





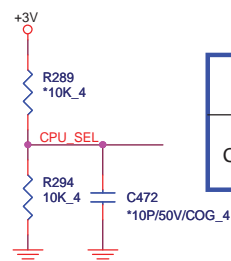
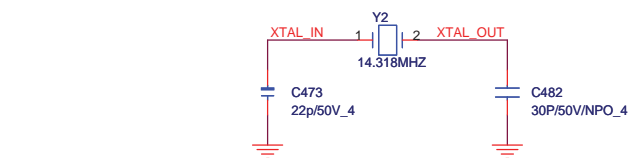
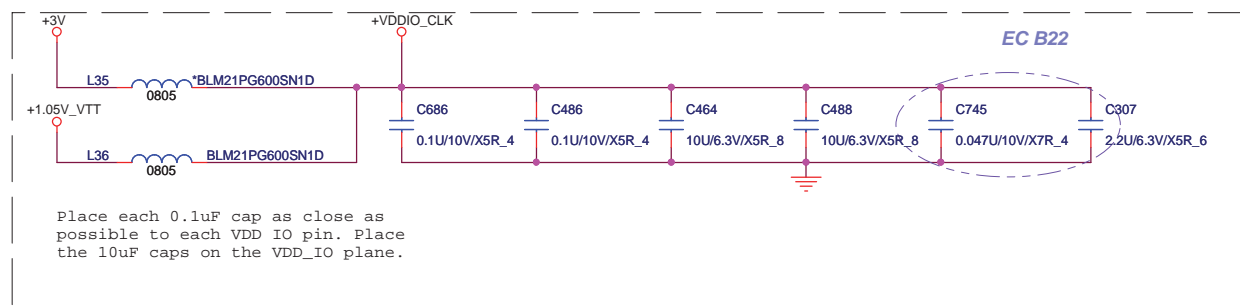
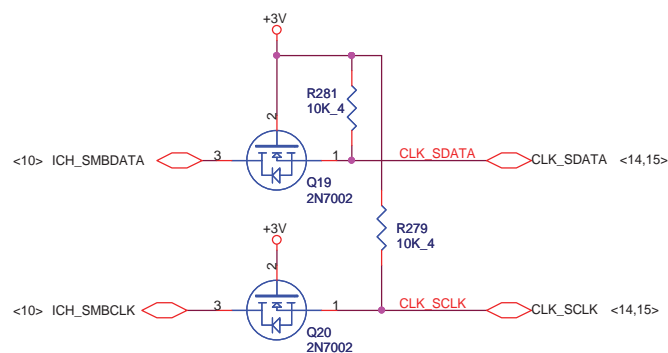
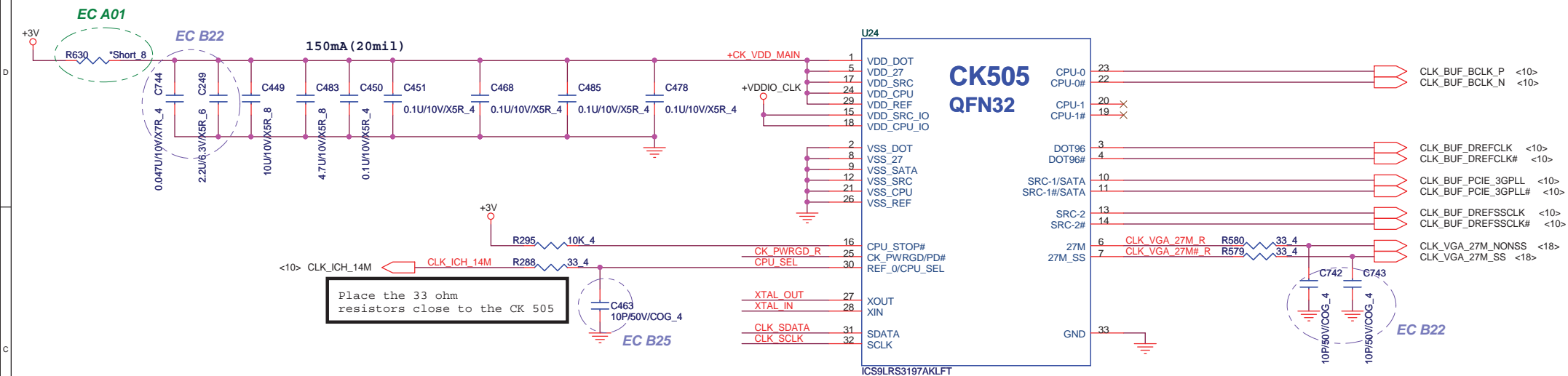
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2	Front Page
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4-7	Arrandale CPU
8-13	Ibex Peak-M
14-15	DDRIII SO-DIMM
16-22	Discreate VGA (Madison/Park)
23	LVDS/HDMI/CRT switchable
24	LCD + Camera Conn.
25	CRT Conn.
26	LAN (BCM57780, RJ45)
27	AL272/AMP/MIC/LINE-OUT
28	SATA HDD/ESATA/CD-ROM
29	USB X3/BT
30	JMB385/387 Card Reader
31	MINI-Card (WLAN/WWAN)
32	Express Card
33	FAN /THERMAL
34	K/B & T/P
35	B TO B CON/LED
36	KBC IT8512E
37	HOLD & SKEW
38	Discharge
39	Charger
40	DDR3 (TPS5116REGR)
41	1.05V_VTT & 1.05_PCH (RT8204)
42	3V/5V (MAX17020ET)
43	CPU (ISL62882)
44	DIS_GFX_VCC (MAX8792)
45	GFX_VCC (MAX17028)
46	Power Block Dianram
47	EC RECORD

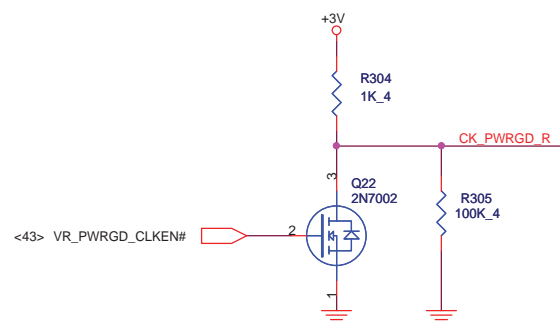
Power States

POWER PLANE	VOLTAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
VIN	+10V~+19V	MAIN POWER		S0~S5
+RTC_CELL	+3V~+3.3V	RTC		S0~S5
+3VPCU	+3.3V	8051 POWER	3V5V_EN	S0~S5
+5VPCU	+5V	DC/DC POWER IC SOURCE	3V5V_EN	S0~S5
+15V	+15V	LARGE POWER	3V5V_EN	S0~S5
VCC3_LAN	+3.3V	LAN POWER	LAN_ON	
+5VSUS	+5V	SLP_S4# CTRLD POWER	SUSON	
+3VSUS	+3.3V	SLP_S4# CTRLD POWER	SUSON	
+1.5VSUS	+1.5V	SODIMM POWER	SUSON	
+0.75V_DDR_VTT	+0.9V	SODIMM POWER	MAIN_ON	
+5V	+5V	SLP_S3# CTRLD POWER	MAIN_ON	
+3V	+3.3V	SLP_S3# CTRLD POWER	MAIN_ON	
+1.8V	+1.8V	CPU,PCH POWER	MAIN_ON	
+1.5V	+1.5V	PCH POWER	MAIN_ON	
+1.05V_VTT	+1.05V~+1.1V	CPU POWER	MAIN_ON	
+1.05V_PCH	+1.05V	PCH POWER	1.05V_RUN_ON	
VCC_CORE	0V~+1.5V	CPU CORE POWER	VRON	
LCDVCC	+3.3V	LCD Power	ENVDD	
BAT-V	+10V~+17V	MAIN BATTERY		
+5V_S5	+5V	PCH SUS POWER	S5_ON	
+3V_S5	+3.3V	Sys Management,PCH Resume Well	S5_ON	

GND PLANE	PAGE	DESCRIPTION
 LANGND	26	
 IT8512_AGND	36	
 ADOGND	27	
 GND	ALL	



	0	1
CPU_SEL	CPU0/1=133MHz (default)	CPU0/1=100MHz



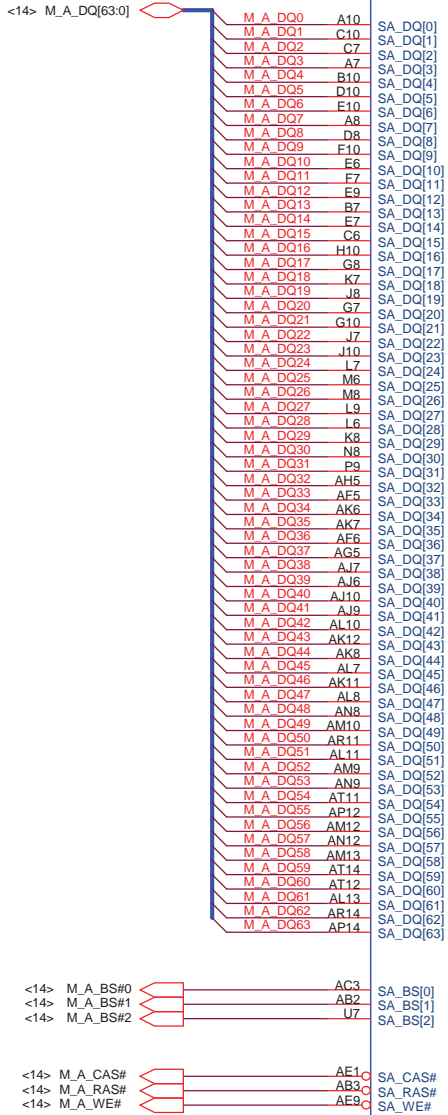


AUBURNDALE PROCESSOR (DDR3)

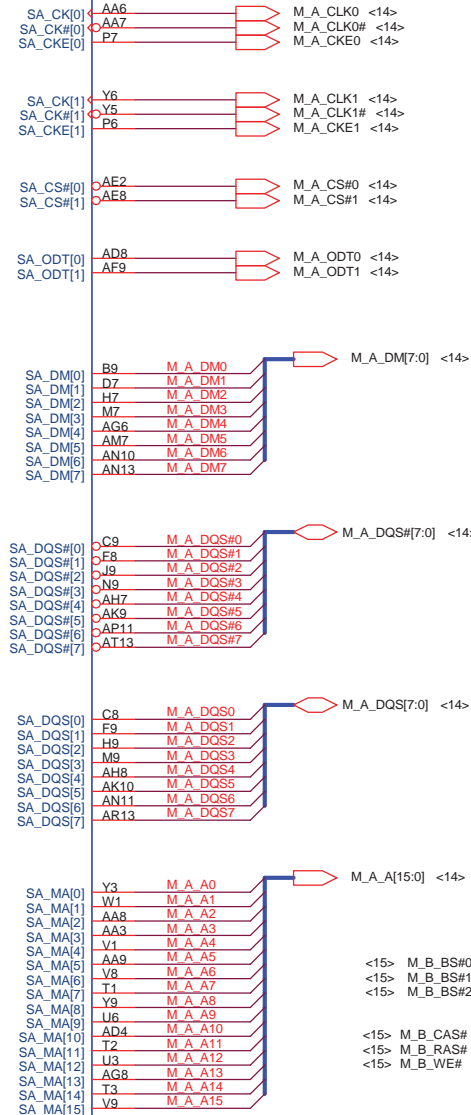
05

U47C

IC:AUB_CFD_rPGA,R0P9



DDR SYSTEM MEMORY A



<15> M_B_DQ[63:0]

<14> M_A_DM[7:0]

<14> M_A_DQS[7:0]

<14> M_A_DQS[7:0]

<14> M_A_A[15:0]

<15> M_B_BS#0

<15> M_B_BS#1

<15> M_B_BS#2

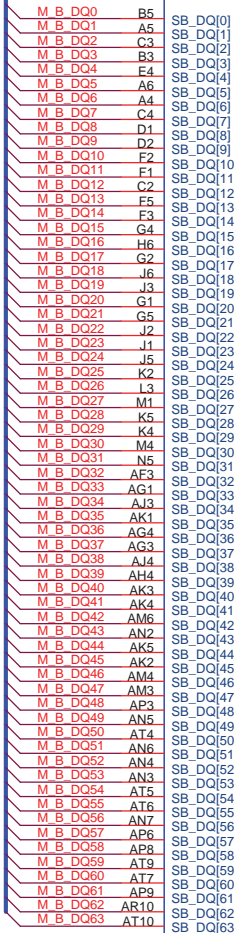
<15> M_B_CAS#

<15> M_B_RAS#

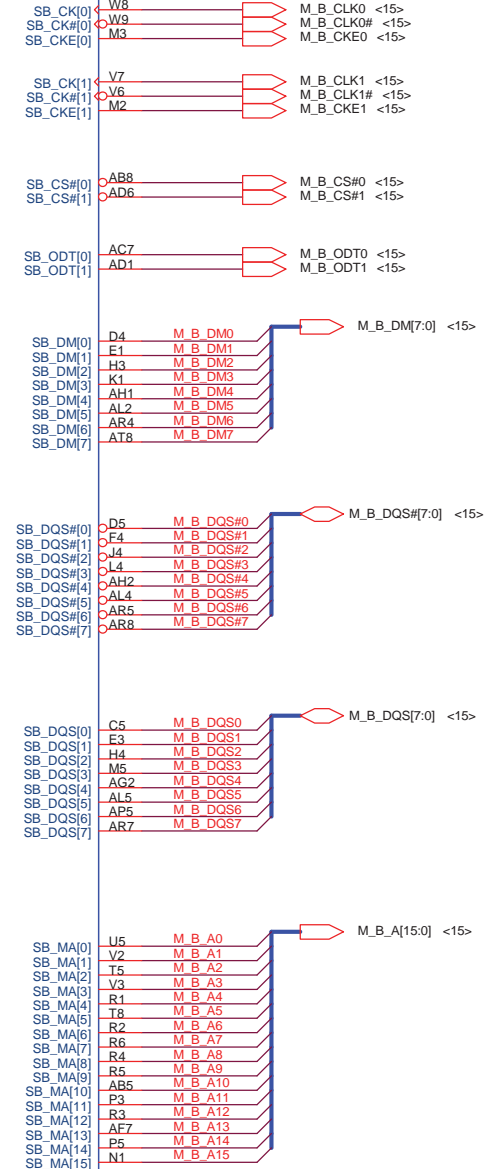
<15> M_B_WE#

U47D

IC:AUB_CFD_rPGA,R0P9



DDR SYSTEM MEMORY - B



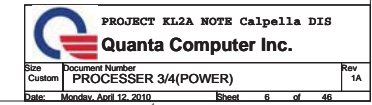
PROJECT KL2A NOTE Calpella DIS

Quanta Computer Inc.

Size
CustomDocument Number
PROCESSOR 2/4(DDR)Rev
1A

Date: Monday, April 12, 2010

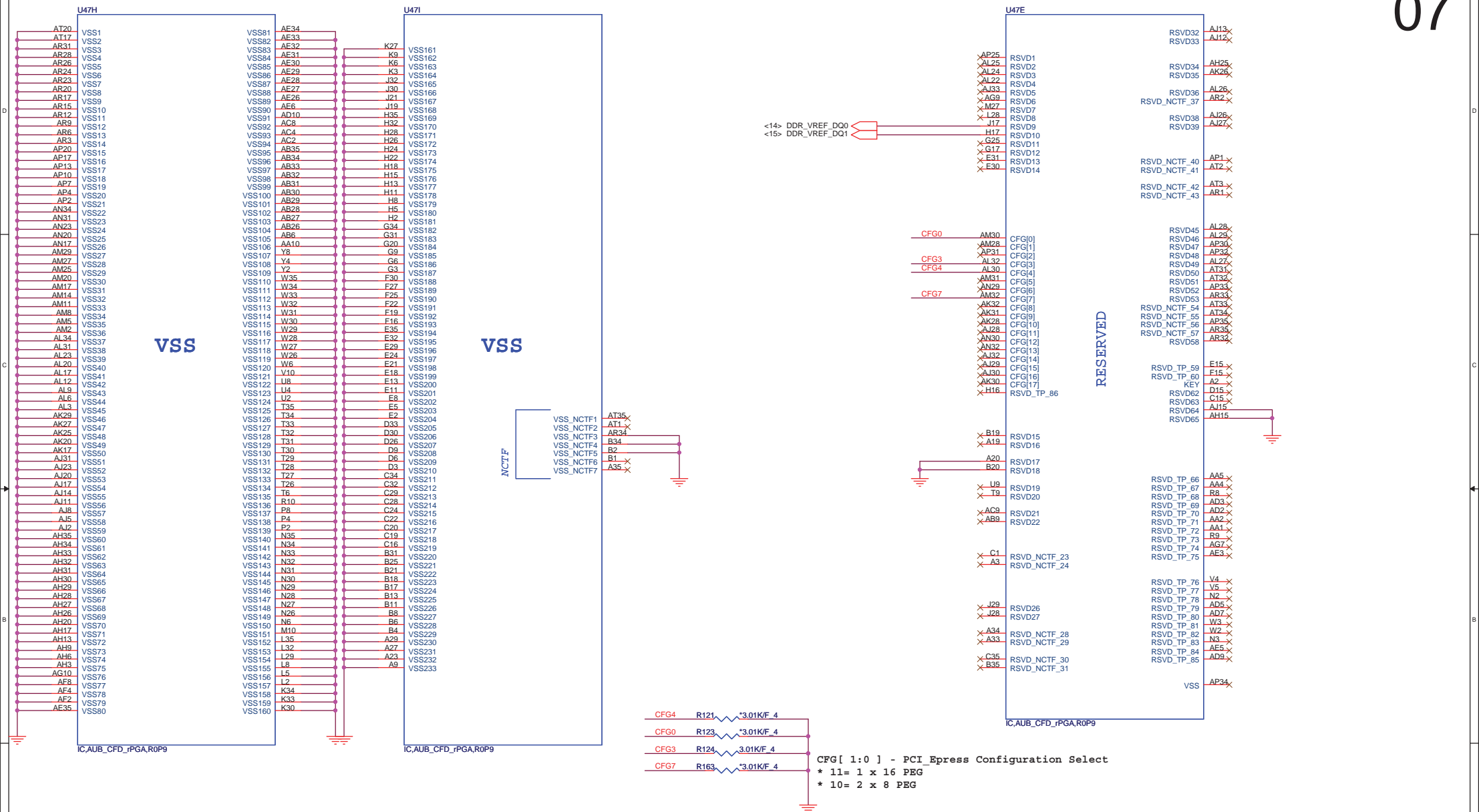
Sheet 5 of 46



AUBURNDALE PROCESSOR (GND)

