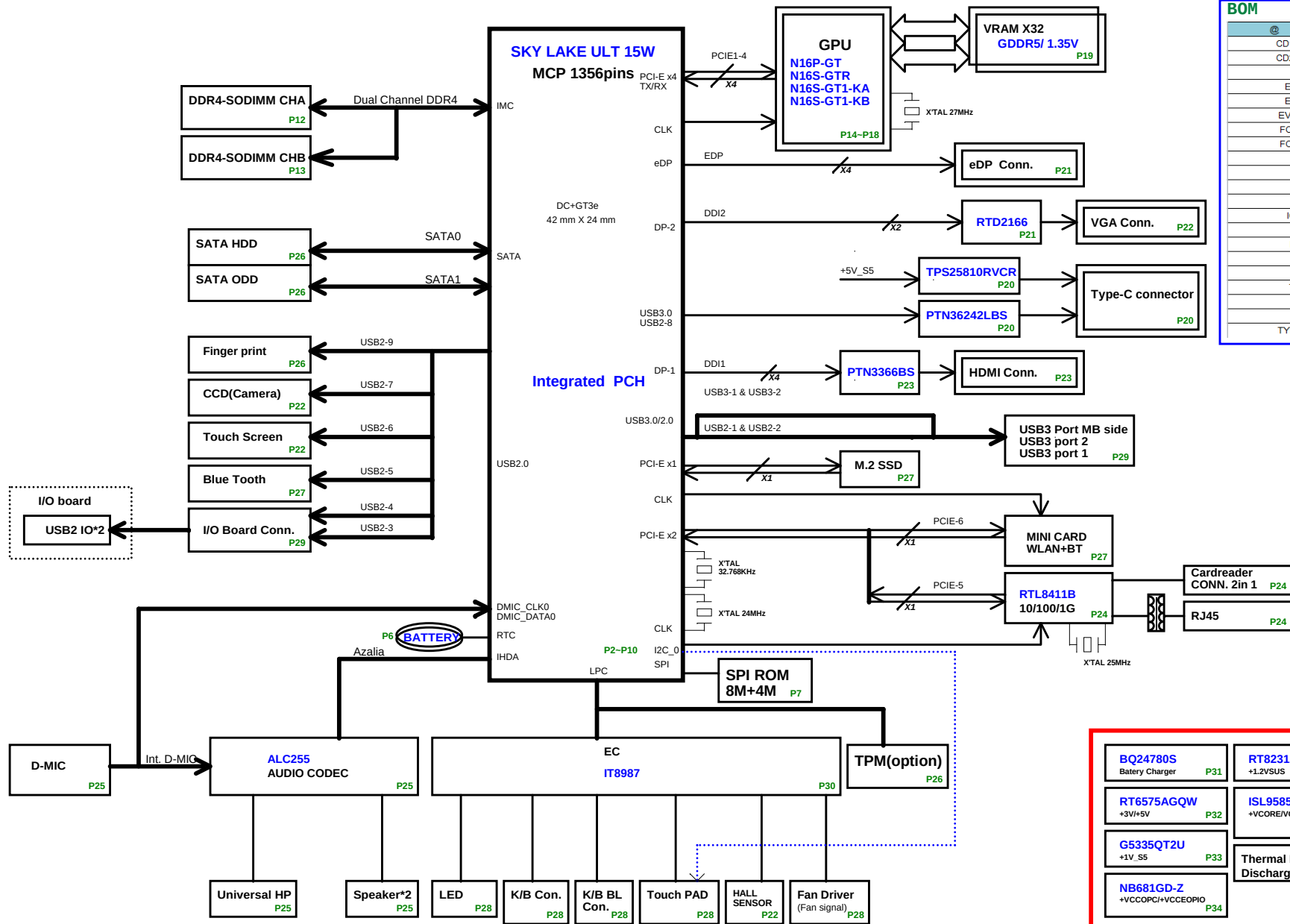


Laptopblue

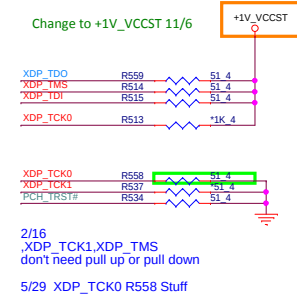
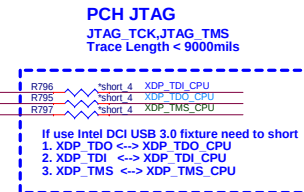
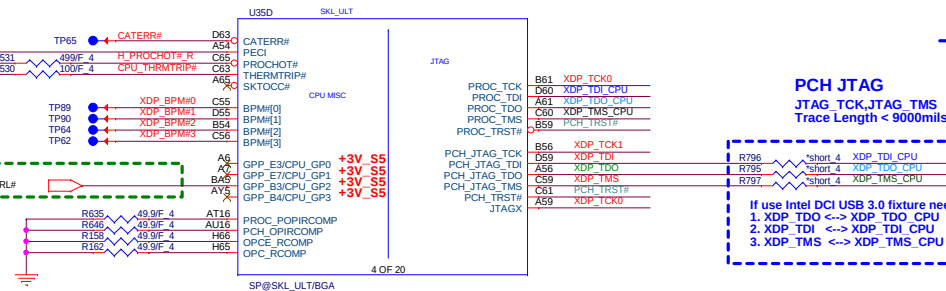
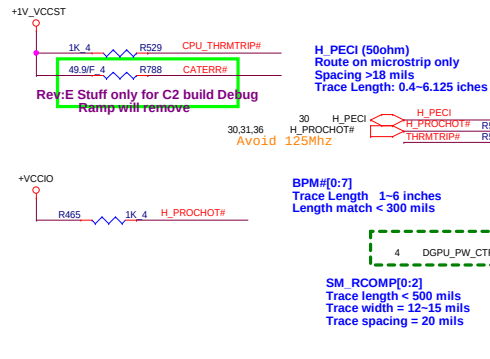
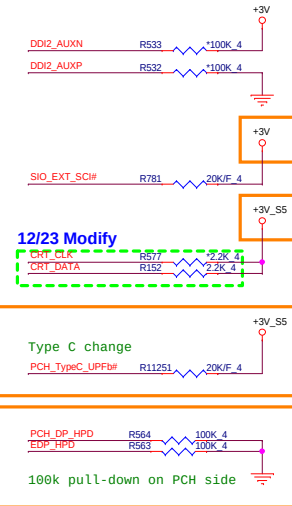
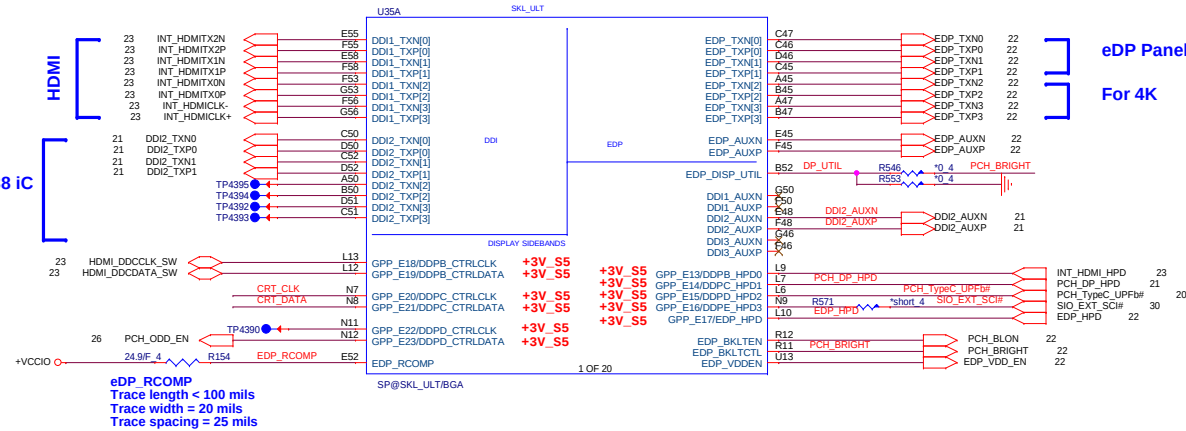
ZAAA Serials SkyLake-U SYSTEM BLOCK DIAGRAM



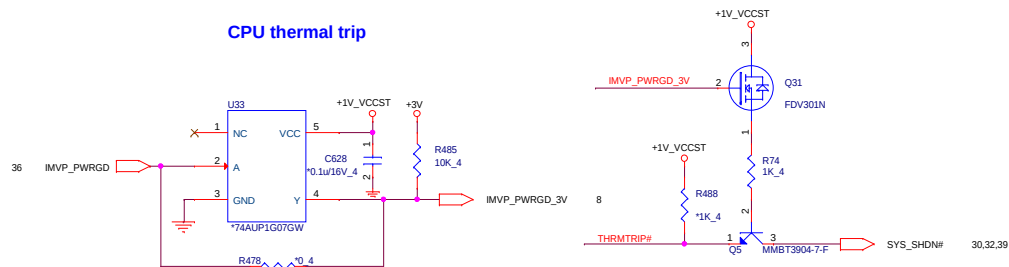
BOM	
Part	Function
CD1006@	22uF_0603 cost down to 10uF_0603
CD2208@	47uF_0805 cost down to 22uF_0805
EV@	Discrete
EV_A@	Discrete_940M_Kill B channel
EV_B@	Discrete_940M_Kill A channel
EV_SP@	Discrete_Special part
FOR15@	For 15"
FOR17@	For 17"
FPD@	Finger Print
GC6@	Discrete_GC6
GS@	G-sensor
GT3@	UMA_GT3
IOAC@	with IOAC
IV@	UMA
NAC@	w/o IOAC
SP@	Special Part
TDI@	Touchpad INT
TPM@	TPM
TSU@	Touch Screen USB
TSI@	Touch Screen I2C
TYPEC@	Type-C function

BQ24780S Battery Charger P31	RT8231BGQW +1.2VSUS P35	UP1658RQKF +VGPU_CORE P36
RT6575AGQW +3V/+5V P32	ISL95859HRTZ-T +VCORE/VCCSA/VCCGT P36	RT8068AZQW +1.05V_GFX P41
G5335QT2U +1V_S5 P33	Thermal Protection Discharger P39	G5335QT2U +1.35V_GFX P41
NB681GD-Z +VCCOPCI/VCCOEPIO P34		

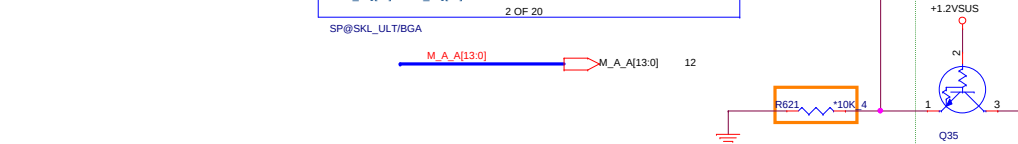
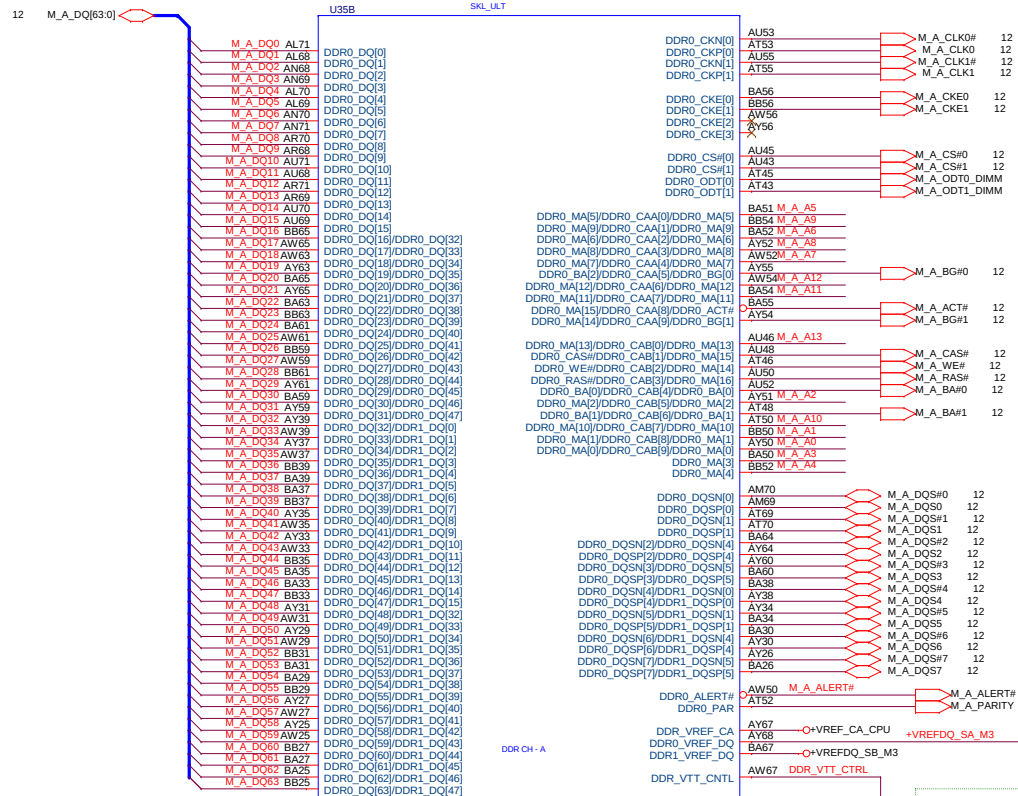
SkyLake ULT (DISPLAY, eDP)



CPU thermal trip

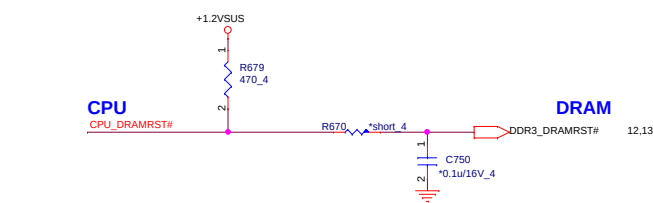
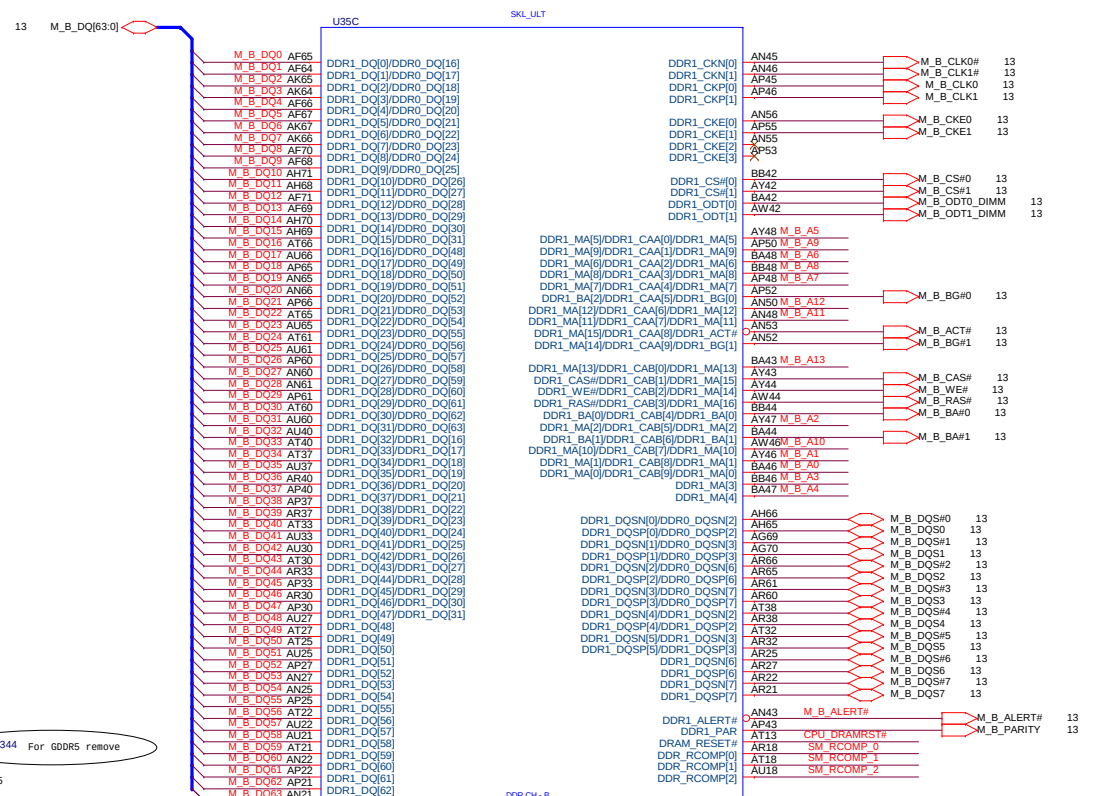


Change Data and DQS to interleave.

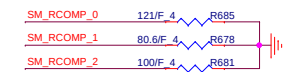
SKL ULT (DDR3L)

For Sx ,stuff Q? in DDR_VTT_CNTL

DRAMRST

**SKL ULT (DDR3L)**

DRAM COMP



Quanta Computer Inc.

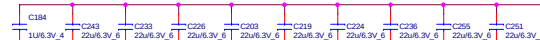
PROJECT : ZAA

ent Number
Skylake 2/3 (DDR3 I/F)

Size	Document Number	Rev
	Skylake 2/3 (DDR3 I/F)	1A
Date:	Monday, March 28, 2016	Sheet 3 of 48

Laptopblue

Backside cap



Backside cap



Backside cap



Backside cap



Backside cap



Backside cap

For 2+3e CPU



Backside cap

For 2+3e CPU



Backside cap

For 2+3e CPU



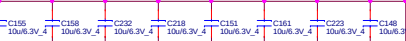
Backside cap

1.0V CPU 3A

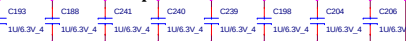


Backside cap

For 2+3e CPU



Backside cap



Backside cap



Backside cap



Backside cap



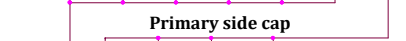
Backside cap



Backside cap



Backside cap



Backside cap



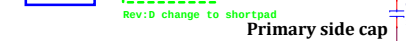
Backside cap



Backside cap



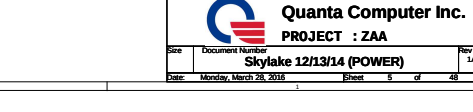
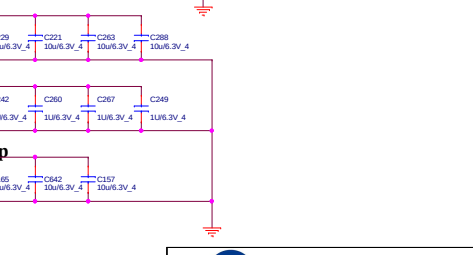
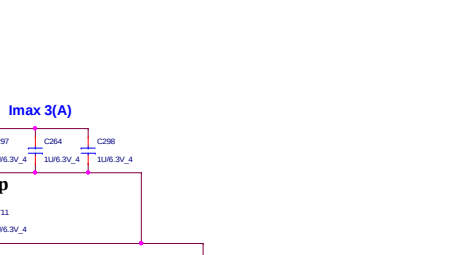
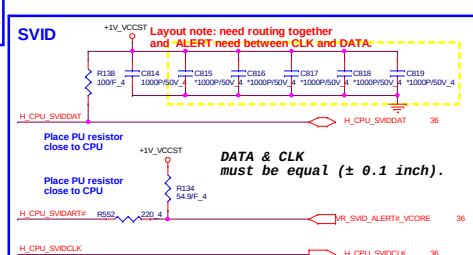
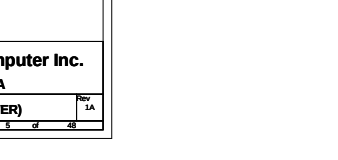
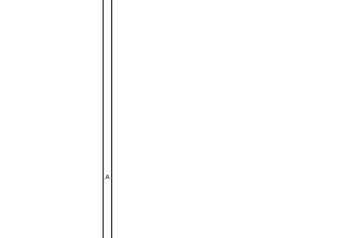
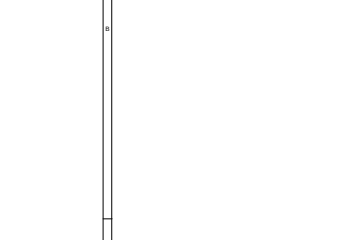
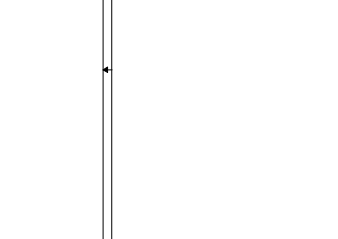
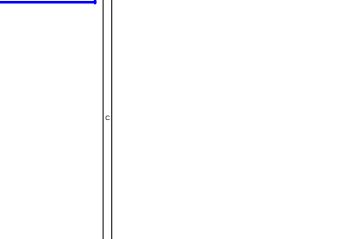
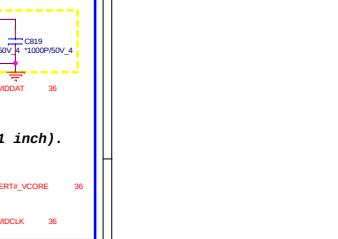
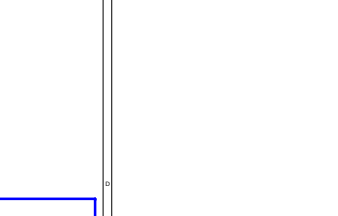
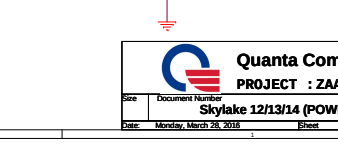
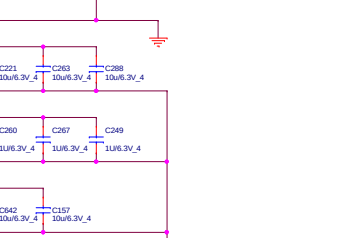
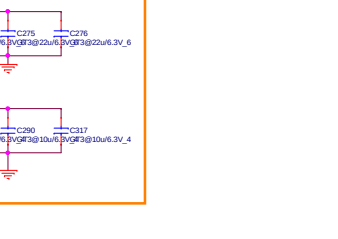
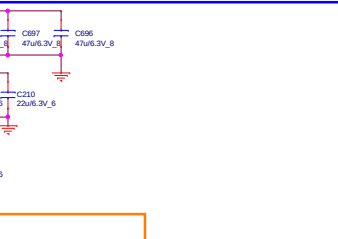
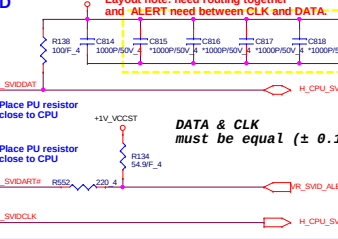
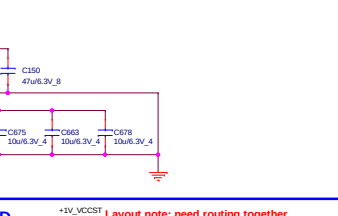
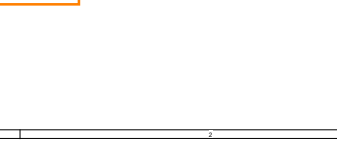
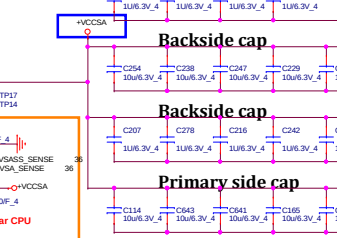
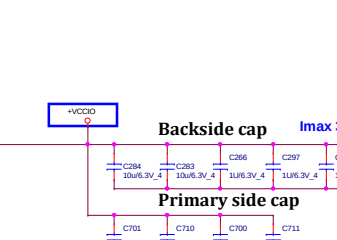
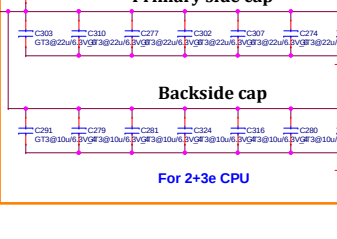
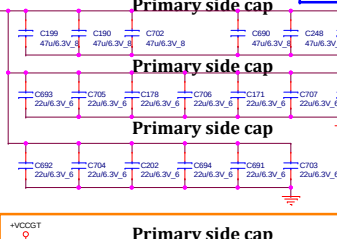
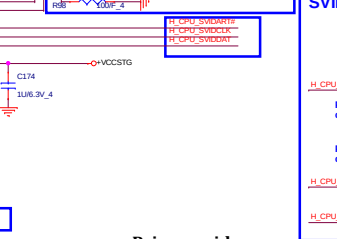
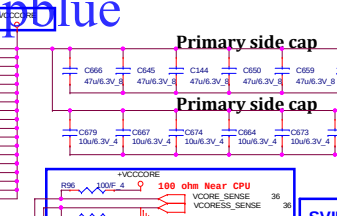
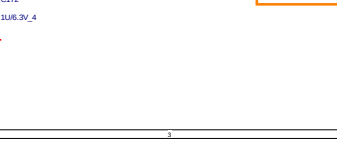
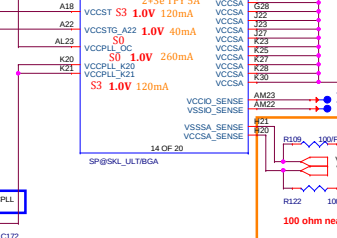
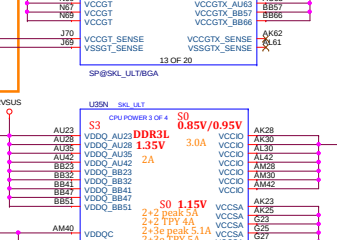
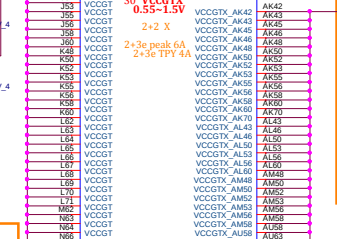
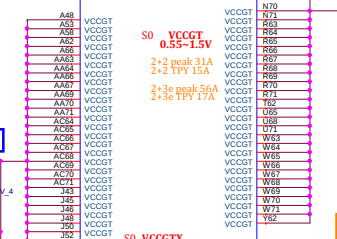
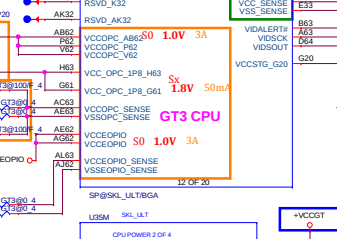
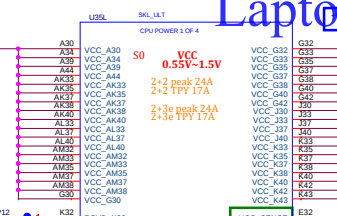
Backside cap



Backside cap



Backside cap



+3V	2,4,7,8,9,12,13,14,16,21,22,23,24,25,26,27,28,30,32,33,34,35,36,39,40,41
+3V_S5	2,3,4,7,8,9,11,20,24,26,27,28,30,32,34,35,40
+3VPCU	9,11,22,24,25,26,27,28,30,31,32,39,40,41
+3V_RTC	8,9,30
+1V_S5	9,33

dGPU PEG*4

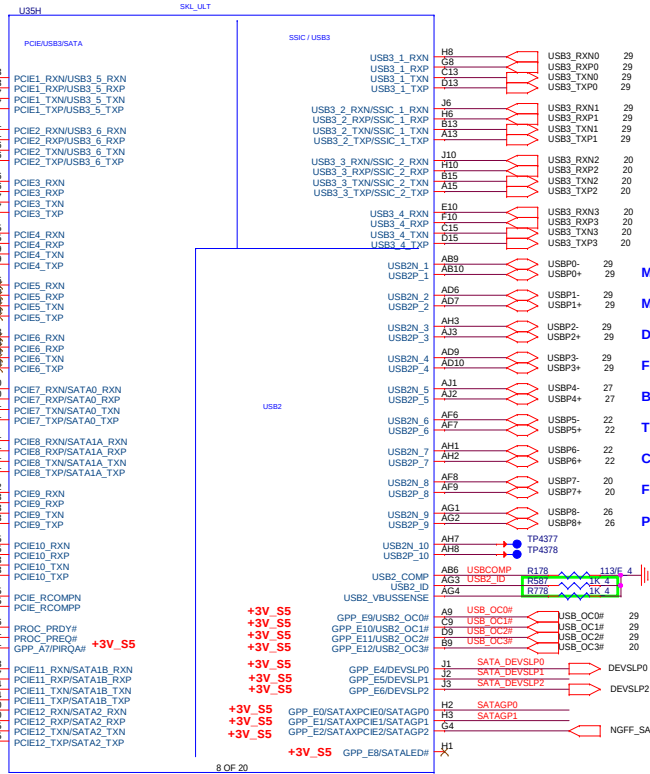
For Thunderbolt

LAN

WIFI

For M.2 SSD -NA

For M.2 SSD -1



MB USB3.0 (Charger IC)

