

LAGUNA

REV : X03

@ : Depop Component

PRELIMINARY

LA-2112 (8 Layer M/B for LAGUNA)

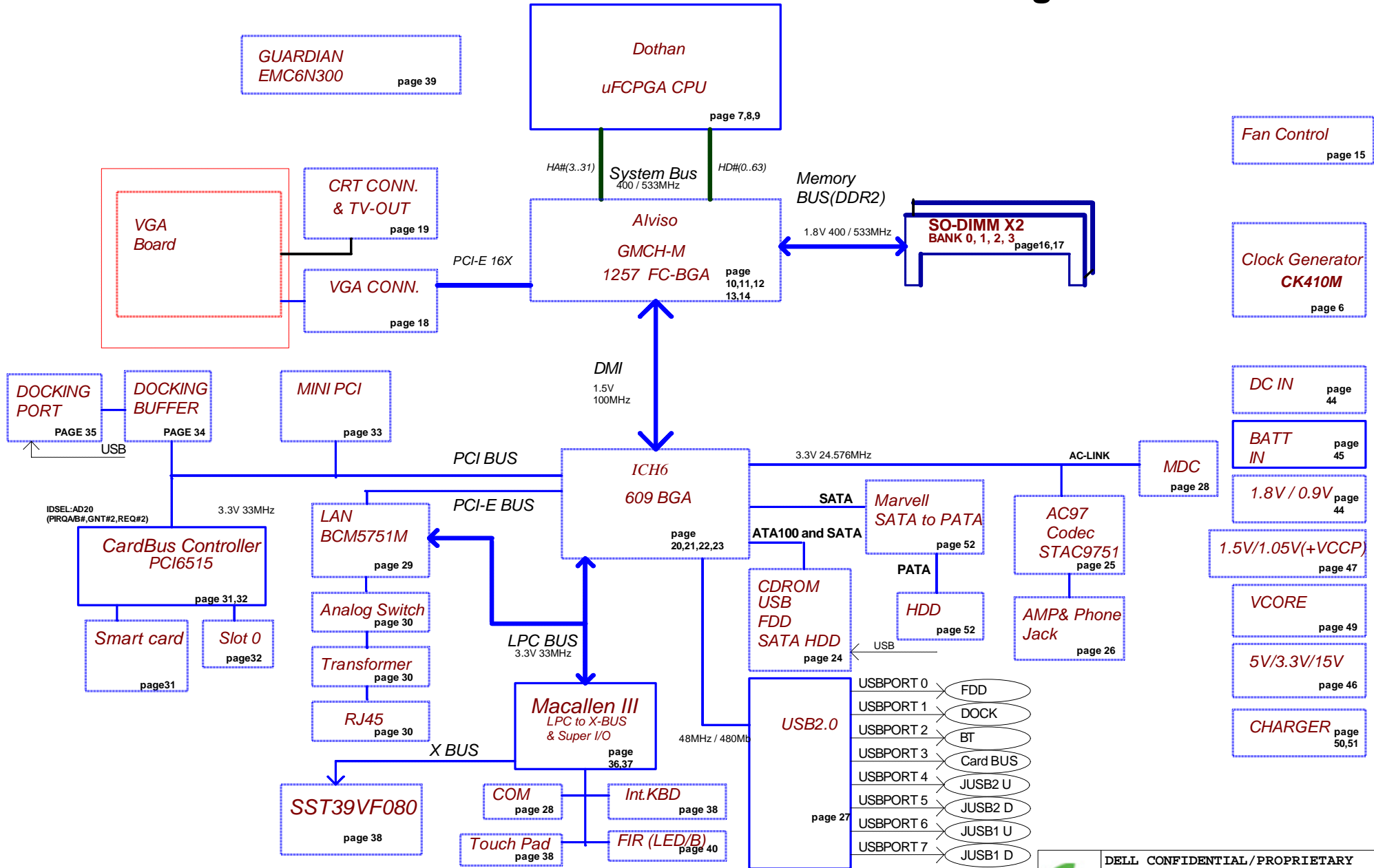
Dothan Schematic with Capture CIS and Function field

uFCPGA Dothan
10-07-2004
REV: 0.4

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY		
Title	Cover Sheet	
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 1 of 82



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL / PROPRIETARY		
File: Block Diagram		
Size:	Document Number: Board Number LA2112	Rev: 0.4
Date: Thursday, October 28, 2004	Sheet 2	of 82

PM TABLE

State \ power plane	+3VALW +5VALW +RTC_CELL +3.3VX	+3VSUS +5VSUS +1.8VSUS +1.5VSUS +15V	+5VRUN +3VRUN +0.9V_DDR_VTT +2.5VRUN +1.8VRUN +1.5VRUN +VCC_CORE +VCCP
S0	ON	ON	ON
S1	ON	ON	ON
S3	ON	ON	OFF
S5 S4/AC	ON	OFF	OFF
S5 S4/AC don't exist	OFF	OFF	OFF

PCI TABLE

PCI DEVICE	IDSEL	REQ#/GNT#	PIRQ
CARD BUS	AD17	1	D,C
DOCK	AD24	0	A
MINI PCI	AD19	3	D,B

USB TABLE

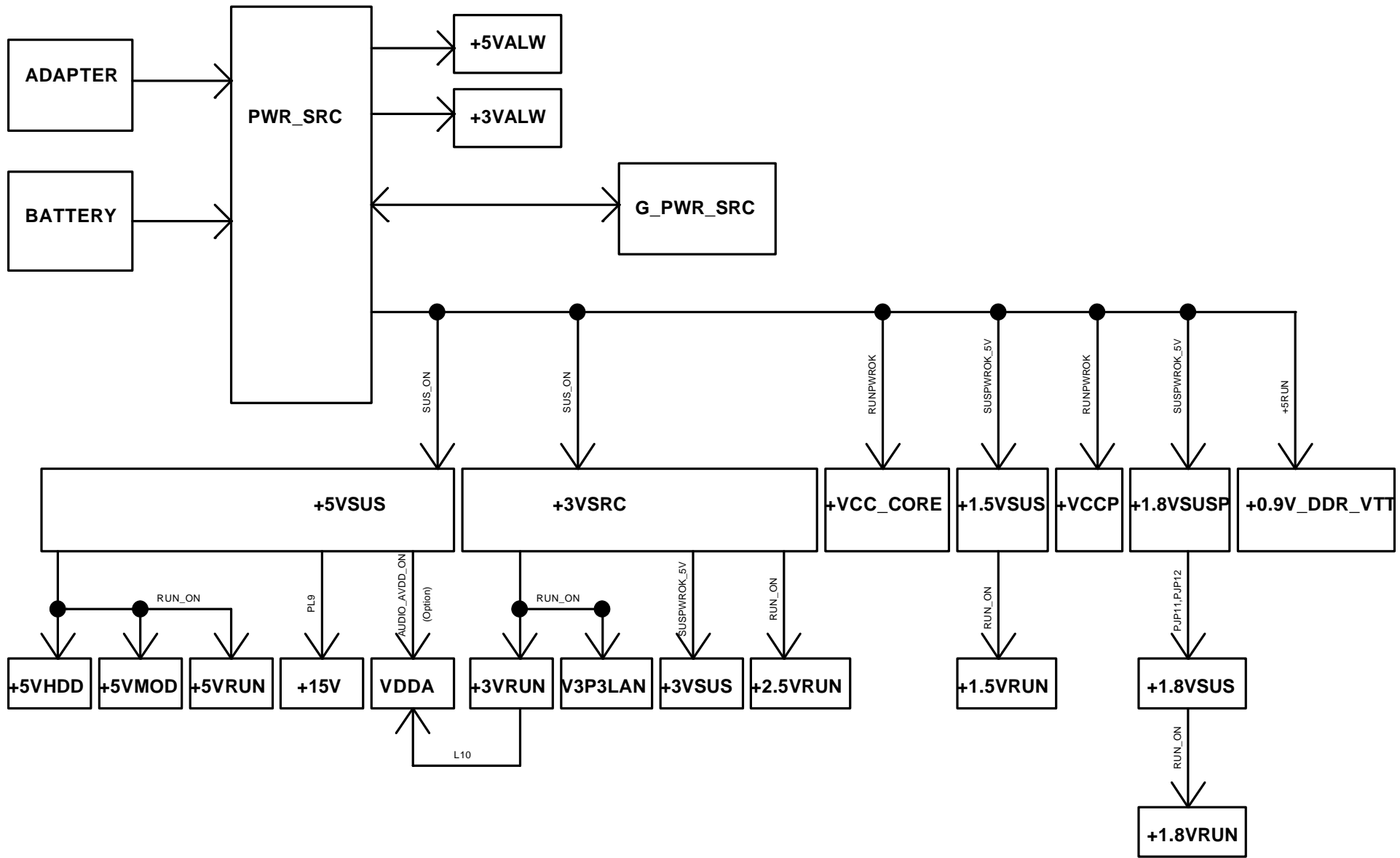
USB PORT#	DESTINATION
0	FDD (module bay)
1	DOCK
2	MPCI (BlueTooth)
3	NEW Connector
4	USB Port 2(Top)
5	USB Port 2(Bottom)
6	USB Port 1(Top)
7	USB Port 1(Bottom)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.




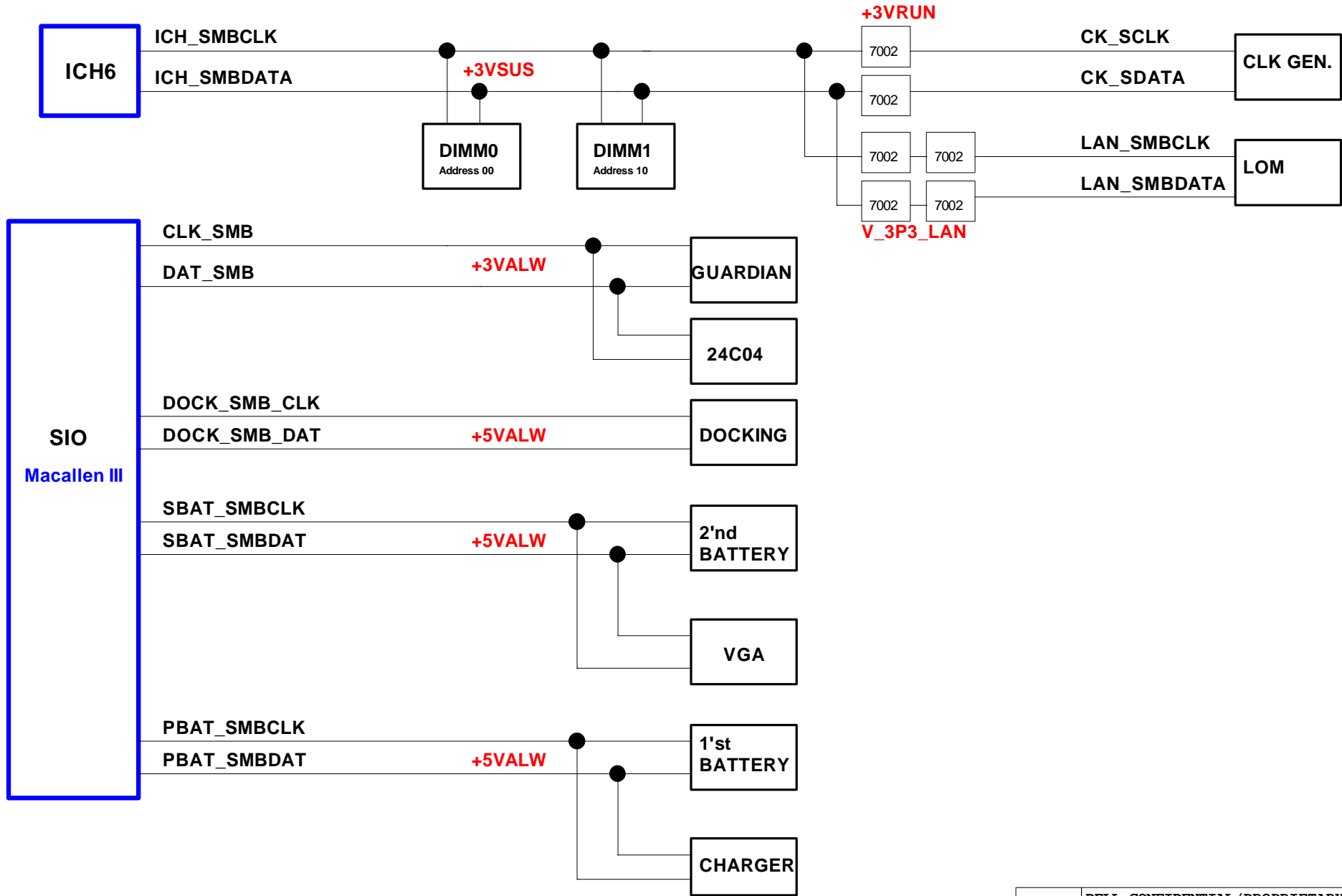
DELL CONFIDENTIAL/PROPRIETARY

Title		Index and Config.	
Size	Document Number	Rev	
	Board Number LA2112	0.4	
Date:	Thursday, October 28, 2004	Sheet	3 of 82



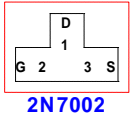
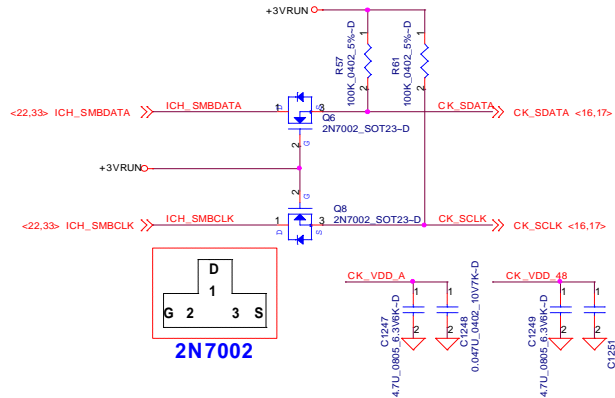
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

		
DELL CONFIDENTIAL/PROPRIETARY		
Title Power Rail		
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 4 of 82



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
Title: SMBUS TOPOLOGY		
Size:	Document Number: LA2112	Rev: 0.4
Date:	Thursday, October 28, 2004	Sheet 5 of 82

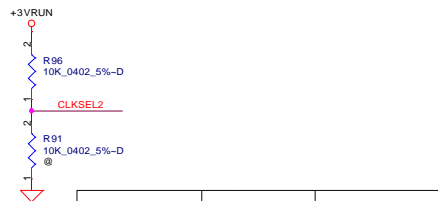
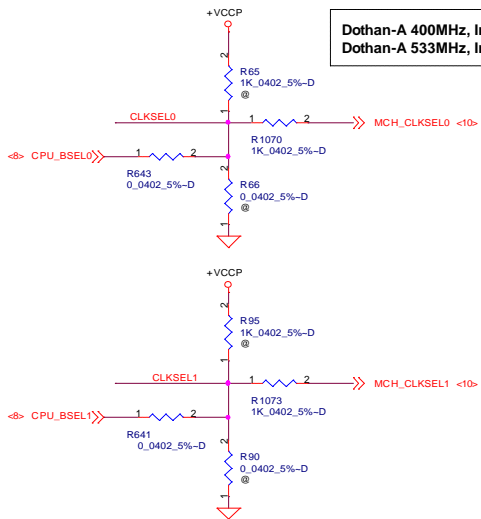


2N7002

FSC	FSB	FSA	CPU	SRC	PCI
CLKSEL0	CLKSEL1	CLKSEL2	MHz	MHz	MHz
0	0	0	266	100	33.3
0	0	1	133	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3
1	0	0	333	100	33.3
1	0	1	100	100	33.3
1	1	0	400	100	33.3
1	1	1	RESERVED		

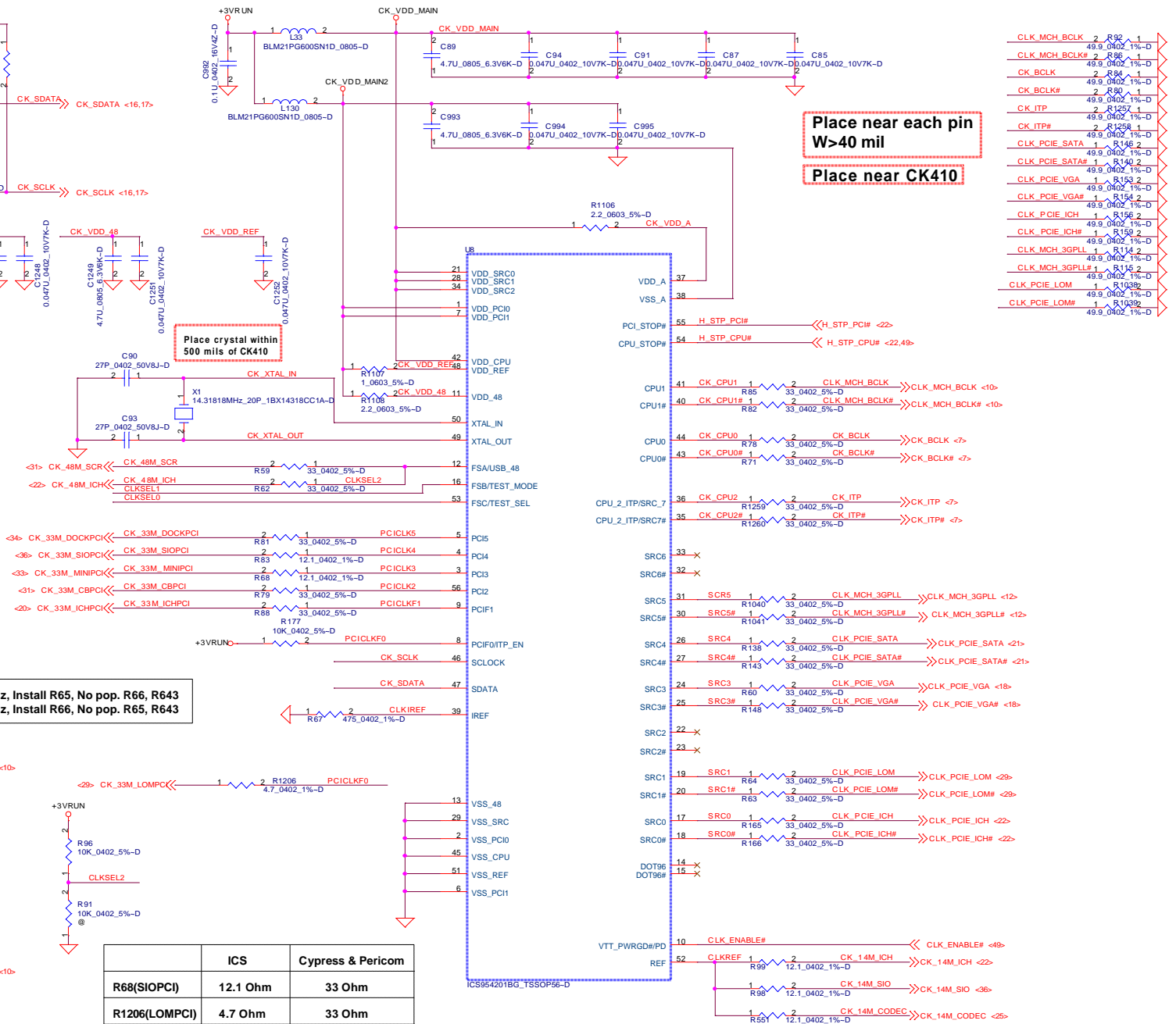
Table : ICS 954201 / Cypress CY28411

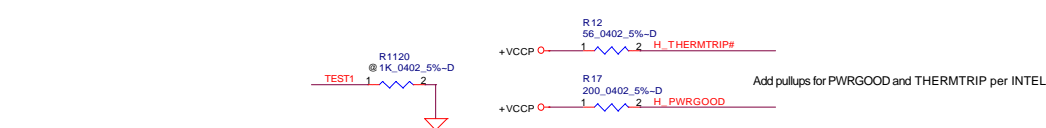
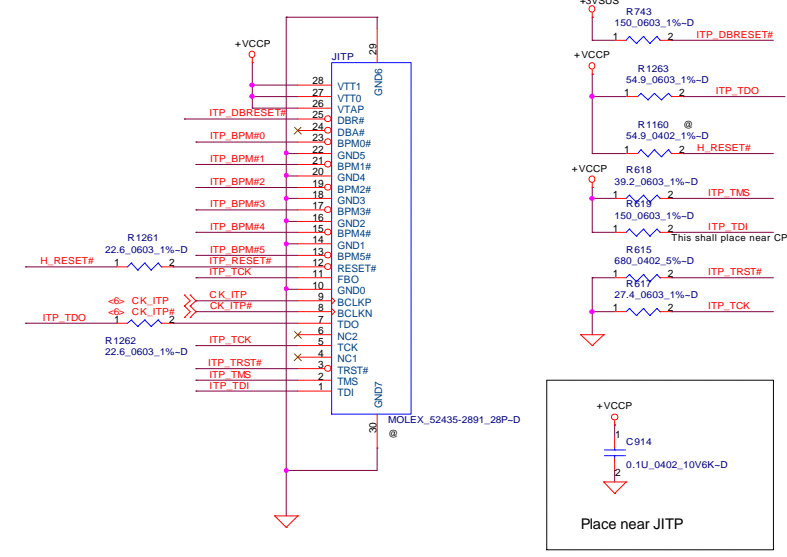
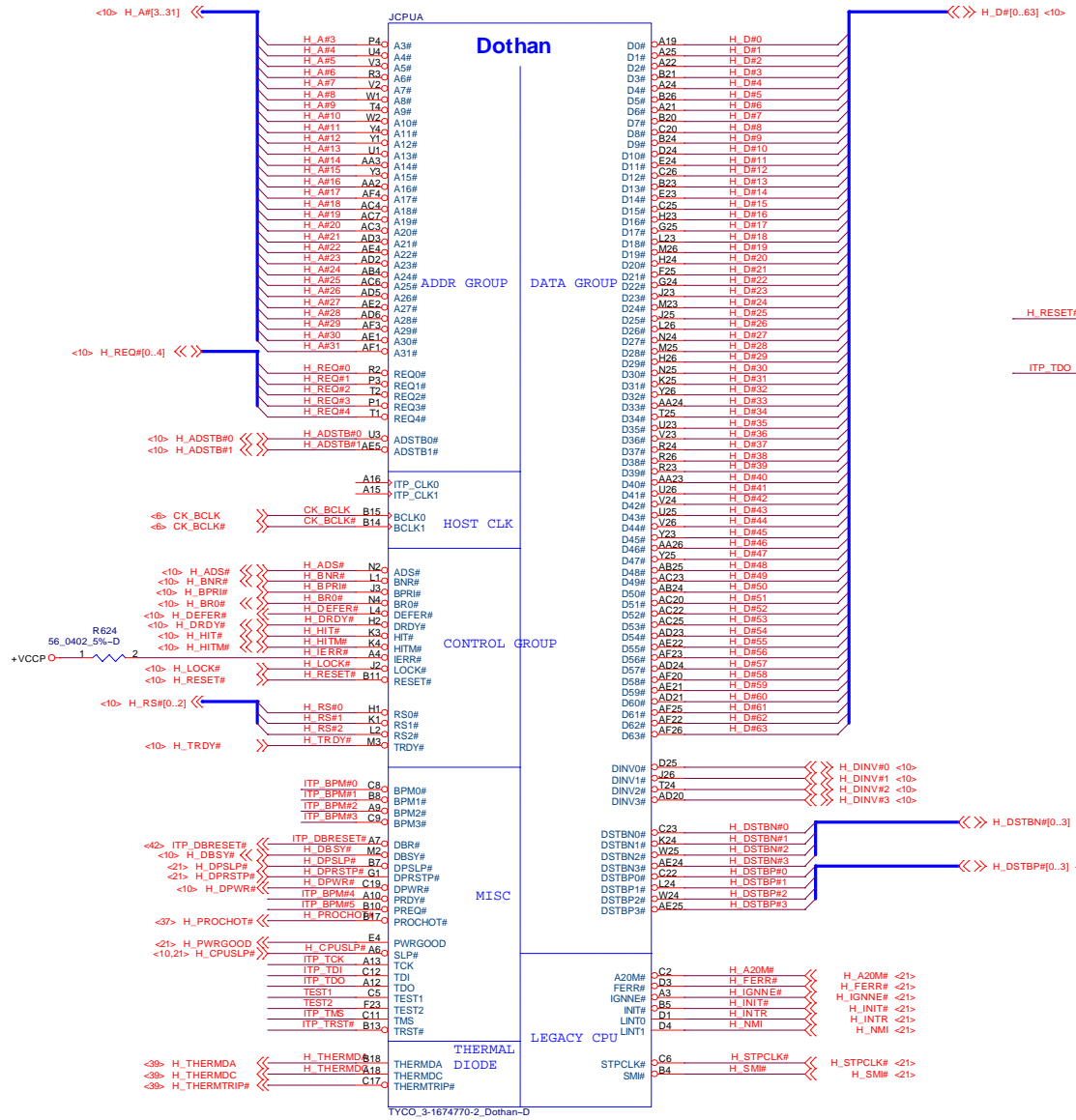
Dothan-A 400MHz, Install R65, No pop. R66, R643
Dothan-A 533MHz, Install R66, No pop. R65, R643



