COMPAL CONFIDENTIAL

MODEL NAME : ***BDW00***

COMPAL P/N : ***DA8DW00L110/DA8DW00L410***

PCB NO : ***LA-1452***

Revision : ***1C***

DATE :

Abacus/TangII Schematics Document

uFCBGA/uFCPGA Northwood

2003-02-24

REV: 1C

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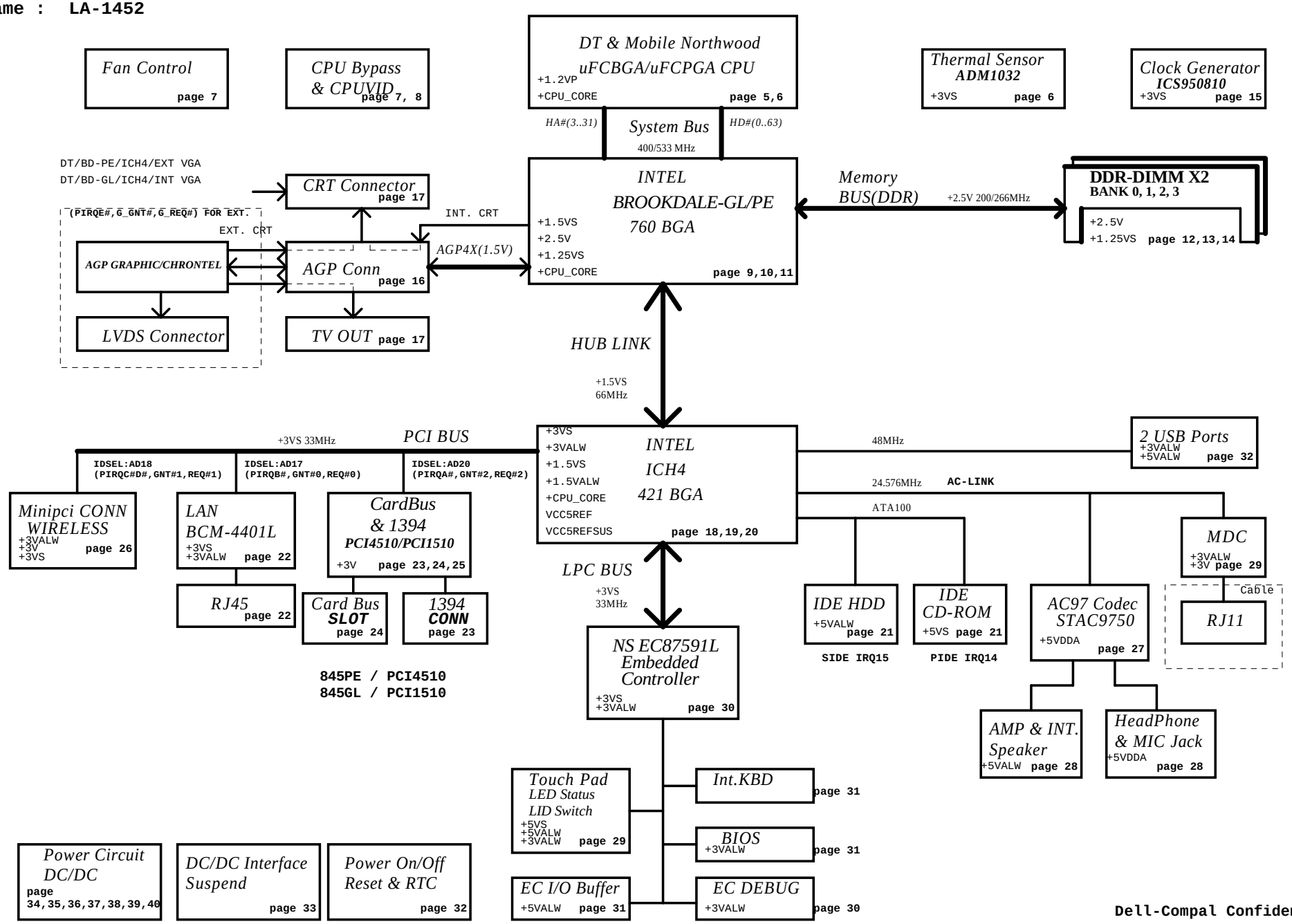
Model Name : ABACUS/TangII

File Name : LA-1452



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Revision List

	Schematics Rev	PCB Rev	CHIPS Rev
SST-Build	0.1	0.1	
PT-Build	0.2	0.2	845PE Rev B0 845GL Rev B1 ICH4 Rev B0
ST-Build			
QT-Build			

Power Managment table

State \ Signal	+3VALW +5VALW +12VALW	+3V +5V +2.5V	+3VS +5VS +1.5VS +1.2VP +CPU_CORE +1.25VS
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

Ceramic Capacitor Spec Guide:

Temperature Characteristics:

Symbol	0	1	2	3	4	5	6	7
CODE	Z5U	Z5V	Z5P	Y5U	Y5V	Y5P	X5R	X7R

8	9	A	B	C	D	E	F	G
NP0	C0G		BJ	CH	CJ	CK	SH	SJ

H	I	J	
UJ	UK	SL	

Tolerance:

Symbol	A	B	C	D	F	G	H	J
CODE	+-0.05PF	+-0.1PF	+-0.25PF	+-0.5PF	+-1PF	+-2%	+-3%	+-5%

K	M	N	P	Q	V	X	Z	
+-10%	+-20%	+-30%	+100,-0%	+30,-10%	+20,-10%	+40,-20%	+80,-20%	

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU) (U57)	THERMAL SENSOR (U25/U23)	SODIMM	CLK CHIP	MINI PCI
SMB_EC_CK1 SMB_EC_DA1	NS 87591	√	√	√ (1010)	X	X	X	X	X
SMB_EC_CK2 SMB_EC_DA2	NS 87591	X	X	X	√	√	X	X	X
SMB_CLK SMB_DATA	ICH4	X	X	X	X	X	√	√	√

NOTE1:

@XX : Depop component

1@XX : Pop for INT, Depop for EXT

2@XX : Pop for EXT, Depop for INT

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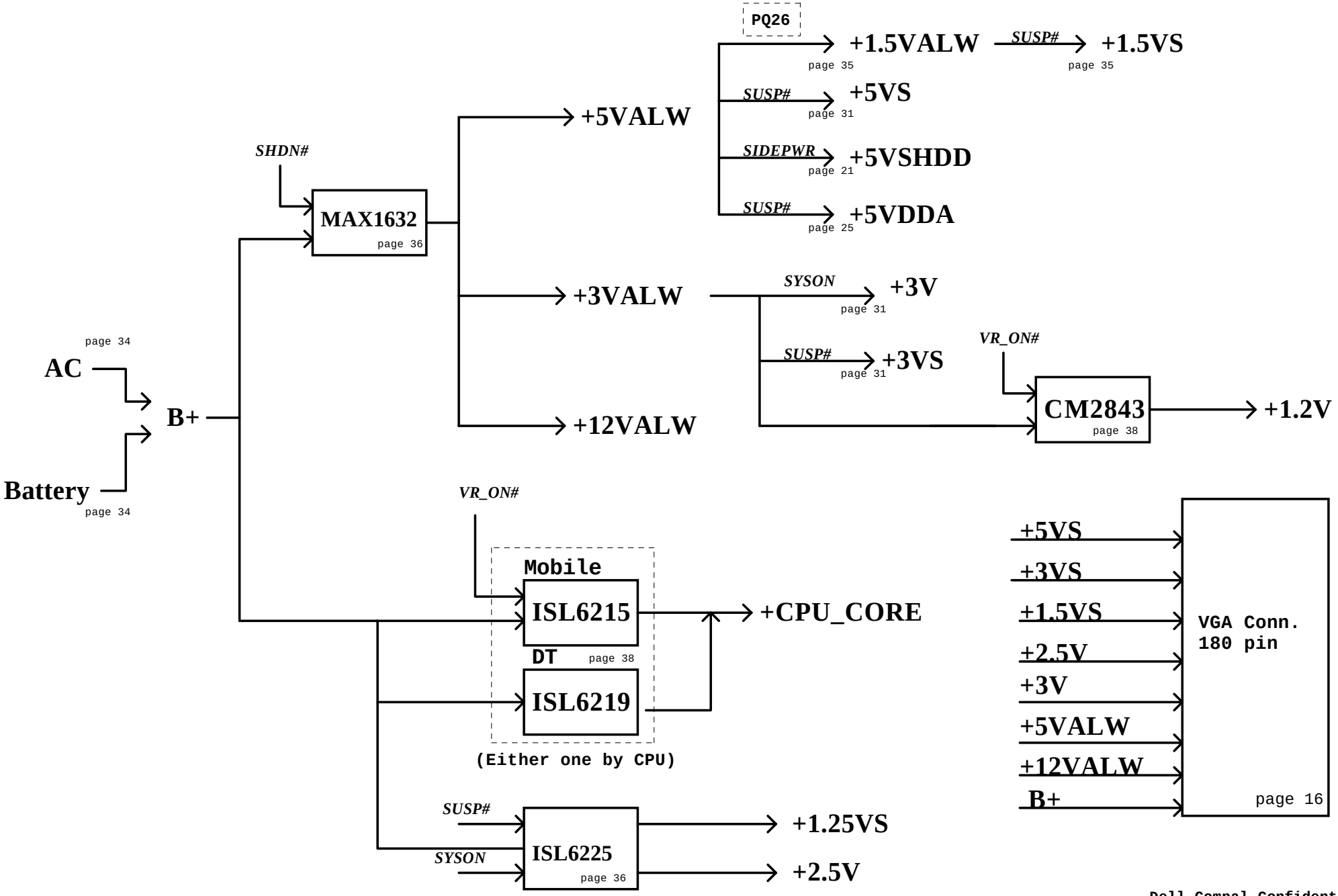

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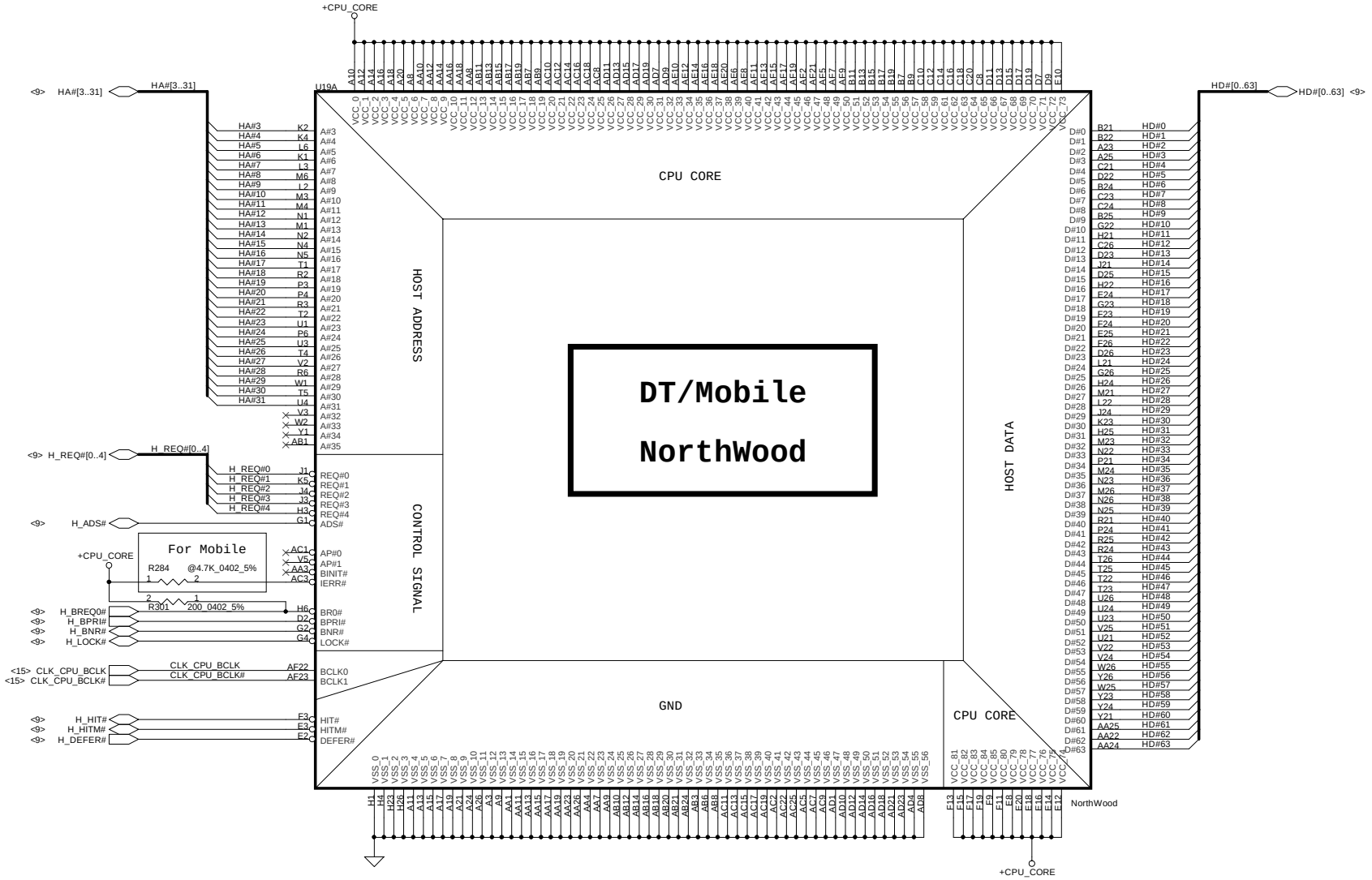

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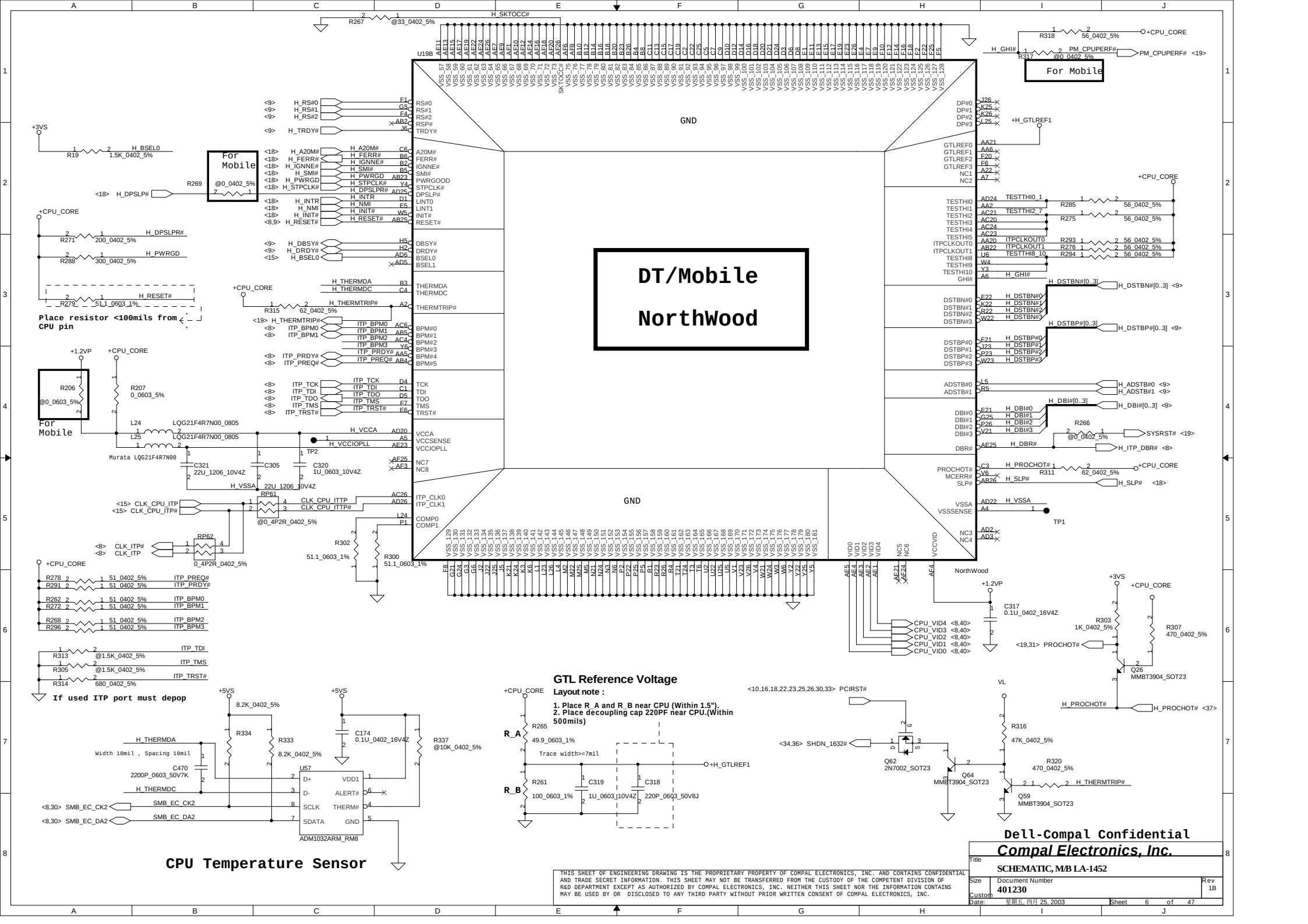
DT/Mobile
NorthWood
U19B
GND
For Mobile
Place resistor <100mils from CPU pin
If used ITP port must depop
GTL Reference Voltage
Layout note :
1. Place R_A and R_B near CPU (Within 1.5").
2. Place decoupling cap 220PF near CPU.(Within 500mils)
CPU Temperature Sensor
Murata LQ621F4R7N00
ADM1032ARM_RM8
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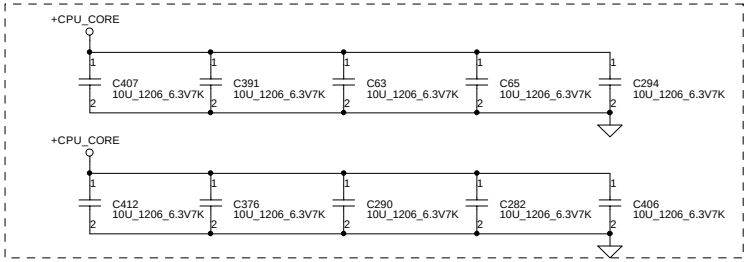
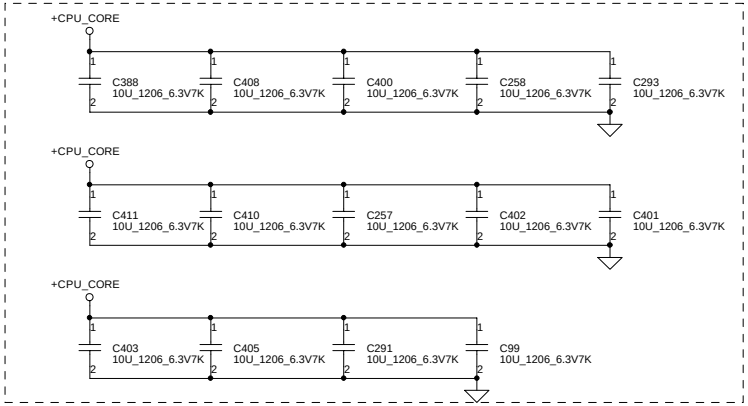
Layout note :

Place close to CPU, Use 2~3 vias per PAD.
Place .22uF caps underneath balls on solder side.
Place 10uF caps on the peripheral near balls.
Use 2~3 vias per PAD.

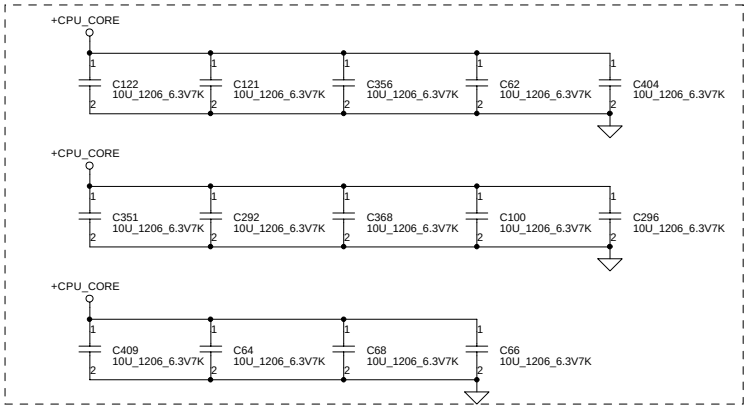
Please place these cap in the socket cavity area



Please place these cap on the socket north side



Please place these cap on the socket south side



Layout note :

Place close to CPU power and ground pin as possible (<1inch)

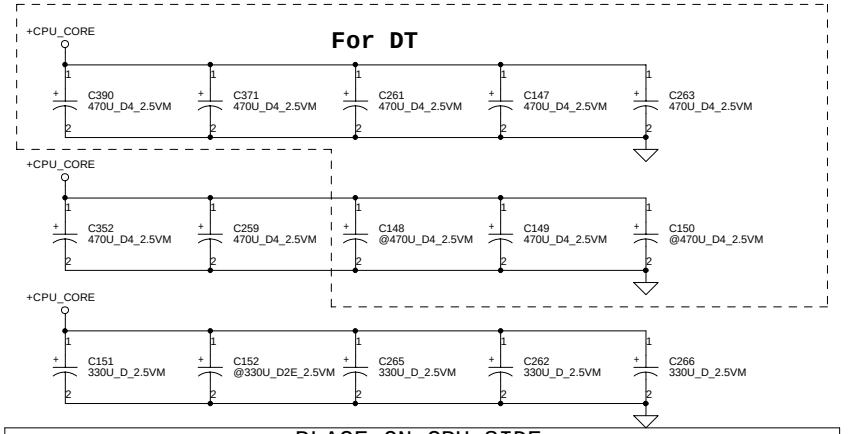
For Desktop's CPU:

ESR total=0.75m ohm
C total=6350uF

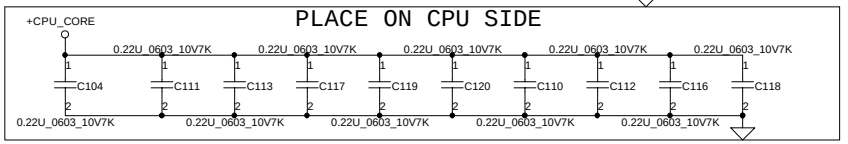
For Mobile's CPU:

ESR total=1.875m ohm
C total=2590uF

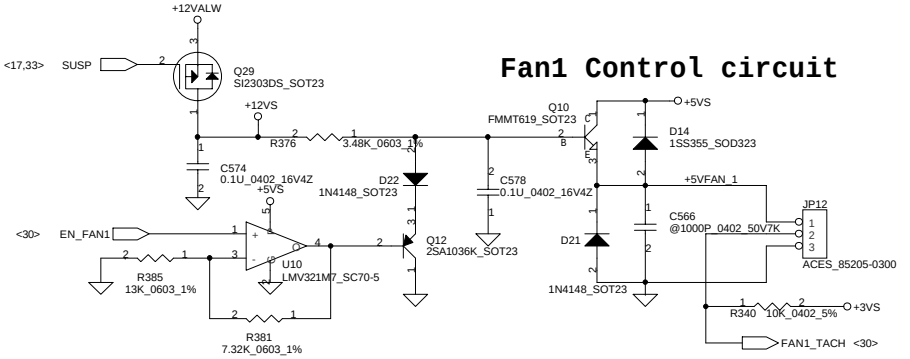
For DT



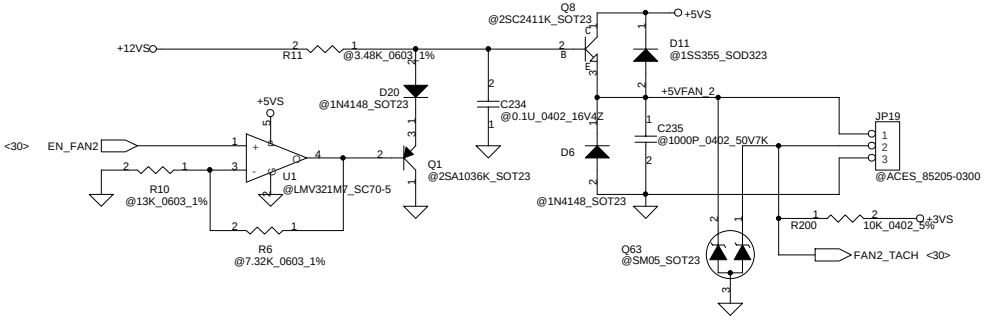
PLACE ON CPU SIDE



Fan1 Control circuit



Fan2 Control circuit



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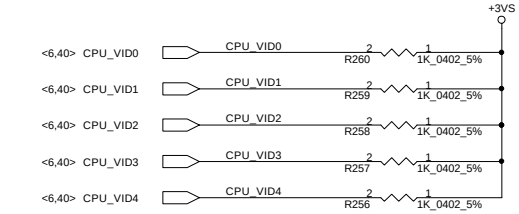
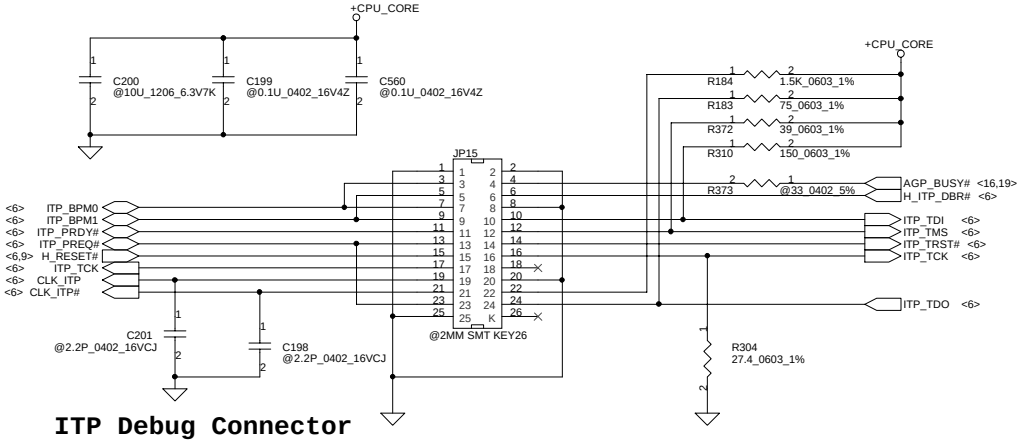
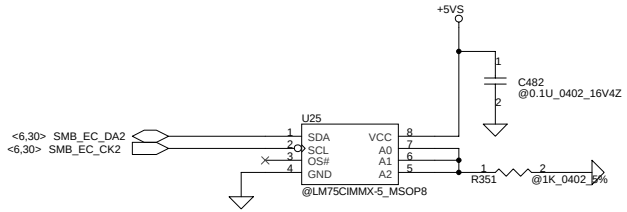


