

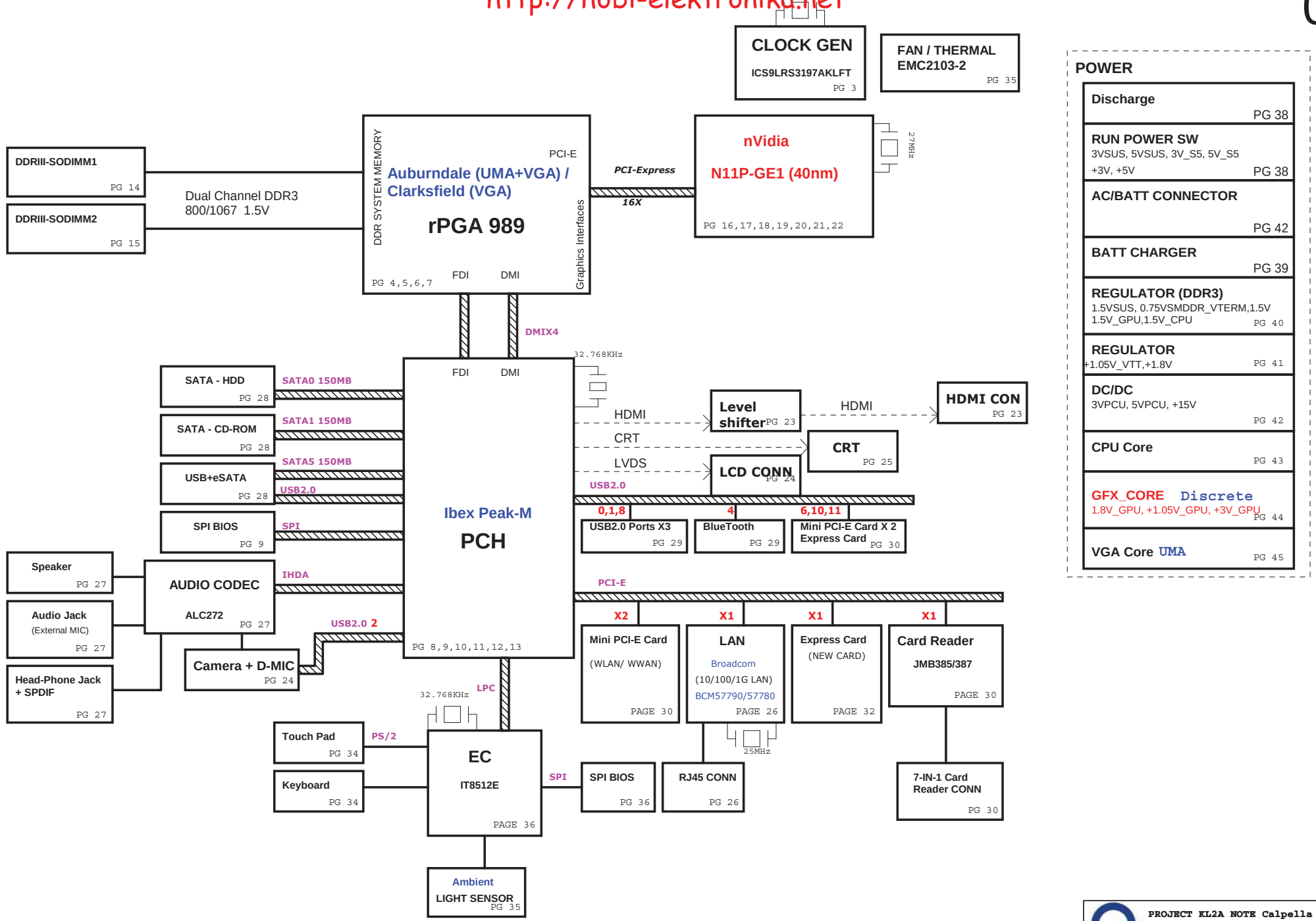


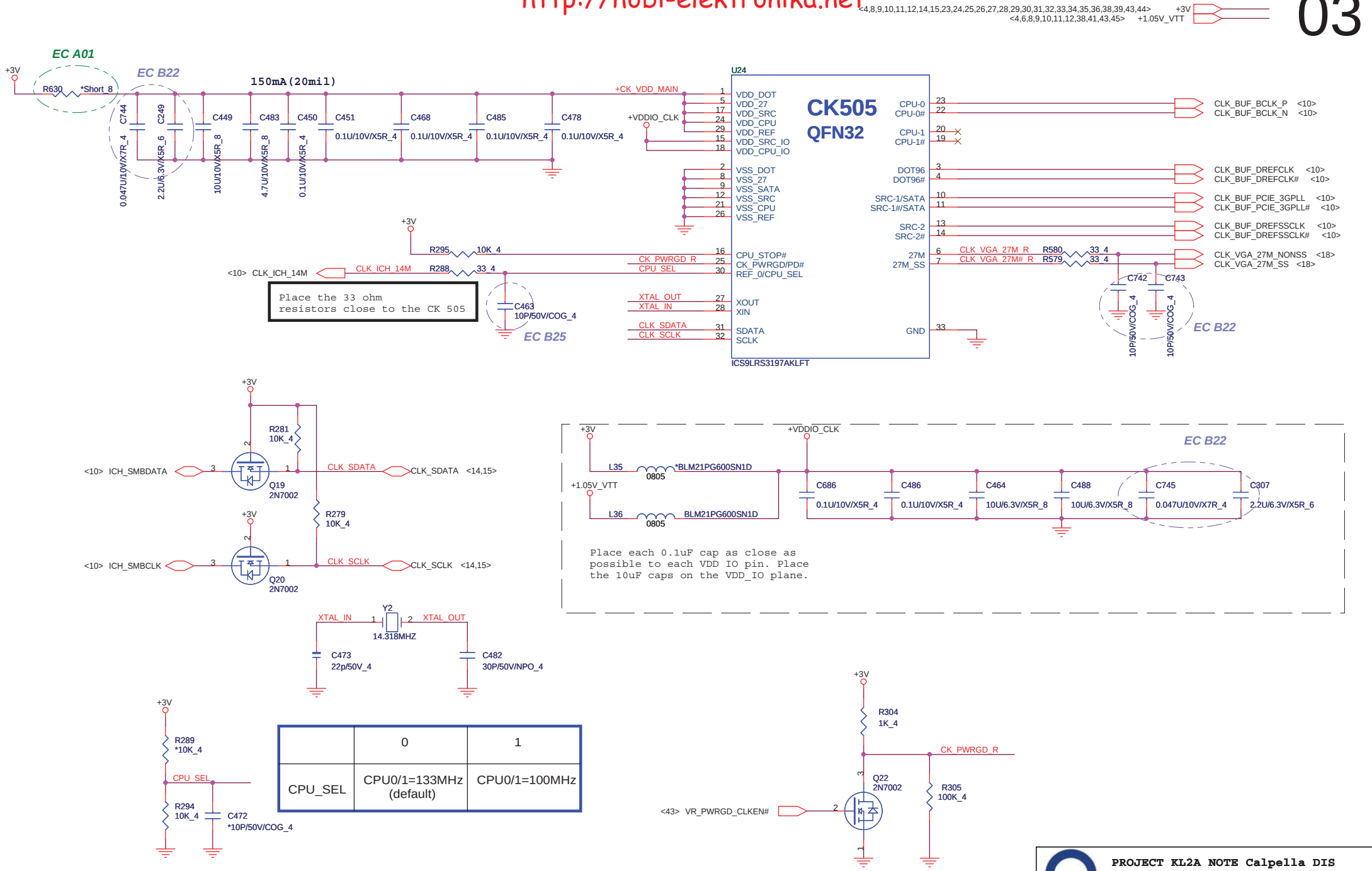
Table of Contents

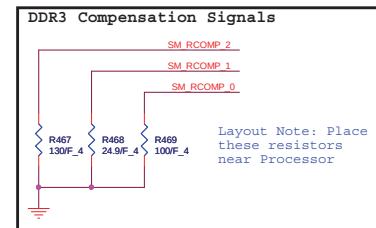
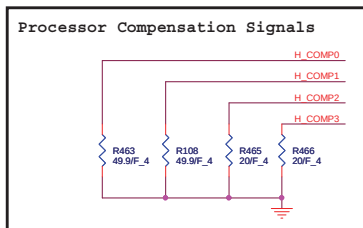
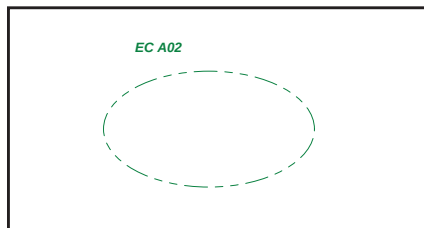
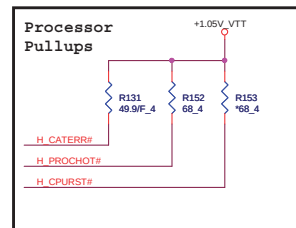
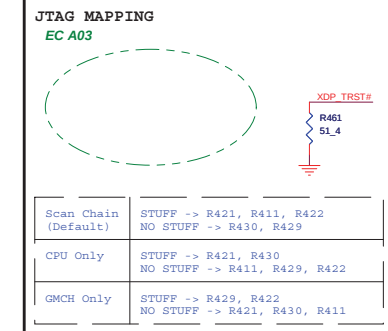
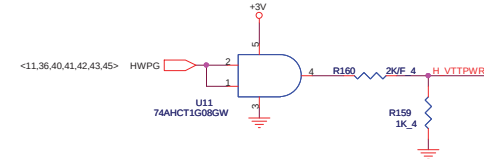
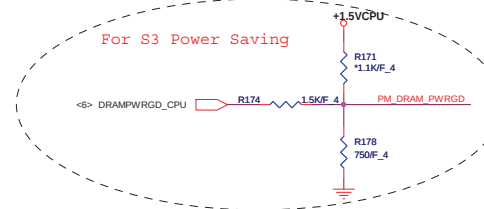
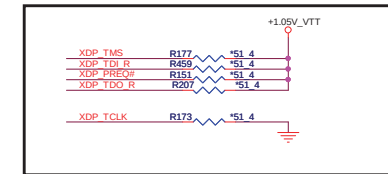
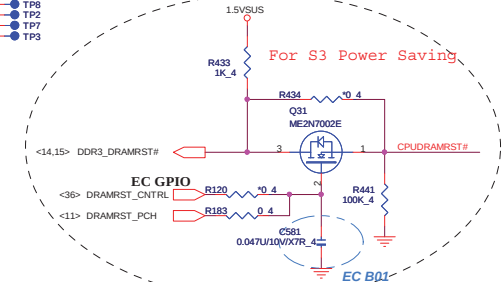
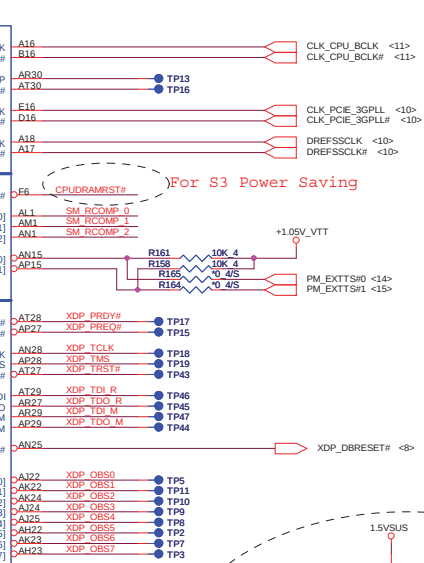
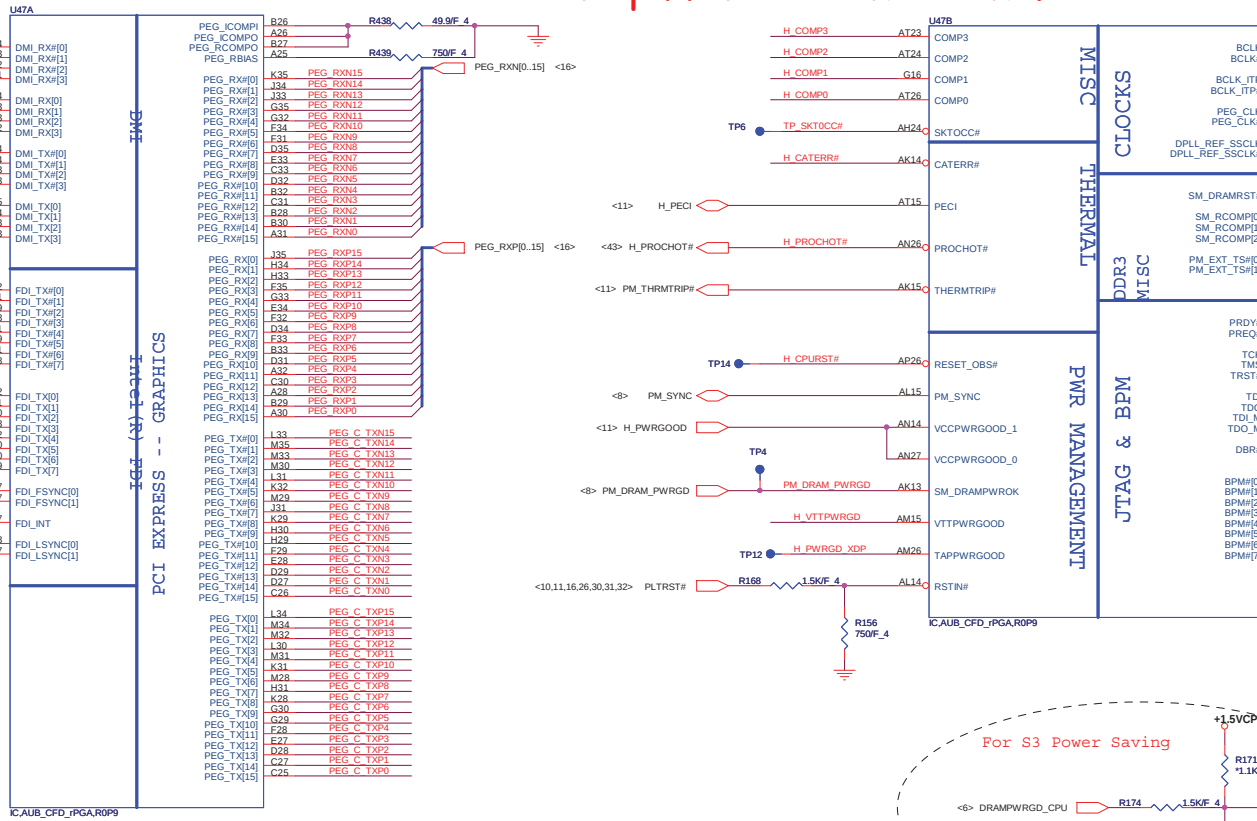
PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
3	CLOCK GENERATOR
4-7	Arrandale CPU
8-13	Ibex Peak-M
14-15	DDRIII SO-DIMM
16-22	Discreate VGA (Madison/Park)
23	LVDS/HDMI/CRT switchable
24	LCD + Camera Conn.
25	CRT Conn.
26	LAN (BCM57780, RJ45)
27	AL272/AMP/MIC/LINE-OUT
28	SATA HDD/ESATA/CD-ROM
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

