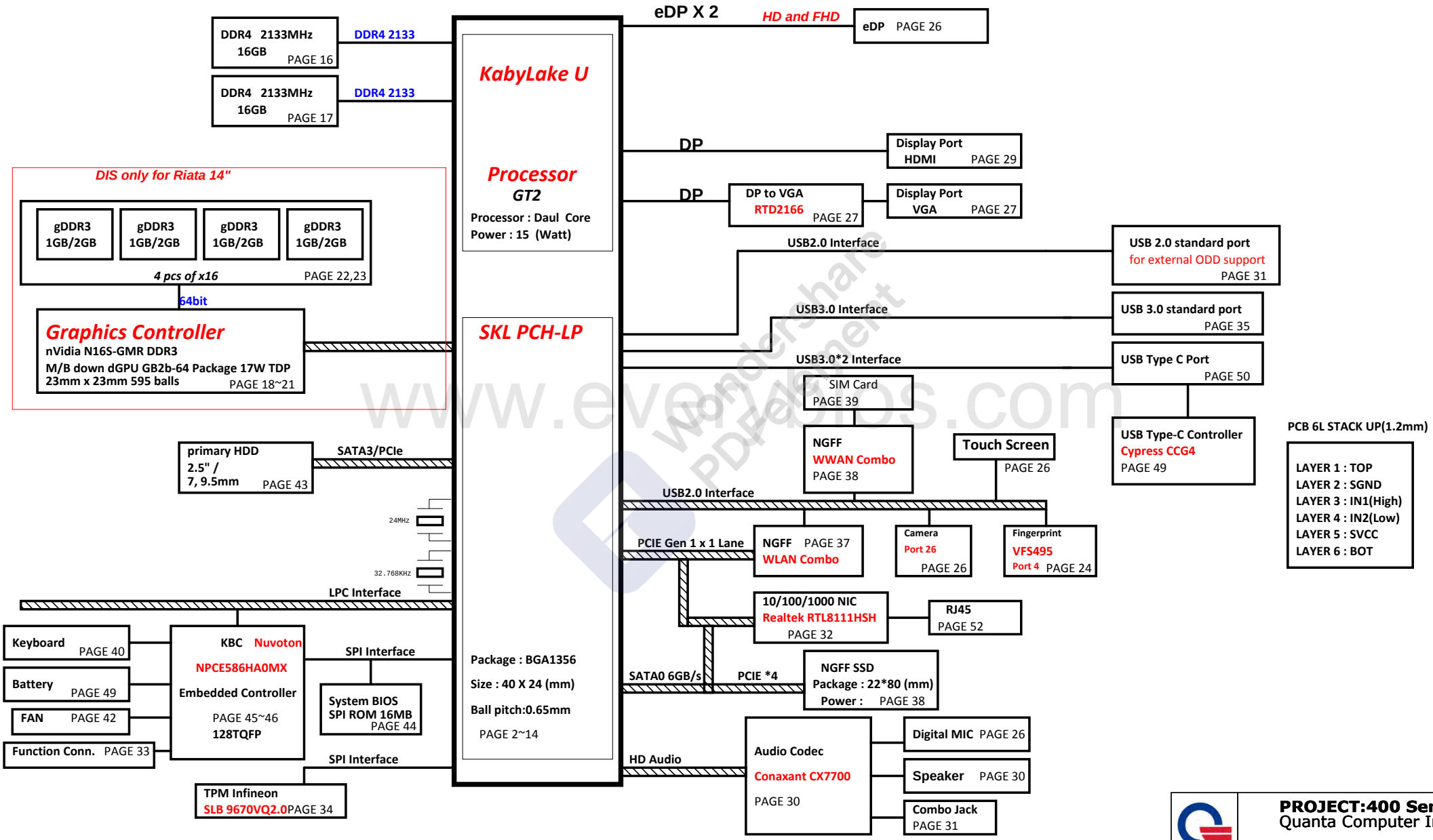
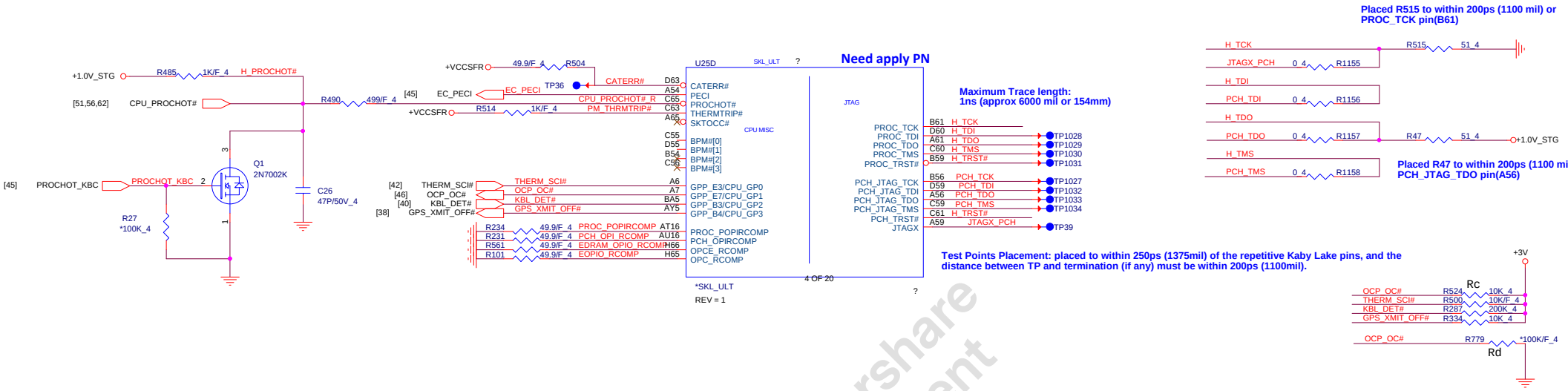
Reilly 13"/Rourke 14" KabyLake -U (UMA/DIS) Schematics



NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: Block Diagram	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 1 of 65	



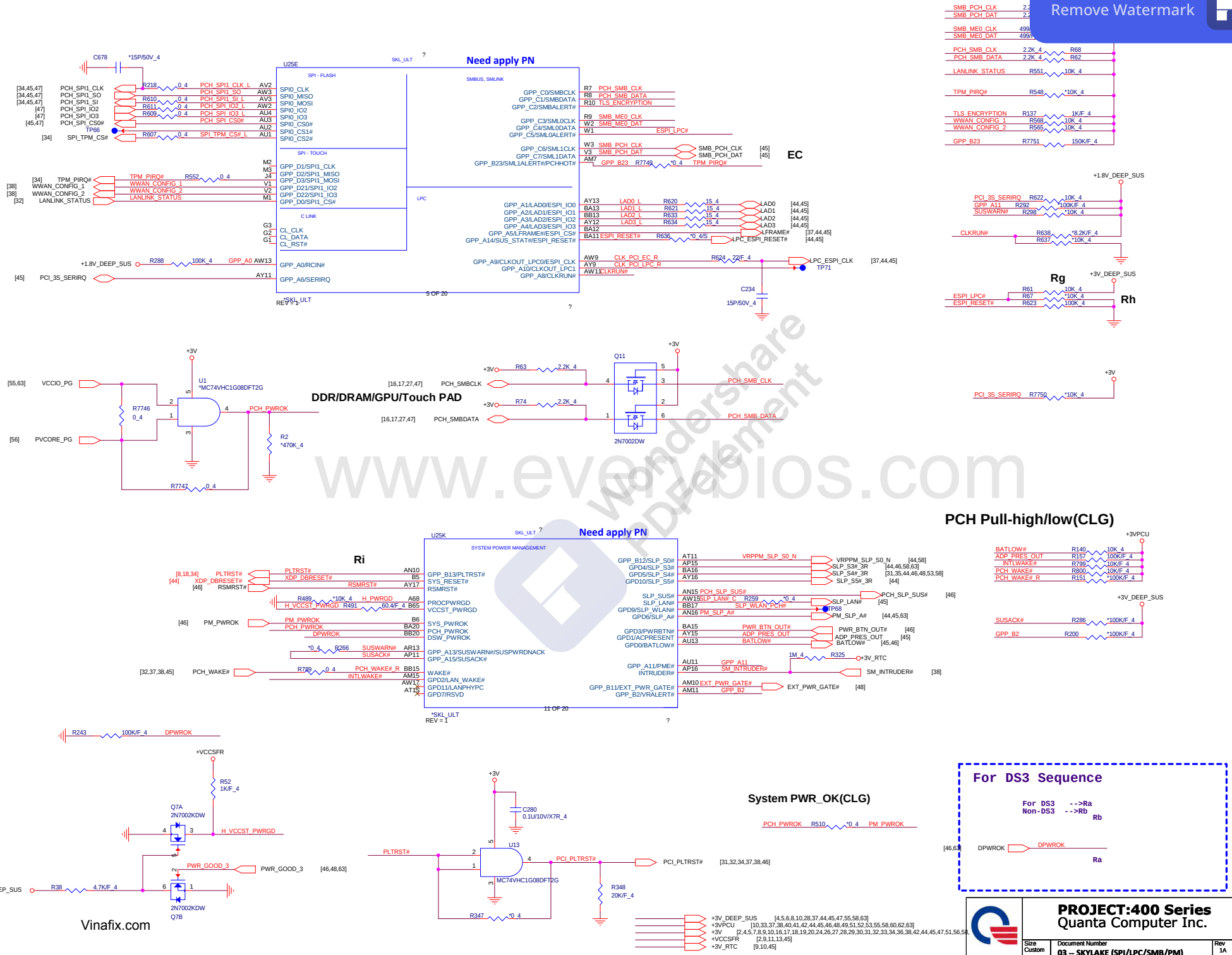
+1.0V_STG [11,13]
+VCCSFR [3,9,11,13,45]
+3V [3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63]

NB5

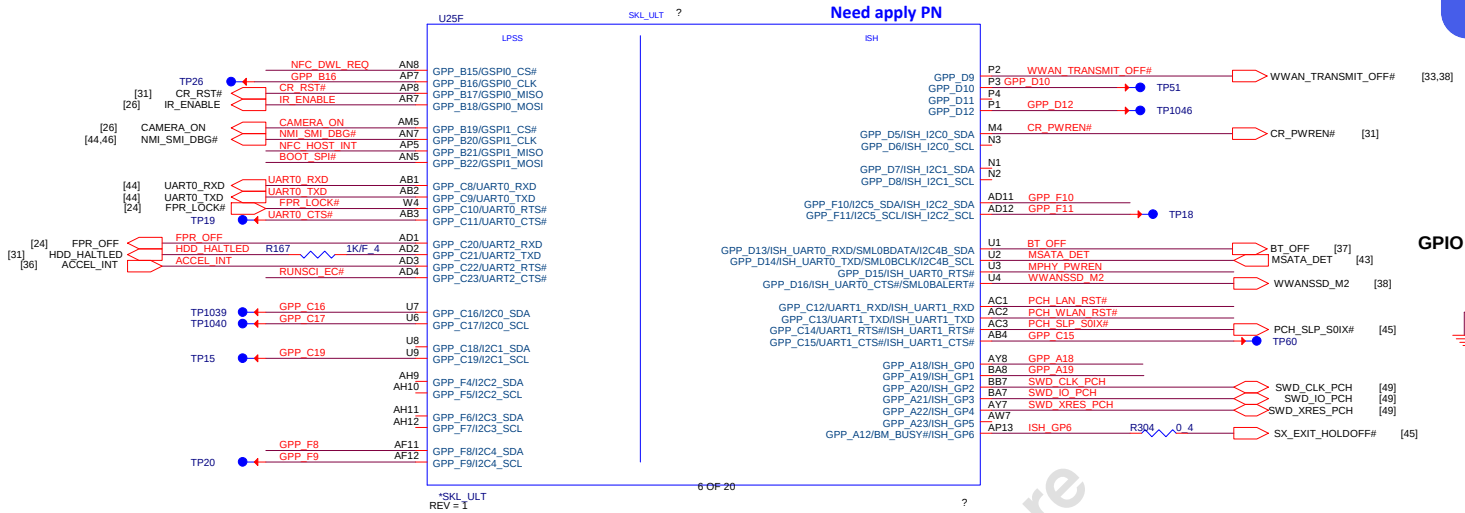
PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	02 -- SKYLAKE 2/20(MISC/ JTAG)	1A

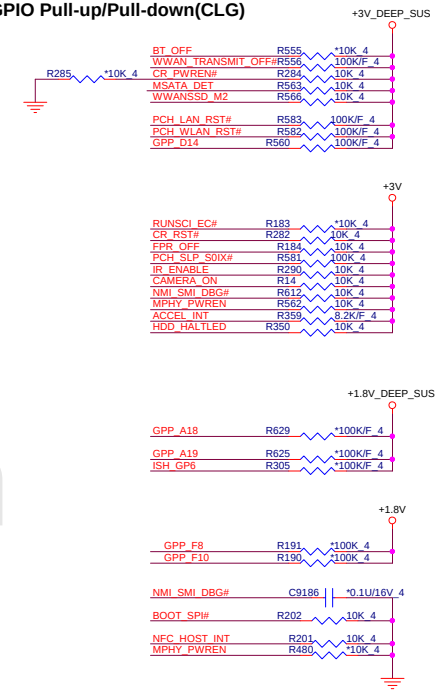
Date: Thursday, May 12, 2016 Sheet 2 of 65

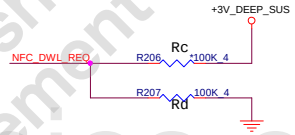


Skylake (GPIO)



GPIO Pull-up/Pull-down(CLG)





Codec table		
	CX7700	CX7501
R206	INSTAL	UNINSTAL
R207	UNINSTAL	INSTAL

[2,3,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63] +3V

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 04 – SKYLAKE (GPIO)	Rev: 1A
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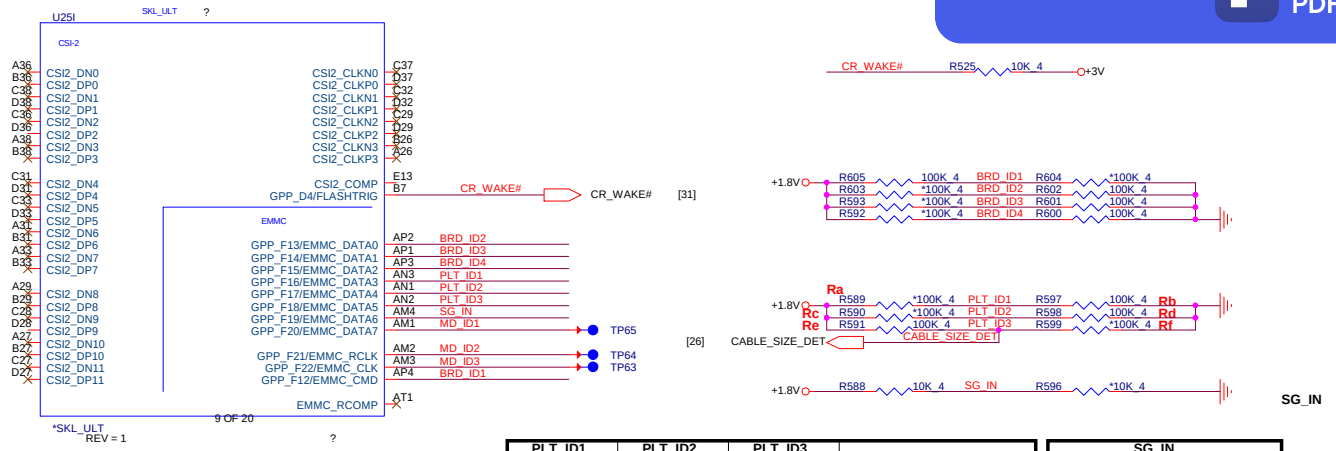
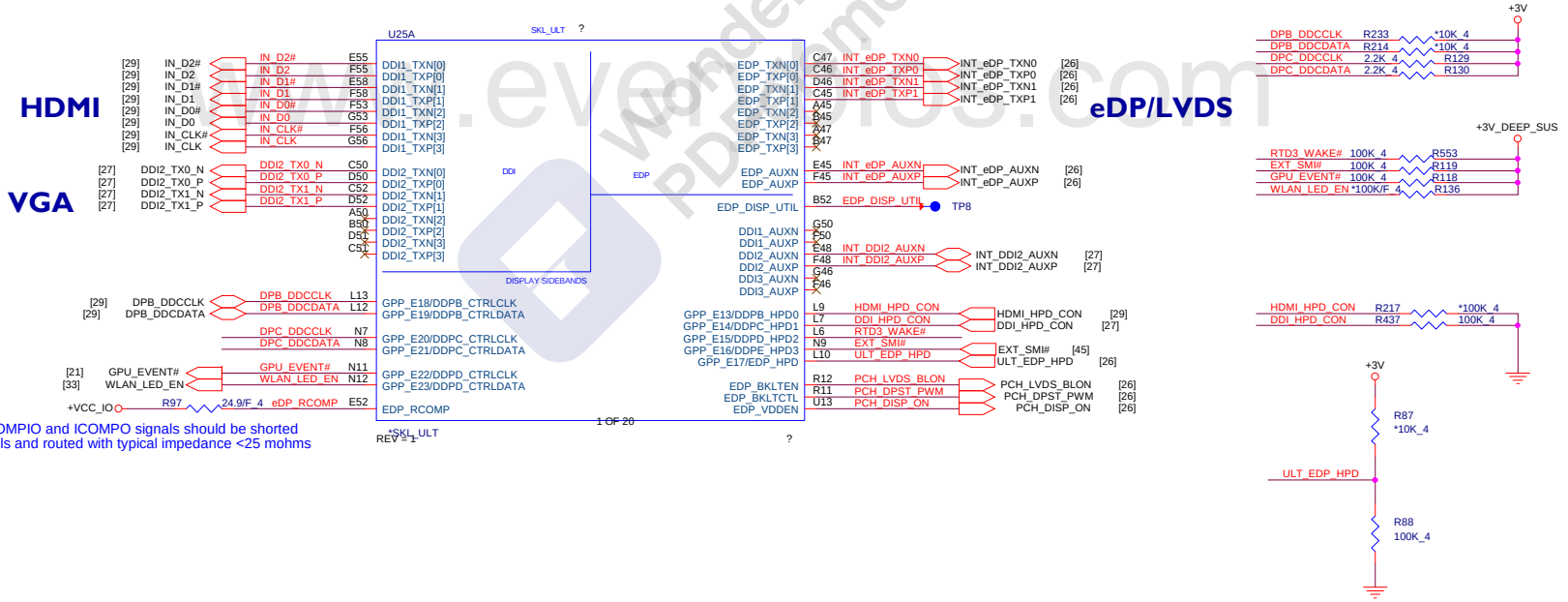
	BRD_ID1	BRD_ID2	BRD_ID3	BRD_ID4	
	GPIO201	GPIO202	GPIO203	GPIO204	AMD_FCH
	GPIO14	GPIO34	GPIO35	GPIO40	PPMT
	GPIO15	GPIO34	GPIO35	GPIO40	LPI-H
BOARD REVISION	GPIO76	GPIO77	GPIO78	GPIO79	LPT-LP
DB0	0	0	0	0	
DB1	0	0	0	1	
DB2	0	0	1	0	
	0	0	1	1	
SI1	0	1	0	0	
SIB	0	1	0	1	
SI2	0	1	1	0	
	0	1	1	1	
Pre-PV	1	0	0	0	
PV	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	



PLT_ID1	PLT_ID2	PLT_ID3	
Ra	Rc	Re	H
Rb	Rd	Rf	L
0	0	0	13.3"
0	0	1	14"
0	1	0	15.6"
0	1	1	17.3"

SG_IN	
DIS=1	R588 (Default)
UMA=0	R596

UNINSTAL



eDP_COMPIO and ICOMPO signals should be shorted
near balls and routed with typical impedance <25 mohms

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Quanta Computer Inc.

Size	Document Number	Rev
Custom	05 -- SKYLAKE (eDP/DDI/Board ID)	1A
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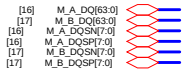
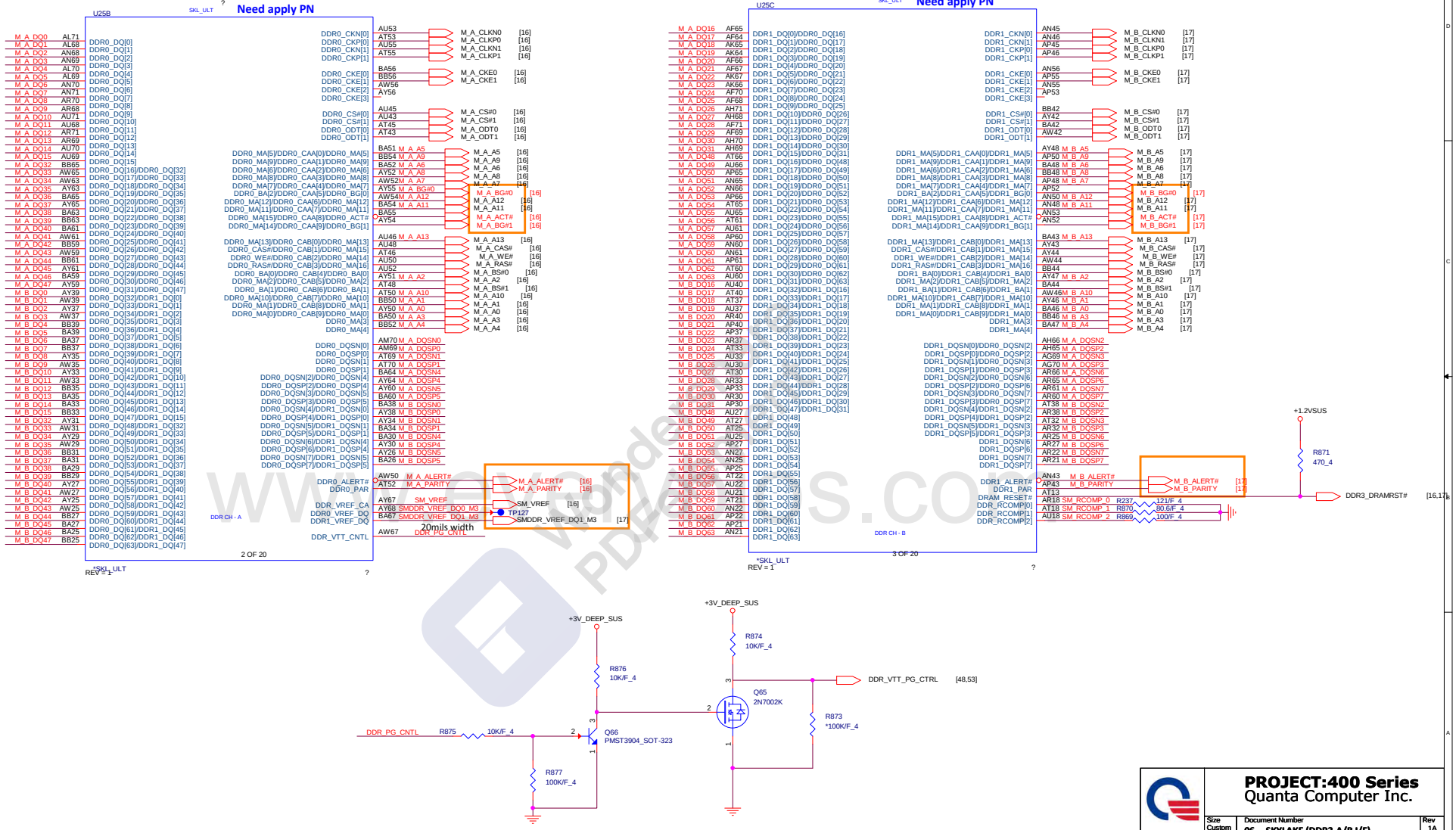
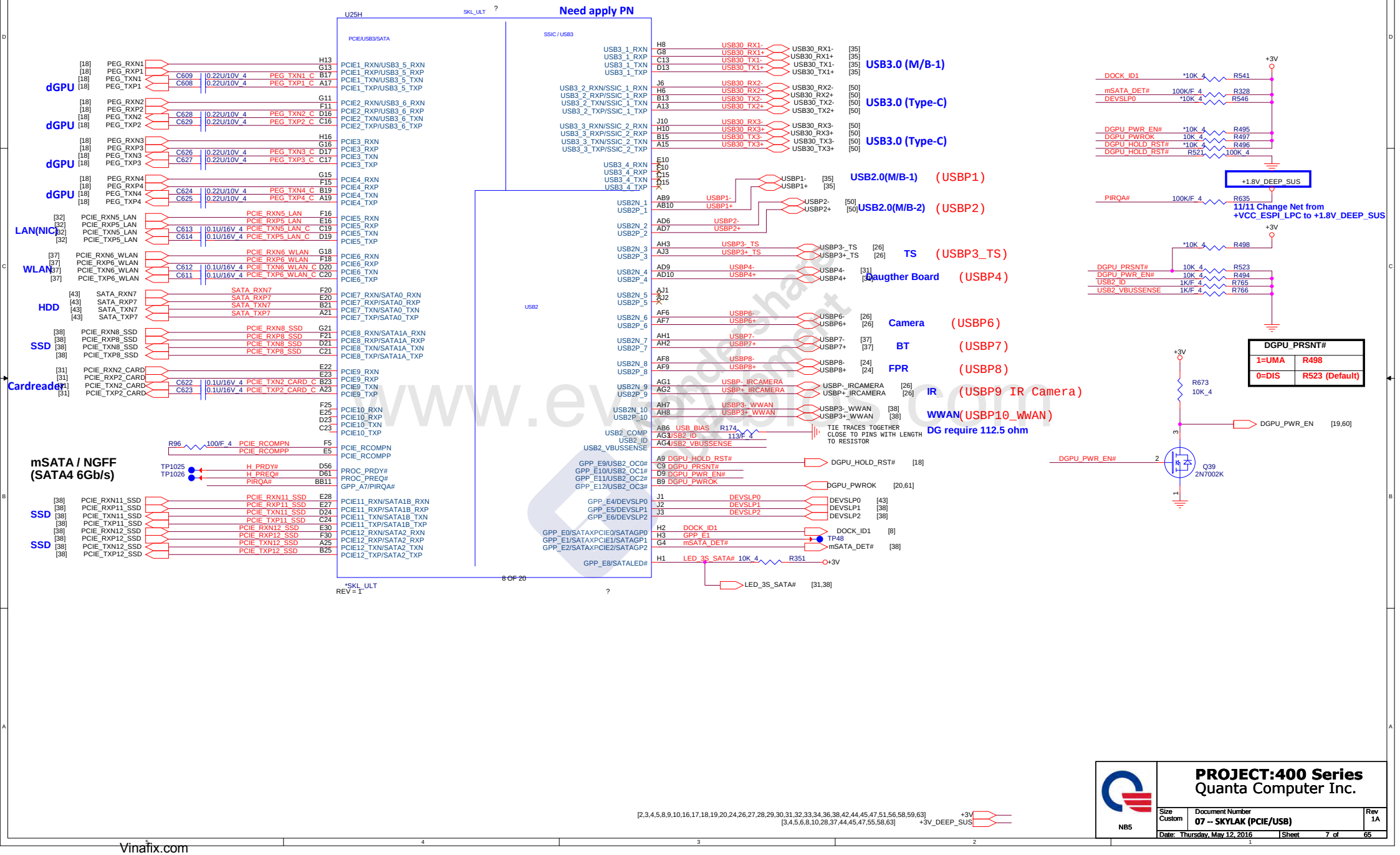
SkyLake ULT Processor (DDR4)





NB5	PROJECT:400 Series Quanta Computer Inc.		
Size: Custom	Document Number: 06 -- SKYLAKE (DDR3-A/B I/F)		Rev: 1A
Date: Thursday, May 12, 2016	Sheet 6 of 65		



PROJECT:	400 Series
	Quanta Computer Inc.
Size	Custom
Document Number	07 -- SKYLAK (PCIE/USB)
Rev	1A
Date:	Thursday, May 12, 2016
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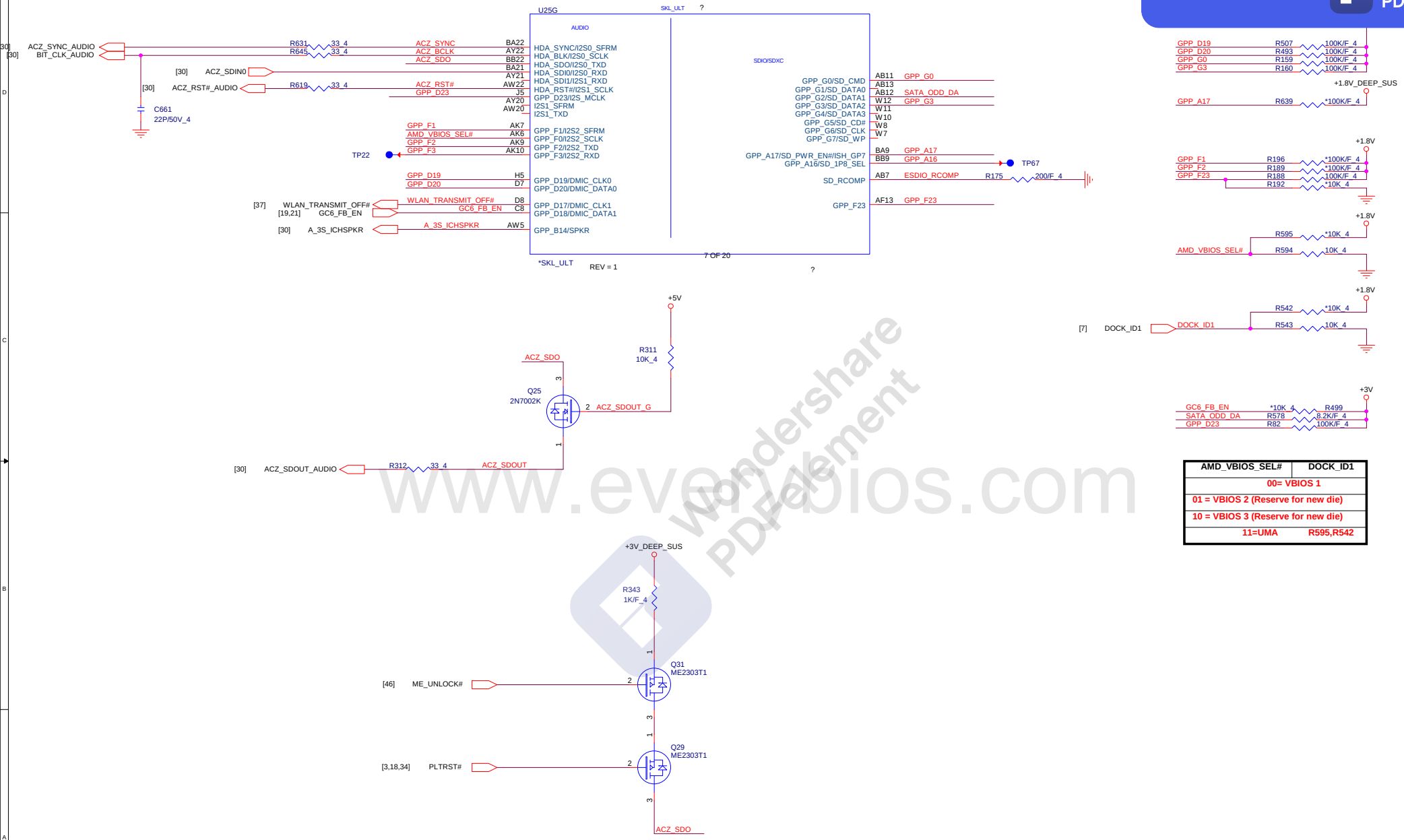
NB5	



