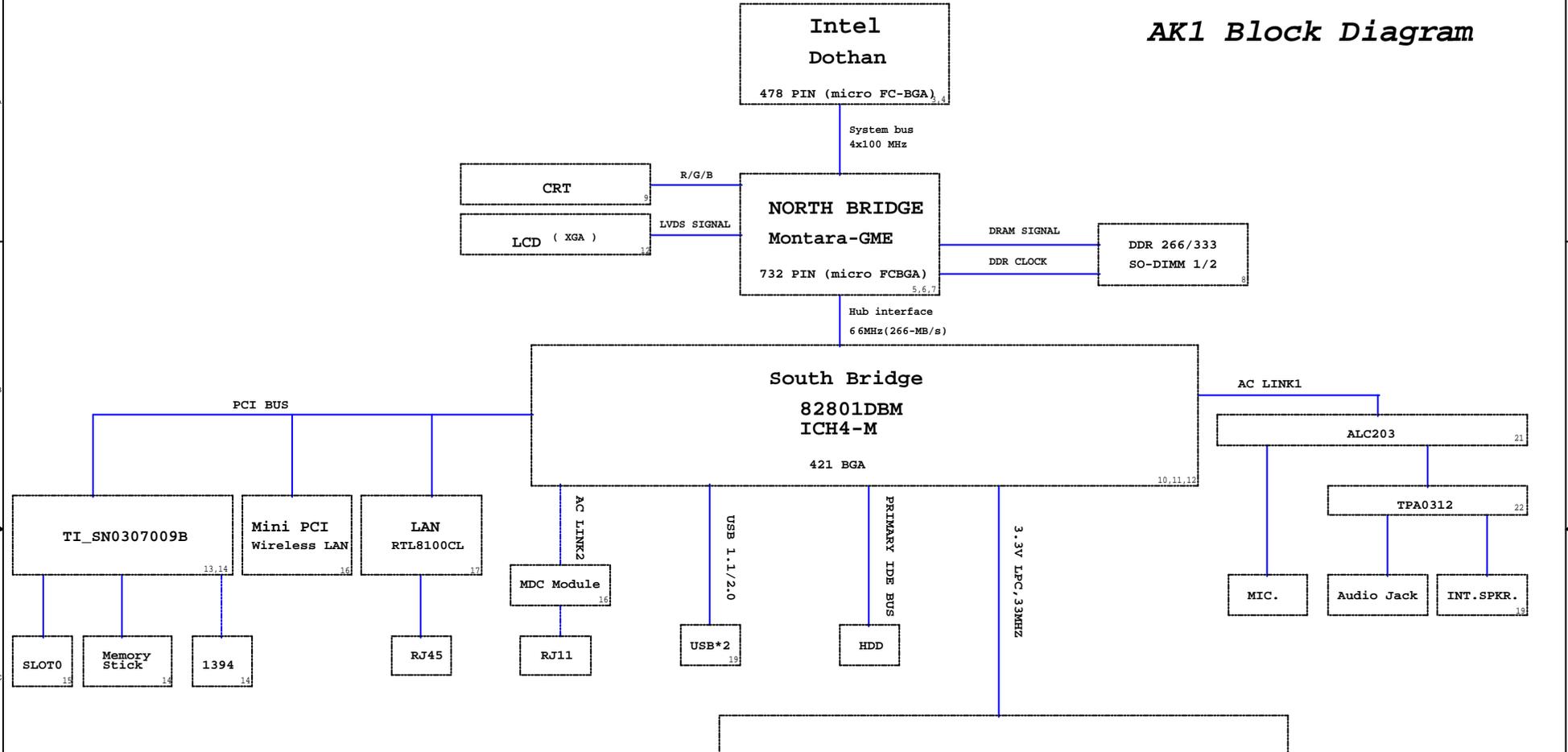
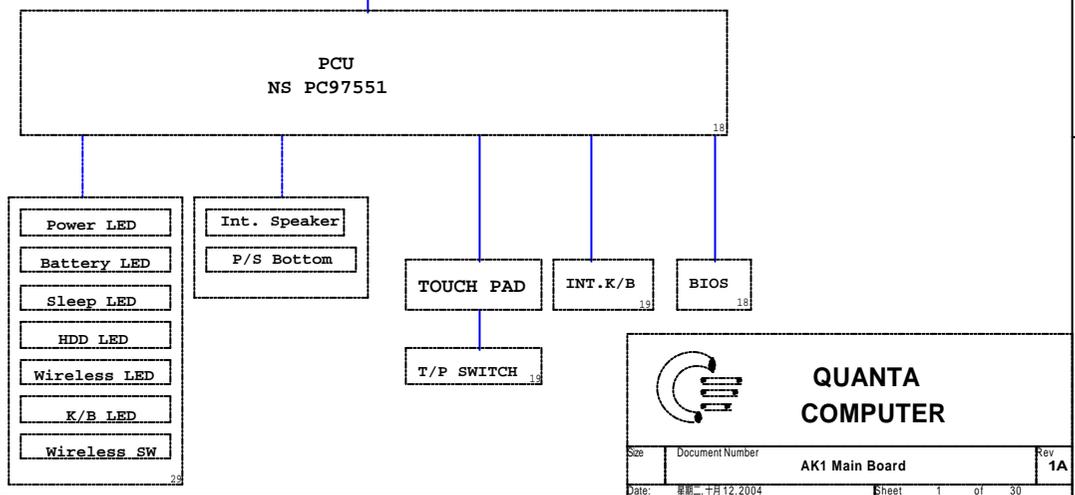
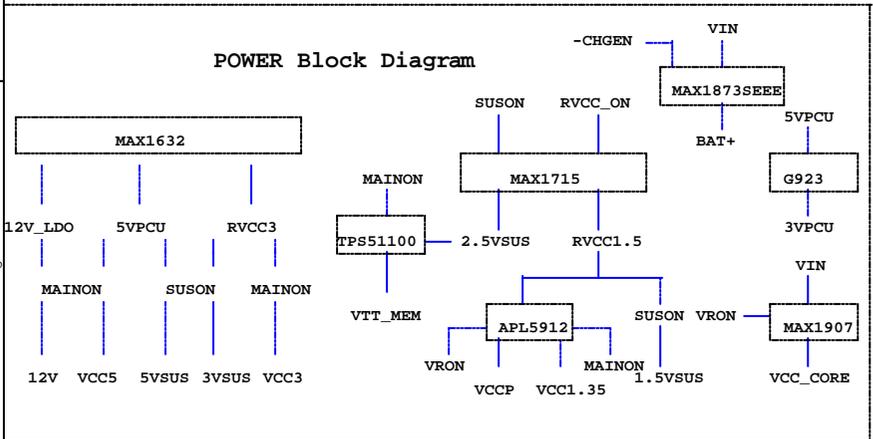


# AK1 Block Diagram



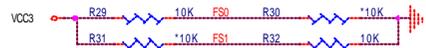
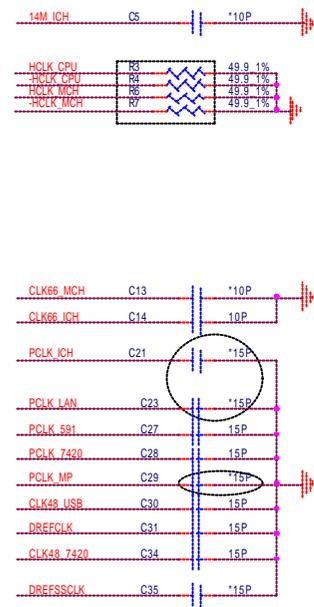
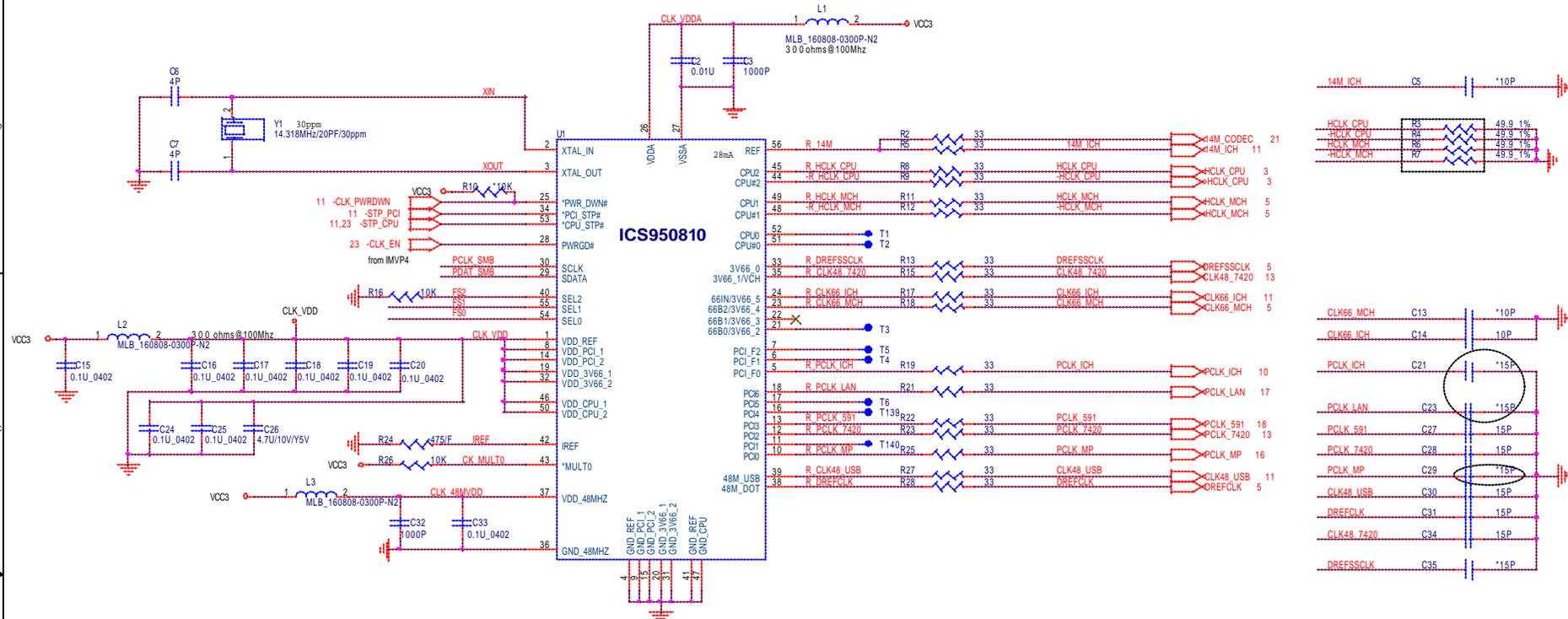
## POWER Block Diagram



**QUANTA COMPUTER**

Size Document Number AK1 Main Board Rev 1A

Date: 2004.12.10 Sheet 1 of 30



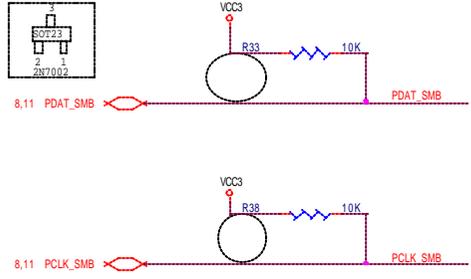
**CPUCLOCK IREF SETUP:**

CK_MULT0	IREF	Output Current
0	221 1% Iref=5mA	Ioh = 4*IREF
1	475 1% Iref=2.32mA	Ioh = 6*IREF

X : Pull high or pull low  
Mid : Pin float

FS2	FS1	FS0	CPU	3V66[5:0]	PCI_F[2:0]
X	0	0	166.66	66.66	33.33
* X	0	1	<b>100.00</b>	<b>66.66</b>	<b>33.33</b>
X	1	0	200.00	66.66	33.33
X	1	1	133.33	66.66	33.33
Mid	0	0	Tristate	Tristate	Tristate
Mid	0	1	TCLK/2	TCLK/4	TCLK/8
Mid	1	0	Reserved	Reserved	Reserved
Mid	1	1	Reserved	Reserved	Reserved