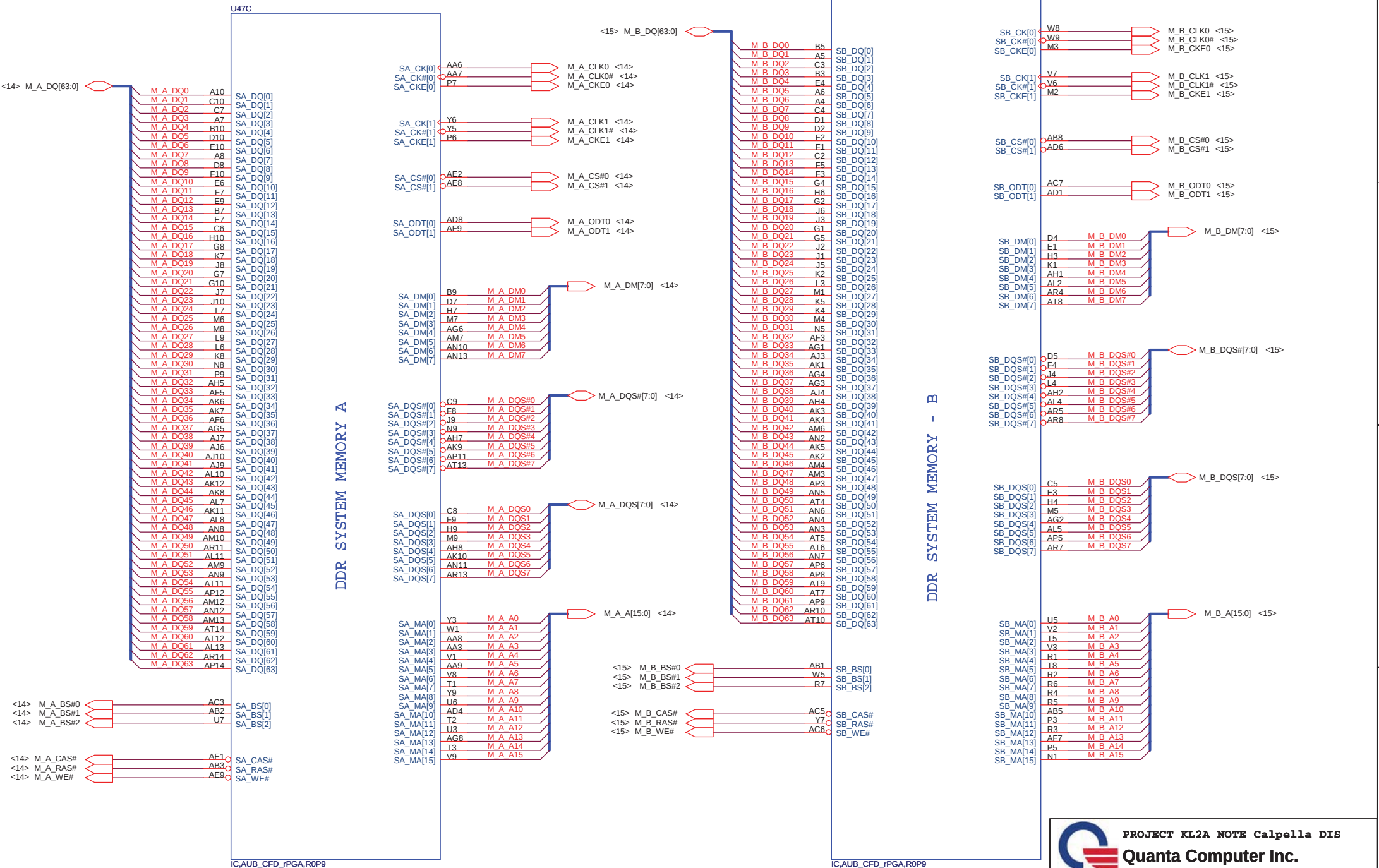
Power States

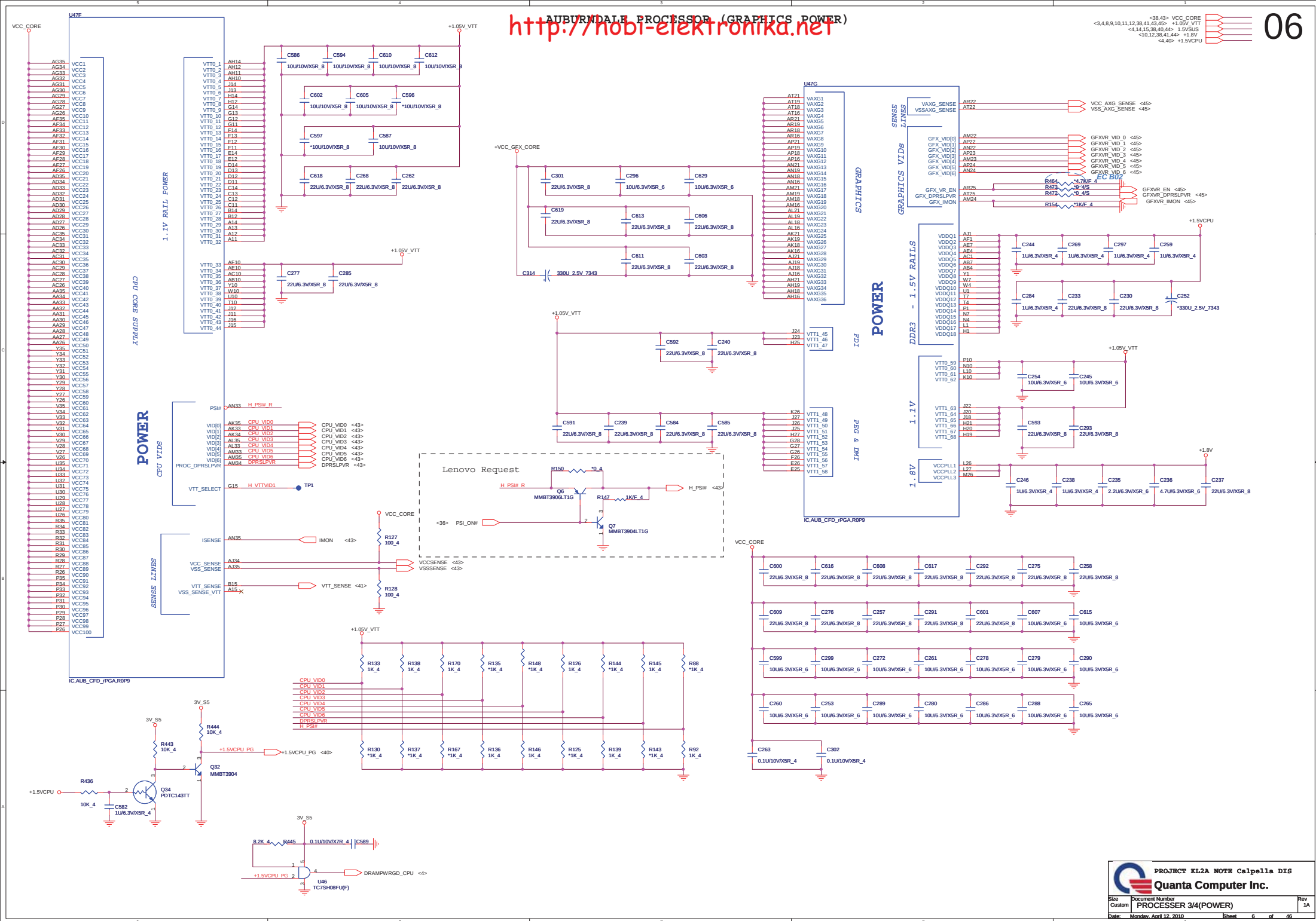
POWER PLANE	VOLTAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
VIN	+10V~+19V	MAIN POWER		S0~S5
+RTC_CELL	+3V~+3.3V	RTC		S0~S5
+3VPCU	+3.3V	8051 POWER	3V5V_EN	S0~S5
+5VPCU	+5V	DC/DC POWER IC SOURCE	3V5V_EN	S0~S5
+15V	+15V	LARGE POWER	3V5V_EN	S0~S5
VCC3_LAN	+3.3V	LAN POWER	LAN_ON	
+5VSUS	+5V	SLP_S4# CTRLD POWER	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	

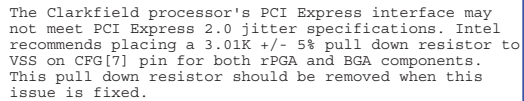
GND PLANE	PAGE	DESCRIPTION
 LANGND	26	
 IT8512_AGND	36	
 ADOGND	27	
 GND	ALL	





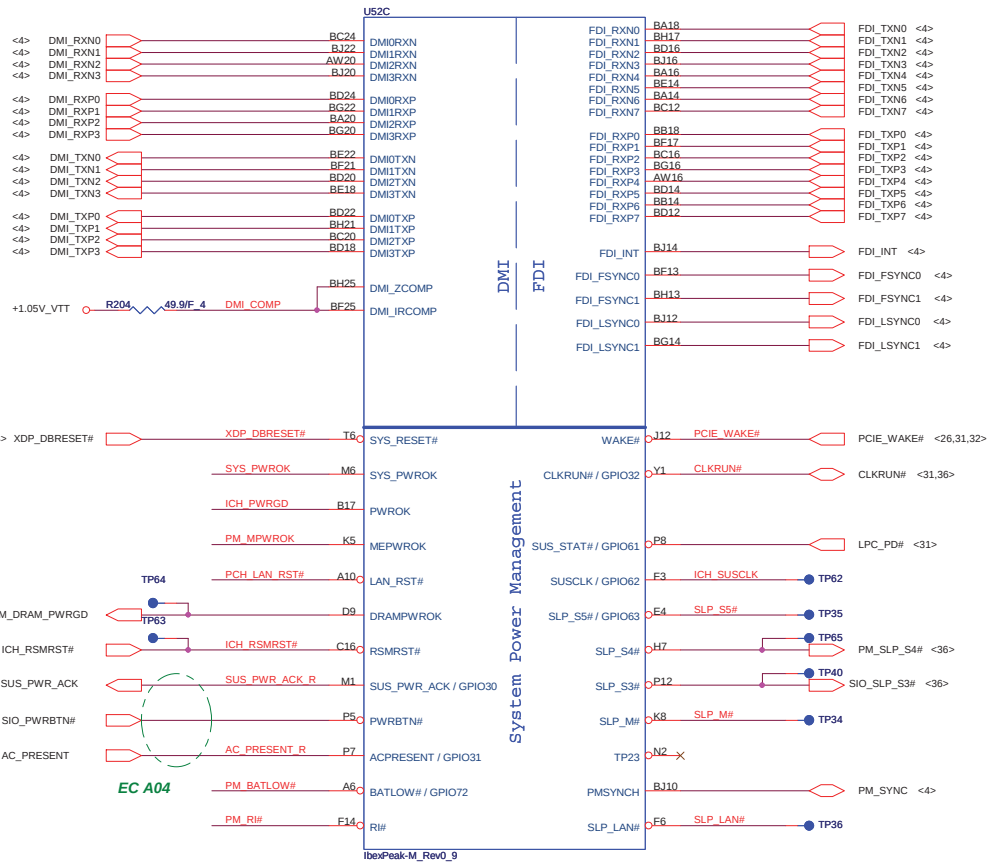




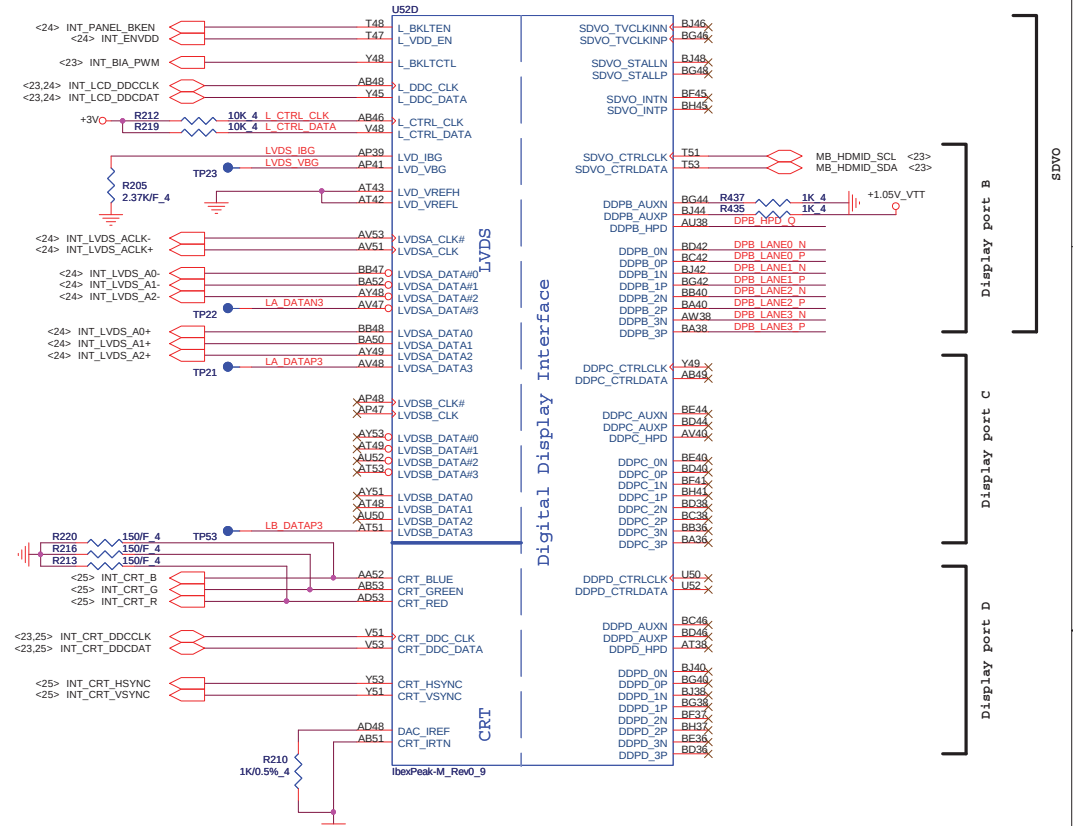


	PROJECT KL2A NOTE Calpella DIS	
	Quanta Computer Inc.	
Size Custom	Document Number PROCESSOR 4/4(GND)	Rev 1A
Date: Monday, April 12, 2010	Sheet 7 of 46	

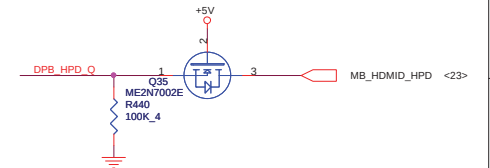
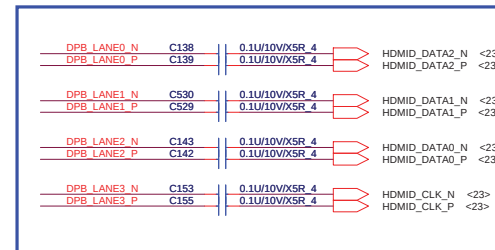
IBEX PEAK-M (DMI, FDI, GPIO)



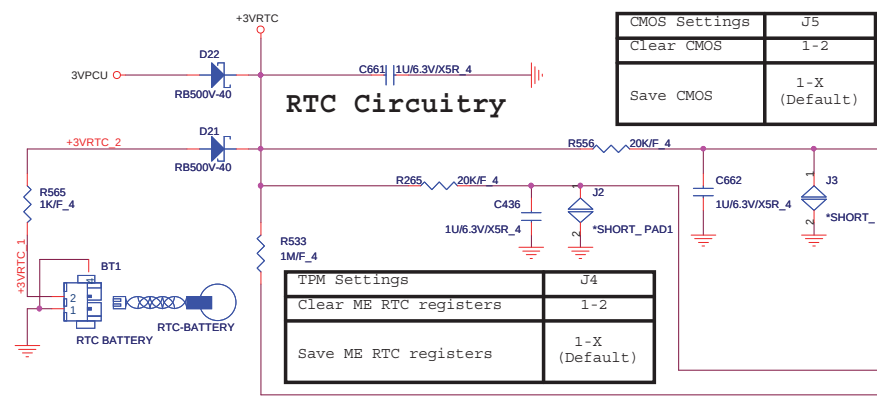
IBEX PEAK-M (LVDS, DDI)



