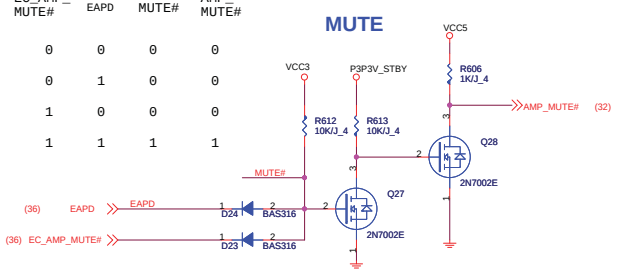


LINE IN



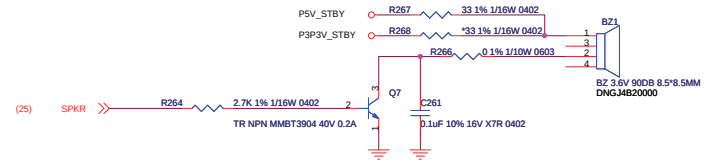
MUTE

EC_AMP_MUTE#	EAPD	MUTE#	AMP_MUTE#
0	0	0	0
0	1	0	0
1	0	0	0
1	1	1	1

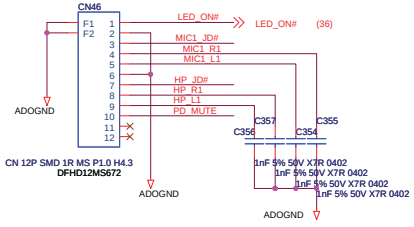


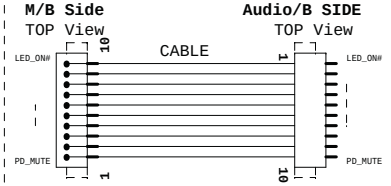
BUZZER

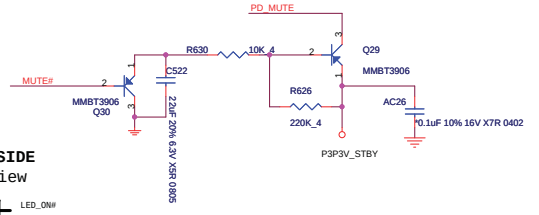
A02



EXT. MIC & HP







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Title	AUDIO CODEC-ALC888/MIC/JACK		
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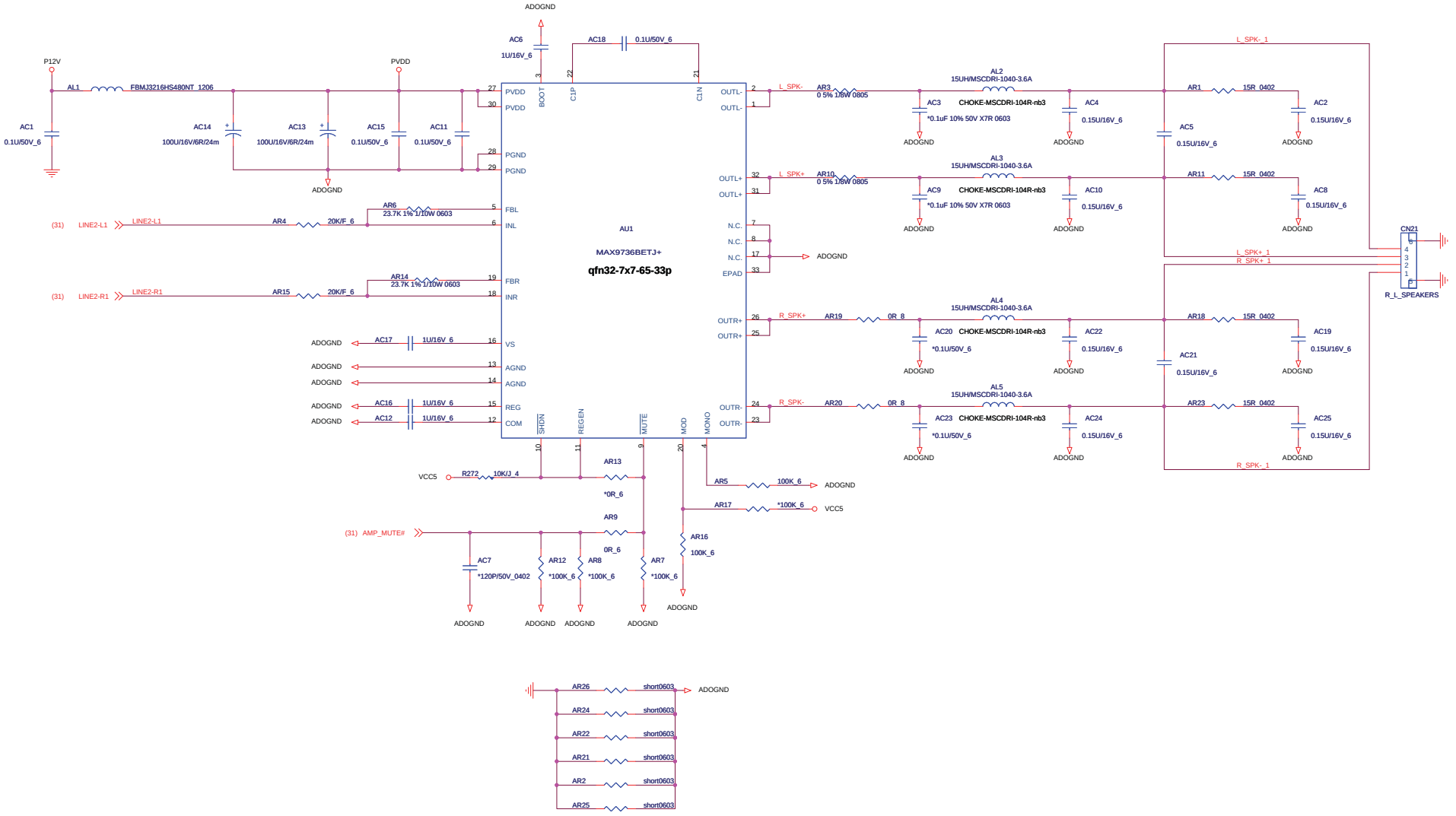
Speaker AMP.



