

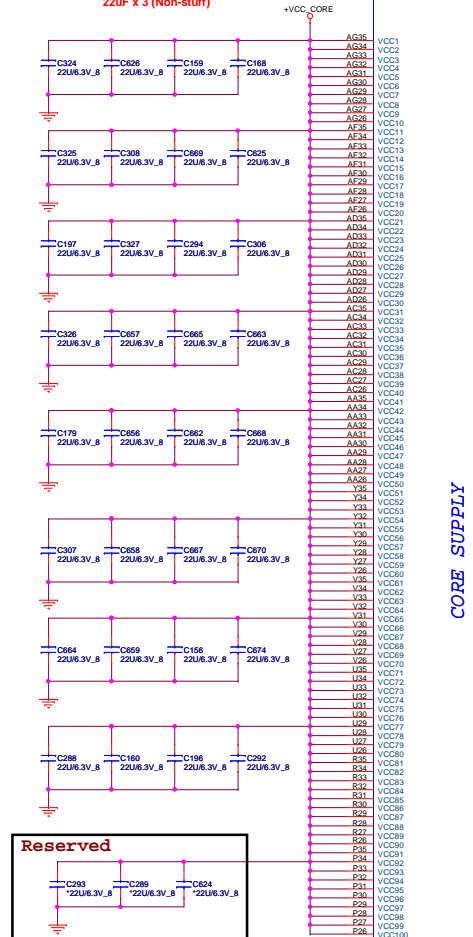
POWER	
Discharge	PG 38
RUN POWER SW 3VSUS, 5VSUS, 3V_S5, 5V_S5 +3V, +5V	PG 38
AC/BATT CONNECTOR	PG 42
BATT CHARGER	PG 39
REGULATOR (DDR3) 1.5VSUS, 0.75VMDDR_VTERM,1.5V 1.5V_GPU,1.5V_CPU	PG 40
REGULATOR +1.05V_VTT,+1.8V	PG 41
DC/DC 3VPCU, 5VPCU, +15V	PG 42
CPU Core	PG 43
VGA Core Discrete 1.8V_GPU, 1V_GFX_PCIE	PG 44
VGA Core UMA	PG 45

Sandy Bridge Processor (POWER)

Sandy Bridge Processor (GRAPHIC POWER)

CPU Core Power
SNB 45W:55A
22uF x 32
22uF x 3 (Non-stuff)

POWER

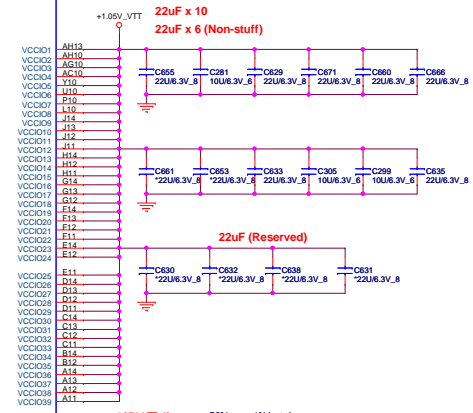


PEG AND DDR

CORE SUPPLY

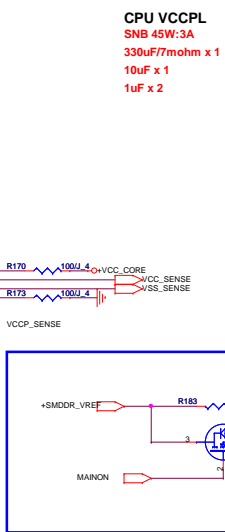
SENSE LINES

CPU VTT
SNB 45W:8.5A
22uF x 10
22uF x 6 (Non-stuff)

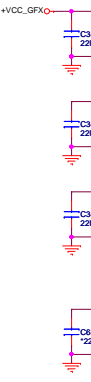


22uF (Reserved)

CPU VCCPL
SNB 45W:3A
330uF/7mohm x 1
10uF x 1
1uF x 2



CPU VGT
SNB 45W:12A
22uF x 4 (Reserved)



POWER

GRAPHICS

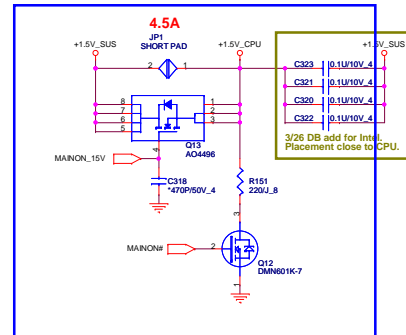
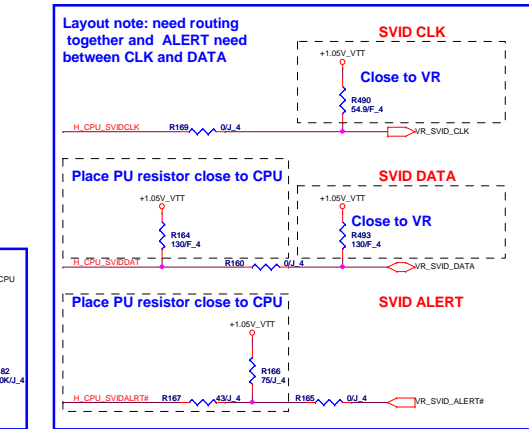
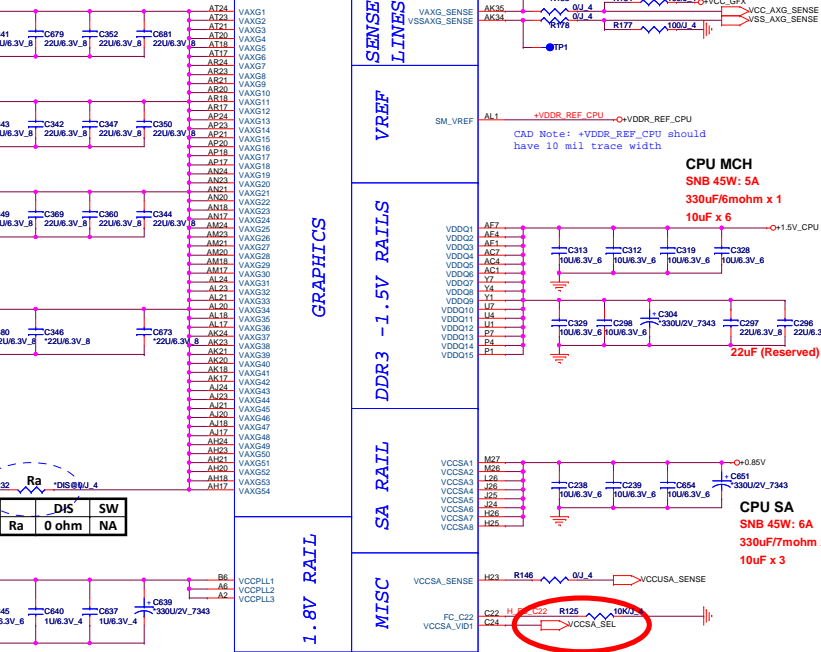
1.8V RAIL

MISC

SENSE LINES

VREF

DDR3 - 1.5V RAILS



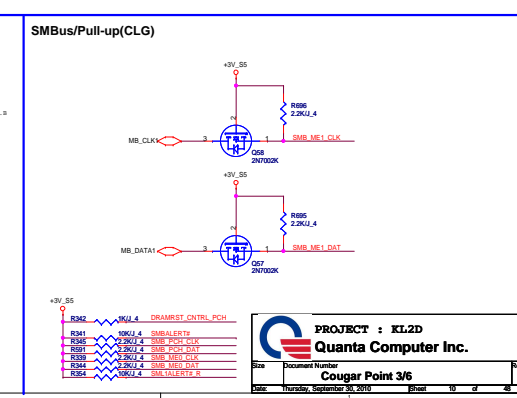
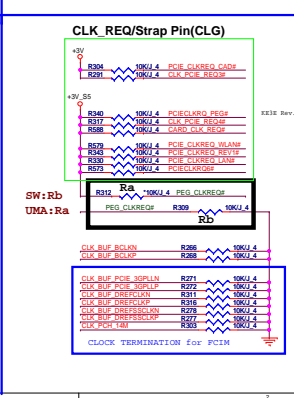
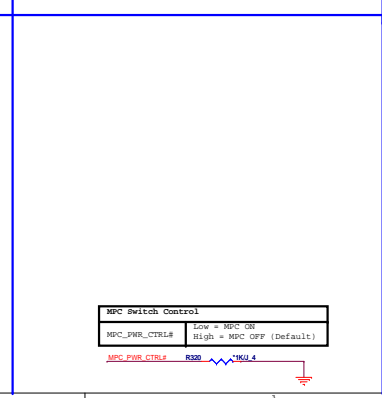
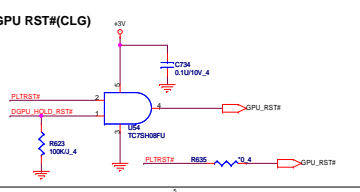
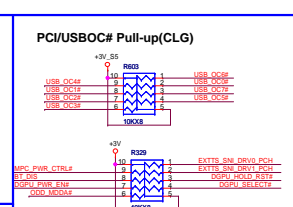
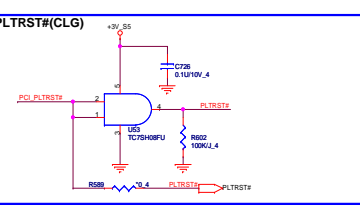
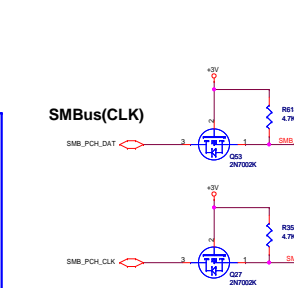
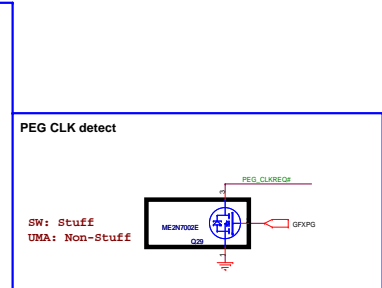
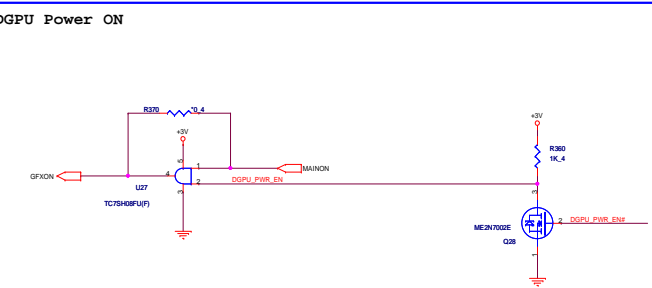
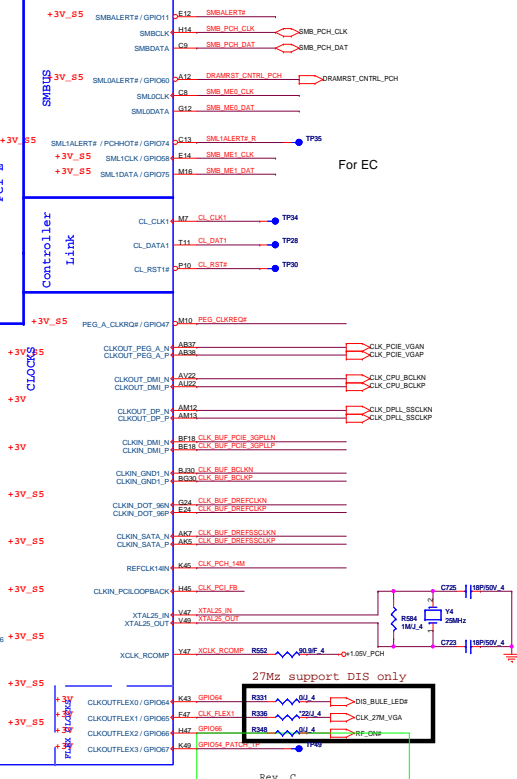
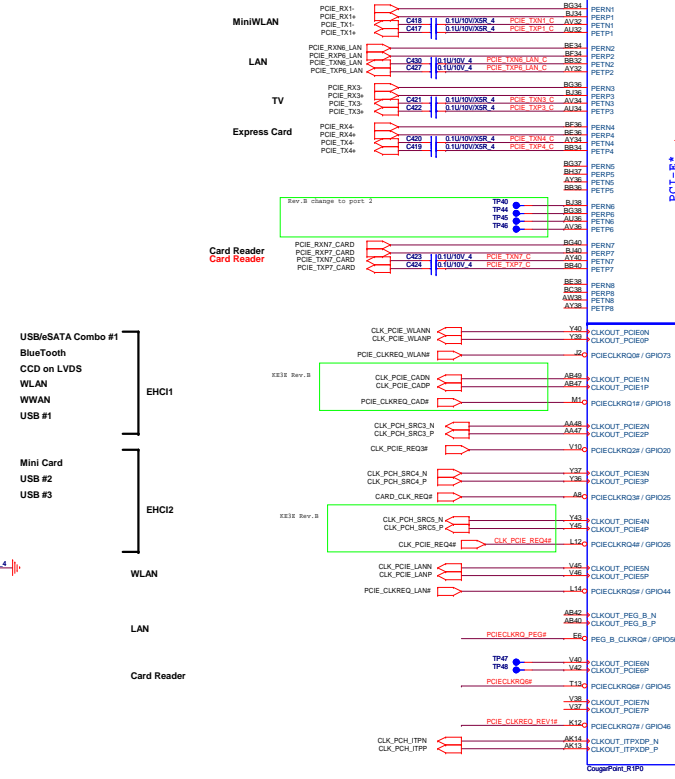
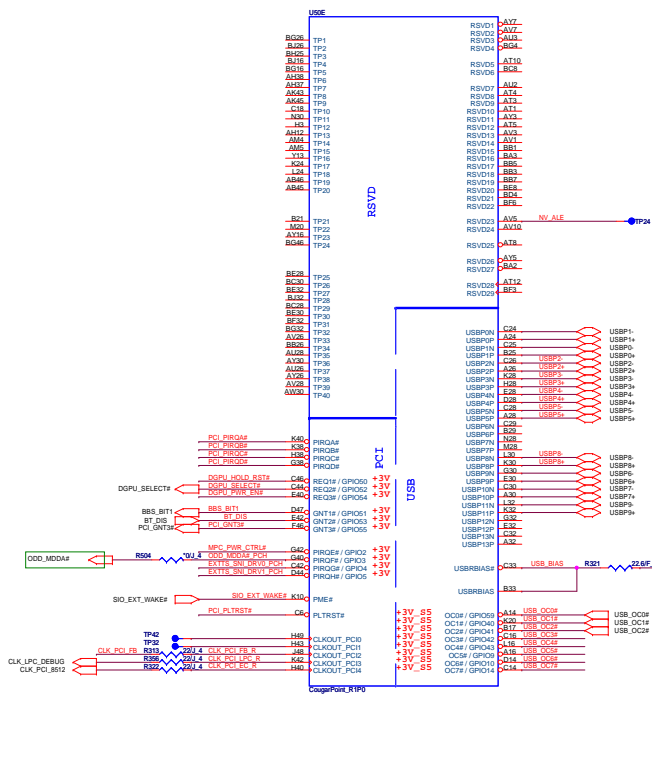
CPU MCH
SNB 45W: 5A
330uF/6mohm x 1
10uF x 6

CPU SA
SNB 45W: 6A
330uF/7mohm x 1
10uF x 3

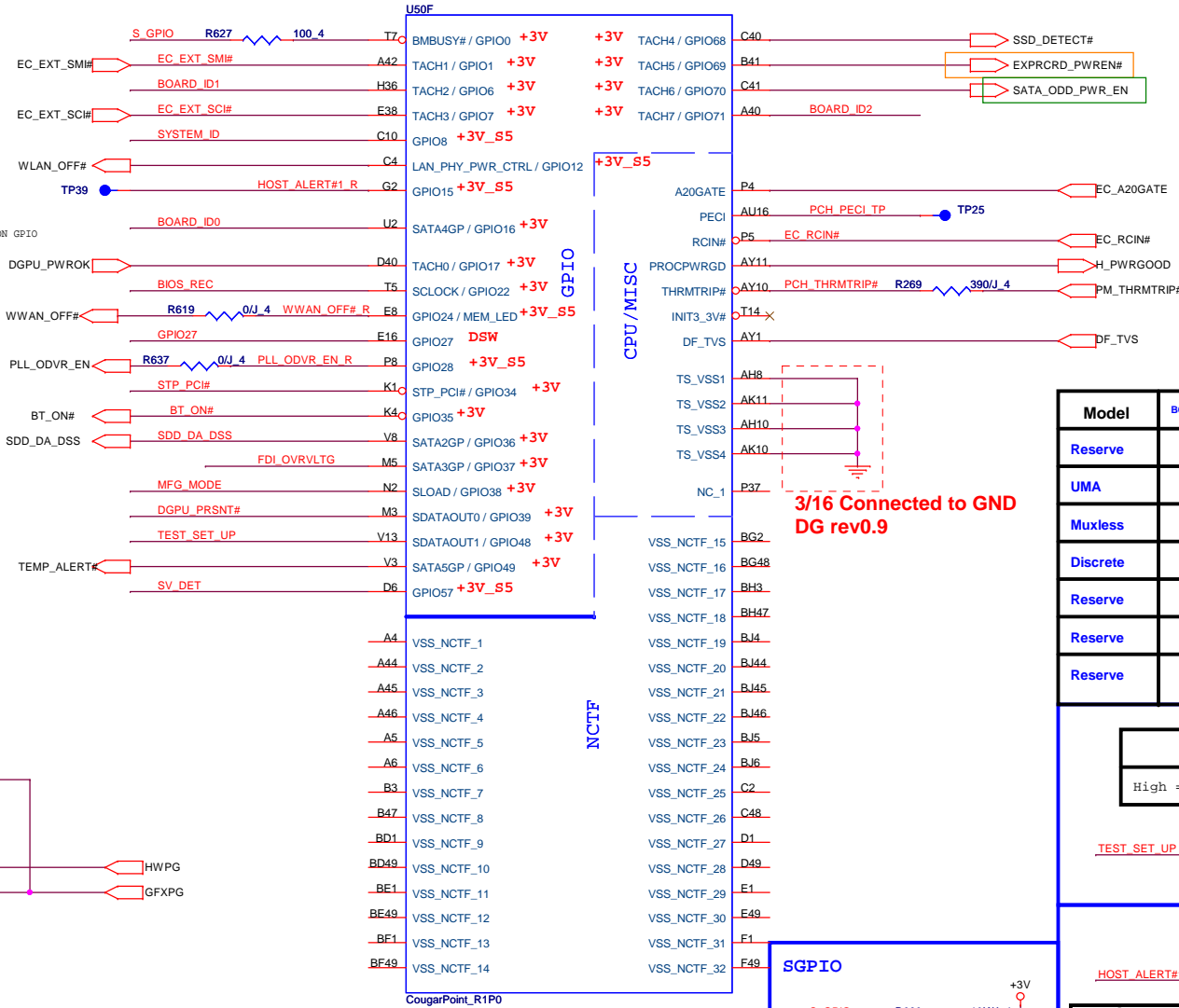
Layout note: need routing together and ALERT need between CLK and DATA

4.5uA SHORT PAD
3/26 DB add for Intell. Placement close to CPU.