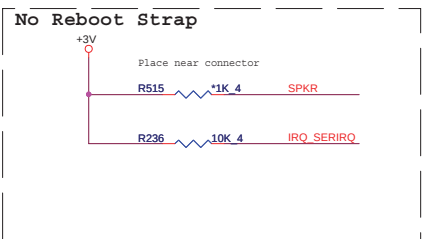
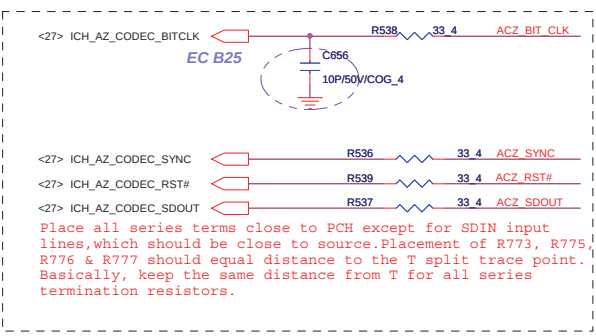
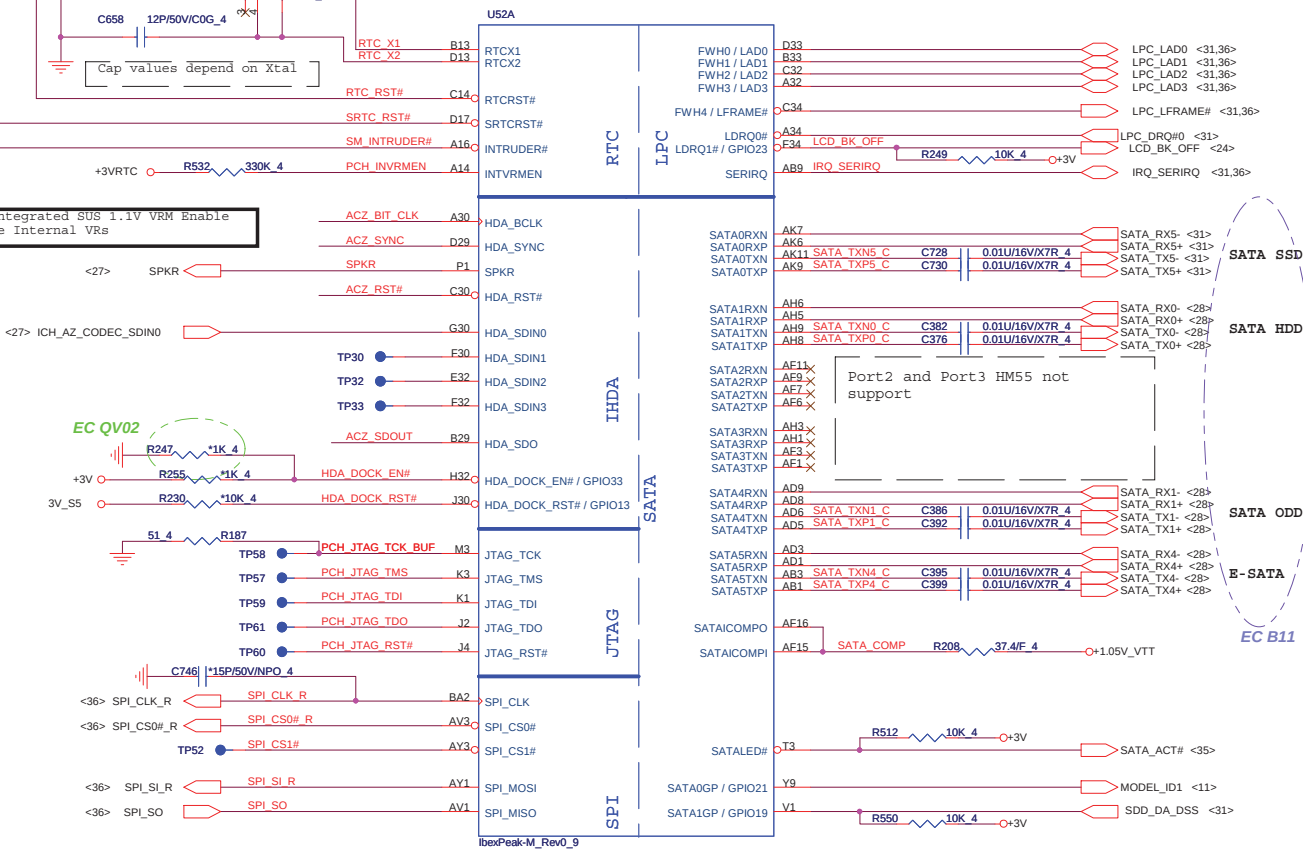
For UMA HDMI Function



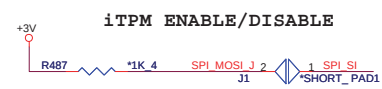
RTC Circuitry



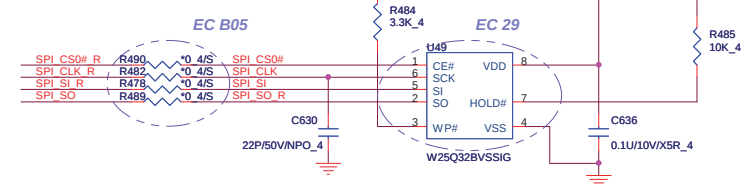
IBEX PEAK-M (HDA, JTAG, SATA)

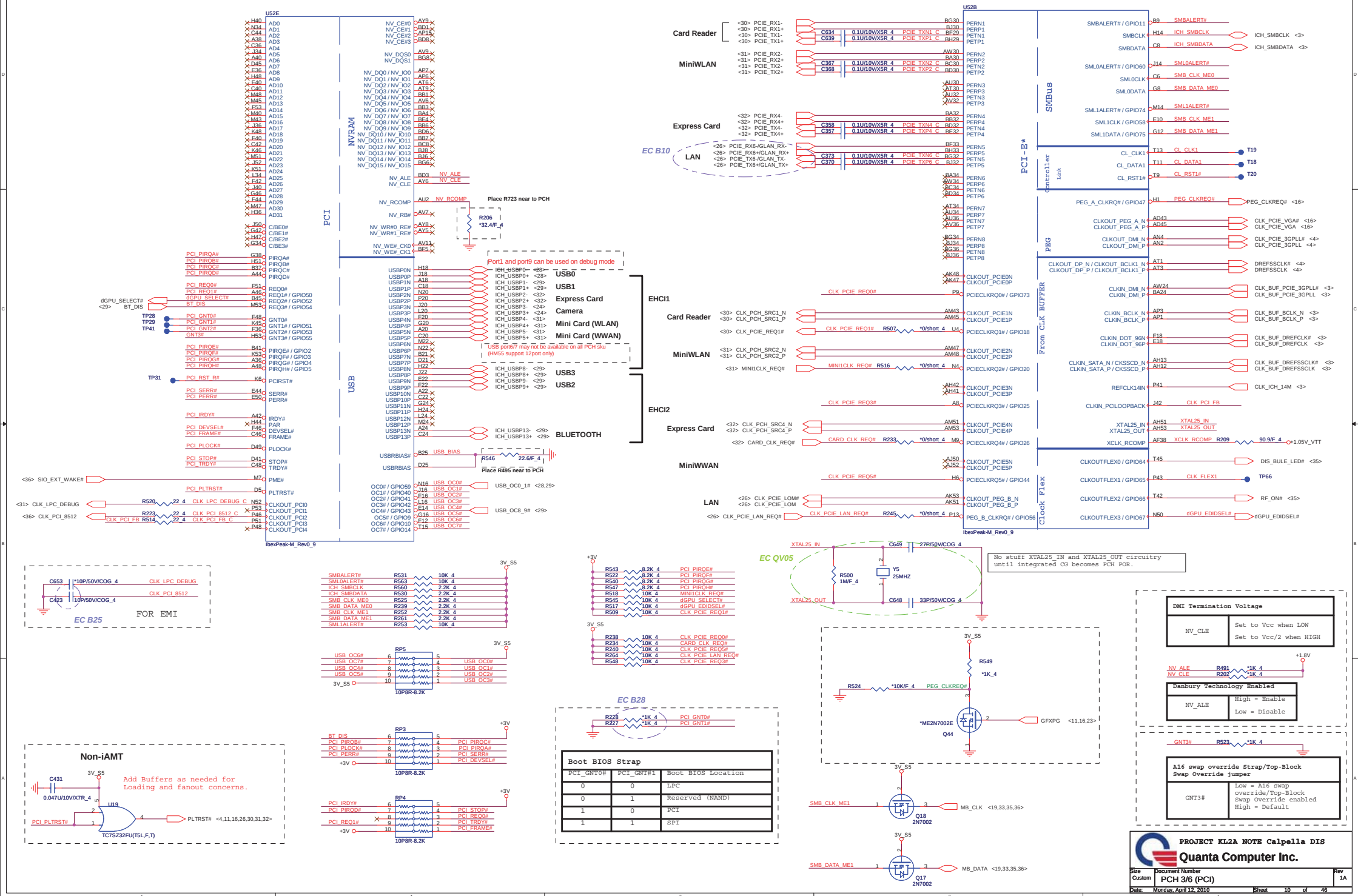


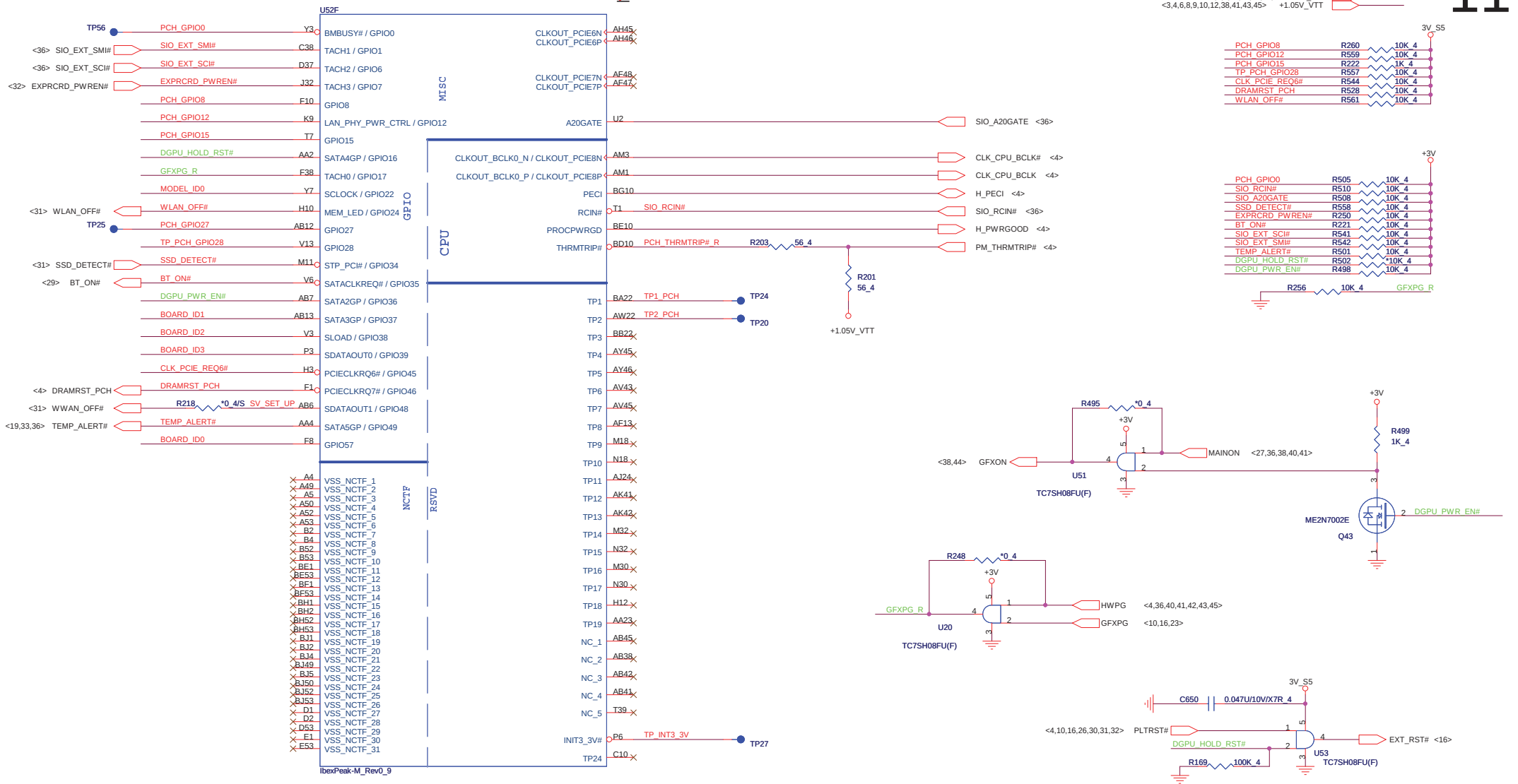
TPM Function	R487
Enable	Stuff
Disable	NC (Default)



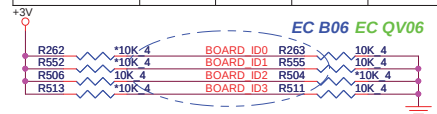
For PCH
32Mbit (4M Byte), SPI





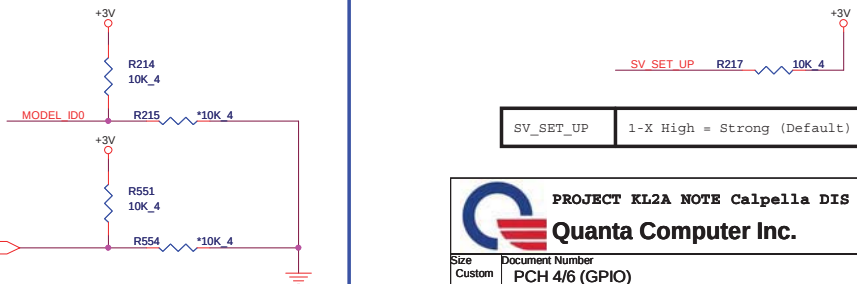
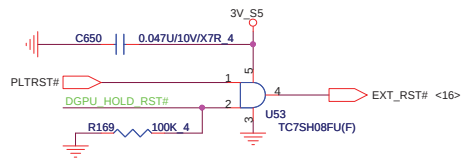
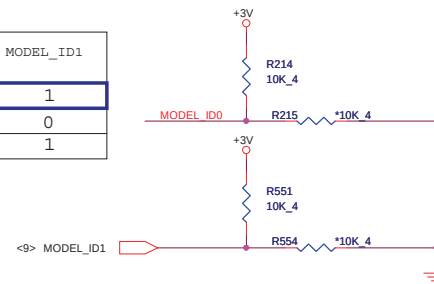
Board ID

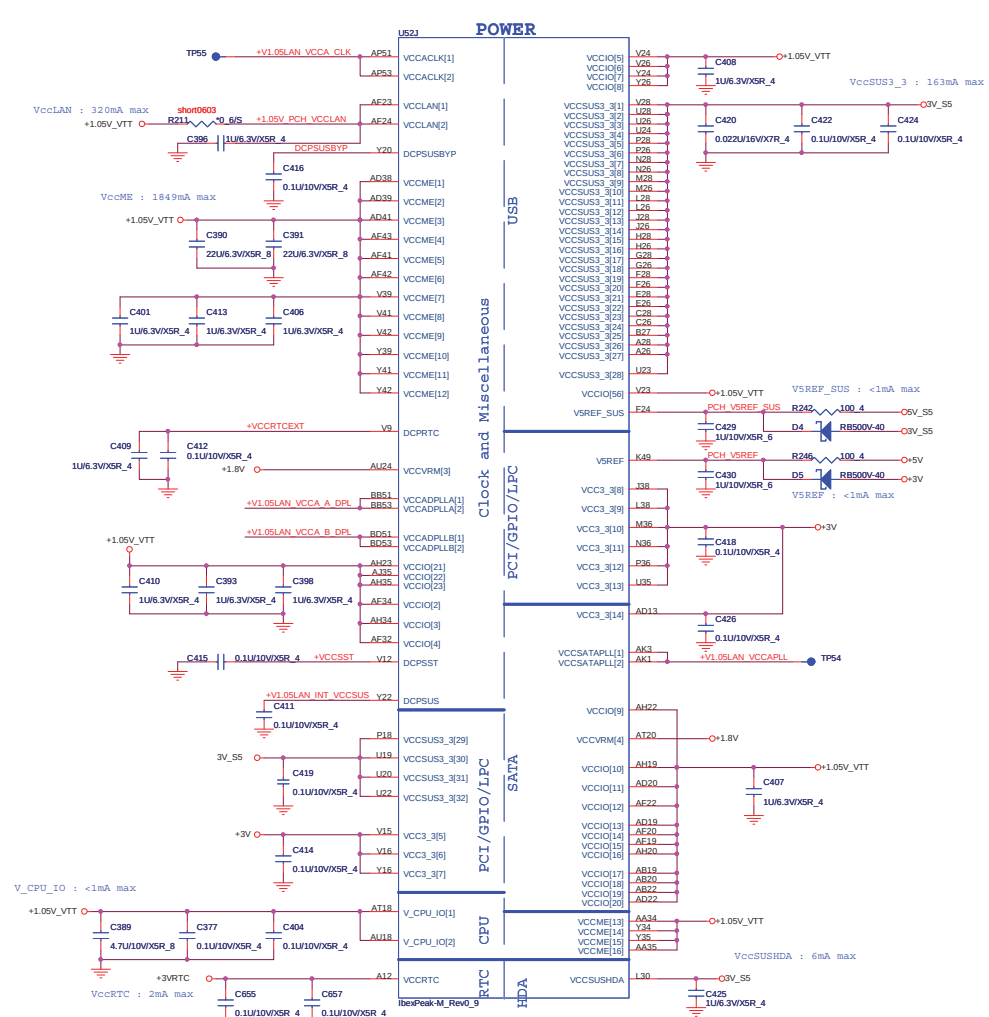
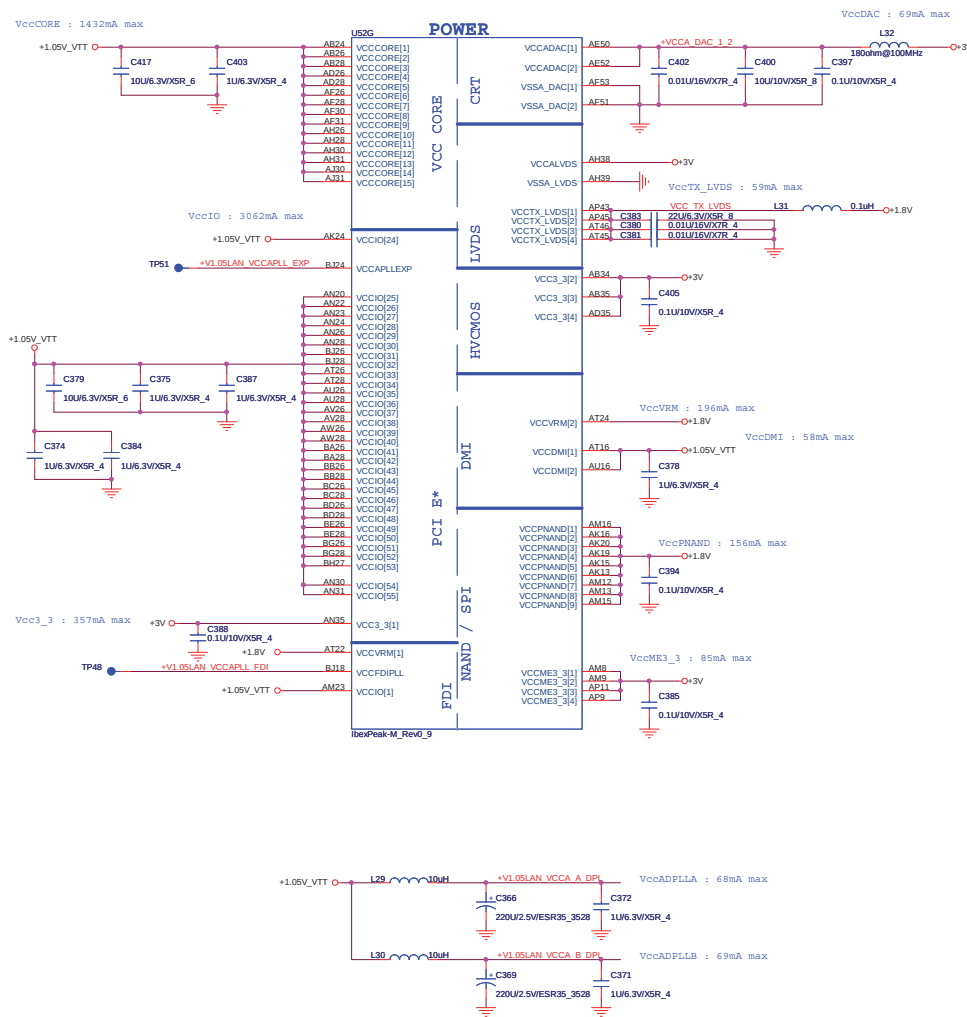
Board ID For Function	ID3 GPIO39	ID2 GPIO38	ID1 GPIO37	ID0 GPIO57
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	1	0	0
SOVP	1	0	0	0