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Tel : +886-3-327-2345		
Title: AUDIO AMP		
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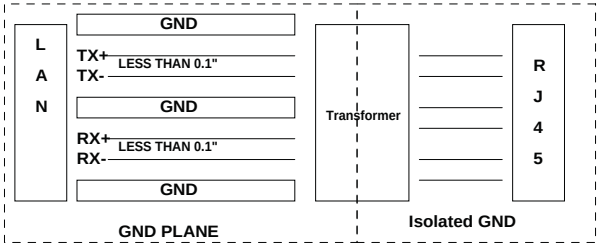
TX
RX

100 ohm ---> trace 4 mil , space 7 mil
50 mil space from other signals
Total Tace Length no more thans 4"
2 Differential pairs must have the same length



LAN POWER

2A

01/07

X'tal 25MHz

CRYSTAL SMD 25MHZ(+-30PPM,20PF)E5FA25.00

HHE:BG625000486
FEE:BG625000F21

G5243T11U:AL005243000
AOZ1320CI:AL001320000

LAN Tramsformer

copy from EL7
trf-10-1-24p-nb3-->trf-10-1-24p-smt
for layout's request

11/24

1000:Yellow

100:Green

1/11

1/11

1/11

CN RJ45 Giga 12P 3LED DIP
DFTJ12FR084

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Title	GBLAN-Intel 82578/RJ45	
Size C	Document Number EL5	Rev A02
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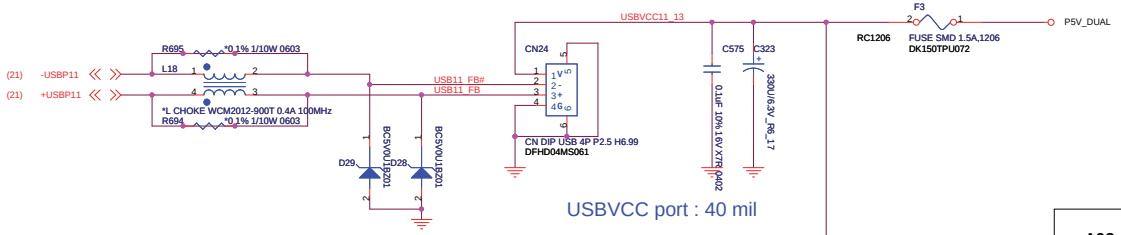
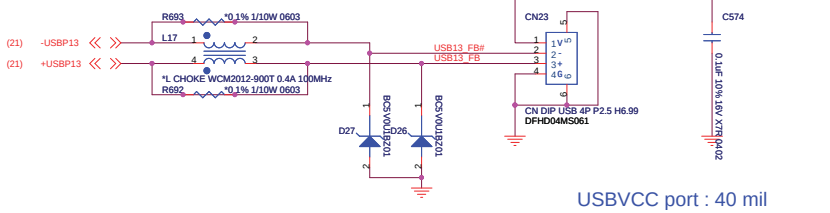
REAR USB PORT X4