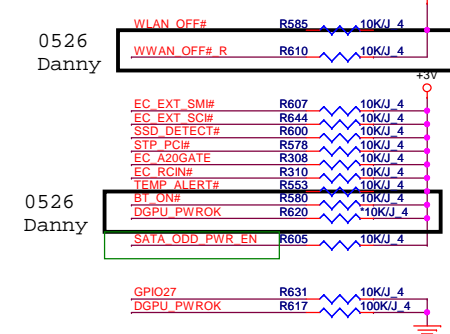
Cougar Point-M (PCI,USB,NVRAM)



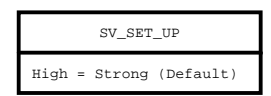
Cougar Point (GPIO,VSS_NCTF,RSVD)



GPIO Pull-up/Pull-down(CLG)

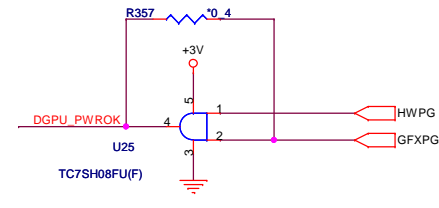
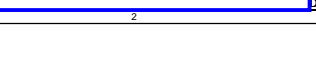


Model	BOARD_ID2	BOARD_ID1	BOARD_ID0
Reserve	0	0	0
UMA	0	0	1
Muxless	0	1	0
Discrete	0	1	1
Reserve	1	0	0
Reserve	1	0	1
Reserve	1	1	0



HOST ALERT#1 R	SWITCHABLE	UMA
Stuff	R575	R571
No Stuff	R8490	R8489

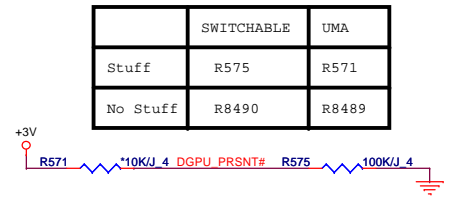
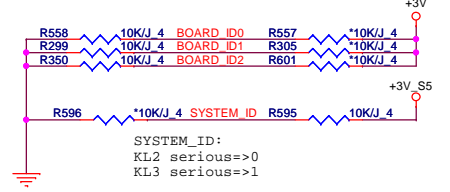
Intel ME Crypto Transport Layer Security (TLS) cipher suite
 Low = Disable (Default)
 High = Enable



FDI TERMINATION VOLTAGE OVERRIDE
 Low - Tx, Rx terminated to same voltage

DMI TERMINATION VOLTAGE OVERRIDE
 Low = Tx, Rx terminated to same voltage (DC Coupling Mode) (DEFAULT)

BIOS RECOVERY
 High = Disable (Default)
 Low = Enable

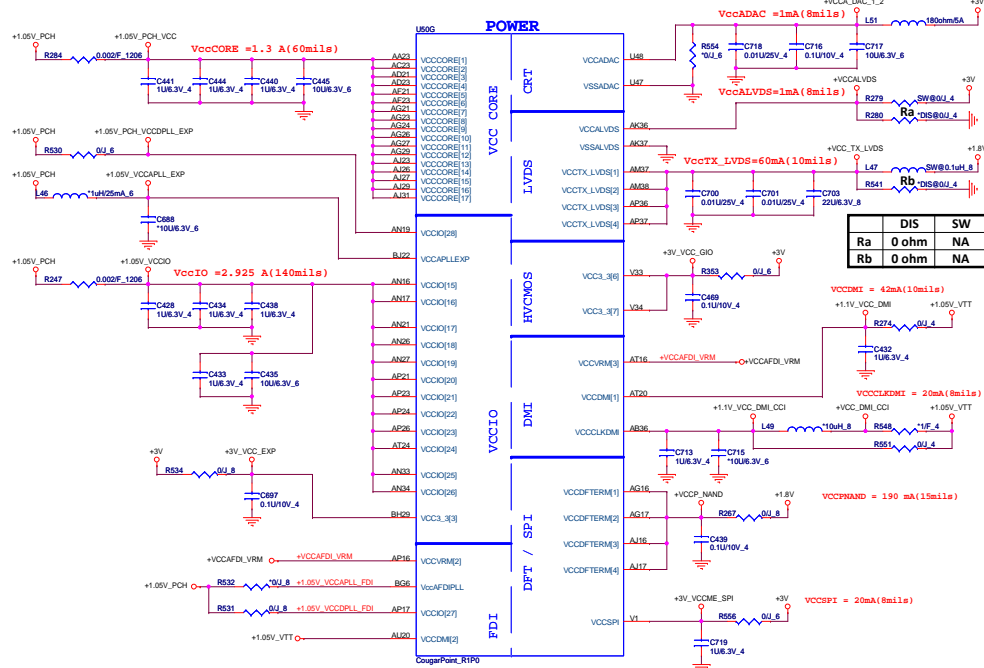


PROJECT : KL2D
Quanta Computer Inc.

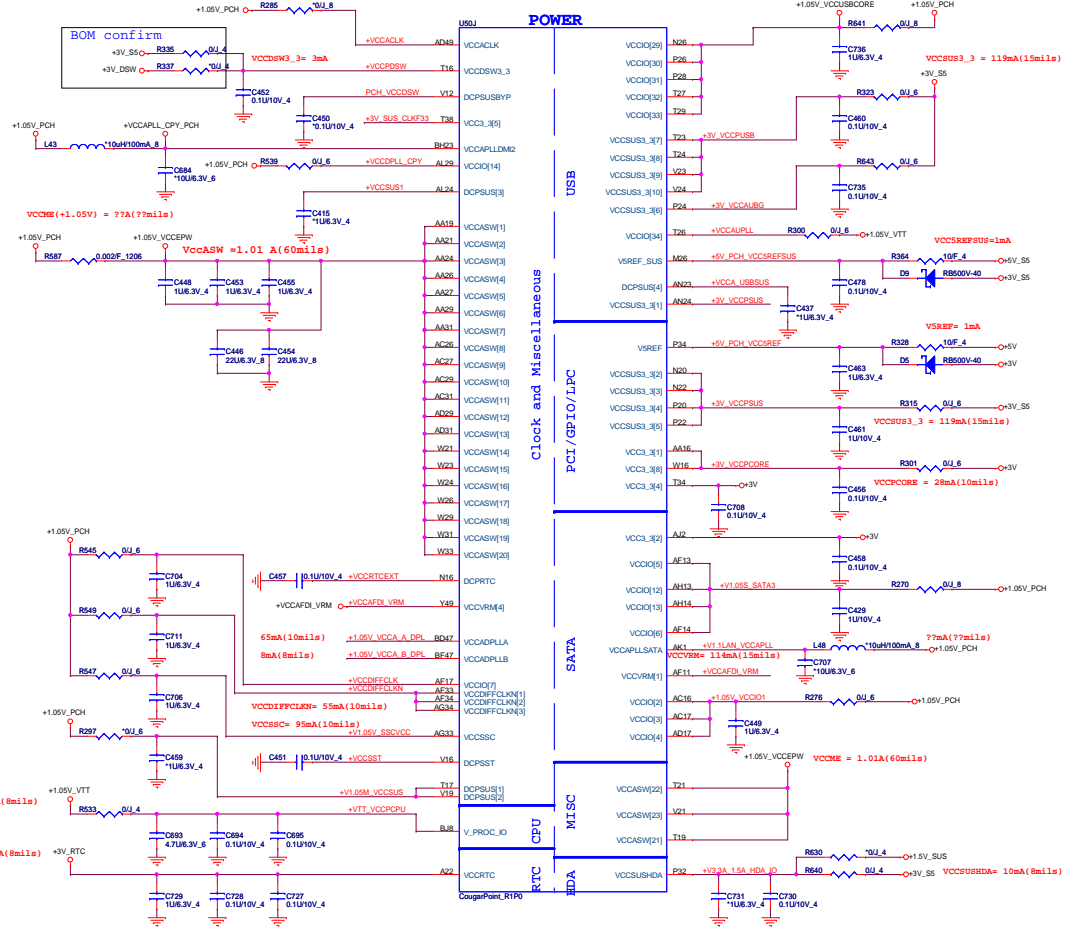
Size Document Number
Cougar Point 4/6

Date: Thursday, September 30, 2010 Sheet 11 of 48 Rev 1A

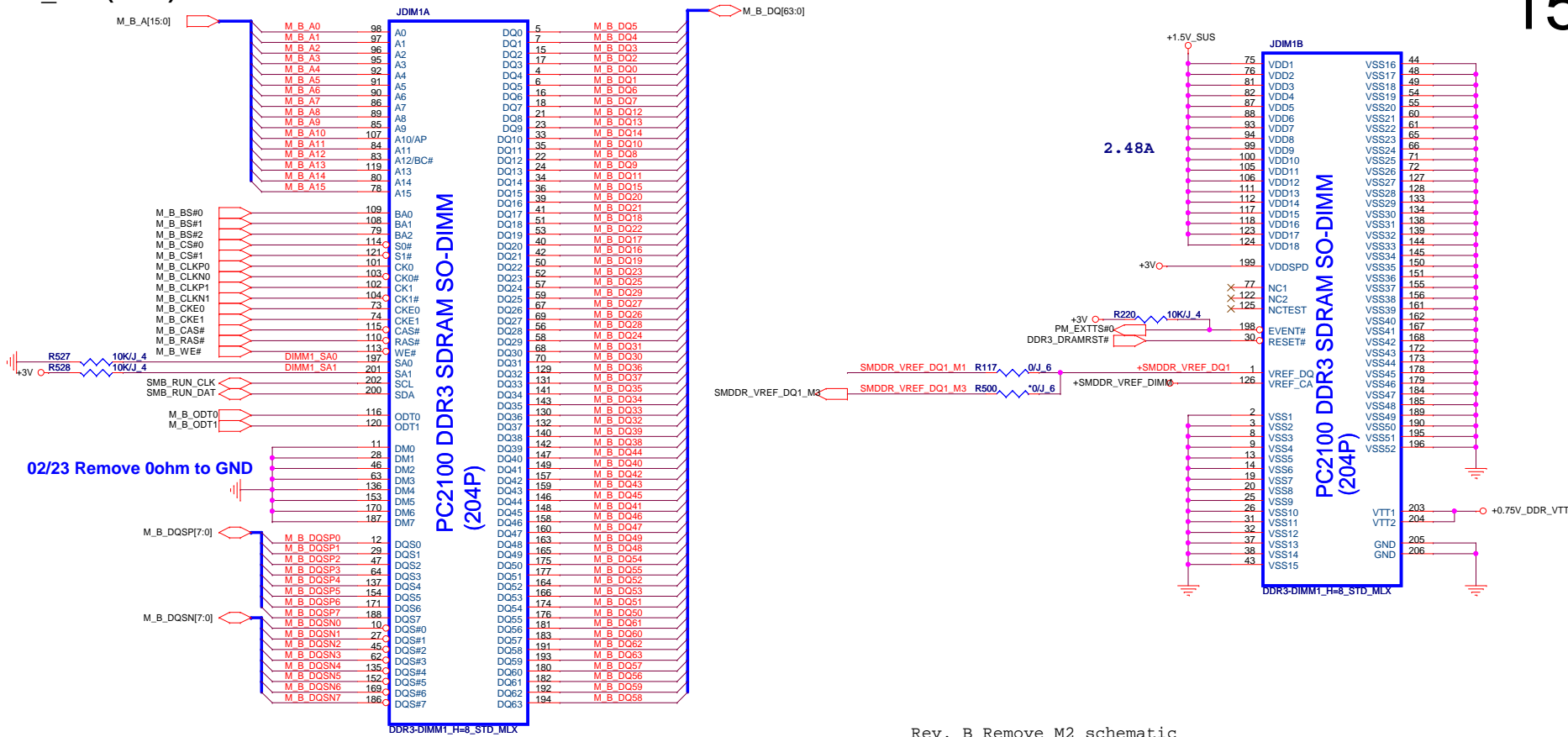
COUGAR POINT (POWER)



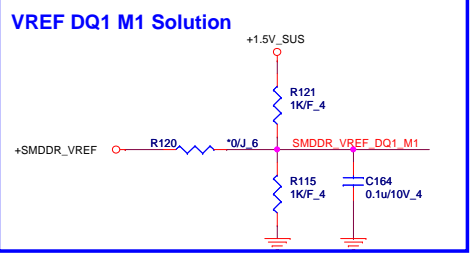
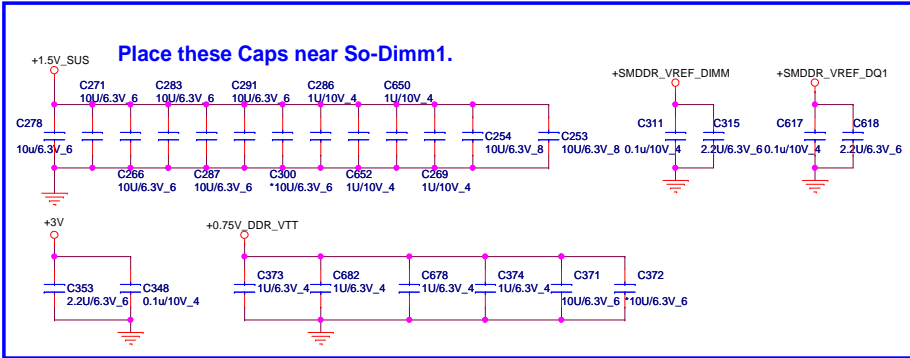
Cougar Point-M (POWER)



VCCVDM: 1.8V (Desktop) 0.20 ohm for Pre-ES1
1.5V (Mobile)



Rev. B Remove M2 schematic

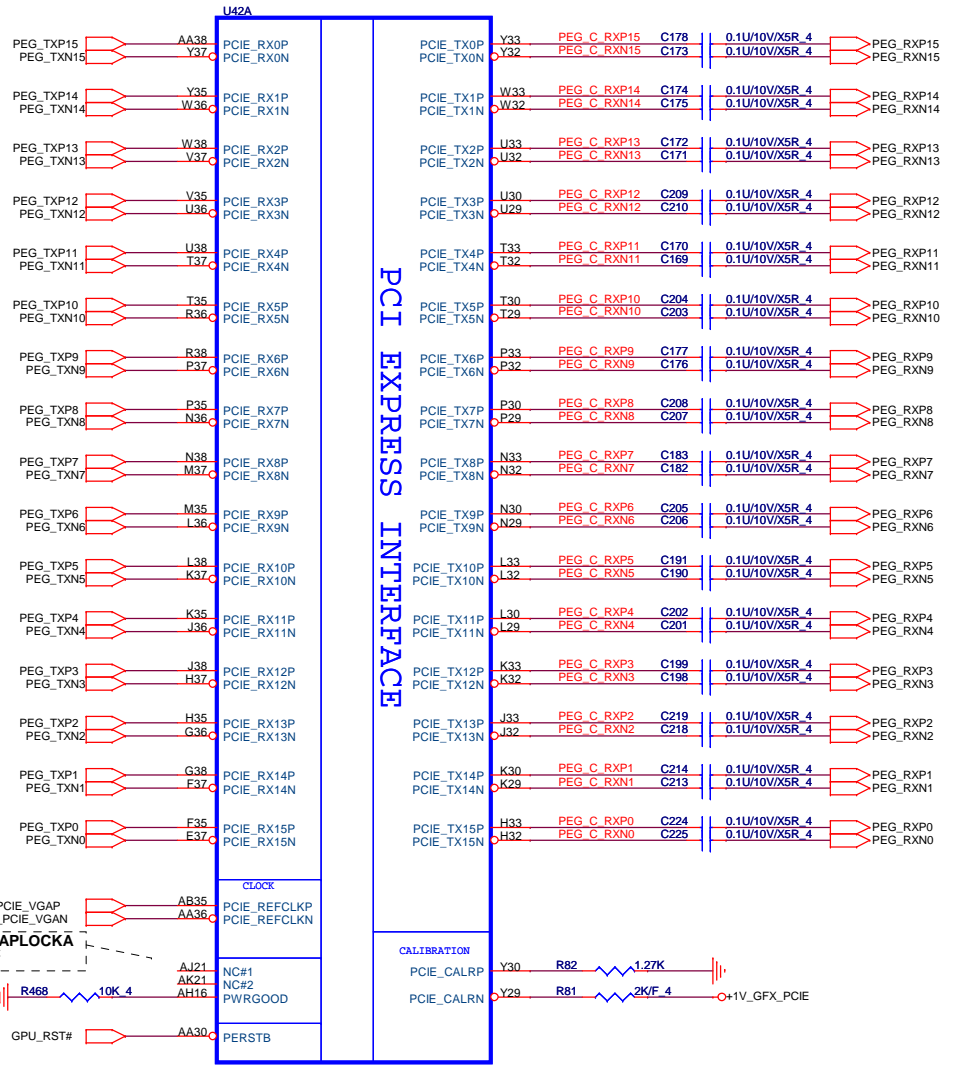


	STD 4H	STD 8H
FOX		
LTK	DGMK4000004	DGMK4000097
SUY		
MLX	DGMK4000011	DGMK4000080
Standard 8H type:DDR-C-2013310-204p-1		

PROJECT : KL2D
Quanta Computer Inc.

Size	Document Number	Rev
	DDR3 SO-DIMM-1	1A
Date:	Thursday, September 30, 2010	Sheet 15 of 48

