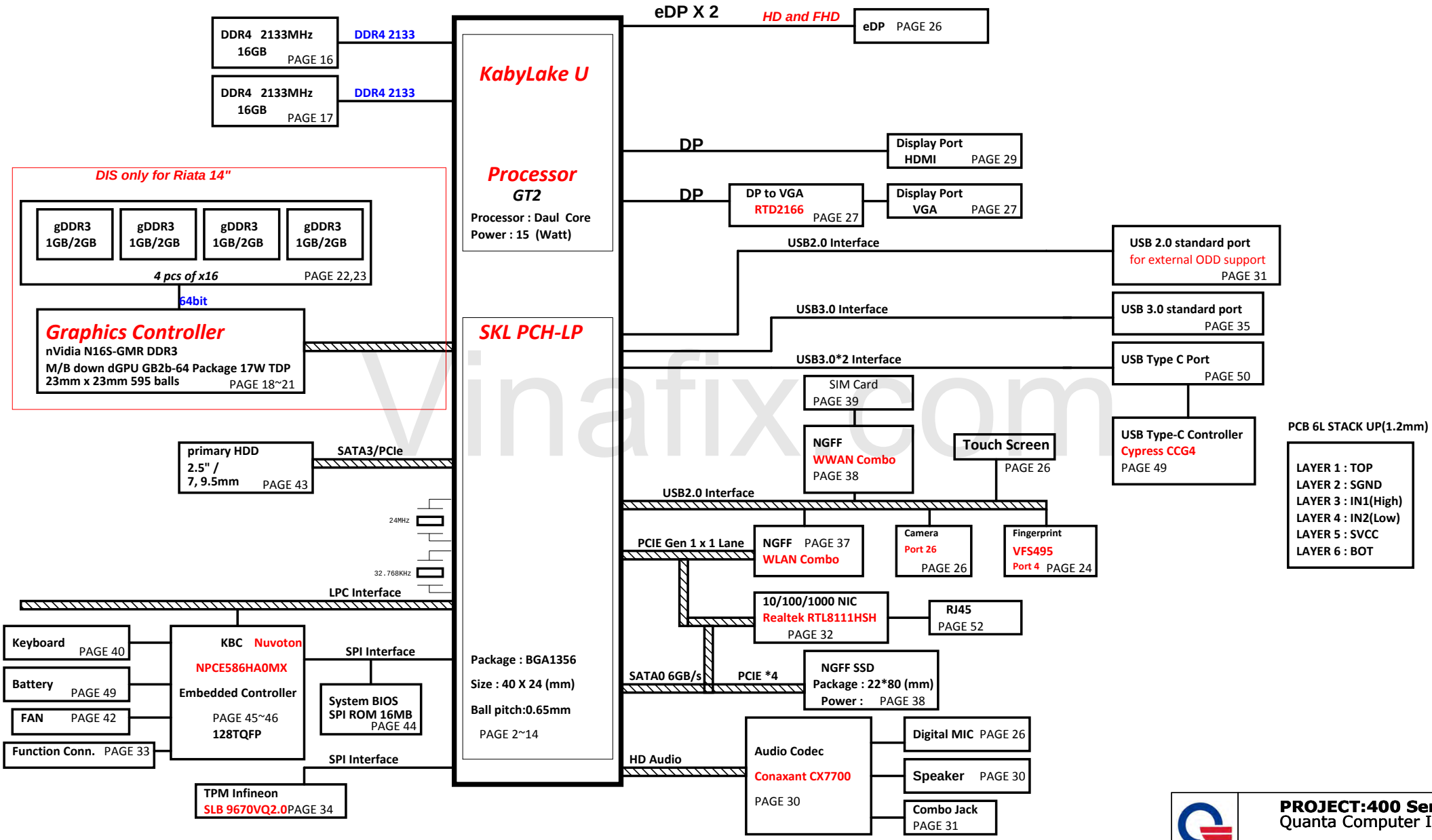
Reilly 13"/Rourke 14" KabyLake -U (UMA/DIS) Schematics 01



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

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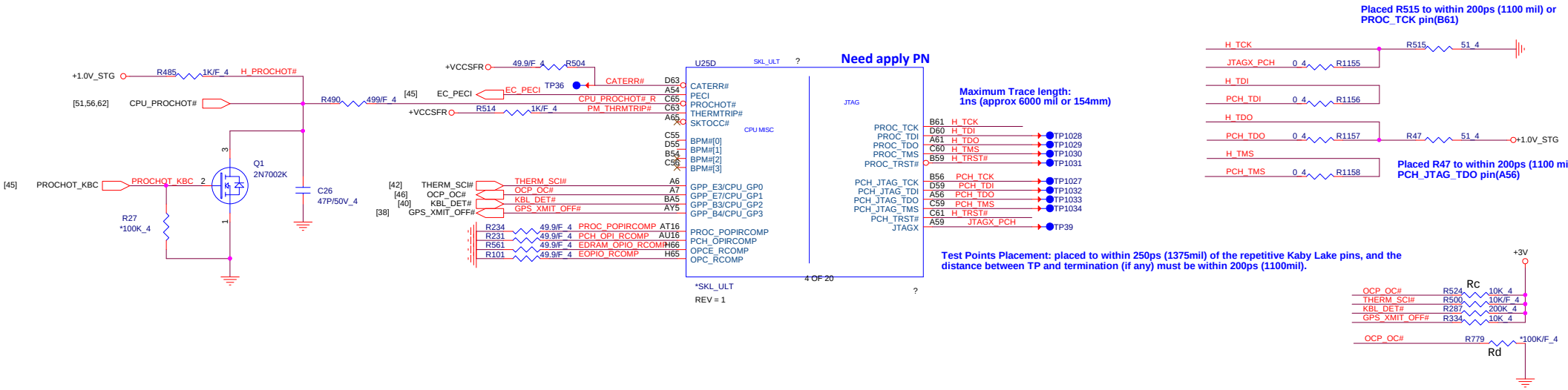

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+1.0V_STG [11,13]
+VCCSFR [3,9,11,13,45]
+3V [3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,36,38,42,44,45,47,51,56,58,59,63]

NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 02 -- SKYLAKE 2/20(MISC/ JTAG)	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 2 of 65	

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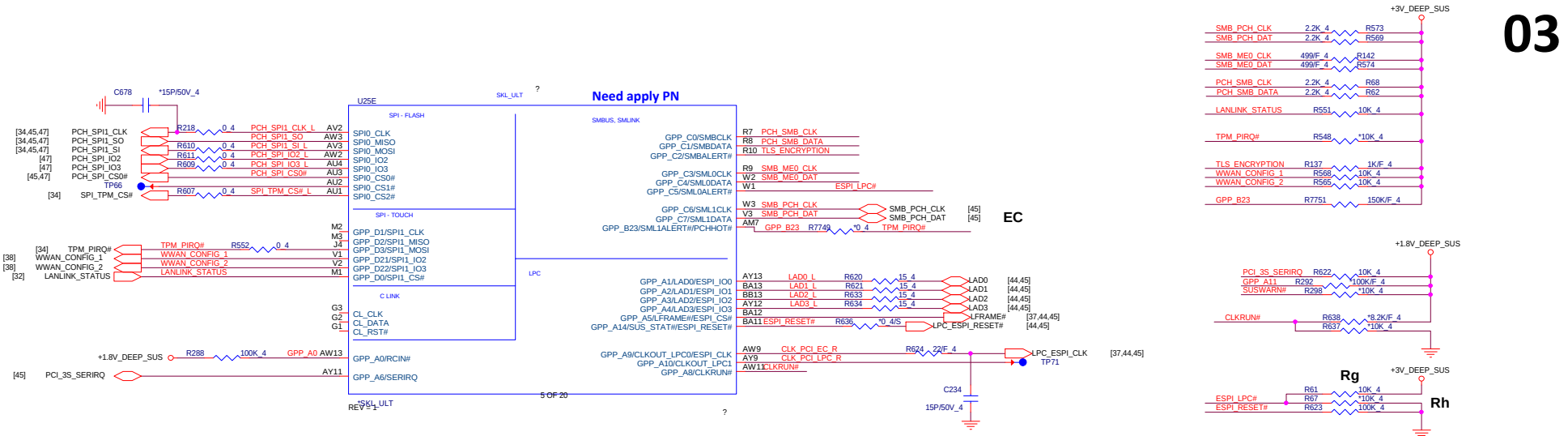

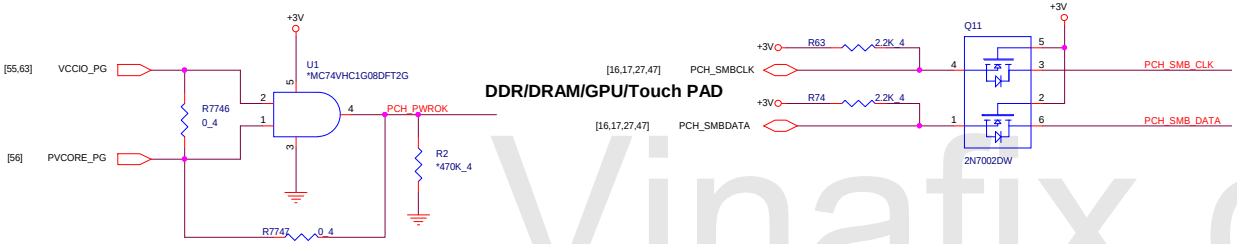

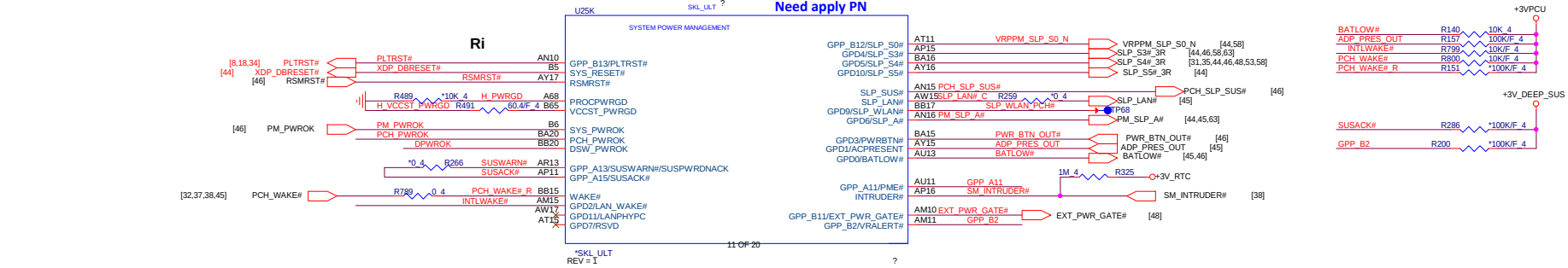

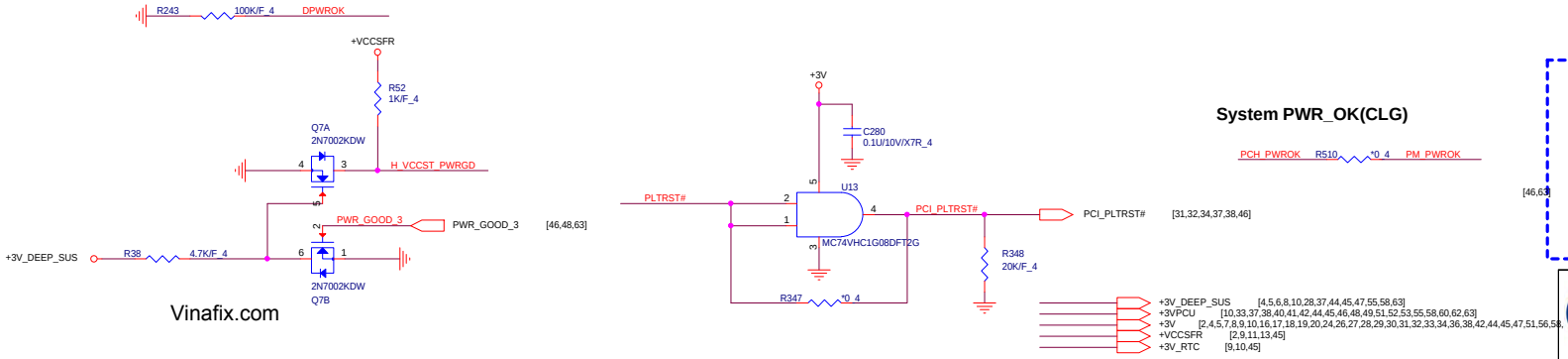

For DS3 Sequence

For DS3 -->Ra
Non-DS3 -->Rb
Rb
Ra

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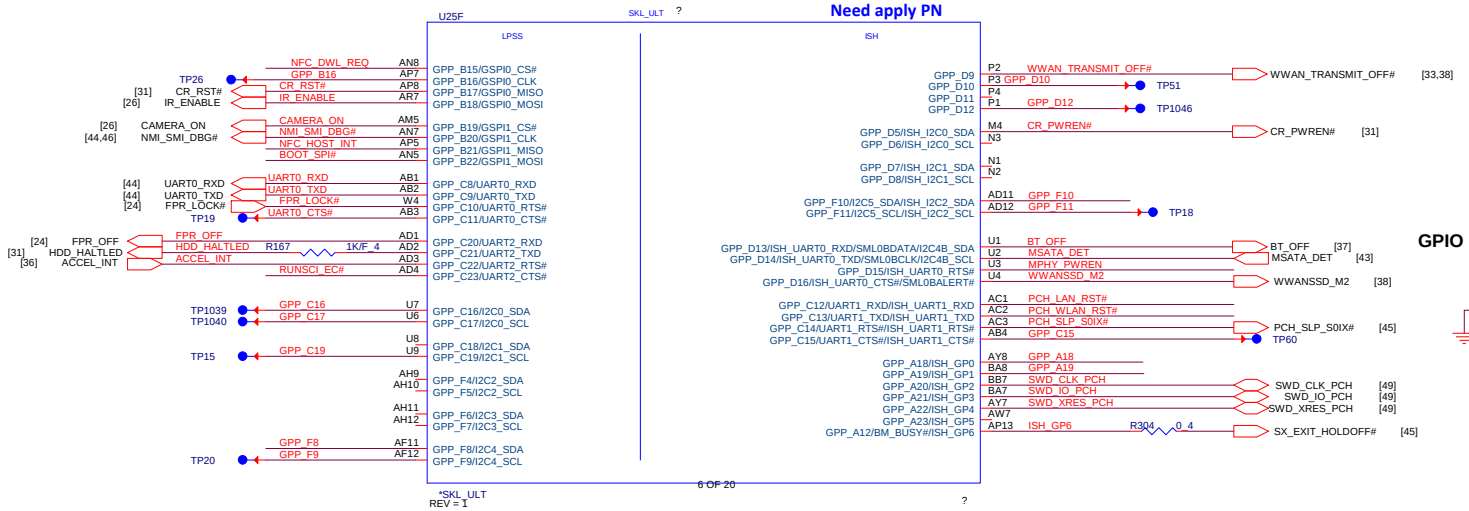
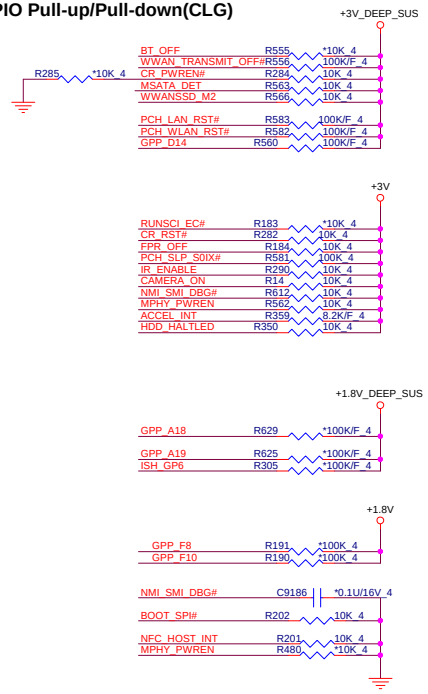
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 03 -- SKYLAKE (SPI/LPC/SMB/PM)	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 3 of 65	

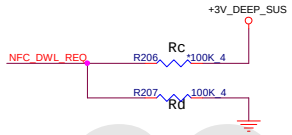
Skylake (GPIO)

04



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

PROJECT:400 Series
Quanta Computer Inc.

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Custom	04 – SKYLAKE (GPIO)	1A
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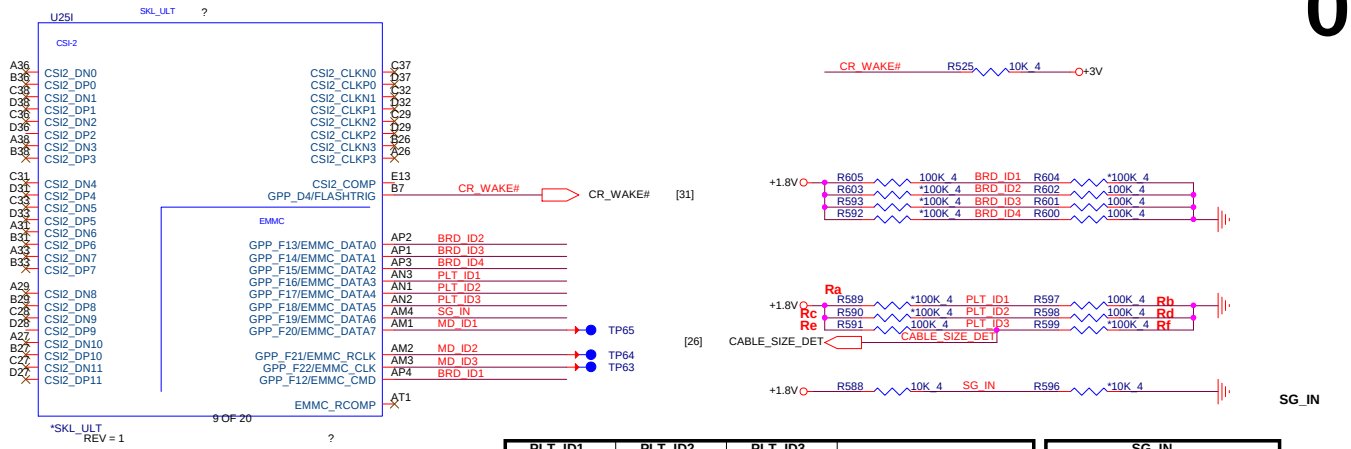
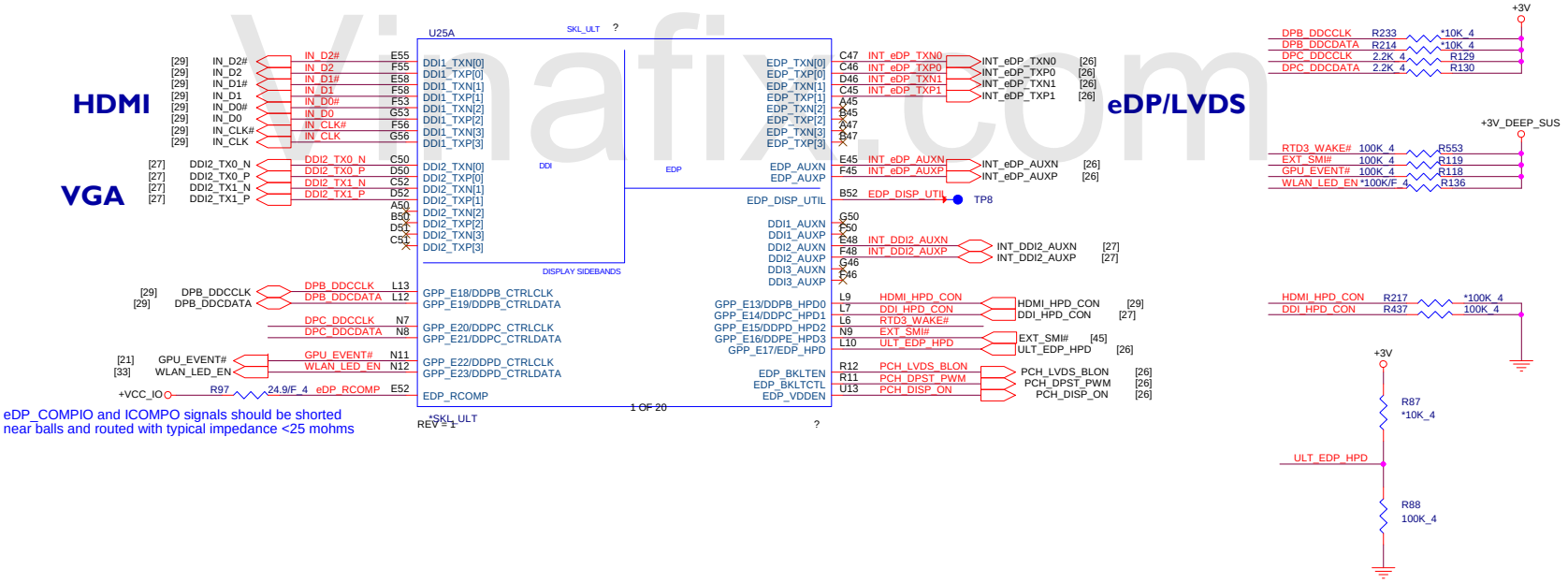
	BRD_ID1	BRD_ID2	BRD_ID3	BRD_ID4	
	GPIO201	GPIO202	GPIO203	GPIO204	AMD_FCH
	GPIO14	GPIO34	GPIO35	GPIO40	PPMT
	GPIO15	GPIO34	GPIO35	GPIO40	LPI-H
BOARD REVISION	GPIO76	GPIO77	GPIO78	GPIO79	LPT-LP
DB0	0	0	0	0	
DB1	0	0	0	1	
DB2	0	0	1	0	
	0	0	1	1	
SI1	0	1	0	0	
SIB	0	1	0	1	
SI2	0	1	1	0	
	0	1	1	1	
Pre-PV	1	0	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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NB5

PROJECT:400 Series
Quanta Computer Inc.

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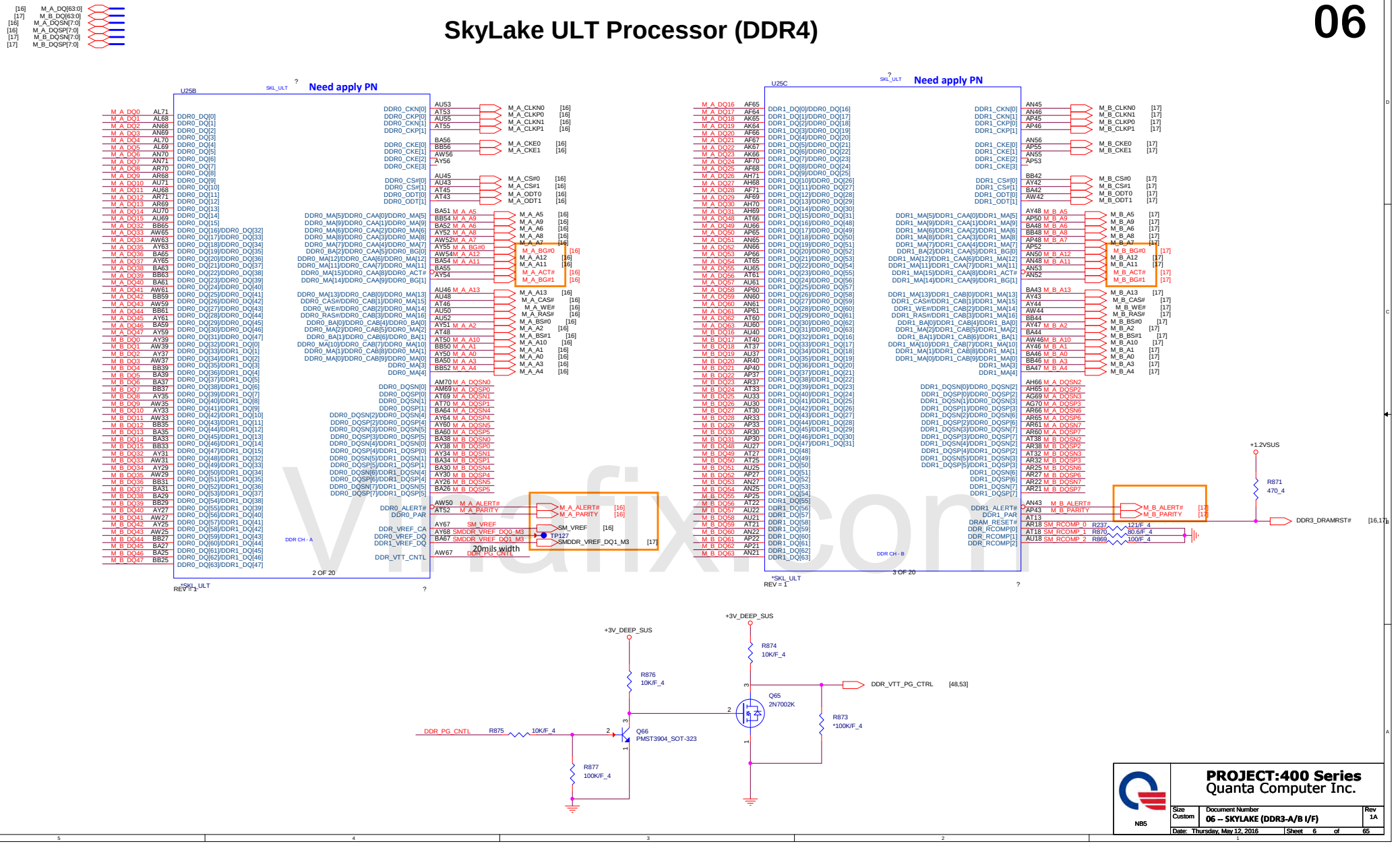
SkyLake ULT Processor (DDR4)

06



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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	

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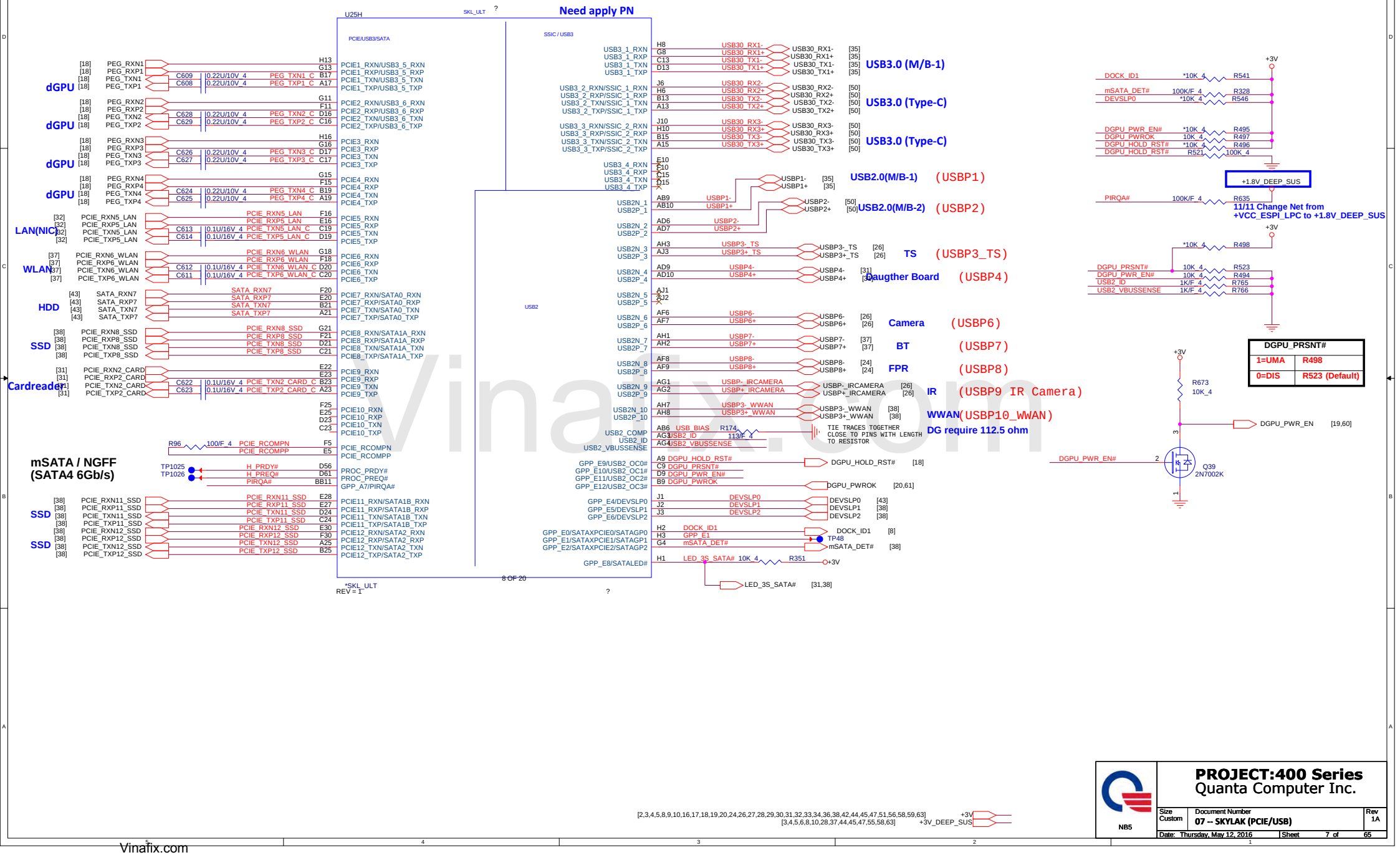

