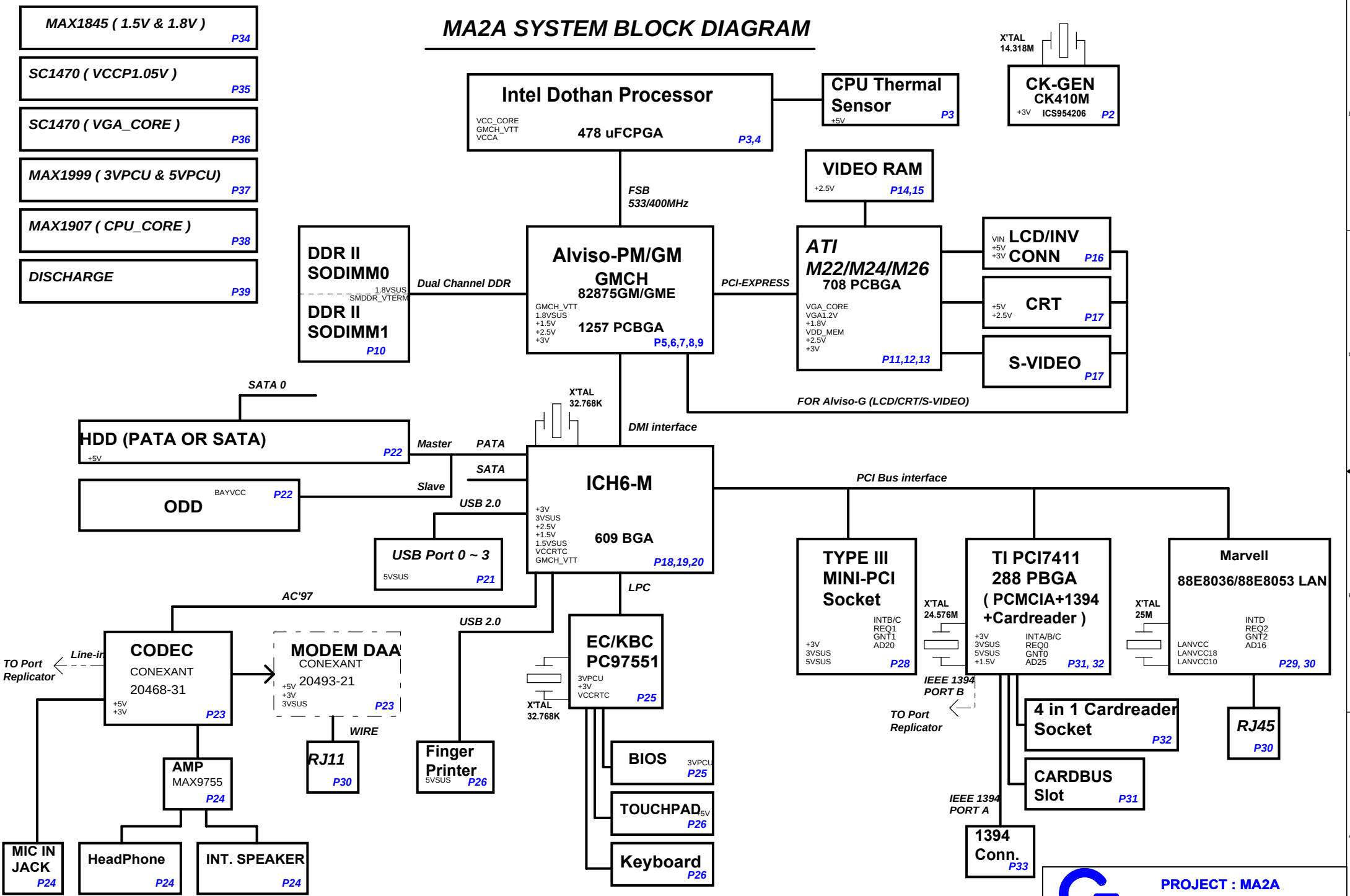
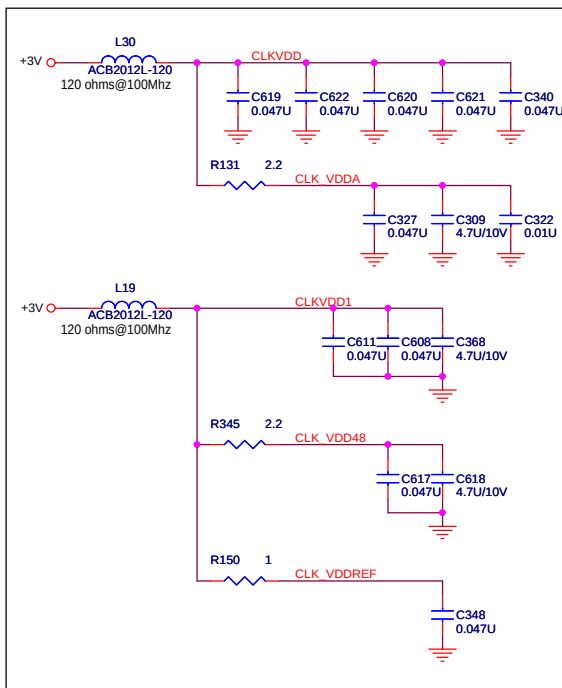


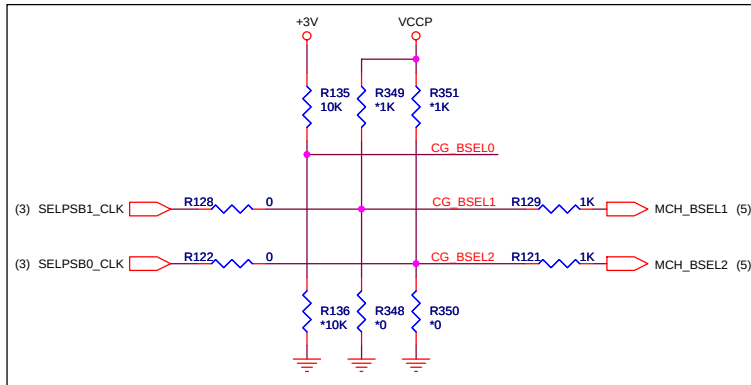
MODEL	REV	CHANGE LIST	Model	NT2 M/B BOARD	
			Page	FM	TO
MA2A M/B	3A	E200505-0479	1	3A	
	3B	E200505-3796	2	3A	
			3	3A	
	3C	E200507-2695	4	3A	
			5	3A	
			6	3A	
			7	3A	
			8	3A	
			9	3A	
			10	3A	
			11	3A	
			12	3B	
			13	3A	
			14	3A	
			15	3A	
			16	3A	
			17	3A	3C
			18	3A	3C
			19	3A	
			20	3A	
			21	3A	
			22	3A	
			23	3A	
			24	3A	
			25	3A	3C
			26	3B	
			27	3A	
			28	3A	
			29	3B	
			30	3B	
			31	3A	
			32	3A	
			33	3A	
	34	3A			
	35	3A			
	36	3A			
	37	3A			
	38	3A	3C		
	39	3A			

MA2A SYSTEM BLOCK DIAGRAM

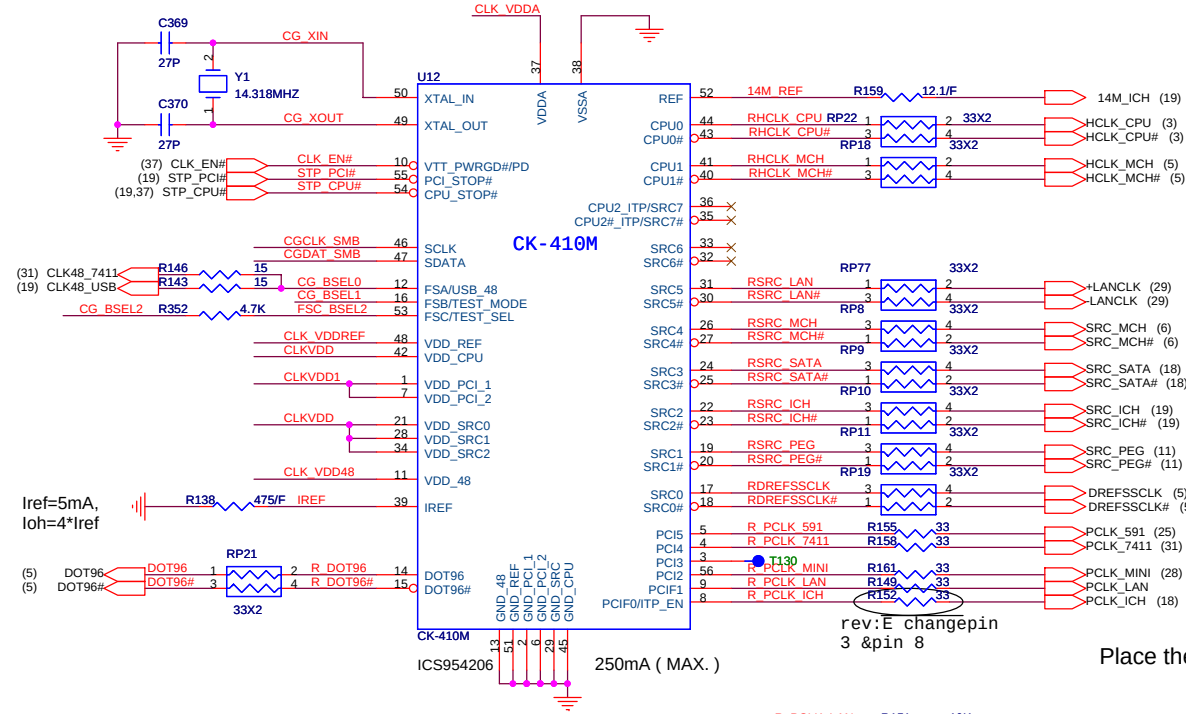




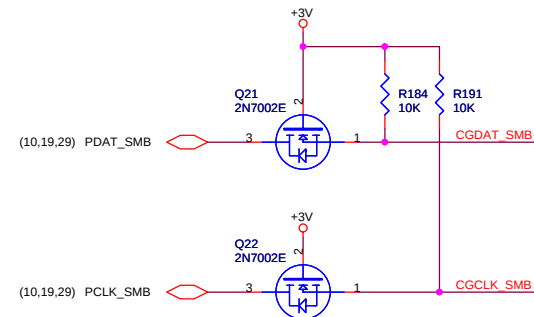
FSC	FSB	FSA	CPU	SRC	PCI	
1	0	1	100	100	33	Default
0	0	1	133	100	33	
0	1	1	166	100	33	
0	1	0	200	100	33	
0	0	0	266	100	33	
1	0	0	333	100	33	
1	1	0	400	100	33	
1	1	1	RESERVED			



Place these termination to close CK410M.



R_PCLK_LAN R151 10K +3V

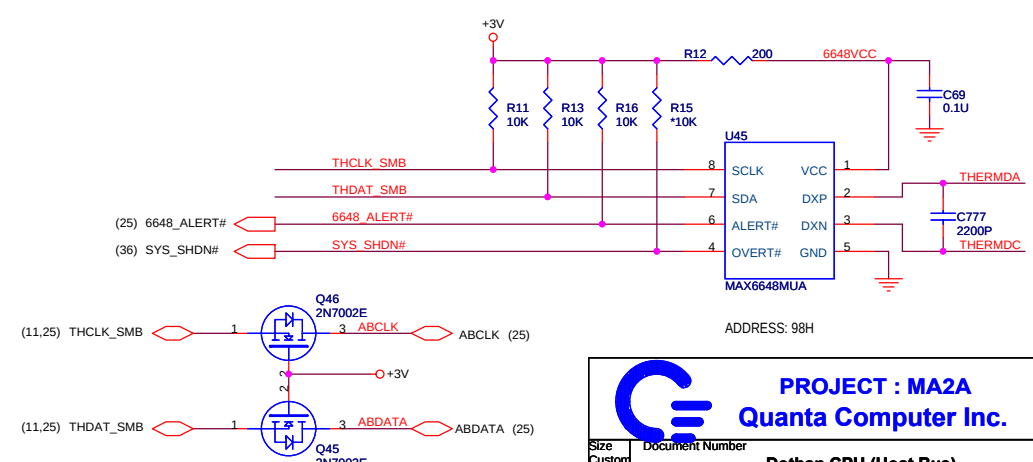
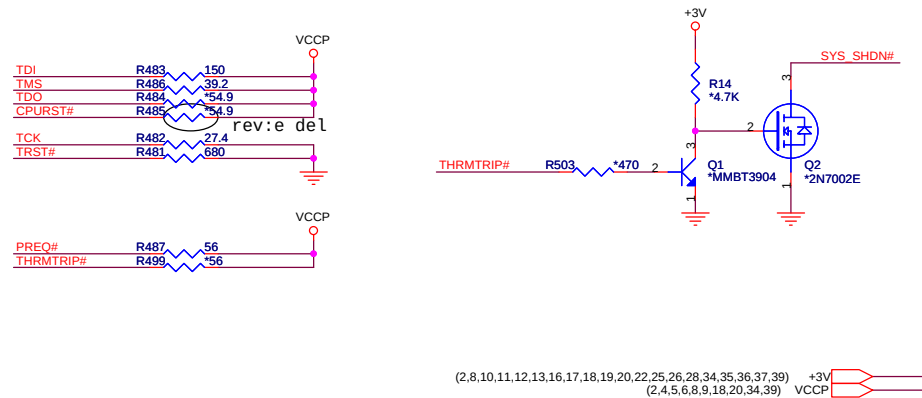


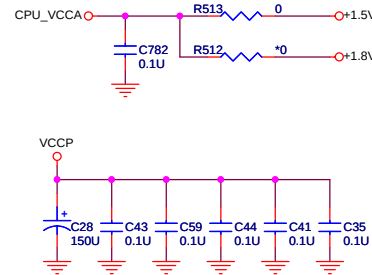
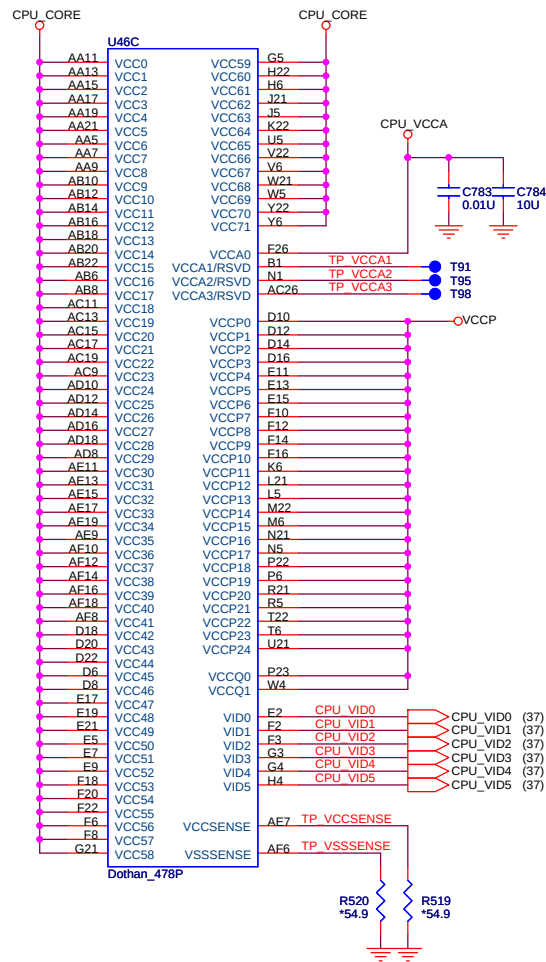
These are for backdrive issue

(48 MHz)

(33 MHz)

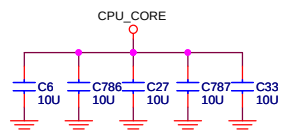
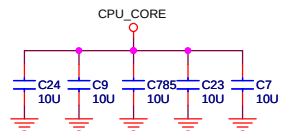
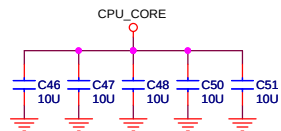
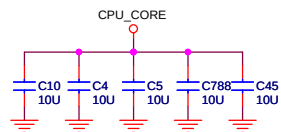
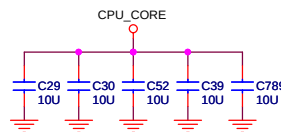
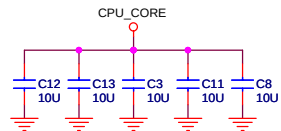
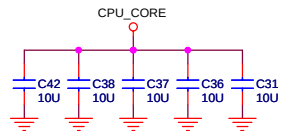
(14 MHz)