AUBURNDALE PROCESSOR (RESERVED, CFG)

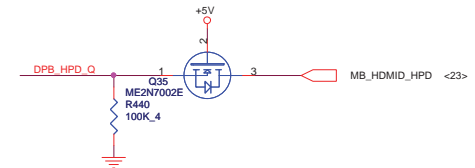
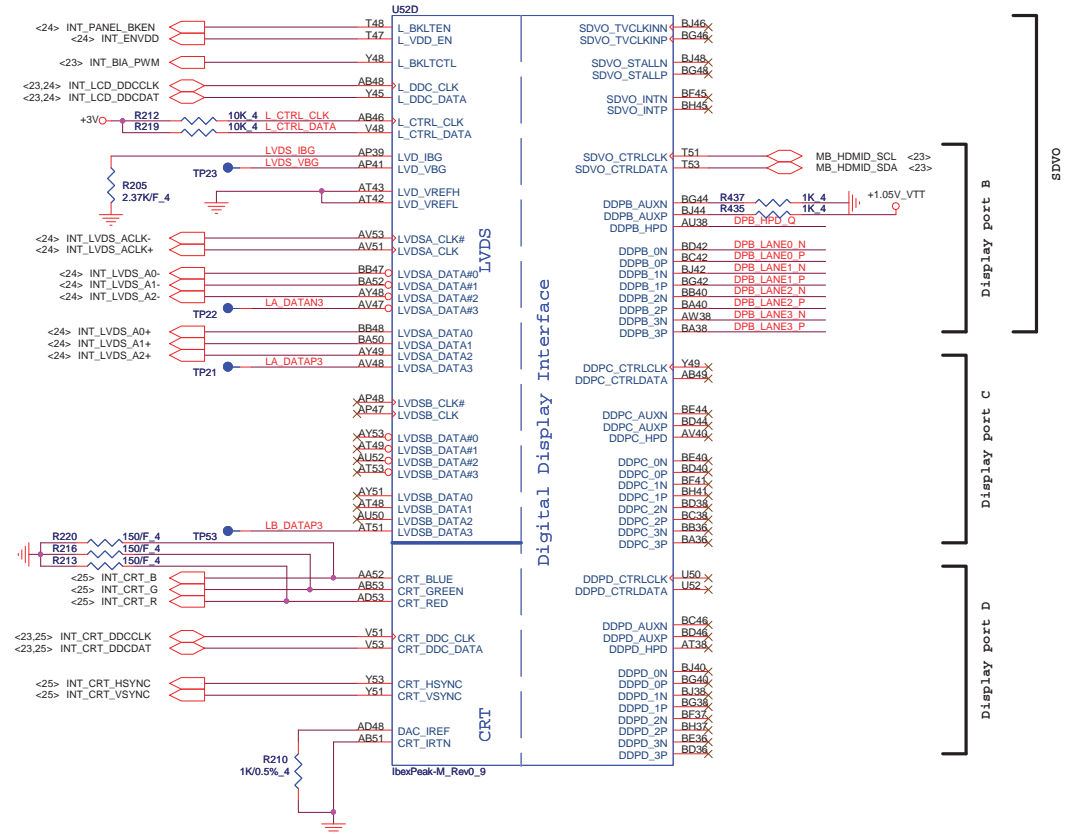
07

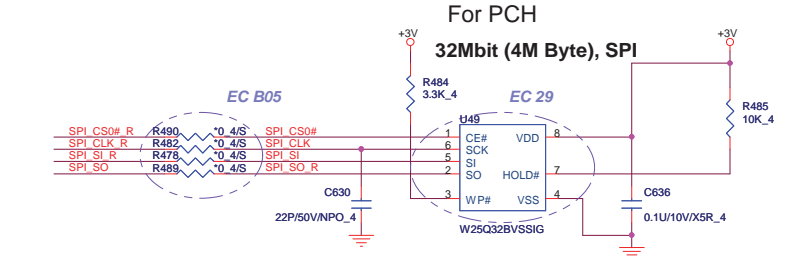
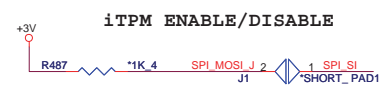
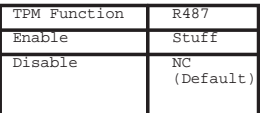
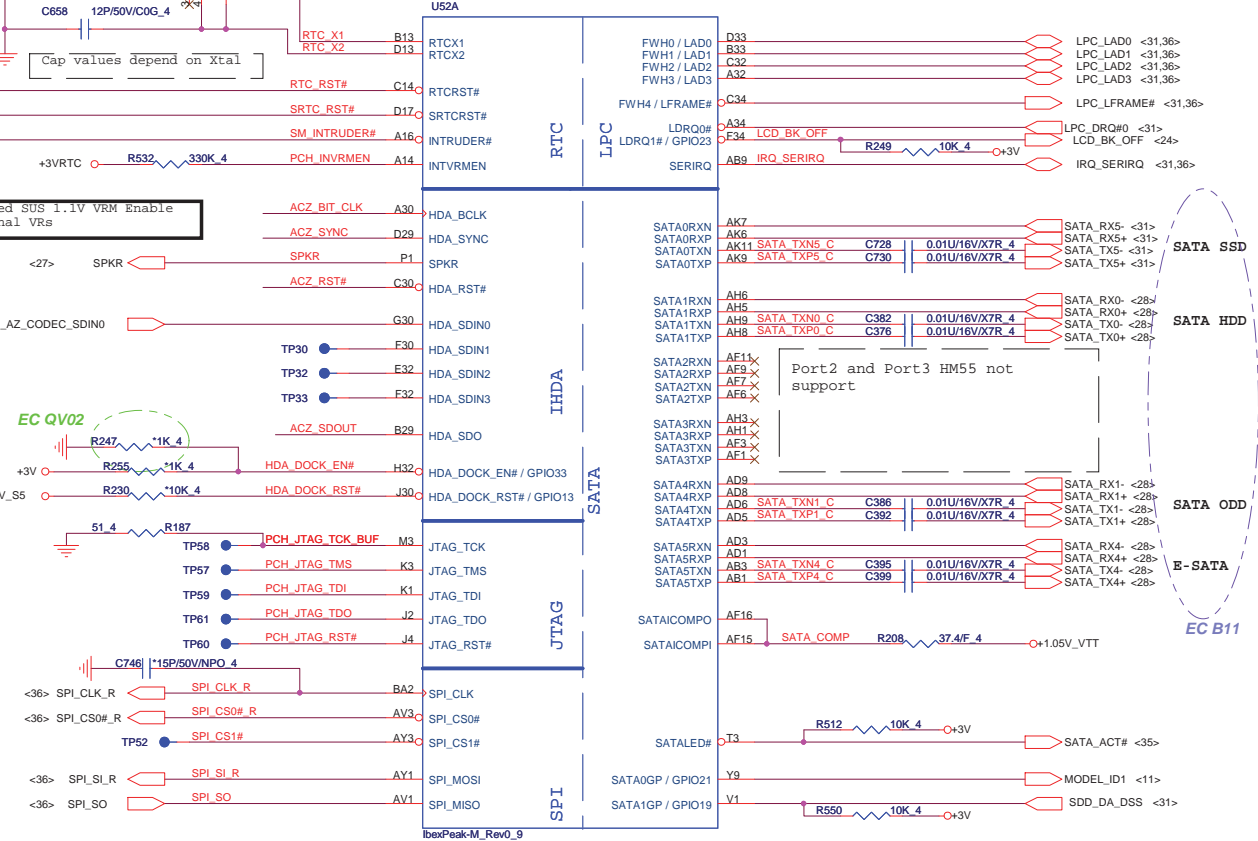
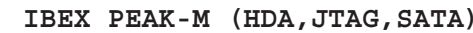


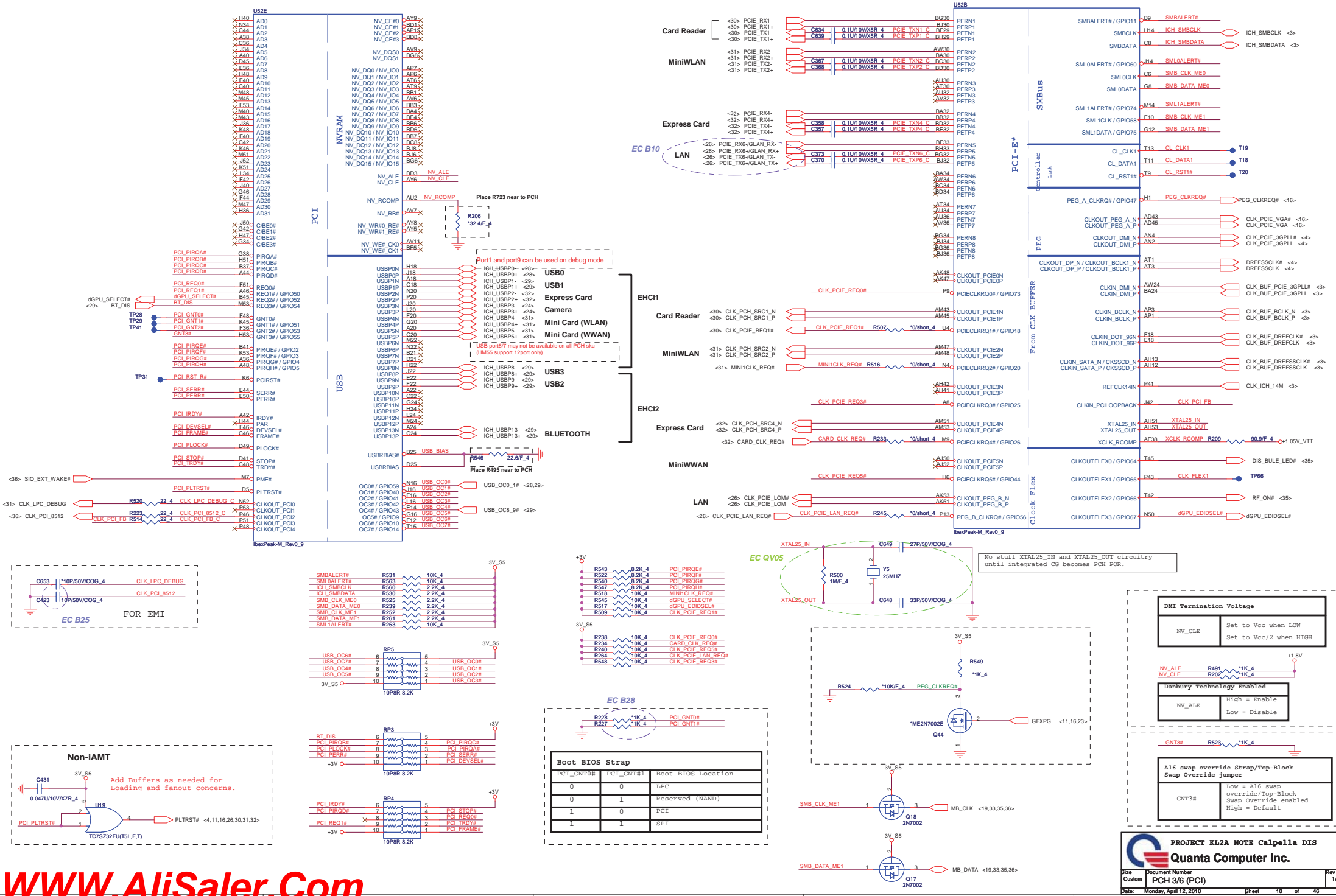
The Clarkfield processor's PCI Express interface may not meet PCI Express 2.0 jitter specifications. Intel recommends placing a 3.01K +/- 5% pull down resistor to VSS on CFG[7] pin for both rPGA and BGA components. This pull down resistor should be removed when this issue is fixed.

	1	0
CFG4 (Display Port Presence)	Disabled; No Physical Display Port attached to Embedded Display Port	Enabled; An external Display port device is connected to the Embedded Display port
CFG0 (PCI-Epress Configuration Select)	Single PEG	Bifurcation enabled
CFG3 (PCI-Epress Static Lane Reversal)	Normal Operation	Lane Numbers Reversed

IBEX PEAK-M (LVDS, DDI)







IBEX PEAK-M (GPIO,VSS_NCTF,RSVD)

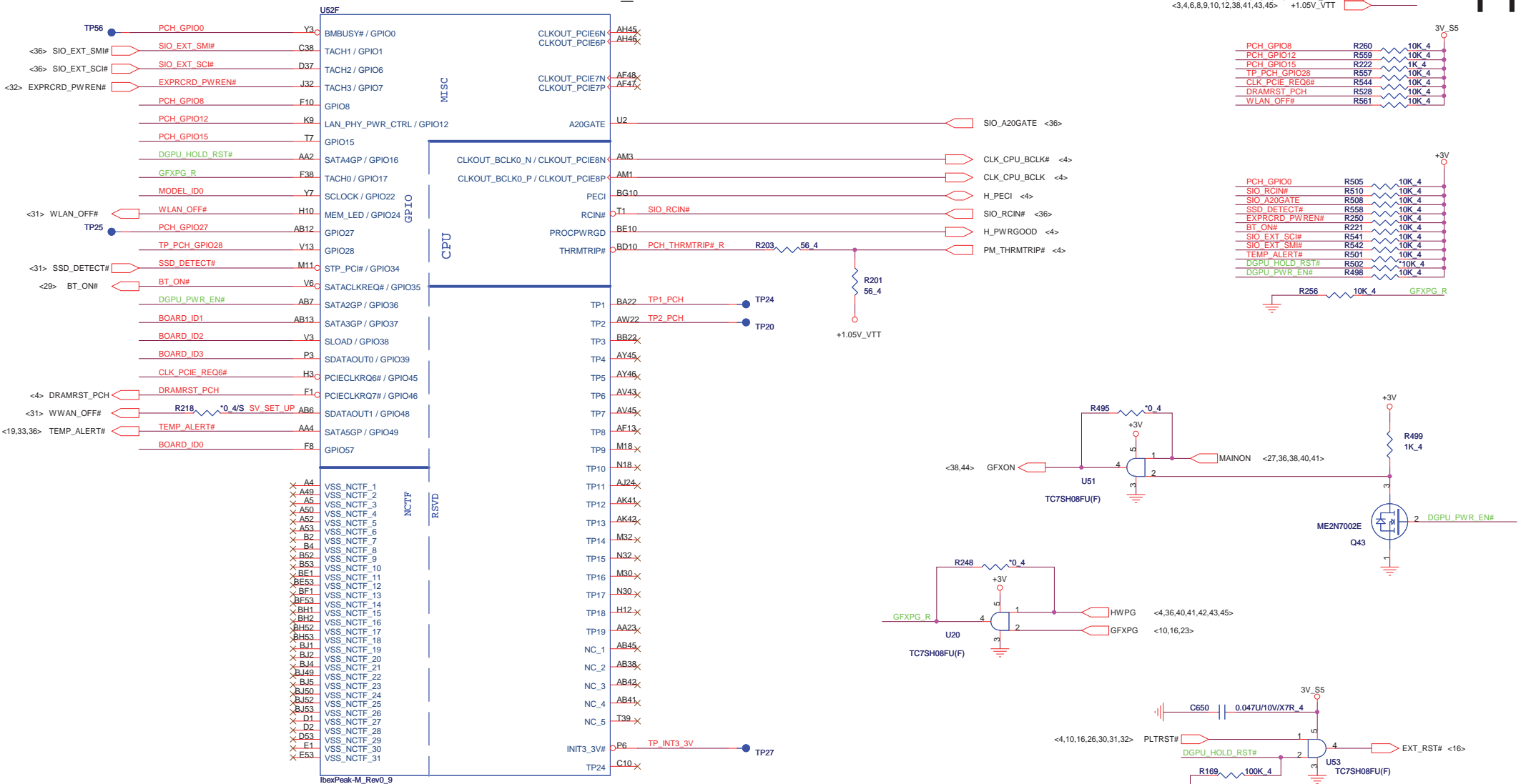
<3,4,8,9,10,12,14,15,23,24,25,26,27,28,29,30,31,32,33,34,35,36,38,39,43,44>

+3V

<6,8,9,10,12,16,31,38> 3V_S5

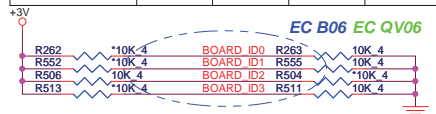
+1.05V_VTT

11



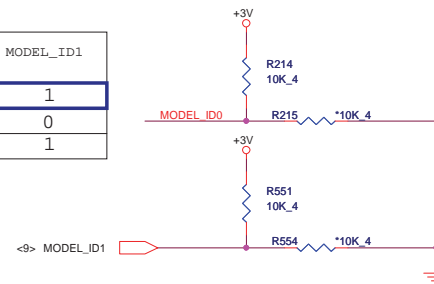
Board ID

Board ID For Function	ID3 GPIO39	ID2 GPIO38	ID1 GPIO37	ID0 GPIO57
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	1	0	0
SOVP	1	0	0	0