	ICS	Cypress & Pericom
R68(SIOPCI)	12.1 Ohm	33 Ohm
R1206(LOMP)	4.7 Ohm	33 Ohm
R83(MINI PCI)	12.1 Ohm	33 Ohm

ICS - ICS954201BG
Cypress - CY28411ZXC
Pericom - PI6C410MA





PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL / PROPRIETARY

File: **Dothan Processor in mFCPGA479**

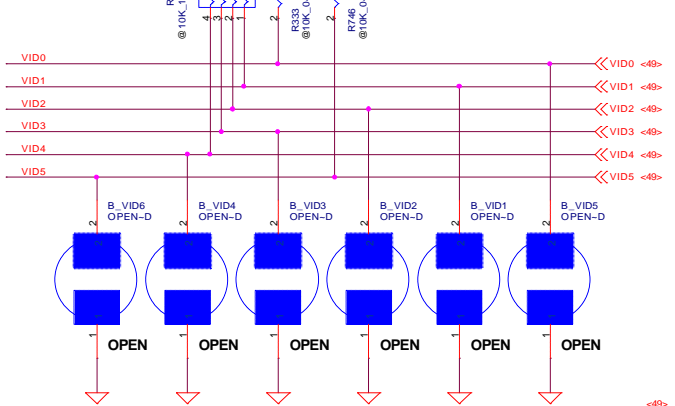
Size: Document Number Board Number LA2112 Rev 0.4

Date: Thursday, October 28, 2004 Sheet 7 of 82

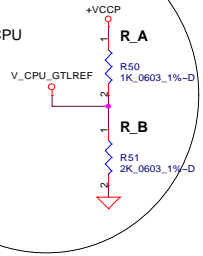
Dothan-A2 w/ 533Mhz supports both 1.5V and 1.8V.
 Dothan-B step w/533Mhz supports only 1.5V

For test only ,Cmos output

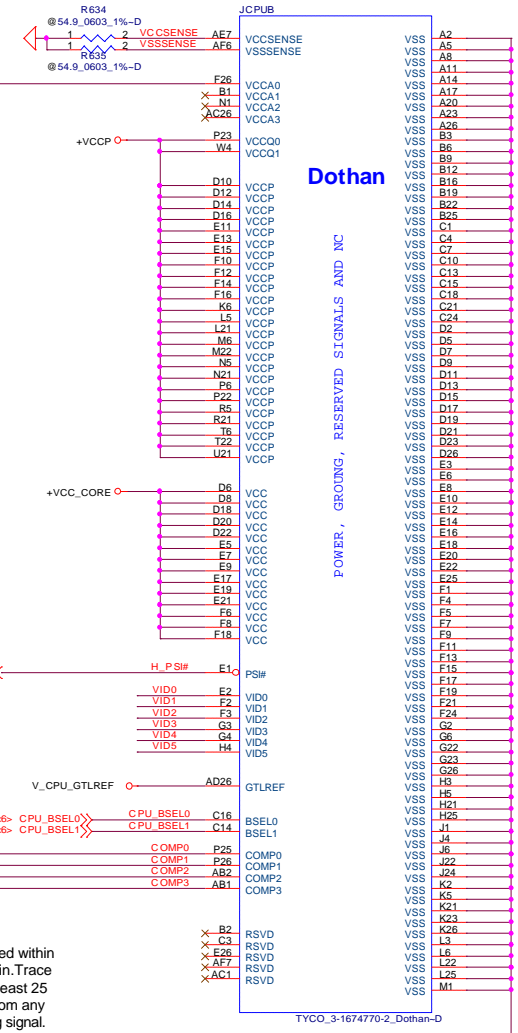
CPU Voltage ID



Layout close CPU



Resistor placed within 0.5" of CPU pin. Trace should be at least 25 miles away from any other toggling signal.

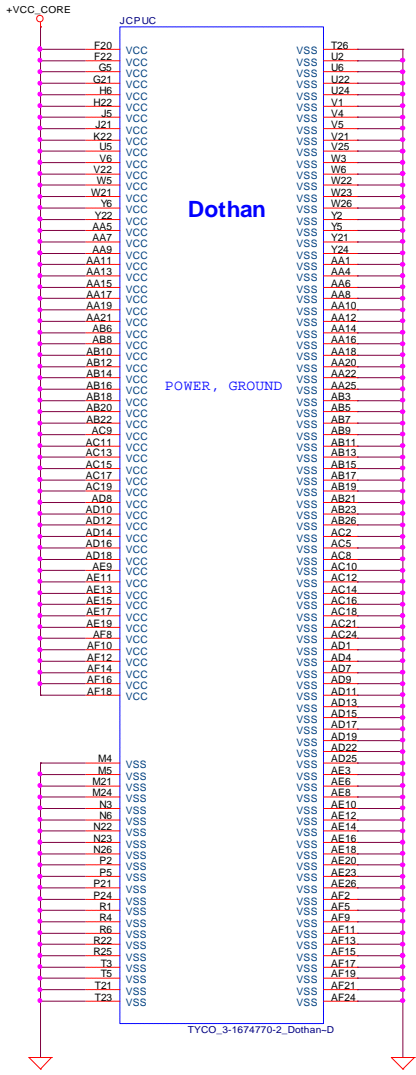


Dothan

Dothan

POWER, GROUND, RESERVED SIGNALS AND NC

POWER, GROUND



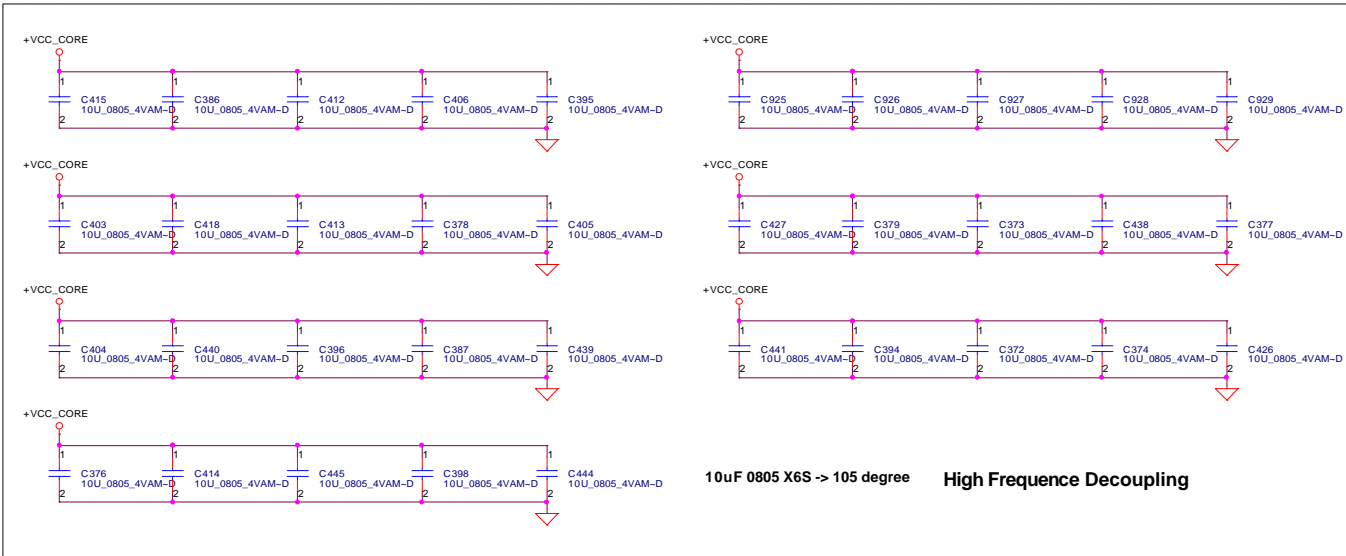
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY

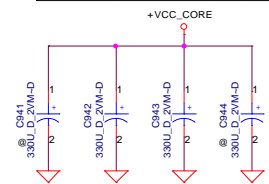
File: **Dothan Processor in mFCPGA479**

Size: Document Number Board Number LA2112 Rev 0.4

Date: Thursday, October 28, 2004 Sheet 8 of 82

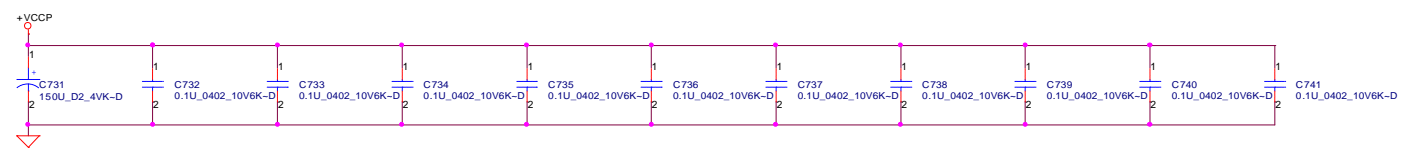


Near VCORE regulator.



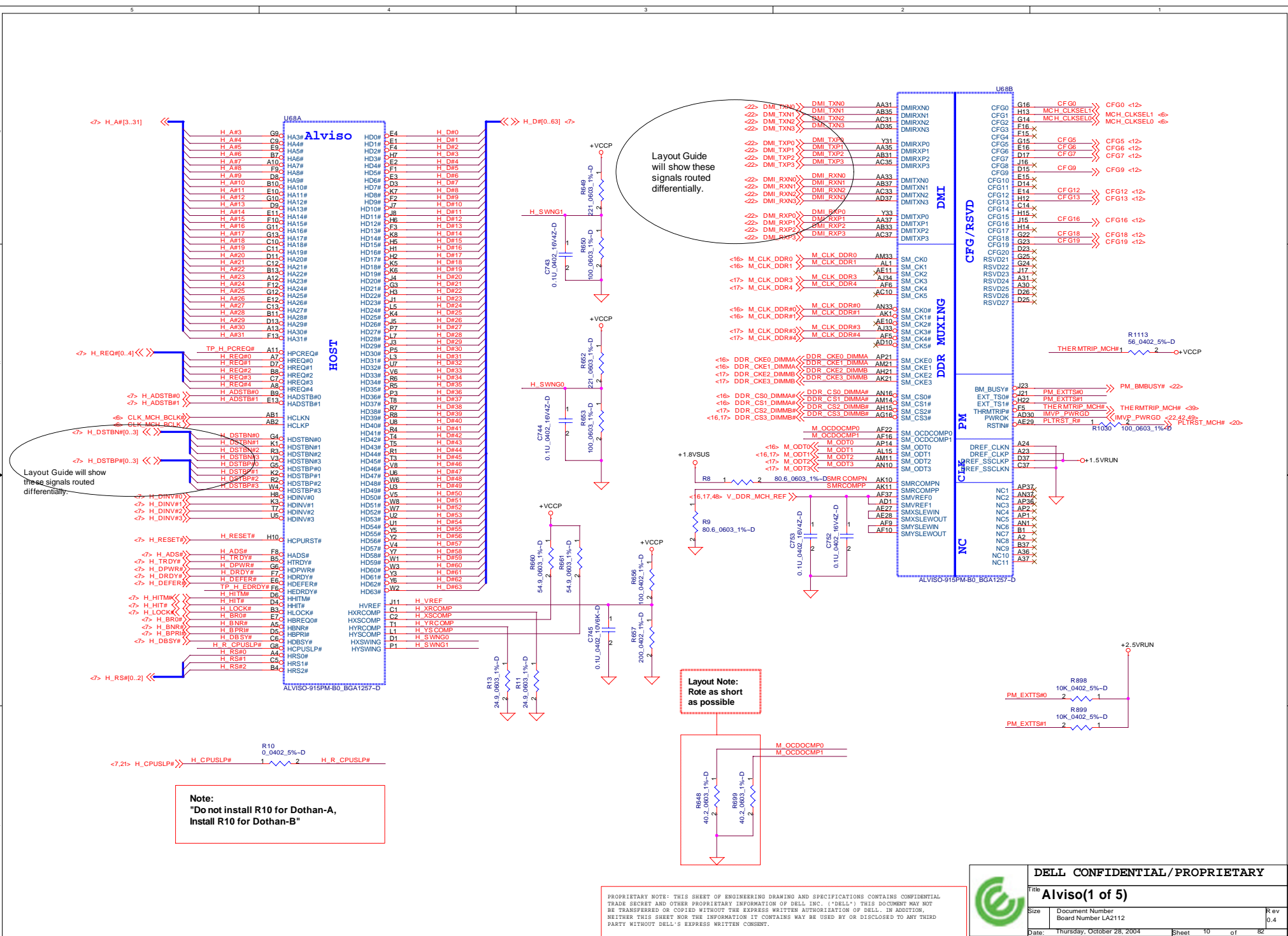
**ESR <= 3m ohm
Capacitor > 880uF**

- 9mOhm 7343 PS CAP
- 9mOhm 7343 PS CAP
- 9mOhm 7343 PS CAP



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
File CPU Bypass		
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 9 of 82



Layout Guide will show these signals routed differentially.

Layout Guide will show these signals routed differentially.

Layout Note: Rate as short as possible

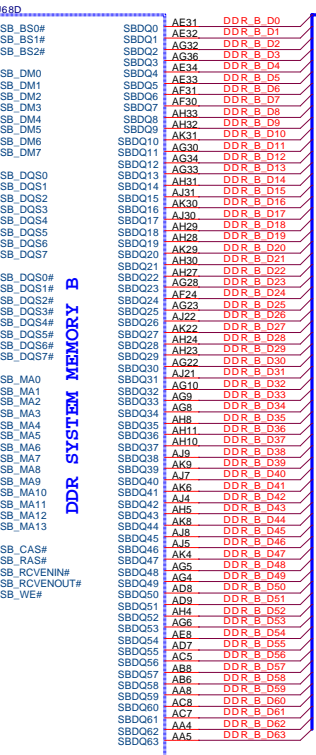
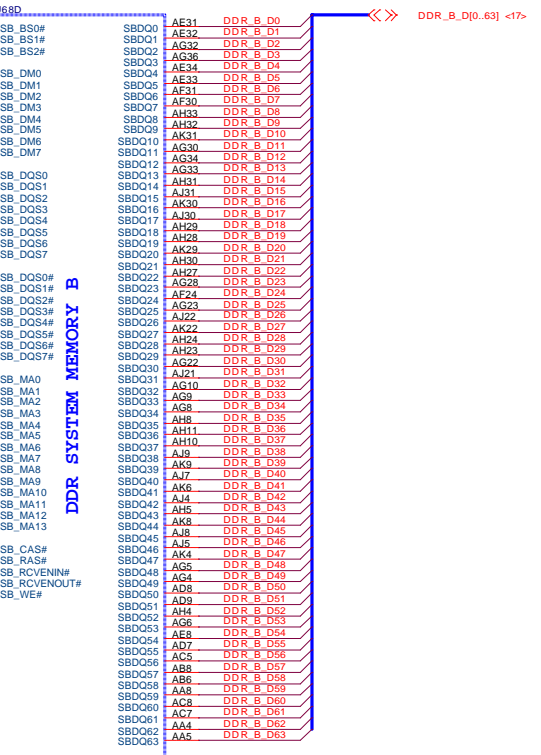
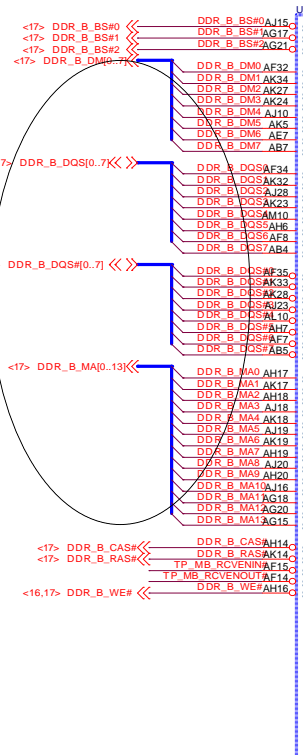
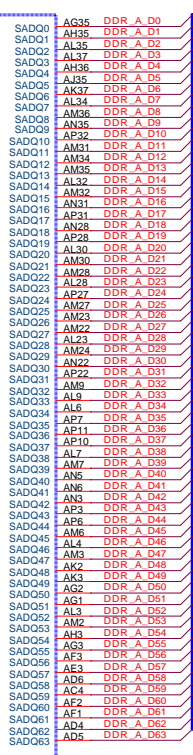
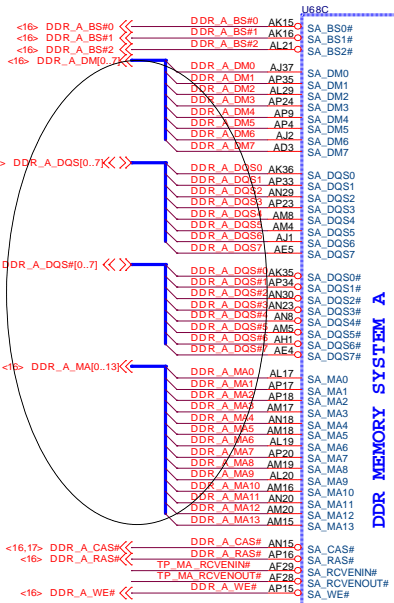
Note: "Do not install R10 for Dothan-A, Install R10 for Dothan-B"

DELL CONFIDENTIAL/PROPRIETARY

Title: Alviso(1 of 5)

Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 10 of 82

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

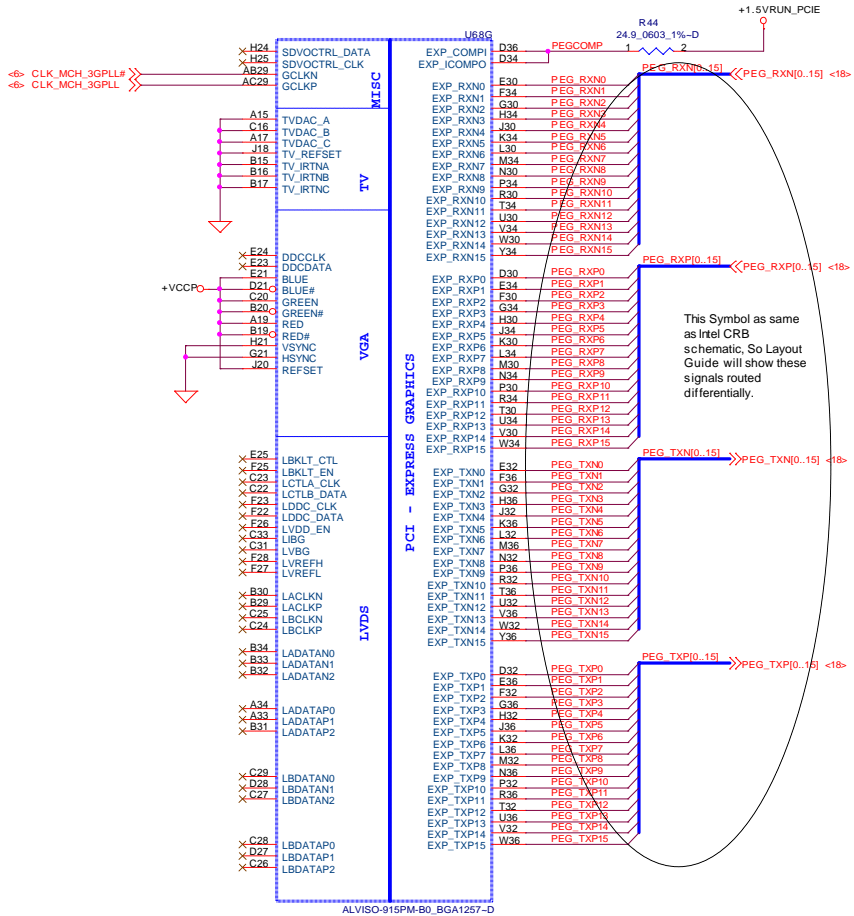


This Symbol as same as Intel CRB schematic, So Layout Guide will show these signals routed differentially.

