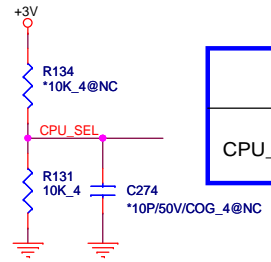
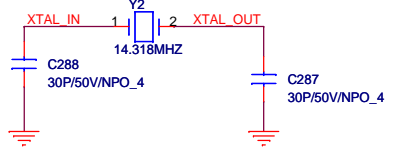
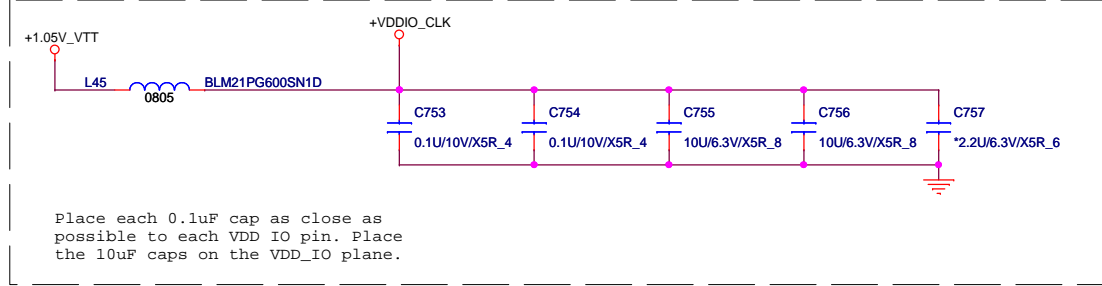
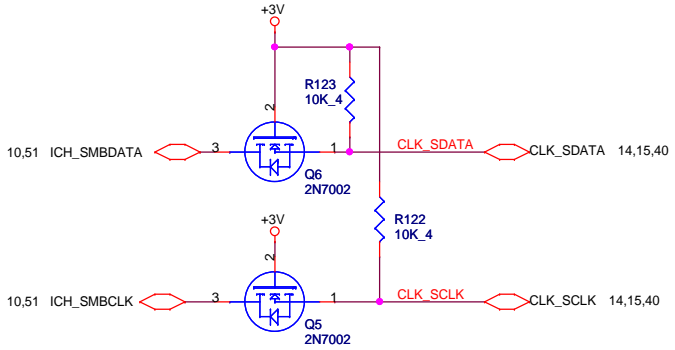
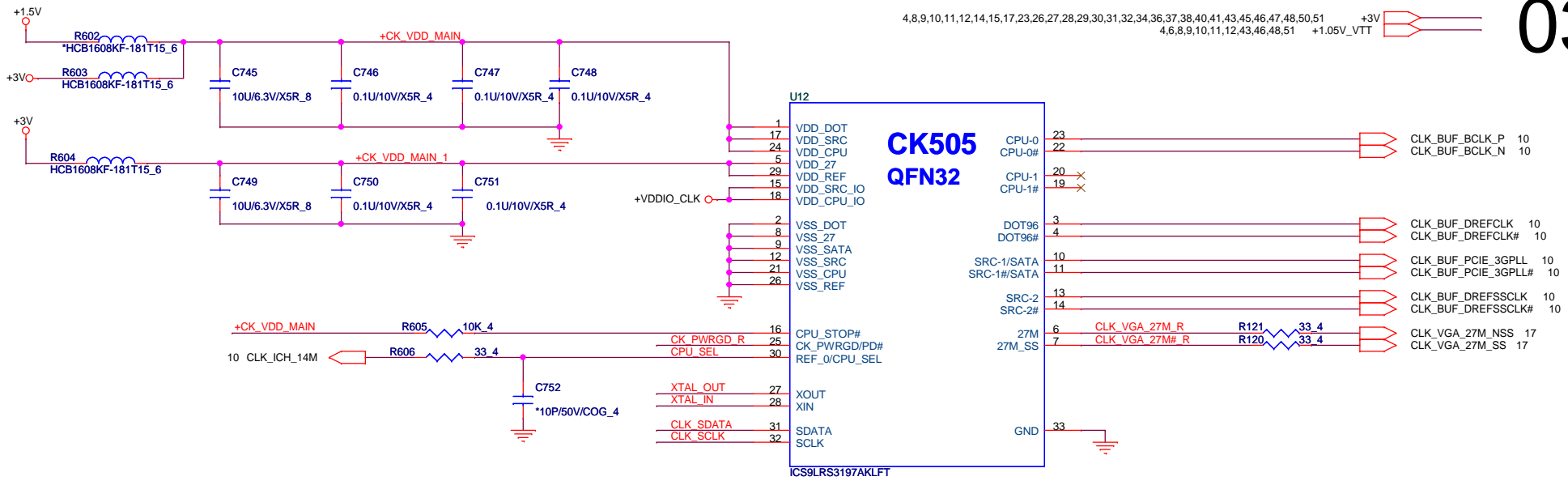


Table of Contents

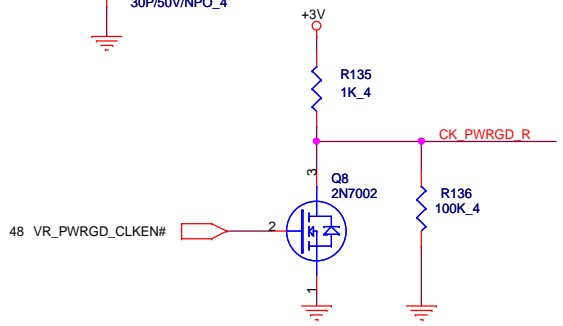
PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
3	CLOCK GENERATOR
4-7	Auburndale CPU
8-13	Ibex Peak-M
14-15	DDRIII SO-DIMM
16-22	Discreate VGA (M92-XT)
23	LCD + Camera Conn.
24	HDMI Conn.
25	CRT Conn.
26	Audio Codec ALC269
27	RTL8111DL
28	SATA HDD & ODD
29	USB x 2 & ESATA
30	USB X2/SIM_CARD/LEDs/RF
31	MINI-Card (UWB & WWAN)
32	MINI-Card (WLAN)
33	ONFI
34	Express Card
35	K/B & T/P
36	BLUETOOTH
37	FAN & Thermal
38	G-Sensor
39	B To B Conn.
40	iTPM & RFID EEPROM
41	KBC IT8502E
42	HOLD & SKEW
43	Discharge
44	Charger
45	DDR3 (TPS5116REGR)
46	1.05V_VTT & 1.05_PCH (RT8204)
47	3V/5V (MAX17101)
48	CPU (MAX17082)
49	DIS_GFX_VCC (MAX8792)
50	DIS_1.8V_RUN (OZ8116LN)
51	Power Block Dianram
52	XDP
53	Revision & Schematic Value Description
54	BOM Matrix Table

Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
VIN	10V~+20V	23,32,43,44,45,46,47,48,49,50	MAIN POWER		S0-S5
+3VRTC	+3.0V~+3.3V	9,12,41	RTC		S0-S5
3VPCU	+3.3V	9,23,27,30,32,35,39,41,43,44,47	ITE8052 POWER	3V5V_EN	S0-S5
5VPCU	+5V	14,43,44,45,46,47,49,50	DC/DC POWER IC SOURCE	3V5V_EN	S0-S5
+15V	+15V	23,38,43,45,46,47	LARGE POWER	3V5V_EN	S0-S5
LANVCC	+3.3V	27,43	LAN POWER	LAN_ON	
5V_S5	+5V	12,29,30,43	PCH SUS POWER	S5_ON	S0-S3
3V_S5	+3.3V	8,9,10,11,12,43,52	Sys Management,PCH Resume Well,Intel HD Audio,USB,WLAN WiMAX POWER	S5_ON	S0-S3
5VSUS	+5V	23,39,43,48	SLP_S4# CTRLD POWER	SUSON	S0-S3
3VSUS	+3.3V	14,15,30,34,41,43,49	SLP_S4# CTRLD POWER	SUSON	S0-S3
1.5VSUS	+1.5V	4,6,14,15,43,45,46,49,50	SODIMM POWER	SUSON	S0-S3
0.75VSMDDR_VTERM	+0.75V	14,15,43,45	DDR3 SODIMM REFERENCE POWER	MAIN_ON	S0
+5V	+5V	12,18,23,24,25,26,28,35,37,41,43,44	SLP_S3# CTRLD POWER	MAIN_ON	S0
+3V	+3.3V	3,4,8,9,10,11,12,14,15,17,23,25,26,27,28,29,30,31,32,33,34,36,37,38,39,40,41,43,44,45,46,47,48,50,52	SLP_S3# CTRLD POWER	MAIN_ON	S0
+1.8V	+1.8V	6,12,17,18,21,22,33,43,50	LVDS,NVM POWER	MAIN_ON	S0
+1.5V	+1.5V	12,18,19,20,31,32,34,45,46	Mini PCIe,Express Card POWER	MAIN_ON	S0
+1.05V_VTT	+1.05V	4,6,11,12,43,46,48,52	AuBurndale VTT POWER	MAIN_ON	S0
+1.05V_PCH	+1.05V	3,10,12,43,46,52	PCH CORE POWER	1.05V_RUN_ON	S0
+VCC_GFX_CORE	+0.9V~+1.2V	18,21,43,49	VGA CORE POWER	GFXVR_EN	S0
VCC_CORE		6,43,48	CPU CORE POWER	VRON	S0
LCDVCC	+3.3V	23	LCD Power	ENVDD	S0
+5V_ODD	+5V	28	ODD Power	MAIN_ON	S0
+5V_HDD	+5V	28	HDD Power	MAIN_ON	S0
BAT-V	+10V~+17V	44	MAIN BATTERY	CHG_PBATT	S0-S5

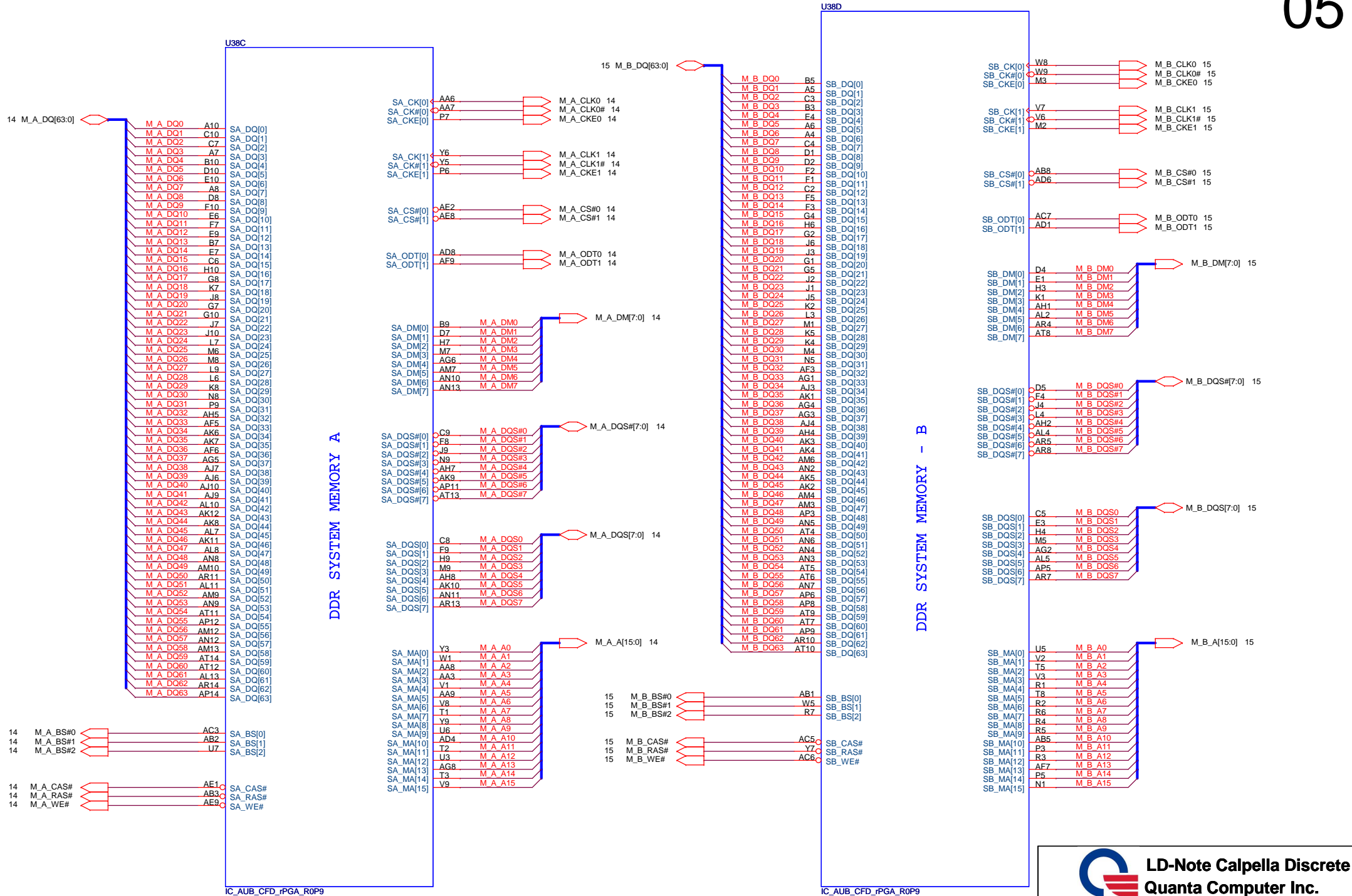



	0	1
CPU_SEL	CPU0/1=133MHz (default)	CPU0/1=100MHz



AUBURNDALE PROCESSOR (DDR3)

05



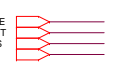


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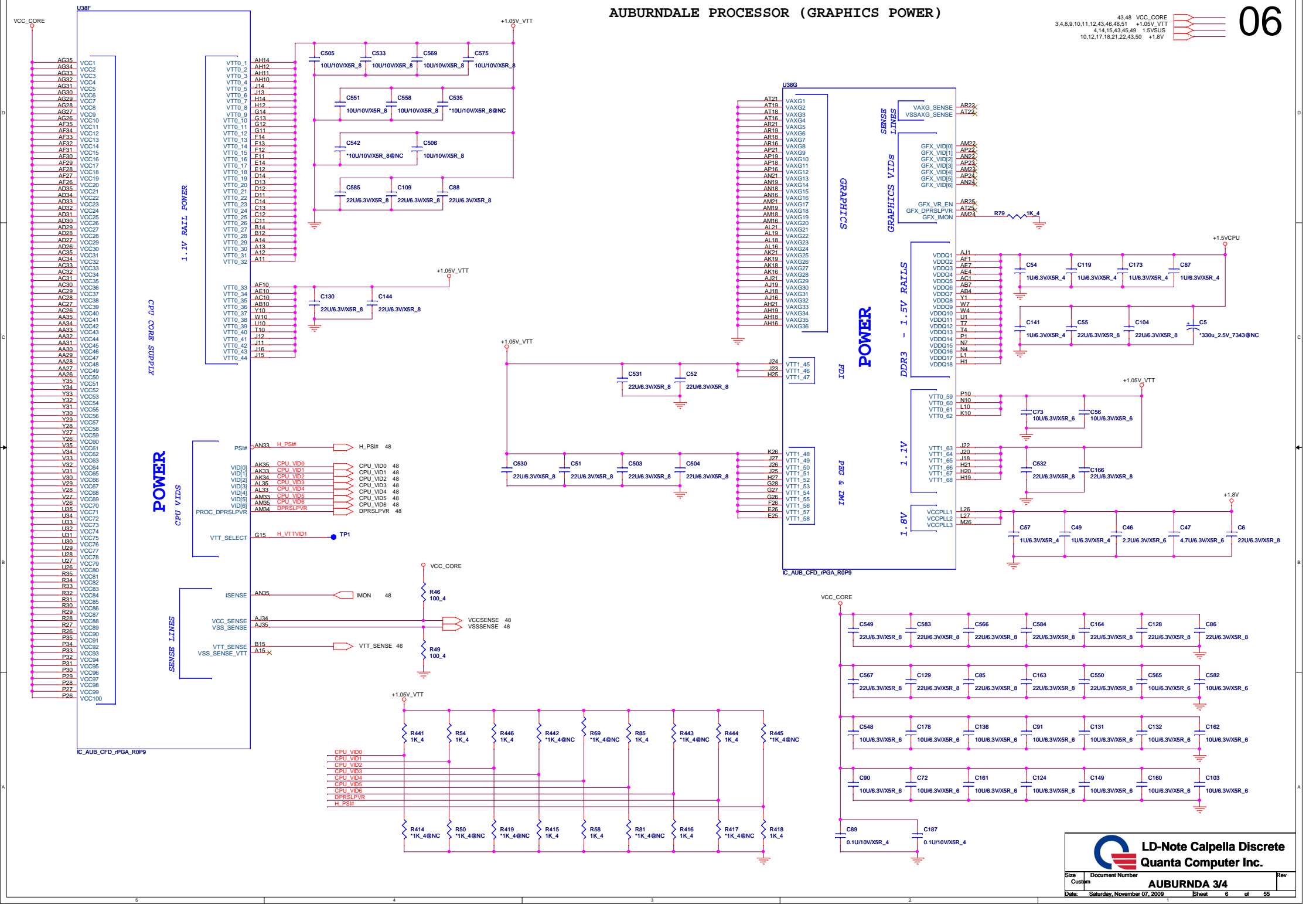
Size	Document Number	Rev
Custom	AUBURNDA 2/4	
Date:	Saturday, November 07, 2009	Sheet 5 of 55

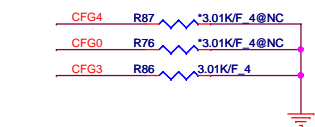
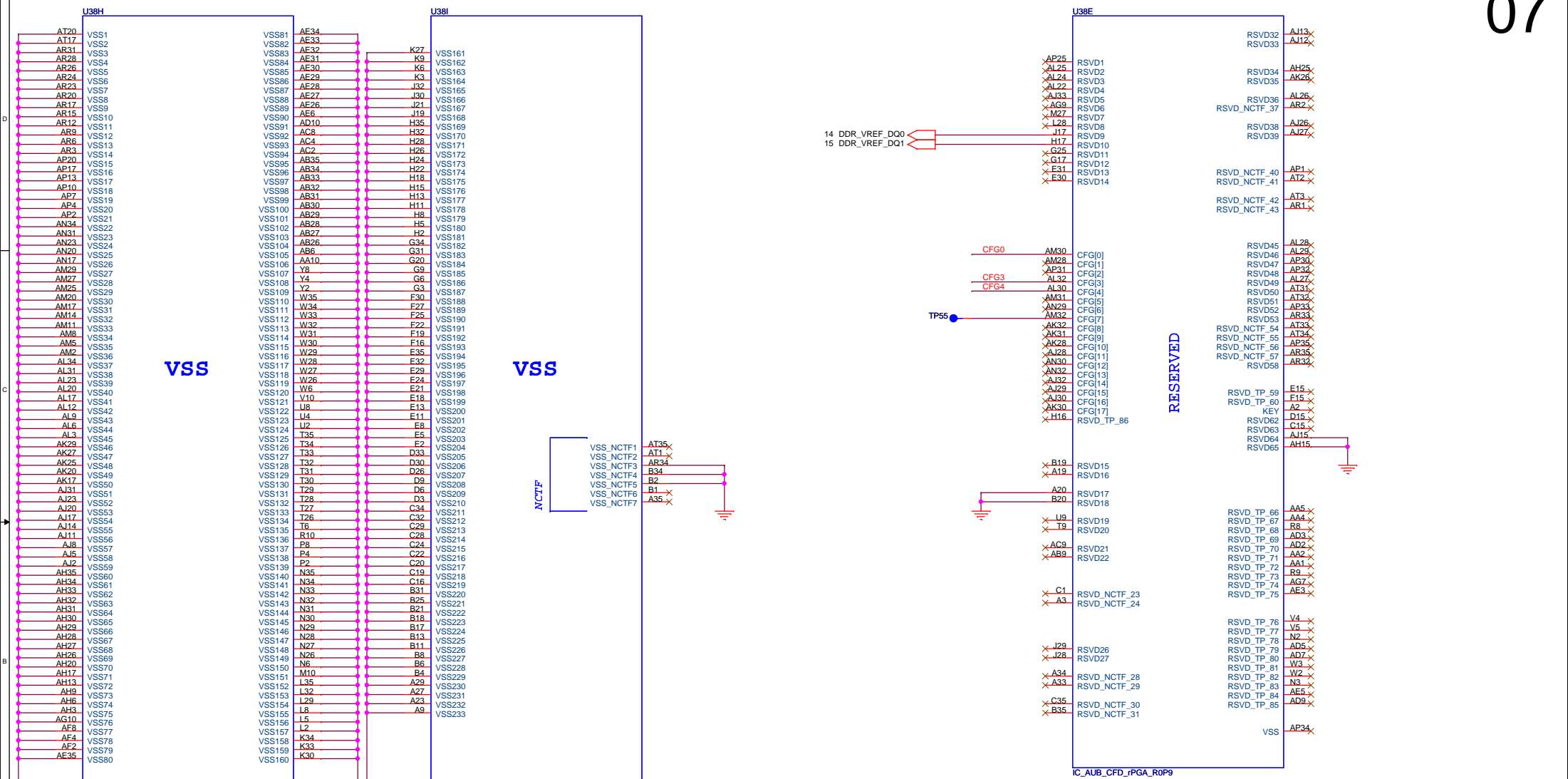
AUBURNDALE PROCESSOR (GRAPHICS POWER)

43.48 VCC_CORE
3.4,8,9,10,11,12,43,46,48,51 +1.05V_VTT
4,14,15,43,45,49 1.5VSBUS
10,12,17,18,21,22,43,50 -1.8V



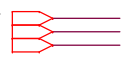
06





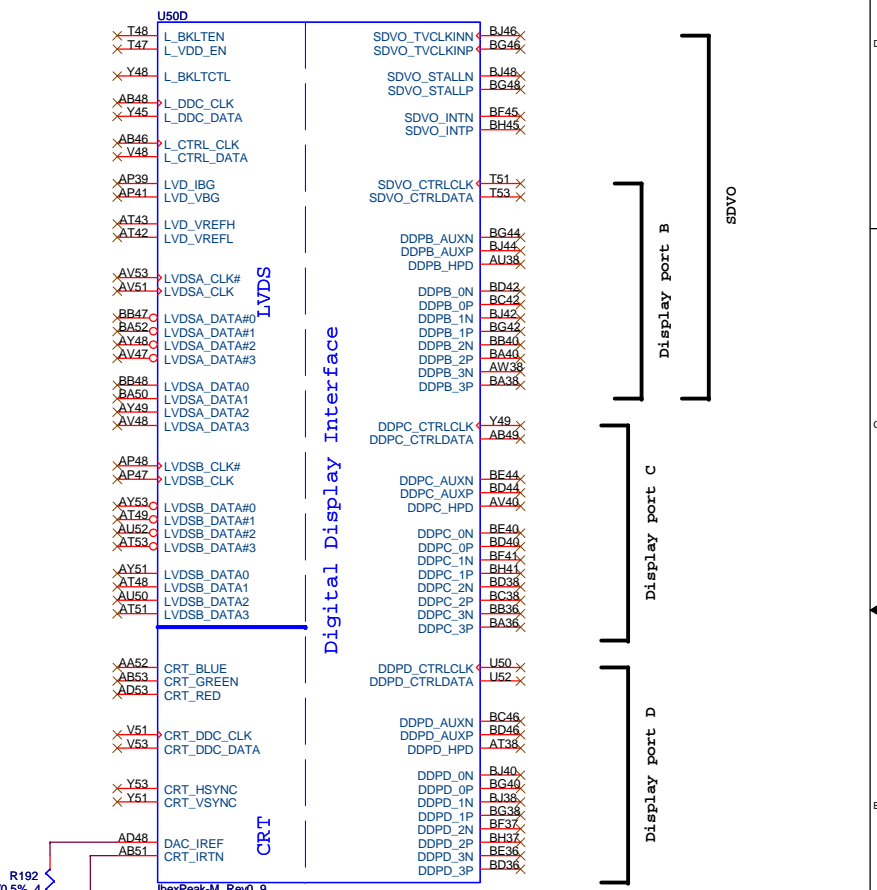
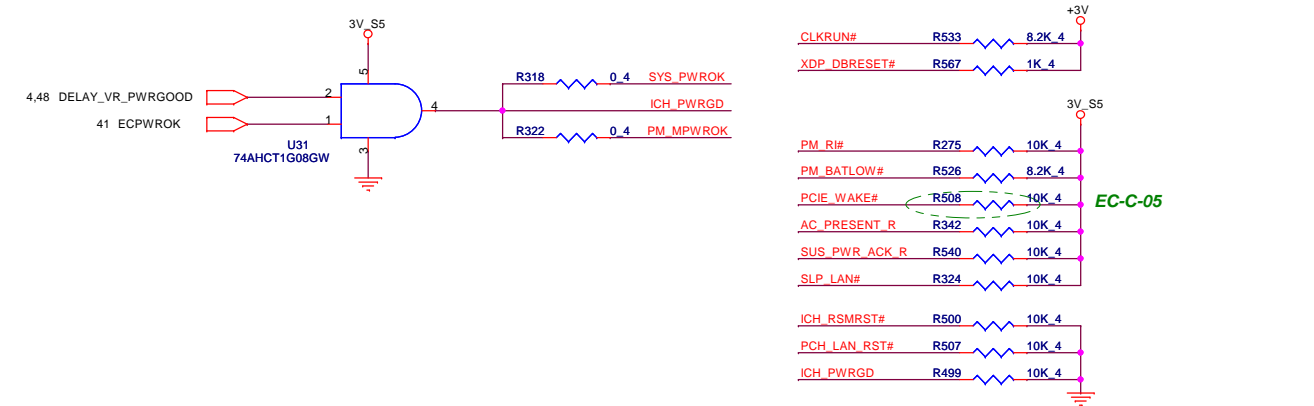
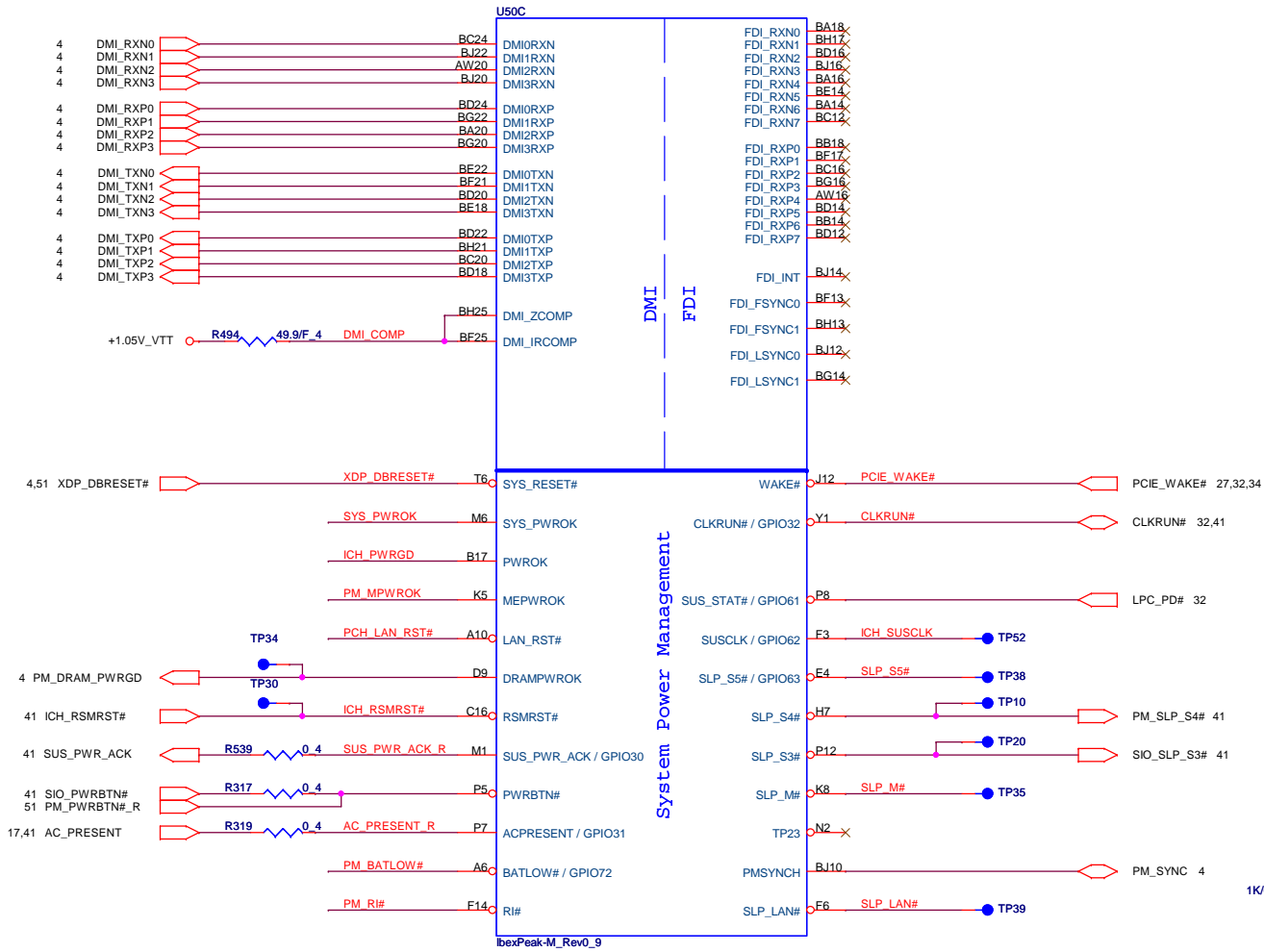
	1	0
CFG4 (Display Port Presence)	Disabled; No Physical Display Port attached to Embedded Display Port	Enabled; An external Display port device is connected to the Embedded Display port
CFG0 (PCI-Epress Configuration Select)	Single PEG	Bifurcation enabled
CFG3 (PCI-Epress Static Lane Reversal)	Normal Operation	Lane Numbers Reversed

LD-Note Calpella Discrete Quanta Computer Inc.
 Size: Custom Document Number: AUBURNDA 4/4 Rev:
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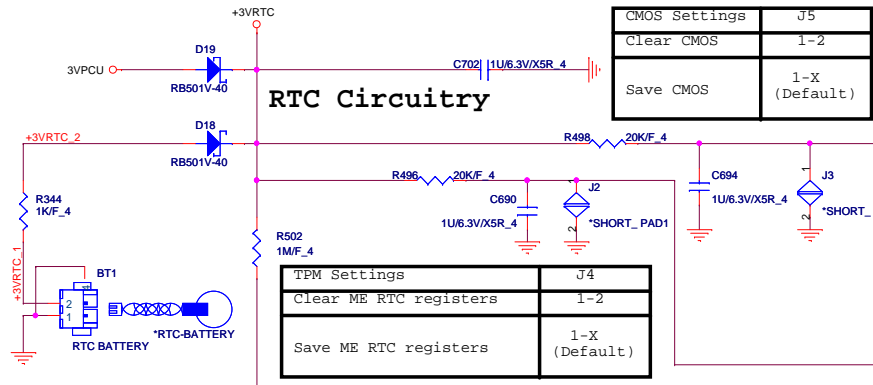
IBEX PEAK-M (DMI, FDI, GPIO)

IBEX PEAK-M (LVDS, DDI)

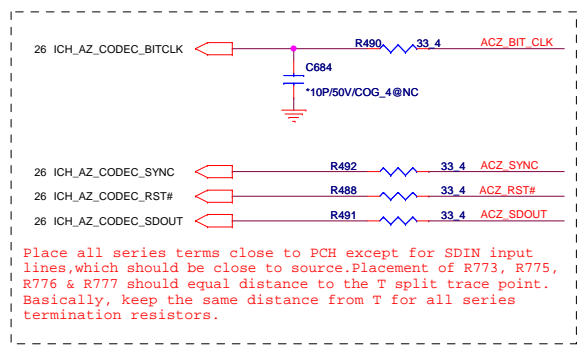
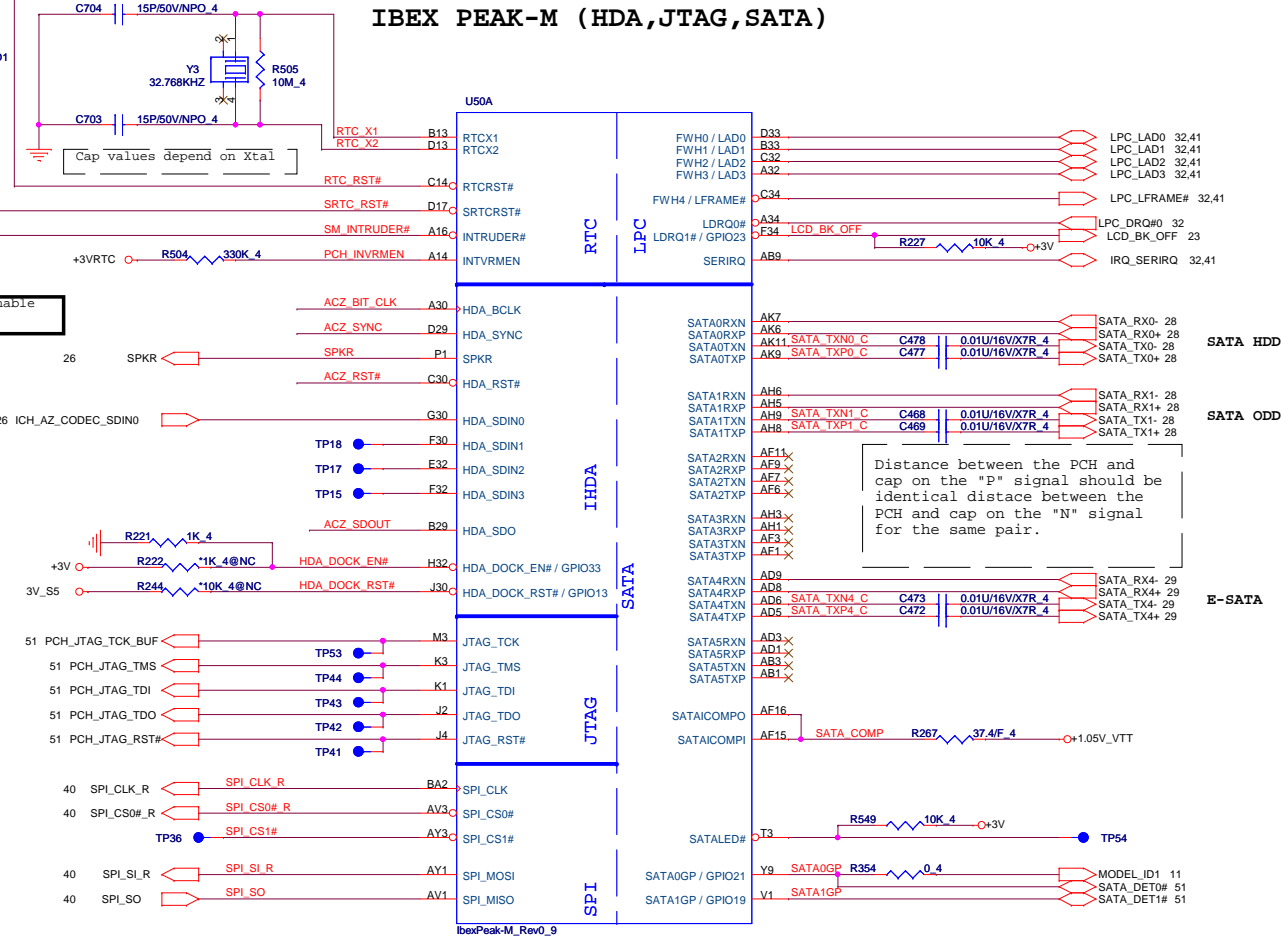


LD-Note Calpella Discrete
Quanta Computer Inc.

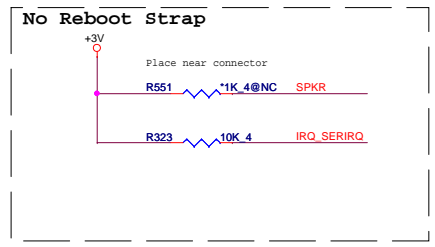
Size: Custom Document Number: IBEX PEAK-M 1/6 Rev: _____
 Date: Saturday, November 07, 2009 Sheet: 8 of 55



IBEX PEAK-M (HDA, JTAG, SATA)



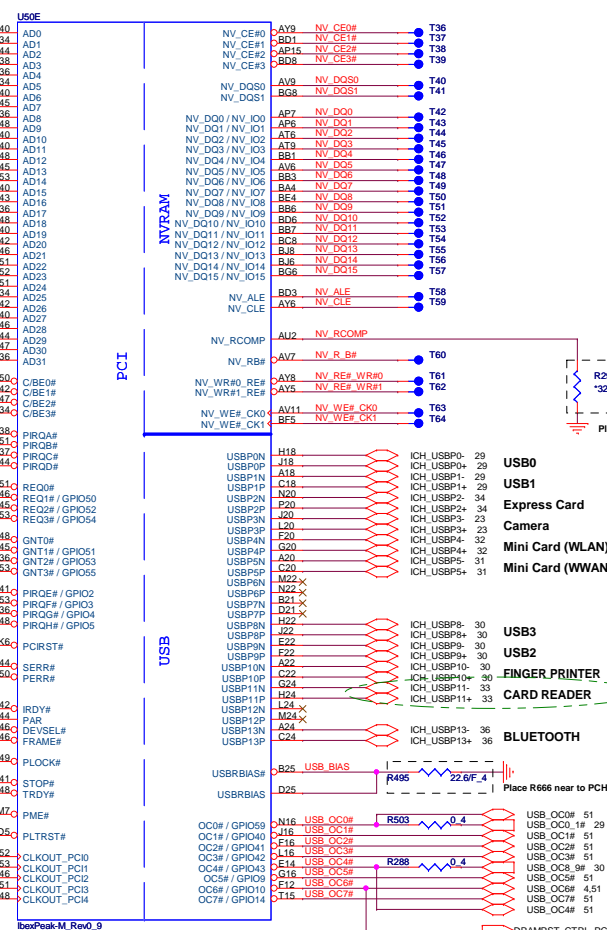
INVRMEN - Integrated SUS 1.1V VRM Enable
High - Enable Internal VRs



Distance between the PCH and cap on the "P" signal should be identical distance between the PCH and cap on the "N" signal for the same pair.

USB Port	Device	PM55 (Support)	HM55 (Support)	DV-Stage
Port 0	USB Port	V	V	HM55
Port 1	USB Port	V	V	HM55
Port 2	New Card	V	V	HM55
Port 3	Camera	V	V	HM55
Port 4	WLAN	V	V	HM55
Port 5	WWAN	V	V	HM55
Port 6	Card Reader	V	X	HM55
Port 7	NC	V	X	HM55
Port 8	USB Port	V	V	HM55
Port 9	USB Port	V	V	HM55
Port 10	Finger print	V	V	HM55
Port 11	NC	V	V	HM55
Port 12	NC	V	V	HM55
Port 13	Bluetooth	V	V	HM55

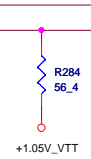
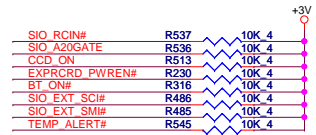
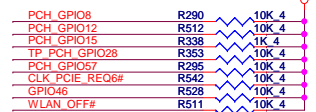
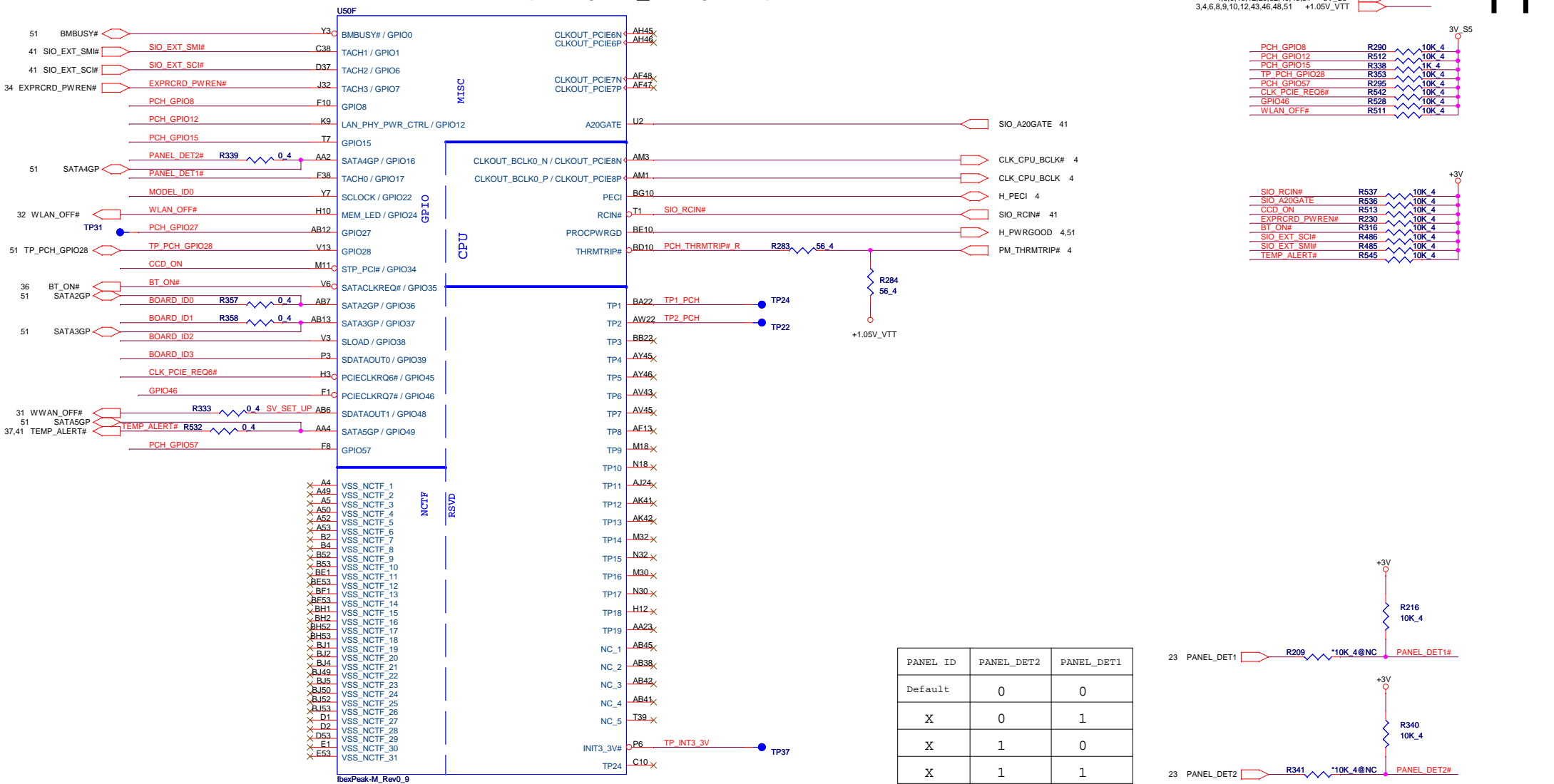
IBEX PEAK-M (PCI,USB,NVRAM)



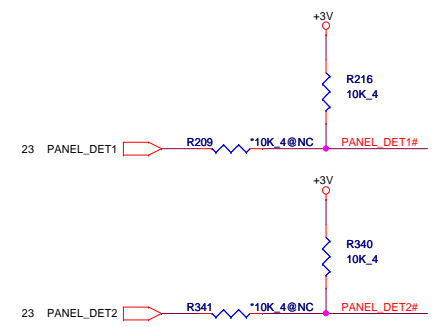
IBEX PEAK-M (GPIO, VSS_NCTF, RSVD)

3,4,8,9,10,12,14,15,17,23,26,27,28,29,30,31,32,34,36,37,38,40,41,43,45,46,47,48,50,51 +3V
 4,8,9,10,12,29,32,40,43,51 3V_S5
 3,4,6,8,9,10,12,43,46,48,51 +1.05V_VTT

11

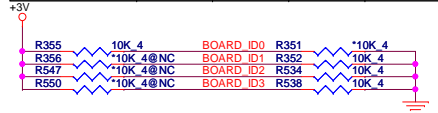


PANEL ID	PANEL_DET2	PANEL_DET1
Default	0	0
X	0	1
X	1	0
X	1	1



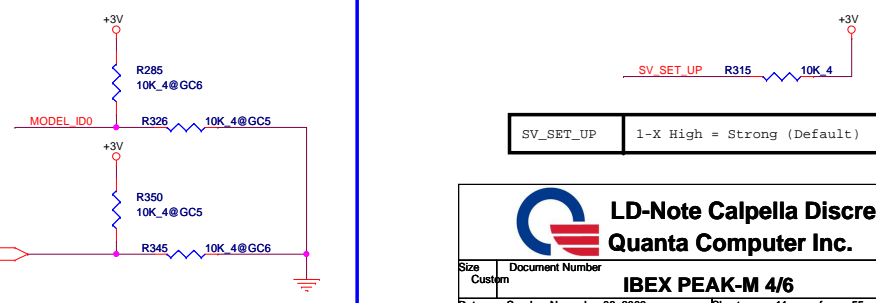
Board ID

Board ID For Function	ID3 GPIO39	ID2 GPIO38	ID1 GPIO37	ID0 GPIO36
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	0	1	1
SOVP	0	1	0	0



Model ID

Model ID	MODEL_ID0	MODEL_ID1
13"	0	0
14"	0	1
15"	1	0
Default	1	1

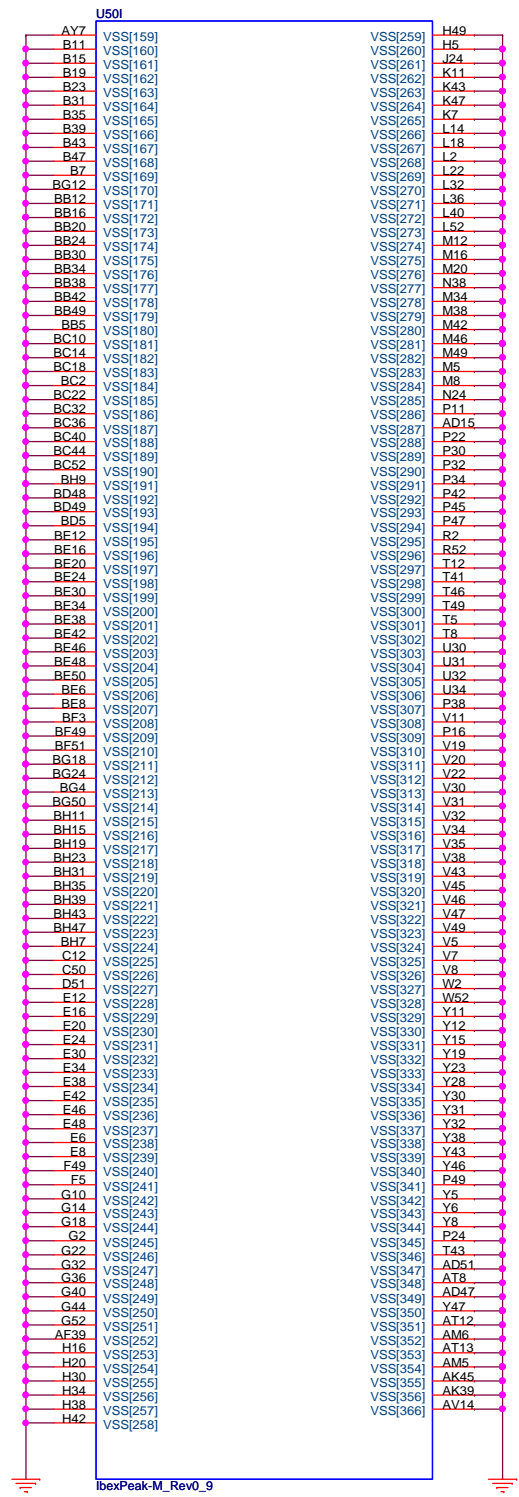
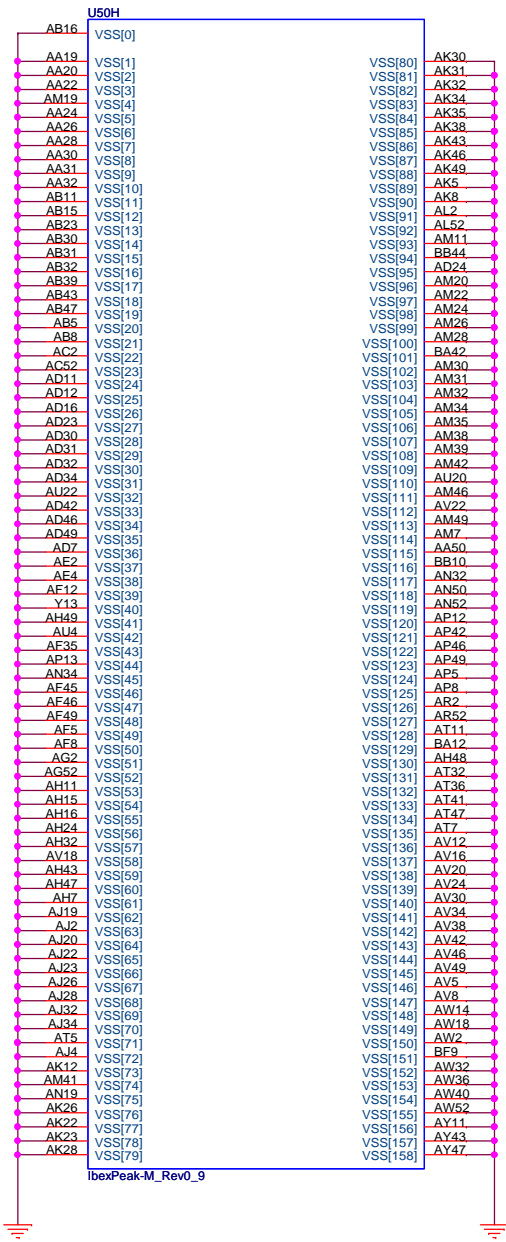


SV_SET_UP 1-X High = Strong (Default)

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Size: Custom Document Number: **IBEX PEAK-M 4/6** Rev: _____
 Date: Sunday, November 08, 2009 Sheet 11 of 56

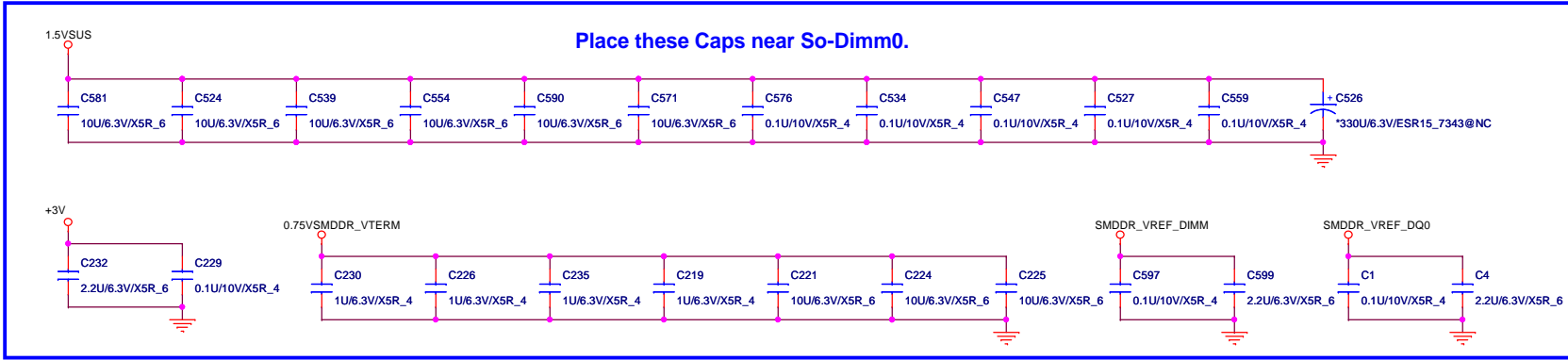
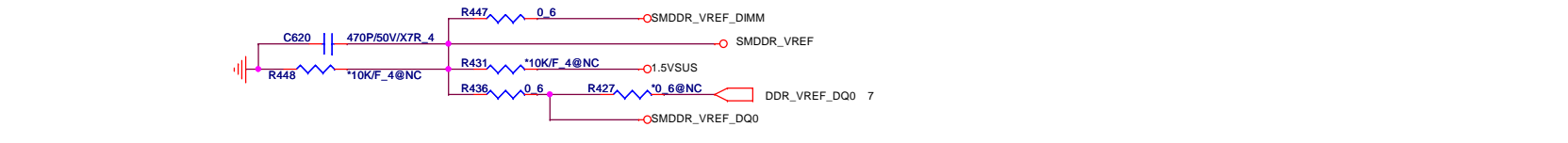
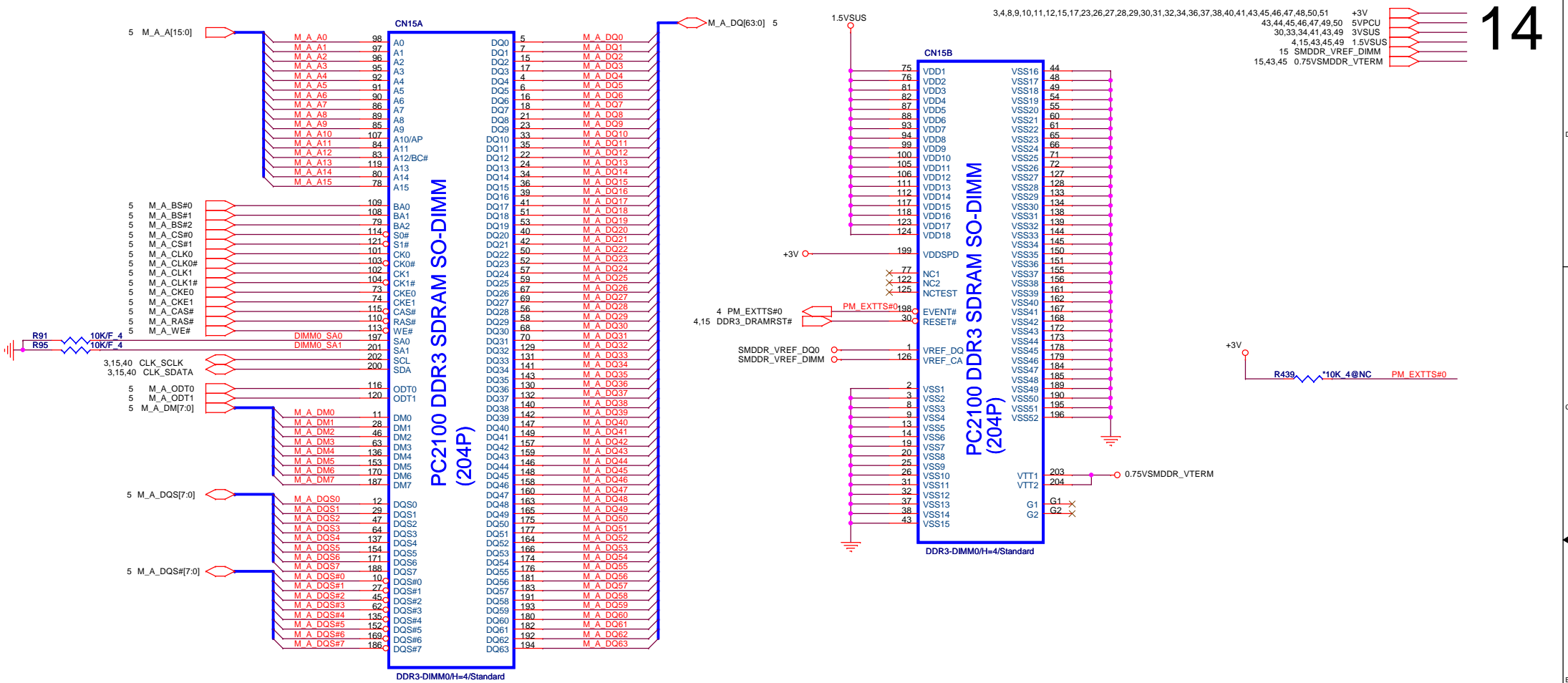
IBEX PEAK-M (GND)



LD-Note Calpella Discrete
Quanta Computer Inc.

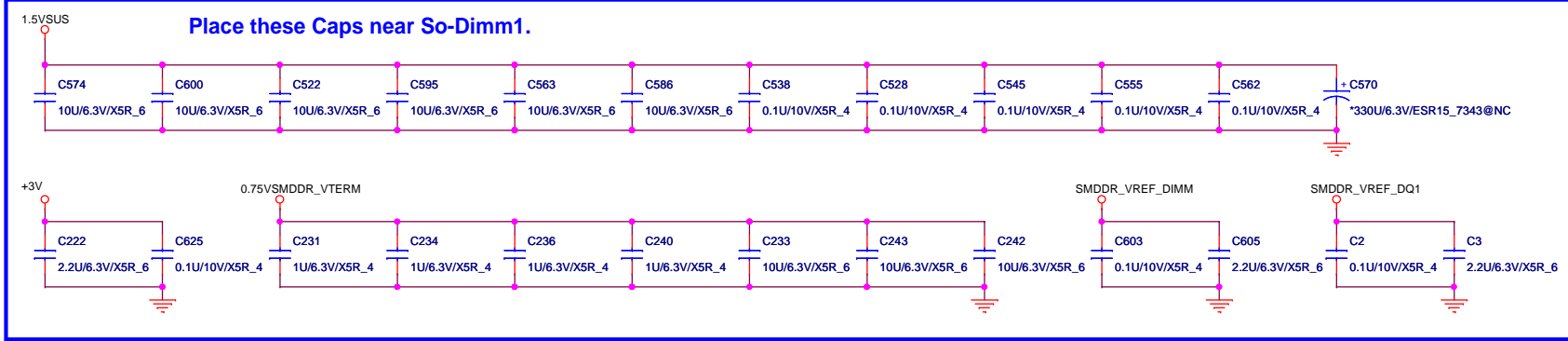
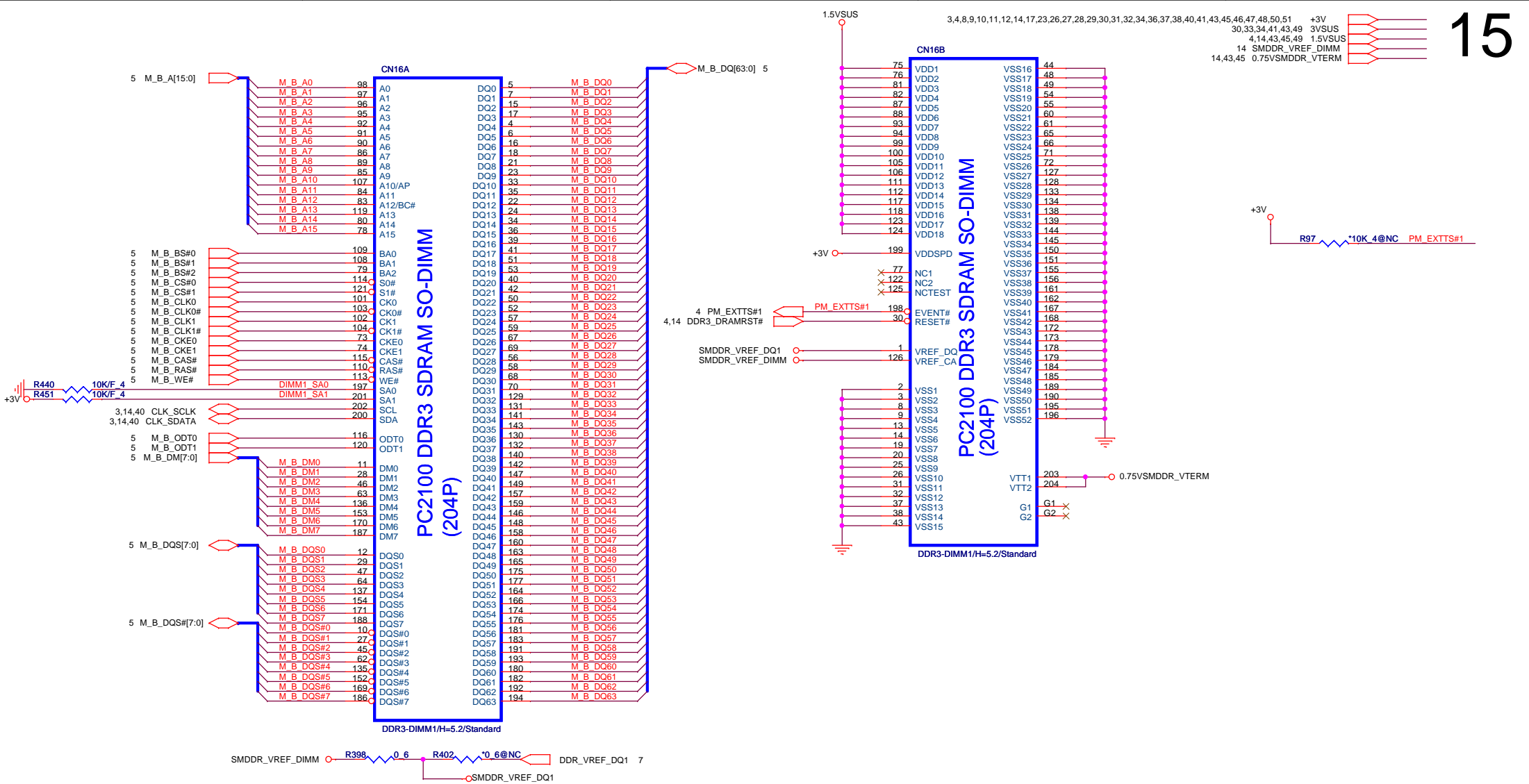
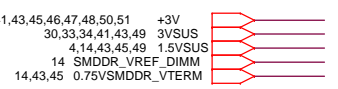
Size: Custom | Document Number: IBEX PEAK-M 6/6 | Rev: _____

Date: Saturday, November 07, 2009 | Sheet: 13 of 55



LD-Note Calpella Discrete
Quanta Computer Inc.

Size: Custom Document Number: **DDR3 DIMM-1(H=5.2)** Rev:
Date: Tuesday, November 03, 2009 Sheet 14 of 55

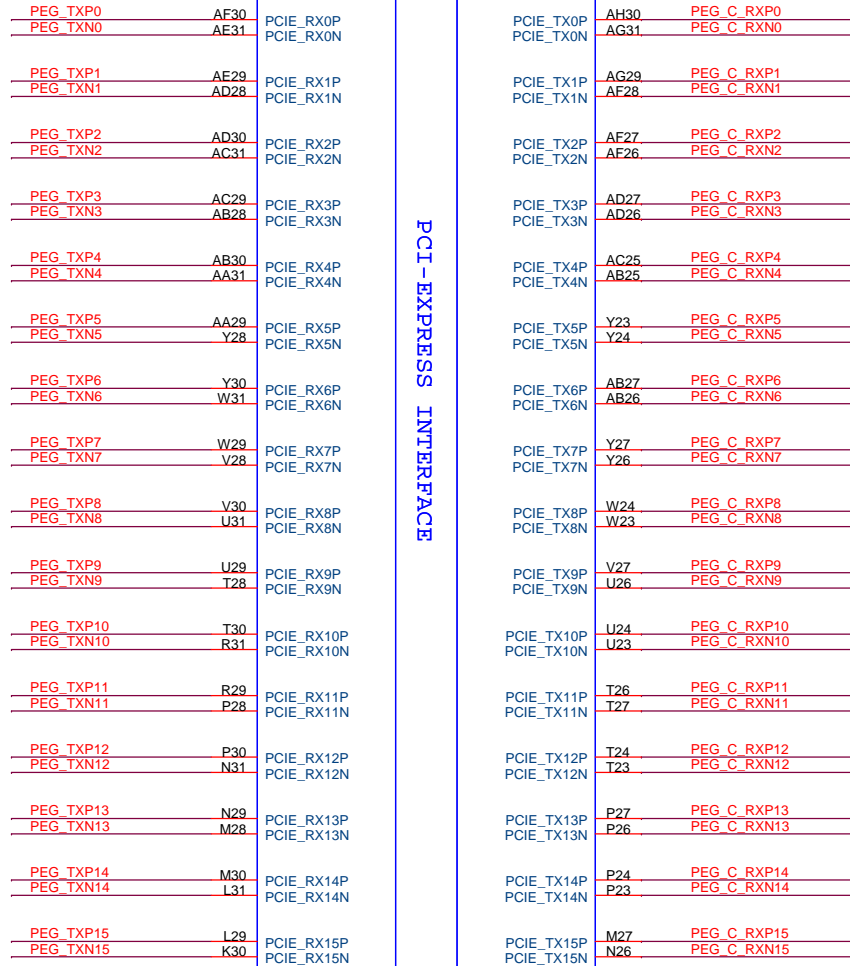


LD-Note Calpella Discrete Quanta Computer Inc.
 Document Number: **DDR3 DIMM-1(H=9.2)**
 Date: Tuesday, November 03, 2009 Sheet 15 of 55

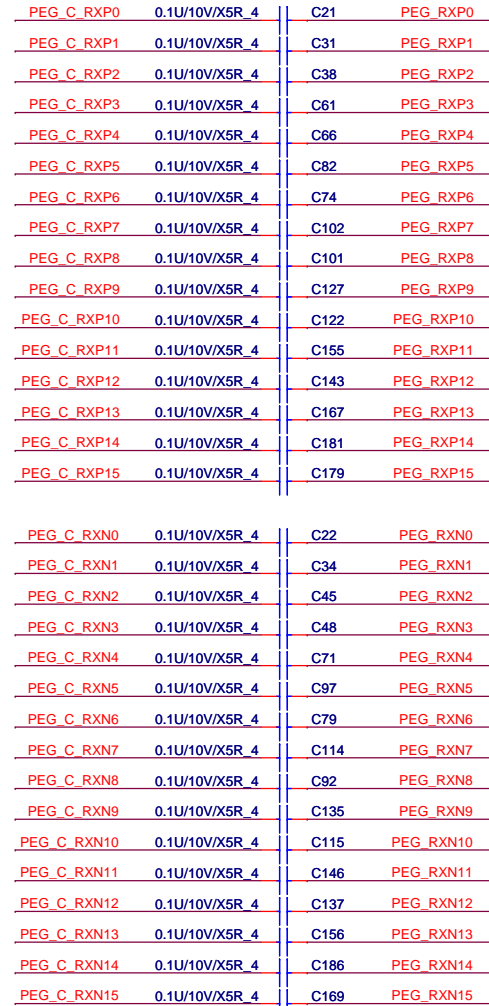
5
4 PEG_TXP[0..15]
4 PEG_TXN[0..15]

2
1
16,21,22,43,49 +1.1V_GFX_PCIE

U40A
PART 1 OF 10



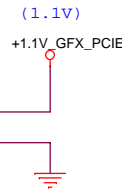
PCI-EXPRESS INTERFACE



PEG_RXP[0..15] 4
PEG_RXN[0..15] 4



M92-S2/M92-XT

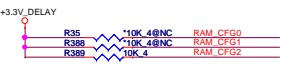


100 MHz (+/-300 ppm) input frequency,
0-0.7 V single-ended swing.
clock must be provided less than 400ns
after CLKREQ# is asserted



**LD-Note Calpella Discrete
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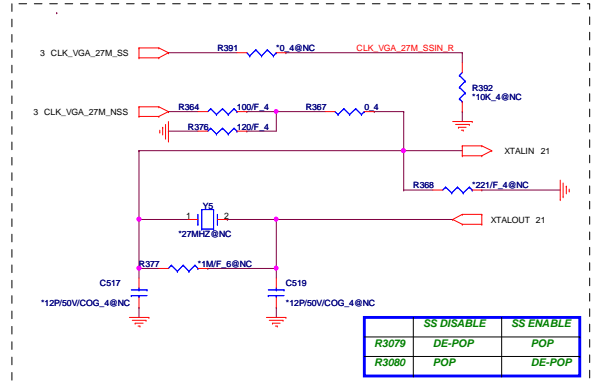
MEMORY APERTURE SIZE SELECT				
MEMORY SIZE	CFG2 GPIO13	CFG1 GPIO12	CFG0 GPIO11	
128MB	0	0	0	
256MB	0	0	1	
64MB	0	1	0	
512MB	1	0	0	



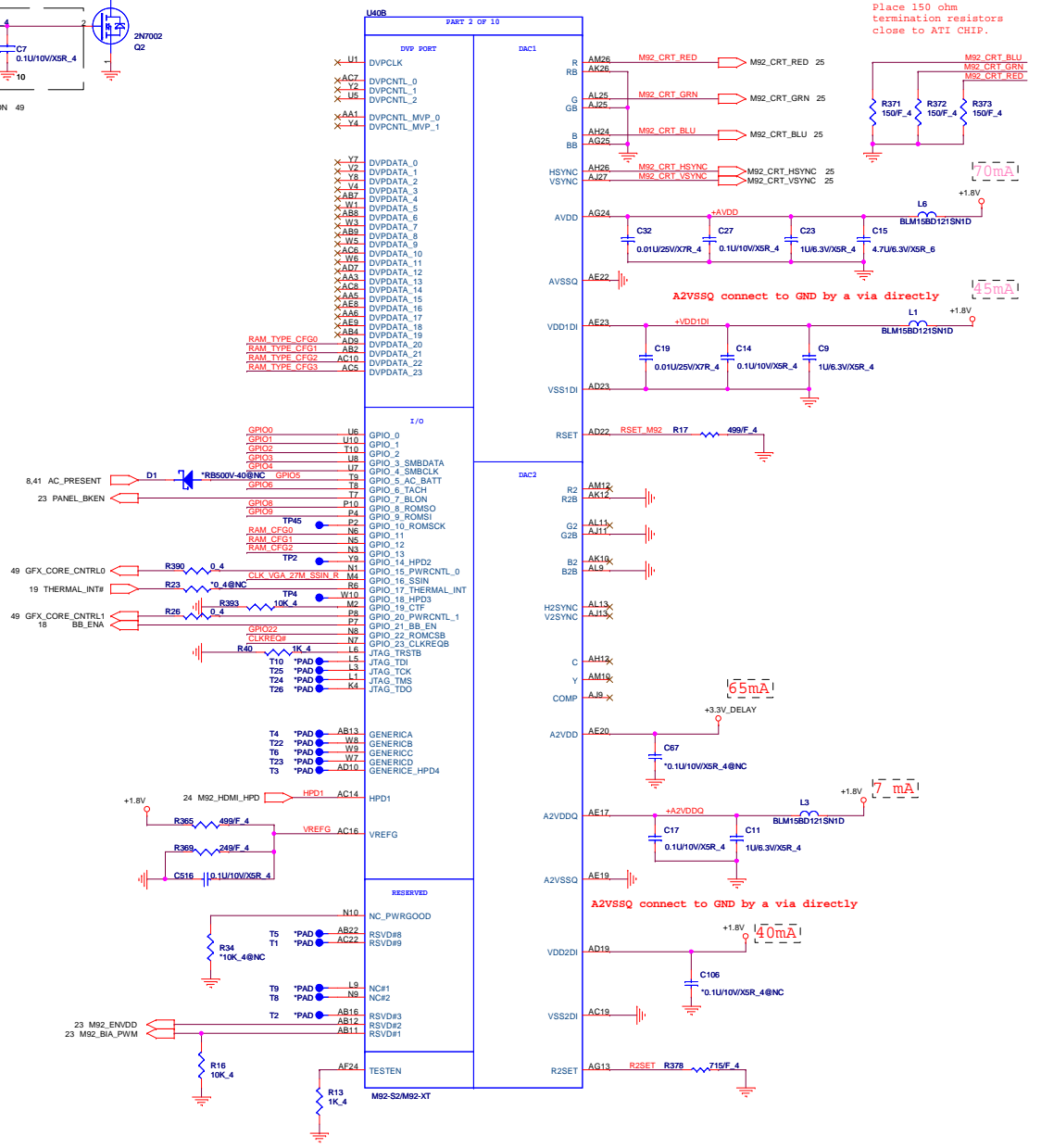
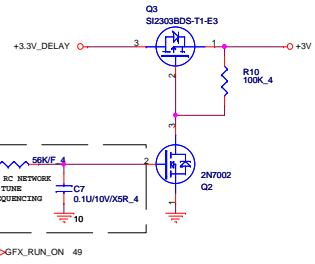
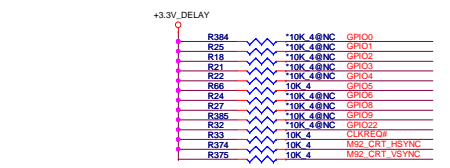
Memory Straps	RAM_TYPE_CFG3	RAM_TYPE_CFG2	RAM_TYPE_CFG1	RAM_TYPE_CFG0
800MHz 512MB(64M*16) Samsung K4W1G1646E-HC12	0	0	0	1
800MHz 512MB(64M*16) Hynix H5TQ1G63BFR-12C	0	0	1	0



GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	G NOTE Setting
GPIO0	GPIO0 - TX_PWRS_ENB (Transmitter Power Savings Enable) 0: 50% Tx output saving for mobile mode 1: full Tx output swing (Default setting for Desktop)	0
GPIO1	GPIO1 - TX_DEEMPH_EN (Transmitter De-emphasis Enable) 0: Tx de-emphasis disabled for mobile mode 1: Tx de-emphasis enabled (Default setting for Desktop)	0
GPIO2	GPIO2 - BIF_GEN2_EN (B.0 OTs Enable) 0: Default (Driver Controlled Gen2) 1: Strap Controlled Gen2	0
GPIO3	ATI reserved configuration straps.	0
GPIO4	ATI reserved configuration straps.	0
GPIO5	GPIO5 - AC_BATT 0: Battery saving mode = 0.0 V 1: AC (Performance mode) = 3.3 V	1
GPIO6	ATI Internal use only	0
GPIO8	ATI reserved configuration straps.	0
GPIO9	VGA Disable 0 - VGA Controller capacity enabled 1 - This device will not recognized as the system's VGA controller.	0
GPIO22	Enable external BIOS ROM device 0 - Disable external BIOS ROM device 1 - Enable external BIOS ROM device	0
HSYNC	AUD[1:0] 00 - No audio function 01 - Audio for DisplayPort and HDMI if adapter is detected 10 - Audio for DisplayPort only 11 - Audio for both DisplayPort and HDMI	1
VSYS		1

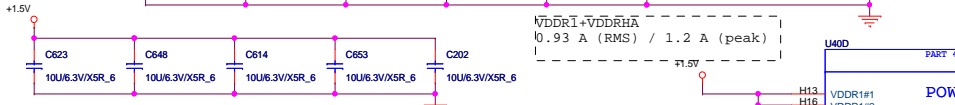
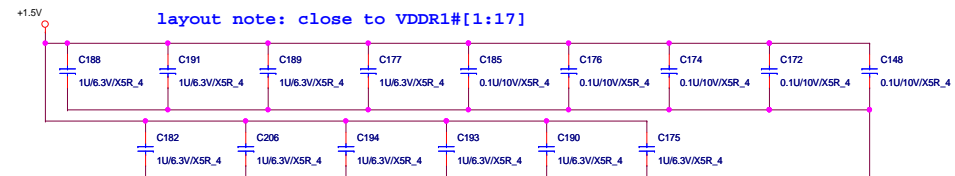


	SS DISABLE	SS ENABLE
R3079	DE-POP	POP
R3080	POP	DE-POP

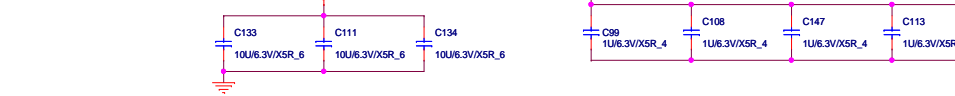
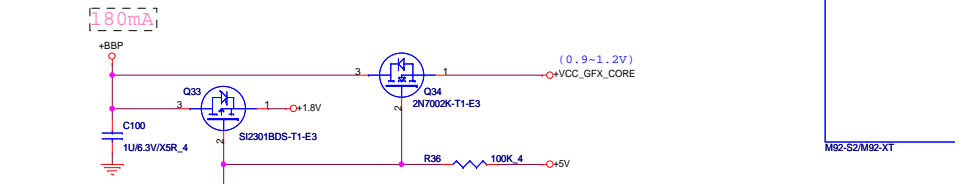
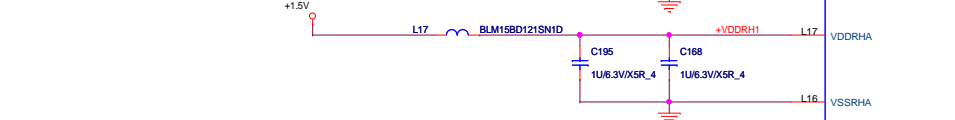
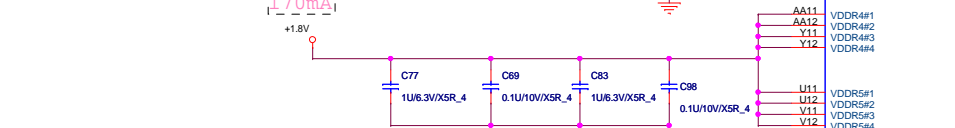
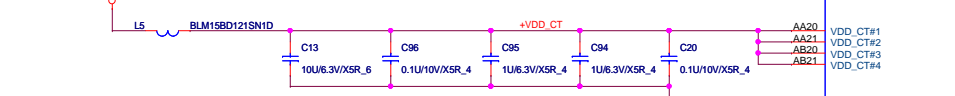


Layout Note:
Place 150 ohm termination resistors close to AFI CHIP.

16,21,22,43,48	+1.1V_GFX_PCIE
3,19,20,31,32,34,45	+1.5V
6,10,12,17,21,22,43,50	+1.8V
17,19,21,24,25	+3.3V_DELAY
21,43,49	+VCC_GFX_CORE
12,24,25,26,28,35,37,39,41,43	+5V



1.10mA



POWER

- VDDR1#1
- VDDR1#2
- VDDR1#3
- VDDR1#4
- VDDR1#5
- VDDR1#6
- VDDR1#7
- VDDR1#8
- VDDR1#9
- VDDR1#10
- VDDR1#11
- VDDR1#12
- VDDR1#13
- VDDR1#14
- VDDR1#15
- VDDR1#16
- VDDR1#17

- VDD CT#1
- VDD CT#2
- VDD CT#3
- VDD CT#4

- VDDR#1
- VDDR#2
- VDDR#3
- VDDR#4

- VDDR#1
- VDDR#2
- VDDR#3
- VDDR#4

- VDDR#1
- VDDR#2
- VDDR#3
- VDDR#4

- VDDRH#
- VSSRHA

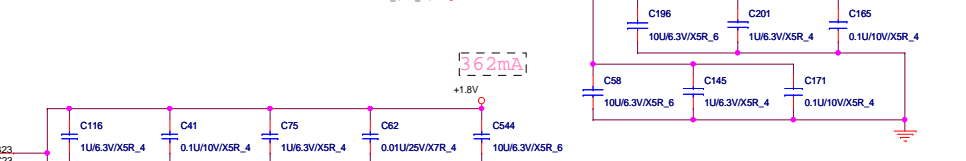
- VDDCI#1
- VDDCI#2
- VDDCI#3
- VDDCI#4
- VDDCI#5
- VDDCI#6
- VDDCI#7
- VDDCI#8

- VDDCI#1
- VDDCI#2
- VDDCI#3
- VDDCI#4
- VDDCI#5
- VDDCI#6
- VDDCI#7
- VDDCI#8

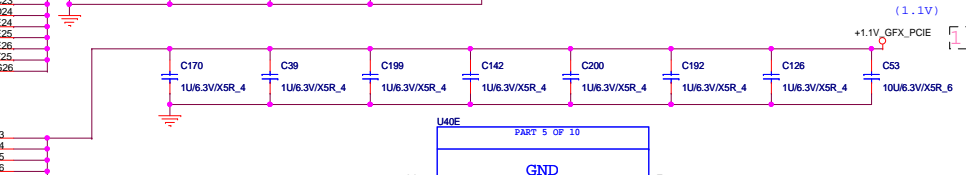
- VDDCI#1
- VDDCI#2
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- VDDCI#4
- VDDCI#5
- VDDCI#6
- VDDCI#7
- VDDCI#8

- VDDCI#1
- VDDCI#2
- VDDCI#3
- VDDCI#4
- VDDCI#5
- VDDCI#6
- VDDCI#7
- VDDCI#8

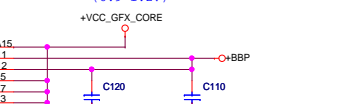
(PCIE_VDDC 1.1V @ 1A) (1.1V)



(1.1V)



(0.9-1.2V)



(0.9-1.2V)



(0.9-1.2V)



(0.9-1.2V)



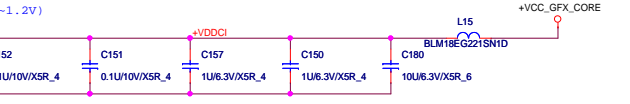
(0.9-1.2V)

GND

- PCIE_VSS#1
- PCIE_VSS#2
- PCIE_VSS#3
- PCIE_VSS#4
- PCIE_VSS#5
- PCIE_VSS#6
- PCIE_VSS#7
- PCIE_VSS#8
- PCIE_VSS#9
- PCIE_VSS#10
- PCIE_VSS#11
- PCIE_VSS#12
- PCIE_VSS#13
- PCIE_VSS#14
- PCIE_VSS#15
- PCIE_VSS#16
- PCIE_VSS#17
- PCIE_VSS#18
- PCIE_VSS#19
- PCIE_VSS#20
- PCIE_VSS#21
- PCIE_VSS#22
- PCIE_VSS#23
- PCIE_VSS#24
- PCIE_VSS#25
- PCIE_VSS#26
- PCIE_VSS#27
- PCIE_VSS#28
- PCIE_VSS#29
- PCIE_VSS#30
- PCIE_VSS#31

- GND#1
- GND#2
- GND#3
- GND#4
- GND#5
- GND#6
- GND#7
- GND#8
- GND#9
- GND#10
- GND#11
- GND#12
- GND#13
- GND#14
- GND#15
- GND#16
- GND#17
- GND#18
- GND#19
- GND#20
- GND#21
- GND#22
- GND#23
- GND#24
- GND#25
- GND#26
- GND#27
- GND#28
- GND#29
- GND#30
- GND#31
- GND#32

- VSS_MECH#1
- VSS_MECH#2
- VSS_MECH#3

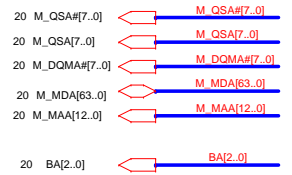
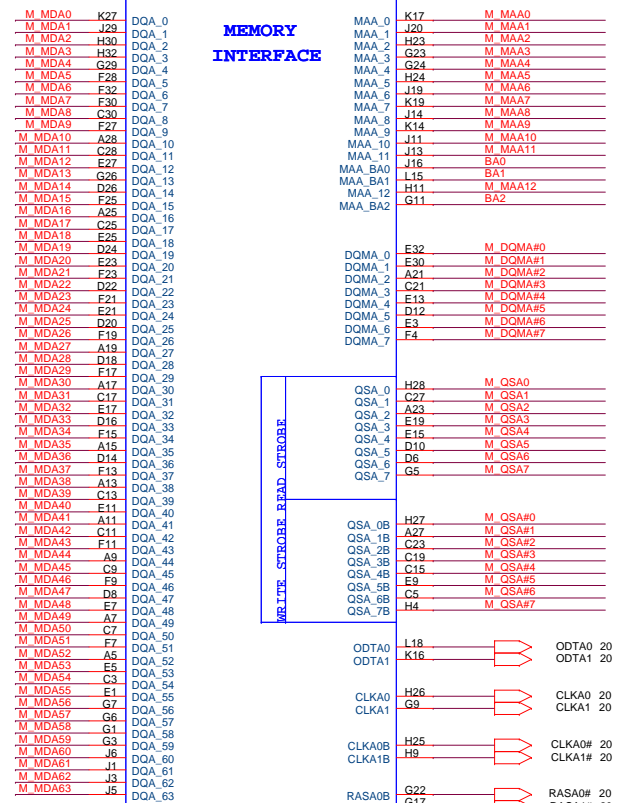


LD-Note Calpella Discrete
Quanta Computer Inc.

Size: Document Number: VGA-M92-XT (POWER/GND) 3/7 Rev: Custom
 Date: Saturday, November 07, 2009 Sheet: 18 of 55

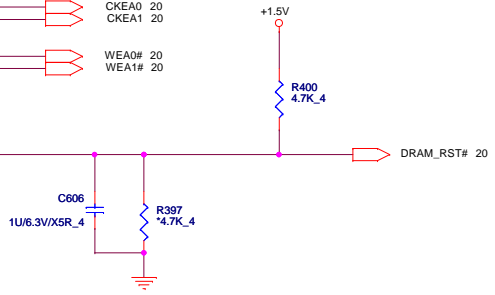
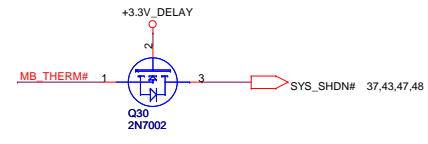
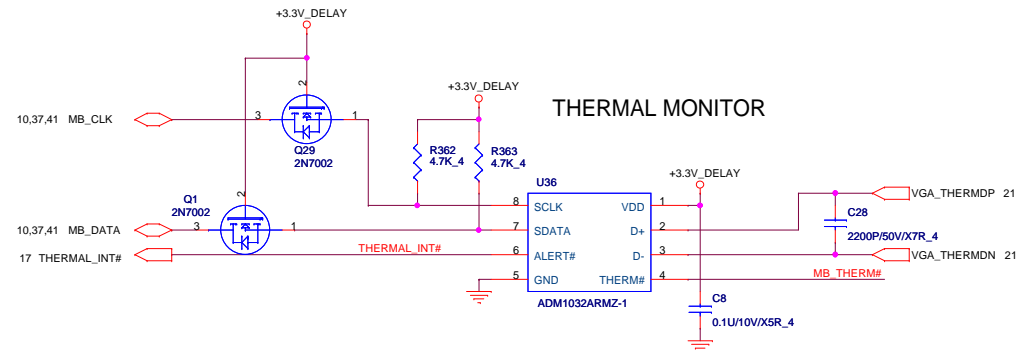
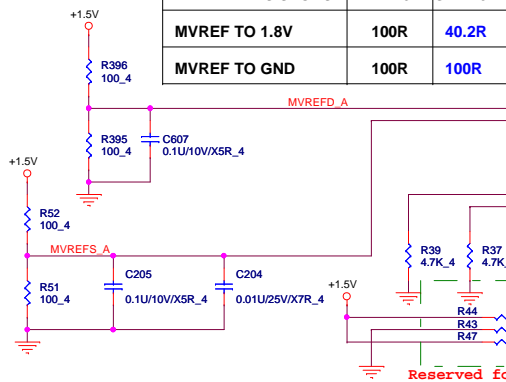
U40C PART 3 OF 10

MEMORY INTERFACE



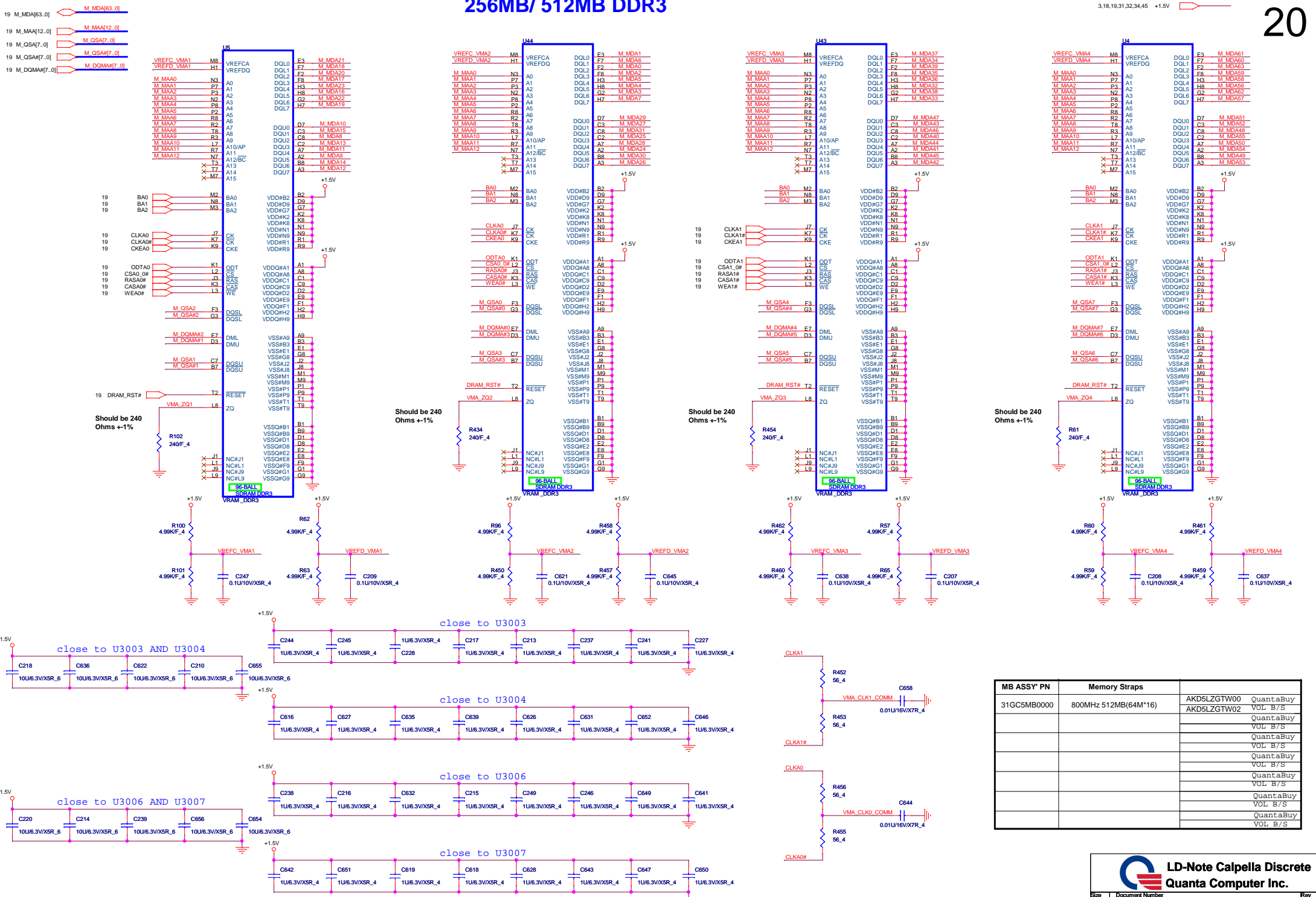
WRITE STROBE & PAD STROBE

DIVIDER RESISTORS	DDR3	GDDR3
MVREF TO 1.8V	100R	40.2R
MVREF TO GND	100R	100R

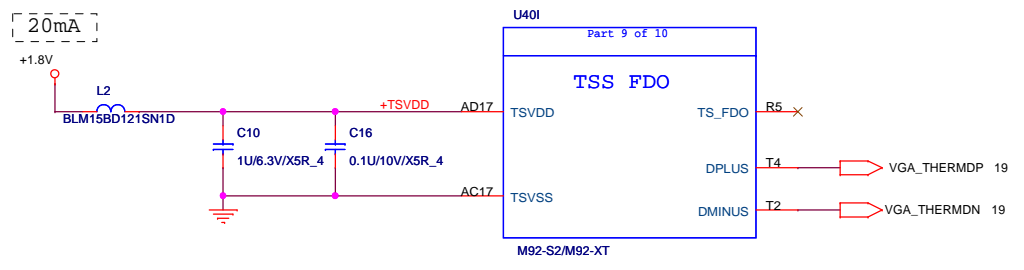
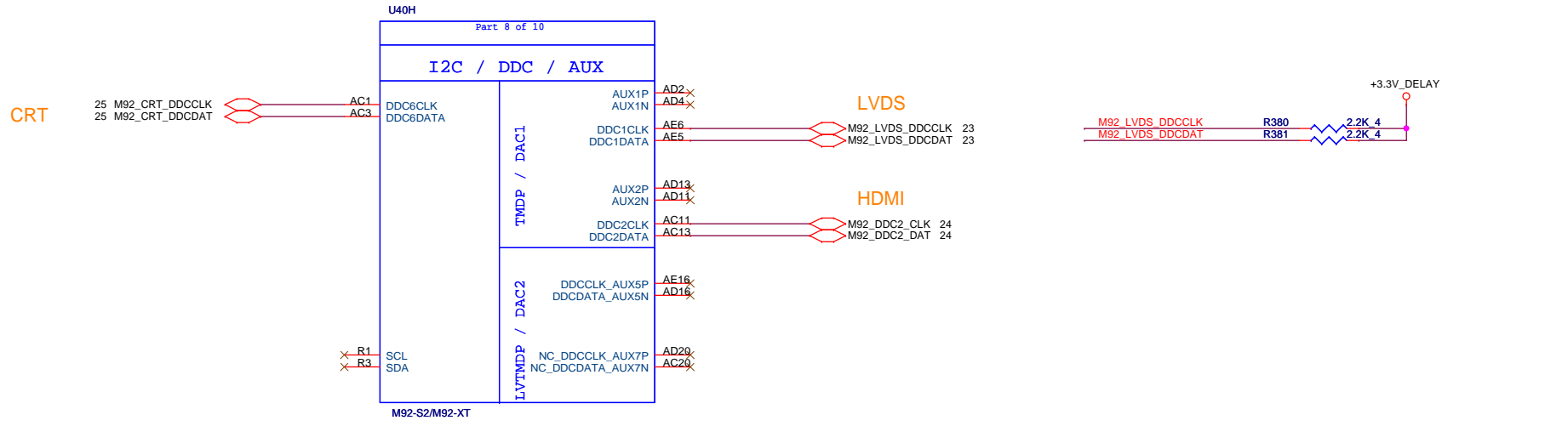
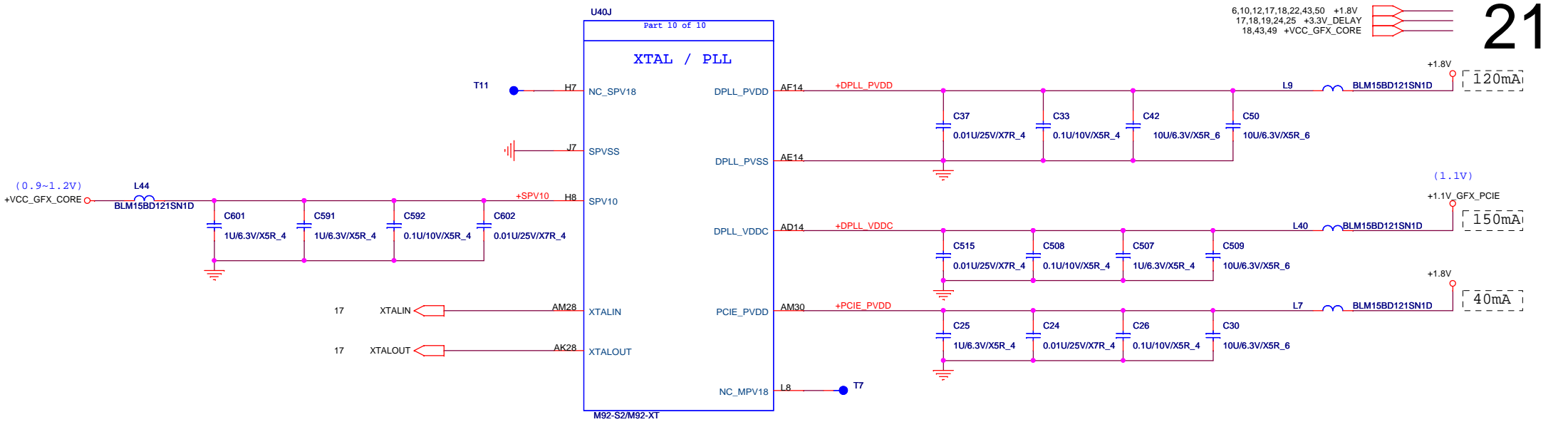


256MB/ 512MB DDR3

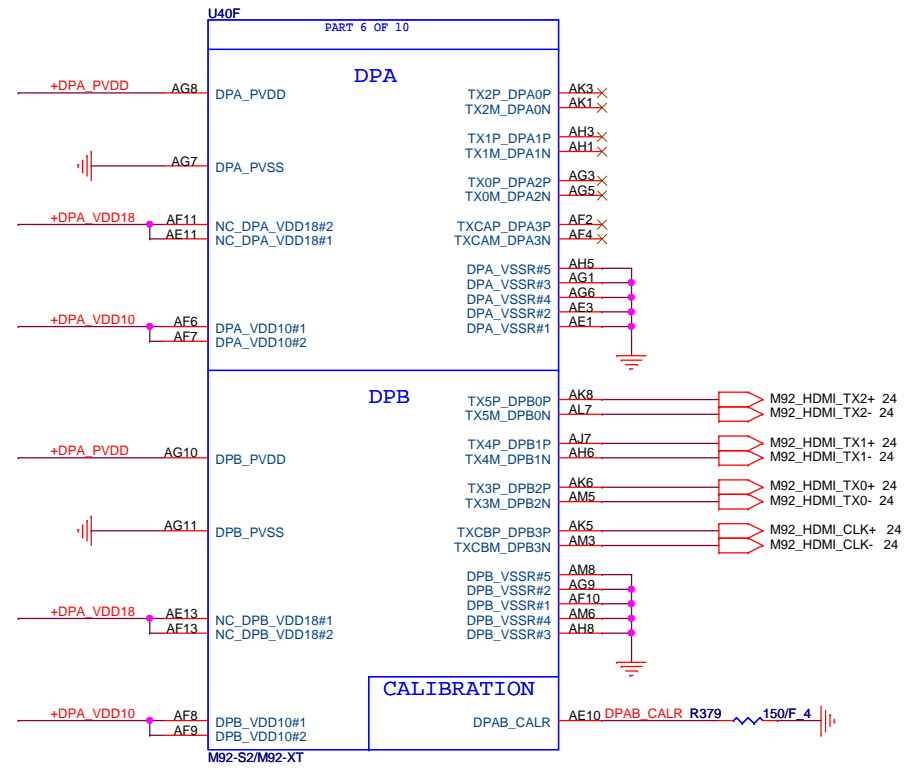
3,18,19,31,32,34,45 +1.5V



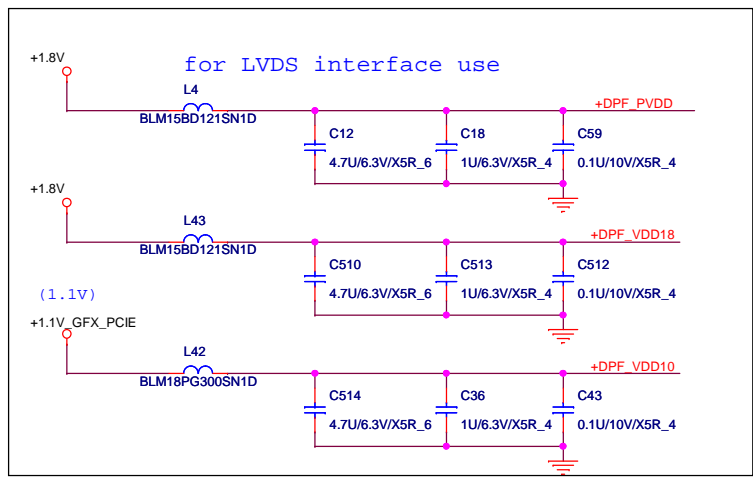
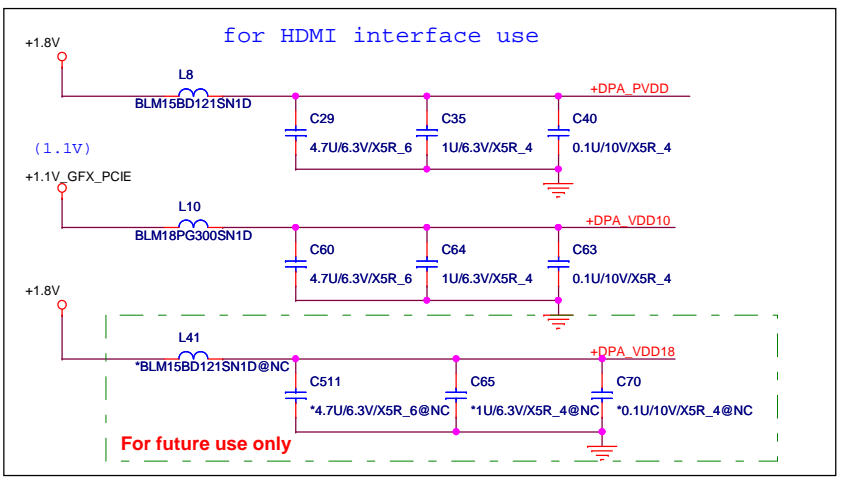
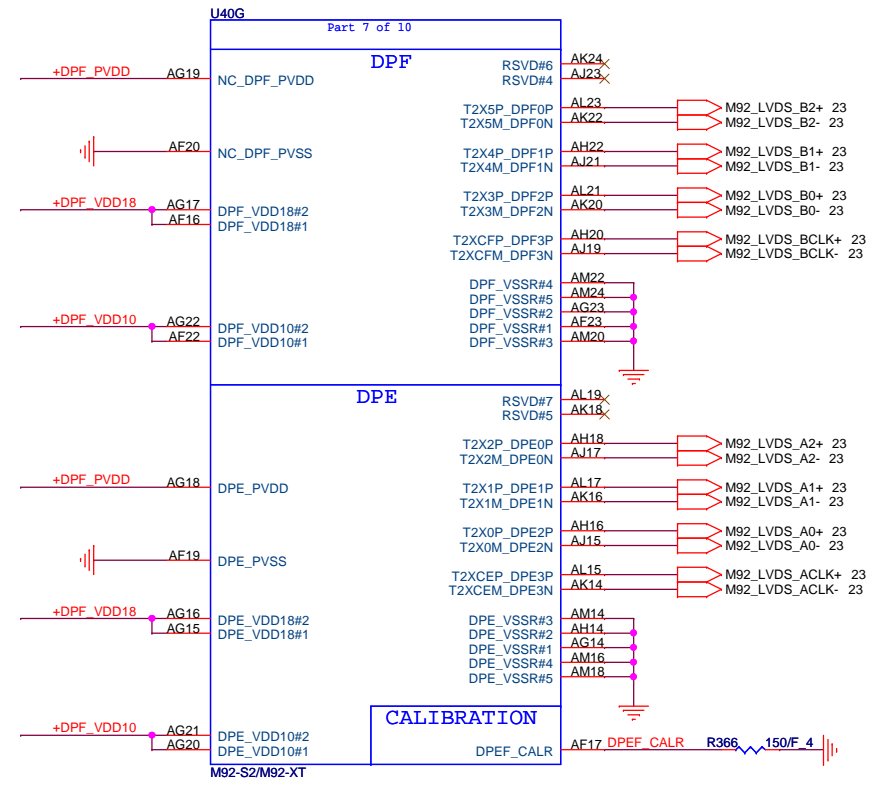
MB ASSY PN	Memory Straps	Part Number	Manufacturer
31GCS5MB0000	800MHz 512MB(64M*16)	AKD5LZGTW00	QuantaBuy
		AKD5LZGTW02	VOL B/S
			QuantaBuy
			VOL B/S
			QuantaBuy
			VOL B/S
			QuantaBuy
			VOL B/S

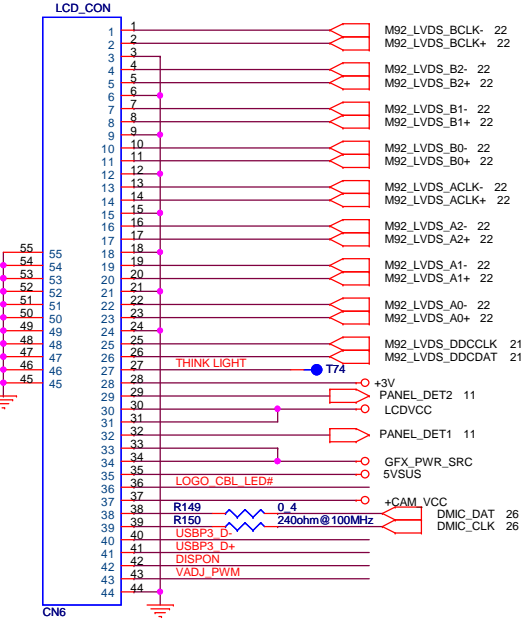
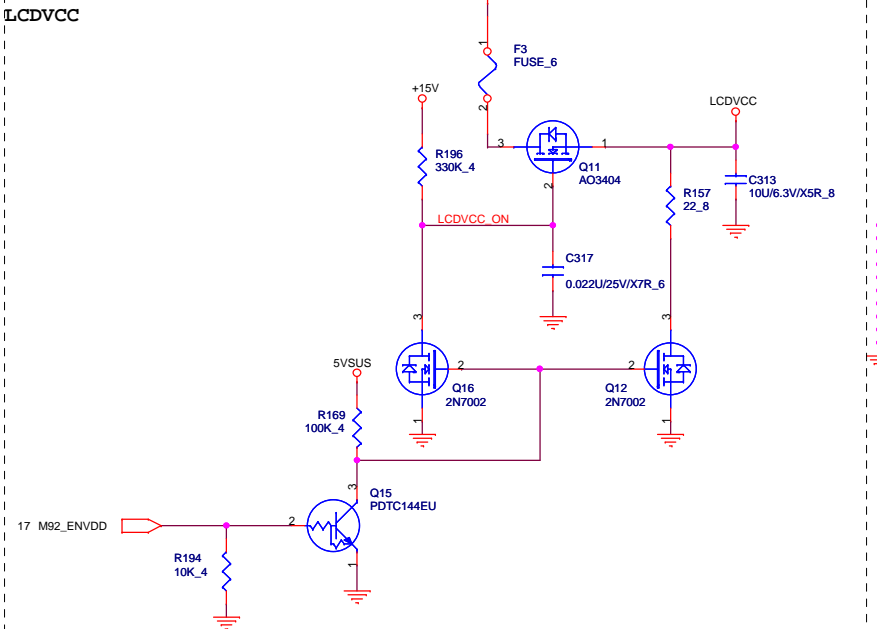


TMDP(HDMI) INTERFACE

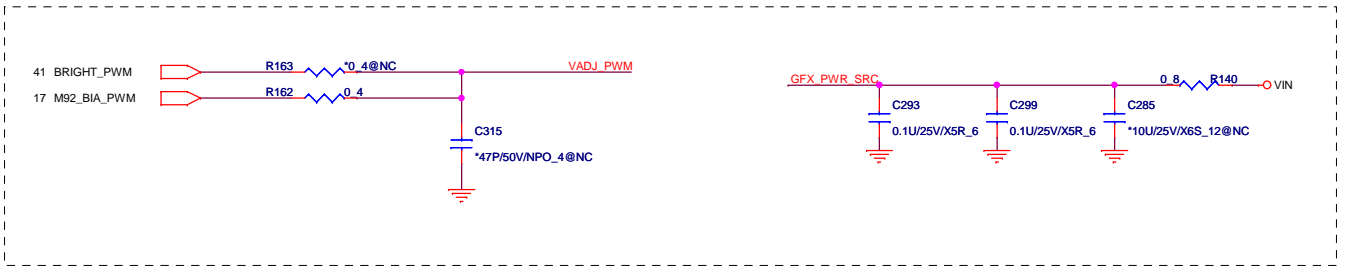
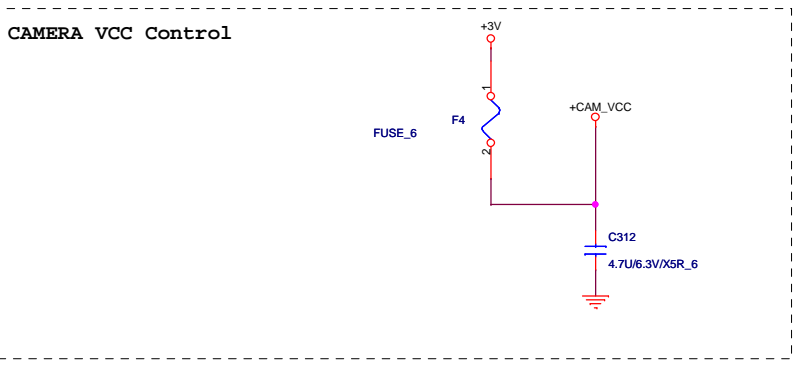
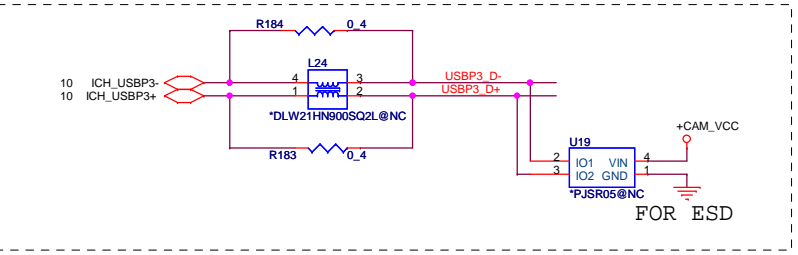
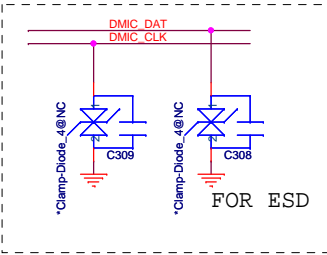
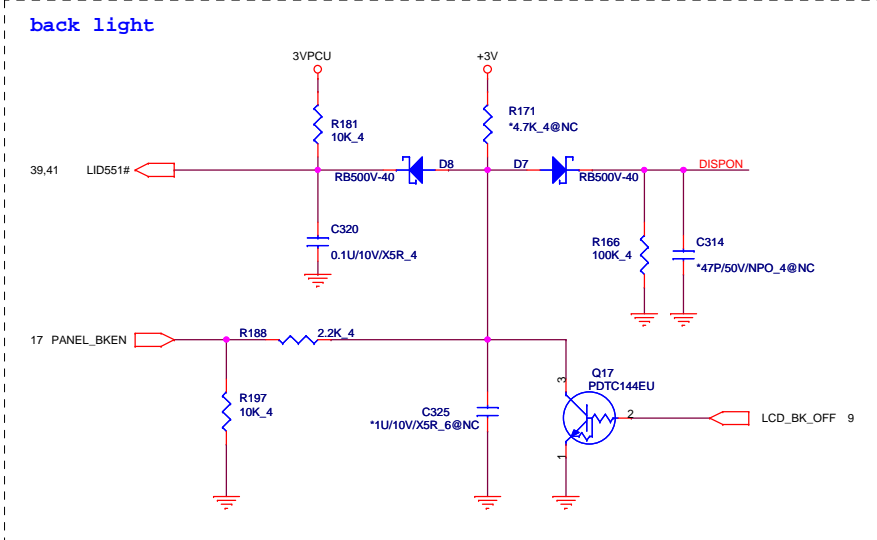
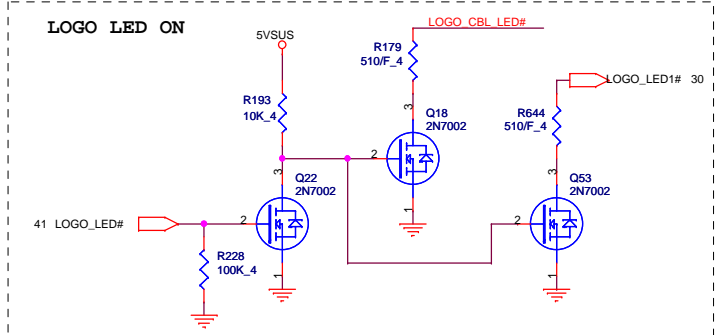


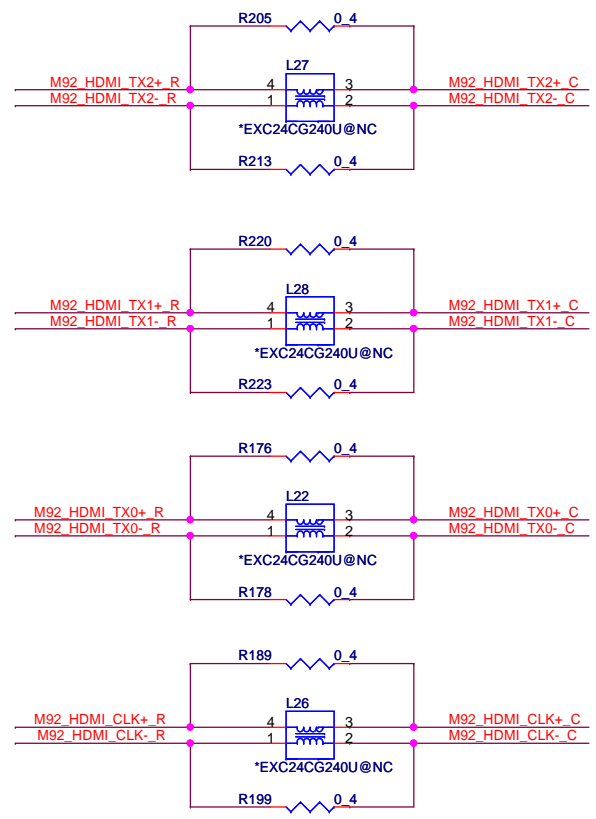
LVDS INTERFACE



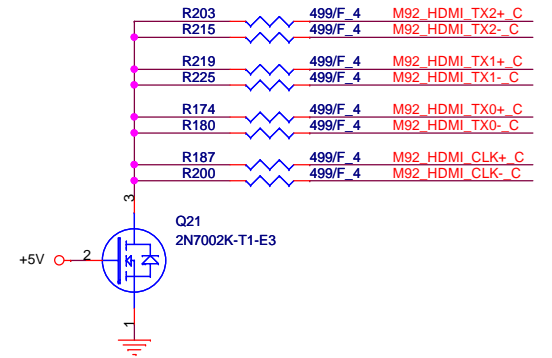
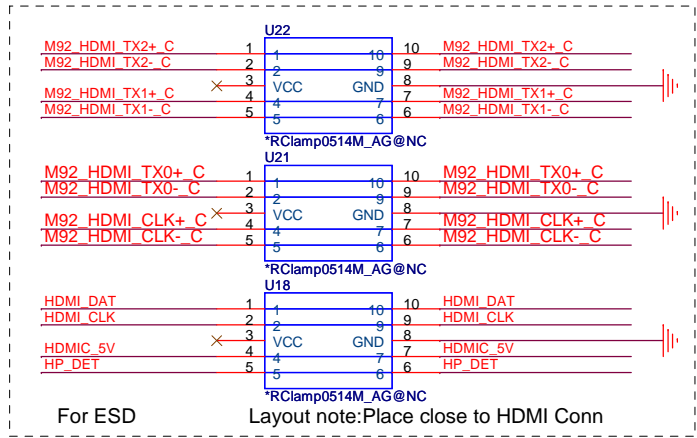
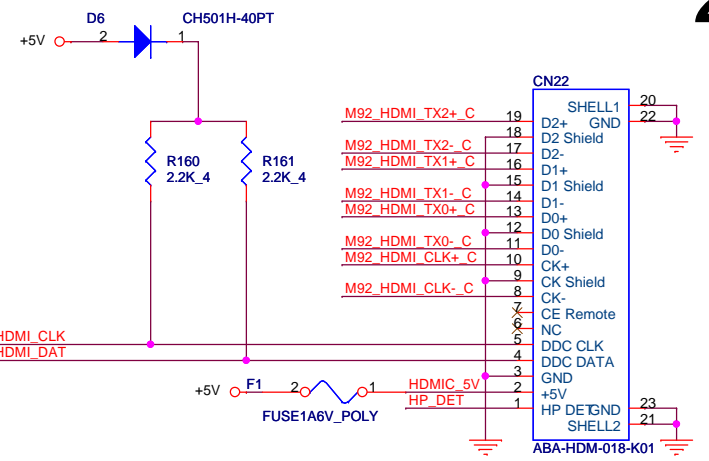
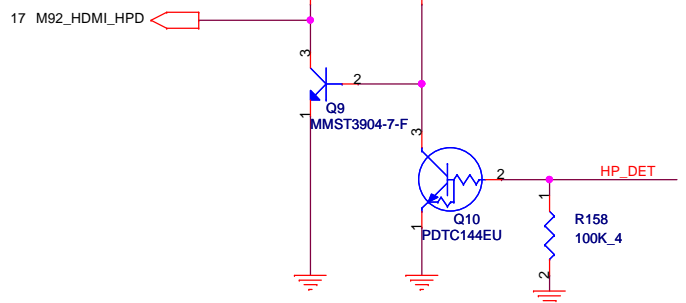
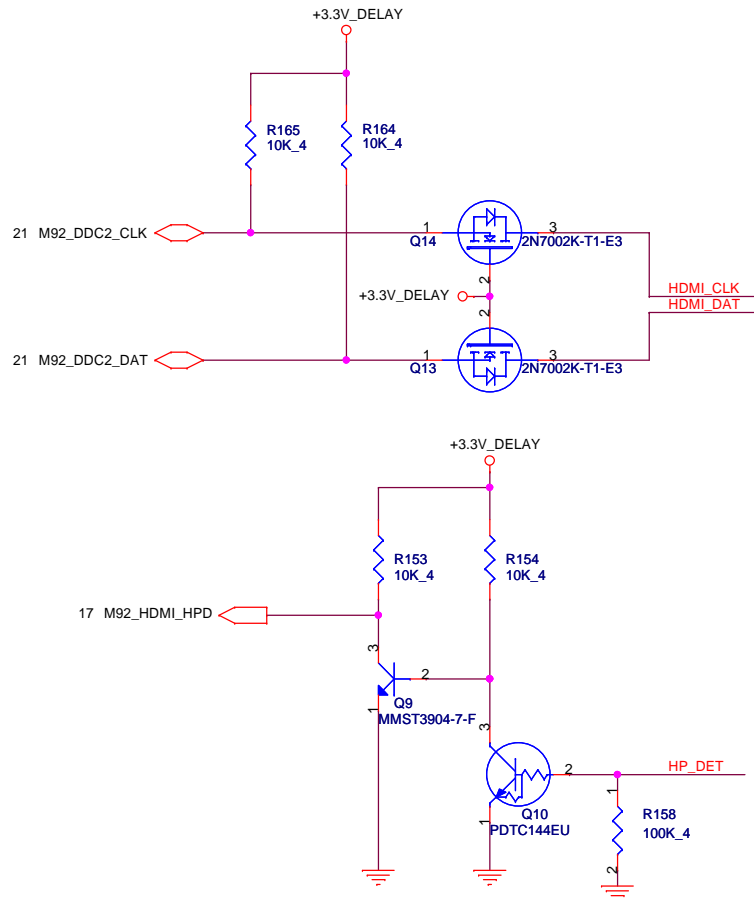


Address : A9H --Contrast
 AAH --Backlight





22	M92_HDMI_TX2+	C338	0.1U/10V/X5R_4	M92_HDMI_TX2+_R
22	M92_HDMI_TX2-	C348	0.1U/10V/X5R_4	M92_HDMI_TX2-_R
22	M92_HDMI_TX1+	C351	0.1U/10V/X5R_4	M92_HDMI_TX1+_R
22	M92_HDMI_TX1-	C354	0.1U/10V/X5R_4	M92_HDMI_TX1-_R
22	M92_HDMI_TX0+	C323	0.1U/10V/X5R_4	M92_HDMI_TX0+_R
22	M92_HDMI_TX0-	C327	0.1U/10V/X5R_4	M92_HDMI_TX0-_R
22	M92_HDMI_CLK+	C332	0.1U/10V/X5R_4	M92_HDMI_CLK+_R
22	M92_HDMI_CLK-	C335	0.1U/10V/X5R_4	M92_HDMI_CLK-_R

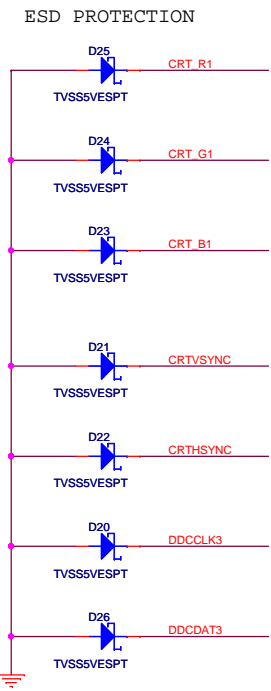
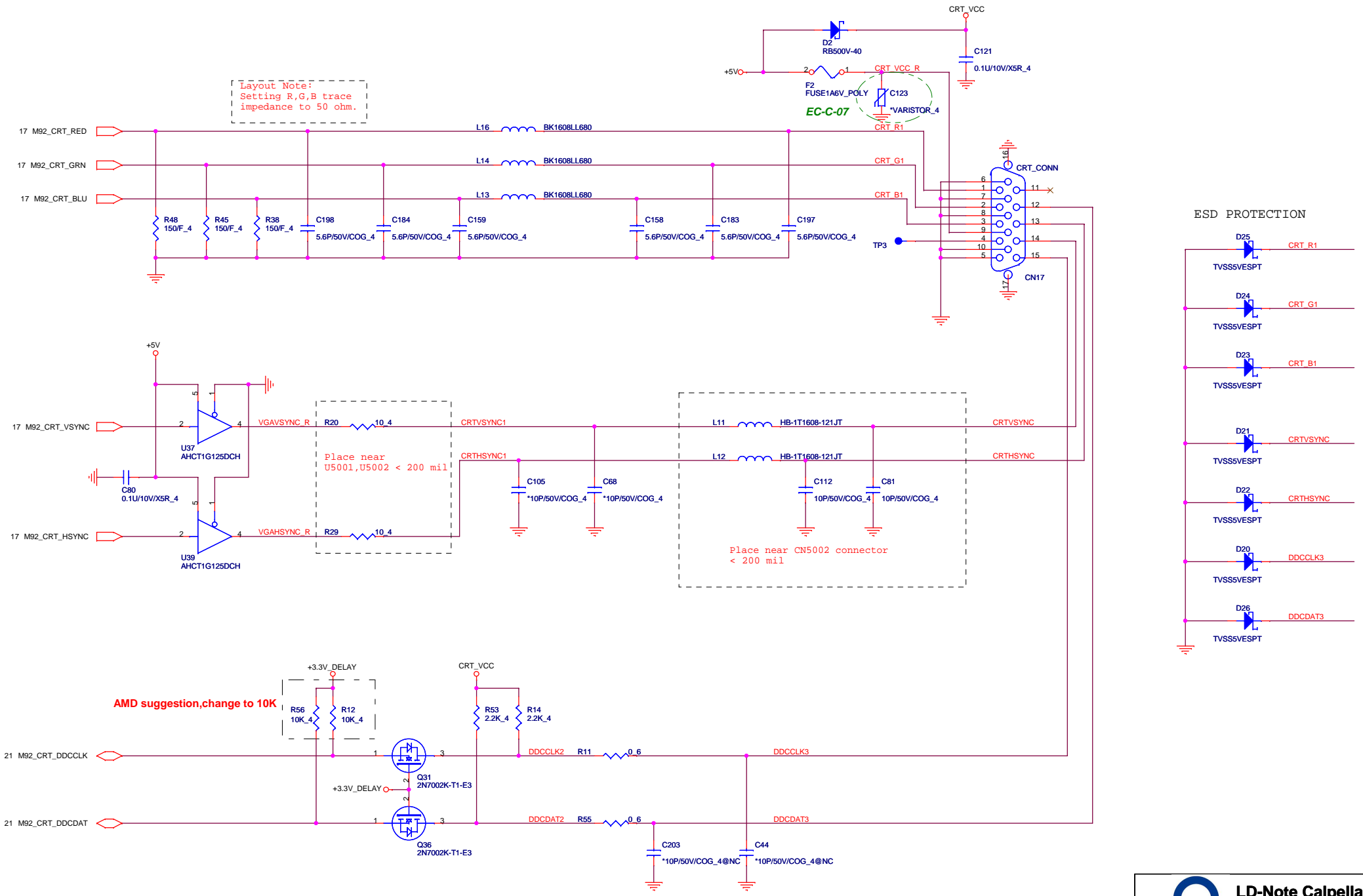


LD-Note Calpella Discrete Quanta Computer Inc.

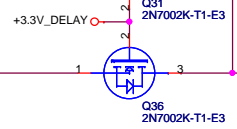
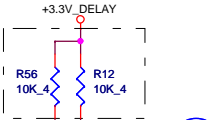
Size	Document Number	Rev
Custom	HDMI CONN	

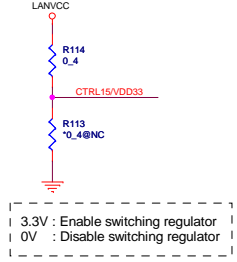
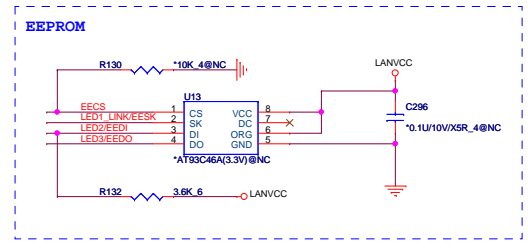
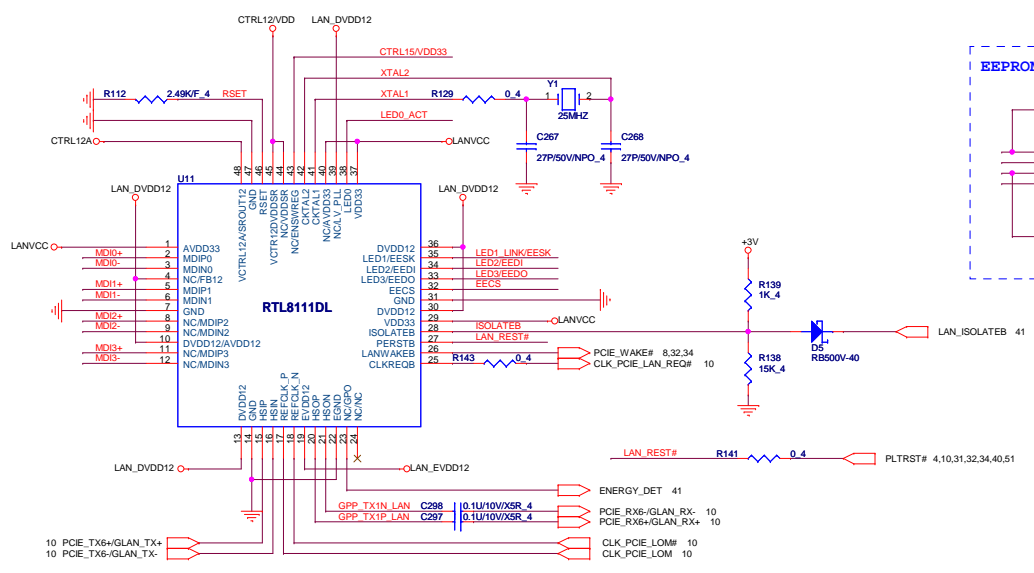
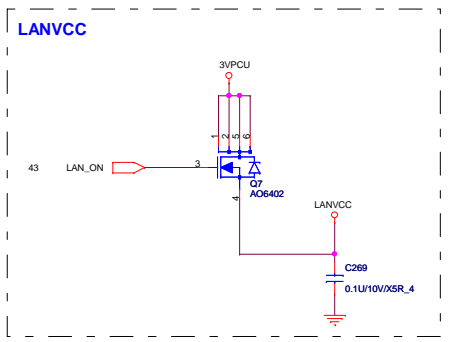
Date: Tuesday, November 03, 2009 Sheet 24 of 55

Layout Note:
 Setting R,G,B trace
 impedance to 50 ohm.

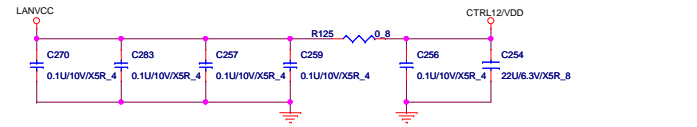


AMD suggestion, change to 10K



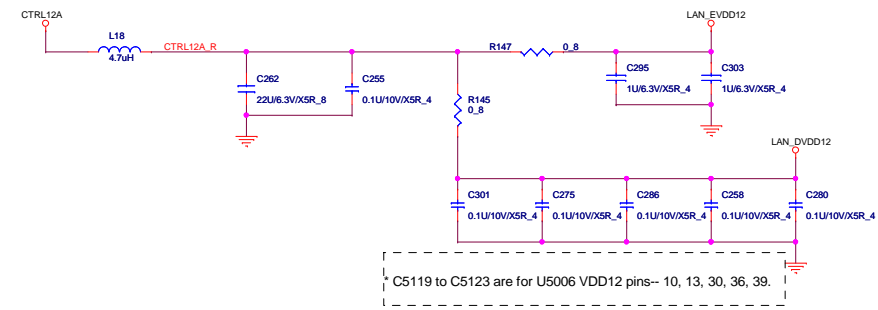


3.3V : Enable switching regulator
0V : Disable switching regulator



Note 1: The Trace length between L1 and 8111DL's Pin 1 must be within 0.5 cm. C5 and C8 to L1 must be within 0.5cm. Refer to Layout guide for more detail.

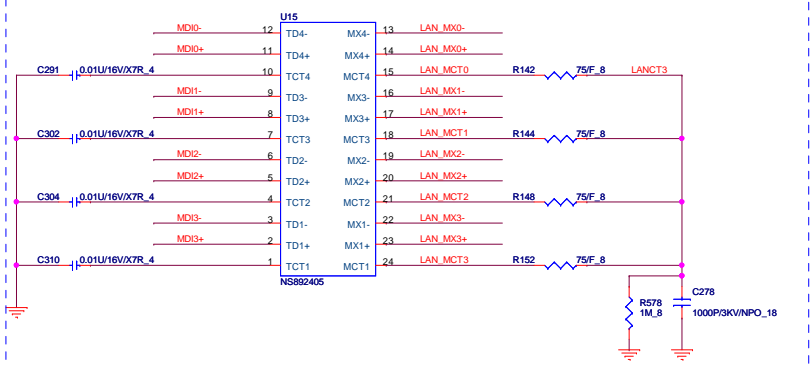
* C5110 to C5113 are for U5006 VDD33 pins-- 1, 29, 37 and 40.
Place C5113, C5094 closed to U5006 pins 44, 45, and 40.



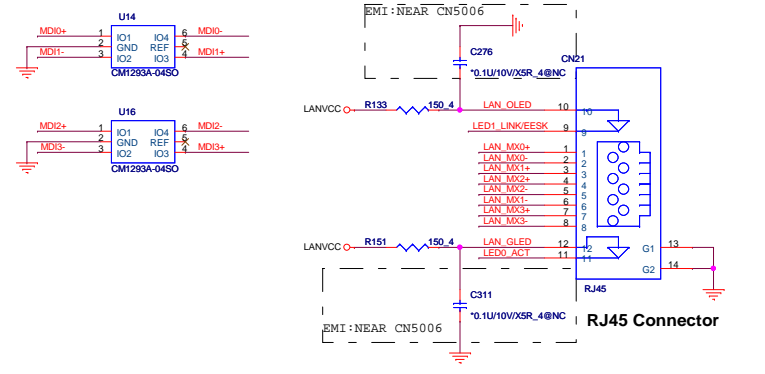
* C5116 and C5273 are for U5006 EVDD12 pin 19.

* C5119 to C5123 are for U5006 VDD12 pins-- 10, 13, 30, 36, 39.

Transformer

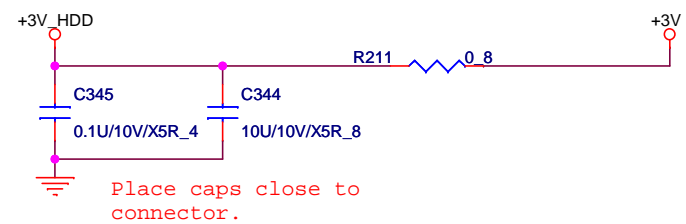
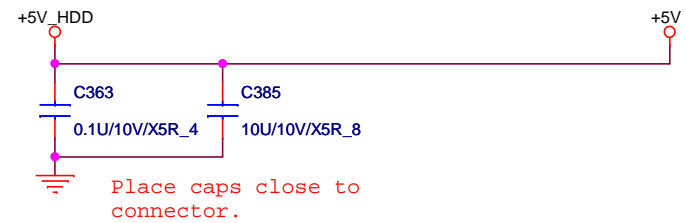
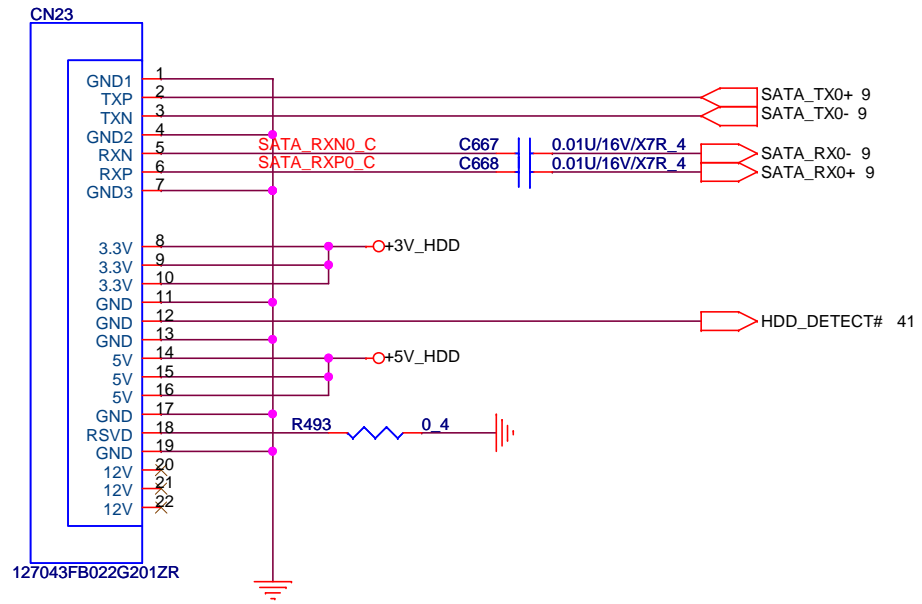
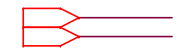


RJ45 Connector

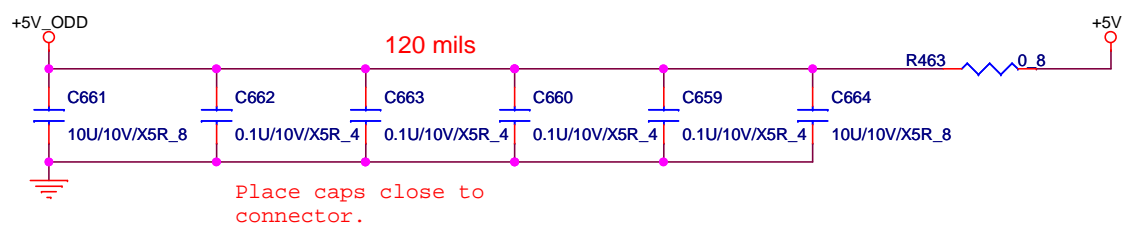
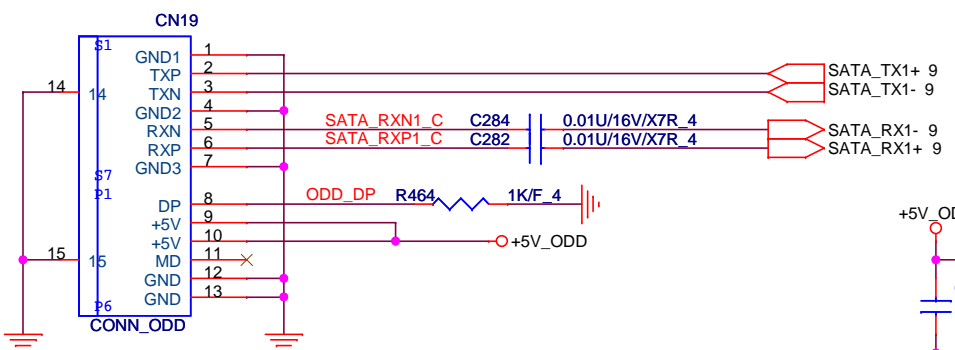


SATA Connector.

12,18,24,25,26,35,37,39,41,43 +5V
 3,4,8,9,10,11,12,14,15,17,23,26,27,29,30,31,32,34,36,37,38,40,41,43,45,46,47,48,50,51 +3V

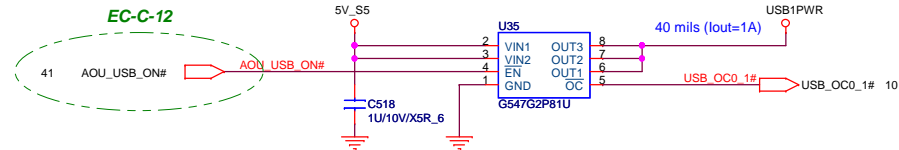


ODD Connector

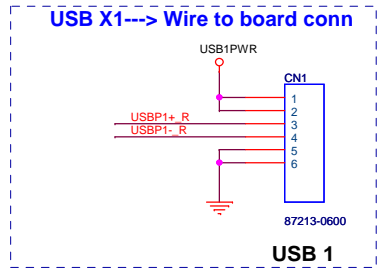
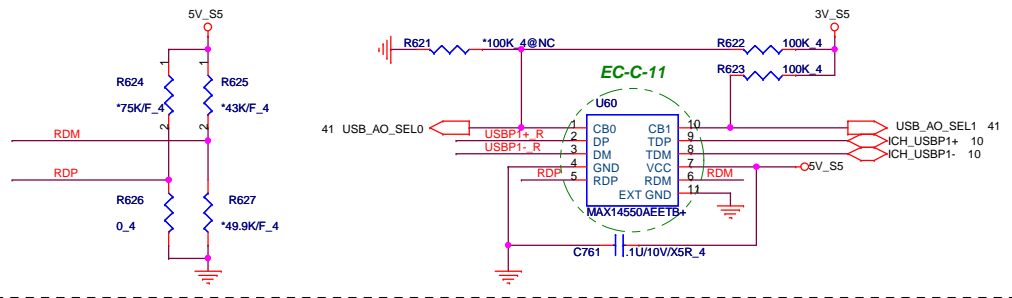


**LD-Note Calpella Discrete
Quanta Computer Inc.**

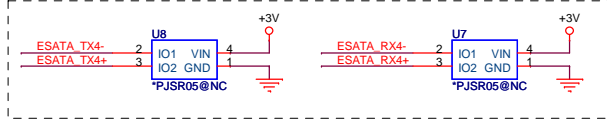
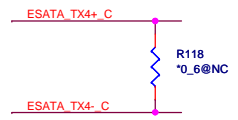
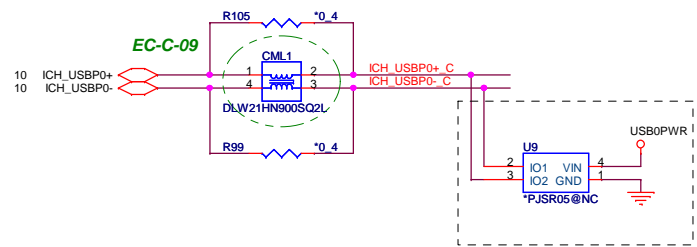
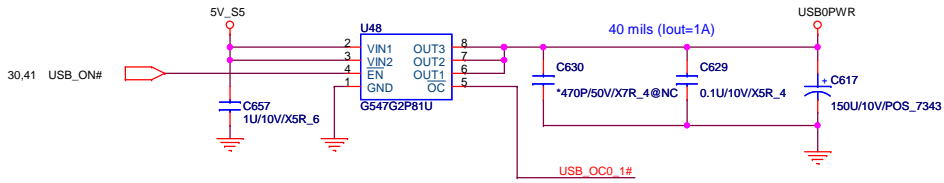
Size	Document Number	Rev
Custom	SATA (HDD&CD_ROM)	
Date:	Tuesday, November 03, 2009	Sheet 28 of 55



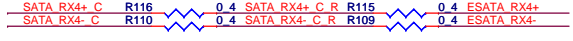
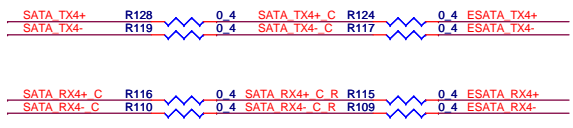
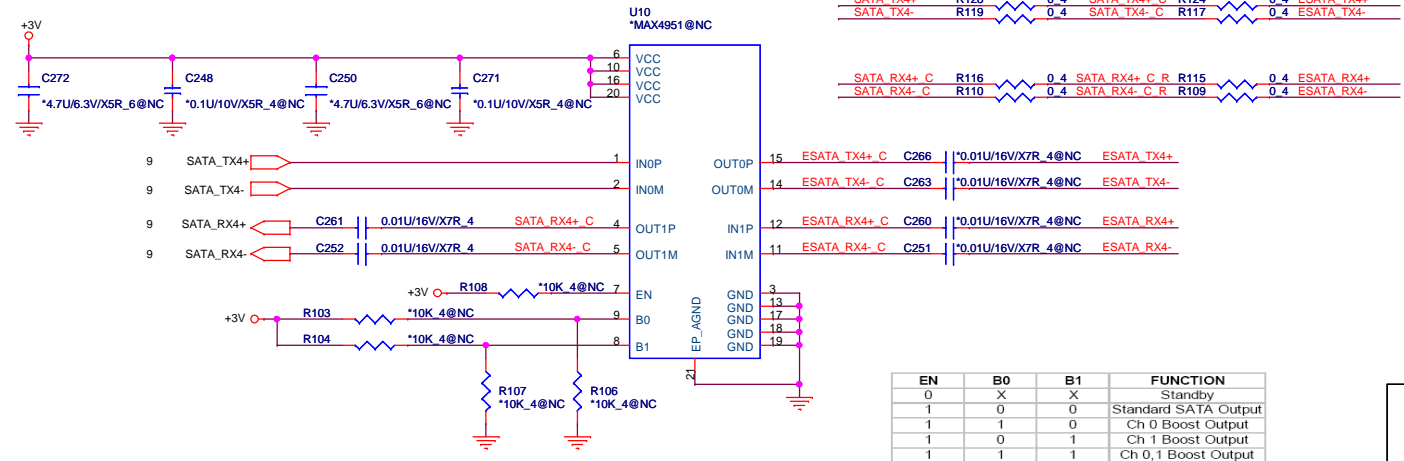
Support Black-berry function



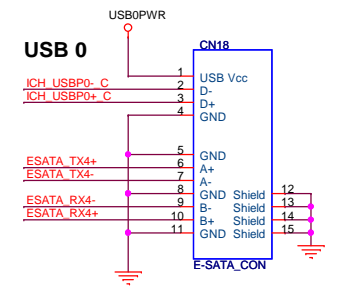
USB + E-SATA



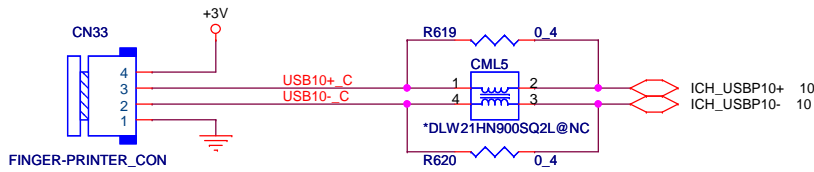
E-SATA RE-DRIVER



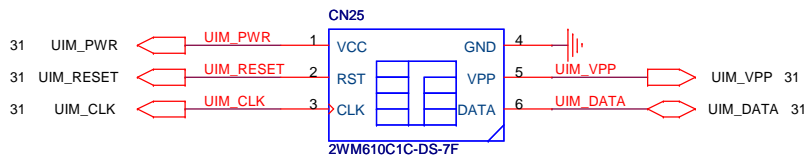
EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output



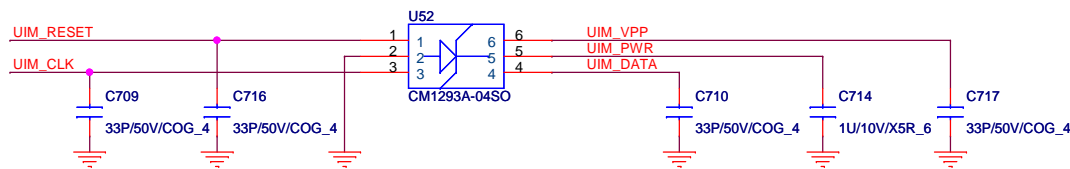
Finger Print



SIM Card CONN



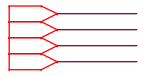
Layout Note:
UIM_RESET, UIM_CLK, UIM_DATA routing as short as possible



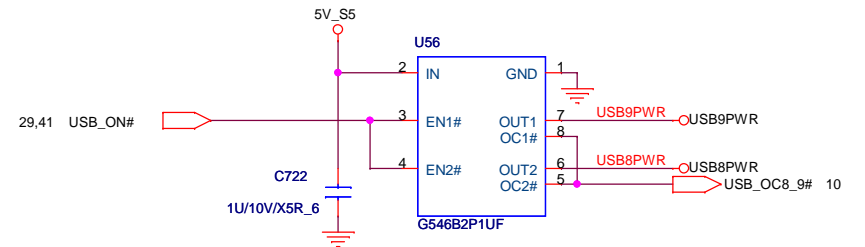
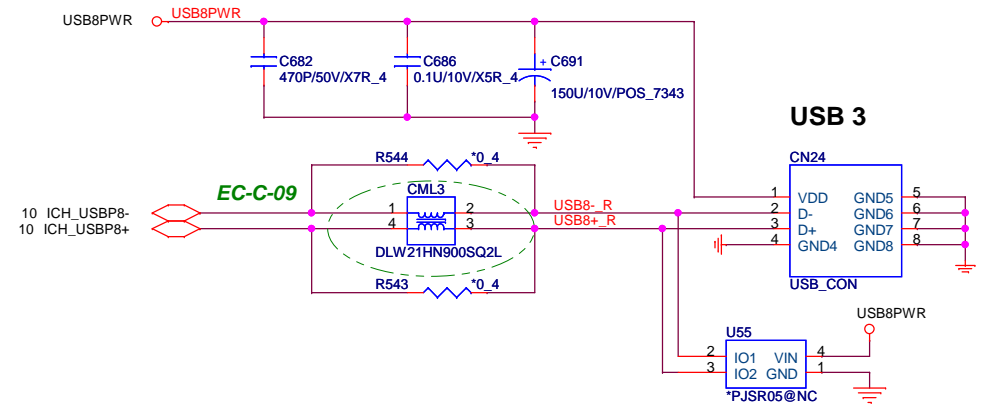
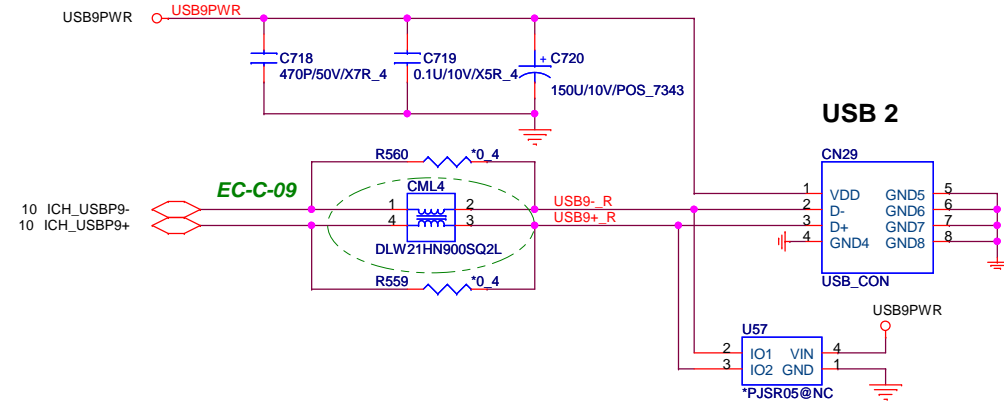
LOGO LED



3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,31,32,34,36,37,38,40,41,43,45,46,47,48,50,51
9,23,27,35,39,41,43,44,47,49
33,34,41,43,49
23,29,43,48



30

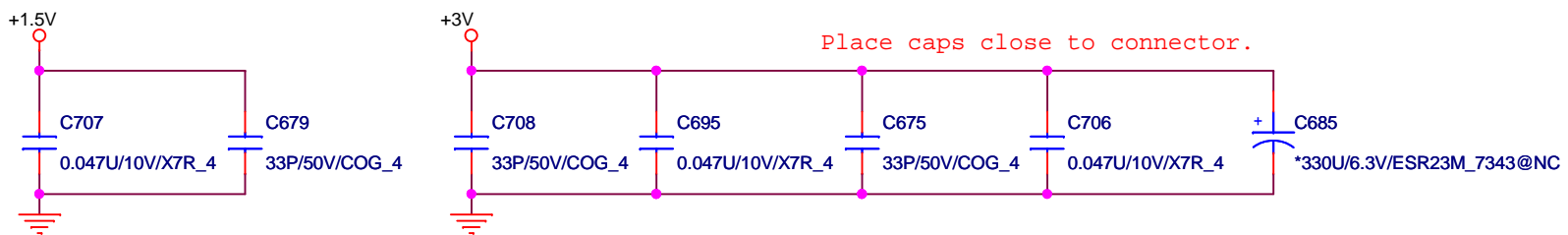
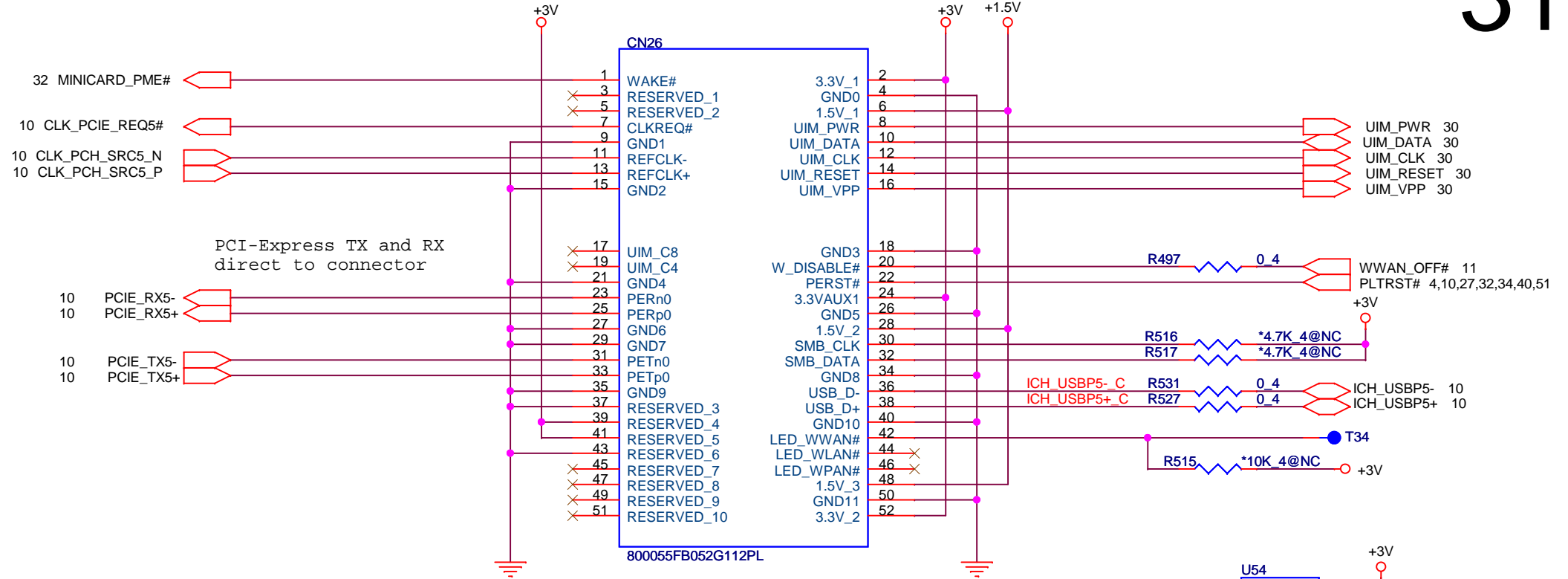



**LD-Note Calpella Discrete
Quanta Computer Inc.**

Size	Document Number	Rev
Custom	USB X2/SIM_CARD/LEDs/RF	
Date:	Sunday, November 08, 2009	Sheet 30 of 55

MiniCard WWAN connector

31



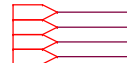


**LD-Note Calpella Discrete
Quanta Computer Inc.**

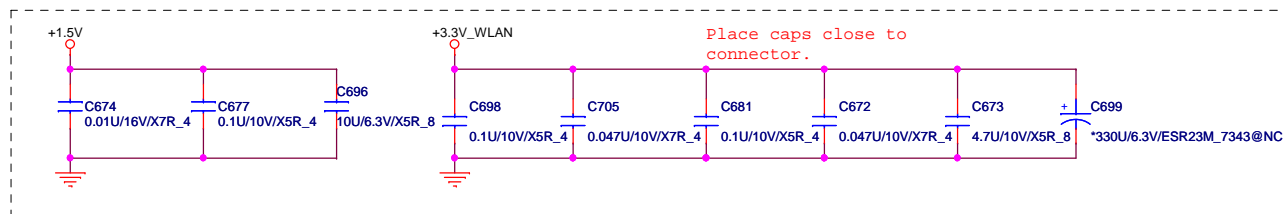
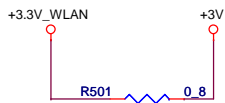
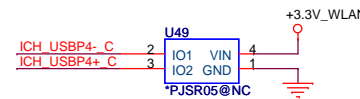
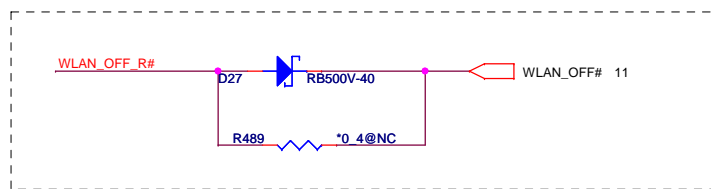
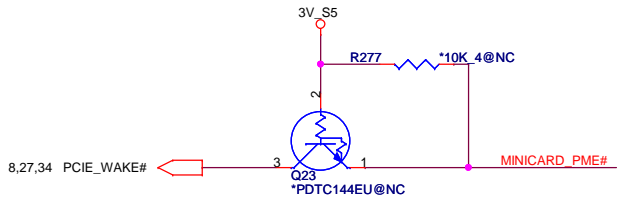
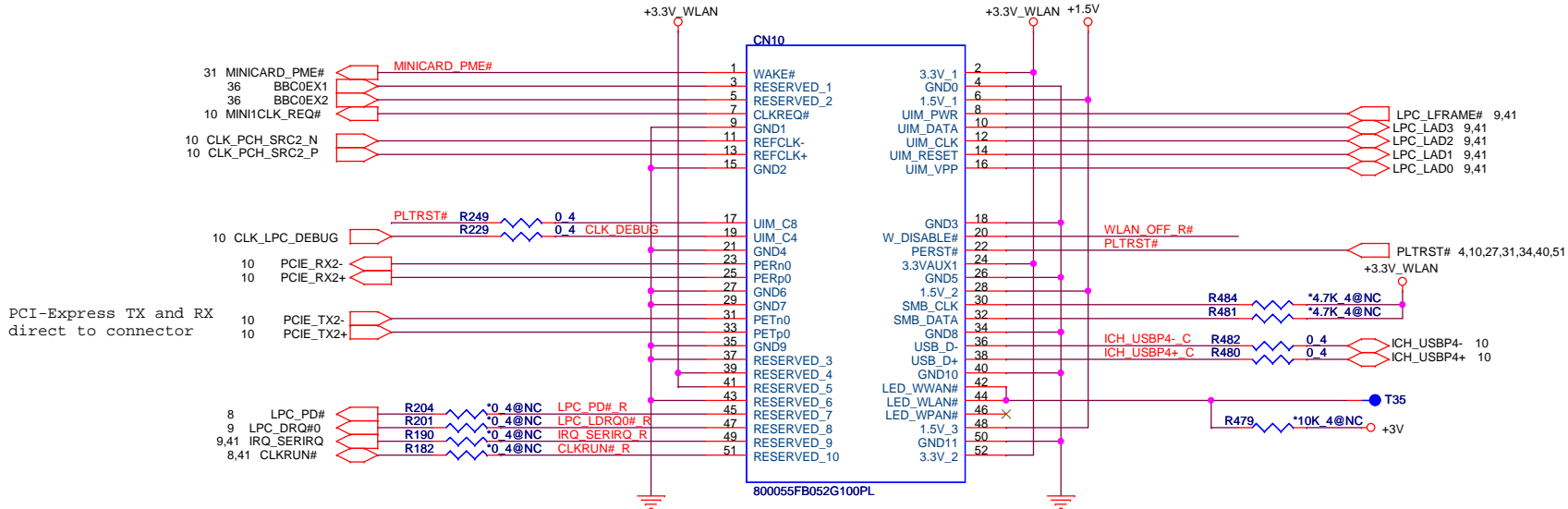
Size Custom	Document Number MINI-Card (WWAN)	Rev
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MiniCard WLAN/WiMAX connector

3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,34,36,37,38,40,41,43,45,46,47,48,50,51
 +3V 3.18,19,20,31,34,45
 +1.5V 9,23,27,35,39,41,43,44,47,49
 3VPCU 23,43,44,45,46,47,48,49,50
 VIN



32



Left NC if Pin23 connected to XD-D4

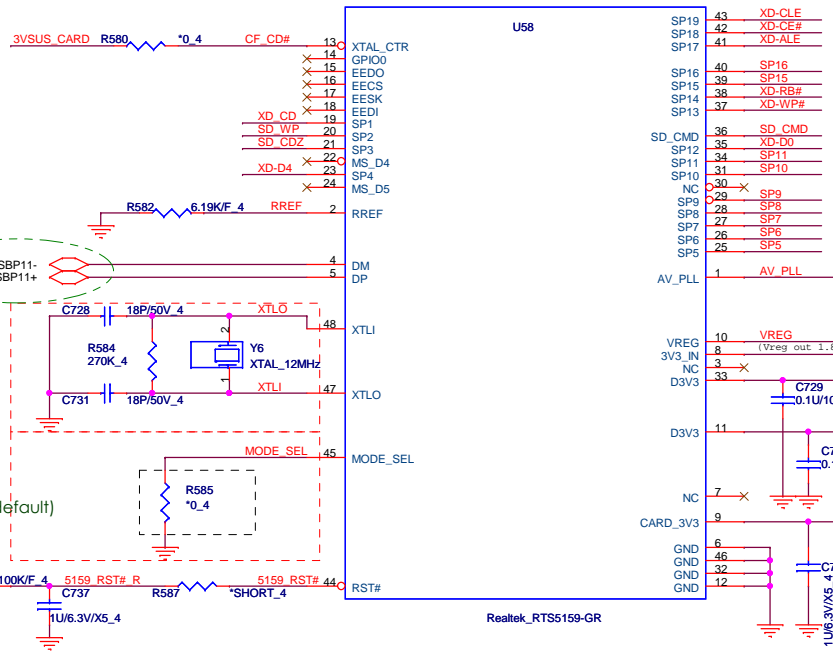
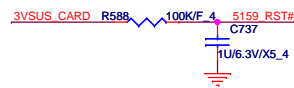
CARD READER

EC-C-01

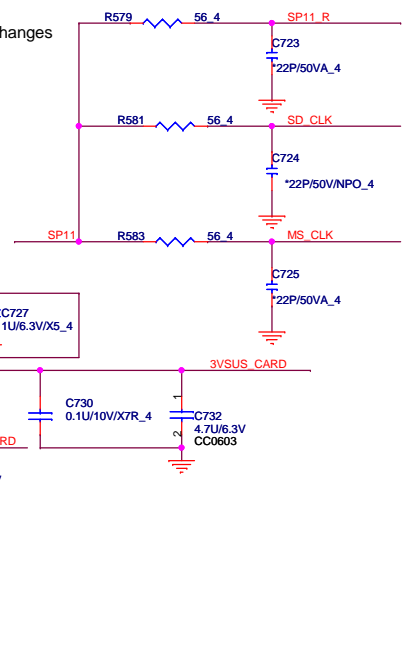
For external 12Mhz clock input pin13 floating
For external 48Mhz clock input pin13 pull high

Card Reader Model Select

Pin 45	R20
RTS5159-GR	0 ohm (default)
RTS5158-GR	N.C

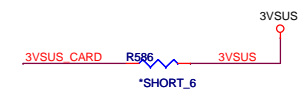


0515 EMI Changes

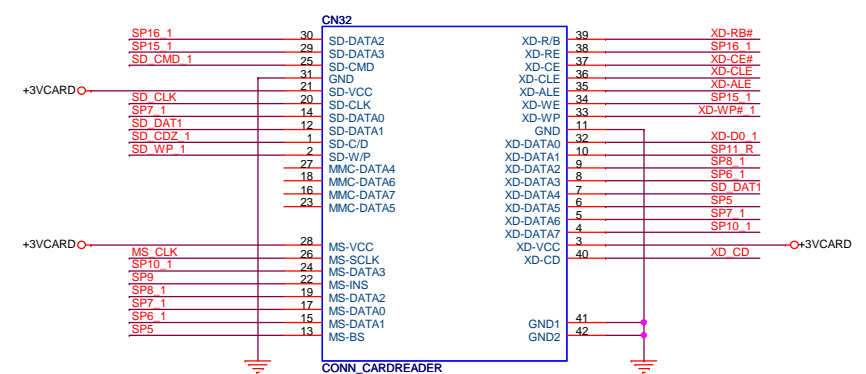


Note:

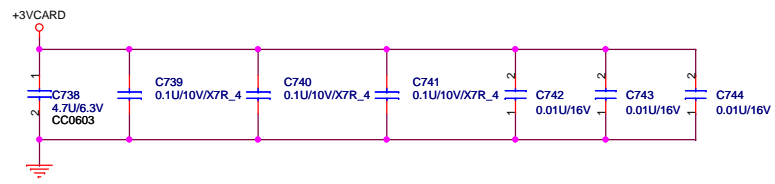
	SD/MMC	MS	XD
SP0			
SP1	SD WP		XD CD#
SP2	SD WP		
SP3	SD CD#		
SP4		MS BS	XD D4
SP5		MS D1	XD D5
SP6		MS D2	XD D3
SP7	SD DAT0	MS D0	XD D6
SP8	SD DAT7	MS D2	XD D2
SP9		MS INS#	
SP10	SD DAT6	MS D3	XD D7
SP11	SD CLK	MS SCLK	XD D1
SP12	SD DAT5		XD D0
SP13	SD DAT4		XD WP#
SP14			XD R/B#
SP15	SD DAT3		XD WE#
SP16	SD DAT2		XD RE#
SP17			XD ALE
SP18			XD CE#
SP19			XD CLE



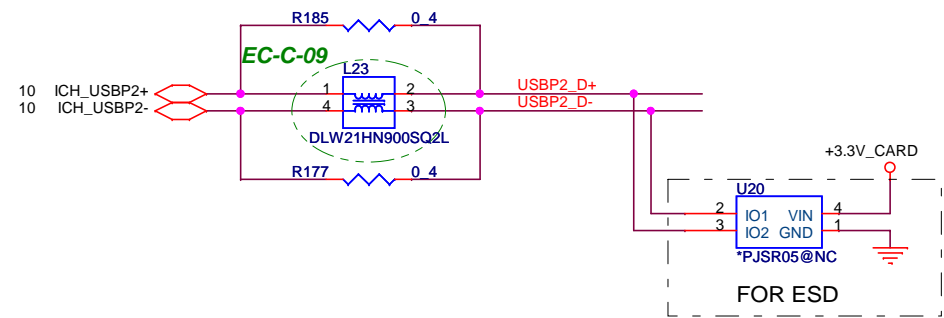
7 in 1 Socket (MS, MS PRO, SD, MMC, xD)



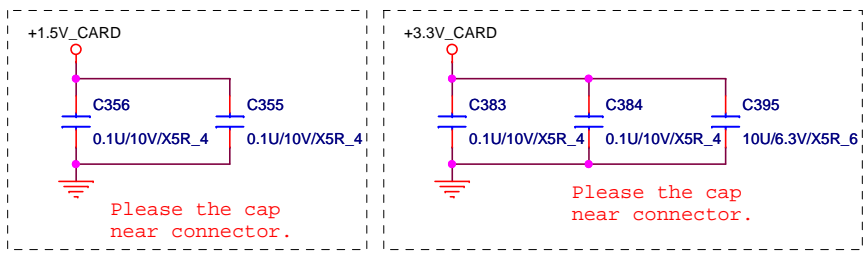
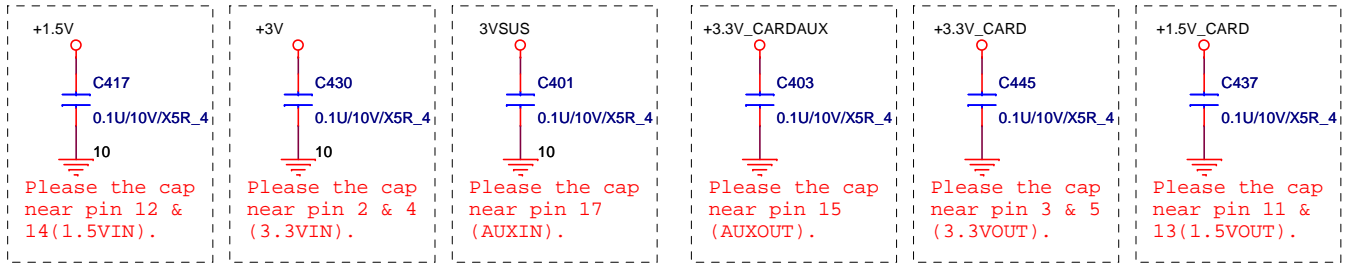
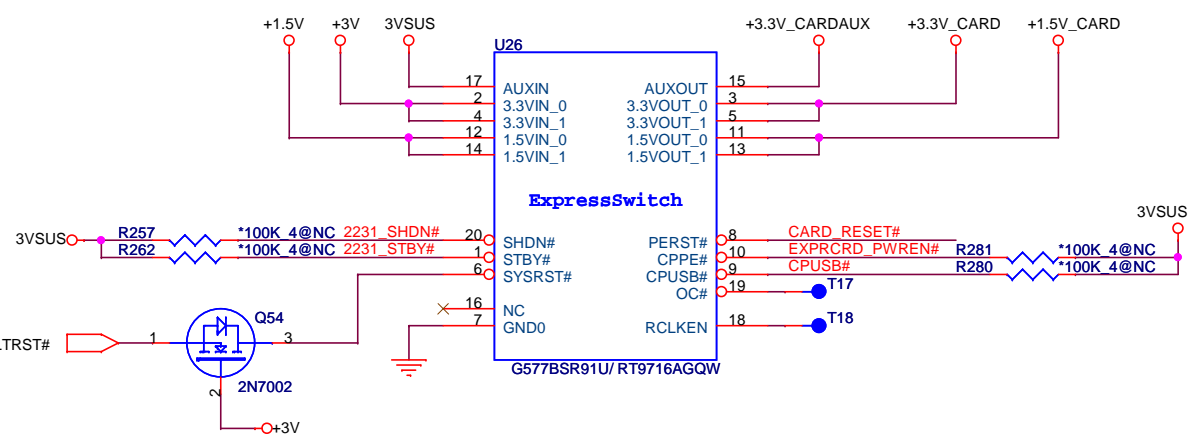
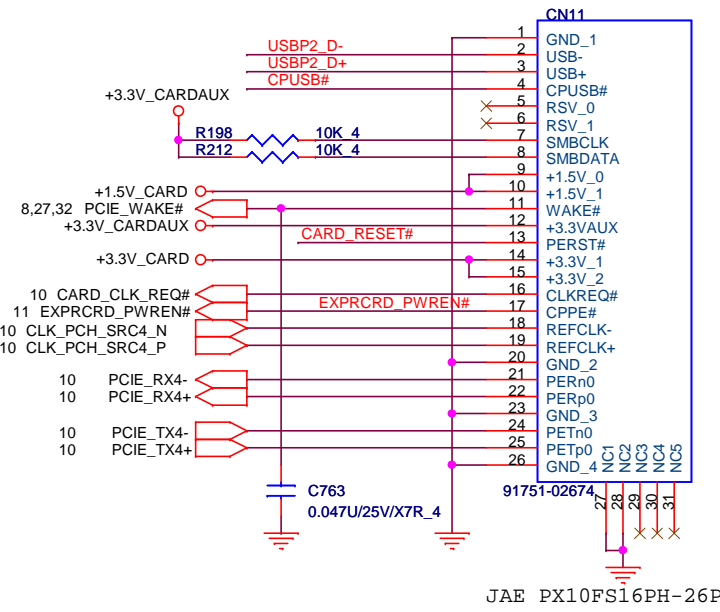
- SD WP R590 56.4 SD WP 1
- SD CDZ R591 56.4 SD CDZ 1
- SD CMD R592 56.4 SD CMD 1
- SP7 R593 56.4 SP7 1
- SP8 R594 56.4 SP8 1
- SP10 R595 56.4 SP10 1
- XD-D4 R596 56.4 SD DAT1
- XD-D0 R597 56.4 XD-D0 1
- XD-WP# R598 56.4 XD-WP# 1
- SP15 R599 56.4 SP15 1
- SP16 R600 56.4 SP16 1
- SP6 R601 56.4 SP6 1



Express Card



+1.5V_CARD Max. 650mA, Average 500mA.
 +3.3V_CARD Max. 1300mA, Average 1000mA.



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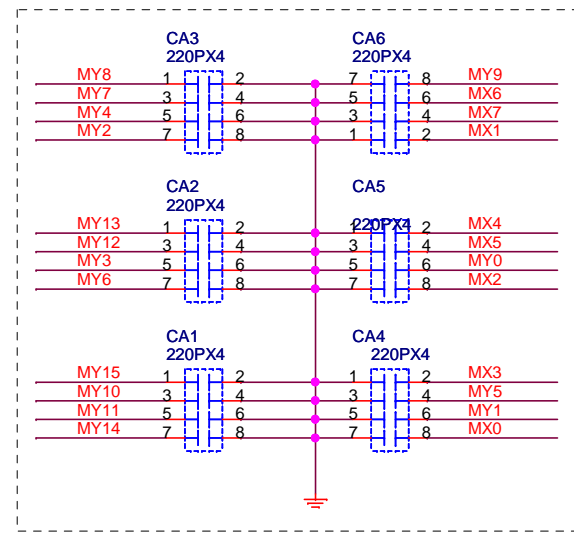
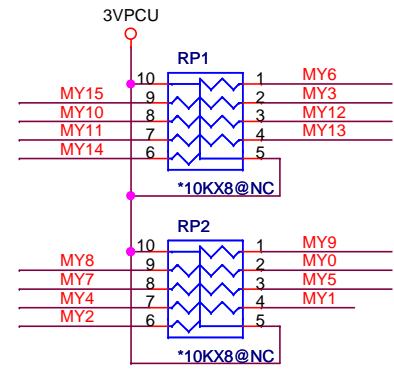
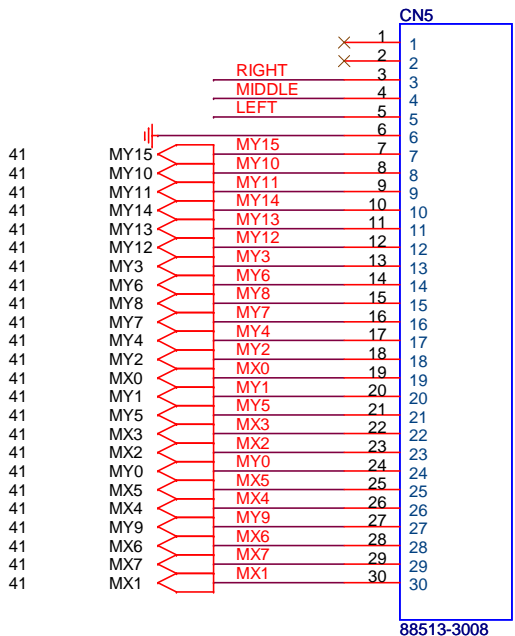
KEYBOARD

KEYBOARD connector

12,18,24,25,26,28,37,39,41,43 +5V
9,23,27,39,41,43,44,47,49 3VPCU

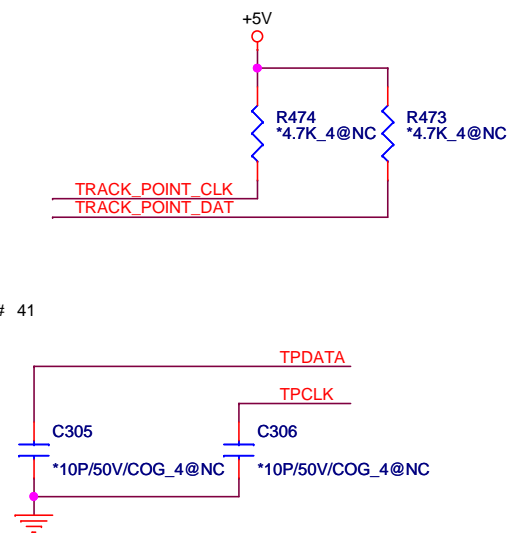
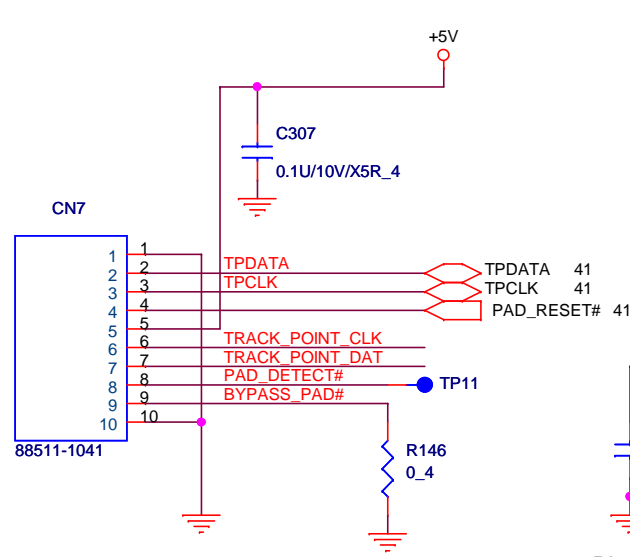


35



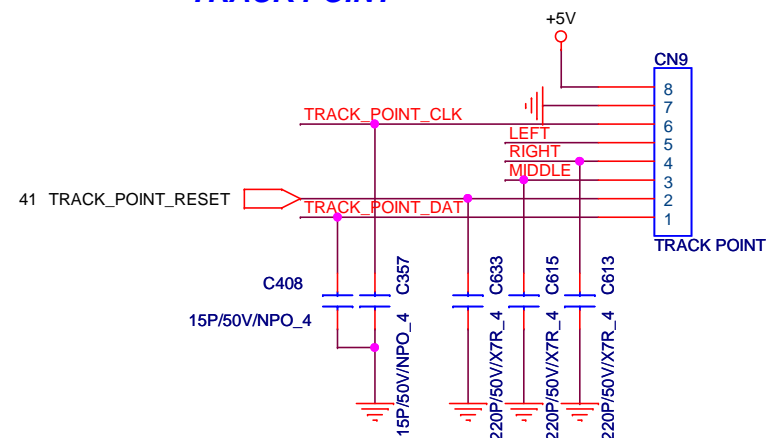
For EMI request

Touch pad



Place C5303 ,C5302 closed to CN5020

TRACK POINT



**LD-Note Calpella Discrete
Quanta Computer Inc.**

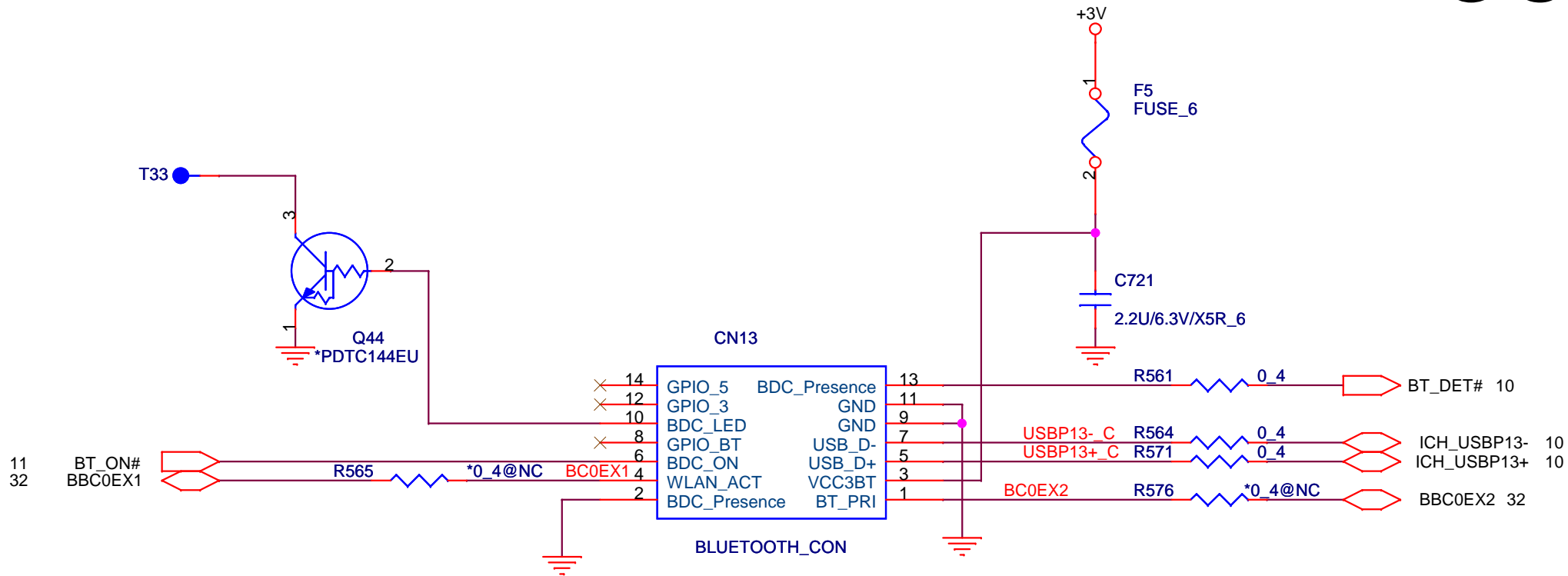
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BLUETOOTH

3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,32,34,37,38,40,41,43,45,46,47,48,50,51

+3V

36



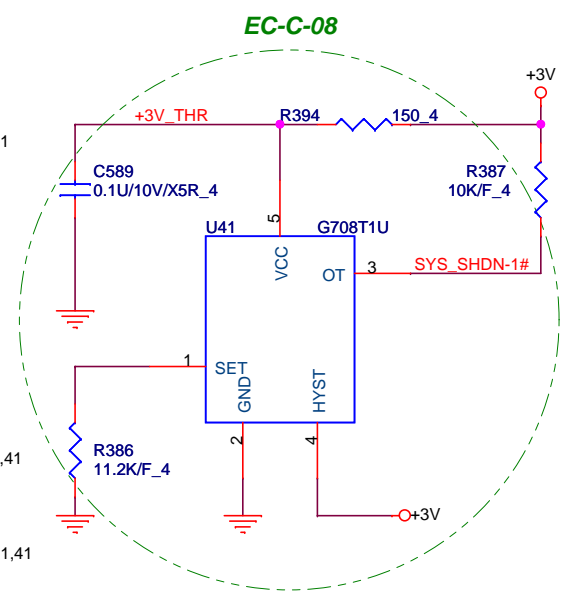
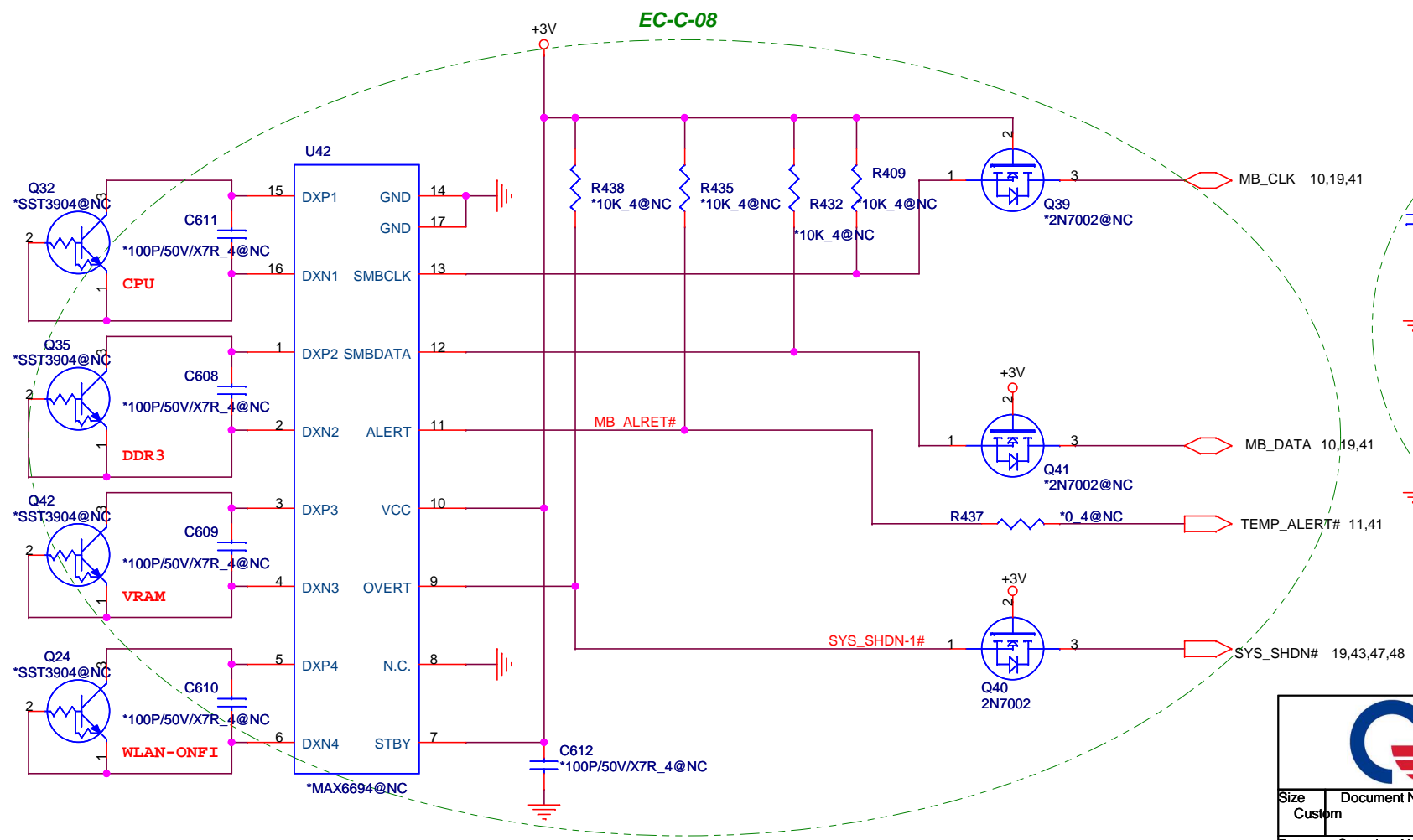
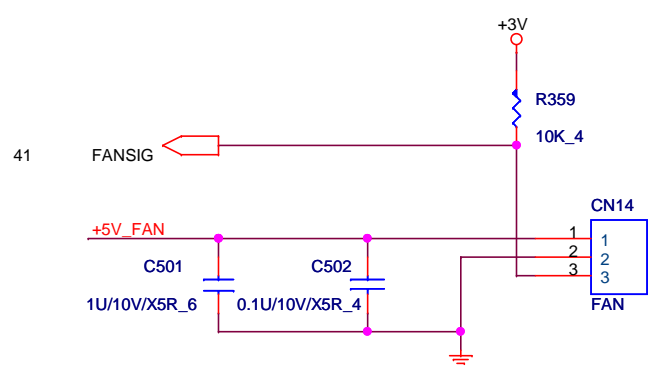
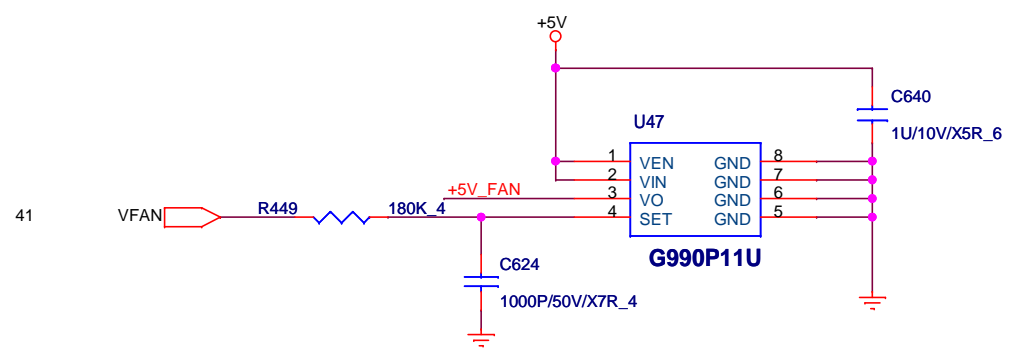


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Quanta Computer Inc.**

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FAN CONTROL

3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,32,34,36,38,40,41,43,45,46,47,48,50,51
12,18,24,25,26,28,35,39,41,43



**LD-Note Calpella Discrete
Quanta Computer Inc.**

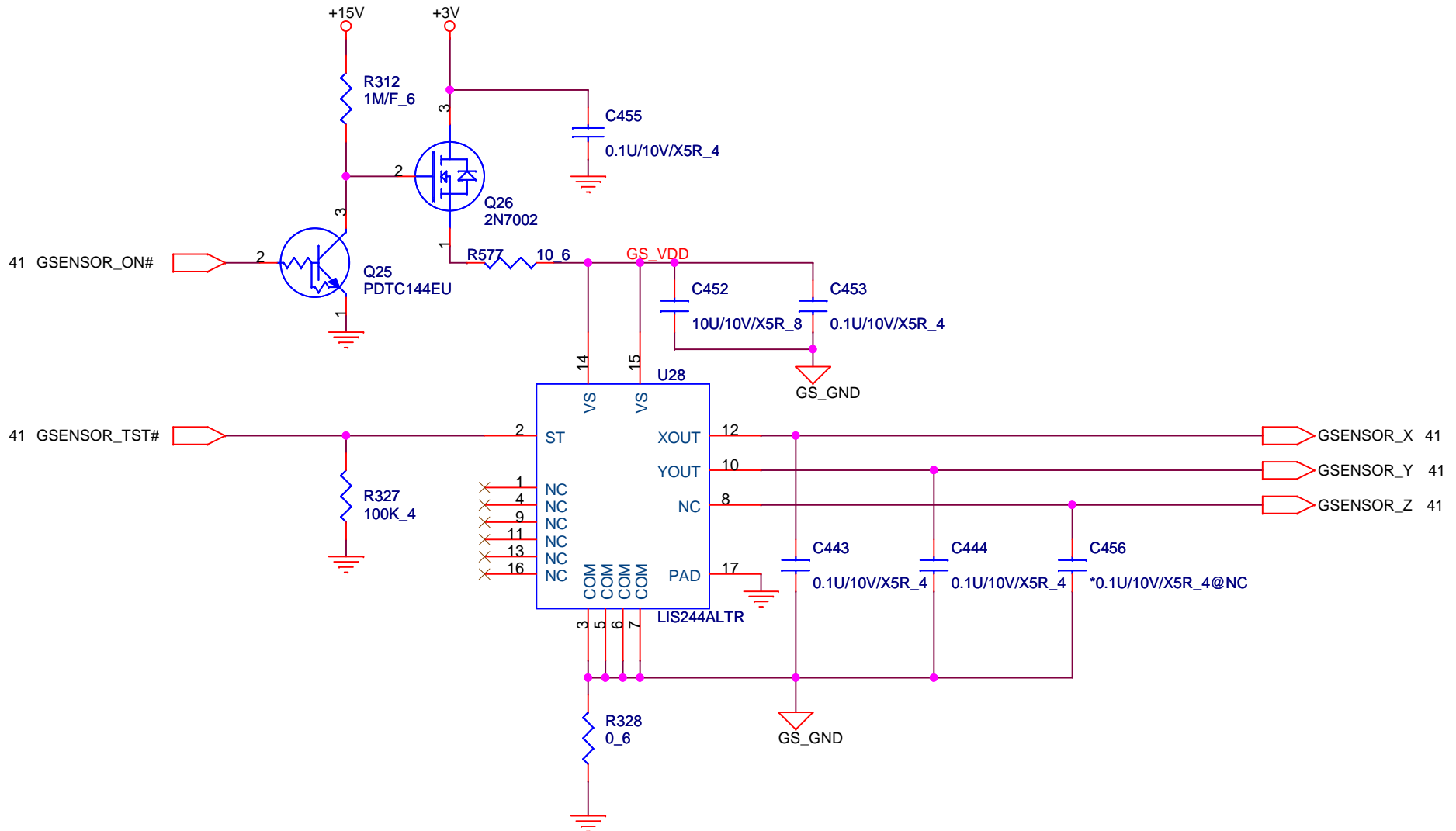
Size	Document Number	Rev
Custom	FAN & THERMAL	
Date: Saturday, November 07, 2009		Sheet 37 of 55

G-SENSOR (2-Axial)

3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,32,34,36,37,40,41,43,45,46,47,48,50,51 +3V
23,43,45,47 +15V



38

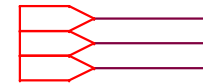


**LD-Note Calpella Discrete
Quanta Computer Inc.**

Size Custom	Document Number G-SENSOR	Rev
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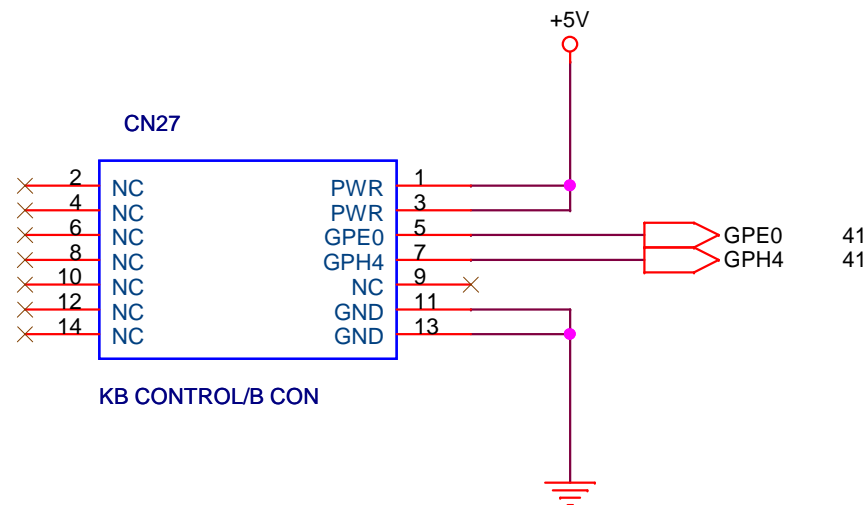
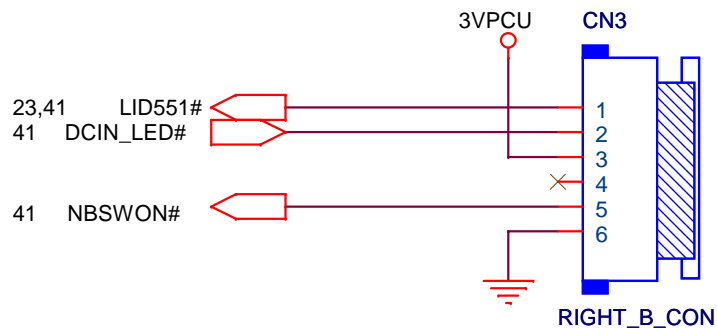
3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,32,34,36,37,38,40,41,43,45,46,47,48,50,51
 9,23,27,35,41,43,44,47,49
 12,18,24,25,26,28,35,37,41,43

+3V
 3VPCU
 +5V



39

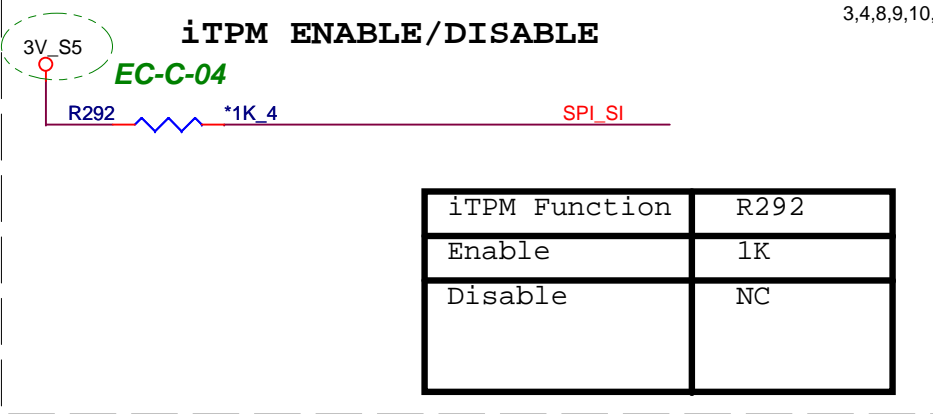
FFC TO B LED RIGHT SIDE CONNECTOR(For 14",15")



**LD-Note Calpella Discrete
 Quanta Computer Inc.**

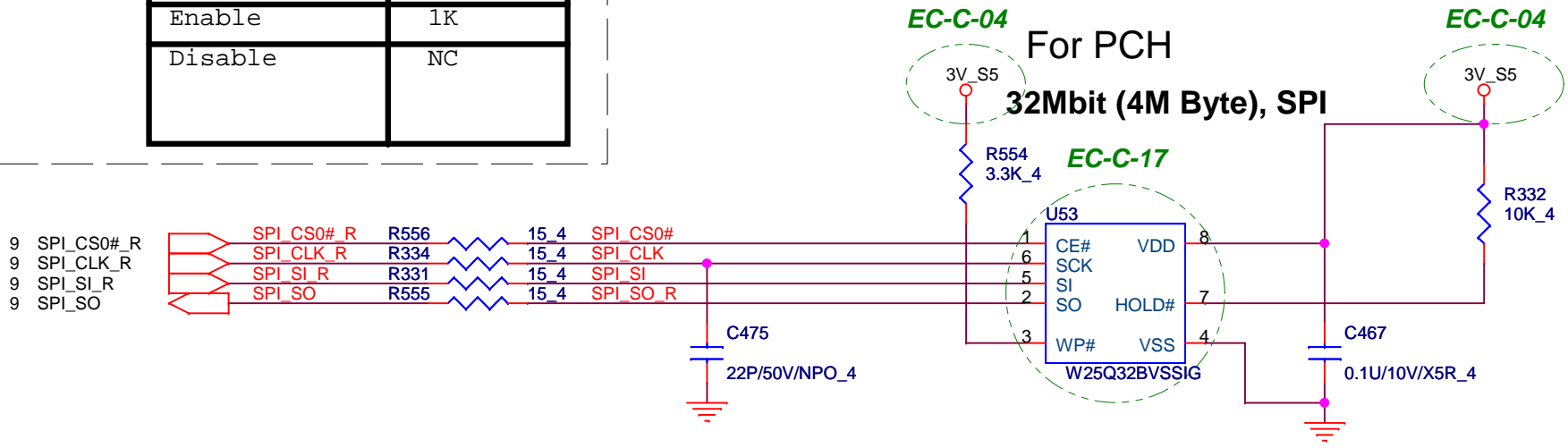
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iTPM ENABLE/DISABLE

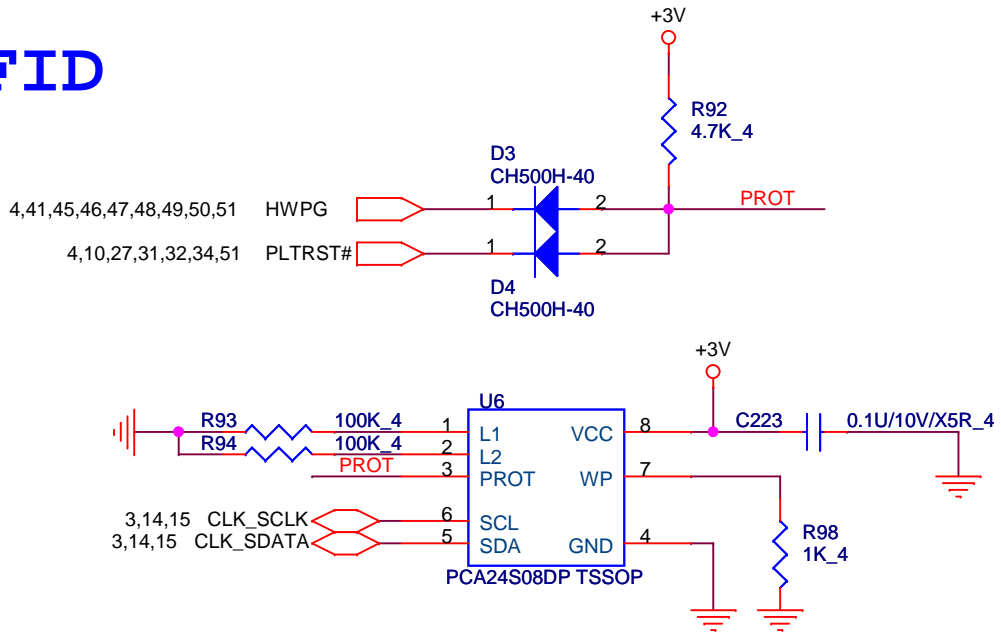


3,4,8,9,10,11,12,14,15,17,23,26,27,28,29,30,31,32,34,36,37,38,41,43,45,46,47,48,50,51
+3V 3V_S5

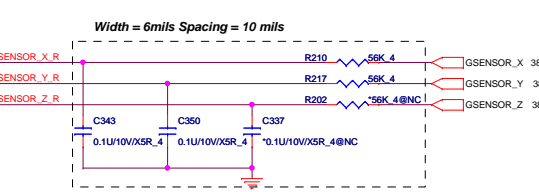
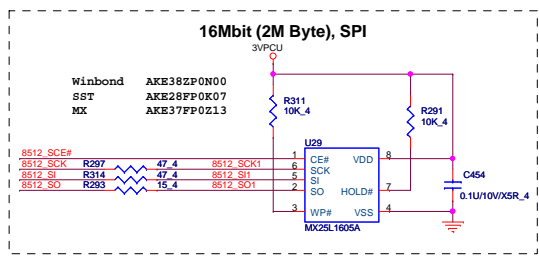
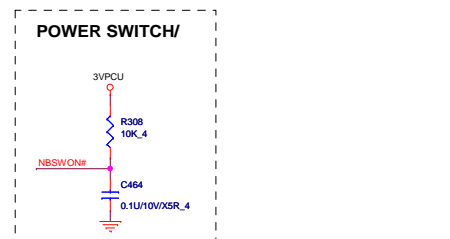
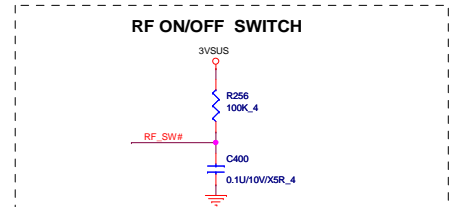
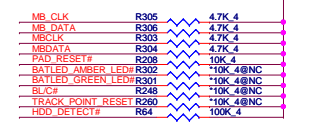
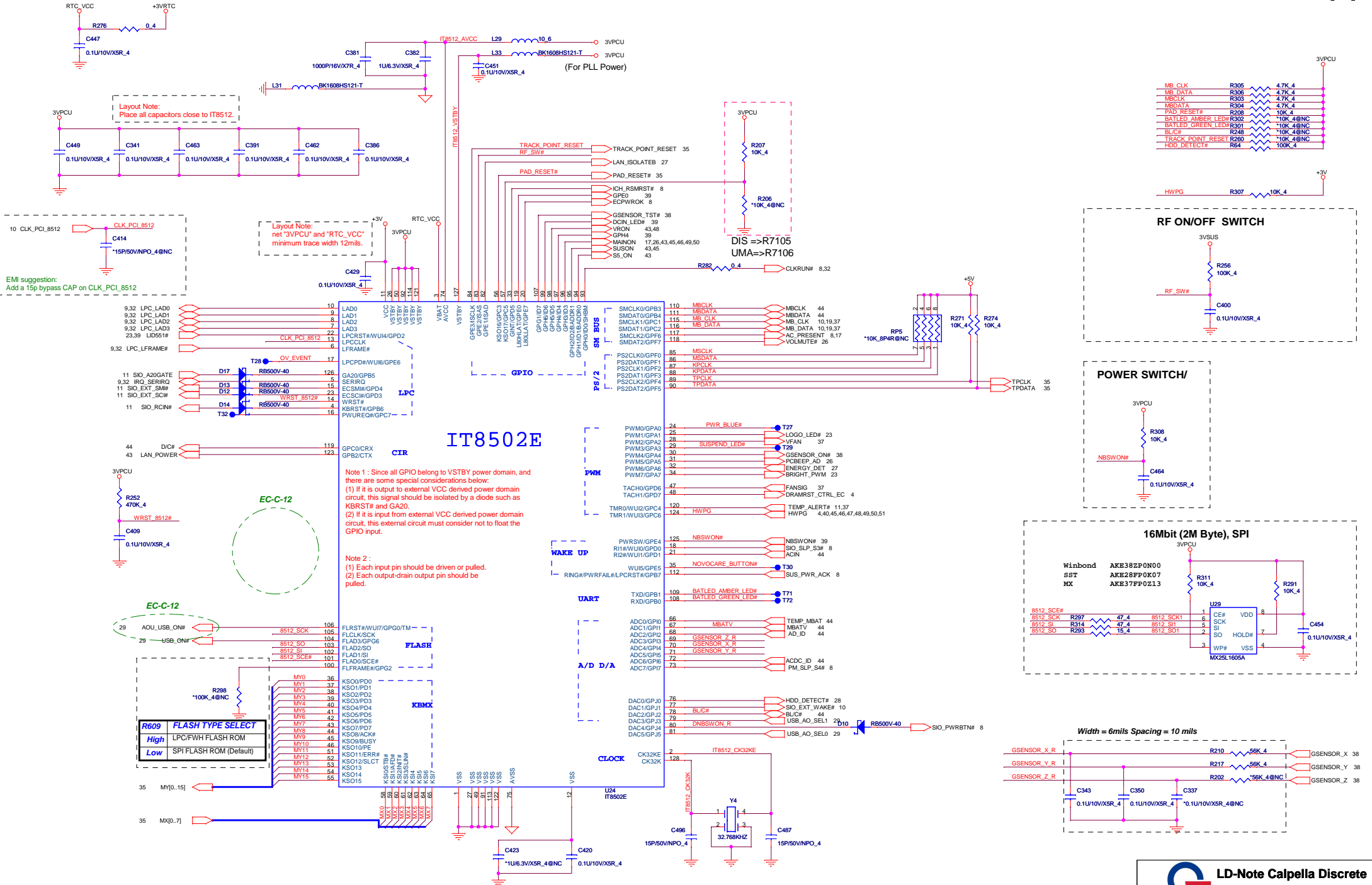
For PCH 32Mbit (4M Byte), SPI



RFID



**LD-Note Calpella Discrete
Quanta Computer Inc.**



IT8502E

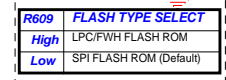
Note 1: Since all GPIO belong to VSTBY power domain, and there are some special considerations below:
 (1) If it is output to external VCC derived power domain circuit, this signal should be isolated by a diode such as KBRST# and CA20.
 (2) If it is input from external VCC derived power domain circuit, this external circuit must consider not to float the GPIO input.

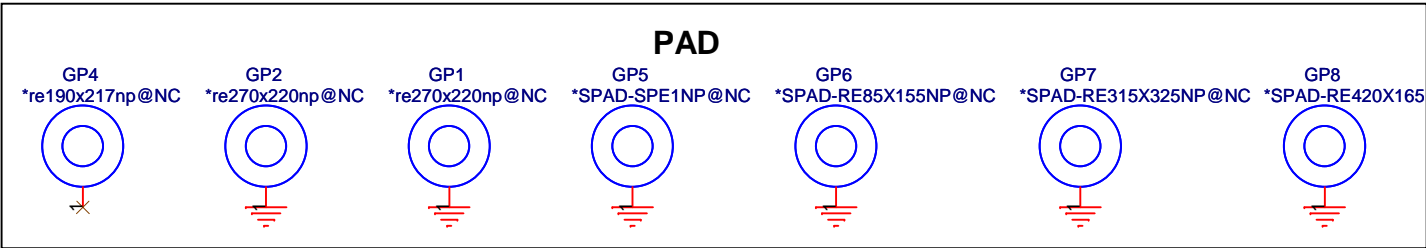
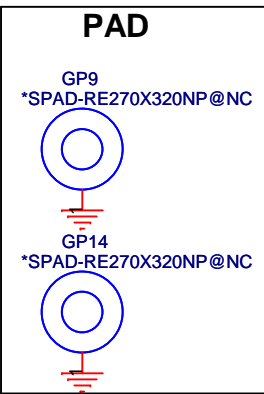
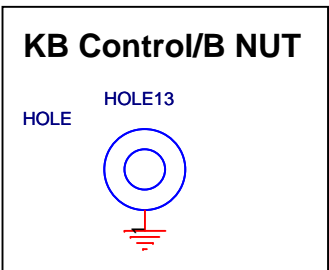
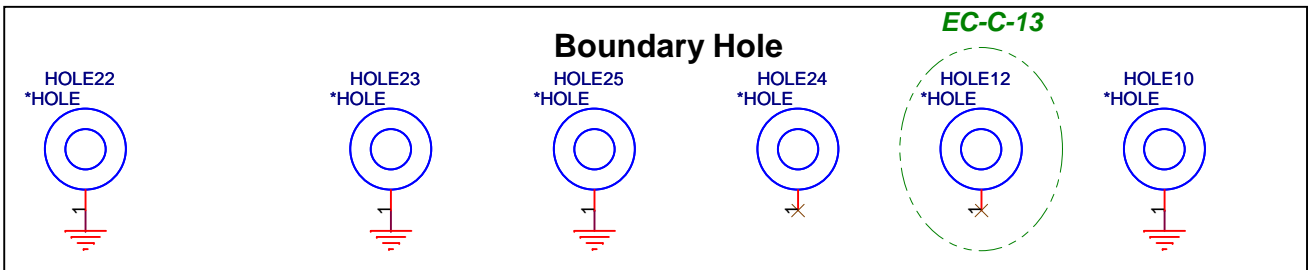
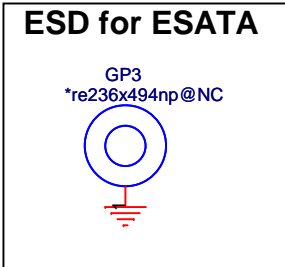
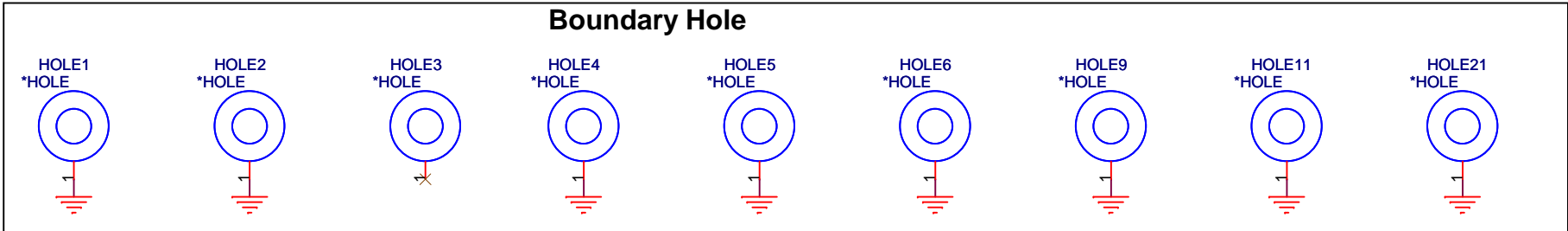
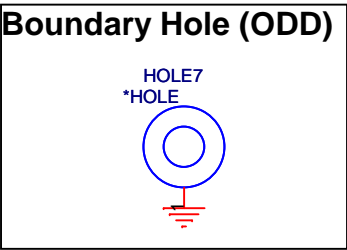
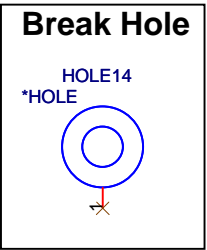
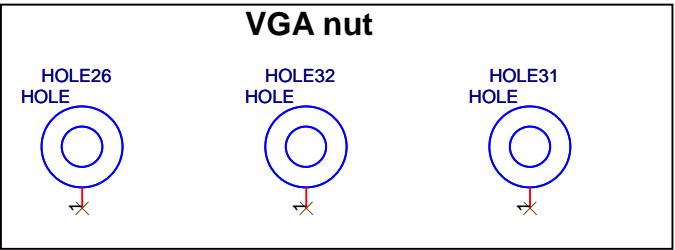
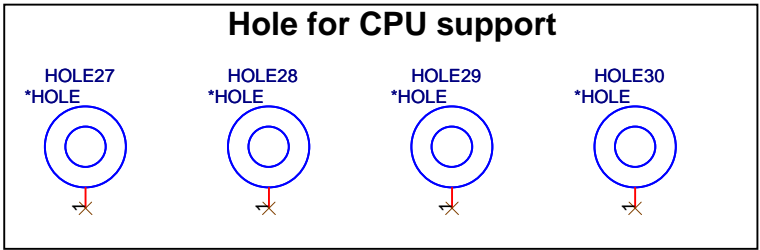
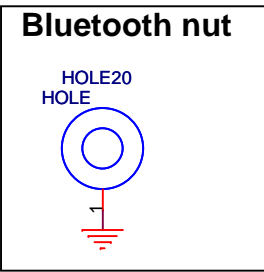
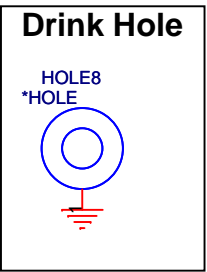
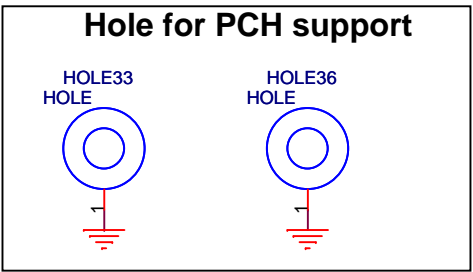
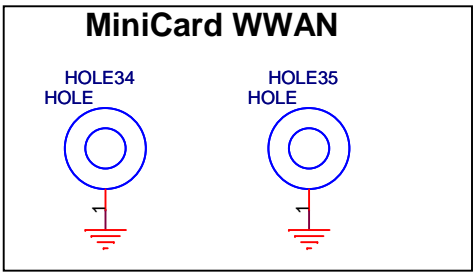
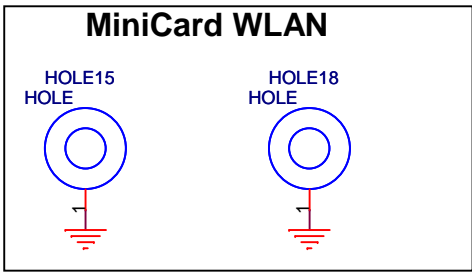
Note 2:
 (1) Each input pin should be driven or pulled.
 (2) Each output-drain output pin should be pulled.

EMi suggestion:
 Add a 15p bypass CAP on CLK_PCL_8512

Layout Note:
 Place all capacitors close to IT8512.

Layout Note:
 net "3VPCU" and "RTC_VCC"
 minimum trace width 12mils.

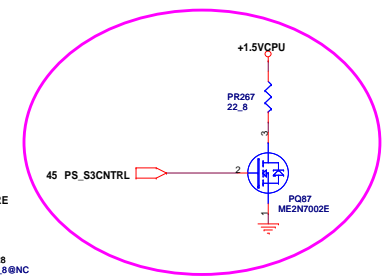
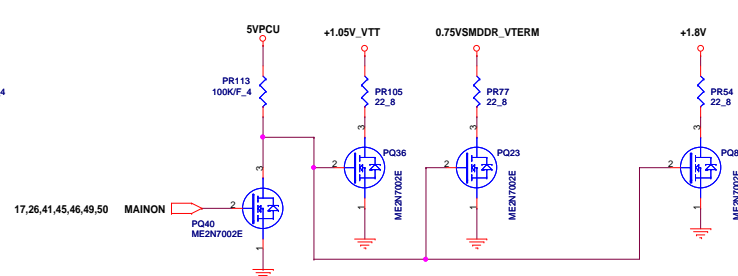
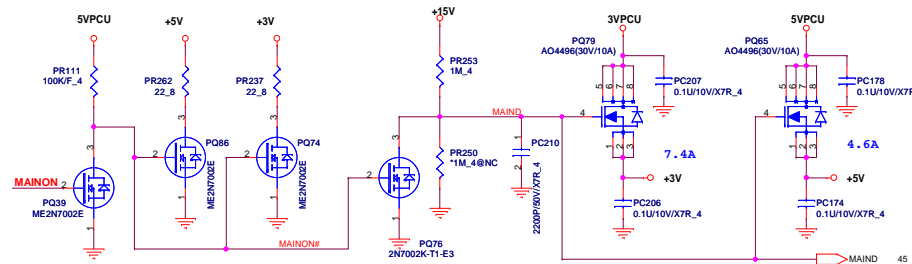




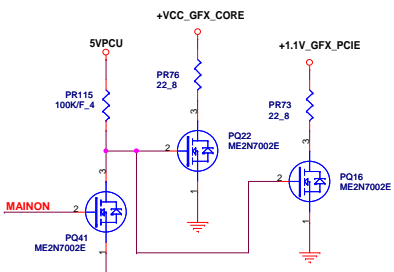
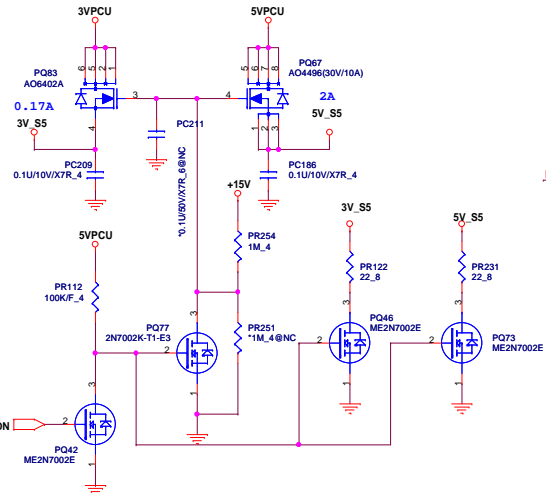
LD-Note Calpella Discrete Quanta Computer Inc.

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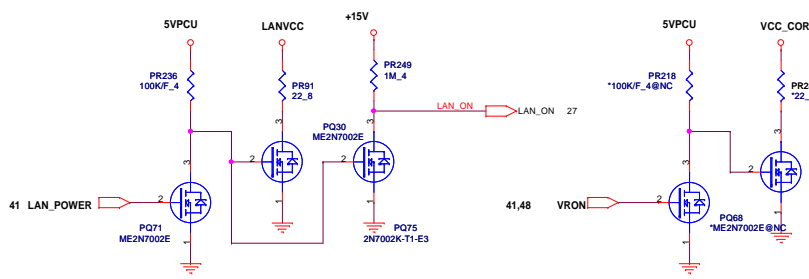
+3V, +5V



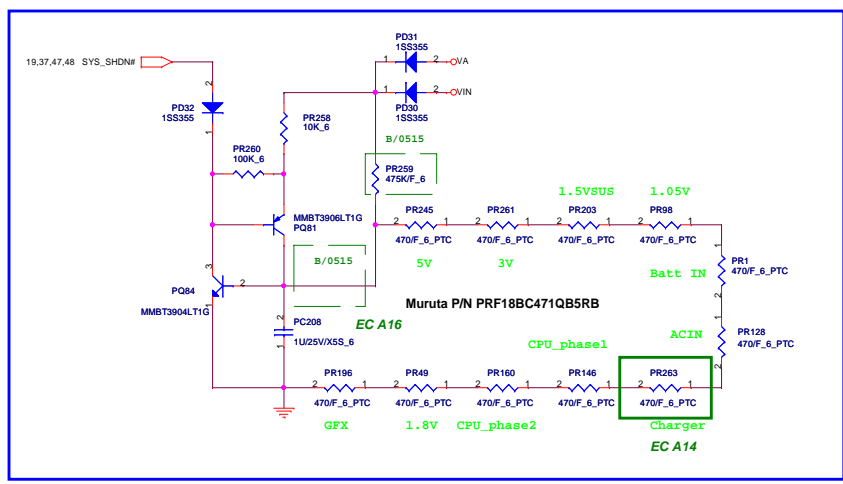
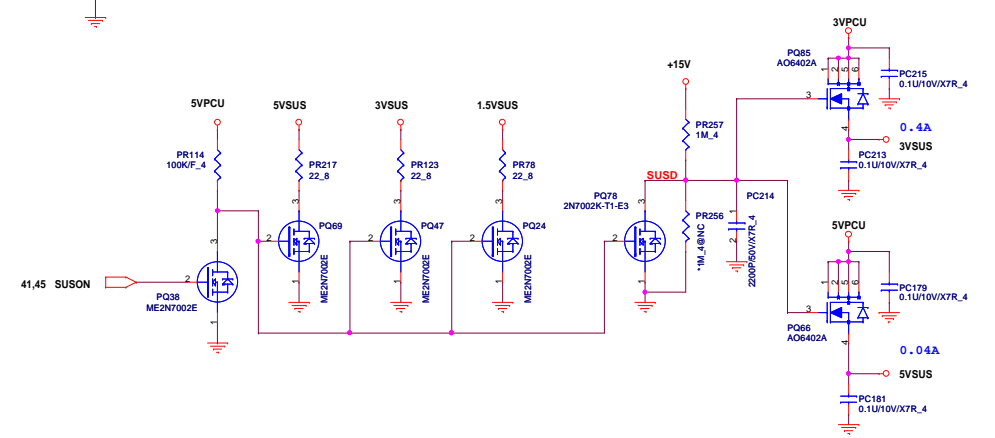
3V_S5, 5V_S5

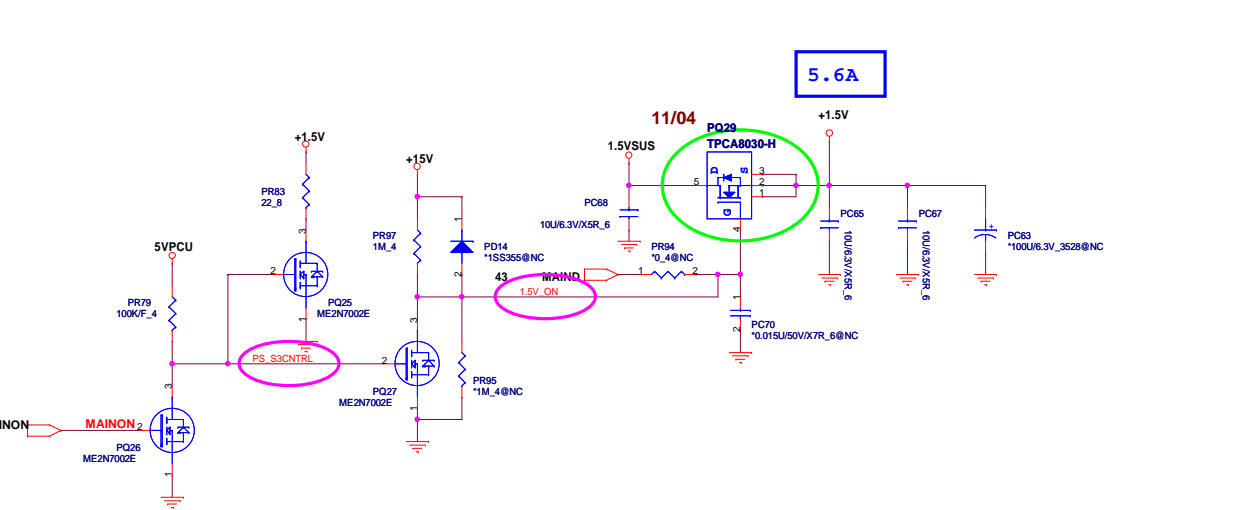
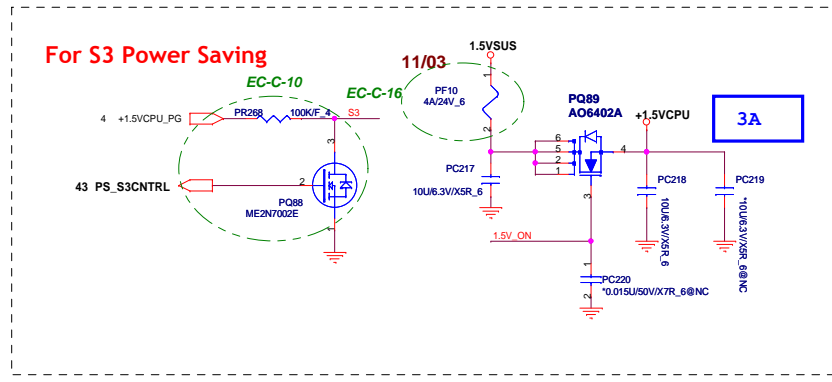
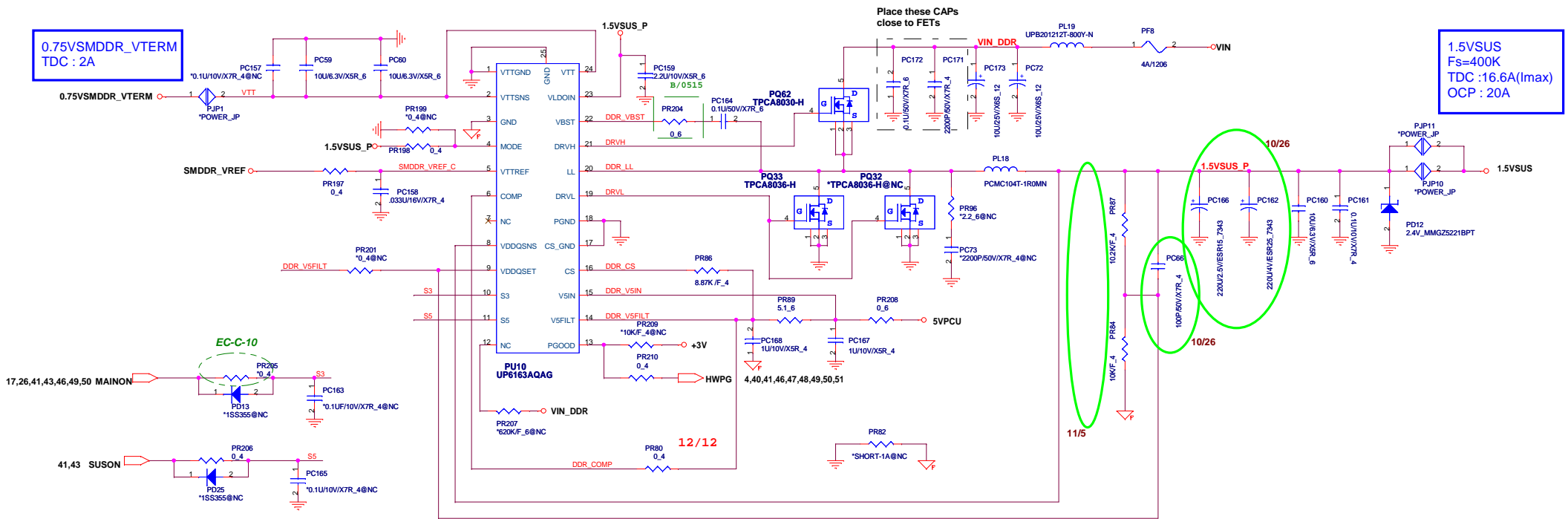


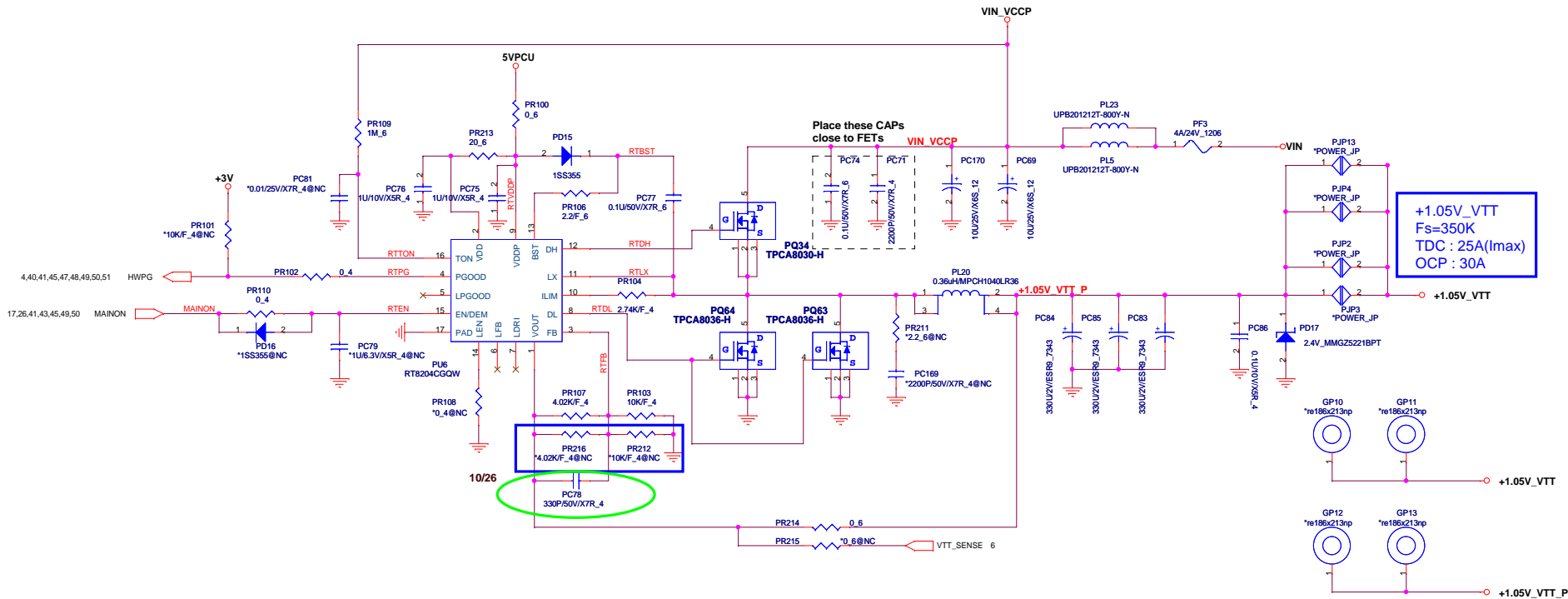
LANVCC

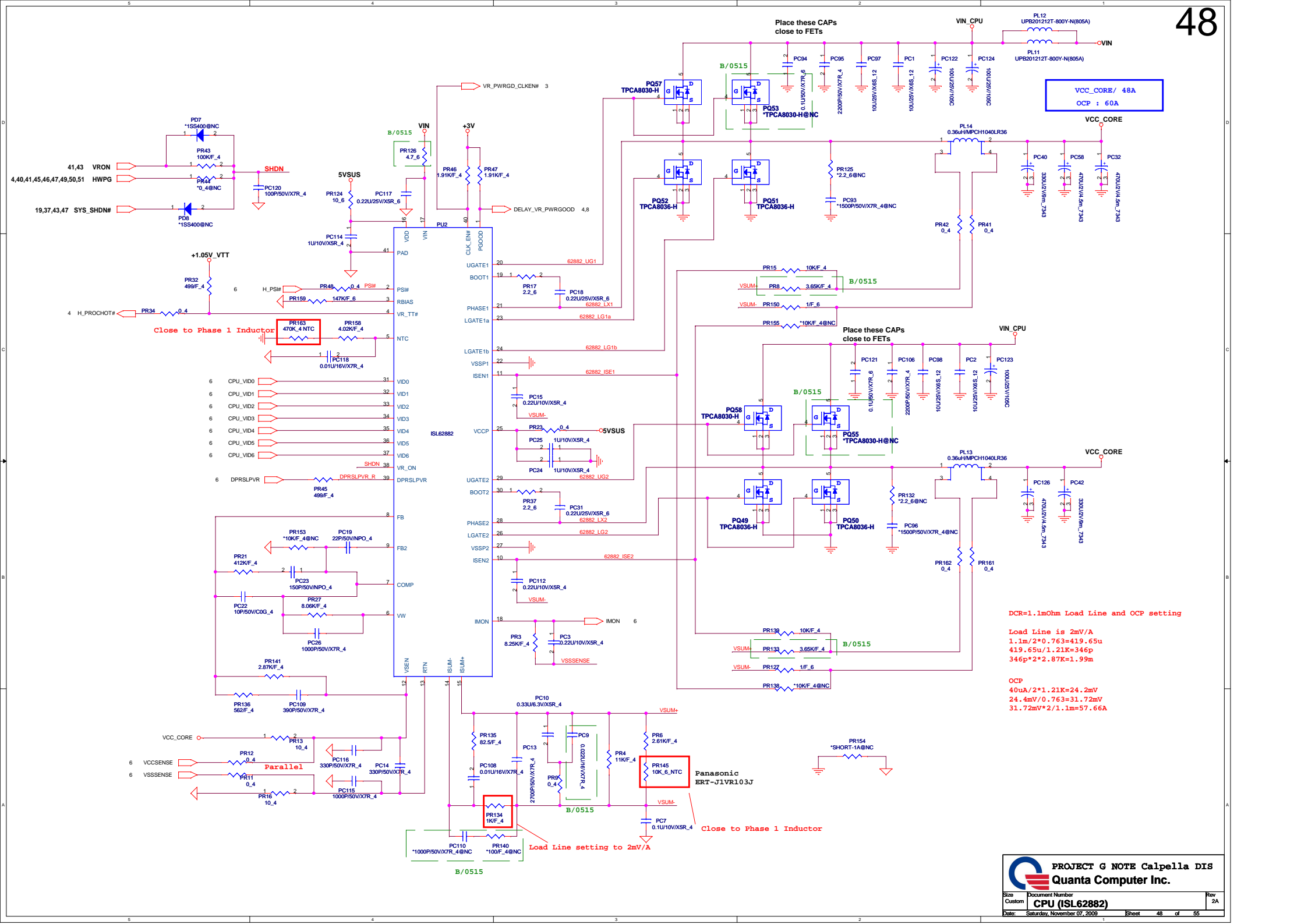


3VSUS, 5VSUS









Close to Phase 1 Inductor

Place these CAPs close to FETs

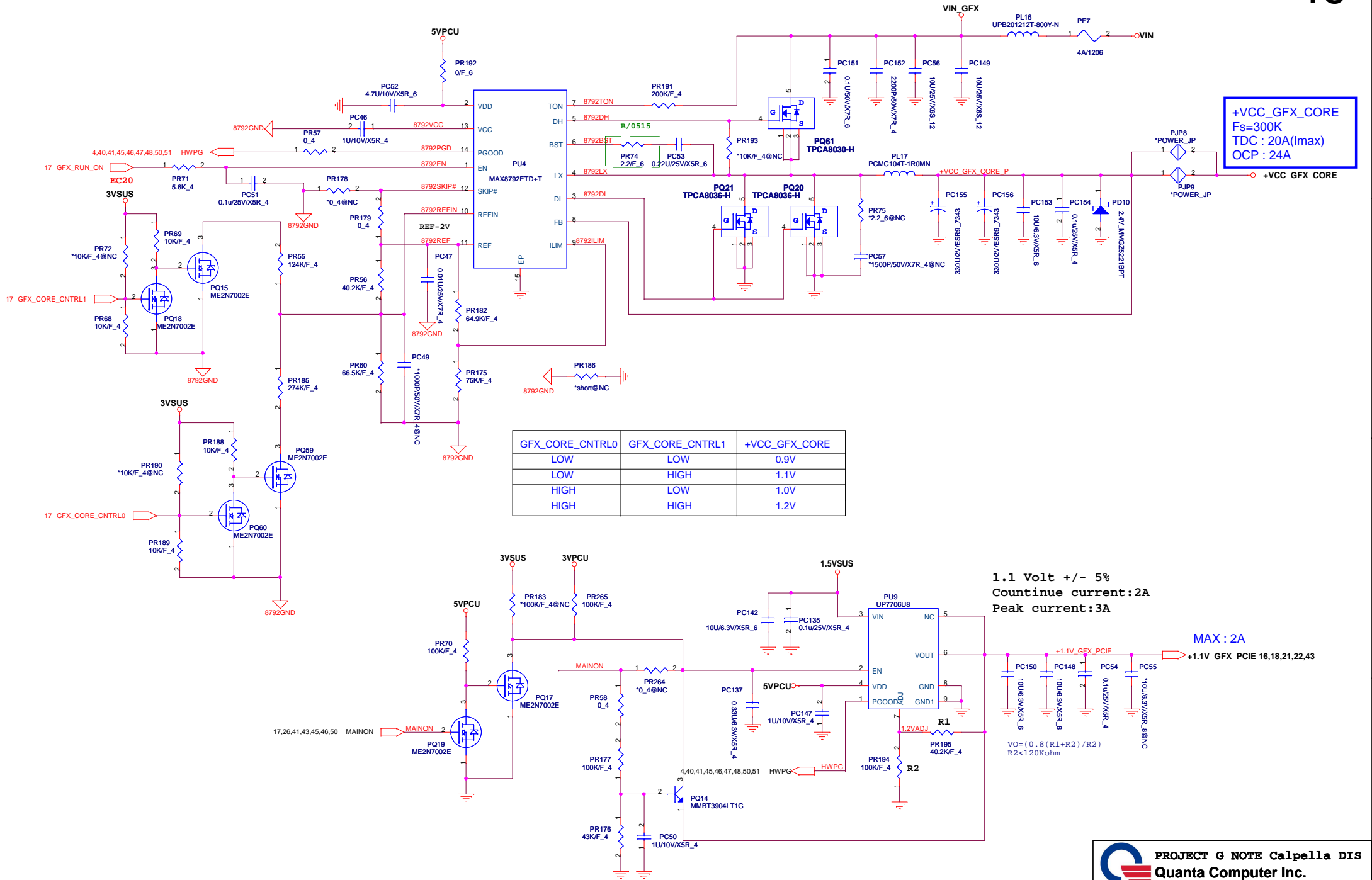
DCR=1.1mOhm Load Line and OCP setting

Load Line is 2mV/A
 $1.1m/2 * 0.763 = 419.65u$
 $419.65u / 1.21K = 346p$
 $346p * 2 * 2.87K = 1.99m$

OCP
 $40uA / 2 * 1.21K = 24.2mV$
 $24.4mV / 0.763 = 31.72mV$
 $31.72mV * 2 / 1.1m = 57.66A$

Load Line setting to 2mV/A

Panasonic ERT-J1VR103J

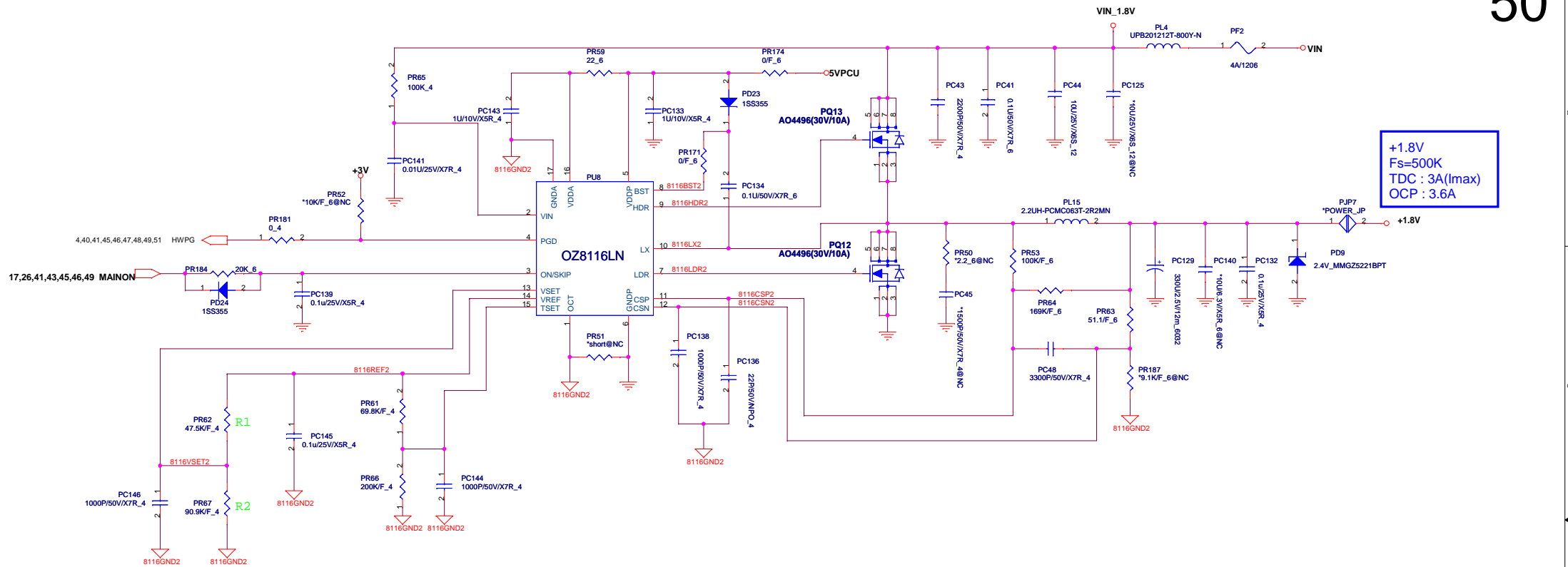


+VCC_GFX_CORE
 Fs=300K
 TDC : 20A(Imax)
 OCP : 24A

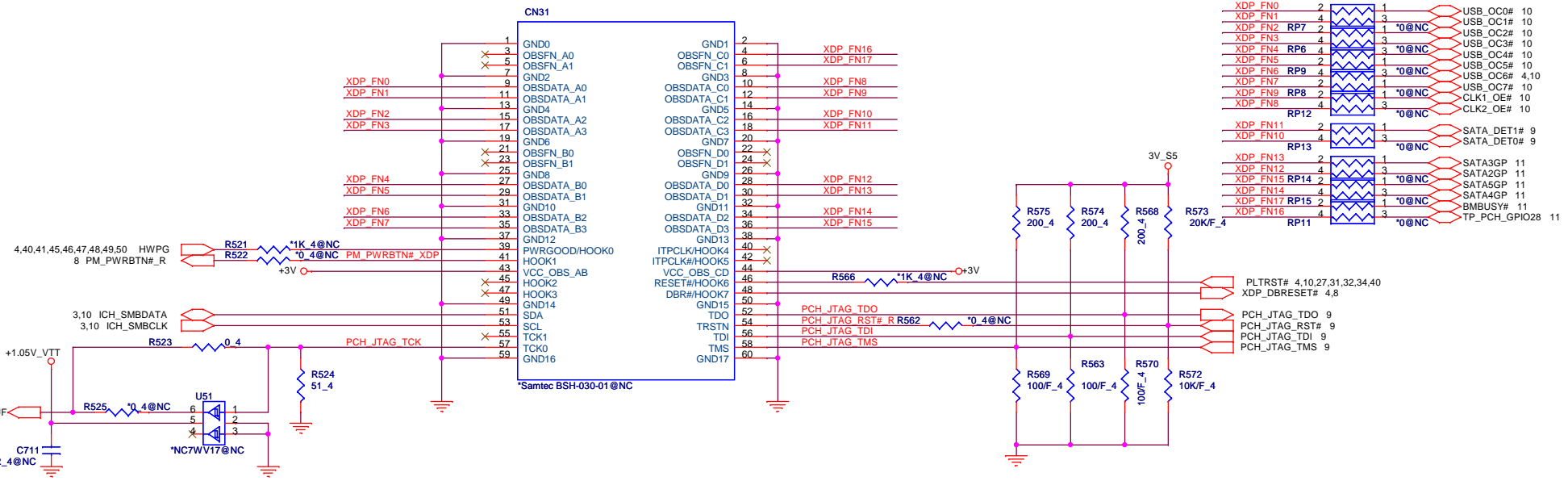
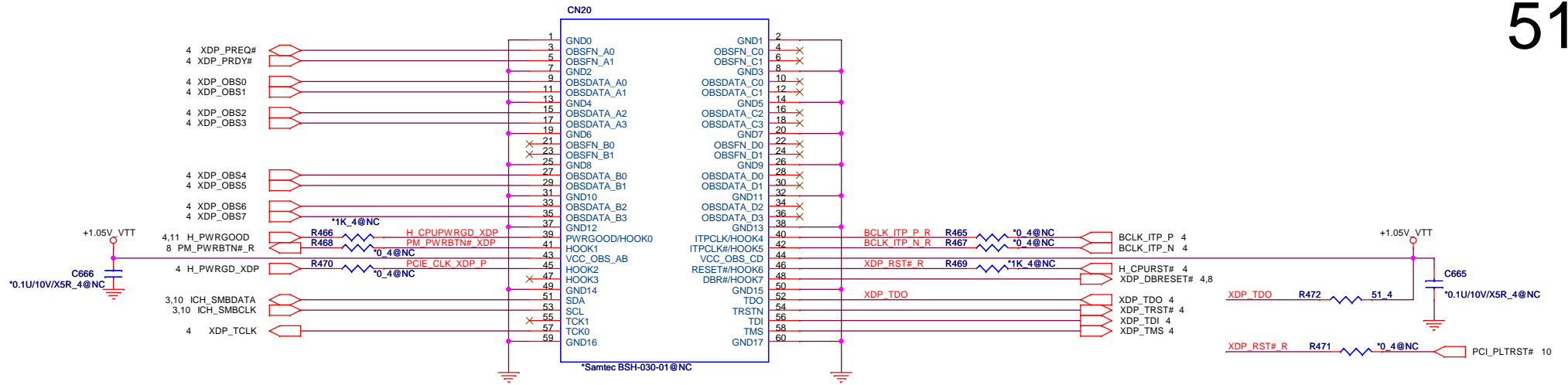
1.1 Volt +/- 5%
 Countinue current:2A
 Peak current:3A

MAX : 2A
 +1.1V_GFX_PCIE 16,18,21,22,43

$$V_O = (0.8(R1+R2) / R2) / R2 < 1.20k\Omega$$



+1.8V
 Fs=500K
 TDC : 3A(I_{max})
 OCP : 3.6A



Revision History

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Revision	Date	Phase	Change List	Release Schematic Date	Release Gerber File Date
1A		DV	Initial release		

Schematic Value Explanation Description :

RESISTOR

Value	F	4	6	8	12	1210	*	Description
*1K/F_4	1%	0402 (1005)					DE POP	1K ohm 1% SMD 0402 package and DE POP
1K_6	5%		0603 (1608)				POP	1K ohm 5% SMD 0603 package and POP
1K_8	5%			0805 (2125)			POP	1K ohm 5% SMD 0805 package and POP
1K_12	5%				1206 (3216)		POP	1K ohm 5% SMD 1206 package and POP
1K_1210	5%					1210 (3225)	POP	1K ohm 5% SMD 1210 package and POP

CAPACITOR

Value	Voltage	Material	6				*	Description
*0.1U/10V/X5R_4	10V	X5R	0402 (1005)				DE POP	0.1UF 10V X5R SMD 0402 package DE POP
1U/25V/X7R_6	25V	X7R	0603 (1608)				POP	0.1UF 25V X7R SMD 0603 package POP

EC #	Page	Description	Part Affected
EC-C-01	10,33	Change card reader from port6 to port11	U58,U50
EC-C-02	26	Change Q52 from MOS to BJT to fix MIC function issue Change Q37 to MOS,Q38 to BJT to fix audio function issue Add LDO circuit to fix audio noise; un-stuff 0 ohm RES	Q52 Q37,Q38 U34,C498,C499,C500,L39
EC-C-04	40	Change PCH SPI BIOS power supplier from +3V to 3V_S5	U53
EC-C-05	8	Change PCIE_WAKE# pull high RES to 10K ohm	R508
EC-C-06	44	Add net MBATV from charger to EC	PR269,PR270
EC-C-07	25	ESD suggest to move C123	C123
EC-C-08	37	Un-stuff thermal IC MAX6694 relative circuits, suff G708 relative circuits	Un-stuff U42,Q32,Q35,Q42,Q24,C611,C608,C609,C610,C612,Q39,Q41,Q40,R432,R409 Stuff U41,C589,R394,R386,R387
EC-C-09	29 30 34	Stuff common choke to fix EMI issue	CML1 CML3,CML4 L23
EC-C-10	45	Solve S3 run in issue	Stuff PR268,PQ88 Un-stuff PR205
EC-C-11	29	Change black-berry charger IC to MAX14550AEETB+	U60
EC-C-12	29 41	Add enable pin AOU_USB_ON# to control black-berry charger function from EC Remove CELL-SET pin and two select RES	U35 U24,299,R300
EC-C-13	42	ME modify NON-PTH hole	HOLE12
EC-C-14	10	Reserve one 0 ohm RES to moniter leakage current in the future	R336
EC-C-15	26	Reserve codec Rev. VA @ VB option schematic	R628,R629,C762,R630,R347,R348
EC-C-16	45	Add one fuse to prevent from PQ89 burn out	PF10
EC-C-17	40	Change PCH BIOS to 4M Byte	U53