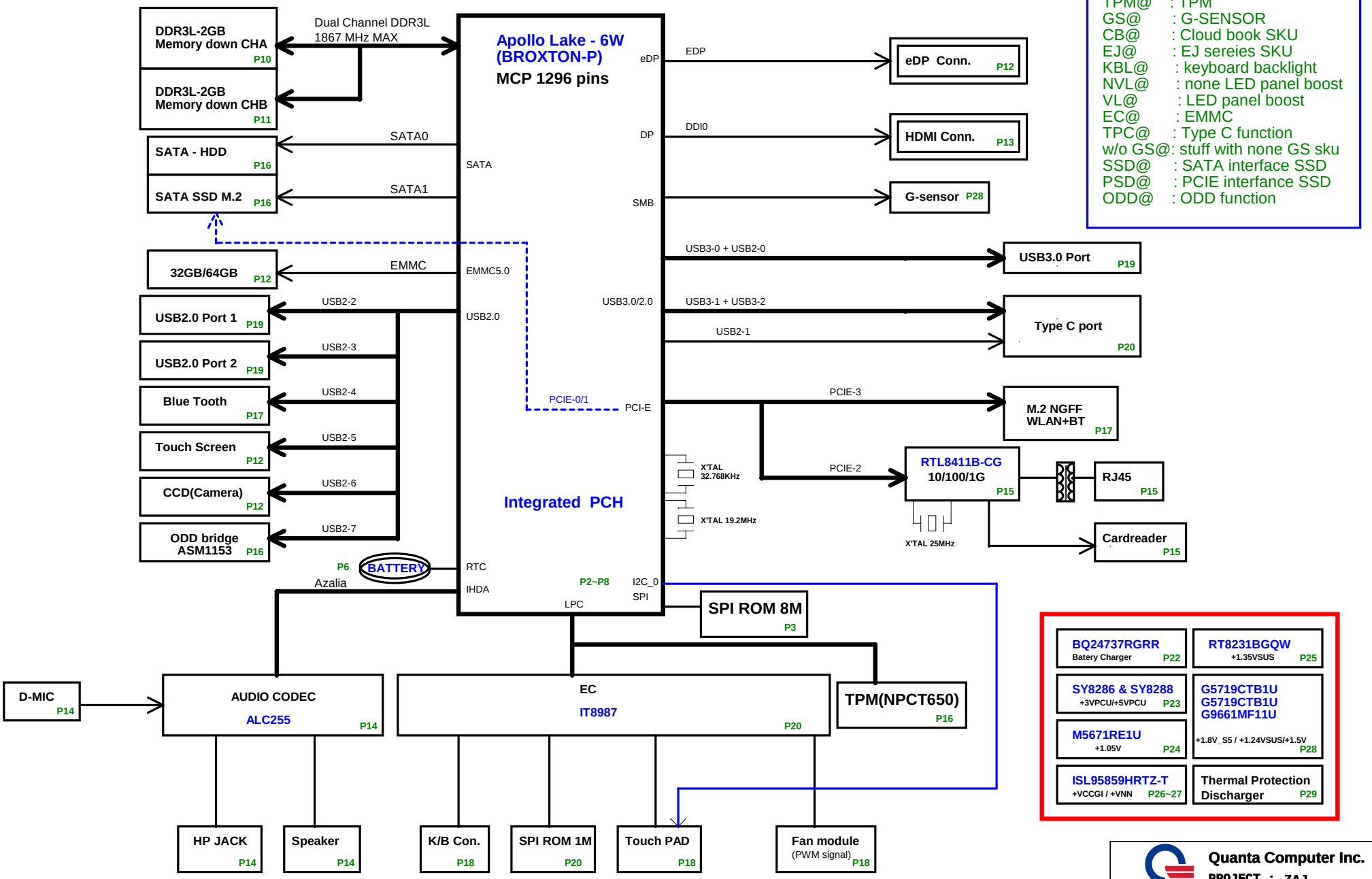
ZAJ/Z8P/Z8PA SYSTEM BLOCK DIAGRAM



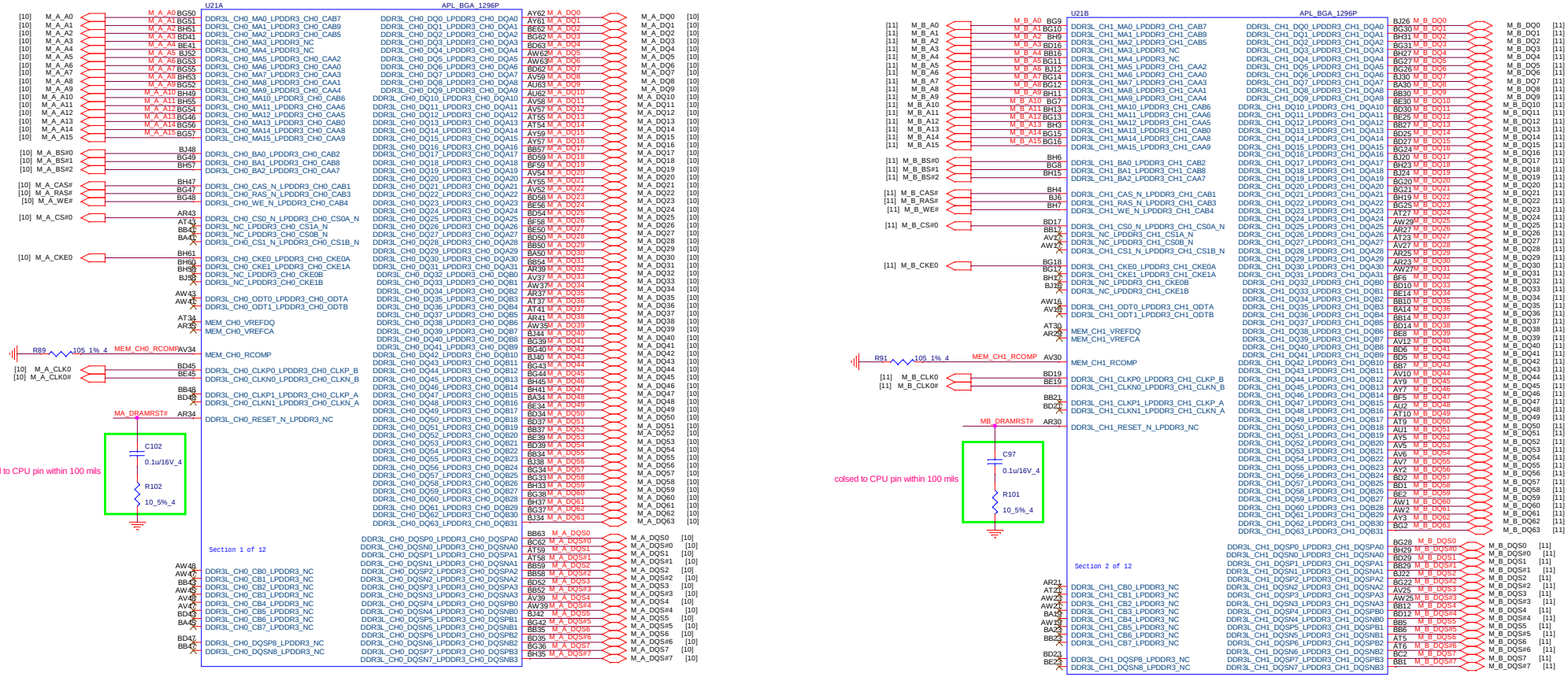
BOM

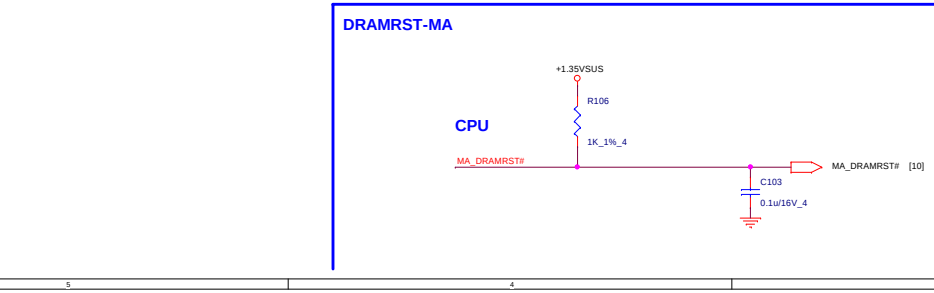
TPM@ : TPM
GS@ : G-SENSOR
CB@ : Cloud book SKU
EJ@ : EJ sereies SKU
KBL@ : keyboard backlight
NVL@ : none LED panel boost
VL@ : LED panel boost
EC@ : EMMC
TPC@ : Type C function
w/o GS@: stuff with none GS sku
SSD@ : SATA interface SSD
PSD@ : PCIE interfance SSD
ODD@ : ODD function

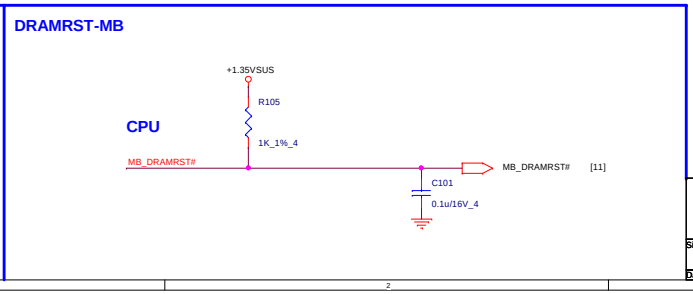
BQ24737RGRR Batery Charger P22	RT8231BGQW +1.35VSUS P25
SY8286 & SY8288 +3VPCU/+5VPCU P23	G5719CTB1U G5719CTB1U G9661MF11U
M5671RE1U +1.05V P24	+1.8V_S5 / +1.24VSUS/+1.5V P28
ISL95859HRTZ-T +VCCGI / +VNN P26~27	Thermal Protection Discharger P29

Quanta Computer Inc.
PROJECT : ZAJ
Size | Document Number | Rev 3A
Block Diagram
Date: Thursday, February 23, 2017 | Sheet 1 of 34

APL ULT (DDR3L)







Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (MEMORY)	3A

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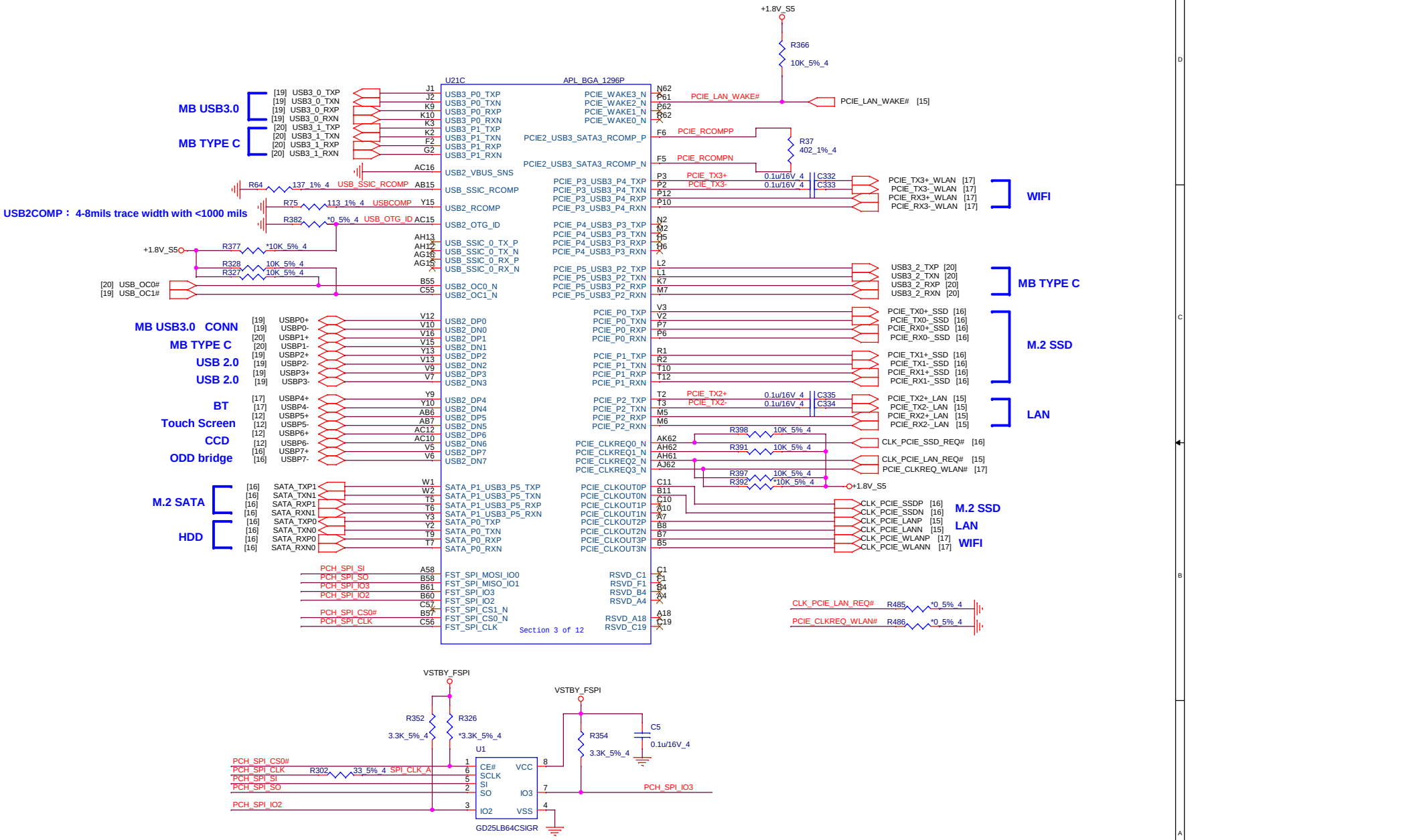
Apollo lake (SATA , ODD, CLK ,USB,PCIE)

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

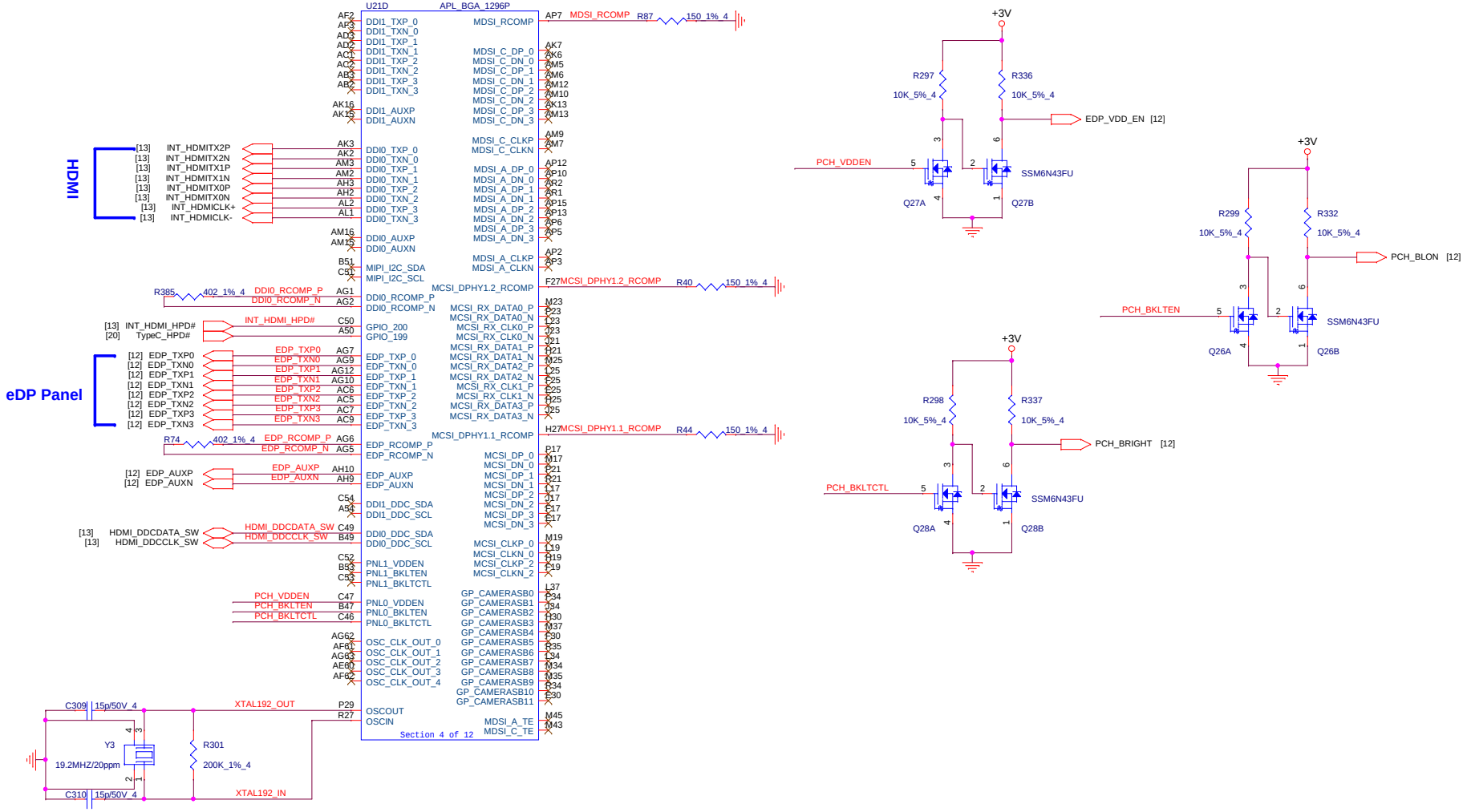
Quanta Computer Inc.