AMD_VBIOS_SEL#	DOCK_ID1
00= VBIOS 1	
01 = VBIOS 2 (Reserve for new die)	
10 = VBIOS 3 (Reserve for new die)	
11=UMA	R595,R542

NB5	PROJECT:400 Series Quanta Computer Inc.		
	Size: Custom	Document Number: 08 -- SKYLAKE (HDA)	Rev: 1A
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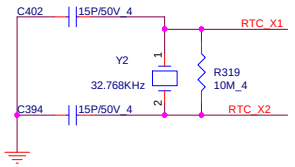
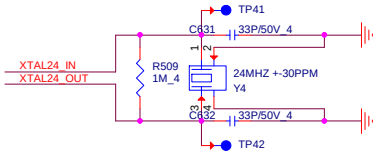
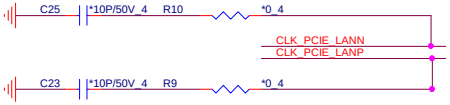
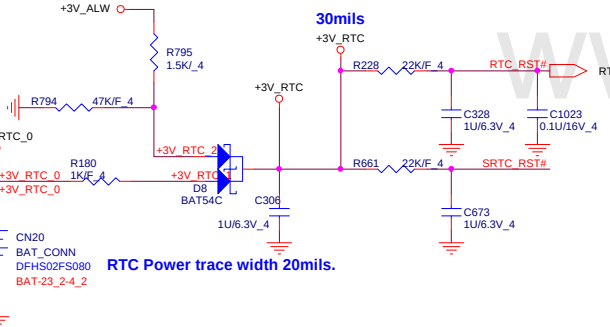
RTC Clock 32.768KHz

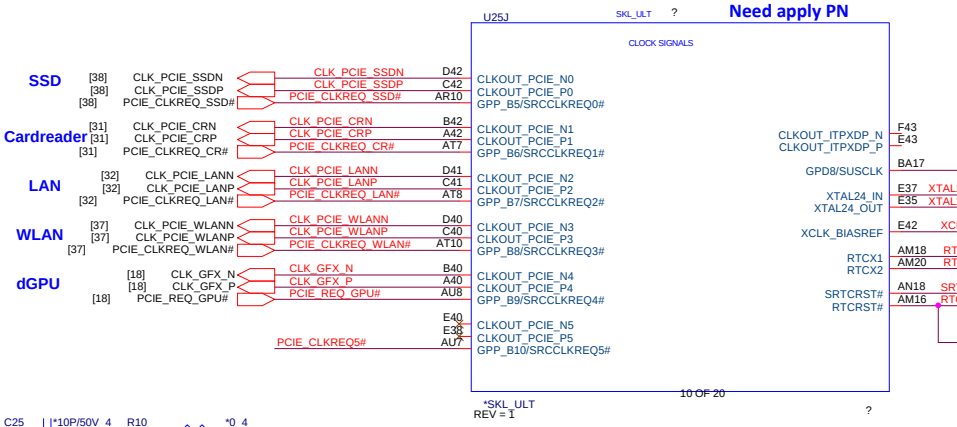


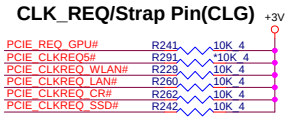


RTC Circuitry(RTC)

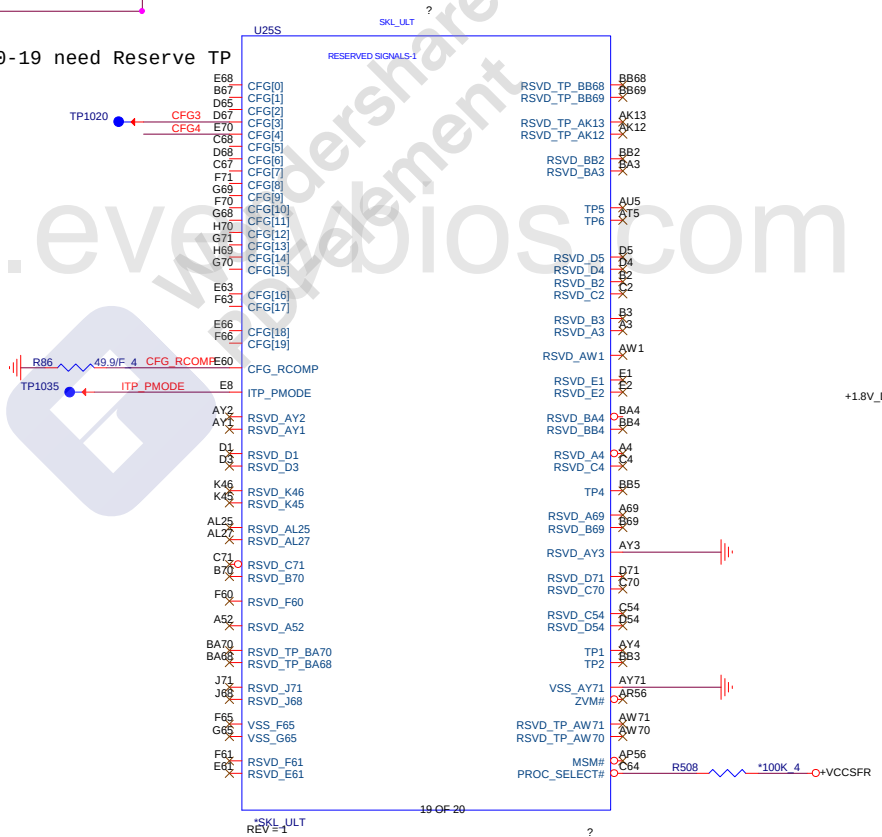


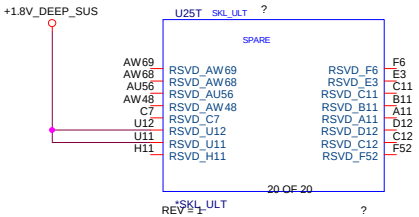






CFG0-19 need Reserve TP





NB5	PROJECT:400 Series Quanta Computer Inc.	
Size Custom	Document Number 09 -- SKYLAKE (CLK/RSV/RTC)	Rev 1A
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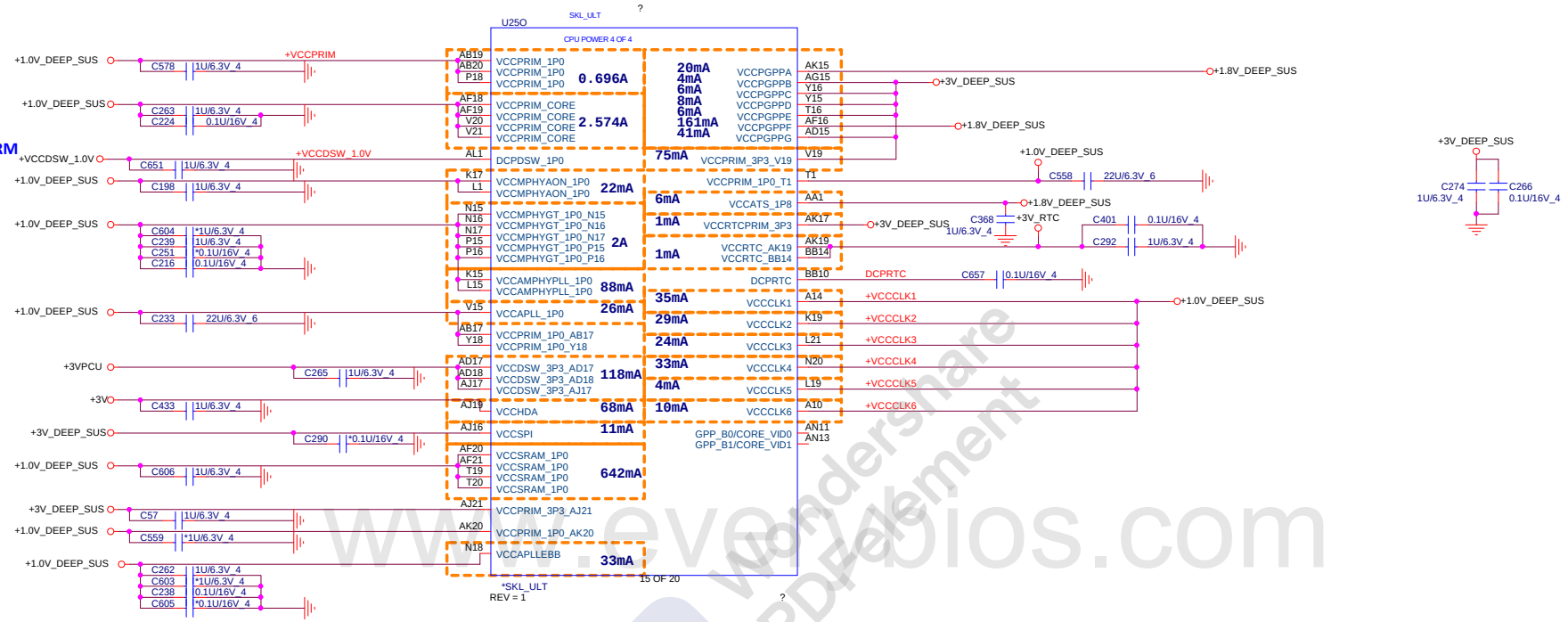
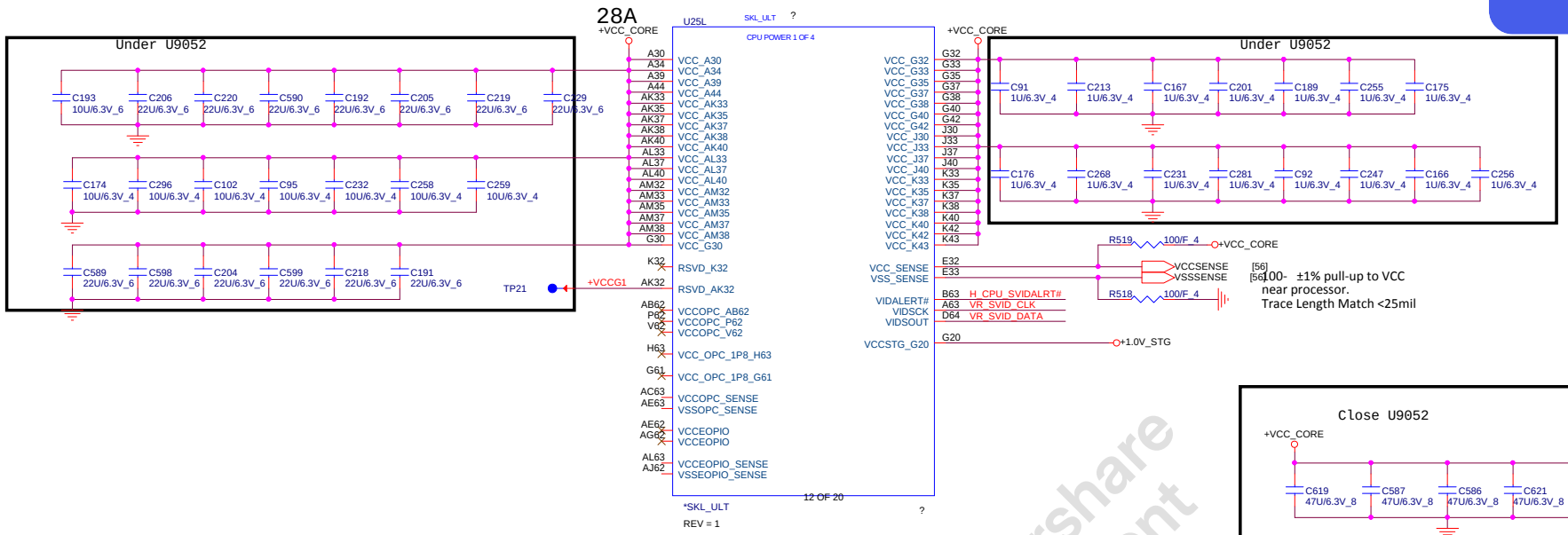
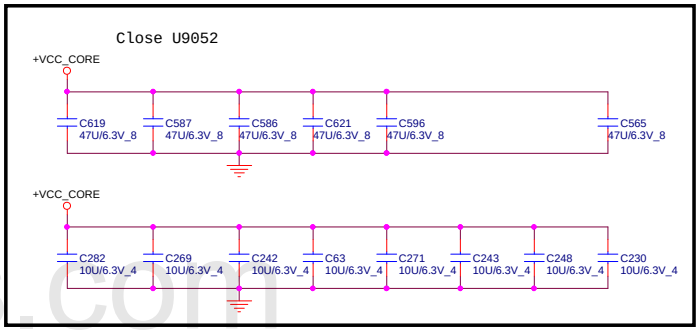
PCH Internal VRM



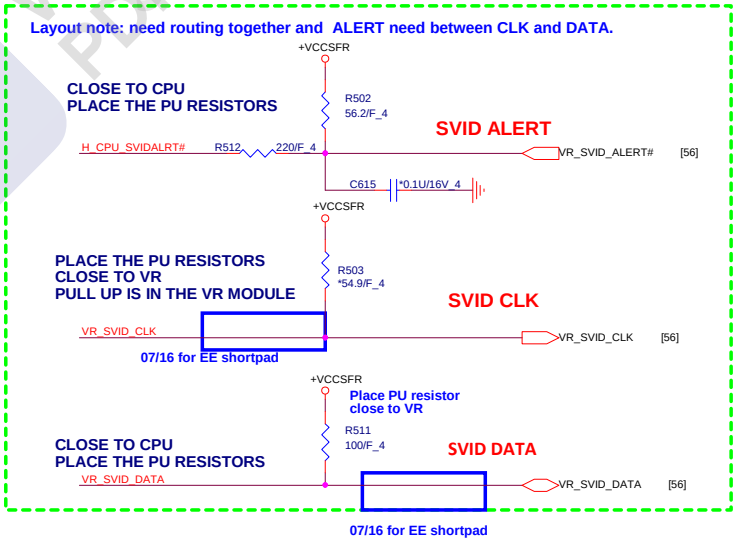
+3V_DEEP_SUS [3,4,5,6,8,28,37,44,45,47,55,58,63]
+3VPCU [3,33,37,38,40,41,42,44,45,46,48,49,51,52,53,55,58,60,62,63]
+1.0V_DEEP_SUS [9,54,55,58]
+VCC_PRIM
+3V [2,3,4,5,7,8,9,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63]
+1.8V_DEEP_SUS [3,4,7,8,9,45,54,63]

NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size: Custom	Document Number: **10 -- SKYLAKE (PCH POWER)** Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 10 of 65





Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
$V_{CC_{GT}}$	Processor Graphics Power Rails	SVID
$V_{CC_{GTX}}$	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
$V_{CC_{SA}}$	System Agent Power Rail	SVID/Fixed (SKU dependent)
$V_{CC_{IO}}$	IO Power Rail	Fixed
$V_{CC_{ST}}$	Sustain Power Rail	Fixed
$V_{CC_{PLL}}$	Processor PLLs power rail	Fixed
V_{DDQ}	Integrated Memory Controller Power Rail	Fixed (Memory technology dependent)
$V_{CC_{OPC}}$	Processor OPC power rail (available only in SKU's with OPC)	Fixed
$V_{CC_{OPC\_1P8}}$	Processor OPC power rail (available only in SKU's with OPC)	Fixed
$V_{CC_{EOPIO}}$	Processor EOPIO power rail (available only in SKU's with OPC)	Fixed



+1.8V [4,5,8,30,54,63]
+VCC_CORE [56]
+VCCSFR [2,3,9,13,45]
+1.0V_STG [2,13]

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Quanta Computer Inc.

Size	Document Number	Rev
Custom	11 -- SKYLAKE (POWER-1)	1A
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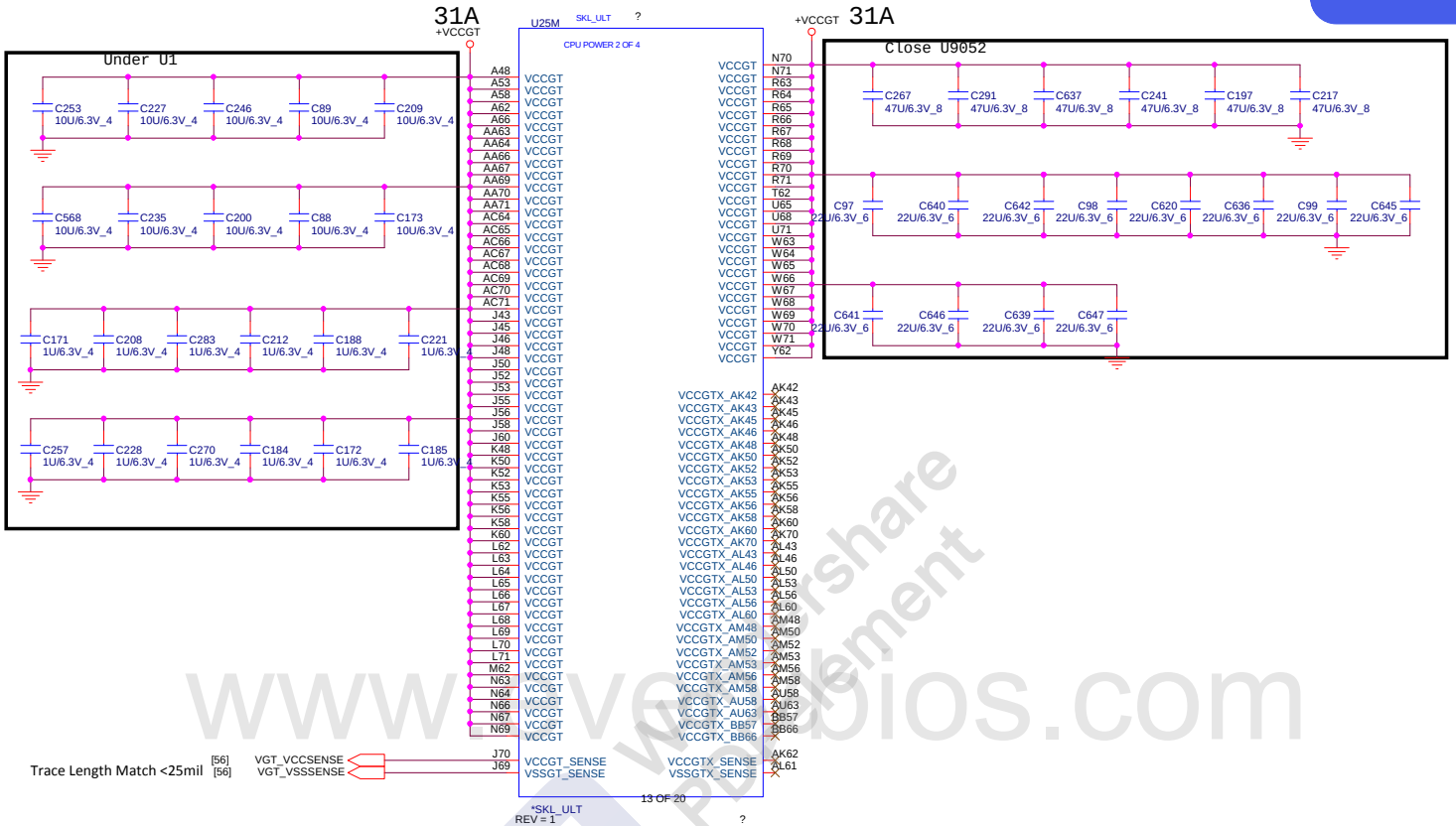

Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
Vcc_{GT}	Processor Graphics Power Rails	SVID
Vcc_{GTX}	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
Vcc_{SA}	System Agent Power Rail	SVID/Fixed (SKU dependent)
Vcc_{IO}	IO Power Rail	Fixed
Vcc_{ST}	Sustain Power Rail	Fixed
Vcc_{PLL}	Processor PLLs power rail	Fixed
V_{DDQ}	Integrated Memory Controller Power Rail	Fixed (Memory technology dependent)
Vcc_{OPC}	Processor OPC power rail (available only in SKU's with OPC)	Fixed
Vcc_{OPC_1P8}	Processor OPC power rail (available only in SKU's with OPC)	Fixed
Vcc_{EOPIO}	Processor EOPIO power rail (available only in SKU's with OPC)	Fixed

NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	12 -- SKYLAKE (POWER-2)	1A

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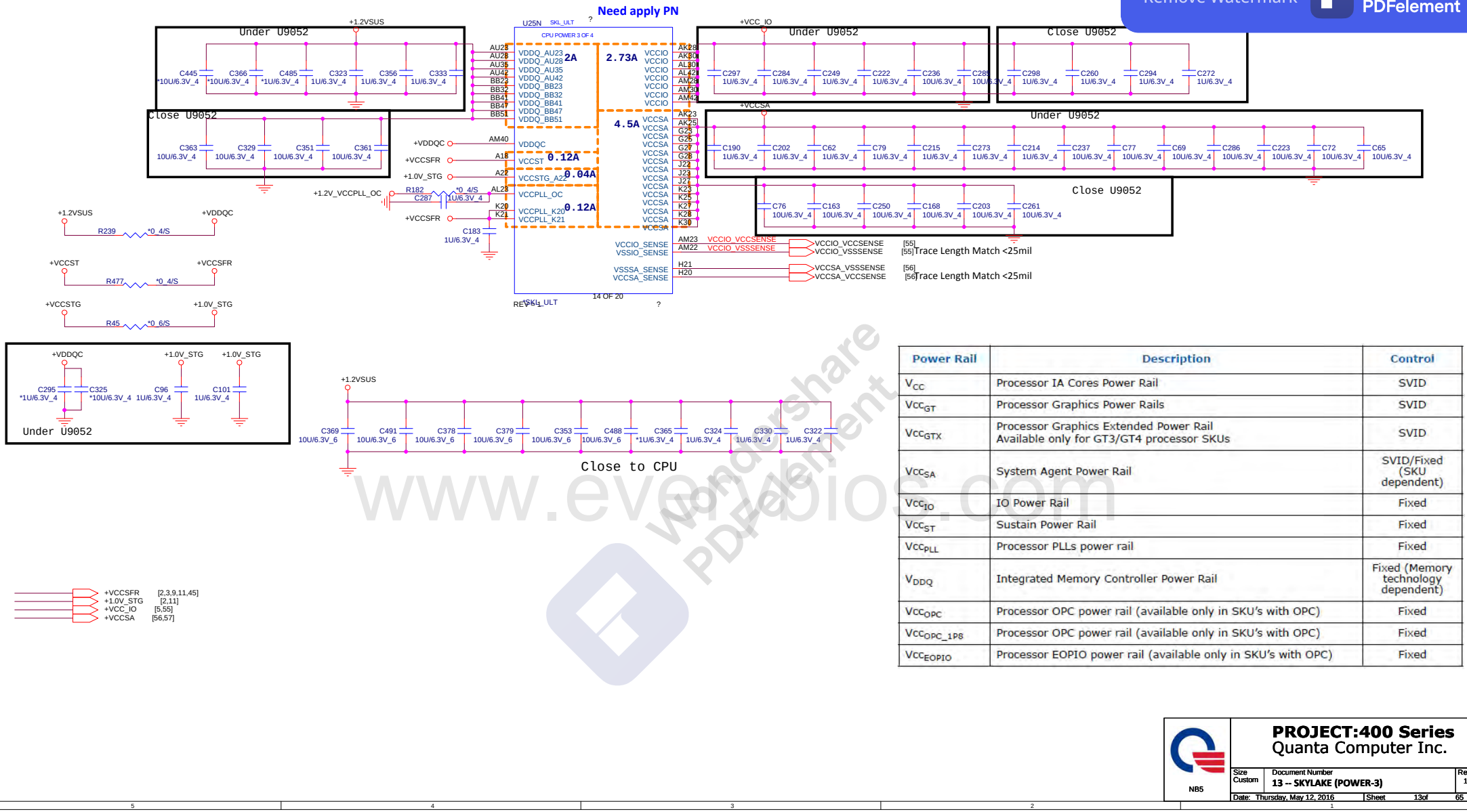

Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
Vcc_{GT}	Processor Graphics Power Rails	SVID
Vcc_{GTX}	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
Vcc_{SA}	System Agent Power Rail	SVID/Fixed (SKU dependent)
Vcc_{IO}	IO Power Rail	Fixed
Vcc_{ST}	Sustain Power Rail	Fixed
Vcc_{PLL}	Processor PLLs power rail	Fixed
V_{DDQ}	Integrated Memory Controller Power Rail	Fixed (Memory technology dependent)
Vcc_{OPC}	Processor OPC power rail (available only in SKU's with OPC)	Fixed
Vcc_{OPC_1P8}	Processor OPC power rail (available only in SKU's with OPC)	Fixed
Vcc_{EOPIO}	Processor EOPIO power rail (available only in SKU's with OPC)	Fixed

NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	13 -- SKYLAKE (POWER-3)	1A

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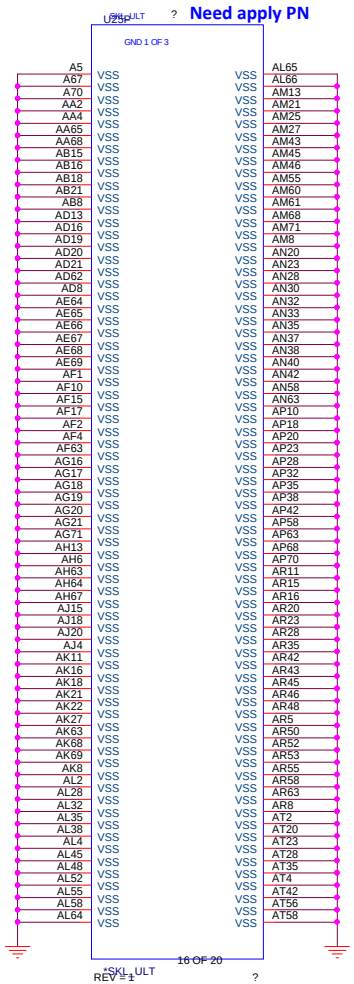

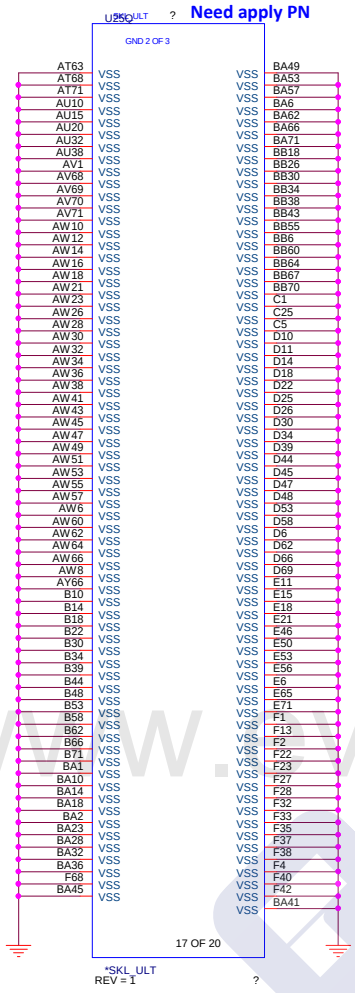

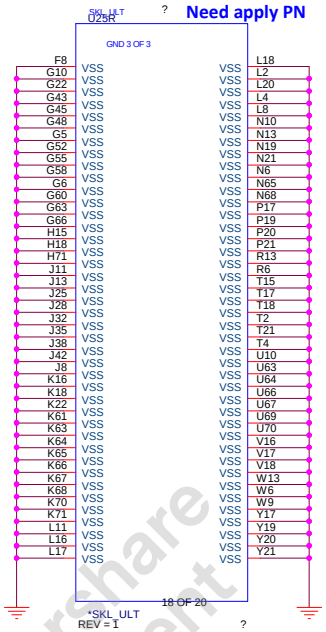

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 14 -- SKYLAKE (GND)	Rev: 1A
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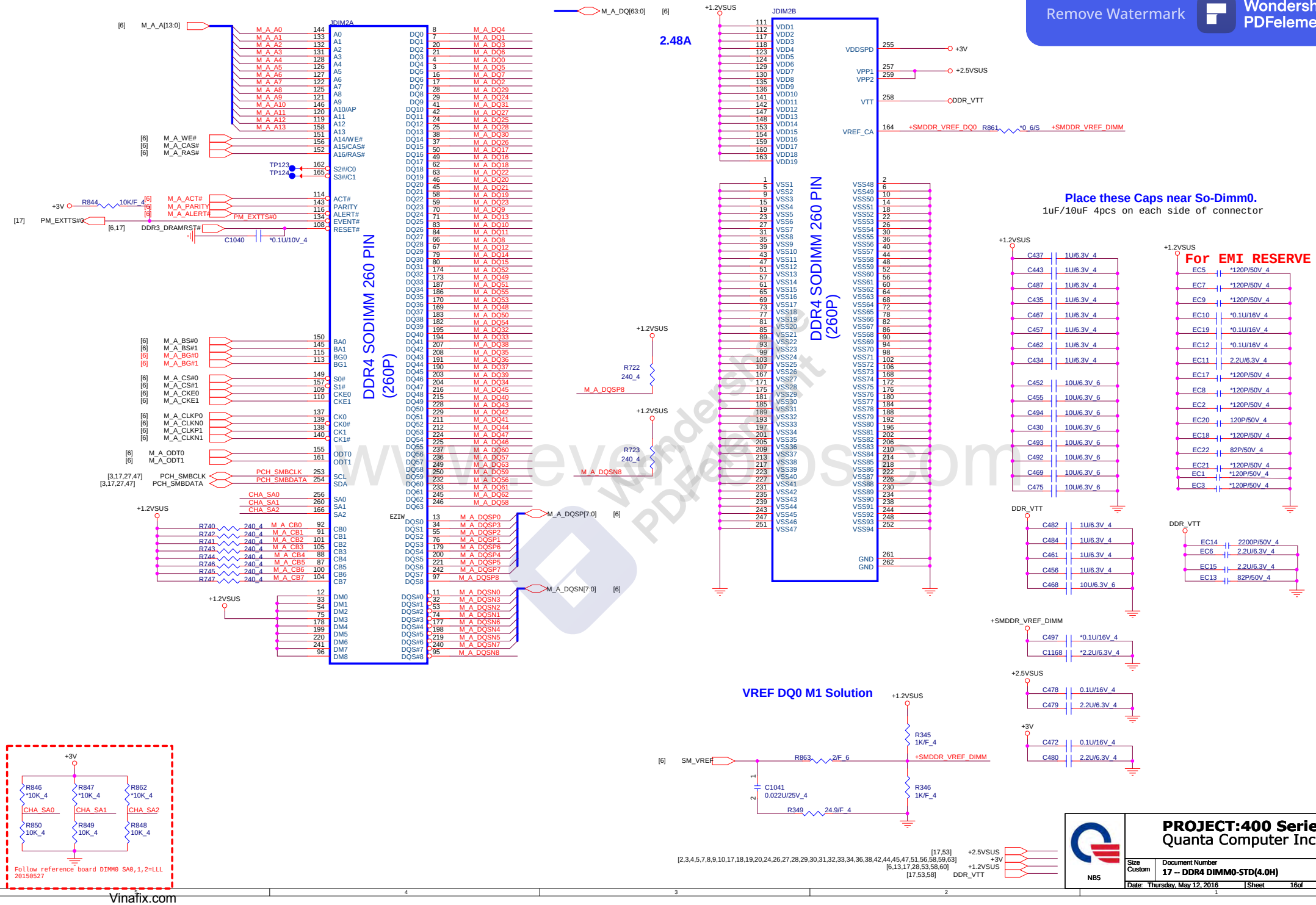
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size:	Document Number: **15 -- HSW XDP & APS** Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 15 of 65



