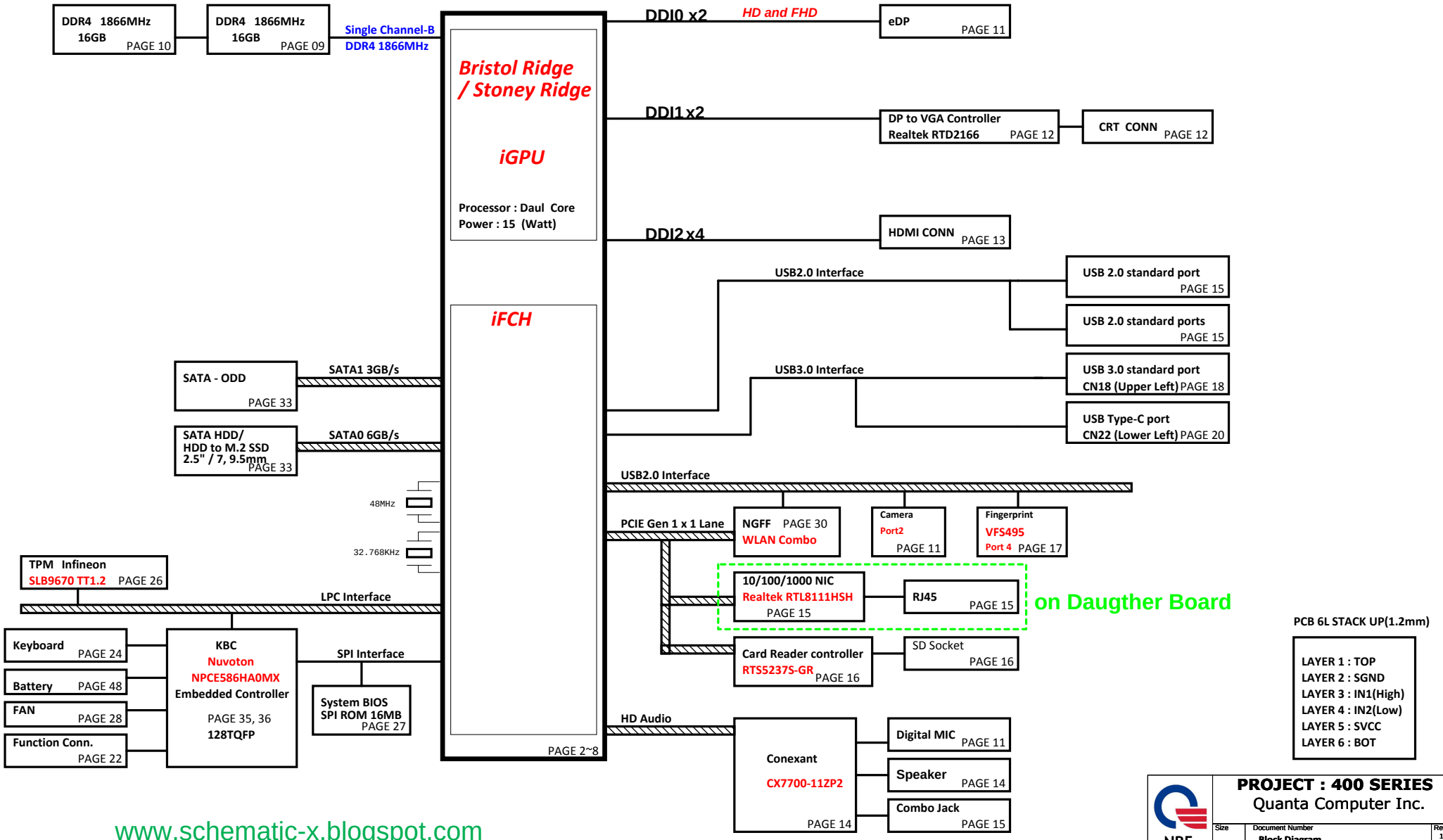
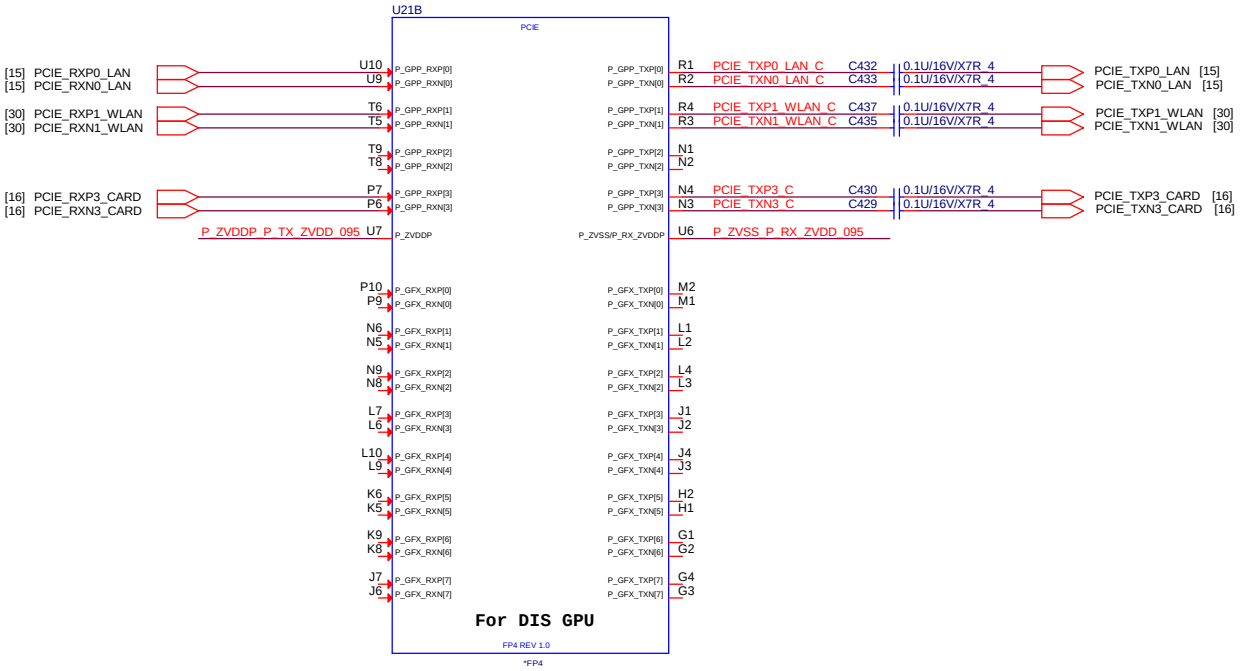
400 series Pitt / X93A (UMA) Schematics

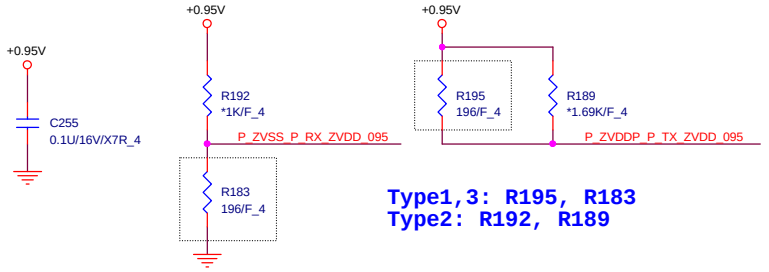


NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
	Block Diagram	1A
Date: Tuesday, March 01, 2016	Sheet 1 of 53	



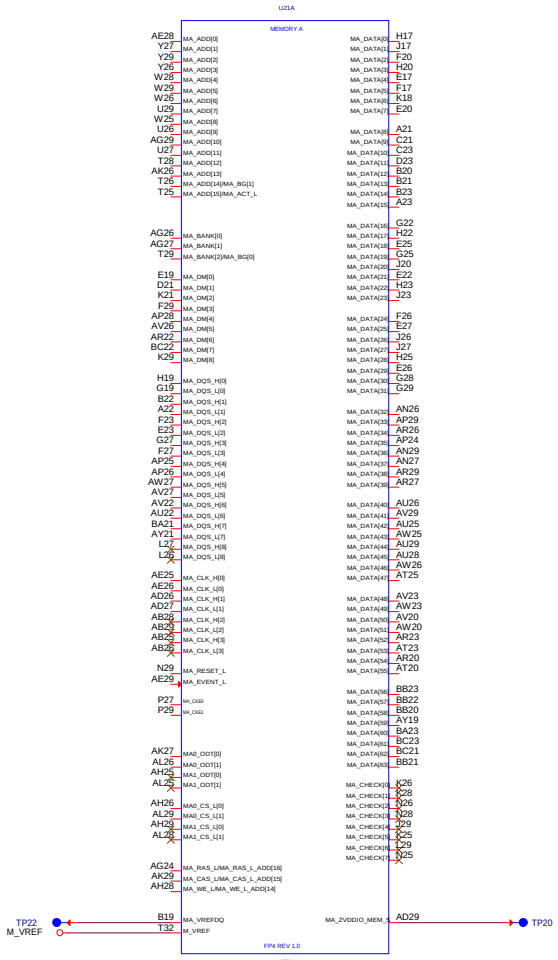


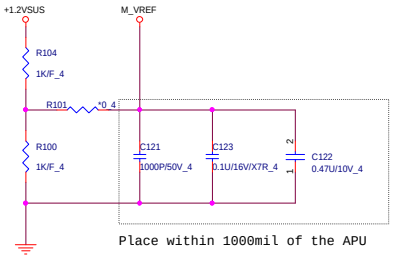
PROJECT : 400 SERIES
Quanta Computer Inc.

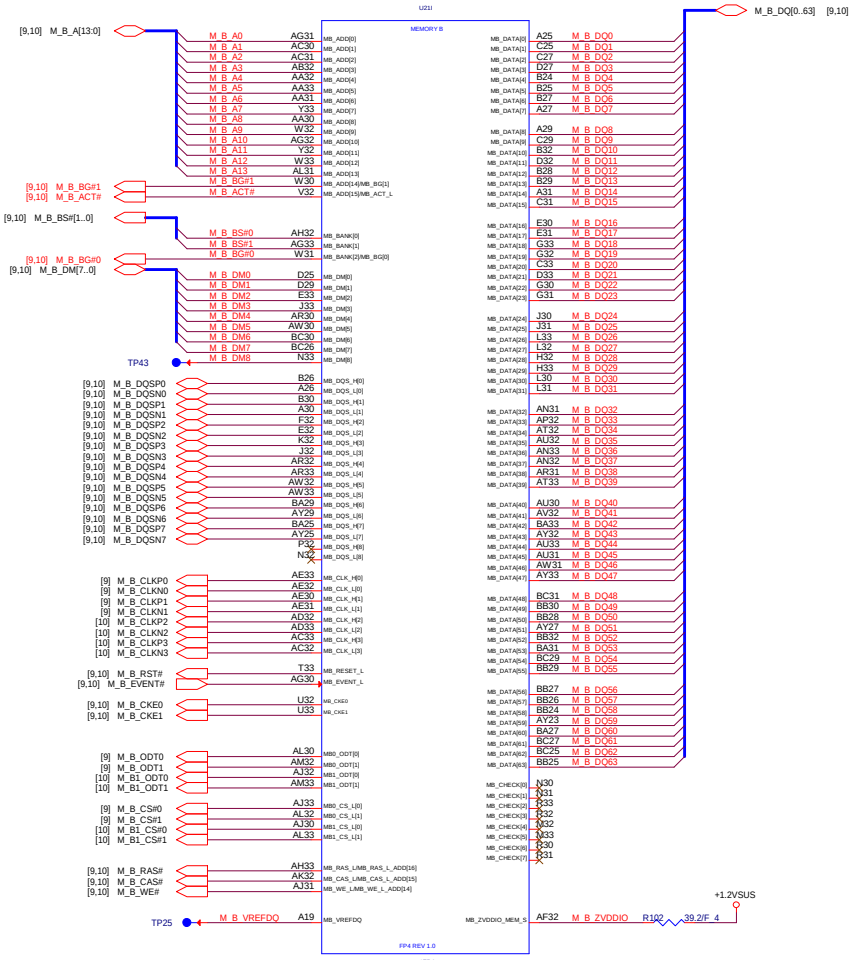
NB5

Size	Document Number	Rev
	BR/ST 1/7 (PCIE)	1A

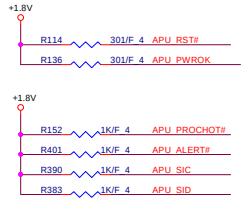
Date: Tuesday, March 01, 2016 | Sheet 2 of 53

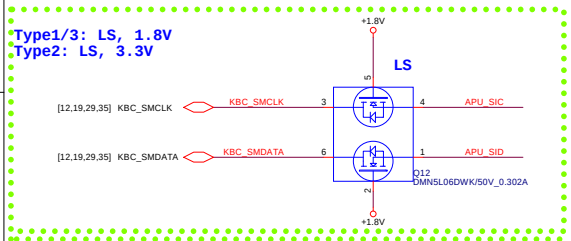


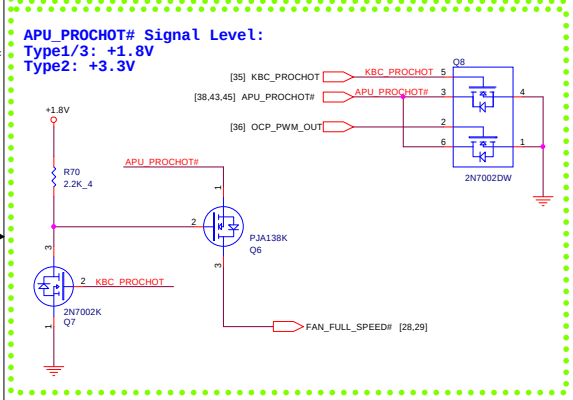


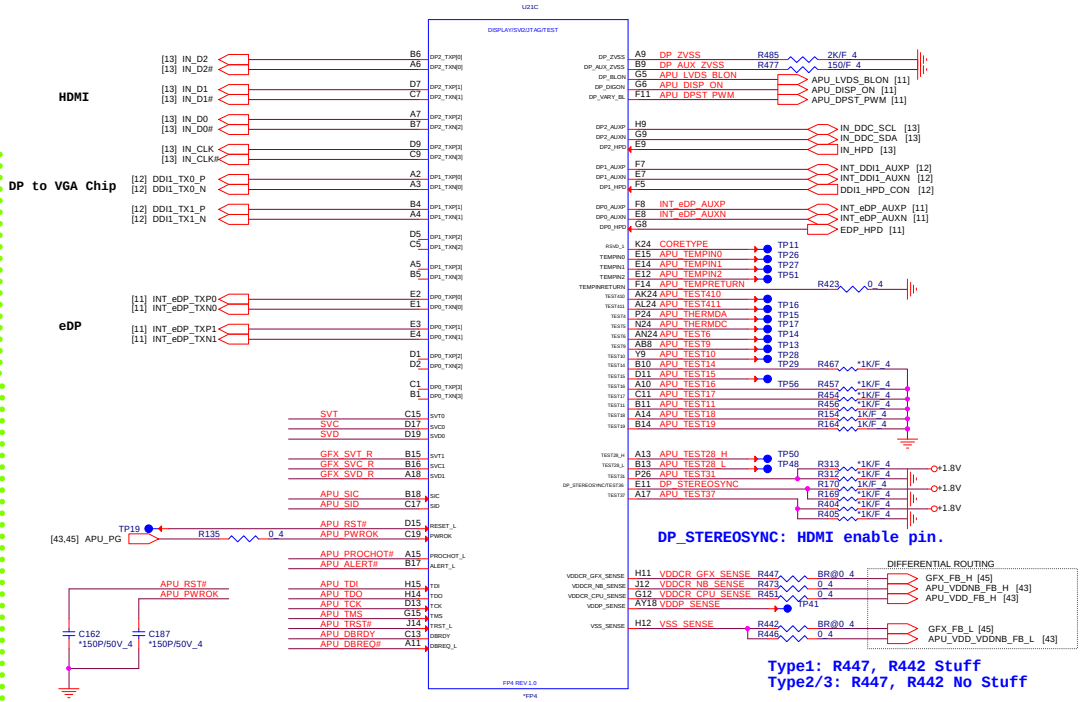


PROJECT : 400 SERIES			
Quanta Computer Inc.			
NB5	Size	Document Number	Rev 1A
		BR/ST 2/7 (MEM)	
	Date: Tuesday, March 01, 2016	Sheet 3 of 53	

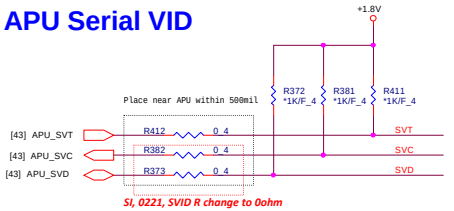






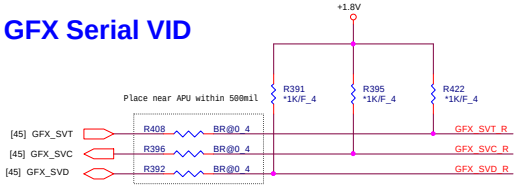


APU Serial VID



SI, 0221, SVID R change to 0ohm

GFX Serial VID

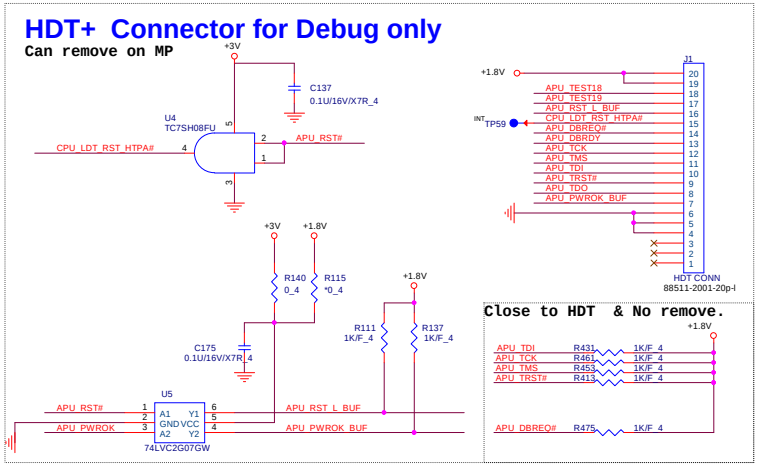


VFIX MODE — VID Override table (VDD)

SVC	SVD	Boot Voltage
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V

HDT+ Connector for Debug only

Can remove on MP



Close to HDT & No remove.

VBIOS_ID	VBIOS_ID1	VBIOS_ID2
	AGPIO6	AGPIO24
Discrete VRAM Group #1	0	0
Discrete VRAM Group #2	0	1
Discrete VRAM Group #3	1	0
UMA	1	1

	PLT_ID1	PLT_ID2	PLT_ID3
	EGPIO141	EGPIO142	EGPIO143
Pitt 15"	1	0	0

BOARD REVISION	BRD_ID1 EGPIO135	BRD_ID2 EGPIO136	BRD_ID3 EGPIO137	BRD_ID4 EGPIO138	
DB0	0	0	0	0	
DB1	0	0	0	1	
DB2	0	0	1	0	
	0	0	1	1	
SI1	0	1	0	0	Default
SIB	0	1	0	1	
SI2	0	1	1	0	
	0	1	1	1	
PV1	1	0	0	0	
	1	0	0	1	
	1	0	1	0	
	1	0	1	1	
MV1	1	1	0	0	
	1	1	0	1	
	1	1	1	0	
	1	1	1	1	

TEST2	TEST1	TEST0	Description
0	0	0	FCH TAP accessible from APU when TAPEN is asserted FCH JTAG pins are overloaded for multiple functions, in this configuration the FCH JTAG are used as non-JTAG pins
0	0	1	Reserved
0	1	X	Reserved
1	TMS	0	FCH JTAG multi-function pins are configured as JTAG pins, in this configuration the FCH TAP can be accessed from FCH JTAG pins
1	TMS	1	Use on ATE only Yuba JTAG enabled

SI_0220, HP request to change PLT_ID to 100

SYS_RST# internal 10K pull up

Default

Power Domain CZ CZ-L

to DDR SMBUS

to TP SMBUS

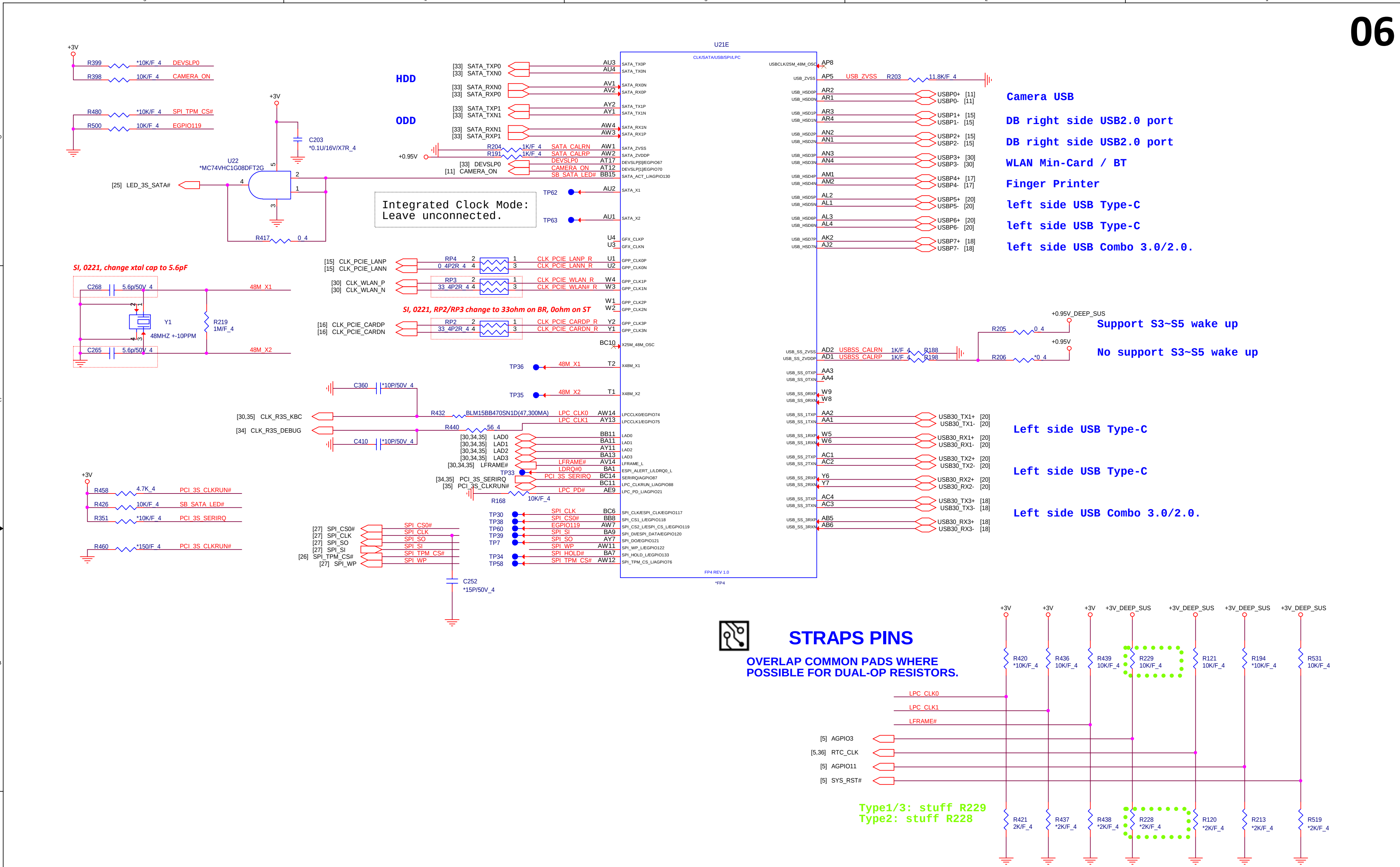
for GPIO145~148 Type1,3 pop those resistor Type2 can NC them

To Azalia

Type1 only

Follow AMD checklist 53537_1_03 suggestion to stuff R118/R120/R122

GENINT1: HVB function Vss:enabke; NC: disable



REQUIRED STRAPS

Follow FAE comment: R659 change to 2K, R401 to 10k, R142 is NC

	LPC_CLK0	LPC_CLK1	LFRAME#	AGPIO3 Int Pull-Up Type2	AGPIO3 Int Pull-Up Type1/3	RTC_CLK Int Pull-Up	AGPIO11 BLINK Int Pull-Up	SYS_RST# Int Pull-Up
PULL HIGH	BOOT FAIL TIMER ENABLED	Use 48Mhz crystal clock and generate both internal and external clocks DEFAULT	SPI ROM DEFAULT	1.8V SPI ROM	Enhanced reset logic (for quicker S5 resume) DEFAULT	Coin battery is on board. DEFAULT	LDT_RST#/LDT_PWRGD output to APU DEFAULT	normal reset mode DEFAULT
PULL LOW	BOOT FAIL TIMER DISABLED DEFAULT	Use 100Mhz PCIE clock as reference clock and generate internal clocks only	LPC ROM	3.3V SPI ROM DEFAULT	Default to traditional reset logic	Coin battery is not on board.	LDT_RST#/LDT_PWRGD output to Pads	short reset mode

PROJECT : 400 SERIES
Quanta Computer Inc.