	Mobile CPU					Desktop CPU				
MO/DT_CPU	1					0				
VID / VCC	4	3	2	1	0	4	3	2	1	0
1.750V	0	0	0	0	0	0	0	1	0	0
1.700V	0	0	0	0	1	0	0	1	1	0
1.650V	0	0	0	1	0	0	1	0	0	0
1.600V	0	0	0	1	1	0	1	0	1	0
1.550V	0	0	1	0	0	0	1	1	0	0
1.500V	0	0	1	0	1	0	1	1	1	0
1.450V	0	0	1	1	0	1	0	0	0	0
1.400V	0	0	1	1	1	1	0	0	1	0
1.350V	0	1	0	0	0	1	0	1	0	0
1.300V	0	1	0	0	1	1	0	1	1	0
1.250V	0	1	0	1	0	1	1	0	0	0
1.200V	0	1	0	1	1	1	1	0	1	0
1.150V	0	1	1	0	0	1	1	1	0	0
1.100V	0	1	1	0	1	1	1	1	1	0
1.050V	0	1	1	1	0	X	X	X	X	X
1.000V	0	1	1	1	1	X	X	X	X	X
0.975V	1	0	0	0	0	X	X	X	X	X
0.950V	1	0	0	0	1	X	X	X	X	X
0.925V	1	0	0	1	0	X	X	X	X	X
0.900V	1	0	0	1	1	X	X	X	X	X
0.875V	1	0	1	0	0	X	X	X	X	X
0.850V	1	0	1	0	1	X	X	X	X	X
0.825V	1	0	1	1	0	X	X	X	X	X
0.800V	1	0	1	1	1	X	X	X	X	X
0.775V	1	1	0	0	0	X	X	X	X	X
0.750V	1	1	0	0	1	X	X	X	X	X
0.725V	1	1	0	1	0	X	X	X	X	X
0.700V	1	1	0	1	1	X	X	X	X	X
0.675V	1	1	1	0	0	X	X	X	X	X
0.650V	1	1	1	0	1	X	X	X	X	X
0.625V	1	1	1	1	0	X	X	X	X	X
0.600V	1	1	1	1	1	X	X	X	X	X
VRM output off						1	1	1	1	1



ITP Debug Connector



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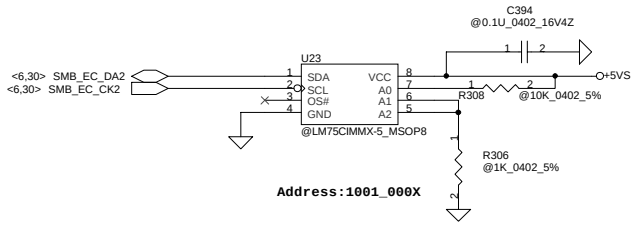

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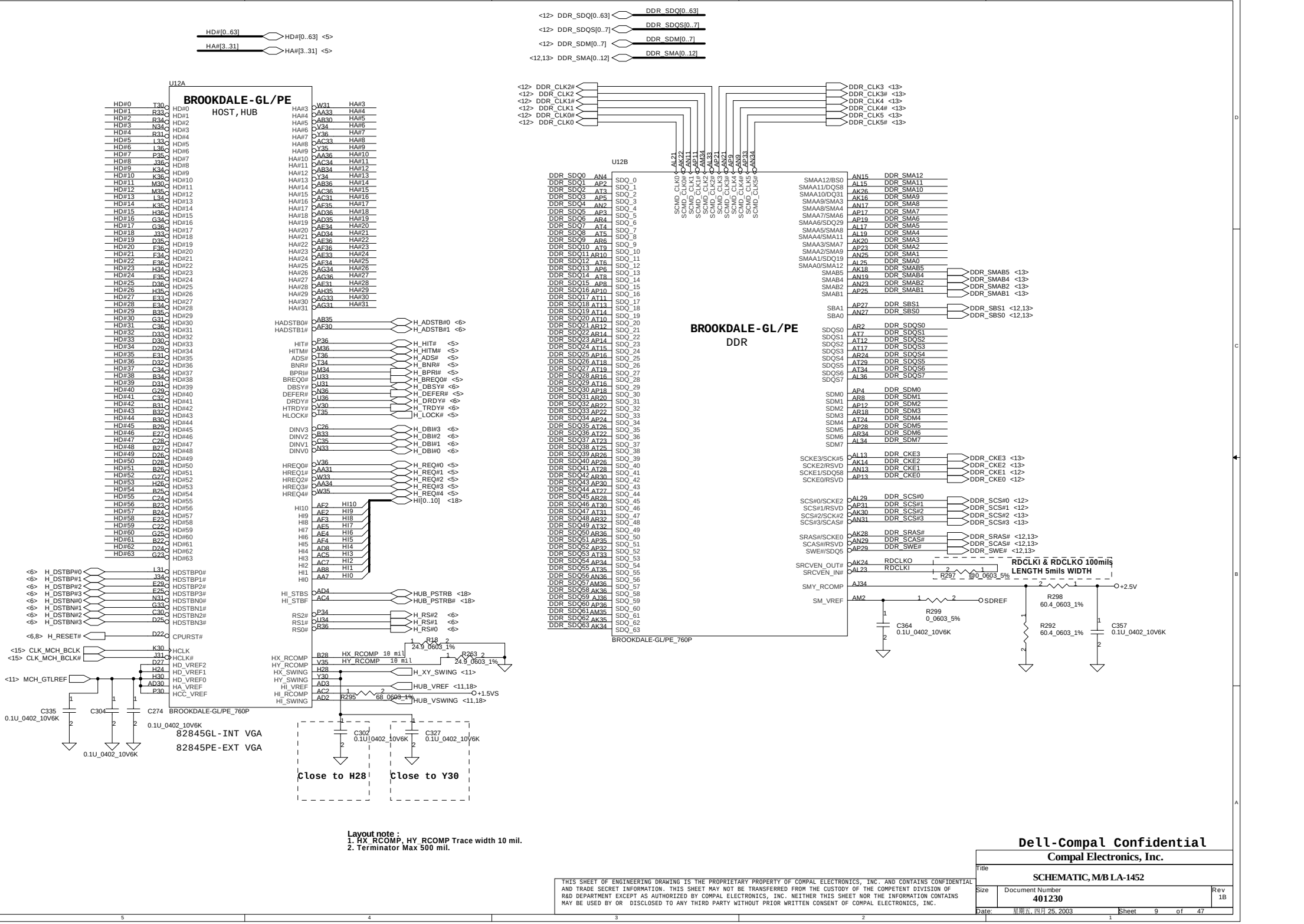

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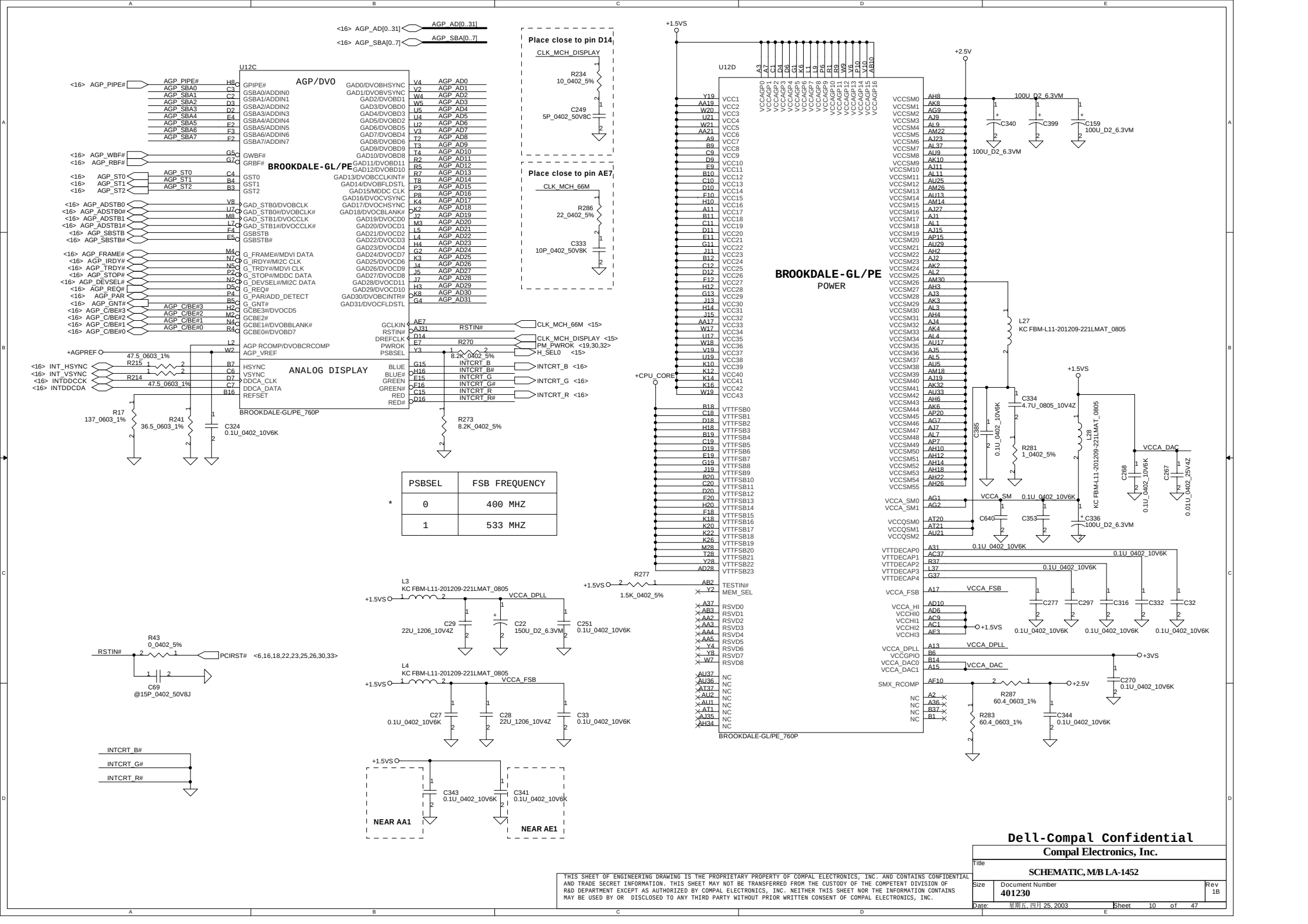

*	PSBSEL	FSB FREQUENCY
	0	400 MHZ
	1	533 MHZ

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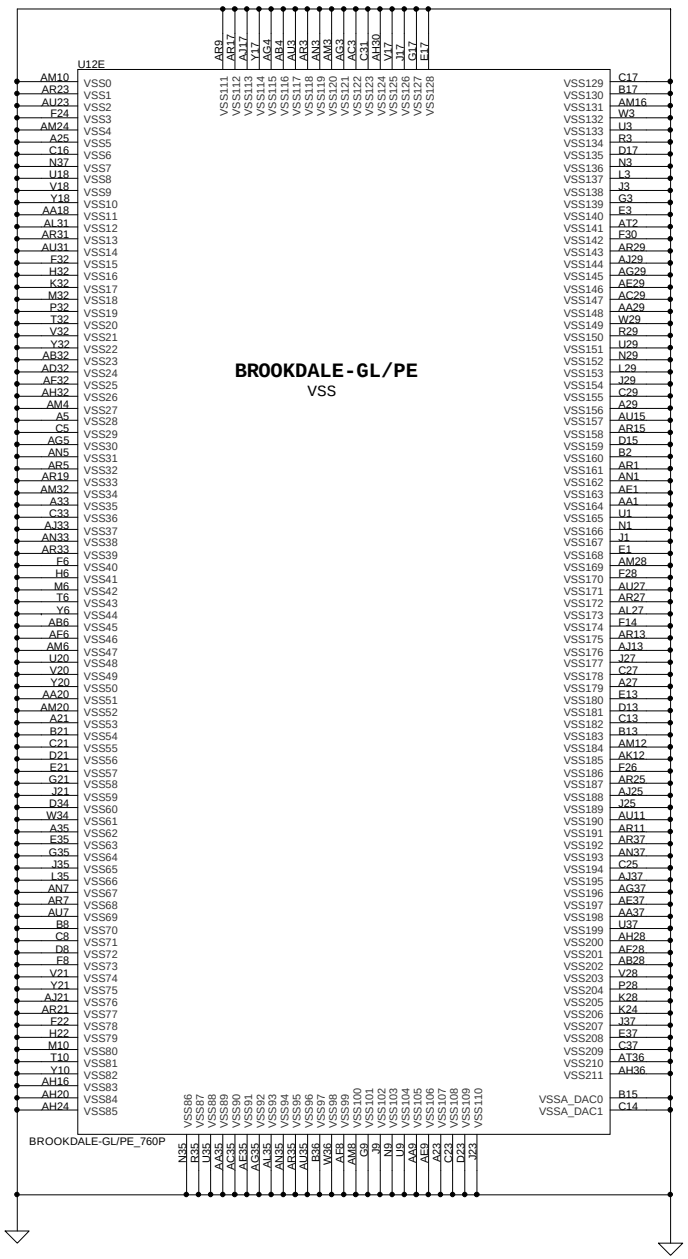

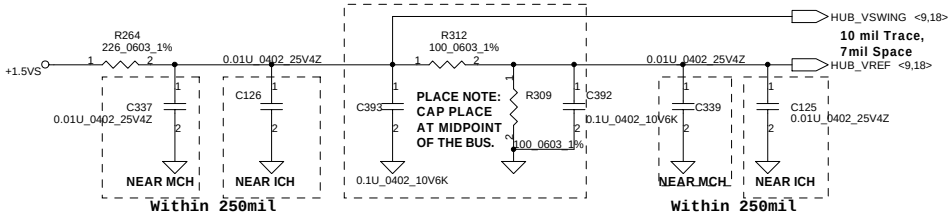

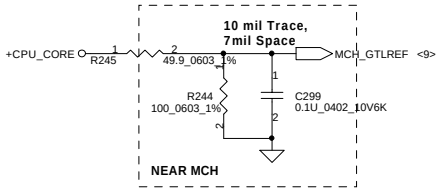

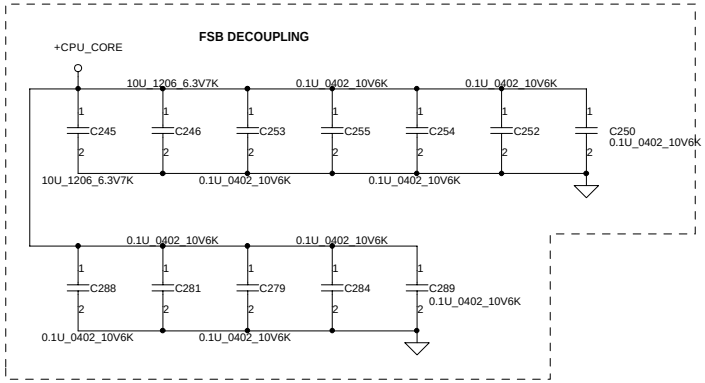

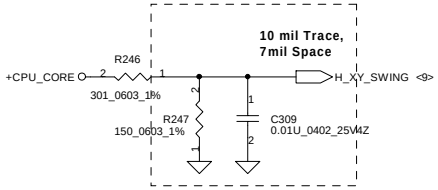

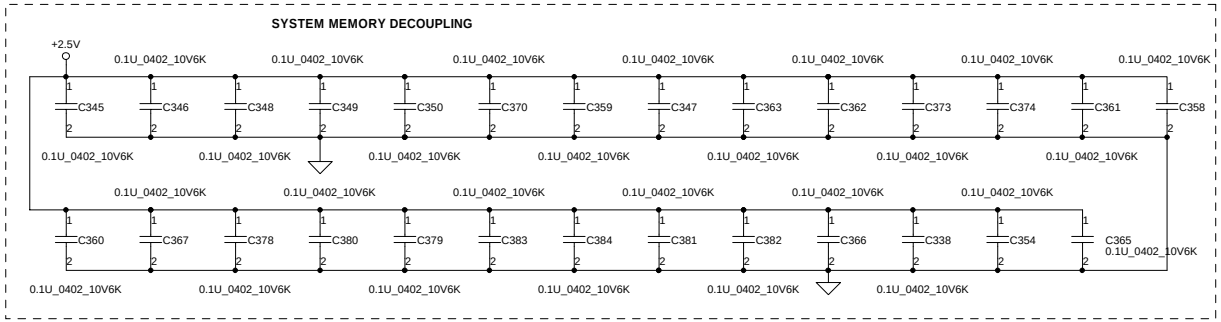

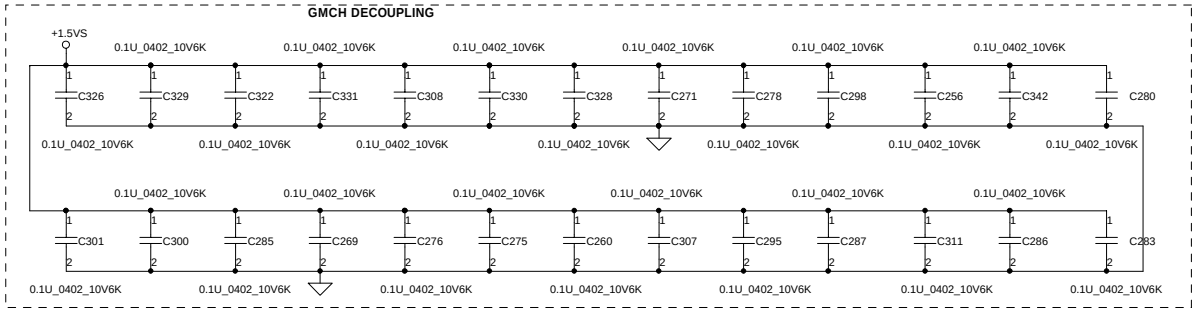

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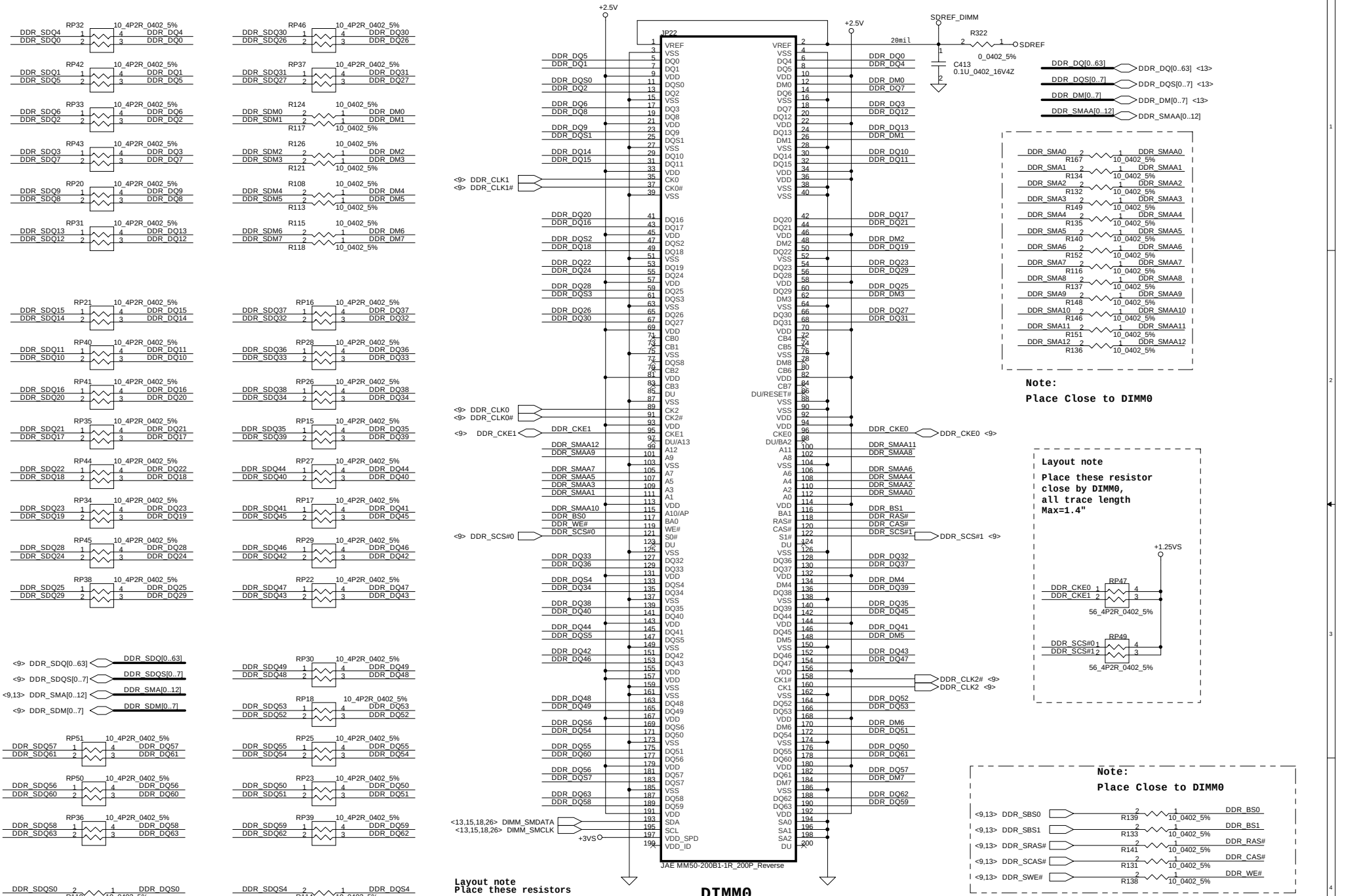

