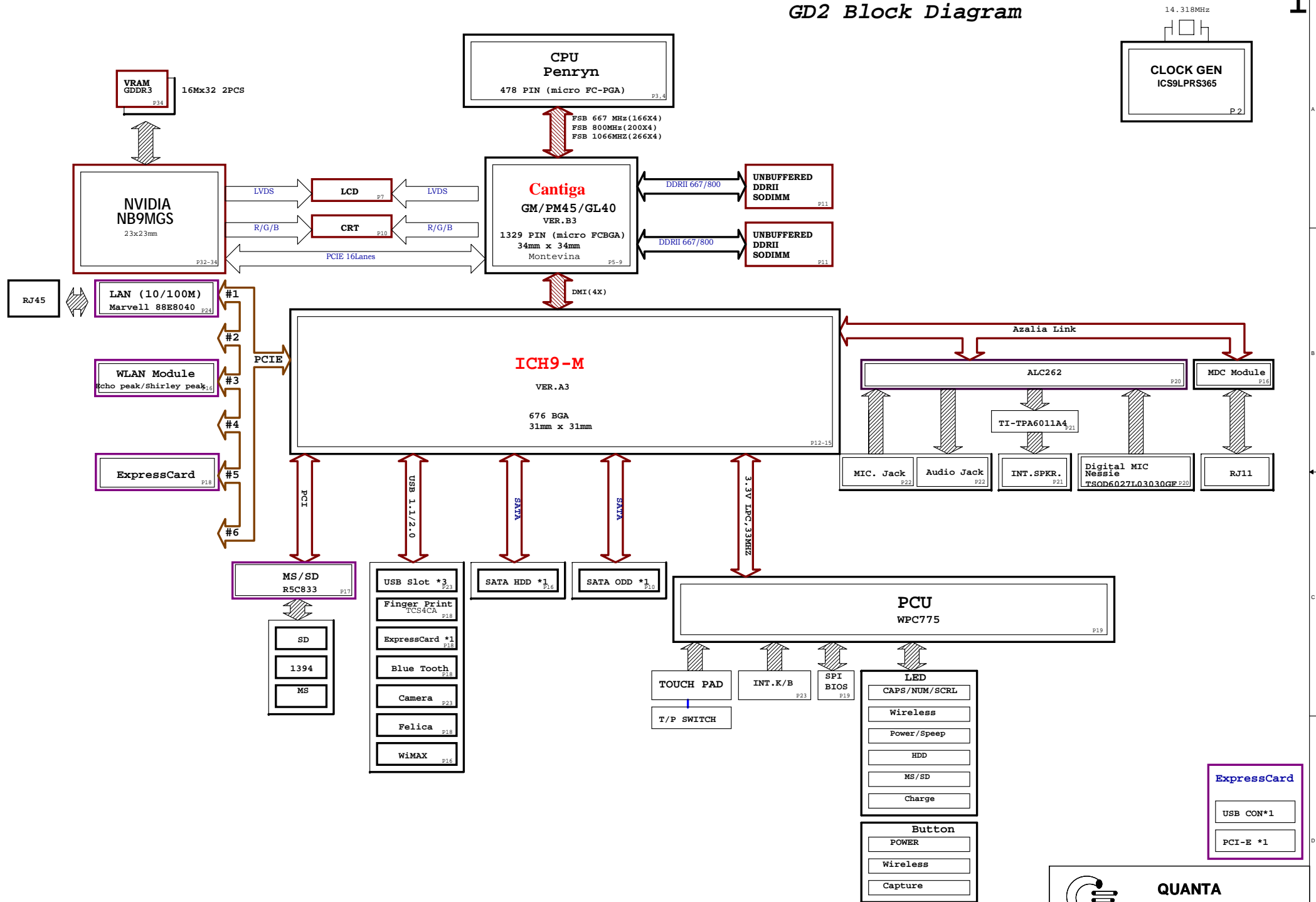
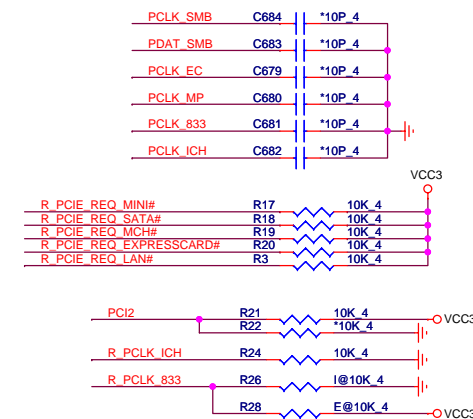
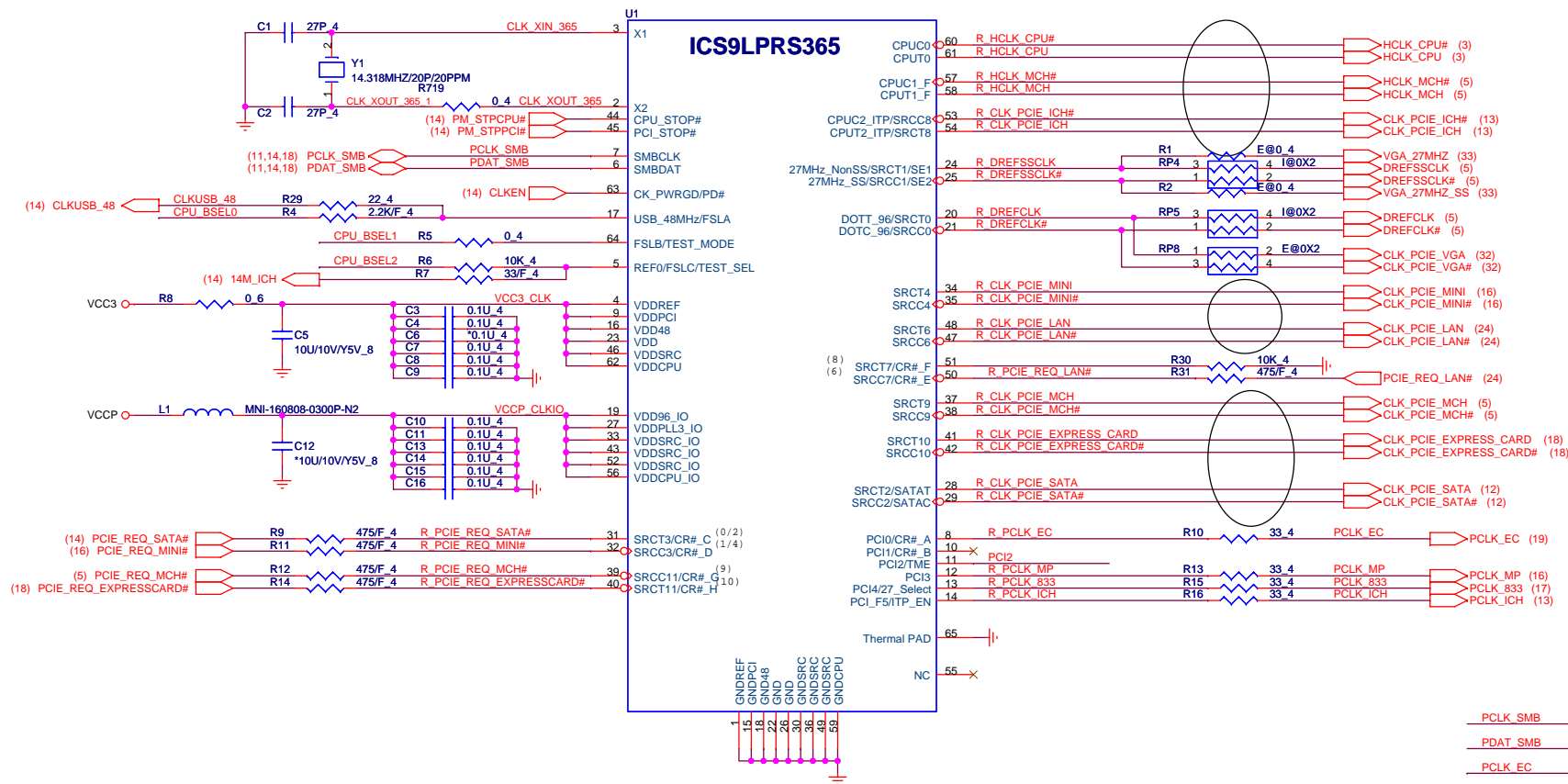


# GD2 Block Diagram

1





FSC BSEL2	FSB BSEL1	FSA BSEL0	CPU	SRC	PCI	REF	USB	DOT	Spread %
* 0	0	0	266.66	100	33.33	14.318	48	96	0.5 Down
0	0	1	133.33	100	33.33	14.318	48	96	0.5 Down
0	1	0	200.00	100	33.33	14.318	48	96	0.5 Down
0	1	1	<b>166.66</b>	100	33.33	14.318	48	96	0.5 Down
1	0	0	333.33	100	33.33	14.318	48	96	0.5 Down
1	0	1	100.00	100	33.33	14.318	48	96	0.5 Down
1	1	0	400.00	100	33.33	14.318	48	96	0.5 Down
1	1	1	RESERVED						

TME(PIN11)		
0 : Overclocking of CPU & SRC allowed.		
* 1 : Overclocking of CPU & SRC NOT allowed.		

27 Select PIN13	PIN 20/21	PIN 24/25
0	DOT_96 / DOT_96#	LCDCLK / LCDCLK#
1	SRC_0 / SRC_0#	27M / 27M_SS

(Int. Graphic)

(NB9M-GS)