NB5

Size | Document Number: BR/ST 5/7 (SATA/USB/SPI) | Rev 1A

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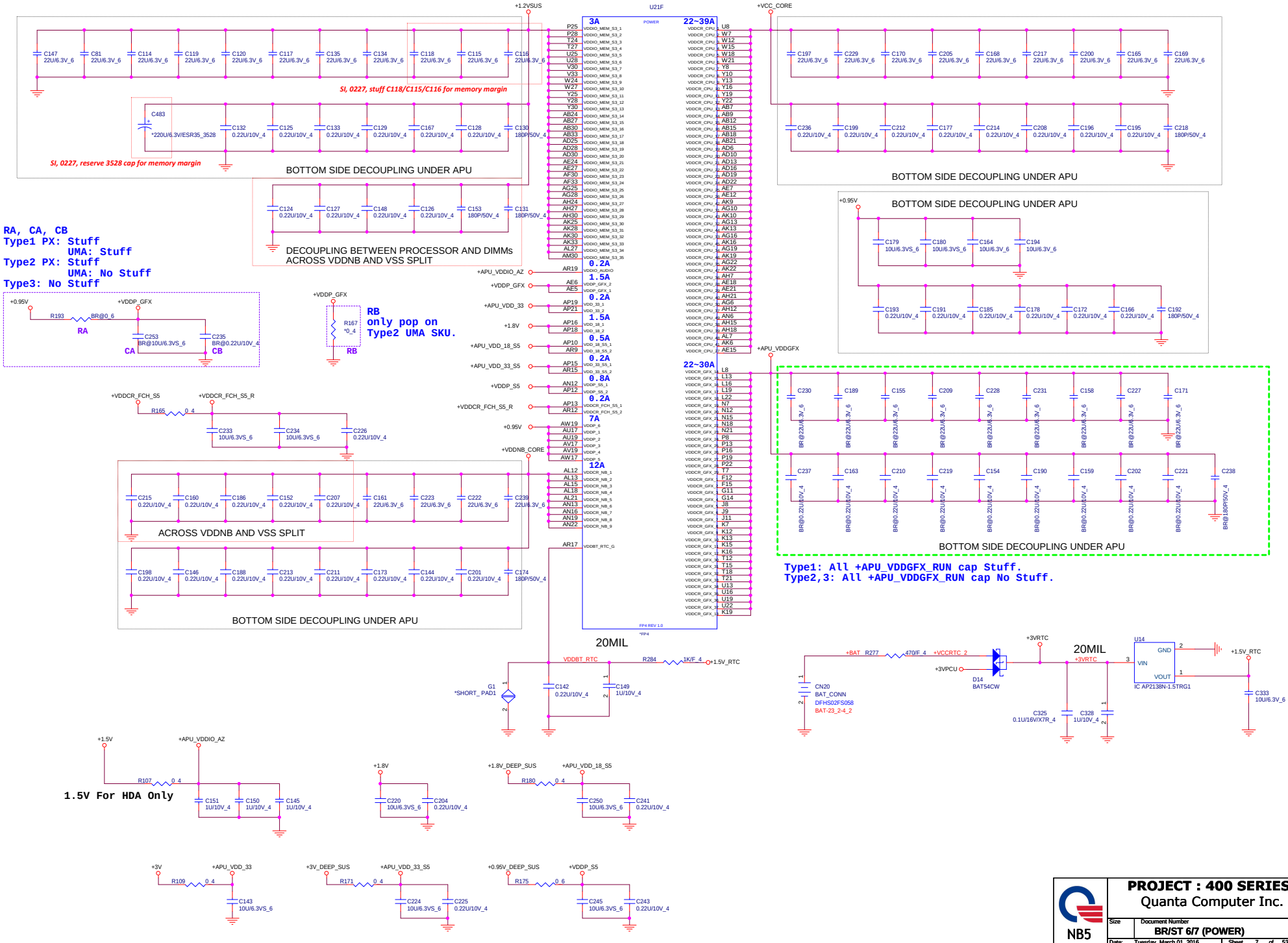
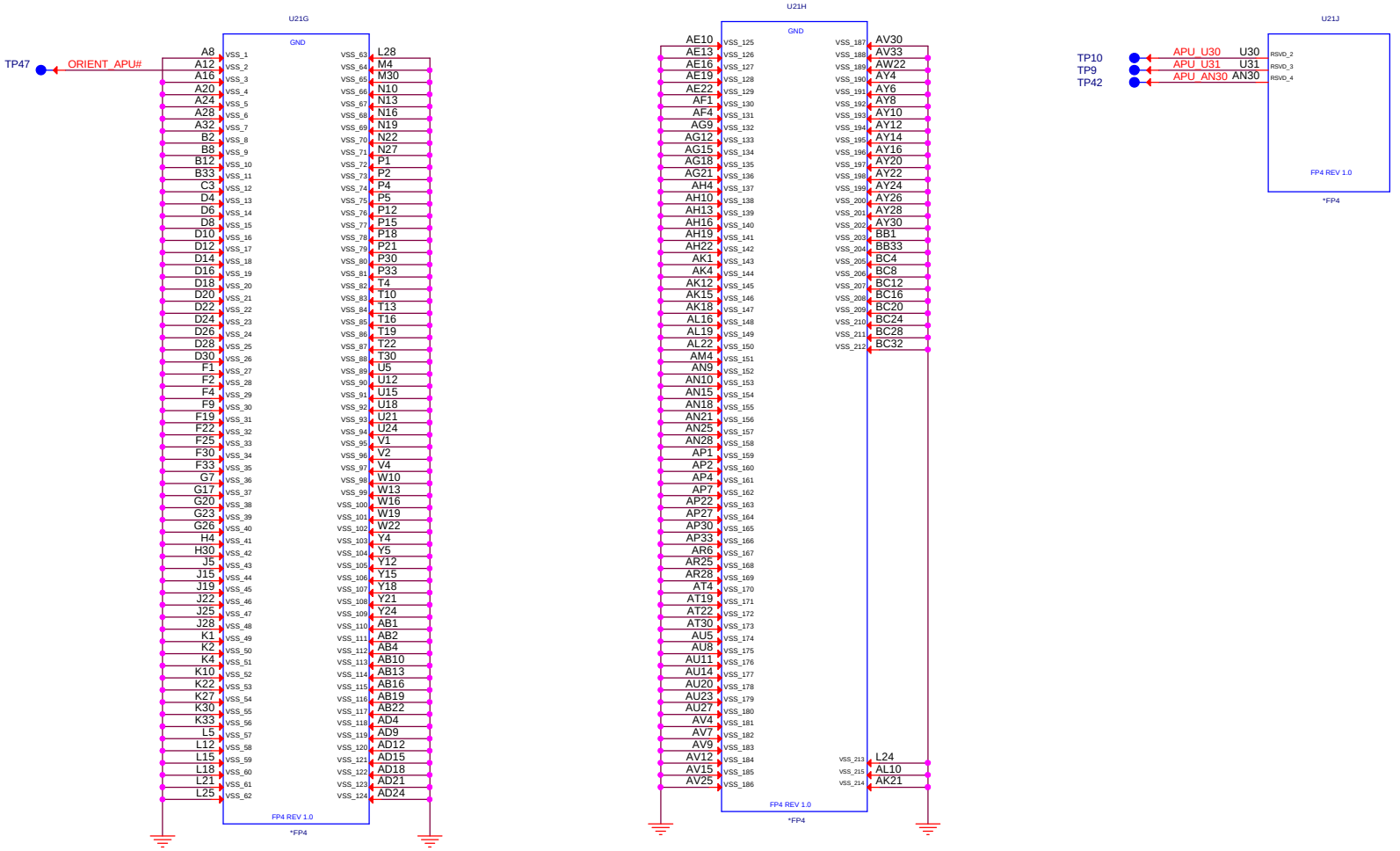
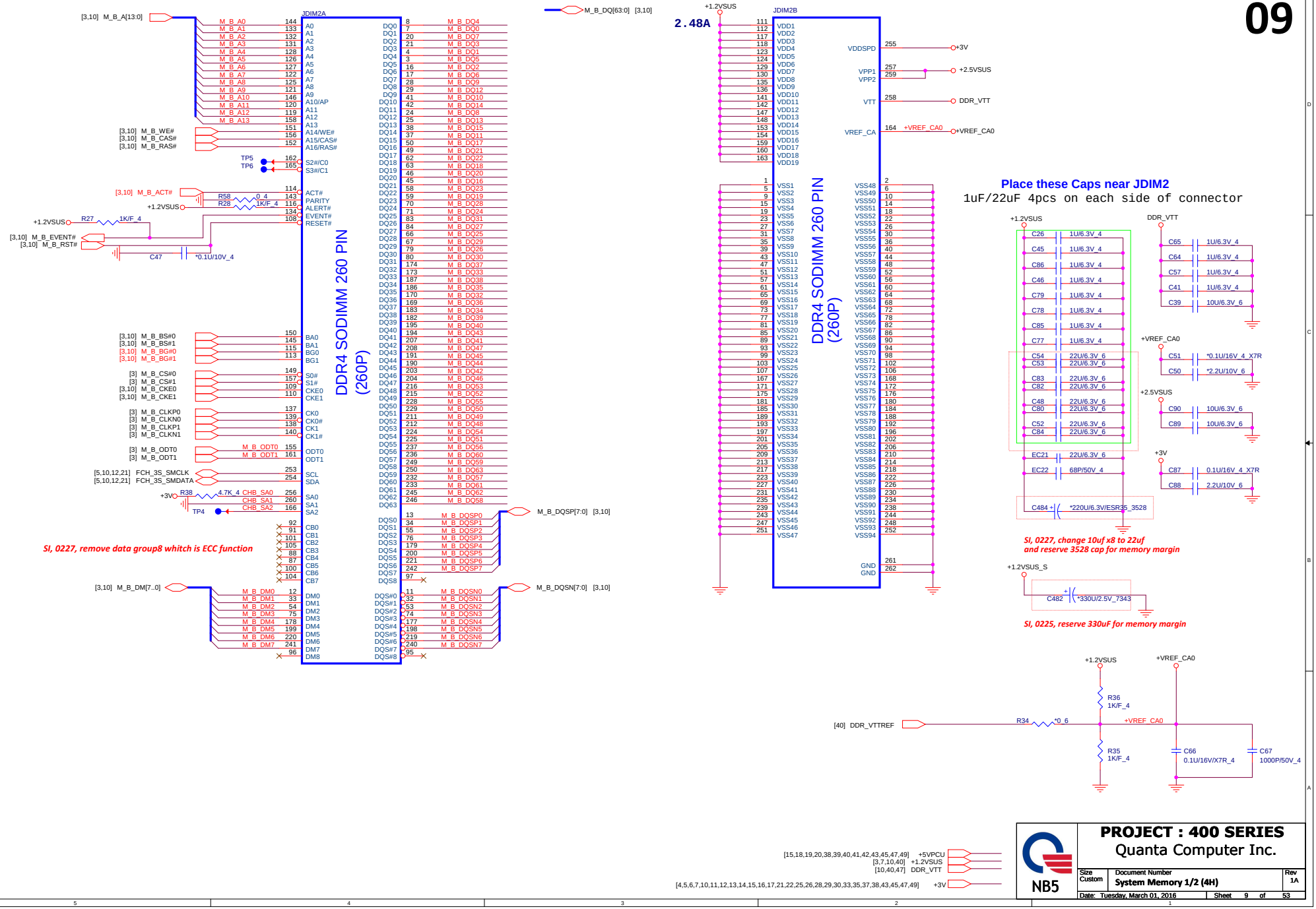
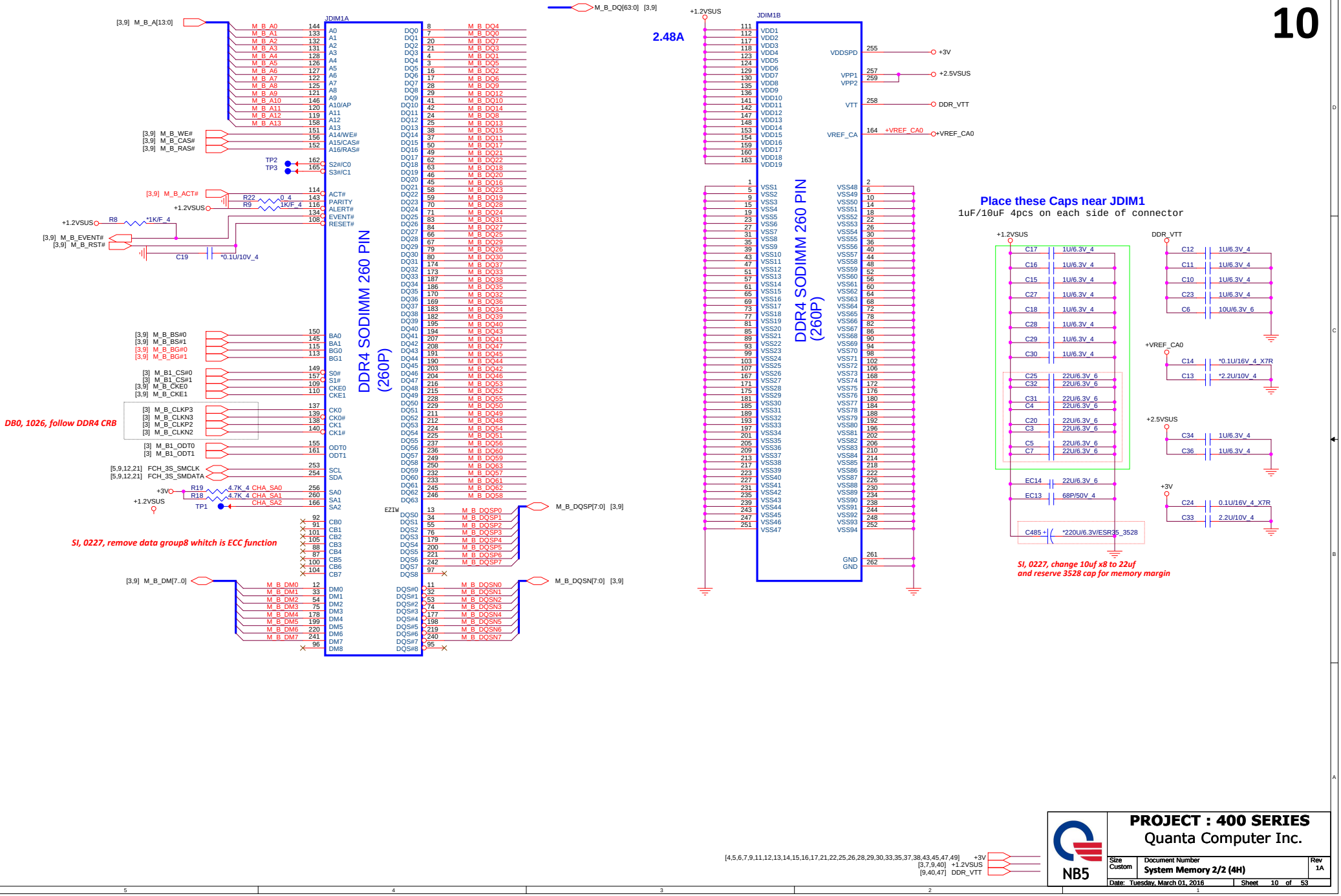


PROJECT : 400 SERIES			
Quanta Computer Inc.			
NB5	Size	Document Number	Rev
		BR/ST 6/7 (POWER)	1A
	Date: Tuesday, March 01, 2016	Sheet 7 of 53	



NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
Size	Document Number BR/ST 7/7 (GND)	Rev 1A
Date: Tuesday, March 01, 2016	Sheet 8 of 53	


JDIM2A
DDR4 SODIMM 260 PIN (260P)
JDIM2B
DDR4 SODIMM 260 PIN (260P)
2.48A
SI, 0227, remove data group8 whitch is ECC function
Place these Caps near JDIM2
1uF/22uF 4pcs on each side of connector
SI, 0227, change 10uf x8 to 22uf and reserve 3528 cap for memory margin
SI, 0225, reserve 330uF for memory margin
PROJECT : 400 SERIES
Quanta Computer Inc.
NB5
System Memory 1/2 (4H)
Tuesday, March 01, 2016



NB5

PROJECT : 400 SERIES

Quanta Computer Inc.

Size	Document Number	Rev
Custom	System Memory 2/2 (4H)	1A

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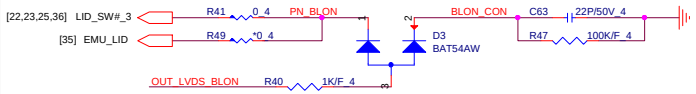
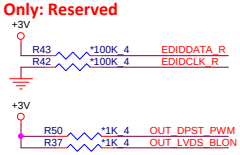
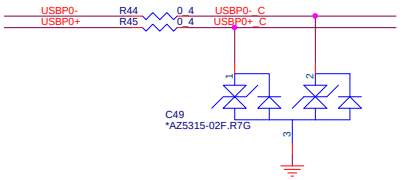
LID Switch



For EDP Only: Reserved

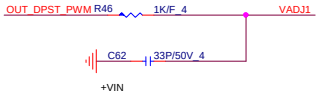


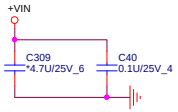


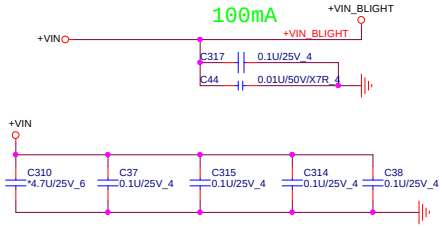
11

LVDS Conn.

51519-0400T-V02
51519-0400t-v02-40p-l
DFFC40FR081
CN1

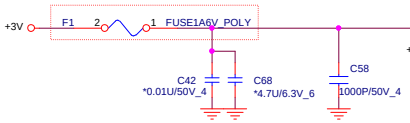


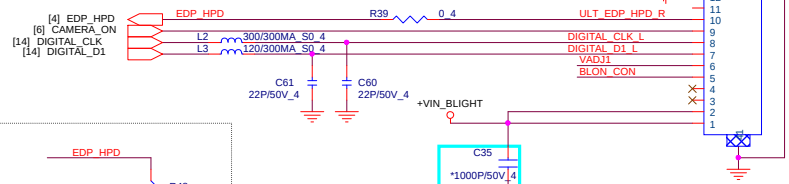




SI, 0220, EMI change solution

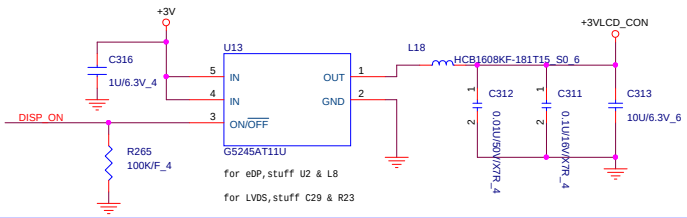
SI, 0223, change 0ohm to fuse

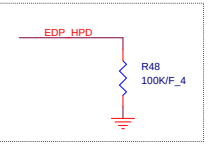




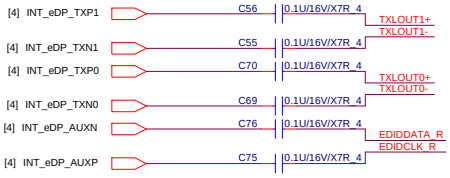
For eDP

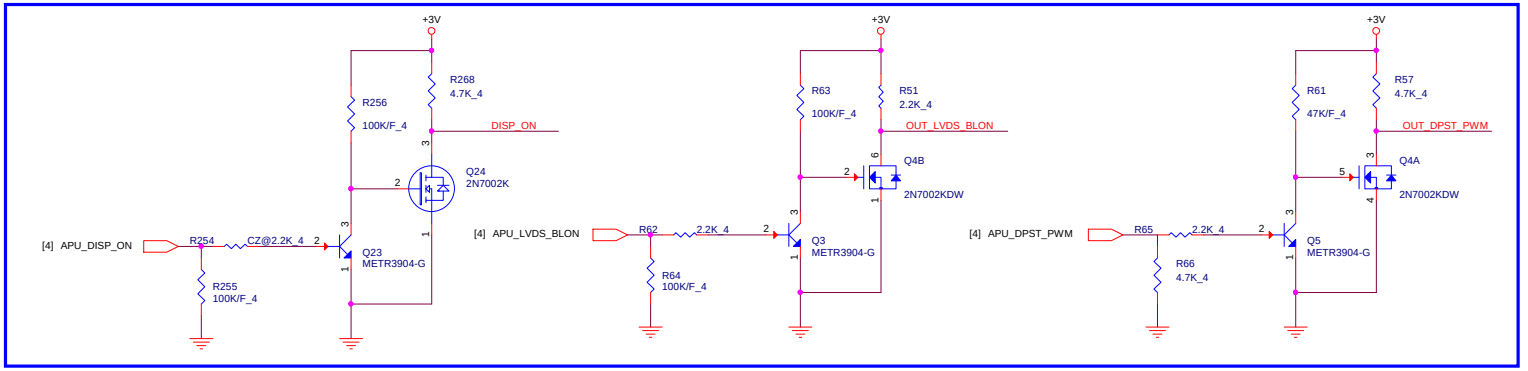
Close to LVDS connector





For EDP Only: stuff Cap
For LVDS only stuff Resistor



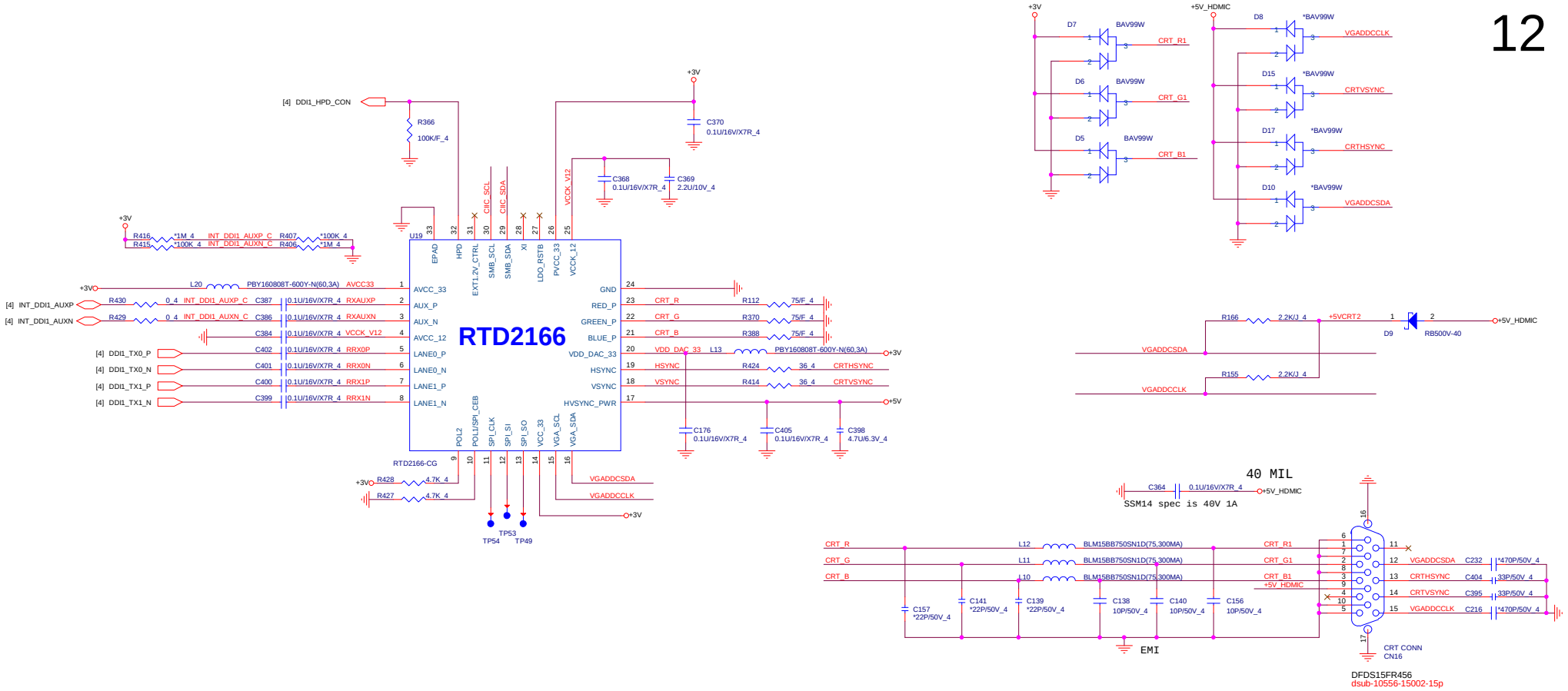


[15,18,19,20,38,39,40,41,42,43,45,47,49] +5VPCU
[4,5,6,7,9,10,12,13,14,15,16,17,21,22,25,26,28,29,30,33,35,37,38,43,45,47,49] +3V
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU
[12,13,14,15,24,28,33,47,49] +5V
[32,33,34,37,38,39,40,41,42,44,46] +VIN

NB5

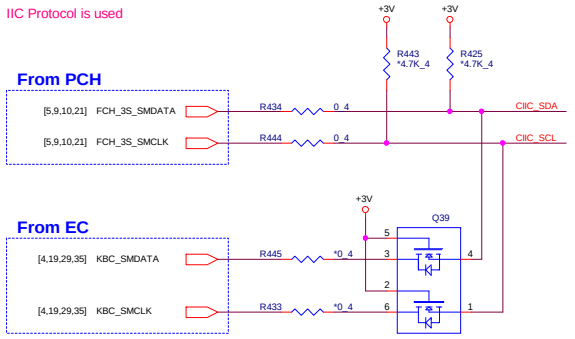
PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LCD CONN/LID/CAM/D-MIC	1A
Date: Tuesday, March 01, 2016	Sheet 11 of 53	



CIIC_SCL, CIIC_SDA Connection

EP mode: Pin2, Pin3 connect to EC SMBUS
ROM or EEPROM mode: connect to PCH SMBUS
IIC Protocol is used

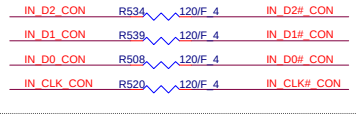


PROJECT : 400 SERIES
Quanta Computer Inc.

