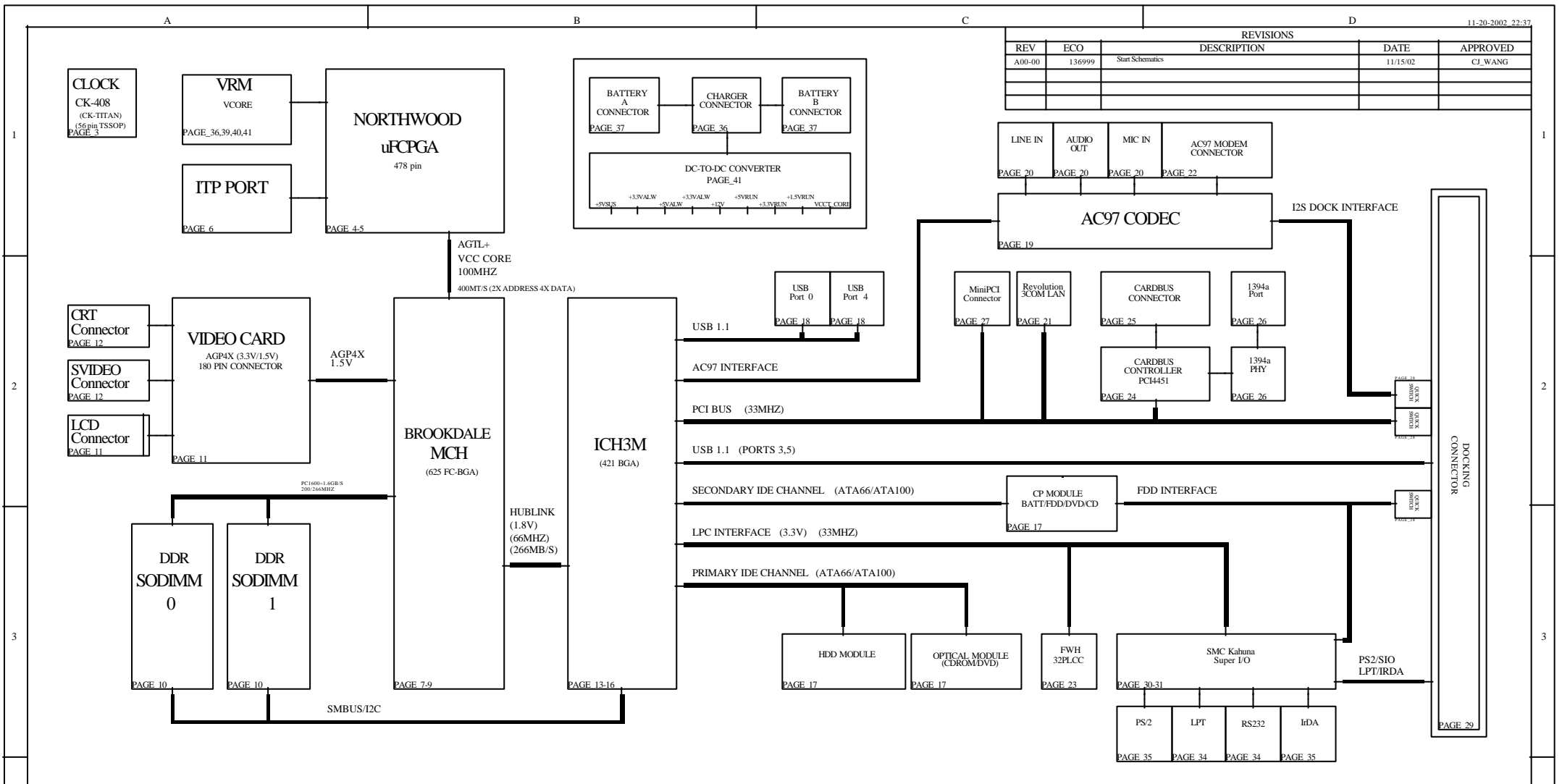


REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A00-00	136999	Start Schematics	11/15/02	CJ_WANG



PARTS

- ASSY.PWA.MN.NV28.M50 (9Y422)
- └ PWA.PLN.MN.NV28.M50 (9Y422)
 - └ ASSEMBLY BARCODE LABEL (XXXXXX)
 - └ ASSEMBLY REVISION LABEL (XXXXXX)
 - └ ASSY.DWG.PLN.MN.NV28.M50 (XXXXXX)
 - └ PWB.PLN.MN.CABN (1Y802)
 - └ SCHEM.PLN.MN.NV28.M50 (C0370)

BOM ADDS APPEAR ON PAGE 42.

- This design requires a font mapping of Fixed to scalable Arial with a scaling factor of 1.0
- Please remember when copying project files that you must include both the symbols and the schematics

EXPORT RESTRICTIONS:
 THE EXPORT OF THE INFORMATION, SCHEMATICS AND OTHER TECHNICAL DATA CONTAINED IN THIS DOCUMENT IS CONTROLLED BY THE U.S. GOVERNMENT. THE EXPORT, REIMPORT OR OTHER TRANSFER OF THIS DATA TO CERTAIN COUNTRIES AND INDIVIDUALS IS RESTRICTED. ANY TRANSFER, EXPORT OR REEXPORT MUST BE IN COMPLIANCE WITH THE U.S. EXPORT ADMINISTRATION REGULATIONS.

M50 A00

PROPRIETARY NOTE

THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT SHALL NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DRAWN	
DESIGNED	
CHECKED	
APPROVED	
APPROVED	
APPROVED	
APPROVED	
APPROVED	
RELEASED	

A CURRENT ISSUE OF THIS DRAWING MUST INCLUDE A COPY OF THE FOLLOWING:

ECOS:	
ECO:	
ECO:	
ECO:	
ECO:	
ECO:	
ECO:	
ECO:	
ECO:	

DELL COMPUTER CORPORATION AUSTIN, TEXAS

TITLE: SCHEMATIC, M/B LA-1221

PWG NO: 40195 REV: 4A

DATE: 11/15/02 SHEET: 52 OF 102

PAGE INDEX

1. Schematic Block Diagram
2. Index
3. System Clock, SMBUS Selector
- 4-5. CPU
6. CPU Voltage ID, CPU Temperature Sensor, ITP Debug Connector
- 7-9. GMCH
10. SODIMM Connectors
- 11-12. Video Connectors
- 13-16. ICH
17. CDROM, IDE Connectors
18. USB Hub
19. Audio Codec
20. Audio Connectors, Audio Amplifiers
21. 3COM Revolution (LAN on Motherboard)
22. LAN and Modem Connectors
23. Firmware Hub
24. Cardbus Controller
25. Cardbus Connector
26. IEEE1394 PHY
27. MiniPCI Connector
28. Dock Buffers
29. Dock Connector
- 30-31. Super I/O Controller (Kahuna)
32. Keyboard/Touchpad Connectors
33. Fan Controllers and Tachometers
34. Parallel and Serial Ports
35. PS2 Connectors, LED Connector, Power Sequencing Logic
36. DC-IN Connector, Charger Board Connector
37. Battery Connectors, NiMH Support
38. Power Plane Enables
39. 1.8V/1.5V Switcher and Sequencer, RTC Power Source
40. VCORE
41. DC to DC Converter
42. Mounting Holes and EMI Clips
43. Schematic Change List
44. Power Rail Diagram
45. SMBUS Diagram
- 46-50. REFDES Page Index

NEEDS TO BE UPDATED

POWER MODES

Power Mode	Voltage	Page	Source	ON	OFF
RBAT	7.2V	32, 36		Always	
PBATT+	1.7V-13V	36, 37, CB - 3		Always	
SBATT+	1.7V-13V	36, 37, CB - 3		Always	
DOCK_DC_IN	20V	29, 36		Always	
DC_IN	20V	29, 36, CB - 2, 3		Always	
SDC_IN	20V	CB - 2, 3		Always	
V_CHG	15V-17.5V	CB - 2		Note 1	
PWR_SRC	7.2V-20V	8, 11, 29, 36, 38, 39, 40, 41		Always	
RTC_SRC	7.2V-20V	36, 39		Always	
3VSUS	3.3V	4, 6, 10-16, 18, 21-25, 27, 30-31, 35, 38-41		S1-S3	S4-S5
RTC_PWR	5V	36, 38, 39, 41, 42		Always	
5VSUS	5V	8, 11, 16, 18-19, 22, 25, 29, 33-35, 38-42		S1-S3	S4-S5
2.5VSUS	2.5V	8, 10, 39		S1-S3	S4-S5
VCC_CORE	0.6V-1.75V	4, 5, 9, 16, 23, 38, 40		S1-S2	S3-S5
12V	12V	3, 11, 25, 29, 33, 36, 38, 41		S1-S2	S3-S5
DOCK_PWR_SRC	13V-20V	29	Docked ALW		
3VRUN	3.3V	3, 4, 6, 11, 13-14, 16-17, 19, 21-23, 26-28, 30-31, 33, 35, 38		S1-S2	S3-S5
VAUX	3.3V	27	Note 2	Note 2	
1.8VSUS	1.8V	16, 38, 39		S1-S3	S4-S5
1.8VRUN	1.8V	7, 8, 9, 13, 16, 38		S1-S2	S3-S5
5VRUN	5V	6, 11-12, 16-17, 20, 27-28, 30, 32-35, 38, 42		S1-S2	S3-S5
5VHDD	5V	17, 38		S1-S2	S3-S5
5VMOD	5V	17, 38		S1-S2	S3-S5
1.5VRUN	1.5V	7, 9, 11, 38, 39		S1-S2	S3-S5
STRB_5V	5V	29, 34, 38		S1-S2	S3-S5
VBEFG	0.7V	11		S1-S2	S3-S5
V_IP2SV_DDR_VTT	1.25V	8, 10, 11, 38, 39		S1-S2	S3-S5
CRF_VCC	5V	12		S1-S2	S3-S5
SV_ODOCK	5V	28, 30		S1-S2	S3-S5
5VEDDPP	5V	17, 31, 38		S1-S2	S3-S5
5VSUS_DOCKED	5V	29	Docked S1-S3	Docked S4-S5	
USB_PWR_04	5V		S1-S2	S3-S5	
VDDA	4.65V	19, 20		S1-S2	S3-S5
VDDA2	2.5V	19, 20		S1-S2	S3-S5
1.2V_VCCVID	1.2V	4, 40		S1-S3	S4-S5
5VALW	5V	11, 29, 30-32, 35-37, 39, 41		Note 4	Note 4
3VVRTC	3.3V	16, 31, 36, 39, 41		Always	
3VALW	3.3V	6, 17, 30, 32, 35, 36, 39, 41		Note 4	Note 4
VCC_RTC	3.3V	14, 16		Always	
ICH_VBIAS	3.3V	14, 16		S1-S2	S3-S5
3VPHYD	3.3V	26		S1-S2	S3-S5
3VPHYA	3.3V	26		S1-S2	S3-S5
CK_VDD_MAIN	3.3V	3		S1-S2	S3-S5
CK_VDD_CORE	3.3V	3		S1-S2	S3-S5
V_3P3_LAN	3.3V	21, 22		S1-S3	S4-S5
V_3P3_LAN_VDDTX	3.3V	21		S1-S3	S4-S5
V_3P3_LAN_VDDRX	3.3V	21		S1-S3	S4-S5
V_MCH_GTLREF	0.675VCC_CORE	8		S1-S2	S3-S5
S1_VPP	0V-12V _{Note A}	25		S1-S3	S4-S5
S2_VPP	0V-12V _{Note A}	25		S1-S3	S4-S5
S1_VCC	0V-5V _{Note A}	24, 25		S1-S3	S4-S5
S2_VCC	0V-5V _{Note A}	24, 25		S1-S3	S4-S5
S1_VCCF	0V-5V _{Note A}	24, 25		S1-S3	S4-S5
S2_VCCF	0V-5V _{Note A}	24, 25		S1-S3	S4-S5
HL_REF	0.9V	8, 13		S1-S2	S3-S5
H_VCCA	1.2V	4		S1-S3	S4-S5
H_VCCIOPLL	1.2V	4		S1-S3	S4-S5
H_GTLREF	0.675VCC_CORE	4		S1-S2	S3-S5
H_VSSA	1.2V	4		S1-S3	S4-S5
V_DDR_MCH_REF	1.25V	8, 10, 39		S1-S3	S4-S5

Note A Voltage delivered to these pins is determined from the type card inserted to the PCMCIA controller.

Note 1 Rail is available anytime AC and BATTERY are both present, and the BIOS is not inhibiting charge

Note 2	NB powered by AC	VAUX	S1-S3	S4-S5
	NB powered by BATT	VAUX	S1-S2	S3-S5

Note 3 Rail is available anytime the HEADPHONE Jack is occupied

Note 4	NB powered by AC	3VALW	Always	
	NB powered by BATT	3VALW	S1-S3	S4-S5
	NB powered by AC	5VALW	Always	
	NB powered by BATT	5VALW	S1-S3	S4-S5

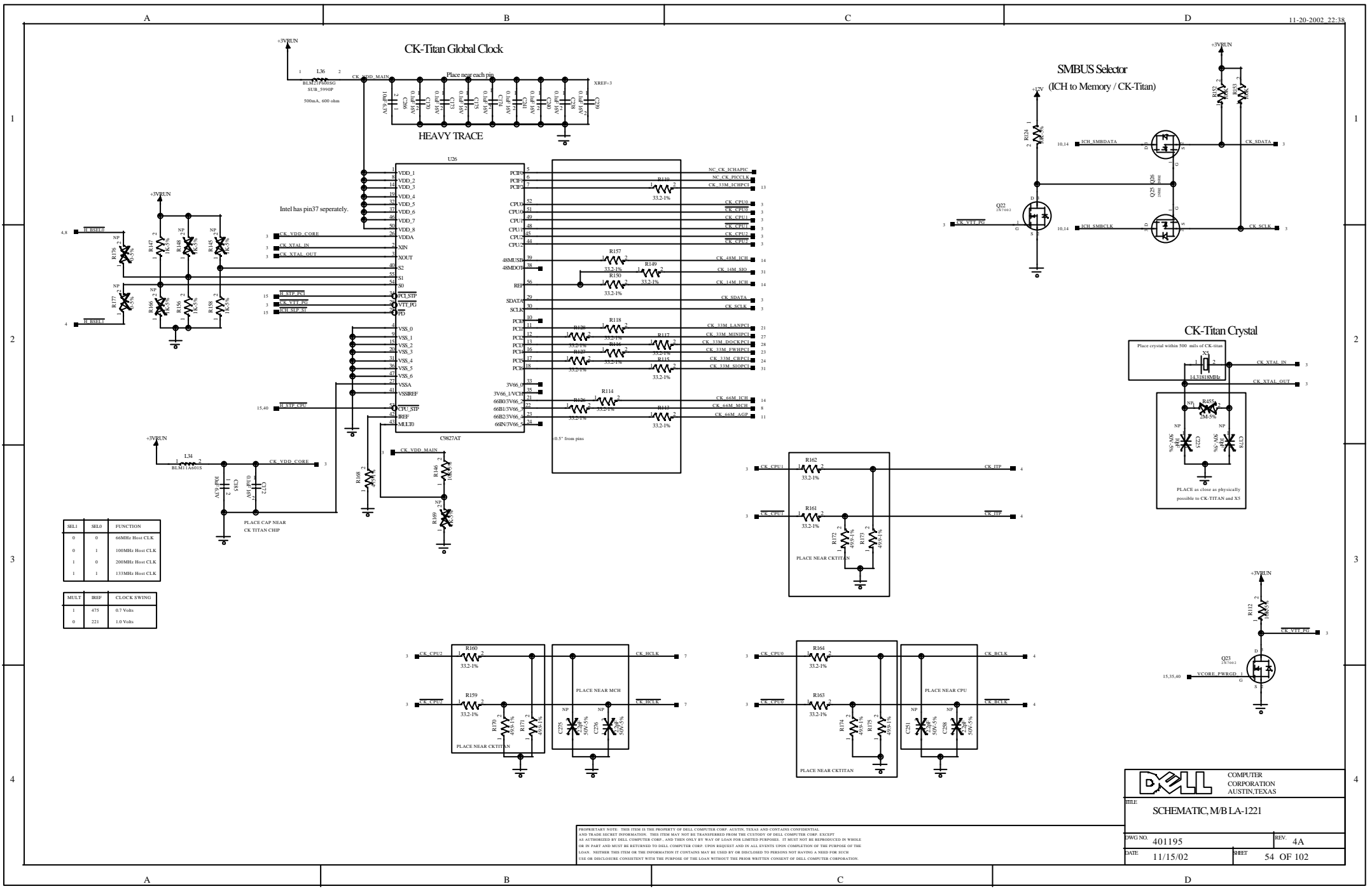
PCI TABLE

DEVICE	IDSEL	IRQ	REQ/GNT	DREQ/DGNT
DOCK	AD24	PIRQC*		REQ0*/GNT0*
3COM	AD16	PIRQC*		REQ4*/GNT4*
VIDEO	IDSEL	PIRQA* PIRQB*		
PCI4451	AD17	PIRQD*	REQB*/GNTB*	REQ1*/GNT1*
Msi	AD18	PIRQA*	REQA*/GNTA*	REQ2*/GNT2*
MINIPCI	AD19	PIRQB* PIRQD*		REQ3*/GNT3*

BOM BUILD OPTIONS	
Option	Description
0	Base Build
1	FDD_PP

		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE: SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE: 11/15/02	SHEET: 53	OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



SEL0	SEL1	FUNCTION
0	0	66MHz Host CLK
0	1	100MHz Host CLK
1	0	200MHz Host CLK
1	1	133MHz Host CLK

MULT	DIVF	CLOCK SWING
1	475	0.7 Volts
0	221	1.0 Volts

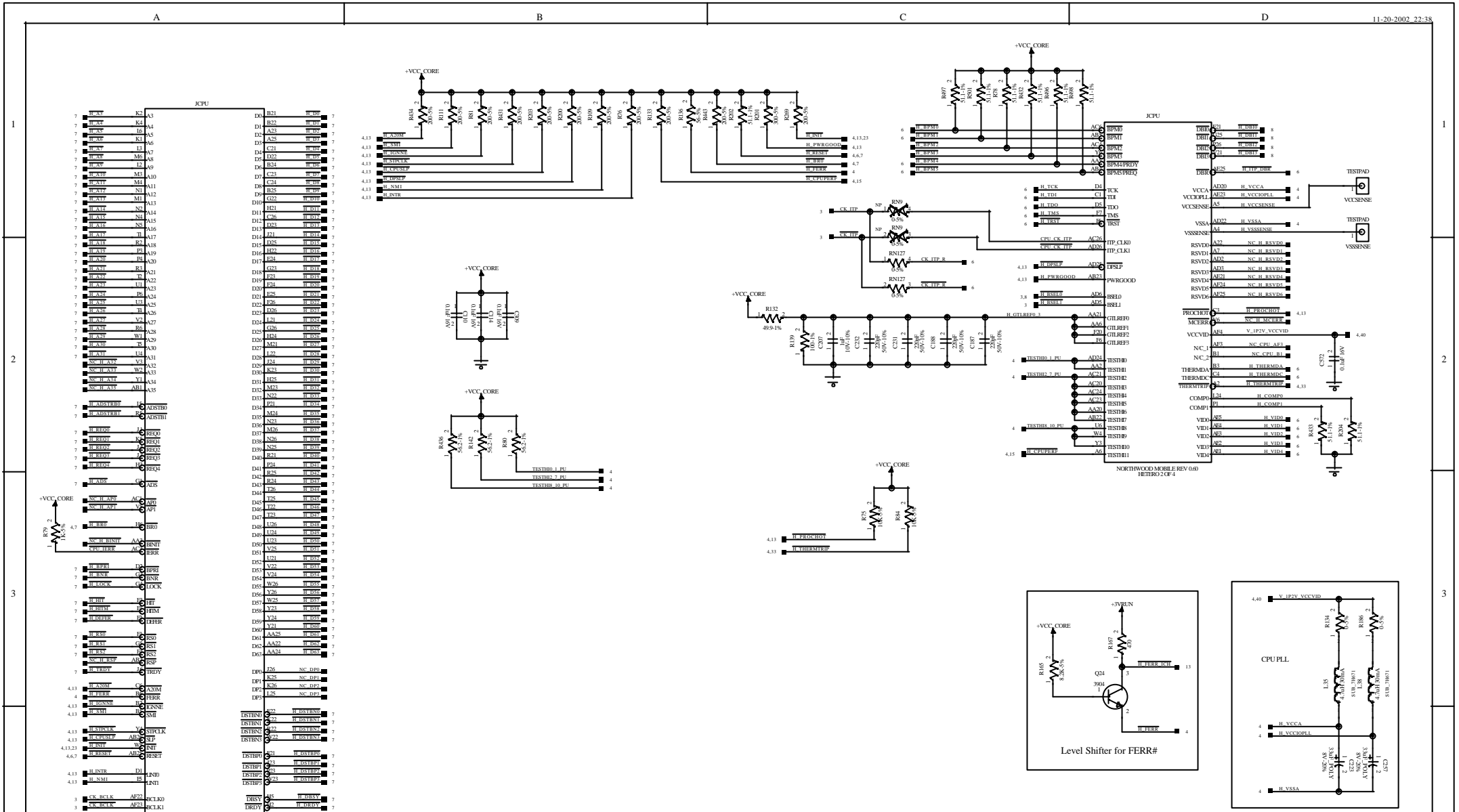
DELL COMPUTER CORPORATION AUSTIN, TEXAS

TITLE: SCHEMATIC, M/B LA-1221

DWG NO: 401195 REV: 4A

DATE: 11/15/02 SHEET: 54 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF A WRITTEN LICENSE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



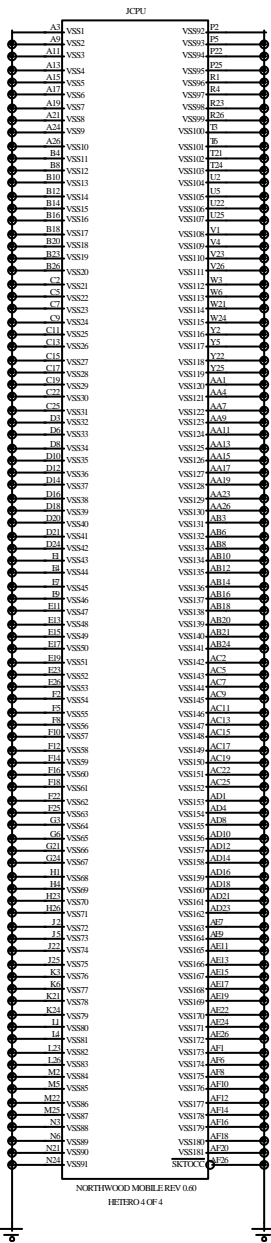
COMPUTER CORPORATION
AUSTIN, TEXAS

SCHEMATIC, M/B LA-1221

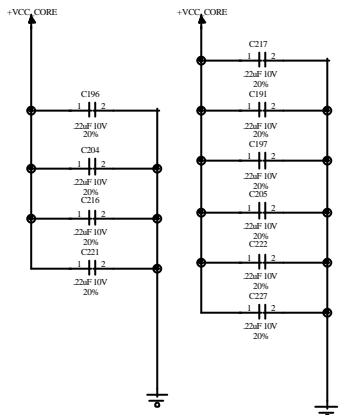
PWG NO. 401195 REV. 4A

DATE 11/15/02 SHEET 55 OF 102

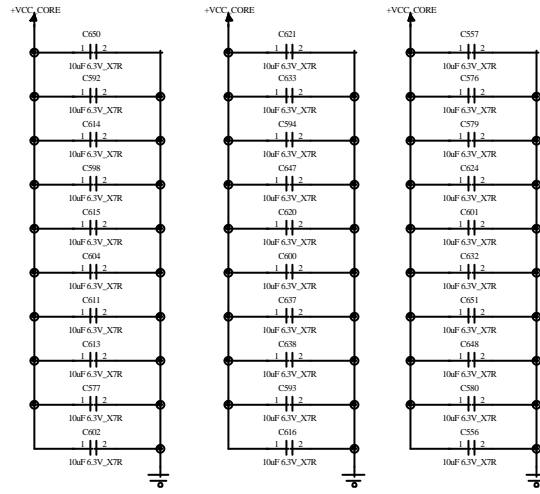
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEAD FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAS. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEAS WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



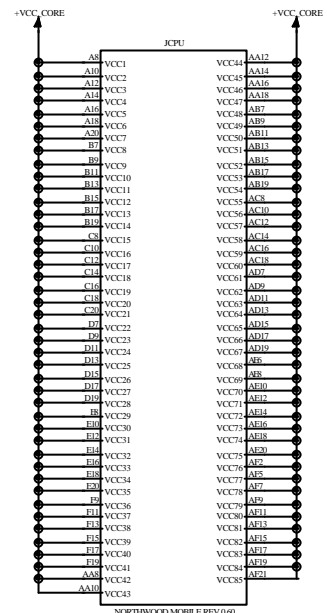
CPU High Frequency Decoupling



CPU Bulk Decoupling



Place caps close to JCPU
ALL CAPS NEED TO BE PLACED
DIRECTLY UNDER JCPU WHEN
POSSIBLE USE TWO VIAS/PAD

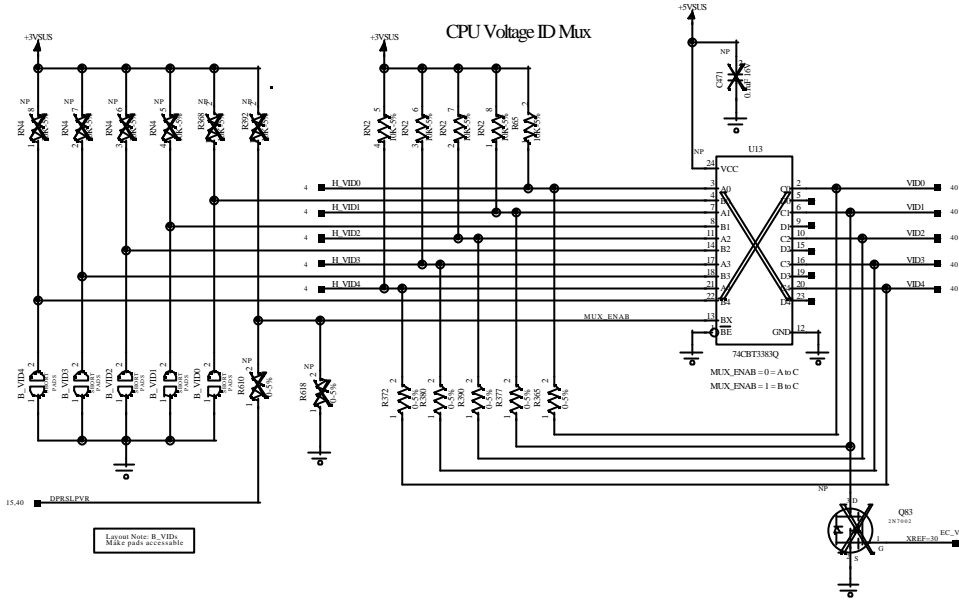


PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH FILE OR DISCLOSED CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

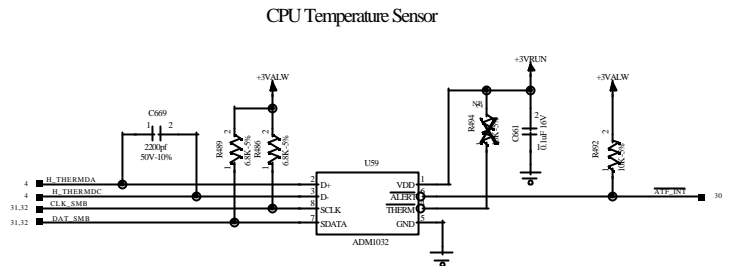
		COMPUTER CORPORATION AUSTIN, TEXAS	
		TITLE SCHEMATIC, M/B LA-1221	
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	56 OF 102

O = pads open
S = pads shorted

B_VID Settings				B_VID Settings					
4	2	1	0	VCC_CODE	4	2	1	0	VCC_CODE
S	S	S	S	1.750V	O	S	S	S	0.9750V
S	S	S	S	1.700V	O	S	S	S	0.950V
S	S	S	S	1.650V	O	S	S	S	0.925V
S	S	S	S	1.600V	O	S	S	S	0.900V
S	S	S	S	1.550V	O	S	S	S	0.875V
S	S	S	S	1.500V	O	S	S	S	0.850V
S	S	S	S	1.450V	O	S	S	S	0.825V
S	S	S	S	1.400V	O	S	S	S	0.800V
S	S	S	S	1.350V	O	S	S	S	0.775V
S	S	S	S	1.300V	O	S	S	S	0.750V
S	S	S	S	1.250V	O	S	S	S	0.725V
S	S	S	S	1.200V	O	S	S	S	0.700V
S	S	S	S	1.150V	O	S	S	S	0.675V
S	S	S	S	1.100V	O	S	S	S	0.650V
S	S	S	S	1.050V	O	S	S	S	0.625V
S	S	S	S	1.000V	O	S	S	S	0.600V

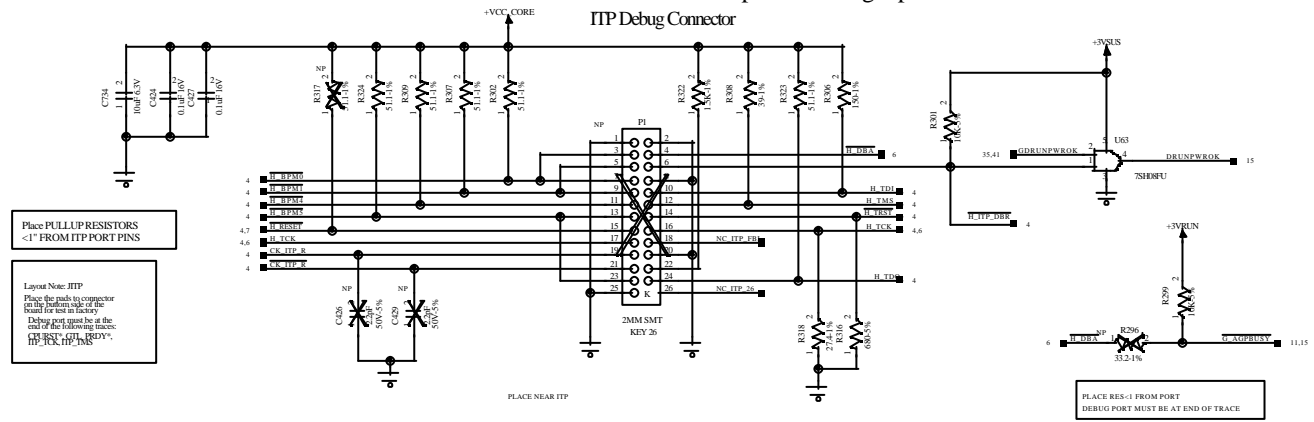


Layout Note: B_VID, MUX pads accessible



Layout Note: CPU Temperature Sensor
Place this circuit on the bottom side of the mainboard

Circuit Not Complete. Pending input from Intel.