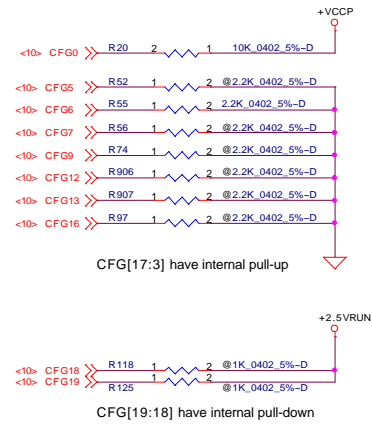
This Symbol as same as Intel CRB schematic, So Layout Guide will show these signals routed differentially.

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL / PROPRIETARY		
Title: Alviso(2 of 5)		
Size:	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 11 of 82

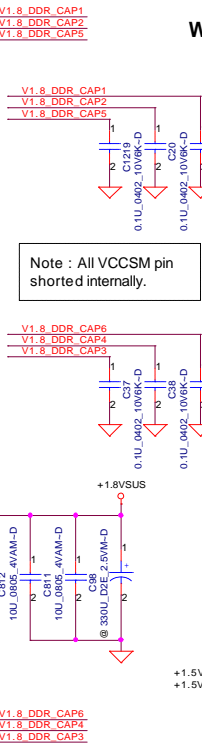
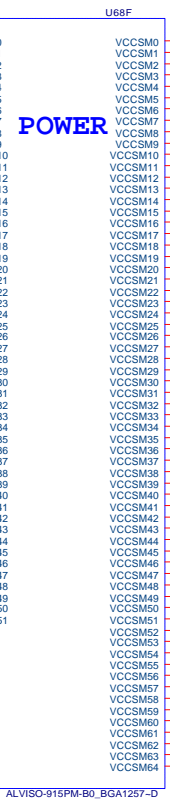


CFG[2:0]	Refer to sheet 6 for FSB frequency select
CFG5	Low = DMI x 2 High = DMI x 4 *
CFG6	Low = DDR-II * High = DDR-I
CFG7	Low = DT/Transportable CPU High = Mobile CPU *
CFG9	Low = Reverse Lane High = Normal Operation *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation (Default) *
CFG16 (FSB Dynamic ODT)	Low = Disabled High = Enabled *
CFG18 (VCC Select)	Low = 1.05V (Default) * High = 1.5V
CFG19 (VTT Select)	Low = 1.05V (Default) * High = 1.2V

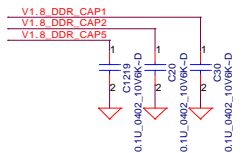


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

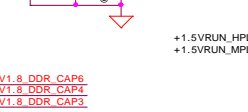
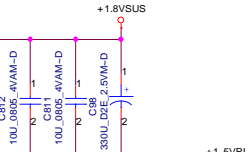
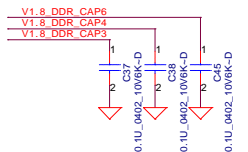
DELL CONFIDENTIAL/PROPRIETARY		
Title		Alviso(3 of 5)
Size	Document Number	Rev
	Board Number LA2112	0.4
Date:	Thursday, October 28, 2004	Sheet 12 of 82



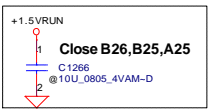
W=20 mils



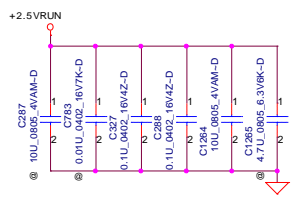
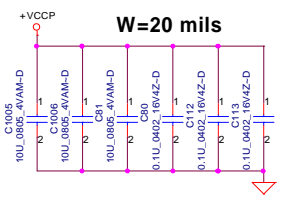
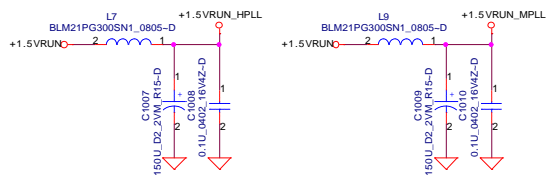
Note : All VCCSM pin shorted internally.



Remove L6, C48, C51, Connect DPLL2 directly to +1.5vrun
Remove L29, C47, C8, Connect DPLLA directly to +1.5vrun
Steven-01/09/2004



Route VSSA3GBG gnd from GMCH to decoupling cap ground lead and then connect to the gnd plane.



DELL CONFIDENTIAL/PROPRIETARY

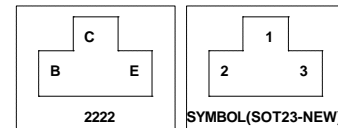
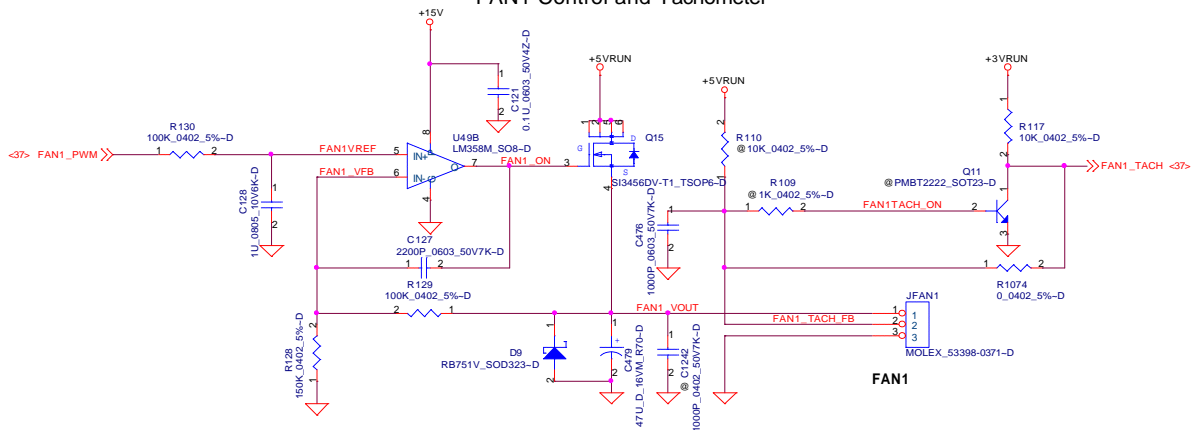
Title Alviso(4 of 5)

Size Document Number Board Number LA2112 Rev 0.4

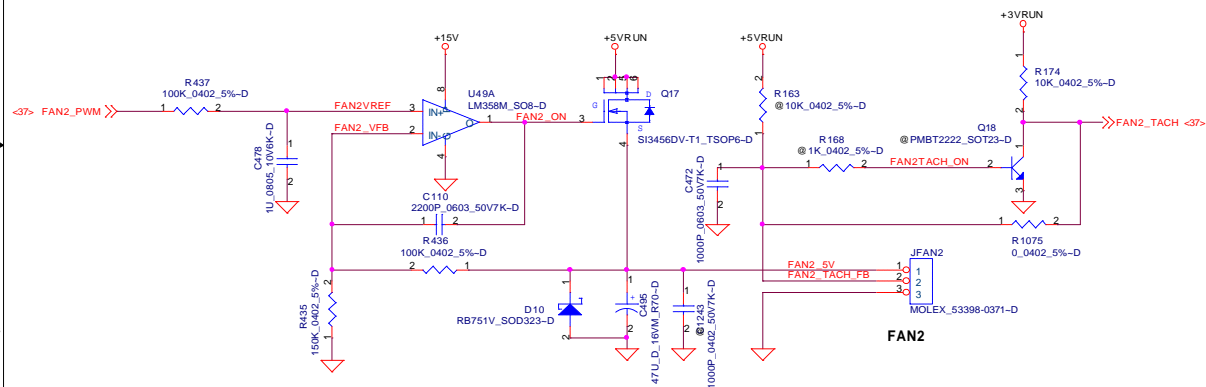
Date: Thursday, October 28, 2004 Sheet 13 of 82

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

FAN1 Control and Tachometer

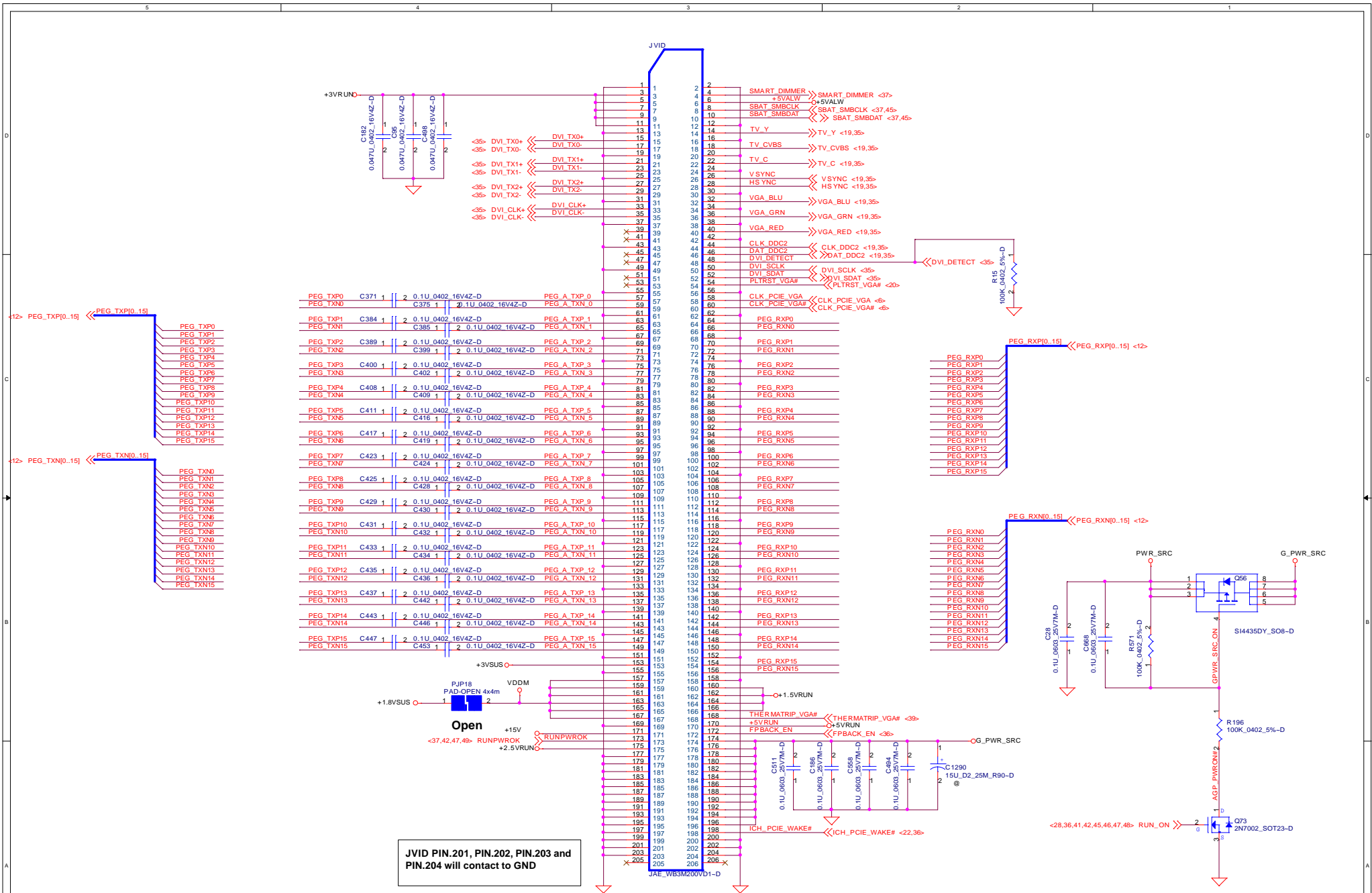


FAN2 Control and Tachometer



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

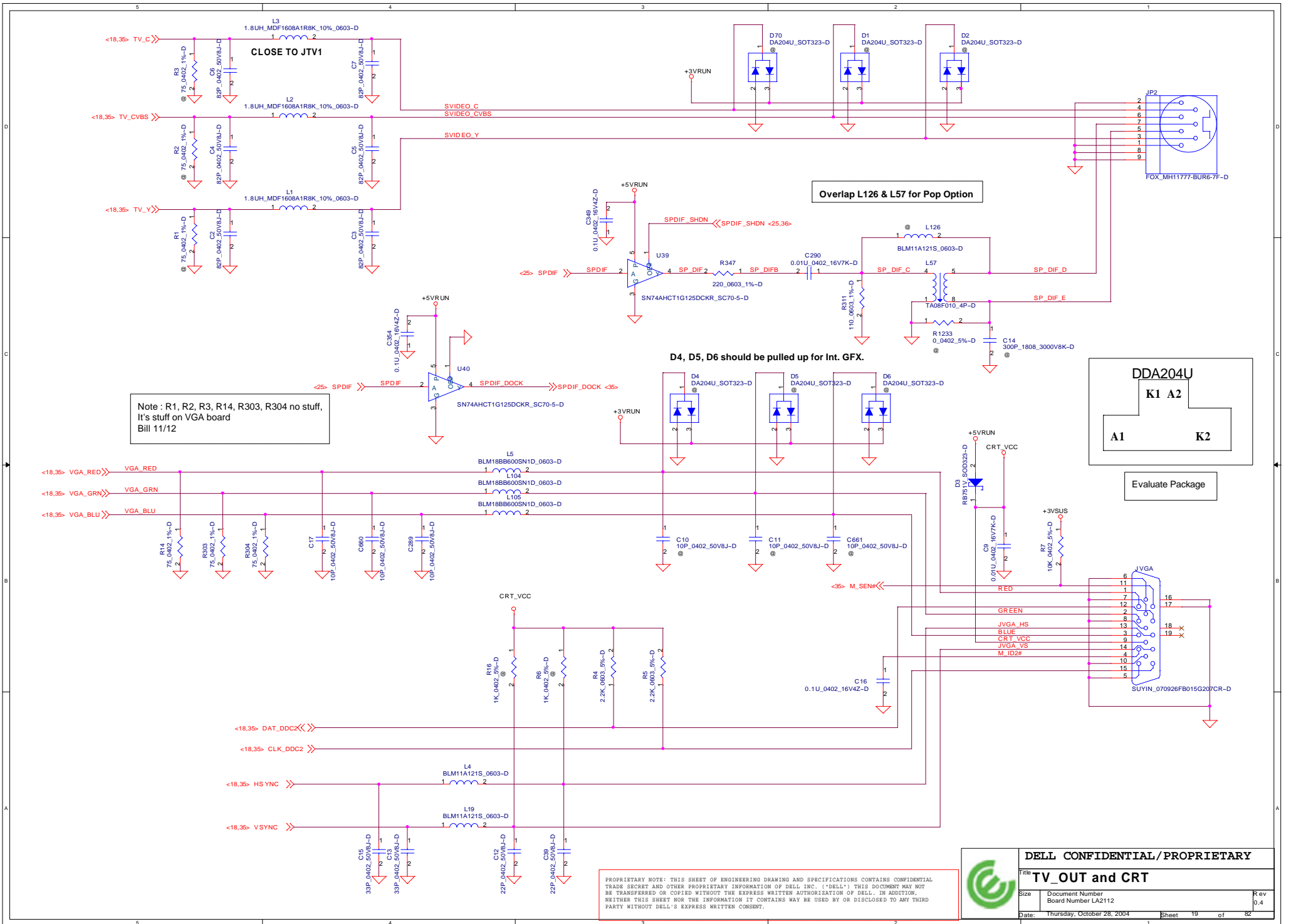
DELL CONFIDENTIAL/PROPRIETARY		
ITP Debug CONN. & FAN		
File	Document Number	Rev
	Board Number LA2112	0.4
Date:	Thursday, October 28, 2004	Sheet 15 of 82



JVID PIN.201, PIN.202, PIN.203 and PIN.204 will contact to GND

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

	DELL CONFIDENTIAL/PROPRIETARY		
	File: VGA connector		
Size	Document Number Board Number LA2112	Rev 0.4	
Date:	Thursday, October 28, 2004	Sheet	18 of 82



Note: R1, R2, R3, R14, R303, R304 no stuff,
It's stuff on VGA board
Bill 11/12

Overlap L126 & L57 for Pop Option

D4, D5, D6 should be pulled up for Int. GFX.

DDA204U

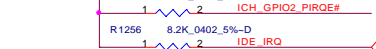
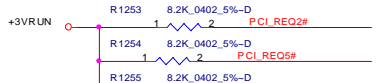
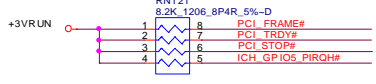
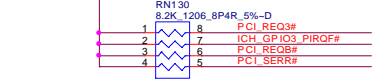
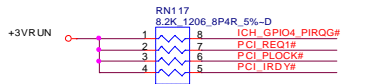
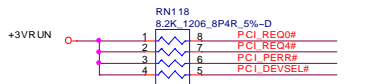
K1 A2

A1 K2

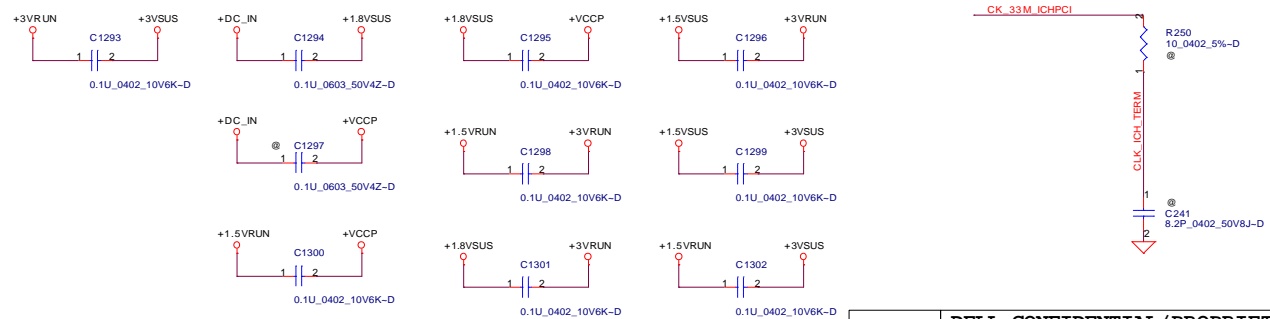
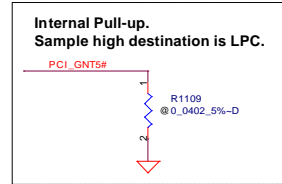
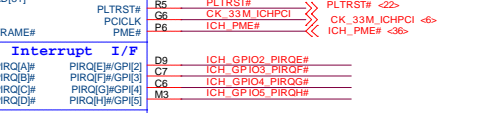
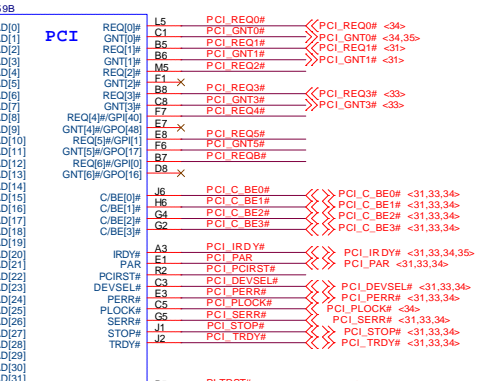
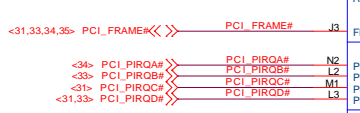
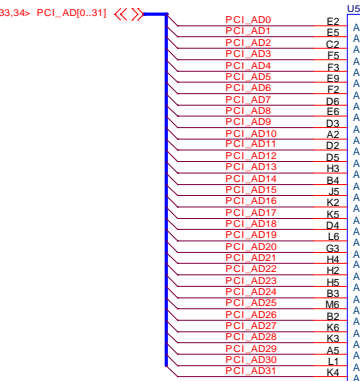
Evaluate Package

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
TV_OUT and CRT		
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 19 of 82



<<31,33,34> PCI_AD[0..31] <<>



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

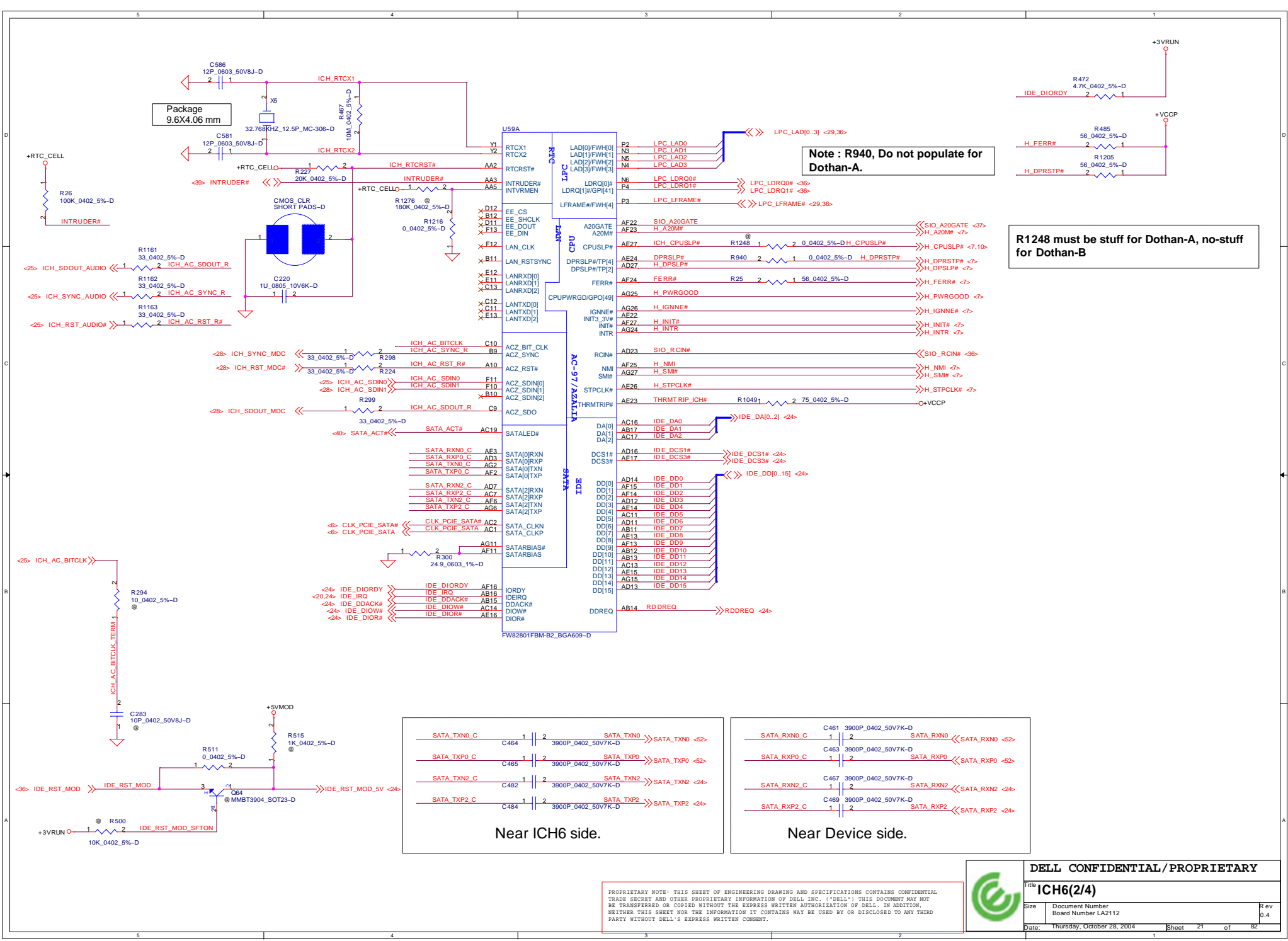
DELL CONFIDENTIAL/PROPRIETARY

File: **ICH6(1/4)**

Size: Document Number
Date: Thursday, October 28, 2004

Rev: 0.4

Sheet 20 of 82



Note : R940, Do not populate for Dothan-A.