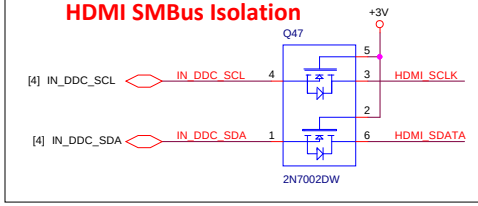
Size	Document Number	Rev
Custom	DP to VGA	1A
Date: Tuesday, March 01, 2016	Sheet 12 of 53	

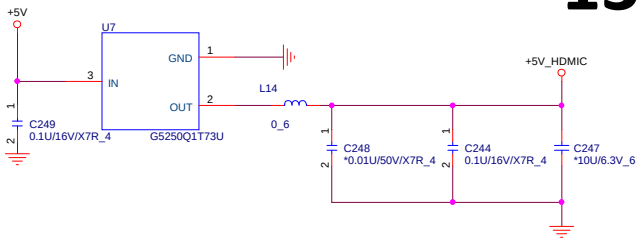
NB5

EMI Solution

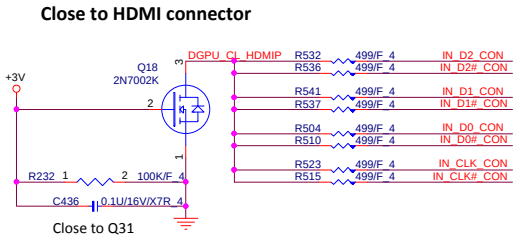


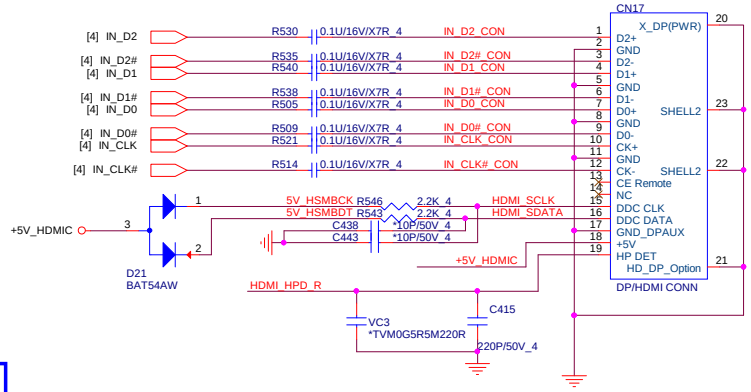
HDMI SMBus Isolation

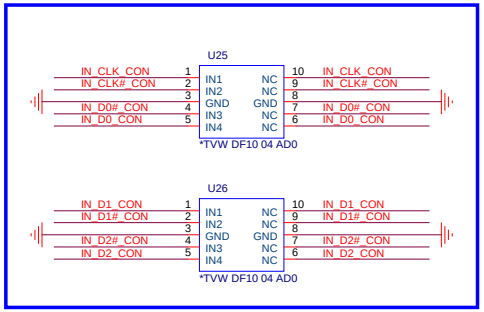




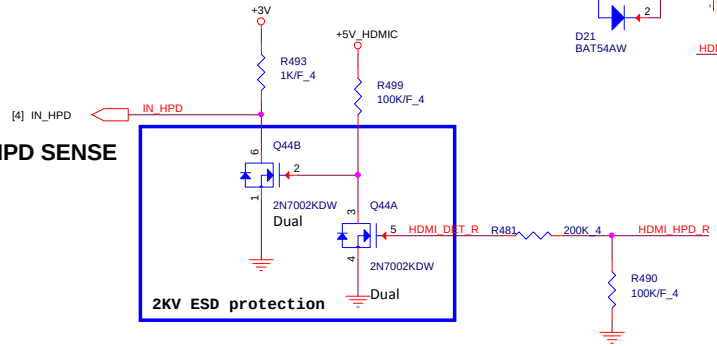
Close to HDMI connector

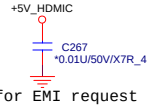






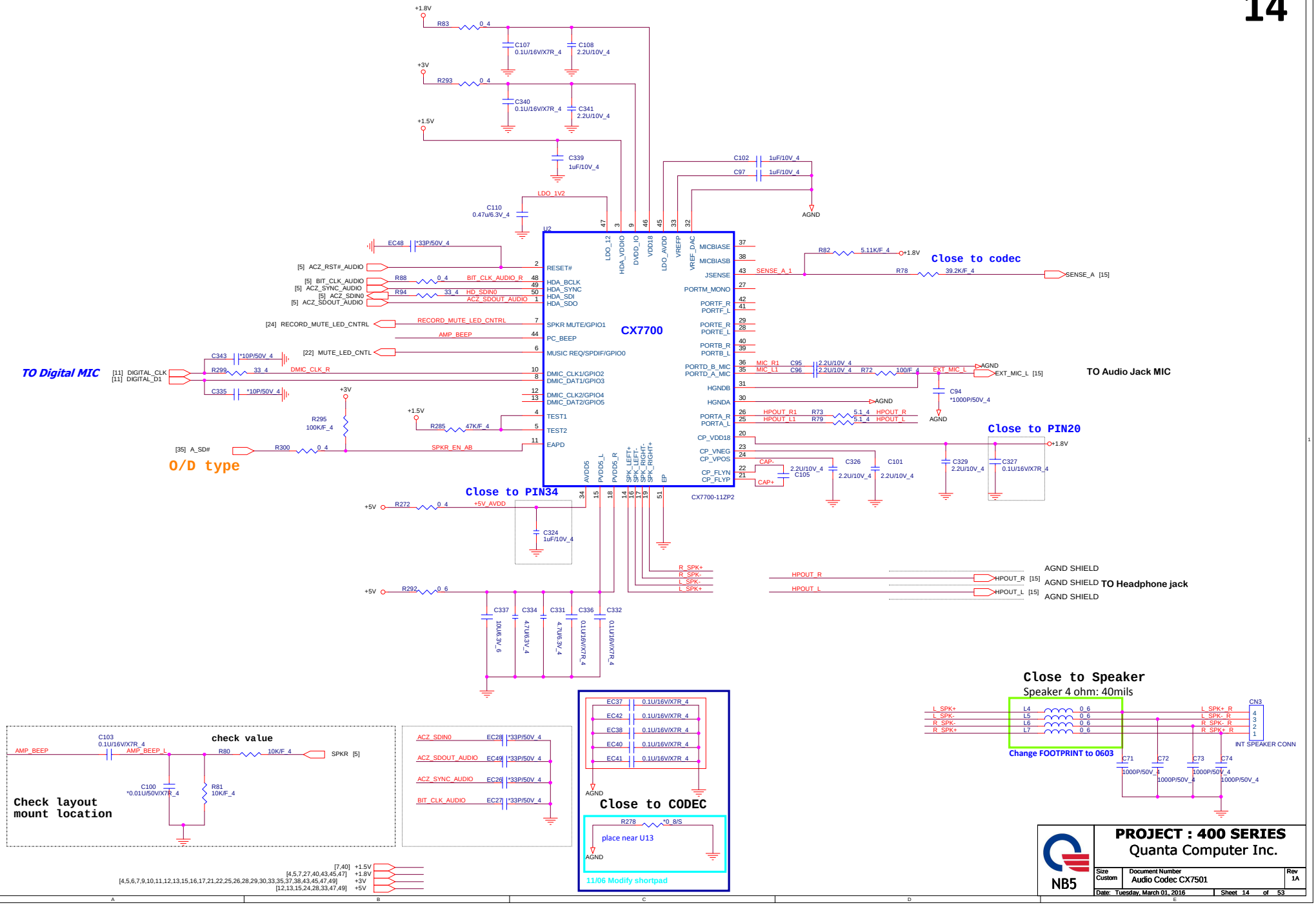
HDMI HPD SENSE



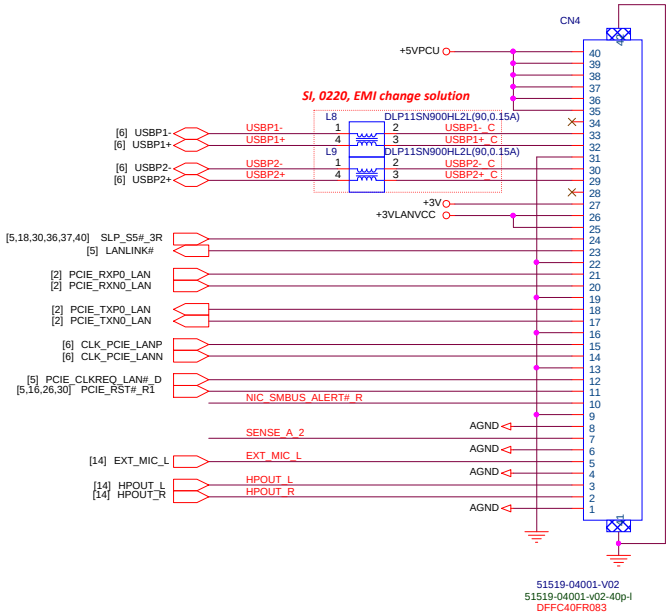


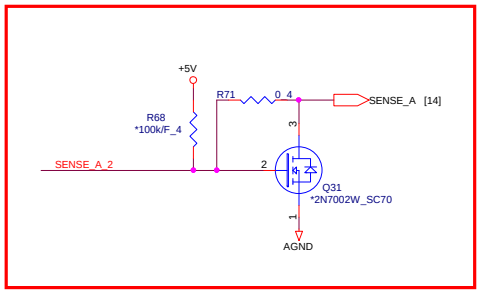
NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
	Size: Custom Document Number: HDMI CONNECTOR	Rev: 1A
	Date: Tuesday, March 01, 2016	Sheet 13 of 53

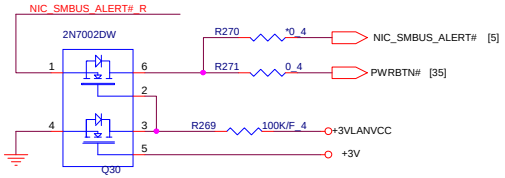
Audio Codec


CX7700
CX7700-11ZP2
U2
TO Digital MIC
O/D type
Close to codec
Close to PIN20
Close to PIN34
TO Audio Jack MIC
TO Headphone jack
AGND SHIELD
Close to Speaker
Speaker 4 ohm: 40mils
Change FOOTPRINT to 0603
INT SPEAKER CONN
Close to CODEC
place near U13
11/06 Modify shortpad
check value
Check layout
mount location

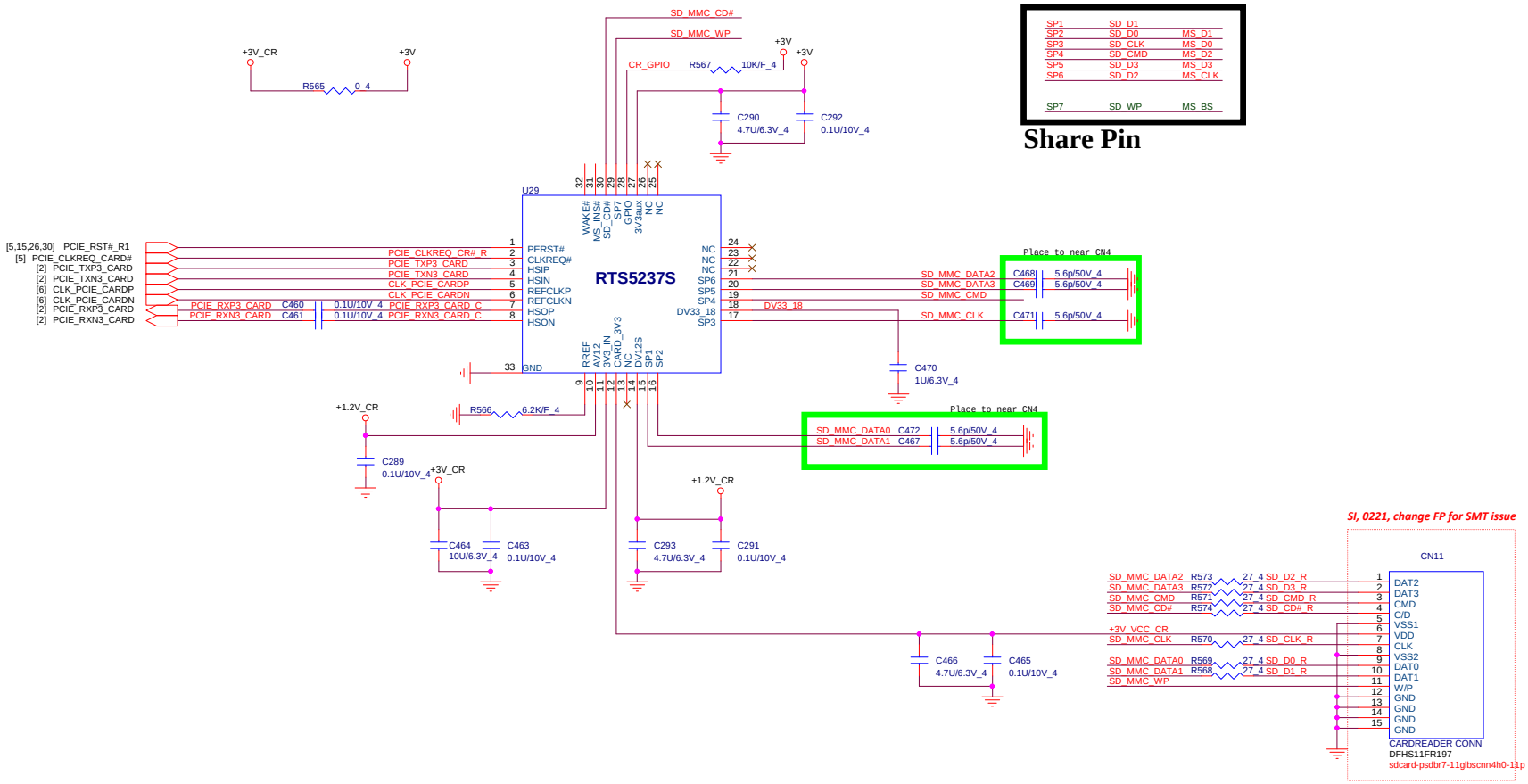
USB2.0 x2/LAN/Headphone_Mic Combo Jack Daugther Board Connector







NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
Size: Custom	Document Number: Audio/USB BOARD	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 15 of 53	

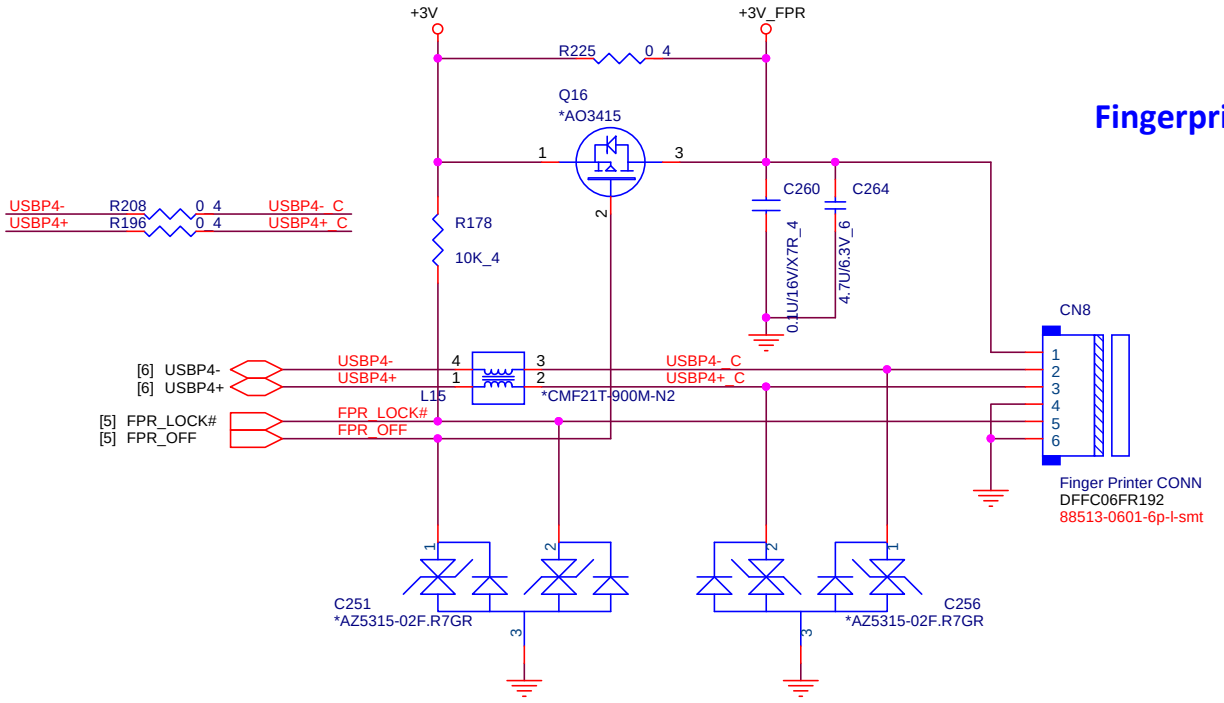


SP1	SD_D1	
SP2	SD_D0	MS_D1
SP3	SD_CLK	MS_D0
SP4	SD_CMD	MS_D2
SP5	SD_D3	MS_D3
SP6	SD_D2	MS_CLK
SP7	SD_WP	MS_BS

Share Pin

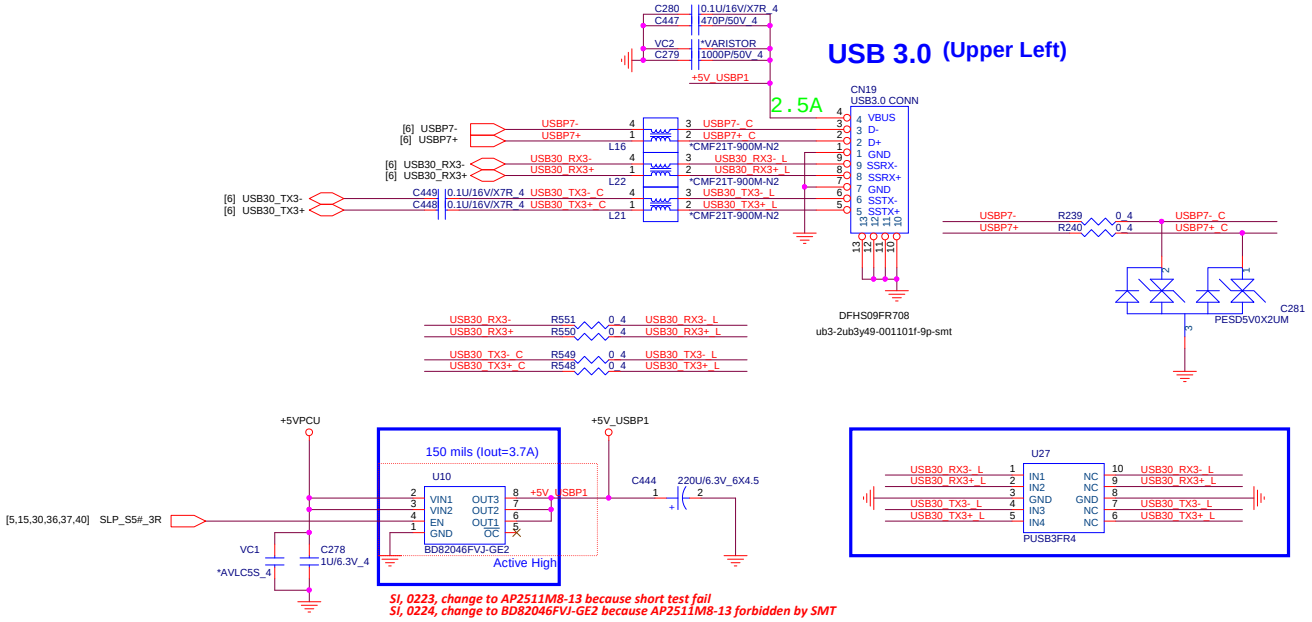
NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: CARD READER	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 16 of 53	