\* : Internal pull-up resistor  
\*\* : Internal pull-down resistor



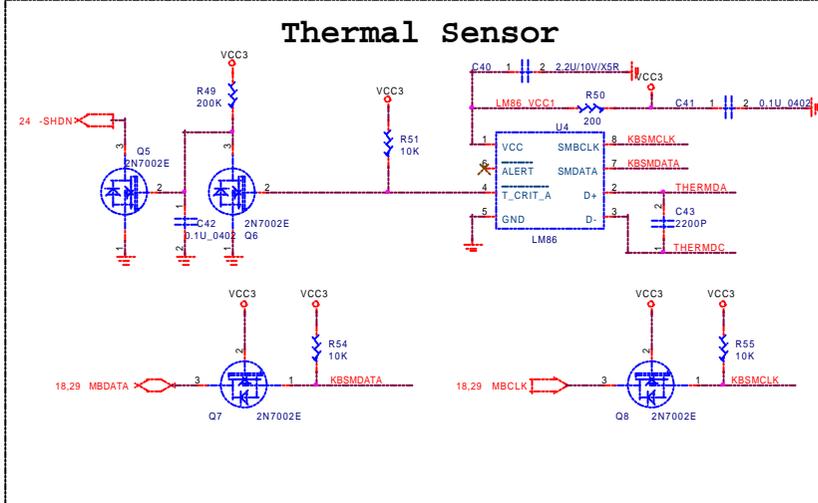
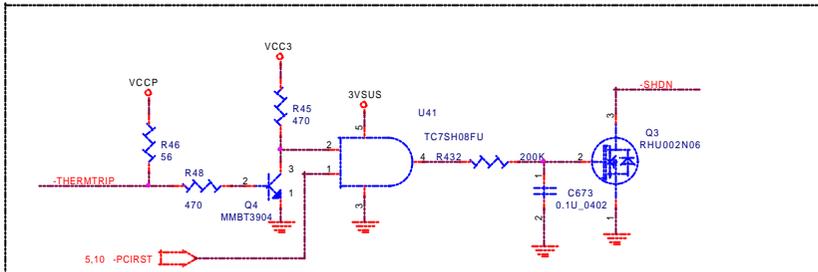
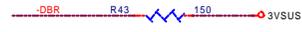
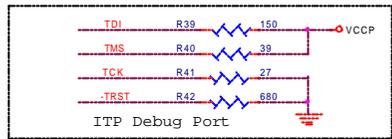
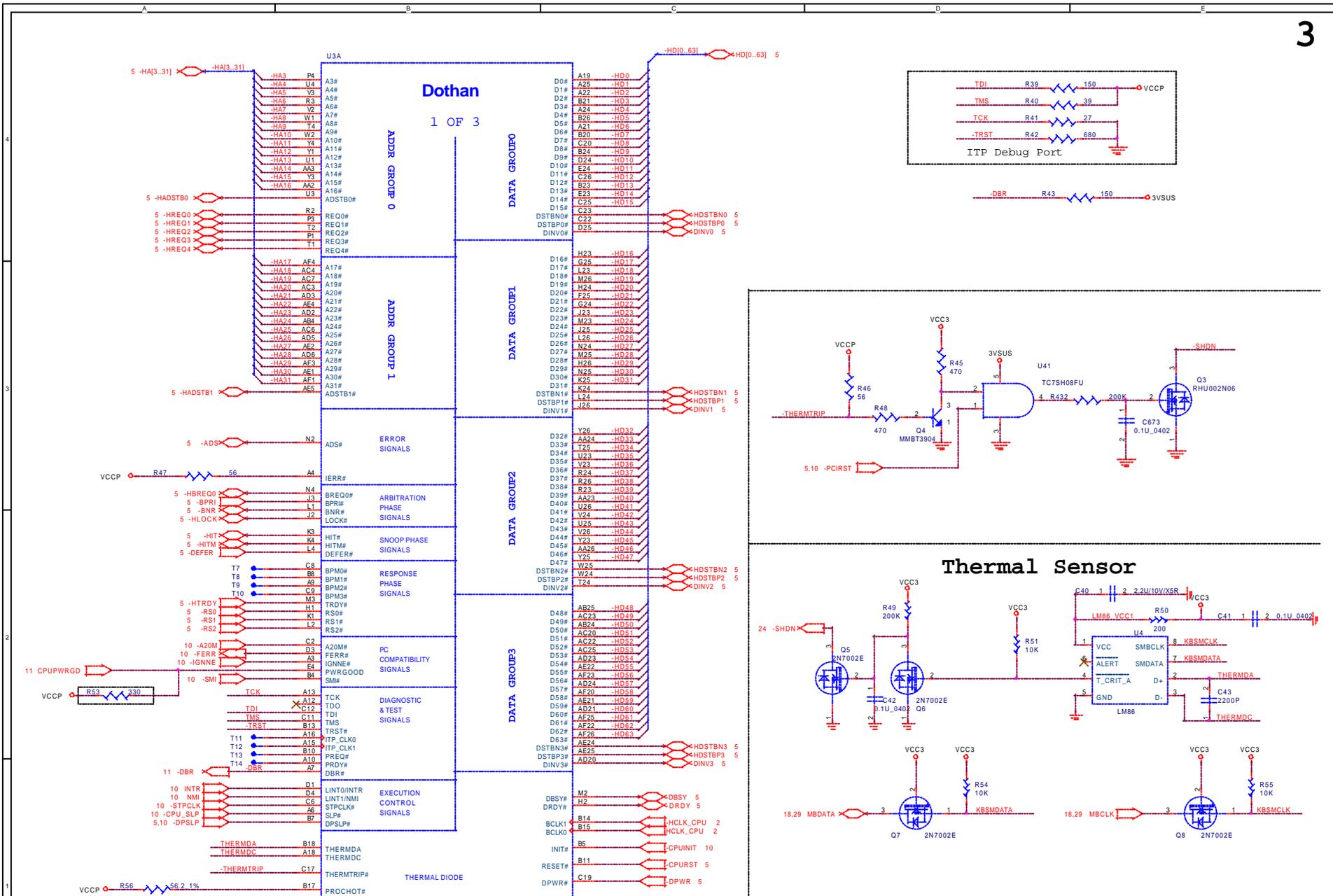
1. This part should not contain any substances which are specified in SS-00259-1  
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

**QUANTA COMPUTER**

Document Number: **CLOCK GENERATOR**

AK1 Main Board

Date: 2004.12.17 Sheet 2 of 30



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.

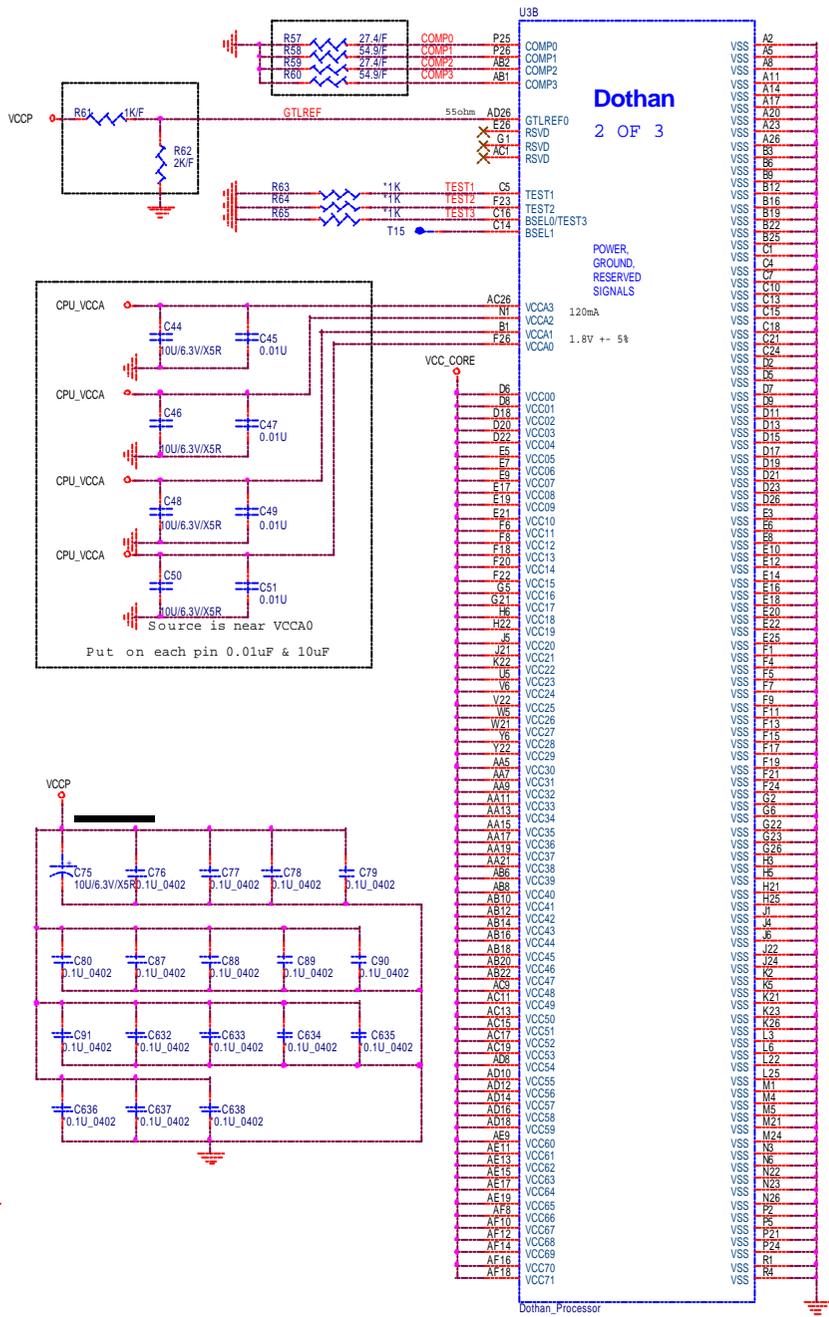
**QUANTA COMPUTER**

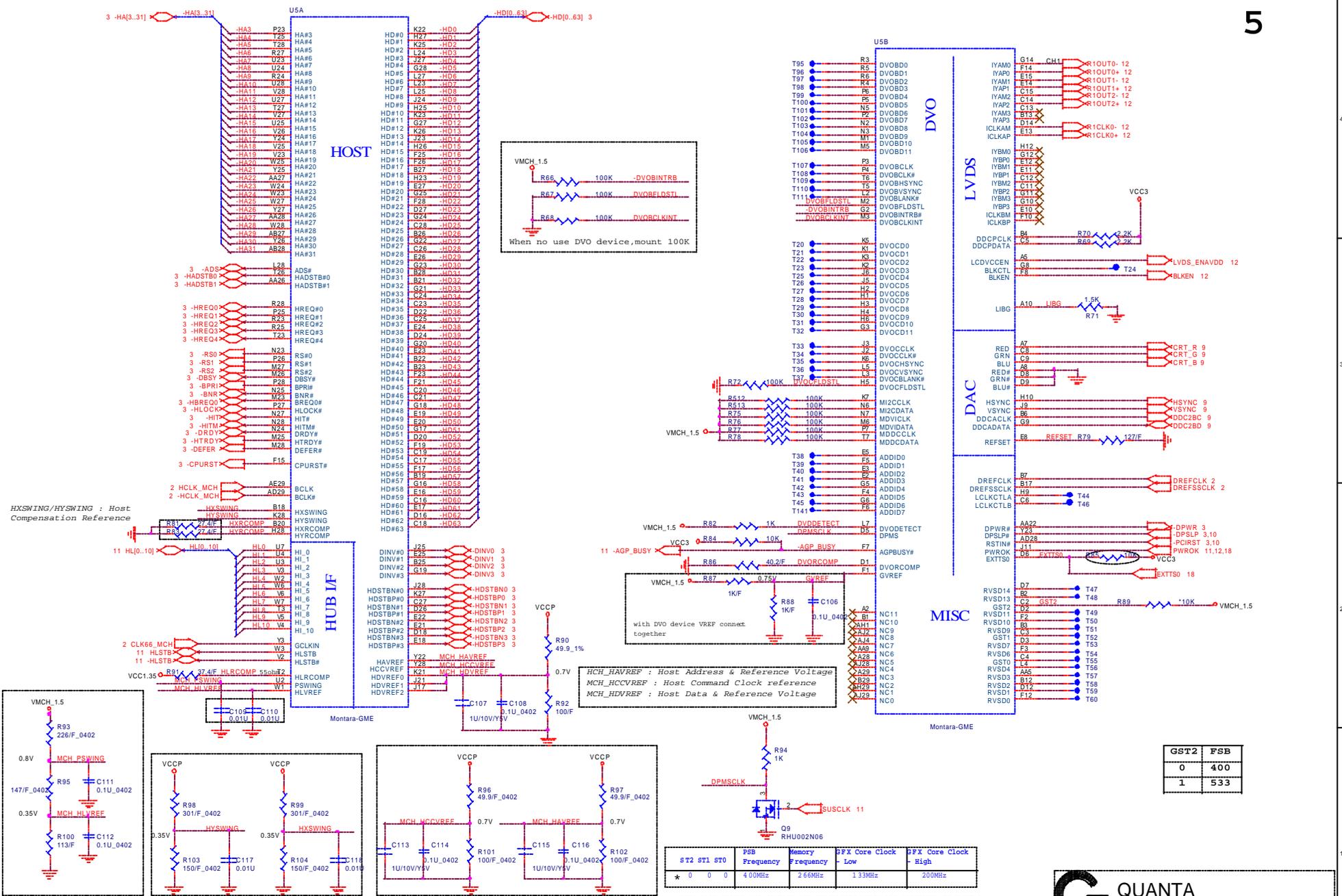
Dothan CPU - A

AK1 Main Board

Date: 2004.12.10 Sheet 3 of 30

VCCA:  
 VCC1.5 : Intel Dothan Processor only.  
 VCC1.8 : Intel Dothan/Pentium M Processor only.





HXSWING/HYSWING : Host Compensation Reference

HCH\_HAVREF : Host Address & Reference Voltage  
MCH\_HCCVREF : Host Command Clock reference  
MCH\_HDVREF : Host Data & Reference Voltage

ST2	ST1	ST0	FSB Frequency	Memory Frequency	FX Core Clock - Low	FX Core Clock - High
*	0	0	4.00MHz	2.66MHz	1.33MHz	200MHz

GST2	FSB
0	400
1	533

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.

**QUANTA COMPUTER**

File: MCH-M\_B(HOST,DVO)  
Size: Document Number AK1 Main Board Rev 2A  
Date: 2004.11.14 2004.11.14 Page: 5 of 30