R1248 must be stuff for Dothan-A, no-stuff for Dothan-B

Near ICH6 side.

SATA_TXN0_C	1	2	3900P_0402_50V7K-D	SATA_TXN0	>>>SATA_TXN0 <<<2>
SATA_TXP0_C	1	2	3900P_0402_50V7K-D	SATA_TXP0	>>>SATA_TXP0 <<<2>
SATA_TXN2_C	1	2	3900P_0402_50V7K-D	SATA_TXN2	>>>SATA_TXN2 <<<24>
SATA_TXP2_C	1	2	3900P_0402_50V7K-D	SATA_TXP2	>>>SATA_TXP2 <<<24>

Near Device side.

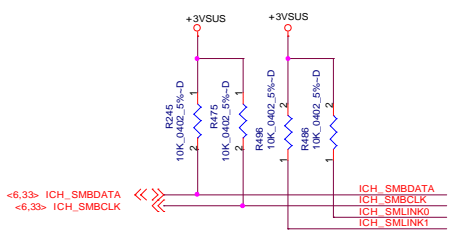
SATA_RXN0_C	1	2	3900P_0402_50V7K-D	SATA_RXN0	<<<SATA_RXN0 >>>2>
SATA_RXP0_C	1	2	3900P_0402_50V7K-D	SATA_RXP0	<<<SATA_RXP0 >>>2>
SATA_RXN2_C	1	2	3900P_0402_50V7K-D	SATA_RXN2	<<<SATA_RXN2 >>>24>
SATA_RXP2_C	1	2	3900P_0402_50V7K-D	SATA_RXP2	<<<SATA_RXP2 >>>24>

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

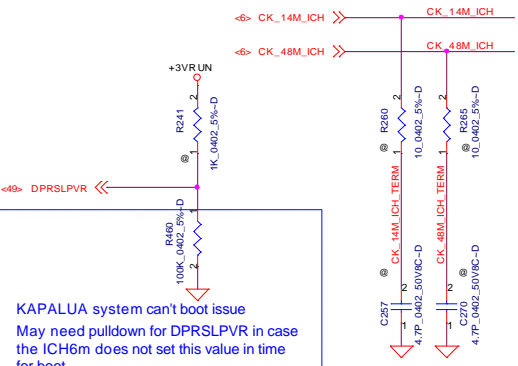
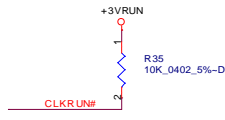
DELL CONFIDENTIAL/PROPRIETARY

File: **ICH6(2/4)**

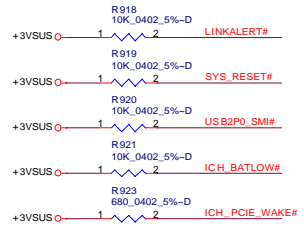
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 21 of 82



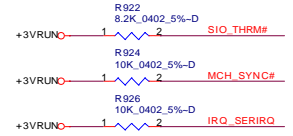
(PCI Express Wake Event)



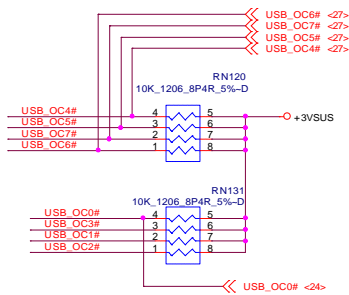
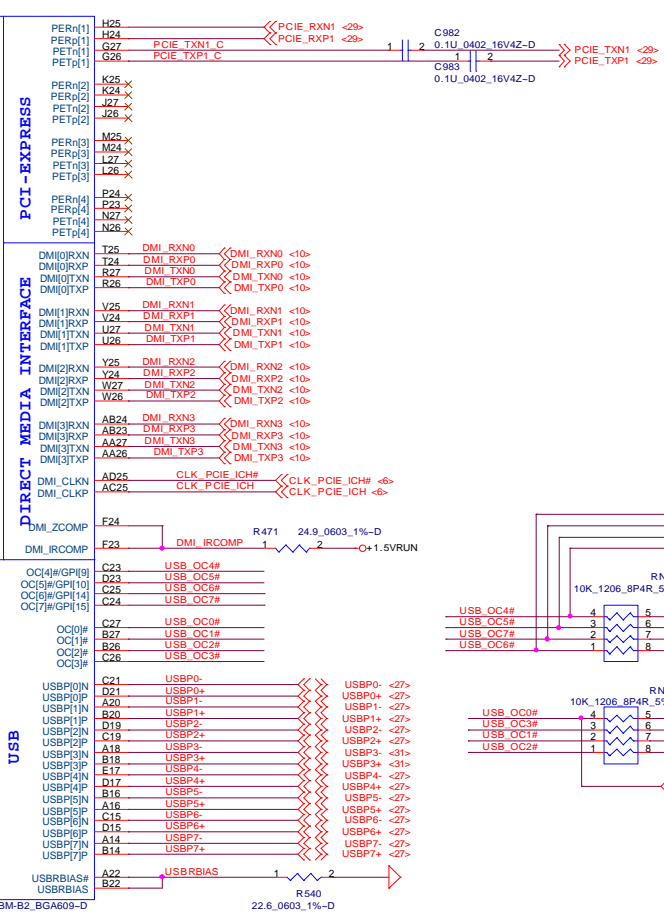
KAPALUA system can't boot issue
May need pulldown for DPRSLPVR in case the ICH6m does not set this value in time for boot.



Check List suggest pop 10/16



Signal	Pin	Component	Value
ICH_SMBCLK	W5	R1164	33.0kΩ 5%-D
ICH_SMBDATA	W6	R1164	33.0kΩ 5%-D
LINKALERT#	W4	R918	10kΩ 0.402 5%-D
SYS_RESET#	U2	R919	10kΩ 0.402 5%-D
USB2PO_SMI#	W6	R920	10kΩ 0.402 5%-D
ICH_BATLOW#	V2	R921	10kΩ 0.402 5%-D
ICH_PCIE_WAKE#	U1	R923	880.0kΩ 2 5%-D
LINKALERT#	W4	R918	10kΩ 0.402 5%-D
SYS_RESET#	U2	R919	10kΩ 0.402 5%-D
USB2PO_SMI#	W6	R920	10kΩ 0.402 5%-D
ICH_BATLOW#	V2	R921	10kΩ 0.402 5%-D
ICH_PCIE_WAKE#	U1	R923	880.0kΩ 2 5%-D
SIO_THRM#	T4	R922	8.2kΩ 0.402 5%-D
MCH_SYNC#	U6	R924	10kΩ 0.402 5%-D
IRO_SERIRQ	T6	R926	10kΩ 0.402 5%-D



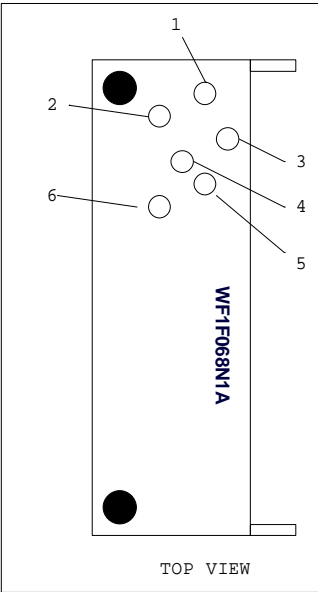
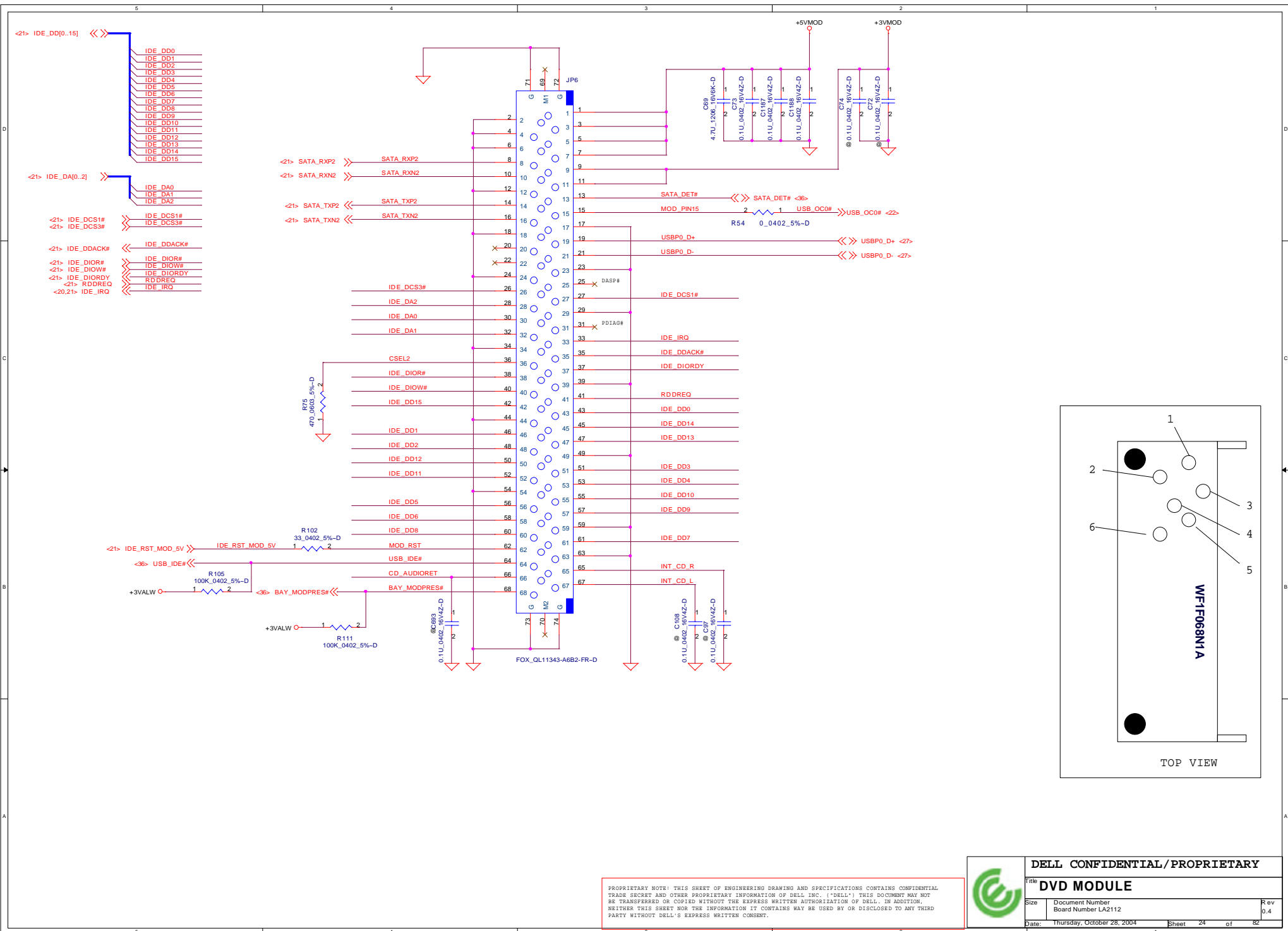
DELL CONFIDENTIAL/PROPRIETARY

File: ICH6(3/4)

Size: Document Number Board Number LA2112 Rev 0.4

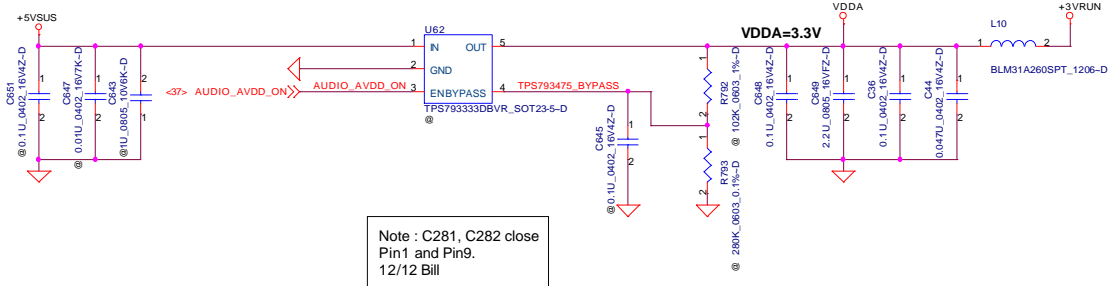
Date: Thursday, October 28, 2004 Sheet 22 of 82

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWINGS AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

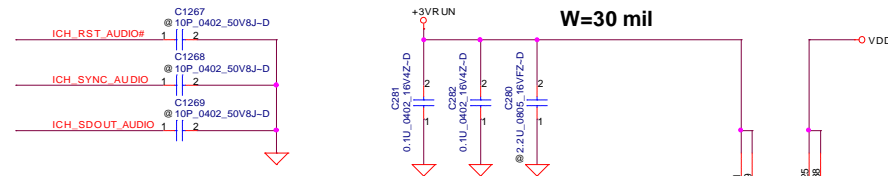
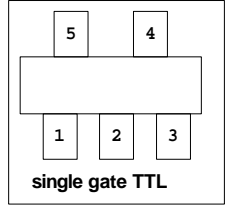
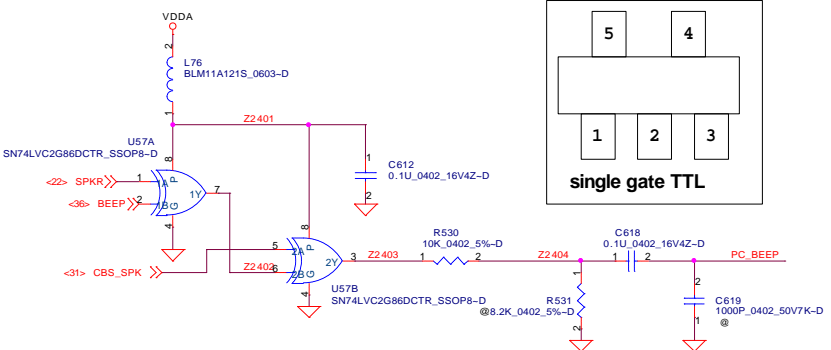


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
File: DVD MODULE		
Size:	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 24 of 82

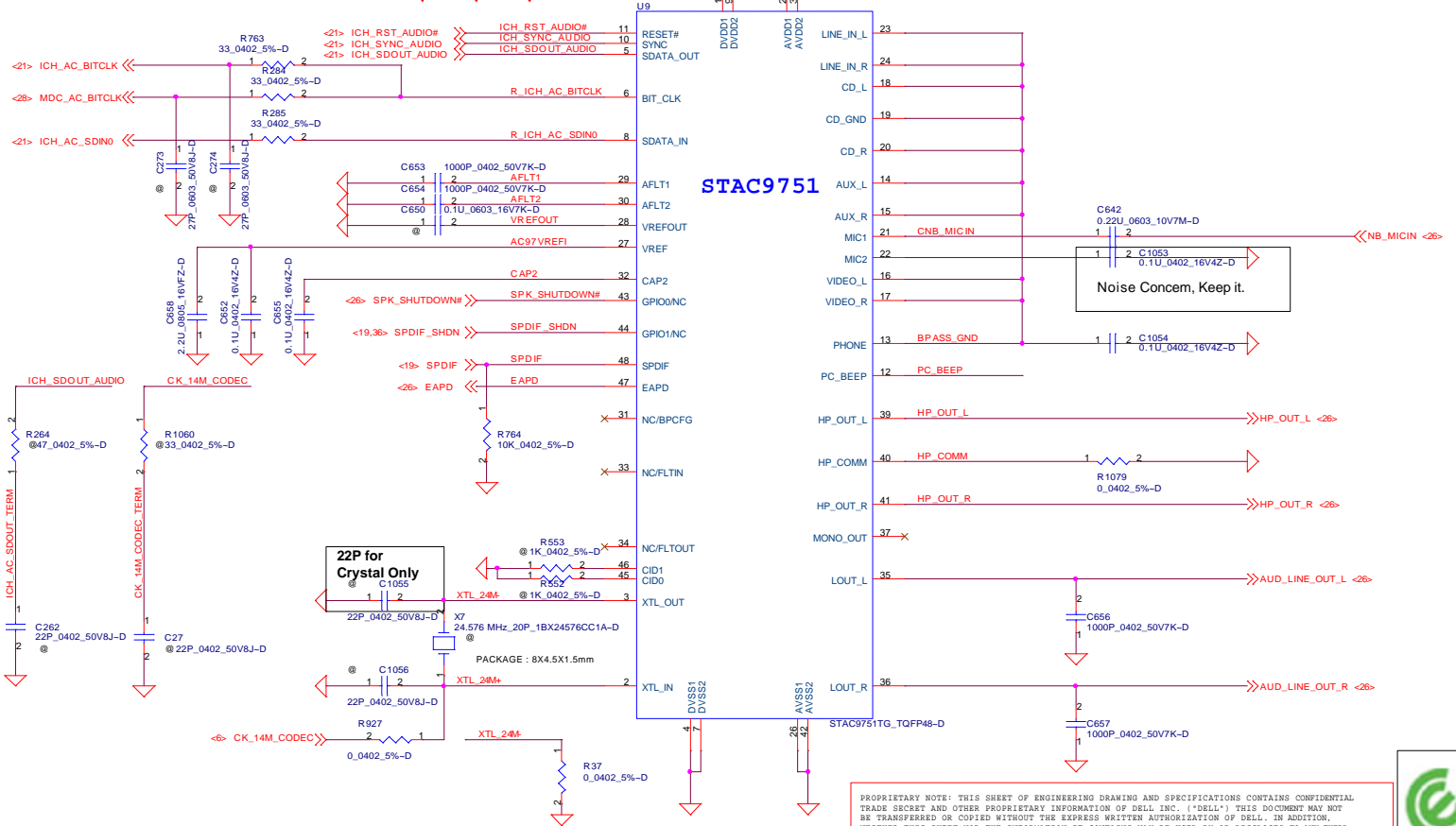


Note : C281, C282 close Pin1 and Pin9.
12/12 Bill



W=30 mil

STAC9751

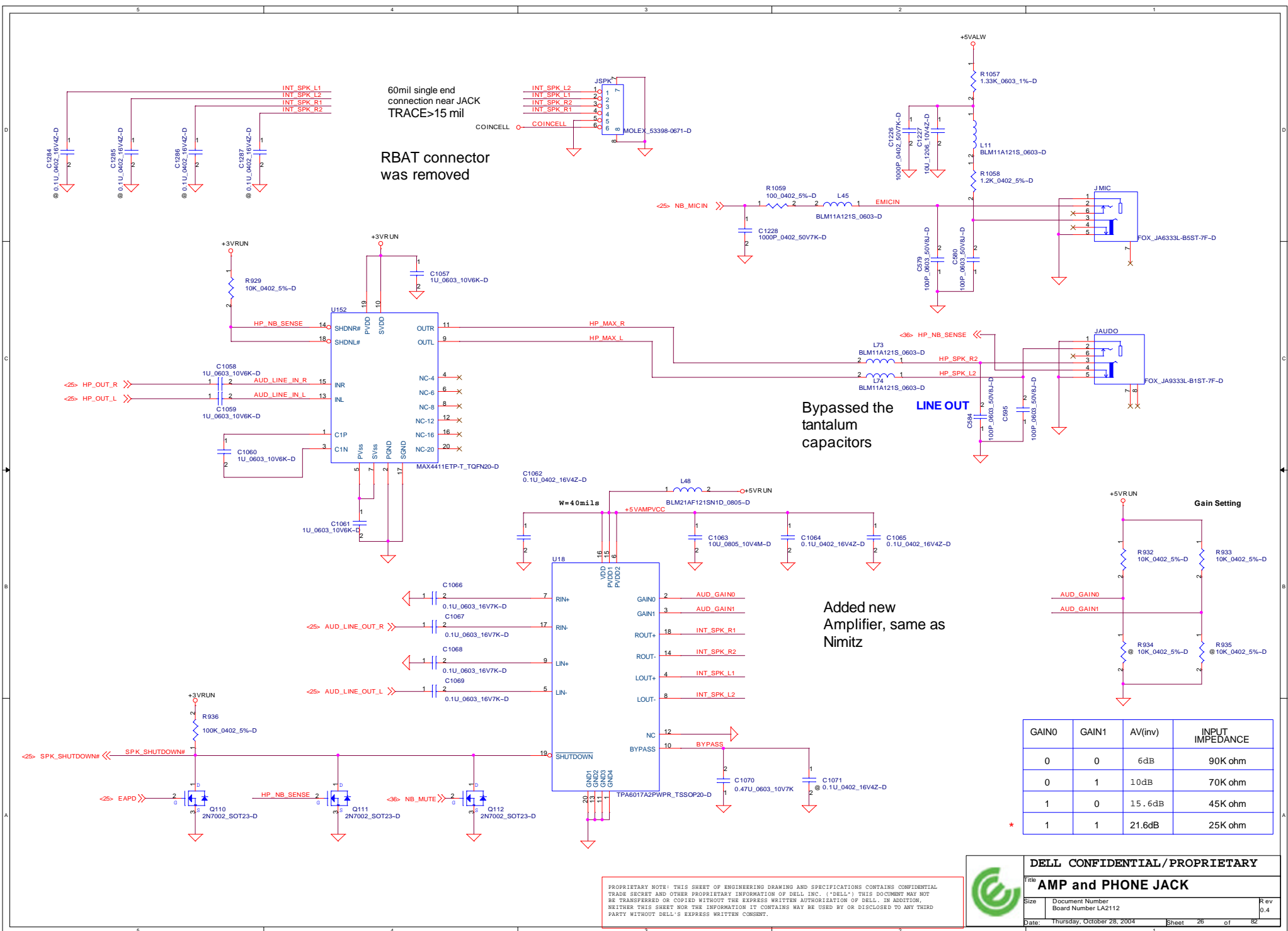


Noise Concern, Keep it.