PROJECT : ZAJ

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

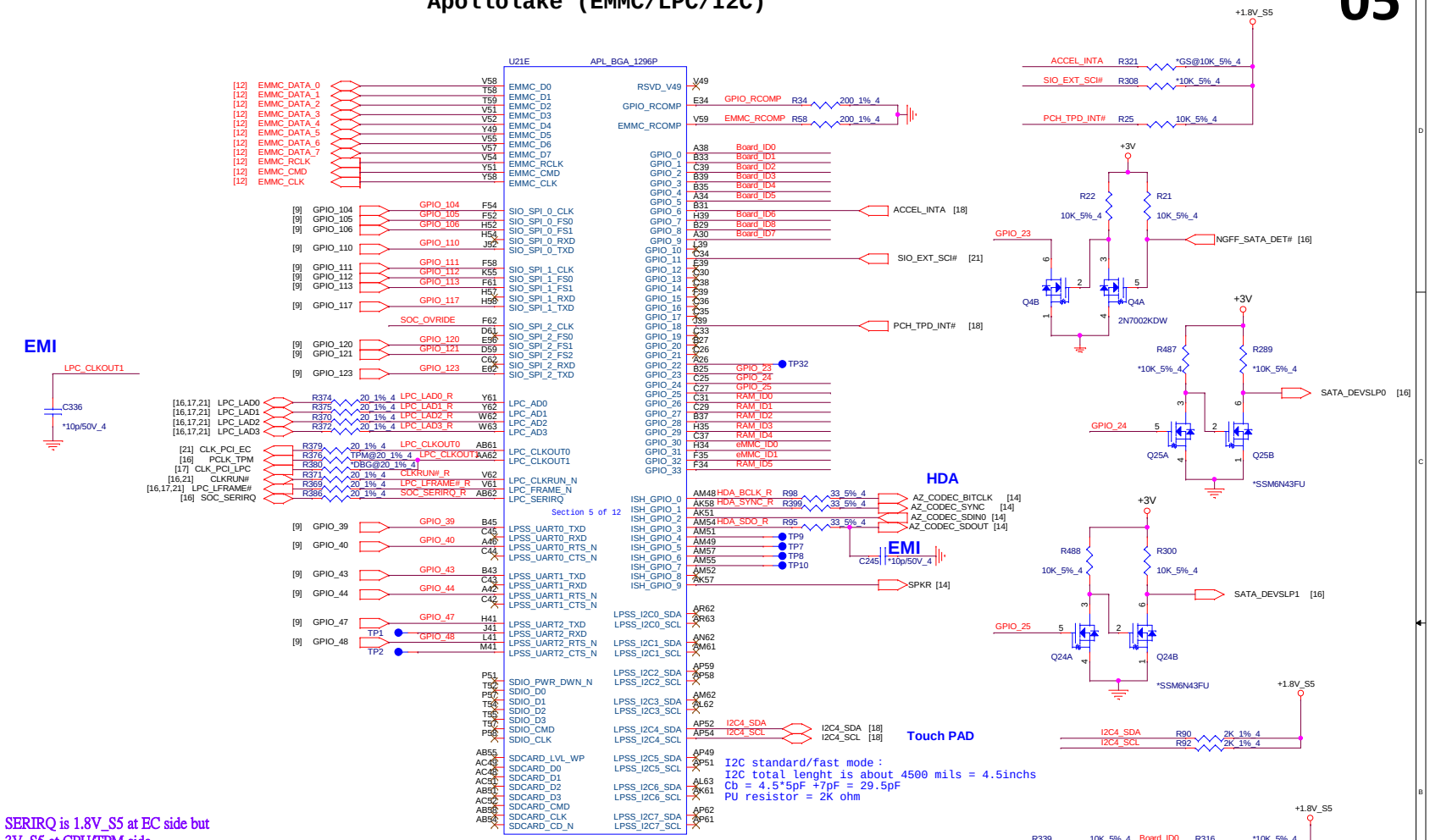
Date: Thursday, February 23, 2017 Sheet 3 of 34

Apollolake (DISPLAY,eDP)



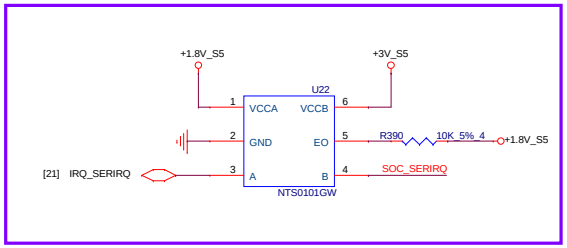
Quanta Computer Inc.		
PROJECT : ZAJ		
Size	Document Number: BXTP (HDMI/eDP)	Rev: 3A
Date: Thursday, February 23, 2017	Sheet 4 of 34	

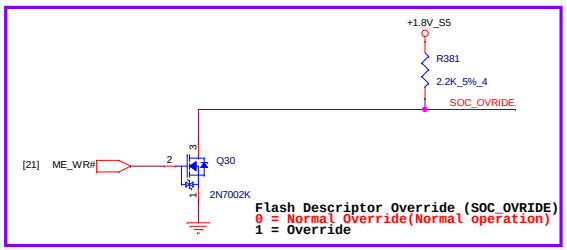
Apollolake (EMMC/LPC/I2C)



EMI

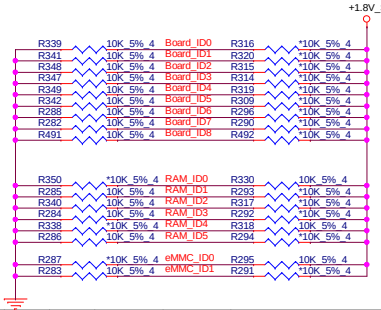
SERIRQ is 1.8V_S5 at EC side but
3V_S5 at CPU/TPM side





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

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



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

colsed to CPU pin within 100 mils

C50 0.1u/16V_4 R61 10_5%_4

U21F — APL_BGA_1296P

RTC_TEST# — RTC_TEST_N (AH49)
[21] RSMRST# — RSM_RST_N (AC57)
[21,22,26] H_PROCHOT# — PROCHOT_N (E47)
PMU_WAKE# — PMU_WAKE_N (AG55)
PMU_SUSCLK — PMU_SUSCLK (AE62)
TP37
[21] SUSC# — PMU_SLP_S4_N (AK54)
[21] SUSB# — PMU_SLP_S3_N (AC62)
PMU_SLP_S0I# — PMU_SLP_S0_N (AD61)
PMU_RSTBTN# — PMU_RSTBTN_N (AD62)
TP38
TP36
R73 200_1%_4 PMU_RCOMP — PMU_RCOMP (AG59)
[21] DNBSWON# — PMU_PWRBTN_N (AK55)
PCI_PLTRST# — PMU_PLTRST_N (AG57)
PCH_BATLOW# — PMU_BATLOW_N (AH51)
ACPRESENT — PMU_AC_PRESENT (AK49)
PMU BLOCK

[21] EC_PWROK — SOC_PWROK (AG49)

+1.8V_S5
R384 *10K_5%_4 PCH_SUSPWRDNACK
R17 1K_1%_4 H_PROCHOT#
R23 *10K_5%_4 THERMTRIP#_SOC
C79 0.1u/16V_4
R83 10_5%_4
THERMTRIP#_SOC — PMIC_THERMTRIP_N (J47)
PMIC_STDBY (J45)
PMIC_SDWN_B_GPIO_213 (M47)
PMIC_RESET_N (F45)
PMIC_PWRGOOD (F47)
PMIC_I2C_SDA (H45)
PMIC_I2C_SCL (L47)
GPIO_214 (L45)
GPIO_215 (P47)
colsed to CPU pin within 100 mils

+3V_S5
R82 *100K_5%_4 PCH_BATLOW#
R71 1K_1%_4 PMU_WAKE#
R85 10K_5%_4 ACPRESENT
R389 10K_5%_4 PMU_RSTBTN#
R67 *100K_5%_4 RSMRST#
R81 20K_1%_4 EC_PWROK
[12] INT_EDP_HPD# — INT_EDP_HPD# — PMC_SPI_TXD (H50)
PMC_SPI_RXD (J50)
PMC_SPI_FS2 (M48)
PMC_SPI_FS1 (P49)
PMC_SPI_FS0 (L48)
PMC_SPI_CLK (E50)

[9] GPIO_34 — GPIO_34 — PWM0 (B41)
[9] GPIO_35 — GPIO_35 — PWM1 (C41)
[9] GPIO_36 — GPIO_36 — PWM2 (F41)
PWM3 (E41)

+3V_RTC — R62 330K_5%_4 INTRUDER# — JTAGX (B21)
INTRUDER (AC58)

PCH_MBDAT0_R — SMB_DATA (T61)
PCH_MBCLK0_R — SMB_CLK (T62)
SMB_ALERT_N (R63)

RSVD_H43 (H43)
RSVD_AG52 (AG52)
RSVD_J43 (J43)
RSVD_AG54 (AG53)

Section 6 of 12

APL_BGA_1296P

RTC_RST_N (AC55) — RTC_RST# — PCH_SUSPWRDNACK — PCH_SUSPWRDNACK [21]
SUSPWRDNACK (AC63)
SUS_STAT_N (AC58) — TP6

AVS_I2S1_WS_SYNC (J62) — GPIO_78 — GPIO_78 [9]
AVS_I2S1_SDO (K62)
AVS_I2S1_SDI (K61)
AVS_I2S1_MCLK (G62)
AVS_I2S1_BCLK (H63)

AVS_I2S2_SDO (M58) — GPIO_88 — GPIO_88 [9]
AVS_I2S2_SDI (K59)
AVS_I2S2_MCLK (K58) — HDA_RST#_R — R52 33_5%_4 — AZ_CODEC_RST# [14]
AVS_I2S2_BCLK (H59)
AVS_I2S2_WS_SYNC (M57)

AVS_I2S3_WS_SYNC (M61) — GPIO_92 — GPIO_92 [9]
AVS_I2S3_SDO (L63)
AVS_I2S3_SDI (L62)
AVS_I2S3_BCLK (M62)

AVS_DMIC_DATA_2 (M52)
AVS_DMIC_DATA_1 (N54)
AVS_DMIC_CLK_B1 (P52)
AVS_DMIC_CLK_AB2 (N55) — GPIO_82 — GPIO_82 [9]
AVS_DMIC_CLK_A1 (P54)

VCC_RTC_EXTPAD (AG51) — C58 0.1u/16V_4 — +1.8V_S5
RTC_X2 (AC59) — RTC_X2
RTC_X1 (AC59) — RTC_X1

JTAG_PREQ_N (C20) — XDP_PREQ# — R307 100_1%_4
JTAG_PRDY_N (C21) — XDP_PRDY# — R306 100_1%_4
JTAG_PMODE (G19)
JTAG_TRST_N (C24) — XDP_TRST# — R322 *51_5%_4
JTAG_TMS (C23) — XDP_TMS — R323 51_5%_4
JTAG_TDO (A22) — XDP_TDO — R304 100_1%_4
JTAG_TDI (C22) — XDP_TDI — R305 51_5%_4
JTAG_TCK (B23) — XDP_TCK — R335 51_5%_4

GPIO_219 (L30)
GPIO_218 (M30)
GPIO_217 (M29)
GPIO_216 (P30)

PCIE_REF_CLK_RCOMP (E21) — CLKDRV_RCOMP — R42 60.4_1%_4

SVID0_DATA (C18) — H_CPU_SVIDDAT [26]
SVID0_CLK (C17) — H_CPU_SVIDCLK [26]
SVID0_ALERT_N (B17) — SVID_ALERT#_R — R329 220_5%_4 — VR_SVID_ALERT#_VCORE [26]

Folllow APL MOW31：
un-stuff 51 ohm pull down resistor on
TRST_N pin

+1.05V
R323 169_1%_4
R324 68_1%_4
C313 1000p/50V_4
H_CPU_SVIDDAT
VR_SVID_ALERT#_VCORE

PLTRST# Buffer

+3V
R66 10K_5%_4
Q5 2N7002K
PCI_PLTRST# — PLTRST# [12,15,16,17,21]
C70 0.1u/16V_4
R72 10_5%_4
colsed to CPU pin within 100 mils

THERMALTRIP#

THERMTRIP#_SOC — R24 *S_4 — THERMTRIP# [21]

RTC Clock 32.768KHz (CPU)

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

Trace length < 1000 mils

C47 15p/50V_4 — RTC_X1
Y1 32.768KHZ/20ppm
R60 10M_5%_4
C34 15p/50V_4 — RTC_X2

SMBus(PCH)

+3V_S5
R368 1K_1%_4
R365 1K_1%_4
PCH_MBDAT0_R — Q29A — CLK_SDATA [18]
PCH_MBCLK0_R — Q29B — CLK_SCLK [18]
2N7002KDW

+3V
R45 4.7K_5%_4
R38 4.7K_5%_4

APL S5
DDR_GS/S0

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

RTC Circuitry (RTC)

+3VPCU
CN7
CB@cable RTC
R463 1K_1%_4 — +3V_RTC_1
Trace width = 20 mils
D26 BAT54CW
+3V_RTC
+3V_RTC Trace width = 20 mils
R245 20K_1%_4 — RTC_RST#
C253 1u/6.3V_4
J1 *JUMP
R246 20K_1%_4 — RTC_TEST#
C254 1u/6.3V_4

20MIL
VCCRTC_2
VCCRTC_3 — Q34 EJ@PMST3904
VCCRTC_4 — R475 EJ@4.7K_5%_4 — R474 EJ@4.7K_5%_4 — +5V_S5
CN13 EJ@53014-00201-V09
R468 EJ@68.1K_1%_4
R469 EJ@150K_1%_4

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

EC reset RTC

RTC_TEST#
RTC_RST#
[21] CLR_CMOS
Q11A
Q11B
2N7002KDW

Quanta Computer Inc.
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Size	Document Number	Rev
	BXTP (PMU/PMIC/HDA/RTC)	3A
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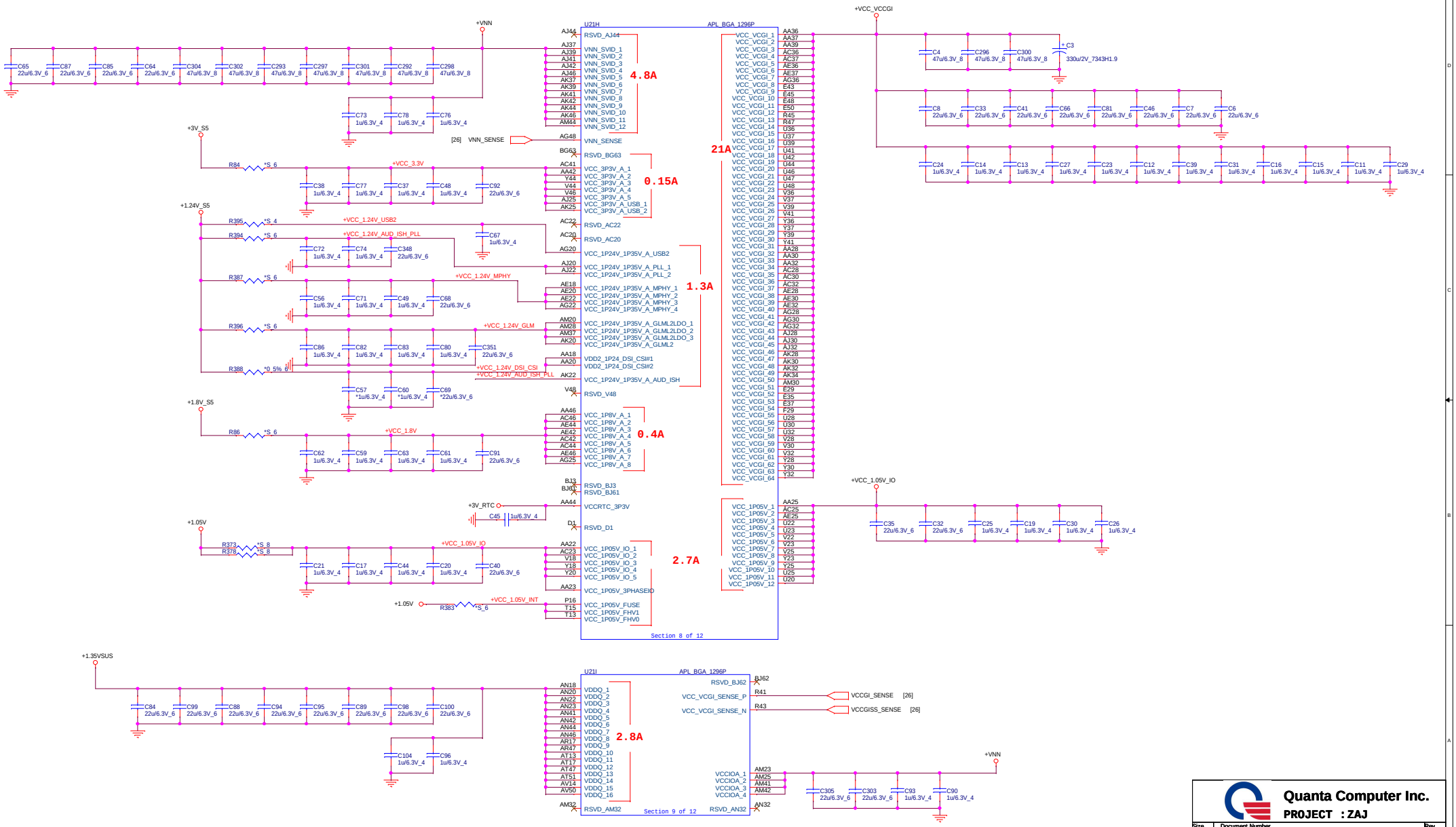
Apollolake (POWER)

07



Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (POWER)	3A

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Apollolake ULT (GND)

08

U21J APL_BGA_1296P

R29	VSS_1	VSS_82	AH58
A12	VSS_2	VSS_83	AH59
A16	VSS_3	VSS_84	AH6
A20	VSS_4	VSS_85	AH7
A24	VSS_5	VSS_86	AJ1
A28	VSS_6	VSS_87	AJ18
A32	VSS_7	VSS_88	AJ2
A36	VSS_8	VSS_89	AJ23
A40	VSS_9	VSS_90	AJ27
A44	VSS_10	VSS_91	AJ34
A48	VSS_11	VSS_92	AJ36
A5	VSS_12	VSS_93	AJ63
A52	VSS_13	VSS_94	AK10
A56	VSS_14	VSS_95	AK12
A62	VSS_15	VSS_96	AK18
A9	VSS_16	VSS_97	AK23
AA1	VSS_17	VSS_98	AK27
AA2	VSS_18	VSS_99	AK36
AA27	VSS_19	VSS_100	AK48
AA34	VSS_20	VSS_101	AK5
AA41	VSS_21	VSS_102	AK52
AA63	VSS_22	VSS_103	AK59
AB10	VSS_23	VSS_104	AK9
AB12	VSS_24	VSS_105	AM18
AB16	VSS_25	VSS_106	AM22
AB48	VSS_26	VSS_107	AM27
AB5	VSS_27	VSS_108	AM34
AB52	VSS_28	VSS_109	AM36
AB57	VSS_29	VSS_110	AM39
AB59	VSS_30	VSS_111	AM46
AB9	VSS_31	VSS_112	AN1
AC18	VSS_32	VSS_113	AN10
AC27	VSS_33	VSS_114	AN11
AC34	VSS_34	VSS_115	AN13
AC39	VSS_35	VSS_116	AN14
AE1	VSS_36	VSS_117	AN16
AE10	VSS_37	VSS_118	AN17
AE11	VSS_38	VSS_119	AN2
AE13	VSS_39	VSS_120	AN25
AE14	VSS_40	VSS_121	AN27
AE16	VSS_41	VSS_122	AN28
AE17	VSS_42	VSS_123	AN30
AE2	VSS_43	VSS_124	AN34
AE23	VSS_44	VSS_125	AN36
AE27	VSS_45	VSS_126	AN37
AE34	VSS_46	VSS_127	AN39
AE39	VSS_47	VSS_128	AN47
AE4	VSS_48	VSS_129	AN48
AE41	VSS_49	VSS_130	AN5
AE47	VSS_50	VSS_131	AN50
AE48	VSS_51	VSS_132	AN51
AE5	VSS_52	VSS_133	AN53
AE50	VSS_53	VSS_134	AN54
AE51	VSS_54	VSS_135	AN56
AE53	VSS_55	VSS_136	AN57
AE54	VSS_56	VSS_137	AN59
AE56	VSS_57	VSS_138	AN63
AE57	VSS_58	VSS_139	AN7
AE59	VSS_59	VSS_140	AN8
AE63	VSS_60	VSS_141	AP55
AE7	VSS_61	VSS_142	AP9
AE8	VSS_62	VSS_143	AR19
AG13	VSS_63	VSS_144	AR32
AG18	VSS_64	VSS_145	AR45
AG23	VSS_65	VSS_146	AT12
AG27	VSS_66	VSS_147	AT16
AG34	VSS_67	VSS_148	AT19
AG37	VSS_68	VSS_149	AT2
AG39	VSS_69	VSS_150	AT25
AG41	VSS_70	VSS_151	AT29
AG42	VSS_71	VSS_152	AT3
AG44	VSS_72	VSS_153	AT35
AG46	VSS_73	VSS_154	AT39
AH15	VSS_74	VSS_155	AT45
AH16	VSS_75	VSS_156	AT48
AH48	VSS_76	VSS_157	AT52
AH5	VSS_77	VSS_158	AT57
AH52	VSS_78	VSS_159	AT61
AH54	VSS_79	VSS_160	AT62
AH55	VSS_80	VSS_161	AT7
AH57	VSS_81	VSS_162	AU32

