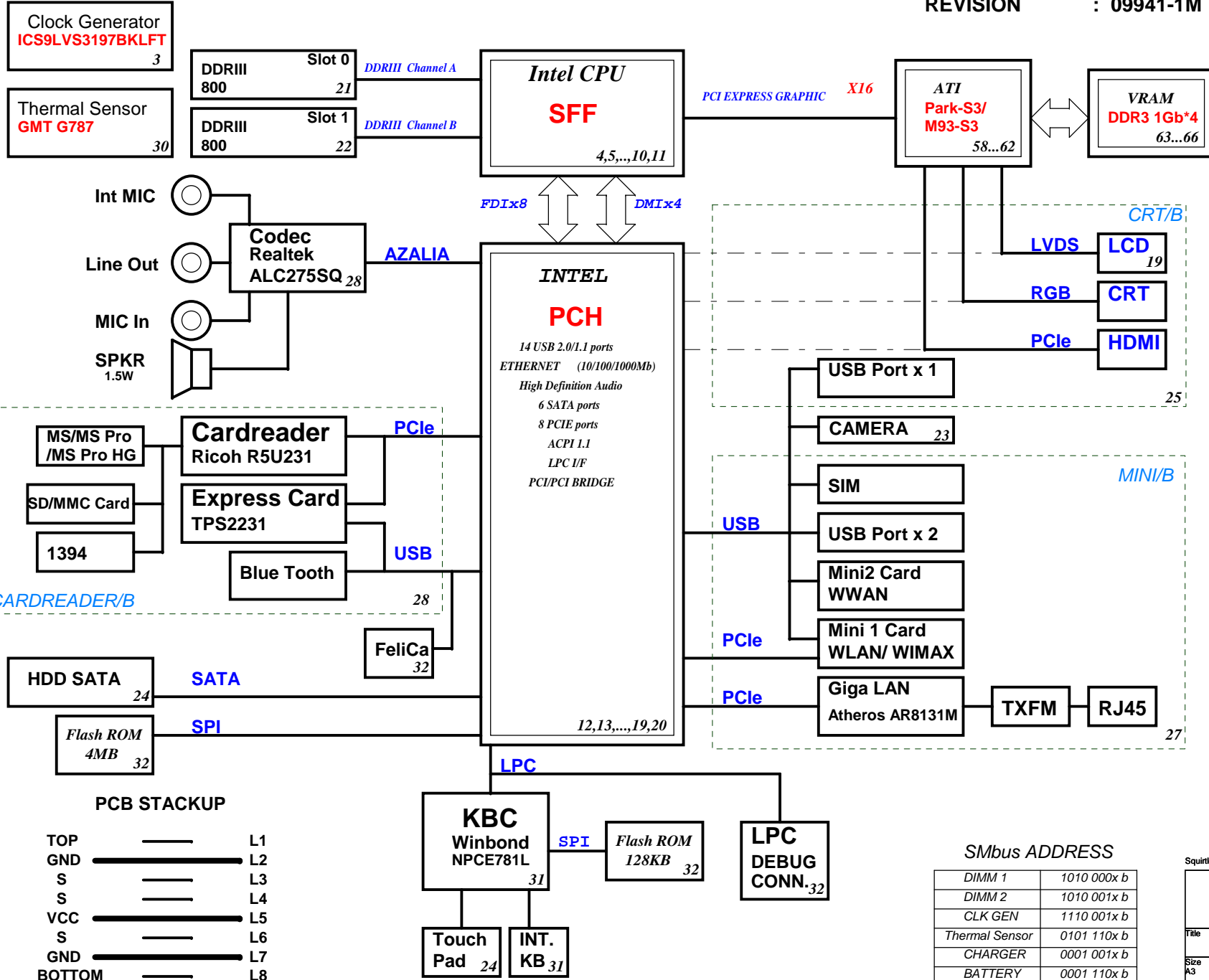


# CADIZ-CP Block Diagram

PROJECT CODE : 91.4JH01.001  
 PCB P/N : 48.4JH01.01M  
 REVISION : 09941-1M



<b>SYSTEM DC/DC RT8223</b> 37	
INPUTS	OUTPUTS
DCBATOUT	5V_S5(9A) 3D3V_S5(5A) 5V_AUX_S5 3D3V_AUX_S5
<b>RT8209</b> 39	
INPUTS	OUTPUTS
DCBATOUT	1D05V_S0(20A)
<b>RT8209</b> 38	
INPUTS	OUTPUTS
DCBATOUT	1D5V_S3(13.5A)
<b>RT9026</b> 36	
INPUTS	OUTPUTS
5V_S5	DDR_VREF_S3 1.2A
<b>CHARGER BQ24751</b> 32	
INPUTS	OUTPUTS
DCBATOUT	CHG_PWR 18V 6.0A
<b>CPU DC/DC ADP3211</b> 36	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE 27A
<b>VGA/ GFX Core ADP3211</b> 40	
INPUTS	OUTPUTS
DCBATOUT	VGA_CORE/ VCC_GFXCORE 11A

**SMbus ADDRESS**

DIMM 1	1010 000x b
DIMM 2	1010 001x b
CLK GEN	1110 001x b
Thermal Sensor	0101 110x b
CHARGER	0001 001x b
BATTERY	0001 110x b

Squirrelle CP DIS SAMSUNG

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Title: **BLOCK DIAGRAM**

Size A3 Document Number **CADIZ-CP** Rev **-1M**

Date: Saturday, April 24, 2010 Sheet 1 of 57

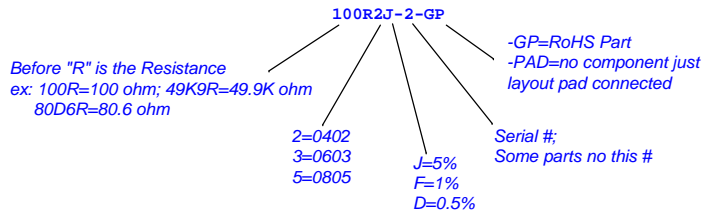
# PCH Strapping

Name	Schematics Notes
SPKR	<b>Reboot option at power-up</b> Default Mode: Internal weak Pull-down. <b>No Reboot Mode with TCO Disabled:</b> Connect to Vcc3_3 with 8.2-kΩ - 10-kΩ weak pull-up resistor.
INIT3_3V#	Weak internal pull-down. Do not pull high.
GNT3#/GPIO55	<b>Default Mode:</b> Internal pull-up. <b>Low (0) = Top Block Swap Mode</b> (Connect to ground with 4.7-kΩ weak pull-down resistor).
INTVRMEN	<b>High (1) = Integrated VRM is enabled</b> <b>Low (0) = Integrated VRM is disabled</b>
GNT0#, GNT1#	<b>Default (SPI):</b> Left both GNT0# and GNT1# floating. No pull up required. <b>Boot from PCI:</b> Connect GNT1# to ground with 1-kΩ pull-down resistor. Leave GNT0# Floating. <b>Boot from LPC:</b> Connect both GNT0# and GNT1# to ground with 1-kΩ pull-down resistor.
GNT2#/GPIO53	<b>Default - Internal pull-up.</b> <b>Low (0)=</b> Configures DMI for ESI compatible operation (for servers only. Not for mobile/desktops).
GPIO33	<b>Default:</b> Do not pull low. <b>Disable ME in Manufacturing Mode:</b> Connect to ground with 1-kΩ pull-down resistor.
SPI_MOSI	<b>Enable iTPM:</b> Connect to Vcc3_3 with 8.2-kΩ weak pull-up resistor. <b>Disable iTPM:</b> Left floating, no pull-down required.
NV_ALE	<b>Enable Danbury:</b> Connect to Vcc3_3 with 8.2-kΩ weak pull-up resistor. <b>Disable Danbury:</b> Connect to ground with 4.7-kΩ weak pull-down resistor.
NC_CLE	Weak internal pull-up. Do not pull low.
HAD_DOCK_EN# /GPIO[33]	<b>Low (0):</b> Flash Descriptor Security will be overridden. <b>High (1) :</b> Flash Descriptor Security will be in effect.
HDA_SDO	Weak internal pull-down. Do not pull high.
HDA_SYNC	Weak internal pull-down. Do not pull high.
GPIO15	Weak internal pull-down. Do not pull high.
GPIO8	Weak internal pull-up. Do not pull low.
GPIO27	<b>Default = Do not connect (floating)</b> High(1) = Enables the internal VccVRM to have a clean supply for analog rails. No need to use on-board filter circuit. Low (0) = Disables the VccVRM. Need to use on-board filter circuits for analog rails.

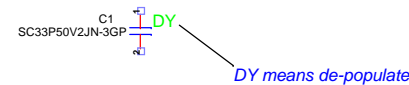
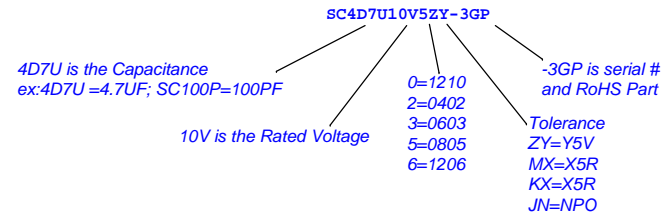
# Processor Strapping

Pin Name	Strap Description	Configuration (Default value for each bit is 1 unless specified otherwise)	Default Value
CFG[4]	<b>Embedded DisplayPort Presence</b>	1: Disabled - No Physical Display Port attached to Embedded DisplayPort. 0: Enabled - An external Display Port device is connected to the Embedded Display Port.	1
CFG[3]	<b>PCI-Express Static Lane Reversal</b>	1: Normal Operation. 0: Lane Numbers Reversed 15 -> 0, 14 -> 1, ...	1
CFG[0]	<b>PCI-Express Configuration Select</b>	1: Single PCI-Express Graphics 0: Bifurcation enabled	1
CFG[7]	<b>Reserved - Temporarily used for early Clarksfield samples.</b>	<b>Clarksfield (only for early samples pre-ESI) -</b> Connect to GND with 3.01K Ohm/5% resistor <b>Note:</b> Only temporary for early CFD samples (xPGA/BGA) [For details please refer to the WW33 MoW and sighting report]. For a common motherboard design (for AUB and CFD), the pull-down resistor should be used. Does not impact AUB functionality.	0

## Resistor

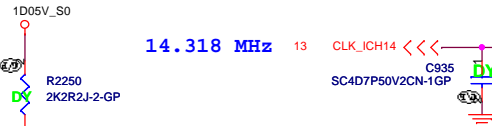
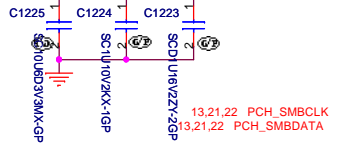
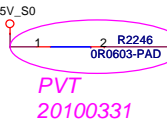
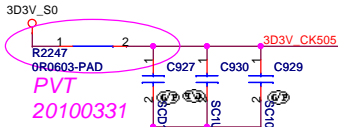
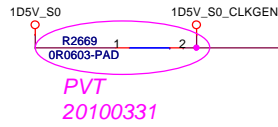
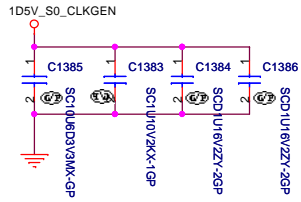


## Capacitor



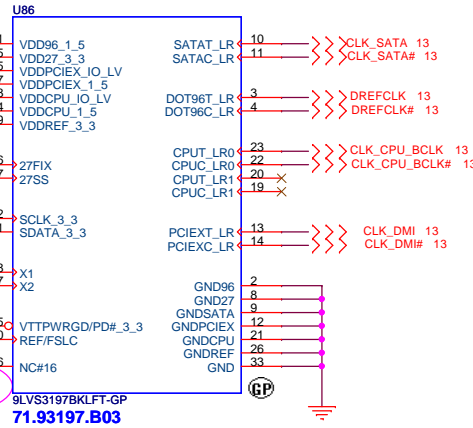
Squire CP DIS SAMSUNG

<b>緯創資通</b>		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>Reference</b>			
Size A3	Document Number	<b>CADIZ-CP</b>	Rev <b>-1M</b>
Date: Saturday, April 24, 2010		Sheet 2	of 57

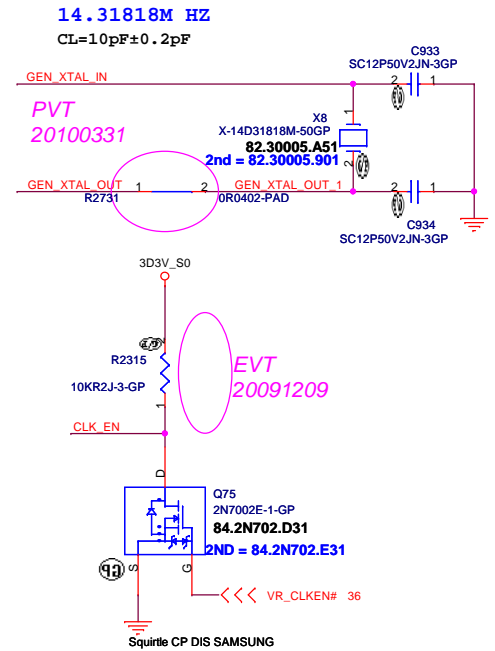


FSC	0	1
SPEED	133MHz (Default)	100MHz

PIN#	1	5	15	17	18	24	29	16
9LRS3197	3.3V	3.3V	1.05V~3.3V	3.3V	1.05V~3.3V	3.3V	3.3V	CPU_STOP#
9LVS3197	1.5V	3.3V	1.05V~1.5V	1.5V	1.05V~1.5V	1.5V	3.3V	NC



- 100 MHz SATA
- 96 MHz PCH
- 133-MHz CPU
- 100 MHz DMI



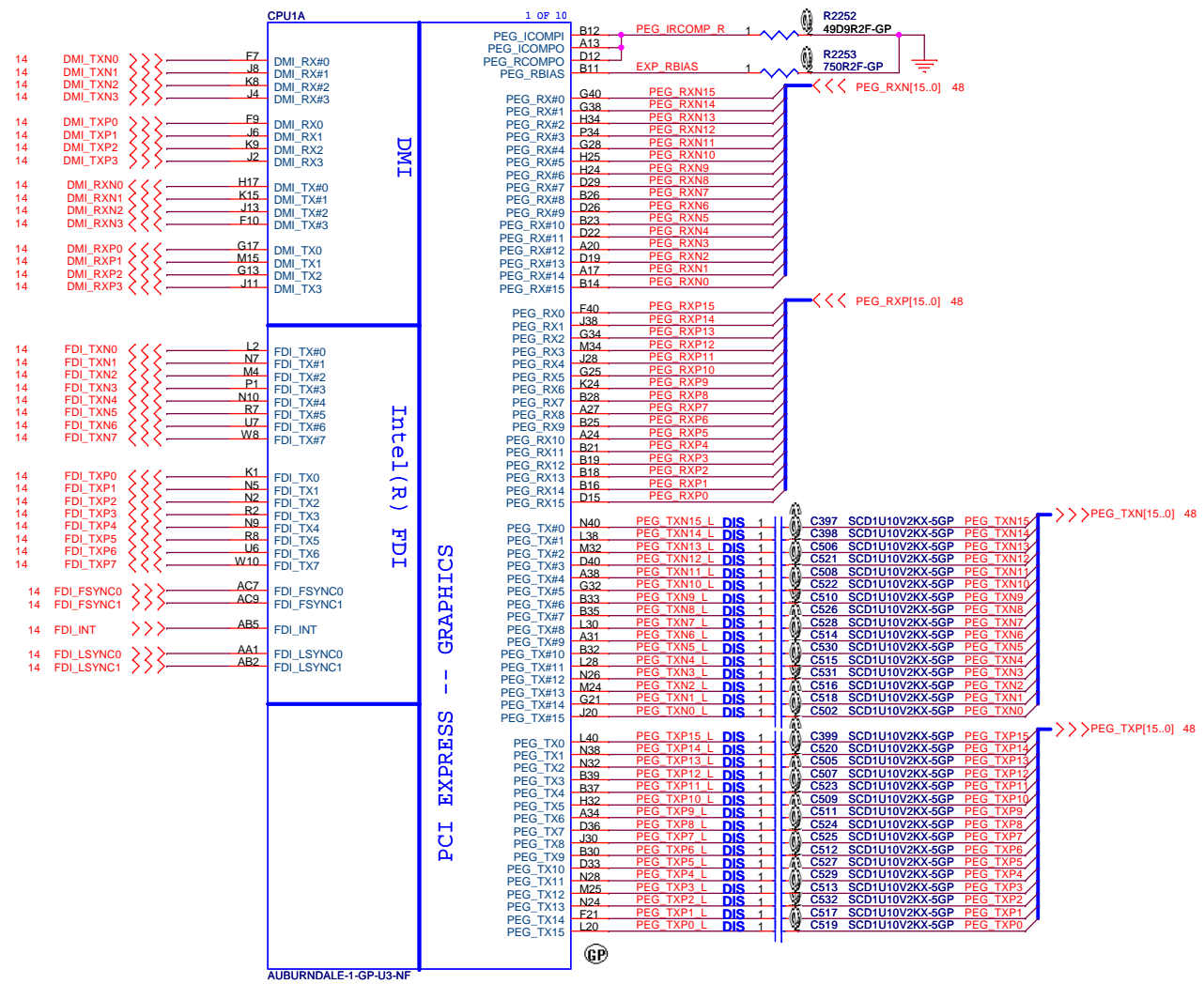
Squirtle CP DIS SAMSUNG

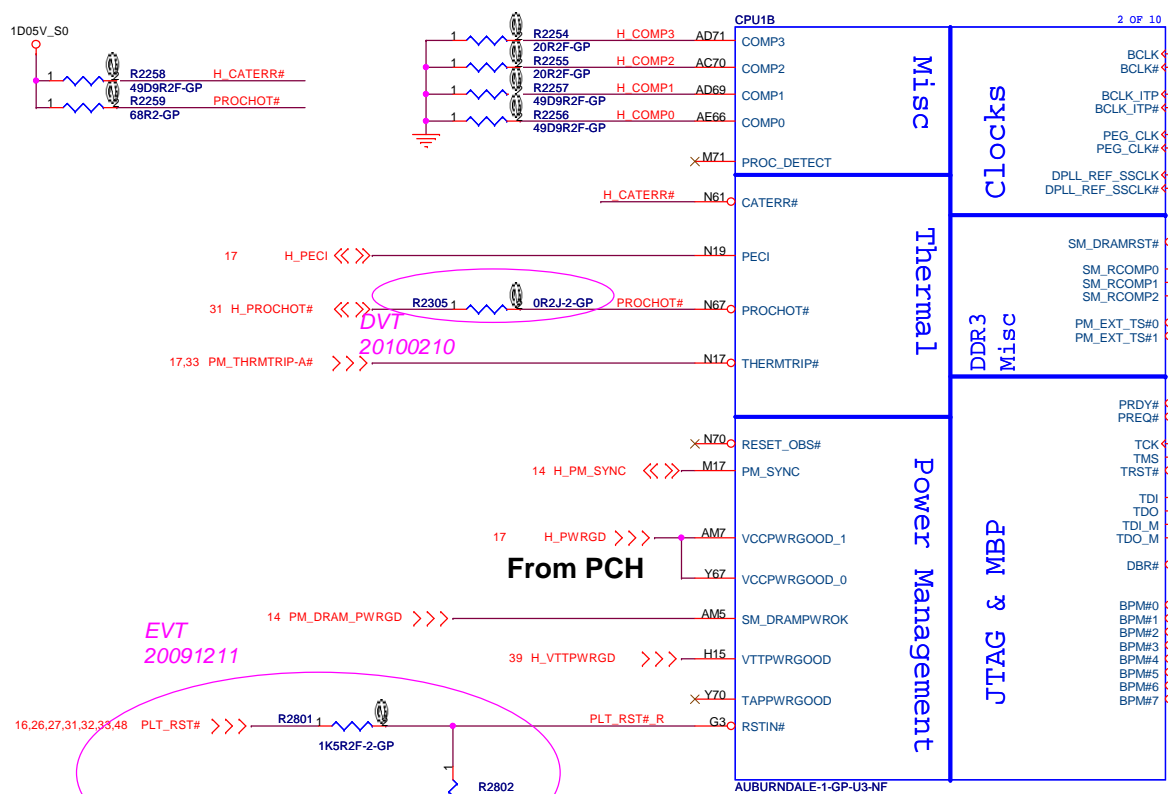
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **Clock Generator**

Size: Custom Document Number: **CADIZ-CP** Rev: **-1M**

Date: Saturday, April 24, 2010 Sheet 3 of 57

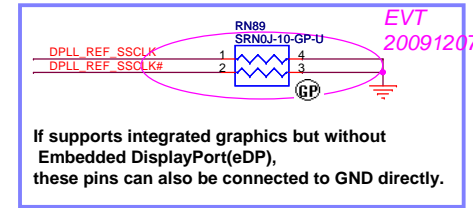




EVT  
20091211

DVT  
20100210

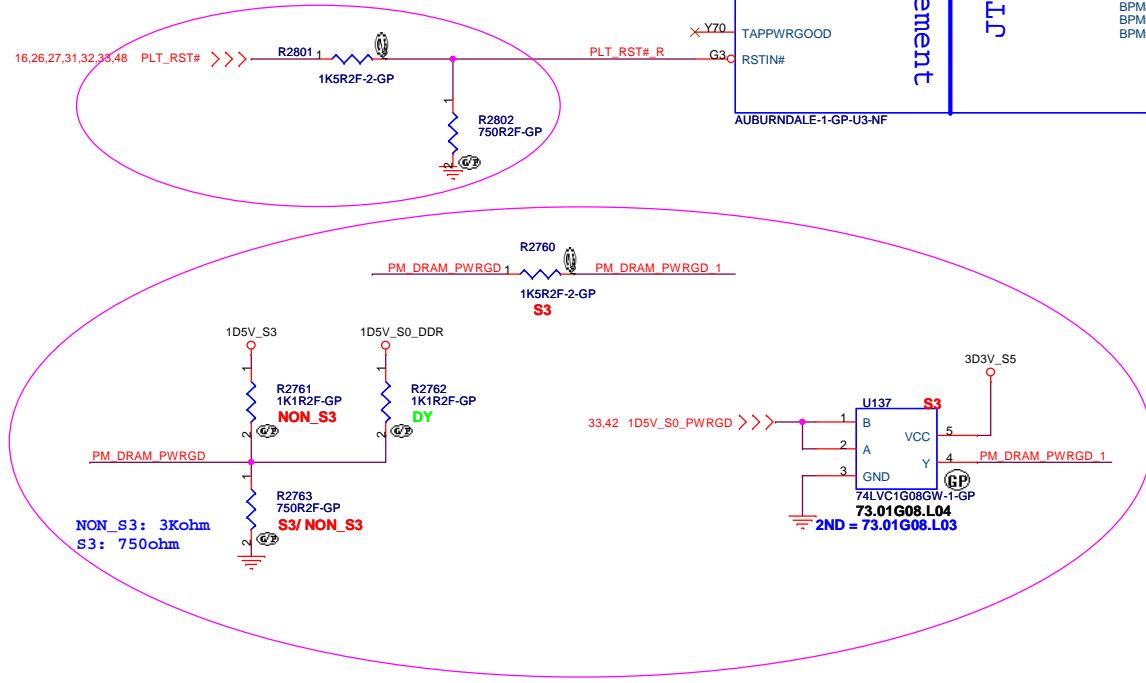
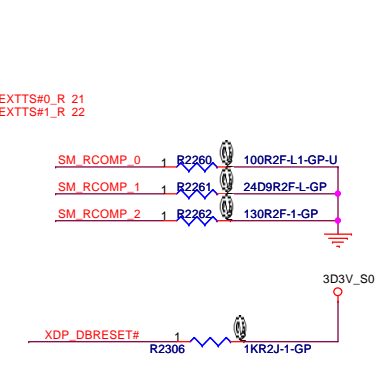
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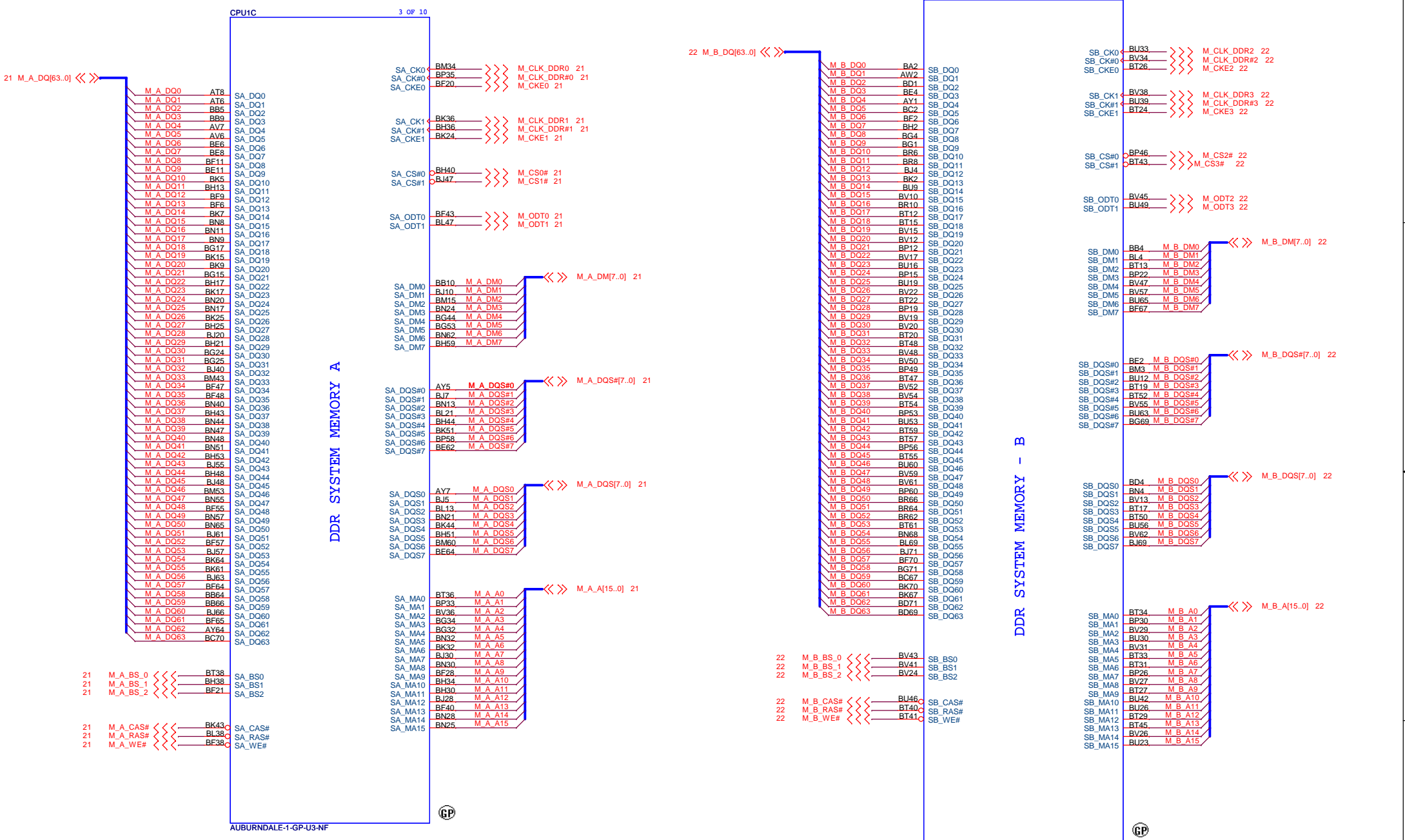


If supports integrated graphics but without Embedded DisplayPort(eDP), these pins can also be connected to GND directly.