PROJECT:400 Series Quanta Computer Inc.		
Size: Custom	Document Number: 17 -- DDR4 DIMM0-STD(4.0H)	Rev: 1A
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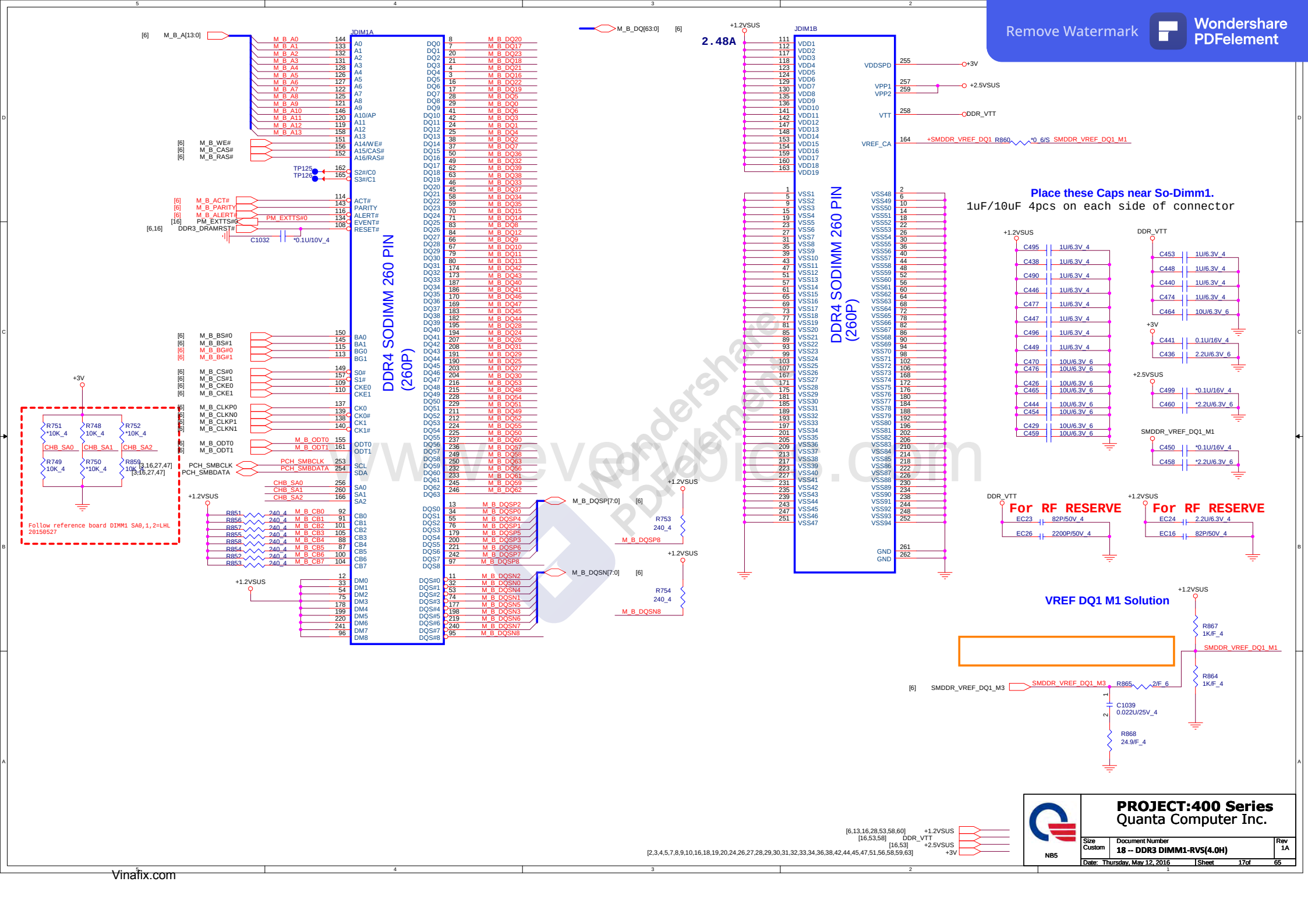

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 18 -- DDR3 DIMM1-RVS(4.0H)	Rev: 1A
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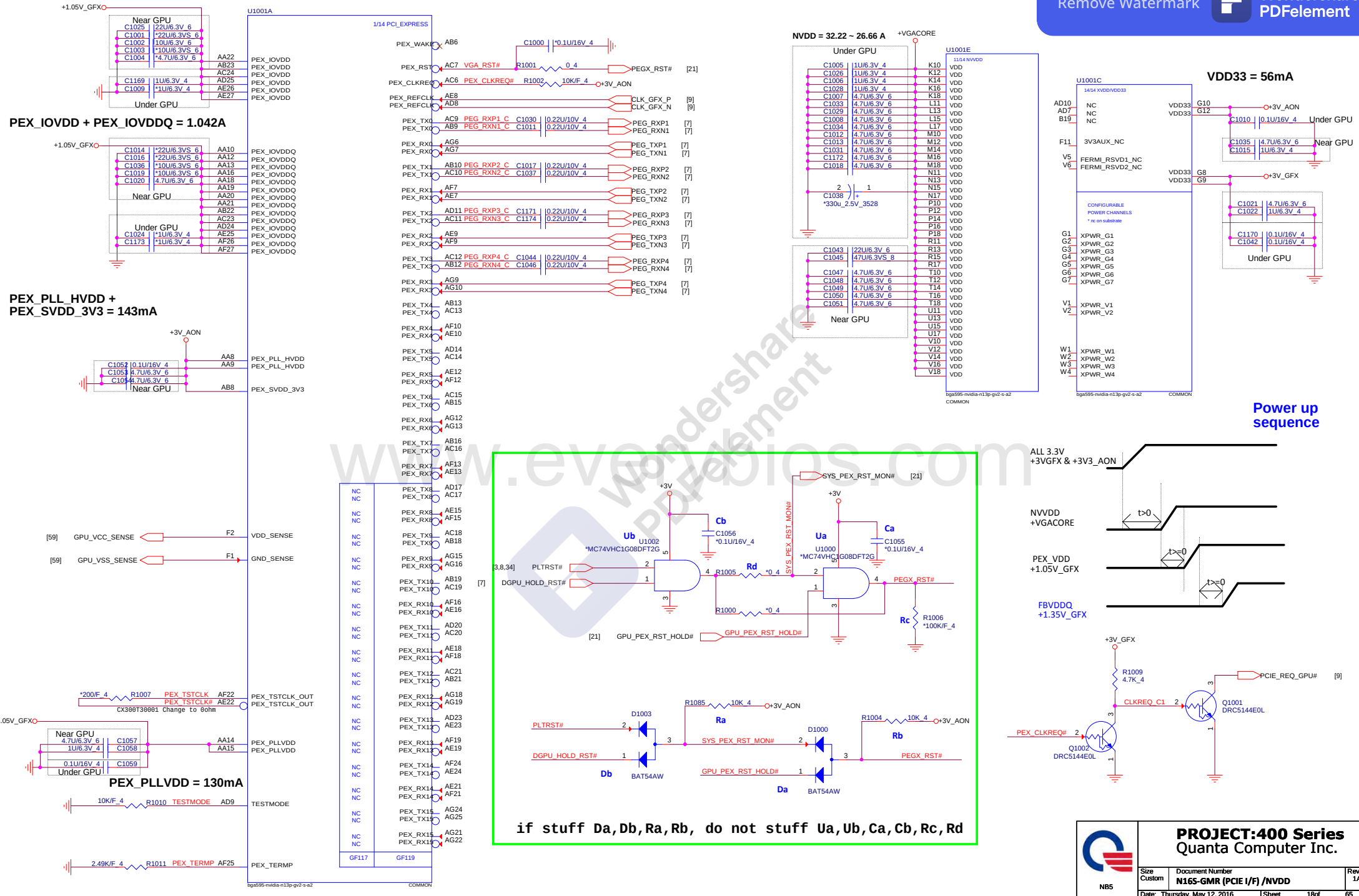
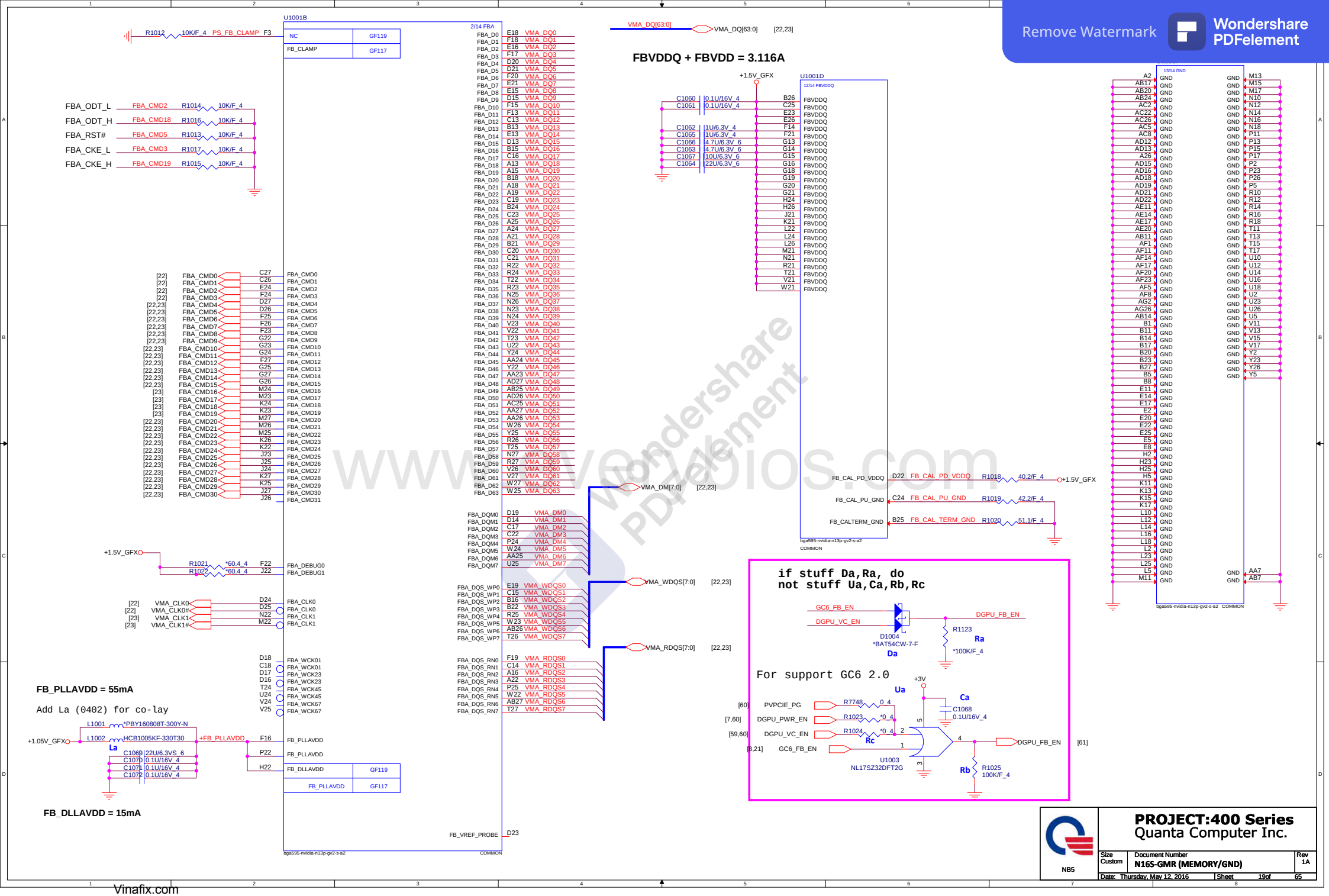
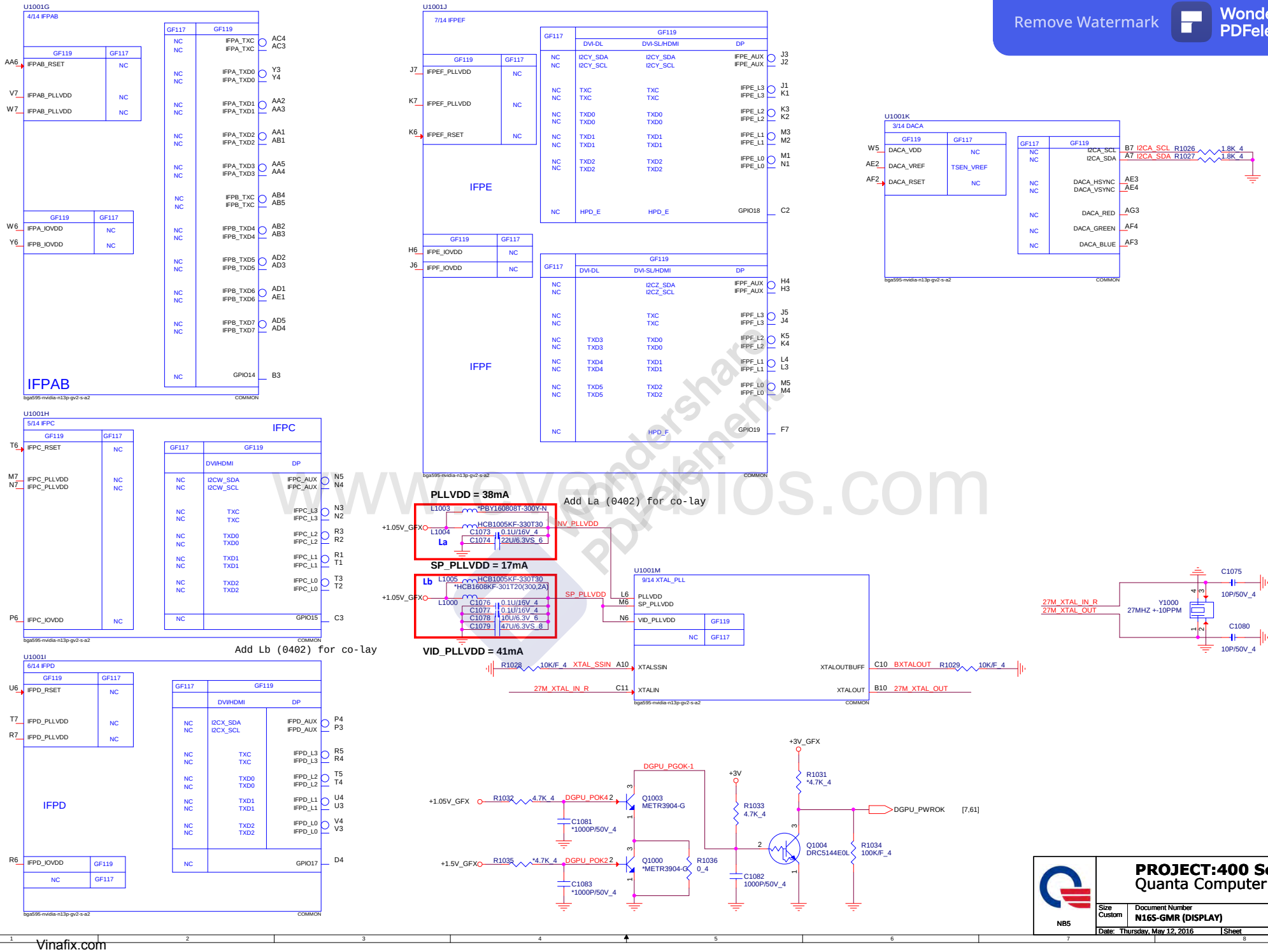
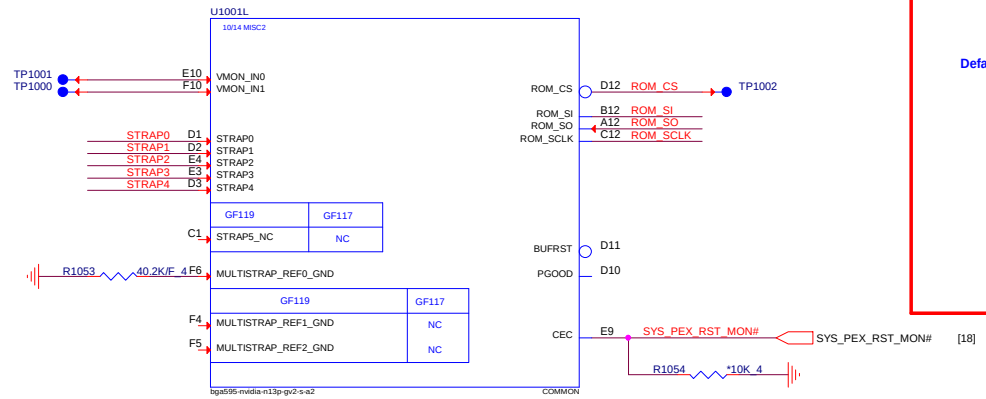
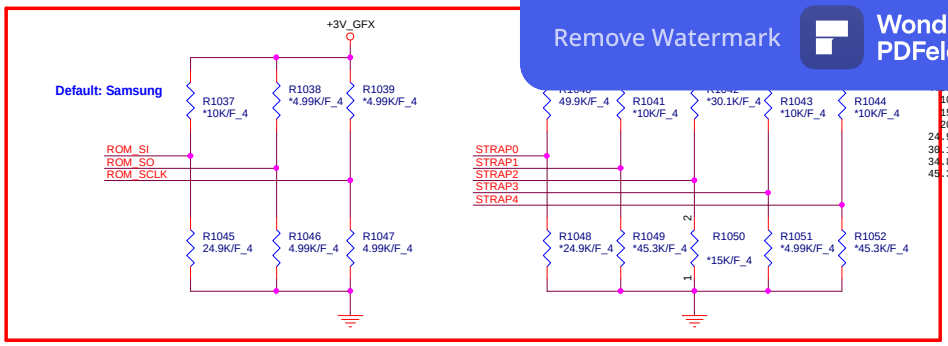


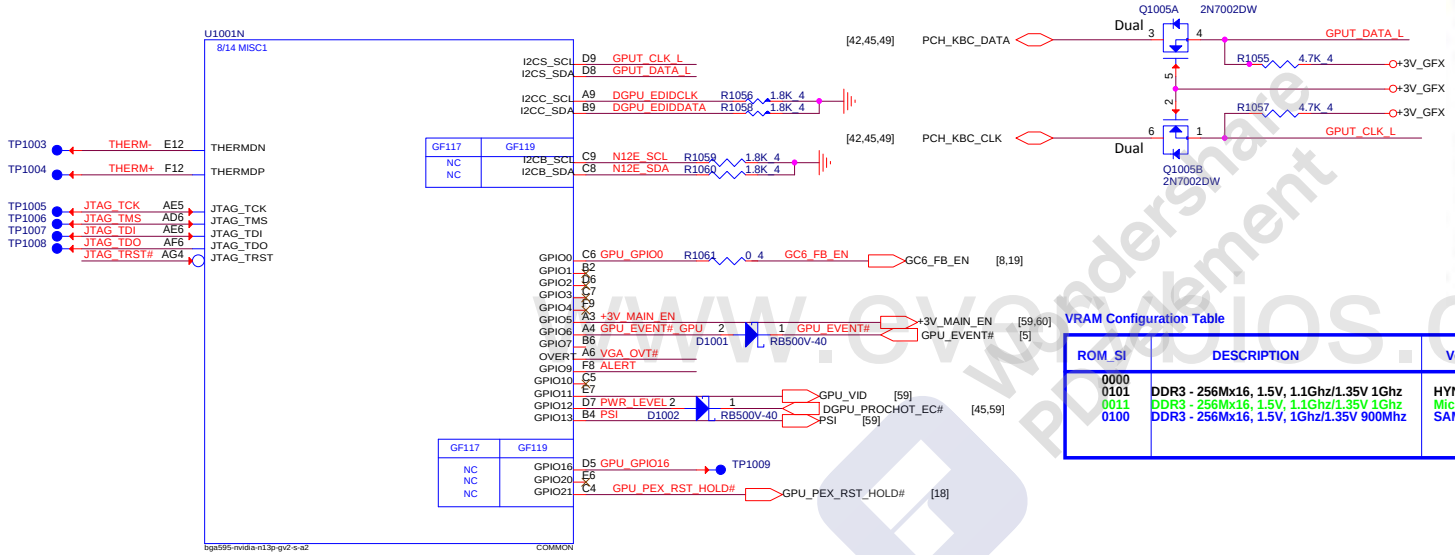
PROJECT:400 Series Quanta Computer Inc.		
NB5	Size Custom / Document Number N16S-GMR (PCIE I/F) /NVDD	Rev 1A
	Date: Thursday, May 12, 2016	Sheet 18of 65











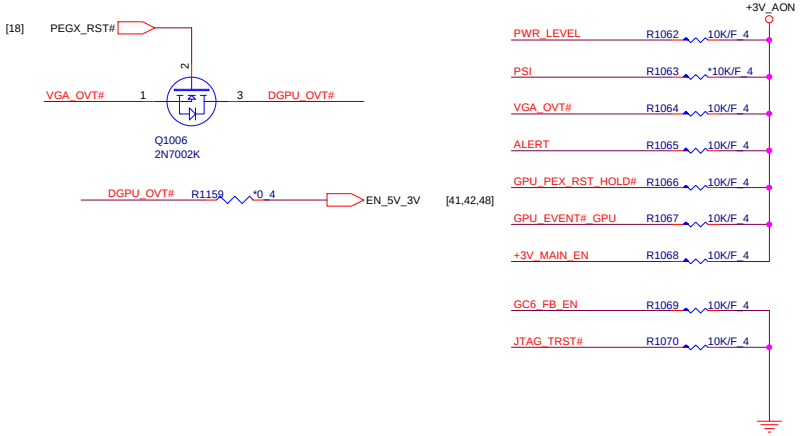


Table 15-2. Resistance Mapping to Hex Values

Resistor Values	Pull-Up to 3V3_MAIN	Pull-Down to GND
4.99 kΩ	1000	0000
10.0 kΩ	1001	0001
15.0 kΩ	1010	0010
20.0 kΩ	1011	0011
24.9 kΩ	1100	0100
30.1 kΩ	1101	0101
34.8 kΩ	1110	0110
45.3 kΩ	1111	0111

VRAM Configuration Table

ROM_SI	DESCRIPTION	Vendor	Vendor P/N	Straping	TOP B/S	QBC
0000						
0101	DDR3 - 256Mx16, 1.5V, 1.1Ghz/1.35V 1Ghz	HYNIX	H5TC4G63CFR-N0C	0x5	AKD5PZDTW01	AKD5PZDTW02
0011	DDR3 - 256Mx16, 1.5V, 1.1Ghz/1.35V 1Ghz	Micron	MT41J256M16LY-091G:N	0x3	AKD59GSTL01	AKD59GSTL00
0100	DDR3 - 256Mx16, 1.5V, 1Ghz/1.35V 900Mhz	SAMSUNG	K4W4G1646E-BC1A	0x4	AKD5PGDT500	AKD5PGDT501

GPIO ASSIGNMENTS

GPIO	I/O	PIN	USAGE
0	IN	FB_CLAMP_MON	FB Clamp monitor
1	OUT	MEM_VDD_CTL	Memory VDD VID
2	OUT	LCD_BL_PWM	Panel Backlight PWM
3	OUT	LCD_VCC	PANEL POWER ENABLE
4	OUT	LCD_BLEN	PANEL BACKLIGHT ENABLE
5	OUT	Reserved	--
6	OUT	FB_CLAMP_TGL_REQ	Active low FB Clamp toggle request
7	OUT	3D VISION	3D VISION LEFT/RIGHT signal
8	I/O	OVERT	ACTIVE LOW THERMAL OVER TEMP
9	I/O	ALERT	ACTIVE LOW THERMAL ALERT
10	OUT	MEM VREF_CTL	MEMMORY VREF CONTROL
11	OUT	PWR_VID	GPU CORE_VDD PWM Control signal
12	IN	PWR_LEVEL	AC Power detect or power supply overdraw input
13	OUT	PSI	Phase Shedding

PROJECT:400 Series
Quanta Computer Inc.

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Rank0

HYU 256Mx16, H5TC4G63AFR-11C QBC PN : AKD5PGWTW08
MIC 256Mx16, MT41J256M16HA-093G:E QBC PN : AKD5PZSTL01
SAM 256Mx16, K4W4G1646D-BC1A QBC PN : AKD5PGWT501

U1004

VRAM _DDR3_HYNIX_256MX16

162_1% ohm CS11622FB07 RES CHIP 162 1/16W +-1%(0402)
CS11622FB15 RES CHIP 162 1/16W +-1%(0402)

R1071 162_4 VMA_CLK0 VMA_CLK0#

U1005

VRAM _DDR3_HYNIX_256MX16

stuff R1124 for
Hynix 8Gb DDP VRAM

stuff R1125 for
Hynix 8Gb DDP VRAM

reserve for Hynix 8Gb DDP VRAM

SDDR3_BGA100

	0..31	32..63
CMD0	CS0*	
CMD1	CS1*	
CMD2	ODT	
CMD3	CKE	
CMD16		CS0*
CMD17		CS1*
CMD18		ODT
CMD19		CKE

SNN_FBA0_ODT1	J1	NC/ODT1
SNN_FBA0_CKE1	J9	NC/CKE1
SNN_FBA0_CS1	L1	NC/CS1
SNN_FBA0_ZQ1	L9	NC/ZQ1

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	DDR3 - RANK0	1A

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NB5

Rank0

HYU 256Mx16, H5TC4G63AFR-11C
MIC 256Mx16, MT41J256M16HA-093G:E
SAM 256Mx16, K4W4G1646D-BC1A

QBC PN : AKD5PGWTW08---T
QBC PN : AKD5PZSTL01---T
QBC PN : AKD5PGWT501---TOP B/S PN : AKD5PGWT502

U1006

VREFC_VMA3 M8
VREFD_VMA3 H1
VREFCA
VREFDQ

[19,22] FBA_CMD9 N3
[19,22] FBA_CMD11 P7
[19,22] FBA_CMD8 P3
[19,22] FBA_CMD25 N2
[19,22] FBA_CMD10 P8
[19,22] FBA_CMD24 P2
[19,22] FBA_CMD22 R8
[19,22] FBA_CMD7 R2
[19,22] FBA_CMD21 T8
[19,22] FBA_CMD6 R3
[19,22] FBA_CMD29 L7
[19,22] FBA_CMD23 R7
[19,22] FBA_CMD28 N7
[19,22] FBA_CMD20 T3
[19,22] FBA_CMD4 T7
[19,22] FBA_CMD14 M7

A0 P7
A1 P3
A2 N2
A3 P8
A4 P2
A5 R8
A6 R2
A7 T8
A8 R3
A9 L7
A10/AP R7
A11 N7
A12/BC T3
A13 T7
A14 M7
A15

[19,22] FBA_CMD12 M2
[19,22] FBA_CMD27 N8
[19,22] FBA_CMD26 M3

BA0 BA1 BA2

[19] VMA_CLK1 J7
[19] VMA_CLK1# K7
[19] FBA_CMD19 K9

CK CK CKE

[19] FBA_CMD18 K1
[19] FBA_CMD16 L2
[19,22] FBA_CMD30 J3
[19,22] FBA_CMD15 K3
[19,22] FBA_CMD13 L3

ODT CS RAS CAS WE

[19] VMA_WDQS4 F3
[19] VMA_RDQS4 G3

DQSL DQSL

[19] VMA_DM4 E7
[19] VMA_DM7 D3

DML DMU

[19] VMA_WDQS7 C7
[19] VMA_RDQS7 B7

DQSU DQSU

[19,22] FBA_CMD5 T2

RESET

GND — 243_4 R1079 — FBA_ZQ4 L8

ZQ

[19] FBA_CMD17 J1
FBA_CMD18 L1
FBA_CMD19 J9
FBA_ZQ6 L9
GND — 243_4 R1126

NC#J1 NC#L1 NC#J9 NC#L9

96-BALL SDRAM DDR3
VRAM _DDR3_HYNIX_256MX16

stuff R1124 for Hynix 8Gb DDP VRAM

DQU0 D7
DQU1 C3
DQU2 C8
DQU3 C2
DQU4 A7
DQU5 A2
DQU6 B8
DQU7 A3

VMA_DQ57 [19]
VMA_DQ61 [19]
VMA_DQ58 [19]
VMA_DQ62 [19]
VMA_DQ59 [19]
VMA_DQ63 [19]
VMA_DQ56 [19]
VMA_DQ60 [19]

DQL0 E3
DQL1 F7
DQL2 F2
DQL3 F8
DQL4 H3
DQL5 H8
DQL6 G2
DQL7 H7

VMA_DQ34 [19]
VMA_DQ37 [19]
VMA_DQ33 [19]
VMA_DQ39 [19]
VMA_DQ32 [19]
VMA_DQ38 [19]
VMA_DQ35 [19]
VMA_DQ36 [19]

VDD#B2 B2
VDD#D9 D9
VDD#G7 G7
VDD#K2 K2
VDD#K8 K8
VDD#N1 N1
VDD#N9 N9
VDD#R1 R1
VDD#R9 R9

+1.5V_GFX — 4.7U/6.3V_6 C1115 — 0.1U/16V_4 C1116 — 0.1U/16V_4 C1117 — GND

VDDQ#A1 A1
VDDQ#A8 A8
VDDQ#C1 C1
VDDQ#C9 C9
VDDQ#D2 D2
VDDQ#E9 E9
VDDQ#F1 F1
VDDQ#H2 H2
VDDQ#H9 H9

+1.5V_GFX — 4.7U/6.3V_6 C1121 — 0.1U/16V_4 C1122 — 0.1U/16V_4 C1123 — GND

VSS#A9 A9
VSS#B3 B3
VSS#E1 E1
VSS#F1 G8
VSS#G8 J2
VSS#J2 J8
VSS#J8 M1
VSS#M1 M9
VSS#M9 P1
VSS#P1 P9
VSS#P9 T1
VSS#T1 T9
VSS#T9

GND

VSSQ#B1 B1
VSSQ#B9 B9
VSSQ#D1 D1
VSSQ#D8 D8
VSSQ#E2 E2
VSSQ#E8 E8
VSSQ#F9 F9
VSSQ#G1 G1
VSSQ#G9 G9

162_1% ohm CS11622FB07 RES CHIP 162 1/16W +-1%(0402)
CS11622FB15 RES CHIP 162 1/16W +-1%(0402)

VMA_CLK1 — R1078 162_4 — VMA_CLK1#

+1.5V_GFX — R1081 1.33K/F_4 — VREFC_VMA3 — R1083 1.33K/F_4 — C1127 0.01U/50V_4
+1.5V_GFX — R1082 1.33K/F_4 — VREFD_VMA3 — R1084 1.33K/F_4 — C1128 0.01U/50V_4

U1007

VREFC_VMA3 M8
VREFD_VMA3 H1
VREFCA
VREFDQ

FBA_CMD9 N3
FBA_CMD11 P7
FBA_CMD8 P3
FBA_CMD25 N2
FBA_CMD10 P8
FBA_CMD24 P2
FBA_CMD22 R8
FBA_CMD7 R2
FBA_CMD21 T8
FBA_CMD6 R3
FBA_CMD29 L7
FBA_CMD23 R7
FBA_CMD28 N7
FBA_CMD20 T3
FBA_CMD4 T7
FBA_CMD14 M7

A0 P7
A1 P3
A2 N2
A3 P8
A4 P2
A5 R8
A6 R2
A7 T8
A8 R3
A9 L7
A10/AP R7
A11 N7
A12/BC T3
A13 T7
A14 M7
A15

FBA_CMD12 M2
FBA_CMD27 N8
FBA_CMD26 M3

BA0 BA1 BA2

VMA_CLK1 J7
VMA_CLK1# K7
FBA_CMD19 K9

CK CK CKE

FBA_CMD18 K1
FBA_CMD16 L2
FBA_CMD30 J3
FBA_CMD15 K3
FBA_CMD13 L3

ODT CS RAS CAS WE

[19] VMA_WDQS5 F3
[19] VMA_RDQS5 G3

DQSL DQSL

[19] VMA_DM5 E7
[19] VMA_DM6 D3

DML DMU

[19] VMA_WDQS6 C7
[19] VMA_RDQS6 B7

DQSU DQSU

FBA_CMD5 T2

RESET

GND — 243_4 R1080 — FBA_ZQ5 L8

ZQ

FBA_CMD18 J1
FBA_CMD17 L1
FBA_CMD19 J9
FBA_ZQ7 L9
GND — 243_4 R1127

NC#J1 NC#L1 NC#J9 NC#L9

96-BALL SDRAM DDR3
VRAM _DDR3_HYNIX_256MX16

stuff R1124 for Hynix 8Gb DDP VRAM

DQU0 D7
DQU1 C3
DQU2 C8
DQU3 C2
DQU4 A7
DQU5 A2
DQU6 B8
DQU7 A3

VMA_DQ51 [19]
VMA_DQ52 [19]
VMA_DQ48 [19]
VMA_DQ55 [19]
VMA_DQ49 [19]
VMA_DQ54 [19]
VMA_DQ50 [19]
VMA_DQ53 [19]

DQL0 E3
DQL1 F7
DQL2 F2
DQL3 F8
DQL4 H3
DQL5 H8
DQL6 G2
DQL7 H7

VMA_DQ41 [19]
VMA_DQ47 [19]
VMA_DQ42 [19]
VMA_DQ45 [19]
VMA_DQ40 [19]
VMA_DQ46 [19]
VMA_DQ43 [19]
VMA_DQ44 [19]

VDD#B2 B2
VDD#D9 D9
VDD#G7 G7
VDD#K2 K2
VDD#K8 K8
VDD#N1 N1
VDD#N9 N9
VDD#R1 R1
VDD#R9 R9

+1.5V_GFX — 4.7U/6.3V_6 C1118 — 0.1U/16V_4 C1119 — 0.1U/16V_4 C1120 — GND

VDDQ#A1 A1
VDDQ#A8 A8
VDDQ#C1 C1
VDDQ#C9 C9
VDDQ#D2 D2
VDDQ#E9 E9
VDDQ#F1 F1
VDDQ#H2 H2
VDDQ#H9 H9

+1.5V_GFX — 4.7U/6.3V_6 C1124 — 0.1U/16V_4 C1125 — 0.1U/16V_4 C1126 — GND

VSS#A9 A9
VSS#B3 B3
VSS#E1 E1
VSS#G8 G8
VSS#J2 J2
VSS#J8 J8
VSS#M1 M1
VSS#M9 M9
VSS#P1 P1
VSS#P9 P9
VSS#T1 T1
VSS#T9 T9

GND

VSSQ#B1 B1
VSSQ#B9 B9
VSSQ#D1 D1
VSSQ#D8 D8
VSSQ#E2 E2
VSSQ#E8 E8
VSSQ#F9 F9
VSSQ#G1 G1
VSSQ#G9 G9

+1.5V_GFX — C1134 1U/6.3V_4 — C1137 1U/6.3V_4 — C1139 1U/6.3V_4 — C1142 1U/6.3V_4

+1.5V_GFX — C1135 1U/6.3V_4 — C1138 1U/6.3V_4 — C1140 1U/6.3V_4 — C1143 1U/6.3V_4

+1.5V_GFX — C1129 10U/6.3V_6 — C1130 10U/6.3V_6 — C1131 10U/6.3V_6 — C1132 0.1U/16V_4 — C1133 0.1U/16V_4 — C1136 0.1U/16V_4 — C1141 0.1U/16V_4 — C1144 0.1U/16V_4 — C1145 0.1U/16V_4

NB5

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Quanta Computer Inc.