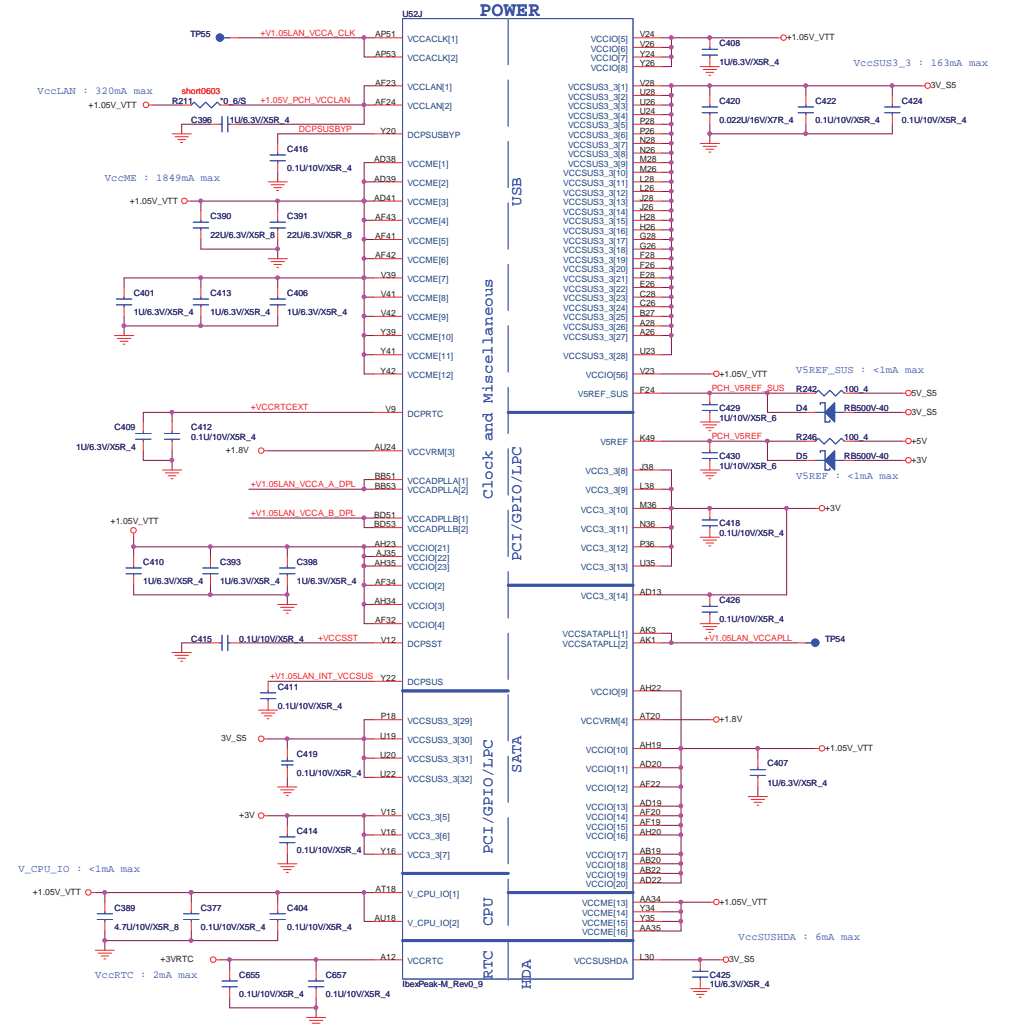


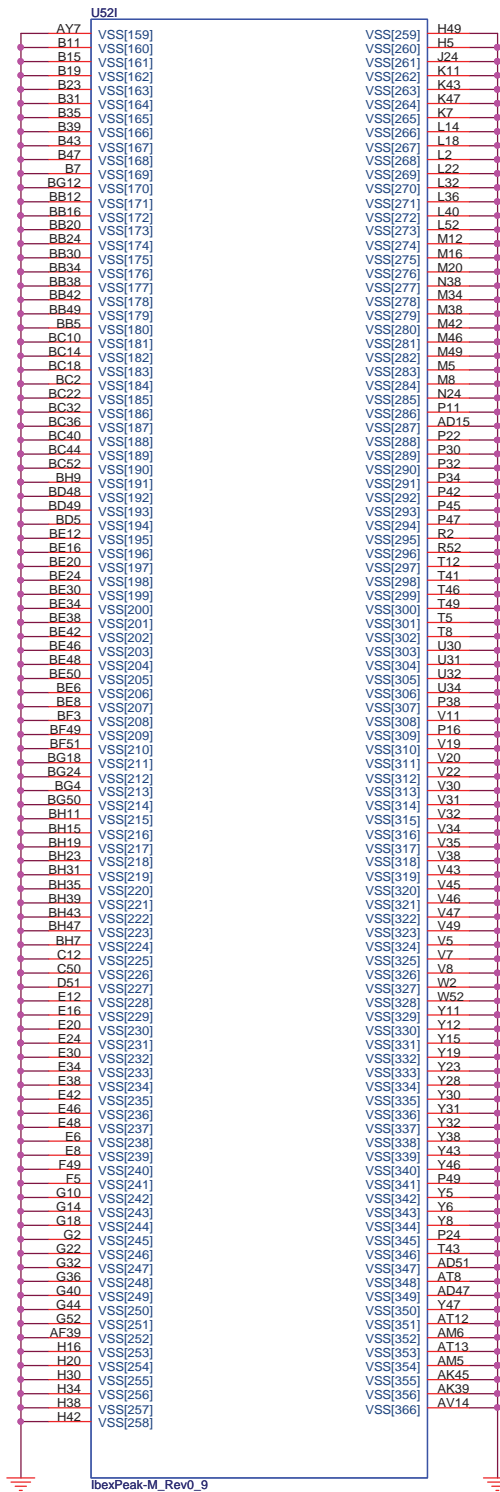
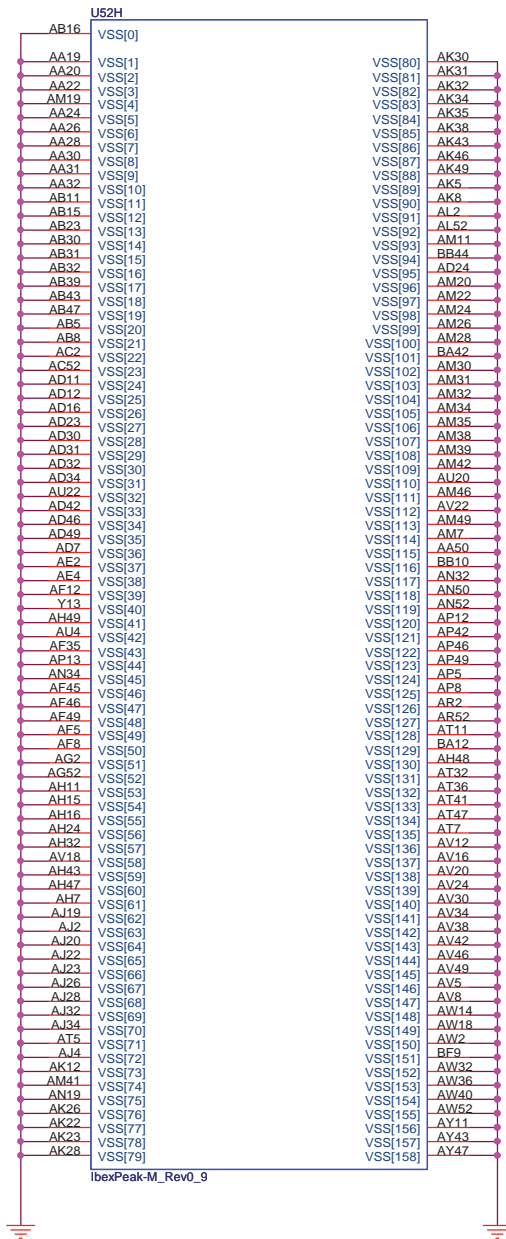
Model ID

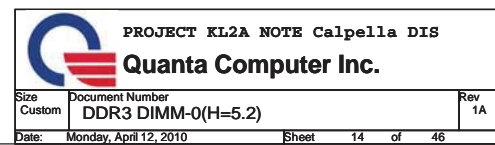
Model ID	MODEL_ID0	MODEL_ID1
14"	0	1
15"	1	0
KL2B	1	1



SV_SET_UP 1-X High = Strong (Default)



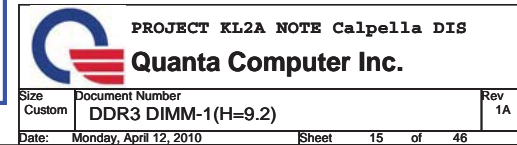




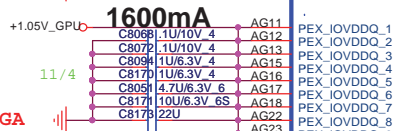
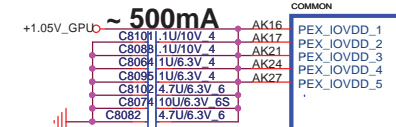
Place these Caps near So-Dimm0.

Capacitors shown in the layout include:

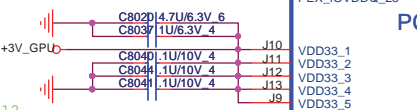
- C614, C590, C250, C267, C620, C282, C604, C595, C242, C598, C273, C271 (all 10U/6.3V/X5R_6)
- C326, C327 (2.2U/6.3V/X5R_6, 0.1U/10V/X5R_4)
- C333, C332, C346, C347, C334, C344 (all 1U/6.3V/X5R_4)
- C335 (10U/6.3V/X5R_6)
- C621, C622 (0.1U/10V/X5R_4, 2.2U/6.3V/X5R_6)
- C136, C141 (0.1U/10V/X5R_4, 2.2U/6.3V/X5R_6)



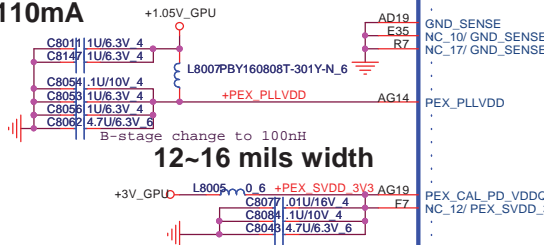
PEX IOVDD+PEX IOVDDQ+PEX PLLVDD >2.2A



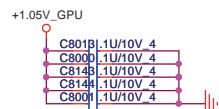
Near BGA



12~16 mils width
110mA +1.05V_GPU



12~16 mils width



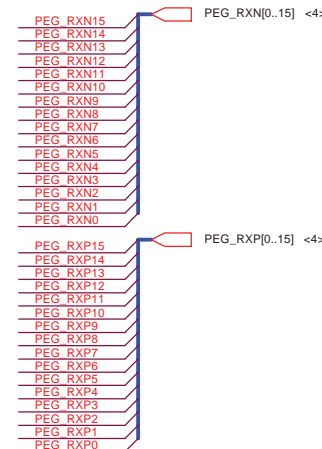
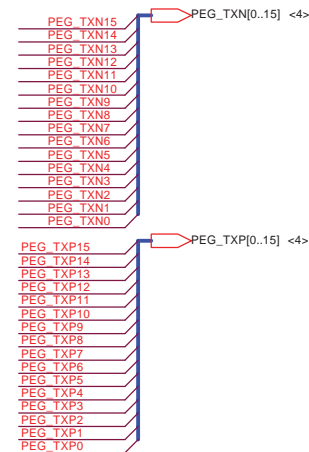
```
1211 for Nvidia request
add transition cap
```

Reverse

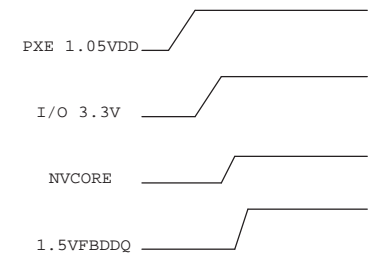
PEX_RX0	AN17	PEG TXP0
PEX_RX0*	AN17	PEG TXN0
PEX_RX1	AN19	PEG TXP1
PEX_RX1*	AN19	PEG TXN1
PEX_RX2	AR10	PEG TXP2
PEX_RX2*	AR10	PEG TXN2
PEX_RX3	AN20	PEG TXP3
PEX_RX3*	AN20	PEG TXN3
PEX_RX3*	AN22	PEG TXP4
PEX_RX4	AR22	PEG TXN4
PEX_RX4*	AR22	PEG TXP5
PEX_RX5	AR23	PEG TXN5
PEX_RX6	AN23	PEG TXP6
PEX_RX6*	AN25	PEG TXN6
PEX_RX7	AP25	PEG TXP7
PEX_RX7*	AR25	PEG TXN7
PEX_RX8	AR26	PEG TXP8
PEX_RX8*	AR26	PEG TXN8
PEX_RX9	AN26	PEG TXP9
PEX_RX9*	AN26	PEG TXN9
PEX_RX10	AR28	PEG TXP10
PEX_RX10*	AP28	PEG TXN10
PEX_RX11	AN29	PEG TXP11
PEX_RX11*	AN29	PEG TXN11
PEX_RX12	AN29	PEG TXP12
PEX_RX12*	AN29	PEG TXN12
PEX_RX13	AP31	PEG TXP13
PEX_RX13*	AR31	PEG TXN13
PEX_RX14	AP31	PEG TXP14
PEX_RX14*	AR31	PEG TXN14
PEX_RX15	AP34	PEG TXP15
PEX_RX15*	AR34	PEG TXN15

Reverse

PEX_Tx0	AL17_C	PEG_RX15	C8063	1U/10V_4	PEG_RXP0
PEX_Tx0'	AM17C	PEG_RX#15	C8063	1U/10V_4	PEG_RXN0
PEX_Tx1	AM18C	PEG_RX14	C8067	1U/10V_4	PEG_RXP1
PEX_Tx1'	AM18C	PEG_RX#14	C8080	1U/10V_4	PEG_RXN1
PEX_Tx2	AL19_C	PEG_RX13	C8067	1U/10V_4	PEG_RXP2
PEX_Tx2'	AK19_C	PEG_RX#13	C8067	1U/10V_4	PEG_RXN2
PEX_Tx3	AL20_C	PEG_RX#12	C8067	1U/10V_4	PEG_RXP3
PEX_Tx3'	AM20C	PEG_RX#12	C8080	1U/10V_4	PEG_RXN3
PEX_Tx4	AM21C	PEG_RX11	C8092	1U/10V_4	PEG_RXP4
PEX_Tx4'	AM22C	PEG_RX#11	C8092	1U/10V_4	PEG_RXN4
PEX_Tx5	AL22_C	PEG_RX10	C8098	1U/10V_4	PEG_RXP5
PEX_Tx5'	AK22_C	PEG_RX#10	C8106	1U/10V_4	PEG_RXN5
PEX_Tx6	AL23_C	PEG_RX9	C8110	1U/10V_4	PEG_RXP6
PEX_Tx6'	AM23C	PEG_RX#9	C8110	1U/10V_4	PEG_RXN6
PEX_Tx7	AM24C	PEG_RX8	C8112	1U/10V_4	PEG_RXP7
PEX_Tx7'	AM25C	PEG_RX#8	C8116	1U/10V_4	PEG_RXN7
PEX_Tx8	AL25_C	PEG_RX7	C8120	1U/10V_4	PEG_RXP8
PEX_Tx8'	AK25_C	PEG_RX#7	C8122	1U/10V_4	PEG_RXN8
PEX_Tx9	AL26_C	PEG_RX6	C8124	1U/10V_4	PEG_RXP9
PEX_Tx9'	AM27_C	PEG_RX#6	C8128	1U/10V_4	PEG_RXN9
PEX_Tx10	AM28C	PEG_RX#5	C8128	1U/10V_4	PEG_RXN10
PEX_Tx10'	AL28_C	PEG_RX4	C8126	1U/10V_4	PEG_RXP11
PEX_Tx11	AK28_C	PEG_RX#4	C8134	1U/10V_4	PEG_RXN11
PEX_Tx12	AK29_C	PEG_RX3	C8129	1U/10V_4	PEG_RXP12
PEX_Tx12'	AL29_C	PEG_RX#3	C8132	1U/10V_4	PEG_RXN12
PEX_Tx13	AM30C	PEG_RX#2	C8136	1U/10V_4	PEG_RXP13
PEX_Tx13'	AM31C	PEG_RX1	C8134	1U/10V_4	PEG_RXP14
PEX_Tx14	AM32C	PEG_RX#1	C8136	1U/10V_4	PEG_RXN14
PEX_Tx15	AL32C	PEG_RX0	C8136	1U/10V_4	PEG_RXP15
PEX_Tx15'	AP32_C	PEG_RX#0	C8138	1U/10V_4	PEG_RXN15

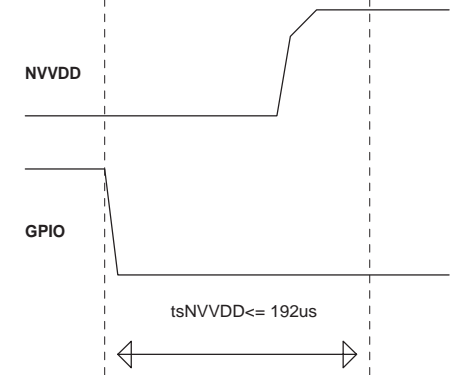


power up sequence

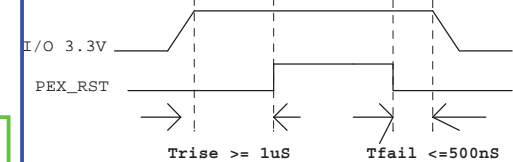


NB9M: VGACORE +0.90V (Normal) , +1.09V

NVVDD Maximum Settling Time



PEX_RST timing



<17,18,38,44> +1.05V_GPU
<18,19,23,44> +3V_GPU



PROJECT KL2A NOTE Calpella DIS

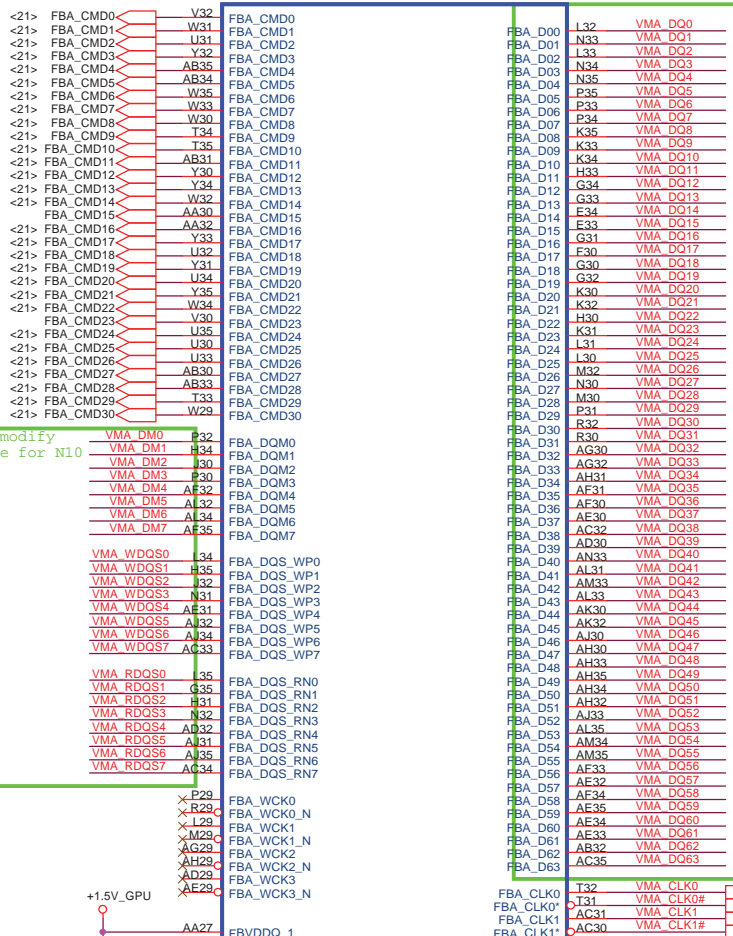
Quanta Computer Inc.