PCI EXPRESS INTERFACE

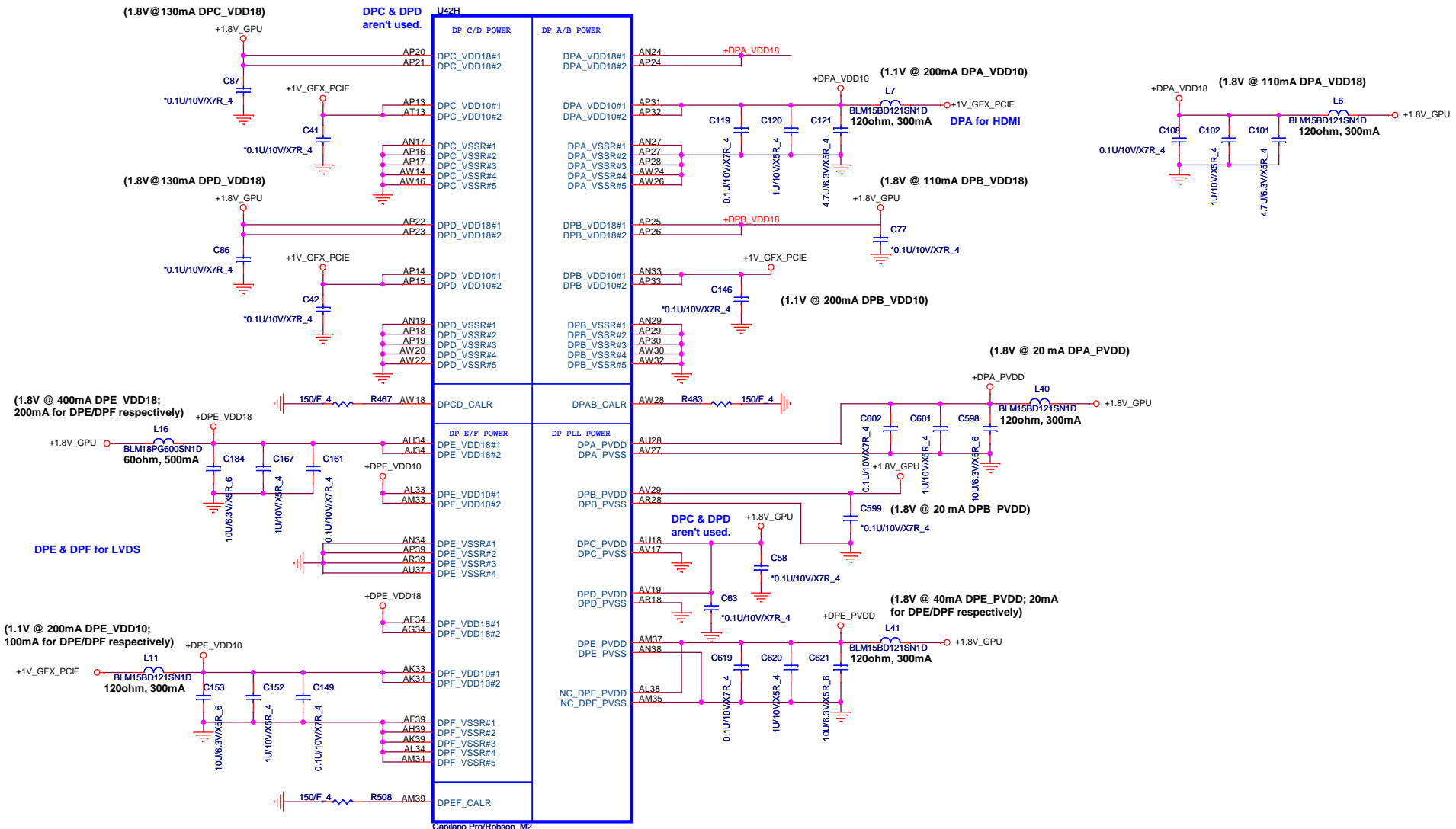


Seymour/Whistler:SWAPLOCKA
Madison/Capilano :NC

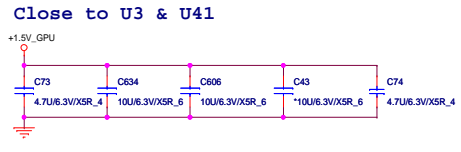
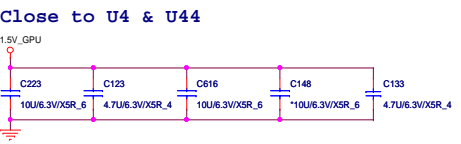
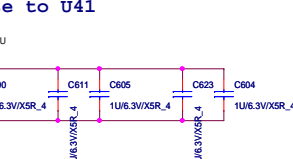
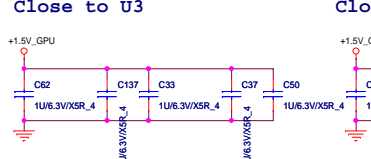
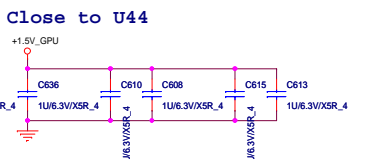
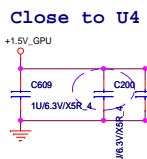
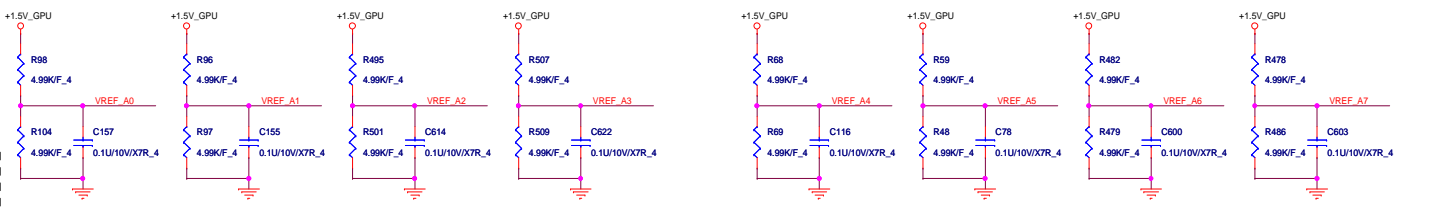
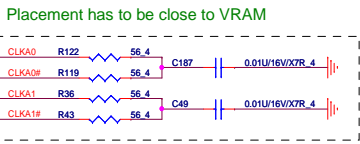
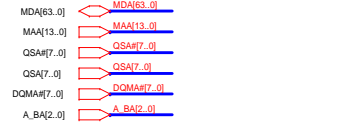
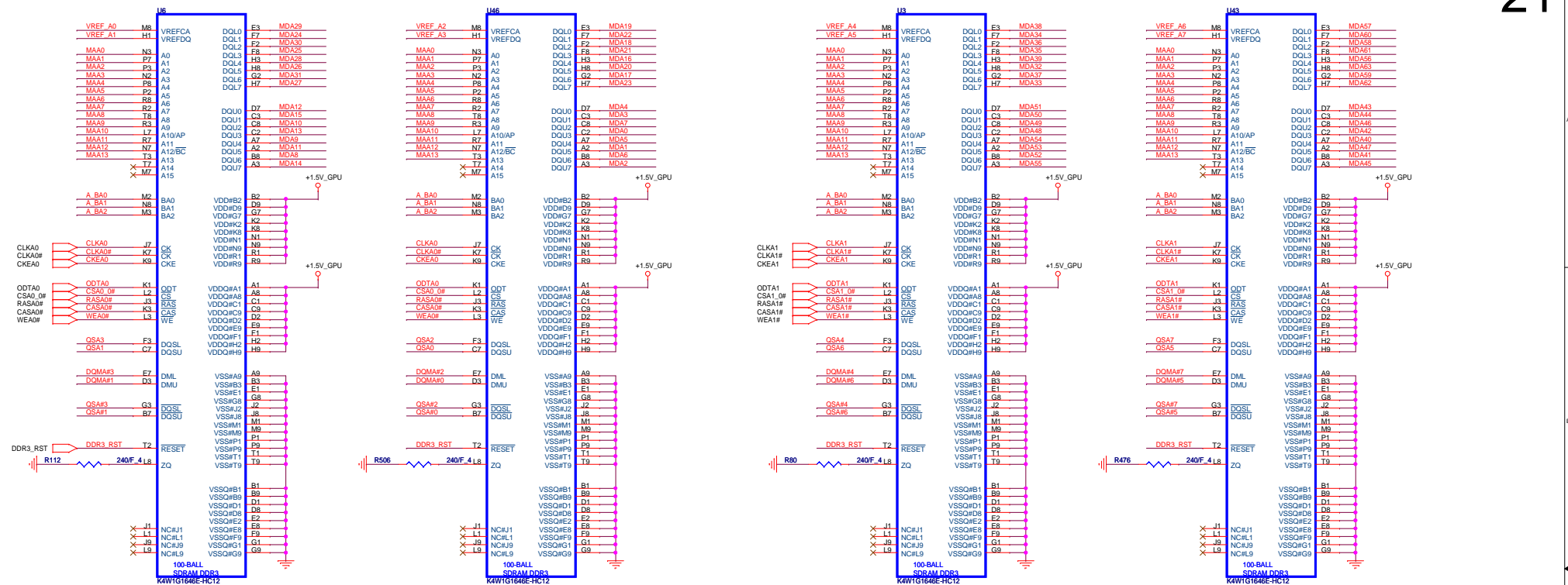
Capilano Pro/Robson_M2

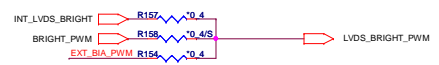
+1V_GFX_PCIE
+1.8V_GPU

!!!
For M96/92, DPx_VDD10 = 1.1V
For M97 DPx_VDD10 = 1.0V



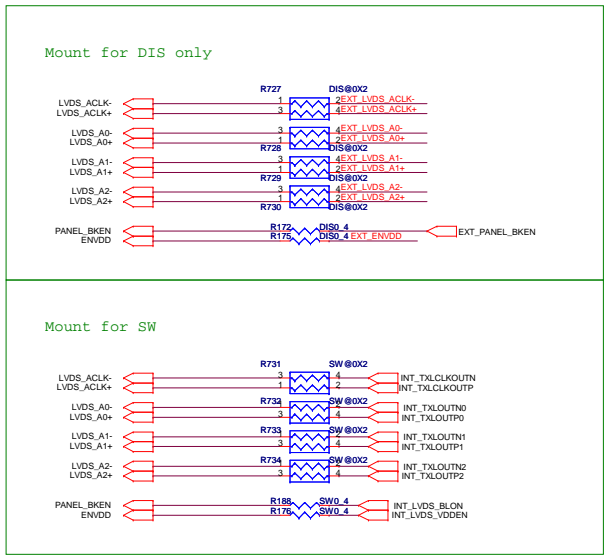
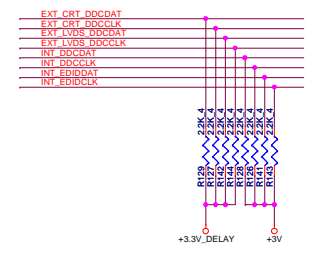
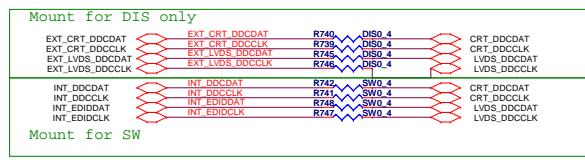
Capilano Pro/Robson_M2



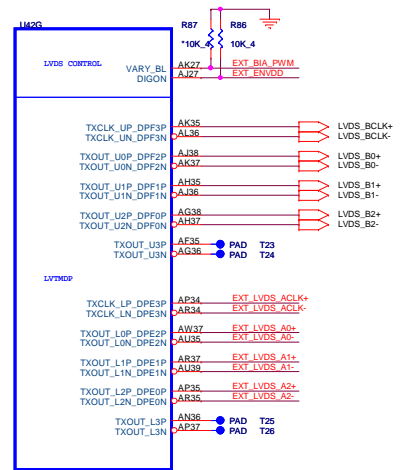


Remove MUX

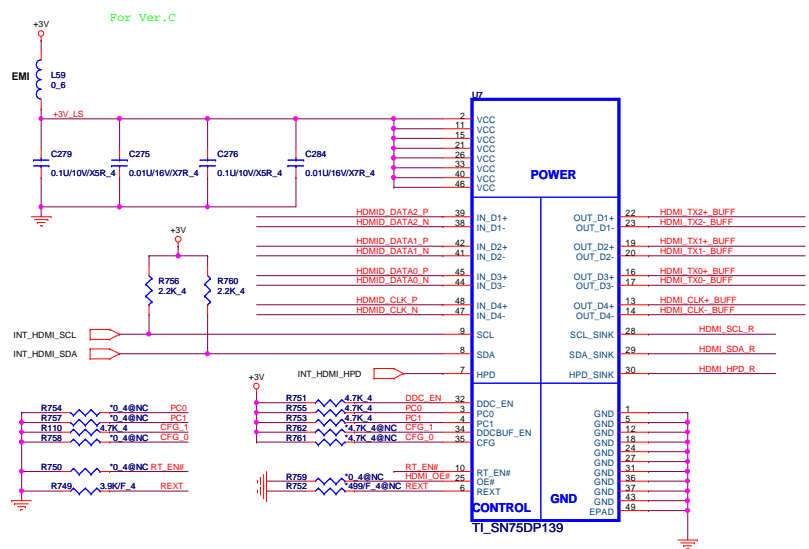
CRT



Create new page for HDMI function...By Danny 0510



+5V
+3V
+3.3V_DELAY



EQUALIZATION SETTING

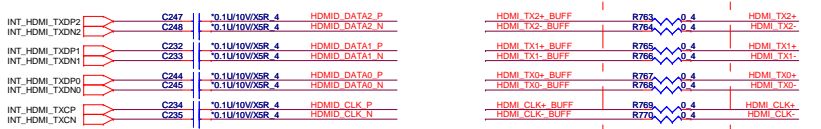
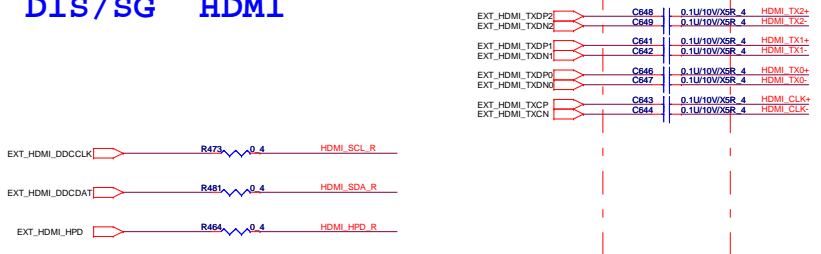
PC1:PC0=0:0 8dB
 PC1:PC0=0:1 4dB Recommended
 PC1:PC0=1:0 12dB
 PC1:PC0=1:1 0dB

PS8101 Pin34/35 is NC

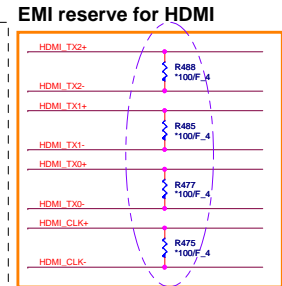
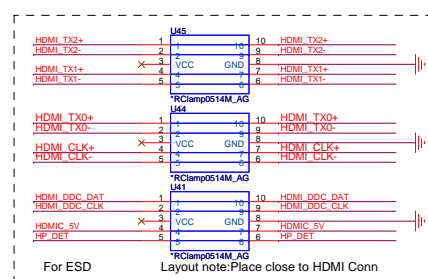
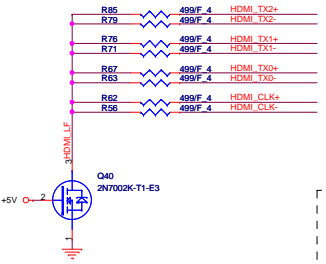
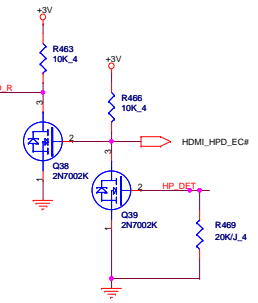
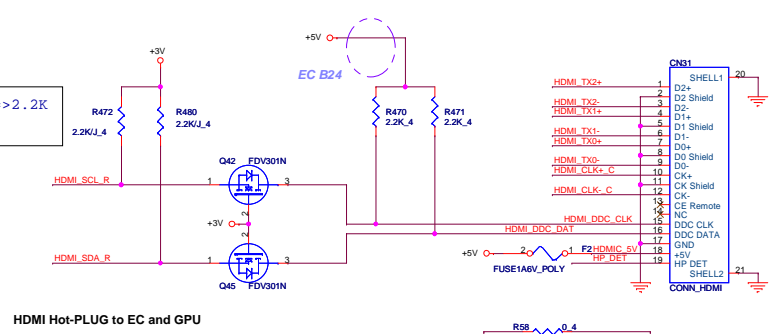
SCLZ/SDAZ Low-level input/output Voltage
 CFG1:CFG0=0:0 VIL:-0.4V VOL:0.6V (Default)
 CGF1:CGF0=0:1 VIL:-0.36V VOL:0.55V
 CGF1:CGF0=1:0 VIL:-0.44V VOL:0.65V
 CGF1:CGF0=1:1 VIL:-0.36V VOL:0.6V

For EMI request

DIS/SG HDMI



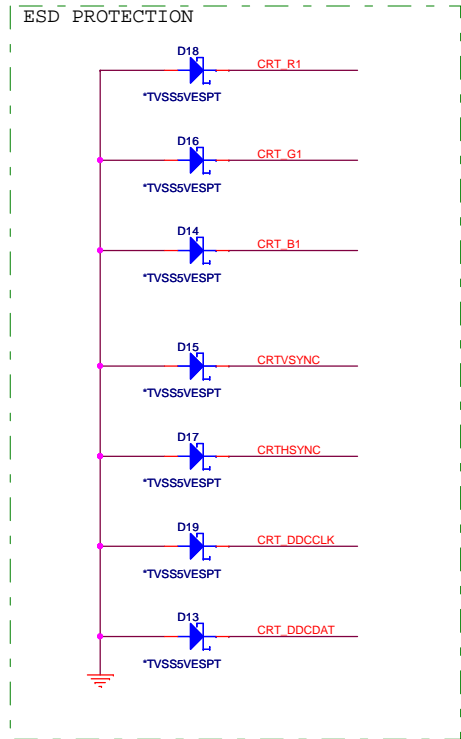
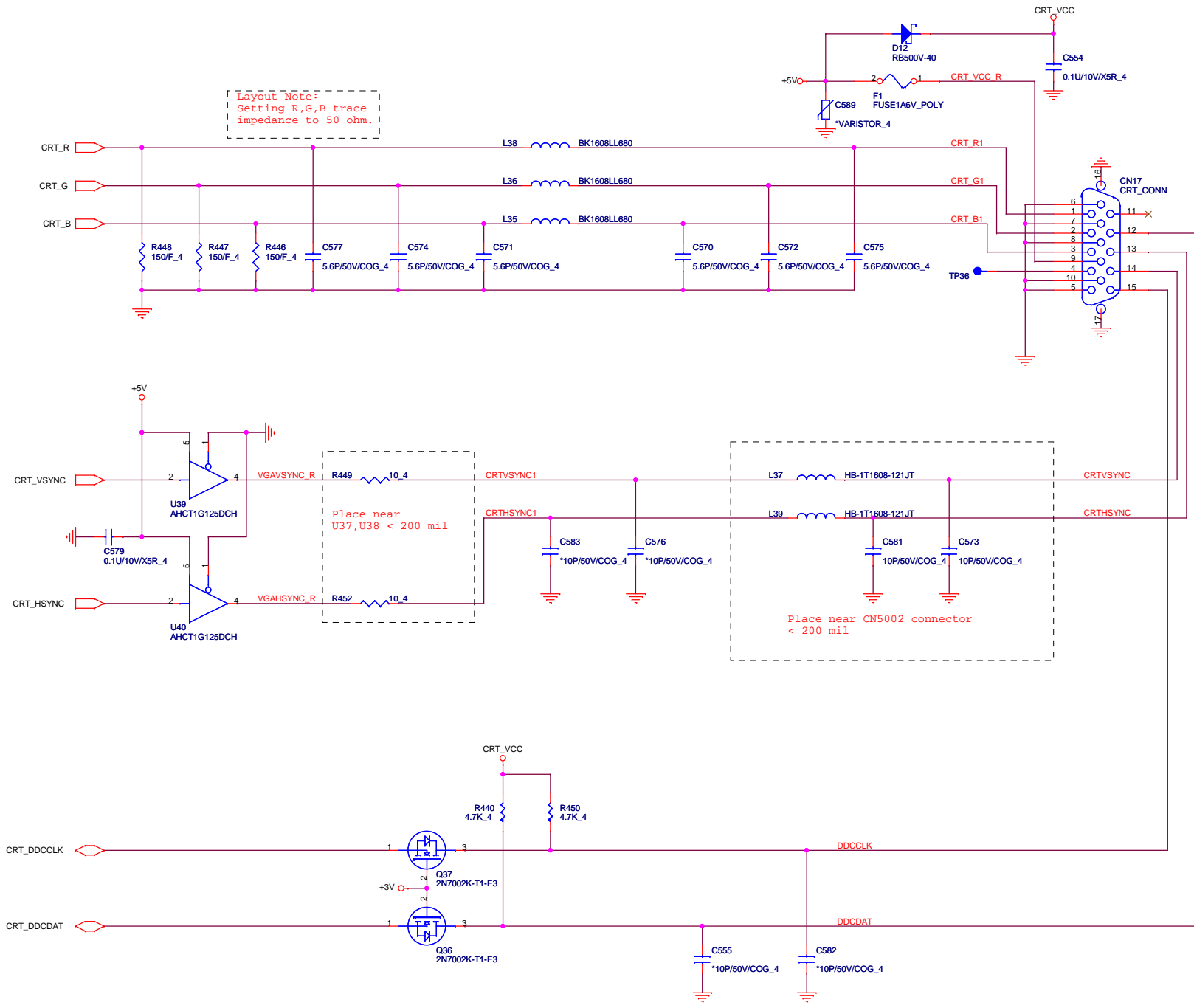
For Intel PCH request =>2.2K
 ATI=>4.7K



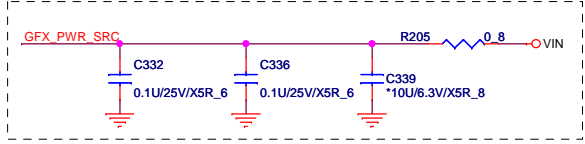
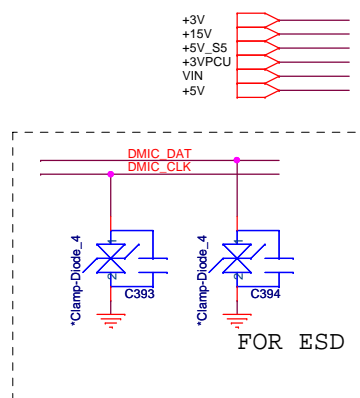
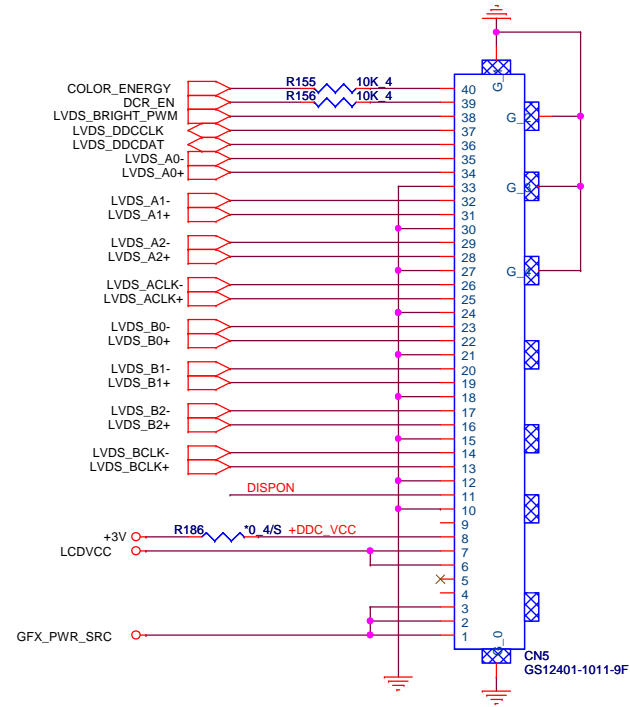
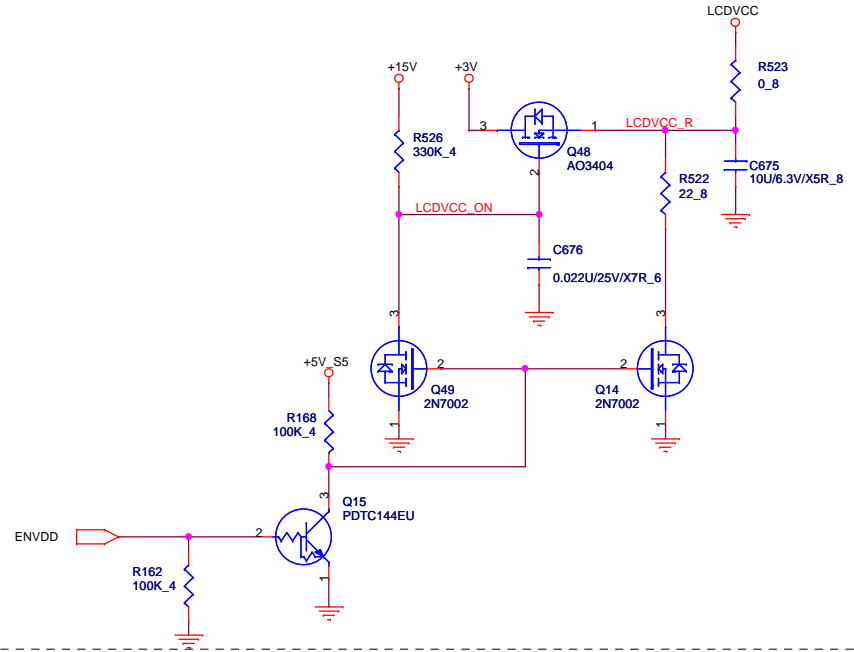
UMA Only HDMI

Co-lay with TOP/BOT placement.
 No any trace length allow.

