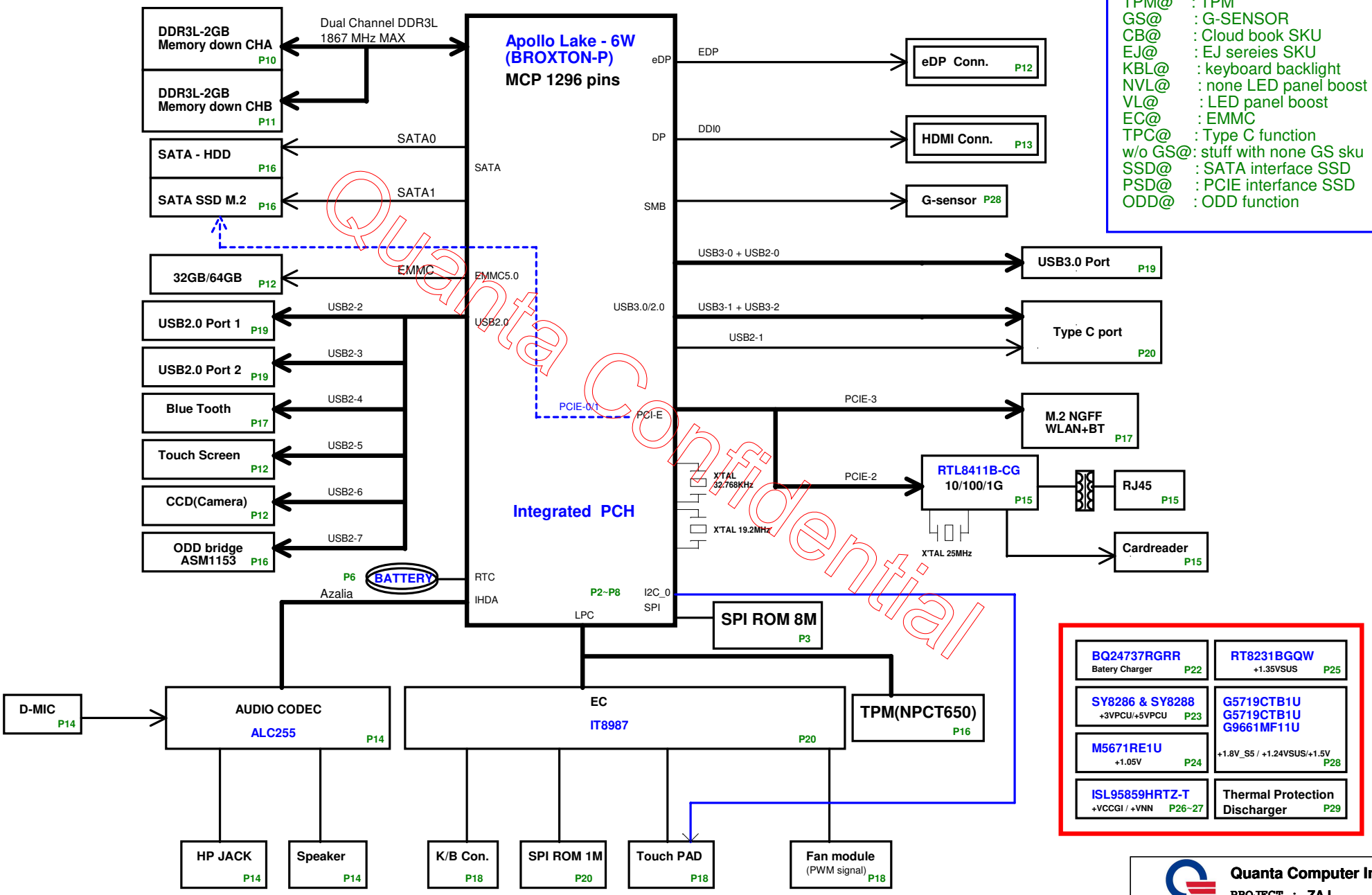
ZAJ/Z8P/Z8PA SYSTEM BLOCK DIAGRAM



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BOM

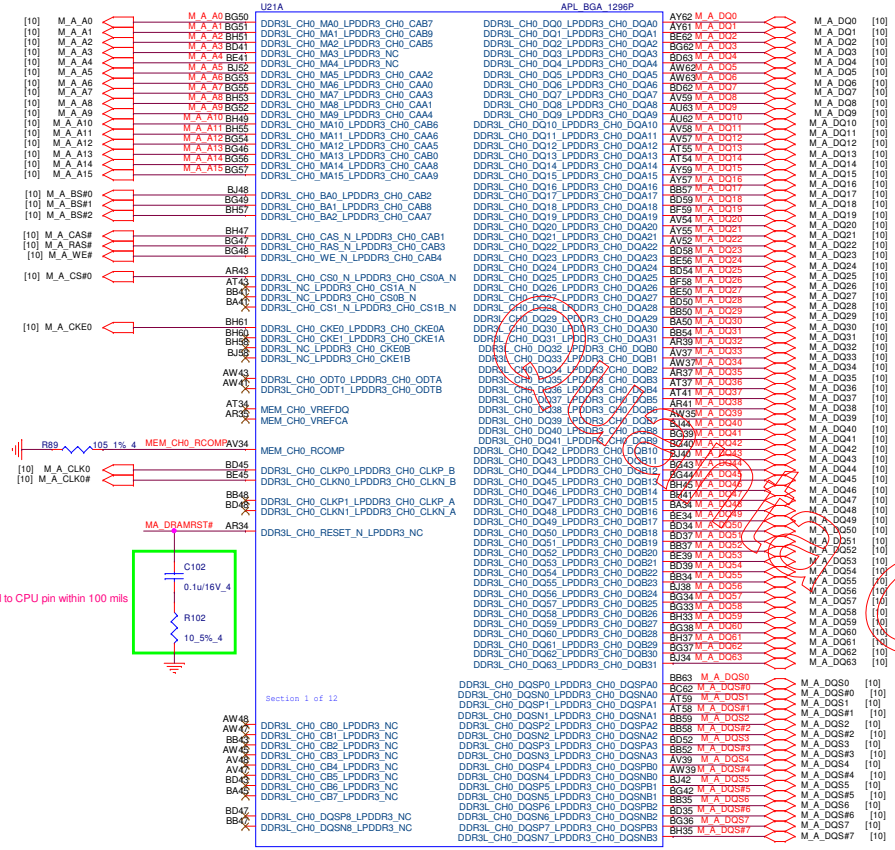
TPM@ : TPM
GS@ : G-SENSOR
CB@ : Cloud book SKU
EJ@ : EJ sereies SKU
KBL@ : keyboard backlight
NVL@ : none LED panel boost
VL@ : LED panel boost
EC@ : EMMC
TPC@ : Type C function
w/o GS@: stuff with none GS sku
SSD@ : SATA interface SSD
PSD@ : PCIE interfance SSD
ODD@ : ODD function

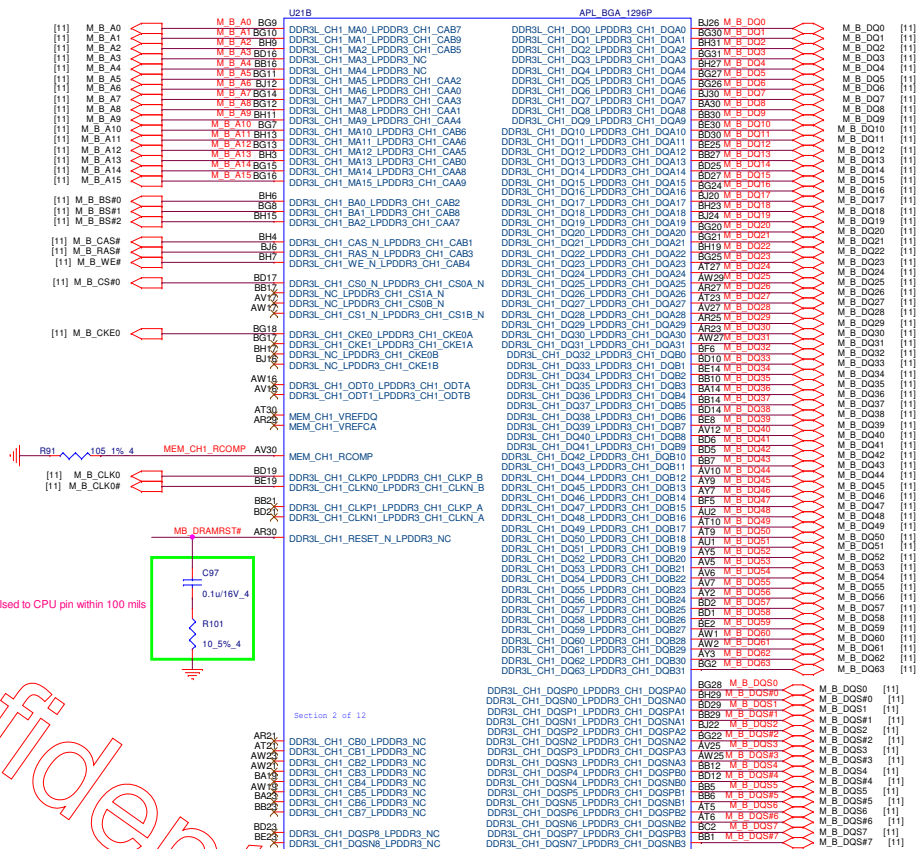
BQ24737RGRR Batery Charger P22	RT8231BGQW +1.35VSUS P25
SY8286 & SY8288 +3VPCU/+5VPCU P23	G5719CTB1U G5719CTB1U G9661MF11U
M5671RE1U +1.05V P24	+1.8V_S5 / +1.24VSUS/+1.5V P28
ISL95859HRTZ-T +VCCGI / +VNN P26~27	Thermal Protection Discharger P29

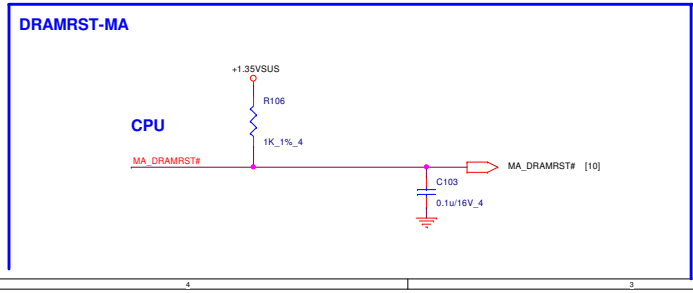
Quanta Computer Inc.
PROJECT : ZAJ
Size | Document Number | Rev 3A
Block Diagram
Date: Tuesday, March 21, 2017 | Sheet 1 of 34

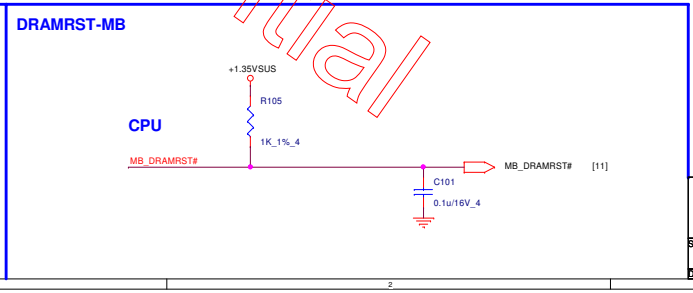
APL ULT (DDR3L)

02









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PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (MEMORY)	3A

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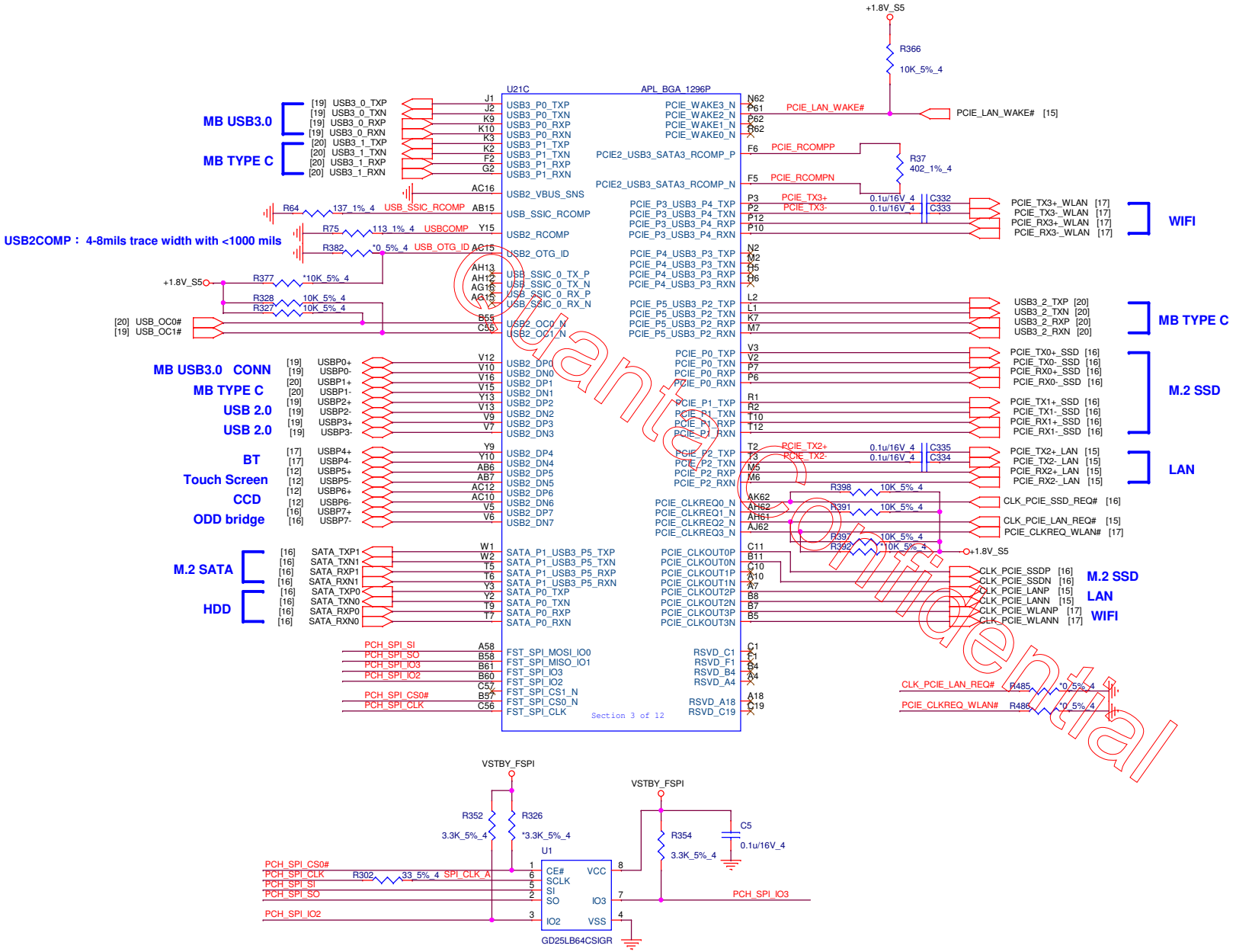
Apollo lake (SATA , ODD, CLK ,USB,PCIE)

03



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

SPI ROM	Vender	Size	Quanta P/N	Vender P/N
1.8V	WND	8M	AKE5EZN0N01	W25Q64FWSSIQ
	GGD	8M	AKE5EG-0Q01	GD25LB64CSIGR

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PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (PCIE/USB/SATA/SPI)	3A

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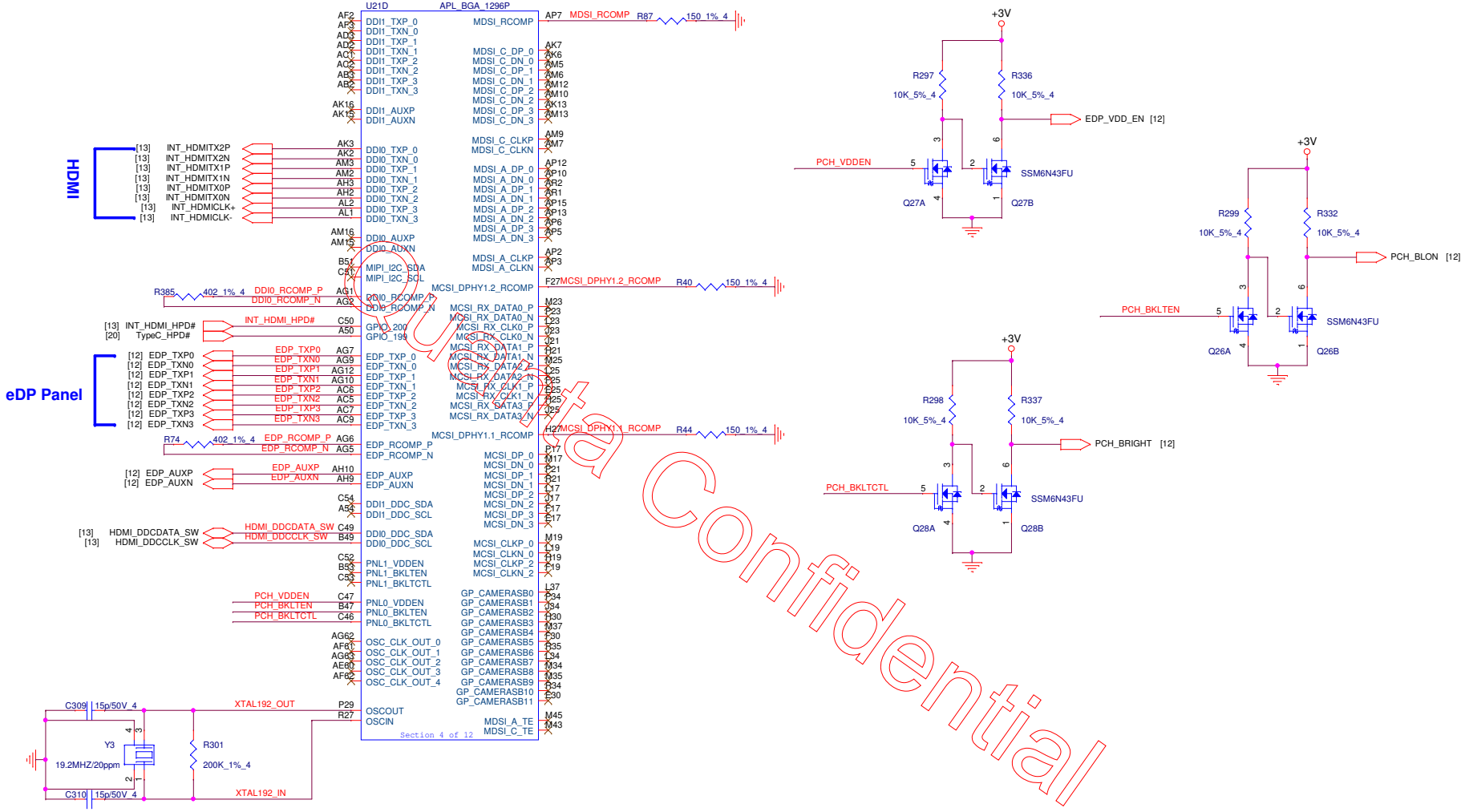
Apollolake (DISPLAY,eDP)



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PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (HDMI/eDP)	3A

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Apollolake (EMMC/LPC/I2C)