CLOCK SOURCE	Pin46 CID1	Pin45 CID0	Pin3 XTL_OUT
14.318 MHz	OPEN	OPEN	GND
27 MHz	OPEN	1K	GND
48 MHz	1K	OPEN	GND
24.576 MHz	1K	1K	GND

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



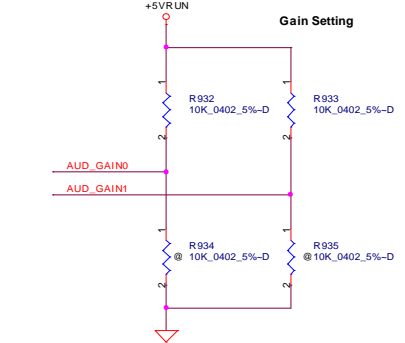


60mil single end connection near JACK
TRACE > 15 mil

RBAT connector was removed

Bypassed the tantalum capacitors

Added new Amplifier, same as Nimitz



GAIN0	GAIN1	AV(inv)	INPUT IMPEDANCE
0	0	6dB	90K ohm
0	1	1.0dB	70K ohm
1	0	15.6dB	45K ohm
1	1	21.6dB	25K ohm

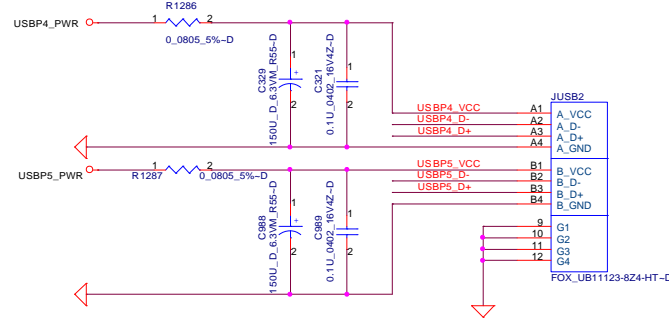
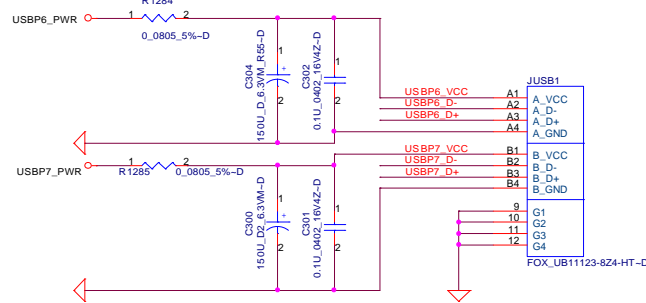
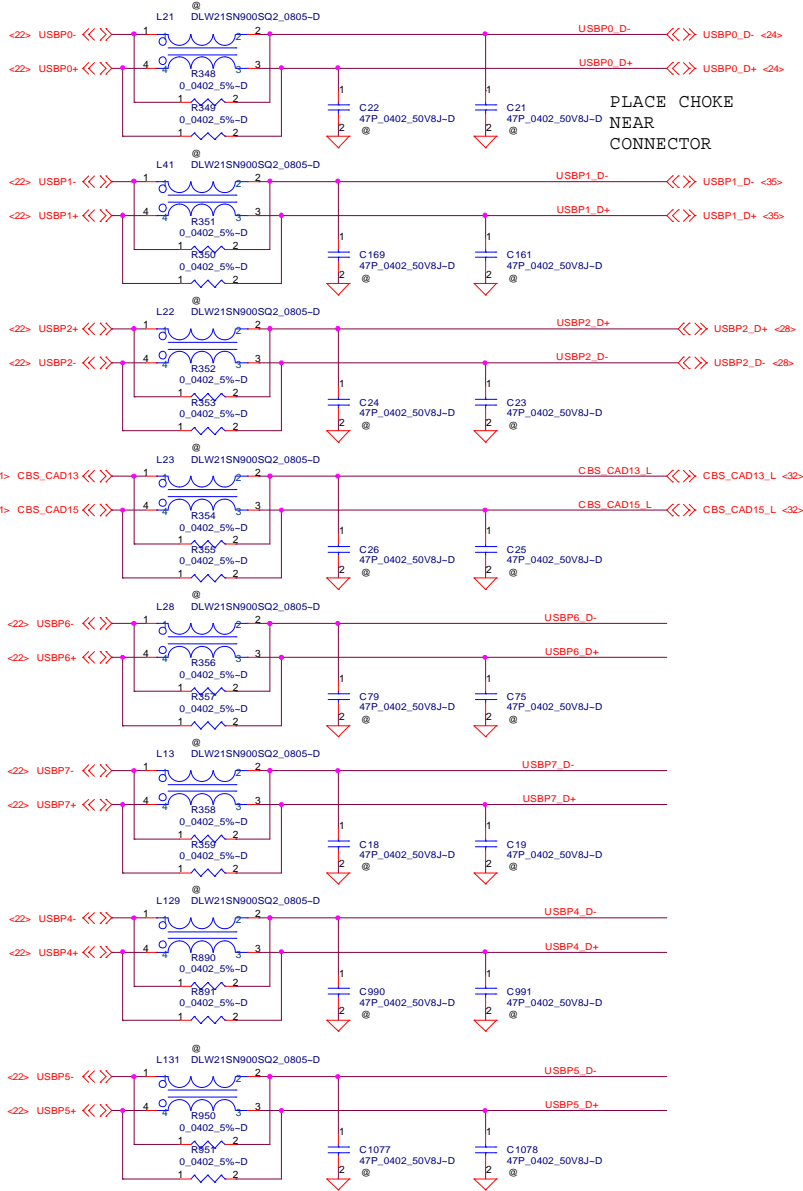
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY

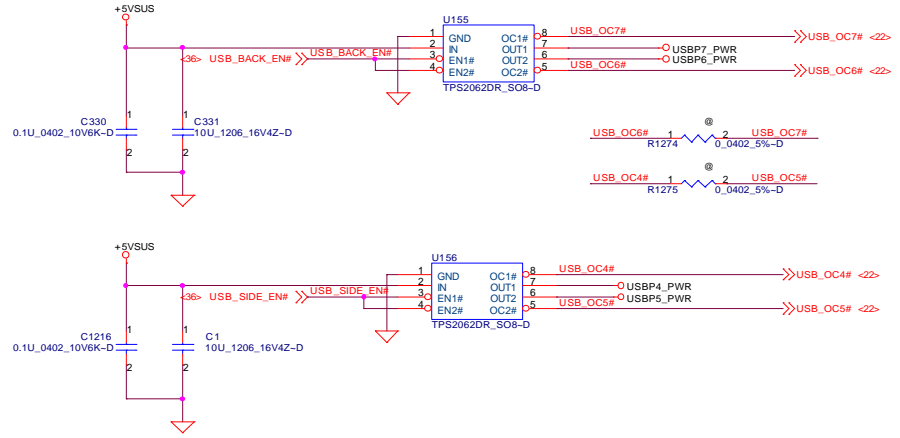
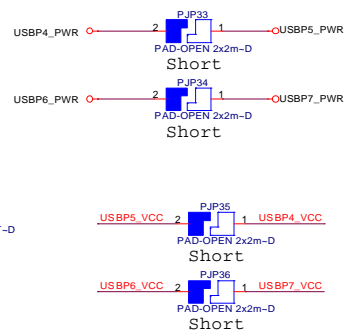
File: **AMP and PHONE JACK**

Size: Document Number Board Number LA2112 Rev 0.4

Date: Thursday, October 28, 2004 Sheet 26 of 82



USB PORT#	DESTINATION
0	FDD (module bay)
1	DOCK
2	MPCI (BlueTooth)
3	NEW Connector
4	USB Port 2(Top)
5	USB Port 2(Bottom)
6	USB Port 1(Top)
7	USB Port 1(Bottom)



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

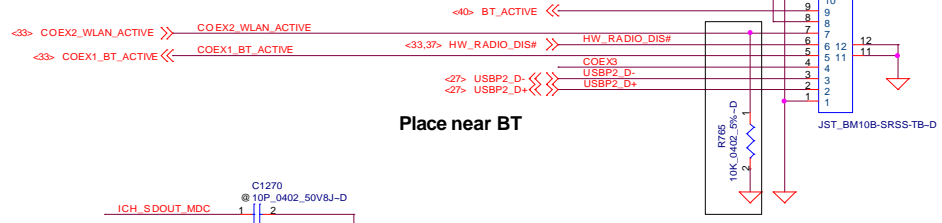
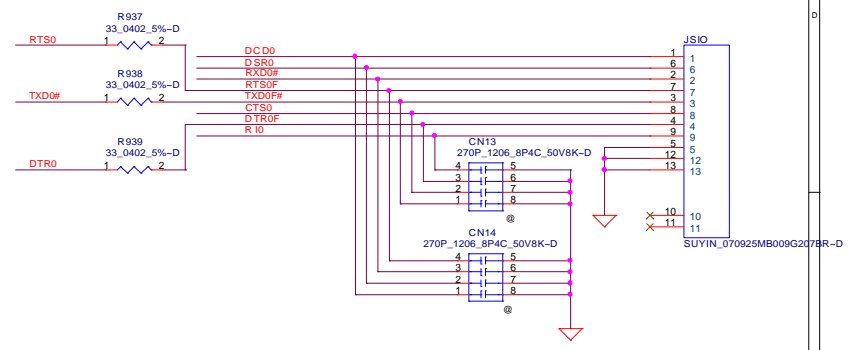
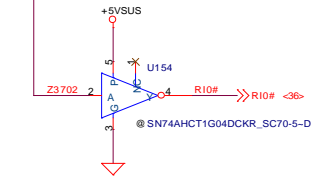
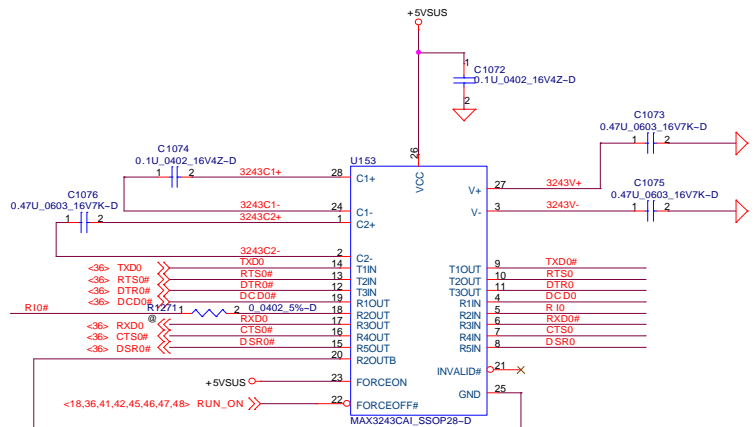
DELL CONFIDENTIAL/PROPRIETARY

Title: **USB 2.0**

Size: Document Number Board Number LA2112

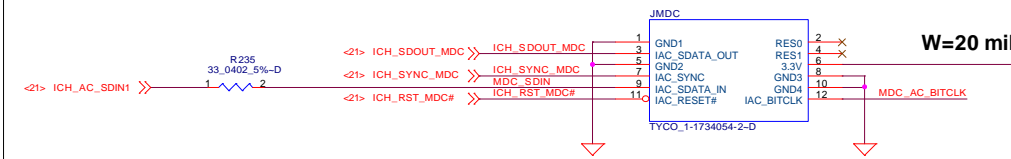
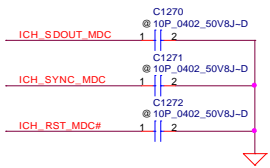
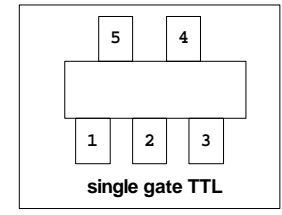
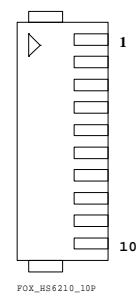
Date: Thursday, October 28, 2004 Sheet 27 of 82

Rev 0.4

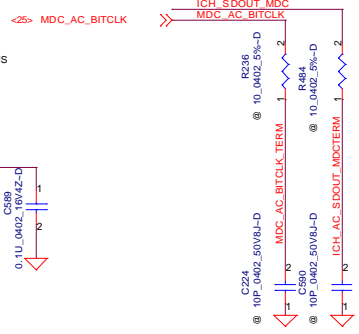


Place near BT

TOP view



W=20 mil



New MDC connector.

1	GND	RES	2
3	IAC_SDATA0	RES	4
5	GND	3.3V	6
7	IAC_SYNC	GND	8
9	IAC_SDATAIN	GND	10
11	IAC_RESET#	IAC_BITCLK	12

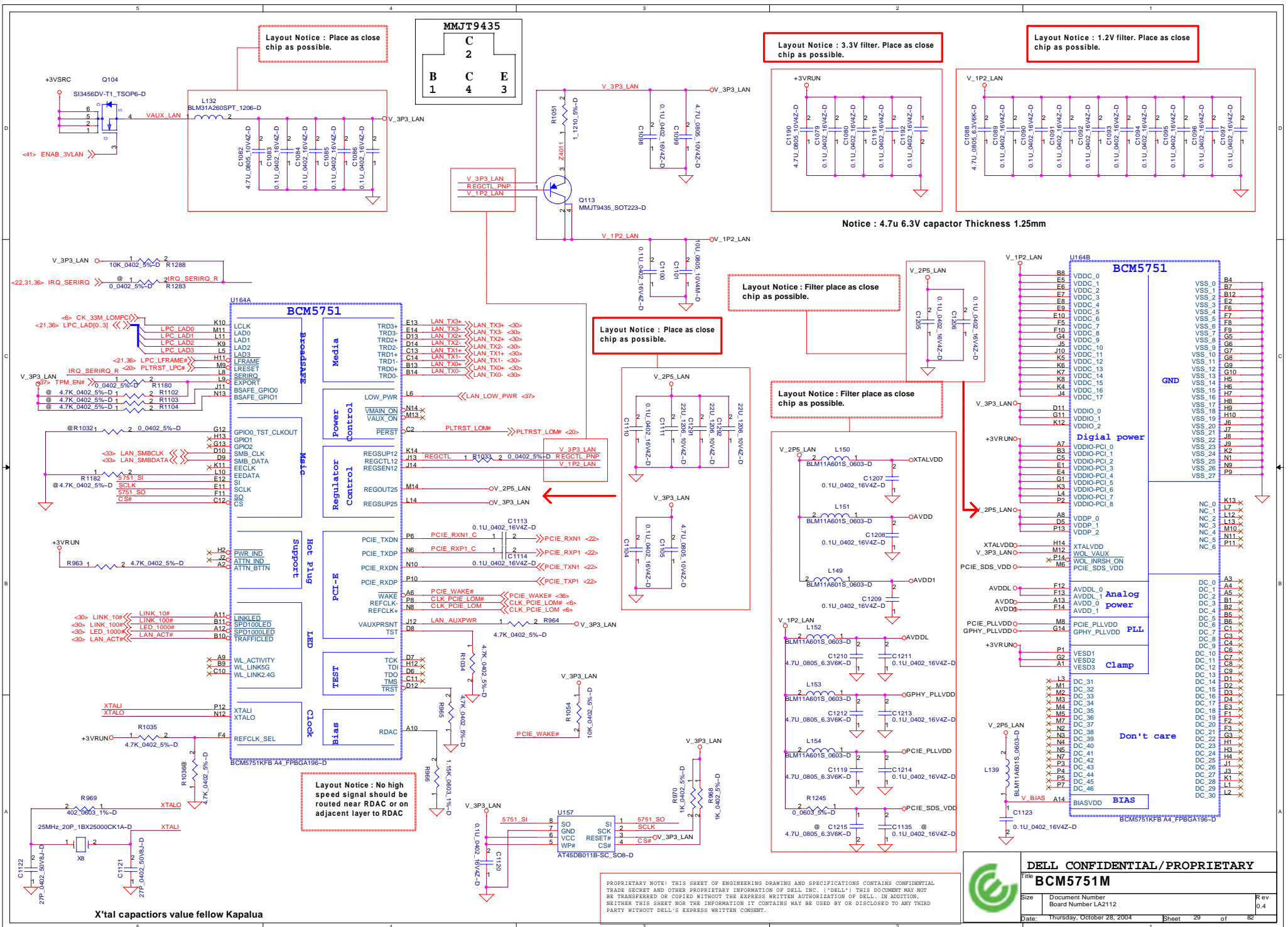
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY

Title: **BT PORT and MDC**

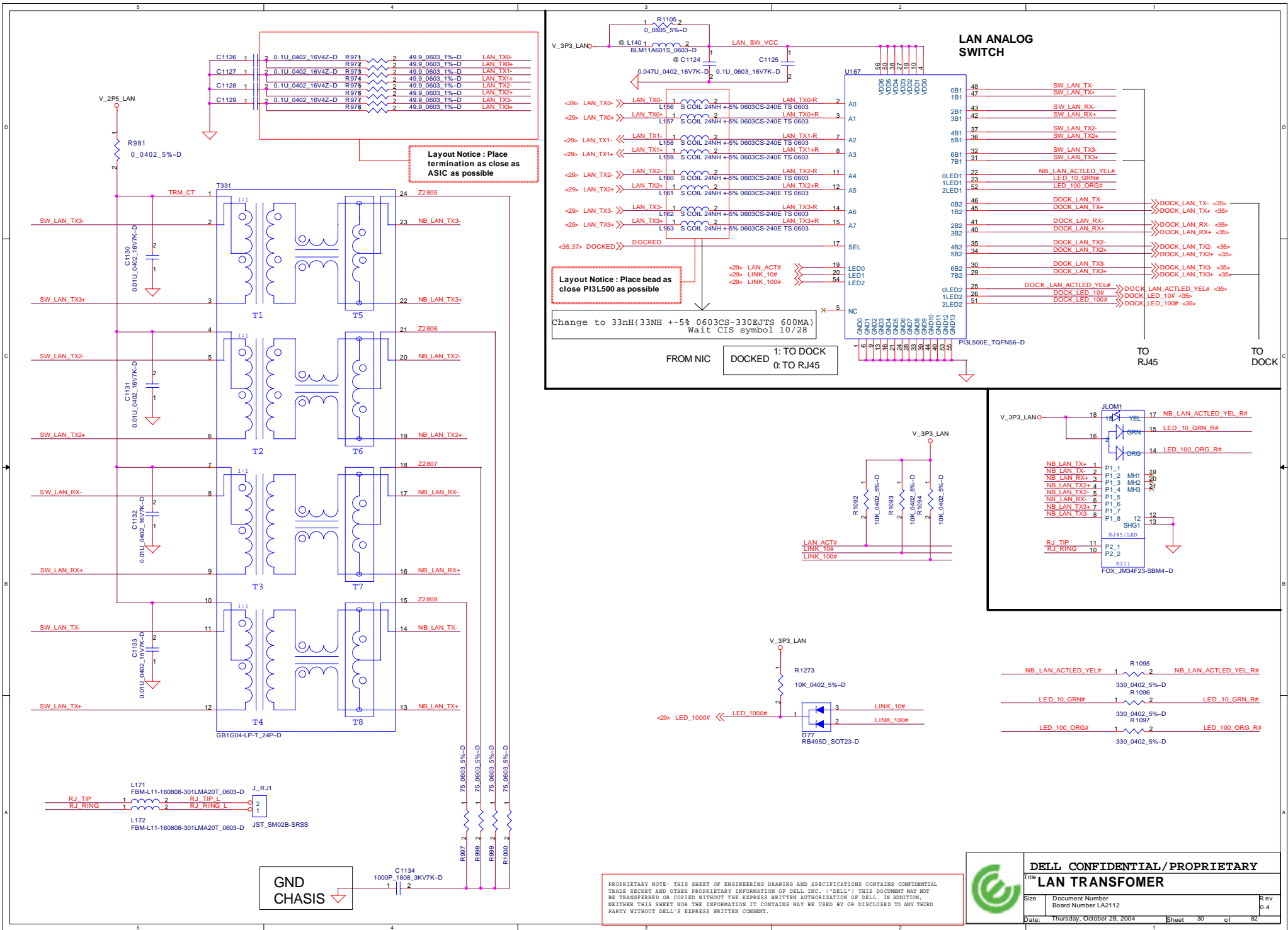
Size: Document Number Board Number LA2112 Rev 0.4

Date: Thursday, October 28, 2004 Sheet 28 of 82



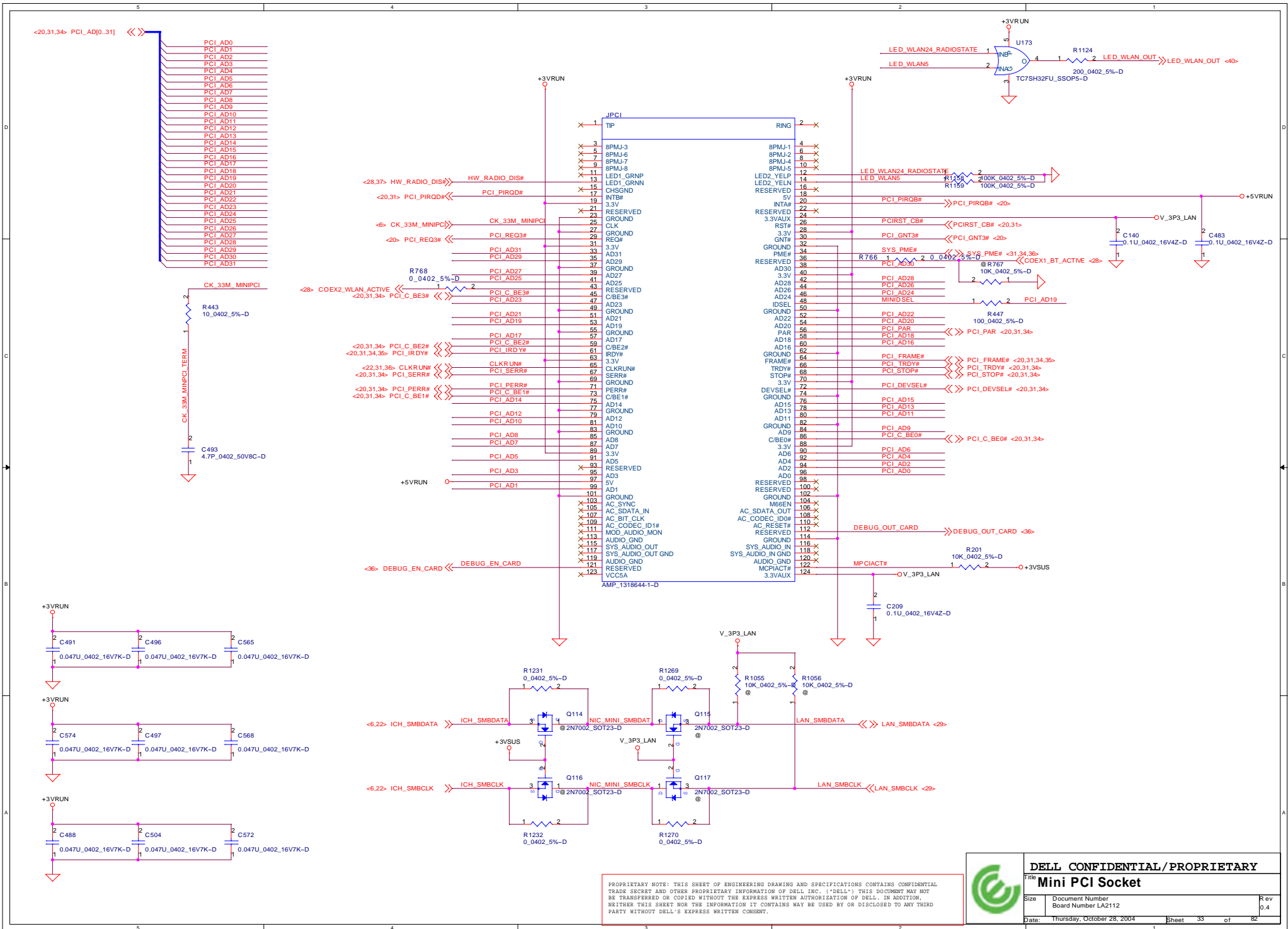
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