THIS PART SHOULD NOT CONTAIN ANY SUBSTANCES WHICH ARE SPECIFIED IN SS-00259-1

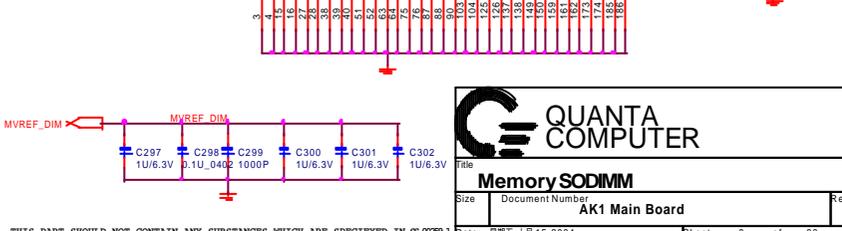
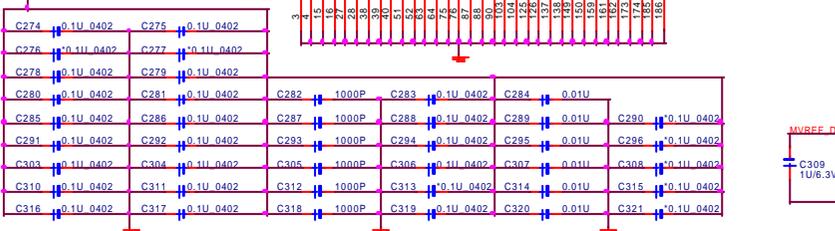
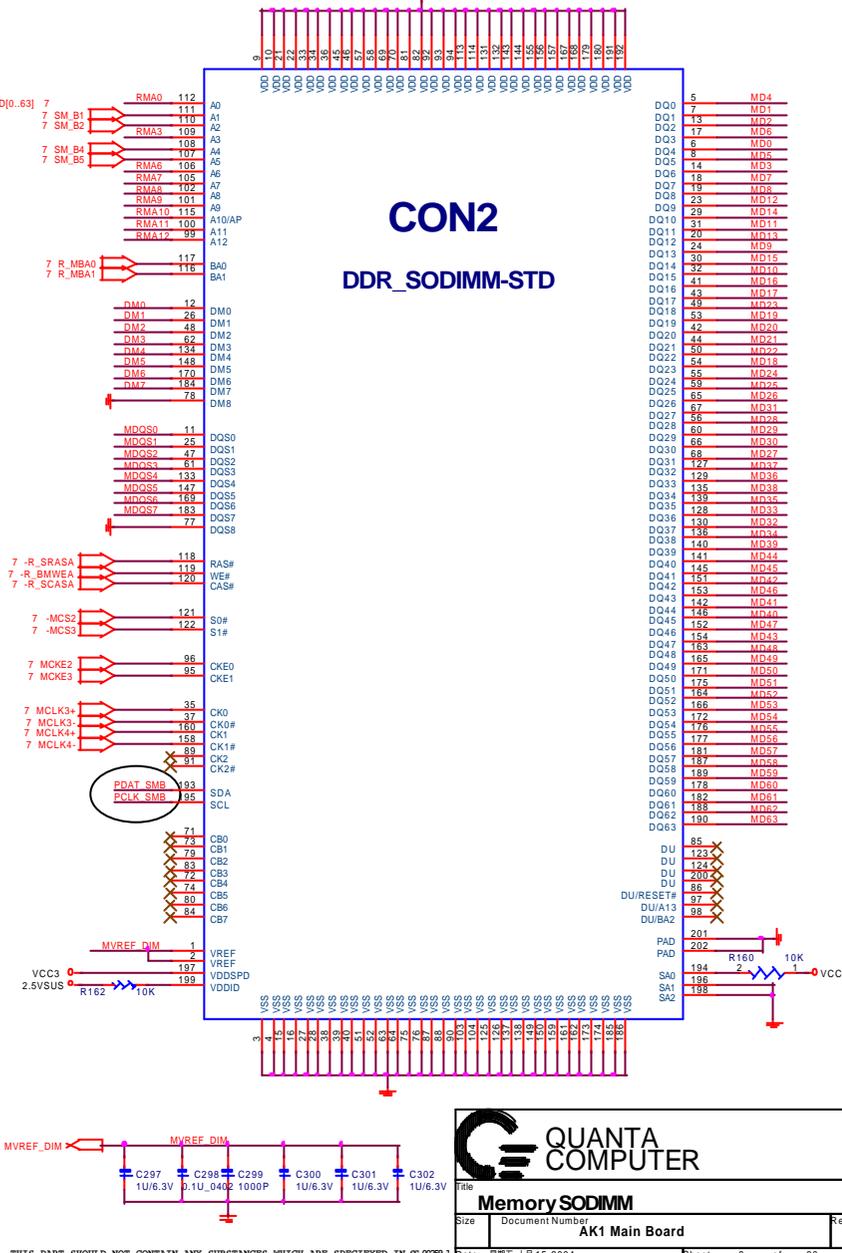
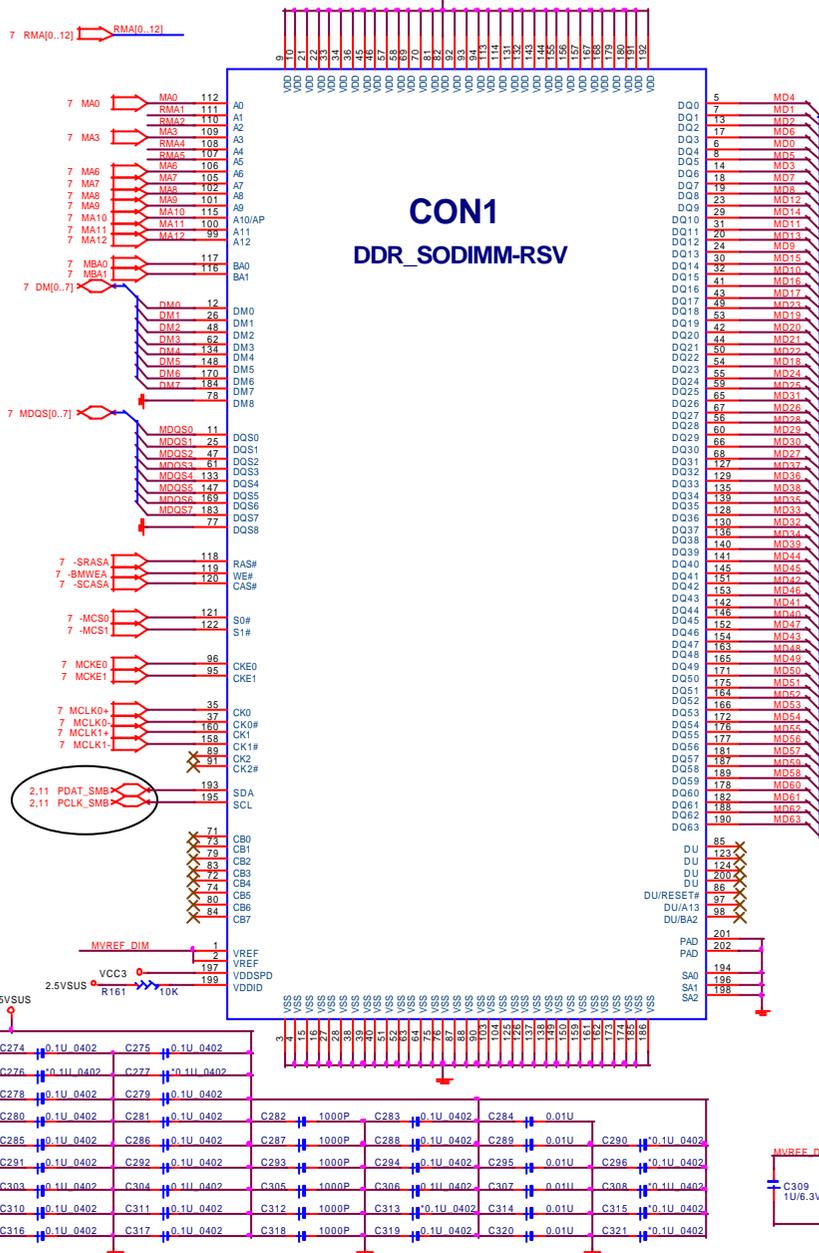




# DDR - Modules

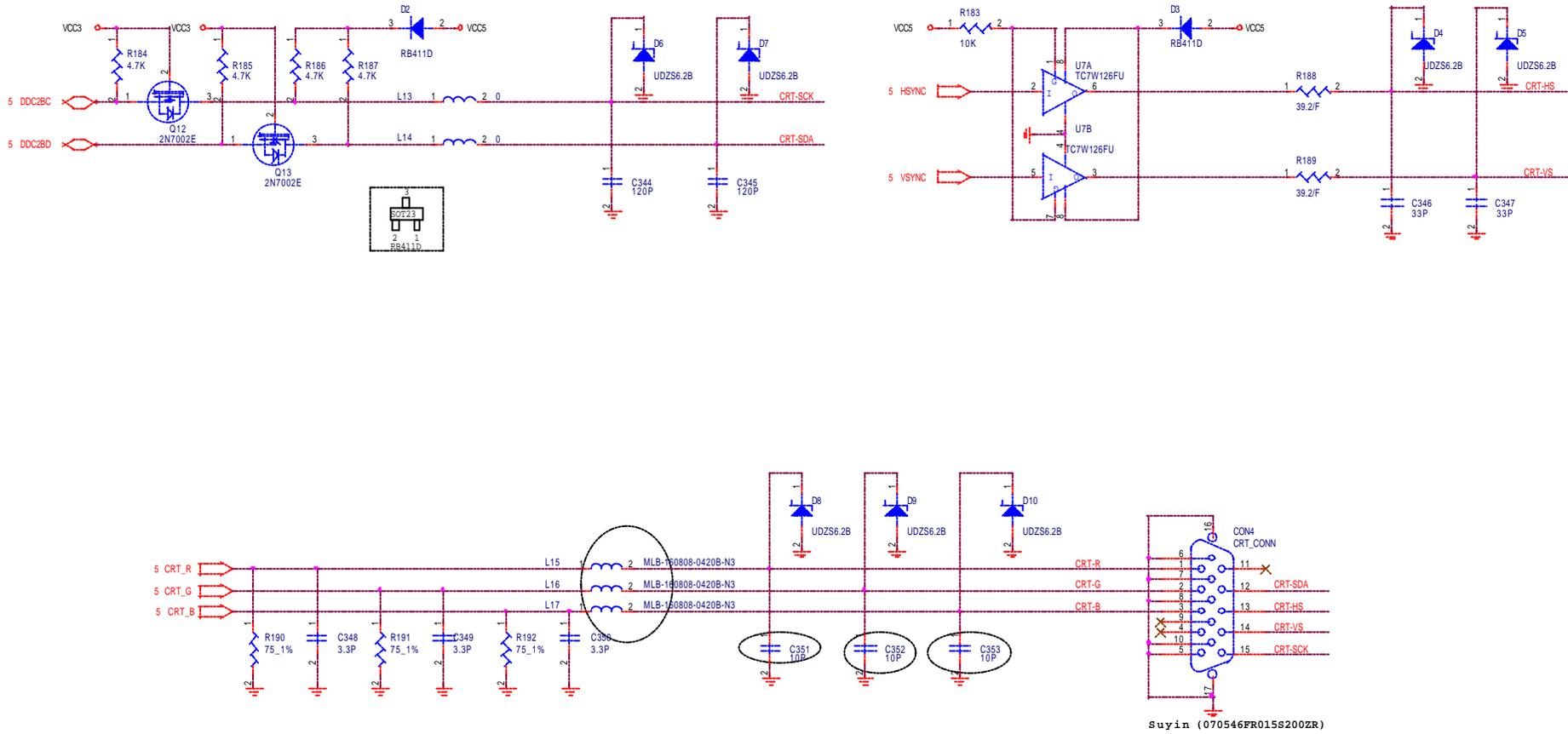
P-Two (CDRA02-AUK0L-P)

8



		<b>QUANTA COMPUTER</b>	
		<b>Memory SODIMM</b>	
File	Document Number	Rev	
AK1 Main Board		2A	

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.

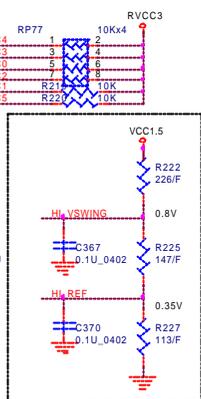
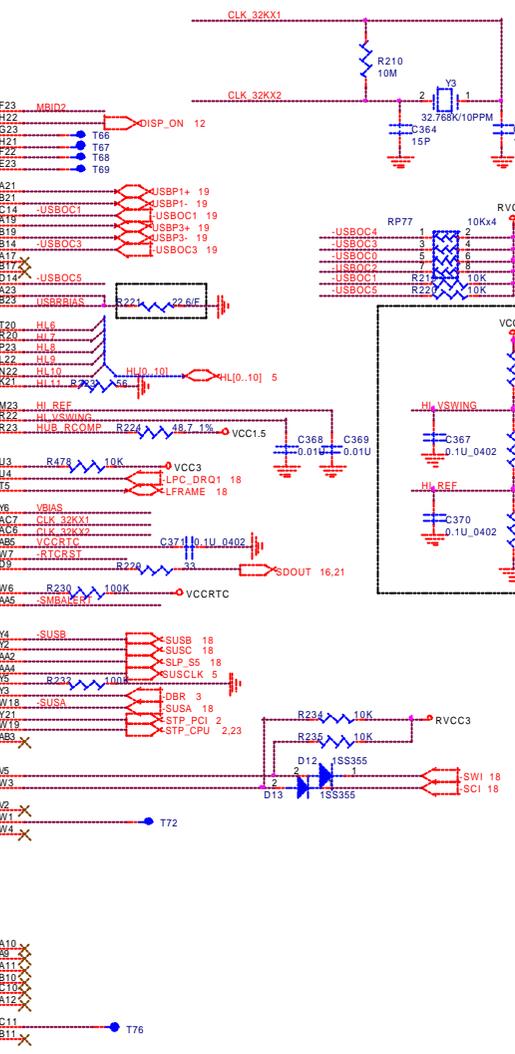
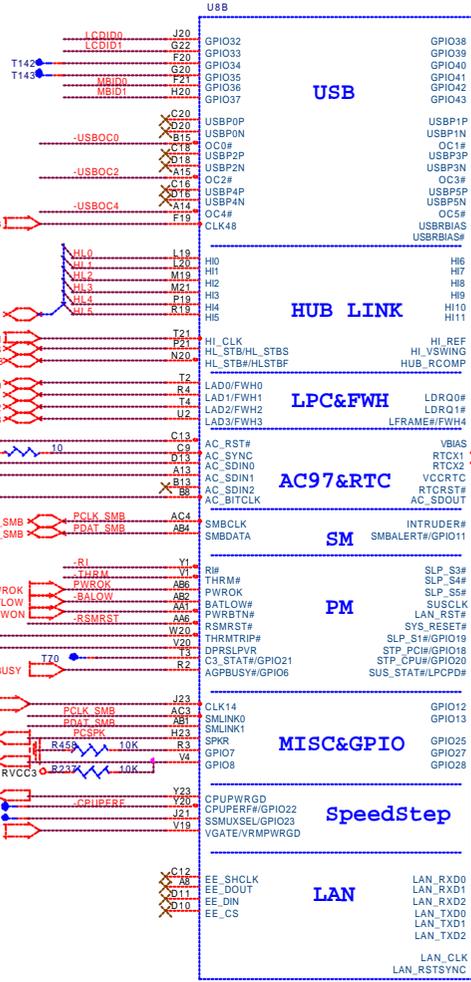
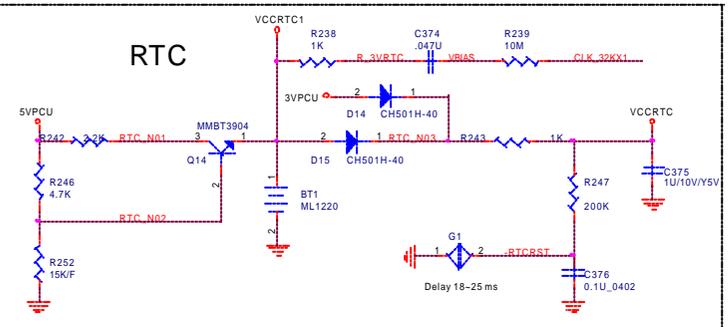
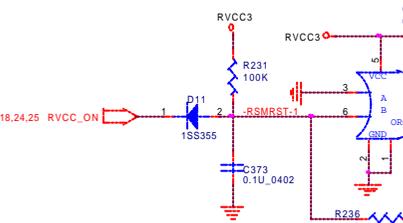
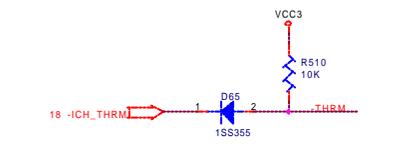
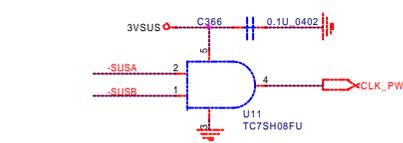
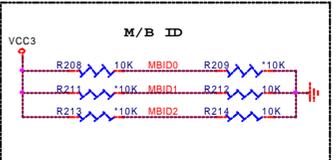
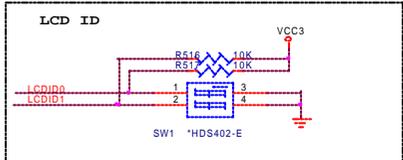


1. This part should not contain any substances which are specified in SS-00259-1  
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# ICH4-M