EVT  
20091207

EVT  
20091204





AUBURDALE-1-GP-U3-NF

AUBURDALE-1-GP-U3-NF

Squirtle CP DIS SAMSUNG

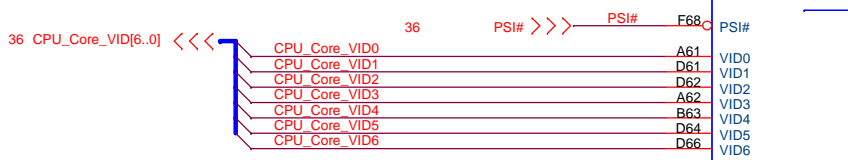
**緯創資通 Wistron Corporation**  
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

**CPU SFF 3 of 8(DDR)**

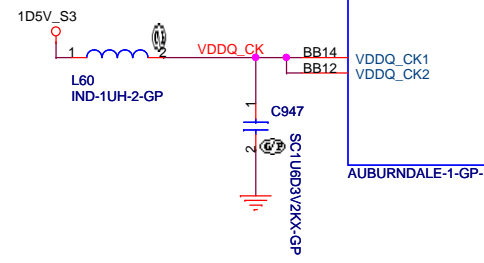
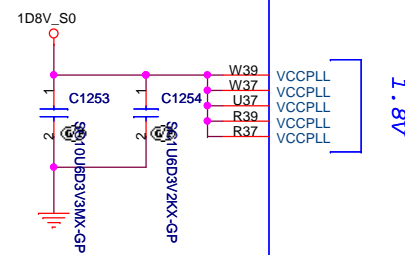
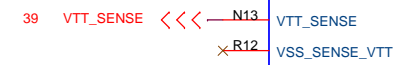
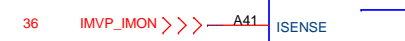
Title: **CPU SFF 3 of 8(DDR)**

Size: A3 Document Number: **CADIZ-CP** Rev: **-1M**

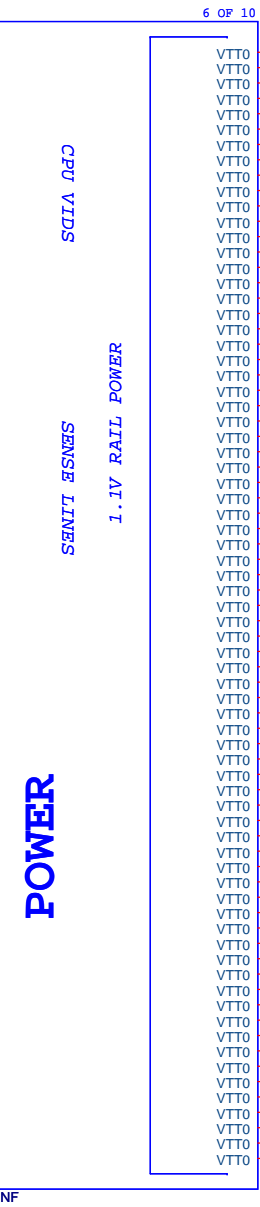
Date: Saturday, April 24, 2010 Sheet 6 of 57



EVT  
20091201



Please note that the VTT Rail Values are Auburndale VTT=1.05V; Clarksfield VTT=1.1V



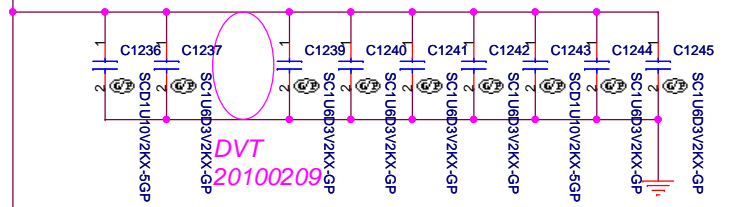
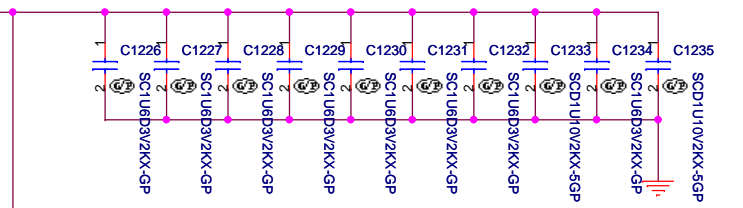
POWER

CPU VIDS

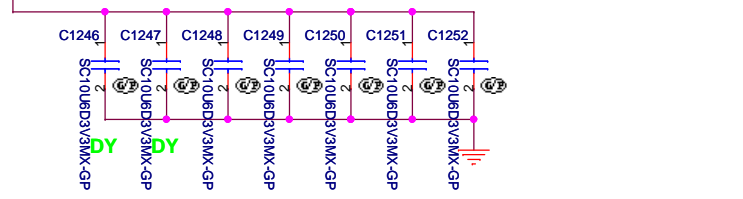
SENSE LINES

1.1V RAIL POWER

1D05V\_S0



DVT  
20100209



1D05V\_S0

Squirrelle CP DIS SAMSUNG

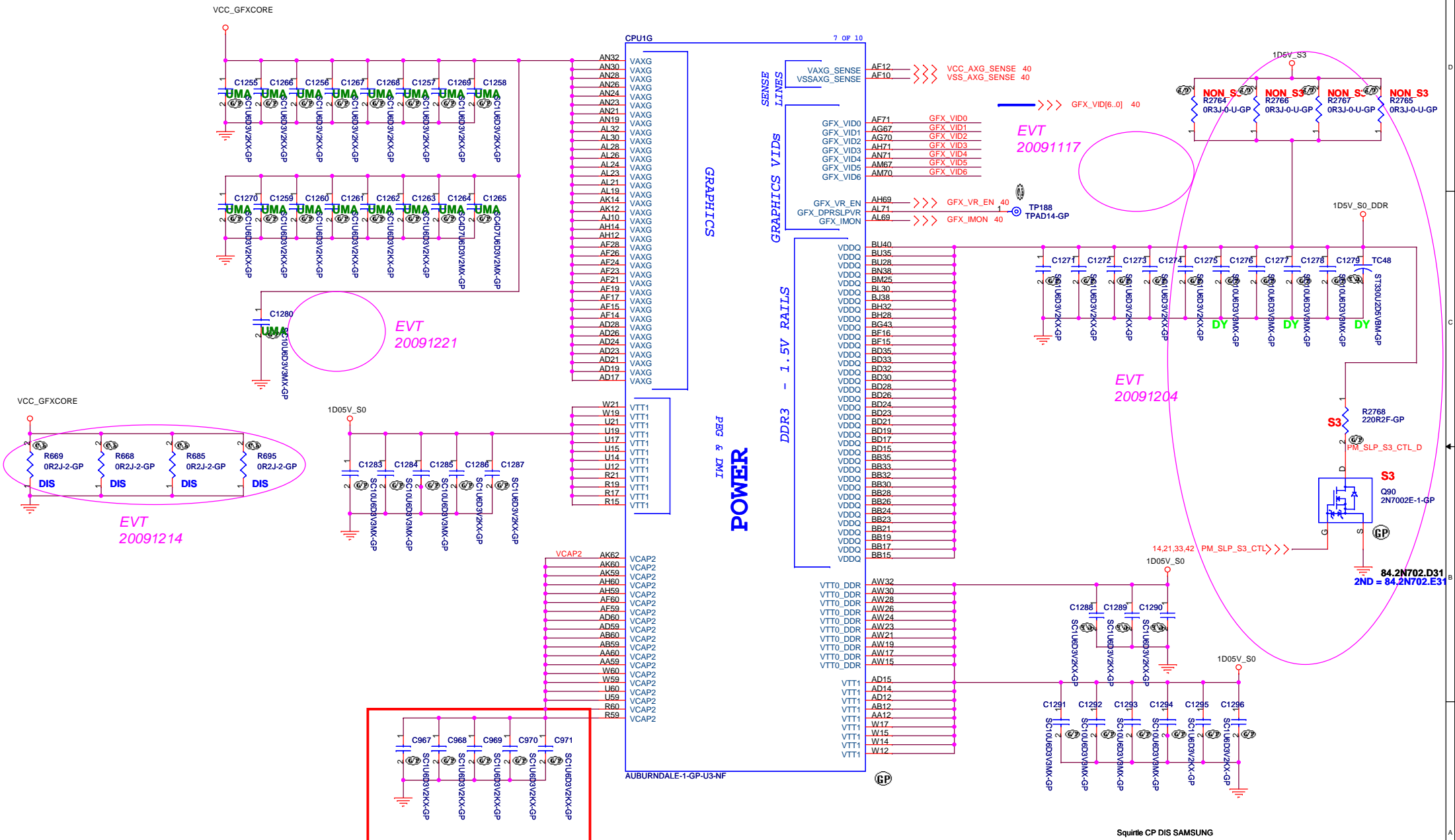
緯創資通 Wistron Corporation  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title CPU SFF 4 of 8(POWER/VTT)

Size Custom Document Number CADIZ-CP Rev -1M

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Do not dummy these CAPS

Squirrelle CP DIS SAMSUNG

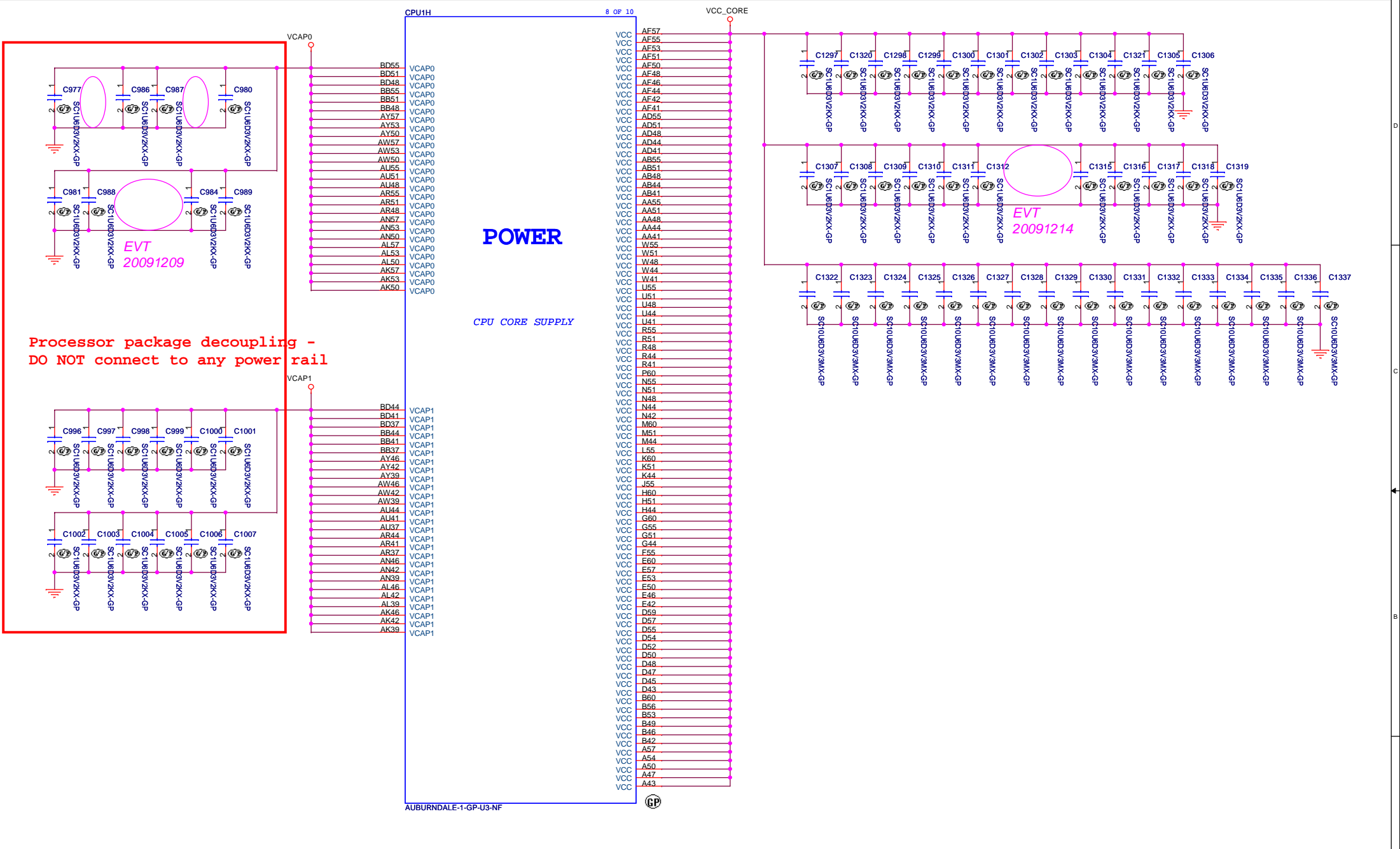
**緯創資通** Wistron Corporation  
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title **CPU SFF 5 of 8(PWR/DDR/GFX)**

Size A3 Document Number **CADIZ-CP** Rev **-1M**

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Processor package decoupling -  
DO NOT connect to any power rail

**POWER**  
CPU CORE SUPPLY

EVT  
20091214

Squirrelle CP DIS SAMSUNG

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Taipei Hsien 221, Taiwan, R.O.C.

Title **CPU SFF 6 of 8(CPU CORE)**

Size A3 Document Number **CADIZ-CP** Rev **-1M**

Date: Saturday, April 24, 2010 Sheet 9 of 57

CPU1E 5 OF 10

- CFG0 AL4
- CFG1 AM2
- CFG2 AK1
- CFG3 AK2
- CFG4 AK4
- CFG5 AJ2
- CFG6 AT2
- CFG7 AG7
- CFG8 AF4
- CFG9 AG2
- CFG10 AH1
- CFG11 AC2
- CFG12 AC4
- CFG13 AE2
- CFG14 AD1
- CFG15 AF8
- CFG16 AF6
- CFG17 AB7

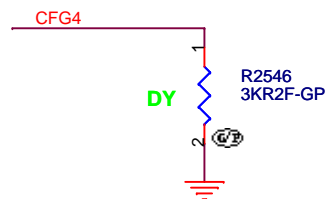
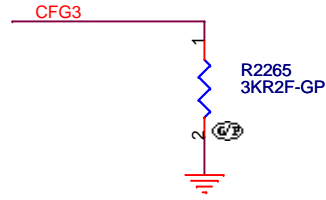
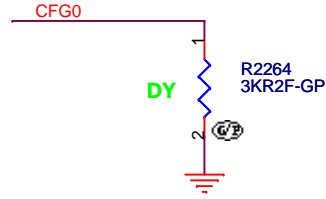
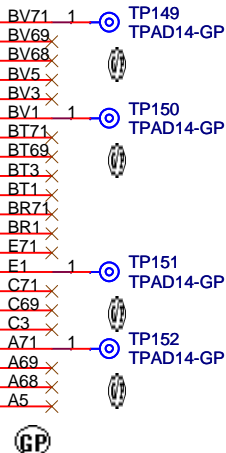
- RSVD#W66 W66
- RSVD#W64 W64
- RSVD#AC69 AC69
- RSVD#AC71 AC71
- RSVD#AA71 AA71
- RSVD#AA69 AA69
- RSVD#R66 R66
- RSVD#R64 R64
- RSVD\_NCTF#BT5 BT5
- RSDV\_NCTF#BR5 BR5
- RSDV\_NCTF#BV6 BV6
- RSDV\_NCTF#BV8 BV8
- RSVD#AV69 AV69
- RSVD#AK71 AK71
- RSVD#AN69 AN69
- RSVD#AP66 AP66
- RSVD#AH66 AH66
- RSVD#AK66 AK66
- RSVD#AR71 AR71
- RSVD#AM66 AM66
- RSVD#AK69 AK69
- RSVD#AU71 AU71
- RSVD#AT70 AT70
- RSVD#AR69 AR69
- RSVD#AU69 AU69
- RSVD#AT67 AT67

RESERVED

- RSVD\_TP0 AU1
- RSVD#T4 T4
- RSVD#T2 T2
- RSVD#U1 U1
- RSVD#V2 V2
- RSVD#AV71 AV71
- RSVD#AW70 AW70
- RSVD#AY69 AY69
- RSVD#BB69 BB69
- RSVD#D8 D8
- RSVD#B7 B7
- RSVD#A10 A10
- RSVD#B9 B9
- RSVD\_NCTF#C5 C5
- RSVD\_NCTF#A6 A6
- RSVD\_NCTF#E3 E3
- RSVD\_NCTF#F1 F1

NCTF TEST PIN:  
A5, A68, A69, A71, C3, C71, E1, E71, BR1, BR71,  
BT1, BT71, BV1, BV3, BV5, BV68, BV69, BV71

- NCTF\_DC\_TEST#BV71 BV71
- NCTF\_DC\_TEST#BV69 BV69
- NCTF\_DC\_TEST#BV68 BV68
- NCTF\_DC\_TEST#BV5 BV5
- NCTF\_DC\_TEST#BV3 BV3
- NCTF\_DC\_TEST#BV1 BV1
- NCTF\_DC\_TEST#BT71 BT71
- DC\_TEST\_BT69 BT69
- DC\_TEST\_BT3 BT3
- DC\_TEST\_BT1 BT1
- NCTF\_DC\_TEST#BT1 BT1
- NCTF\_DC\_TEST#BR71 BR71
- NCTF\_DC\_TEST#BR1 BR1
- NCTF\_DC\_TEST#E71 E71
- NCTF\_DC\_TEST#E1 E1
- NCTF\_DC\_TEST#C71 C71
- DC\_TEST\_C69 C69
- DC\_TEST\_C3 C3
- NCTF\_DC\_TEST#A71 A71
- NCTF\_DC\_TEST#A69 A69
- NCTF\_DC\_TEST#A68 A68
- NCTF\_DC\_TEST#A5 A5



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

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

CFG4 - 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

Squirrel CP DIS SAMSUNG

**Wistron Corporation**  
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CPU SFF 7 of 8(REERVED)

Size A4	Document Number	CADIZ-CP	Rev
			-1M

CPU1I

9 OF 10

BU62	VSS	AY24
BU58	VSS	AY23
BU55	VSS	AY21
BU51	VSS	AY19
BU48	VSS	AY17
BU44	VSS	AY15
BU37	VSS	AY14
BU32	VSS	AY12
BU25	VSS	AY8
BU21	VSS	AY4
BU18	VSS	AW67
BU14	VSS	AW62
BU11	VSS	AW59
BU7	VSS	AW55
BP42	VSS	AW51
BN64	VSS	AW48
BN6	VSS	AW44
BM70	VSS	AW41
BM51	VSS	AW37
BM44	VSS	AV9
BM32	VSS	AV7
BM24	VSS	AU70
BM17	VSS	AU62
BL57	VSS	AU57
BL55	VSS	AU53
BL48	VSS	AU50
BL40	VSS	AU46
BL38	VSS	AU42
BL20	VSS	AU39
BK63	VSS	AU35
BK60	VSS	AU33
BK53	VSS	AU32
BK34	VSS	AU30
BK10	VSS	AU28
BJ64	VSS	AU26
BJ21	VSS	AD53
BJ9	VSS	AD50
BJ1	VSS	AD46
BH70	VSS	AD42
BH57	VSS	AD4
BH55	VSS	AC67
BH47	VSS	AC64
BH24	VSS	AC10
BH20	VSS	AC5
BH15	VSS	AC1
BG51	VSS	AB70
BG36	VSS	AB62
BF62	VSS	AB57
BF30	VSS	AB53
BF13	VSS	AB50
BF8	VSS	AB46
BE70	VSS	AB42
BE55	VSS	AB39
BE9	VSS	AB37
BE1	VSS	AB37
BD57	VSS	AB35
BD53	VSS	AB33
BD50	VSS	AB32
BD46	VSS	AB30
BD42	VSS	AB28
BD39	VSS	AB26
BD14	VSS	AB24
BB71	VSS	AB24
BB62	VSS	AB21
BB57	VSS	AB19
BB53	VSS	AB17
BB50	VSS	AB15
BB46	VSS	AB14
BB42	VSS	AB14
BB39	VSS	AB9
BB7	VSS	AA66
BB1	VSS	AA64
BA70	VSS	AA62
AY71	VSS	AA67
AY66	VSS	AA53
AY62	VSS	AA50
AY59	VSS	AA46
AY55	VSS	AA42
AY51	VSS	AA39
AY48	VSS	AA37
AR42	VSS	AA35
AR39	VSS	AA33
AR35	VSS	AA28
AR33	VSS	AA26
AR32	VSS	AA24
AR30	VSS	AA23
AR28	VSS	AA22
AR26	VSS	AA21
AR24	VSS	AA19
AR23	VSS	AH62
AR21	VSS	F4
AR19	VSS	F20
AR17	VSS	E37
AR15	VSS	E33
AR14	VSS	E30
AR4	VSS	BT68
AP70	VSS	E16
AP64	VSS	E12
AN62	VSS	D41
AN55	VSS	D38
AY44	VSS	D34
AY41	VSS	D31
AY37	VSS	D27
AY35	VSS	D24
AY33	VSS	D20
AY32	VSS	H71
AY30	VSS	F71
AY28	VSS	E69
AY26	VSS	E68
	VSS	A66
	VSS	A64
	VSS	E5
	VSS	C68

VSS

AUBURNDALE-1-GP-U3-NF



CPU1J

10 OF 10

AH53	VSS	A40
AH51	VSS	A36
AH50	VSS	A33
AH48	VSS	A29
AH46	VSS	A26
AH44	VSS	A22
AH42	VSS	A19
AH41	VSS	A15
AH39	VSS	A12
AH37	VSS	A8
AH35	VSS	B62
AH33	VSS	B58
AH32	VSS	B55
AH30	VSS	B51
AH28	VSS	B48
AH26	VSS	B44
AH24	VSS	A59
AH23	VSS	A55
AH21	VSS	A52
AH19	VSS	A48
AH17	VSS	A45
AH15	VSS	AA17
AH4	VSS	AA15
AG64	VSS	AA14
AG9	VSS	AA4
AG6	VSS	W89
AF69	VSS	W62
AF62	VSS	W57
AF1	VSS	W53
AE70	VSS	W50
AE64	VSS	W46
AD62	VSS	W42
AD57	VSS	W6
AD53	VSS	W1
AD50	VSS	V70
AD46	VSS	U64
AD42	VSS	U62
AD4	VSS	U57
AC67	VSS	U53
AC64	VSS	U50
AC10	VSS	U46
AC5	VSS	U42
AC1	VSS	U39
AB70	VSS	U9
AB62	VSS	U4
AB57	VSS	T1
AB53	VSS	R70
AB50	VSS	R62
AB46	VSS	R57
AB42	VSS	R53
AB39	VSS	R50
AB37	VSS	R46
AB35	VSS	R42
AB33	VSS	R5
AB32	VSS	P4
AB30	VSS	N63
AB28	VSS	N57
AB26	VSS	N53
AB24	VSS	N50
AB23	VSS	N46
AB21	VSS	N30
AB19	VSS	N21
AB17	VSS	N15
AB15	VSS	M53
AB14	VSS	M42
AB9	VSS	M36
AA66	VSS	M1
AA64	VSS	L70
AA62	VSS	L57
AA67	VSS	L48
AA53	VSS	L47
AA50	VSS	L13
AA46	VSS	K64
AA42	VSS	K53
AA39	VSS	K43
AA37	VSS	K36
AA35	VSS	K34
AA33	VSS	K32
AA28	VSS	K25
AA26	VSS	K17
AA24	VSS	K11
AA23	VSS	K6
AA21	VSS	K4
AJ70	VSS	J65
F20	VSS	J57
F4	VSS	J48
E37	VSS	J47
E33	VSS	J40
E30	VSS	J9
BT68	VSS	H53
E16	VSS	H43
E12	VSS	H36
D41	VSS	H1
D38	VSS	G70
D34	VSS	G57
D31	VSS	G53
D27	VSS	G48
D24	VSS	G47
D20	VSS	G43
H71	VSS	G30
F71	VSS	G24
E69	VSS	G20
E68	VSS	G15
A66	VSS	F61
A64	VSS	F48
E5	VSS	F47
C68	VSS	F28

VSS

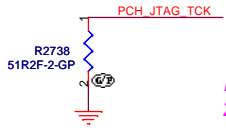
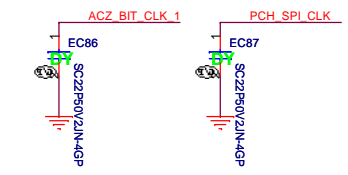
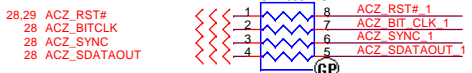
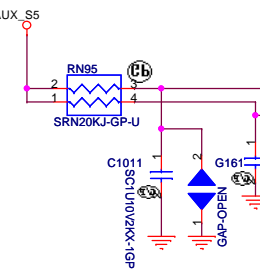
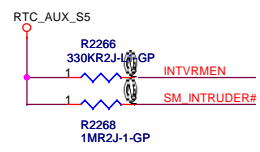
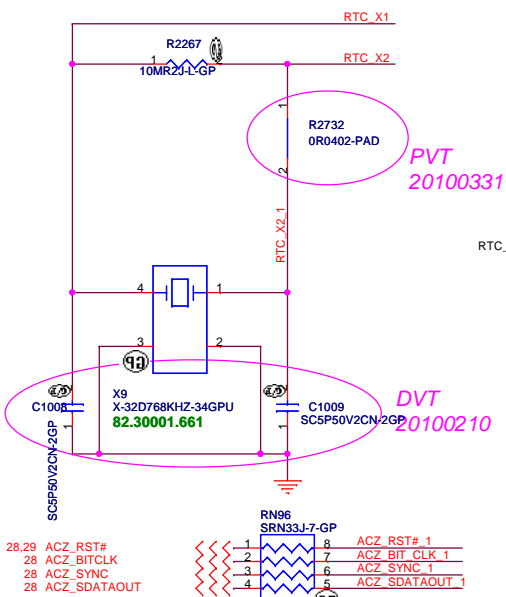
AUBURNDALE-1-GP-U3-NF



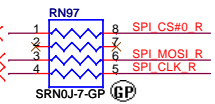
Squirtle CP DIS SAMSUNG

		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
		<b>CPU SFF 8 of 8(VSS)</b>	
Title	Document Number	<b>CADIZ-CP</b>	Rev
Size A3	Date: Saturday, April 24, 2010	Sheet 11 of 57	<b>-1M</b>

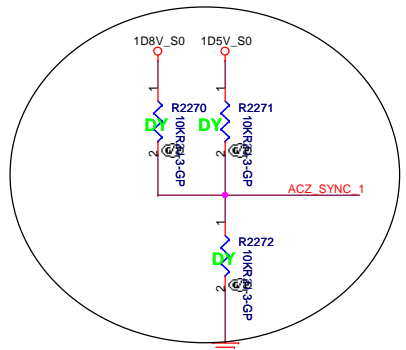
Integrated VccSus1_05,VccSus1_5,VccCL1_5		
INTVRMEN	High=Enable	Low=Disable
Integrated VccLan1_05VccCL1_05		
LAN100_SLP	High=Enable	Low=Disable



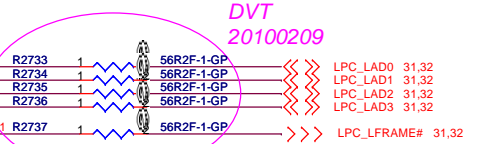
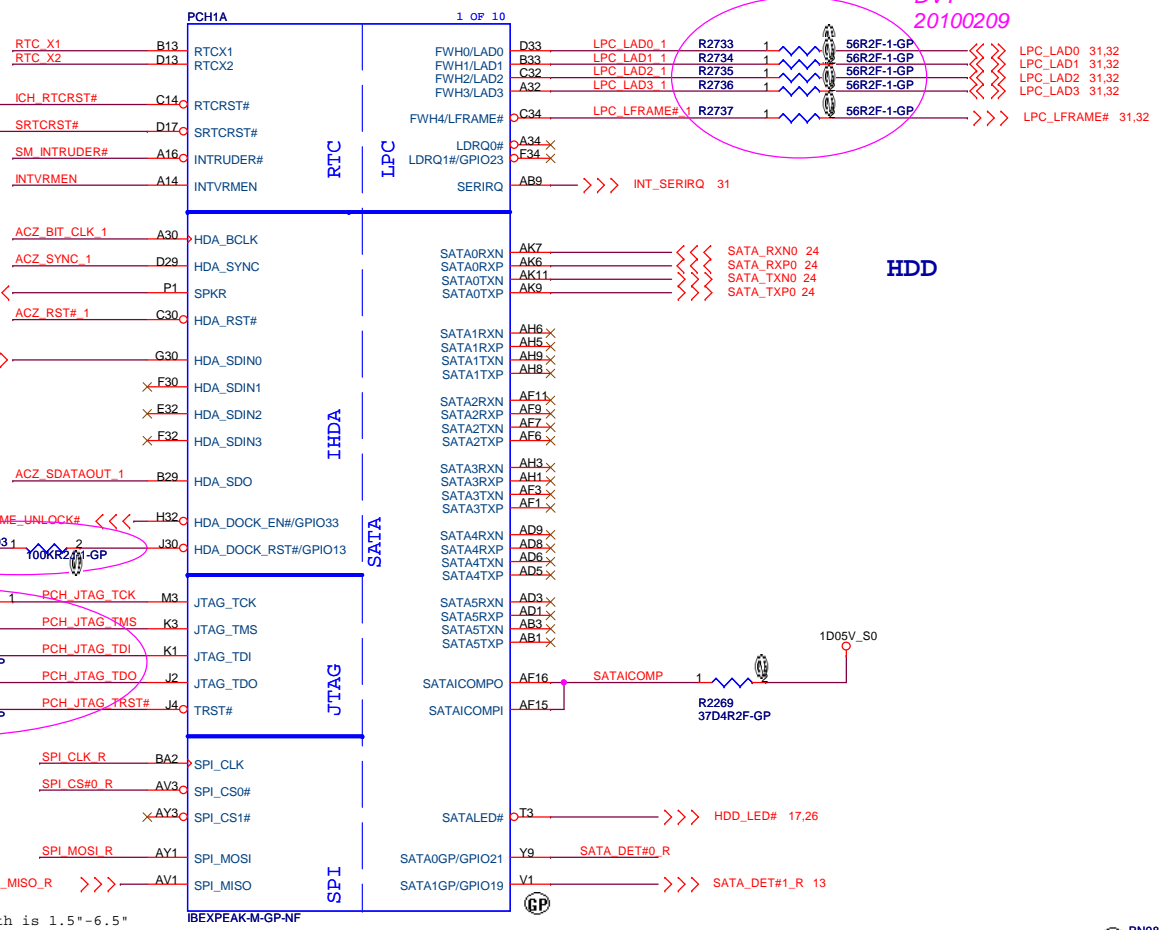
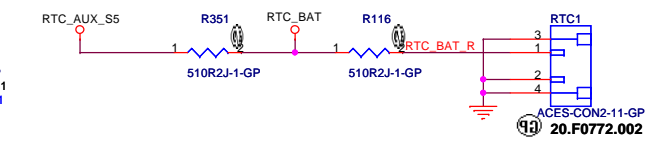
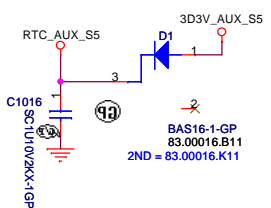
EVT 20091210



SPI\_CS#, SPI\_MISO, SPI\_MOSI, SPI\_CLK:  
No series resistor required if routing length is 1.5"-6.5"



If reserve 1.5/1.8V option for VCCVRM. Not Power plan change only.  
Please refer figure2.HDA\_SYNC will be strap to define VCCVRM is 1.5 or 1.8V. sover.  
Means need have Pull high/low resistor to option,  
P/H voltage base on HAD Link is 1.5V or 3.3V(Figure 3).



HDD

### RTC CONN

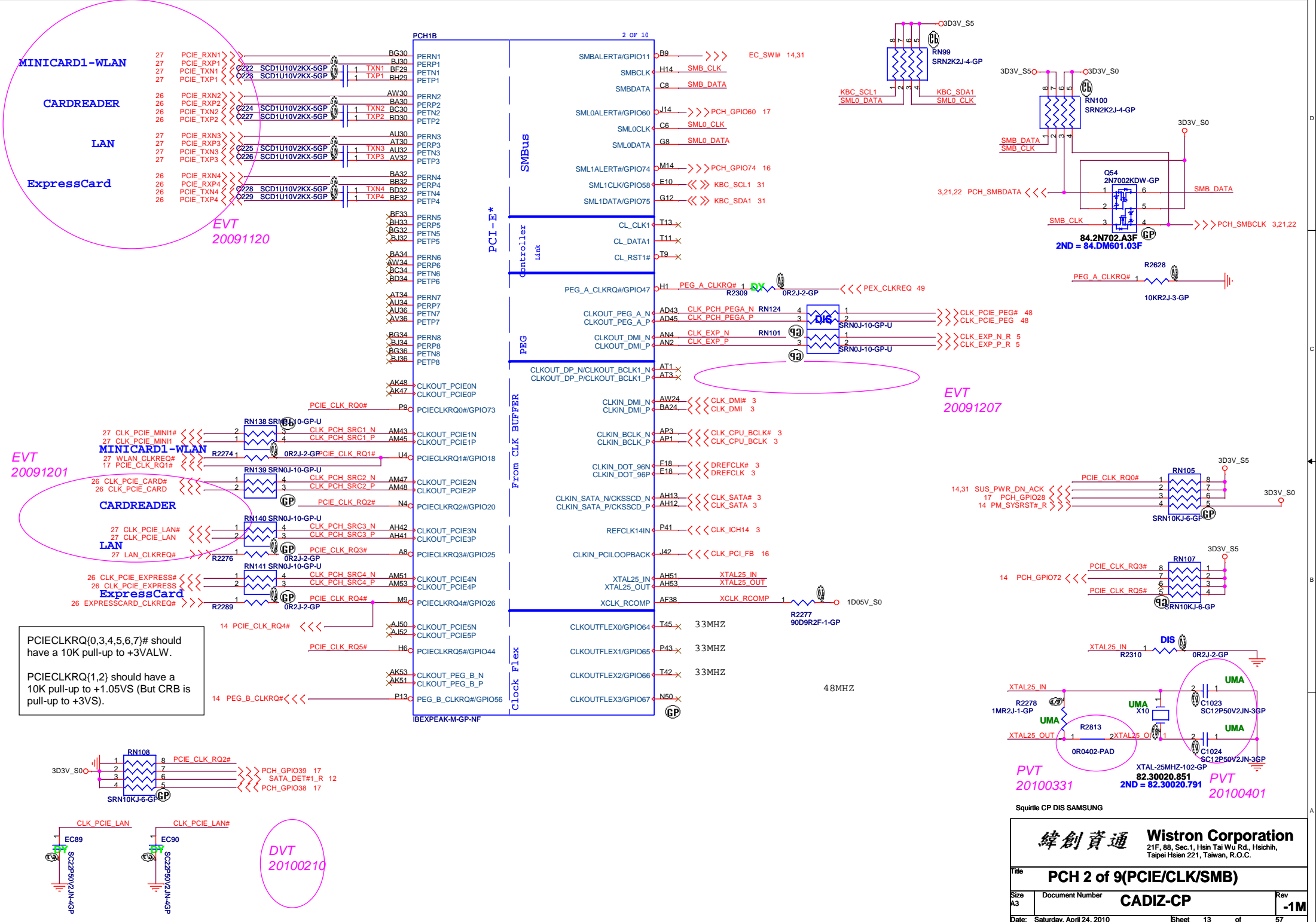
Squirtle CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **PCH 1 of 9(SAT/RTC/HDA)**

Size: A3 Document Number: **CADIZ-CP** Rev: **-1M**

Date: Saturday, April 24, 2010 Sheet 12 of 57



EVT  
20091120

EVT  
20091201

EVT  
20091207

PVT  
20100331  
UMA  
C1023 SC12P50V2JN-3GP  
C1024 SC12P50V2JN-3GP  
XTAL-25MHZ-102-GP  
82.30020.851  
2ND = 82.30020.791  
PVT  
20100401

DVT  
20100210

PCIECLKRQ{0,3,4,5,6,7}# should have a 10K pull-up to +3VALV.  
PCIECLKRQ{1,2} should have a 10K pull-up to +1.05VS (But CRB is pull-up to +3VS).

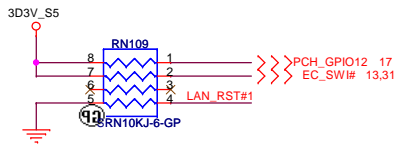
Squintle CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

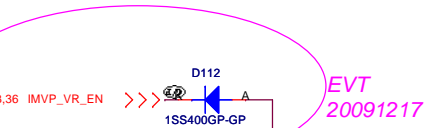
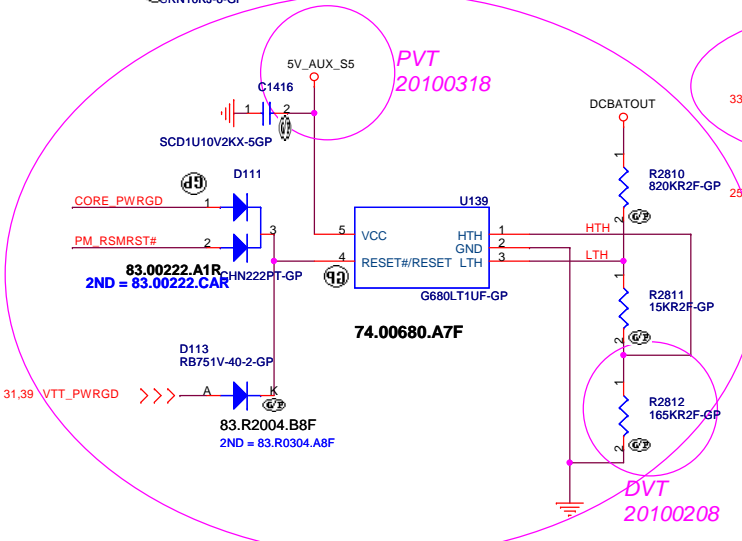
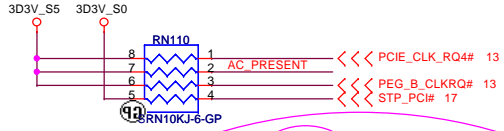
Title **PCH 2 of 9(PCIE/CLK/SMB)**

Size A3 Document Number **CADIZ-CP** Rev **-1M**

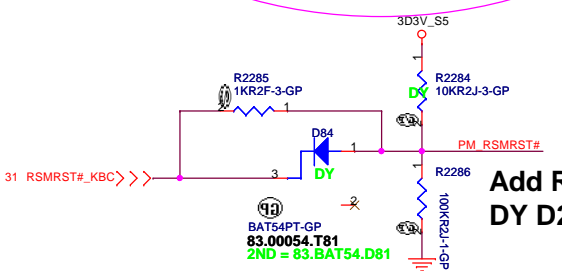
Date: Saturday, April 24, 2010 Sheet 13 of 57



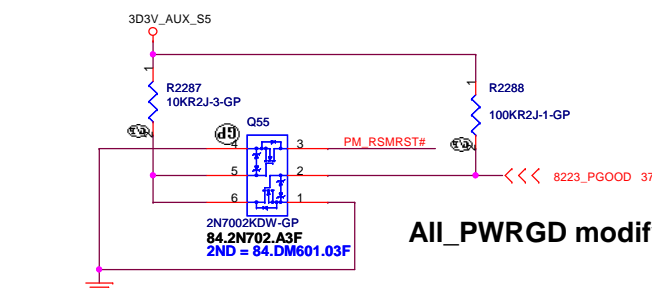
Delete PM\_PWRBTN# pull high



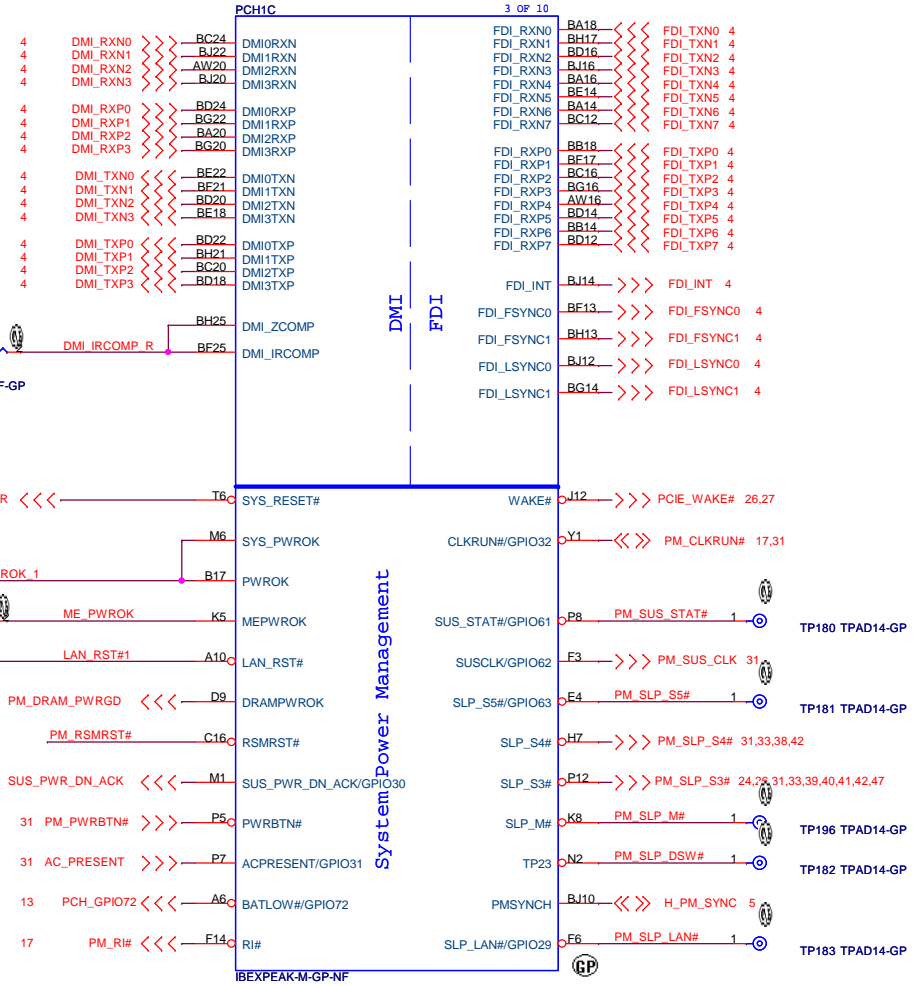
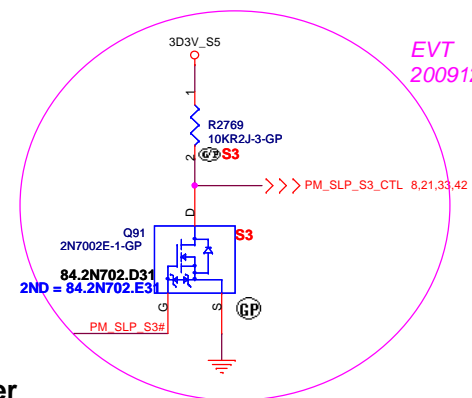
$V_L = 1.245 \cdot ((R1+R2+R3)/(R2+R3))$   
 $V_h = 1.245 \cdot ((R1+R2+R3)/(R3))$



Add RTC Data lose function  
DY D2

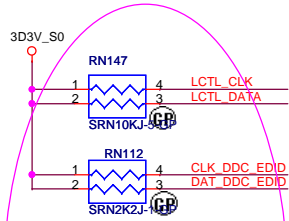


All\_PWRGD modify 51123\_PGOOD from 3V/5V power

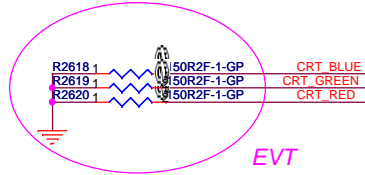


System Power Management

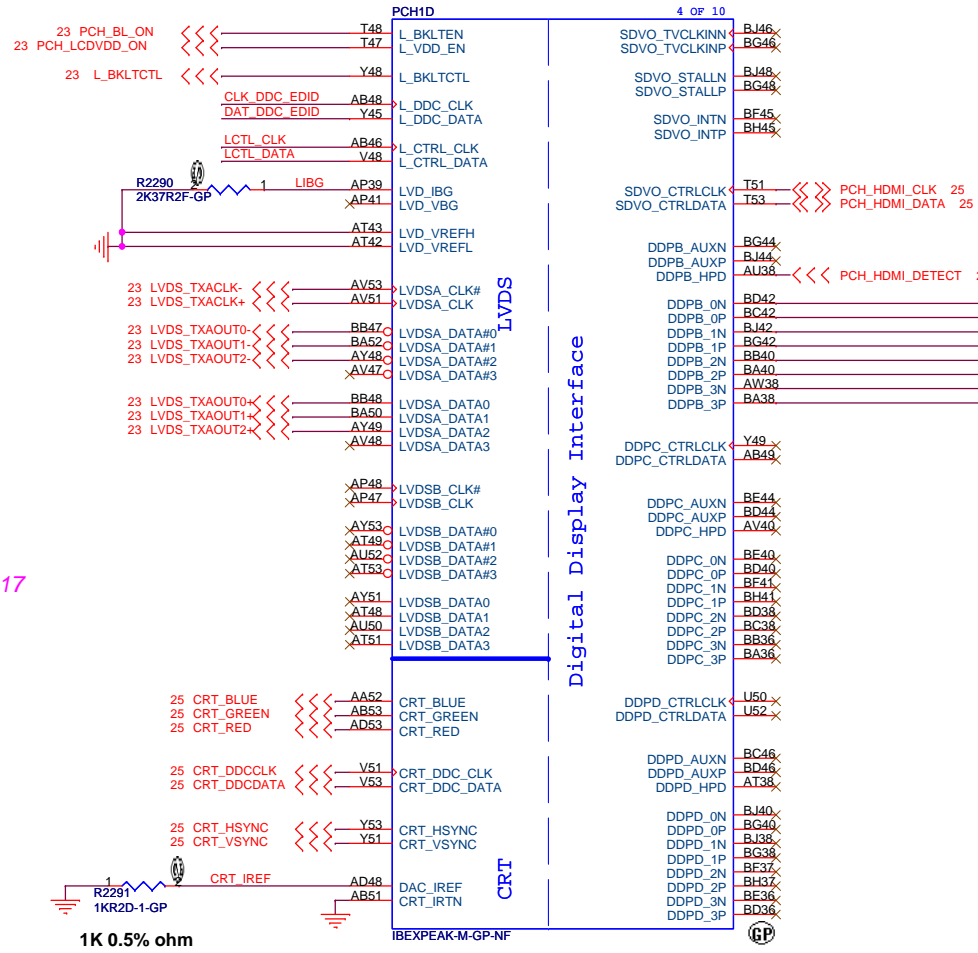
Panel backlight enable control for LVDS -  
used to gate power into the backlight circuit



EVT  
20091117



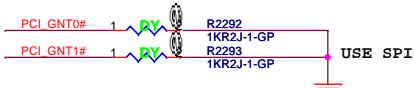
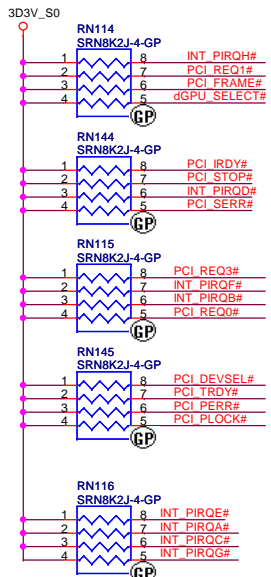
EVT  
20091117



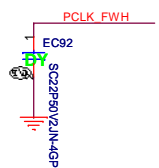
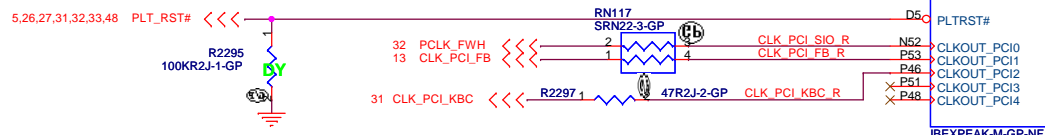
Squirrel CP DIS SAMSUNG

<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>Title PCH 4 of 9(LVDS/CRT/DP)</b>	
Size Custom	Document Number <b>CADIZ-CP</b>
Date: Saturday, April 24, 2010	Rev <b>-1M</b>

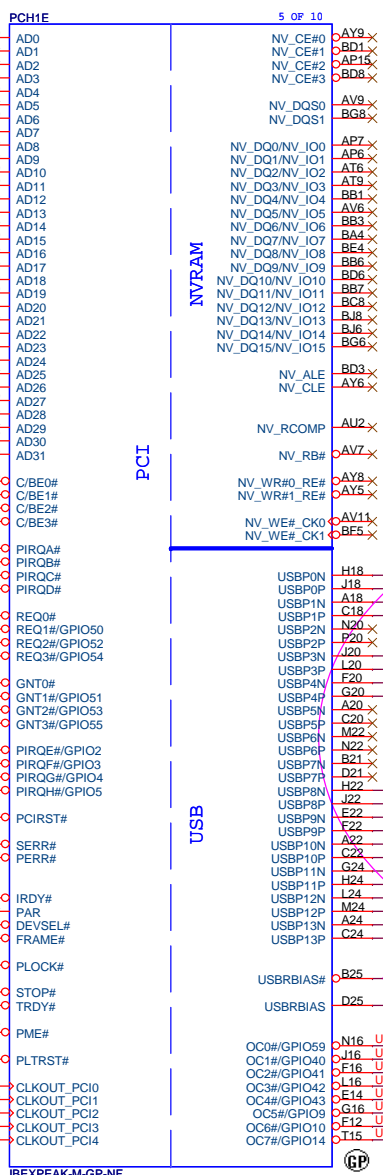




BOOT BIOS Strap		
PCI_GNT#0	PCI_GNT#1	BOOT BIOS Location
0	0	LPC(Default)
1	0	Reserved
0	1	PCI
1	1	SPI



DVT 20100210

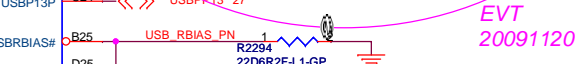


These pins are left as NC, because the function is disable.

These pins are left as NC, because the function is disable.

### USB Table

Pair	Device
0	External #0
1	External #1
2	NC
3	EXPRESS CARD
4	External #2
5	NC
6	NC
7	NC
8	WIMAX(HS)
9	CAMERA(HS)
10	WWAN(HS)
11	FELICA(FS)
12	BLUETOOTH(FS)
13	MULTIMEDIA SIM(FS)



EVT 20091120

EVT 20091214

Squire CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **PCH 5 of 9(PCI/USB)**

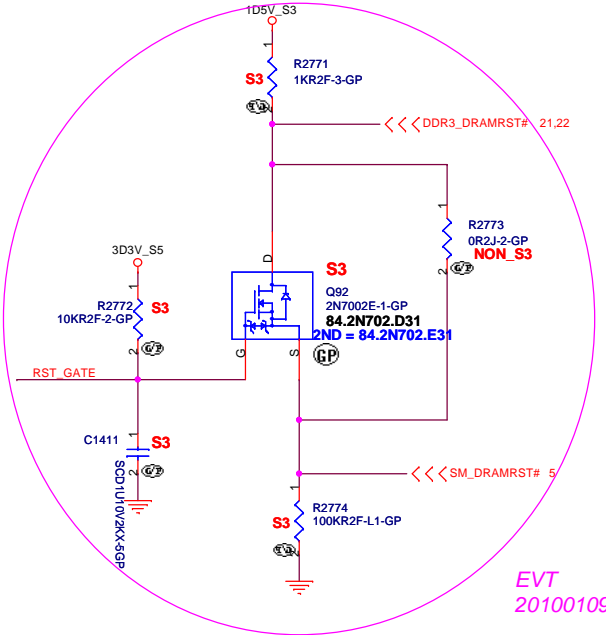
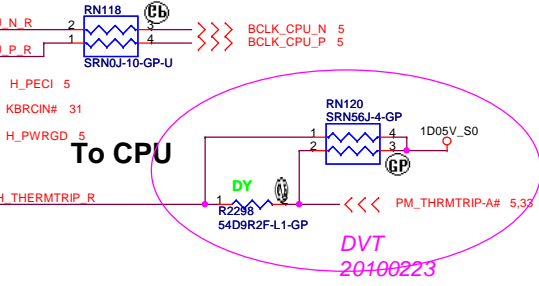
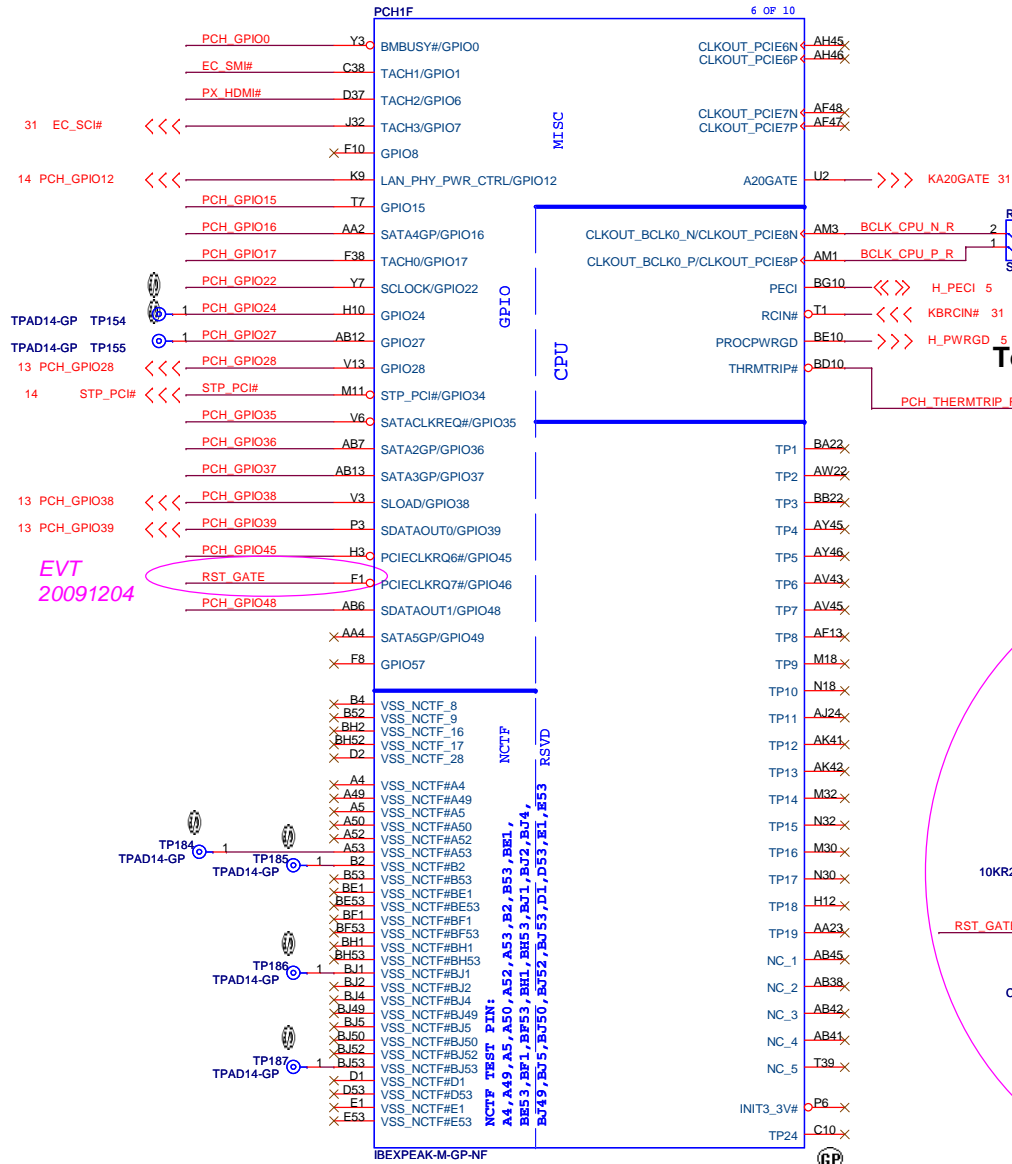
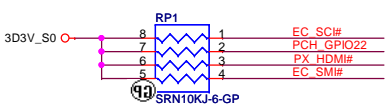
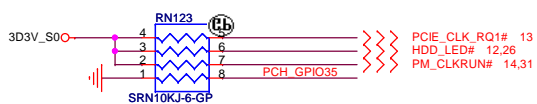
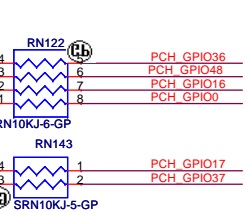
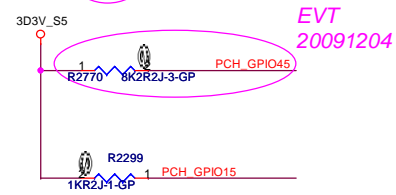
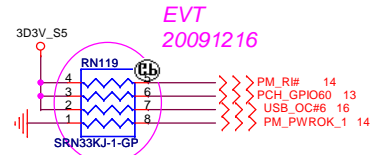
Size A3	Document Number <b>CADIZ-CP</b>	Rev <b>-1M</b>
Date: Saturday, April 24, 2010	Sheet 16 of 57	

GPIO8 has a weak[20K] internal pull up.  
No need to have external pull down/up.  
GPIO8 pin set to high at reset.