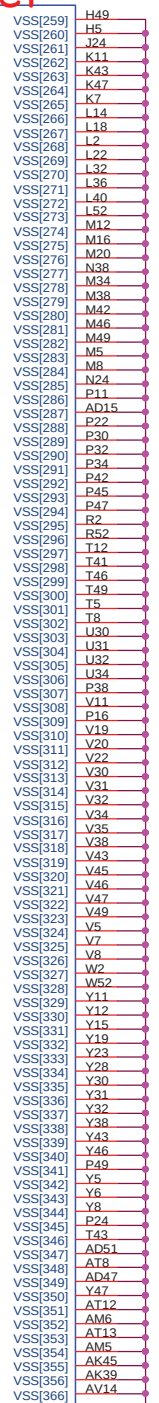
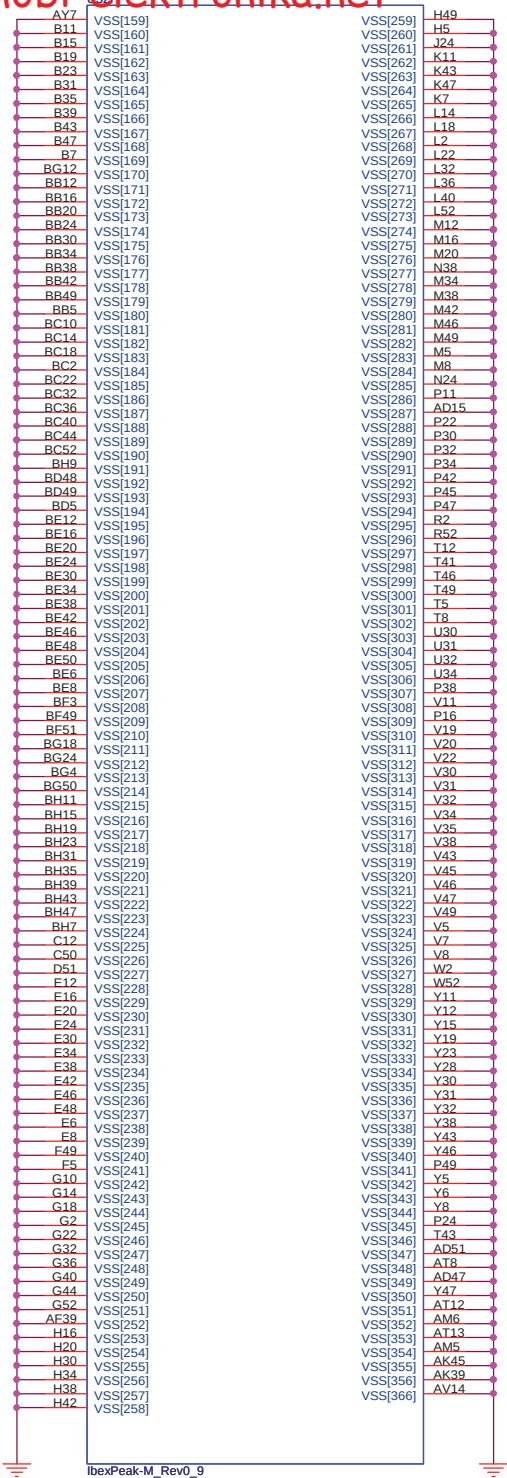
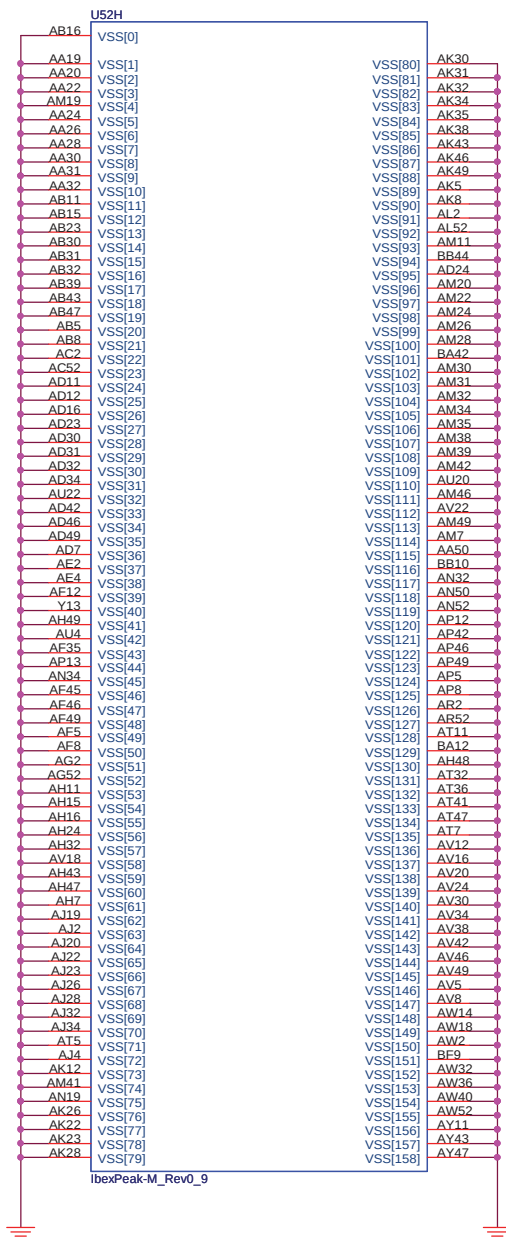


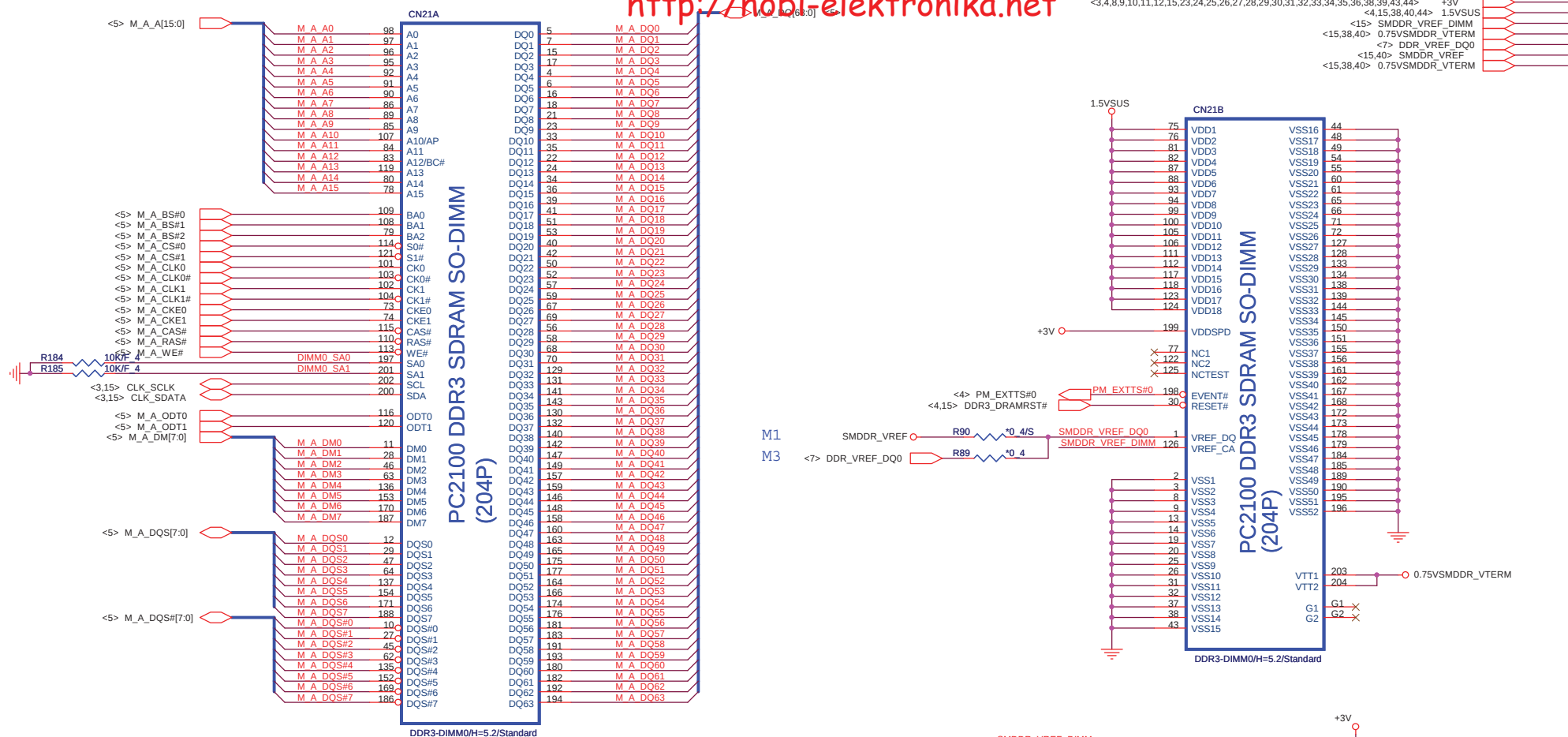
Model ID

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

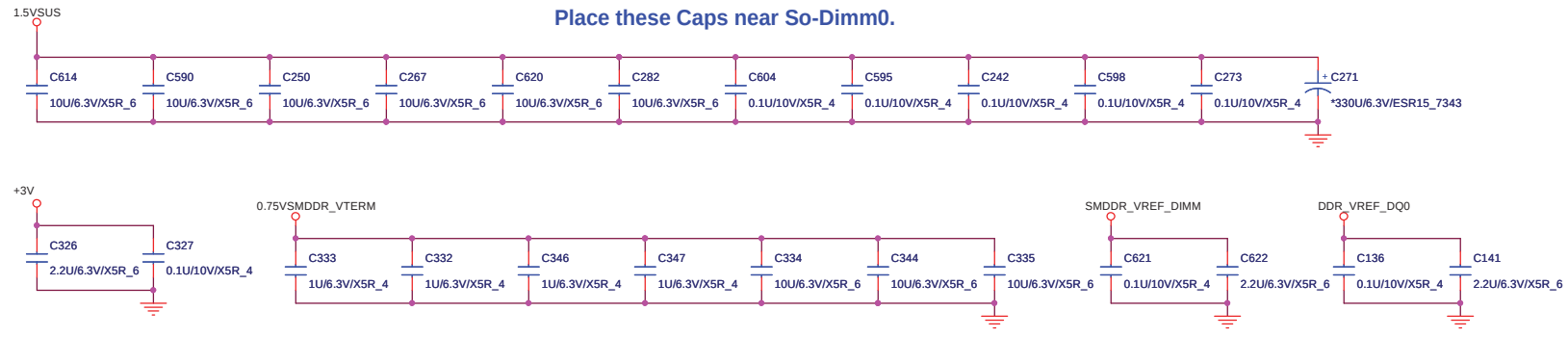


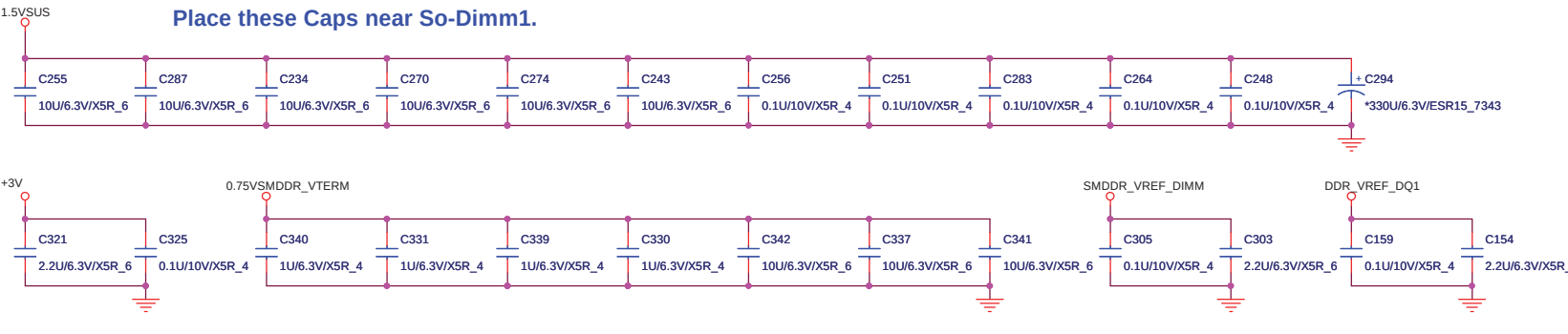
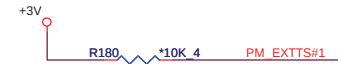




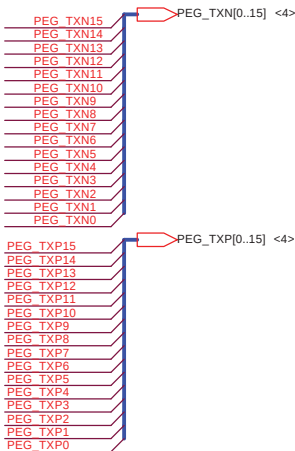


Place these Caps near So-Dimm0.





U8006A
BGA969-NVIDIA-NB9P-GS
COMMON



Timing diagram showing the relationship between NVVDD and GPIO signals. The diagram illustrates the time interval $t_{sNVVDD} \leq 192\mu s$ between the falling edges of the two signals.