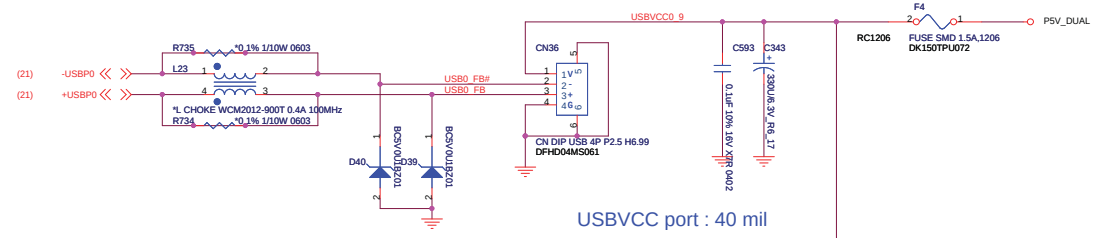
USBVCC port : 40 mil



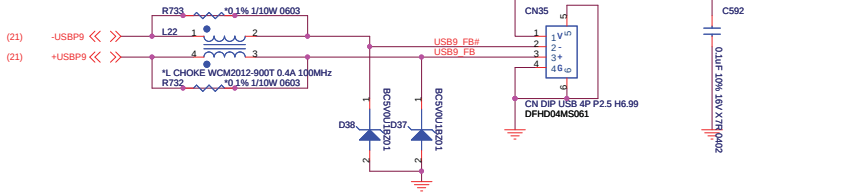
USBVCC port : 40 mil



USBVCC port : 40 mil

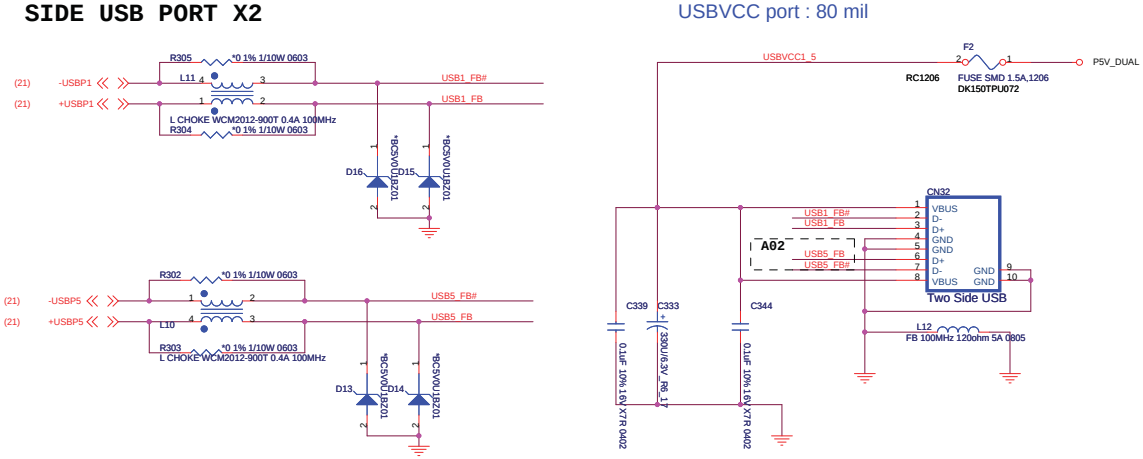


USBVCC port : 40 mil

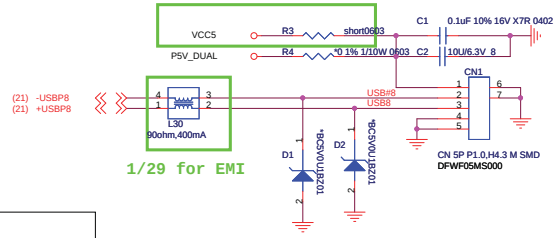


SIDE USB PORT X2

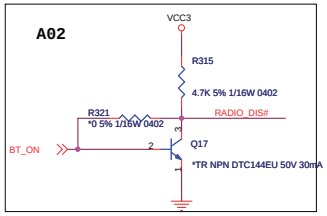
USBVCC port : 80 mil



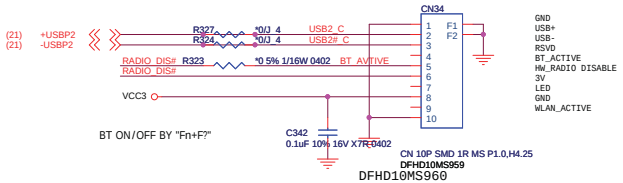
Touch Panel connector



1/29 for EMI

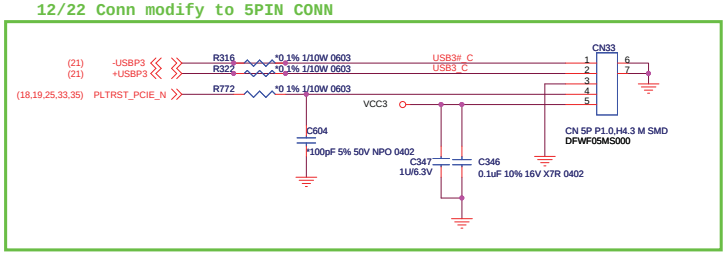


BLUETOOTH connector



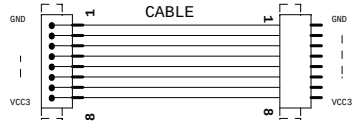
MEDIA READER connector

12/22 Conn modify to 5PIN CONN



M/B Side
TOP View

Card reader/B SIDE
TOP View



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Title	USB PORT/BLUETOOTH/MEDIA READER CNN	
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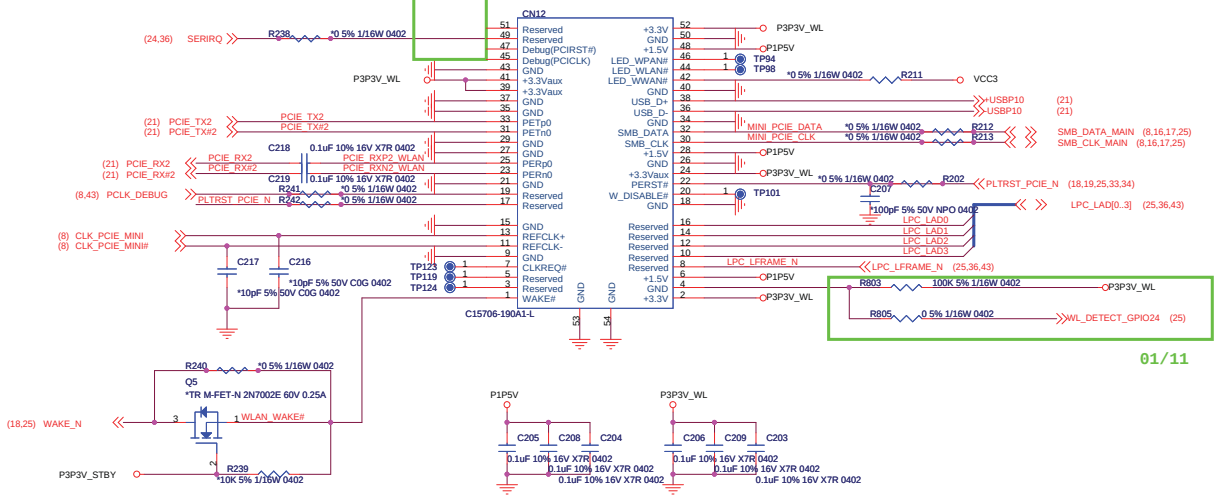
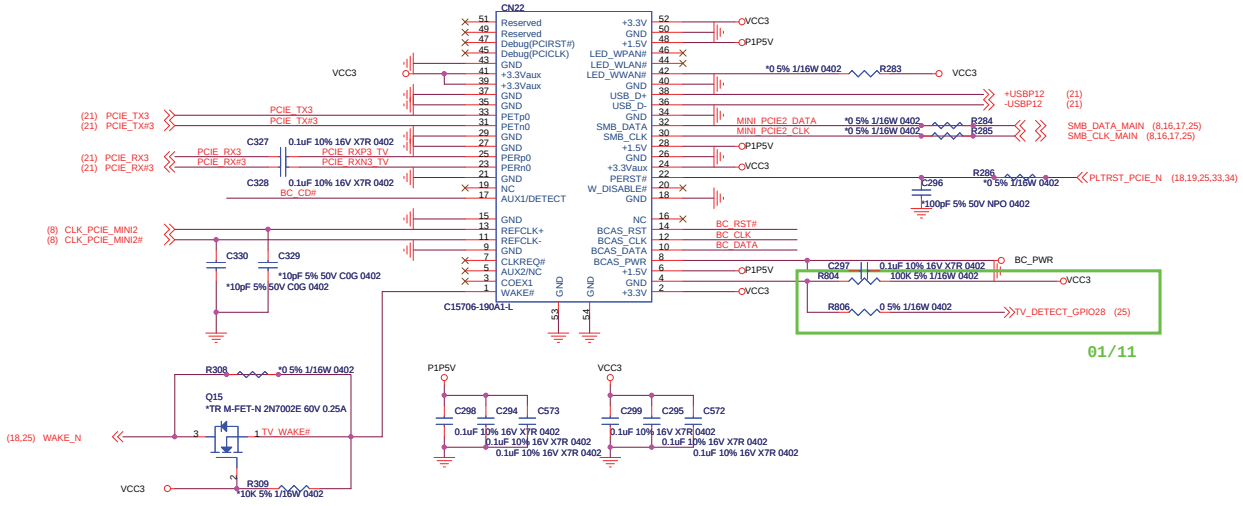
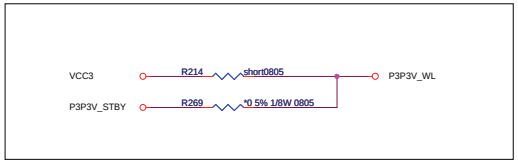
Wireless / 80 Port