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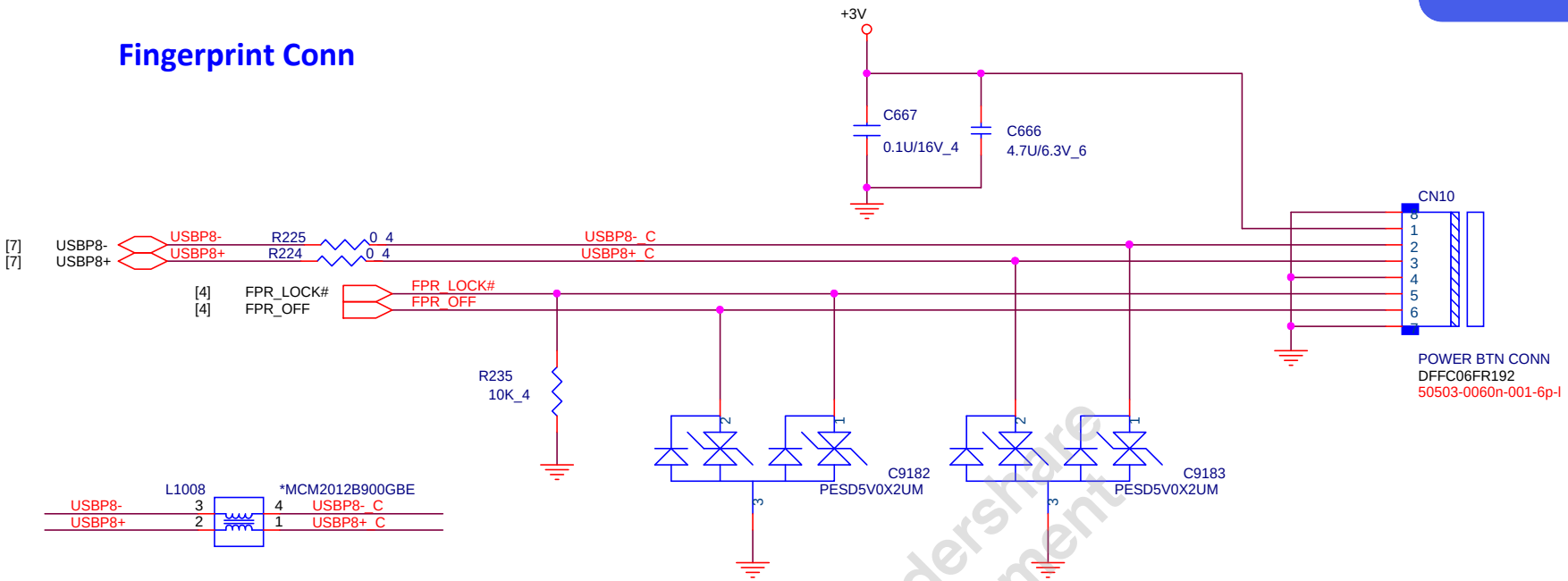
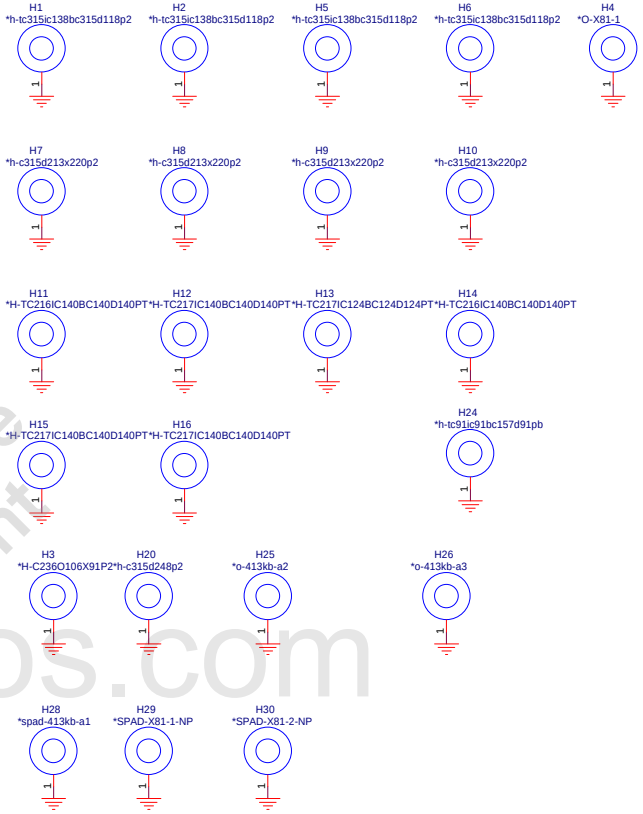
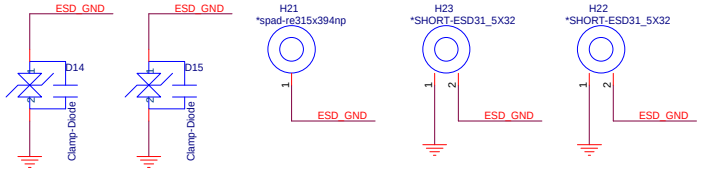
Fingerprint Conn

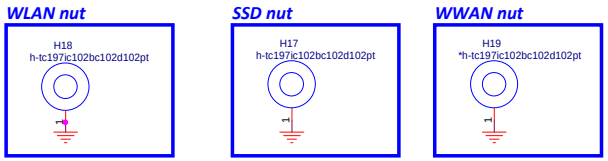


NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **24 -- FPR**	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 24 of 65	

Hole







Vinafix.com

NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **25 -- LVDS converter RTD2136**	Rev: 1A
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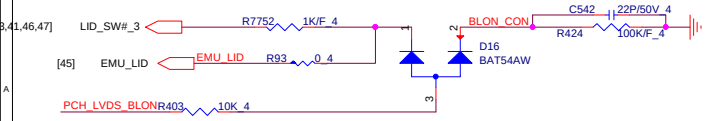
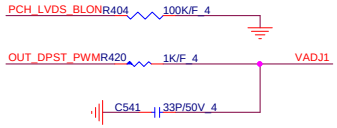
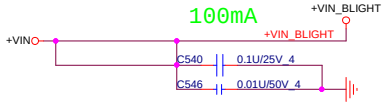
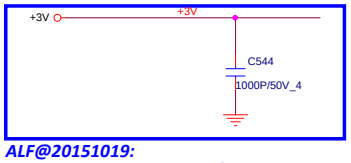
LID Switch

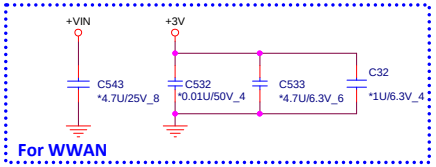


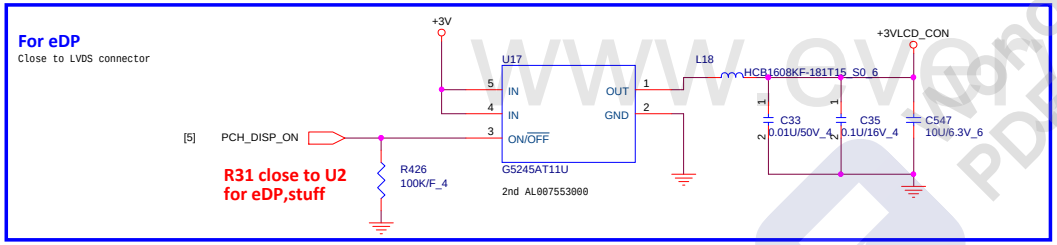


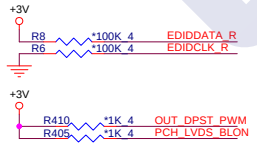


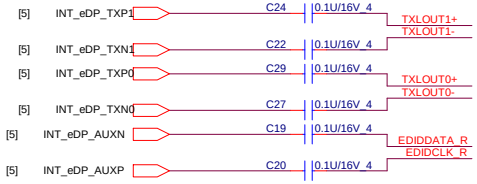


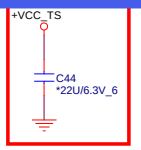
ALF@20151019:
1. Designed Reserve 4Pins for IR CCD Pin 26 to Pin29
2.Combined the +3V & +3V_CAM & +3V_IR at Pin26~25

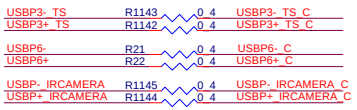




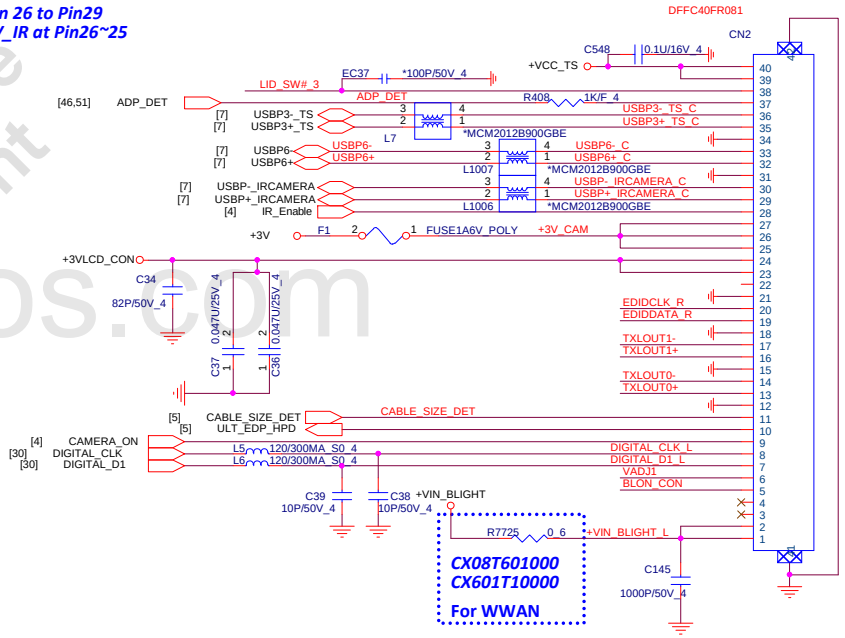








GS12401-1011-9H
lvds-50671-04041-001-40p-I



[2,3,4,5,7,8,9,10,16,17,18,19,20,24,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63] +3V
[8,27,29,30,40,42,43,54,58,63] +5V
[28,44,51,52,53,54,55,56,57,58,59,61,66] +VIN

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Quanta Computer Inc.

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Custom	26 -- LCD CONN/LID/CAM/D-MIC	1A
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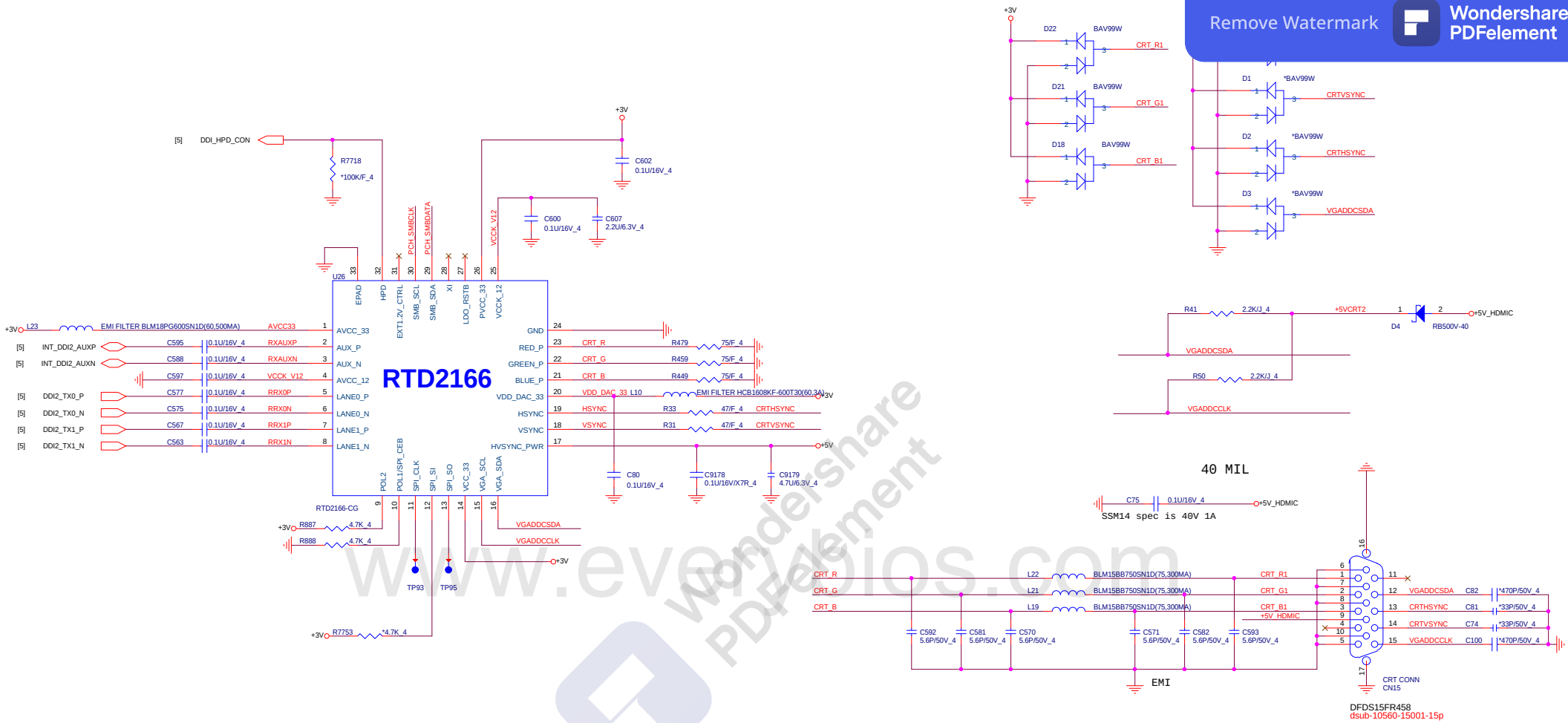

CIIC_SCL, CIIC_SDA Connection

EP mode: Pin2, Pin3 connect to EC SMBUS

ROM or EEPROM mode: connect to PCH SMBUS

IIC Protocol is used

RTD2168 Slave Address:
0x64/0x65 and 0x68/0x69

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: DP to VGA	Rev: 1A
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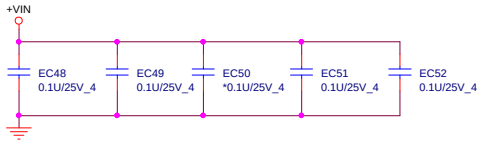
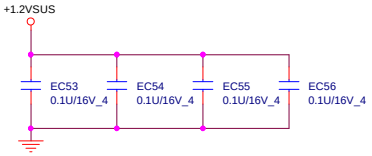
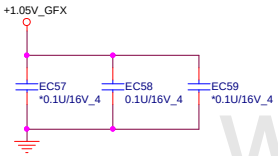
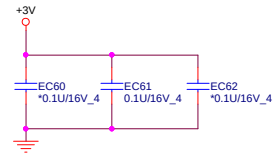
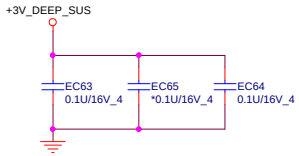
EMI CAP

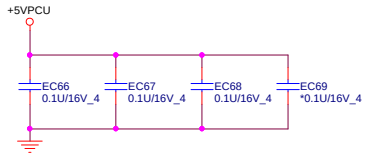




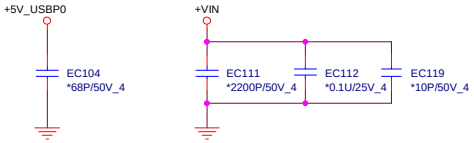


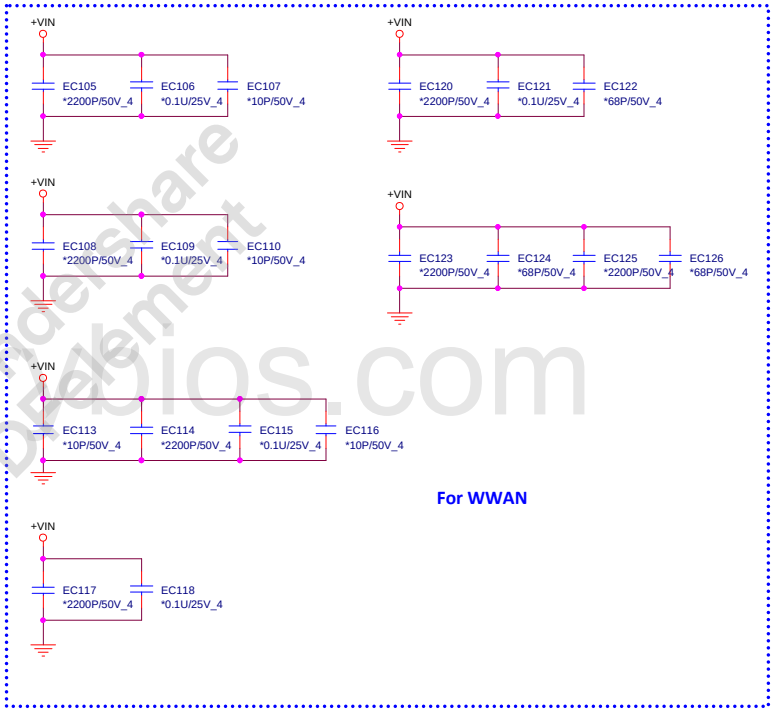






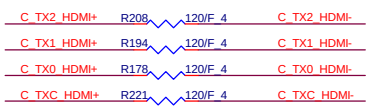
RF Cap

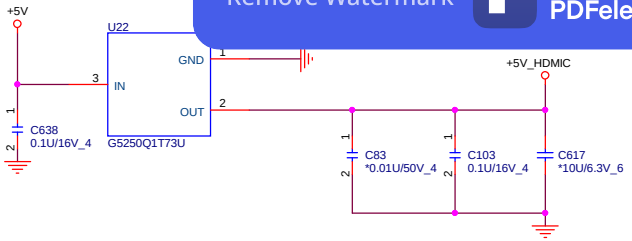


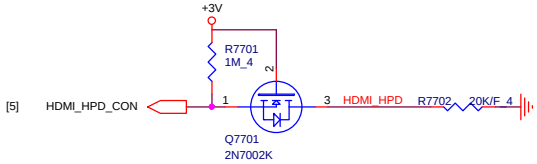


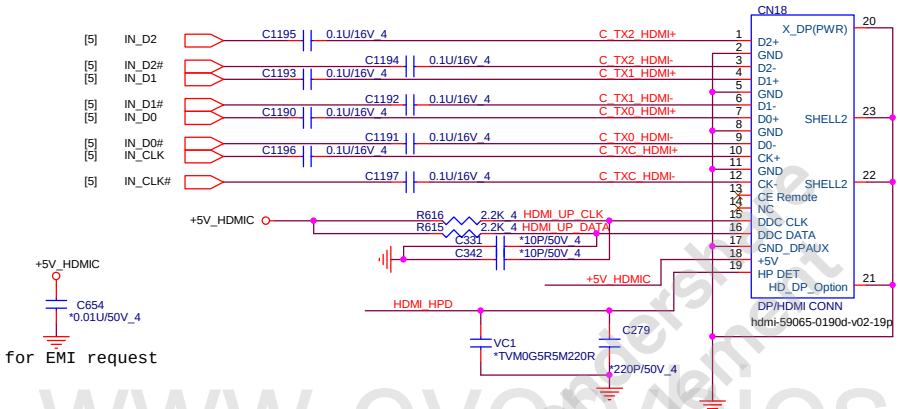
NB5	PROJECT:400 Series Quanta Computer Inc.	
	Size: Custom Document Number: 28 – REPEATER PS8407A	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 28 of 65

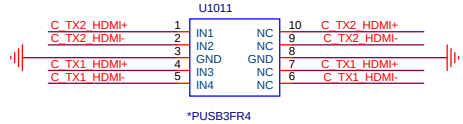
EMI Solution

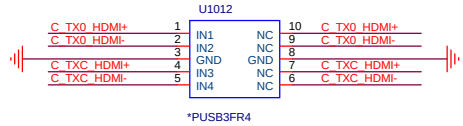




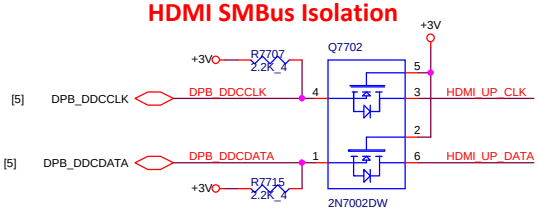


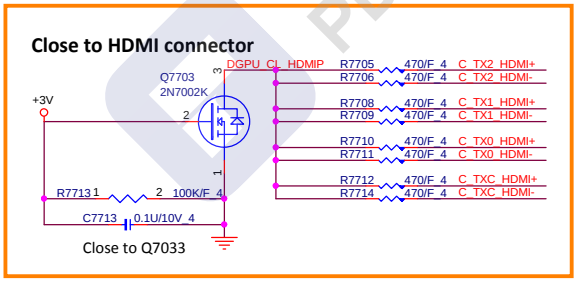






HDMI SMBus Isolation

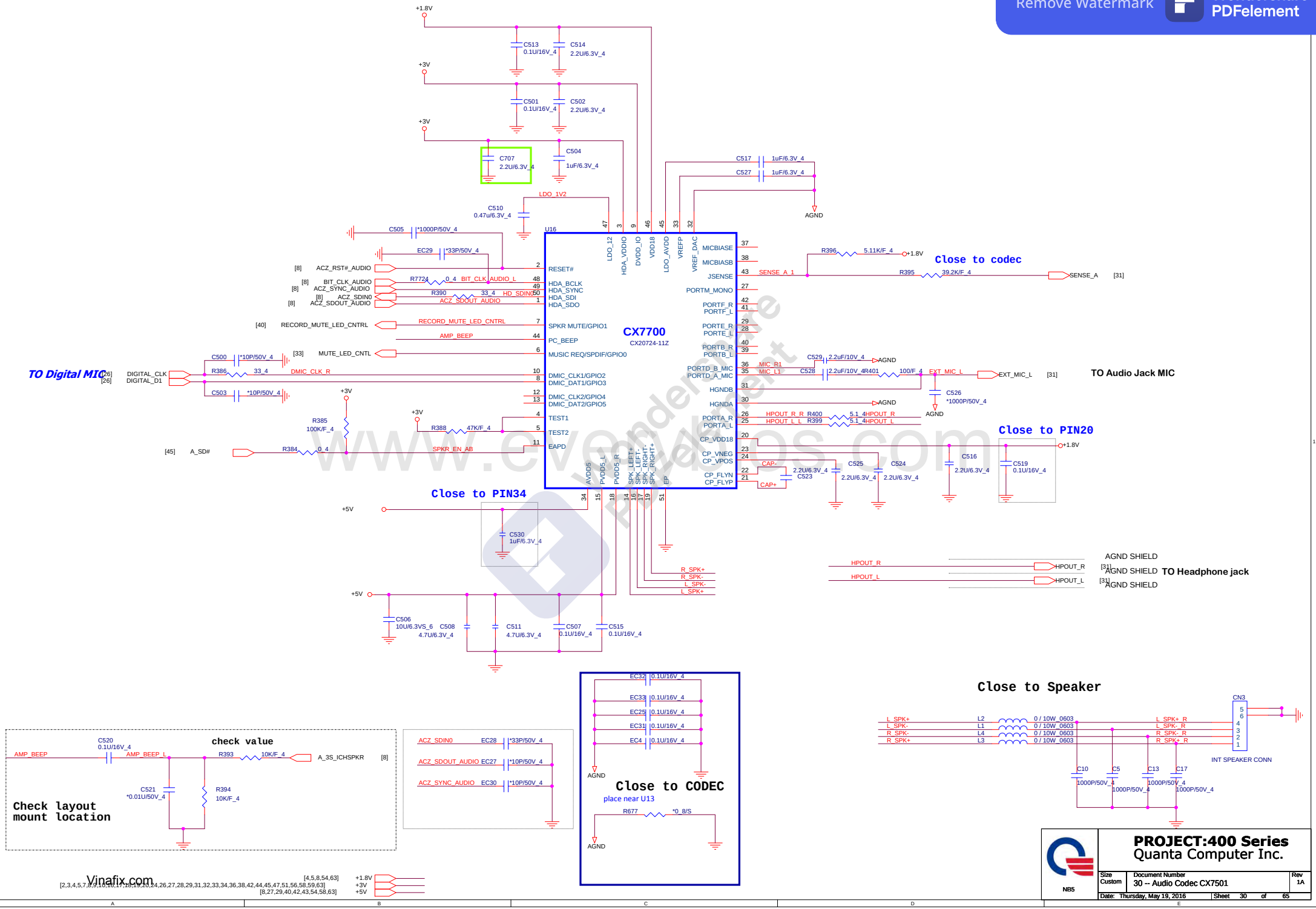




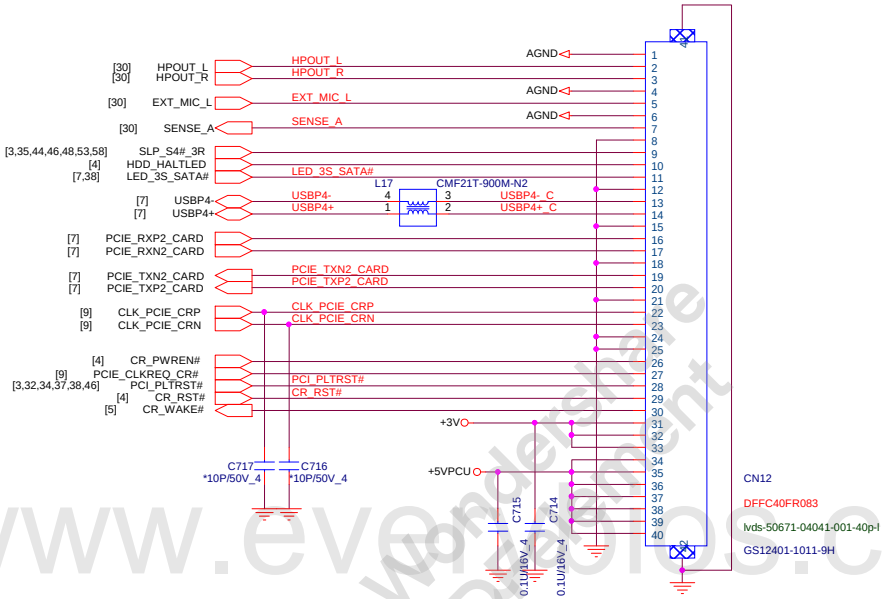
Vinafix.com

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 29 -- HDMI CONNECTOR	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 29 of 65	