Section 10 of 12

U21K APL_BGA_1296P

AV19	VSS_163	VSS_244	BG29
AV2	VSS_164	VSS_245	BG32
AV21	VSS_165	VSS_246	BG35
AV23	VSS_166	VSS_247	BG41
AV29	VSS_167	VSS_248	BG45
AV3	VSS_168	VSS_249	BH1
AV32	VSS_169	VSS_250	BH2
AV35	VSS_170	VSS_251	BH21
AV41	VSS_171	VSS_252	BH25
AV43	VSS_172	VSS_253	BH39
AV45	VSS_173	VSS_254	BH43
AV55	VSS_174	VSS_255	BH62
AV61	VSS_175	VSS_256	BH63
AV62	VSS_176	VSS_257	BJ10
AV9	VSS_177	VSS_258	BJ14
AW14	VSS_178	VSS_259	BJ18
AW30	VSS_179	VSS_260	BJ28
AW34	VSS_180	VSS_261	BJ32
AW50	VSS_181	VSS_262	BJ36
AY10	VSS_182	VSS_263	BJ4
AY32	VSS_183	VSS_264	BJ46
AY54	VSS_184	VSS_265	BJ50
AY58	VSS_185	VSS_266	BJ54
AY6	VSS_186	VSS_267	BJ56
B2	VSS_187	VSS_268	BJ60
B3	VSS_188	VSS_269	BJ8
B62	VSS_189	VSS_270	C12
B63	VSS_190	VSS_271	C16
B9	VSS_191	VSS_272	C28
BA1	VSS_192	VSS_273	C32
BA12	VSS_193	VSS_274	C40
BA16	VSS_194	VSS_275	C48
BA17	VSS_195	VSS_276	D32
BA2	VSS_196	VSS_277	D58
BA21	VSS_197	VSS_278	D6
BA25	VSS_198	VSS_279	E12
BA27	VSS_199	VSS_280	E14
BA29	VSS_200	VSS_281	E19
BA32	VSS_201	VSS_282	E27
BA35	VSS_202	VSS_283	E4
BA37	VSS_203	VSS_284	E54
BA39	VSS_204	VSS_285	F10
BA43	VSS_205	VSS_286	F21
BA47	VSS_206	VSS_287	F3
BA48	VSS_207	VSS_288	F32
BA52	VSS_208	VSS_289	F37
BA62	VSS_209	VSS_290	F43
BA63	VSS_210	VSS_291	F45
BB19	VSS_211	VSS_292	F50
BB25	VSS_212	VSS_293	F56
BB3	VSS_213	VSS_294	F59
BB39	VSS_214	VSS_295	F63
BB45	VSS_215	VSS_296	G1
BB61	VSS_216	VSS_297	G32
BC32	VSS_217	VSS_298	H17
BD3	VSS_218	VSS_299	H23
BD32	VSS_219	VSS_300	H29
BD56	VSS_220	VSS_301	H3
BD61	VSS_221	VSS_302	H37
BD8	VSS_222	VSS_303	H47
BE1	VSS_223	VSS_304	H61
BE10	VSS_224	VSS_305	H7
BE12	VSS_225	VSS_306	J12
BE16	VSS_226	VSS_307	J14
BE17	VSS_227	VSS_308	J19
BE21	VSS_228	VSS_309	J27
BE27	VSS_229	VSS_310	J30
BE29	VSS_230	VSS_311	J32
BE35	VSS_231	VSS_312	J35
BE37	VSS_232	VSS_313	J37
BE43	VSS_233	VSS_314	J48
BE47	VSS_234	VSS_315	J63
BE48	VSS_235	VSS_316	K32
BE52	VSS_236	VSS_317	K5
BE54	VSS_237	VSS_318	K54
BE63	VSS_238	VSS_319	K57
BF3	VSS_239	VSS_320	K6
BF32	VSS_240	VSS_321	L21
BF61	VSS_241	VSS_322	L27
BG19	VSS_242	VSS_323	L29
BG23	VSS_243	VSS_324	L35

Section 11 of 12

U21L APL_BGA_1296P

L43	VSS_325	VSS_361	U27
L45	VSS_326	VSS_362	U34
L50	VSS_327	VSS_363	U5
M14	VSS_328	VSS_364	U50
M21	VSS_329	VSS_365	U51
M27	VSS_330	VSS_366	U53
M3	VSS_331	VSS_367	U54
M32	VSS_332	VSS_368	U56
M50	VSS_333	VSS_369	U57
M59	VSS_334	VSS_370	U59
M9	VSS_335	VSS_371	U62
N1	VSS_336	VSS_372	U63
N32	VSS_337	VSS_373	U7
N63	VSS_338	VSS_374	U8
P13	VSS_339	VSS_375	V20
P19	VSS_340	VSS_376	V27
P35	VSS_341	VSS_377	V34
P37	VSS_342	VSS_378	V42
P41	VSS_343	VSS_379	Y12
P43	VSS_344	VSS_380	Y16
P45	VSS_345	VSS_381	Y22
P5	VSS_346	VSS_382	Y27
P55	VSS_347	VSS_383	Y34
P59	VSS_348	VSS_384	Y42
P9	VSS_349	VSS_385	Y46
R23	VSS_350	VSS_386	Y48
R32	VSS_351	VSS_387	Y5
T49	VSS_352	VSS_388	Y52
U1	VSS_353	VSS_389	Y54
U10	VSS_354	VSS_390	Y55
U11	VSS_355	VSS_391	Y57
U13	VSS_356	VSS_392	Y59
U14	VSS_357	VSS_393	Y6
U16	VSS_358	VSS_394	Y7
U17	VSS_359	VSS_395	
U18	VSS_360		

Sect 12/12

U21G APL_BGA_1296P

B13	SPARE_9	NOCONNECT_16	M12
C13	SPARE_8	NOCONNECT_17	C15
L16	SPARE_7	NOCONNECT_18	F16
M16	SPARE_6	NOCONNECT_19	J16
E23	SPARE_5	NOCONNECT_20	D8
F23	SPARE_4	NOCONNECT_21	E8
R25	SPARE_3	NOCONNECT_22	H16
AB49	SPARE_2	NOCONNECT_23	C9
AC13	SPARE_11	NOCONNECT_24	F8
AB13	SPARE_10	NOCONNECT_25	E10
AM59	SPARE_1	NOCONNECT_26	E16
AM58	SPARE_0	NOCONNECT_27	F14
		NOCONNECT_28	F12
T51		NOCONNECT_29	H10
L14	NOCONNECT_1	NOCONNECT_30	H14
R19	NOCONNECT_2	NOCONNECT_31	H12
E6	NOCONNECT_3	NOCONNECT_32	A14
R17	NOCONNECT_4	NOCONNECT_33	C14
E3	NOCONNECT_5	NOCONNECT_34	M39
D4	NOCONNECT_6	NOCONNECT_35	P39
A60	NOCONNECT_7	NOCONNECT_36	R39
A61	NOCONNECT_8	NOCONNECT_37	R37
BJ2	NOCONNECT_9	NOCONNECT_38	C2
BG1	NOCONNECT_10	NOCONNECT_39	J29
P27	NOCONNECT_11	NOCONNECT_40	P25
A3	NOCONNECT_12	NOCONNECT_41	R30
M10	NOCONNECT_13	NOCONNECT_42	C63
B15	NOCONNECT_14	NOCONNECT_43	E63
	NOCONNECT_15	NOCONNECT_44	D2
		NOCONNECT_45	AP57

Section 7 of 12

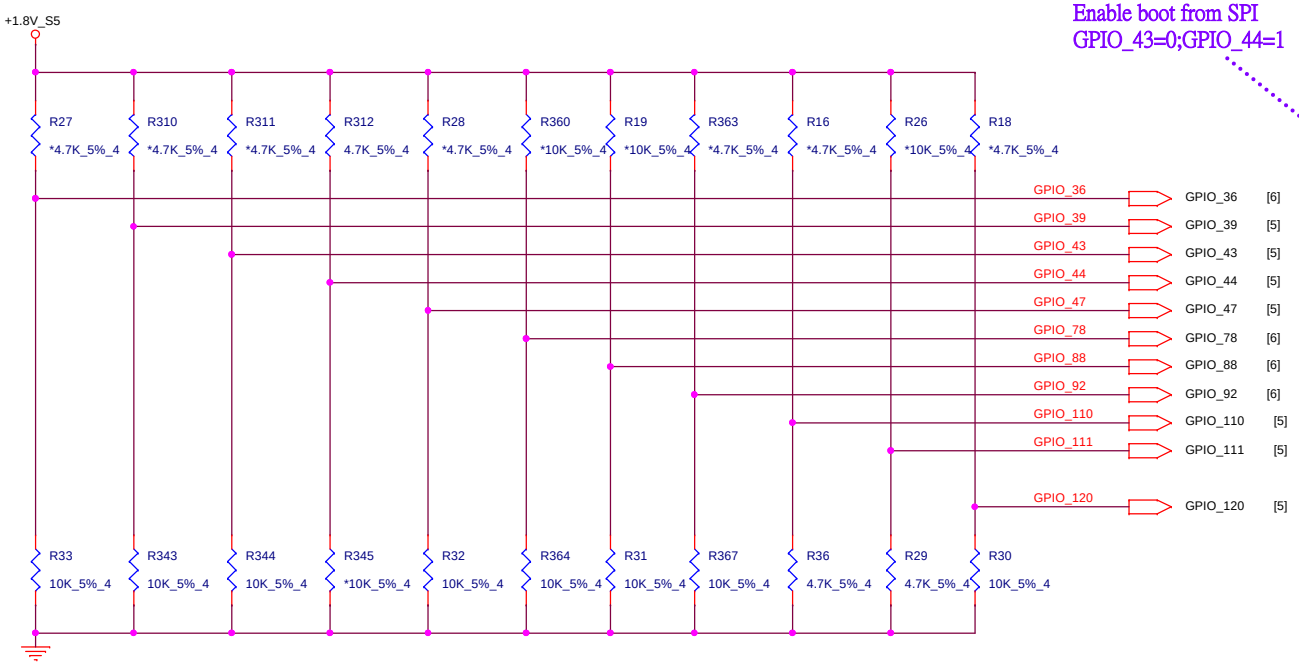
Quanta Computer Inc.

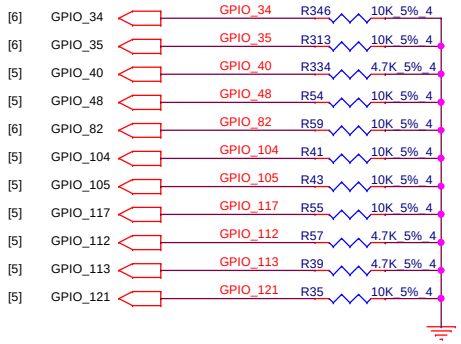
PROJECT : ZAJ

Size	Document Number	Rev
	BXTP (GND)	3A
Date: Thursday, February 23, 2017	Sheet 8 of 34	

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

Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	HARDWARE STRAPS	3A
Date: Thursday, February 23, 2017	Sheet 9 of 34	

On board memory(OBM)

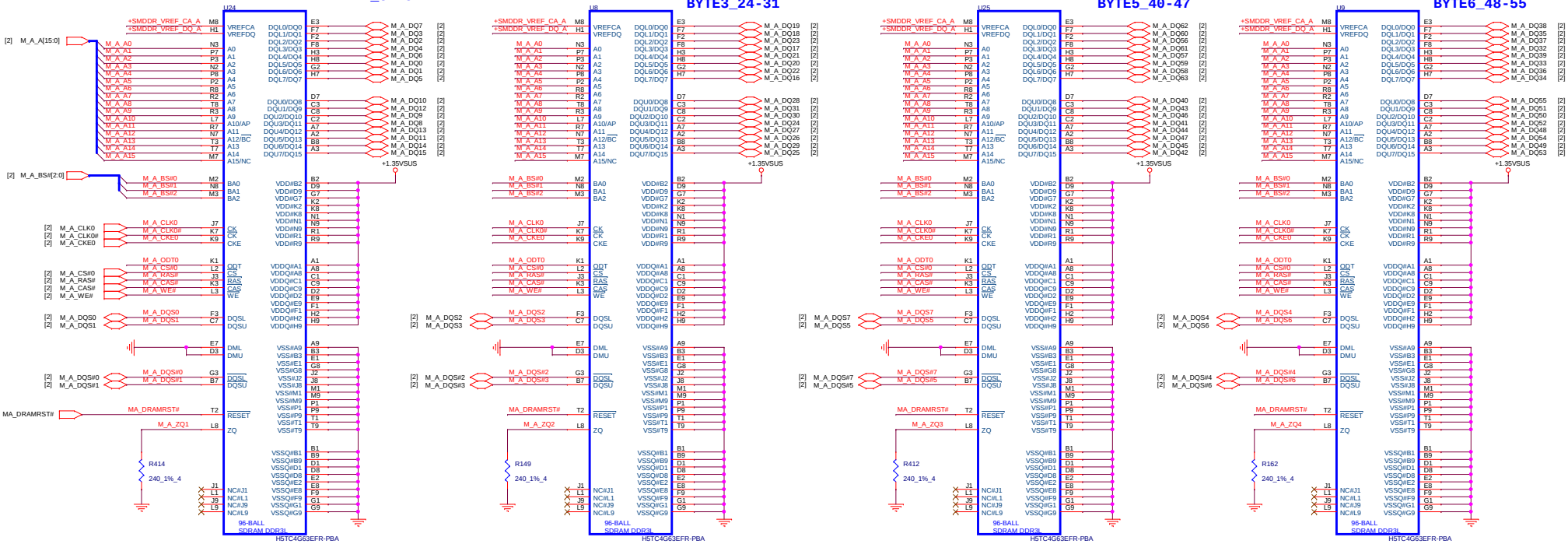
DDR3L MEMORY CHANNEL A

BYTE0_0-7
BYTE1_8-15

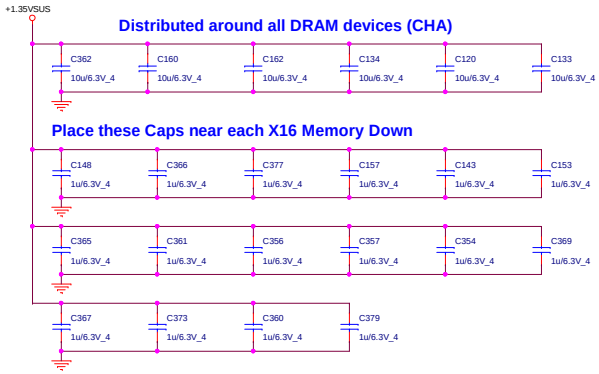
BYTE2_16-23
BYTE3_24-31

BYTE7_56-63
BYTE5_40-47

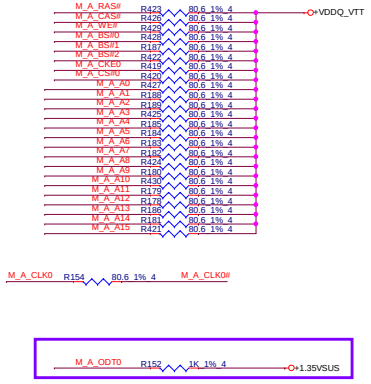
BYTE4_32-39
BYTE6_48-55



DE-CAPS FOR MEMORY CHANNEL A

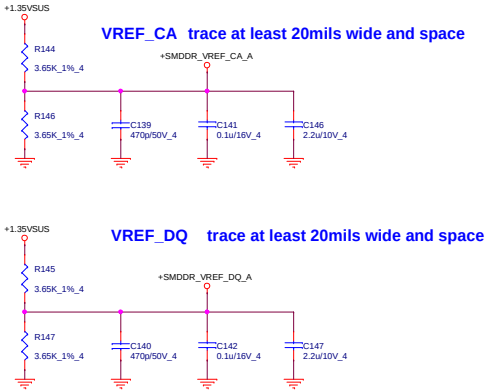


VTT TERMINATIONS



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

VREF_CA-DQ CIRCUIT



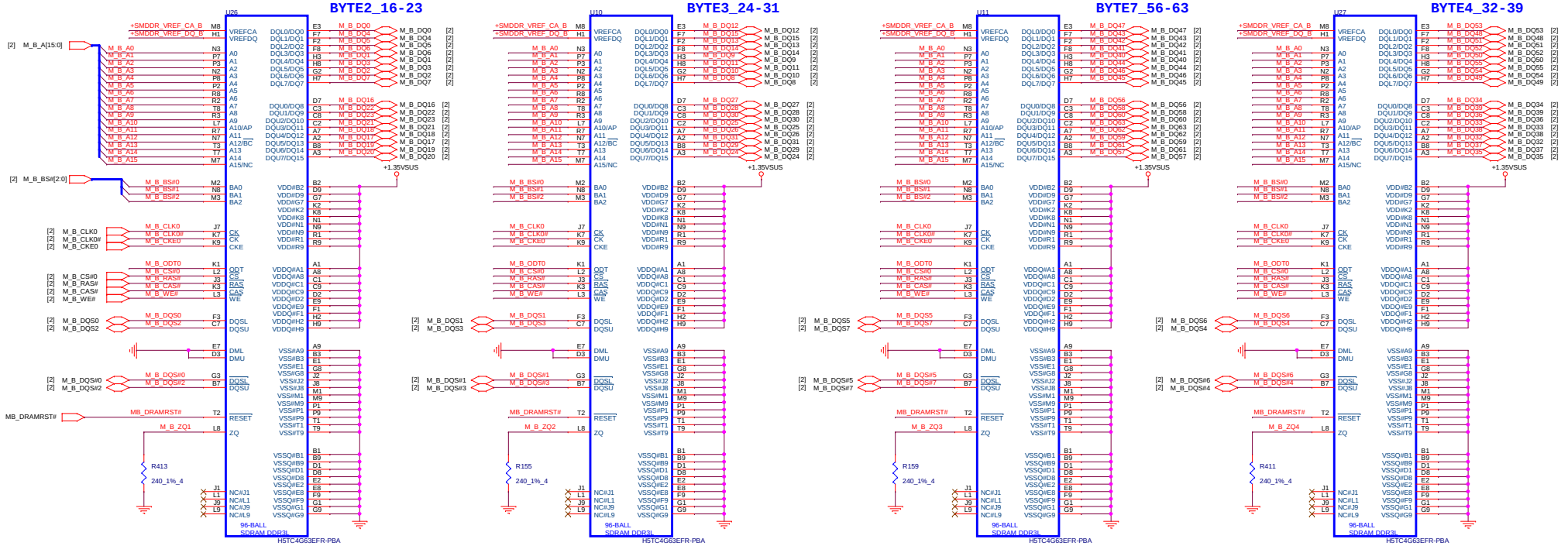
Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	DDR3L SODIMM-STD CHA	3A
Date: Thursday, February 23, 2017	Sheet 10 of 34	

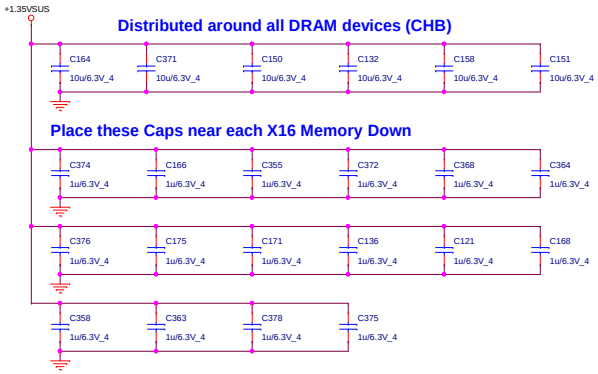
On board memory(OBM)

DDR3L MEMORY CHANNEL B

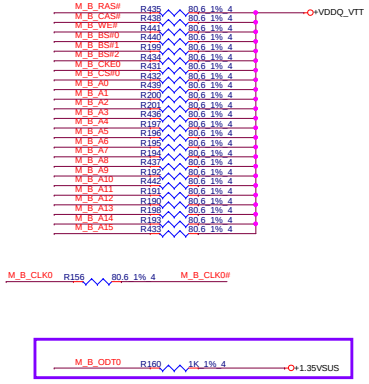
BYTE0_0-7
BYTE2_16-23
BYTE1_8-15
BYTE3_24-31
BYTE5_40-47
BYTE7_56-63
BYTE6_48-55
BYTE4_32-39