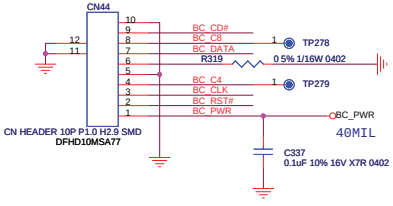


TV Card

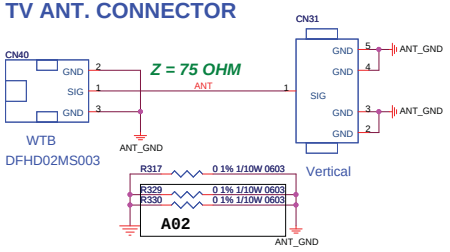




B-CAS CONN



TV ANT. CONNECTOR



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Title	MINI PCIE-WLAN/TV, B-CAS CN	
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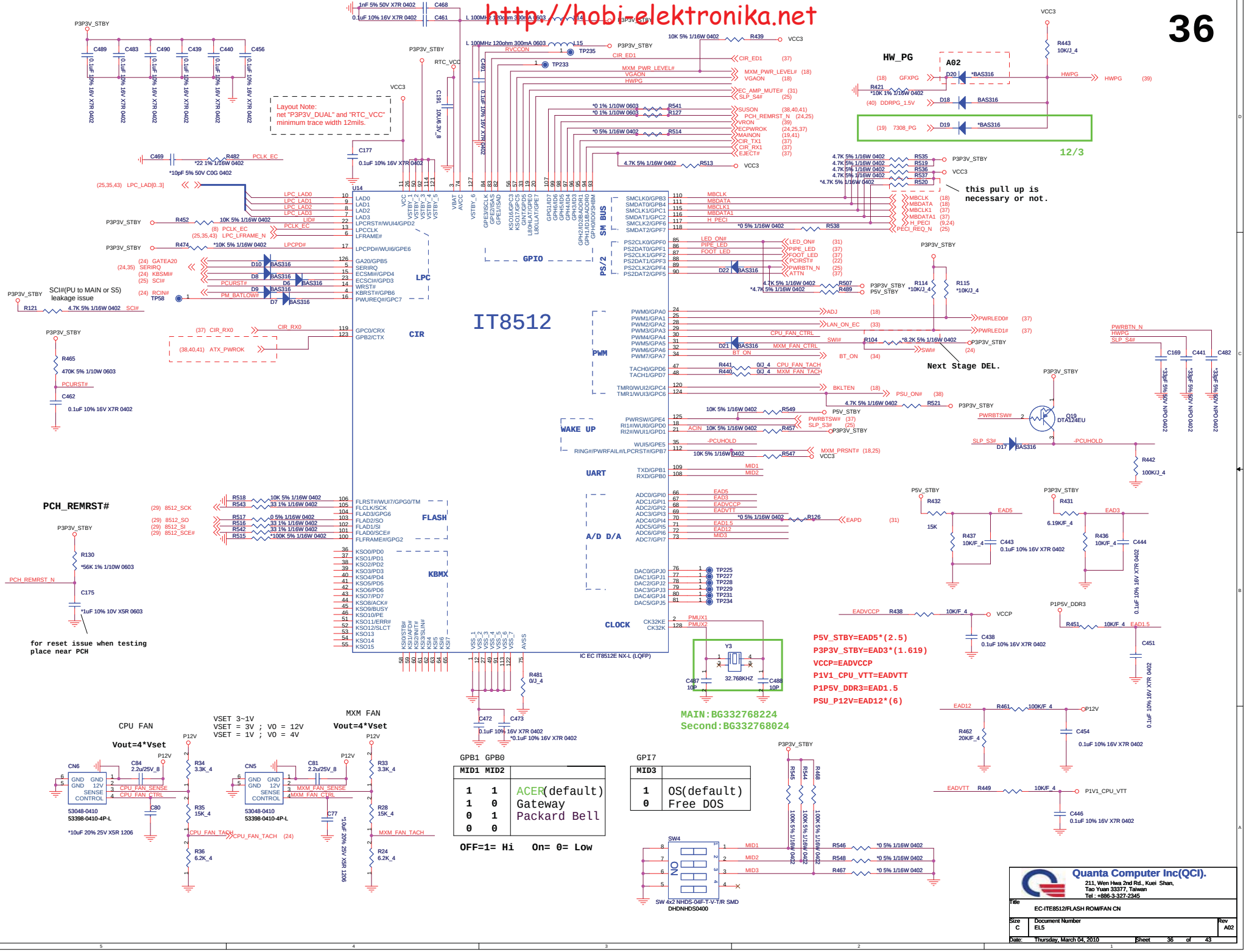
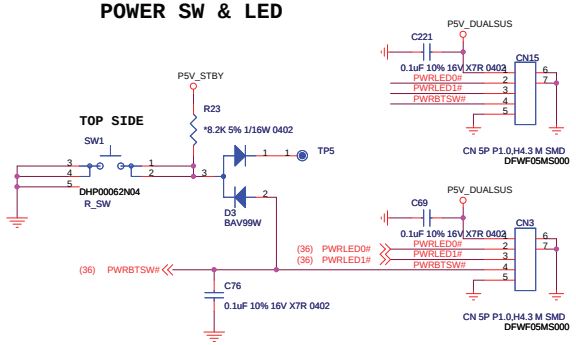
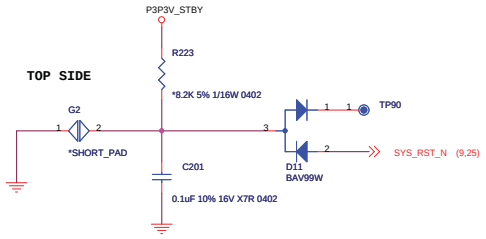