I/O 3.3V

PEX_RST

$T_{rise} \geq 1\mu s$

$T_{fall} \leq 500ns$

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

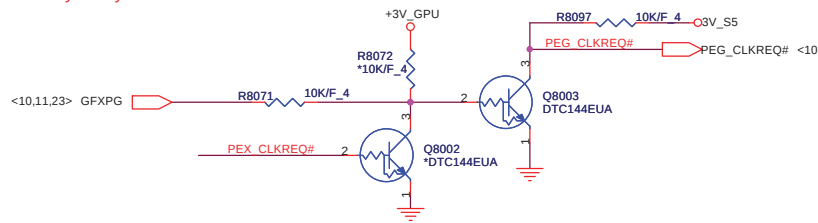


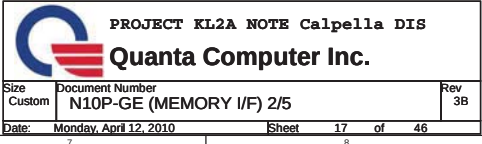
Size Custom	Document Number N10P-GE (PCIE I/F) 1/5	Rev 3B
Date:	Monday, April 12, 2010	Sheet 16 of 46

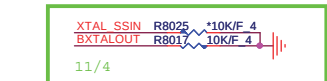


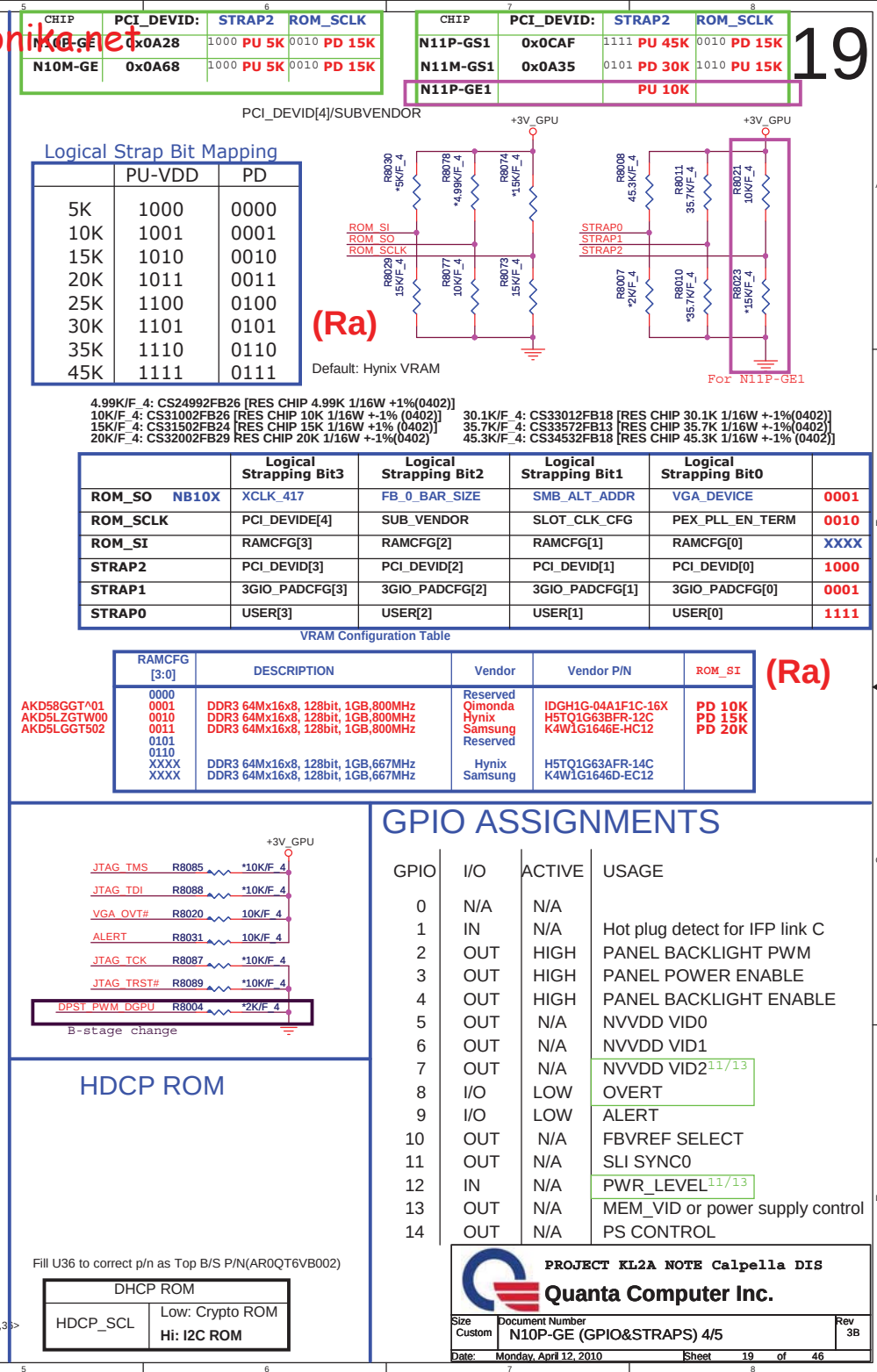
PCI EXPRESS

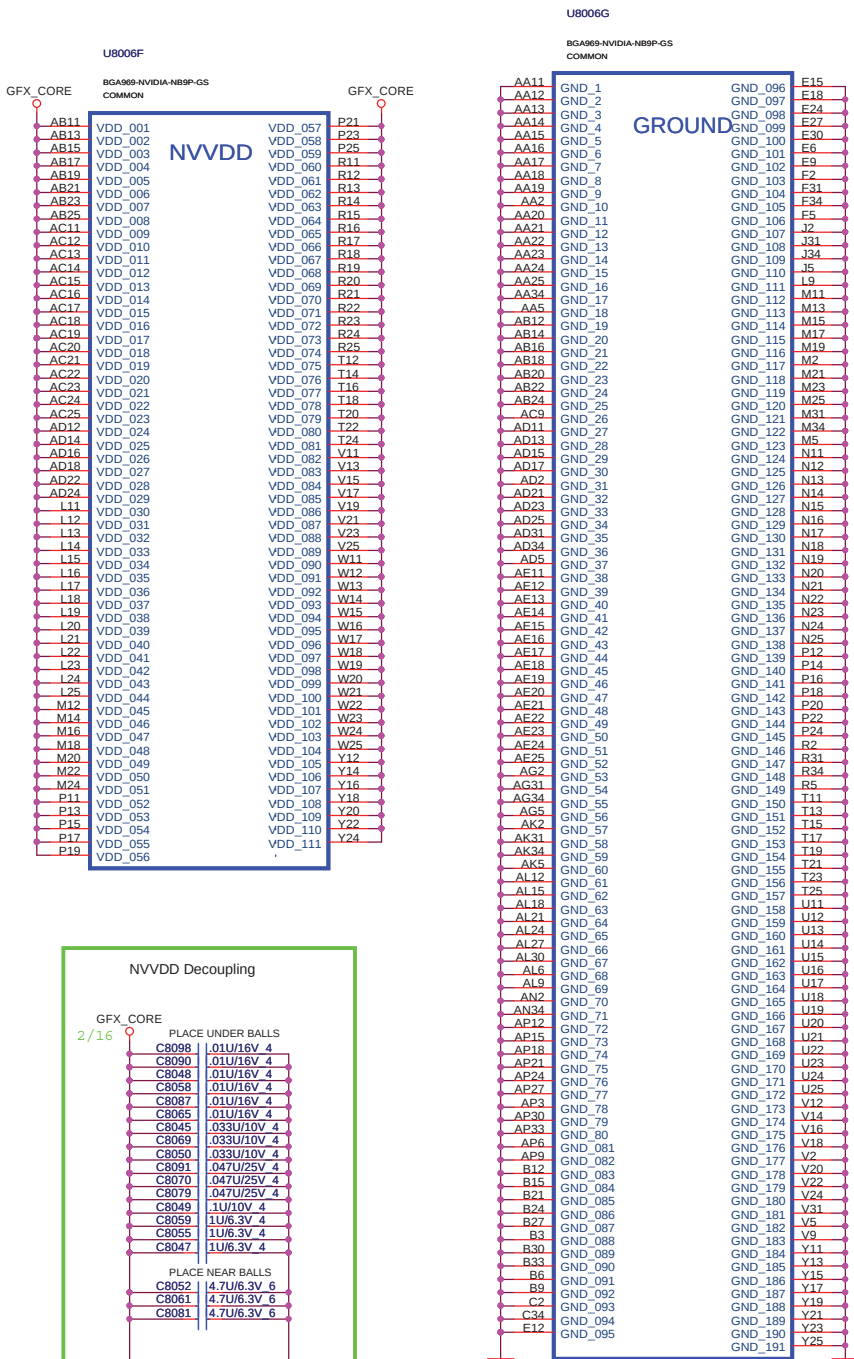
Only for Hybrid

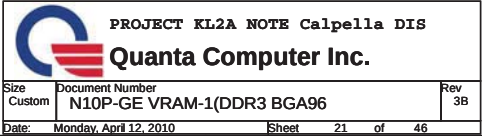


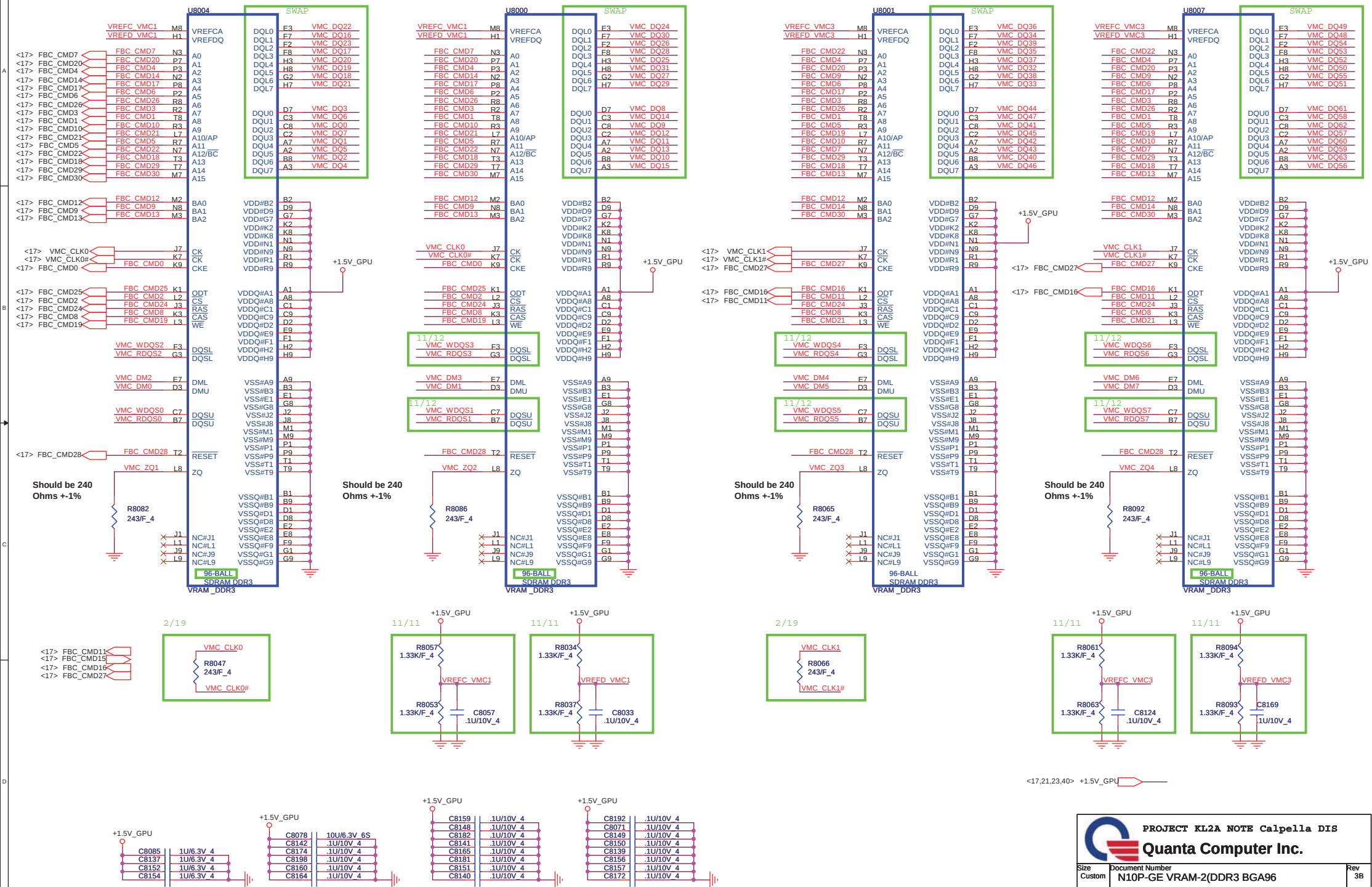


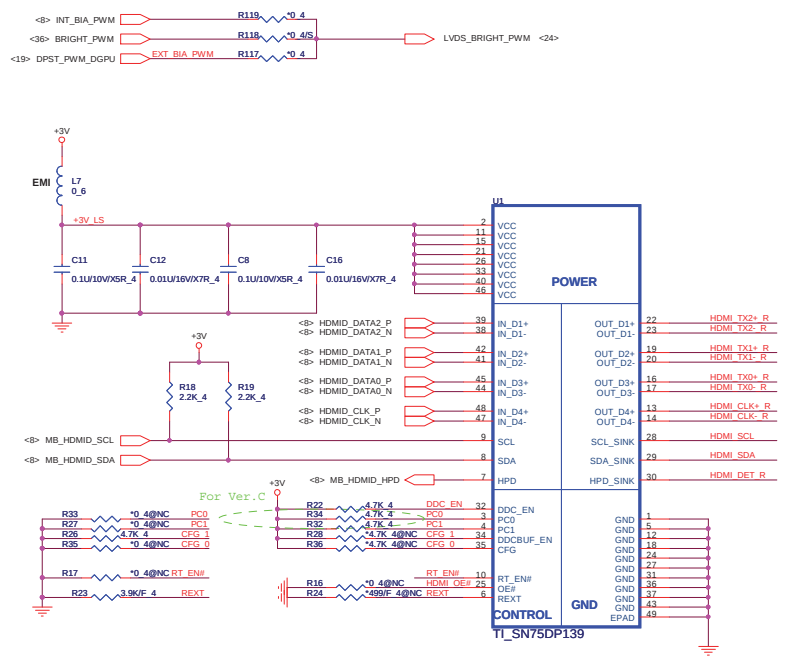






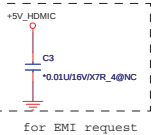




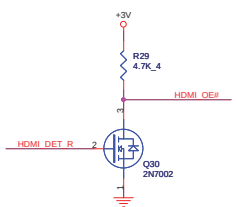
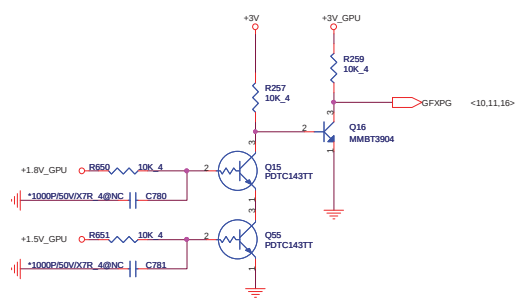


EQUALIZATION SETTING
PC1:PC0=0:0 8dB
PC1:PC0=0:1 4dB Recommended
PC1:PC0=1:0 12dB
PC1:PC0=1:1 0dB