GPIO15 has a weak[20K] internal pull down.  
No need to have external pull up/down.  
GPIO 15 pin is set to low at reset.

Low : ME Crypto TLS with no confidentiality  
High : ME Crypto TLS with confidentiality

GPIO27 has a weak[20K] internal pull up.  
To enable on-die PLL Voltage regulator,  
should not place external pull down.



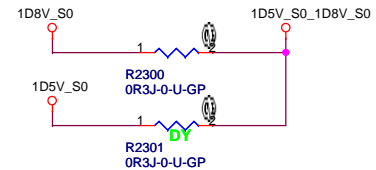
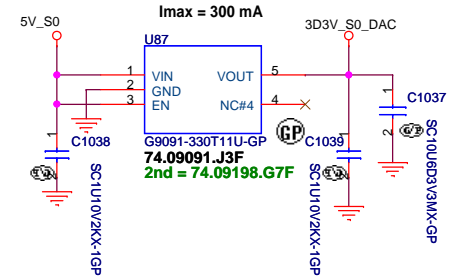
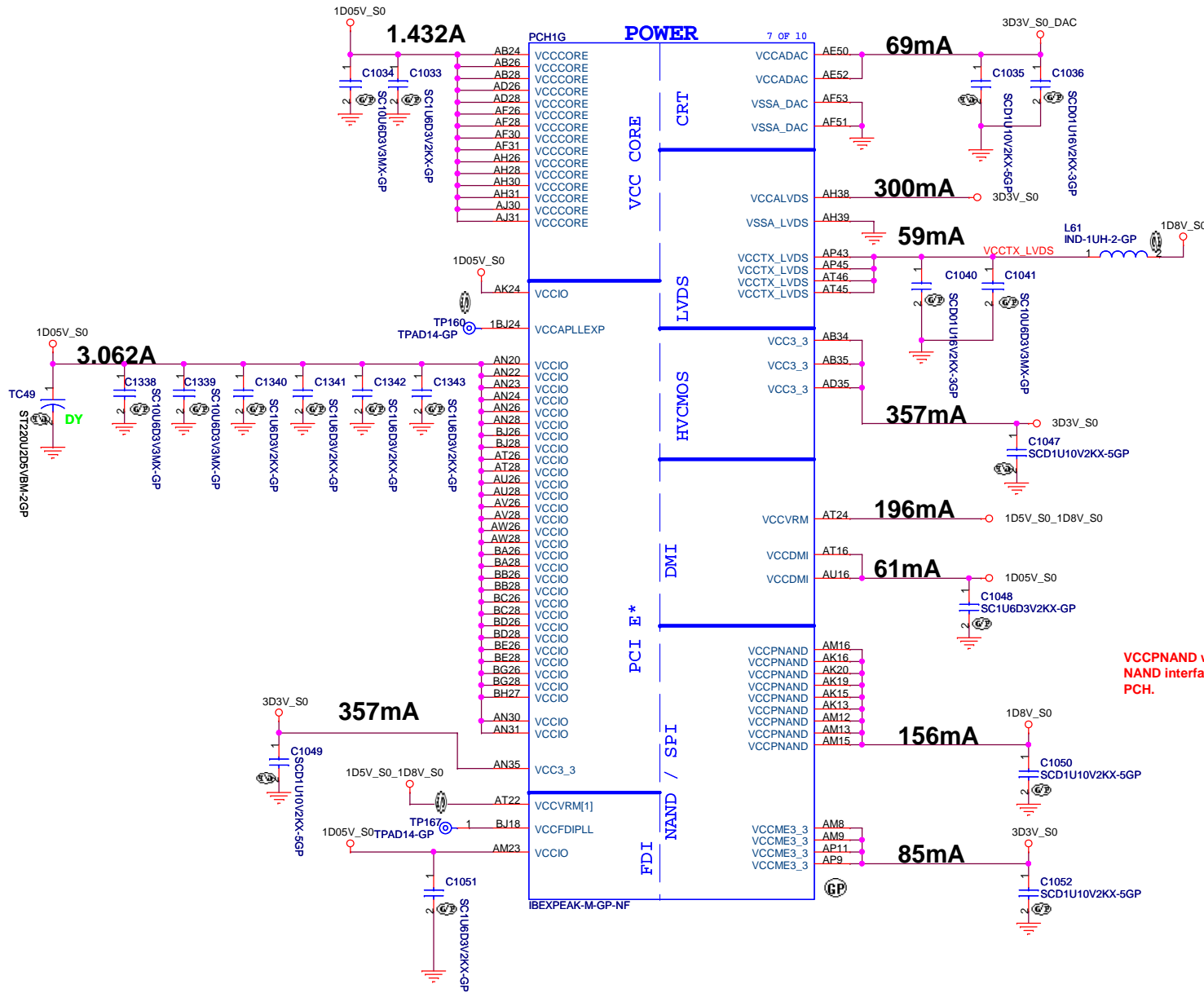
Squirrelle CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **PCH 6 of 9(GPIO/RSVD)**

Size A3 Document Number: **CADIZ-CP** Rev: **-1M**

Date: Saturday, April 24, 2010 Sheet 17 of 57



VCCPNAND which power the DC NAND interface must be powered even if dual channel NAND interface is not connected since it also supplies power to other functions inside PCH.

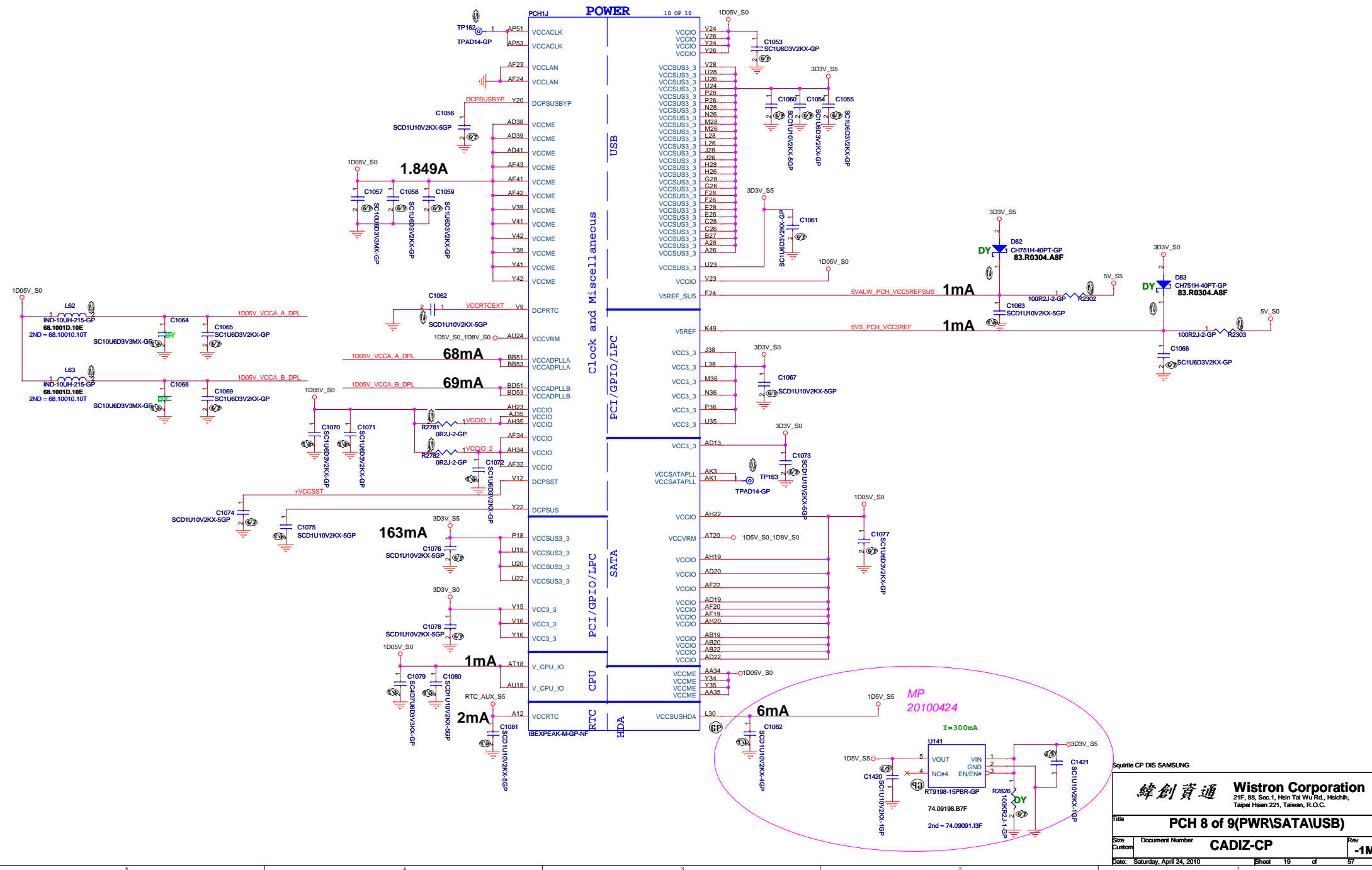
Squirtle CP DIS SAMSUNG

緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

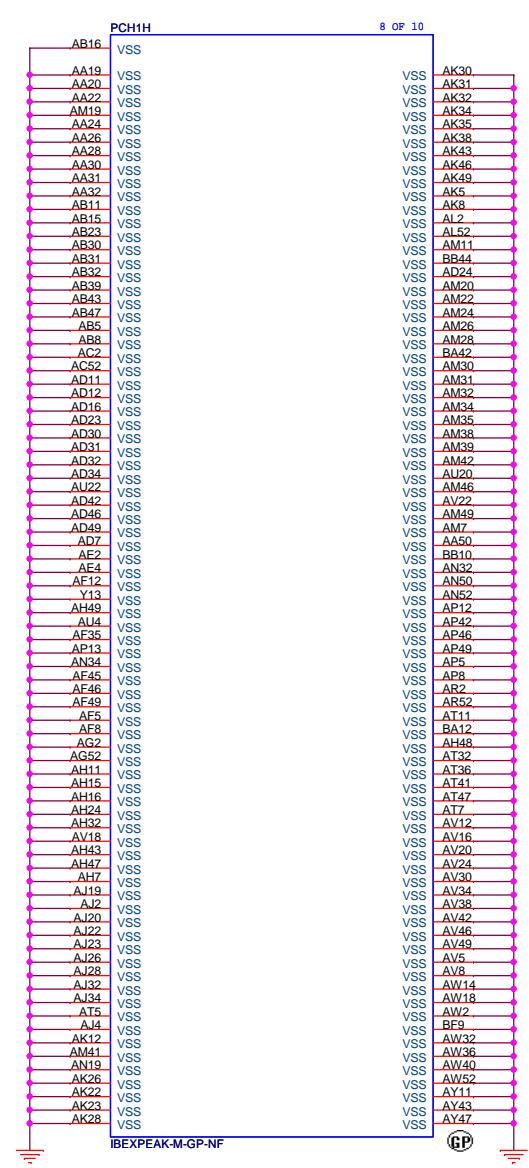
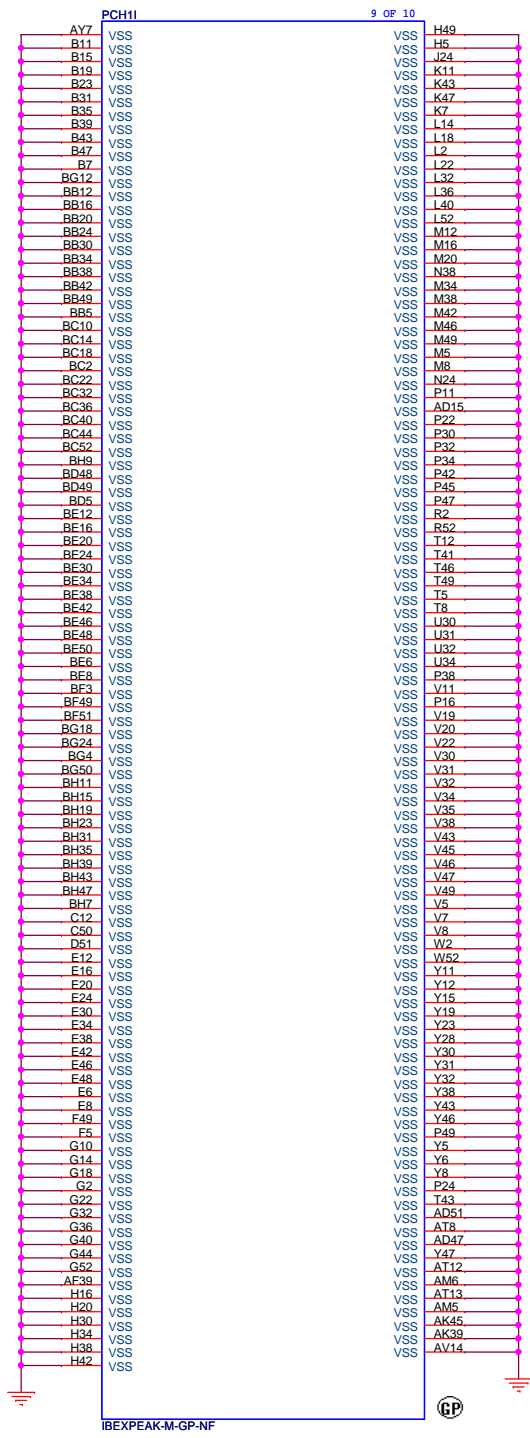
Title PCH 7 of 9(PWR/CORE/LVDS)

Size Document Number CADIZ-CP Rev -1M

Date: Saturday, April 24, 2010 Sheet 18 of 57



Squirtle CP DIS SAMSUNG			
<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 88, Sec. 1, Hei Tai Wu Rd., Hsichih, Taipei Hsein 221, Taiwan, R.O.C.			
<b>Title PCH 8 of 9(PWRISATA/USB)</b>			
Size Custom	Document Number	<b>CADIZ-CP</b>	Rev <b>-1M</b>
Date: Saturday, April 24, 2010		Sheet 19	of 57



Squire CP DIS SAMSUNG

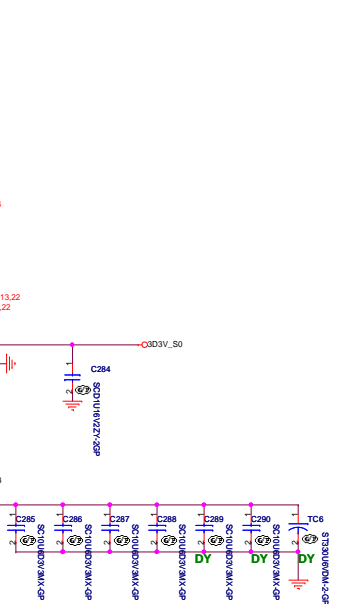
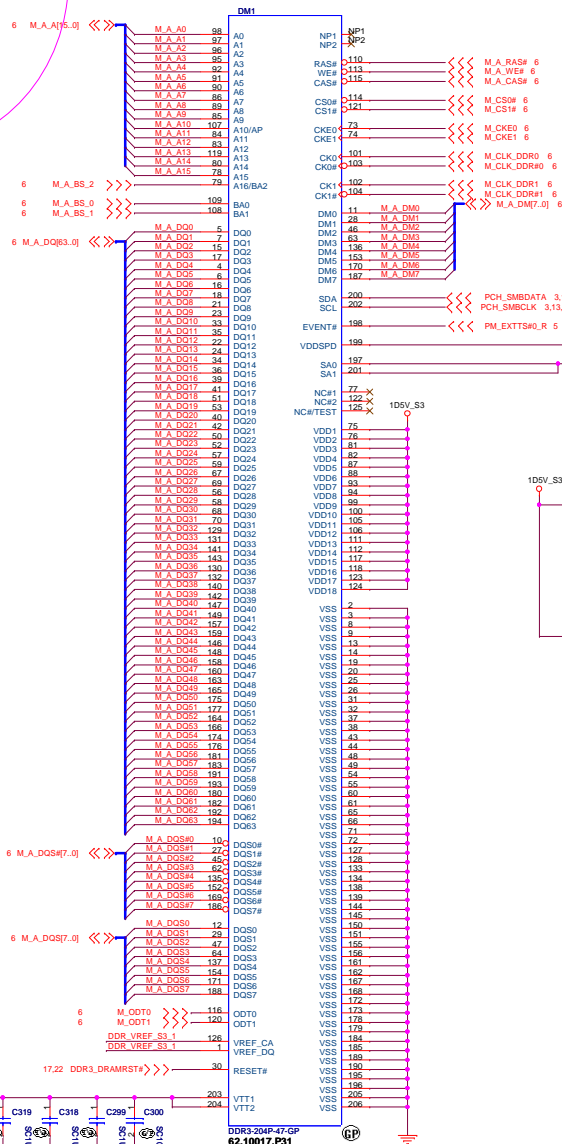
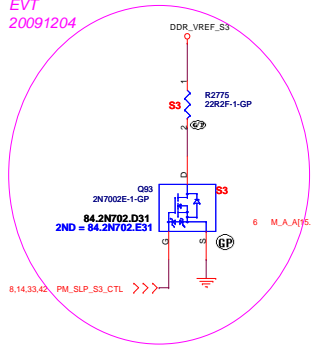
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title **PCH 9 of 9(VSS)**

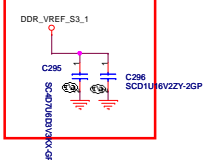
Size A3	Document Number <b>CADIZ-CP</b>	Rev <b>-1M</b>
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Date: Saturday, April 24, 2010 Sheet 20 of 57

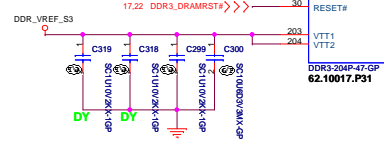
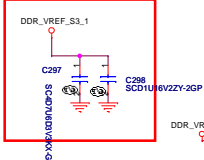
# DDR3 SOCKET\_1



Layout Note : Near Pin 126



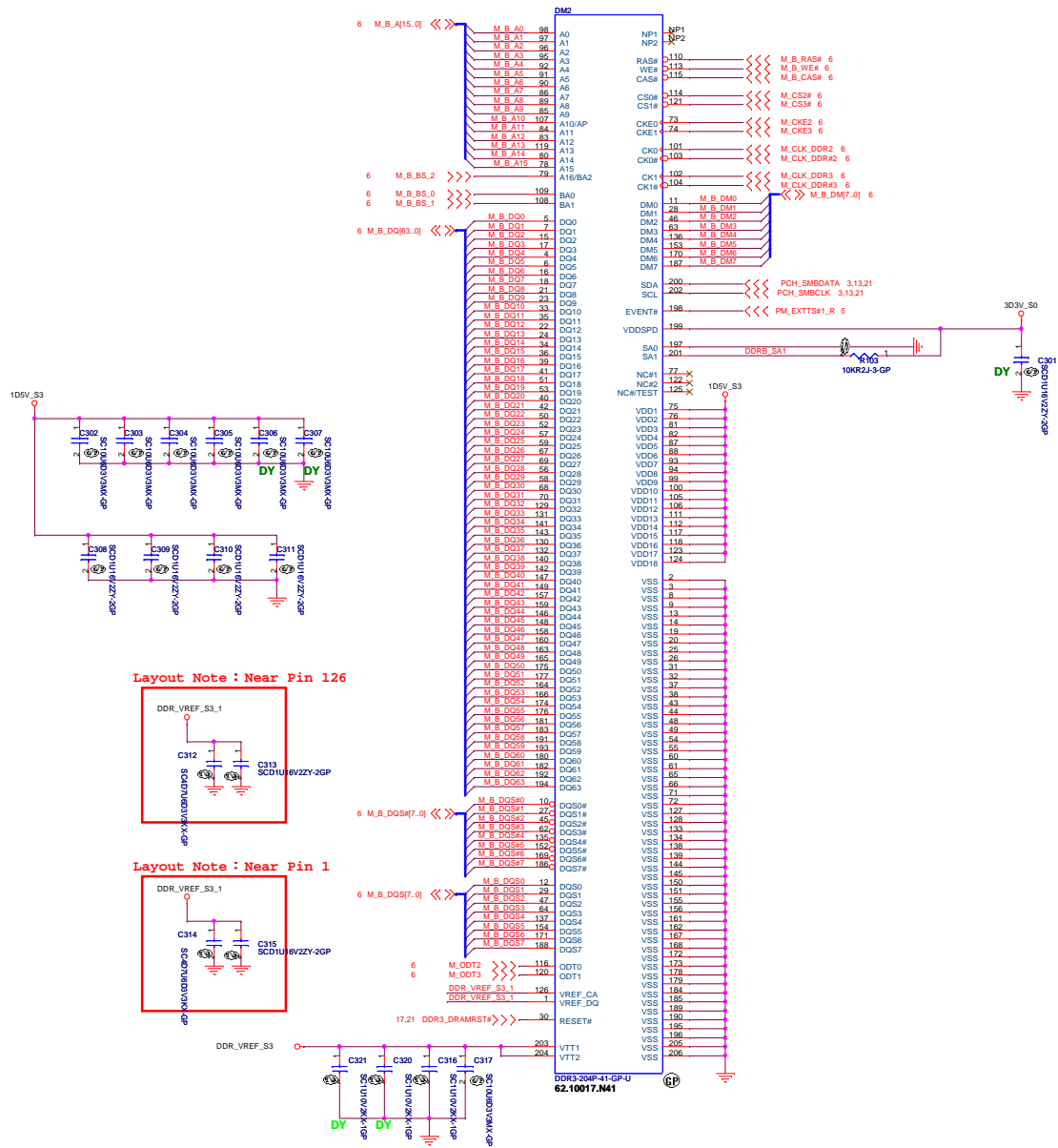
Layout Note : Near Pin 1



緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title <b>DDR3 Socket1</b>		
Size	Document Number <b>CADIZ-CP</b>	Rev -1M
Date: Sunday, April 26, 2010	Sheet 21 of 67	

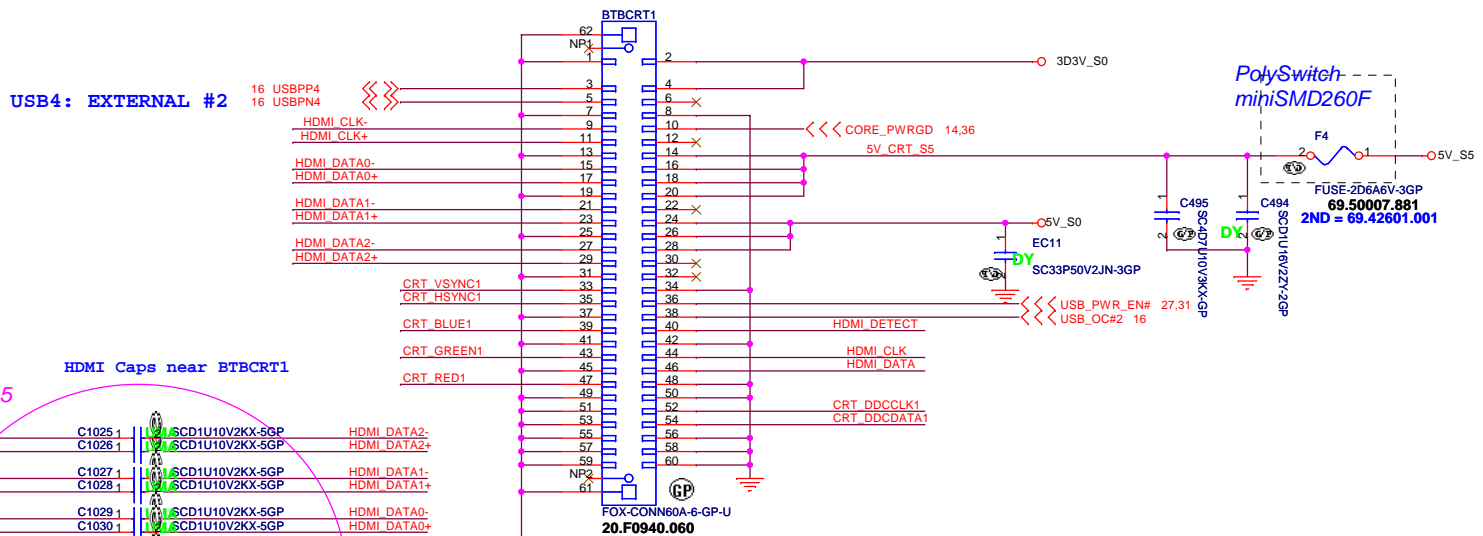
# DDR3 SOCKET\_2



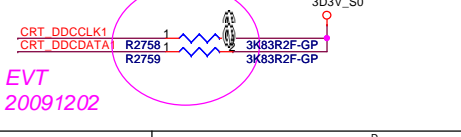
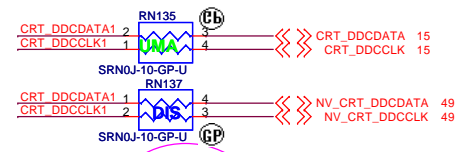
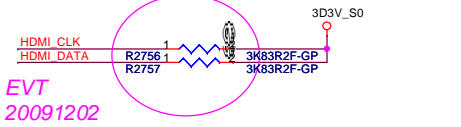
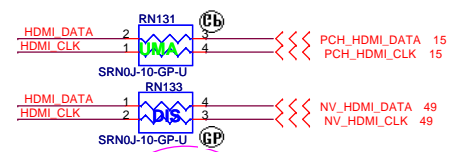
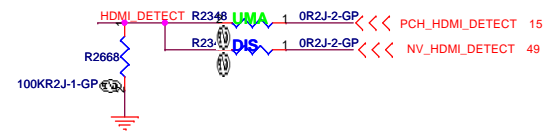
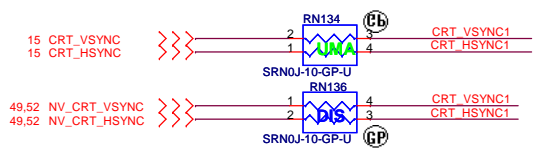
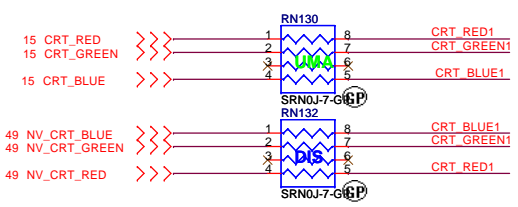
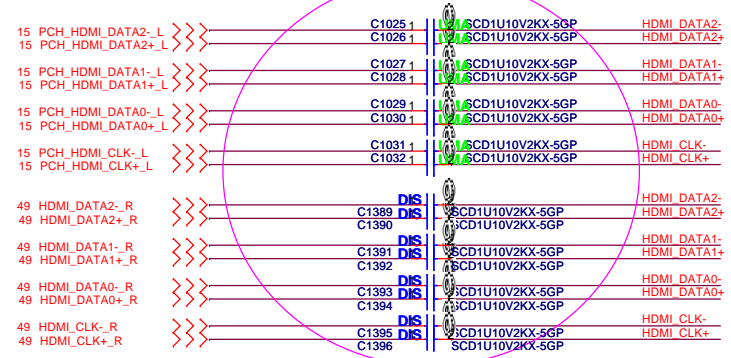