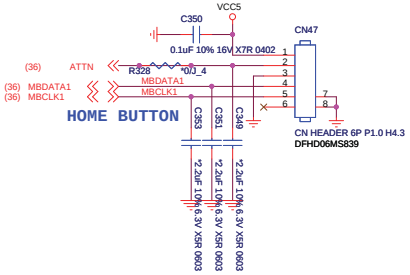
POWER SW & LED



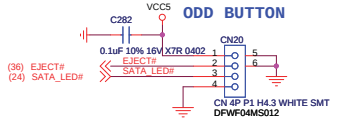
SYSTEM RESET



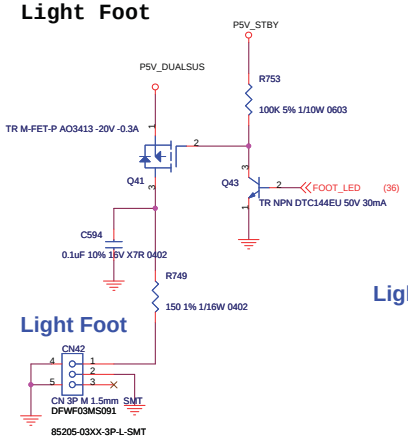
HOME BUTTON



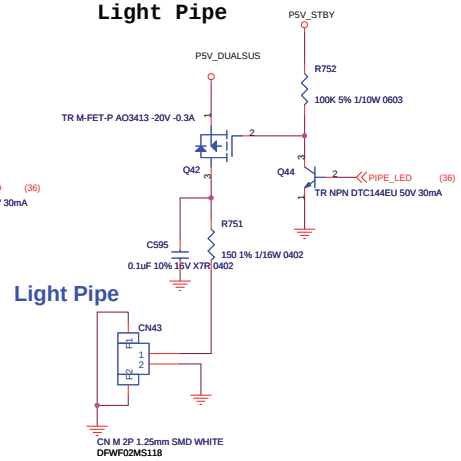
ODD EJECT



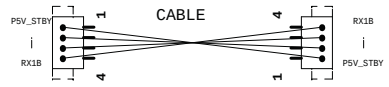
Light Foot



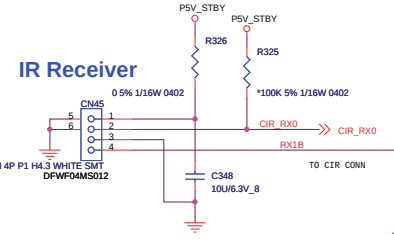
Light Pipe

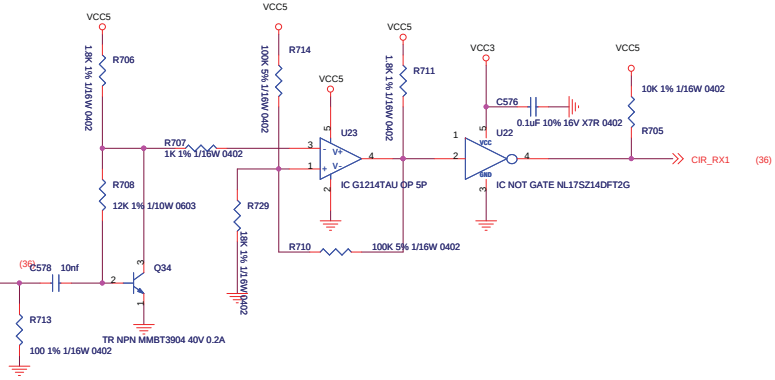


M/B Side / IR/B SIDE

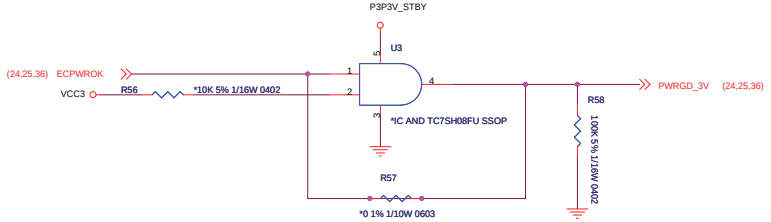


IR Receiver

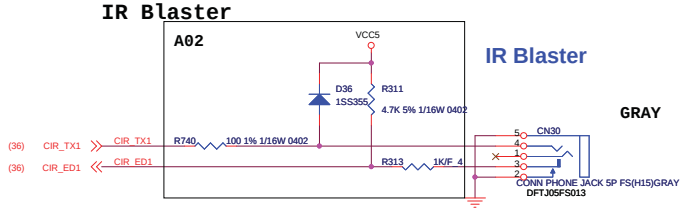




PCH POWEROK



IR Blaster



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Title	POWER SW/FRONT PANEL CN/IR	
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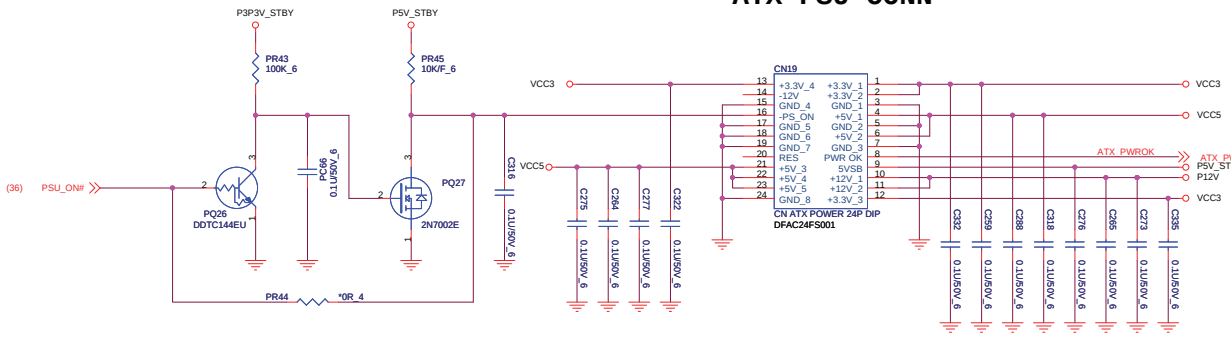
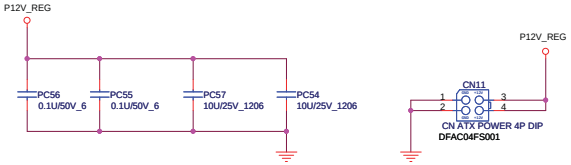
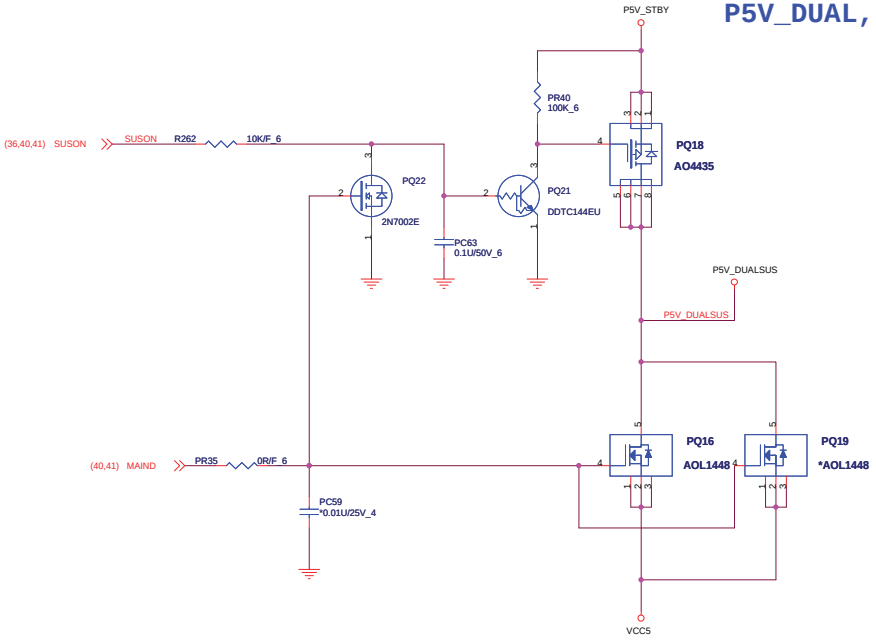
ATX PSU CONN