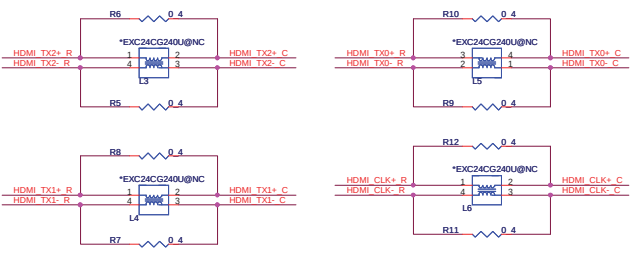
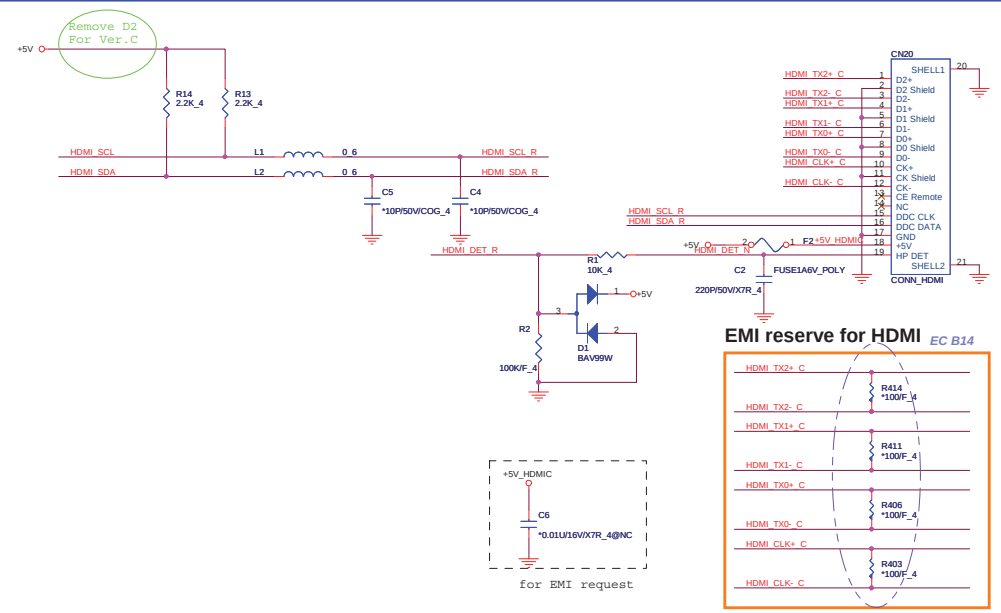
PS8101 Pin34/35 is NC
SCL/SDA Low-level input/output Voltage
CFG1:CFG0=0:0 VIL:<0.4V VOL:0.6V (Default)
CFG1:CFG0=0:1 VIL:<0.36V VOL:0.55V
CFG1:CFG0=1:0 VIL:<0.44V VOL:0.65V
CFG1:CFG0=1:1 VIL:<0.36V VOL:0.6V



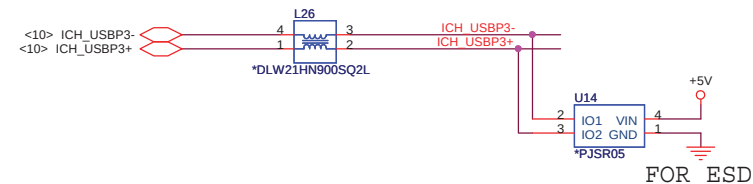
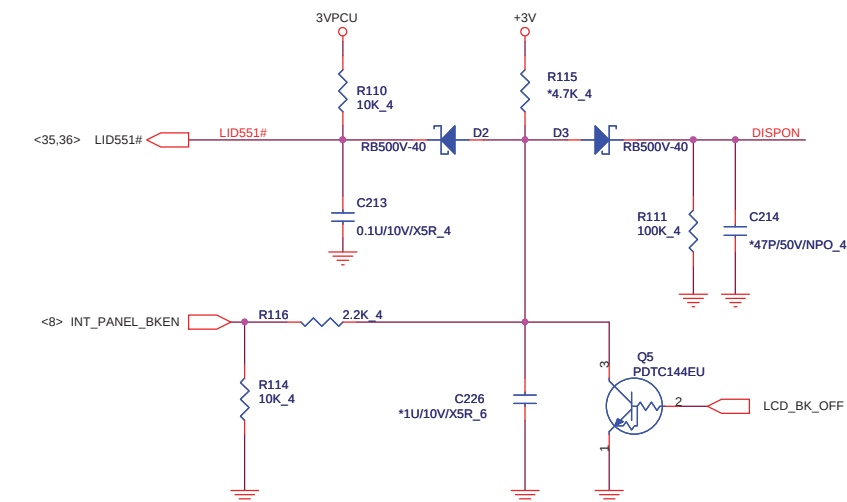
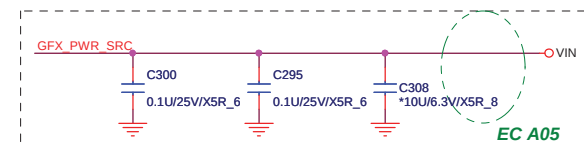
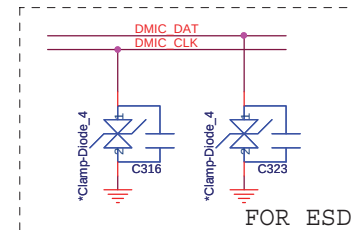
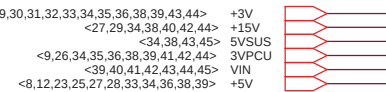
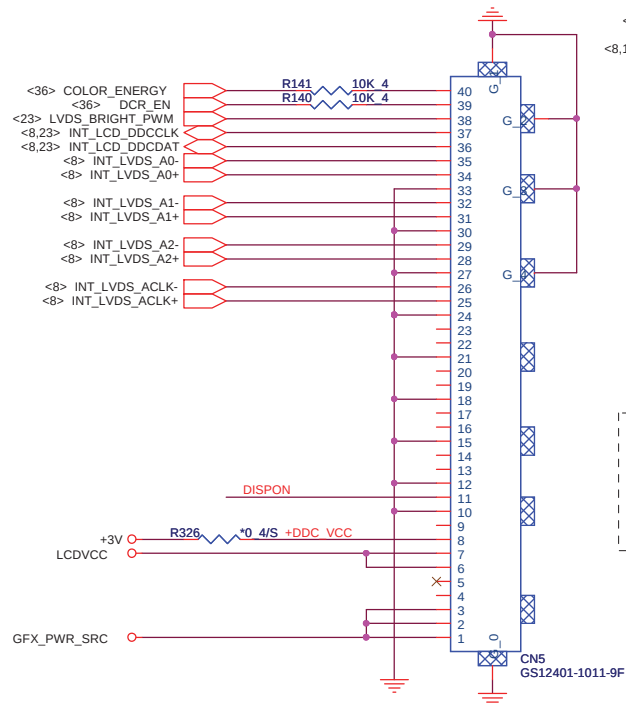
GPU all PWROK



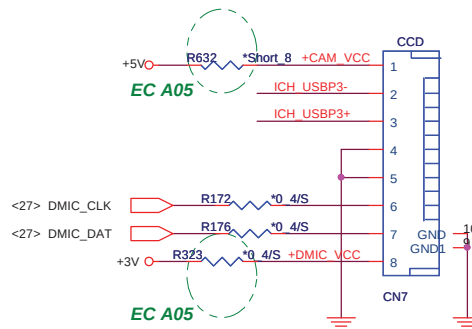
HDMI

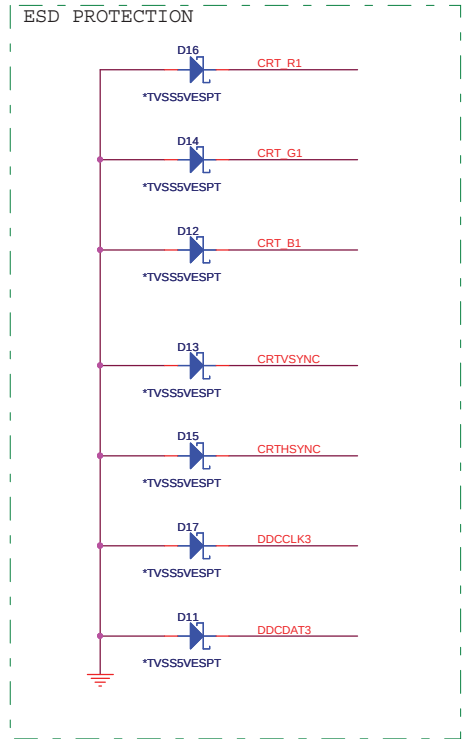
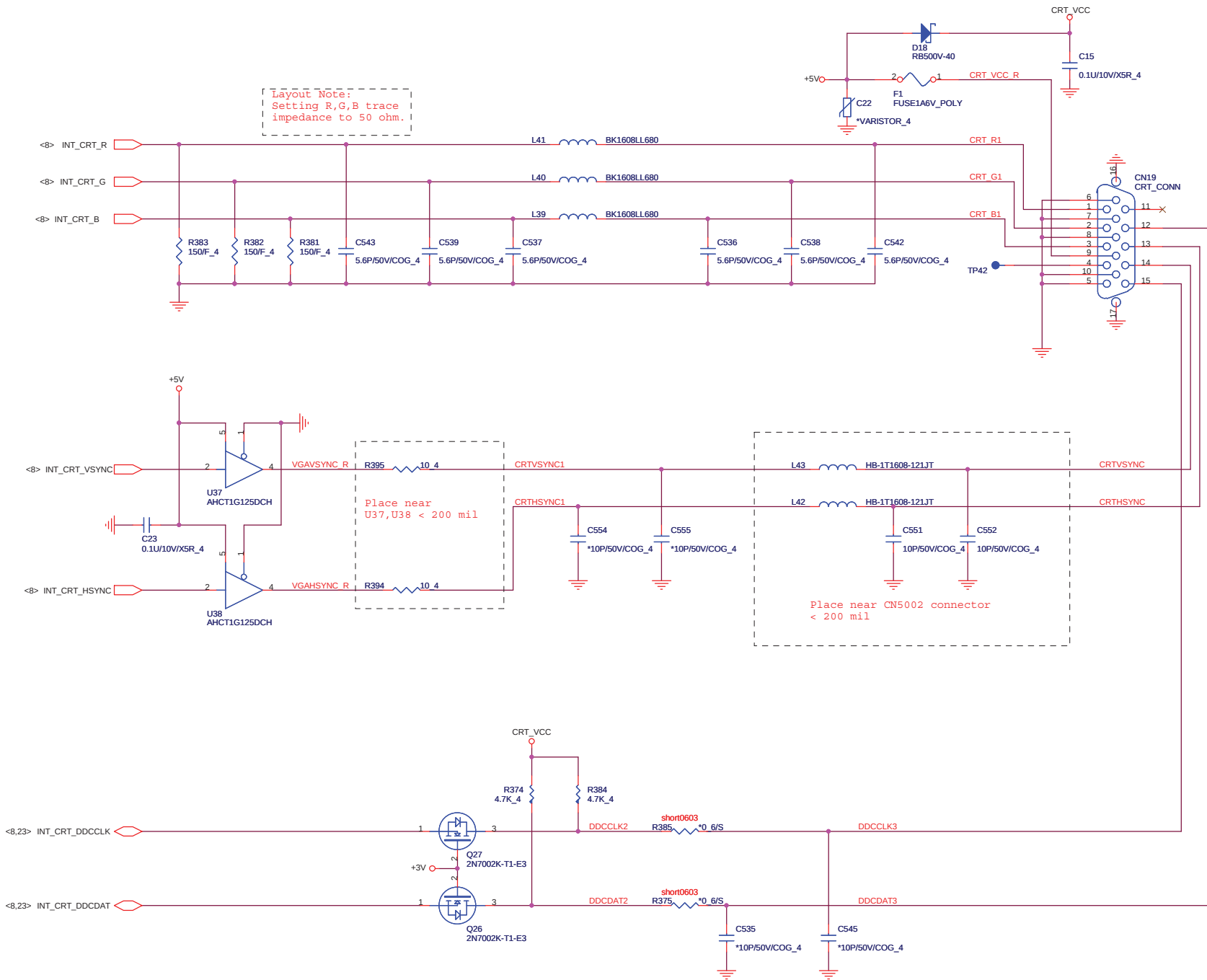