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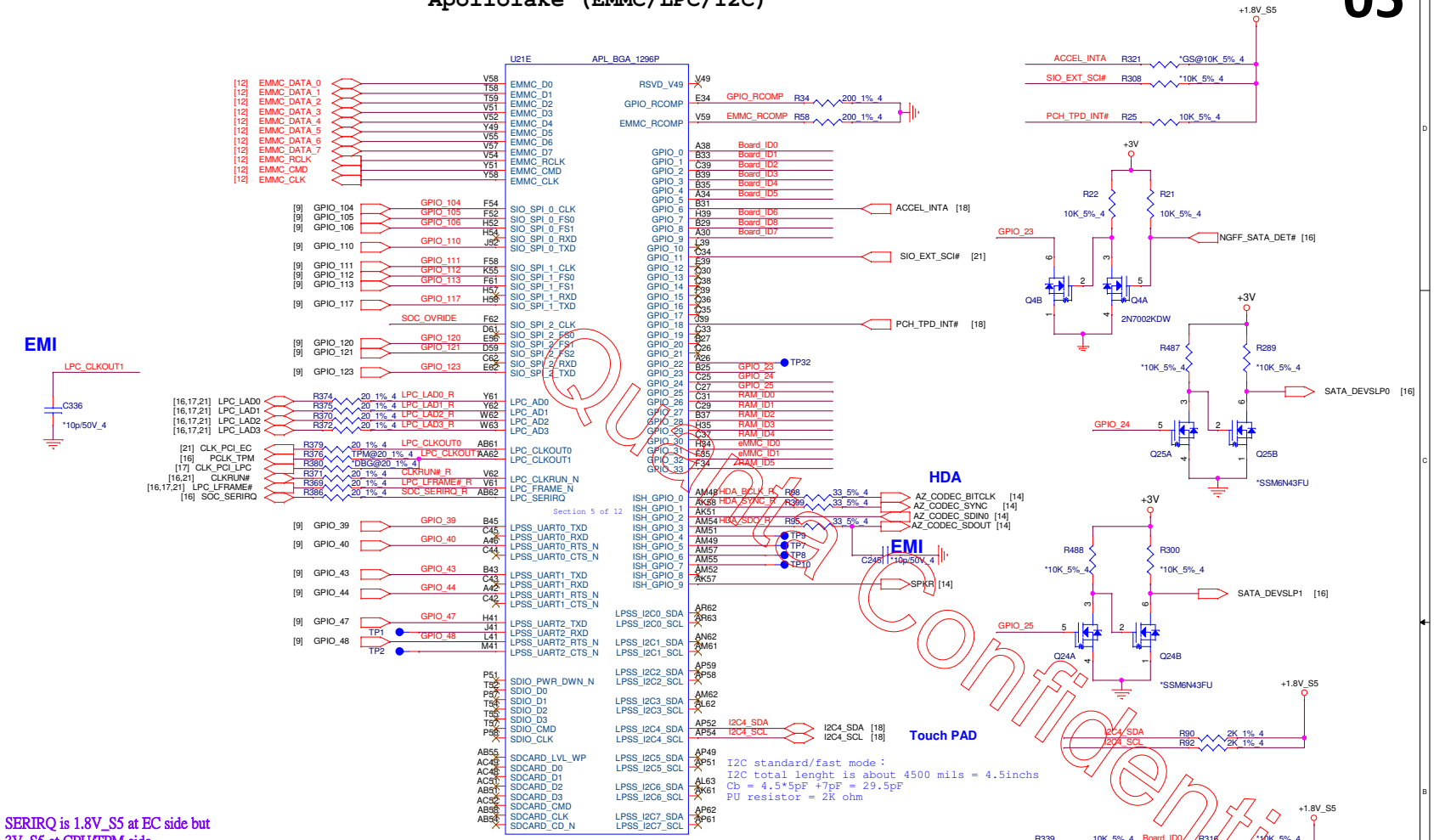
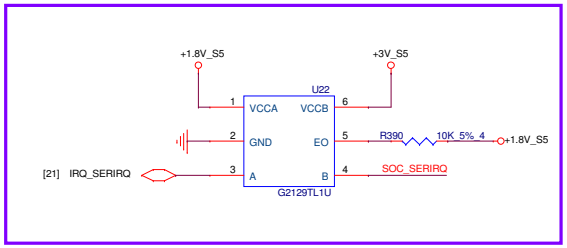
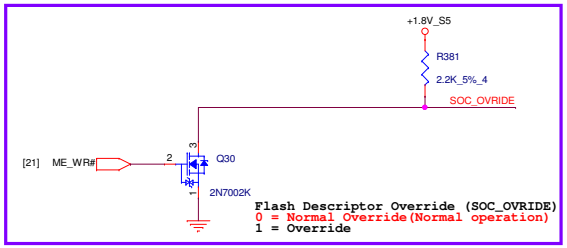


SERIRQ is 1.8V_S5 at EC side but
3V_S5 at CPU/TPM side





I2C standard/fast mode :
I2C total lenght is about 4500 mils = 4.5inchs
Cb = 4.5*5pF +7pF = 29.5pF
PU resistor = 2K ohm

HW strap ID	Strap pin Description
Board_ID0	0 = w/o type C 1 = w/ type C
Board_ID1	0 = with EMMC 1 = without EMMC <HDD only>
Board_ID2	0 = SATA SSD 1 = PCIE SSD
Board_ID3	0 = none G sensor 1 = G sensor
Board_ID4	0 = none TPM 1 = TPM
Board_ID5	0 = EJ HDD 1 = Cloud book SSD
Board_ID6	0 = EJ SSD 1 = Cloud book N/A
Board_ID7	0 = EJ series 1 = Cloud book
Board_ID8	0 = UMA 1 = GPU
RAM_ID0	0 = Single channel (A only) 1 = Dual channel (A & B)
RAM_ID1	0 = Channel A 2GB 1 = Channel A 4GB
RAM_ID2	0 = Channel B 2GB 1 = Channel B 4GB

RAM_ID5	RAM_ID4	RAM_ID3	Vender	Quanta PN	Description
0	0	0	Miron-2GB	AKD5JGSTL08	IC SDRAM(96P)MT41K256M16HA-125:E STNBSQ
0	0	1	Miron-2GB	AKD59GSTL12	IC SDRAM(96P)MT41K256M16TW-107:P STNBSQ
0	1	0	Hynix-2GB	AKD5PGSTW29	IC SDRAM(96P)H5TC4G63EFR-PBA(FBGA)STNBSQ
0	1	1	Samsung-2GB	AKD5JG0T504	IC SDRAM(96P)K4B4G1646E-BYK0(FBGA)STNBSQ

eMMC_ID1	eMMC_ID0	Vender
0	0	Samsung 32/64GB
0	1	Hynix 32/64GB
1	0	Kingston 32/64GB

Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (EMMC/LPC/SMB/ISH)	3A

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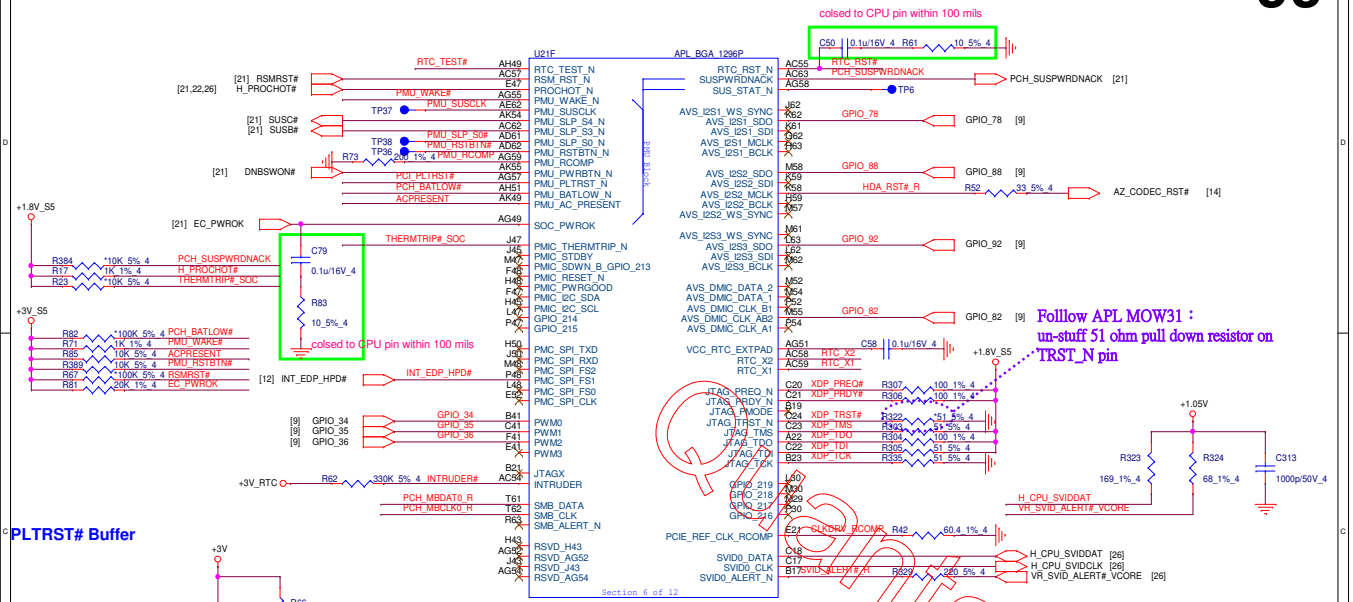
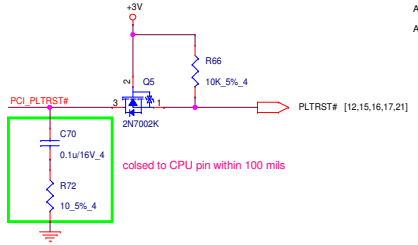
Apollolake (PMU/PMIC/HDA)

06

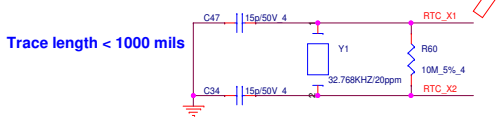


PLTRST# Buffer



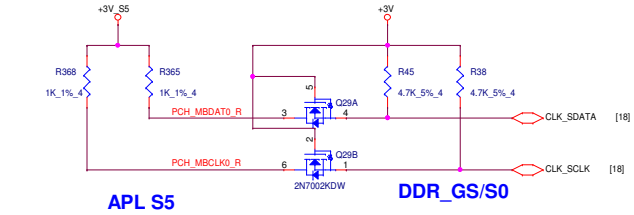
THERMALTRIP#

RTC Clock 32.768KHz (CPU)

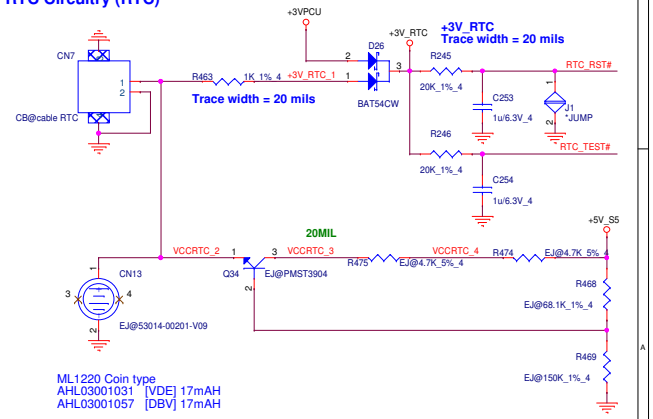


CH01006JB08 -> 10p
CH01506JB06 -> 15p
CH-6806TB01 -> 6.8p

SMBus(PCH)

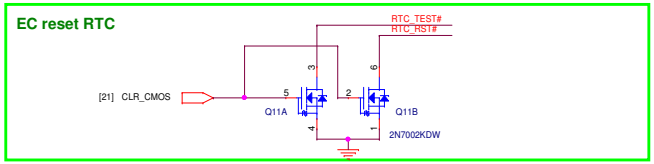


RTC Circuitry (RTC)



ML1220 Coin type
AHL03001031 [VDE] 17mAH
AHL03001057 [DBV] 17mAH

EC reset RTC



[21,22] SB_ACDC — R88 *S_4 — ACPRESENT

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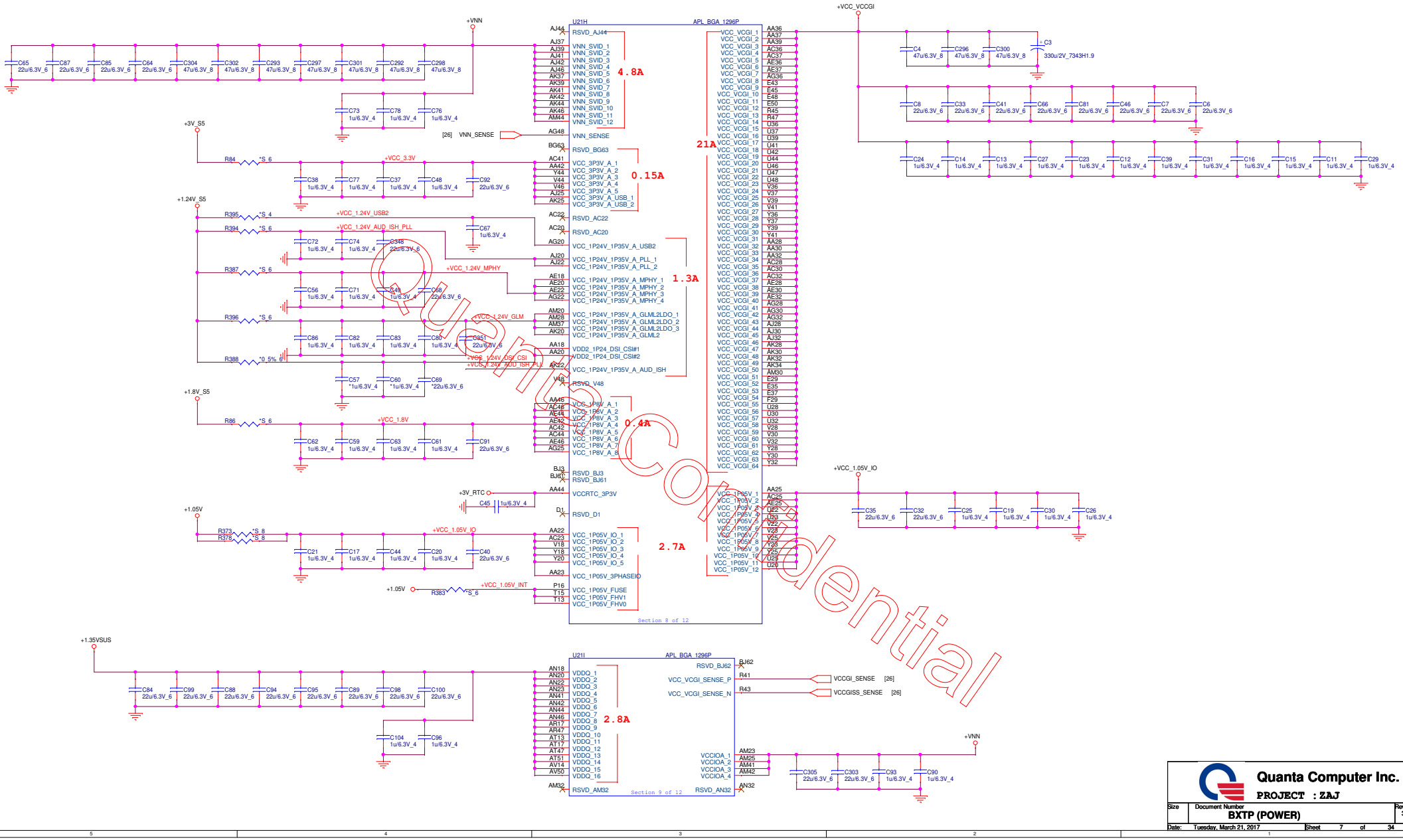
PROJECT : ZAJ		
Size	Document Number: BXTP (PMU/PMIC/HDA/RTC)	Rev 3A
Date: Tuesday, March 21, 2017	Sheet 6 of 34	

Apollolake (POWER)



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PROJECT : ZAJ		
Size	Document Number: BXTP (POWER)	Rev: 3A
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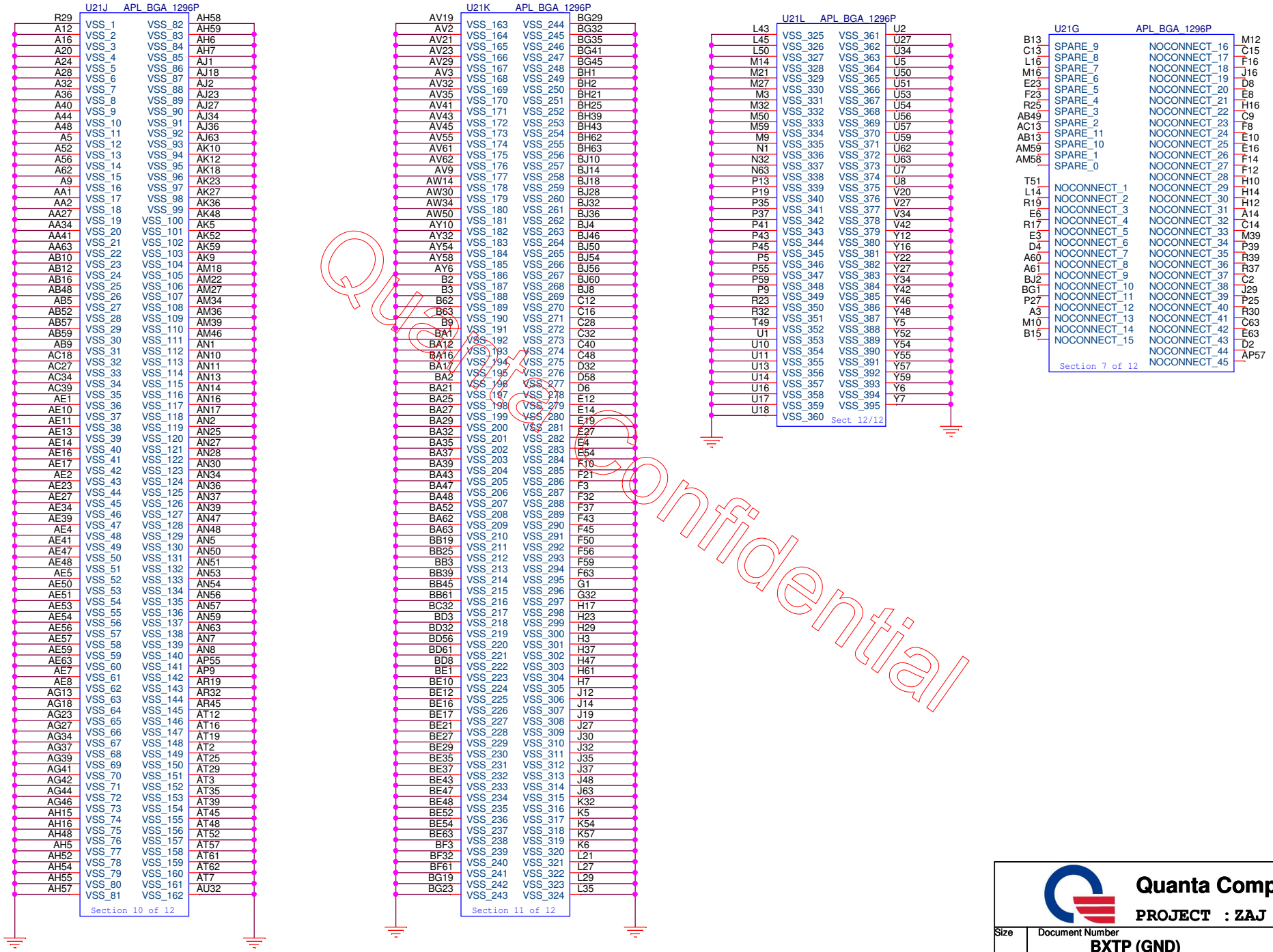
Apollolake ULT (GND)