ITP_EN(PIN14)	PIN53/54
* 0	SRC8 / SRC8#
1	ITP / ITP#

**QUANTA COMPUTER**

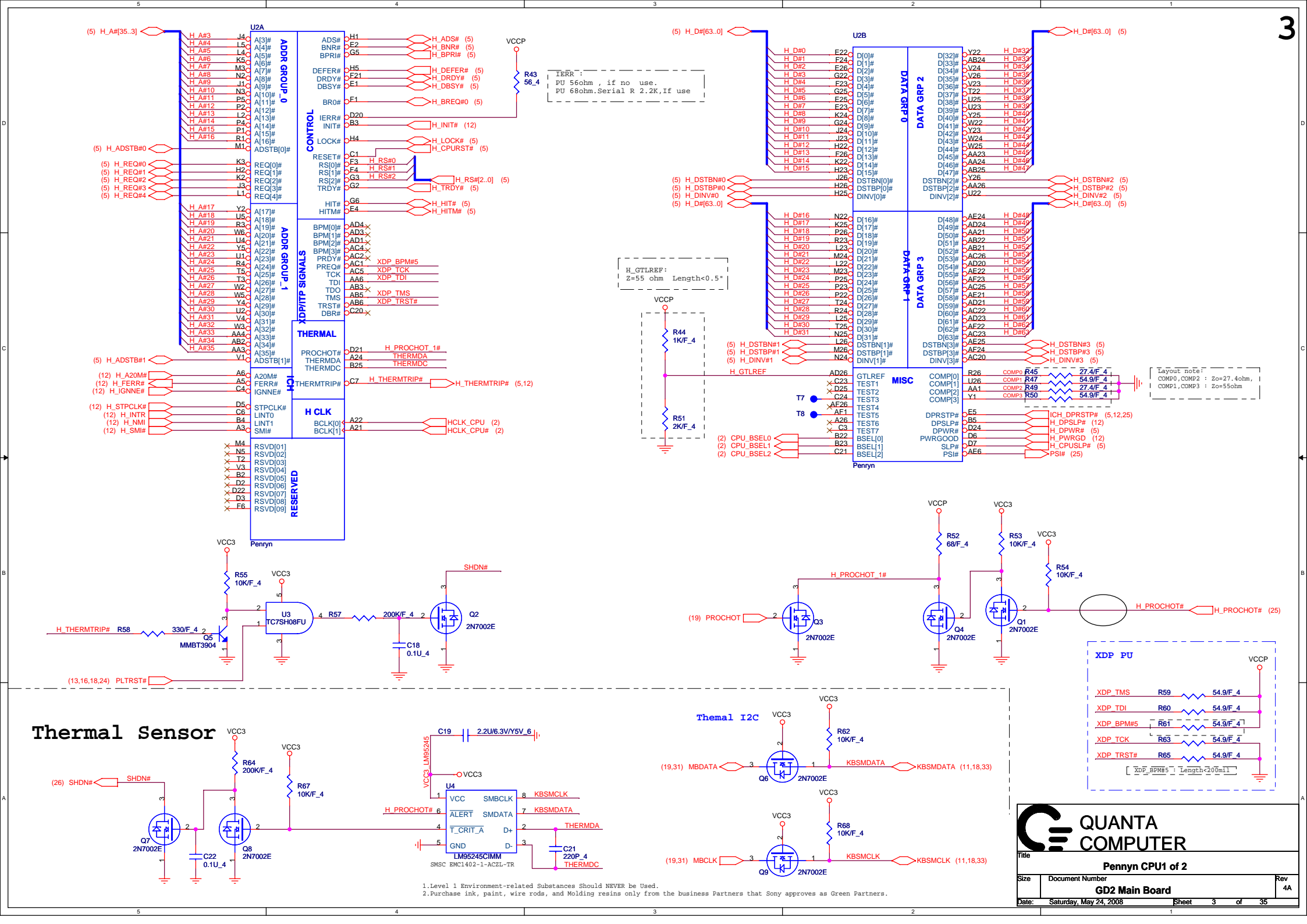
Model: **CLOCK GENERATOR**

Document Number: **GD2 Main Board**

Date: **Saturday, May 24, 2008**

Sheet **2** of **35**

Rev **4A**

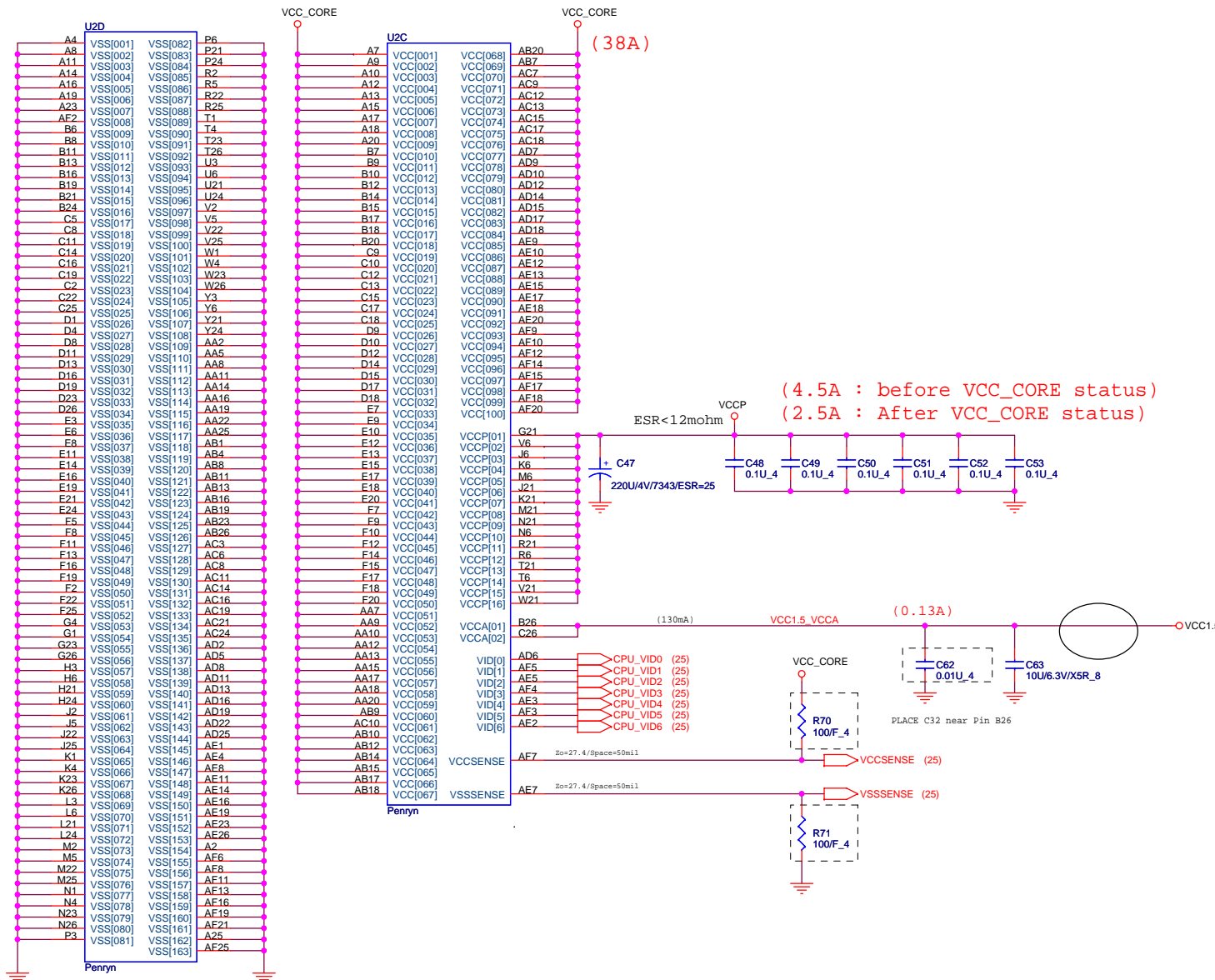


```

Fs >= 300kHz
0.315uH <= Lout <= 0.5uH

330U/1.5mohm *4
10U/6.3V/X5R*20

```



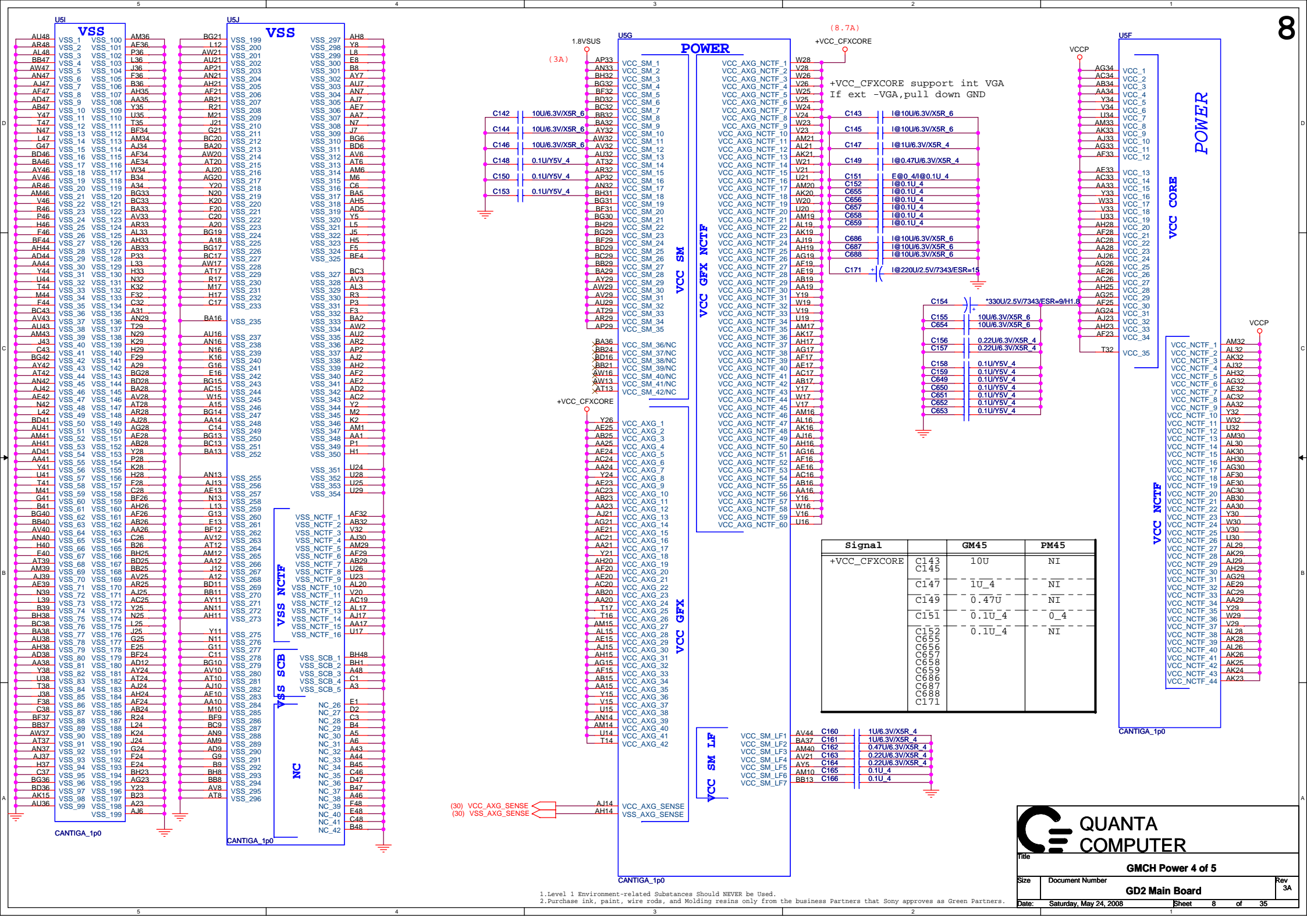
1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.





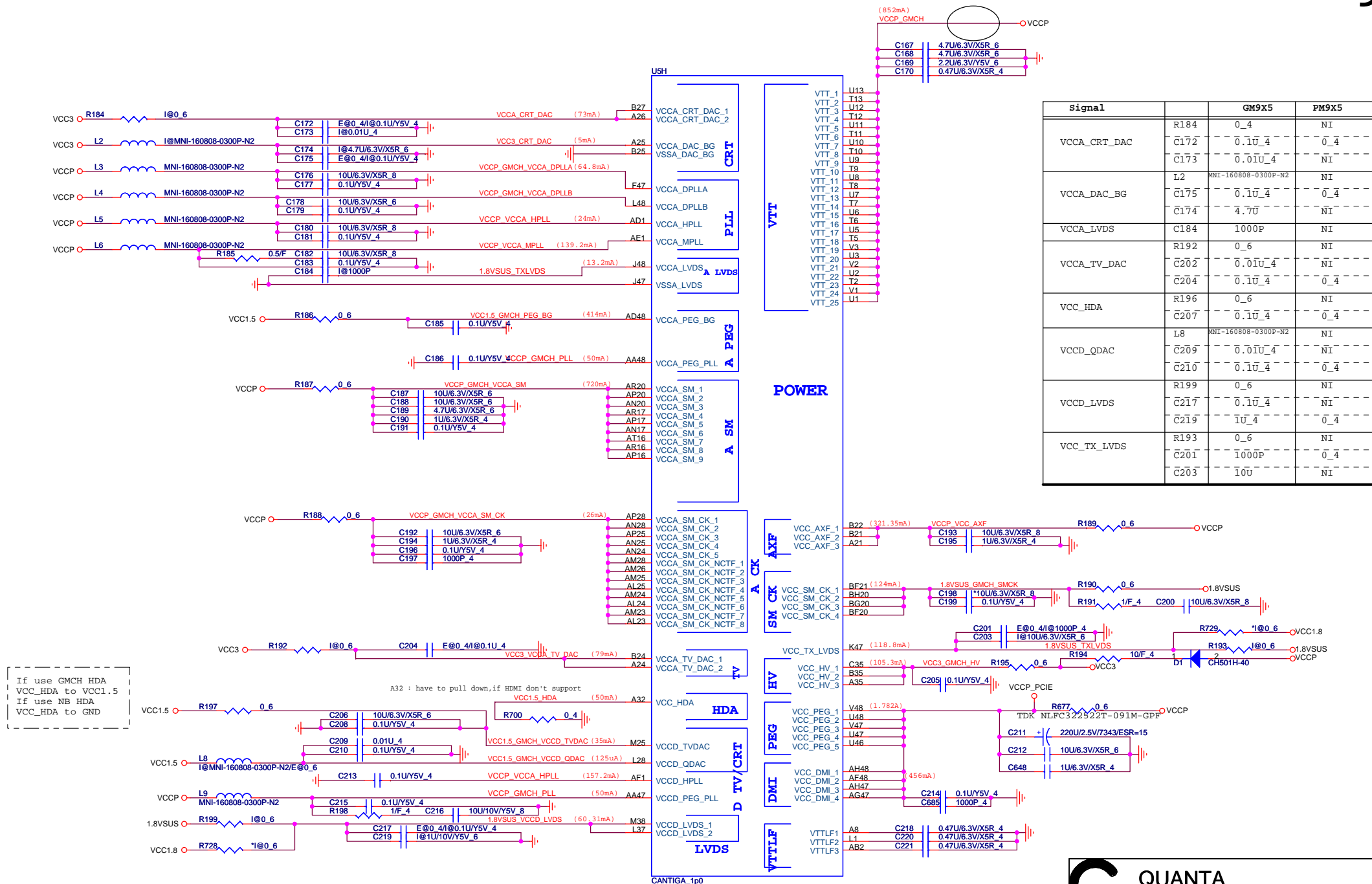






The image displays a complex PCB layout for the GMCH Power 4 of 5. The layout includes various components such as capacitors (e.g., 100uF/6.3V/X5R 6, 100uF/6.3V/X5R 4, 100uF/6.3V/X5R 2, 100uF/6.3V/X5R 1, 100uF/6.3V/X5R 0, 100uF/6.3V/X5R -1, 100uF/6.3V/X5R -2, 100uF/6.3V/X5R -3, 100uF/6.3V/X5R -4, 100uF/6.3V/X5R -5, 100uF/6.3V/X5R -6, 100uF/6.3V/X5R -7, 100uF/6.3V/X5R -8, 100uF/6.3V/X5R -9, 100uF/6.3V/X5R -10, 100uF/6.3V/X5R -11, 100uF/6.3V/X5R -12, 100uF/6.3V/X5R -13, 100uF/6.3V/X5R -14, 100uF/6.3V/X5R -15, 100uF/6.3V/X5R -16, 100uF/6.3V/X5R -17, 100uF/6.3V/X5R -18, 100uF/6.3V/X5R -19, 100uF/6.3V/X5R -20, 100uF/6.3V/X5R -21, 100uF/6.3V/X5R -22, 100uF/6.3V/X5R -23, 100uF/6.3V/X5R -24, 100uF/6.3V/X5R -25, 100uF/6.3V/X5R -26, 100uF/6.3V/X5R -27, 100uF/6.3V/X5R -28, 100uF/6.3V/X5R -29, 100uF/6.3V/X5R -30, 100uF/6.3V/X5R -31, 100uF/6.3V/X5R -32, 100uF/6.3V/X5R -33, 100uF/6.3V/X5R -34, 100uF/6.3V/X5R -35, 100uF/6.3V/X5R -36, 100uF/6.3V/X5R -37, 100uF/6.3V/X5R -38, 100uF/6.3V/X5R -39, 100uF/6.3V/X5R -40, 100uF/6.3V/X5R -41, 100uF/6.3V/X5R -42, 100uF/6.3V/X5R -43, 100uF/6.3V/X5R -44, 100uF/6.3V/X5R -45, 100uF/6.3V/X5R -46, 100uF/6.3V/X5R -47, 100uF/6.3V/X5R -48, 100uF/6.3V/X5R -49, 100uF/6.3V/X5R -50, 100uF/6.3V/X5R -51, 100uF/6.3V/X5R -52, 100uF/6.3V/X5R -53, 100uF/6.3V/X5R -54, 100uF/6.3V/X5R -55, 100uF/6.3V/X5R -56, 100uF/6.3V/X5R -57, 100uF/6.3V/X5R -58, 100uF/6.3V/X5R -59, 100uF/6.3V/X5R -60, 100uF/6.3V/X5R -61, 100uF/6.3V/X5R -62, 100uF/6.3V/X5R -63, 100uF/6.3V/X5R -64, 100uF/6.3V/X5R -65, 100uF/6.3V/X5R -66, 100uF/6.3V/X5R -67, 100uF/6.3V/X5R -68, 100uF/6.3V/X5R -69, 100uF/6.3V/X5R -70, 100uF/6.3V/X5R -71, 100uF/6.3V/X5R -72, 100uF/6.3V/X5R -73, 100uF/6.3V/X5R -74, 100uF/6.3V/X5R -75, 100uF/6.3V/X5R -76, 100uF/6.3V/X5R -77, 100uF/6.3V/X5R -78, 100uF/6.3V/X5R -79, 100uF/6.3V/X5R -80, 100uF/6.3V/X5R -81, 100uF/6.3V/X5R -82, 100uF/6.3V/X5R -83, 100uF/6.3V/X5R -84, 100uF/6.3V/X5R -85, 100uF/6.3V/X5R -86, 100uF/6.3V/X5R -87, 100uF/6.3V/X5R -88, 100uF/6.3V/X5R -89, 100uF/6.3V/X5R -90, 100uF/6.3V/X5R -91, 100uF/6.3V/X5R -92, 100uF/6.3V/X5R -93, 100uF/6.3V/X5R -94, 100uF/6.3V/X5R -95, 100uF/6.3V/X5R -96, 100uF/6.3V/X5R -97, 100uF/6.3V/X5R -98, 100uF/6.3V/X5R -99, 100uF/6.3V/X5R -100, 100uF/6.3V/X5R -101, 100uF/6.3V/X5R -102, 100uF/6.3V/X5R -103, 100uF/6.3V/X5R -104, 100uF/6.3V/X5R -105, 100uF/6.3V/X5R -106, 100uF/6.3V/X5R -107, 100uF/6.3V/X5R -108, 100uF/6.3V/X5R -109, 100uF/6.3V/X5R -110, 100uF/6.3V/X5R -111, 100uF/6.3V/X5R -112, 100uF/6.3V/X5R -113, 100uF/6.3V/X5R -114, 100uF/6.3V/X5R -115, 100uF/6.3V/X5R -116, 100uF/6.3V/X5R -117, 100uF/6.3V/X5R -118, 100uF/6.3V/X5R -119, 100uF/6.3V/X5R -120, 100uF/6.3V/X5R -121, 100uF/6.3V/X5R -122, 100uF/6.3V/X5R -123, 100uF/6.3V/X5R -124, 100uF/6.3V/X5R -125, 100uF/6.3V/X5R -126, 100uF/6.3V/X5R -127, 100uF/6.3V/X5R -128, 100uF/6.3V/X5R -129, 100uF/6.3V/X5R -130, 100uF/6.3V/X5R -131, 100uF/6.3V/X5R -132, 100uF/6.3V/X5R -133, 100uF/6.3V/X5R -134, 100uF/6.3V/X5R -135, 100uF/6.3V/X5R -136, 100uF/6.3V/X5R -137, 100uF/6.3V/X5R -138, 100uF/6.3V/X5R -139, 100uF/6.3V/X5R -140, 100uF/6.3V/X5R -141, 100uF/6.3V/X5R -142, 100uF/6.3V/X5R -143, 100uF/6.3V/X5R -144, 100uF/6.3V/X5R -145, 100uF/6.3V/X5R -146, 100uF/6.3V/X5R -147, 100uF/6.3V/X5R -148, 100uF/6.3V/X5R -149, 100uF/6.3V/X5R -150, 100uF/6.3V/X5R -151, 100uF/6.3V/X5R -152, 100uF/6.3V/X5R -153, 100uF/6.3V/X5R -154, 100uF/6.3V/X5R -155, 100uF/6.3V/X5R -156, 100uF/6.3V/X5R -157, 100uF/6.3V/X5R -158, 100uF/6.3V/X5R -159, 100uF/6.3V/X5R -160, 100uF/6.3V/X5R -161, 100uF/6.3V/X5R -162, 100uF/6.3V/X5R -163, 100uF/6.3V/X5R -164, 100uF/6.3V/X5R -165, 100uF/6.3V/X5R -166, 100uF/6.3V/X5R -167, 100uF/6.3V/X5R -168, 100uF/6.3V/X5R -169, 100uF/6.3V/X5R -170, 100uF/6.3V/X5R -171, 100uF/6.3V/X5R -172, 100uF/6.3V/X5R -173, 100uF/6.3V/X5R -174, 100uF/6.3V/X5R -175, 100uF/6.3V/X5R -176, 100uF/6.3V/X5R -177, 100uF/6.3V/X5R -178, 100uF/6.3V/X5R -179, 100uF/6.3V/X5R -180, 100uF/6.3V/X5R -181, 100uF/6.3V/X5R -182, 100uF/6.3V/X5R -183, 100uF/6.3V/X5R -184, 100uF/6.3V/X5R -185, 100uF/6.3V/X5R -186, 100uF/6.3V/X5R -187, 100uF/6.3V/X5R -188, 100uF/6.3V/X5R -189, 100uF/6.3V/X5R -190, 100uF/6.3V/X5R -191, 100uF/6.3V/X5R -192, 100uF/6.3V/X5R -193, 100uF/6.3V/X5R -194, 100uF/6.3V/X5R -195, 100uF/6.3V/X5R -196, 100uF/6.3V/X5R -197, 100uF/6.3V/X5R -198, 100uF/6.3V/X5R -199, 100uF/6.3V/X5R -200, 100uF/6.3V/X5R -201, 100uF/6.3V/X5R -202, 100uF/6.3V/X5R -203, 100uF/6.3V/X5R -204, 100uF/6.3V/X5R -205, 100uF/6.3V/X5R -206, 100uF/6.3V/X5R -207, 100uF/6.3V/X5R -208, 100uF/6.3V/X5R -209, 100uF/6.3V/X5R -210, 100uF/6.3V/X5R -211, 100uF/6.3V/X5R -212, 100uF/6.3V/X5