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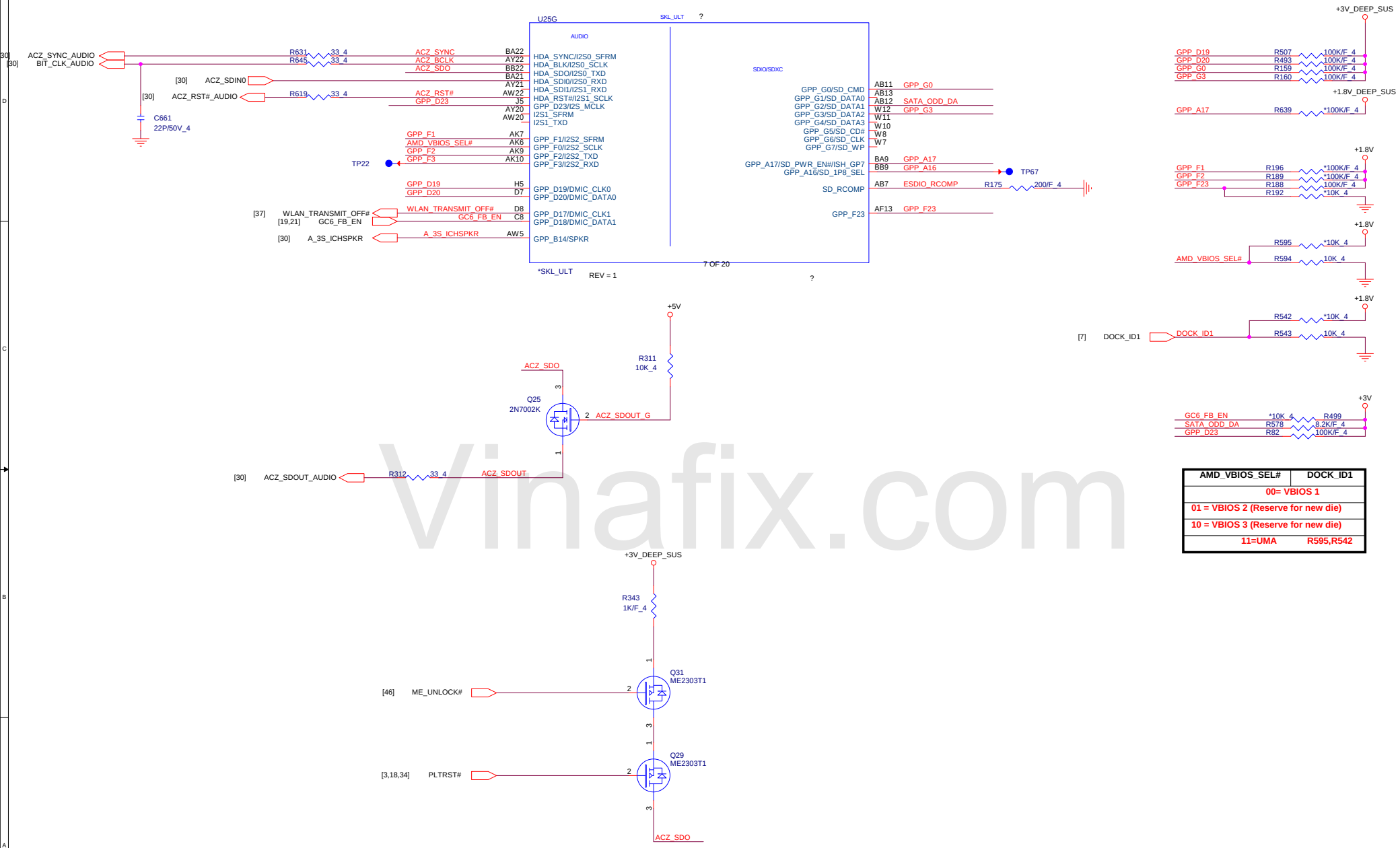
PROJECT	400 Series
Quanta Computer Inc.	
NB5	
Size: Custom	Document Number: 07 -- SKYLAK (PCIE/USB)
Rev: 1A	
Date: Thursday, May 12, 2016	Sheet 7 of 65



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

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PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	08 -- SKYLAKE (HDA)	1A

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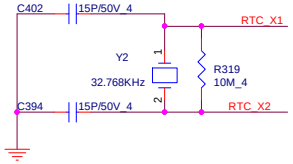
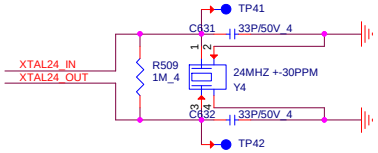
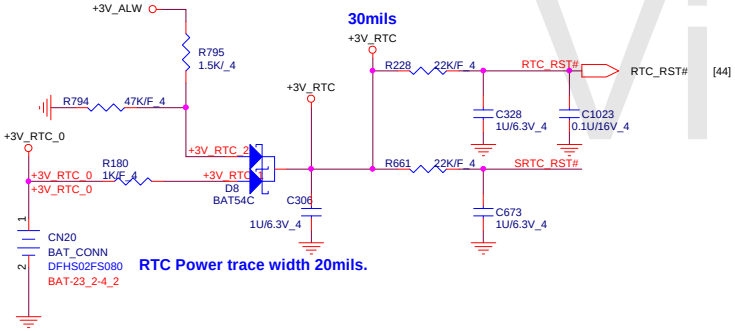
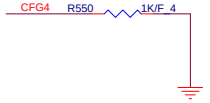
RTC Clock 32.768KHz

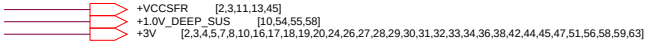


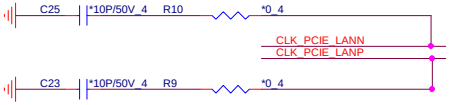


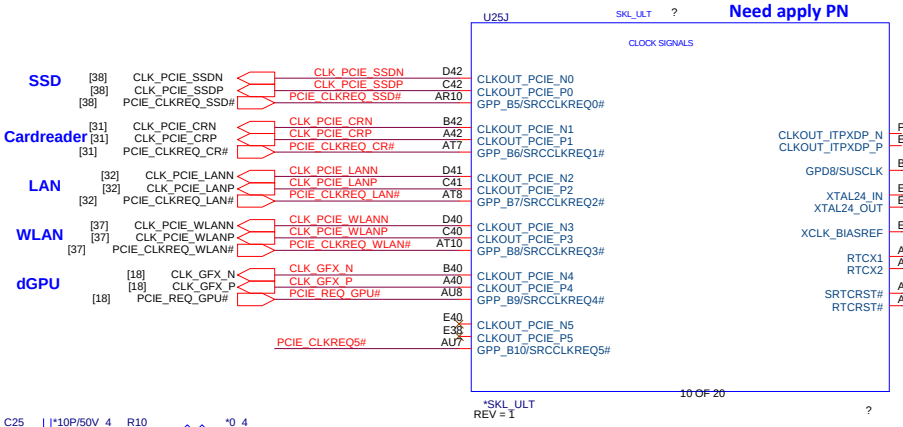
RTC Circuitry(RTC)



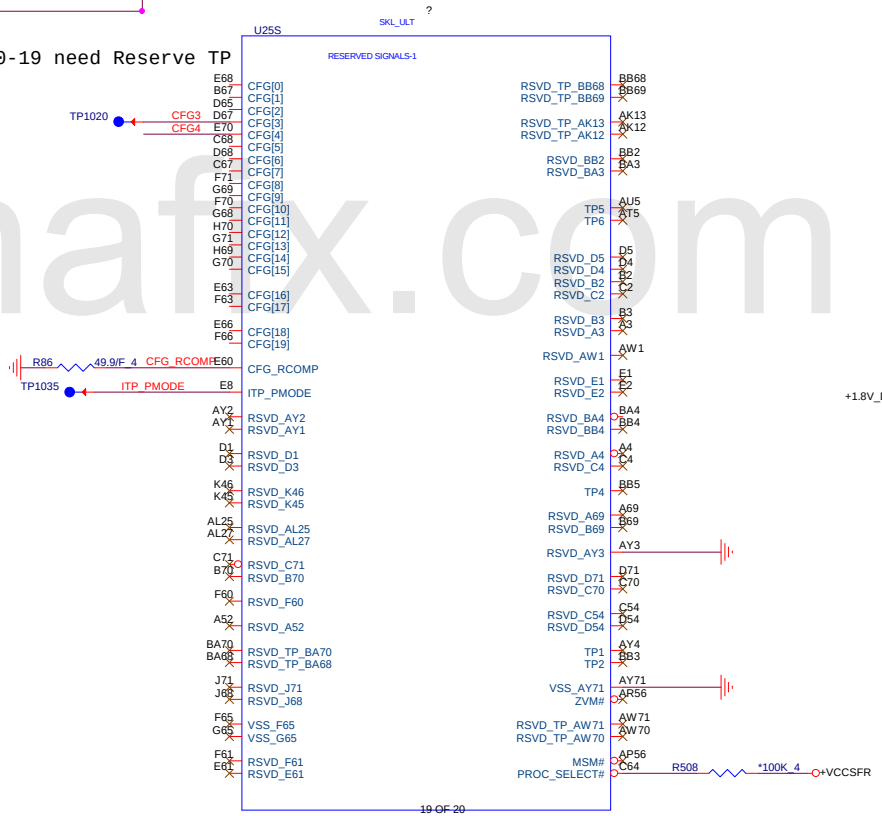




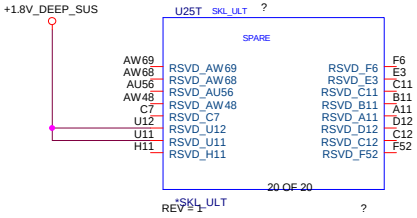




CFG0-19 need Reserve TP



CLK_REQ/Strap Pin(CLG)



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NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	09 -- SKYLAKE (CLK/RSV/RTC)	1A
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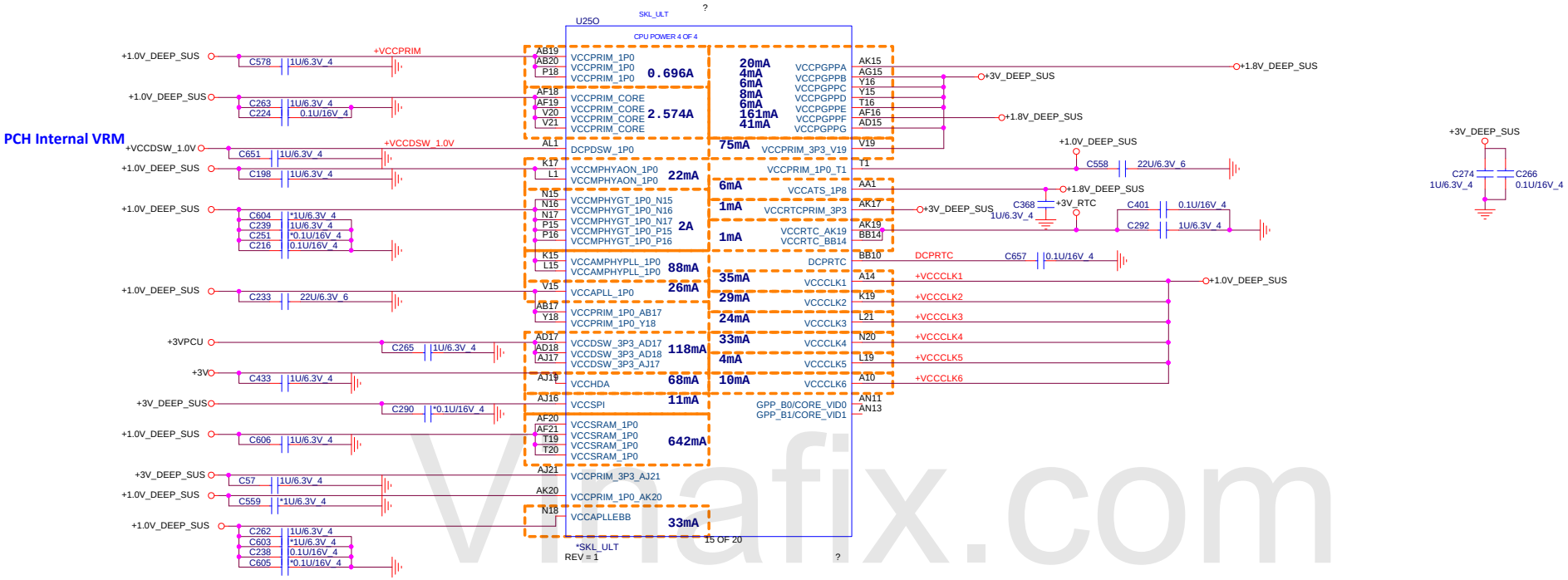
PCH Internal VRM



+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

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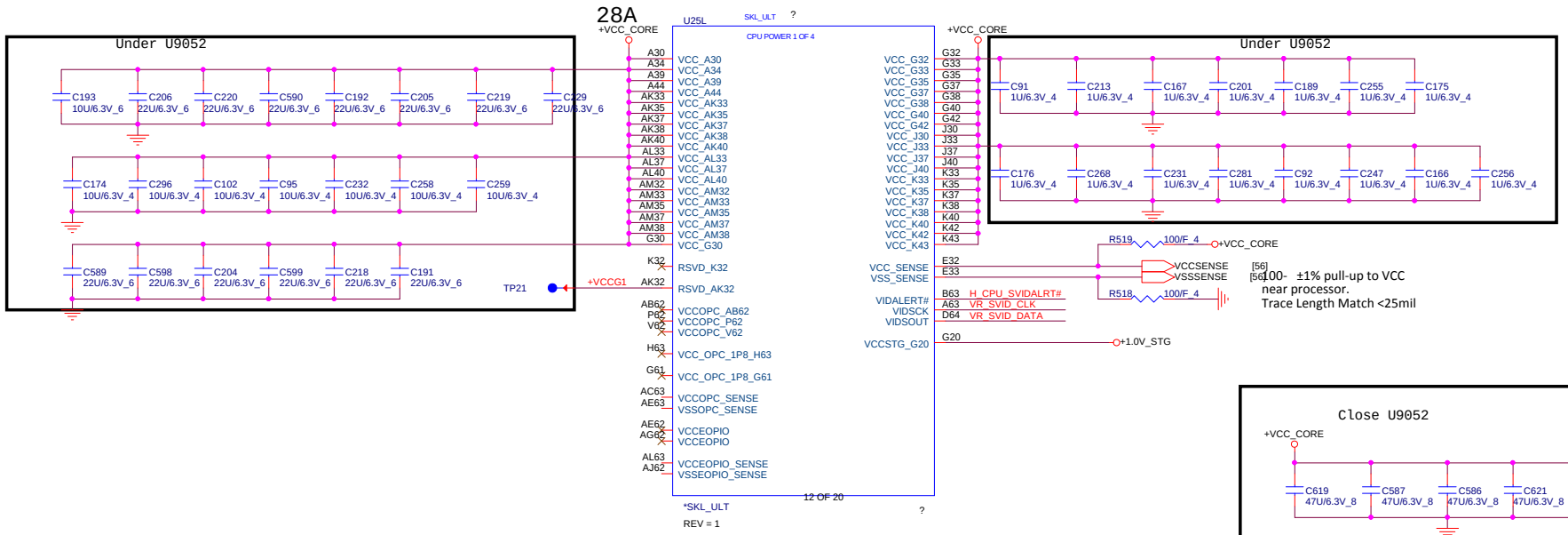
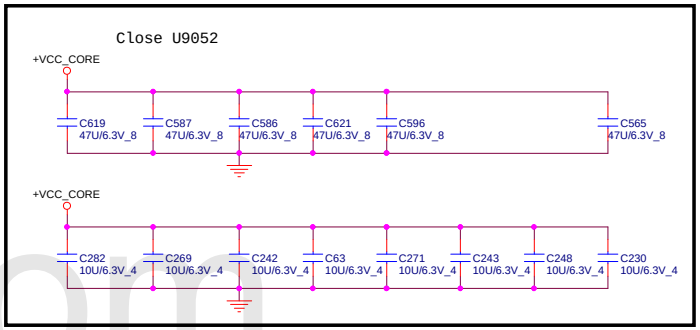
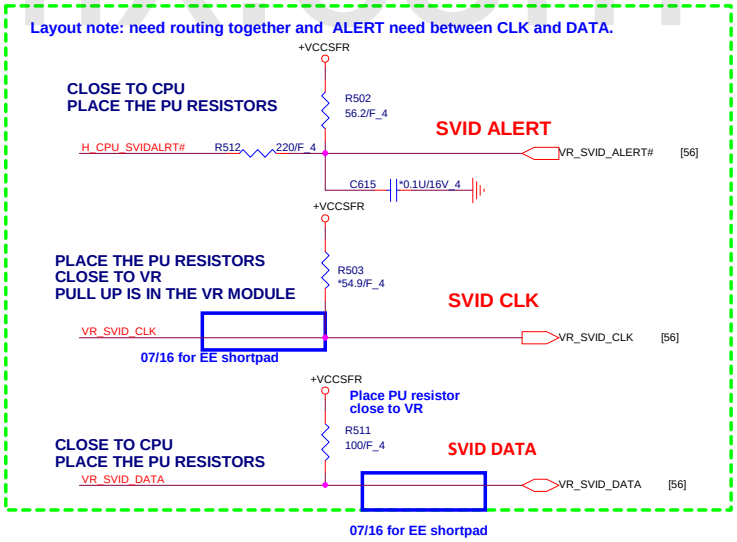




Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
$V_{CC_{GT}}$	Processor Graphics Power Rails	SVID
$V_{CC_{GTX}}$	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
$V_{CC_{SA}}$	System Agent Power Rail	SVID/Fixed (SKU dependent)
$V_{CC_{IO}}$	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]

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	11 -- SKYLAKE (POWER-1)	1A
Date: Thursday, May 12, 2016	Sheet 11of 65	

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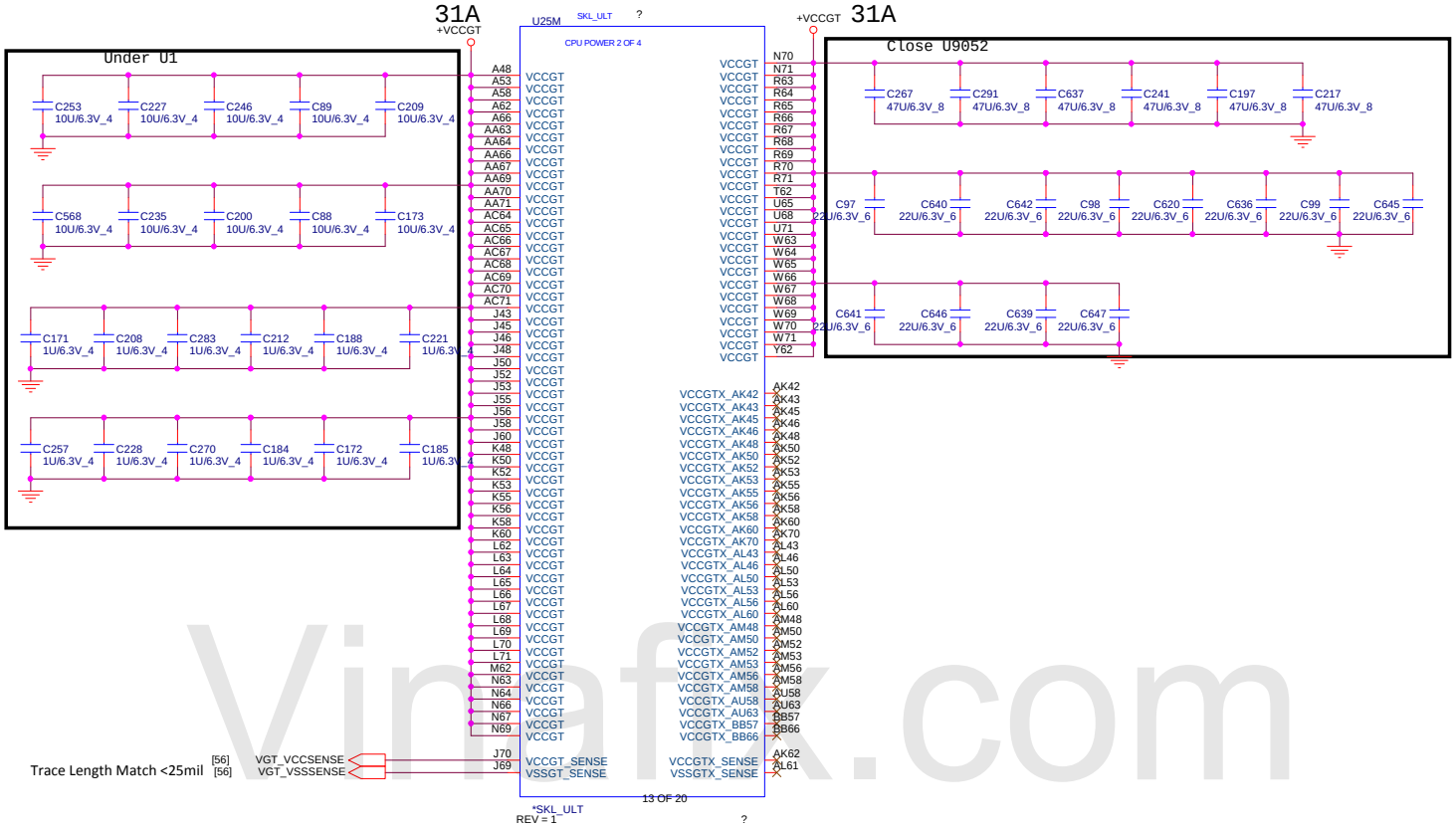

Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
Vcc_{GT}	Processor Graphics Power Rails	SVID
Vcc_{GTX}	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
Vcc_{SA}	System Agent Power Rail	SVID/Fixed (SKU dependent)
Vcc_{IO}	IO Power Rail	Fixed
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

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PROJECT:400 Series
Quanta Computer Inc.

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

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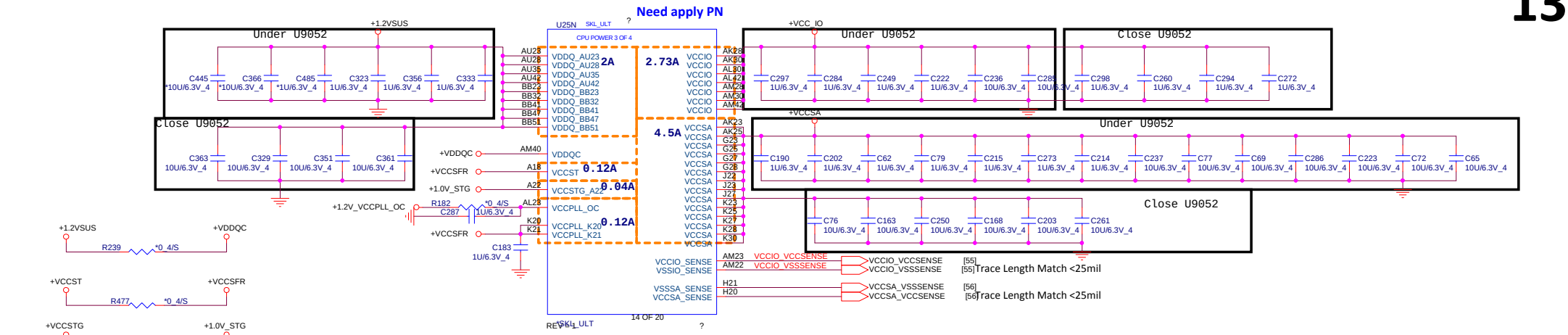

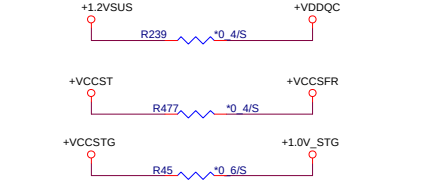

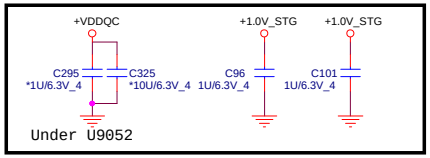

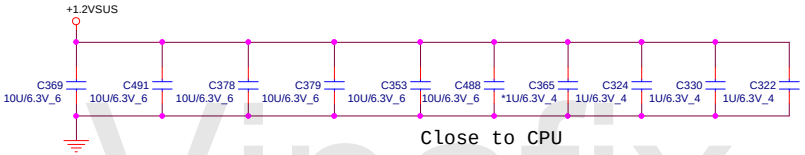

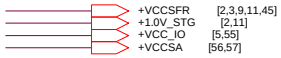

Power Rail	Description	Control
V_{CC}	Processor IA Cores Power Rail	SVID
Vcc_{GT}	Processor Graphics Power Rails	SVID
Vcc_{GTX}	Processor Graphics Extended Power Rail Available only for GT3/GT4 processor SKUs	SVID
Vcc_{SA}	System Agent Power Rail	SVID/Fixed (SKU dependent)
Vcc_{IO}	IO Power Rail	Fixed
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

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PROJECT:400 Series
Quanta Computer Inc.

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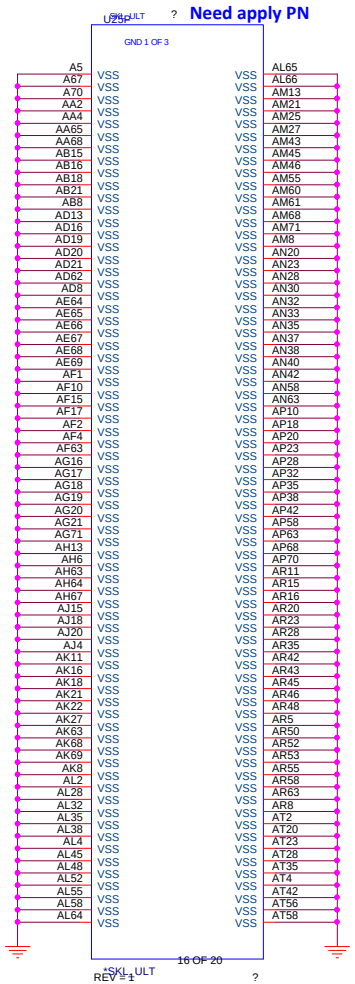

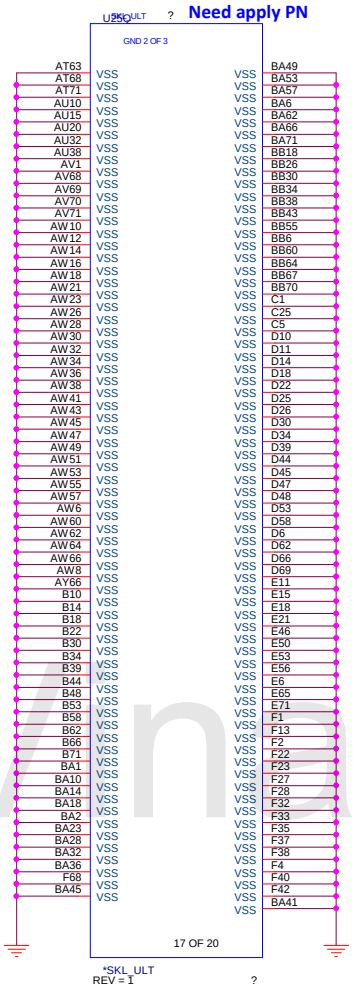

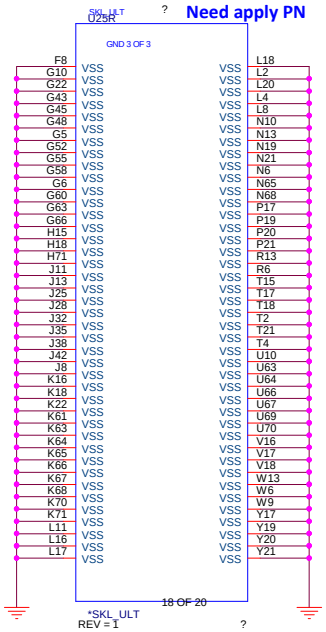

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NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 14 -- SKYLAKE (GND)	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 14of 65	

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Quanta Computer Inc.