Size	Document Number
Custom	N10P-GE (PCI-E I/F) 1/5

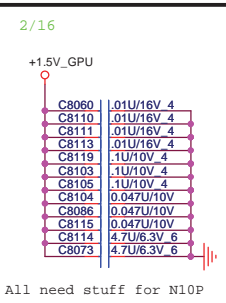
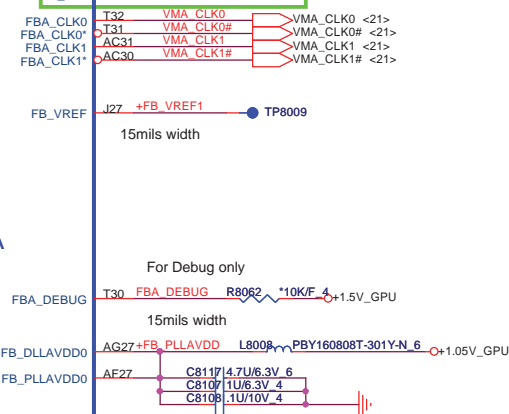
Sheet 16 of 46

U8006B
BGAR69-NVIDIA-NB9P-GS
COMMON

12/02 modify
package for N10

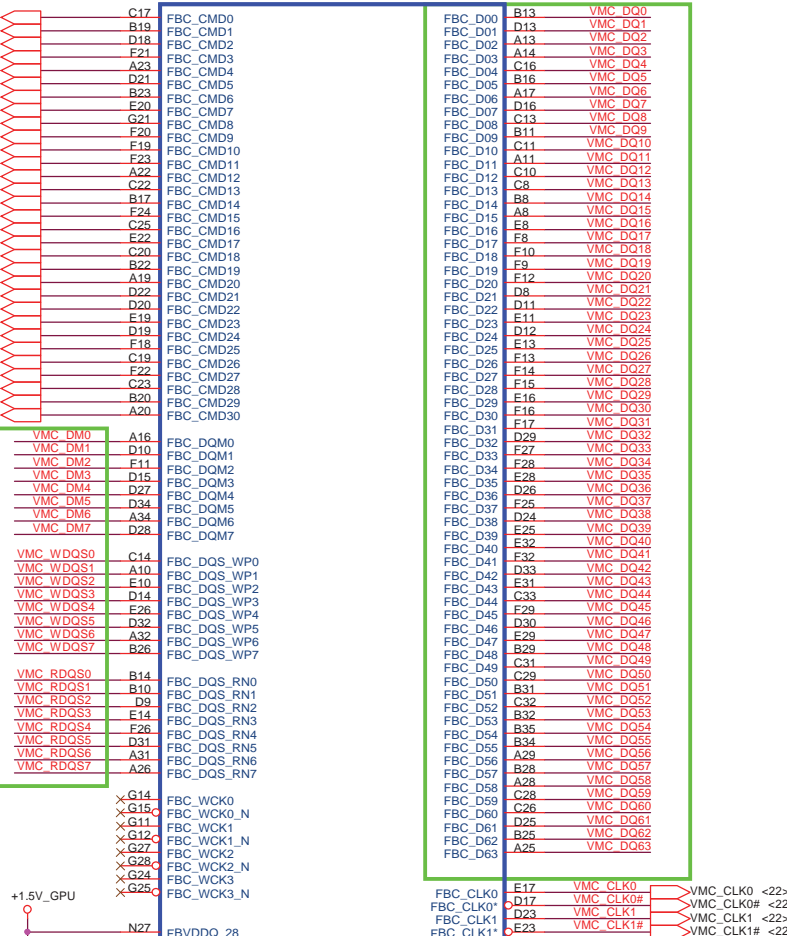


MEMORY I/F A

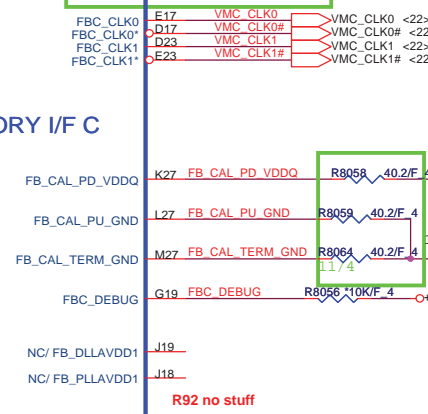


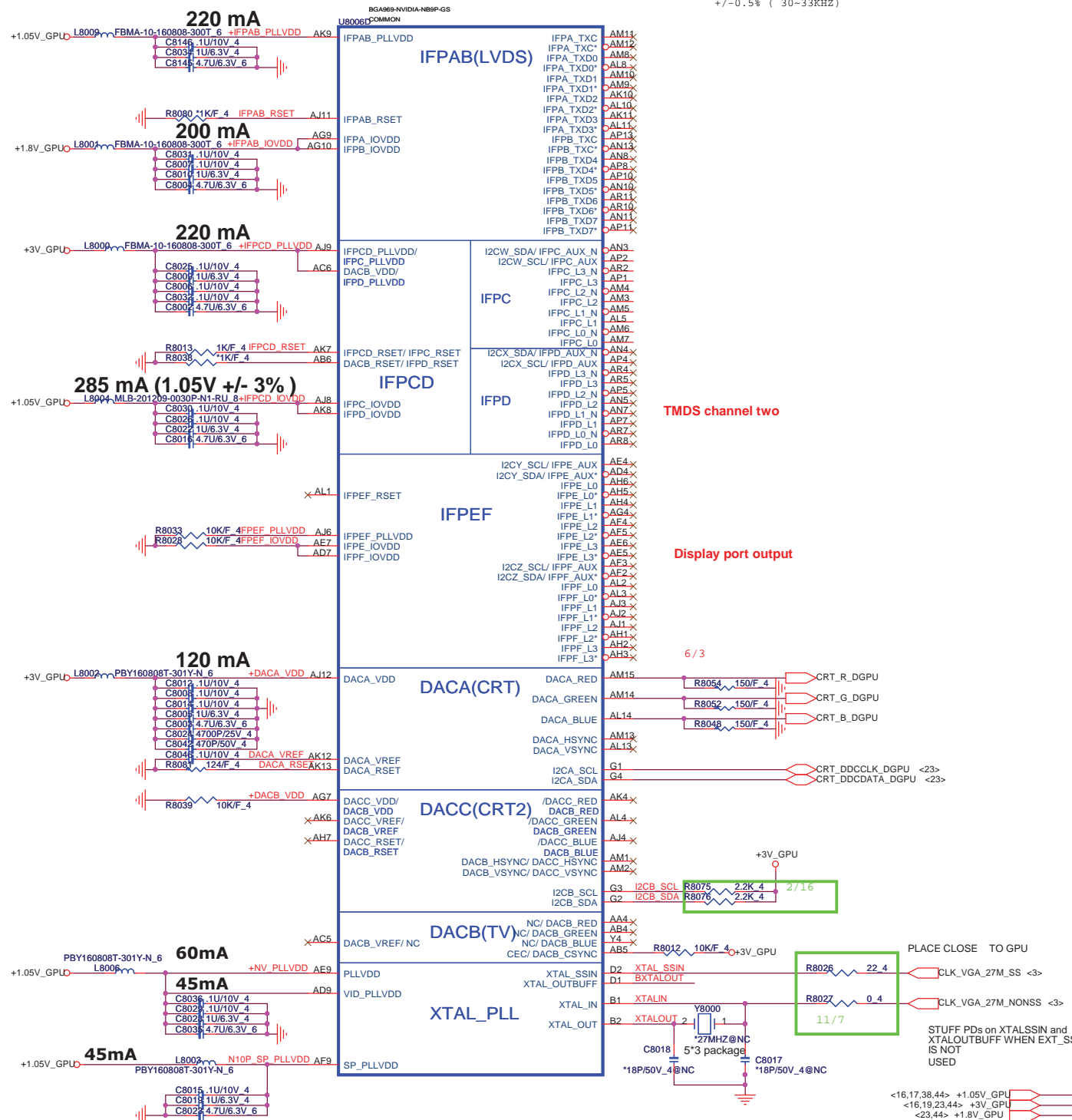
U8006C
BGAR69-NVIDIA-NB9P-GS
COMMON

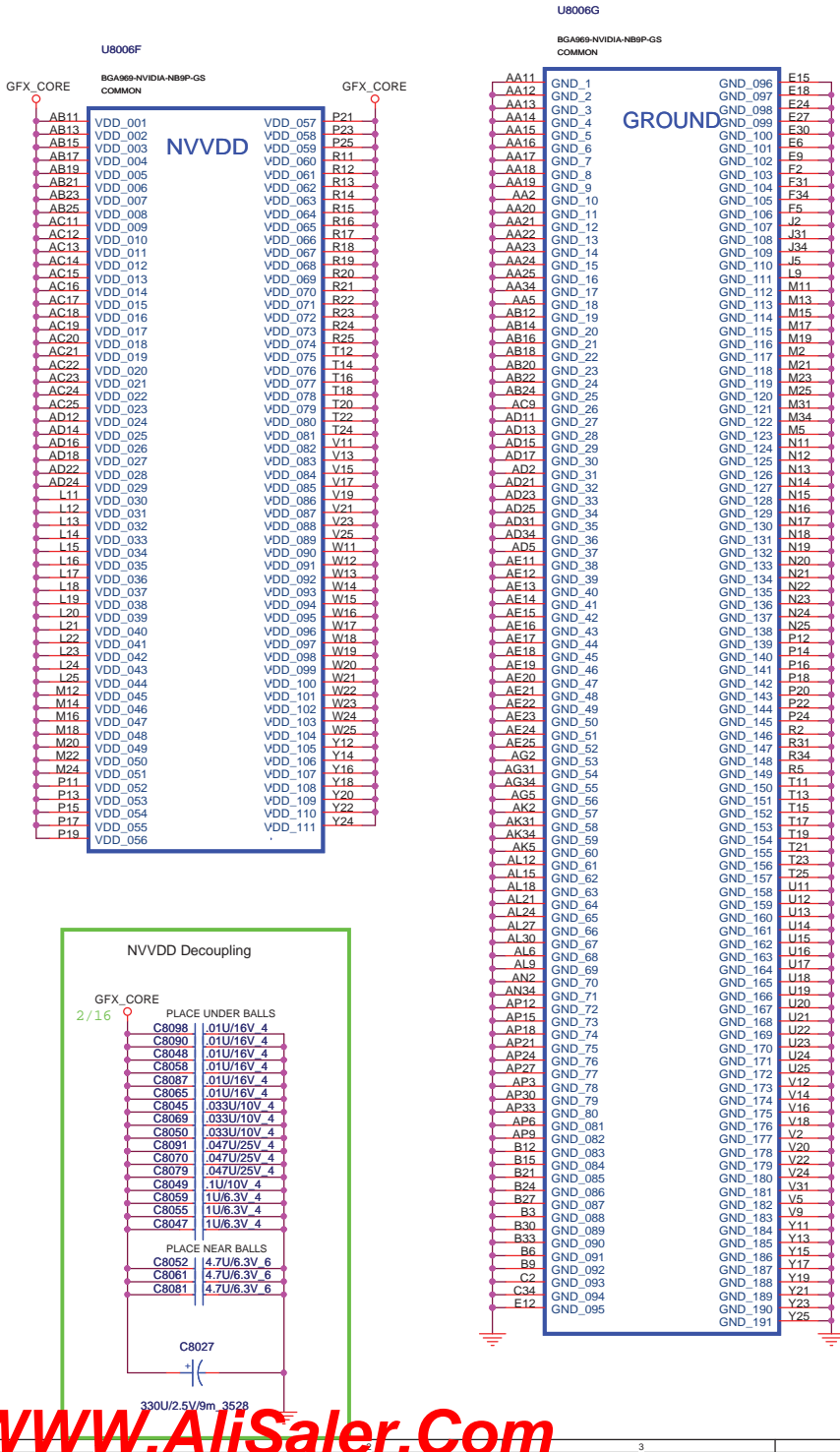
12/02 modify
package for N10

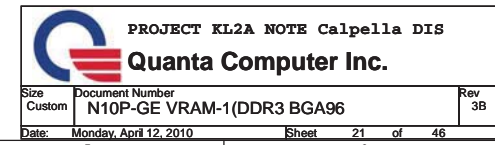


MEMORY I/F C

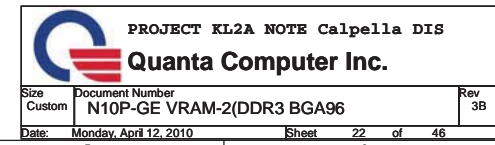




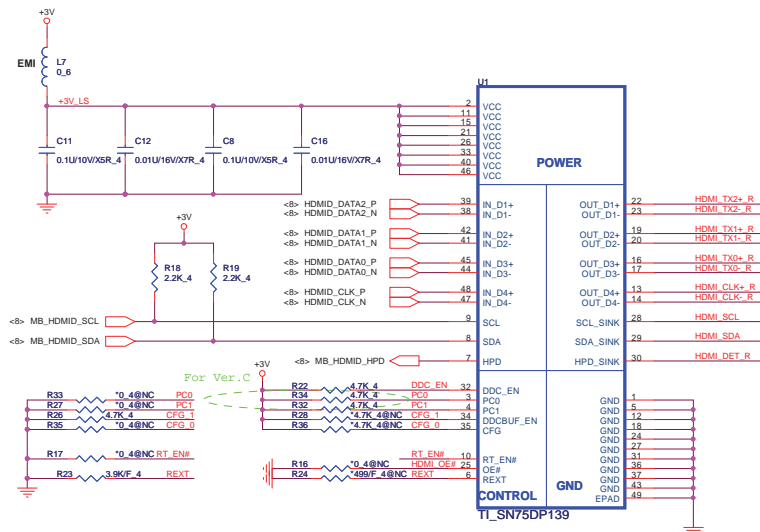




A diagram showing a 4x4 grid of hexagons. The hexagons are arranged in four rows and four columns. Blue lines connect the hexagons horizontally and vertically, forming a grid pattern. The hexagons are outlined in red.

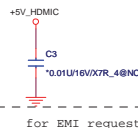


<8> INT_BIA_PWM R119 0.4
 <36> BRIGHT_PWM R116 0.4/S
 <19> DPST_PWM_DGPU EXT_BIA_PWM R117 0.4

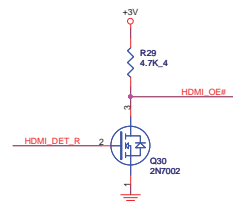
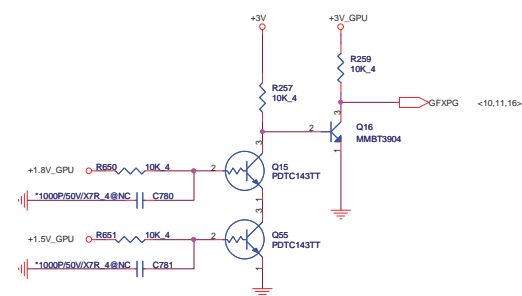


EQUALIZATION SETTING
 PC1:PC0=0:0 8dB
 PC1:PC0=0:1 4dB Recommended
 PC1:PC0=1:0 12dB
 PC1:PC0=1:1 0dB

PS8101 Pin34/35 is NC
 SCLZ/SDAZ Low-level input/output Voltage
 CFG1:CFG0=0:0 VIL:<0.4V VOL:0.6V (Default)
 CGF1:CGF0=0:1 VIL:<0.36V VOL:0.55V
 CGF1:CGF0=1:0 VIL:<0.44V VOL:0.65V
 CGF1:CGF0=1:1 VIL:<0.36V VOL:0.6V