DE-CAPS FOR MEMORY CHANNEL B

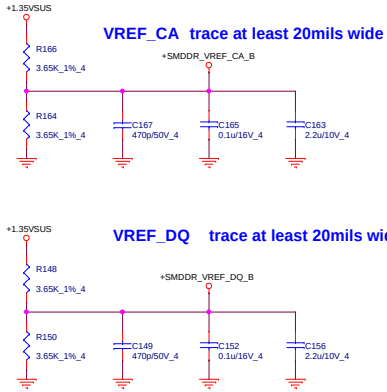


VTT TERMINATIONS



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

VREF_CA-DQ CIRCUIT



Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	DDR3L MEMORY DOWNx16 CHB	3A

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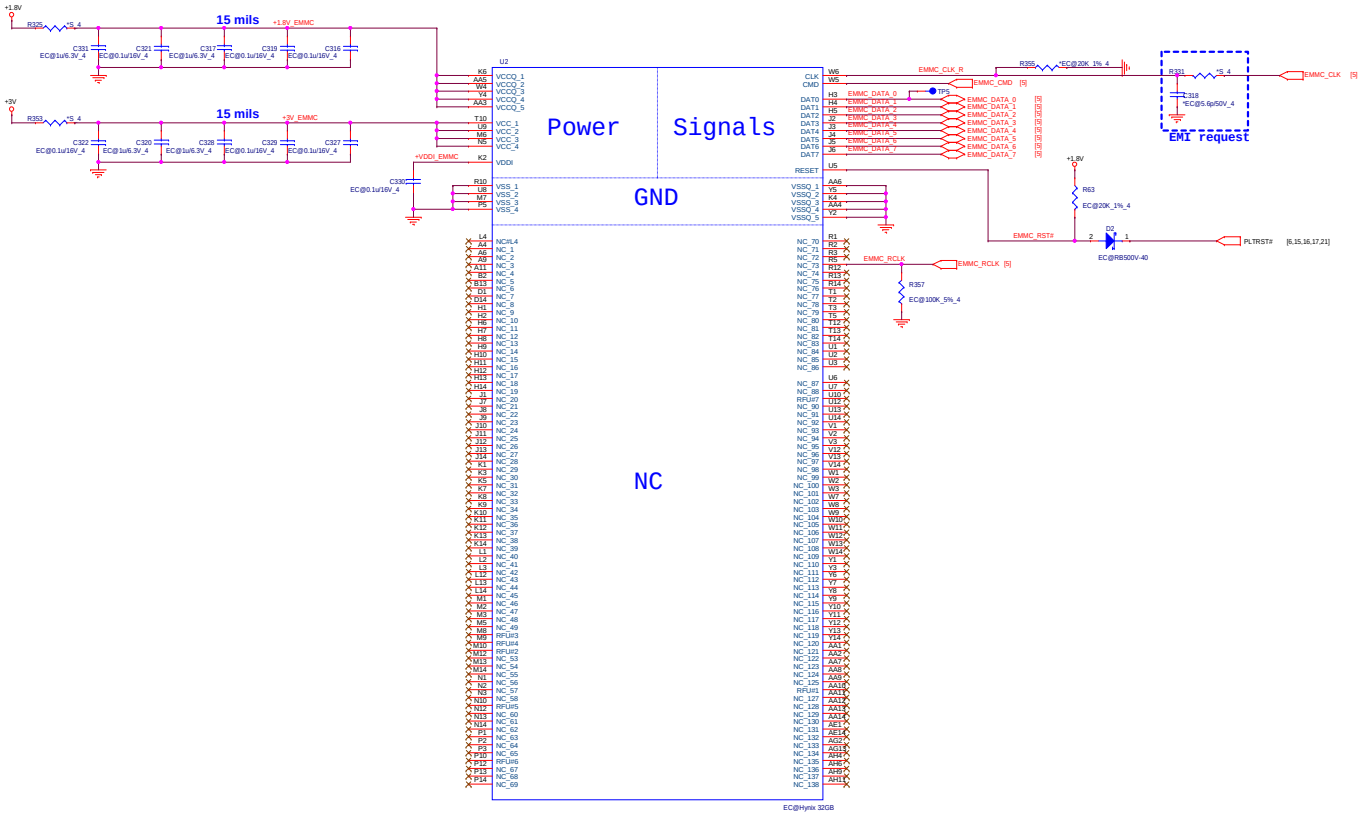
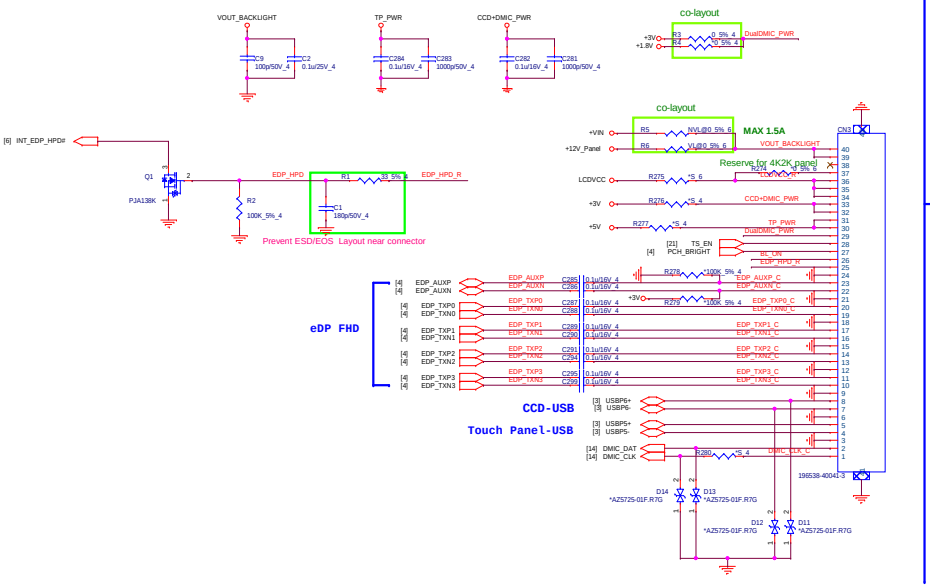
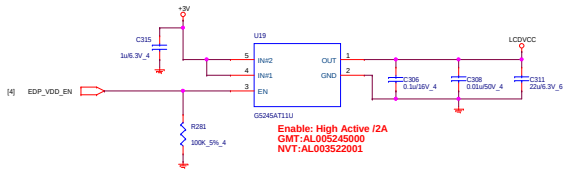
eMMC (MMC)



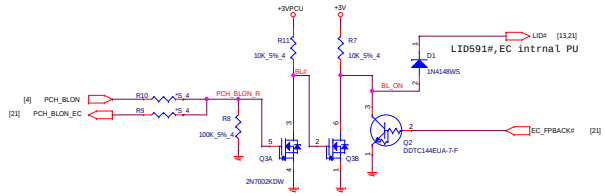
eDP CONNECTOR (LDS)



eDP Power (LDS)



eDP Backlight (LDS)



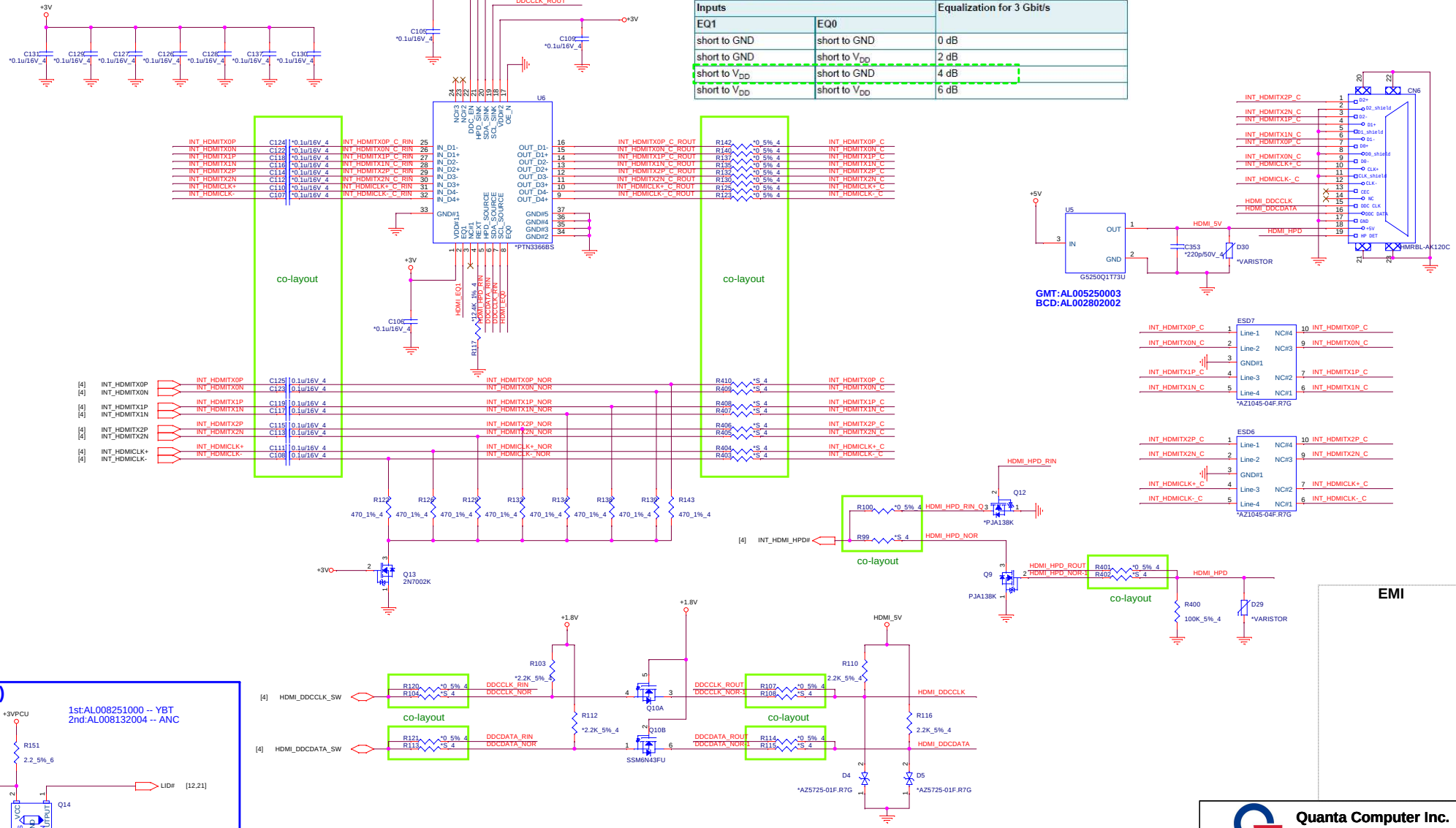
Quanta Computer Inc.			
PROJECT : ZAJ			
Size	Document Number	eDP/ CCD/eMMC	Rev 3A
Date: Thursday, February 23, 2017	Sheet 12 of 34		

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)

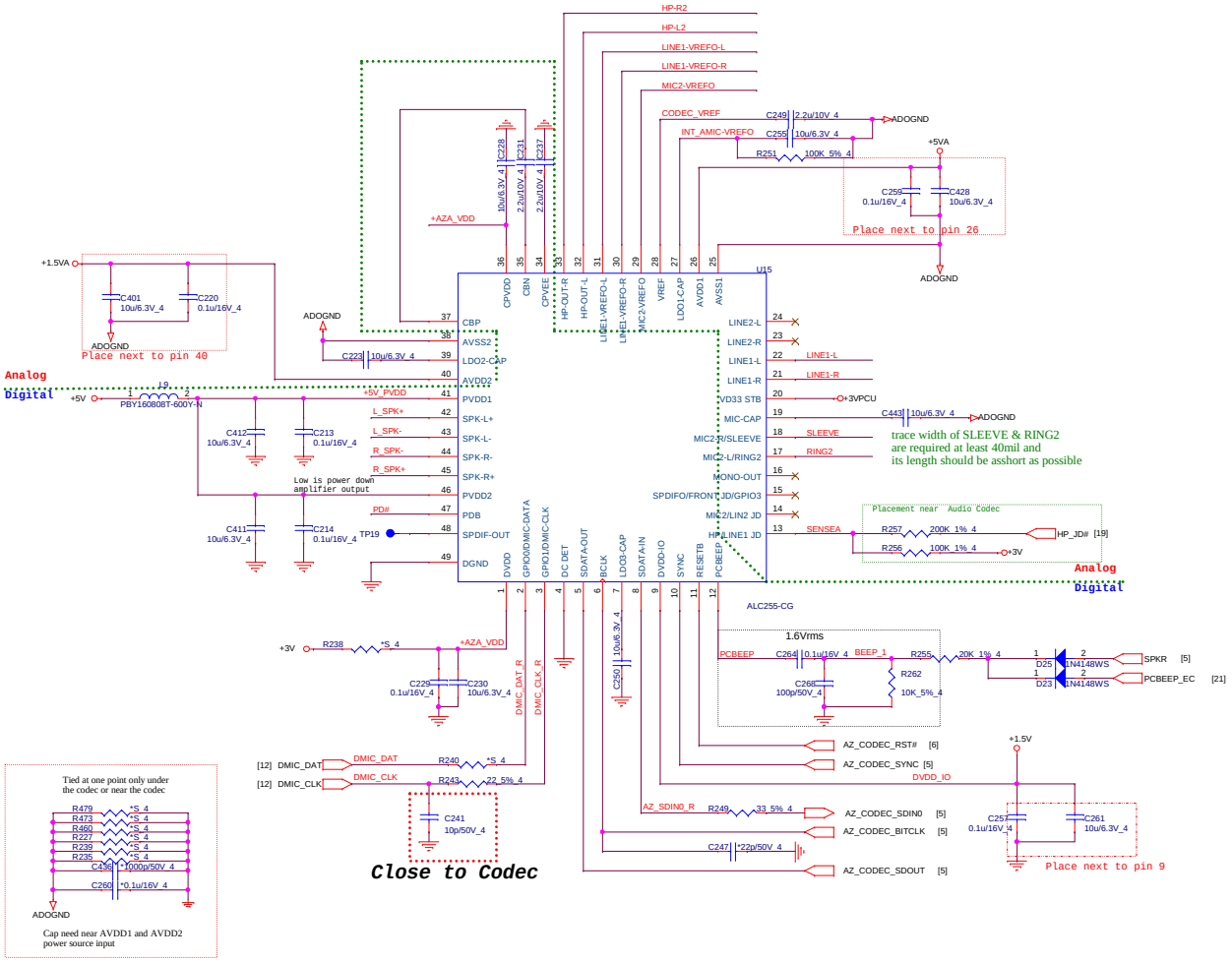
EMI

Quanta Computer Inc.
PROJECT : ZAJ

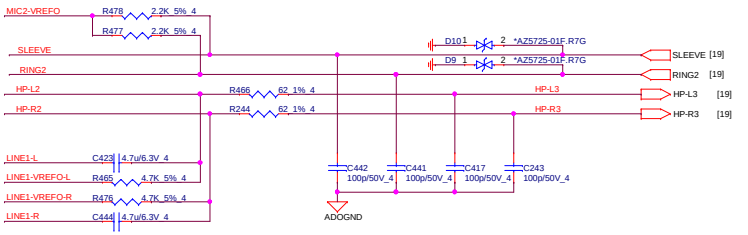
Size	Document Number	Rev
	HDMI/Hall sensor	3A

Date: Thursday, February 23, 2017 Sheet 13 of 34

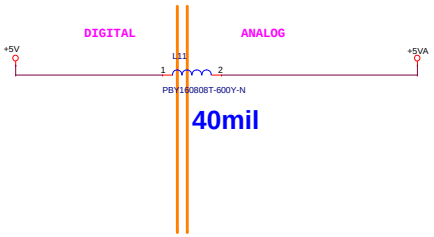
Codec(ADO)



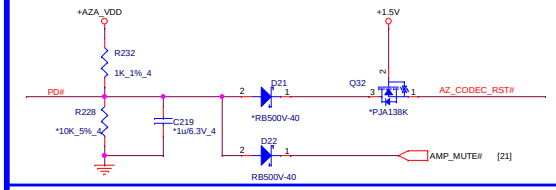
Universal Audio Jack HEADPHONE/MIC/LINE combo (ADO)



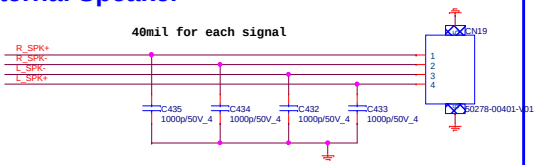
Codec PWR 5V(ADO)



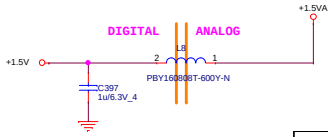
Mute(ADO)



Internal Speaker



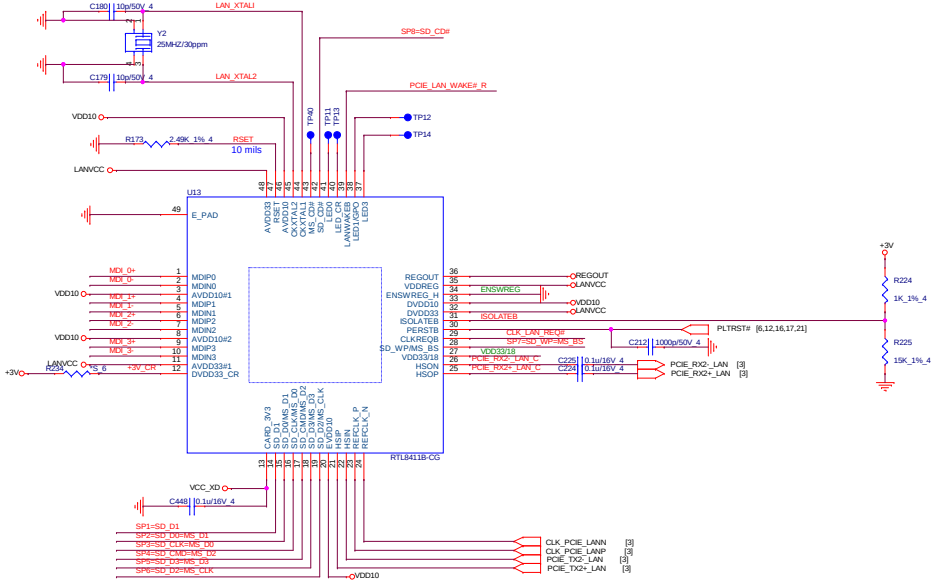
Codec PWR 1.5V(ADO)



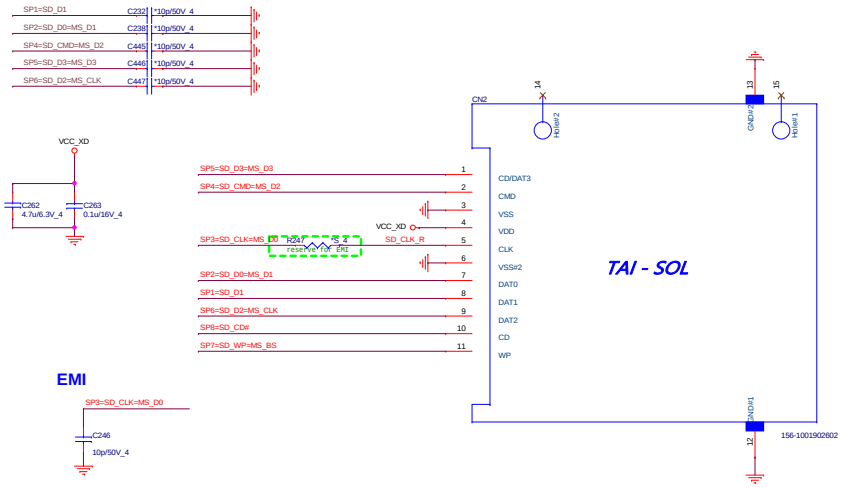
Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	Audio Codec/HP/SPK/AMIC	3A
Date: Thursday, February 23, 2017	Sheet 14 of 34	