X'tal capacitors value fellow Kapitalua




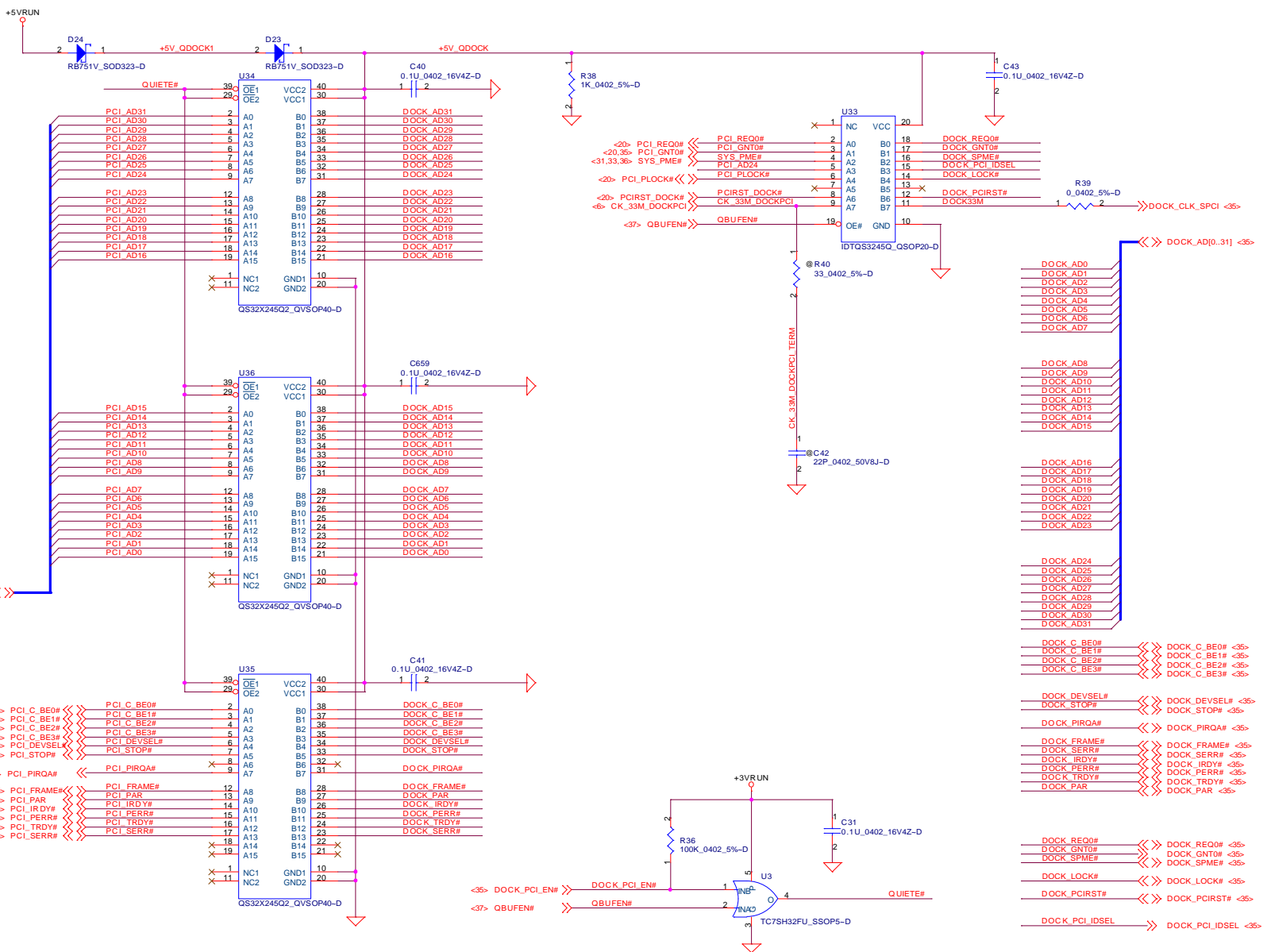
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
LAN TRANSFORMER		
File:	Document Number	Rev
	Board Number LA2112	0.4
Date:	Thursday, October 28, 2004	Sheet 30 of 82



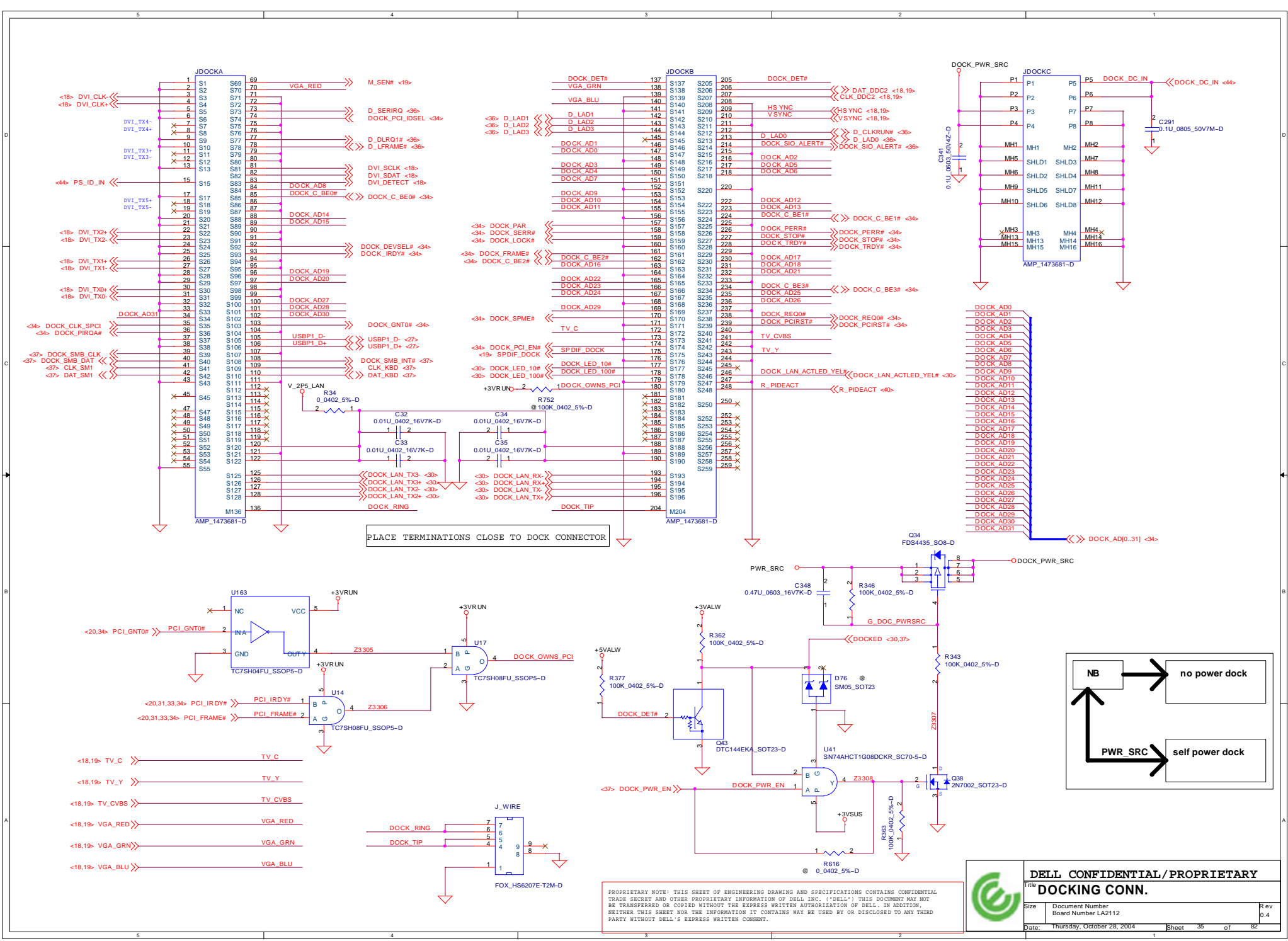
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

			DELL CONFIDENTIAL/PROPRIETARY	
			Mini PCI Socket	
Size	Document Number	Rev		
	Board Number LA2112	0.4		
Date:	Thursday, October 28, 2004	Sheet	33	of 82



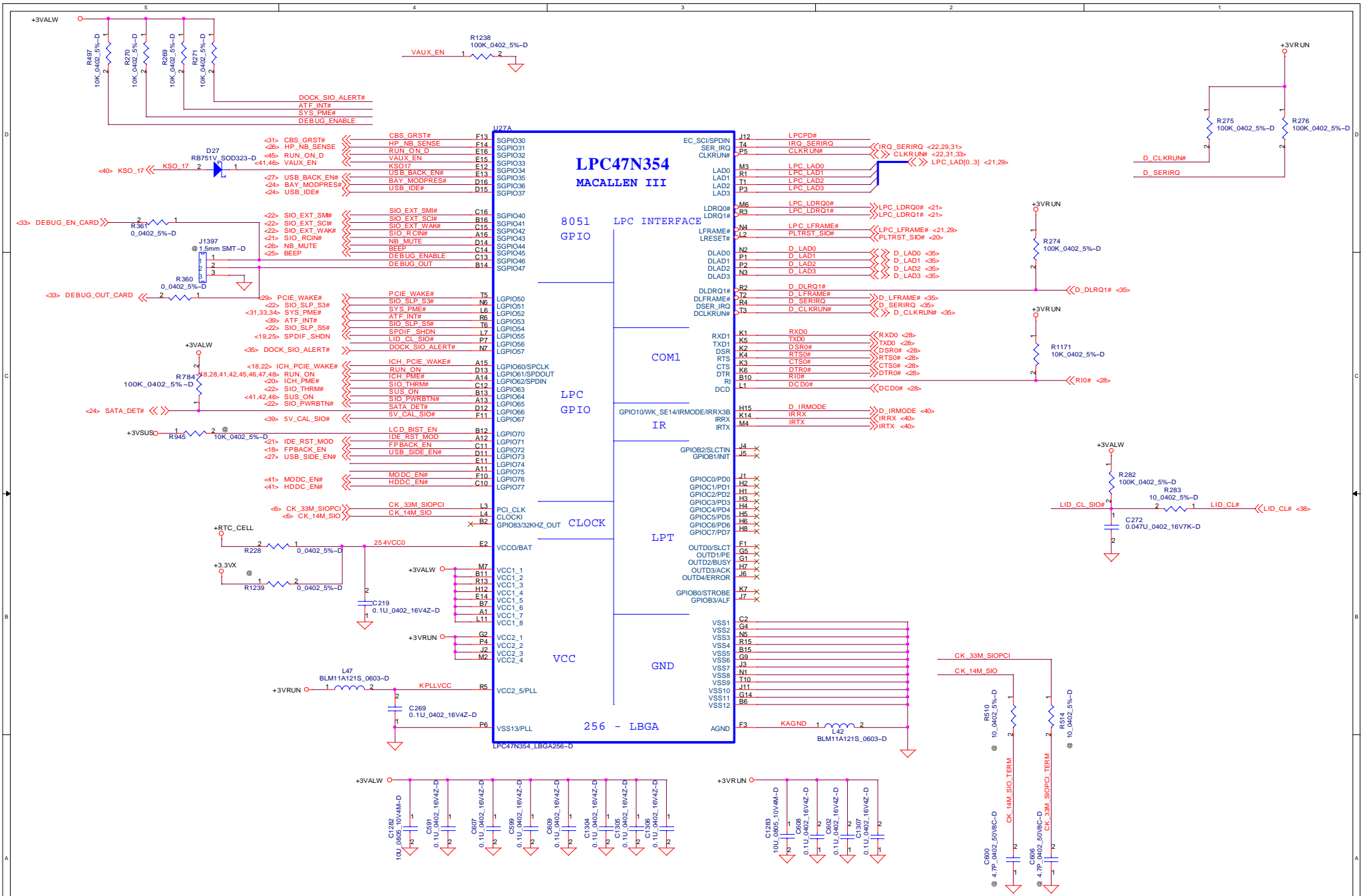
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

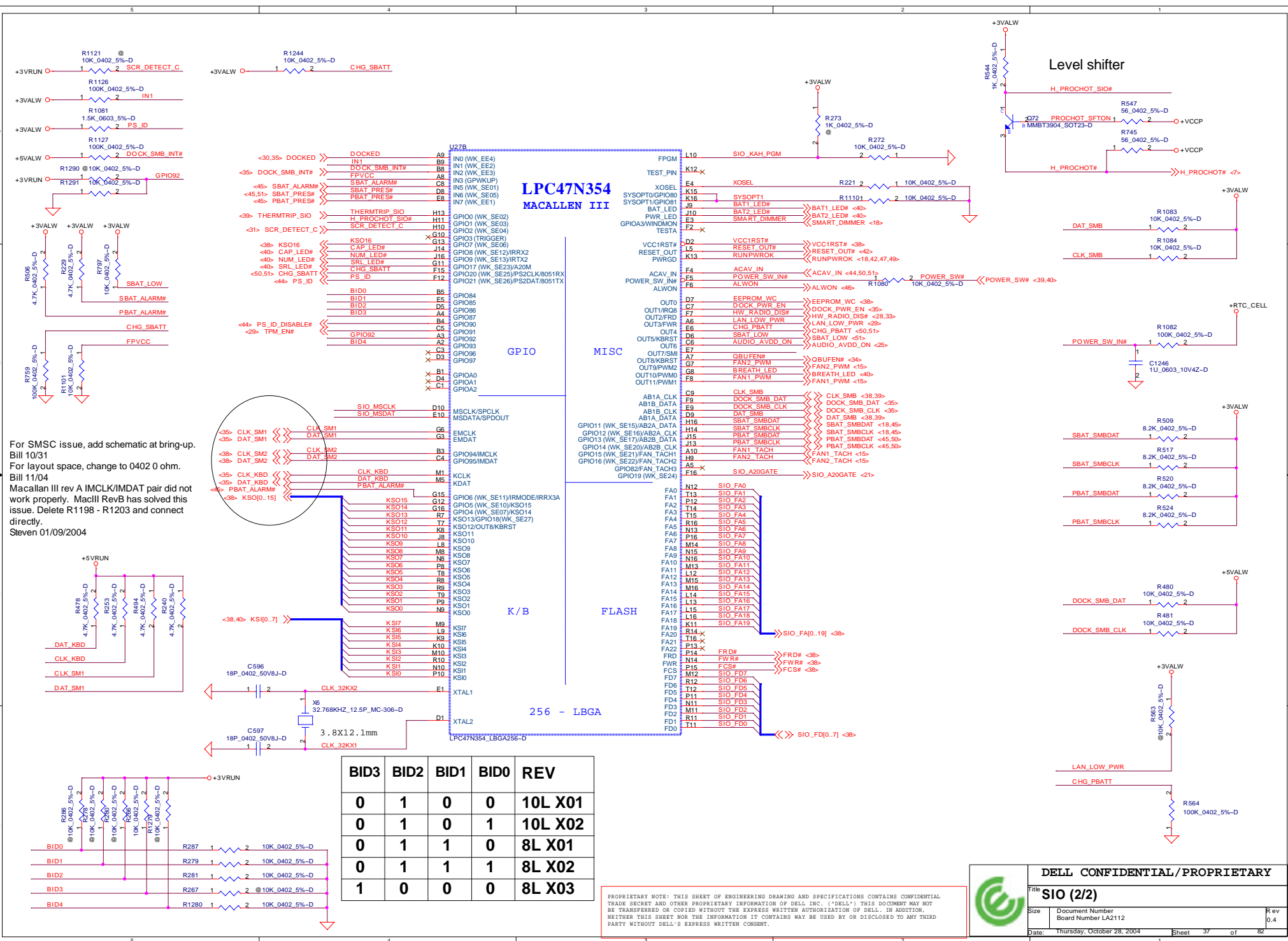
	DELL CONFIDENTIAL/PROPRIETARY	
	DOCKING BUFFER	
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 34 of 82



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWINGS AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.





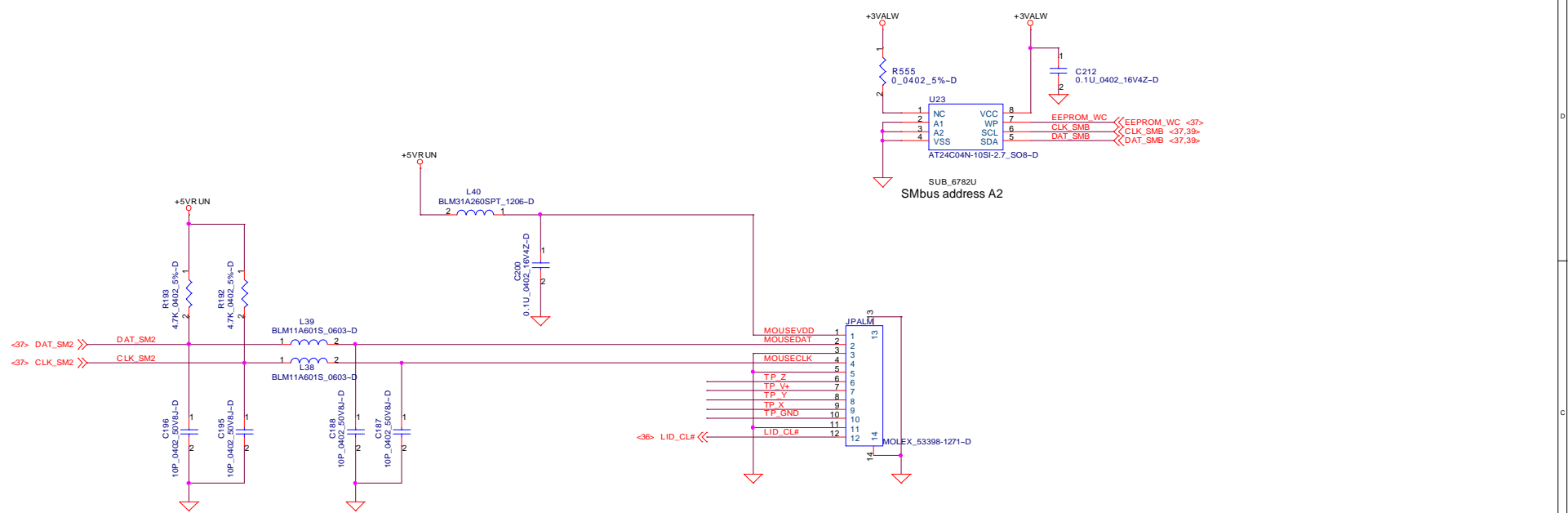


For SMC issue, add schematic at bring-up.
 Bill 10/31
 For layout space, change to 0402 0 ohm.
 Bill 11/04
 Macallen III rev A IMCLK/IMDAT pair did not work properly. MacII RevB has solved this issue. Delete R1198 - R1203 and connect directly.
 Steven 01/09/2004

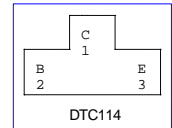
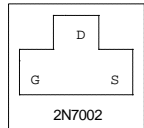
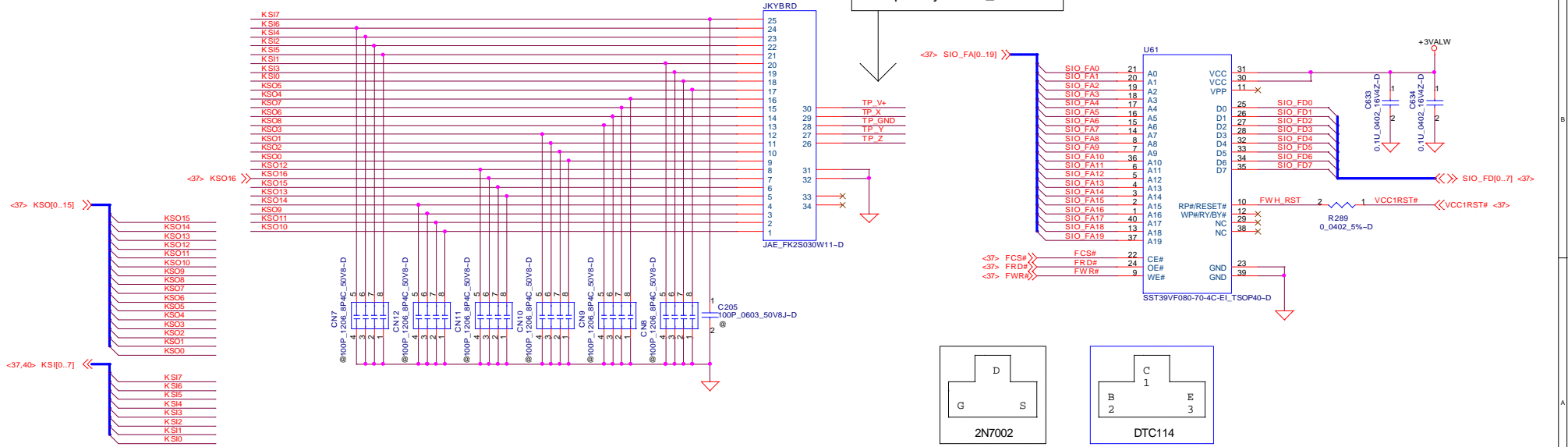
BID3	BID2	BID1	BID0	REV
0	1	0	0	10L X01
0	1	0	1	10L X02
0	1	1	0	8L X01
0	1	1	1	8L X02
1	0	0	0	8L X03

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.