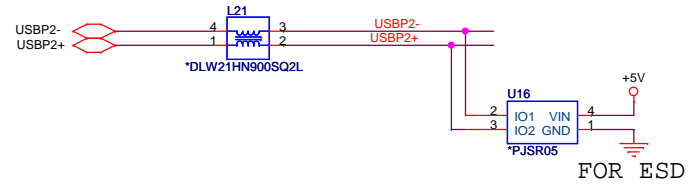
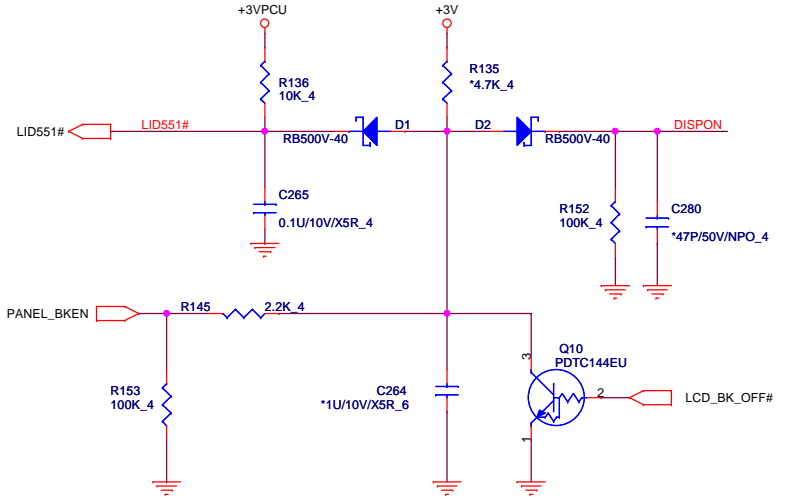
Layout Note:
Setting R,G,B trace
impedance to 50 ohm.



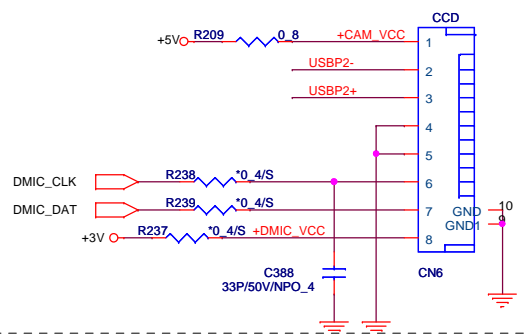
LCDVCC

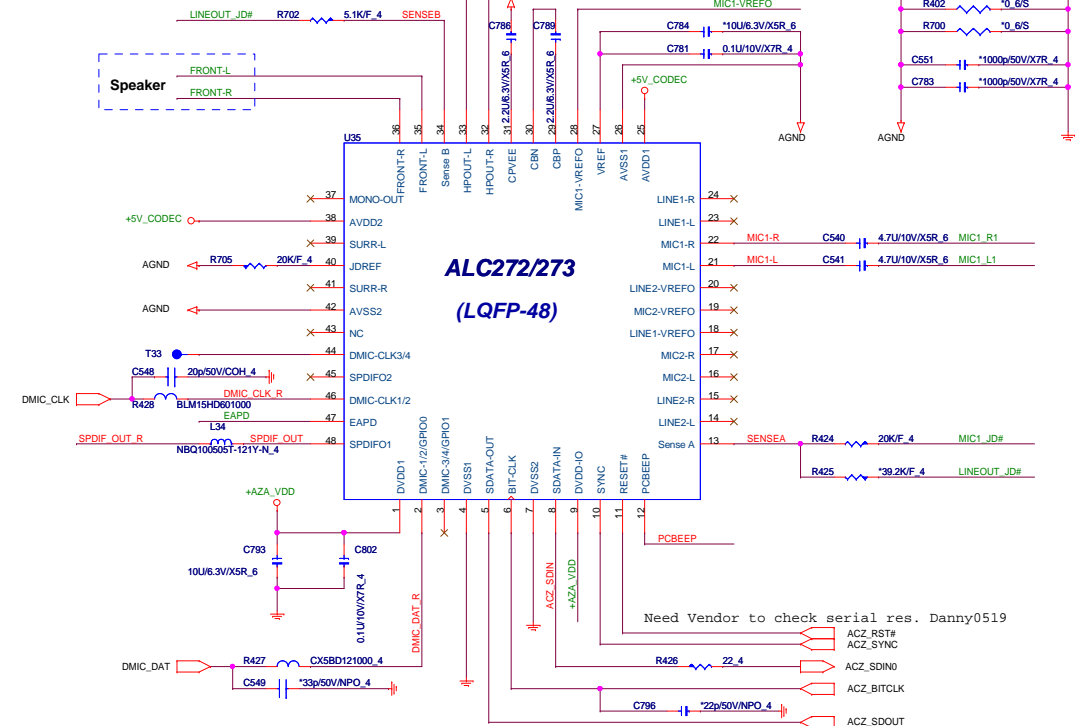


back light



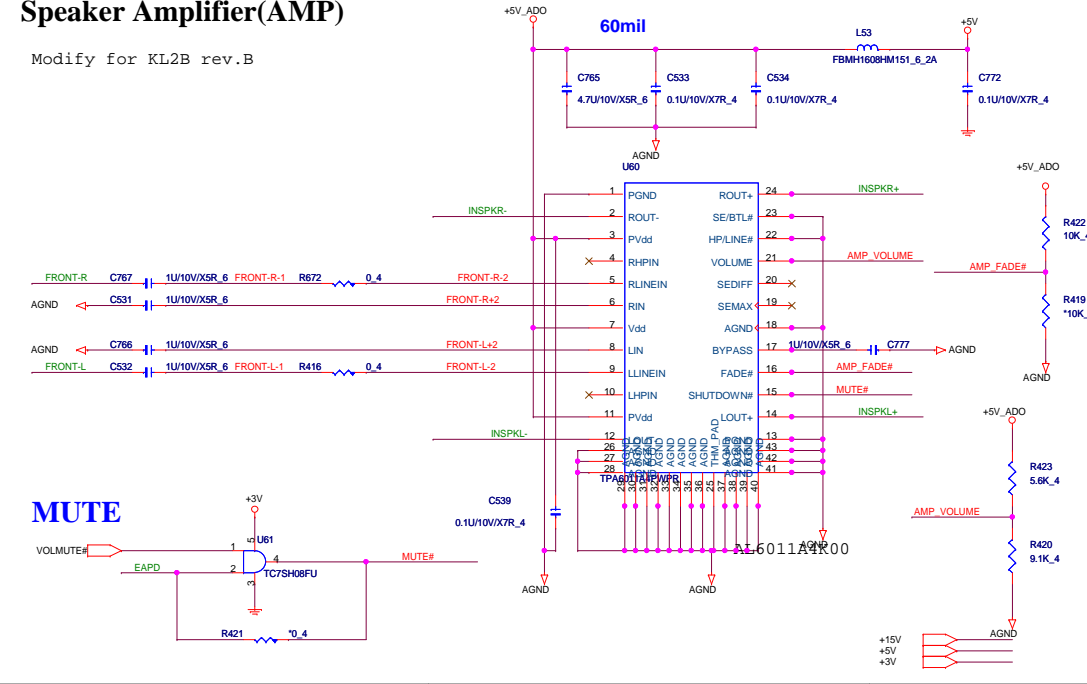
CAMERA



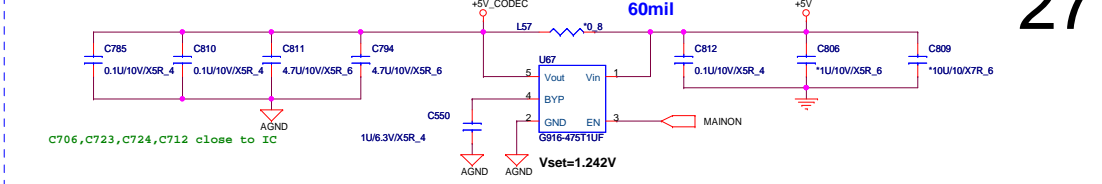


Speaker Amplifier(AMP)

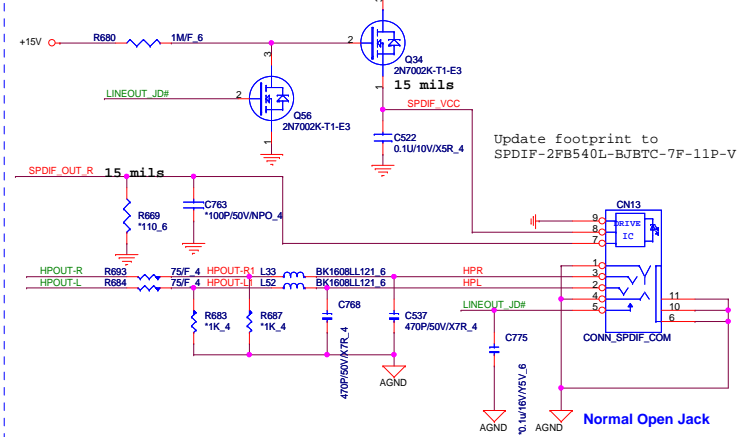
Modify for KL2B rev.B



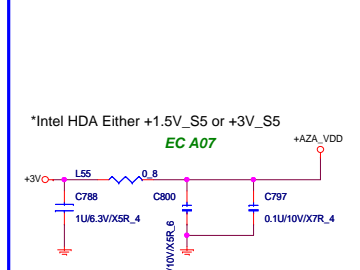
Codec Power(ADO)



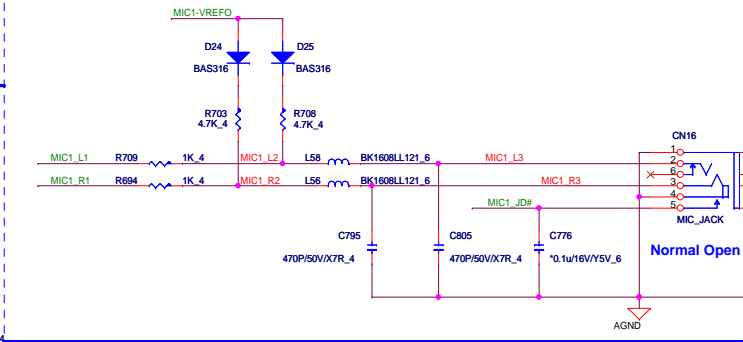
Earphone(AMP)



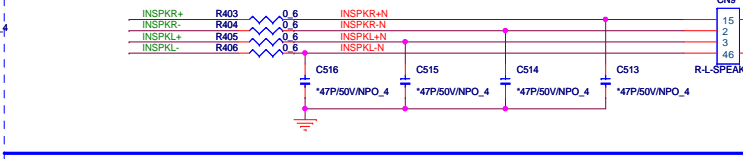
HDA Power(ADO)



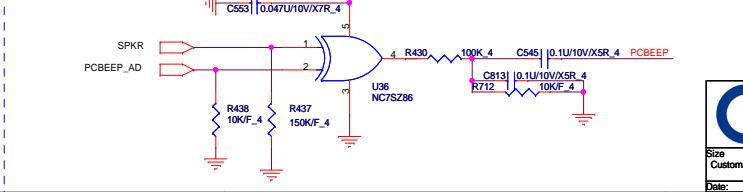
System MIC(AMP)



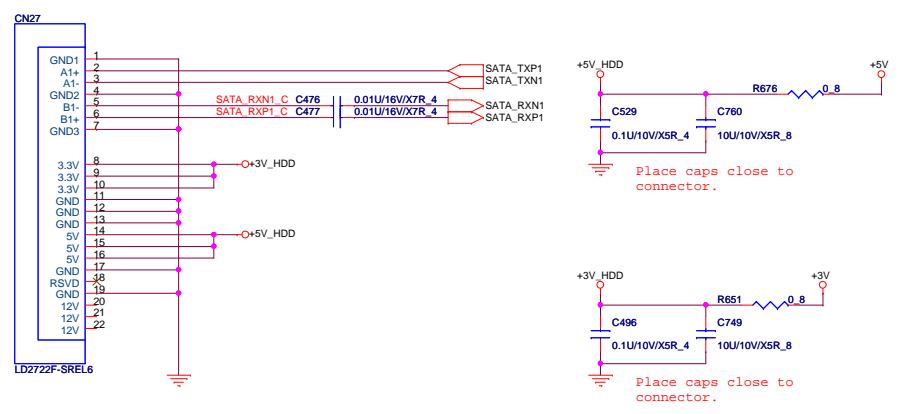
Speaker(AMP)



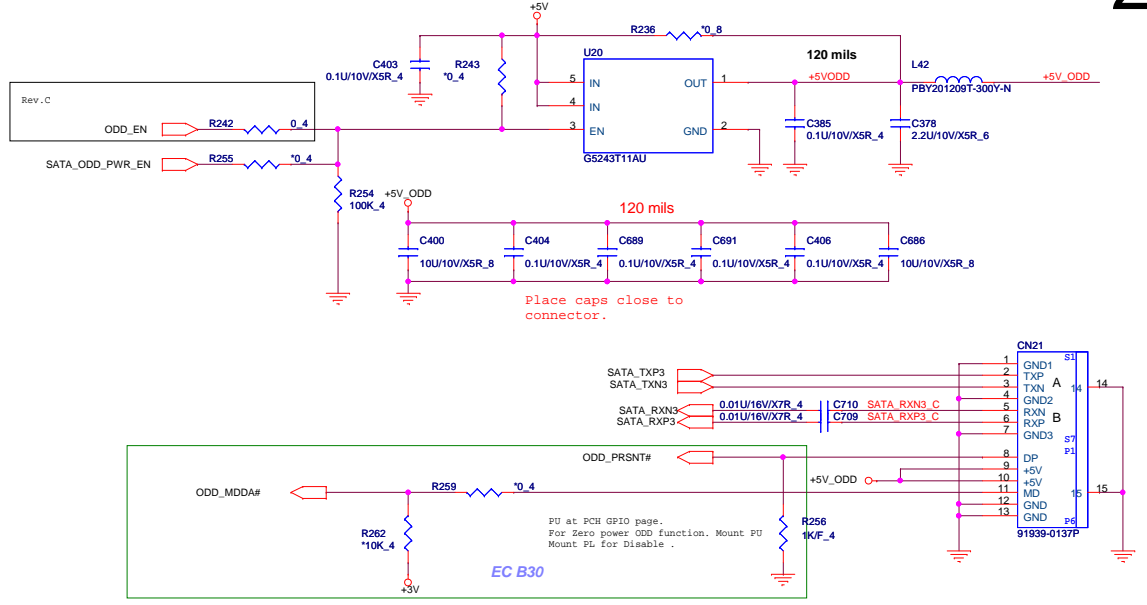
PC BEEP



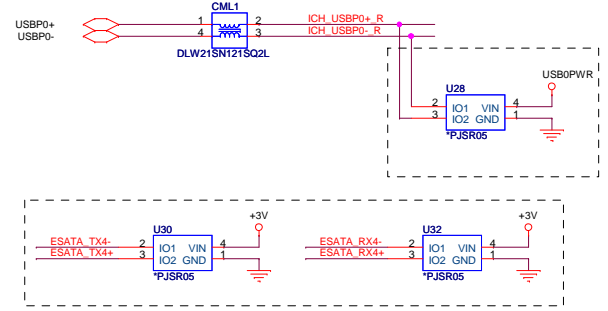
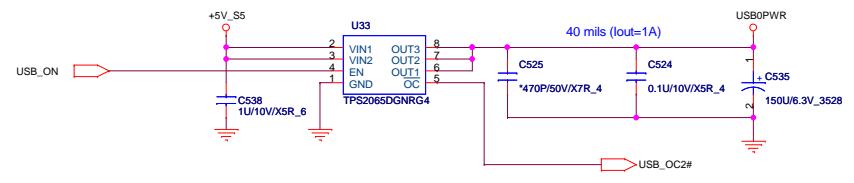
SATA HDD Connector.



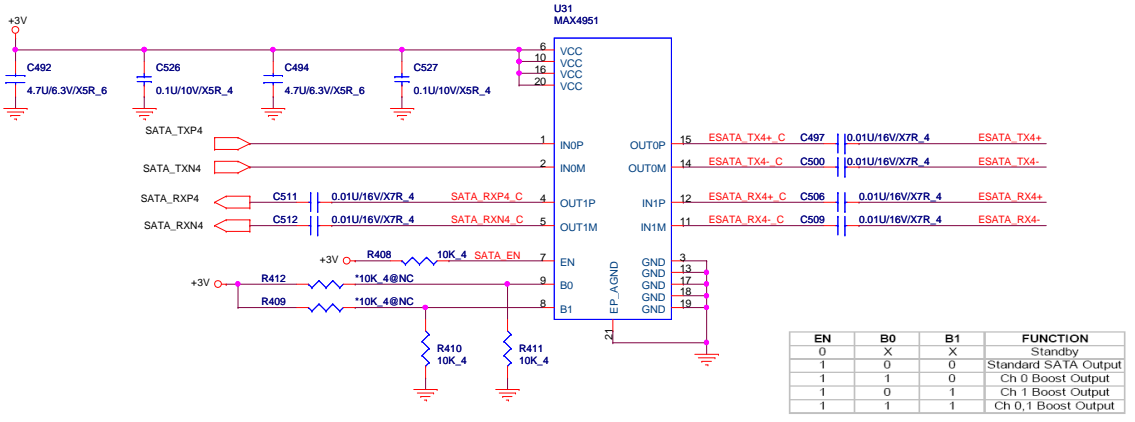
SATA ODD Connector.