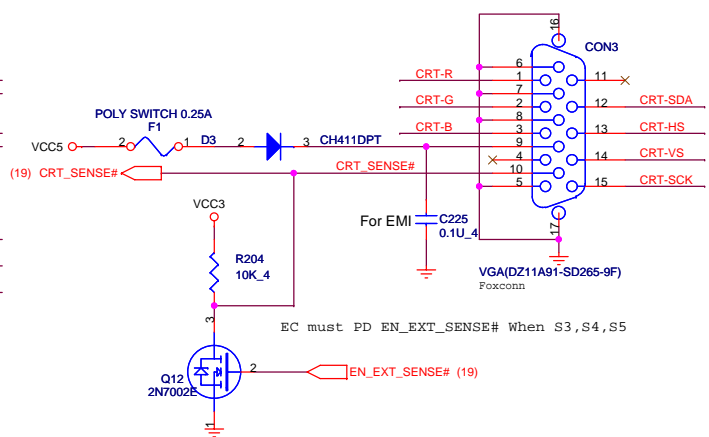
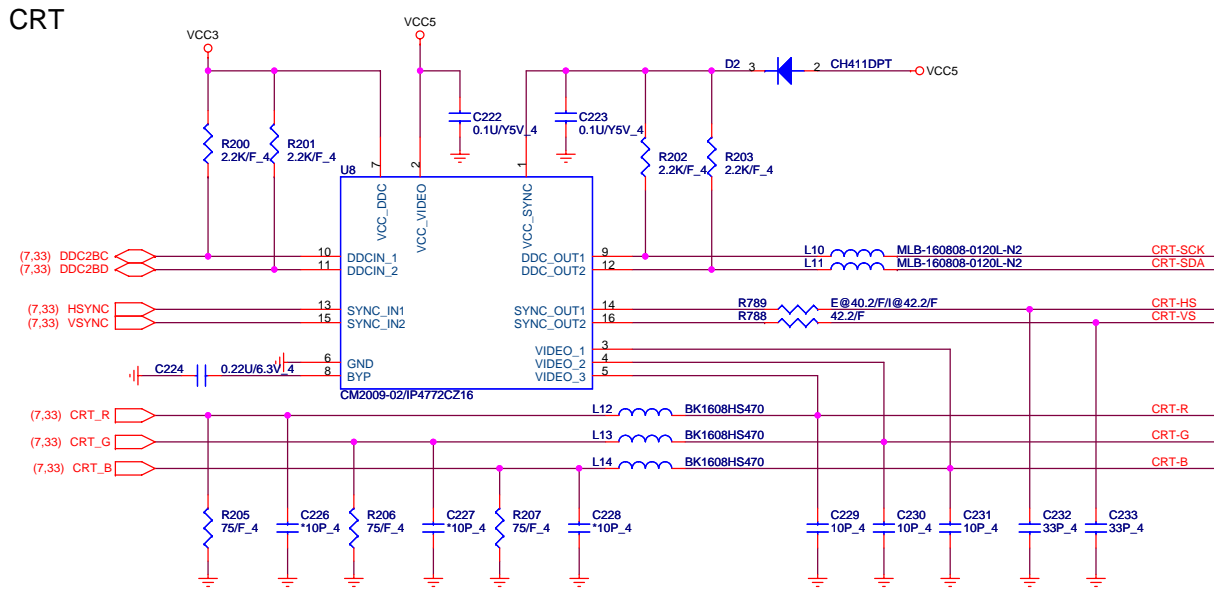
If use GMCH HDA  
VCC\_HDA to VCC1.5  
If use NB HDA  
VCC\_HDA to GND

CANTIGA\_1p0

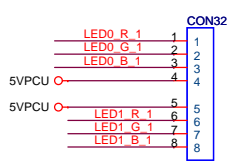
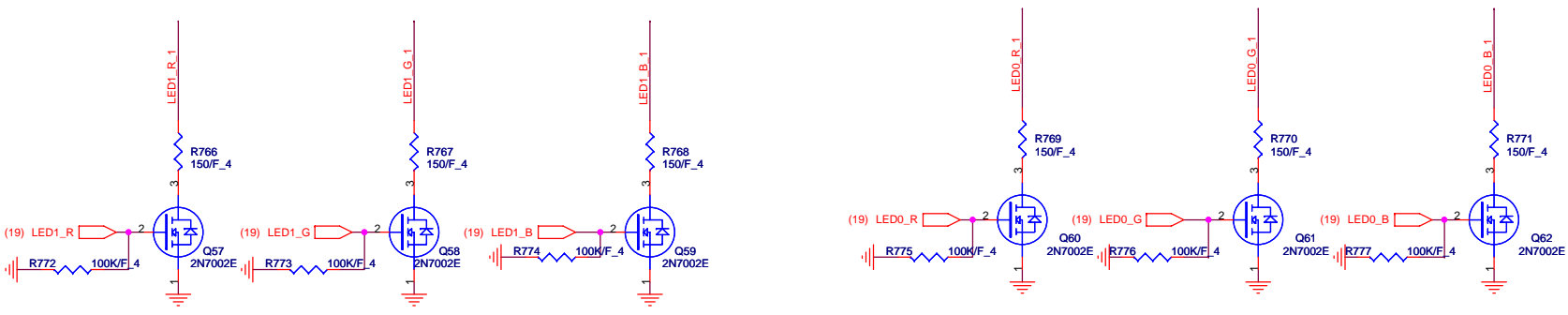
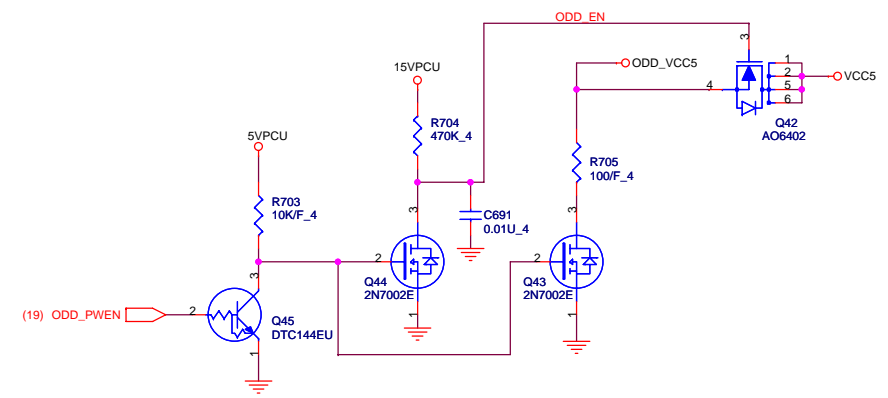
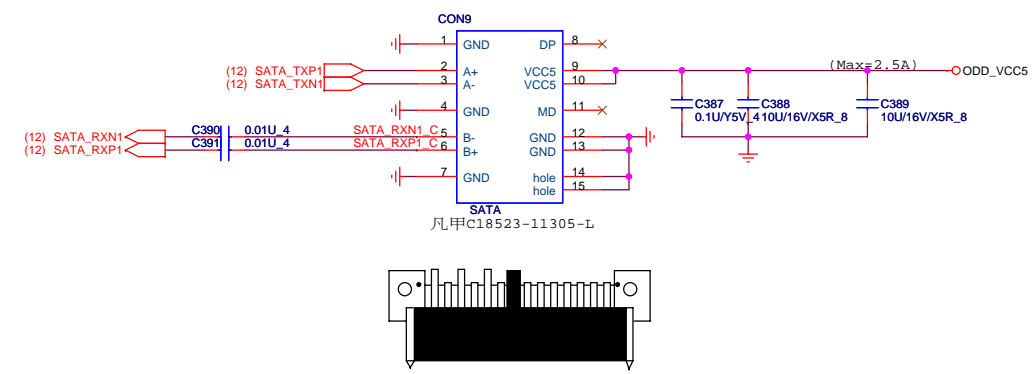
**QUANTA**  
COMPUTER

Title		
GMCH Power 5 of 5		
Size	Document Number	Rev 4A
GD2 Main Board		
Date	Saturday, May 24, 2008	Sheet 9 of 35

CRT



ODD CONNECTOR



7LEDA-(87212-0800L)

**QUANTA COMPUTER**

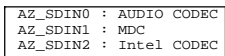
**CRT**

Size Custom Document Number **GD2 Main Board** Rev 4A

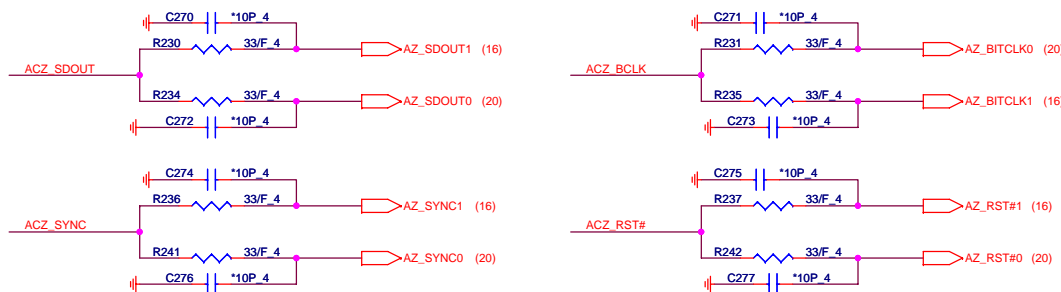
Date: Saturday, May 24, 2008 Sheet 10 of 35