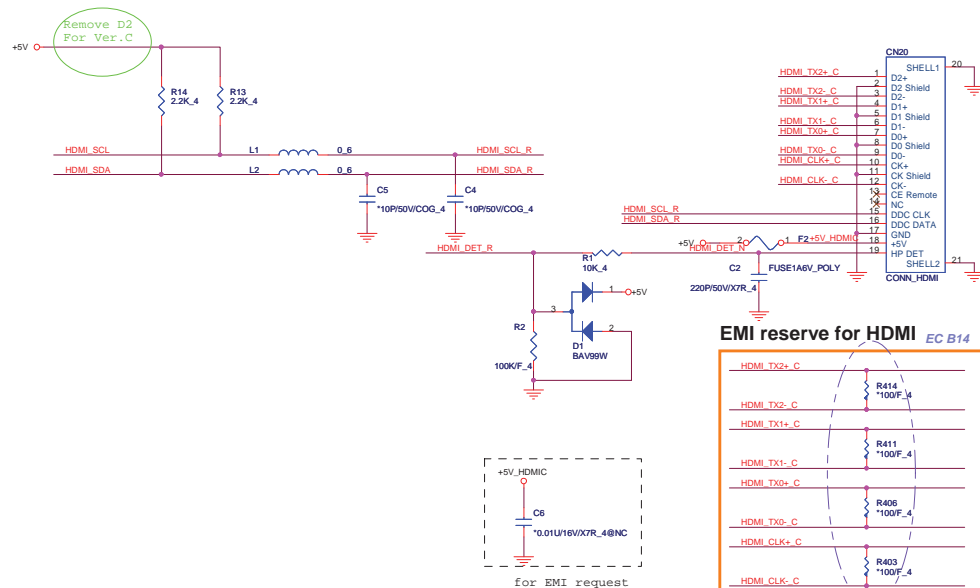


GPU all PWROK

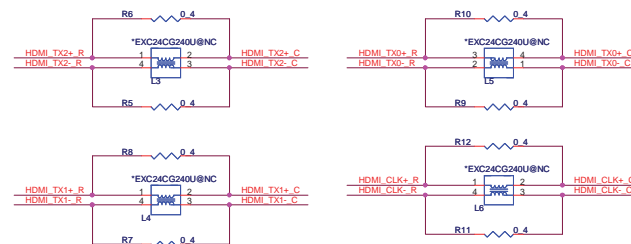
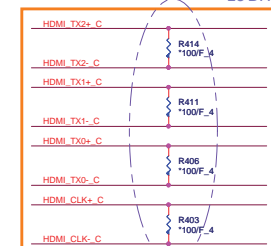


CRT

HDMI

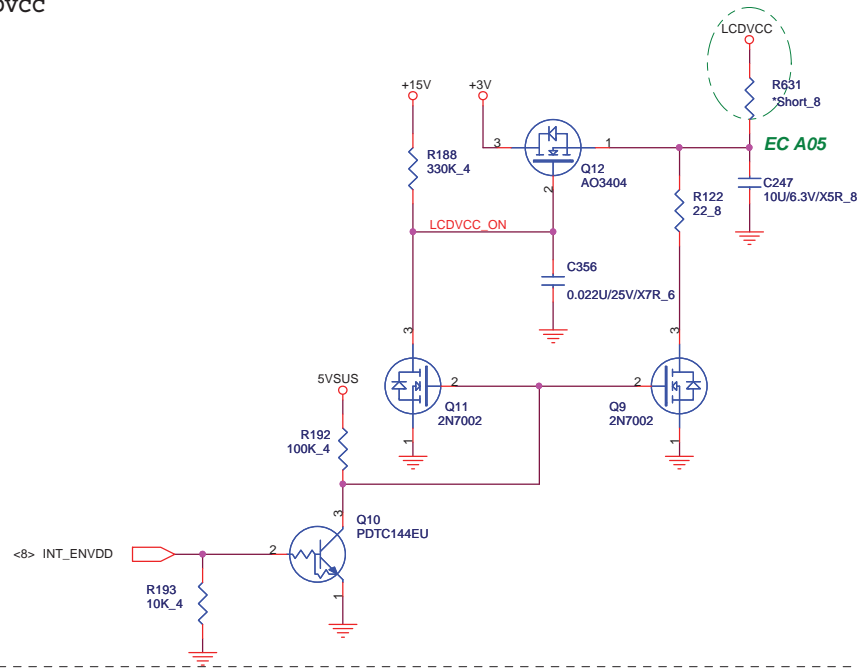


EMI reserve for HDMI EC B14

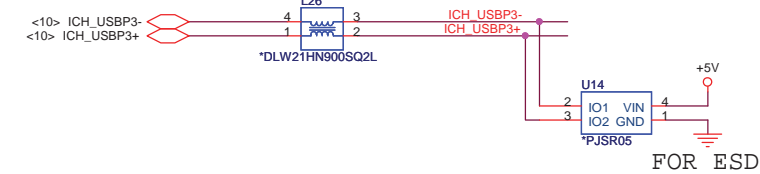
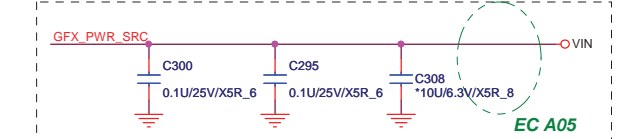
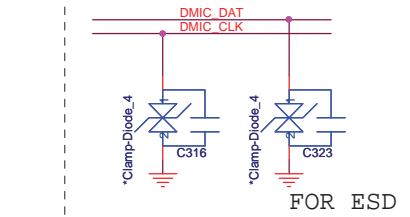
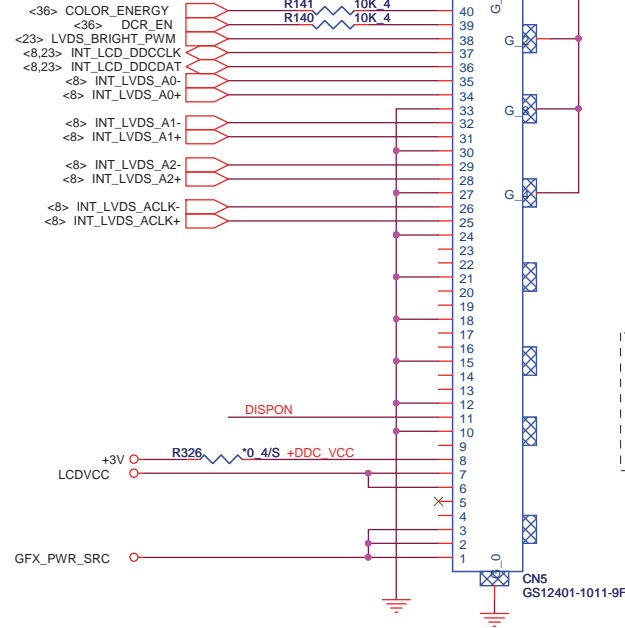
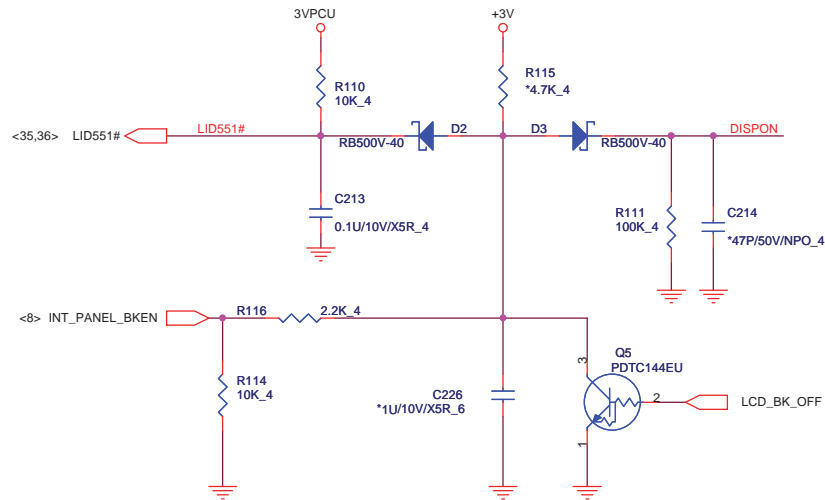


<16,17,18,38,44> +1.08V_GPU
 <17,21,22,40> +1.5V_GPU
 <18,44> +1.8V_GPU
 <16,18,19,44> +3V_GPU
 +3V
 <6,12,24,25,27,28,33,34,36,38,39> +5V

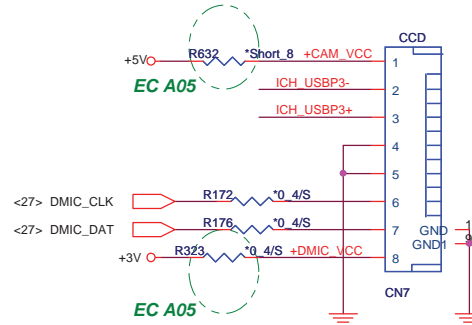
LCDVCC

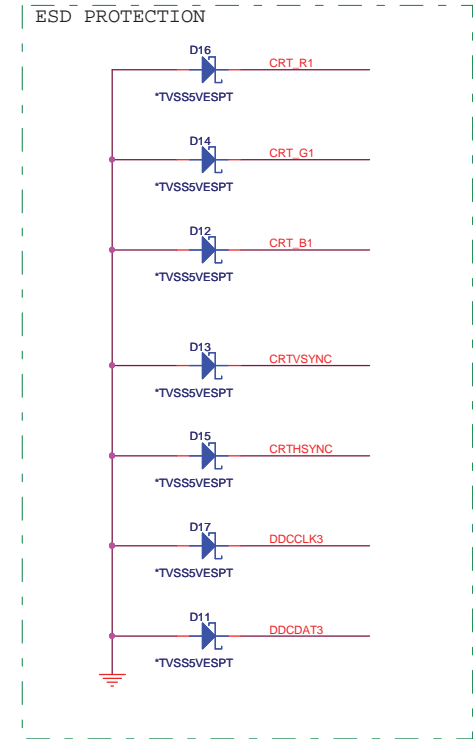
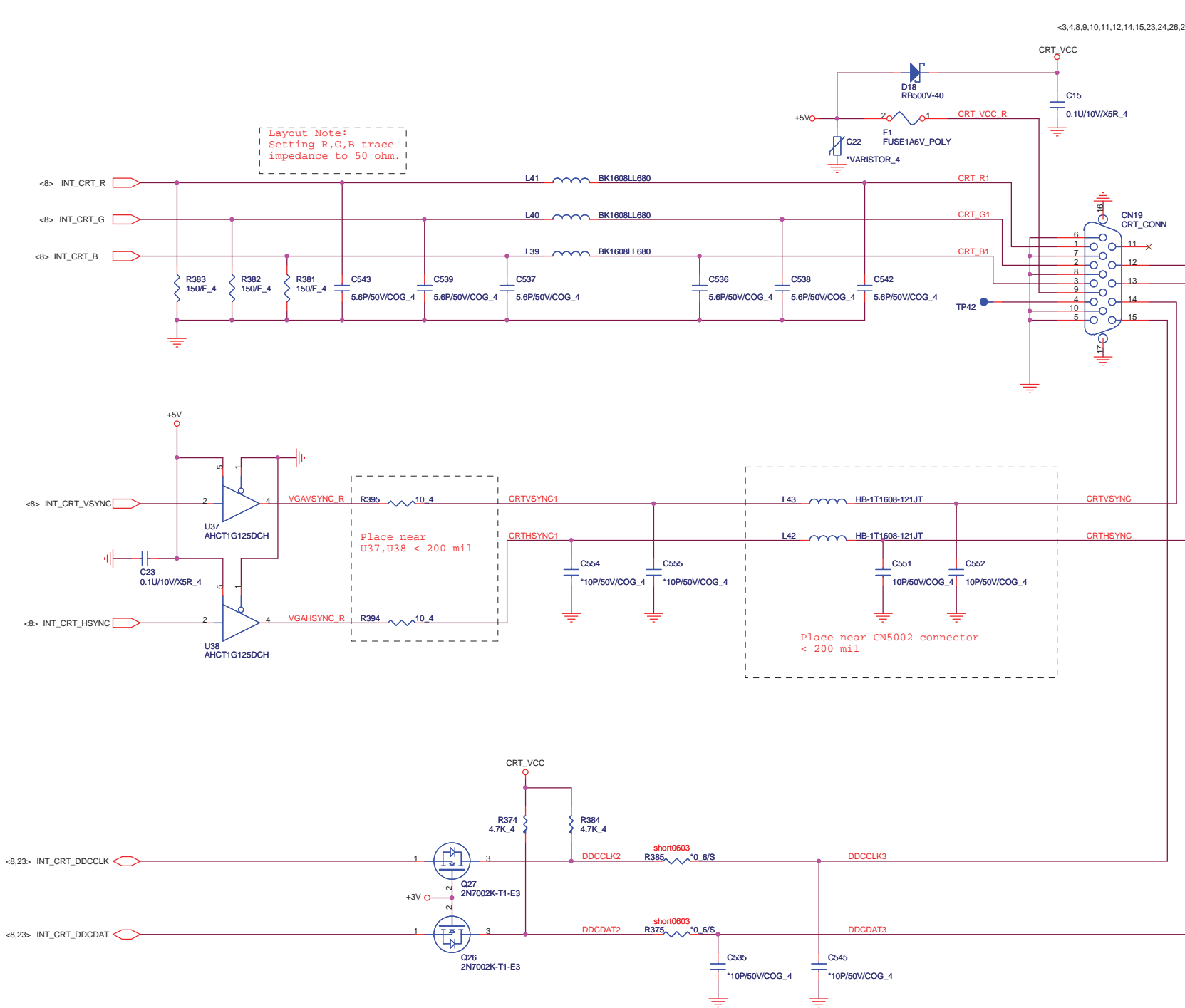


back light



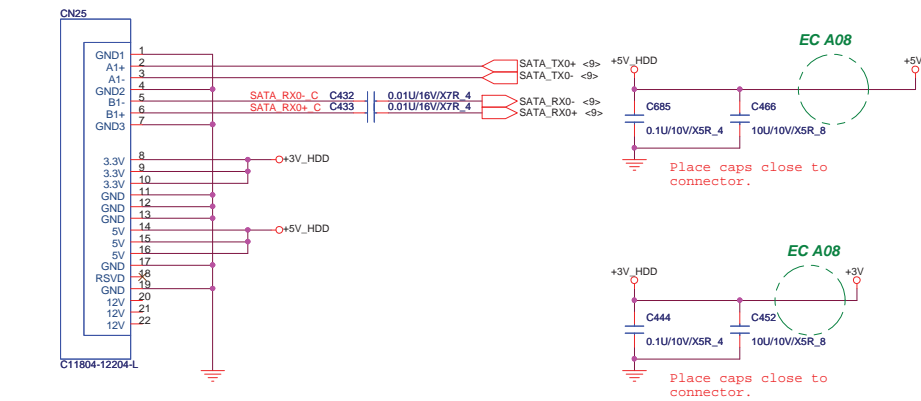
CAMERA



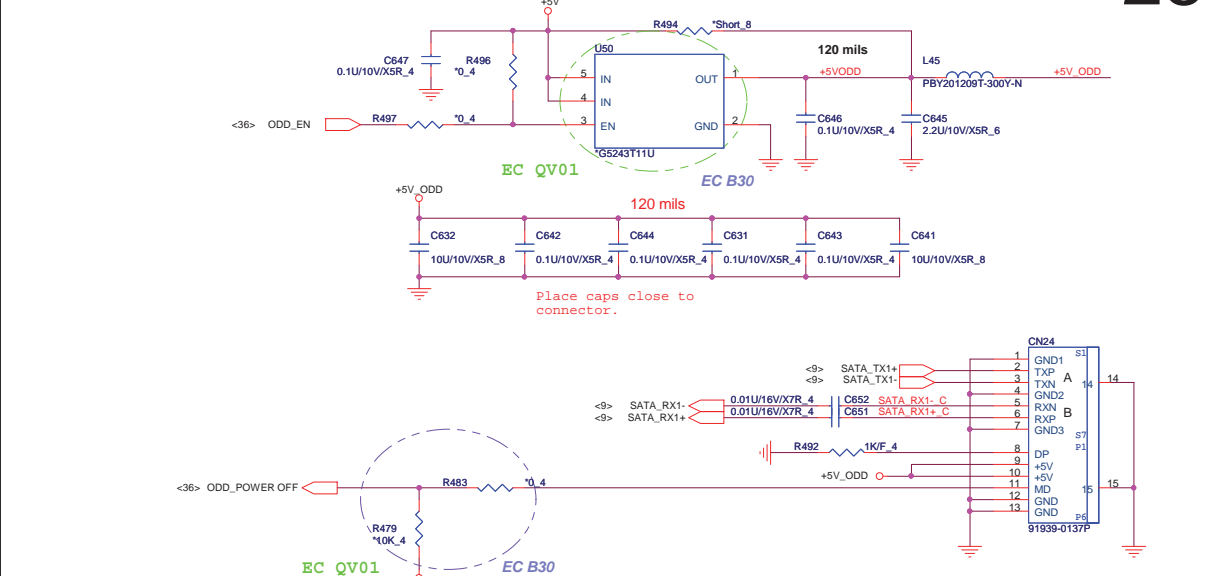




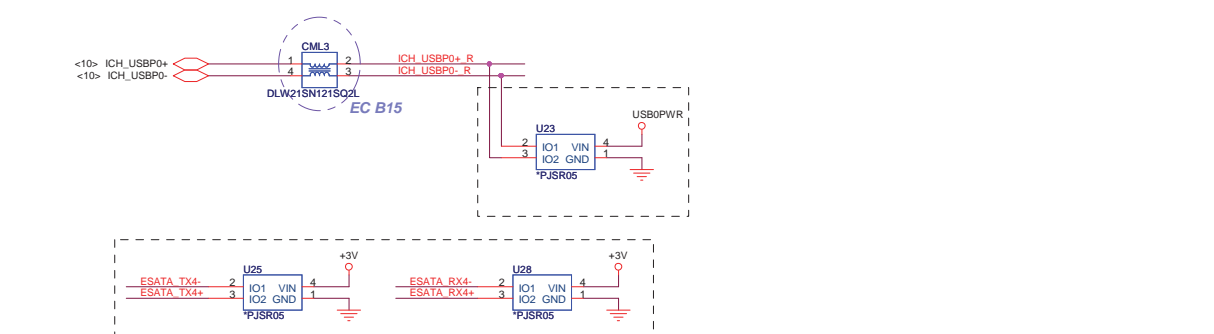
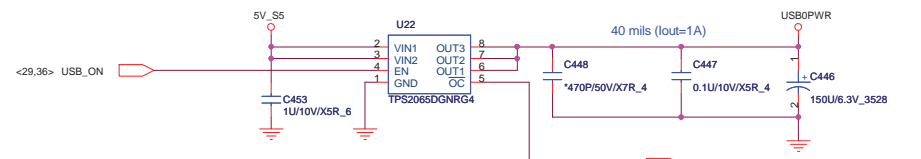
SATA HDD Connector.