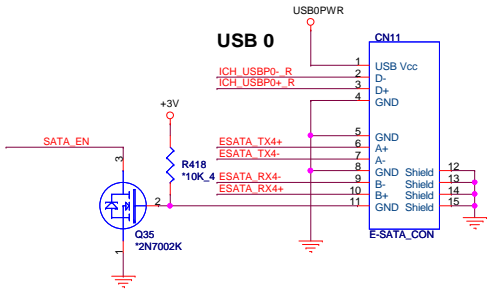
USB + E-SATA



E-SATA RE-DRIVER

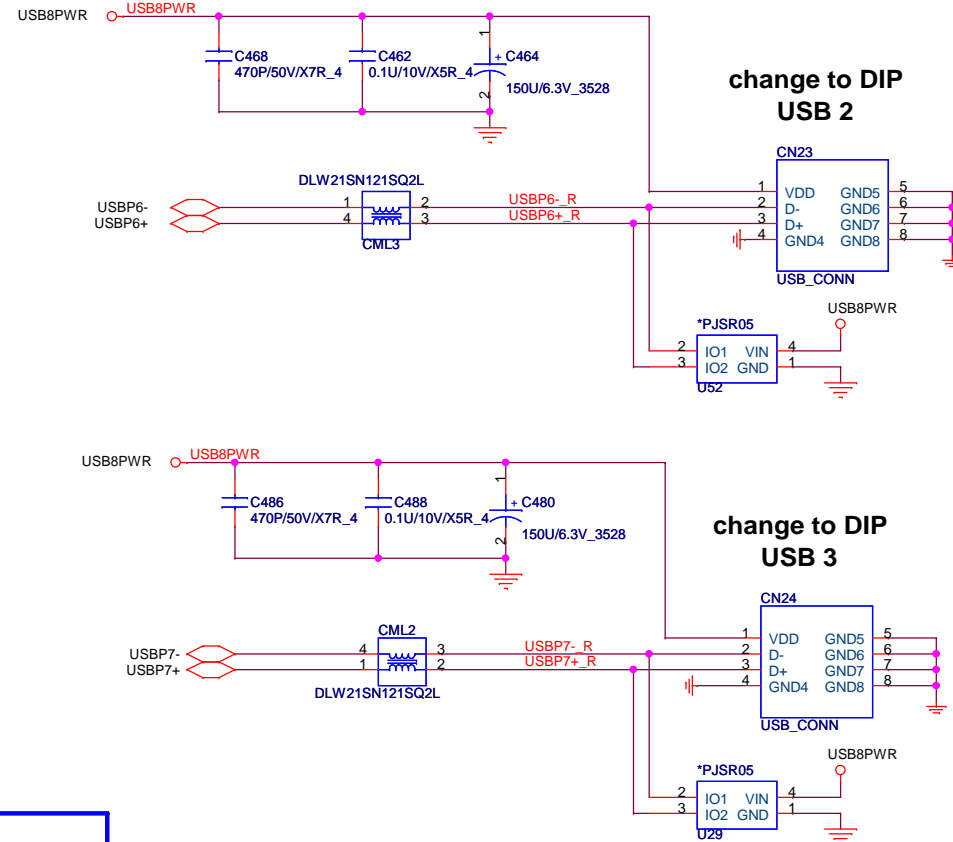
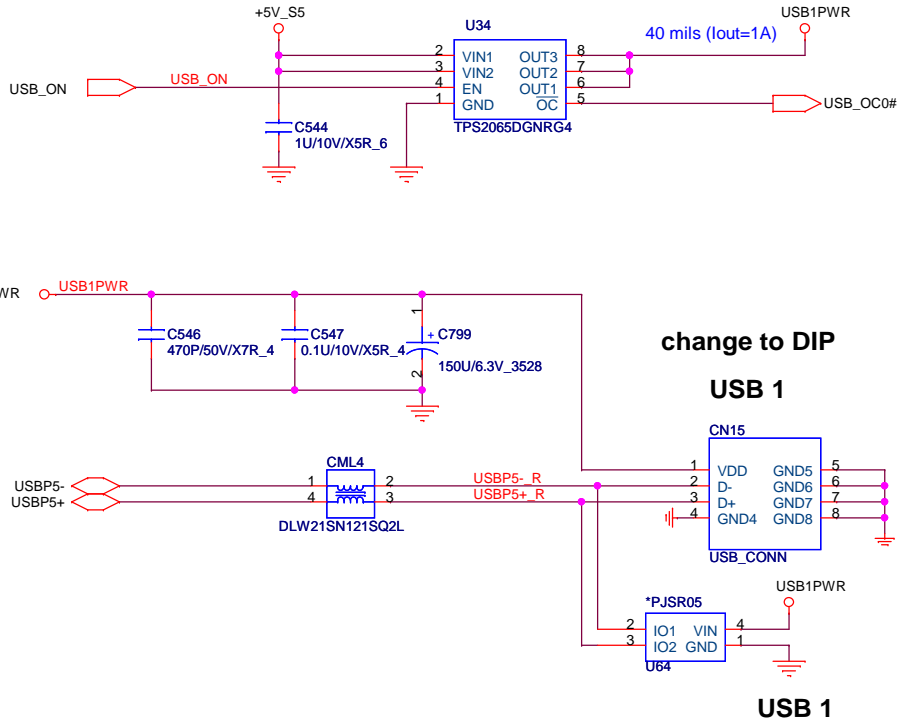


EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

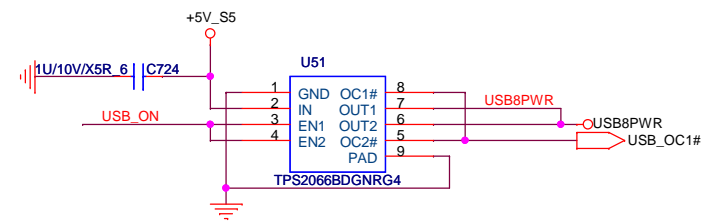
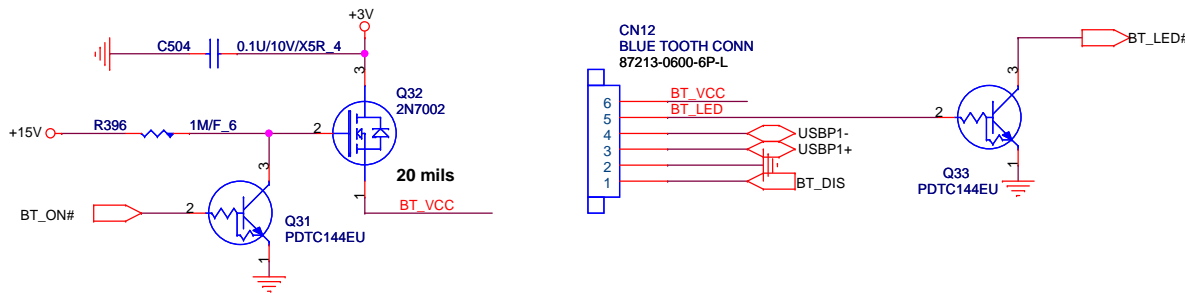


USBX3

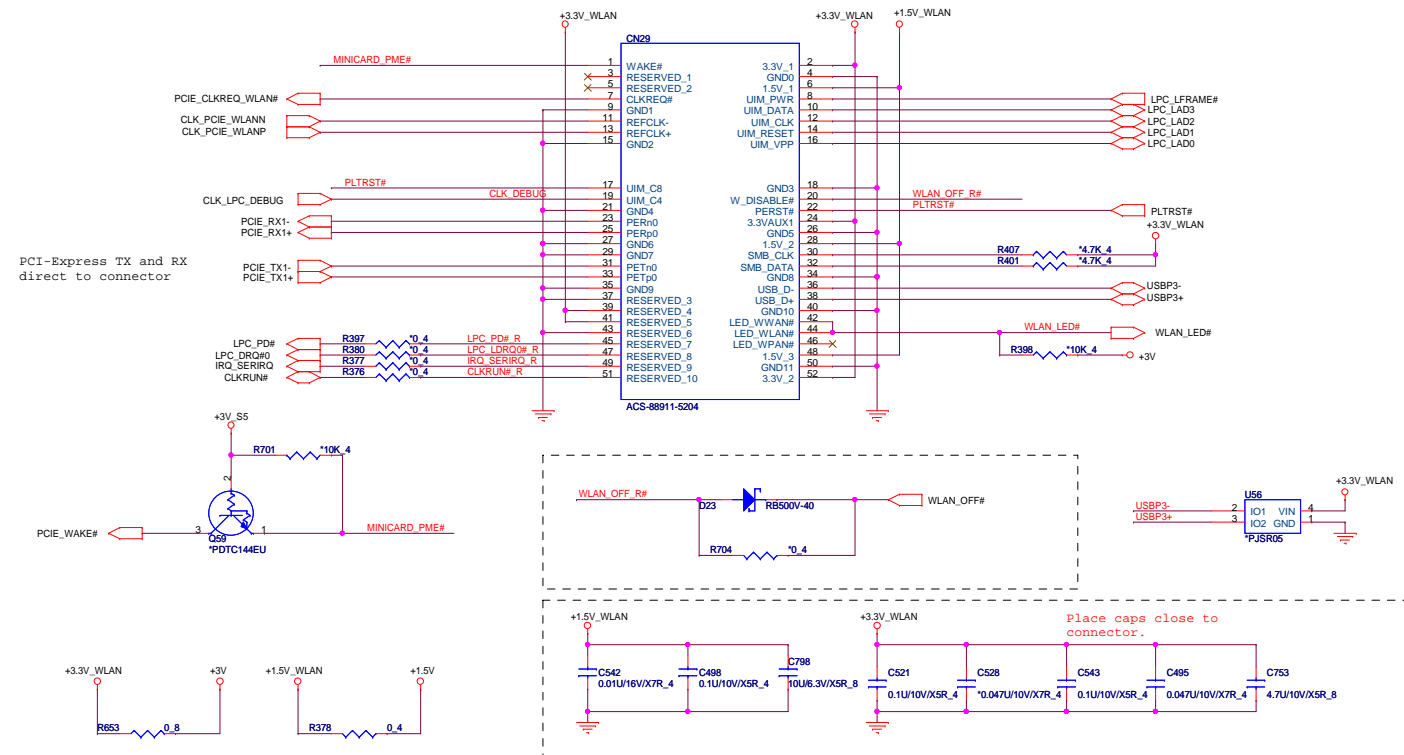
+5V_S5
+3V
+15V



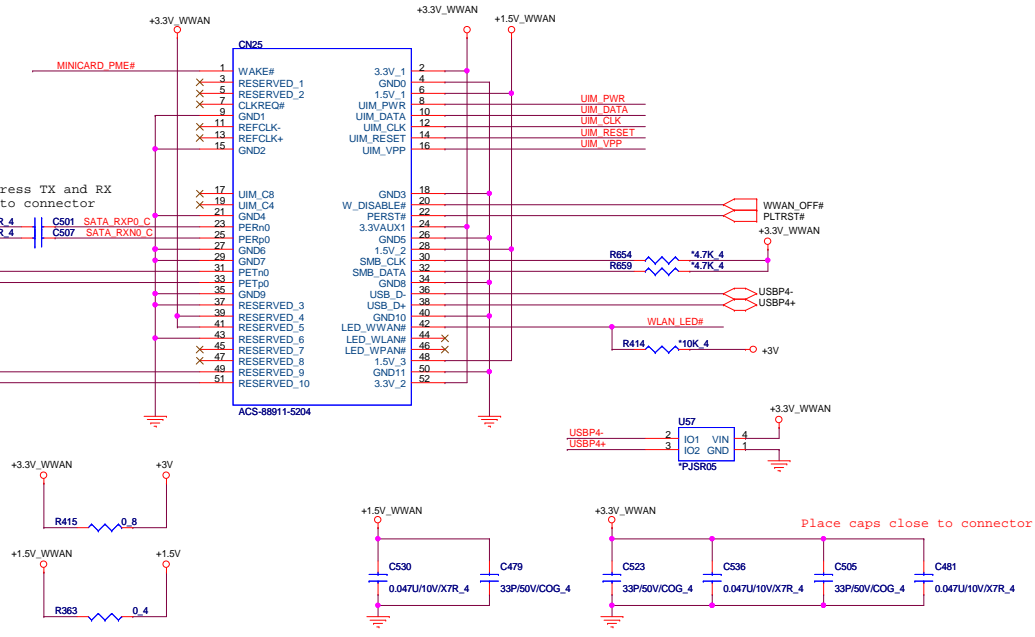
BLUETOOTH



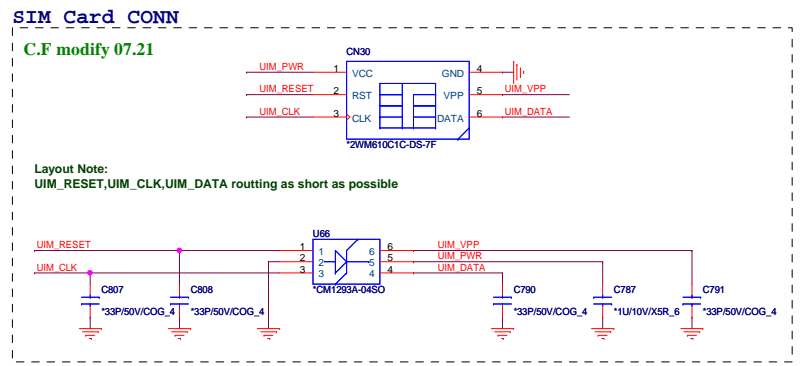
MiniCard WLA connector



MiniCard WWAN/SATA SSD connector



SIM Card CONN

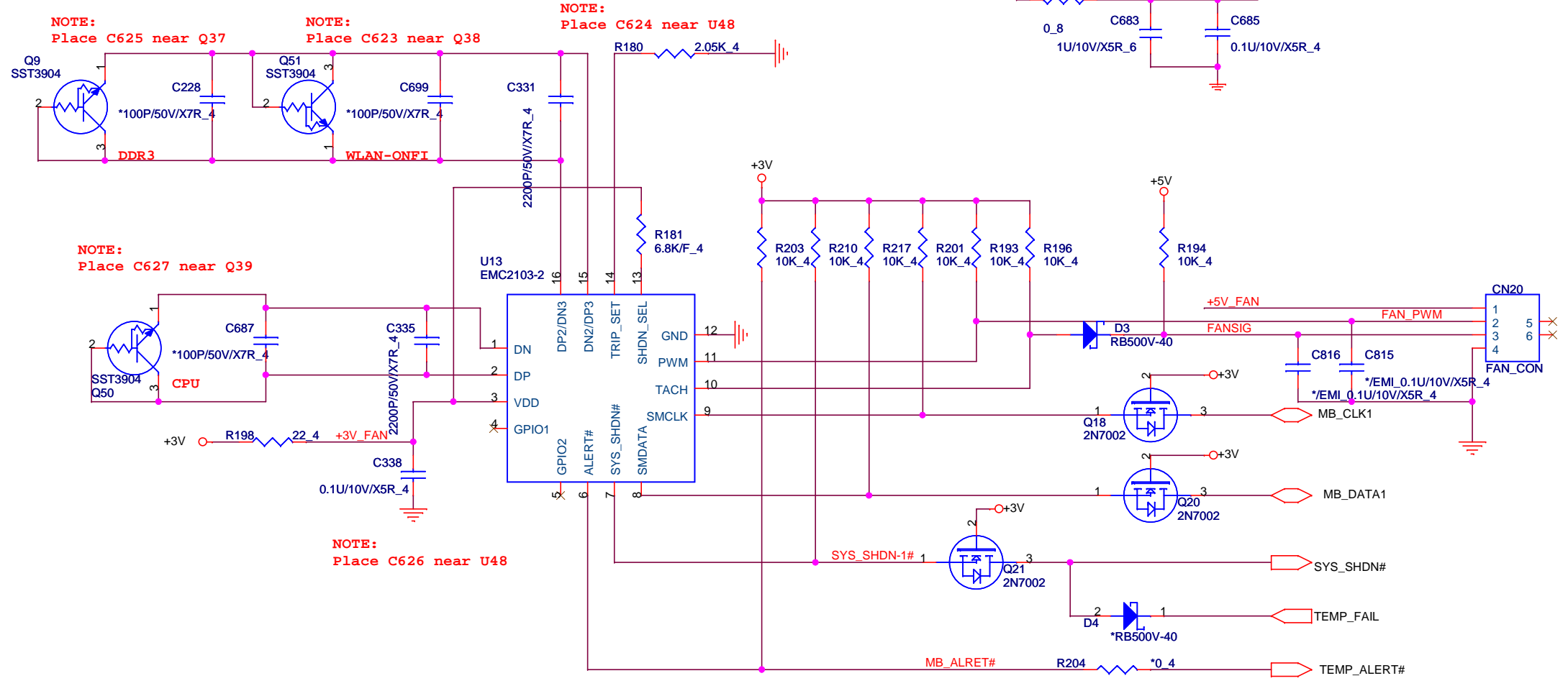



PROJECT : KL2D
Quanta Computer Inc.

Size: Custom Document Number: MINI-Card (WLAN/WWAN) Rev: 1A
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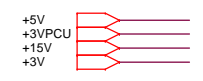
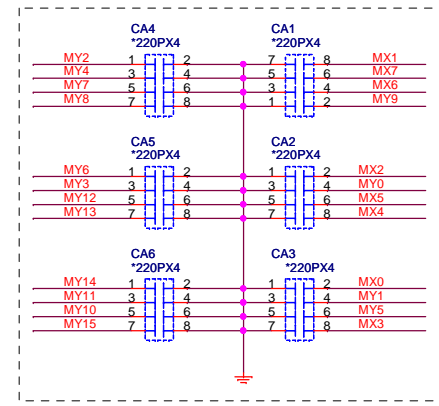
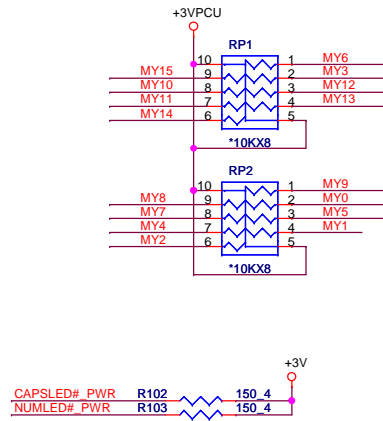
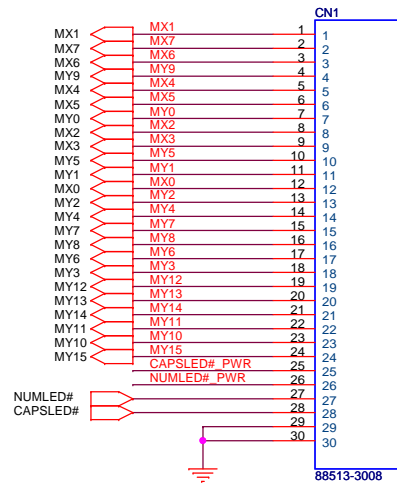
+3V
+5V

FAN CONTROL

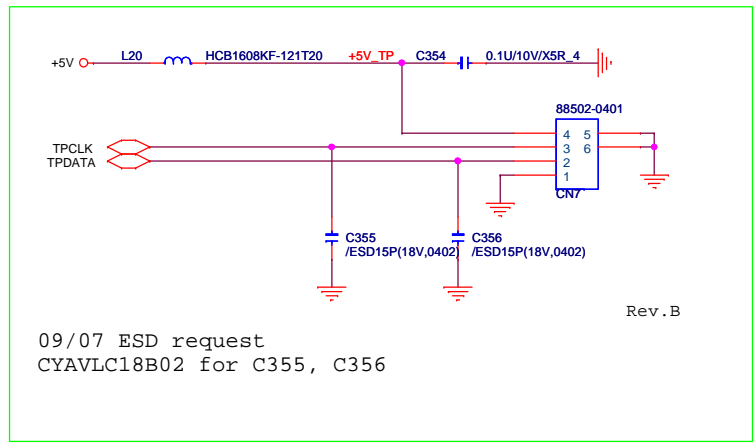


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KEYBOARD

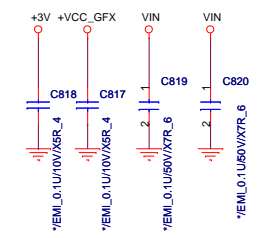
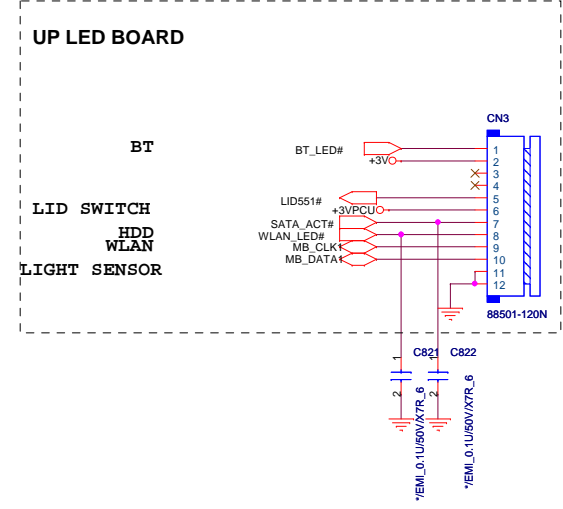
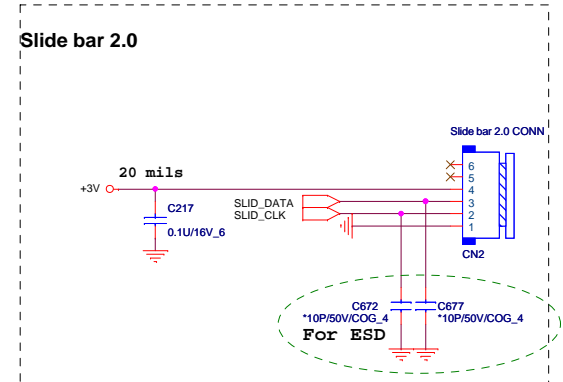
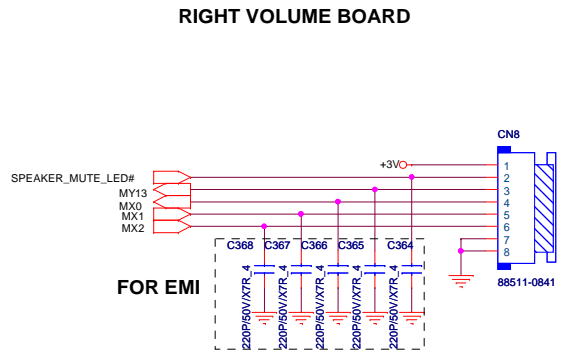
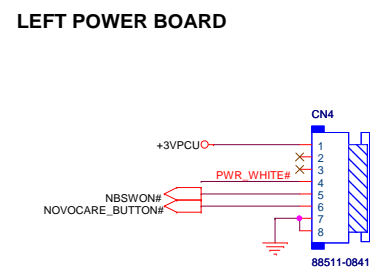
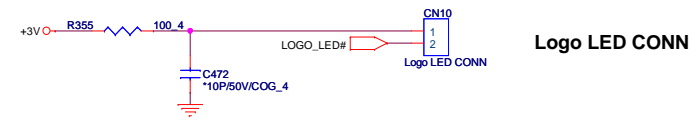
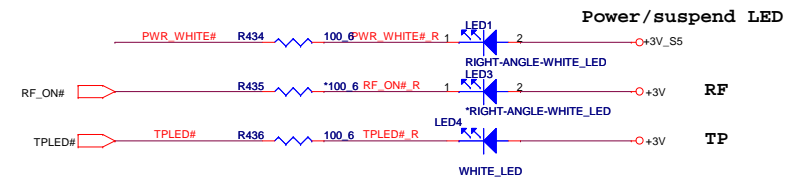
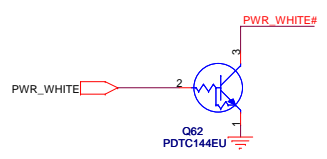
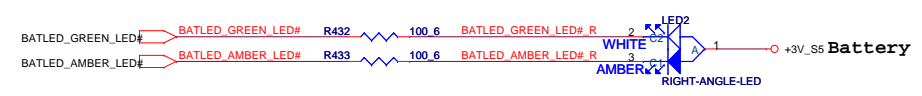
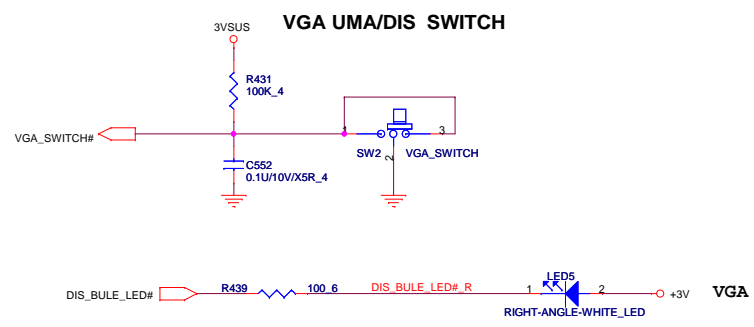