MB USB3.0

For TYPE-C

MB USB3.0 (Charger IC)

MB USB3.0

DB USB2.0

For 17" DB use

BT

Touch Screen

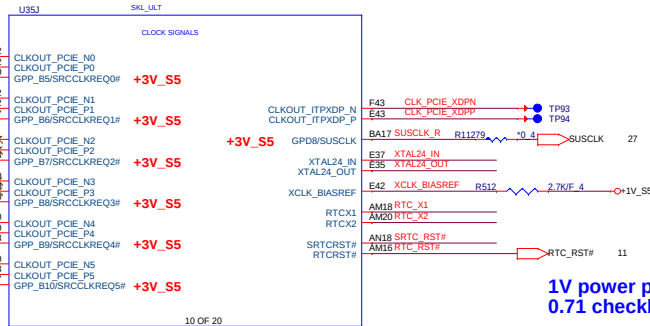
CCD

For TYPE-C

POA

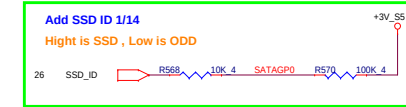
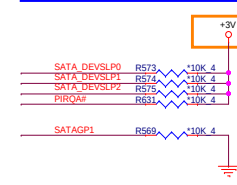
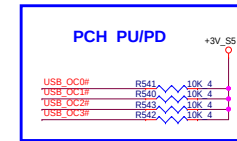
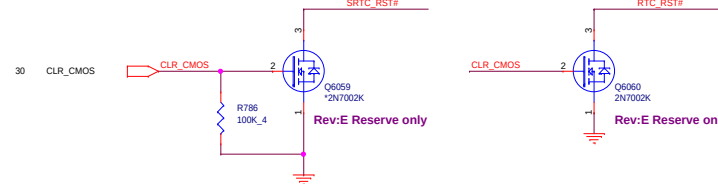
USBCOMP
Impedance = 50 ohm
Trace length < 500 mils
Trace spacing = 15 milsMB U3
MB U3
DB U2
TYPE C

SP@SKL_ULT1BGA

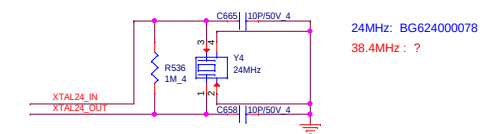


SP@SKL_ULT1BGA

Rev:D add for EC reset RTC

1V power plane
0.71 checklist p14

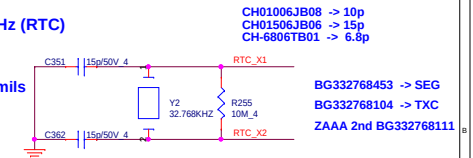
Skylake-U used 24 MHz (50 Ohm ESR) XTAL



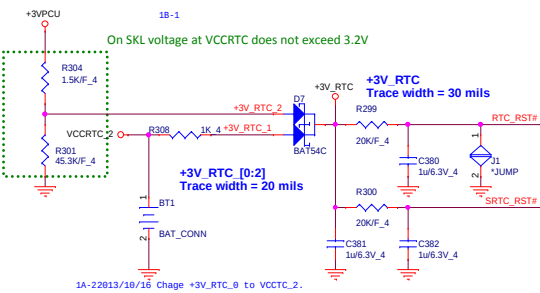
Note: Change Y4 to 38.4 MHz(ESR 30 ohm) for Cannonlake U

RTC Clock 32.768KHz (RTC)

Trace length < 1000 mils

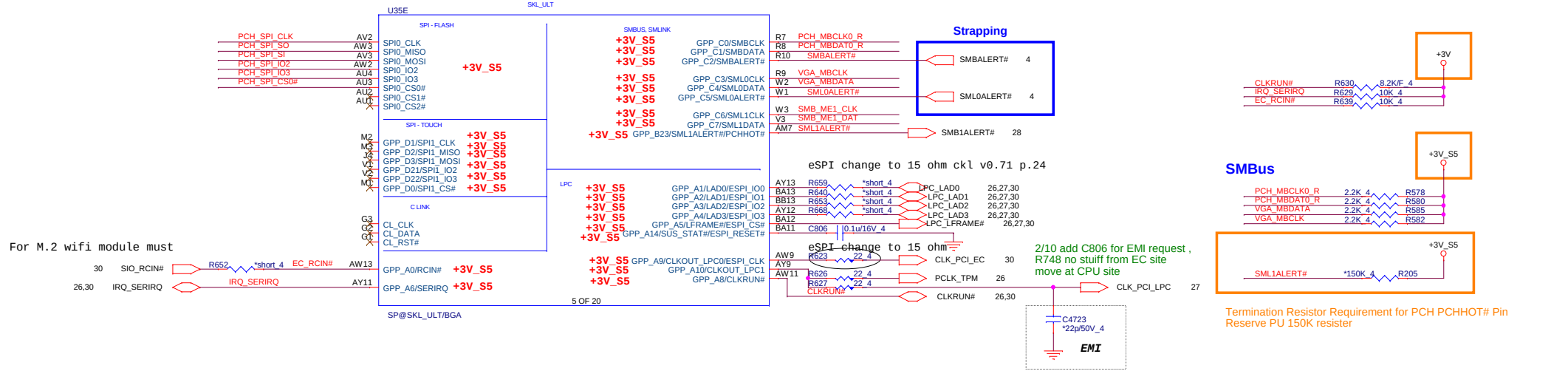


RTC Circuitry (RTC)



1. AHL03003057 DBV CR2032
2. AHL03003003 VDE CR2032

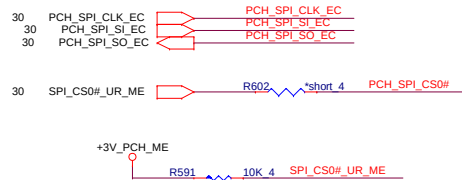
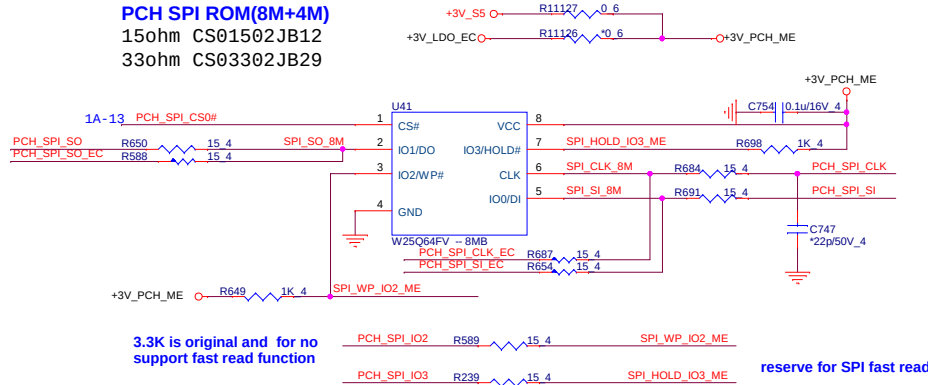
Laptopblue



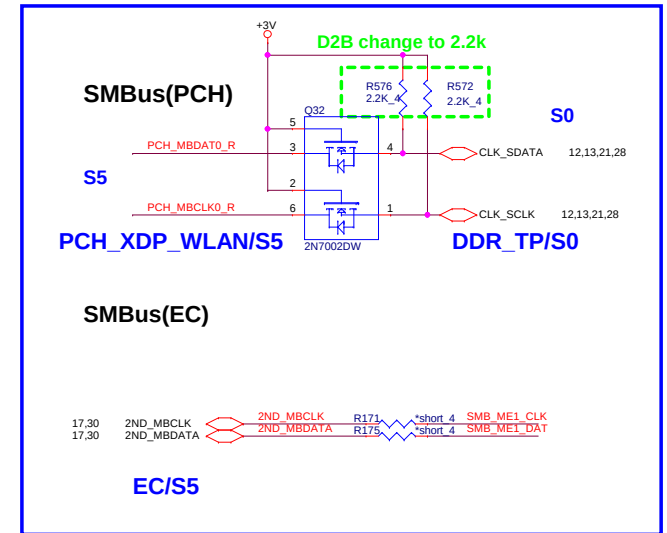
SP@ socket P/N: DFHS08FS023 only for A-TEST

SPI ROM	Vender	Size	Quanta P/N	Vender P/N
Skylake 3.3V	WND	8M	AKE3EFP0N07	W25Q64FVSSIQ
	GGD	8M	AKE2EZN0Q00	GD25B64CSIGR

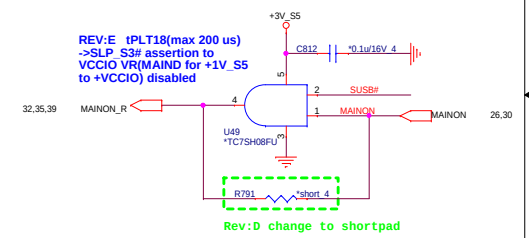
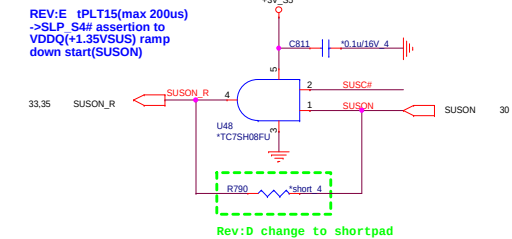
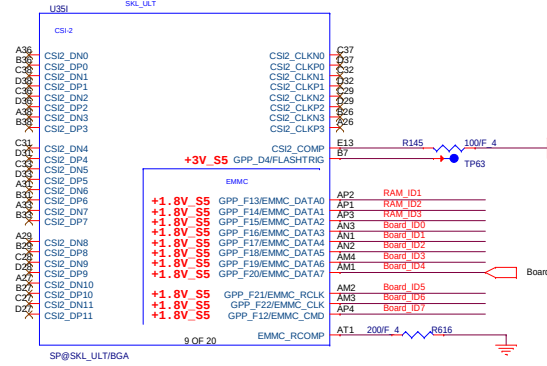
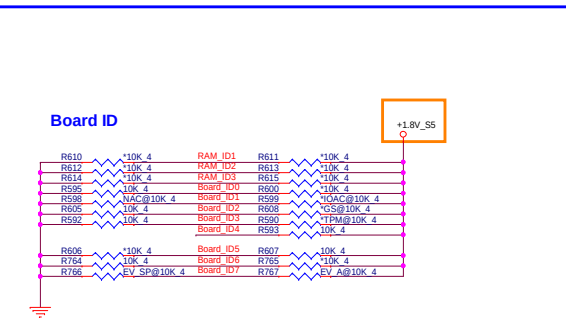
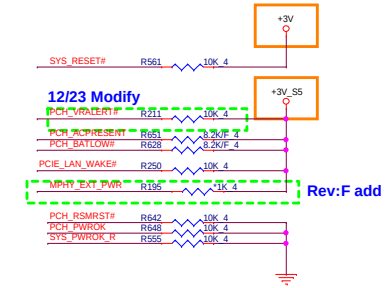
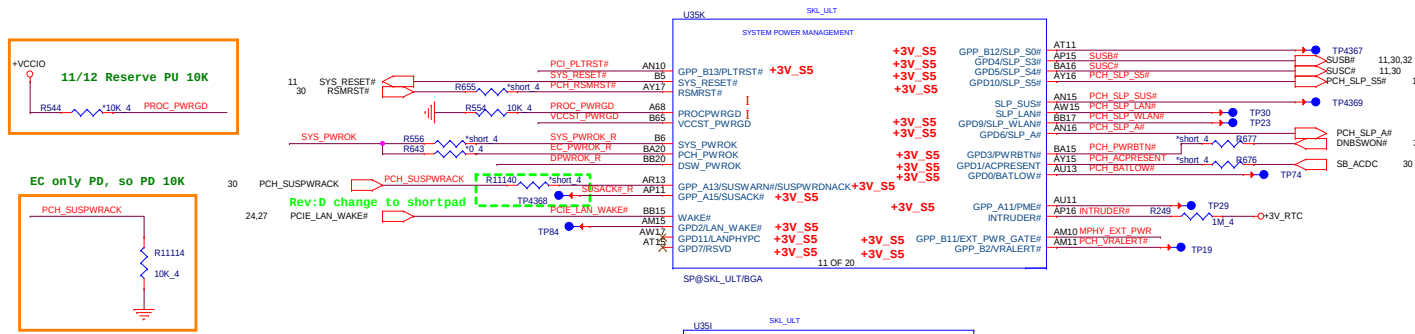
PCH SPI ROM(8M+4M)
15ohm CS01502JB12
33ohm CS03302JB29



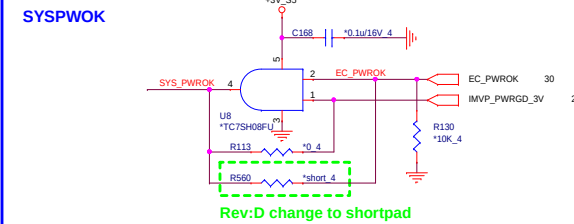
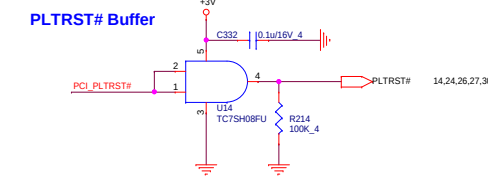
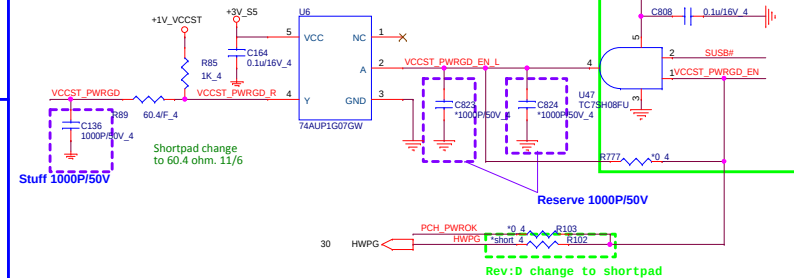
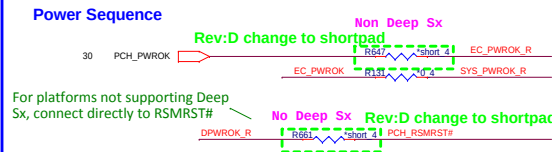
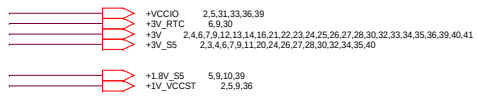
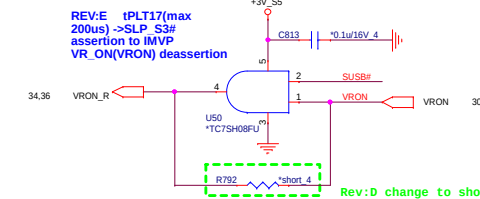
+3V 2,4,6,8,9,12,13,14,16,21,22,23,24,25,26,27,28,30,32,33,34,35,36,39,40,41
+3V_S5 2,3,4,6,8,9,11,20,24,26,27,28,30,32,34,35,40



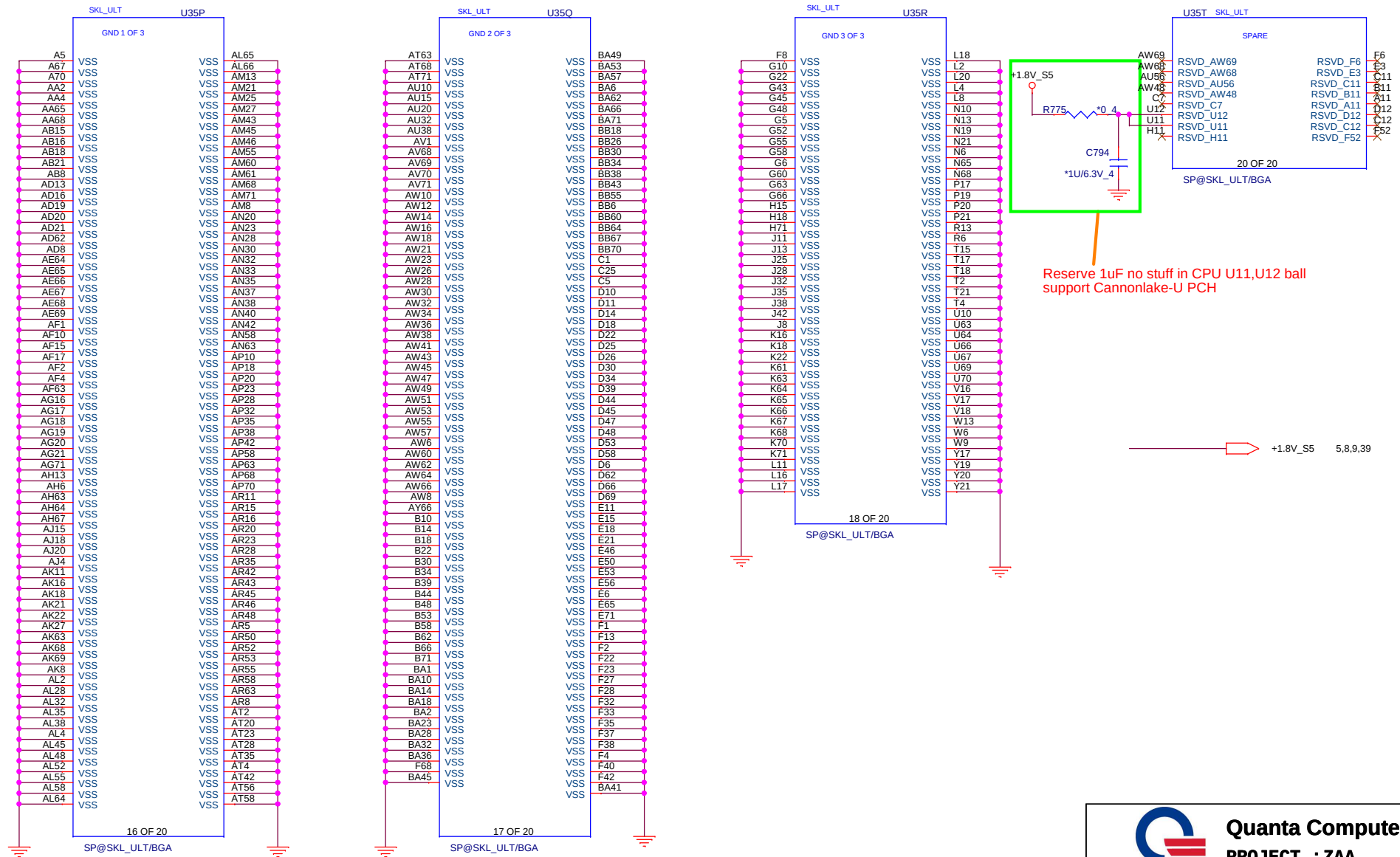
Laptopblue



	Low	High		Low	High	
BOARD_ID0	VRAM X32	VRAM X16	BOARD_ID5	For 14"	For 15" & 17"	
BOARD_ID1	Non IOAC	IOAC	BOARD_ID6	Reserved	Reserve	
BOARD_ID2	No G-sensor	G-sensor	BOARD_ID7	GPU--> KA	GPU--> KB GPU--> GTR GPU--> 950M	
BOARD_ID3	No TPM	TPM				
BOARD_ID4	No touch panel	touch panel				

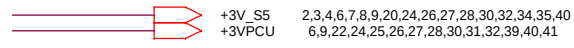
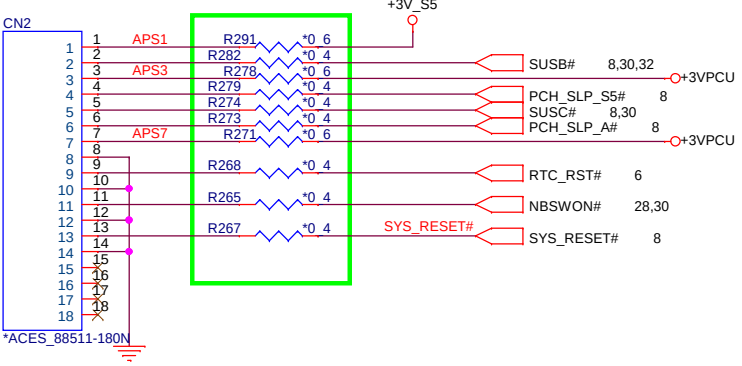


SkyLake ULT (GND)

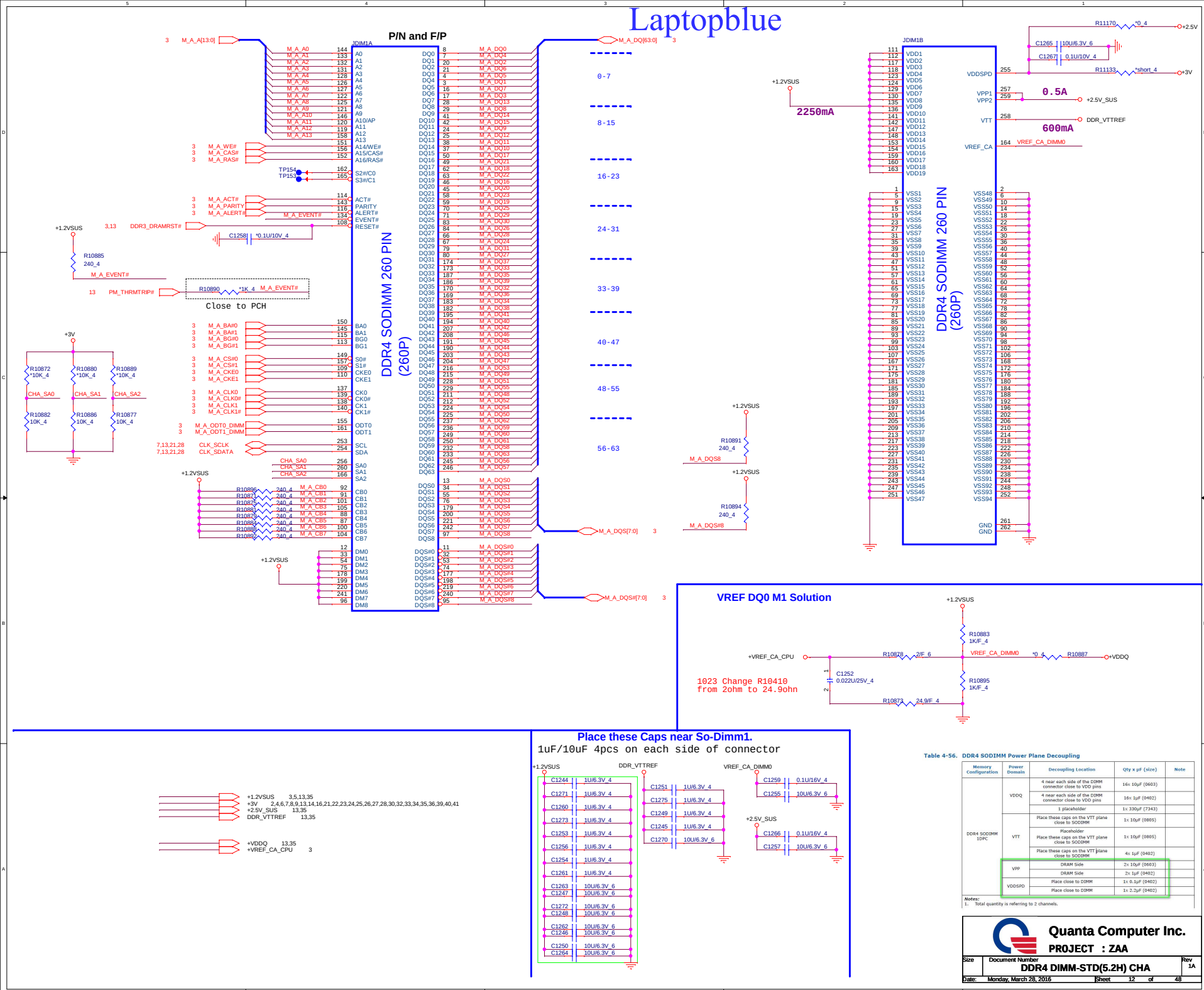




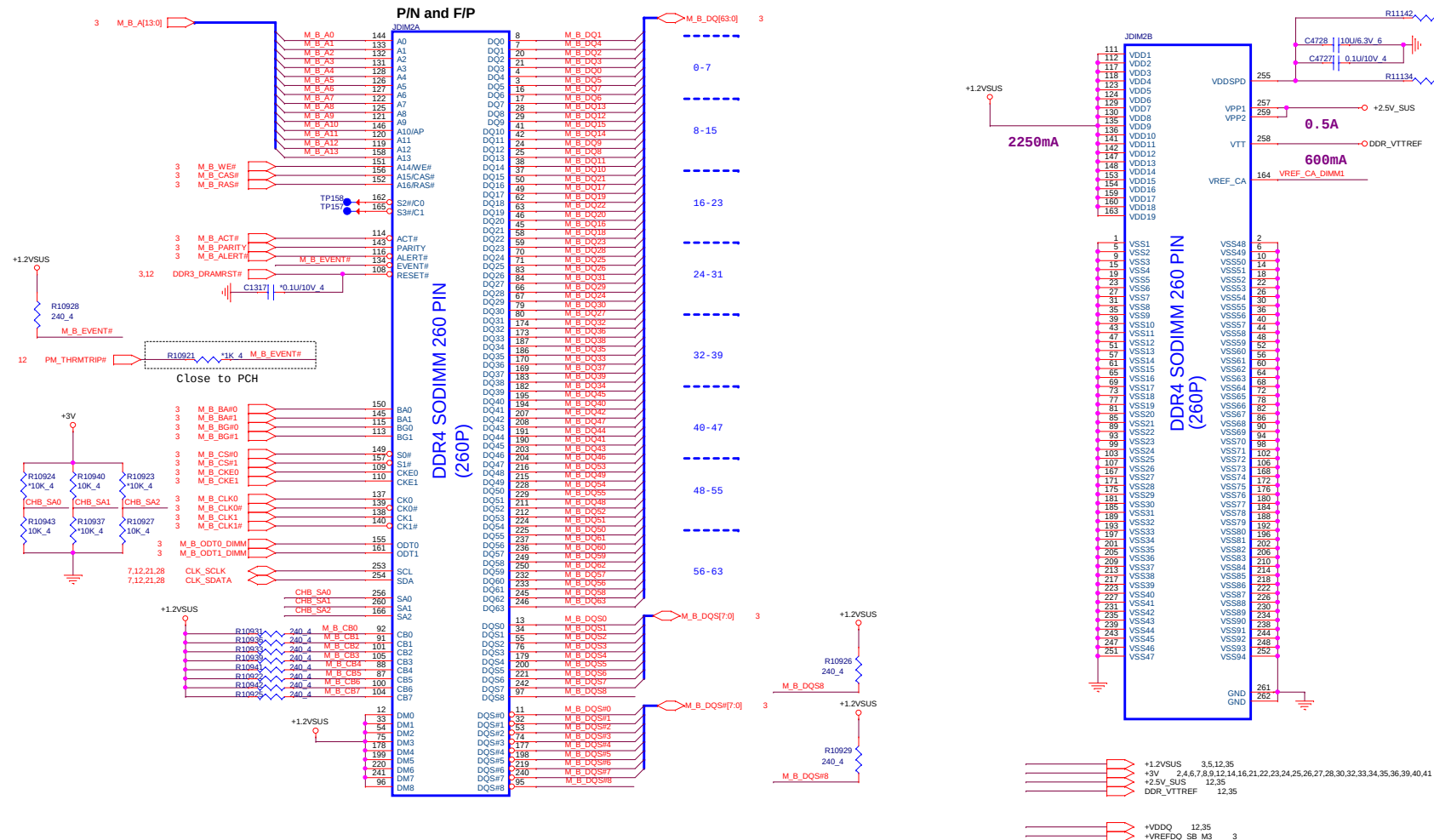
Intel APS Fixture use



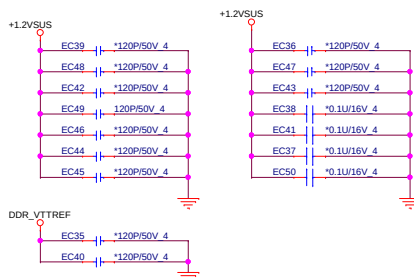
Laptopblue



Laptopblue

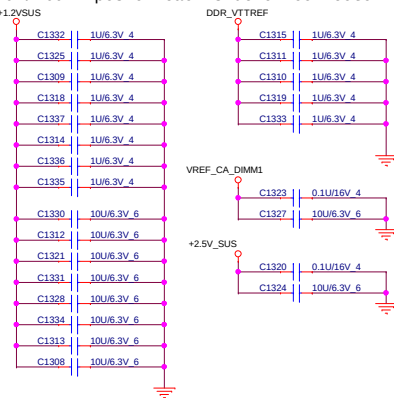


For EMI RESERVE

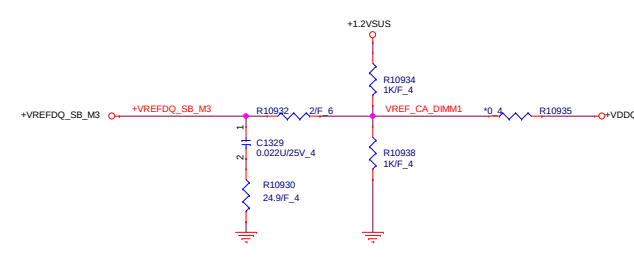


Place these Caps near So-Dimm0.