**EVT 20091125**  
HDMI Caps near BTBCRT1



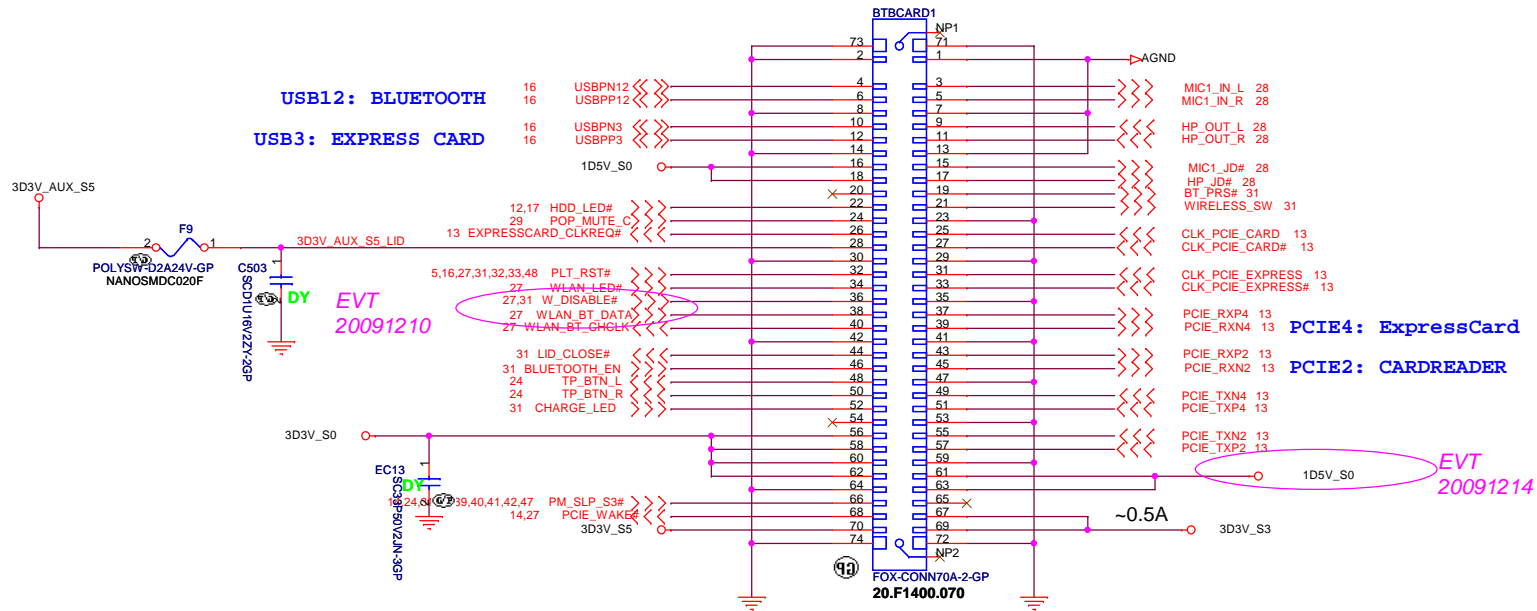
Squirrelle CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.


Title: **CRT BD CONN**

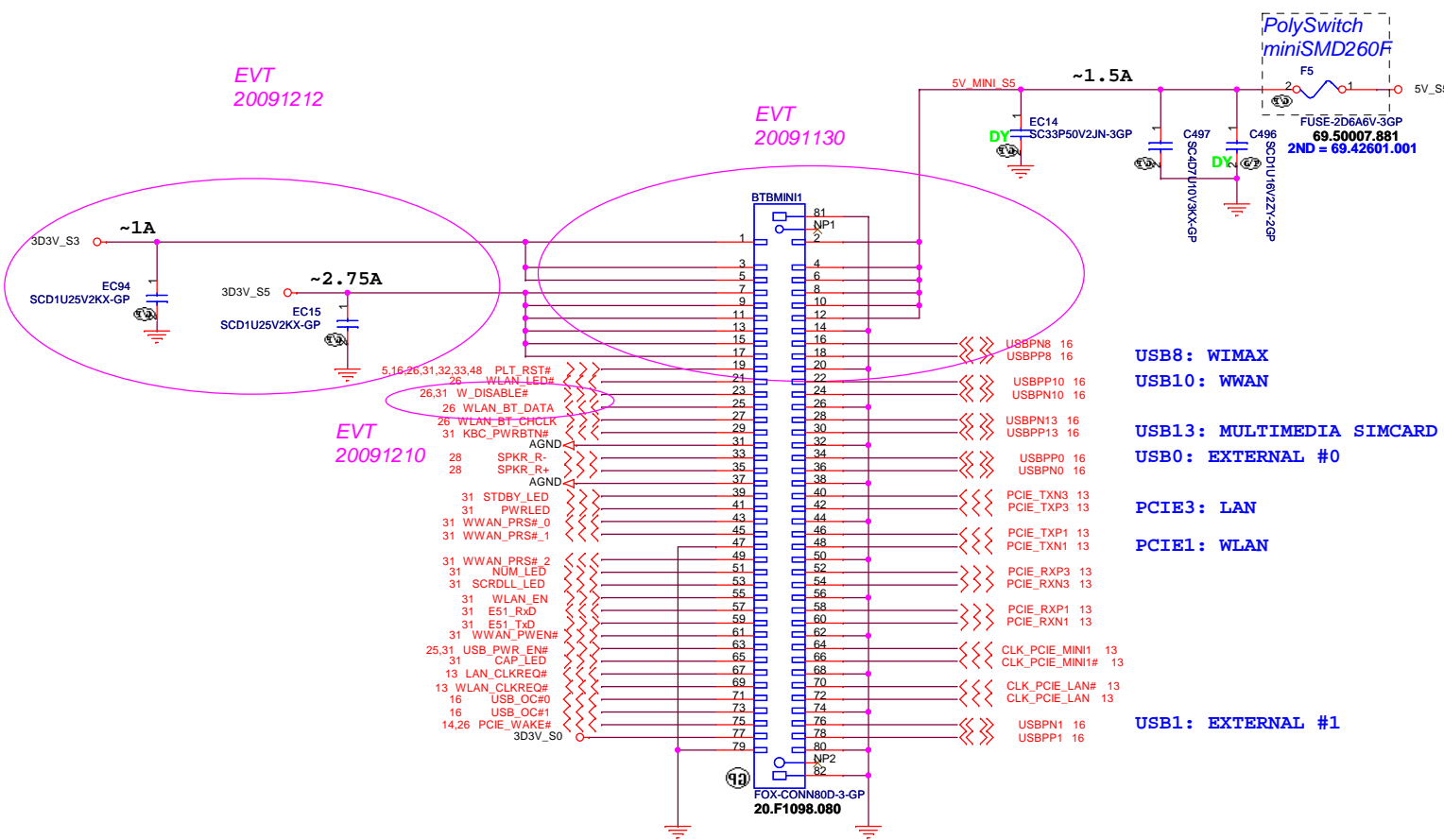
Size: Document Number: **CADIZ-CP** Rev: **-1M**

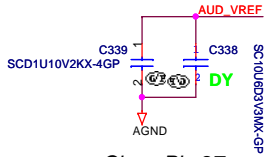
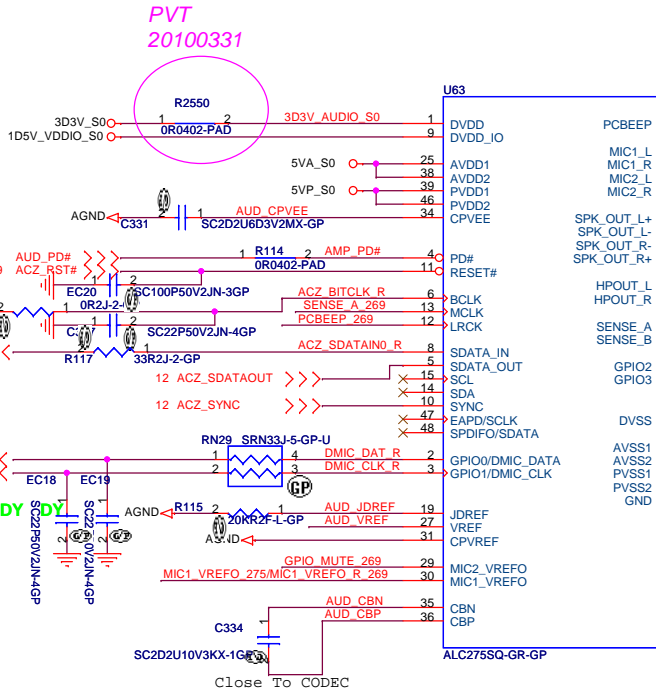
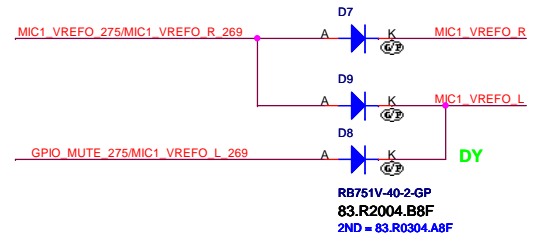
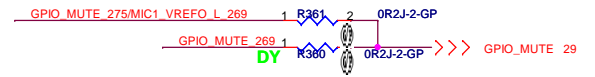
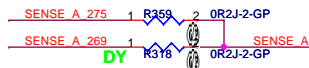
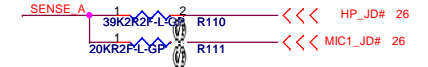
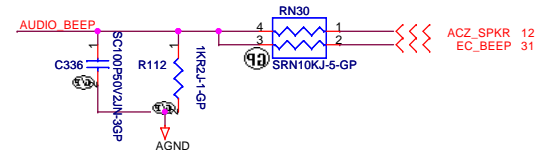
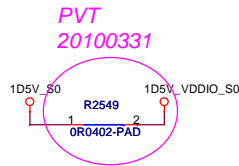
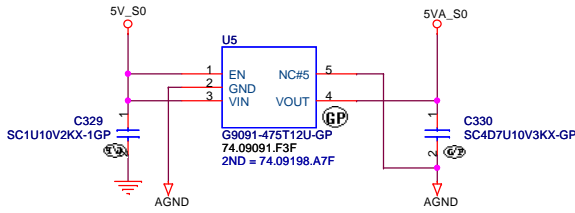
Date: Saturday, April 24, 2010 Sheet 25 of 57



Squirrel CP DIS SAMSUNG

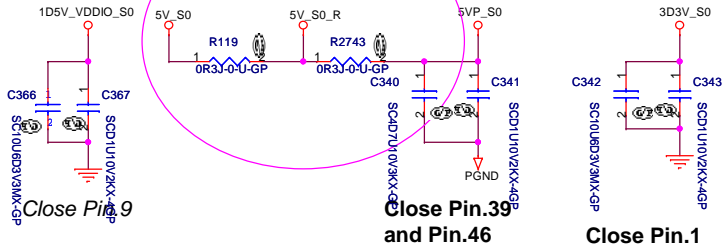
 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>Cardreader BD Conn</b>	
Size	Document Number
<b>CADIZ-CP</b>	
Date: Saturday, April 24, 2010	Sheet 26 of 57
Rev	-1M





Close Pin.27

EVT 20091204

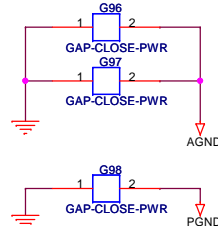


Close Pin.9

Close Pin.39 and Pin.46

Close Pin.1

1. BOTTOM CLOSE TO CODEC
2. TOP CLOSE TO BTB CONNECTOR



Dummy Parts	
ALC275	C372, R318, R360, D8
ALC269	C335, R359, R361, D9

Squirrel CP DIS SAMSUNG

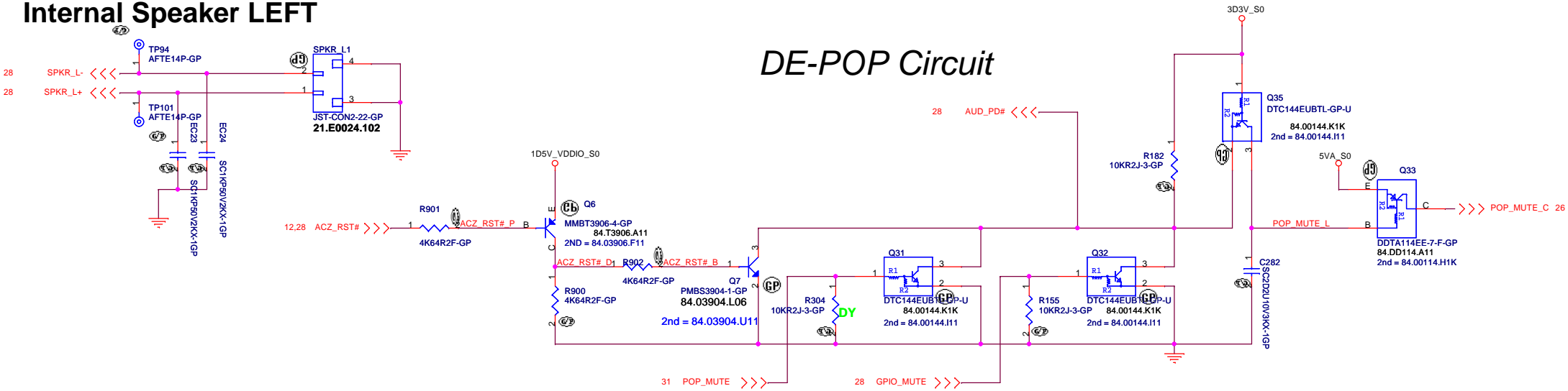
緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: AUDIO CODEC REALTEK ALC275  
Size: Document Number  
Date: Saturday, April 24, 2010

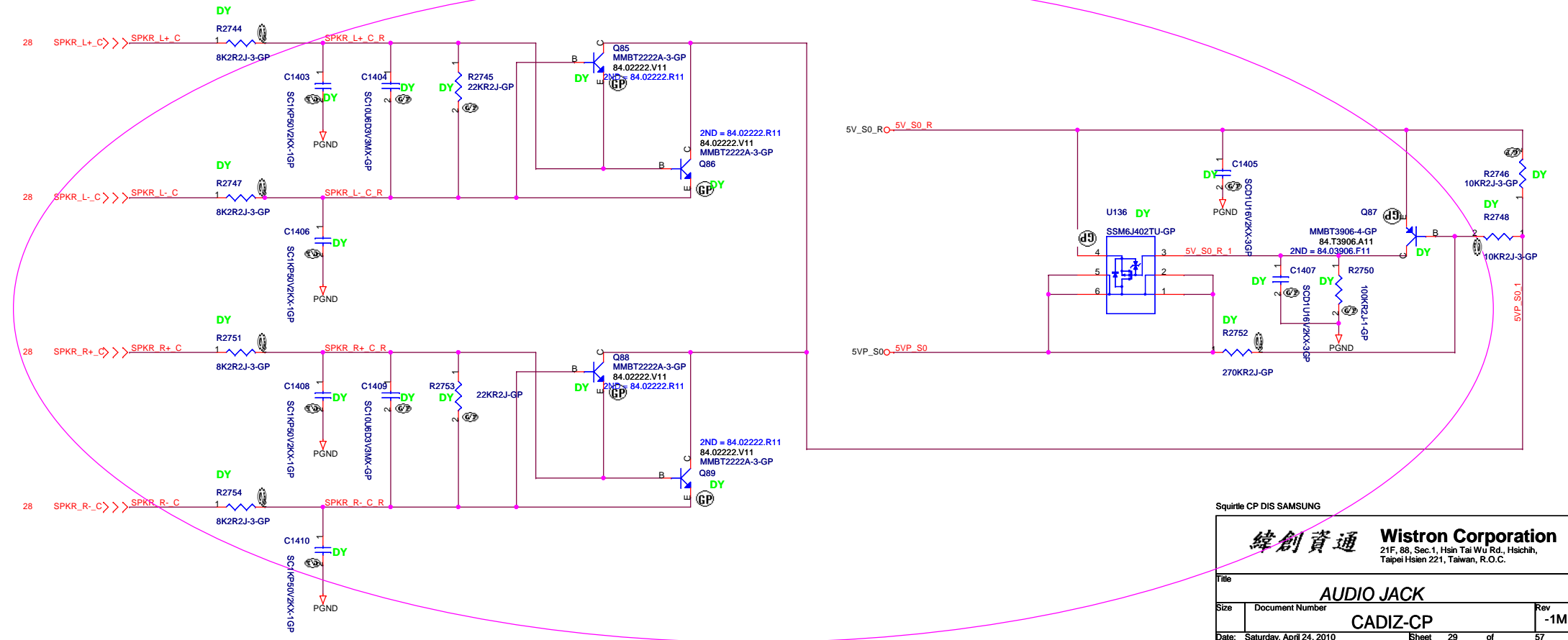
Rev: -1M  
Sheet 28 of 57

# Internal Speaker LEFT

## DE-POP Circuit



EVT  
20091204



Squirtle CP DIS SAMSUNG

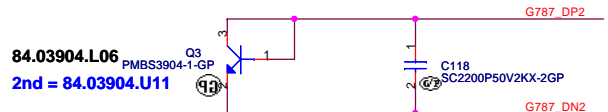
**緯創資通 Wistron Corporation**  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title	AUDIO JACK	
Size	Document Number	Rev -1M
Date: Saturday, April 24, 2010		Sheet 29 of 57

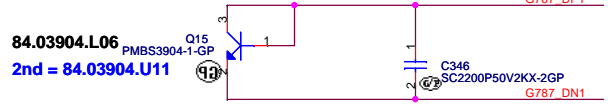
**CADIZ-CP**



for T8 thermal diode

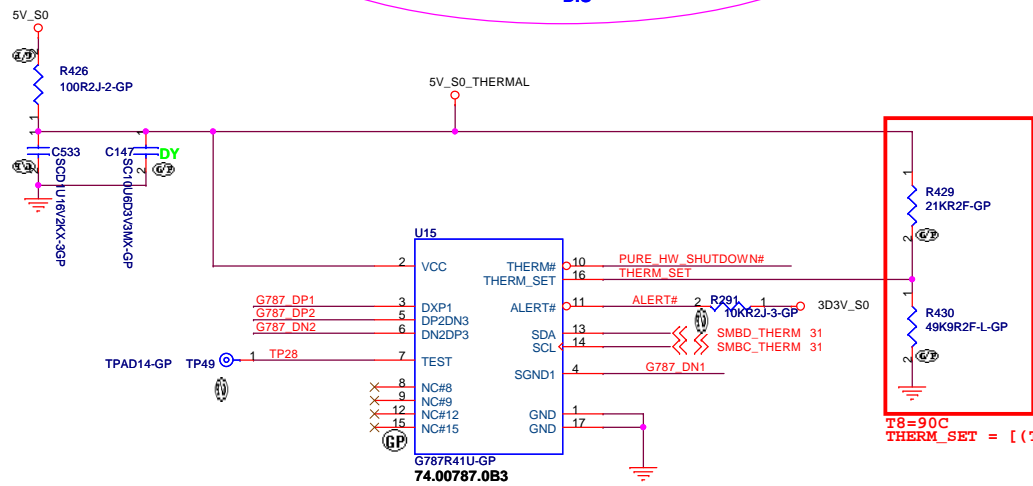
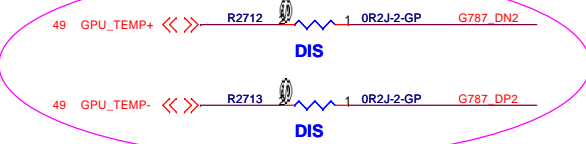


for system thermal diode

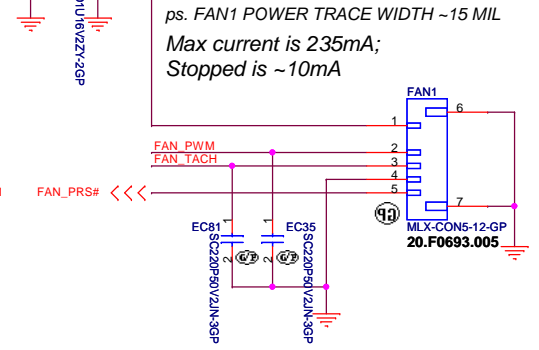
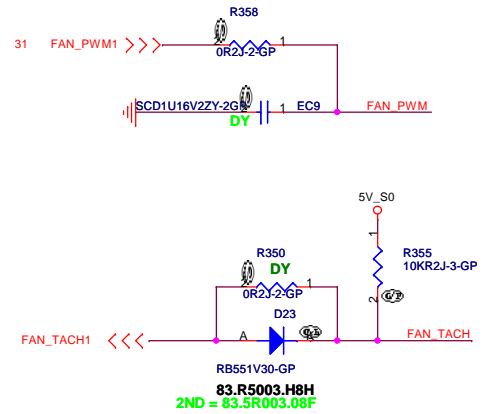


C1252 & C1254 CLOSE TO G787

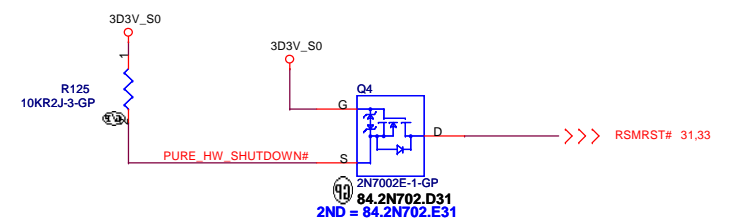
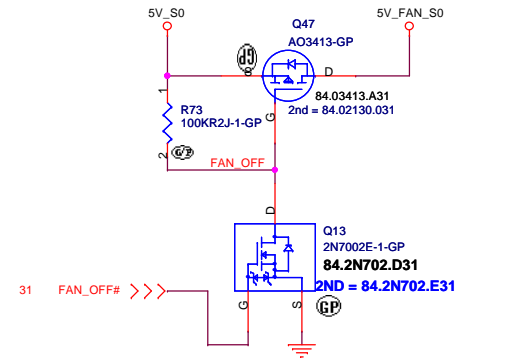
EVT 20091201