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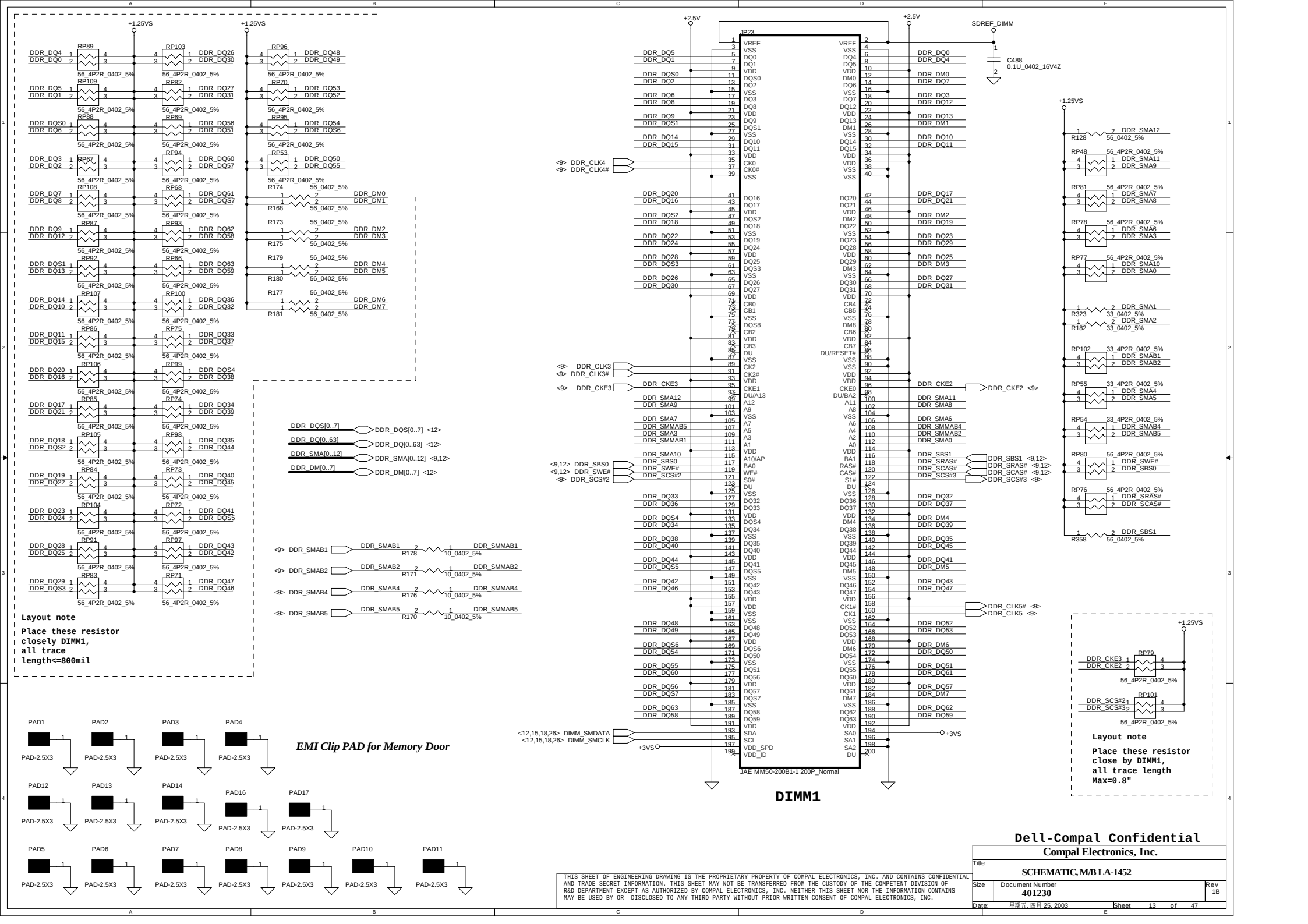

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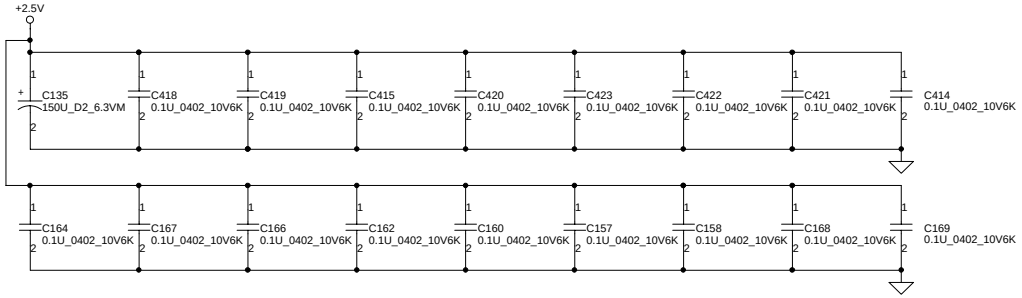
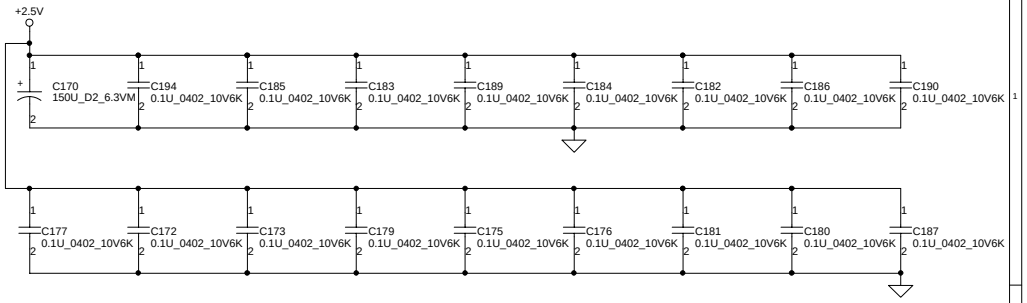
Layout note :

Distribute as close as possible to DDR-SODIMM0.



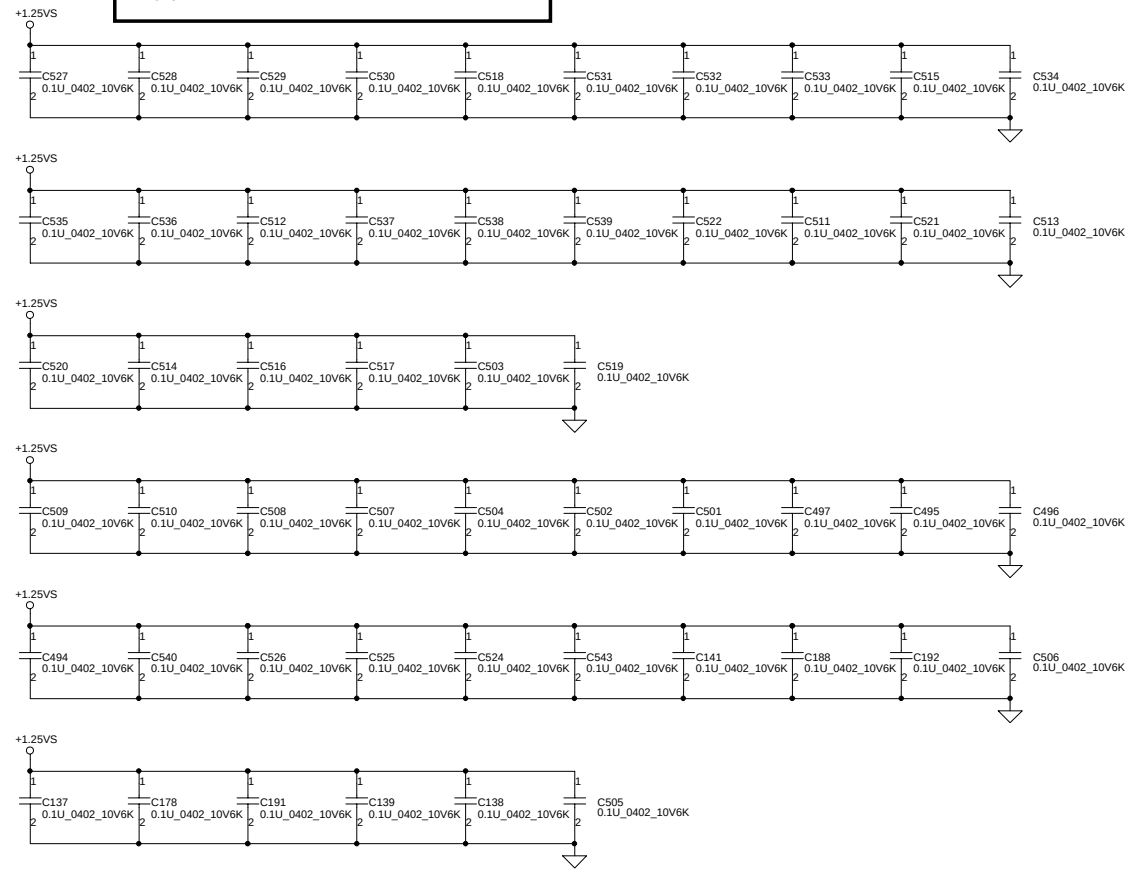
Layout note :

Distribute as close as possible to DDR-SODIMM1.



Layout note :

Place one cap close to every 2 pull up resistors termination to +1.25VS



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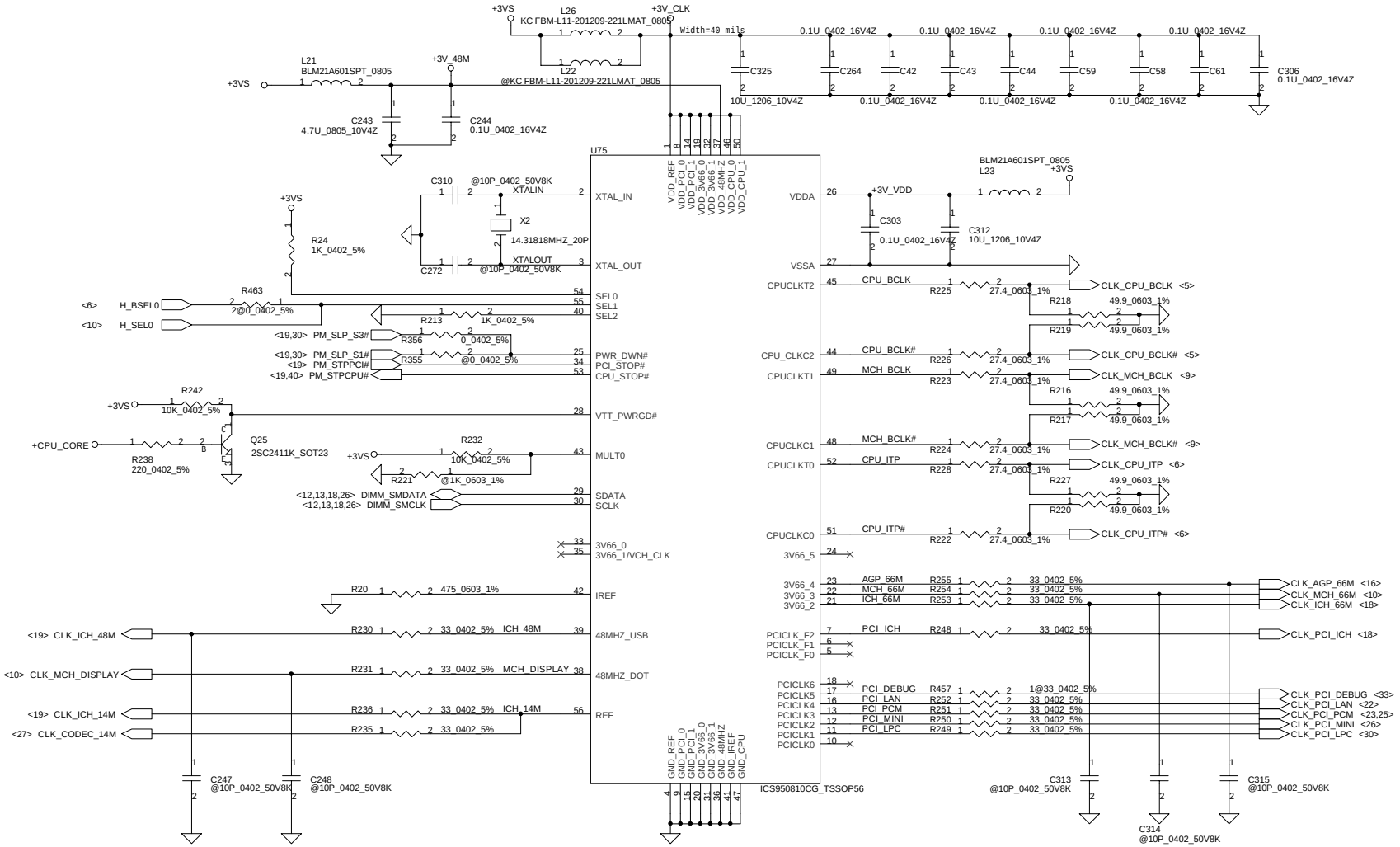
Clock Generator



CPU Frequency Select Table

	SEL[2:0]	CK-408 Speed
	001	100 MHZ
*	011	133 MHZ

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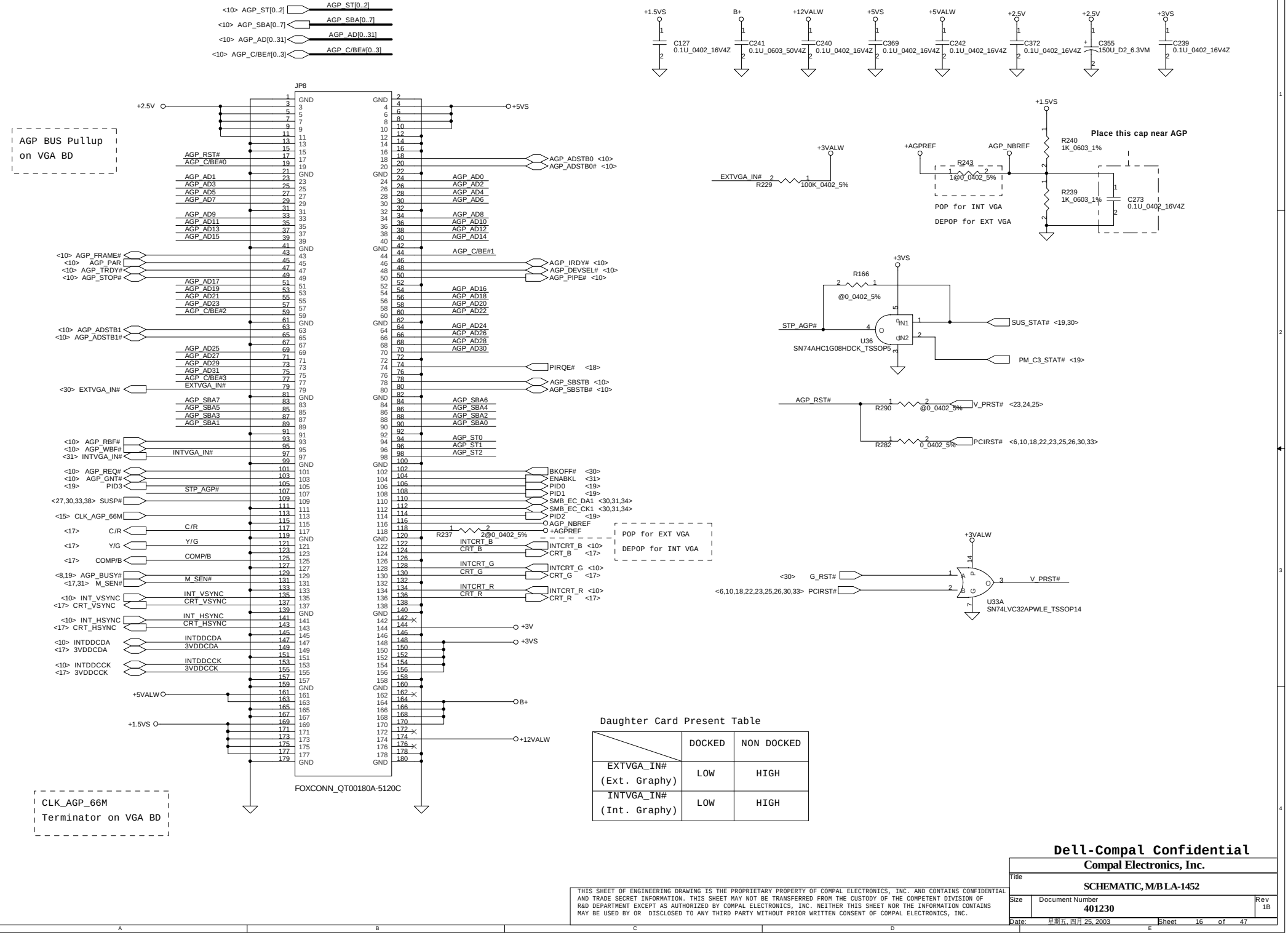

Daughter Card Present Table

	DOCKED	NON DOCKED
EXTVGA_IN# (Ext. Graphy)	LOW	HIGH
INTVGA_IN# (Int. Graphy)	LOW	HIGH

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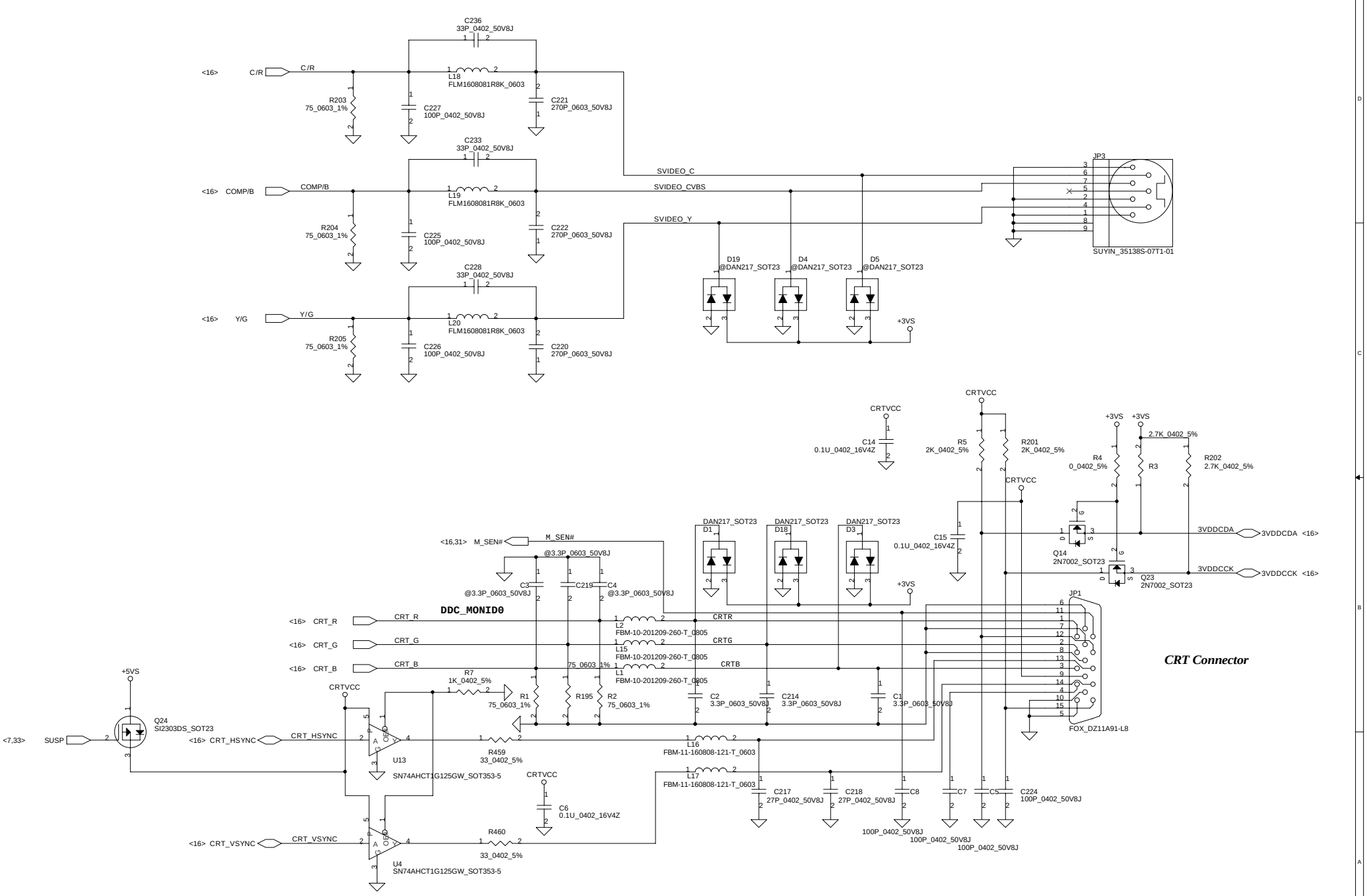

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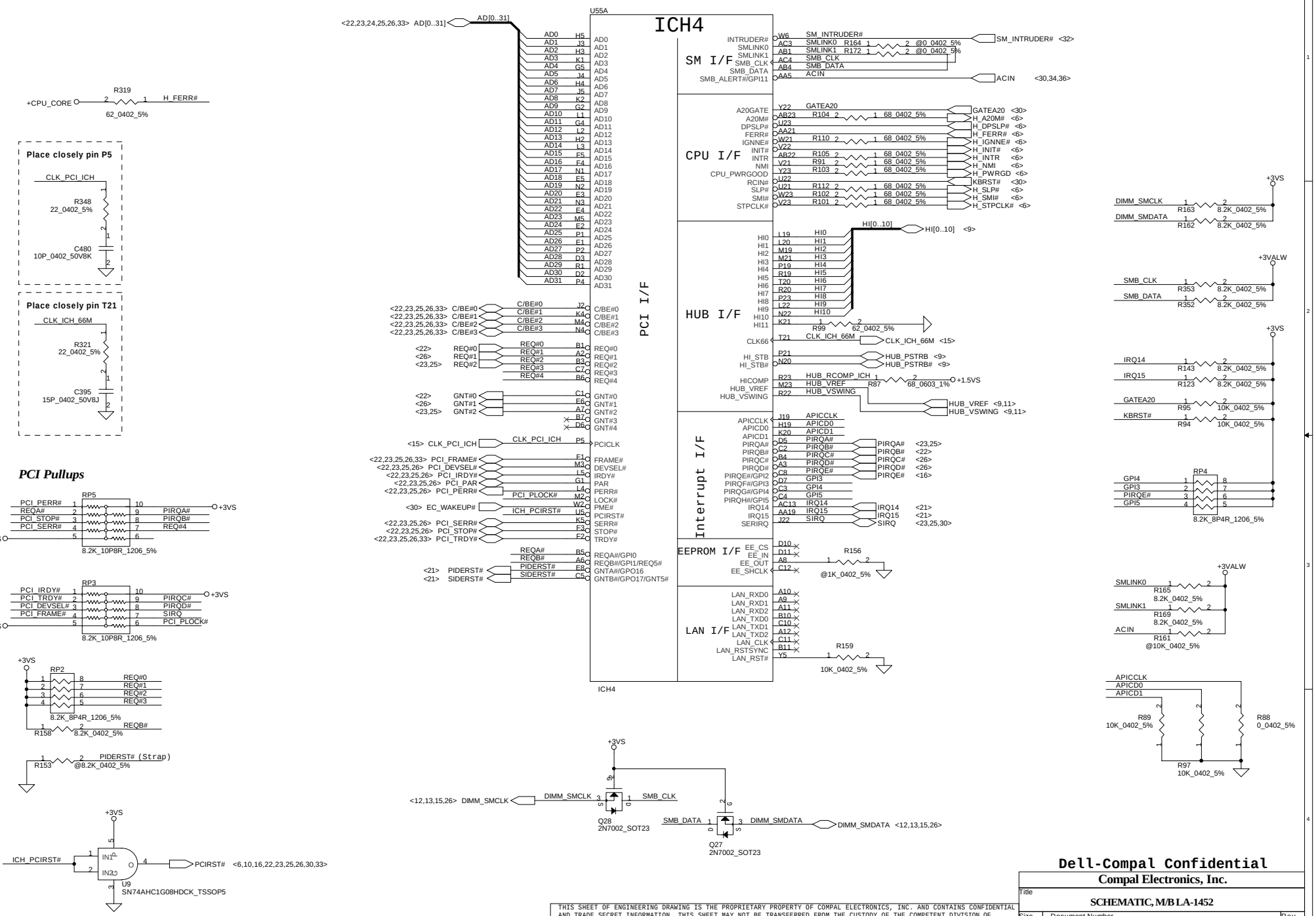

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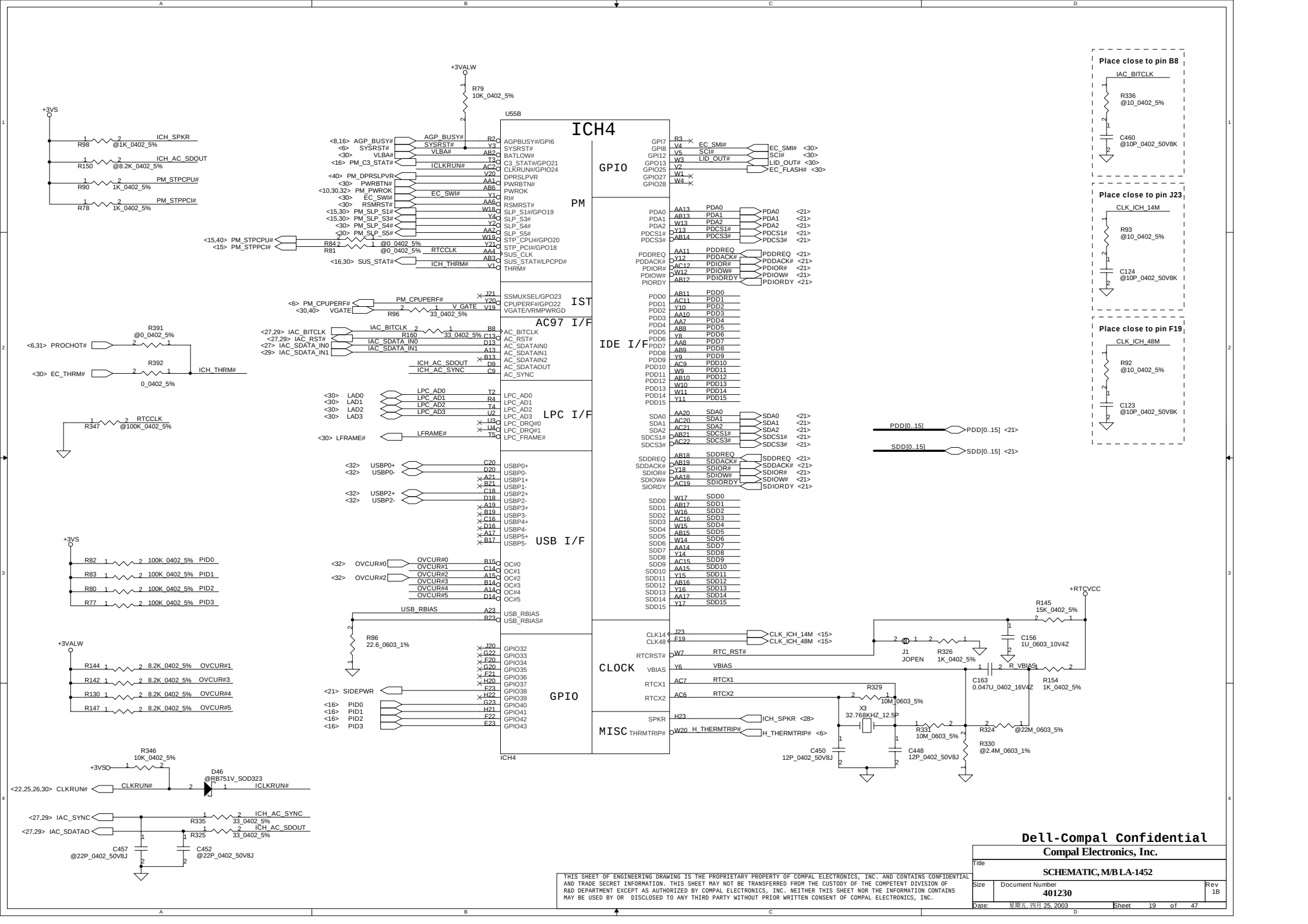