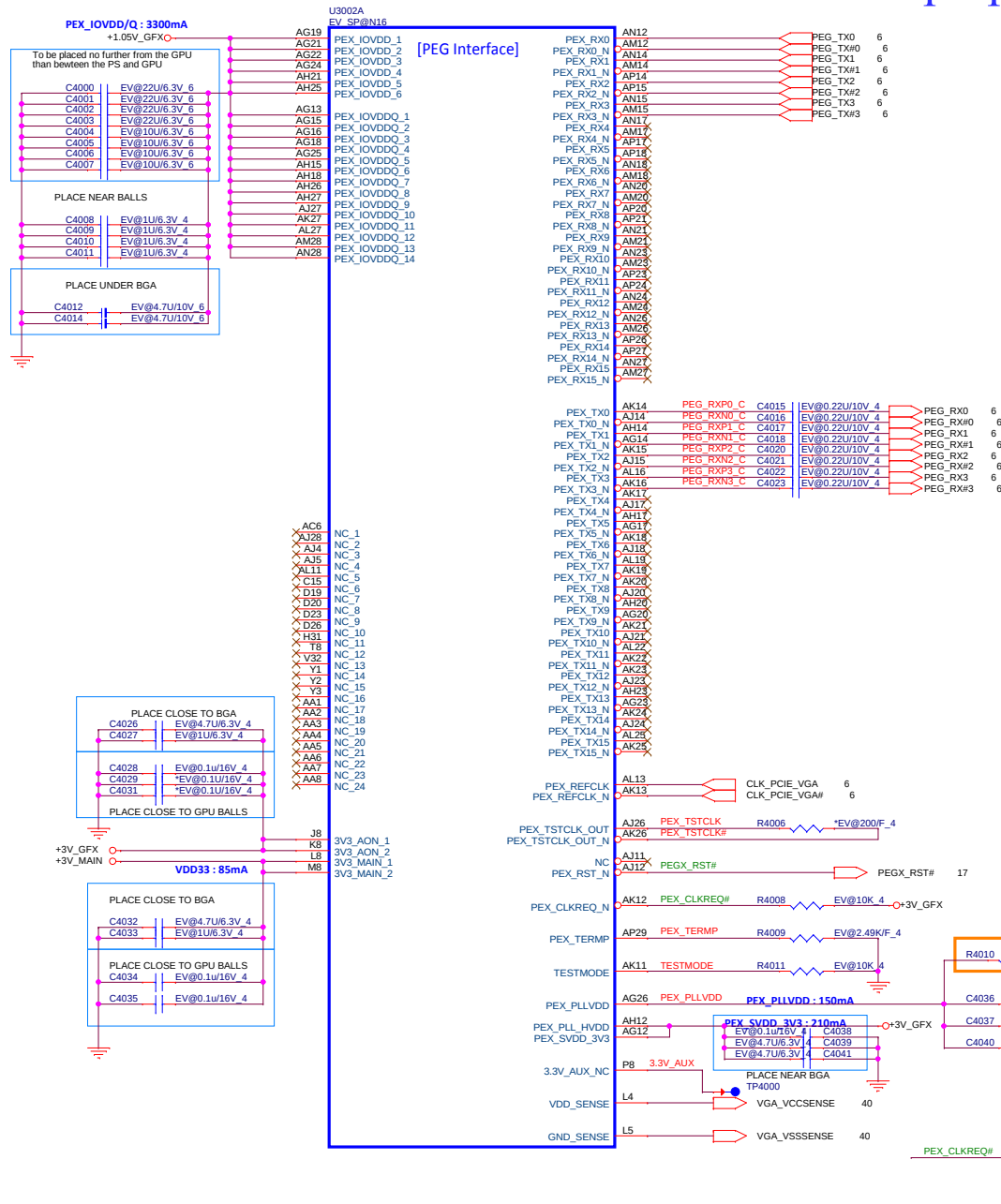
1uF/10uF 4pcs on each side of connector



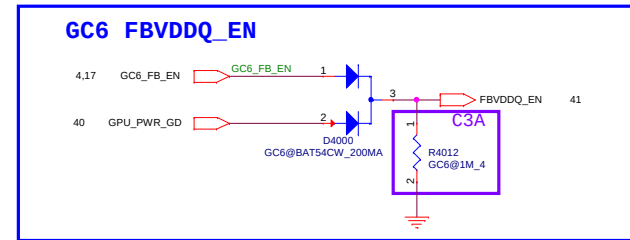
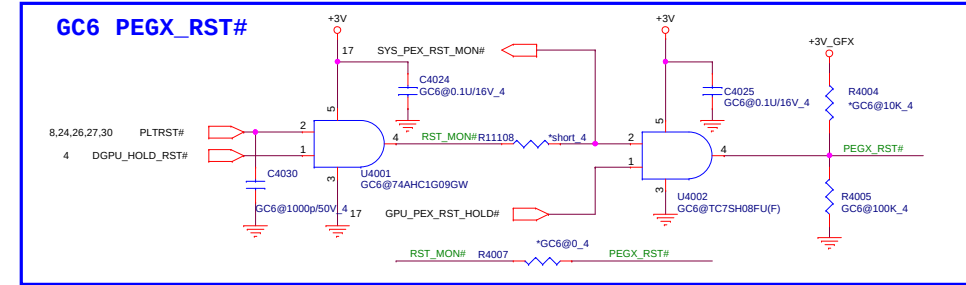
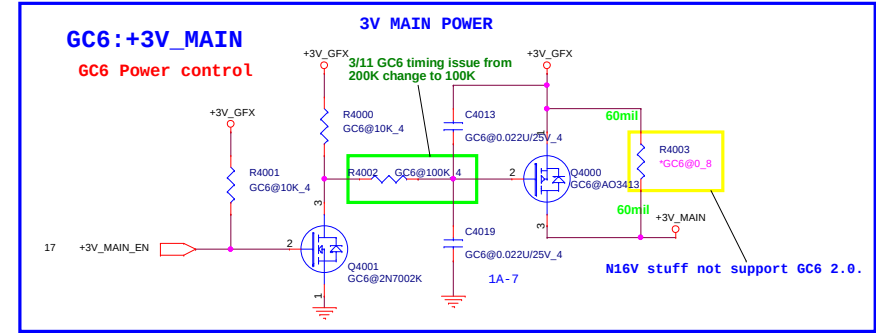
VREF DQ1 M1 Solution



Laptopblue

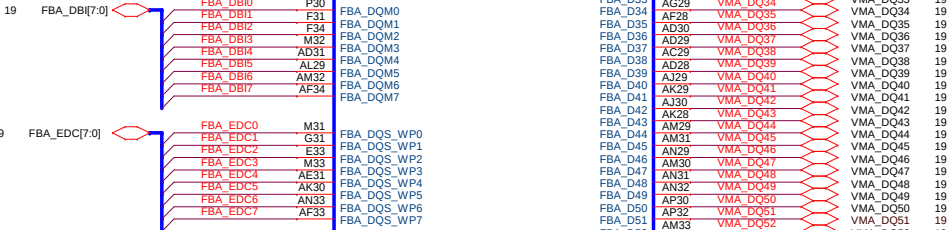
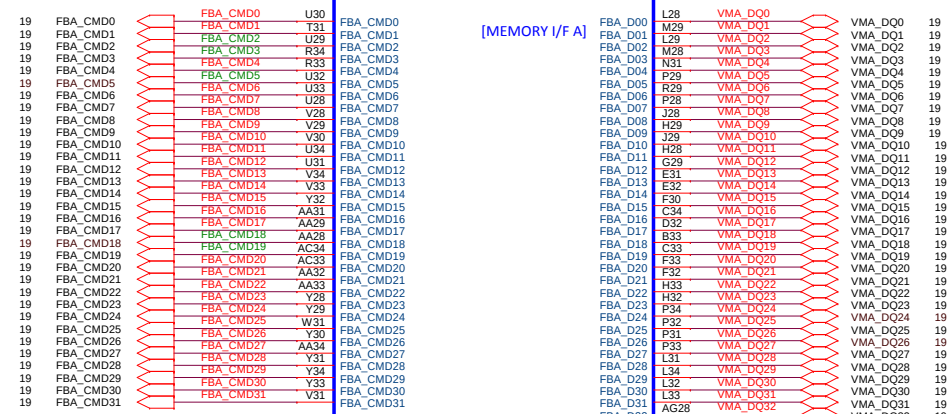


+1.05V_GFX 15,16,41
+3V_GFX 16,17,30,41
+3V_MAIN 15,16,17
+3V 2,4,6,7,8,9,12,13,16,21,22,23,24,25,26,27,28,30,32,33,34,35,36,39,40,41

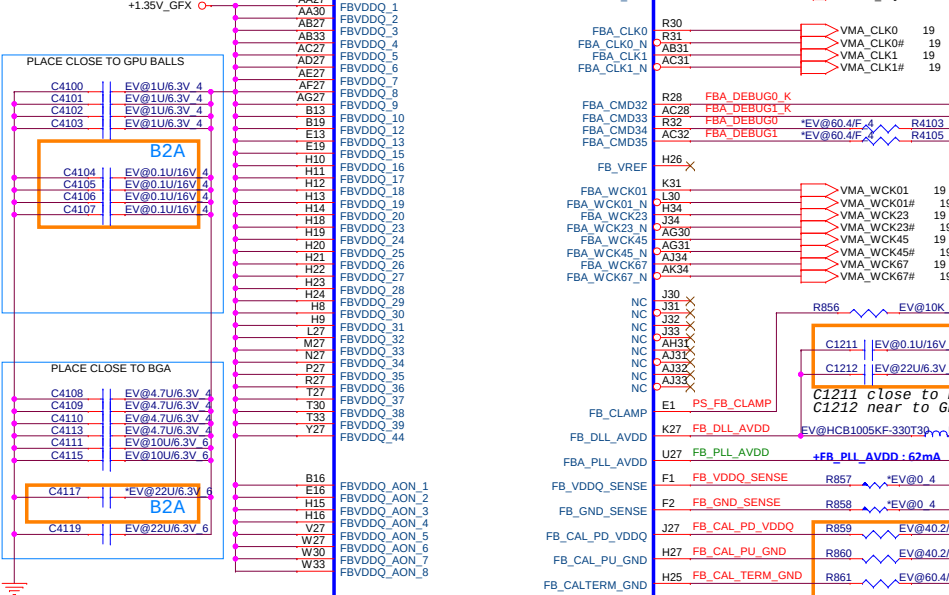


Laptopblue

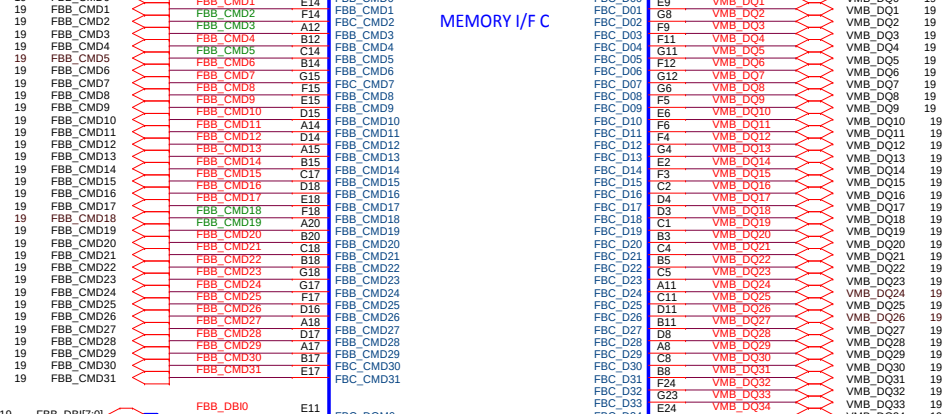
U3002B
EV_SP@N16



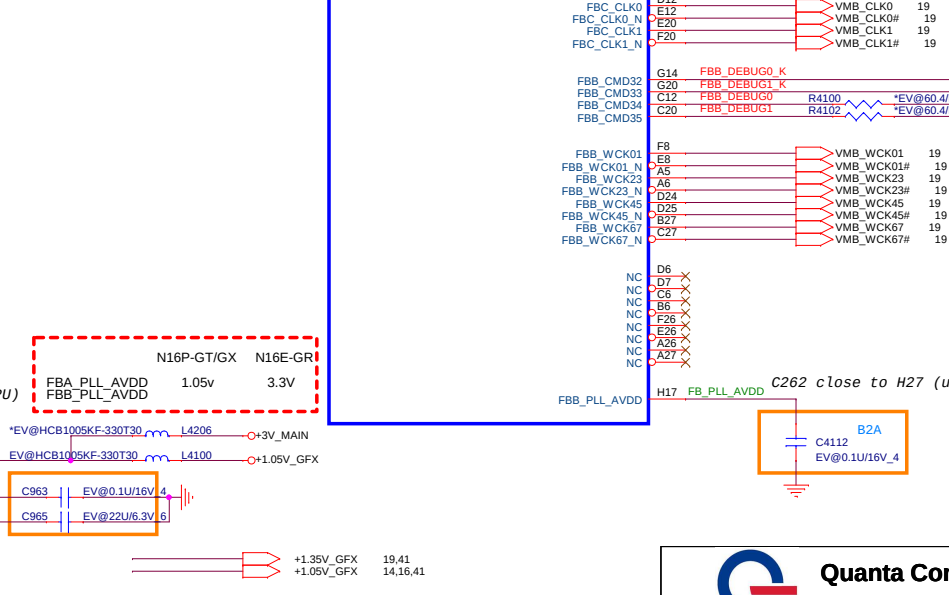
GDDR5 NO USE



U3002C
EV_SP@N16

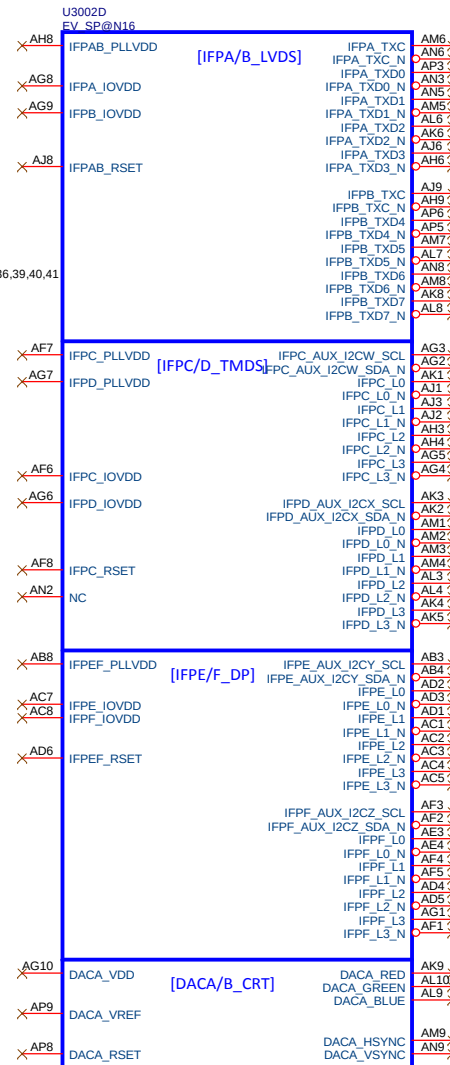


GDDR5 NO USE

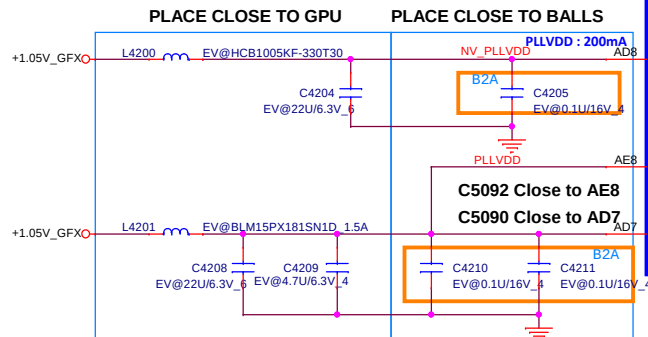
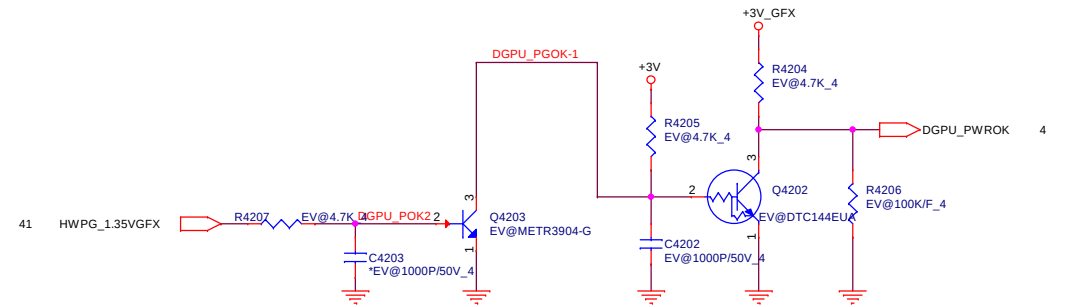
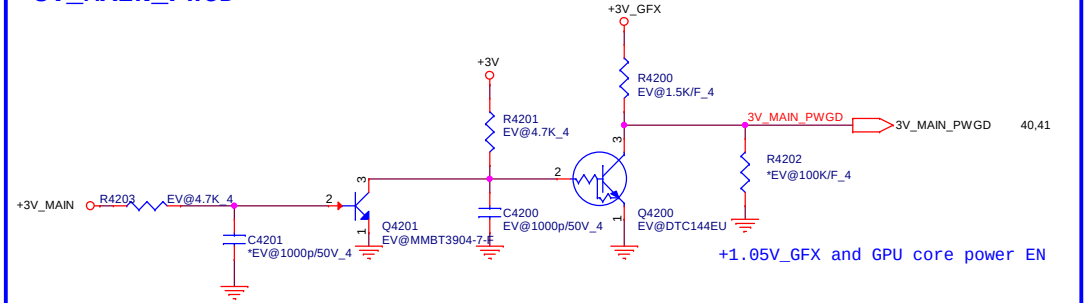


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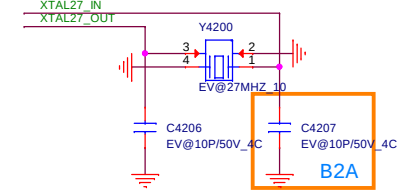
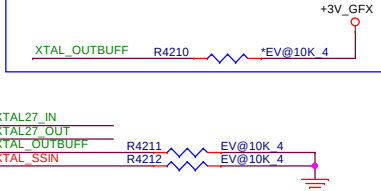
+3V_MAIN 14,15,17
+1.05V_GFX 14,15,41
+3V_GFX 14,17,30,41
+3V 2,4,6,7,8,9,12,13,14,21,22,23,24,25,26,27,28,30,32,33,34,35,36,39,40,41



3V_MAIN_PWGD

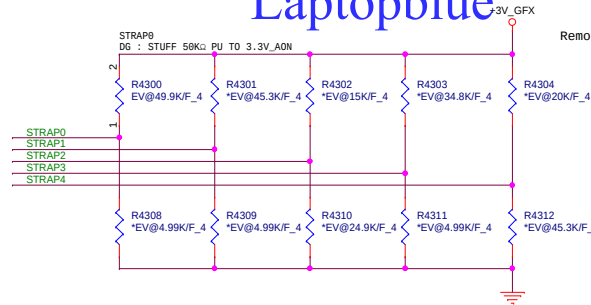


Reserve

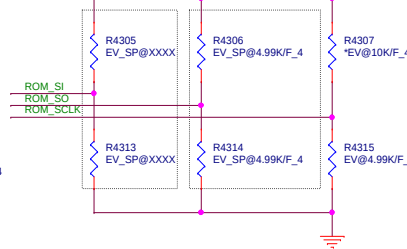


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PROJECT : ZAA

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Remove P/N for BOM making. For N16S-KA/KB need PU 4.99K.



	Package	DevID
(default)		
N16S-GTR	GB4b-128	
N16S-GT1-KA	GB4b-128	
N16S-GT1-KB	GB4b-128	

Resistor P/N
4.99K ----> CS24992FB26
10K ----> CS31002FB26
15K ----> CS31502FB24
20K ----> CS32002FB29
24.9K ----> CS32492FB16
30.1K ----> CS33012FB18
34.8K ----> CS33482FB22
45.3K ----> CS34532FB18
49.9K ----> CS34992FB10

	PU +3V_MAIN	PD
4.99K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
24.9K	1100	0100
30.1K	1101	0101
34.8K	1110	0110
45.3K	1111	0111

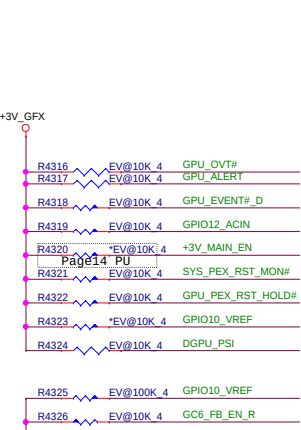
Mutil-level mode strapping:
For N16P-GT-A2 :
R886=40.2k PD
1.ROM_SCLK = 4.99k PD
2.ROM_SO = 4.99k PD
3.ROM_SI= Memory strap setting
4.STRAP0 = 49.9k PU
5.Strap4~1 = Reserve Pull up and Pull down

N16P-GT-A2 VRAM Configuration Table:
Default: GDDR5 VRAM

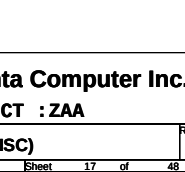
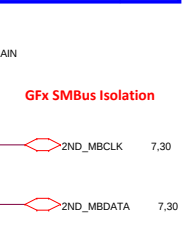
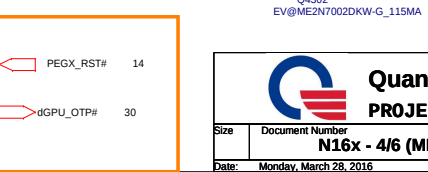
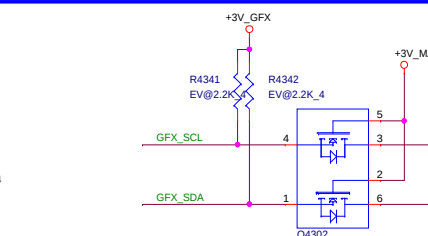
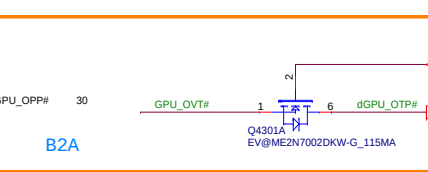
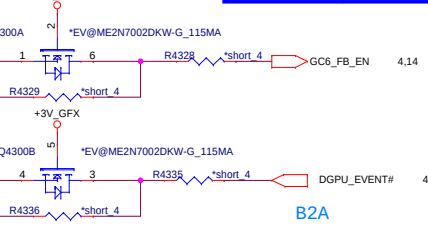
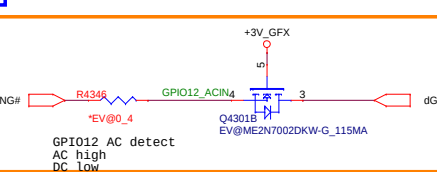
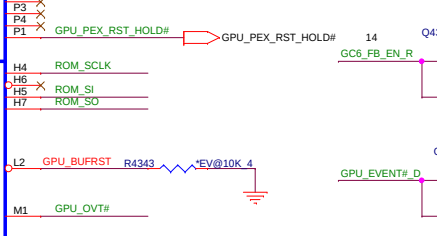
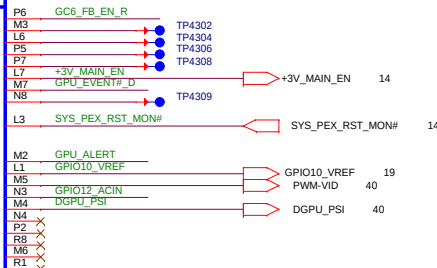
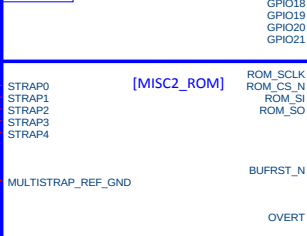
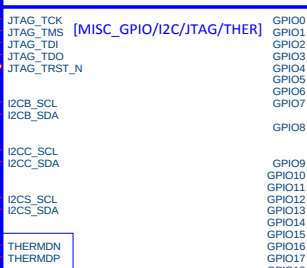
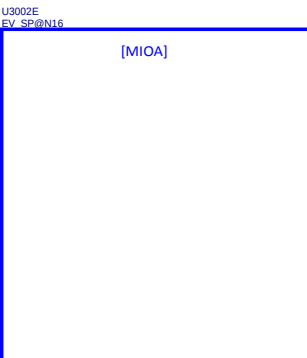
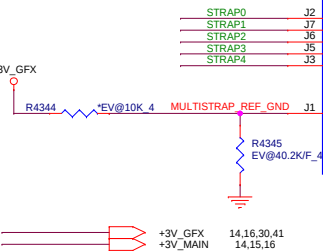
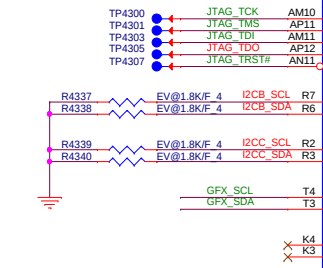
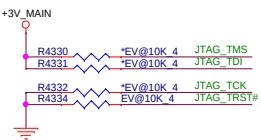
Memory Size	Vendor	P/N	Mfr. P/N	ROM_SI	
OBS 128M x 16	Samsung	AKG5MWDT502	K4G20325FD-FC03	0000 (0x0)	4.99K PD
256M x 16 (4Gb)	Hynix (1.35V)	AKG5PWUTW11	H5GC4H24AJR-T2C	0110 (0x6)	34.8K PD
256M x 16 (4Gb) (default)	Samsung (1.35V)	AKG5PGDT500	K4G41325FC-HC03	0011 (0x3)	20K PD (16P) 15K PD (16E)