Size	Document Number	Rev
	15 -- HSW XDP & APS	1A

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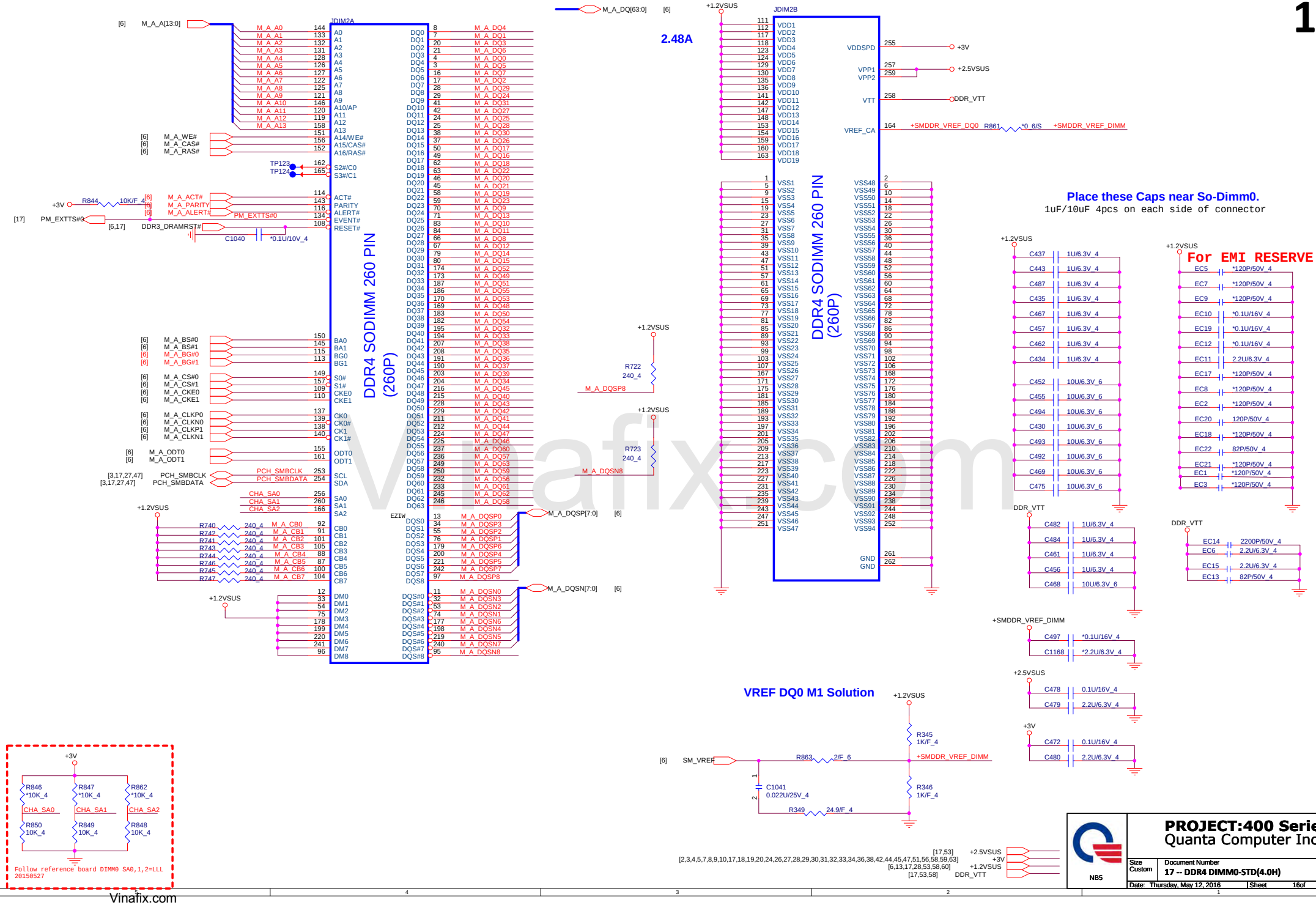
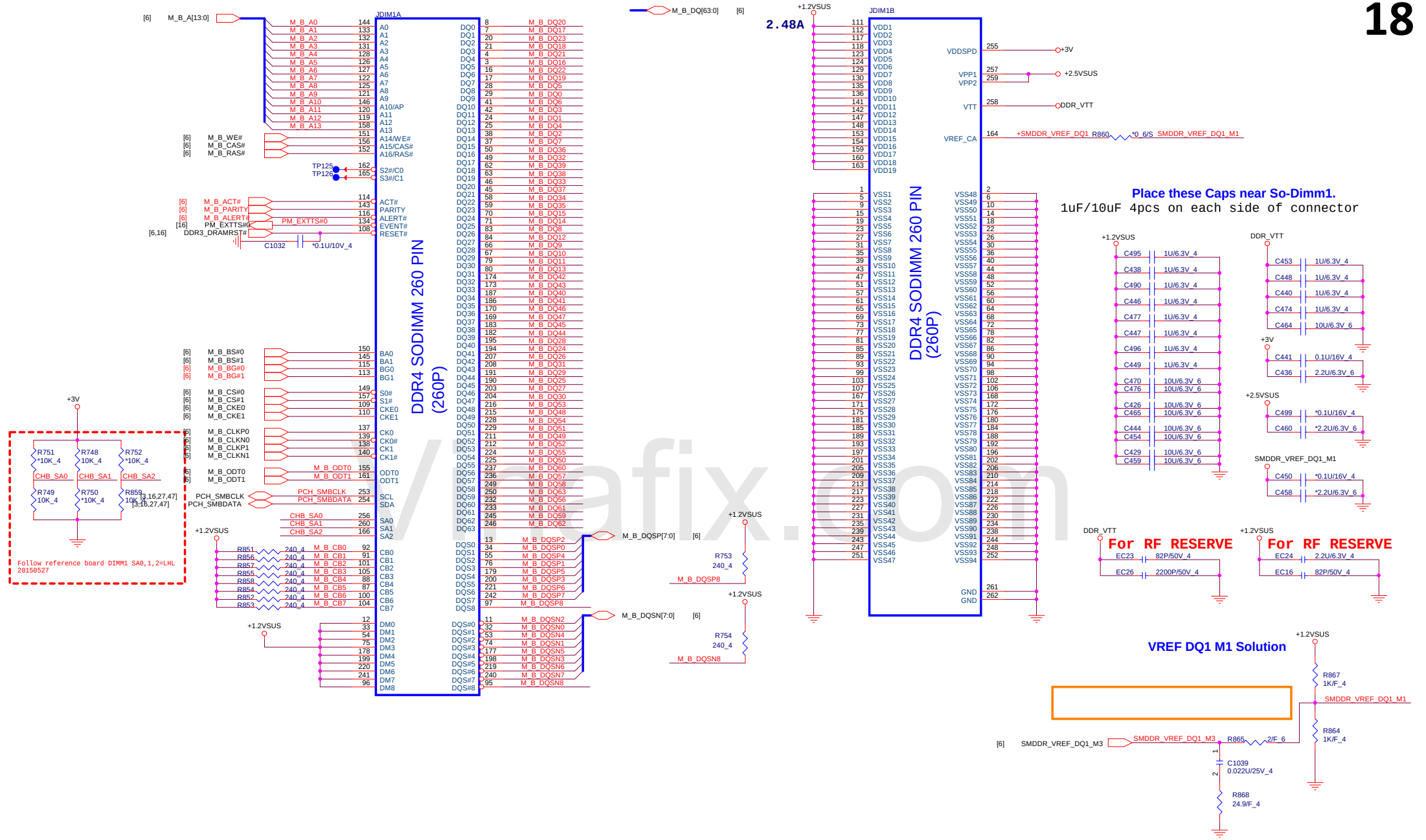

JDIM2A
DDR4 SODIMM 260 PIN (260P)
JDIM2B
DDR4 SODIMM 260 PIN (260P)
2.48A
Place these Caps near So-Dimm0.
1uF/10uF 4pcs on each side of connector
For EMI RESERVE
VREF DQ0 M1 Solution
Follow reference board DIMM0 SA0,1,2=LLL 20150527
PROJECT:400 Series
Quanta Computer Inc.
17 -- DDR4 DIMM0-STD(4.0H)
Date: Thursday, May 12, 2016
Sheet 16of 65
Vinafix.com


JDIM1A
DDR4 SODIMM 260 PIN (260P)
JDIM1B
DDR4 SODIMM 260 PIN (260P)
2.48A
Follow reference board DIMM1 SA0,1,2=LHL 20150527
Place these Caps near So-Dimm1.
1uF/10uF 4pcs on each side of connector
For RF RESERVE
For RF RESERVE
VREF DQ1 M1 Solution
PROJECT:400 Series
Quanta Computer Inc.
Document Number
18 -- DDR3 DIMM1-RVS(4.0H)
Rev 1A
Size Custom
Date: Thursday, May 12, 2016
Sheet 17of 65
NB5

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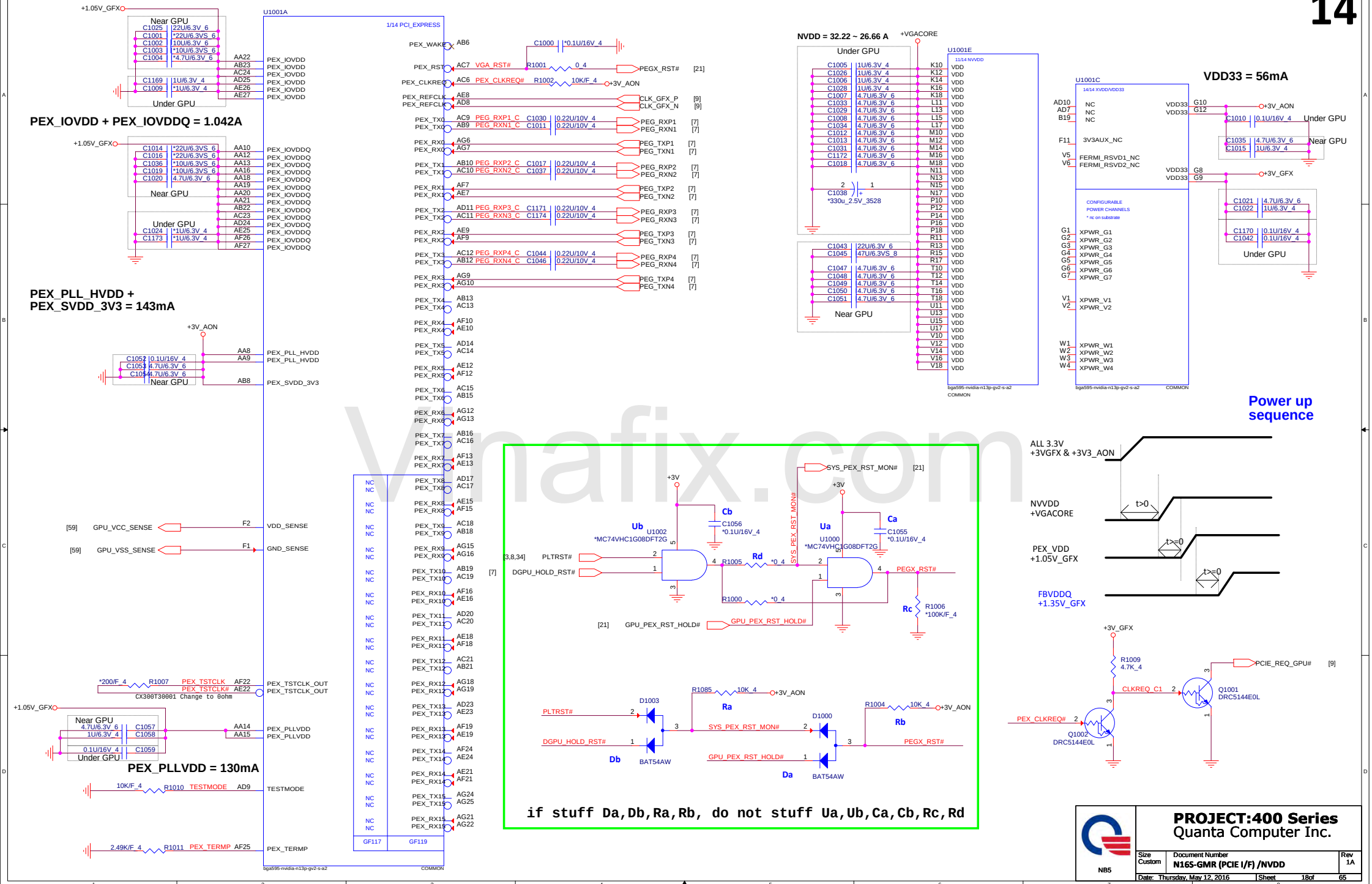
PEX_IOVDD + PEX_IOVDDQ = 1.042A
PEX_PLL_HVDD + PEX_SVDD_3V3 = 143mA
PEX_PLLVDD = 130mA
NVDD = 32.22 ~ 26.66 A
VDD33 = 56mA
Near GPU
Under GPU
U1001A
1/14 PCI_EXPRESS
U1001E
U1001C
PEX_IOVDD
PEX_IOVDDQ
PEX_PLL_HVDD
PEX_SVDD_3V3
PEX_PLLVDD
PEX_TERMP
VDD_SENSE
GND_SENSE
PEX_TSTCLK_OUT
TESTMODE
PEX_TERMP
PEX_WAKE#
PEX_RST#
PEX_CLKREQ#
PEX_REFCLK
PEX_TX0
PEX_RX0
PEX_TX1
PEX_RX1
PEX_TX2
PEX_RX2
PEX_TX3
PEX_RX3
PEX_TX4
PEX_RX4
PEX_TX5
PEX_RX5
PEX_TX6
PEX_RX6
PEX_TX7
PEX_RX7
PEX_TX8
PEX_RX8
PEX_TX9
PEX_RX9
PEX_TX10
PEX_RX10
PEX_TX11
PEX_RX11
PEX_TX12
PEX_RX12
PEX_TX13
PEX_RX13
PEX_TX14
PEX_RX14
PEX_TX15
PEX_RX15
PEX_GFX_P
PEX_GFX_N
PEX_RXP1
PEX_RXN1
PEX_TXP1
PEX_TXN1
PEX_RXP2
PEX_RXN2
PEX_TXP2
PEX_TXN2
PEX_RXP3
PEX_RXN3
PEX_TXP3
PEX_TXN3
PEX_RXP4
PEX_RXN4
PEX_TXP4
PEX_TXN4
VGA_RST#
PEX_CLKREQ#
PEGX_RST#
SYS_PEX_RST_MON#
GPU_PEX_RST_HOLD#
PLTRST#
DGPU_HOLD_RST#
Ua
Ub
Ca
Cb
Rc
Rd
Ra
Rb
Da
Db
Power up sequence
ALL 3.3V
+3VGFX & +3V3_AON
NVVDD
+VGACORE
PEX_VDD
+1.05V_GFX
FBVDDQ
+1.35V_GFX
t>0
t>=0
if stuff Da,Db,Ra,Rb, do not stuff Ua,Ub,Ca,Cb,Rc,Rd
PROJECT:400 Series
Quanta Computer Inc.
N16S-GMR (PCIE I/F) /NVDD
Thursday, May 12, 2016
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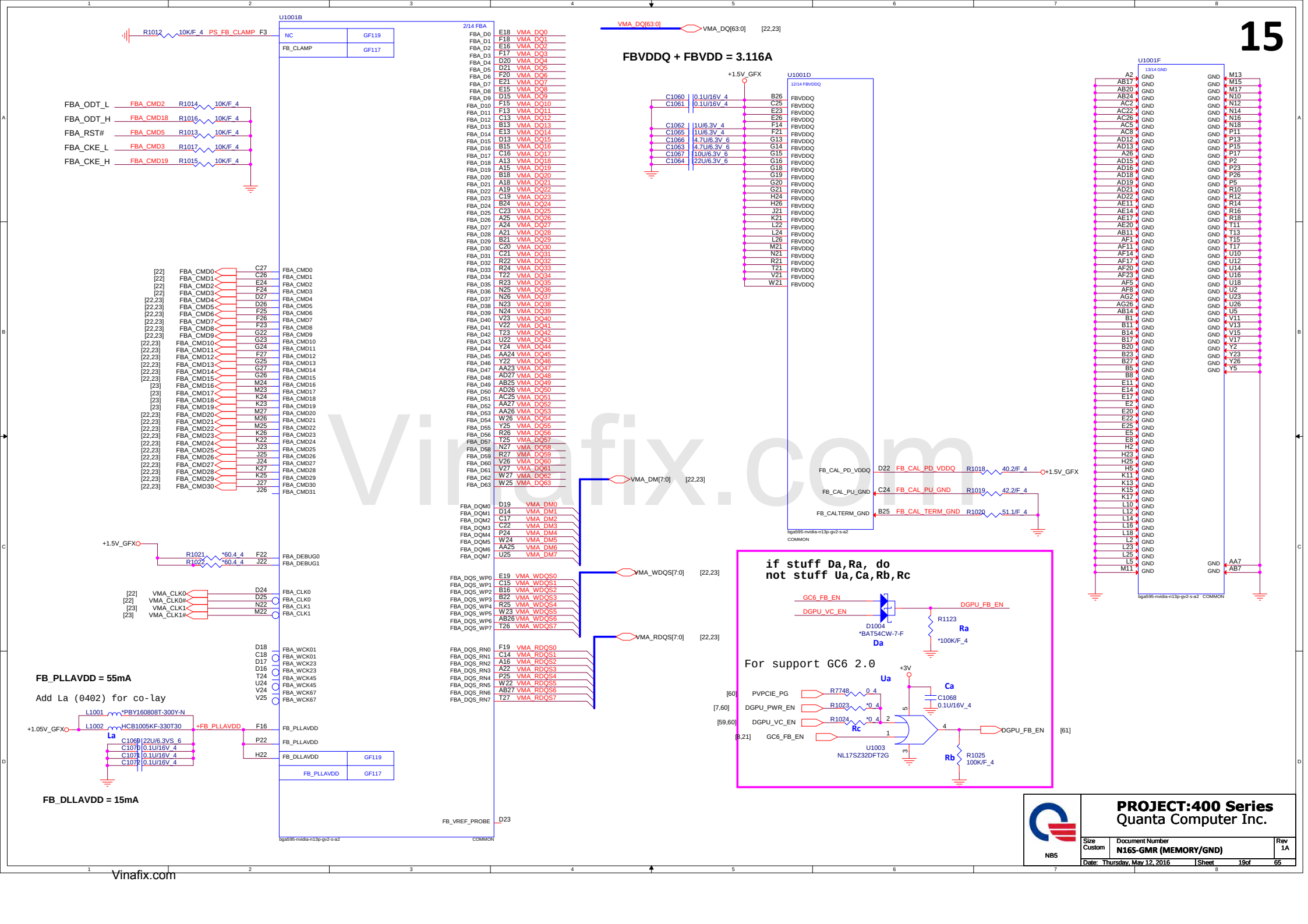

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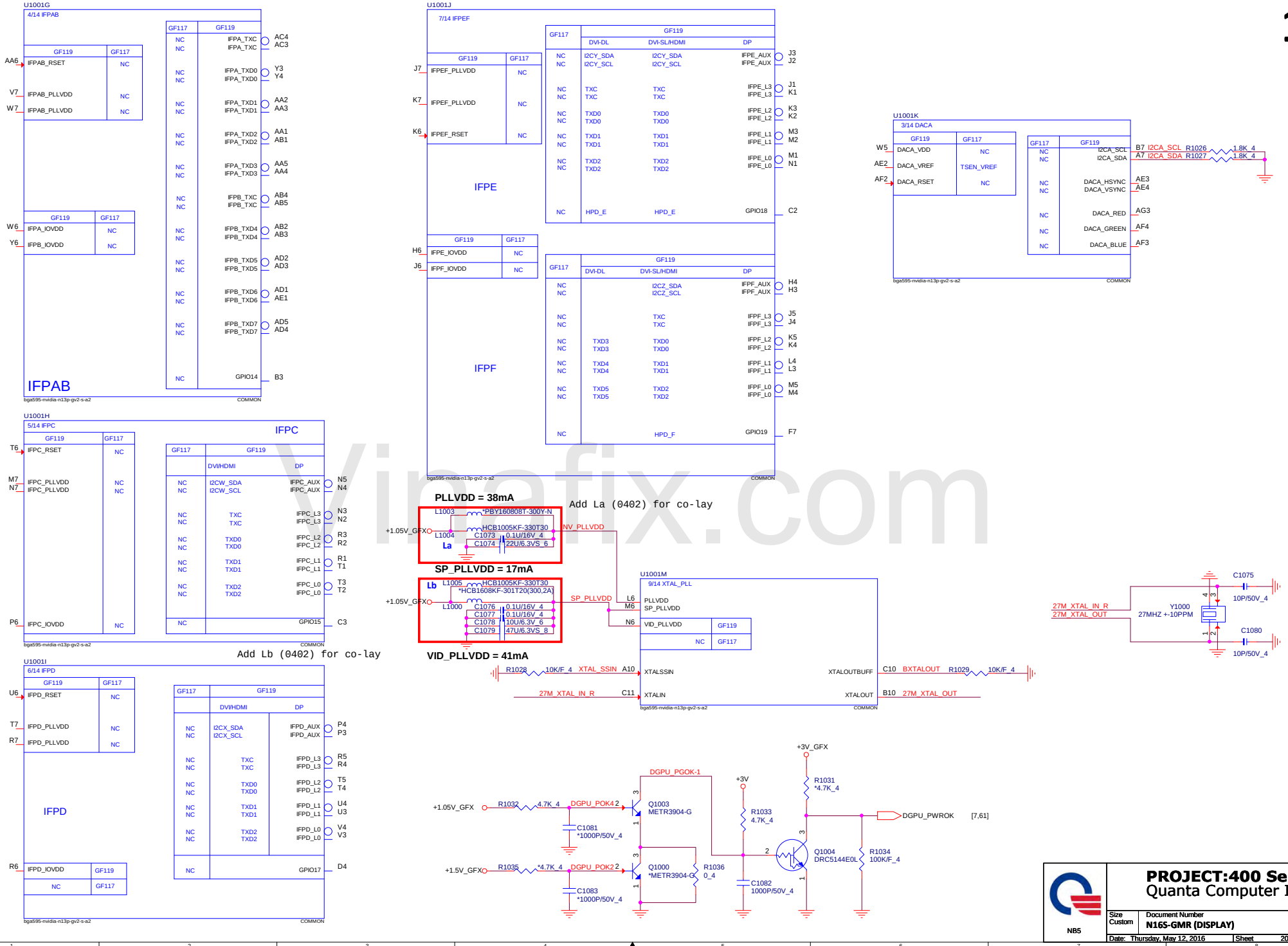
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size Custom	Document Number N16S-GMR (MEMORY/GND)	Rev 1A
Date: Thursday, May 12, 2016	Sheet 19of 65	

Vinafix.com


U1001G
4/14 IFPAB
IFPAB
U1001J
7/14 IFPEF
IFPE
IFPF
U1001K
3/14 DACA
U1001H
5/14 IFPC
IFPC
U1001I
6/14 IFPD
IFPD
PLLVDD = 38mA
Add La (0402) for co-lay
SP_PLLVDD = 17mA
VID_PLLVDD = 41mA
Add Lb (0402) for co-lay
U1001M
9/14 XTAL_PLL
DGPU_PGOK-1
DGPU_PWROK
PROJECT:400 Series
Quanta Computer Inc.
N16S-GMR (DISPLAY)
Vinafix.com

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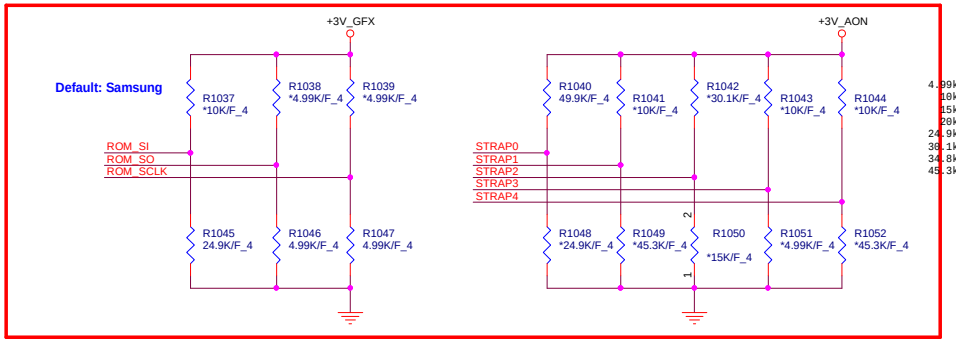

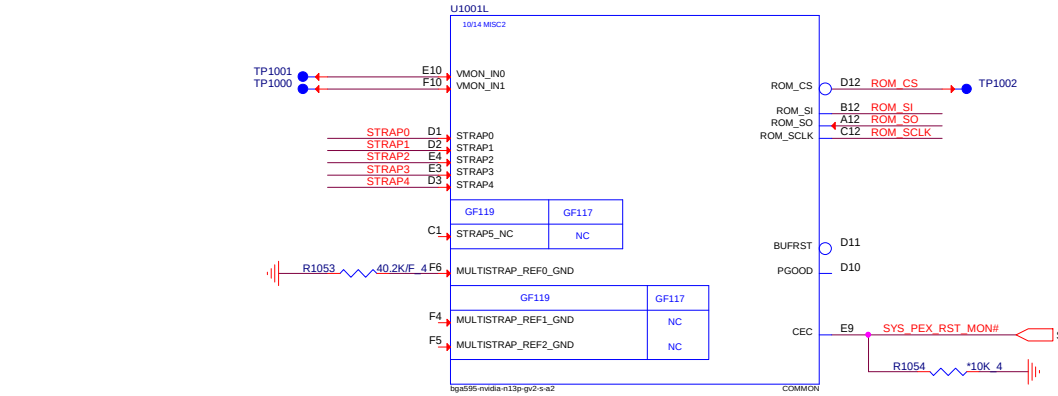

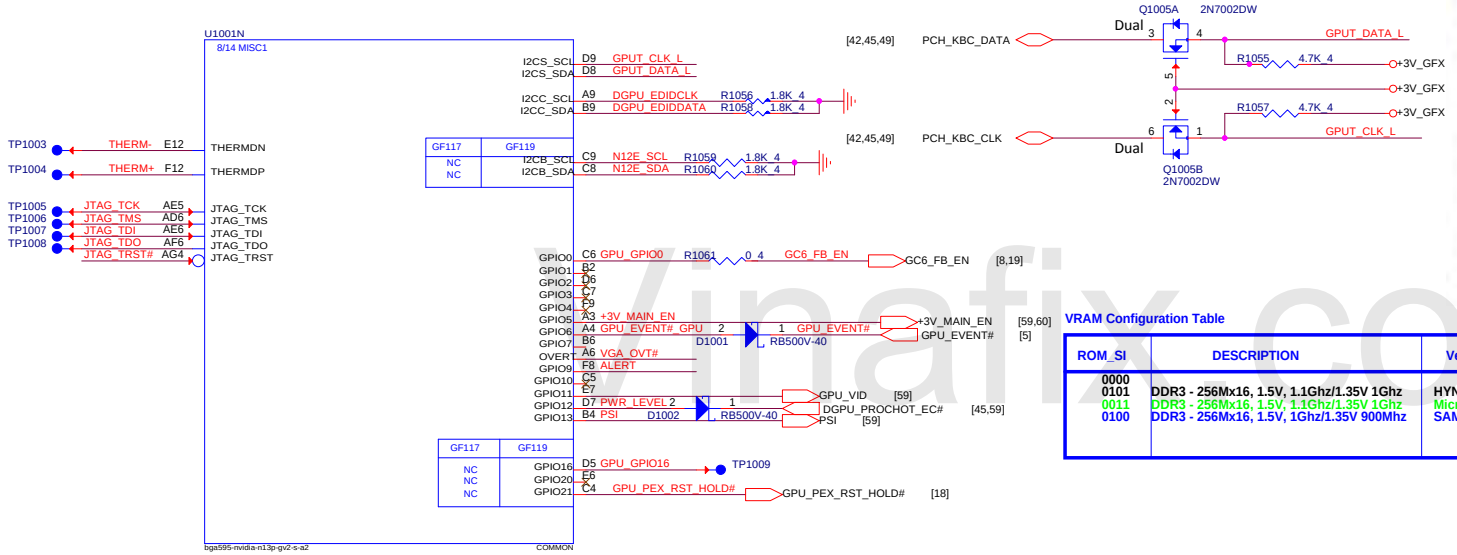

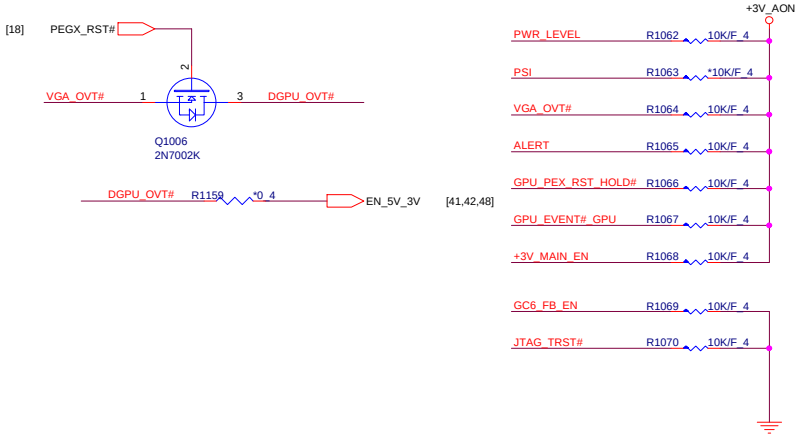

Table 15-2. Resistance Mapping to Hex Values

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

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NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	N16S-GMR (GPIO/STRAPS)	1A

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Rank0

HYU 256Mx16, H5TC4G63AFR-11C QBC PN : AKD5PGWTW08---TOP B/S PN : AKD5PGWTW07
MIC 256Mx16, MT41J256M16HA-093G:E QBC PN : AKD5PZSTL01---TOP B/S PN : AKD5PZSTL00
SAM 256Mx16, K4W4G1646D-BC1A QBC PN : AKD5PGWT501---TOP B/S PN : AKD5PGWT502