Audio Codec



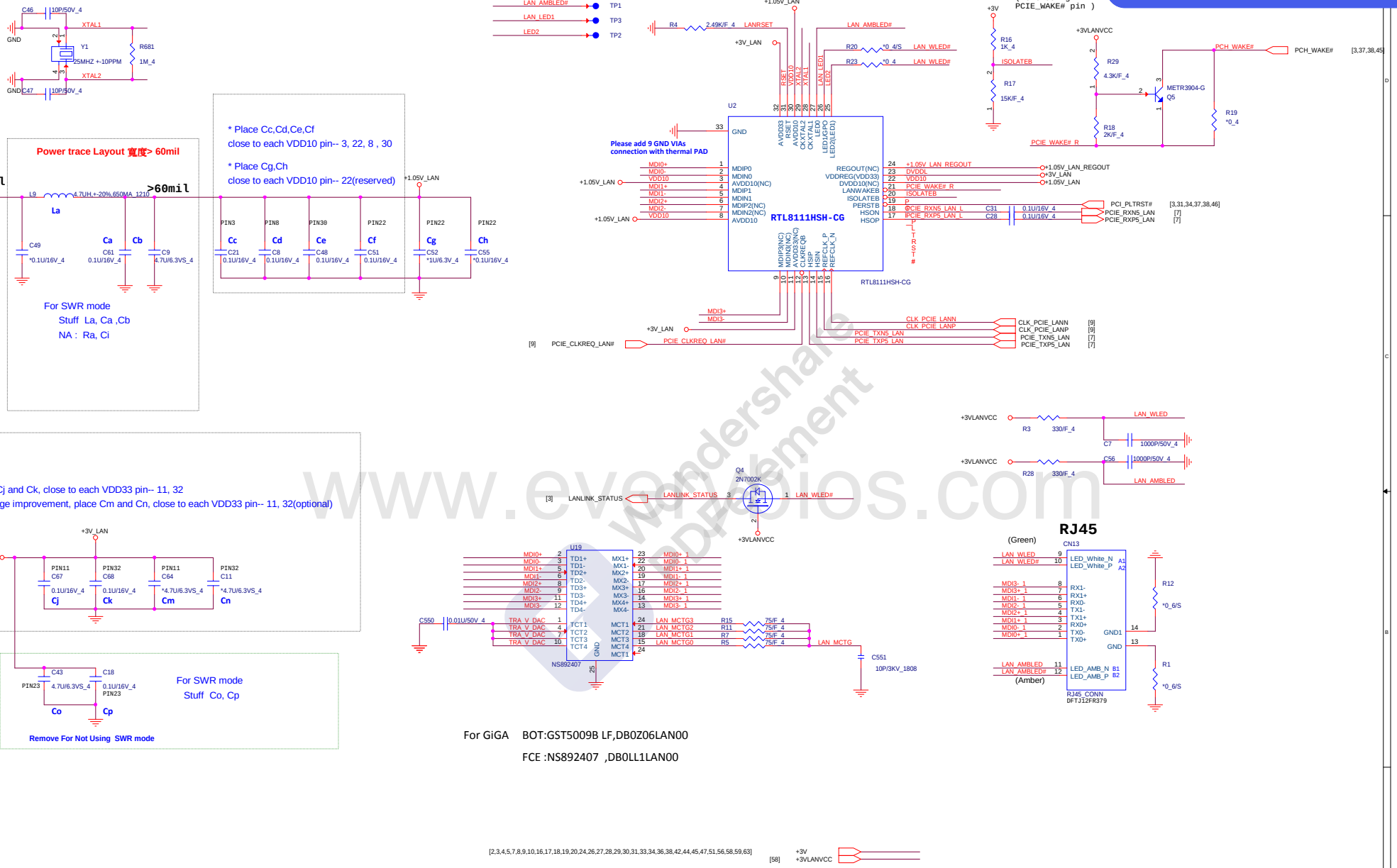
USB/Card Reader/Headphone_Mic Combo Jack Daugther Board Connector



NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 31 -- DAUGTHER BOARD CONN.	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 31 of 65	

400 series 0930 whole page

LAN & RJ45

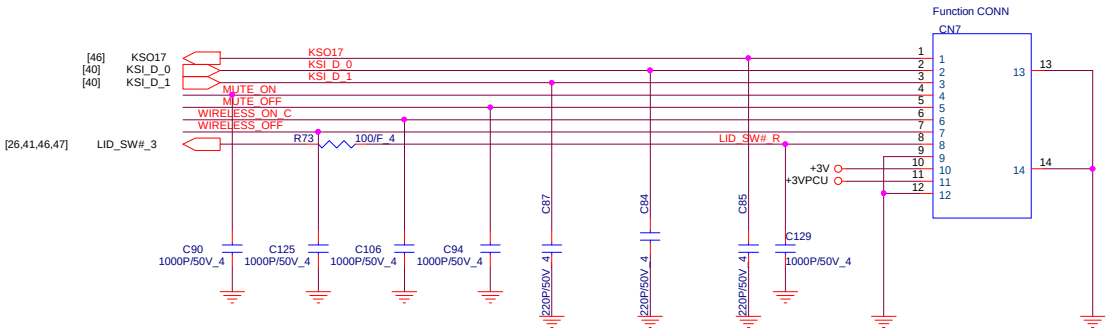


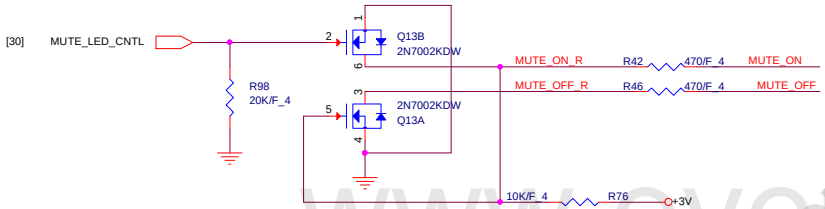
For GiGA BOT:GST5009B LF,DB0Z06LAN00

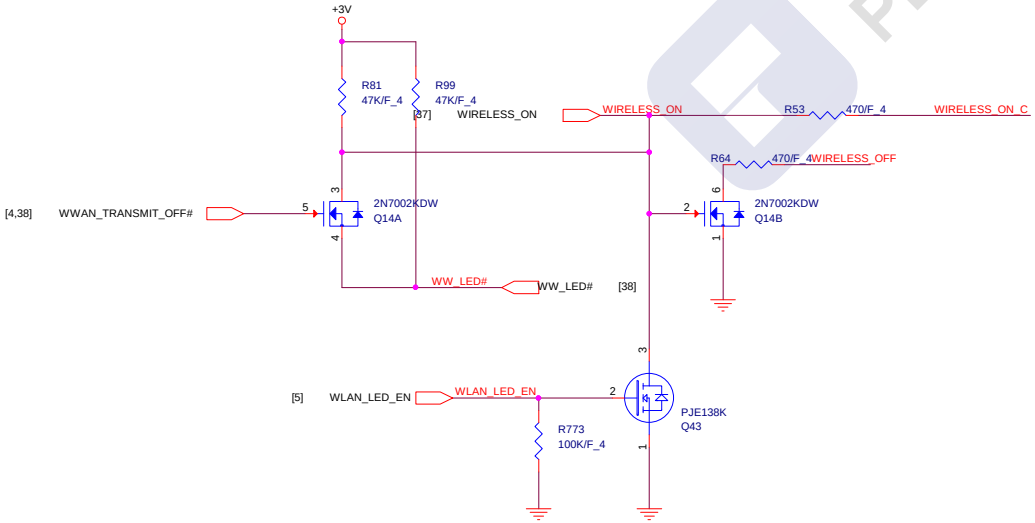
FCE :NS892407 ,DB0LL1LAN00

Vinafix.com

PROJECT:400 Series Quanta Computer Inc.		
Size C	Document Number 32 -- LAN RTL8111HSH-CG/RJ45	Rev 1A
Date: Thursday, May 12, 2016	Sheet 32 of 65	

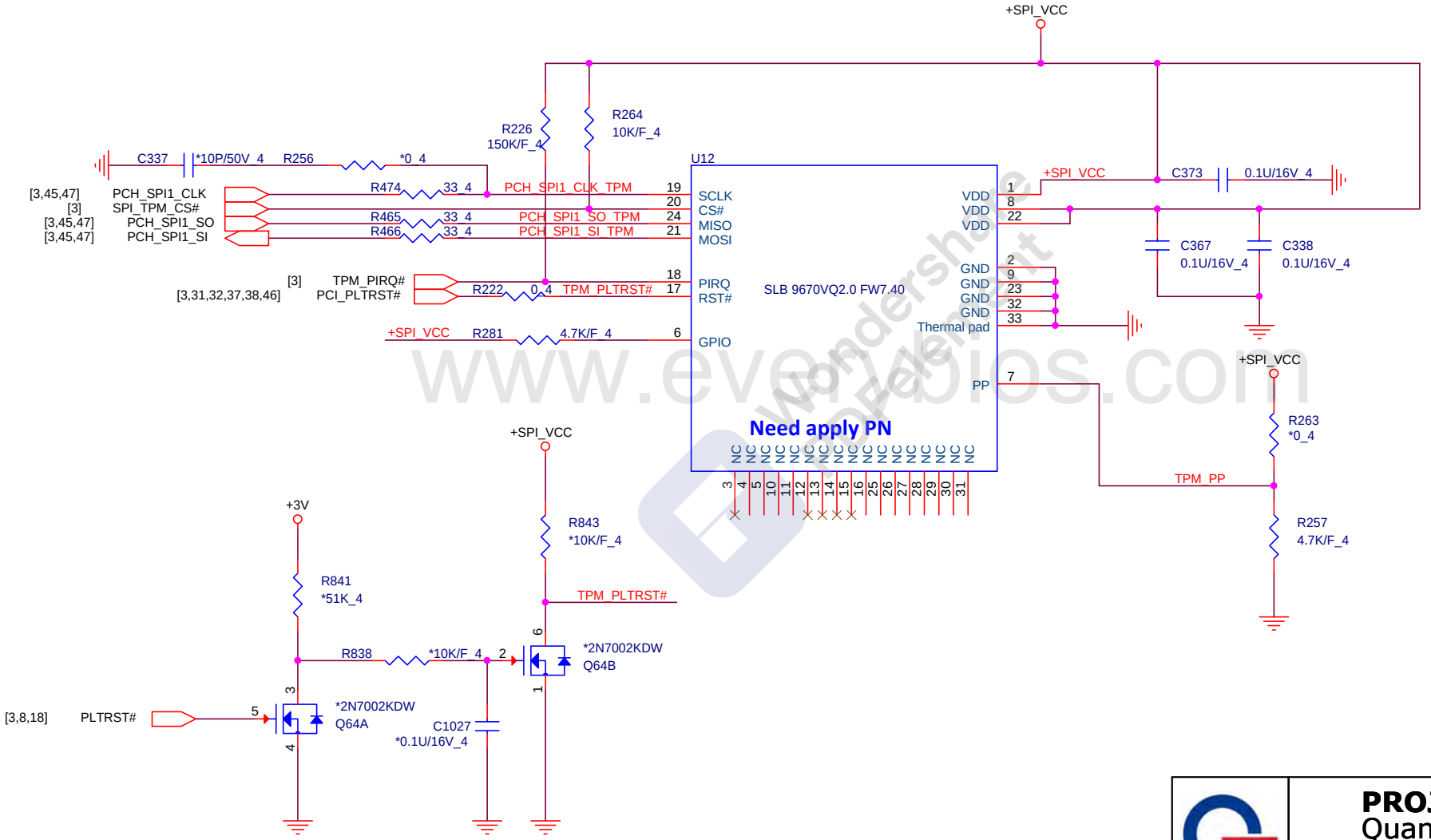






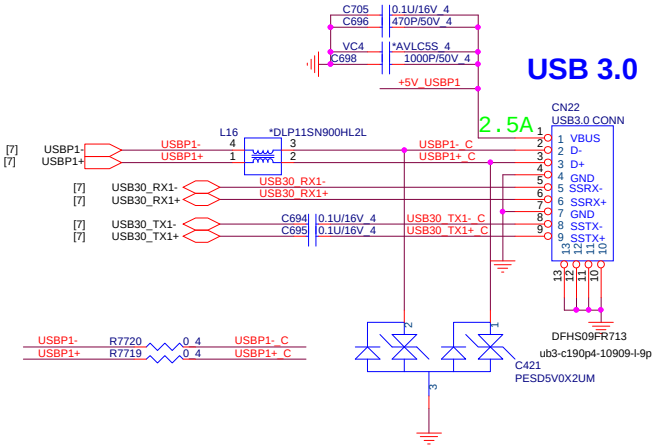
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 33 -- Function Conn.	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 33 of 65	

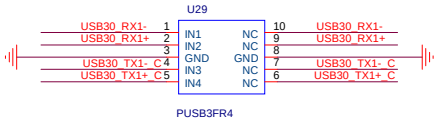
TPM (1.2 or 2.0)

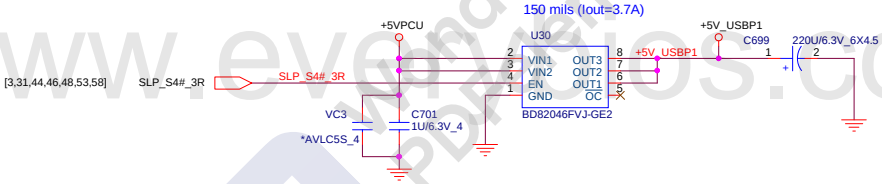


NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: 34 -- TPM SLB9670_QFN	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 34of 65	

USB 2.0/3.0 Combo







[28,31,44,49,50,51,52,53,54,56,57,58,59,60,61,63] +5VPCU

[3,10,33,37,38,40,41,42,44,45,46,48,49,51,52,53,55,58,60,62,63] +3VPCU

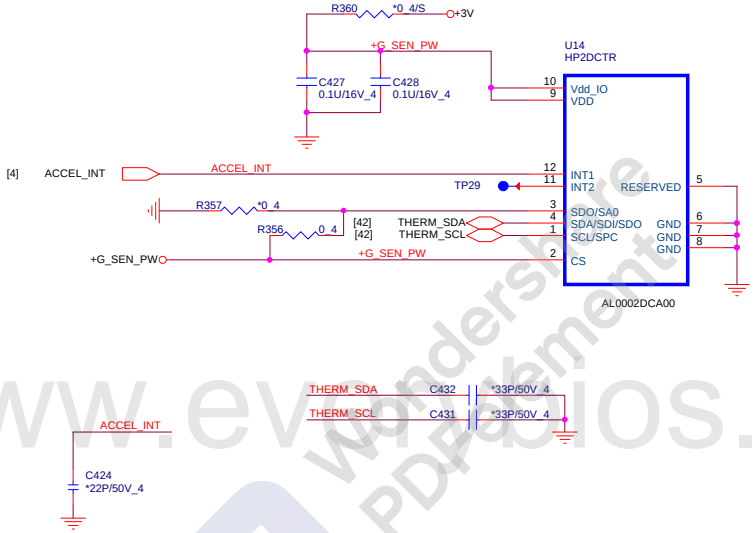
NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	35 – USB3.0 x2	1A

Date: Tuesday, May 17, 2016 Sheet 35 of 65

Accelerometer Sensor



[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,38,42,44,45,47,51,56,58,59,63] +3V

[3,10,33,37,38,40,41,42,44,45,46,48,49,51,52,53,55,58,60,62,63] +3VPCU

NB5

PROJECT:400 Series
Quanta Computer Inc.

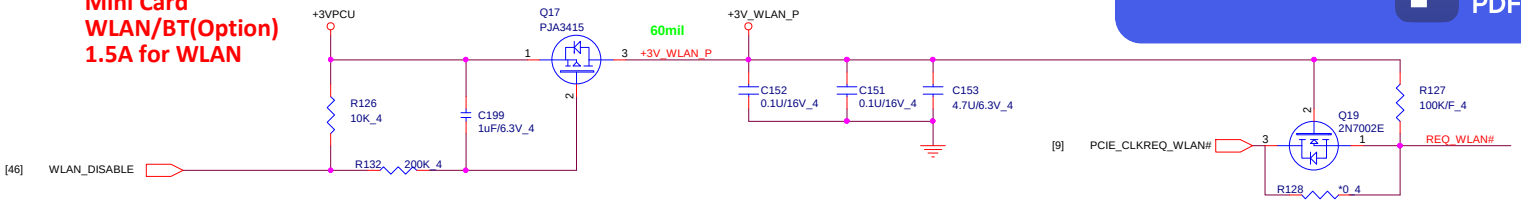
Size	Document Number	Rev
Custom	36 -- TS and Accelerometer	1A

Date: Thursday, May 12, 2016 Sheet 36of 65

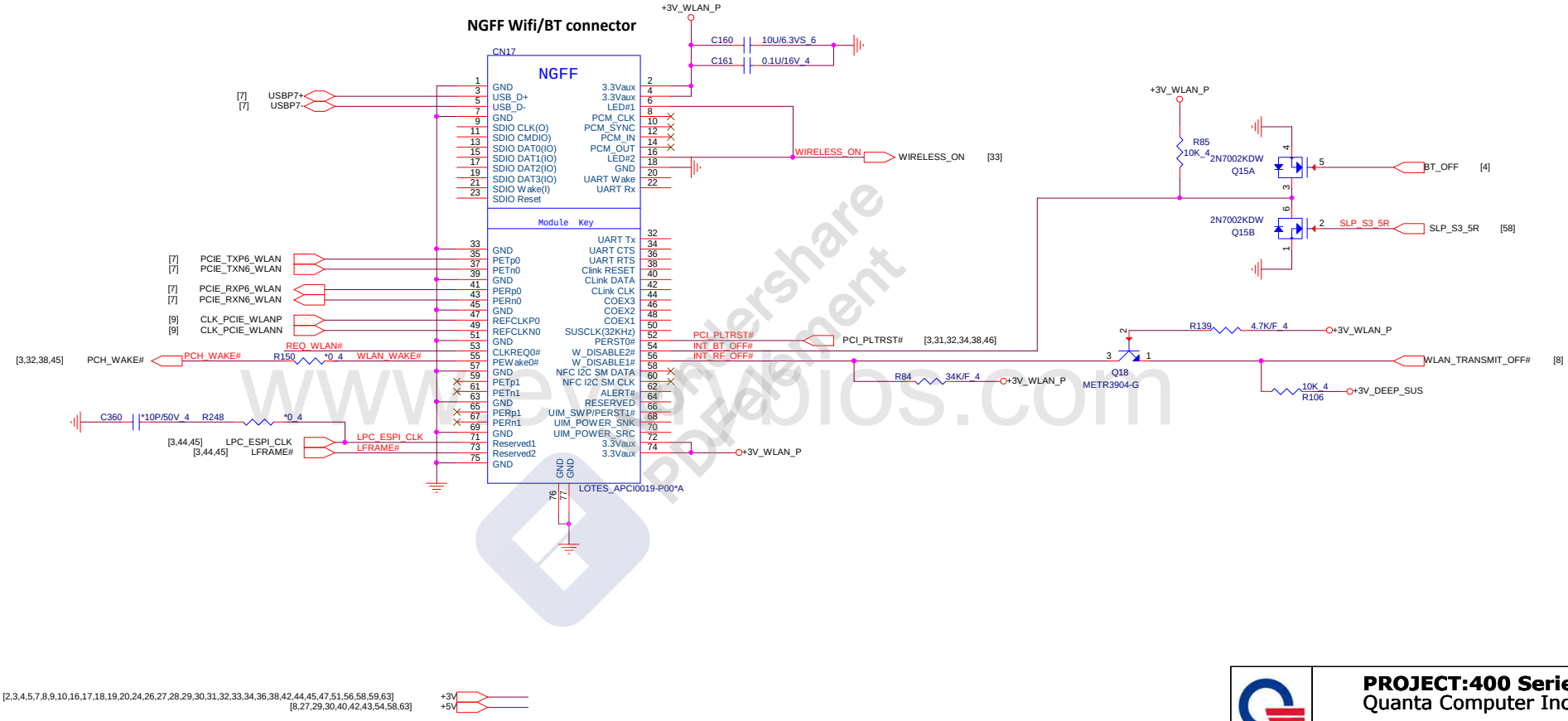
NGFF WLAN/BT

EC-B-03

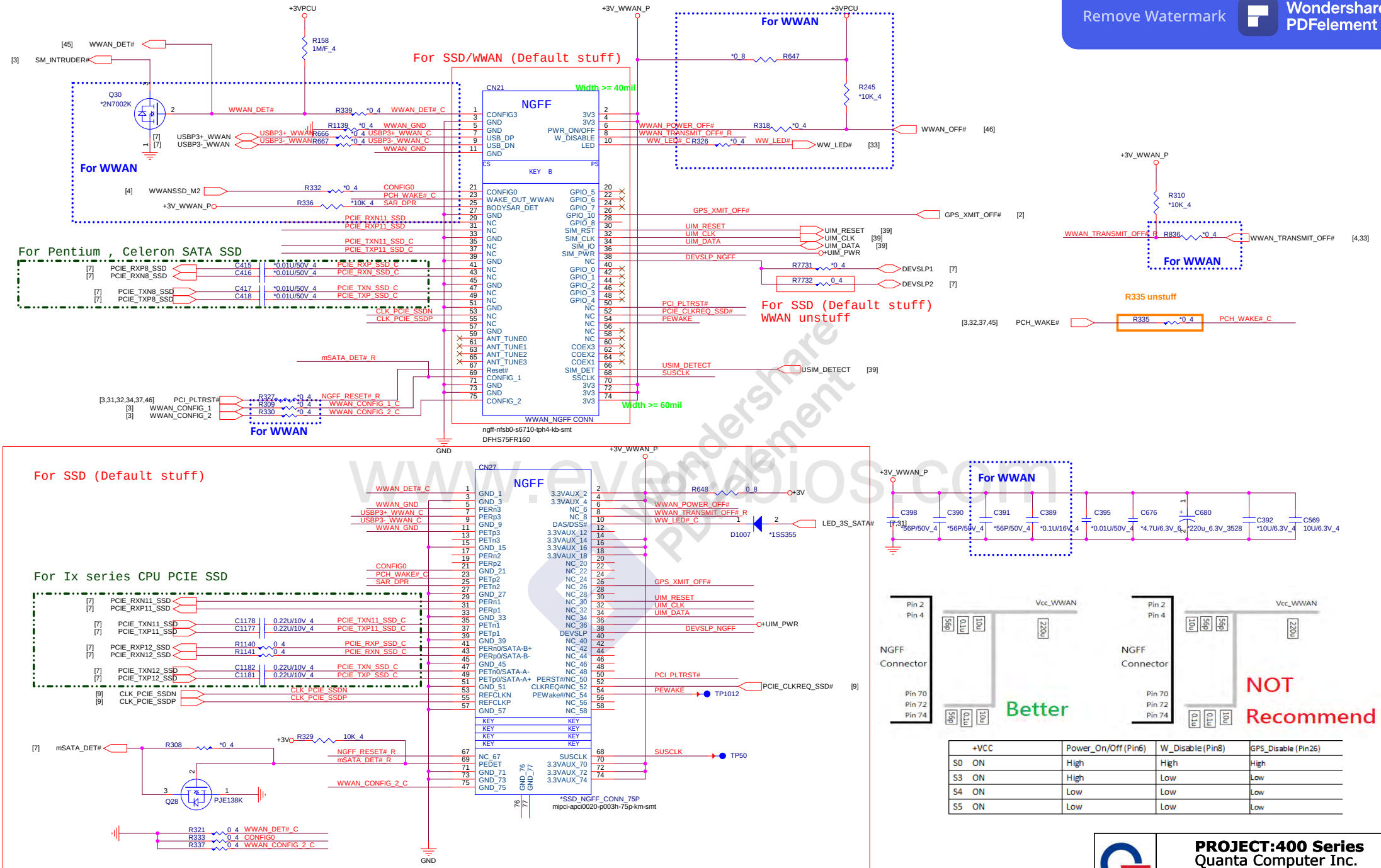
Mini Card
WLAN/BT(Option)
1.5A for WLAN



NGFF Wifi/BT connector



NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: 37 -- NGFF WLAN/BT	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 37of 65	

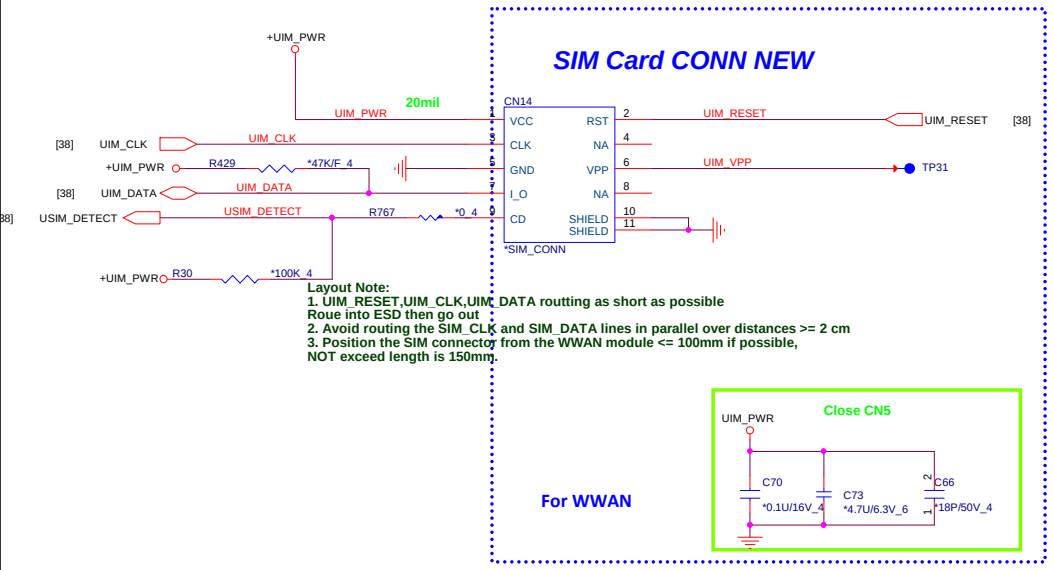


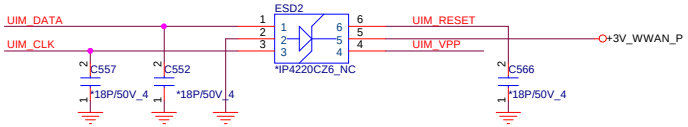
+VCC	Power_On/Off (Pin6)	W_Disable (Pin8)	GPS_Disable (Pin26)
S0 ON	High	High	High
S3 ON	High	Low	Low
S4 ON	Low	Low	Low
S5 ON	Low	Low	Low

PROJECT:400 Series
Quanta Computer Inc.

NB5

Size	Document Number	Rev
Custom	38 -- WWAN NGFF/ SSD	1A
Date: Thursday, May 12, 2016	Sheet 38 of 65	





Trace Length and Routing

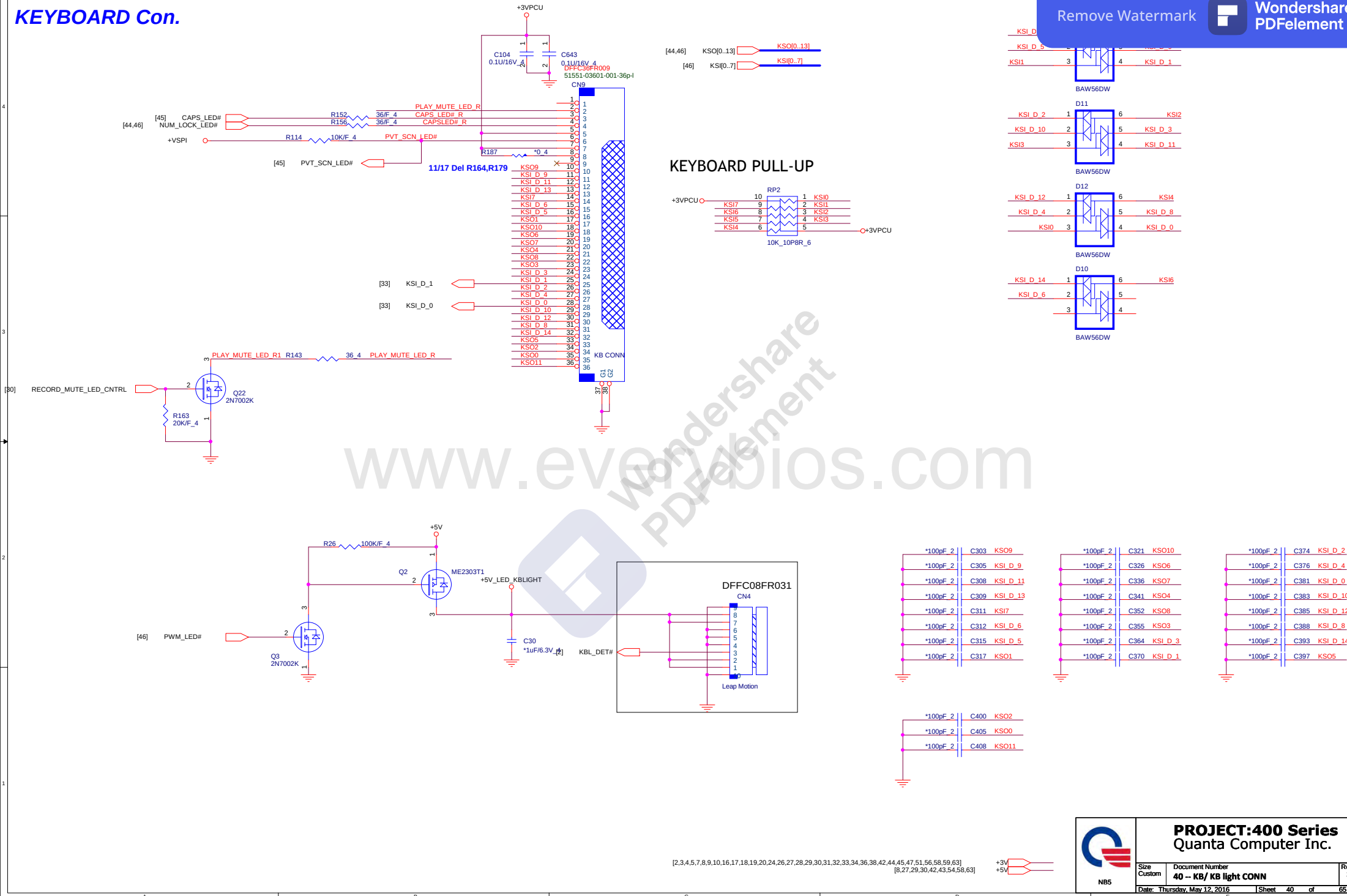
- Special attention should be paid to SIM traces (UIM_CLK, UIM_DATA and UIM_RST) to minimize the trace lengths between the SIM slot and the WAN NGFF slot. **Minimizing the signal lengths and traces will reduce possibility of SIM signal integrity issues.** Recommended maximum length is 100mm. Not to exceed length is 150mm.
- Minimum distance between UIM_CLK and UIM_DATA should be 20 mils. Static signals such as UIM_RST can be routed between UIM_CLK and UIM_DATA to conserve space if needed.
- It is recommended that SIM traces be isolated from other high-speed switching signals, as noise can couple into the SIM signals. Keep a minimum distance of 20 mils between UIM_CLK, UIM_DATA and any other high-speed switching signals.
- Placing the SIM card on a daughter card is also not recommended as the interconnect may impact SIM signal integrity.

SIM Power

- The UIM_PWR trace width must be at least 20 mils. Sub-planar routing is recommended.
- Implement additional power filtering to SIM card power to ensure clean power is supplied to minimize any possible noise ripple effects. At a minimum, place a 0.1uF and a 4.7uF capacitor on the UIM_PWR supply and locate near the SIM connector.