T8=90C  
 $THERM\_SET = [(Tset-72) \times 0.02 + 0.34] \times VCC$



ps. FAN1 POWER TRACE WIDTH ~15 MIL  
 Max current is 235mA;  
 Stopped is ~10mA



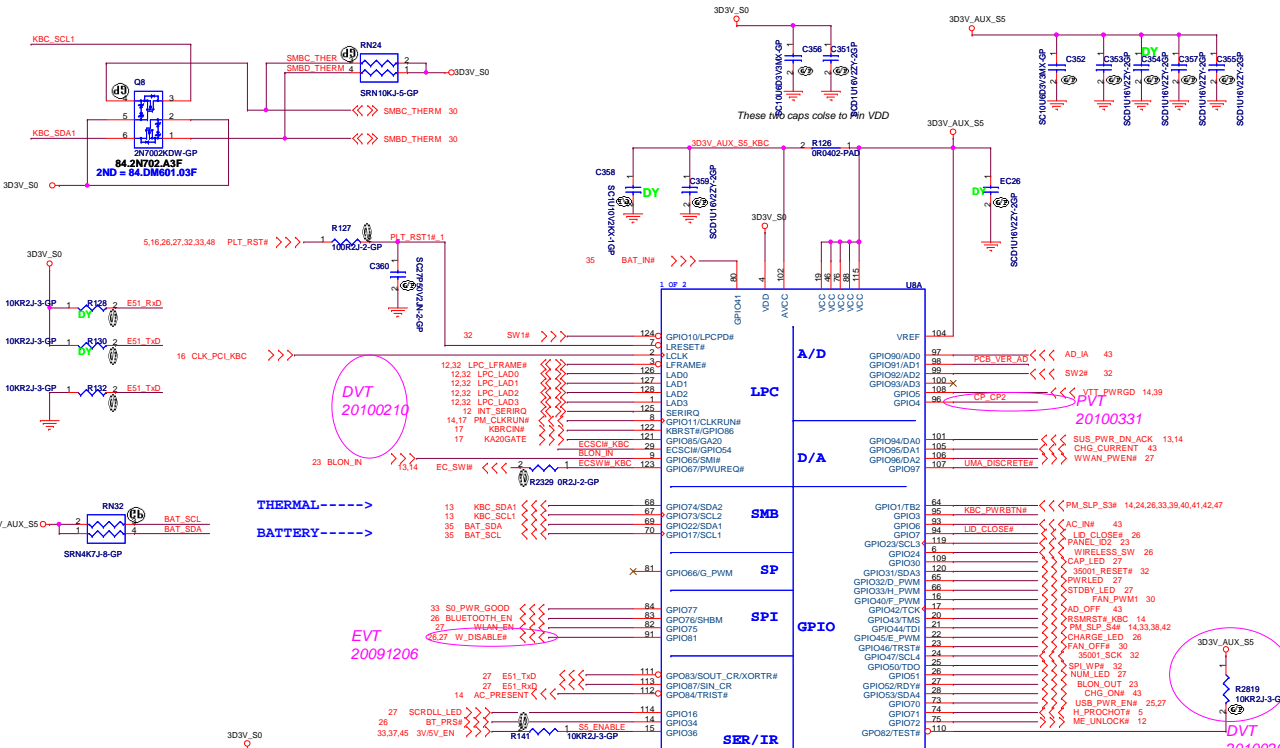
Squirrelle CP DIS SAMSUNG

緯創資通 Wistron Corporation  
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

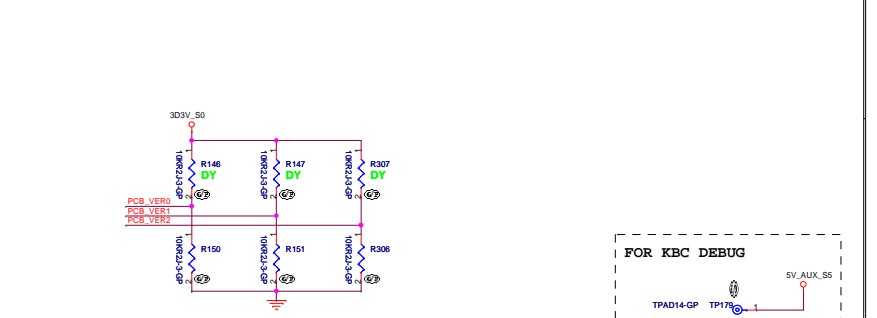
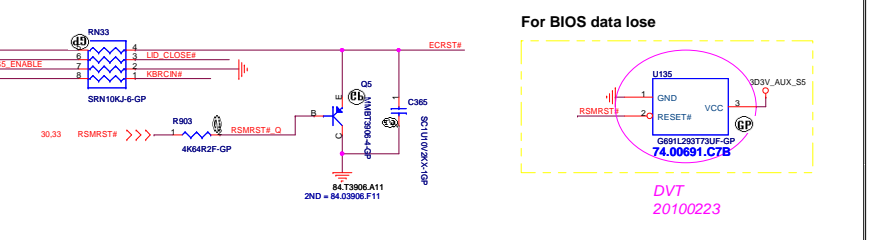
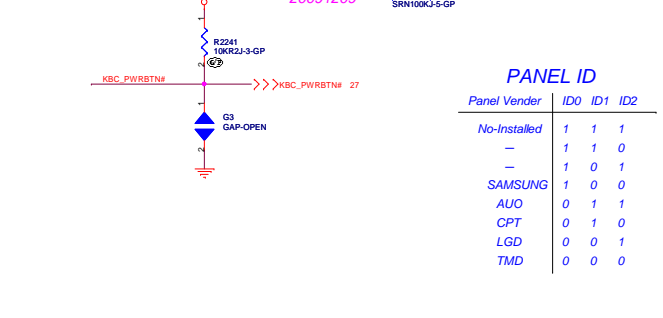
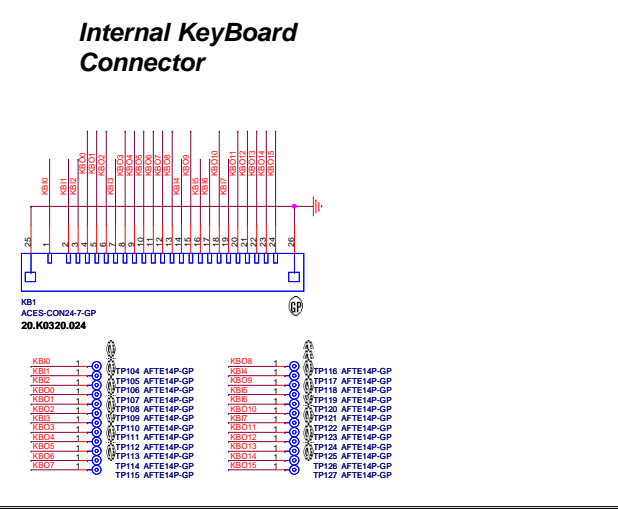
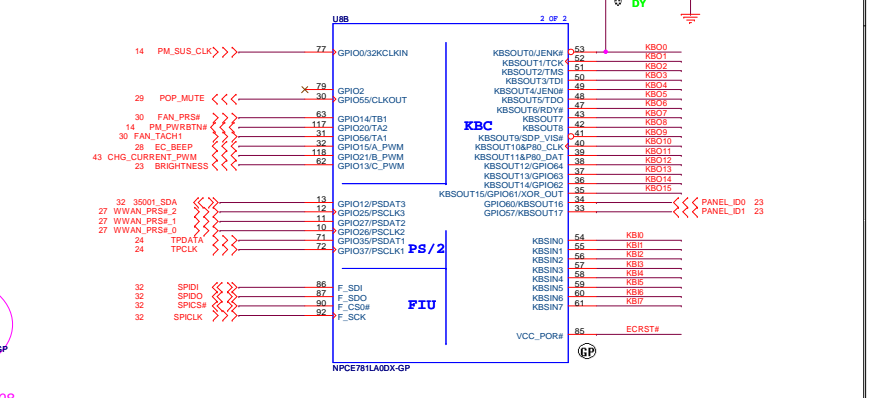
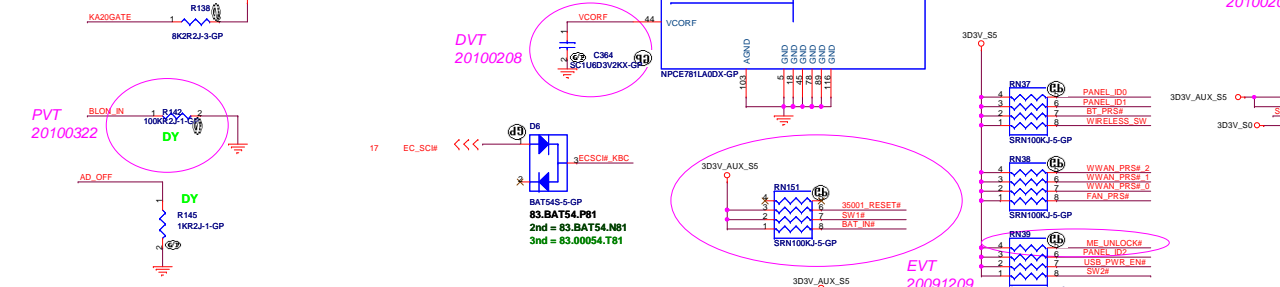
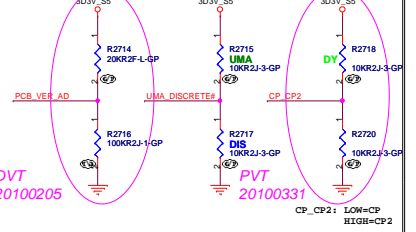
Title: Thermal/Fan Controllor

Size: Document Number: CADIZ-CP Rev: -1M

Date: Saturday, April 24, 2010 Sheet: 30 of 57

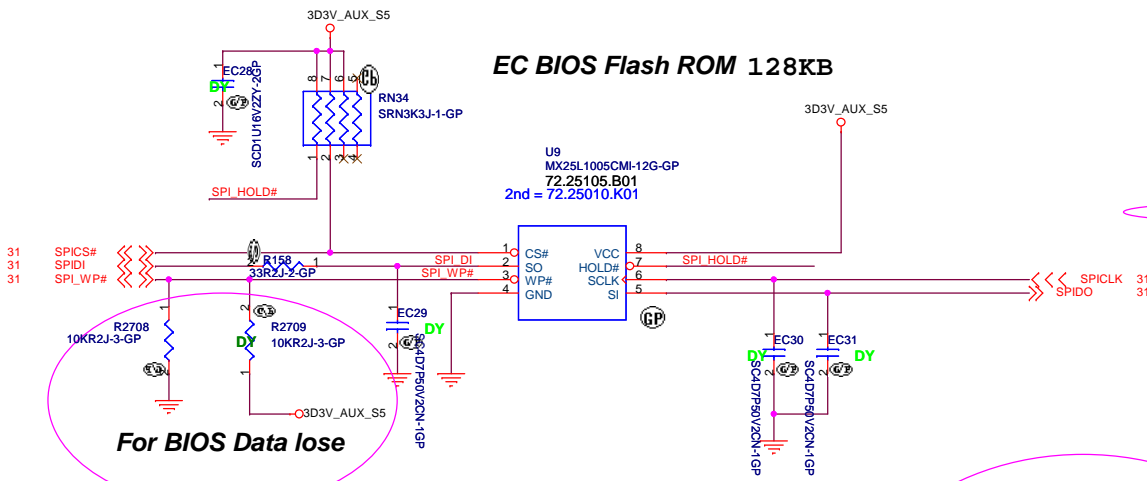


SA	SB	SC	SD	SE	SF
100.0 K	100.0 K	100.0 K	100.0 K	100.0 K	100.0 K
100.0 K	20.0 K	33.0 K	47.0K	64.9K	76.8 K
100.0 K	100.0 K	100.0 K	100.0 K	100.0 K	100.0 K
3.0 V	2.75 V	2.54 V	2.24 V	1.94 V	1.81 V
					1.65 V

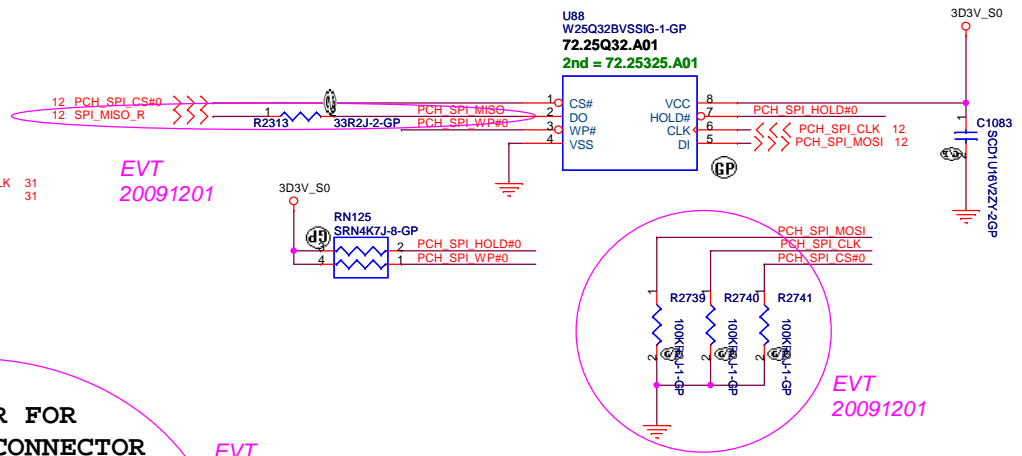


Panel Vender	ID0	ID1	ID2
No-Installed	1	1	1
SAMSUNG	1	1	0
AUO	0	1	1
CPT	0	1	0
LGD	0	0	1
TMD	0	0	0

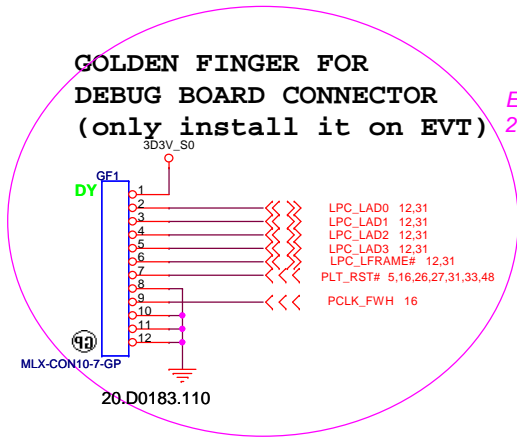
### EC BIOS Flash ROM 128KB



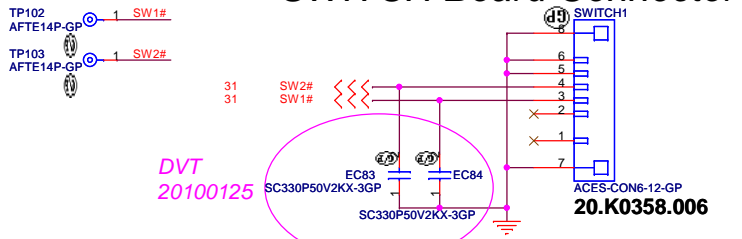
### System BIOS Flash ROM (4MB)



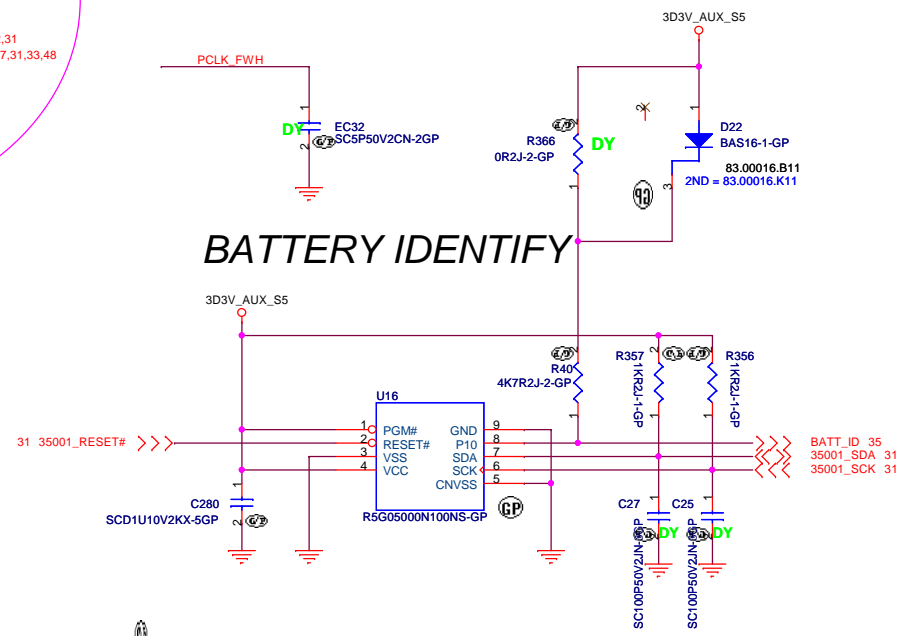
### GOLDEN FINGER FOR DEBUG BOARD CONNECTOR (only install it on EVT)



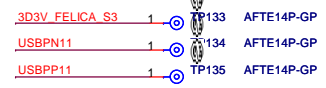
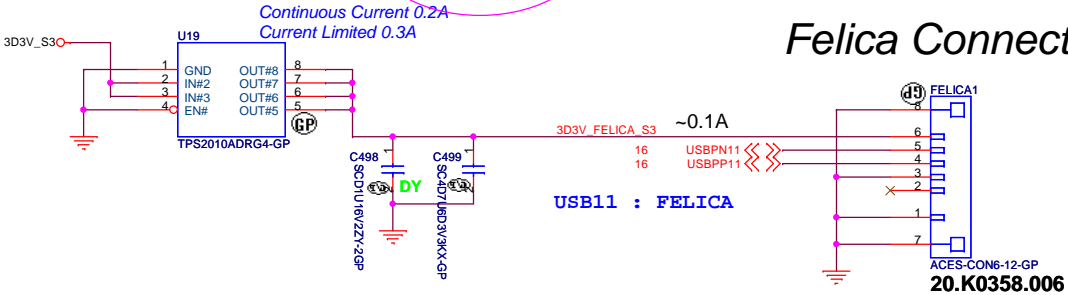
### SWITCH Board Connector



### BATTERY IDENTIFY



### Felica Connector



Squirrel CP DIS SAMSUNG

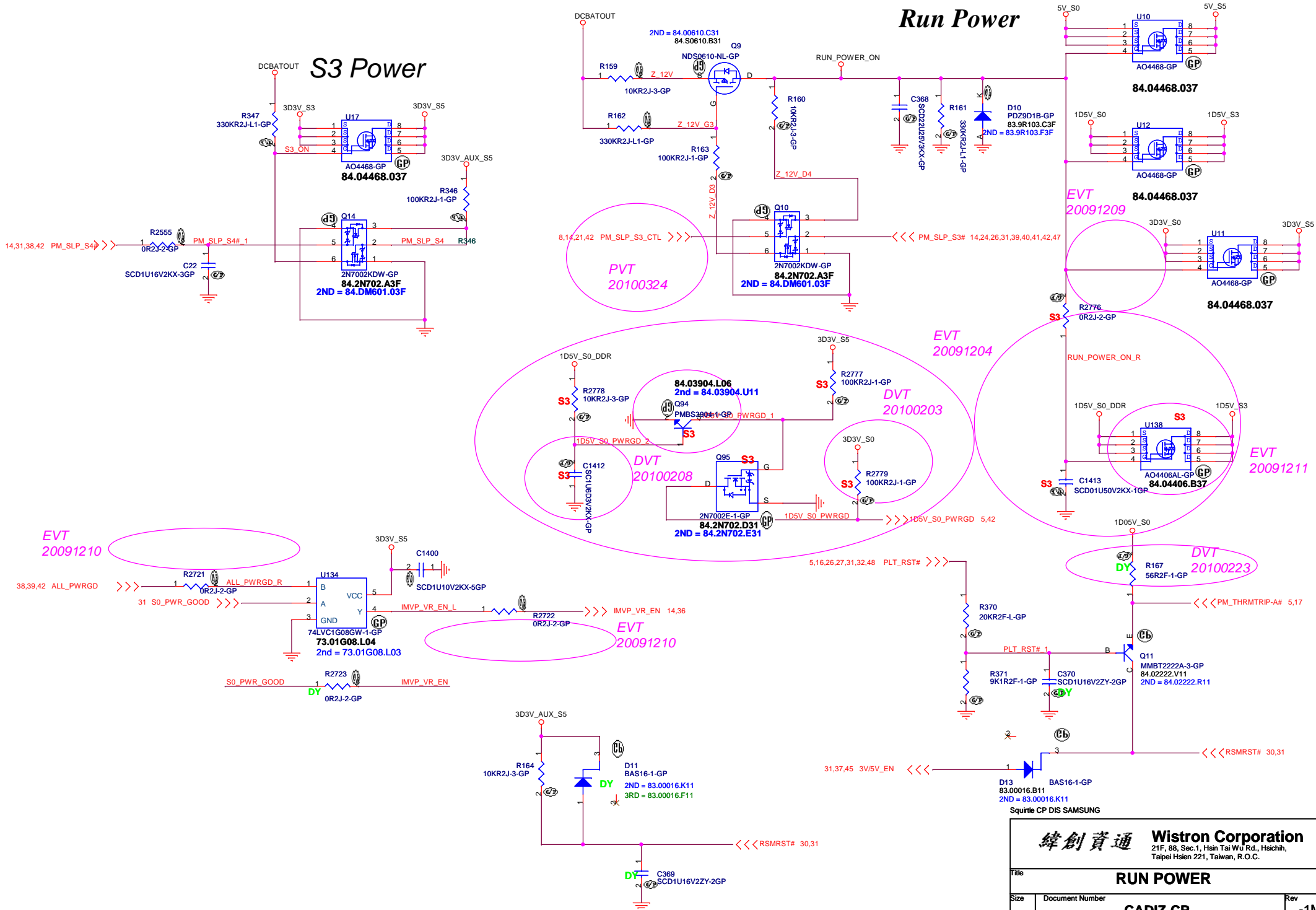
緯創資通 Wistron Corporation  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title  
**BIOS & SW/C & BAT ID & Felica**

Size	Document Number	Rev
		-1M

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# Run Power



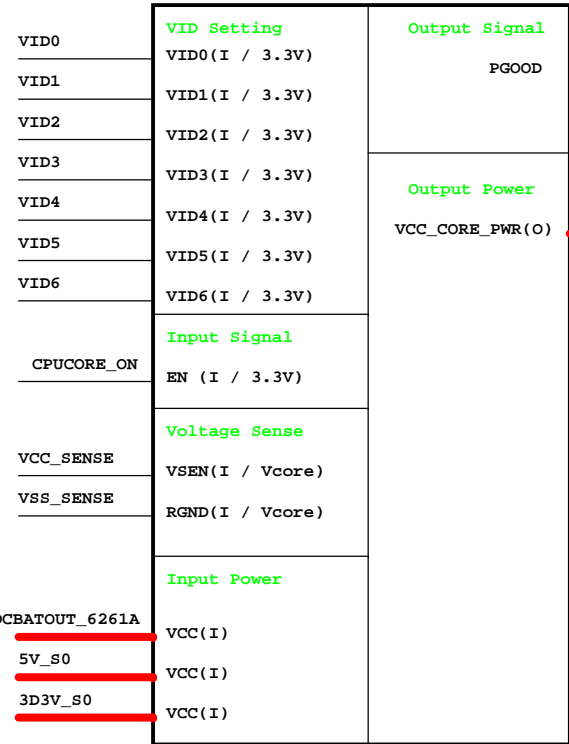
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

**RUN POWER**

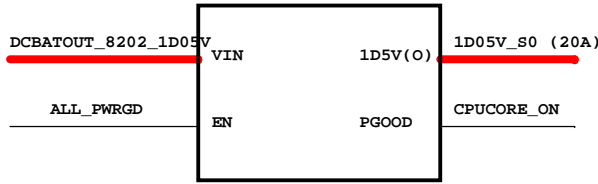
Title	Document Number	Rev
	<b>CADIZ-CP</b>	-1M

Date: Saturday, April 24, 2010 Sheet 33 of 57

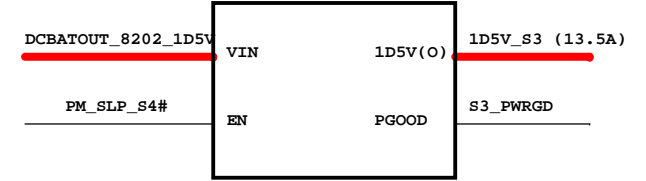
**CPU\_CORE  
ADP3211**



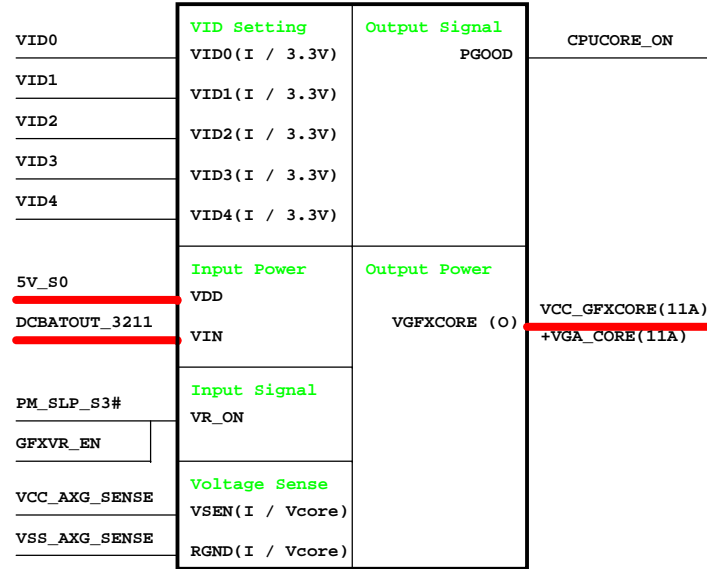
**RT8209 1D05V\_S0**



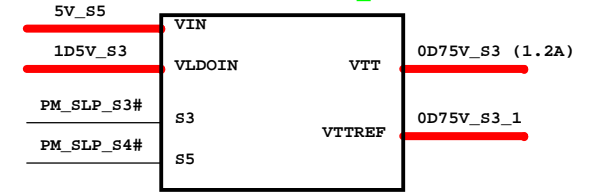
**RT8209 1D5V\_S3**



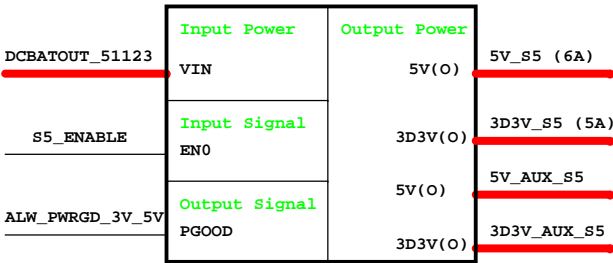
**GFX\_CORE/ VGA\_CORE  
ADP3211**



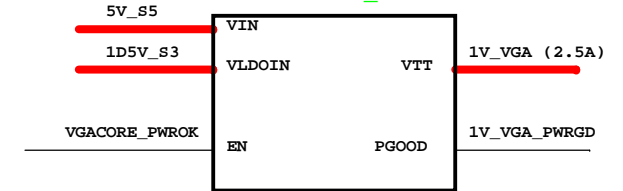
**RT9026 0D75V\_S0**



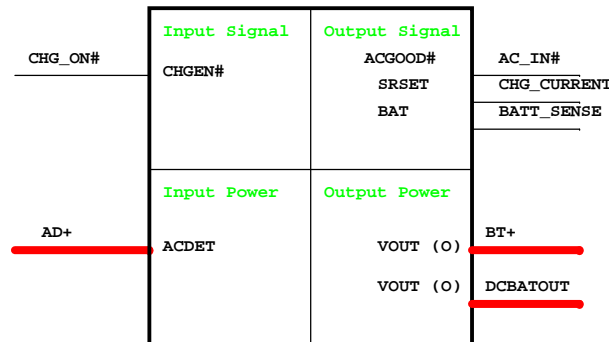
**5V/3D3V  
RT8223**



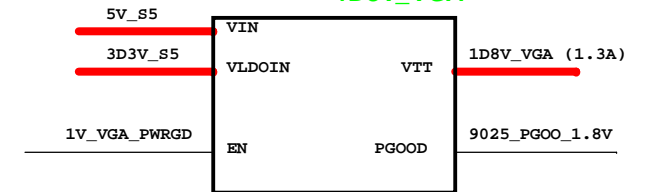
**APL5930 1V\_VGA**



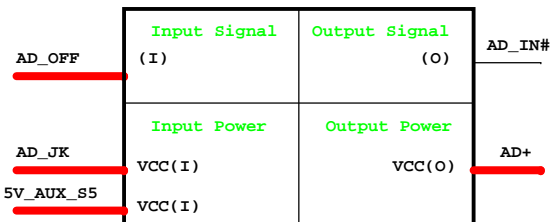
**Charger BQ24751**



**G9661 1D8V\_VGA**

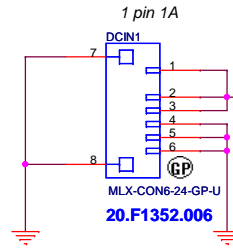


**Adapter**

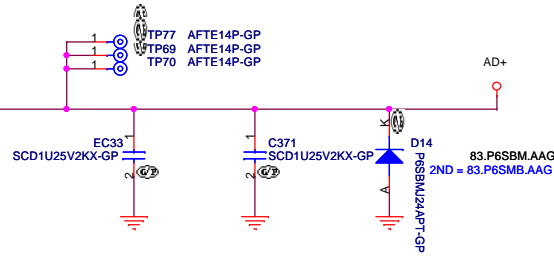


Squirtle CP DIS SAMSUNG

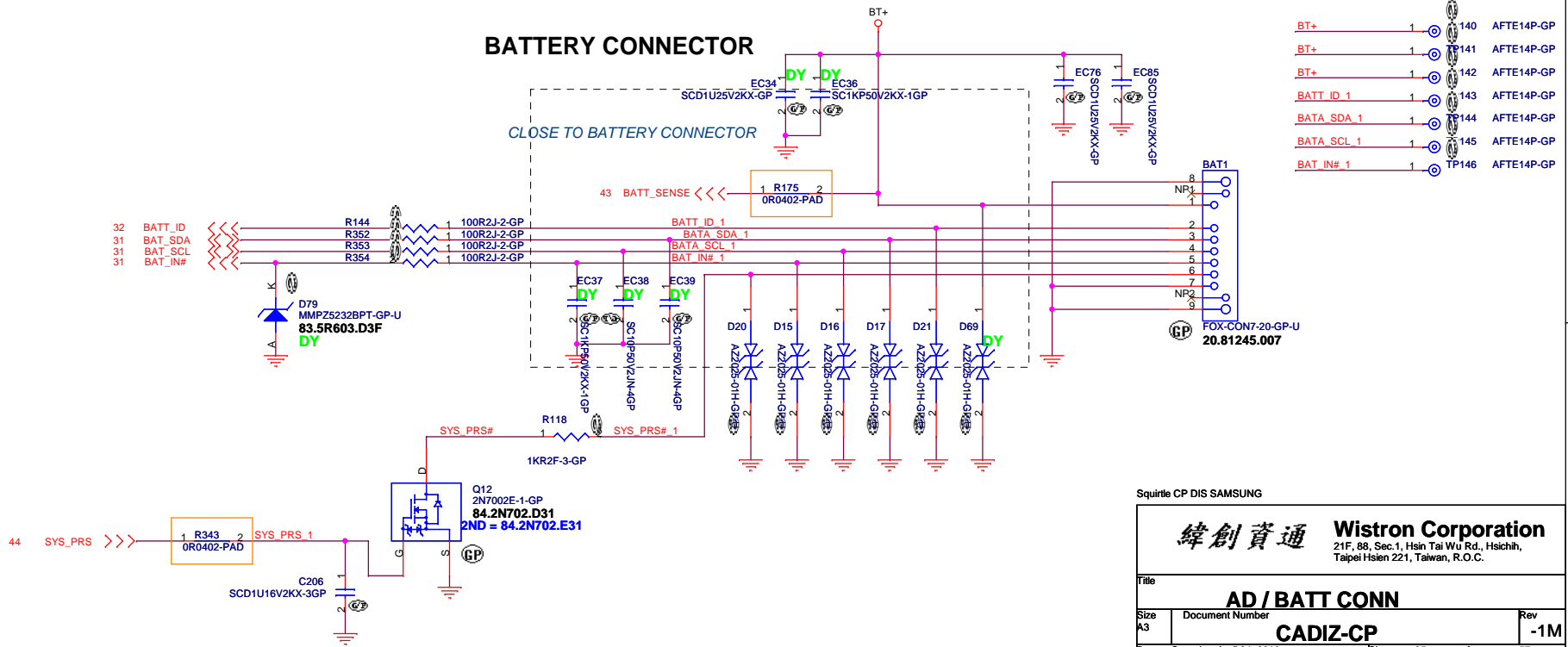
DC IN Connector



Adaptor in to generate DCBATOUT



BATTERY CONNECTOR



- BAT+ 140 AFTE14P-GP
- BT+ 141 AFTE14P-GP
- BT+ 142 AFTE14P-GP
- BATT\_ID 1 143 AFTE14P-GP
- BATA\_SDA 1 144 AFTE14P-GP
- BATA\_SCL 1 145 AFTE14P-GP
- BAT\_IN# 1 146 AFTE14P-GP