1. Level 1 Environment-related Substances Should NEVER be Used.  
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



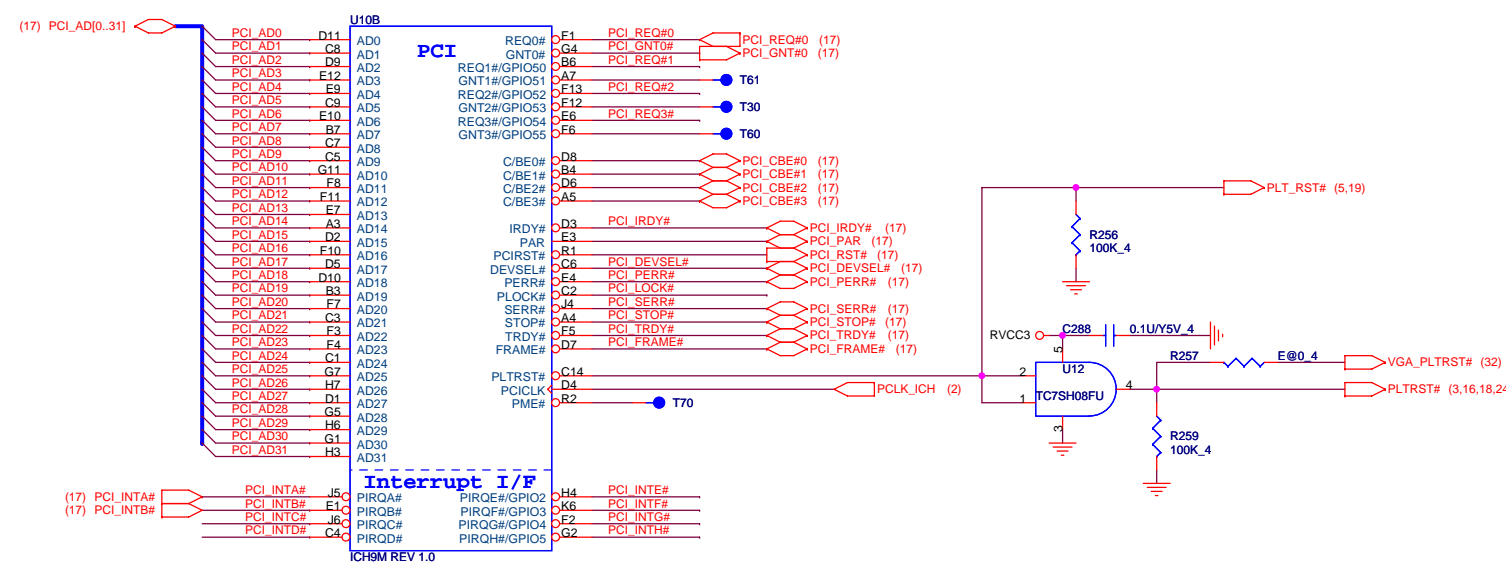
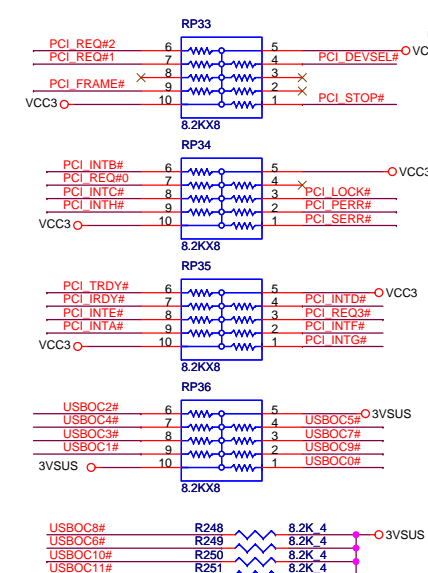
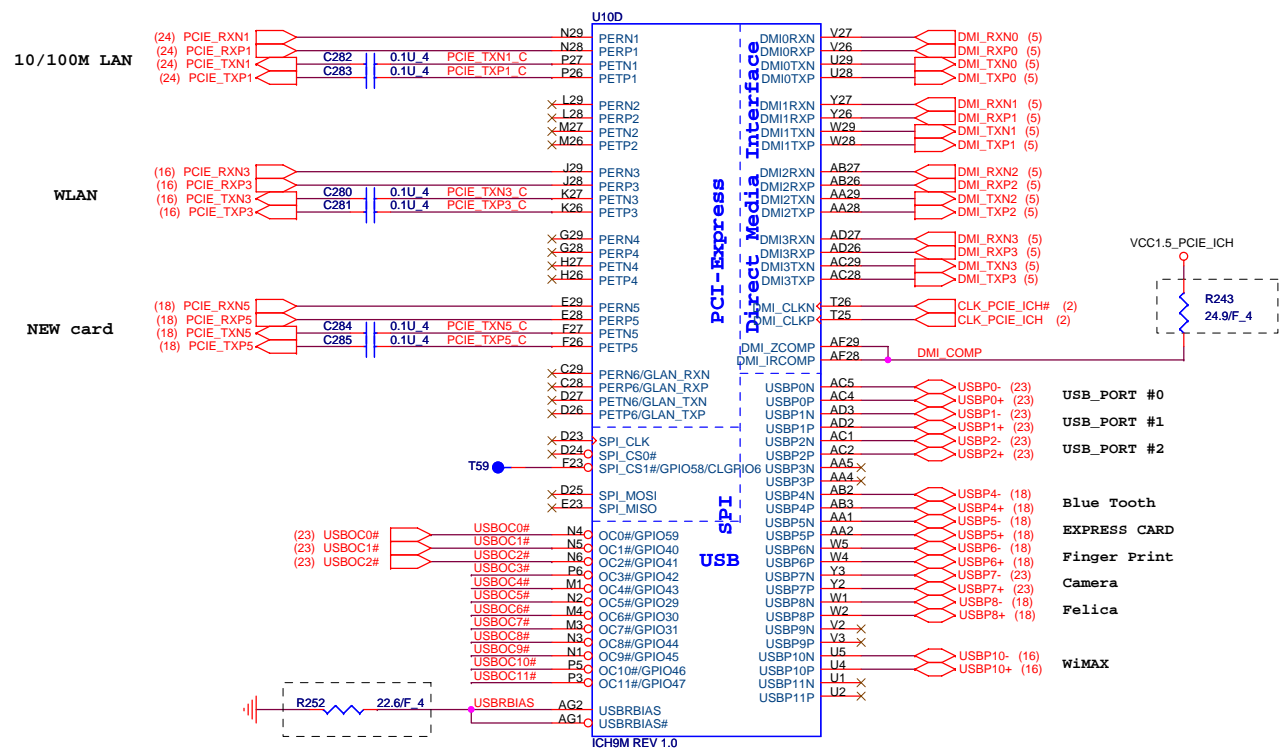


```
Internal VRM Enable for Vccsus1_05,  
VccSus1_5 , VccCL1_5, vccLAN1_05,vccCL1_05)
```

HD to Audio Codec / Modem / N.B

1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners






GPIO49 : NC GPIO20 : Can't pull high.		
--	--	--

**A16 SWAP Override strap**

PCI_GNT#3	Low = A16 swap override enabled High = Default
-----------	---

**ICH9 Boot BIOS select**

PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC (Default)



QUANTA  
COMPUTER

Title

ICH9-M PCIE 2 of 4

Size

Document Number

Rev 2A

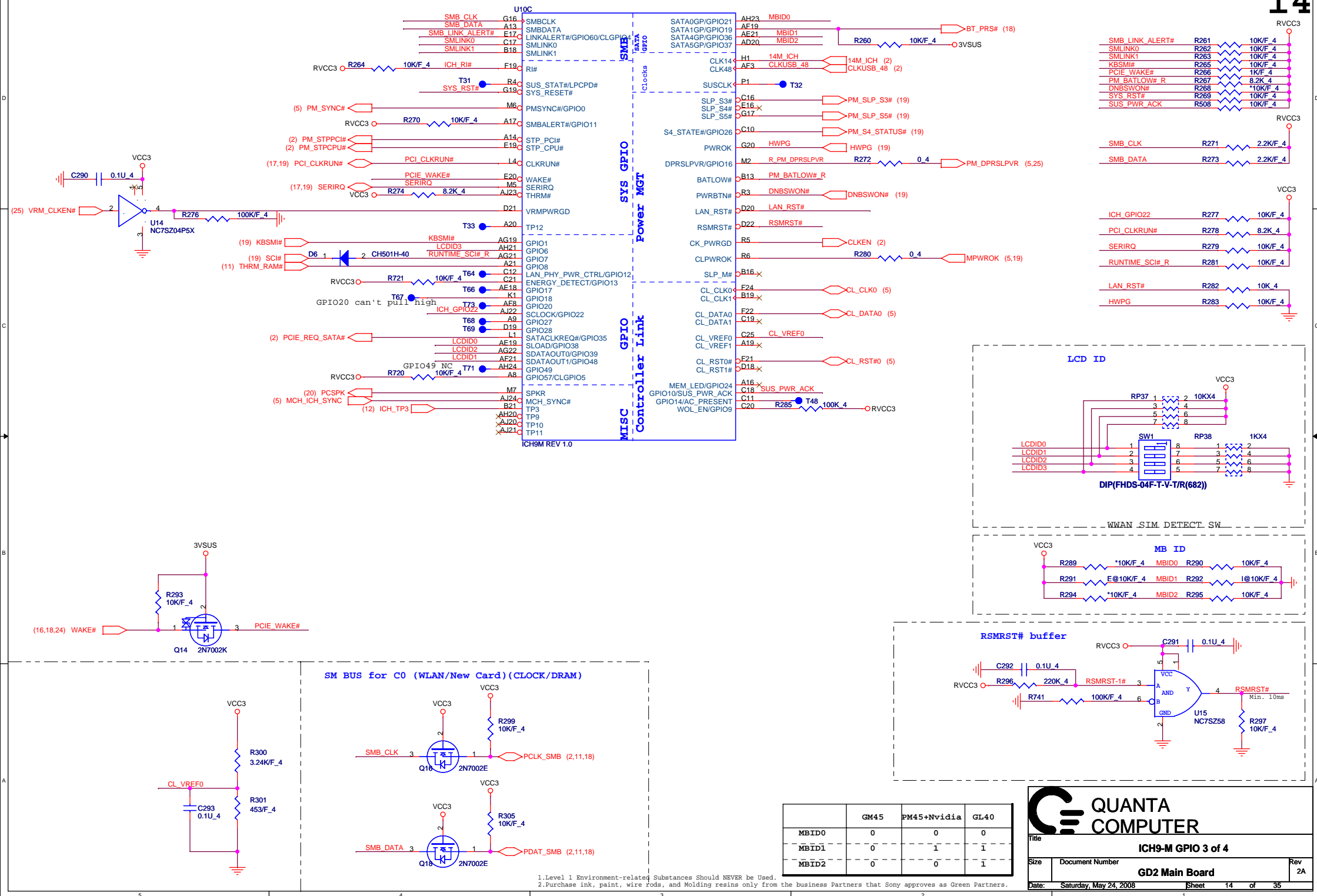
GD2 Main Board

Date

Saturday, May 24, 2008

Sheet 13 of 35

1.This part should not contain any substances which are specified in SS-00259-1  
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

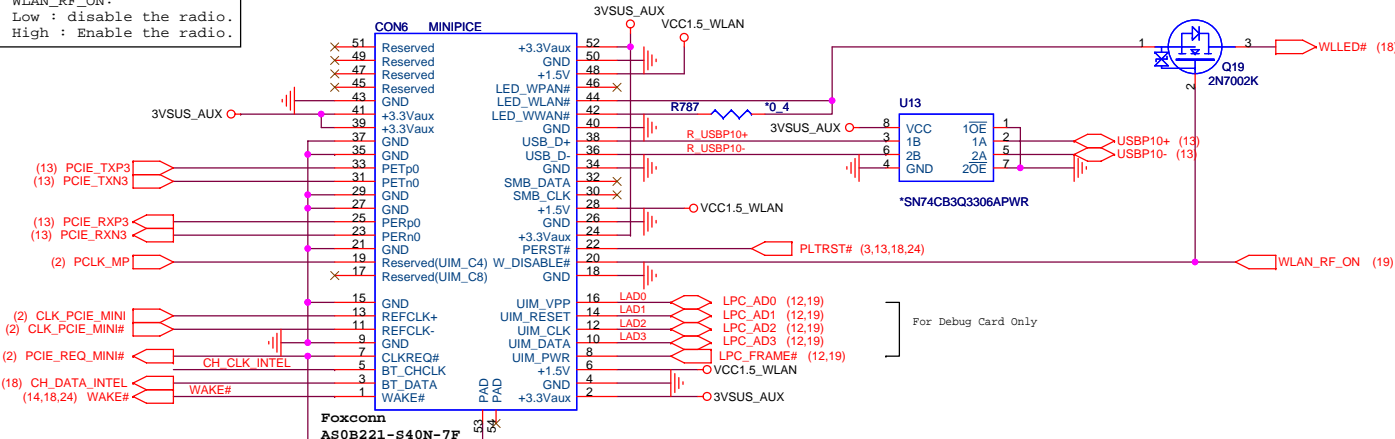




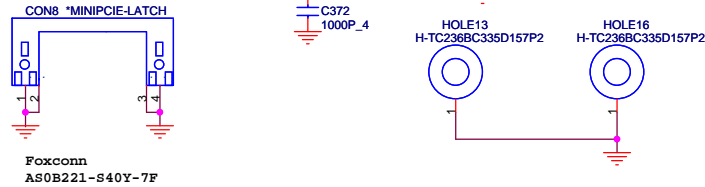
# Mini PCI-E Card FOR WL

16

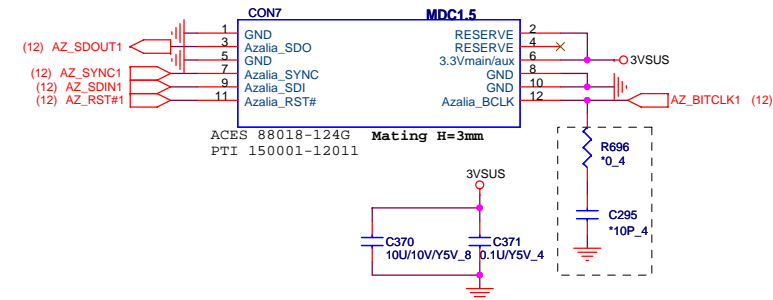
WLAN\_RF\_ON:  
Low : disable the radio.  
High : Enable the radio.