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PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (GND)	3A
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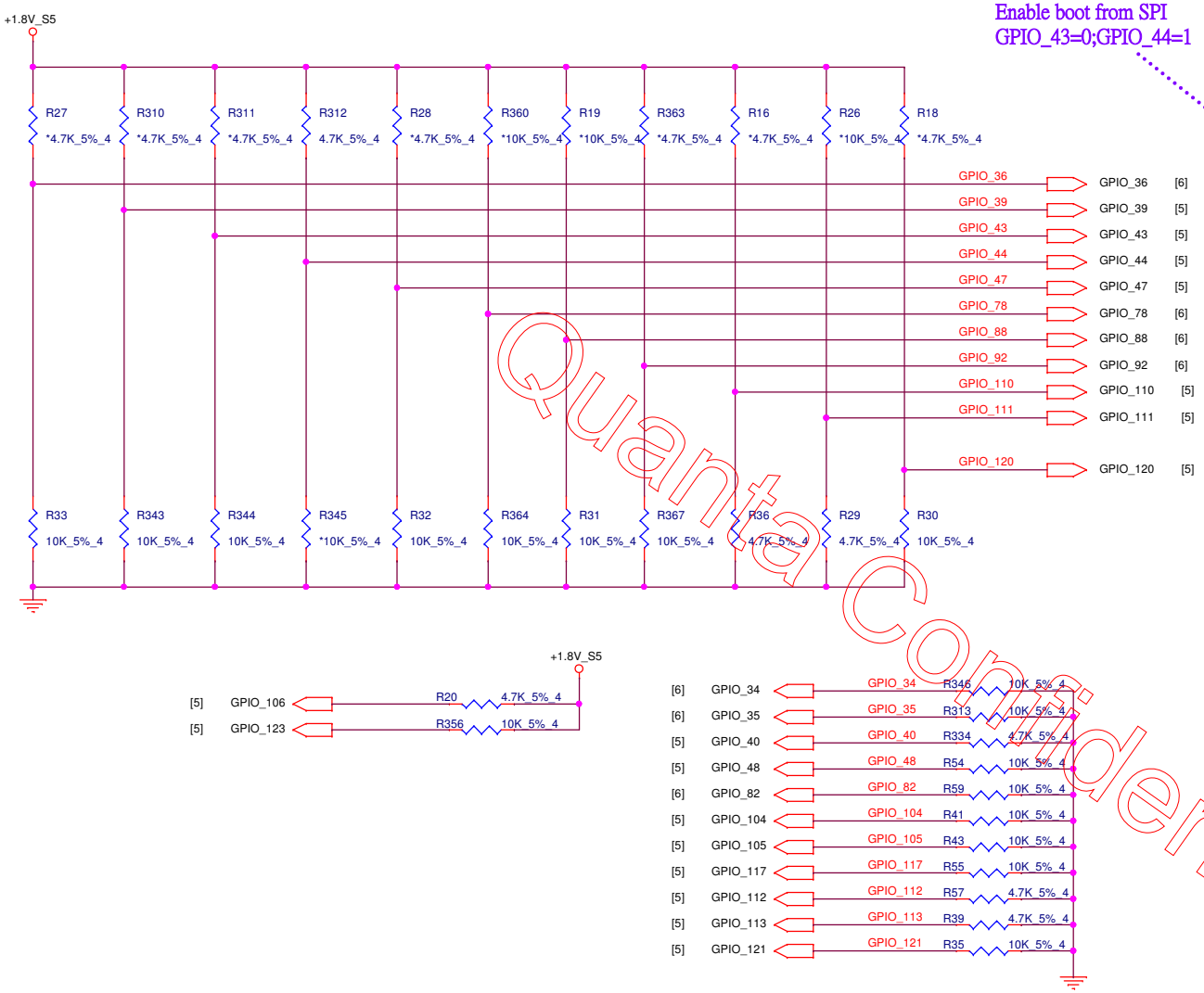
HARDWARE STRAPS

Folllow APL WoW36 :
Enable boot from SPI
GPIO_43=0;GPIO_44=1



Hardware Strap	Strap Description
GPIO_36	VCC_1P24V_1P35V_A voltage select 0 = 1.24V 1 = 1.35V
GPIO_39	Enable CSE(TXE3.0) ROM Bypass 0 = Disable bypass 1 = Enable Bypass
GPIO_43	Allow eMMC as a boot source 0 = Disable 1 = Enable
GPIO_44	Allow SPI as a boot source 0 = Disable 1 = Enable
GPIO_47	Force DNX FW Load 0 = Do not force 1 = Force
GPIO_78	SMBus 1.8V/3.3V mode select 0=buffers set to 3.3V 1=buffers set to 1.8V
GPIO_88	PMU 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode
GPIO_92	SMBus No Re-Boot 0 = Disable (default) 1 = Enable
GPIO_110	LPC 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode
GPIO_111	Boot BIOS Strap 0 = Boot from SPI 1 = Do not boot from SPI
GPIO_120	Top swap override 0 = Disable 1 = Enable

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Size	Document Number	Rev
	HARDWARE STRAPS	3A
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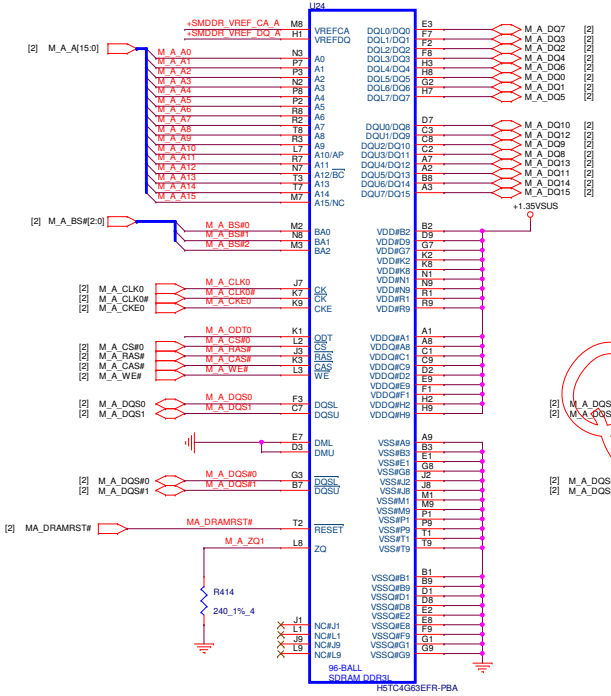
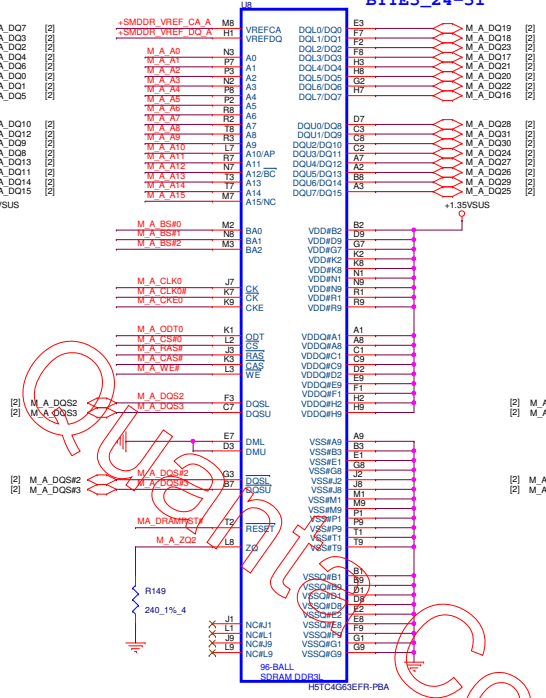
On board memory(OBM)

DDR3L MEMORY CHANNEL A

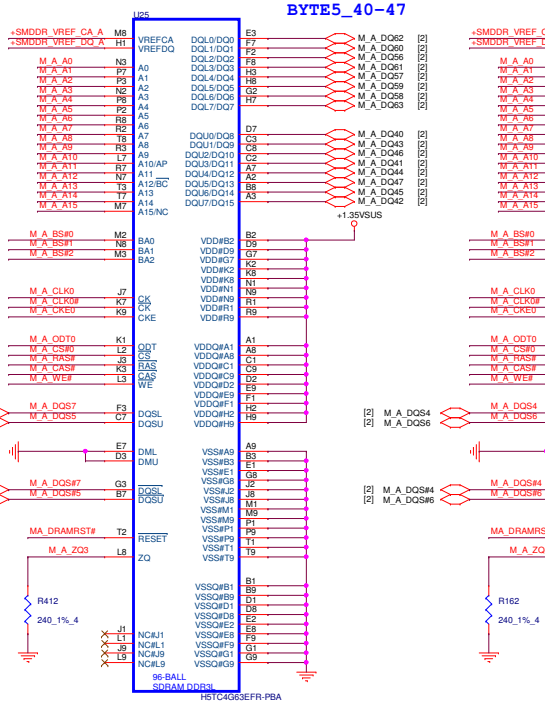
BYTE0_0-7
BYTE1_8-15



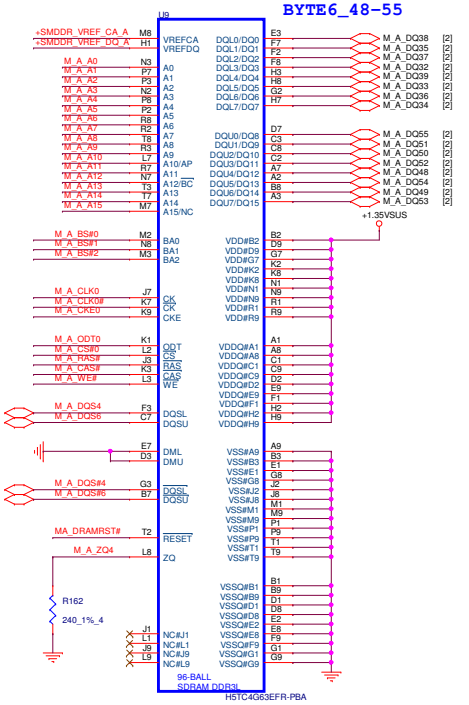
BYTE2_16-23
BYTE3_24-31



BYTE7_56-63
BYTE5_40-47



BYTE4_32-39
BYTE6_48-55



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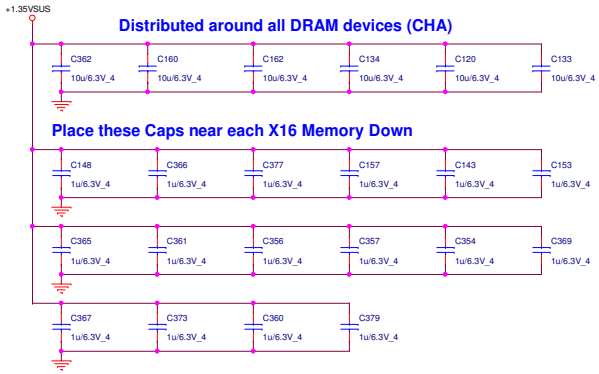
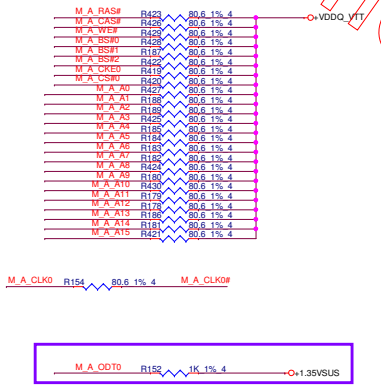
DE-CAPS FOR MEMORY CHANNEL A

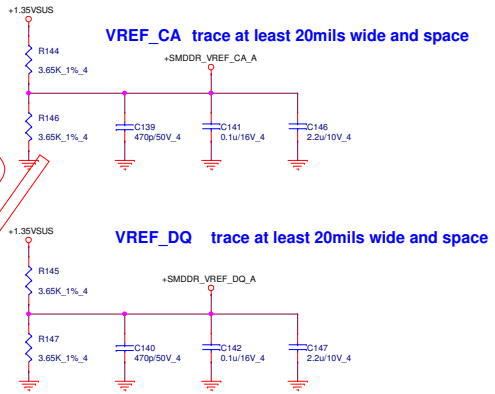


VTT TERMINATIONS



Folllow APL WoW37 : Memory Down
ODT single on DRAM side is pulled up to VDDQ

VREF_CA-DQ CIRCUIT



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PROJECT : ZAJ

Size	Document Number	Rev
	DDR3L SODIMM-STD CHA	3A
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On board memory(OBM)

DDR3L MEMORY CHANNEL B

BYTE0_0-7

BYTE2_16-23

BYTE1_8-15

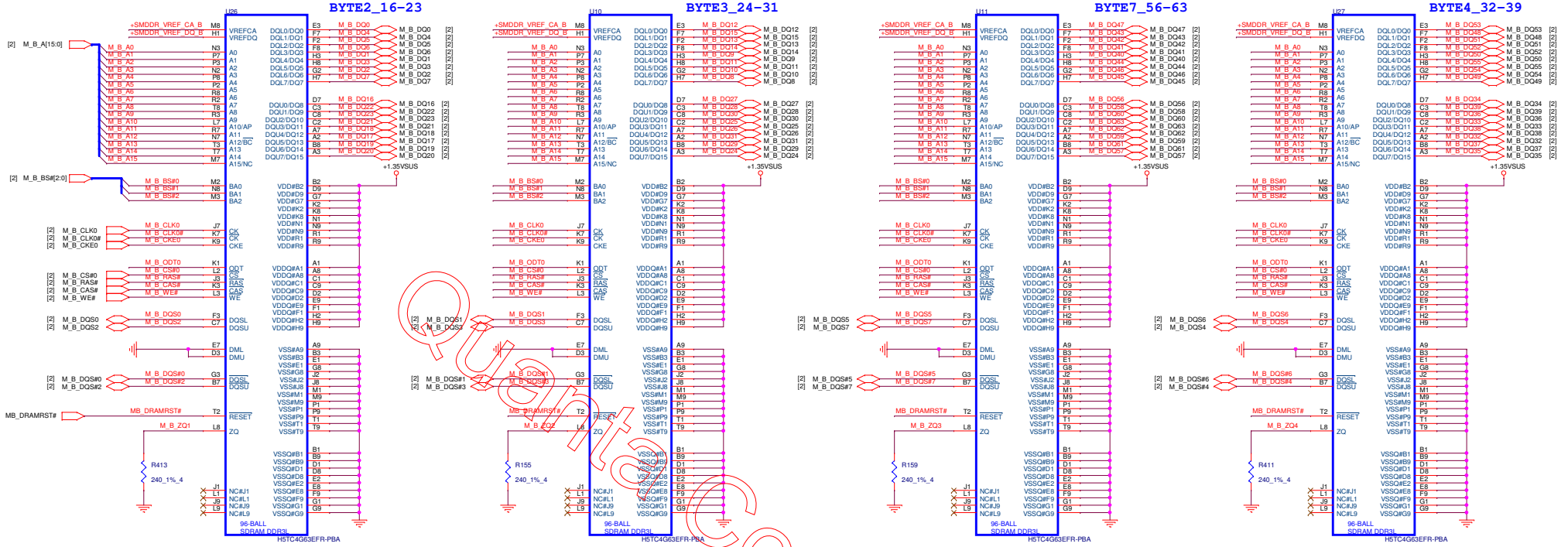
BYTE3_24-31

BYTE5_40-47

BYTE7_56-63

BYTE6_48-55

BYTE4_32-39



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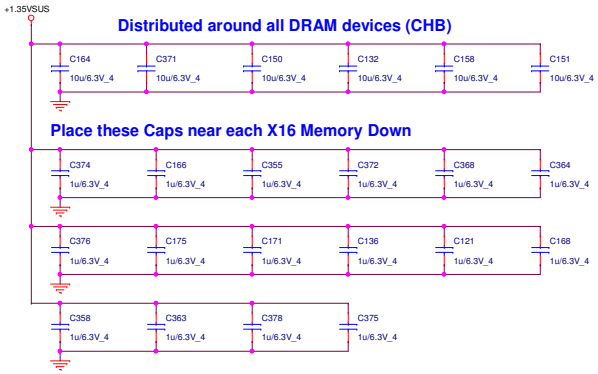
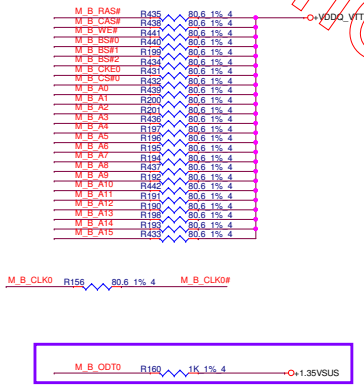
DE-CAPS FOR MEMORY CHANNEL B

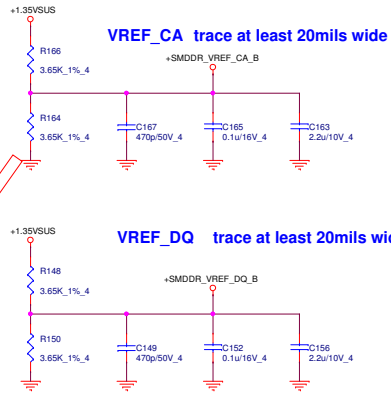


VTT TERMINATIONS



Folllow APL WoW37 : Memory Down
ODT single on DRAM side is pulled up to VDDQ

VREF_CA-DQ CIRCUIT



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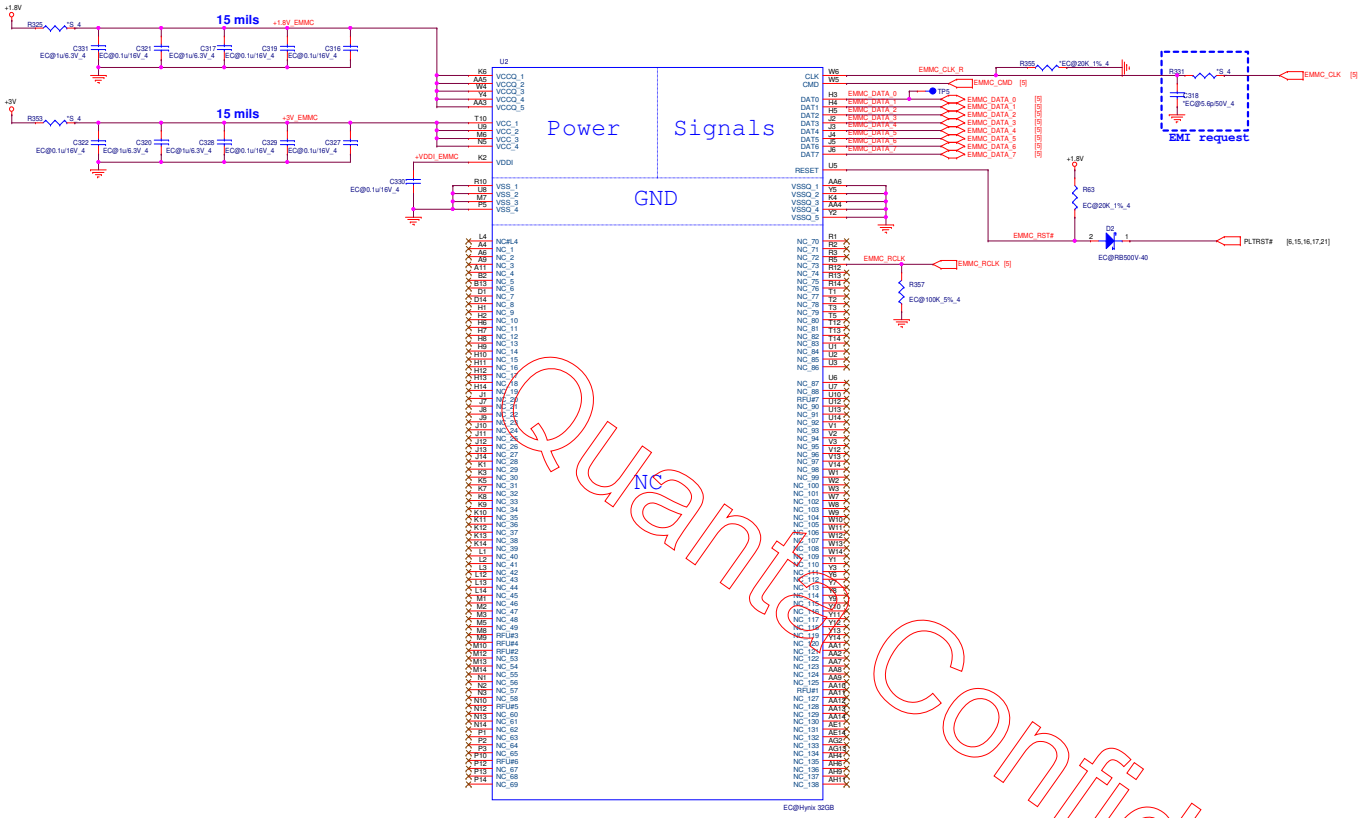
PROJECT : ZAJ