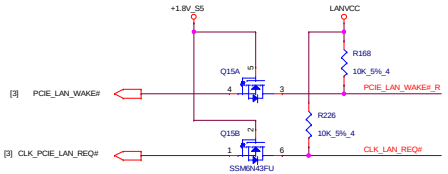
LAN & Card reader Combo (LAN)

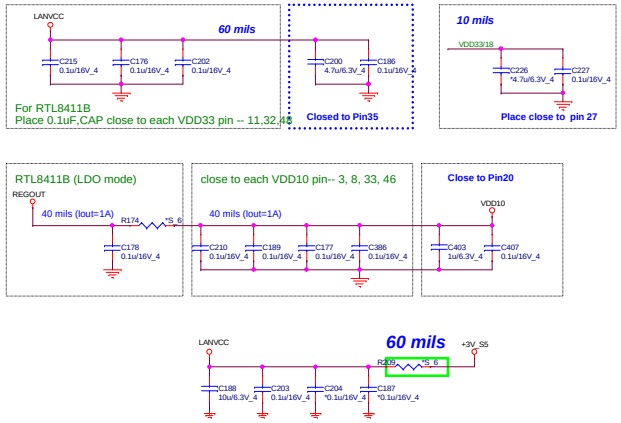


Card Reader (CRD)

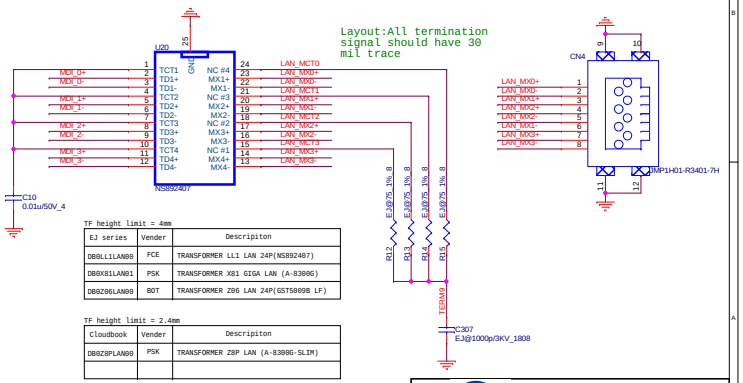


WAKE#/REQ# circuit(LAN)





Tramsformer



TF height limit = 4mm

EJ series	Vender	Descripiton
DB0LL11AN00	FCE	TRANSFORMER LL1 LAN 24P(NS892407)
DB0X81AN001	PSK	TRANSFORMER X81 GIGA LAN (A-8300G)
DB0Z06LAN00	BOT	TRANSFORMER Z06 LAN 24P(GST5009B LF)

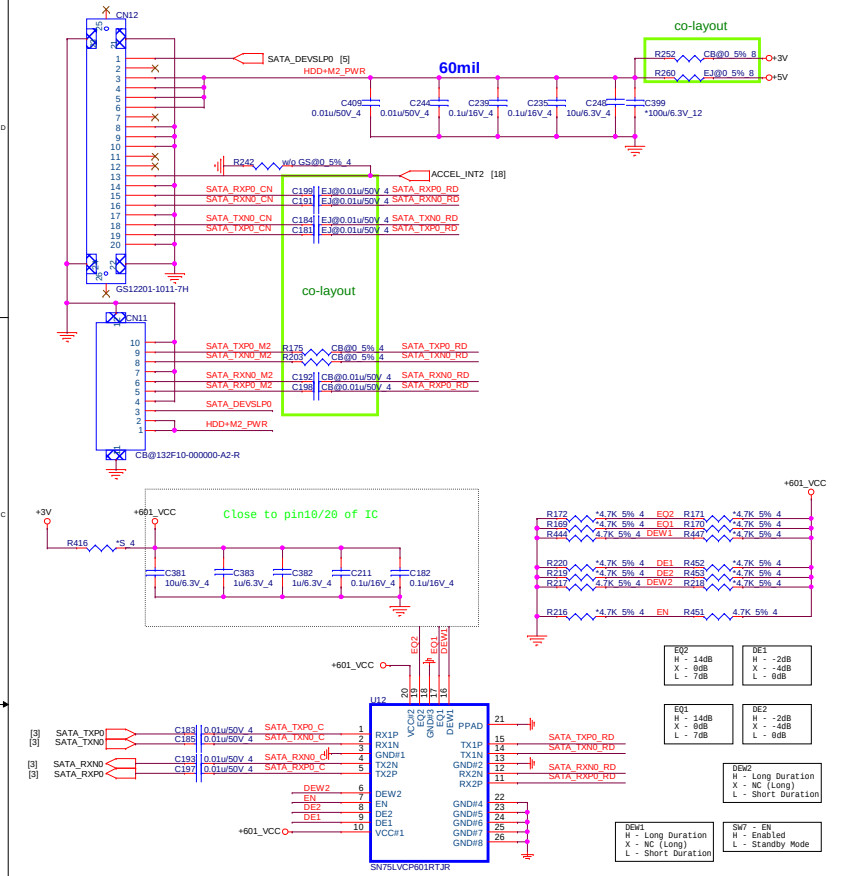
TF height limit = 2.4mm

Cloudbook	Vender	Descripiton
DB0Z8PLAN00	PSK	TRANSFORMER Z8P LAN (A-8300G-SLIM)

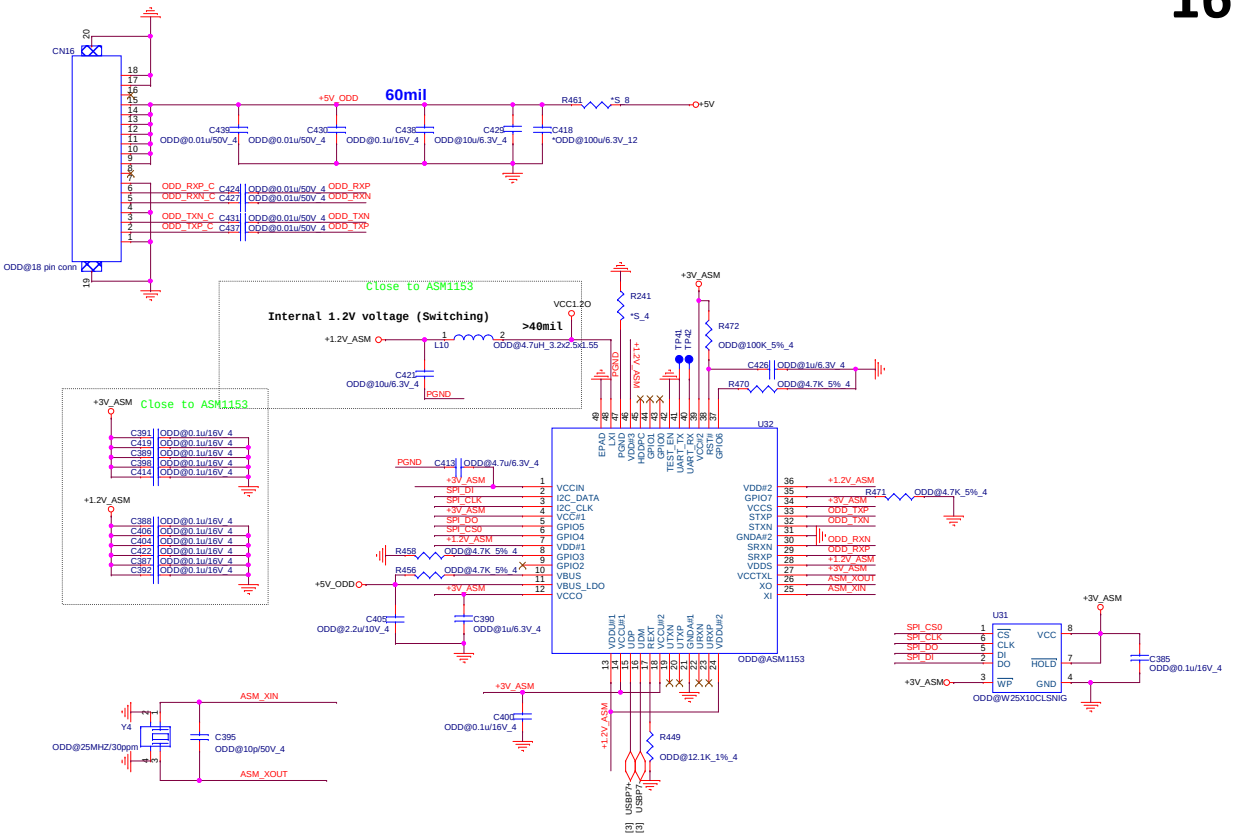
Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	LAN/CRD COMBO - RTL8411B	3A
Date: Thursday, February 23, 2017	Sheet 15 of 34	

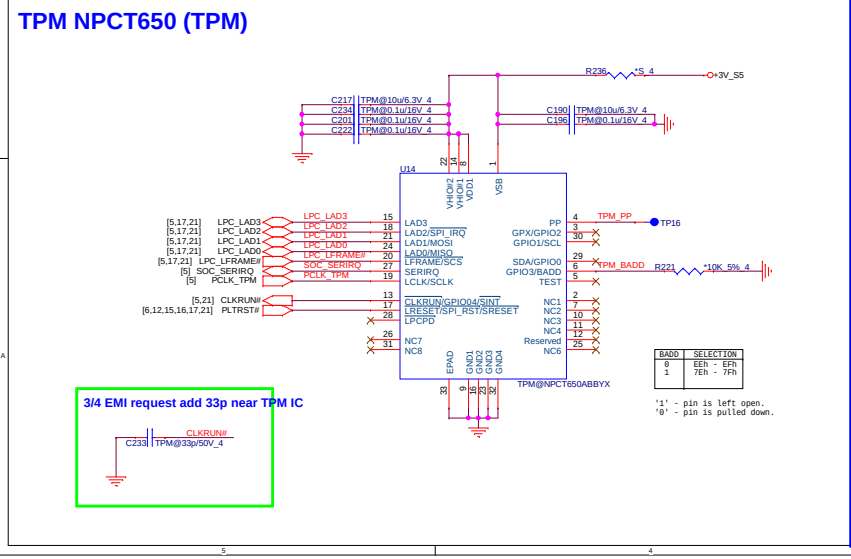
2.5" SATA HDD (HDD)



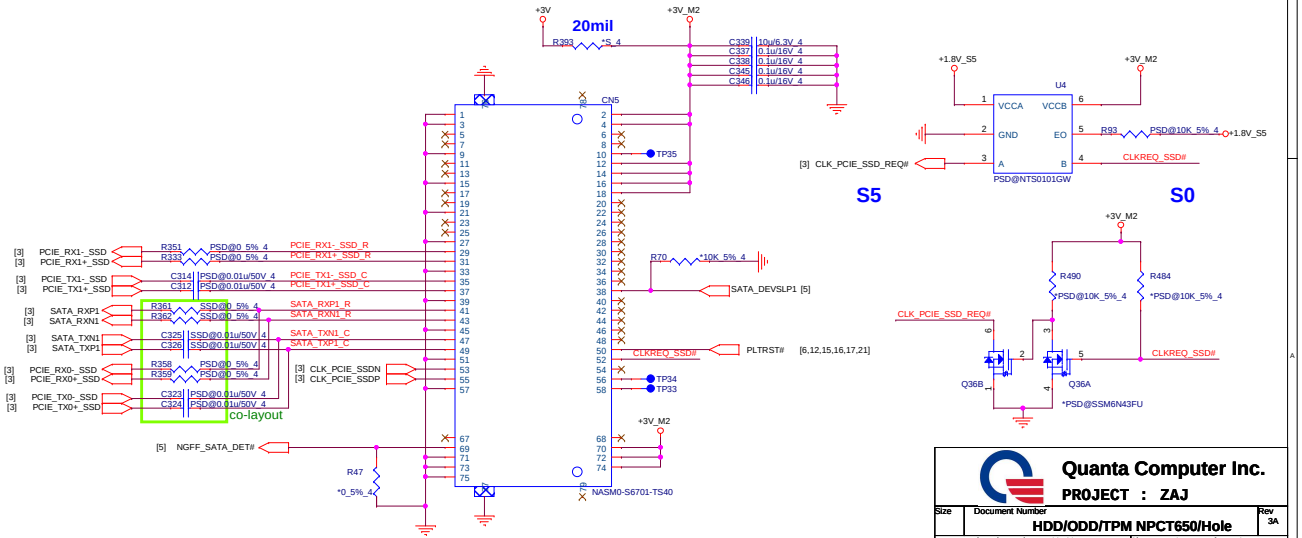
USB ODD Bridge (ODD)



TPM NPCT650 (TPM)



M.2 PCPIE & SATA SSD (NGF)



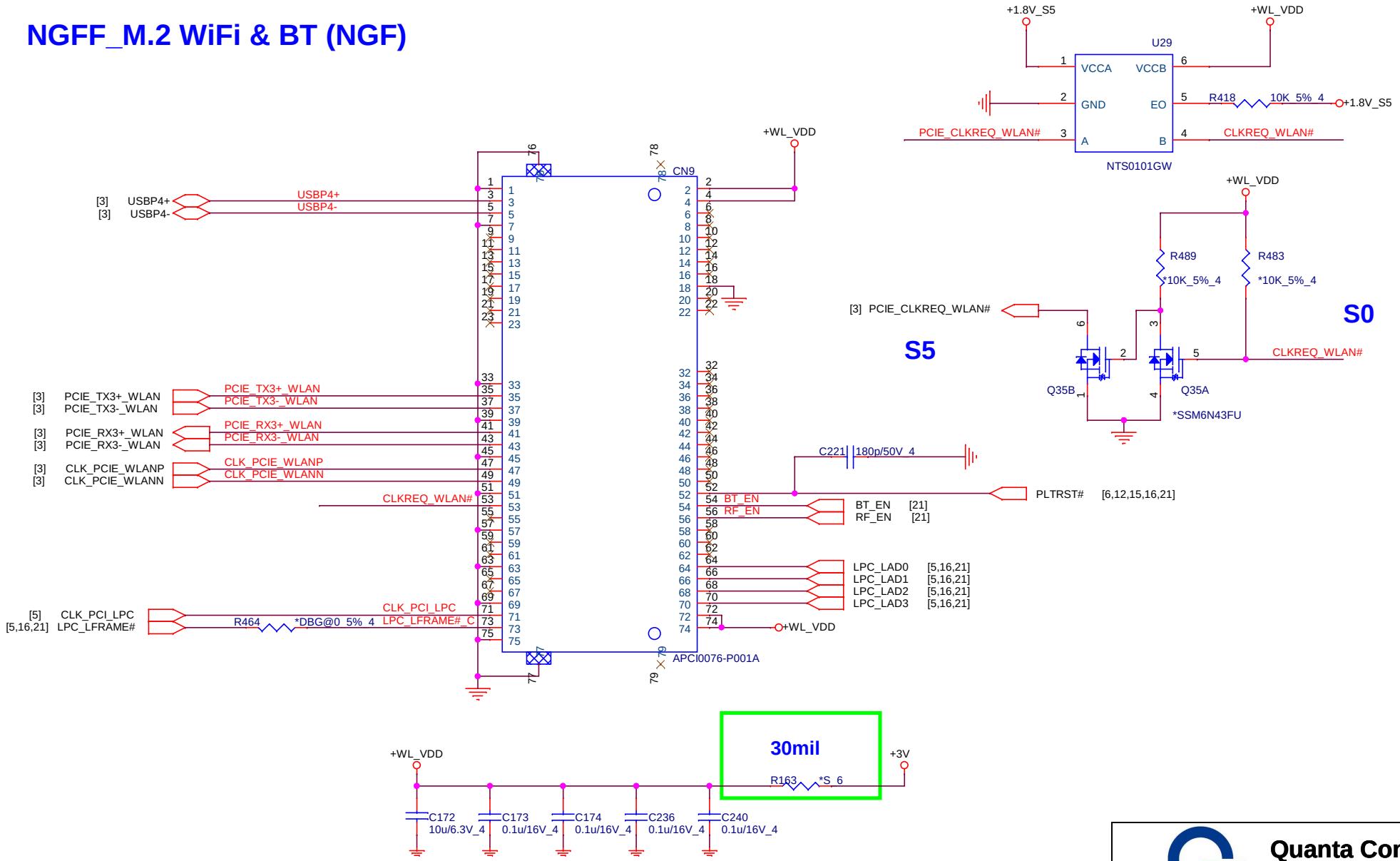
Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	HDD/ODD/TPM NPCT650/Hole	3A

Date: Thursday, February 23, 2017 Sheet 16 of 34

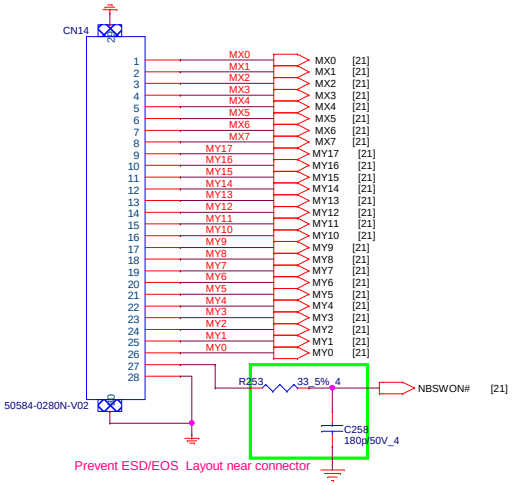
NGFF_M.2 WiFi & BT (NGF)

17



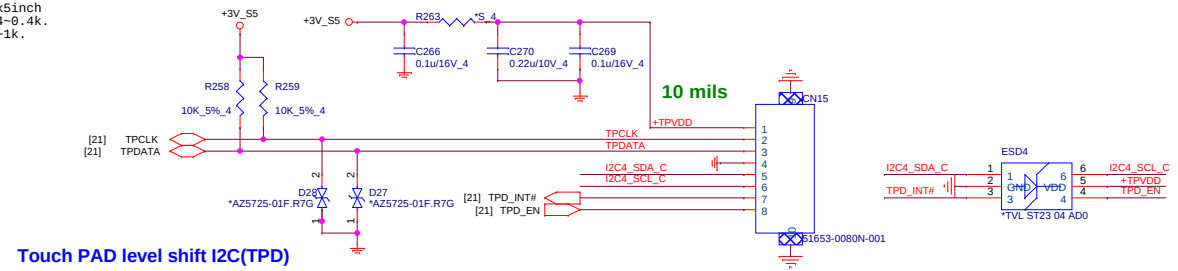
Quanta Computer Inc.		
PROJECT : ZAJ		
Size	Document Number: NGFF WiFi & BT	Rev: 3A
Date: Thursday, February 23, 2017	Sheet 17 of 34	

KEYBOARD (KBC)

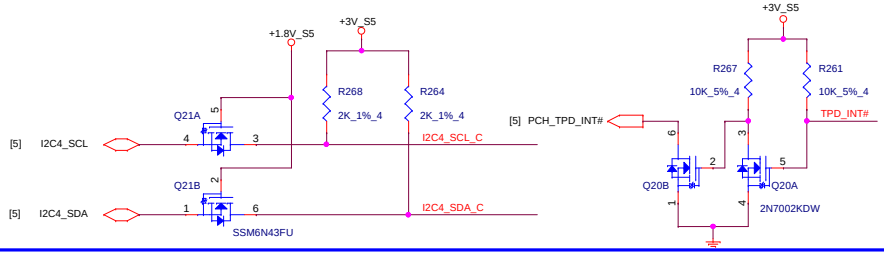


TOUCHPAD (TPD I2C/PS2 co-lay)