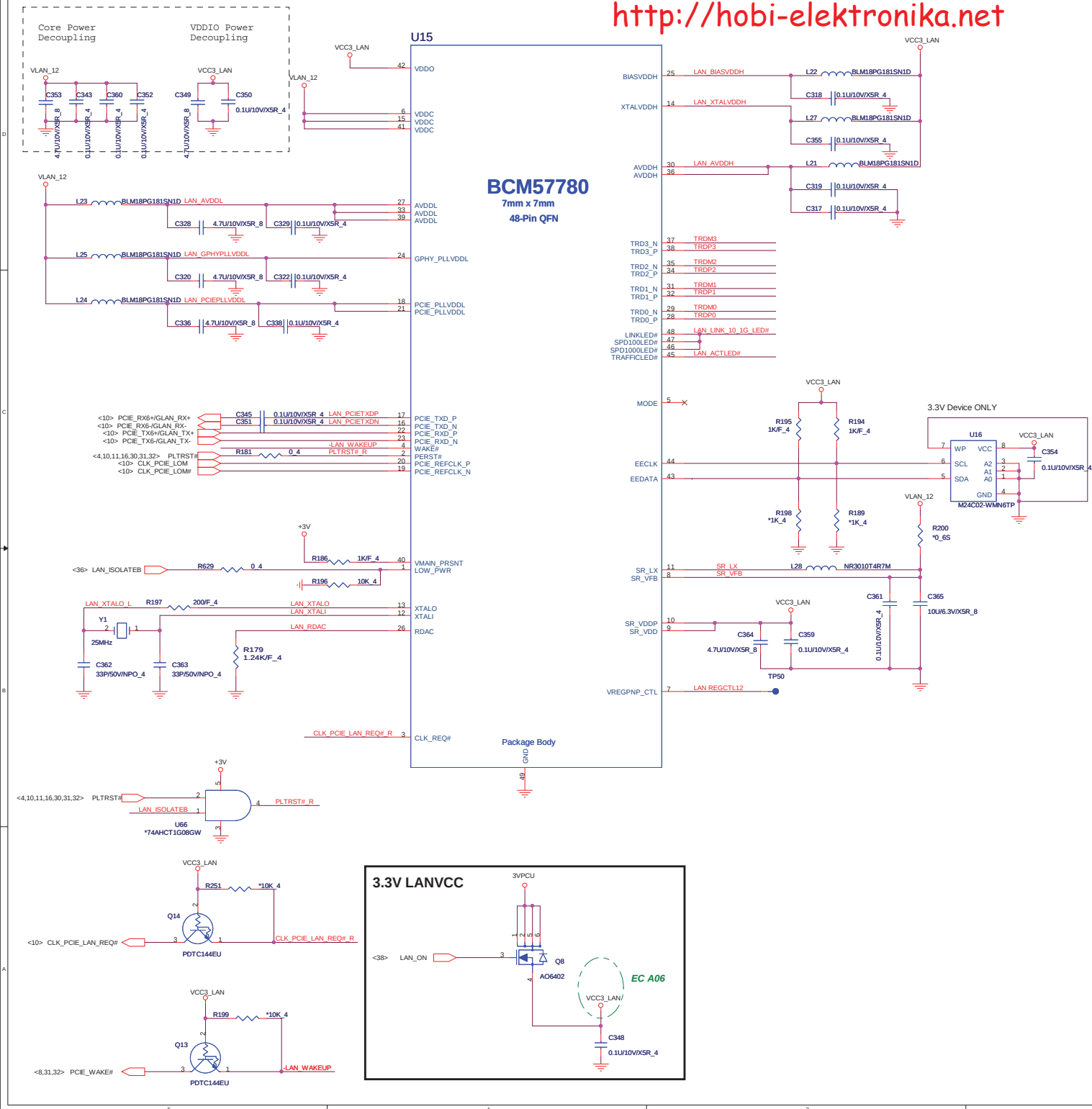
back light



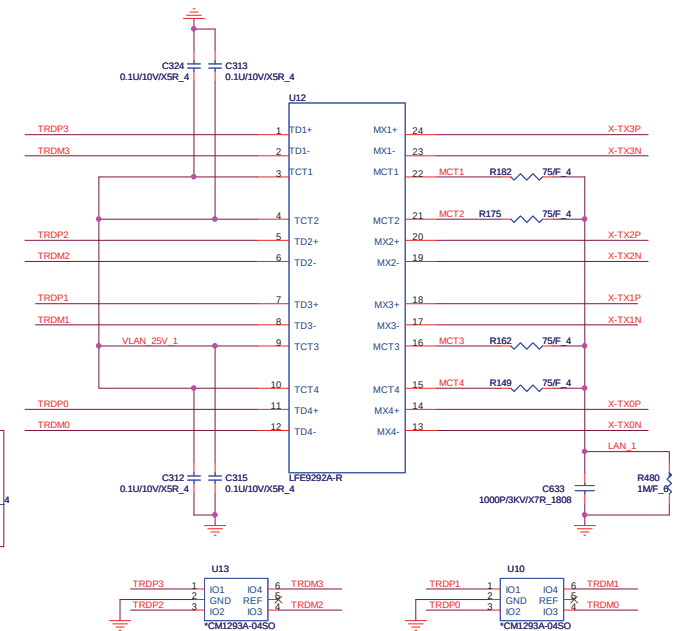
CAMERA



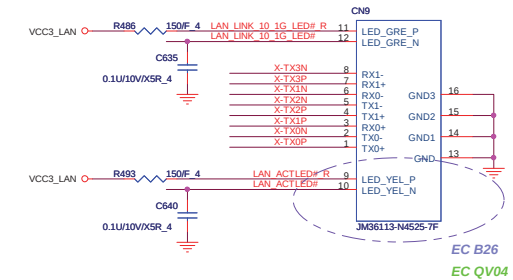




Transformer



RJ45 Connector



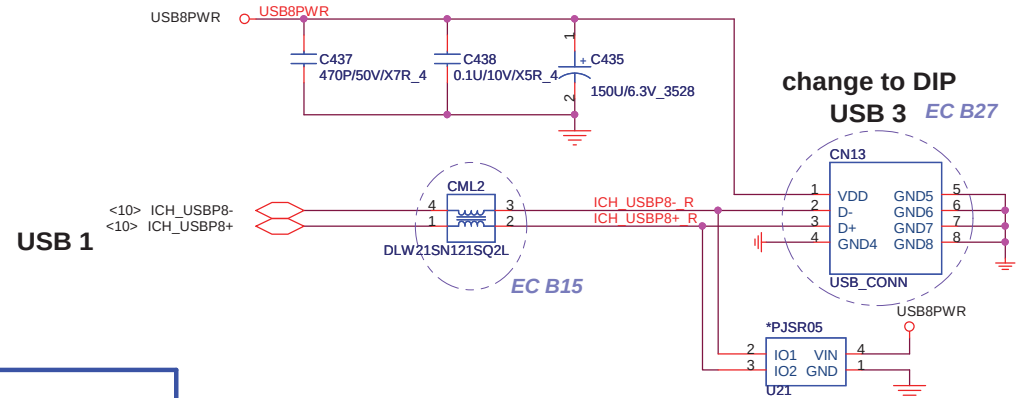
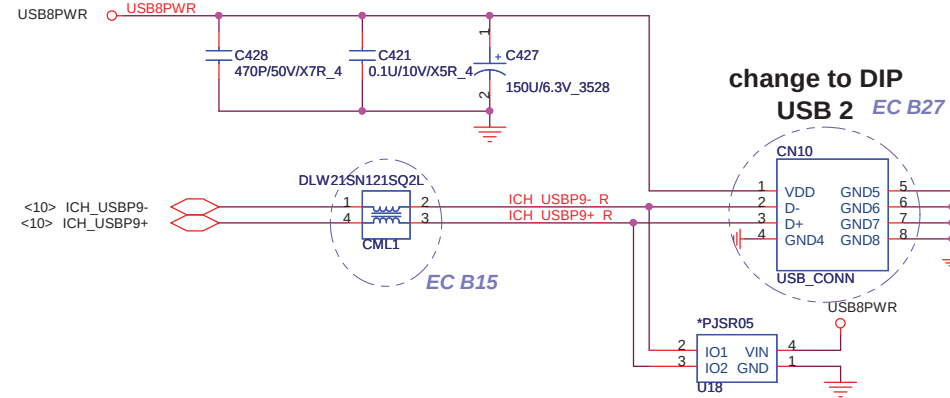
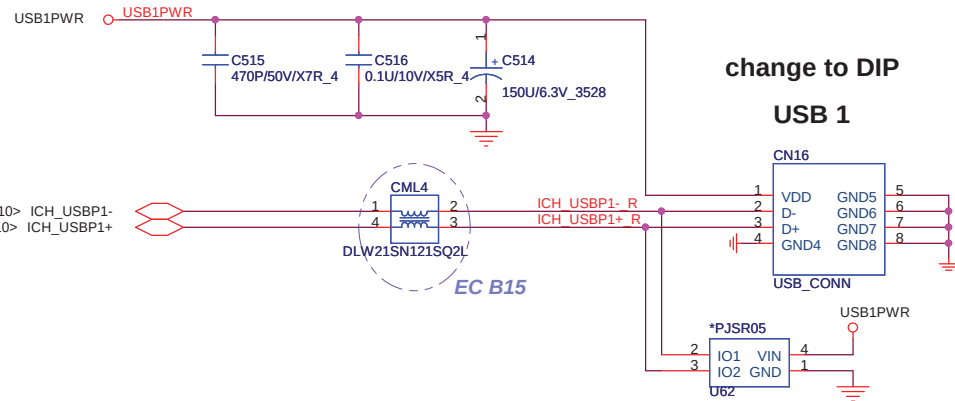
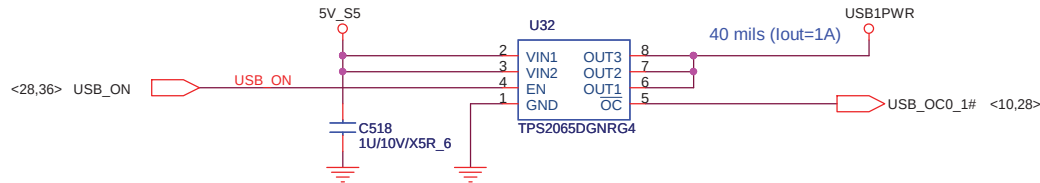
USBX3

<http://hobi-elektronika.net>

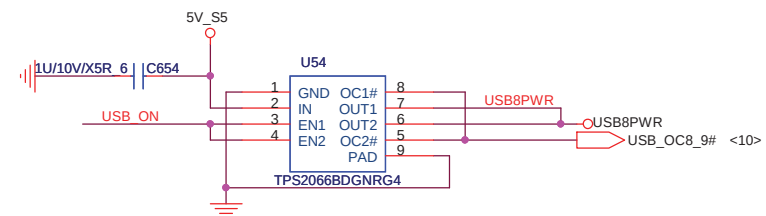
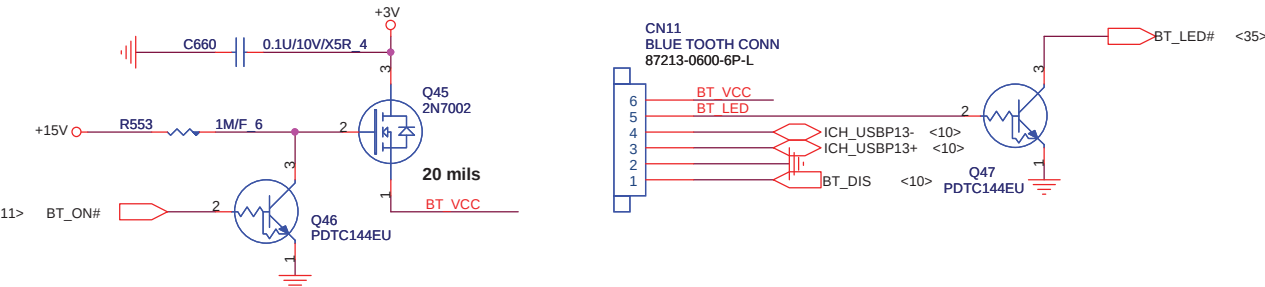
<3,4,8,9,10,11,12,14,15,23,24,25,26,27,28,30,31,32,33,34,35,36,38,39,43,44>
<12,28,38> 5V_S5
<24,27,34,38,40,42,44> +3V
+15V

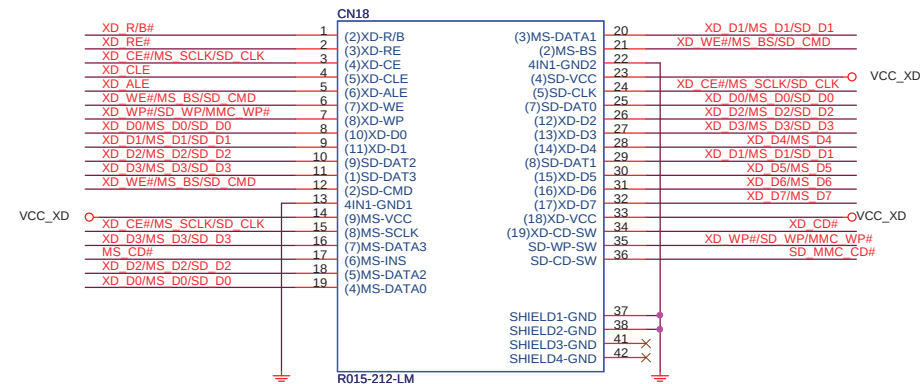


29

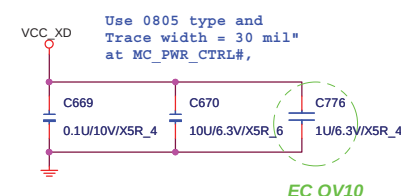
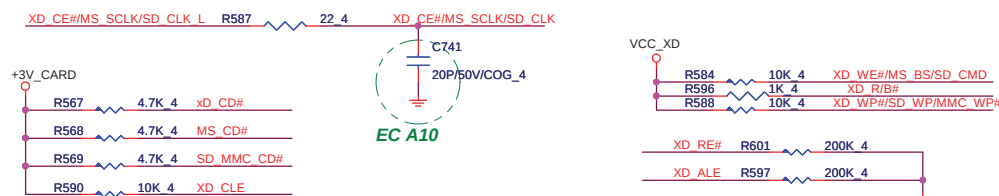


BLUETOOTH

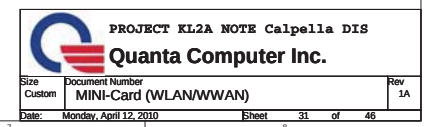




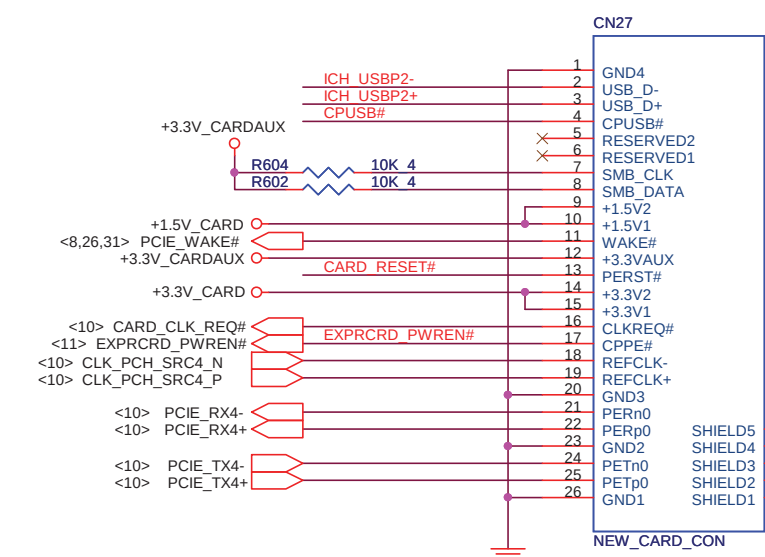
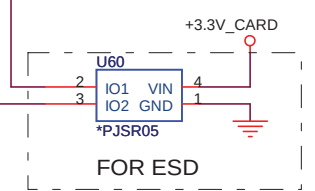
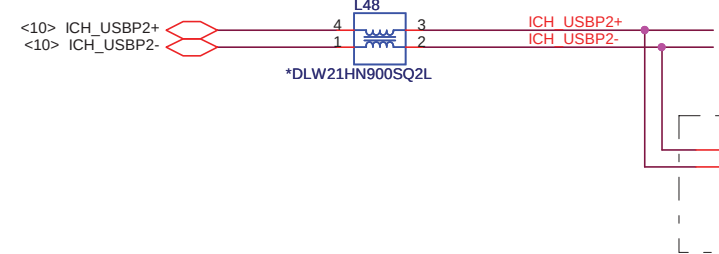
The diagram shows a green dashed circle labeled "EC A09". A red line representing a current source labeled "250mA" and "PWR_CTRL" is connected to the "VCC_XD" pin of the EC A09.



31

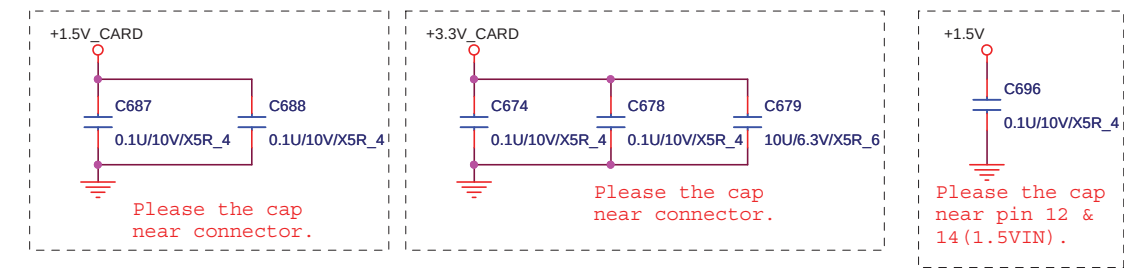
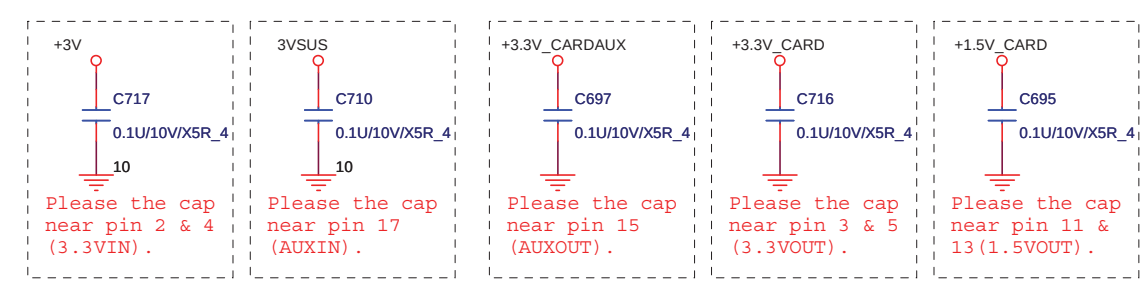
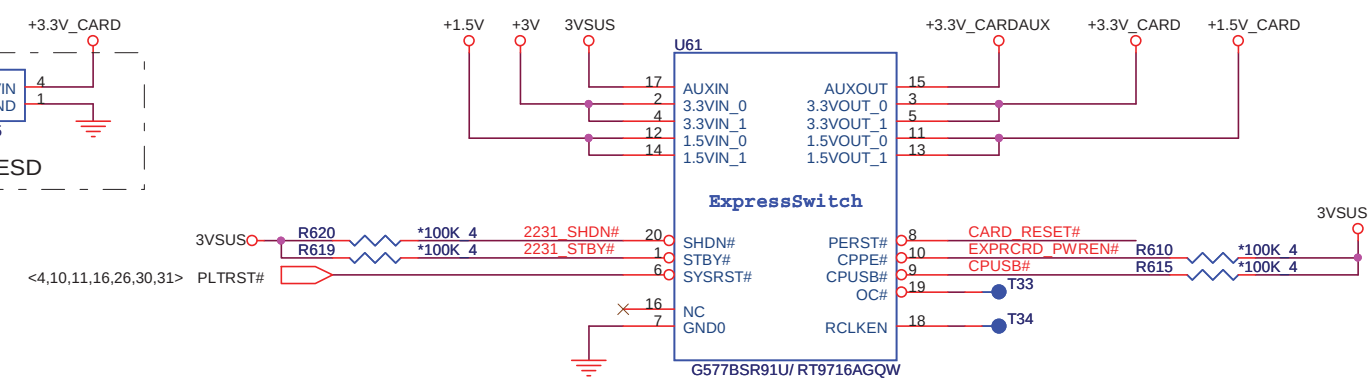