Size	Document Number	Rev
	DDR3L MEMORY DOWNx16 CHB	3A
Date: Tuesday, March 21, 2017	Sheet 11 of 34	

eMMC (MMC)



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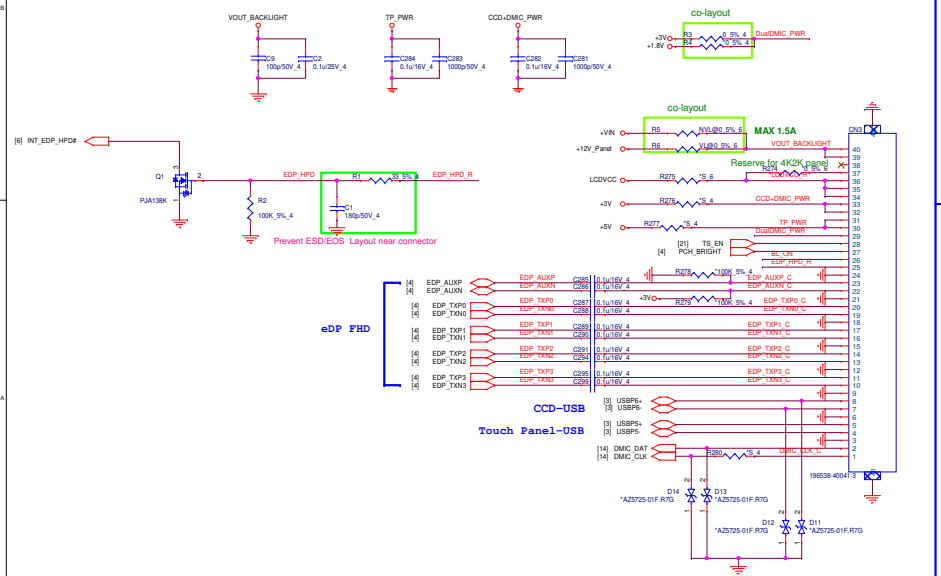
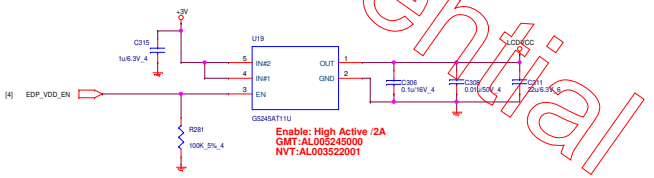
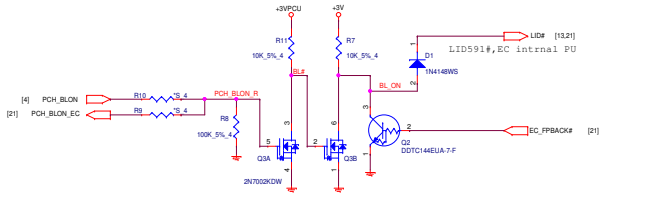
eDP CONNECTOR (LDS)



eDP Power (LDS)



eDP Backlight (LDS)



Quanta Computer Inc.			
PROJECT : ZAJ			
Size	Document Number	eDP/ CCD/eMMC	Rev 3A
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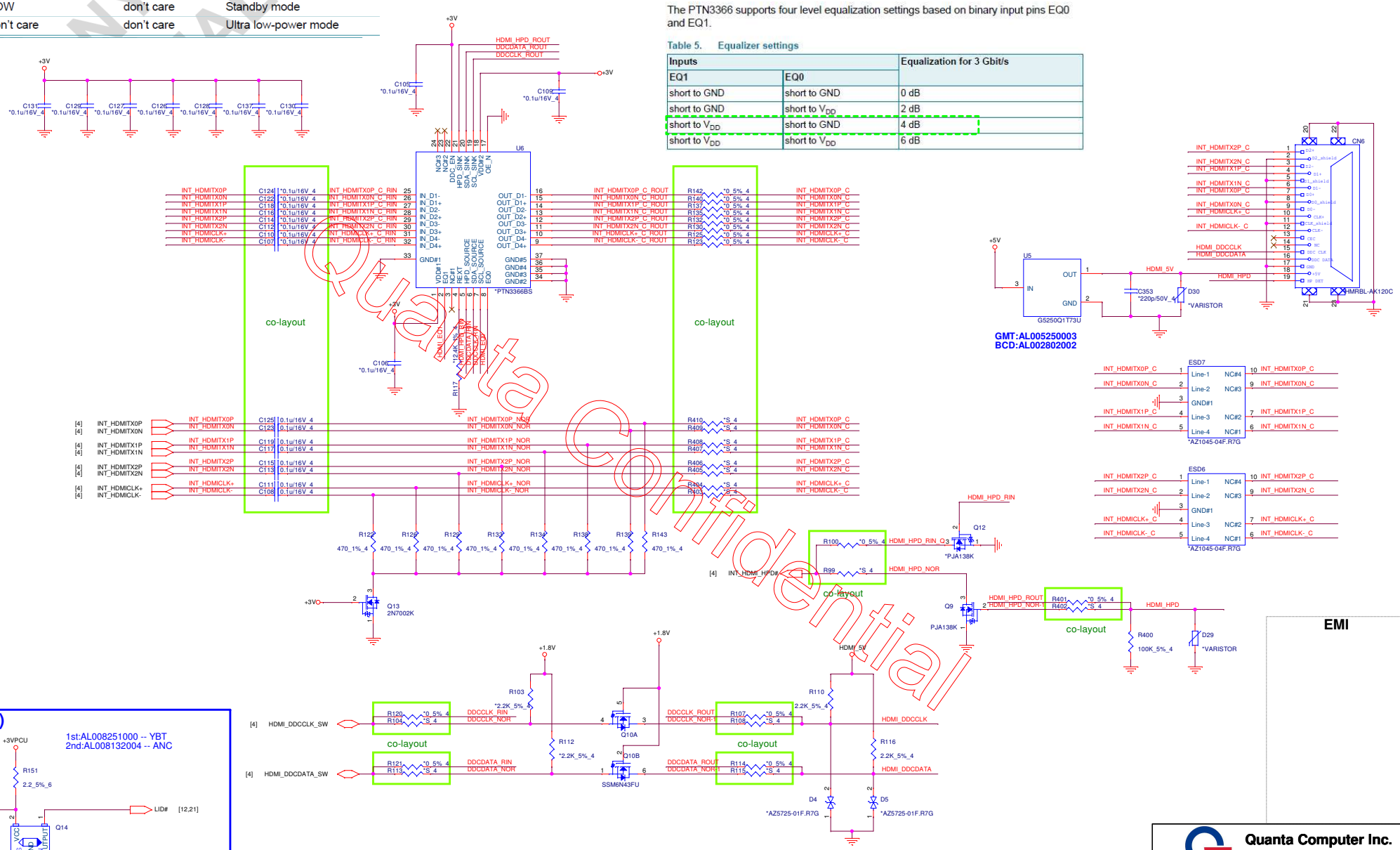
OE_N	DDC_EN	HPD_SINK	Source output	PTN3366 power mode
LOW	HIGH	HIGH	source active	Active mode; DDC active
LOW	LOW	LOW	don't care	Standby mode
HIGH	LOW	don't care	don't care	Ultra low-power mode

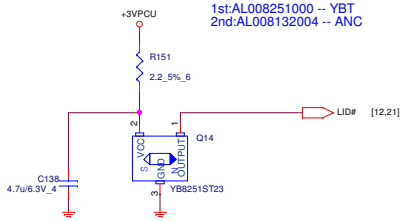
The PTN3366 supports four level equalization settings based on binary input pins EQ0 and EQ1.

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 V_{DD}	2 dB
short to V_{DD}	short to GND	4 dB
short to V_{DD}	short to V_{DD}	6 dB



Hall Sensor (HSR)



EMI

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PROJECT : ZAJ
Size | Document Number | HDMI/Hall sensor | Rev 3A
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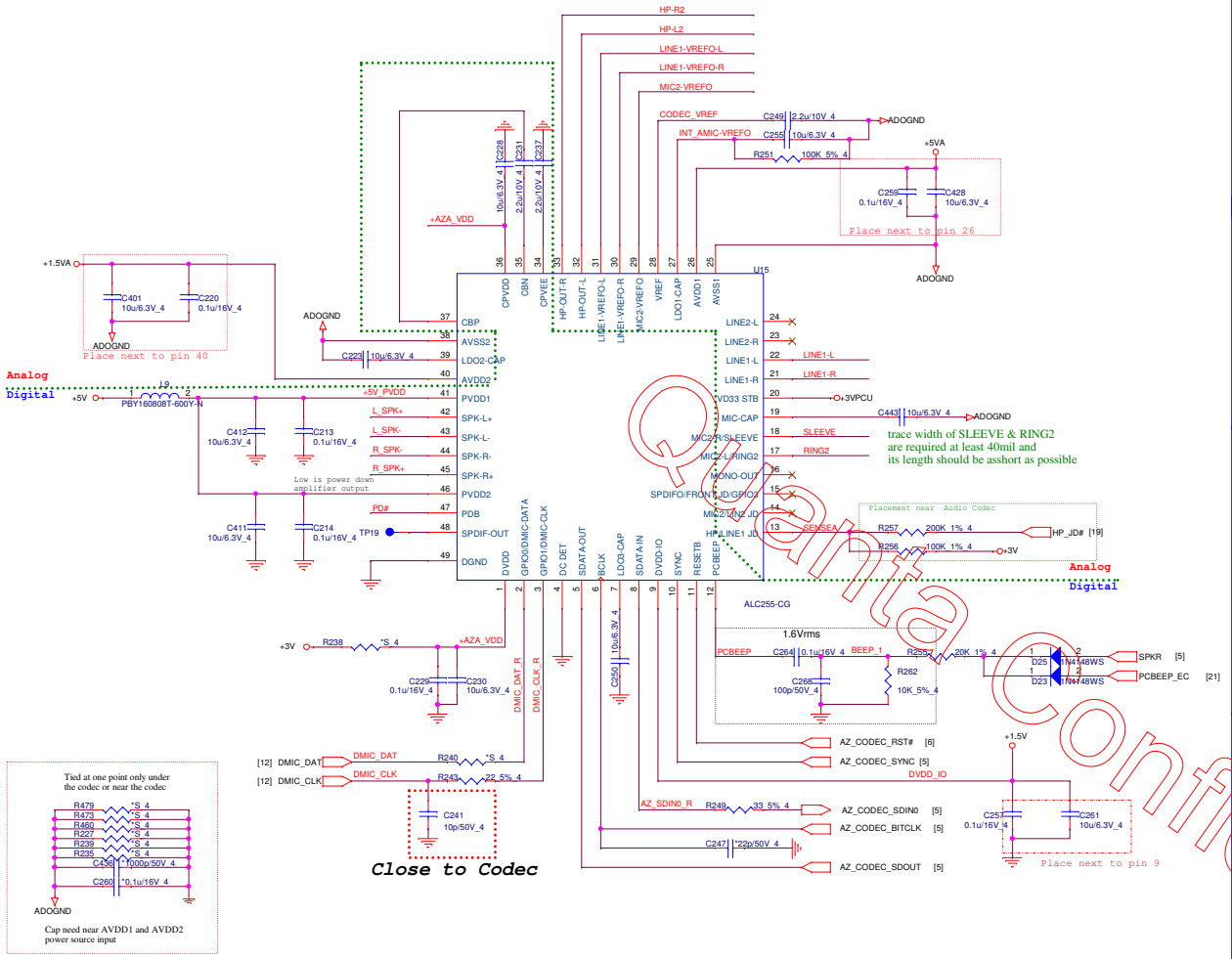
Codec(ADO)



trace width of SLEEVE & RING2 are required at least 40mil and its length should be asshort as possible

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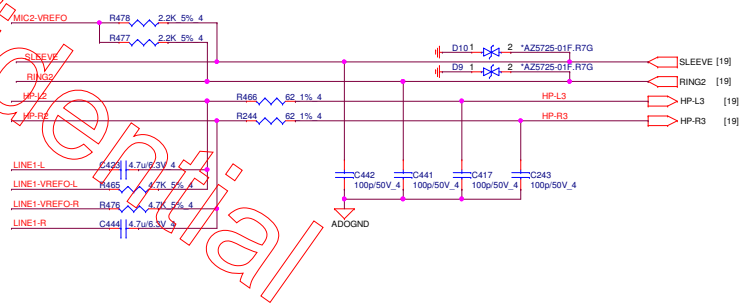
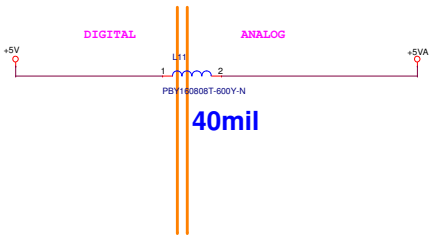
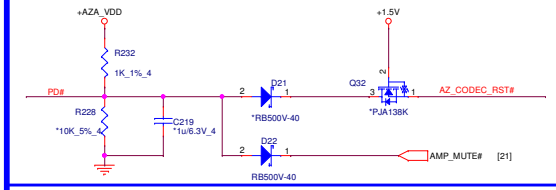
Universal Audio Jack HEADPHONE/MIC/LINE combo (ADO)



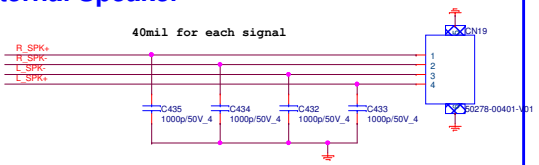
Codec PWR 5V(ADO)



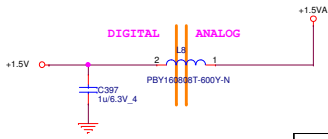
Mute(ADO)



Internal Speaker



Codec PWR 1.5V(ADO)



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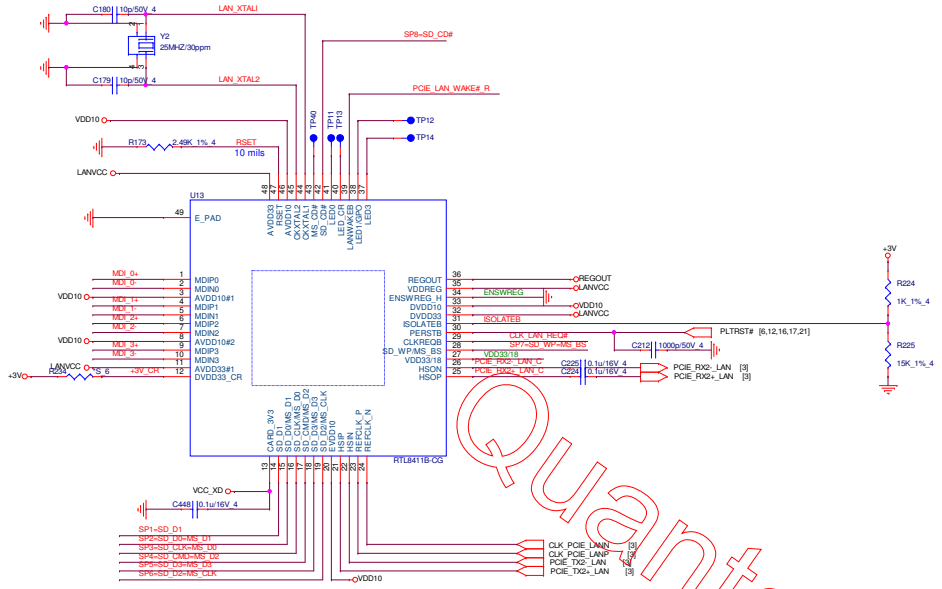
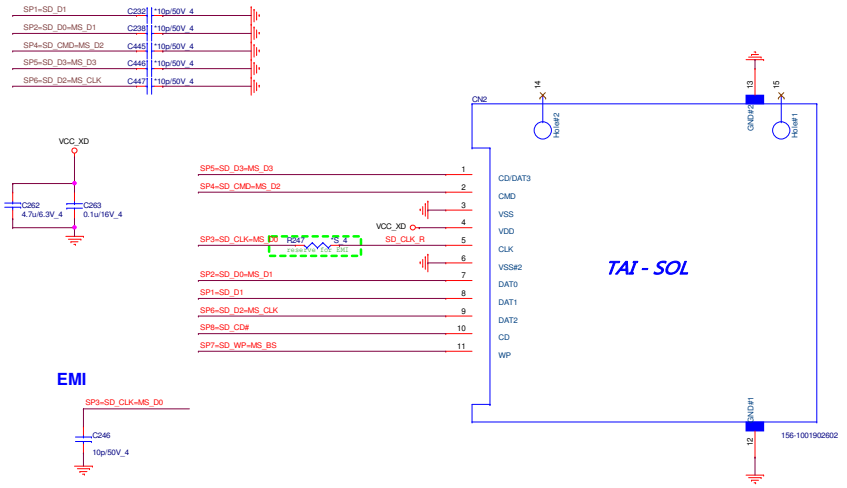
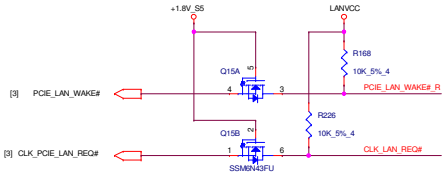
LAN & Card reader Combo (LAN)

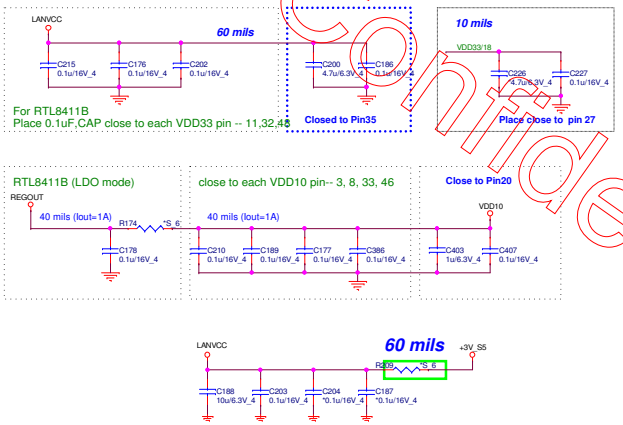


Card Reader (CRD)

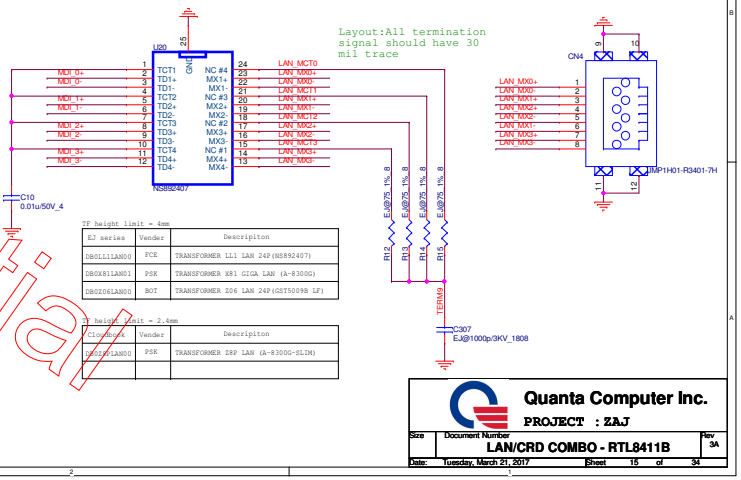


WAKE#/REQ# circuit(LAN)





Tramsformer



EJ series	Vender	Descripiton
DB0LL11AN00	FCE	TRANSFORMER LL1 LAN 24P(NS892407)
DB0X81AN01	PSK	TRANSFORMER X81 GIGA LAN (A-8300G)
DB0Z06AN00	BOT	TRANSFORMER Z06 LAN 24P(GST5009B LF)

Cindy Sun	Vender	Descripiton
DB0Z89AN00	PSK	TRANSFORMER Z8P LAN (A-8300G-SLIM)