U1004

VRAM _DDR3_HYNIX_256MX16

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

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

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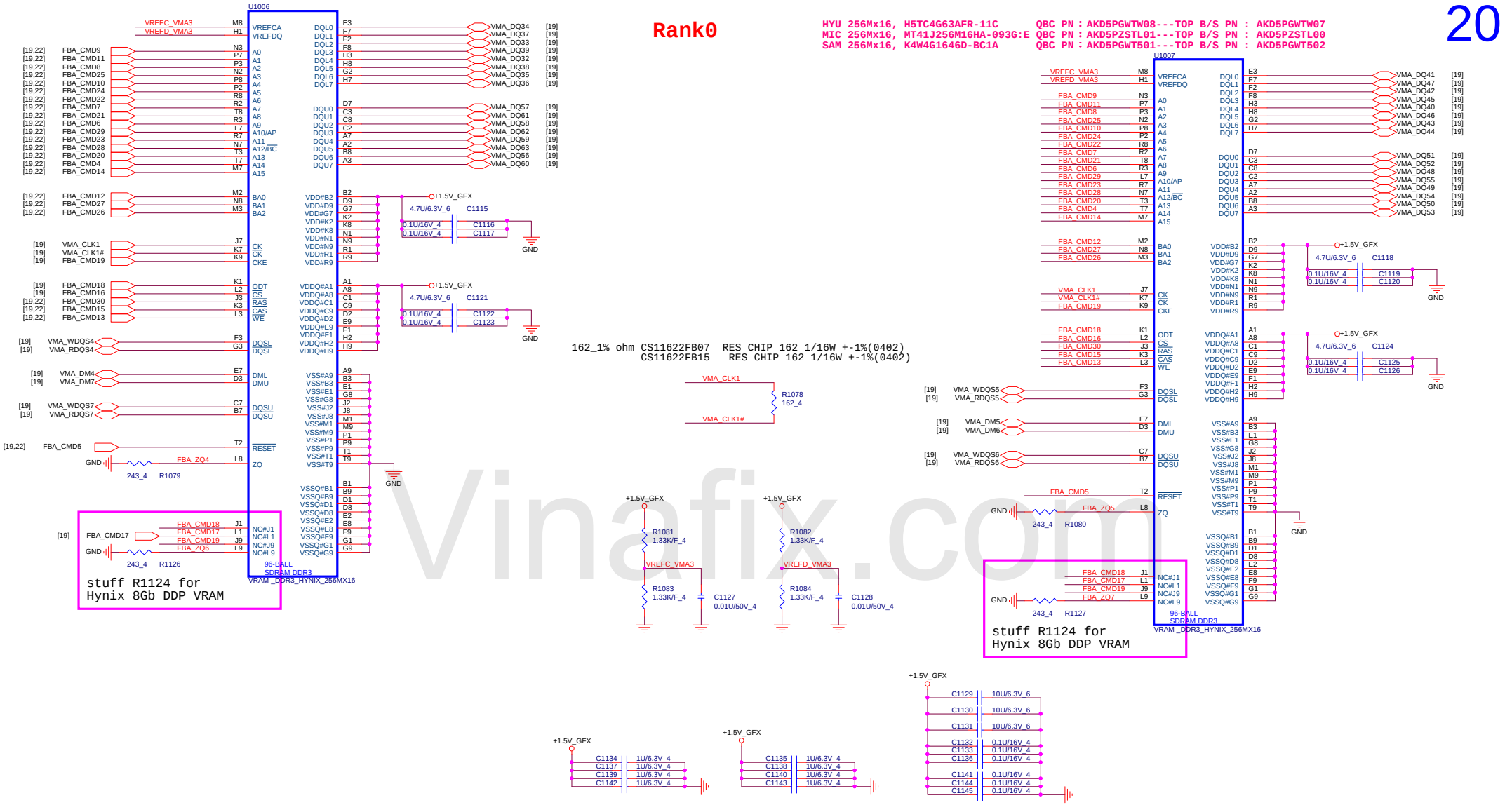
Rank0

HYU 256Mx16, H5TC4G63AFR-11C QBC PN : AKD5PGWTW08---TOP B/S PN : AKD5PGWTW07
MIC 256Mx16, MT41J256M16HA-093G:E QBC PN : AKD5PZSTL01---TOP B/S PN : AKD5PZSTL00
SAM 256Mx16, K4W4G1646D-BC1A QBC PN : AKD5PGWT501---TOP B/S PN : AKD5PGWT502



NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: DDR3 - RANK0	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 23of 65	

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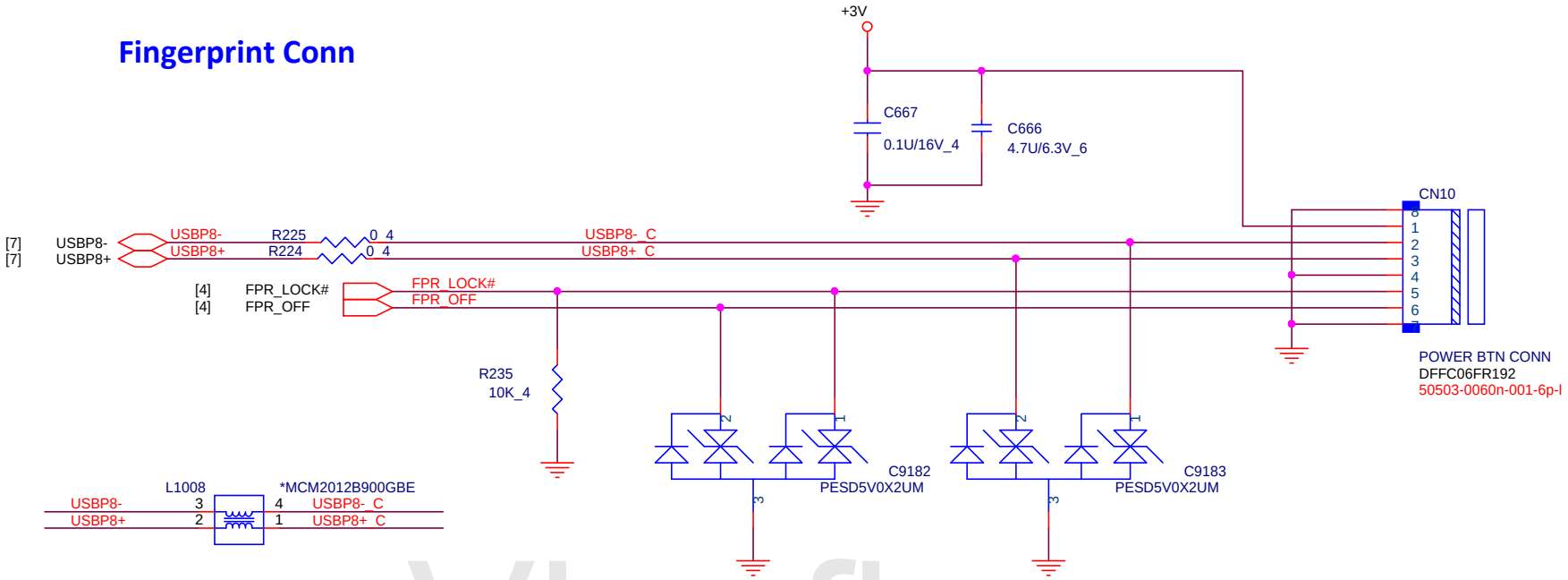
Fingerprint Conn



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

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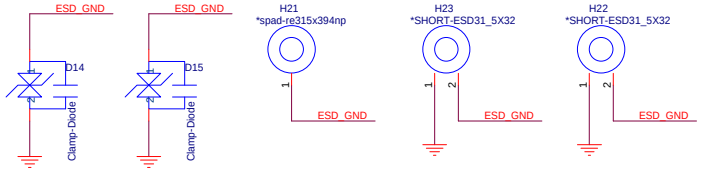
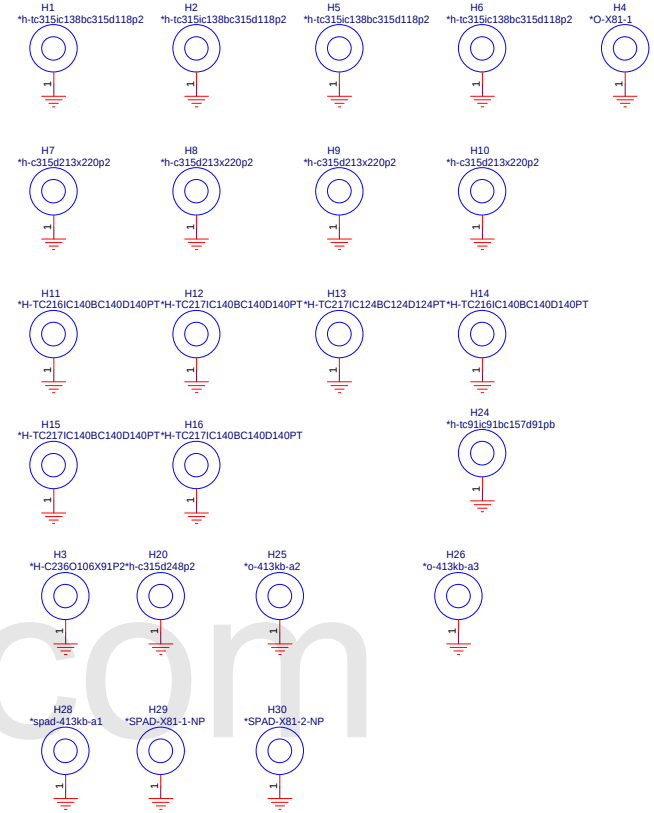
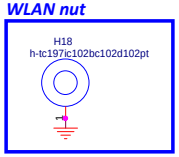


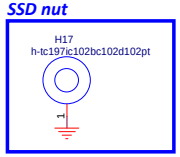
Hole



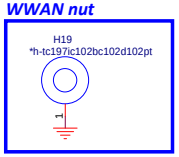
WLAN nut



SSD nut



WWAN nut



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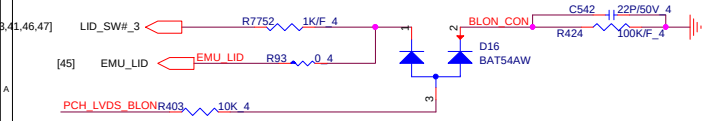
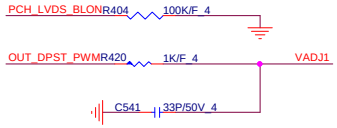
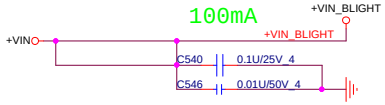
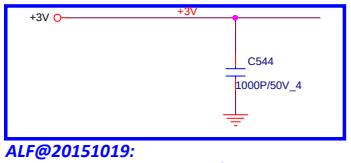
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **25 -- LVDS converter RTD2136**	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 25of 65	

LID Switch

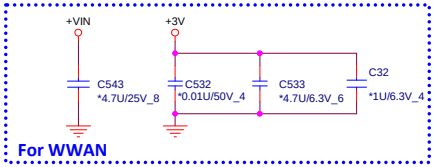


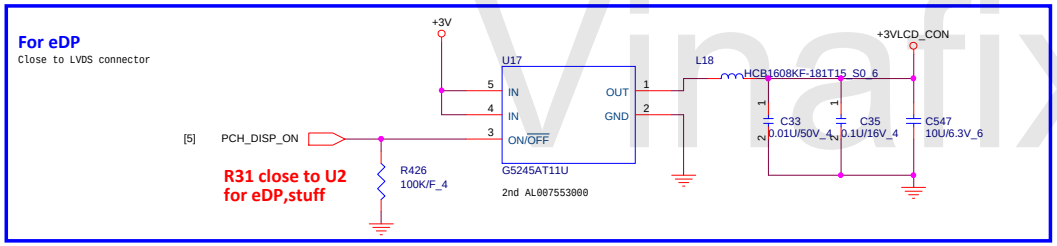




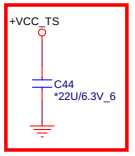


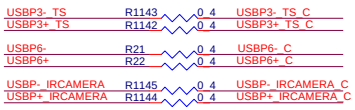
ALF@20151019:
1. Designed Reserve 4Pins for IR CCD Pin 26 to Pin29
2.Combined the +3V & +3V_CAM & +3V_IR at Pin26~25





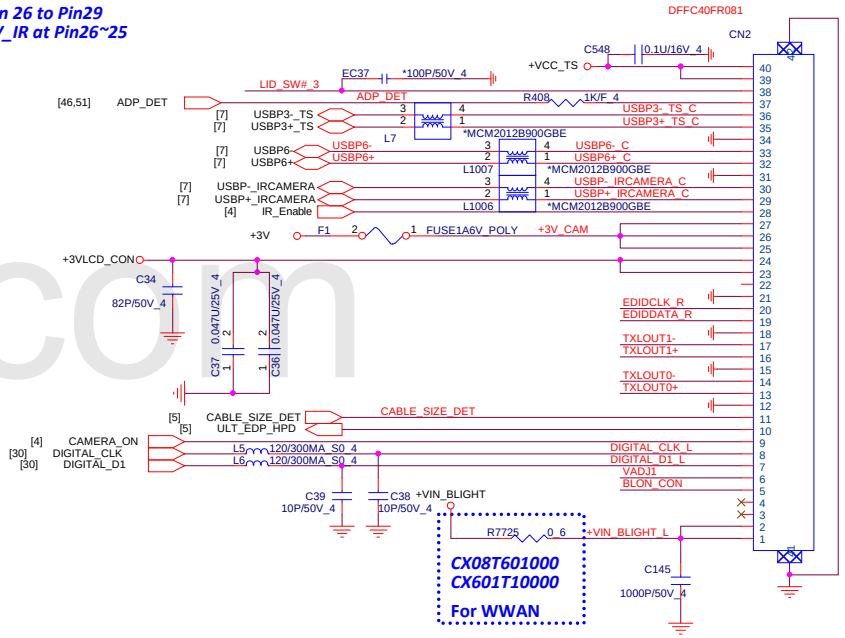
LVDS Conn.



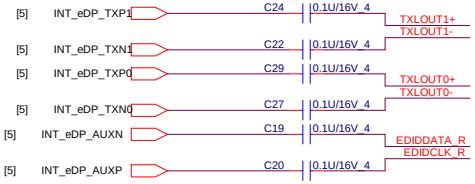


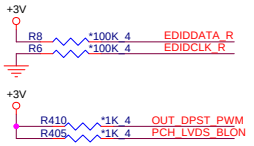
GS12401-1011-9H
lvds-50671-04041-001-40p-I

DFFC40FR081
CN2



CX08T601000
CX601T10000
For WWAN





[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

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	26 -- LCD CONN/LID/CAM/D-MIC	1A

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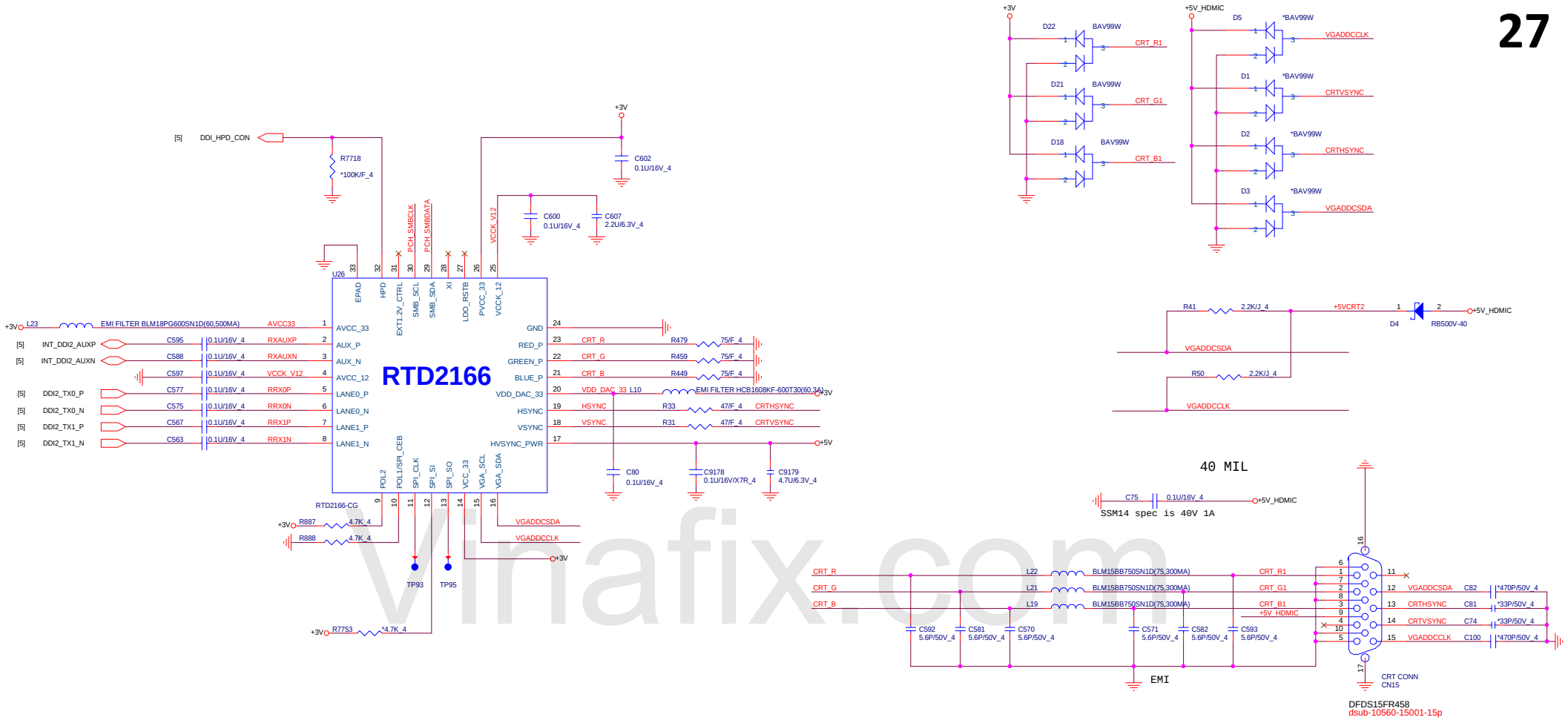

CIIC_SCL, CIIC_SDA Connection

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
Date: Thursday, May 12, 2016	Sheet 27 of 65	

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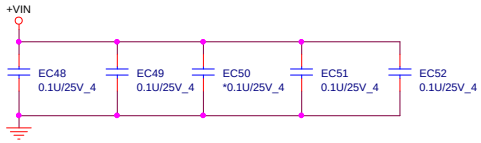
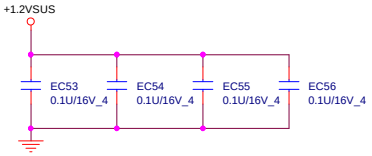
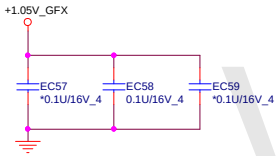
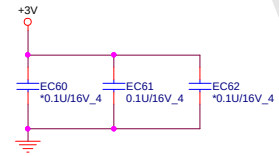
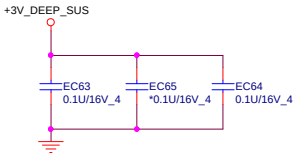
EMI CAP

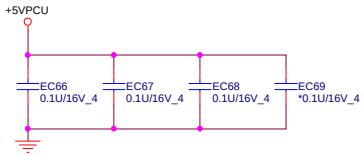




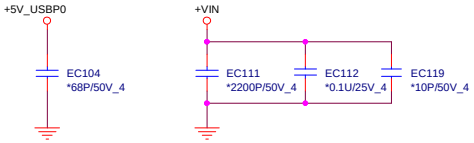


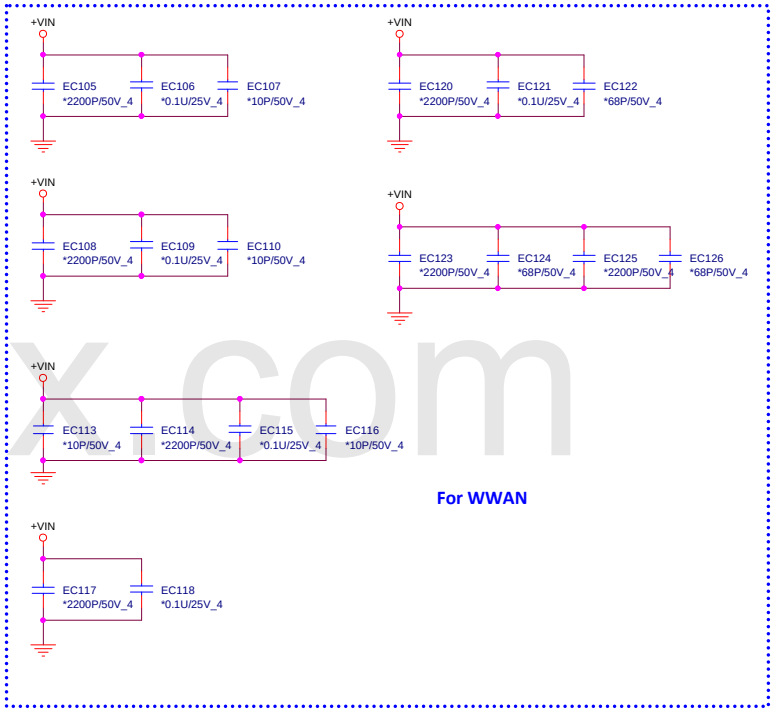






RF Cap





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NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	28 – REPEATER PS8407A	1A

Date: Thursday, May 12, 2016 Sheet 28 of 65

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EMI Solution

C_TX2_HDMI+ R208 120/F_4 C_TX2_HDMI-
C_TX1_HDMI+ R194 120/F_4 C_TX1_HDMI-
C_TX0_HDMI+ R178 120/F_4 C_TX0_HDMI-
C_TXC_HDMI+ R221 120/F_4 C_TXC_HDMI-

+3V
R7701 1M_4
[5] HDMI_HPD_CON
Q7701 2N7002K
HDMI_HPD R7702 20K/F_4

+5V
U22
GND
IN
OUT
G5250Q1T73U
C638 0.1U/16V_4
+5V_HDMIC
C83 *0.01U/50V_4
C103 0.1U/16V_4
C617 *10U/6.3V_6

CN18
X_DP(PWR)
D2+
GND
D2-
D1+
GND
D1-
D0+ SHELL2
GND
D0-
CK+
GND
CK- SHELL2
CE Remote
NC
DDC CLK
DDC DATA
GND_DPAUX
+5V
HP DET
HD_DP_Option
DP/HDMI CONN
hdmi-59065-0190d-v02-19p

[5] IN_D2 C1195 0.1U/16V_4 C_TX2_HDMI+
[5] IN_D2# C1194 0.1U/16V_4 C_TX2_HDMI-
[5] IN_D1 C1193 0.1U/16V_4 C_TX1_HDMI+
[5] IN_D1# C1192 0.1U/16V_4 C_TX1_HDMI-
[5] IN_D0 C1190 0.1U/16V_4 C_TX0_HDMI+
[5] IN_D0# C1191 0.1U/16V_4 C_TX0_HDMI-
[5] IN_CLK C1196 0.1U/16V_4 C_TXC_HDMI+
[5] IN_CLK# C1197 0.1U/16V_4 C_TXC_HDMI-

+5V_HDMIC
R616 2.2K_4 HDMI_UP_CLK
R615 2.2K_4 HDMI_UP_DATA
C331 *10P/50V_4
C342 *10P/50V_4
+5V_HDMIC
HDMI_HPD
VC1 *TVM0G5R5M220R
C279 *220P/50V_4
+5V_HDMIC
C654 *0.01U/50V_4
for EMI request

U1011
C_TX2_HDMI+ C_TX2_HDMI-
C_TX1_HDMI+ C_TX1_HDMI-
IN1 IN2 IN3 IN4 NC GND
*PUSB3FR4

U1012
C_TX0_HDMI+ C_TX0_HDMI-
C_TXC_HDMI+ C_TXC_HDMI-
IN1 IN2 IN3 IN4 NC GND
*PUSB3FR4

HDMI SMBus Isolation

+3V
R7707 2.2K_4
[5] DPB_DDCCLK
DPB_DDCCLK
Q7702
HDMI_UP_CLK
[5] DPB_DDCDATA
DPB_DDCDATA
HDMI_UP_DATA
R7715 2.2K_4
2N7002DW

Close to HDMI connector

Q7703 2N7002K
DGPU_CL_HDMIP
+3V
R7713 100K/F_4
C7713 0.1U/10V_4
Close to Q7033

R7705 470/F_4 C_TX2_HDMI+
R7706 470/F_4 C_TX2_HDMI-
R7708 470/F_4 C_TX1_HDMI+
R7709 470/F_4 C_TX1_HDMI-
R7710 470/F_4 C_TX0_HDMI+
R7711 470/F_4 C_TX0_HDMI-
R7712 470/F_4 C_TXC_HDMI+
R7714 470/F_4 C_TXC_HDMI-

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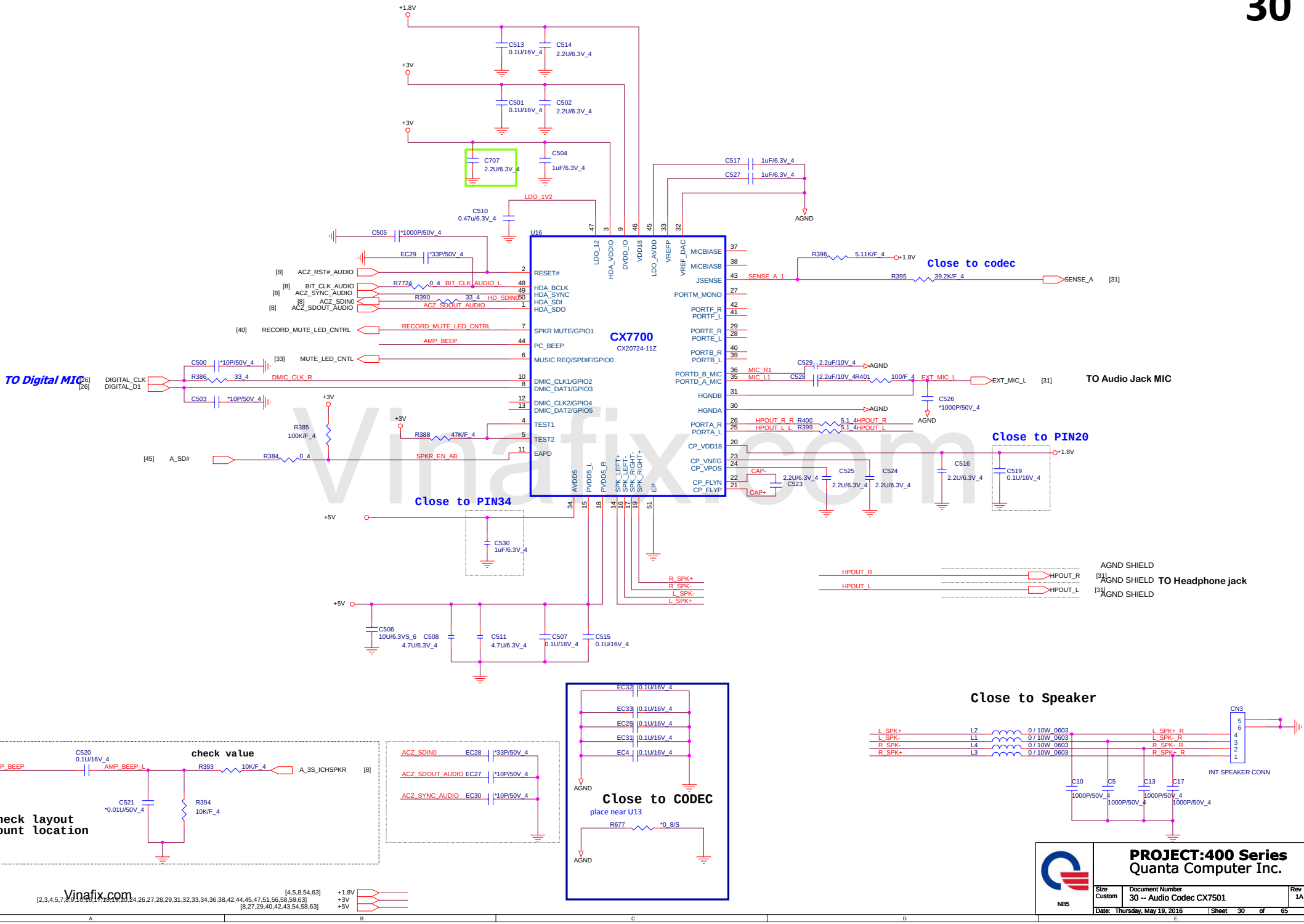
NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	29 -- HDMI CONNECTOR	1A
Date: Thursday, May 12, 2016	Sheet 29 of 65	

Audio Codec



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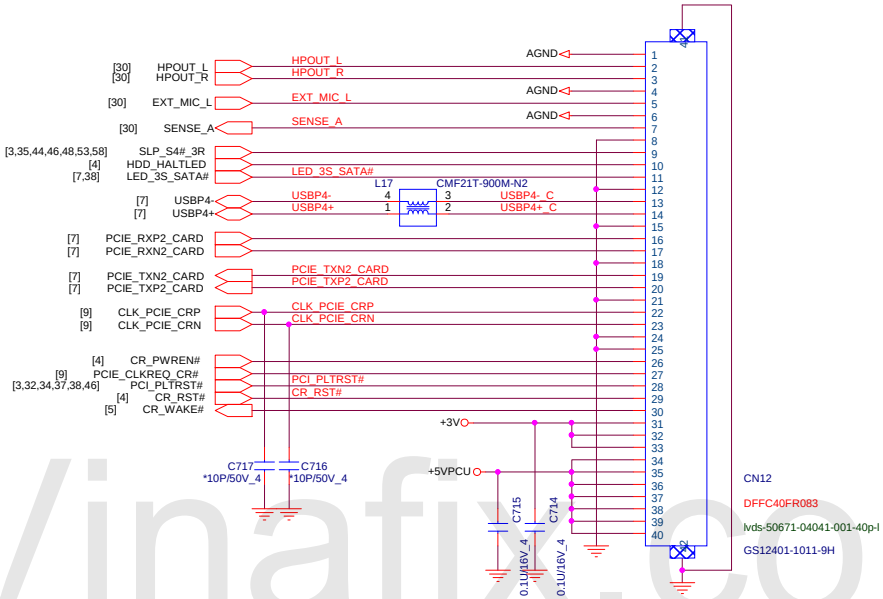
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 30 -- Audio Codec CX7501	Rev: 1A
Date: Thursday, May 19, 2016	Sheet 30 of 65	

USB/Card Reader/Headphone_Mic Combo Jack Daugther Board Connector



Vinafix.com

NB5

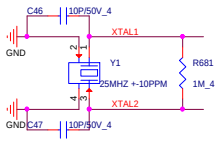
PROJECT:400 Series
Quanta Computer Inc.