Place PULL-UP RESISTORS <1> FROM ITP PORT PINS

Layout Note: ITP
Place the pads to connector on the bottom side of the board for test in factory.
Deliver open pins at the end of the following traces:
Destructive CPU operation:
ITP_RX, ITP_TX

Place RES-1 FROM DEBUG PORT MUST BE AT END OF TRACE

ITP Population Matrix

Ref. Des.	ITP Used	ITP Not Used
R264	510 ohms	1.5k
R255	pop	no pop
R257	pop	no pop
R265	no pop	1k pull-down
R258	pop	no pop
R140 (p.7)	pop	no pop
R249	pop	no pop
R248	pop	no pop
R280	no pop	no pop
R281	pop	no pop
R279	pop	no pop
R278	pop	no pop
R283	pop	no pop
R275	pop	no pop
R273	pop	no pop
R256	39 ohms	1k
R251	no pop	pop
R271	pop	no pop
R263	pop	no pop
R272	pop	pop

DELL COMPUTER CORPORATION AUSTIN, TEXAS

SCHEMATIC, M/B LA-1221

PWG NO. 401195 REV. 4A

DATE 11/15/02 SHEET 57 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A

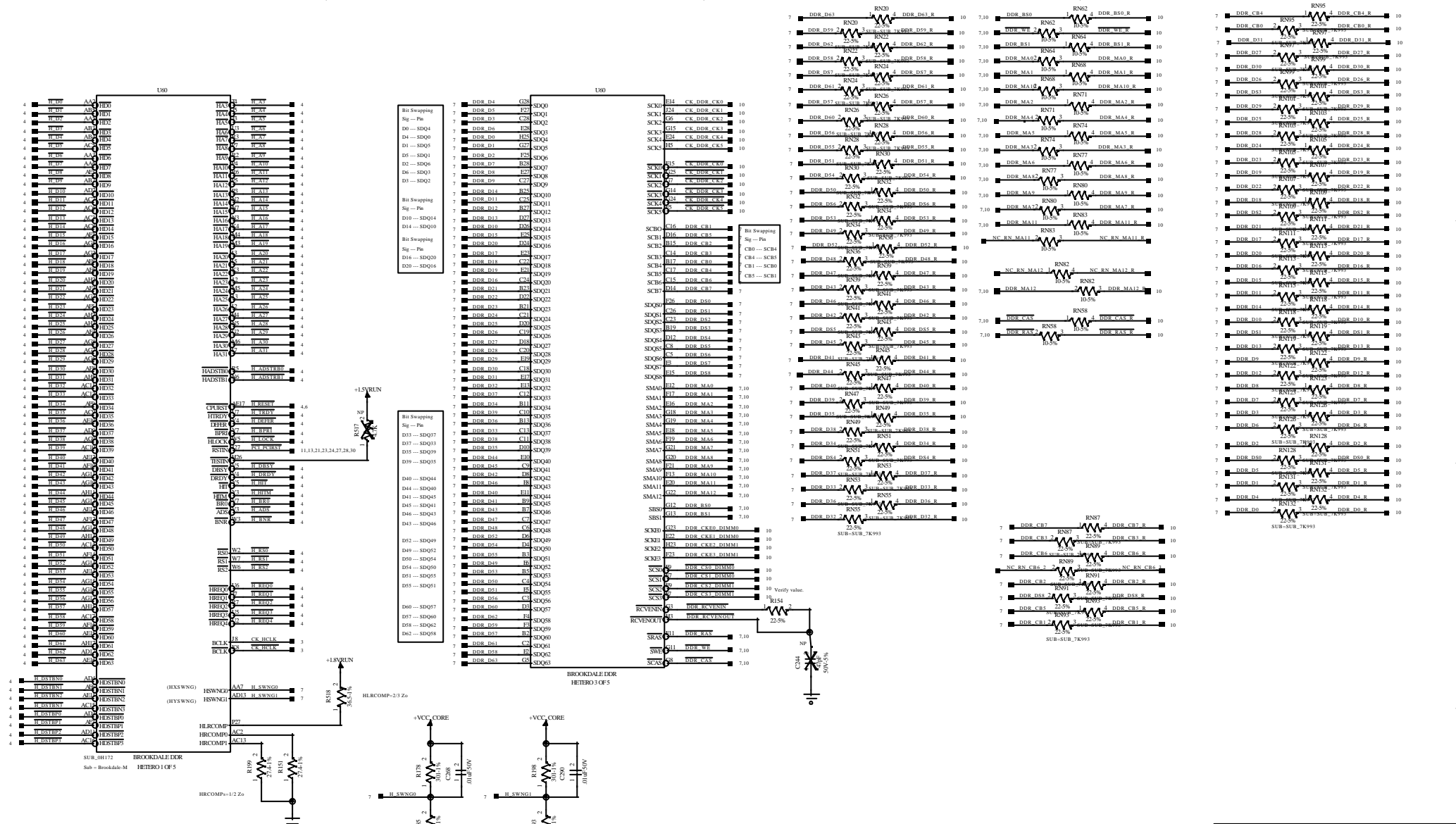
B

C

D

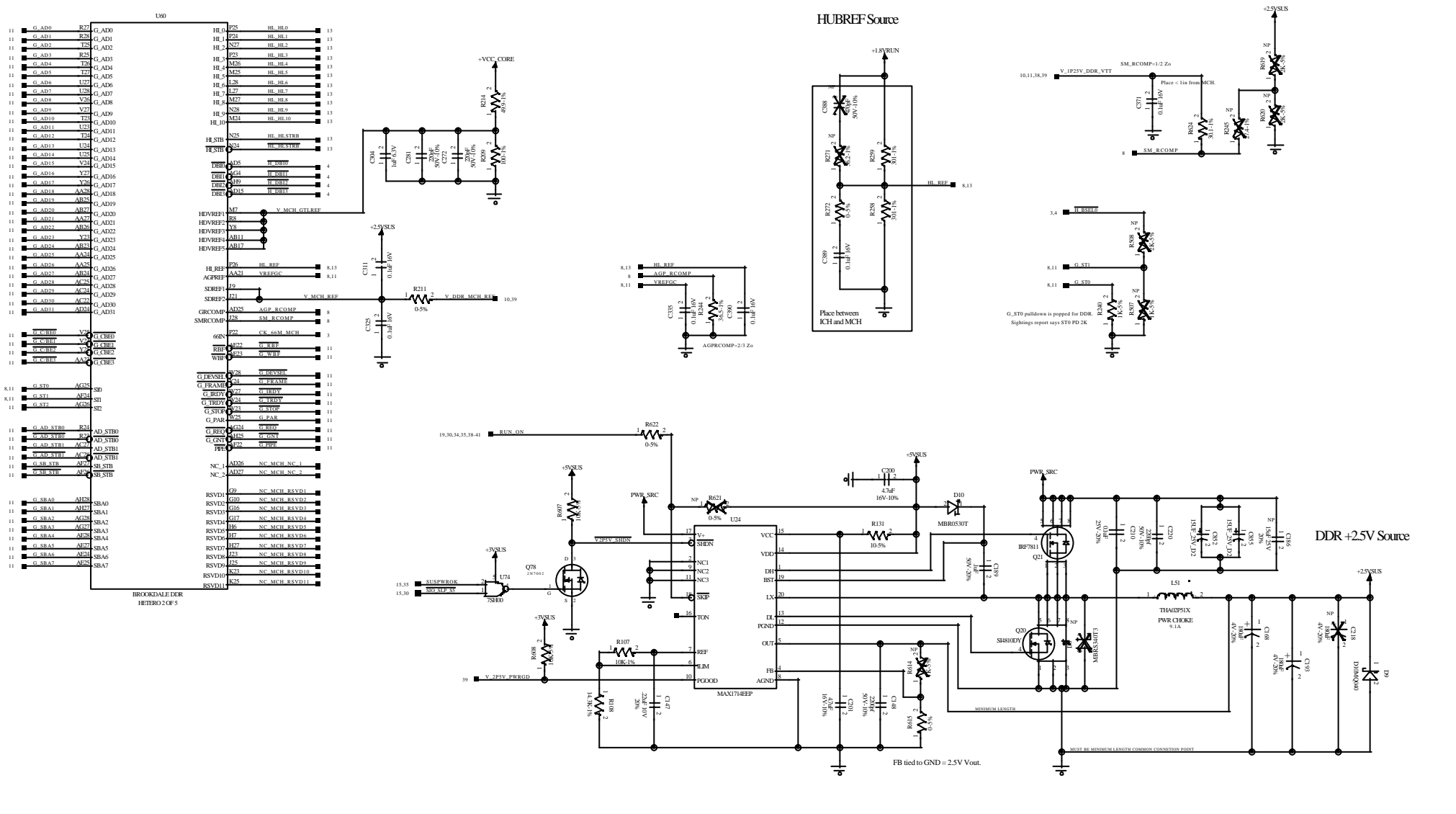
1
2
3
4

1
2
3
4



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE REPRODUCED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF A LICENSE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. WITHIN THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 58	OF 102	

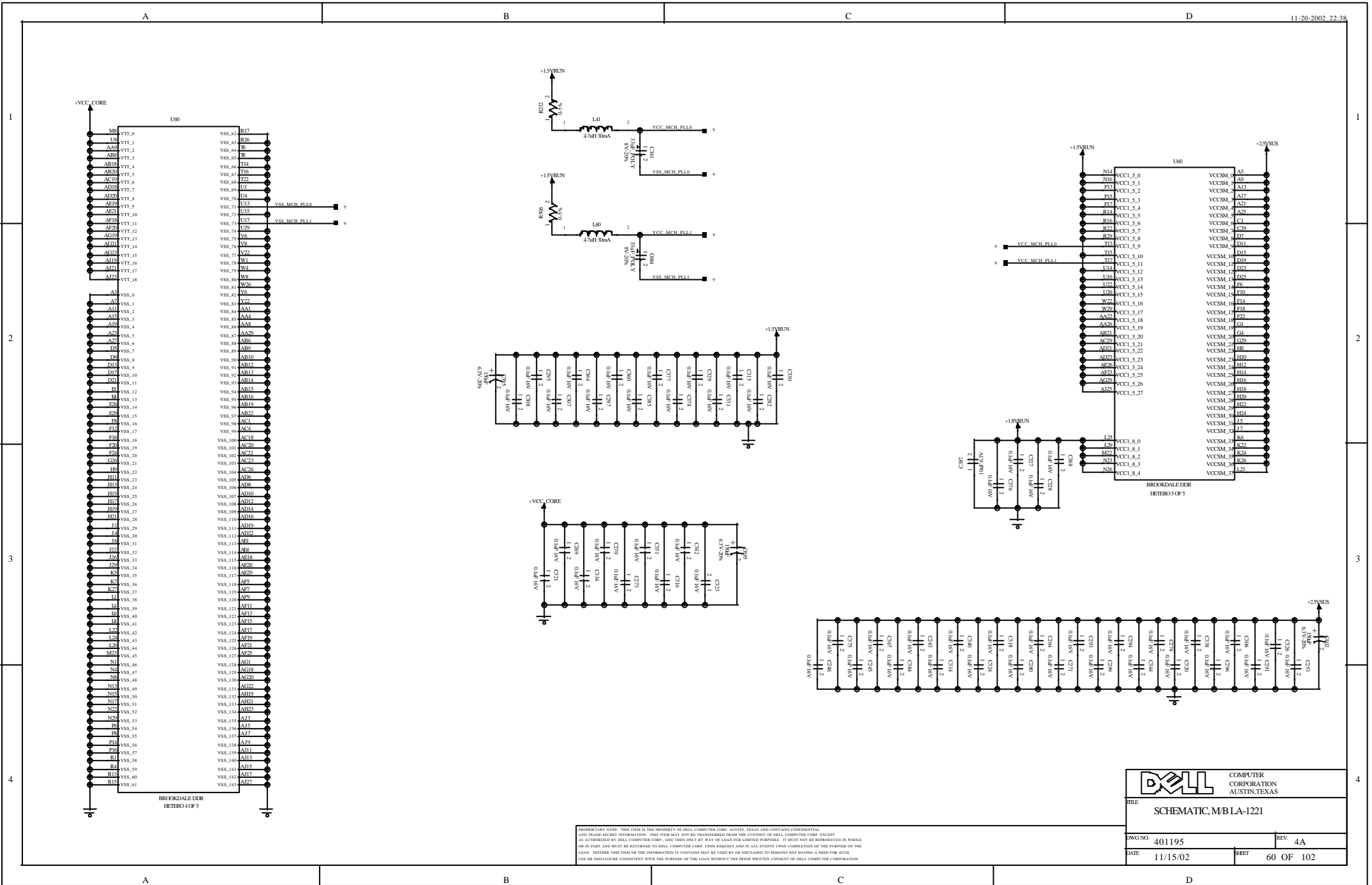


U90

11	G_AD0	R27	G_AD0	HL_HL0	HL_HL0	13
11	G_AD1	R28	G_AD1	HL_HL1	HL_HL1	13
11	G_AD2	R29	G_AD2	HL_HL2	HL_HL2	13
11	G_AD3	R30	G_AD3	HL_HL3	HL_HL3	13
11	G_AD4	R31	G_AD4	HL_HL4	HL_HL4	13
11	G_AD5	R32	G_AD5	HL_HL5	HL_HL5	13
11	G_AD6	R33	G_AD6	HL_HL6	HL_HL6	13
11	G_AD7	R34	G_AD7	HL_HL7	HL_HL7	13
11	G_AD8	R35	G_AD8	HL_HL8	HL_HL8	13
11	G_AD9	R36	G_AD9	HL_HL9	HL_HL9	13
11	G_AD10	R37	G_AD10	HL_HL10	HL_HL10	13
11	G_AD11	R38	G_AD11	HL_HL11	HL_HL11	13
11	G_AD12	R39	G_AD12	HL_HL12	HL_HL12	13
11	G_AD13	R40	G_AD13	HL_HL13	HL_HL13	13
11	G_AD14	R41	G_AD14	HL_HL14	HL_HL14	13
11	G_AD15	R42	G_AD15	HL_HL15	HL_HL15	13
11	G_AD16	R43	G_AD16	HL_HL16	HL_HL16	13
11	G_AD17	R44	G_AD17	HL_HL17	HL_HL17	13
11	G_AD18	R45	G_AD18	HL_HL18	HL_HL18	13
11	G_AD19	R46	G_AD19	HL_HL19	HL_HL19	13
11	G_AD20	R47	G_AD20	HL_HL20	HL_HL20	13
11	G_AD21	R48	G_AD21	HL_HL21	HL_HL21	13
11	G_AD22	R49	G_AD22	HL_HL22	HL_HL22	13
11	G_AD23	R50	G_AD23	HL_HL23	HL_HL23	13
11	G_AD24	R51	G_AD24	HL_HL24	HL_HL24	13
11	G_AD25	R52	G_AD25	HL_HL25	HL_HL25	13
11	G_AD26	R53	G_AD26	HL_HL26	HL_HL26	13
11	G_AD27	R54	G_AD27	HL_HL27	HL_HL27	13
11	G_AD28	R55	G_AD28	HL_HL28	HL_HL28	13
11	G_AD29	R56	G_AD29	HL_HL29	HL_HL29	13
11	G_AD30	R57	G_AD30	HL_HL30	HL_HL30	13
11	G_AD31	R58	G_AD31	HL_HL31	HL_HL31	13
11	G_AD32	R59	G_AD32	HL_HL32	HL_HL32	13
11	G_AD33	R60	G_AD33	HL_HL33	HL_HL33	13
11	G_AD34	R61	G_AD34	HL_HL34	HL_HL34	13
11	G_AD35	R62	G_AD35	HL_HL35	HL_HL35	13
11	G_AD36	R63	G_AD36	HL_HL36	HL_HL36	13
11	G_AD37	R64	G_AD37	HL_HL37	HL_HL37	13
11	G_AD38	R65	G_AD38	HL_HL38	HL_HL38	13
11	G_AD39	R66	G_AD39	HL_HL39	HL_HL39	13
11	G_AD40	R67	G_AD40	HL_HL40	HL_HL40	13
11	G_AD41	R68	G_AD41	HL_HL41	HL_HL41	13
11	G_AD42	R69	G_AD42	HL_HL42	HL_HL42	13
11	G_AD43	R70	G_AD43	HL_HL43	HL_HL43	13
11	G_AD44	R71	G_AD44	HL_HL44	HL_HL44	13
11	G_AD45	R72	G_AD45	HL_HL45	HL_HL45	13
11	G_AD46	R73	G_AD46	HL_HL46	HL_HL46	13
11	G_AD47	R74	G_AD47	HL_HL47	HL_HL47	13
11	G_AD48	R75	G_AD48	HL_HL48	HL_HL48	13
11	G_AD49	R76	G_AD49	HL_HL49	HL_HL49	13
11	G_AD50	R77	G_AD50	HL_HL50	HL_HL50	13
11	G_AD51	R78	G_AD51	HL_HL51	HL_HL51	13
11	G_AD52	R79	G_AD52	HL_HL52	HL_HL52	13
11	G_AD53	R80	G_AD53	HL_HL53	HL_HL53	13
11	G_AD54	R81	G_AD54	HL_HL54	HL_HL54	13
11	G_AD55	R82	G_AD55	HL_HL55	HL_HL55	13
11	G_AD56	R83	G_AD56	HL_HL56	HL_HL56	13
11	G_AD57	R84	G_AD57	HL_HL57	HL_HL57	13
11	G_AD58	R85	G_AD58	HL_HL58	HL_HL58	13
11	G_AD59	R86	G_AD59	HL_HL59	HL_HL59	13
11	G_AD60	R87	G_AD60	HL_HL60	HL_HL60	13
11	G_AD61	R88	G_AD61	HL_HL61	HL_HL61	13
11	G_AD62	R89	G_AD62	HL_HL62	HL_HL62	13
11	G_AD63	R90	G_AD63	HL_HL63	HL_HL63	13
11	G_AD64	R91	G_AD64	HL_HL64	HL_HL64	13
11	G_AD65	R92	G_AD65	HL_HL65	HL_HL65	13
11	G_AD66	R93	G_AD66	HL_HL66	HL_HL66	13
11	G_AD67	R94	G_AD67	HL_HL67	HL_HL67	13
11	G_AD68	R95	G_AD68	HL_HL68	HL_HL68	13
11	G_AD69	R96	G_AD69	HL_HL69	HL_HL69	13
11	G_AD70	R97	G_AD70	HL_HL70	HL_HL70	13
11	G_AD71	R98	G_AD71	HL_HL71	HL_HL71	13
11	G_AD72	R99	G_AD72	HL_HL72	HL_HL72	13
11	G_AD73	R100	G_AD73	HL_HL73	HL_HL73	13
11	G_AD74	R101	G_AD74	HL_HL74	HL_HL74	13
11	G_AD75	R102	G_AD75	HL_HL75	HL_HL75	13
11	G_AD76	R103	G_AD76	HL_HL76	HL_HL76	13
11	G_AD77	R104	G_AD77	HL_HL77	HL_HL77	13
11	G_AD78	R105	G_AD78	HL_HL78	HL_HL78	13
11	G_AD79	R106	G_AD79	HL_HL79	HL_HL79	13
11	G_AD80	R107	G_AD80	HL_HL80	HL_HL80	13
11	G_AD81	R108	G_AD81	HL_HL81	HL_HL81	13
11	G_AD82	R109	G_AD82	HL_HL82	HL_HL82	13
11	G_AD83	R110	G_AD83	HL_HL83	HL_HL83	13
11	G_AD84	R111	G_AD84	HL_HL84	HL_HL84	13
11	G_AD85	R112	G_AD85	HL_HL85	HL_HL85	13
11	G_AD86	R113	G_AD86	HL_HL86	HL_HL86	13
11	G_AD87	R114	G_AD87	HL_HL87	HL_HL87	13
11	G_AD88	R115	G_AD88	HL_HL88	HL_HL88	13
11	G_AD89	R116	G_AD89	HL_HL89	HL_HL89	13
11	G_AD90	R117	G_AD90	HL_HL90	HL_HL90	13
11	G_AD91	R118	G_AD91	HL_HL91	HL_HL91	13
11	G_AD92	R119	G_AD92	HL_HL92	HL_HL92	13
11	G_AD93	R120	G_AD93	HL_HL93	HL_HL93	13
11	G_AD94	R121	G_AD94	HL_HL94	HL_HL94	13
11	G_AD95	R122	G_AD95	HL_HL95	HL_HL95	13
11	G_AD96	R123	G_AD96	HL_HL96	HL_HL96	13
11	G_AD97	R124	G_AD97	HL_HL97	HL_HL97	13
11	G_AD98	R125	G_AD98	HL_HL98	HL_HL98	13
11	G_AD99	R126	G_AD99	HL_HL99	HL_HL99	13
11	G_AD100	R127	G_AD100	HL_HL100	HL_HL100	13

DELL		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE SCHEMATIC, M/B LA-1221		
DWG NO.	401195	REV. 4A
DATE	11/15/02	SHEET 59 OF 102

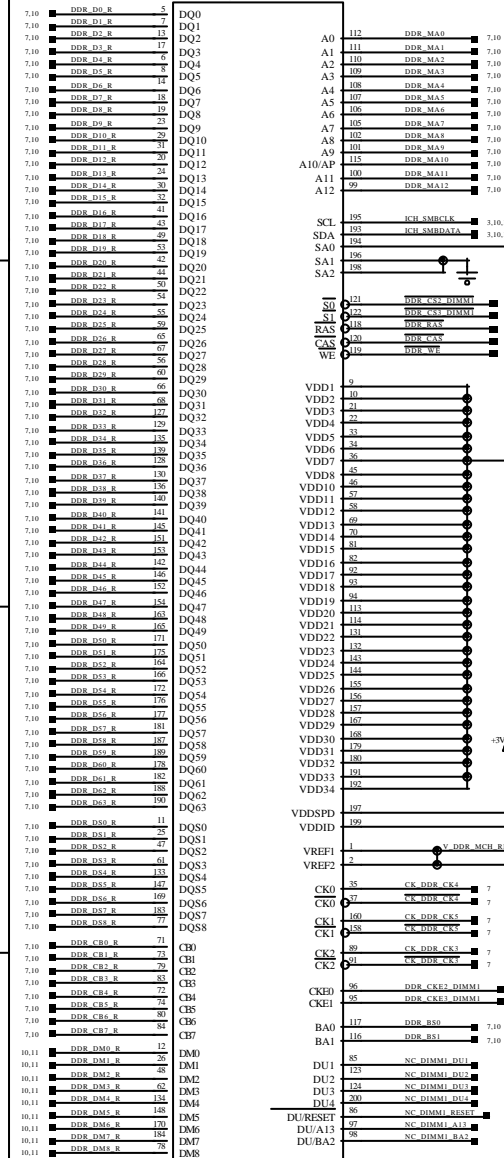
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

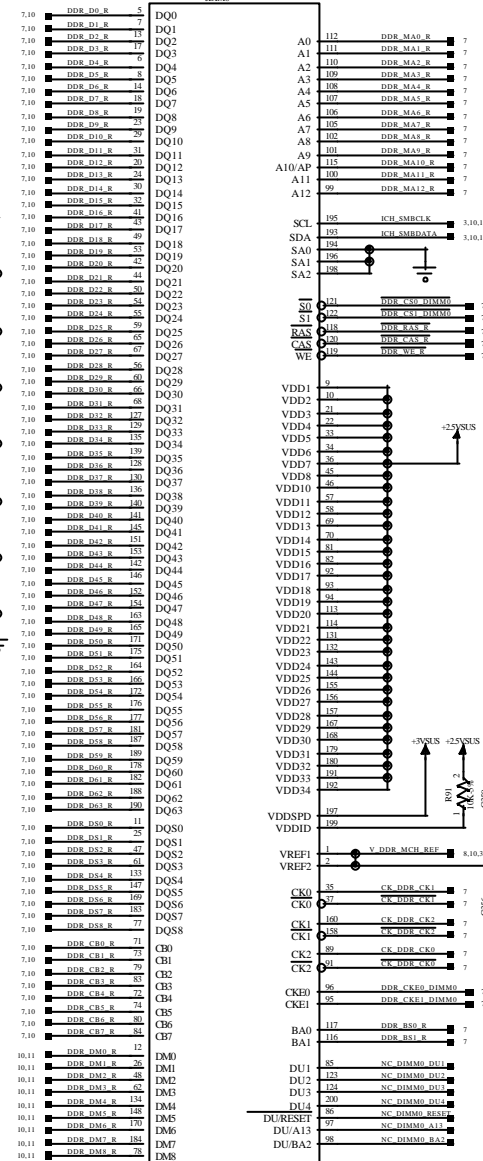
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 60 OF 102	

DIMM1 LOW PROFILE, REVERSE KEY



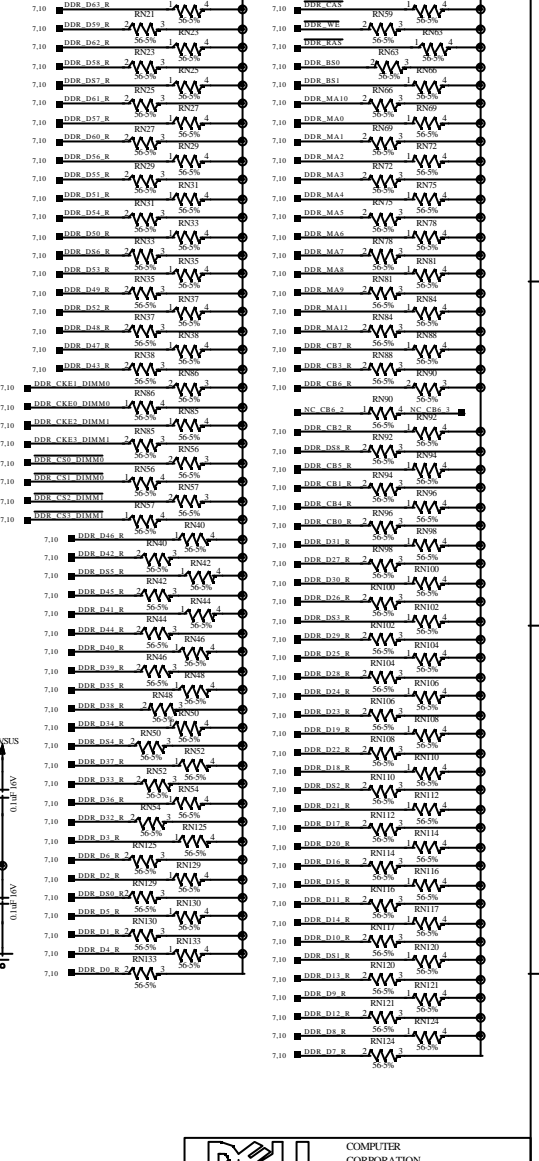
PC2100 DDR SO-DIMM SKT
REVERSE KEY

DIMM0 STANDARD PROFILE



PC2100 DDR SO-DIMM SKT

R.0101.38.39_V_1P25V_DDR_VTT



COMPUTER CORPORATION AUSTIN, TEXAS		TITLE	
		SCHEMATIC, M/B LA-1221	
DWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	61 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE REPRODUCED FROM THE CUSTOMER OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LICENSE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND NOT BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. WITHIN THE ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH INFO AND DISCLOSED IN CONTRADICTION WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

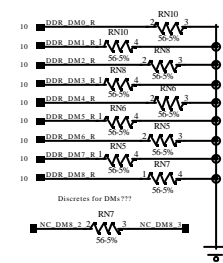
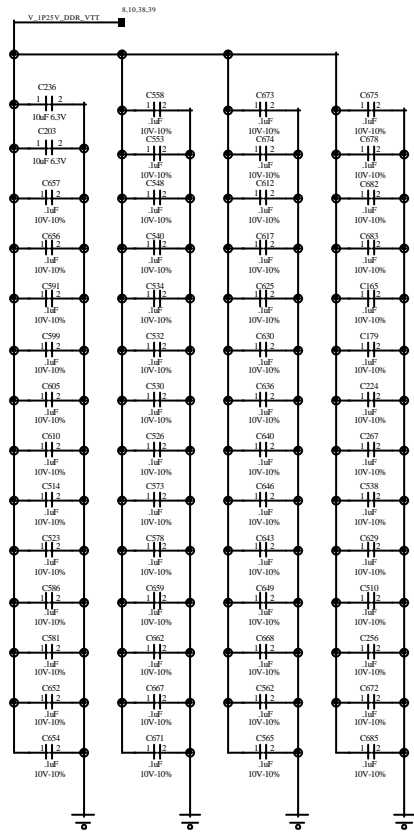
A

B

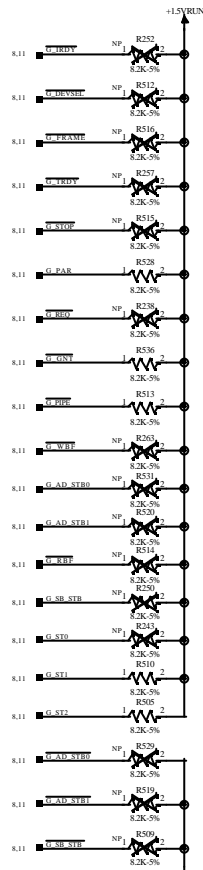
C

D

DDR VTT decoupling.