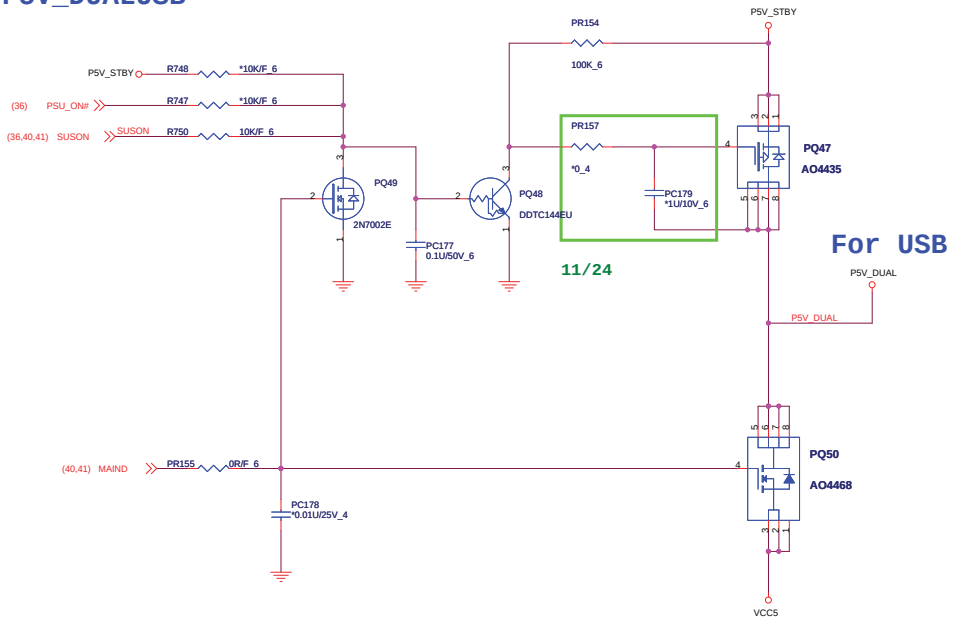


4PIN +12V_REG for CPU_CORE

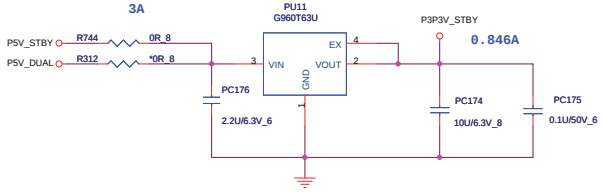


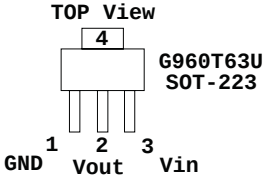
P5V_DUAL, P5V_DUALUSB





For EC&LAN





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Tel : +886-3-327-2345		
Title: PSU, 3V/5V DUAL		
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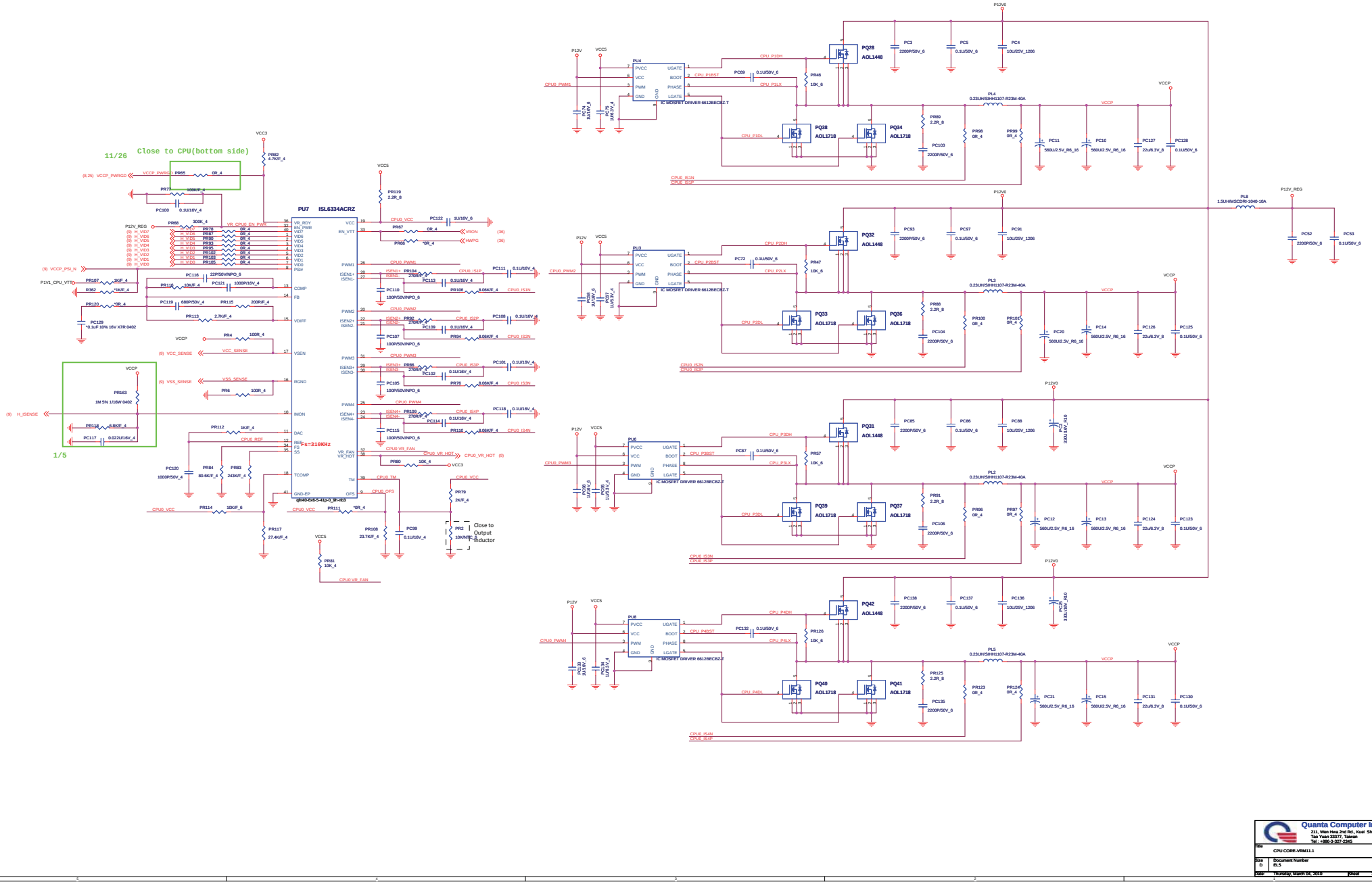

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Title	CPU CORE-VRM11.1		
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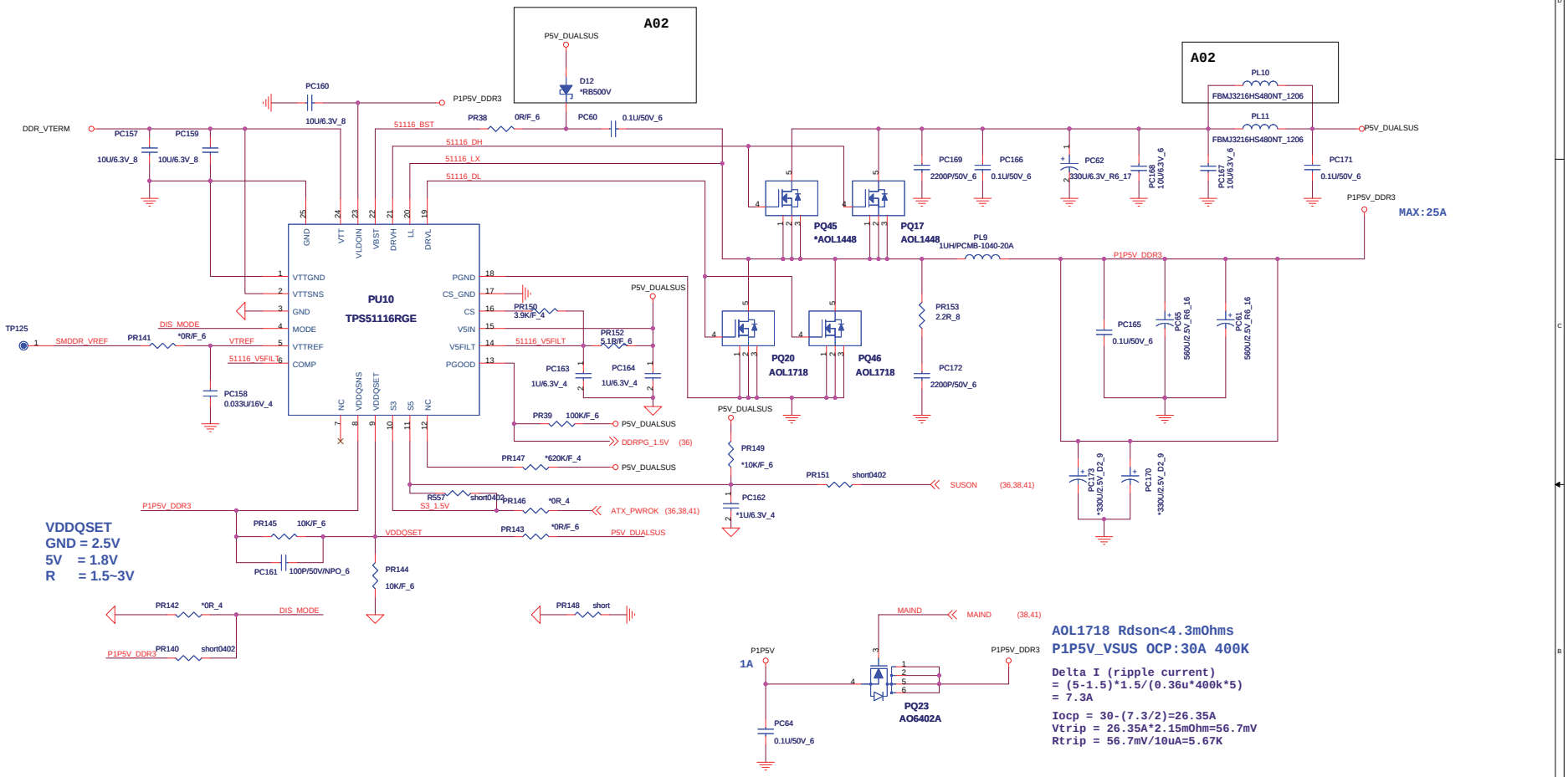
DDRIII P1P5V_SUS (TPS51116)