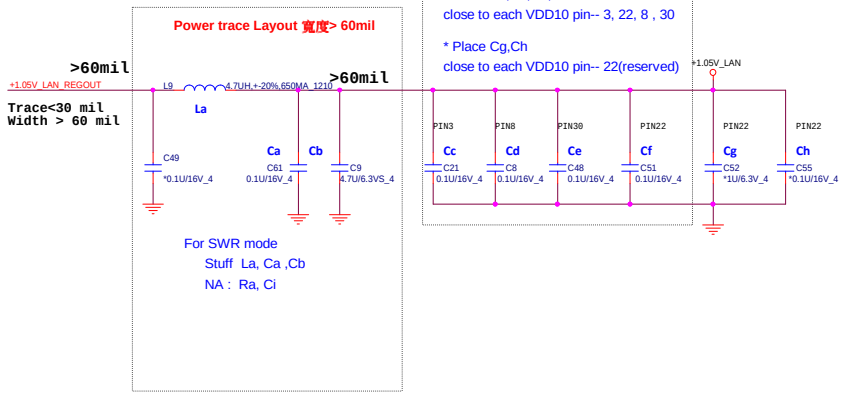
Size	Document Number	Rev
Custom	31 -- DAUGTHER BOARD CONN.	1A

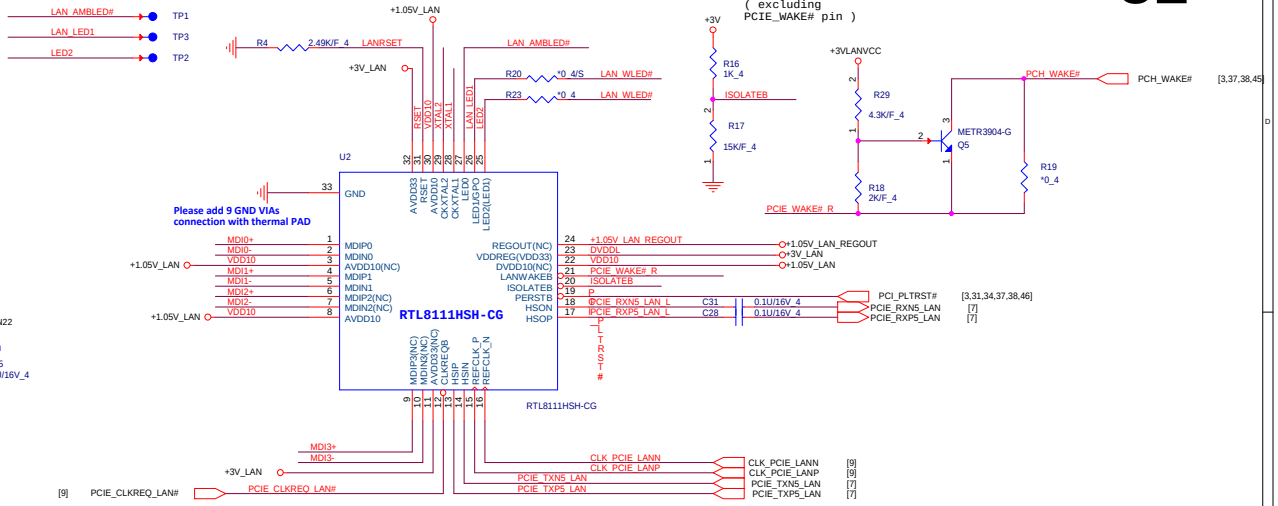
Date: Thursday, May 12, 2016 Sheet 31 of 65

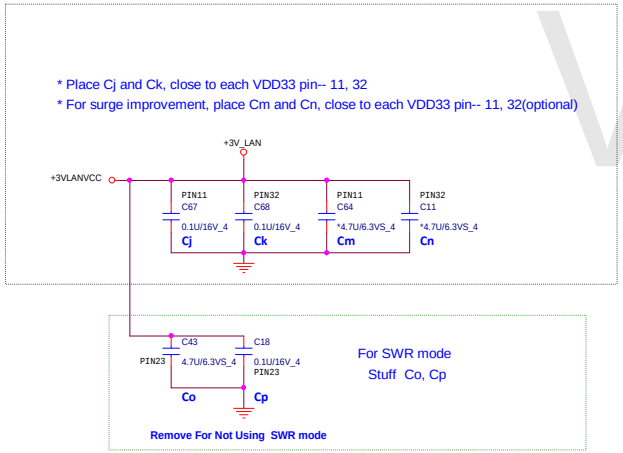
400 series 0930 whole page

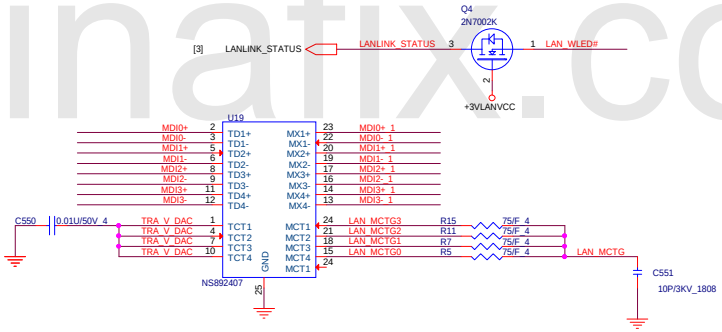
LAN & RJ45

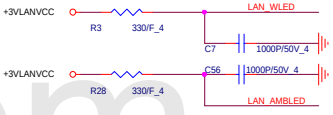


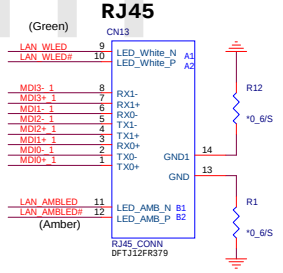










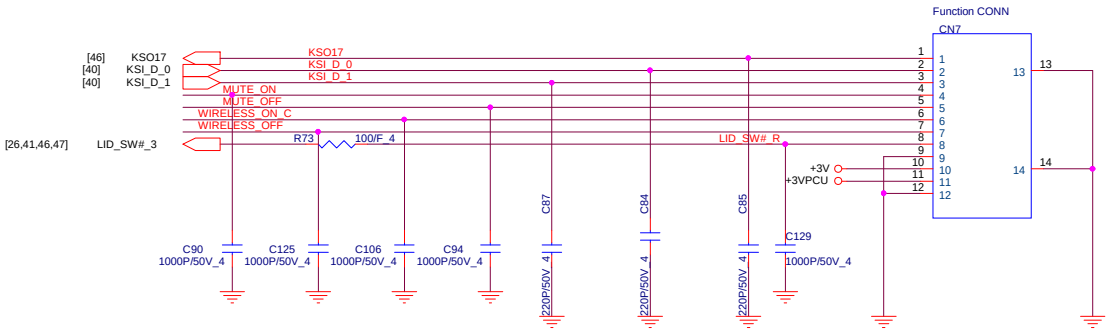


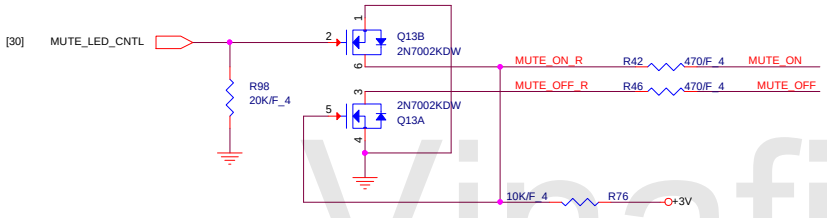
For GiGA BOT:GST5009B LF,DB0Z06LAN00

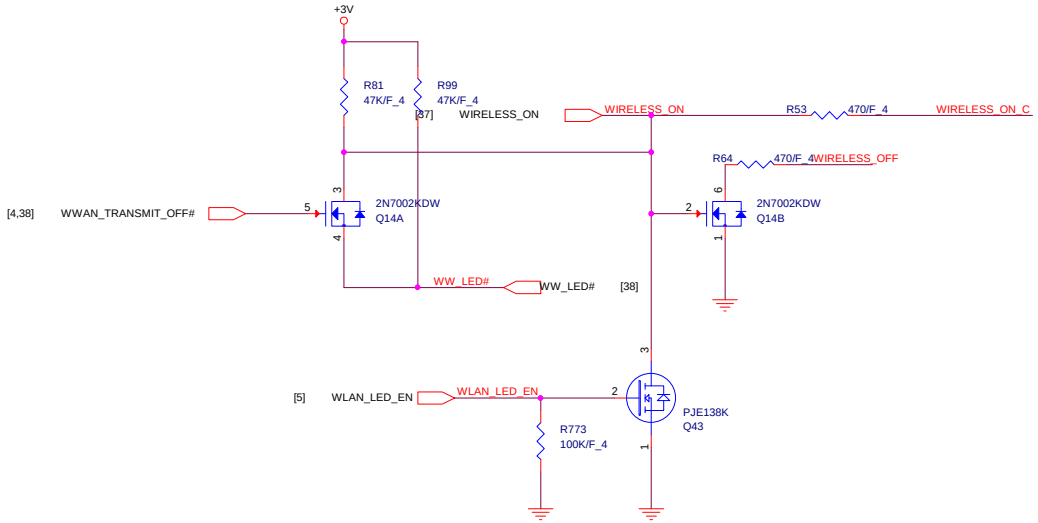
FCE :NS892407 ,DB0LL1LAN00

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

Vinafix.com







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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	

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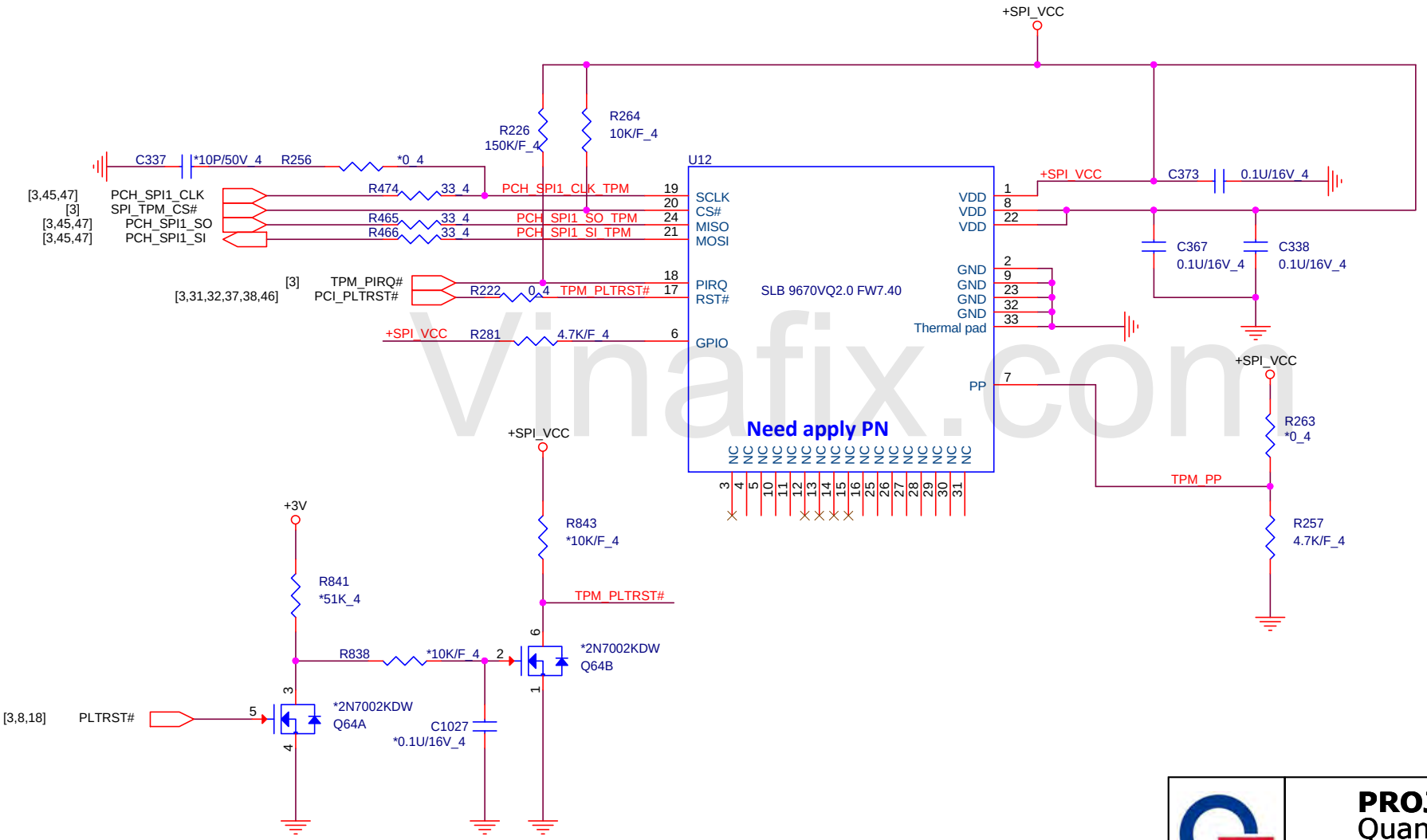
TPM (1.2 or 2.0)



Vinafix.com

NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	34 -- TPM SLB9670_QFN	1A
Date: Thursday, May 12, 2016	Sheet 34of 65	

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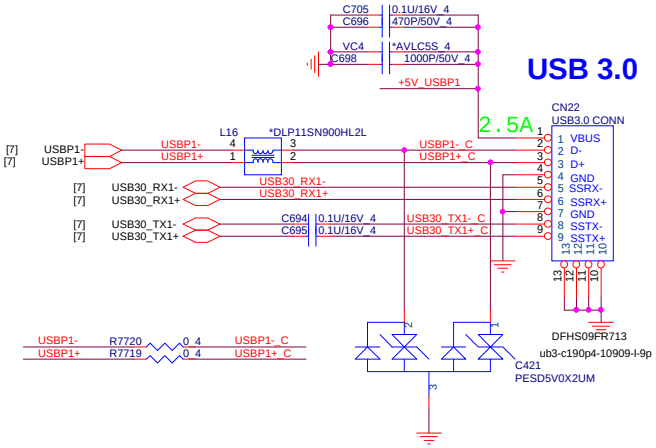
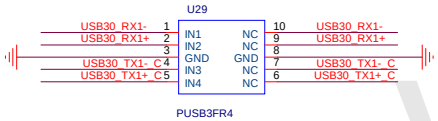
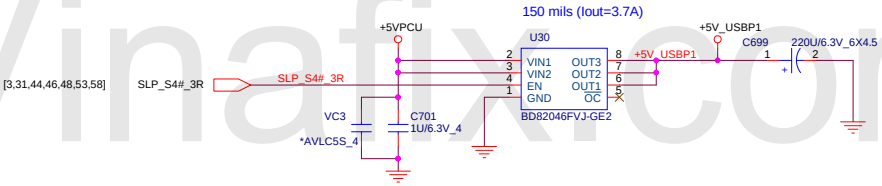
USB 2.0/3.0 Combo







[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: Custom	Document Number: 35 – USB3.0 x2	Rev: 1A
Date: Tuesday, May 17, 2016	Sheet 35 of 65	

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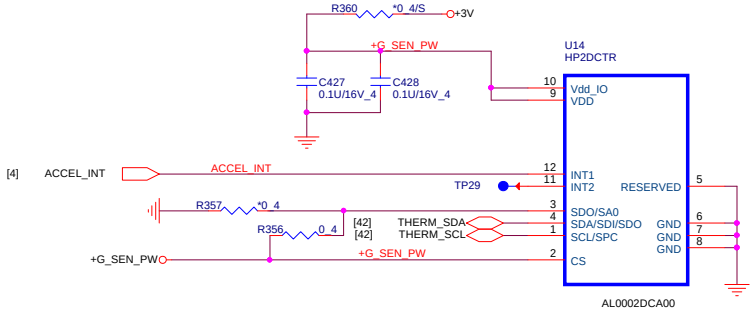
Accelerometer Sensor



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[2,3,4,5,7,8,9,10,16,17,18,19,20,24,26,27,28,29,30,31,32,33,34,38,42,44,45,47,51,56,58,59,63] +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: Custom	Document Number: 36 -- TS and Accelerometer	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 36of	65

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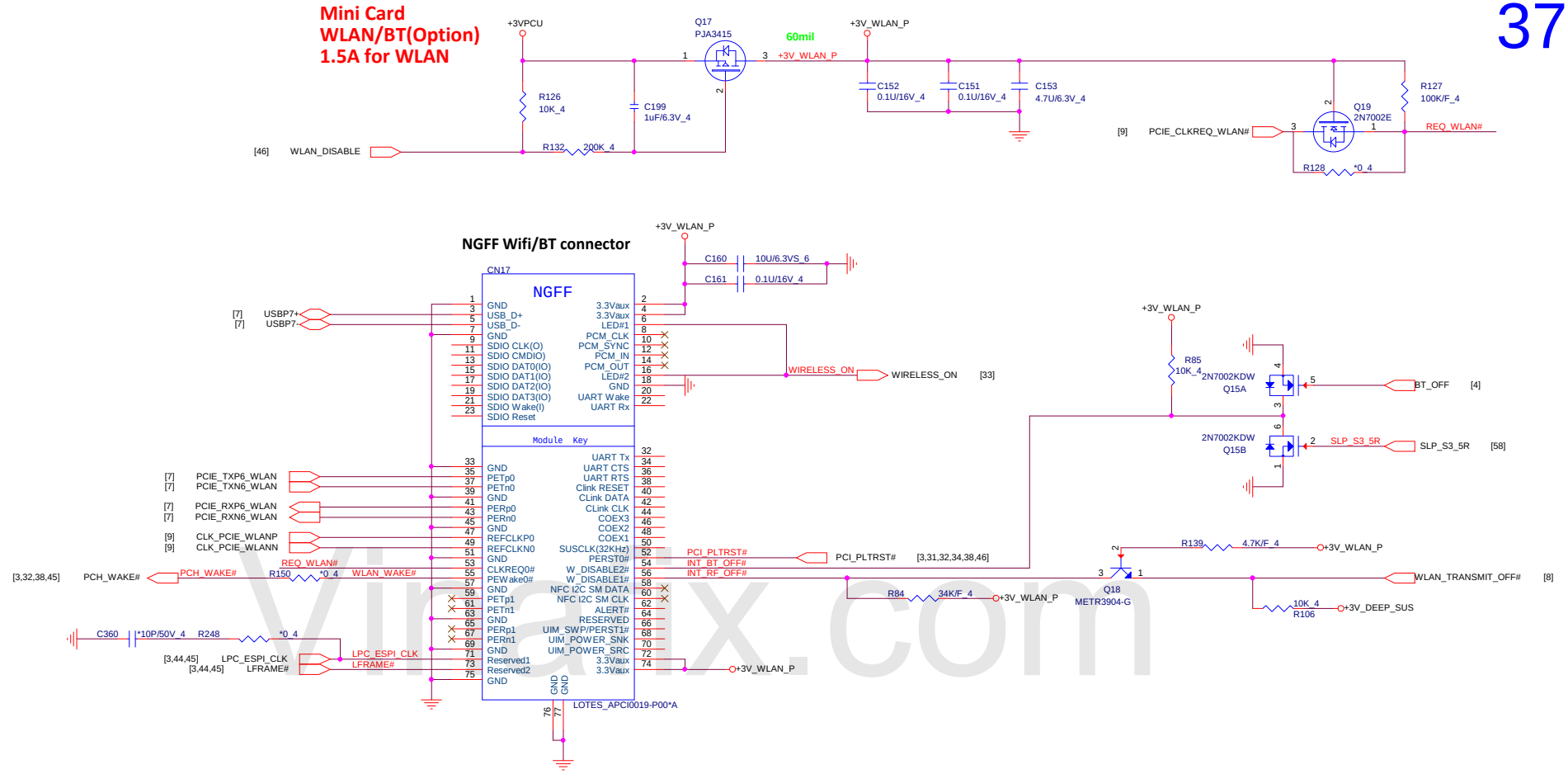
NGFF WLAN/BT

EC-B-03

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

37



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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

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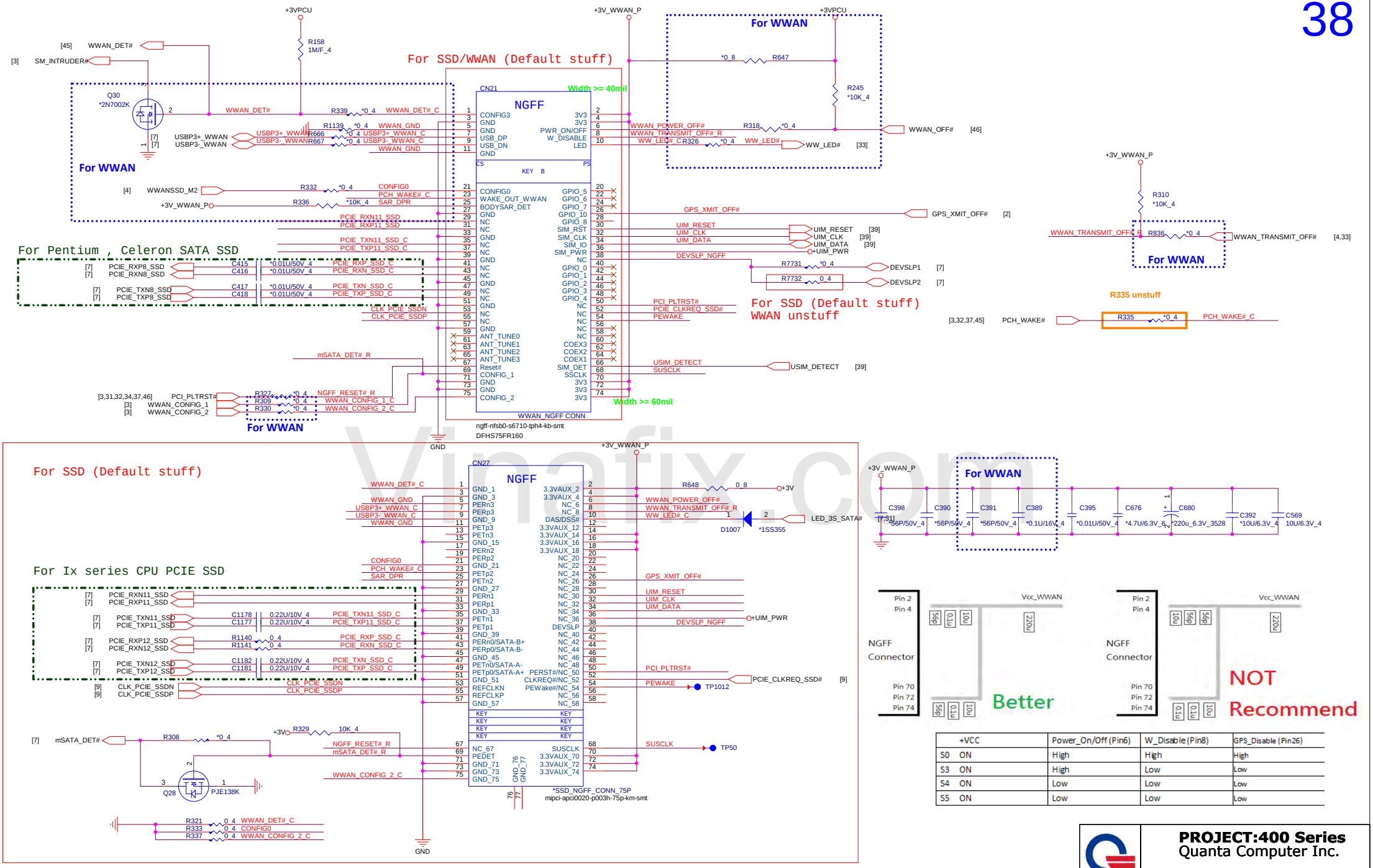

+VCC	Power_On/Off (Pin6)	W_Disable (Pin8)	GPS_Disable (Pin26)
S0 ON	High	High	High
S3 ON	High	Low	Low
S4 ON	Low	Low	Low
S5 ON	Low	Low	Low

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	

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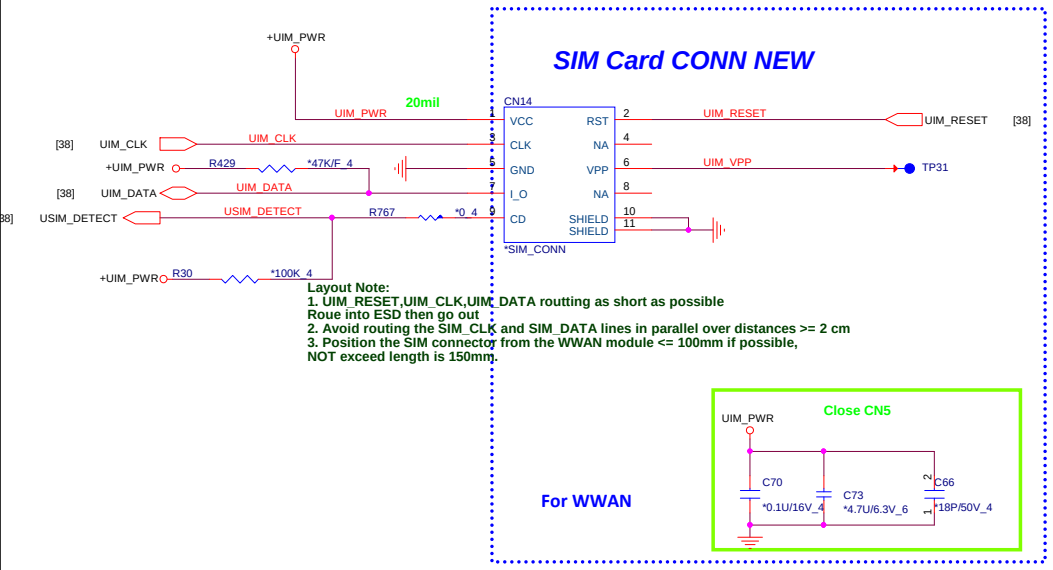

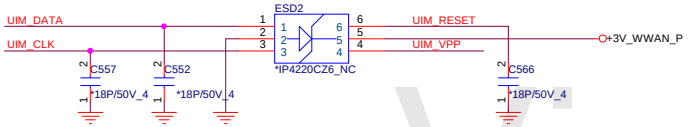

Trace Length and Routing

- 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.

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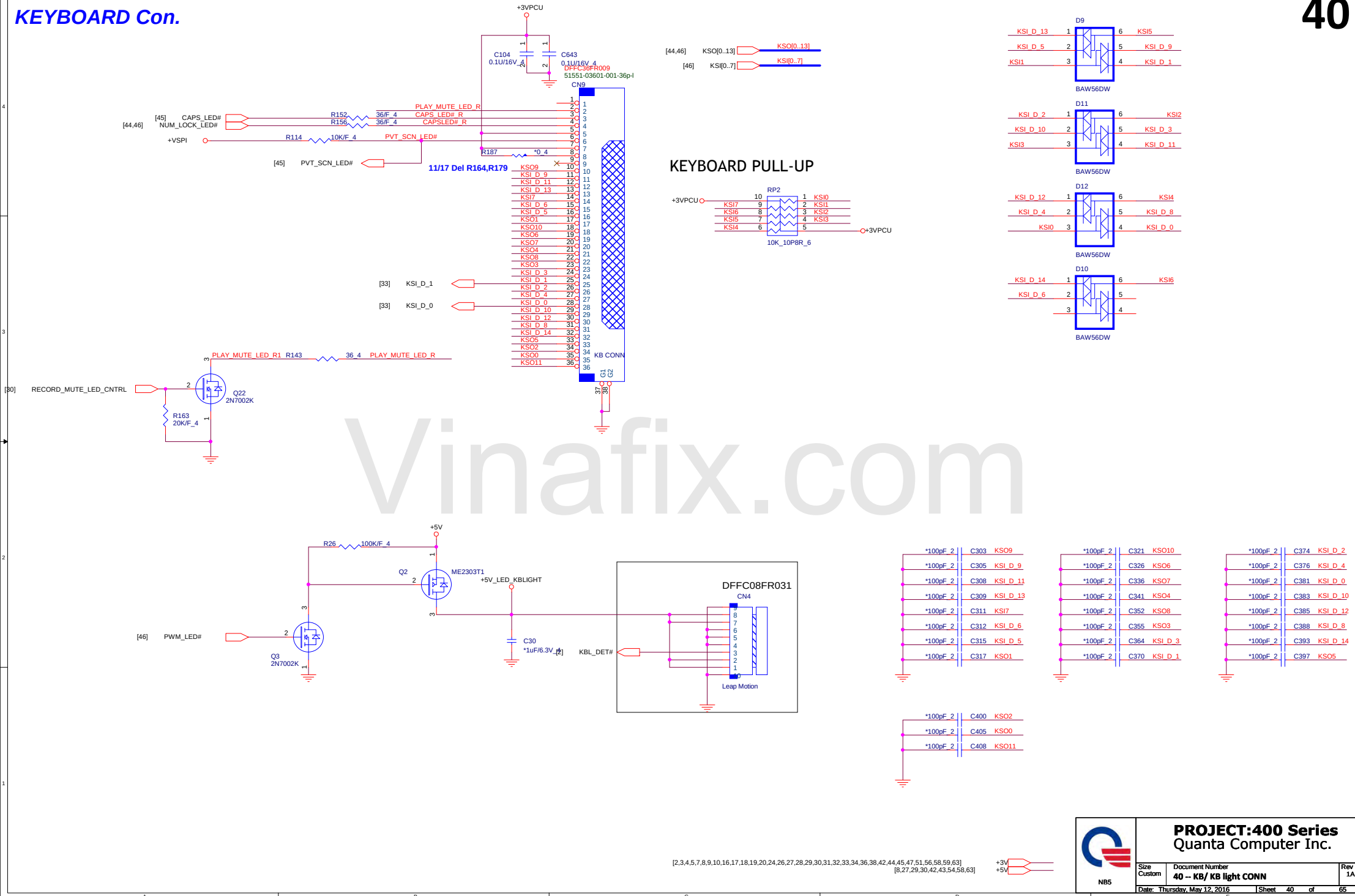
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: Custom	Document Number: 39 -- SIM CARD/ RF cap	Rev: 1A
Date: Thursday, May 12, 2016	Sheet 39 of 65	

KEYBOARD Con.