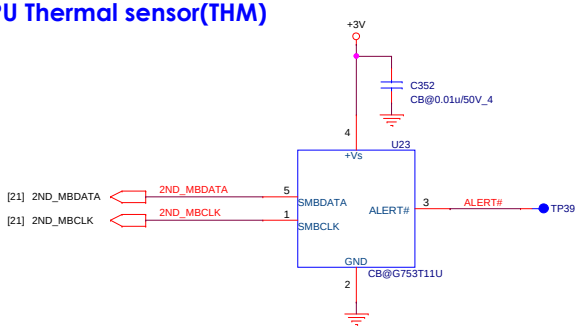
```
TPD->100kHz,TS=400Khz
Intel design guide suggestion
MCP PIN 10u.
Per inch 3u  TS=3x5inch
400kHz10~100u =2.4~0.4k.
100Khz 10~100u=9k~1k.
```



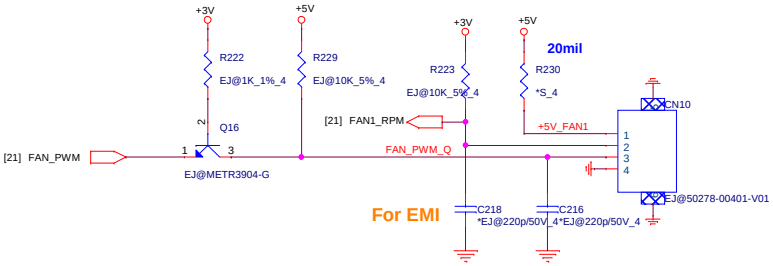
Touch PAD level shift I2C(TPD)



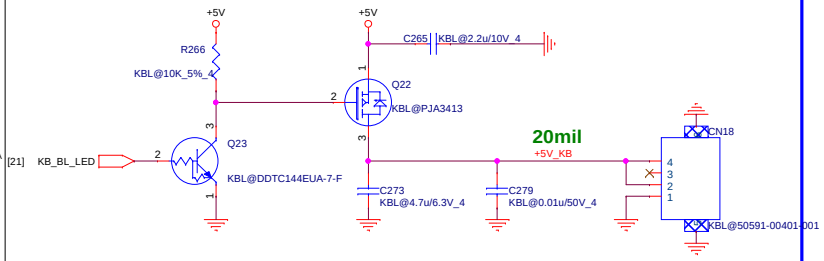
CPU Thermal sensor(THM)



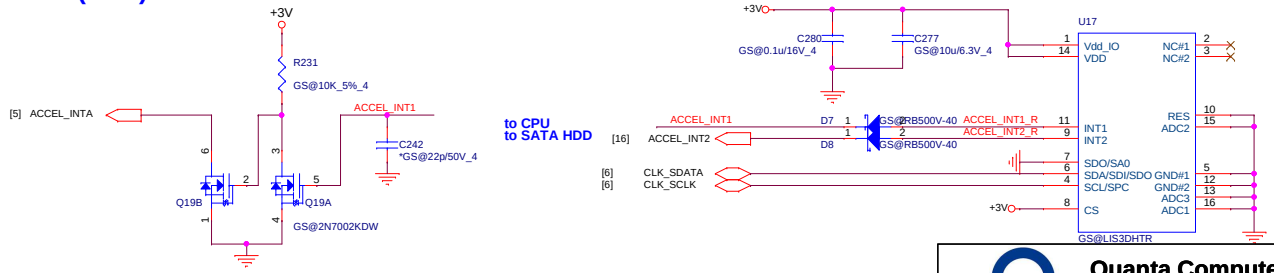
CPU FAN (THM)



Keyboard backlight (KBL)



G-sensor(ACS)



Quanta Computer Inc.		
PROJECT : ZAJ		
Size	Document Number: KB/TP/FAN/G-sensor	Rev: 3A
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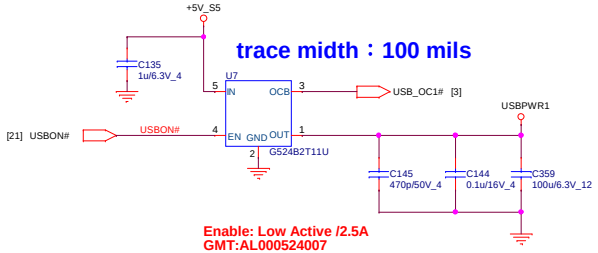
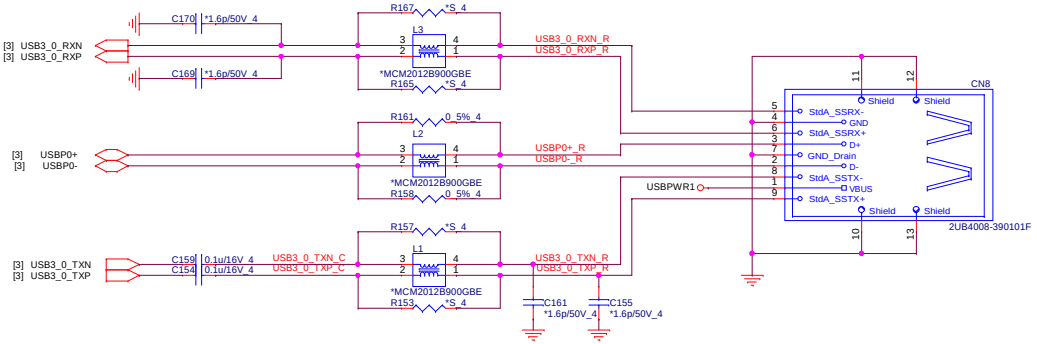
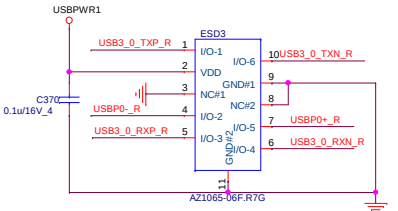
USB 3.0 (UB3)

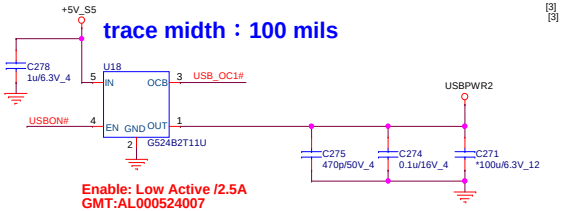


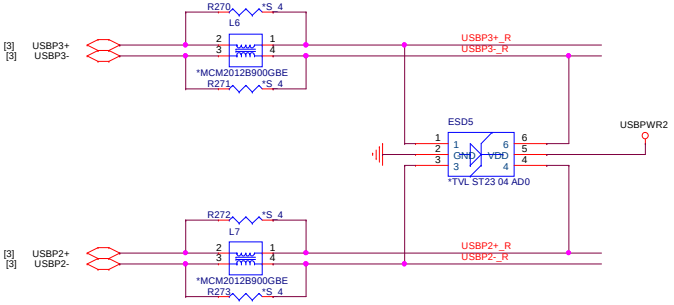




USB protection diodes for ESD.
as close as possible to USB connector pins.

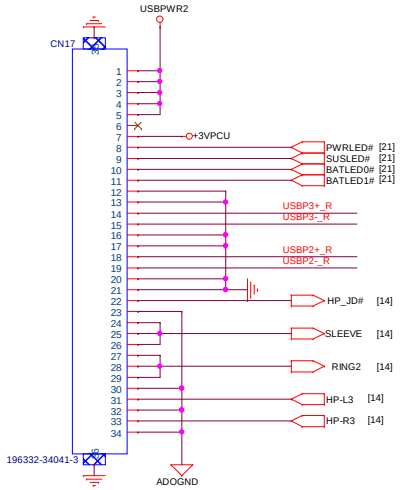
USB 2.0 (UB2)



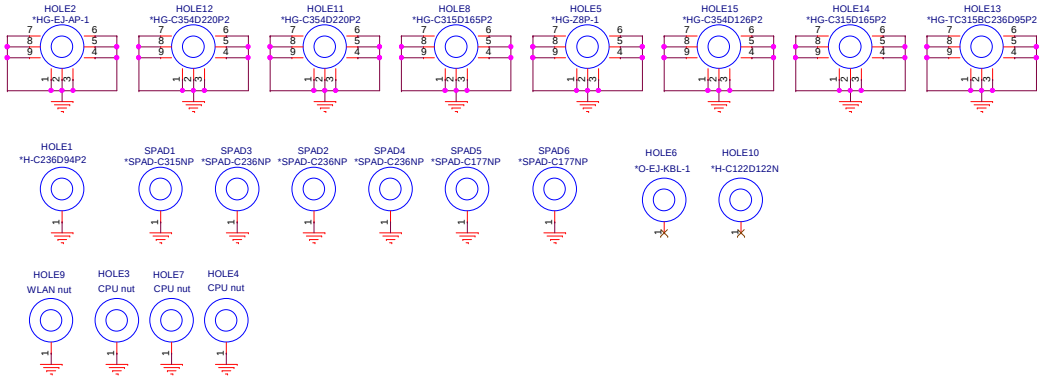


Stitch cap (EMC)

USB 2.0/LED/AUDIO JACK DB (UB2)



HOLE(OTH)



Quanta Computer Inc.
PROJECT : ZAJ

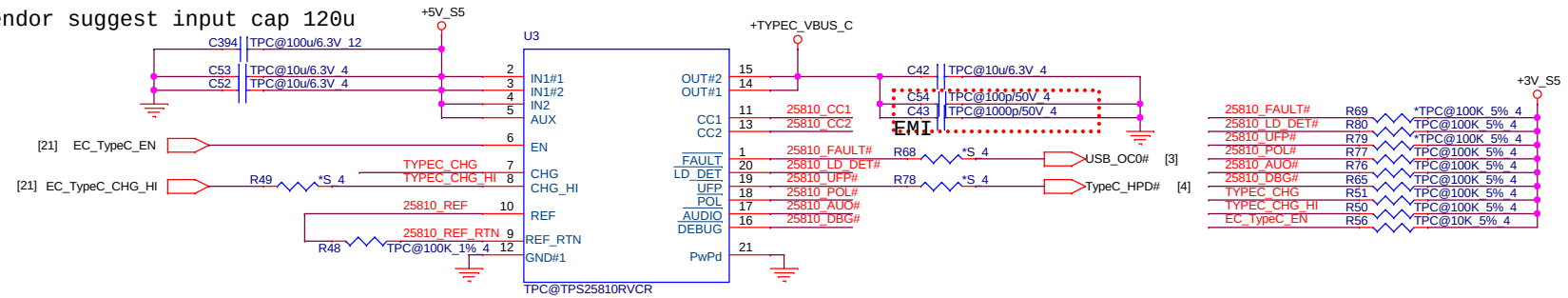
Size	Document Number	Rev
	USB/CARDREADER/LED	3A

Date: Thursday, February 23, 2017 Sheet 19 of 34

USB TYPE-C (UB3)

trace midth：150 mils

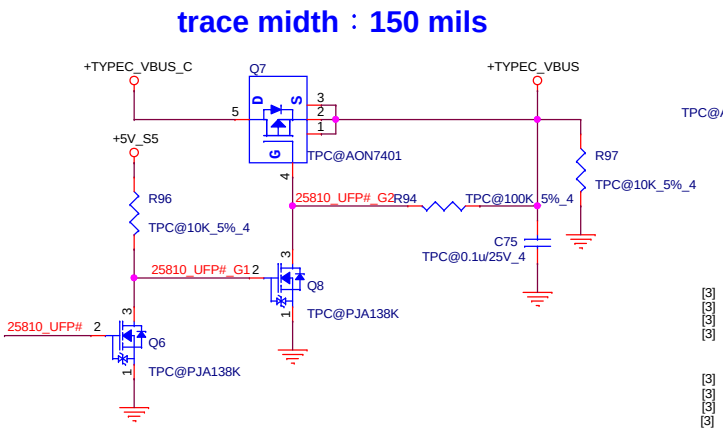
Vendor suggest input cap 120u

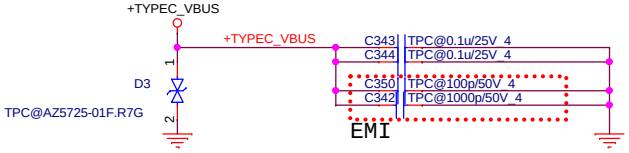


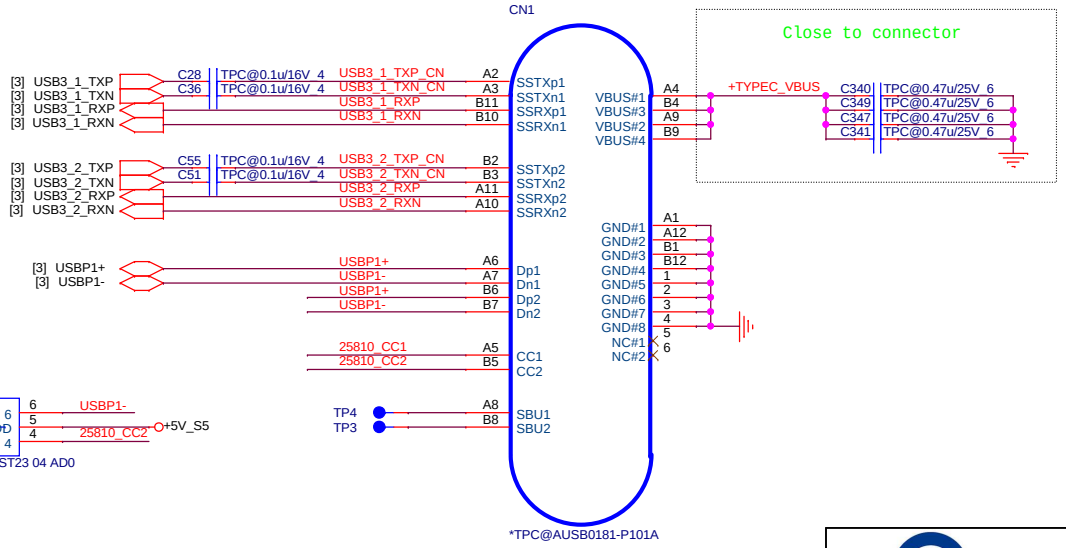
TPS25810 Port	CC1	CC2	TPS25810 Response					
			OUT	VCONN On CC1 or CC2	POLb	UFPb	AUDIOb	DEBUGb
Nothing Attached	OPEN	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
UFP Connected	Rd	OPEN	IN1	NO	Hi-Z	LOW	Hi-Z	Hi-Z
UFP Connected	OPEN	Rd	IN1	NO	LOW	LOW	Hi-Z	Hi-Z
Powered Cable/No UFP Connected	OPEN	Ra	OPEN	NO	Hi-Z	Hi-Z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

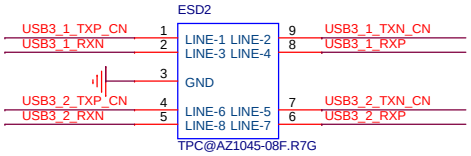
CHG	CHG_HI	CC Capability Broadcast	Current Limit	Load Detect Threshold
0	0	STD	1.67 A	NA
0	1	STD	1.67 A	NA
1	0	1.5 A	1.67 A	NA
1	1	3.0 A	3.34 A	1.77 A

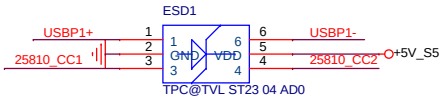
trace midth：150 mils











Amazing：BC104508Z00
PJT　　：BC605S8QZ00
INPAQ　：BC38109LZ00

Quanta Computer Inc.
PROJECT ：ZAJ

Size	Document Number	Rev
	USB_Type C_25810	3A
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EC(KBC)

+3VPCU_EC and +3V_RTC minimum trace width 12mils.

12 mils

IT8987E/CX LQFP

Output for type-c Apling ridge reset timming"Low " Active

Prevent ESD/EOS Layout near EC

Prevent ESD/EOS Layout near device

Pin124 is a board ID for Cloud book (PD) , EC has internal PU for EJ series

colsed to EC pin within 100 mils

(For PLL Power)

SM BUS ARRANGEMENT TABLE

SM Bus 1	Battery
SM Bus 2	Thermal sensor
SM Bus 3	
SM Bus 4	

PU/PD (KBC)

Battery Disable (FSW)

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)

Reserve power on switch for test (MP remove)

Quanta Computer Inc.
PROJECT : ZAJ
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Double Check ADP-IN Connector with ME

PJ1 EJ@CI2504P1H02-RB-NH

PJ2 CB@50278-006T1-001

VA1 VA2

PD4 1N4148WS

recommend 200mA at least.