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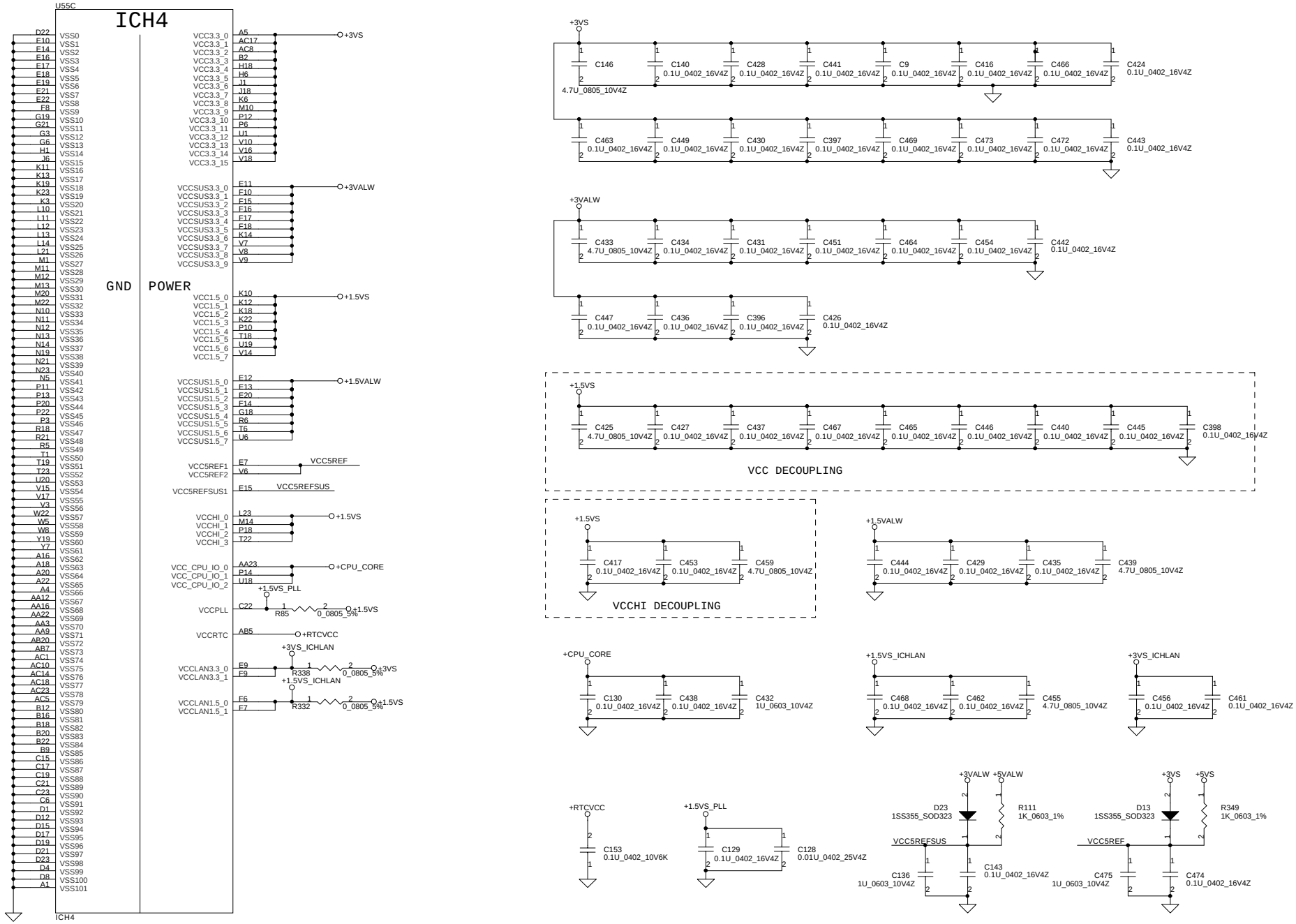

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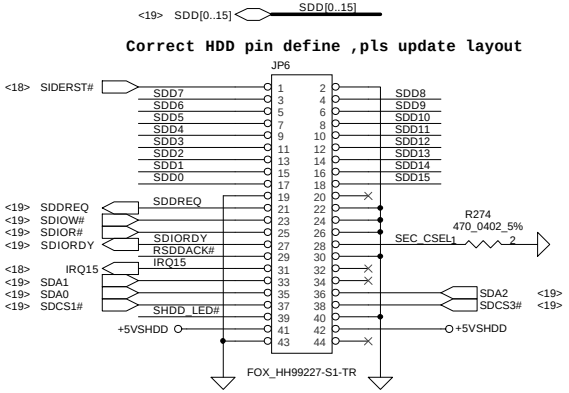
SI2301DS: P CHANNEL
VGS: -4.5V, RDS: 130 mOHM
VGS: -2.5V, RDS: 190mOHM
Id(MAX): 2.3A
VGS(MAX): +-8V

1 D

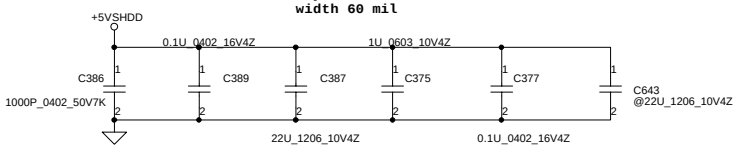
G 2 3 S

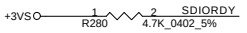
HDD Connector

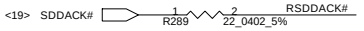


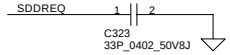
Placea caps. near HDD CONN.

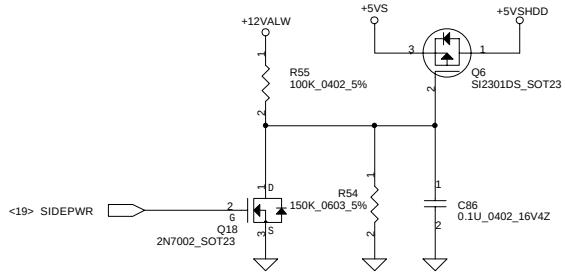
Layout Note: +5VSHDD trace width 60 mil



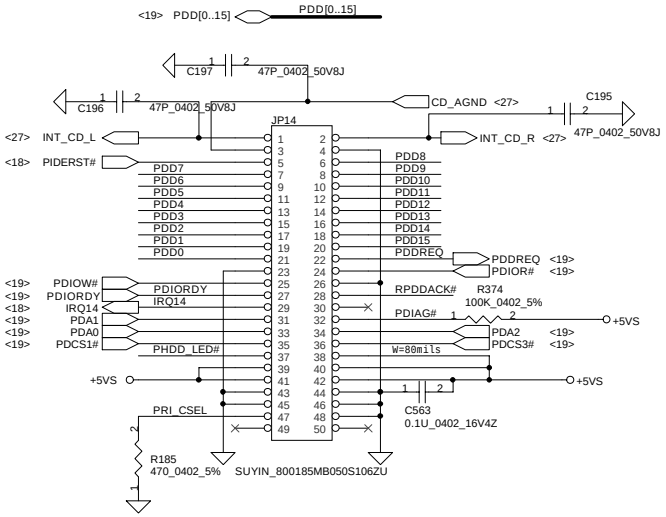


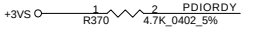


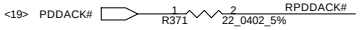


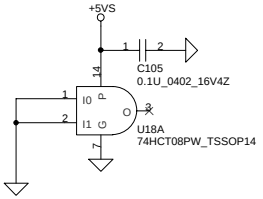


CD-ROM Connector

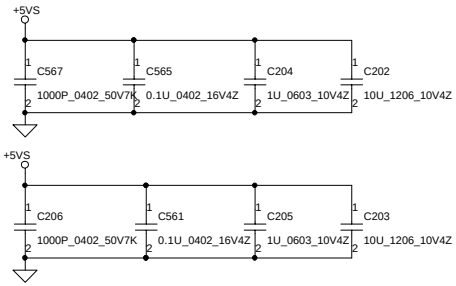


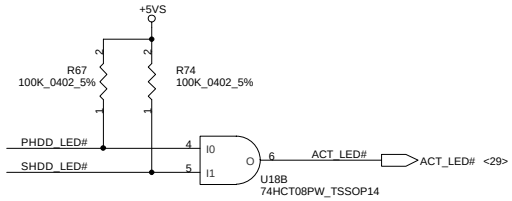






Placea caps. near CDROM CONN.





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WLAN	LOM	LED (JP28)
WLAN_LINK_80211A	LINK_LED100#	ORANGE (100M)
WLAN_LINK_10_LDE	LINK_LED10#	GREEN (10M)
WLAN_ACT_LED	ACTLED#	YELLOW
WLAN_LINK_80211A WLAN_LINK_10_LDE	NC	ORANGE/GREEN

	SPROM_DOUT	SPROM_CLK
1Kb	None	None
4Kb	10K Pullup	None
16Kb	None	10K Pullup

Broadcom
BCM 4401L

U11 — BCM4401_LQFP128

U8 — AT93C46_SO8

U2 — Pulse_H1112

JP7 — FOX_JM66113-L1B1-TR

Place close to pin 57

Place close to pin 69

Place closely pin 118

Place close to U11

Close to RJ45 under inch

Chassis GND & Digital GND Short Together

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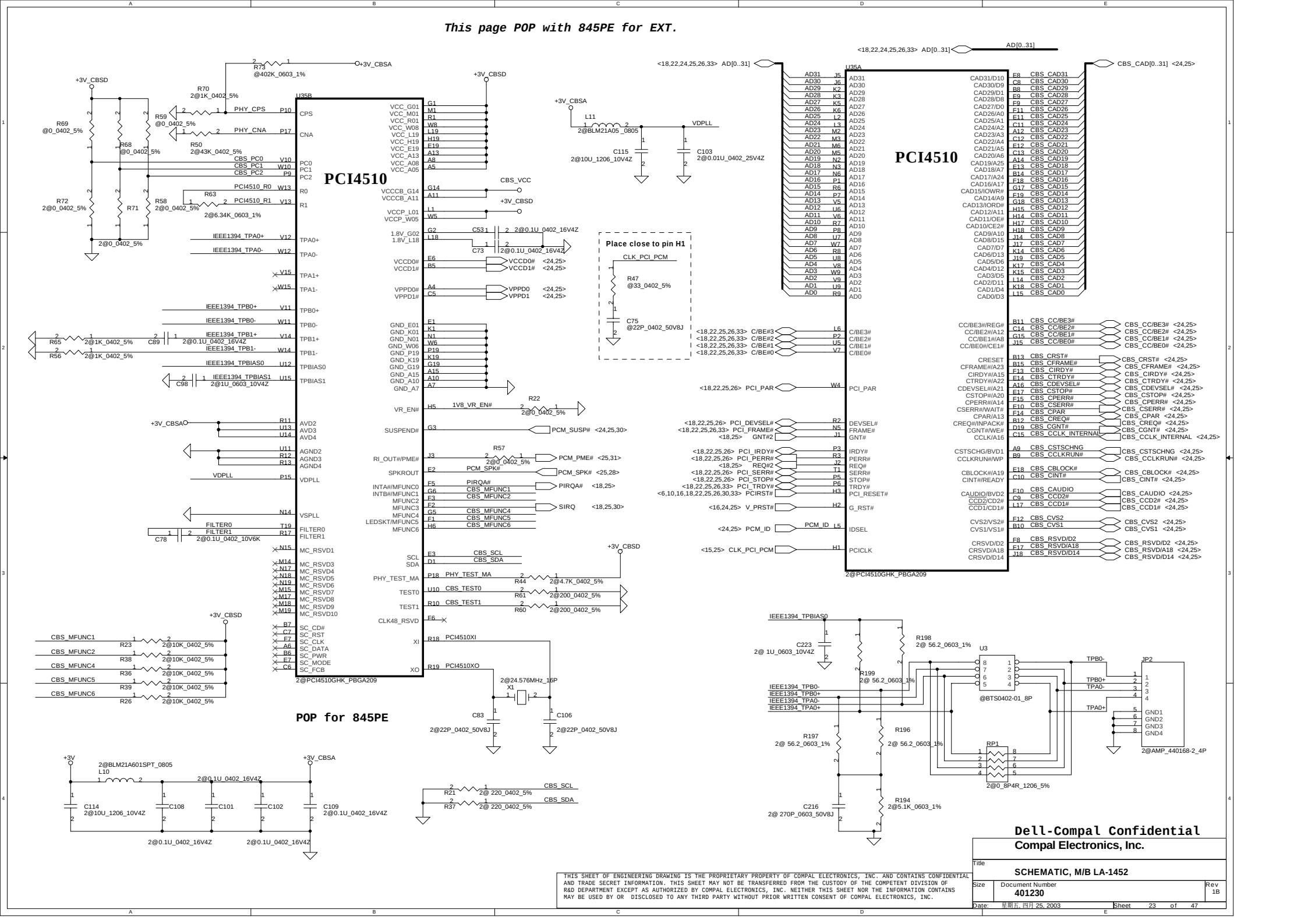
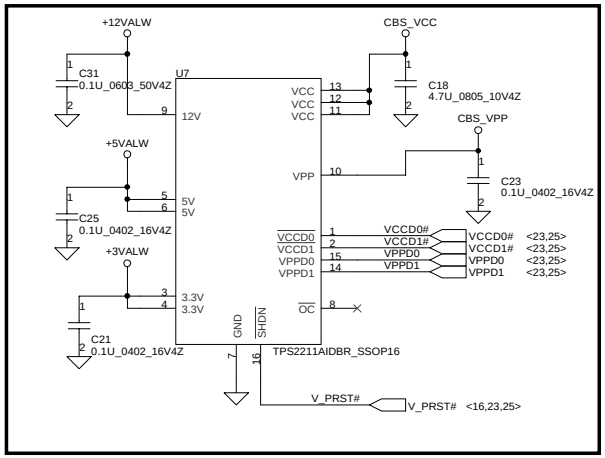
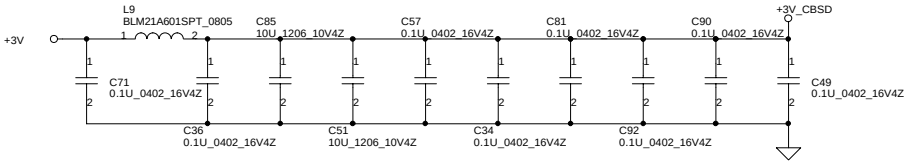
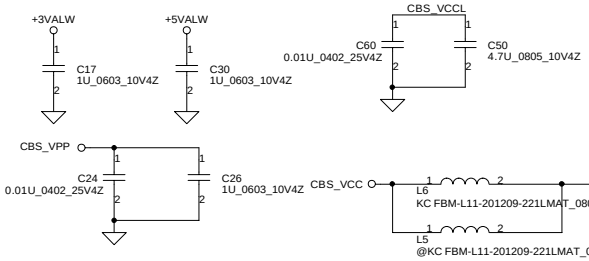
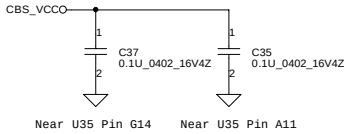


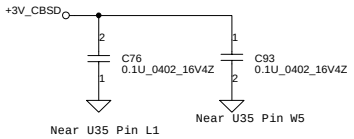
PCMCIA Power Controller



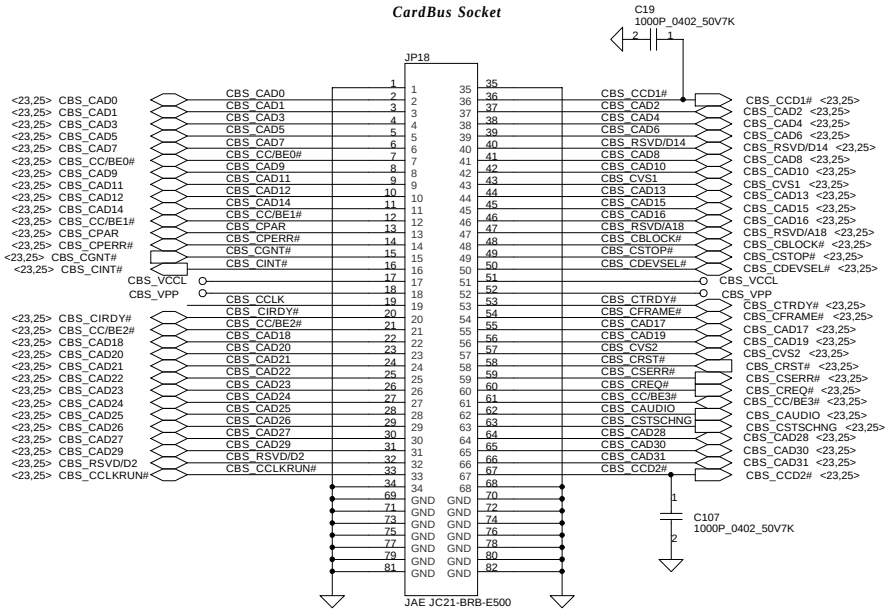


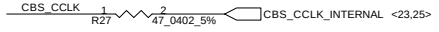


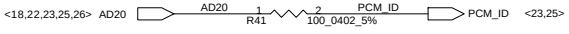


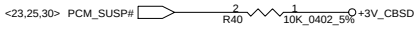


CardBus Socket









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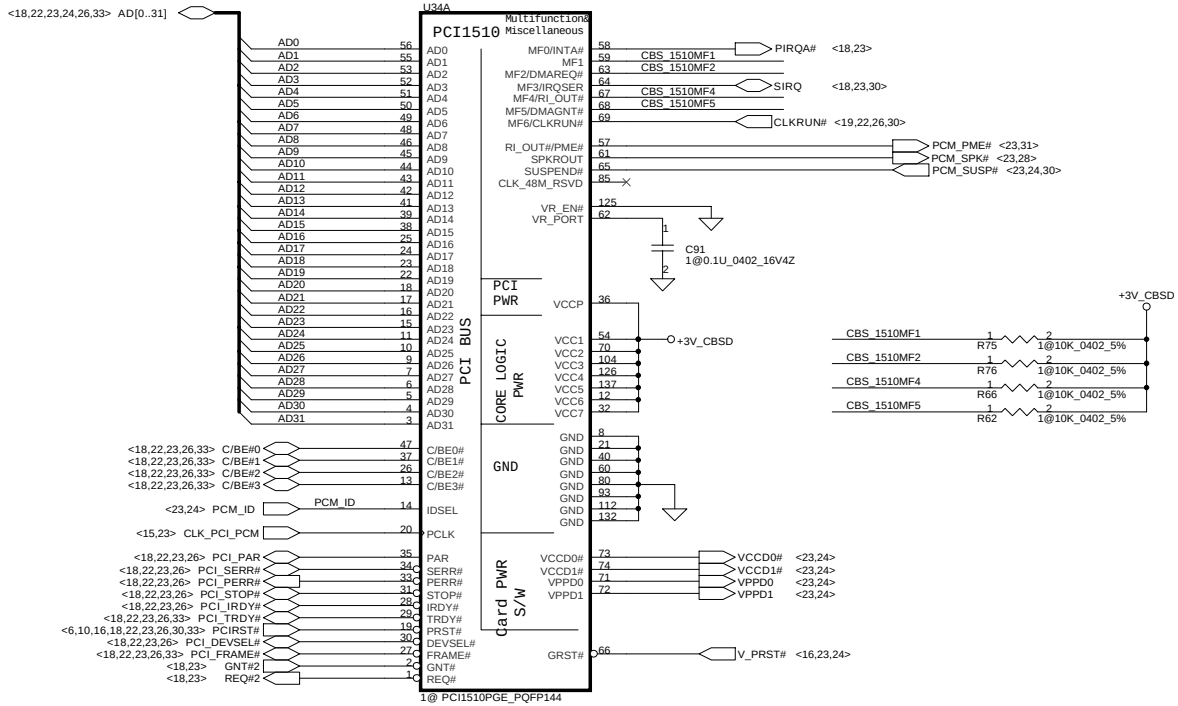

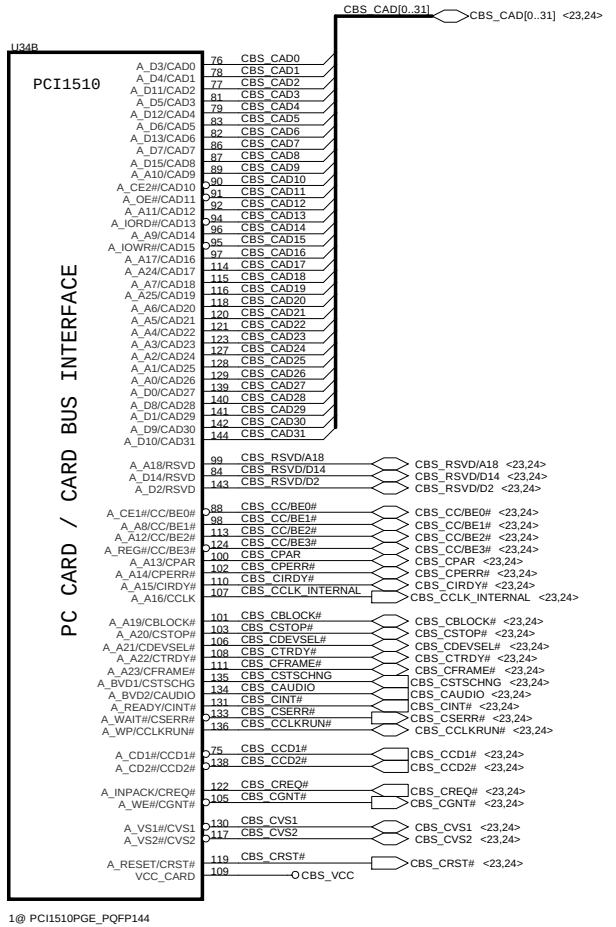

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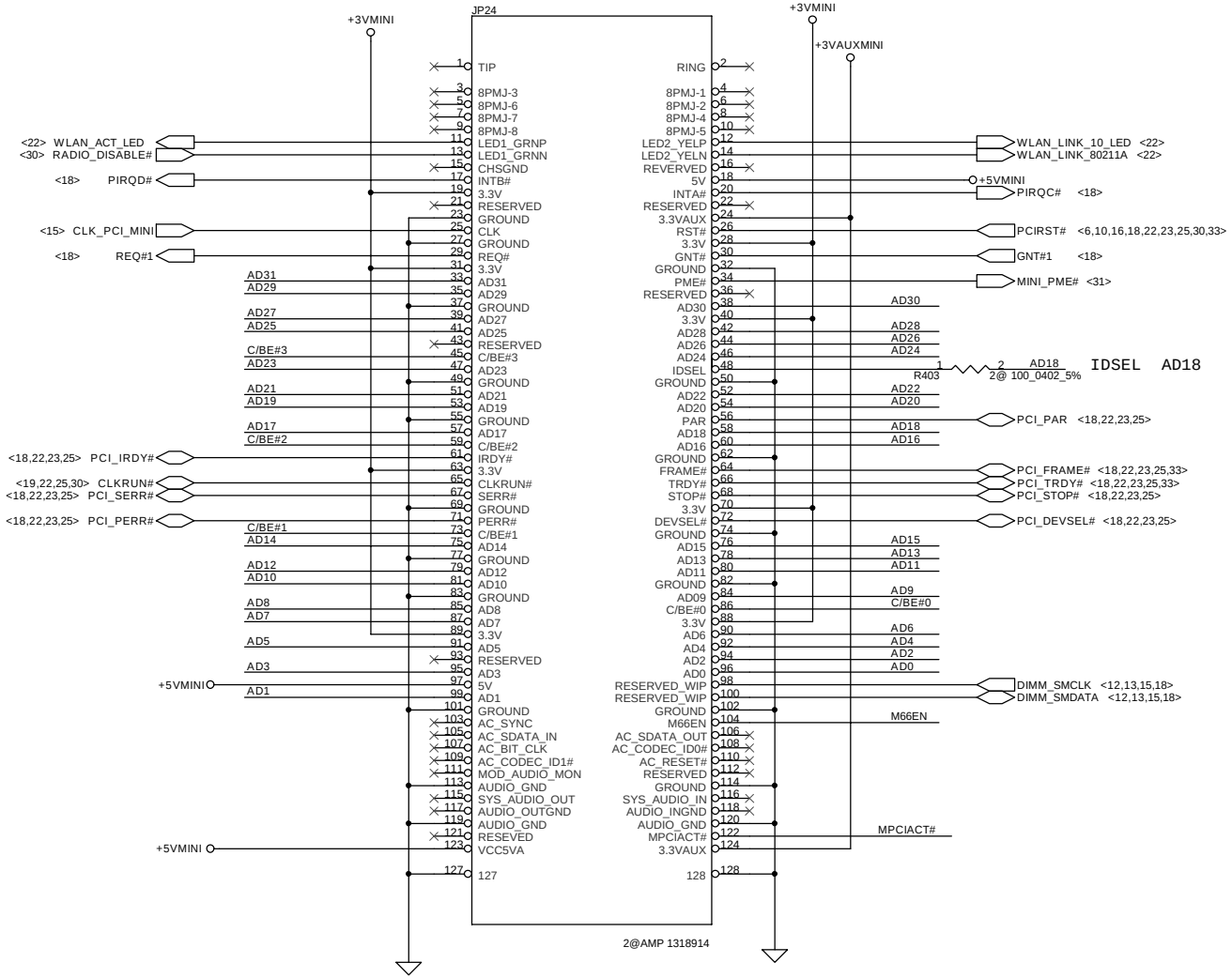
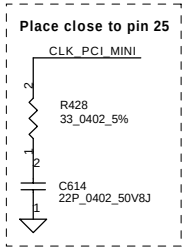
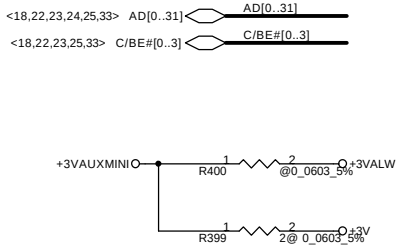
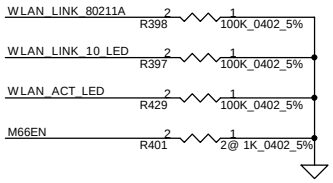
MINI PCI TYPE III