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NB5

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
Custom	40 -- KB/ KB light CONN	1A
Date: Thursday, May 12, 2016	Sheet 40 of 65	

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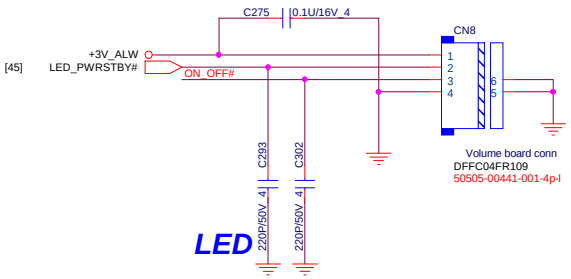
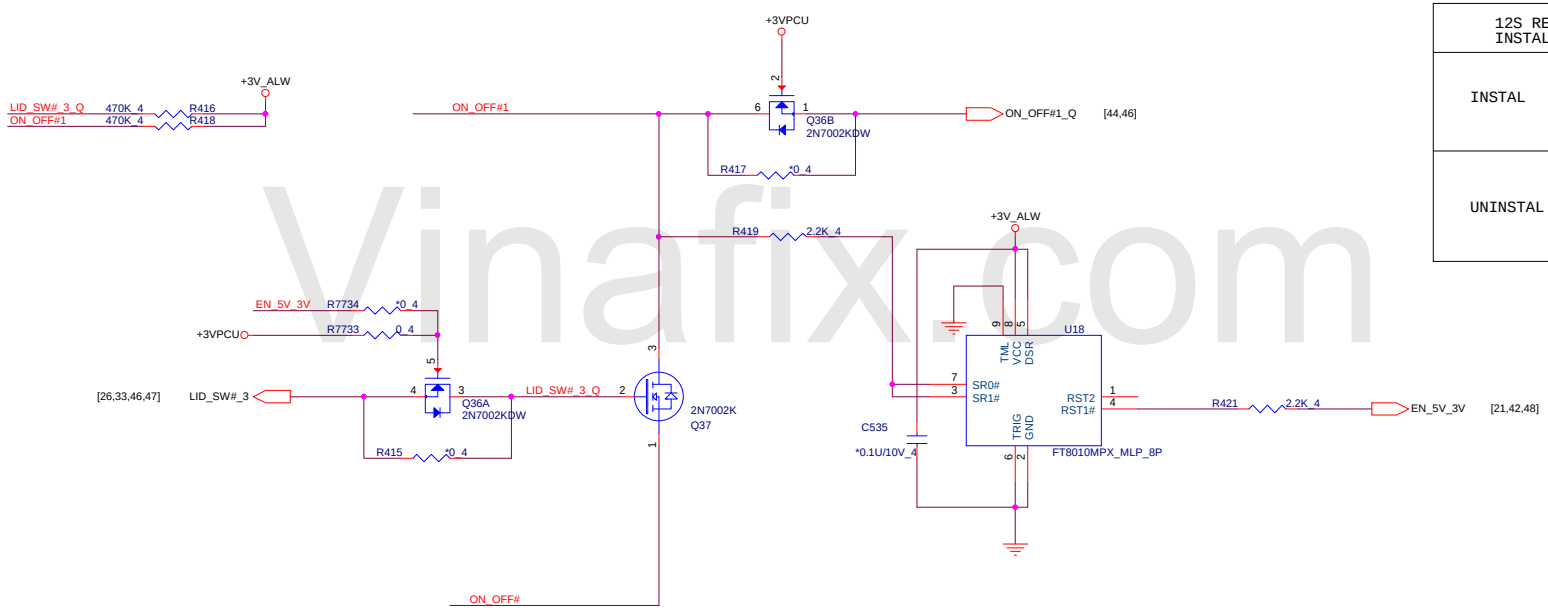
Power Botton Connector





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	

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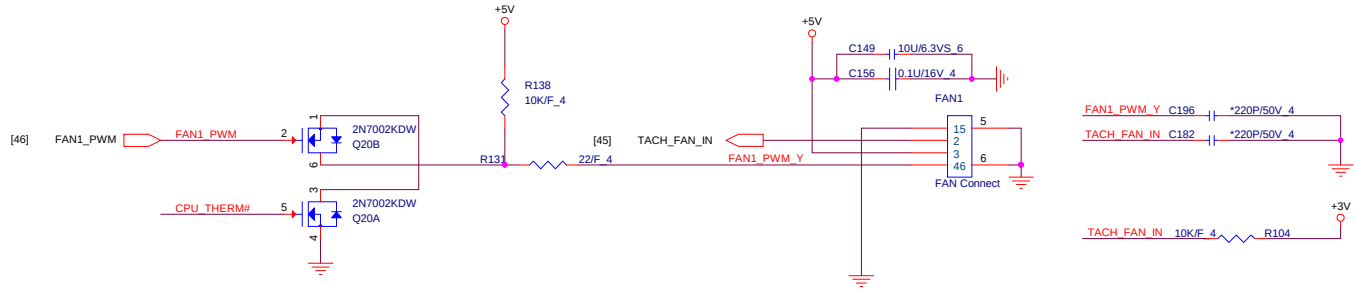
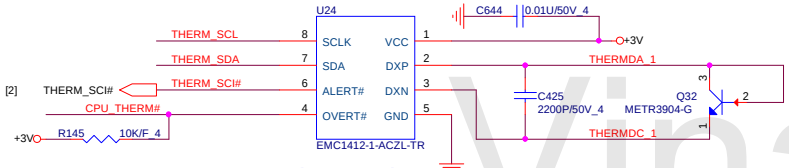
FAN



Thermal sensor

CPU Thermal Sensor

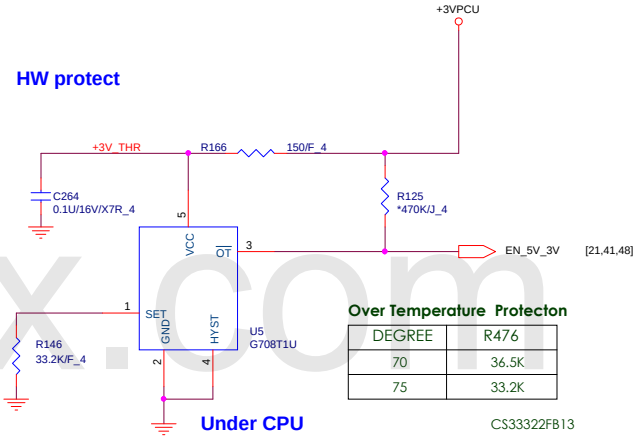


Under Heat Pipe

2nd:AL000431014 TMP431ADGKR

Main: AL000781012 G781P8(98h)

HW protect

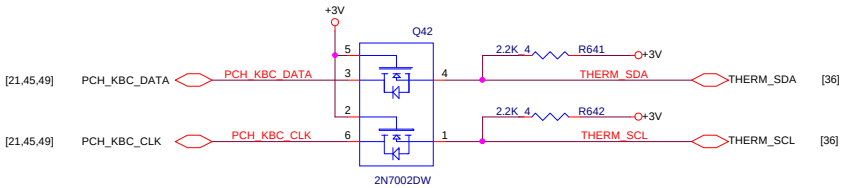


Over Temperature Protecton

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] +3V
[9,41,48,51,52,58,62,63] +3V_ALW

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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	

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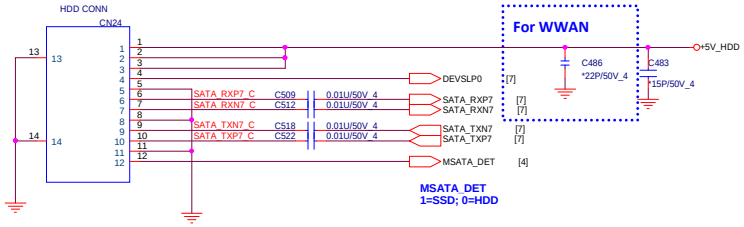
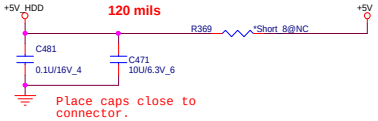
SATA-HDD





Vinafix.com

[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

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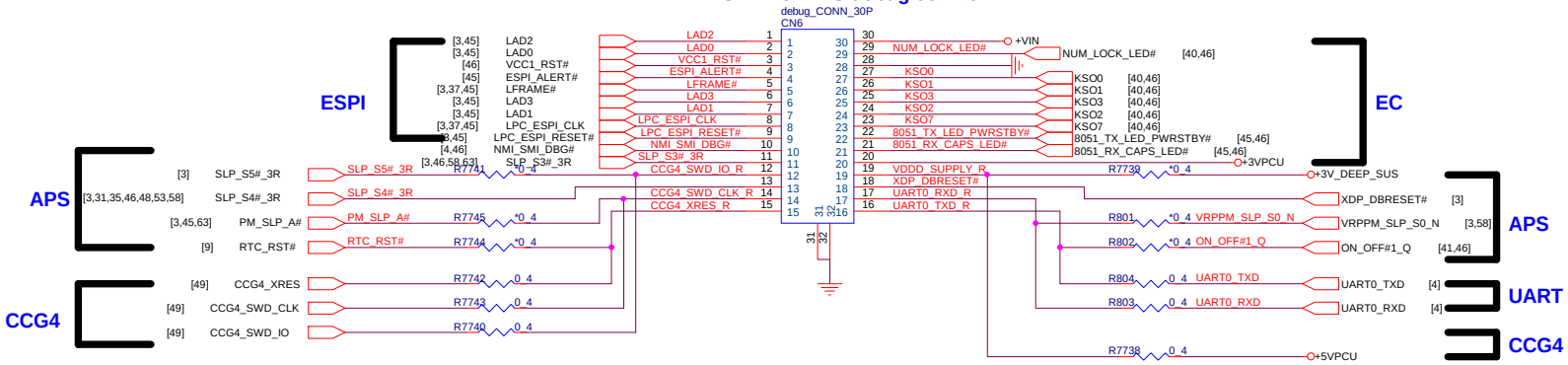
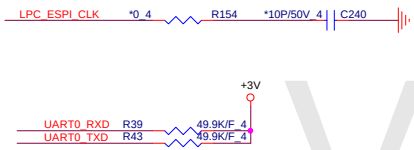
NB5	PROJECT:400 Series Quanta Computer Inc.	
Size: C	Document Number: 43 -- HDD/ EMI cap	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 43of 65	

ESPI+EC+APS debug conn on MB





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

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NB5

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	

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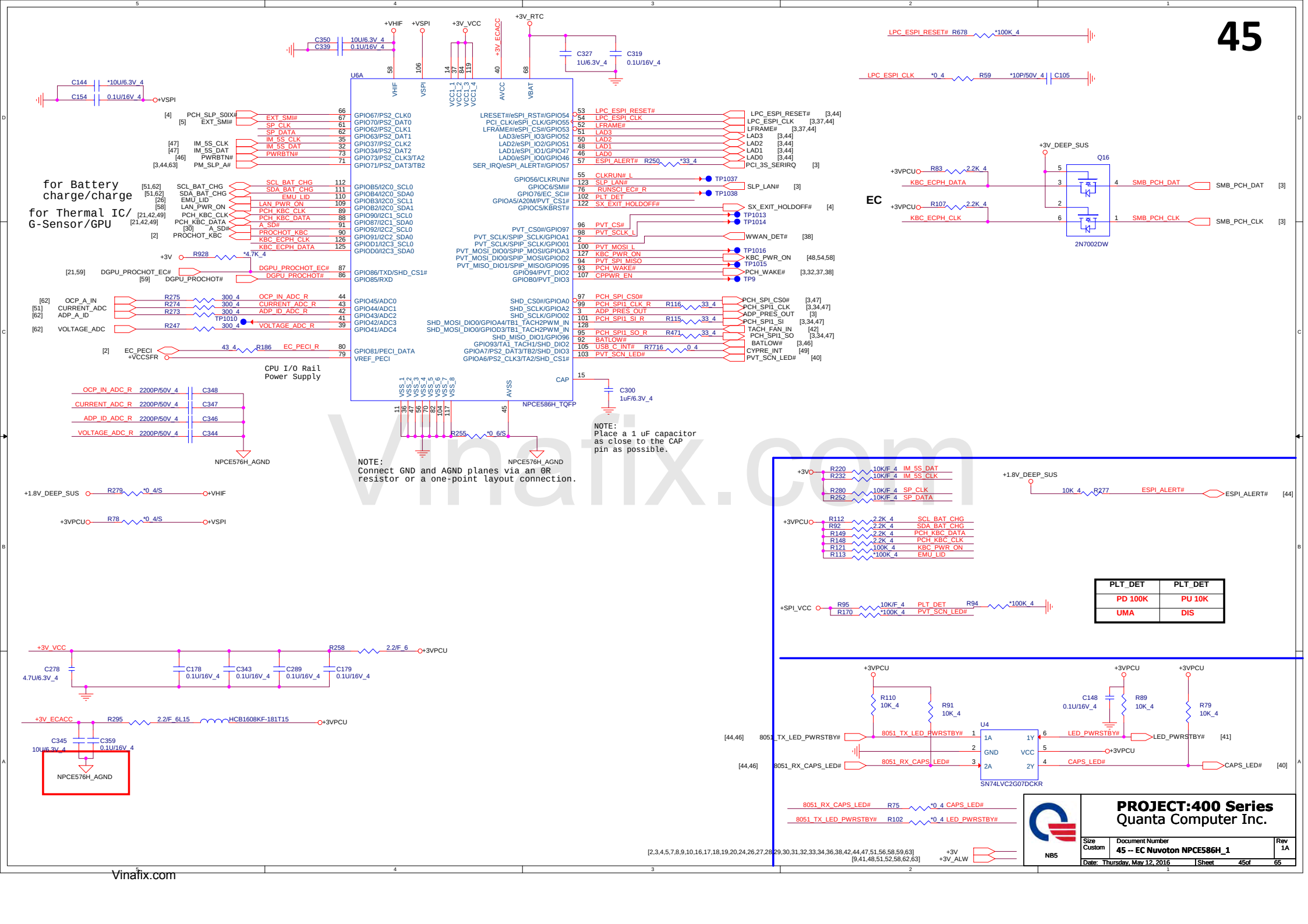
for Battery charge/charge
for Thermal IC/ G-Sensor/GPU
EC
CPU I/O Rail Power Supply
NOTE: Connect GND and AGND planes via an 0R resistor or a one-point layout connection.
NOTE: Place a 1 uF capacitor as close to the CAP pin as possible.
U6A
NPCE586H_TQFP
2N7002DW
SN74LVC2G07DCKR
PLT_DET
PD 100K
PU 10K
UMA
DIS
PROJECT:400 Series
Quanta Computer Inc.
NB5
Size Custom
Document Number
45 -- EC Nuvoton NPCE586H_1
Rev 1A
Date: Thursday, May 12, 2016
Sheet 45of 65

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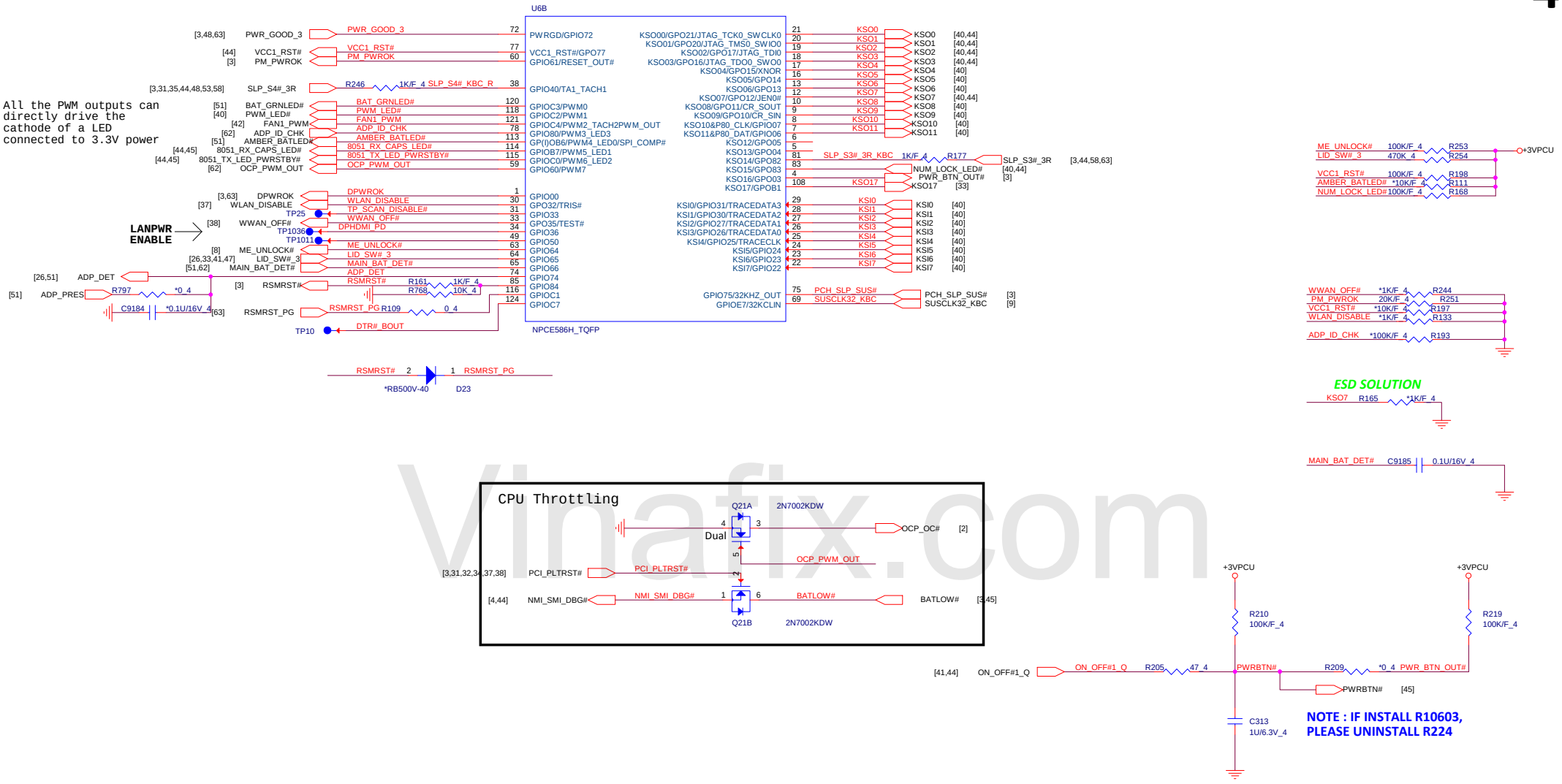
All the PWM outputs can directly drive the cathode of a LED connected to 3.3V power



ESD SOLUTION

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

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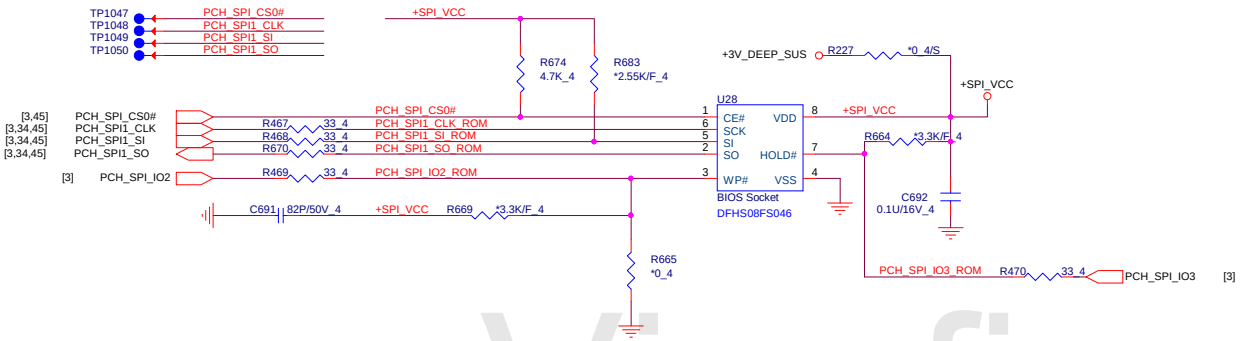
SPI ROM

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

PCH SPI ROM(CLG)

PCH 6*5mm WSON 16M
SPI ROM Socket



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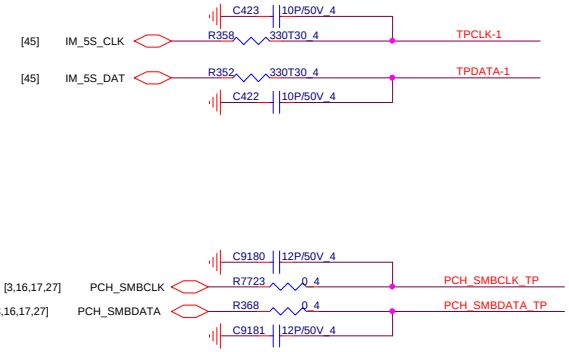
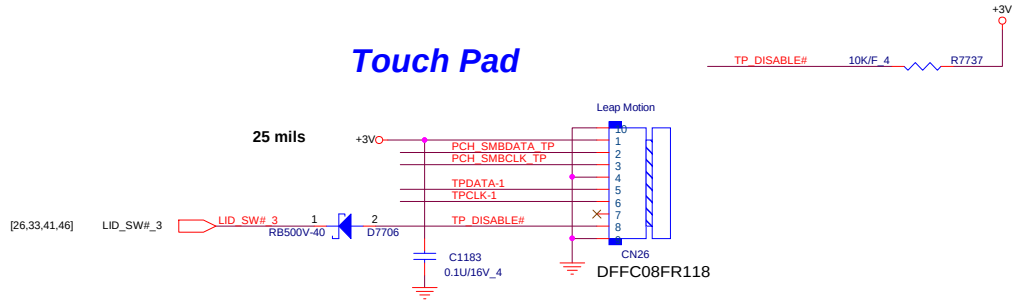
Touch Pad



CLICK PAD
Address: 0x20(7 bit)



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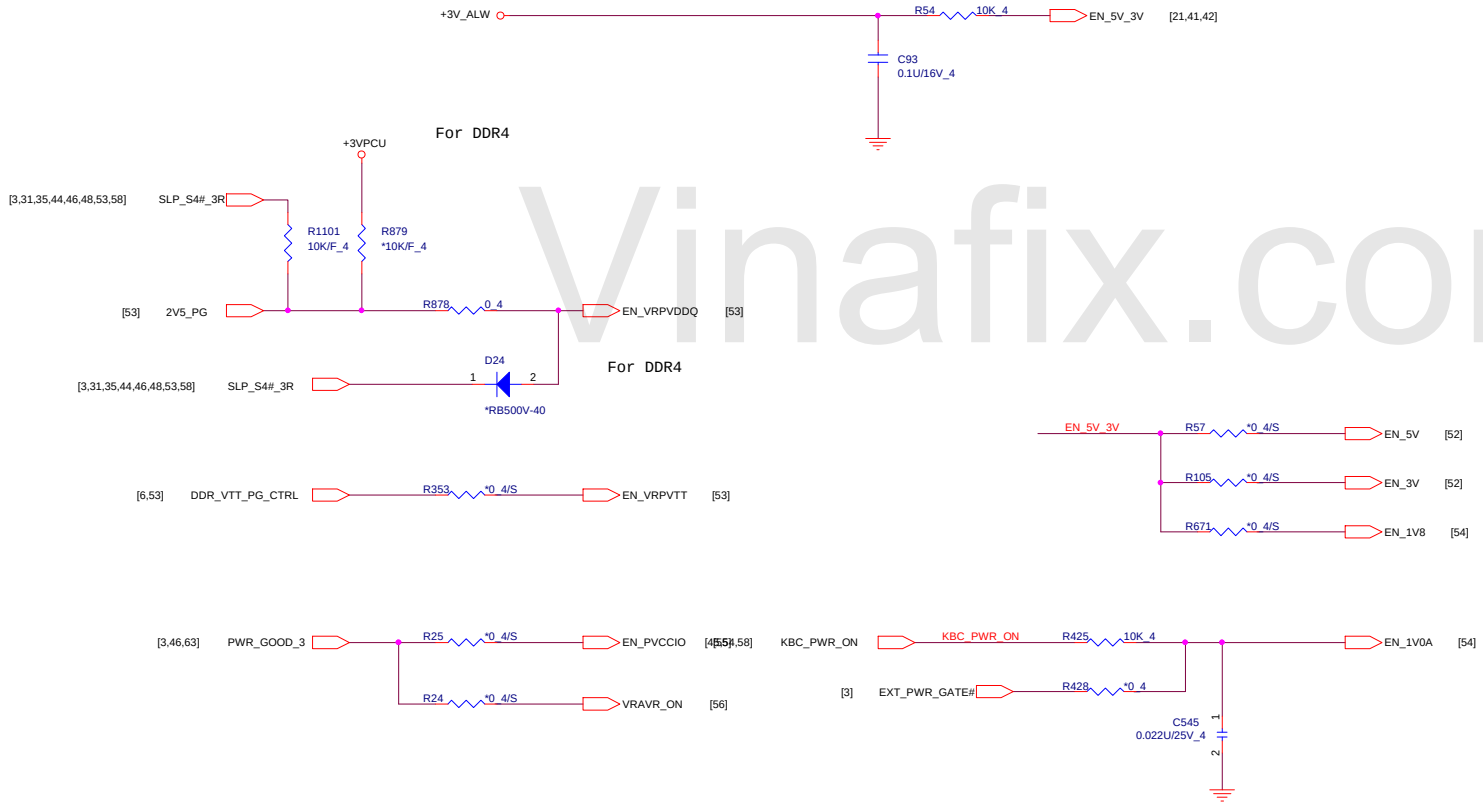
NB5	PROJECT:400 Series Quanta Computer Inc.	
	Size: Custom Document Number: 47 -- Flash(KBC+PCH)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 47of 65

POWER TO EE NET NAME CONNECTION



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

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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
+5VPCU
IN
GND
OUT
*G5250Q1T73U
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

+3VPCU
R1146 10K/F_4
[45] CYPRE_INT

VDDD_SUPPLY
R7754 *4.7K_4
CCG4_SWD_CLK
R7755 *4.7K_4

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

[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
USB_C_INT#
[21,42,45] PCH_KBC_DATA
[21,42,45] PCH_KBC_CLK
PCH_KBC_DATA
PCH_KBC_CLK
VCONN_VMON_P1
[50] CCG4_OVP
MOD_ID1
MOD_ID2
VDDD_SUPPLY
R806 4.7K_4
[44] CCG4_XRES
CCG4_XRES
C1188 0.1U/16V_4
[4] SWD_XRES_PCH
R807 *10K/F_4
*PJE138K Q1010

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

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

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

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

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

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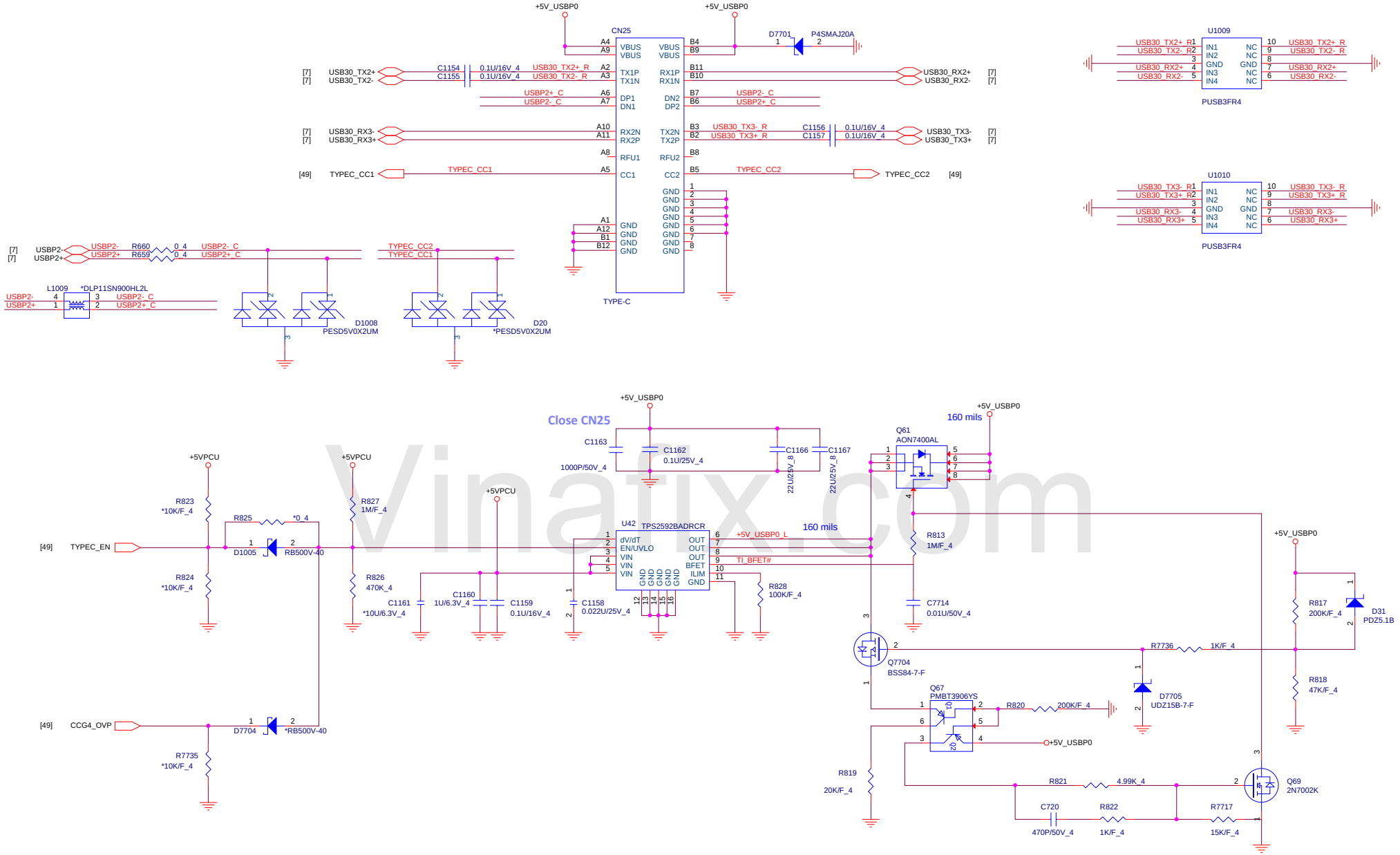