Fingerprint Conn



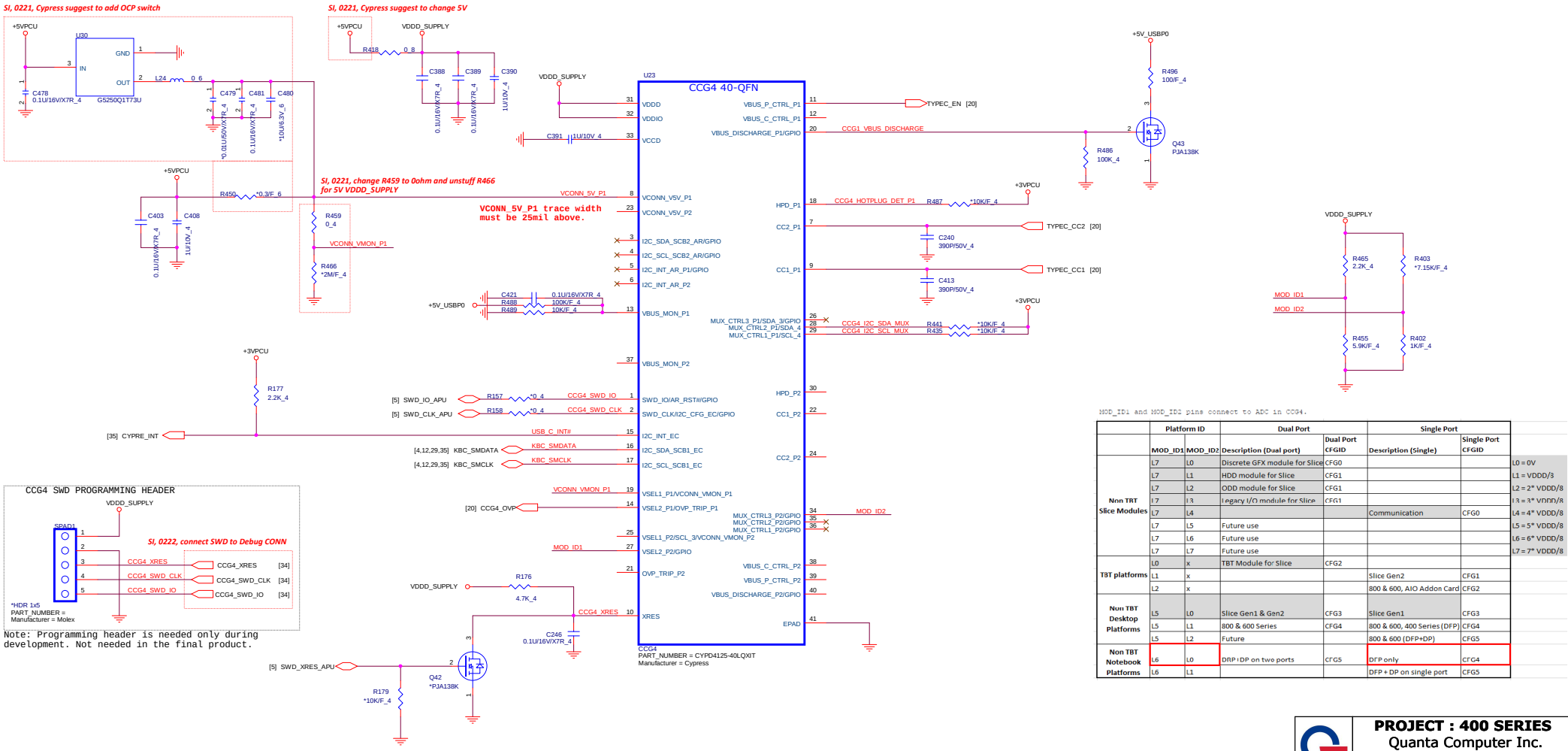
NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **Finger Printer**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 17 of 53	

USB 2.0/3.0 Combo



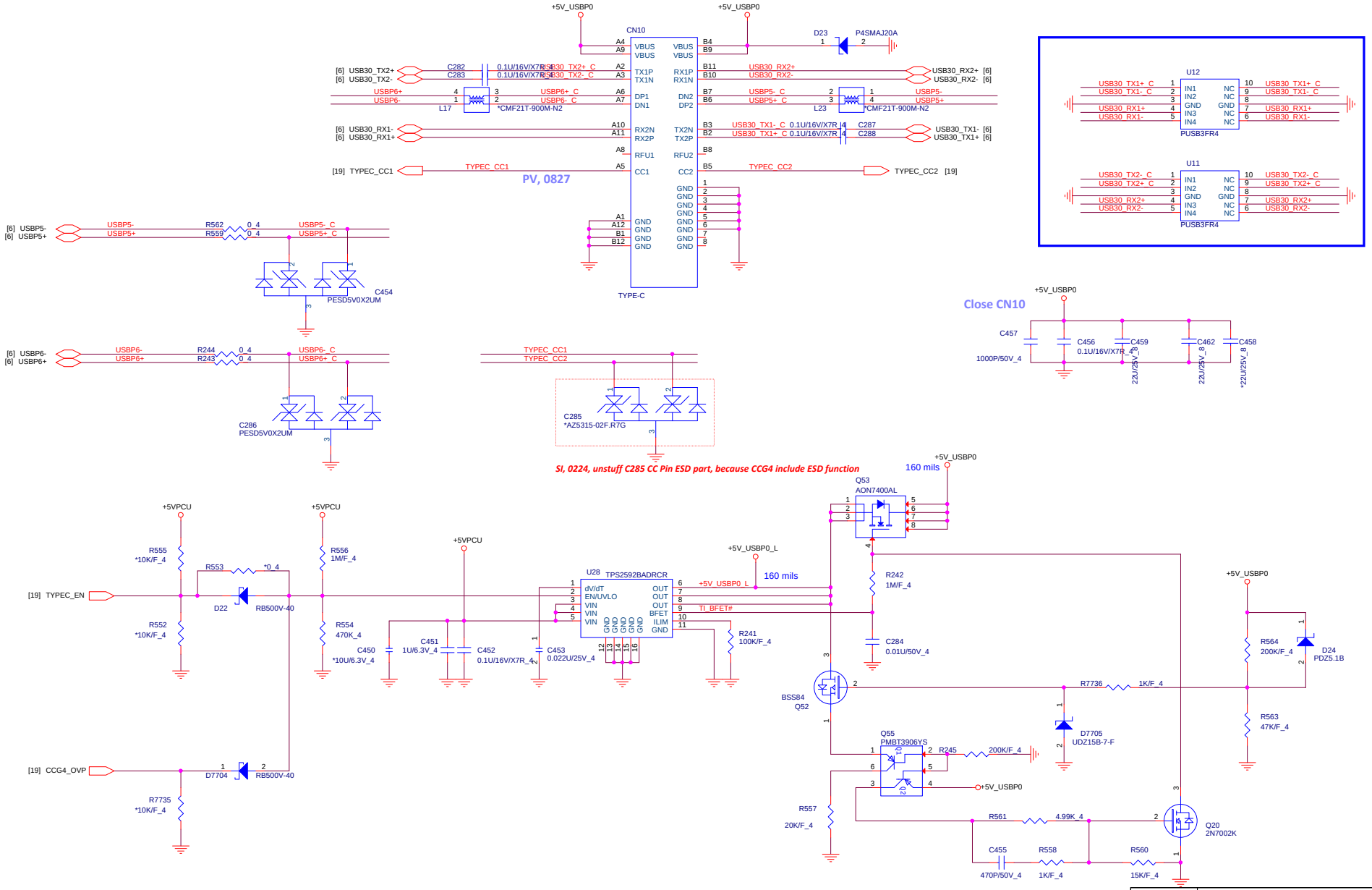
[15,19,20,38,39,40,41,42,43,45,47,49] +5VPCU
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU

NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
Size: Custom	Document Number: USB 3.0/USB3 Re-driver	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 18 of 53	



	Platform ID		Dual Port		Single Port		
	MOD_ID1	MOD_ID2	Description (Dual port)	Dual Port CFGID	Description (Single)	Single Port CFGID	
Non TBT Slice Modules	L7	L0	Discrete GFX module for Slice	CFG0			L0 = 0V
	L7	L1	HDD module for Slice	CFG1			L1 = VDDD/3
	L7	L2	ODD module for Slice	CFG1			L2 = 2* VDDD/8
	L7	L3	Legacy I/O module for Slice	CFG1			L3 = 3* VDDD/8
	L7	L4			Communication	CFG0	L4 = 4* VDDD/8
	L7	L5	Future use				L5 = 5* VDDD/8
	L7	L6	Future use				L6 = 6* VDDD/8
	L7	L7	Future use				L7 = 7* VDDD/8
TBT platforms	L0	x	TBT Module for Slice	CFG2			
	L1	x			Slice Gen2	CFG1	
	L2	x			800 & 600, AIO Addon Card	CFG2	
Non TBT Desktop Platforms	L5	L0	Slice Gen1 & Gen2	CFG3	Slice Gen1	CFG3	
	L5	L1	800 & 600 Series	CFG4	800 & 600, 400 Series (DFP)	CFG4	
	L5	L2	Future		800 & 600 (DFP+DP)	CFG5	
Non TBT Notebook Platforms	L6	L0	DFP+DP on two ports	CFG5	DFP only	CFG4	
	L6	L1			DFP + DP on single port	CFG5	

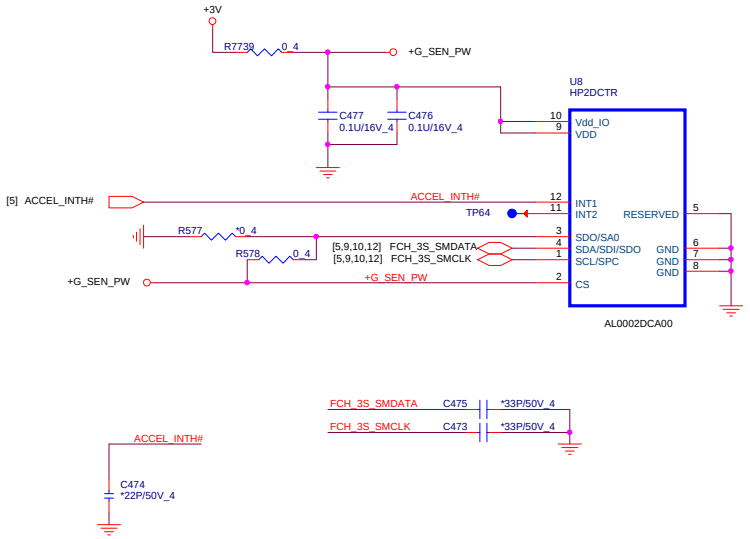
PROJECT : 400 SERIES
Quanta Computer Inc.
NB5
Size | Document Number: Cypress CCG4 | Rev 1A
Date: Tuesday, March 01, 2016 | Sheet 19 of 53



Close CN10

SI, 0224, unstuff C285 CC Pin ESD part, because CCG4 include ESD function

Accelerometer Sensor

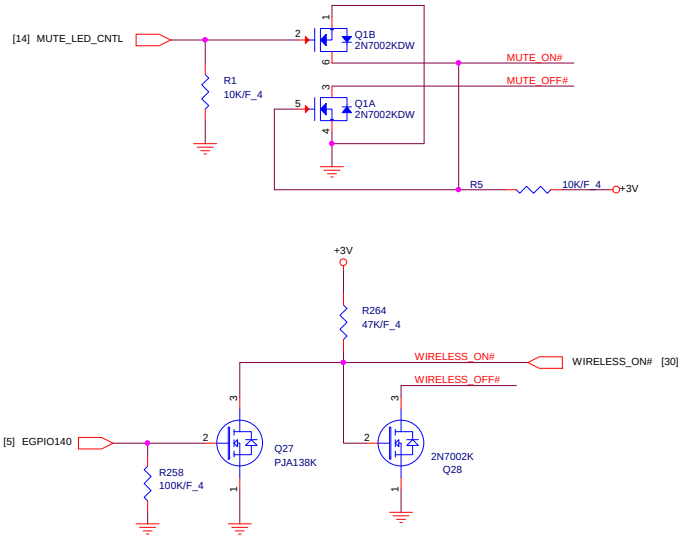


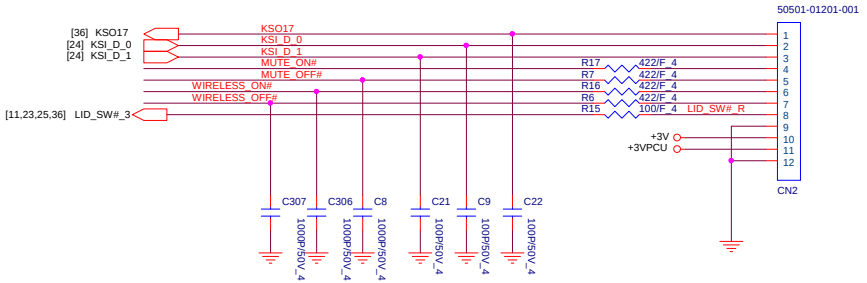
[15,18,19,20,38,39,40,41,42,43,45,47,49] +5VPCU
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	**Accelerometer**	1A
Date: Tuesday, March 01, 2016	Sheet 21 of 53	

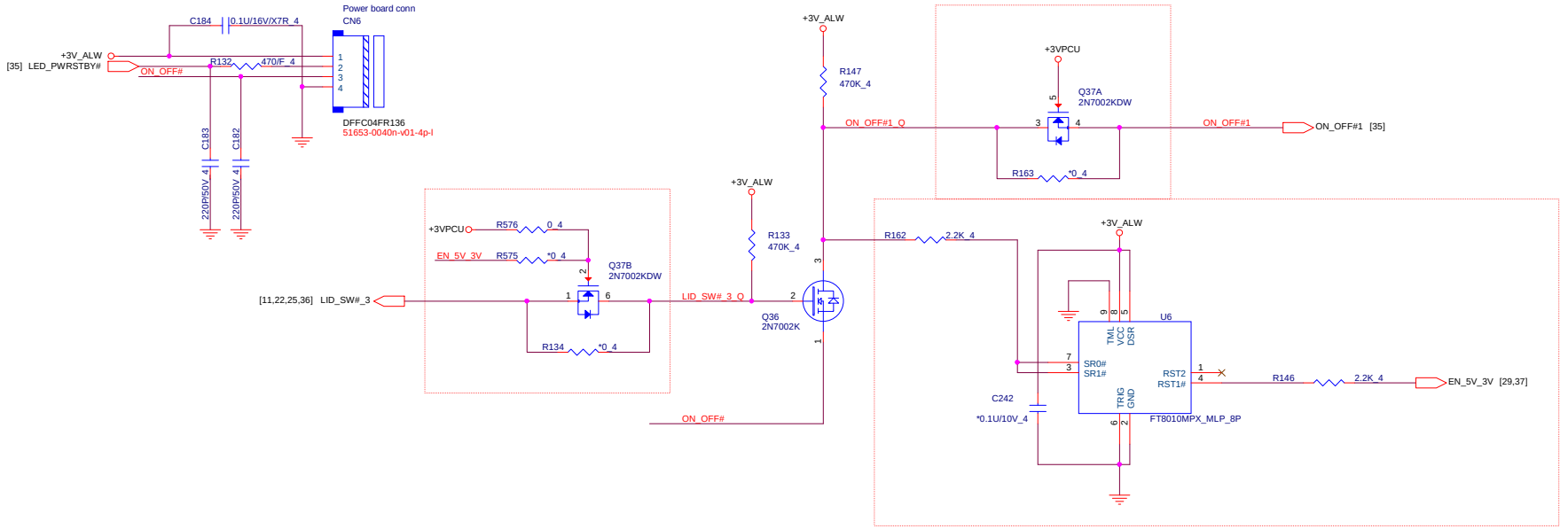




NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **Function Conn./LED**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 22 of 53	

Power Botton Connector

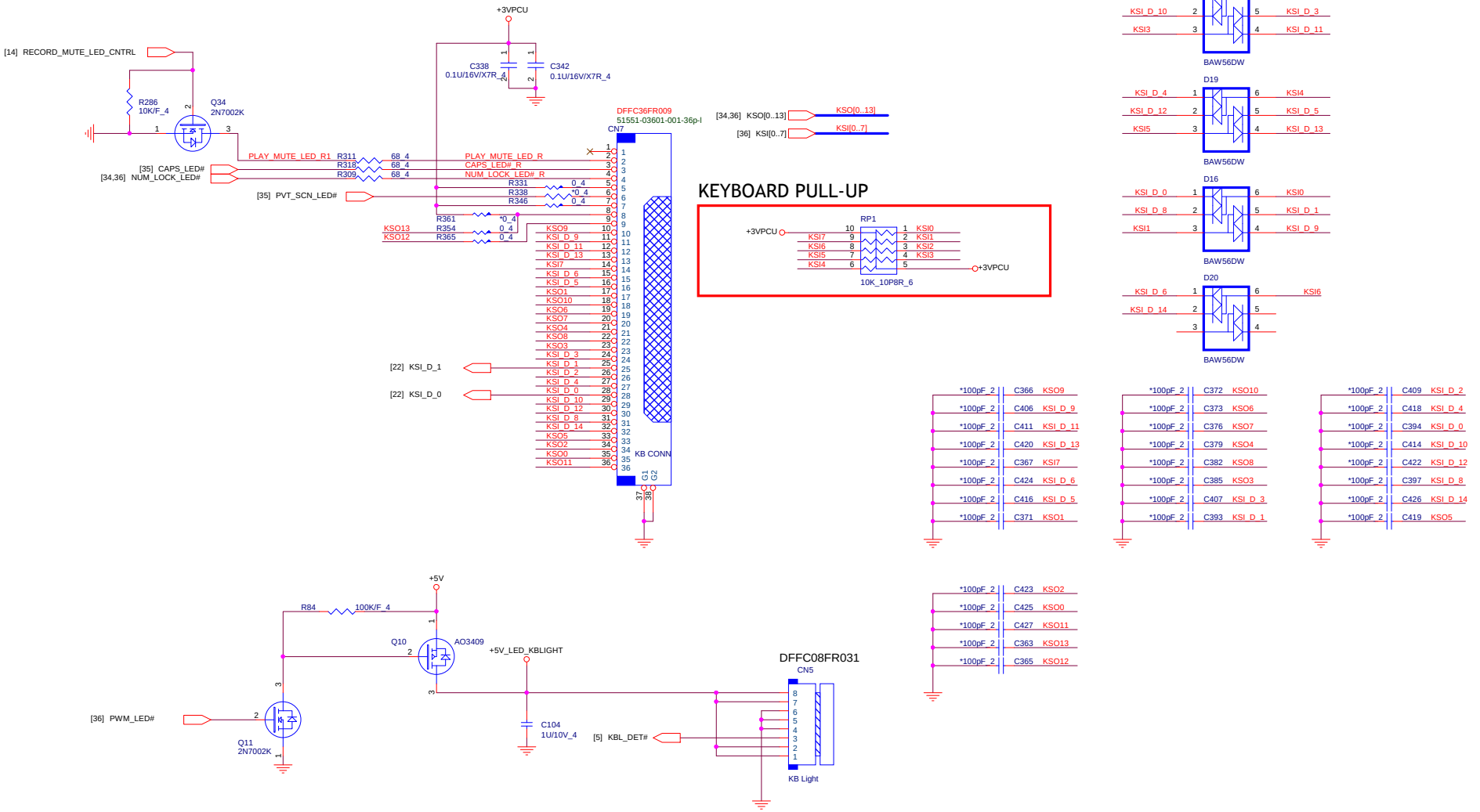
LED



[37,38,39,48] +3V_ALW
[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,28,29,30,33,35,37,38,43,45,47,49] +3V
[12,13,14,15,24,28,33,47,49] +5V
[7,19,22,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU

NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **33 -- PB/LID**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 23 of 53	

KEYBOARD Con.

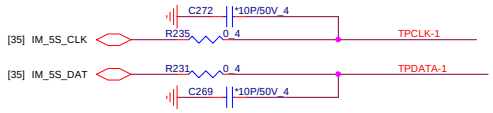


PROJECT : 400 SERIES
Quanta Computer Inc.

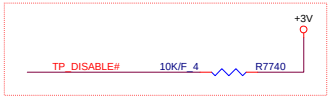
Size	Document Number	Rev
Custom	KB/KB light	1A

Date: Tuesday, March 01, 2016 Sheet 24 of 53

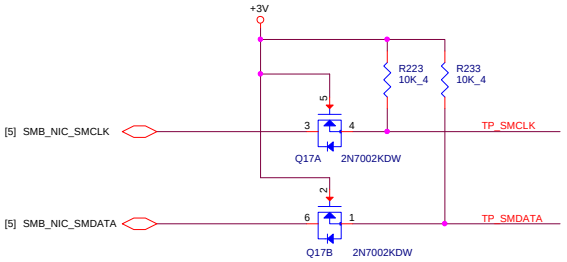
NB5

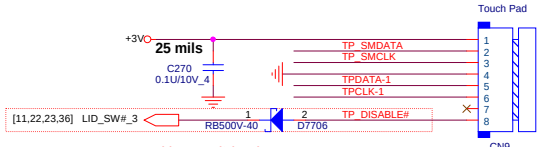


SI, 0221, HP request to add LID at ClickPad



Touch POINT

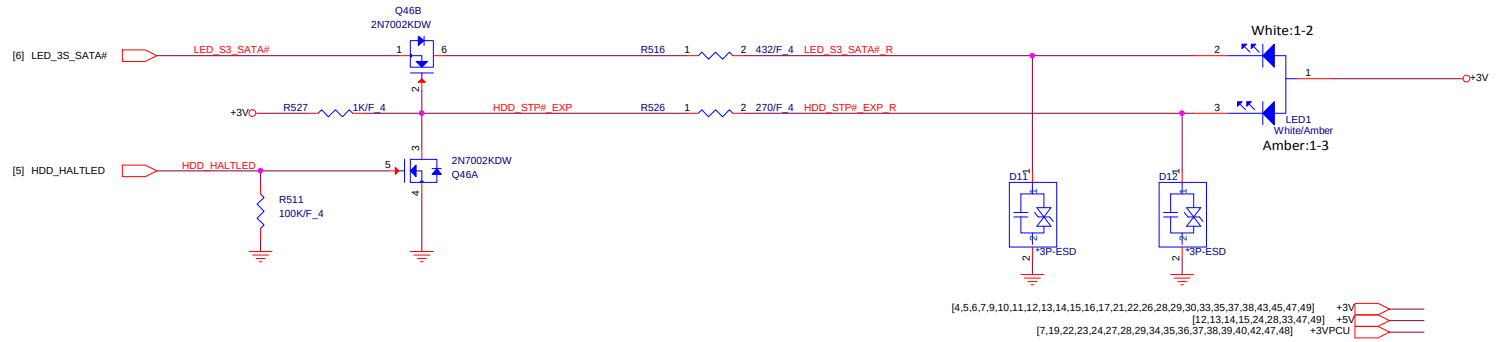




SI, 0221, HP request to add LID at ClickPad

DFFC08FR118

CLICK PAD
Address: 0x2C(7 bit)

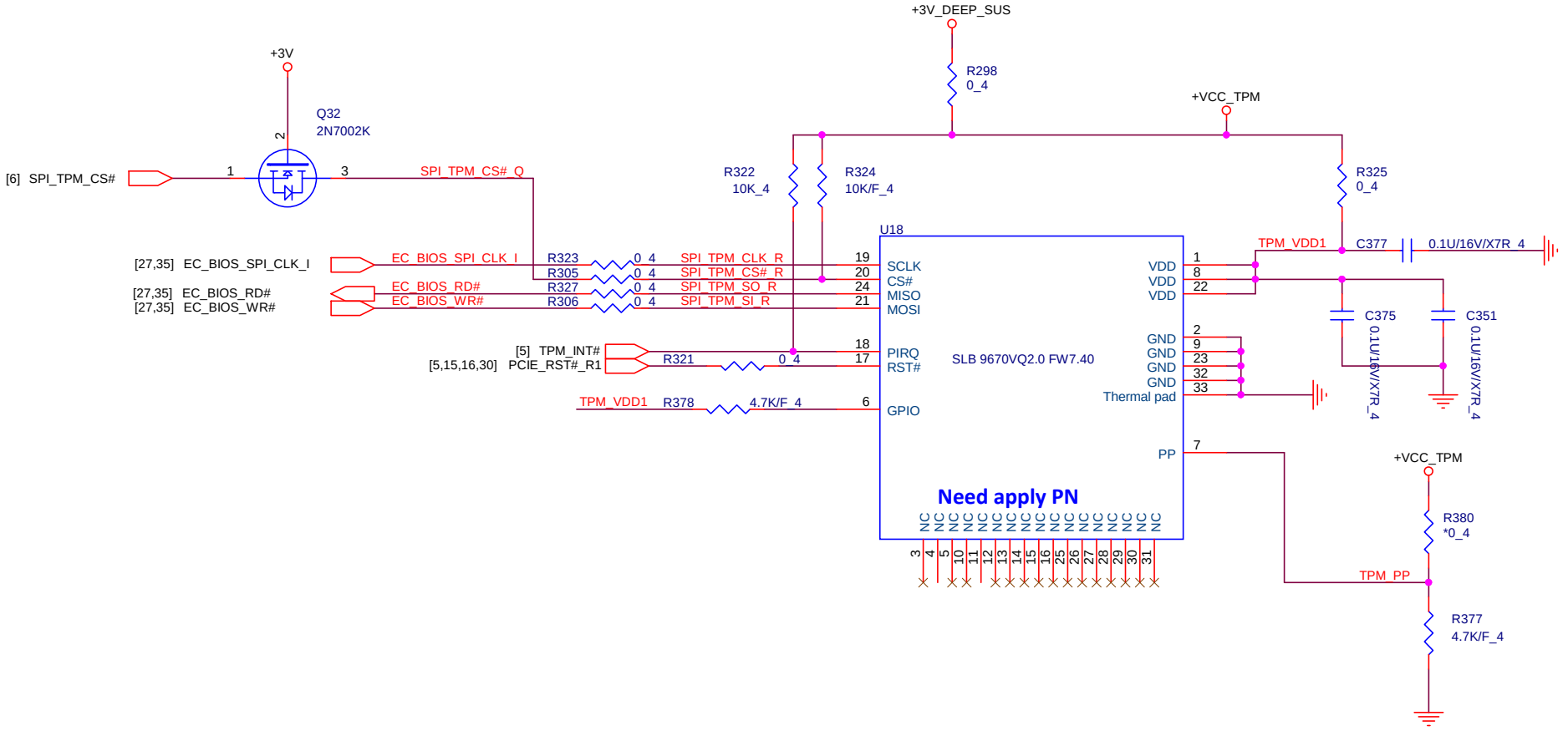


NB5

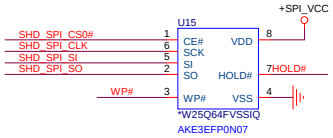
PROJECT : 400 SERIES
Quanta Computer Inc.