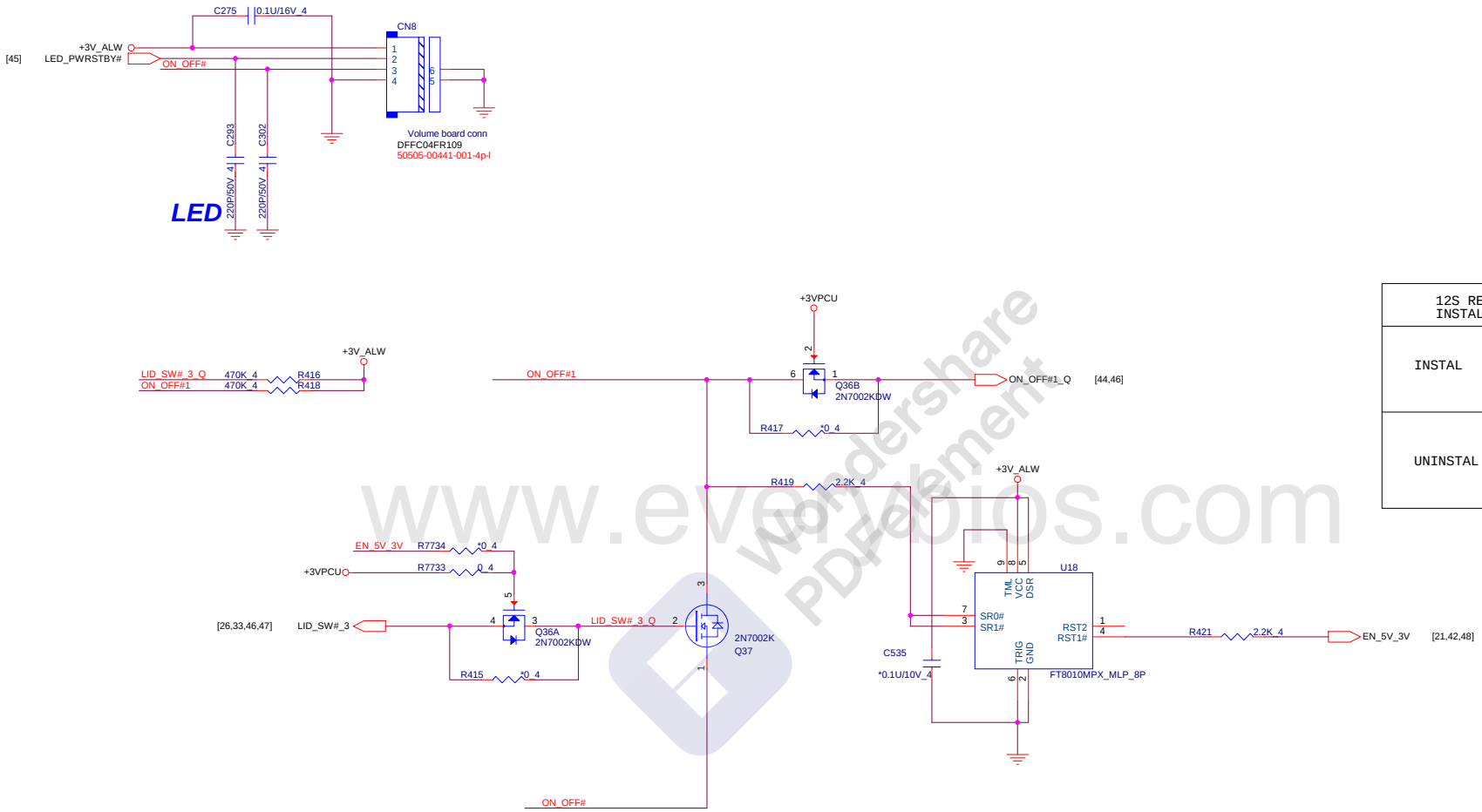
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 39 -- SIM CARD/ RF cap	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 39 of 65	

KEYBOARD Con.



NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 40 -- KB/ KB light CONN	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 40 of 65	

Power Botton Connector

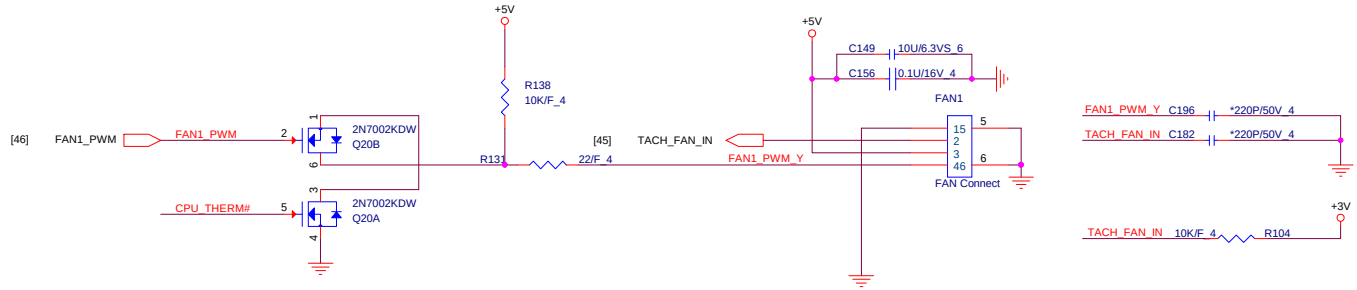


12S RESET MODE INSTAL FOR DB0	
INSTAL	R10702 R10703 R10704 R581 R10701 R595 U9068
UNINSTAL	R10754 R10755 Q7080 Q7081

[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63] +3V
[8,27,29,30,40,42,43,54,58,63] +5V
[9,48,51,52,58,62,63] +3V_ALW

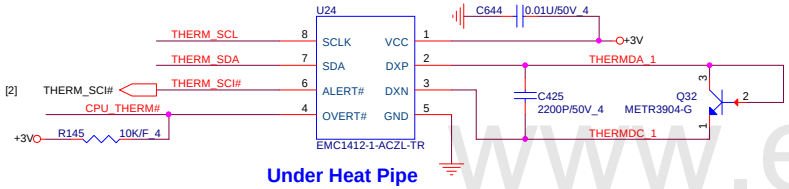
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 41 -- Power Button/ HW Reset	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 41 of 65	

FAN



Thermal sensor

CPU Thermal Sensor

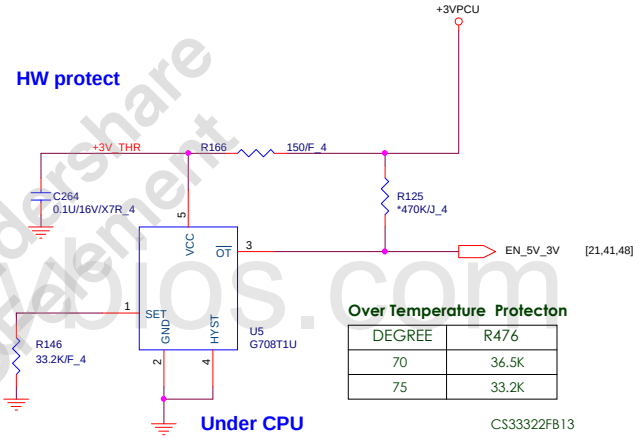


Under Heat Pipe

2nd:AL000431014 TMP431ADGKR

Main: AL000781012 G781P8(98h)

HW protect



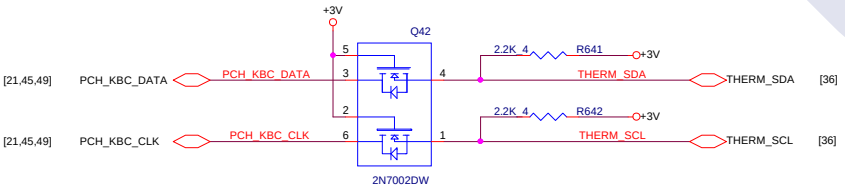
Over Temperature Protecton

DEGREE	R476
70	36.5K
75	33.2K

Under CPU

CS33322FB13

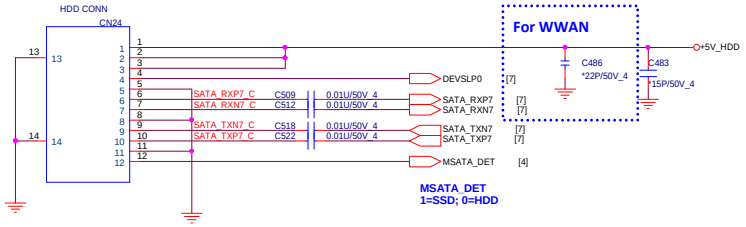
RSET (K OHM) = 0.0012T^2 - 0.9308T + 96.147

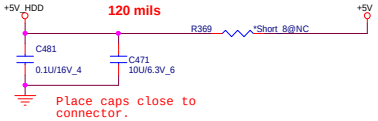


[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,44,45,47,51,56,58,59,63] [9,41,48,51,52,58,62,63] +3V +3V_ALW

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size Custom	Document Number 42-- FAN and Thermal IC	Rev 1A
Date: Thursday, May 19, 2016	Sheet 42 of 65	

SATA-HDD





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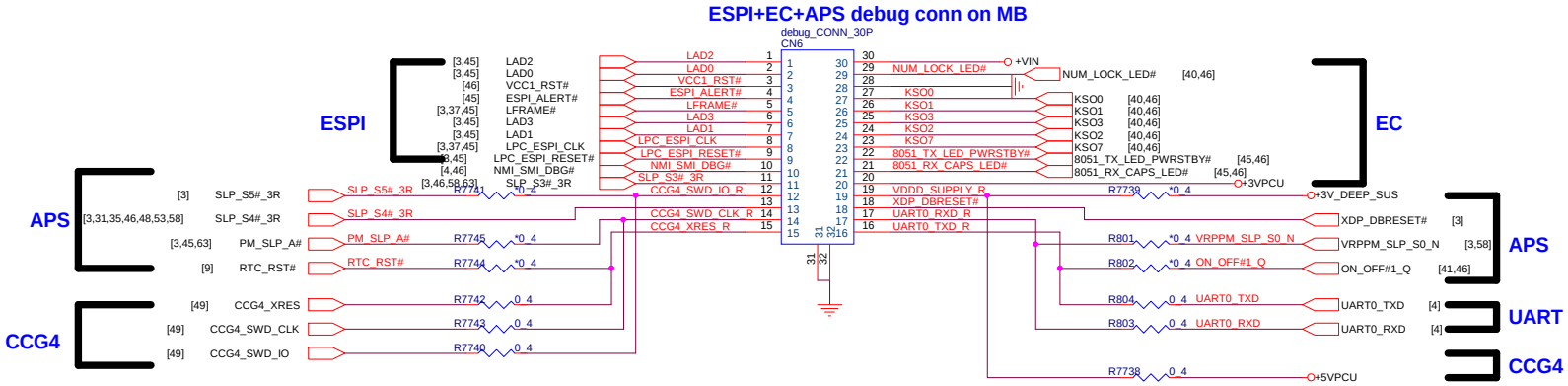
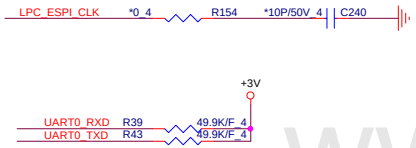
[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63]
[8,27,29,30,40,42,54,58,63]
+3V
+5V

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: C	Document Number: 43 -- HDD/ EMI cap	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 43of 65	





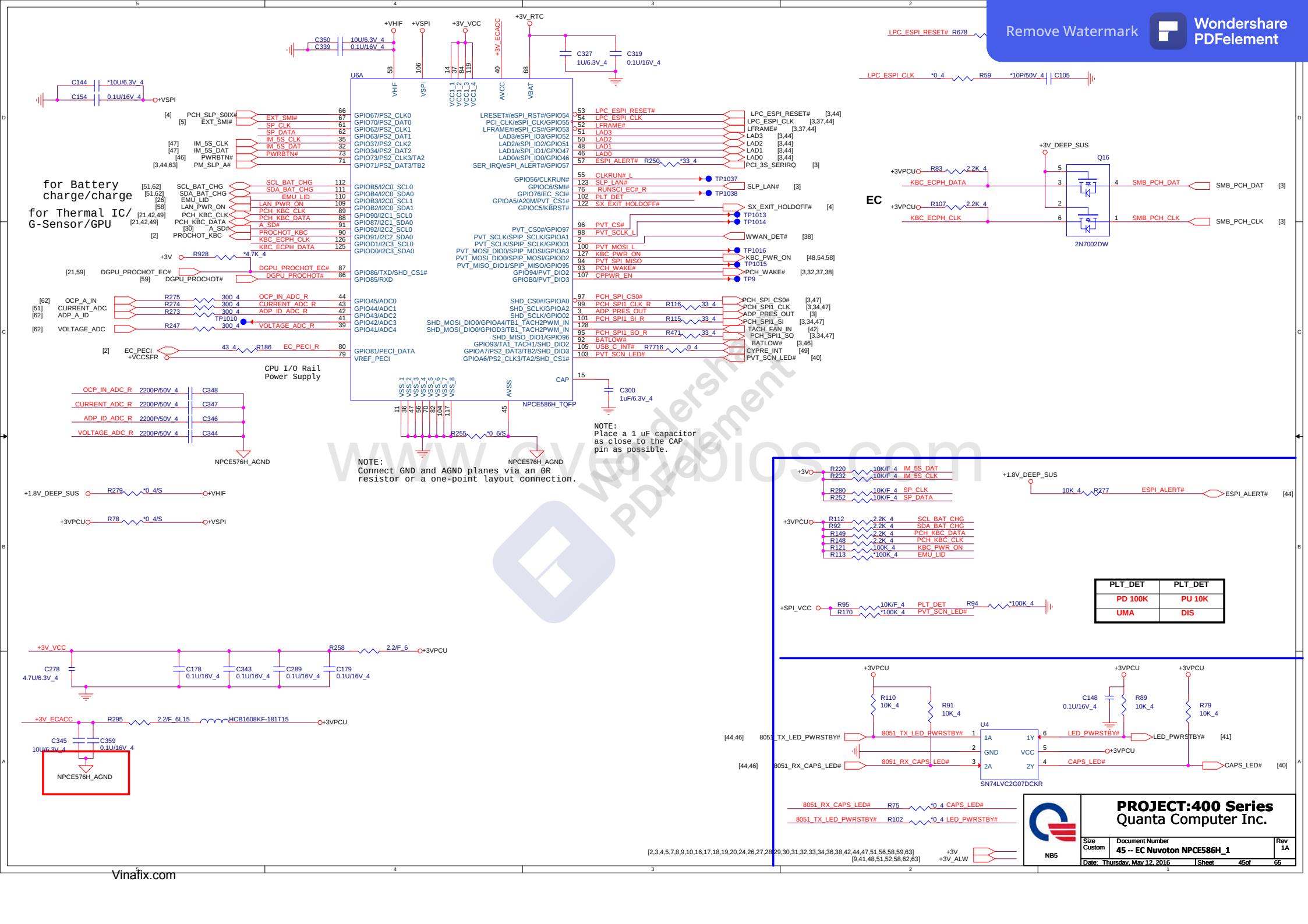
LPC & ESPI TABLE		
	LPC MODE	ESPI MODE
R771	INSTAL	UNINSTAL
R769	UNINSTAL	INSTAL
R770	INSTAL	UNINSTAL

LPC & ESPI TABLE			
		LPC MODE	ESPI MODE
R658	Ra	INSTAL	UNINSTAL
R646	Rb	INSTAL	UNINSTAL
R659	Rc	INSTAL	UNINSTAL
R656	Rd	INSTAL	UNINSTAL
R649	Re	INSTAL	UNINSTAL
R657	Rf	INSTAL	UNINSTAL
R249	Rg	INSTAL	UNINSTAL
R147	Rh	INSTAL	UNINSTAL
R120	Ri	INSTAL	UNINSTAL
R276	Rj	INSTAL	UNINSTAL
R678	Rk	UNINSTAL	INSTAL

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	44 -- EC & eSPI/UART debug conn	1A
Date: Thursday, May 12, 2016	Sheet 44 of 65	

NB5



All the PWM outputs can directly drive the cathode of a LED connected to 3.3V power

U6B

NPCE586H_TQFP

LANPWR ENABLE

ESD SOLUTION

NOTE : IF INSTALL R10603, PLEASE UNINSTALL R224

CPU Throttling

Dual

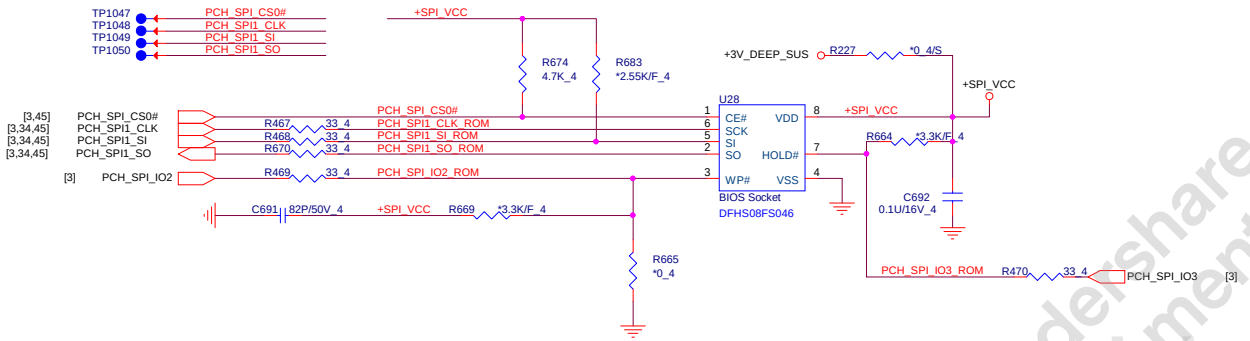
PROJECT:400 Series Quanta Computer Inc.		
NB5	Size: Custom; Document Number: 46 -- EC Nuvoton NPCE586H_2	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 46of 65

SPI ROM

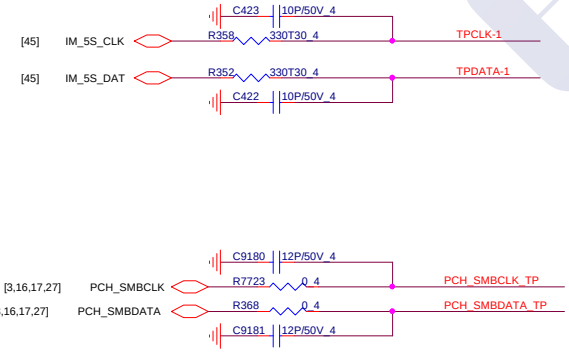
Vender	Size	P/N
GD	128MB	AKE2DF0KQ00
Winbond	128MB	AKE3DZNKN00
Socket		DFHS08FS046

PCH SPI ROM(CLG)

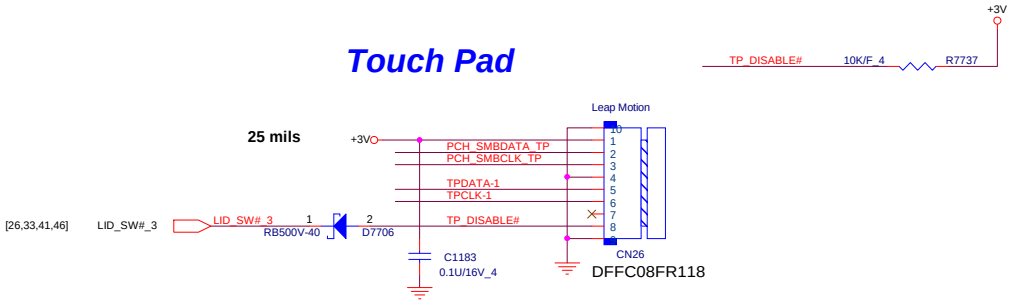
PCH 6*5mm WSON 16M
SPI ROM Socket



Touch Pad

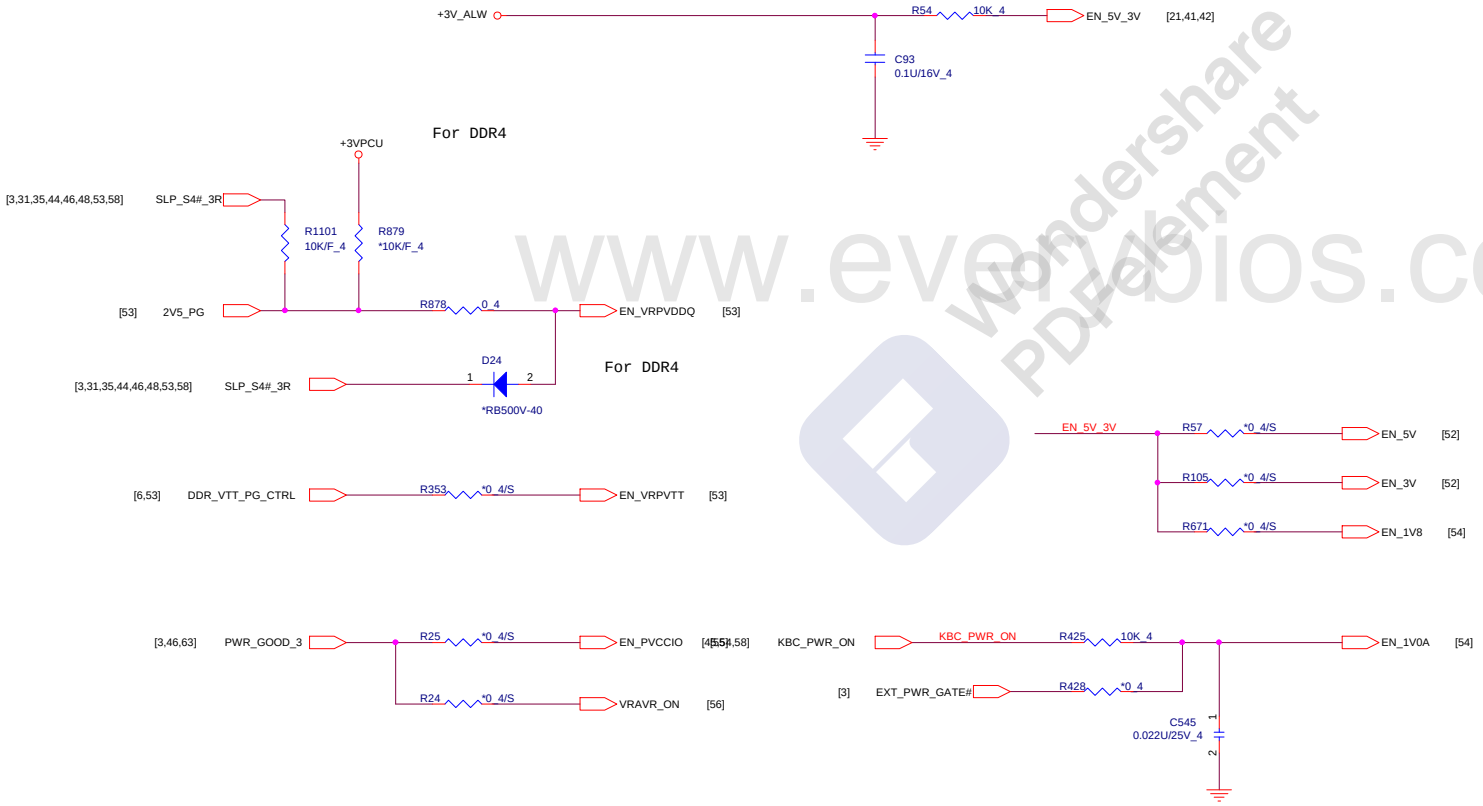


CLICK PAD
Address: 0x20(7 bit)



NB5	PROJECT:400 Series Quanta Computer Inc.	
	Size: Custom Document Number: 47 -- Flash(KBC+PCH)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 47of 65

POWER TO EE NET NAME CONNECTION



NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 48 -- POWER ENABLE	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 48of	65

SI, 2/22, Change 5V

+5VPCU
VDDD_SUPPLY
R1153 0_8
C1186 0.1U/16V_4
C1185 0.1U/16V_4
C700 1uF/6.3V_4

U1013
*G5250Q1T73U
GND
IN
OUT
C1184 0.1U/16V_4
C697 1uF/6.3V_4
R837 0.3_6
R57
R839 0_4
R58
R1154 *2M/F_4
VCONN_VMON_P1
VCONN_5V_P1
VCONN_5V_P1 trace width must be 25mil above.

Note:
The above resistor divider network is needed only when VDDD_SUPPLY is 3.3V.
Don't place R58 and R60 resistors when VDDD_SUPPLY is 5V.
Use 0ohm resistors for R57 and R59 when VDDD_SUPPLY is 5V.

T/I connect To EC 105 Pin, netname CYPRE_INT

U1008
CCG4 40-QFN
VDDD
VDDIO
VCCD
C1189 1uF/6.3V_4
VCONN_V5V_P1
VCONN_V5V_P2
I2C_SDA_SCB2_AR/GPIO
I2C_SCL_SCB2_AR/GPIO
I2C_INT_AR_P1/GPIO
I2C_INT_AR_P2
VBUS_MON_P1
VBUS_MON_P2
SWD_IO/AR_RST#/GPIO
SWD_CLK/I2C_INT_AR_P2/GPIO
I2C_INT_EC
I2C_SDA_SCB1_EC
I2C_SCL_SCB1_EC
VSEL1_P1/VCONN_VMON_P1
VSEL2_P1/OVP_TRIP_P1
VSEL1_P2/SCL_3/VCONN_VMON_P2
VSEL2_P2/GPIO
OVP_TRIP_P2
XRES
VBUS_P_CTRL_P1
VBUS_C_CTRL_P1
VBUS_DISCHARGE_P1/GPIO
HPD_P1
CC2_P1
CC1_P1
MUX_CTRL3_P1/SDA_3/GPIO
MUX_CTRL2_P1/SDA_4
MUX_CTRL1_P1/SCL_4
HPD_P2
CC1_P2
CC2_P2
MUX_CTRL3_P2/GPIO
MUX_CTRL2_P2/GPIO
MUX_CTRL1_P2/GPIO
VBUS_C_CTRL_P2
VBUS_P_CTRL_P2
VBUS_DISCHARGE_P2/GPIO
EPAD
CYPD4125-40LQXIT
PART_NUMBER = CYPD4225-40LQXIT
Manufacturer = Cypress

TYPEC_EN [50]
CCG1_VBUS_DISCHARGE
R7726 100K_4
+5V_USBP0
R1149 100/F_4
PJE138K Q63
CCG4_HOTPLUG_DET_P1
R798 *10K/F_4
+3VPCU
TYPEC_CC2 [50]
C702 390P/50V_4
TYPEC_CC1 [50]
C703 390P/50V_4
CCG4_I2C_SDA_MUX
CCG4_I2C_SCL_MUX
R1152 *10K/F_4
R1151 *10K/F_4

C704 0.1U/16V_4
R1147 100K/F_4
R1150 10K/F_4
+5V_USBP0

[44] CCG4_SWD_IO
[44] CCG4_SWD_CLK
[4] SWD_IO_PCH
[4] SWD_CLK_PCH
R1148 *0_4
R805 *0_4
CCG4_SWD_IO
CCG4_SWD_CLK
R1146 10K/F_4
[45] CYPRE_INT
USB_C_INT#
[21,42,45] PCH_KBC_DATA
[21,42,45] PCH_KBC_CLK
PCH_KBC_DATA
PCH_KBC_CLK
[50] CCG4_OVP
MOD_ID1
MOD_ID2
R806 4.7K_4
VDDD_SUPPLY
[44] CCG4_XRES
CCG4_XRES
C1188 0.1U/16V_4
[4] SWD_XRES_PCH
R807 *10K/F_4
*PJE138K Q1010

R7729 2.2K_4
R7727 *7.15K/F_4
R7728 5.9K/F_4
R7730 1K/F_4
MOD_ID1
MOD_ID2

R7754 *4.7K_4
R7755 *4.7K_4
CCG4_SWD_CLK

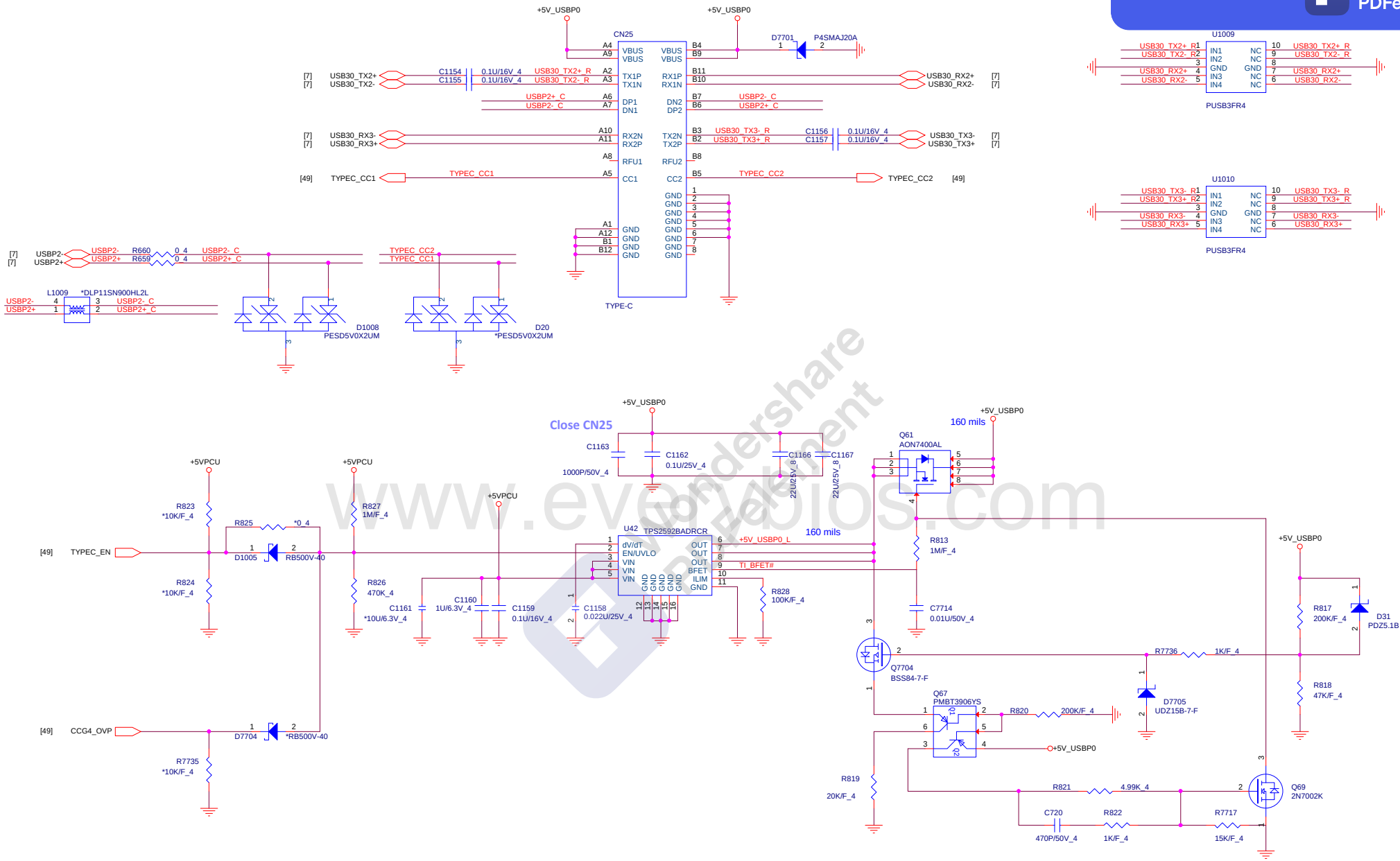
MOD_ID	Pull high	Pull down
L0	None	1K
L1	7.1K	1K
L5	3.09K	5.1K
L6	2.2K	5.9K

MOD_ID1 and MOD_ID2 pins connect to ADC in CCG4.