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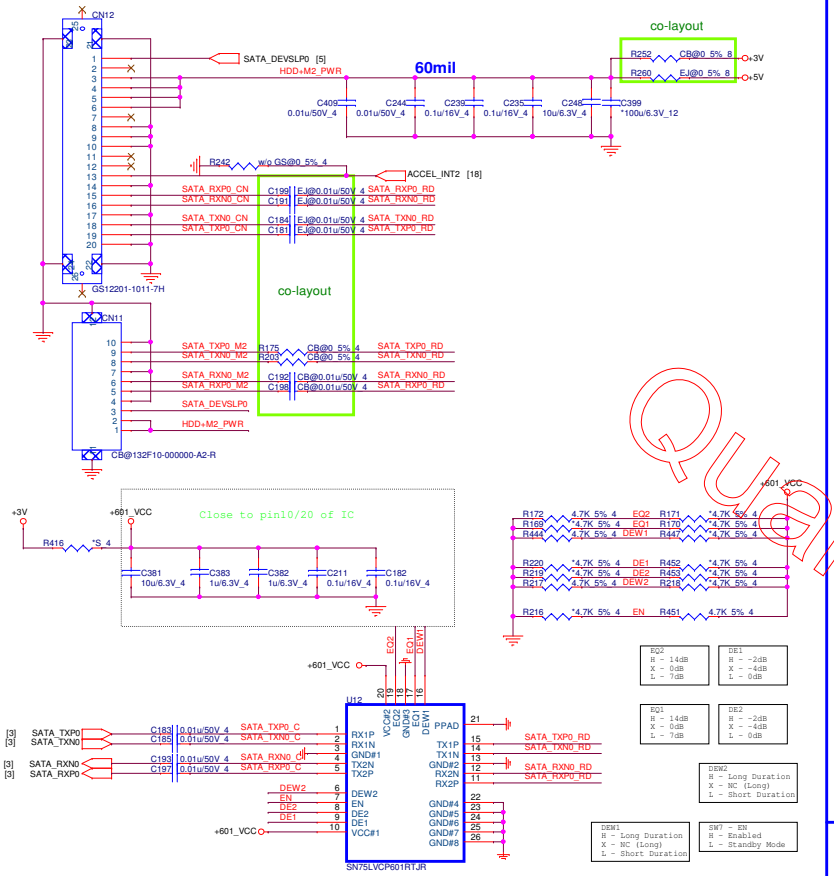
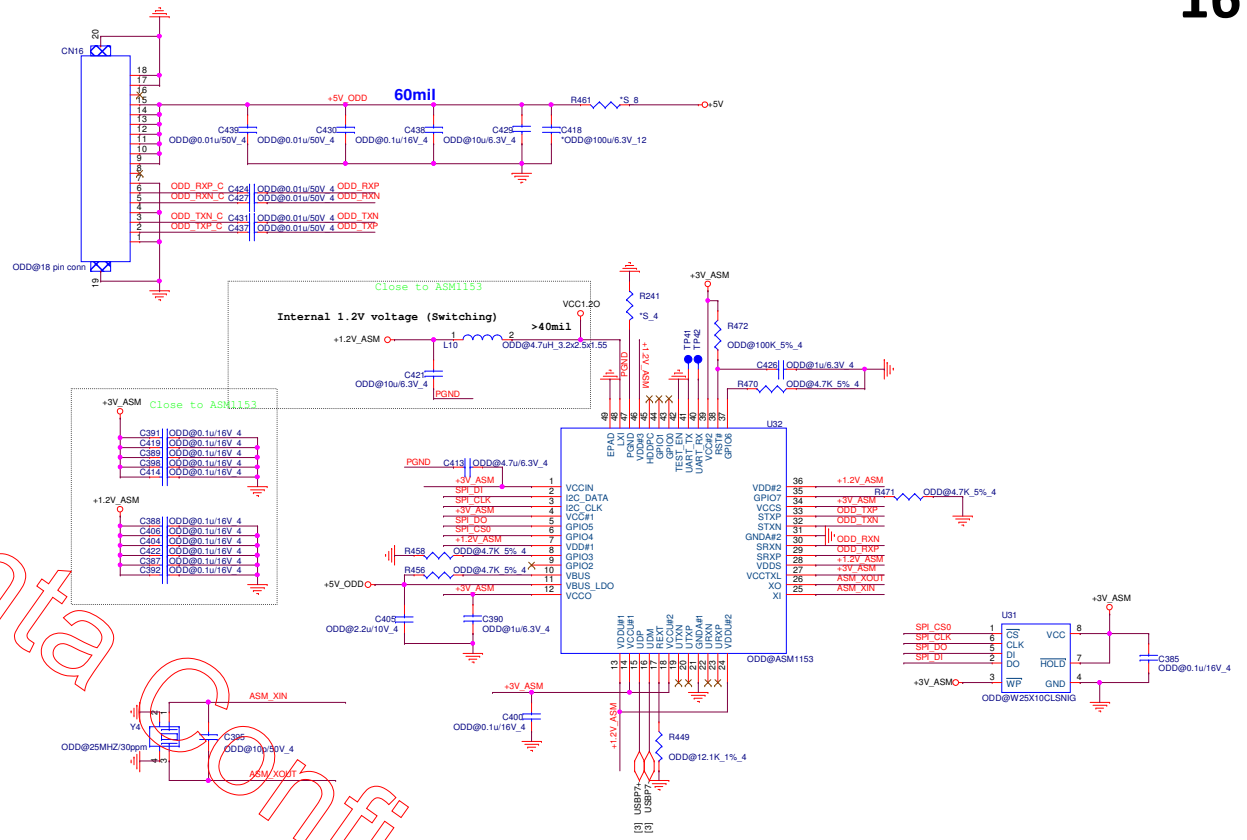
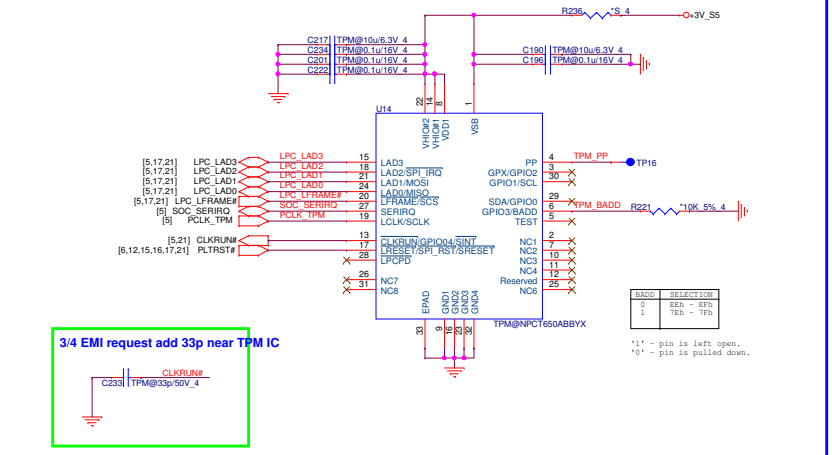
2.5" SATA HDD (HDD)



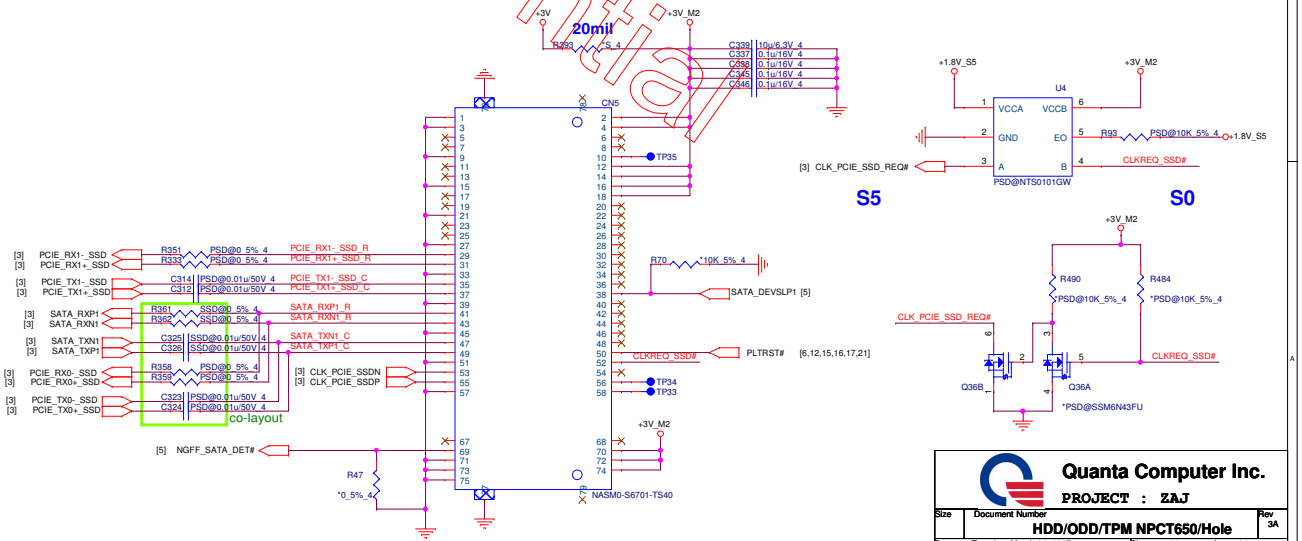
USB ODD Bridge (ODD)



TPM NPCT650 (TPM)



M.2 PCPIE & SATA SSD (NGF)



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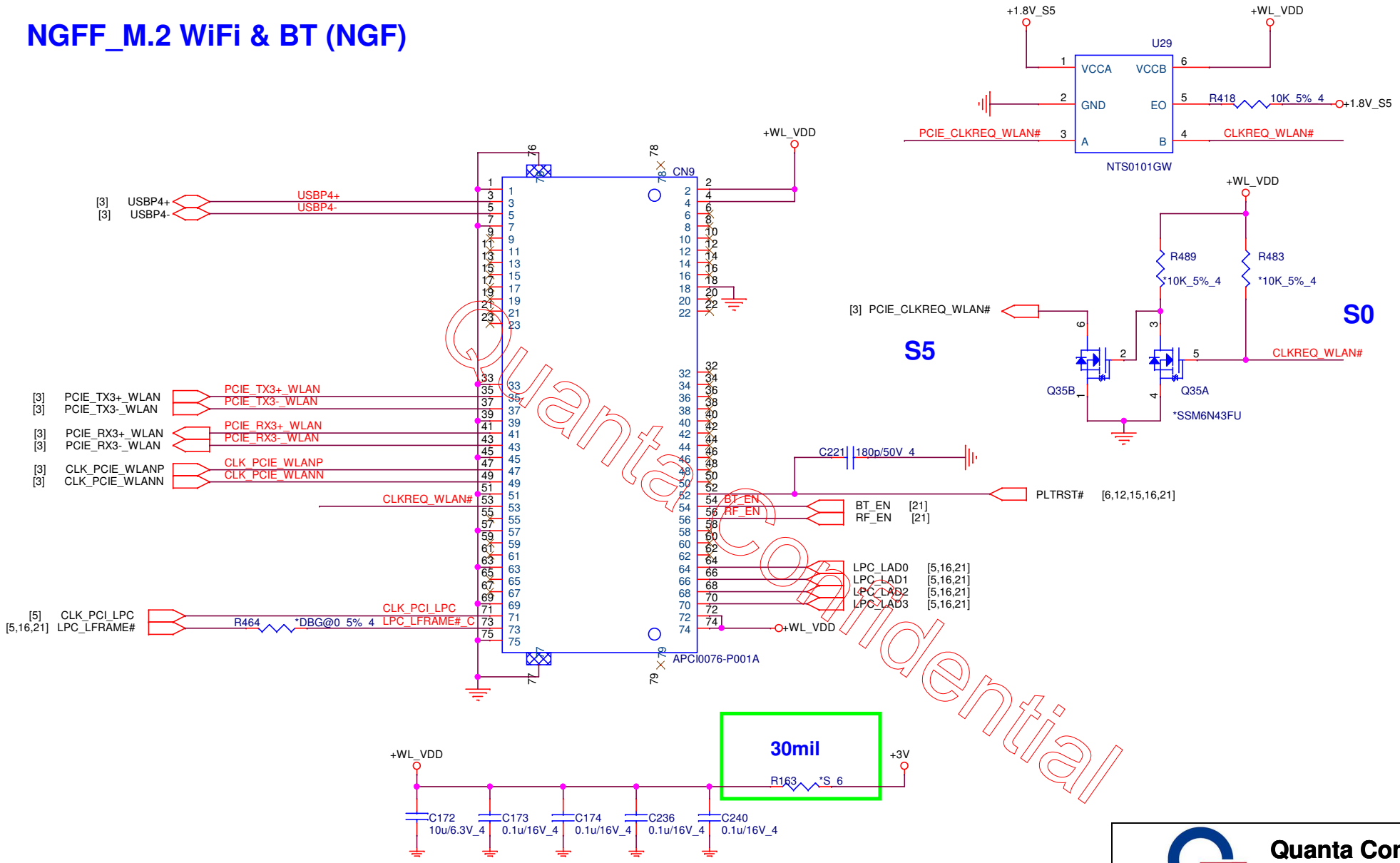
NGFF_M.2 WiFi & BT (NGF)

17



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Size	Document Number	Rev
	NGFF WiFi & BT	3A
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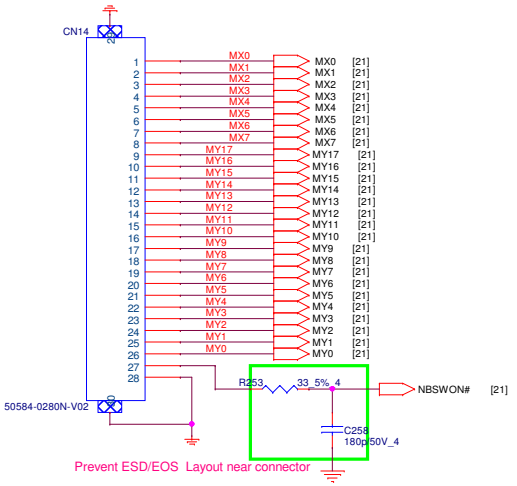
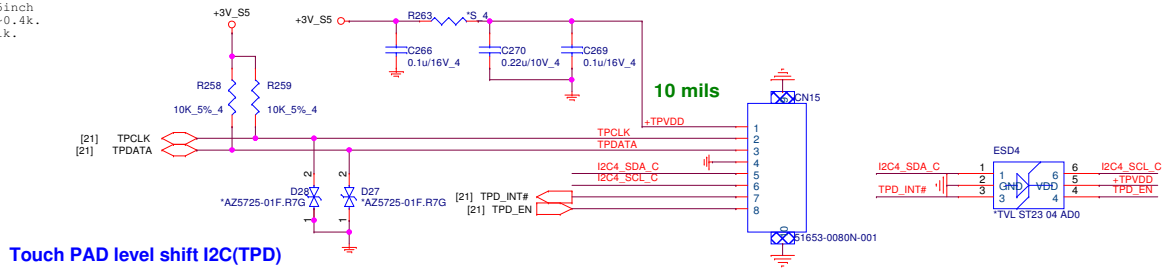
KEYBOARD (KBC)

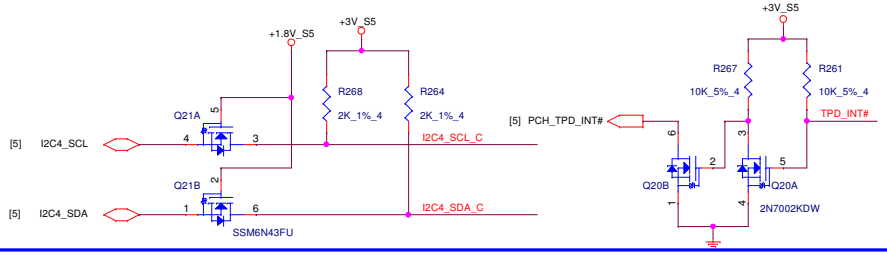


TOUCHPAD (TPD I2C/PS2 co-lay)

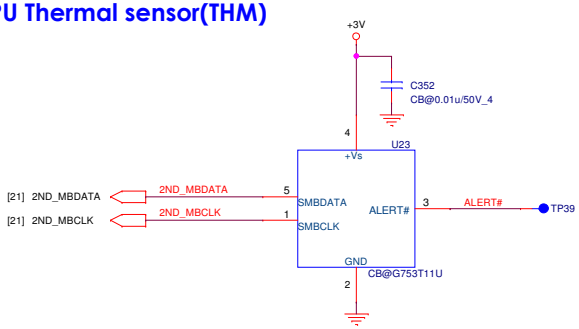
```
TPD->100kHz,TS=400Khz
Intel design guide suggestion
MCP PIN 10u.
Per inch 3u  TS=3x5inch
400kHz10~100u =2.4~0.4k.
100Khz 10~100u=9k~1k.
```



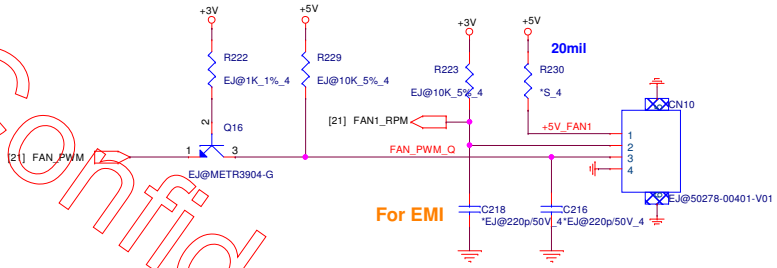
Touch PAD level shift I2C(TPD)



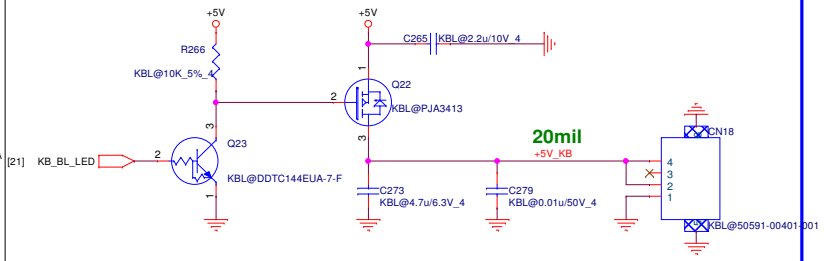
CPU Thermal sensor(THM)



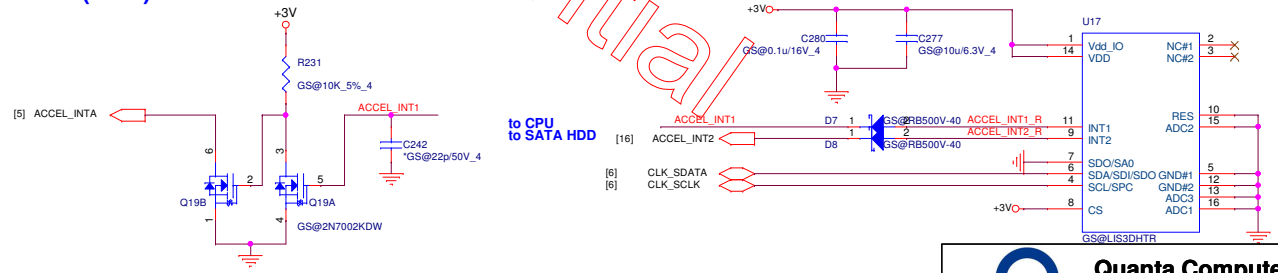
CPU FAN (THM)



Keyboard backlight (KBL)



G-sensor(ACS)



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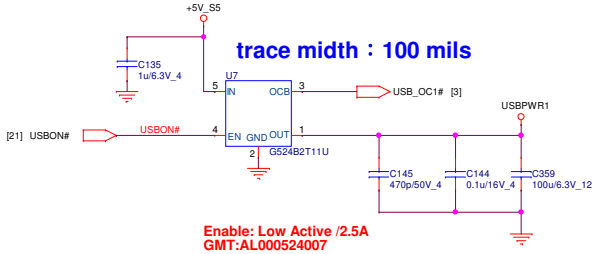
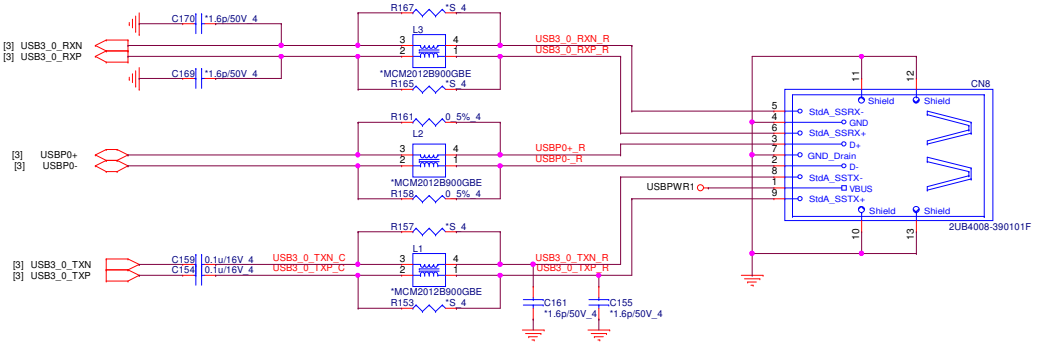
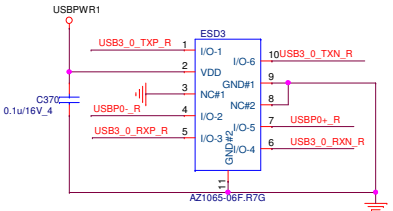
USB 3.0 (UB3)

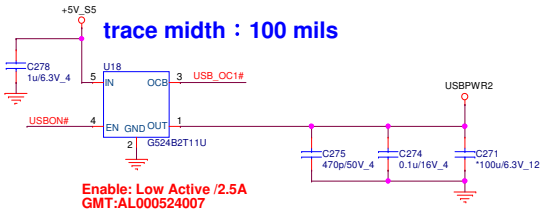


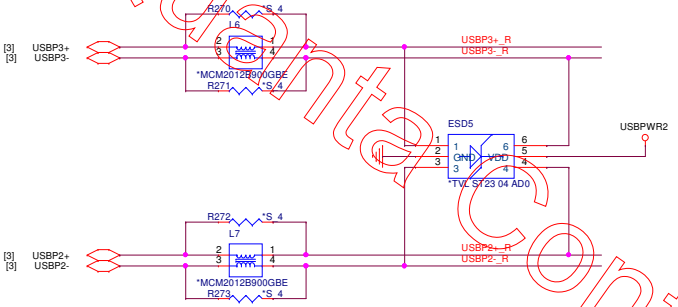




USB protection diodes for ESD.
as close as possible to USB connector pins.