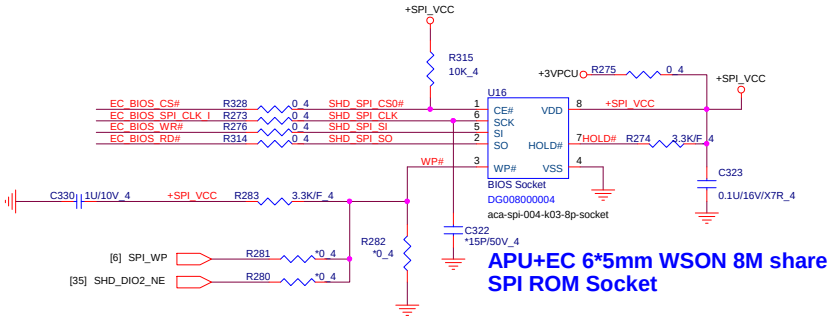
Size	Document Number	Rev
Custom	**34 -- Forced Pad/Card reader**	1A
Date: Tuesday, March 01, 2016	Sheet 25 of 53	

TPM (1.2 or 2.0)

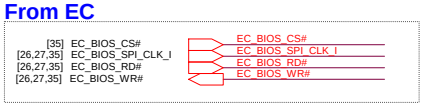


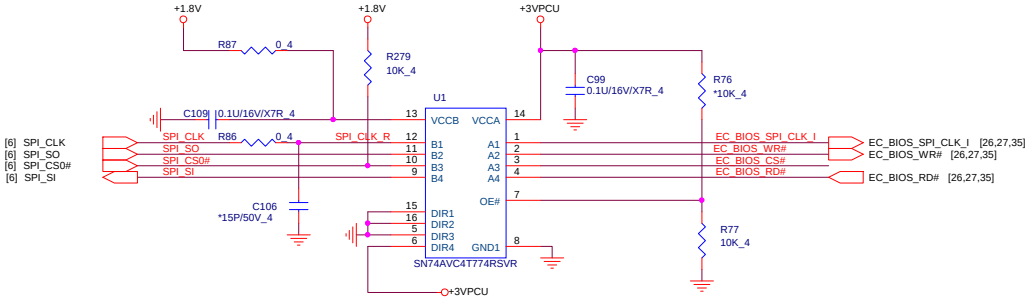
NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **TPM SLB9665_QFN**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 26 of 53	





From EC





OE#	DIR	OPERATION
L	L	B TO A
L	H	A TO B
H	X	Disconnect

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Flash(KBC+PCH)	1A
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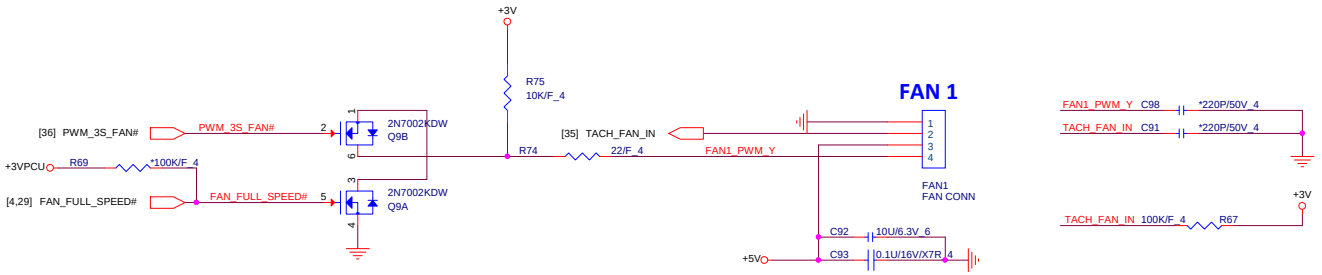

[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,29,30,33,35,37,38,43,45,47,49] +3V
[12,13,14,15,24,33,47,49] +5V
[7,19,22,23,24,27,29,34,35,36,37,38,39,40,42,47,48] +3VPCU
[15,18,19,20,38,39,40,41,42,43,45,47,49] +5VPCU

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	35 -- FAN	1A
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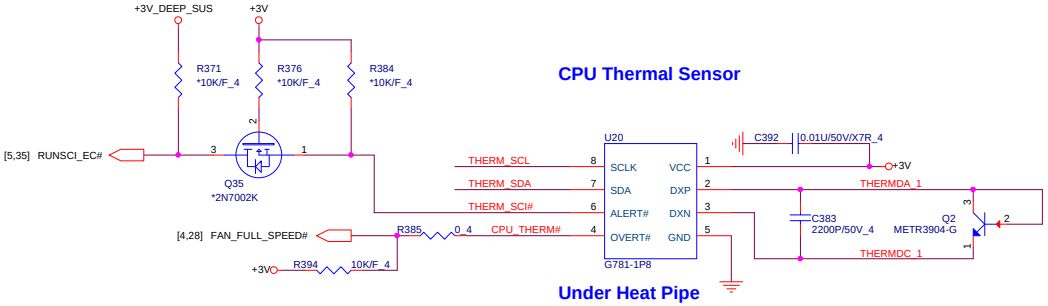
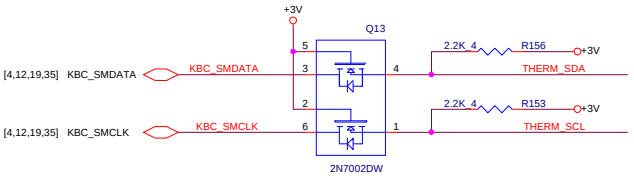
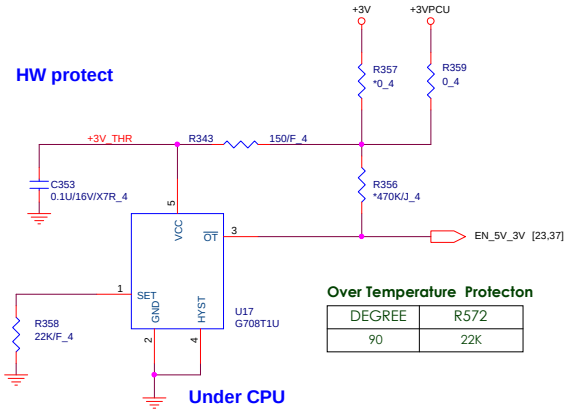
Thermal sensor



1st: AL000781039 G781-1P8(9Ah)

2nd: AL000431019 TMP431BDGKR(9Ah)





Over Temperature Protecton

DEGREE	R572
90	22K

RSET (K OHM) = 0.0012T^2 - 0.9308T + 96.147

[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,28,30,33,35,37,38,43,45,47,49] +3V
[7,19,22,23,24,27,28,34,35,36,37,38,39,40,42,47,48] +3VPCU

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

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Custom	36 -- Thermal IC	1A
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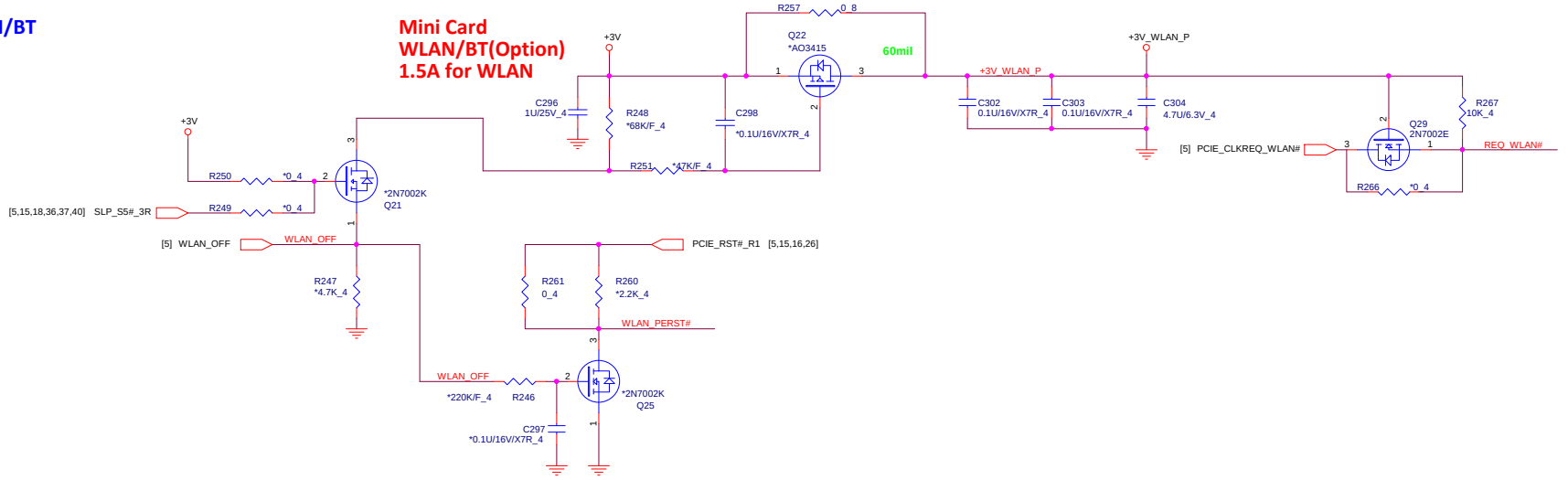
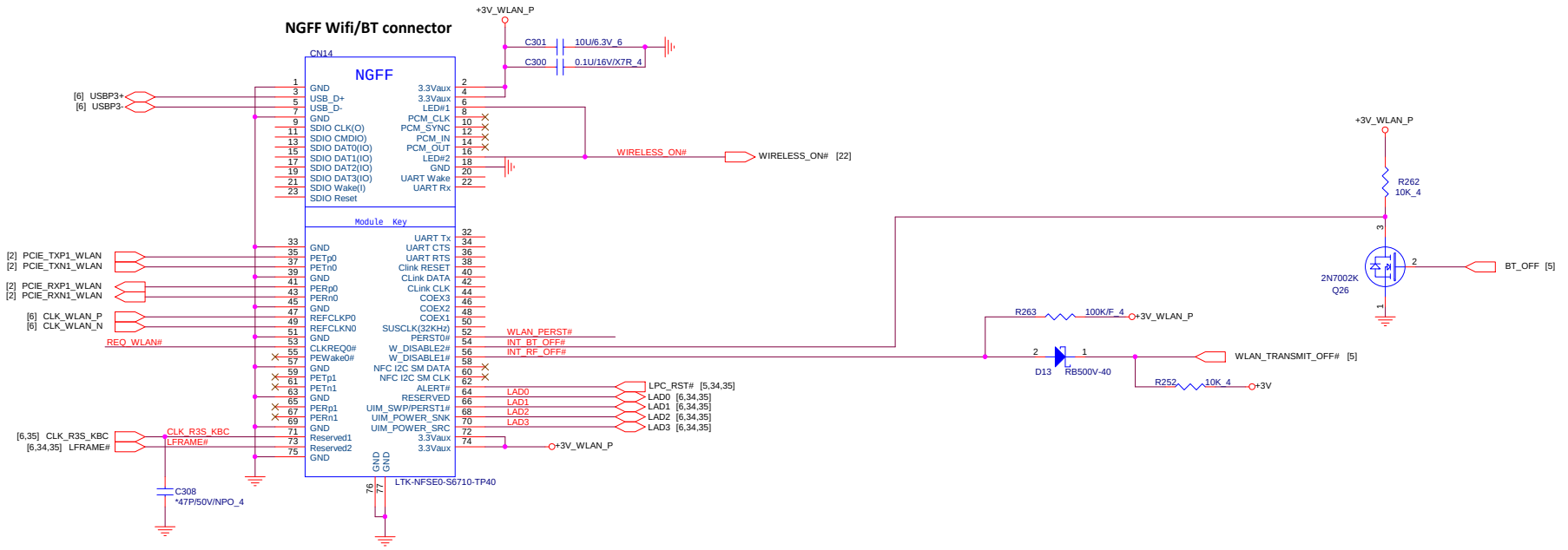
NGFF WLAN/BT

Mini Card
WLAN/BT(Option)
1.5A for WLAN





[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,28,29,33,35,37,38,43,45,47,49] +3V
[12,13,14,15,24,28,33,47,49] +5V
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU

PROJECT : 400 SERIES
Quanta Computer Inc.

NB5

Size	Document Number	Rev
Custom	NGFF WLAN/BT	1A
Date: Tuesday, March 01, 2016	Sheet 30 of 53	

NB5

PROJECT : 400 SERIES

Quanta Computer Inc.

Size	Document Number	Rev
Custom	38 -- WWAN NGFF/ SSD	1A

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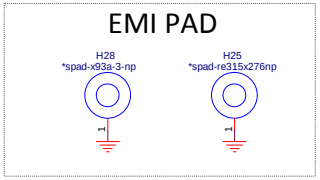
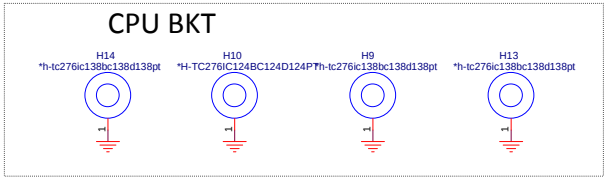
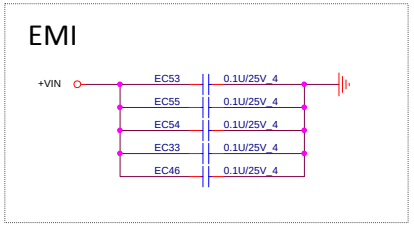
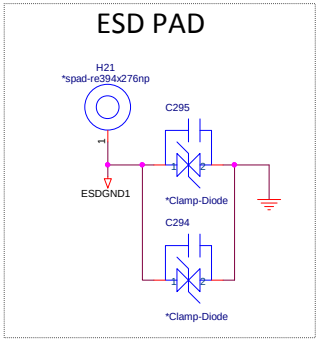
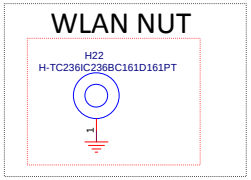


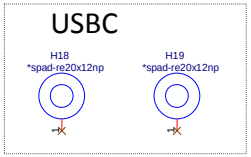


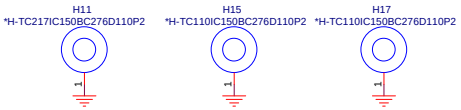


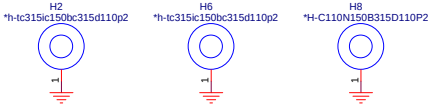


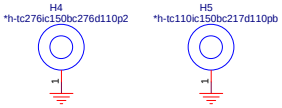
SI, 0221, ME change WLAN Nut

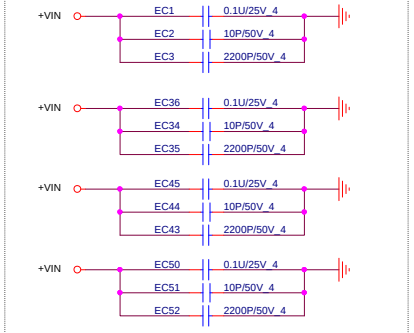


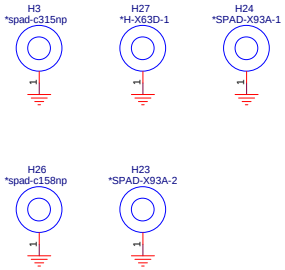


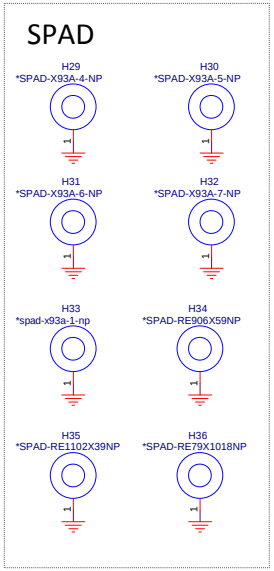


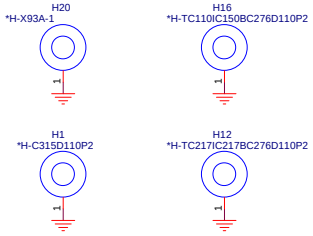












NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	HOLE	1A

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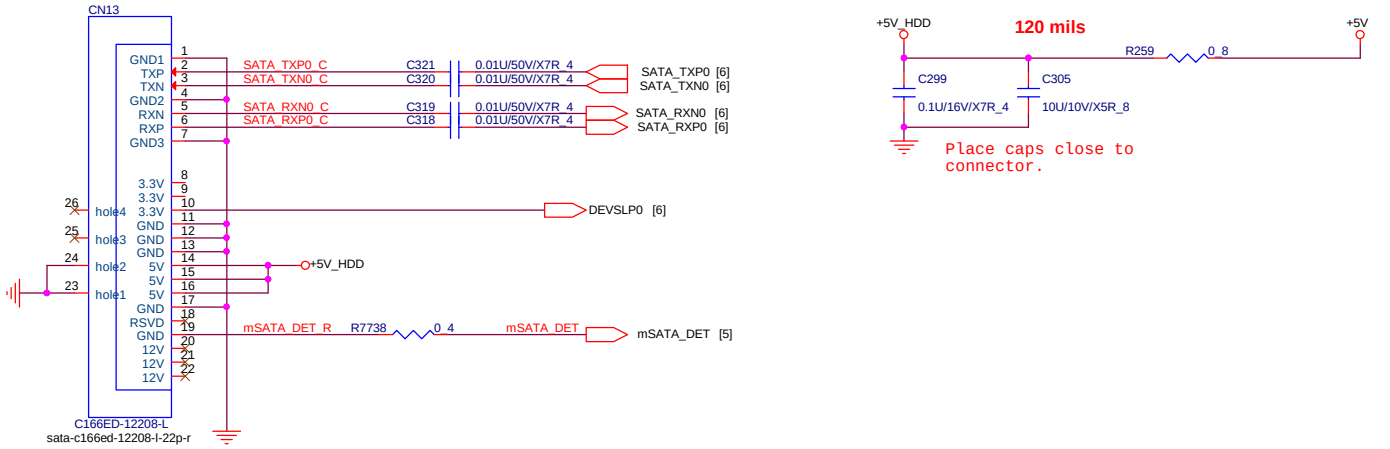
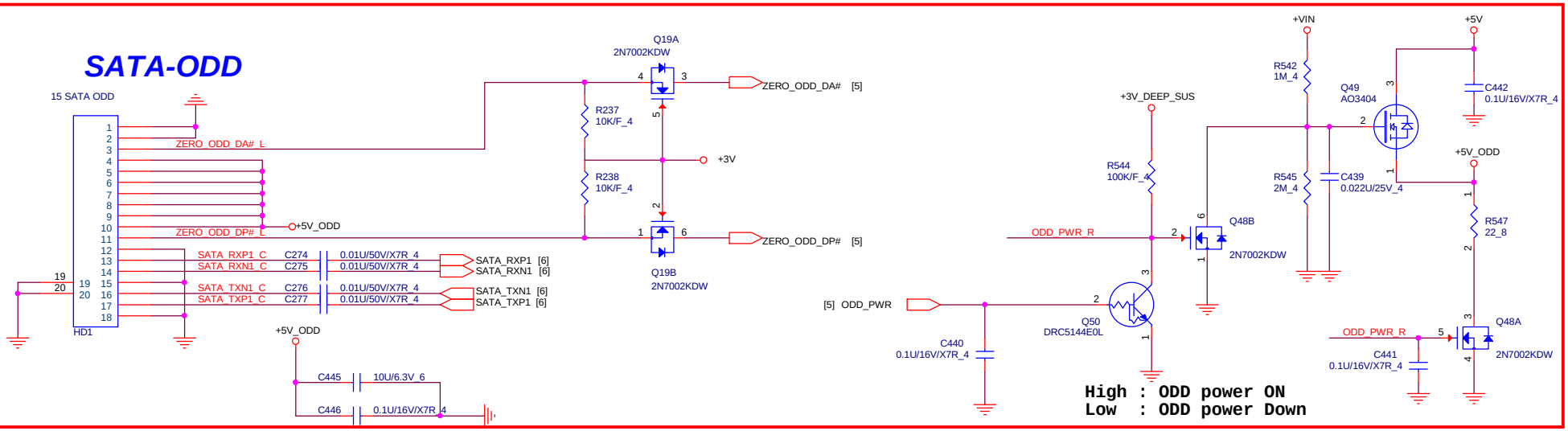
SATA-HDD



SATA-ODD



[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,28,29,30,35,37,38,43,45,47,49] +3V
[12,13,14,15,24,28,47,49] +5V
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,47,48] +3VPCU

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
B	37 -- HDD/ODD	1A

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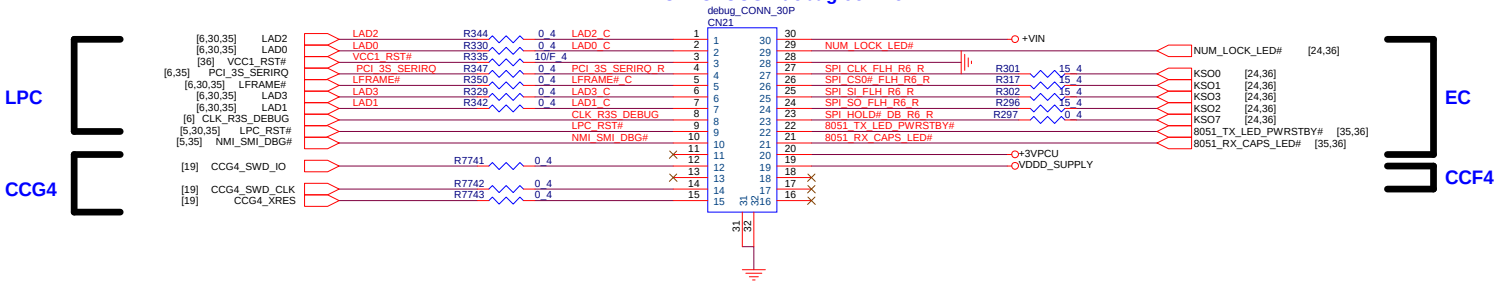
LPC+EC+CCG4 debug conn on MB



NB5	PROJECT : 400 SERIES Quanta Computer Inc.		
Size: Custom	Document Number: 38 -- EC debug conn	Rev: 1A	
Date: Tuesday, March 01, 2016	Sheet 34 of 53		

for Battery charge/charge

for Thermal IC/ APU, GPU Thermal

Sure Start 3.0

NOTE:
Connect GND and AGND planes via an 0R resistor or a one-point layout connection.