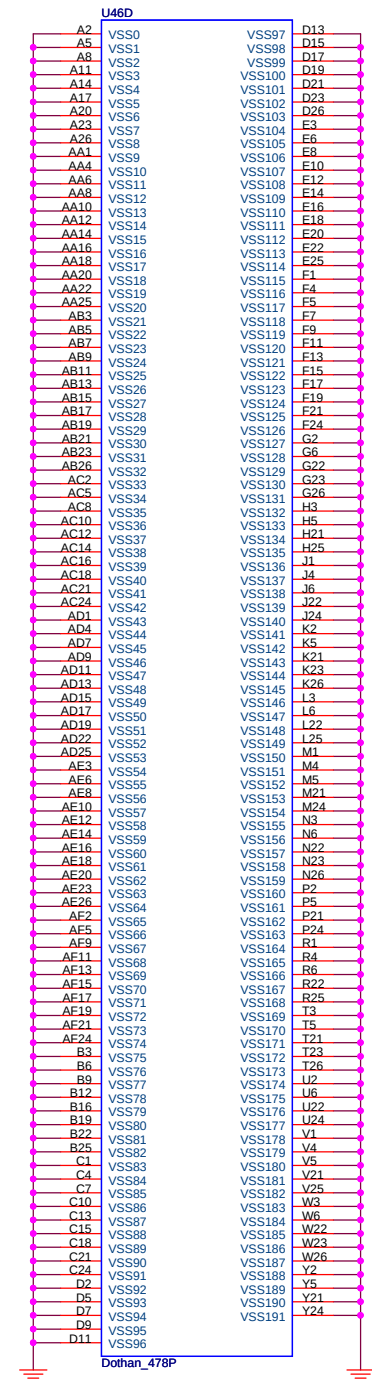
270U/2.0V(CC7343) 12 mΩ * 4
04/13 Intel recommend

(37,39) CPU_CORE
(2,3,5,6,8,9,18,20,34,39) VCCP
(8,12,19,20,32,33,39) +1.5V
(12,13,33,35,39) +1.8V



10U/6.3V/X5R(CC8085)
5 mOhm*35

----> 10U/4V/X5R(CC0603)
Murata



(10) A_MD[0..63]

A MD0 AG35
A MD1 AH35
A MD2 AL35
A MD3 AL37
A MD4 AH36
A MD5 AJ35
A MD6 AK37
A MD7 AL34
A MD8 AM36
A MD9 AN35
A MD10 AP32
A MD11 AM31
A MD12 AM31
A MD13 AM34
A MD14 AL32
A MD15 AM32
A MD16 AN31
A MD17 AP31
A MD18 AN28
A MD19 AP28
A MD20 AL30
A MD21 AM30
A MD22 AM28
A MD23 AL28
A MD24 AP27
A MD25 AM27
A MD26 AM23
A MD27 AM22
A MD28 AL23
A MD29 AM24
A MD30 AN22
A MD31 AP22
A MD32 AM9
A MD33 AL9
A MD34 AL6
A MD35 AP7
A MD36 AP11
A MD37 AP10
A MD38 AL7
A MD39 AM7
A MD40 AN5
A MD41 AN6
A MD42 AN3
A MD43 AP3
A MD44 AP6
A MD45 AM6
A MD46 AL4
A MD47 AM3
A MD48 AK2
A MD49 AK3
A MD50 AG2
A MD51 AG1
A MD52 AL3
A MD53 AM2
A MD54 AH3
A MD55 AG3
A MD56 AE3
A MD57 AE3
A MD58 AD6
A MD59 AC4
A MD60 AF2
A MD61 AF1
A MD62 AD4
A MD63 AD5

U37B

DDR SYSTEM MEMORY A

SA_BS0#
SA_BS1#
SA_BS2#
SA_DM0
SA_DM1
SA_DM2
SA_DM3
SA_DM4
SA_DM5
SA_DM6
SA_DM7
SA_DQS0
SA_DQS1
SA_DQS2
SA_DQS3
SA_DQS4
SA_DQS5
SA_DQS6
SA_DQS7
SA_DQS0#
SA_DQS1#
SA_DQS2#
SA_DQS3#
SA_DQS4#
SA_DQS5#
SA_DQS6#
SA_DQS7#
SA_MA0
SA_MA1
SA_MA2
SA_MA3
SA_MA4
SA_MA5
SA_MA6
SA_MA7
SA_MA8
SA_MA9
SA_MA10
SA_MA11
SA_MA12
SA_MA13
SA_CAS#
SA_RAS#
SA_RCVENIN#
SA_RCVENOUT#
SA_WE#

AK15 A BS0#
AK16 A BS1#
AL21 A BS2#
AJ37 A DM0
AP35 A DM1
AL29 A DM2
AP24 A DM3
AP9 A DM4
AP4 A DM5
AJ2 A DM6
AD3 A DM7
AK36 A DQS0
AP33 A DQS1
AN29 A DQS2
AP23 A DQS3
AM8 A DQS4
AM4 A DQS5
AJ1 A DQS6
AE5 A DQS7
AK35 A DQS#0
AP34 A DQS#1
AN30 A DQS#2
AN23 A DQS#3
AN8 A DQS#4
AM5 A DQS#5
AH1 A DQS#6
AE4 A DQS#7
AL17 A MA0
AP17 A MA1
AP18 A MA2
AM17 A MA3
AN18 A MA4
AM18 A MA5
AL19 A MA6
AP20 A MA7
AM19 A MA8
AL20 A MA9
AM16 A MA10
AN20 A MA11
AM20 A MA12
AM15 A MA13

A_BS0# (10)
A_BS1# (10)
A_BS2# (10)
A_DM[0..7] (10)
A_DQS[0..7] (10)
A_DQS# [0..7] (10)
A_MA[0..13] (10)
A_SCASA# (10)
A_SRASA# (10)
T21
T19
A_BMWEA# (10)

(10) B_MD[0..63]

B MD0 AE31
B MD1 AE32
B MD2 AG32
B MD3 AG36
B MD4 AE34
B MD5 AE31
B MD6 AE31
B MD7 AF30
B MD8 AH33
B MD9 AH32
B MD10 AK31
B MD11 AG30
B MD12 AG30
B MD13 AG34
B MD14 AH31
B MD15 AJ31
B MD16 AK30
B MD17 AJ30
B MD18 AH29
B MD19 AH28
B MD20 AK29
B MD21 AH30
B MD22 AH27
B MD23 AG28
B MD24 AF24
B MD25 AG23
B MD26 AJ22
B MD27 AK22
B MD28 AH24
B MD29 AH23
B MD30 AG22
B MD31 AJ21
B MD32 AG10
B MD33 AG9
B MD34 AG8
B MD35 AH8
B MD36 AH11
B MD37 AH10
B MD38 AJ9
B MD39 AK9
B MD40 AJ7
B MD41 AK6
B MD42 AJ4
B MD43 AH5
B MD44 AK8
B MD45 AJ8
B MD46 AJ5
B MD47 AK4
B MD48 AG5
B MD49 AG4
B MD50 AD8
B MD51 AD9
B MD52 AH4
B MD53 AG6
B MD54 AE9
B MD55 AD7
B MD56 AC5
B MD57 AB8
B MD58 AB6
B MD59 AA8
B MD60 AC8
B MD61 AC7
B MD62 AA4
B MD63 AA5

U37G

DDR SYSTEM MEMORY B

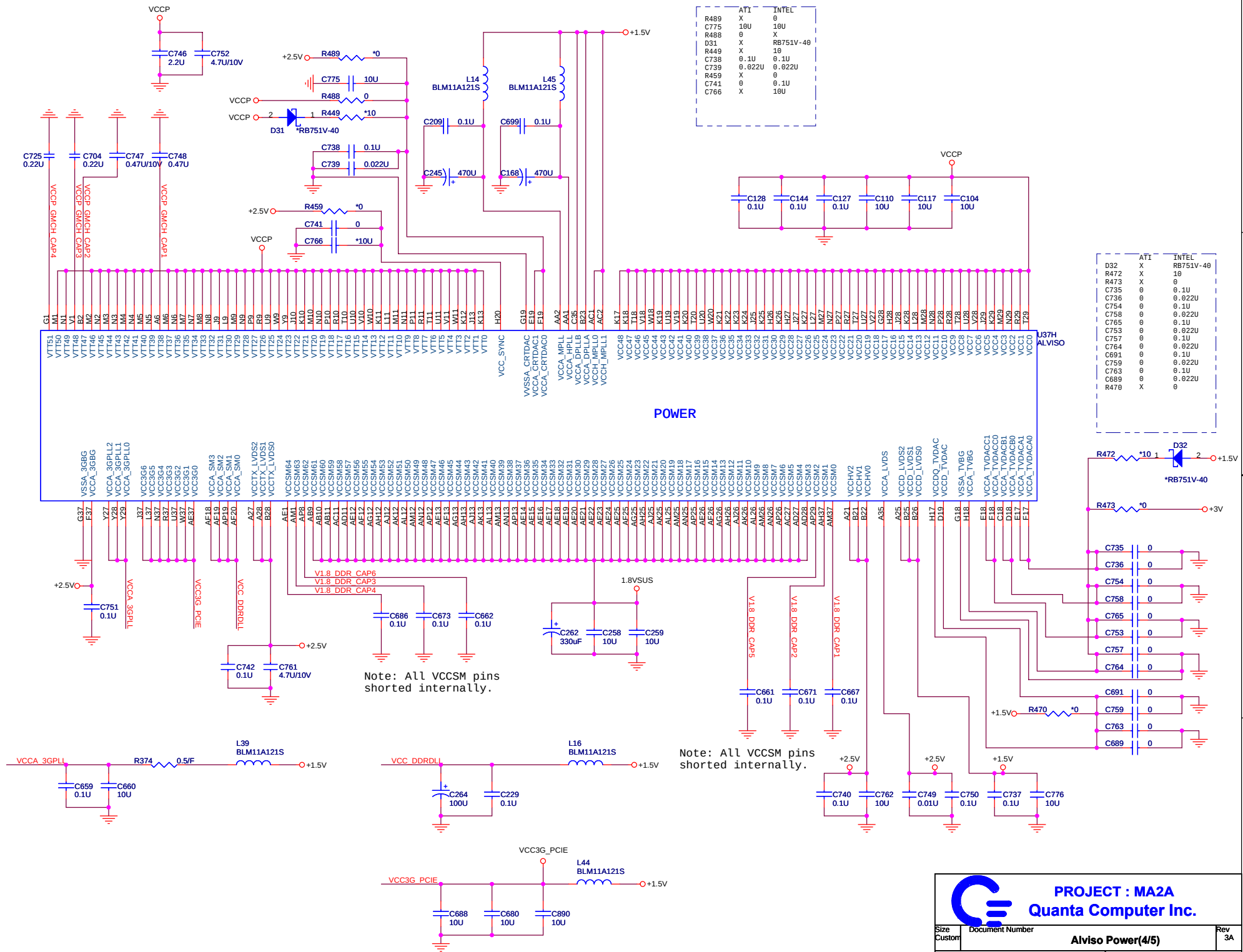
SB_BS0#
SB_BS1#
SB_BS2#
SB_DM0
SB_DM1
SB_DM2
SB_DM3
SB_DM4
SB_DM5
SB_DM6
SB_DM7
SB_DQS0
SB_DQS1
SB_DQS2
SB_DQS3
SB_DQS4
SB_DQS5
SB_DQS6
SB_DQS7
SB_DQS0#
SB_DQS1#
SB_DQS2#
SB_DQS3#
SB_DQS4#
SB_DQS5#
SB_DQS6#
SB_DQS7#
SB_MA0
SB_MA1
SB_MA2
SB_MA3
SB_MA4
SB_MA5
SB_MA6
SB_MA7
SB_MA8
SB_MA9
SB_MA10
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SB_MA12
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SB_CAS#
SB_RAS#
SB_RCVENIN#
SB_RCVENOUT#
SB_WE#

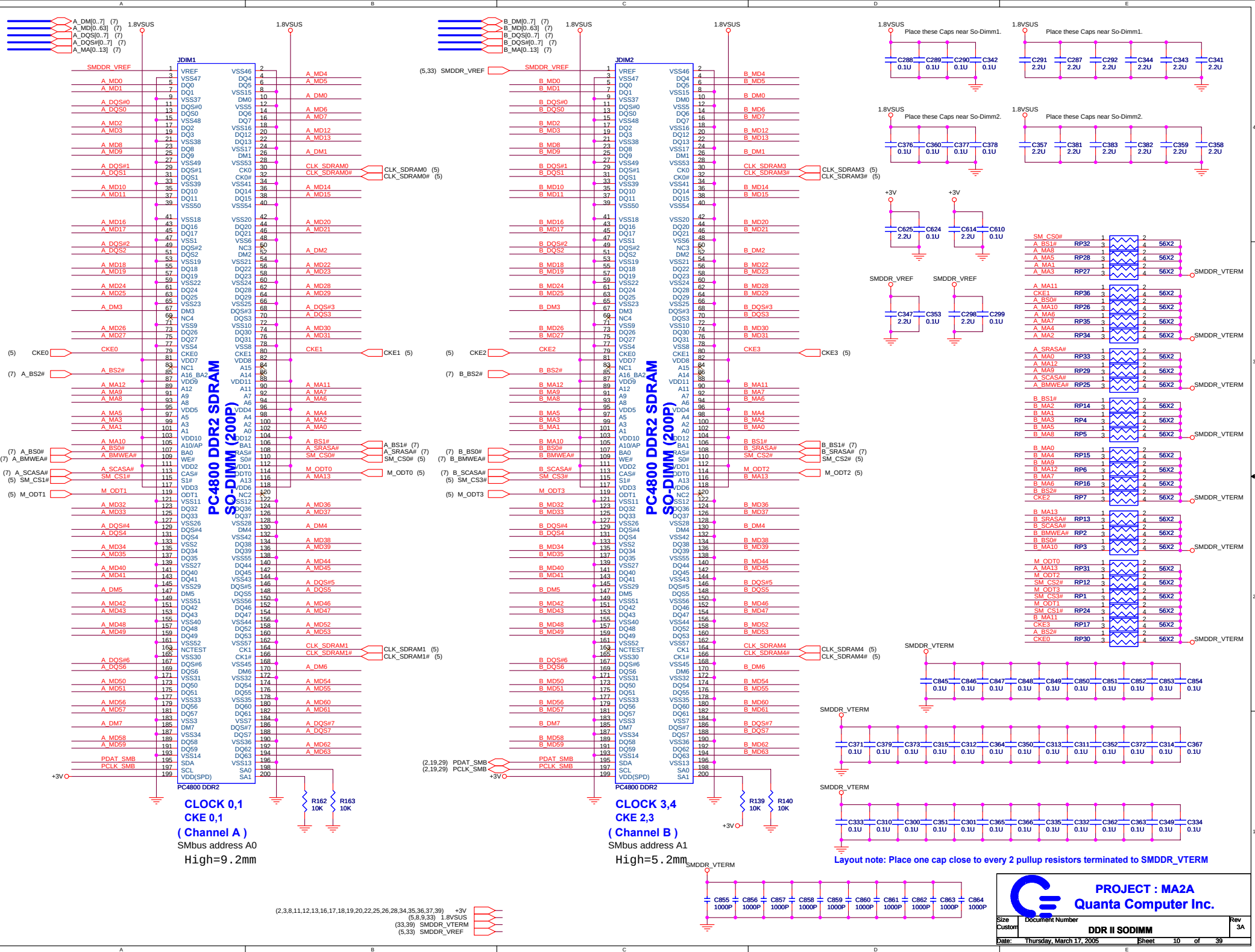
AJ15 B BS0#
AG17 B BS1#
AG21 B BS2#
AE32 B DM0
AK34 B DM1
AK27 B DM2
AK24 B DM3
AJ10 B DM4
AK5 B DM5
AE7 B DM6
AB7 B DM7
AE34 B DQS0
AK32 B DQS1
AJ28 B DQS2
AK23 B DQS3
AM10 B DQS4
AH6 B DQS5
AF8 B DQS6
AB4 B DQS7
AE35 B DQS#0
AK33 B DQS#1
AK28 B DQS#2
AJ23 B DQS#3
AL10 B DQS#4
AH7 B DQS#5
AE7 B DQS#6
AB5 B DQS#7
AH17 B MA0
AK17 B MA1
AH18 B MA2
AJ18 B MA3
AK18 B MA4
AJ19 B MA5
AK19 B MA6
AH19 B MA7
AJ20 B MA8
B MA9
AH20 B MA10
AJ16 B MA11
AG18 B MA12
AG20 B MA13
AH14 B SCASA#
AK14 B SRASA#
AE15 SB RCVENIN#
AE14 SB RCVENOUT#
AH16 B BMWEA#