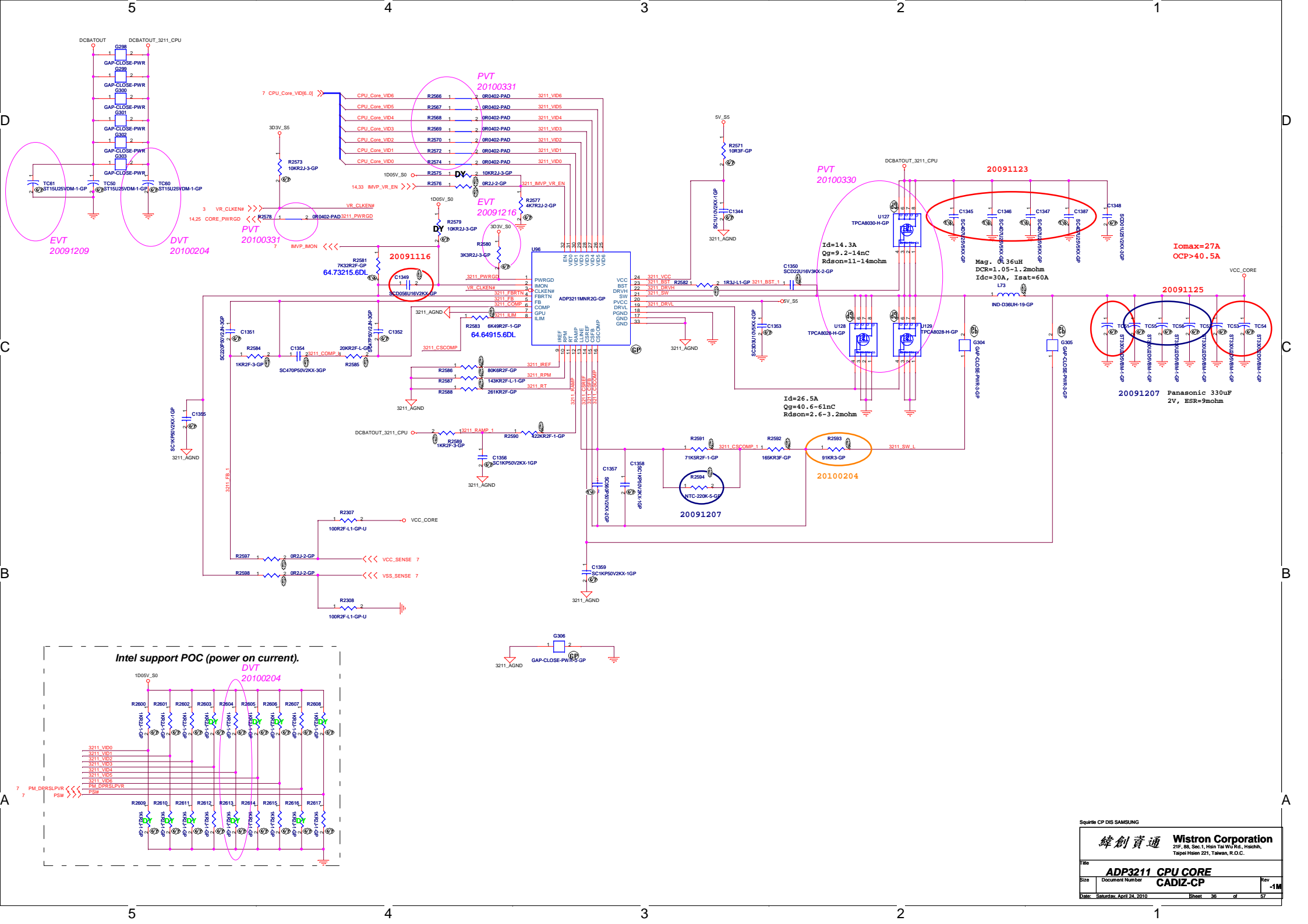
Squirtle CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **AD / BATT CONN**

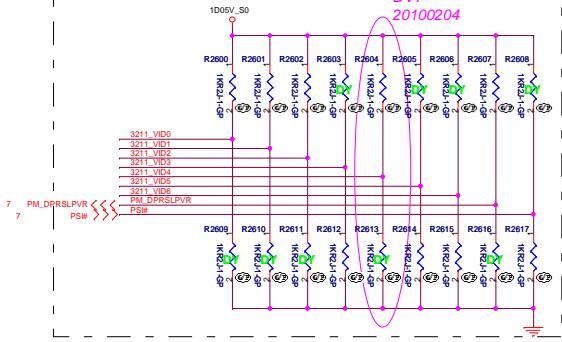
Size A3 Document Number: **CADIZ-CP** Rev: **-1M**

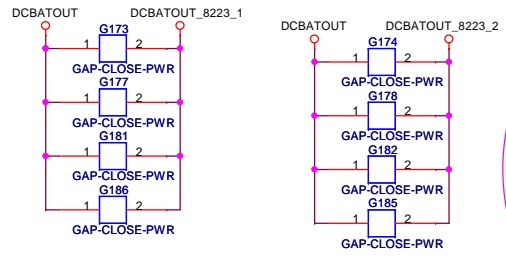
Date: Saturday, April 24, 2010 Sheet 35 of 57



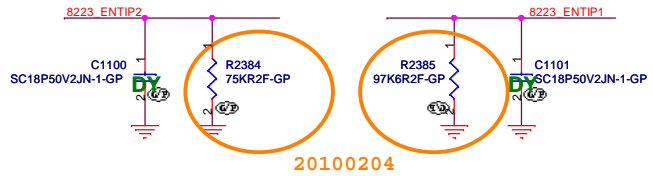
**Intel support POC (power on current).**

**DVT 20100204**

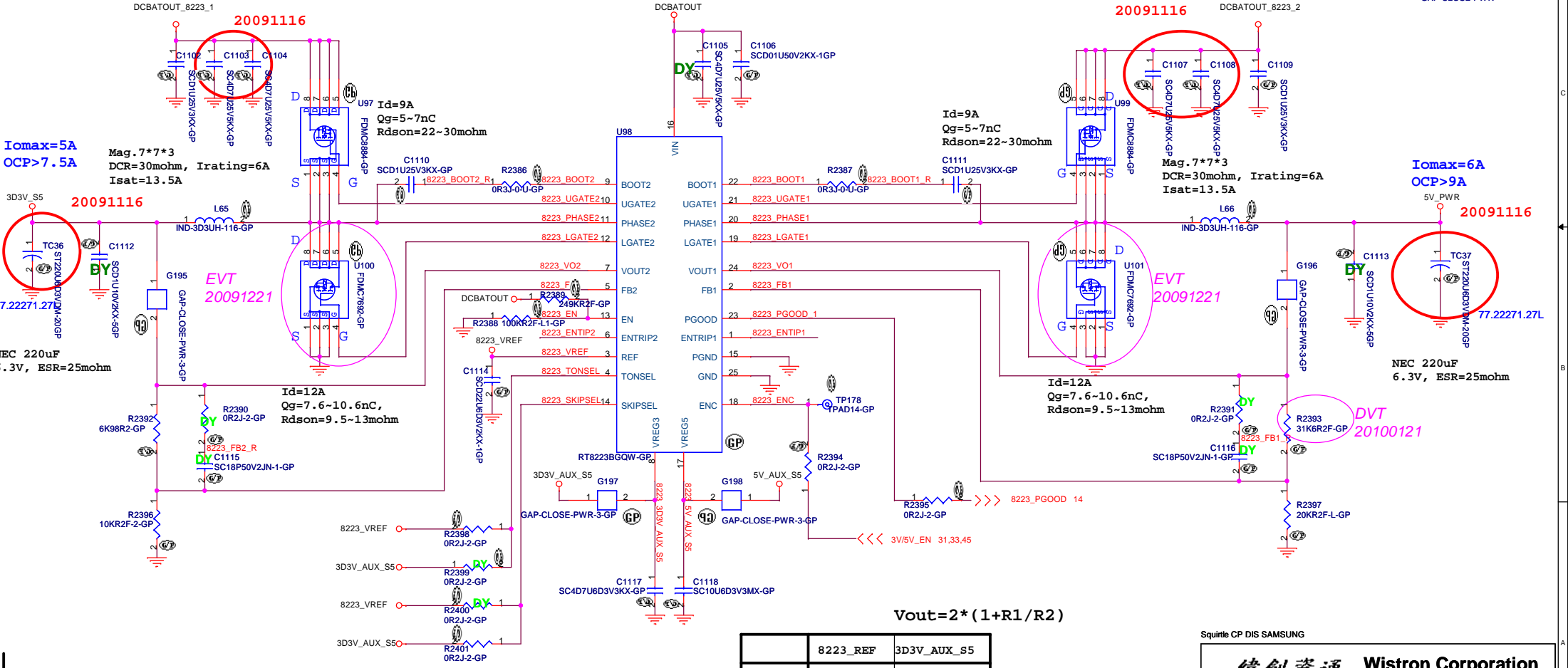
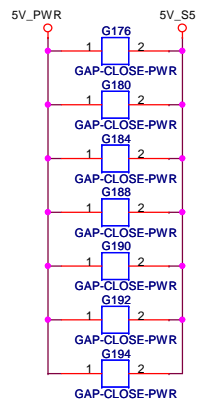




EVT  
20091202



20100204



Iomax=5A  
OCP>7.5A

Mag. 7\*7\*3  
DCR=30mohm, Irating=6A  
Isat=13.5A

20091116

Mag. 7\*7\*3  
DCR=30mohm, Irating=6A  
Isat=13.5A

Iomax=6A  
OCP>9A

$$V_{out} = 2 * (1 + R1/R2)$$

	8223_REF	3D3V_AUX_S5
SKIPSEL	PWM	00A AUTOSKIP
TONSEL	245k/CH1 305k/CH2	300k/CH1 375k/CH2

Squirrel CP DIS SAMSUNG

緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

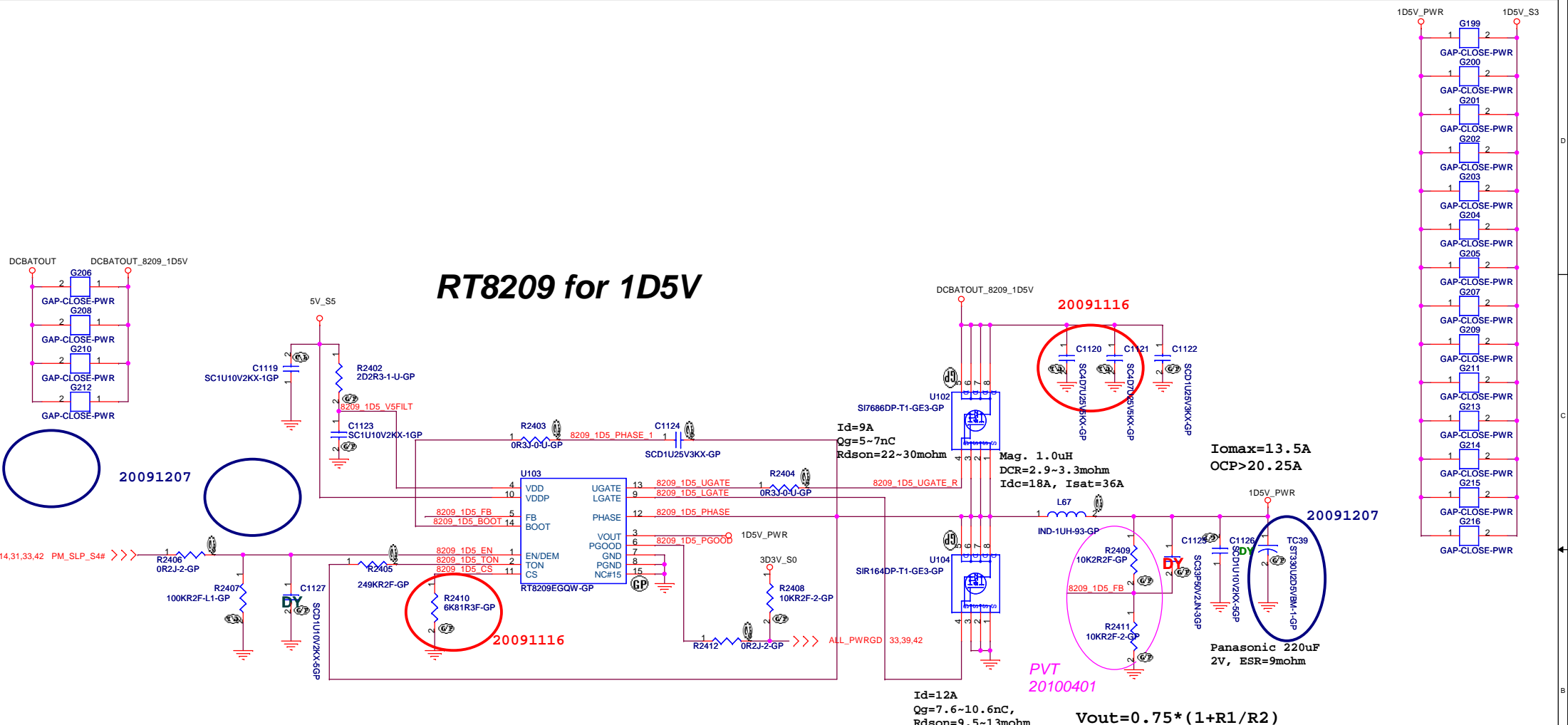
Title: RT8223 5V/3D3V

Size: Document Number: CADIZ-CP Rev: -1M

Date: Saturday, April 24, 2010 Sheet 37 of 57



# RT8209 for 1D5V



20091207

20091116

20091116

20091207

Id=12A  
Qg=7.6~10.6nC,  
Rdson=9.5~13mohm

$V_{out} = 0.75 * (1 + R1/R2)$

Squirtle CP DIS SAMSUNG

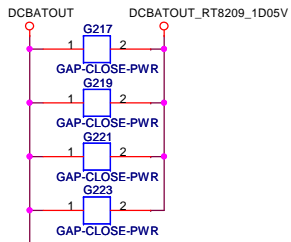
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title: **RT8209 1D5V**

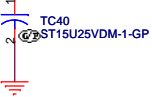
Size	Document Number	Rev
	<b>CADIZ-CP</b>	<b>-1M</b>

Date: Saturday, April 24, 2010 Sheet 38 of 57

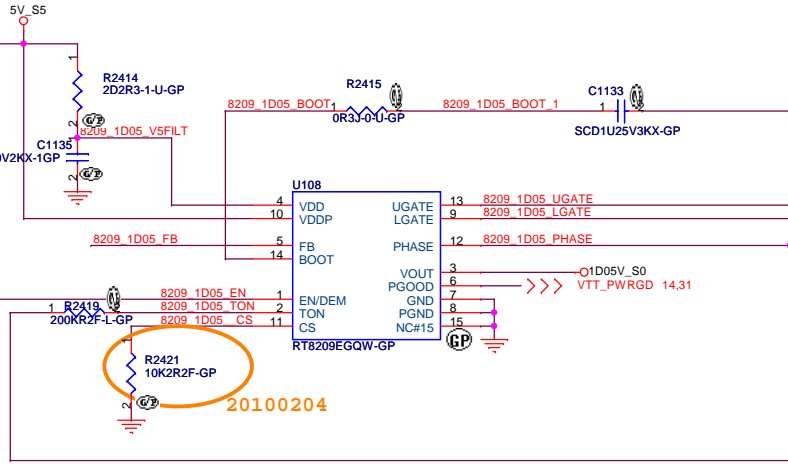
# RT8209 1D05V



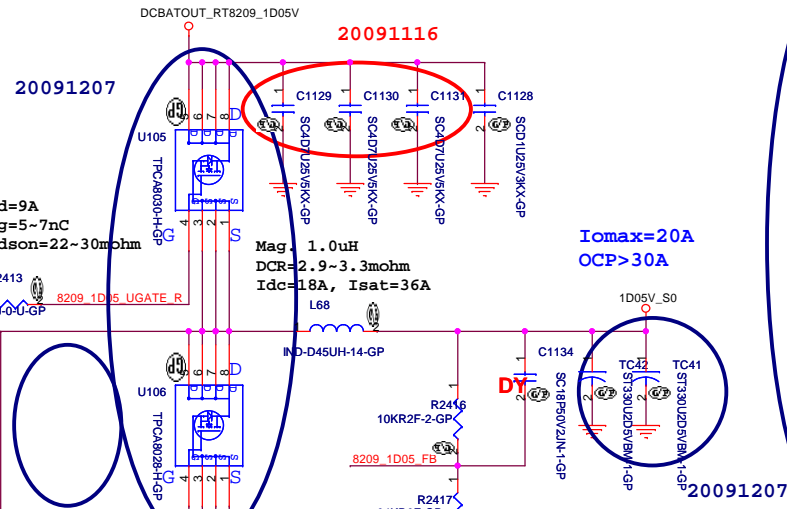
EVT  
20091214



20091207



20100204



Id=9A  
Qg=5~7nC  
Rdson=22~30mohm

Mag. 1.0uH  
DCR=2.9~3.3mohm  
Idc=18A, Isat=36A

Iomax=20A  
OCP>30A

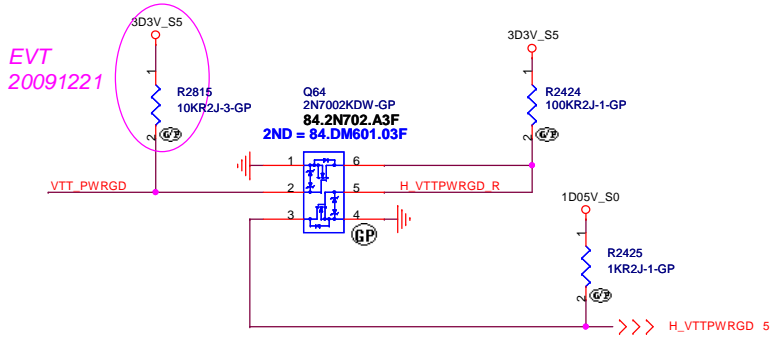
Id=12A  
Qg=7.6~10.6nC,  
Rdson=9.5~13mohm

$$V_{out} = 0.75 * (1 + R1/R2)$$

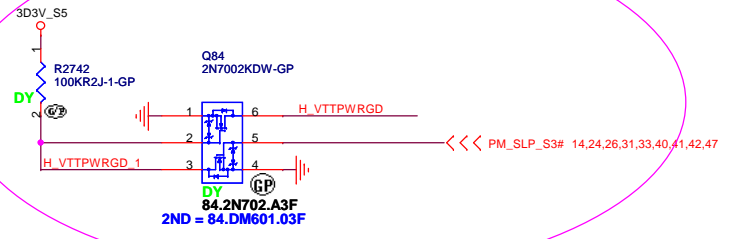
EVT  
20091201

EVT  
20091204

The processor needs to be warned about the VTT rails shutdown at least 100 ns before the VTT rail falls to -5% of nominal value.

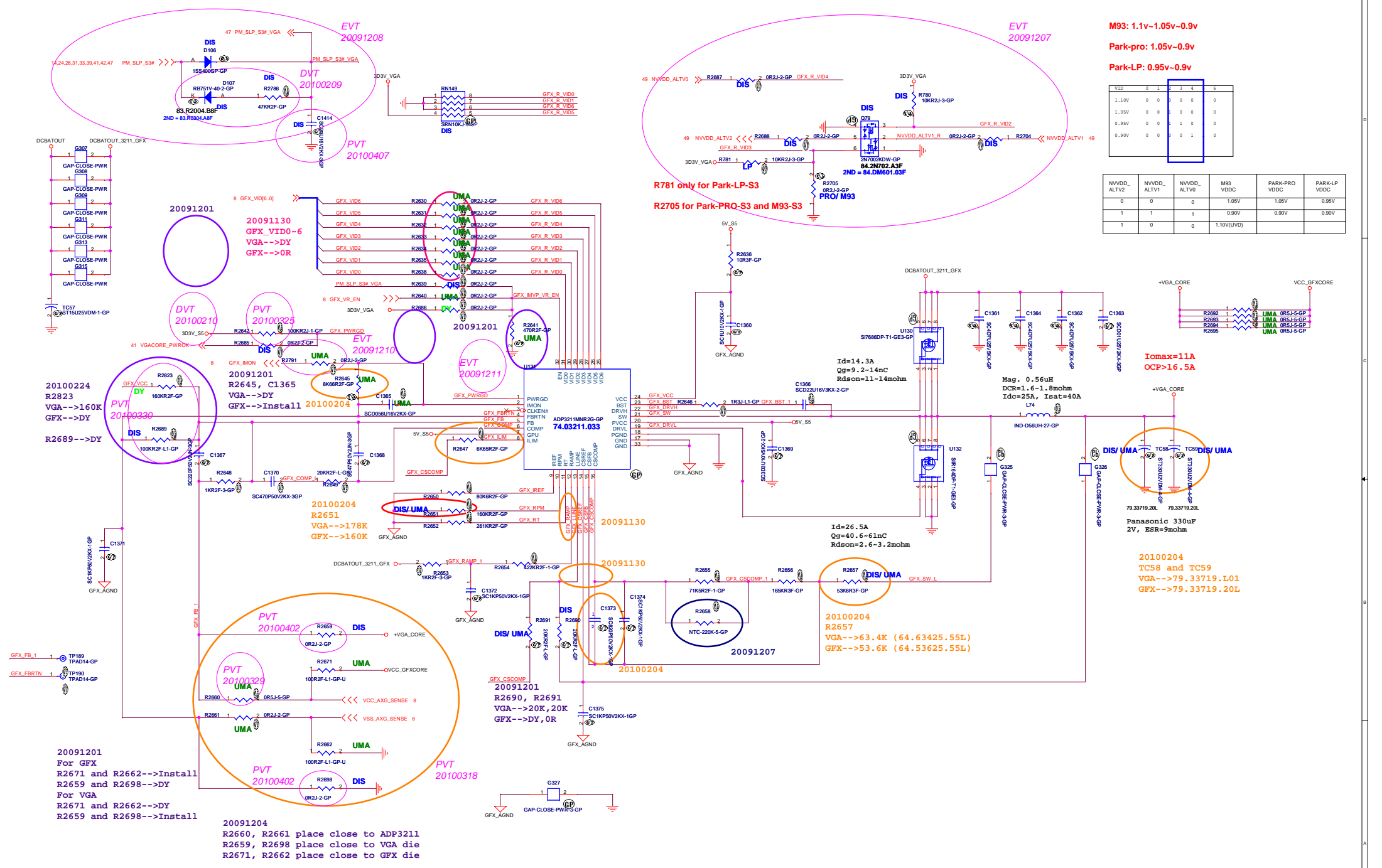


EVT  
20091221



Squirrelle CP DIS SAMSUNG

		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: <b>RT8209_1D05V</b>			
Size	Document Number	<b>CADIZ-CP</b>	
Date: Saturday, April 24, 2010	Sheet	39	of 57



M93: 1.1v~1.05v~0.9v  
 Park-pro: 1.05v~0.9v  
 Park-LP: 0.95v~0.9v

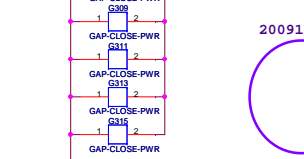
VID	0	1	2	3	4	5
1.10V	0	0	0	0	0	0
1.05V	0	0	1	0	0	0
0.95V	0	0	0	1	0	0
0.90V	0	0	0	0	1	0

NVDD0_ALT2V	NVDD0_ALT1V	NVDD0_ALT0V	M93_VDDC	PARK-PRO_VDDC	PARK-LP_VDDC
0	0	0	1.05V	1.05V	0.95V
1	1	1	0.90V	0.90V	0.90V
1	0	0	1.10V(LVD)		

R781 only for Park-LP-S3  
 R2705 for Park-PRO-S3 and M93-S3

Iomax=11A  
 OCP=16.5A

20100204  
 TC58 and TC59  
 VGA-->79.33719.L01  
 GFX-->79.33719.20L



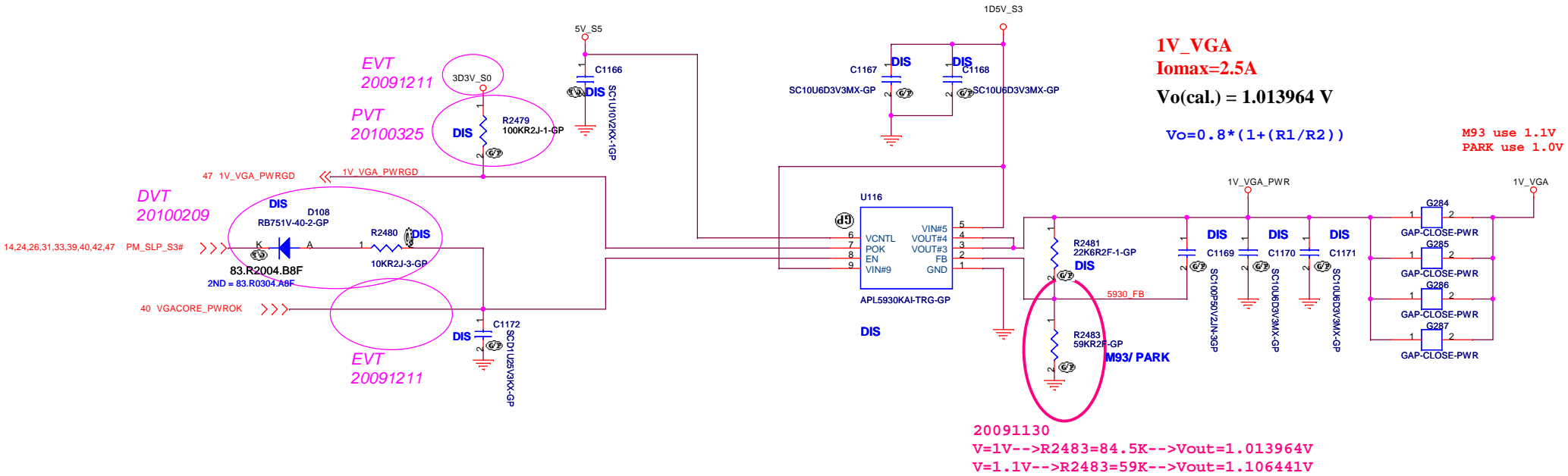
20100224  
 R2823  
 VGA-->160K  
 GFX-->DY  
 R2689-->DY