Keep no noise coupled,
Especially the TP_GND



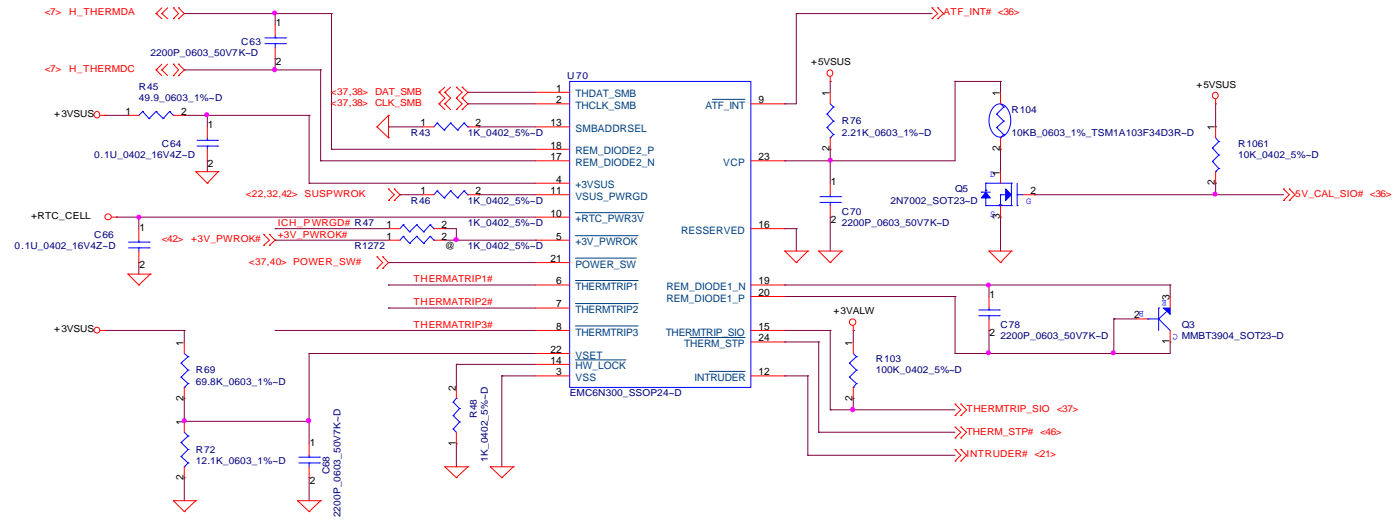
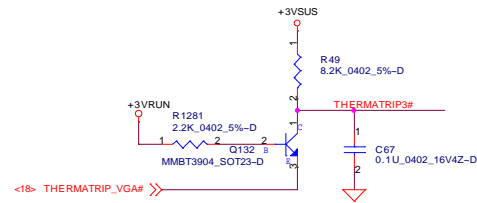
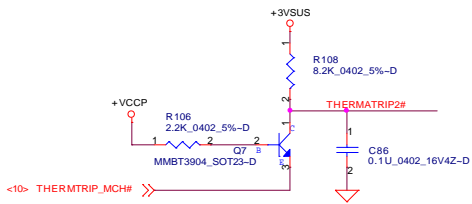
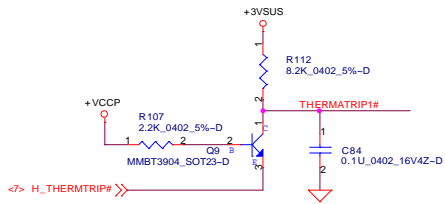
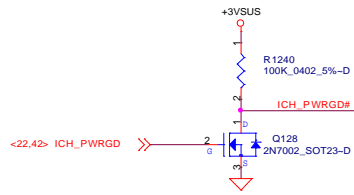
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSMITTED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY

INT KB

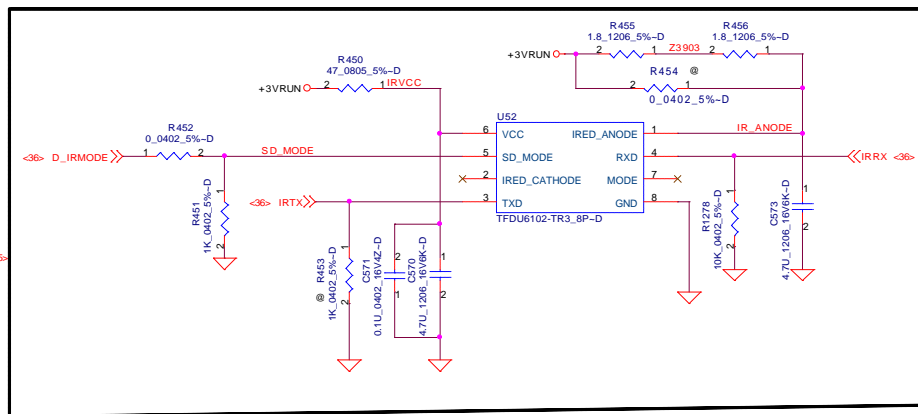
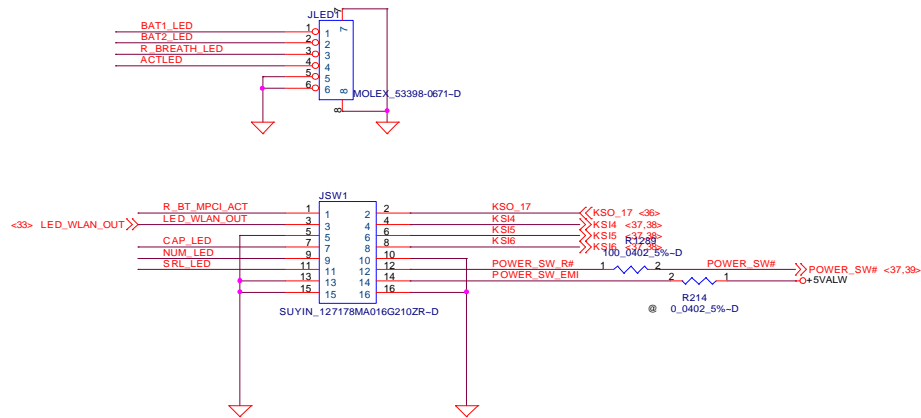
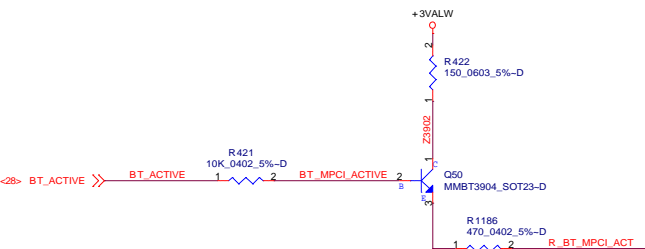
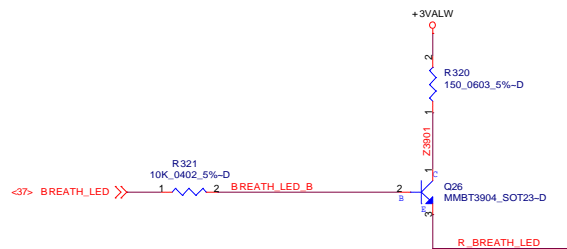
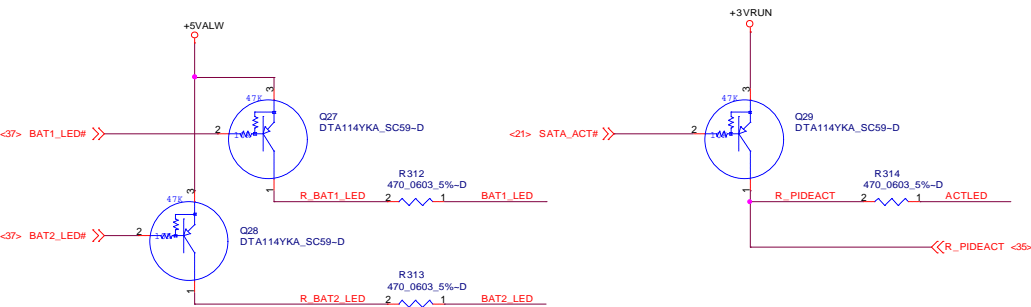
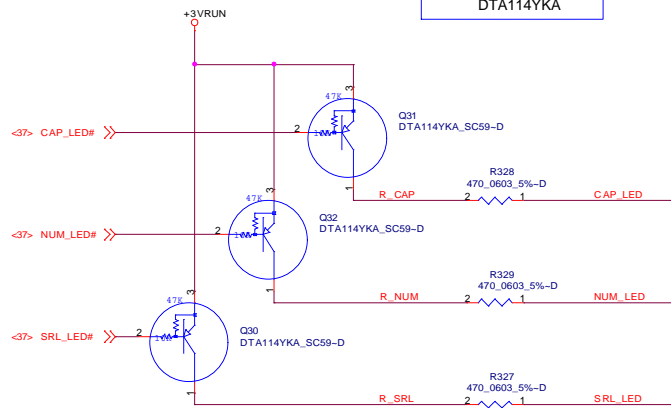
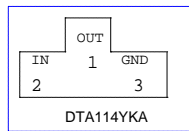
Date: Thursday, October 28, 2004

Sheet 38 of 82



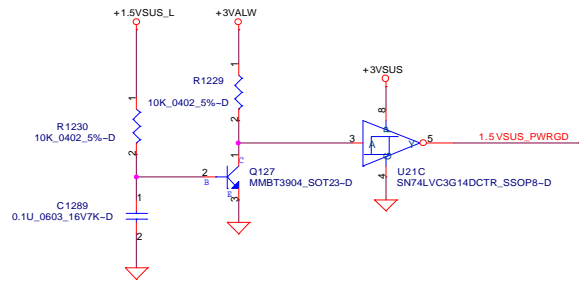
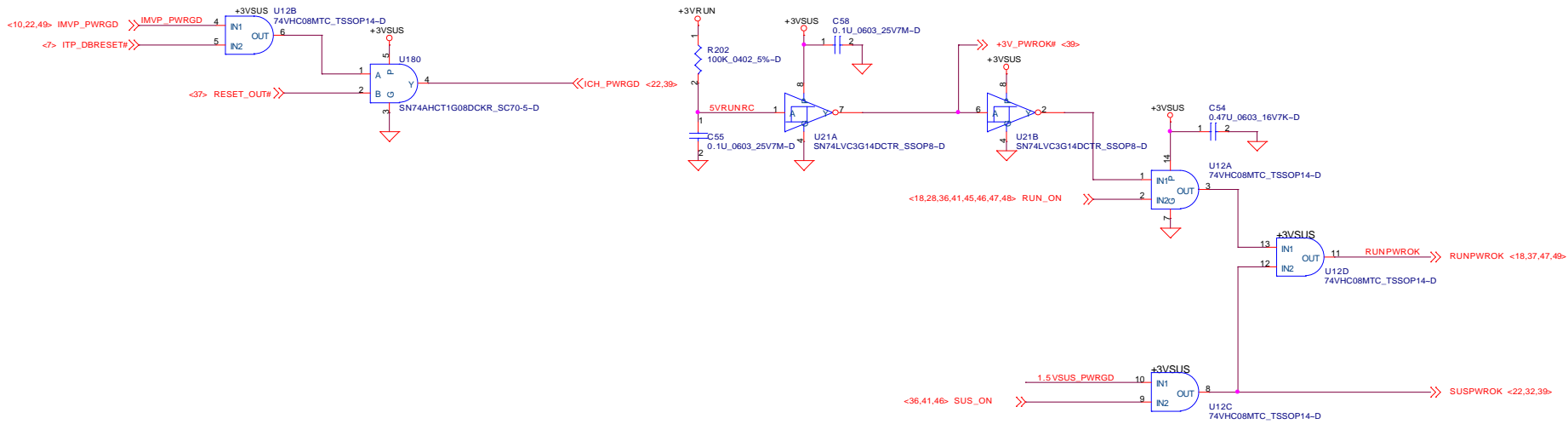
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
Thermtrip		
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 39 of 82




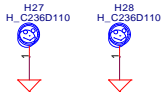
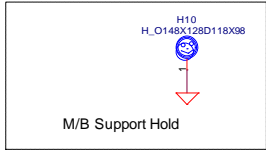
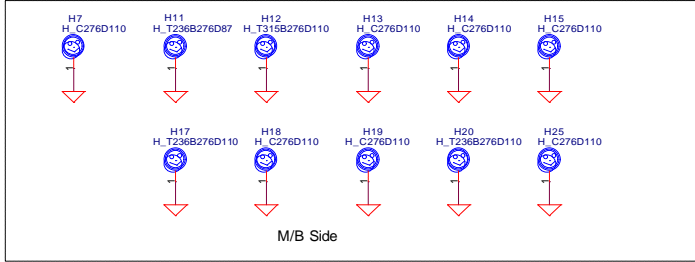
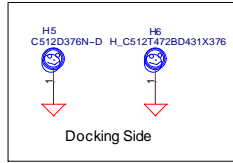
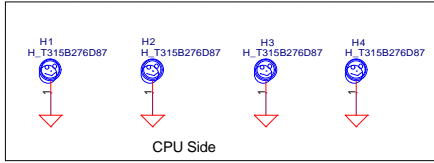
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
JLED/IR/PS2		
File	Document Number	Rev
	Board Number LA2112	0.4
Date:	Thursday, October 28, 2004	Sheet 40 of 82

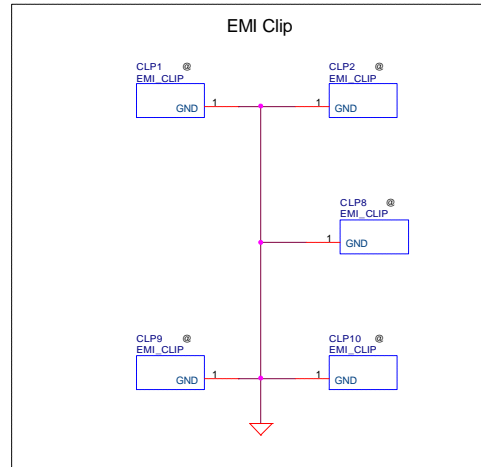
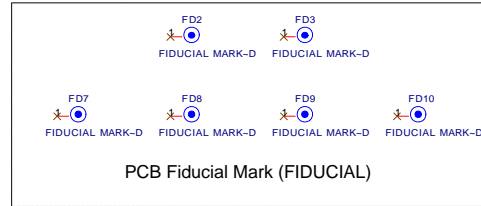
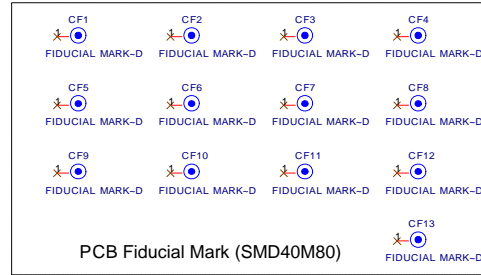


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

			DELL CONFIDENTIAL/PROPRIETARY		
			Power Sequence		
File	Document Number				Rev
Size	Board Number LA2112				0.4
Date:	Thursday, October 28, 2004	Sheet	42	of	82

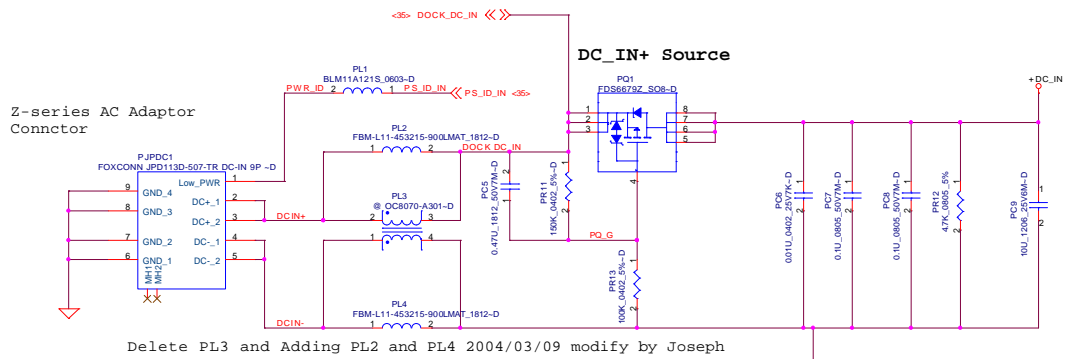
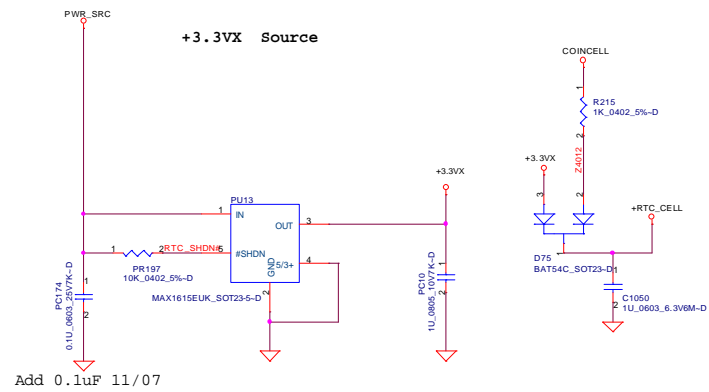
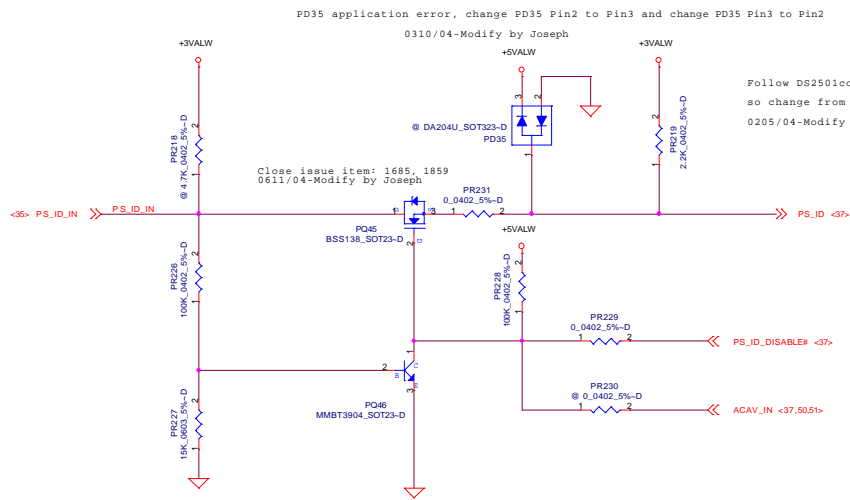


Fiducial Mark



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

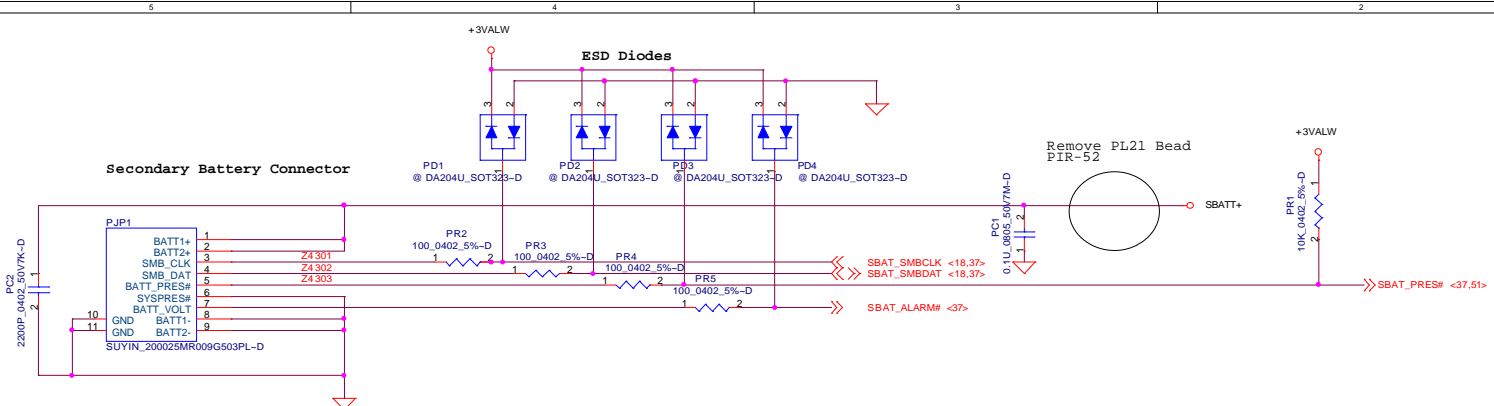
	DELL CONFIDENTIAL/PROPRIETARY	
	PAD and Standoff	
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 43 of 82



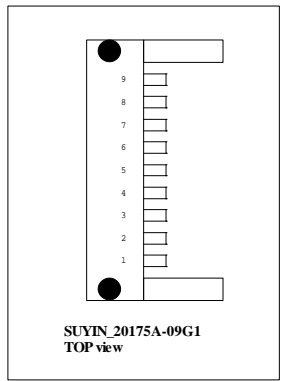
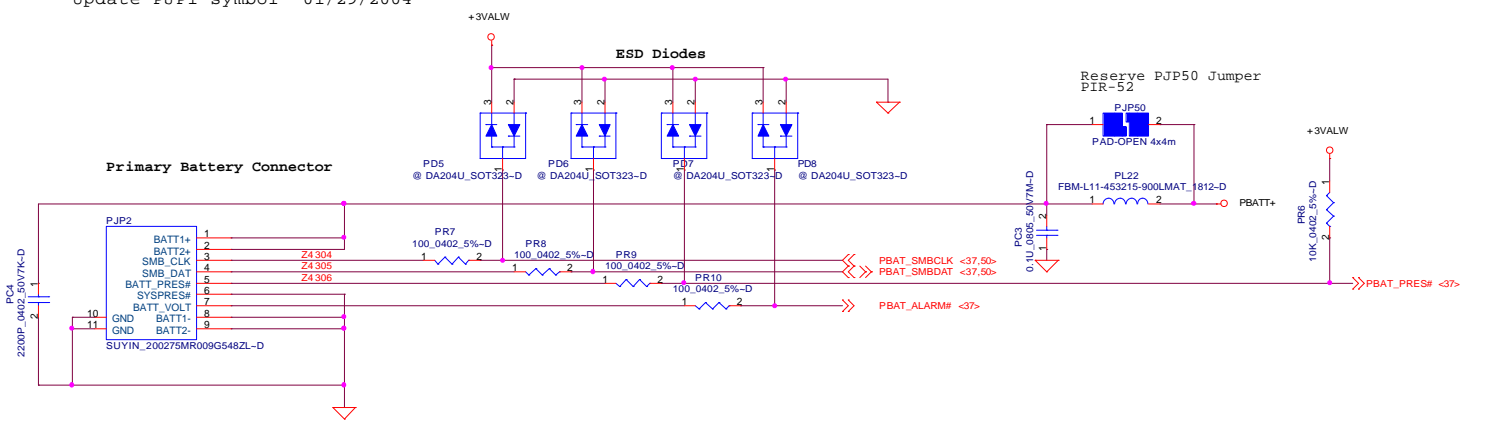
THE POINT
NOTE: *THE POINT LOCATED
AT PS MODULE