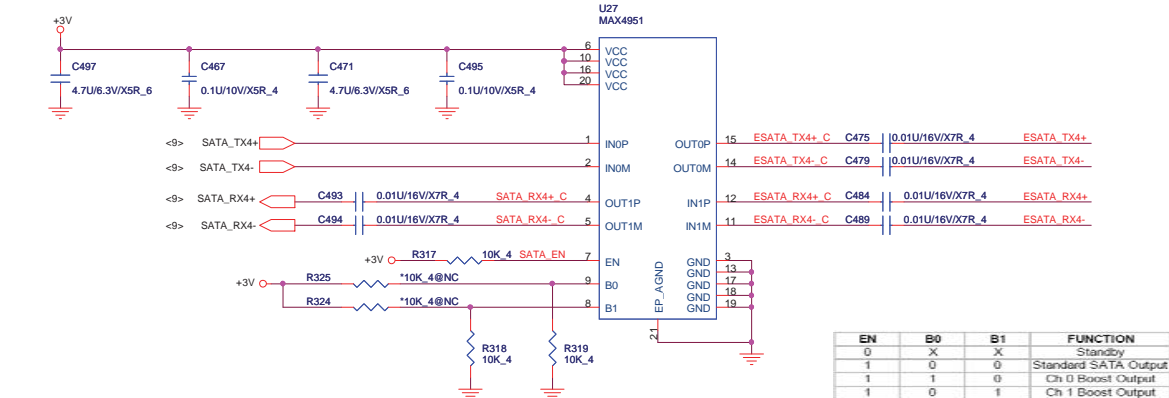
SATA ODD Connector.



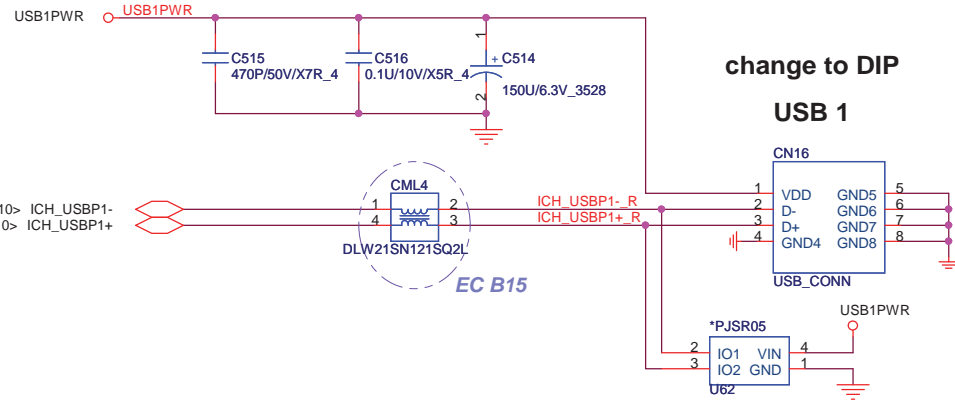
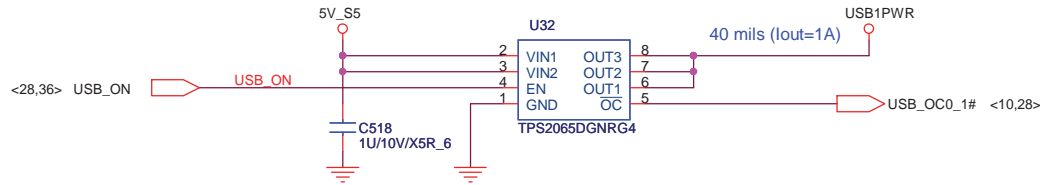
USB + E-SATA



E-SATA RE-DRIVER



USBX3



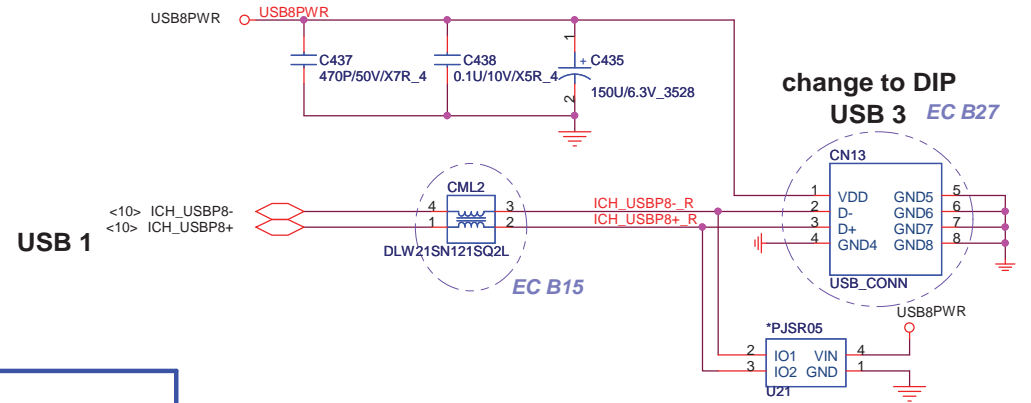
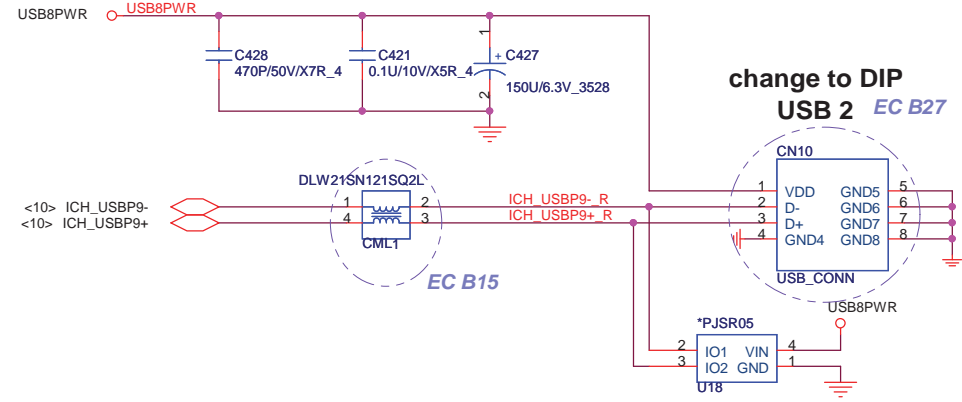
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<12,28,38> 5V_S5

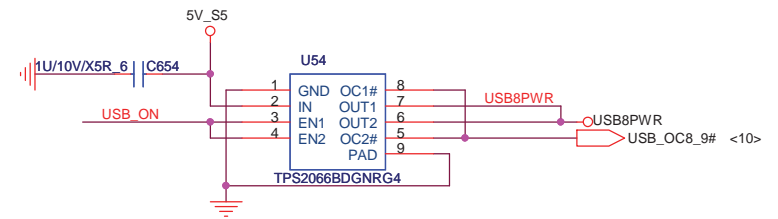
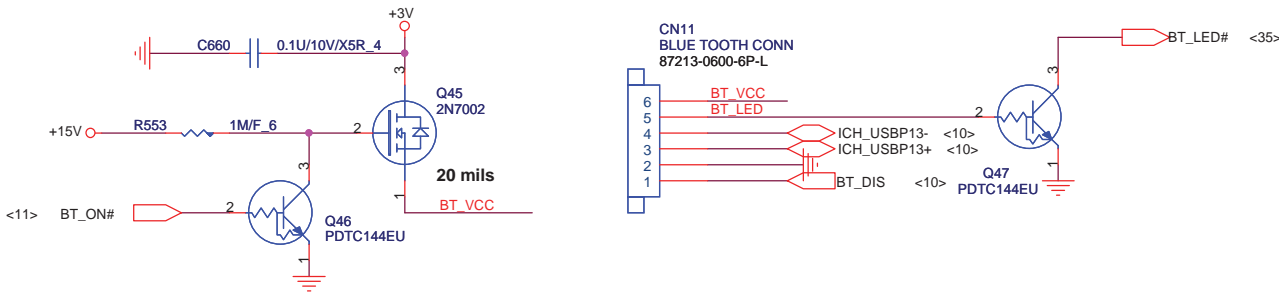
<24,27,34,38,40,42,44> +3V

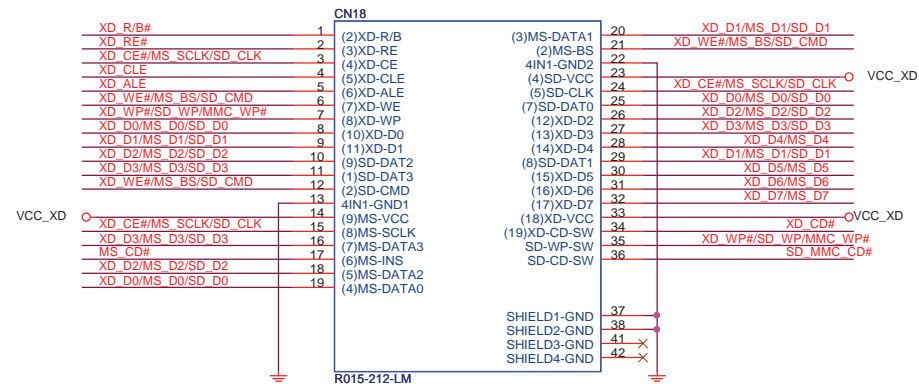
+15V

29

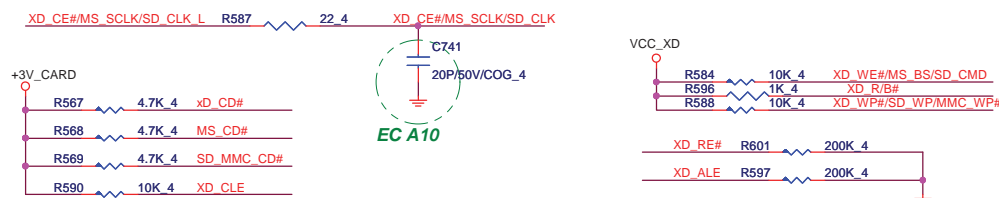
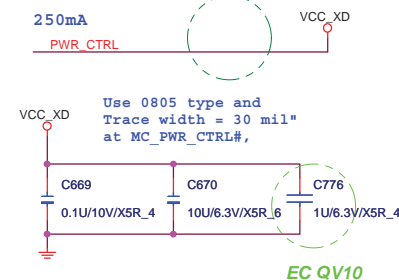


BLUETOOTH

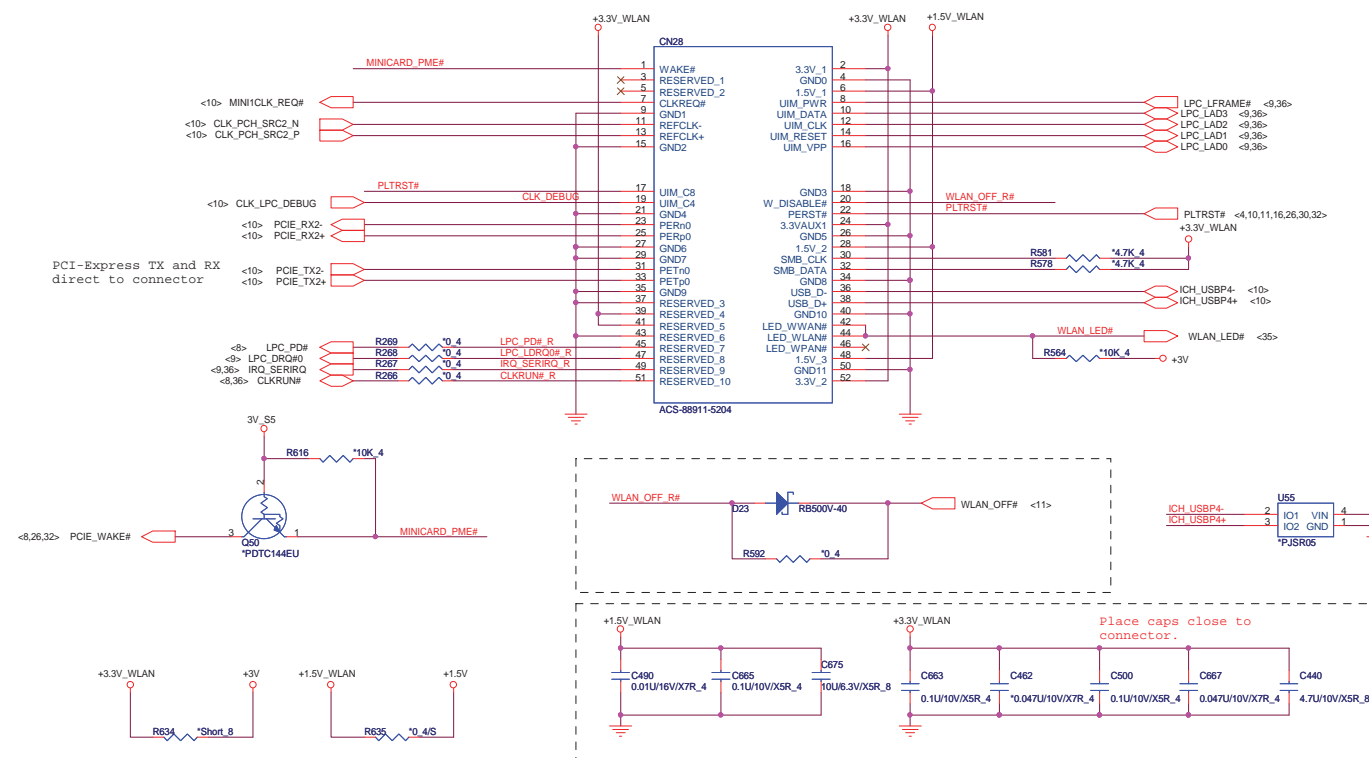




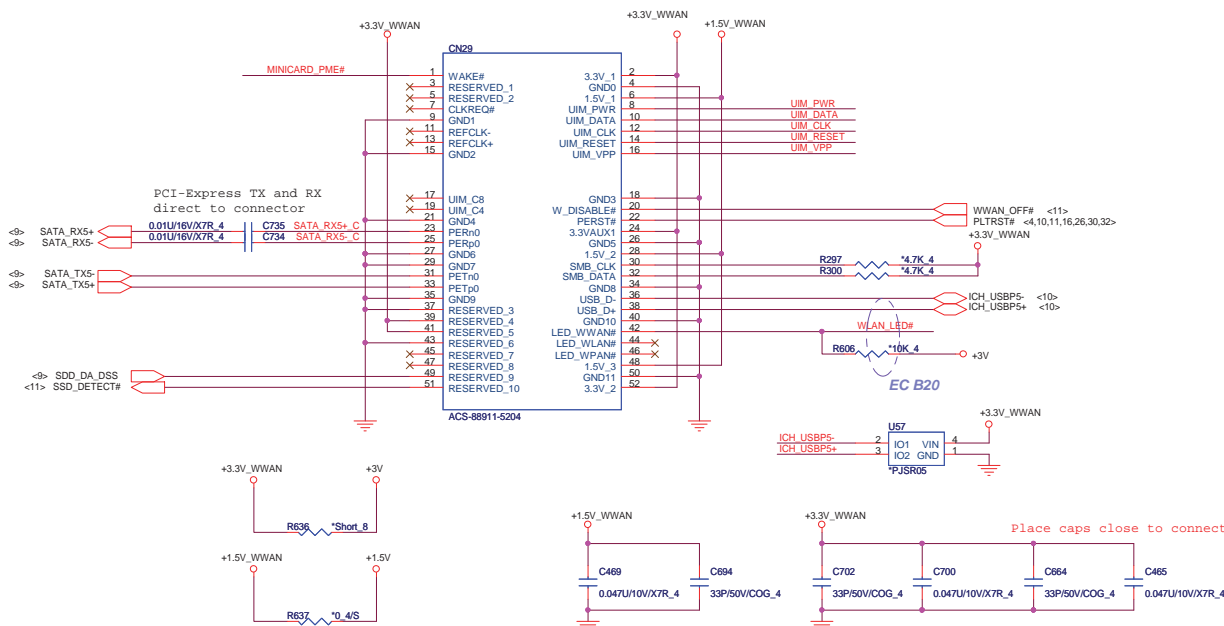
EC A09



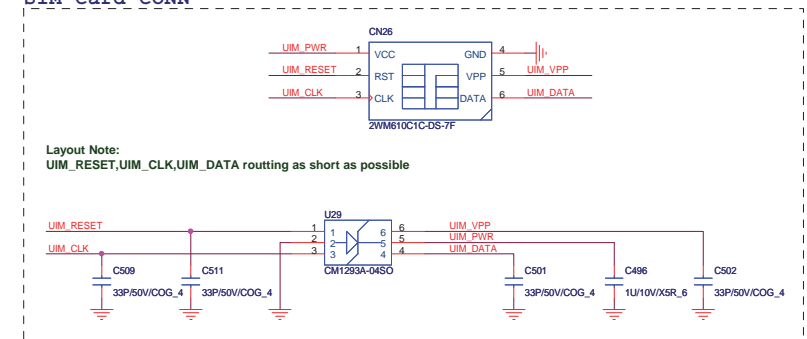
MiniCard WLA connector



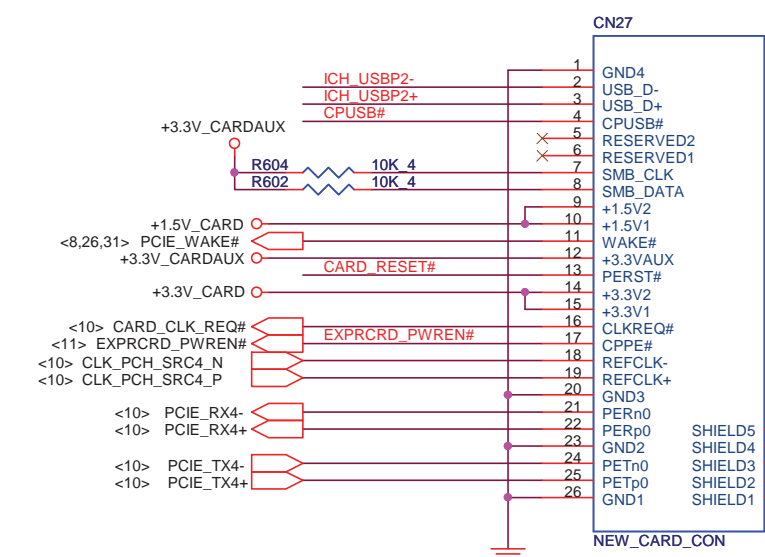
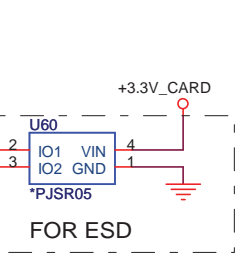
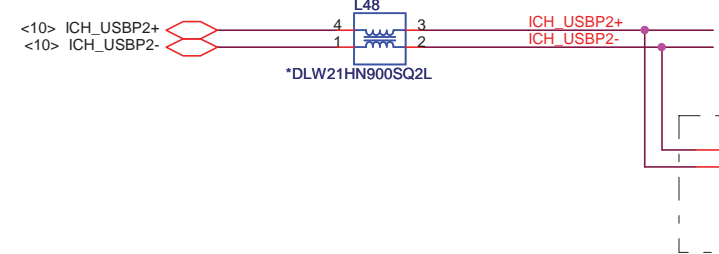
MiniCard WWAN/SATA SSD connector