N16P-GT-A2 (GB4b-128)

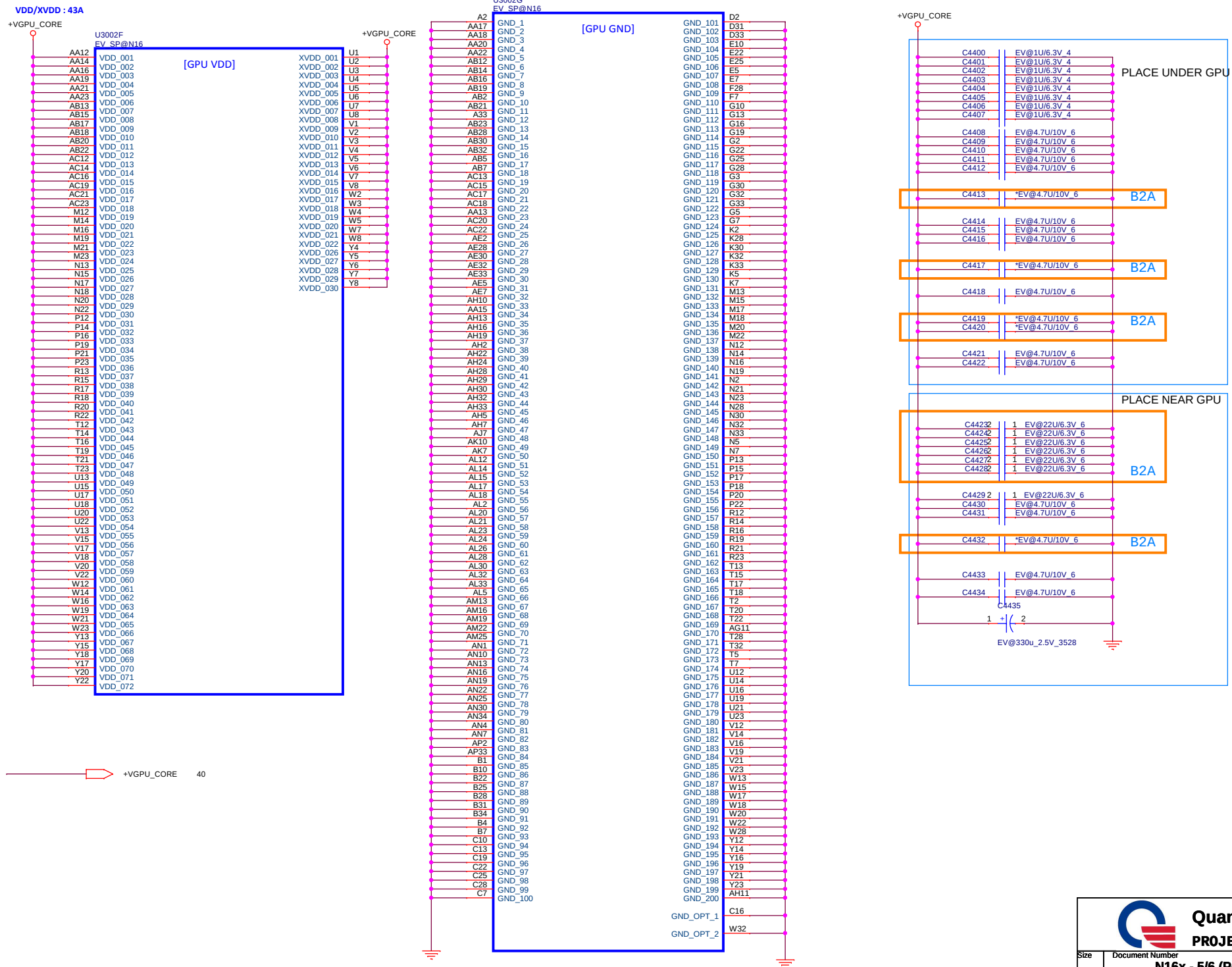
	Logical Strapping Bit3	Logical Strapping Bit2	Logical Strapping Bit1	Logical Strapping Bit0	
ROM_SCLK	SOR3_EXPOSED	SOR2_EXPOSED	SOR1_EXPOSED	SOR0_EXPOSED	0001
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]	XXXX
ROM_SO	DEVID_SEL	PCIE_CFG	SMB_ALT_ADDR	VGA_DEVICE	0001
STRAP0	Keep footprint to PU to 3V3_AON and PD to GND [Stuff 49.9K PU]				0001
STRAP1	Keep footprint to PU to 3V3_AON and PD to GND [Do Not Stuff]				
STRAP2					
STRAP3					
STRAP4					

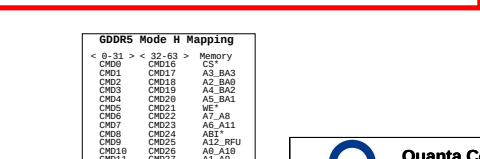
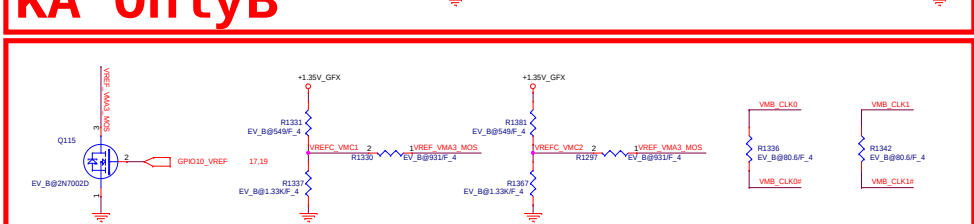
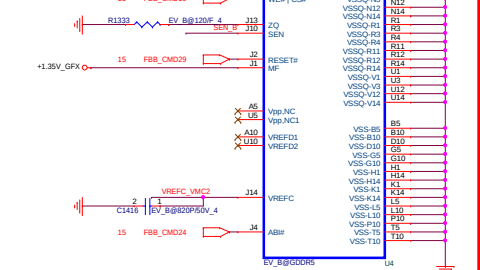
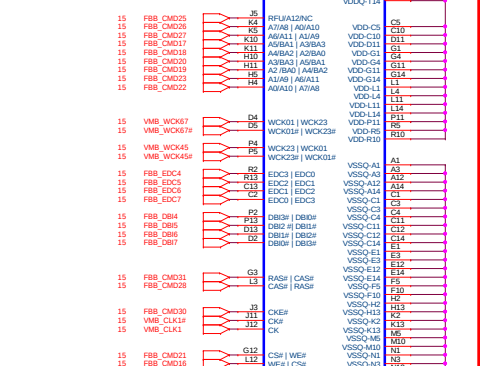
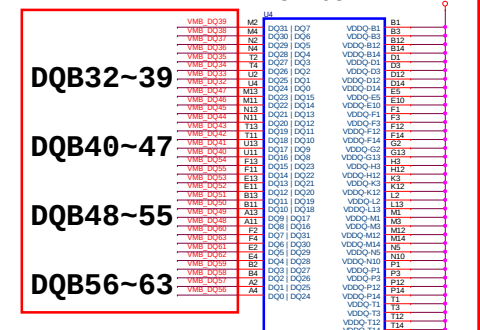
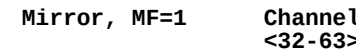


Reserve PU/PD for Debug



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GDDR5 Mode H Mapping		
< 32 - 31	< 32 - 63	Memory
CM00	CM016	CS
CM01	CM017	A3_BA3
CM02	CM018	A2_BA0
CM03	CM019	A4_BA2
CM04	CM020	A5_BA1
CM05	CM021	WE
CM06	CM022	A7_A8
CM07	CM023	A6_A11
CM08	CM024	AB1*
CM09	CM025	A12_RFU
CM10	CM026	AB8_AB9
CM11	CM027	A1_A9
CM12	CM028	RAS*
CM13	CM029	RST*
CM14	CM030	CKE*
CM15	CM031	CAS*

RST PD place @ the end of daisy-chain

USB TYPE-C

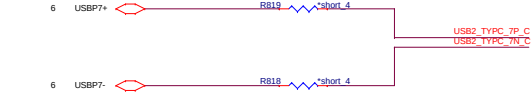
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2,3,4,6,7,8,9,11,24,26,27,28,30,32,34,35,40
32 +3V_S5
+9V_S5_V2

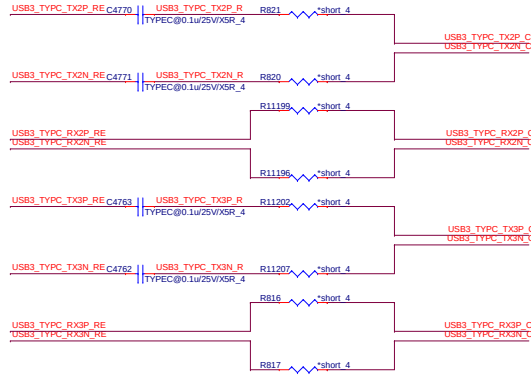


USB2.0 ESD

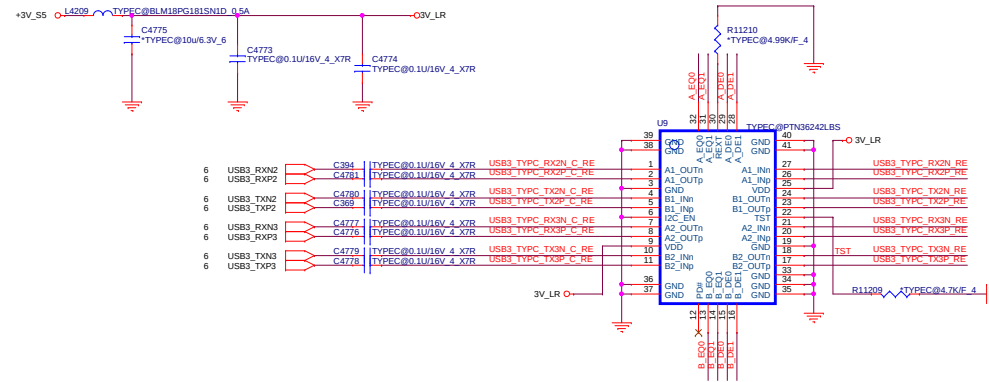
Close to connector



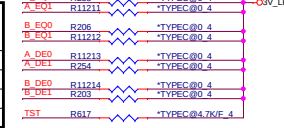
Type C1 HSIO ESD



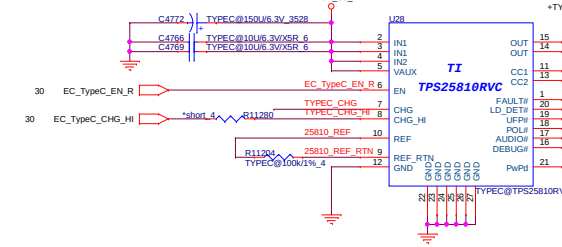
USB3 Re-Driver



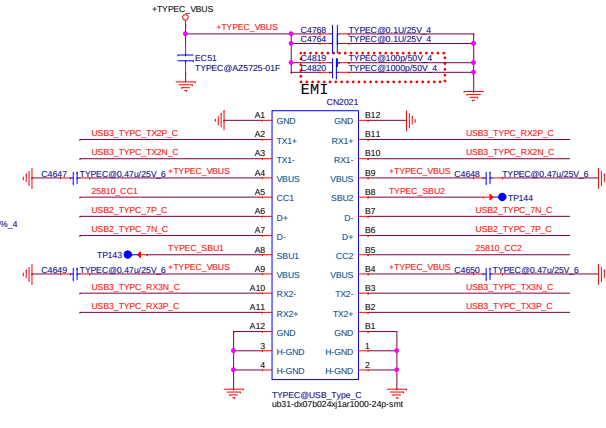
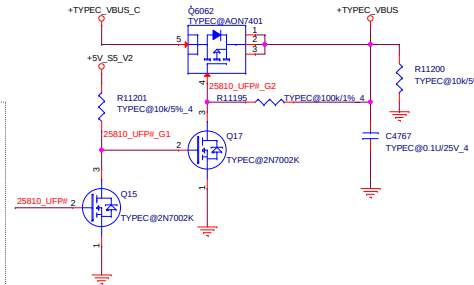
A_EQ0	A_EQ1	A_DE0	A_DE1	
B_EQ0	B_EQ1	B_DE0	B_DE1	
0	0	9dB	0	-3.5dB
0	1	3dB	0	no de-emphasis
1	0	6dB	1	-7dB
1	1	7.5dB	1	-5dB



Vendor suggest input cap 120u



TPS25810 Port	CC1	CC2	OUT	VCONN On CC1	POL	UFPs	AUDIO6	DEBU6
Nothing Attached	OPEN	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
UFP Connected	Rd	OPEN	INT	NO	Hi-Z	LOW	Hi-Z	Hi-Z
UFP Connected	OPEN	Rd	INT	NO	LOW	LOW	Hi-Z	Hi-Z
Powered CableNo UFP Connected	OPEN	Ra	OPEN	NO	Hi-Z	LOW	Hi-Z	Hi-Z
Powered CableNo UFP Connected	Ra	OPEN	OPEN	NO	Hi-Z	LOW	Hi-Z	Hi-Z
Powered CableUFP Connected	Rd	Ra	INT	CC2	Hi-Z	LOW	Hi-Z	Hi-Z
Powered CableUFP Connected	Ra	Rd	INT	CC1	LOW	LOW	Hi-Z	Hi-Z
Debug Accessory Connected	Rd	Rd	OPEN	NO	Hi-Z	Hi-Z	LOW	Hi-Z
Audio Adapter Accessory Connected	Ra	Ra	OPEN	NO	Hi-Z	Hi-Z	LOW	Hi-Z

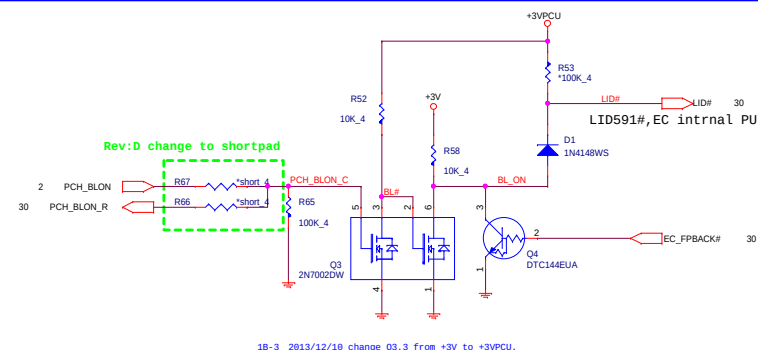
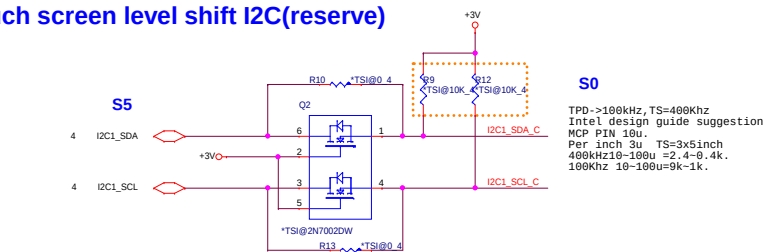


Quanta P/NAMAZING P/NUSD保護位置
BC104308Z00AZ1043-08F.R7G0.08TX RX (USB3.0 6EN1 5G)
BC104508Z00AZ1045-08F.R7G0.08D+ D- SBU1 SBU2 CC1 CC2
BC005725Z00AZ5725-01F.R7G0.009 PD 5V (follow ZAA)

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PROJECT :ZAA

Size	Document Number	Rev
	USB_Type C_25810	1A
Date	Monday, March 28, 2016	Sheet 20 of 48

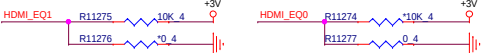
Laptopblue



HDMI

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OE_N	DDC_EN	HPD_SINK	Source output	PTN3366 power mode
LOW	HIGH	HIGH	source active	Active mode; DDC active
LOW	LOW	LOW	don't care	Standby mode
HIGH	LOW	don't care	don't care	Ultra low-power mode

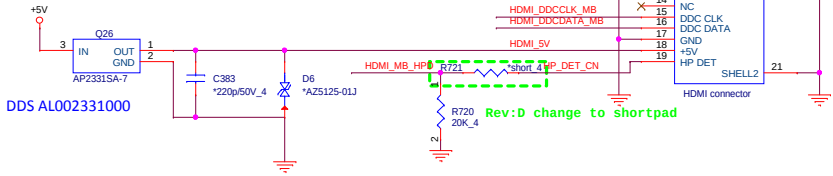
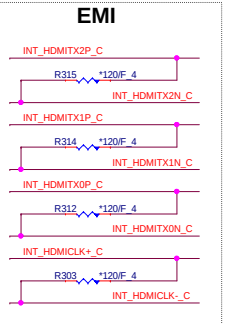
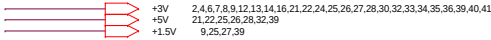
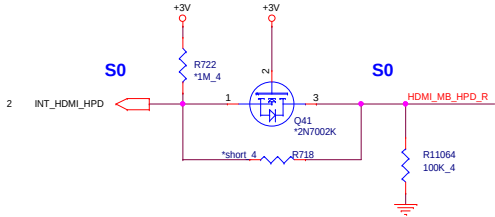
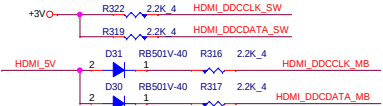
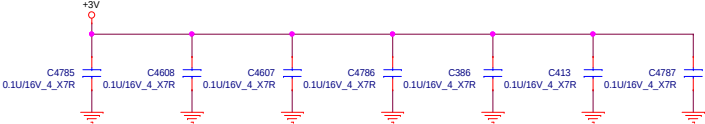
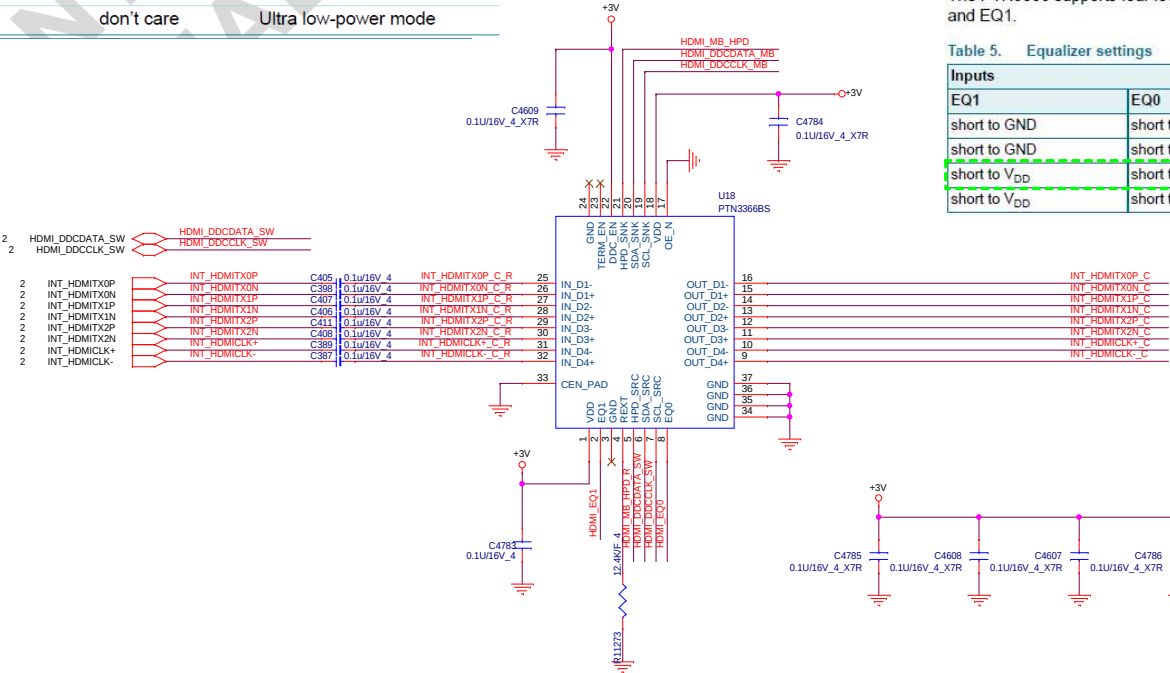


The PTN3366 supports four level equalization settings based on binary input pins EQ0 and EQ1.

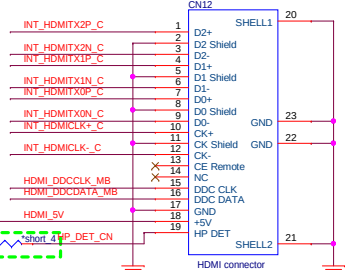
Table 5. Equalizer settings

Inputs		Equalization for 3 Gbit/s
EQ1	EQ0	
short to GND	short to GND	0 dB
short to GND	short to VDD	2 dB
short to VDD	short to GND	4 dB
short to VDD	short to VDD	6 dB

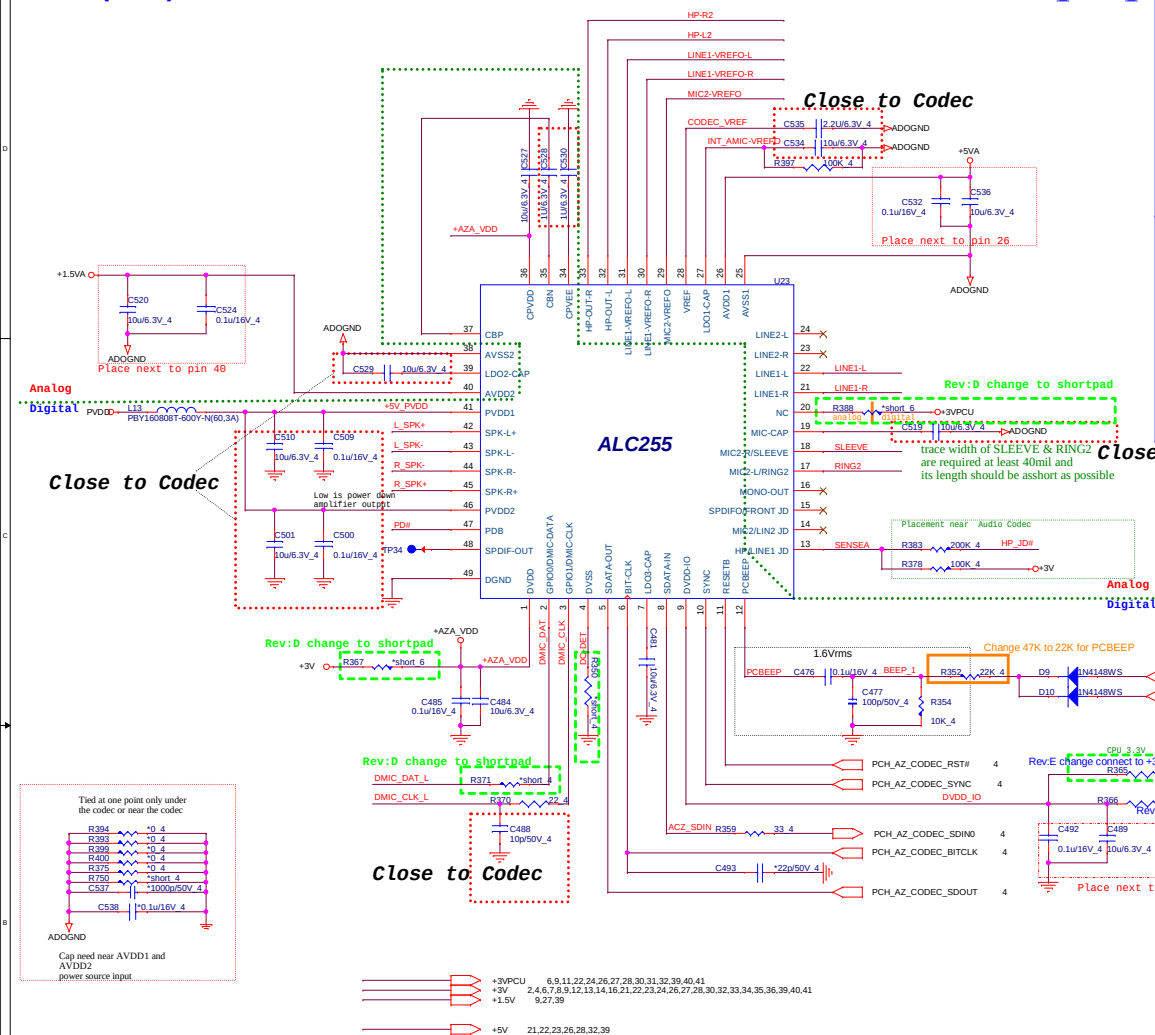
From PCH



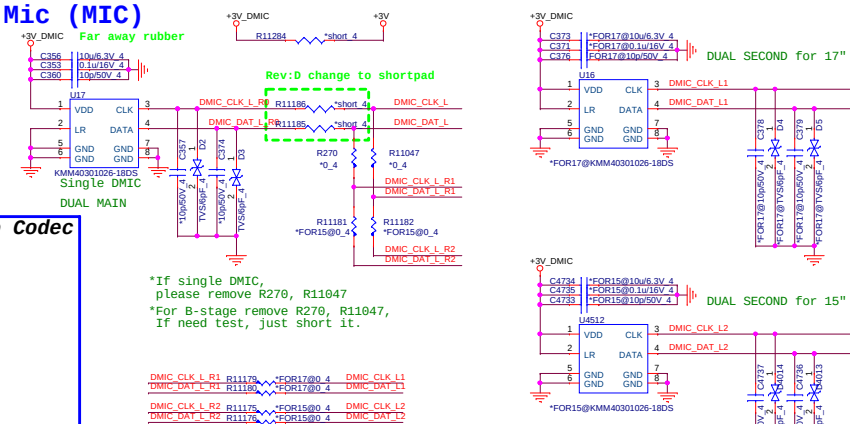
HDMI connector



DC-DET circuit(ADO)



D-Mic (MIC)

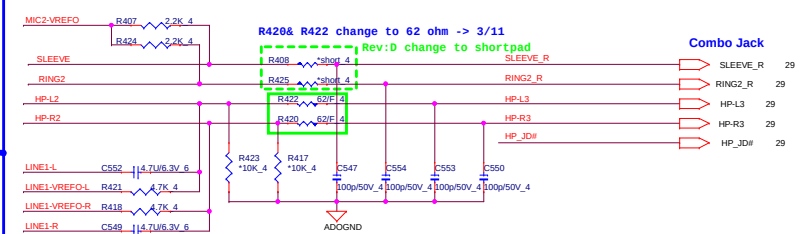


*If single DMIC,
please remove R270, R11047
*For B-stage remove R270, R11047,
If need test, just short it.