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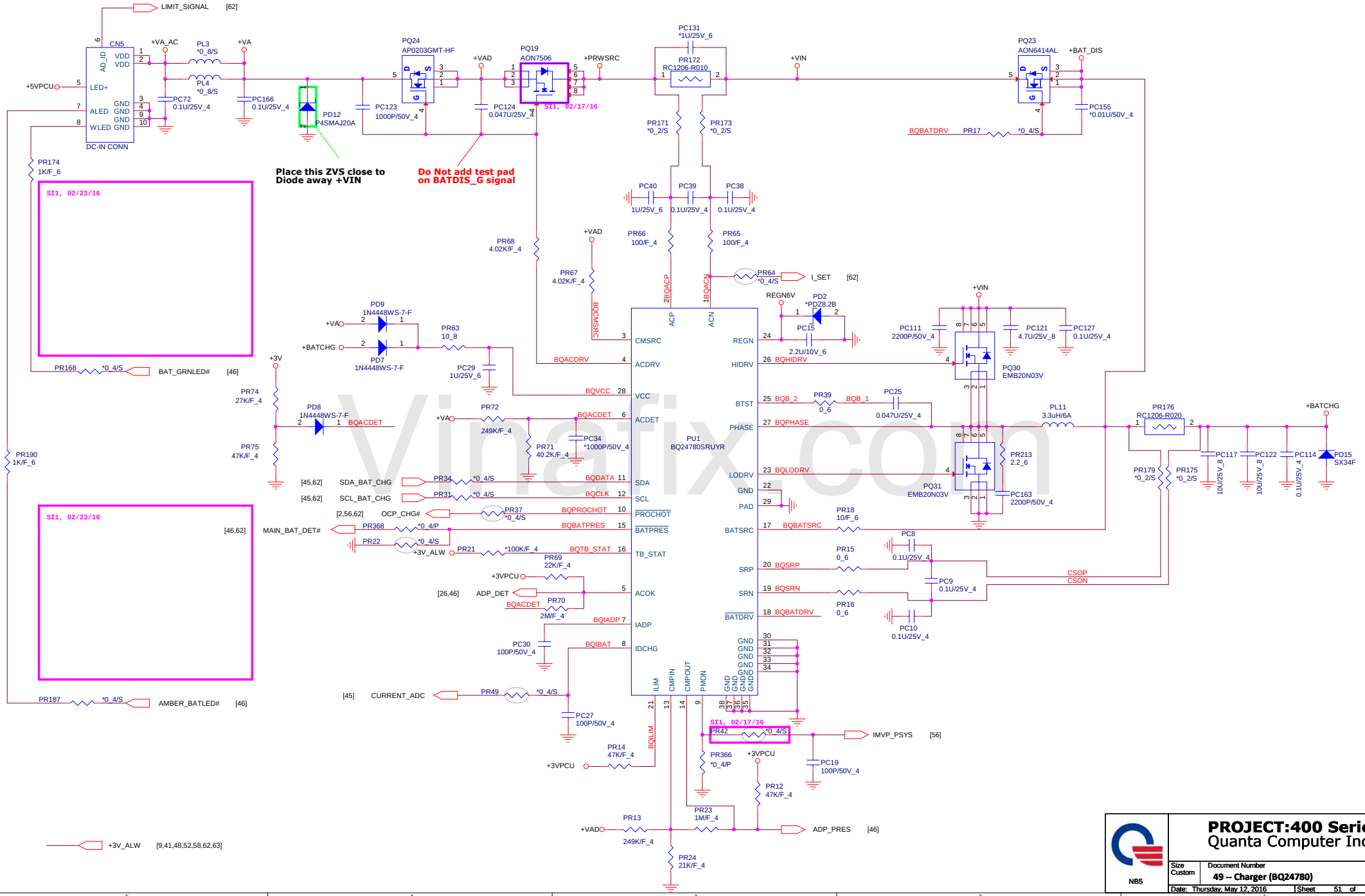
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size	Document Number: 50 -- TYPE-C	Rev: 1A
Date: Tuesday, May 17, 2016	Sheet 50 of 65	

Vinafix.com

90W DC_JACK



Vinafix.com

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	

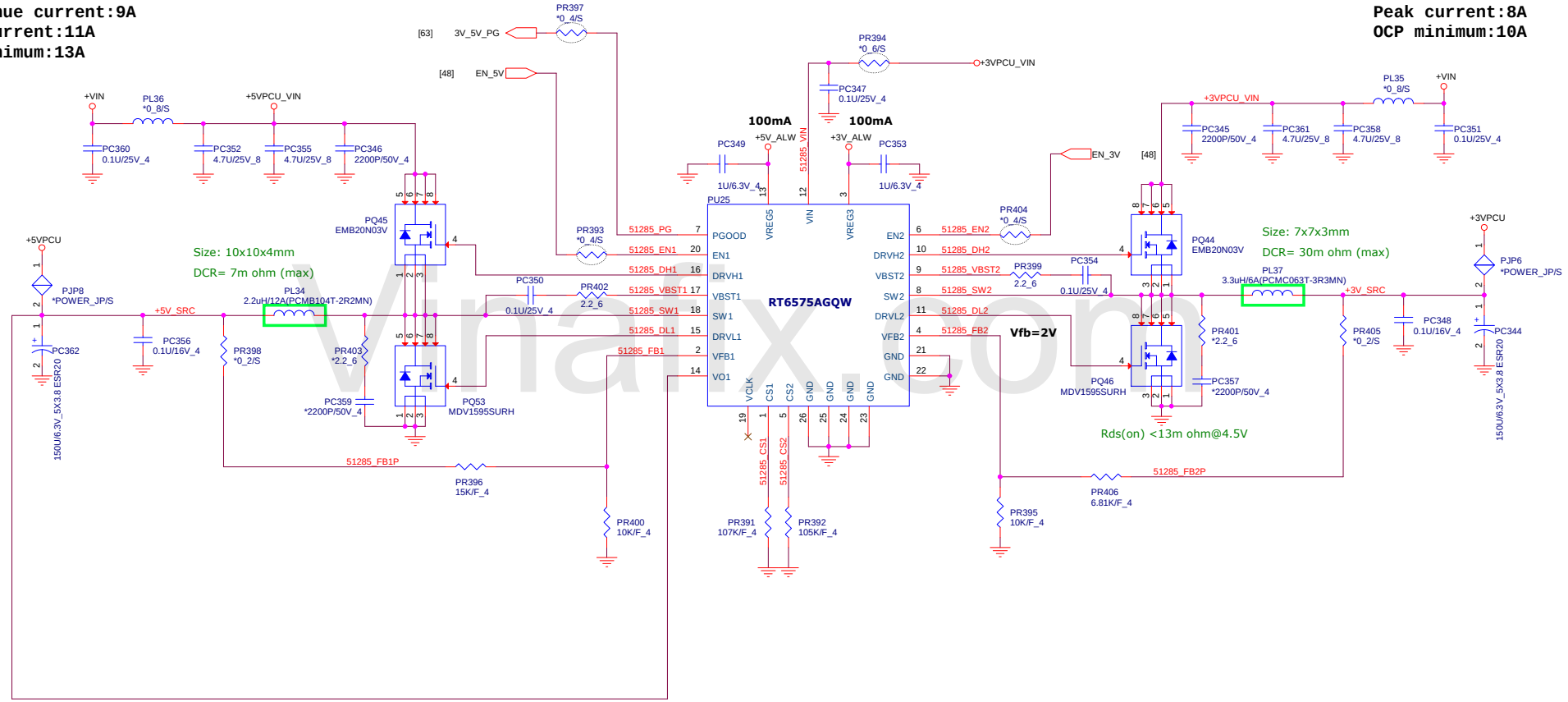
Vinafix.com

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



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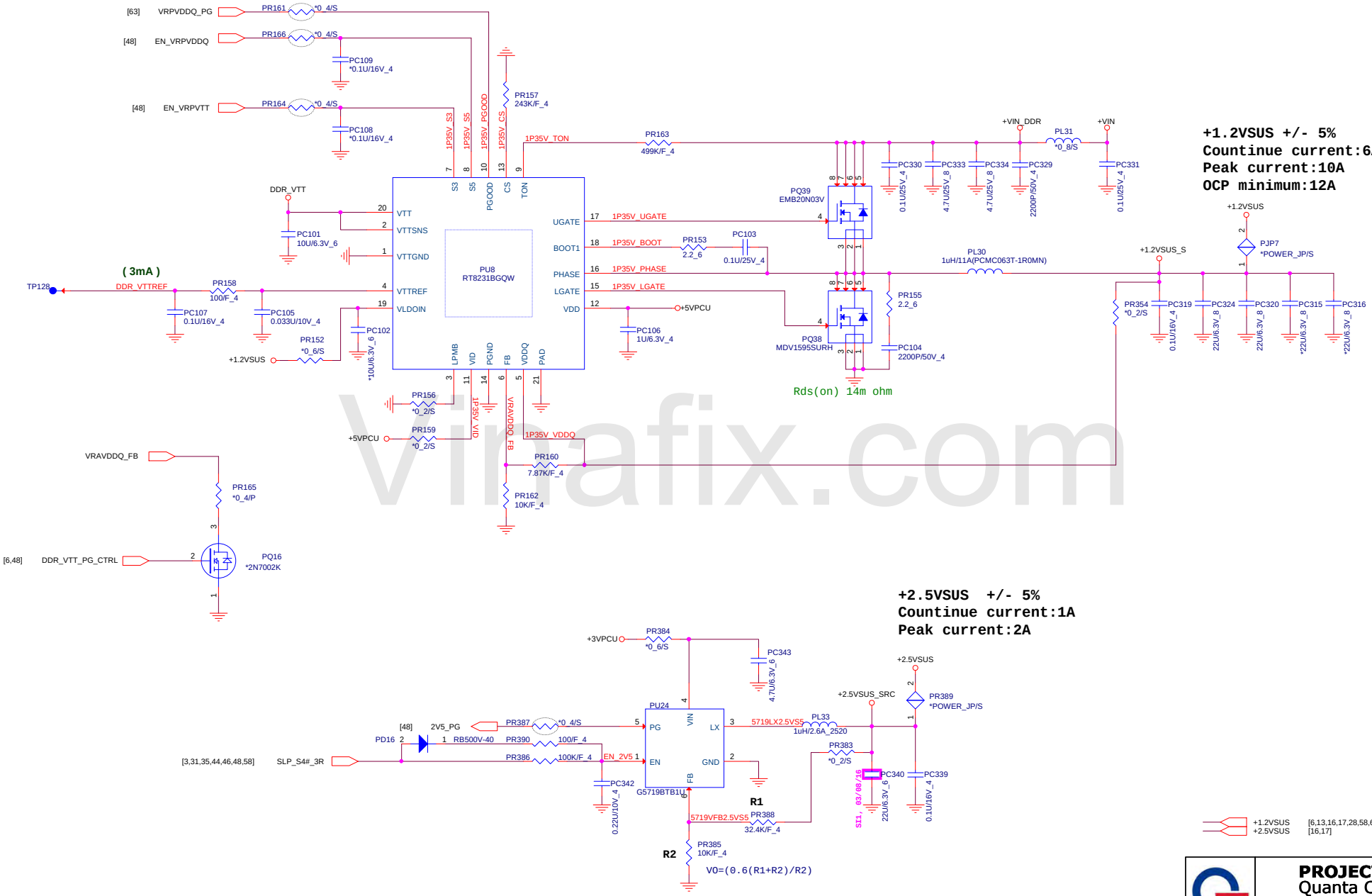
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size: Document Number: 50 – 3/5VS5 (SY8208B/SY8208C)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 52 of 65

Vinafix.com

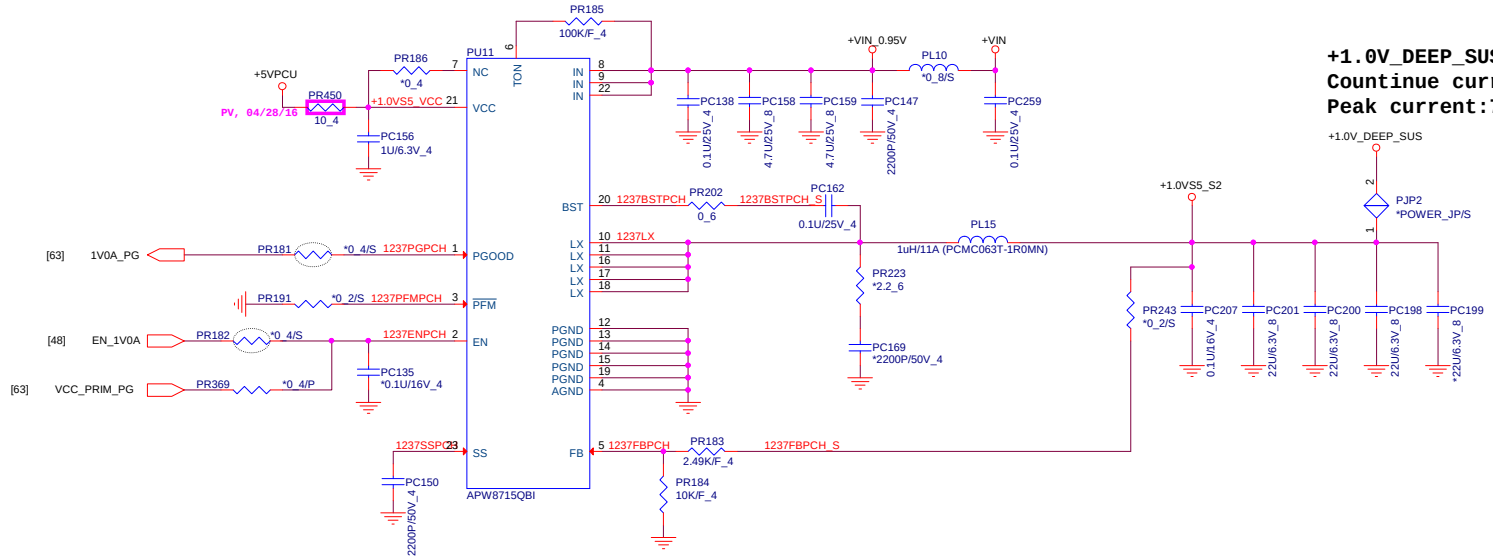


Vinafix.com

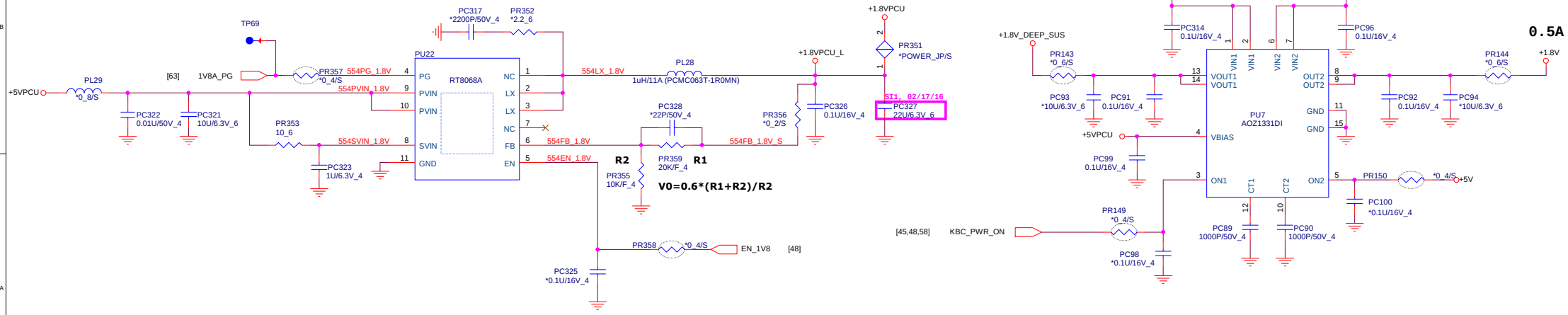
NB5	PROJECT:400 Series Quanta Computer Inc.	
	Size: Document Number: 51 -- DDR4 (RT8231B)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 53 of 65

Vinafix.com

+1.0V_DEEP_SUS +/- 5%
Countinue current:6A
Peak current:7A



+1.8VPCU +/- 5%
Countinue current:2A
Peak current:4A



+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]

PROJECT:400 Series
Quanta Computer Inc.

Size	Document Number	Rev
	52 -- +1.0VS5/1.8VS5	1A
Date: Thursday, May 12, 2016	Sheet 54 of 65	

NB5

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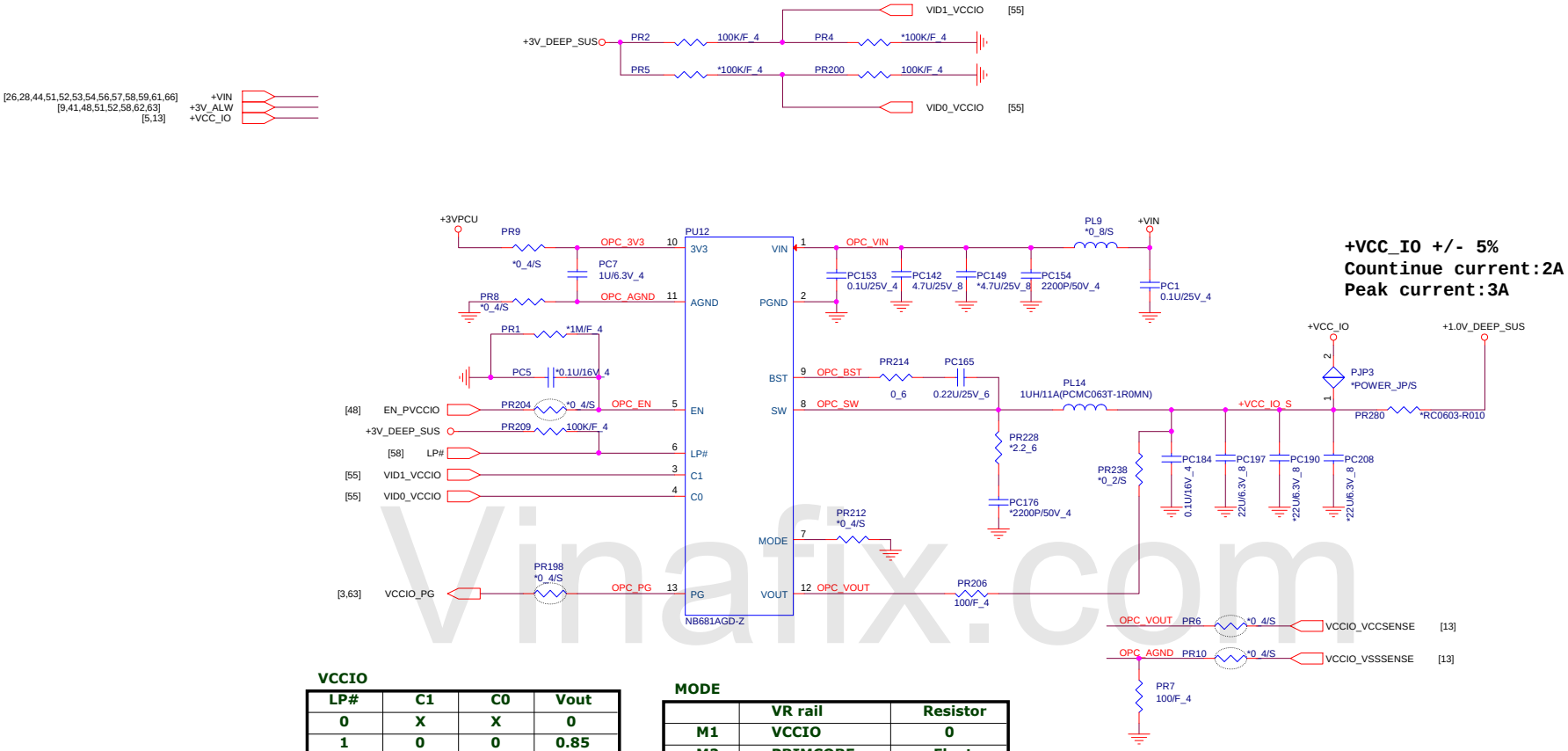

+VCC_IO +/- 5%
Countinue current:2A
Peak current:3A

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

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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

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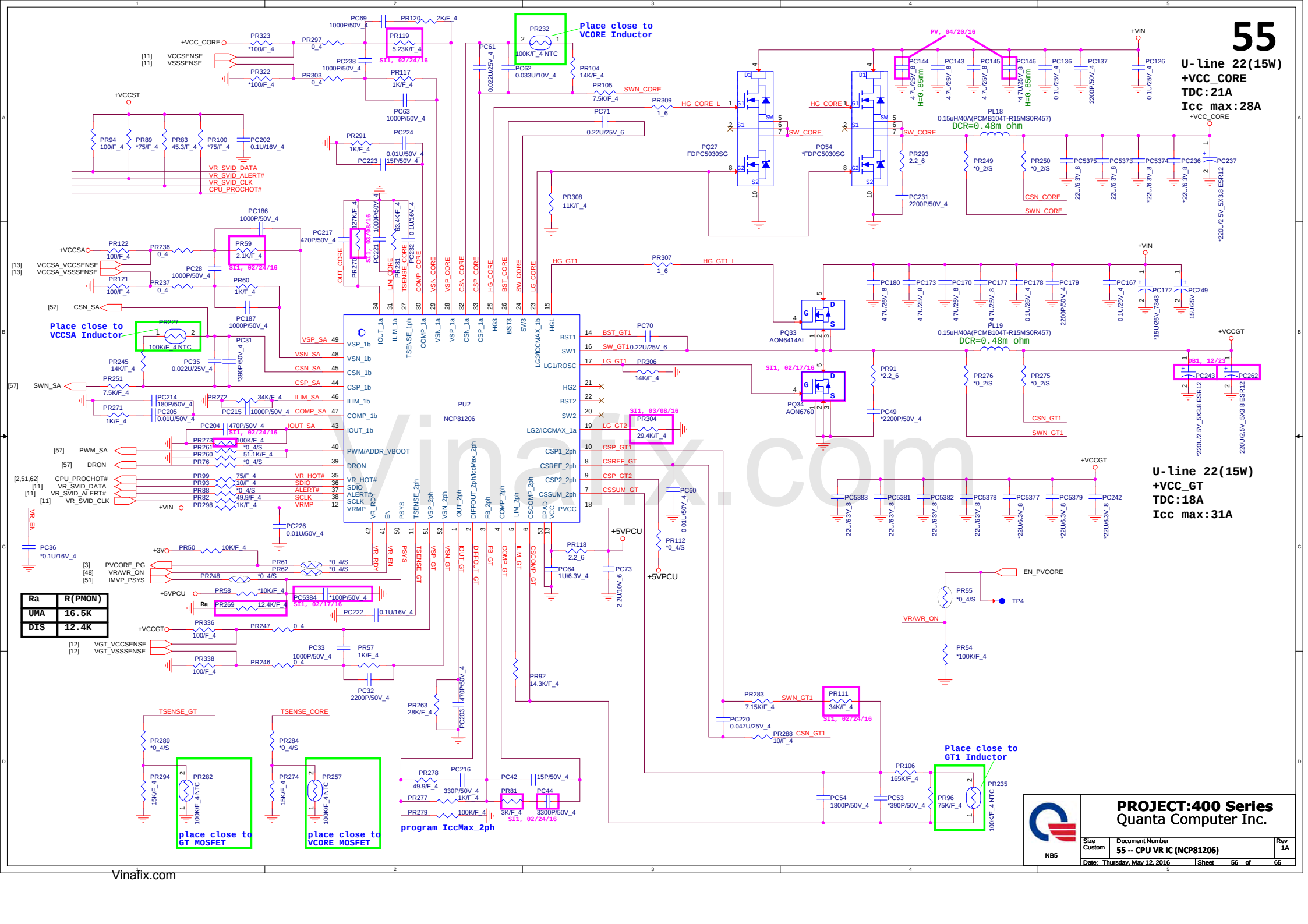
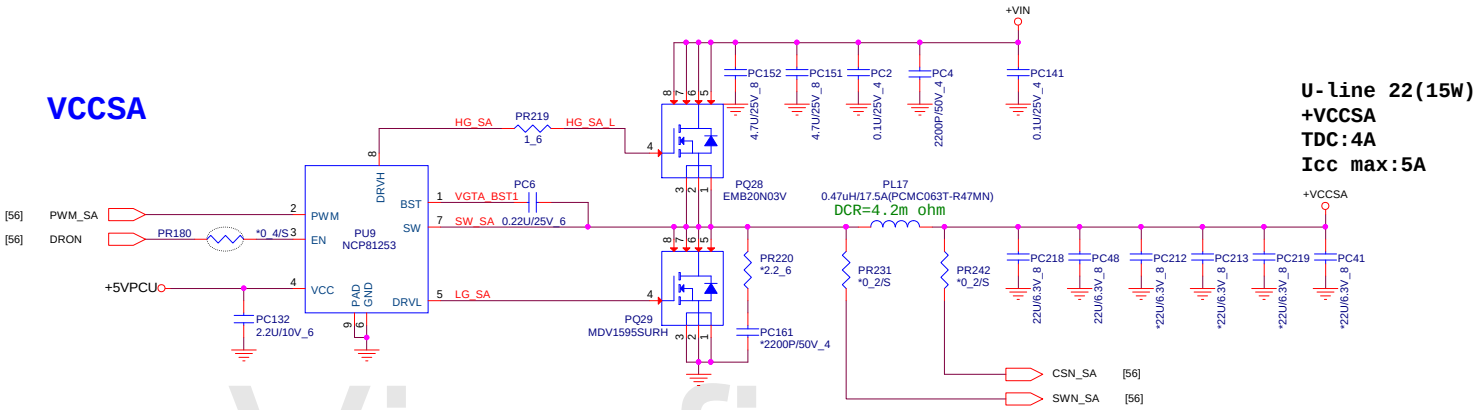

55
U-line 22(15W)
+VCC_CORE
TDC:21A
Icc max:28A
U-line 22(15W)
+VCC_GT
TDC:18A
Icc max:31A
Place close to VCORE Inductor
Place close to VCCSA Inductor
Place close to GT1 Inductor
place close to GT MOSFET
place close to VCORE MOSFET
program IccMax_2ph
PU2
NCP81206
PL18
0.15uH/40A(PCMB104T-R15MS0R457)
DCR=0.48m ohm
PL19
0.15uH/40A(PCMB104T-R15MS0R457)
DCR=0.48m ohm
PQ27 FDPC5030SG
PQ54 *FDPC5030SG
PQ33 AON6414AL
PQ34 AON6760
PV, 04/20/16
SI1, 02/24/16
SI1, 02/17/16
SI1, 03/08/16
SI1, 03/08/16
DB1, 12/23
Ra R(PMON)
UMA 16.5K
DIS 12.4K
PROJECT:400 Series
Quanta Computer Inc.
NB5
Size Custom
Document Number
55 -- CPU VR IC (NCP81206)
Rev 1A
Date: Thursday, May 12, 2016
Sheet 56 of 65
Vinafix.com

VCCSA



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

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

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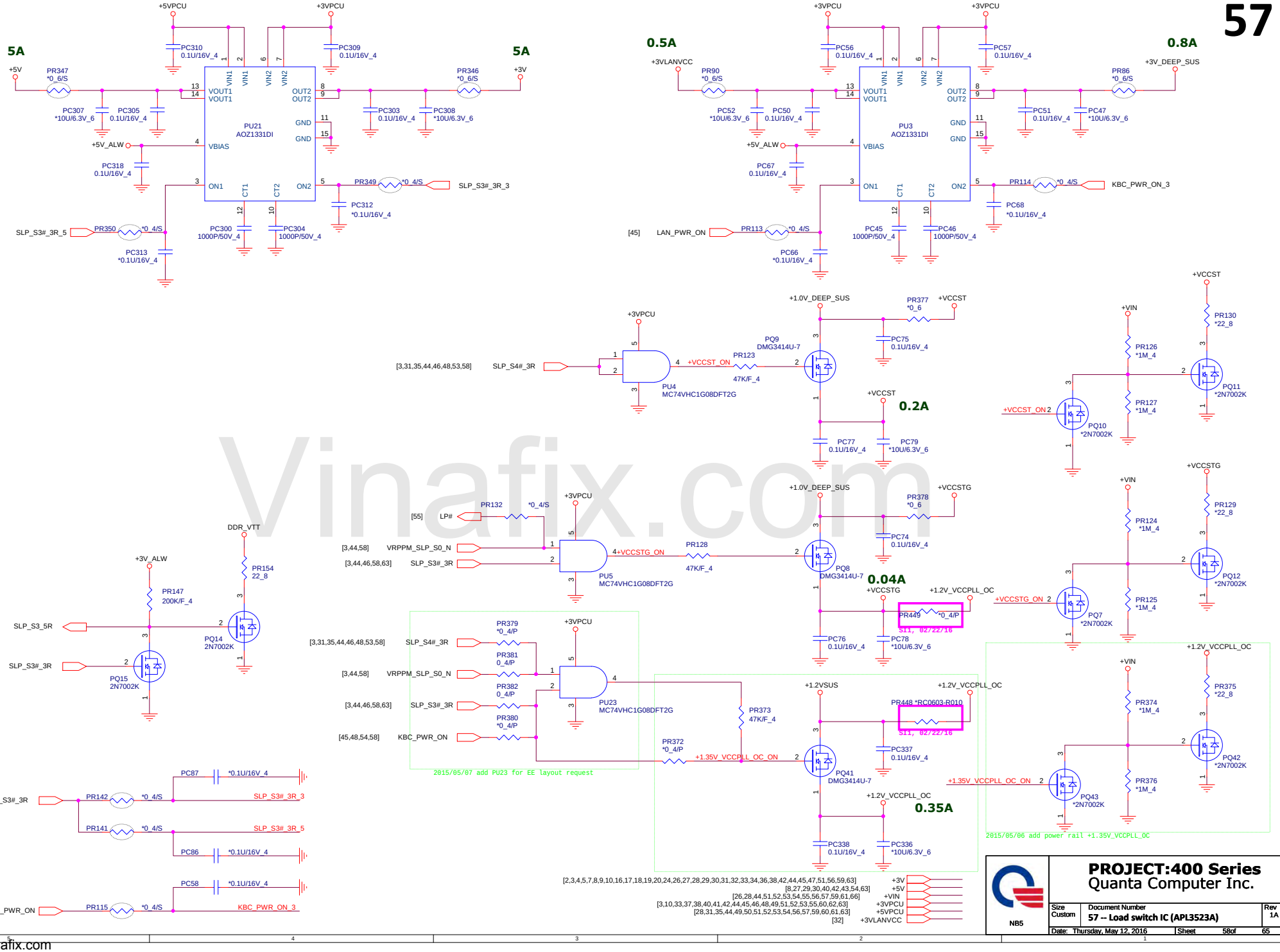