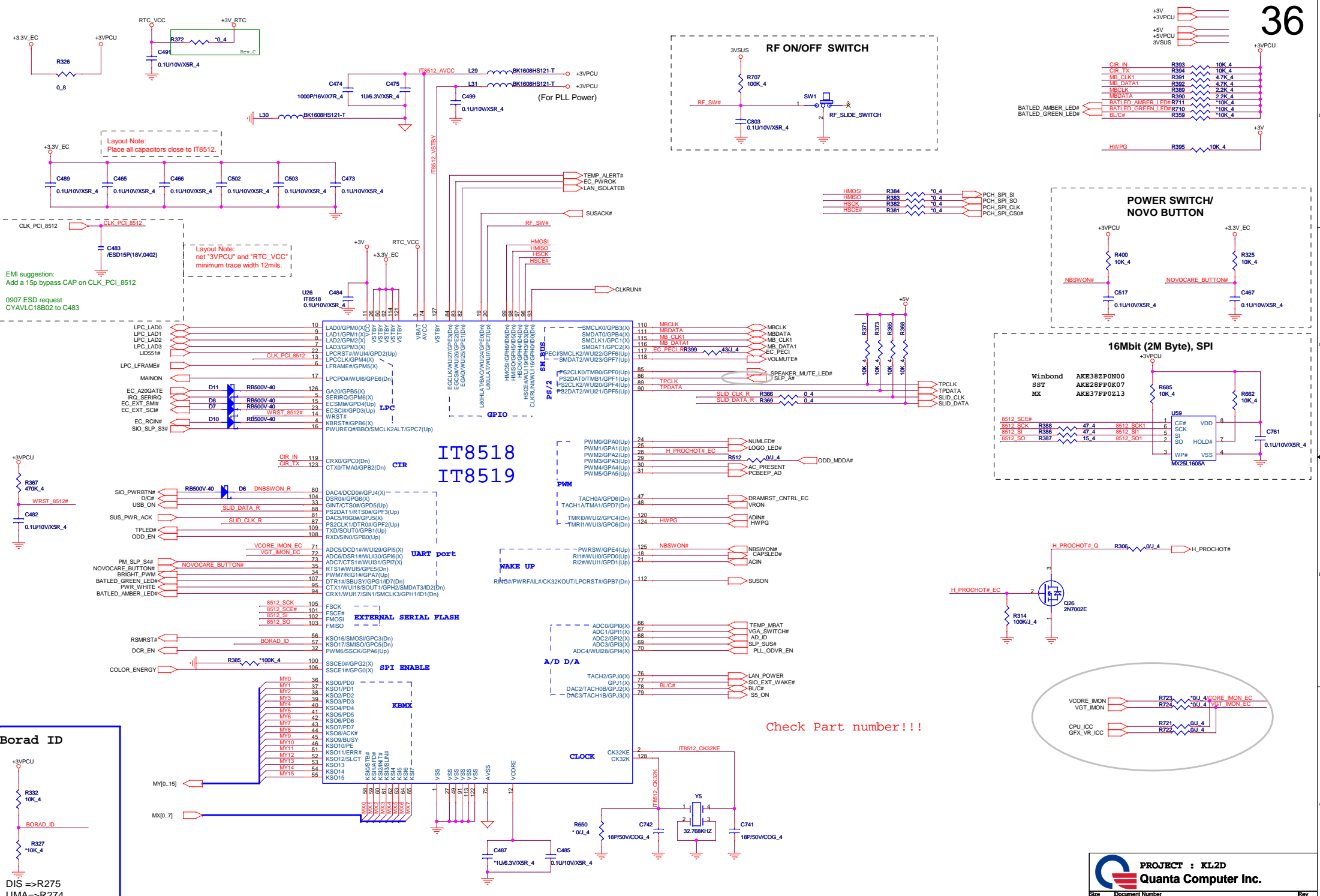
Touch pad



Backlight Keyboard Con.

Remove KB LED Schematic
Danny0513



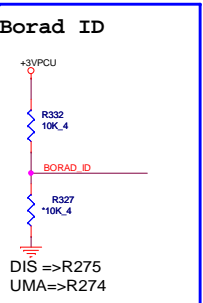


Layout Note:
Place all capacitors close to IT8512.

EMI suggestion:
Add a 15pF bypass CAP on CLK_PCI_8512

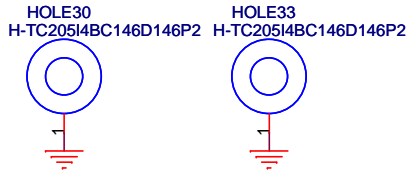
0907 ESD request
CYAVLC18B02 to C483

Layout Note:
net "3VPCU" and "RTC_VCC"
minimum trace width 12mils.

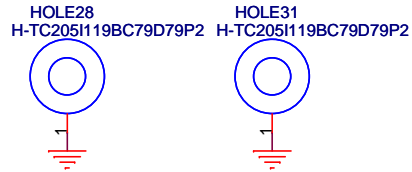


Check Part number!!!

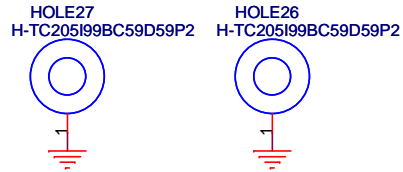
MiniCard WLAN



MiniCard WWAN



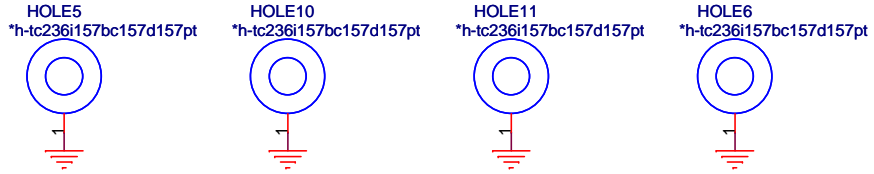
Hole for PCH support



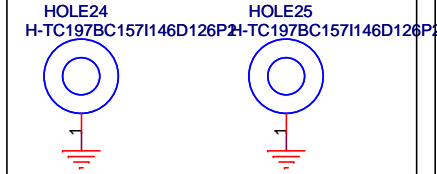
Drink Hole

ESD for ESATA

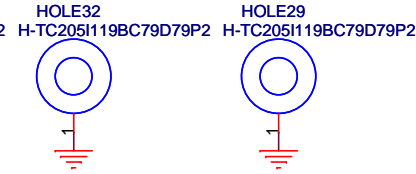
Hole for CPU support



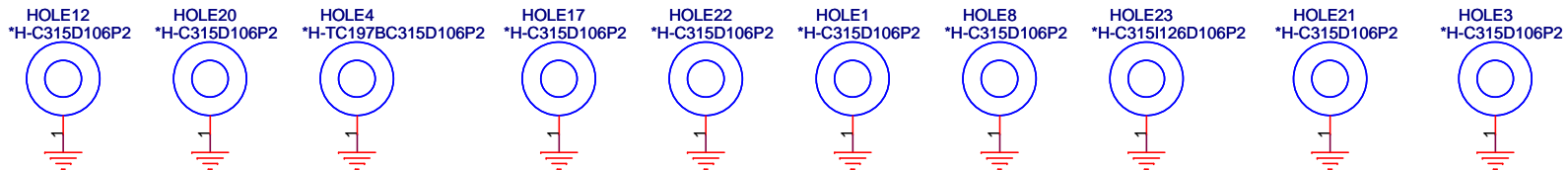
VGA nut



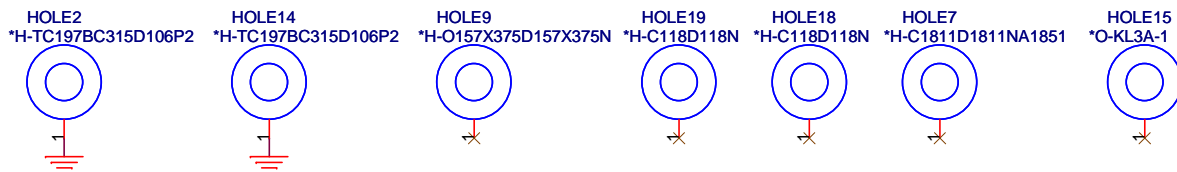
MiniCard TV



Boundary Hole



Boundary Hole

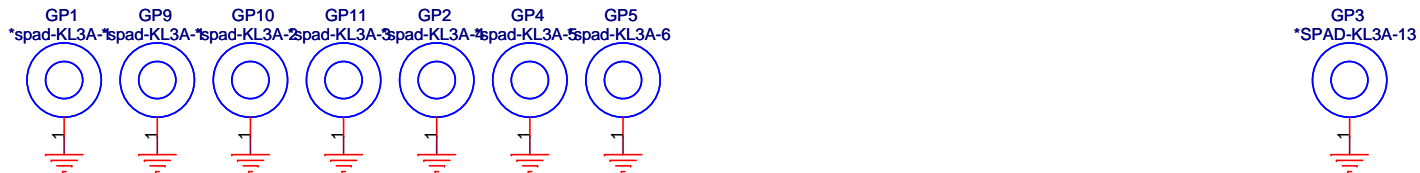


Break Hole

Boundary Hole (ODD)

HDD PAD

ESD PAD



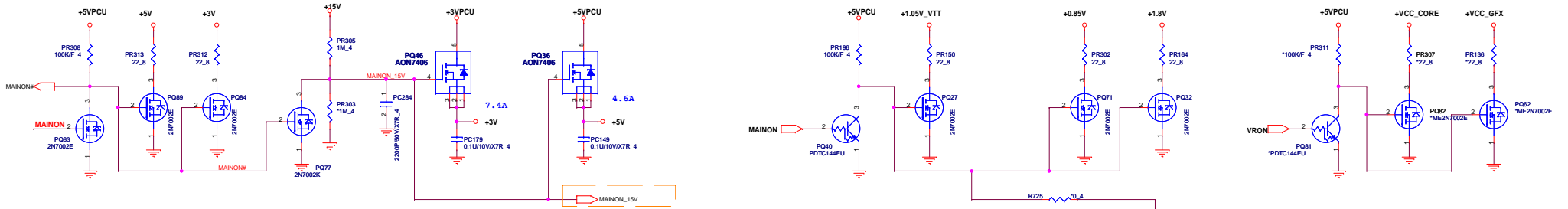
PROJECT KL3 NOTE Calpella DIS

Quanta Computer Inc.

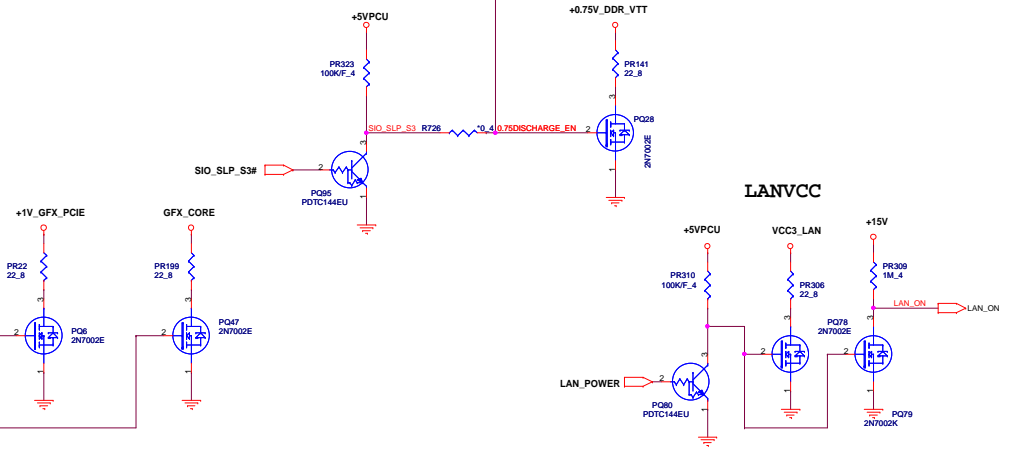
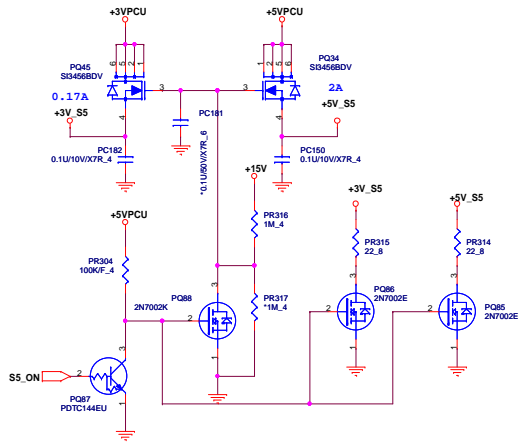
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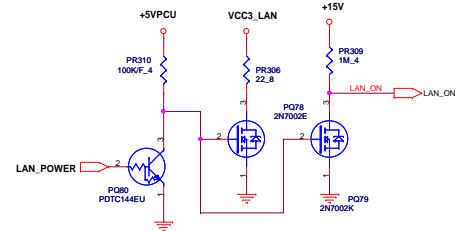
+3V, +5V



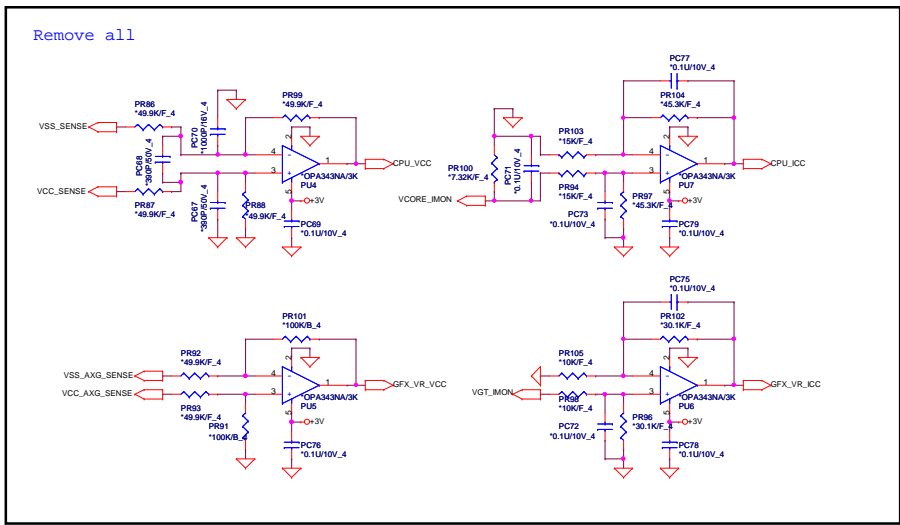
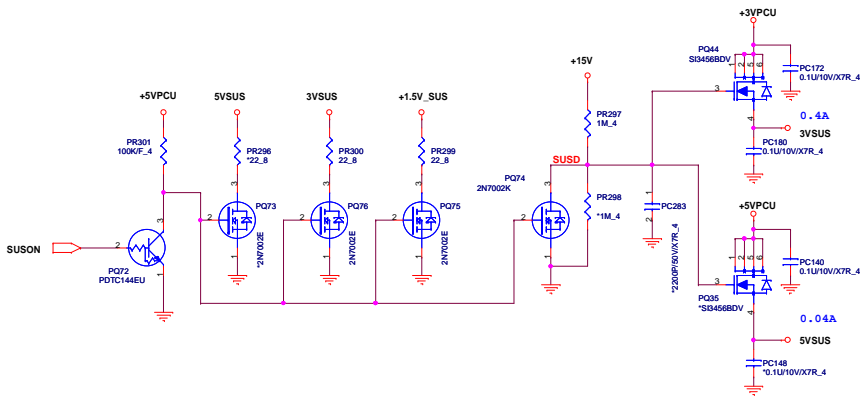
3V_S5, 5V_S5