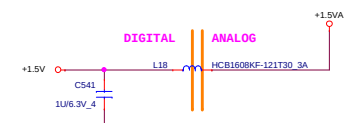
Single DMIC and Dual DIMC same PN: AL403010A00

- ```
1.Single DMIC
 NSM0407DT (AL472376000) <- Main source
 SPM0437HD4H (AL000437000)
2.Dual DMIC
 NSM0410DT (w/ Fortemedia algorithm)
 Main MIC CS need connect to second MIC DATA
```

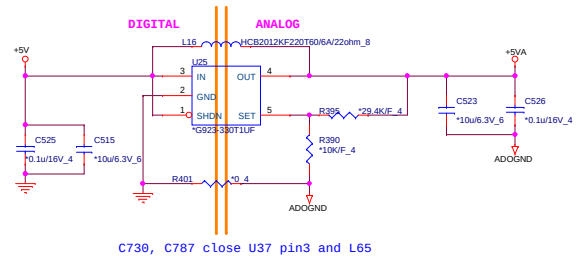
**Universal Audio Jack HEADPHONE/MIC/LINE combo (ADO)**



### Codec PWR 1.5V(ADO)

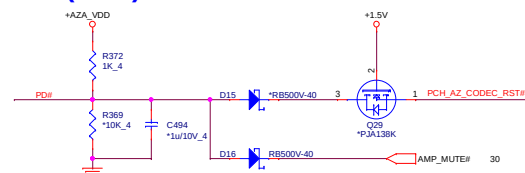


### Codec PWR 5V(ADO)



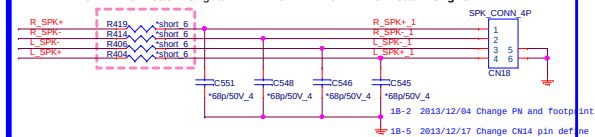
C730, C787 close U37 pin3 and L65

## Mute(ADO)



## Internal Speaker

40mil for each signal      4 ohm : 40mil for each signal

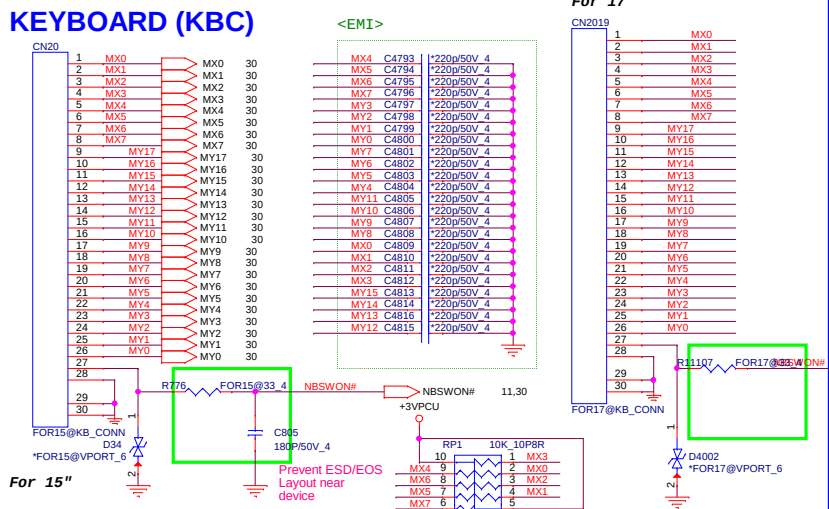




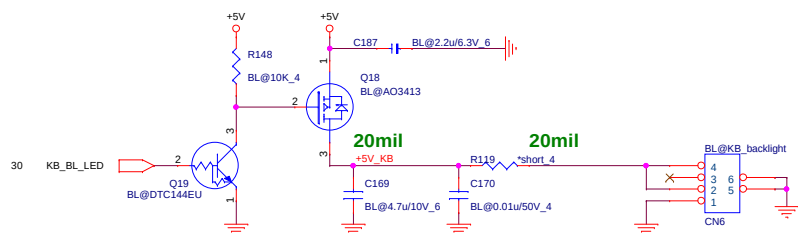
Laptopblue

|                                                                                                                                           |                            |           |          |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|----------|
|  <b>Quanta Computer Inc.</b><br><b>PROJECT : ZAA</b> |                            |           |          |
| Size                                                                                                                                      | Document Number            | Rev       |          |
|                                                                                                                                           | <b>Mini-Card/WL/3G/SIM</b> | <b>1A</b> |          |
| Date:                                                                                                                                     | Monday, March 28, 2016     | Sheet     | 27 of 48 |

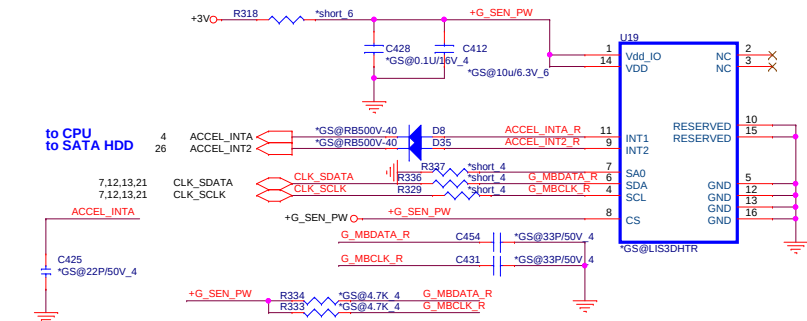
## KEYBOARD (KBC)



KB\_BL LED (KBC)

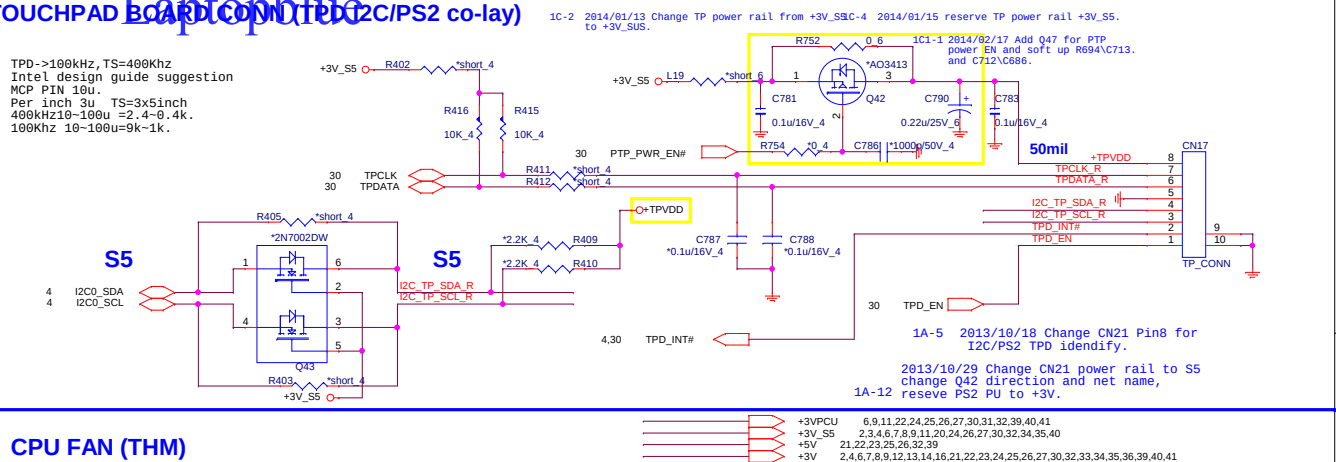


### G-sensor(ACS)



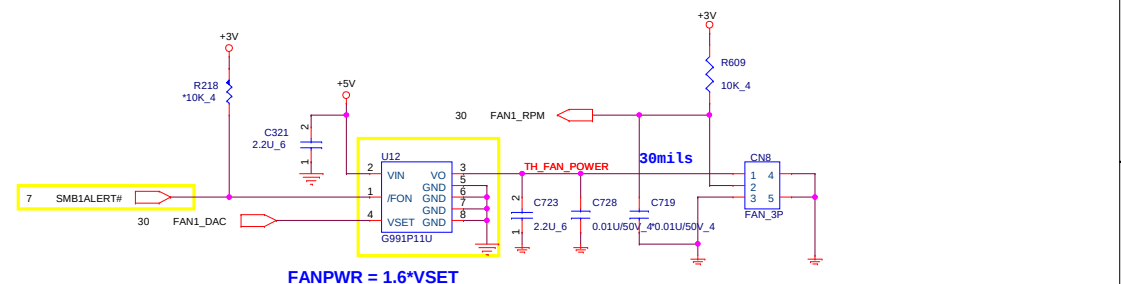
# TOUCHPAD BOARD CONN (TPD12C/PS2 co-lay)

TPD->100kHz, TS=400Khz  
Intel design guide suggestion  
MCP PIN 10u.  
Per inch 3u TS=3x5inch  
400KHz10-100u=2.4-0.4k.  
100Khz 10-100u=9k-1k.



### CPU FAN (THM)

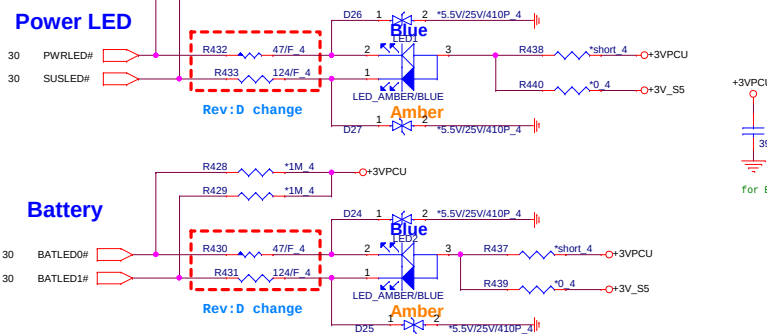
Prevent ESD/EOS  
Layout near  
device



## POWER LED(UIF)

Blue 47 ohm CS04702FB16 -> 2/16 Rev D.

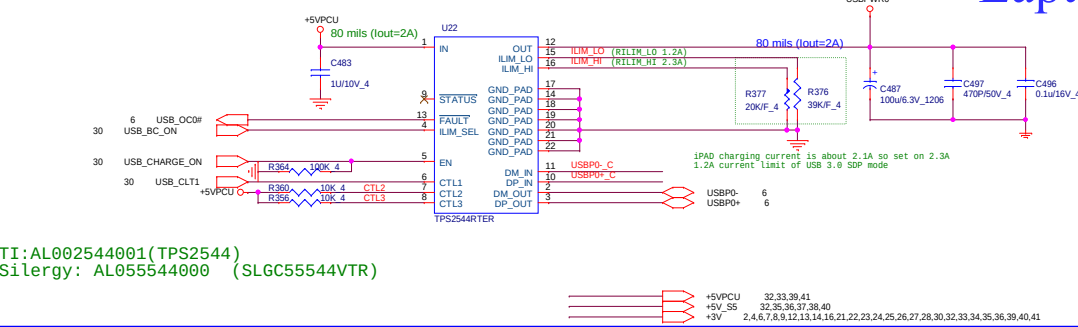
Amber 124 ohm CS11242FB10 -&gt; 2/16 Rev D



**Quanta Computer Inc.**  
**PROJECT : ZAA**

|       |                        |                |
|-------|------------------------|----------------|
| Size  | Document Number        | Rev            |
|       | <b>KB/TP/FAN</b>       | <b>1A</b>      |
| Date: | Monday, March 28, 2016 | Sheet 28 of 48 |

USB Charger to 3.0 (UBC)



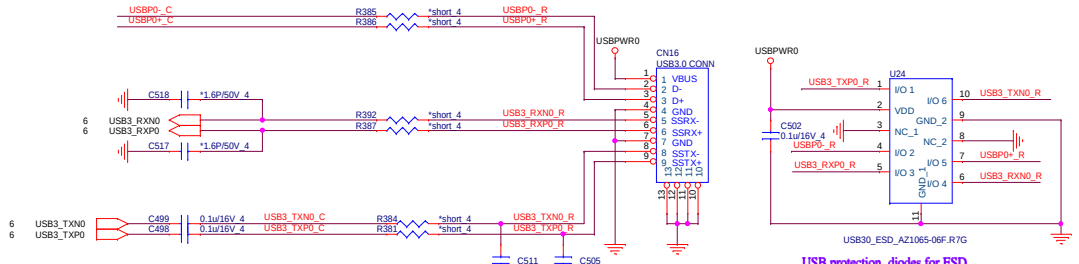
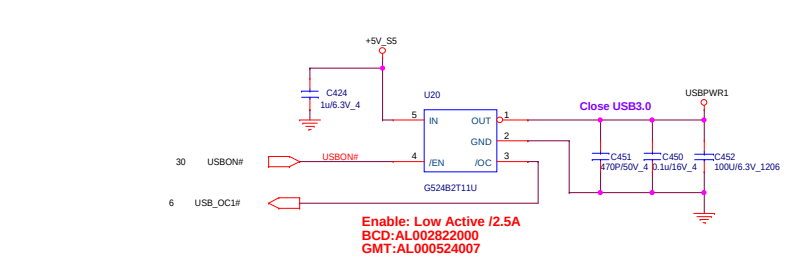
TI:AL002544001(TPS2544)  
Silergy: AL055544000 (SLGC55544VTR)

Laptopblue

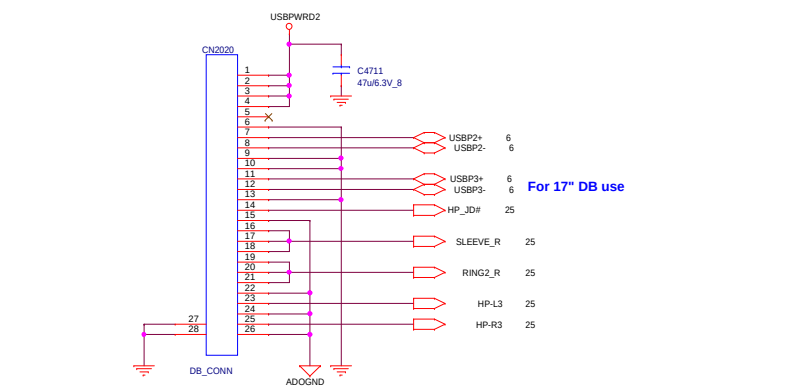
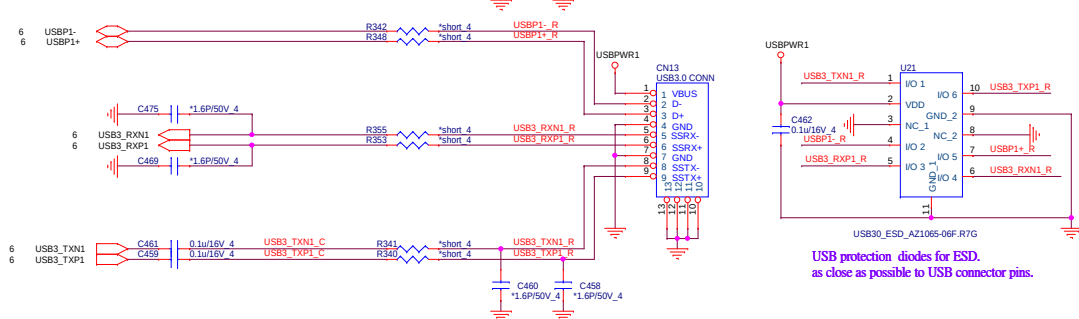
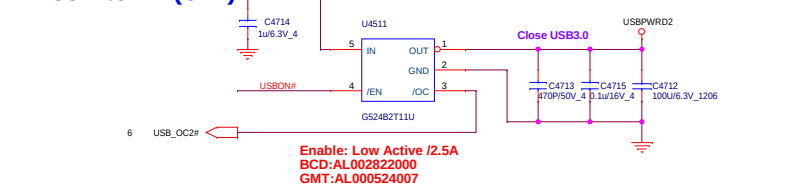
|     | CTL1 | CTL2 | CTL3 | ILIM_SEL |
|-----|------|------|------|----------|
| SDP | 1    | 1    | 1    | 0        |
| CDP | 1    | 1    | 1    | 1        |
| DCP | 0    | 1    | 1    | X        |

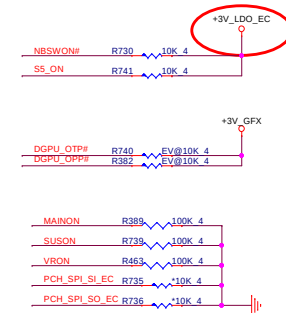
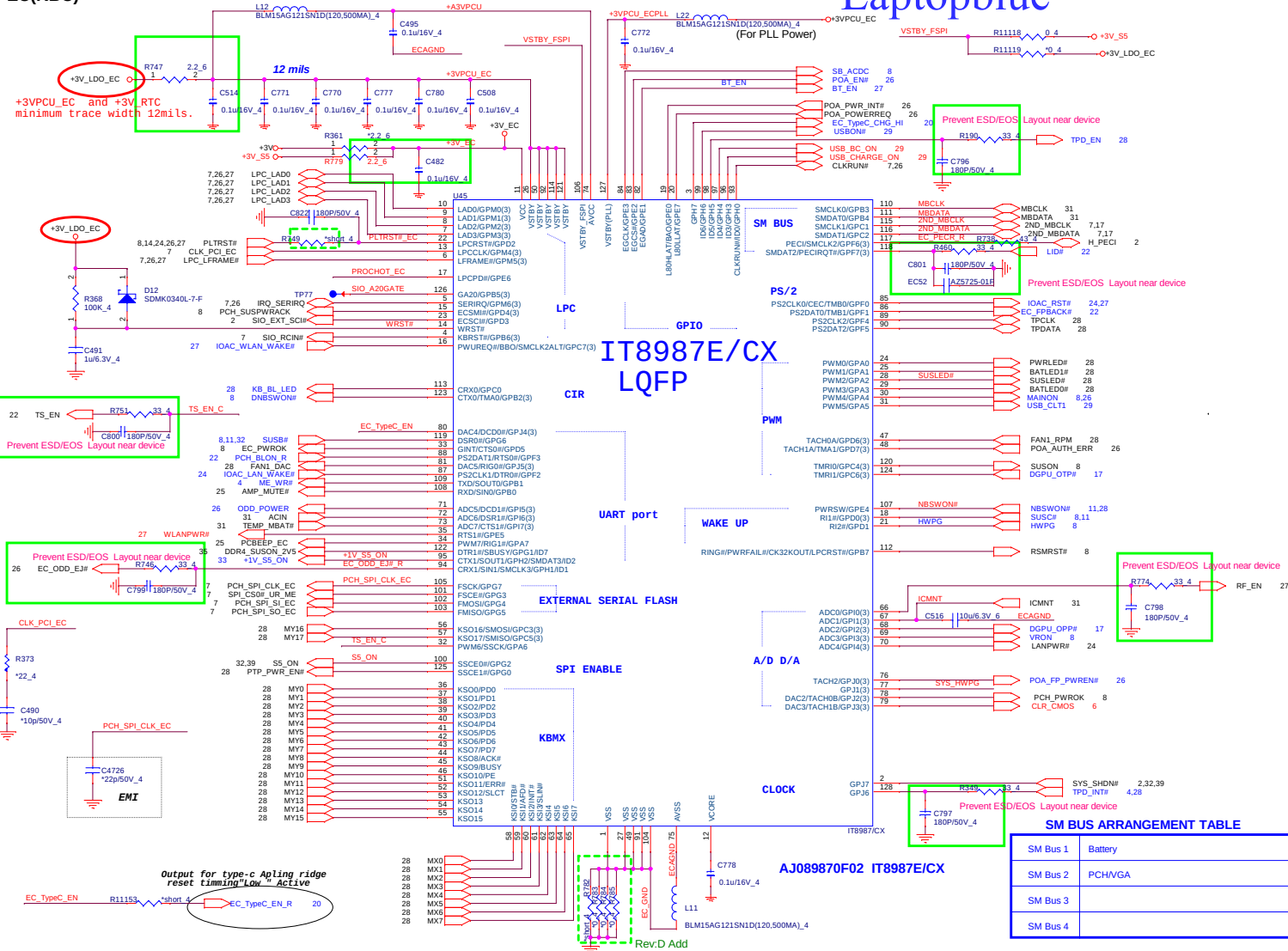
RILIM\_LO is optional and the ILIM\_LO pin may be left unconnected if the following conditions are met:  
1. ILIM\_SEL is always set high  
2. Load Detection - Port Power Management is not used  
3. Mouse / keyboard wake function is not used  
If conditions 1 and 2 are met but the mouse / keyboard wake function is also desired, it is recommended to use RILIM\_LO < 88.6 kΩ.  
The following equation programs the typical current limit:  
(1)  $IOS\_typ(mA) = 50,250 / (RILIM\_XX(K\Omega) + 0.1)$   
RILIM\_XX corresponds to either RILIM\_HI or RILIM\_LO as appropriate.

USB 3.0 Connector (UB3)

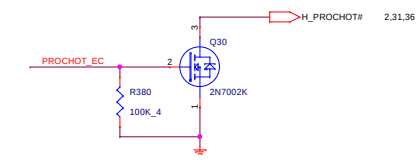
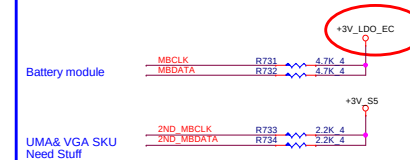


USB2.0 DB (UB2)

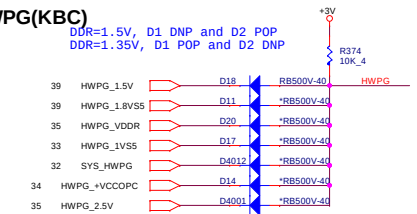




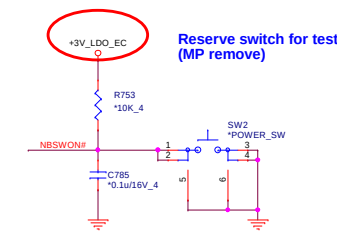
## SM BUS PU(KBC)



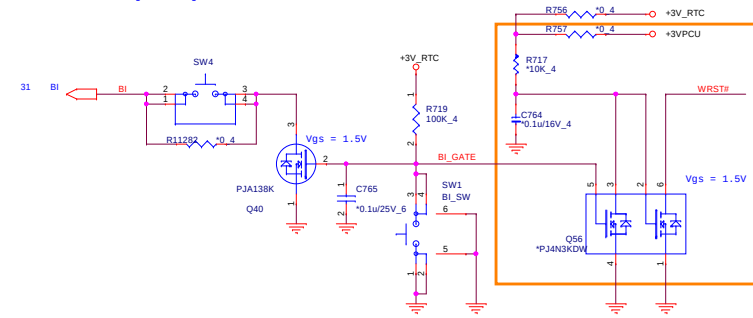
## HWPG(KBC)



|          |         |
|----------|---------|
| SM Bus 1 | Battery |
| SM Bus 2 | PCH/VGA |
| SM Bus 3 |         |
| SM Bus 4 |         |

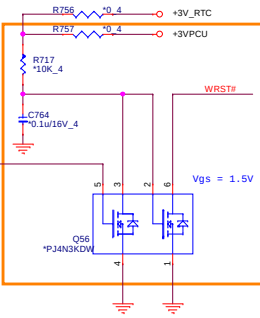


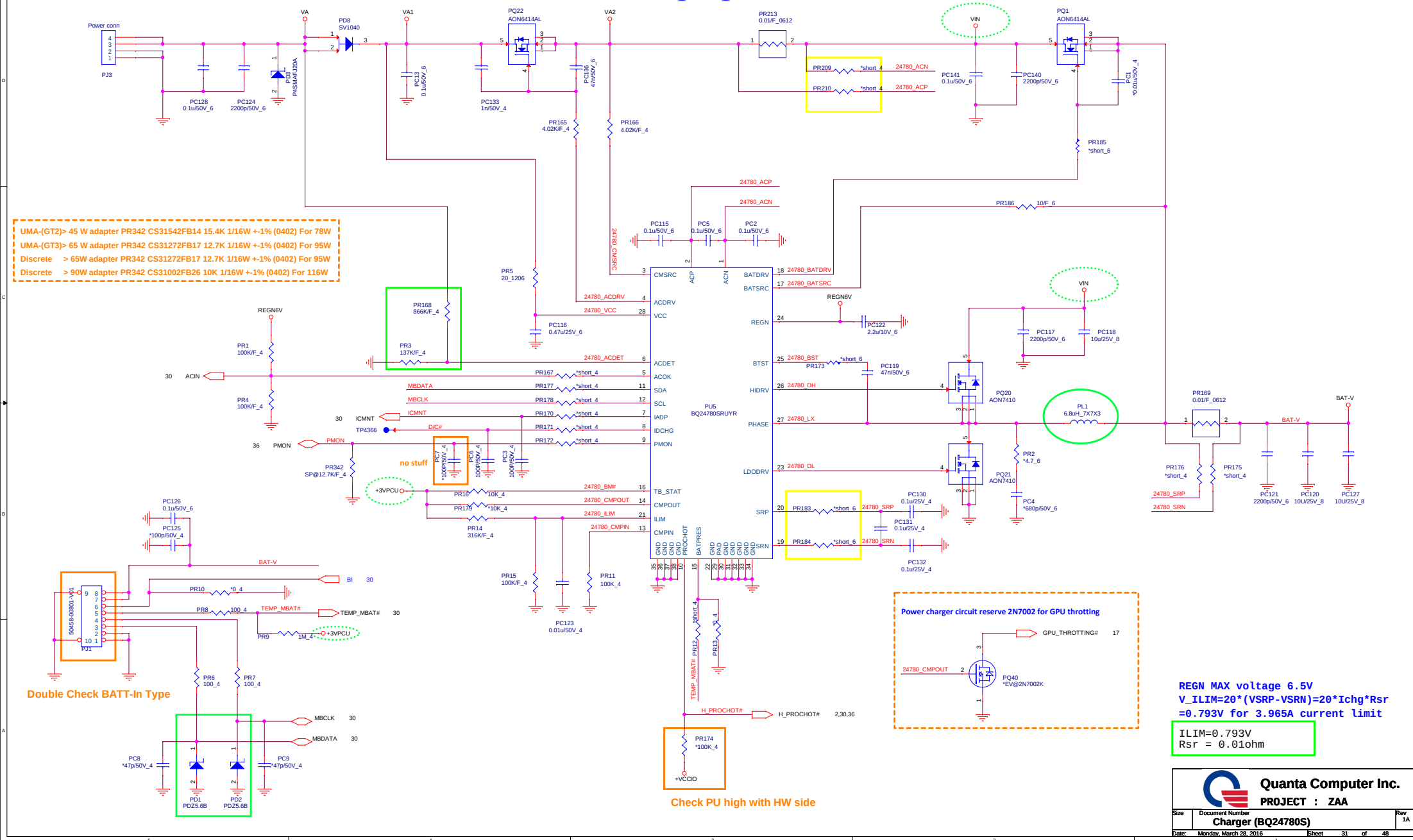
## Reset SW (FSW)