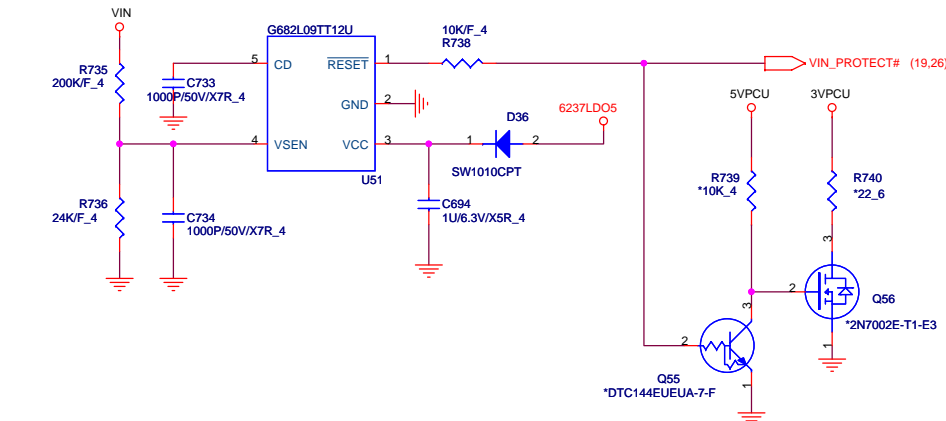
SM BUS ADDRESS	A6	A5	A4	A3	A2	A1	A0
CPU LM95245C1MM	1	0	0	1	1	0	0
EMC1402-1							
NB9MGS LM89-1/G781-1	1	0	0	1	1	0	1
DRAM G751-2P	1	0	0	1	0	0	0
Thermal G751-2P	1	0	0	1	0	0	1



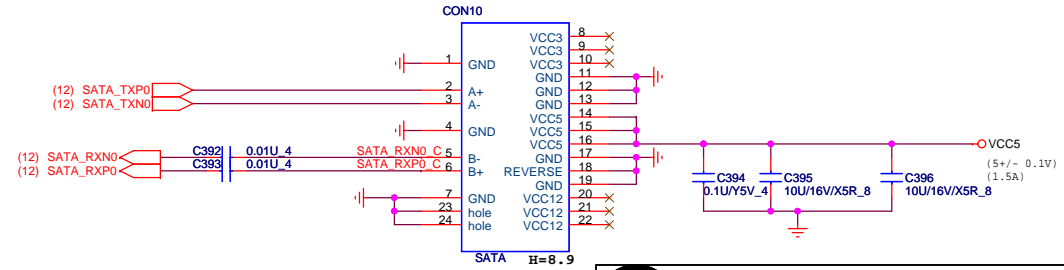
## MDC V1.5



## Reset Circuit



## HDD CONNECTOR



**QUANTA COMPUTER**

File: **MINIPCE / MDC**

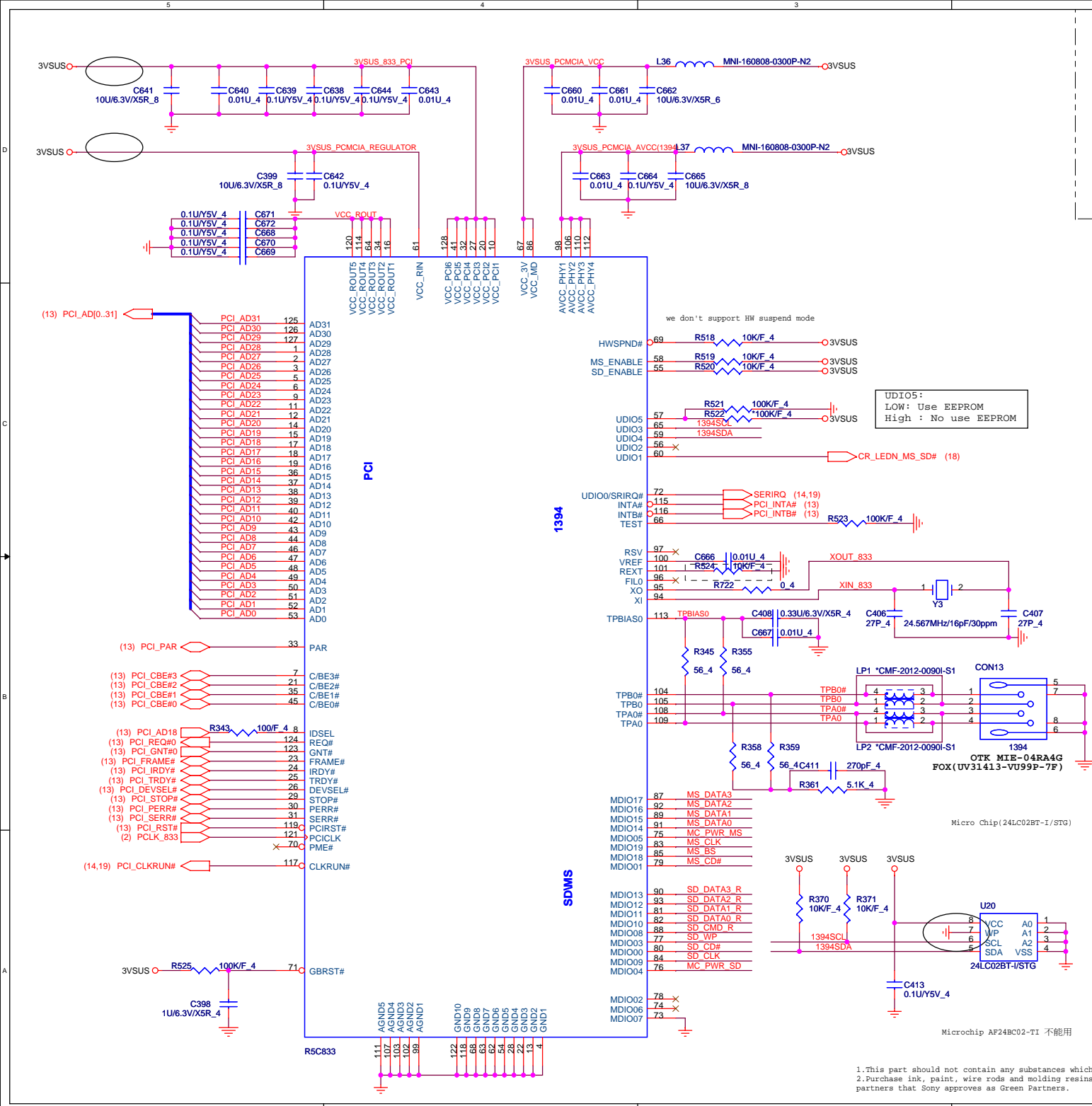
Size: **Document Number: GD2 Main Board**

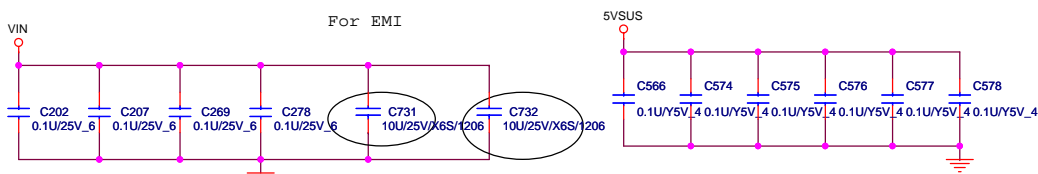
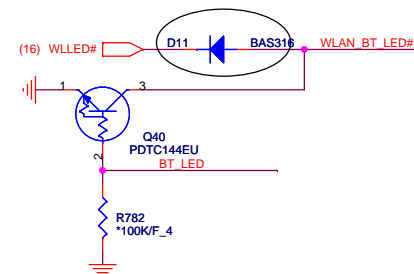
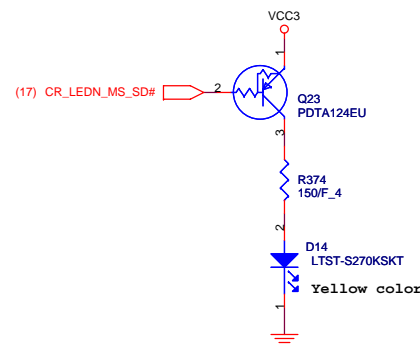
Date: **Saturday, May 24, 2008**

Sheet: **16 of 35**

Rev: **3A**

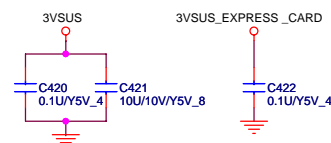
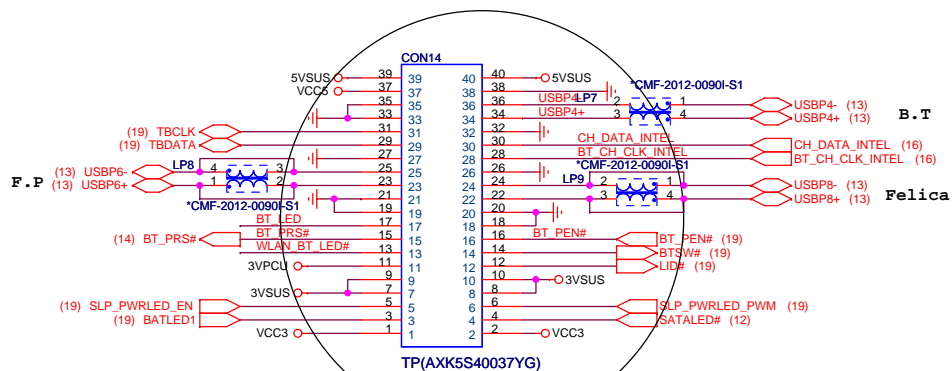
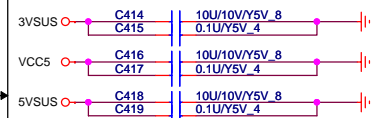






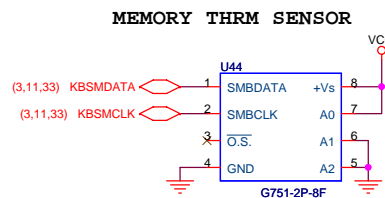
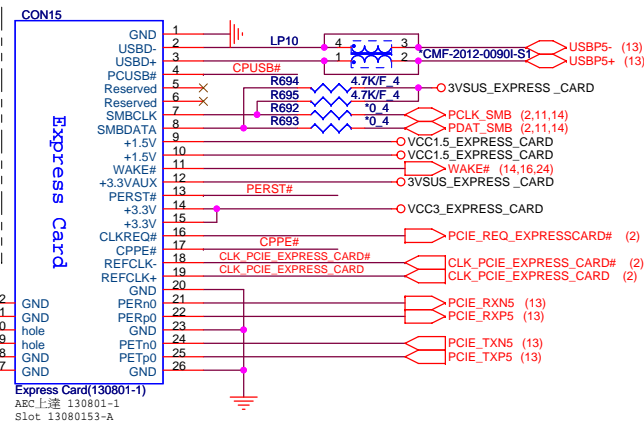
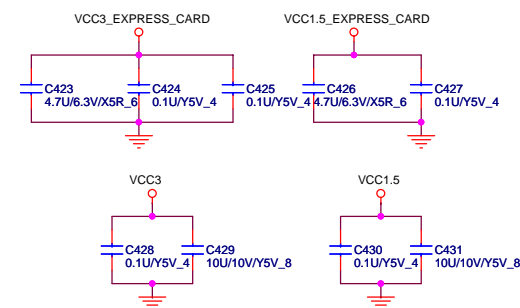
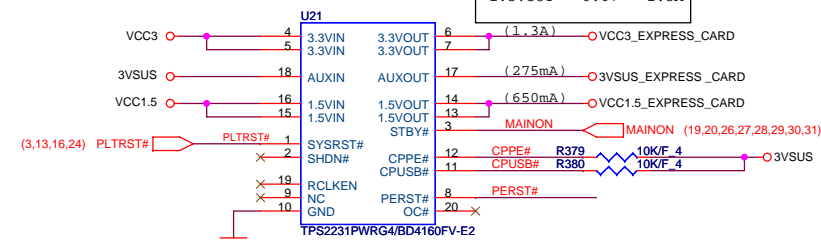
```
Two Color :
everylight : 19-22UYOSYGC(BEAG00282A0_
liteon : LTST-C195GKGFT(BEAG00323A0 )
Amber:
everylight : 19-21UYOC/S530-A6/TR8 (BEAB0015206)
liteon : LTST-C190KFKT (BEAB0006207)
Green :
everylight : 19-21SYGC/S530-E2/TR8(BEYG00532A2)
liteon : LTST-C190KGKT(BEGR0080207)
Yellow:
everylight : 19-21UYVC/S530-A2/TR8(BEYL0016208)
liteon : LTST-C190KSKT(BEYL0024201)
```

T/P to M/B (FPC)



## EXPRESS CARD

Short current:  
3.3VOUT : 1.35 ~ 2.5A  
AUXOUT : 0.275 ~ 0.6A  
1.5VOUT : 0.67 ~ 1.3A

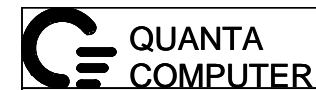
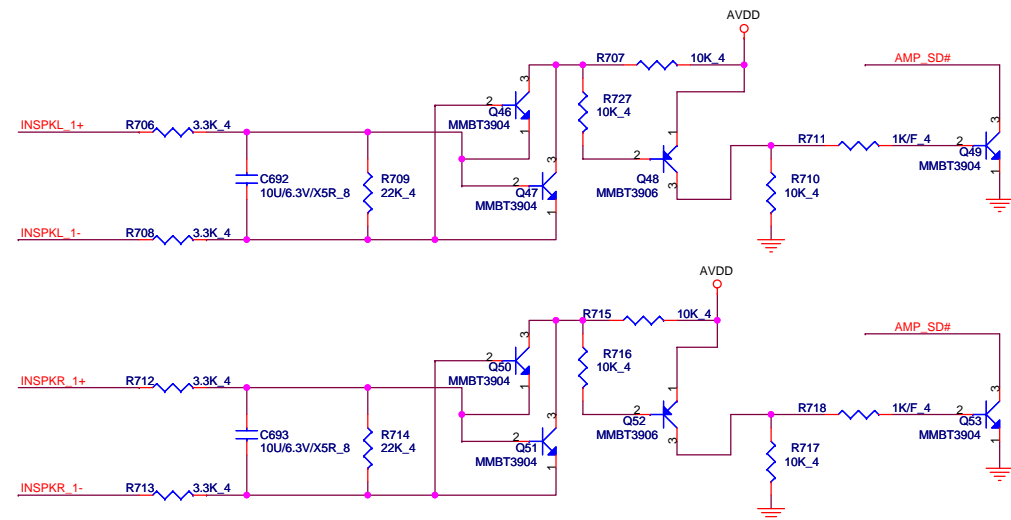
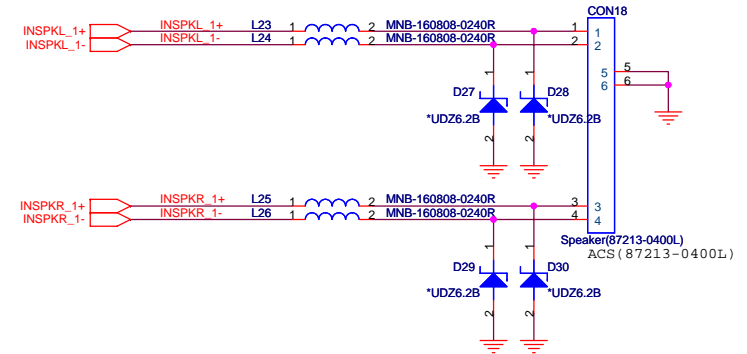
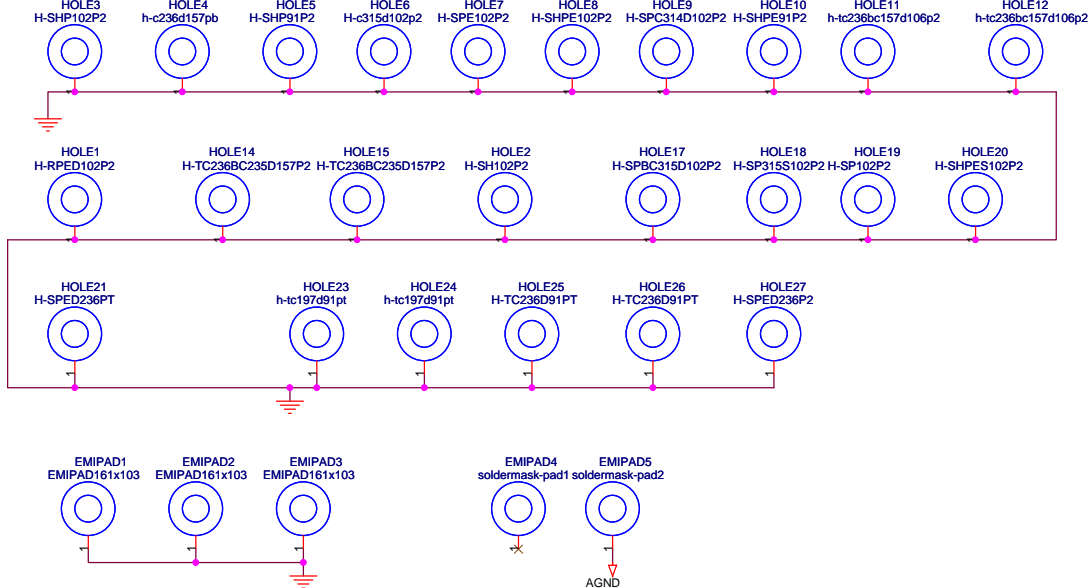
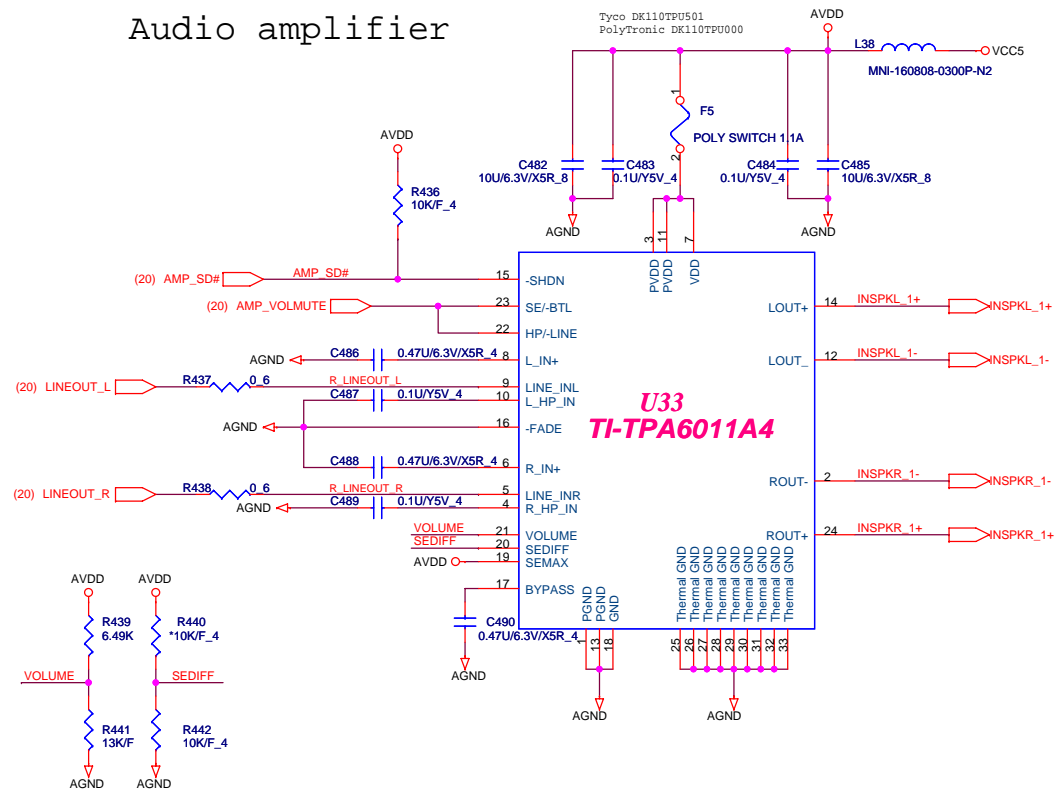




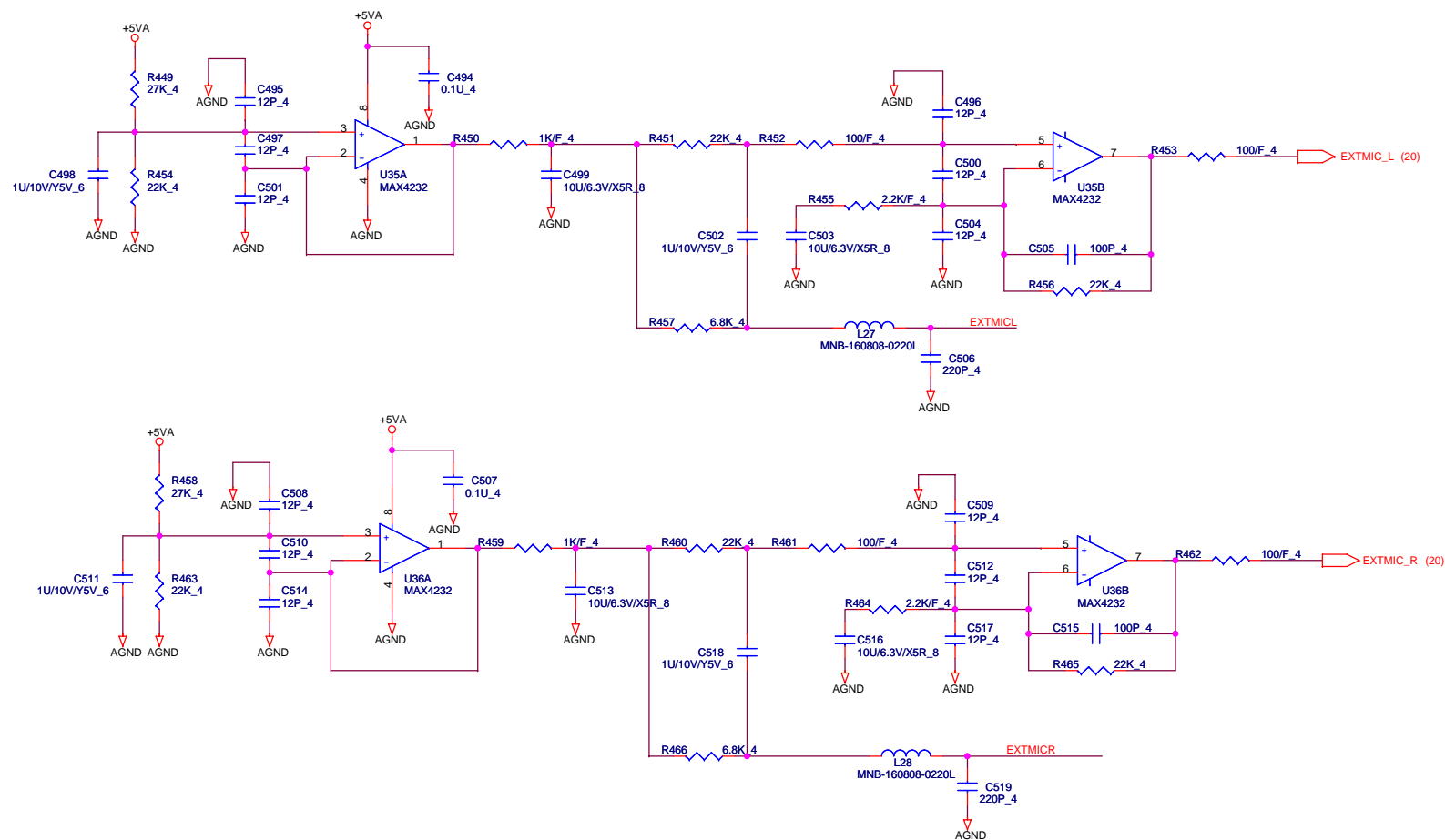




## Audio amplifier

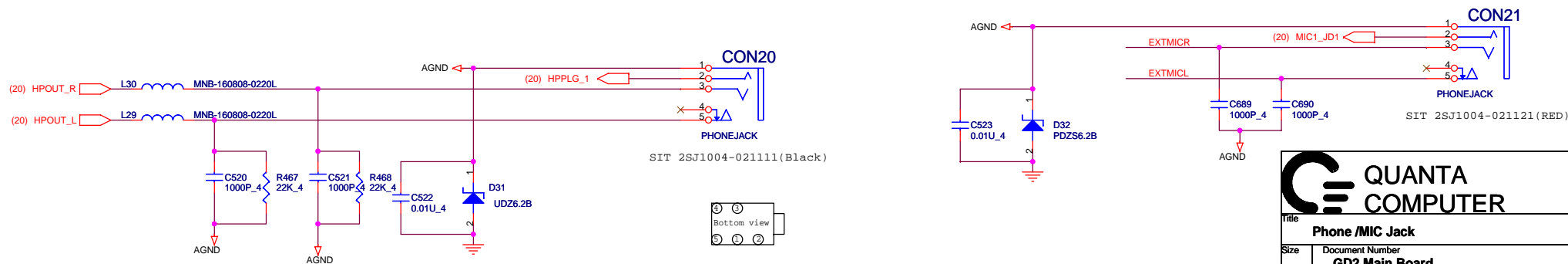


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## EXTERNAL PHONE

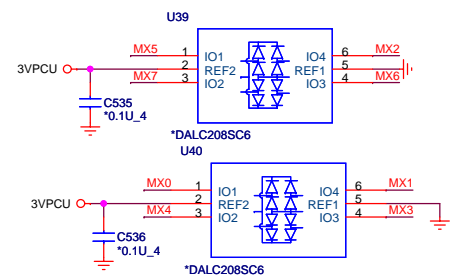
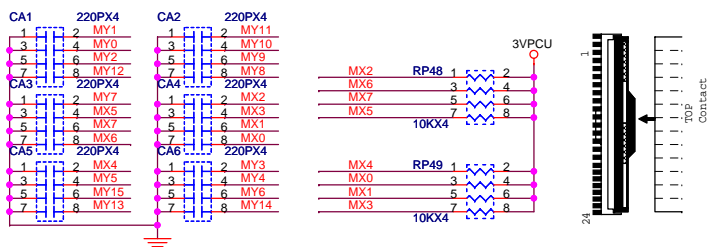
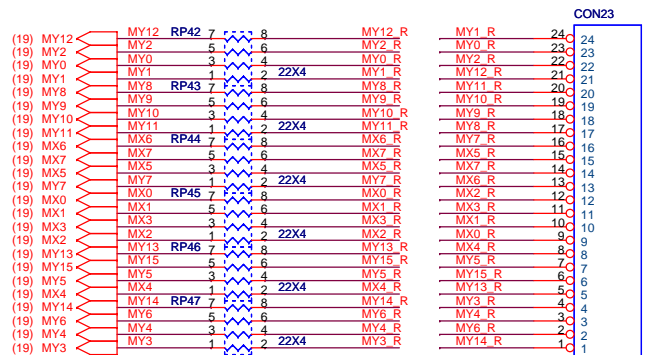
## EXTERNAL MIC



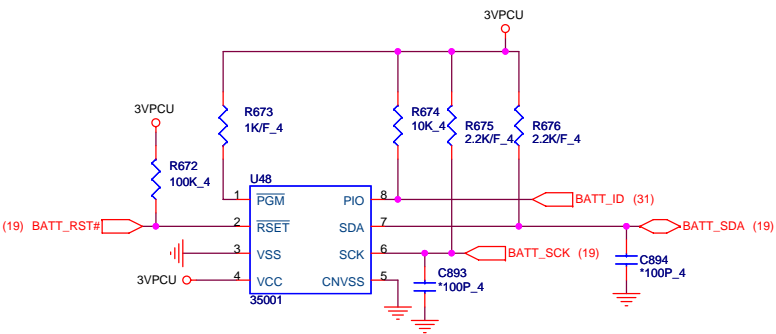
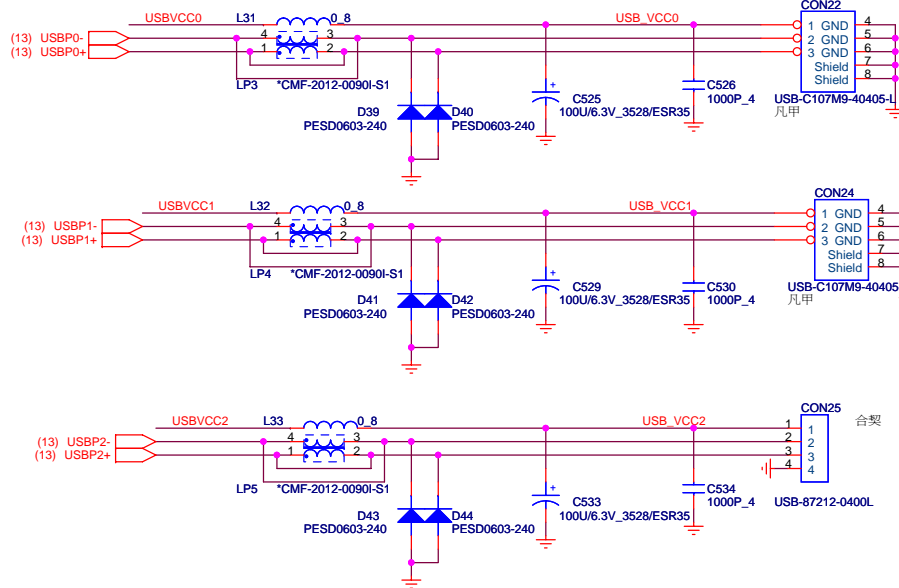
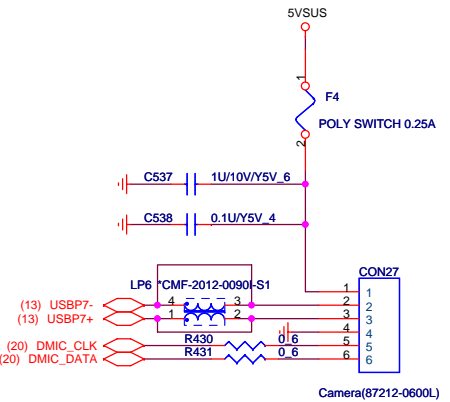
1. Level 1 Environment-related Substances Should NEVER be Used.  
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

<b>QUANTA COMPUTER</b>		
<b>Phone / MIC Jack</b>		
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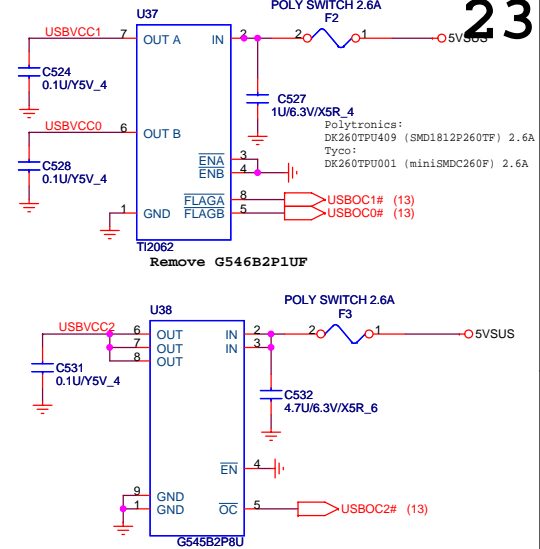
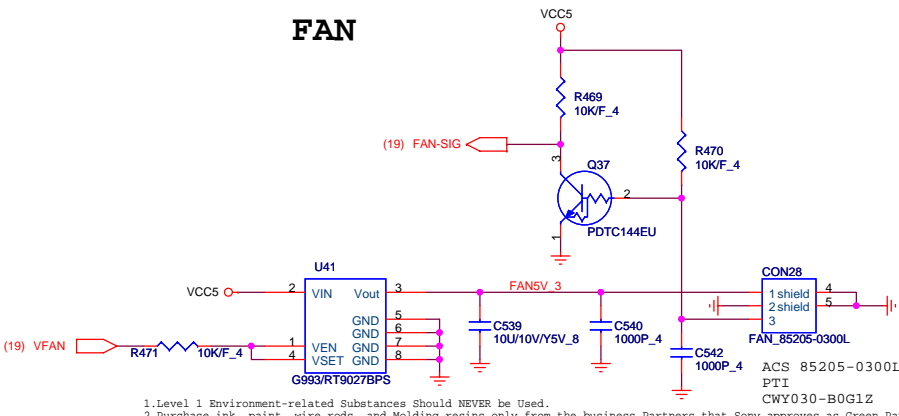
# KEYBOARD