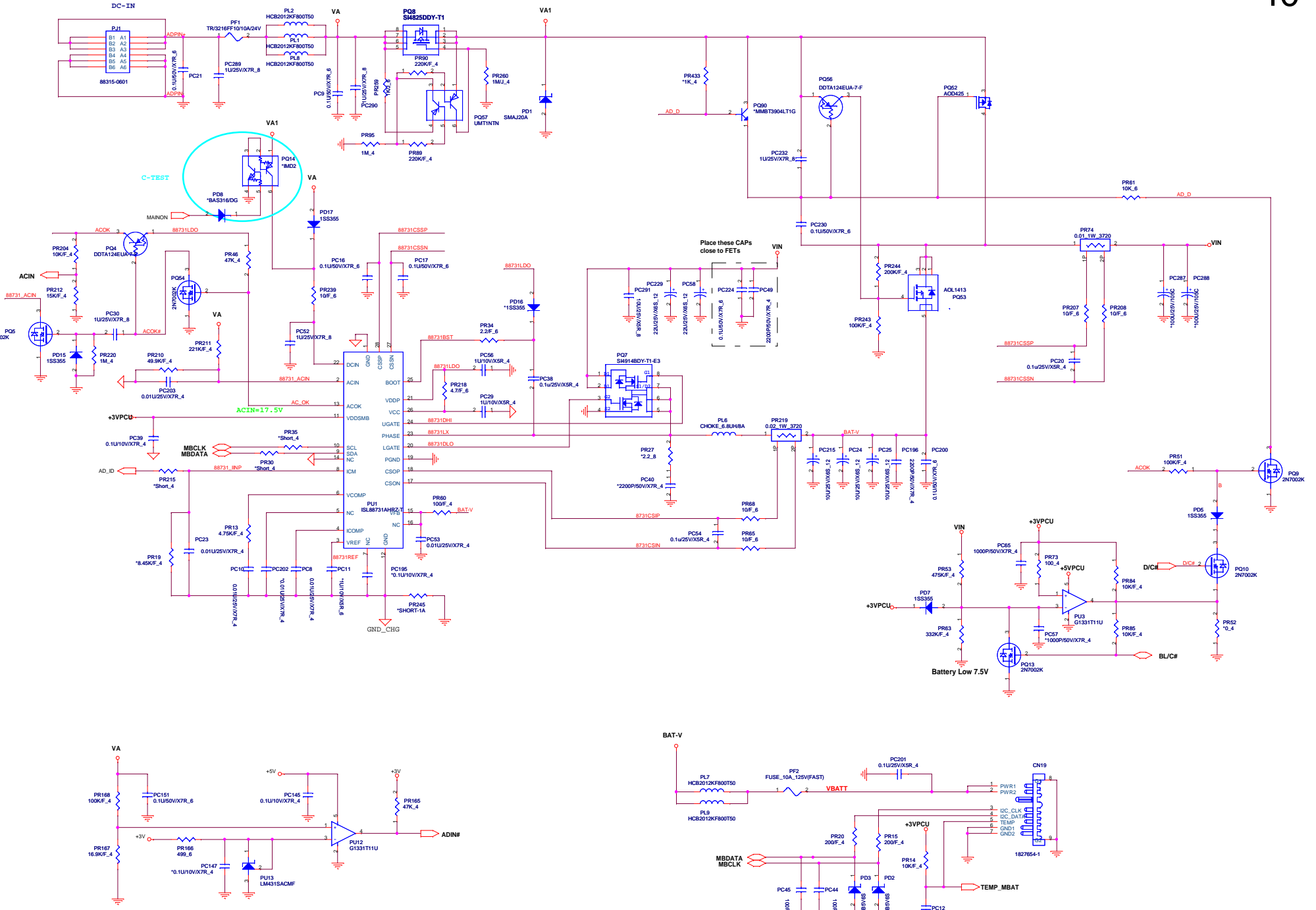


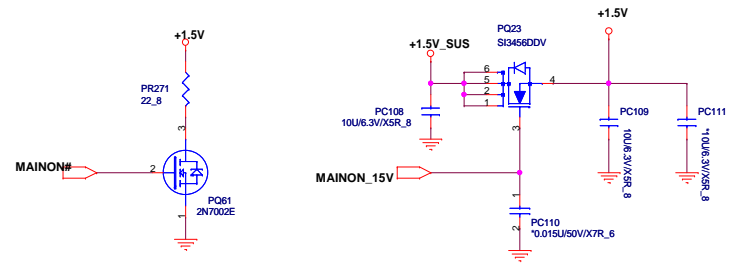
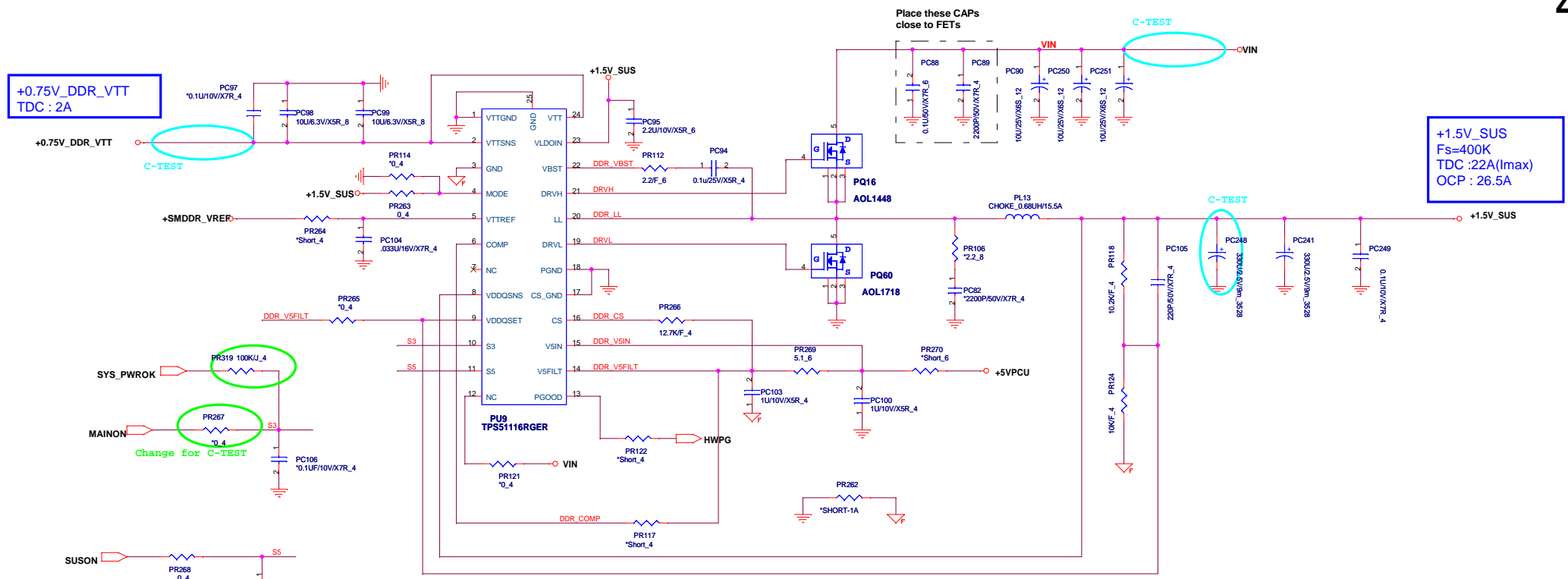
LANVCC

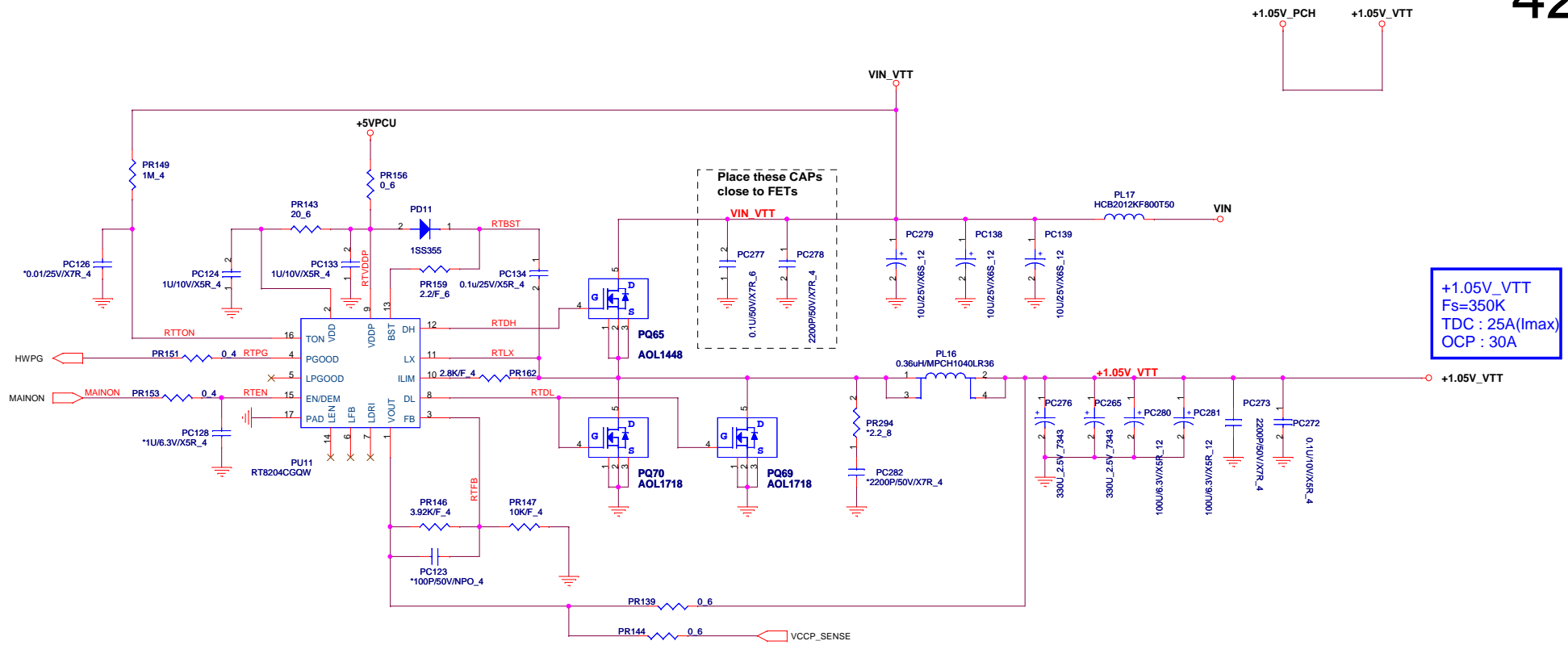


3VSUS, 5VSUS









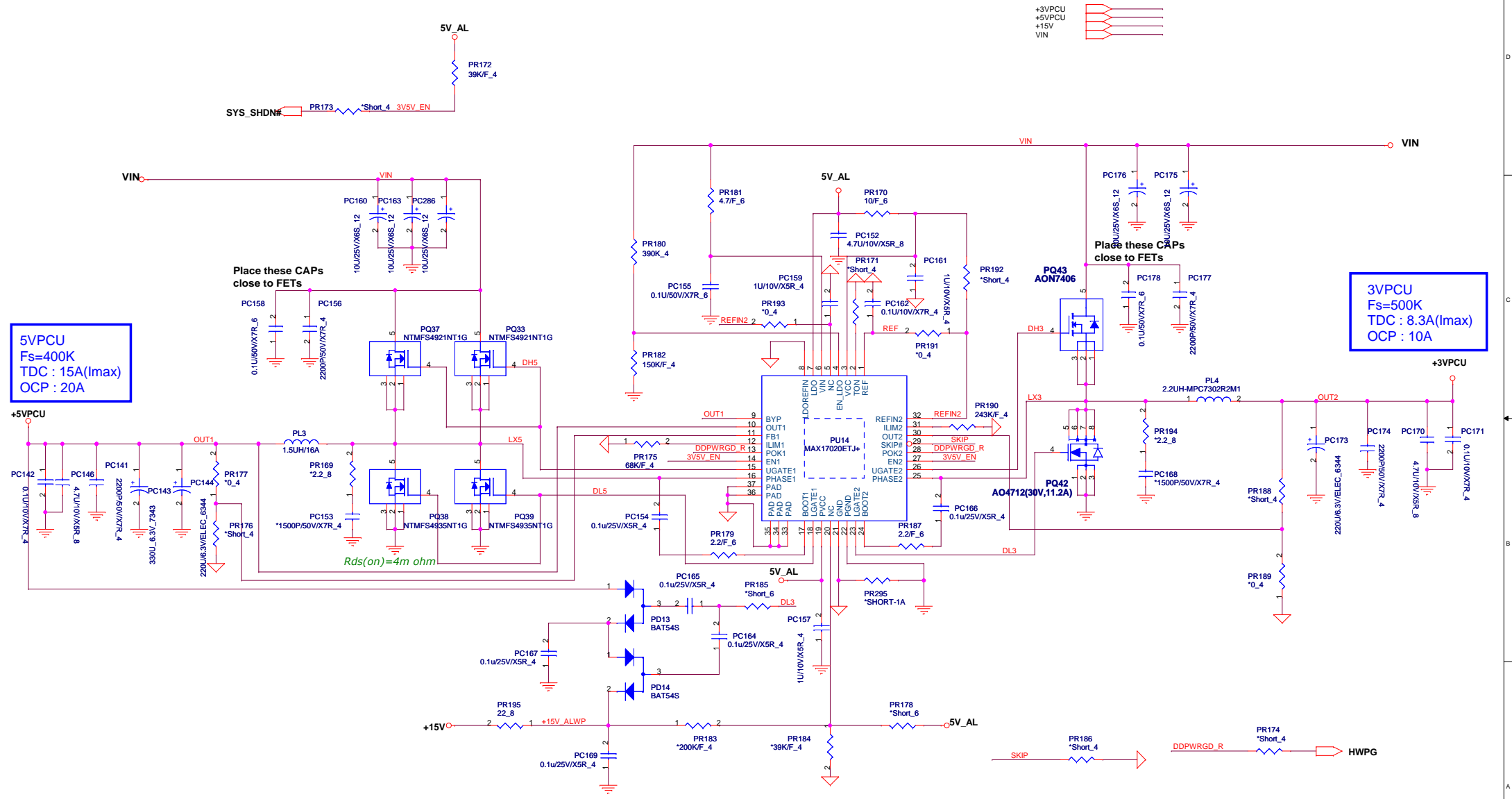
Place these CAPs close to FETs

+1.05V_VTT
 Fs=350K
 TDC : 25A(I_{max})
 OCP : 30A

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Quanta Computer Inc.

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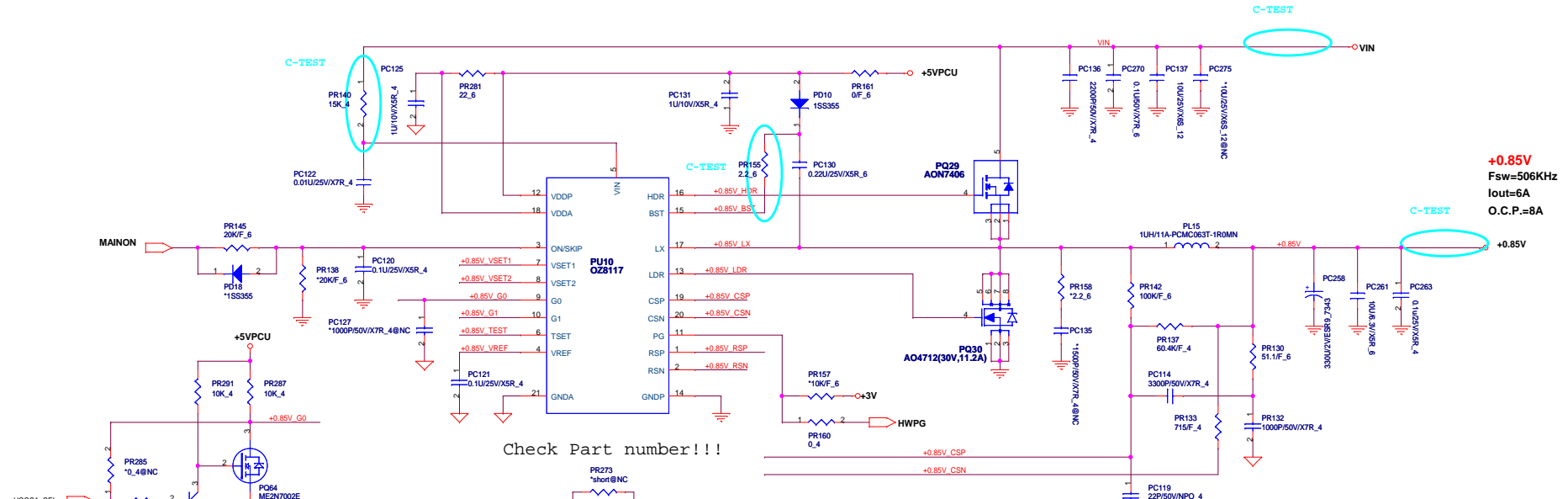
5VPCU
Fs=400K
TDC : 15A(Imax)
OCP : 20A

3VPCU
Fs=500K
TDC : 8.3A(Imax)
OCP : 10A

PROJECT KL3 NOTE Calpella DIS

Quanta Computer Inc.

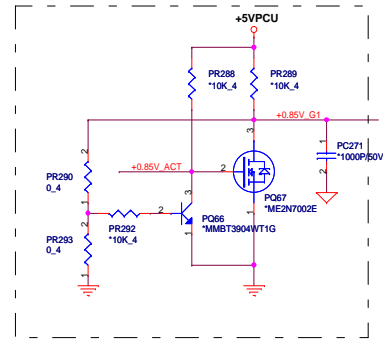
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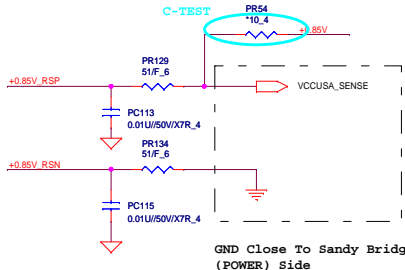
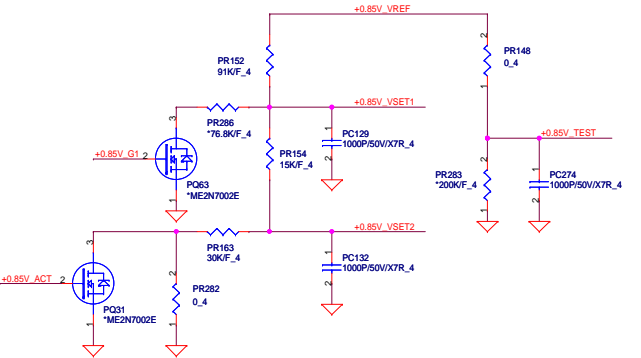
Check Part number!!!

+0.85V
Fsw=506KHz
Iout=6A
O.C.P.=8A

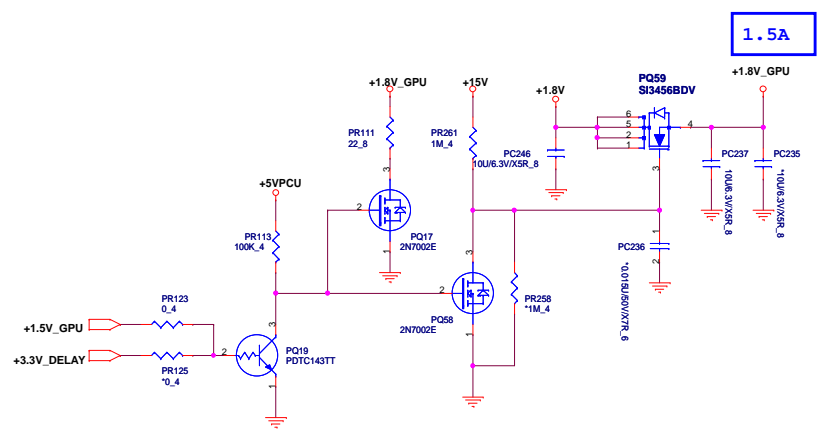
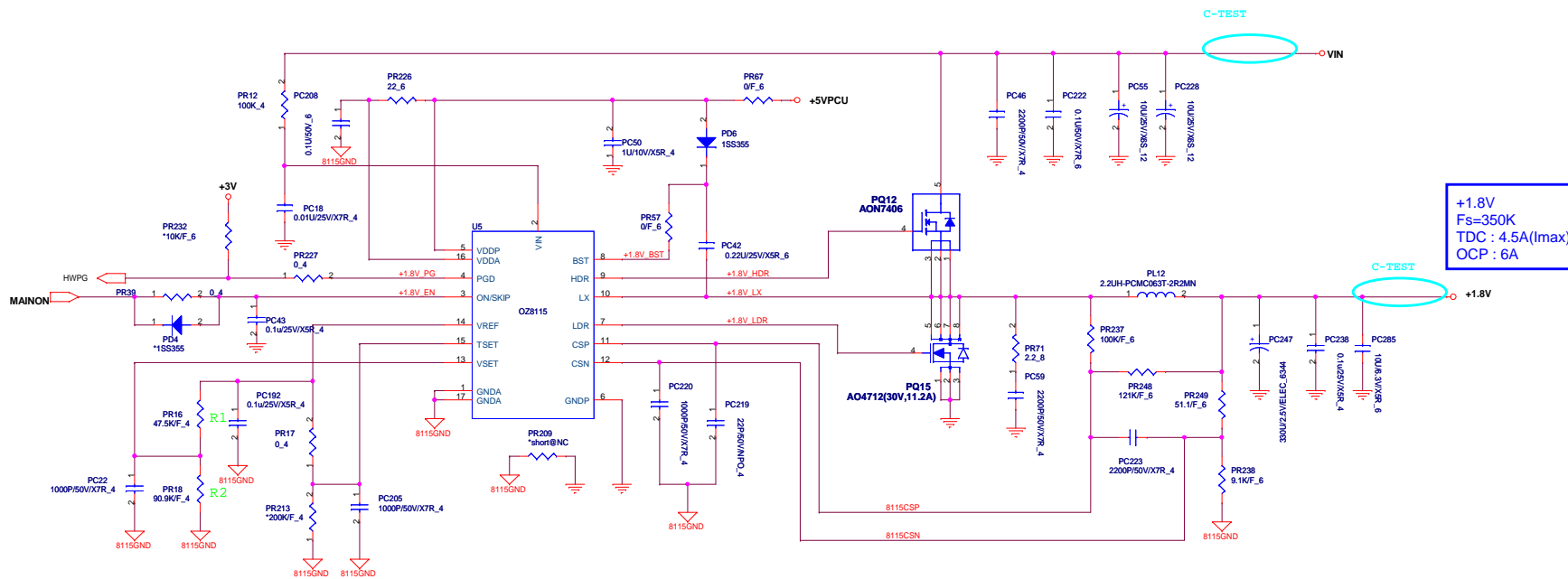
	VCCSA_SEL	VCCUA(+0.85V)	
	0	0.9V	
	0	1	0.8V