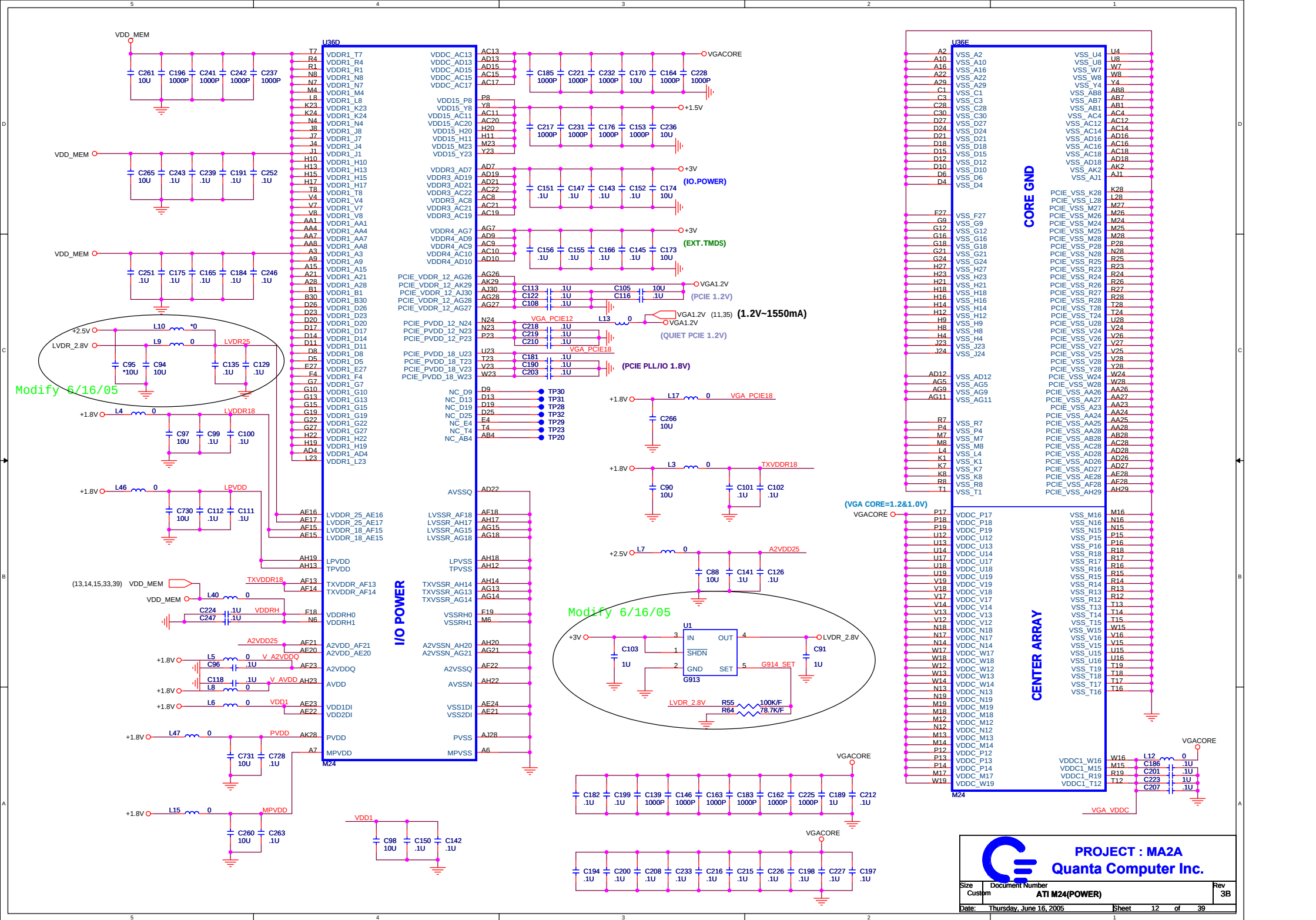
B_BS0# (10)
B_BS1# (10)
B_BS2# (10)
B_DM[0..7] (10)
B_DQS[0..7] (10)
B_DQS# [0..7] (10)
B_MA[0..13] (10)
B_SCASA# (10)
B_SRASA# (10)
T16
T17
B_BMWEA# (10)

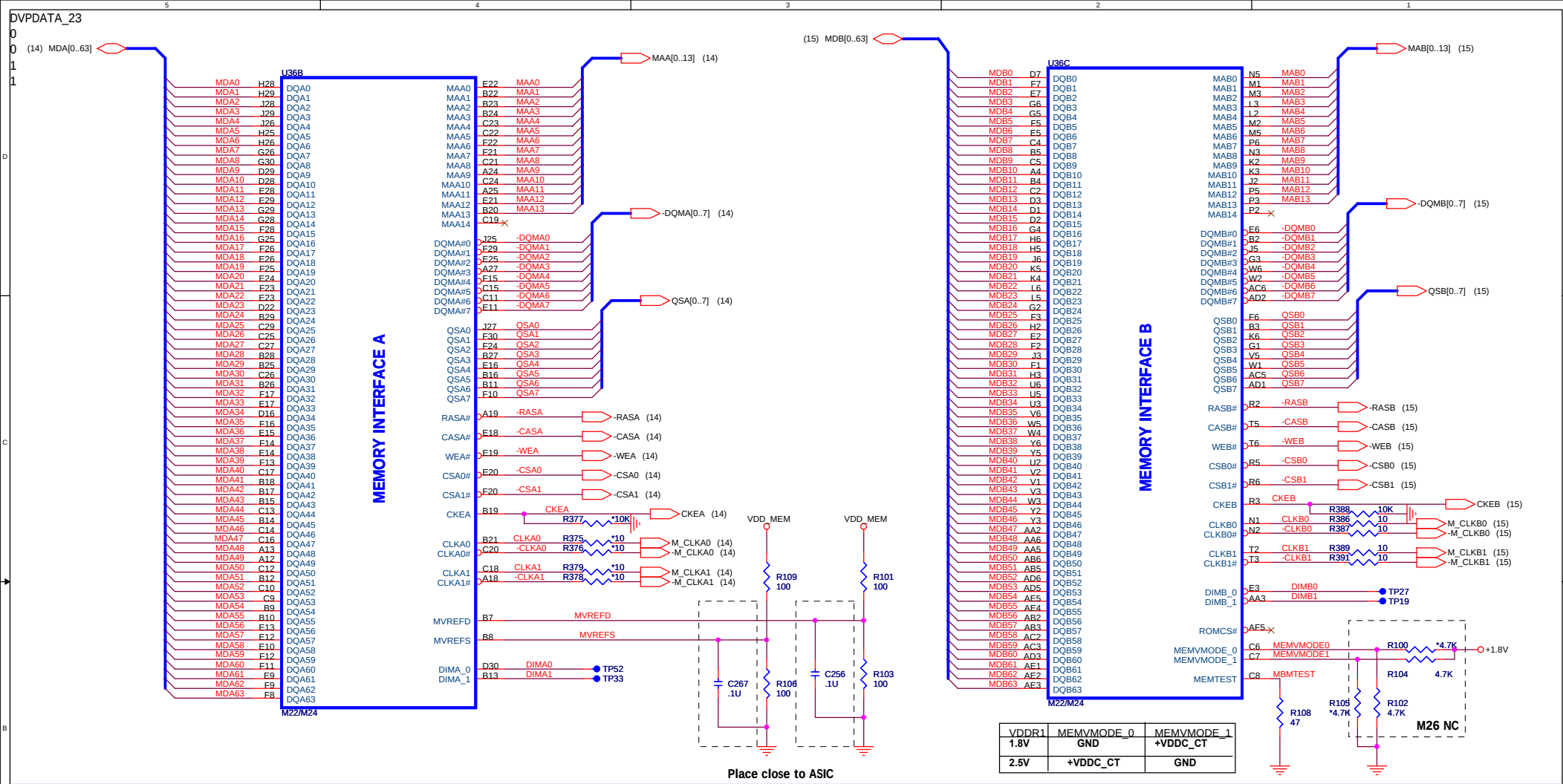
ALVISO

ALVISO







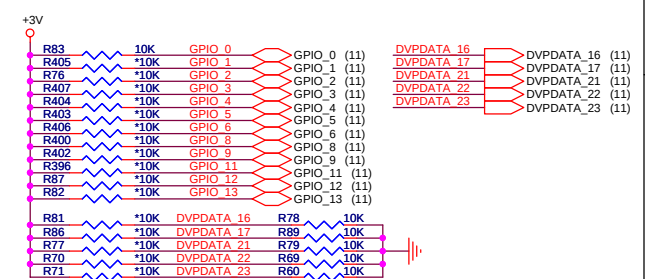


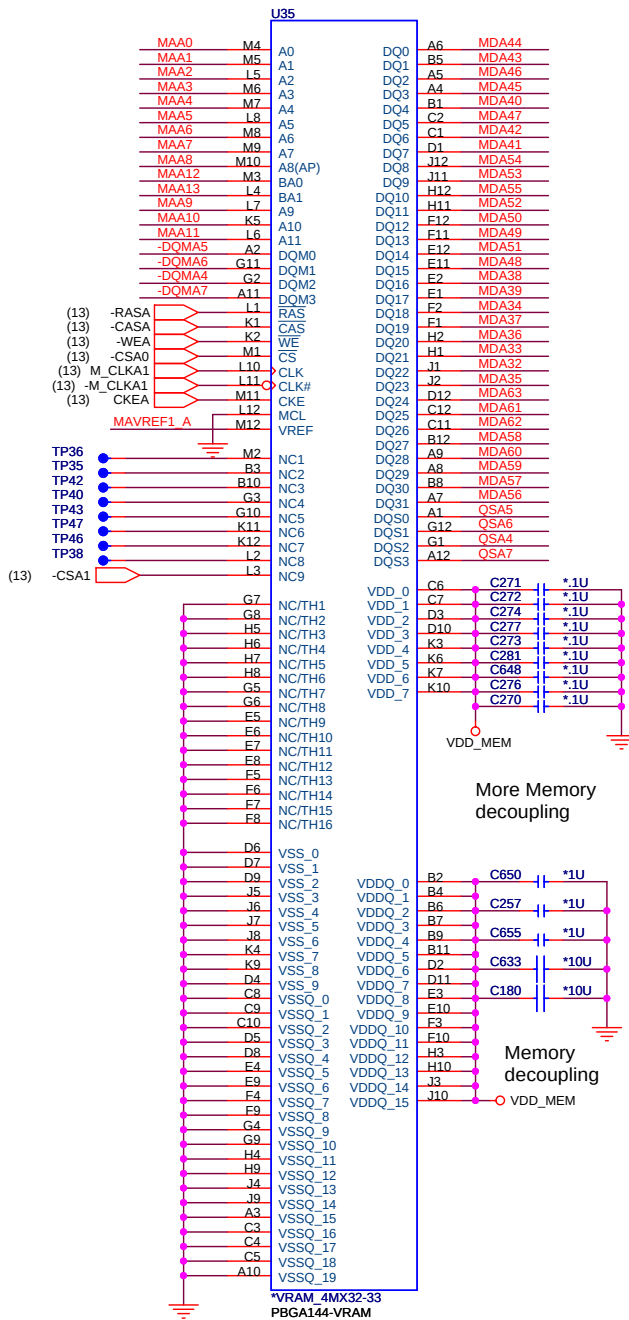
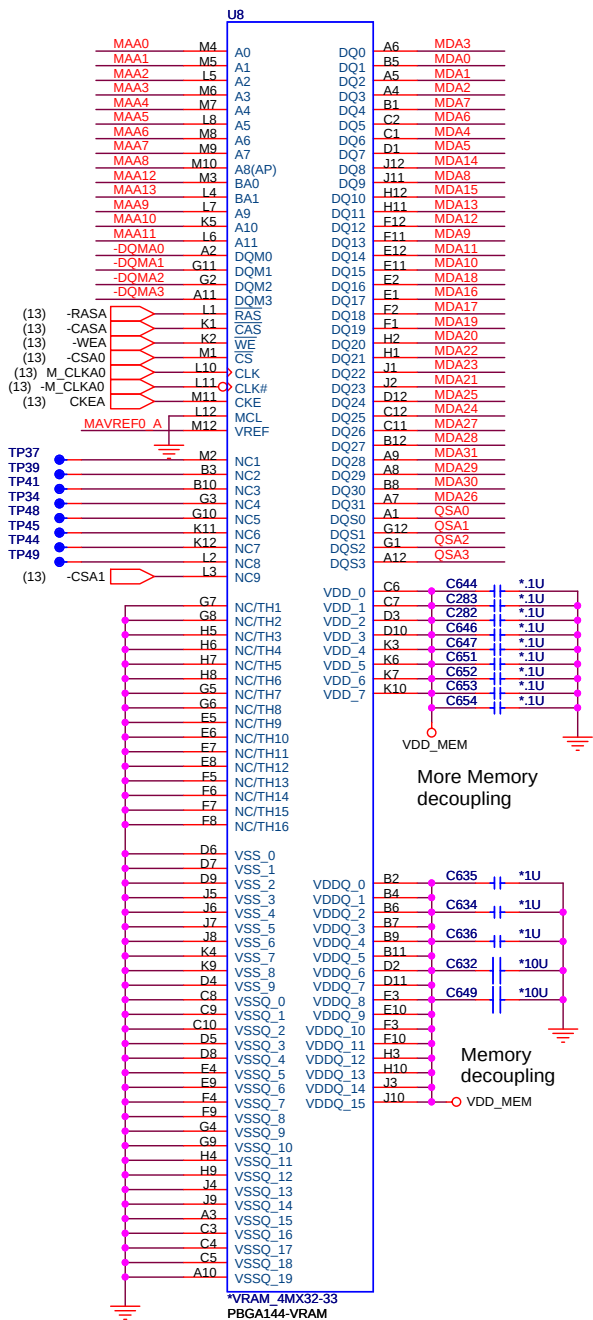
STRAPS PIN

GPIO_0	PCI-Express Current Calibration Bandgap Backup
	0: use reference voltage from Bandgap 1: use reference voltage from resistor divider
GPIO_1	PCI-Express PLL Calibration force enable
	0: Disable PLL force calibration 1: Enable PLL force calibration
GPIO_(3,2)	00: PCI Express 1.0 mode 01: RESERVED 10: PCI Express 1.0 mode 11: RESERVED
	Turn off PCI-Express impedance / strength calibration
GPIO_4	0: enable 1: disable
	Bypass PCI-Express PLL
GPIO_5	PCI-Express transmitter current compensation
	0: Normal 1: Inject extra current for output buffer switching

STRAPS PIN

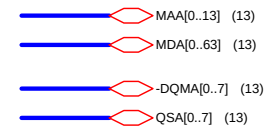
GPIO_8	Strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible		
GPIO(9,13:11) INT P/D	ROMIDCFG		
	0x0x: No ROM, CHG_ID=0 0x1x: No Rom, CHG_ID=1 1000: Parallel ROM, Chip ID'S from ROM 1000: Parallel ROM, Chip ID'S from ROM		
DVPDATA_23-22 MEM TYPE	DVPDATA_23	DVPDATA_22	
	0	0	Samsung 8M x 32 (1.8V) - M24C
	0	1	Samsung 4M x 32 (1.8V) - M24C
	1	0	Hynix 8M x 32 (1.8V) - M24C
	1	1	Hynix 4M x 32 (1.8V) - M24C



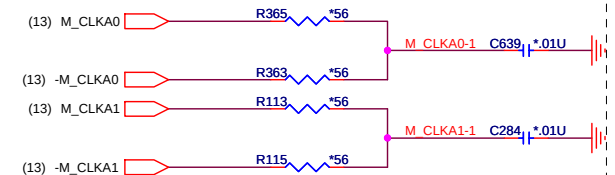
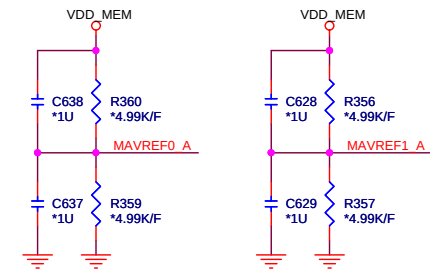