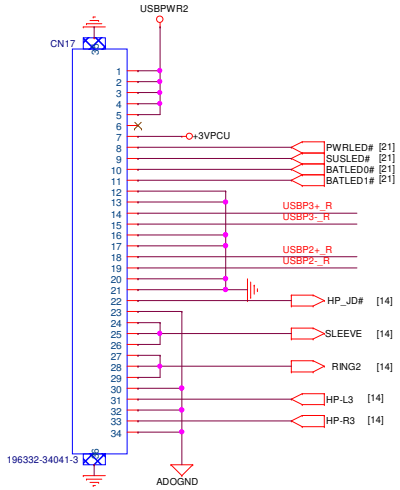
USB 2.0 (UB2)



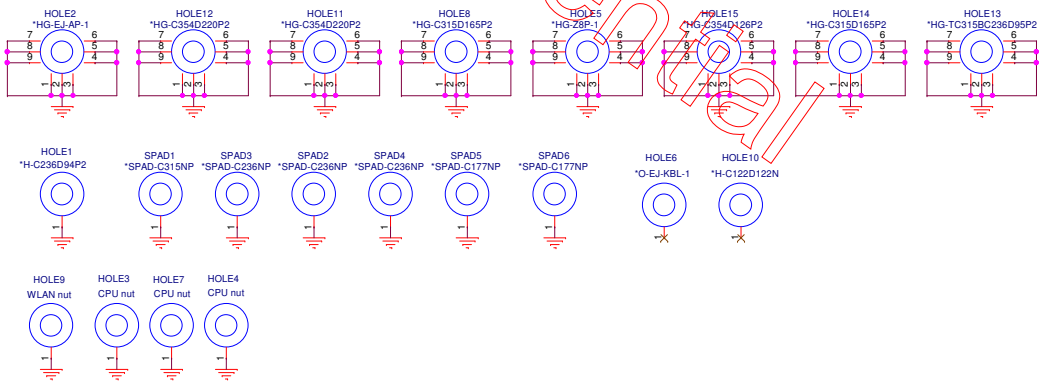


Stitch cap (EMC)

USB 2.0/LED/AUDIO JACK DB (UB2)



HOLE(OTH)



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	USB/CARDREADER/LED	3A
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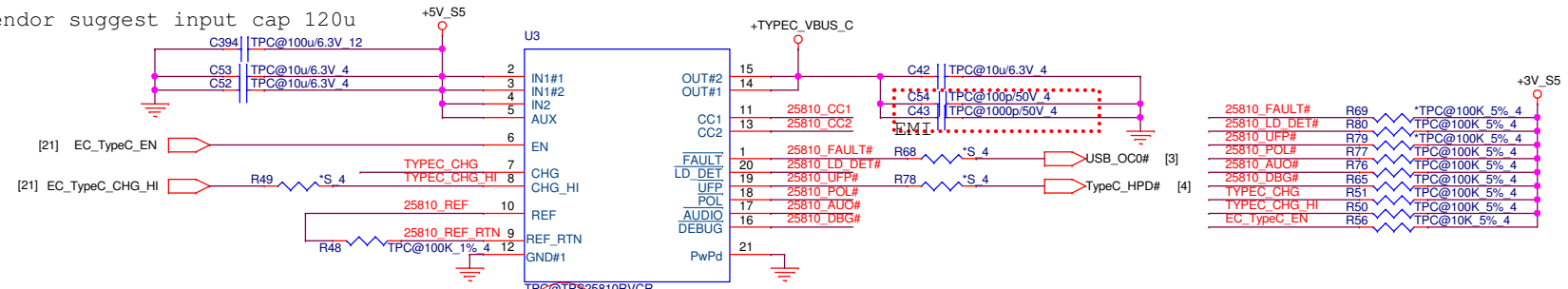
USB TYPE-C (UB3)

trace midth：150 mils

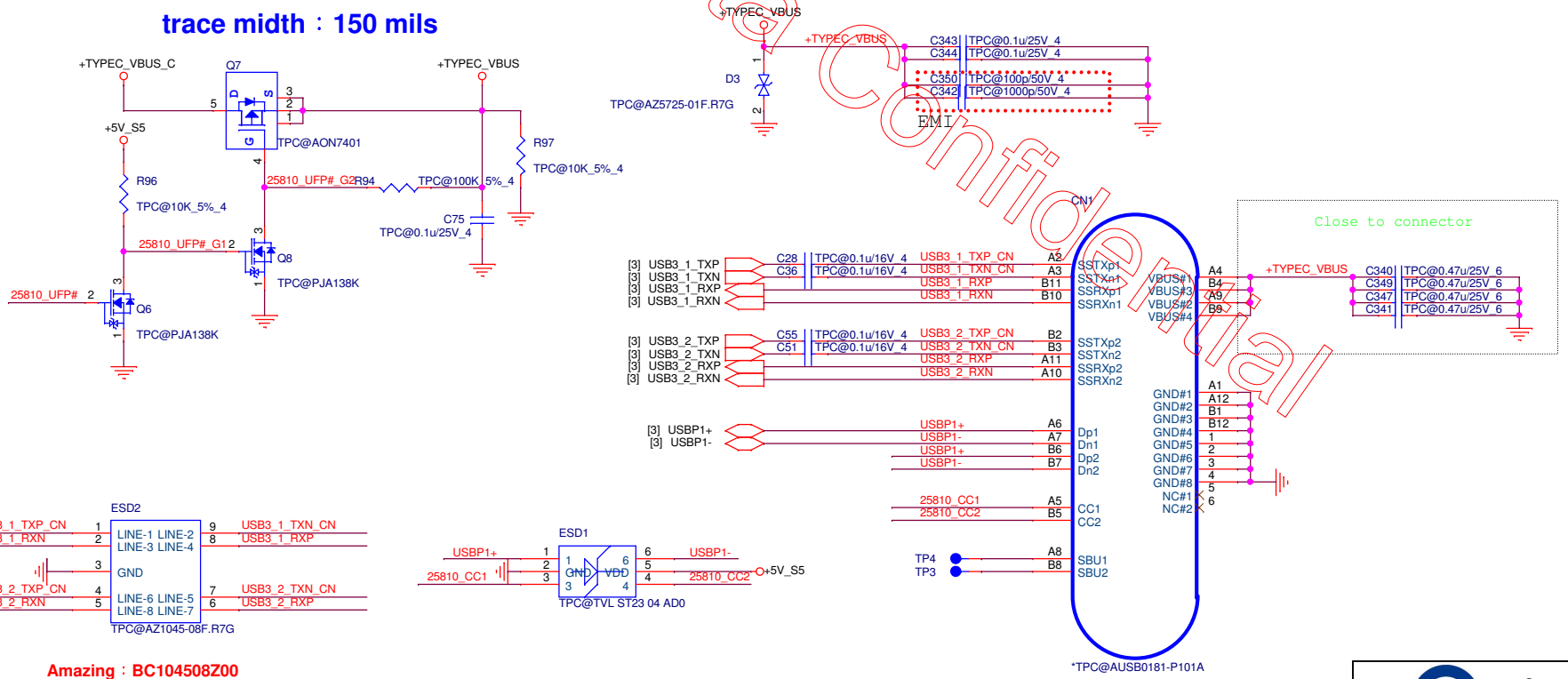
Vendor suggest input cap 120u



TPS25810 Port	CC1	CC2	TPS25810 Response OUT	VCONN On CC1 or CC2	POLb	UFPb	AUDIOb	DEBUGb
Nothing Attached	OPEN	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
UFP Connected	Rd	OPEN	IN1	NO	Hi-Z	LOW	Hi-Z	Hi-Z
UFP Connected	OPEN	Rd	IN1	NO	LOW	LOW	Hi-Z	Hi-Z
Powered Cable/No UFP Connected	OPEN	Ra	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
Powered Cable/No UFP Connected	Ra	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
Powered Cable/UFP Connected	Rd	Ra	IN1	CC2	Hi-Z	LOW	Hi-Z	Hi-Z
Powered Cable/UFP Connected	Ra	Rd	IN1	CC1	LOW	LOW	Hi-Z	Hi-Z
Debug Accessory Connected	Rd	Rd	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	LOW
Audio Adapter Accessory Connected	Ra	Ra	OPEN	NO	Hi-Z	Hi-Z	LOW	Hi-Z

CHG	CHG_HI	CC Capability Broadcast	Current Limit	Load Detect Threshold
0	0	STD	1.67 A	NA
0	1	STD	1.67 A	NA
1	0	1.5 A	1.67 A	NA
1	1	3.0 A	3.34 A	1.77 A

trace midth：150 mils



Amazing：BC104508Z00
PJT　　：BC605S8QZ00
INPAQ　：BC38109LZ00

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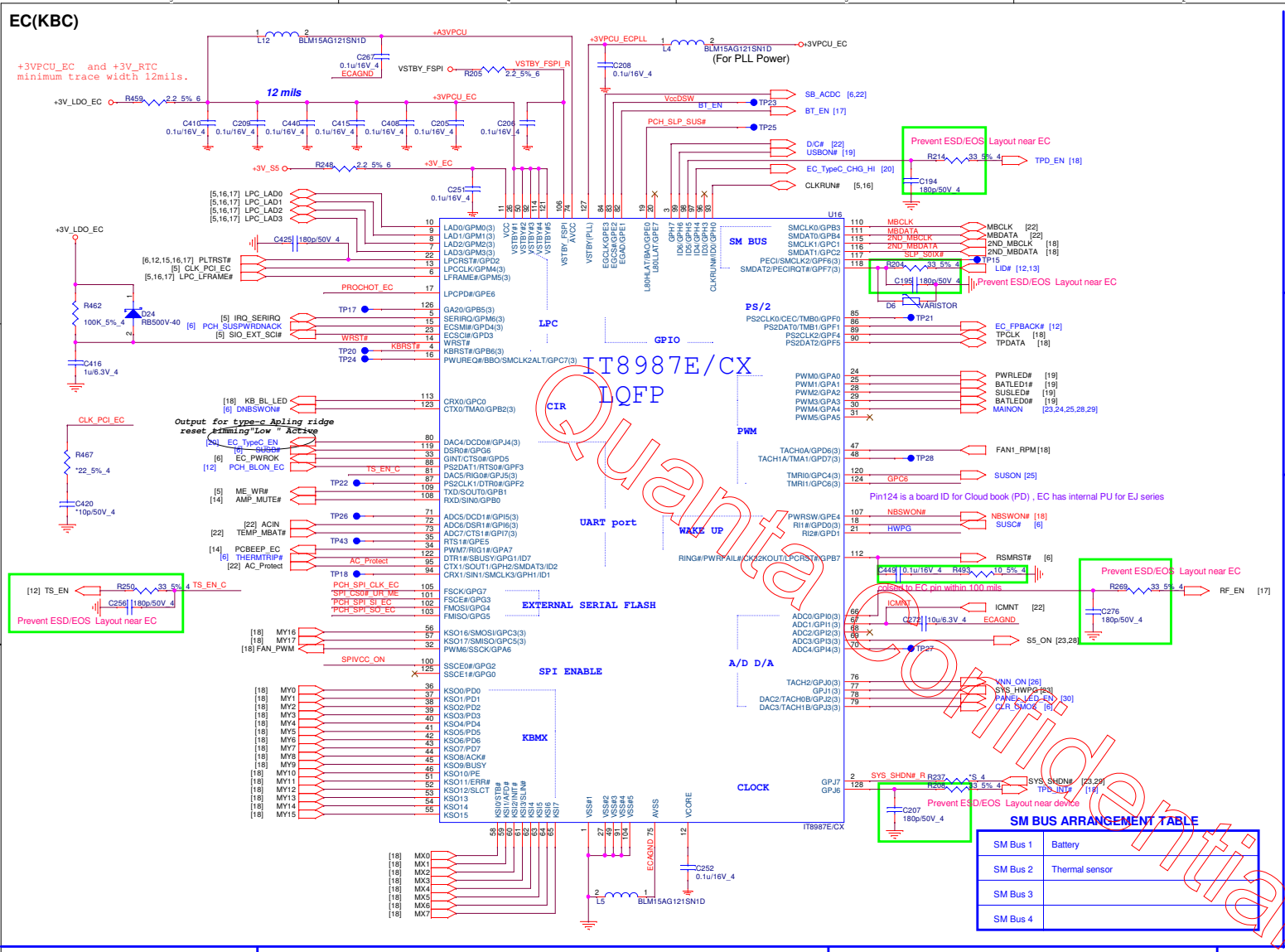
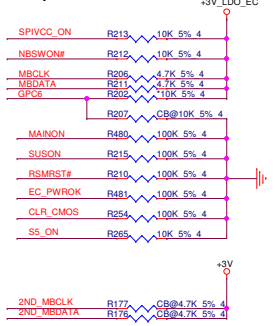
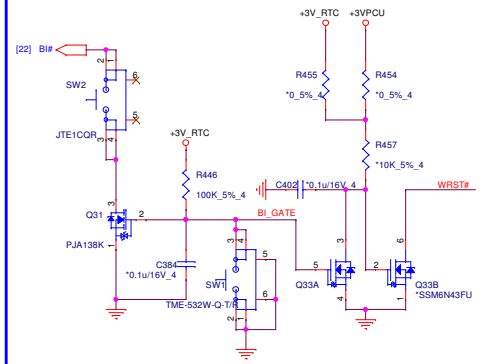
EC(KBC)



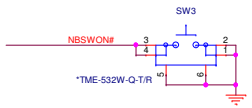
PU/PD (KBC)



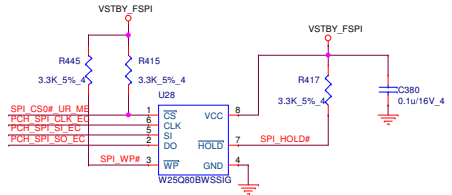
Battery Disable (FSW)



Reserve power on switch for test (MP remove)



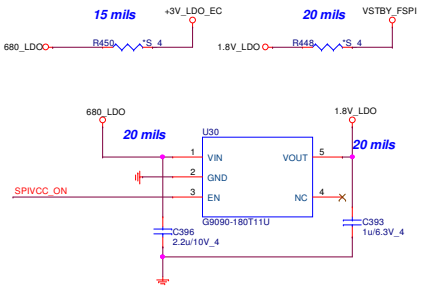
SPI ROM(KBC)



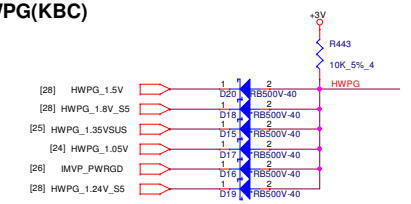
SP@ socket P/N: DFHS08FS023 only for A-TEST

SPI ROM	Vender	Size	Quanta P/N	Vender P/N
1.8V	WND	1M	AKE5GGN0N00	W25Q80EWSSIG
	GGD	1M	AKE5GZN0Q00	GD25LQ80BSIGR

Power_Auto_Recovery



HWPG(KBC)



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Double Check ADP-IN Connector with ME

PJ1 EJ@CI2504P1H02-RB-NH

PJ2 CB@50278-006T1-001

PD4 1N4148WS

recommend 200mA at least.