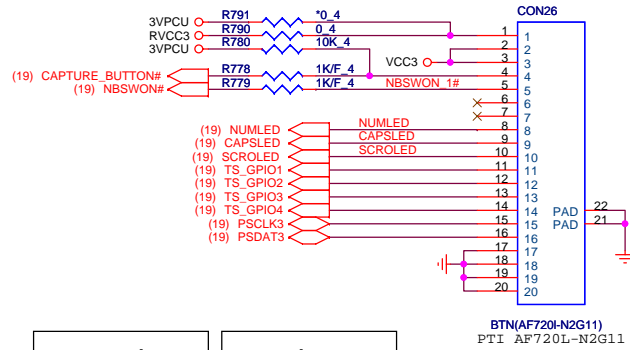
## USB Camera



## FAN



## Power SW BOARD

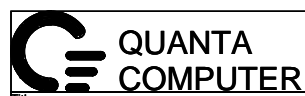


Aladdin :

VCC3  
PSCLK3  
PSDAT3  
TS\_GPIO3  
TS\_GPIO4  
GND

Merlin:

RVCC3  
TS\_GPIO1  
TS\_GPIO2  
GND

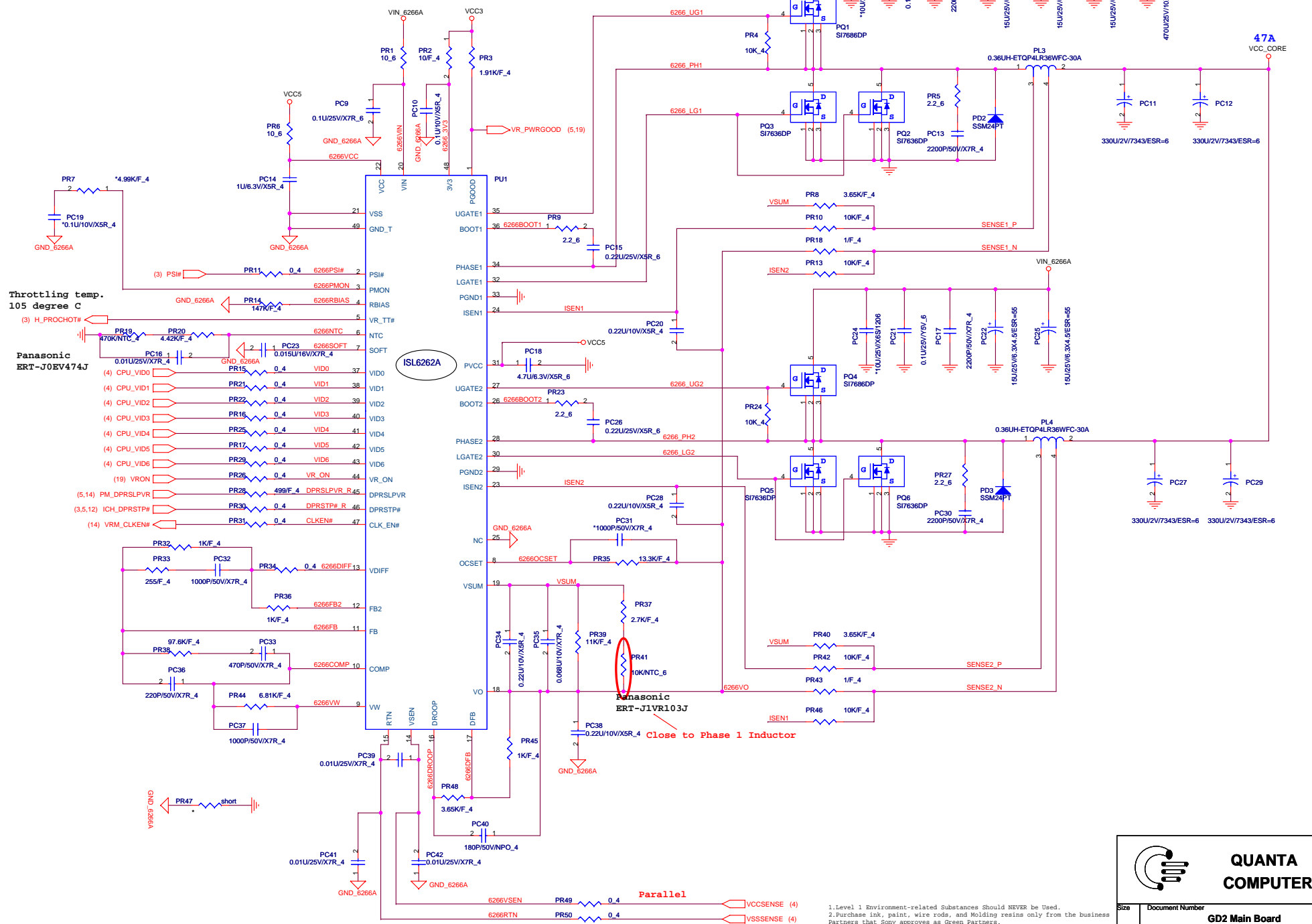


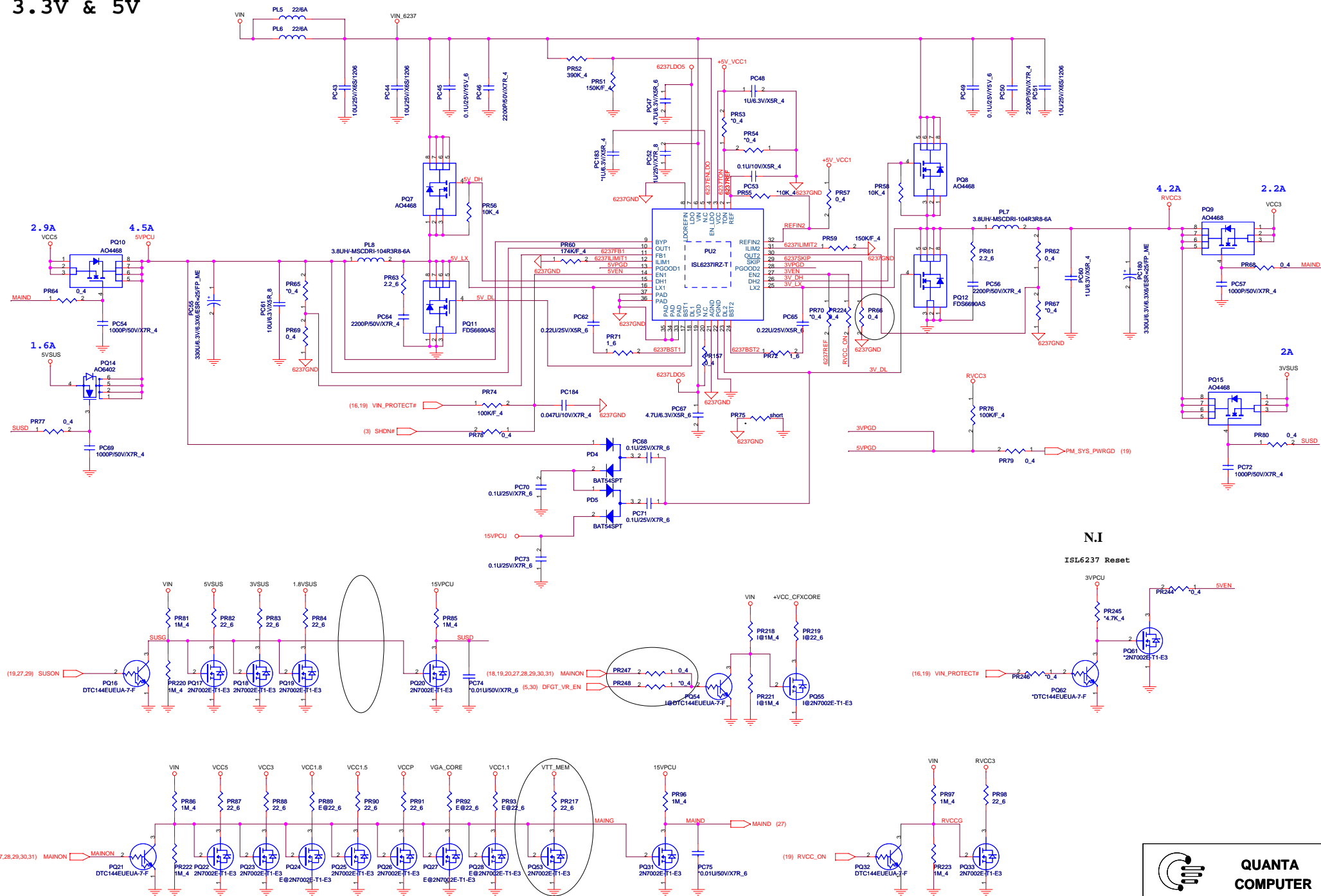
Title		K/B ,USB	
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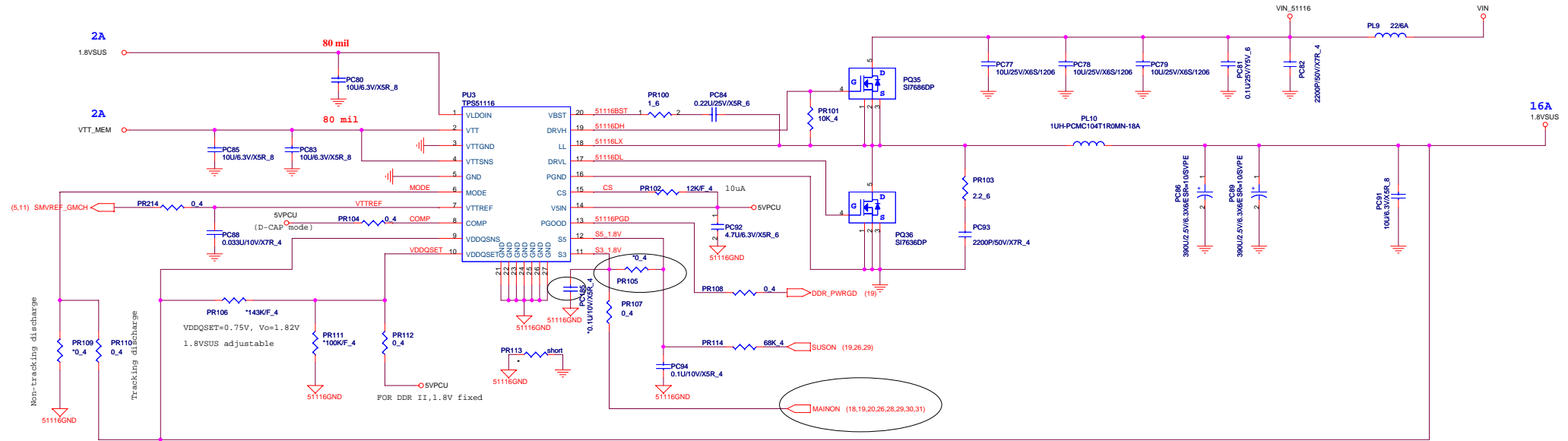


## CPU\_CORE





# 1.8VSUS & VTT\_MEM

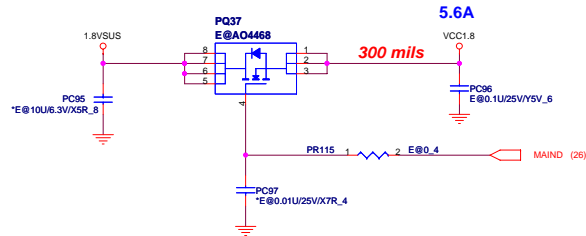


MODE	DISCHARGE MODE
+5V	No discharge
+1.8V	Tracking discharge
GND	Non-tracking discharge

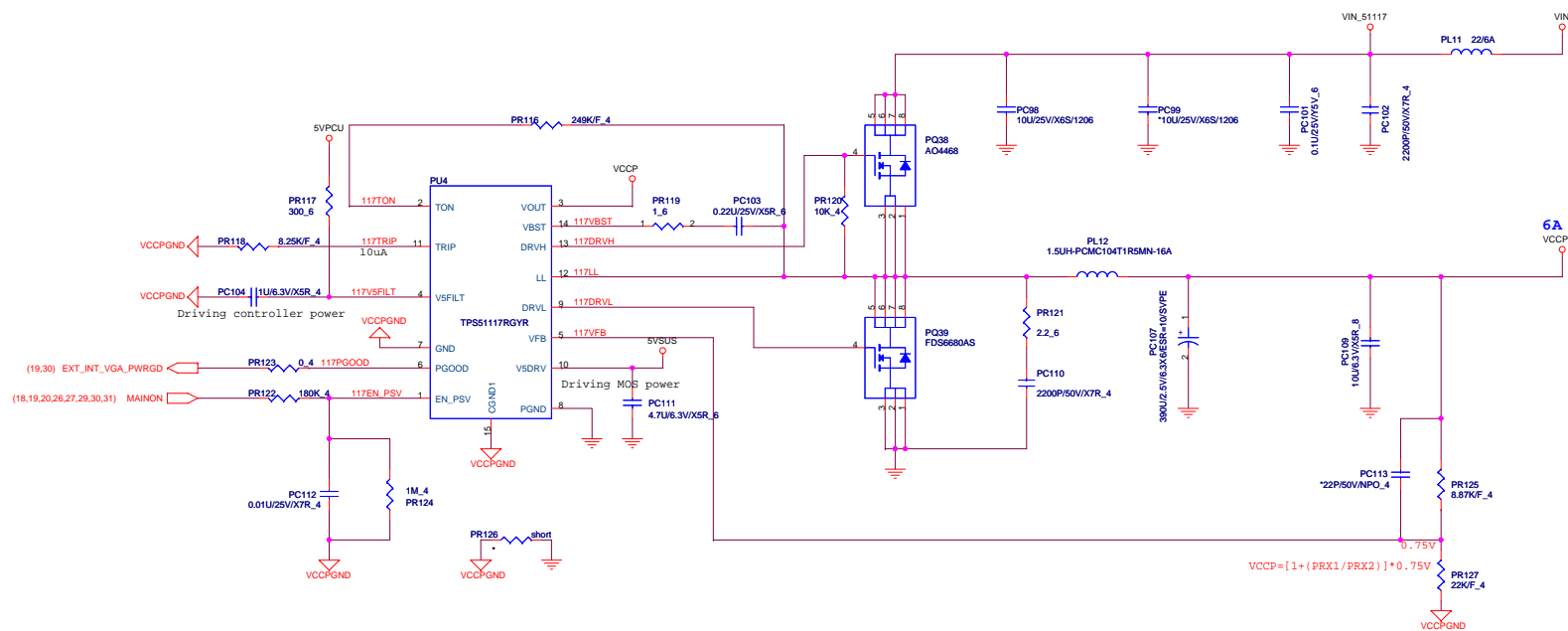
VDDQSET	VDDQ(V)	VTTREF & VTT	NOTE
GND	2.5 fixed	VDDQSNS/2	DDR
5V	1.8 fixed	VDDQSNS/2	DDR2
FB-Resistor	Adjustable	VDDQSNS/2	1.5V<VDDQ<3V