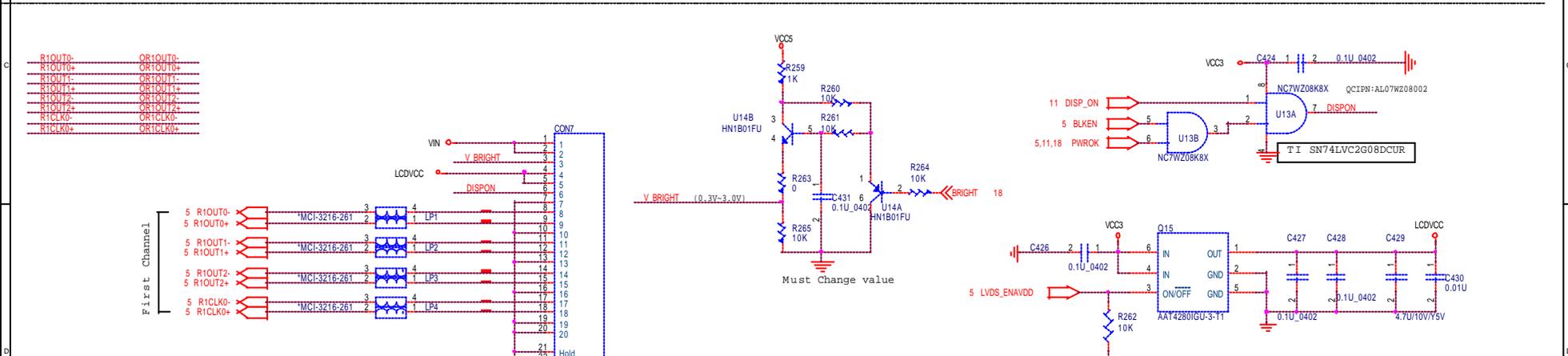
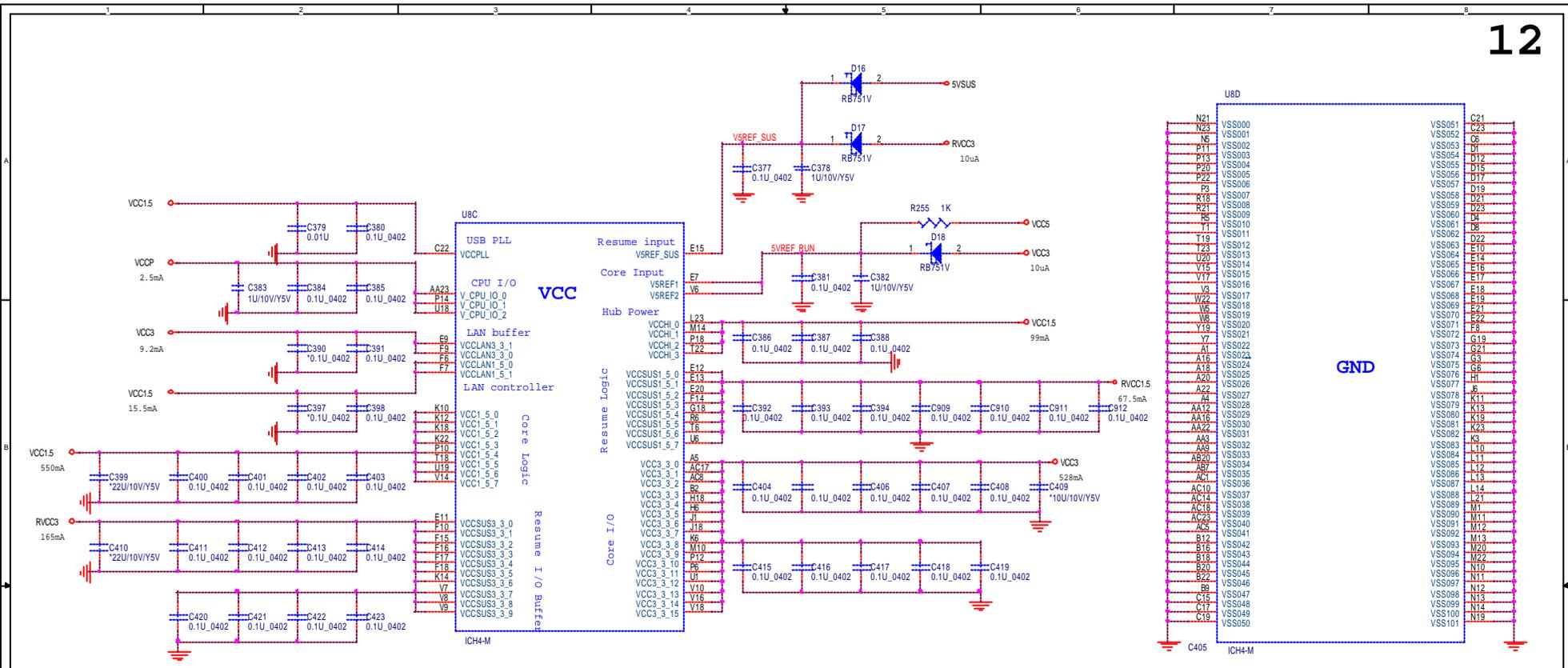
**QUANTA COMPUTER**

File: ICH4-M USB, HUB & LPC INTERFACE

Size: Document Number: AK1 Main Board Rev 2A

Date: 08/12/2004 Sheet 11 of 30

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.



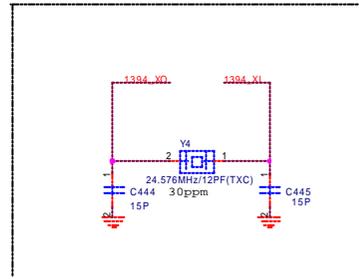
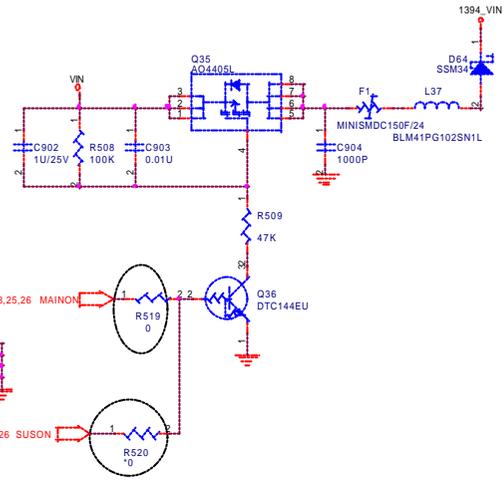
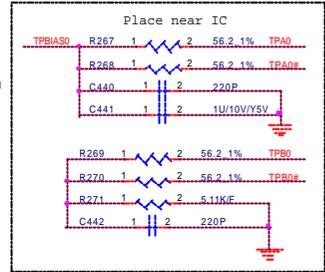
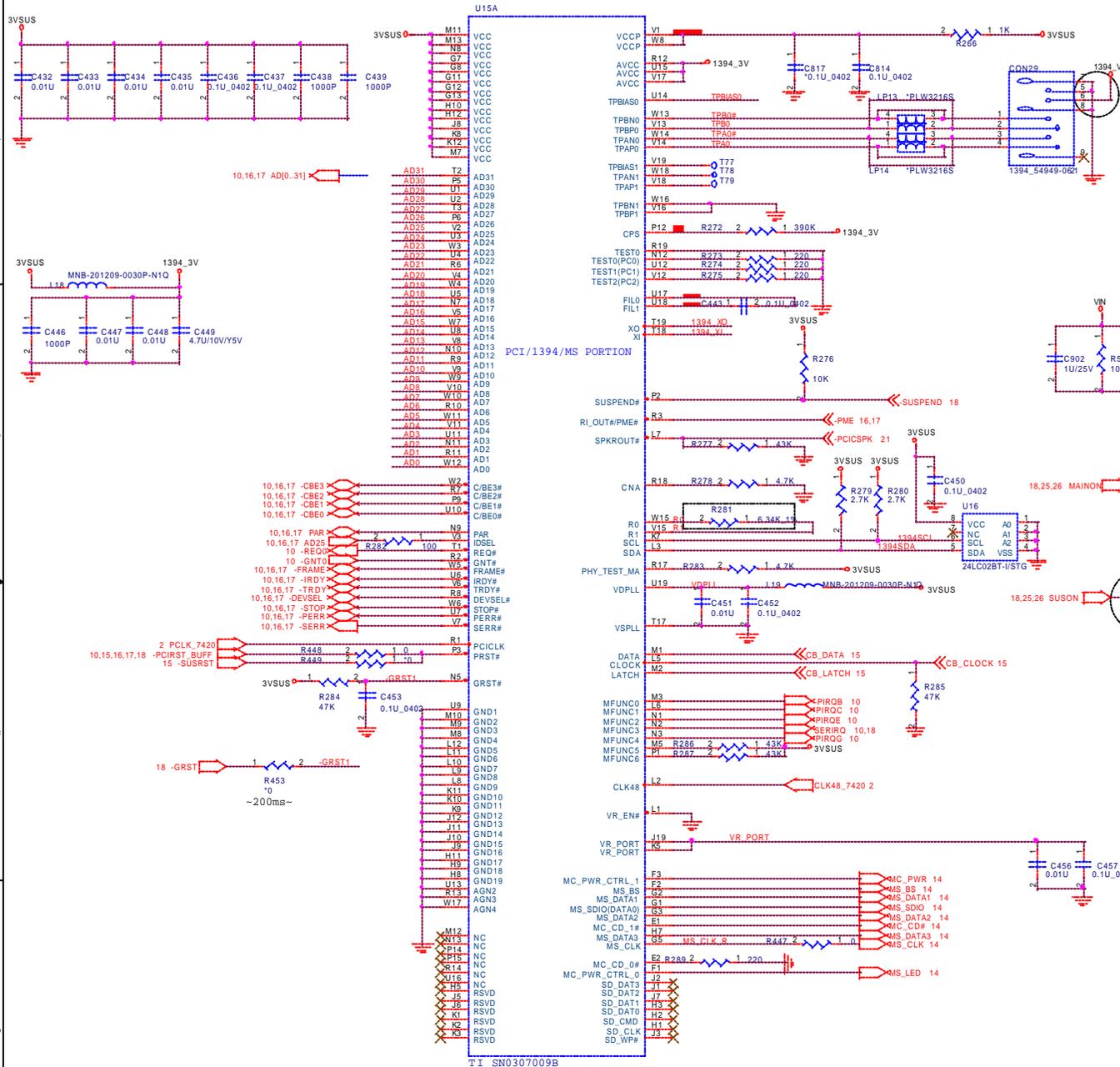
1. This part should not contain any substances which are specified in SS-00259-1  
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**QUANTA COMPUTER**

File: **ICH4-M (POWER&GND)LCD**

Size: Document Number **AK1 Main Board** Rev 1A

Date: 2004年12月17日 Sheet 12 of 30

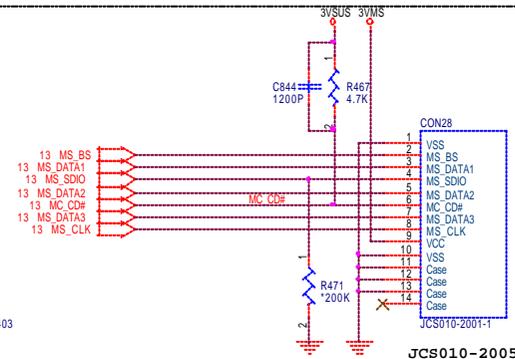
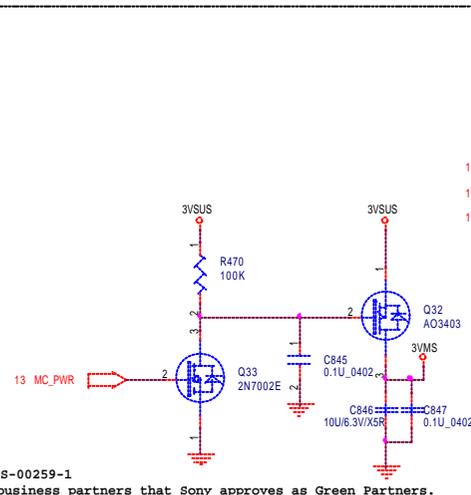
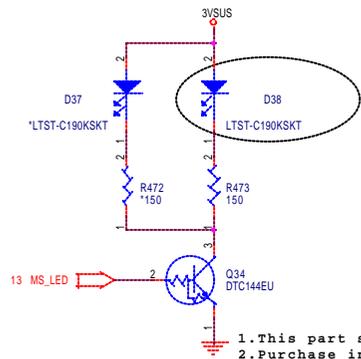
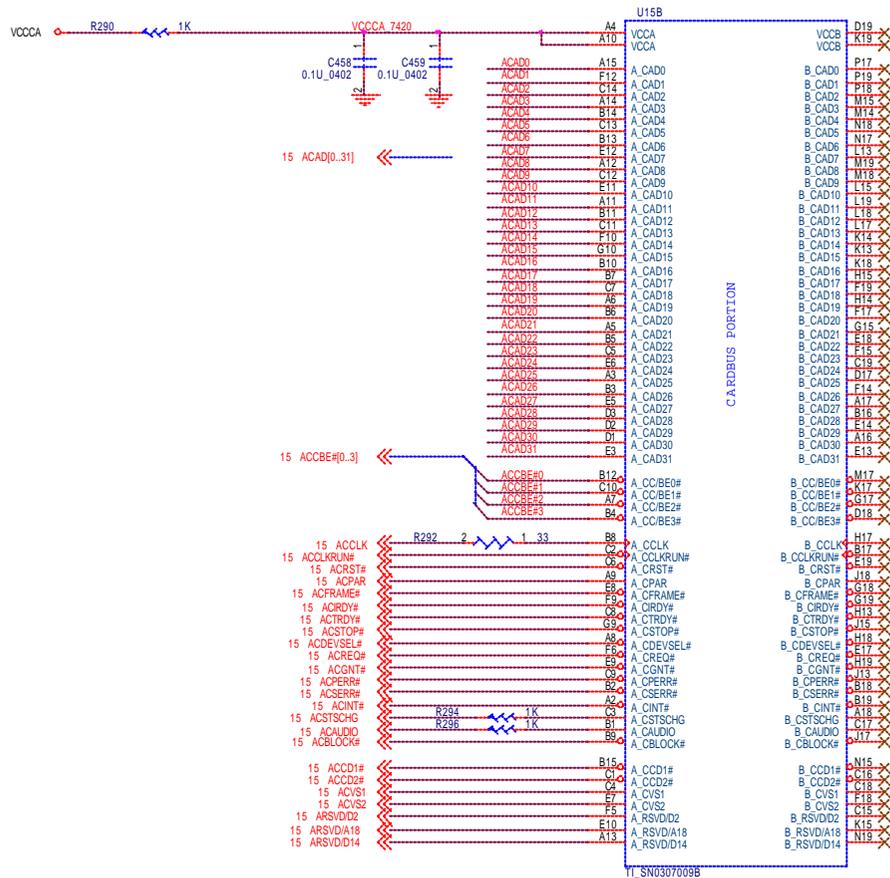