PD2 P4SMAFJ20A

PD3 SV1040

PQ6 TPCA8109

PQ17 TPCA8109

PQ16 IMD2AT108

PQ7 2N7002K

PR44 0.02_1%_0612

PR45 *S_4

PR46 *S_4

PR49 33K_1%_4

PR51 10K_5%_4

PR187 220K_1%_4

PR188 220K_1%_4

PR189 *S_4

PR71 *S_6

PR67 63.4K_1%_4

PR68 11K_1%_4

PR58 20_5%_12

PC37 0.1u/50V_6

PC38 2200p/50V_6

PC55 0.1u/50V_6

PC190 0.1u/50V_6

PC206 0.1u/50V_6

PC49 2200p/50V_4

PC213 *10u/25V_8

PC46 0.1u/50V_6

PC50 0.1u/50V_6

PC45 0.1u/50V_6

PC51 0.47u/25V_6

24737_ACP

24737_ACN

24737_ACDET

24737_VCC

D/C# [21]

+VIN

+3VPCU

PR6 *10K_5%_4

PR3 100K_5%_4

PR60 100K_5%_4

PC42 0.1u/25V_4

[21] ACIN

[6,21] SB_ACDC

PR57 *0_5%_4

PQ9B 2N7002KDW

PQ9A 2N7002KDW

PC200 0.1u/50V_6

PC43 *100p/50V_4

BAT-V

PJ5 50458-00801-V02

BI# [21]

PR77 *0_5%_4

PR73 100_1%_4

TEMP_MBAT# [21]

PR79 1M_5%_4

PR75 100_1%_4

PR74 100_1%_4

MBCLK [21]

MBDATA [21]

PC57 *47p/50V_4

PC56 *47p/50V_4

PD6 PDZ5.6B

PD5 PDZ5.6B

PU2 BQ24737RGRR

ACDET ACP ACN VCC ACOK SDA SCL BM CMPOUT ILIM CMPIN IOUT

REGN BTST HIDRV PHASE LODRV GND#1 SRP SRN

GND#2 GND#3 GND#4 GND#5 GND#6

24737_REGN

24737_BST

24737_DH

24707_LX

24737_DL

24737_SRP

24737_SRN

PR70 *S_4

PR76 *S_4

MBDATA

MBCLK

PR81 10K_5%_4

PR62 10K_5%_4

PR80 316K_1%_4

24737_BM#

24737_CMPOUT

24737_ILIM

24737_CMPIN

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

[21] ICMNT

PC53 100p/50V_4

PR66 *0_5%_4

PR55 *S_4

PQ8 2N7002K

[21] AC_Protect

For BATT Only

Check PU High with HW side

+1.8V_S5

PR50 *100K_5%_4

H_PROCHOT# [6,21,26]

PR72 *S_6

PD7 RB500V-40

PC54 0.047u/50V_6

PC59 1u/16V_6

PQ20 AON7410

PQ21 AON7410

PR202 10_5%_6

PR203 7.5_5%_6

PC61 0.1u/25V_4

PC60 0.1u/25V_4

PC62 0.1u/25V_4

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

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

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

	R1	R2
UMA-45W	51K	100K

Quanta Computer Inc.
PROJECT : ZAJ

Size	Document Number	Rev
	Charger(BQ24737RGRR)	3A

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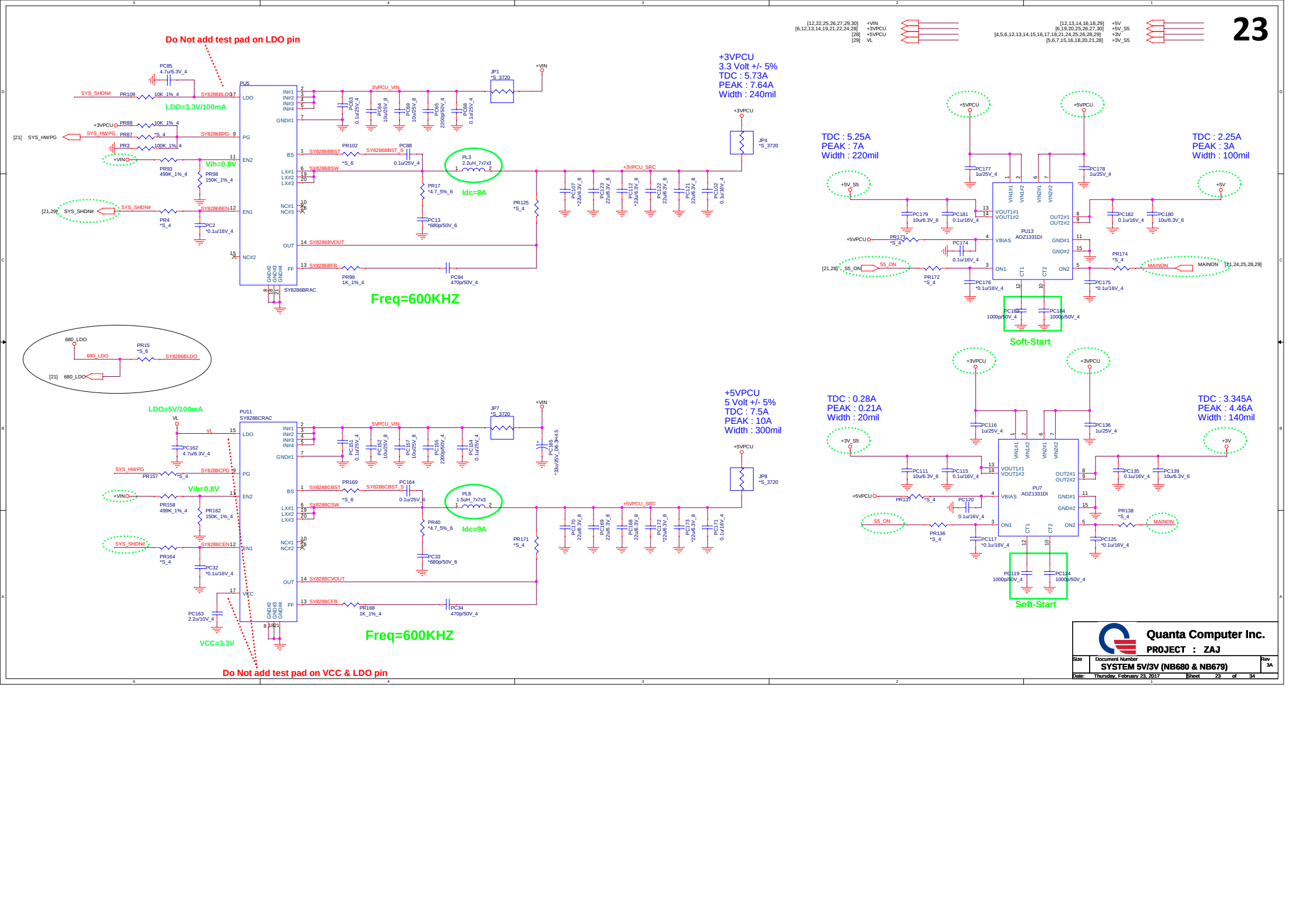
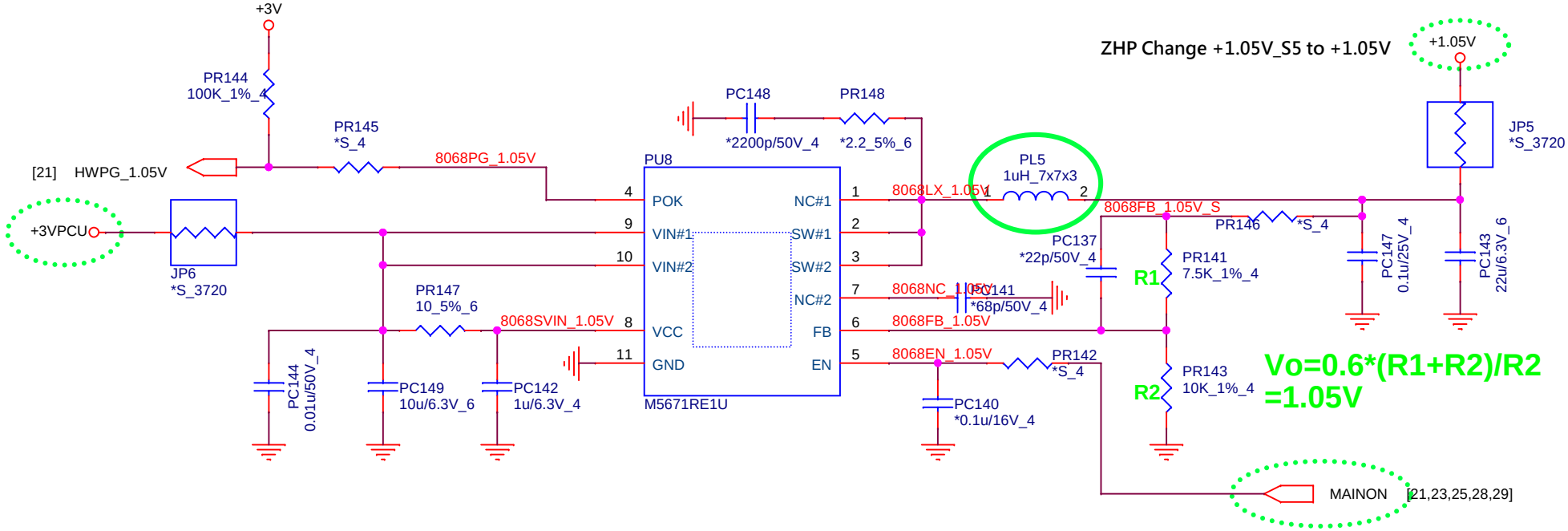

Do Not add test pad on LDO pin
+3VPCU
3.3 Volt +/- 5%
TDC : 5.73A
PEAK : 7.64A
Width : 240mil
LDO=3.3V/100mA
Vih=0.8V
Idc=8A
Freq=600KHZ
SY8286BRAC
TDC : 5.25A
PEAK : 7A
Width : 220mil
TDC : 2.25A
PEAK : 3A
Width : 100mil
Soft-Start
680_LDO
+5VPCU
5 Volt +/- 5%
TDC : 7.5A
PEAK : 10A
Width : 300mil
LDO=5V/100mA
Vih=0.8V
Idc=9A
Freq=600KHZ
SY8288CRAC
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
Quanta Computer Inc.
PROJECT : ZAJ
SYSTEM 5V/3V (NB680 & NB679)
Rev 3A
Thursday, February 23, 2017
Sheet 23 of 34

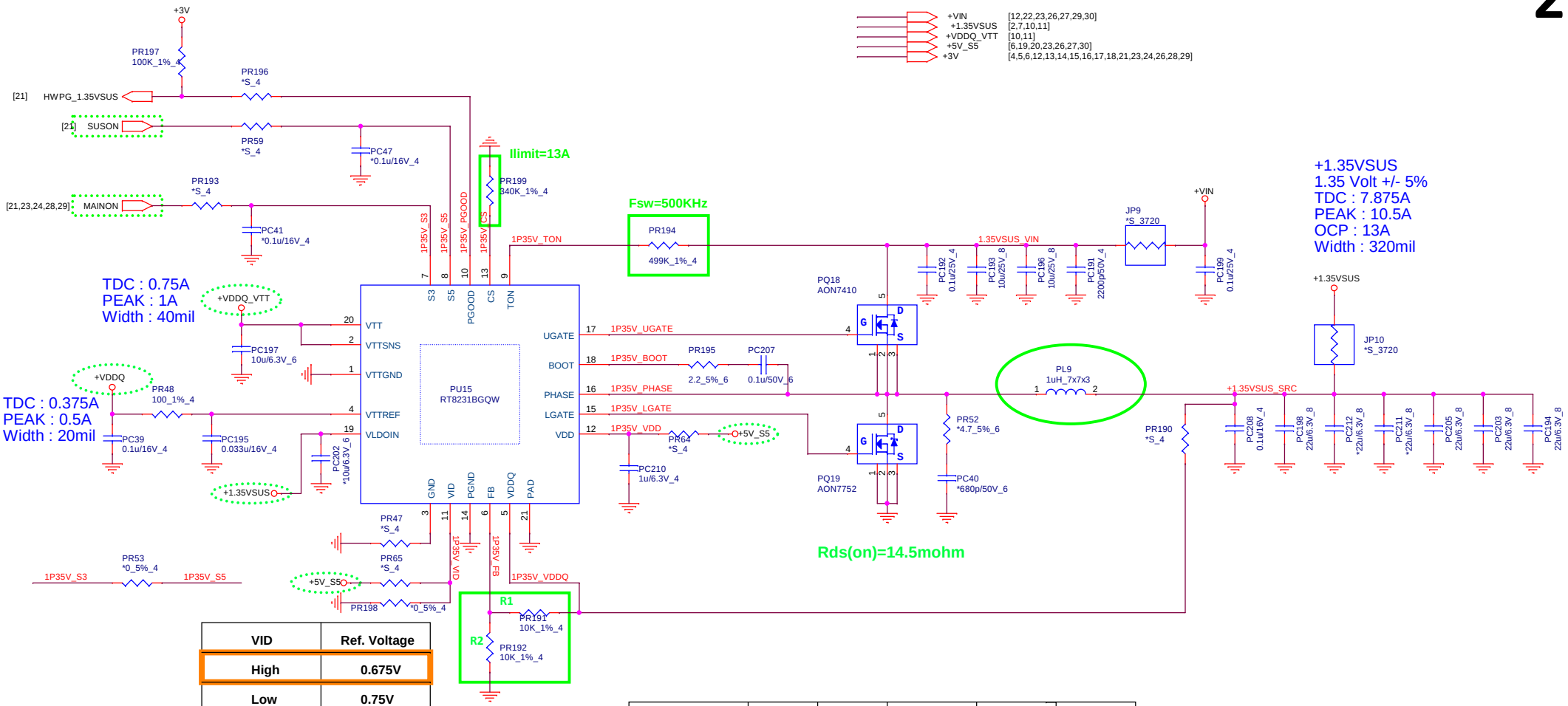
[6,12,13,14,19,21,22,23,28] +3VPCU
[6,7,26] +1.05V
[4,5,6,12,13,14,15,16,17,18,21,23,25,26,28,29] +3V

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

ZHP Change +1.05V_S5 to +1.05V



Quanta Computer Inc.		
PROJECT :		
Size	Document Number: +1.05V (M5671RE1U)	Rev 3A
Date: Thursday, February 23, 2017	Sheet 24 of 34	



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

Quanta Computer Inc.
PROJECT :

Size	Document Number	Rev
	DDR3L (RT8231BGQW)	3A

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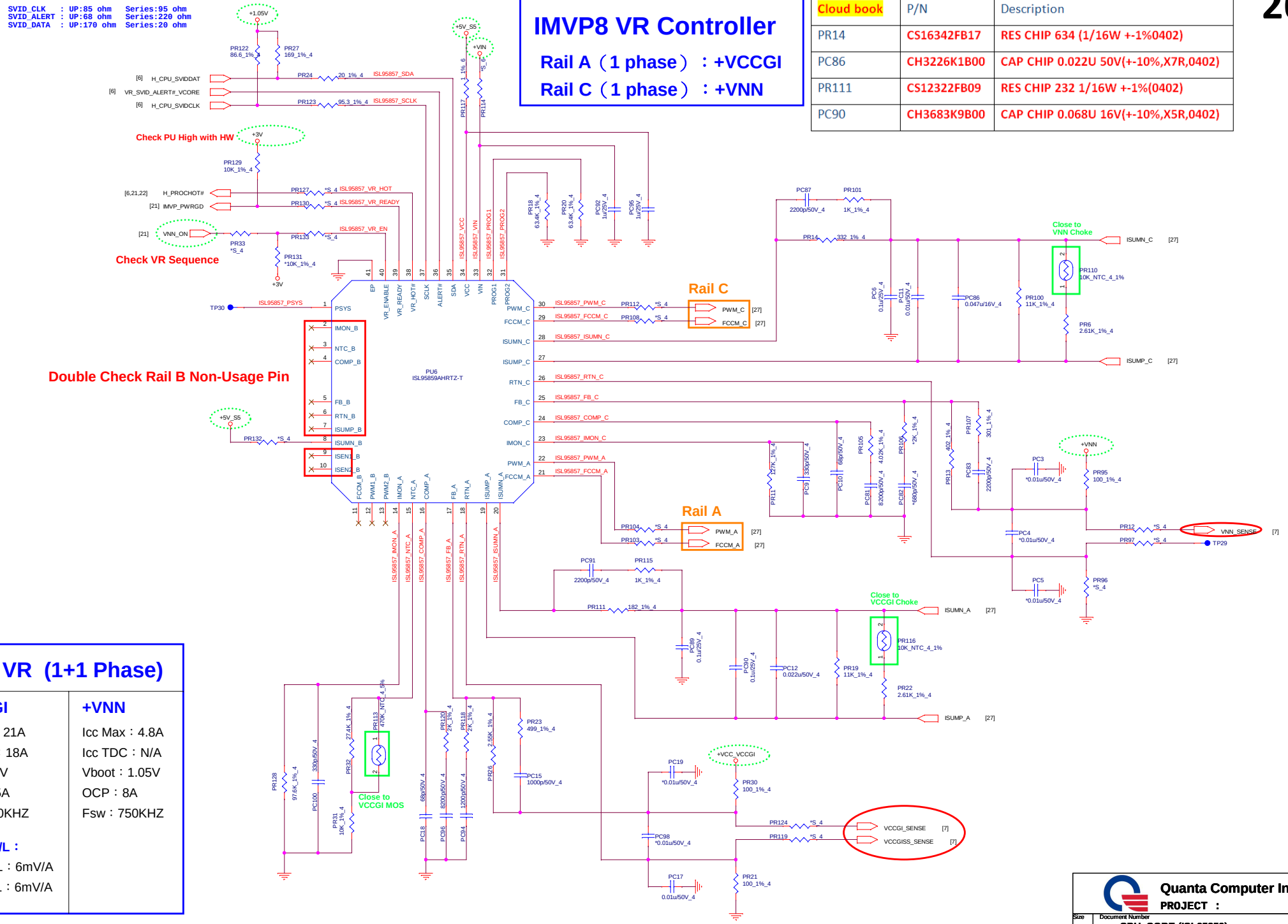
IMVP8 VR Controller

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)



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

Quanta Computer Inc.

PROJECT :

Size	Document Number	Rev
	CPU_CORE (ISL95859)	3A

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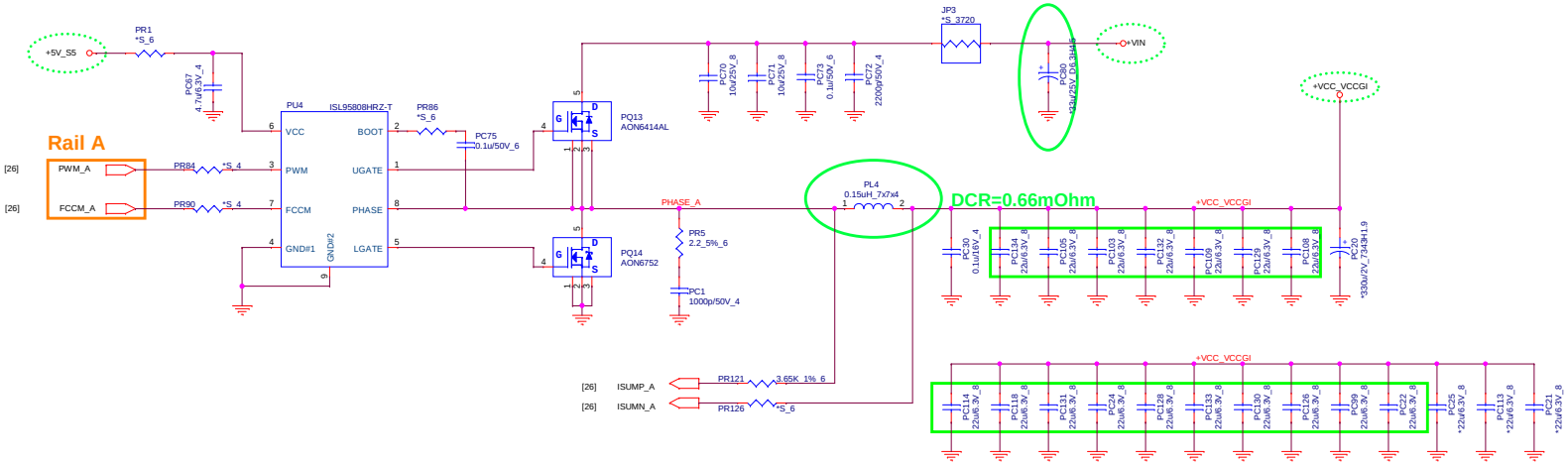
+VIN [12,22,23,25,26,29,30]
+VCC_VCCGI [7,26]
+VNN [7,26]
+5V_S5 [6,19,20,23,25,26,30]

VCCGI



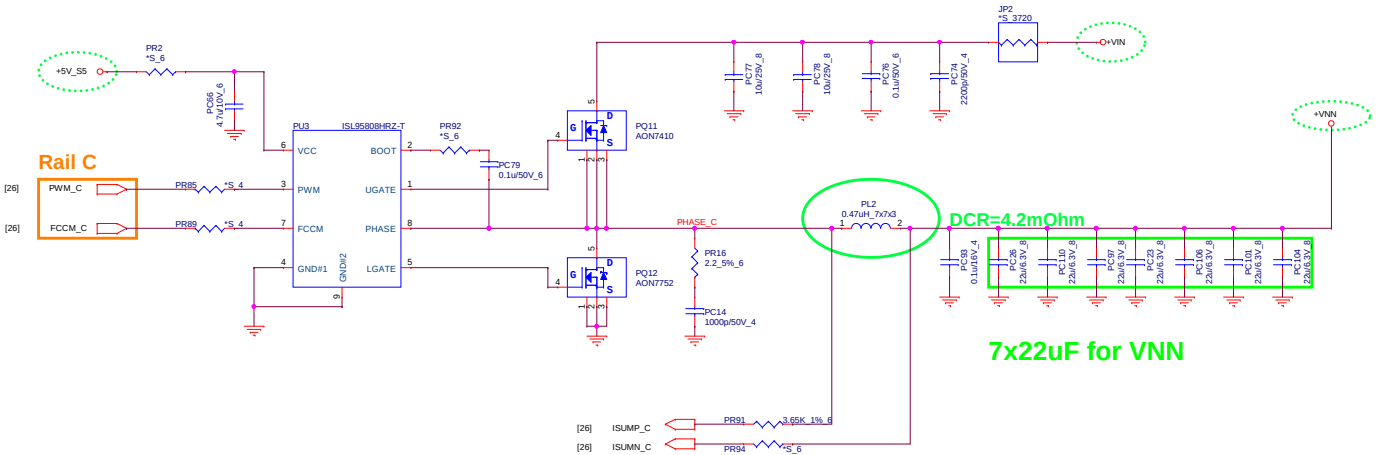
+VCCGI

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

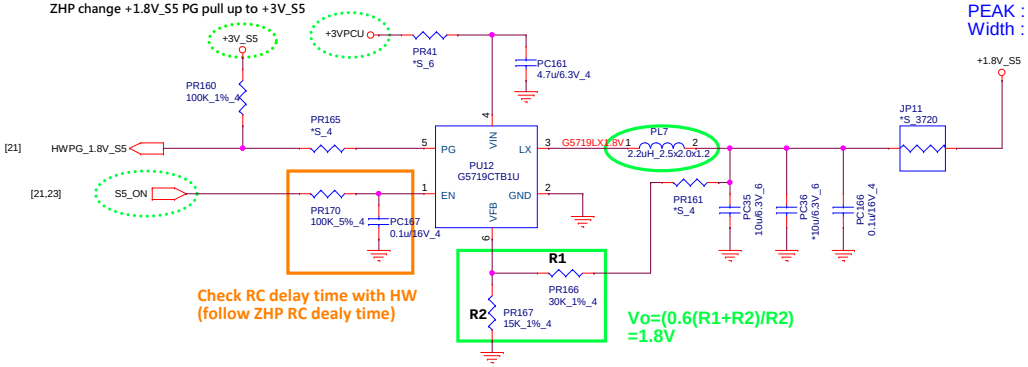
Quanta Computer Inc.
PROJECT :
Size | Document Number: +VCCGI / +VNN (ISL95859) | Rev 3A
Date: Thursday, February 23, 2017 | Sheet 27 of 34