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Title	DDRIII POWER-1.5VSUS	
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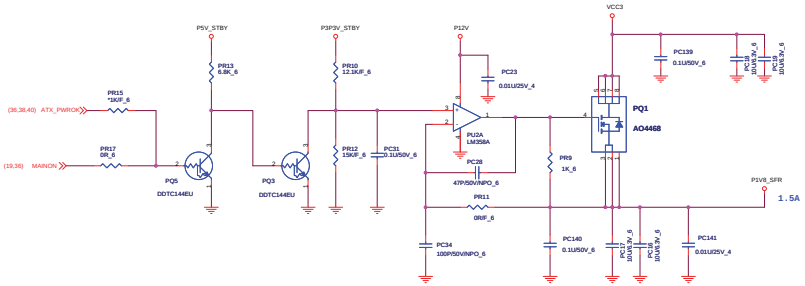
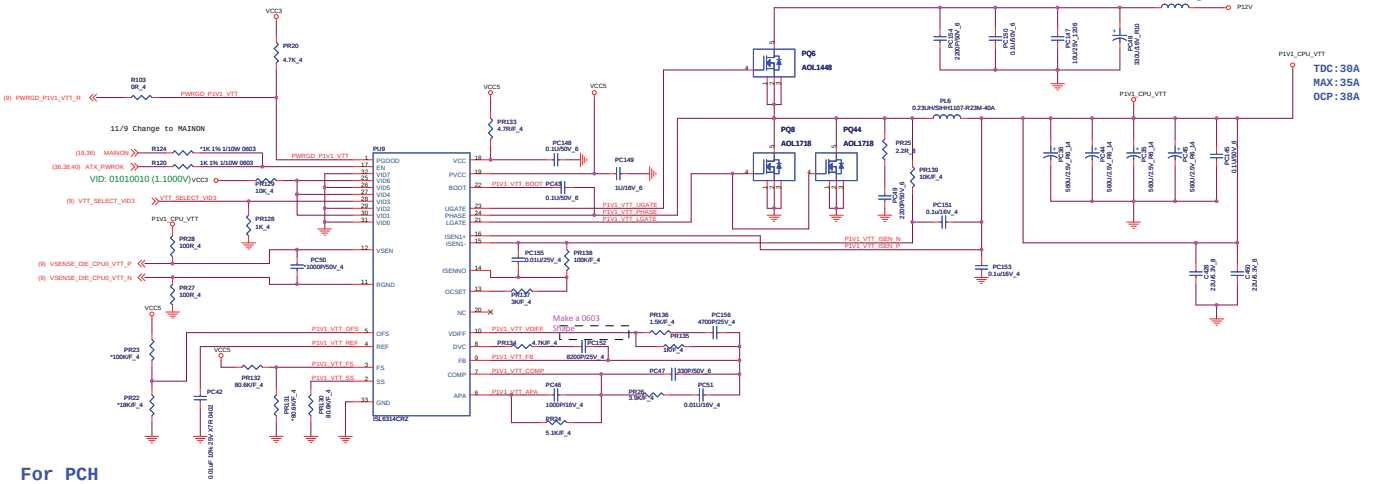
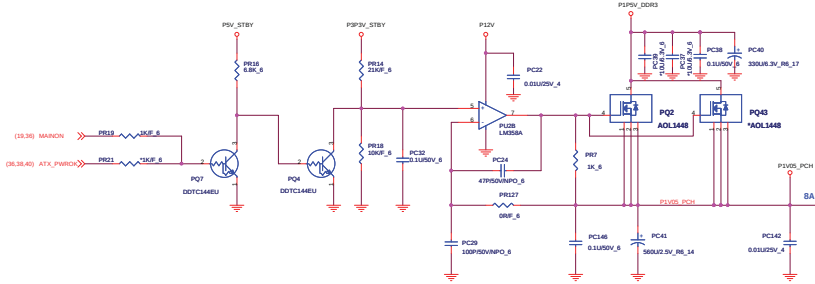