VGA DDR MEMORY A

@64/128MBytes DDR 128Mbit 1MX32X4 uBGA



Place close to memory



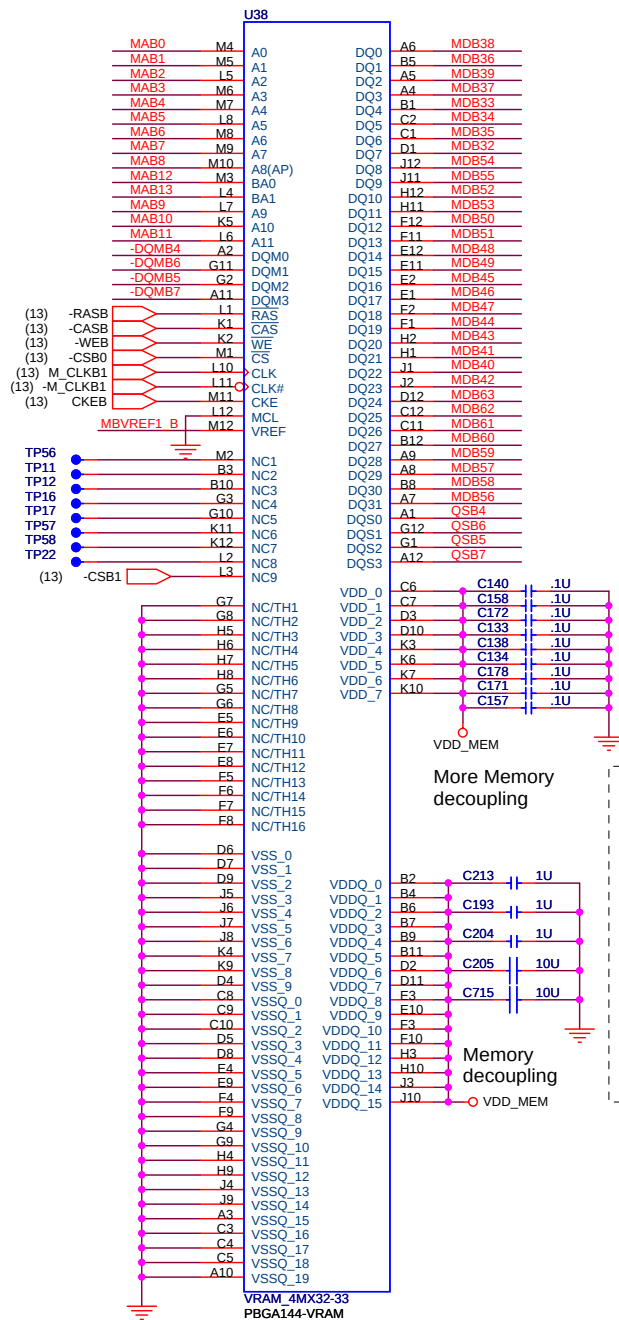
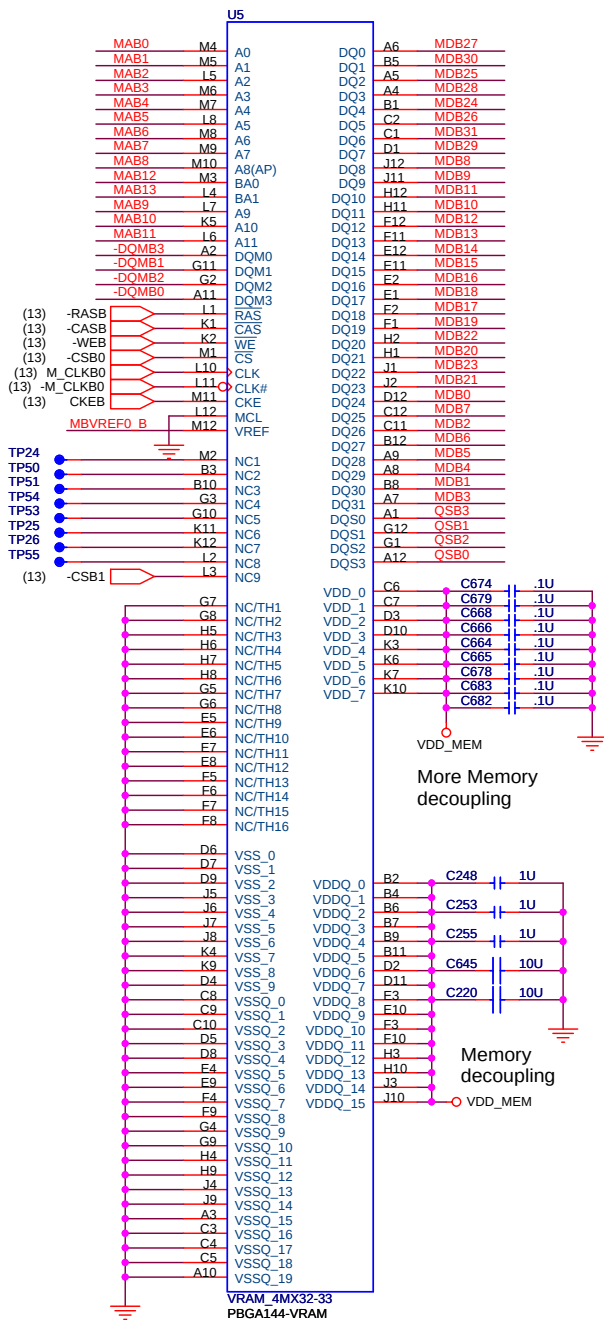
At least a 2.5:1 spacing between the pair

These resistors and caps must be placed to minimize any stubs. These must also be placed after the memory



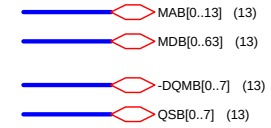
PROJECT : MA2A
Quanta Computer Inc.

Size	Document Number	Rev
B	VGA DDR VRAM-A CANNEL	3A
Date:	Thursday, March 17, 2005	Sheet 14 of 39

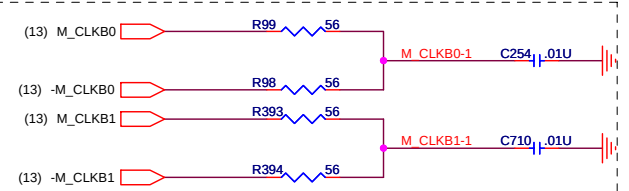
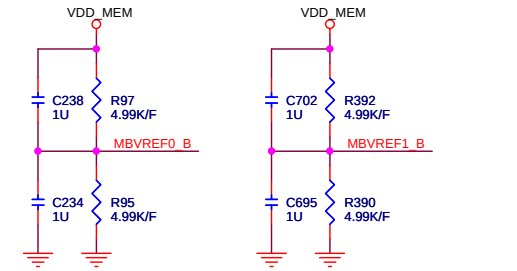


VGA DDR MEMORY B

@64/128MBytes DDR 128Mbit 1MX32X4 uBGA



Place close to memory



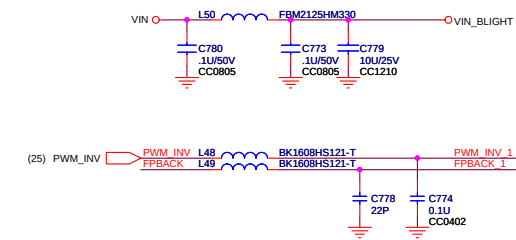
At least a 2.5:1 spacing between the pair

These resistors and caps must be placed to minimize any stubs. These must also be placed after the memory

The schematic diagram illustrates the power management section of the MXLID# (25) module. It includes two +3V power inputs, a 3VPCU input, and a 3V output. The circuit features two MOSFETs (Q54, Q53), two diodes (D15, D16), and several resistors (R579, R314, R233, R311). Capacitors C483, C587, and C567 are used for decoupling. The circuit is controlled by BLON, FPBACK#, and COVERSWSW signals.

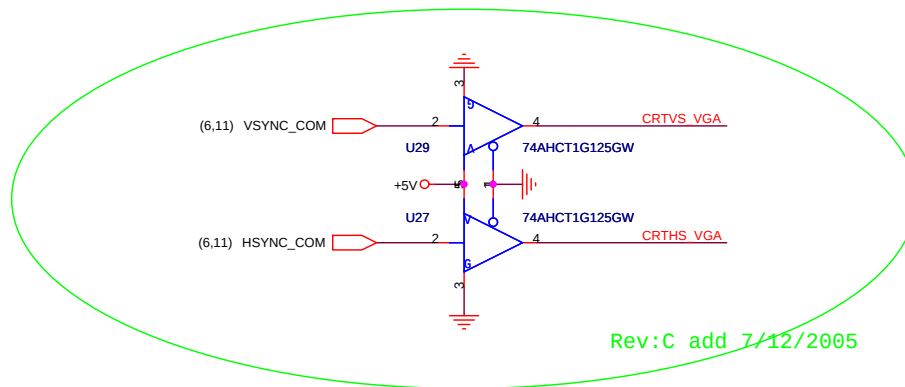
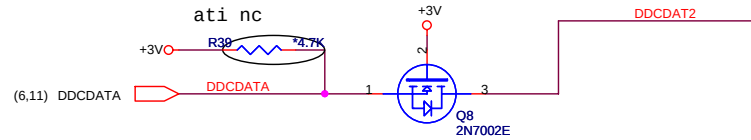
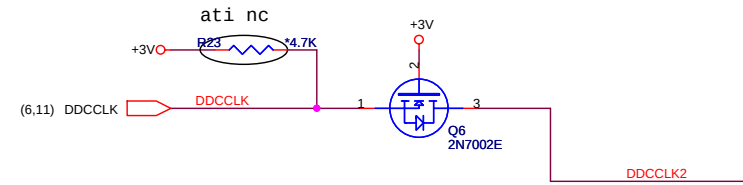
The diagram illustrates the pinout for the LCDCON40F connector. The signals are as follows:

- Pin 1:** LCDVCC
- Pin 2:** PWM_INV_1
- Pin 3:** FPBACK_1
- Pin 4:** U47 TC/SH08FU
- Pin 5:** (6.11) DDC_CLK
- Pin 6:** (6.11) DDC_DATA
- Pin 7:** +3V
- Pin 8:** TXUOUT0-
- Pin 9:** TXUOUT0+
- Pin 10:** TXUOUT1-
- Pin 11:** TXUOUT1+
- Pin 12:** TXUOUT2-
- Pin 13:** TXUOUT2+
- Pin 14:** TXUCLKOUT-
- Pin 15:** TXUCLKOUT+
- Pin 16:** TXLOUT0-
- Pin 17:** TXLOUT0+
- Pin 18:** TXLOUT1-
- Pin 19:** TXLOUT1+
- Pin 20:** TXLOUT2-
- Pin 21:** TXLOUT2+
- Pin 22:** TXCLKOUT-
- Pin 23:** TXCLKOUT+
- Pin 24:** PWM_INV_2
- Pin 25:** VIN_BLIGHT
- Pin 26:** LCDCON40F

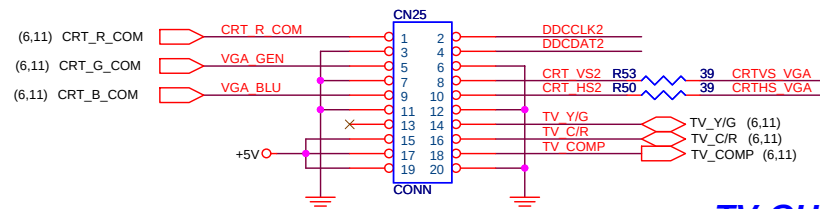


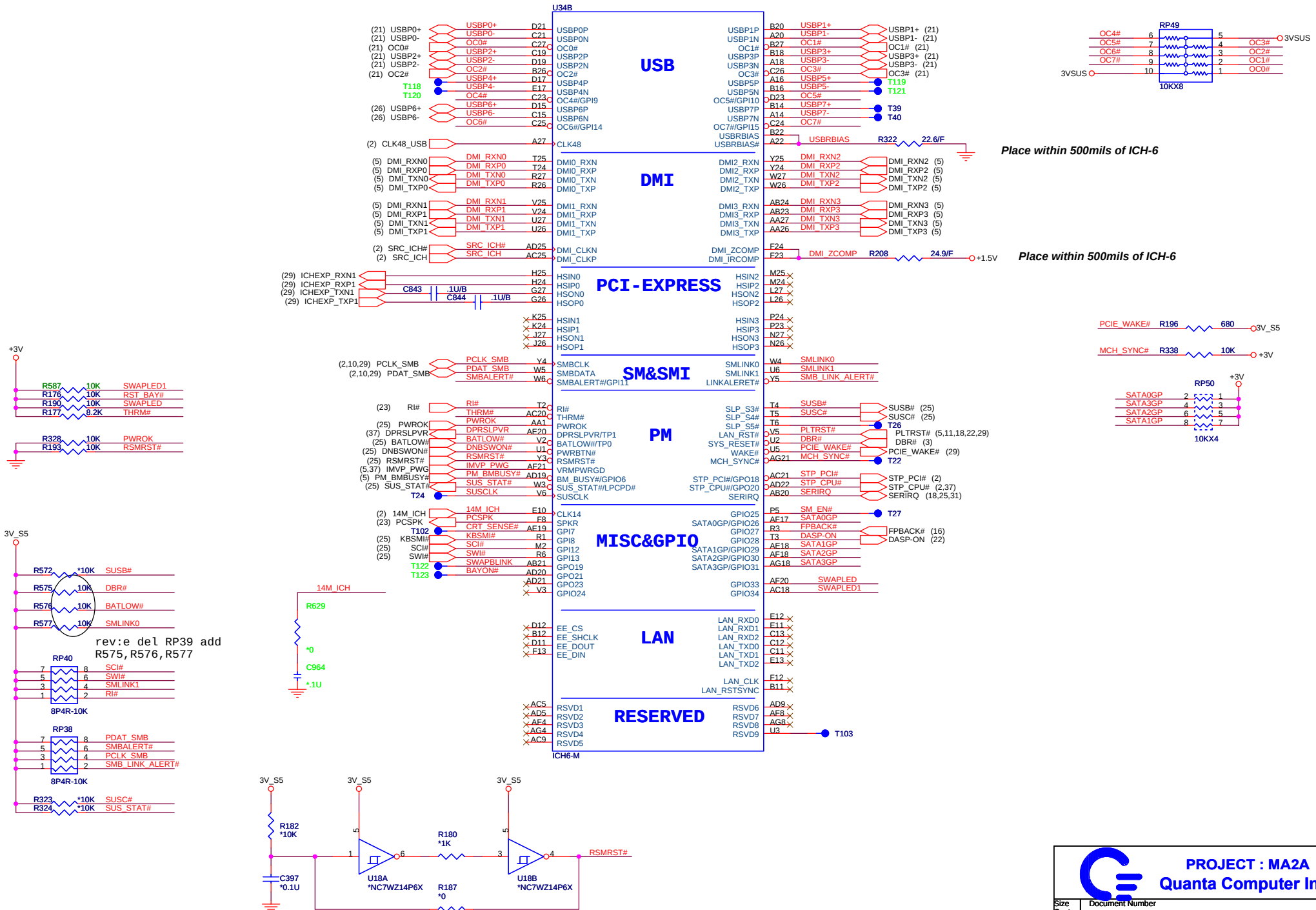
PROJECT : MA2A
Quanta Computer Inc.

Size Custom	Document Number LCD LVDS CON	Rev 3A
Date: Thursday, March 17, 2005	Sheet 16 of 39	

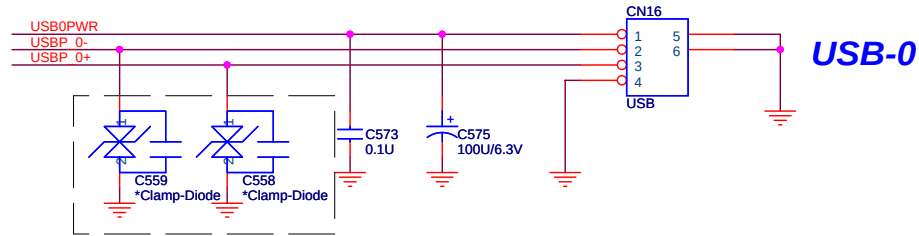
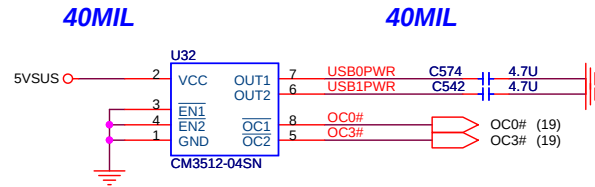


CRT PORT

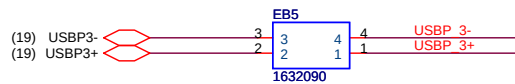
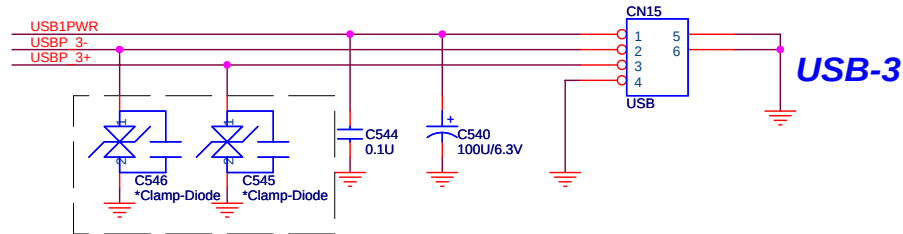
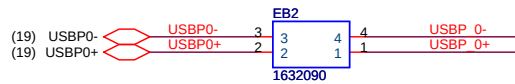




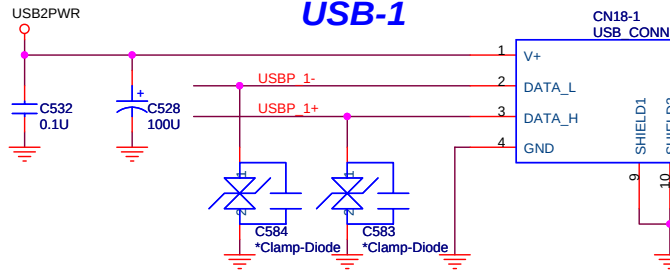
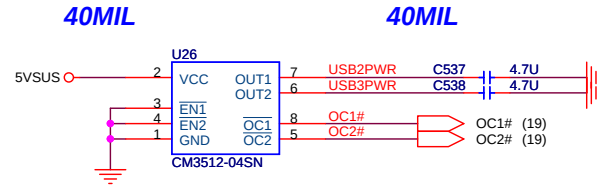
LEFT SIDE



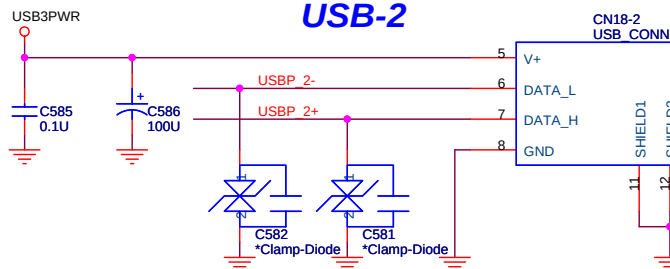
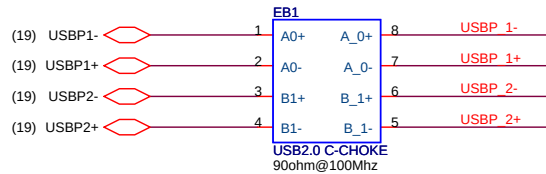
LEFT SIDE



USB-1



USB-2



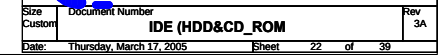
(26,28,31,34,36,37,39) 5VSUS



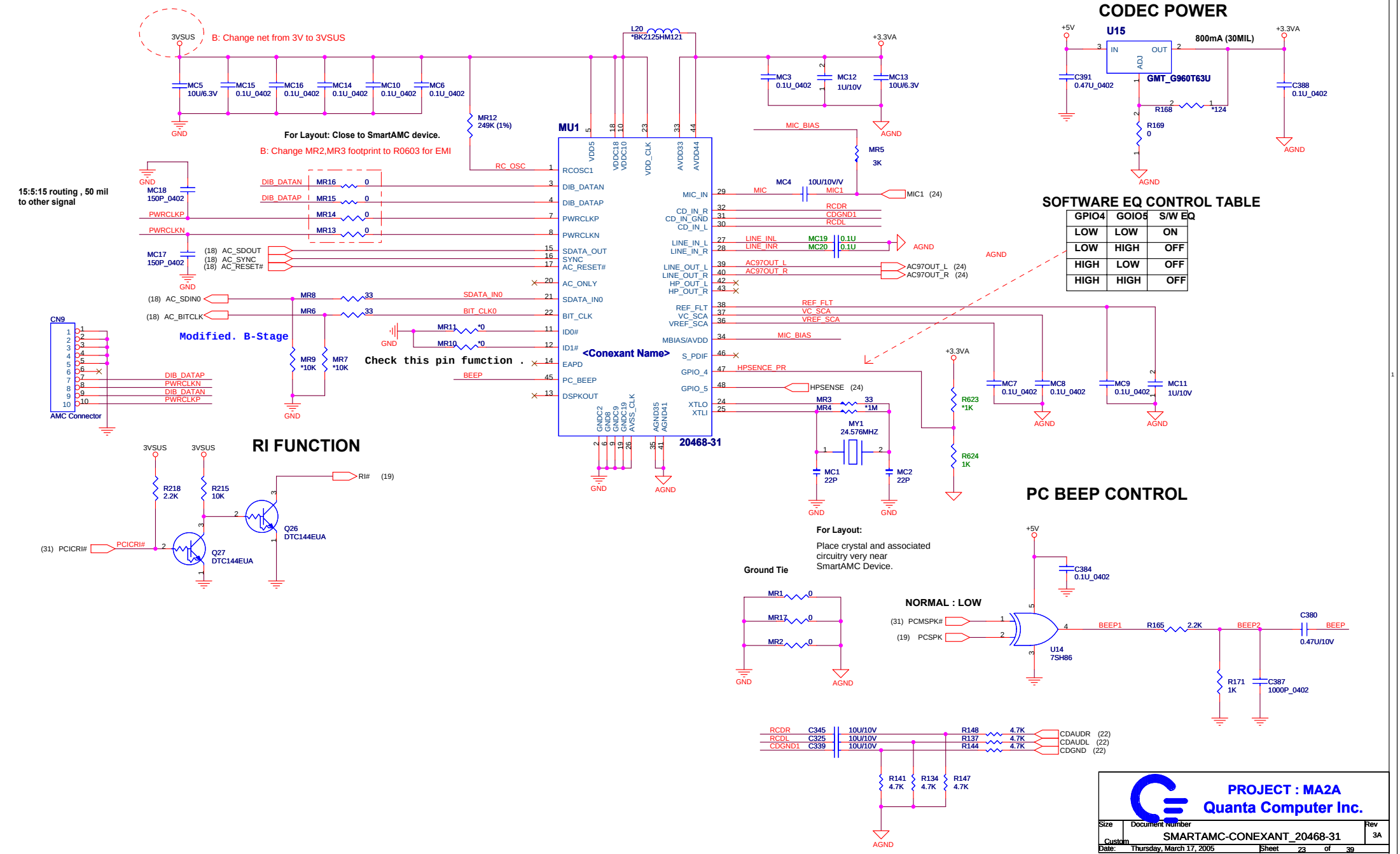
PROJECT : MA2A
Quanta Computer Inc.

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CD-ROM connector



For Layout:
Place decoupling caps near the power pins of
SmartAMC device.

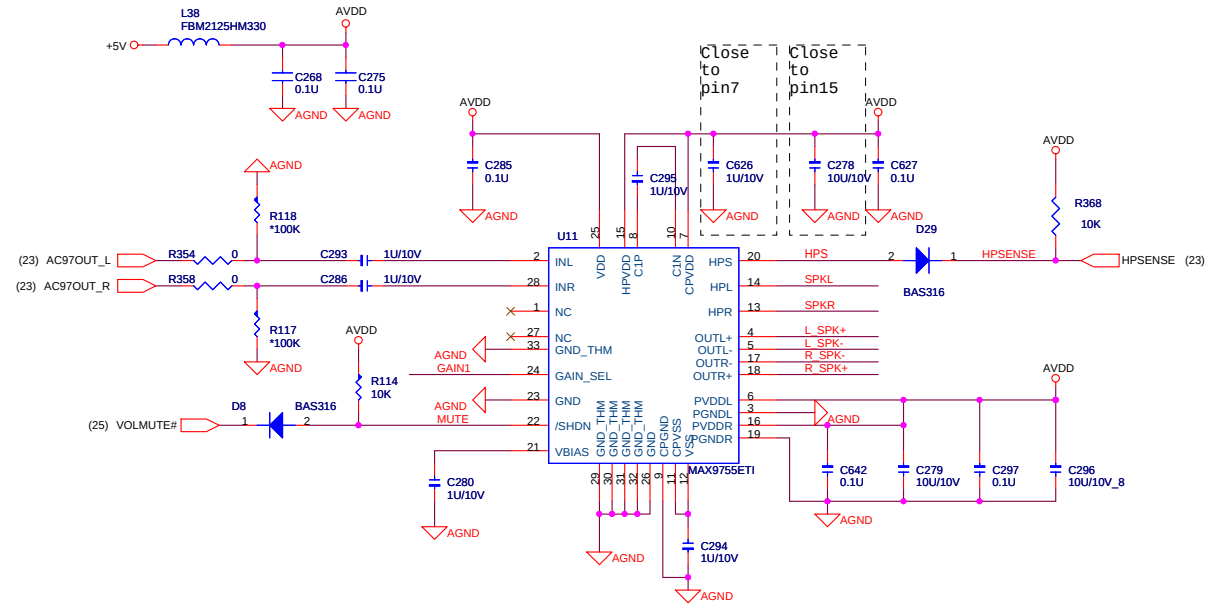


SOFTWARE EQ CONTROL TABLE

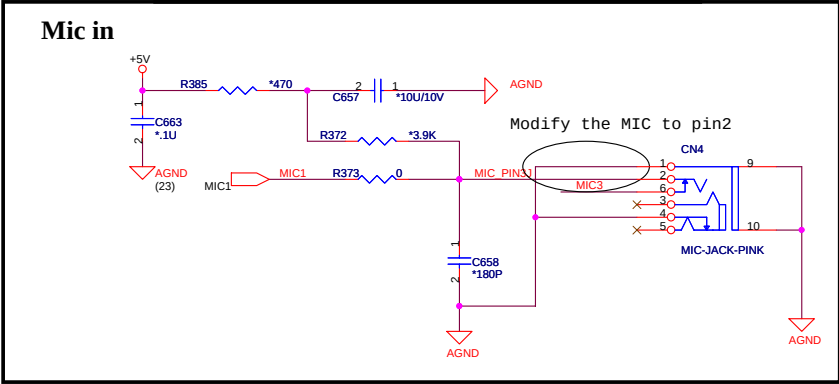
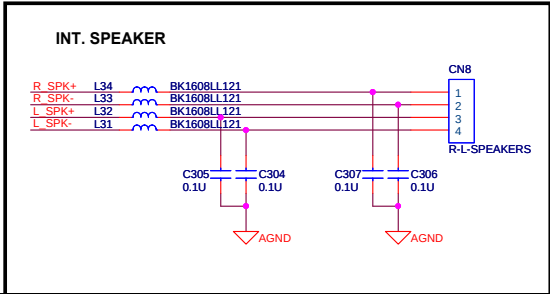
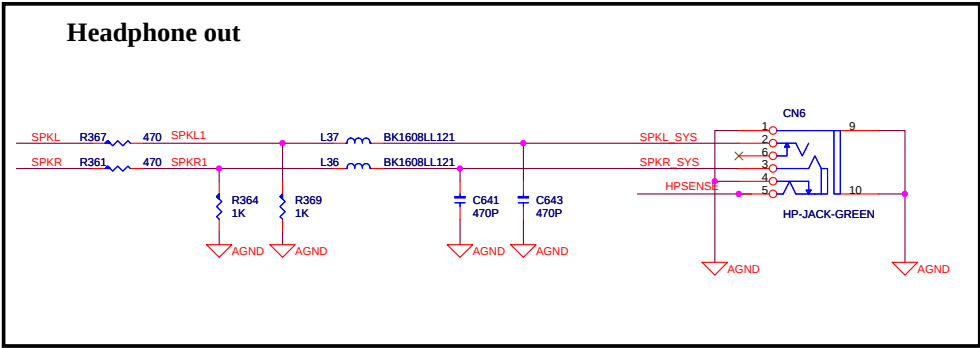
GPIO4	GPIO5	S/W EQ
LOW	LOW	ON
LOW	HIGH	OFF
HIGH	LOW	OFF
HIGH	HIGH	OFF

PC BEEP CONTROL

AUDIO AMPLIFIER-MAX9755

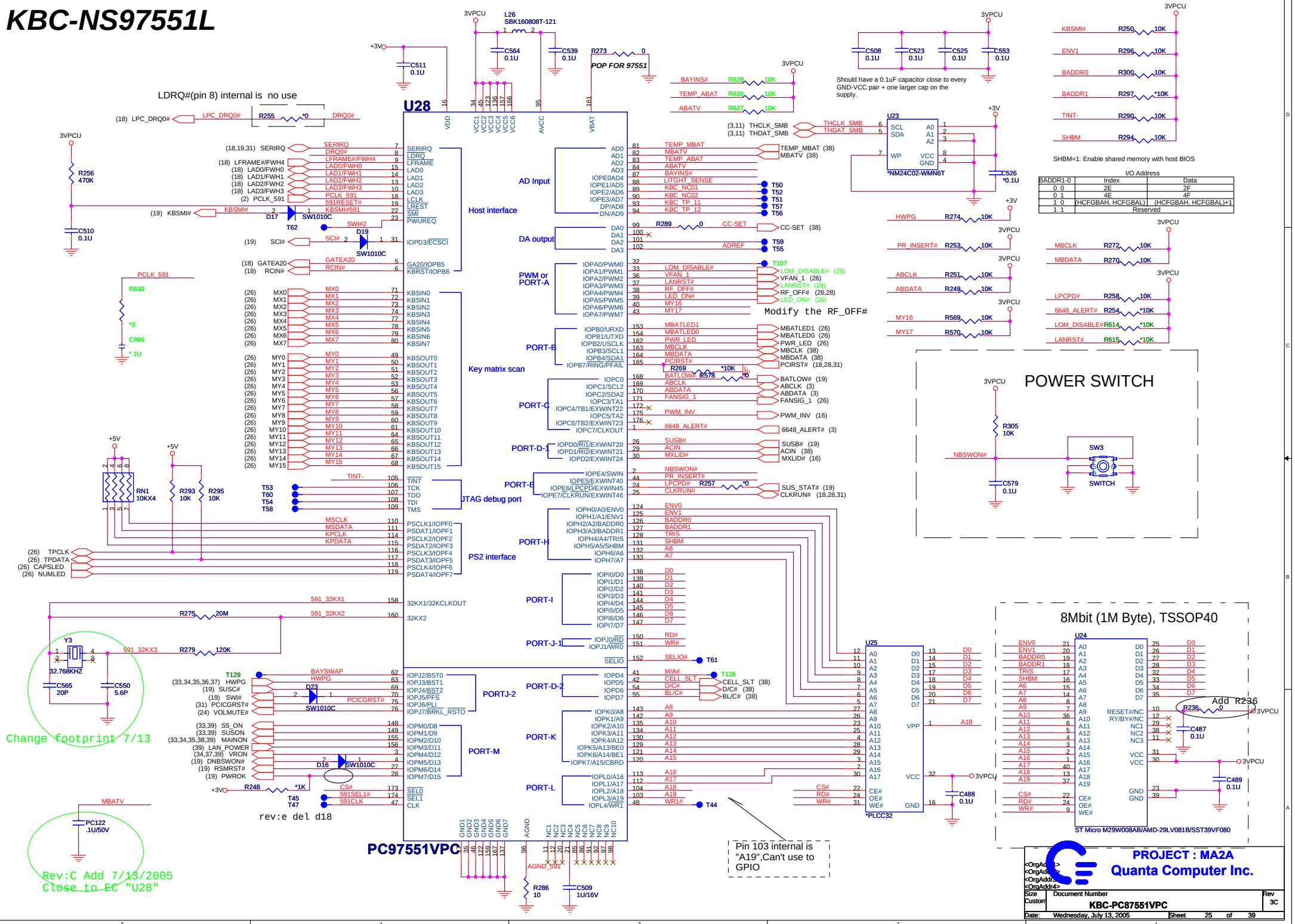


GAIN1	SPKR MODE	HP MODE
0	10.5	3
1	9	0

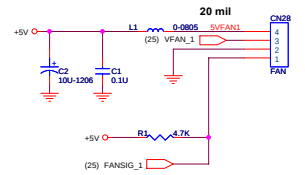


KBC-NS97551L

LDRQ#(pin 8) internal is no use

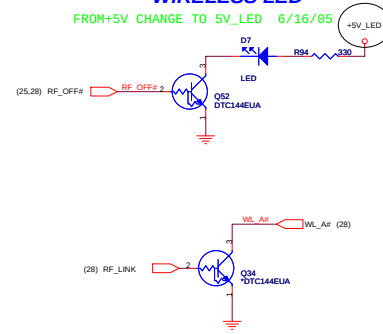


FAN OUT PWM CONNECTOR

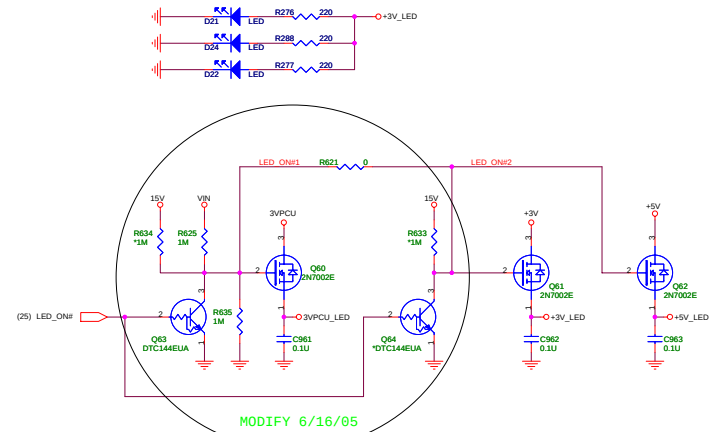
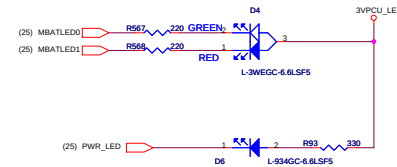
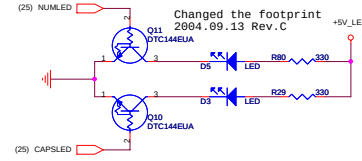
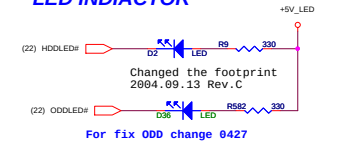


WIRELESS LED

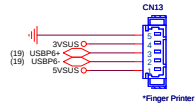
FROM+5V CHANGE TO 5V_LED 6/16/05



LED INDIATOR

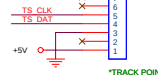


FINGER PRINT

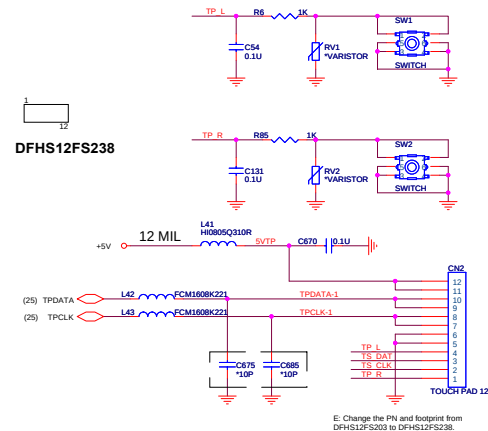


TRACK POINT

Changed the pin define
2004.09.13 Rev.C



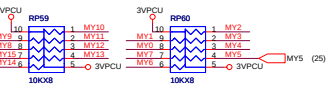
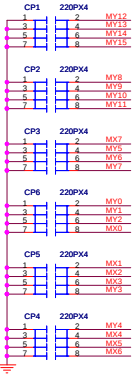
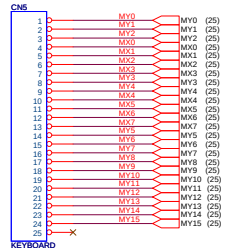
TOUCHPAD

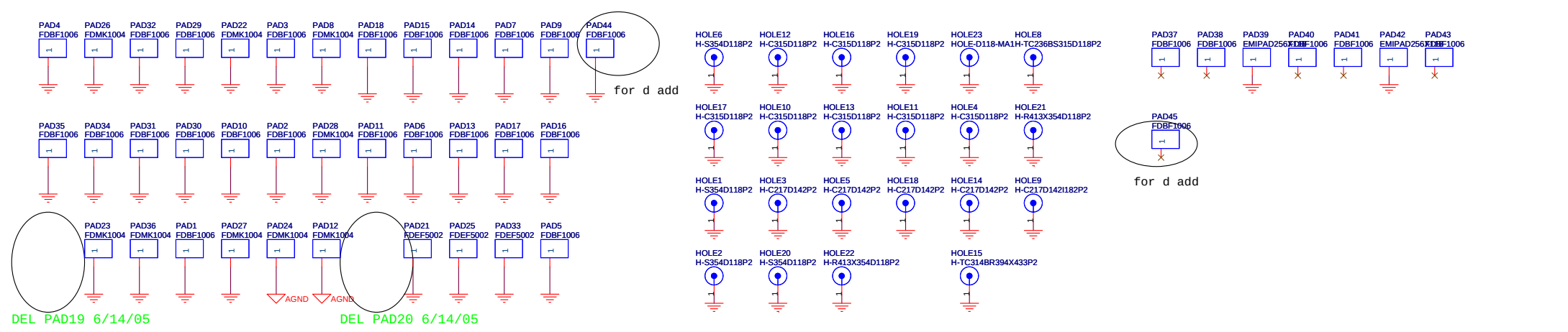


DFHS12FS238

E: Change the PN and footprint from
DFHS12FS238 to DFHS12FS238

KEYBOARD

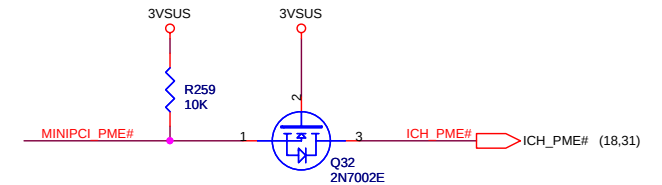
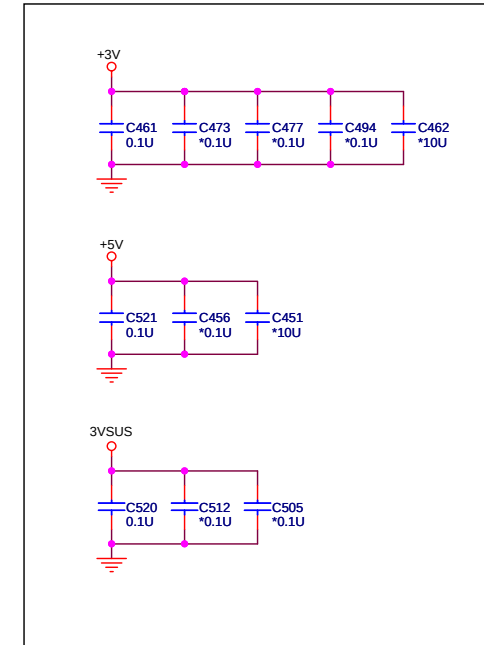
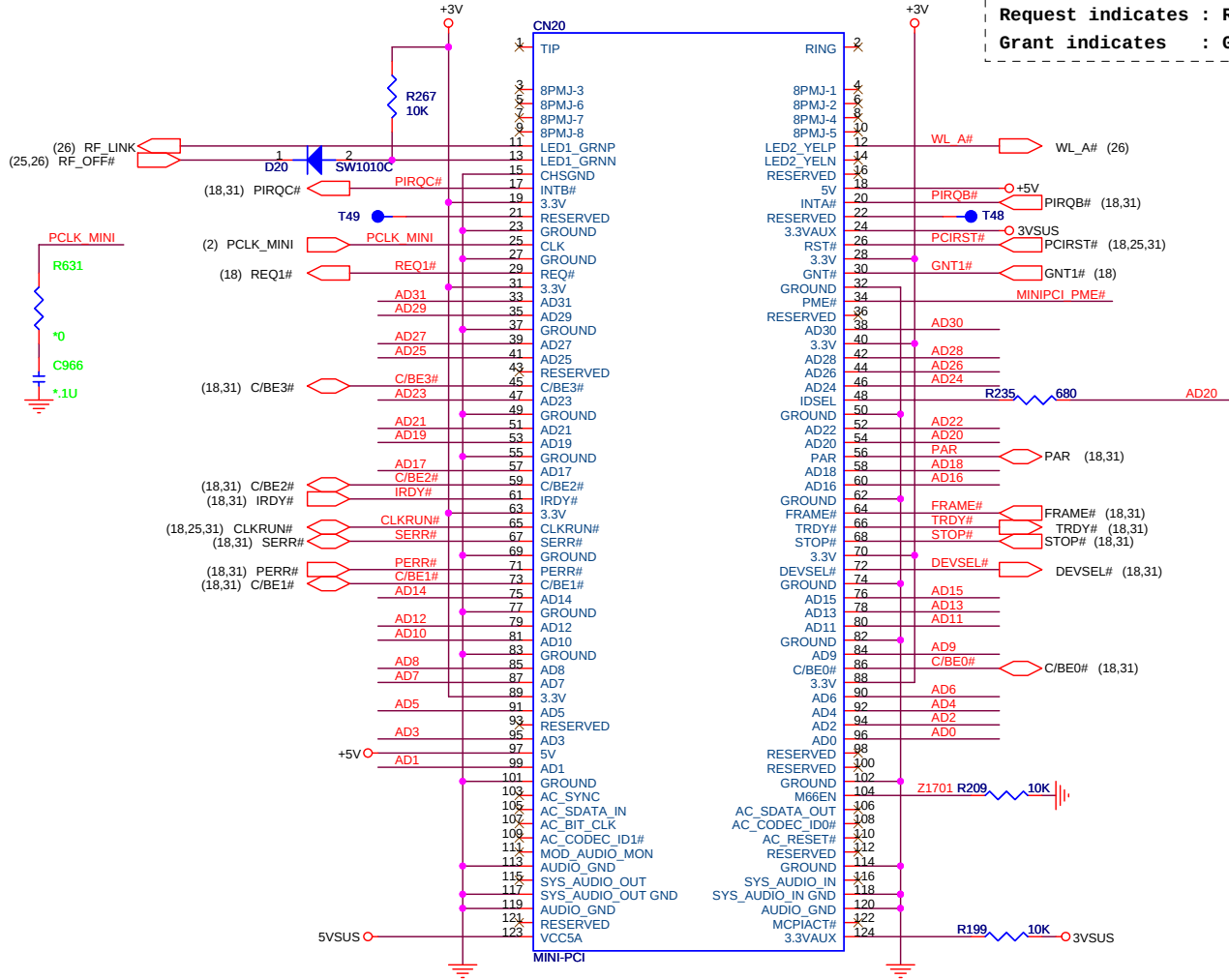




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TYPE III MINI PCI SOCKET

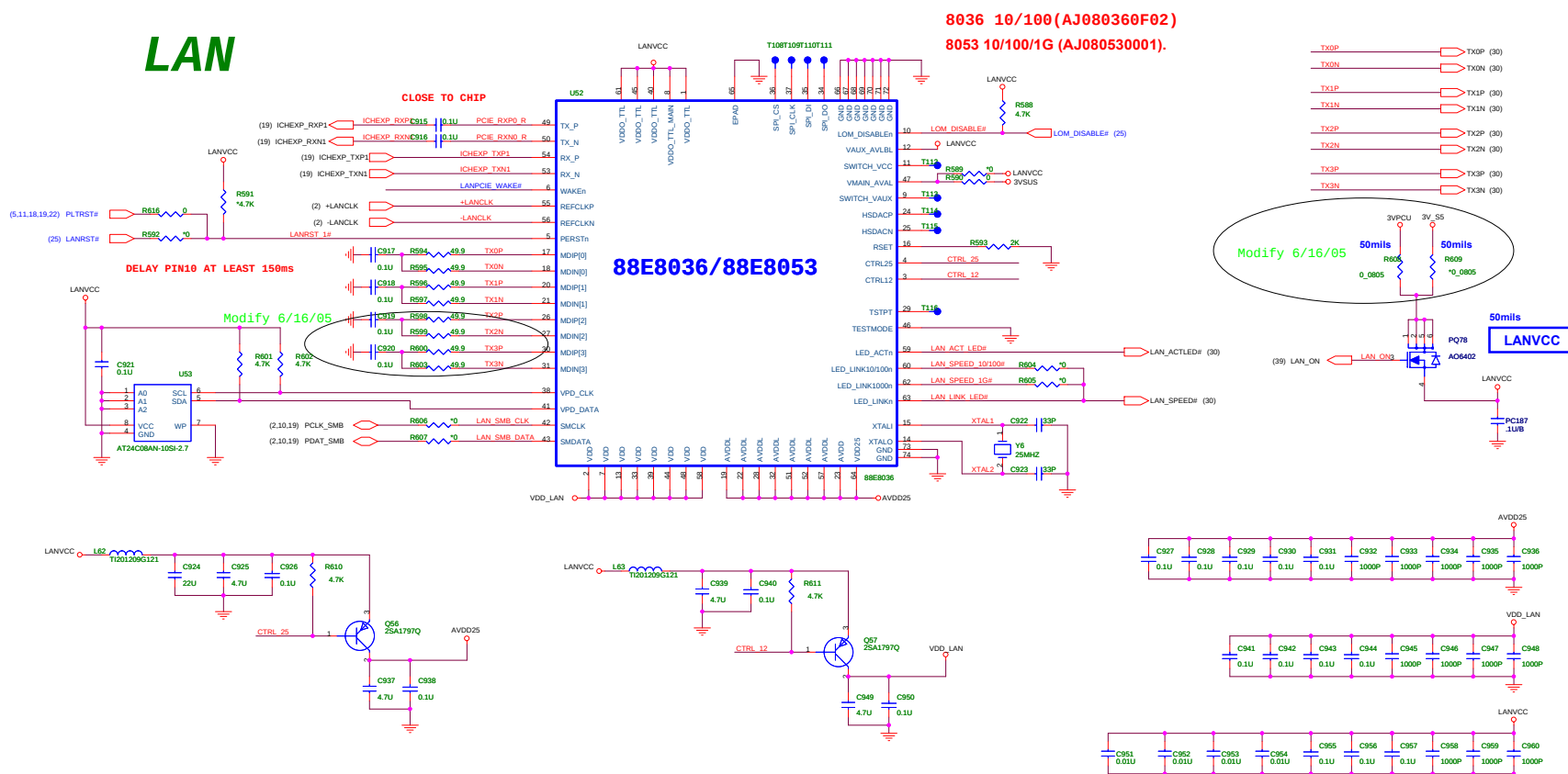
ID Select : AD20
Interrupt Pin : PIRQB# , PIRQC#
Request indicates : REQ1#
Grant indicates : GNT1#



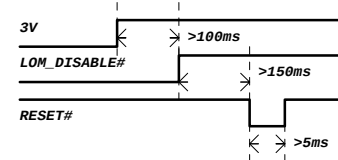
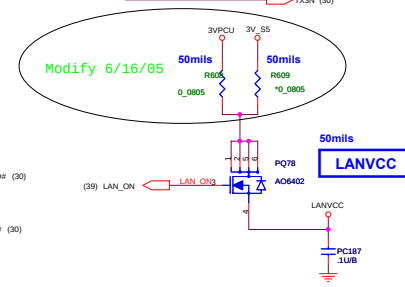
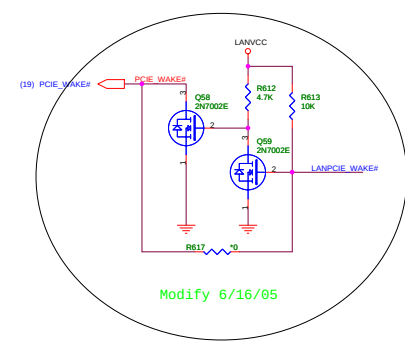
PROJECT : MA2A
Quanta Computer Inc.

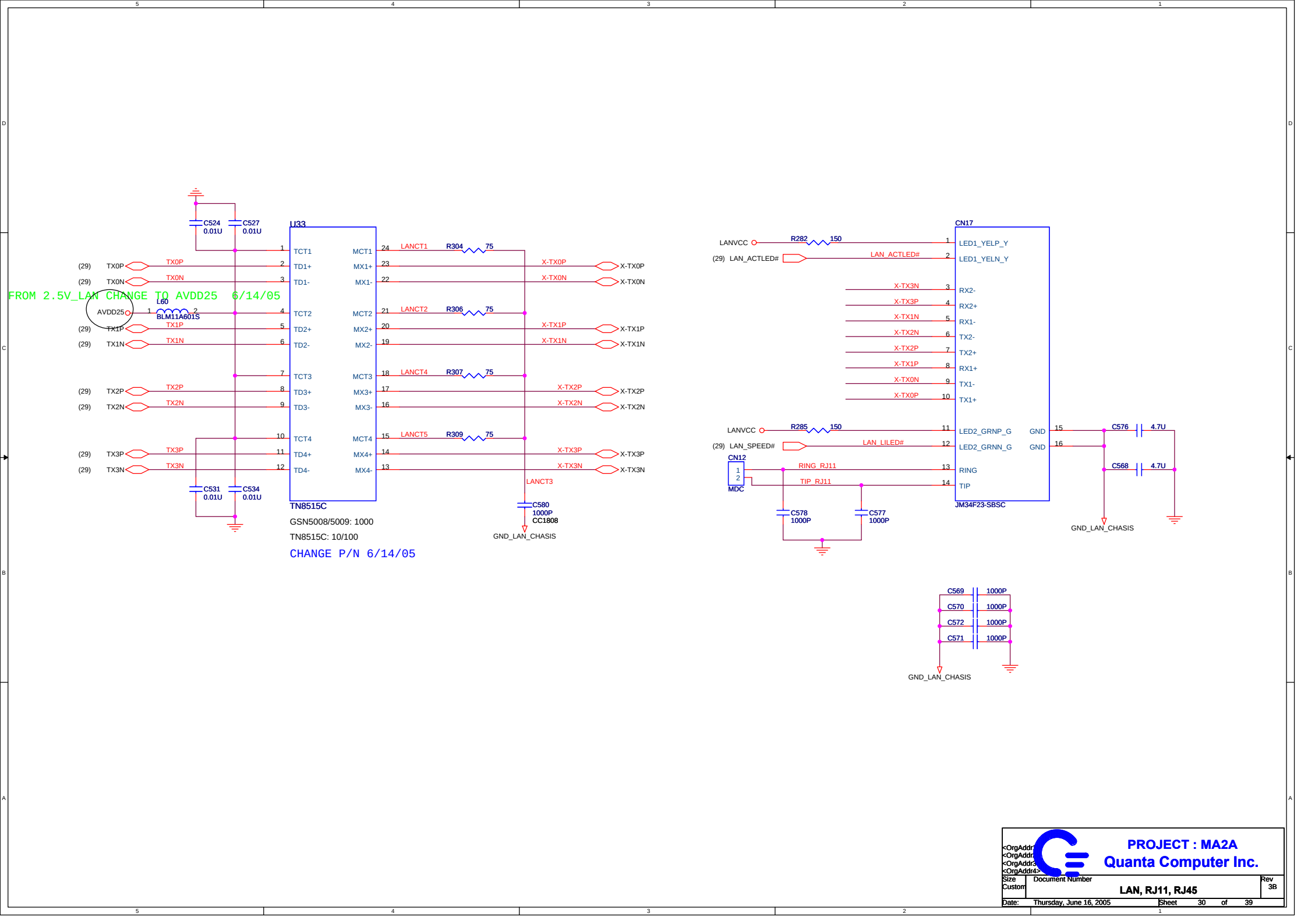
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B	MINI PCI Socket & MDC	3A
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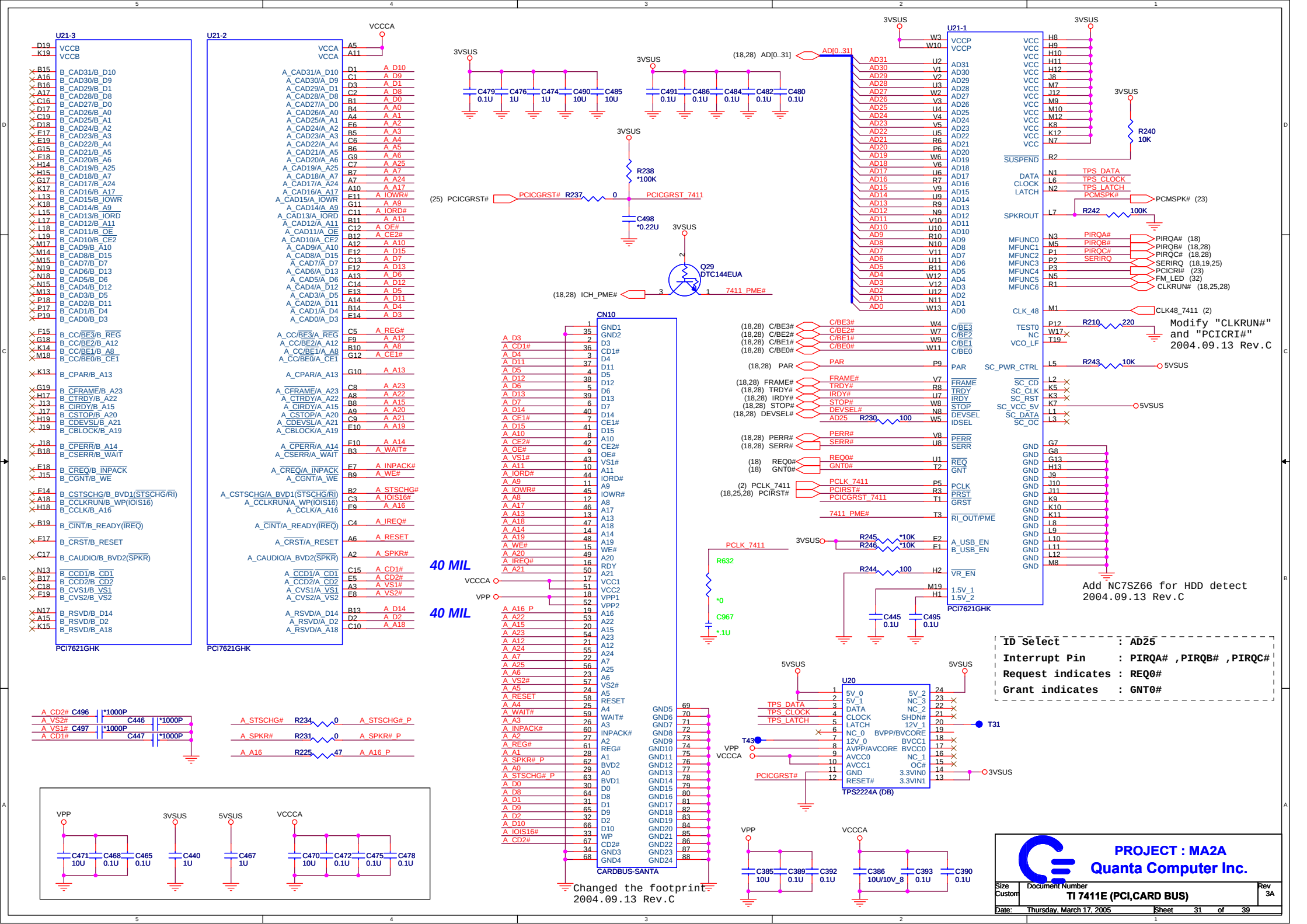
LAN

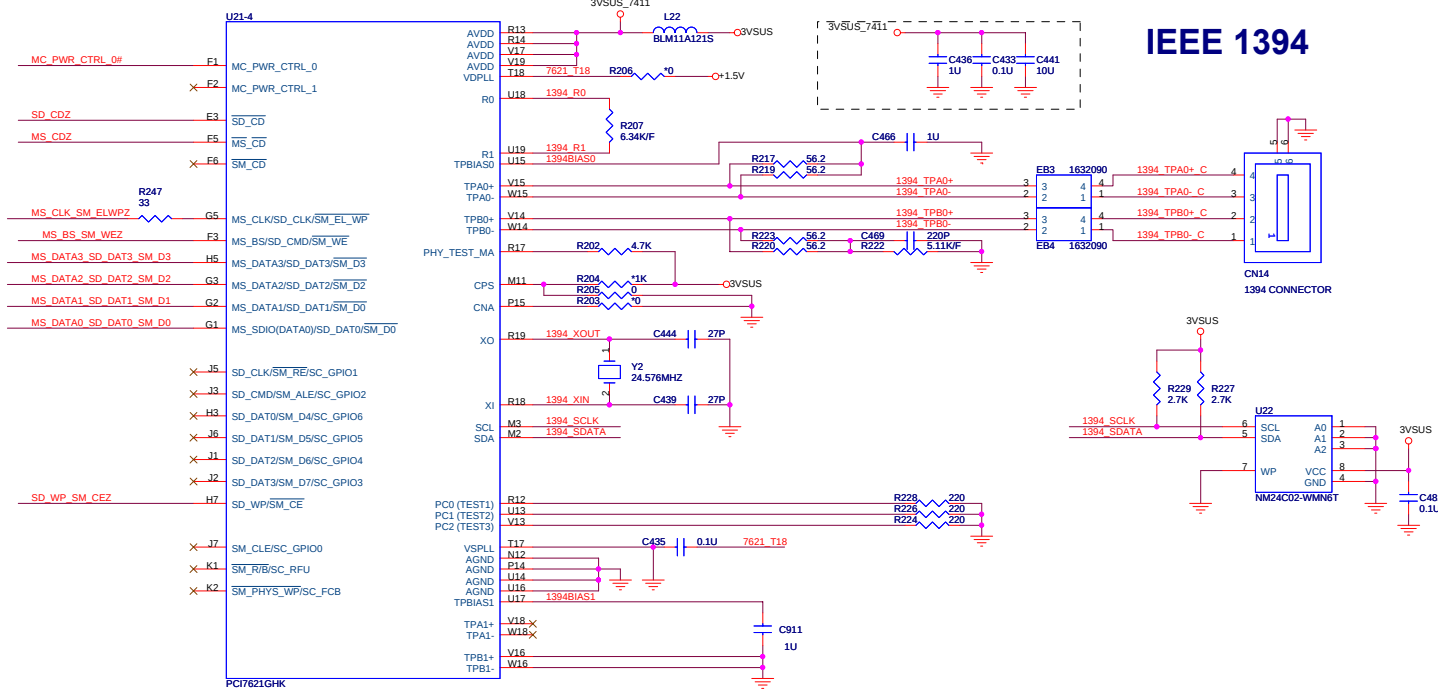


PIN number	88E8053	88E8036
34	SPI_DO (Unused)	NC
35	SPI_DI (Unused)	NC
36	SPI_CS (Unused)	NC
37	SPI_CLK (Unused)	NC
26	MDIP2	NC
27	MDIN2	NC
30	MDIP3	NC
31	MDIN3	NC
42	NC	NC
43	NC	NC
60	LINK 10M/100M	LINK 10M
62	LINK 1000M	LINK 100M
16	RESISTOR 5K	RESISTOR 2K
64	2.5V	NC

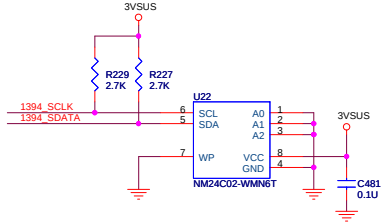
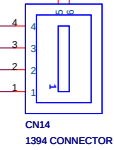




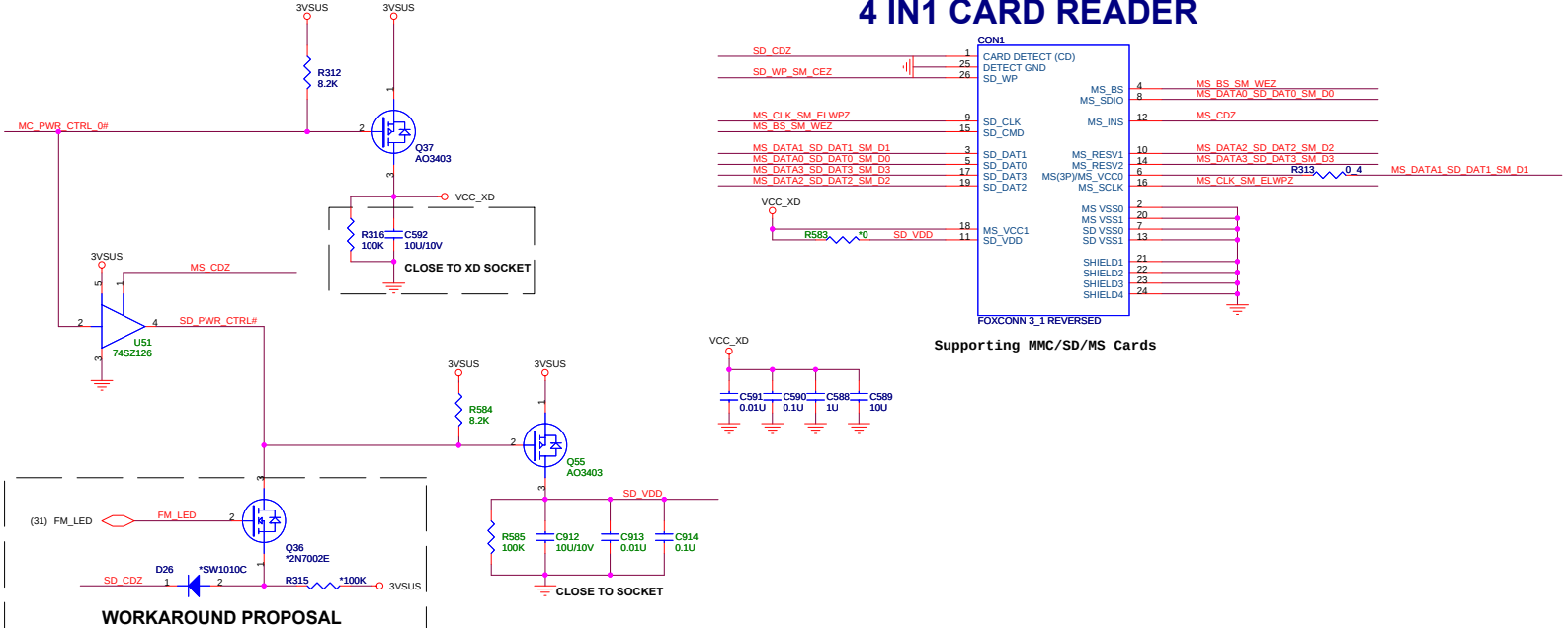




IEEE 1394



4 IN1 CARD READER

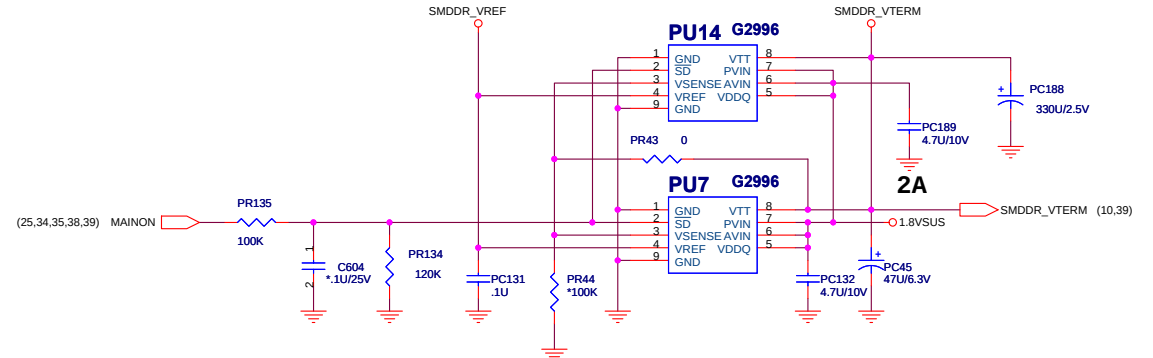
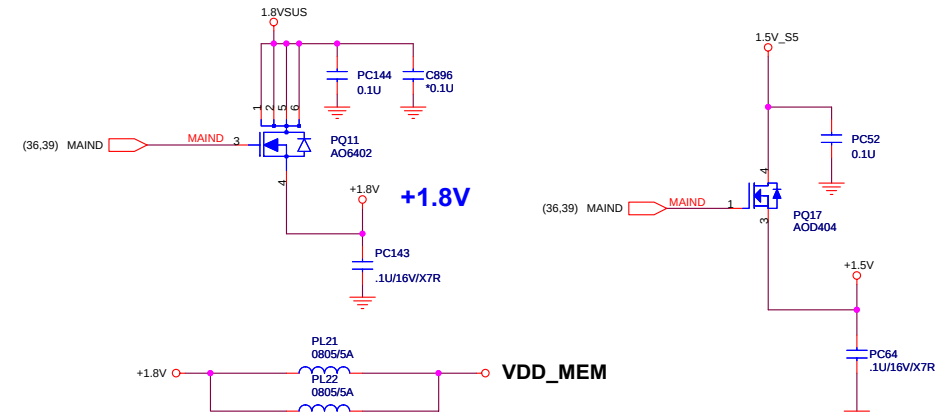
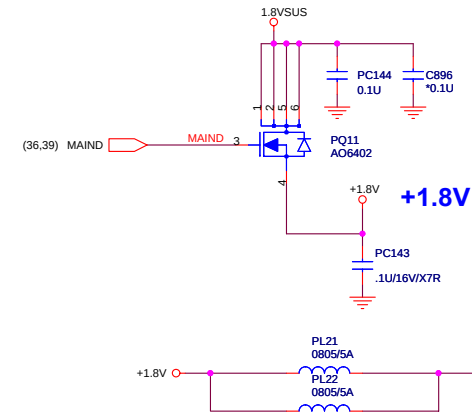
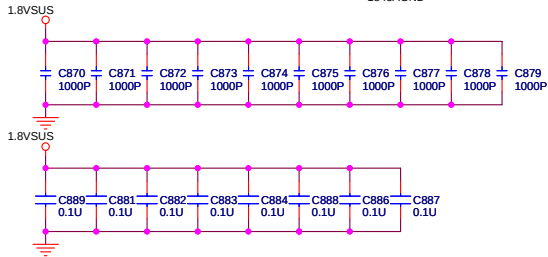
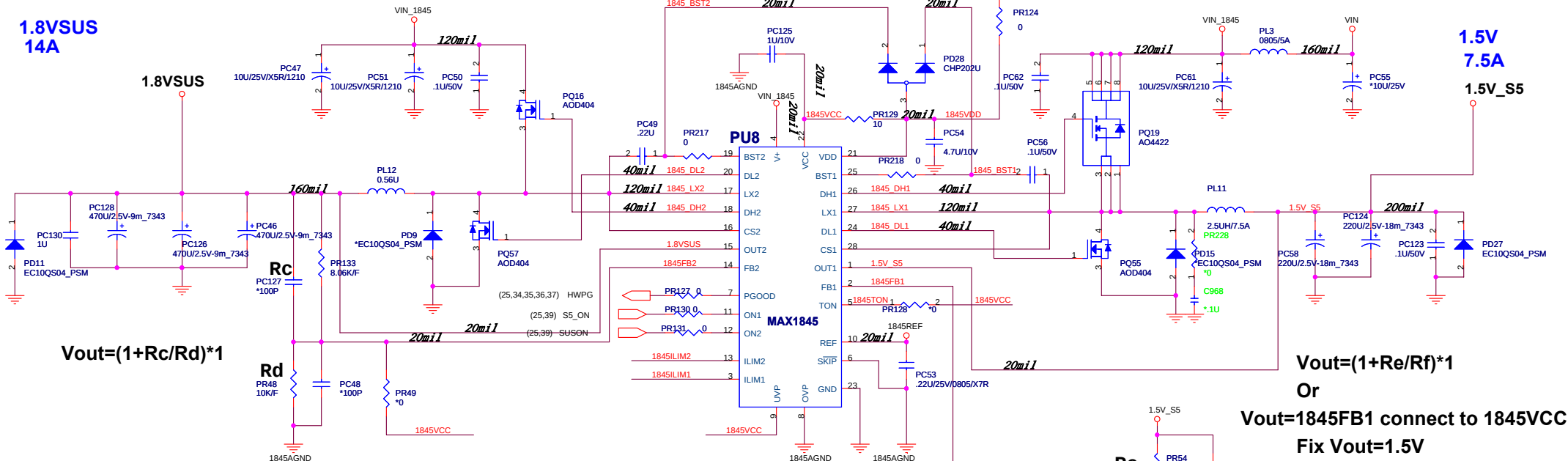


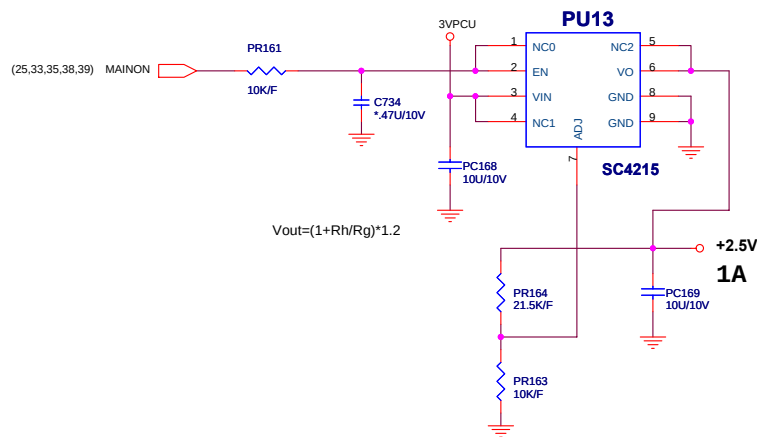
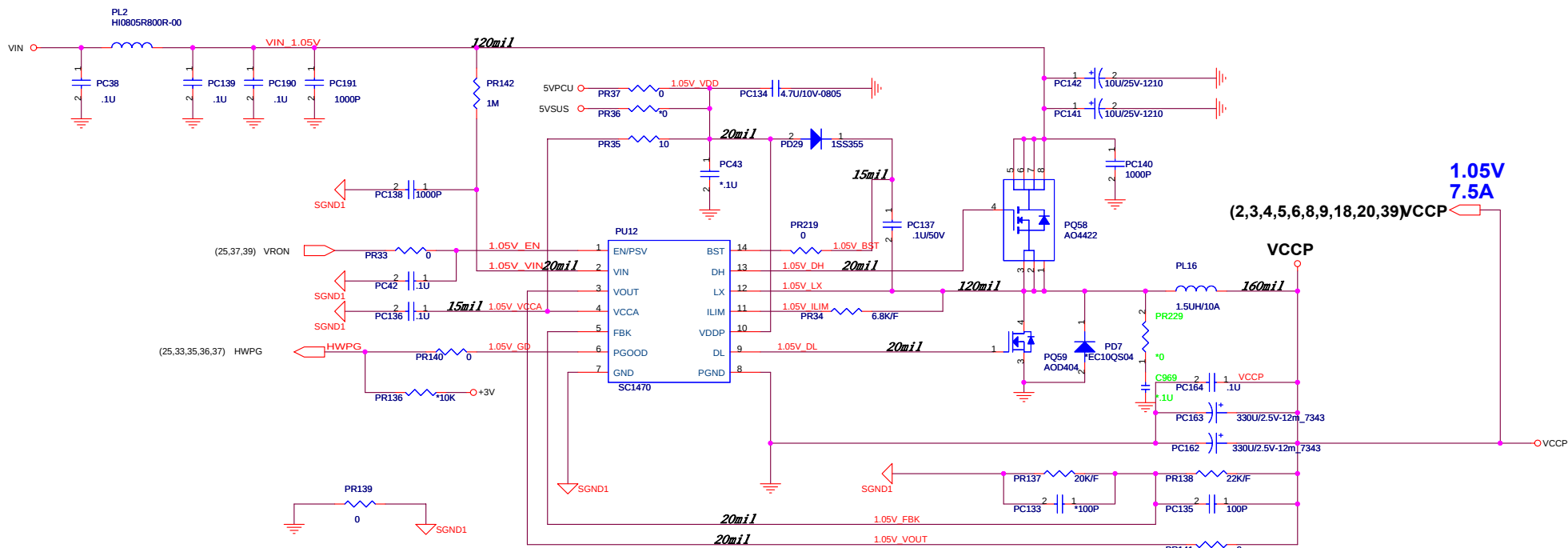
Supporting MMC/SD/MS Cards

WORKAROUND PROPOSAL

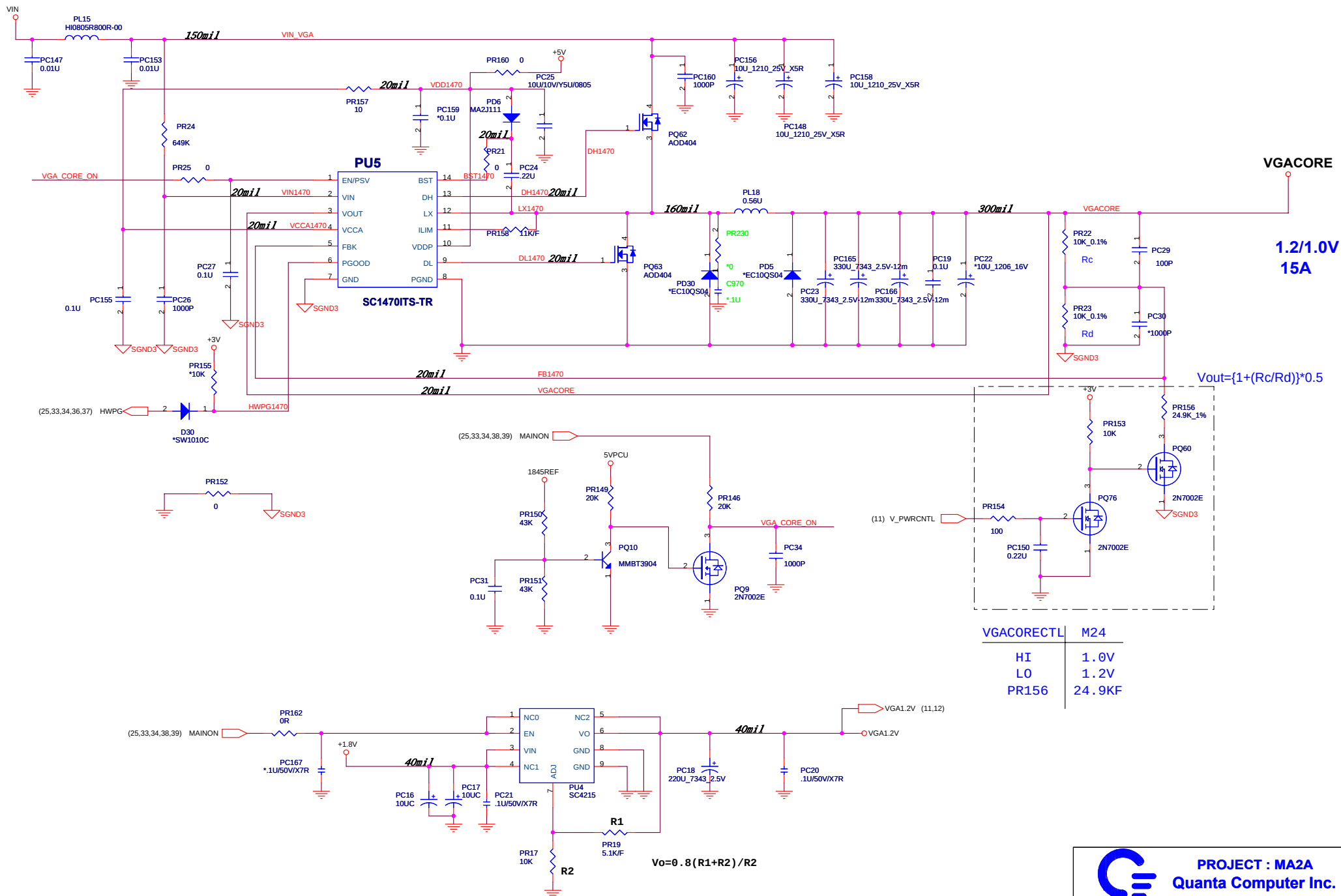
1.8VSUS
14A

1.8VSUS



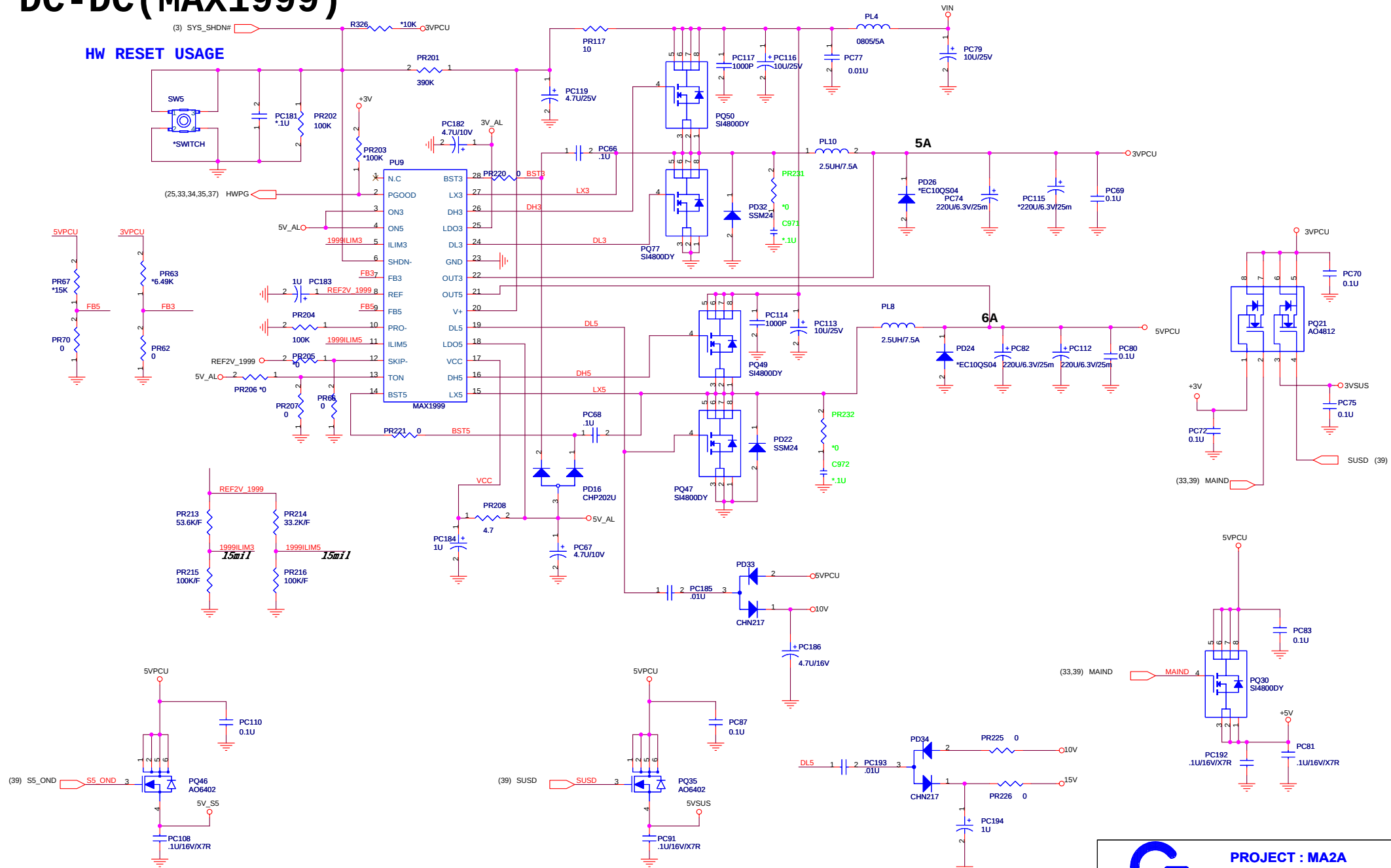


VGA POWER



VGACORECTL	M24
HI	1.0V
LO	1.2V
PR156	24.9KF

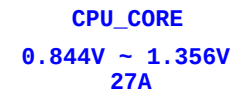
DC - DC (MAX1999)



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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	1	0	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	1	0	0	0	1.596V
1	0	1	0	0	0	1.068V	0	0	1	0	0	1	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

SUSPEND MODE (SUS=HIGH)			
S2	S1	S0	Output
OPEN	VCC	GND	0.748V

VCC_BOOT			Output
B2	B1	B0	
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

For Yonah

ADAPTER 19V 90W 4.74A



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CHARGER		
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