VTT = VTTREF = VDDQSNS/2 = 0.9V

STATE	S3	S5	1.8VSUS	VTTREF	VTT
S0	1	1	on	on	on
S3	0	1	on	on	off
S4/S5	0	0	off	off	off



## VCCP



**QUANTA  
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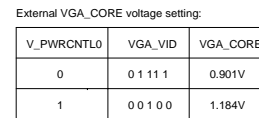
VCC1.1

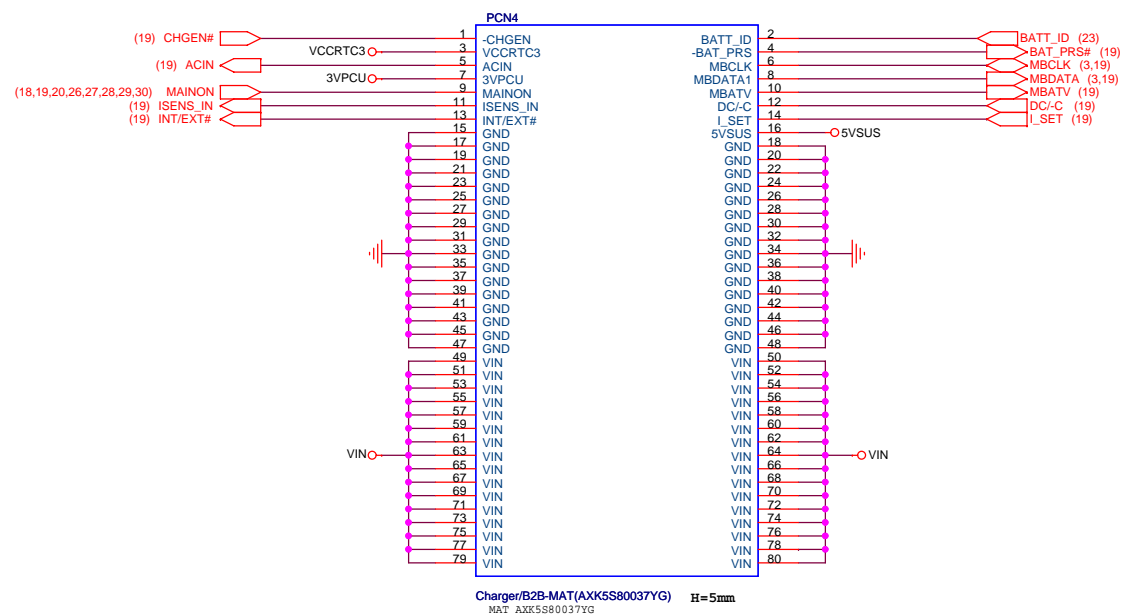


VCC1.5



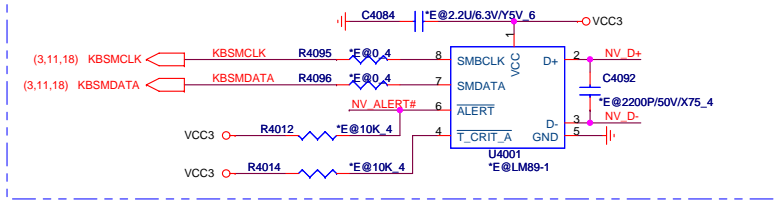








# NB9M-GS Thermal Sensor



Logical Strap Bit Mapping

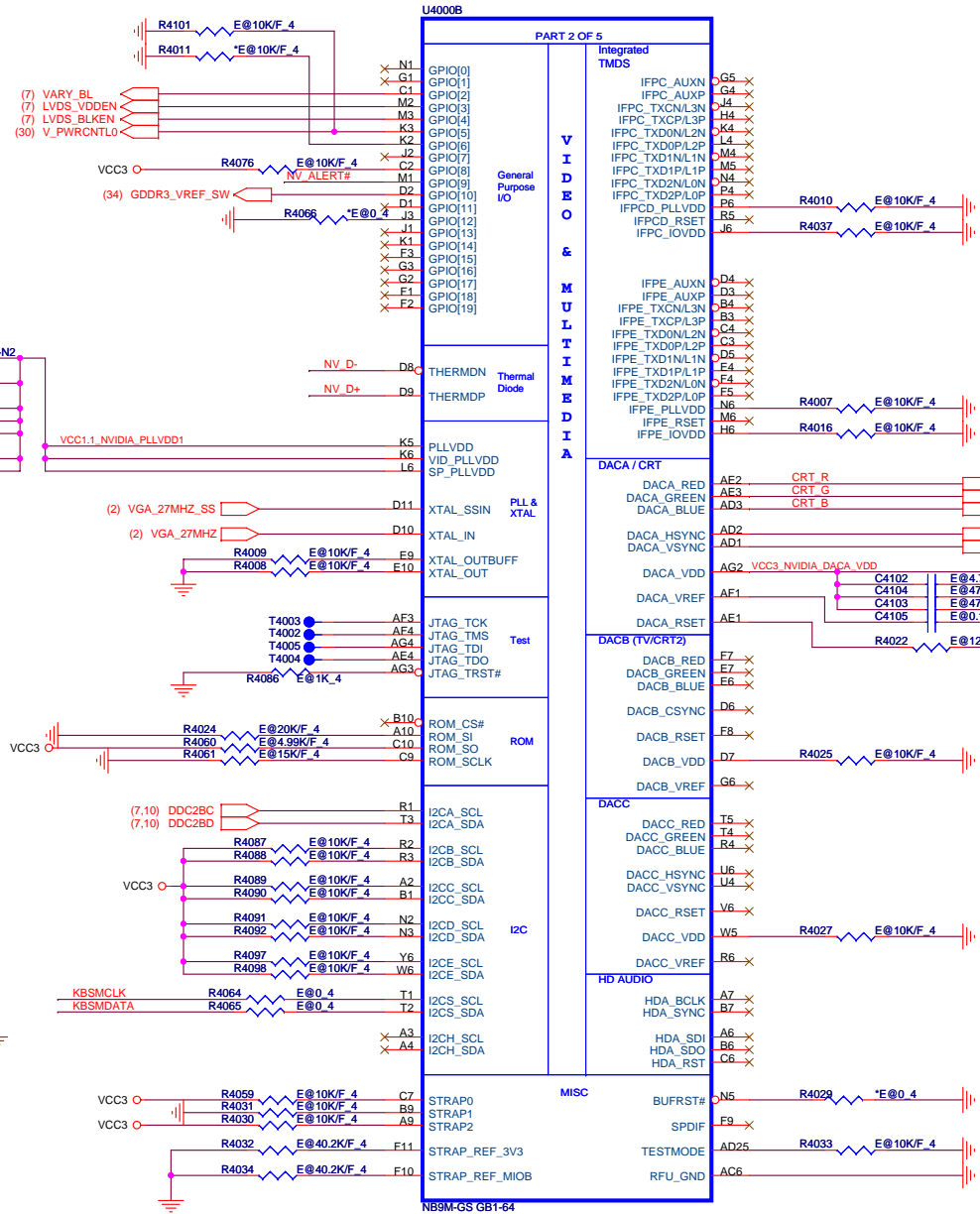
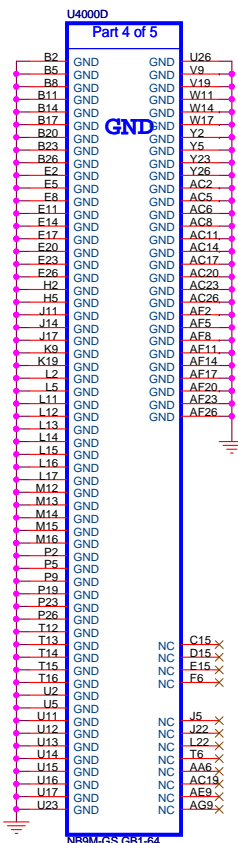
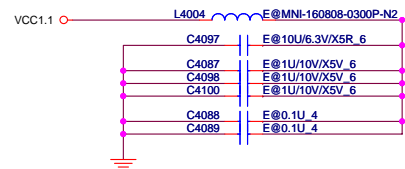
Resistor Value	Pull to VDD	Pull to GND
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

Strap Bit Define

Straps	Bit 3	Bit 2	Bit 1	Bit 0
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
ROM_SO	XCLK_277	TVMODE[2]	TVMODE[1]	TVMODE[0]
ROM_SCLK	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG	PEX_PLL_EN_TERM100
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	3GIO_PADCFG	3GIO_PADCFG	3GIO_PADCFG	3GIO_PADCFG
	[3]	[2]	[1]	[0]
STRAP2	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]

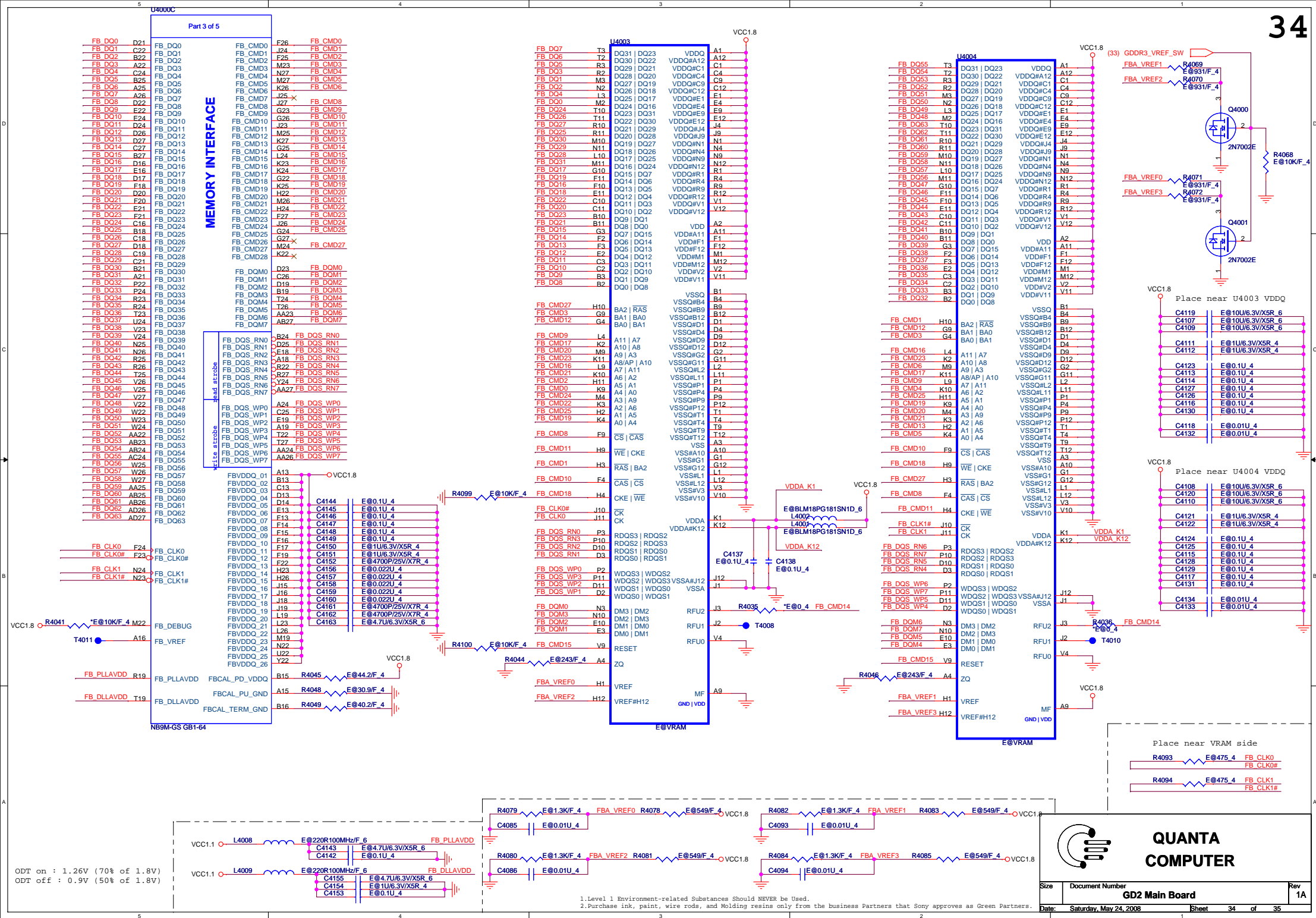
VRAM Strap:ROM\_SI ; RAMCFG[x]

VRAM Vender	ID	R4024
Infineon	0001	PD 10K
Hynix	0010	PD 15K
Samsung	0011	PD 20K



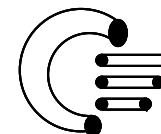
**QUANTA  
COMPUTER**

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\* Delete RP1,RP2,RP3,RP6,RP7,RP9,RP10,RP11.(P2)  
\* Delete R56(P3)  
\* Delete R69(P4)  
\* Delete R726,R725(P7)  
  
\* R789 change value to E@40.2F/I@42.2F.(P10)  
\* R788 change value to 42.2F.(P10)  
\* Delete R516,R517(P17)  
\* U20 pin 7 pull low.(P17)  
\* C731,C732 change from 0805 to 1206(P18)  
\* CON14 change to BtB connector.(easy for ASSY)(P18)  
\* Add D11(P18)  
\* Change net BSW to BSW# (P18)  
\* Change net BSW to BSW# (P19)  
\* R434 change value from 28.7K/F to 27K/F.(P20)  
\* Add PR66 to enable "Skip" mode for 3V/5V. (P26)  
\* Change PQ53 pin2 from SUSG to MAING. (P26)  
\* Change PR107 connection to MAINON / reserve PR105,PC185. (P27)



**QUANTA  
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