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**QUANTA COMPUTER**

File: TI-SN0307009B CardBus Control -- A

Size	Document Number	AK1 Main Board	Rev	2A
Date	08-11-2004	Sheet	13	of 30



**QUANTA COMPUTER**

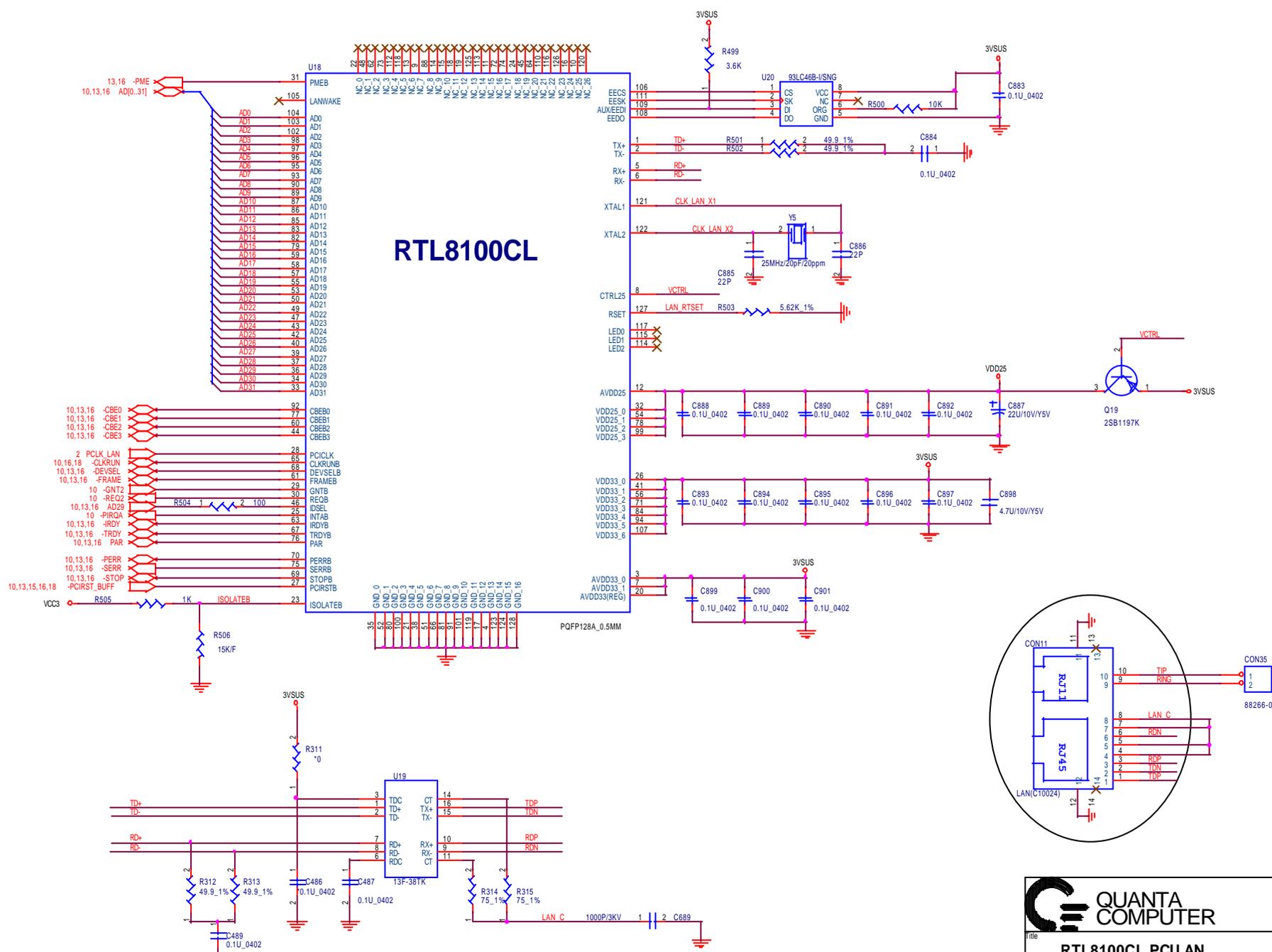
TI-SN0307009B CardBus Control - B

Rev 2A

Date: 十月 12, 2004 Sheet 14 of 30







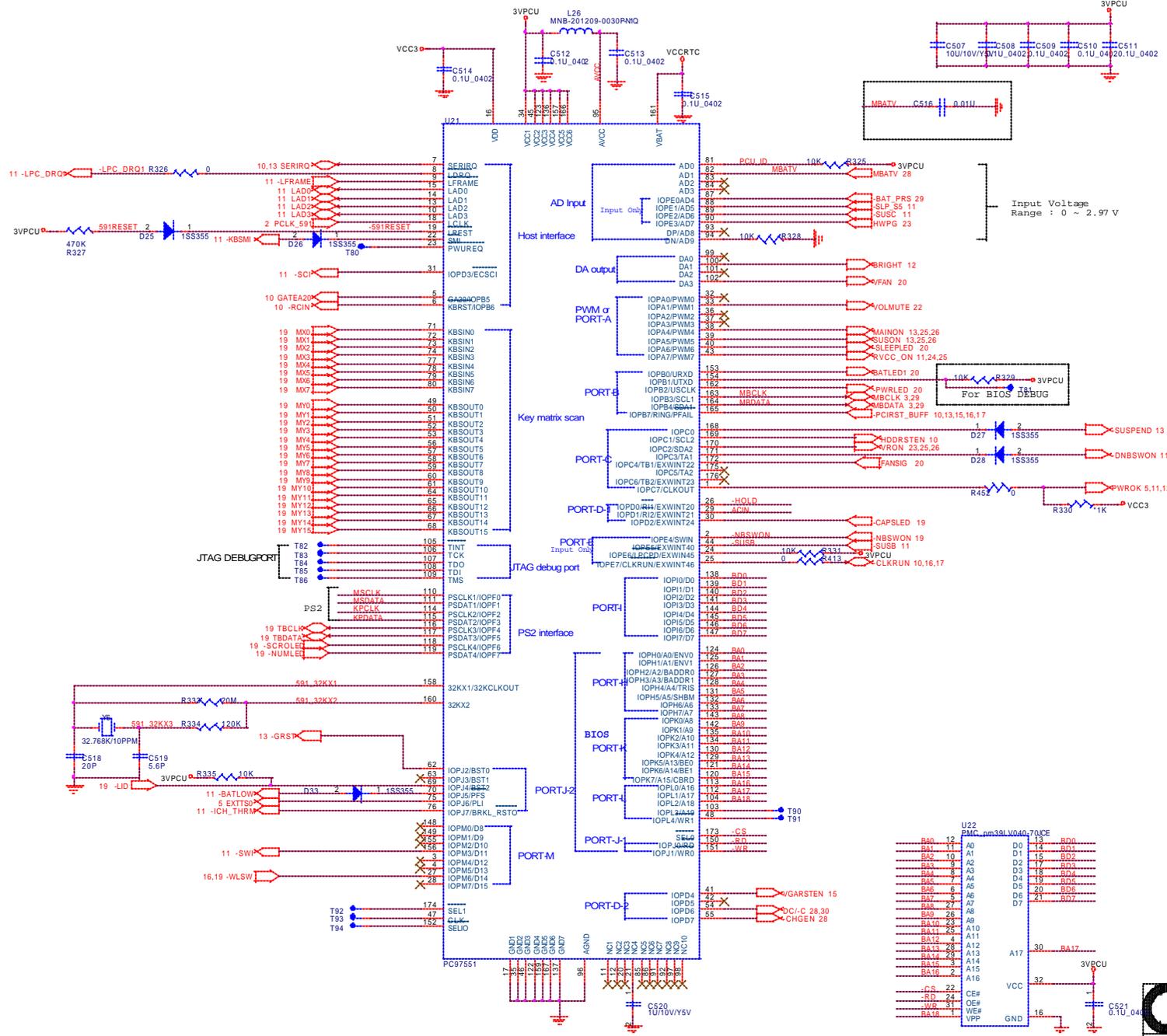
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2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

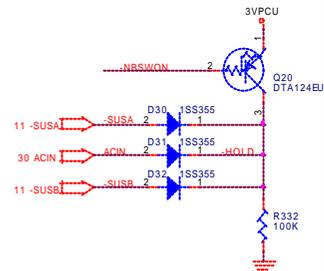
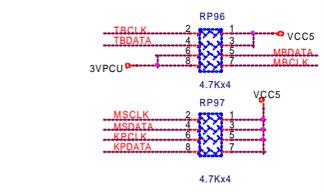


RTL8100CL PCILAN

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	AK1 Main Board	2A



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1	99	HCHEGBAH	HCHEGBAH
1	100	HCHEGBAH	HCHEGBAH



Pin 94 if no use, pin 94(DN) should connect to ground.  
 Pin 24 if no pull-high, will can't robot.  
 Pin 103 internal is "A19", Can't use to GPIO.  
 Pin 168 default is high.  
 -DRQ(pin 8) internal is no use

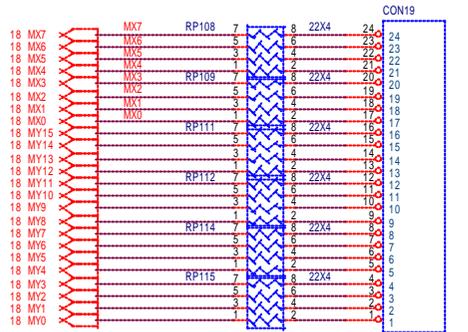
1. This part should not contain any substances which are specified in SS-00259-1  
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**QUANTA COMPUTER**

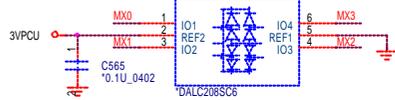
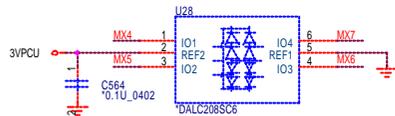
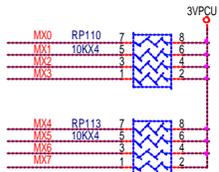
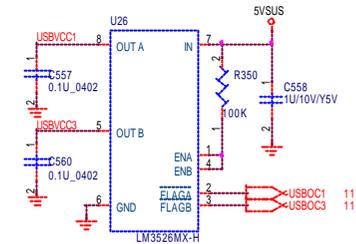
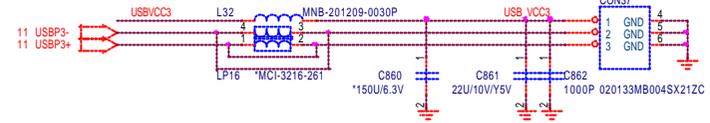
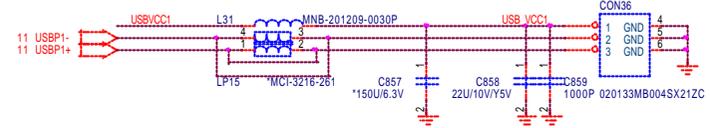
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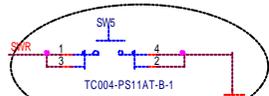
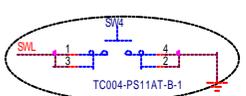
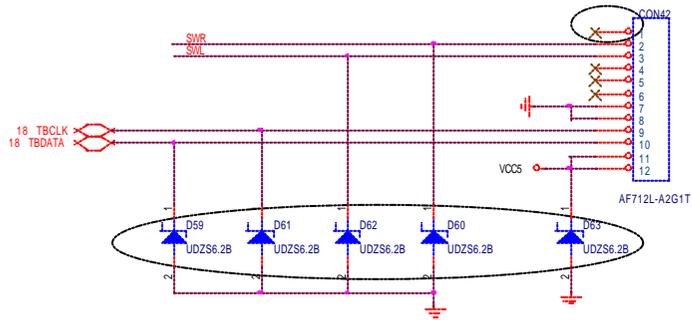
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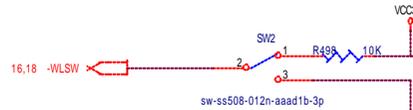
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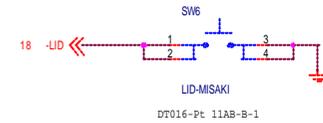
TOUCH PAD CONNECTOR