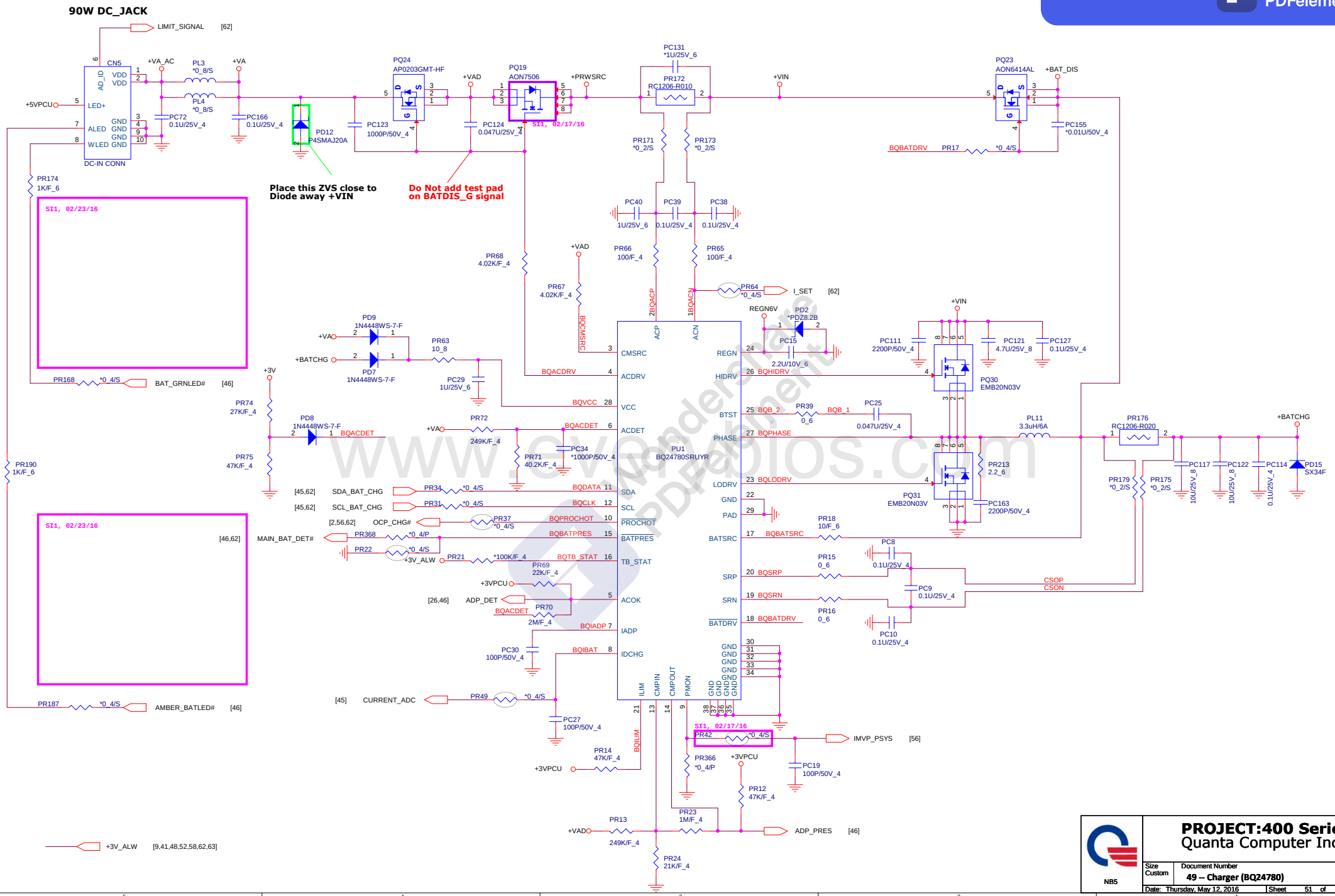
	Platform ID		Dual Port		Single Port		
	MOD_ID1	MOD_ID2	Description (Dual port)	Dual Port CFGID	Description (Single)	Single Port CFGID	
Non TBT Slice Modules	L7	L0	Discrete GFX module for Slice	CFG0			L0 = 0V
	L7	L1	HDD module for Slice	CFG1			L1 = VDDD/8
	L7	L2	ODD module for Slice	CFG1			L2 = 2* VDDD/8
	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	DRP+DP on two ports	CFG5	DFP only	CFG4	
	L6	L1			DFP + DP on single port	CFG5	

test points sequence and pitch.
(2.54mm with PHY 1.02)
VDDD_SUPPLY
TP1041
TP1042
TP1043 CCG4_XRES
TP1044 CCG4_SWD_CLK
TP1045 CCG4_SWD_IO

PROJECT:400 Series
Quanta Computer Inc.
NB5
Size
Document Number
49 -- Cypress CCG1
Rev 1A
Date: Friday, May 20, 2016
Sheet 49 of 65



NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size	Document Number **50 -- TYPE-C**	Rev 1A
Date: Tuesday, May 17, 2016	Sheet 50 of 65	



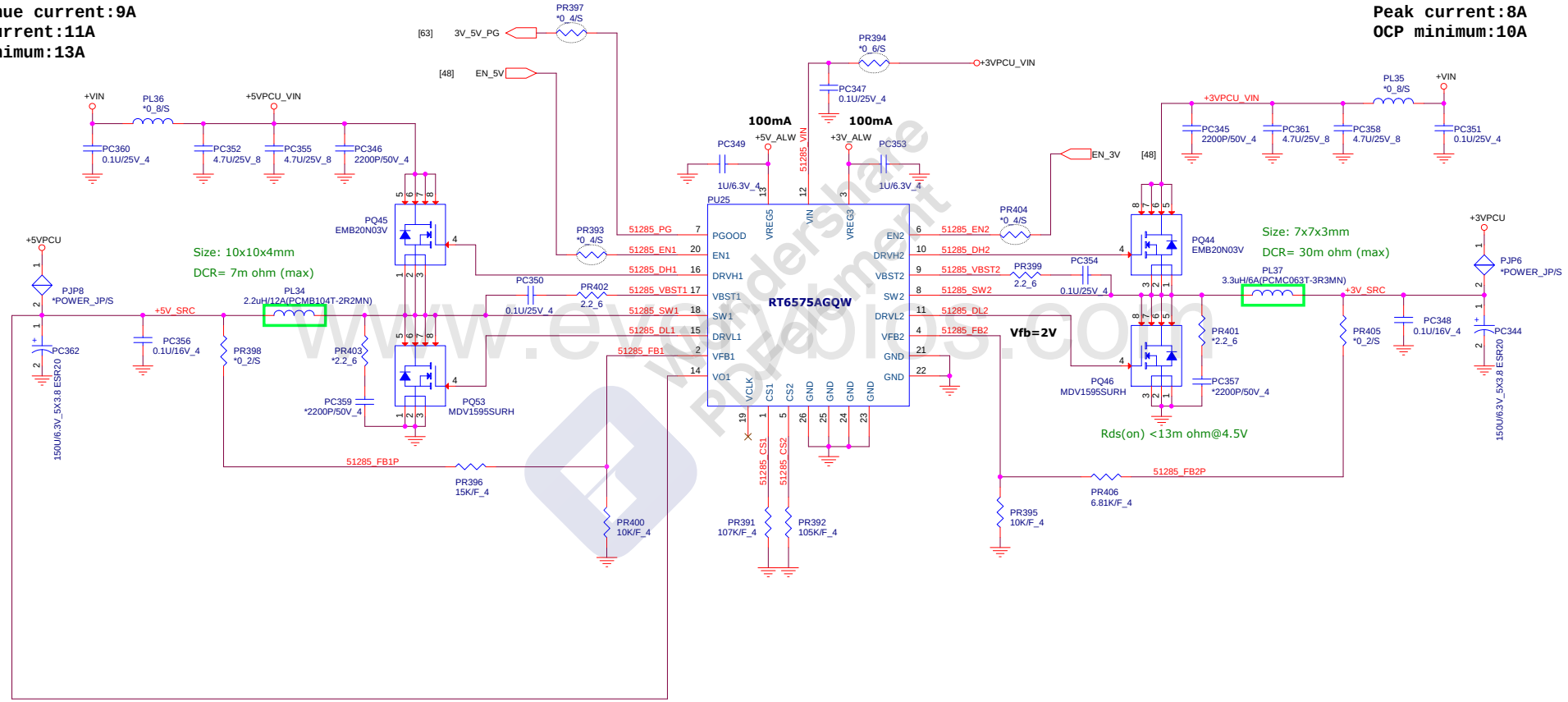
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 49 -- Charger (BQ24780)	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 51 of 65	

DC/DC +3VS5/+5VS5

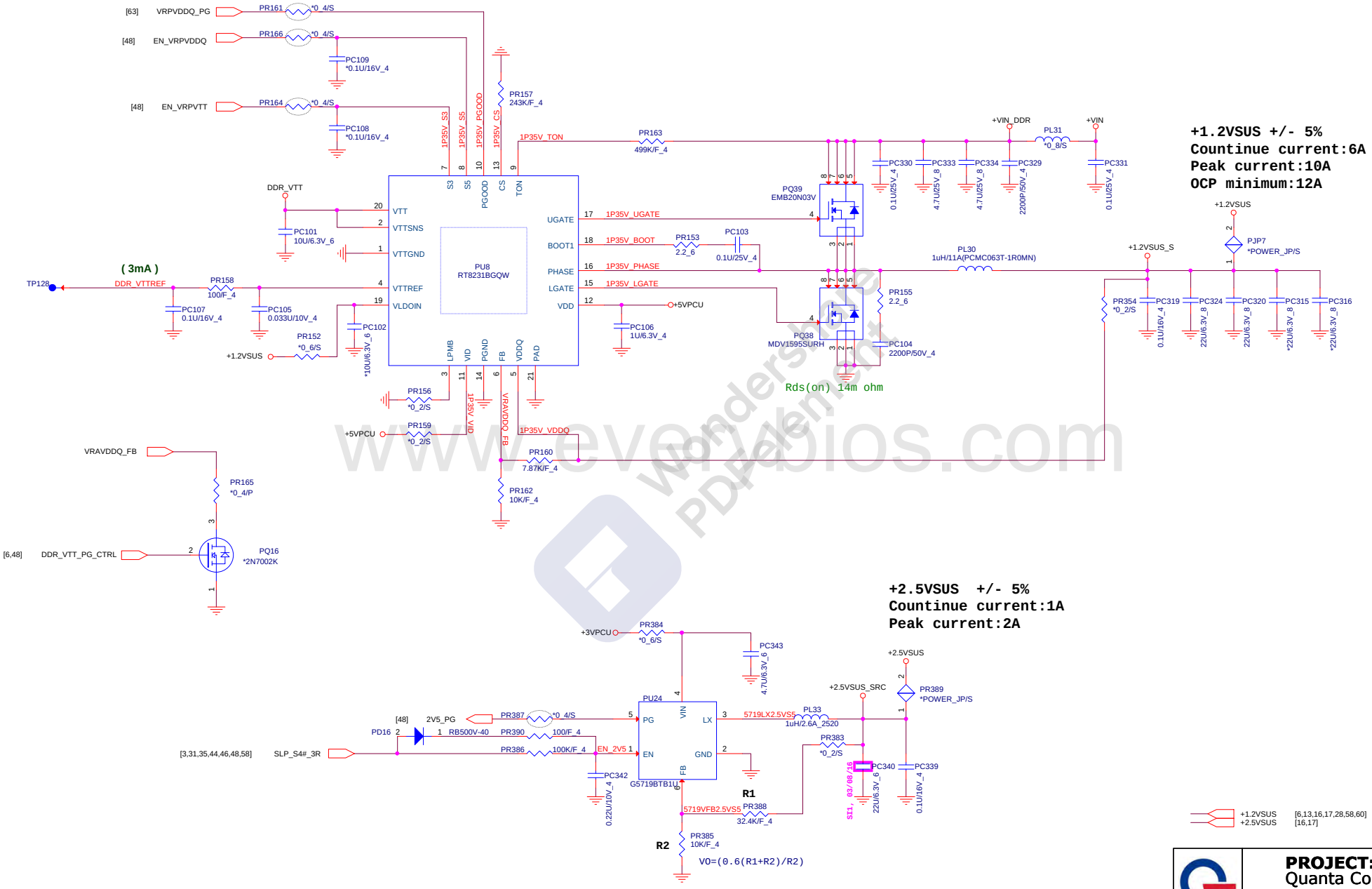
+3VPCU [3,10,33,37,38,40,41,42,44,45,46,48,49,51,53,55,58,60,62,63]
+5VPCU [28,31,35,44,49,50,51,53,54,56,57,58,59,60,61,63]

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

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



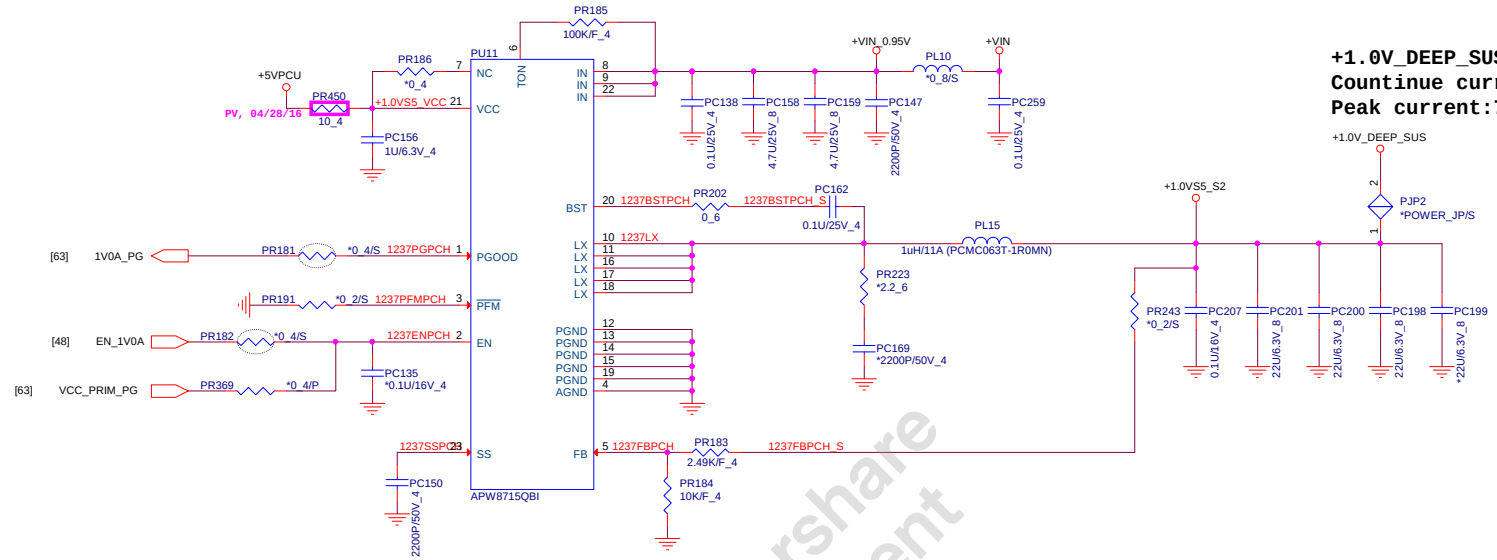
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size	Document Number 50 – 3/5VS5 (SY8208B/SY8208C)	Rev 1A
Date: Thursday, May 12, 2016	Sheet 52 of 65	

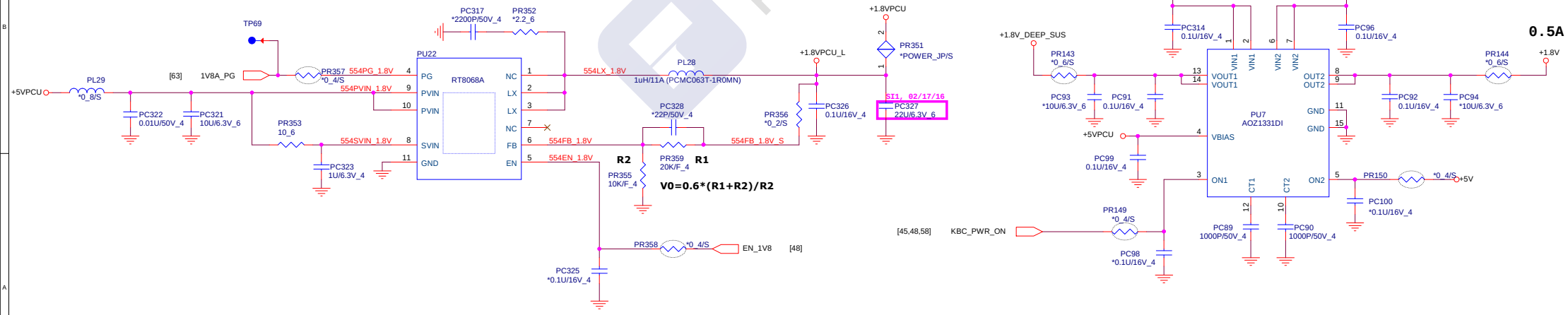


PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
	51 -- DDR4 (RT8231B)	1A
Date: Thursday, May 12, 2016	Sheet 53 of 65	

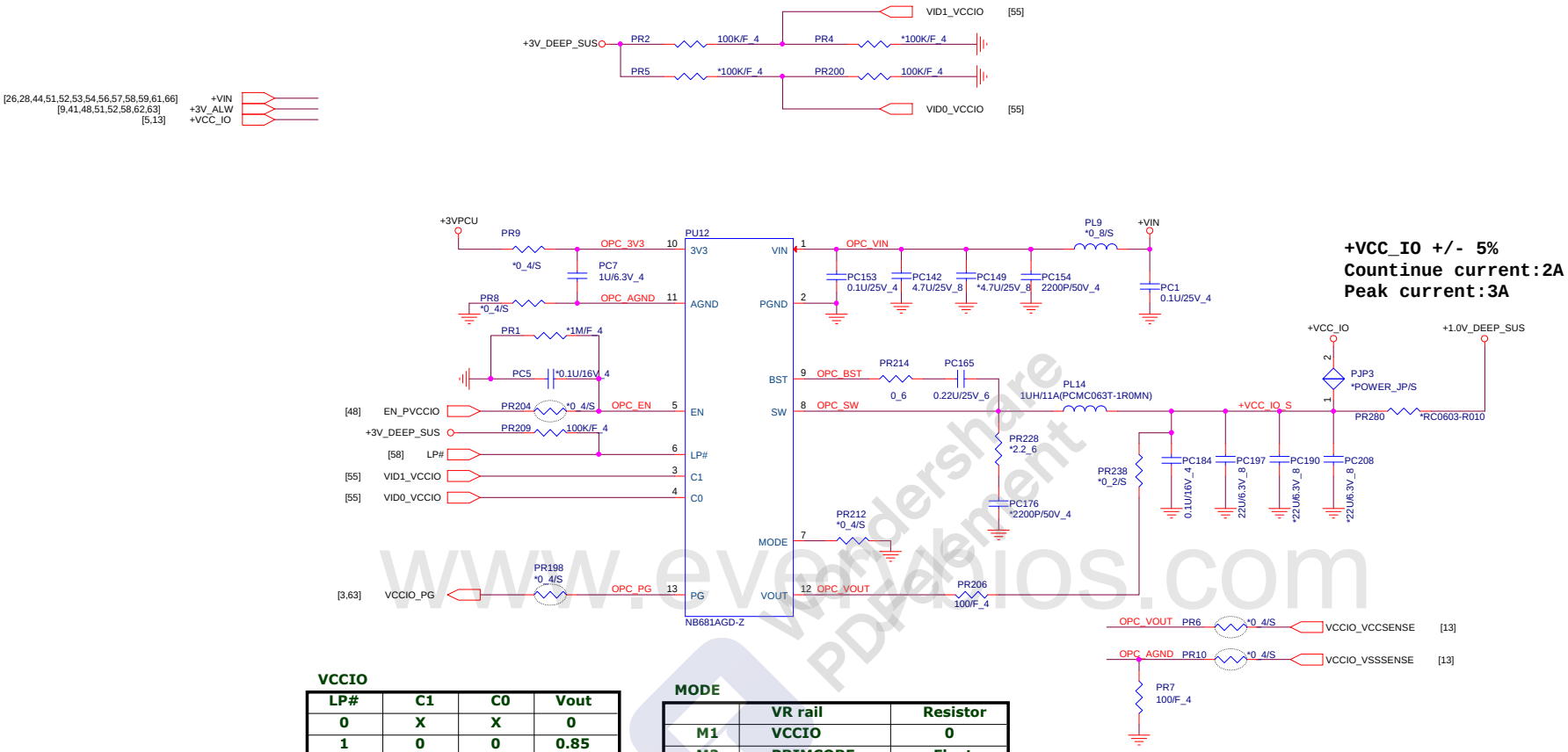
NB5





+VIN [26,28,44,51,52,53,55,56,57,58,59,61,66]
+3VPCU [3,10,33,37,38,40,41,42,44,45,46,48,49,51,52,53,55,58,60,62,63]
+5VPCU [28,31,35,44,49,50,51,52,53,56,57,58,59,60,61,63]

NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size	Document Number 52 – +1.0VS5/1.8VS5	Rev 1A
Date: Thursday, May 12, 2016	Sheet 54 of 65	



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

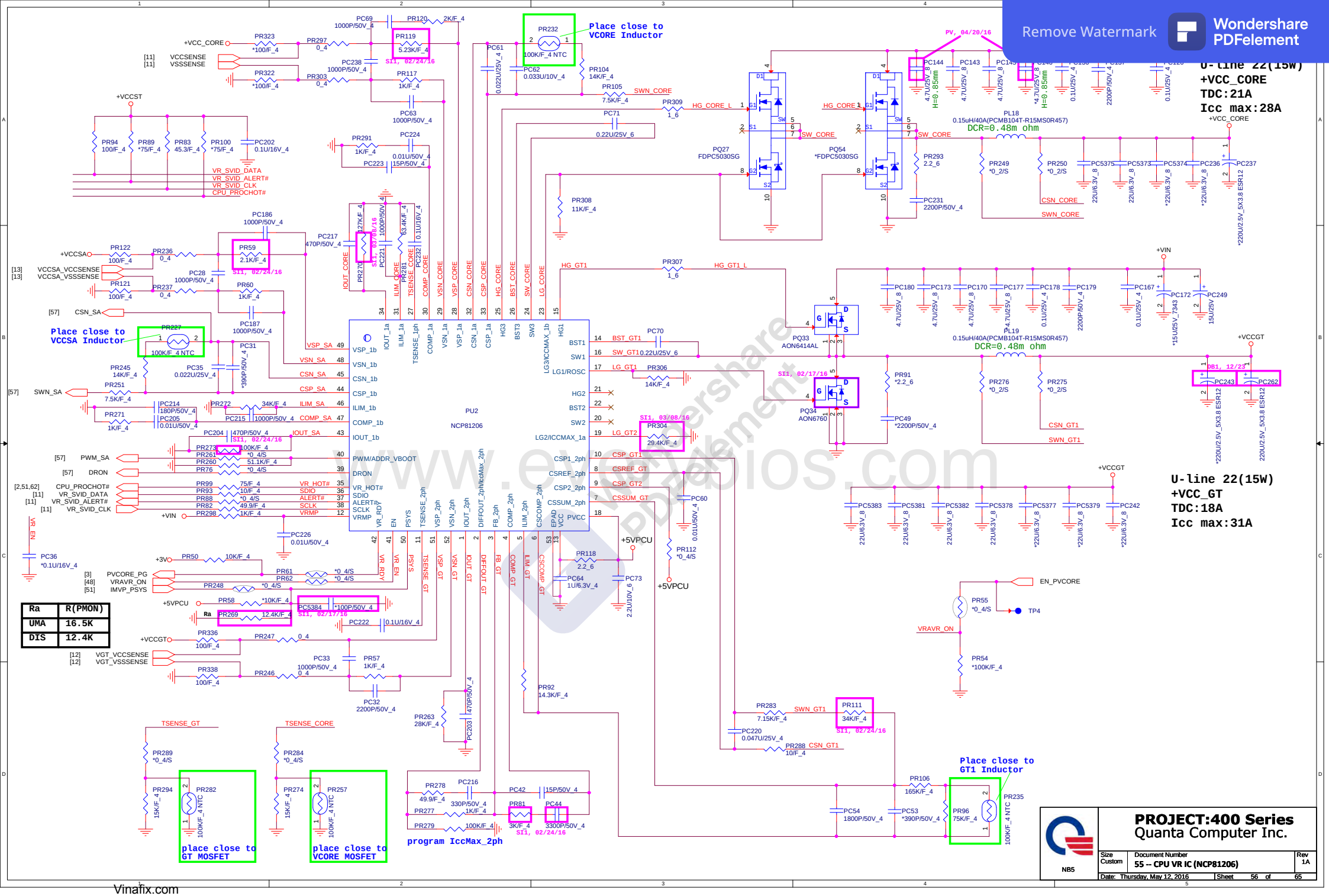
VCCIO

LP#	C1	C0	Vout
0	X	X	0
1	0	0	0.85
1	0	1	0.875
1	1	0	0.95
1	1	1	0.975

MODE

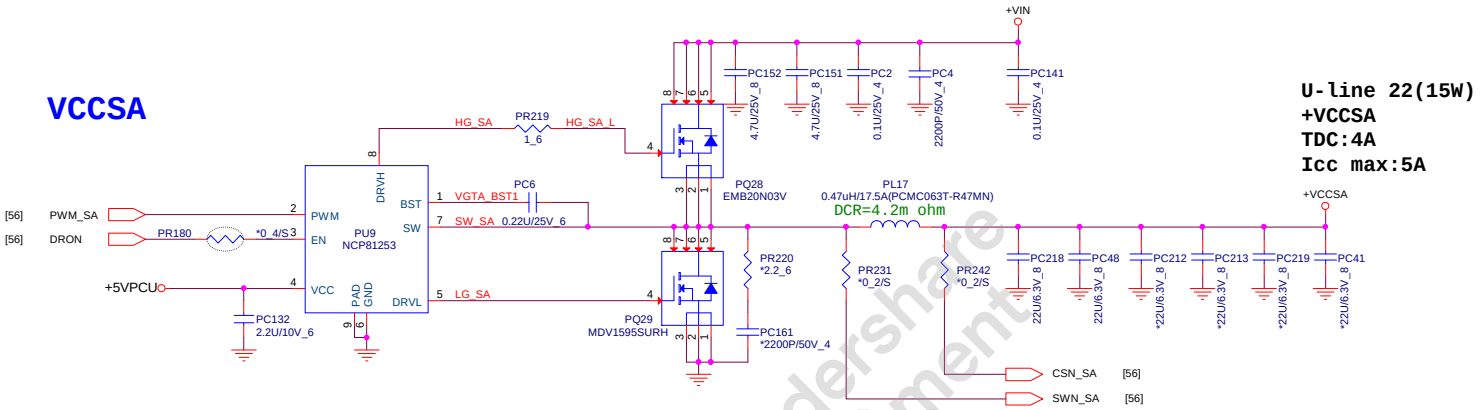
	VR rail	Resistor
M1	VCCIO	0
M2	PRIMCORE	Float
M3	EDRAM/EOPIO	100K
M4	other	150K

NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size: Document Number: 53 -- +VCC_IO (NB681)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 55 of 65