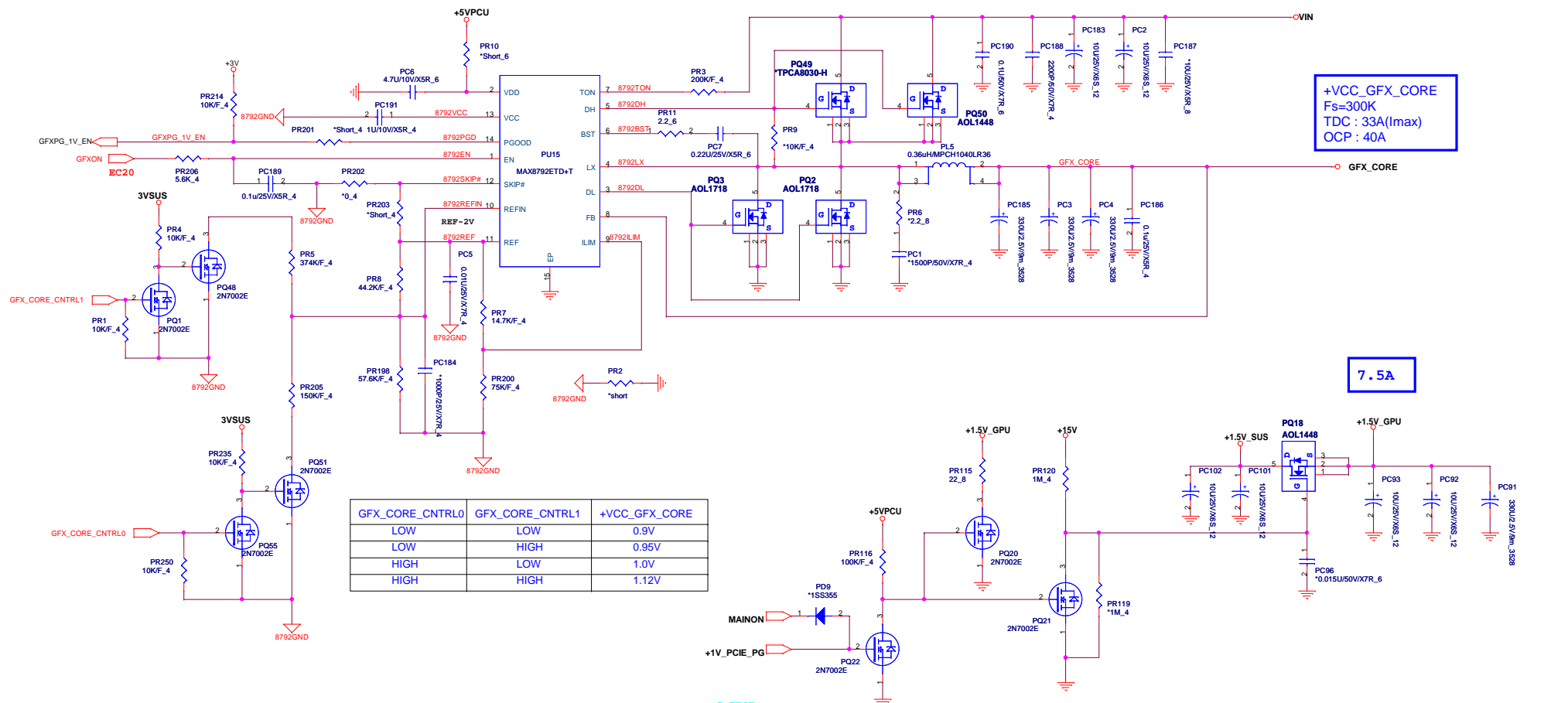


For Sandy Bridge And IV Bridge VID Select



GND Close To Sandy Bridge Processor (POWER) Side

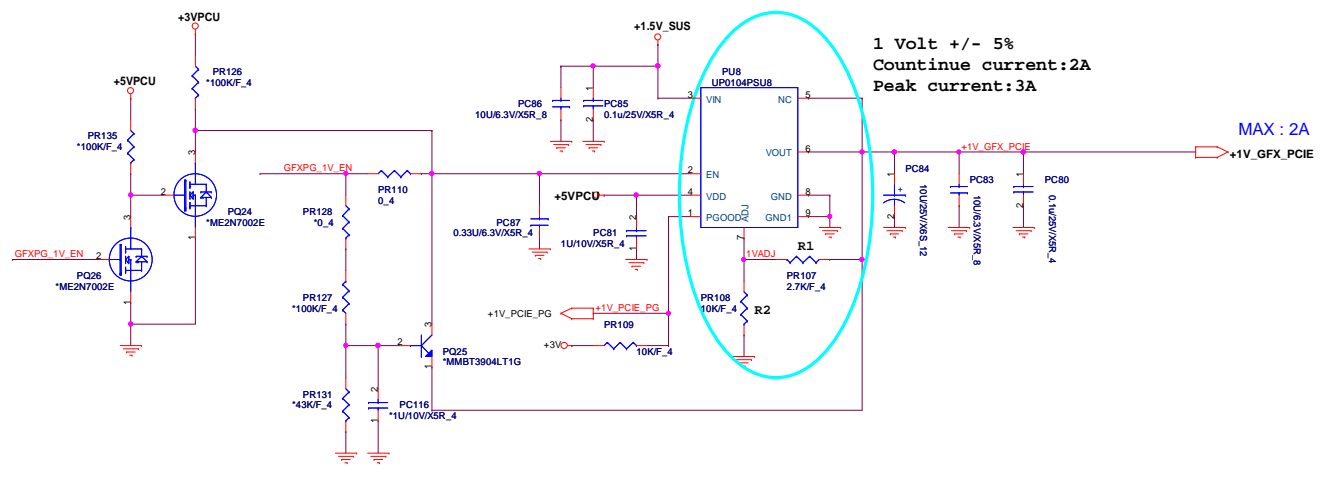




GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	+VCC_GFX_CORE
LOW	LOW	0.9V
LOW	HIGH	0.95V
HIGH	LOW	1.0V
HIGH	HIGH	1.12V

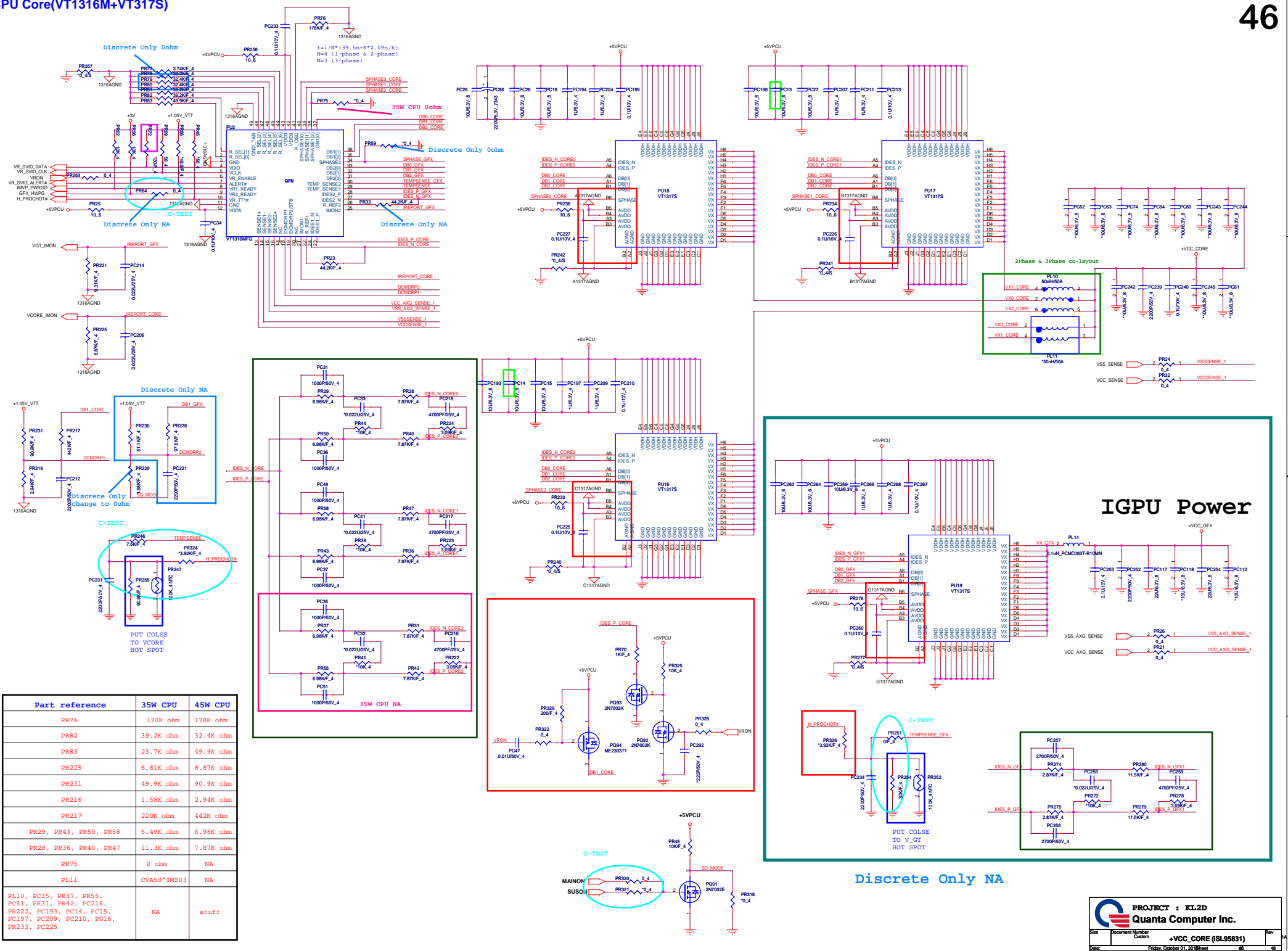
C-TEST

1 Volt +/- 5%
 Countinue current:2A
 Peak current:3A



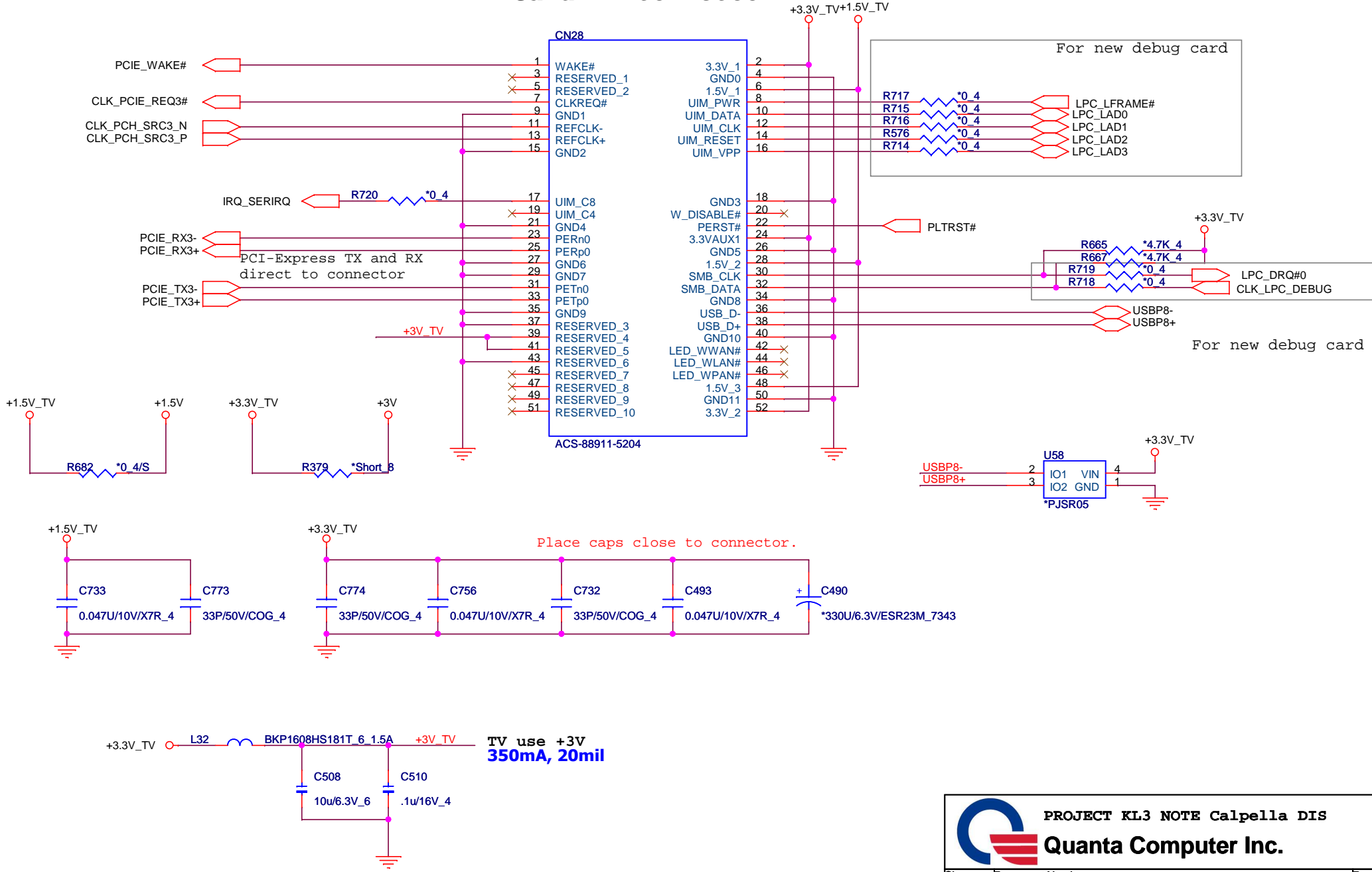
+VCC_GFX_CORE
 Fs=300K
 TDC : 33A(lmax)
 OCP : 40A

7.5 A



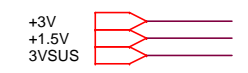
Part reference	35W CPU	45W CPU
PR76	130K ohm	178K ohm
PR82	39.2K ohm	32.4K ohm
PR83	23.7K ohm	49.9K ohm
PR225	6.81K ohm	8.87K ohm
PR231	49.9K ohm	90.9K ohm
PR216	1.58K ohm	2.94K ohm
PR217	220K ohm	442K ohm
PR29, PR43, PR50, PR58	6.49K ohm	6.98K ohm
PR28, PR36, PR40, PR47	11.3K ohm	7.87K ohm
PR75	0 ohm	NA
PL11	CVA50*0M203	NA
PL10, PC35, PR37, PR55, PC51, PR31, PR42, PC216, PR222, PC193, PC14, PC15, PC197, PC209, PC210, PU16, PR233, PC225	NA	stuff

MiniCard TV connector

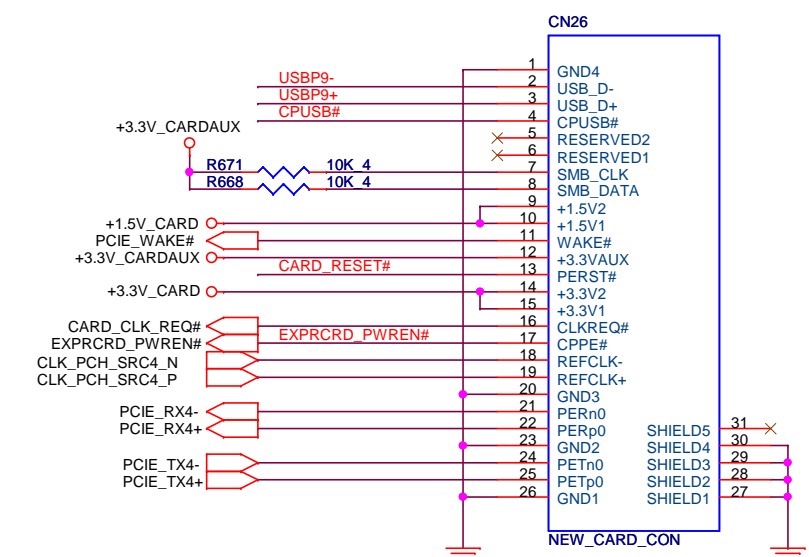
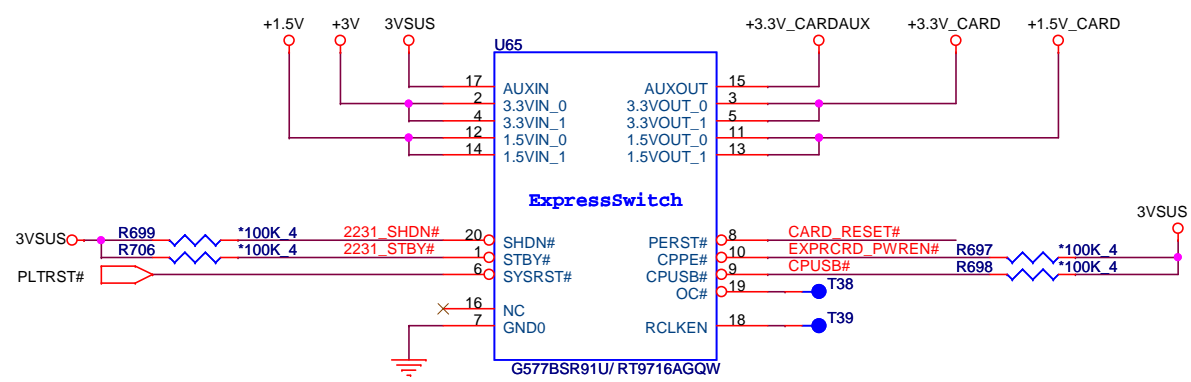
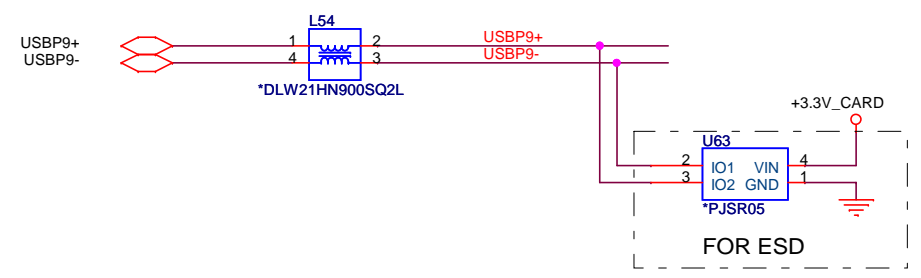


Express Card

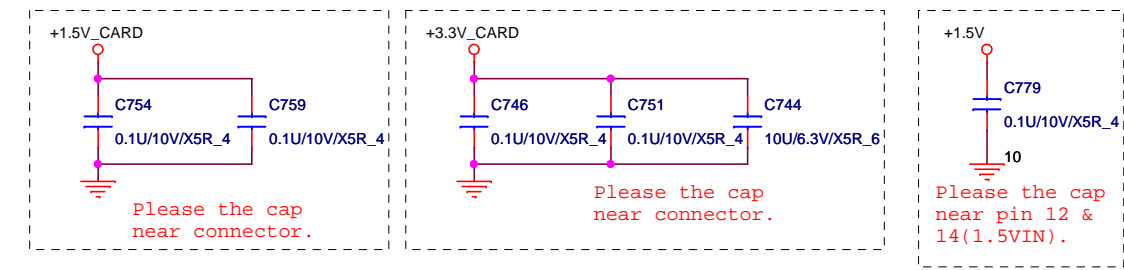
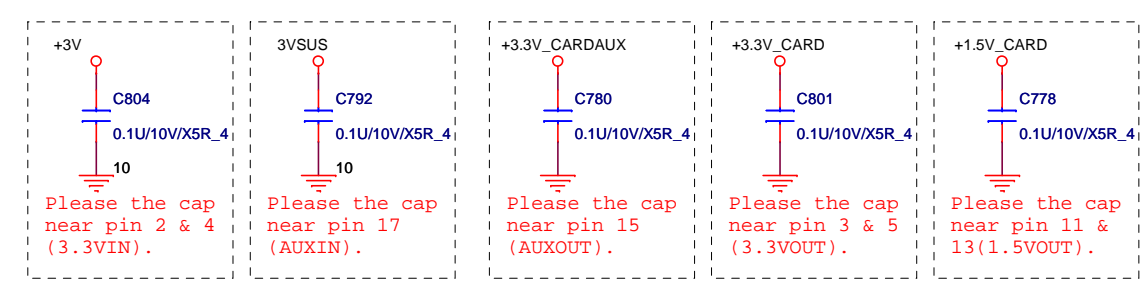
33



+1.5V_CARD Max. 650mA, Average 500mA.
 +3.3V_CARD Max. 1300mA, Average 1000mA.



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



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