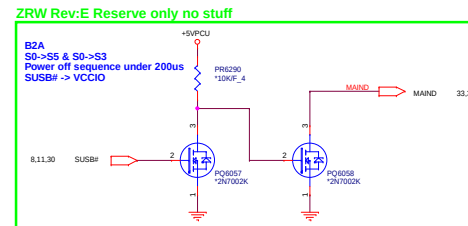
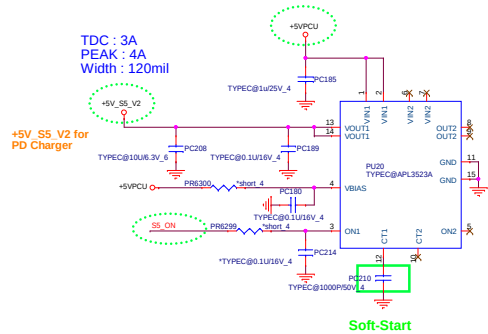
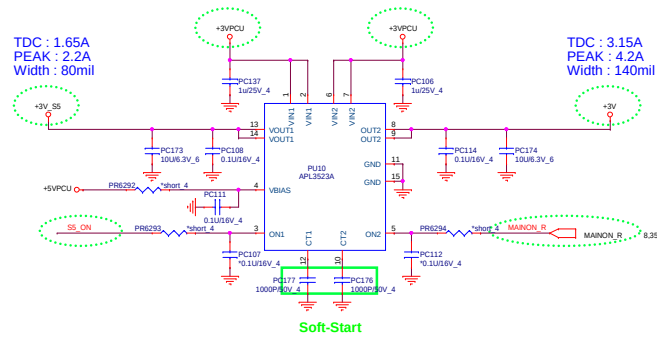
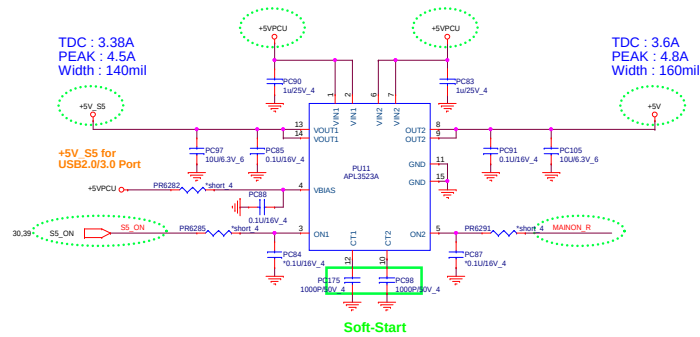
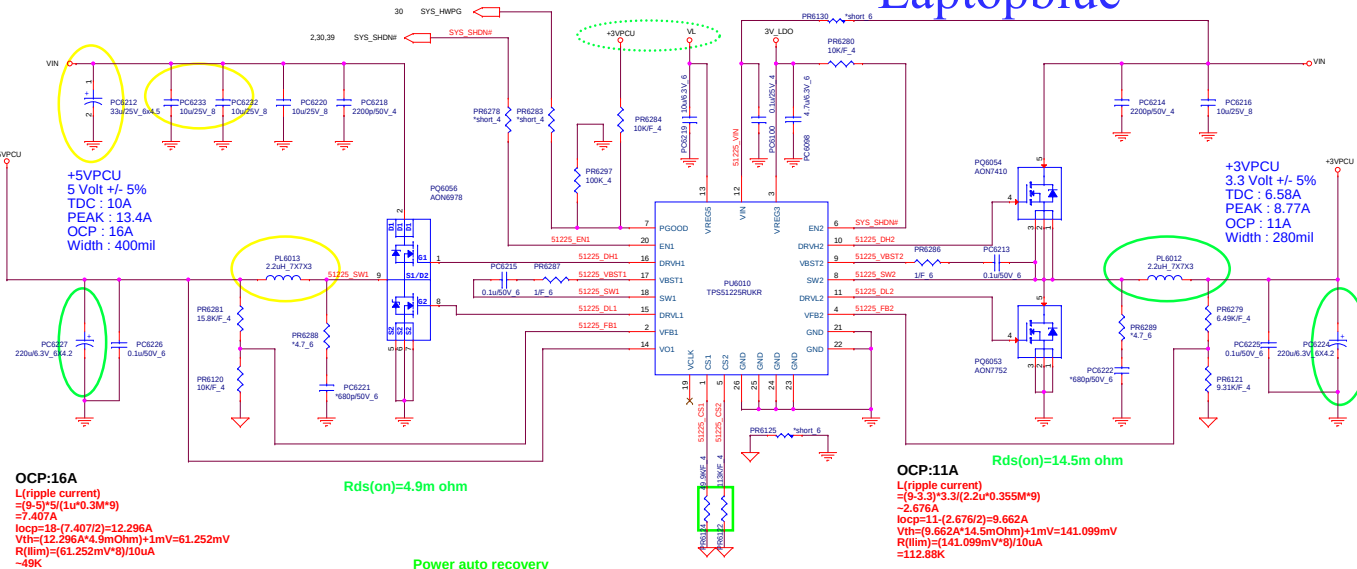
**Reserve no stuff**

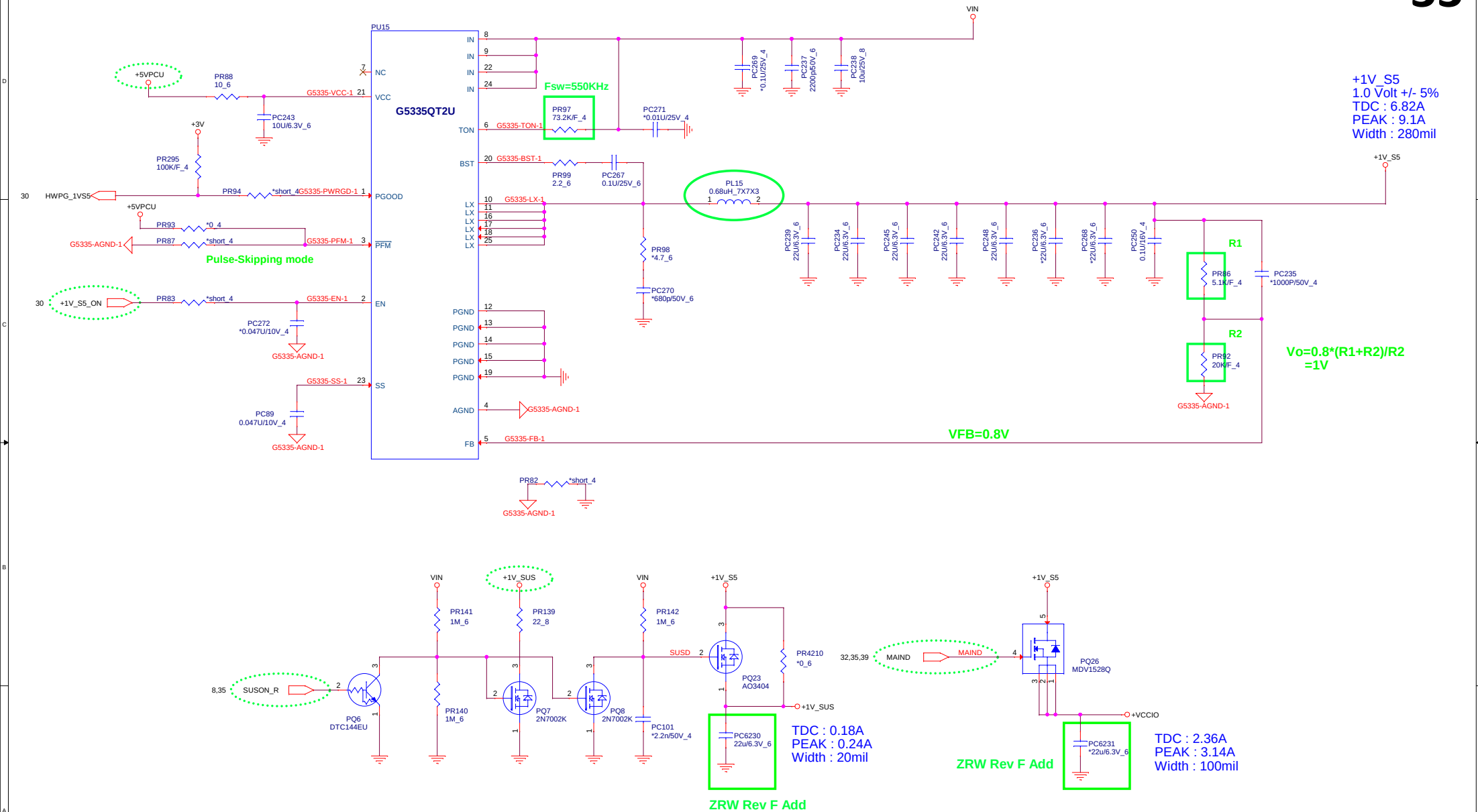
## Battery Detect Switch





# Laptopblue



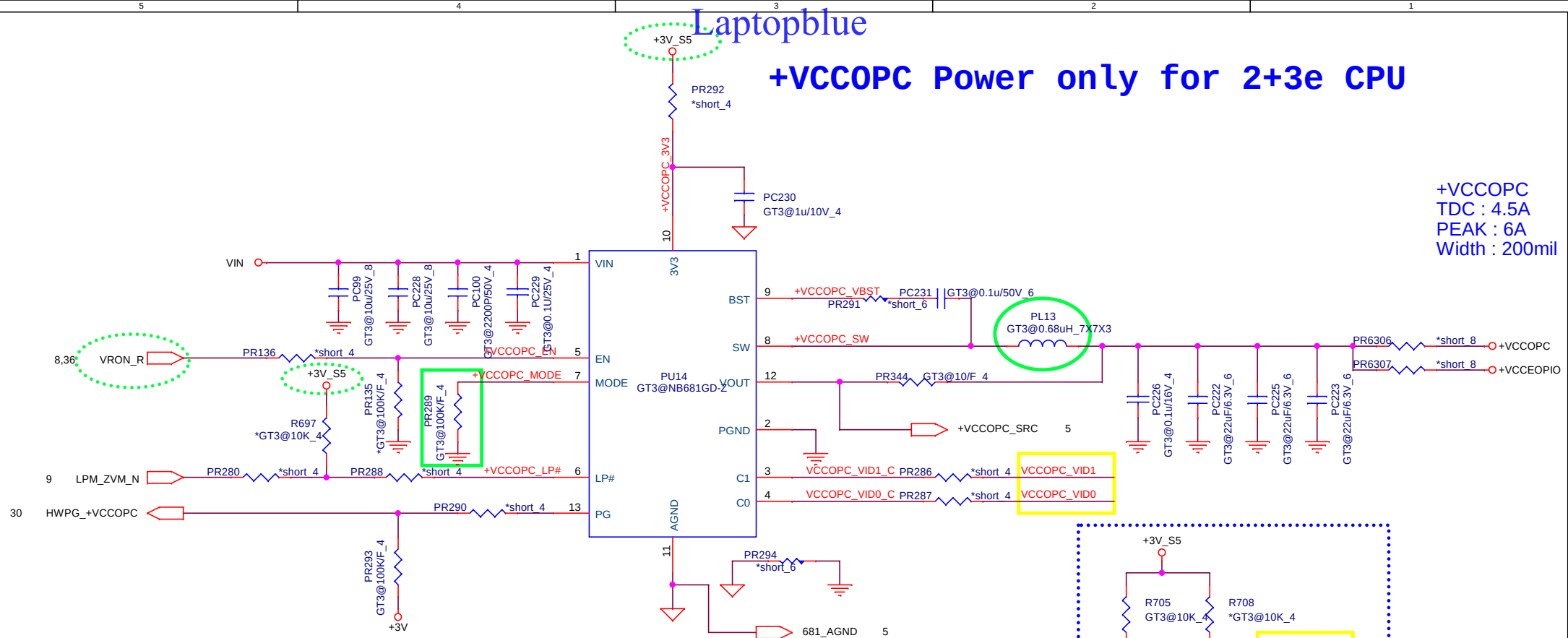


**Quanta Computer Inc.**  
**PROJECT : ZAA**

| Size  | Document Number           | Rev            |
|-------|---------------------------|----------------|
|       | <b>+1V_S5 (G5335QT2U)</b> | 1A             |
| Date: | Monday, March 28, 2016    | Sheet 33 of 48 |

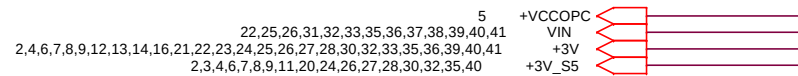
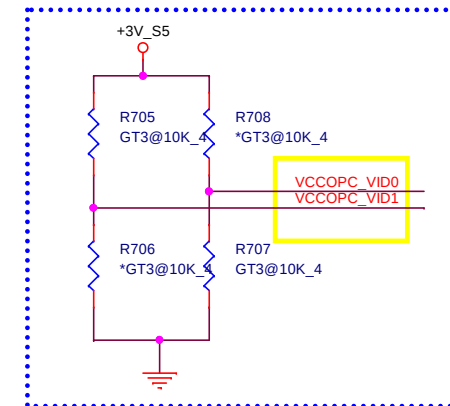
**+VCCOPC Power only for 2+3e CPU**

+VCCOPC  
TDC : 4.5A  
PEAK : 6A  
Width : 200mil

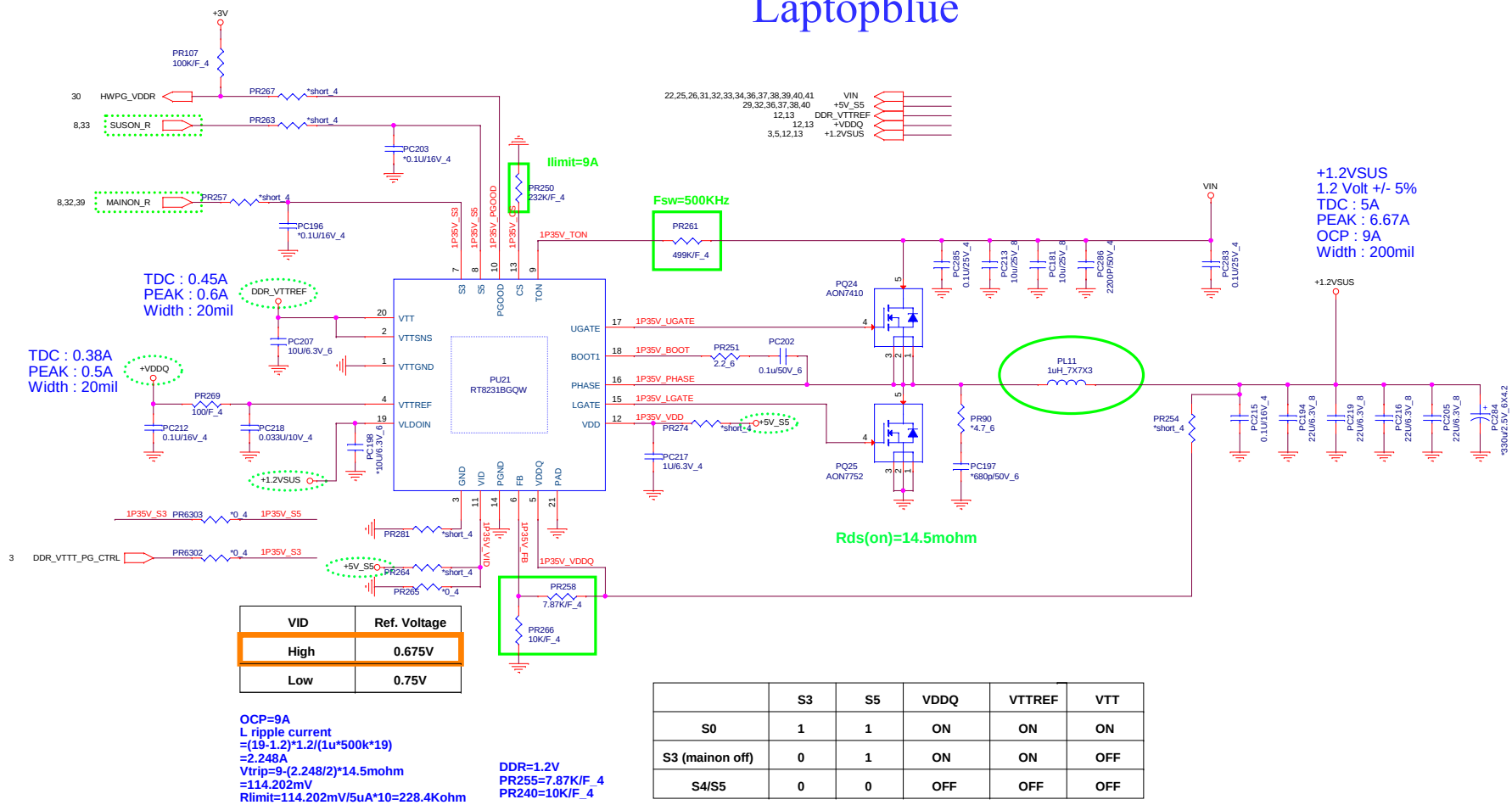


| Mode     | VR Rail     |
|----------|-------------|
| 0 ohm    | VCCIO       |
| Floating | PRIMCORE    |
| 100K     | EDRAM/EOPIC |
| 150K     | Other       |

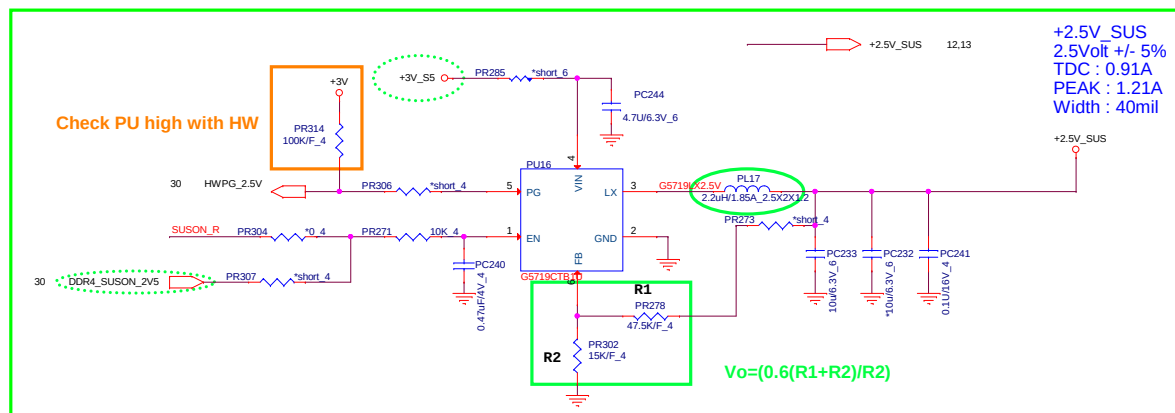
|          | LP# | C1 | C0 | Vo        |
|----------|-----|----|----|-----------|
| VCCEDRAM | 0   | X  | X  | 0V        |
|          | 1   | 0  | 0  | 0.8V(MSM) |
|          | 1   | 0  | 1  | 0.95V     |
|          | 1   | 1  | 0  | 1.0V      |
|          | 1   | 1  | 1  | 1.05V     |



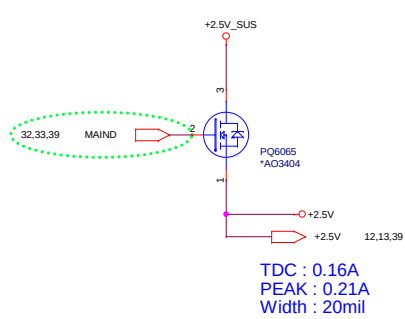
## Laptopblue



## +2.5VSUS Power Rail For DDR4



10/26 Reserve +2.5V for DDR4 VDDSPD



# Laptopblue

ZAAA 6L power solution table

Check PU high with HW

SVID near PU1

ZRW RE

## IMVP8 Vcore Controller

**Rail A ( 1 phase ) : VCORE**

**Rail B ( 2 phase ) : VCCGT**

**Rail C ( 1 phase ) : VCCSA**

GT2: PC134 CH4104K9B03 0.1uF/25V  
GT2: PR6301 CS00002JB38 0 ohm

GT2: PR194 CS21912FB13 1.94K  
GT2: PR207 CS41622FB11 162K

GT2: PR192 CS12672FB02 267  
GT2: PR203 CS37872FB15 78.7K  
GT2: PR198 CS38872FB18 88.7K

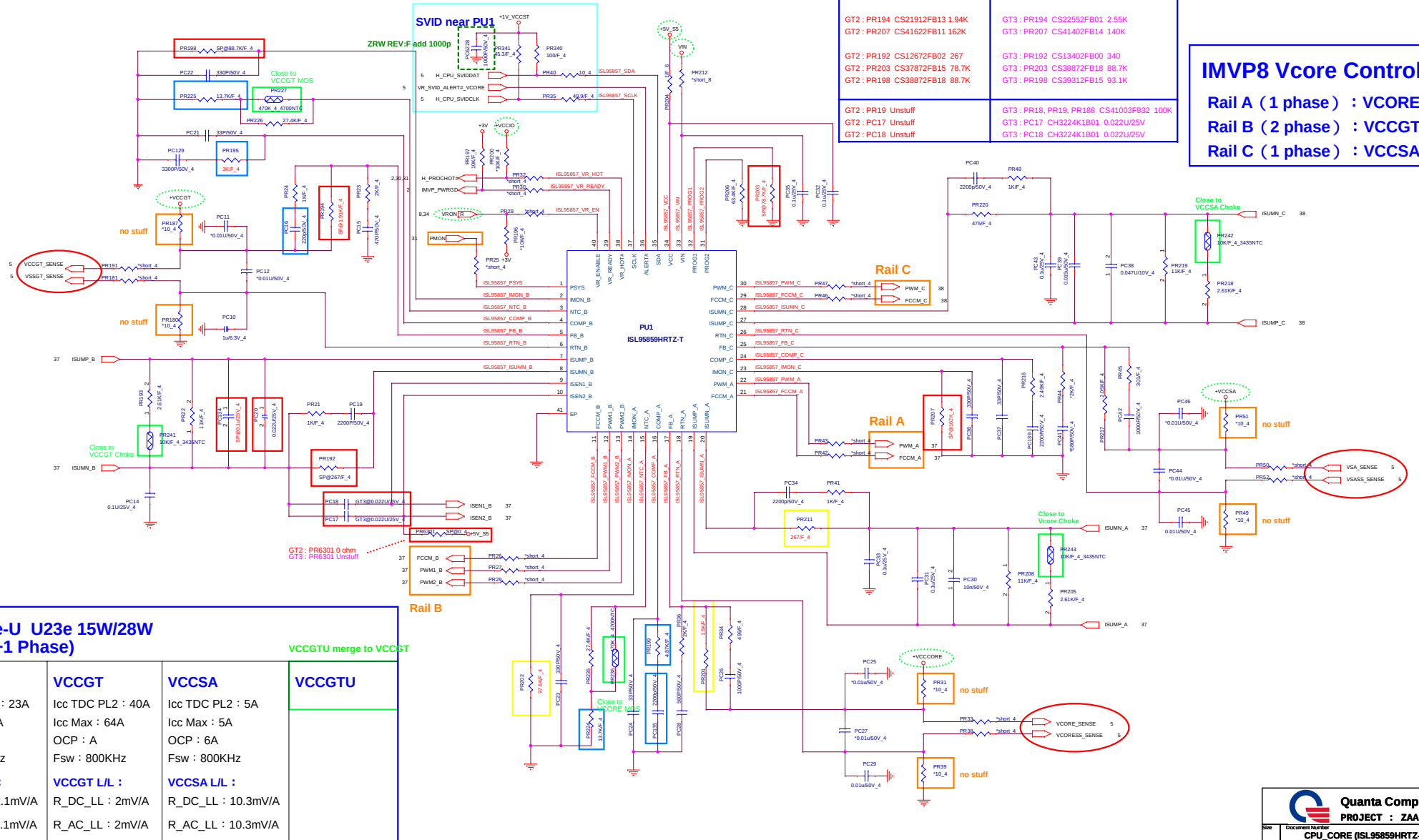
GT3: PC134 CH4152K9B02 0.15uF/10V  
GT3: PR6301 Unstuff

GT3: PR194 CS22552FB01 2.55K  
GT3: PR207 CS41402FB14 140K

GT3: PR192 CS13402FB00 340  
GT3: PR203 CS38872FB18 88.7K  
GT3: PR198 CS39312FB15 93.1K

- GT2 : PR19 Unstuff
- GT2 : PC17 Unstuff
- GT2 : PC18 Unstuff

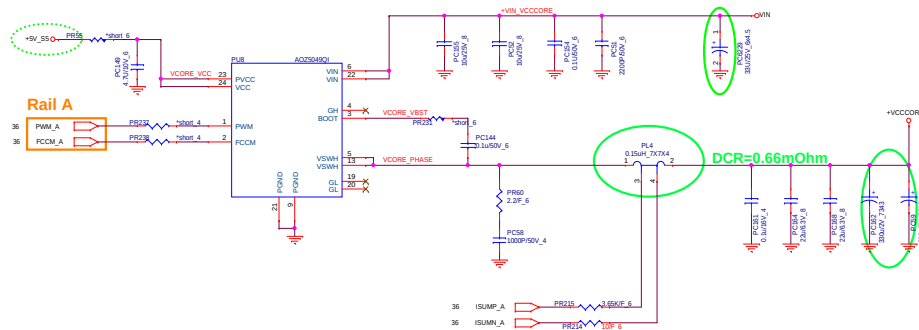
GT3 : PR18, PR19, PR188 CS41003F93  
GT3 : PC17 CH3224K1B01 0.022U/25V  
GT3 : PC18 CH3224K1B01 0.022U/25V



|                                                                                                                                           |                                  |                |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|
|  <b>Quanta Computer Inc.</b><br><b>PROJECT : ZAA</b> |                                  |                |
| Size                                                                                                                                      | Document Number                  | Rev            |
|                                                                                                                                           | <b>CPU_CORE (ISL95859HRTZ-T)</b> | <b>1A</b>      |
| Date:                                                                                                                                     | Monday, March 28, 2016           | Sheet 36 of 48 |

GT3:PR19 CS41003F932 100K

## VCORE



## VCORE

Icc TDC PL2 : 23A

Icc Max : 32A

OCP : 35A

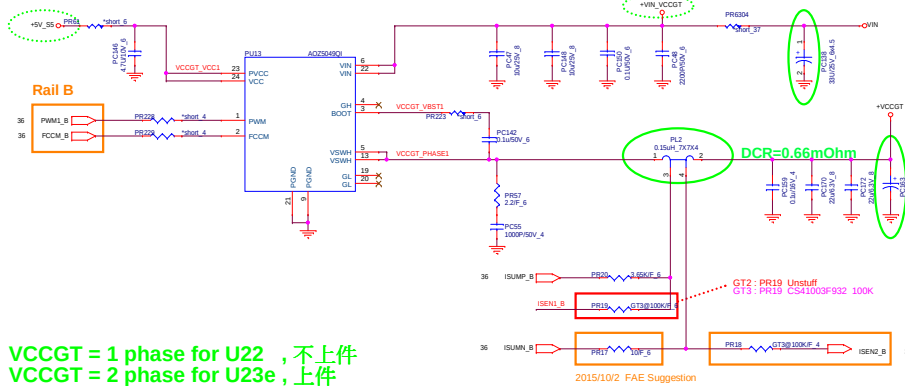
F<sub>sw</sub> : 800KHz

VCORE L/L :

R\_DC\_LL : 2.1mV/A

R\_AC\_LL : 2.1mV/A

# VCCGT



## VCCGT

Icc TDC PL2 : 40A

Icc Max : 64A

OCP : A

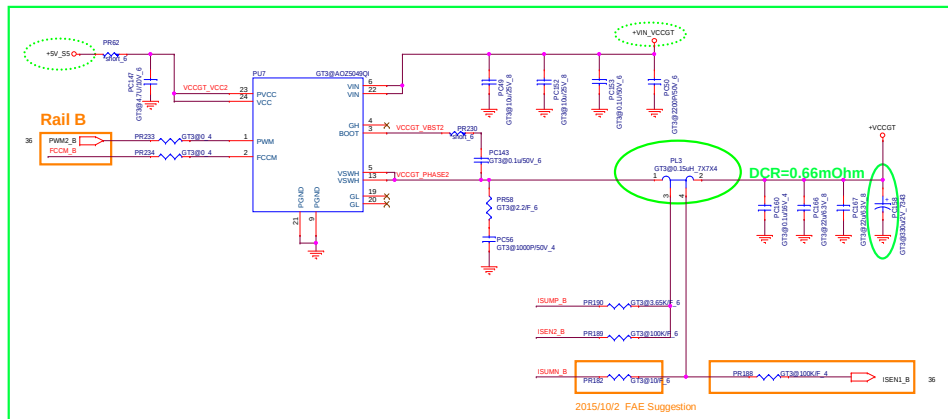
Fsw : 800KHz

VCCGT L/L :