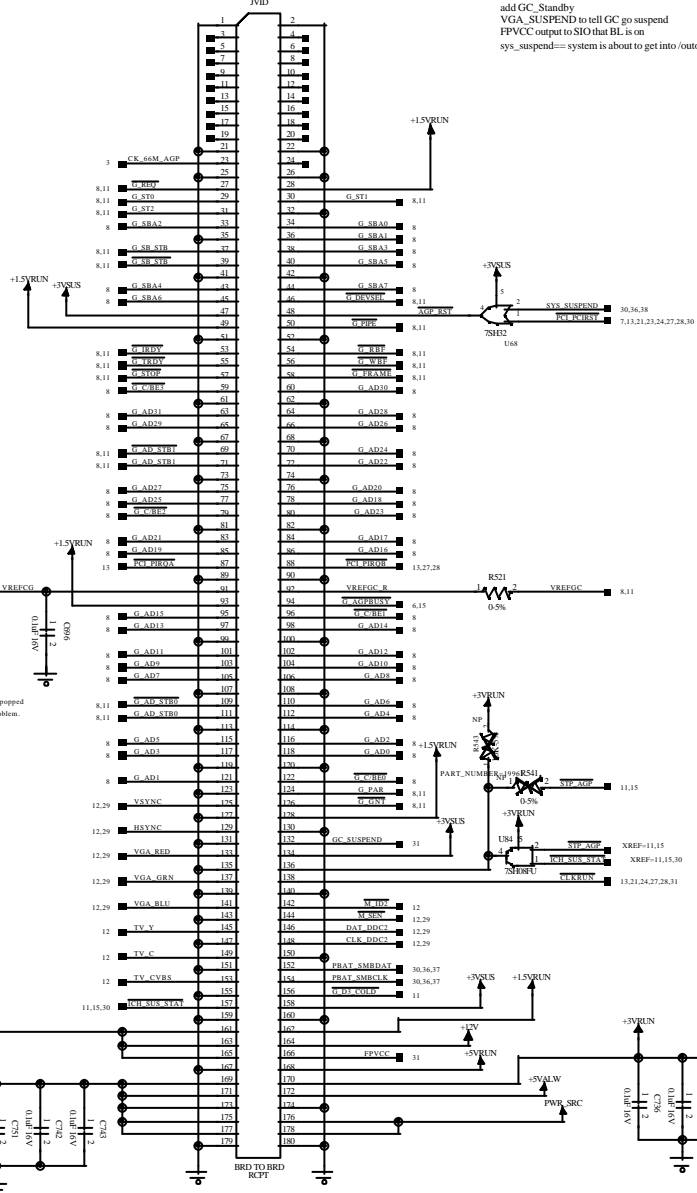


AGP pullups: matches Meteor. Verify pullups in Brookdale.

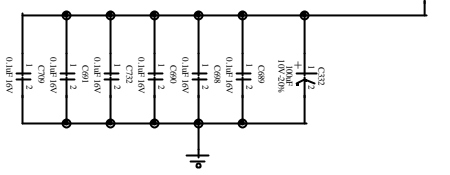


R953 and R498 are popped due to BD-M AD problem.

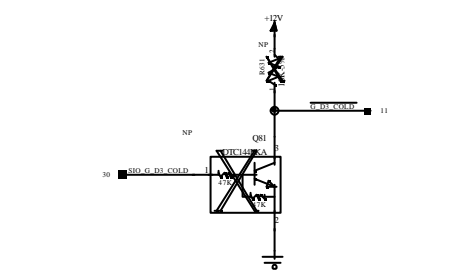
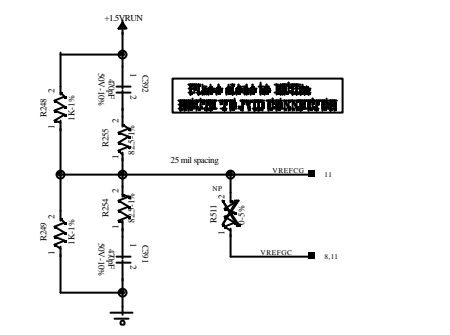
VGA Board Connector



vga-off==vga_suspend
 v_vga==comes from 3VSUS and 5vSus
 add GC_Suspend
 add GC_Standby
 VGA_SUSPEND to tell GC go suspend
 FPVCC output to SIO that BL is on
 sys_suspend== system is about to get into /outo suspend



VREFCG Source



DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 62 OF 102	

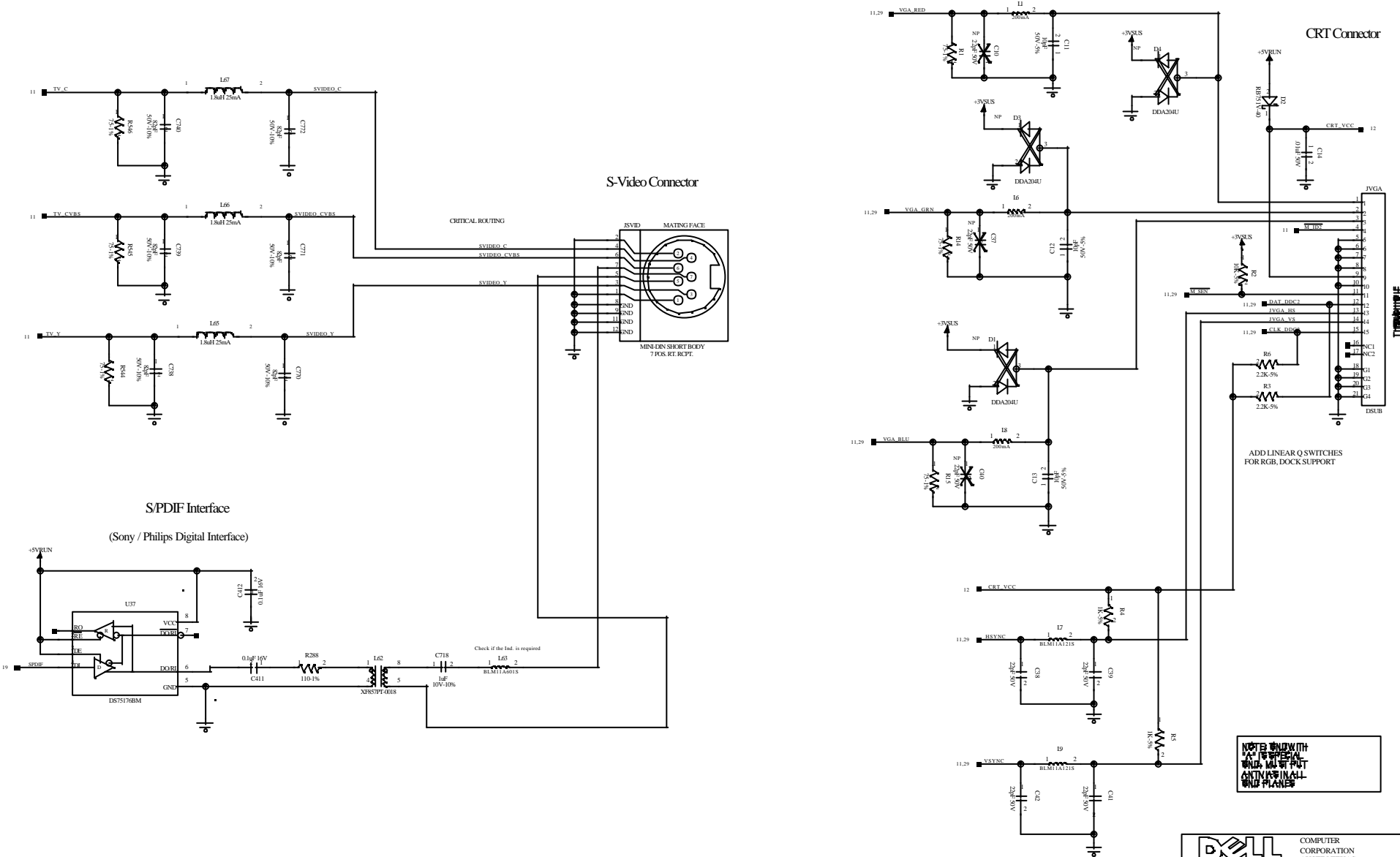
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A

B

C

D

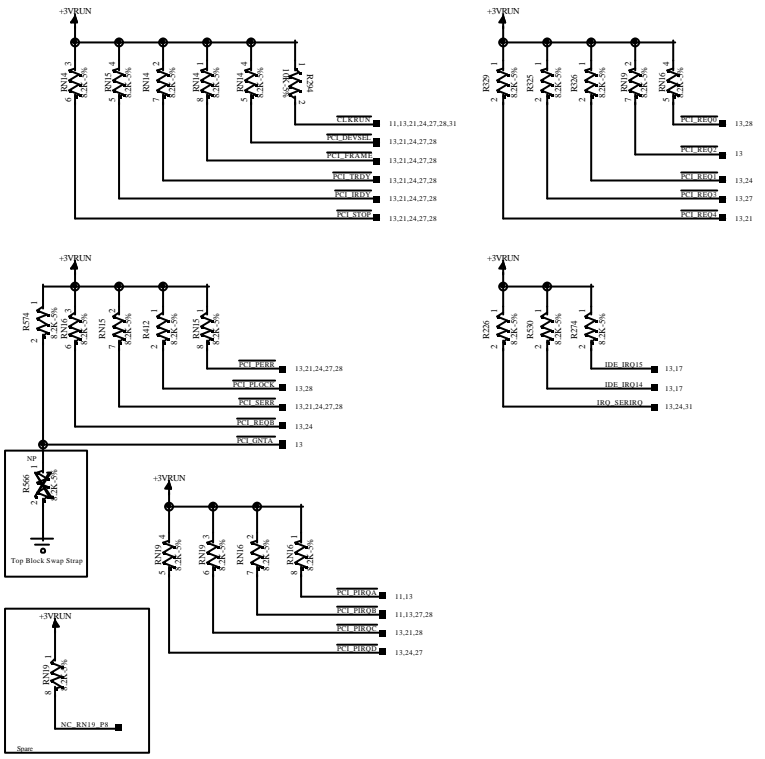


DO NOT MIX WITH
ANY OTHER PART
AS THIS IS IN A
DIFFERENT PLANE

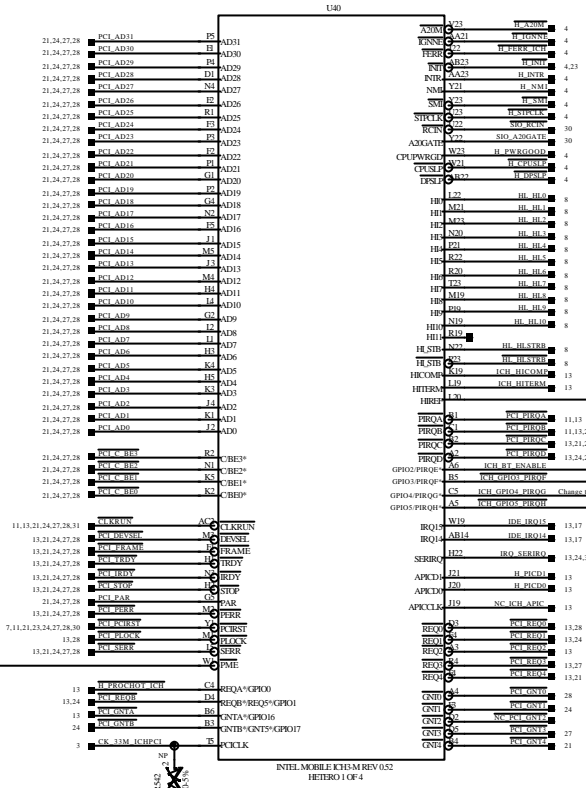
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
PWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 63 OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

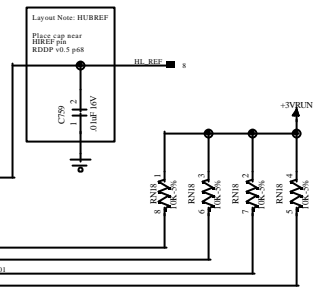
PCI Bus Pull-Ups



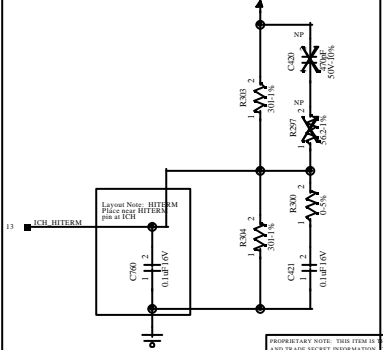
ICH3-M (1/4) PCI/CPU/Hublink Interface



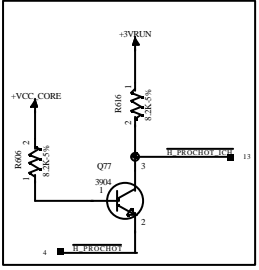
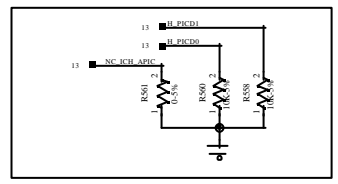
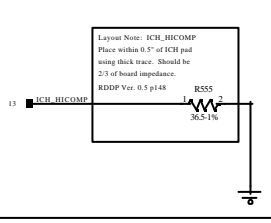
HUB INTERFACE LAYOUT:
ROUTE SIGNALS WITH 5:20 TRACE SPACE.
SIGNALS MUST MATCH +/-0.1" OF HL_STB*STB* SIGNALS.
RDDP Ver. 0.5 p148



Hub Interface Termination Mode Select



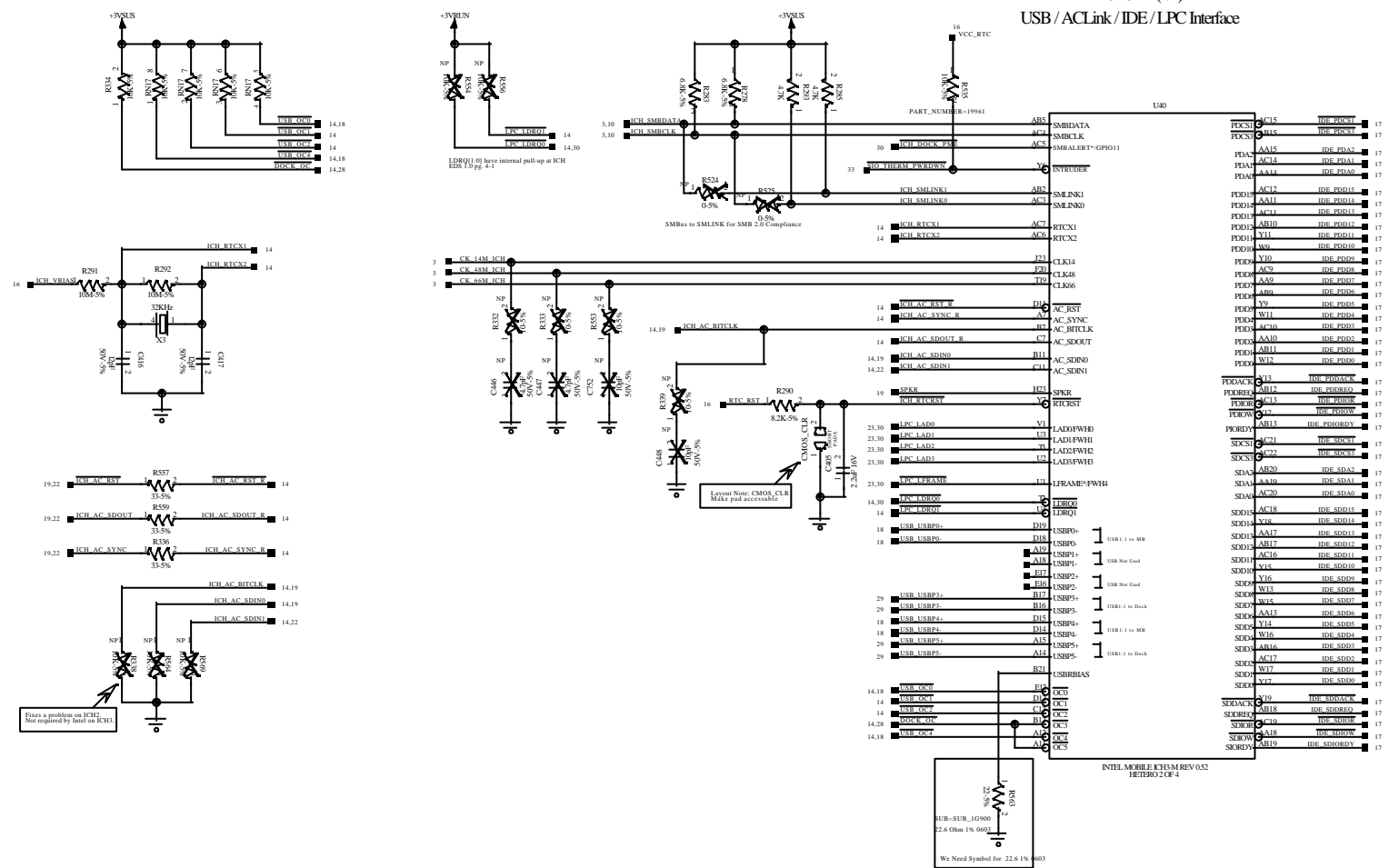
Hub Interface Buffer Compensation



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LICENSE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 64	OF 102	

ICH3-M (2/4) USB / ALink / IDE / LPC Interface

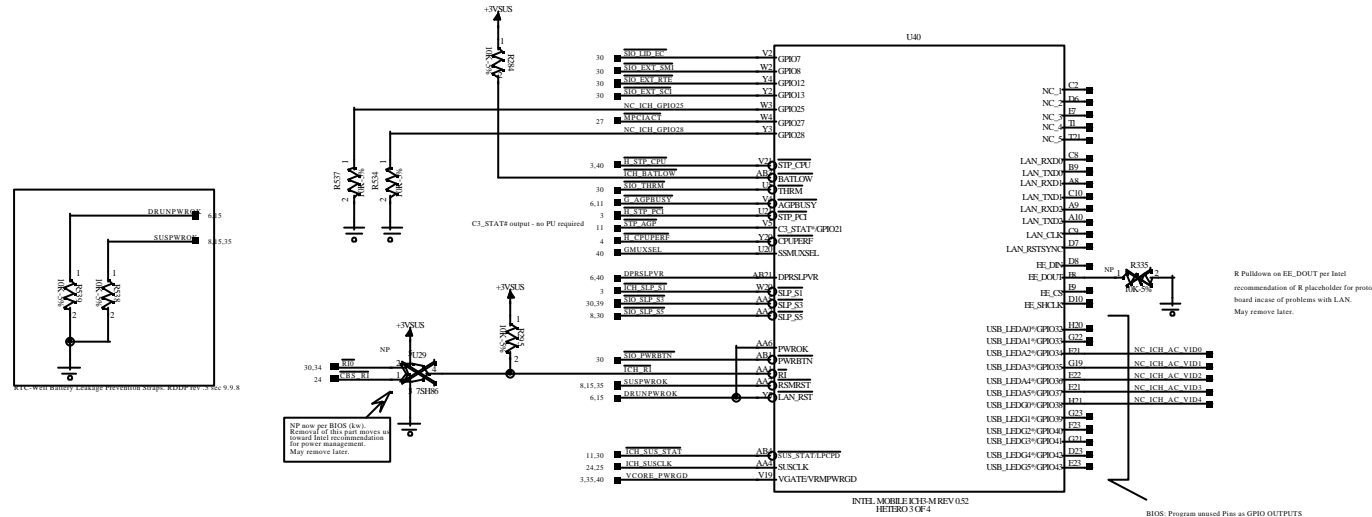


Fixes a problem on ICH3.
Not required by Intel on ICH3.

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS, AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LICENSE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE SCHEMATIC, M/B LA-1221		
P/WG NO. 401195		REV. 4A
DATE 11/15/02	SHEET 65 OF 102	

ICH3-M (3/4) PWR MGMT / LAN / USBLED Interface

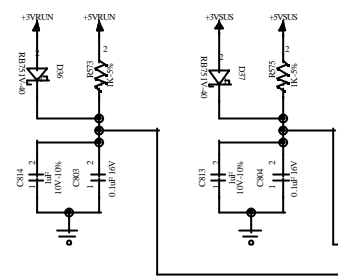


PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEAN FOR LIMITED PURPOSES. IF NOT TO BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

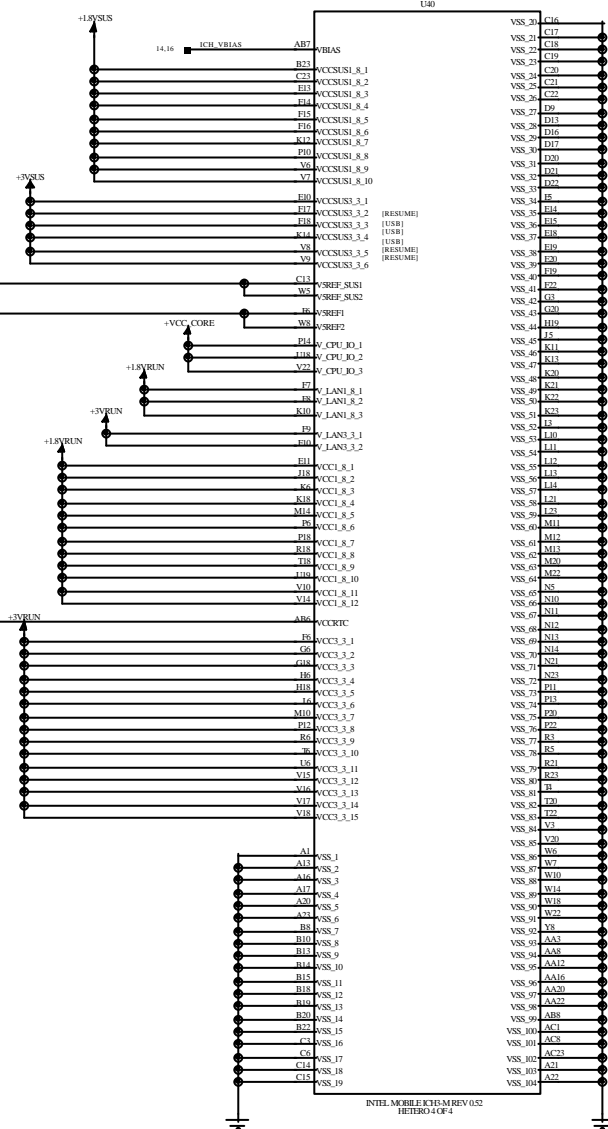
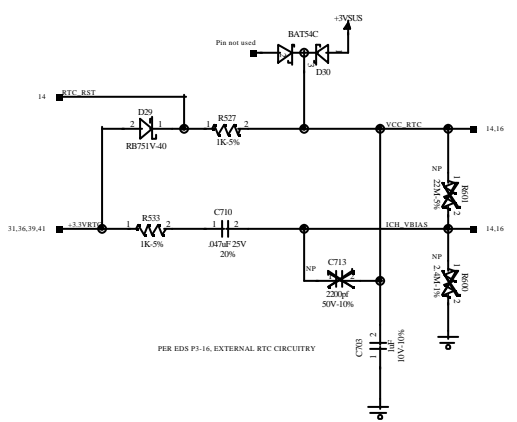
DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE: SCHEMATIC, M/B LA-1221	
DWG NO. 401195	REV. 4A
DATE: 11/15/02	SHEET 66 OF 102

ICH3-M (44) Power and Ground

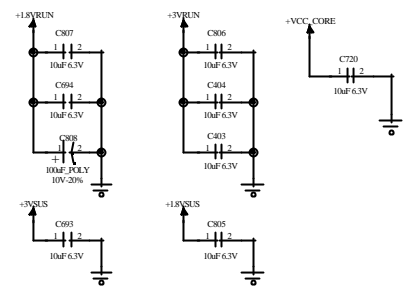
V5REF/VCC3_3 Sequencing Circuits



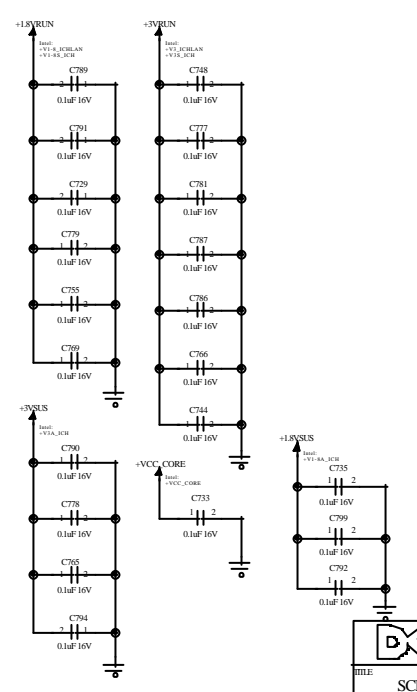
External RTC Circuitry



ICH3 Bulk Capacitance



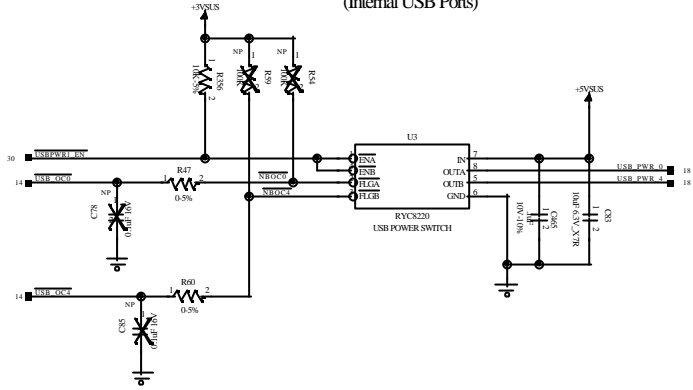
ICH3 Decoupling Capacitance



DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 67 OF 102		

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSED CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

Overcurrent Detection (Internal USB Ports)

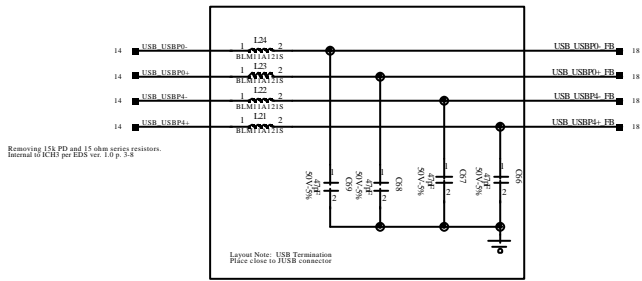


Layout Note: C72
Place a "+" character silkscreen on the board near the non-ground side of this capacitor.

C72 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor

Layout Note: USB1.1
Follow RDDP's routing recommendations
INTEL USB GUIDELINE APPLIES

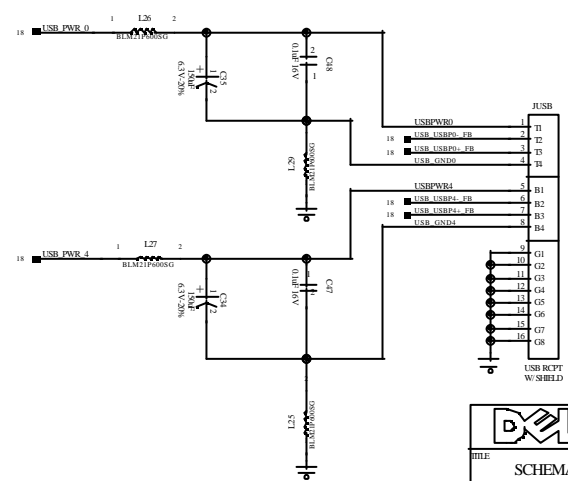
USB1.1 To System



Removing 15k PD and 15 ohm series resistors. Internal to RCH1 per EDS ver. 1.0 p. 3.8

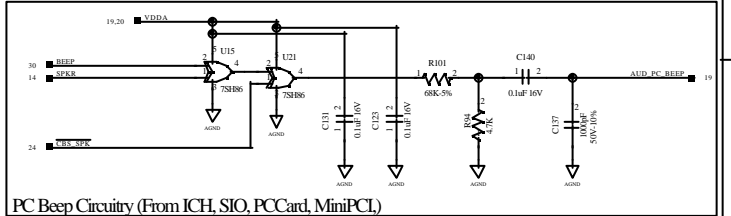
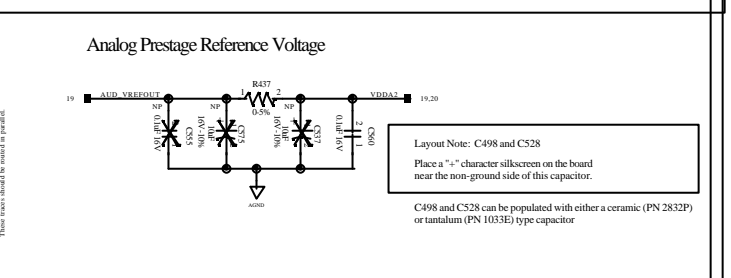
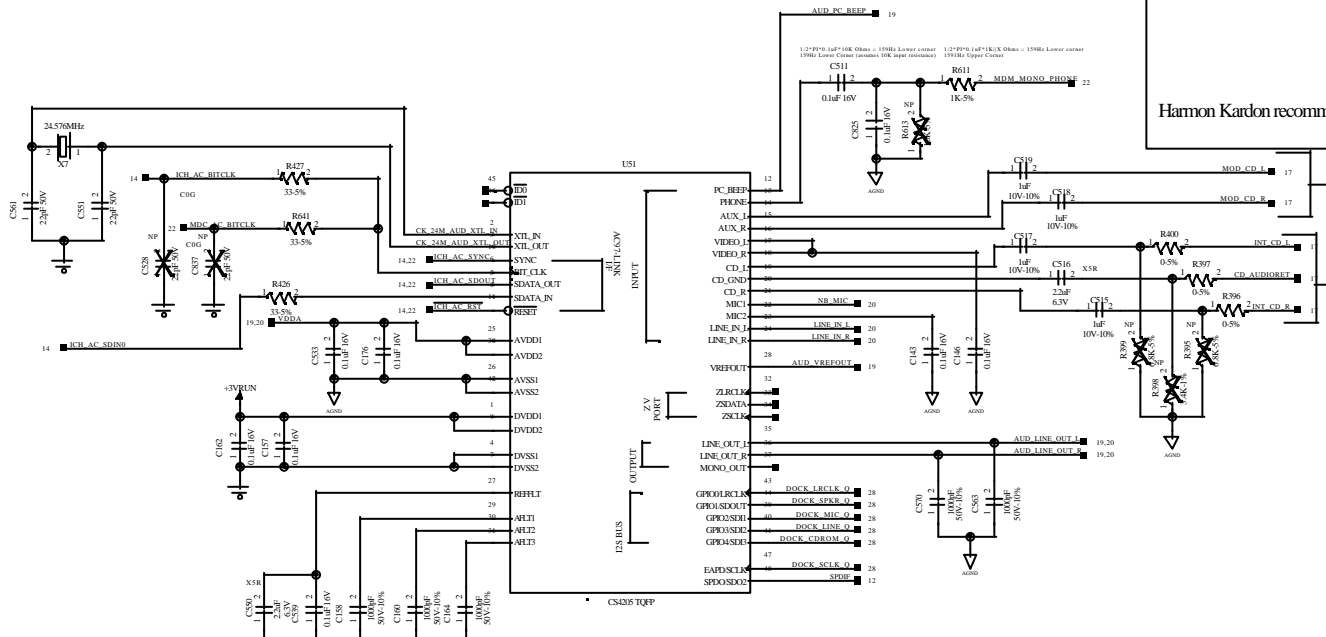
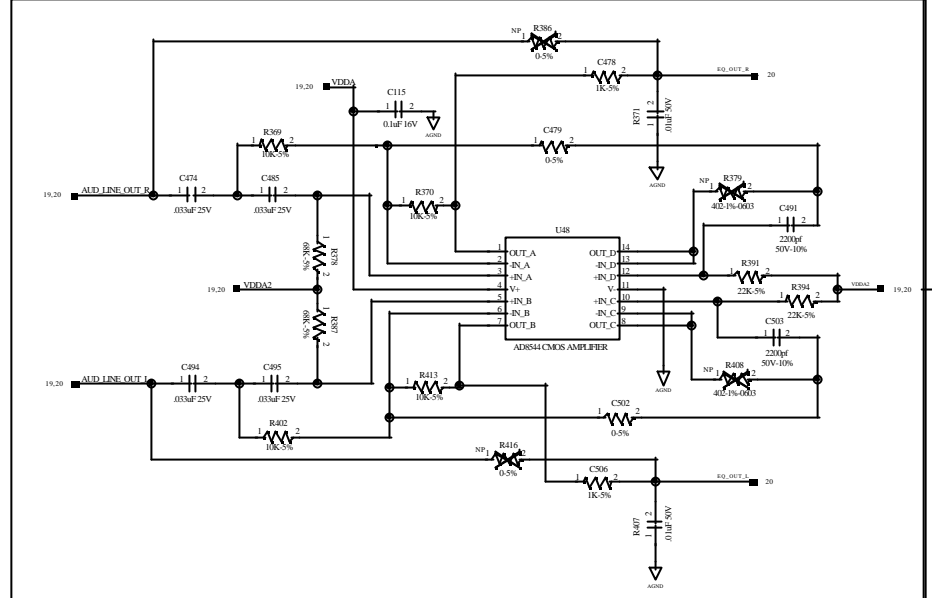
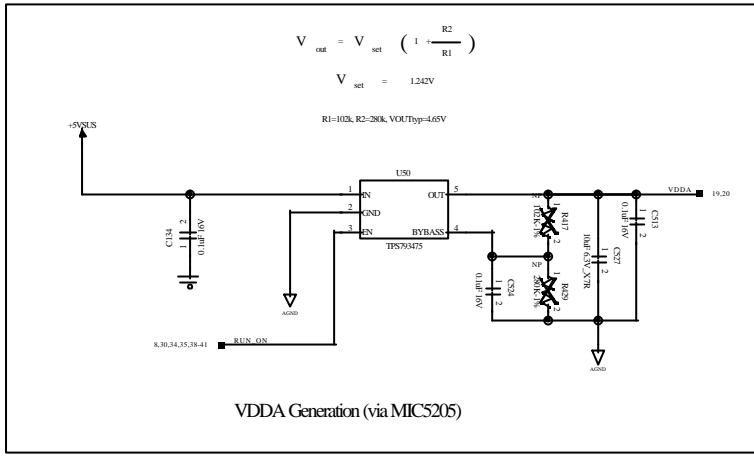
Layout Note: USB Termination
Place close to J18 connector

USB1.1 To System System Board USB Connectors



DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
PWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 69	OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



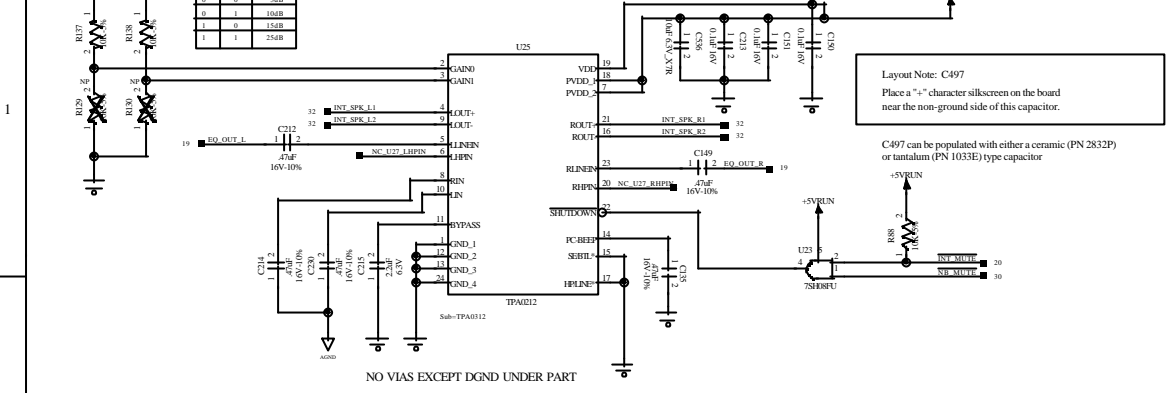
NOTE: ECAD MUST CONNECT AGND TO GND (VIA DRAWBRIDGE)!! 60 MIL TRACE AT ONE POINT ONLY UNDER THE CODEC

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. WITHOUT THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 70 OF 102	

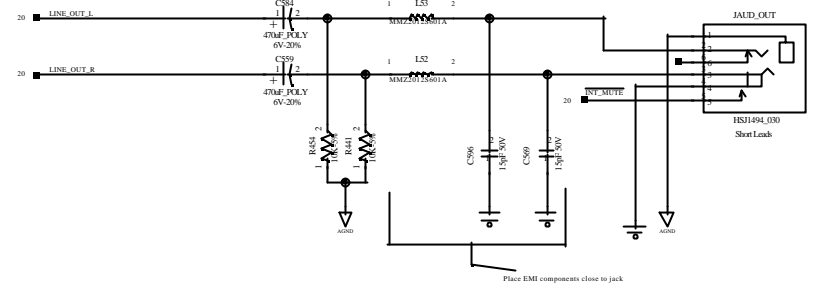
Gain Register Settings		
Gain	Gain	Filter
0	0	48K
0	1	100K
1	0	154K
1	1	254K

Internal Speaker Amplifier

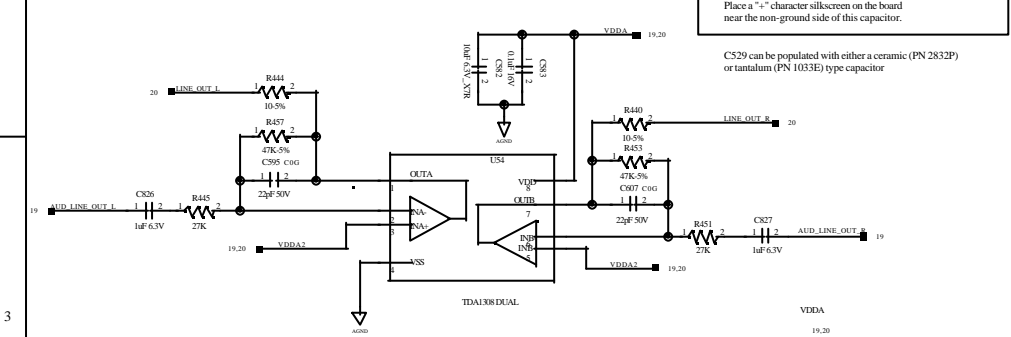


Layout Note: C497
Place a "+" character silkscreen on the board near the non-ground side of this capacitor.

C497 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor



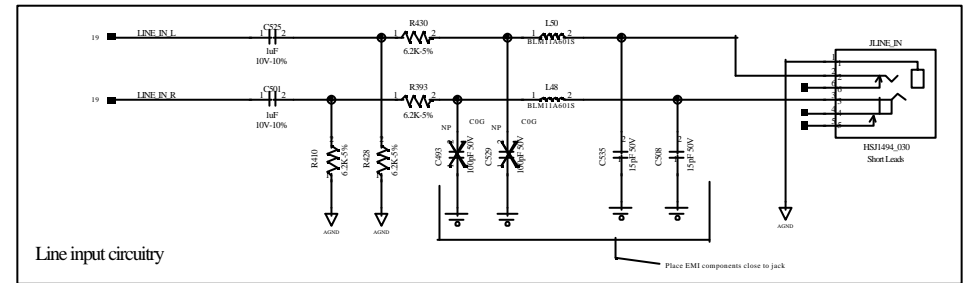
Headphone/Line Out Amplifier



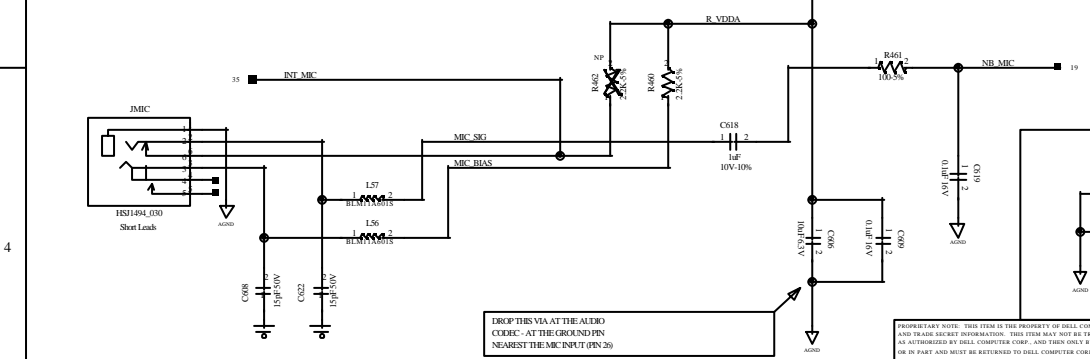
Layout Note: C529
Place a "+" character silkscreen on the board near the non-ground side of this capacitor.

C529 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor

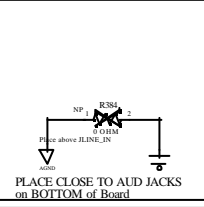
Line output circuitry



Microphone Input Circuit

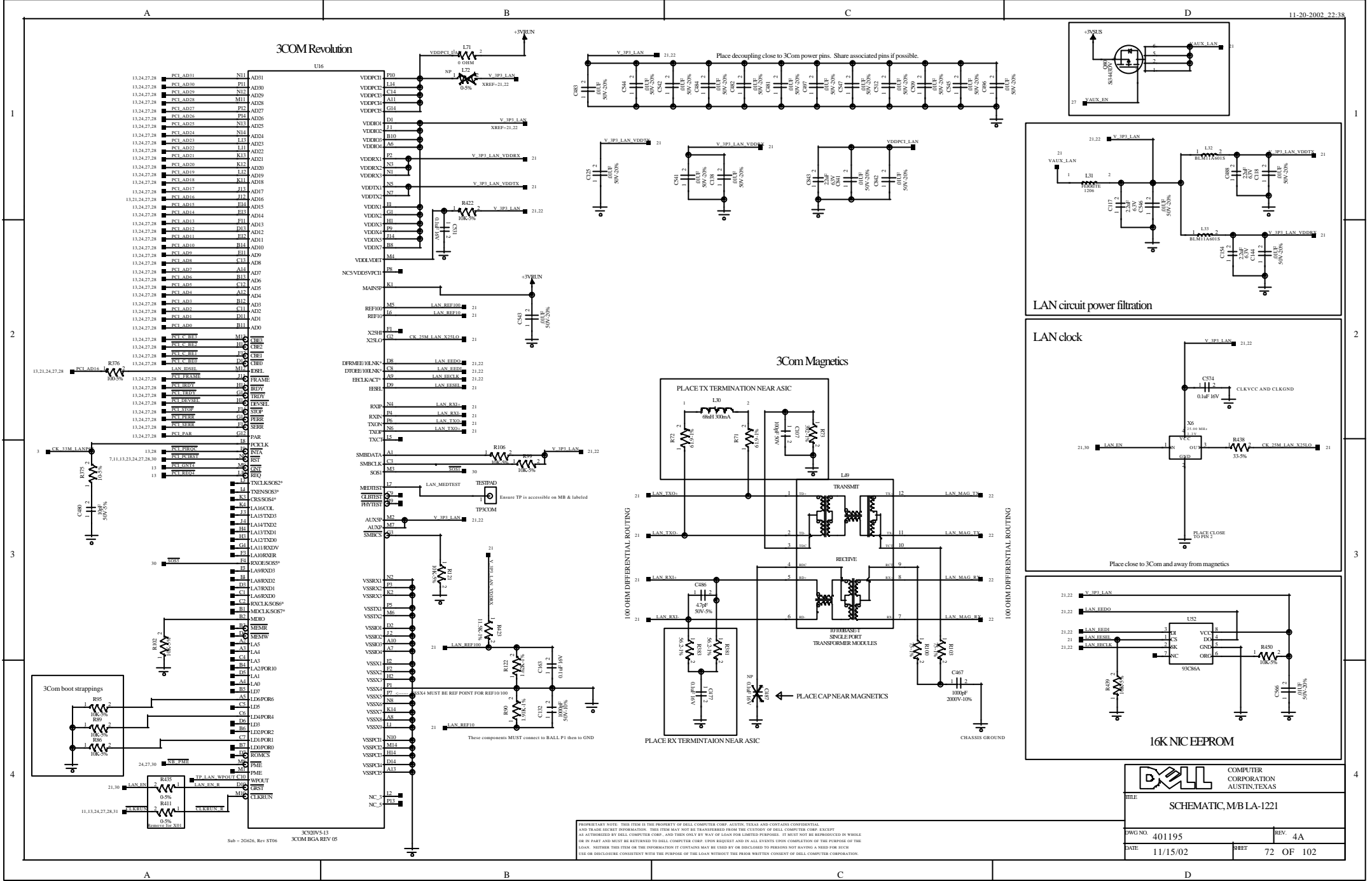


NOTE: ECAD MUST CONNECT AGND TO GND (VIA DRAWBRIDGE)!! 60 MIL TRACE AT ONE POINT ONLY UNDER THE CODEC



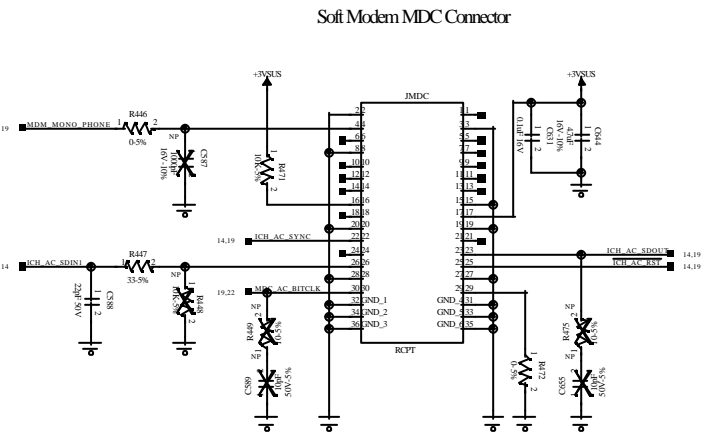
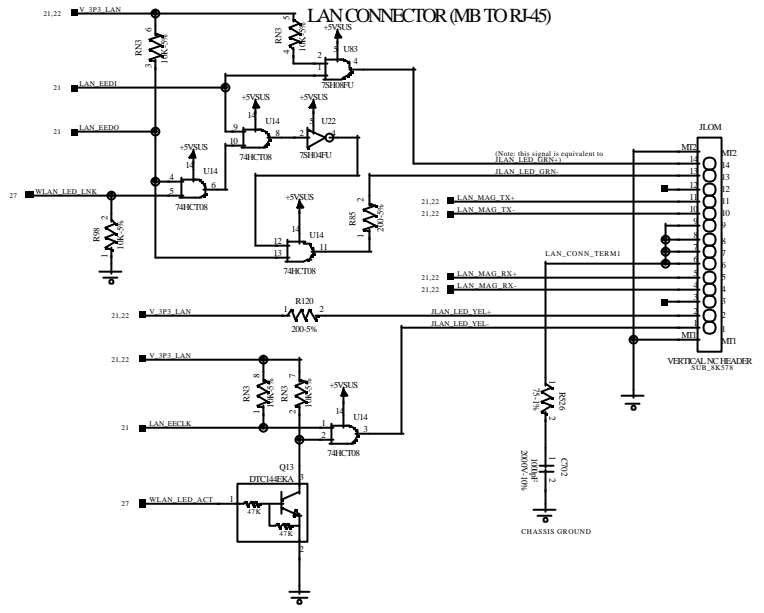
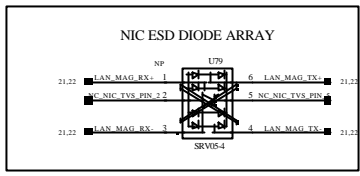
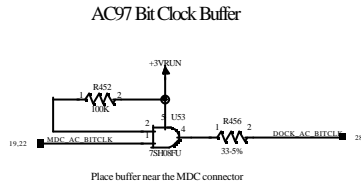
DELL		COMPUTER CORPORATION AUSTIN, TEXAS
SCHEMATIC, M/B LA-1221		
PWG NO. 401195	REV. 4A	
DATE 11/15/02	SHEET 71 OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. WITHOUT THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEAD FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAD. WITHIN THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEAD WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

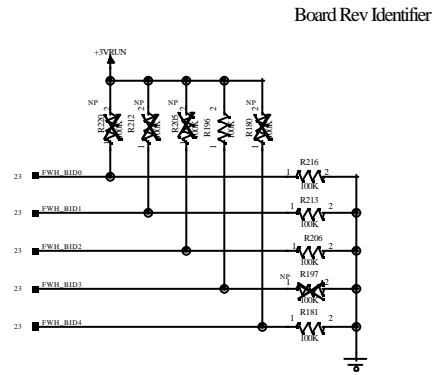
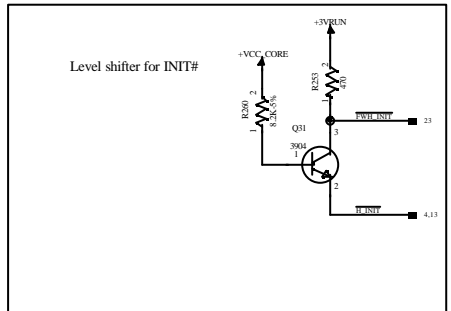
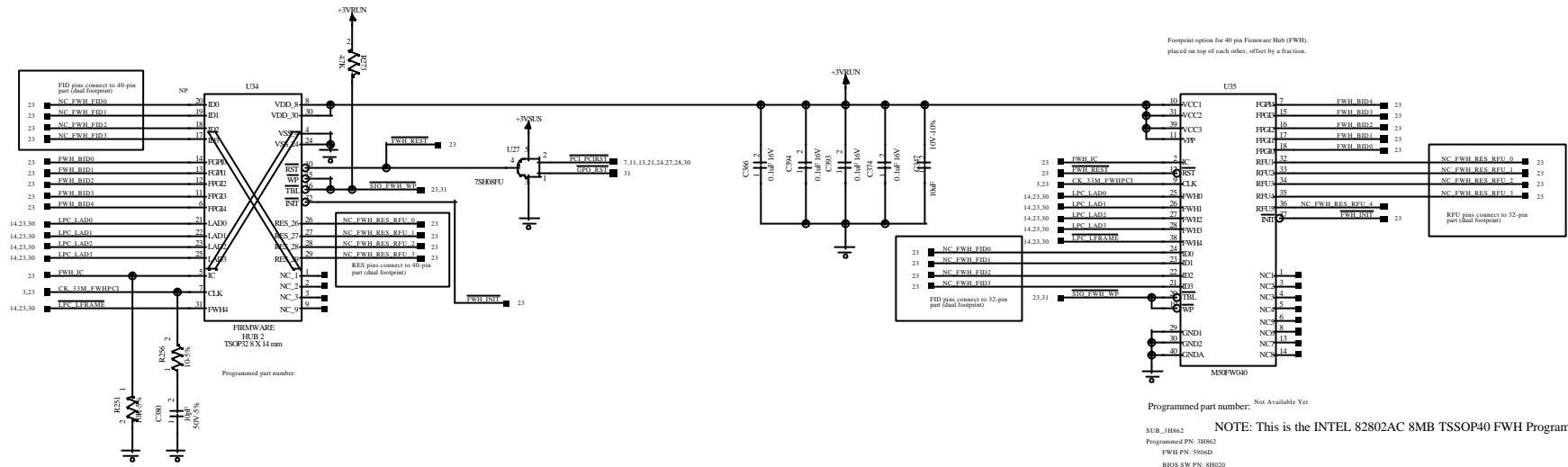
		COMPUTER CORPORATION AUSTIN, TEXAS	
		SCHEMATIC, M/B LA-1221	
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	72 OF 102



DELL		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE SCHEMATIC, M/B LA-1221		
PWG NO.	401195	REV. 4A
DATE	11/15/02	SHEET 73 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

Dual Footprint Firmware Hub (FWH) - System BIOS



FWH REV.	BID6	BID5	BID4	BID3	BID2	BID1	BID0
400-00	0	0	0	0	0	0	0
401-00	0	0	0	0	0	0	1
402-00	0	0	0	0	1	0	0
403-00	0	0	0	0	1	1	1
X04-00	0	0	1	0	0	0	0
X05-00	0	0	1	0	1	0	1

DELL COMPUTER CORPORATION AUSTIN, TEXAS

TITLE: SCHEMATIC, M/B LA-1221

FWG NO. 401195 REV. 4A

DATE 11/15/02 SHEET 74 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

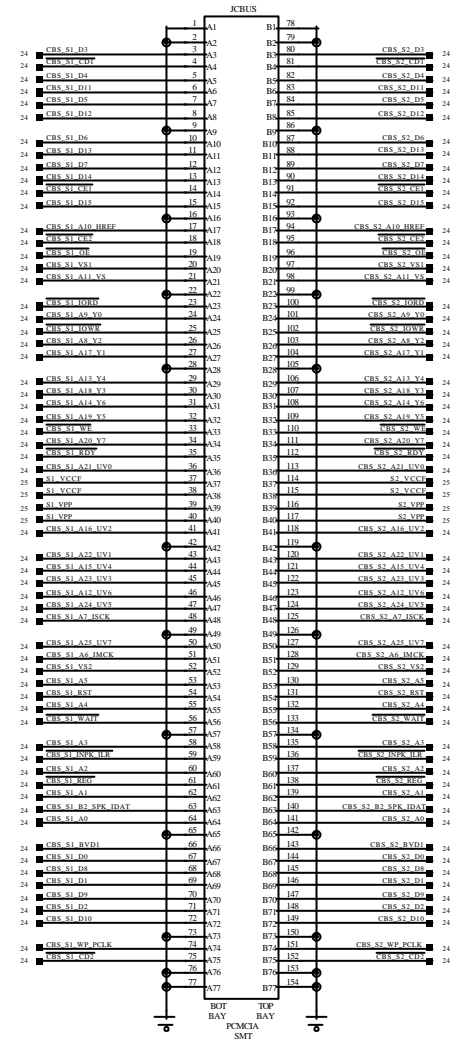
1

2

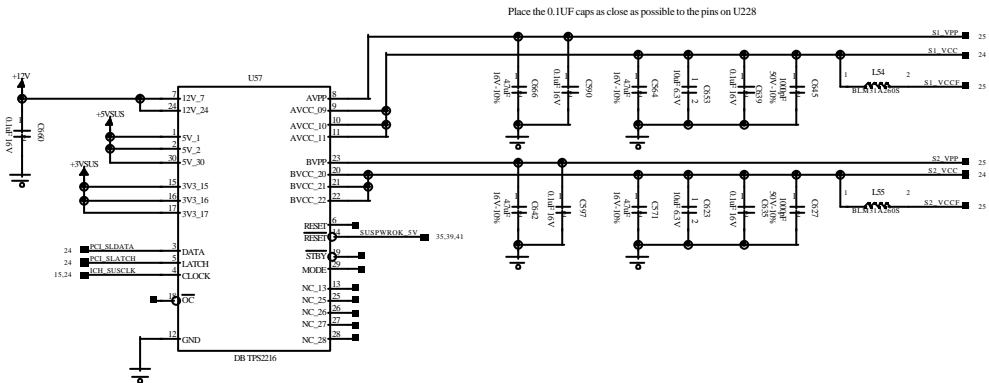
3

4

PC Card Connectors



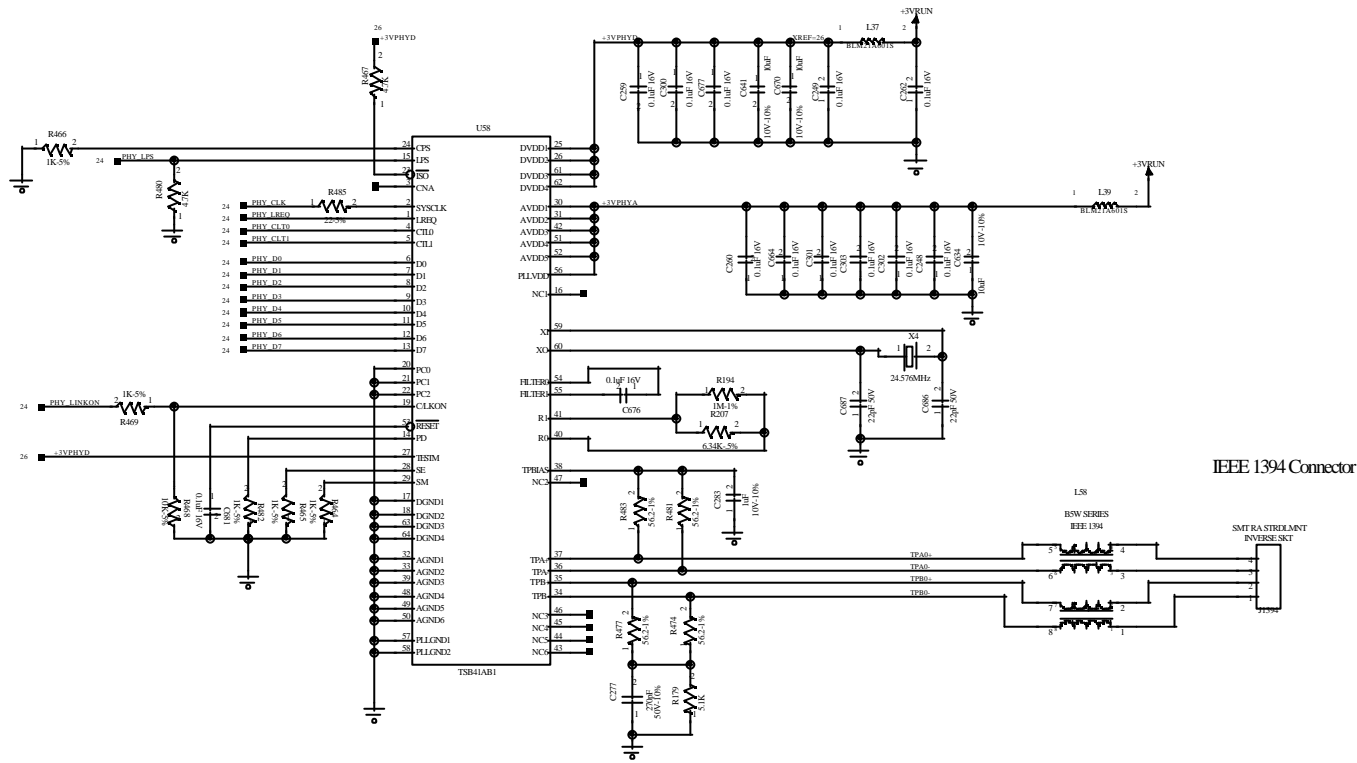
PC Card Slot Voltage Selector



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. WITHIN THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 76	OF 102	

IEEE 1394 Phy



		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
PWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 77 OF 102	

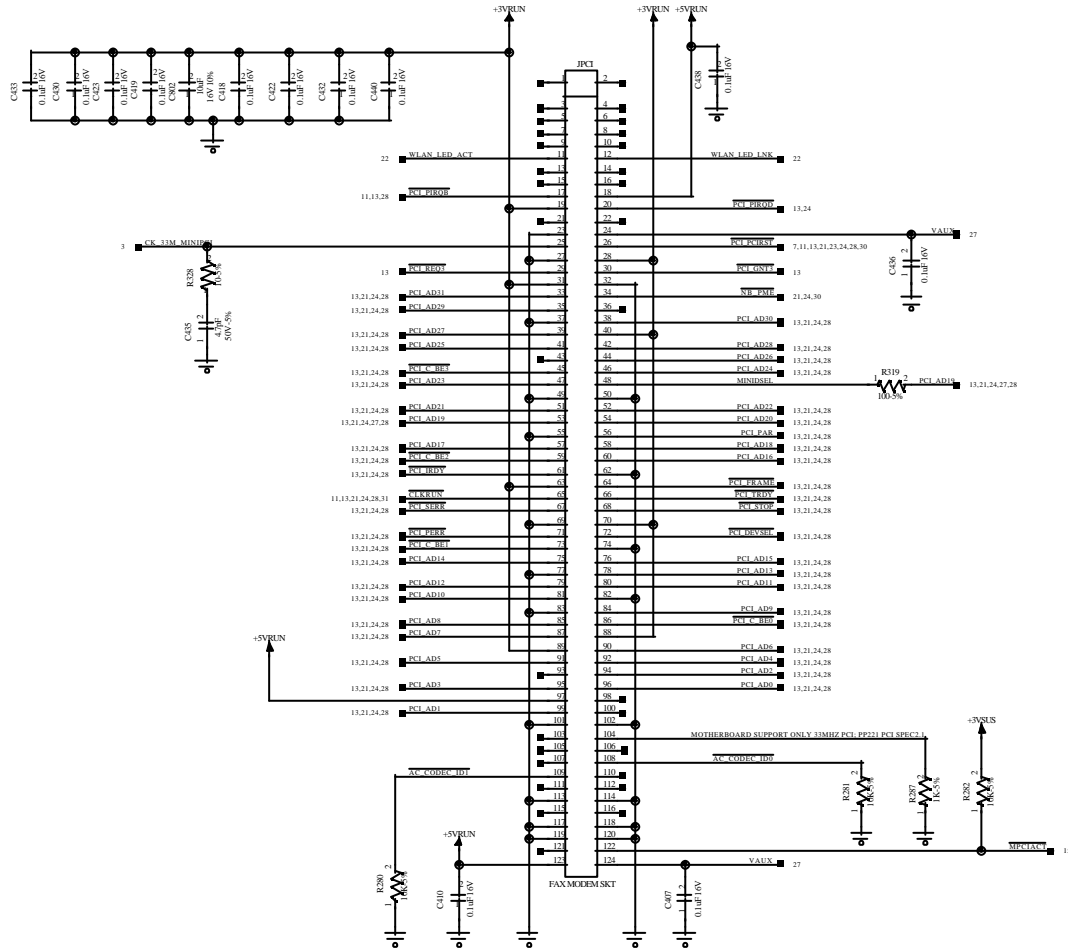
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

Layout Note: C699

Place a "+" character silkscreen on the board near the non-ground side of this capacitor.

C699 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor

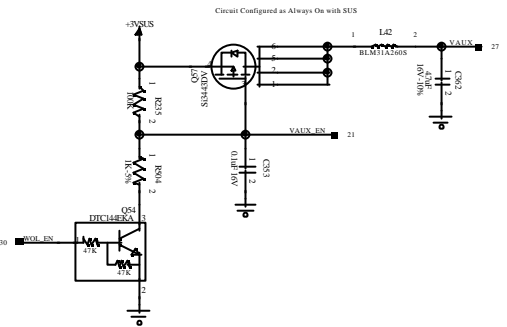
Mini PCI Connector



Note: Pins 3 through 16 of JPC1 are not being used per the mini-pci spec. THIS BOARD DOES NOT SUPPORT WAKE UP FROM MINIPCI CARD WHILE IN SHUT/DOWN. 3.3aux is connected to 3.3SUS

Power requirement total 2W
+5VRUN = 100mA
3.3V/RUN = 575mA/PPMAX

Vaux Source



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 78	OF 102	

1

1

2

2

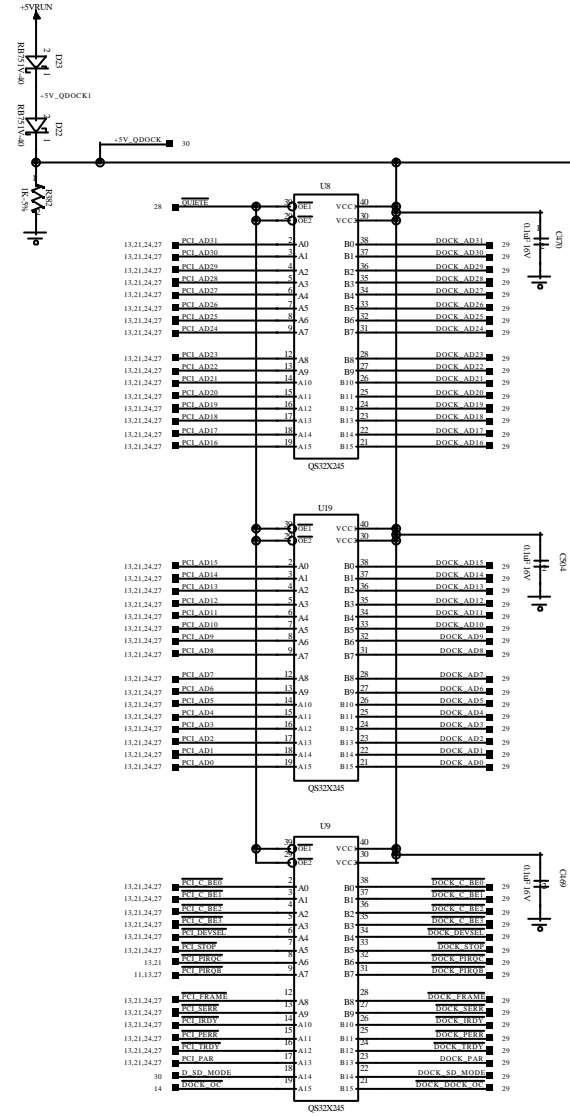
3

3

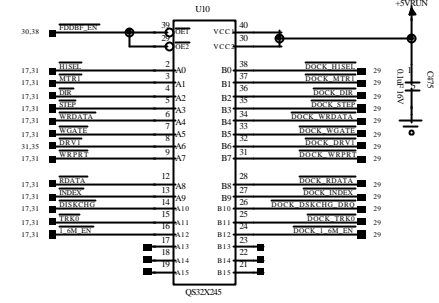
4

4

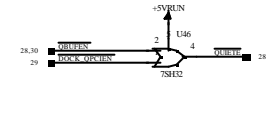
Dock PCI Bus Buffers



Dock FD Buffer



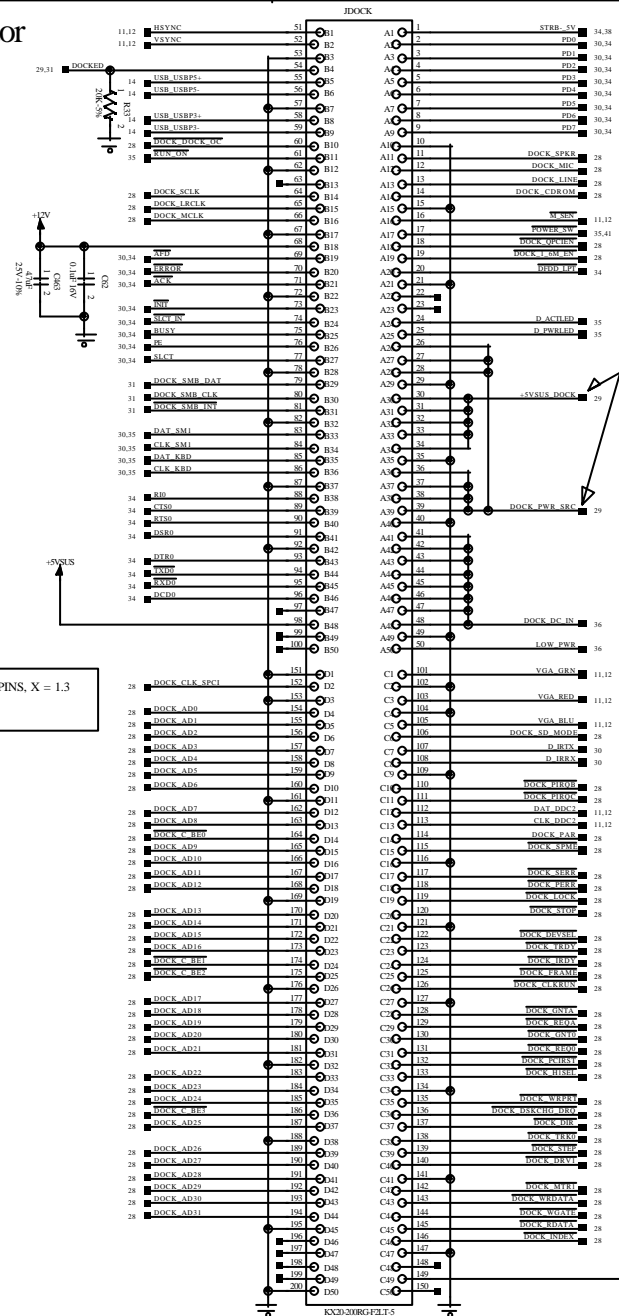
Dock Buffer Enable



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURCHASE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

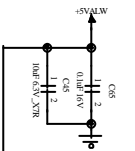
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 79	OF 102	

Dock Connector



TRACE 100 MILS OR GREATER

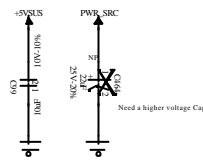
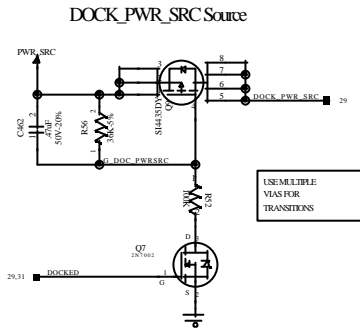
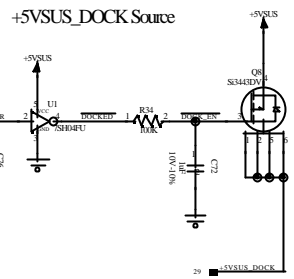
Disconnect REQ* and GRNT* for PCPC Issue



Layout Note: C62
 Place a "+" character silkscreen on the board near the non-ground side of this capacitor.

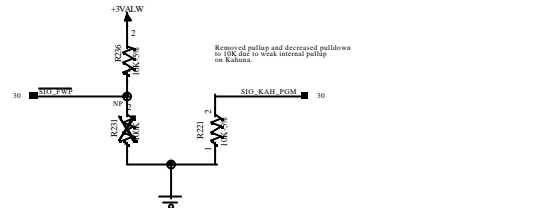
C62 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

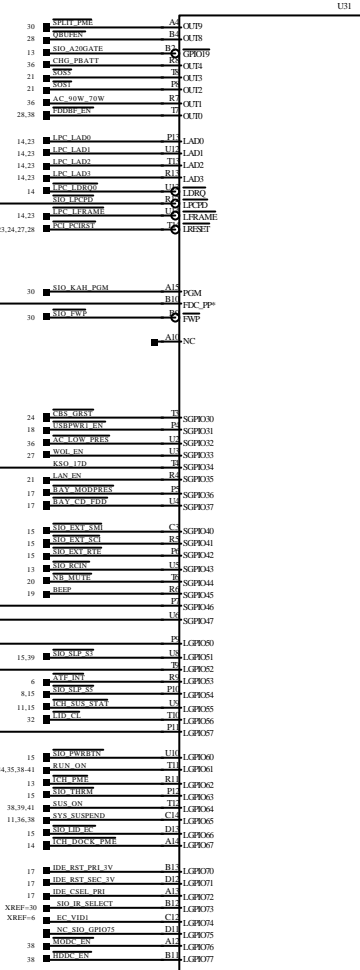


DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 80	OF 102	

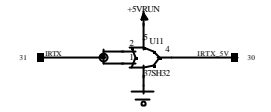
Kahuna Re-flash Setup



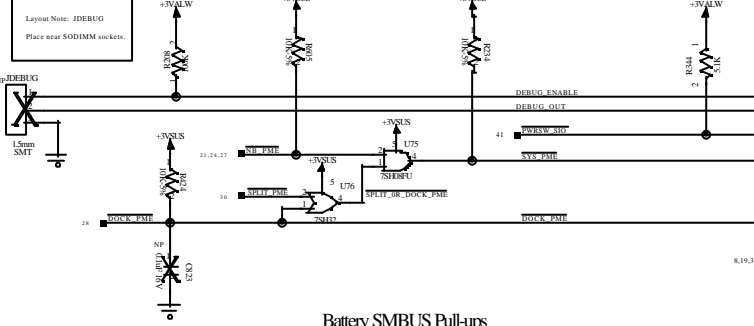
Super I/O Controller (Kahuna 1/2)



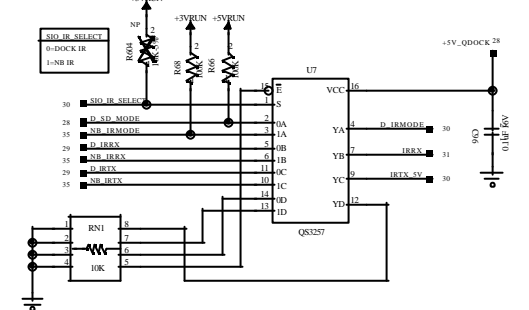
IRTX Level Shifter



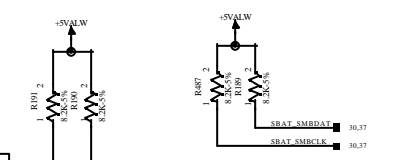
Kahuna Debug Port



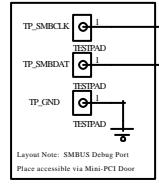
IRDA Mux



Battery SMBUS Pull-ups



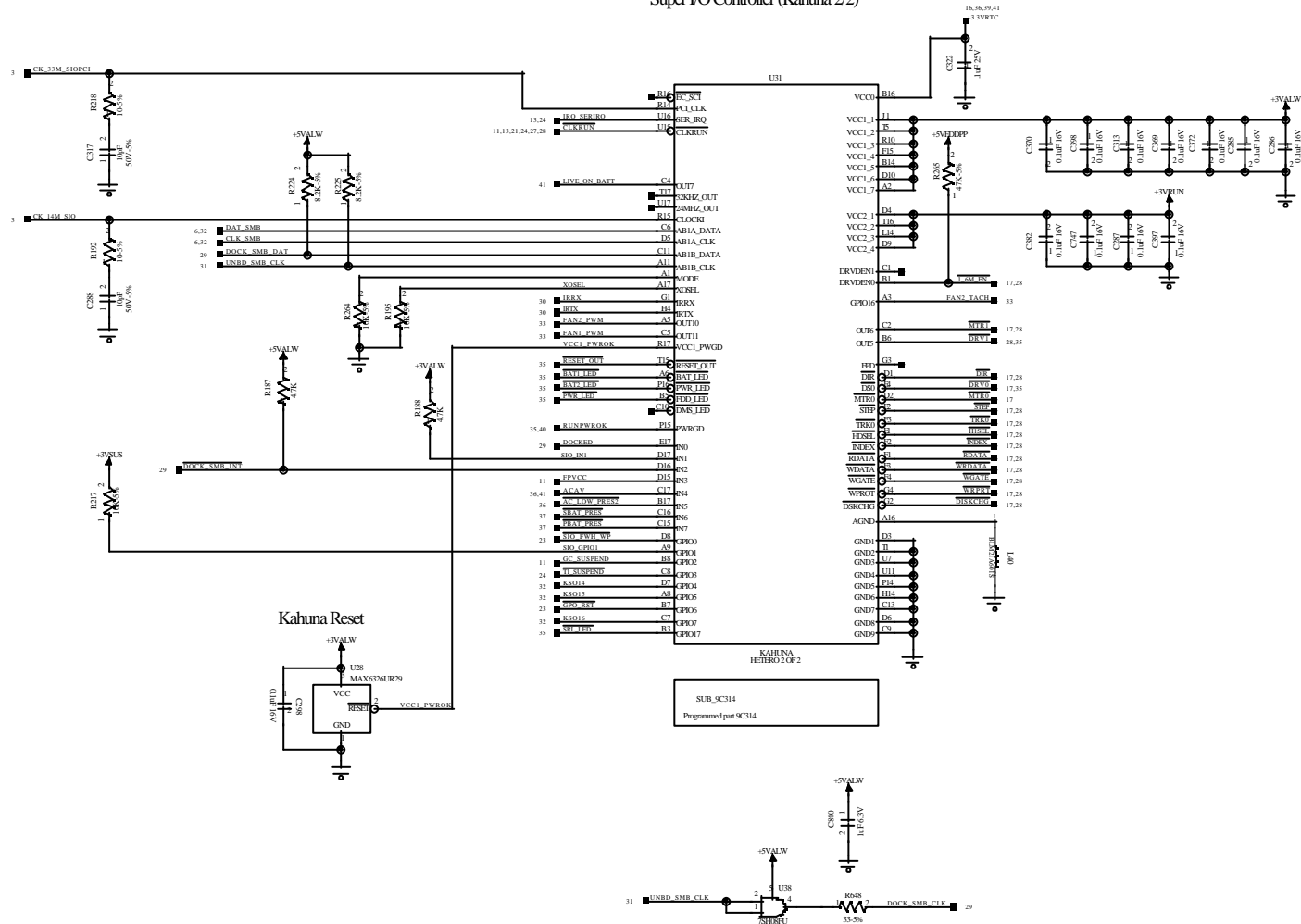
SMBUS Debug Port



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAS. WITHIN THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH FILE OR DISCLOSED CONSISTENT WITH THE PURPOSE OF THE LEAS WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

		COMPUTER CORPORATION AUSTIN, TEXAS	
		Schematic, M/B LA-1221	
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	81 OF 102

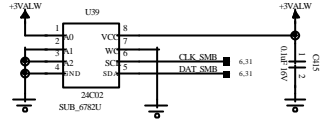
Super I/O Controller (Kahuna 2/2)



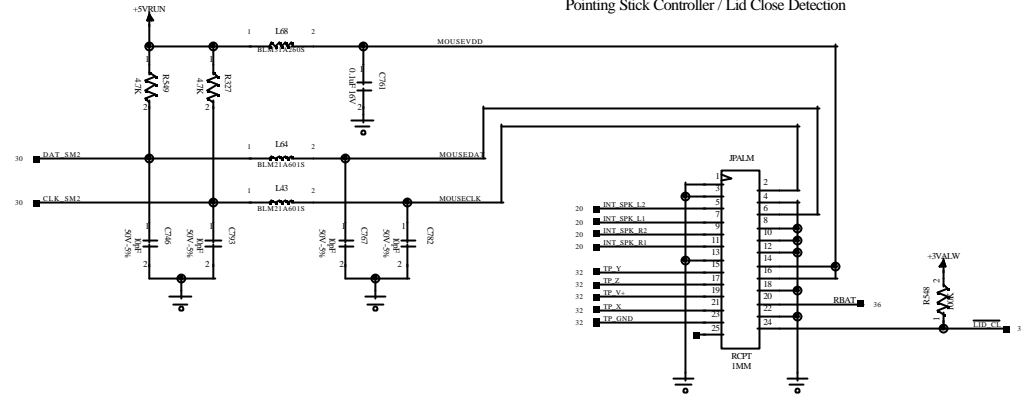
DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221	
PWG NO. 401195	REV. 4A
DATE 11/15/02	SHEET 82 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THIS ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

EEPROM (Service/Asset Tag, etc.)

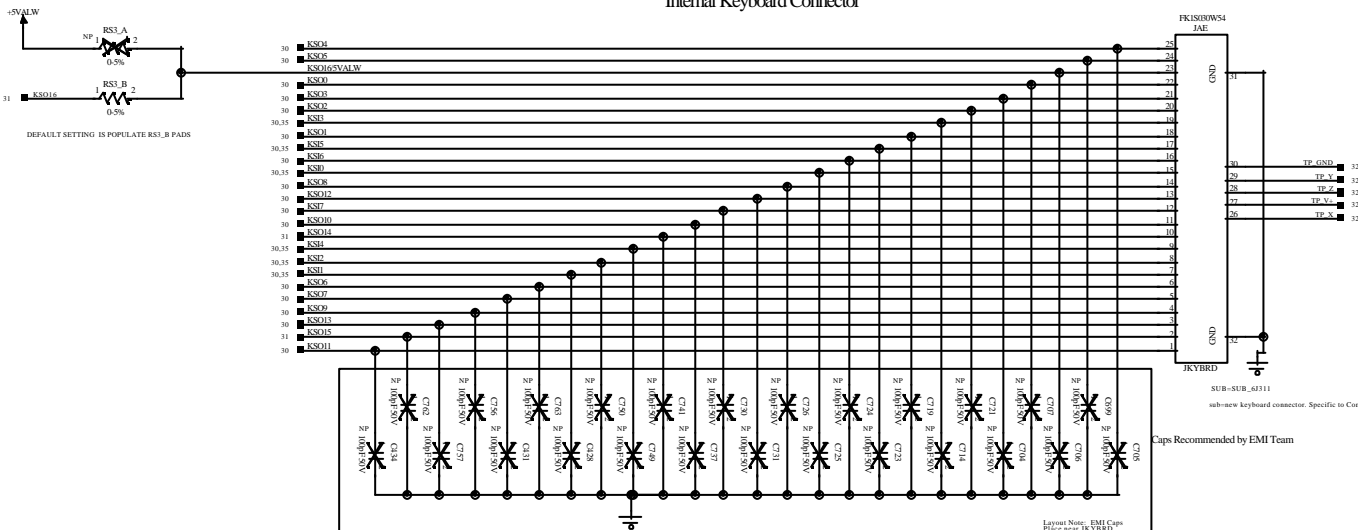


Palm Rest Connector Rbat / Speakers / Touch Pad / Pointing Stick Controller / Lid Close Detection



SUB-SUB_63112
Sub- Swapped Connector between Palm rest and Connector originally on MB

Internal Keyboard Connector



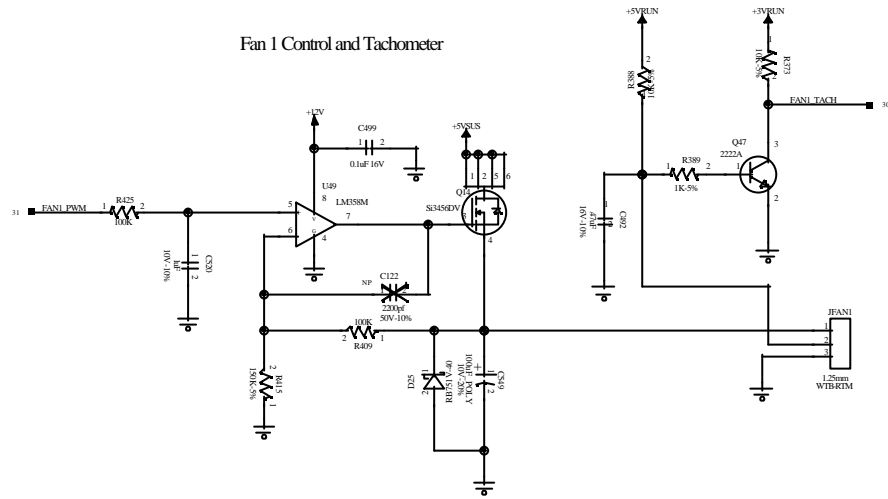
SUB-SUB_63111
sub-new keyboard connector. Specific to Comaneci.
Caps Recommended by EMI Team

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURCHASE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

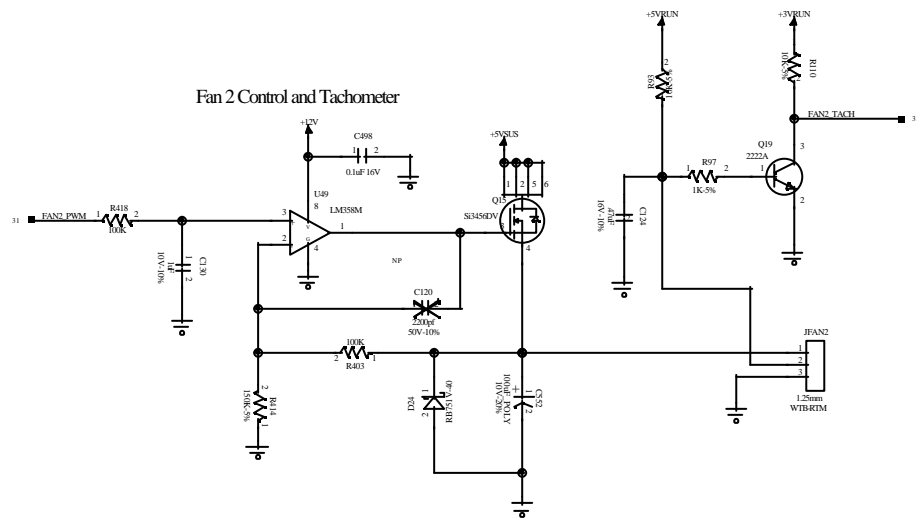
		COMPUTER CORPORATION AUSTIN, TEXAS	
SCHEMATIC, M/B LA-1221			
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	83 OF 102

Fan Control Circuit

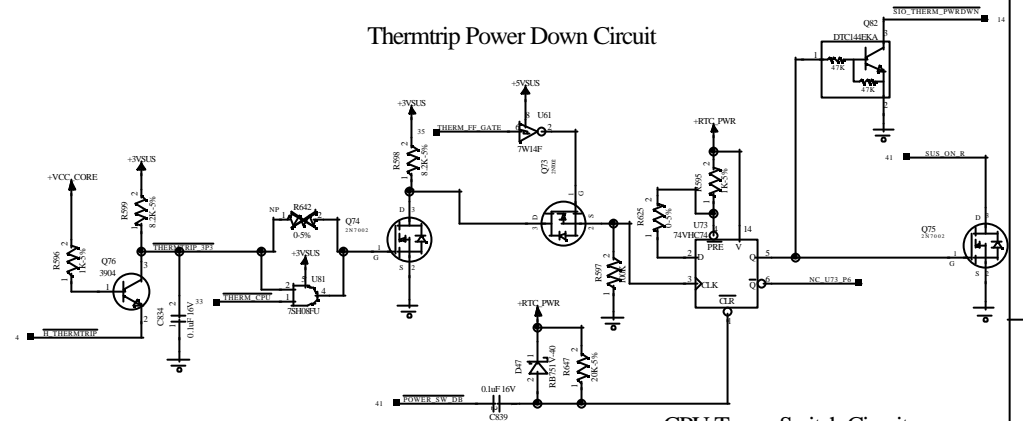
Fan 1 Control and Tachometer



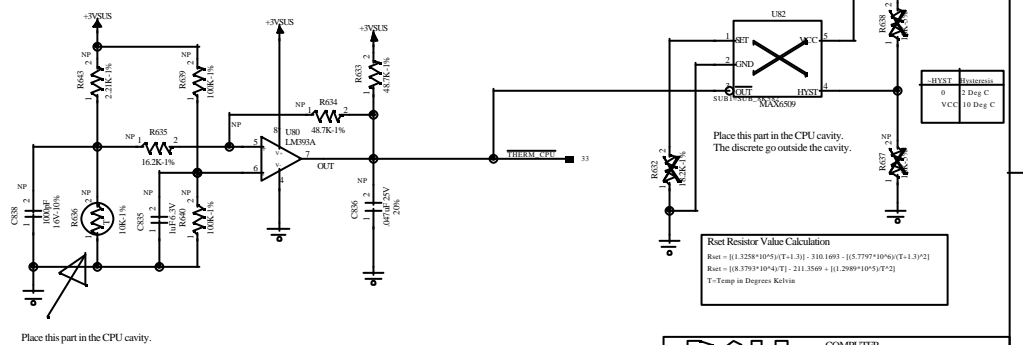
Fan 2 Control and Tachometer



Thermtrip Power Down Circuit

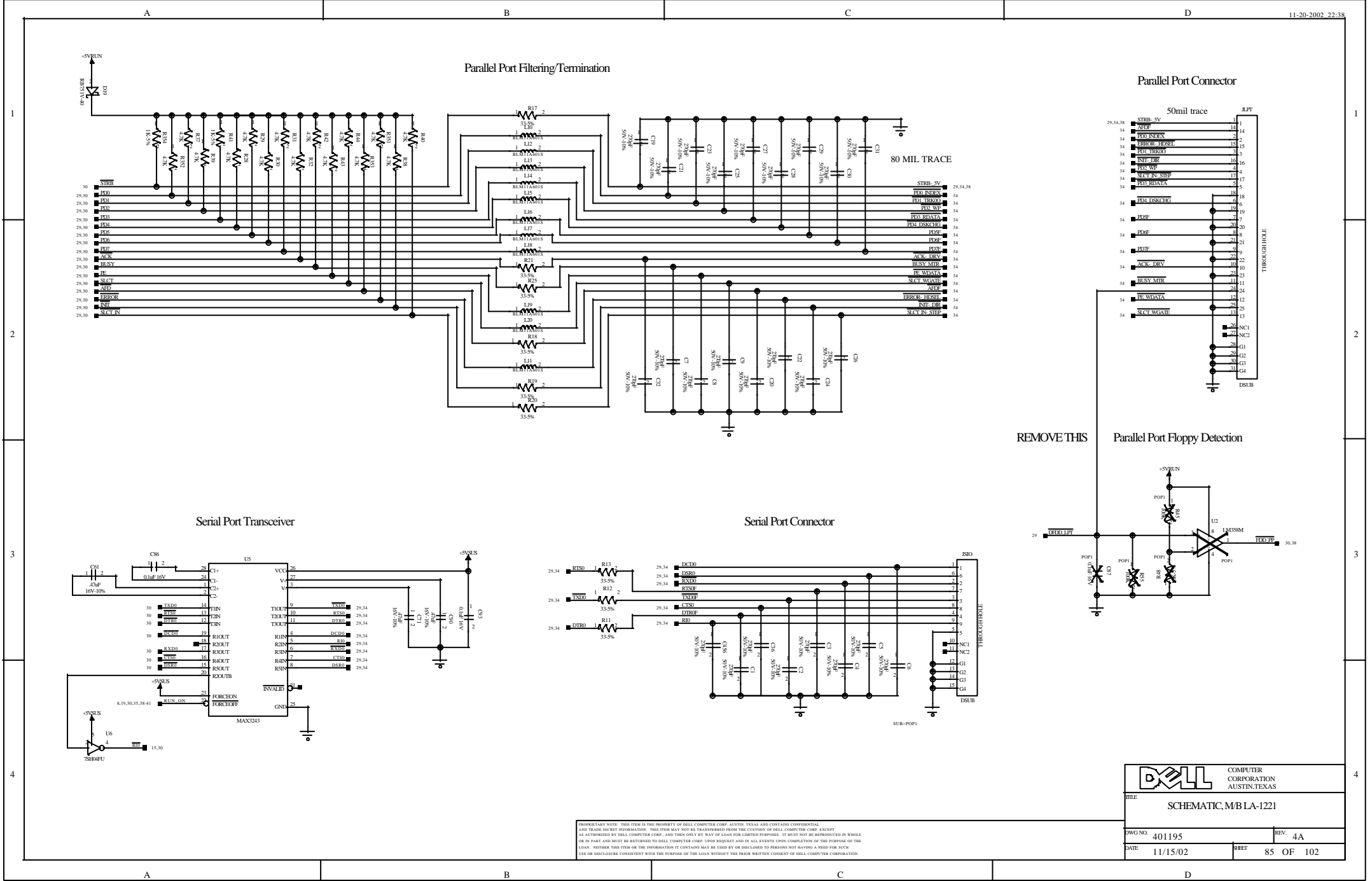


CPU Thermistor Circuit

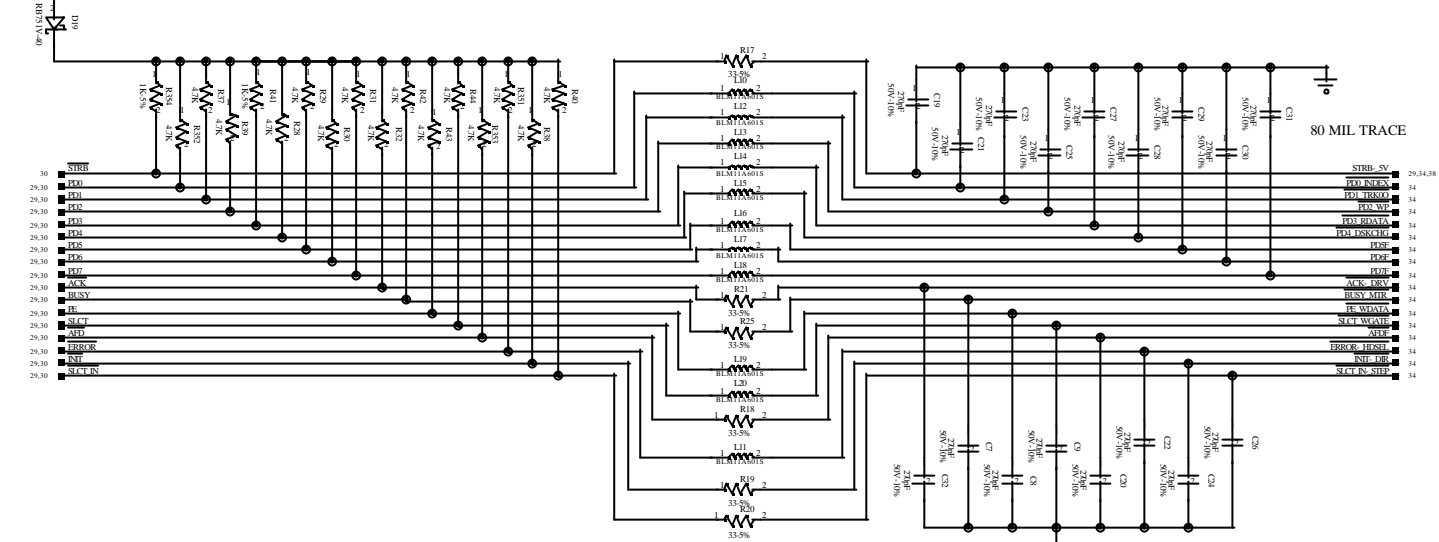


DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE: SCHEMATIC, M/B LA-1221	
PWG NO. 401195	REV. 4A
DATE 11/15/02	SHEET 84 OF 102

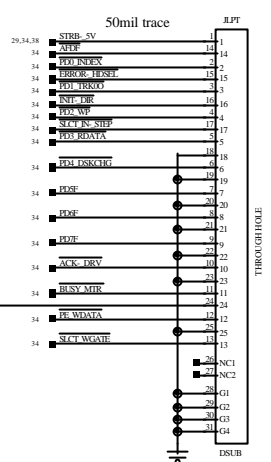
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURCHASE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.



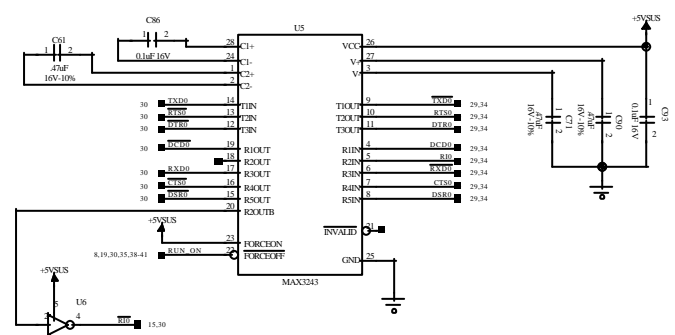
Parallel Port Filtering/Termination



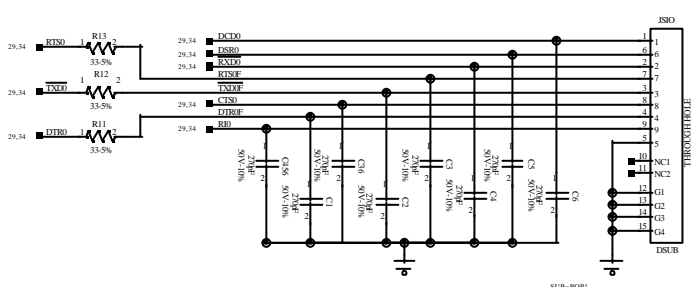
Parallel Port Connector



Serial Port Transceiver

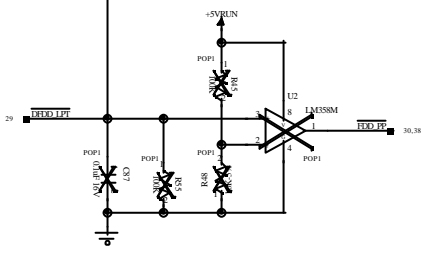


Serial Port Connector



REMOVE THIS

Parallel Port Floppy Detection



DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221	
DWG NO. 401195	REV. 4A
DATE 11/15/02	SHEET 85 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP., AND THEN ONLY BY WAY OF LEASE OR LIMITED PURCHASE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAS. WITHOUT THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEAS WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

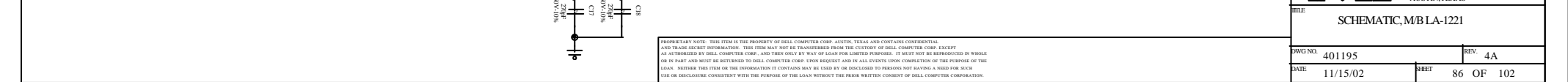
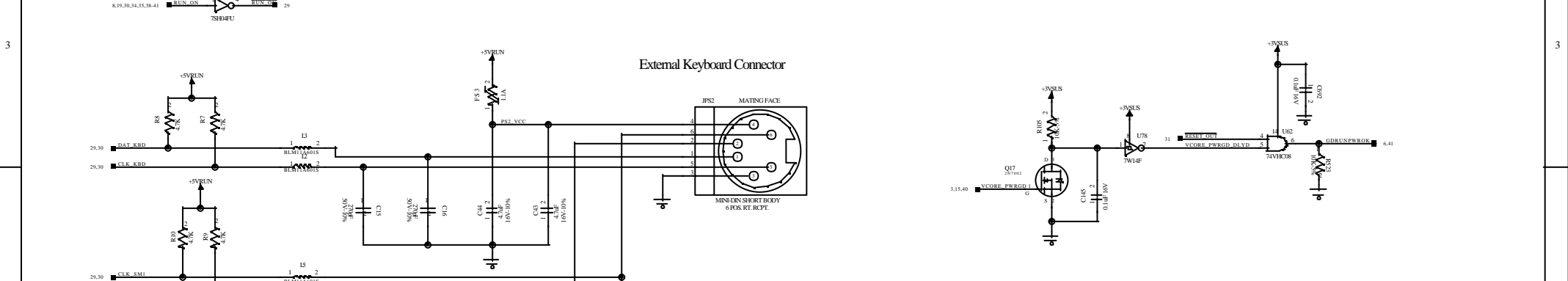
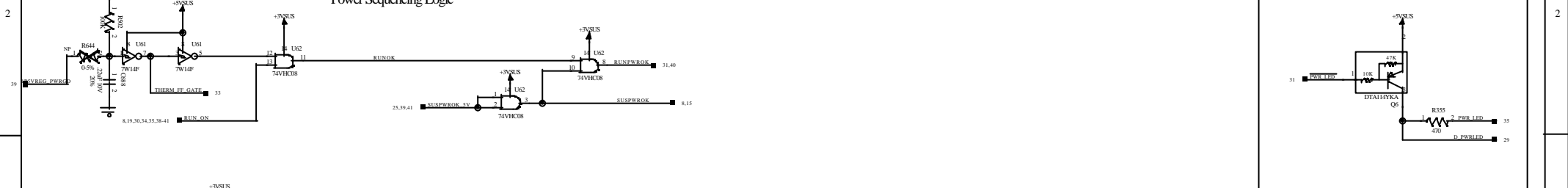
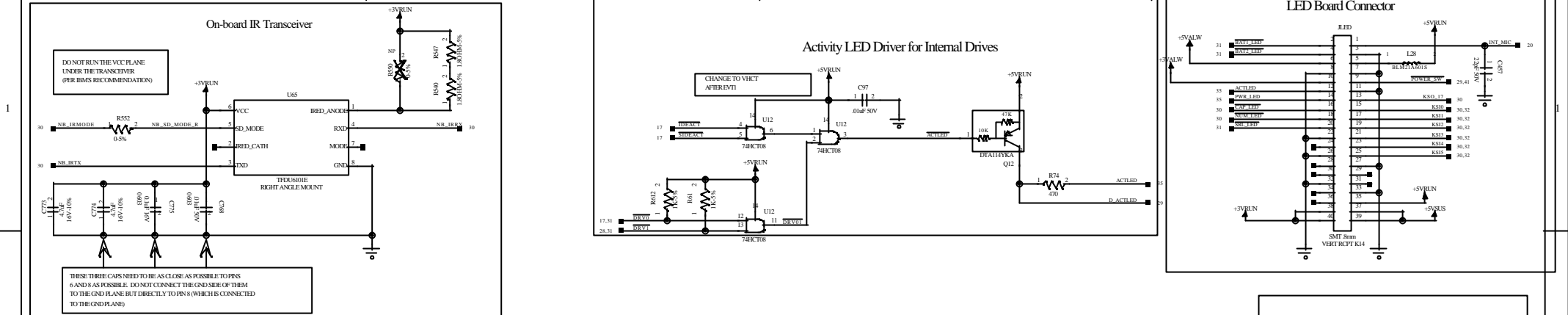
A

B

C

D

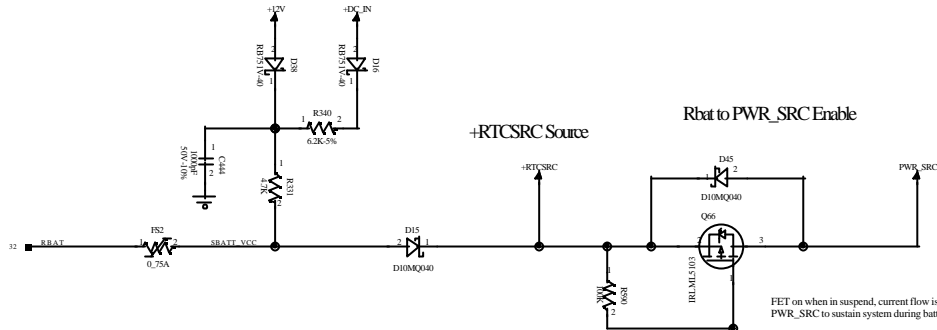
11-20-2002 22:38



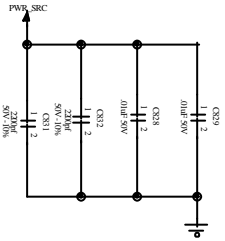
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	86 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP., AND THEN ONLY BY WAY OF LEASE OR LIMITED PURCHASE. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

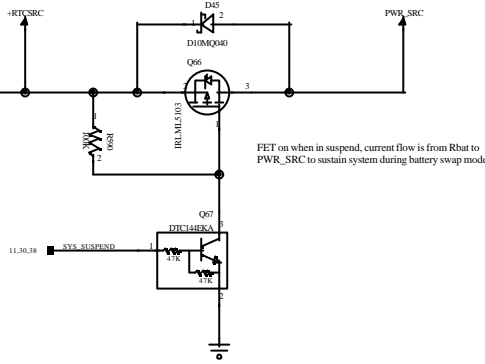
Rbat Charger



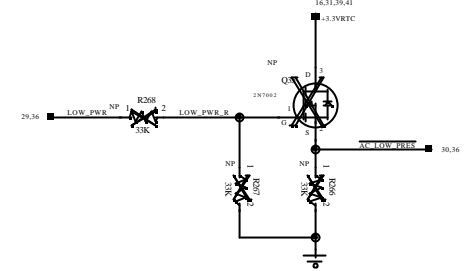
USE MULTIPLE VIAS FOR TRANSIENTS



Rbat to PWR_SRC Enable

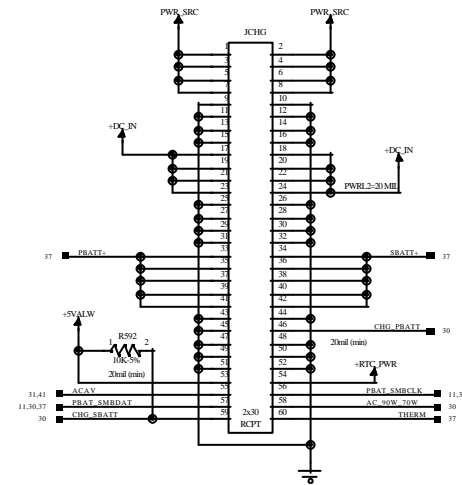


Low-Power Adapter Detection

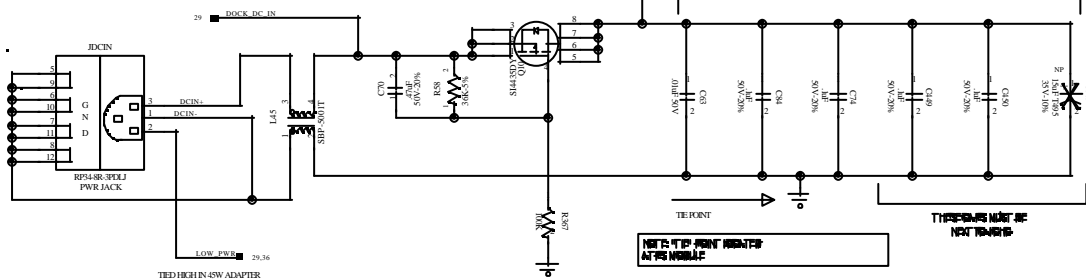


LOW_PWR	AC_LOW_PRES1	AC_LOW_PRES14
0V	0	0
FLOAT	0	1
20V	1	1

Charger Board Connector



AC Adaptor Connector



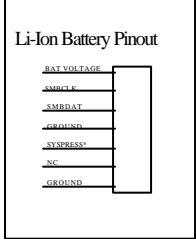
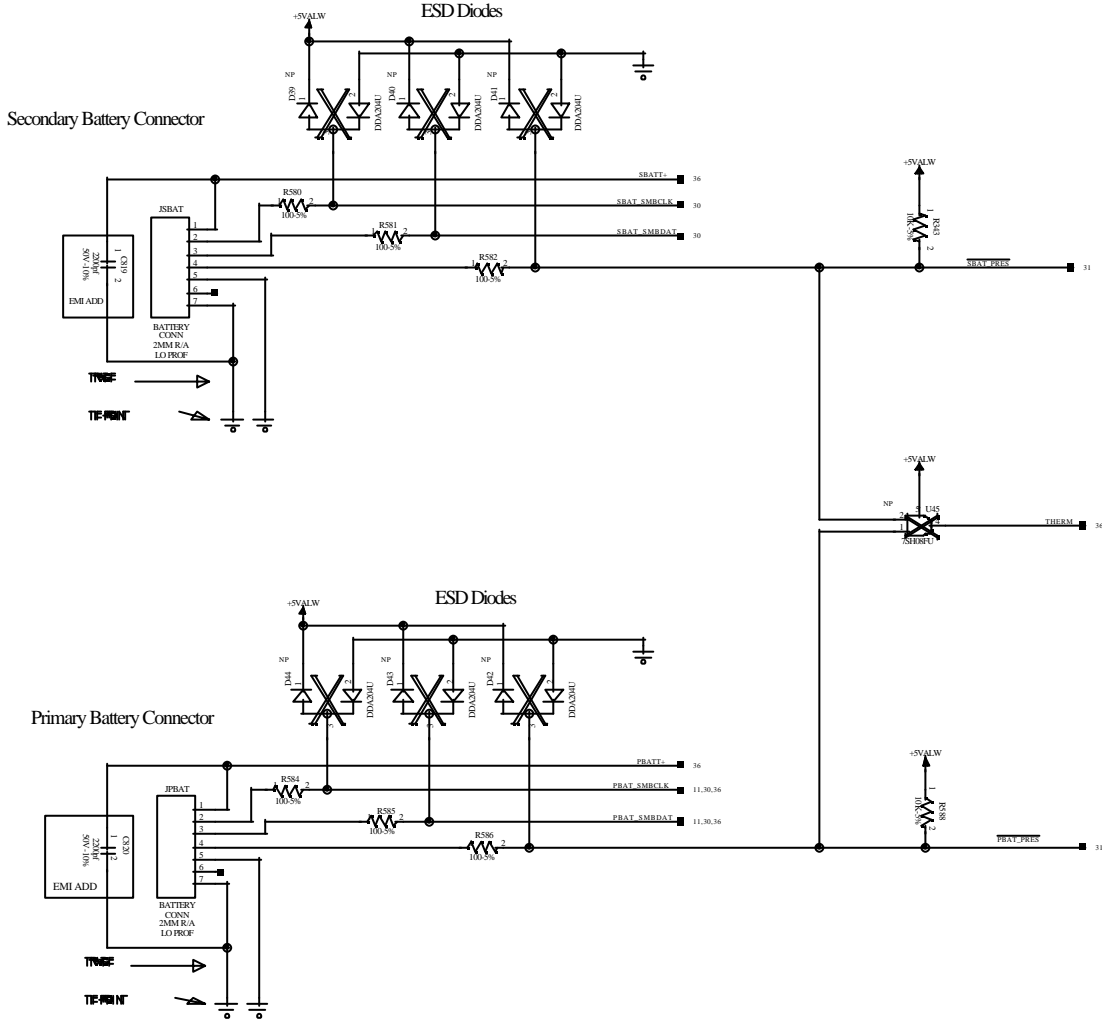
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL COMPUTER CORPORATION AUSTIN, TEXAS

TITLE: SCHEMATIC, M/B LA-1221

PWG NO. 401195 REV. 401195

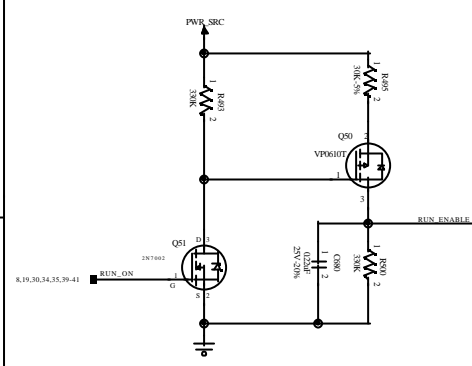
DATE 11/15/02 SHEET 87 OF 102



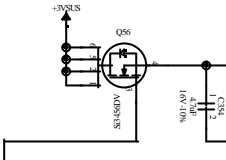
PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221	
DWG NO. 401195	REV. 4A
DATE 11/15/02	SHEET 88 OF 102

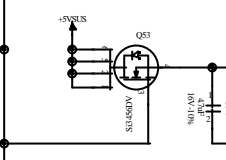
Run Planes Enable



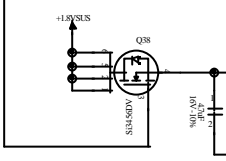
+3VRUN Source



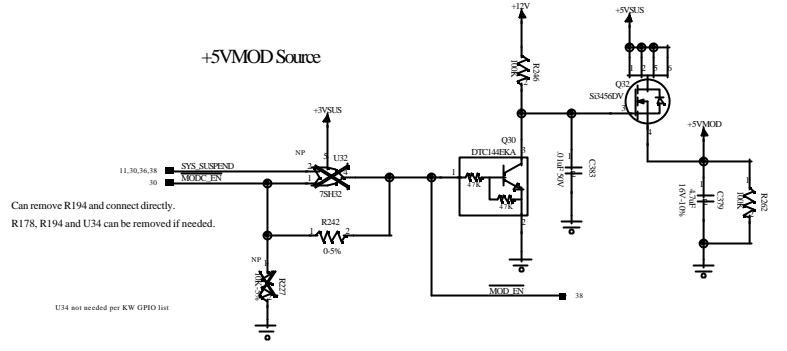
+5VRUN Source



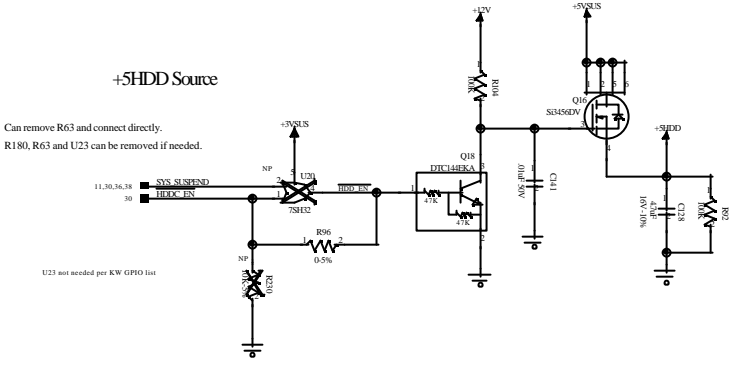
+1.8VRUN Source



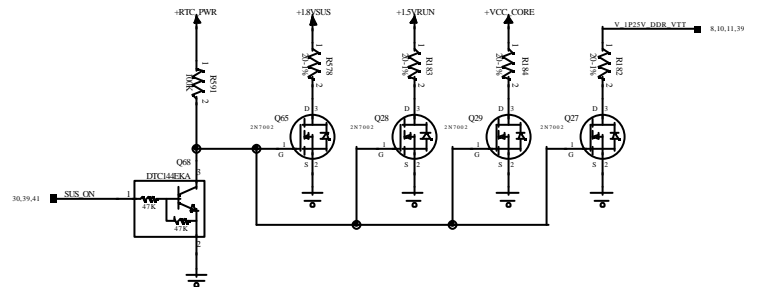
+5VMOD Source



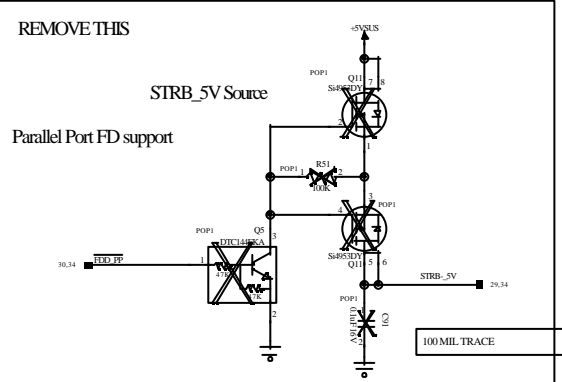
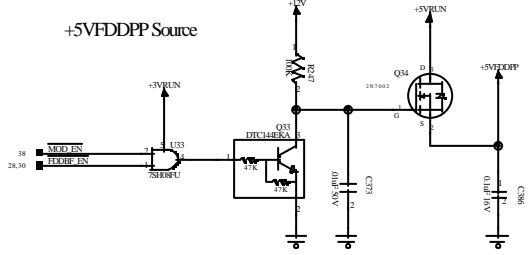
+5HDD Source



Voltage Rail Drains

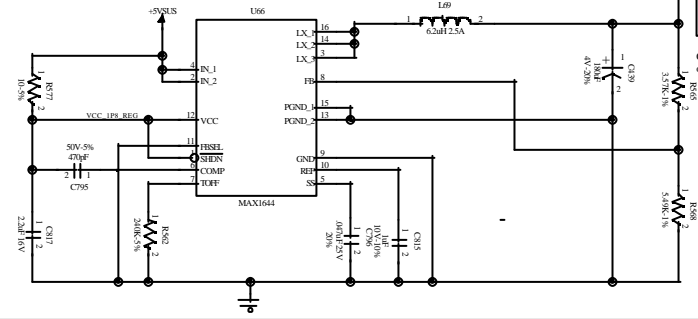
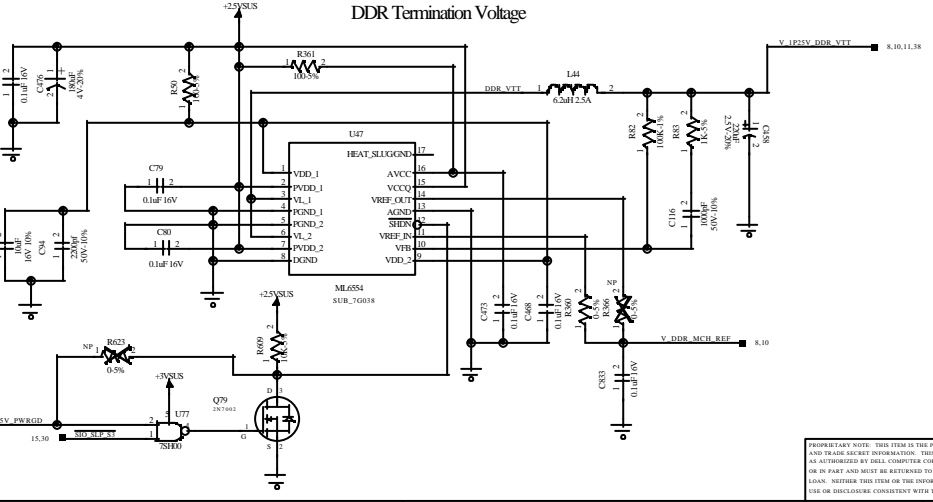
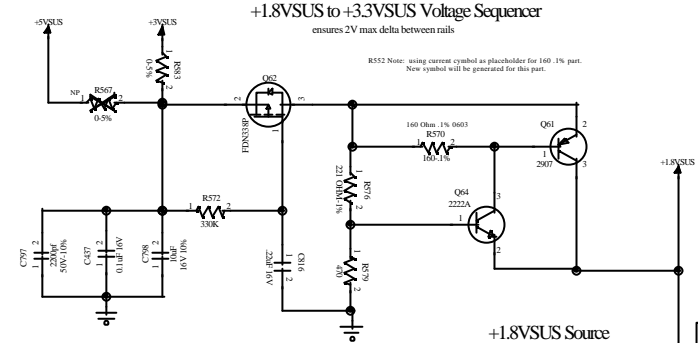
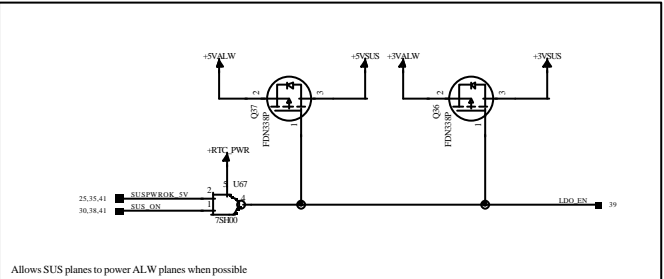
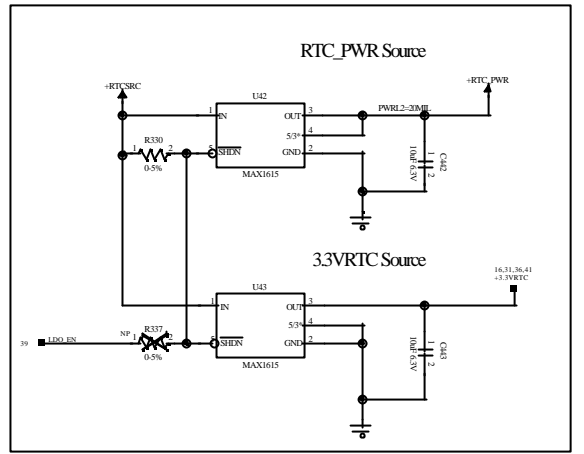
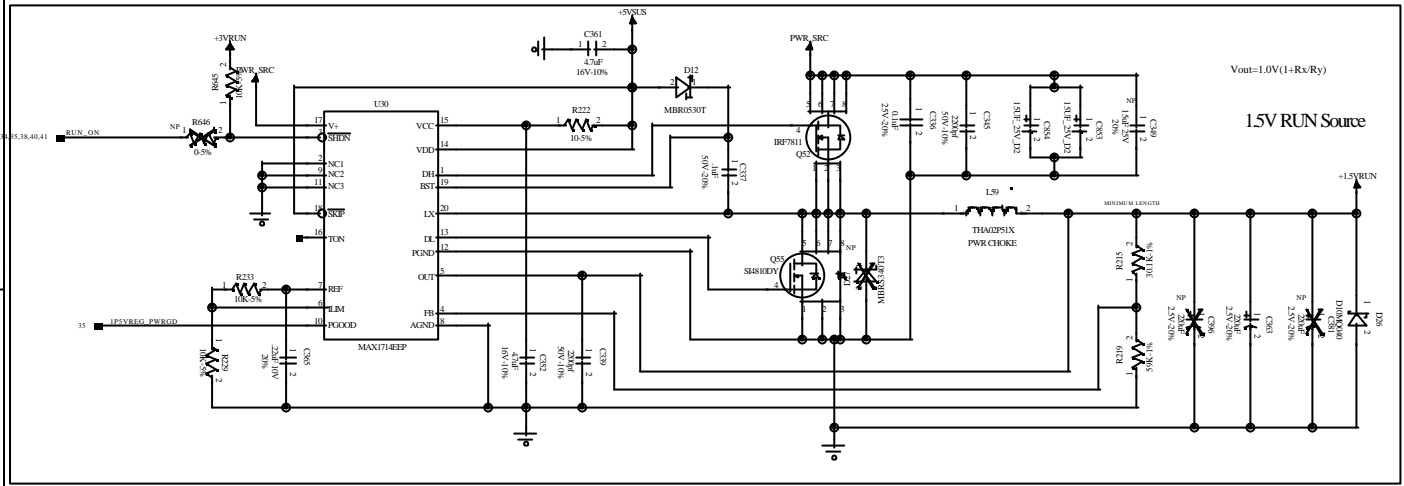


+5VFDDPP Source



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

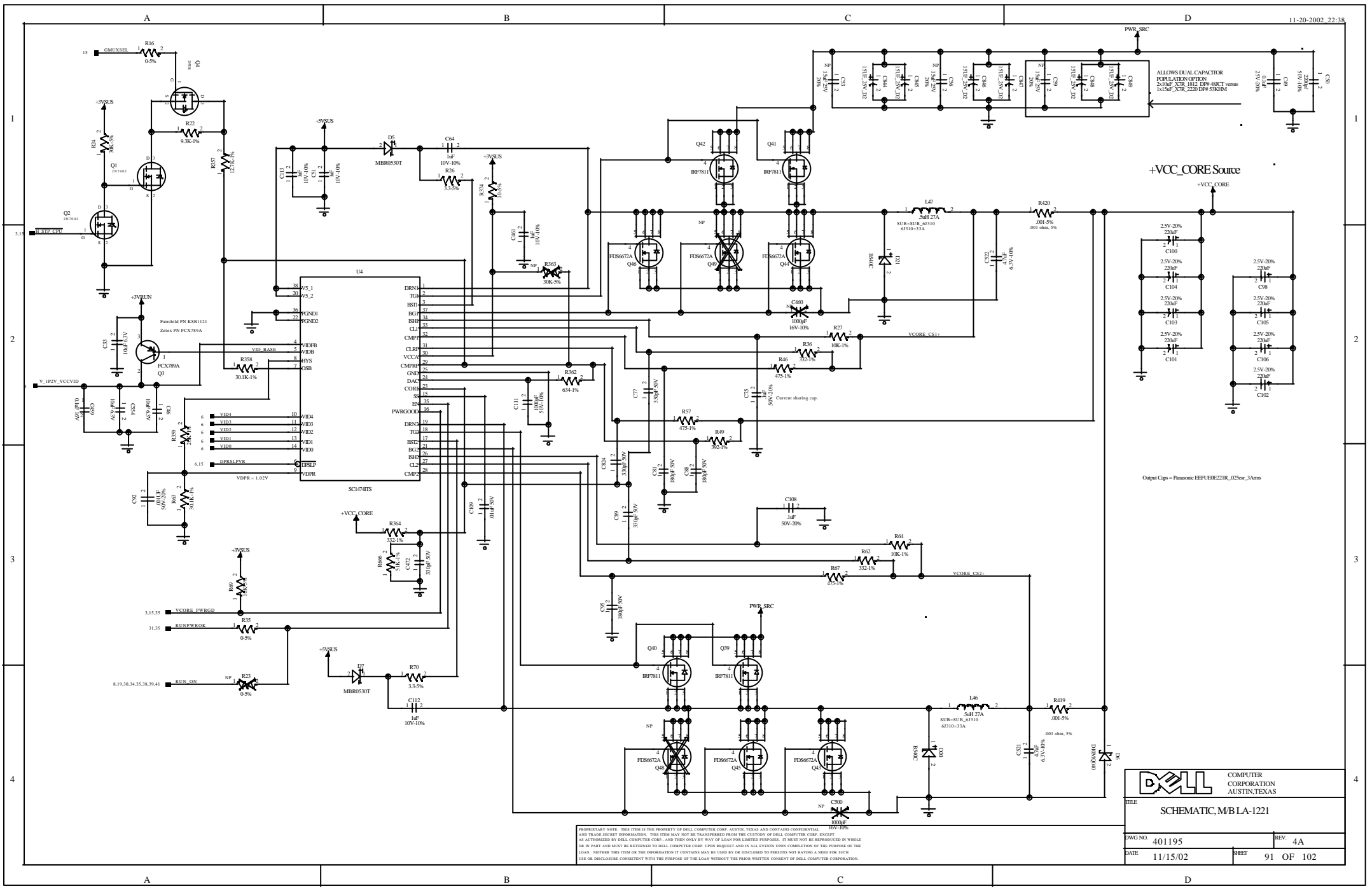
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 89	OF 102	



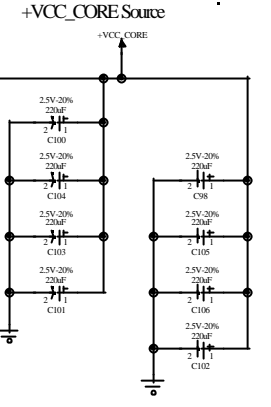
Layout Note: C694
 Place a "+" character silkscreen on the board near the non-ground side of this capacitor.
 C694 can be populated with either a ceramic (PN 2832P) or tantalum (PN 1033E) type capacitor

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
SCHEMATIC, M/B LA-1221			
PART NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 90 OF 102	



ALLOWED DUAL CAPACITOR POPULATION OPTION
 2x10µF SCR 1812 EPW 85CCT versus
 1x10µF SCR 2221EPW 535UM

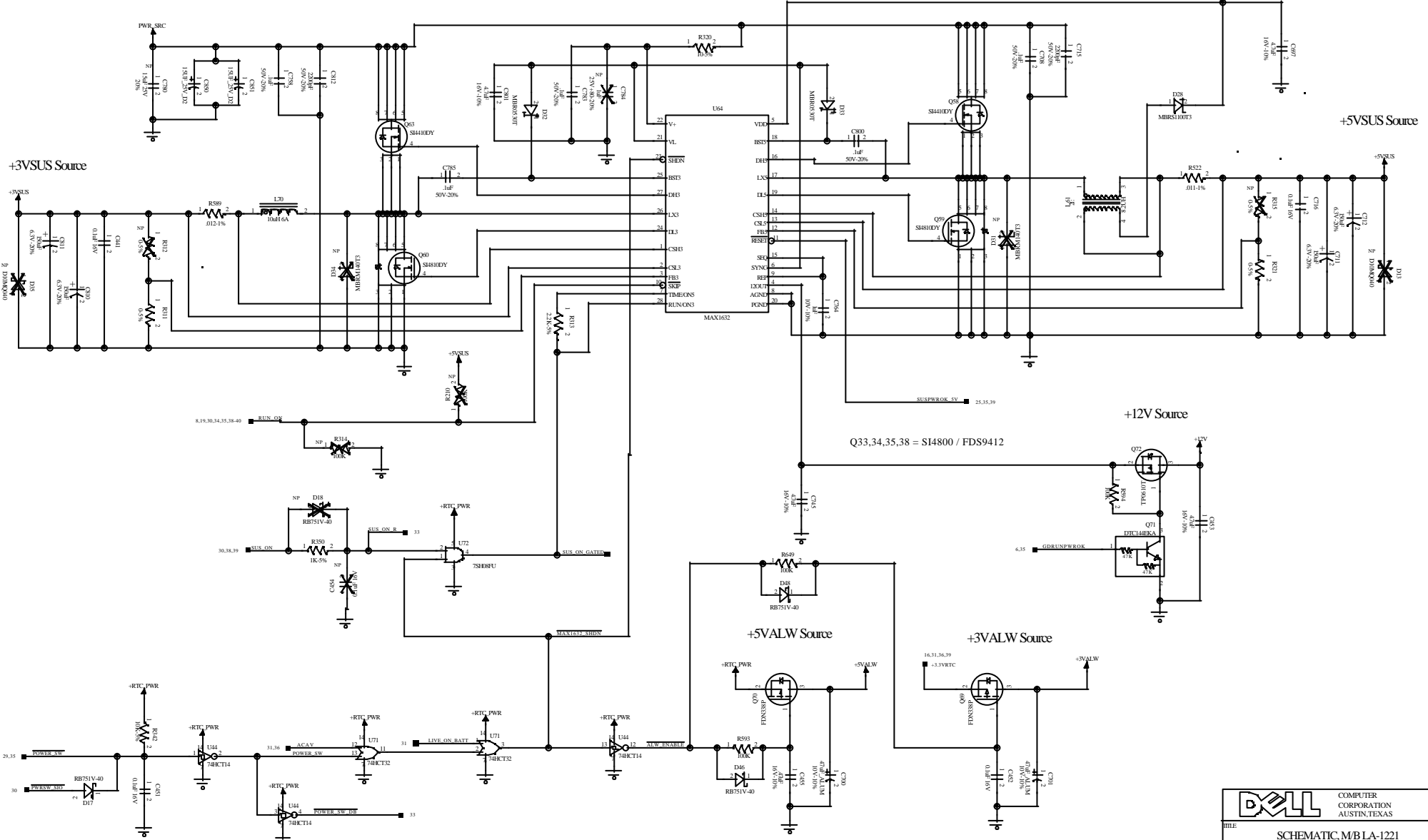


Output Caps = Panasonic EEFUEE221R_02Ser_3Amm

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. WITHOUT THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
DWG NO. 401195		REV. 4A	
DATE 11/15/02		SHEET 91 OF 102	

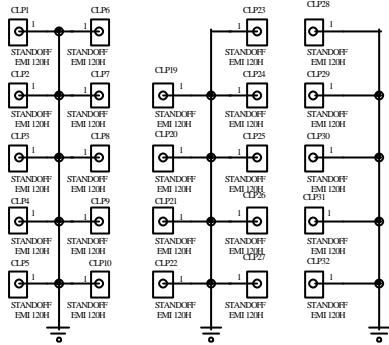
+5VSUS/+3VSUS PWM Controller



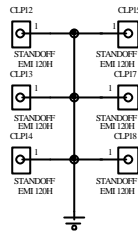
DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE SCHEMATIC, M/B LA-1221			
PWG NO. 401195		REV. 4A	
DATE 11/15/02	SHEET 92	OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

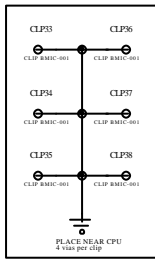
Memory Door EMI Clips



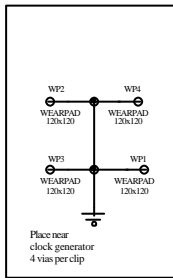
Mini-PCI Door EMI Clips



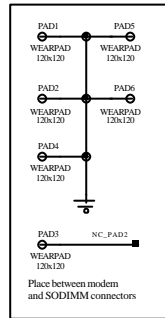
CPU EMI Clips



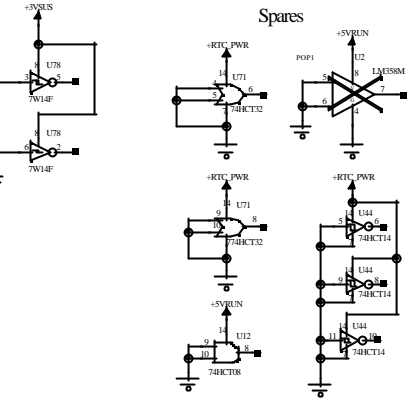
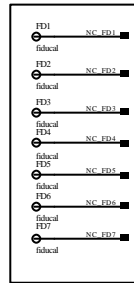
Clock Generator EMI Clips



Modem Fence Pads



Fiducial mark



1

2

3

1

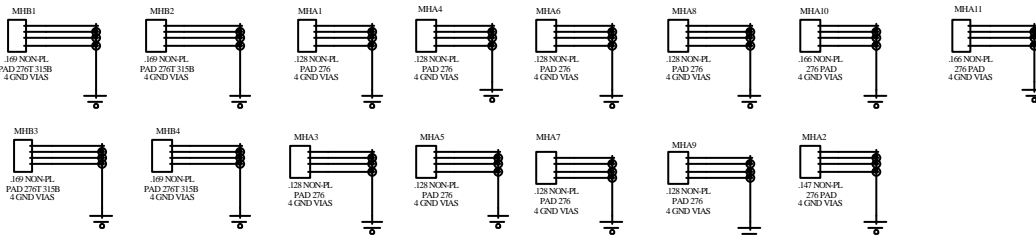
2

3

4

4

Mounting Holes



Xibom requires ADD attributes to be attached to an instance of a symbol (prefix I in the wire file). You may "nop" rename the attributes. The required order is: ADD, ADD1, ADD2, ...

ADD=ADD_3F195_PWB
 ADD1=ADD_1F475_SCHBEM
 ADD2=ADD_0F681_ASSYDVG
 ADD3=ADD_42753_BARCODE_REVLEVEL
 ADD4=ADD_12510_BARCODE_IDLABEL Label: LBL_ID, BARCODE.PWA
 PWA 2F219

DELL COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE: SCHEMATIC, M/B LA-1221	
PWG NO. 401195	REV. 4A
DATE 11/15/02	SHEET 93 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A

B

C

D

A

B

C

D

Schematic Change List

1

1

2


2

3

3

4

4

		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE SCHEMATIC, M/BLA-1221		
DWG NO.	401195	REV. 4A
DATE	11/15/02	SHEET 94 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A

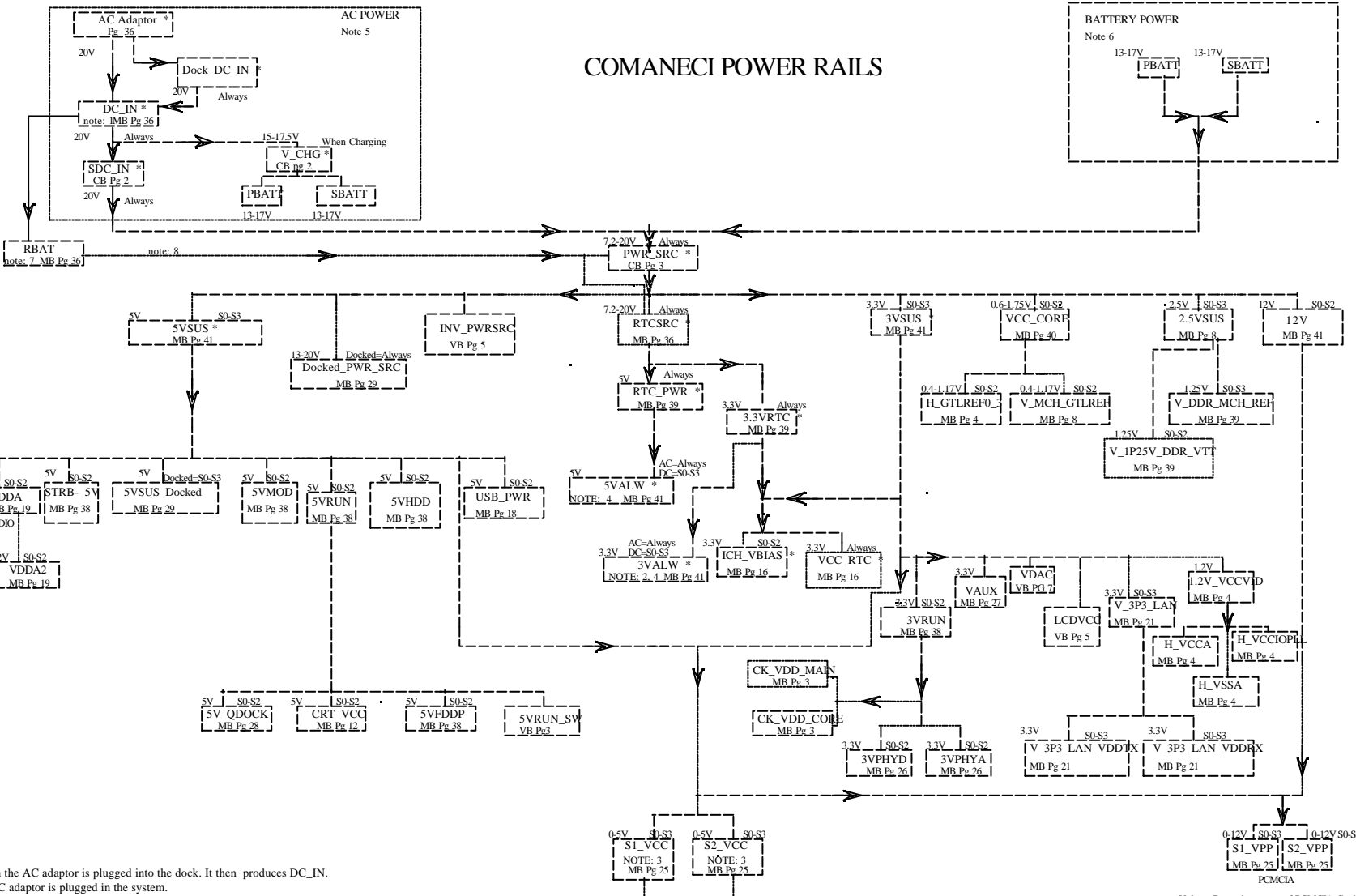
B

C

D

COMANECI POWER RAILS

LEGEND
 CB = Charger Board X02
 MB = Mother Board X00
 VB = Video Board X04
 * = On in suspend



- Note 1 Dock_DC_IN is produced when the AC adaptor is plugged into the dock. It then produces DC_IN.
- Note 2 DC_IN is produced when the AC adaptor is plugged in the system.
- Note 3 When SUS planes are available they produce the ALW planes
- Note 4 S1_VCC and S2_VCC are determined by each specific PC-Card
- Note 5 When System is off Always planes are up with AC power, down with battery power.
- Note 6 Track when AC is plugged into system
- Note 7 Track when System is battery power
- Note 8 Charged by 12V when on battery
- Note 9 Enables PWR_SRC during battery swap

PCMCIA
 Voltage Depends on type of PCMCIA Card

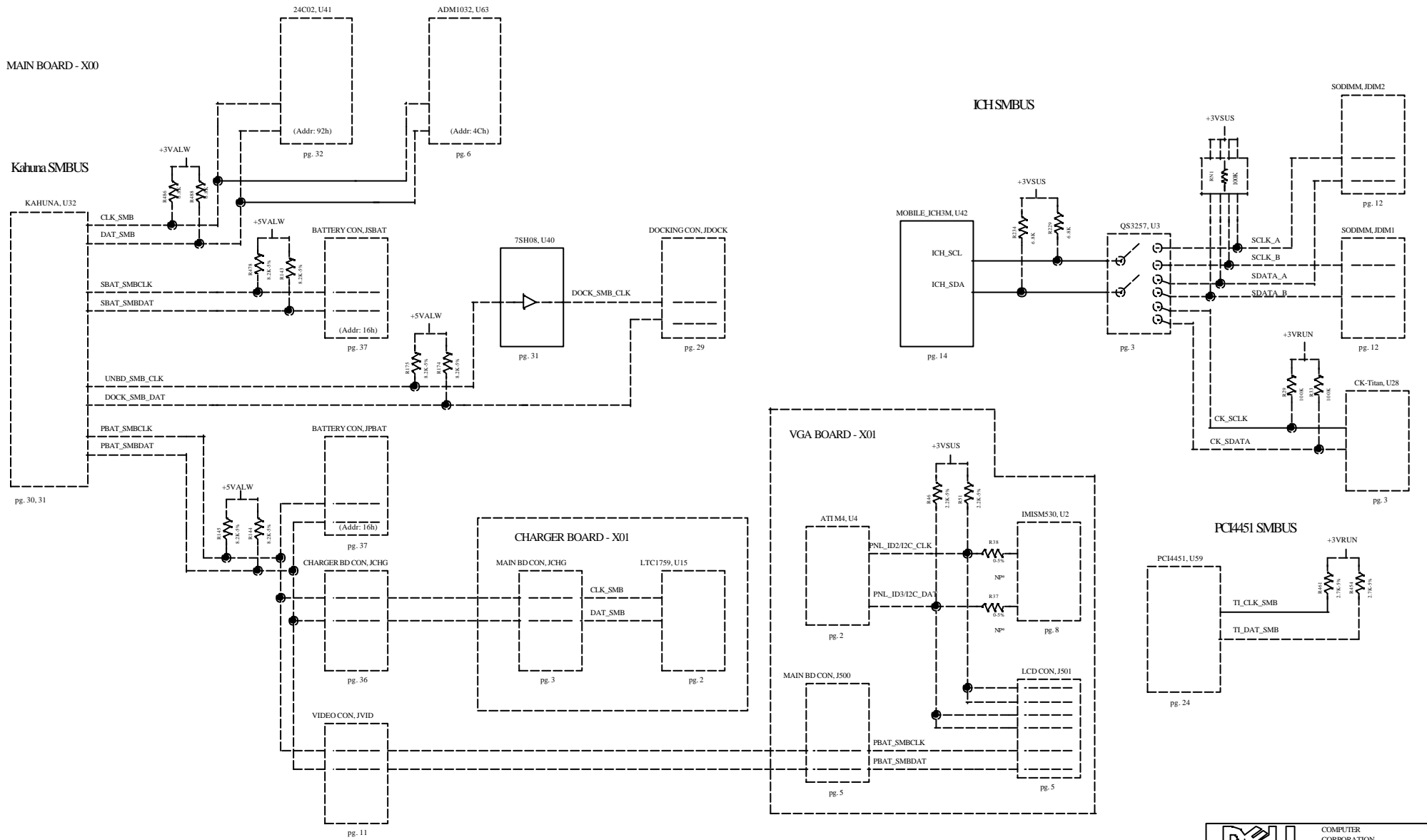
Voltage Depends on type of PCMCIA Card	
PROPRIETARY NOTE	
<small>THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PERIODS. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON RECEIPT AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEAN. NEITHER THIS ITEM NOR THE INFORMATION IF CONTAINED HEREIN MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSED INCONSISTENT WITH THE PURPOSE OF THE LEAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.</small>	
DELL COMPUTER CORPORATION AUSTIN, TEXAS	
FILE	SCHEMATIC, M/B LA-1221
PW/CNO	401195
REV.	4A
DATE	11/15/02
HEET	95 OF 102

MAIN BOARD - X00

Kahuna SMBUS

ICH SMBUS

PCI4451 SMBUS



PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

		COMPUTER CORPORATION AUSTIN, TEXAS	
		TITLE: SCHEMATIC, M/B LA-1221	
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	96 OF 102

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

B_VID0.....6
 B_VID1.....6
 B_VID2.....6
 B_VID3.....6
 B_VID4.....6
 C1.....34
 C2.....34
 C3.....34
 C4.....34
 C5.....34
 C6.....34
 C7.....34
 C8.....34
 C9.....34
 C10.....12
 C11.....12
 C12.....12
 C13.....12
 C14.....12
 C15.....35
 C16.....35
 C17.....35
 C18.....35
 C19.....34
 C20.....34
 C21.....34
 C22.....34
 C23.....34
 C24.....34
 C25.....34
 C26.....34
 C27.....34
 C28.....34
 C29.....34
 C30.....34
 C31.....34
 C32.....34
 C33.....40
 C34.....18
 C35.....18
 C36.....34
 C37.....12
 C38.....12
 C39.....12
 C40.....12
 C41.....12
 C42.....12
 C43.....35
 C44.....35
 C45.....29
 C46.....40
 C47.....18
 C48.....18
 C49.....40
 C50.....40
 C51.....40

C52.....40
 C53.....40
 C54.....40
 C55.....40
 C56.....40
 C57.....40
 C58.....40
 C59.....40
 C60.....40
 C61.....34
 C62.....29
 C63.....36
 C64.....40
 C65.....29
 C66.....18
 C67.....18
 C68.....18
 C69.....18
 C70.....36
 C71.....34
 C72.....29
 C73.....36
 C74.....36
 C75.....40
 C76.....29
 C77.....40
 C78.....18
 C79.....39
 C80.....39
 C81.....40
 C82.....39
 C83.....18
 C84.....36
 C85.....18
 C86.....34
 C87.....34
 C88.....40
 C89.....40
 C90.....34
 C91.....38
 C92.....40
 C93.....34
 C94.....39
 C95.....40
 C96.....30
 C97.....35
 C98.....40
 C99.....29
 C100.....40
 C101.....40
 C102.....40
 C103.....40
 C104.....40
 C105.....40
 C106.....40
 C107.....21


C108.....40
 C109.....40
 C110.....4
 C111.....40
 C112.....40
 C113.....40
 C114.....4
 C115.....19
 C116.....39
 C117.....21
 C118.....21
 C119.....10
 C120.....33
 C121.....10
 C122.....33
 C123.....19
 C124.....33
 C125.....21
 C126.....10
 C127.....10
 C128.....38
 C129.....10
 C130.....33
 C131.....19
 C132.....21
 C133.....10
 C134.....19
 C135.....20
 C136.....17
 C137.....19
 C138.....21
 C139.....10
 C140.....19
 C141.....38
 C142.....17
 C143.....19
 C144.....21
 C145.....35
 C146.....19
 C147.....8
 C148.....8
 C149.....20
 C150.....20
 C151.....20
 C152.....10
 C153.....10
 C154.....21
 C155.....10
 C156.....17
 C157.....19
 C158.....19
 C159.....10
 C160.....19
 C161.....10
 C162.....19
 C163.....21

C164.....19
 C165.....11
 C166.....10
 C167.....10
 C168.....8
 C169.....24
 C170.....3
 C171.....10
 C172.....3
 C173.....3
 C174.....3
 C175.....3
 C176.....19
 C177.....8
 C178.....3
 C179.....11
 C180.....10
 C183.....24
 C184.....10
 C185.....3
 C186.....8
 C187.....4
 C188.....4
 C189.....8
 C191.....5
 C192.....24
 C193.....8
 C194.....10
 C195.....8
 C196.....5
 C197.....5
 C198.....24
 C199.....24
 C200.....8
 C201.....8
 C202.....24
 C203.....11
 C204.....5
 C205.....5
 C206.....10
 C207.....4
 C208.....24
 C209.....10
 C210.....8
 C211.....24
 C212.....20
 C213.....20
 C214.....20
 C215.....20
 C216.....5
 C217.....5
 C218.....8
 C219.....10
 C220.....8
 C221.....5
 C222.....5

C223.....4
 C224.....11
 C225.....3
 C227.....5
 C228.....10
 C229.....24
 C230.....20
 C231.....4
 C232.....4
 C233.....10
 C236.....11
 C237.....10
 C238.....3
 C239.....3
 C240.....3
 C241.....3
 C242.....10
 C243.....9
 C244.....7
 C245.....9
 C246.....9
 C247.....24
 C248.....26
 C249.....26
 C250.....10
 C251.....3
 C252.....10
 C253.....9
 C254.....10
 C255.....10
 C256.....11
 C257.....4
 C258.....3
 C259.....26
 C260.....26
 C261.....24
 C262.....26
 C263.....10
 C264.....9
 C265.....24
 C266.....3
 C267.....11
 C268.....7
 C269.....9
 C270.....9
 C271.....9
 C272.....8
 C273.....9
 C274.....9
 C275.....3
 C276.....3
 C277.....26
 C278.....10
 C279.....10
 C280.....9
 C281.....8

C282.....9
 C283.....26
 C284.....30
 C285.....31
 C286.....31
 C287.....31
 C288.....31
 C289.....30
 C290.....7
 C291.....9
 C292.....10
 C293.....9
 C294.....9
 C295.....9
 C296.....9
 C297.....9
 C298.....31
 C299.....9
 C300.....26
 C301.....26
 C302.....26
 C303.....26
 C304.....8
 C305.....10
 C306.....9
 C307.....9
 C308.....9
 C309.....4
 C310.....24
 C311.....8
 C312.....10
 C313.....31
 C314.....9
 C315.....9
 C316.....9
 C317.....31
 C318.....9
 C319.....10
 C320.....9
 C321.....9
 C322.....31
 C323.....9
 C324.....9
 C325.....8
 C326.....9
 C327.....9
 C328.....9
 C329.....9
 C330.....9
 C331.....9
 C332.....11
 C333.....10
 C334.....9
 C335.....8
 C336.....39
 C337.....39

XREF PAGE 1 OF 6

		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE			
SCHEMATIC, M/B LA-1221			
DWG NO.		REV.	
401195		4A	
DATE		SHEET	
11/15/02		97 OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSFERRED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A	B	C	D
REFDES PAGE	REFDES PAGE	REFDES PAGE	REFDES PAGE
C338.....9	C394.....23	C450.....36	C506.....19
C339.....39	C395.....9	C451.....41	C507.....17
C340.....9	C396.....39	C452.....41	C508.....20
C341.....9	C397.....31	C453.....41	C509.....21
C342.....9	C398.....31	C454.....41	C510.....11
C343.....10	C399.....17	C455.....41	C511.....19
C344.....9	C400.....17	C456.....34	C512.....21
C345.....39	C401.....17	C457.....35	C513.....19
C346.....10	C402.....9	C458.....39	C514.....11
C347.....23	C403.....16	C459.....40	C515.....19
C348.....39	C404.....16	C460.....40	C516.....19
C349.....39	C405.....14	C461.....40	C517.....19
C350.....39	C406.....17	C462.....29	C518.....19
C351.....9	C407.....27	C463.....29	C519.....19
C352.....39	C408.....17	C464.....29	C520.....33
C353.....27	C409.....17	C465.....18	C521.....40
C354.....38	C410.....27	C466.....39	C522.....40
C355.....10	C411.....12	C467.....21	C523.....11
C356.....10	C412.....12	C468.....39	C524.....19
C357.....10	C413.....17	C469.....28	C525.....20
C358.....10	C414.....17	C470.....28	C526.....11
C359.....10	C415.....32	C471.....6	C527.....19
C360.....9	C416.....14	C472.....40	C528.....19
C361.....39	C417.....14	C473.....39	C529.....20
C362.....27	C418.....27	C474.....19	C530.....11
C363.....39	C419.....27	C475.....28	C531.....21
C364.....9	C420.....13	C476.....39	C532.....11
C365.....39	C421.....13	C477.....21	C533.....19
C366.....23	C422.....27	C478.....19	C534.....11
C367.....9	C423.....27	C479.....19	C535.....20
C368.....9	C424.....6	C480.....21	C536.....20
C369.....31	C425.....11	C481.....21	C537.....19
C370.....31	C426.....6	C482.....21	C538.....11
C371.....8	C427.....6	C483.....21	C539.....19
C372.....31	C428.....32	C484.....21	C540.....11
C373.....38	C429.....6	C485.....19	C541.....21
C374.....23	C430.....27	C486.....21	C542.....21
C375.....9	C431.....32	C487.....21	C543.....21
C376.....9	C432.....27	C488.....21	C544.....21
C377.....9	C433.....27	C489.....28	C545.....21
C378.....9	C434.....32	C490.....28	C546.....21
C379.....38	C435.....27	C491.....19	C547.....21
C380.....23	C436.....27	C492.....33	C548.....11
C381.....39	C437.....39	C493.....20	C549.....33
C382.....31	C438.....27	C494.....19	C550.....19
C383.....38	C439.....39	C495.....19	C551.....19
C384.....9	C440.....27	C496.....21	C552.....33
C385.....9	C441.....41	C497.....21	C553.....11
C386.....38	C442.....39	C498.....33	C554.....40
C387.....9	C443.....39	C499.....33	C555.....19
C388.....8	C444.....36	C500.....40	C556.....5
C389.....8	C445.....11	C501.....20	C557.....5
C390.....8	C446.....14	C502.....19	C558.....11
C391.....11	C447.....14	C503.....19	C559.....20
C392.....11	C448.....14	C504.....28	C560.....19
C393.....23	C449.....36	C505.....28	C561.....19
			C562.....11
			C563.....19
			C564.....25
			C565.....11
			C566.....21
			C567.....24
			C568.....24
			C569.....20
			C570.....19
			C571.....25
			C572.....4
			C573.....11
			C574.....21
			C575.....19
			C576.....5
			C577.....5
			C578.....11
			C579.....5
			C580.....5
			C581.....11
			C582.....20
			C583.....20
			C584.....20
			C585.....24
			C586.....11
			C587.....22
			C588.....22
			C589.....22
			C590.....25
			C591.....11
			C592.....5
			C593.....5
			C594.....5
			C595.....20
			C596.....20
			C597.....25
			C598.....5
			C599.....11
			C600.....5
			C601.....5
			C602.....5
			C603.....24
			C604.....5
			C605.....11
			C606.....20
			C607.....20
			C608.....20
			C609.....20
			C610.....11
			C611.....5
			C612.....11
			C613.....5
			C614.....5
			C615.....5
			C616.....5
			C617.....11
			C618.....20
			C619.....20
			C620.....5
			C621.....5
			C622.....20
			C623.....25
			C624.....5
			C625.....11
			C626.....24
			C627.....25
			C628.....24
			C629.....11
			C630.....11
			C631.....22
			C632.....5
			C633.....5
			C634.....26
			C635.....25
			C636.....11
			C637.....5
			C638.....5
			C639.....25
			C640.....11
			C641.....26
			C642.....25
			C643.....11
			C644.....22
			C645.....25
			C646.....11
			C647.....5
			C648.....5
			C649.....11
			C650.....5
			C651.....5
			C652.....11
			C653.....25
			C654.....11
			C655.....22
			C656.....11
			C657.....11
			C658.....24
			C659.....11
			C660.....25
			C661.....6
			C662.....11
			C663.....24
			C664.....26
			C665.....24
			C666.....25
			C667.....11
			C668.....11
			C669.....6
			C670.....26
			C671.....11
			C672.....11
			C673.....11

XREF PAGE 2 OF 6

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.


DELL		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE			
SCHEMATIC, MB LA-1221			
DWG NO.		REV.	
401195		4A	
DATE		SHEET	
11/15/02		98 OF 102	

A B C D

REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE

C674.....11	C730.....32	C786.....16	CLP5.....42	D24.....33	JSVID.....12
C675.....11	C731.....32	C787.....16	CLP6.....42	D25.....33	JUSB.....18
C676.....26	C732.....11	C788.....41	CLP7.....42	D26.....39	JVGA.....12
C677.....26	C733.....16	C789.....16	CLP8.....42	D27.....39	JVID.....11
C678.....11	C734.....6	C790.....16	CLP9.....42	D28.....41	L1.....12
C679.....38	C735.....16	C791.....16	CLP10.....42	D29.....16	L2.....35
C680.....38	C736.....11	C792.....16	CLP12.....42	D30.....16	L3.....35
C681.....26	C737.....32	C793.....32	CLP13.....42	D31.....41	L4.....35
C682.....11	C738.....12	C794.....16	CLP14.....42	D32.....41	L5.....35
C683.....11	C739.....12	C795.....39	CLP15.....42	D33.....41	L6.....12
C684.....9	C740.....12	C796.....39	CLP17.....42	D34.....41	L7.....12
C685.....11	C741.....32	C797.....39	CLP18.....42	D35.....41	L8.....12
C686.....26	C742.....11	C798.....39	CLP19.....42	D36.....16	L9.....12
C687.....26	C743.....11	C799.....16	CLP20.....42	D37.....16	L10.....34
C688.....35	C744.....16	C800.....41	CLP21.....42	D38.....36	L11.....34
C689.....11	C745.....41	C801.....41	CLP22.....42	D39.....37	L12.....34
C690.....11	C746.....32	C802.....27	CLP23.....42	D40.....37	L13.....34
C691.....11	C747.....31	C803.....16	CLP24.....42	D41.....37	L14.....34
C692.....35	C748.....16	C804.....16	CLP25.....42	D42.....37	L15.....34
C693.....16	C749.....32	C805.....16	CLP26.....42	D43.....37	L16.....34
C694.....16	C750.....32	C806.....16	CLP27.....42	D44.....37	L17.....34
C695.....9	C751.....11	C807.....16	CLP28.....42	D45.....36	L18.....34
C696.....11	C752.....14	C808.....16	CLP29.....42	D46.....41	L19.....34
C697.....41	C753.....12	C809.....36	CLP30.....42	FS2.....36	L20.....34
C698.....11	C754.....11	C810.....41	CLP31.....42	FS3.....35	L21.....18
C699.....32	C755.....16	C811.....41	CLP32.....42	J1394.....26	L22.....18
C700.....41	C756.....32	C812.....41	CLP33.....42	JAUD_OUT..20	L23.....18
C701.....41	C757.....32	C813.....16	CLP34.....42	JCBUS.....25	L24.....18
C702.....22	C758.....41	C814.....16	CLP35.....42	JCD.....17	L25.....18
C703.....16	C759.....13	C815.....39	CLP36.....42	JCHG.....36	L26.....18
C704.....32	C760.....13	C816.....39	CLP37.....42	JCPU.....5	L27.....18
C705.....32	C761.....32	C817.....39	CLP38.....42	JCPU.....4	L28.....35
C706.....32	C762.....32	C818.....38	CMOS_CLR..14	JCPU.....4	L29.....18
C707.....32	C763.....32	C819.....37	D1.....12	JCPU.....5	L30.....21
C708.....41	C764.....41	C820.....37	D2.....12	JDCIN.....36	L31.....21
C709.....11	C765.....16	C821.....36	D3.....12	JDEBUG...30	L32.....21
C710.....16	C766.....16	C822.....36	D4.....12	JDIM0.....10	L33.....21
C711.....41	C767.....32	C823.....30	D5.....40	JDIM1.....10	L34.....3
C712.....41	C768.....35	C824.....40	D6.....40	JDOCK.....29	L35.....4
C713.....16	C769.....16	C825.....19	D7.....40	JFAN1.....33	L36.....3
C714.....32	C770.....12	C826.....20	D8.....8	JFAN2.....33	L37.....26
C715.....41	C771.....12	C827.....20	D9.....8	JHDD.....17	L38.....4
C716.....41	C772.....12	C828.....36	D10.....8	JKYBRD...32	L39.....26
C717.....16	C773.....35	C829.....36	D11.....24	JLED.....35	L40.....31
C718.....12	C774.....35	C831.....36	D12.....39	JLINE_IN..20	L41.....9
C719.....32	C775.....35	C832.....36	D13.....41	JLOM.....22	L42.....27
C720.....16	C776.....41	C833.....39	D14.....30	JLPT.....34	L43.....32
C721.....32	C777.....16	C834.....33	D15.....36	JMDC.....22	L44.....39
C722.....13	C778.....16	C835.....33	D16.....36	JMIC.....20	L45.....36
C723.....32	C779.....16	C836.....33	D17.....41	JMOD.....17	L46.....40
C724.....32	C780.....41	C837.....19	D18.....41	JPALM.....32	L47.....40
C725.....32	C781.....16	C838.....33	D19.....34	JPBAT.....37	L48.....20
C726.....32	C782.....32	CLP1.....42	D20.....40	JPCL.....27	L49.....21
C727.....11	C783.....41	CLP2.....42	D21.....40	JPS2.....35	L50.....20
C728.....11	C784.....41	CLP3.....42	D22.....28	JSBAT.....37	L51.....8
C729.....16	C785.....41	CLP4.....42	D23.....28	JSIO.....34	L52.....20

XREF PAGE 3 OF 6

		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE		
SCHEMATIC, MB LA-1221		
PWG NO.	401195	REV. 4A
DATE	11/15/02	SHEET 99 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP. AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE OR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A B C D

A

B

C

D

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

L53.....20
 L54.....25
 L55.....25
 L56.....20
 L57.....20
 L58.....26
 L59.....39
 L60.....9
 L61.....41
 L62.....12
 L63.....12
 L64.....32
 L65.....12
 L66.....12
 L67.....12
 L68.....32
 L69.....39
 L70.....41
 MHA1.....42
 MHA2.....42
 MHA3.....42
 MHA4.....42
 MHA5.....42
 MHA6.....42
 MHA7.....42
 MHA8.....42
 MHA9.....42
 MHA10.....42
 MHA11.....42
 MHB1.....42
 MHB2.....42
 MHB3.....42
 MHB4.....42
 P1.....6
 PAD1.....42
 PAD2.....42
 PAD3.....42
 PAD4.....42
 PAD5.....42
 PAD6.....42
 Q1.....40
 Q2.....40
 Q3.....40
 Q4.....40
 Q5.....38
 Q6.....35
 Q7.....29
 Q8.....29
 Q9.....29
 Q10.....36
 Q11.....38
 Q12.....35
 Q13.....22
 Q14.....33
 Q15.....33
 Q16.....38

Q17.....35
 Q18.....38
 Q19.....33
 Q20.....8
 Q21.....8
 Q22.....3
 Q23.....3
 Q24.....4
 Q25.....3
 Q26.....3
 Q27.....38
 Q28.....38
 Q29.....38
 Q30.....38
 Q31.....23
 Q32.....38
 Q33.....38
 Q34.....38
 Q35.....36
 Q36.....39
 Q37.....39
 Q38.....38
 Q39.....40
 Q40.....40
 Q41.....40
 Q42.....40
 Q43.....40
 Q44.....40
 Q45.....40
 Q46.....40
 Q47.....33
 Q48.....40
 Q49.....40
 Q50.....38
 Q51.....38
 Q52.....39
 Q53.....38
 Q54.....27
 Q55.....39
 Q56.....38
 Q57.....27
 Q58.....41
 Q59.....41
 Q60.....41
 Q61.....39
 Q62.....39
 Q63.....41
 Q64.....39
 Q65.....38
 Q66.....36
 Q67.....36
 Q68.....38
 Q69.....41
 Q70.....41
 Q71.....41
 Q72.....41


Q73.....33
 Q74.....33
 Q75.....33
 Q76.....33
 Q77.....13
 Q78.....8
 Q79.....39
 Q80.....21
 Q81.....11
 R1.....12
 R2.....12
 R3.....12
 R4.....12
 R5.....12
 R6.....12
 R7.....35
 R8.....35
 R9.....35
 R10.....35
 R11.....34
 R12.....34
 R13.....34
 R14.....12
 R15.....12
 R16.....40
 R17.....34
 R18.....34
 R19.....34
 R20.....34
 R21.....34
 R22.....40
 R23.....40
 R24.....40
 R25.....34
 R26.....40
 R27.....40
 R28.....34
 R29.....34
 R30.....34
 R31.....34
 R32.....34
 R33.....29
 R34.....29
 R35.....40
 R36.....40
 R37.....34
 R38.....34
 R39.....34
 R40.....34
 R41.....34
 R42.....34
 R43.....34
 R44.....34
 R45.....34
 R46.....40
 R47.....18

R48.....34
 R49.....40
 R50.....39
 R51.....38
 R52.....29
 R53.....29
 R54.....18
 R55.....34
 R56.....29
 R57.....40
 R58.....36
 R59.....18
 R60.....18
 R61.....35
 R62.....40
 R63.....40
 R64.....40
 R65.....6
 R66.....30
 R67.....40
 R68.....30
 R69.....40
 R70.....40
 R71.....21
 R72.....21
 R73.....21
 R74.....35
 R75.....4
 R76.....4
 R77.....20
 R78.....4
 R79.....4
 R80.....4
 R81.....4
 R82.....39
 R83.....39
 R84.....4
 R85.....22
 R86.....21
 R87.....10
 R88.....20
 R89.....21
 R90.....21
 R91.....10
 R92.....38
 R93.....33
 R94.....19
 R95.....21
 R96.....38
 R97.....33
 R98.....22
 R99.....21
 R100.....21
 R101.....19
 R102.....21
 R103.....21

R104.....38
 R105.....35
 R106.....21
 R107.....8
 R108.....8
 R109.....4
 R110.....33
 R111.....4
 R112.....3
 R113.....3
 R114.....3
 R115.....3
 R116.....3
 R117.....3
 R118.....3
 R119.....3
 R120.....22
 R121.....21
 R122.....21
 R123.....24
 R124.....3
 R125.....24
 R126.....3
 R127.....3
 R128.....3
 R129.....20
 R130.....20
 R131.....8
 R132.....4
 R133.....4
 R134.....4
 R135.....24
 R136.....4
 R137.....20
 R138.....20
 R139.....4
 R140.....24
 R141.....24
 R142.....4
 R143.....24
 R144.....20
 R145.....3
 R146.....3
 R147.....3
 R148.....3
 R149.....3
 R150.....3
 R151.....7
 R152.....3
 R153.....3
 R154.....7
 R155.....24
 R156.....3
 R157.....3
 R158.....3
 R159.....3

R160.....3
 R161.....3
 R162.....3
 R163.....3
 R164.....3
 R165.....4
 R166.....3
 R167.....4
 R168.....3
 R169.....3
 R170.....3
 R171.....3
 R172.....3
 R173.....3
 R174.....3
 R175.....3
 R176.....3
 R177.....3
 R178.....7
 R179.....26
 R180.....23
 R181.....23
 R182.....38
 R183.....38
 R184.....38
 R185.....7
 R186.....4
 R187.....31
 R188.....31
 R189.....30
 R190.....30
 R191.....30
 R192.....31
 R193.....7
 R194.....26
 R195.....31
 R196.....23
 R197.....23
 R198.....7
 R199.....7
 R200.....4
 R201.....4
 R202.....4
 R203.....4
 R204.....4
 R205.....23
 R206.....23
 R207.....26
 R208.....30
 R209.....8
 R210.....41
 R211.....8
 R212.....23
 R213.....23
 R214.....8
 R215.....39

XREF PAGE 4 OF 6

		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE			
SCHEMATIC, MB LA-1221			
DWG NO.		REV.	
401195		4A	
DATE		SHEET	
11/15/02		100 OF 102	

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LEASE FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LEASE. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LEASE WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A

B

C


D

A B C D

REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE REFDES PAGE

R216.....23	R272.....8	R328.....27	R384.....20	R440.....20	R496.....4
R217.....31	R273.....23	R329.....13	R385.....28	R441.....20	R497.....4
R218.....31	R274.....13	R330.....39	R386.....19	R442.....24	R498.....4
R219.....39	R275.....17	R331.....36	R387.....19	R443.....4	R499.....38
R220.....23	R276.....17	R332.....14	R388.....33	R444.....20	R500.....38
R221.....30	R277.....17	R333.....14	R389.....33	R445.....20	R501.....4
R222.....39	R278.....14	R334.....14	R390.....6	R446.....22	R502.....35
R223.....30	R279.....17	R335.....15	R391.....19	R447.....22	R503.....38
R224.....31	R280.....27	R336.....14	R392.....6	R448.....22	R504.....27
R225.....31	R281.....27	R337.....39	R393.....20	R449.....22	R505.....11
R226.....13	R282.....27	R338.....14	R394.....19	R450.....21	R506.....9
R227.....38	R283.....14	R339.....14	R395.....19	R451.....20	R507.....8
R228.....10	R284.....15	R340.....36	R396.....19	R452.....22	R508.....8
R229.....39	R285.....14	R341.....38	R397.....19	R453.....20	R509.....11
R230.....38	R286.....17	R342.....41	R398.....19	R454.....20	R510.....11
R231.....30	R287.....27	R343.....37	R399.....19	R455.....3	R511.....11
R232.....9	R288.....12	R344.....30	R400.....19	R456.....22	R512.....11
R233.....39	R289.....31	R345.....36	R401.....17	R457.....20	R513.....11
R234.....30	R290.....14	R346.....36	R402.....19	R458.....20	R514.....11
R235.....27	R291.....14	R347.....36	R403.....33	R459.....24	R515.....11
R236.....30	R292.....14	R348.....36	R404.....28	R460.....20	R516.....11
R237.....30	R293.....14	R349.....36	R405.....28	R461.....20	R517.....7
R238.....11	R294.....13	R350.....41	R406.....28	R462.....20	R518.....7
R239.....10	R295.....15	R351.....34	R407.....19	R463.....24	R519.....11
R240.....8	R296.....6	R352.....34	R408.....19	R464.....26	R520.....11
R241.....30	R297.....13	R353.....34	R409.....33	R465.....26	R521.....11
R242.....38	R298.....17	R354.....34	R410.....20	R466.....26	R522.....41
R243.....11	R299.....6	R355.....35	R411.....21	R467.....26	R523.....35
R244.....8	R300.....13	R356.....18	R412.....13	R468.....26	R524.....14
R245.....8	R301.....6	R357.....40	R413.....19	R469.....26	R525.....14
R246.....38	R302.....6	R358.....40	R414.....33	R470.....24	R526.....22
R247.....38	R303.....13	R359.....40	R415.....33	R471.....22	R527.....16
R248.....11	R304.....13	R360.....39	R416.....19	R472.....22	R528.....11
R249.....11	R305.....17	R361.....39	R417.....19	R473.....24	R529.....11
R250.....11	R306.....6	R362.....40	R418.....33	R474.....26	R530.....13
R251.....23	R307.....6	R363.....40	R419.....40	R475.....22	R531.....11
R252.....11	R308.....6	R364.....40	R420.....40	R476.....24	R533.....16
R253.....23	R309.....6	R365.....6	R421.....28	R477.....26	R534.....15
R254.....11	R310.....17	R366.....39	R422.....21	R478.....24	R535.....14
R255.....11	R311.....41	R367.....36	R423.....21	R479.....17	R536.....11
R256.....23	R312.....41	R368.....6	R424.....30	R480.....26	R537.....15
R257.....11	R313.....41	R369.....19	R425.....33	R481.....26	R538.....15
R258.....8	R314.....41	R370.....19	R426.....19	R482.....26	R539.....15
R259.....8	R315.....41	R371.....19	R427.....19	R483.....26	R540.....35
R260.....23	R316.....6	R372.....6	R428.....20	R484.....24	R541.....11
R261.....17	R317.....6	R373.....33	R429.....19	R485.....26	R542.....13
R262.....38	R318.....6	R374.....40	R430.....20	R486.....6	R543.....11
R263.....11	R319.....27	R375.....21	R431.....4	R487.....30	R544.....12
R264.....31	R320.....41	R376.....21	R432.....4	R488.....24	R545.....12
R265.....31	R321.....41	R377.....6	R433.....4	R489.....6	R546.....12
R266.....36	R322.....6	R378.....19	R434.....4	R490.....24	R547.....35
R267.....36	R323.....6	R379.....19	R435.....21	R491.....24	R548.....32
R268.....36	R324.....6	R380.....6	R436.....4	R492.....6	R549.....32
R269.....4	R325.....13	R381.....21	R437.....19	R493.....38	R550.....35
R270.....17	R326.....13	R382.....28	R438.....21	R494.....6	R551.....13
R271.....8	R327.....32	R383.....21	R439.....21	R495.....38	R552.....35

XREF PAGE 5 OF 6

		COMPUTER CORPORATION AUSTIN, TEXAS
TITLE		
SCHEMATIC, MB LA-1221		
PWG NO.	401195	REV. 4A
DATE	11/15/02	SHEET 101 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.

A B C D

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

REFDES PAGE

R553.....14
 R554.....14
 R555.....13
 R556.....14
 R557.....14
 R558.....13
 R559.....14
 R560.....13
 R561.....13
 R562.....39
 R563.....14
 R564.....14
 R565.....39
 R566.....13
 R567.....39
 R568.....39
 R569.....14
 R570.....39
 R571.....36
 R572.....39
 R573.....16
 R574.....13
 R575.....16
 R576.....39
 R577.....39
 R578.....38
 R579.....39
 R580.....37
 R581.....37
 R582.....37
 R583.....39
 R584.....37
 R585.....37
 R586.....37
 R587.....36
 R588.....37
 R589.....41
 R590.....36
 R591.....38
 R592.....36
 R593.....41
 R594.....41
 R595.....33
 R596.....33
 R597.....33
 R598.....33
 R599.....33
 R600.....16
 R601.....16
 R602.....17
 R603.....17
 R604.....30
 R605.....30
 R606.....13
 R607.....8
 R608.....8

R609.....39
 R610.....6
 R611.....19
 R612.....35
 R613.....19
 R614.....8
 R615.....8
 R616.....13
 R617.....30
 R618.....6
 R619.....8
 R620.....8
 R621.....8
 R622.....8
 R623.....39
 R624.....8
 R625.....33
 R631.....11
 R632.....33
 R633.....33
 R634.....33
 R635.....33
 R636.....33
 R637.....33
 R638.....33
 R639.....33
 R640.....33
 R641.....19
 R642.....33
 R643.....33
 R644.....35
 RN1.....30
 RN2.....6
 RN3.....22
 RN4.....6
 RN5.....11
 RN6.....11
 RN7.....11
 RN8.....11
 RN9.....4
 RN10.....11
 RN11.....17
 RN12.....17
 RN13.....17
 RN14.....13
 RN15.....42
 RN15.....13
 RN16.....13
 RN17.....14
 RN18.....13
 RN19.....13
 RN20.....7
 RN21.....10
 RN22.....7
 RN23.....10
 RN24.....7

RN25.....10
 RN26.....7
 RN27.....10
 RN28.....7
 RN29.....10
 RN30.....7
 RN31.....10
 RN32.....7
 RN33.....10
 RN34.....7
 RN35.....10
 RN36.....7
 RN37.....10
 RN38.....10
 RN39.....7
 RN40.....10
 RN41.....7
 RN42.....10
 RN43.....7
 RN44.....10
 RN45.....7
 RN46.....10
 RN47.....7
 RN48.....10
 RN49.....7
 RN50.....10
 RN51.....7
 RN52.....10
 RN53.....7
 RN54.....10
 RN55.....7
 RN56.....10
 RN57.....10
 RN58.....7
 RN59.....10
 RN62.....7
 RN63.....10
 RN64.....7
 RN66.....10
 RN68.....7
 RN69.....10
 RN71.....7
 RN72.....10
 RN74.....7
 RN75.....10
 RN77.....7
 RN78.....10
 RN80.....7
 RN81.....10
 RN82.....7
 RN83.....7
 RN84.....10
 RN85.....10
 RN86.....10
 RN87.....7
 RN88.....10

RN89.....7
 RN90.....10
 RN91.....7
 RN92.....10
 RN93.....7
 RN94.....10
 RN95.....7
 RN96.....10
 RN97.....7
 RN98.....10
 RN99.....7
 RN100.....10
 RN101.....7
 RN102.....10
 RN103.....7
 RN104.....10
 RN105.....7
 RN106.....10
 RN107.....7
 RN108.....10
 RN109.....7
 RN110.....10
 RN111.....7
 RN112.....10
 RN113.....7
 RN114.....10
 RN115.....7
 RN116.....10
 RN117.....10
 RN118.....7
 RN119.....7
 RN120.....10
 RN121.....10
 RN122.....7
 RN123.....7
 RN124.....10
 RN125.....10
 RN126.....7
 RN127.....4
 RN128.....7
 RN129.....10
 RN130.....10
 RN131.....7
 RN132.....7
 RN133.....10
 RS3_A.....32
 RS3_B.....32
 TP3COM.....21
 TP_GND...30
 TP_SMBCL_30
 TP_SMBDA_30
 U1.....29
 U2.....42
 U2.....34
 U3.....18
 U4.....40

U5.....34
 U6.....34
 U7.....30
 U8.....28
 U9.....28
 U10.....28
 U11.....30
 U12.....42
 U12.....35
 U13.....6
 U14.....22
 U15.....19
 U16.....21
 U17.....28
 U18.....28
 U19.....28
 U20.....38
 U21.....19
 U22.....22
 U23.....20
 U24.....8
 U25.....20
 U26.....3
 U27.....23
 U28.....31
 U29.....15
 U30.....39
 U31.....31
 U31.....30
 U32.....38
 U33.....38
 U34.....23
 U35.....23
 U36.....17
 U37.....12
 U38.....31
 U39.....32
 U40.....16
 U40.....15
 U40.....14
 U40.....13
 U41.....17
 U42.....39
 U43.....39
 U44.....42
 U44.....41
 U45.....37
 U46.....28
 U47.....39
 U48.....19
 U49.....33
 U50.....19
 U51.....19
 U52.....21
 U53.....22
 U54.....20

U55.....24
 U55.....24
 U56.....17
 U57.....25
 U58.....26
 U59.....6
 U60.....9
 U60.....9
 U60.....7
 U60.....8
 U60.....7
 U61.....35
 U61.....33
 U62.....35
 U63.....6
 U64.....41
 U65.....35
 U66.....39
 U67.....39
 U68.....11
 U69.....36
 U70.....35
 U71.....42
 U71.....41
 U72.....41
 U73.....33
 U74.....8
 U75.....30
 U76.....30
 U77.....39
 U78.....42
 U78.....35
 U79.....22
 U80.....33
 U81.....33
 U82.....33
 U83.....22
 VCCSENSE...4
 VSSSENSE...4
 WP1.....42
 WP2.....42
 WP3.....42
 WP4.....42
 X2.....30
 X3.....14
 X4.....26
 X5.....3
 X6.....21
 X7.....19
 R666...40
 R667...36
 C852...8
 C855...8
 C853...39
 C854...39
 C844...40
 C845...40

C846...40
 C847...40
 C848...40
 C849...40
 C850...41
 C851...41

XREF PAGE 6 OF 6

		COMPUTER CORPORATION AUSTIN, TEXAS	
TITLE			
SCHEMATIC, MB LA-1221			
PWG NO.	401195	REV.	4A
DATE	11/15/02	SHEET	102 OF 102

PROPRIETARY NOTE: THIS ITEM IS THE PROPERTY OF DELL COMPUTER CORP., AUSTIN, TEXAS AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS ITEM MAY NOT BE TRANSMITTED FROM THE CUSTODY OF DELL COMPUTER CORP. EXCEPT AS AUTHORIZED BY DELL COMPUTER CORP. AND THEN ONLY BY WAY OF LOAN FOR LIMITED PURPOSES. IT MUST NOT BE REPRODUCED IN WHOLE OR IN PART AND MUST BE RETURNED TO DELL COMPUTER CORP. UPON REQUEST AND IN ALL EVENTS UPON COMPLETION OF THE PURPOSE OF THE LOAN. NEITHER THIS ITEM OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO PERSONS NOT HAVING A NEED FOR SUCH USE OR DISCLOSURE CONSISTENT WITH THE PURPOSE OF THE LOAN WITHOUT THE PRIOR WRITTEN CONSENT OF DELL COMPUTER CORPORATION.