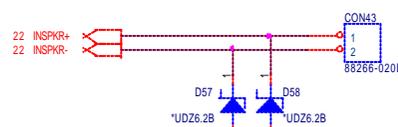
WIRELESS SWITCH



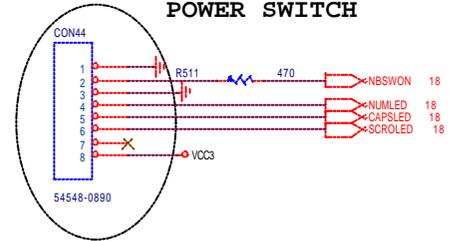
LID SWITCH



SPEAKER CONNECTOR



POWER SWITCH

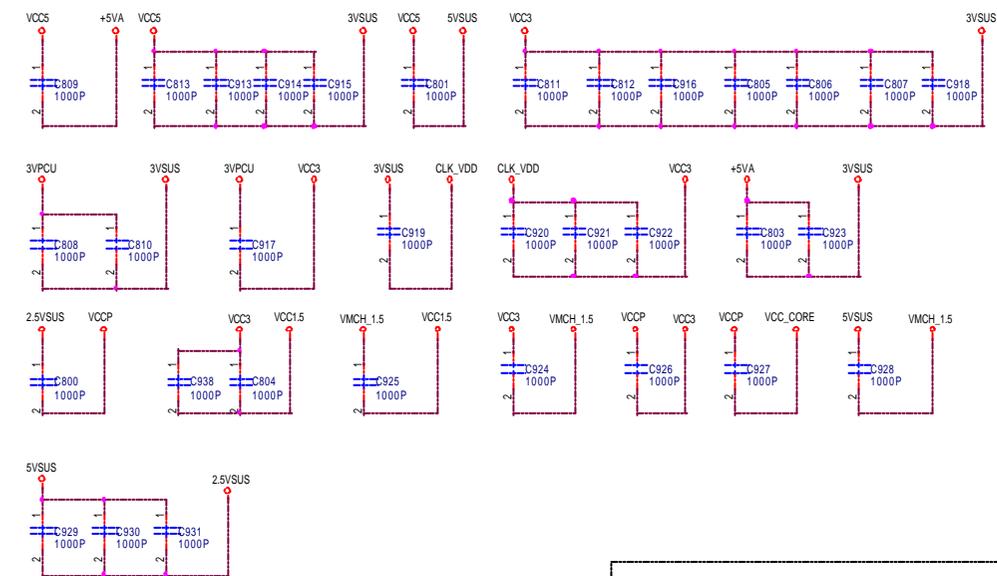
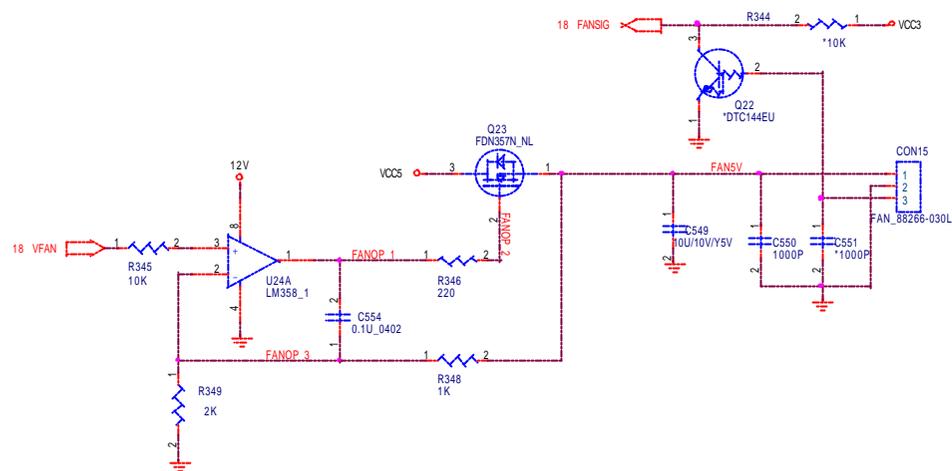
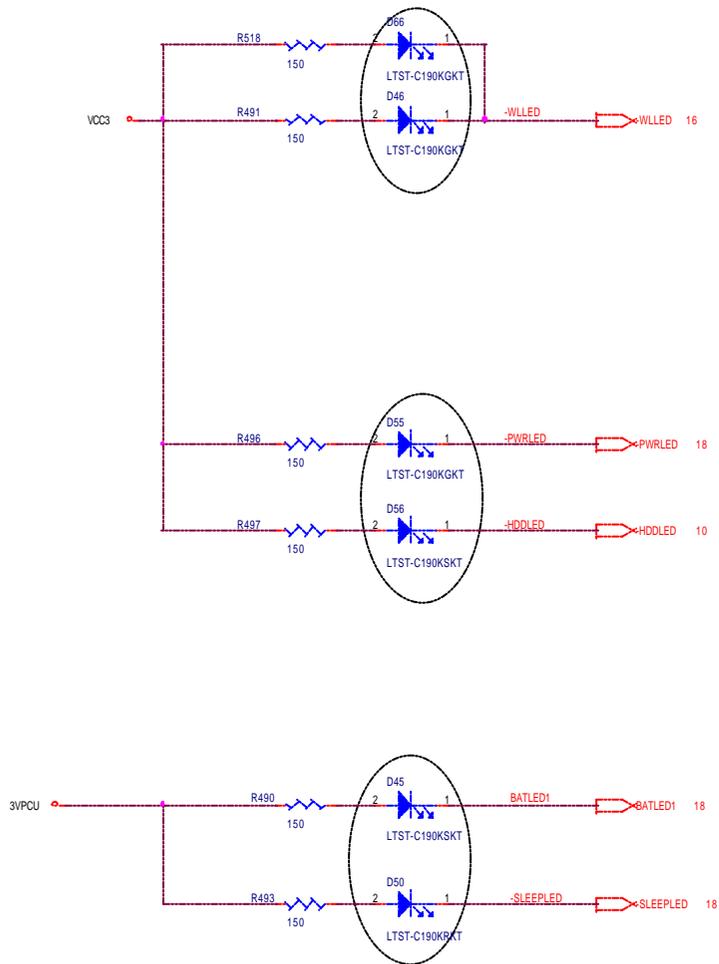


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 2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.



MAIN FAN UNIT

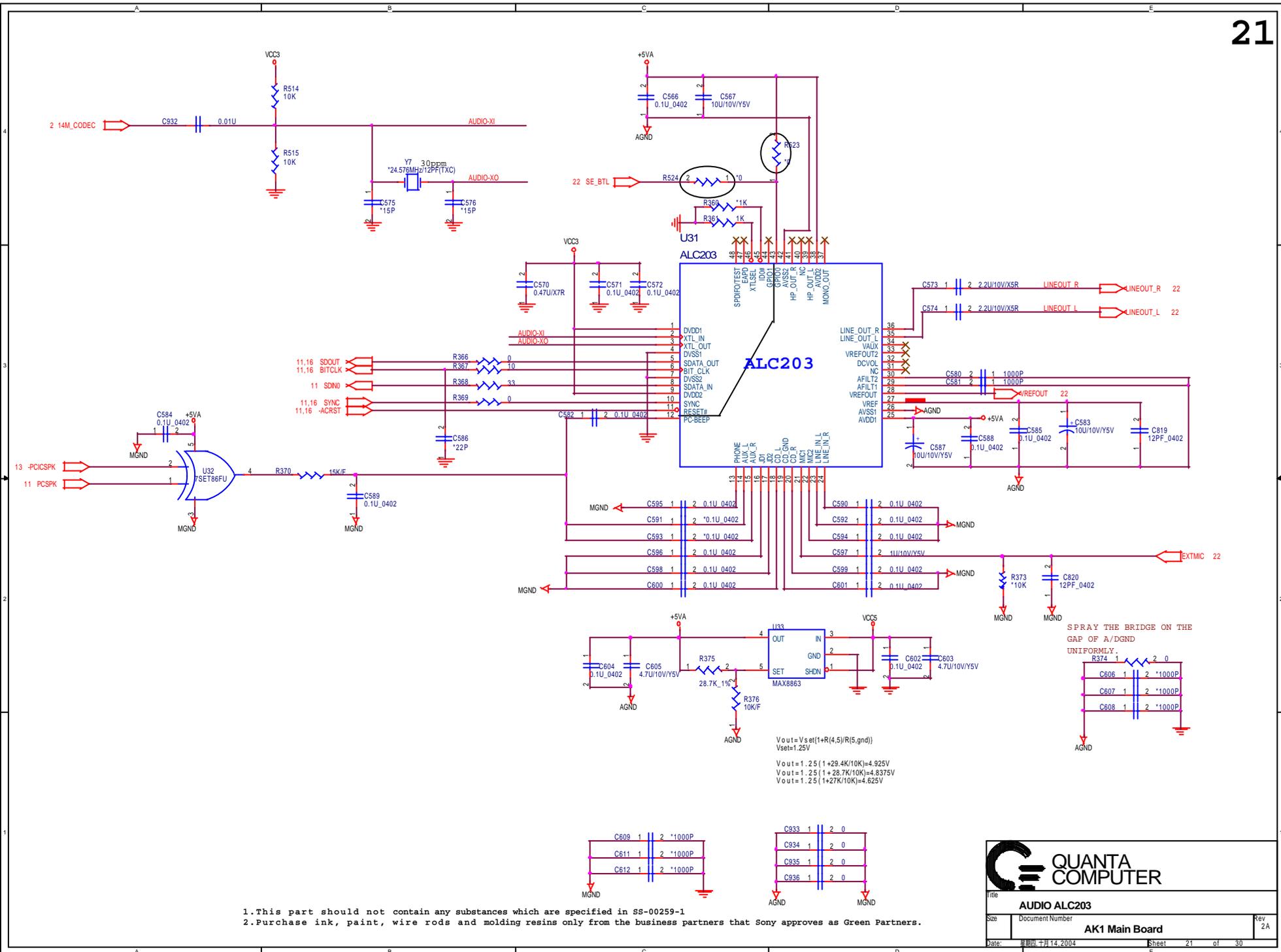
LED GROUP



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**QUANTA  
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	<b>LED,P/S,C/B CONNECTOR</b>	<b>2A</b>
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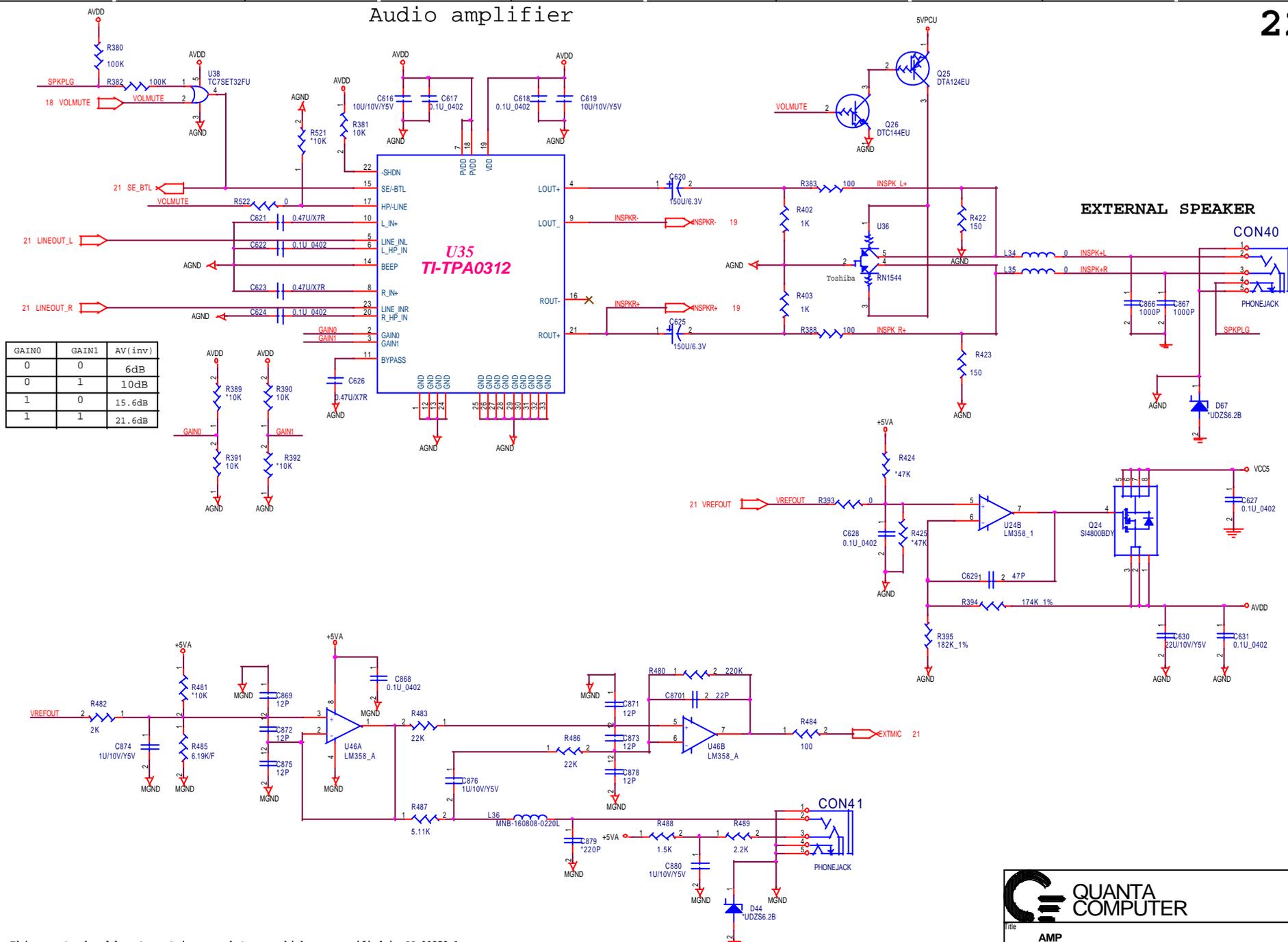


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Audio amplifier

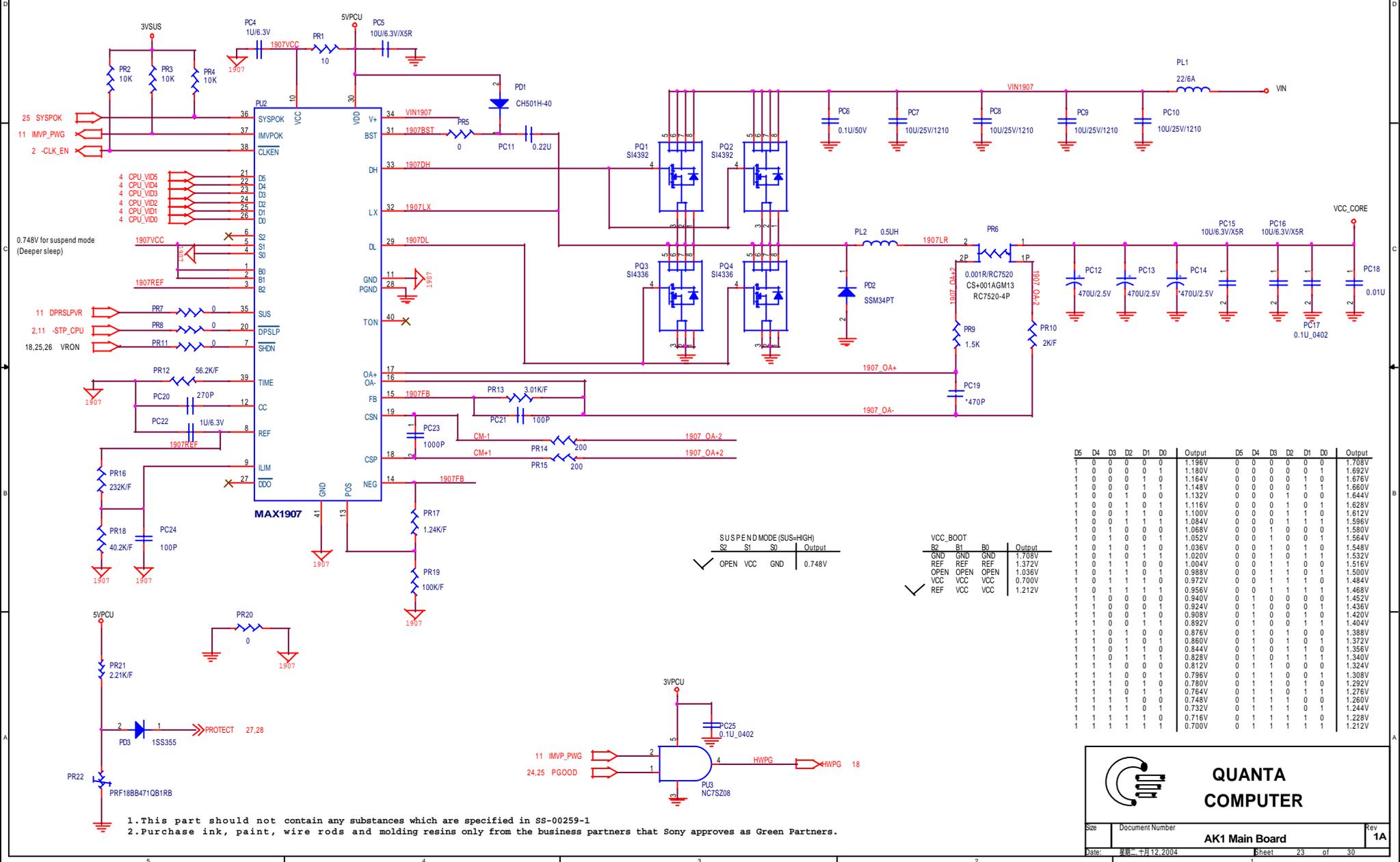


GAIN0	GAIN1	AV(inv)
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

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CPU CORE



SUSPEND MODE (SUS=HIGH)