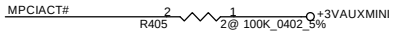


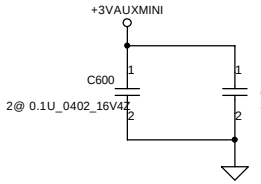
WIRELESS SUPPORT ONLY

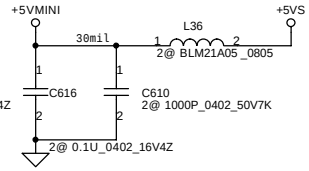


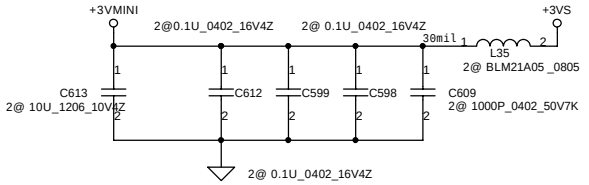












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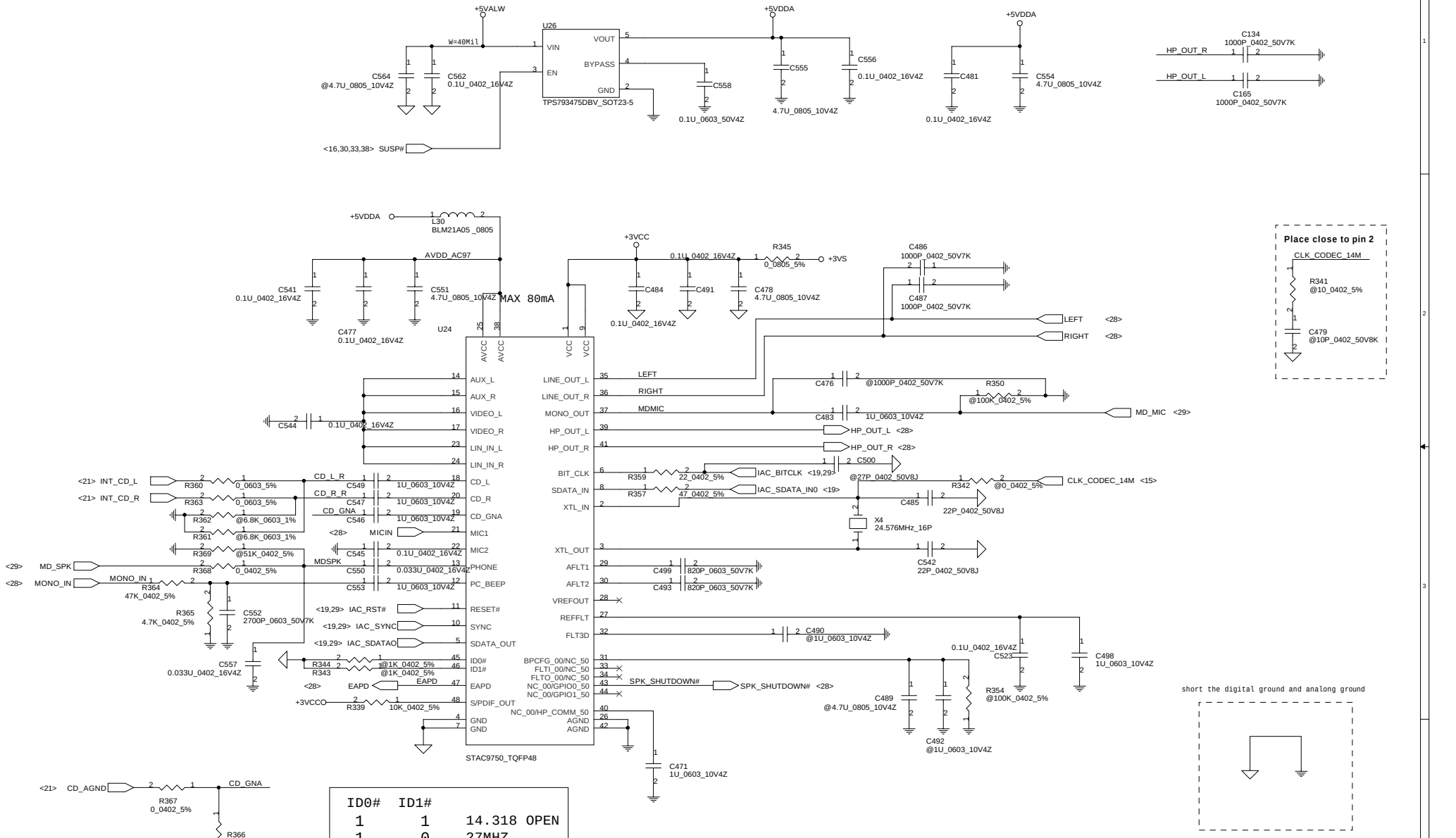

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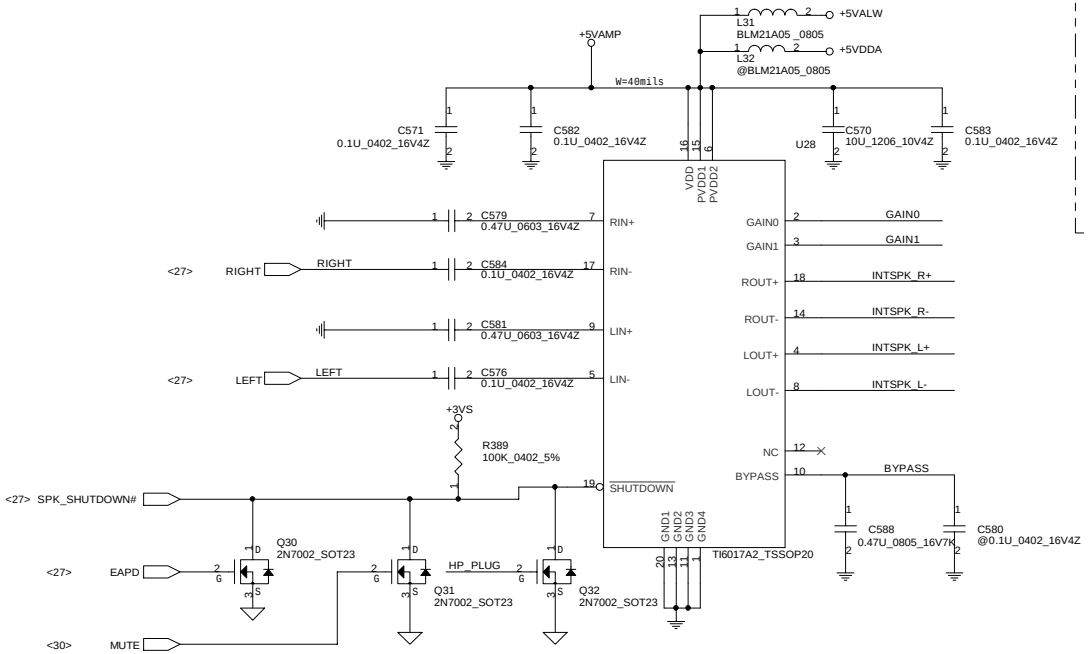
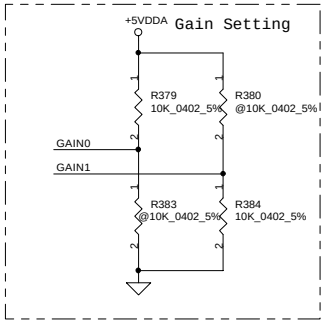
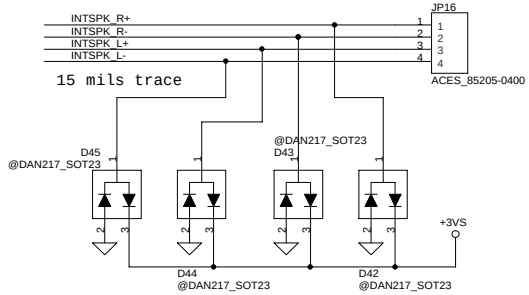


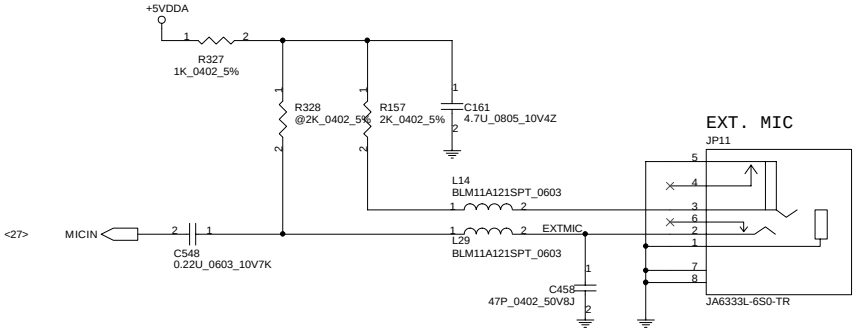


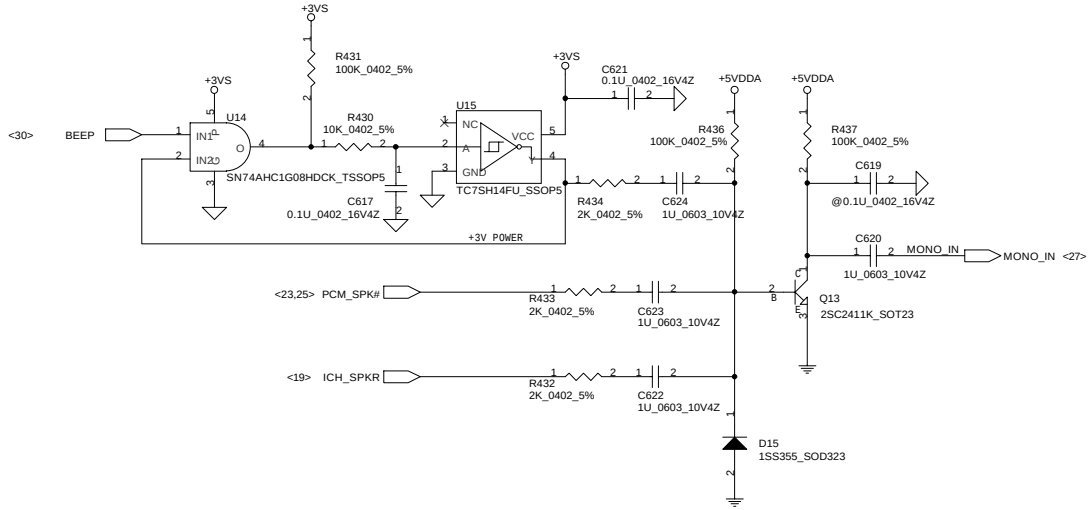
*

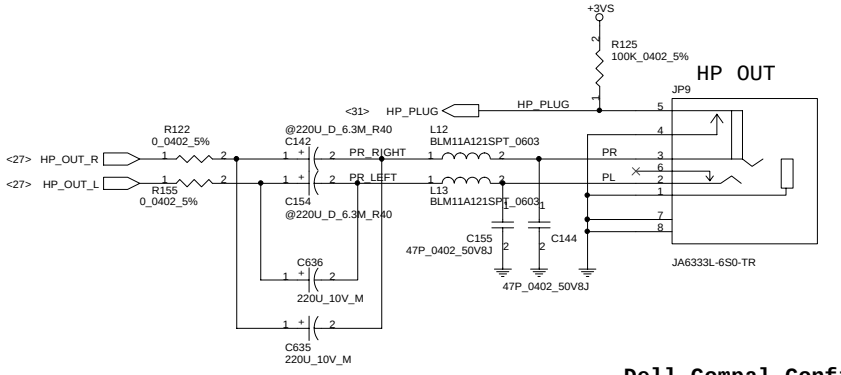
GAIN0	GAIN1	AV(inv)	INPUT IMPEDANCE
0	0	6dB	90K ohm
0	1	10dB	70K ohm
1	0	15.6dB	45K ohm
1	1	21.6dB	25K ohm

Speaker Connector









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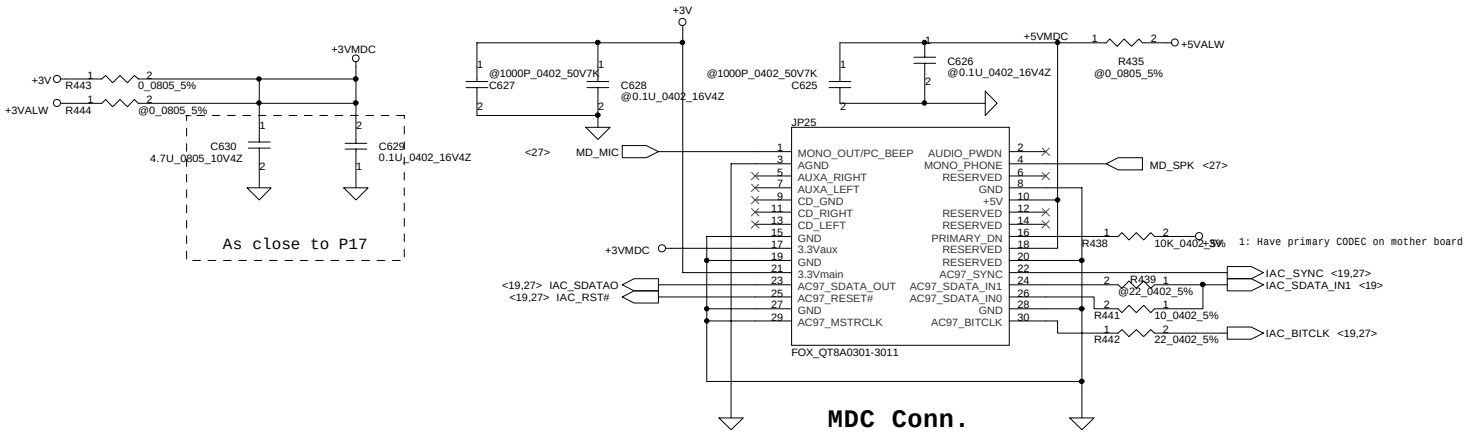
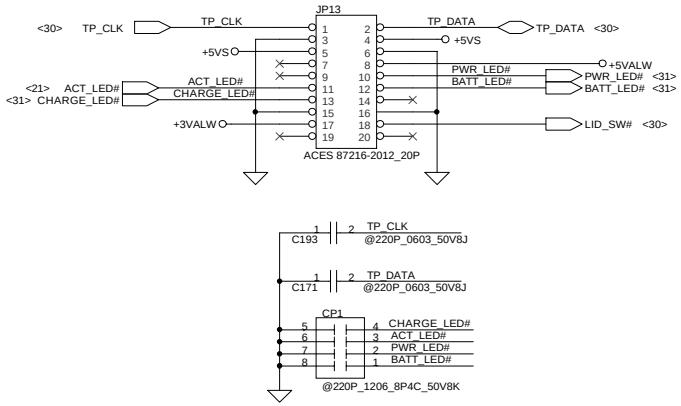
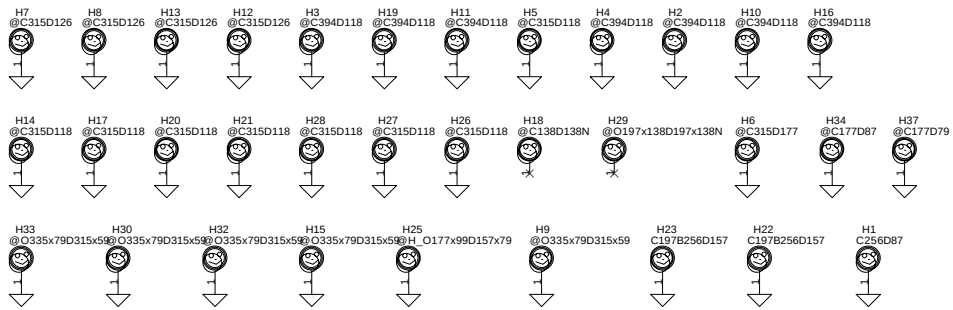


MDC Note
Pin 1 is NC for Pctel and connexant MDC modem
Pin 2 is NC for Pctel and connexant MDC modem

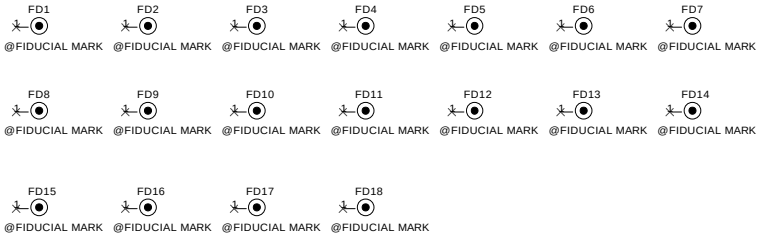
Touch Pad & Status LED Conn.



Screw Hole



Fiduial Mark



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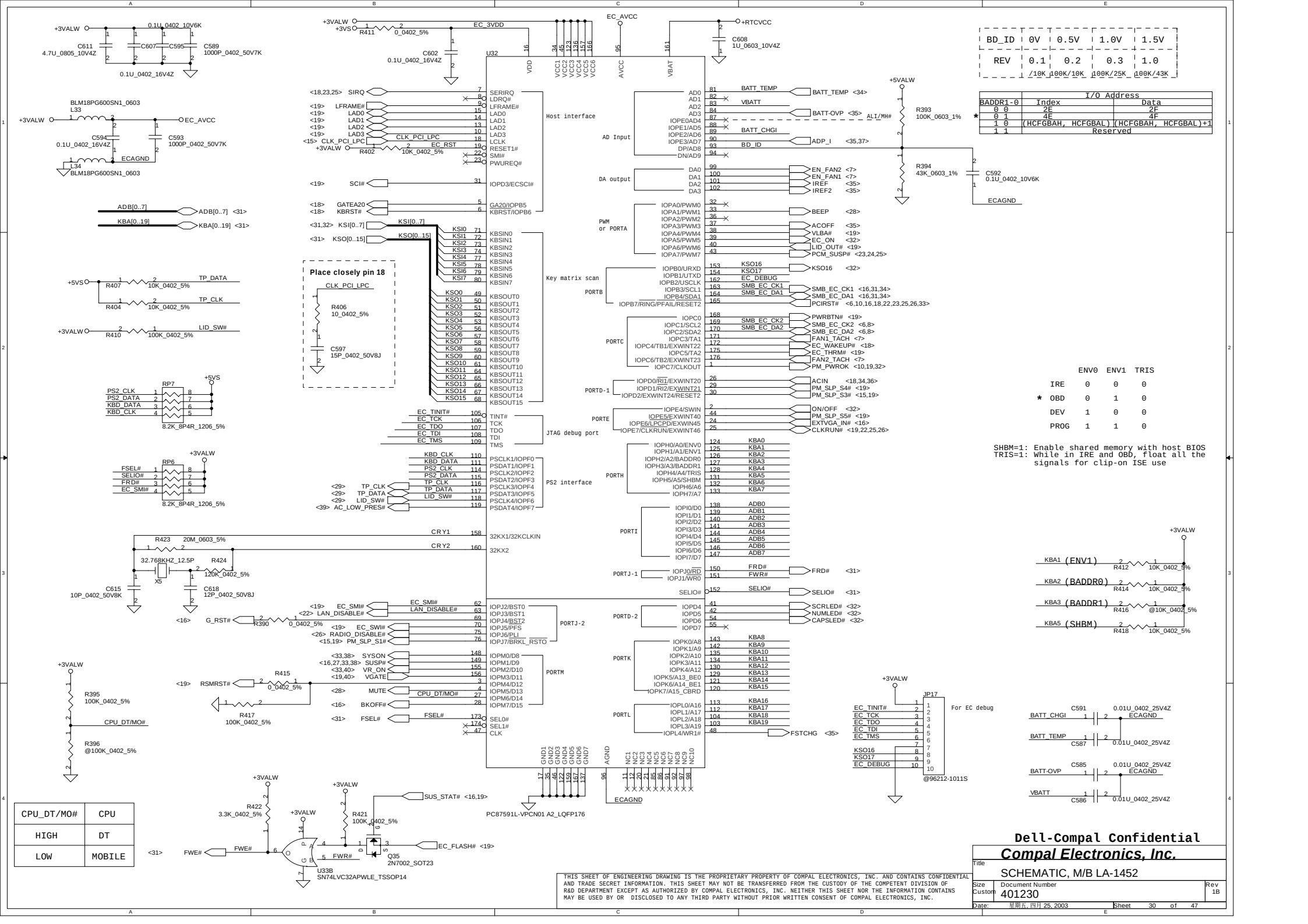
+3VALW
0.1U_0402_10V6K
C611 4.7U_0805_10V4Z
C607
C595
C589 1000P_0402_50V7K
0.1U_0402_16V4Z
BLM18PG600SN1_0603
L33
EC_AVCC
C594 0.1U_0402_16V4Z
C593 1000P_0402_50V7K
ECAGND
L34
BLM18PG600SN1_0603
+3VS
R411 0_0402_5%
EC_3VDD
C602 0.1U_0402_16V4Z
U32
VDD
VCC1
VCC2
VCC3
VCC4
VCC5
VCC6
AVCC
VBAT
+RTCVCC
C608 1U_0603_10V4Z
BD_ID 0V 0.5V 1.0V 1.5V
REV 0.1 0.2 0.3 1.0
/10K 100K/10K 100K/25K 100K/43K
I/O Address
BADDR1-0 Index Data
0 0 2E 2F
0 1 4E 4F
1 0 (HCFGBAH, HCFGBAL) (HCFGBAH, HCFGBAL)+1
1 1 Reserved
<18,23,25> SIRQ
<19> LFRAME#
<19> LAD0
<19> LAD1
<19> LAD2
<19> LAD3
<15> CLK_PCI_LPC
+3VALW
R402 10K_0402_5%
EC_RST
SERIRQ
LDRQ#
LFRAME#
LAD0
LAD1
LAD2
LAD3
LCLK
RESET1#
SMI#
PWUREQ#
Host interface
<19> SCI#
IOPD3/ECSCI#
<18> GATEA20
<18> KBRST#
GA20/IOPB5
KBRST/IOPB6
ADB[0..7]
KBA[0..19]
<31,32> KSI[0..7]
<31> KSO[0..15]
KSI[0..7]
KSO[0..15]
KSI0 KSI1 KSI2 KSI3 KSI4 KSI5 KSI6 KSI7
KSO0 KSO1 KSO2 KSO3 KSO4 KSO5 KSO6 KSO7 KSO8 KSO9 KSO10 KSO11 KSO12 KSO13 KSO14 KSO15
KBSIN0 KBSIN1 KBSIN2 KBSIN3 KBSIN4 KBSIN5 KBSIN6 KBSIN7
KBSOUT0 KBSOUT1 KBSOUT2 KBSOUT3 KBSOUT4 KBSOUT5 KBSOUT6 KBSOUT7 KBSOUT8 KBSOUT9 KBSOUT10 KBSOUT11 KBSOUT12 KBSOUT13 KBSOUT14 KBSOUT15
Key matrix scan
Place closely pin 18
CLK_PCI_LPC
R406 10_0402_5%
C597 15P_0402_50V8J
AD Input
AD0 AD1 AD2 AD3
IOPE0AD4 IOPE1/AD5 IOPE2/AD6 IOPE3/AD7
DP/AD8 DN/AD9
BATT_TEMP
VBATT
BATT-OVP <35>
ALI/MH#
BATT_CHGI
ADP_I <35,37>
BD_ID
+5VALW
R393 100K_0603_1%
R394 43K_0603_1%
C592 0.1U_0402_10V6K
ECAGND
DA output
DA0 DA1 DA2 DA3
EN_FAN2 <7>
EN_FAN1 <7>
IREF <35>
IREF2 <35>
PWM or PORTA
IOPA0/PWM0 IOPA1/PWM1 IOPA2/PWM2 IOPA3/PWM3 IOPA4/PWM4 IOPA5/PWM5 IOPA6/PWM6 IOPA7/PWM7
BEEP <28>
ACOFF <35>
VLBA# <19>
EC_ON <32>
LID_OUT# <19>
PCM_SUSP# <23,24,25>
PORTB
IOPB0/URXD IOPB1/UTXD IOPB2/USCLK IOPB3/SCL1 IOPB4/SDA1 IOPB7/RING/PFAIL/RESET2
KSO16
KSO17
EC_DEBUG
SMB_EC_CK1 <16,31,34>
SMB_EC_DA1 <16,31,34>
PCIRST# <6,10,16,18,22,23,25,26,33>
PORTC
IOPC0 IOPC1/SCL2 IOPC2/SDA2 IOPC3/TA1 IOPC4/TB1/EXWINT22 IOPC5/TA2 IOPC6/TB2/EXWINT23 IOPC7/CLKOUT
PWRBTN# <19>
SMB_EC_CK2 <6,8>
SMB_EC_DA2 <6,8>
FAN1_TACH <7>
EC_WAKEUP# <18>
EC_THRM# <19>
FAN2_TACH <7>
PM_PWROK <10,19,32>
PORTD-1
IOPD0/RI1/EXWINT20 IOPD1/RI2/EXWINT21 IOPD2/EXWINT24/RESET2
ACIN <18,34,36>
PM_SLP_S4# <19>
PM_SLP_S3# <15,19>
PORTE
IOPE4/SWIN IOPE5/EXWINT40 IOPE6/LPCPD/EXWIN45 IOPE7/CLKRUN/EXWINT46
ON/OFF <32>
PM_SLP_S5# <19>
EXTVGA_IN# <16>
CLKRUN# <19,22,25,26>
ENV0 ENV1 TRIS
IRE 0 0 0
* OBD 0 1 0
DEV 1 0 0
PROG 1 1 1
SHBM=1: Enable shared memory with host BIOS
TRIS=1: While in IRE and OBD, float all the signals for clip-on ISE use
+5VS
TP_DATA
TP_CLK
LID_SW#
R407 10K_0402_5%
R404 10K_0402_5%
R410 100K_0402_5%
RP7
PS2_CLK
PS2_DATA
KBD_DATA
KBD_CLK
8.2K_8P4R_1206_5%
RP6
FSEL#
SELIO#
FRD#
EC_SMI#
8.2K_8P4R_1206_5%
EC_TINIT# EC_TCK EC_TDO EC_TDI EC_TMS
TINT# TCK TDO TDI TMS
JTAG debug port
KBD_CLK KBD_DATA PS2_CLK PS2_DATA TP_CLK TP_DATA LID_SW#
PSCLK1/IOPF0 PSDAT1/IOPF1 PSCLK2/IOPF2 PSDAT2/IOPF3 PSCLK3/IOPF4 PSDAT3/IOPF5 PSCLK4/IOPF6 PSDAT4/IOPF7
PS2 interface
<29> TP_CLK
<29> TP_DATA
<29> LID_SW#
<39> AC_LOW_PRES#
PORTH
IOPH0/A0/ENV0 IOPH1/A1/ENV1 IOPH2/A2/BADDR0 IOPH3/A3/BADDR1 IOPH4/A4/TRIS IOPH5/A5/SHBM IOPH6/A6 IOPH7/A7
KBA0 KBA1 KBA2 KBA3 KBA4 KBA5 KBA6 KBA7
PORTI
IOPI0/D0 IOPI1/D1 IOPI2/D2 IOPI3/D3 IOPI4/D4 IOPI5/D5 IOPI6/D6 IOPI7/D7
ADB0 ADB1 ADB2 ADB3 ADB4 ADB5 ADB6 ADB7
PORTJ-1
IOPJ0/RD IOPJ1/WR0
FRD# <31>
FWR#
SELIO# <31>
CRY1 CRY2
32KX1/32KCLKIN
32KX2
R423 20M_0603_5%
32.768KHZ_12.5P
X5
R424 120K_0402_5%
C615 10P_0402_50V8K
C618 12P_0402_50V8J
PORTJ-2
IOPJ2/BST0 IOPJ3/BST1 IOPJ4/BST2 IOPJ5/PFS IOPJ6/PLI IOPJ7/BRKL_RSTO
EC_SMI# LAN_DISABLE# EC_SWI# RADIO_DISABLE# PM_SLP_S1#
<16> G_RST#
R390 0_0402_5%
PORTD-2
IOPD4 IOPD5 IOPD6 IOPD7
SCRLED# <32>
NUMLED# <32>
CAPSLED# <32>
PORTK
IOPK0/A8 IOPK1/A9 IOPK2/A10 IOPK3/A11 IOPK4/A12 IOPK5/A13_BE0 IOPK6/A14_BE1 IOPK7/A15_CBRD
KBA8 KBA9 KBA10 KBA11 KBA12 KBA13 KBA14 KBA15
PORTM
IOPM0/D8 IOPM1/D9 IOPM2/D10 IOPM3/D11 IOPM4/D12 IOPM5/D13 IOPM6/D14 IOPM7/D15
SYSON <33,38>
SUSP# <16,27,33,38>
VR_ON <33,40>
VGATE <19,40>
MUTE <28>
BKOFF# <16>
FSEL# <31>
CPU_DT/MO#
SEL0# SEL1# CLK
R415 0_0402_5%
R417 100K_0402_5%
RSMRST# <19>
PORTL
IOPL0/A16 IOPL1/A17 IOPL2/A18 IOPL3/A19 IOPL4/WR1#
KBA16 KBA17 KBA18 KBA19
FSTCHG <35>
GND1 GND2 GND3 GND4 GND5 GND6 GND7 AGND
NC1 NC2 NC3 NC4 NC5 NC6 NC7 NC8 NC9 NC10
ECAGND
PC87591L-VPCN01 A2_LQFP176
+3VALW
R395 100K_0402_5%
CPU_DT/MO#
R396 @100K_0402_5%
CPU_DT/MO# CPU
HIGH DT
LOW MOBILE
+3VALW
R422 3.3K_0402_5%
FWE#
<31>
U33B SN74LVC32APWLE_TSSOP14
+3VALW
R421 100K_0402_5%
SUS_STAT# <16,19>
EC_FLASH# <19>
Q35 2N7002_SOT23
+3VALW
JP17
For EC debug
EC_TINIT# EC_TCK EC_TDO EC_TDI EC_TMS KSO16 KSO17 EC_DEBUG
@96212-1011S
+3VALW
KBA1 (ENV1) R412 10K_0402_5%
KBA2 (BADDR0) R414 10K_0402_5%
KBA3 (BADDR1) R416 @10K_0402_5%
KBA5 (SHBM) R418 10K_0402_5%
BATT_CHGI C591 0.01U_0402_25V4Z ECAGND
BATT_TEMP C587 0.01U_0402_25V4Z
BATT-OVP C585 0.01U_0402_25V4Z ECAGND
VBATT C586 0.01U_0402_25V4Z
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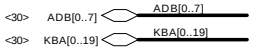
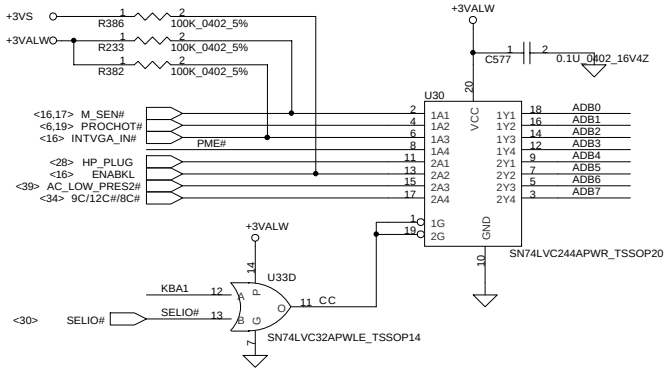
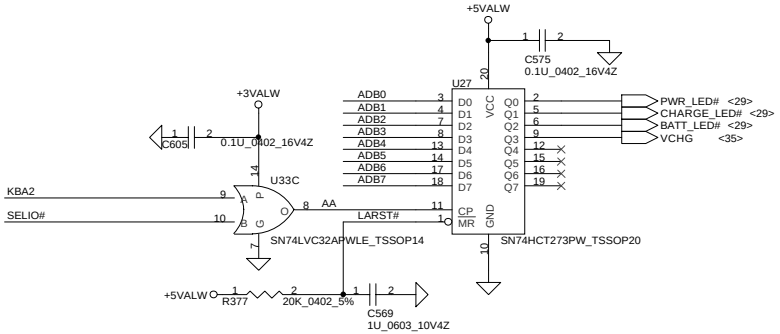


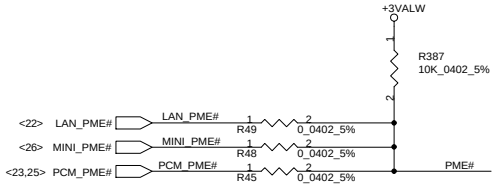
Input Port

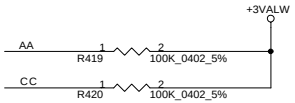


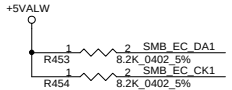
Output Port

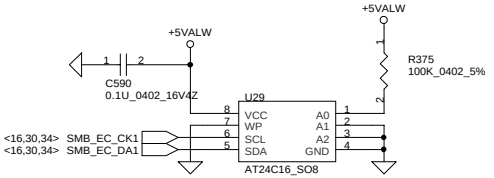


NM24C164 Address definition: 1 A2 A1# A0 B2 B1 B0 R/W#





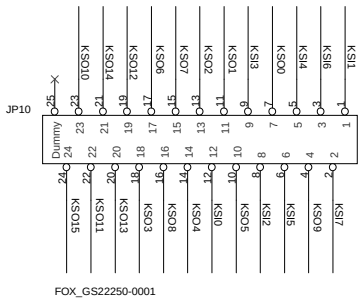


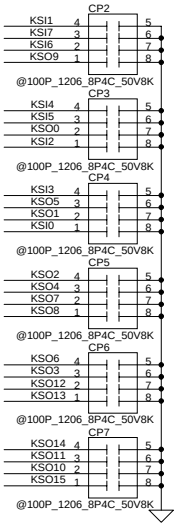


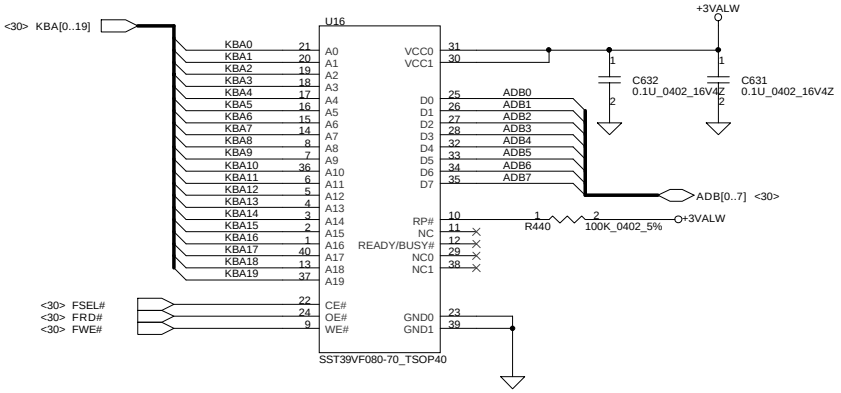
EC I2C Bus Address:

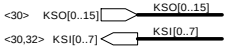
24C164: 1011xxx R/W#
24C16: 1010xxx R/W#

INT_KBD CONN.









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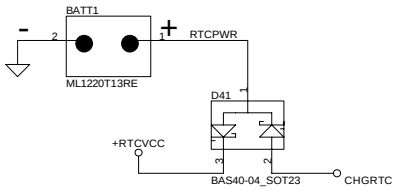
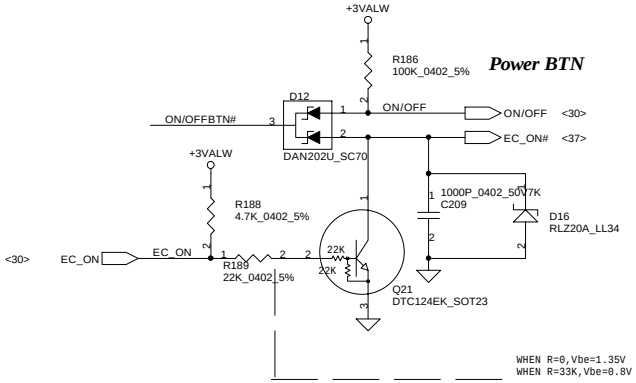
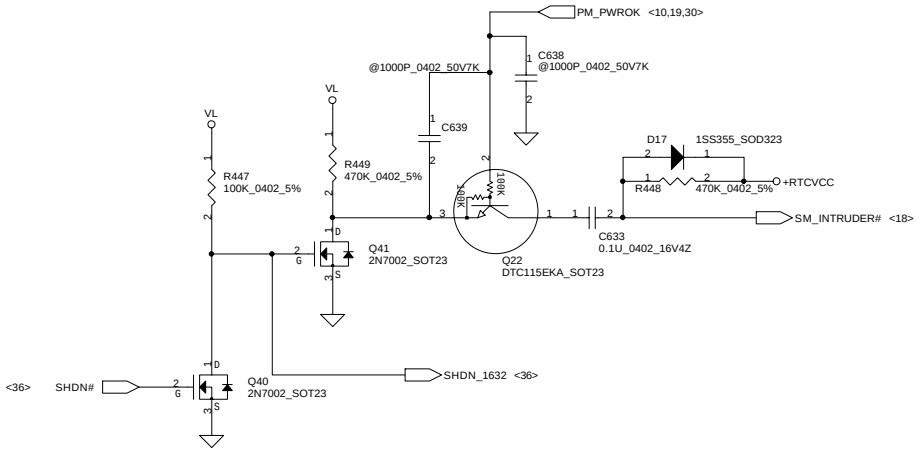
RTC Battery

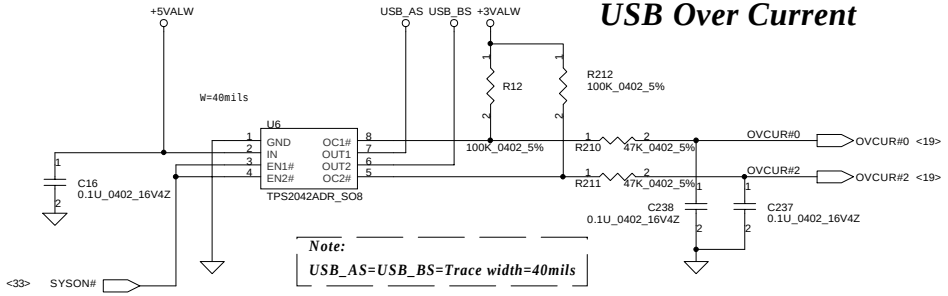


Power BTN

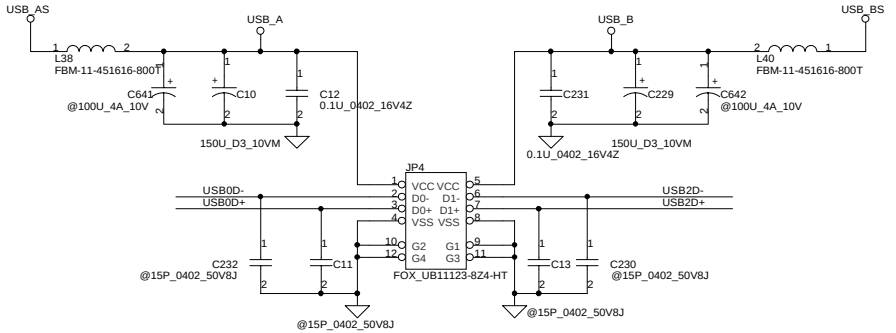


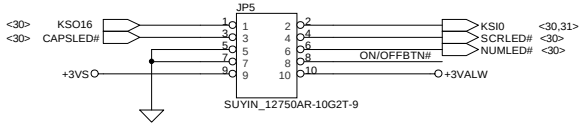


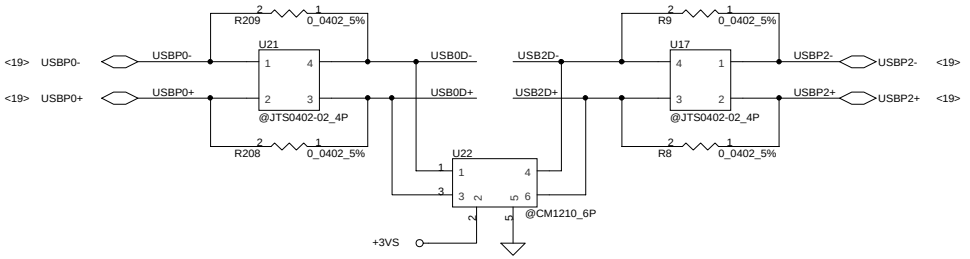
USB Over Current



USB PORT







Power SW Function Button

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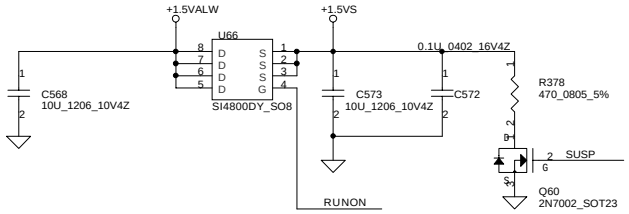
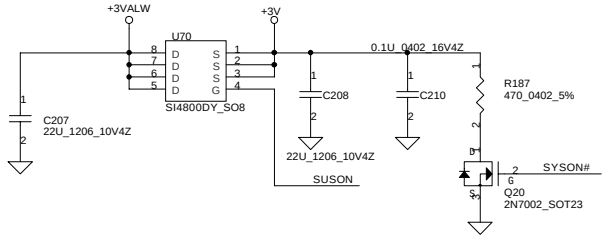
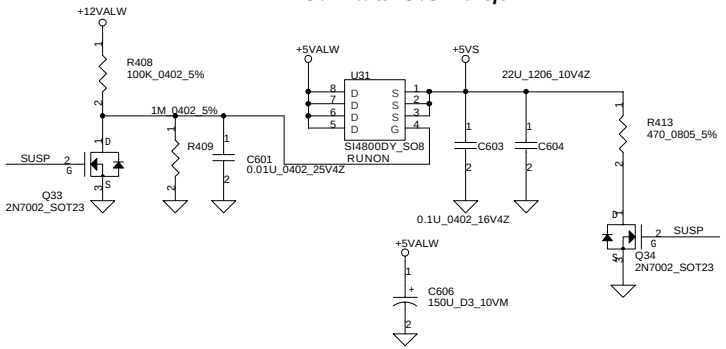
+1.5VALW to +1.5VS Transfer



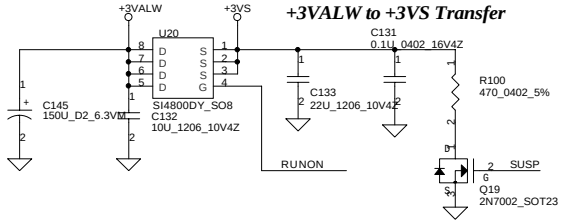
+3VALW to +3V Transfer

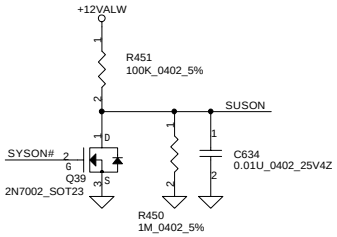


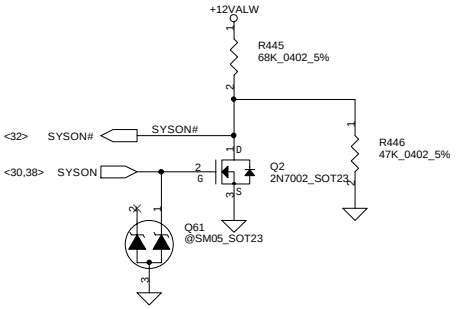
+5VALW to +5VS Transfer

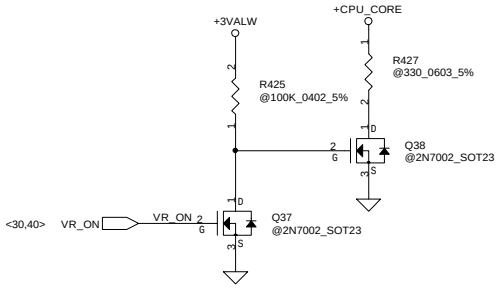


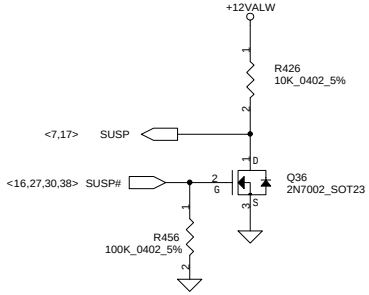
+3VALW to +3VS Transfer

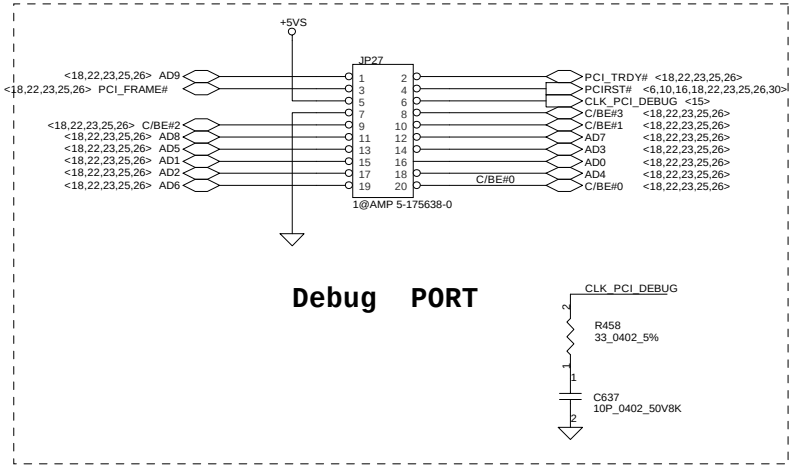












Debug PORT

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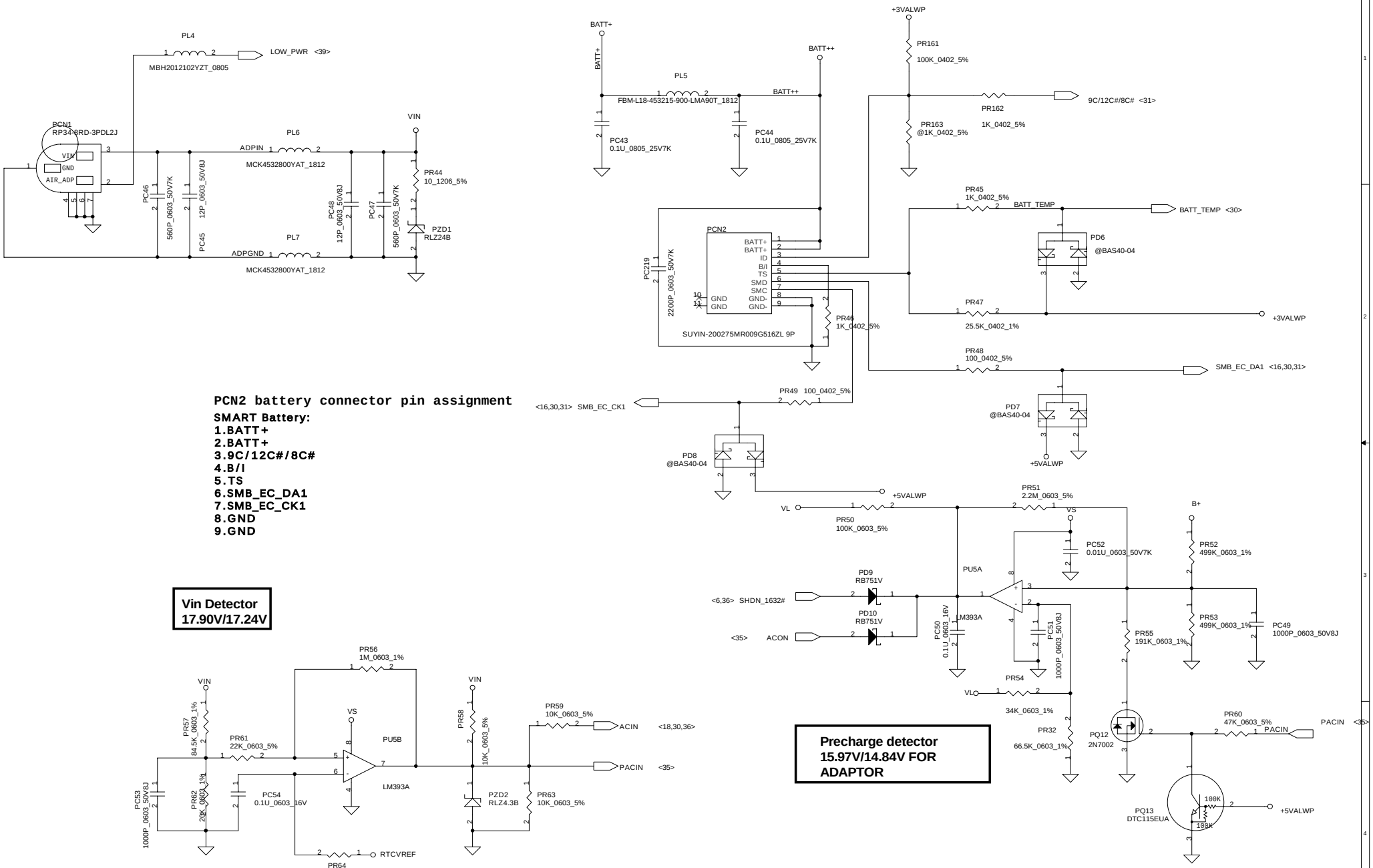

PCN2 battery connector pin assignment

SMART Battery:
1.BATT+
2.BATT+
3.9C/12C#/8C#
4.B/I
5.TS
6.SMB_EC_DA1
7.SMB_EC_CK1
8.GND
9.GND

Vin Detector
17.90V/17.24V

Precharge detector
15.97V/14.84V FOR
ADAPTOR

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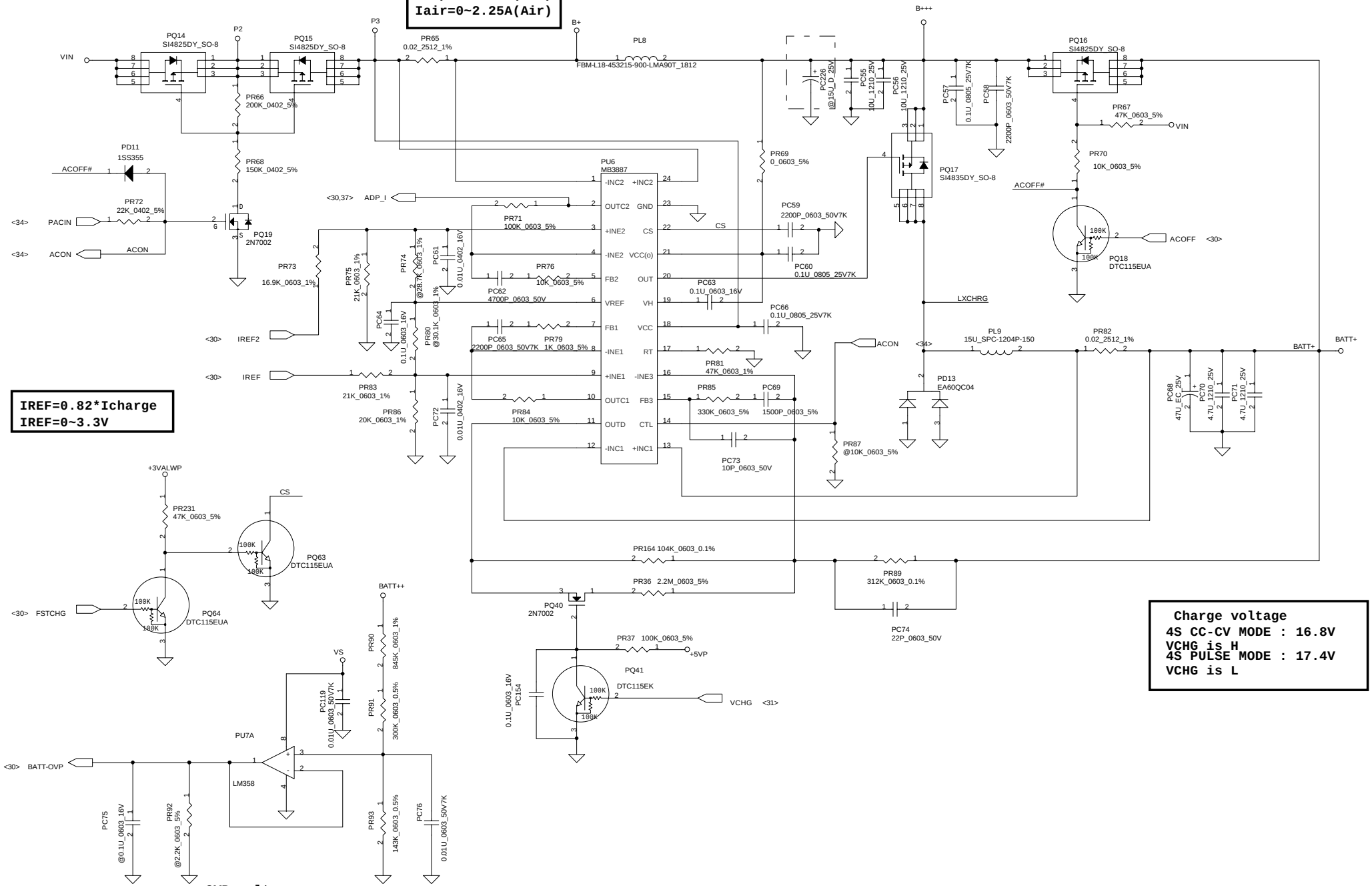
Charger

Iadp=0~4.10A(90W)
Iadp=0~3.20A(70W)
Iair=0~2.25A(Air)



IREF=0.82*Icharge
IREF=0~3.3V

Charge voltage
4S CC-CV MODE : 16.8V
VCHG is H
4S PULSE MODE : 17.4V
VCHG is L

OVP voltage :
LI-4S :18.0V----BATT-OVP=2.00V
LI-3S :13.5V----BATT-OVP=1.50V
BATT-OVP=0.2206*BATT++

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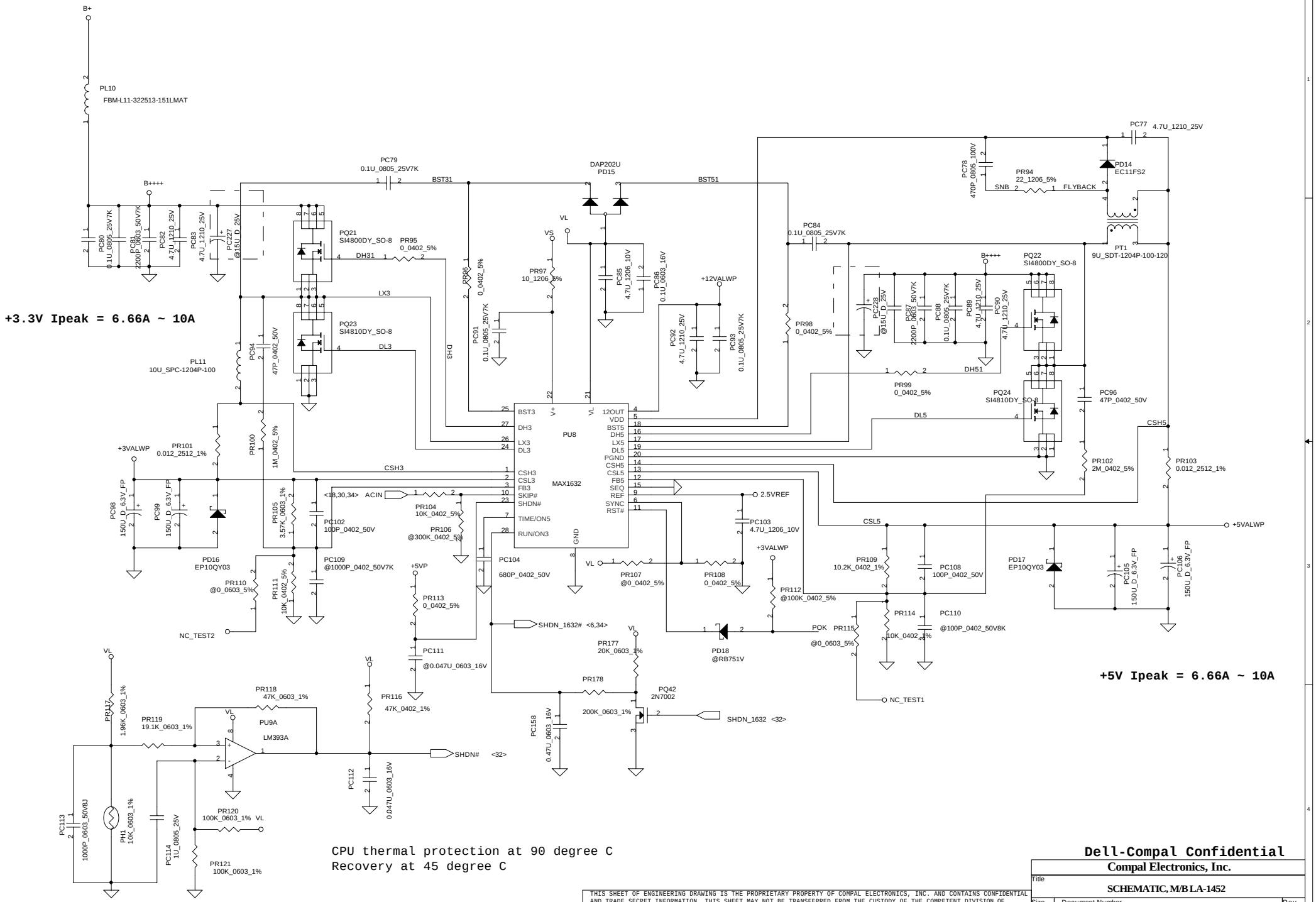
+3.3V/+5V/+12V



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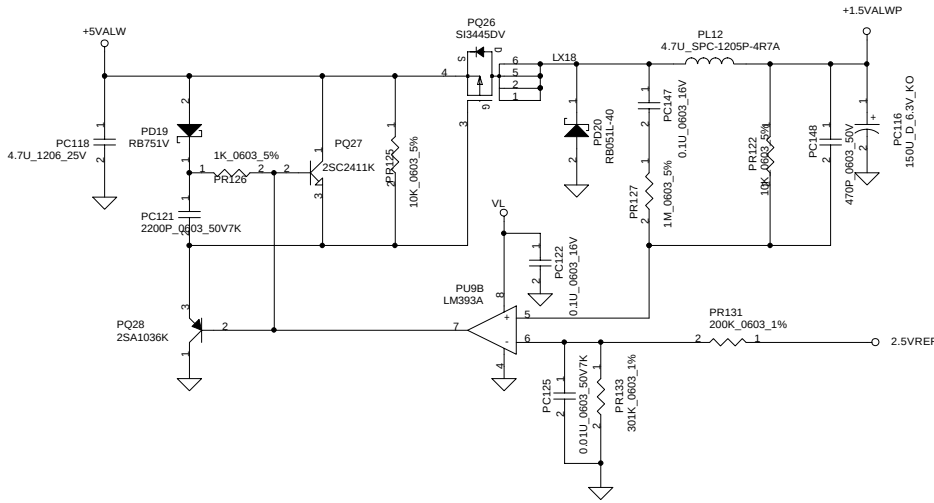
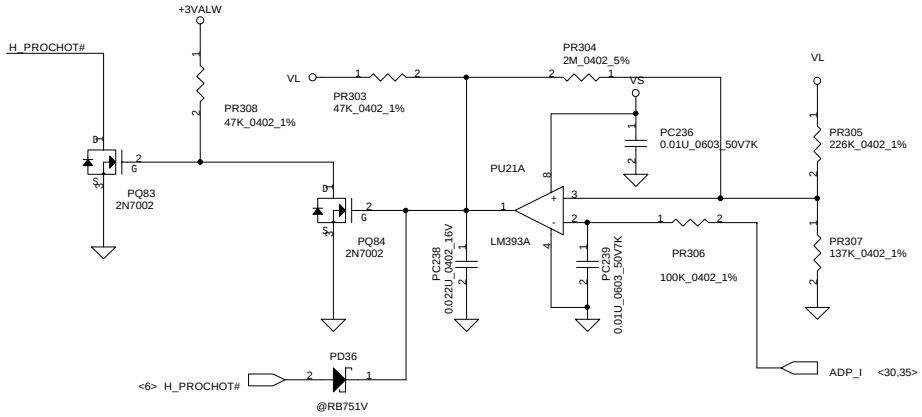
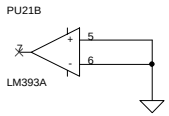
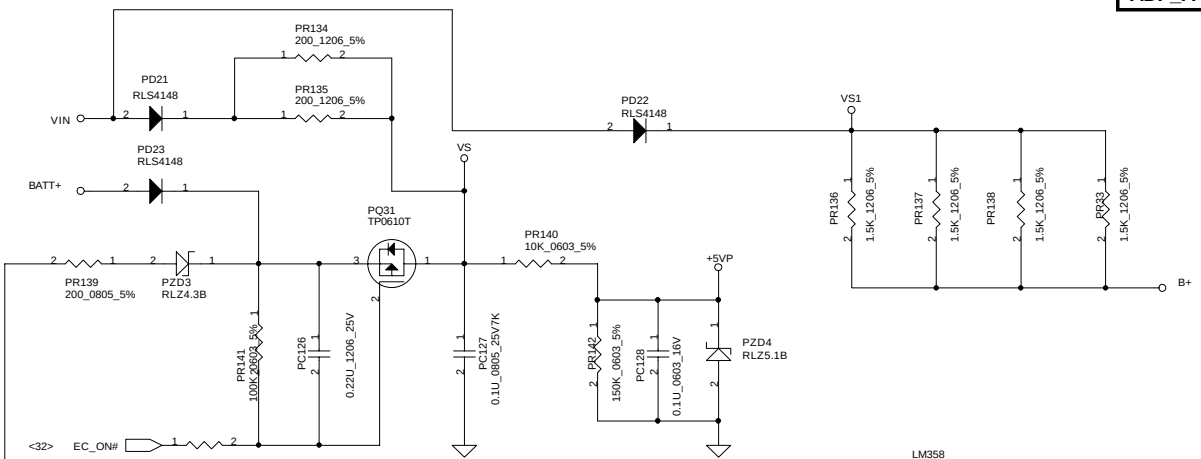
+1.5VALW+-5%

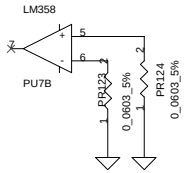


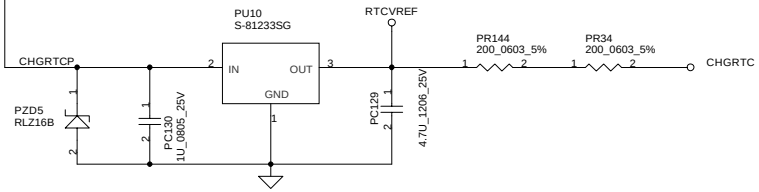


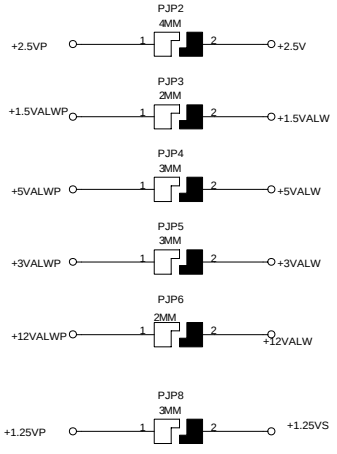
Adaptor Current Detector
ADP_I : 2.01V.... clock throttle(lin=5.025A)
ADP_I : 1.81V....No clock throttle(lin=4.525A)











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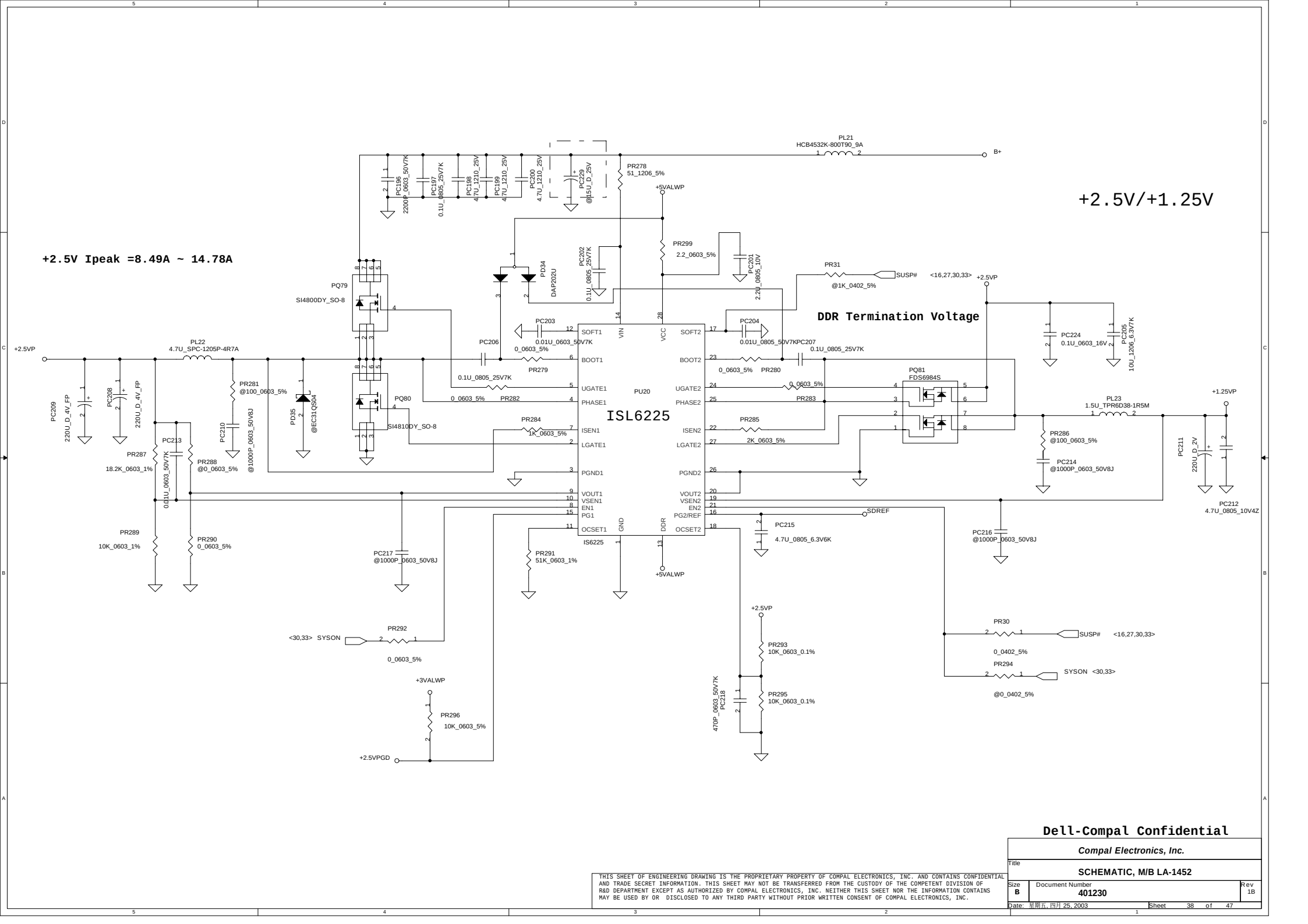

Compal Electronics, Inc.

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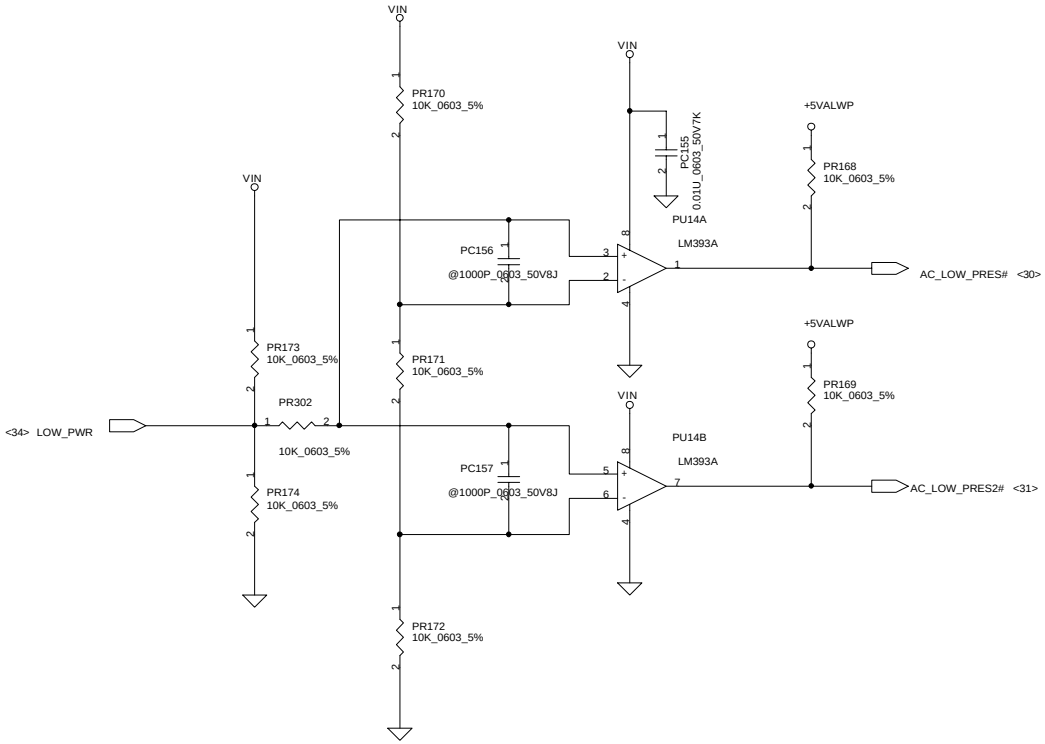
AC Adapter Detector

AC Adapter	LOW_PWR	AC_LOW_PRES#	AC_LOW_PRES2#	IREF2
90W	0V	0	0	2.96V
70W	Float	0	1	2.31V
AIRLINE	20V	1	1	1.62V



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Different Pin Definition for ISL6215 in PU16

#6	RAMPS	#12	ALTV	#17	NODV
#8	VMON	#13	OFFSET	#24	EN
#11	OCSET	#15	VRTN	#27	ALTEN
#26	SOFT				

DE-POP all items in dash- area if ISL6215is used for mobile CPU

	DE-POP	PR249	PR256	PR268	PC171
ISL6219 for desk-top	PR247, PR255, PR260 PR248, PR250,PR258, PC178,PC172,PR236	7.5K	1.74K	unpop	5.6nF
ISL6215 for mobile	PR266, PQ74, PQ71 PR253, PC179, PR257	6.04K	1.5K	130K	4.7nF

PTC solution	1.PH6,PH7,PH8 pop thermal resistor 2. Non-pop PR298 and PH5 3.PR297 0 ohm
NTC solution	1.PH6,PH7,PH8 pop 0 ohm resistor 2. Pop PR298 681_0603_1%,PR297 1.15K_0603_1% 3. Pop PH5 4.7K thermal resistor

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Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
1	Fireware issue	The ICH4 GNTA# strap pull up for EC BIOS	0.1A	18	Depop R153, GNTA# have internal pull up	0.1	SST
2	Leakage current issue	Reduce Broadcom 4401L leakage current	0.1A	22	Depop L39 and pop L7, conncetor power source from +3VALW to +3V, R31, R32, R33 pull up to +3VAUXLAN, Q3,Q4,Q5 pin3 connect to +3VAUXLAN	0.1	SST
3	Fix schematics part value	L21, L22, L23, L26 part value different with BOM	0.1B	15	Change L21, L22, L23, L26 part value from CHB2012U121 to BLM21A601SPT on schematics	0.1	SST
4	BOM issue	R445 include wrong part number	0.1B	33	Change R445 part number from SD028470200 to SD028680200. PN indicate value from 47K_0402_5% to 68K_0402_5%	0.1	SST
5	HDD leakage current issue	When AC in +5VSHDD will go up to 5V	0.1C	21	Q6 change to SI2302DS as schematics, SIDEPWR active low when HDD power on	0.1	SST
6	Capture library package issue	2N7002 Drain is pin1, Source is pin3	0.1C	28	Fixed Q30, Q31, Q32 capture libaray , pin1 fixed to pin3, pin3 fixed to pin1	0.1	SST
7	BOM issue	Fixed R196~R199 from 56.2K ohm to 56.2 ohm	0.1C	23	Change R196~R199 PN from SD014562207 to SD014562A00 on schematics	0.1	SST
8	Fix LOM EEPROM issue	U8 (AT93C46) is used X16 organization	0.1C	22	NC or pop R452 to pull up U8 pin6 for X16 organization select	0.1	SST
9	Fix CLKRUN# leakage issue	ICH4 not implement CLKRUN#, GPIO24 is resume power well.	0.1D	19	Add a diode D46 to isolate GPIO24 from ICH4 to PCI devices, and depop D46.	0.2	PT
10	LOM EEPROM issue	U8 (AT93C46) is used X16 organization. U8 pin6 pull up or NC for X16 organization select, pull down for X8 organization selcet.	0.1D	22	U8 pin6 pull up +3VAUXLAN via R452 , and depop R452.	0.2	PT
11	SW BD LED keep turn on	SW BD LED control transistor Emitter conncet to +5VALW be keep LED always turn on	0.1D	32	Change JP5 pin9 from +5VS to +3VS	0.2	PT
12	Fix VCCA_SM voltage drop issue	Add current rating for VCCA_SM, VCCA_DPLL, VCCA_FSB (1.5VS)	0.1E	10	Change L3, L4, L27, L28 from MLF2012DR68XT to FBM-L11-201209-121LMA05	0.2	PT
13	Change address and control signals layout topology	Change ddr address and control signal layout topology	0.1E	12,13	DDR address and control signals layout topology same the ddr data layout topology	0.2	PT
14	Fix EE issue item 89	Signal COMP/B and Y/G connect error	0.1E	17	Swap COMP/B and Y/G to correct connection	0.2	PT
15	Fix EE issue item 91	BEEP# from EC should be high active	0.1E	28	Change net name BEEP# to BEEP	0.2	PT
16	Fix EE issue item 92	Fix FSB 400MHz when 845GL pop	0.1E	15	Add R455 (8.2K_5%) pull down for H_BSEL0	0.2	PT
17	Fix EE issue item 95	When AC insertion SUSP# may be floating before the KBC can programit.	0.1E	33	Add R456 (100K_5%) pull down SUSP#	0.2	PT
18	Fix EE issue item 47	Provide enough current rating	0.1F	15	L22 and L26 change frome BLM21A601SPT (300mA) to FBM-L11-201209-121LMA05 (500mA) and depop L22	0.2	PT
19	Card Bus power bead current rating not enough	Provide enough current rating	0.1F	24	L5 and L6 change frome FBM-11-160808-800LMT_0603 (300mA) to FBM-L11-201209-121LMA05 (500mA)	0.2	PT
20	Fix EE issue item 102	Fix Intel CPU FSB frequency issue	0.1F	10,15	H_SEL0 connect to R270 pin1 from CLK generator, HBSEL0 connector to R270 pin2 from CPU. Depop R270 on GL board.	0.2	PT
21	Battery charge issue	ACIN pull up +3VALW can't change power supplier to battery when AC exit	0.1F	18	Depop R161	0.2	PT
22	NO	Change PCMCIA connector	0.1F	24	Change PCMCIA conncetor from AMP_0-1376275-1 to JAE_JC21-BRB	0.2	PT
23	Fix INTRUDER issue	ESD protect for Q22	0.1F	32	Add C638, C639 for Q22 protection	0.2	PT
24	Remove PS2 connector	No necessary	0.1G	29	Remove RP7, JP26	0.2	PT
25	Add debug port	GL board have not pop minipci connector, we need a port 80 debug tool	0.1G	33	Add R458, C637 and JP27	0.2	PT
27	For cost save	For cost save	0.1G	32	Depop C10, C229 (150U Poly Cap), add C641, C642 (100U Petit Cap)	0.2	PT
28	It no need	Use R19 pop and depop to control H_SEL0 high or low	0.1G	15	Remove R455	0.2	PT
29	Fix EE issue item 134	Change ddr address and control signal layout topology	0.1H	12,13	Change DDR address and control signal to go back SST topology	0.2	PT
30	Fix EE issue item 149	Pop Petit Cap after EA test	0.1H	32	Depop C641, C642 and pop C10, C229	0.2	PT
31	Fix EMI issue	EMI team's recommendation	0.1I	10	Pop R52, C79 for CLK_CLK_PCI_LAN; R428, C614 for CLK_PCI_MINI; R406, C597 for CLK_PCI_LPC; R321, C395 for CLK_ICH_66M	0.2	PT

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
32	No	Connect MiniPci conncetor metal door to short to GND	0.1I	26	Add JP24 pin 127, 128 on schematics short to GND, JP24 footprint pin 127, 128 (metal lock door) be short to GND	0.2	PT
33	No	Some text mode use wire, change to line	0.1I	10,30,40	Some text mode use wire, change to line	0.2	PT
34	Fix power on issue	Use PCIRST# to set the SHDN_1632# work after PCIRST# high when power on	0.1I	6	Add Q62 gate connect to PCIRST#, source connect to SHDN_1632#	0.2	PT
35	No	Change to use approve part	0.1I	31	RP118 (8.2K +-5% 4P2R) change to R453, R454 (8.2K_0402_5%)	0.2	PT
36	No	Hard Disk source power change to +5VS	0.1I	21	Q6 change back to SI2301DS (PMOS) pin3 connect to +5VS	0.2	PT
37	Fix EE issue item 134	Change DDR address and control signal topology back to REV0.1	0.1I	12,13	Change DDR address and control signal topology back to REV0.1	0.2	PT
38	Fix EE issue item 171	For CRT Hsync and Vsync to allow tuning	0.1I	17	Add series resistors R459, R460 for Hsync and Vsync	0.2	PT
39	No	Schematic version change for PT build	0.2	ALL	Change revision from 0.1I to 0.2	0.2	PT
40	Fix issue item 20	Slow rising and falling time	0.2A	10	Pop R234, C249 for CLK_MCH_DISPLAY; R286, C333 for CLK_MCH_66M	0.2	PT
41	Fix CRT rising and falling time issue	Fast rising and falling time	0.2A	17	Pop L1, L2, L15 Change form FCM-2012C-800 to FBM-10-201209-260T for PE board	0.2	PT
42	No	Change Board ID output level	0.2A	30	Pop R393 100K_0603_1% for Board ID	0.2	PT
43	No	Add off-page reference	0.2A	24	Add off-page on pg24 PCMCIA connector	0.2	PT
44	No	Net in for Rev 0.2A Gerber	0.2B	ALL	Modify Text	0.2A	PT-2
45	Fix DFX issue	C387 effect DIMM door lock	0.2C	21	Add C643 22U_1206 replace C387's layout location and C387 leave DIMM area.	0.2A	PT-2
46	No	Add JP18 PCMCIA connector GND pads	0.2C	24	JP18 pin75,76,77,78,79,80,81,82 connect to GND	0.2A	PT-2
47	No	PM_GMUXSEL for mobil platform to support SpeedStep, desktop platform just GPIO fuction	0.2C	19	Remove PM_GMUXSEL signal net	0.2A	PT-2
48	Fix PIR2 issue	PIR not match schemaitcs	0.2F	22	Pop L39 and depop L7	0.2A	PT-2
49	Fix PIR19 issue	PIR not match schemaitcs	0.2F	24	L5, L6 change to FBM-L11-201209-221LMAT (3A). And Depop L5	0.2A	PT-2
50	Fix PIR23 issue	PIR not match schemaitcs	0.2F	32	Depop C638	0.2A	PT-2
51	Fix PIR24 issue	PIR not match schemaitcs	0.2F	30	RP7 pop for pull up PS2 signal	0.2A	PT-2
52	Fix PIR25 issue	PIR not match schemaitcs	0.2F	33	JP27 pop on GL board for debug and depop on PE board	0.2A	PT-2
53	Fix EE issue item 62	Schematics component's PN not match BOM	0.2G	29	JP13 (TP CONN) PN change to "SP02001091O" in schematics to match BOM	0.2A	PT-2
54	Fix EE issue item 63	Schematics component's PN not match BOM	0.2G	29	JP25 (MDC CONN) PN change to "SP02F00410L" in schematics to match BOM	0.2A	PT-2
55	Fix EE issue item 64	Schematics component's PN not match BOM	0.2G	32	JP4 (USB CONN) PN change to "DC23310241L" in schematics to match BOM	0.2A	PT-2
56	3VDDCDA, 3VDDCCK rising time issue	3VDDCDA, 3VDDCCK rising slow on SMBus EA measurement	0.2G	17	R5, R201 change from 10K_0402_5% to 2K_0402_5%	0.3	ST
57	EE issue list item 91	CLK_PCI_ICH timing out of spec	0.2H	18	Pop R349 (22_0402_5%), C480 (10P_0402_50V8K) for CLK_PCI_ICH AC termination	0.3	ST
58	EE issue list item 103	Depop sub thermal sensors for cost save	0.2H	8	Depop U25, U23, C394, C482, R308, R351 and R306	0.3	ST
59	Fix Boardcom 4401L wake up from S3 issue	Fix Boardcom 4401L wake up from S3 issue	0.2H	22	Add R461, R462 and depop R462. Option VESD and VDDBUS power source from +3VS to +3VAUXLAN. C97, C96, C77, C74, C88, C87, C80 bypass +3VWOL	0.3	ST
60	EE issue list item 103	H_BSEL0 of 845PE should get 1.5V at input and CLK chip should be seeing 3.3V with 533MHz CPU	0.2H	15	Add R463 (0_0402_5%) Pop on PE board. R19 move to CPU side and power source +3VS.	0.3	ST

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
61	ESD protection on 2nd FAN	ESD protection on 2nd FAN	0.2I	7	Reserve Q63 (SM05) for 2nd FAN ESD protection	0.3	ST
62	Fix EE issue item 105	H_BSEL0 circuit not correct	0.2I	10, 15	Serie resistor R270 for CPU and MCH	0.3	ST
63	No	Change Board ID for ST build	0.2I	30	R394 change from 10K_0603_1% to 24.9K_0603_1%	0.3	ST
64	No	Change for ITP test on PCBA	0.2I	6, 8	Depop R313, R305 and pop R310, R372, R183, R184, R304	0.3	ST
65	Fix EE issue item 126	Using larger cap for high-pot margin	0.2J	22	C211, C212 change package from 1206 size to 1808.	0.3	ST
66	RJ11 ISN failed	EMI team recommend to resolve RJ11 ISN test failed	0.2J	29	Cut a seperated GND for MDC and connect to system GND via a schottky diode. Reserve a jump for connect system and MDC GND.	0.3	ST
67	Fix EE issue item 140	Connect 9C/12C#/8C# to EC GPIO for future 9Cell support if required	0.2K	31, 34	Connect 9C/12C#/8C# from PR162 to U30 pin17 and remove R388	0.3	ST
68	TI TPS793475DBVR damage issue	When power on, there are 1.5A sink current when TPS793475DBVR started	0.2K	29	For power solution, C558 change package size from 0402 to 0603 for value tolerance	0.3	ST
69	Fix EE issue item 136	Add hardware circuit to sense Adapter current and automatically generate PROCHOT to the CPU to generate automatic throttling	0.2K	6	R311 change to 4.7K_0402_5%, H_PROCHOT# connect to PD36	0.3	ST
70	Fix ThermTrip function	When thermal protective resistor PH1 work, SHDN_1632# can't tie to low	0.2K	6	R320 connect to Q59 base, R316 connect to Q59 collector and VL power source. Add Q64 between Q59 and Q62. Q62 change pin1 Drain to connect SHDN_1632#	0.3	ST
71	RJ11 ISN failed	Change solution for ISN failed	0.3	29	Remove PJP9-13 and D47	0.3	ST
72	Fix EE issue item 136	Follow Intel desing guide recommend pull up resistor value	0.3	6	R311 change back to 62_0402_5%	0.3	ST
73	Fix EE issue item 141	Prevent noise issue	0.3	28	Depop R328 for noise prevention	0.3	ST
74	No	For cost save	0.3	7	Depop C148, C150 (470U_D4_2.5VM) and C152 (330U_D2E_2.5VM)	0.3	ST
75	Fix PROTO3 EE issue item 44	Minipci connector pop for PE board only	0.3B	26	Add 2@ symbol for JP24 for PE board pop only	0.3	ST
76	No	Vendor schematics review recommendation	0.3B	22	R35 change from 10K_0402_5% to 1K_0402_5%	0.3	ST
77	Fix PROTO3 EE issue item 45	Remove minipci suport component for GL board cost save	0.3B	26	Remove R405, R399, C600, C596, C613, C612, C599, C598, C609, L35, C616, C610, L36, R401, R403 on GL board	0.3	ST
78	No	Modify material value	0.3C	23,26, 27,28	Change value L11,L30,L31,L35,L36 from BDM21A05 _0805 to BLM21A05 _0805	0.3	ST
79	No	Modify material part number	0.3C	27	U24 STAC9750 change from (SA097500000) to (SA097500010) for both BOM	0.3	ST
80	No	Depop Fan2 Control circuit	0.3C	7	Delete R11,D11,D20,U1,R10,R6,Q1,C234,Q8,JP19	0.3	ST
79	No	EMI require	1.0	17	Pop D1, D3, D18 for EMI requirement	1.0	QT
80	No	Modify Fiduial Mark & Screw Hole value for non pop	1.0	29	Fiduial Mark & Screw Hole value add @ symbol	1.0	QT
81	No	BD_ID change for QT build	1A	30	R394 change from 24.9K_0603_1% to 43K_0603_1%	1.0	QT

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
82	INTRUDER# issue	Sometimes when normal shutdown, INTRUDER# record a event	1A	32	Q22 change from 2N7002 to BJT DTC115EKA	1.0	QT
83	No	Because Q22 change to DTC115EKA, C639 is no necessory	1B	32	Depop C639 (1000P_0402_50V7K)	1.0	QT
84	Fix Qual issue item 35	Improve IAC_SDATA_IN1 singnal quaility	1B	29	The serie resistor R441 change from 22_0402_5% to 10_0402_5%	1.0	Pilot
85	Fix audio not switching to headphones or ext speakers immediately	For audio switching to headphones or ext speakers immediately	1C	28	Depop C580 and change C588 from 4.7uf to 0.47uf	1.0	RTS

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
1	CPU_CORE can't power up	Pin7 of PU16 can't be used as on/off control pin	0.1B	40	1. Change VCC power source of PU16 from +5VALWP to +5VS	0.1	SST
2	current limited is not up to 60A	Current limtited is about 37A while PH6,PH7,PH8 is 1.5K that is not enough for design target.Because we don't use PTC resistor on PCB now, the value must be tuned later.	0.1B	40	1. Change PH6,PH7,PH8 from 1.5K_0603_5% to 3K_0603_1%	0.1	SST
3	Turn on voltage of PQ19 is not eonugh	Vgs of PQ19 is 2V while PR72 is 47K. That is not enough. While PR72 is 22K, the Vgs can be improved to 2.5V.	0.1B	35	1. Change PR72 from 47K_0402_5% to 22K_0402_5%	0.1	SST
4	current rating is not enough.	FBM-L11-322513-151LMAT is 5A that is not enough.So FBM -L18-453215-900LMA90T1812 is 9A that is better.	0.1B	35	1. Change PL8 from FBM-L11-322513-151LMAT to FBM -L18-453215-900LMA90T1812.	0.2	PT
5	Fix noise issue	On SST PCB, we can sound some noise due to PC77, the cernamic capacitor has sounded noise with thinner type.	0.1C	36	1. Change PC77 from 2.2U_1206_25V to 4.7U_1210_25V	0.2	PT
6	Fix CPU_CORE Transient Response fail	The transient response is too slow. We must to tune feedback resistor and capacitor to fix it.	0.1E	40	1. Change PR249 from 3.48K_0603_1% to 5.76K_0603_1%. 2. Change PR257 from 49.9_0603_1% to 1.1K_0603_1% 3. Populate PC172 68PF_0603_50V.	0.2	PT
7	SDREF output voltage is over spec.	Add bypass capacitor pallel pin18 of ISL6225	0.1E	38	Populate PC218 470P_0603_50V7K	0.2	PT
8	PG of CM28423 has a glitch while VCC is ready and VR_ON is float	Add pulldown resistor tie to GND while VR_ON is float that can be made sure the logic is low.	0.1E	40	Add PR301 100K_0603_1%	0.2	PT
9	Change VCC power source of PU15, PU17, PU19 from +5VALWP to +5VS	Negative voltage was observed on +5VALWP when system powered off	0.1E	40	1. Change VCC power source of PU15, PU17, PU19 from +5VALWP to +5VS	0.2	PT
10	Prevent abnoral function OVP caused by ISL6219 while system powerwd off ; bouble pulses was observed at output PW1, PW2, PWM3 of ISL6219	ISL6219 caused OVP when on/off pin changed from high to low level	0.1E	40	1. Add PQ82 2N7002 2. Change PR232 from 5.1_0603_5% to 10K_0603_5% 3. Change PC168 from 1U_0805_25V to 0.01U_0603_50V. 4. Depop PR251, PR270, PC183, PC194 5. Tie the EN pin of PU15, PU17, PU19 to Pin1 of PQ82	0.2	PT
11	Fine-tune current sharing of CPU VR phase1,2,3 to have thermal balance	uneven current sharing found	0.1E	40	1. Change PH6, PH7, PH8 form 3K_0603_1% to 0_0603_5% 2. Change PR245 from 0_0603_5% to 1.96K_0603_1% 3. Change PR263 from 0_0603_5% to 1.43K_0603_1%. 4. Change PR276 from 0_0603_5% to 1.5K_0603_1%	0.2	PT
12	Fine-tune CPU load-line with NTC	Fine-tune CPU load-line with NTC	0.1E	40	1. Keep PR268 nonpop 2. Change PR256 from 2K_0603_1% to 1.74K_0603_1% 3. Change PR297 from 0_0603_5% to 1.15K_0603_1%. 4. Change PH5from depop to 4.7K_0603_1% 5. Change PR298 from depop to 681_0603_1% 6. Change PR257 from 49.9_0603_1% to 909_0603_1% 7. Change PC179 from 3900P_0603_50V to 5.6N_0603_50V 8. Change PR249 from 3.48K_0603_5% to 7.5K_0603_1% 7. Change PC171 from 6800P_0603_50V to 5.6N_0603_50V 8. Change PC172 from depop to 47P_0603_50V	0.2	PT
13	Audio noise found	Still find root cause	0.1E	35, 36, 38, 40	1. reserve 15U_D_25V capacitors on PC226-PC235,	0.2	PT
14	PC212 location space change	requested by ME to put a connector around	0.1E	38	1. change the size of PC212 from D size to 0805 and pop 4.7U_0805_10V	0.2	PT
15	Remove PD5	no possibilty to have a reverse voltage at Vin when adapter plug-in because of the DC-jack orientation structure	0.2C	34	1.delete PD5 from schematics	0.2A	PT-2
16	Prevent PU14 from burn out	When pin1 (GND pin) of DC-jack PCN1 disconnected from B/M (damaged by force from outside), there is a large current going through PU14 resulted in PU14 damaged	0.2C	39	Add PR302 10K_0603_5%	0.2A	PT-2

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
17	100MHz EMI broad-band over spec.	Improve 100MHz EMI broad-band	0.2E	34	Add a FBM-L18-453215-900-LMA90T_1812 bead on PL7	0.2A	PT-2
18	100MHz EMI broad-band over spec.	Improve 100MHz EMI broad-band	0.2H	34	1. Change PL6,PL7 from FBM-L18-453215-900-LMA90T_1812 to MCK4532800YAT_1812 2. Add PL4 MBH2012102YZT_0805 3. Change PC45 from 100P to 560P, PC46 from 1000P to 12P,PC47 from 100P to 12P and PC48 from 1000P to 560P	0.3	ST
19	Precharge function has some bug, while AC Adapter plug in firt time	Precharge can reduce surge current from AC adapter,while Adapter plugged in	0.2H	34	1. Change PR51 from 1M to 2.2M,PR55 from 215K to 191K. 2. Change PR54 from 10K to 34K,add PR32 66.5K. 3. Change PC51 from 0.1U_16V to 1000P_50V. 4. Change PC50 from 1000P_50V to 0.1U_16V. 5. Change net +5VP and RTCVREF to VL. 6. Change PR113 from 47K_0402_5% to 0_0402_5%. 7. De-pop PC111 and change PC158 from 0.1U_16V to 0.47U_16V.	0.3	ST
20	Power rating of 0.02_2010 is not enough.	rating power of 0.02_2010 is 0.5W that is very poor for 90W adpater	0.2H	35	1. Change PR65 from 0.02_2010_1% to 0.02_2512_1%.	0.3	ST
21	Power open issue	Change size of thermal resistor and cost down	0.2H	36	Change PH1 from 10K_0805_1% to 10K_0603_1%.	0.3	ST
22	Power good giltch issue in ISL6225	The giltch occurs while secondary PWM is enabled that effects system boots up	0.2H	38	1. Add PR31 1K_0402_5%.. 2. De-pop PR294	0.3	ST
23	Fix open issue #137	DELL don't aprove item22 solution, prefer using new version ISL6225	0.2J	38	1. De-pop PR31 1K_0402_5%. 2. De-pop PR294 0_0402_5%. 3. Add PR30 0_0402_5%.	0.3	ST
24	Fix open issue #124	Fix open issue #124 and using ISL6219A	0.2J	40	1. Change PR232 from 10K_0603_5% to 5.1_0603_5%. 2. Populate PR251 and PR270 5.1_0603_5% 3. Populate PC183 and PC194 0.01U_0603_50V. 4. De-pop PQ82,PD31,PD,32	0.3	ST
25	Fix ISN fail issue	Fix ISN fail with 200KHz	0.2J	35	1. Change PR81 from 66.5K_0603_1% to 47K_0603_1% 2. Change PC55 and PC56 from 4.7U_1210_25V to 10U_1210_25V 3. Change PL9 from 15UH to 22UH	0.3	ST
26	Fix open issue #123	Rds(on) of SI4835DY is too high,change PQ14,15,16 to SI4825DY for power stress	0.2J	35	Change PQ14,PQ15,and PQ16 from SI4835DY to SI4825DY	0.3	ST
27	Adapter shut down while running P4MaxPower 100%	Adapter current over 5.5A 4 sec while running P4MaxPower 100%	0.3	37	1. add PR303, PR306 47K_0402_1%. 2. add PR304 1M_0402_1%. 3. add PR305 226K_0402_1% 4. add PR307 147K_0402_1% 5. add PR308 100K_0402_1% 6. add PC236 0.01U_0603_50V 7. add PC239 0.1U_0603_16V 8. add PC238 1000P_0402_50V 9. add PQ83, PQ84 2N7002 10. add PU21 LM393A	0.3	ST
28	Modify thermal protect temp. from 95C to 87C	Based on thermal team requirement	0.3A	36	1. ChangePR119 from 21K_0603_1% to 17.8K_0603_1% 2. Change PR117 from 1.74K_0603_1% to 2.05K_0603_1%	0.3	ST

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
29	modify compension for reduce output capacitor	modify compension for reduce output capacitor	0.3A	40	1. De-pop PR257 and PC179. 2. Change PC171 from 5.6N_0603_50V to 15N_0603_50V 3. Change PC172 form 47P_0603_50V to 150P_0603_50V 4. Change PR249 from 7.5K_0603_1% to 10K_0603_1%	0.3	ST
30	Fix item25 about ISN test without changing inductor	Fix item25 about ISN test without changing inductor	0.3A	35	1. Change PL9 from 22UH_SPC-1205P-220A to 15UH_SPC-1204P-150	0.3	ST
31	Capacitor DFX issues	Component layout pad overlap (reserved for noise issue) causes some components shifting when pass the re-flow	0.3D	35 36 38 40	remove PC226, PC227, PC228, PC229, PC230, PC231, PC232, PC233, PC234, PC235	1.0	QT
32	Noise issue in B+ power	Add reservated caps. back for noise issue	0.3E	35 36 38 40	reserve PC226, PC227, PC228, PC229, PC230, PC231, PC232, PC233, PC234, PC235	1.0	QT
33	Change OTP from 87C to 90C	Change OTP from 87C to 90C	1.0B	36	1. Change PR117 from 2.05K_0603_1% to 1.96K_0603_1% 2. Change PR119 from 17.8K_0603_1% to 19.1K_0603_1%	1.0	QT
34	Fine tune adaptor detector	Fine tune adaptor detector	1.0B	37	1. Change PC238 from 1000P_0603_50V% to 0.022U_0402_16V 2. Change PC239 from 0.1U_0603_16V to 0.01U_0603_50V 3. Change PR304 from 1M_0402_1% to 2M_0402_5% 4. Change PR307 from 147K_0402_1% to 137K_0402_1%	1.0	QT
35	Use new version ISL6225	Use new version ISL6225	1.0B	38	1. Change PU20 from ISL6225CA to ISL6225BCA	1.0	QT
36	Fix surge voltage in +CPU_CORE while power up	Fix surge voltage in +CPU_CORE while power up	1.0B	40	1. Add PR244,PR262,PR277 499K_0603_1% 2. No populate PR251,PR270,PC183 and PC194. 3. Change PR232 from 5.1_0603_5% to 10K_0603_5%. 4. Add PQ82 2N7002	1.0	QT