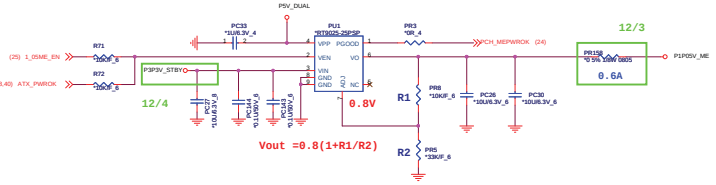


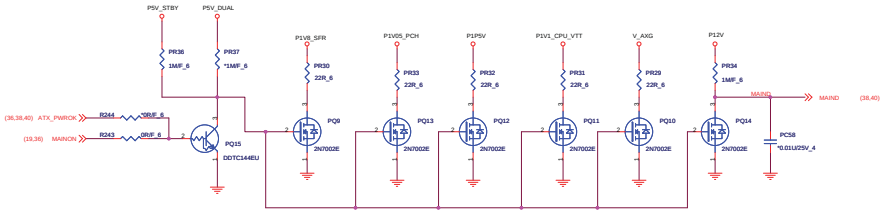


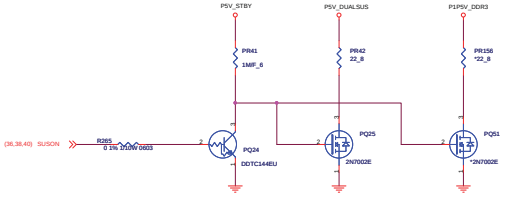
For PCH

P1P05V_ME

Short for Non-M3 support







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Title	1.8VSFR,1.05V,FSB_VTT(1.1V)	
Size: D	Document Number: EL5	Rev: A02
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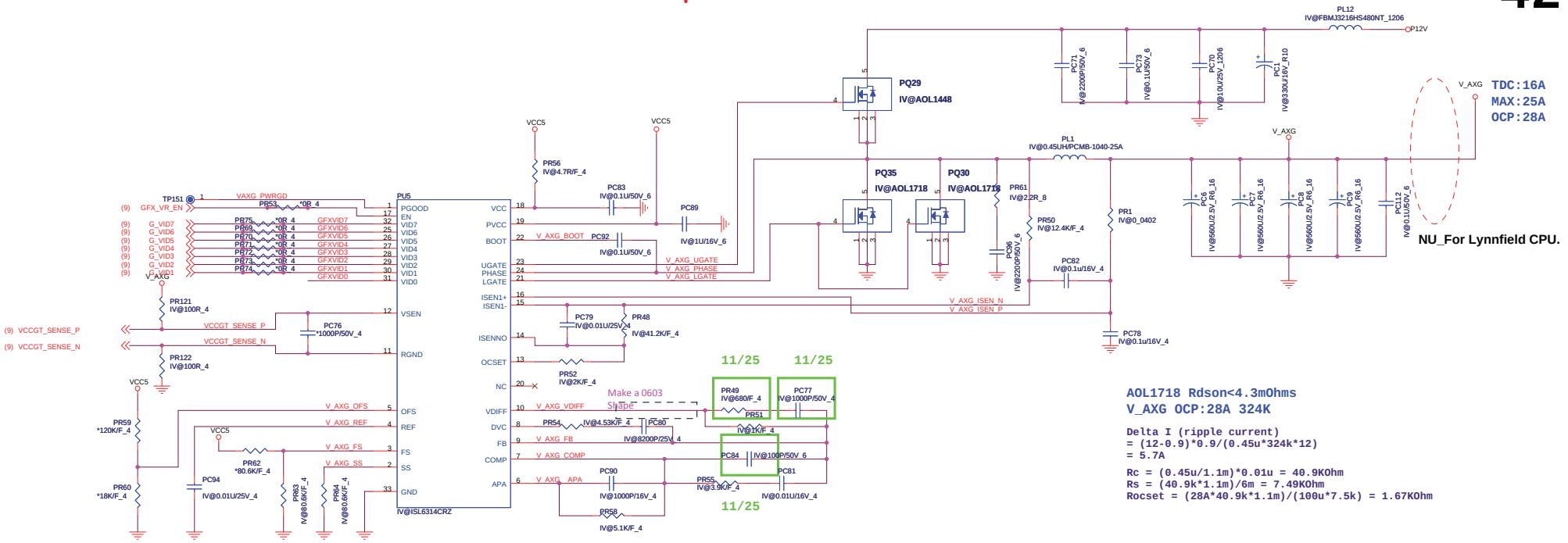
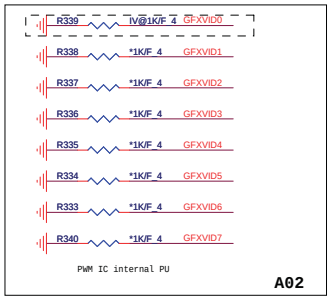


AOL1718 Rdson<4.3mOhms
V_AXG OCP:28A 324K

Delta I (ripple current)
= (12-0.9)*0.9/(0.45u*324k*12)
= 5.7A

Rc = (0.45u/1.1m)*0.01u = 40.9KOhm
Rs = (40.9k*1.1m)/6m = 7.49KOhm
Rocset = (28A*40.9k*1.1m)/(100u*7.5k) = 1.67KOhm



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Title: GFX_VCC	
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02/22 Change size for ME

01/08 Add PAD FOR EMI

H11 H-C67D67N
H13 H-C87D87N
H4 H-C87D87N
PAD1 SPAD-RE1175X985NP
SPAD-RE1175X985NP
H25 H-EL5_MB-1
H-EL5_MB-1
H26 H-EL5_MB-1
H-EL5_MB-1

H23 H-C322D217P2
H22 H-C322D217P2
H8 H-C322D217P2
H9 H-C322D217P2
H16 H-TC472BC276D110P2
H10 H-TC472BC276D110P2

H15 H-C276D138P2
H12 H-C276D138P2
H19 H-C276D138P2
H21 H-C217D124P2
H14 H-C217D124P2

H18 H-C276D118P2
H5 H-C276D118P2
H31 H-O-EL5-1
ADOGND
H32 H-O-EL5-1

12/22

H29 H-C276D157P2
H30 H-C276D110P2
H1 H-C276D110P2
H33 O-EL5-2
H6 H-C1575D1575N
H7 H-C1969D1969N

H28 h-c276d110p2
H24 H-c355d110p2
H2 H-C276D157P2
H3 H-C276D110P2
H17 H-TC236D130P2
H20 H-TC236D130P2
H27 H-TC236D130P2

12/4

WLAN / TV

VCC3	C313	*0.1uF 10% 50V X7R 0603		
VCC3	C249	*0.1uF 10% 50V X7R 0603	P1P5V_DDR3	
	C165	*0.1uF 10% 50V X7R 0603		
VCC3	C326	*0.1uF 10% 50V X7R 0603		
	C119	*0.1uF 10% 50V X7R 0603		
VCC3	C274	*0.1uF 10% 50V X7R 0603	P1P5V_DDR3	
VCC3	C82	*0.1uF 10% 50V X7R 0603	P12V	
VCC5	C23	*0.1uF 10% 50V X7R 0603	P12V	
	C20	*0.1uF 10% 50V X7R 0603		
P12V0	C358	*0.1uF 10% 50V X7R 0603	P12V	
P12V0	C367	*0.1uF 10% 50V X7R 0603	VCCP	
V_AXG	C78	*0.1uF 10% 50V X7R 0603	VCCP	
V_AXG	C79	*0.1uF 10% 50V X7R 0603		
ADOGND	C336	*0.1uF 10% 50V X7R 0603		
ADOGND	C320	*0.1uF 10% 50V X7R 0603	VCC3	
	C317	*0.1uF 10% 50V X7R 0603		
P5V_DUAL	C222	*0.1uF 10% 50V X7R 0603	P1P5V_DDR3	
P5V_DUAL	C215	*0.1uF 10% 50V X7R 0603	P12V	
P1V1_CPU_VTT	C176	*0.1uF 10% 50V X7R 0603		
P1V1_CPU_VTT	C392	*0.1uF 10% 50V X7R 0603	VCCP	

VCC3	C618	0.1uF 10% 50V X7R 0603	
VCC3	C619	0.1uF 10% 50V X7R 0603	
VCC3	C620	0.1uF 10% 50V X7R 0603	
VCC3	C621	0.1uF 10% 50V X7R 0603	
VCC3	C622	0.1uF 10% 50V X7R 0603	
VCC3	C623	0.1uF 10% 50V X7R 0603	
VCC3	C624	0.1uF 10% 50V X7R 0603	
VCC3	C625	0.1uF 10% 50V X7R 0603	ADOGND
VCC3	C626	0.1uF 10% 50V X7R 0603	ADOGND
VCC3	C627	0.1uF 10% 50V X7R 0603	ADOGND
VCC3	C628	0.1uF 10% 50V X7R 0603	ADOGND
VCC3	C629	0.1uF 10% 50V X7R 0603	P1P5V_DDR3

2/23 For EMI

CONN(LPC Debug Card)

(25,35,36) LPC_LAD[0..3]
LPC_LAD3
LPC_LAD2
LPC_LAD1
LPC_LAD0
(25,35,36) LPC_LFRAME_N
(8,35) PCLK_DEBUG
P3P3V_STBY
CN16
1 2 3 4 5 6 7 8 9 10
*CN HEADER 8P P1.0 H4.3 SMD
DFHD08MS036

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