PQ6 TPCA8109

PQ17 TPCA8109

PD3 SV1040

PD2 P4SMAFJ20A

PQ16 IMD2AT108

PR44 0.02_1%_0612

PR45 *S_4

PR46 *S_4

PR189 *S_4

PR187 220K_1%_4

PR188 220K_1%_4

PR51 10K_5%_4

PR49 33K_1%_4

PC206 0.1u/50V_6

PC49 2200p/50V_4

PC213 *10u/25V_8

PQ7 2N7002K

PR71 *S_6

PR67 63.4K_1%_4

PR68 11K_1%_4

PR58 20_5%_12

PC46 0.1u/50V_6

PC50 0.1u/50V_6

PC45 0.1u/50V_6

PC51 0.047u/25V_6

PU2 BQ24737RGRR

PR56 10K_5%_4

PR63 100K_5%_4

PR60 100K_5%_4

PC42 0.1u/25V_4

PR57 *0_5%_4

PQ9B 2N7002KDW

PQ9A 2N7002KDW

PC200 0.1u/50V_6

PC43 *100p/50V_4

PR70 *S_4

PR76 *S_4

PR81 10K_5%_4

PR62 10K_5%_4

PR80 316K_1%_4

PR201 *100K_5%_4

PR200 100K_1%_4

PC58 0.01u/50V_4

PR61 100K_5%_4

R2

PR54 51K_1%_4

R1

PQ10 *2N7002K

PR66 *0_5%_4

PR50 *100K_5%_4

PQ8 2N7002K

PR55 *S_4

PC53 100p/50V_4

PR77 *0_5%_4

PR73 100_1%_4

PR79 1M_5%_4

PR75 100_1%_4

PR74 100_1%_4

PC57 *47p/50V_4

PC56 *47p/50V_4

PD6 PDZ5.6B

PD5 PDZ5.6B

50458-00801-V02

PC59 1u/16V_6

PD7 RB500V-40

PR72 *S_6

PC54 0.047u/50V_6

PQ20 AON7410

PQ21 AON7410

PC48 2200p/50V_4

PC209 10u/25V_8

PL10 6.8uH_7x7x3

PR78 0.01_1%_0612

PR69 *4.7_5%_6

PC52 *680p/50V_6

PR83 *S_4

PR82 *S_4

PC61 0.1u/25V_4

PC60 0.1u/25V_4

PC62 0.1u/25V_4

PR202 10_5%_6

PR203 7.5_5%_6

PC44 2200p/50V_4

PC204 10u/25V_8

PC201 10u/25V_8

PC214 *10u/25V_8

	Non cloud book	Cloud book
Description(PL10)	IND SMD 6.8UH+-20%,4.5A(PCMC063T-6R8MN)	IND SMD 4.7UH 20% 5A(PCMB062D-4R7MS)
Quanta (P/N)	CV-6845MZ05	CV-4750MZ00

	SRP／SRN	
	4-Cells	Others
bq24707A	0／0	10／7.5
bq24737	10／7.5	10／7.5

	R1	R2
UMA-45W	51K	100K

Check PU High with HW side

REGN MAX voltage 6.5V
V_ILIM=20*(VSRP-VSRN)=20*Ichg*Rsr
=0.793V for 3.965A current limit

Pin10 ILIM=0.793V
Rsr = 0.01ohm

For BATT Only

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PROJECT : ZAJ
Size | Document Number: Charger(BQ24737RGRR) | Rev 3A
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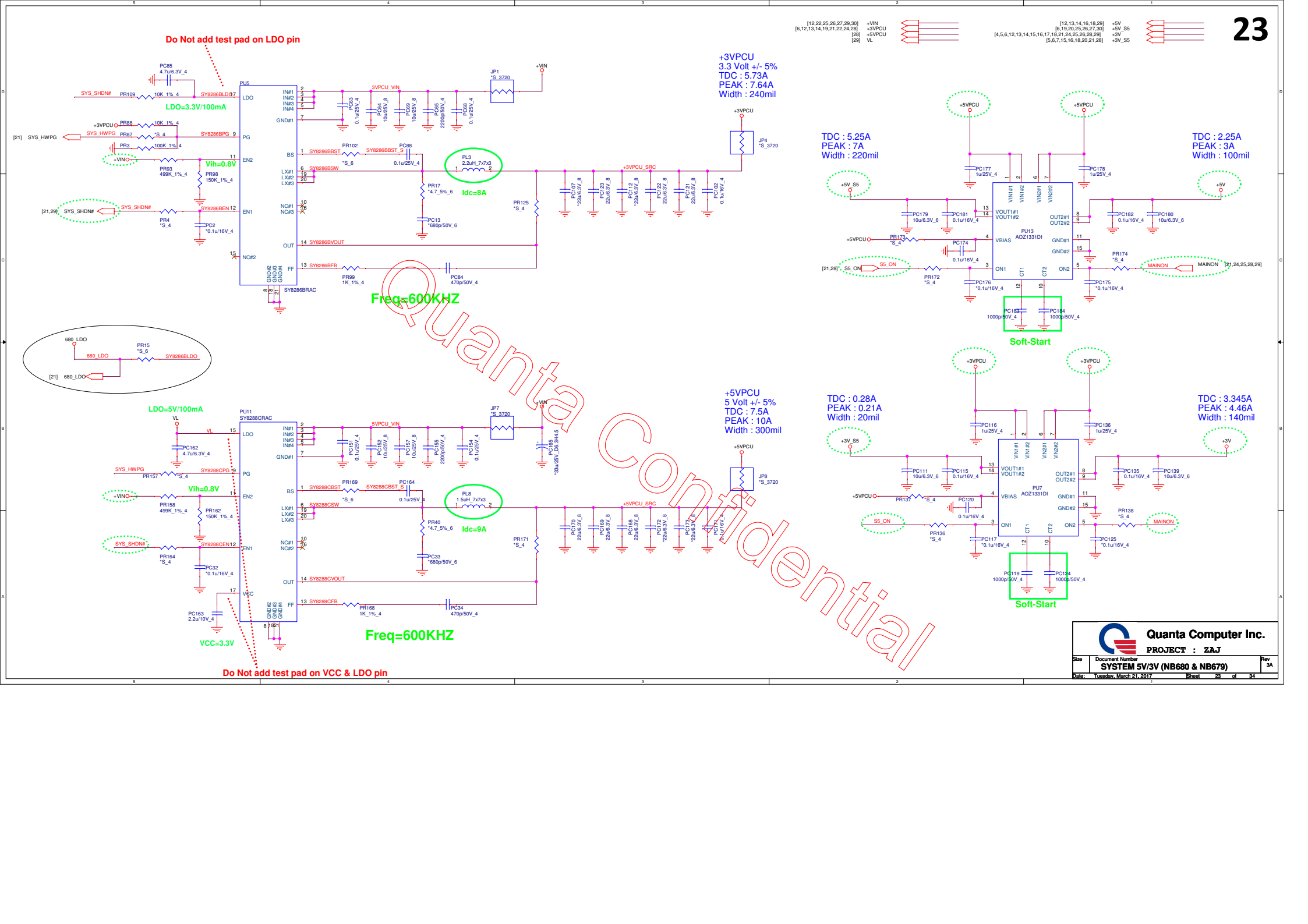
Do Not add test pad on LDO pin
+3VPCU
3.3 Volt +/- 5%
TDC : 5.73A
PEAK : 7.64A
Width : 240mil
LDO=3.3V/100mA
Vih=0.8V
Idc=8A
Freq=600KHZ
TDC : 5.25A
PEAK : 7A
Width : 220mil
TDC : 2.25A
PEAK : 3A
Width : 100mil
Soft-Start
+5VPCU
5 Volt +/- 5%
TDC : 7.5A
PEAK : 10A
Width : 300mil
LDO=5V/100mA
Vih=0.8V
Idc=9A
Freq=600KHZ
VCC=3.3V
TDC : 0.28A
PEAK : 0.21A
Width : 20mil
TDC : 3.345A
PEAK : 4.46A
Width : 140mil
Soft-Start
Do Not add test pad on VCC & LDO pin
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Quanta Computer Inc.
PROJECT : ZAJ
SYSTEM 5V/3V (NB680 & NB679)
Rev 3A
Tuesday, March 21, 2017
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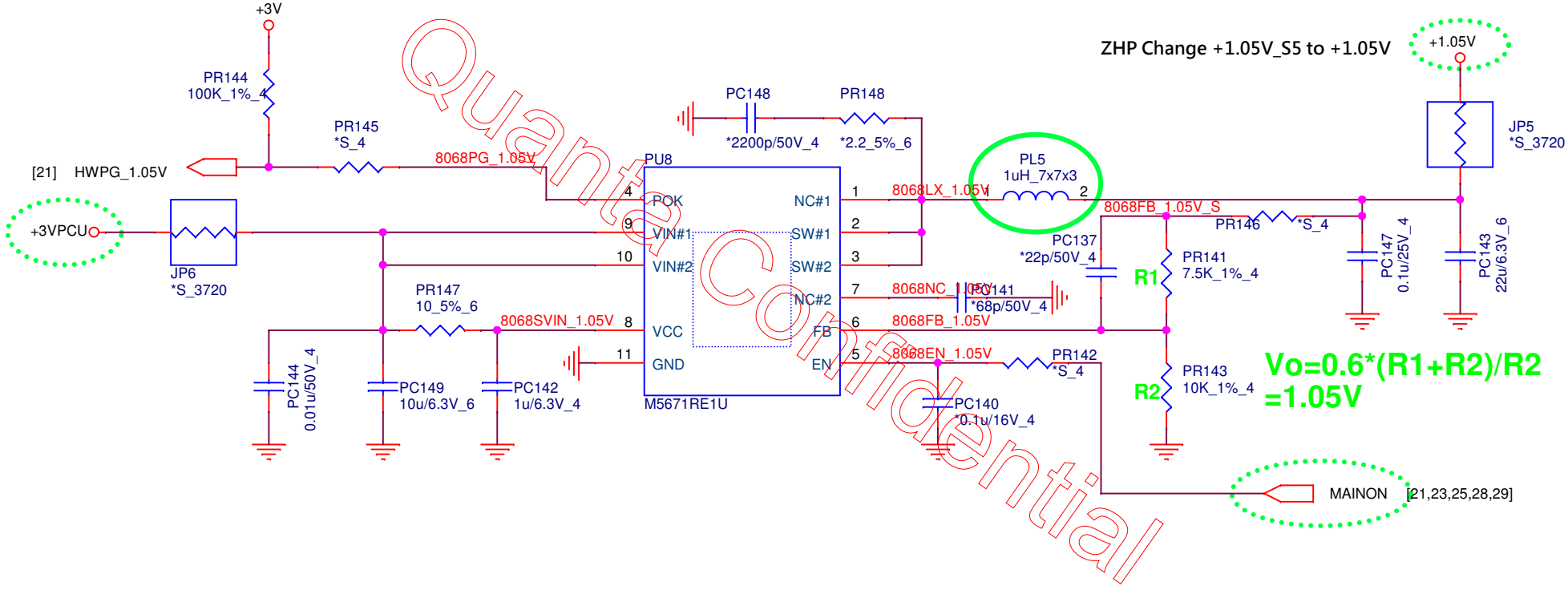
[6,12,13,14,19,21,22,23,28] +3VPCU
[6,7,26] +1.05V
[4,5,6,12,13,14,15,16,17,18,21,23,25,26,28,29] +3V

+1.05V
1.05Volt +/- 5%
TDC : 2.025A
PEAK : 2.7A
Width : 100mil

ZHP Change +1.05V_S5 to +1.05V



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PROJECT :

Size	Document Number	Rev
	+1.05V (M5671RE1U)	3A
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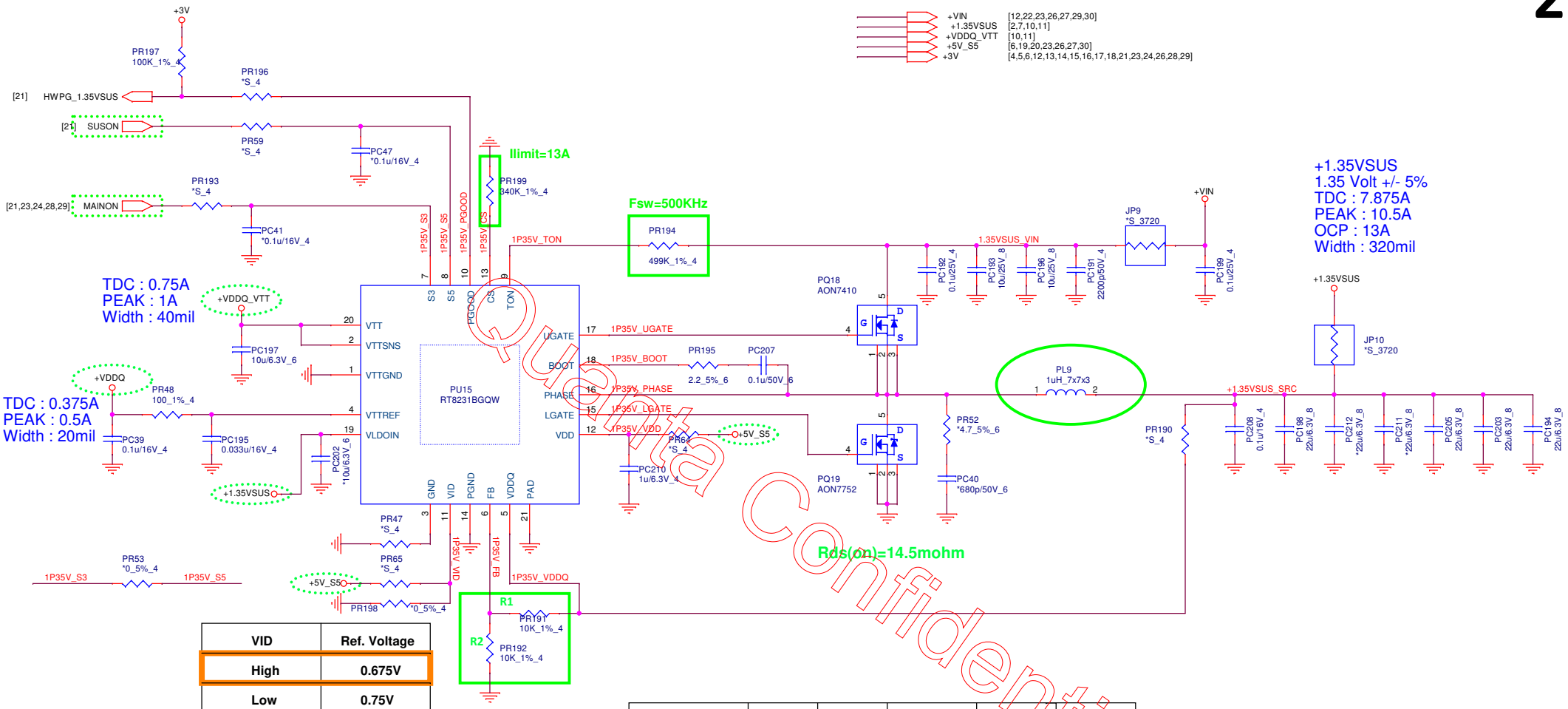

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VID	Ref. Voltage
High	0.675V
Low	0.75V

OCP=13A
L ripple current
=(19-1.35)*1.35/(1u*500k*19)
=2.508A
Vtrip=13-(2.508/2)*14.5mohm
=170.317mV
Rlimit=170.317mV/5uA*10=340.63Kohm

DDR=1.35V
R1=10K/F_4
R2=10K/F_4

	S3	S5	VDDQ	VTTREF	VTT
S0	1	1	ON	ON	ON
S3 (mainon off)	0	1	ON	ON	OFF
S4/S5	0	0	OFF	OFF	OFF

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PROJECT :

Size	Document Number	Rev
	DDR3L (RT8231BGQW)	3A

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IMVP8 VR Controller

Rail A（1 phase）：+VCCGI

Rail C（1 phase）：+VNN

Cloud book	P/N	Description
PR14	CS16342FB17	RES CHIP 634 (1/16W +-1%0402)
PC86	CH3226K1B00	CAP CHIP 0.022U 50V(+-10%,X7R,0402)
PR111	CS12322FB09	RES CHIP 232 1/16W +-1%(0402)
PC90	CH3683K9B00	CAP CHIP 0.068U 16V(+-10%,X5R,0402)

SVID_CLK : UP:85 ohm Series:95 ohm
SVID_ALERT : UP:68 ohm Series:220 ohm
SVID_DATA : UP:170 ohm Series:20 ohm

Check PU High with HW

Check VR Sequence

Double Check Rail B Non-Usage Pin

Rail C

Rail A

Close to VNN Choke

Close to VCCGI Choke

Close to VCCGI MOS

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APL VR (1+1 Phase)

+VCCGI	+VNN
Icc Max：21A	Icc Max：4.8A
Icc TDC：18A	Icc TDC：N/A
Vboot：0V	Vboot：1.05V
OCP：25A	OCP：8A
Fsw：750KHZ	Fsw：750KHZ

VCCGI L/L :

R_DC_LL：6mV/A

R_AC_LL：6mV/A

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PROJECT :
Size: Document Number: CPU_CORE (ISL95859) Rev: 3A
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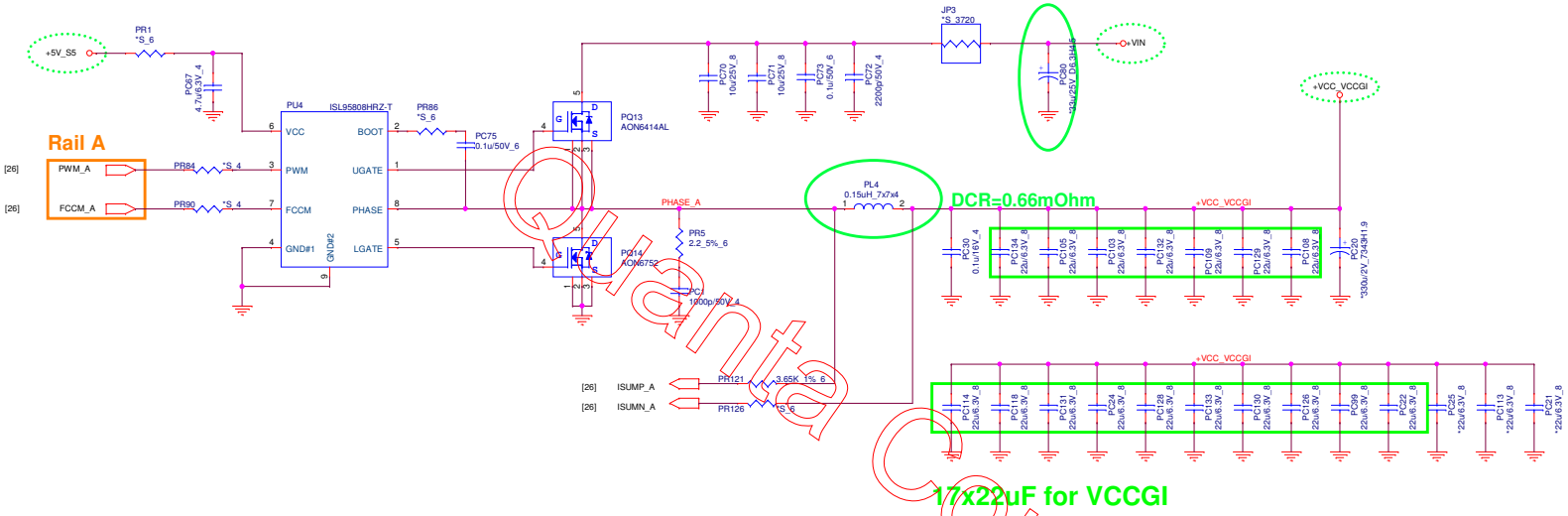
VCCGI



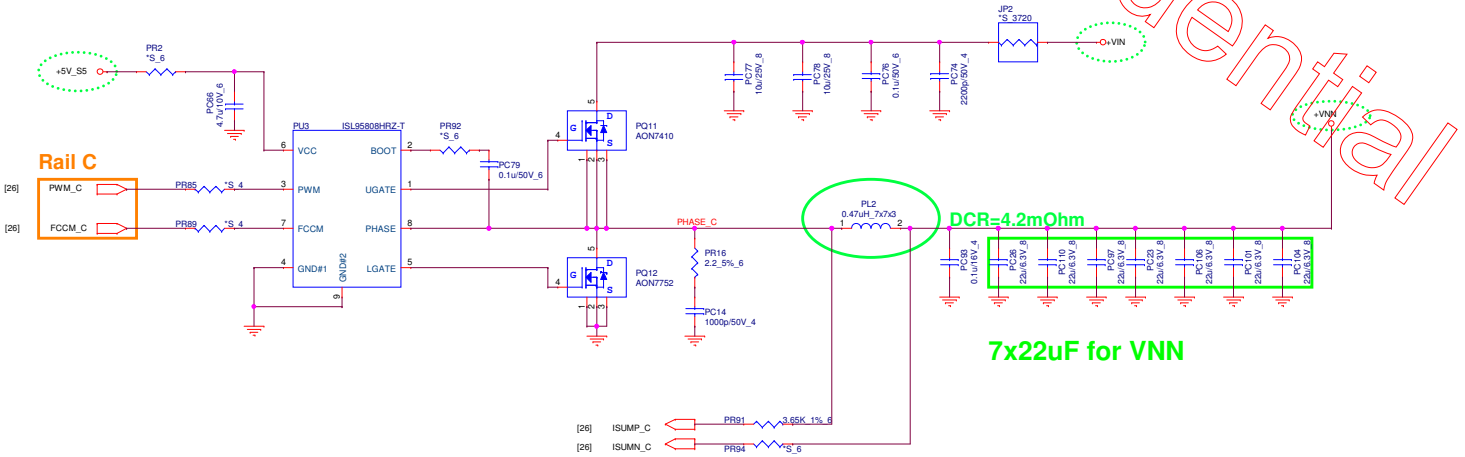
+VCCGI

Icc Max : 21A
Icc TDC : 18A
Vboot : 0V
OCP : 25A
Fsw : 750KHZ

VCCGI L/L :