S2	S1	S0	Output
✓ OPEN	VCC	GND	0.748V

VCC\_BOOT

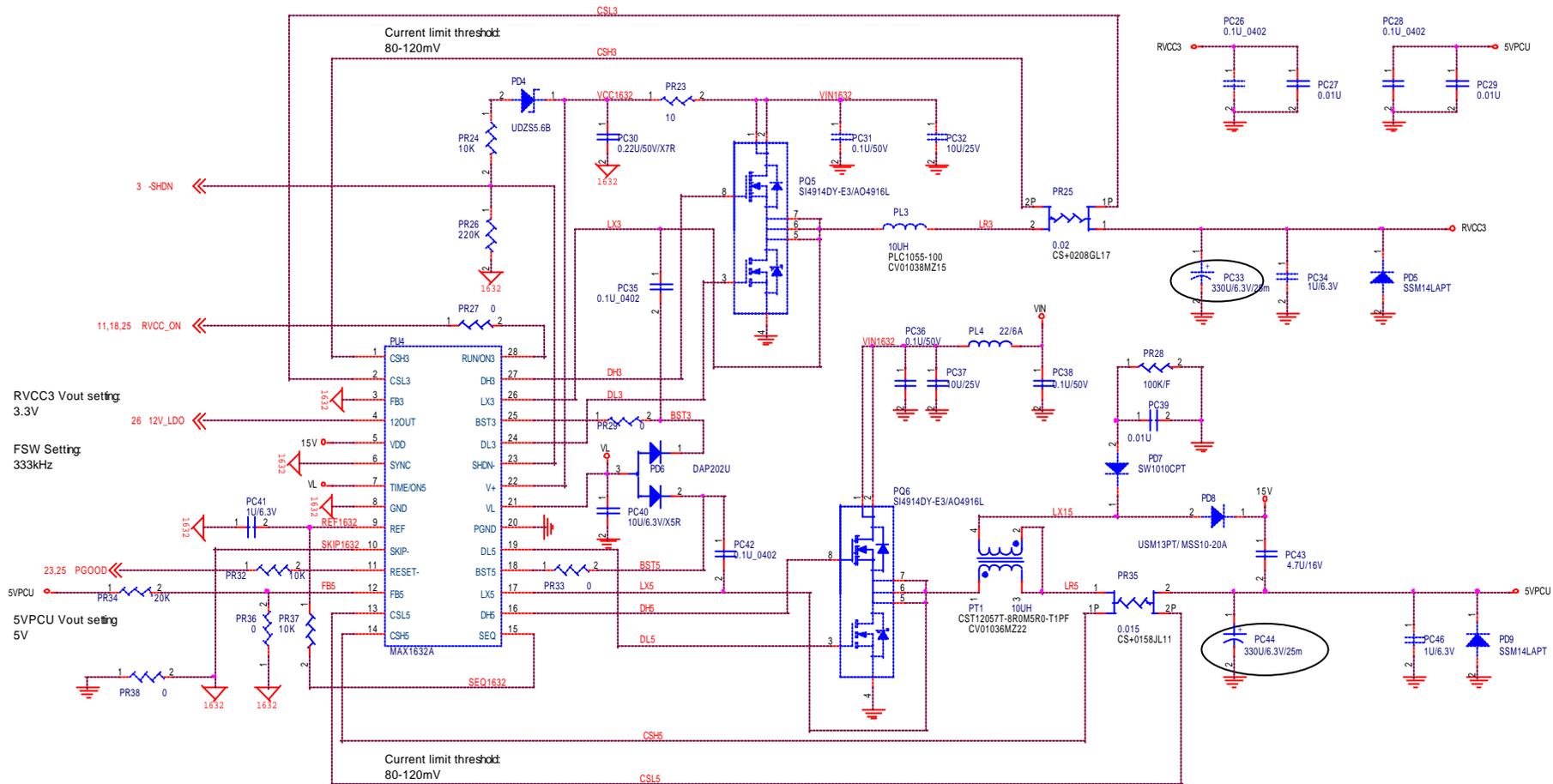
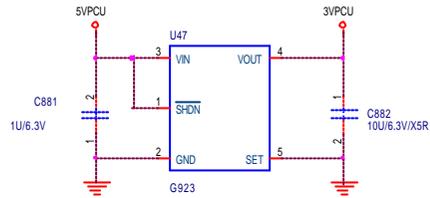
B2	B1	B0	Output
GND	GND	GND	1.708V
REF	REF	REF	1.372V
OPEN	OPEN	OPEN	1.036V
VCC	VCC	VCC	0.700V
✓ REF	VCC	VCC	1.212V

D5	D4	D3	D2	D1	D0	Output	D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.196V	0	0	0	0	0	0	1.708V
1	0	0	0	0	1	1.180V	0	0	0	0	0	1	1.692V
1	0	0	0	1	0	1.164V	0	0	0	0	1	0	1.676V
1	0	0	0	1	1	1.148V	0	0	0	0	1	1	1.660V
1	0	0	1	0	0	1.132V	0	0	0	1	0	0	1.644V
1	0	0	1	0	1	1.116V	0	0	0	1	0	1	1.628V
1	0	0	1	1	0	1.100V	0	0	0	1	1	0	1.612V
1	0	0	1	1	1	1.084V	0	0	0	1	1	1	1.596V
1	0	1	0	0	0	1.068V	0	0	1	0	0	0	1.580V
1	0	1	0	0	1	1.052V	0	0	1	0	0	1	1.564V
1	0	1	0	1	0	1.036V	0	0	1	0	1	0	1.548V
1	0	1	0	1	1	1.020V	0	0	1	0	1	1	1.532V
1	0	1	1	0	0	1.004V	0	0	1	1	0	0	1.516V
1	0	1	1	0	1	0.988V	0	0	1	1	0	1	1.500V
1	0	1	1	1	0	0.972V	0	0	1	1	1	0	1.484V
1	0	1	1	1	1	0.956V	0	0	1	1	1	1	1.468V
1	1	0	0	0	0	0.940V	0	1	0	0	0	0	1.452V
1	1	0	0	0	1	0.924V	0	1	0	0	0	1	1.436V
1	1	0	0	1	0	0.908V	0	1	0	0	1	0	1.420V
1	1	0	0	1	1	0.892V	0	1	0	0	1	1	1.404V
1	1	0	1	0	0	0.876V	0	1	0	1	0	0	1.388V
1	1	0	1	0	1	0.860V	0	1	0	1	0	1	1.372V
1	1	0	1	1	0	0.844V	0	1	0	1	1	0	1.356V
1	1	0	1	1	1	0.828V	0	1	0	1	1	1	1.340V
1	1	1	0	0	0	0.812V	0	1	1	0	0	0	1.324V
1	1	1	0	0	1	0.796V	0	1	1	0	0	1	1.308V
1	1	1	0	1	0	0.780V	0	1	1	0	1	0	1.292V
1	1	1	0	1	1	0.764V	0	1	1	0	1	1	1.276V
1	1	1	1	0	0	0.748V	0	1	1	1	0	0	1.260V
1	1	1	1	0	1	0.732V	0	1	1	1	0	1	1.244V
1	1	1	1	1	0	0.716V	0	1	1	1	1	0	1.228V
1	1	1	1	1	1	0.700V	0	1	1	1	1	1	1.212V

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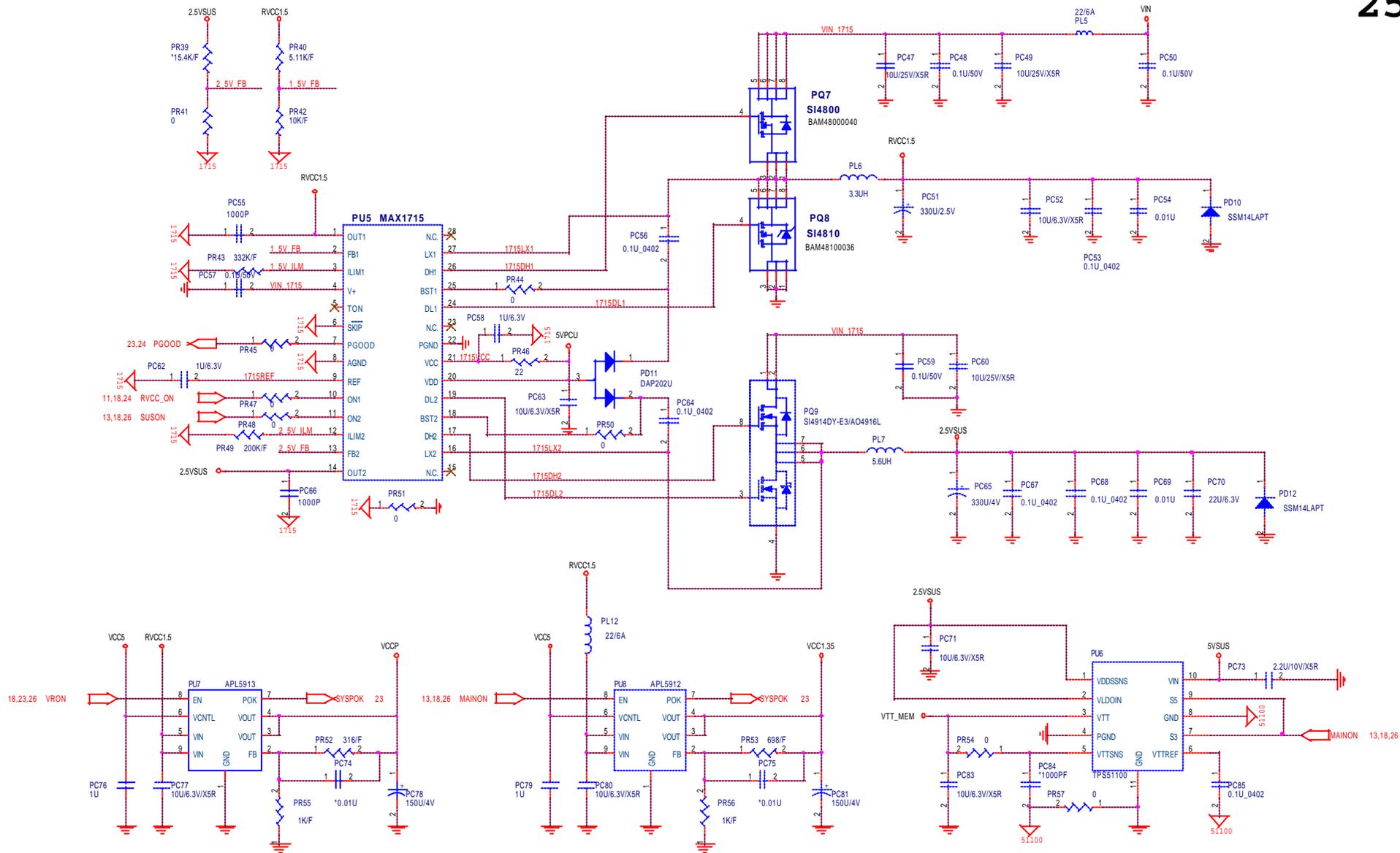
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**QUANTA  
COMPUTER**

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			2A
Date:	2004年10月14日		Sheet 24 of 30