Express Card

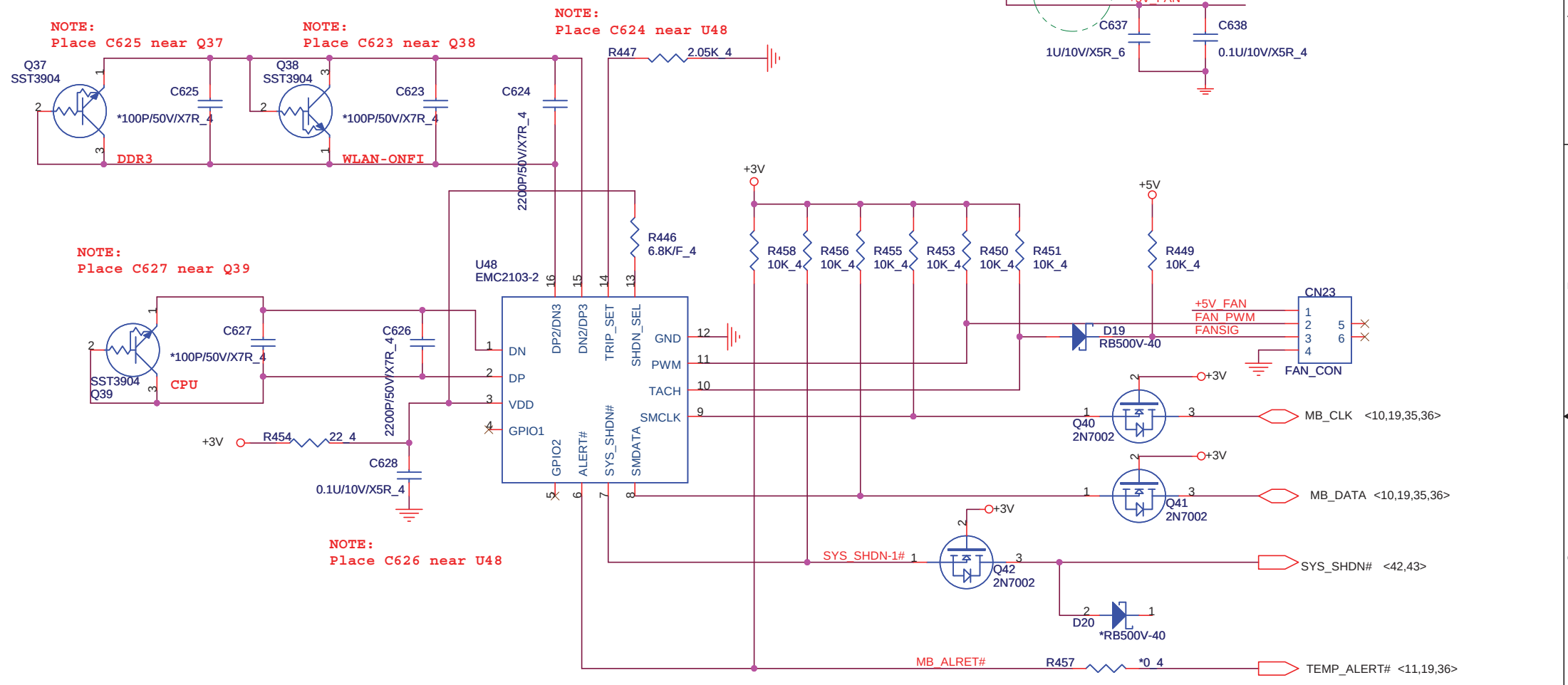


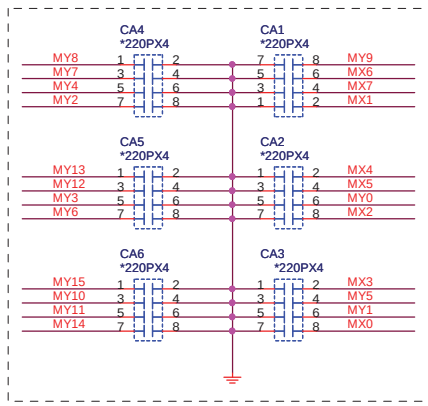
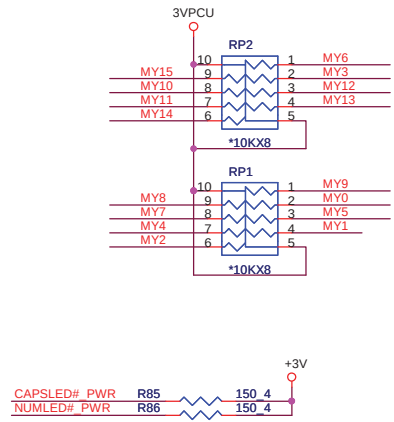
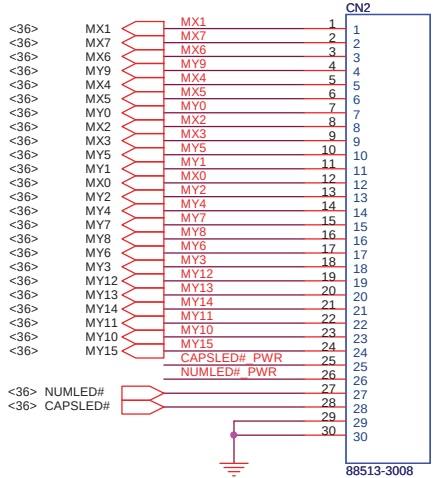
PCI-Express TX and RX direct to connector.

JAE PX10FS16PH-26P



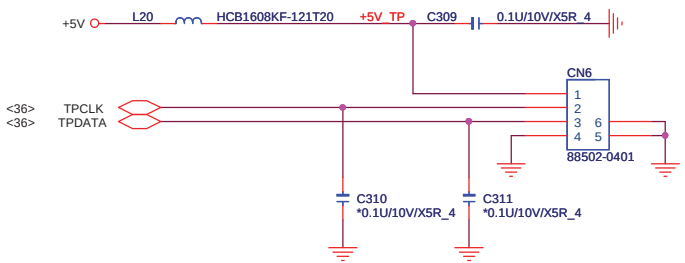
FAN CONTROL



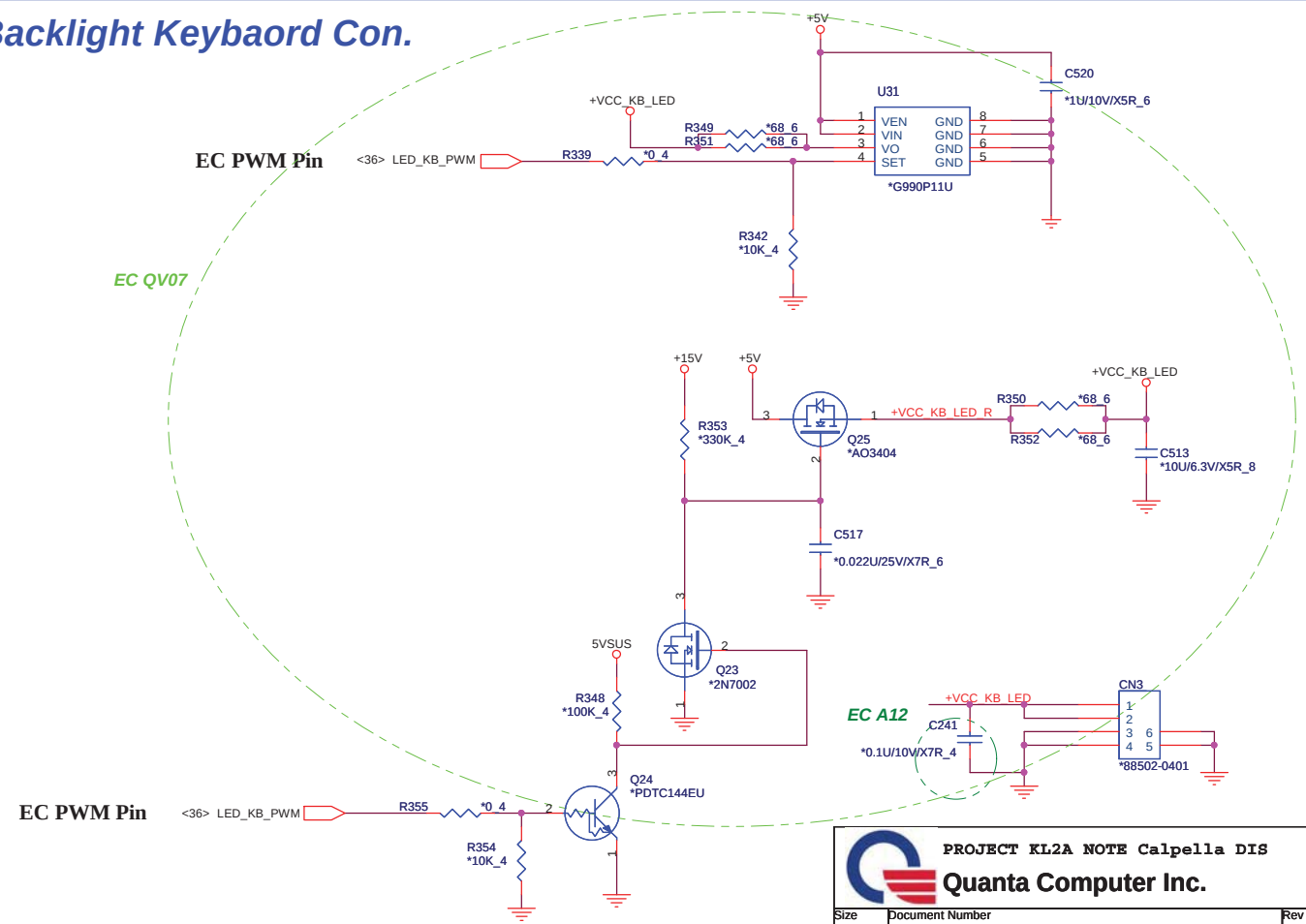


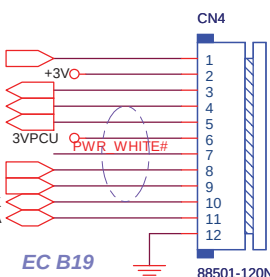
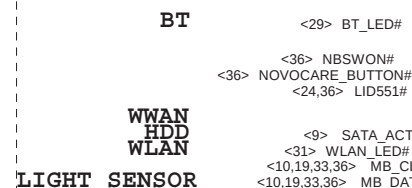
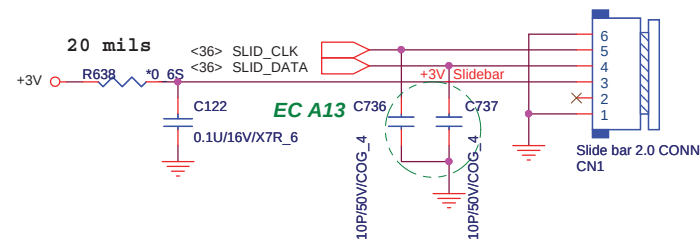
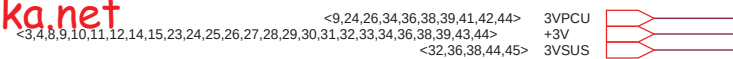
For EMI request

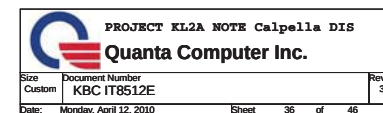
Touch pad



Backlight Keyboard Con.







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-C315I126D118N

HOLE18
*H-C315I126D106P2

HOLE19
*H-C315I126D106P2

HOLE13
*H-TC197BC256D106P2

HOLE17
*H-C315I126D106P2

HOLE16
*H-C315I126D106P2

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

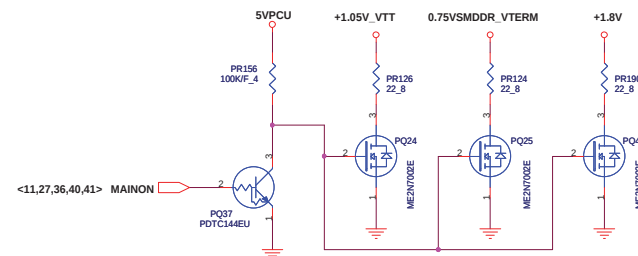
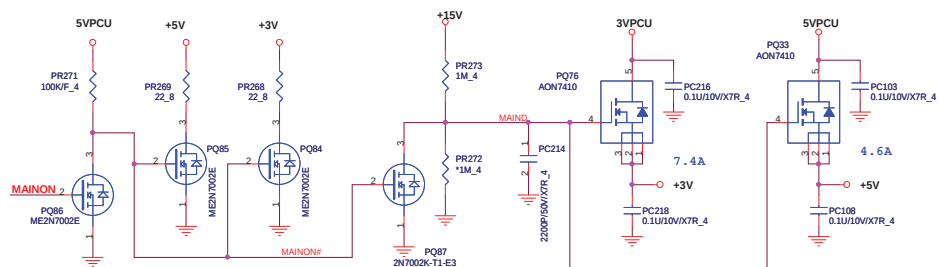
Boundary Hole (ODD)

HDD PAD
EC QV08

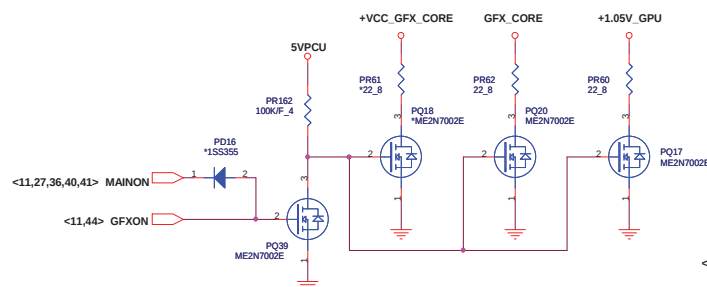
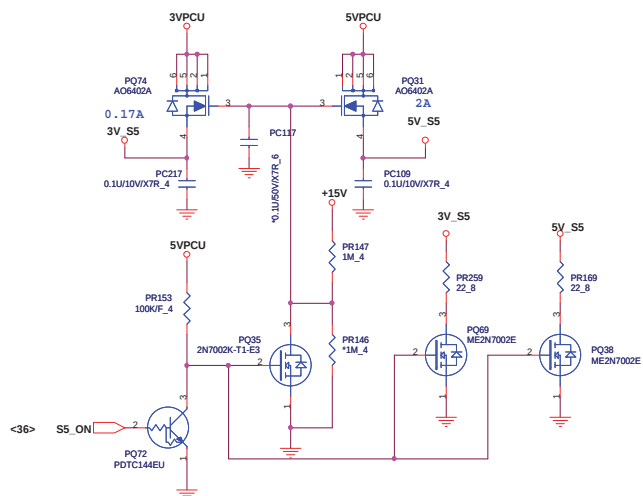
HOLE10
*H-O158X355D158X355N

DISCHARGE

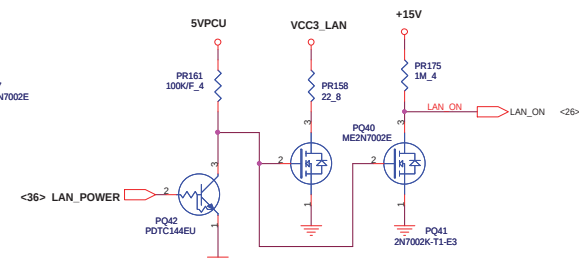
+3V, +5V



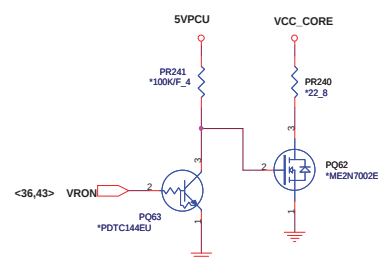
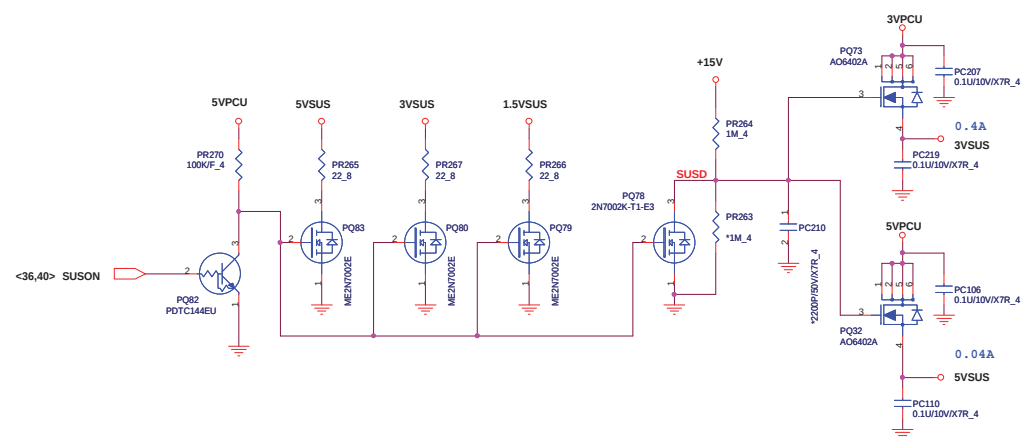
3V_S5, 5V_S5



LANVCC



3VSUS, 5VSUS



	PROJECT KL2A NOTE Calpella DIS		
	Quanta Computer Inc.		
Size Custom	Document Number Charger (ISL88731A)		Rev 2
Date: Monday, April 12, 2010	Sheet	39	of 46



1.5VSUS
Fs=400K
TDC :22A(I_{max})
OCP : 26.5A



2.15A



PROJECT KL2A NOTE Calpella DIS
Quanta Computer Inc.

Size Custom	Document Number DDR3/0.75V (TPS51116REGR)	Rev 2A
Date: Monday, April 12, 2010	Sheet 40 of 46	