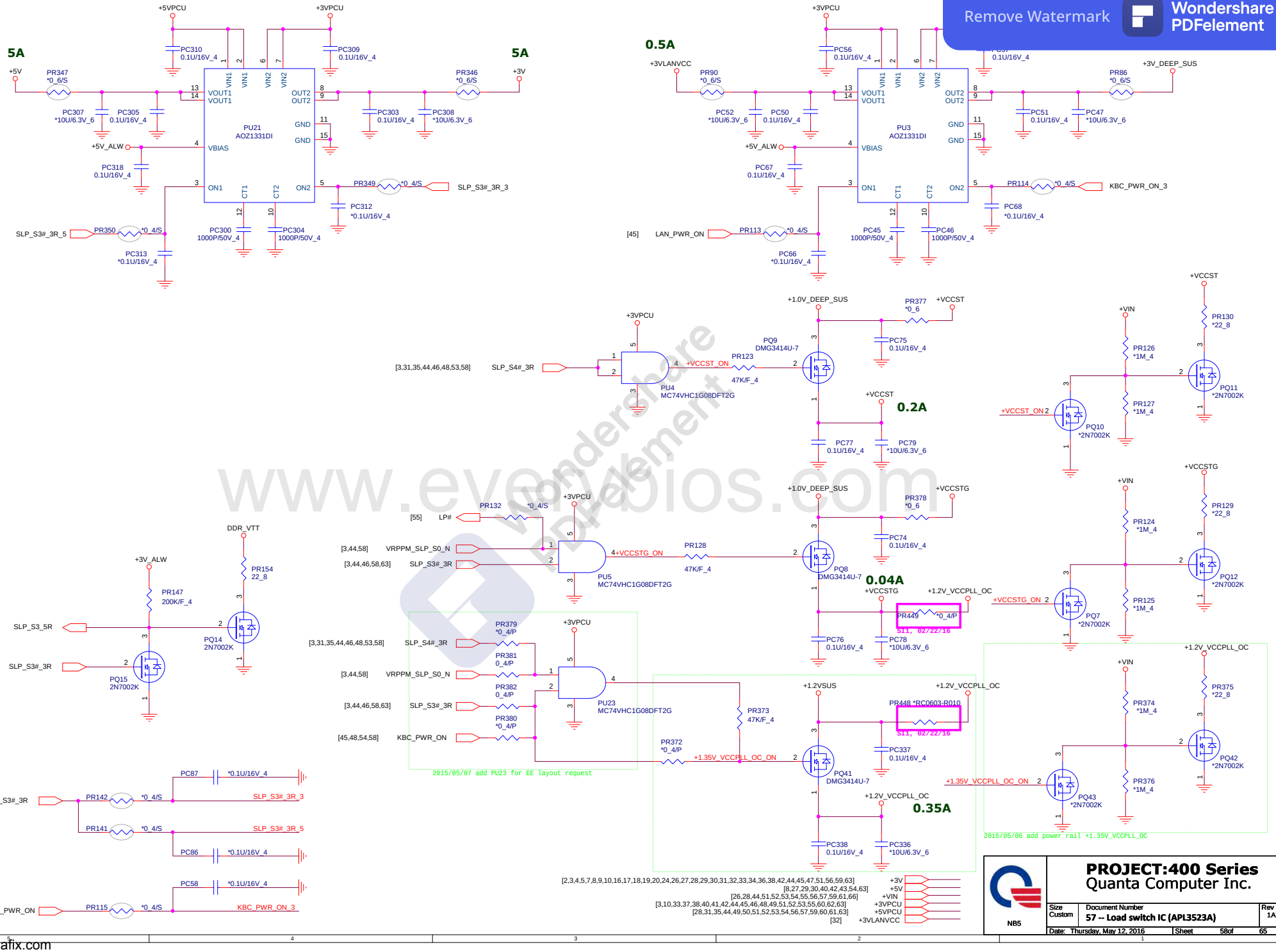
Ra	R(PMON)
UMA	16.5K
DIS	12.4K

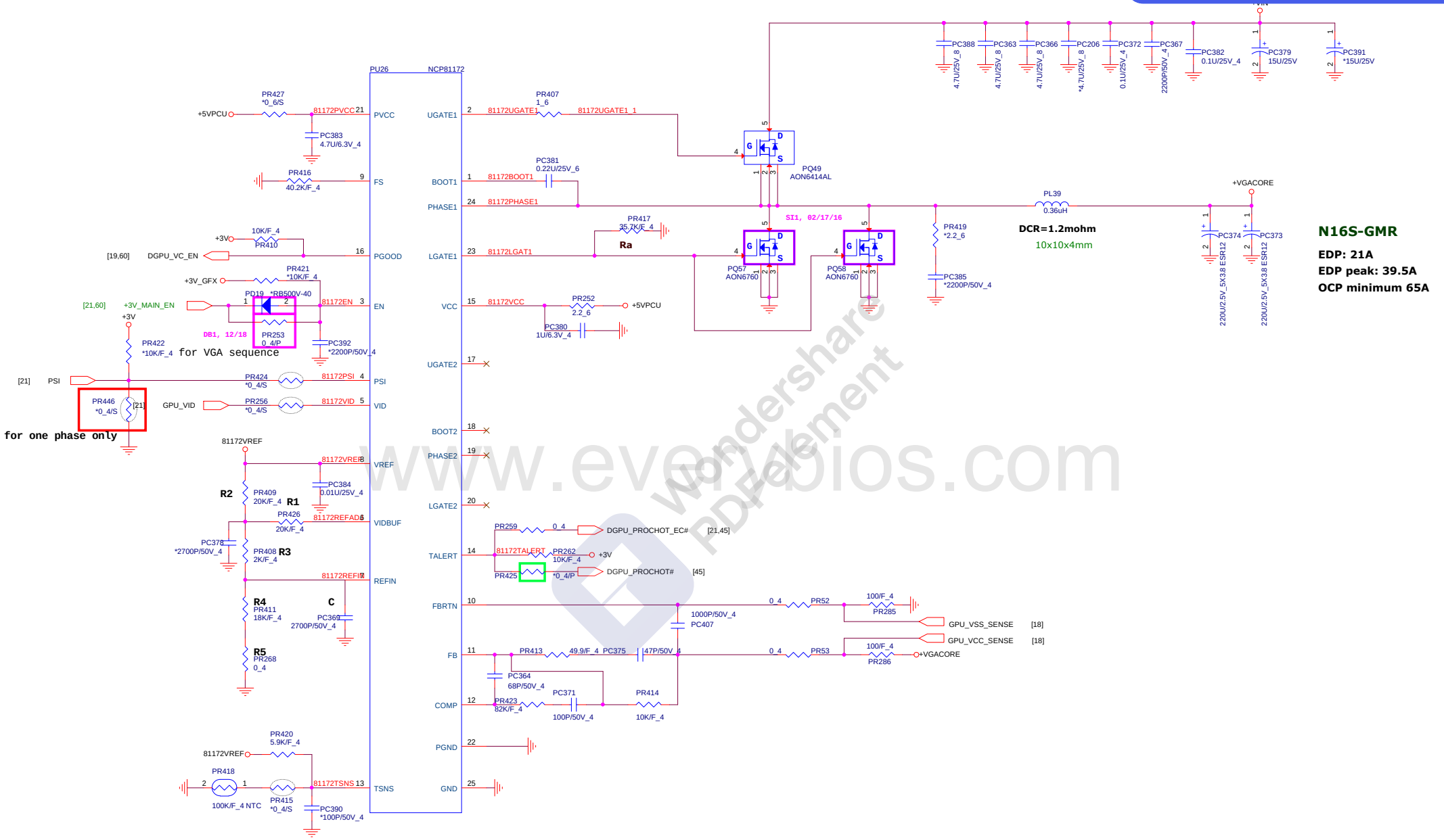
VCCSA



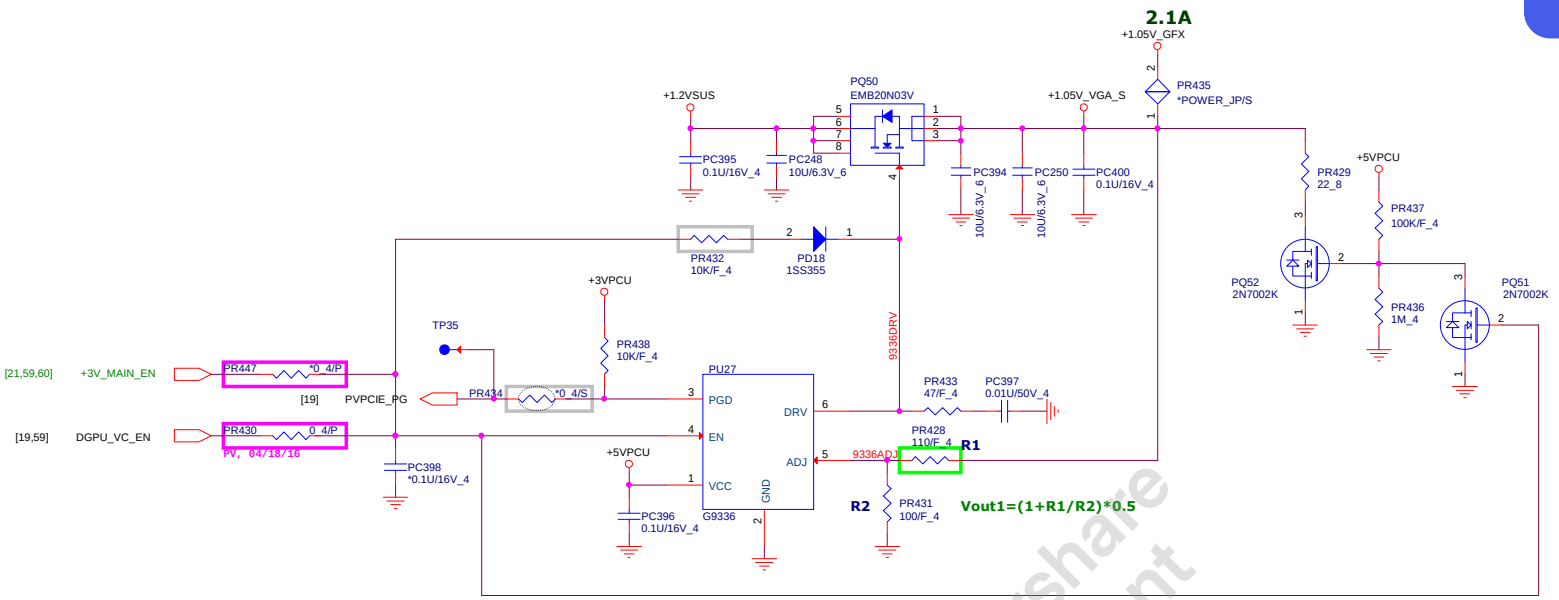
U-line 22(15W)
+VCCSA
TDC:4A
Icc max:5A

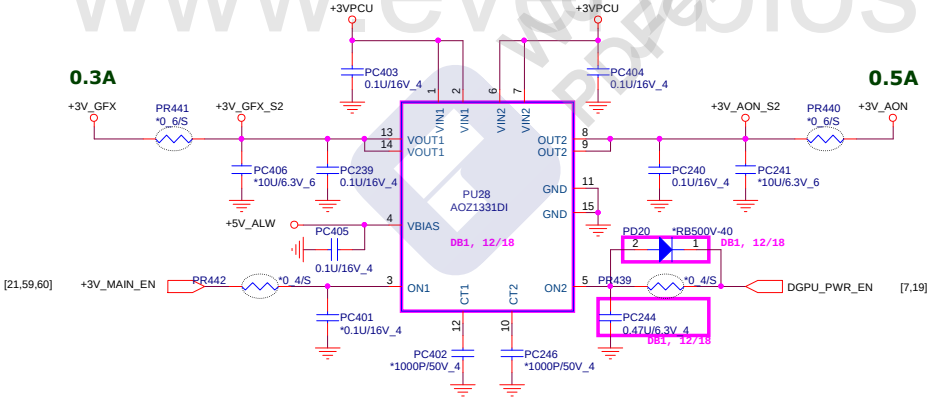
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **56 -- +VCCSA (NCP81253)**	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 57of	65





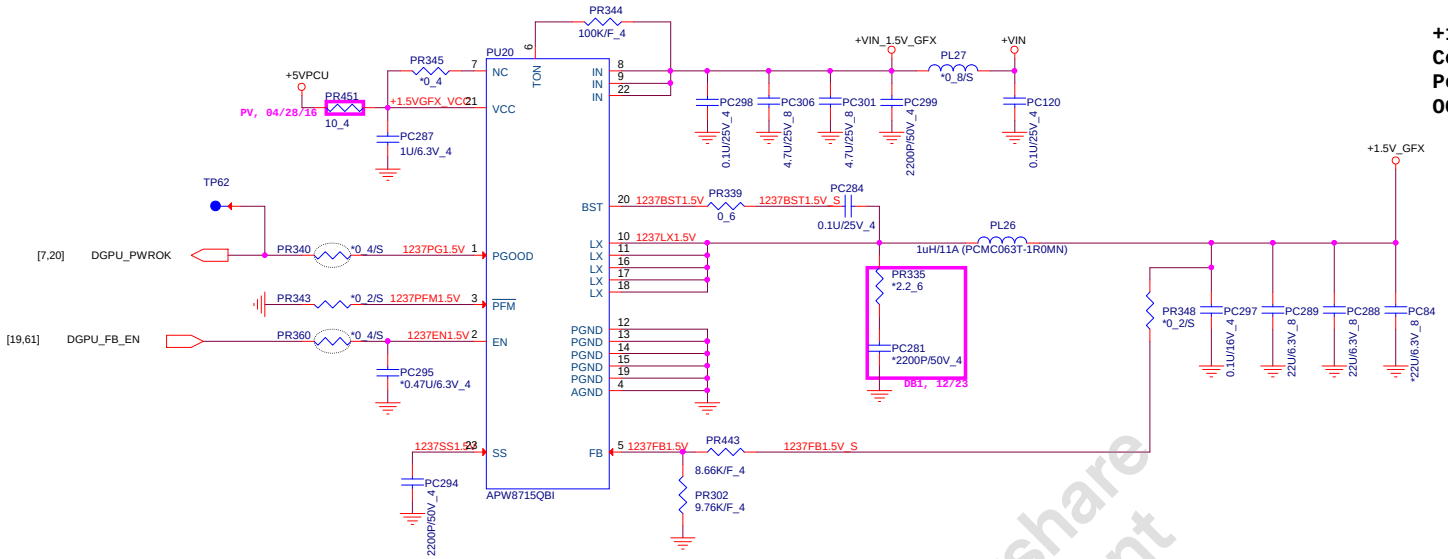
NB5	PROJECT:400 Series Quanta Computer Inc.		
	Size: Custom	Document Number: 58 -- VGA Core1 (ISL62771)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet: 59of	65

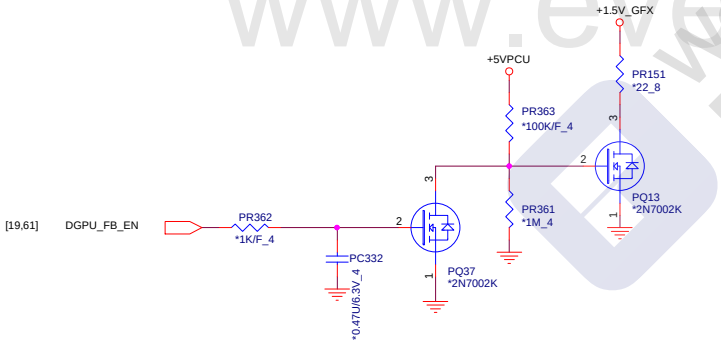




NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: 60 -- +1.0V_VGA/1.8V_VGA/3V_VGA	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 60of 65	

+1.5V_GFX Volt +/- 5%
Countinue current:2.4A
Peak current:4.1A
OCP minimum:8A





NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **61 -- +1.35V_GFX (AOZ1267)**	Rev: 1A
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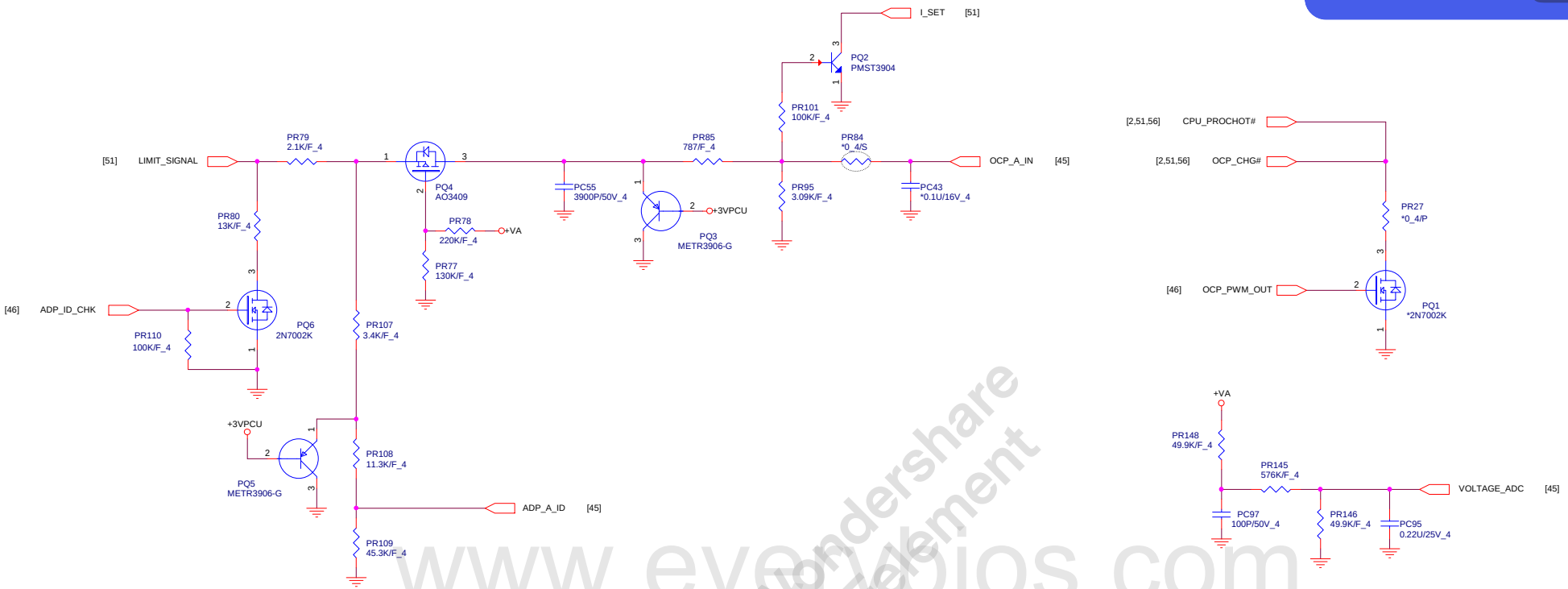
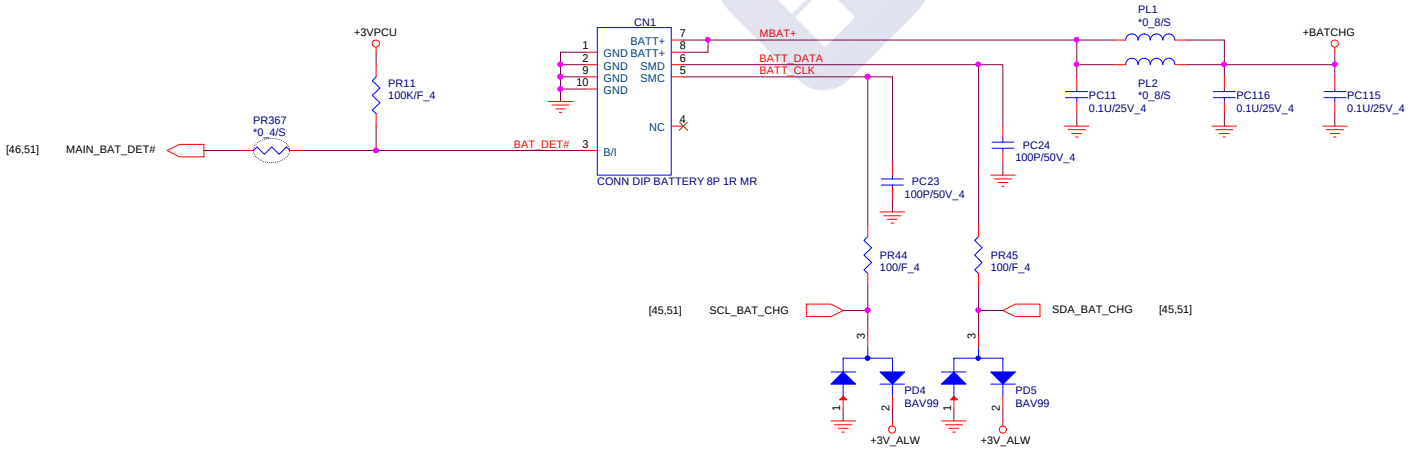
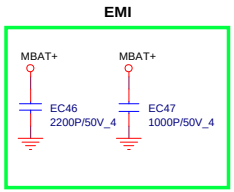
Adapter OCP



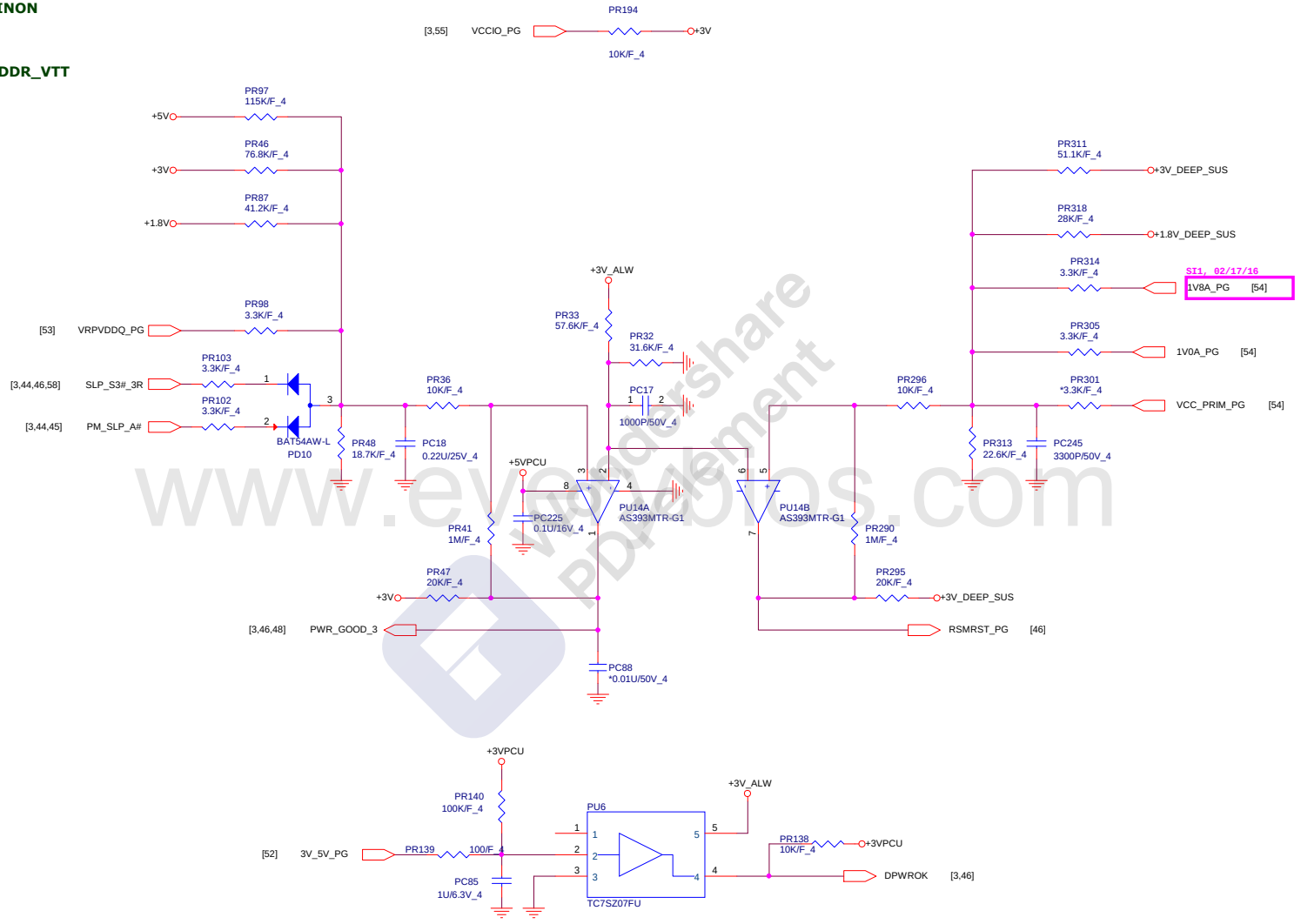




NB5	PROJECT:400 Series Quanta Computer Inc.	
Size	Document Number 62 -- CHARGER II	Rev 1A
Date: Thursday, May 12, 2016	Sheet 62 of 65	

POK CKT

PM_SLP_S4# = SUSON
PM_SLP_S3# = MAINON
+V5S = +5V
+V3S = +3V
+V0.75S =+0.75V_DDR_VTT

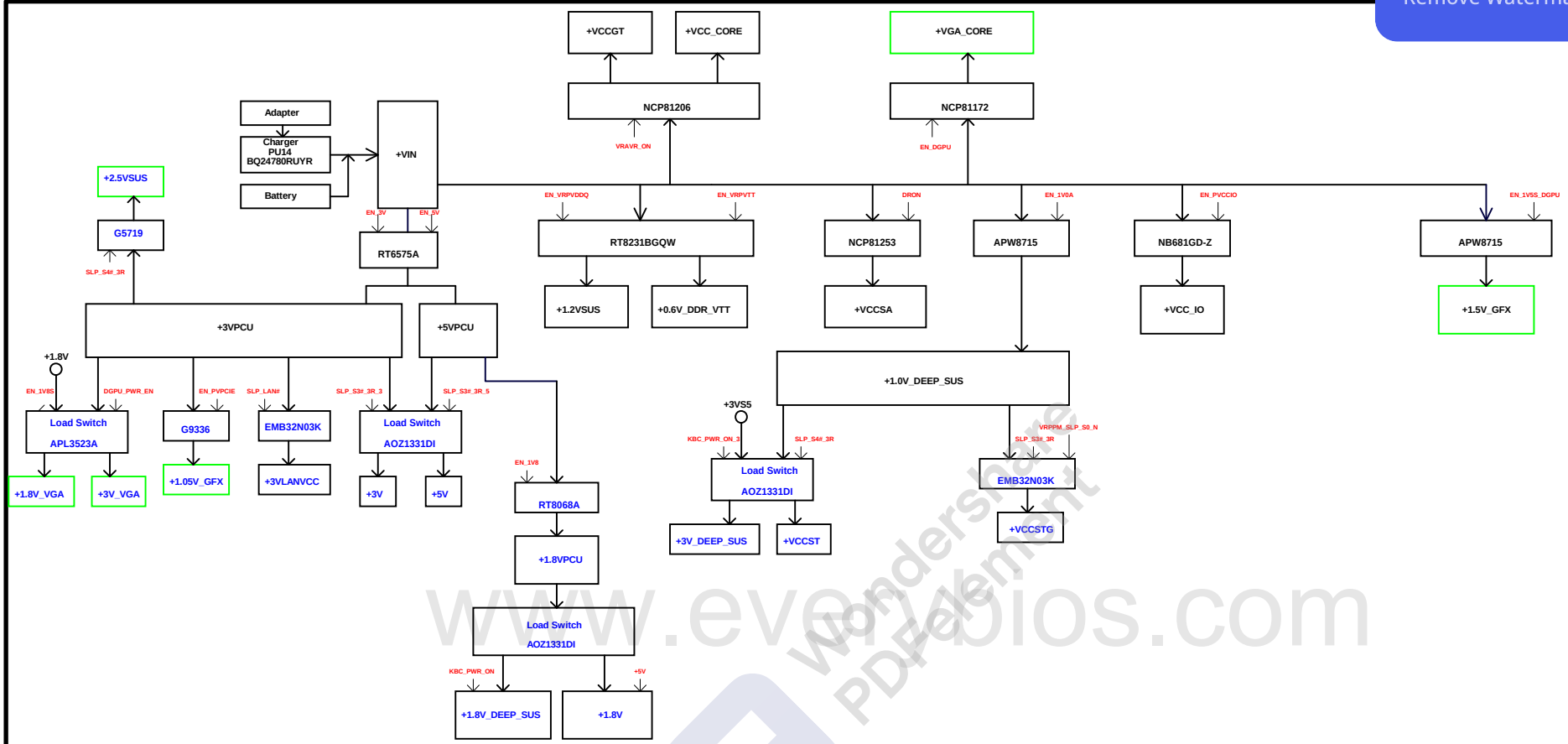


[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59] +3V
[8,27,29,30,40,42,43,54,58] +5V
[9,41,48,51,52,58,62] +3V_ALW

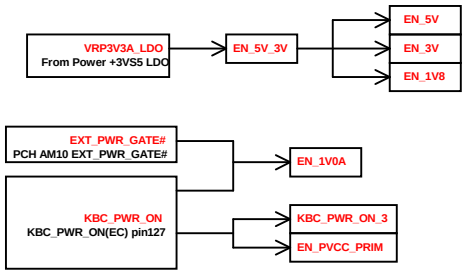
NB5

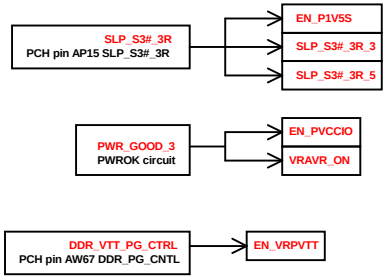
PROJECT:400 Series
Quanta Computer Inc.

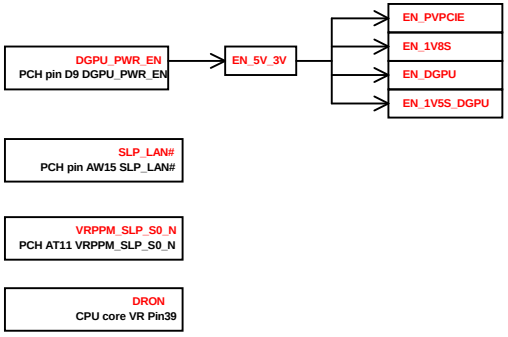
Size	Document Number	Rev
Custom	**63 -- PWROK**	1A
Date: Thursday, May 12, 2016	Sheet 63 of 65	



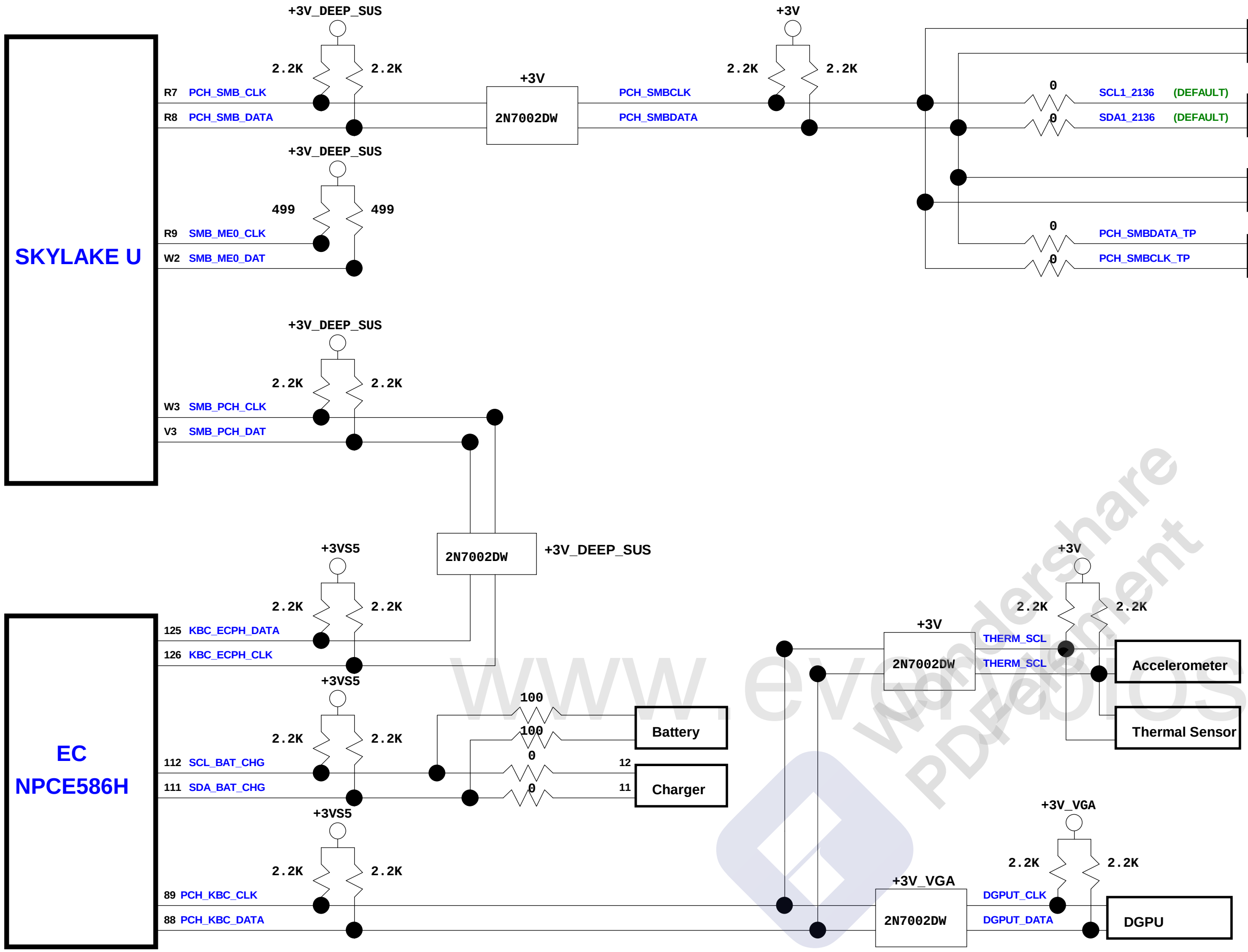
POWER ENABLE PIN







PROJECT:400 Series
Quanta Computer Inc.
Size: Custom | Document Number: 64 -- Power Block Diagram | Rev: 1A
Date: Thursday, May 12, 2016 | Sheet: 64of 65



Examp
* mea
499 me
F means 1%
_4 means 0402 size
/S means short pad

Multiplexed HSIO Lane	Port Assignment
USB3 #1	USB2.0/USB3.0 Combo Jack(Left side down)
USB3 #2 / SSIC #1	USB2.0/USB3.0 Combo Jack(Left side up)
USB3 #3 / SSIC #2	NC
USB3 #4	NC
PCIE1 / USB3 #5	dGPU
PCIE2 / USB3 #6	dGPU
PCIE3	dGPU
PCIE4	dGPU
PCIE5	LAN
PCIE6	WLAN
PCIE7 / SATA #0	HDD (SATA)
PCIE8 / SATA #1	ODD (SATA)
PCIE9	Cardreader (PCIE)
PCIE10	NC
PCIE11 / SATA #1*	NC
PCIE12 / SATA #2	SSD (SATA)

USB2.0	Port Assignment
USB2 #1	USB2.0/USB3.0 Combo Jack(Left side down)
USB2 #2	USB2.0/USB3.0 Combo Jack(Left side up)
USB2 #3	WWAN
USB2 #4	USB2.0(Right side on USB Board)
USB2 #5	USB2.0(Right side on USB Board)
USB2 #6	Touch Screen
USB2 #7	Bluetooth
USB2 #8	Finger Print
USB2 #9	Camera
USB2 #10	NC

PROJECT:400 Series
Quanta Computer Inc.

NB5

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

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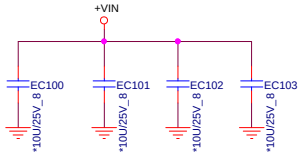

NB5	**PROJECT:400 Series** Quanta Computer Inc.	
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