R\_DC\_LL : 2mV/A

R\_AC\_LL : 2mV/A

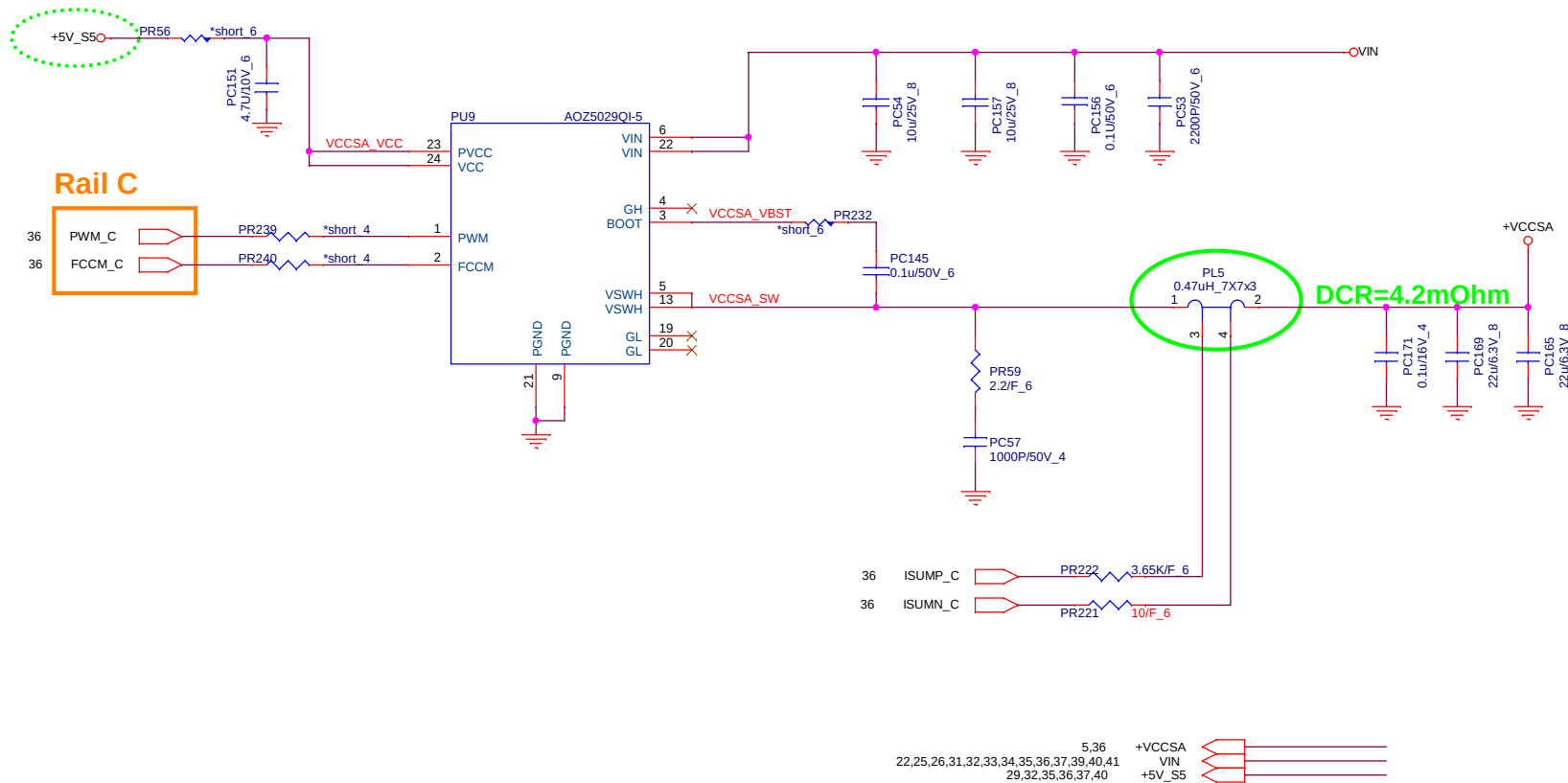
VCCGT = 1 phase for U22 ,不上件  
VCCGT = 2 phase for U23e ,上件



2015/10/2 FAE Suggestion

|                                        |          |                                                                                     |                                                                                     |
|----------------------------------------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 5,36                                   | +VCCCORE |  |  |
| 22,25,26,31,32,33,34,35,36,38,39,40,41 | VIN      |  |  |
| 5,36                                   | +VCCGT   |  |  |
| 29,32,35,36,38,40                      | +5V_S5   |  |  |

# VCCSA



**VCCSA**

Icc TDC PL2 : 5A

Icc Max : 5A

OCP : 6A

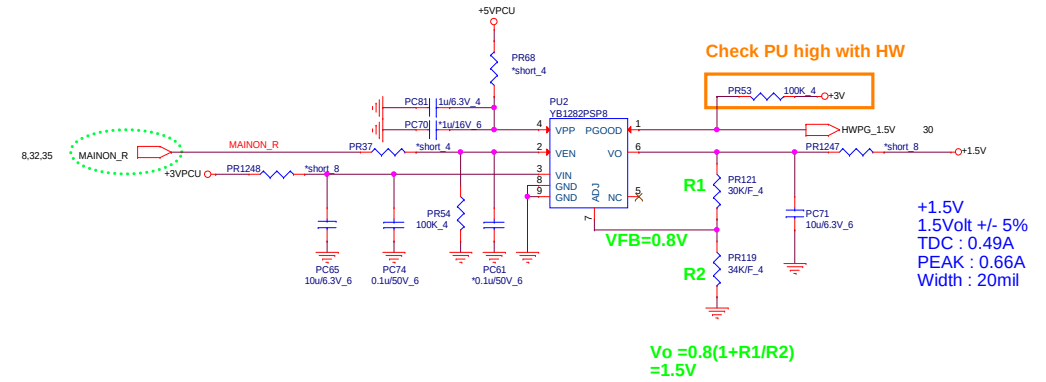
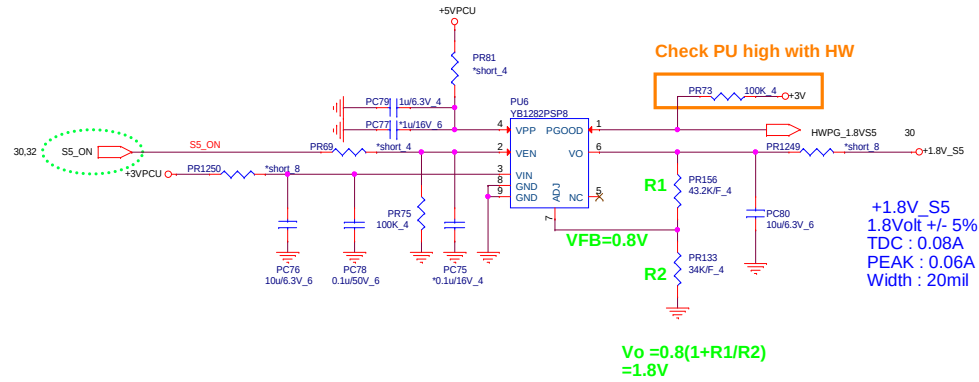
Fsw : 800KHz

**VCCSA L/L :**

|                    |
|--------------------|
| R_DC_LL : 10.3mV/A |
|--------------------|

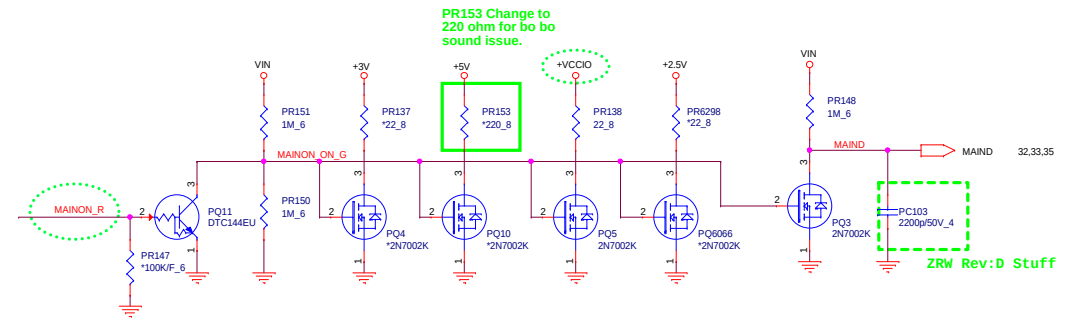
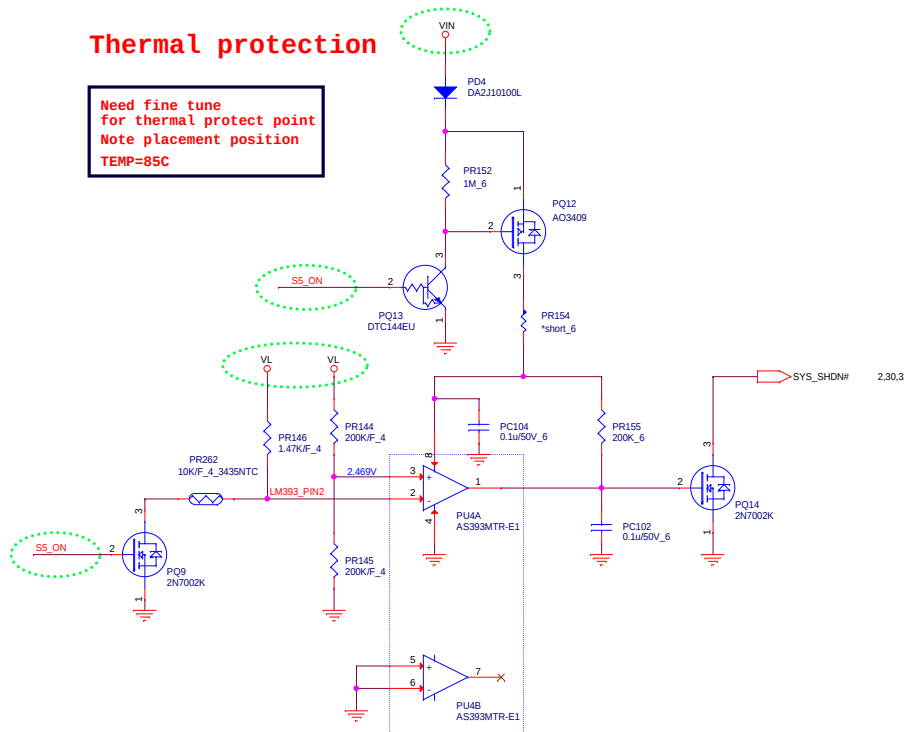
|                    |
|--------------------|
| R_AC_LL : 10.3mV/A |
|--------------------|

# Laptopblue



## Thermal protection

Need fine tune  
for thermal protect point  
Note placement position  
TEMP=85C



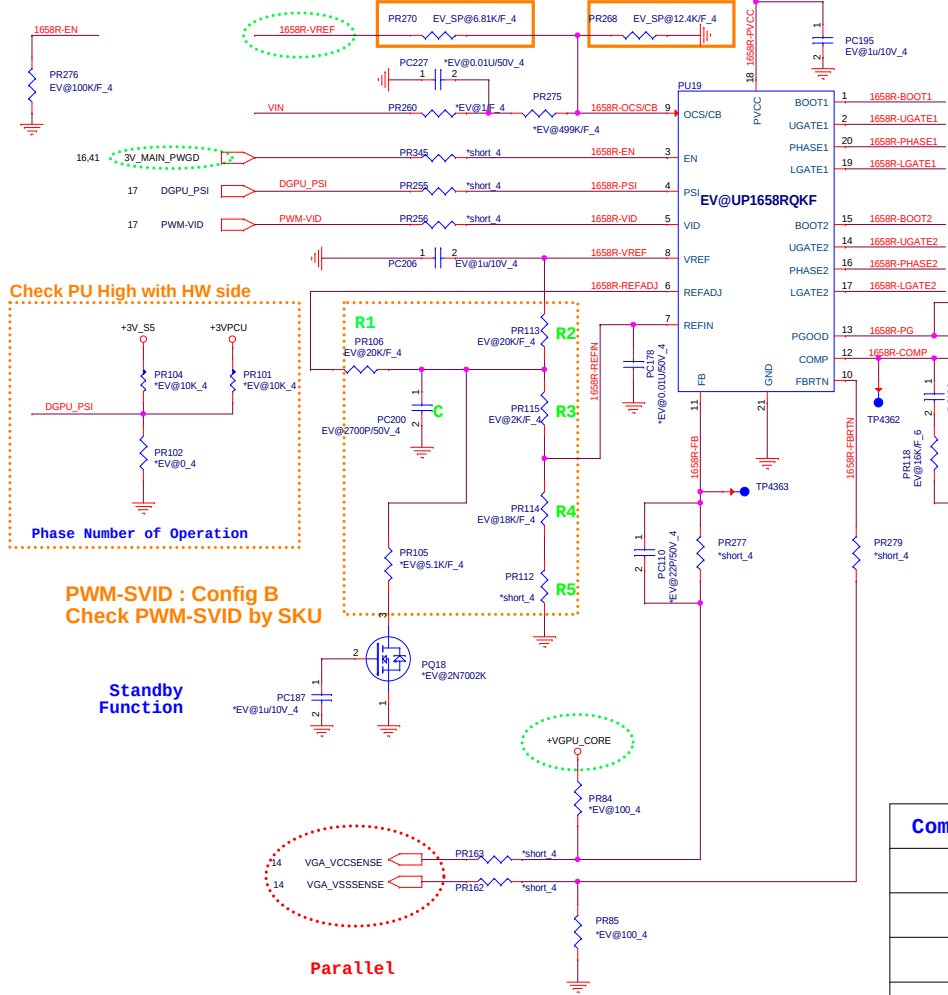
Quanta Computer Inc.  
PROJECT : ZAA

| Size  | Document Number             | Rev            |
|-------|-----------------------------|----------------|
|       | +1.8V/+1.5V/Thermal Protect | 1A             |
| Date: | Monday, March 28, 2016      | Sheet 39 of 48 |

## Laptopblue

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| 940 (23W) : PR268 CS31242FB13 12.4K/F_4 | 950(40W) : PR268 CS31002FB26 10K/F_4   |
| 940 (23W) : PR270 CS26812FB13 6.81K/F_4 | 950(40W) : PR270 CS25362FB15 5.36K/F_4 |
| 940 (23W) : PQ41 Unstuff                | 950(40W) : PQ41 B4M64140000 AON6414AL  |
| 940 (23W) : PQ42 Unstuff                | 950(40W) : PQ42 B4M67520000 AON6752    |
| 940 (23W) : PQ30 Unstuff                | 950(40W) : PQ30 B4M64140000 AON6414AL  |
| 940 (23W) : PQ34 Unstuff                | 950(40W) : PQ34 B4M67520000 AON6752    |

## Double Check OCP SETTING



| Component | Value | Config B |
|-----------|-------|----------|
| R1        |       | 20K      |
| R2        |       | 20K      |
| R3        |       | 2K       |
| R4        |       | 18K      |
| R5        |       | 0-ohm    |
| C         |       | 2.7nF    |

N16S-GT(23W/GDDR5)  
OpenVR Config:B

+VGPU\_CORE  
Continue current:26.5A  
Peak current:53A  
OCP:72A  
FSW:300KHz  
L/L=0mV/A

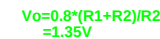
N16E-GR(GDDR5)  
OpenVR Config:B

+VGPU\_CORE  
Continue current:62A  
Peak current:119A  
OCP:144A  
FSW:300KHz  
L/L=0mV/A

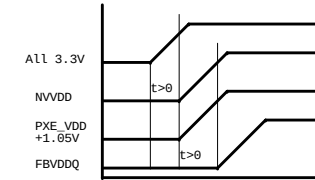
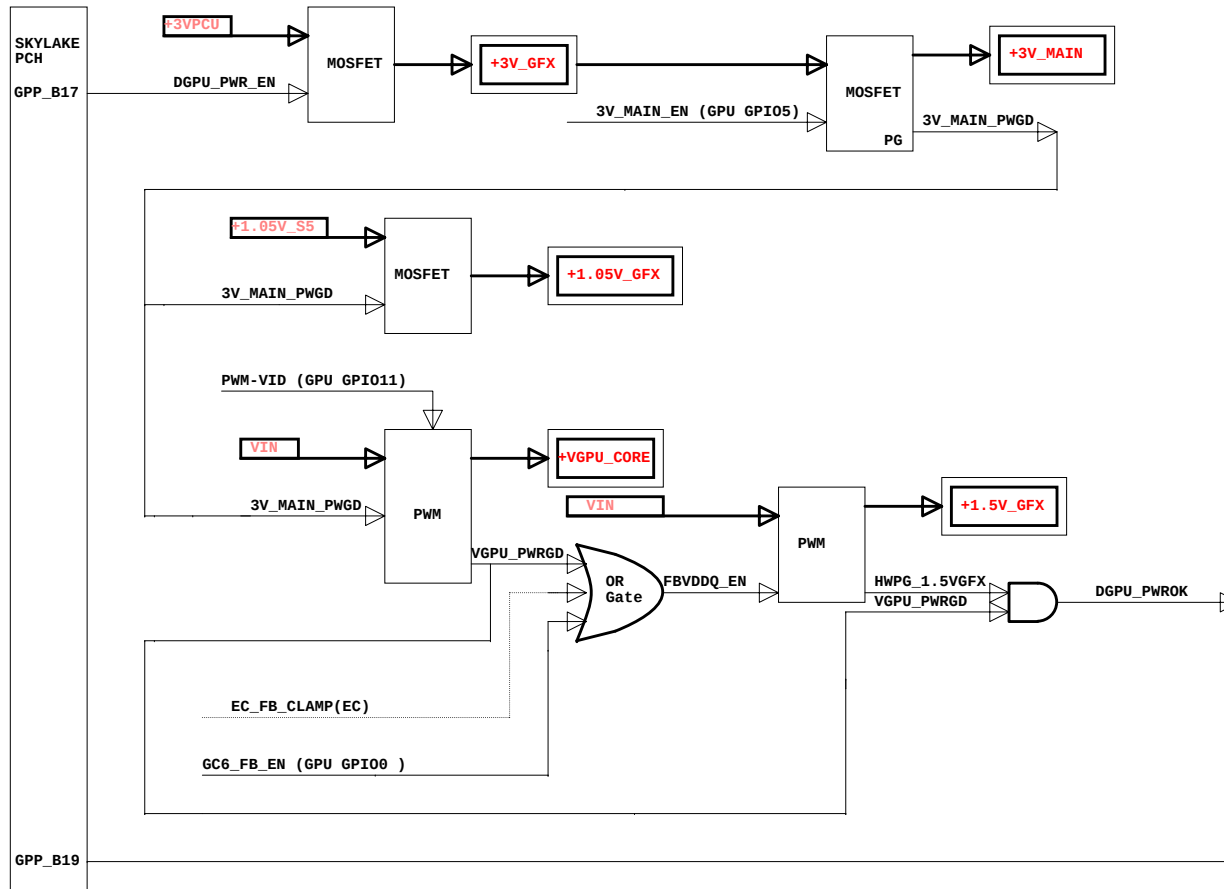
+1.05V\_GFX  
TDC : 1.84A  
PEAK : 2.45A  
Width : 100mil



+1.35V\_GFX  
1.35 Volt +/- 5%  
TDC : 7.74A  
PEAK : 10.32A  
Width : 320mil

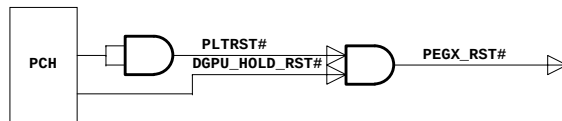


## VGA power up sequence

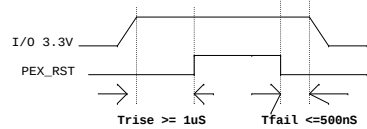


N15x Power on sequence  
Notes: -All 3.3V includes all rails powered at 3.3V  
-PEX\_VDD 1.05V includes all rails that are shared

## VGA Reset



### PEX\_RST timing



## Non Deep Sx

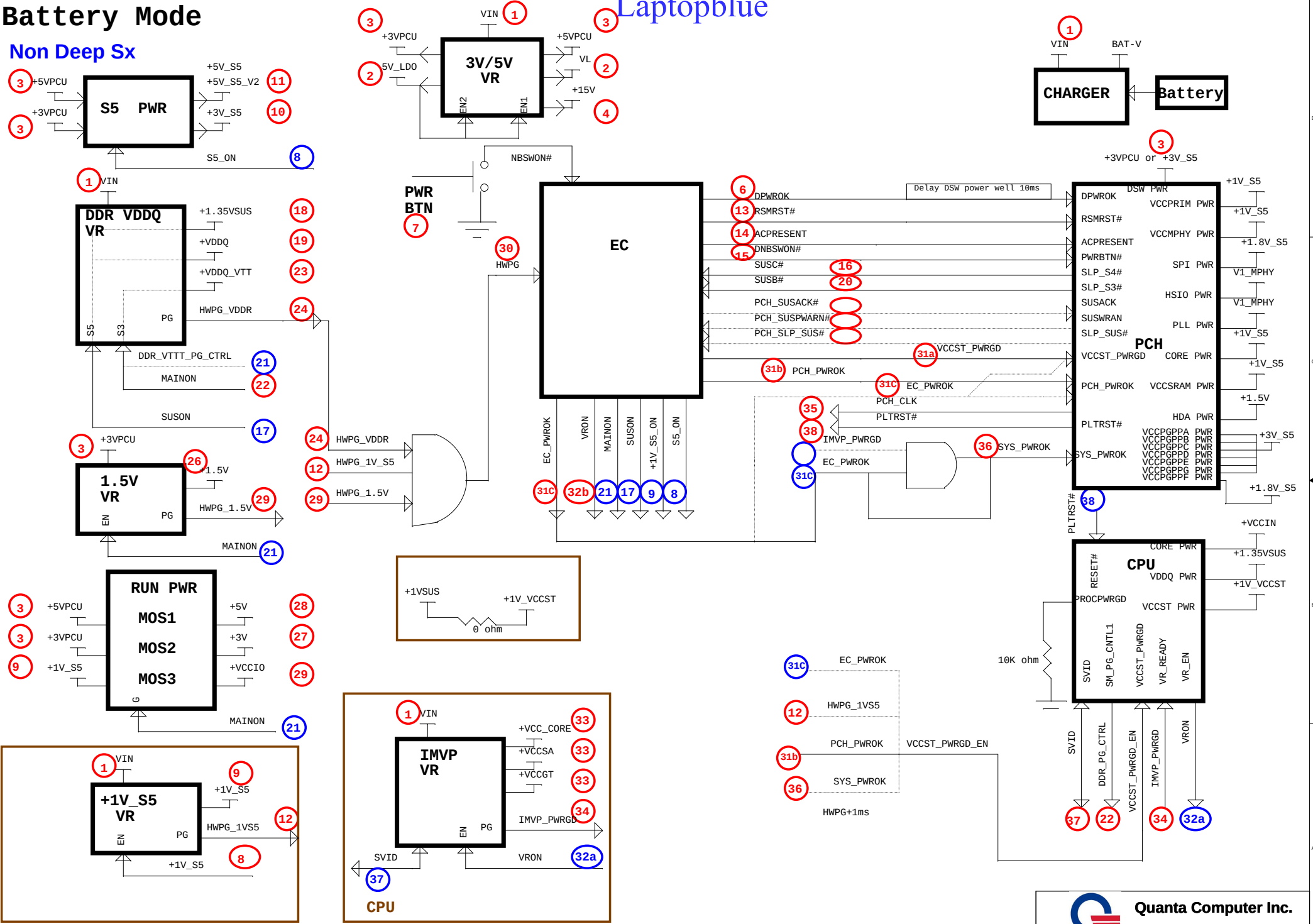
The diagram illustrates the power sequence for the ZAA project, showing the connection between the CHARGER, Battery, PCH (Platform Controller Hub), and CPU (Central Processing Unit) components.

**CHARGER:** Connected to VIN (1) and BAT-V. It provides power to the Battery.

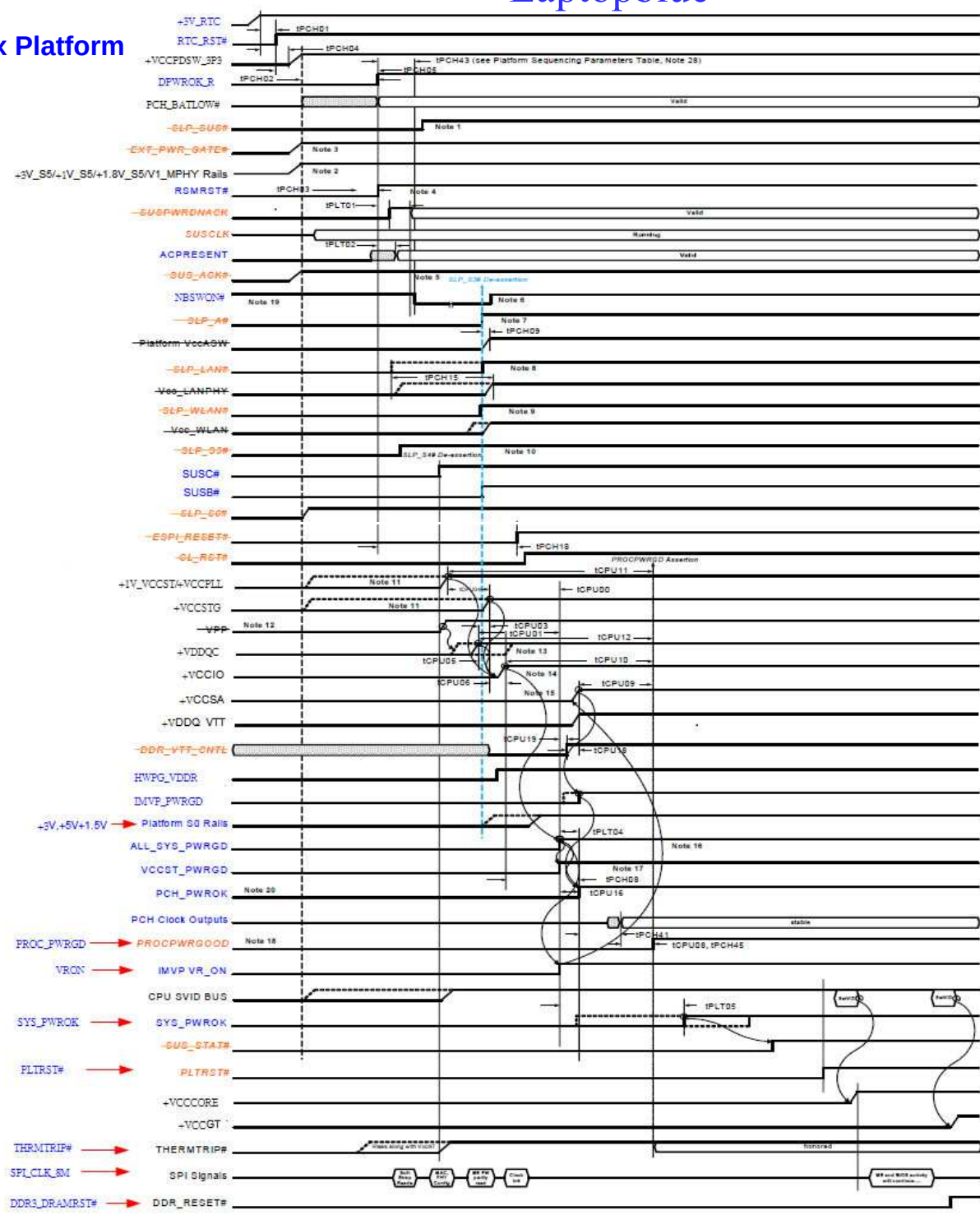
**Battery:** Provides power to the PCH.