NOTE:
Place a 1 uF capacitor as close to the CAP pin as possible.

DS=Always Power

Reserve for Pointing Stick

A=S5 Power

Reserve for USB Charging

PROJECT	400 SERIES
Quanta Computer Inc.	
Size / Custom	Document Number: EC Nuvoton NPCE576H_1
Rev	1A
Date	Tuesday, March 01, 2016
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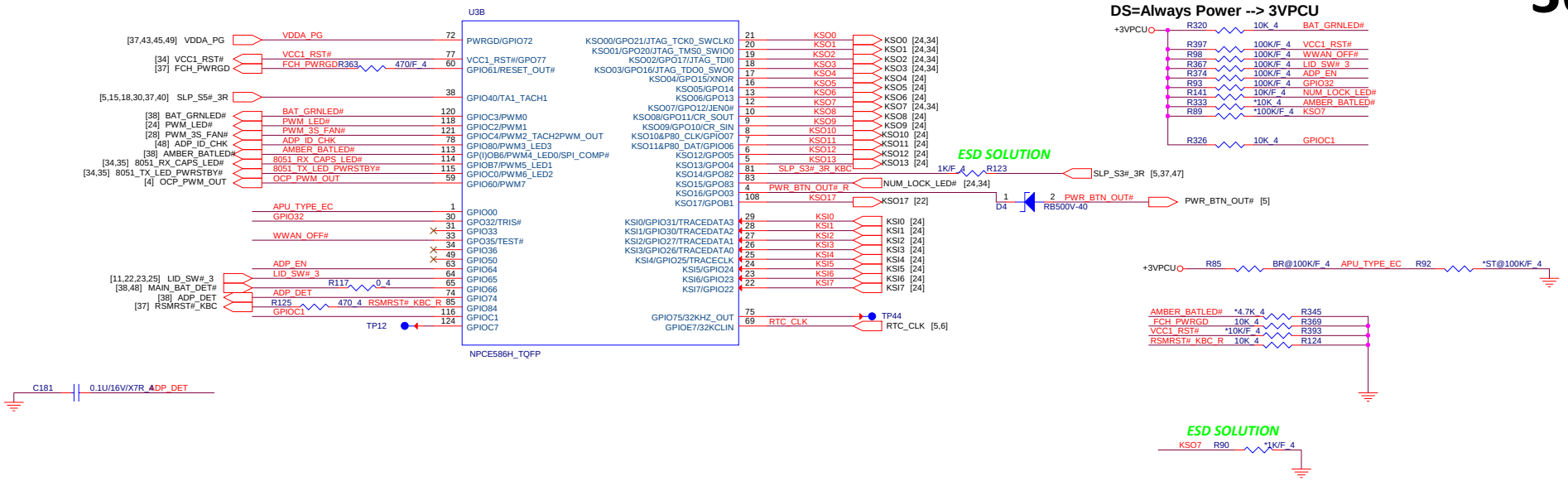
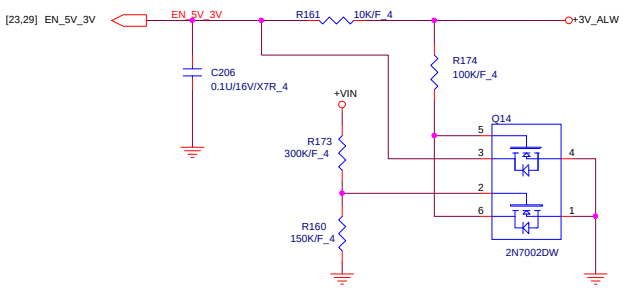
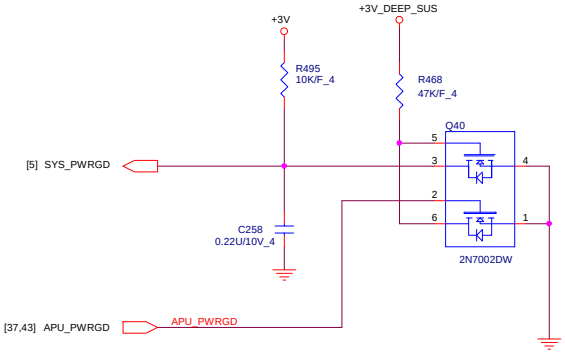
NB5	

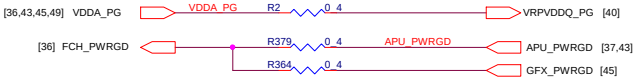
400 series 1001 change to NPCE586H_TQFP

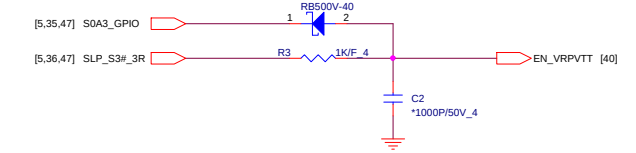


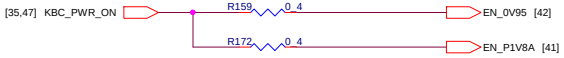
POWER TO EE NET NAME CONNECTION For AMD

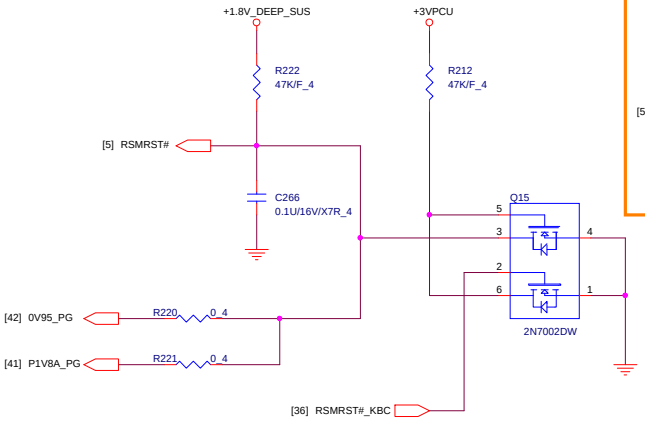


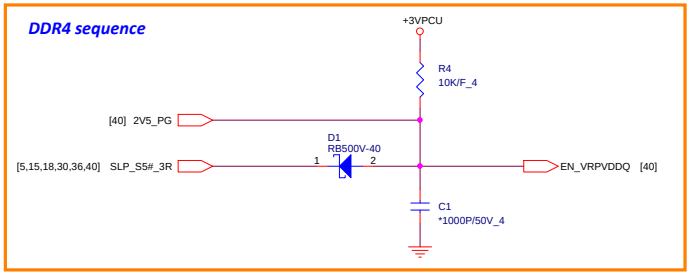










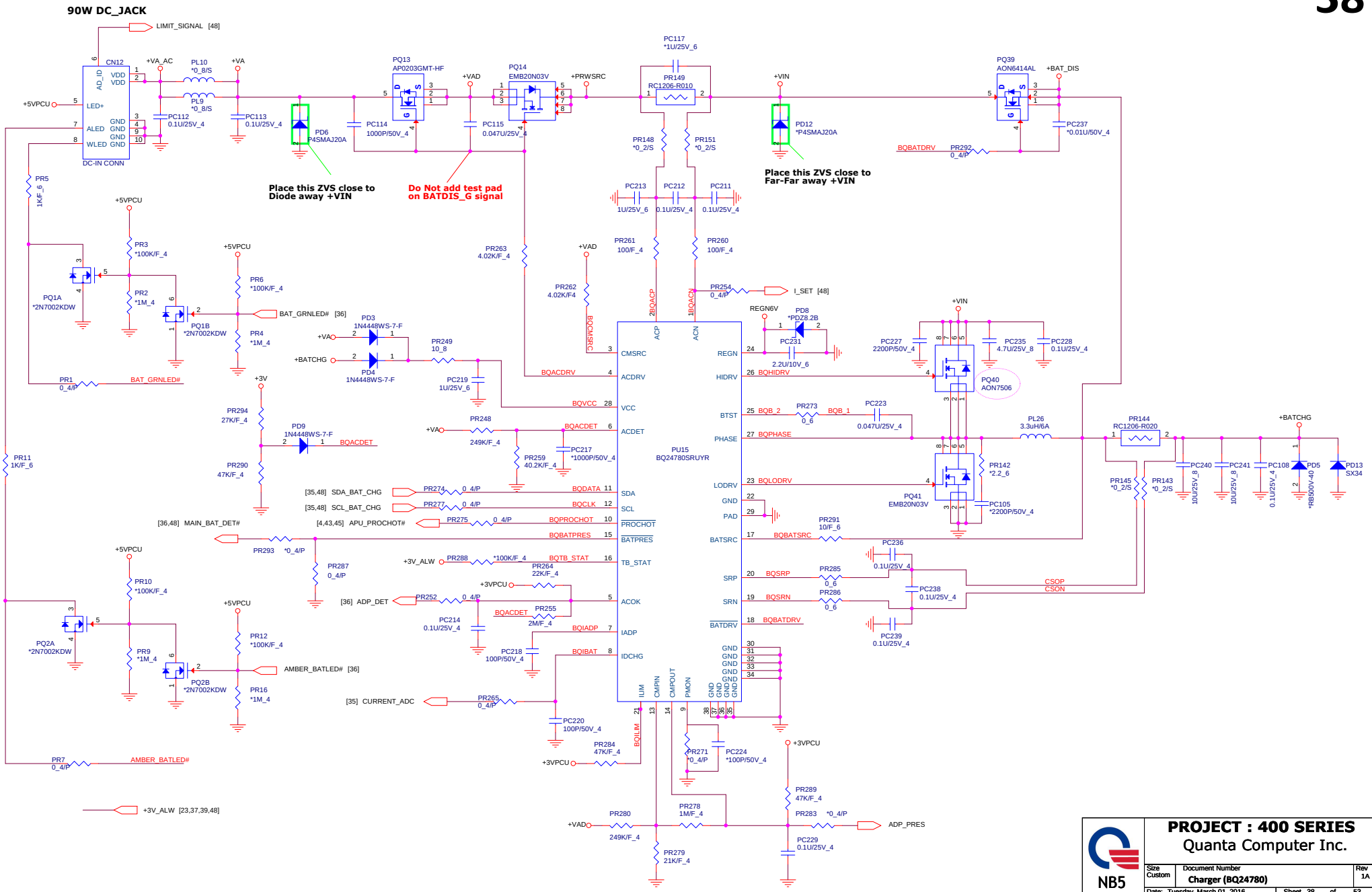


NB5

PROJECT : 400 SERIES

Quanta Computer Inc.

Size	Document Number	Rev
Custom	60 -- Commercial Debug card	1A
Date: Tuesday, March 01, 2016	Sheet 37 of 53	



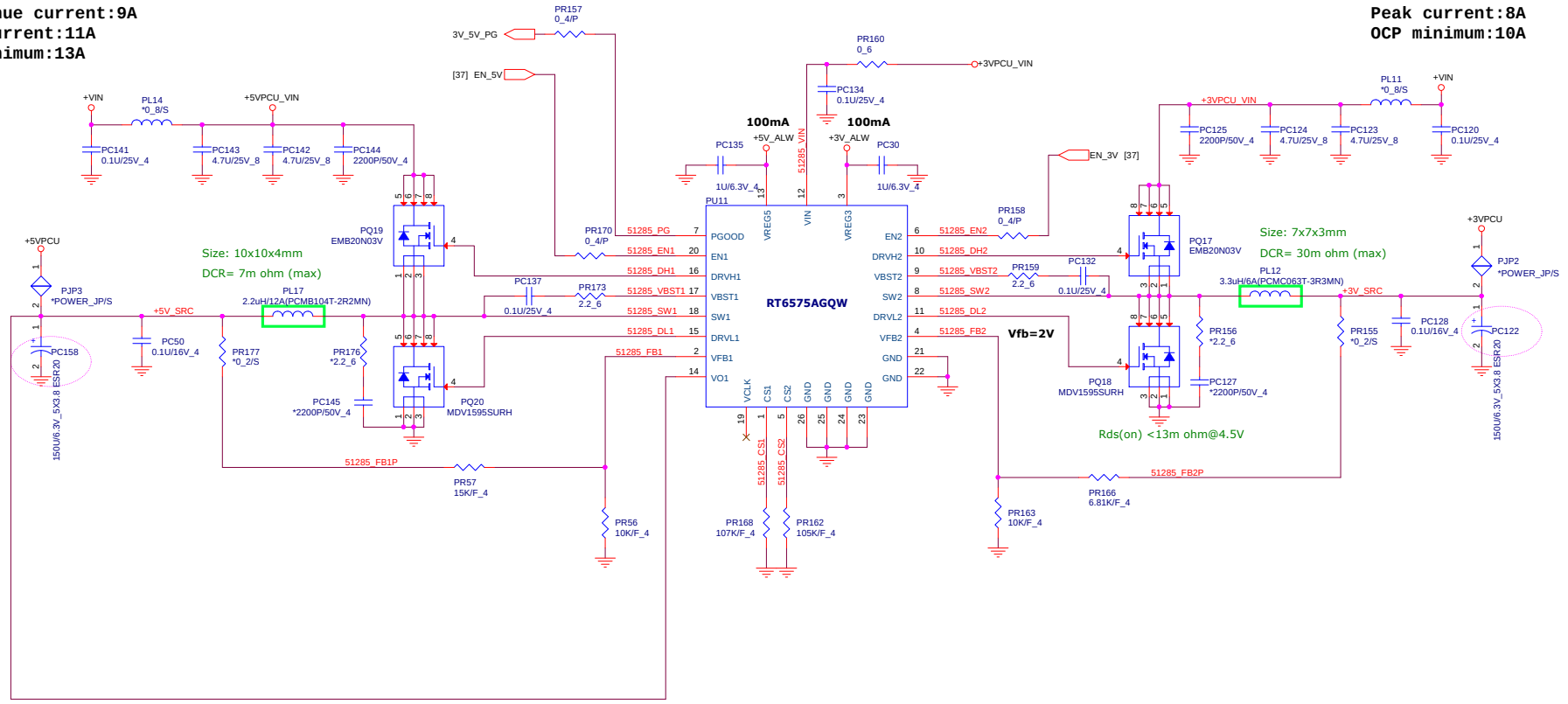
NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
Size: Custom	Document Number: Charger (BQ24780)	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 38 of 53	

DC/DC +3VS5/+5VS5

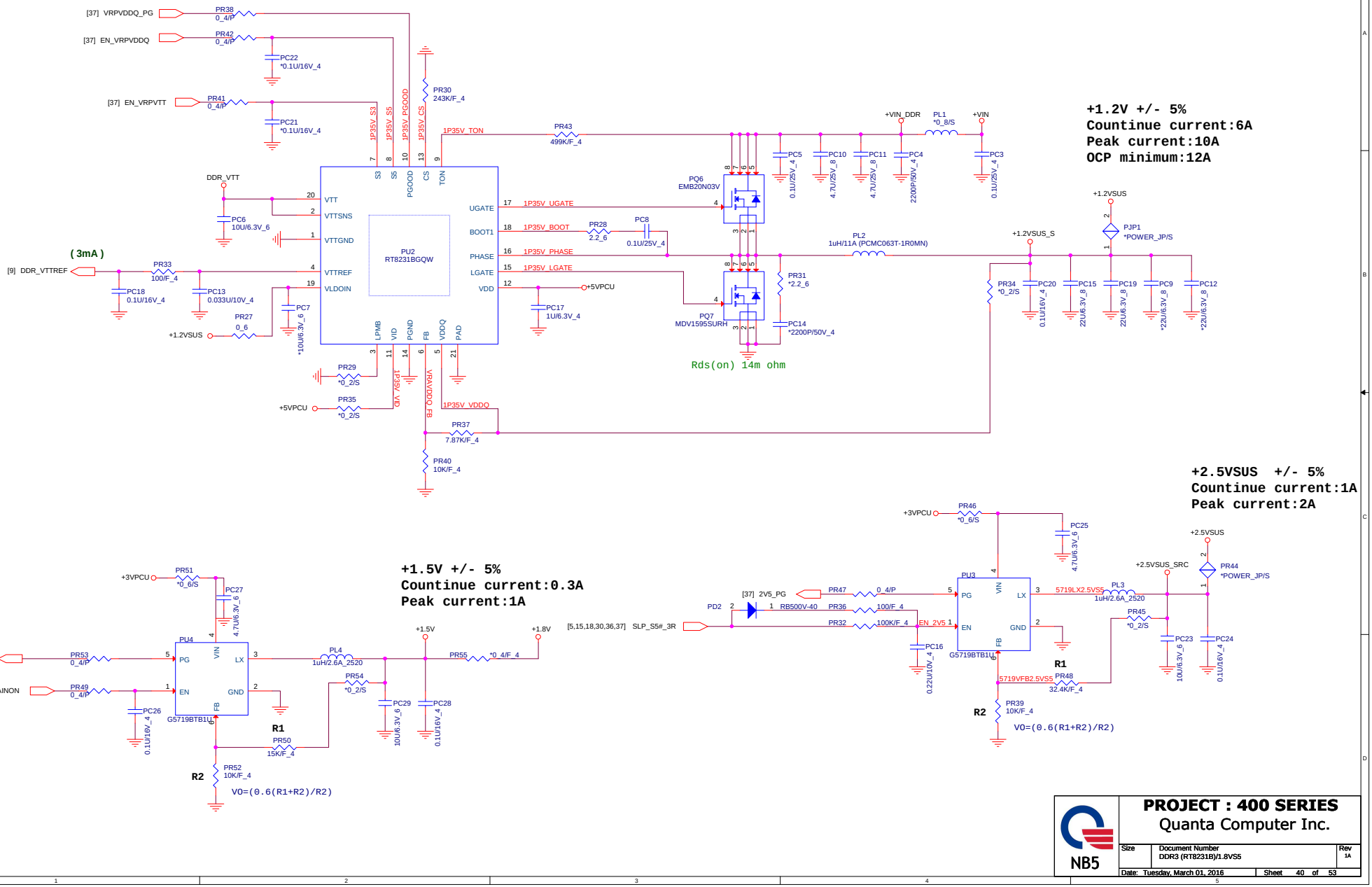
+3VPCU [7,19,22,23,24,27,28,29,34,35,36,37,38,40,42,47,48]
+5VPCU [15,18,19,20,38,40,41,42,43,45,47,49]

+5VPCU +/- 5%
Countinue current:9A
Peak current:11A
OCP minimum:13A

+3VPCU +/- 5%
Countinue current:6A
Peak current:8A
OCP minimum:10A



NB5	PROJECT : 400 SERIES Quanta Computer Inc.	
Size: Custom	Document Number: 3/5VPCU(RT6575A)	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 39 of 53	


+1.2V +/- 5%
Countinue current:6A
Peak current:10A
OCP minimum:12A
PU2
RT8231BGQW
PQ6
EMB20N03V
PQ7
MDV1595SURH
PL2
1uH/11A (PCMC063T-1R0MN)
PL1
*0_8/S
PJP1
*POWER_JP/S
Rds(on) 14m ohm
(3mA)
+2.5VSUS +/- 5%
Countinue current:1A
Peak current:2A
PU3
G5719BTB1U
PL3
1uH/2.6A_2520
+1.5V +/- 5%
Countinue current:0.3A
Peak current:1A
PU4
G5719BTB1U
PL4
1uH/2.6A_2520
R1
R2
VO=(0.6(R1+R2)/R2)
VO=(0.6(R1+R2)/R2)
PROJECT : 400 SERIES
Quanta Computer Inc.
NB5
Size
Document Number
DDR3 (RT8231B)/1.8VS5
Rev
1A
Date: Tuesday, March 01, 2016
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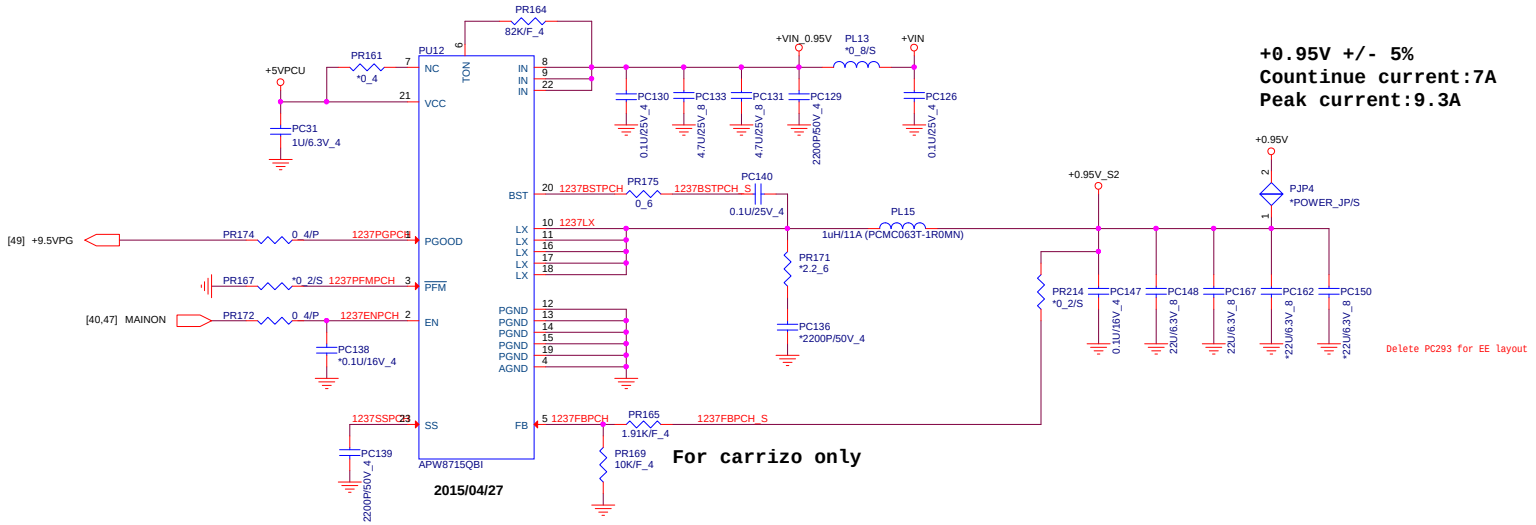
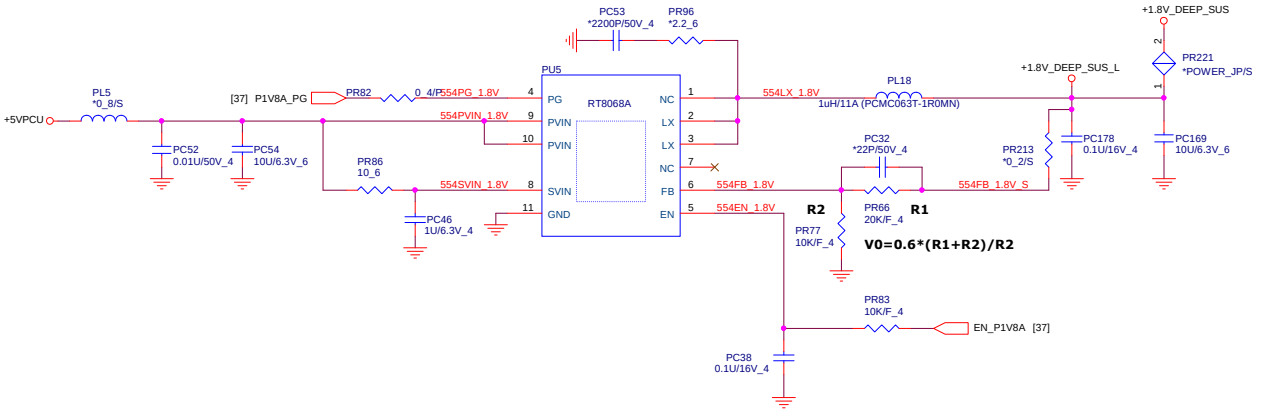




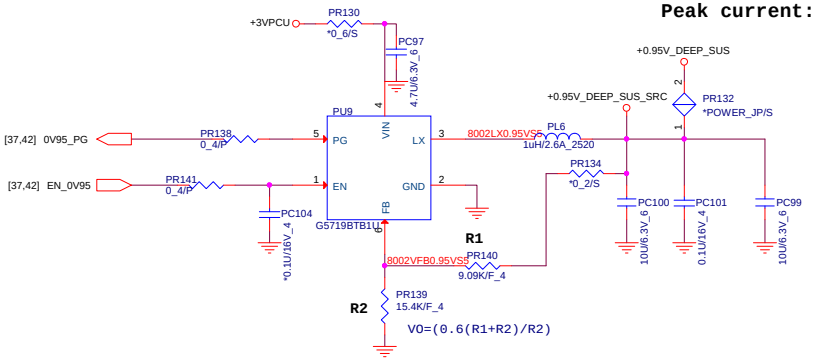
+VIN [11,32,33,34,37,38,39,40,42,44,46]
+3VPCU [7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,
+5VPCU [15,18,19,20,38,39,40,42,43,45,47,49]

NB5

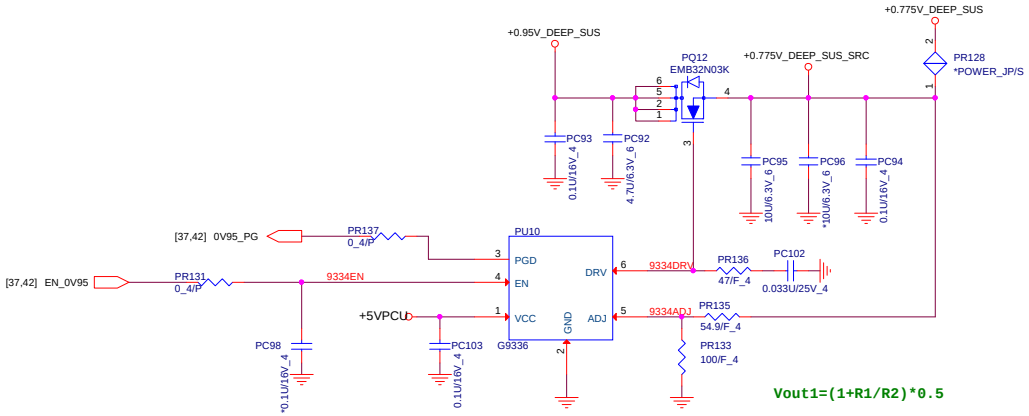
PROJECT : 400 SERIES
Quanta Computer Inc.

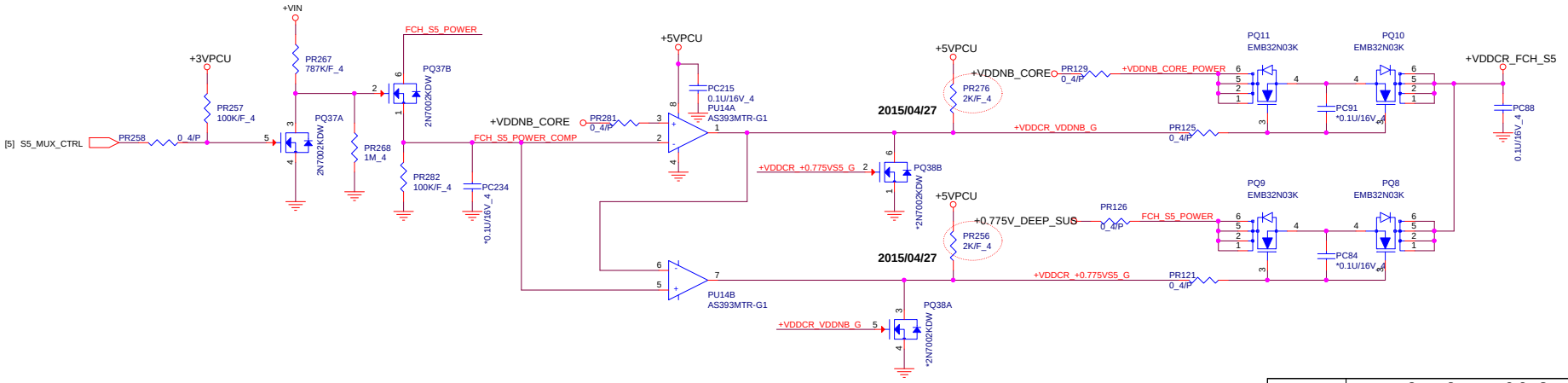
Size	Document Number	Rev
Custom	+1.1VS5 (RT8228)/2.5V	1A
Date: Tuesday, March 01, 2016	Sheet 41 of 53	

+0.95V_DEEP_SUS +/- 5%
Countinue current:1A
Peak current:2A



+0.775V_DEEP_SUS +/- 5%
Countinue current:1A
Peak current:2A





PROJECT : 400 SERIES
Quanta Computer Inc.

NB5

Size	Document Number	Rev
	+VCC_IO (NB681)	1A
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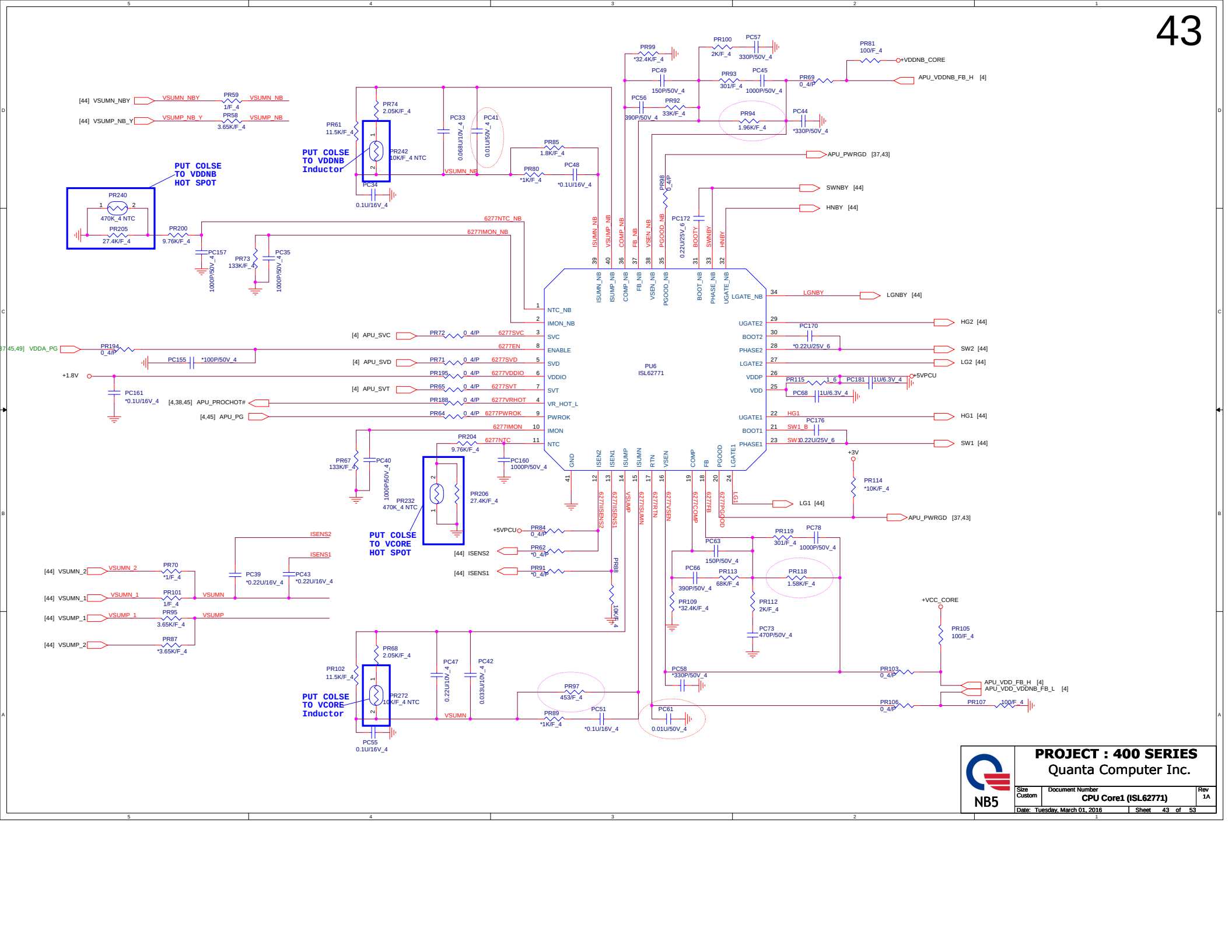
PU6
ISL62771
PUT COLSE TO VDDNB HOT SPOT
PUT COLSE TO VDDNB Inductor
PUT COLSE TO VCORE HOT SPOT
PUT COLSE TO VCORE Inductor
NTC_NB
IMON_NB
SVC
ENABLE
SVD
VDDIO
SVT
VR_HOT_L
PWROK
IMON
NTC
LGATE_NB
UGATE2
BOOT2
PHASE2
LGATE2
VDDP
VDD
UGATE1
BOOT1
PHASE1
GND
ISEN2
ISEN1
ISUMP
ISUMN
RTN
VSEN
COMP
FB
PGOOD
LGATE1
+VDDNB_CORE
APU_VDDNB_FB_H [4]
APU_PWRGD [37,43]
SWNBY [44]
HNBY [44]
LGNBY [44]
HG2 [44]
SW2 [44]
LG2 [44]
+5VPCU
HG1 [44]
SW1 [44]
LG1 [44]
+3V
+VCC_CORE
APU_VDD_FB_H [4]
APU_VDD_VDDNB_FB_L [4]
[44] VSUMN_NBY
[44] VSUMP_NB_Y
[44] VSUMN_2
[44] VSUMN_1
[44] VSUMP_1
[44] VSUMP_2
[44] ISENS2
[44] ISENS1
[4] APU_SVC
[4] APU_SVD
[4] APU_SVT
[4,38,45] APU_PROCHOT#
[4,45] APU_PG
[37,45,49] VDDA_PG
+1.8V
6277NTC_NB
6277IMON_NB
6277SVC
6277EN
6277SVD
6277VDDIO
6277SVT
6277VRHOT
6277PWROK
6277IMON
6277NTC
6277ISENS2
6277ISENS1
6277ISUMP
6277ISUMN
6277RTN
6277VSEN
6277COMP
6277FB
6277PGOOD
6277LGATE1
ISUMN_NB
ISUMP_NB
COMP_NB
FB_NB
VSEN_NB
PGOOD_NB
BOOT_NB
PHASE_NB
UGATE_NB
VSUMN_NB
VSUMP_NB
VSUMN
VSUMP
ISENS2
ISENS1
PR240 470K_4 NTC
PR242 10K/F_4 NTC
PR232 470K_4 NTC
PR272 10K/F_4 NTC
PR205 27.4K/F_4
PR200 9.76K/F_4
PR206 27.4K/F_4
PR204 9.76K/F_4
PR67 133K/F_4
PR73 133K/F_4
PR61 11.5K/F_4
PR102 11.5K/F_4
PR74 2.05K/F_4
PR68 2.05K/F_4
PR99 *32.4K/F_4
PR100 2K/F_4
PR81 100/F_4
PR49 150P/50V_4
PR93 301/F_4
PR69 0_4/P
PR56 390P/50V_4
PR92 33K/F_4
PR94 1.96K/F_4
PR85 1.8K/F_4
PR80 *1K/F_4
PR68 0_4/P
PR72 0_4/P
PR71 0_4/P
PR195 0_4/P
PR65 0_4/P
PR188 0_4/P
PR64 0_4/P
PR194 0_4/P
PR84 0_4/P
PR62 *0_4/P
PR91 *0_4/P
PR88 10K/F_4
PR97 453/F_4
PR89 *1K/F_4
PR115 1_6
PR114 *10K/F_4
PR119 301/F_4
PR113 68K/F_4
PR118 1.58K/F_4
PR109 *32.4K/F_4
PR112 2K/F_4
PR105 100/F_4
PR103 0_4/P
PR106 0_4/P
PR107 100/F_4
PR70 *1/F_4
PR101 1/F_4
PR95 3.65K/F_4
PR87 *3.65K/F_4
PR59 1/F_4
PR58 3.65K/F_4
PC157 1000P/50V_4
PC35 1000P/50V_4
PC161 *0.1U/16V_4
PC155 *100P/50V_4
PC33 0.068U/10V_4
PC41 0.01U/50V_4
PC34 0.1U/16V_4
PC48 *0.1U/16V_4
PC172 0.22U/25V_6
PC67 1000P/50V_4
PC40 1000P/50V_4
PC160 1000P/50V_4
PC57 330P/50V_4
PC45 1000P/50V_4
PC44 *330P/50V_4
PC170 *0.22U/25V_6
PC68 1U/6.3V_4
PC181 1U/6.3V_4
PC176 0.22U/25V_6
PC63 150P/50V_4
PC66 390P/50V_4
PC78 1000P/50V_4
PC73 470P/50V_4
PC58 *330P/50V_4
PC61 0.01U/50V_4
PC51 *0.1U/16V_4
PC55 0.1U/16V_4
PC47 0.22U/10V_4
PC42 0.033U/10V_4
PC39 *0.22U/16V_4
PC43 *0.22U/16V_4
PROJECT : 400 SERIES
Quanta Computer Inc.
NB5
Size Custom
Document Number
CPU Core1 (ISL62771)
Rev 1A
Date: Tuesday, March 01, 2016
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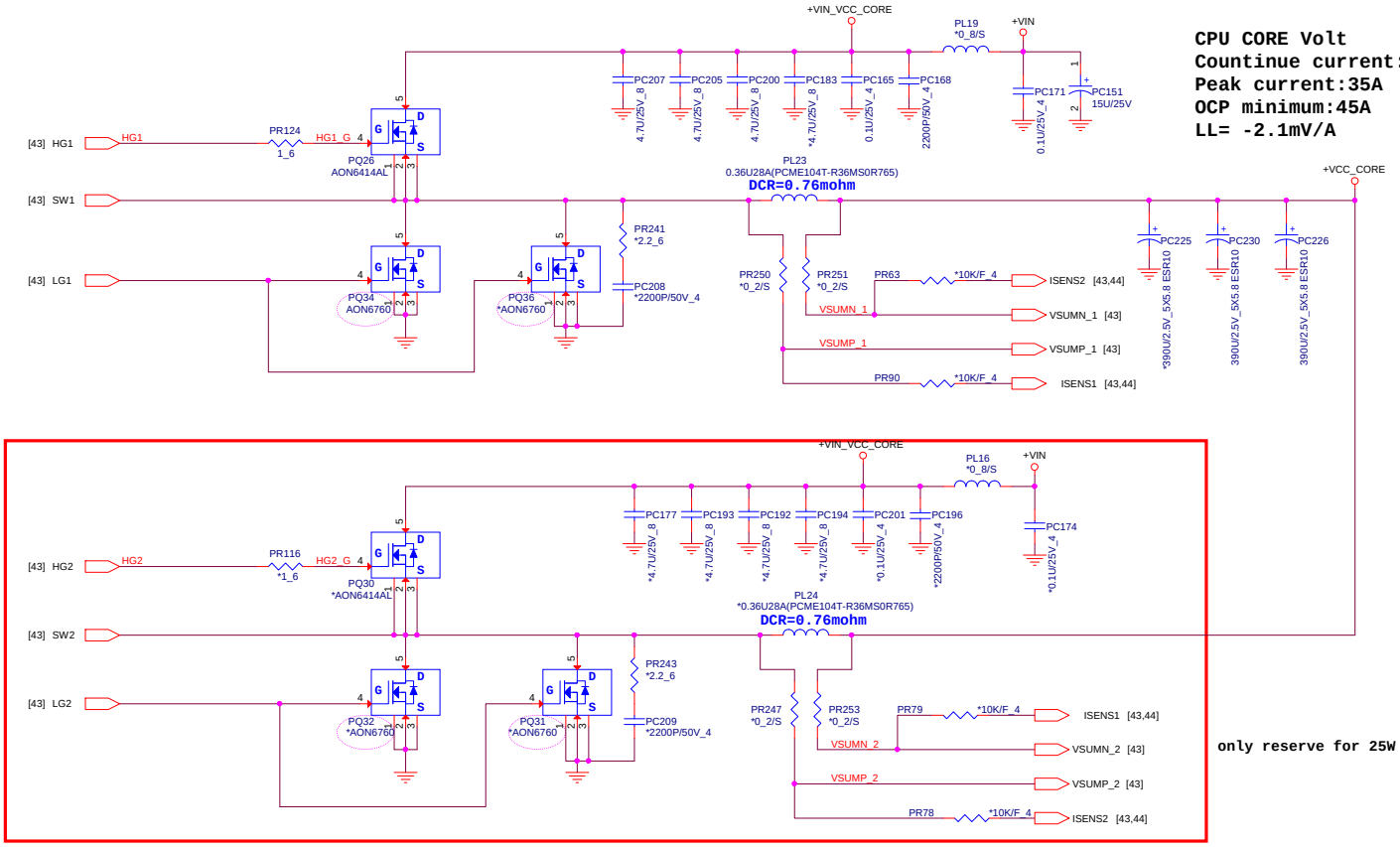
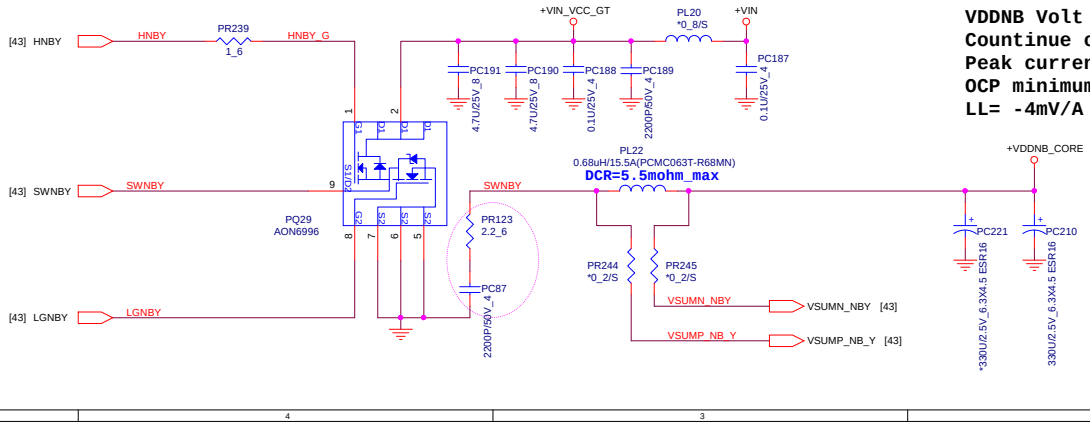


CPU CORE Volt
Countinue current:22A
Peak current:35A
OCP minimum:45A
LL= -2.1mV/A

only reserve for 25W



VDDNB Volt
Countinue current:12A
Peak current:17A
OCP minimum:22A
LL= -4mV/A

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	CPU Core2	1A
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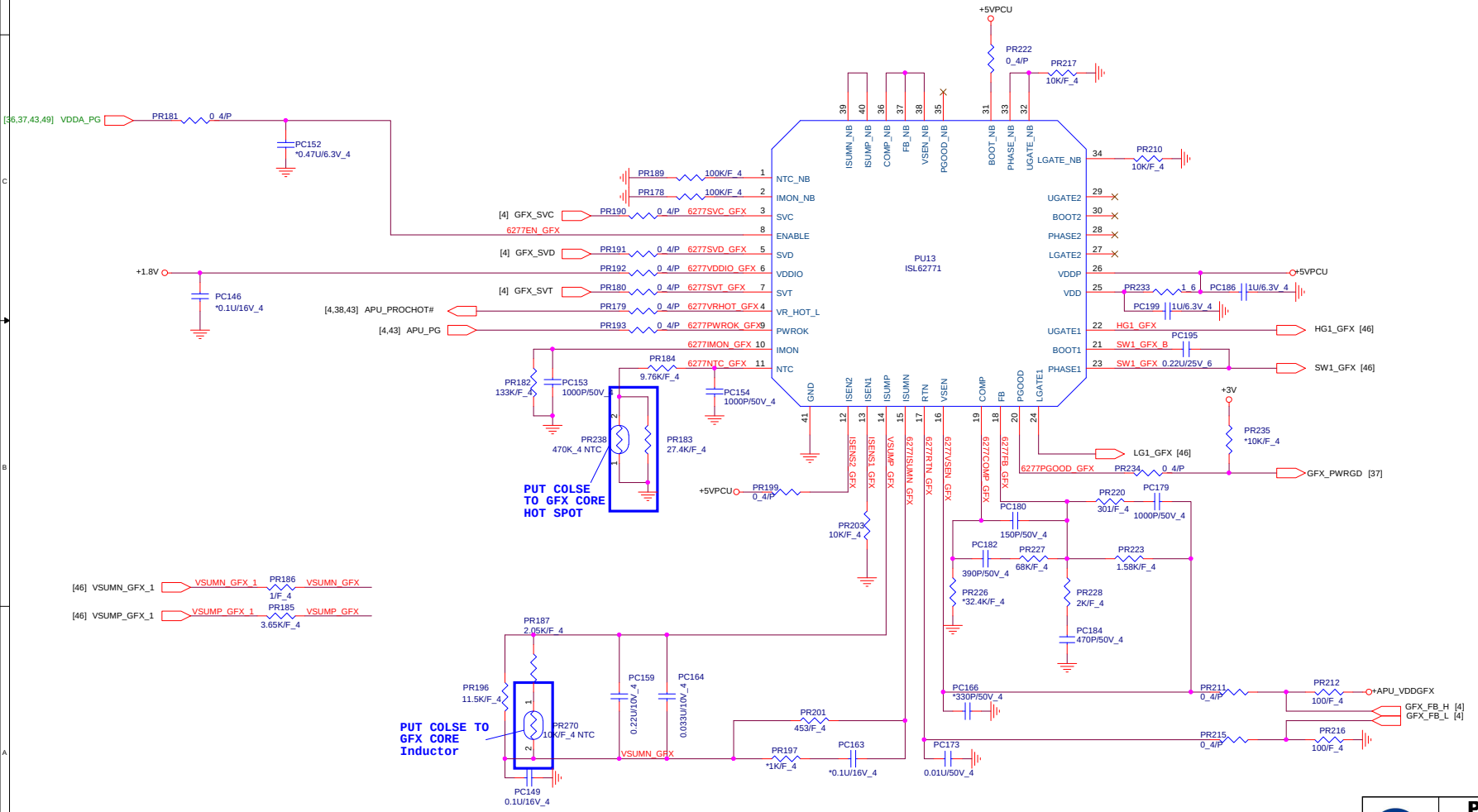
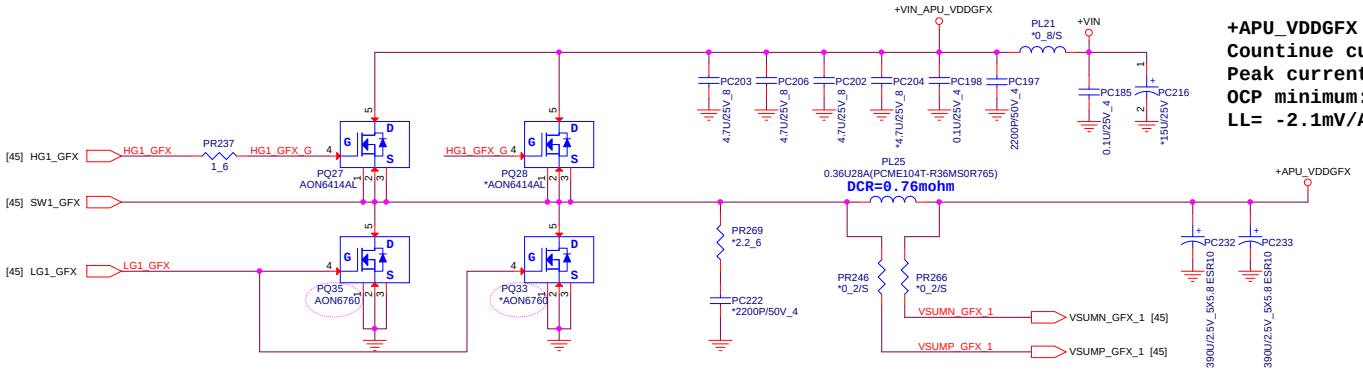
EC Charge Function	Page 45 & Page 46
Carrizo	Stuff
Carrizo-L	Unstuff



NB5

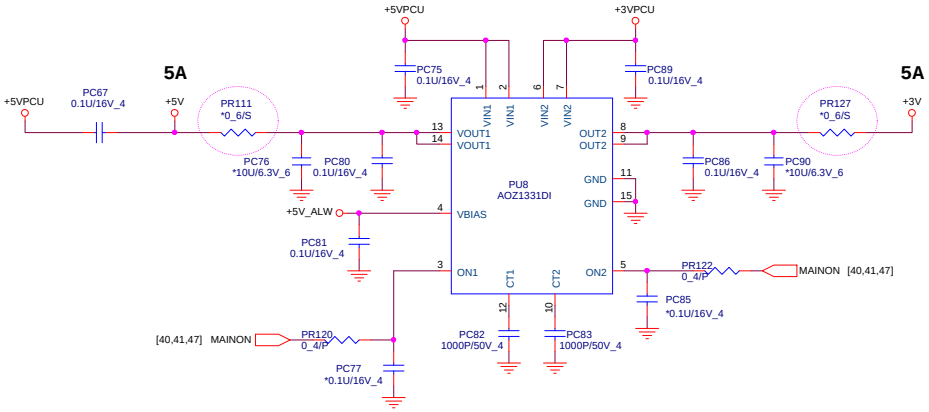
PROJECT : 400 SERIES
Quanta Computer Inc.

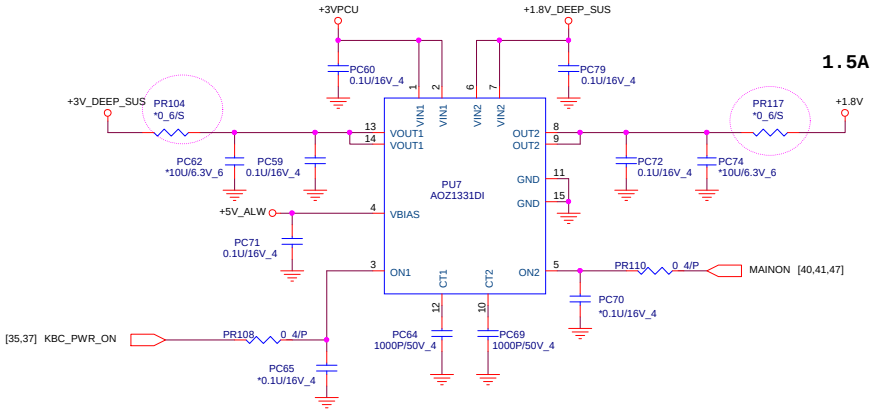
Size	Document Number	Rev
Custom	CPU Core1 (ISL62771)	1A
Date: Tuesday, March 01, 2016	Sheet 45 of 53	



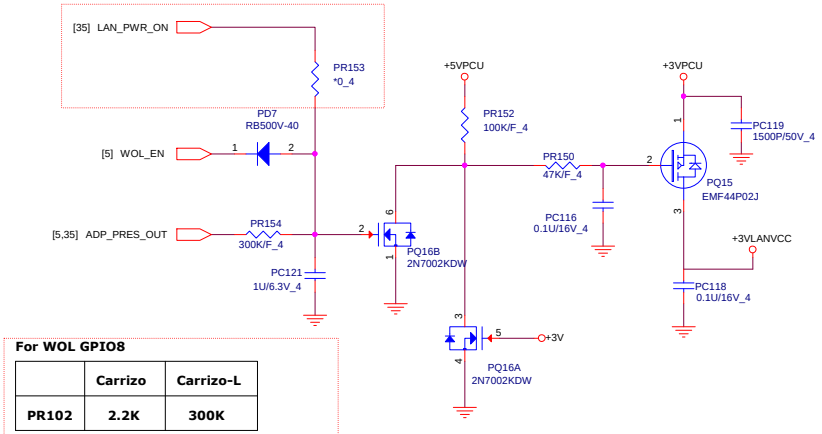
+APU_VDDGFX Volt
Countinue current:22A
Peak current:35A
OCP minimum:45A
LL= -2.1mV/A

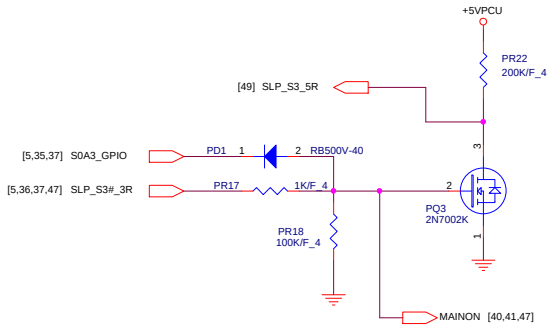
NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **CPU Core2**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 46 of 53	

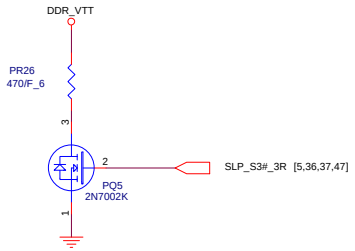




Alfred@DB0, 1103,
1. HP requests to reserve the control the LAN Power from EC Side, so reserved R 0ohm and un-Stuff.







For WOL GPIO8

	Carrizo	Carrizo-L
PR102	2.2K	300K

Alfred@DB0, 1103,
1. Dut to swap the WOL_EN from AGPIO7 to AGPIO8 and have a PU in EE side, it can use the 300K ohm both BR & ST APU.

[4,5,6,7,9,10,11,12,13,14,15,16,17,21,22,25,26,28,29,30,33,35,37,38,43,45,49] +3V
[12,13,14,15,24,28,33,49] +5V
[11,32,33,34,37,38,39,40,41,42,44,46] +VIN
[7,19,22,23,24,27,28,29,34,35,36,37,38,39,40,42,48] +3VPCU
[15,18,19,20,38,39,40,41,42,43,45,49] +5VPCU
[15] +3VLANVCC

NB5

PROJECT : 400 SERIES
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Dis-charge IC (SLG55448)	1A
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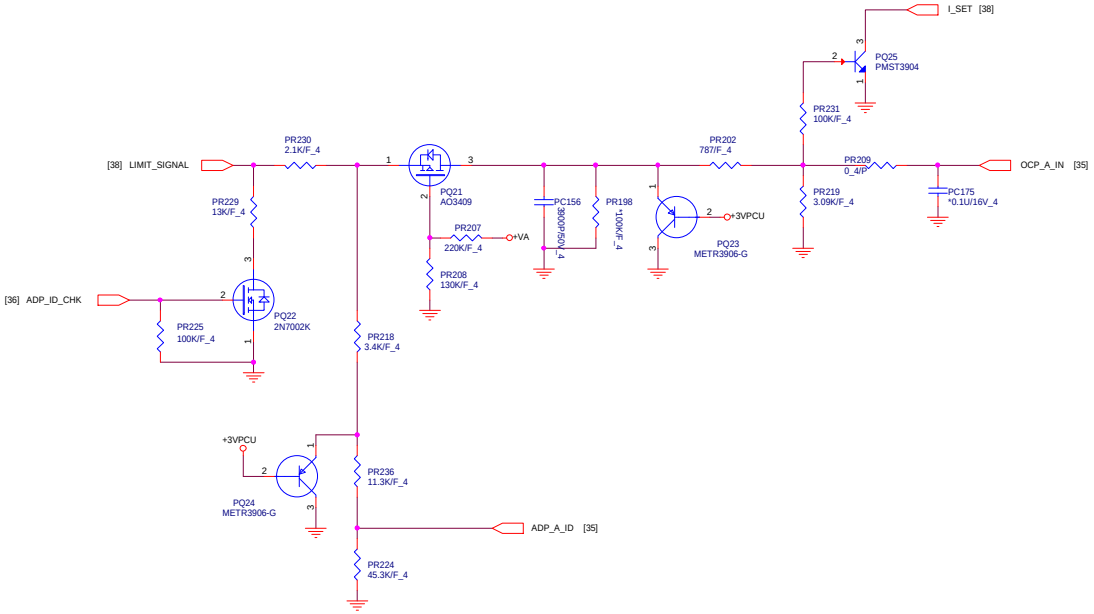
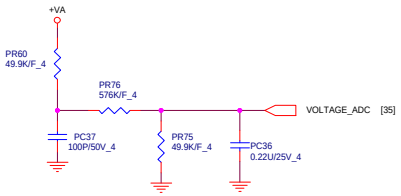
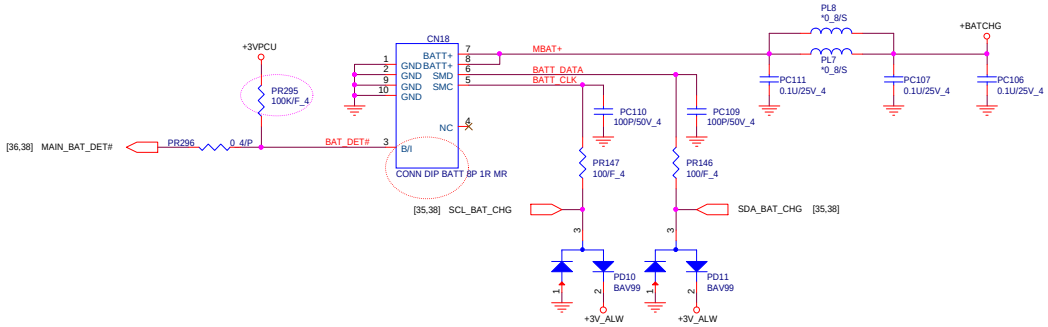
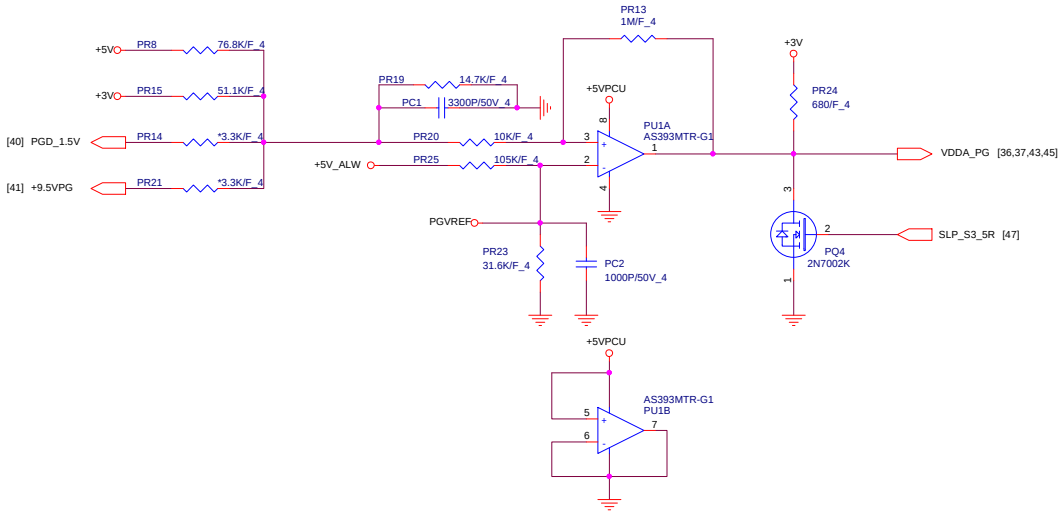
Adapter OCP





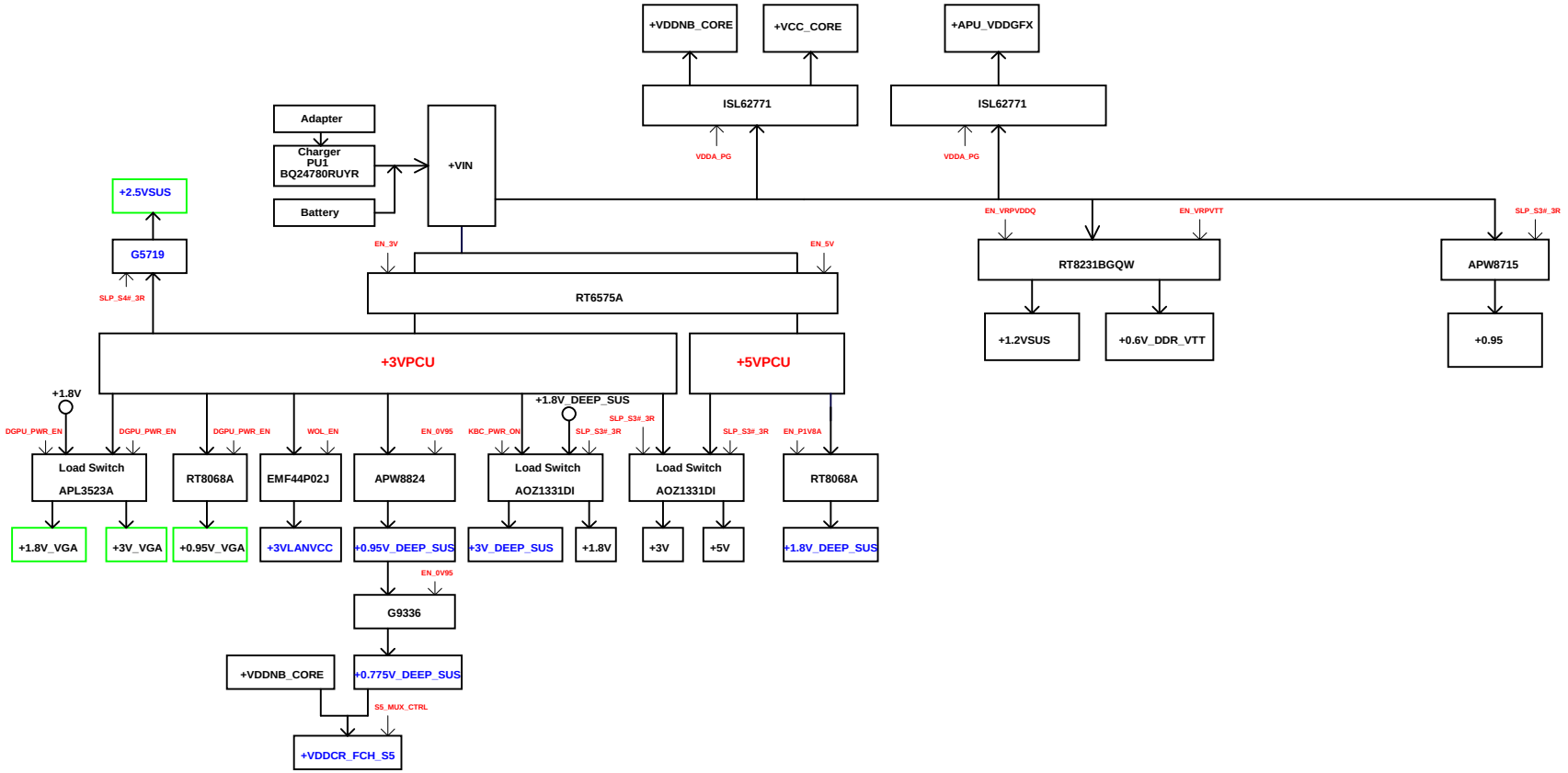


NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
	Size:	Document Number: CHARGER II — Rev: 1A
	Date: Tuesday, March 01, 2016	Sheet 48 of 53

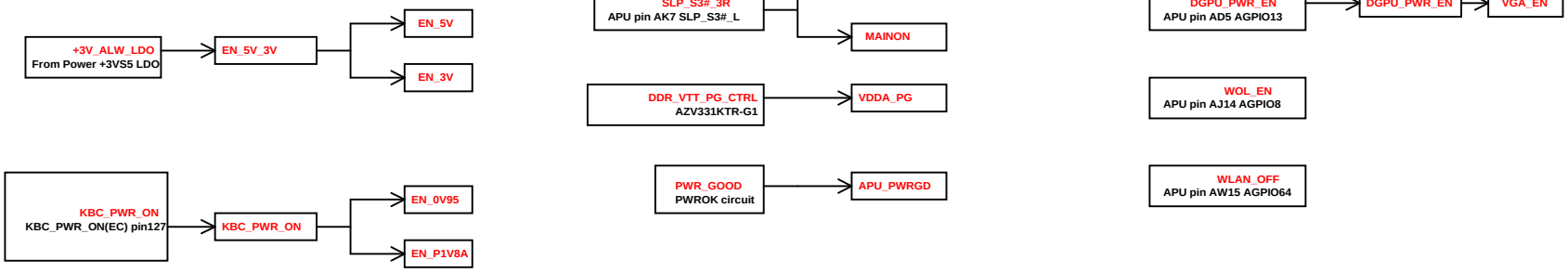


NB5	**PROJECT : 400 SERIES** Quanta Computer Inc.	
Size: Custom	Document Number: **56 --Power OK**	Rev: 1A
Date: Tuesday, March 01, 2016	Sheet 49 of 53	

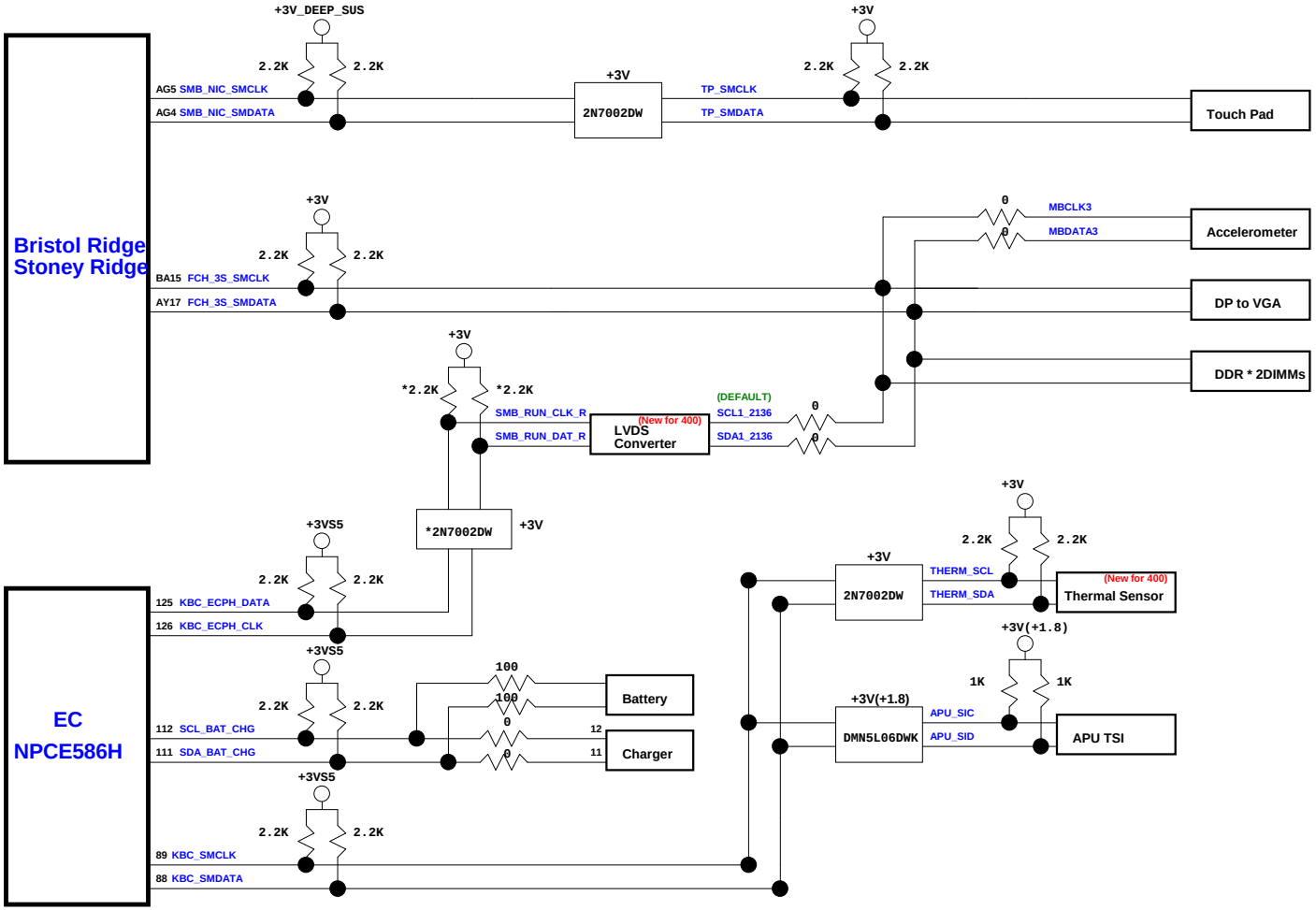
POWER BLOCK DIAGRAM



POWER ENABLE PIN



PROJECT : 400 SERIES
Quanta Computer Inc.
NB5
Size: Custom | Document Number: 64 -- Power Block Diagram | Rev: 1A
Date: Tuesday, March 01, 2016 | Sheet 50 of 53



HSIO Lane	Port Assignment
USB3 #0	NC
USB3 #1	USB Type-C
USB3 #2	USB Type-C
USB3 #3	USB2.0/USB3.0 Combo Jack
PCIE0	NIC
PCIE1	WLAN
PCIE2	NC
PCIE4	Cardreader (PCIE)
DDI0	eDP
DDI1	DP2VGA
DDI2	HDMI
SATA0	HDD/ BOM 0 ohm Option for M.2 SSD
SATA1	ODD
PEG0~3	NC
PEG4~7	NC

USB2.0	Port Assignment
USB2 #0	Camera
USB2 #1	USB2.0(Right side on USB Board)
USB2 #2	USB2.0(Right side on USB Board)
USB2 #3	Bluetooth
USB2 #4	Finger Print
USB2 #5	USB Type-C
USB2 #6	USB Type-C
USB2 #7	USB2.0/USB3.0 Combo Jack

NB5

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Size	Document Number	Rev
Custom	65 -- SMBus/Port Assignment	1A

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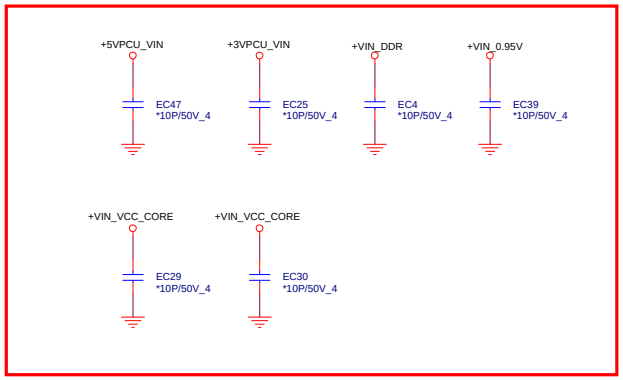
Bristol/Stoney SKU TABLE wtih Discrete
When setup the BOM, please make sure every item are finalized or not !

Function	Bristol	Stoney	Page



NB5

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Size	Document Number	Rev
Custom	**53 -- ISN and EMI**	1A
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