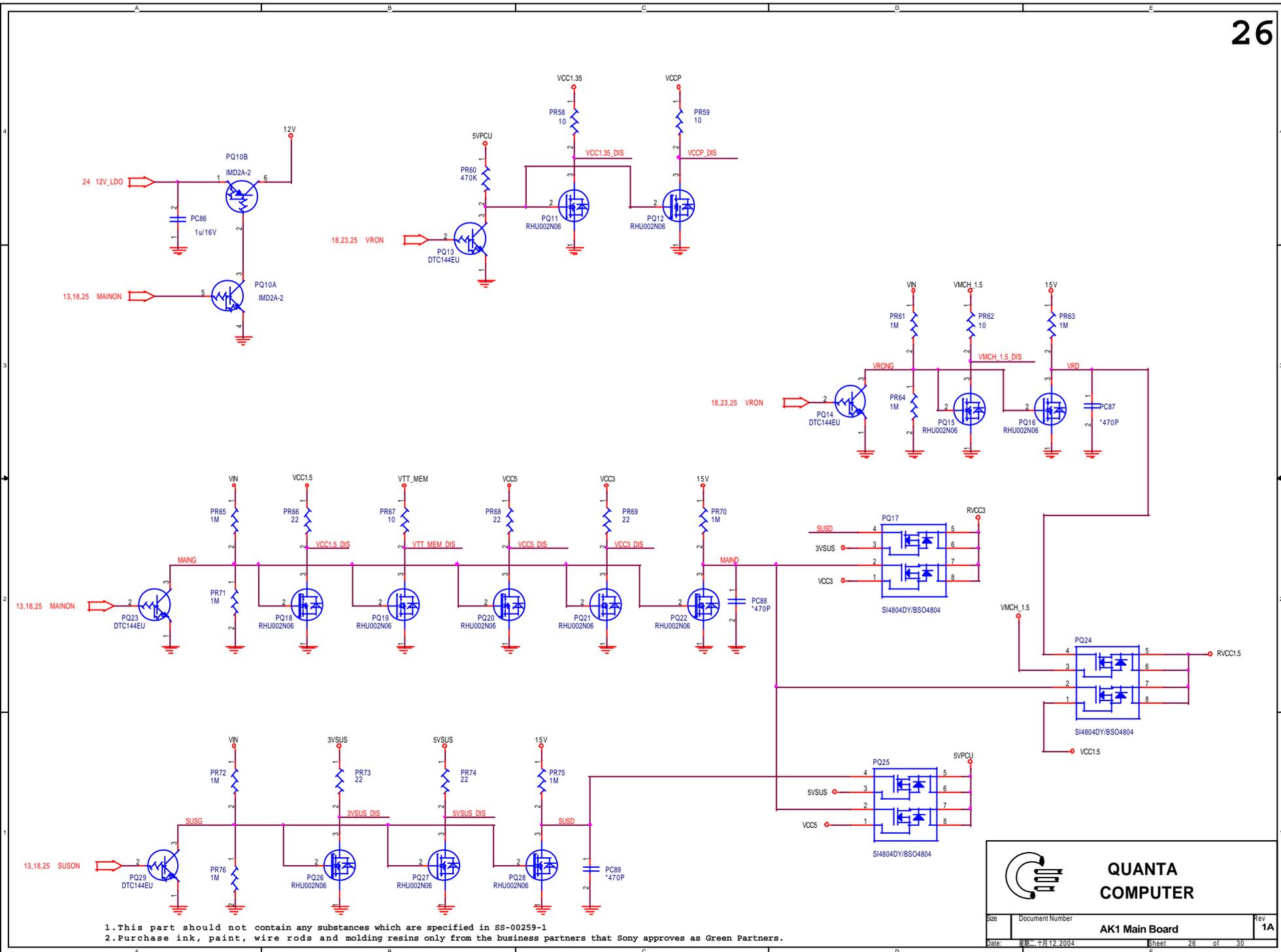


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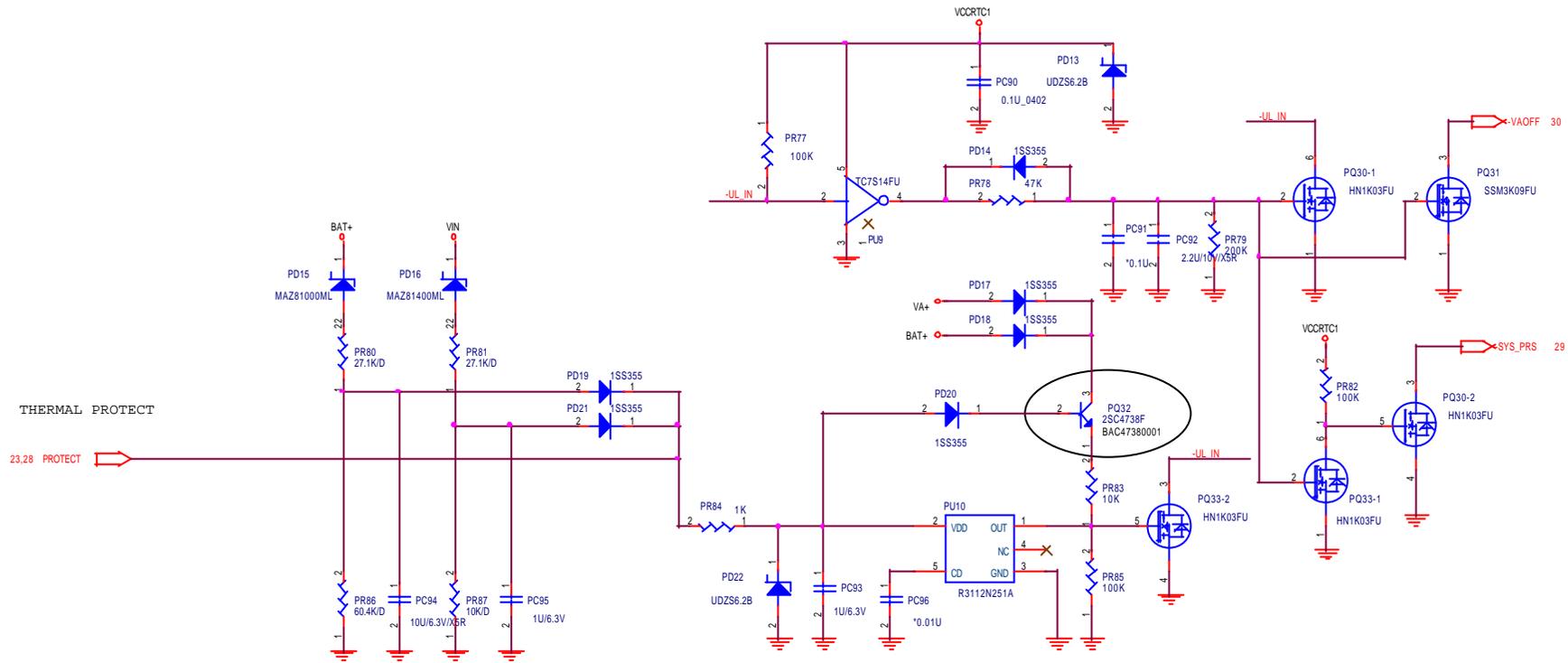
**QUANTA  
COMPUTER**

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			1A
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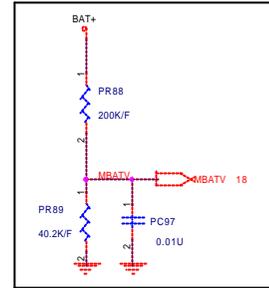
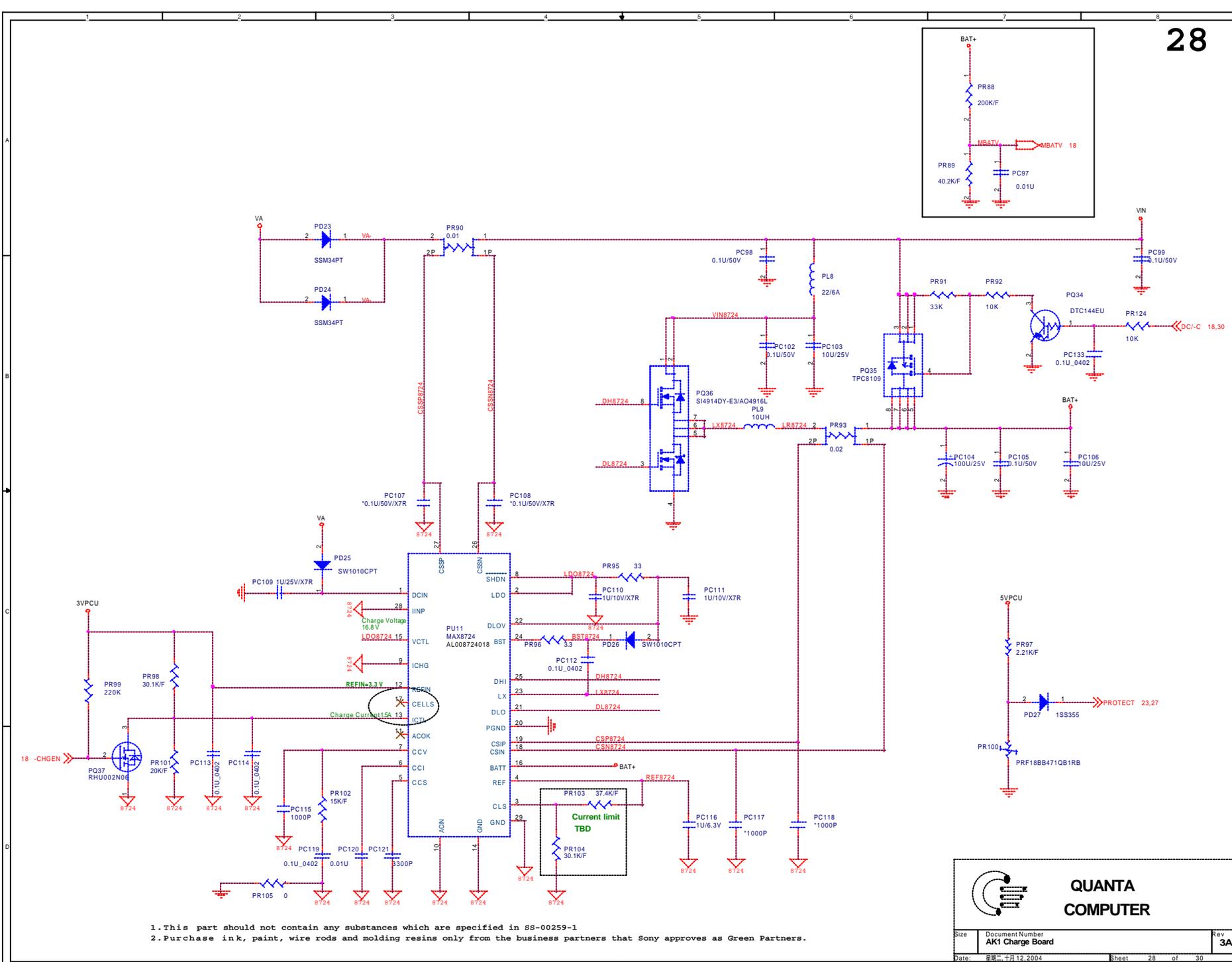
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		AK1 Main Board		
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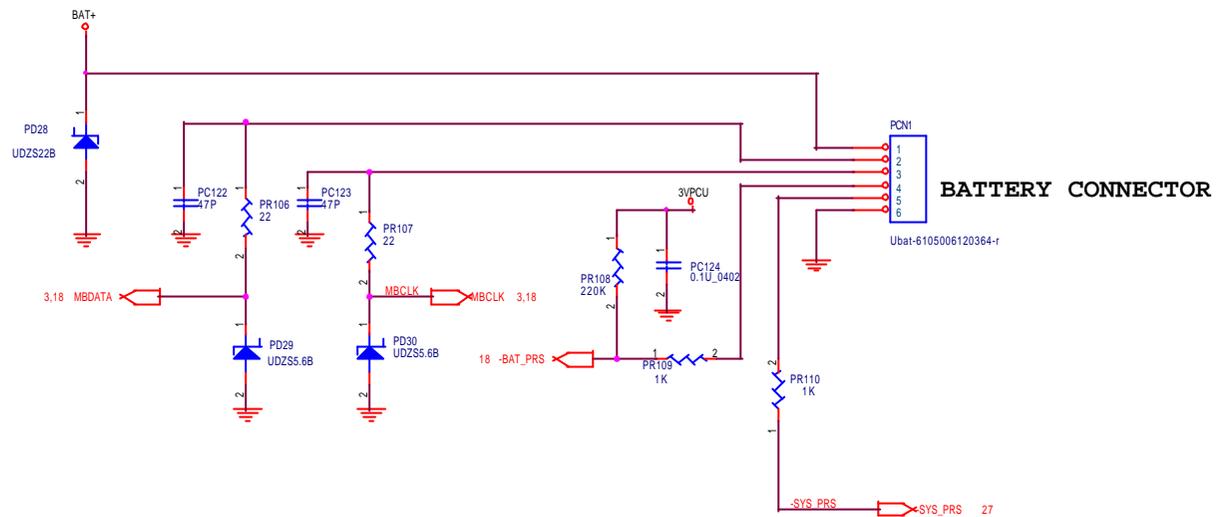


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**QUANTA COMPUTER**

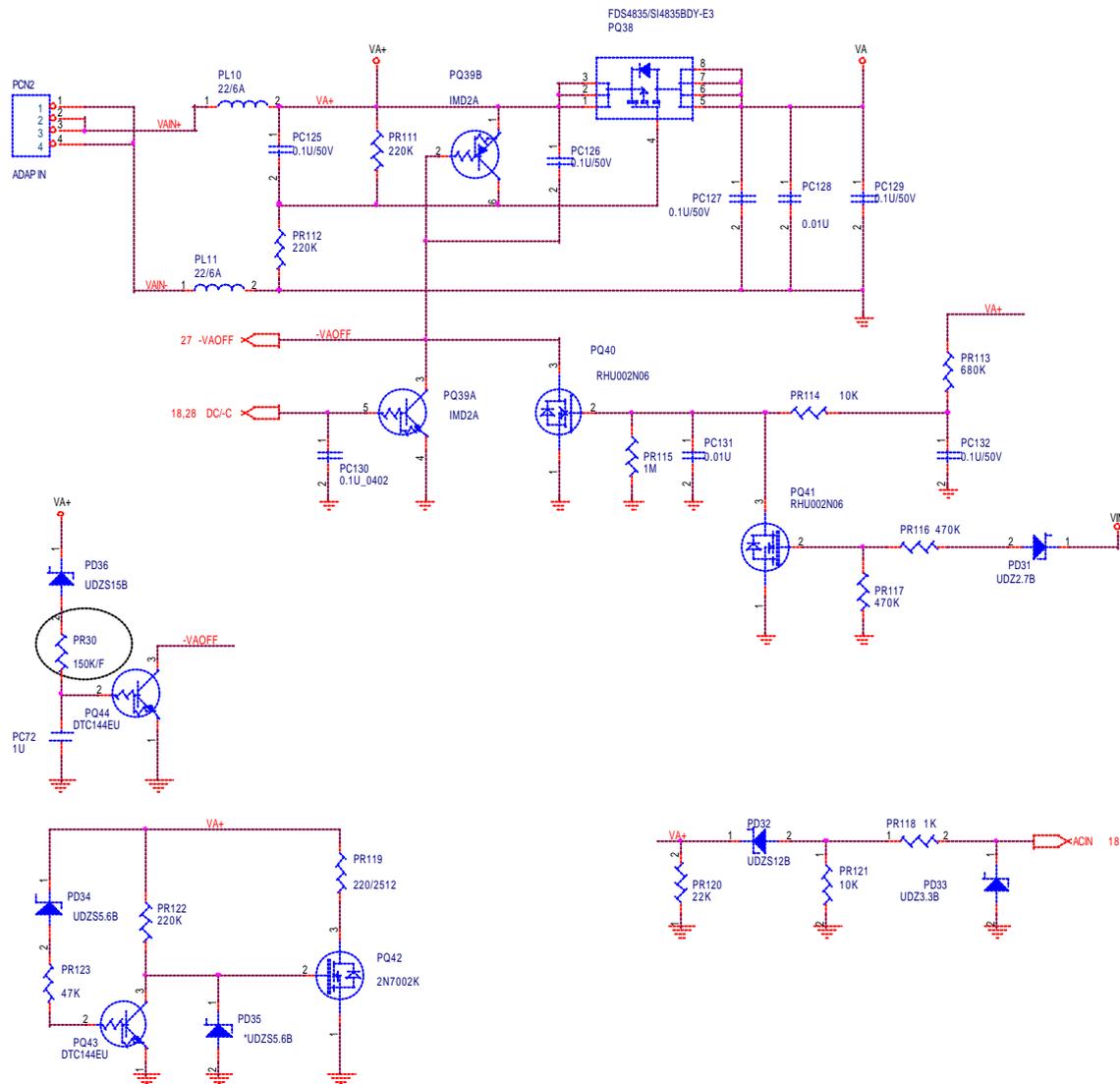
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 <b>QUANTA COMPUTER</b>		Size	Document Number	Rev
			AK1 Main Board	1A
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 <b>QUANTA COMPUTER</b>		Size	Document Number	Rev
			<b>AK1 MAIN BOARD</b>	<b>2A</b>
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