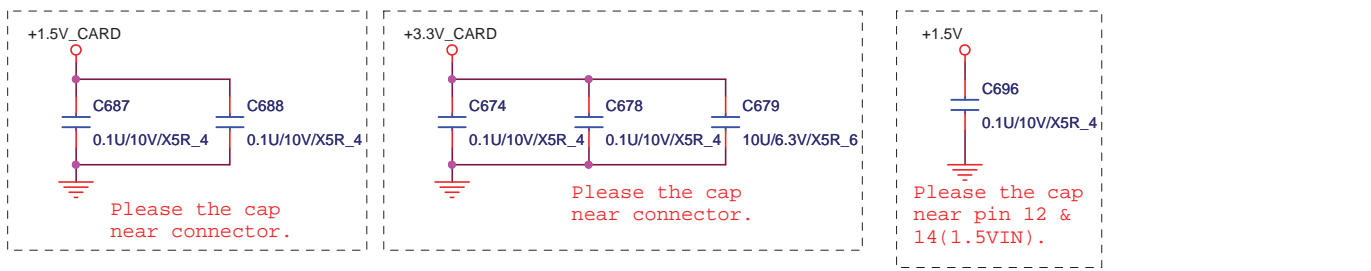
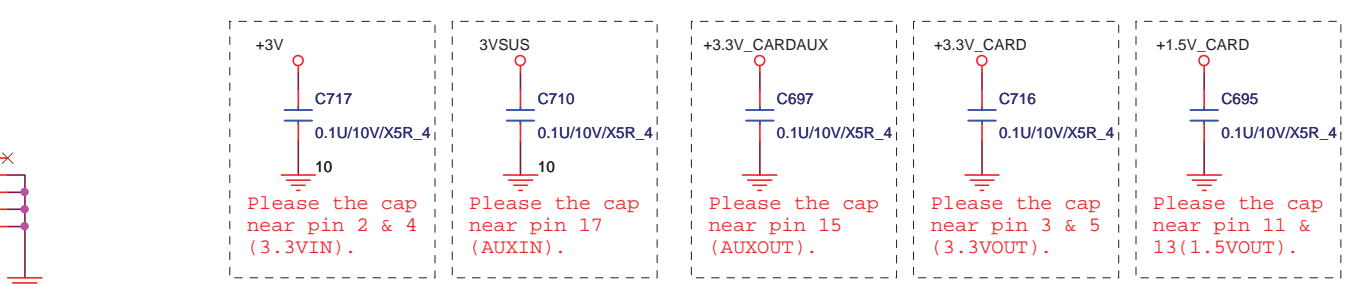
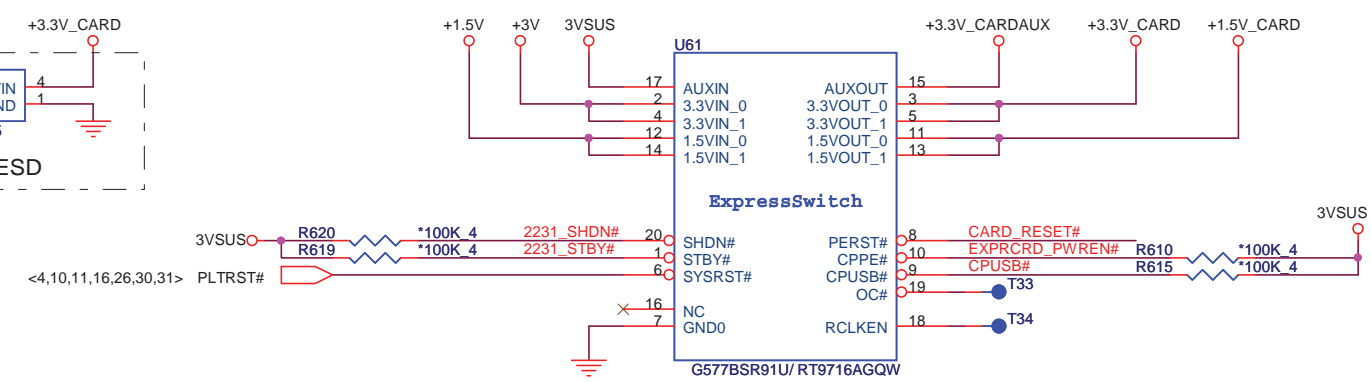
SIM Card CONN




Express Card



PCI-Express TX and RX direct to connector.
JAE PX10FS16PH-26P

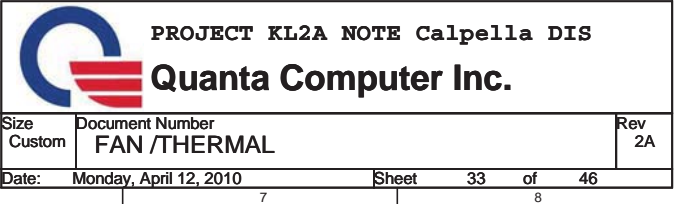


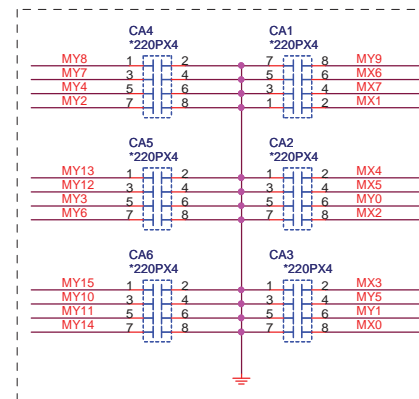
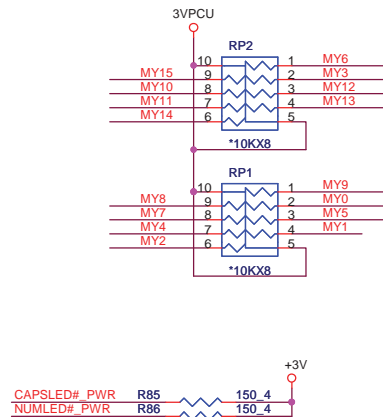
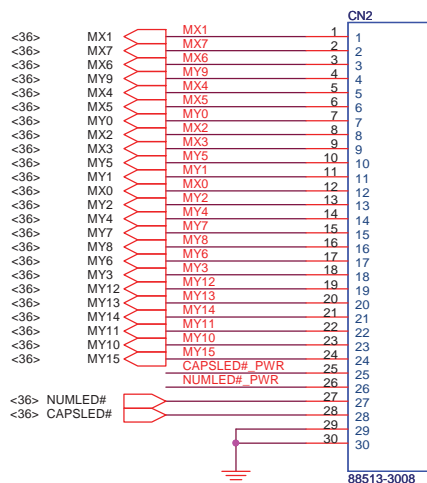


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Quanta Computer Inc.

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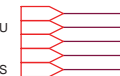
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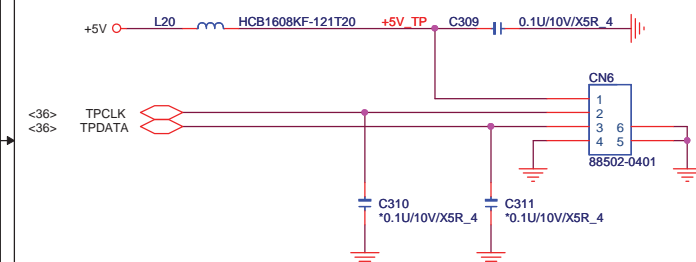


For EMI request

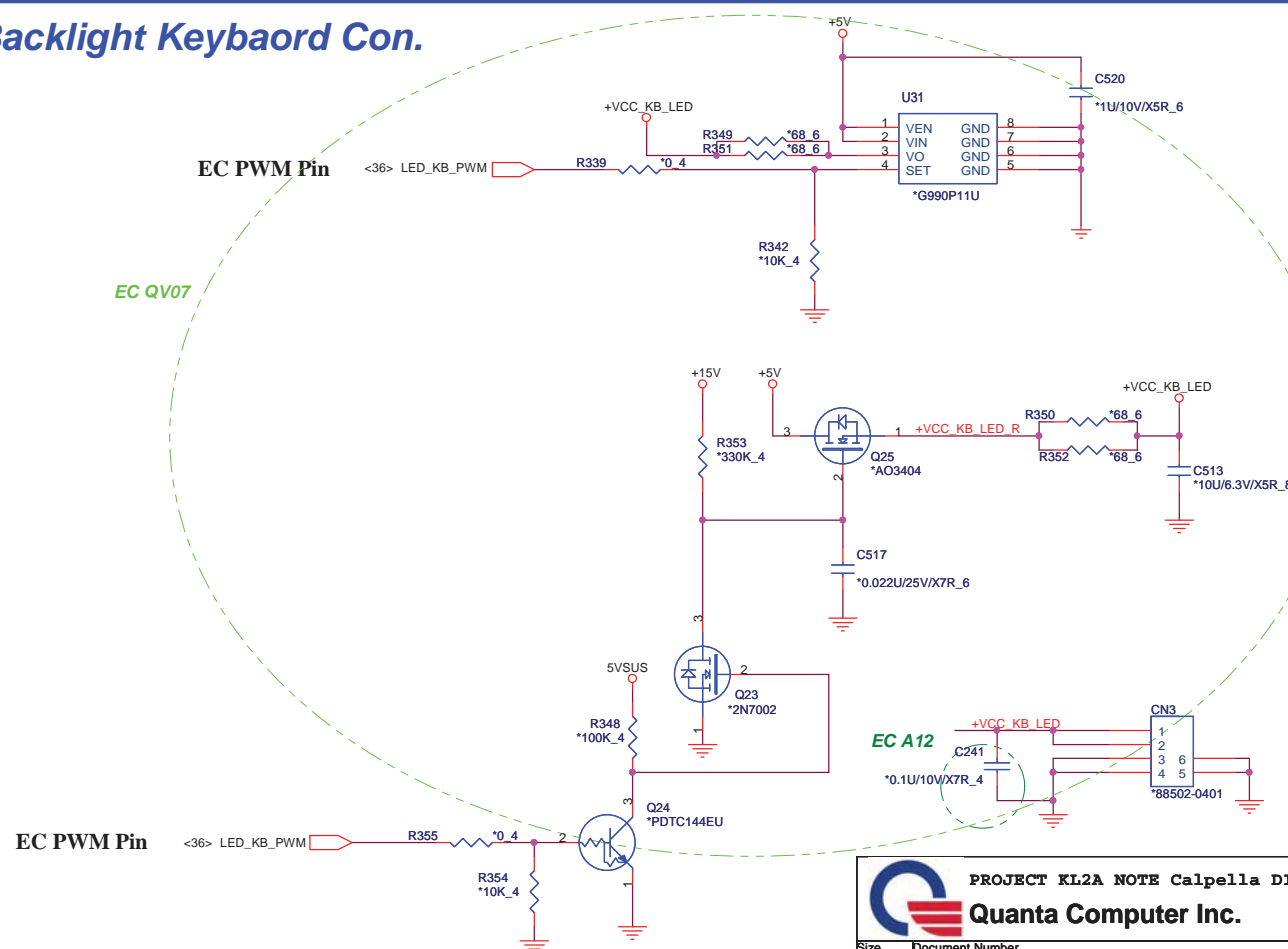
<8,12,23,24,25,27,28,33,36,38,39>	+5V
<9,24,26,35,36,38,39,41,42,44>	3VPCU
<24,27,29,38,40,42,44>	+15V
28,29,30,31,32,33,35,36,38,39,43,44>	+3V
<24,38,43,45>	5VSUS



Touch pad

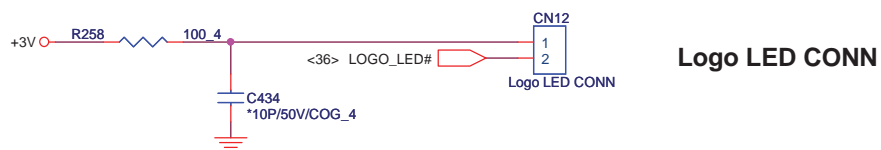
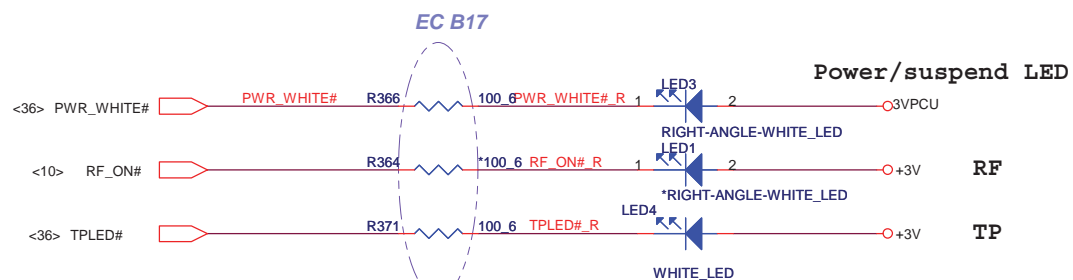
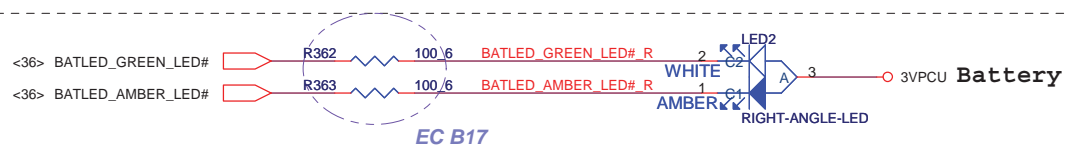
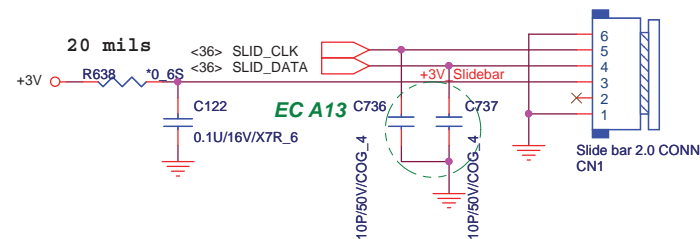


Backlight Keybaord Con.

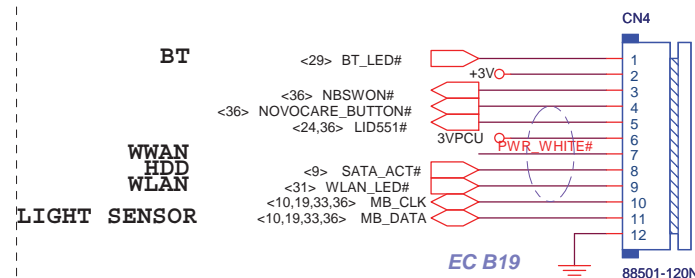


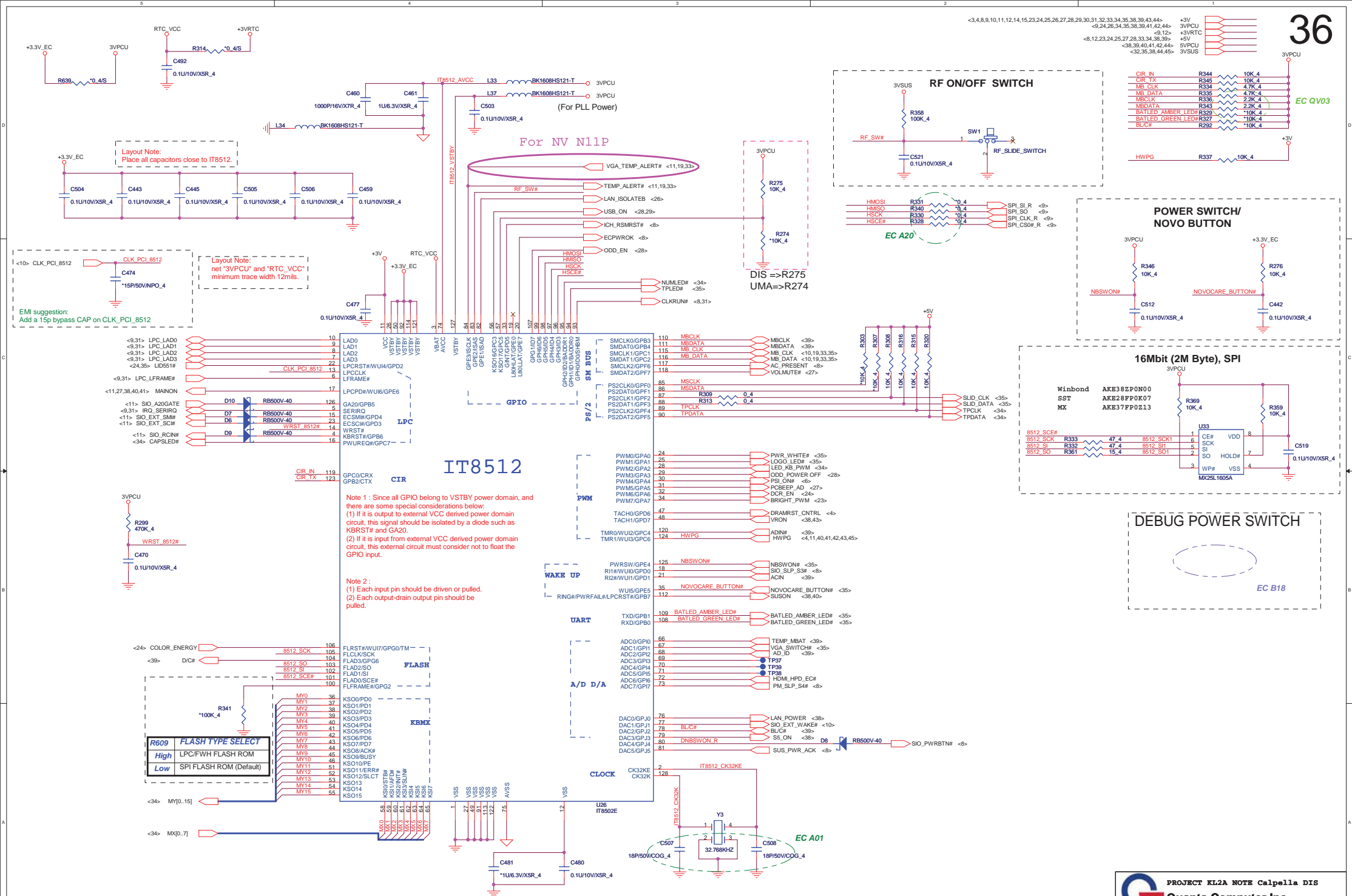


Slide bar 2.0



POWER BOARD






MiniCard WLAN

HOLE28
H-TC197D79PT


HOLE30
H-TC197D79PT



MiniCard WWAN

HOLE29
H-TC197D79PT


HOLE31
H-TC197D79PT



Hole for PCH support

HOLE25
H-TC197D59PT

HOLE27
H-TC197D59PT



Drink Hole

ESD for ESATA

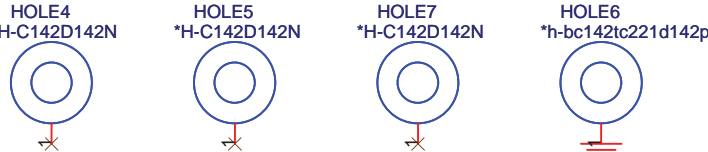
Hole for CPU support

HOLE4
*H-C142D142N

HOLE5
*H-C142D142N

HOLE7
*H-C142D142N


HOLE6
*h-bc142tc221d142pt



VGA nut

HOLE20
H-TC197BC138I102D102P2

HOLE22
H-TC197BC138I102D102P2



Bluetooth nut

Boundary Hole

HOLE1
*h-sd106p2-kl2

HOLE11
*H-C315I3146BO378D106P2

HOLE15
*H-C315I126D106P2

HOLE18
*H-C315I126D106P2

HOLE19
*H-C315I126D106P2

HOLE13
*H-TC197BC256D106P2

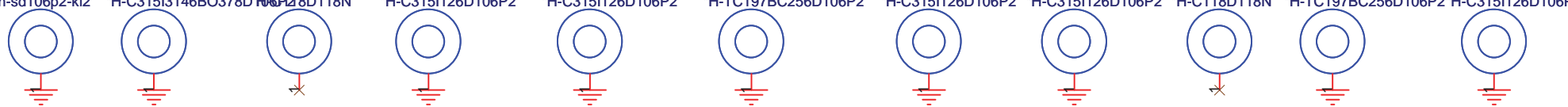
HOLE17
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HOLE16
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HOLE14
*H-C118D118N

HOLE8
*H-TC197BC256D106P2

HOLE3
*H-C315I126D106P2

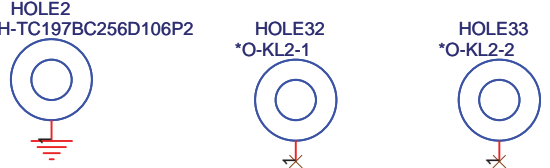


Boundary Hole

HOLE2
*H-TC197BC256D106P2

HOLE32
*O-KL2-1

HOLE33
*O-KL2-2



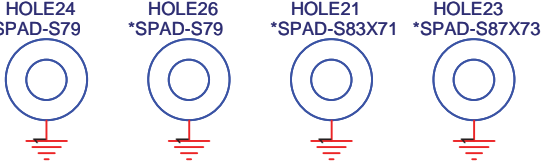
PAD

HOLE24
*SPAD-S79

HOLE26
*SPAD-S79

HOLE21
*SPAD-S83X71

HOLE23
*SPAD-S87X73




Break Hole

Boundary Hole (ODD)

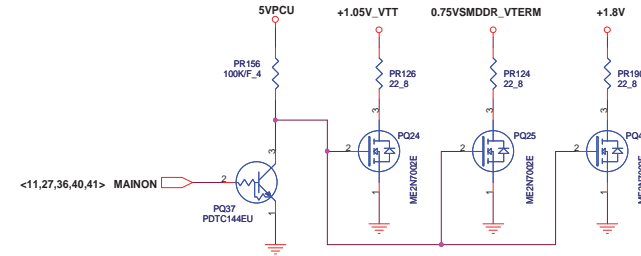
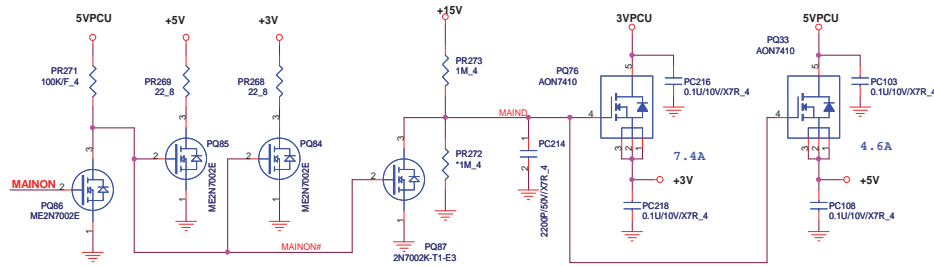
HDD PAD
EC QV08

HOLE10
*H-O158X355D158X355N

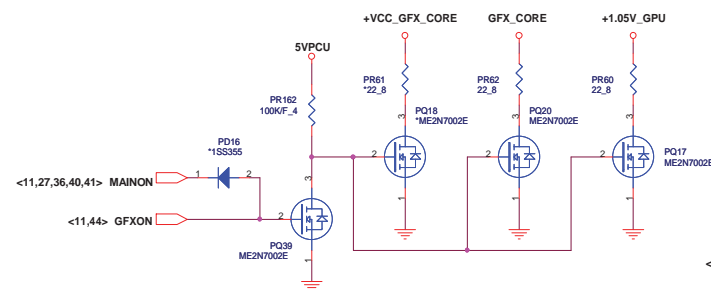
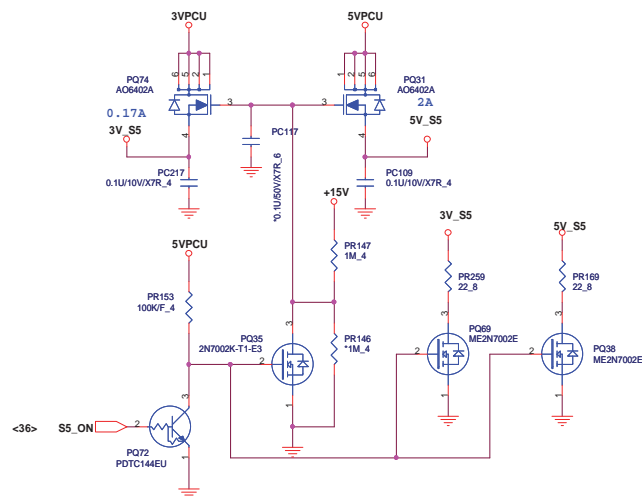


DISCHARGE

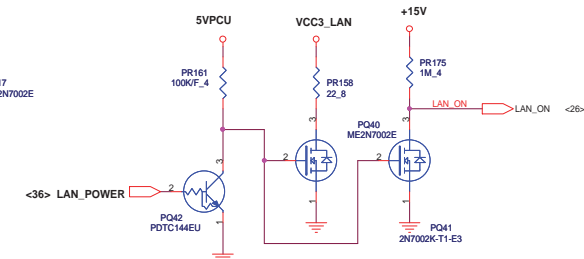
+3V, +5V



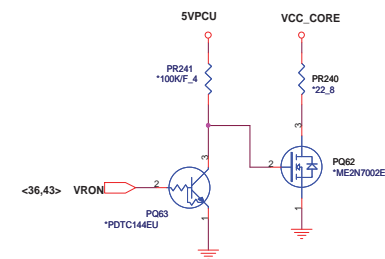
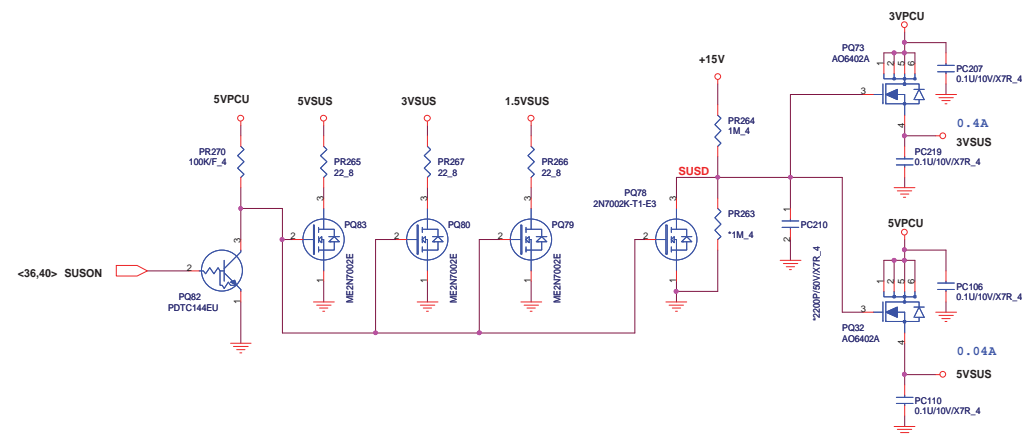
3V_S5, 5V_S5

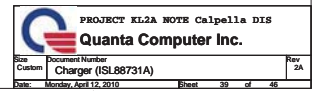


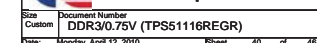
LANVCC

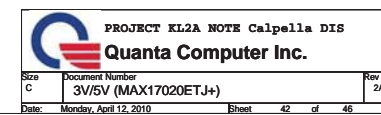


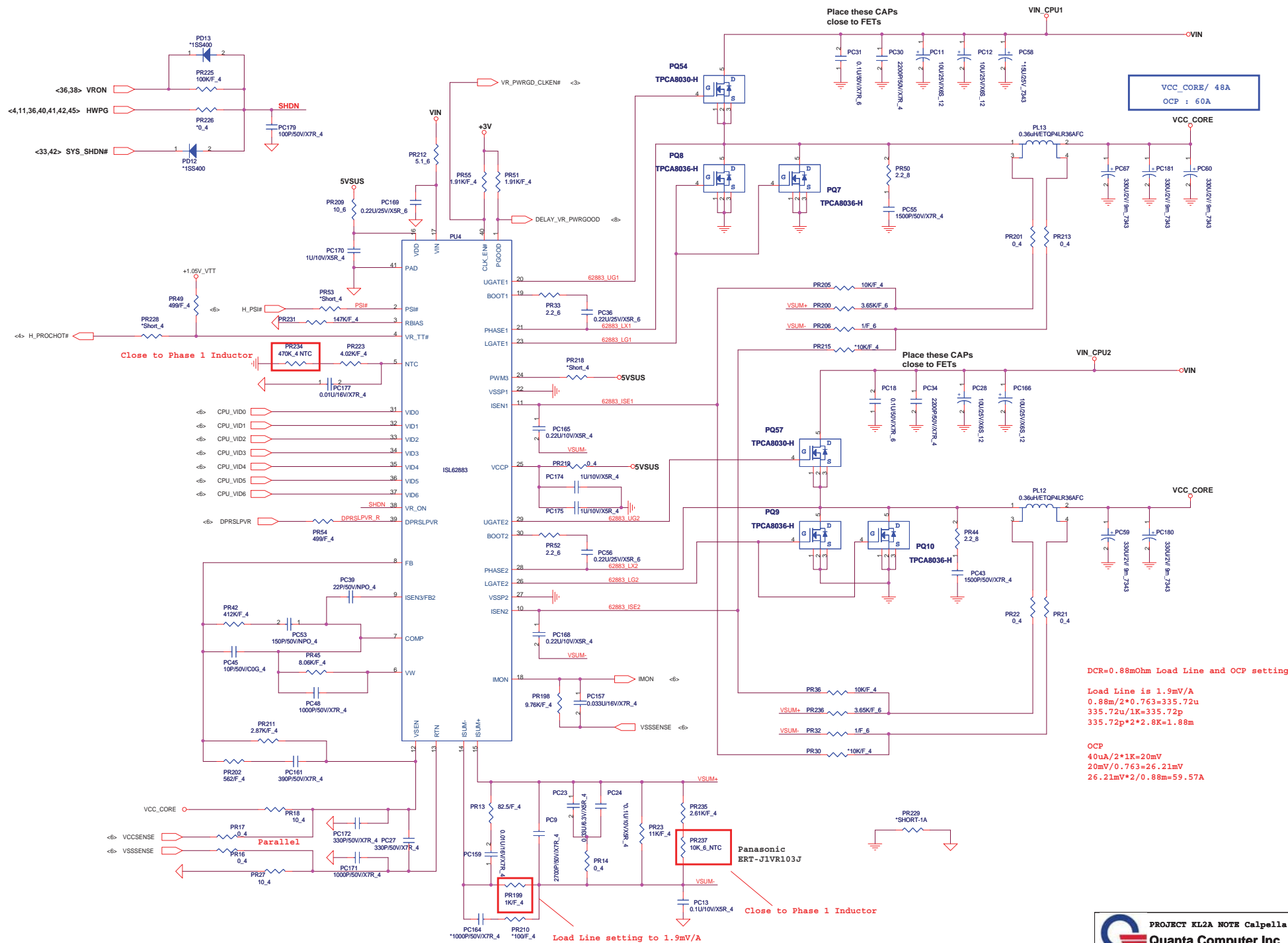
3VSUS, 5VSUS



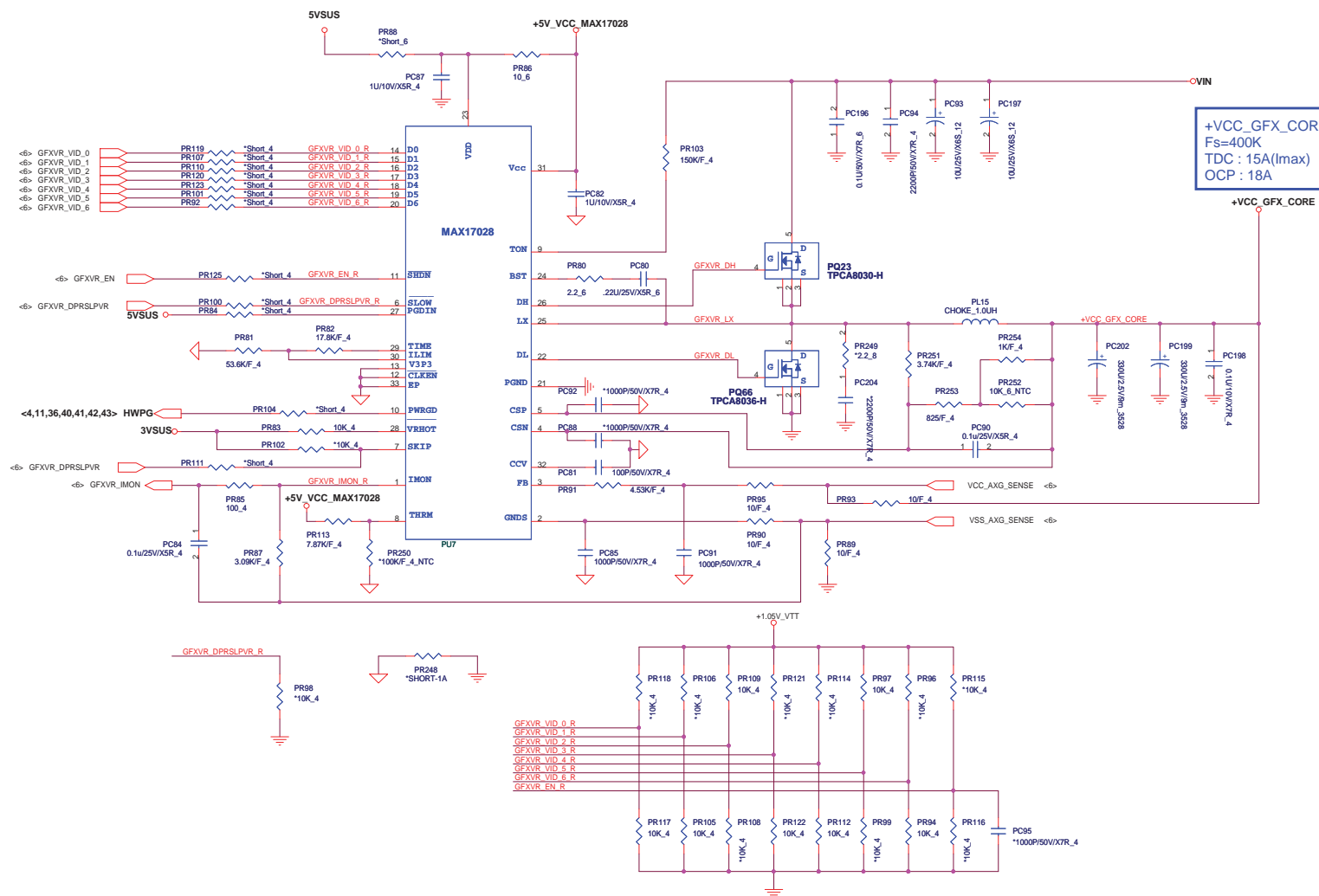













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			Quanta Computer Inc.		
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