**PCH (Platform Controller Hub):** Receives power from the Battery (+3VPCU or +3V\_S5, 3). It has multiple power pins connected to various voltage rails:

- DPWR0K, RSMRST#, ACPRESENT, PWRBTN#, SLP\_S4#, SLP\_S3#, SUSACK, SUSWRAN, SLP\_SUS#
- VCCST\_PWRGD, PCH\_PWR0K, PLTRST#
- VCCP0K, VCCP1K, VCCP2K, VCCP3K, VCCP4K, VCCP5K, VCCP6K, VCCP7K, VCCP8K, VCCP9K, VCCP10K, VCCP11K, VCCP12K, VCCP13K, VCCP14K, VCCP15K, VCCP16K, VCCP17K, VCCP18K, VCCP19K, VCCP20K, VCCP21K, VCCP22K, VCCP23K, VCCP24K, VCCP25K, VCCP26K, VCCP27K, VCCP28K, VCCP29K, VCCP30K, VCCP31K, VCCP32K, VCCP33K, VCCP34K, VCCP35K, VCCP36K, VCCP37K, VCCP38K, VCCP39K, VCCP40K, VCCP41K, VCCP42K, VCCP43K, VCCP44K, VCCP45K, VCCP46K, VCCP47K, VCCP48K, VCCP49K, VCCP50K, VCCP51K, VCCP52K, VCCP53K, VCCP54K, VCCP55K, VCCP56K, VCCP57K, VCCP58K, VCCP59K, VCCP60K, VCCP61K, VCCP62K, VCCP63K, VCCP64K, VCCP65K, VCCP66K, VCCP67K, VCCP68K, VCCP69K, VCCP70K, VCCP71K, VCCP72K, VCCP73K, VCCP74K, VCCP75K, VCCP76K, VCCP77K, VCCP78K, VCCP79K, VCCP80K, VCCP81K, VCCP82K, VCCP83K, VCCP84K, VCCP85K, VCCP86K, VCCP87K, VCCP88K, VCCP89K, VCCP90K, VCCP91K, VCCP92K, VCCP93K, VCCP94K, VCCP95K, VCCP96K, VCCP97K, VCCP98K, VCCP99K, VCCP100K, VCCP101K, VCCP102K, VCCP103K, VCCP104K, VCCP105K, VCCP106K, VCCP107K, VCCP108K, VCCP109K, VCCP110K, VCCP111K, VCCP112K, VCCP113K, VCCP114K, VCCP115K, VCCP116K, VCCP117K, VCCP118K, VCCP119K, VCCP120K, VCCP121K, VCCP122K, VCCP123K, VCCP124K, VCCP125K, VCCP126K, VCCP127K, VCCP128K, VCCP129K, VCCP130K, VCCP131K, VCCP132K, VCCP133K, VCCP134K, VCCP135K, VCCP136K, VCCP137K, VCCP138K, VCCP139K, VCCP140K, VCCP141K, VCCP142K, VCCP143K, VCCP144K, VCCP145K, VCCP146K, VCCP147K, VCCP148K, VCCP149K, VCCP150K, VCCP151K, VCCP152K, VCCP153K, VCCP154K, VCCP155K, VCCP156K, VCCP157K, VCCP158K, VCCP159K, VCCP160K, VCCP161K, VCCP162K, VCCP163K, VCCP164K, VCCP165K, VCCP166K, VCCP167K, VCCP168K, VCCP169K, VCCP170K, VCCP171K, VCCP172K, VCCP173K, VCCP174K, VCCP175K, VCCP176K, VCCP177K, VCCP178K, VCCP179K, VCCP180K, VCCP181K, VCCP182K, VCCP183K, VCCP184K, VCCP185K, VCCP186K, VCCP187K, VCCP188K, VCCP189K, VCCP190K, VCCP191K, VCCP192K, VCCP193K, VCCP194K, VCCP195K, VCCP196K, VCCP197K, VCCP198K, VCCP199K, VCCP200K, VCCP201K, VCCP202K, VCCP203K, VCCP204K, VCCP205K, VCCP206K, VCCP207K, VCCP208K, VCCP209K, VCCP210K, VCCP211K, VCCP212K, VCCP213K, VCCP214K, VCCP215K, VCCP216K, VCCP217K, VCCP218K, VCCP219K, VCCP220K, VCCP221K, VCCP222K, VCCP223K, VCCP224K, VCCP225K, VCCP226K, VCCP227K, VCCP228K, VCCP229K, VCCP230K, VCCP231K, VCCP232K, VCCP233K, VCCP234K, VCCP235K, VCCP236K, VCCP237K, VCCP238K, VCCP239K, VCCP240K, VCCP241K, VCCP242K, VCCP243K, VCCP244K, VCCP245K, VCCP246K, VCCP247K, VCCP248K, VCCP249K, VCCP250K, VCCP251K, VCCP252K, VCCP253K, VCCP254K, VCCP255K, VCCP256K, VCCP257K, VCCP258K, VCCP259K, VCCP260K, VCCP261K, VCCP262K, VCCP263K, VCCP264K, VCCP265K, VCCP266K, VCCP267K, VCCP268K, VCCP269K, VCCP270K, VCCP271K, VCCP272K, VCCP273K, VCCP274K, VCCP275K, VCCP276K, VCCP277K, VCCP278K, VCCP279K, VCCP280K, VCCP281K, VCCP282K, VCCP283K, VCCP284K, VCCP285K, VCCP286K, VCCP287K, VCCP288K, VCCP289K, VCCP290K, VCCP291K, VCCP292K, VCCP293K, VCCP294K, VCCP295K, VCCP296K, VCCP297K, VCCP298K, VCCP299K, VCCP300K, VCCP301K, VCCP302K, VCCP303K, VCCP304K, VCCP305K, VCCP306K, VCCP307K, VCCP308K, VCCP309K, VCCP310K, VCCP311K, VCCP312K, VCCP313K, VCCP314K, VCCP315K, VCCP316K, VCCP317K, VCCP318K, VCCP319K, VCCP320K, VCCP321K, VCCP322K, VCCP323K, VCCP324K, VCCP325K, VCCP326K, VCCP327K, VCCP328K, VCCP329K, VCCP330K, VCCP331K, VCCP332K, VCCP333K, VCCP334K, VCCP335K, VCCP336K, VCCP337K, VCCP338K, VCCP339K, VCCP340K, VCCP341K, VCCP342K, VCCP343K, VCCP344K, VCCP345K, VCCP346K, VCCP347K, VCCP348K, VCCP349K, VCCP350K, VCCP351K, VCCP352K, VCCP353K, VCCP354K, VCCP355K, VCCP356K, VCCP357K, VCCP358K, VCCP359K, VCCP360K, VCCP361K, VCCP362K, VCCP363K, VCCP364K, VCCP365K, VCCP366K, VCCP367K, VCCP368K, VCCP369K, VCCP370K, VCCP371K, VCCP372K, VCCP373K, VCCP374K, VCCP375K, VCCP376K, VCCP377K, VCCP378K, VCCP379K, VCCP380K, VCCP381K, VCCP382K, VCCP383K, VCCP384K, VCCP385K, VCCP386K, VCCP387K, VCCP388K, VCCP389K, VCCP390K, VCCP391K, VCCP392K, VCCP393K, VCCP394K, VCCP395K, VCCP396K, VCCP397K, VCCP398K, VCCP399K, VCCP400K, VCCP401K, VCCP402K, VCCP403K, VCCP404K, VCCP405K, VCCP406K, VCCP407K, VCCP408K, VCCP409K, VCCP410K, VCCP411K, VCCP412K, VCCP413K, VCCP414K, VCCP415K, VCCP416K, VCCP417K, VCCP418K, VCCP419K, VCCP420K, VCCP421K, VCCP422K, VCCP423K, VCCP424K, VCCP425K, VCCP426K, VCCP427K, VCCP428K, VCCP429K, VCCP430K, VCCP431K, VCCP432K, VCCP433K, VCCP434K, VCCP435K, VCCP436K, VCCP437K, VCCP438K, VCCP439K, VCCP440K, VCCP441K, VCCP442K, VCCP443K, VCCP444K, VCCP445K, VCCP446K, VCCP447K, VCCP448K, VCCP449K, VCCP450K, VCCP451K, VCCP452K, VCCP453K, VCCP454K, VCCP455K, VCCP456K, VCCP457K, VCCP458K, VCCP459K, VCCP460K, VCCP461K, VCCP462K, VCCP463K, VCCP464K, VCCP465K, VCCP466K, VCCP467K, VCCP468K, VCCP469K, VCCP470K, VCCP471K, VCCP472K, VCCP473K, VCCP474K, VCCP475K, VCCP476K, VCCP477K, VCCP478K, VCCP479K, VCCP480K, VCCP481K, VCCP482K, VCCP483K, VCCP484K, VCCP485K, VCCP486K, VCCP487K, VCCP488K, VCCP489K, VCCP490K, VCCP491K, VCCP492K, VCCP493K, VCCP494K, VCCP49

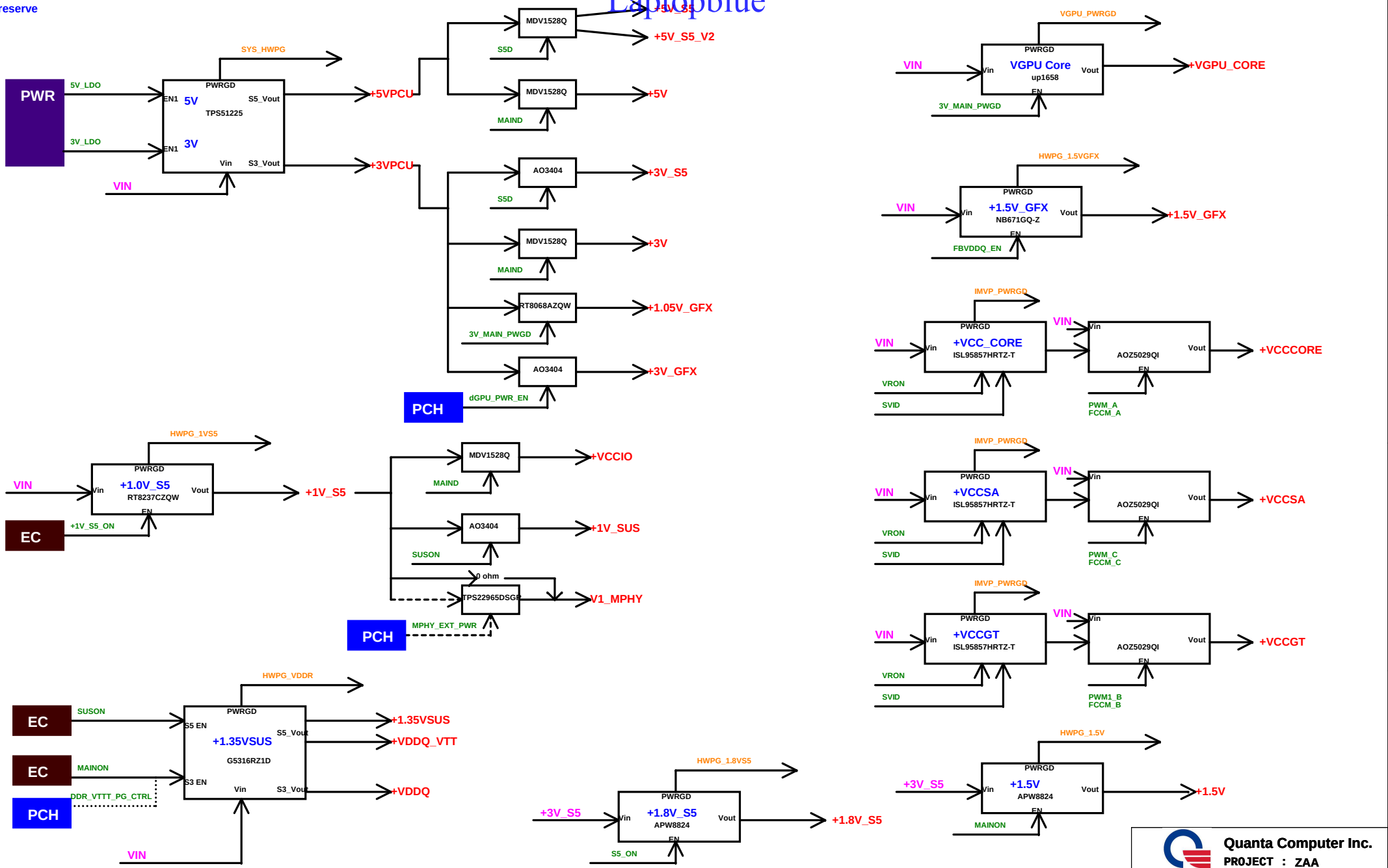


## Skylake U Non-Deep Sx Platform Power on sequence



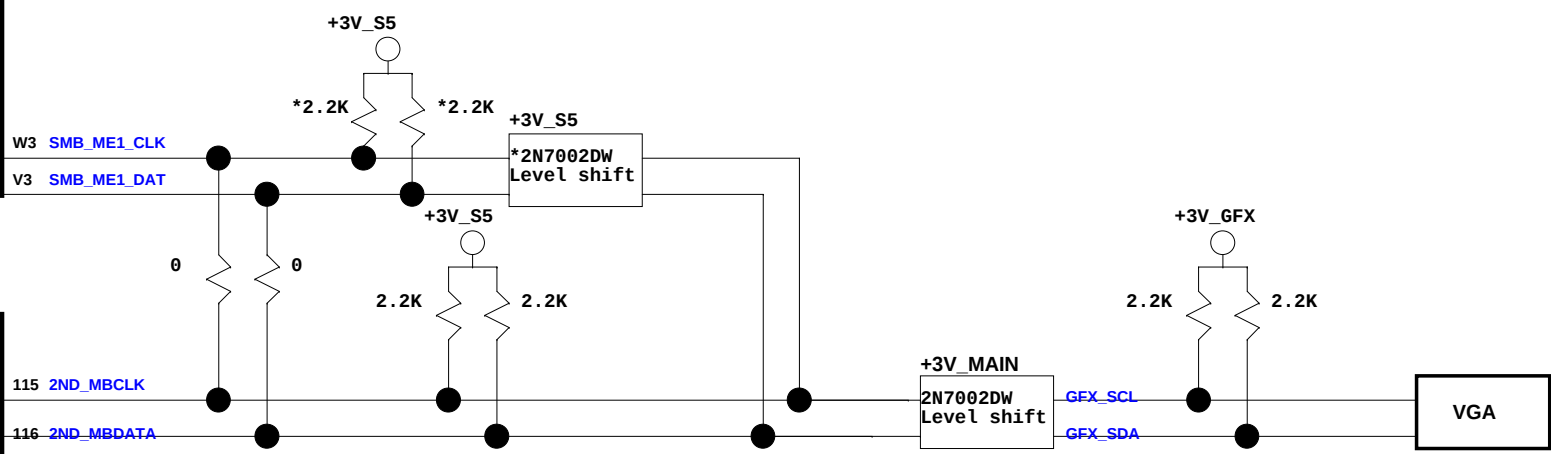
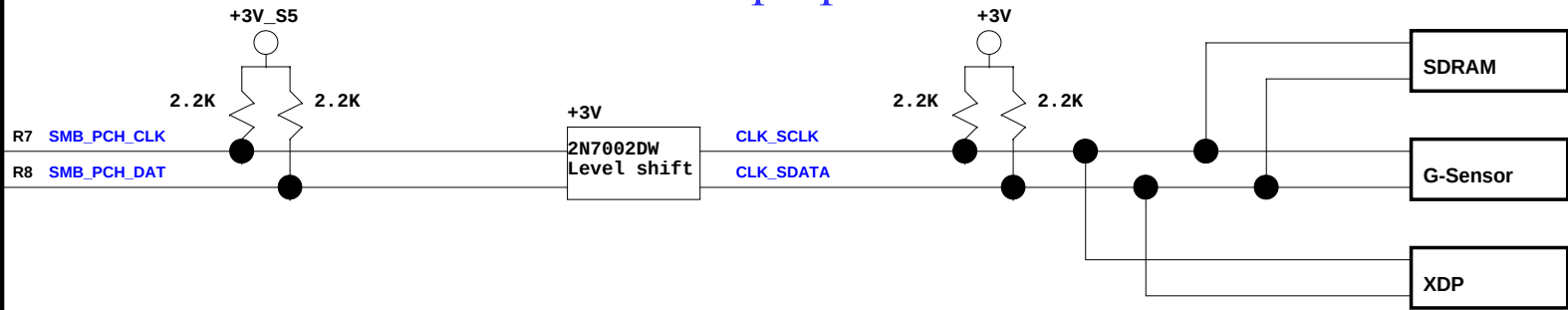
實線表default  
虛線表reserve

Laptopblue

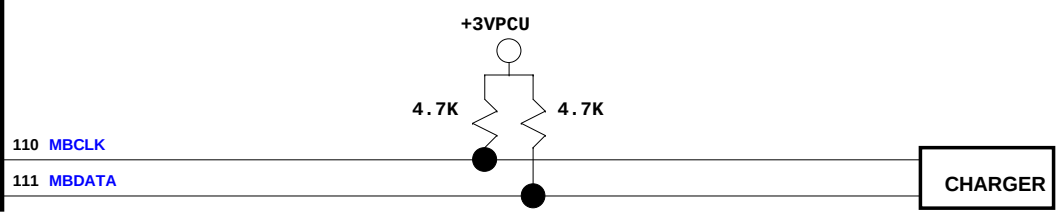


Laptopblue

Skylake U



EC  
IT8987CX



# Laptopblue

| Stage | Date  | CHANGE LIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A     | 11/25 | 1. FIRST RELEASED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| B     | 12/11 | 1. Update DFDS15FR421, DFFC28FR026, DFFC08FR055, DFFC04FR127 to new footprint.<br>2. Remove IOAC@ part and change BOARD_ID3 to low (page 8.)<br>3. Change FAN connector CN8 to 3-pin, and add releven circuits. (page 28.)<br>4. For FAN function change, swap U45 pin-81 with pin-32. (page 30.)<br>5. Reserve G-sensor circuit. (page 28.)<br>6. Internal speaker signal short pad R419, R414, R406 & R404 change to 0603 0 ohm. (page 25.)<br>7. Remove extra hall-sensor circuit on 17". (page 22.)<br>8. Modify touchpad INT circuit by using R164. (page 4.)<br>9. Add EC52 TVS diode. (page 30.)<br>10. Dual DMIC LR pin change to pull-high. (page 25.)<br>11. Change R4314 & R4306 of value for KA/KB (page 17.)<br>12. Change R247 value from 0 to 2.2 Ohm (CS-2204FA00) (page 24.)<br>13. Change R251, R262, R269, R11265 footprint from 0603 to 0805 (page 24.)<br>14. Reserve R11282 for battery. (page 30.)<br>15. Change CN23 H=5.0 part number (page 28.)<br>16. R512 Change to 1% tolerance part number (page 6.) |
|       | 12/14 | 1. Update CN6, CN8, CN18 part nmuber and foot print (page 25.)<br>2. Change U1006 part number to AL000103006 (page 26.)<br>3. Q0060 change to stuff (page 6.)<br>4. R628, R512, R630, R651, R4006 Change to 1% tolerance part number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|       | 12/15 | 1. Update HOLE1, HOLE2 foot print to new Rev (page 27.)<br>2. Add HOLE25, PAD14 foot print (page 27.)<br>3. Change CN13, CN16 foot print to new Rev (page 23.)<br>4. Change cap CP to normal cap for keyboard (page 22.)<br>5. Reserve POA(FPD) circuit (page 26.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|       | 12/20 | 1. Change PJ3 foot print to 50320-0040n-001-4p-l-smt for SMT issue (page 31.)<br>2. Change CPU 0201 Cap to 0402 besides C245, C196, C269, C285, C235 (page 5.)<br>3. Change SW4 foot print and part number for B-stage, and swap the pin (page 30.)<br>4. Modify some SPAD and HOLE (page 27.)<br>5. Change CN6 foot print to 50591-00401-001-4p-l (page 28.)<br>6. Modify U22 Block GND pin 18-22 (page 29.)<br>7. Modify CN12, JDIM1, JDIM2, CN23, SW1, SW2 foot print to newer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|       | 12/21 | 1. Change CN2021 foot print to ub31-dx07b024xj1ar1000-24p (page 20.)<br>2. Change CN10 foot print to ngff-nase0-s6701-ts48-ke-smt (page 27.)<br>3. Add R11284 reserve DMIC power supply (page 25.)<br>4. Change C739 to 22pF and stuff for bit clock issue (page 4.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|       | 12/22 | 1. Change C1255, C1257, C1265, C1270, C1327, C4728 to 10uF cap for cost down (page 12, page 13.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|       | 12/23 | 1. Modify R211, R152 to +3V_S5 for +3V leakage issue (page 8, page2.)<br>2. Modify R577 to reserved (NC), because no used (page 2.)<br>3. Add C4817, C4818, C4819, C4820 for EMI issue (page 20.)<br>4. Change CN2021 foot print to ub31-dx07b024xj1ar1000-24p-smt (page 20.)<br>5. Change CN13, C16 foot print to ub3-yusb0021-p001a-9p-smt (page 29.)<br>6. Stuff R786, R568, R570, and unstuff U33, C628 (page 2, page 6.)<br>7. Swap PJ3 (page 31.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|       | 12/24 | 1. Change CN4 foot print to sdcard-psdat4-11glbs1nn4h4-11p (page 24.)<br>2. Change R11267, R11270 to short pad, and change R11268, R11271 form 33 ohm to 47 ohm (page 22.)<br>3. Unstuff C319, C333, C336, C716, C718 (page 22.)<br>4. Reserve R11285, R11286 pull up to +3V, and R11287 pull down to GND for CRT issue (page 21.)<br>5. Stuff R11286 for CRT issue (page 21.)<br>6. Remove all type-C re-driver short resistor and capacitor (page 20.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | 12/25 | 1. Change HOLE16 foot print to H-TC217BC197D126P2 (page 24.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|       | 12/29 | 1. Modify the power solution between GT2 and GT3e, see the table (page 36.)<br>2. Change the power value, PC10 to 1uF CH5101K9B01 (page 36.)<br>3. Change the power value, PC20 to 0.022uF CH3224K1B01 (page 36.)<br>4. Change the power value, PC28 to 560pF CH1566K1B09 (page 36.)<br>5. Change the power value, PC39 to 0.015uF CH3154K1B00 (page 36.)<br>6. Change the power value, PR220 to 475 ohm CS14752FB11 (page 36.)<br>7. Modify BOARD_ID7. GPU GT, KB, GTR PU 10k ohm, KA PD 10k. (page 8.)<br>8. Change the RTC clock crystal Y2 part number to BG3327680C6 (page 6.)<br>9. Change Q115, Q129 part number to BAM70020076 (page 19.)<br>10. Modify R11283 to +3V fixed the SSD issue (page 27.)<br>11. Change the HOLE16 NUT part number to MBZAA002010 (page 27.)                                                                                                                                                                                                                                                    |
| B2    | 1/7   | 1. Remove R11274 and mount R11277 for change equalizer setting from 6dB to 4dB (page. 23)<br>2. Change 15" and 17" keyboard part number to DFFC28FR030 (page 28.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|       | 1/18  | 1. Update the System Block Diagram (page 1.)<br>2. Update the part number option same as B-SMT BOM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|       | 1/19  | 1. Power team remove JUMP and change 0 ohm to shortpad (page 31-41.)<br>2. Modify some description, value and part number have blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|       | 1/20  | 1. Change C144, C150, C190, C199, C248, C645, C650, C659, C666, C690, C696, C697, C702 to 22uF, part number : CH6221M9A00 (page 5.)<br>2. Change C171, C178, C203, C219, C224, C226, C233, C236, C243, C251, C255, C272, C273, C282, C289, C691, C692, C693, C694, C703, C704, C705, C706, C707, C202, C210 to 10uF, part number : CH6101M9905 (page 5.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | 1/21  | 1. Change D2, D3, D4, D5, D4013, D4014, EC51, EC52 main source part number from BC040201Z00 to BC005725Z00.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                                                                                                                            |  |  |  |  |  |                |                        |     |                     |  |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|----------------|------------------------|-----|---------------------|--|------------------|
|  <b>Quanta Computer Inc.</b><br><b>PROJECT : ZAA</b>     |  |  |  |  |  | <b>DOC NO.</b> | <b>PROJECT MODEL :</b> | ZWA | <b>APPROVED BY:</b> |  | <b>DATE:</b>     |
| <div style="text-align: center;"> <b>Change list</b><br/> <small>File    Modify   March 20 2016   10:09am   E:\   .\d   .d2</small> </div> |  |  |  |  |  |                | <b>PART NUMBER:</b>    |     | <b>DRAWING BY:</b>  |  | <b>REVISION:</b> |

| Stage | Date | CHANGE LIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C     | 1/22 | 1. Reserve R11288, R11289, R11290, R11291 0ohm for POA NC function (page 26.)<br>2. Change Q115, Q129 main source to BAM70020002<br>3. Change Q5, Q4201 main source to BA039040020.<br>4. Change D7, D4000 main source to BCBAT54CZ01.<br>5. Change Q3, Q32, Q4301 main source to BAM70020047.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 1/26 | 1. Change CN5 part number to DFHS40FS036 (page 22.)<br>2. Change CN4 part number to DFHS11FR170 (page 4.)<br>3. Modify POA circuit for C-stage test (page 26.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 1/27 | 1. Change the TPS25810RVC pu-high power from +5V_S5_V2 to +3V_S5 (page 20.)<br>2. Reserve R11193 for Type-C detec issue (page 20.)<br>3. Change 0 Ohm to short pad R11,R14,R15,R28,R66,R67,R11129,R102,R194,R224,R229,R235,R790,R791,R792,R11111,R11112,R11113,R11140,R112,R135,R179,R180,R182,R185,R187,R188,R192,R193,R198,R240,R252,R11131,R164,R246,R339,R350,R11185,R11186,R550,R657,R718,R721,R782,R11153,R11283,R795,R796,R797,R816,R817,R818,R819,R820,R821,R11196,R11199,R11202,R11207,R11279,R11280,R11281,R948,R951,R956,R958,R959,R960,R11061,R11062,R11110,R11133,R11134,R11136,R11137,R11138,R11139,R11141,R11253,R11254,R11255,R11256,R11267,R11270,R4328,R4335,R2855,R2870,R318,R221,R403,R405,R742,R743,R725,R745,L19,R2872.<br>4. Add TYPE0 part at Type-C power function (page 32.)<br>5. Add BL0 part at keyboard back-light (page 28.)<br>6. Reserve 15" 17" Dual DMIC circuit part (page 25.)<br>7. Reserve C4821 for NAC function (page 24.) |
|       | 1/28 | 1. Add EV0 part at HOLE8, HOLE9 (page 27.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|       | 1/29 | 1. Stuff PR233, PR234 for GT3e power function (page 37.)<br>2. Add D220, D100 part at CPU power side (page 5.)<br>3. Change PR209, PR210 from short pad to 10 ohm (page 31.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|       | 2/2  | 1. Modify POA circuit for C-stage test (page 26.)<br>2. Remove HOLE25 because not used (page 25.)<br>3. Change HOLE13, HOLE14, HOLE15 foot print to H-C256D161P2 (page 25.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | 2/3  | 1. Modify POA circuit for C-stage test (page 26.)<br>2. Change PC115 from CH5104K9906 to CH41006K911 for FAE suggest (page31.)<br>3. Stuff PC138 for FAE suggest (page 37.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | 2/4  | 1. Update C-test BOM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|       | 2/16 | 1. Change PR6121 from CS31002FB26 to CS29312FB13 (page 32.)<br>2. Add C376 distinguish ZAA/ZAAA 15" serial and ZYJ/ZYI 17" serial (page 25.)<br>3. Change LED current limiting resistor blue and orange to 47 ohm and 124 ohm (page 28.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|       | 2/17 | 1. Change PU6010 from AL006575002 to AL051225003 for 3/5V IC noise issue (page 32.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| RAMP  | 2/22 | 1. Stuff PC6229, PC6212 for 3/5 voltage IC noise and charging issue (page 32, 37.)<br>2. Change PR183, PR184, PR209, PR210 to shortpad for 3/5 voltage IC noise and charging issue (page 31.)<br>3. Modify RP1 circuit (page 28.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|       | 3/3  | 1. Unstuff R694, R699 (page 27.)<br>2. Change 0 Ohm to shortpad R3, R4 R365, R640, R653, R659, R668, R11191, R11192, R16, R212, R404, R406, R414, R419, R752, R789, R237, R672.<br>3. Remove RP2, RP3, RP4, RP5, L69 for SMT colay issue. (page 20.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|       | 3/9  | 1. Change 0 Ohm to shortpad R11284, R2870, R2872, R11298, PR6296, R4329, R4336, PR112.<br>2. Change PR201, PR202 and PR211 to 1.5k, 97.6k and 267 ohm for GT2 and GT3 (page 36.)<br>3. Add PC6232, PC6233 at 3/5 V Vin (page 32.)<br>4. Change PL6013 from 1uH_7X7X3 to 2.2uH_7X7X3 (page 32.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 3/10 | 1. Change C714 and C724 value from 10p to 1000p for projector issue (page 22.)<br>2. Remove SW2 for RAMP-stage (page 30.)<br>3. Change PU10, PU11, PU20 footprint to son14-3x2-4-15p-smt (page 32.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|       | 3/15 | 1. Change RTC crystal circuit C351 and C362 value from 6.8p to 15p for EA issue (page 22.)<br>2. Modify GPU power solution for cost down (page 40.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|       | 3/25 | 1. Change R237 shortpad to 0 ohm for next PCB rev. F (page 27.)<br>2. Reserve POA function (page 26.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |