COMPAL CONFIDENTIAL

MODEL NAME : *NAL22/23/24*

PCB NO : *LA-5573P (DAA00001G00)*

BOM P/N : *43177531LXX*

M10 Margaux DIS/ASICS
rPGA Auburndale/Clarksfield
+FCBGA PCH IBEXPEAK-M
+ N10M-NS-B/N10P-GLM/N10P-GLM4

2010-01-21

REV : 1.0(A00)

@ : Nopop Component

7@ : N10P-GLM VID

8@ : N10M-NS-B & N10P-GLM4 VID

9@ : N10P-GLM4 only

MB Type	BOM P/N	Asics DIS N10P	Margaux DIS N10M	TCM		TPM		BOM CONFIG
		1@	2@	W(3@)	W/O(4@)	W(5@)	W/O(6@)	
Margaux DIS, TPM EN,TCM DIS	43177531L01		*		*	*		2@,4@,5@,8@
Margaux DIS, TCM EN,TPM DIS	43177531L02		*	*			*	2@,3@,6@,8@
Margaux DIS, ALL TPM DISABLE	43177531L03		*		*		*	2@,4@,6@,8@
Asics GLM, TPM EN,TCM DIS	43177531L11	*			*	*		1@,4@,5@,7@
Asics GLM, TCM EN,TPM DIS	43177531L12	*		*			*	1@,3@,6@,7@
Asics GLM, ALL TPM DISABLE	43177531L13	*			*		*	1@,4@,6@,7@
Asics GLM4, TPM EN,TCM DIS	43177531L21	*			*	*		1@,4@,5@,8@,9@
Asics GLM4, TCM EN,TPM DIS	43177531L22	*		*			*	1@,3@,6@,8@,9@
Asics GLM4, ALL TPM DISABLE	43177531L23	*			*		*	1@,4@,6@,8@,9@

MB PCB

Part Number	Description
DAA00001G00	PCB 0AH LA-5573P REV0 M/B DIS

Block Diagram
Compal confidential
Model : NAL22

Thermal GUARDIAN III EMC4002 +3.3V_M page 23

CPU/PCH XDP Port +1.05V_VCCP page 8,15

Clock Generator SLG8SP585 +3.3V_RUN page6

FAN R3P TPF3000 +FAN1_VOUT page 23

CRT CONN +5V_RUN page 27

Video Switch PI3V712-AZLE +3.3V_RUN page 27

VGA

eDP CONN +5V_ALW +3.3V_RUN +PWR_SRC page 24

DP Repeater DP119 +3.3V_RUN page 24

eDP

N10M/N10P 29X29 +GPU_CORE +1.5V_MEM_GFX +1.05V_RUN_VTT_GFX page 24-27

DPC

DP Switch PI3VDP8200 +5V_RUN page 26

DPB

DP CONN +5V_RUN page 26

PCIE-E 16X

Auburndale/Clarksfield 4MB (Socket G1) PGA CPU +VCC_CORE +1.5V_MEM +1.05V_1.1V_RUN_VTT +VCC_GFXCORE 988A pins page 7-12

Memory BUS (DDR3) +1.5V_MEM 800Mhz/1066MHz

DDRIII-DIMM X2 BANK 0, 1, 2, 3, 4 ,5 ,6 ,7 ,8 page 13,14 +1.5V_MEM +V_DDR_REF +V_DDR_REF

DMI Lane x 4

INTEL IBEXPEAK-M 1060pin BGA +1.8V_RUN +1.05V_RUN_VTT +1.05V_M +3.3V_ALW_PCH page 15-22

USB[11] Camera +5V_RUN page 24 Trough eDP Cable

SATA4 SATA Repeater SN75LVCP412 +3.3V_RUN page 37 E-SATA USB Ports X2 +5V_ALW page 37

USB[2,3] L SIDE

USB2 : Left side pair top
USB3 Rear Right pair bottom

48MHz

USB[0,10] R SIDE USB Ports X2 +5V_ALW page 36 On IO/B

USB0 : Right side pair top
USB1 : Right side pair bottom

DOCKING PORT page 38

DAI

USB[8,9]

SATA5

DOCK LPC BUS

On IO/B

IEEE1394 page 33

PCMCIA SLOT +3.3V_RUN page 34

SD/MMC CONN +3.3V_RUN page 33

CardBus R5U242 +3.3V_RUN page 33-34

PCIE3

PCIE

HD Audio I/F

+1.05V_RUN_VTT /100MHz

PCI Express BUS

+1.05V_RUN_VTT /100MHz

S-ATA 0/1/4/5 3GB/s

SPI

Option

China TPM1.2 SSX35BCB page 32

LPC BUS +3V_RUN 33MHz

W25Q64VSSIG +3.3V_M page 15 64M 4K sector

W25X64VSSIG +3.3V_M page 15 32M 4K sector

SATA1 E-Module +5V_MOD page 28

SATA0 SATA Repeater SN75LVCP412 +3.3V_RUN page 28

S-HDD +5V_HDD +3.3V_HDD page 28

Intel Hanksville 82577LM +3.3V_LAN +1.0V_LAN page 30

LAN SWITCH PI3L720 +3.3V_LAN pg 30

Azalia Codec 92HD81B1 +3.3V_RUN +5V_RUN page 29

INT.Speaker page 29

HeadPhone & MIC Jack +3.3V_RUN

RJ45

WiFi ON/OFF

On IO/B

EXPRESS Card +3.3V_RUN page 35

PCIE5

SATA/PCIE MUX PI2DBS212

PCIE2

Mini Card2 WLAN +3.3V_WLAN +1.5V_RUN page 36

PCIE1

Mini Card 1 WWAN +3.3V_RUN_WWAN_PWR +1.5V_RUN page 36

USB[7]

Mini Card 3 PCIE\BKT +3.3V_RUN +1.5V_RUN page 36

USB[4]

USB[5]

USH TPM1.2 BCM5882 +3.3V_RUN +2.5V_RUN +1.2V_RUN page 31,32

Smart Card page 32

TDA8034HN +5V_RUN +3.3V_RUN page 32

USB[13]

RFID page 33

USBH

USB[1]

SATA Repeater SN75LVCP412 +3.3V_RUN page 35

SATA2

SMSC KBC MEC5045 +RTC_CELL +3.3V_ALW page 40

DOCK LPC BUS

BC BUS

SMSC SIO ECE5028 +3.3V_ALW page 39

MDC +3V_SUS page 34 On IO/B

RJ11 Trough Cable

TI TLV320AIC3004 +3.3V_RUN page 29

DOCK

Dig. MIC

Trough LVDS Cable

+VCC_GFXCORE page 53

Trough Cable

Biometric +3.3V_RUN page 36

SMBUS

Touch Pad

Stick

BC BUS page 40

ECE1077 +3.3V_ALW

Int.KBD & Stick

0.75V page 49

VCORE (IMVP-6) page 51

3V/5V page 47

PWR SELECT page 54

1.1V page 50

CHARGER page 52

1.5V page 48

DC IN & BATT IN page 46

Power On/Off SW & LED page 42

DC/DC Interface page 41

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Title: Block Diagram

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 2 of 69

POWER STATES

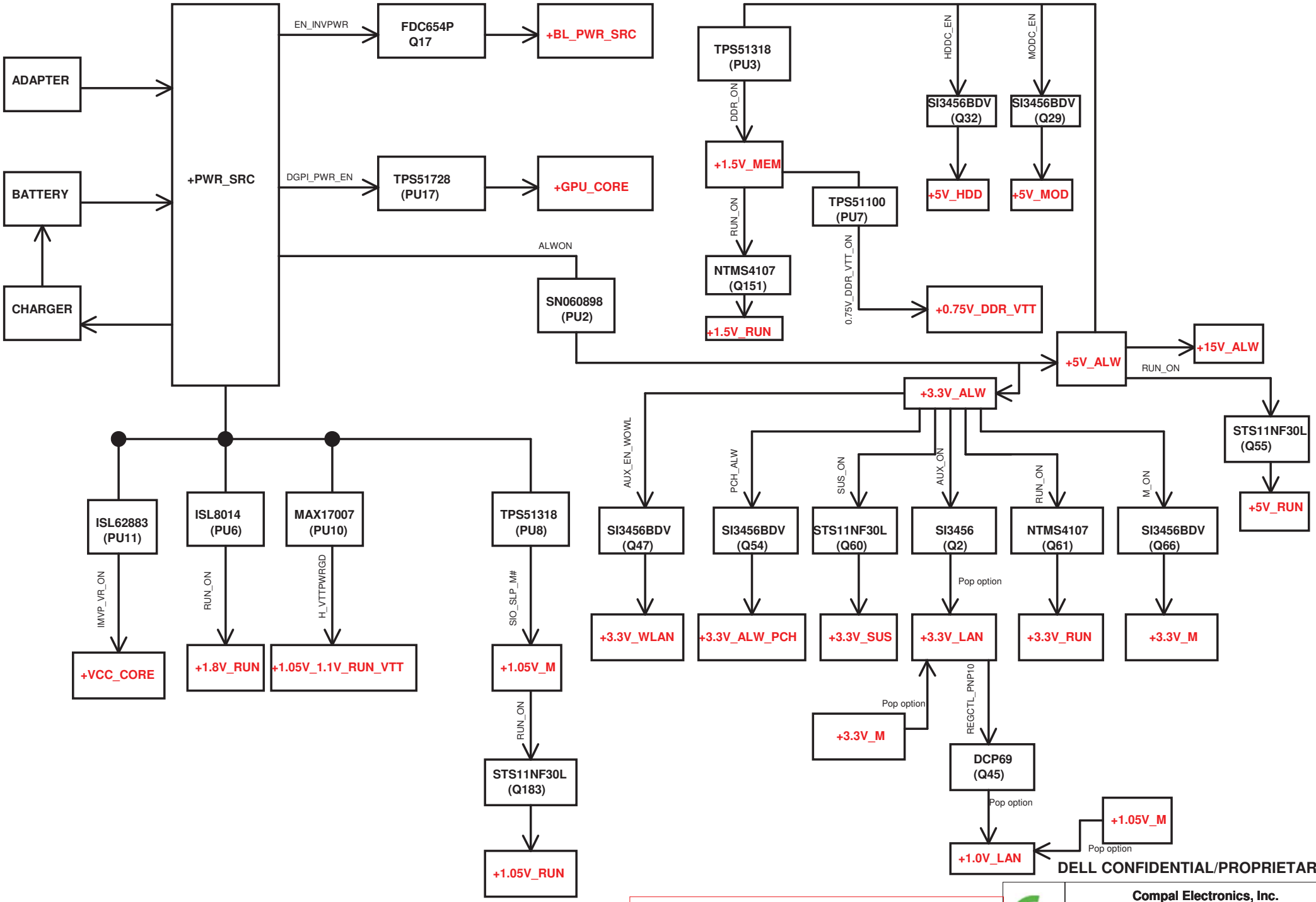
State \ Signal	SLP S3#	SLP S4#	SLP S5#	S4 STATE#	SLP M#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M1	LOW	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	OFF	OFF
S4 (Suspend to DISK) / M1	LOW	LOW	HIGH	LOW	HIGH	ON	ON	OFF	OFF	OFF
S5 (SOFT OFF) / M1	LOW	LOW	LOW	LOW	HIGH	ON	ON	OFF	OFF	OFF
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

PM TABLE

State \ power plane	+15V_ALW +5V_ALW +3.3V_ALW_PCH +3.3V_RTC_LDO	+3.3V_SUS +1.5V_MEM	+5V_RUN +3.3V_RUN +1.8V_RUN +1.5V_RUN +0.75V_DDR_VTT +VCC_CORE +1.05V_RUN_VTT +1.05V_RUN	+3.3V_M +1.05V_M	+3.3V_M +1.05V_M (M-OFF)
S0	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	ON	OFF
S5 S4/AC don't exist	OFF	OFF	OFF	OFF	OFF

PCH	USB PORT#	DESTINATION
	0	JUSB1 (Ext Right Side Bottom)
	1	JUSB1 (Ext Right Side Top)
	2	JESA1 (Ext Left Side Top)
	3	JESA1 (Ext Left Side Bottom)
	4	WLAN
	5	WWAN
	6	Bluetooth
	7	USH->BIO
	8	DOCKING
	9	DOCKING
	10	Express card
	11	Camera
	12	NA
	13	WPAN/NVMHCI

PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	Card Bus
Lane 4	EXPRESS CARD
Lane 5	MINI CARD-3 PCIE/BKT
Lane 6	10/100/1G LAN
Lane 7	None
Lane 8	None



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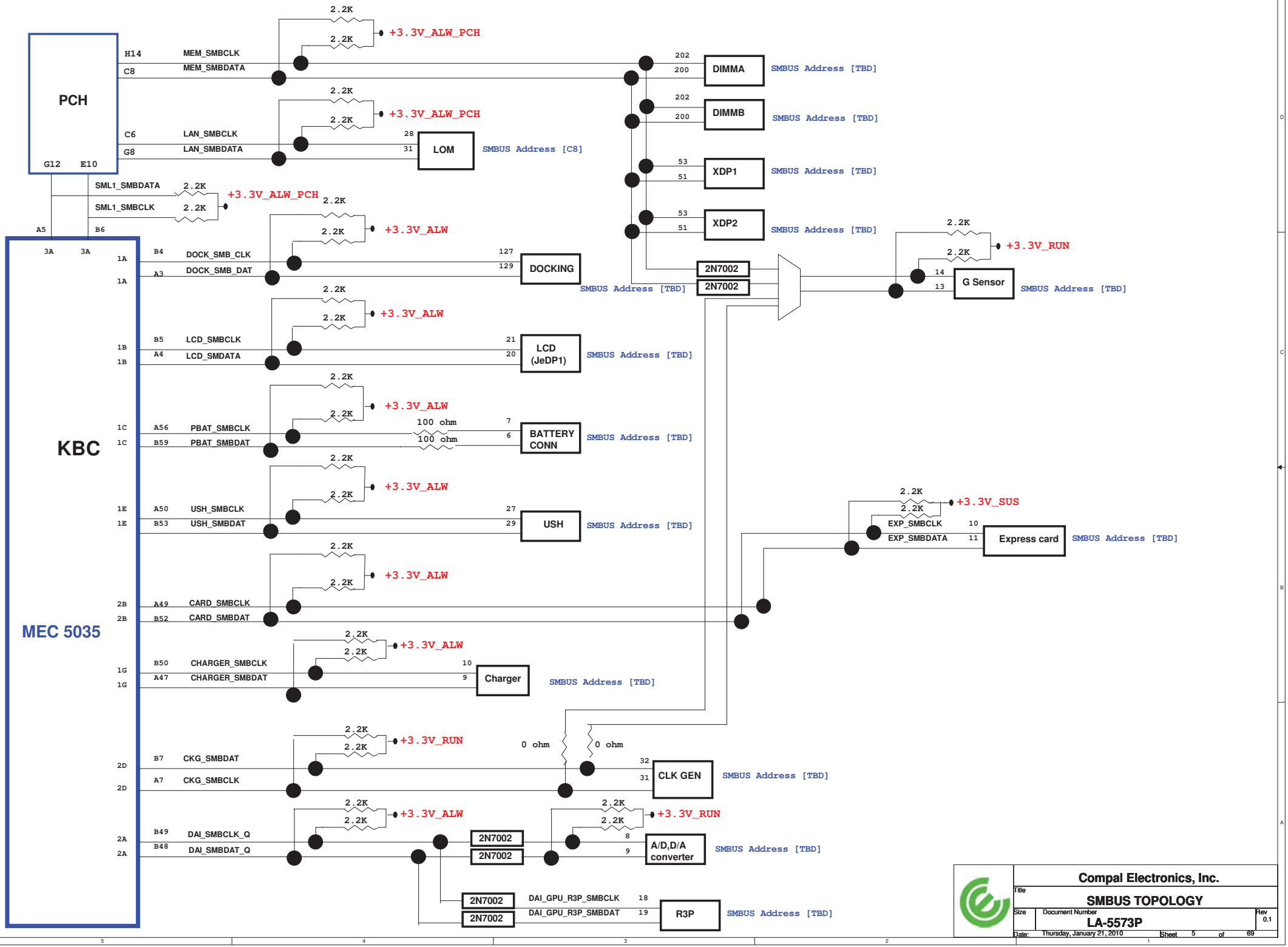
Title: Power Rail

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 4 of 69



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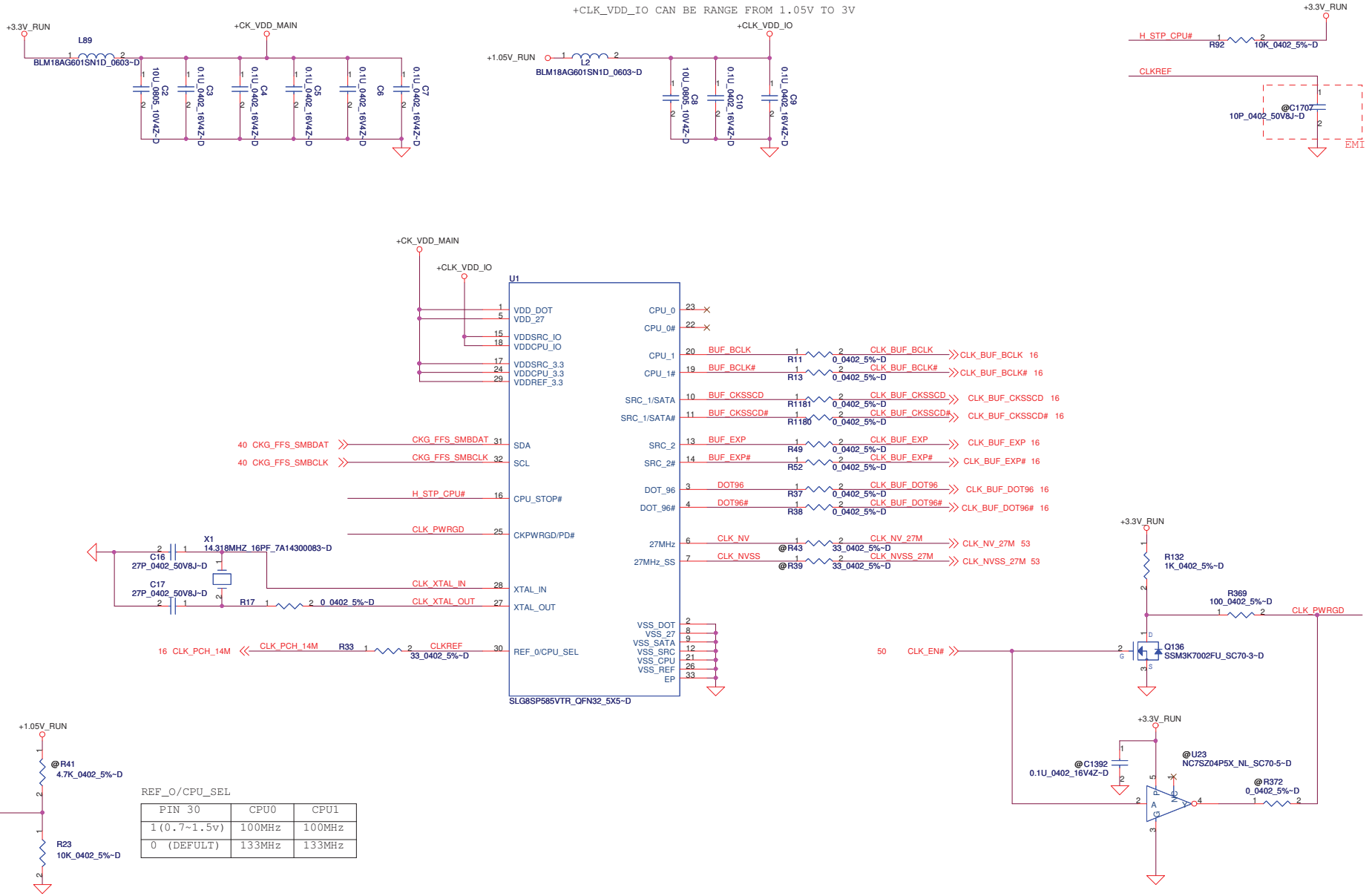
Title	SMBUS TOPOLOGY
Size	Document Number: LA-5573P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	5 of 69

+CLK_VDD_IO CAN BE RANGE FROM 1.05V TO 3V



REF_O/CPU_SEL

PIN 30	CPU0	CPU1
1(0.7~1.5v)	100MHz	100MHz
0 (DEFULT)	133MHz	133MHz

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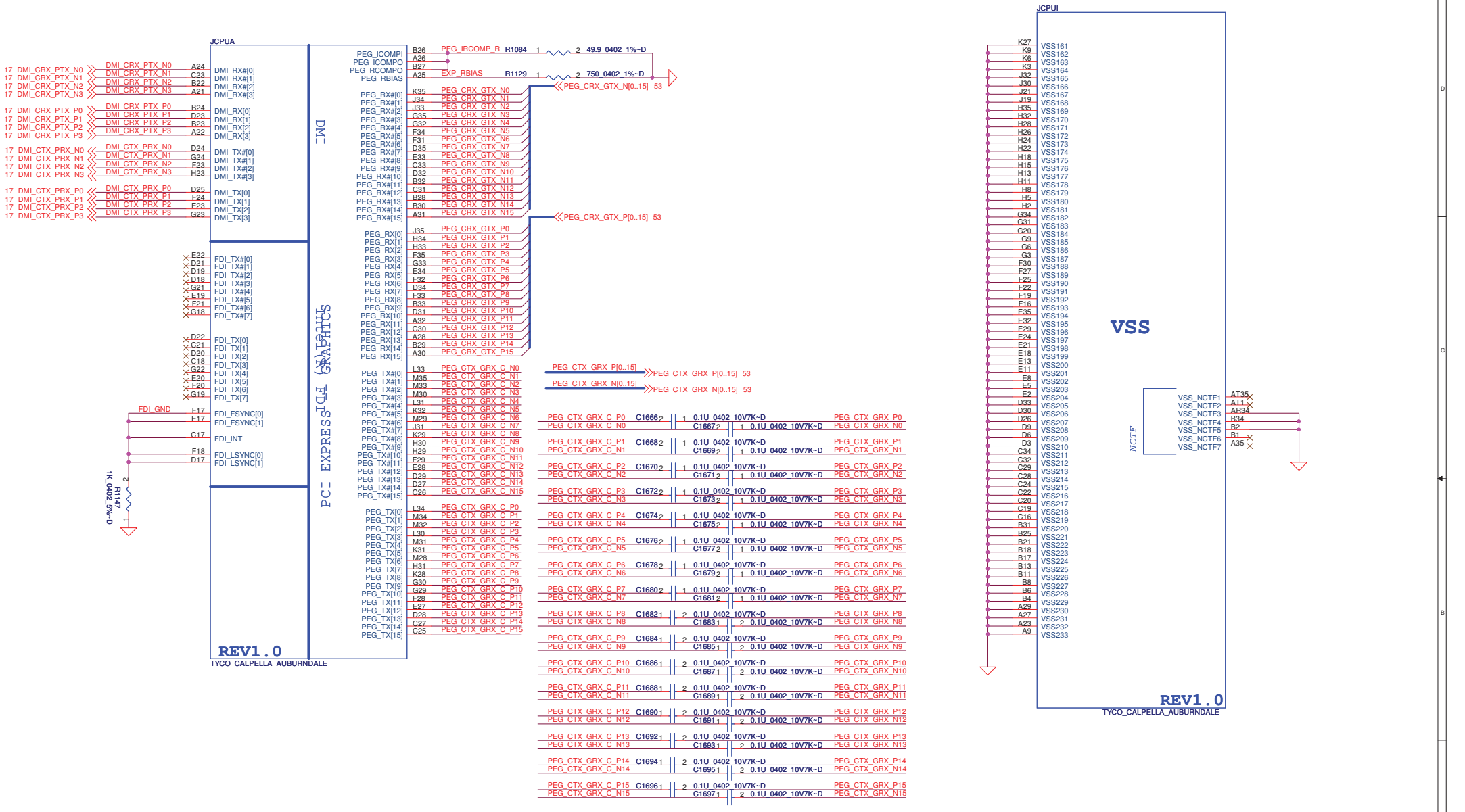
Title: Clock Generator

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 6 of 69



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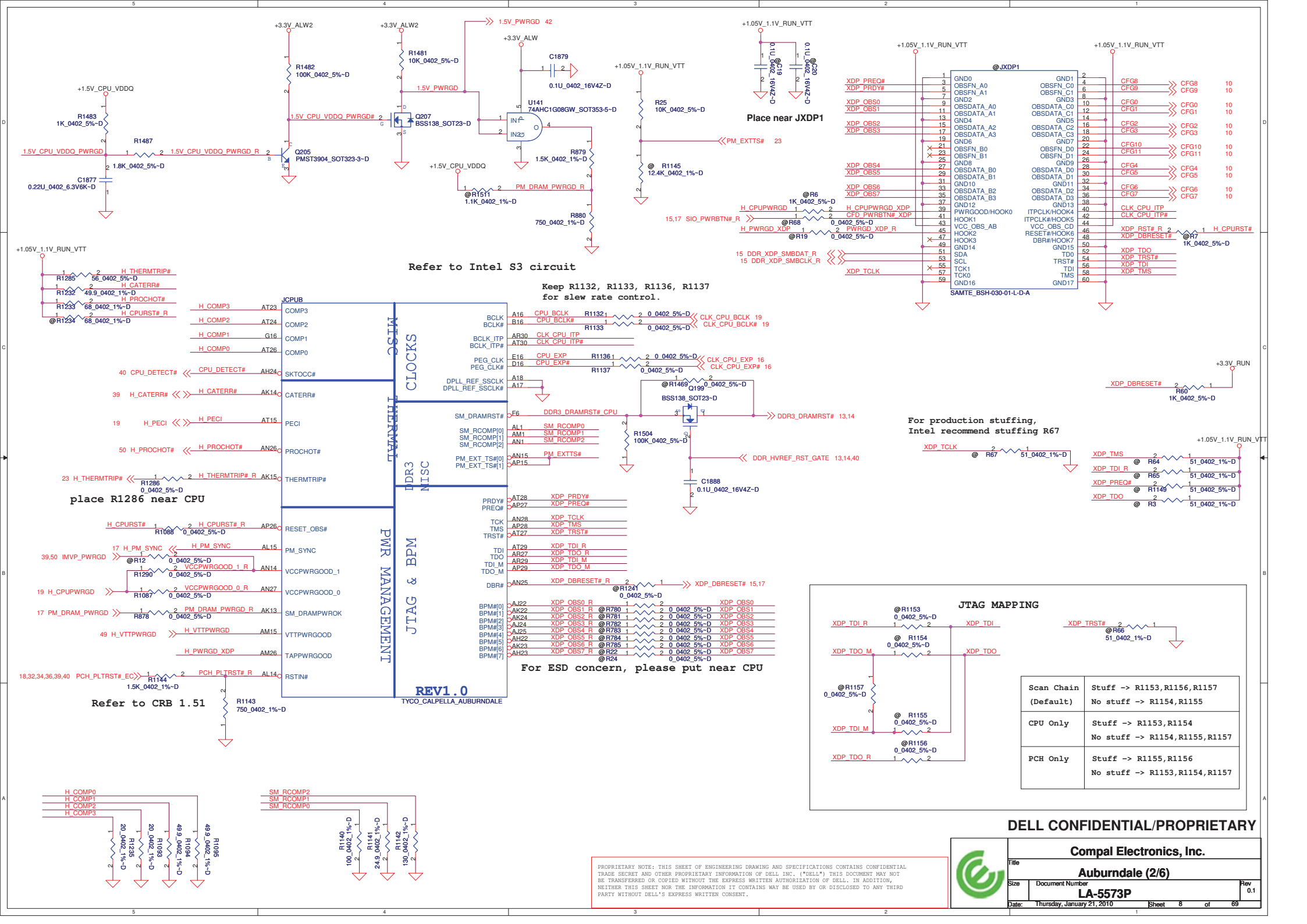
Title	Auburndale (1/6)
Size	Document Number: LA-5573P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	7 of 69



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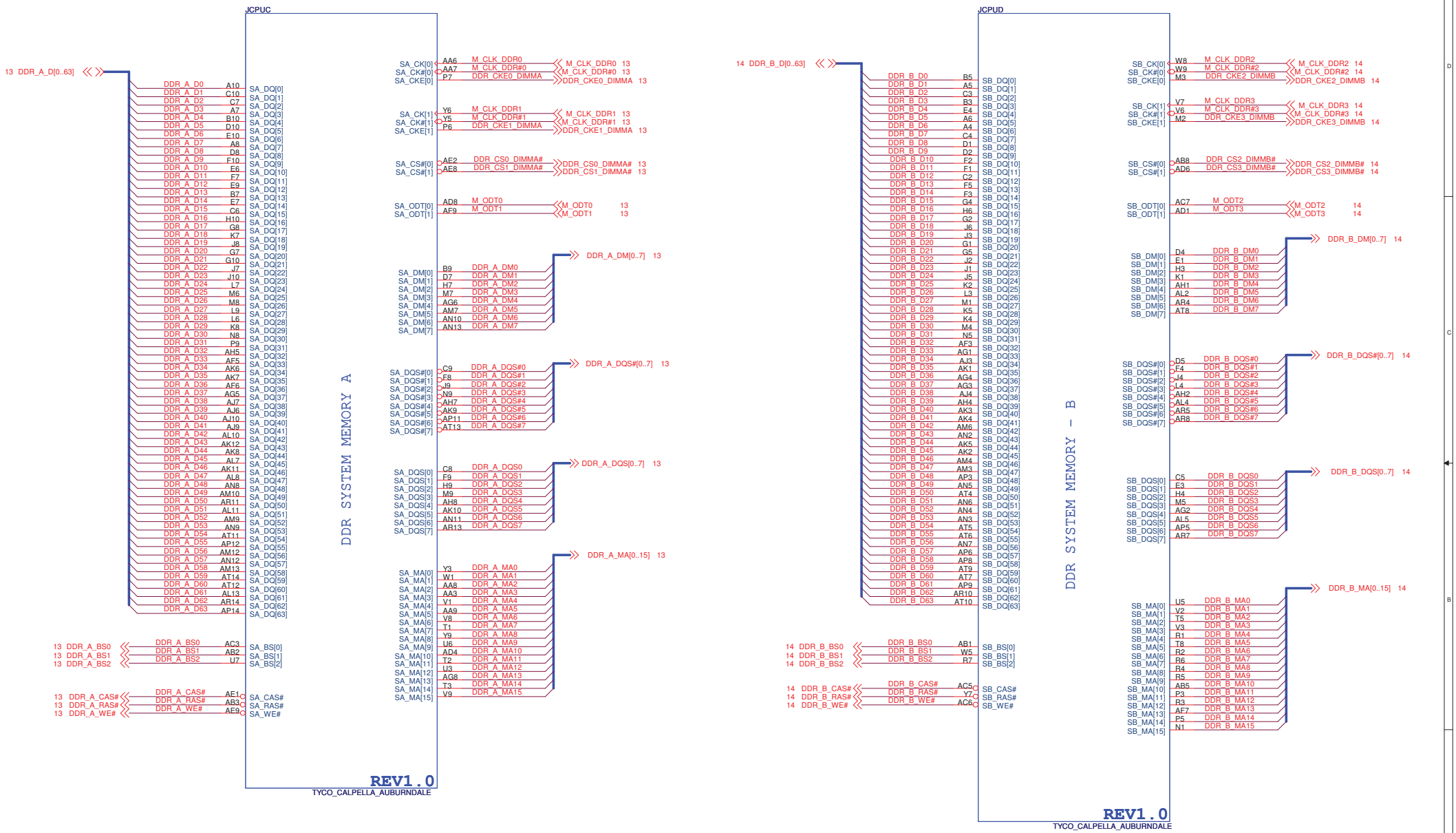
Title	Auburndale (2/6)
Size	Document Number: LA-5573P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	8 of 69



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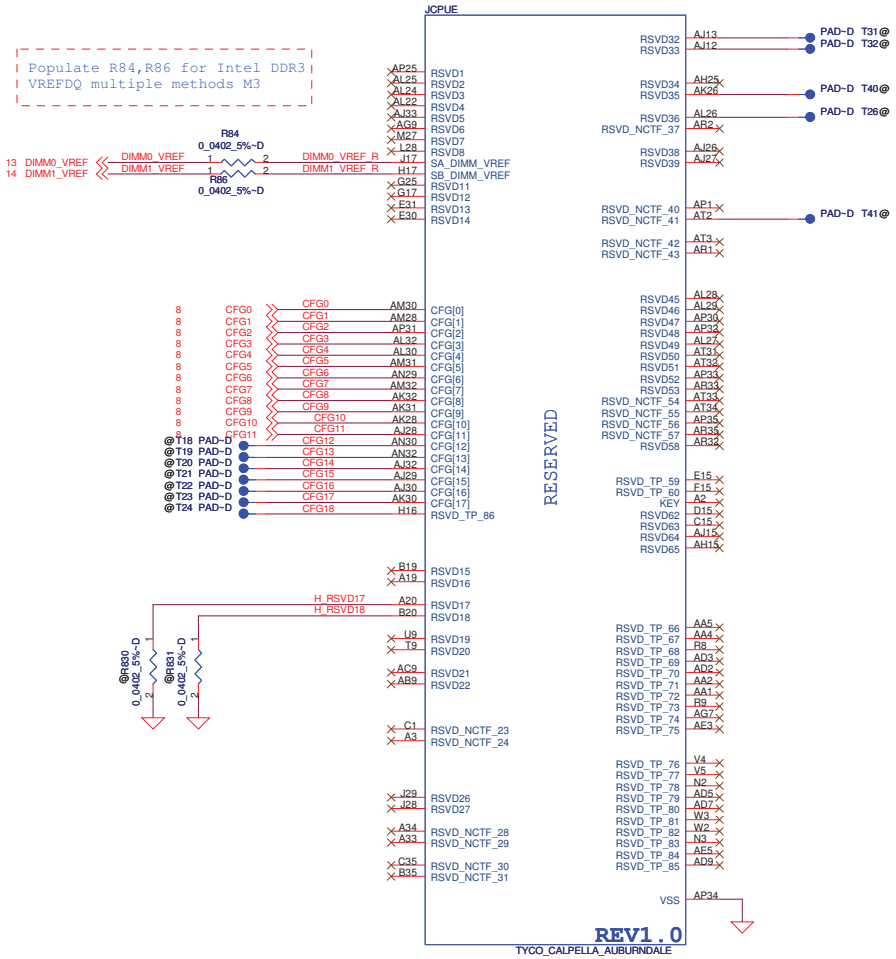
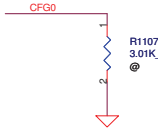
Title: Auburndale (3/6)

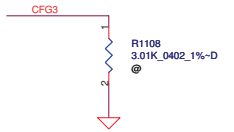
Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 9 of 69

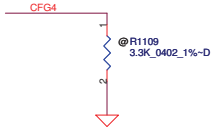




PCI-Express Configuration Select	
CFG0	1 : Single PEG 0 : Bifurcation enable



PCI-Express Static Lane Reversal	
CFG3	1 : Normal Operation 0 : Lane Number Reversed 15->0, 14->1 ...



Display Port Presence	
CFG4	1 : Disabled; No Physical Display Port attached to Embedded Display Port 0 : Enabled; An external Display Port device is connected to the Embedded Display Port

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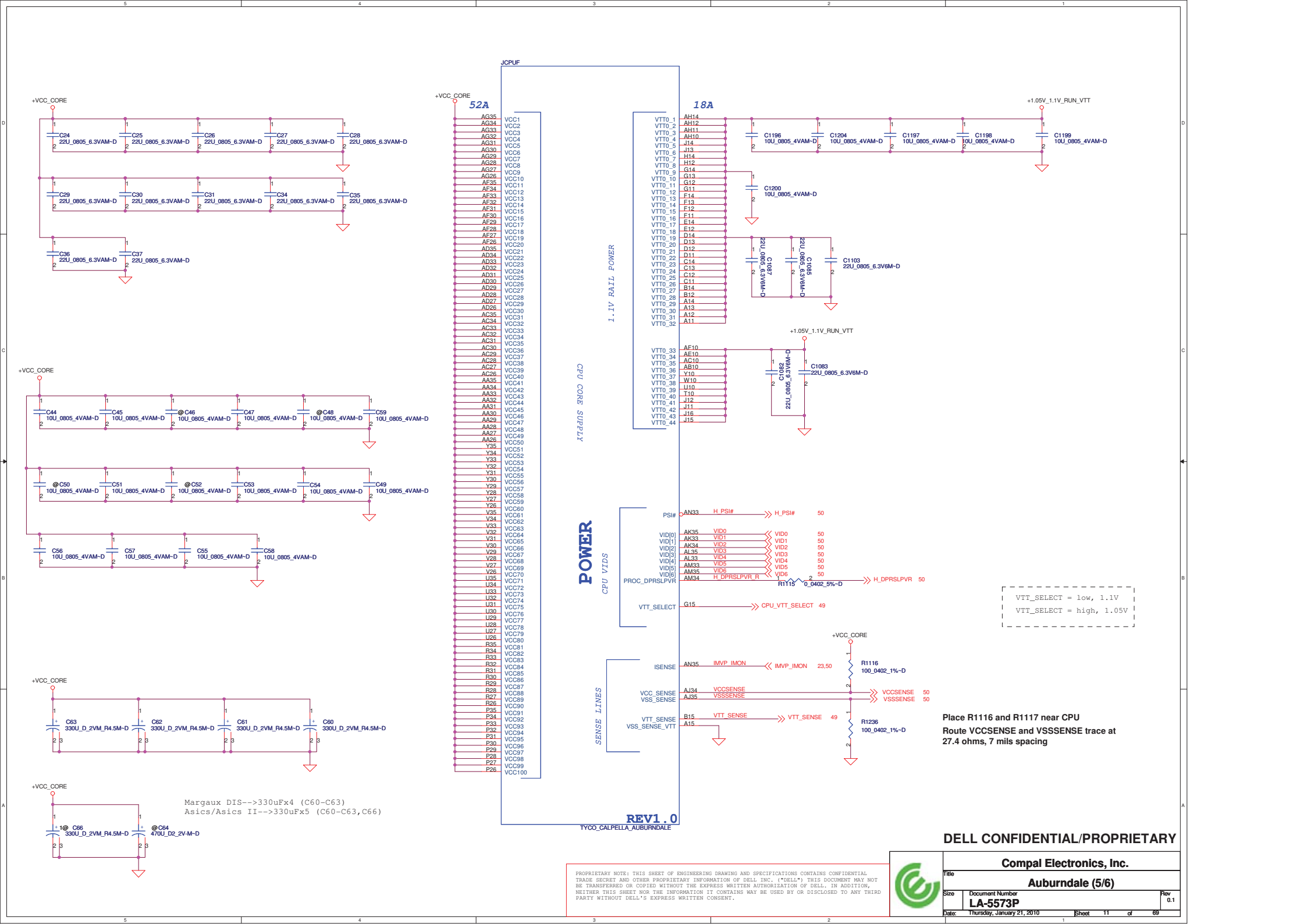
Title: Auburndale (4/6)

Size | Document Number: LA-5572P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 10 of 69


JCPUF
52A
18A
CPU CORE SUPPLY
1.1V RAIL POWER
POWER
CPU VIDS
SENSE LINES
+VCC_CORE
+1.05V_1.1V_RUN_VTT
C24 22U_0805_6.3VAM-D
C25 22U_0805_6.3VAM-D
C26 22U_0805_6.3VAM-D
C27 22U_0805_6.3VAM-D
C28 22U_0805_6.3VAM-D
C29 22U_0805_6.3VAM-D
C30 22U_0805_6.3VAM-D
C31 22U_0805_6.3VAM-D
C34 22U_0805_6.3VAM-D
C35 22U_0805_6.3VAM-D
C36 22U_0805_6.3VAM-D
C37 22U_0805_6.3VAM-D
C44 10U_0805_4VAM-D
C45 10U_0805_4VAM-D
@C46 10U_0805_4VAM-D
C47 10U_0805_4VAM-D
@C48 10U_0805_4VAM-D
C59 10U_0805_4VAM-D
@C50 10U_0805_4VAM-D
C51 10U_0805_4VAM-D
@C52 10U_0805_4VAM-D
C53 10U_0805_4VAM-D
C54 10U_0805_4VAM-D
C49 10U_0805_4VAM-D
C56 10U_0805_4VAM-D
C57 10U_0805_4VAM-D
C55 10U_0805_4VAM-D
C58 10U_0805_4VAM-D
C63 330U_D_2VM_R4.5M-D
C62 330U_D_2VM_R4.5M-D
C61 330U_D_2VM_R4.5M-D
C60 330U_D_2VM_R4.5M-D
1@ C66 330U_D_2VM_R4.5M-D
@C64 470U_D2_2V-M-D
C1196 10U_0805_4VAM-D
C1204 10U_0805_4VAM-D
C1197 10U_0805_4VAM-D
C1198 10U_0805_4VAM-D
C1199 10U_0805_4VAM-D
C1200 10U_0805_4VAM-D
C1087 22U_0805_6.3V6M-D
C1085 22U_0805_6.3V6M-D
C1103 22U_0805_6.3V6M-D
C1082 22U_0805_6.3V6M-D
C1083 22U_0805_6.3V6M-D
PSI# H_PSI# 50
VID[0] VID0 50
VID[1] VID1 50
VID[2] VID2 50
VID[3] VID3 50
VID[4] VID4 50
VID[5] VID5 50
VID[6] VID6 50
PROC_DPRSLPVR H_DPRSLPVR_R R1115 0_0402_5%~D H_DPRSLPVR 50
VTT_SELECT G15 CPU_VTT_SELECT 49
VTT_SELECT = low, 1.1V
VTT_SELECT = high, 1.05V
ISENSE AN35 IMVP_IMON IMVP_IMON 23,50
R1116 100_0402_1%~D
VCC_SENSE AJ34 VCCSENSE VCCSENSE 50
VSS_SENSE AJ35 VSSSENSE VSSSENSE 50
VTT_SENSE B15 VTT_SENSE VTT_SENSE 49
VSS_SENSE_VTT A15
R1236 100_0402_1%~D
Margaux DIS-->330uFx4 (C60-C63)
Asics/Asics II-->330uFx5 (C60-C63,C66)
REV1.0
TYCO_CALPELLA_AUBURNDALE
Place R1116 and R1117 near CPU
Route VCCSENSE and VSSSENSE trace at 27.4 ohms, 7 mils spacing
DELL CONFIDENTIAL/PROPRIETARY
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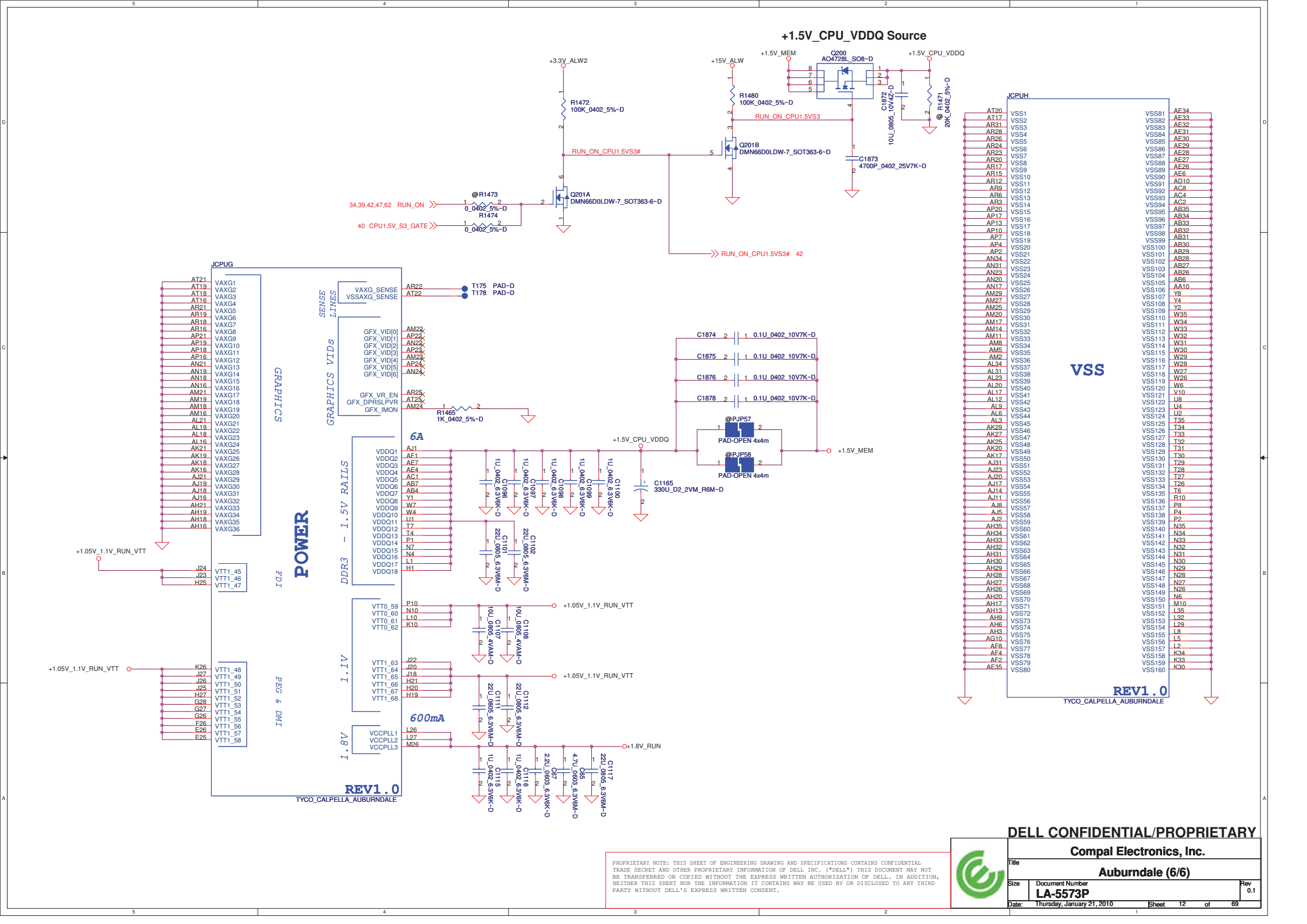
Title
Auburndale (5/6)
Size
Document Number
LA-5573P
Rev
0.1
Date: Thursday, January 21, 2010
Sheet 11 of 69



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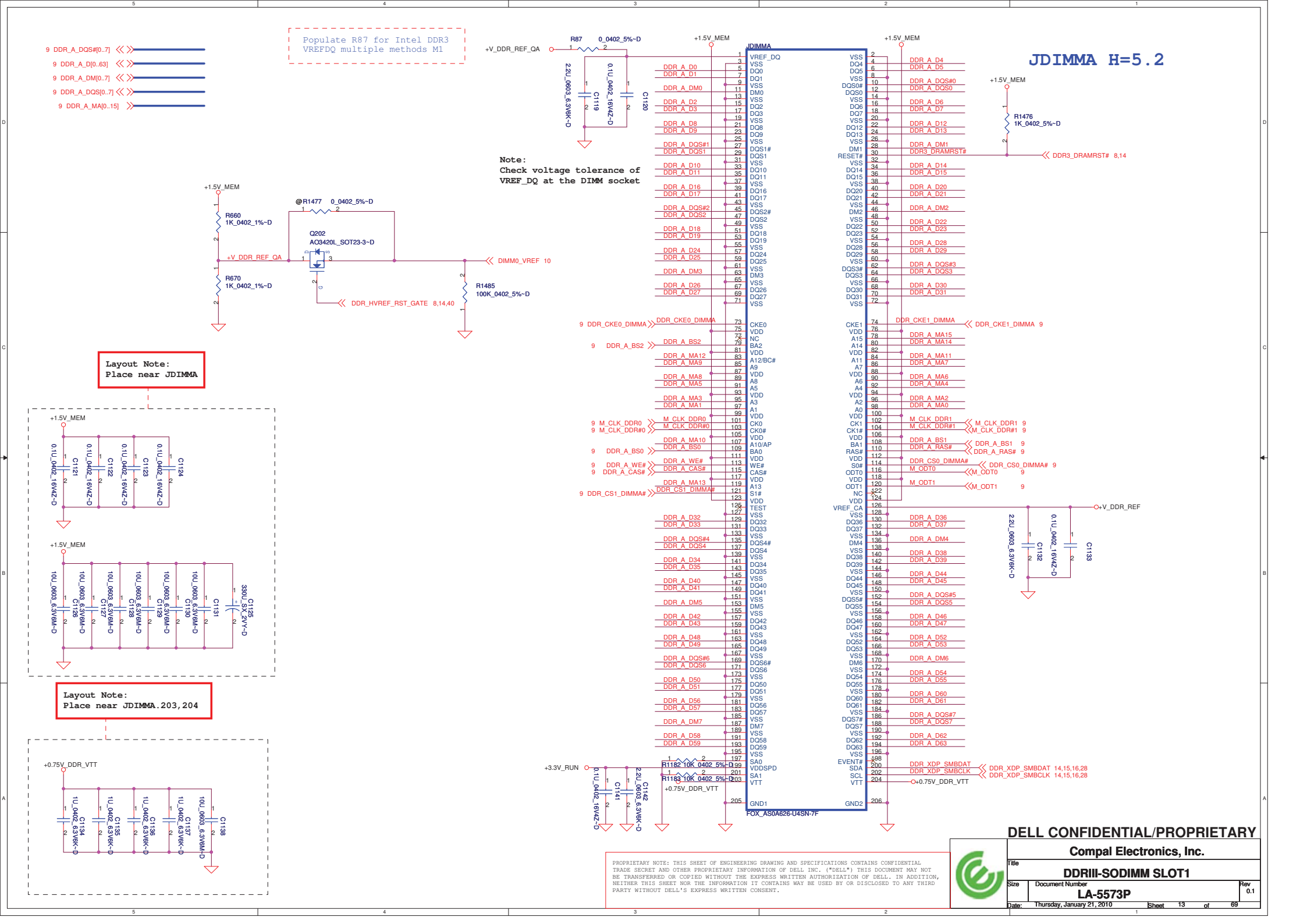
Title: Auburndale (6/6)

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 12 of 69


9 DDR_A_DQS#[0..7]
9 DDR_A_D[0..63]
9 DDR_A_DM[0..7]
9 DDR_A_DQS[0..7]
9 DDR_A_MA[0..15]
Populate R87 for Intel DDR3
VREFDQ multiple methods M1
JDIMMA H=5.2
Note:
Check voltage tolerance of
VREF_DQ at the DIMM socket
Layout Note:
Place near JDIMMA
Layout Note:
Place near JDIMMA.203,204
JDIMMA
FOX_AS0A626-U4SN-7F
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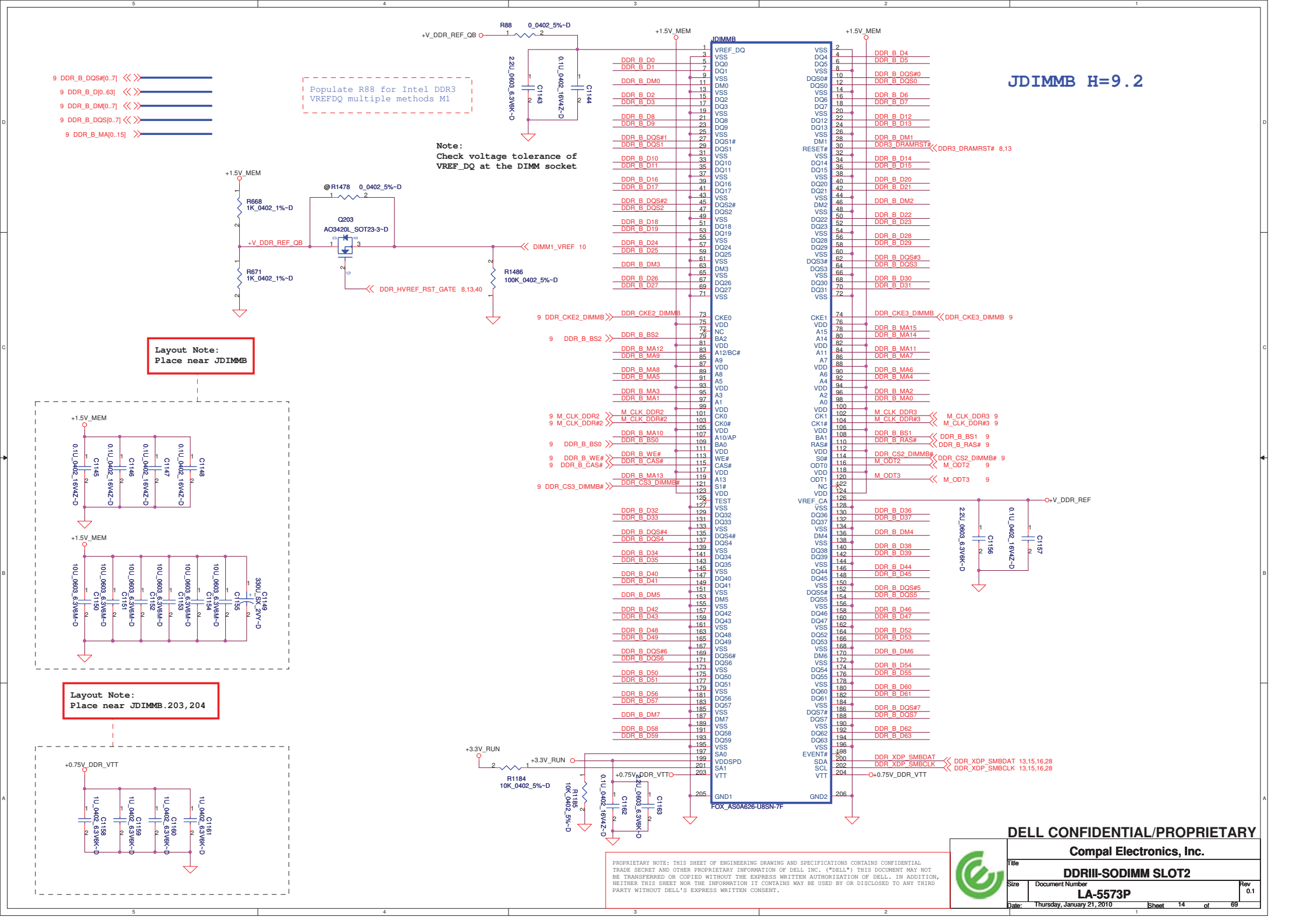
Compal Electronics, Inc.
DDRIII-SODIMM SLOT1
LA-5573P
Thursday, January 21, 2010
Sheet 13 of 69


JDIMMB H=9.2
JDIMMB
FOX_AS0A626-U8SN-7F
9 DDR_B_DQS#[0..7]
9 DDR_B_D[0..63]
9 DDR_B_DM[0..7]
9 DDR_B_DQS[0..7]
9 DDR_B_MA[0..15]
Populate R88 for Intel DDR3 VREFDQ multiple methods M1
Note:
Check voltage tolerance of VREF_DQ at the DIMM socket
Layout Note:
Place near JDIMMB
Layout Note:
Place near JDIMMB.203,204
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Compal Electronics, Inc.
DDRIII-SODIMM SLOT2
LA-5573P
Rev 0.1
Thursday, January 21, 2010
Sheet 14 of 69

CMOS_CLR1	CMOS setting
Shunt	Clear CMOS
Open	Keep CMOS

ME_CLR1	TPM setting
Shunt	Clear ME RTC Registers
Open	Keep ME RTC Registers

INTVRMEN- Integrated SUS 1.1V VRM Enable
High - Enable Internal VRs

On Die PLL VR is supplied by 1.5V when sampled high, 1.8 V when sampled low

Disconnect XDP trace, add R1532/1533

CMOS place near DIMM

Stuff R128,no stuff R123 when production

200 MIL SO8
64Mb Flash ROM
For iAMT

200 MIL SO8
32Mb Flash ROM

		PCH JTAG Enable		PCH JTAG Disable		Production
PCH Pin	Ref.	ES1	ES2	ES1	ES2	All
TDO	R806	No Stuff	200 ohm	No Stuff	No Stuff	No Stuff
	R1315	No Stuff	100 ohm	No Stuff	No Stuff	No Stuff
TMS	R807	200 ohm	200 ohm	No Stuff	No Stuff	No Stuff
	R1281	100 ohm	100 ohm	No Stuff	No Stuff	No Stuff
TDI	R805	200 ohm	200 ohm	20K ohm	No Stuff	No Stuff
	R1282	100 ohm	100 ohm	10K ohm	No Stuff	No Stuff
TCK	R804	51 ohm	51 ohm	51 ohm	51 ohm	No Stuff
TRST#	R808	20K ohm	20K ohm	No Stuff	No Stuff	
	R1316	10K ohm	10K ohm	No Stuff	No Stuff	

No Reboot Strap	
SPKR	Low = Default
	High = No Reboot

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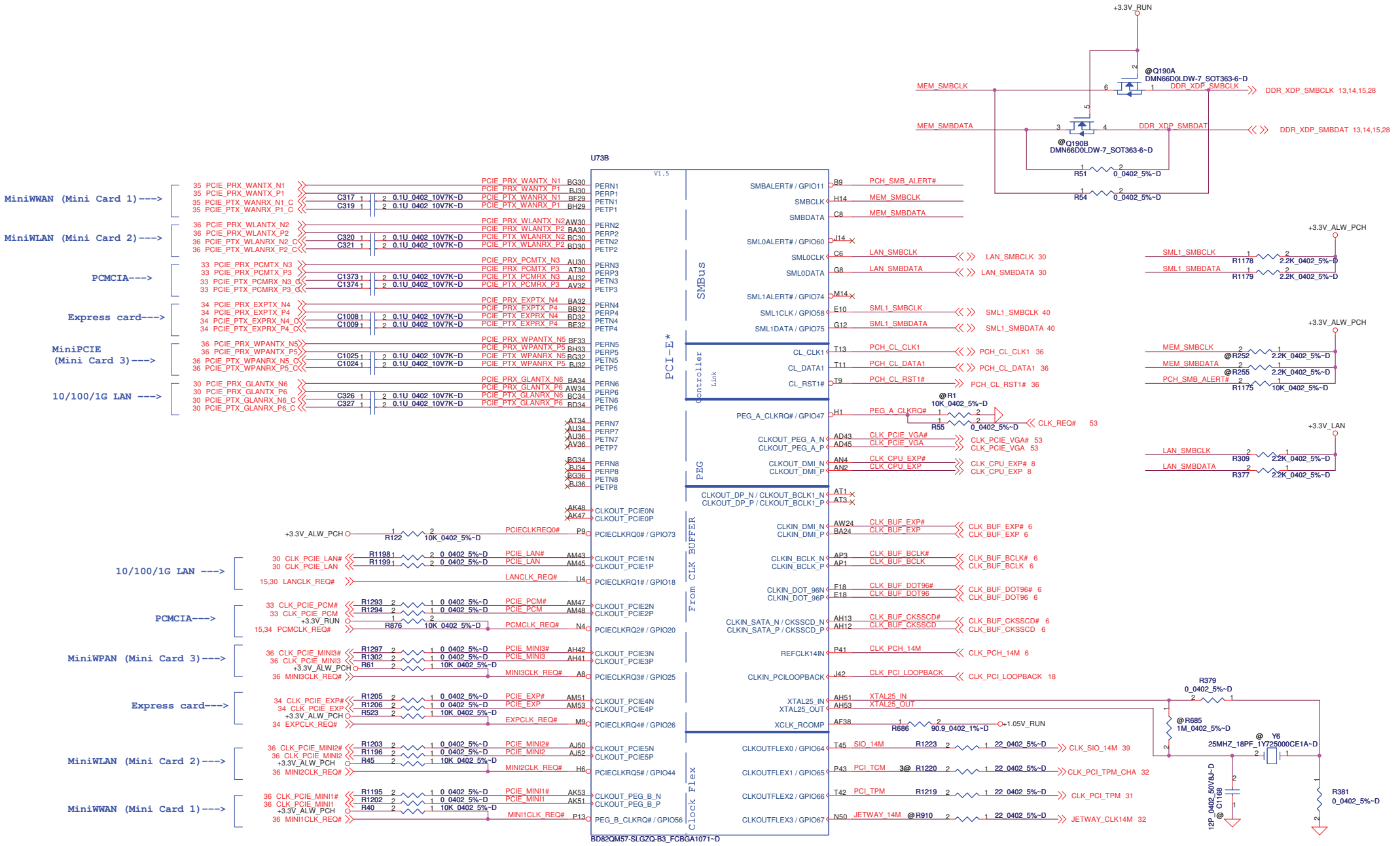
Compal Electronics, Inc.

Title: PCH (1/8)

Size: | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 15 of 69


U73B
V1.5
BD82QM57-SLGZQ-B3_FCBGA1071~D
PCI-E*
SMBus
Controller Link
PEG
From CLK BUFFER
Clock Flex
MiniWWAN (Mini Card 1)--->
MiniWLAN (Mini Card 2)--->
PCMCIA--->
Express card--->
MiniPCIE (Mini Card 3)--->
10/100/1G LAN --->
MiniWPAN (Mini Card 3)--->
+3.3V_RUN
@Q190A DMN66D0LDW-7_SOT363-6~D
@Q190B DMN66D0LDW-7_SOT363-6~D
MEM_SMBCLK
MEM_SMBDATA
DDR_XDP_SMBCLK
DDR_XDP_SMBDAT
+3.3V_ALW_PCH
+3.3V_LAN
SMBALERT# / GPIO11
SMBCLK
SMBDATA
SML0ALERT# / GPIO60
SML0CLK
SML0DATA
SML1ALERT# / GPIO74
SML1CLK / GPIO58
SML1DATA / GPIO75
CL_CLK1
CL_DATA1
CL_RST1#
PEG_A_CLKRQ# / GPIO47
CLKOUT_PEG_A_N
CLKOUT_PEG_A_P
CLKOUT_DMI_N
CLKOUT_DMI_P
CLKOUT_DP_N / CLKOUT_BCLK1_N
CLKOUT_DP_P / CLKOUT_BCLK1_P
CLKIN_DMI_N
CLKIN_DMI_P
CLKIN_BCLK_N
CLKIN_BCLK_P
CLKIN_DOT_96N
CLKIN_DOT_96P
CLKIN_SATA_N / CKSSCD_N
CLKIN_SATA_P / CKSSCD_P
REFCLK14IN
CLKIN_PCILOOPBACK
XTAL25_IN
XTAL25_OUT
XCLK_RCOMP
CLKOUTFLEX0 / GPIO64
CLKOUTFLEX1 / GPIO65
CLKOUTFLEX2 / GPIO66
CLKOUTFLEX3 / GPIO67
PCIECLKREQ0# / GPIO73
LANCLK_REQ# / GPIO18
PCIECLKRQ2# / GPIO20
MINI3CLK_REQ# / GPIO25
EXPCLK_REQ# / GPIO26
MINI2CLK_REQ# / GPIO44
MINI1CLK_REQ# / GPIO56
PCH_SMB_ALERT#
LAN_SMBCLK
LAN_SMBDATA
SML1_SMBCLK
SML1_SMBDATA
PCH_CL_CLK1
PCH_CL_DATA1
PCH_CL_RST1#
PEG_A_CLKRQ#
CLK_REQ#
CLK_PCIE_VGA
CLK_CPU_EXP
CLK_BUF_EXP#
CLK_BUF_BCLK#
CLK_BUF_DOT96#
CLK_BUF_CKSSCD#
CLK_PCH_14M
CLK_PCI_LOOPBACK
XTAL25_IN
XTAL25_OUT
SIO_14M
PCI_TCM
PCI_TPM
JETWAY_14M
+1.05V_RUN
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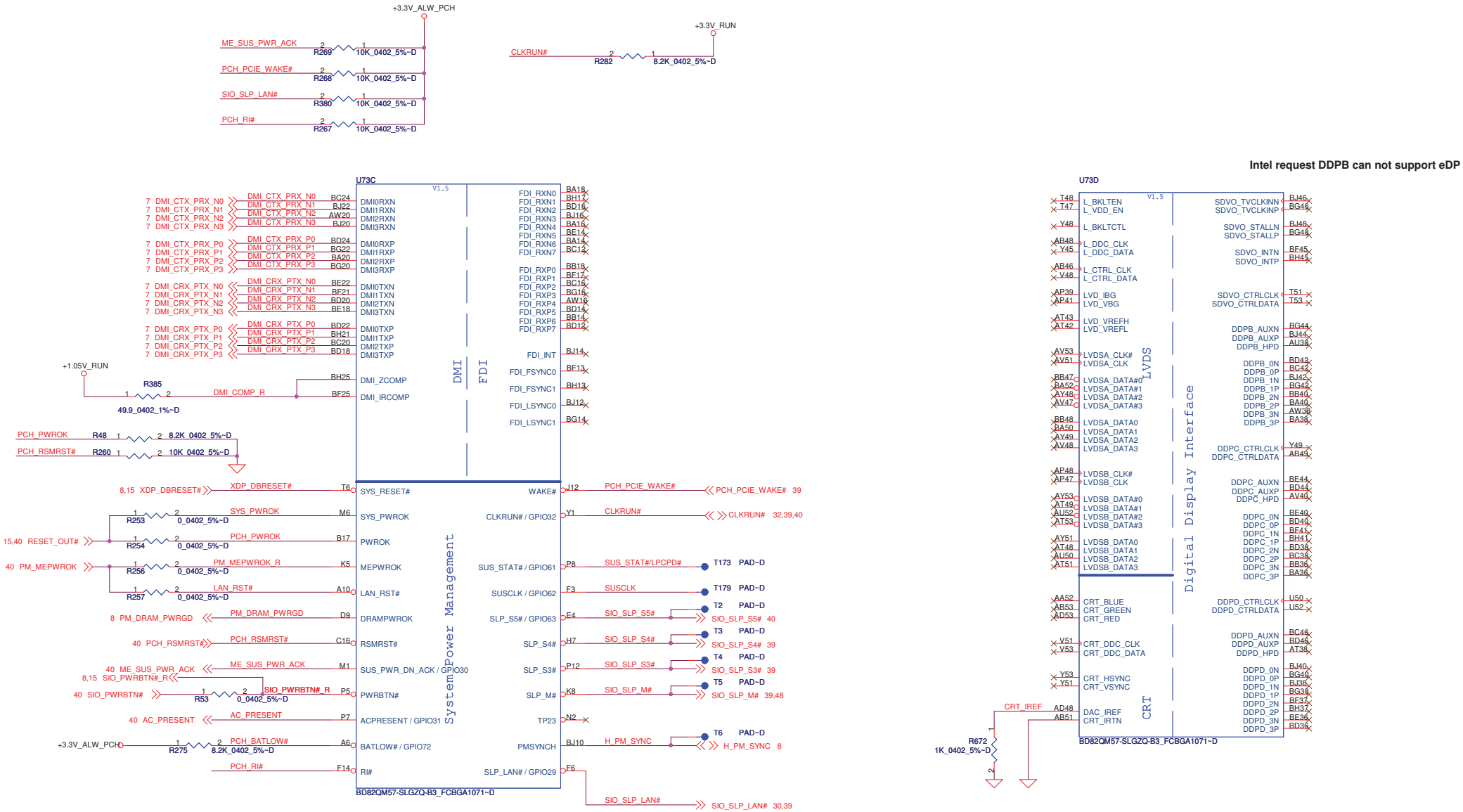
Compal Electronics, Inc.
PCH (2/8)
LA-5573P
Rev 0.1
Thursday, January 21, 2010
Sheet 16 of 69



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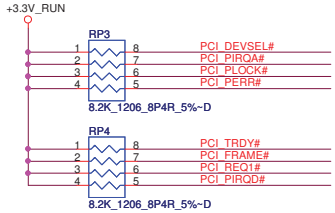
Compal Electronics, Inc.

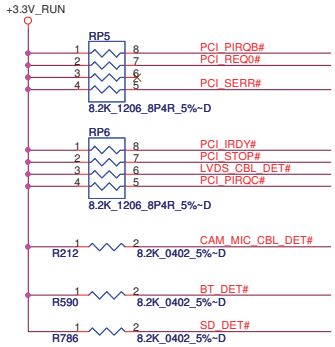
Title: PCH (3/8)

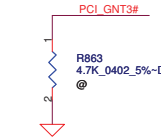
Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 17 of 69

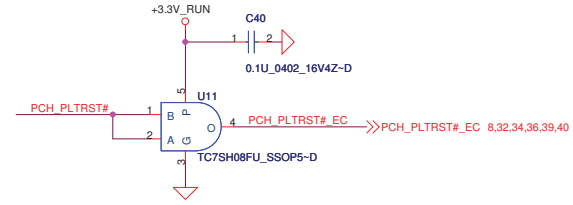
PCH XDP ENABLE	Stuff: R78,R89,R101~R116
	No Stuff: R71,R77,RP1,RP2,R45,R40,R131,R58,R1242,R1243,R1244,R1245,R74,R130
PCH XDP DISABLE	Stuff: R71,R77,RP1,RP2,R45,R40,R131,R58,R1242,R1243,R1244,R1245,R74,R130
	No Stuff: R78,R89,R101~R116

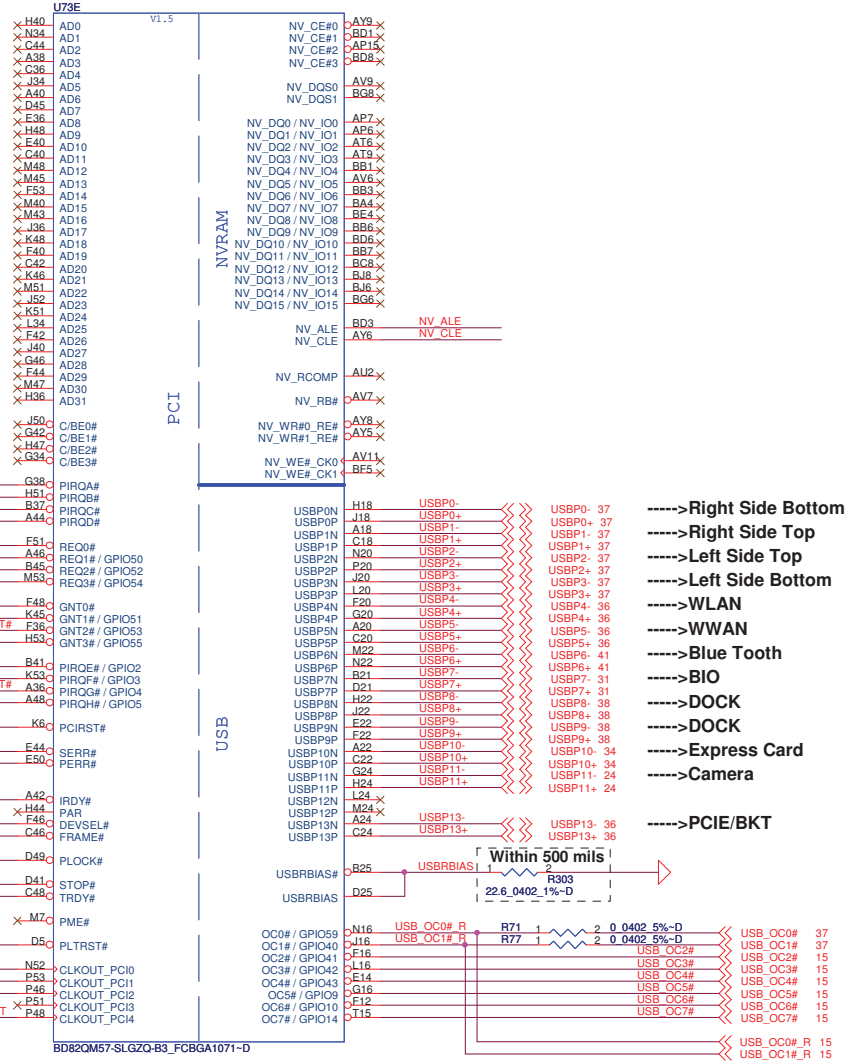


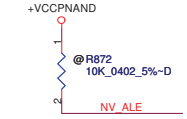




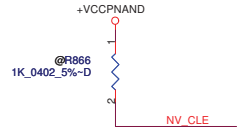
A16 swap override Strap/Top-Block	
Swap Override jumper	
PCI_GNT#3	Low = A16 swap High = Default







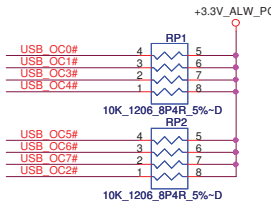
Danbury Technology Enabled	
NV_ALE	High = Enabled (Default) Low = Disabled



DMI Termination Voltage	
NV_CLE	Set to Vss when LOW Set to Vcc when HIGH

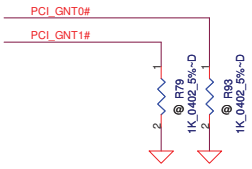
----->Right Side Bottom
----->Right Side Top
----->Left Side Top
----->Left Side Bottom
----->WLAN
----->WWAN
----->Blue Tooth
----->BIO
----->DOCK
----->DOCK
----->Express Card
----->Camera

----->PCIE/BKT



Boot BIOS Strap		
PCI_GNT#1	PCI_GNT#0	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI

★



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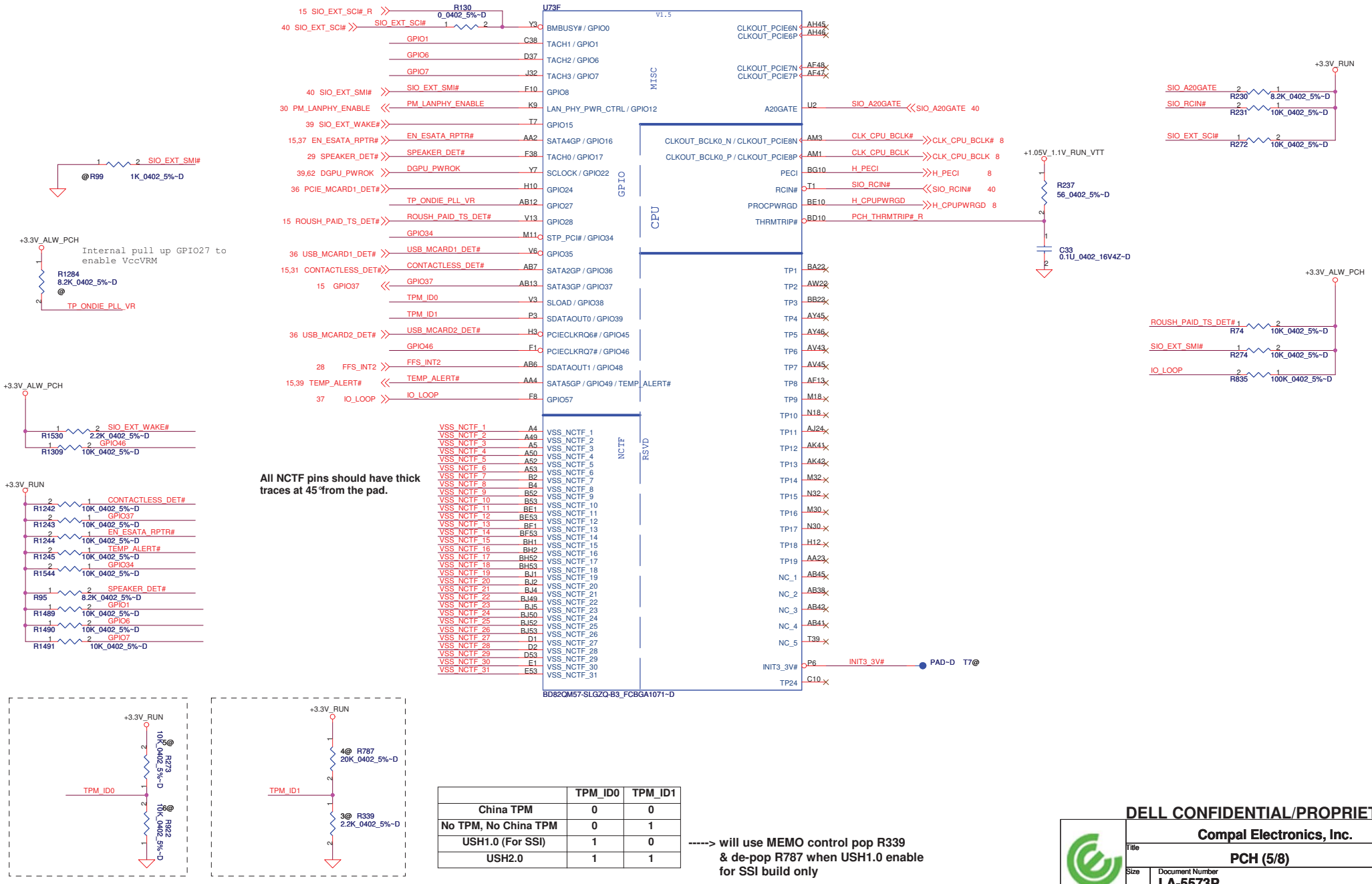
Compal Electronics, Inc.

Title: PCH (4/8)

Size: | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 18 of 69



	TPM_ID0	TPM_ID1
China TPM	0	0
No TPM, No China TPM	0	1
USH1.0 (For SSI)	1	0
USH2.0	1	1

-----> will use MEMO control pop R339 & de-pop R787 when USH1.0 enable for SSI build only

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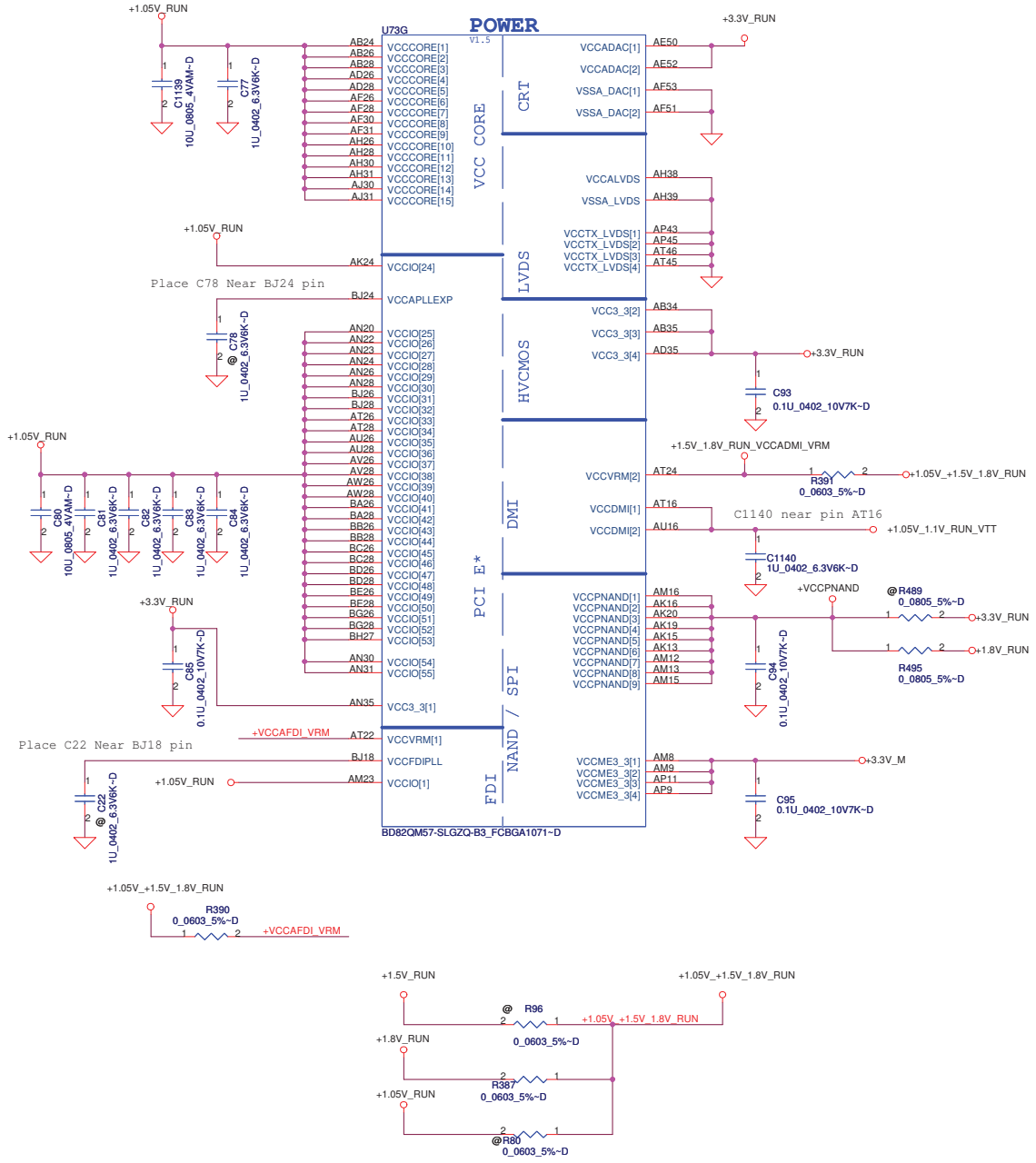
Title: PCH (5/8)

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 19 of 69



PCH Power Rail Table		
Voltage Rail	Voltage	S0 Iccmax Current (A)
V_CPU_IO	1.1/1.05	< 1 (mA)
V5REF	5	< 1 (mA)
V5REF_Sus	5	< 1 (mA)
Vcc3_3	3.3	0.357
VccAClk	1.1	0.052
VccADAC	3.3	0.069
VccADPLLA	1.1	0.068
VccADPLLB	1.1	0.069
VccapllEXP	1.1	0.04
VccCore	1.1	1.432
VccDMI	1.1	0.058
VccDMI	1.1	0.061
VccFDIPLL	1.1	0.037
VccIO	1.1	3.062
VccLAN	1.1	0.32
VccME	1.1	1.849
VccME3_3	3.3	0.085
VccpNAND	1.8	0.156
VccRTC	3.3	2 (mA)
VccSATAPLL	1.1	0.031
VccSus3_3	3.3	0.163
VccSusHDA	3.3	0.006
VccVRM	1.8 / 1.5	0.196
VccVRM	1.05	< 1 (mA)
VccALVDS	3.3	< 1 (mA)
VccTX_LVDS	1.8	0.059

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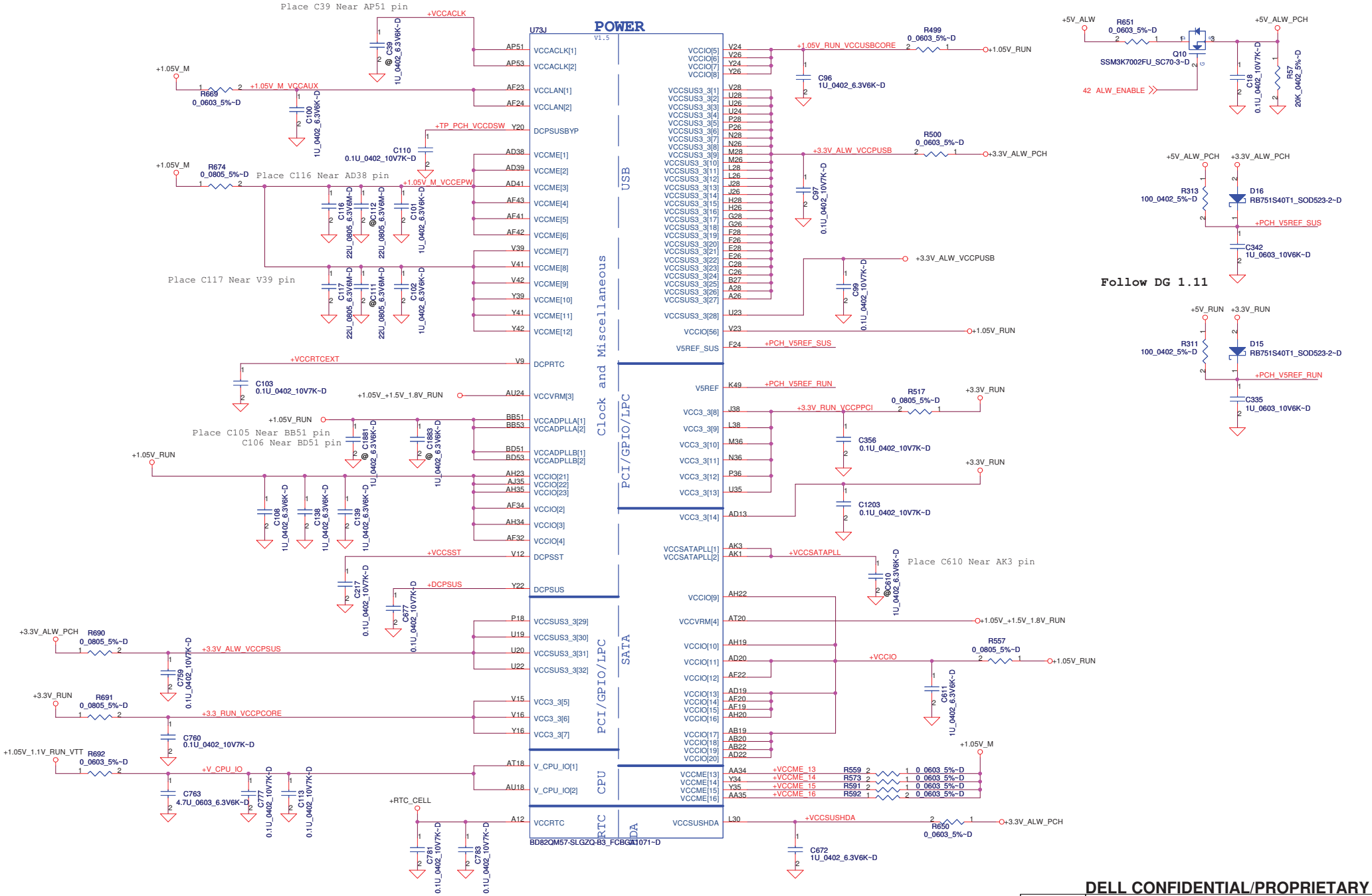
Title: PCH (6/8)

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 20 of 69



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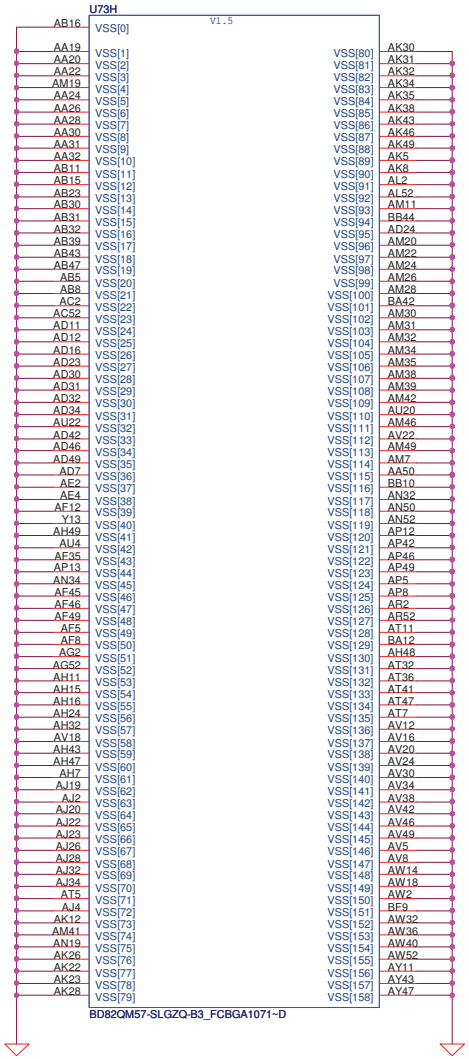
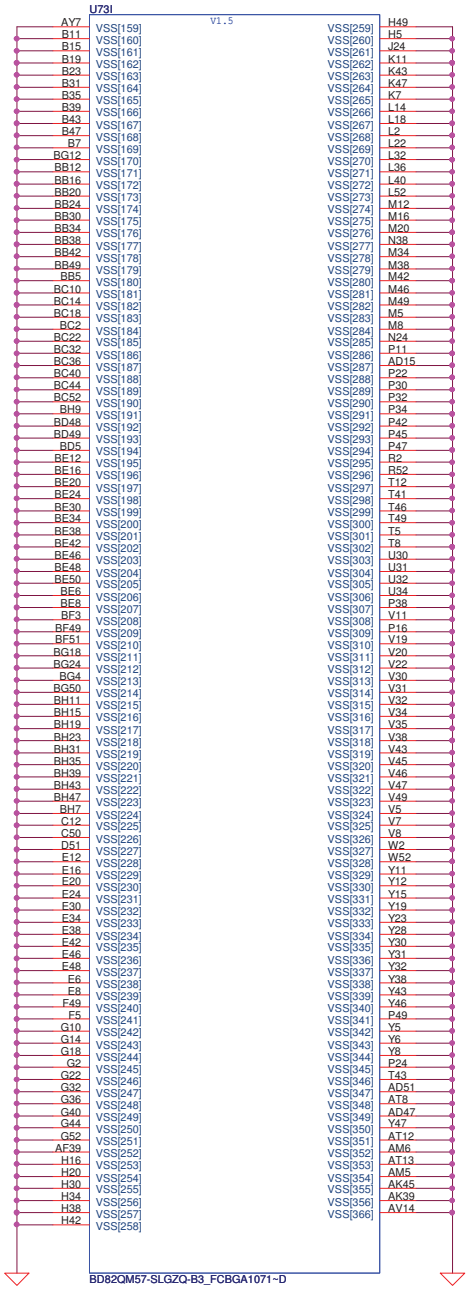
Title	PCH (7/8)	
Size	Document Number LA-5573P	Rev 0.1
Date: Thursday, January 21, 2010	Sheet 21 of 69	



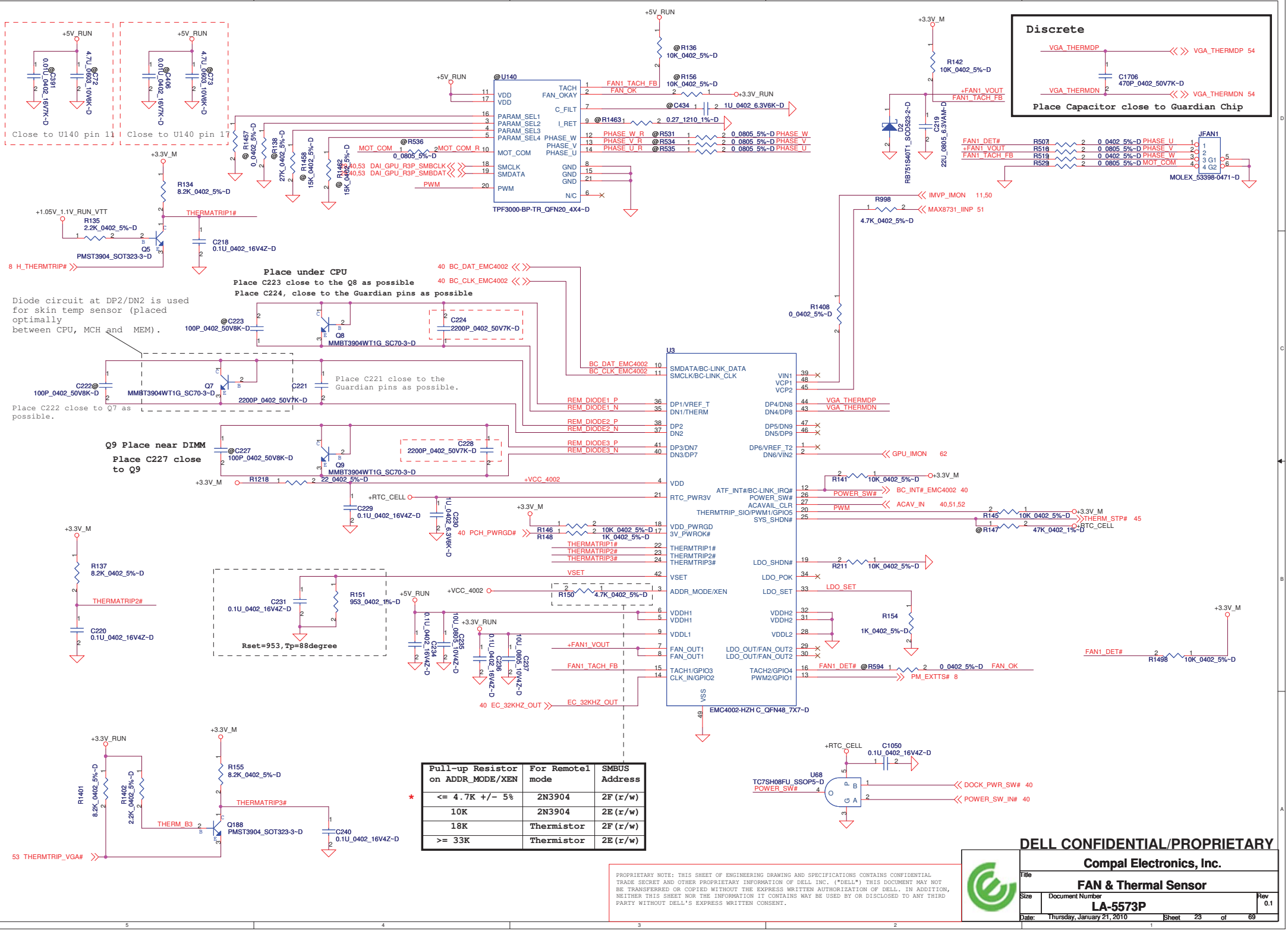


Compal Electronics, Inc.

Title: PCH (8/8)

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 22 of 69


Close to U140 pin 11
Close to U140 pin 17
Discrete
VGA_THERMDP
VGA_THERMDN
Place Capacitor close to Guardian Chip
Place under CPU
Place C223 close to the Q8 as possible
Place C224, close to the Guardian pins as possible
Diode circuit at DP2/DN2 is used for skin temp sensor (placed optimally between CPU, MCH and MEM).
Place C221 close to the Guardian pins as possible.
Place C222 close to Q7 as possible.
Q9 Place near DIMM
Place C227 close to Q9
Rset=953, Tp=88degree
U3
EMC4002-HZH C_QFN48_7X7~D
TPF3000-BP-TR_QFN20_4X4~D
JFAN1
MOLEX_53398-0471~D
PMST3904_SOT323-3~D
MMBT3904WT1G_SC70-3~D
RB751S40T1_SOD523-2~D
TC7SH08FU_SSOP5~D
Pull-up Resistor on ADDR_MODE/XEN
For Remote1 mode
SMBUS Address
<= 4.7K +/- 5%
2N3904
2F(r/w)
10K
2N3904
2E(r/w)
18K
Thermistor
2F(r/w)
>= 33K
Thermistor
2E(r/w)
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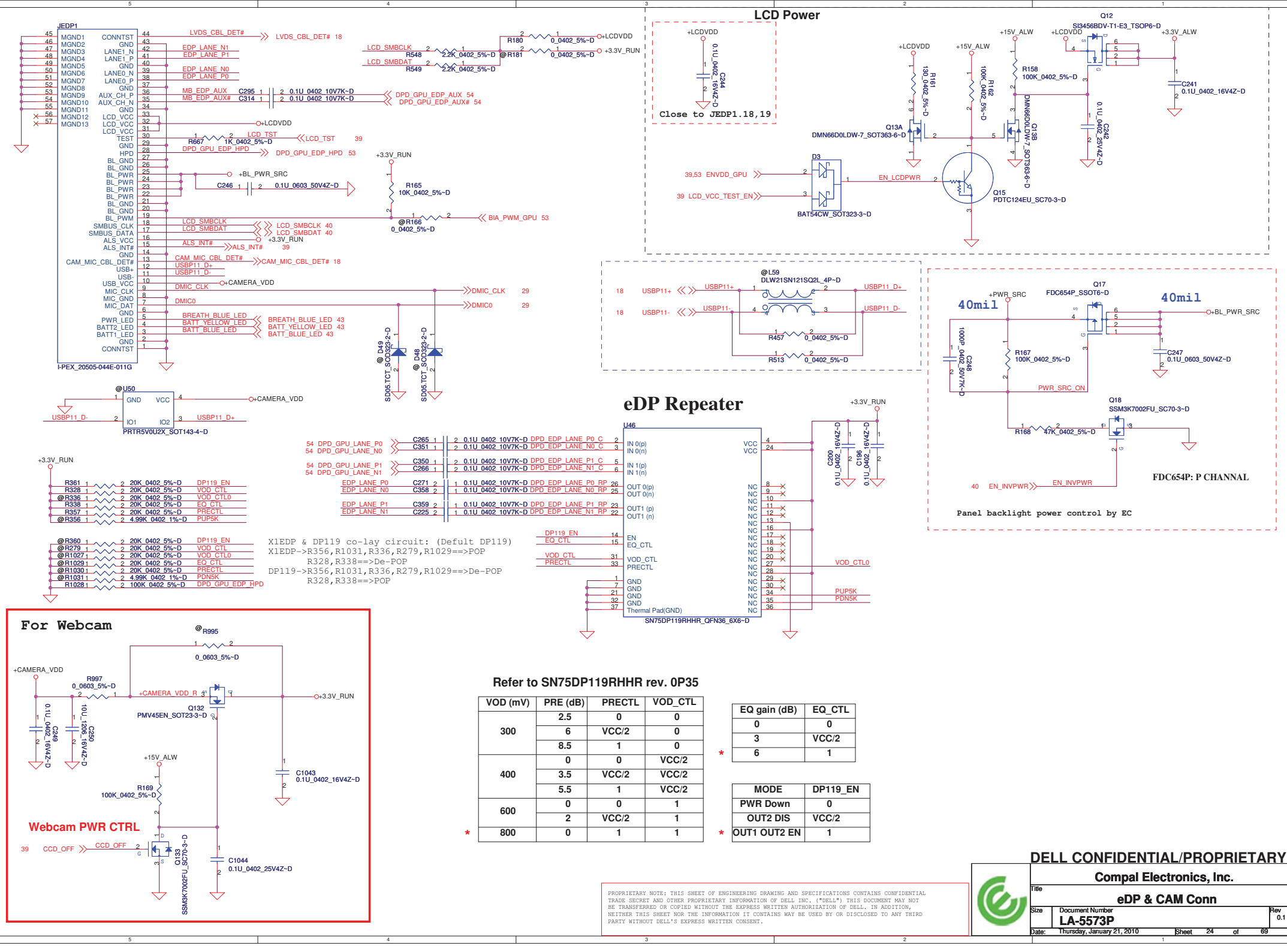
Compal Electronics, Inc.
FAN & Thermal Sensor
LA-5573P
Rev 0.1
Thursday, January 21, 2010
Sheet 23 of 69



Refer to SN75DP119RHHR rev. 0P35

VOD (mV)	PRE (dB)	PRECTL	VOD_CTL
300	2.5	0	0
	6	VCC/2	0
	8.5	1	0
400	0	0	VCC/2
	3.5	VCC/2	VCC/2
	5.5	1	VCC/2
600	0	0	1
	2	VCC/2	1
* 800	0	1	1

EQ gain (dB)	EQ_CTL
0	0
3	VCC/2
* 6	1

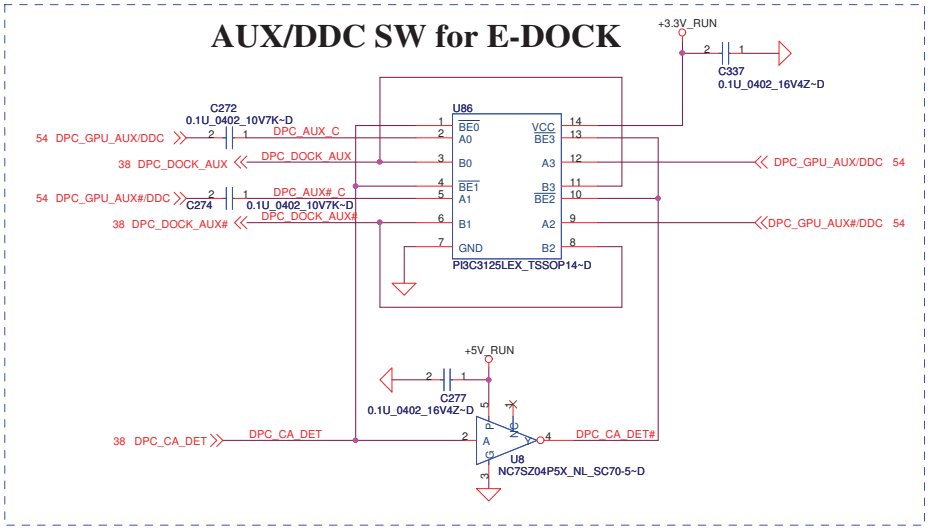
MODE	DP119_EN
PWR Down	0
OUT2 DIS	VCC/2
* OUT1 OUT2 EN	1

Compal Electronics, Inc.

Title: eDP & CAM Conn

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 24 of 69



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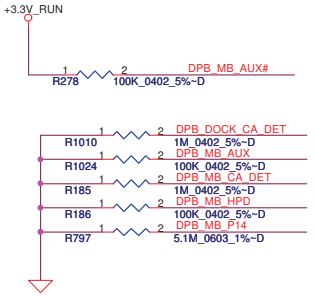
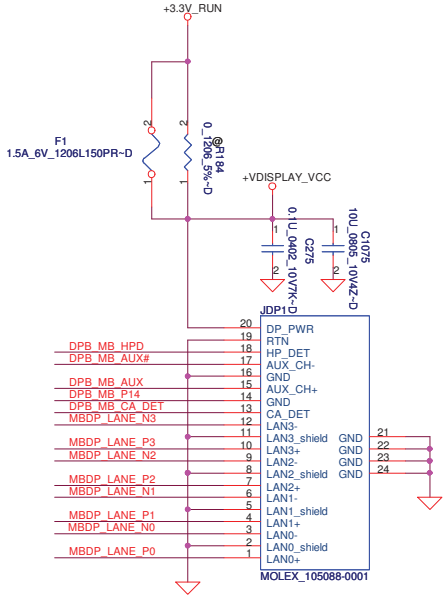
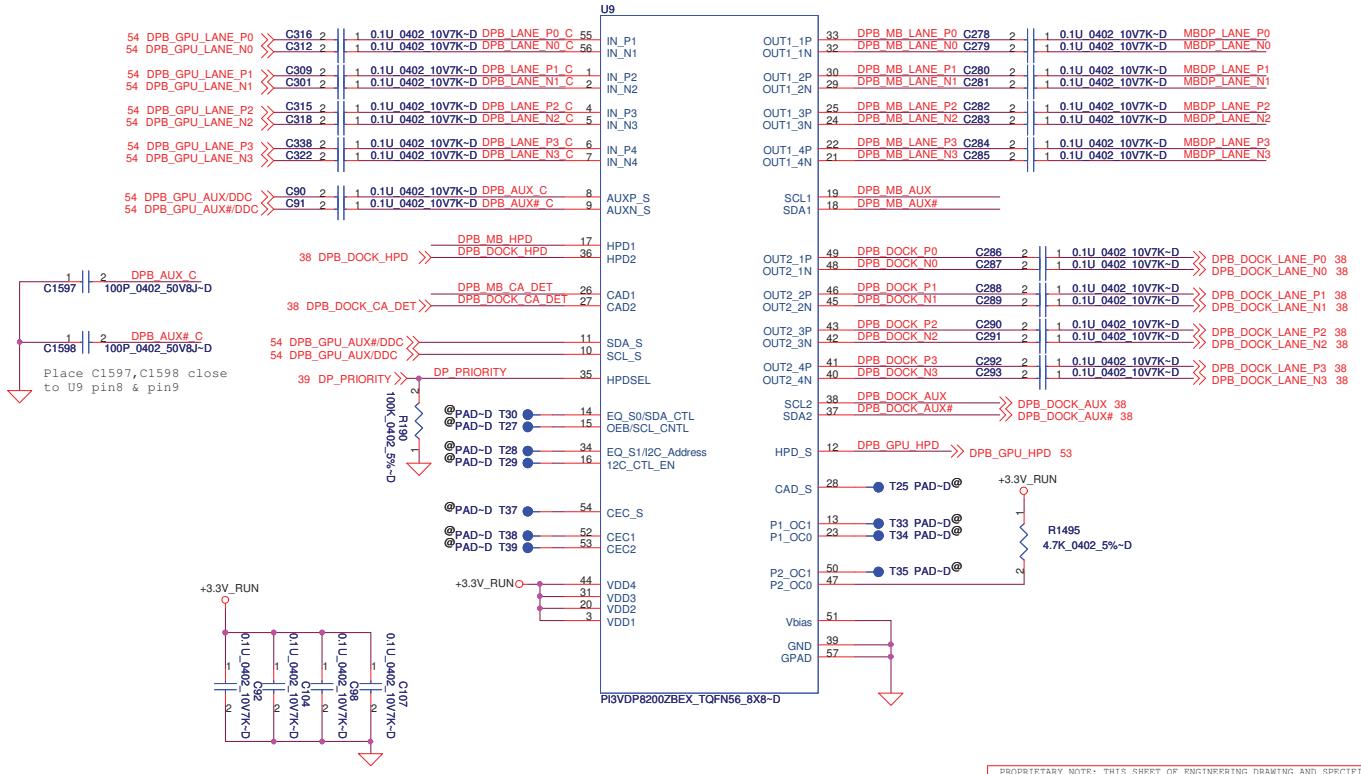
Compal Electronics, Inc.		
Title: DP SW		
Size	Document Number: LA-5573P	Rev: 0.1
Date: Thursday, January 21, 2010	Sheet 25 of 69	

Display port Dip Connector





DPB SW for MB & DOCK

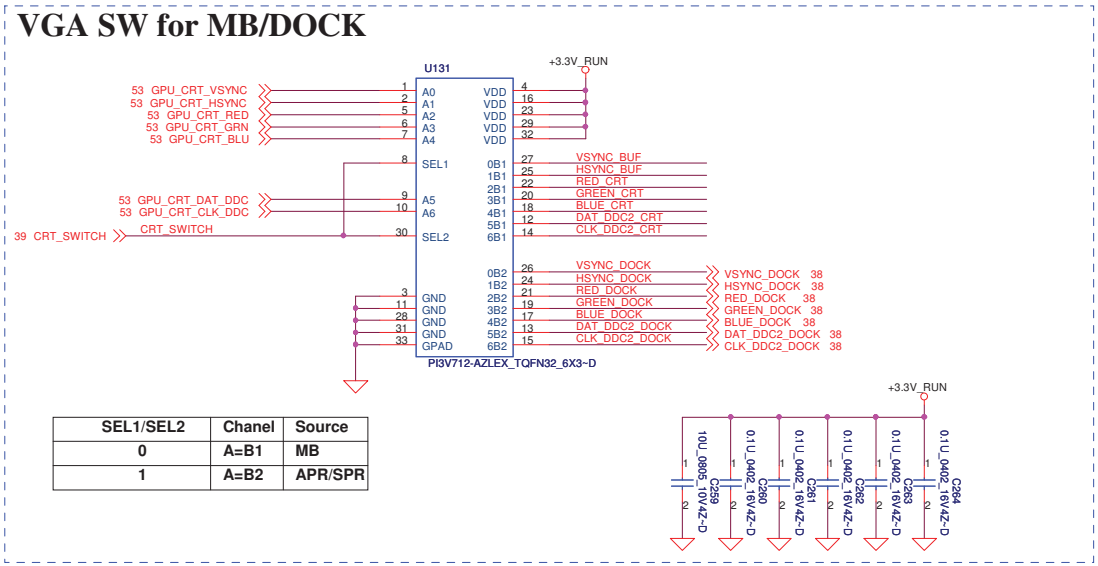


Compal Electronics, Inc.

Title: Display port

Size: | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 26 of 69



SEL1/SEL2	Chanel	Source
0	A=B1	MB
1	A=B2	APR/SPR

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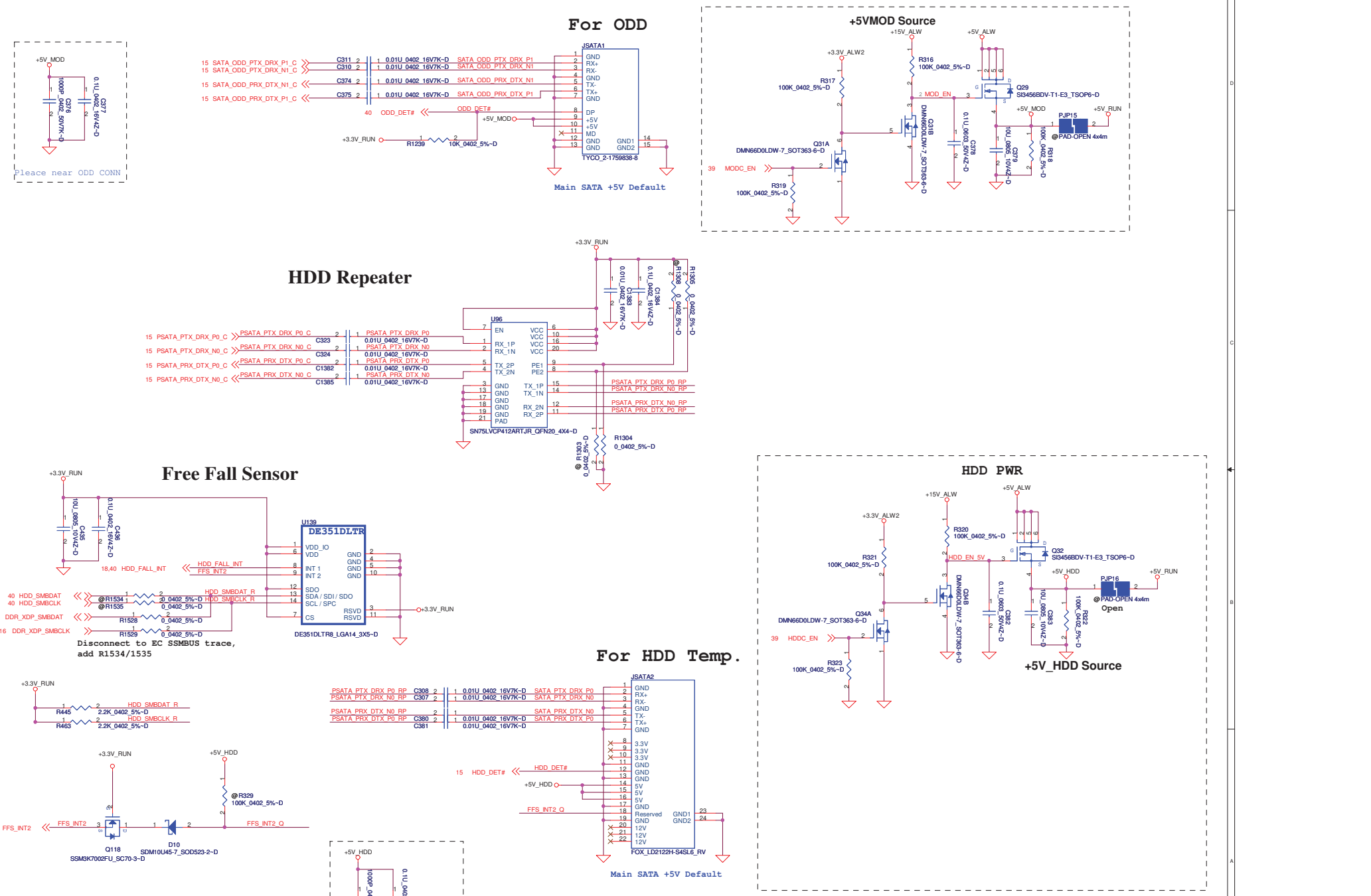
Compal Electronics, Inc.	
Title	CRT/Video switch
Size	Document Number: LA-5573P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	27 of 69


For ODD
+5VMOD Source
HDD Repeater
Free Fall Sensor
HDD PWR
For HDD Temp.
Main SATA +5V Default
Please near ODD CONN
Disconnect to EC SSMBUS trace,
add R1534/1535
+5V_HDD Source
Main SATA +5V Default
Please near HDD CONN
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Compal Electronics, Inc.
ODD/HDD CONNECTOR
LA-5573P
Thursday, January 21, 2010
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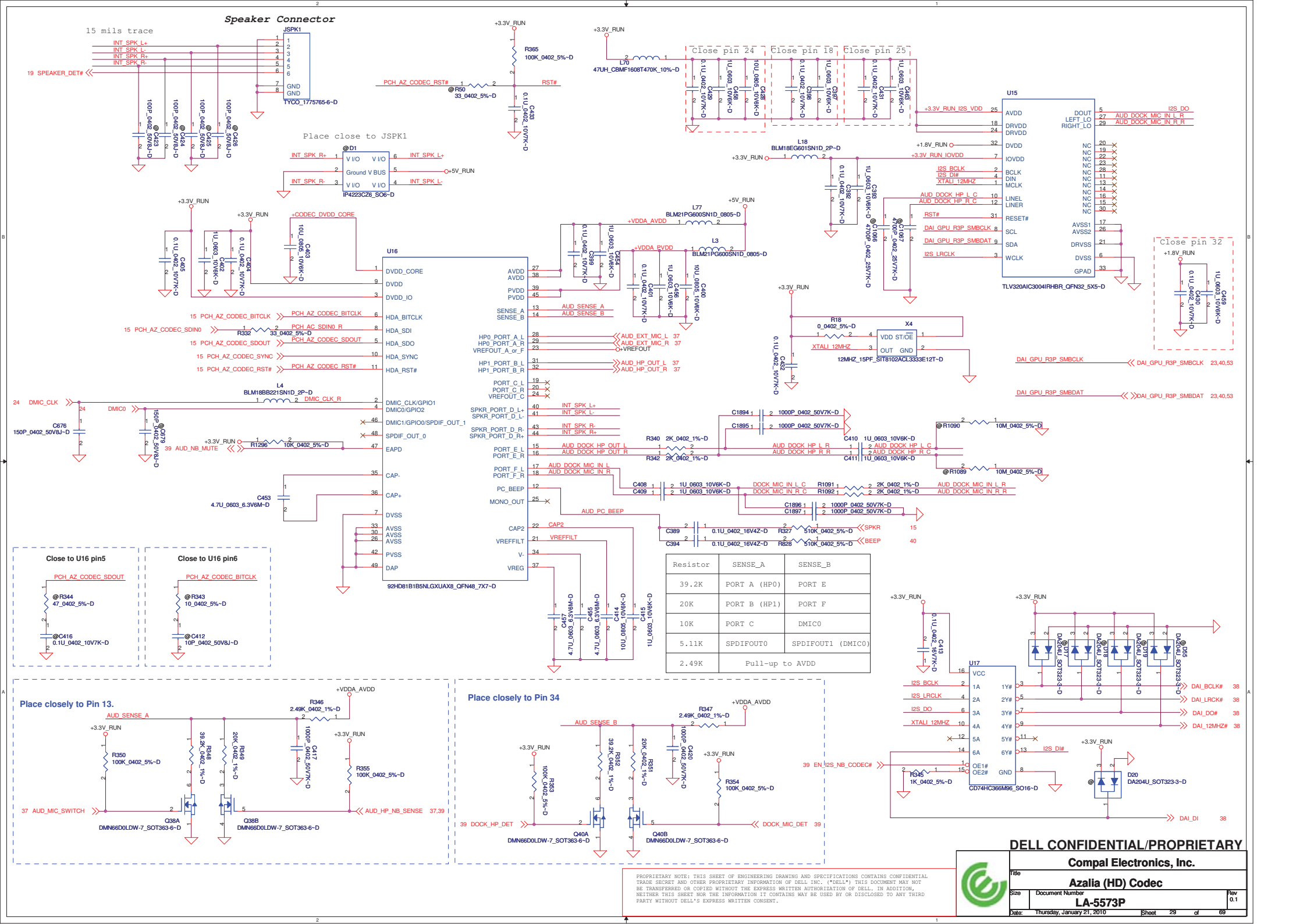
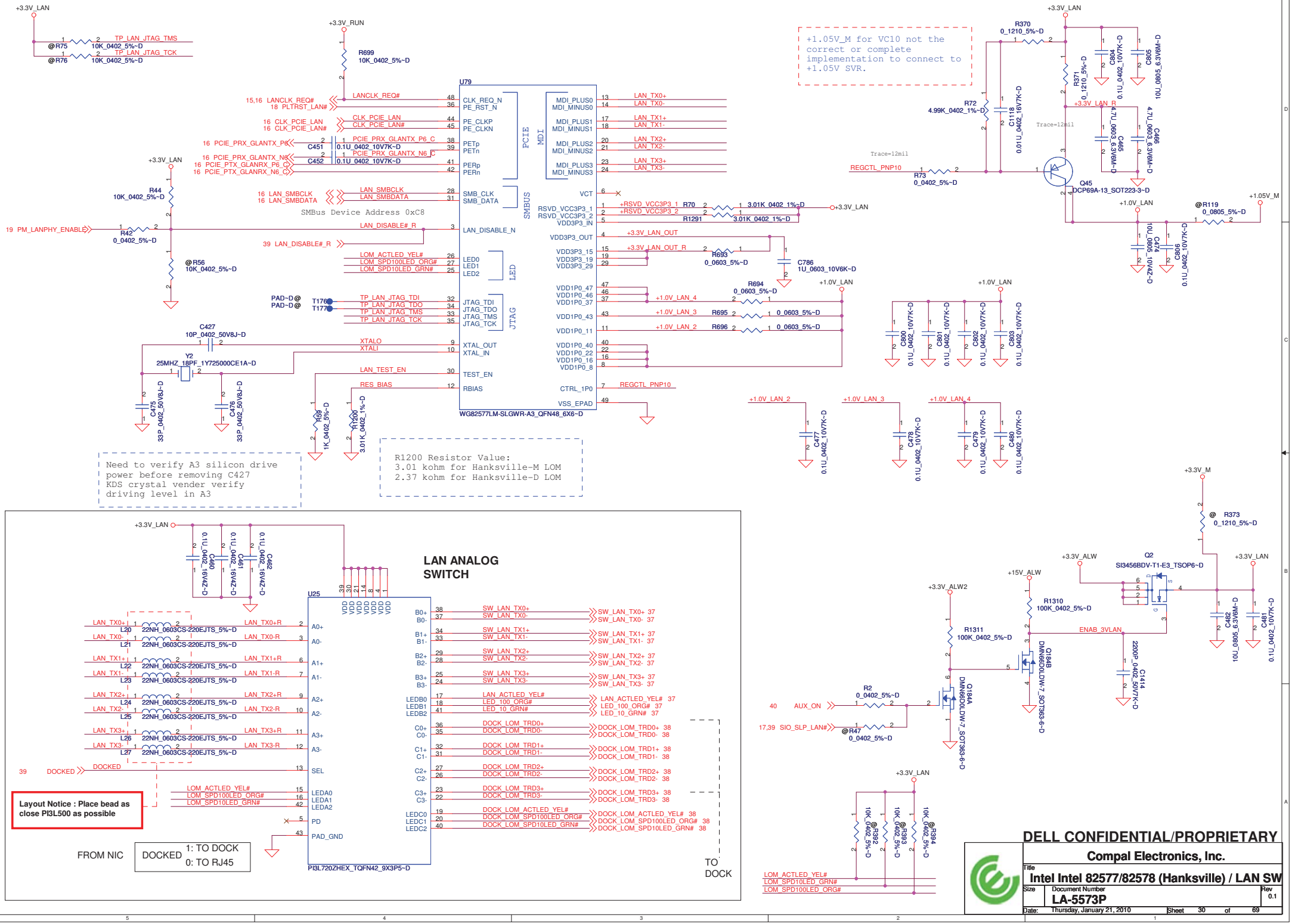


Resistor	SENSE_A	SENSE_B
39.2K	PORT A (HP0)	PORT E
20K	PORT B (HP1)	PORT F
10K	PORT C	DMIC0
5.11K	SPDIFOUT0	SPDIFOUT1 (DMIC0)
2.49K	Pull-up to AVDD	


+3.3V_LAN
+3.3V_RUN
+1.05V_M for VC10 not the correct or complete implementation to connect to +1.05V SVR.
U79
WG82577LM-SLGWR-A3_QFN48_6X6~D
SMBus Device Address 0xC8
Need to verify A3 silicon drive power before removing C427
KDS crystal vender verify driving level in A3
R1200 Resistor Value:
3.01 kohm for Hanksville-M LOM
2.37 kohm for Hanksville-D LOM
LAN ANALOG SWITCH
PI3L720ZHEX_TQFN42_9X3P5~D
Layout Notice : Place bead as close PI3L500 as possible
FROM NIC
DOCKED 1: TO DOCK 0: TO RJ45
TO DOCK
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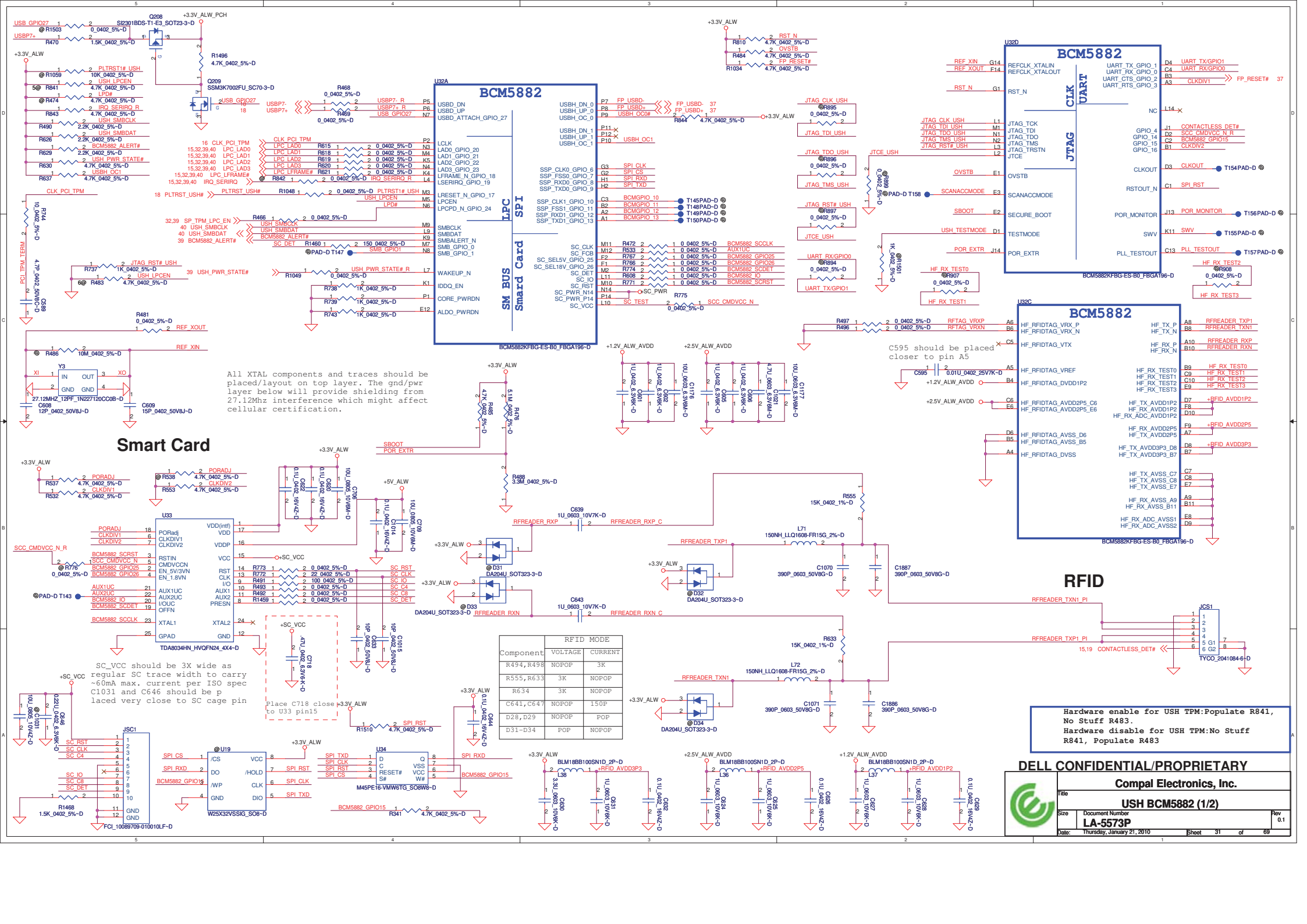
Intel Intel 82577/82578 (Hanksville) / LAN SW
LA-5573P
Rev 0.1
Thursday, January 21, 2010
Sheet 30 of 69


BCM5882
U32A
BCM5882KFBG-ES-B0_FBGA196~D
U32D
BCM5882KFBG-ES-B0_FBGA196~D
U32C
BCM5882KFBG-ES-B0_FBGA196~D
Smart Card
RFID
All XTAL components and traces should be placed/layout on top layer. The gnd/pwr layer below will provide shielding from 27.12Mhz interference which might affect cellular certification.
C595 should be placed closer to pin A5
SC_VCC should be 3X wide as regular SC trace width to carry ~60mA max. current per ISO spec C1031 and C646 should be p laced very close to SC cage pin
Place C718 close to U33 pin15
Hardware enable for USH TPM:Populate R841, No Stuff R483.
Hardware disable for USH TPM:No Stuff R841, Populate R483
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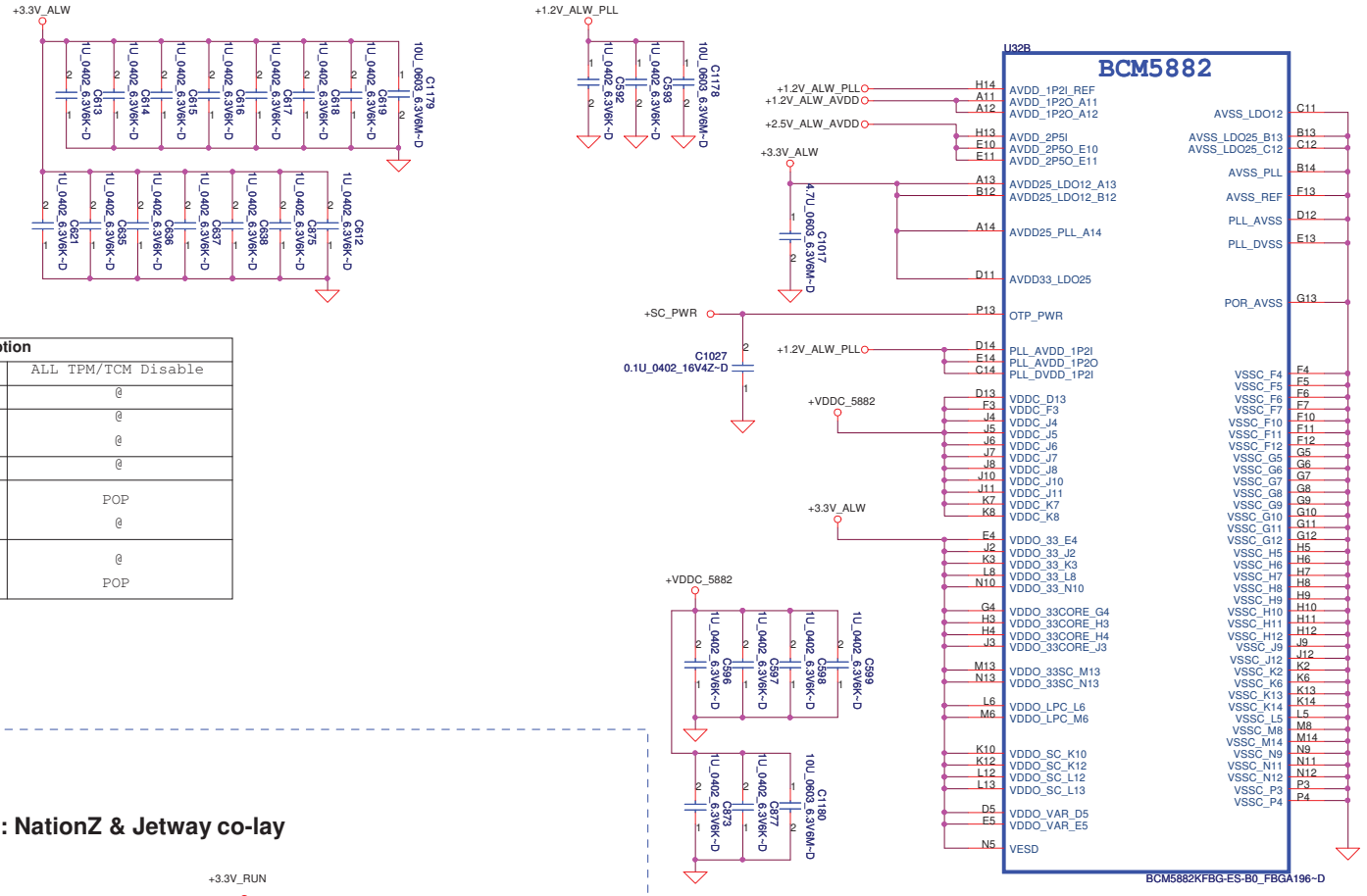
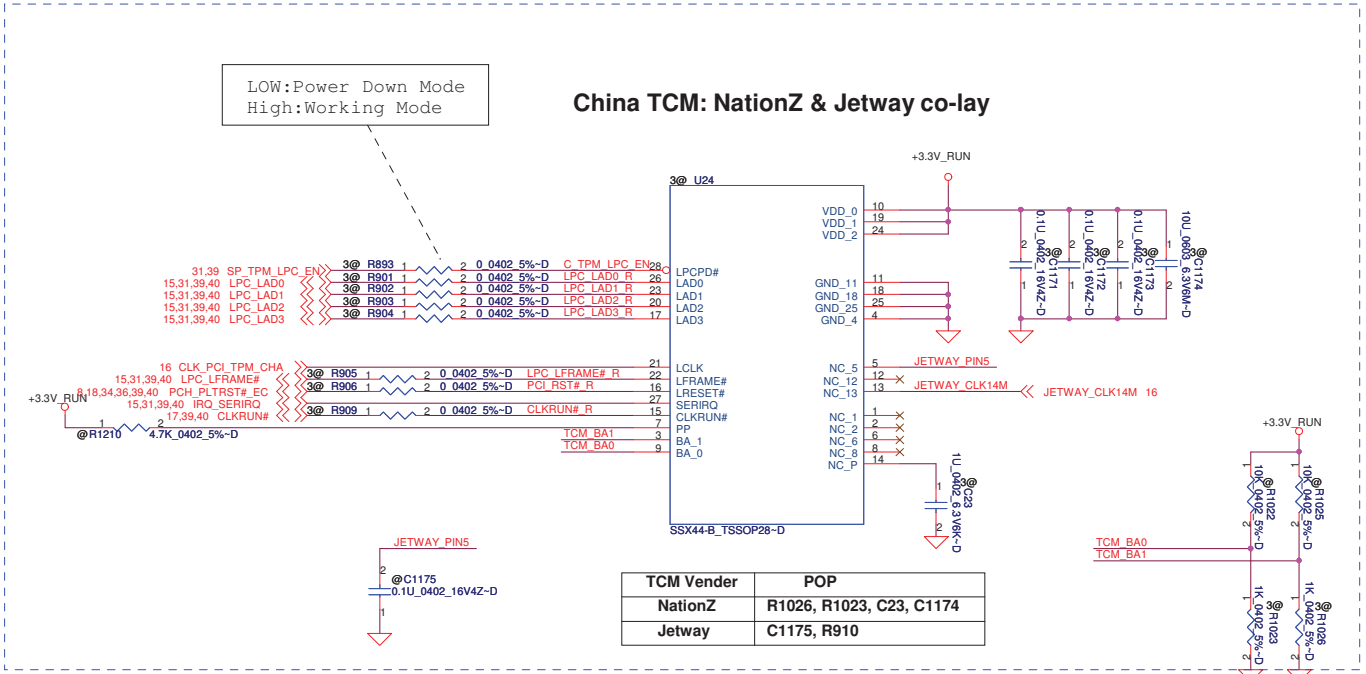
USH BCM5882 (1/2)
LA-5573P
Rev 0.1
Thursday, January 21, 2010
Sheet 31 of 69



USH BCM5882 and China TCM Z8H172T Option				
PART/PIN	Ref Des	TCM Enable	TPM Enable	ALL TPM/TCM Disable
TCM circuit	All 3@	POP	@	@
USH_LPCEN	PU R841	@	POP	@
	PD R483	POP	@	@
SIO 5028 ->SP_TPM_LPC_EN	PU R788	@	@	@
PCH GPIO39 ->TPM_ID1	PU R787	@	@	POP
	PD R339	POP	POP	@
PCH GPIO38 ->TPM_ID0	PU R273	POP	POP	@
	PD R922	@	@	POP



TCM Vender	POP
NationZ	R1026, R1023, C23, C1174
Jetway	C1175, R910

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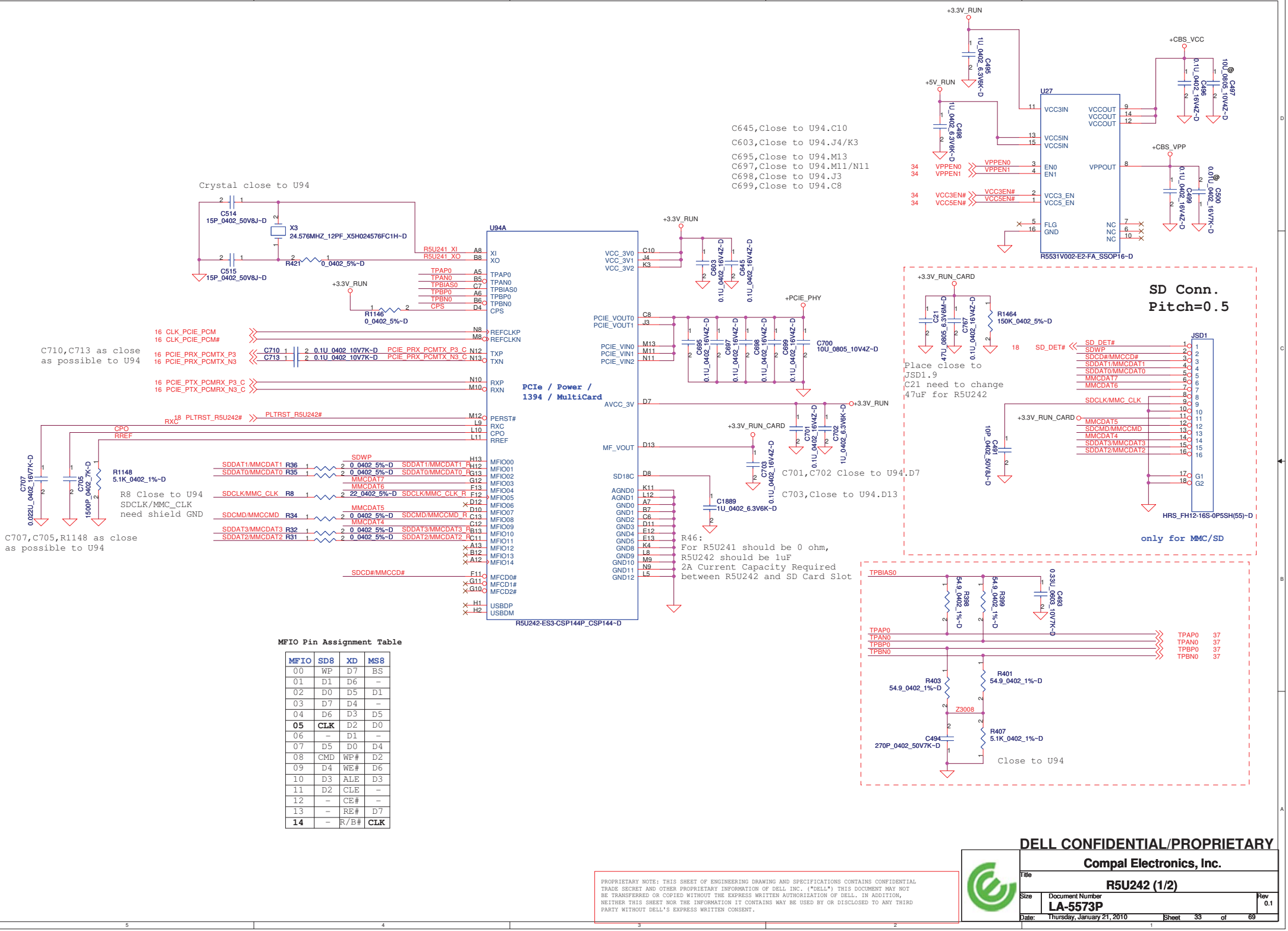
Title: USH BCM5882 (2/2)

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 32 of 69



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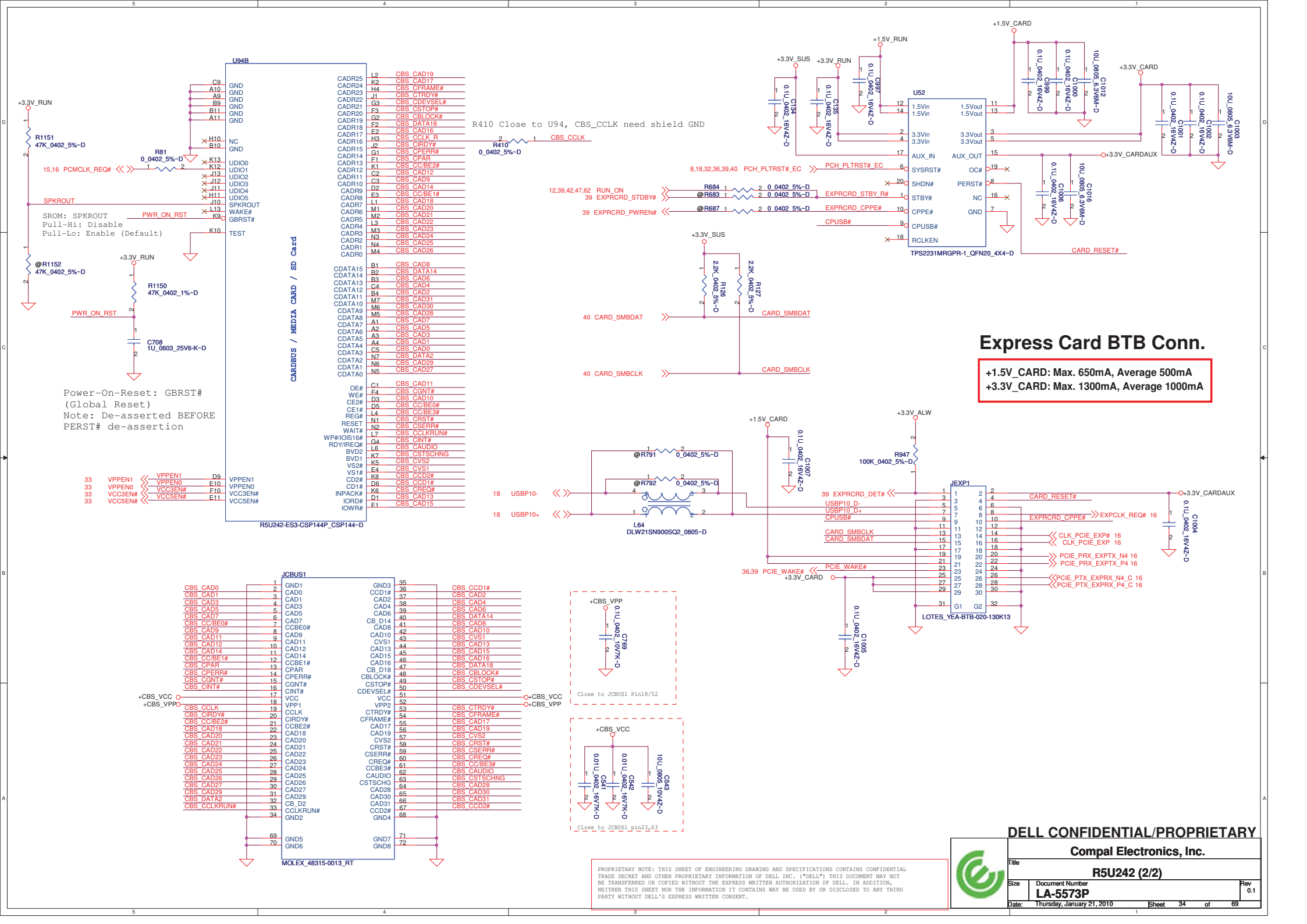
Title: R5U242 (1/2)

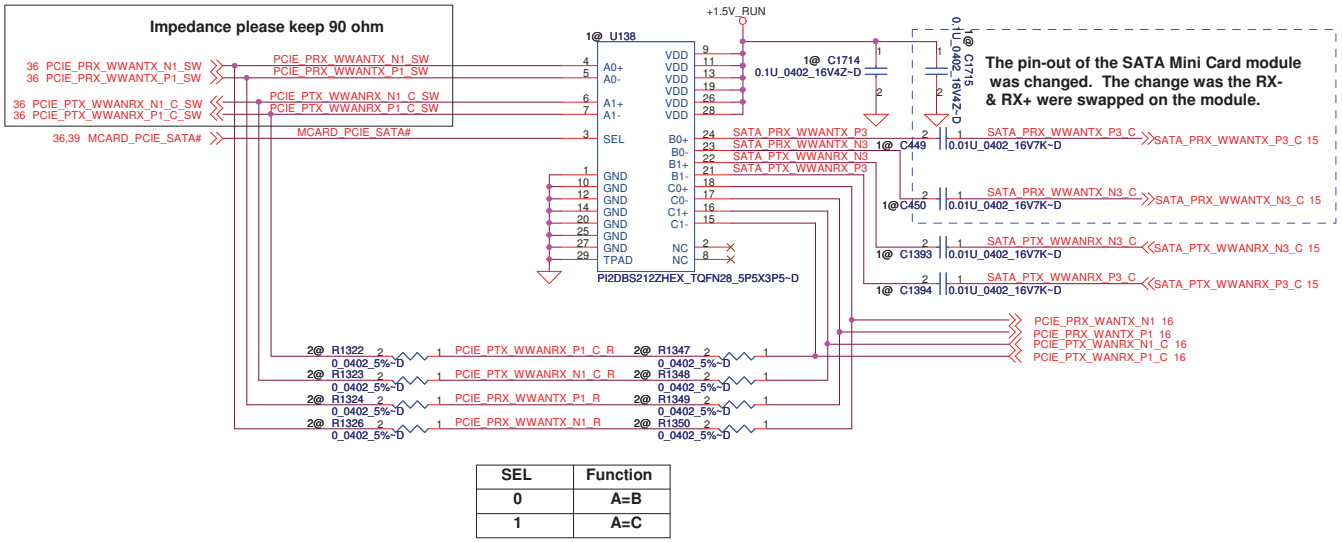
Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 33 of 69


U94B
CARDBUS / MEDIA CARD / SD Card
R5U242-ES3-CSP144P_CSP144~D
R410 Close to U94, CBS_CCLK need shield GND
SROM: SPKROUT
Pull-Hi: Disable
Pull-Lo: Enable (Default)
Power-On-Reset: GBRST#
(Global Reset)
Note: De-asserted BEFORE
PERST# de-assertion
U52
TPS2231MRGPR-1_QFN20_4X4~D
Express Card BTB Conn.
+1.5V_CARD: Max. 650mA, Average 500mA
+3.3V_CARD: Max. 1300mA, Average 1000mA
JEXP1
LOTES_YEA-BTB-020-130K13
L64
DLW21SN900SQ2_0805~D
JCBUS1
MOLEX_48315-0013_RT
Close to JCBUS1 Pin18/52
Close to JCBUS1 pin23,63
DELL CONFIDENTIAL/PROPRIETARY
Compal Electronics, Inc.
R5U242 (2/2)
LA-5573P
Thursday, January 21, 2010
Sheet 34 of 69

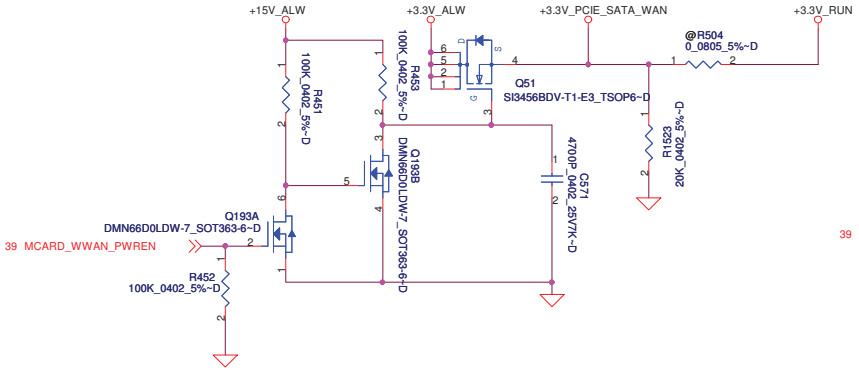
For Asics placement estimate

PCIE/SATA SW for Mini card1

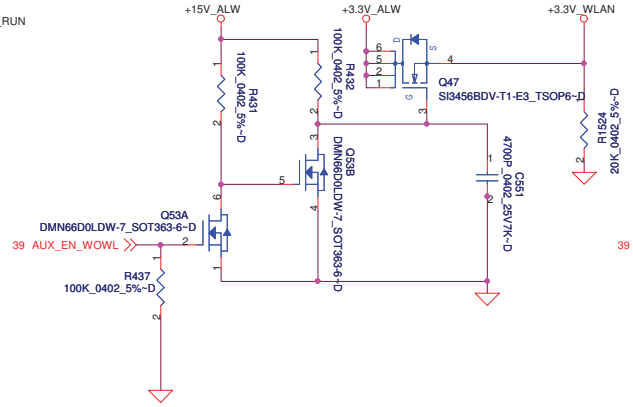


SEL	Function
0	A=B
1	A=C

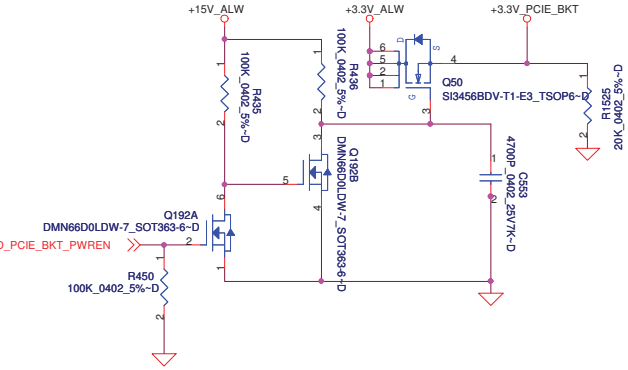
Power Control for Mini card1



Power Control for Mini card2



Power Control for Mini card3

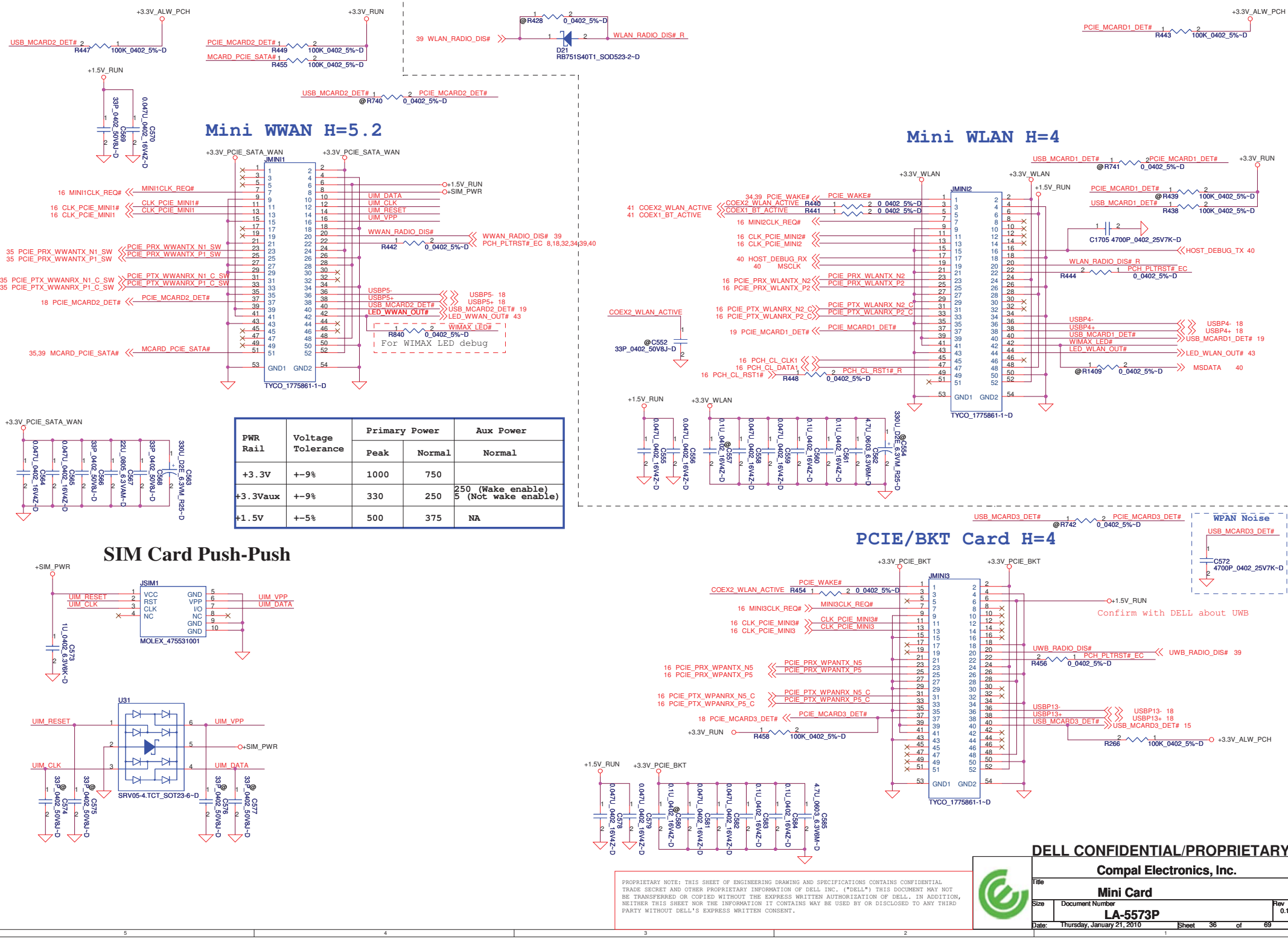


Compal Electronics, Inc.

Title: PCIE/SATA SW & PCIE PWR

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 35 of 69



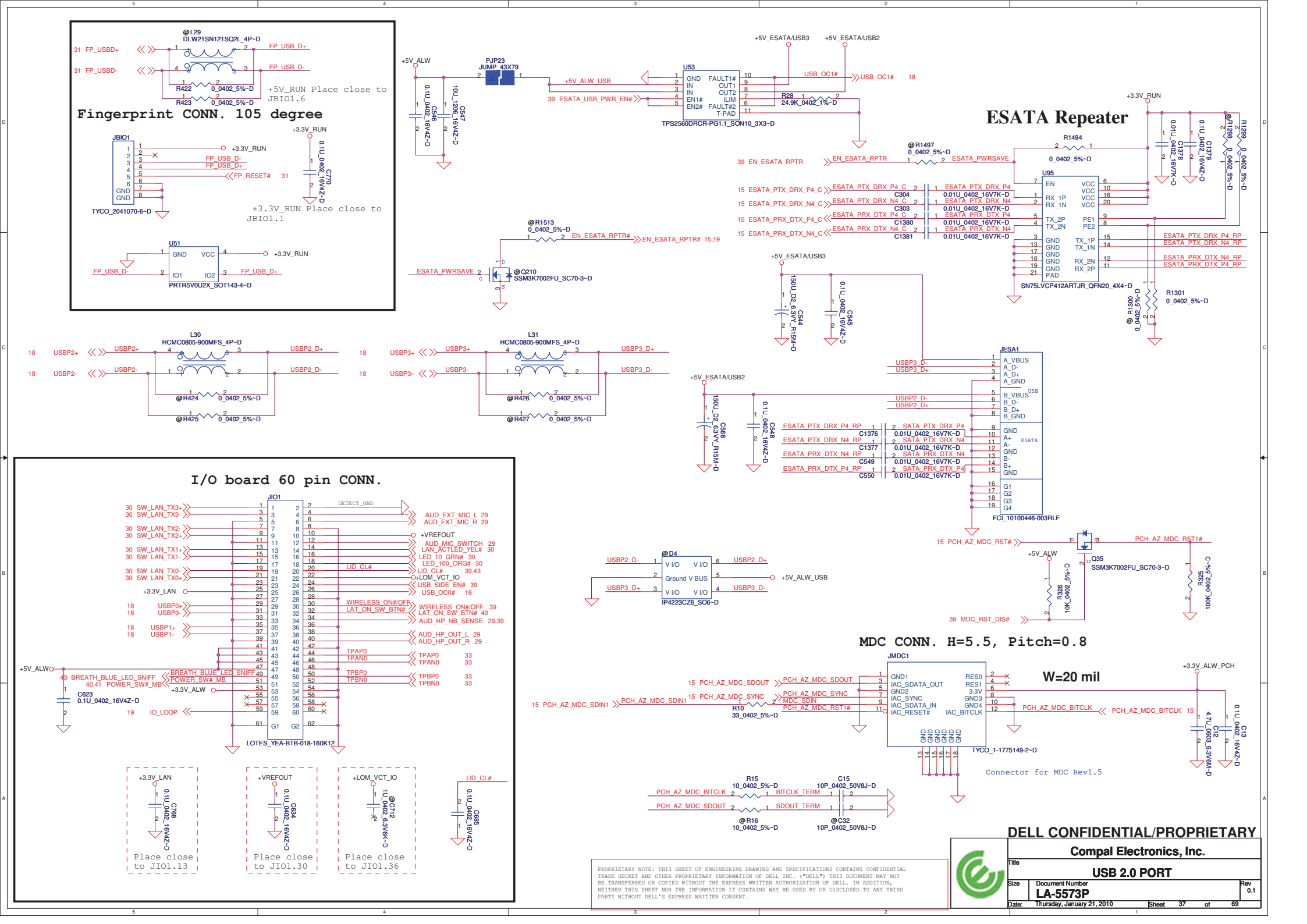
PWR Rail	Voltage Tolerance	Primary Power		Aux Power
		Peak	Normal	Normal
+3.3V	+-9%	1000	750	
+3.3Vaux	+-9%	330	250	250 (Wake enable) 5 (Not wake enable)
+1.5V	+-5%	500	375	NA

Compal Electronics, Inc.

Title: Mini Card

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 36 of 69


Fingerprint CONN. 105 degree
@L29
DLW21SN121SQ2L_4P~D
FP_USB_D+
FP_USB_D-
R422 0_0402_5%~D
R423 0_0402_5%~D
+5V_RUN Place close to JBIO1.6
JBIO1
TYCO_2041070-6~D
FP_RESET#
C770 0.1U_0402_16V4Z~D
+3.3V_RUN Place close to JBIO1.1
U51
PRTR5V0U2X_SOT143-4~D
+5V_ALW
PJP23 JUMP_43X79
+5V_ALW_USB
ESATA_USB_PWR_EN#
U53
TPS2560DRCR-PG1.1_SON10_3X3~D
USB_OC1#
R28 24.9K_0402_1%~D
ESATA Repeater
EN_ESATA_RPTR
R1497 0_0402_5%~D
ESATA_PWRSAVE
R1494 0_0402_5%~D
U95
SN75LVCP412ARTJR_QFN20_4X4~D
ESATA_PTX_DRX_P4_C
ESATA_PTX_DRX_N4_C
ESATA_PRX_DTX_P4_C
ESATA_PRX_DTX_N4_C
C304 0.01U_0402_16V7K~D
C303 0.01U_0402_16V7K~D
C1380 0.01U_0402_16V7K~D
C1381 0.01U_0402_16V7K~D
ESATA_PTX_DRX_P4_RP
ESATA_PTX_DRX_N4_RP
R1301 0_0402_5%~D
@R1513 0_0402_5%~D
EN_ESATA_RPTR#
@Q210 SSM3K7002FU_SC70-3~D
+5V_ESATA/USB3
+5V_ESATA/USB2
C544 150U_D2_6.3VY_R15M~D
C545 0.1U_0402_16V4Z~D
C588 150U_D2_6.3VY_R15M~D
C548 0.1U_0402_16V4Z~D
JESA1
FCI_10100446-003RLF
SATA_PTX_DRX_P4
SATA_PTX_DRX_N4
SATA_PRX_DTX_N4
SATA_PRX_DTX_P4
C1376 0.01U_0402_16V7K~D
C1377 0.01U_0402_16V7K~D
C549 0.01U_0402_16V7K~D
C550 0.01U_0402_16V7K~D
L30
HCMC0805-900MFS_4P~D
L31
HCMC0805-900MFS_4P~D
@R424 0_0402_5%~D
@R425 0_0402_5%~D
@R426 0_0402_5%~D
@R427 0_0402_5%~D
I/O board 60 pin CONN.
JIO1
LOTES_YEA-BTB-018-160K12
DETECT_GND
AUD_EXT_MIC_L
AUD_EXT_MIC_R
+VREFOUT
AUD_MIC_SWITCH
LAN_ACTLED_YEL#
LED_10_GRN#
LED_100_ORG#
LID_CL#
LOM_VCT_IO
USB_SIDE_EN#
USB_OC0#
WIRELESS_ON#/OFF
LAT_ON_SW_BTN#
AUD_HP_NB_SENSE
AUD_HP_OUT_L
AUD_HP_OUT_R
TPAP0
TPAN0
TPBP0
TPBN0
IO_LOOP
BREATH_BLUE_LED_SNIFF
POWER_SW#_MB
C623 0.1U_0402_16V4Z~D
+3.3V_LAN
+3.3V_ALW
+VREFOUT
+LOM_VCT_IO
C768 0.1U_0402_16V4Z~D
C634 0.1U_0402_16V4Z~D
@C712 1U_0402_6.3V6K~D
C685 0.1U_0402_16V4Z~D
Place close to JIO1.13
Place close to JIO1.30
Place close to JIO1.36
@D4
IP4223CZ6_SO6~D
+5V_ALW_USB
MDC CONN. H=5.5, Pitch=0.8
JMDC1
TYCO_1-1775149-2~D
PCH_AZ_MDC_SDOUT
PCH_AZ_MDC_SDIN1
PCH_AZ_MDC_SYNC
PCH_AZ_MDC_RST1#
PCH_AZ_MDC_BITCLK
R10 33_0402_5%~D
W=20 mil
+3.3V_ALW_PCH
C12 4.7U_0603_6.3V6M~D
C13 0.1U_0402_16V4Z~D
Connector for MDC Rev1.5
R15 10_0402_5%~D
C15 10P_0402_50V8J~D
BITCLK_TERM
SDOUT_TERM
@R16 10_0402_5%~D
@C32 10P_0402_50V8J~D
Q35 SSM3K7002FU_SC70-3~D
R326 10K_0402_5%~D
R325 10K_0402_5%~D
PCH_AZ_MDC_RST#
MDC_RST_DIS#
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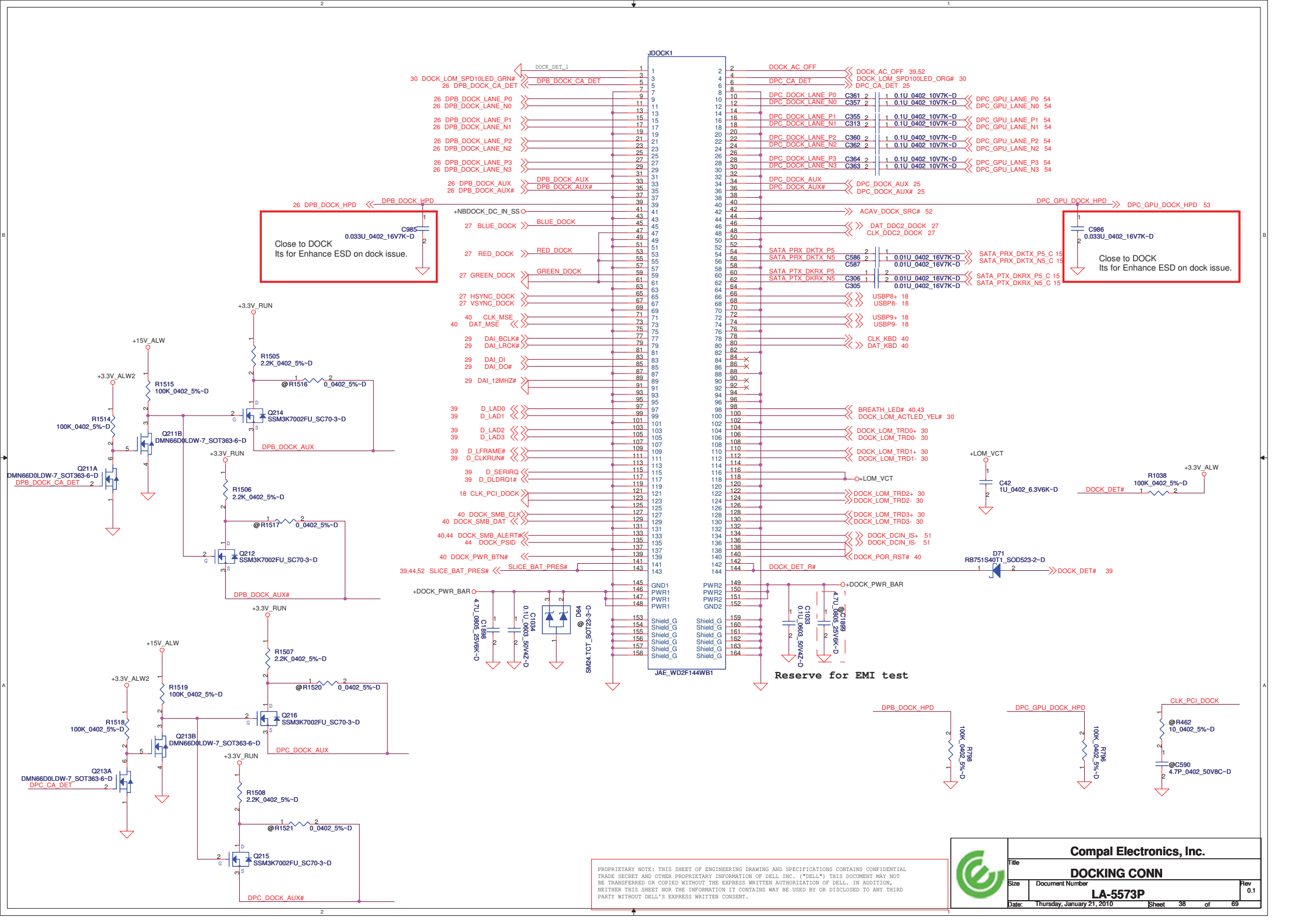
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS WAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.
Compal Electronics, Inc.
Title
USB 2.0 PORT
Size
Document Number
LA-5573P
Rev
0.1
Date: Thursday, January 21, 2010
Sheet 37 of 69


JDOCK1
JAE_WD2F144WB1
Close to DOCK
Its for Enhance ESD on dock issue.
Close to DOCK
Its for Enhance ESD on dock issue.
Reserve for EMI test
Q211A DMN66D0LDW-7_SOT363-6~D
Q211B DMN66D0LDW-7_SOT363-6~D
Q212 SSM3K7002FU_SC70-3~D
Q213A DMN66D0LDW-7_SOT363-6~D
Q213B DMN66D0LDW-7_SOT363-6~D
Q214 SSM3K7002FU_SC70-3~D
Q215 SSM3K7002FU_SC70-3~D
Q216 SSM3K7002FU_SC70-3~D
D71 RB751S40T1_SOD523-2~D
D44 @ SM24.TCT_SOT23-3~D
+3.3V_RUN
+15V_ALW
+3.3V_ALW2
+LOM_VCT
+DOCK_PWR_BAR
DPB_DOCK_AUX
DPB_DOCK_AUX#
DPC_DOCK_AUX
DPC_DOCK_AUX#
DPB_DOCK_HPD
DPC_GPU_DOCK_HPD
CLK_PCI_DOCK
DOCK_DET#
DOCK_DET_R#
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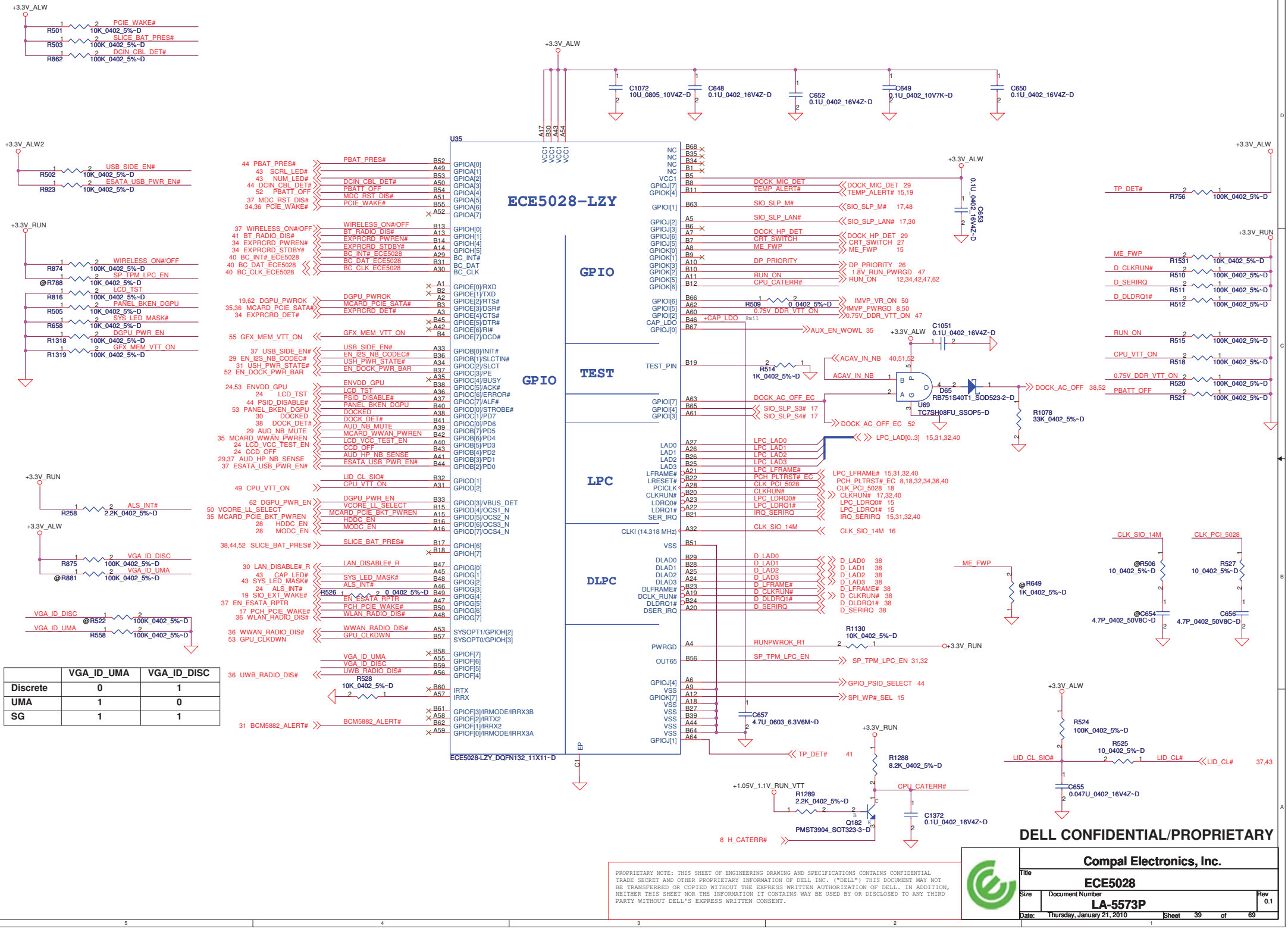
Compal Electronics, Inc.
Title
DOCKING CONN
Size
Document Number
LA-5573P
Rev
0.1
Date: Thursday, January 21, 2010
Sheet 38 of 69



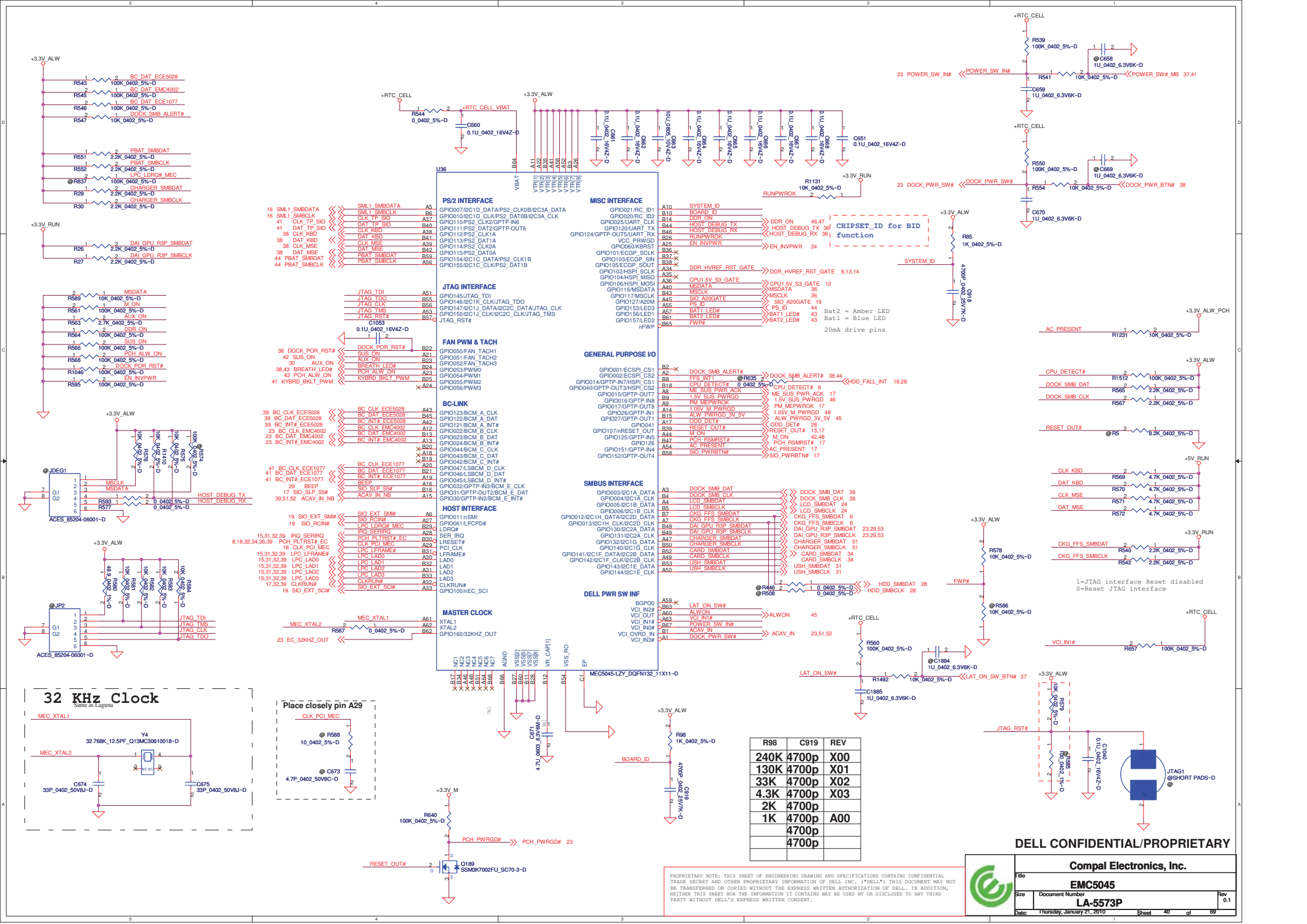
	VGA_ID_UMA	VGA_ID_DISC
Discrete	0	1
UMA	1	0
SG	1	1

Compal Electronics, Inc.

Title: ECE5028

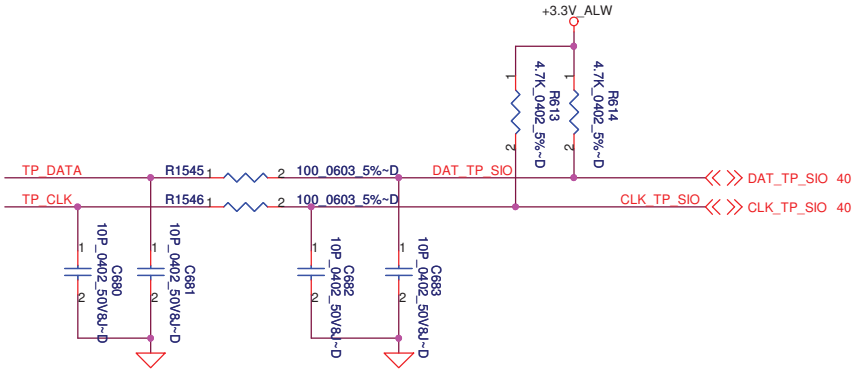
Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 39 of 69

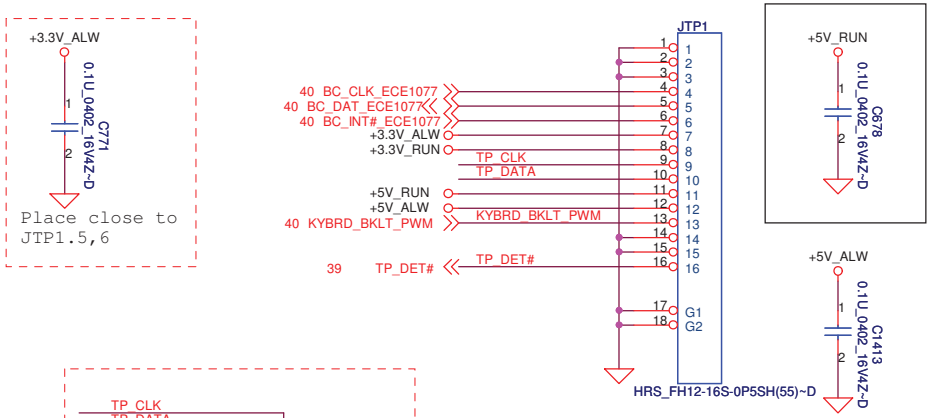


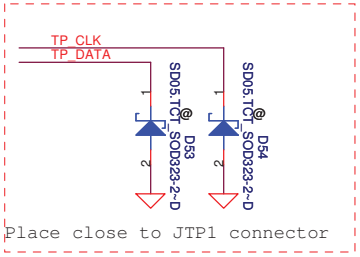
R98	C919	REV
240K	4700p	X00
130K	4700p	X01
33K	4700p	X02
4.3K	4700p	X03
2K	4700p	
1K	4700p	A00
	4700p	
	4700p	

Touch Pad

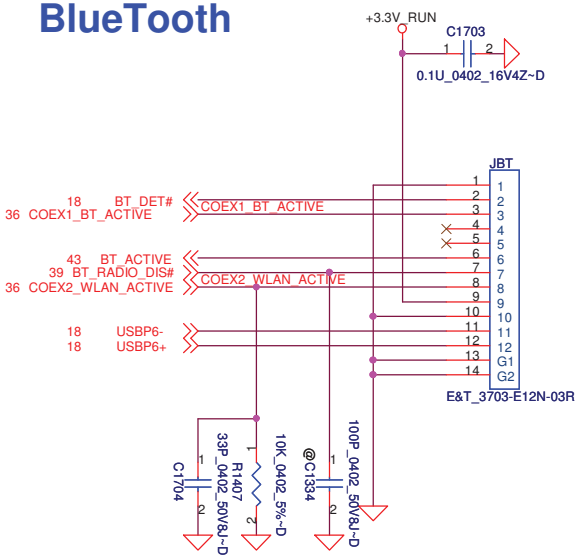


Touch Pad Conn. Pitch=0.5

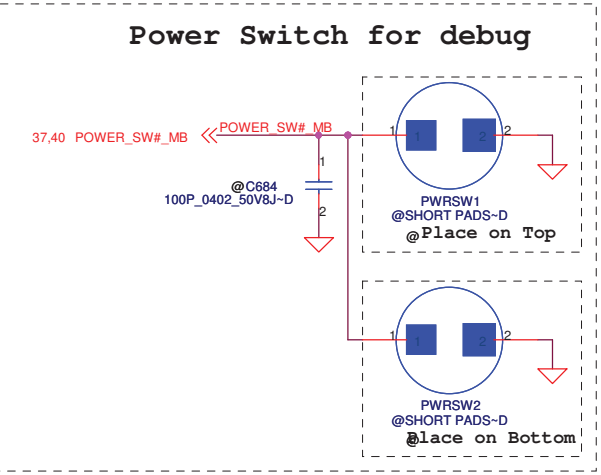




BlueTooth



Power Switch for debug



@FAN

Part Number	Description
DC28A000800	FAN SET DAQ20 DC5V AB7405HB-HB3 ADDA

@Speak

Part Number	Description
PK230003Q0L	SPK PACK ZJX 2.0W 4 OHM FG

@SM CARD BODY

Part Number	Description
SP070007V0L	S SOCKET TYCO 1770551-1 10P H5.9 SMART

@PCMCIA BODY

Part Number	Description
DC000001Q0L	PCMCIA TYCO 1759096-1

@MDC wire set cable

Part Number	Description
DC02000CS0L	H-CONN SET ZGX MB-MDC

@T/P wire set cable

Part Number	Description
DC02000840L	H-CONN SET ZJX MB-B/T-TP-FP

@LVDS cable

Part Number	Description
DC020003Y0L	H-CONN SET ZJX MB-LCD 14 WXGA+(-1ch)

@LVDS cable

Part Number	Description
DC02000870L	H-CONN SET ZJX MB-LCD 14 WXGA+(-2ch)

@RTC BATT

Part Number	Description
GC20323MX00	BATT CR2032 3V 220MAH MAXELL

Compal Electronics, Inc.

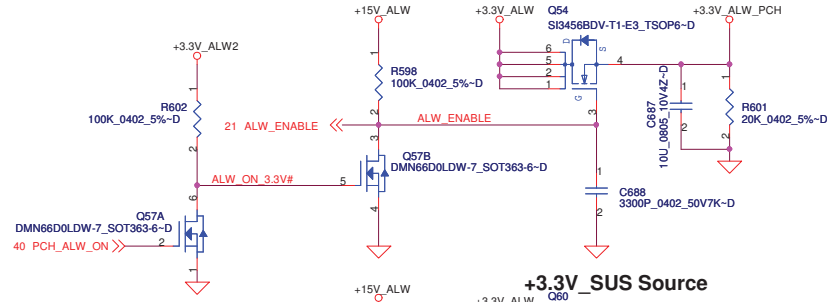
Title: Touch PAD/Int KB/LID

Size | Document Number: LA-5573P | Rev: 0.1

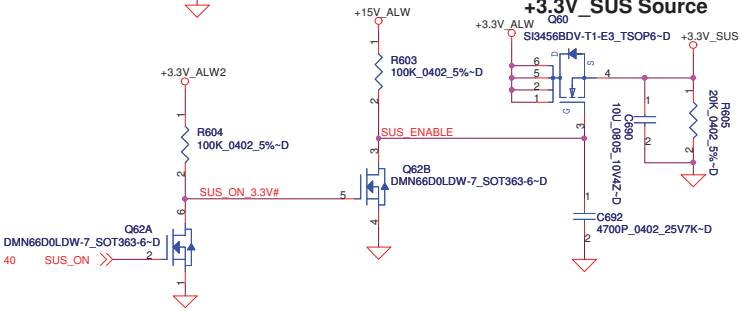
Date: Thursday, January 21, 2010 | Sheet 41 of 69

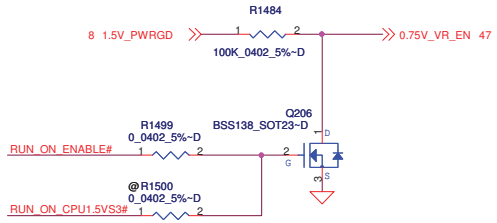
DC/DC Interface

+3.3V_ALW_PCH Source

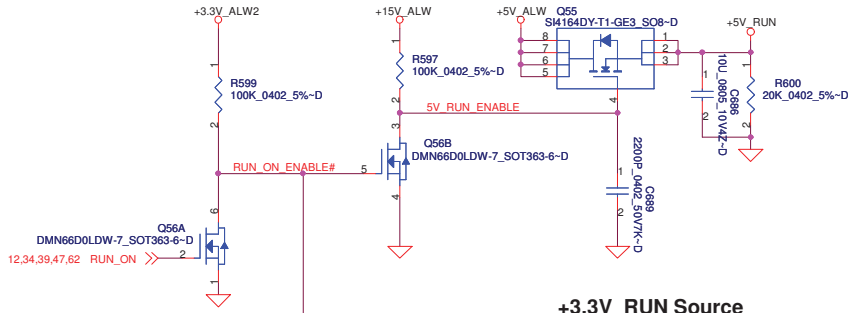


+3.3V_SUS Source

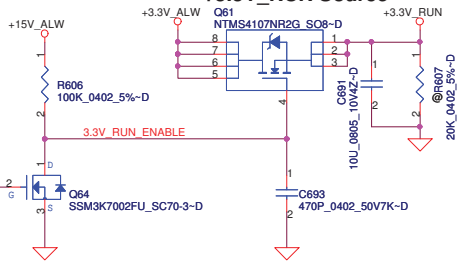




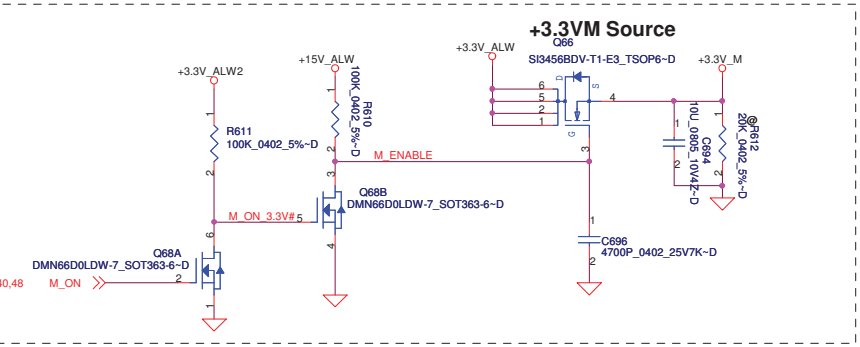
+5VRUN Source



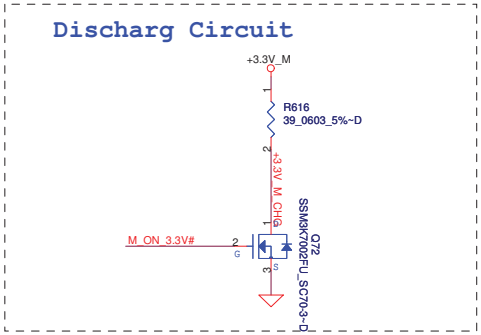
+3.3V_RUN Source



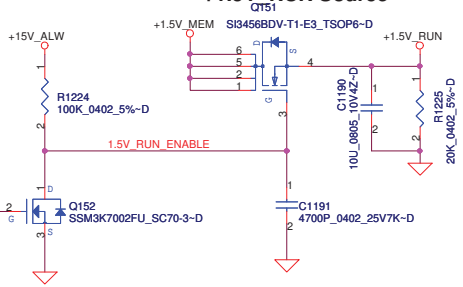
+3.3VM Source



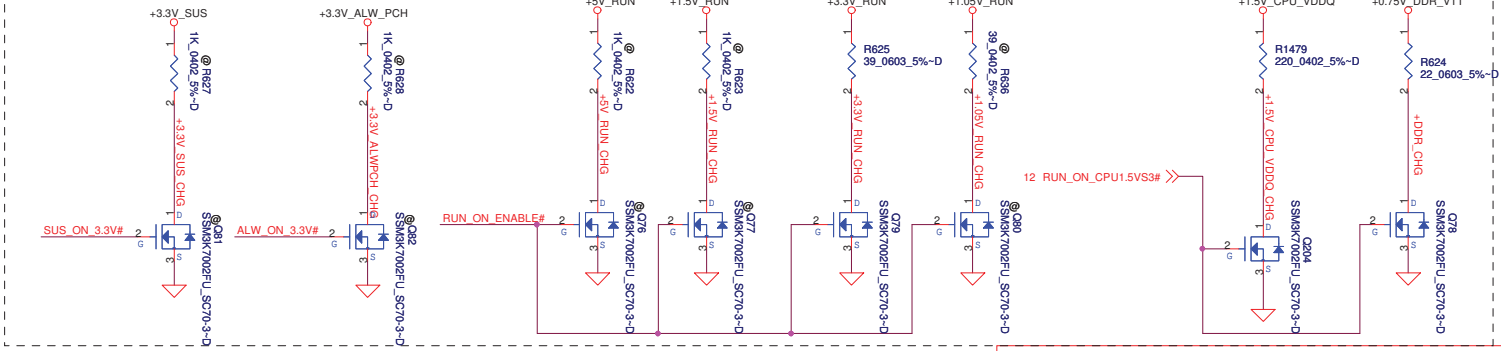
Discharg Circuit



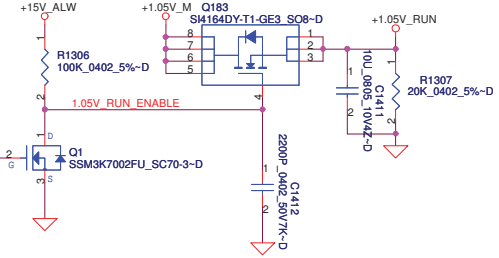
+1.5V_RUN Source



Discharg Circuit



+1.05V_RUN Source



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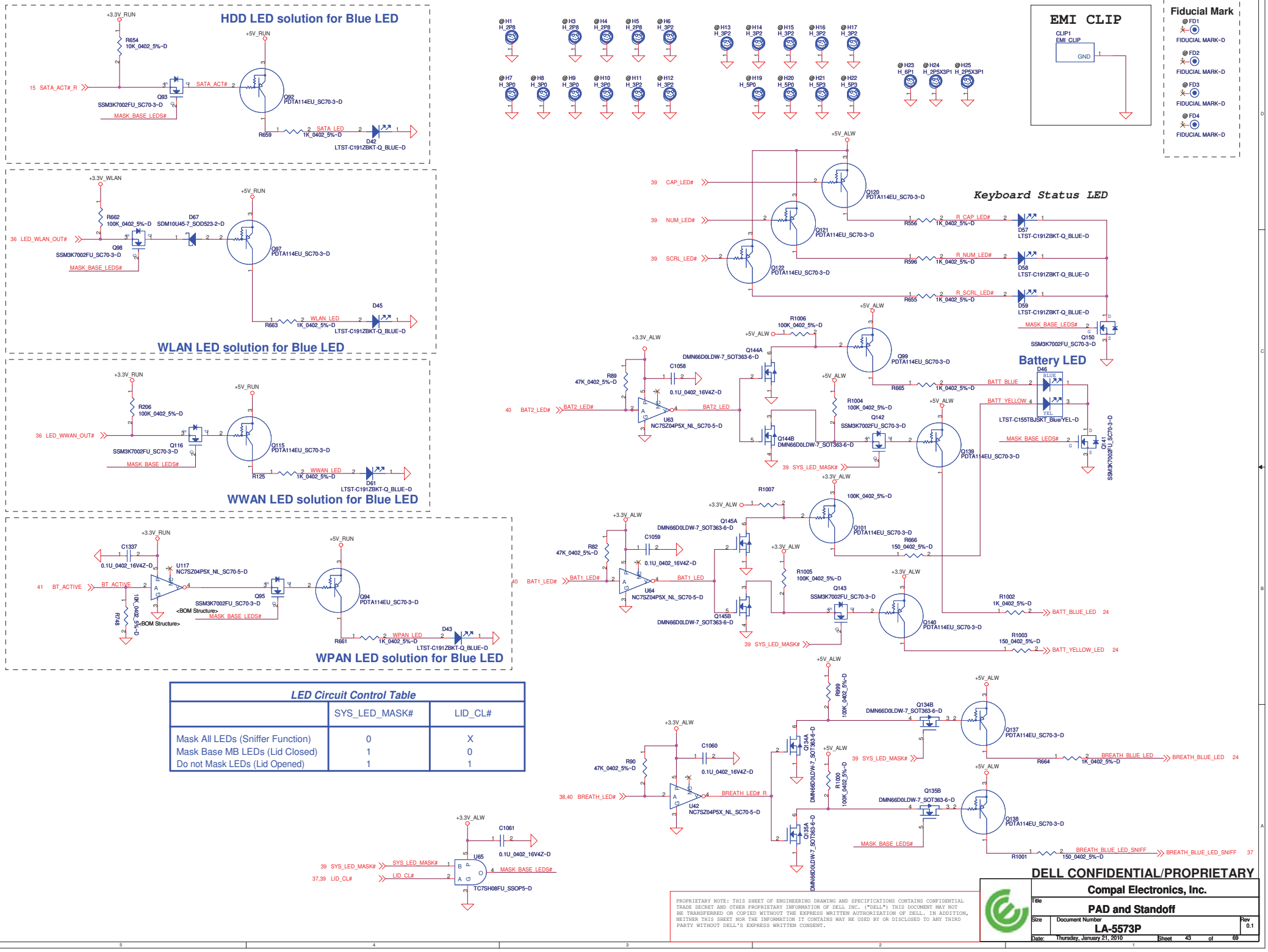
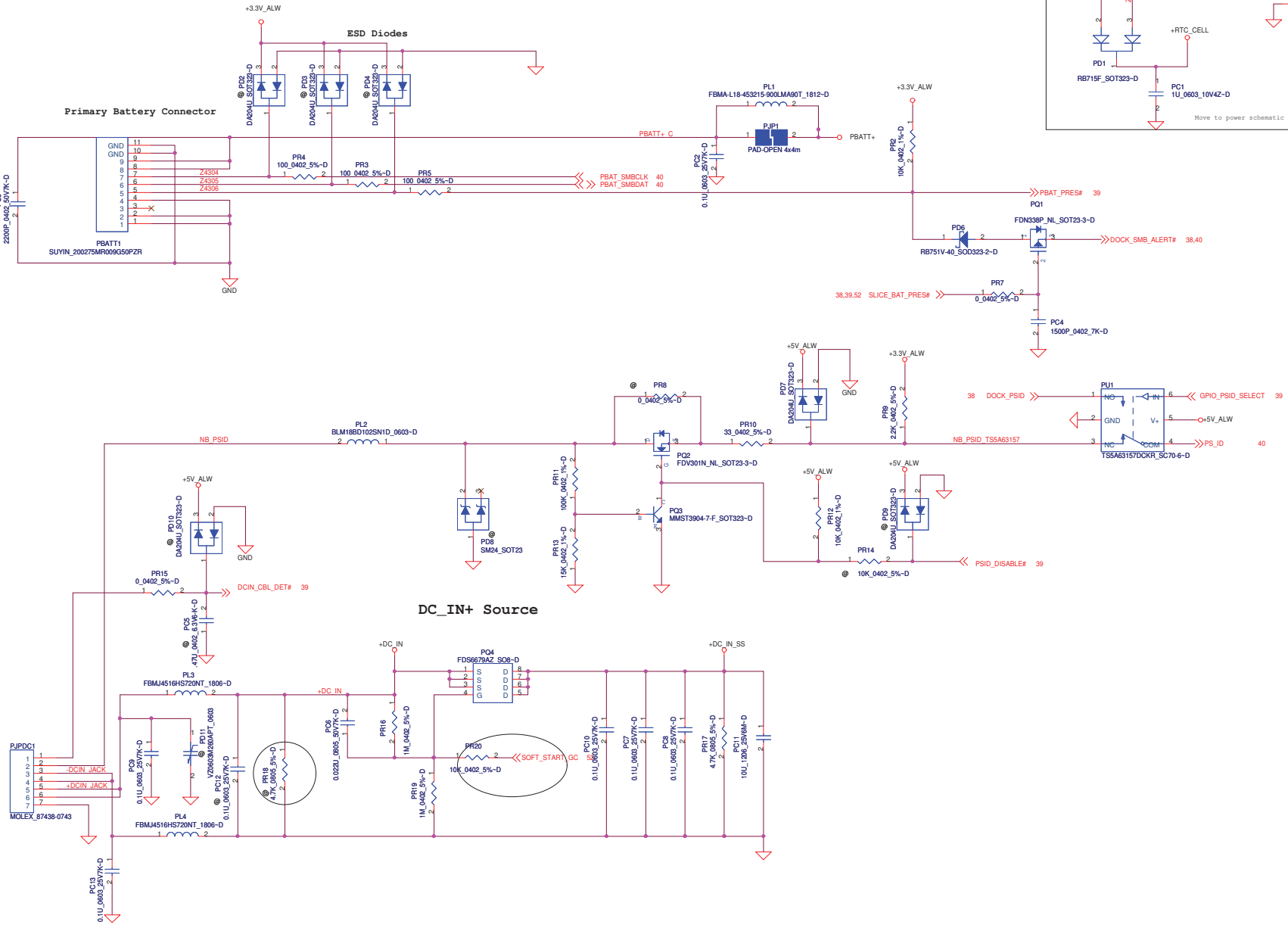
Compal Electronics, Inc.	
Title	POWER CONTROL
Size	Document Number: LA-5573P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	42 of 69

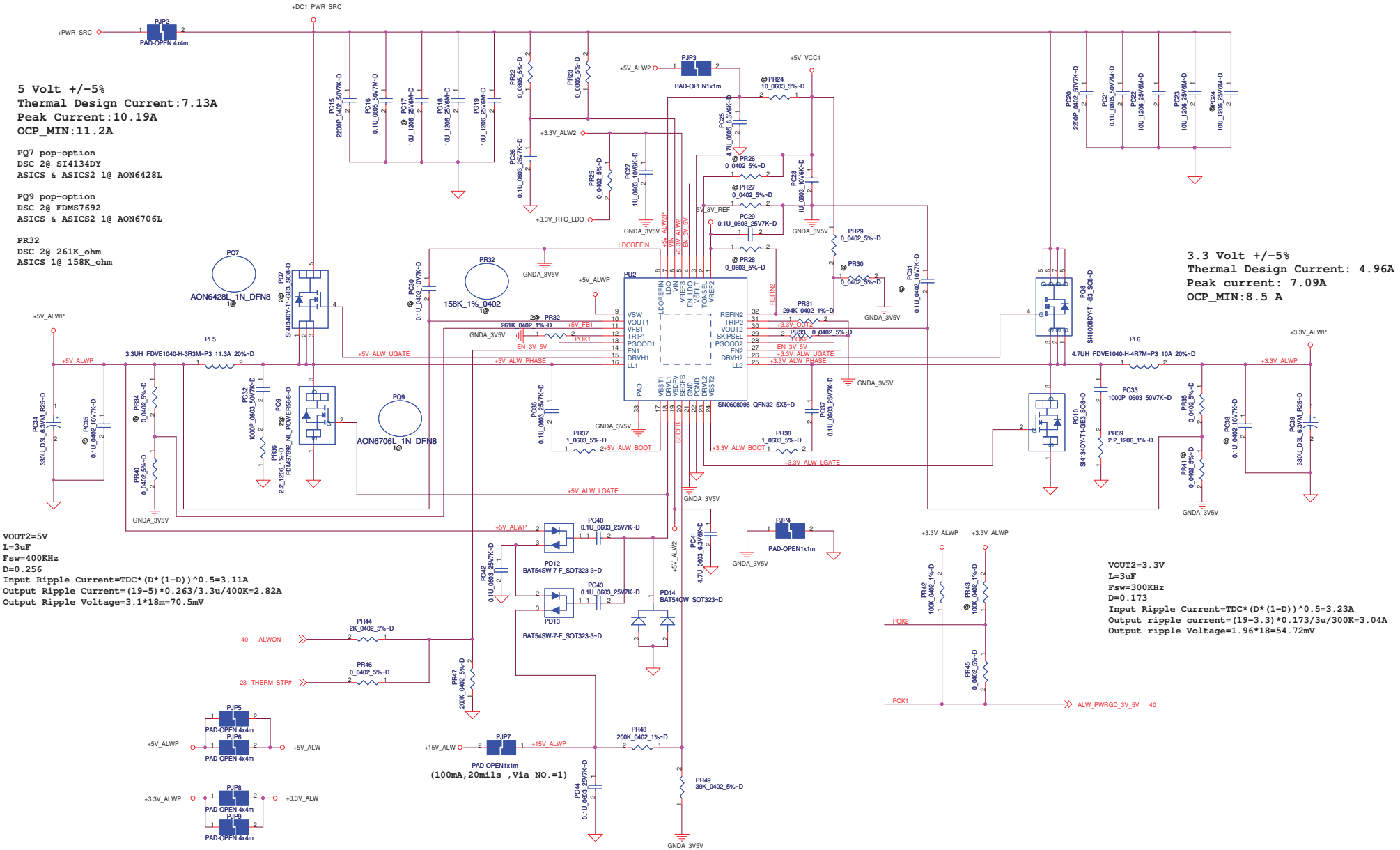

HDD LED solution for Blue LED
WLAN LED solution for Blue LED
WWAN LED solution for Blue LED
WPAN LED solution for Blue LED
EMI CLIP
Fiducial Mark
Keyboard Status LED
Battery LED
LED Circuit Control Table
SYS_LED_MASK#
LID_CL#
Mask All LEDs (Sniffer Function) 0 X
Mask Base MB LEDs (Lid Closed) 1 0
Do not Mask LEDs (Lid Opened) 1 1
DELL CONFIDENTIAL/PROPRIETARY
Compal Electronics, Inc.
PAD and Standoff
LA-5573P
Thursday, January 21, 2010
Sheet 43 of 69



DELL CONFIDENTIAL/PROPRIETARY

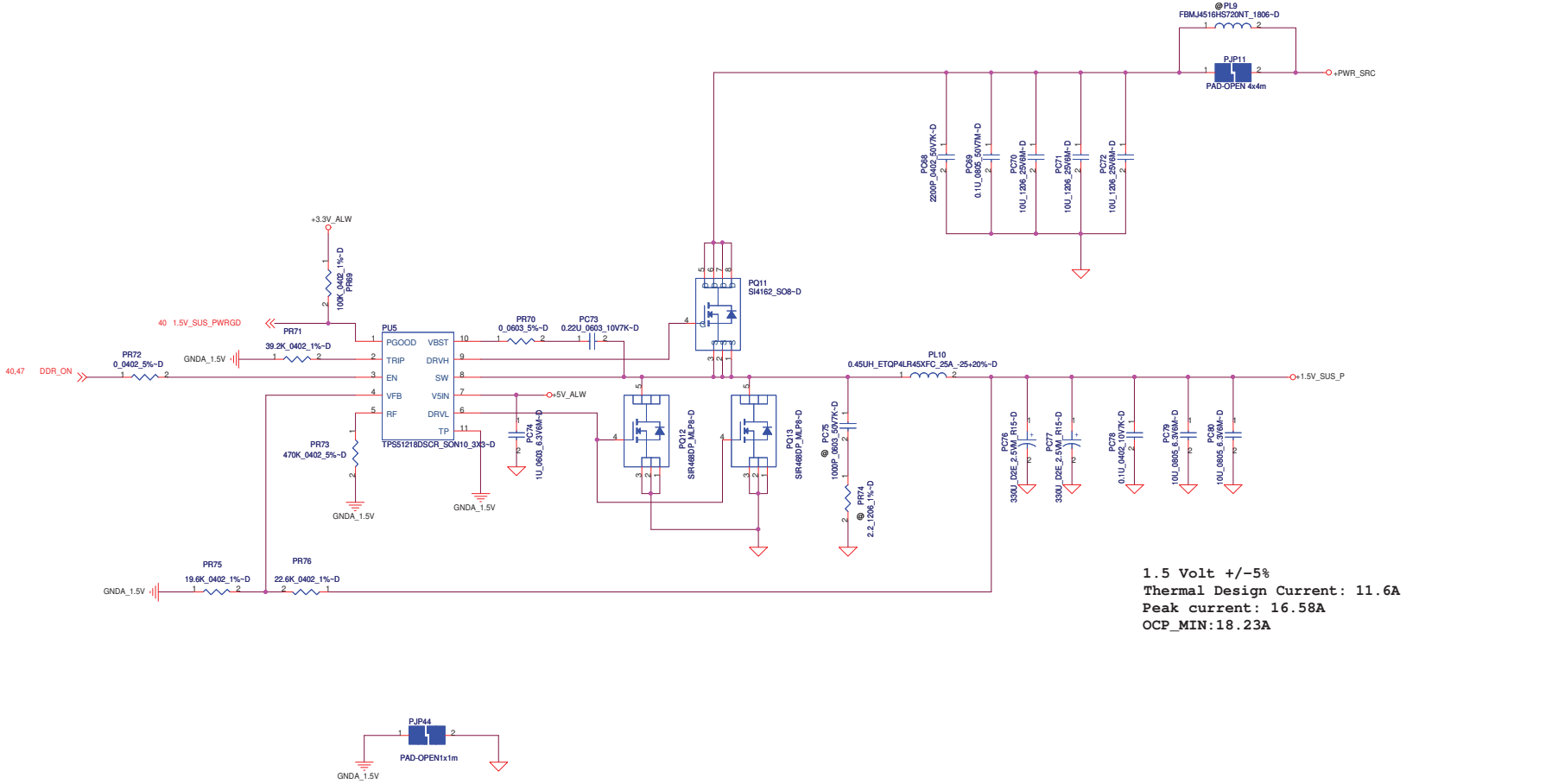
Compal Electronics, Inc.	
Title	+DCIN
Size	Document Number: LA-5772P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	44 of 69

+3.3V_ALWP/ +5V_ALWP/ +5V_ALW2 / +15V_ALWP/ +3.3V_RTC_LDO



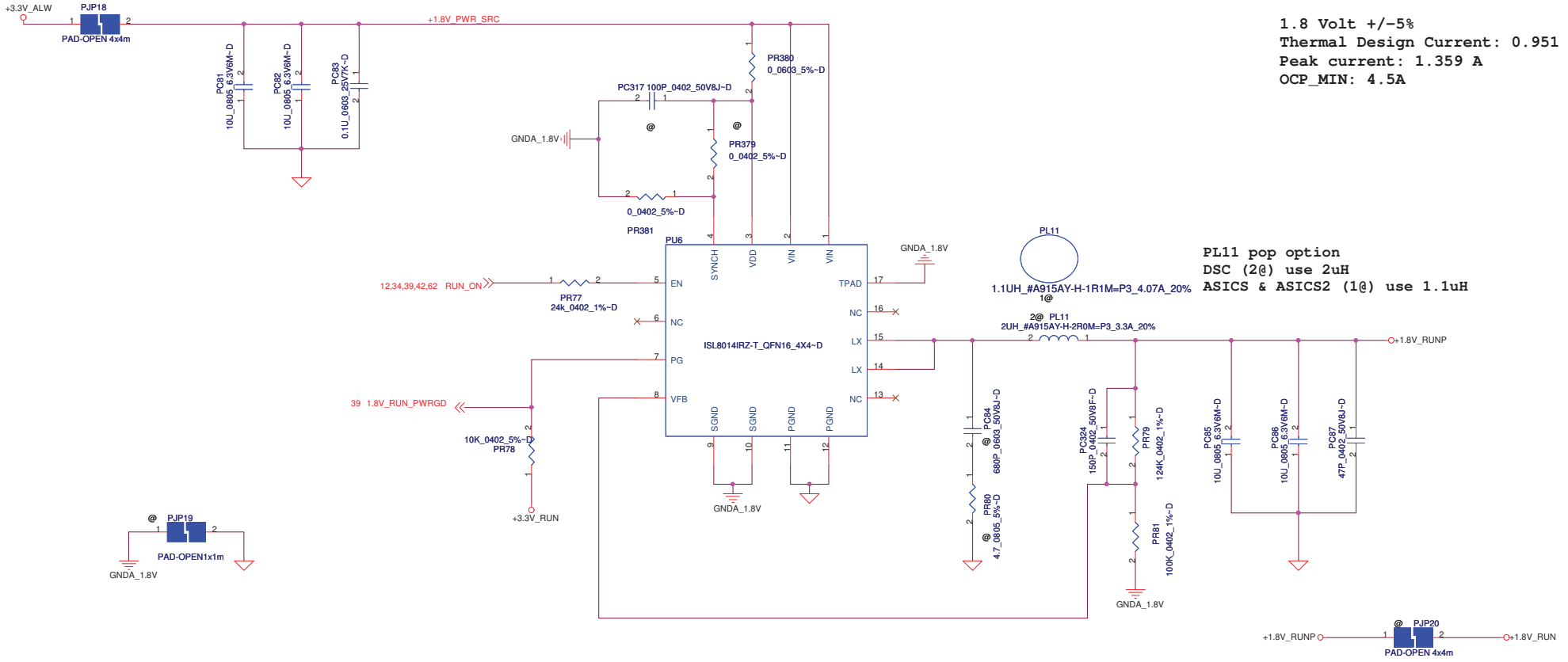
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.	
Title	DC/DC +3V/ +5V
Size	Document Number: LA-5772P
Rev	0.1
Date:	Thursday, January 21, 2010
Sheet	45 of 69



Compal Electronics, Inc.		
Title: +1.5V_MEM		
Size	Document Number: LA-4151P	Rev: 0.1
Date: Thursday, January 21, 2010	Sheet 46 of 69	

+1.8V_RUNP

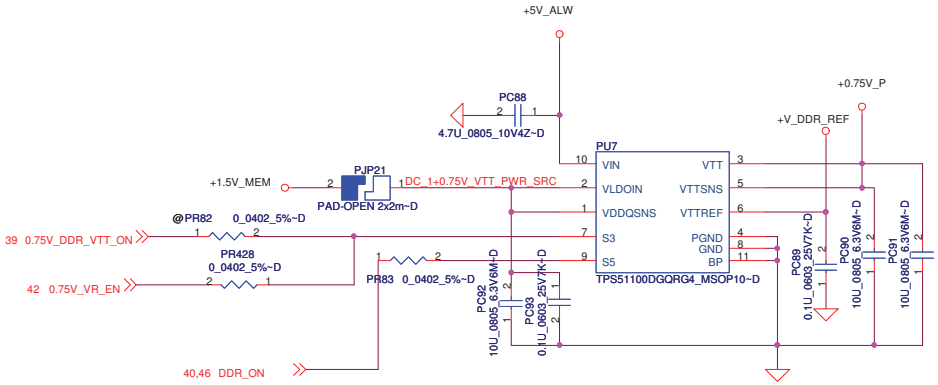


1.8 Volt +/-5%
Thermal Design Current: 0.951 A
Peak current: 1.359 A
OCP_MIN: 4.5A

PL11 pop option
DSC (2@) use 2uH
ASICS & ASICS2 (1@) use 1.1uH

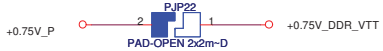
+0.75V_DDR_VTT

DDR3 Termination



0.75Volt +/-5%
Thermal Design Current: 0.7A
Peak current: 1A

VOUT=1.8V
L=3.3uF
Fsw=290KHz
D=0.092
Input Ripple Current=TDC*(D*(1-D))^0.5=0.884A
Output Ripple Current=1.707A
Output Ripple Voltage=1.707*15m=20.5mV



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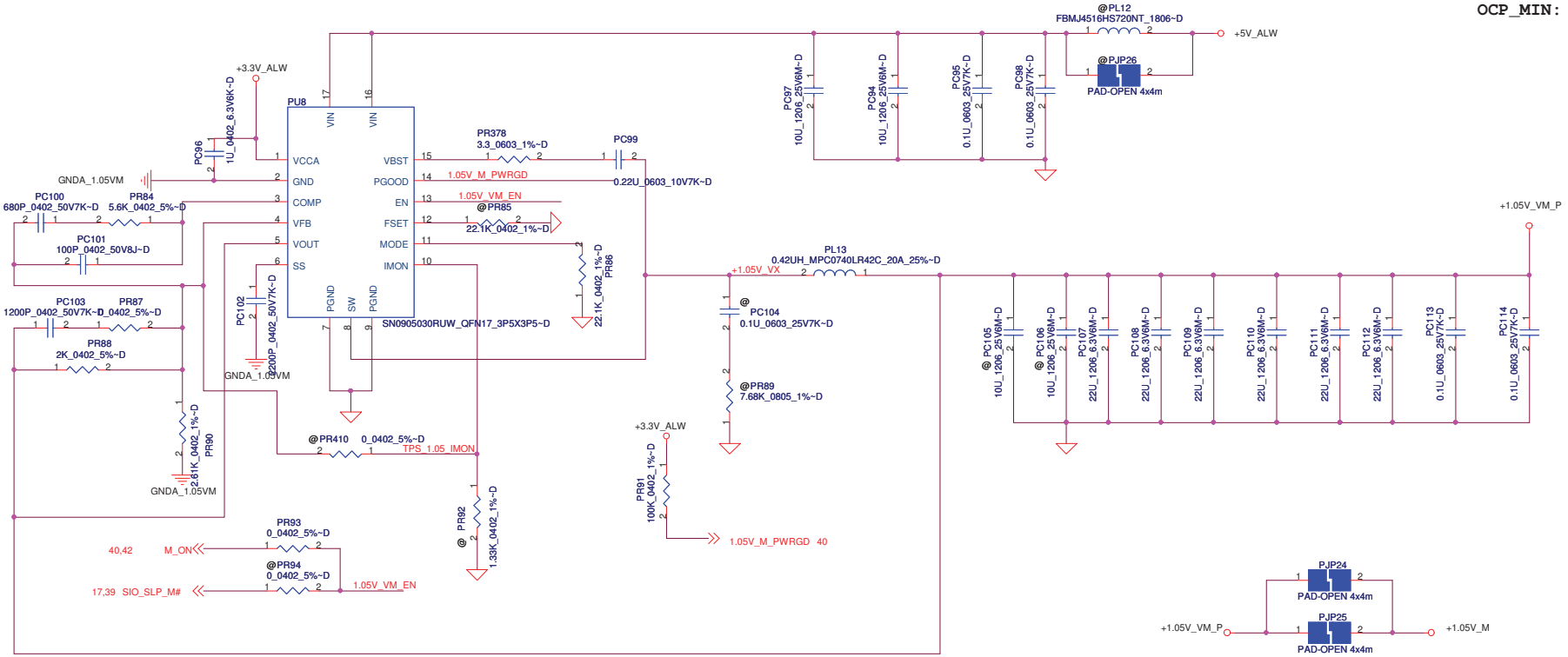
Title: +0.75V_DDR_VT/+1.8V_RUN

Size | Document Number: LA-5772P | Rev: 0.1

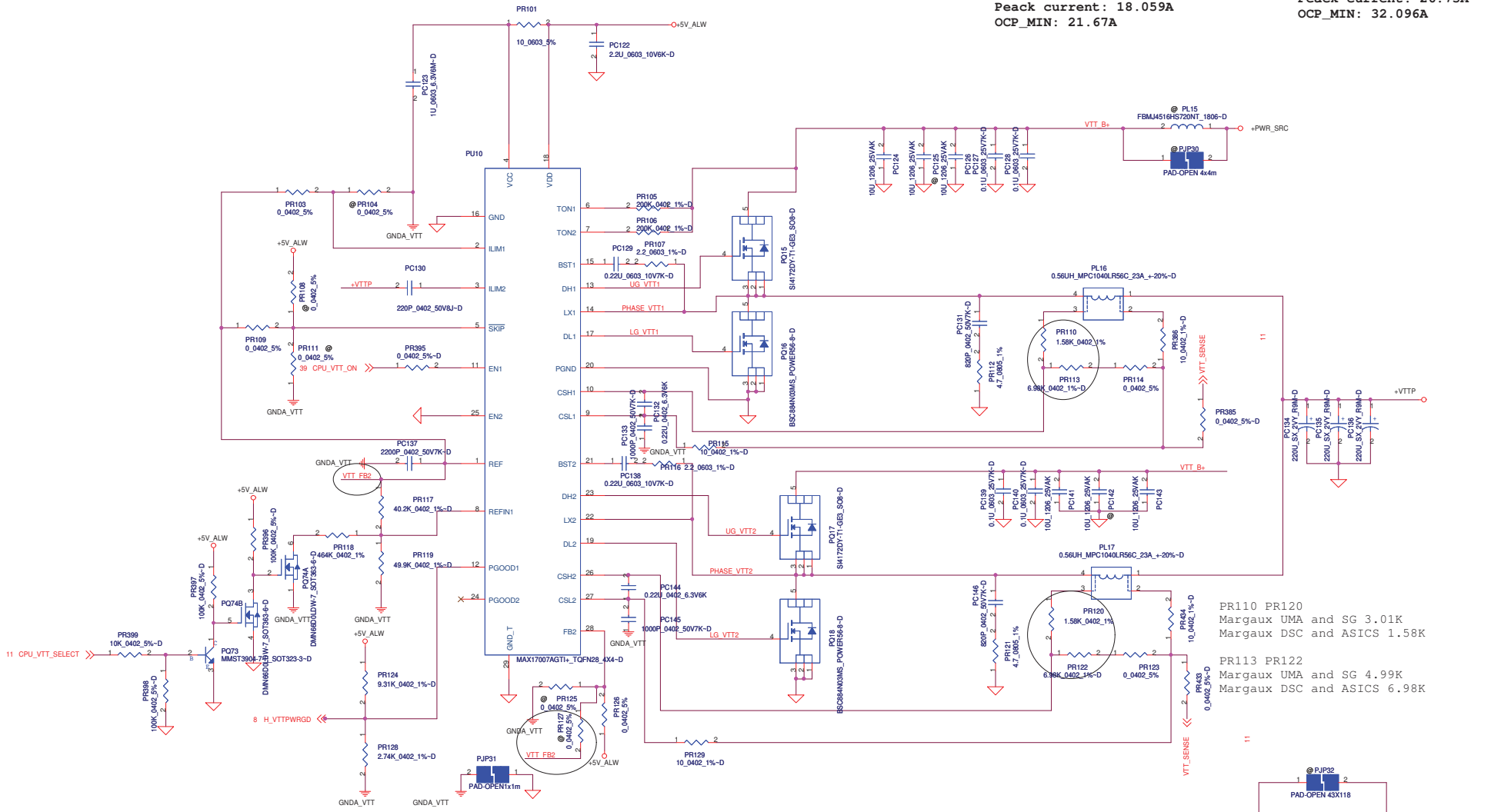
Date: Thursday, January 21, 2010 | Sheet 47 of 69

+1.05V_M_P

1.05 Volt +/-5%
Thermal Design Current: 7.6A
Peack current: 10.9A
OCP_MIN: 11.9A



Compal Electronics, Inc.		
Title: +1.05VM		
Size	Document Number: LA-4151P	Rev: 0.1
Date: Thursday, January 21, 2010	Sheet 48 of 69	



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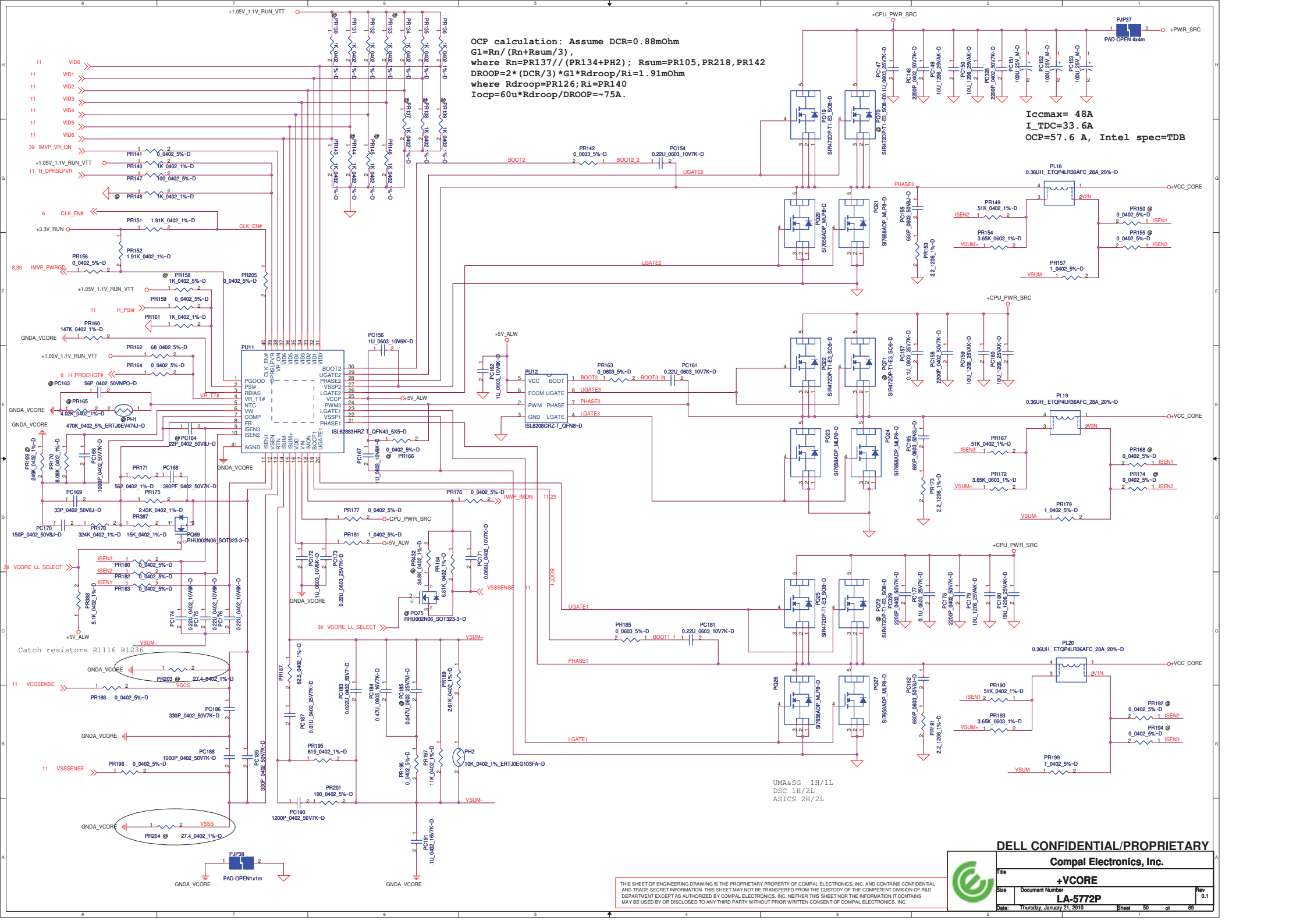
Size C	Document Number LA-5772P	Rev 1A
Date: Thursday, January 21, 2010	Sheet 49 of 69	

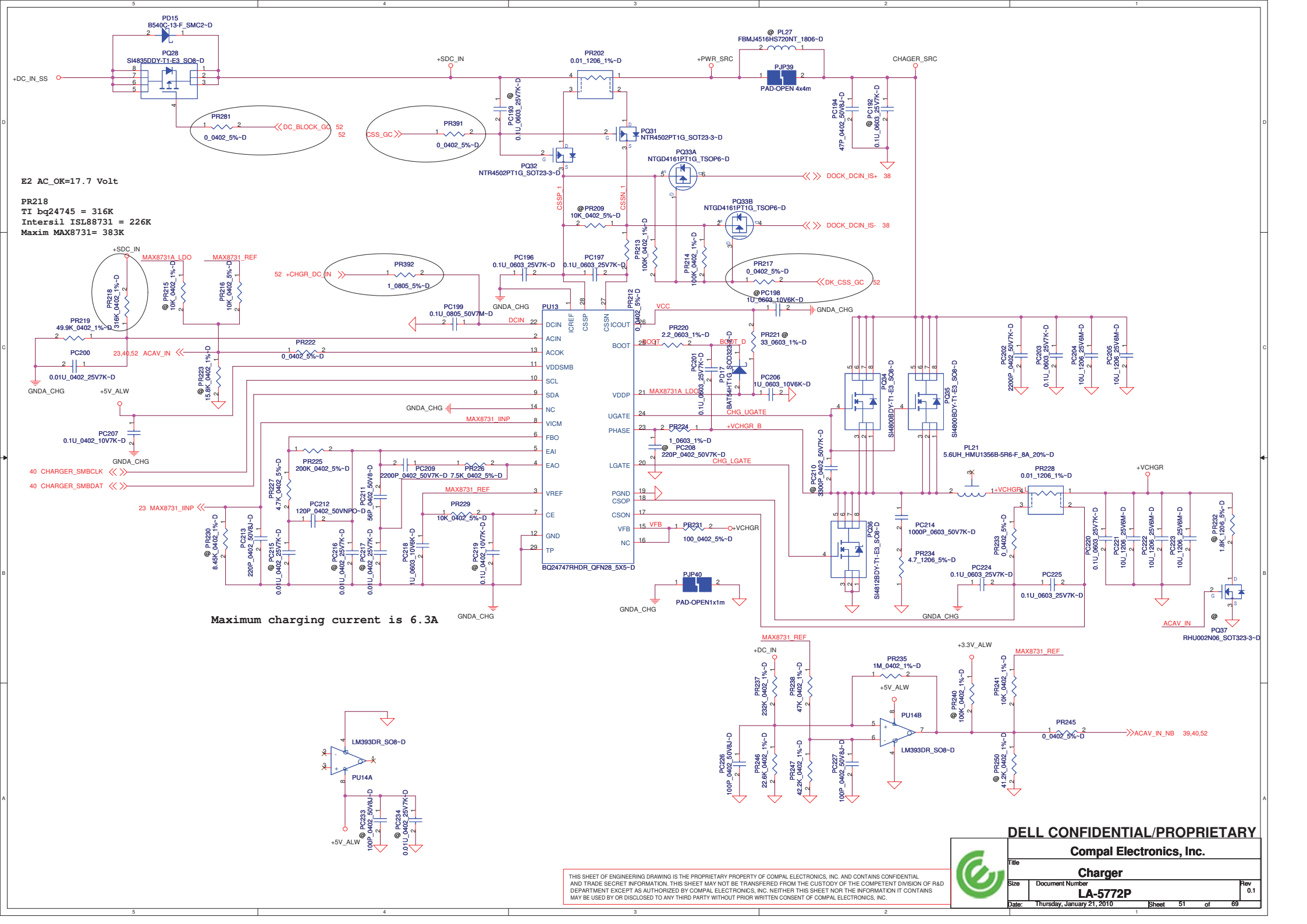


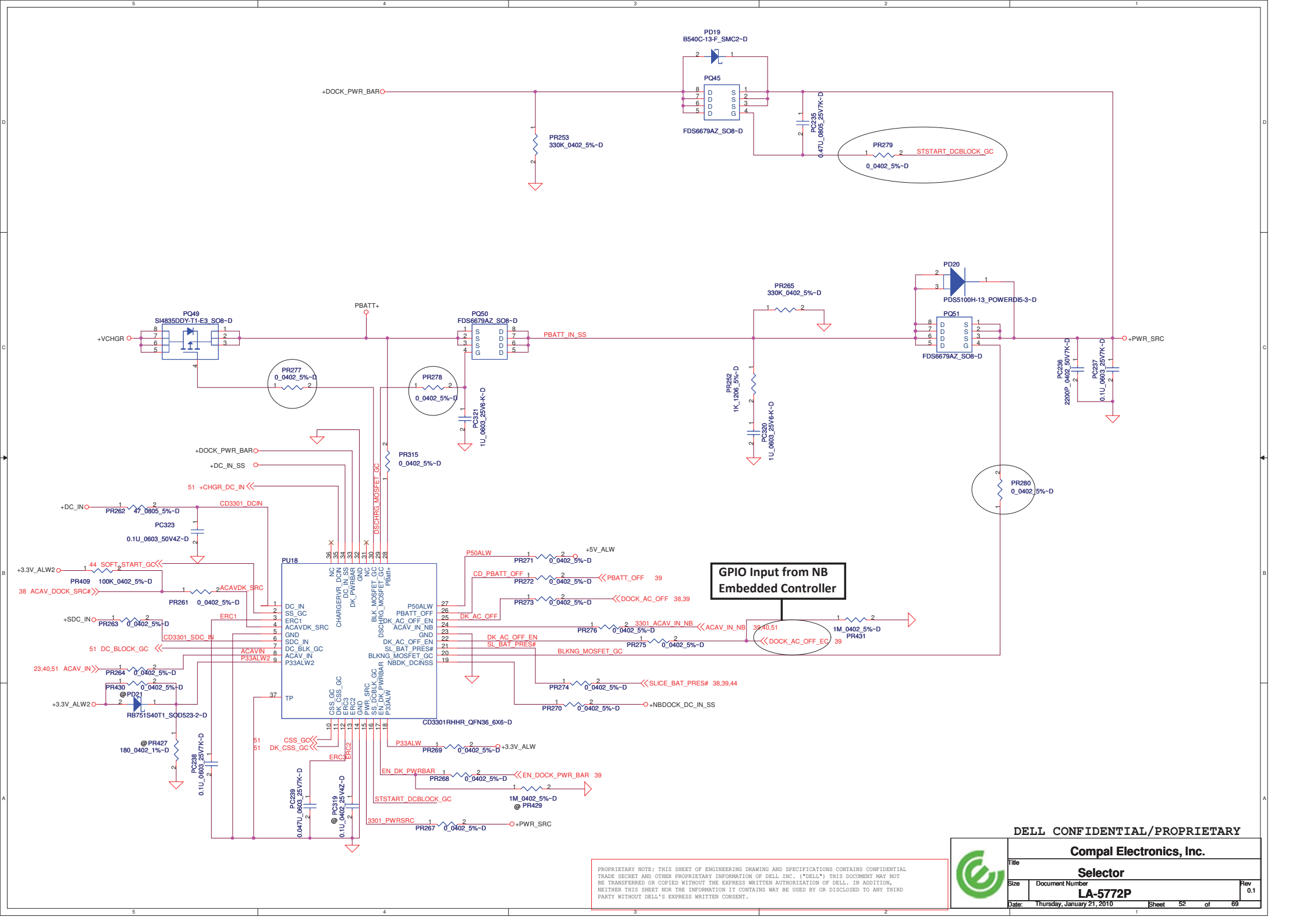
Compal Electronics, Inc.

Title: +VCORE

Size: | Document Number: LA-5772P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 50 of 69





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Title	Selector	
Size	Document Number LA-5772P	Rev 0.1
Date: Thursday, January 21, 2010	Sheet 52 of 69	

U106A

Part 1 of 7

PCI EXPRESS DVO

GPIO

CLK

I2C DACs

N10P-GLM-A3_BGA969~D

Differential signal

Close to U106

Close to Pin

Close to GPU

120mA

150mA , 10mil

CRT

Stuff R1328 for standard I2C ROM. Stuff R1329 for crypto ROM

Compal Electronics, Inc.

Title: N10P PCIE,GPIO,CLK,I2C

Size: | Document Number: LA-5573P | Rev: 3.0

Date: Thursday, January 21, 2010 | Sheet 53 of 69

STRAP0	USER[3:0]
STRAP1	3GIO_PADCFG_LUT_ADR[3:0]
STRAP2	PCI_DEVID[3:0]

ROM_SCLK	PCIDEVID_EXT, SUB_VENDOR, SLOT_CLK, PEX_PLL_EN
ROM_SI	RAM_CFG[3:0]
ROM_SO	XCLK_417, FB_0_BAR_SIZE, ALT_ADOOR, VGA_DEVICE

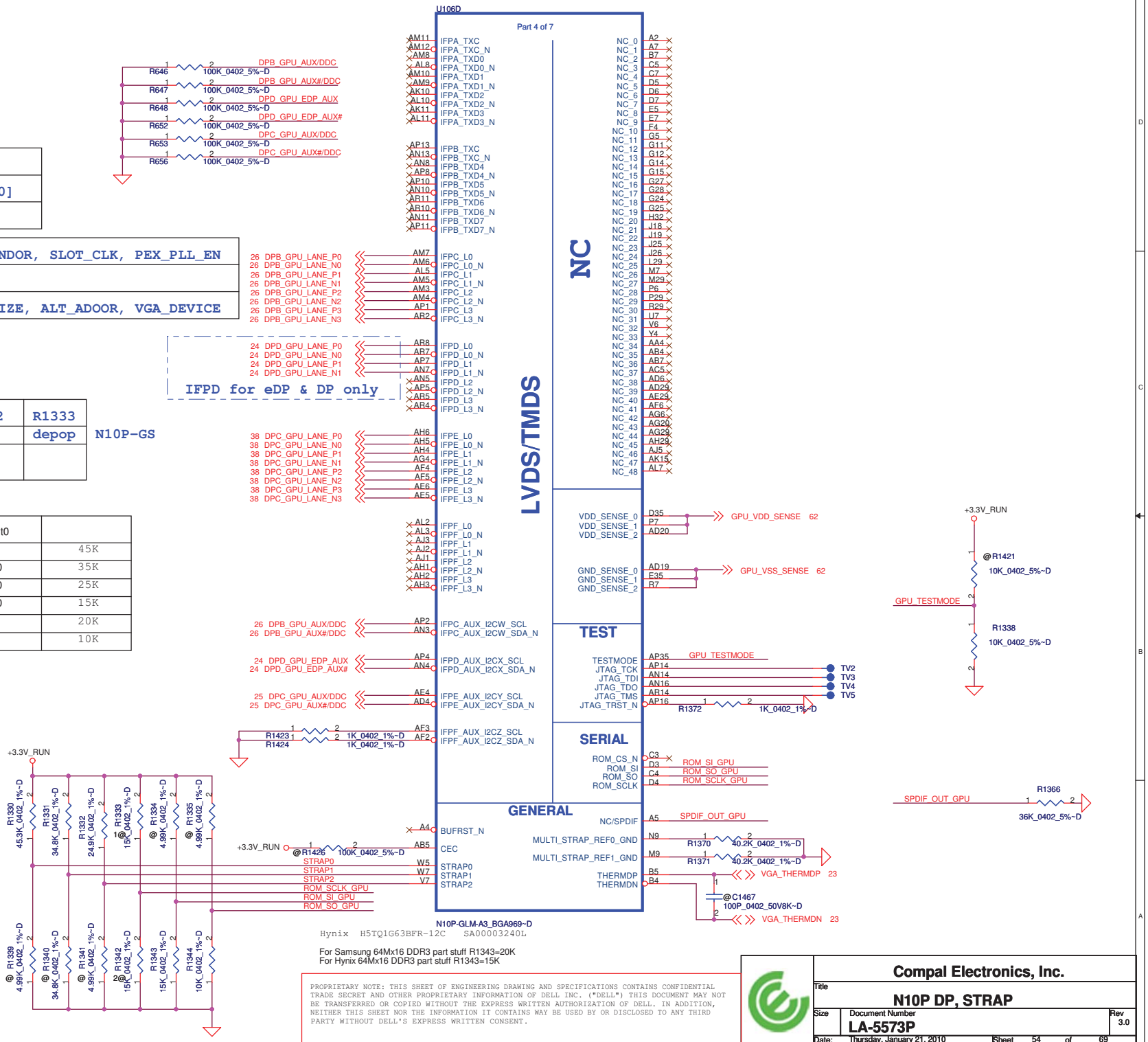
	R1332	R1341	R1342	R1333
Asics	10K	depop	15K	depop
Margaux				

N10P-GS

Resistor Values	PU/PD	Bit3-Bit0	
STRAP0	PU	1111	45K
STRAP1	PD	0110	35K
STRAP2	PU	1100	25K
ROM_SCLK	PD	0010	15K
ROM_SI	PD	0011	20K
ROM_SO	PD	0001	10K

For Samsung 64Mx16 DDR3 part stuff R1343=20K
For Hynix 64Mx16 DDR3 part stuff R1343=15K

Hynix H5TQ1G63BFR-12C SA00003240L



Hynix H5TQ1G63BFR-12C SA00003240L

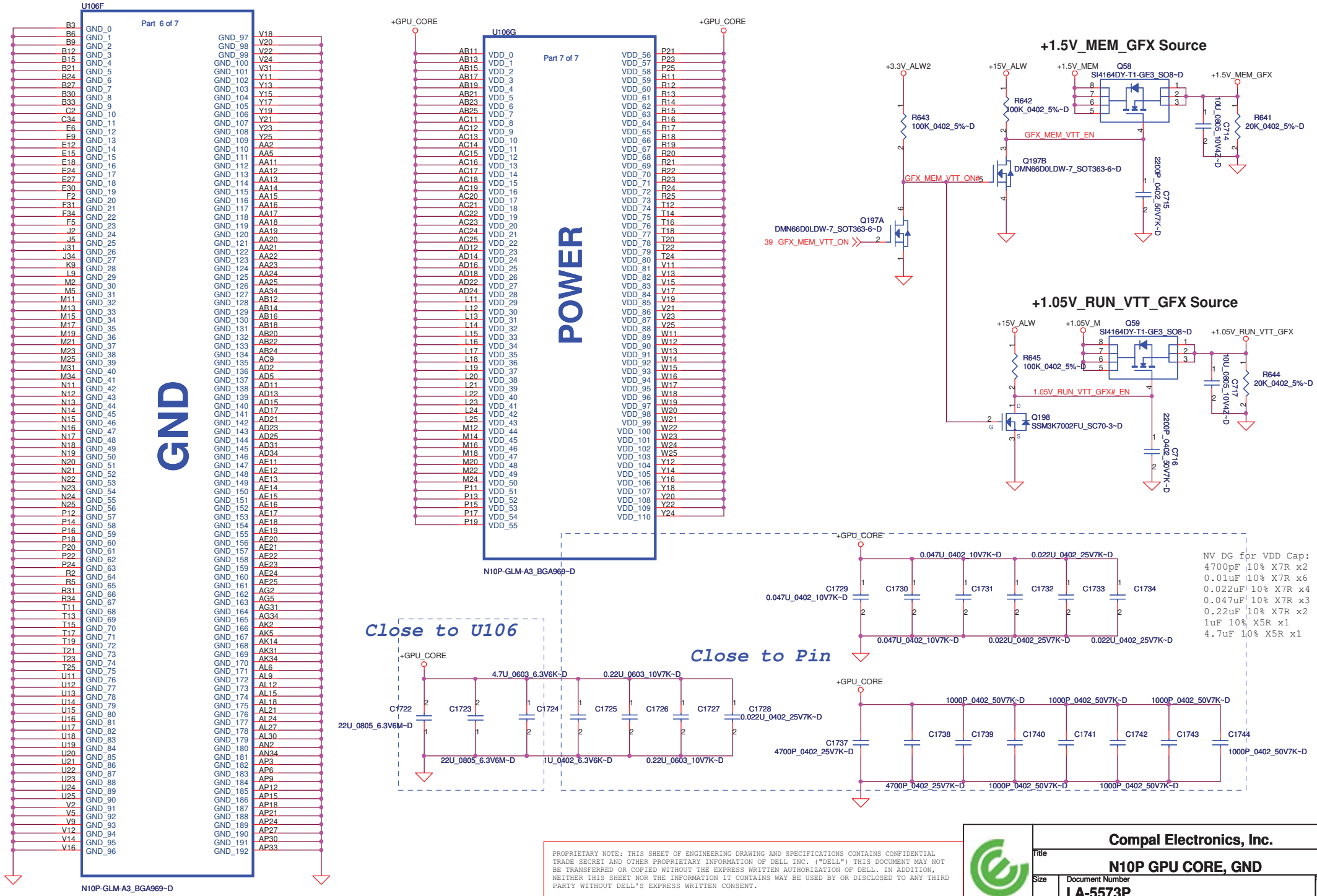
For Samsung 64Mx16 DDR3 part stuff R1343=20K
For Hynix 64Mx16 DDR3 part stuff R1343=15K

Compal Electronics, Inc.

Title: N10P DP, STRAP

Size: | Document Number: LA-5573P | Rev: 3.0

Date: Thursday, January 21, 2010 | Sheet 54 of 69

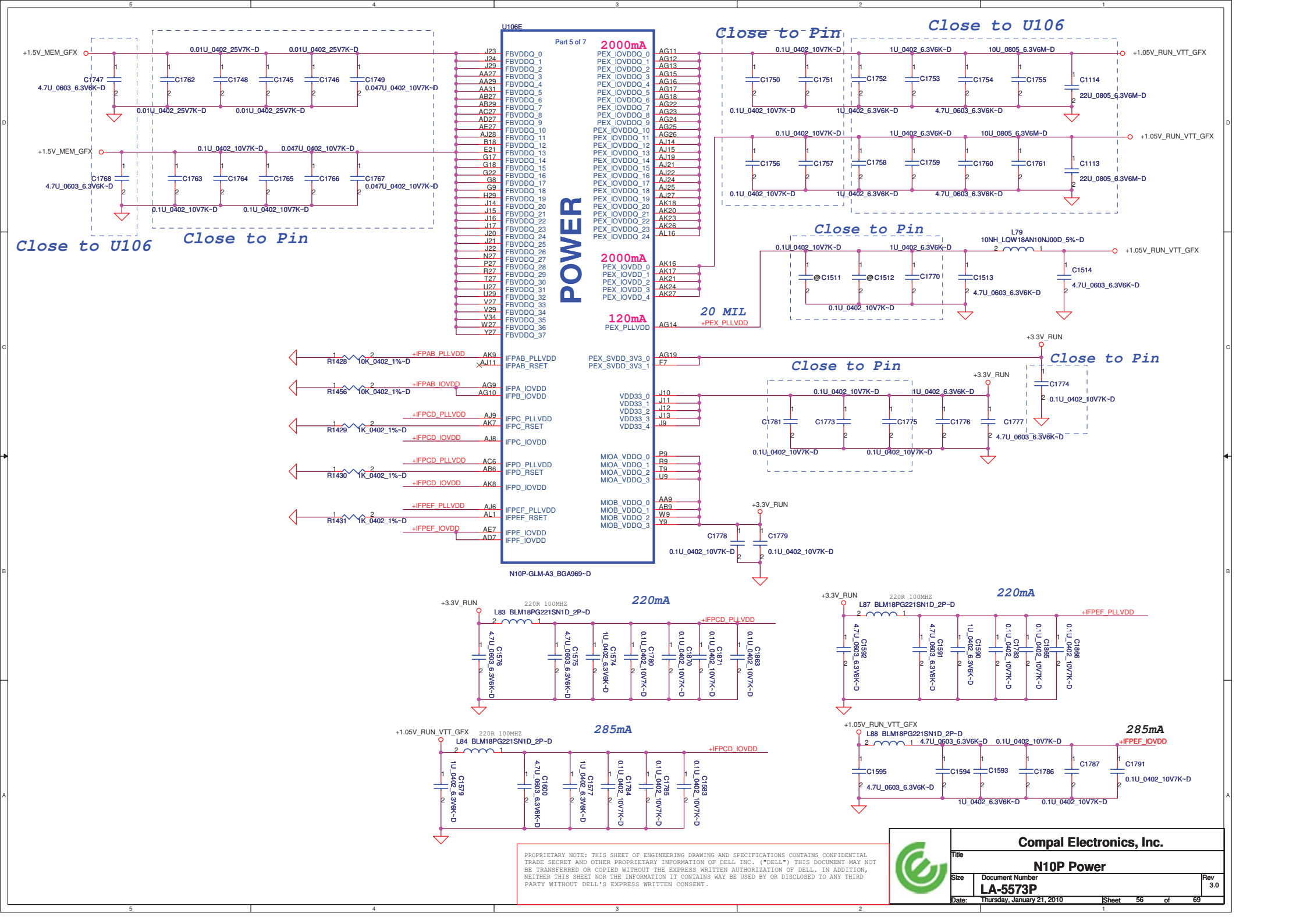


Compal Electronics, Inc.

Title: N10P GPU CORE, GND

Size: Document Number: LA-5573P Rev: 3.0

Date: Thursday, January 21, 2010 Sheet 55 of 69



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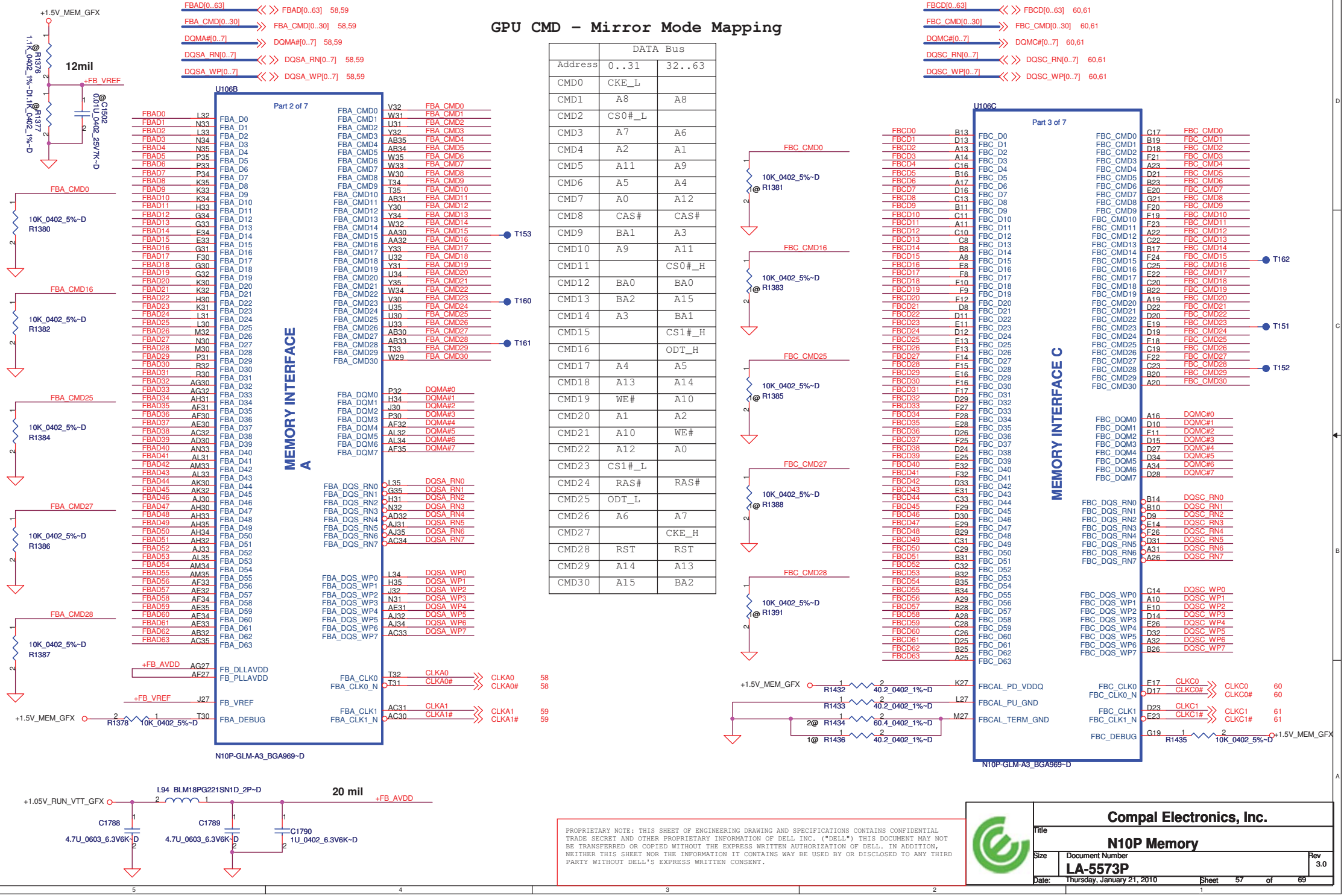
Compal Electronics, Inc.	
Title	N10P Power
Size	Document Number: LA-5573P
Rev	3.0
Date:	Thursday, January 21, 2010
Sheet	56 of 69

GPU CMD – Mirror Mode Mapping

	DATA Bus	
Address	0..31	32..63
CMD0	CKE_L	
CMD1	A8	A8
CMD2	CS0#_L	
CMD3	A7	A6
CMD4	A2	A1
CMD5	A11	A9
CMD6	A5	A4
CMD7	A0	A12
CMD8	CAS#	CAS#
CMD9	BA1	A3
CMD10	A9	A11
CMD11		CS0#_H
CMD12	BA0	BA0
CMD13	BA2	A15
CMD14	A3	BA1
CMD15		CS1#_H
CMD16		ODT_H
CMD17	A4	A5
CMD18	A13	A14
CMD19	WE#	A10
CMD20	A1	A2
CMD21	A10	WE#
CMD22	A12	A0
CMD23	CS1#_L	
CMD24	RAS#	RAS#
CMD25	ODT_L	
CMD26	A6	A7
CMD27		CKE_H
CMD28	RST	RST
CMD29	A14	A13
CMD30	A15	BA2



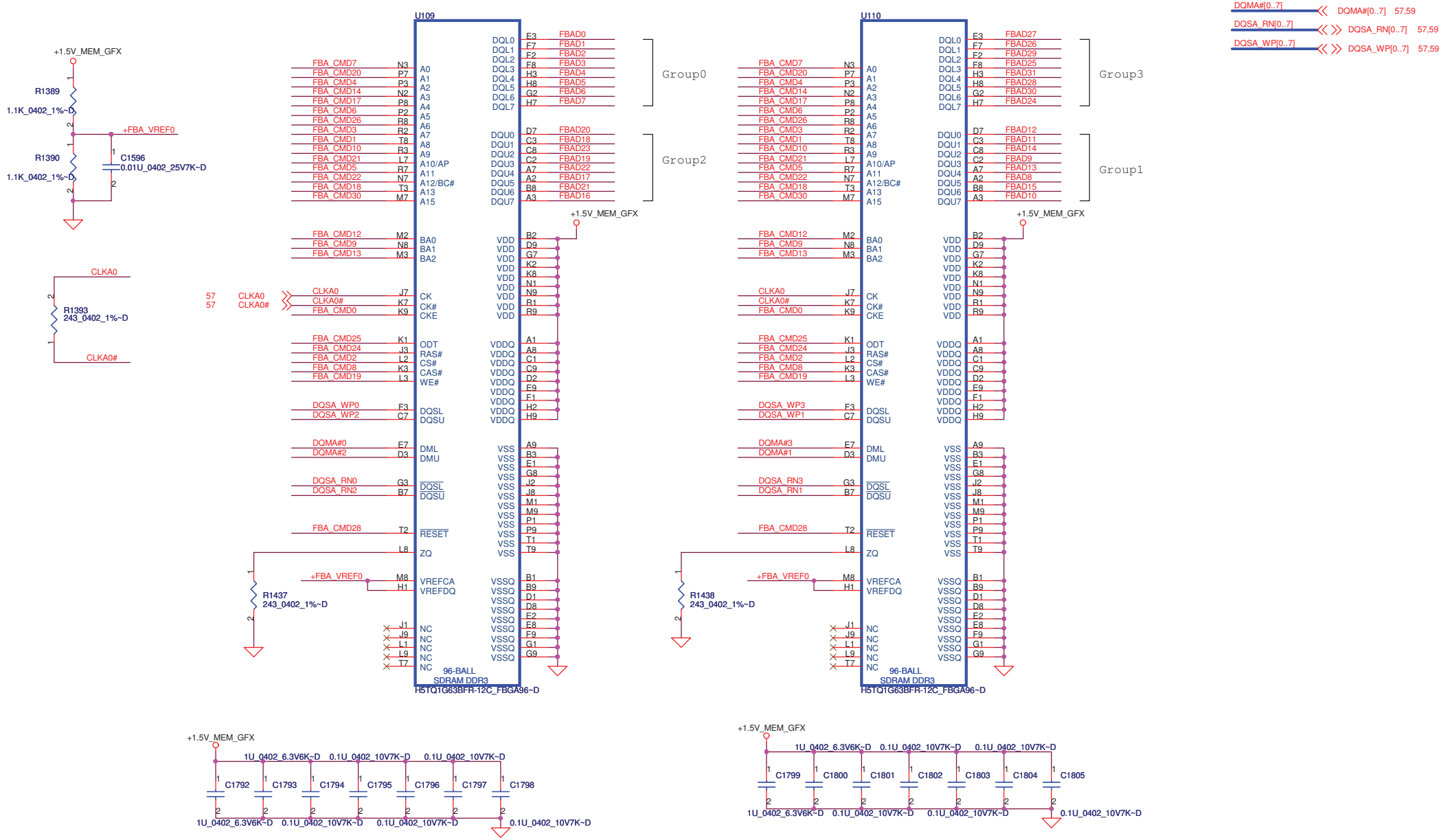
Compal Electronics, Inc.

Title: N10P Memory

Size: | Document Number: LA-5573P | Rev: 3.0

Date: Thursday, January 21, 2010 | Sheet 57 of 69

Memory Partition A - Lower 32 bits



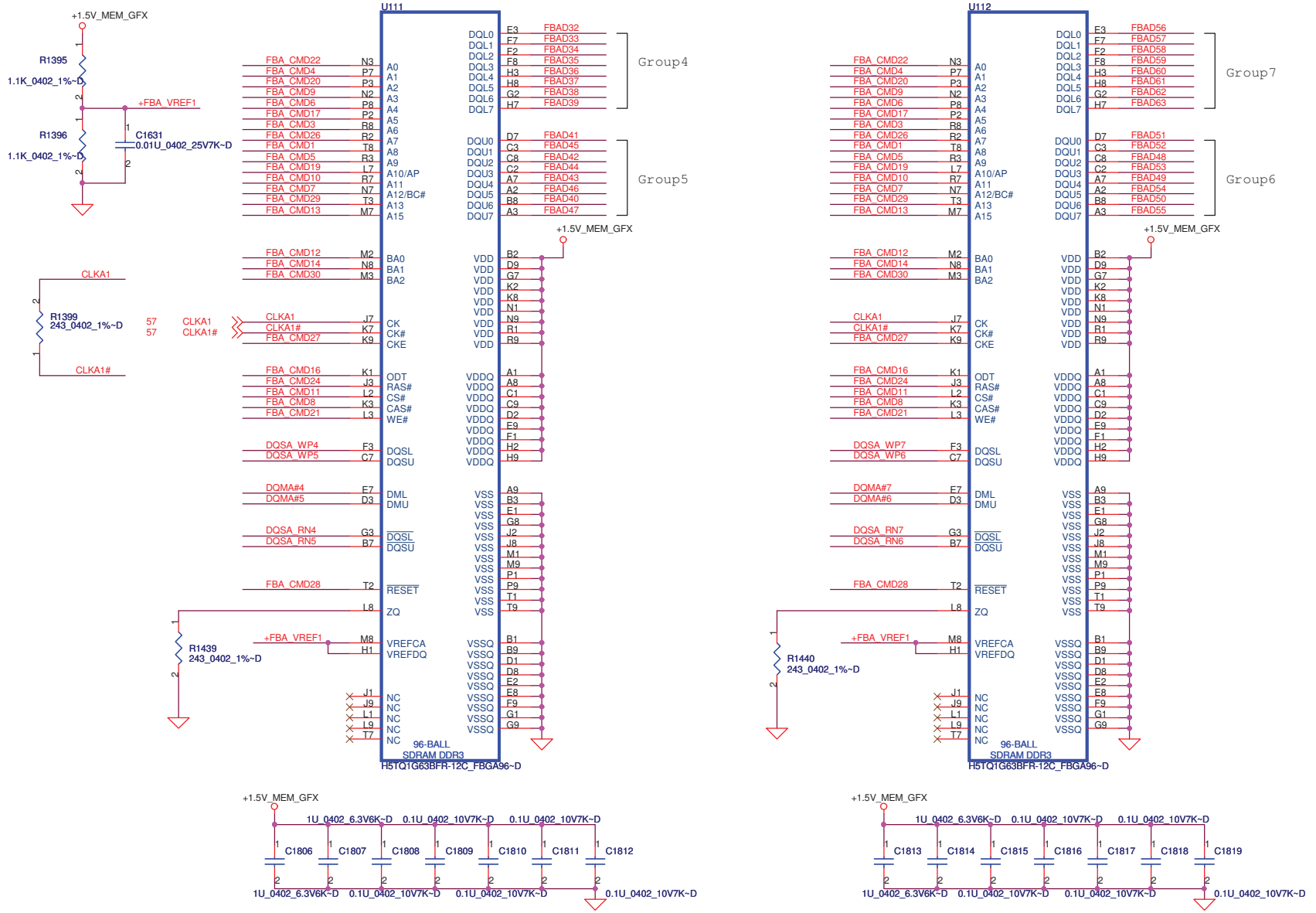
Compal Electronics, Inc.

Title: VRAM A Lower

Size: | Document Number: LA-5573P | Rev: 3.0

Date: Thursday, January 21, 2010 | Sheet 58 of 69

Memory Partition A - Upper 32 bits



FBA_CMD[0..30] FBA_CMD[0..30] 57,58
FBAD[0..63] FBAD[0..63] 57,58
DQMA#[0..7] DQMA#[0..7] 57,58
DQSA_RN[0..7] DQSA_RN[0..7] 57,58
DQSA_WP[0..7] DQSA_WP[0..7] 57,58

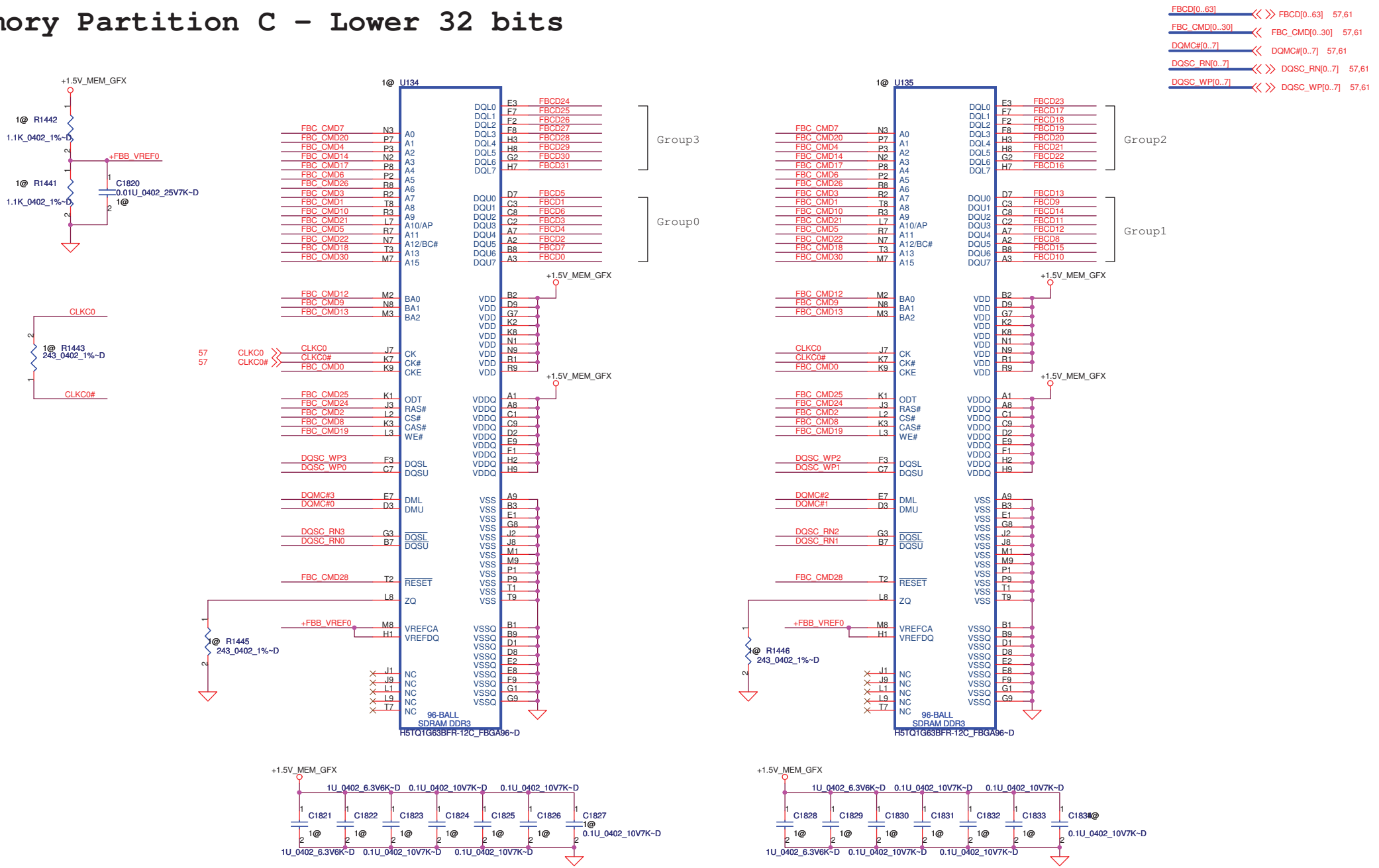
Compal Electronics, Inc.

Title: VRAM A Upper

Size: Document Number: LA-5573P Rev: 3.0

Date: Thursday, January 21, 2010 Sheet 59 of 69

Memory Partition C – Lower 32 bits



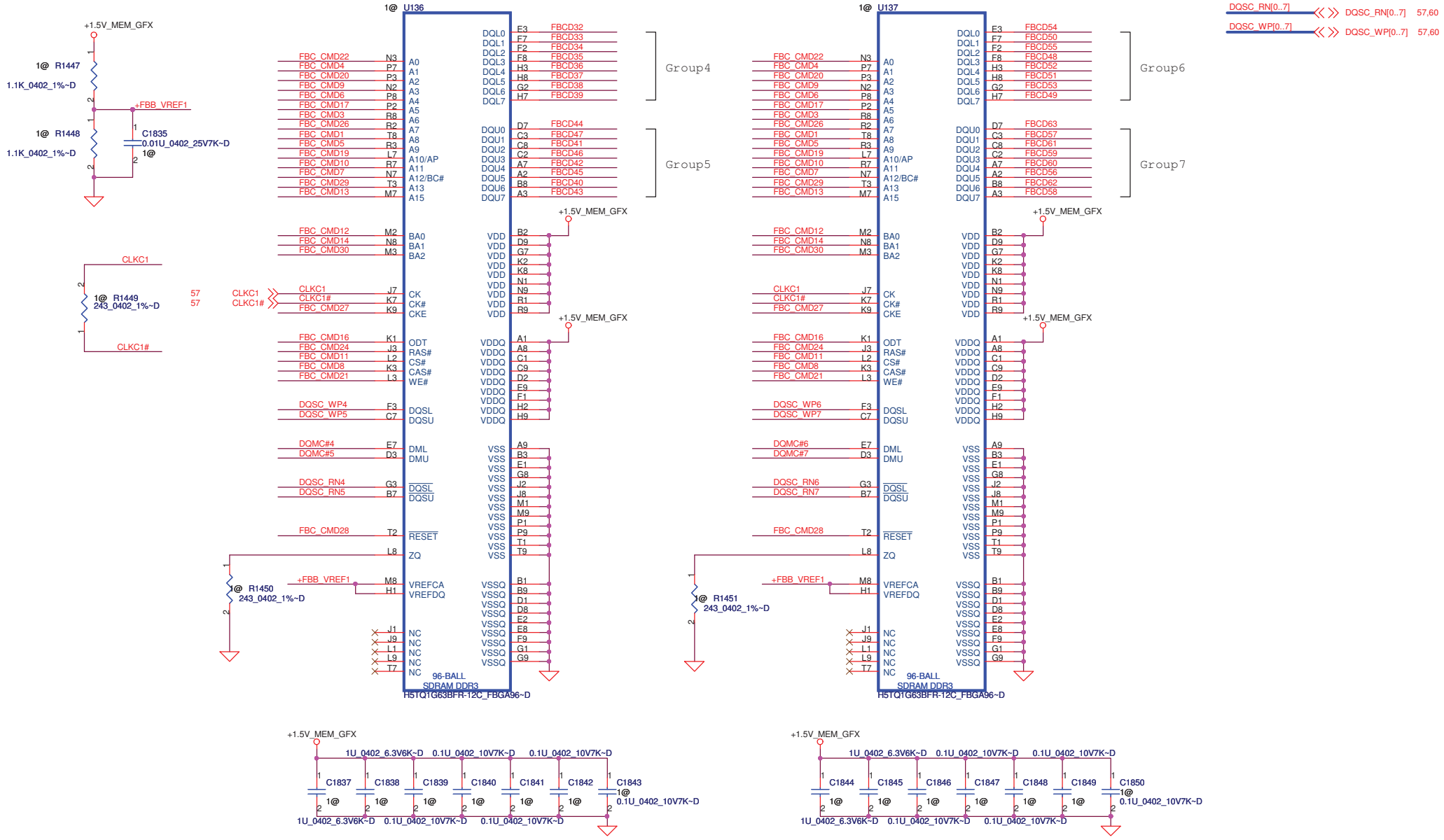
Compal Electronics, Inc.

Title: VRAM C Lower

Size: | Document Number: LA-5573P | Rev: 3.0

Date: Thursday, January 21, 2010 | Sheet 60 of 69

Memory Partition C - Upper 32 bits



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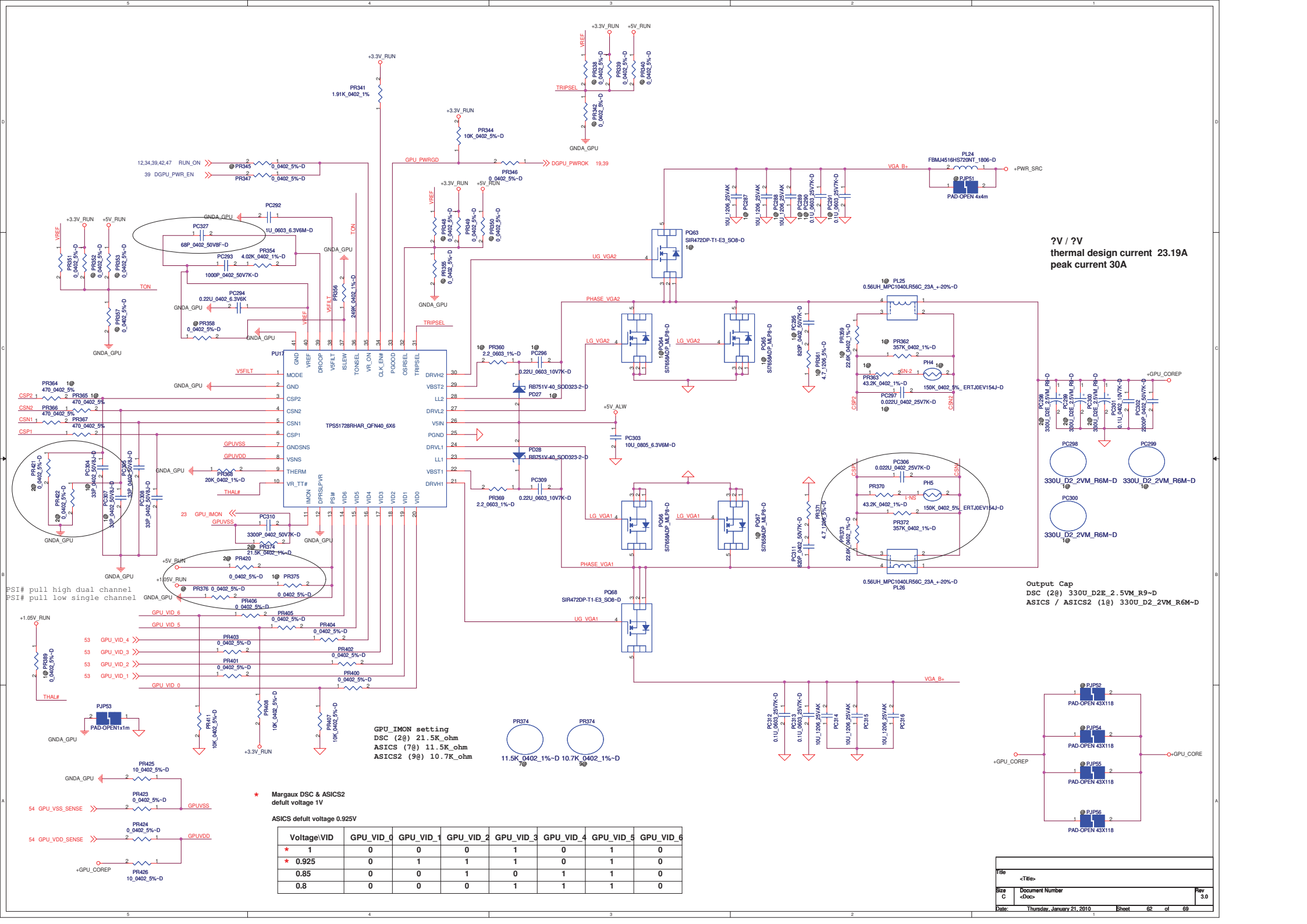
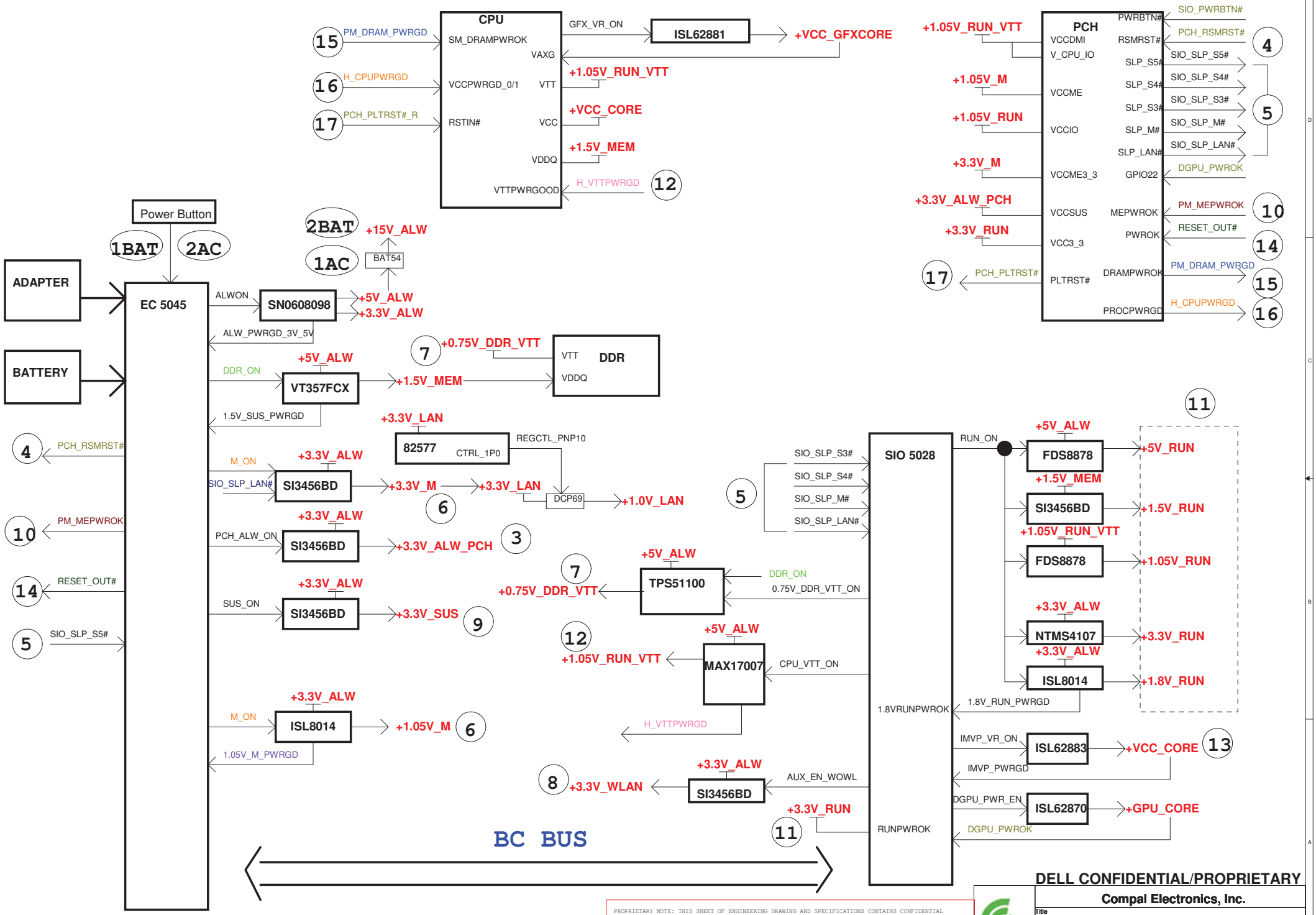
Title: VRAM C Upper

Size: Document Number: LA-5573P Rev: 3.0

Date: Thursday, January 21, 2010 Sheet 61 of 69


TPS51728RHAR_QFN40_6X6
PU17
PSI# pull high dual channel
PSI# pull low single channel
?V / ?V
thermal design current 23.19A
peak current 30A
Output Cap
DSC (2@) 330U_D2E_2.5VM_R9~D
ASICS / ASICS2 (1@) 330U_D2_2VM_R6M~D
GPU_IMON setting
DSC (2@) 21.5K_ohm
ASICS (7@) 11.5K_ohm
ASICS2 (9@) 10.7K_ohm
* Margaux DSC & ASICS2
defult voltage 1V
ASICS defult voltage 0.925V
Voltage\VID | GPU_VID_0 | GPU_VID_1 | GPU_VID_2 | GPU_VID_3 | GPU_VID_4 | GPU_VID_5 | GPU_VID_6
* 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0
* 0.925 | 0 | 1 | 1 | 1 | 0 | 1 | 0
0.85 | 0 | 0 | 1 | 0 | 1 | 1 | 0
0.8 | 0 | 0 | 0 | 1 | 1 | 1 | 0
Title
<Title>
Size C
Document Number <Doc>
Rev 3.0
Date: Thursday, January 21, 2010
Sheet 62 of 69



Compal Electronics, Inc.

Title: Power Sequence

Size | Document Number: LA-5573P | Rev: 0.1

Date: Thursday, January 21, 2010 | Sheet 63 of 69

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	8,12,13, 14,42	HW	6/30/2009	Intel	Intel S3 reduction circuit.	Add R1469, R1471-R1480, C1872-C1877, Q199-Q204, change R624 to 27 ohm, pop Q78, add net DDR_HVREF_RST_GATE from U36.B36, CPU1.5V_S3_GATE from U36.B37, change CPU VDDQ net name to +1.5V_CPU_VDDQ	X01
2	40	HW	6/30/2009	COMPAL	Board ID	R98 change to 130k ohm	X01
3	43	HW	6/30/2009	COMPAL	for derating concern	Change R1001 from 82 to 150 ohm	X00
4	8	HW	6/30/2009	Intel	Follow CRB by Intel request	R1286 needs to change to 0-ohm	X00
5	39,40	HW	6/30/2009	COMPAL	MEMO implementation	de-pop R1319, R595	X00
6	8	HW	7/01/2009	Intel	Intel S3 reduction circuit.	Change R879 to 2k, R880 to 1.1k, add U141	X01
7	55	HW	7/01/2009	COMPAL	Rdson concern by ADC	Change Q55/Q58/Q59/Q183 to SI4164	X01
8	8,42,47	HW	7/02/2009	Intel	Intel S3 reduction circuit.	Add R1481-R1484, Q205, Q206, Q207, C1877, PR428, change R879 to 1.5k, R880 to 750 ohm, change net DDR_HVREF_RST_GATE to U36.A34, CPU1.5V_S3_GATE to U36.A36	X01
9	30	HW	7/03/2009	COMPAL	+3.3V_LAN enable control follow M09	De-pop R47	X01
10	12	HW HW	7/03/2009	DELL	Intel S3 reduction circuit.	De-pop R1473, separated +V_DDR_REF_Q for each SO-DIMM, The dividers should use 1% part replacement for 5% as well	X01
11	8,12,13, 14,42	HW	7/08/2009	DELL Intel	Intel S3 reduction circuit.	Add C1879, PJP57, PJP58, R1485, R1486, change Q205 to PMST3904, Q200 to AO4728L, R624 to 22 ohm, connect RUN_ON_CPU1.5VS3# to Q78.2 Q204.2,	X01
12	8	HW	7/09/2009	COMPAL	Intel S3 reduction circuit.	Add R1487	X01
13	24	HW	7/14/2009	COMPAL	NVidia BIA_PWM implementation	POP R165, de-pop R166	X01
14	8,15	HW	7/14/2009	COMPAL	Depop all related components where are located at 0 Z-hight area	Depop JXDP1, JXDP2, JDEG1, JP2 circuit	X02
15	24	HW	7/14/2009	DELL	ENVDD_PCH connection	Remove D91 and connect ENVDD_GPU to 5028.pin B38	X02
16	19	HW	7/14/2009	Intel	GPIO1,6,7 PU if not being used	Add R1489-R1491	X02
17	24	HW	7/14/2009	COMPAL	Camera need to be changed from 7 to 8 pin	Change JEDP1 pin definition	X02
18	37	HW	7/16/2009	COMPAL	JTP1, JBIO1 power gnd pins redefined	Change JTP1, JBIO1 pin definition	X02
19	37,40	HW	7/16/2009	SMSC	LAT_ON_SW# needs to be added a 1uF cap	Add @C1884, C1885, R1492, change R560 to 100K, JIO.32 change to LAT_ON_SW_BTN#	X02
20	23	HW	7/16/2009	SMSC	R594 has to be a group with R3P circuit	De-pop R594 for M09 fan solution	X02
21	31	HW	7/17/2009	Braodcom	Found both PD R898 and PU R485 pop	depopulate R898 for normal operation	X02
22	40	HW	7/17/2009	COMPAL	Board ID	Change R98 to 62K ohm.	X02
23	31	HW	7/17/2009	Braodcom	RFID disable circuit remove	Remove R1062-R1065	X02
24	28,37	HW	7/17/2009	TI	Please reserve 1 resistor and connect connector (Pin1 or 7) to MAX4951	Add R1493 & R1494 at pin 18 of U95 & U96 for power saving	X02
25	31	HW	7/17/2009	Braodcom	+SC_VCC Capacitor (C718) Value Change	Broadcom has recommneded changing the value of C718 from .47uF to 220nF	X02
26	42	HW	7/17/2009	COMPAL	Backdrive EA Failure on Margaux/ASICS	Pop R625 and Q79	X02
27	24	HW	7/17/2009	DELL	eDP repeater change to SN75DP119.	update U46 circuit for eDP repeater	X02
28	23	HW	7/17/2009	COMPAL	R3P circuit by SMSC request	R536 depop for 3P FAN, R1457 change to 0 ohm, R138 change to 27K ohm	X02
29	21	HW	7/17/2009	Intel	The PLLs aren't used in a DIS system	De-pop C105 & C106	X02
30	33	HW	7/17/2009	TXC	EA result	C514, C515 have to change to 22pF	X02
31	36,39	HW	7/22/2009	DELL	Reconnect the signal UWB_RADIO_DIS#	connect UWB_RADIO_DIS# from EC5028.A56 to MINI3.20	X02
32	23	HW	7/22/2009	DELL	Change FAN solution to M09	De-pop R3P circuit component & pop M09 solution	X02
33	42	HW	7/23/2009	COMPAL	de-rating result fail	Change Q61 from AO4456 to NTMS4107	X02
34	26	HW	7/23/2009	PERICOM	Pericom 8200 SW issue DVI can not work	Add R1495 to pull up U9 pin 23 (P1_OC0) of Pericom 8200 SW with a 4.7K ohm resistor to 3.3_RUN	X02
35	24	HW	7/23/2009	TI	eDP repeater DP119 vender review request	reserve pop option for X1EDP & DP119, change PU/PD to 20K.	X02
36	28	HW	7/23/2009	DELL	We will never disable the power to HDD redriver, go back connected in SSI	Remove R1493 & delete SATA_PWRSAVE	X02
37	18,28,40	HW	7/23/2009	DELL	There has been some confusion due to the net name showing active low	change net name HDD_FALL_INT1# to HDD_FALL_INT to show correct polarity	X02

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
38	29	HW	7/24/2009	DELL	use the SiTimes part due to the cost savings	change X4 from TXC to SiTimes.	X02
39	31	HW	7/24/2009	Braodcom	connect pin-L10 of U32 to pin-5 of U33, and disconnect pin-D2 from pin-5 of U33	pop R775, de-pop R776	X02
40	33	HW	7/24/2009	COMPAL	fixed SD/MMC Clock overshoot and undershoot	Changing R8 dumping from 0-ohm to 10-ohm	X02
41	31	HW	7/24/2009	Braodcom	BCM5880 Leakage Issue on Margaux	Add Q208,Q209,R1496 circuit to fix.	X02
42	37,39	HW	7/27/2009	DELL	ESATA repeater power saving	Add a 0 ohm jumper between EN pin and VDD, but no-pop it. Then connect the EN pin to 5028.A47 with a 0 ohm jumper that is popped.	X02
43	39	HW	7/27/2009	DELL	Sometimes VGA_ID_DISC and VGA_ID_UMA both read as low	Change R875 and R881 to +3.3V_ALW rail.	X02
44	23	HW	7/27/2009	SMSC	SMSC review feedback	The pull-up source of the R150 should be changed to +VCC_4002	X02
45	31	HW	7/27/2009	NXP	Better for decoupling noise	Change C1015 ,C633 to 10pf	X02
46	36	HW	7/27/2009	DELL	For PCH GPIOs rail.	PCIE_MCARD3_DET# & USB_MCARD1_DET# pull-ups (R458 & R438) need to change from +3.3V_ALW_PCH rail to +3.3V_RUN rail	X02
47	11	HW	7/27/2009	Intel	The VCC_Core de-coupling requirements for Clarksfield XE processor	C60-64, C66 change to 470uF/4mOhm, C44-C59 change to 22uF(0805)	X02
48	23,40	HW	7/29/2009	SMSC	per SMSC 5045 AN 19.6, 4002 AN 16.11	R541, R554, R1492 should be 10K, R147 should be populate, Add R1498	X02
49	35	HW	7/29/2009	DELL	Braidwood has been removed from Ibex Peak platforms	De-pop JBW1 & R1453	X02
50	39	HW	7/29/2009	DELL	GPIO MAP update	change net name from RESERVED FOR ESATA to EN_ESATA_RPTR	X02
51	42	HW	7/29/2009	Compal	By Intel S3 timing concern	reserve R1500 & @R1499 0 ohm for Q206.2 from RUN_ON_CPU1.5VS3# & RUN_ON_ENABLE#	X02
52	37	HW	7/30/2009	Intel	Intel continues to recommend that all pre-production and production motherboards include common mode choke footprints to enable a stuffing option in case a choke is required to pass EMI testing	Add @L30, @L31, R424-R427	X02
53	31	HW	7/30/2009	Broadcom	Broadcom schematic review request	pop R537; Remove C647, C641,R634, R498, R898; Add @C1886 & @C1887; Remove L73, R631, C1026, R494, Short net RFREADER_TXN1_PI_R to RFREADER_RXP_C; Remove C642, C640, change R487, R496 to 0 ohm; Add @R1501; de-pop R496 & R497; JCS1 pin2 & pin3 and pin4 & pin5 should be short to carry higher current.	X02
54	31	HW	7/30/2009	Compal	Solve smart card cage vender reverse pin definition.	Reverse JSC1 pin definition	X02
55	31	HW	7/31/2009	Broadcom	Broadcom schematic review request	The pin1 of R497 and R496 should be connected to GND	X02
56	15,40	HW	7/31/2009	KDS	KDS crystal EA result	change DIS C296 & C297 to 12pF, C674, C675 to 33pF	X02
57	8,15	HW	7/31/2009	Intel	For XDP debug concern	Populate all the resistors and leave out the connector	X02
58	27	HW	8/03/2009	Compal	CRB EA result	C251-C253 to 4.7pF; L61-L63 to 10-Ohm Bead ; De-pop C996, C518, C390	X02
59	23	HW	8/03/2009	Compal	If populate R147 PU resistor for THERM_STP#, it will impact ALWON signal at MEC 5045	De-pop R147	X02
60	15,40	HW	8/04/2009	KDS	KDS crystal EA result	change DIS C427 change to 200 ohm, C514, C515 back to 15P and change X3 from CL=16pF to CL=12pF	X02
61	8	HW	8/05/2009	DELL	fix the Intel S3 power up timing	change C1877 from 0.01uF to 0.22uF 0402 cap.	X02
62	28,37	HW	8/06/2009	Compal	Per ESATA/SATA EA result	pop R1301, R1304, de-pop R1298, R1308	X02
63	28	HW	8/06/2009	Compal	ODD_DET# PU from +5V_MOD to +3.3V_RUN	connect R1239.1 to +3.3V_RUN & pop R1239	X02
64	42	HW	8/06/2009	SMSC	Watch dog timer may not be resetED when 4002 VDD_PWRGD is not completely at Logic Low	Pop R616 to 39 & pop Q72	X02
65	30	HW	8/10/2009	Intel	Remove the VCT trace	Remove @R562, @C41	X02
66	35	HW	8/10/2009	DELL	Braidwood Removal on RAM	Remove @JBW1, @C1851, @R1452, @R1453, @C1852, R1411	X02
67	31	HW	8/11/2009	Broadcom	Broadcom review request	Remove @R1061, Change C718 value to 470pF, change C646 value to 220pF. pin2 of R470 should have a 0ohm but de-pop resistor to USB_GPIO27 net.	X02

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
68	8	HW	8/11/2009	Intel	Intel review request	add @R1504 for DDR3_DRAMRST#_CPU PD & add C1888 for PM_DRAMRST# to slow down gate of FET	X02
69	33	HW	8/11/2009	Richo	Change pop option for R5U242	Change C21 from 10U to 47U, change R46 to C1889 (1uF)	X02
70	38	HW	8/11/2009	Compal	For DVI DOCK issue	Add R1505-R1508	X02
71	21	HW	8/12/2009	Intel	Follow CRB rev 1.6 schematic	No stuff C111 and C112	X02
72	31	HW	8/12/2009	Broadcom	Per Broadcom request	pop R496 & R497 (0 ohm)	X02
73	31	HW	8/12/2009	Compal	Smart card EA result	change R772 to 47 Ohm for resolving SC_CLK Rise/Fail timing issue	X02
74	8	HW	8/12/2009	Intel	Follow Intel S3 white paper rev0.9	pop R1504 & change C1888 to 470pF	X02
75	37	HW	8/12/2009	DELL	add a pull-up to +3.3V_ALW for IO_LOOP	change R835.1 from +3.3V_ALW_PCH to +3.3V_ALW	X02
76	37	HW	8/12/2009	Compal	disconnect IO & DOCK VCT	rename IO VCT to +LOM_VCT_IO & reserve C712 pad for test.	X02
77	31	HW	8/13/2009	Broadcom	Per Broadcom request	need to have 4.7K pull-up to 3.3V_ALW for BCM5882 pin-C1 "RSTOUT_N"	X02
78	8	HW	8/13/2009	DELL	Avoid a glitch for DDR_HVREF_RST_GATE, please add a 1.1K 1% no-stuff pull-up to +1.5V_CPU_VDDQ rail on the PM_DRAM_PWRGD_R signal for a back-up option	change C1888 to 0.1u, add @R1511 for PM_DRAM_PWRGD_R	X02
79	8,45	HW	8/13/2009	DELL	CPU detection since the edge diode has been removed from M'09	Add R1512 for CPU_DETECT# and connect JCPU.AH24 to U36.B18	X02
80	37	HW	8/14/2009	DELL	Invert the EN_ESATA_RPTR signal and connect this to SATAGP4/GPIO16	Add @R1513 & @Q210, pop R1494 and de-pop R1497, change net name from GPIO16 to EN_ESATA_RPTR#	X02
81	33	HW	8/14/2009	Compal	Solve 1394 impedance issue	Change R399, R400, R401, R403 to 54.9 ohm.	X02
82	37	HW	8/14/2009	Compal	EMI solution	pop L30 & L31, de-pop R424-R427	X02
83	38	HW	8/17/2009	NV	Solve DIV issue	Add Q211-Q216, R1514-R1521 for SW DDC PU.	X02
84	11	HW	8/17/2009	Compal	PWR team request	de-pop C66, C64, change C60-C63 to 330uF, C44-C59 to 10uF, can meet Intel spec.	X02
85	55	HW	8/18/2009	NV	Reserve crystal for 27M.	add @R1522, @y7, @C1890, @C1891	X02
86	26	HW	8/19/2009	Pericom	8200 pin 8,9 add cpas to minimize noise	Add C1597 & C1598	X02
87	29	HW	8/19/2009	COMPAL	EMI solution	C676 to 150pF and R1295 to L4 (220 ohm), POP C1121-C1124, C1145-C1148	X02
88	33,34	HW	8/20/2009	COMPAL	EMI solution for SD CLOCK & EXP card USB	R8 change to 22 ohm, pop L64 & depop R791, R792	X02
89	11	HW	9/11/2009	DELL	To meet Intel spec	C60-C63, Margaux DIS-->330uF, Asics/Asics II-->470uF	X02
90	55	HW	9/11/2009	DELL	27M crystal for NV	add Y7, C1890, C1891, R1522, R1417, de-pop R617, R1317, R43, R39	X02
91	21	HW	9/11/2009	Intel	Intel request	de-pop C39, C610	X02
92	31	HW	9/11/2009	Broadcom	Broadcom review feedback	change C718 from 470p to .47u, C646 from 220p to .22u	X02
93	30	HW	9/11/2009	Intel	Follow Intel document request	change R1502 to C427 10pF, C475, C476 to 33pF	X02
94	35	HW	9/11/2009	Compal	Add PD 10k for Minicard PWR	Add R1523-R1525	X03
95	31	HW	10/23/2009	Compal	Smart card connector DFM issue	change JSC1 type (the same with Rothschild)	X03
96	54	HW	10/23/2009	NV	JTAG_TRST#: Populate R1372 with 1K resistor.	Change R1372 to 1K and pop	X03
97	40	HW	10/23/2009	COMPAL	Board ID	Change R98 to 4.3K ohm.	X03
98	17	HW	10/23/2009	Intel	Intel schematic check list 2.0 request	R268 change from 1k ohm to 10k ohm, R672 change from 0.5% to 5%	X03
99	40	HW	10/23/2009	SMSC	SMSC review feed back	R561 and R1046 are too large it is recommend that no PU/PD be larger than 100K	X03
100	12,42	HW	10/23/2009	COMPAL	avoid double bleed off	+3.3V_M, +3.3V_RUN, +1.5V_CPU_VDDQ power plane discharge circuit have been pop, de-pop R612, R607, R1471.	X03
101	36	HW	10/23/2009	DELL	support WiMax LED status	Need to populate R840	X03
102	16,32	HW	10/25/2009	COMPAL	Change R910 placement	Please put R910 close to PCH not TCM chip	X03
103	41	HW	10/25/2009	COMPAL	Touch Pad PU need to move from 5V to 3V	R613, R614 change power rail from +5V_ALW to +3.3V_ALW	X03
104	31	HW	10/28/2009	Broadcom	For 5882-B0 request	L71, L72 68nH, 2%, 400mA; C1070, C1071 1500pF, 2%, 50V; C1886, C1887 150pF, 2%, 50V	X03
105	29	HW	10/28/2009	IDT	create a low pass filter with the pole set at 36kHz to filter out of band noise	de-pop C1066 & C1067, R1090, R1089 ; R340 & R342, R1091 & R1092 change to 2k, add C1894-C1897 1000pF.	X03
110	29	HW	10/28/2009	COMPAL	ME request for JSPK1 swap	JSPK1 Pin 2 and pin 4 swap, pin 3 and pin 5 swap	X03

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
111	8,12,13, 15,16,28	HW	10/29/2009	DELL	MEM SMBus design needs to change	Move Q190 connection, add R1528,R1529, add net name DDR_XDP_CLK/DAT	X03
112	31	HW	10/29/2009	DELL	smart card clock resistor	Change R772 from 47 ohm to 22 ohm	X03
113	37	HW	10/29/2009	COMPAL	EMI concern	pop R15 with 10 ohm and C15 with 10pF	X03
114	36	HW	10/29/2009	COMPAL	USB_MCARD2_DET# change to +3.3V_ALW_PCH	R447 pull up should change to +3.3V_ALW_PCH	X03
115	40	HW	10/29/2009	COMPAL	avoid RESET_OUT# double PD	de-pop R5	X03
116	15	HW	11/02/2009	COMPAL	EMI, RF team concern	pop C300, C302	X03
117	24	HW	11/04/2009	COMPAL	LCD power sequencing issue	change R161 from 470 to 130 ohm .	X03
118	37	HW	11/05/2009	COMPAL	EMI concern	Change choke vender from Murata to Delta on L30,L31	X03
119	29	HW	11/05/2009	COMPAL	RF team concern	X4 change from Sitime to TXC	X03
120	15	HW	11/05/2009	COMPAL	RTC issue	Y1 & Y4 change from 30ppm to 10ppm.	X03
121	15	HW	11/05/2009	COMPAL	For flash ROM EOL issue	U13 change from W25X32 to W25Q32	X03
122	19	HW	11/09/2009	DELL	PCH driving the siganl low at GPIO15 initial	add R1530 2.2K PU resistor to +3.3V_ALW_PCH on the SIO_EXT_WAKE# signal.	X03
123	55	HW	11/10/2009	COMPAL	By power team request	Please pop 22u*2 at original reserved location C1722 and C1723.	X03
124	39	HW	11/10/2009	DELL	add a 10K 5% PU to +3.3V_RUN on ME_FWP	Add R1531	X03
125	24, 53	HW	11/11/2009	NV	By NV review request	~~pop R180, de-pop R181~~; change GPU booting voltage setting, GPU_VID1: @Q4, 7@R1374, 8@R1361, GPU_VID4:pop R1379, GPU VID2: 7@R1357, 8@R1360, GPU_VID3: pop R1354	X03
126	15,28	HW	11/13/2009	COMPAL	To cut redundant trace for SMBUS	Add @R1532/R1533/R1534/R1535	X03
127	19	HW	11/17/2009	Intel	By Intel check list request	Add R1544 for PCH GPIO34	X03
128	41	HW	12/24/2009	Compal	To solve touch pad ESD issue	Change L41 and L42 to R1545 & R1546 with 100 ohm.	X03
129	29	HW	12/24/2009	Compal	RF noise issue concern	change Sitime 12MHz oscillator X4 to driver strength 1x	X03
130	15	HW	12/24/2009	Intel	Follow Intel check list rev2.0	Change R224 to tolerance from 5% to 1%	X03
131	36	HW	12/24/2009	DELL	Wimax LED abnormal operation.	de-pop R1409	X03
132	11	HW	12/24/2009	Compal	PWR team request	Change C60-C63, add C66 to 330uF for Ascis/AsicsII	X03
133	38	HW	12/24/2009	Compal	Simplo battery slice EMI issue	Add C1898 and C1899(Depop,reserve for EMI test)	A00
134	31	HW	12/24/2009	Braodcom	By Broadcom request	Change L71,L72 from 68nH to 150nH, C1070,C1071 from 1500pF to 390pF.C1887, C1888 from 150pF to 390pF.	A00
135	40	HW	12/30/2009	DELL	Board ID	Change R98 from 4.3K to 1K for A00	A00
136	33,34	HW	12/30/2009	COMPAL	Change R5U242 to rev ES3	Change U94 from ES2 to ES3	A00
137	8,15	HW	12/30/2009	Intel	De-pop XDP & JTAG resistor	de-pop C19,C20,R6,R7,R68,R19,R3,R1153,R1156,R1157,R66,R1241,R780-R785, R22,R24,R78,R91,R101-R116,C1375,R69,R118,R123,R804,R807,R805,R806,R1281, R1282,R1315	A00
138	28,37	HW	01/15/2010	COMPAL	Change Esata repeater for power save	Change U95 U96 from 412 to 412A	A00
139	27	HW	01/15/2010	COMPAL	EMI concern	Change L61-L63 to 27nH, C251-C253 to 2P, pop C390, C518, C996	A00
140	11	HW	01/18/2010	COMPAL	No stuff MLCC caps to fix Acoustic noise	de-pop C46, C48, C50, C52	A00
141	15	HW	01/21/2010	COMPAL	For factory to do JTAG test	Pop R123, R804-R807, R1281, R1282, R1315	A00

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	50	+VCORE_DSC	6/12	Dell	Adjust Vimon	ASICS and ASICS2 Change PR184 to 7.5K	
2	62	Graphic ASICS	6/19	TI	Adjust compensation	DSC Change PR370 to 43.2K, PR372 to 357K, PR373 to 22.6K, PC 306 to 0.022uF ASICS/ASICS2 Change PR370&PR363 to 43.2K, PR372&PR362 to 357K, PR373&PR359 to 22.6K, PC306&PC297 to 0.022uF	
3	62	Graphic ASICS	6/19	TI	Droop circuit add cap for filtering the noise	DSC, ASICS and ASICS2 Change PD26 to PC327 68pF	
4	62	Graphic ASICS	6/19	TI	Adjust to operate single phase	DSC PR364,PR365,PC304,PC307 unpop and add PR421&PR422 0_ohm to avoid PIN3,4 floating Add PR420 0_ohm connect +5V_RUN to control PSI# for Single phase	
5	62	Graphic ASICS	6/30	TI	add 0_ohm for cut power rail to debug	Add PR423 PR424 PR425 PR426	
6	62	Graphic ASICS	7/01	TI	CSS GC logic wrong issue	Add PR427 180_ohm to GND	
7	62	Graphic ASICS	7/2	ADC Guangyong 090612	Change PR374 and PC310 reference GND to GPUVSS	connect PR374 and PC310 pin1 to GPUVSS	
8	50	+VCORE	7/14	Dell / intersil	change Cisense GND to VSUM-	PC174 PC175 PC176 pin2 connect to VSUM-	
9	52	Selector	7/16	Compal	Add 1M_ohm pull down to fix ACAV_IN_NB oscillation when battery mode S5	Add PR429	
10	52	Selector	7/22	TI	new version CD3301 (PG2.1) dont need PD21	un-pop PD21 add PR430	
11	53	Selector	7/22	TI	DOCK_AC_OFF_EC floating issue	add PR431	
12	62	Graphic ASICS	8/3	TI	Pin38 V5FILT is output pin. don't need to connect to power rail.	Delete connection to +5V_RUN	
13	45 / 49 50 / 51	+5V/+3.3V +1.1VTT +Vcore charger	8/11	Compal / EMC	solve EMI issue	pop PC32 PC33 PR36 PR39 PL15 PC155 PC165 PC182 PR153 PR173 PR191 PL24 add PL27	
14	50	+VCORE	8/13	Intersil	Adjust Imon and Load line	PR195 change to 619, PR175 change to 2.43K, PR387 change to 15K PR184 change to 8.45K, add PR432 34.8K and PQ75 (PR432 and PQ75 un-pop Merle 0820) PC171 change to 0.068uF, PC183 add 0.022uF	
15	49	+1.1VTT	8/13	DELL	Improve ESD	PQ74 change SB57002528L to SB00000DH0L	
16	51	Charger	8/13	Dell / TI	change PU13 to BQ24747 to improve IC ESD to change strong	change PU13 from SA00001RK0L to SA00003KX0L	
17	48	+1.05V_VM_DSC	8/13	TI	change from TPS51318 to SN0905030	change PU8 to SN0905030	
18	45	+5V/+3.3V	8/17	TI/Compal	adjust OCP setting	Change PR31 from 243K to 294K, PR32 from 232K to 261K(DSC) 158K(ASICS)	
19	46	+1.5V_MEM_DSC	8/17	TI/Compal	adjust OCP setting	Change PR71 from 61.9K to 39.2K	
20	50	+VCORE	0820	Dell EMC	Add 2 2200pF caps. (jerry lin 0820)	Add PC328 PC329	

Title	<Title>	
Size C	Document Number <Doc>	Rev 3.0
Date: Thursday, January 21, 2010	Sheet 68 of 69	

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
21	44	+DCIN	10/23	TI/Compal	slow soft star to fast issue	Change PR20 from 0_ohm to 10K.	
22	49	+1.1VTT	10/23	Intel	VTT power good voltage level change	Change PR124 from 28.7K to 9.31K. Change PR128 from 10K to 2.74K.	
23	51	Charger	10/23	Compal EMI	EMI solution	pop PC214 1000pF, PR234 4.7_ohm	
24	49	+1.1VTT	10/23	Maxim	fix VTT drop issue	ILIM = 30mV, un-pop PR104, PR103=0_ohm, PC130=220pF PR110, PR120=1.58K_ohm ; PR113, PR122=6.98K_ohm ; PR114, PR123=0_ohm Ceq PC132, PC144 =0.22uF ; Filter PC133, PC145=un-pop ; PR115, PR129=0_ohm REF capacitor PC137 change to 2.2nF ; REFIN PR117, PR118 and PR119 increase by 10x Add PR432, PR433 for dual remote sense	
25	51	Charger	10/23	TI	Reduce CD3301 pin34 pin 35 peak current	Change PR392 to 0805 size.	
26	51	Charger	11/10	Compal	ACAV_IN_NB level adjust. (10/29)	Change PR246 from 21.5K to 22.6K	
27	50	+Vcore	11/17	Compal	pop PC190 PR201 for improve 2nd source FDIM	pop PC190 PR201	
28	49	+1.1VTT	01/20	Maxim	fix dual palse issue	pop filter PC133, PC145=1000p ; PR115, PR129=10_ohm	
29	51	Charger	01/20	Compal	reduce surge current. (for CD3301)	Change PR392 form 0_ohm to 1ohm change PC199 from 1uF to 0.1uF	
30	51	Charger	01/20	Compal	EMI can pass without this bead. remove for cost saving.	un-pop PL27	
31	62	Graphic ASICS	8/3	Compal	RF boardband issue	pop PC295 PC311 820pF , pop PR361 PR371 4.7ohm.	
32	49	+1.1VTT	01/20	Compal RF/EMI	fix RF boardband issue	change PC131 PC146 from 680pF to 820pF	

Title	<Title>	
Size C	Document Number <Doc>	Rev 3.0
Date: Thursday, January 21, 2010	Sheet 69 of 69	