R_DC_LL : 6mV/A
R_AC_LL : 6mV/A

VNN



+VNN

Icc Max : 4.8A
Icc TDC : N/A
Vboot : 1.05V
OCP : 8A
Fsw : 750KHZ

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Size	Document Number: +VCCGI / +VNN (ISL95859)	Rev: 3A
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[6,12,13,14,19,21,22,23,24] +3VPCU
[3,5,6,7,9,15,16,17,18,22] +1.8V_S5
[7] +1.24V_S5
[12,13,29] +1.8V
[14] +1.5V

[5,6,7,15,16,18,20,21,23] +3V_S5
[23] +5VPCU
[4,5,6,12,13,14,15,16,17,18,21,23,24,25,26,29] +3V

ZHP change +1.8V_S5 PG pull up to +3V_S5

+1.8V_S5
1.8Volt +/- 5%
TDC : 0.514A
PEAK : 0.685A
Width : 40mil

+3V_S5
+3VPCU
PR41 *S_6
PC161 4.7u/6.3V_4
PR160 100K_1%_4
PR165 *S_4
[21] HWPG_1.8V_S5
PU12 G5719CTB1U
PG VIN LX EN GND VFB
G5719LX1.8V1
PL7 2.2uH_2.5x2.0x1.2
JP11 *S_3720
+1.8V_S5
[21,23] S5_ON
PR170 100K_5%_4
PC167 0.1u/16V_4
PR161 *S_4
PC35 10u/6.3V_6
PC36 *10u/6.3V_6
PC166 0.1u/16V_4
R1
PR166 30K_1%_4
R2
PR167 15K_1%_4
Check RC delay time with HW
(follow ZHP RC dealy time)
Vo=(0.6(R1+R2)/R2)
=1.8V

+1.8V_S5
[29] MAIND
MAIND
PQ4 AO3404
+1.8V
TDC : 0.173A
PEAK : 0.23A
Width : 20mil

+1.24V_S5
1.24Volt +/- 5%
TDC : 0.975A
PEAK : 1.3A
Width : 40mil

+3V_S5
+3VPCU
PR150 *S_6
PC150 4.7u/6.3V_4
PR149 100K_1%_4
PR152 *S_4
[21] HWPG_1.24V_S5
PU10 G5719CTB1U
PG VIN LX EN GND VFB
G5719LX1.24V1
PL6 2.2uH_2.5x2.0x1.2
JP12 *S_3720
+1.24V_S5
HWPG_1.8V_S5
PR163 *S_4
PC158 *0.1u/16V_4
PR151 *S_4
PC156 10u/6.3V_6
PC153 *10u/6.3V_6
PC159 0.1u/16V_4
R1
PR154 16K_1%_4
R2
PR155 15K_1%_4
Check RC delay time with HW
(follow ZHP RC dealy time)
Vo=(0.6(R1+R2)/R2)
=1.24V

+1.5V
1.5Volt +/- 5%
TDC : 0.39A
PEAK : 0.52A
Width : 20mil

+3VPCU
PR180 *S_8
PC187 10u/6.3V_6
PC188 0.1u/50V_6
[21,23,24,25,29] MAINON
MAINON
PR182 *S_4
PR184 100K_5%_4
PC189 *0.1u/50V_6
PU14 G9661MF11U
VIN NC VO VEN VPP POK ADJ GND#1 GND#2
PR181 *S_8
+1.5V
+5VPCU
PR179 *S_4
PC185 1u/25V_4
[21] HWPG_1.5V
+3V
PR186 100K_5%_4
PC186 10u/6.3V_6
R1
PR183 30K_1%_4
0.8V
Vo =0.8(1+R1/R2)
=1.506V
R2
PR185 34K_1%_4

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PROJECT :
Size | Document Number: +1.8V_S5 / +1.24V_S5 / +1.5V | Rev: 3A
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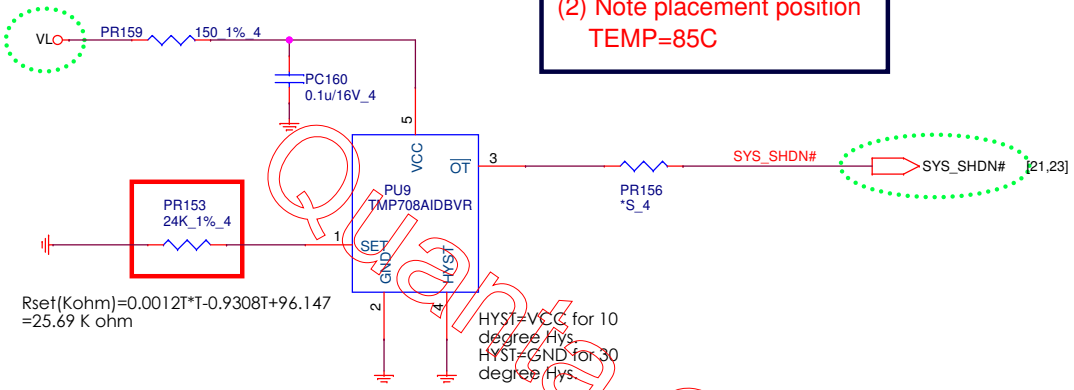
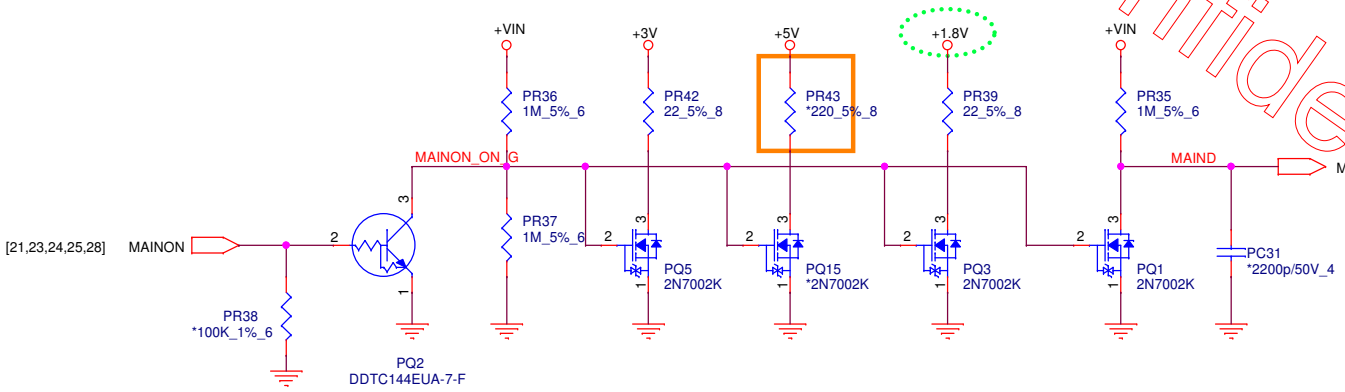
[23] VL
[12,22,23,25,26,27,30] +VIN
[4,5,6,12,13,14,15,16,17,18,21,23,24,25,26,28] +3V
[12,13,14,16,18,23] +5V
[12,13,28] +1.8V

Thermal Protection

(1) Need fine tune for thermal protect point
(2) Note placement position TEMP=85C



+5V PU High R= 220 ohm for Bo-Bo sound issue.



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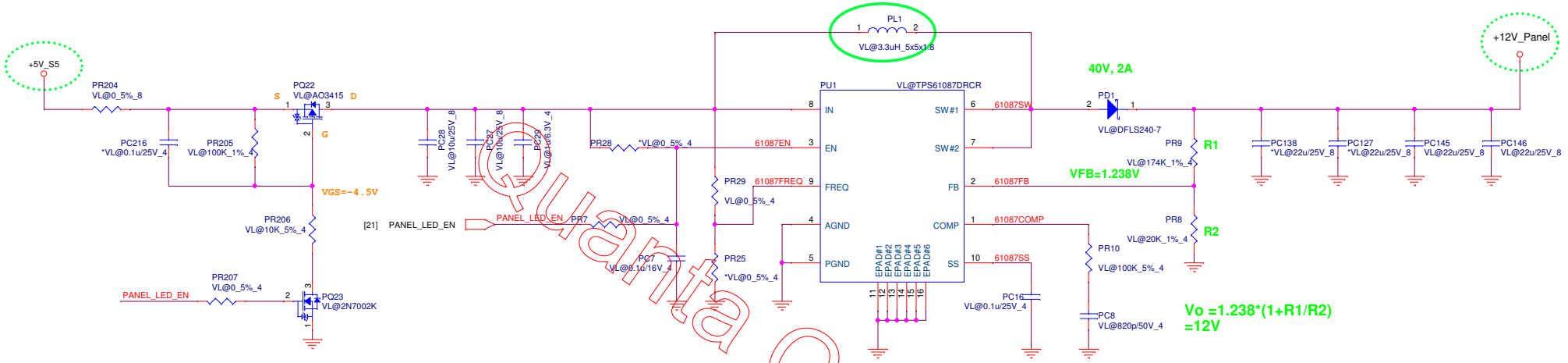
PROJECT :

Size	Document Number	Rev
	Thermal / Discharge	3A
Date: Tuesday, March 21, 2017	Sheet 29 of 34	

Panel Spec (TFT-LCD 14")
VLED : 6V~21V (Tpy:12V)
Power Consumption : 3W (MAX)

+12V_Panel
12 Volt +/- 5%
PEAK : 0.35A
Width : 20mil



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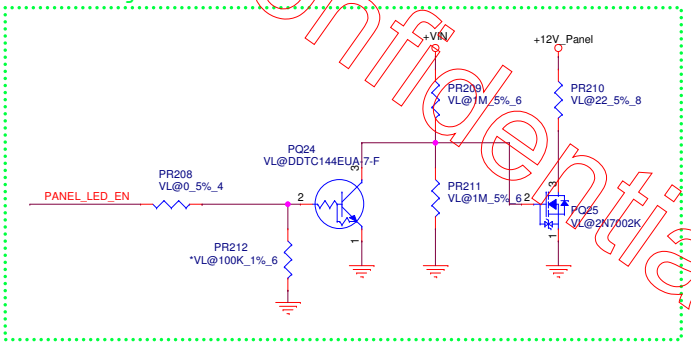
BL Discharge Circuit



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PROJECT : ZAJ		
Size	Document Number: LED Panel (TPS61087)	Rev: 3A
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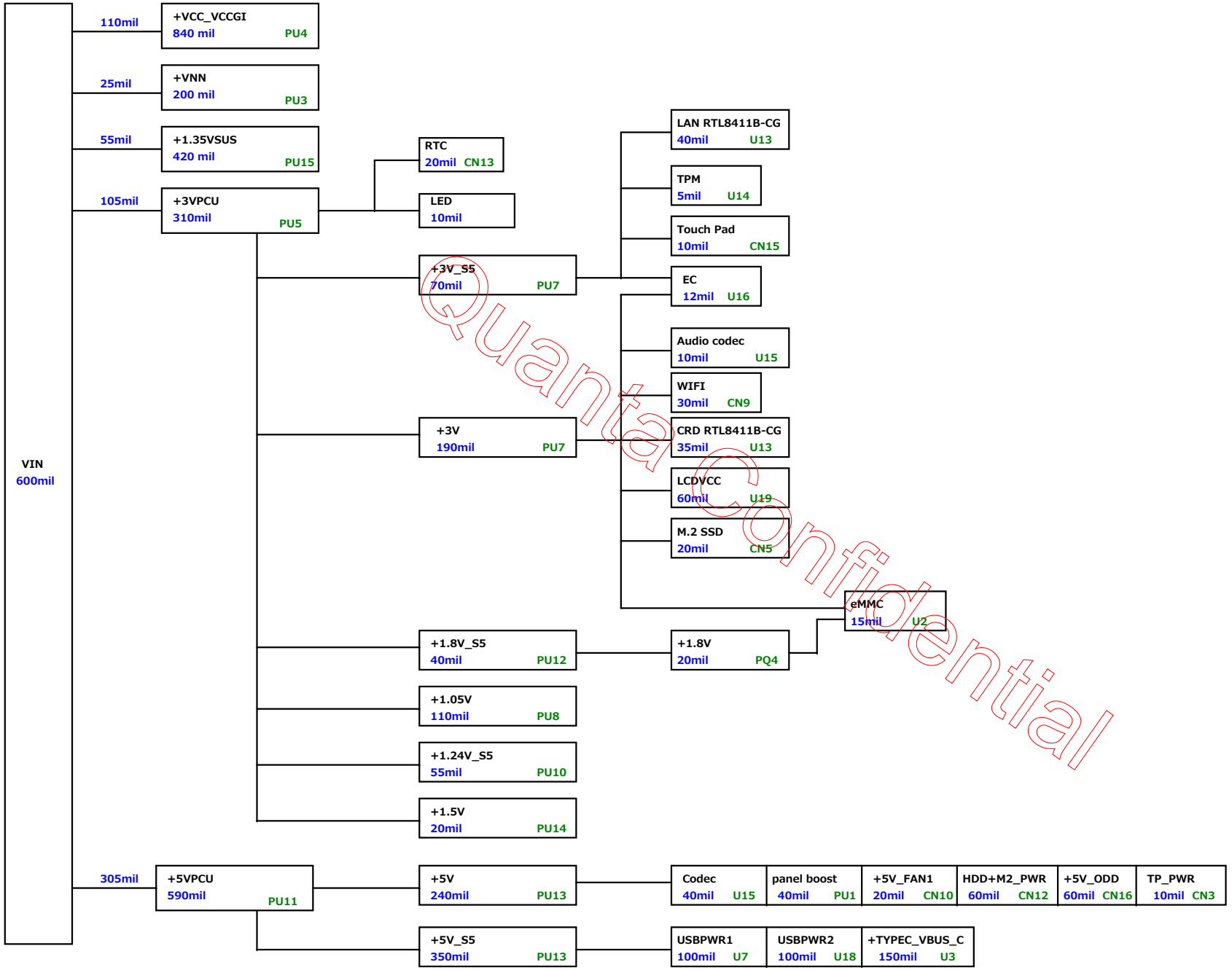
Apollo Power Tree



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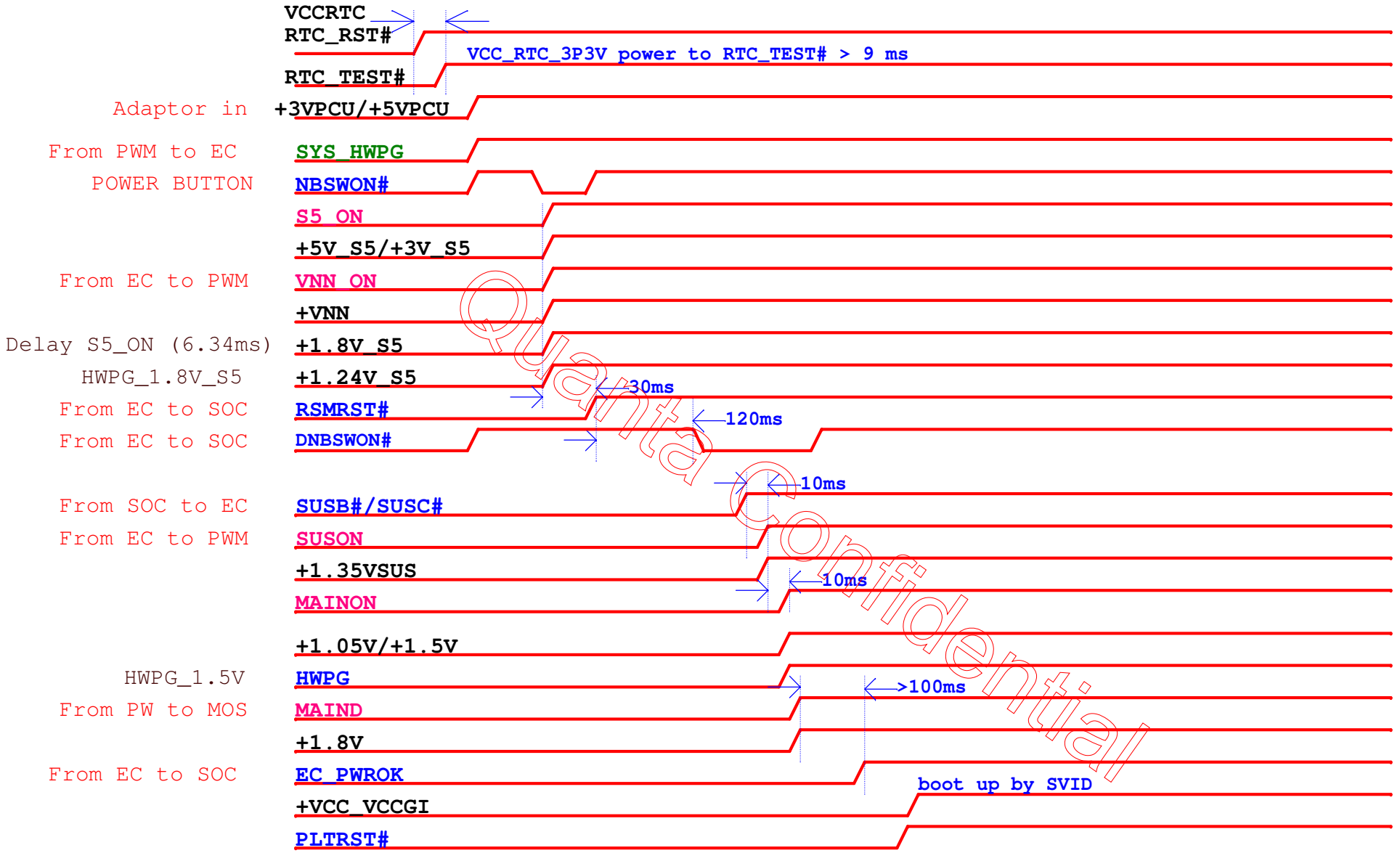
PROJECT : ZAJ
Size | Document Number | Rev 3A
POWER TREE
Date: Tuesday, March 21, 2017 | Sheet 31 of 34



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PROJECT : ZAJ

Size	Document Number	Rev
	Power on Sequence	3A
Date: Tuesday, March 21, 2017	Sheet 32 of 34	

Power plane	Description	S0	S3	S5
+VIN	Adaptor power supply	ON	ON	ON
+VCC_VCCGI	Variable voltage supply to CPU and Graphics Core and ISP logic	ON	OFF	OFF
+VNN	Variable voltage supply to other (non core) logic	ON	OFF	OFF
+1.05V	Fixed voltage rail for SRAM,I/O,internal Logic	ON	OFF	OFF
+1.24V_S5	Fixed voltage rail for SoC L2/ Audio & ISH I/O Logic and PLLs MPHY Logic/ USB2-I/O/MIPI I/Os	ON	ON	ON
+1.8V_S5	Fixed voltage rail for all GPIOs	ON	ON	ON
+1.35VSUS	Fixed voltage rail for DDR3L IO	ON	ON	OFF
+3V_RTC	Fixed Voltage rail for RTC (Real Time Clock)	ON	ON	ON
+1.8V	1.8V S0 power rail	ON	OFF	OFF
+1.5V	1.5V S0 power rail	ON	OFF	OFF
+5VPCU	5V always on power rail	ON	ON	ON
+5V_S5	5V S5 power rail	ON	ON	ON
+5V	5V S0 power rail	ON	OFF	OFF
+3VPCU	3V always on power rail	ON	ON	ON
+3V_S5	3V S5 power rail	ON	ON	ON
+3V	3V S0 power rail	ON	OFF	OFF

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Model	Date	CHANGE LIST
ZAJ REV.D	02/10	1.Change 0 ohm to shortpad : R403,R404,R405,R406,R407,R408,R409,R410,R104,R113,R108,R115,R99,R402,R167,R165,R161,R158,R157,R153,R270,R271,R272,R273,R247 2.Un-stuff R380/R464 (debug card circuit)
	02/18	1.Unstuff SW3 2.Update SW2 FP to "sw-ds-a40e-4p-smt" by SMT request 3.Update CN2 FP to "sdcard-156-1001902602-11p-smt" by SMT request 4.Update CN9 FP to "ngff-apci0076-p001a-75p-ke-smt" by SMT request

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