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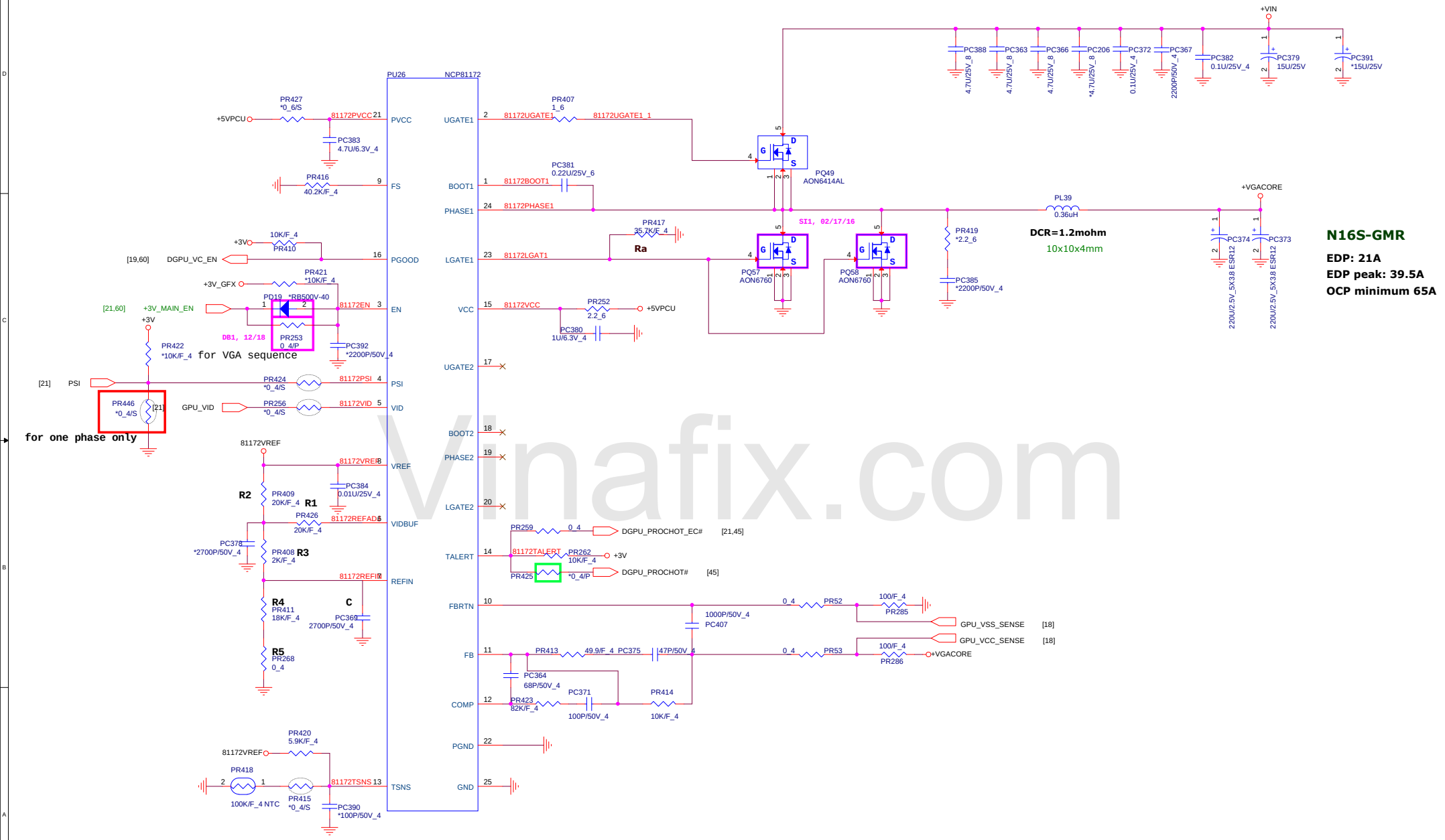

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NB5	PROJECT:400 Series Quanta Computer Inc.		
	Size: Custom	Document Number: 58 -- VGA Core1 (ISL62771)	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet: 59of	65

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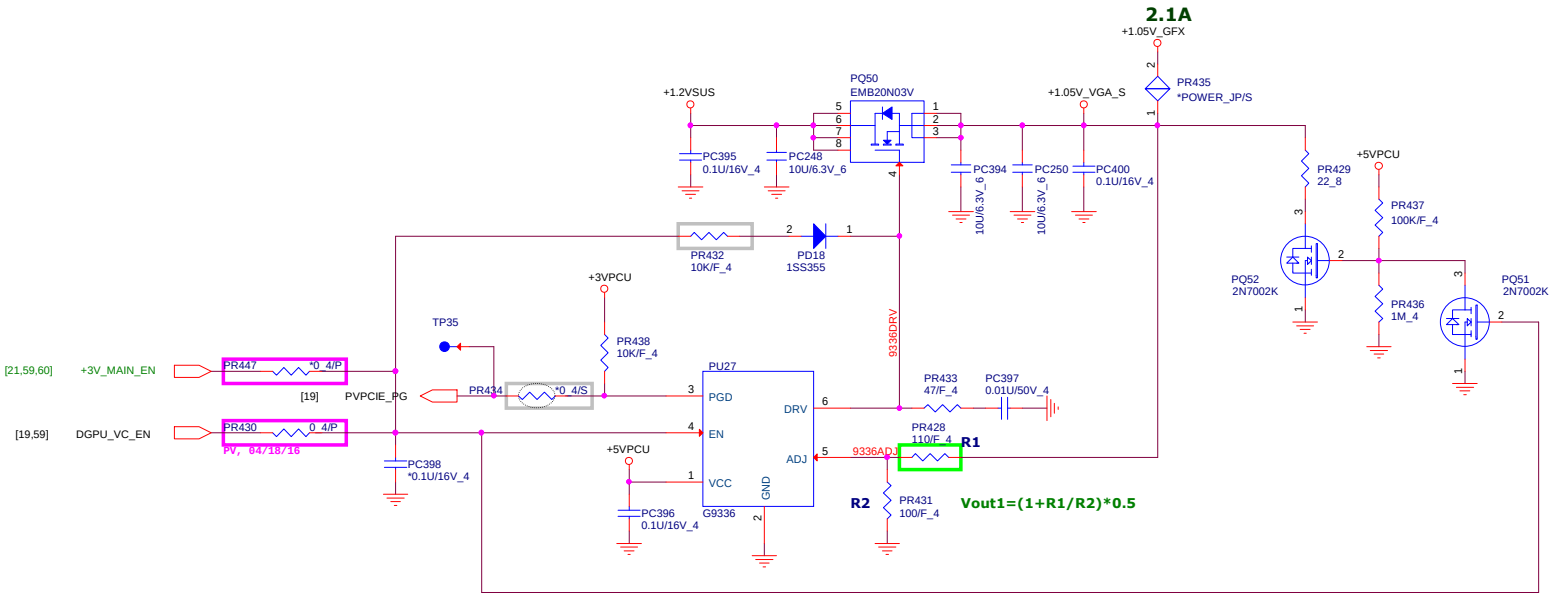

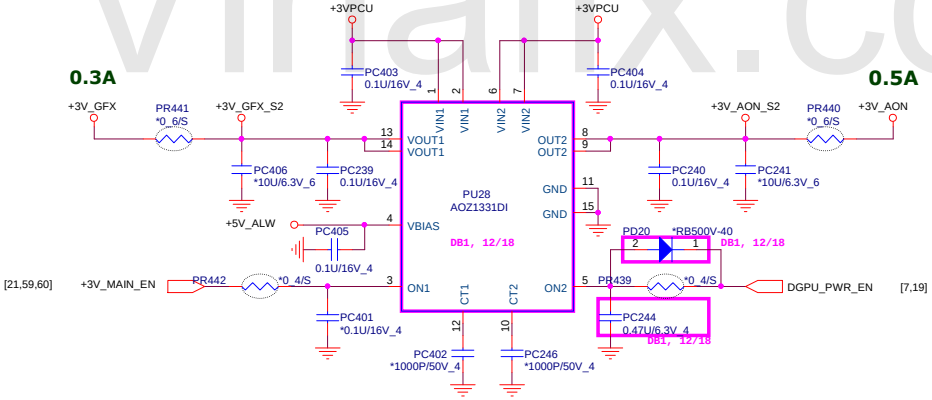

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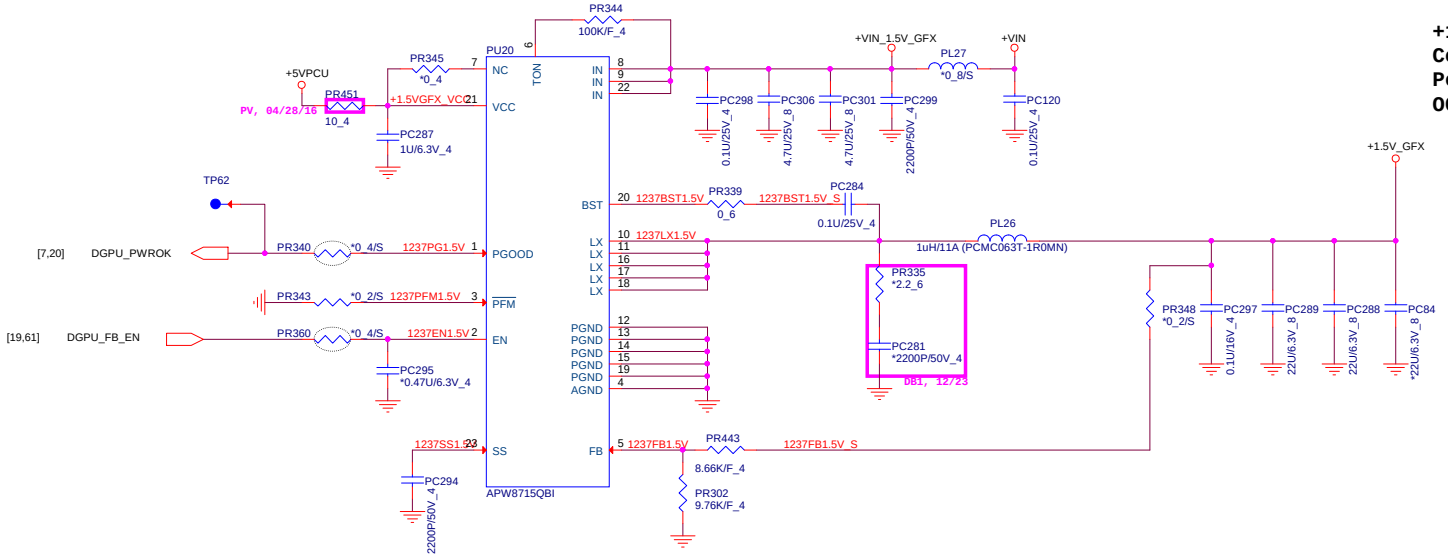
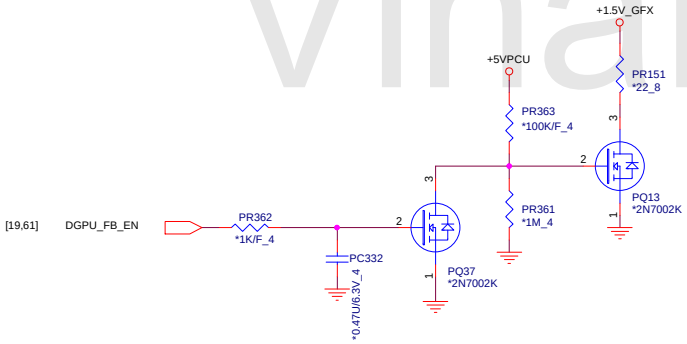
NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size: Custom Document Number: 60 -- +1.0V_VGA/1.8V_VGA/3V_VGA	Rev: 1A
	Date: Thursday, May 12, 2016	Sheet 60of 65

Vinafix.com

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





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NB5	**PROJECT:400 Series** Quanta Computer Inc.	
Size: Custom	Document Number: **61 -- +1.35V_GFX (AOZ1267)**	Rev: 1A
Date: Thursday, May 12, 2016	Sheet: 61of 65	

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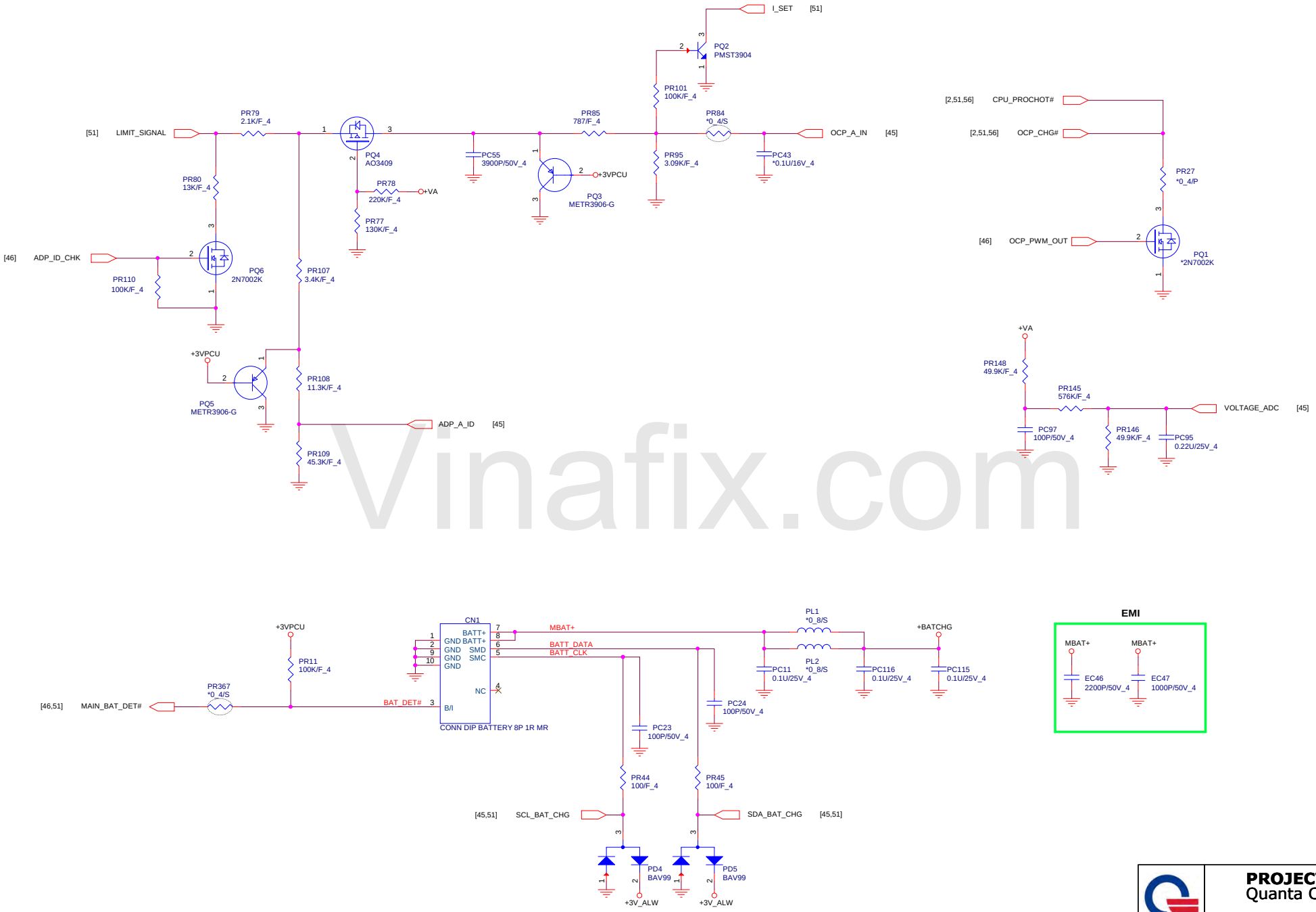
Adapter OCP



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NB5	**PROJECT:400 Series** Quanta Computer Inc.	
	Size: Document Number: 62 -- CHARGER II	Rev: 1A
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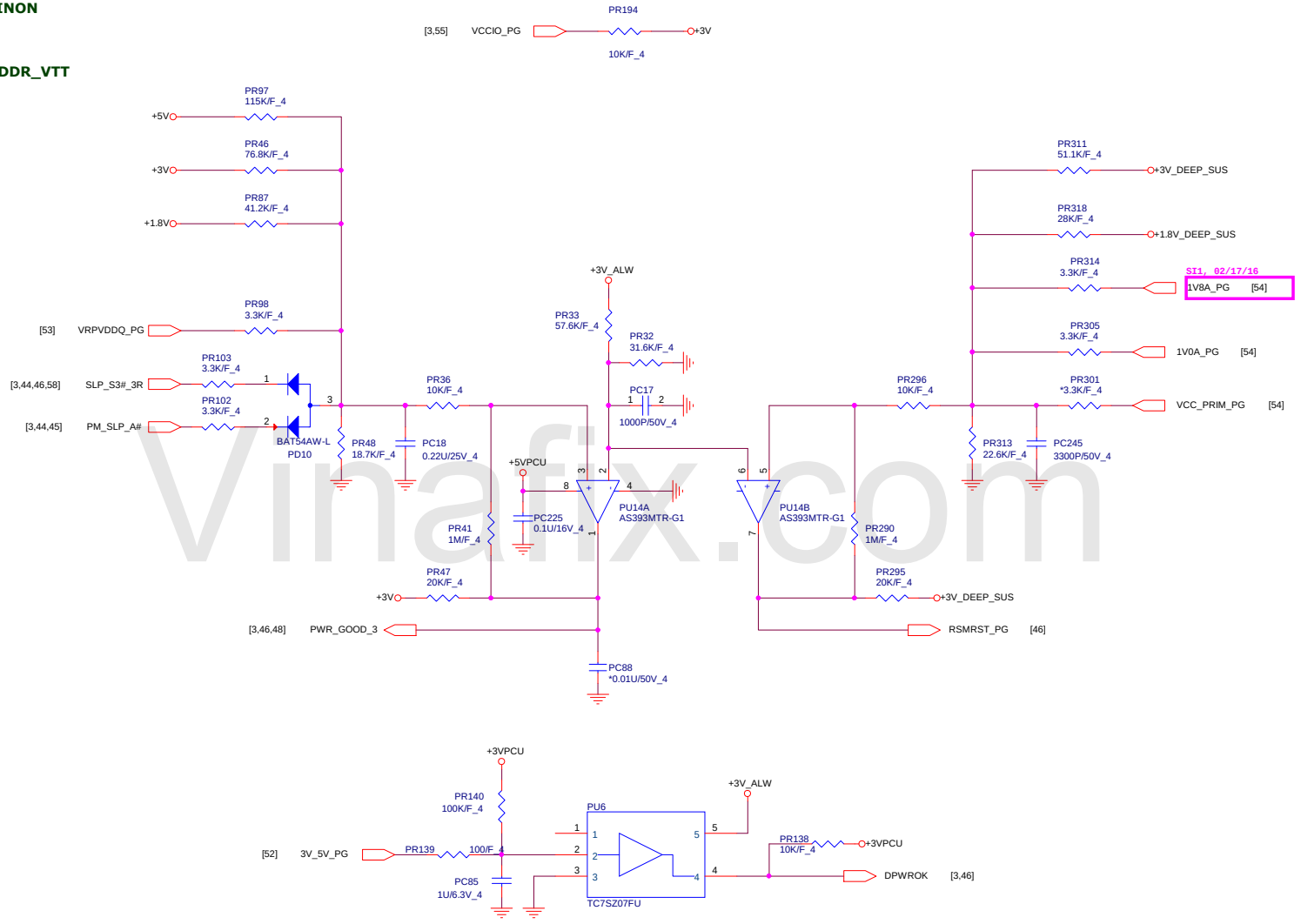
POK CKT

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

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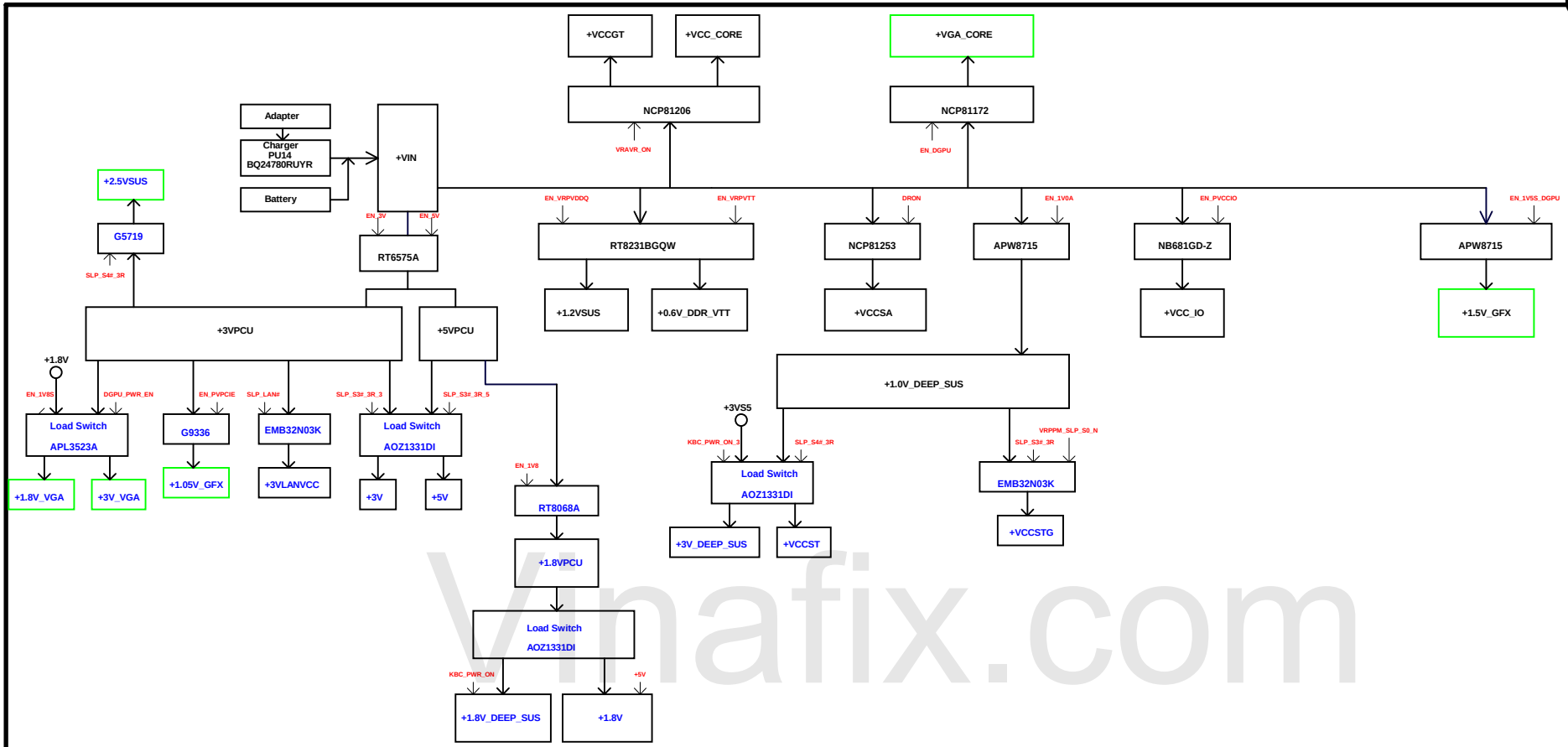

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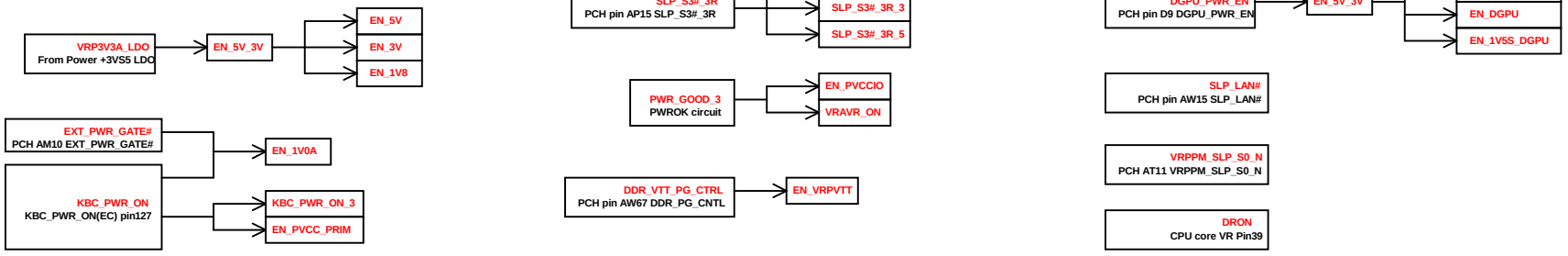
POWER ENABLE PIN



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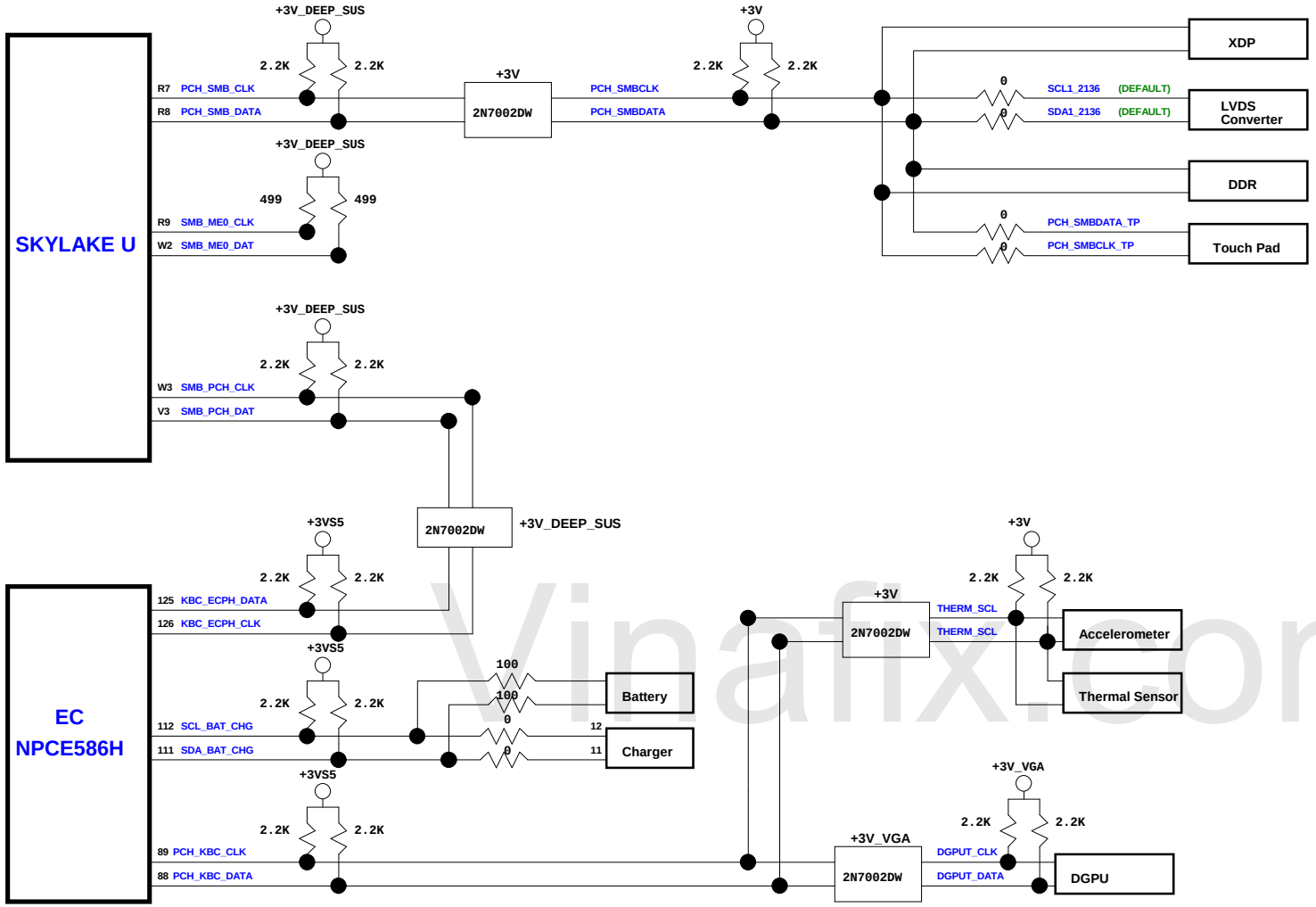

Example: *499/F_4 and *0_6/S
* means none-installed
499 means value
F means 1%
_4 means 0402 size
/S means short pad

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

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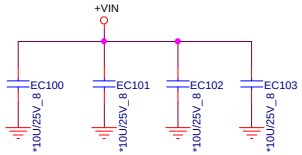

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