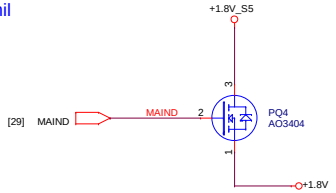
[6,12,13,14,19,21,22,23,24] +3VPCU
[3,5,6,7,9,15,16,17,18,22] +1.8V_S5
[7] +1.24V_S5
[12,13,29] +1.8V
[14] +1.5V

[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

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

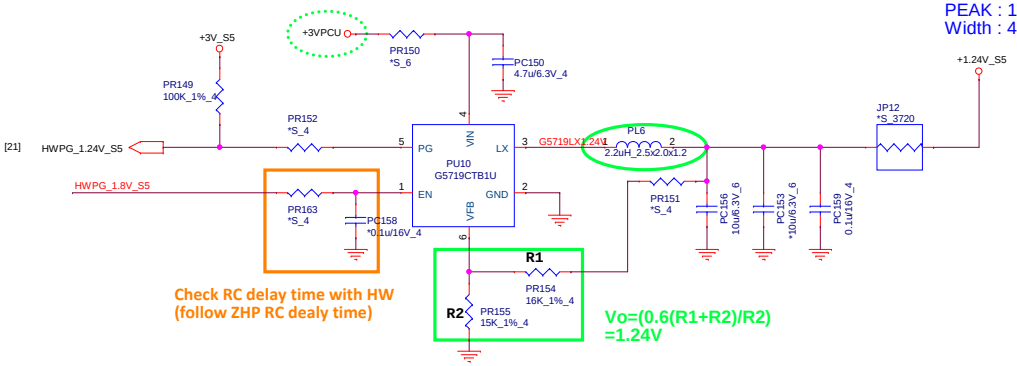
ZHP change +1.8V_S5 PG pull up to +3V_S5



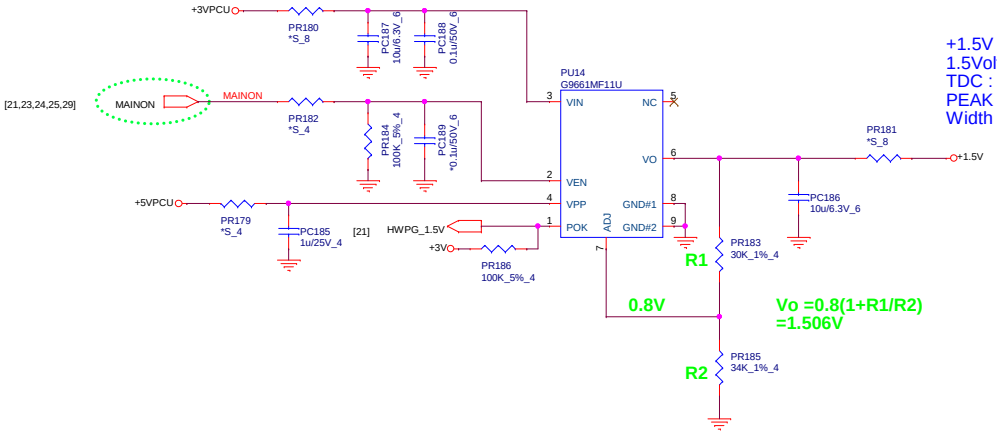


TDC : 0.173A
PEAK : 0.23A
Width : 20mil

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



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



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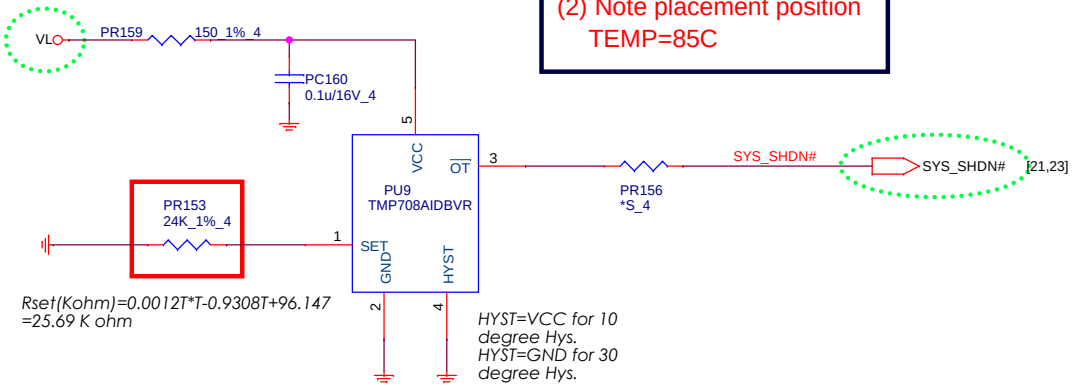
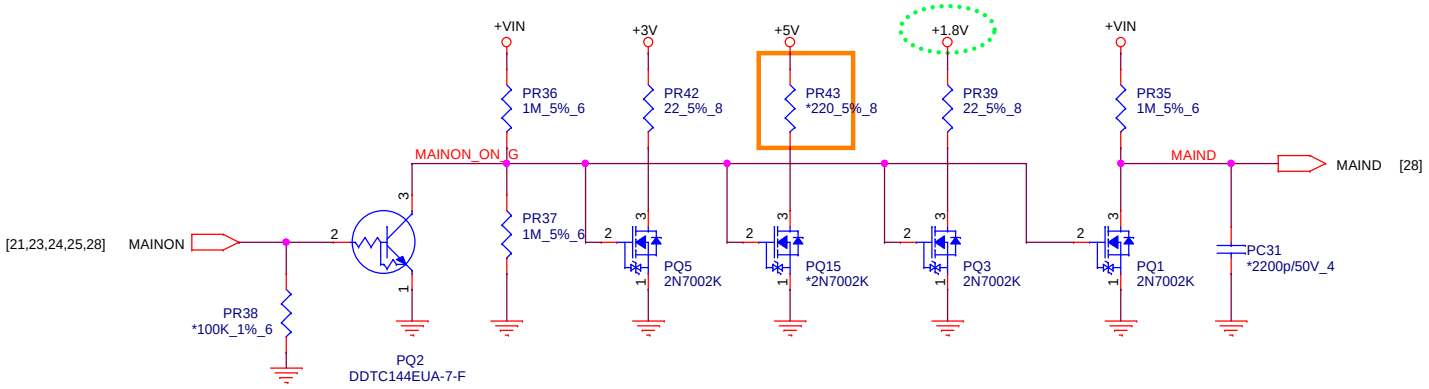
[23] VL
[12,22,23,25,26,27,30] +VIN
[4,5,6,12,13,14,15,16,17,18,21,23,24,25,26,28] +3V
[12,13,14,16,18,23] +5V
[12,13,28] +1.8V

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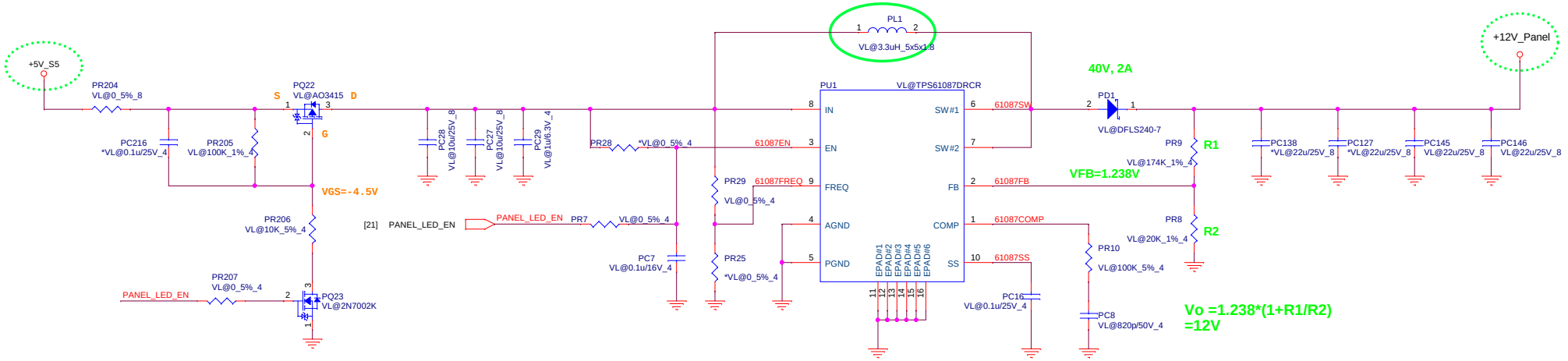
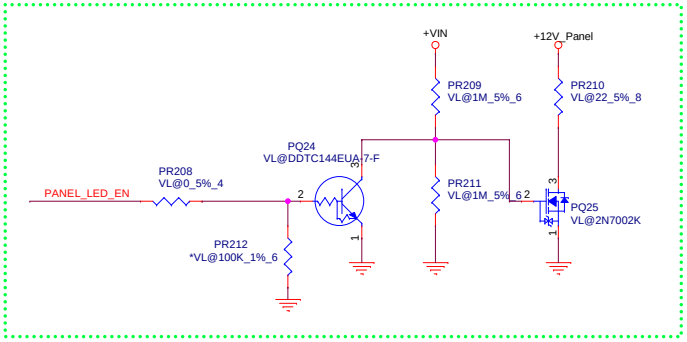
Panel Spec (TFT-LCD 14")
VLED : 6V~21V (Tpy:12V)
Power Consumption : 3W (MAX)

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



BL Discharge Circuit



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PROJECT : ZAJ

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	LED Panel (TPS61087)	3A

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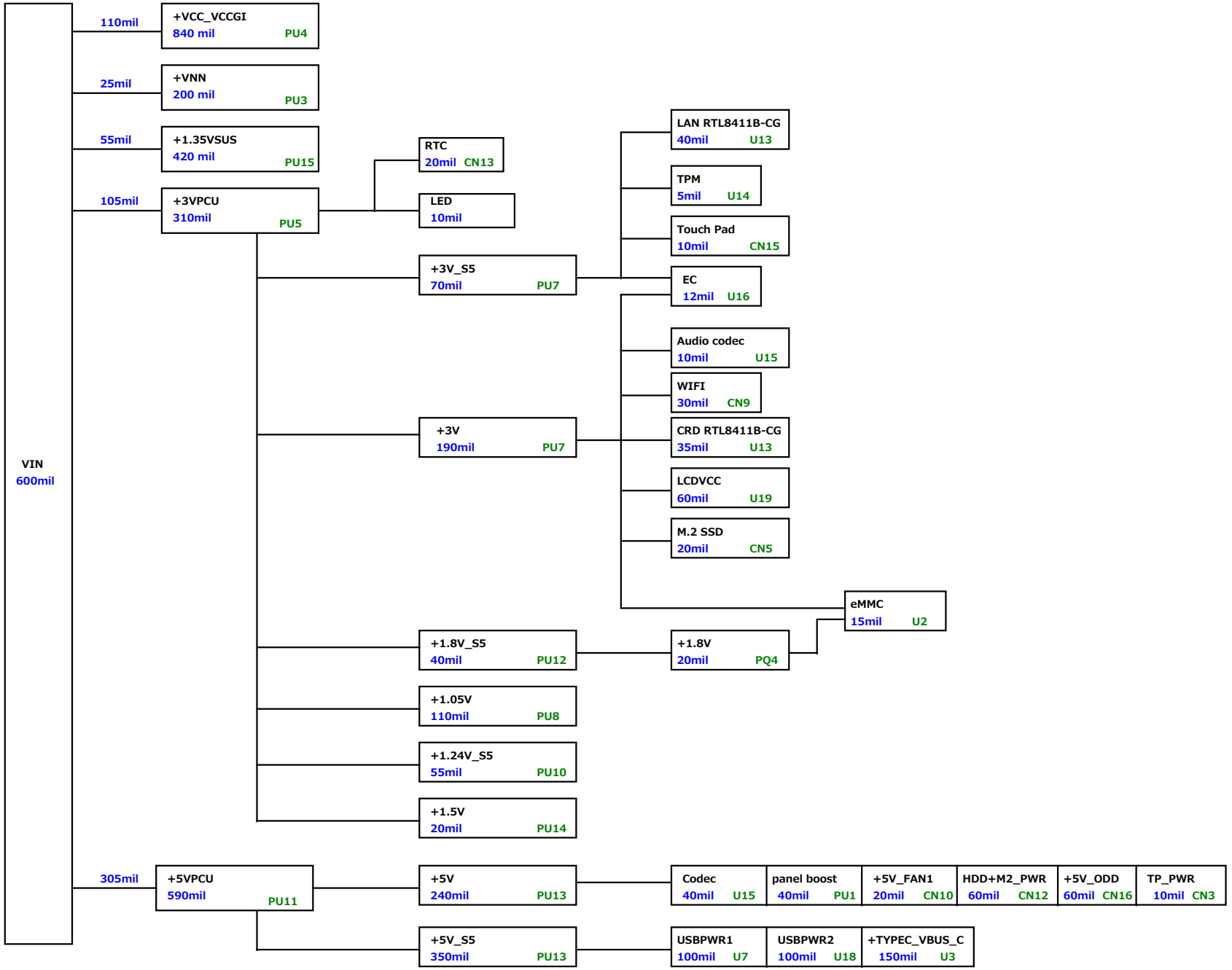
Apollo Power Tree



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POWER TREE
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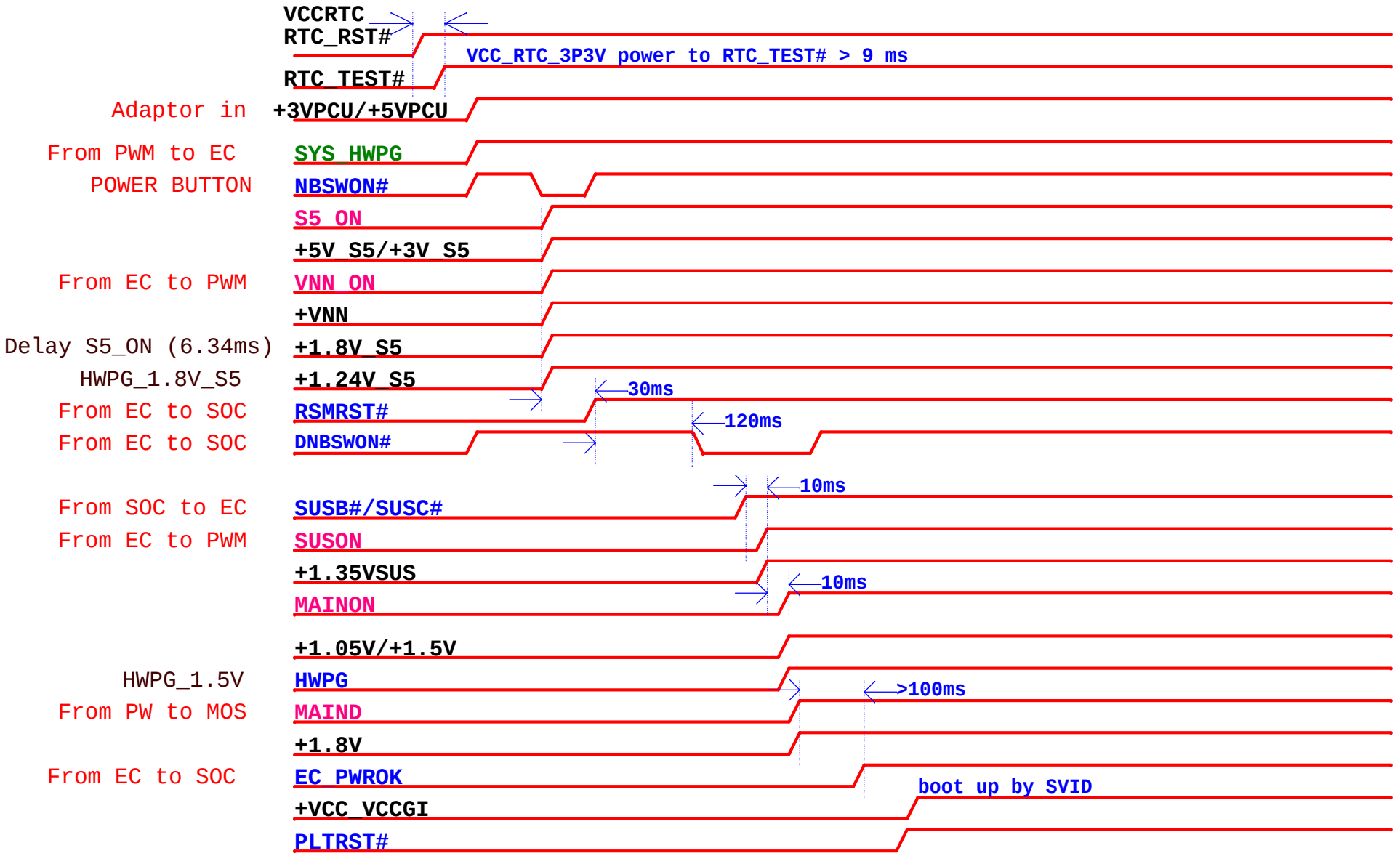

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	Power on Sequence	3A

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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

Model	Date	CHANGE LIST
ZAJ REV.D	02/10	1.Remove U33/R482 2.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 3.Change C34 from 18pF to 15pF 4.Un-stuff R380/R464 (debug card circuit) 5.Change PR5/PR16 from 1% to 5%
	02/16	1.Remove HDMI EMI resistor -R131/R136/R141/R124
	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
	02/20	1.Un stuff PC211&PC212 then stuff PC203&PC194 by power team request 2.Un stuff PC107&PC112 then stuff PC121&PC122 by power team request 3.Change R158/R161 from shortpad to 0 ohm 4.Add C449&R493 for RSMRST#
	02/23	1.Modify Q31/Q33 from 2N7002 (Vgs=2.5V) to PJA138K (Vgs=1.5V) 2.Change CN14 QPN and FP to DFFC28FR029 -- "50584-0280n-v02-28p-l" by PDC request 3.Change CN17 QPN and FP to DFFC34FR026 -- "196332-34041-3-34p-l" by PDC request