		DELL CONFIDENTIAL/PROPRIETARY	
		+DCIN	
Size	Document Number	Rev	
	Board Number LA2112	0.4	
Date:	Thursday, October 28 2004	Sheet	44 of 82

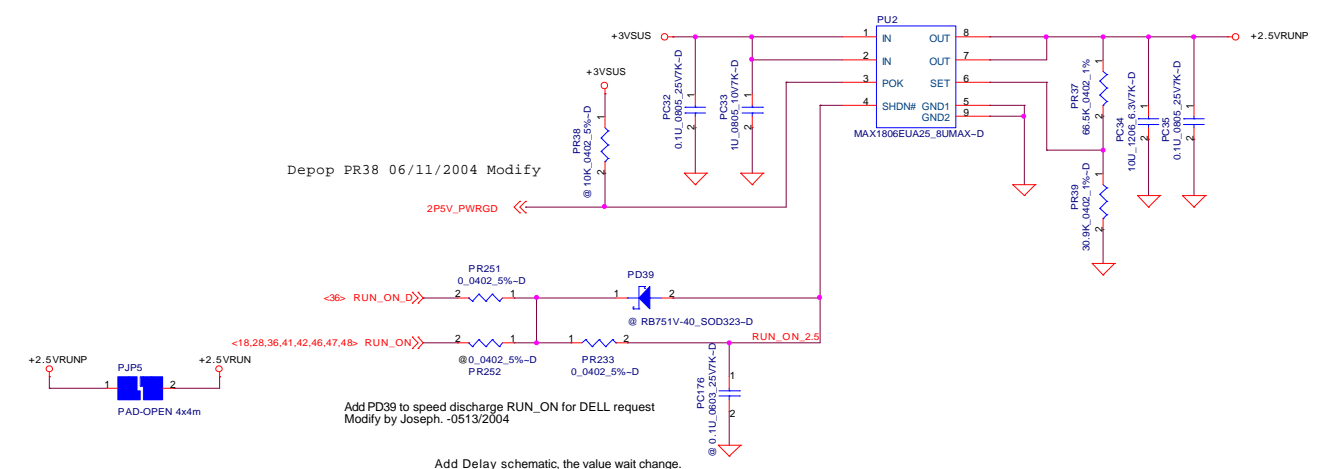
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



Update PJP1 symbol -01/29/2004



+2.5VRUN $R1=R2 * (V_o / 0.8 - 1)$, R2:25K~100K.



Depop PR38 06/11/2004 Modify

Add PD39 to speed discharge RUN_ON for DELL request
Modify by Joseph. -0513/2004

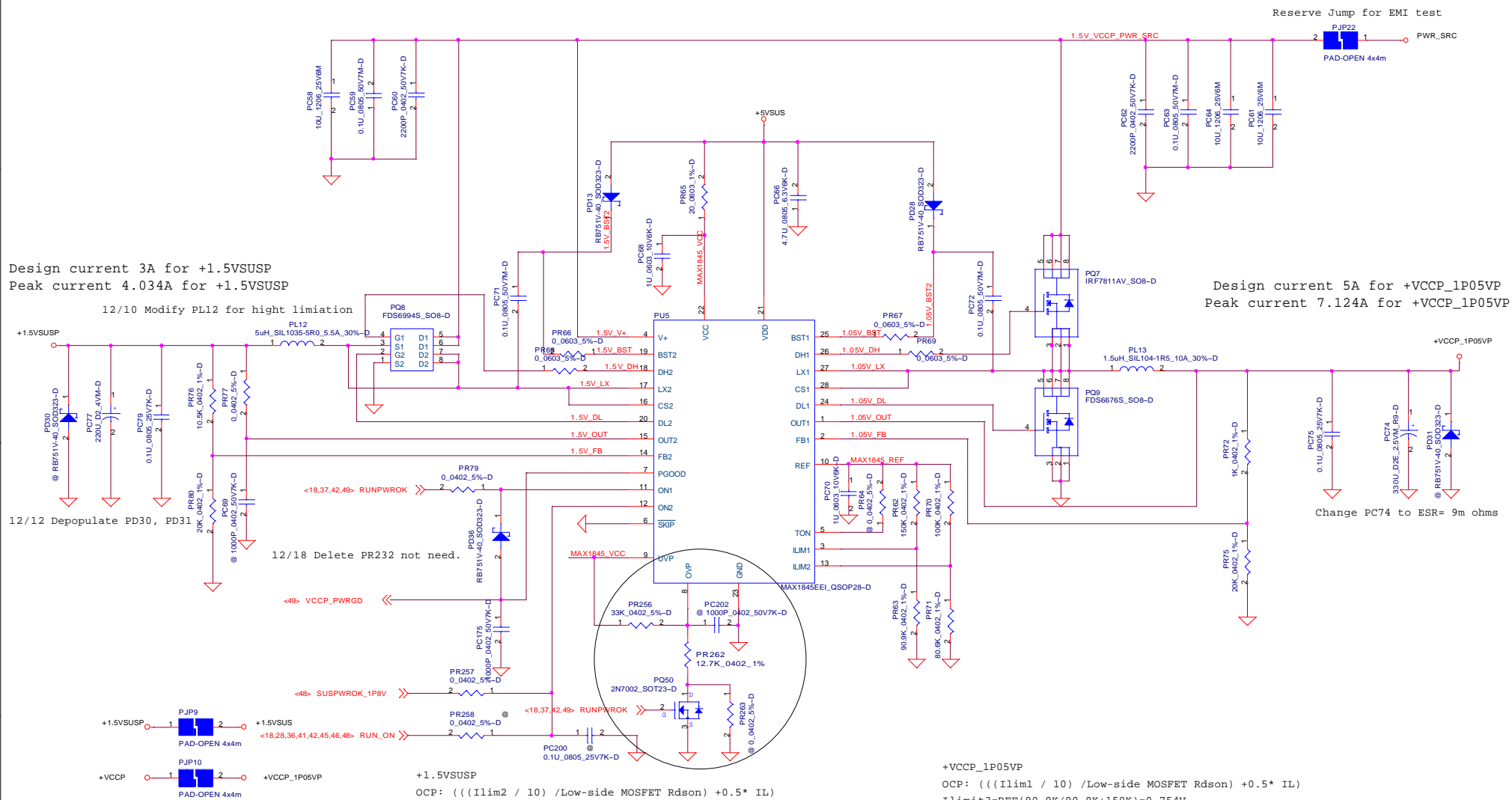
Add Delay schematic, the value wait change.
12/16 Change to PWR materials

Change PR233 to achieve proper 1ms powerup delay.
Modify PR233 from 10 k to 27k by Joseph. -02/05

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
File	Battery Conn./+2.5V	
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 45 of 82

+1.5VSUSP / +VCCP_1P05VP



Design current 3A for +1.5VSUSP
Peak current 4.034A for +1.5VSUSP

Design current 5A for +VCCP_1P05VP
Peak current 7.124A for +VCCP_1P05VP

12/10 Modify PL12 for high limitation

12/12 Depopulate PD30, PD31

12/18 Delete PR232 not need.

Change PC74 to ESR= 9m ohms

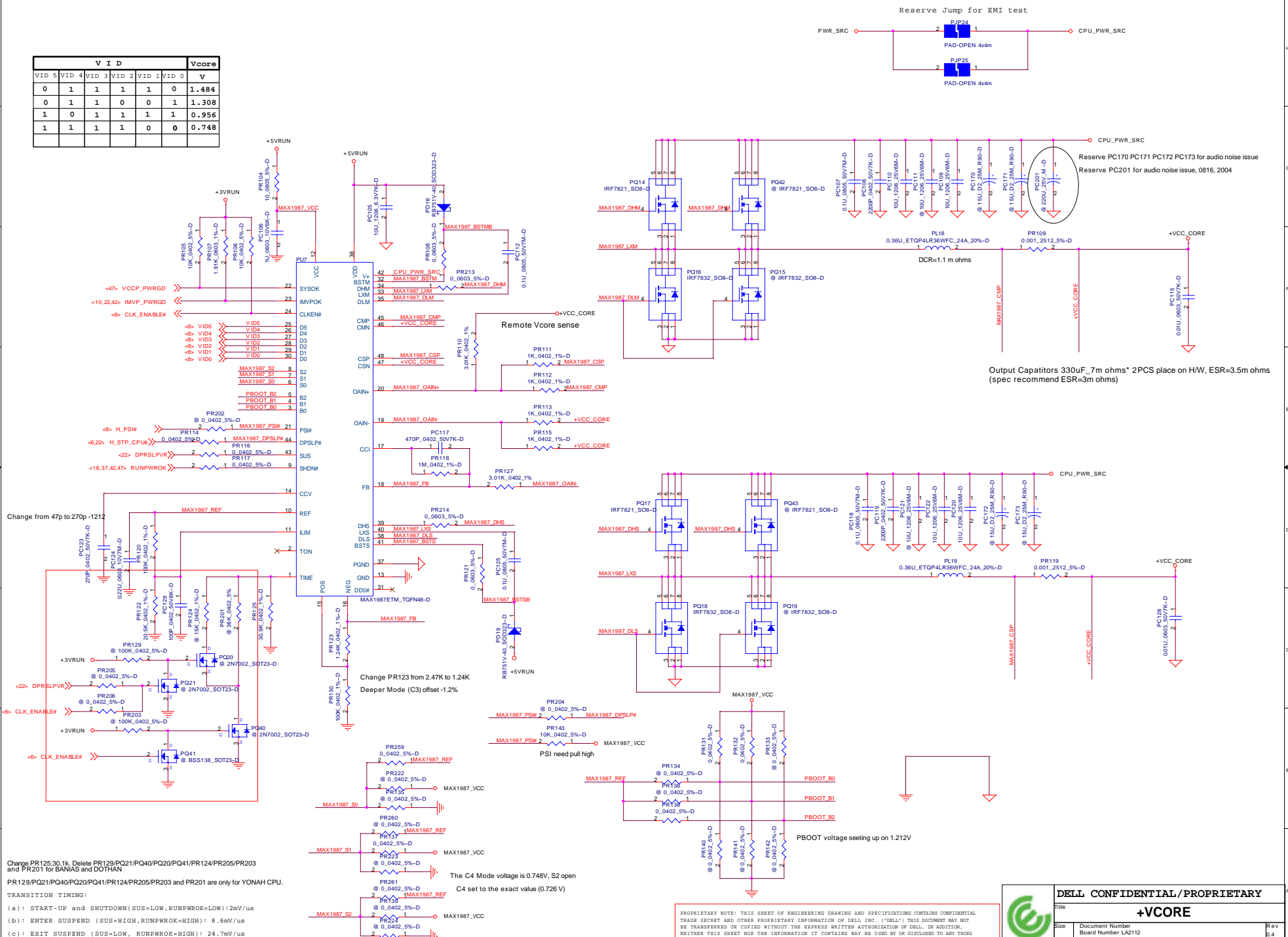
+1.5VSUSP
 $OCP = ((Ilim2 / 10) / \text{Low-side MOSFET } R_{ds(on)} + 0.5 * IL)$
 $Ilim3 = REF(80.6K / 80.6K + 100K) = 0.8925 V$
 Low side MOSFET $R_{ds(on)}$: 22.75m ohms at 100C
 $iL = ((Vin - Vo) / L) * Ton = ((19.5 - 1.5) / 5u) * ((1/255K) * 1.5 / 19.5) = 1.23 A$
 OCP TYP: 4.462A

+VCCP_1P05VP
 $OCP = ((Ilim1 / 10) / \text{Low-side MOSFET } R_{ds(on)} + 0.5 * IL)$
 $Ilim3 = REF(90.9K / 90.9K + 150K) = 0.754V$
 Low side MOSFET $R_{ds(on)}$: FDS6676SS=0.01125 at 100C
 $iL = ((Vin - Vo) / L) * Ton = ((19.5 - 1.05) / 1.5u) * ((1/345K) * 1.05 / 19.5) = 1.92 A$
 OCP TYP: 7.66 A

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ('DELL'). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
Title +1.5VSUSP / +VCCP_1P05VP		
Size	Document Number Board Number LA2112	Rev 0.4
Date:	Thursday, October 28, 2004	Sheet 47 of 82

V I D						Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	v
0	1	1	1	1	0	1.484
0	1	1	0	0	1	1.308
1	0	1	1	1	1	0.956
1	1	1	1	0	0	0.748



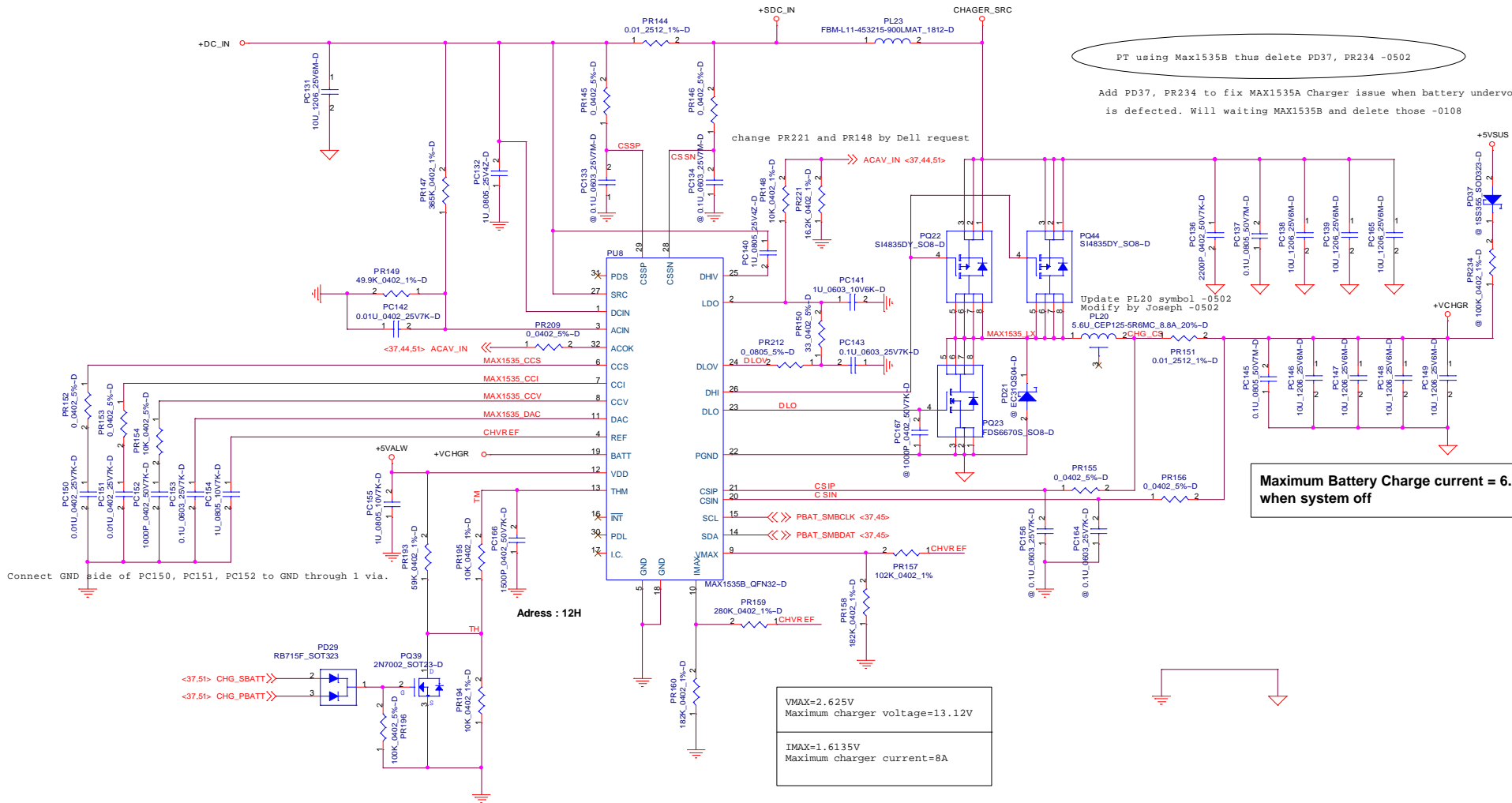
Change PR125:30.1k. Delete PR129/PQ21/PQ40/PQ20/PQ41/PR124/PR205/PR203 and PR201 for BANIAS and DOTHAN
 PR129/PQ21/PQ40/PQ20/PQ41/PR124/PR205/PR203 and PR201 are only for YONAH CPU.

TRANSITION TIMING:
 (a) : START-UP and SHUTDOWN(SUS=LOW,RUNPWROK=LOW): 2mV/us
 (b) : ENTER SUSPEND (SUS=HIGH,RUNPWROK=HIGH): 8.6mV/us
 (c) : EXIT SUSPEND (SUS=LOW, RUNPWROK=HIGH): 24.7mV/us

The C4 Mode voltage is 0.748V, S2 open
 C4 set to the exact value (0.726 V)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET HAS THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

		DELL CONFIDENTIAL/PROPRIETARY	
		+V CORE	
Title	Document Number	Rev	
Size	Board Number LA2112		0.4
Date: Thursday, October 28, 2004	Sheet: 49	of	82



PT using Max1535B thus delete PD37, PR234 -0502

Add Pd37, PR234 to fix MAX1535A Charger issue when battery undervoltage is detected. Will waiting MAX1535B and delete those -0108

Maximum Battery Charge current = 6.2A when system off

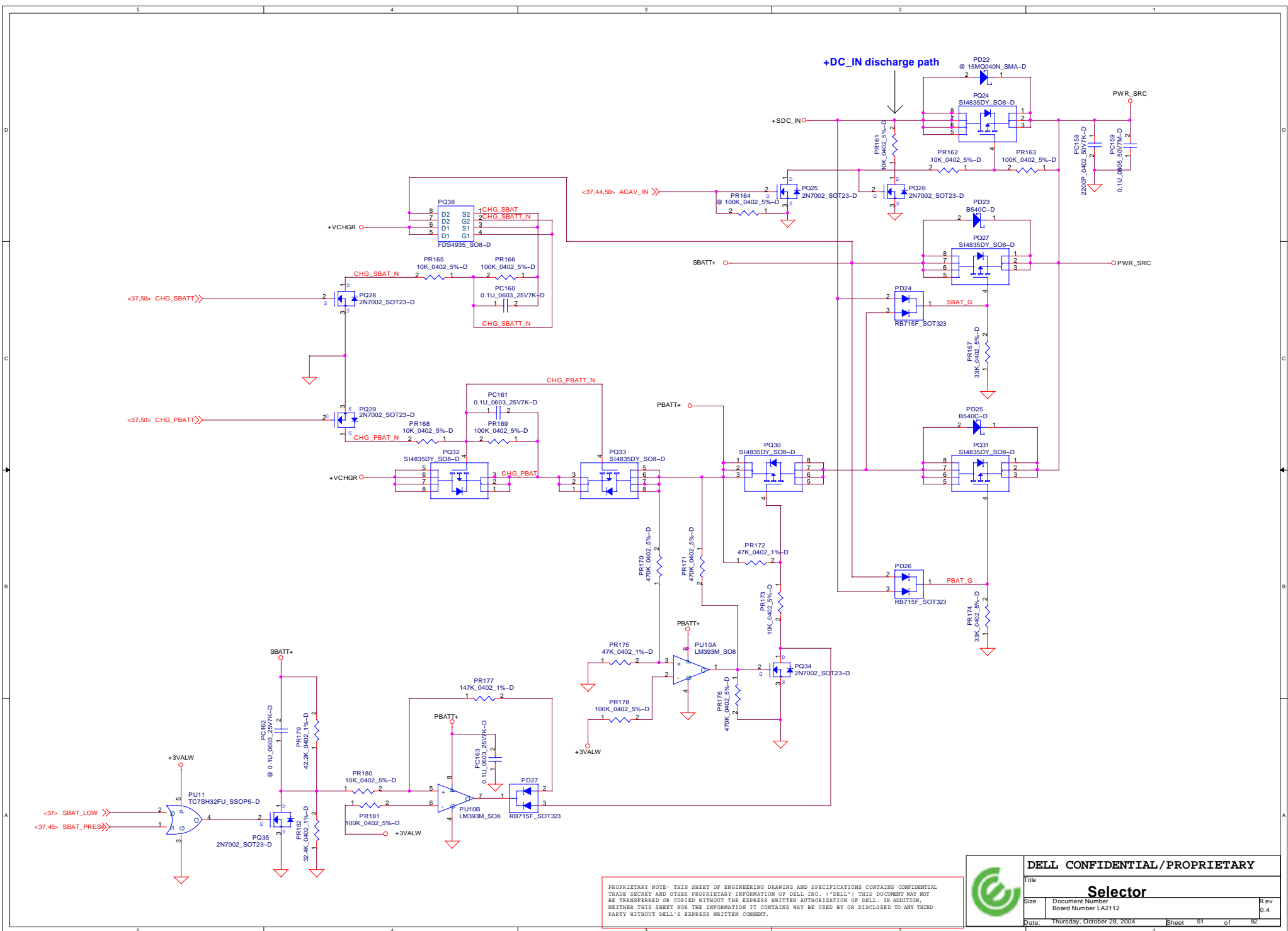
VMAX=2.625V
Maximum charger voltage=13.12V

IMAX=1.6135V
Maximum charger current=8A

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY		
File	Charger	
Size	Document Number Board Number LA2112	Rev 0.4
Date	Thursday, October 28, 2004	Sheet 50 of 82



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, WHETHER THIS SHEET OR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY		
Selector		
File	Document Number	Rev
	Board Number LA2112	0.4
Date:	Thursday, October 28, 2004	Sheet 51 of 82