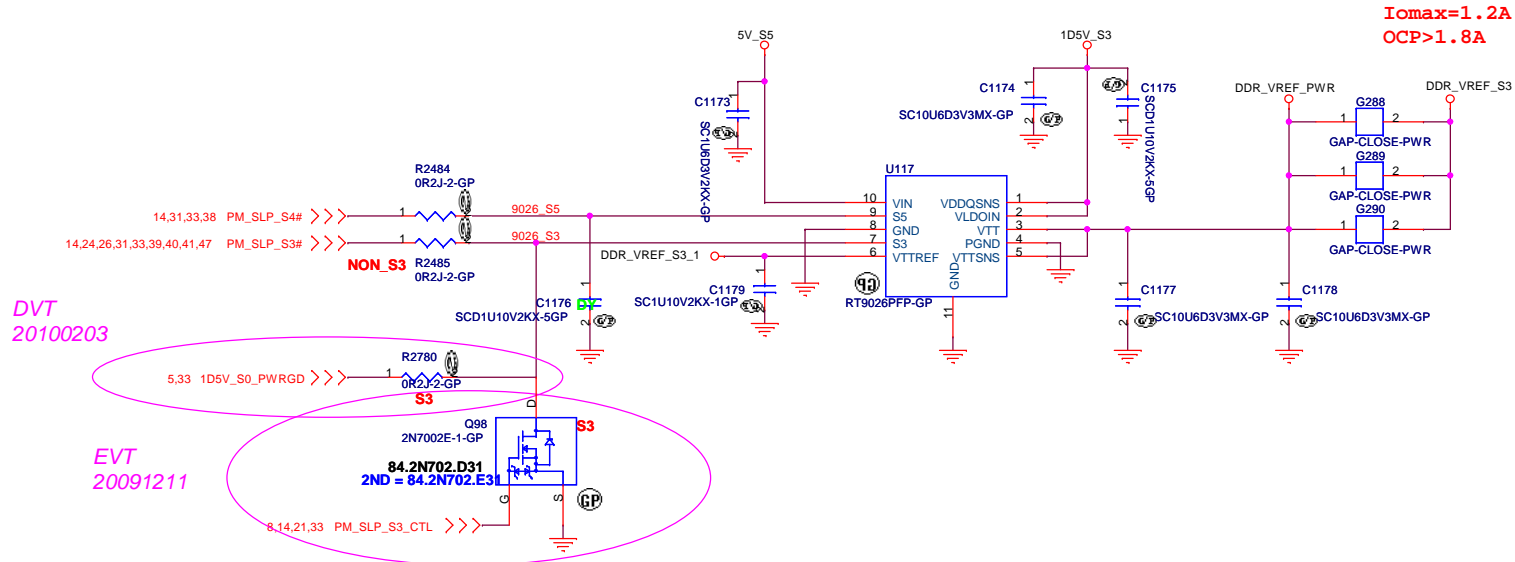
20091201  
 For GFX  
 R2671 and R2662-->Install  
 R2659 and R2698-->DY  
 For VGA  
 R2671 and R2662-->DY  
 R2659 and R2698-->Install

20091204  
 R2660, R2661 place close to ADP3211  
 R2659, R2698 place close to VGA die  
 R2671, R2662 place close to GFX die

# APL5930 for 1V\_VGA

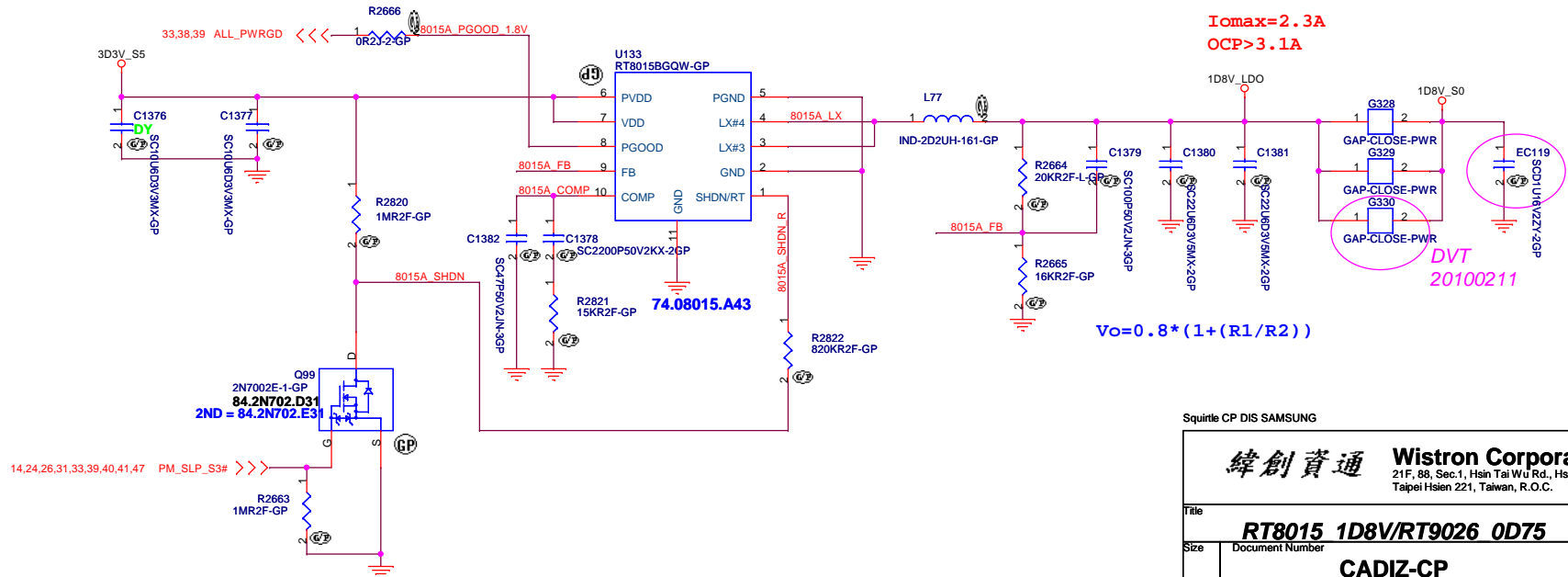


# RT9026 for 0D75V\_S3



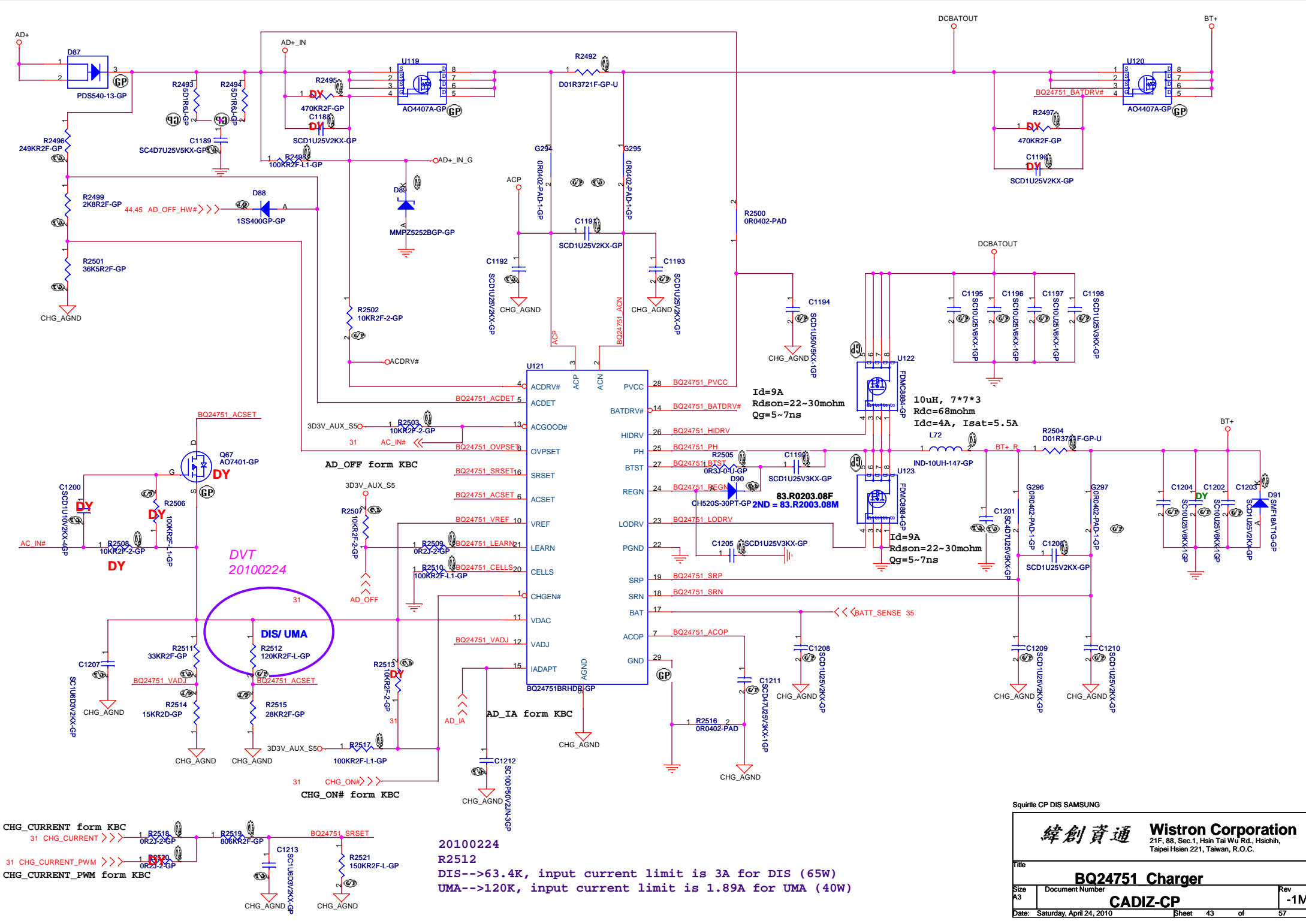
20100209

# RT8015 for 1D8V\_S0



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<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>RT8015 1D8V/RT9026 0D75</b>	
File	Rev
Size	Document Number
<b>CADIZ-CP</b>	
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CHG\_CURRENT form KBC  
 31 CHG\_CURRENT >>> 1 R2518 0R2V2-GP  
 31 CHG\_CURRENT\_PWM >>> 1 R2520 0R2V2-GP  
 CHG\_CURRENT\_PWM form KBC

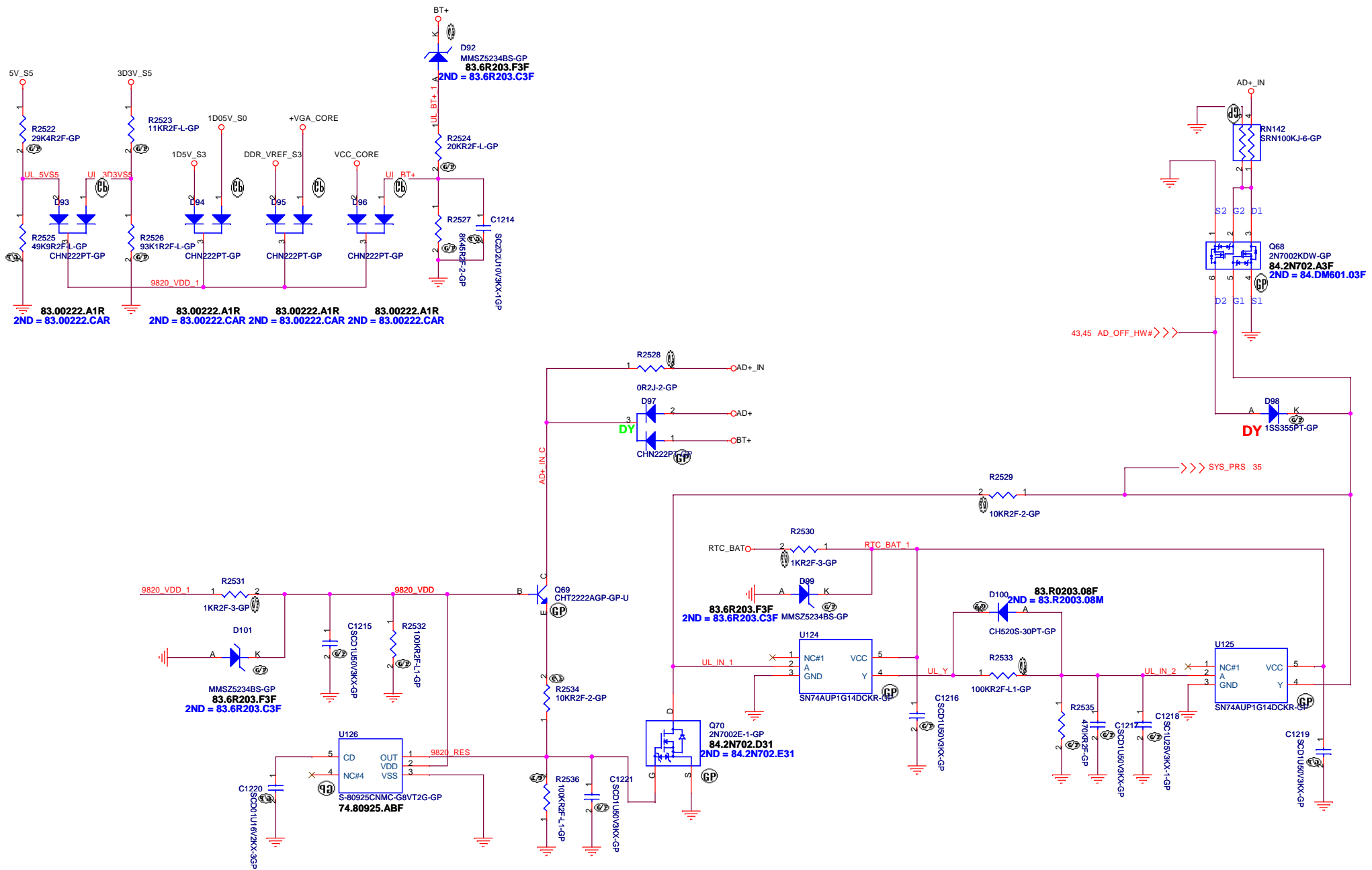
20100224  
 R2512  
 DIS-->63.4K, input current limit is 3A for DIS (65W)  
 UMA-->120K, input current limit is 1.89A for UMA (40W)

Squirrelle CP DIS SAMSUNG

緯創資通 Wistron Corporation  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

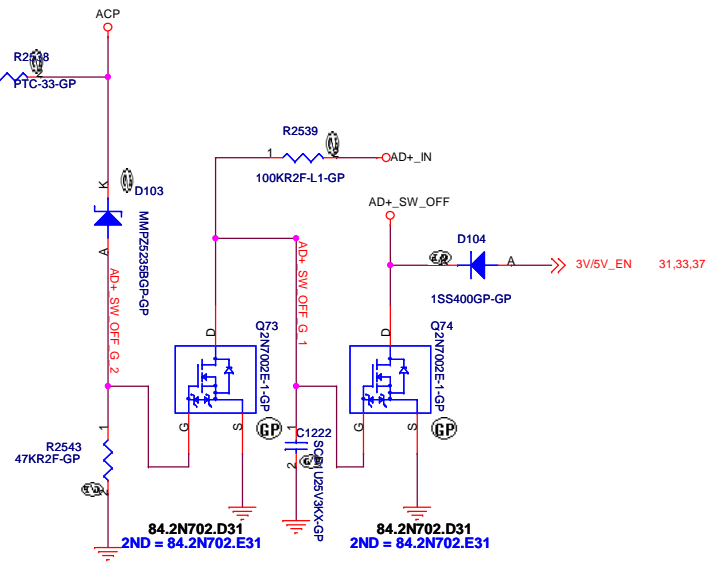
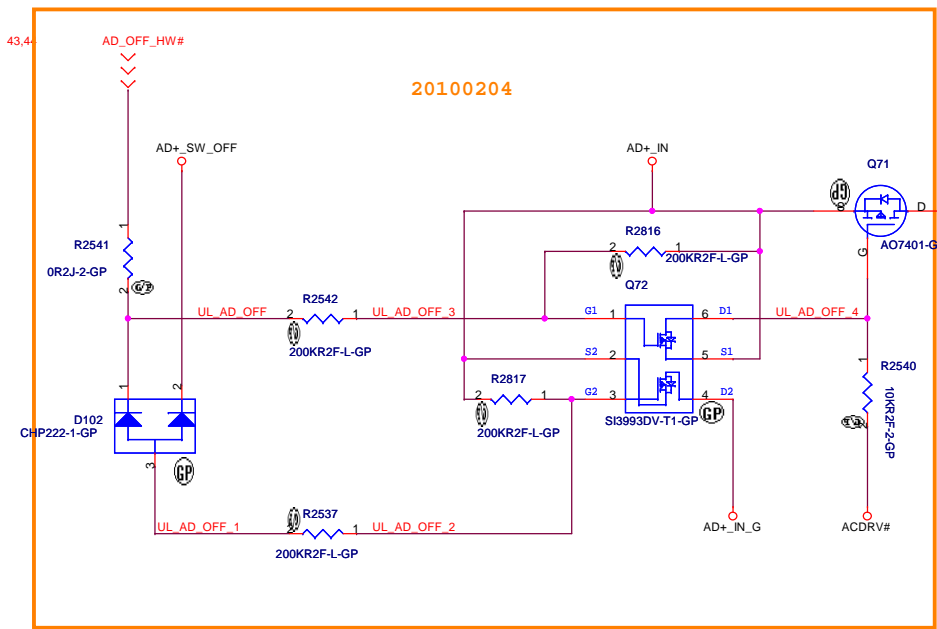
Title: BQ24751 Charger

Size A3	Document Number	Rev -1M
Date: Saturday, April 24, 2010		Sheet 43 of 57

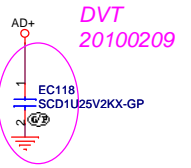
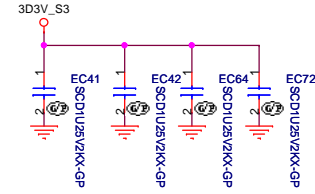
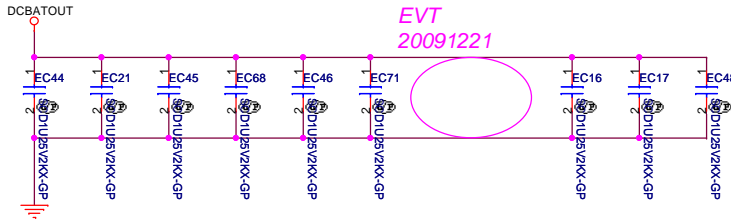
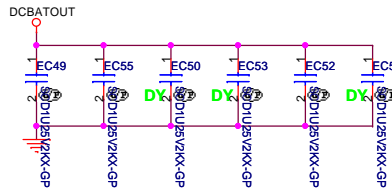


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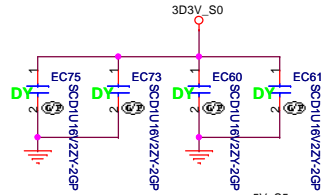
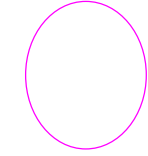
		<b>Wistron Corporation</b> 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>UL circuit</b>			
Size A3	Document Number	Rev -1M	
<b>CADIZ-CP</b>			
Date: Saturday, April 24, 2010		Sheet 44 of 57	



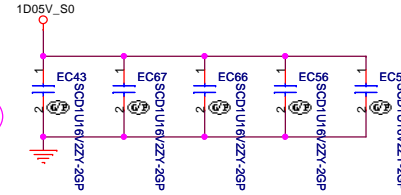
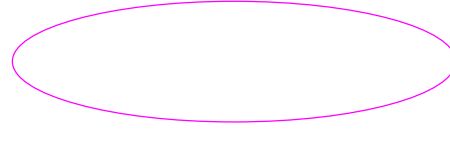




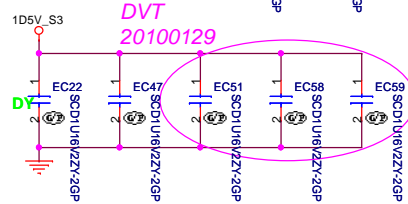
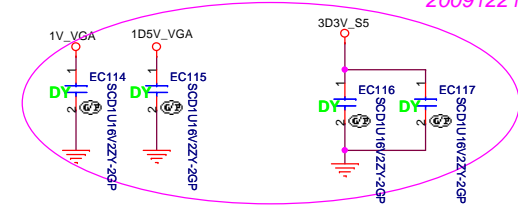
EVT 20091221



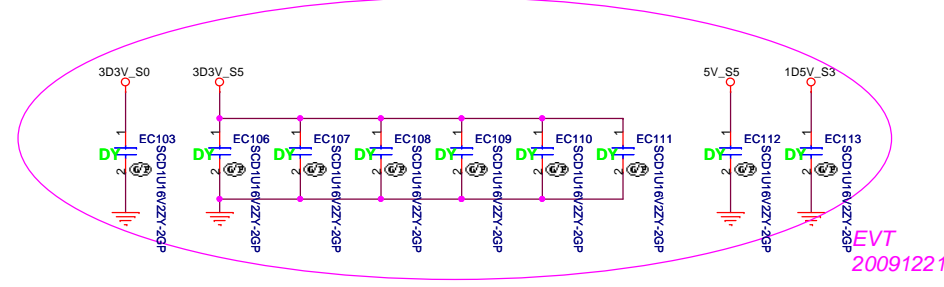
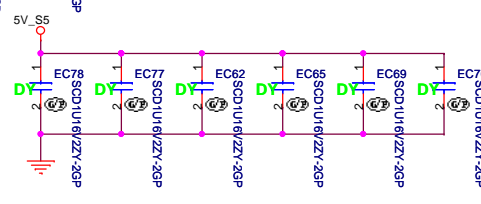
EVT 20091221



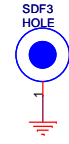
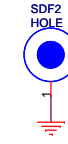
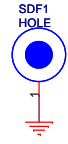
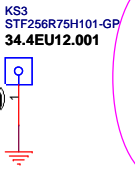
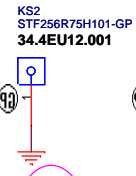
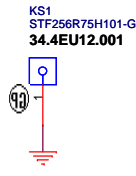
EVT 20091221



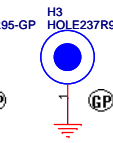
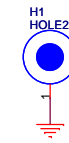
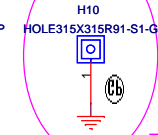
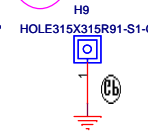
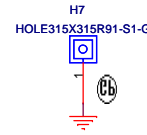
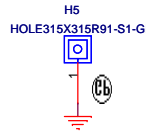
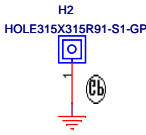
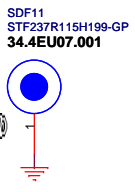
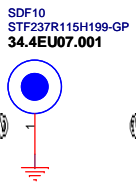
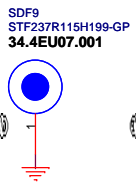
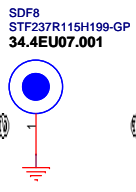
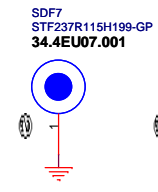
DVT 20100129



EVT 20091221



EVT 20091208



EVT 20091117



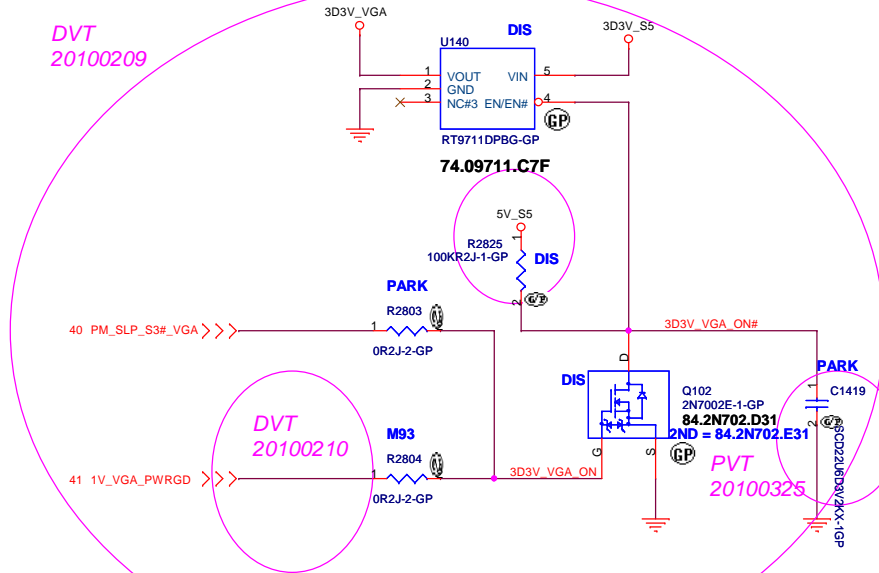
EVT 20091208

Squirtle CP DIS SAMSUNG

緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

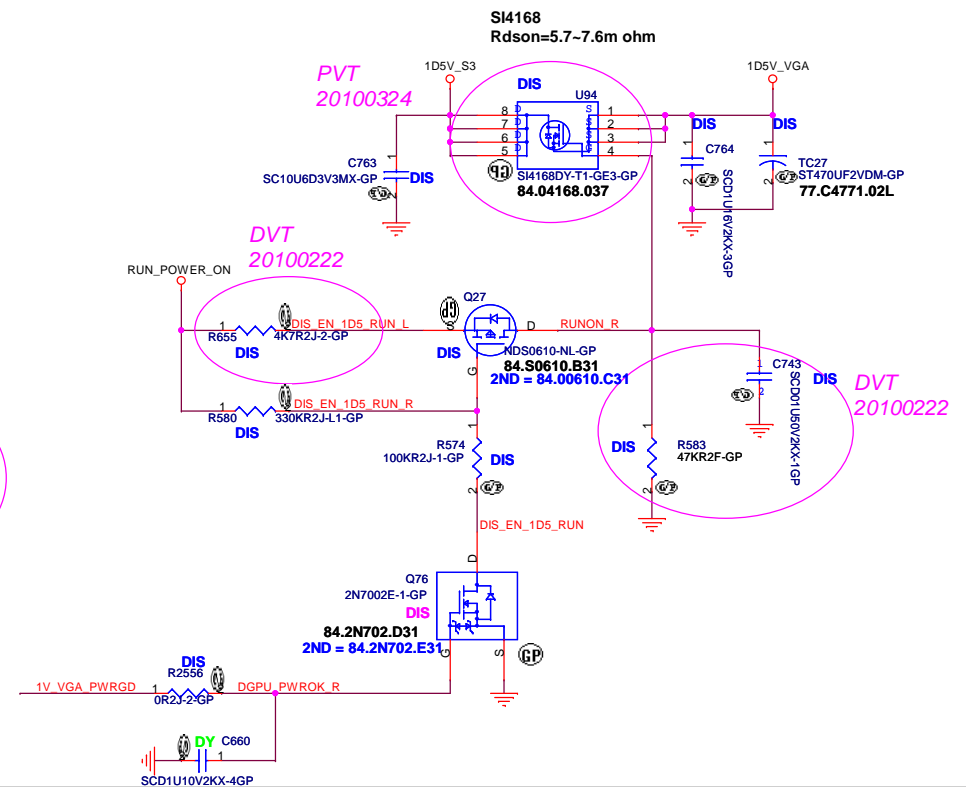
Title		<b>EMI/Spring/Boss</b>	
Size	Document Number	Rev	
Date: Saturday, April 24, 2010		Sheet 46 of 57	
<b>CADIZ-CP</b>		<b>-1M</b>	

DVT  
20100209



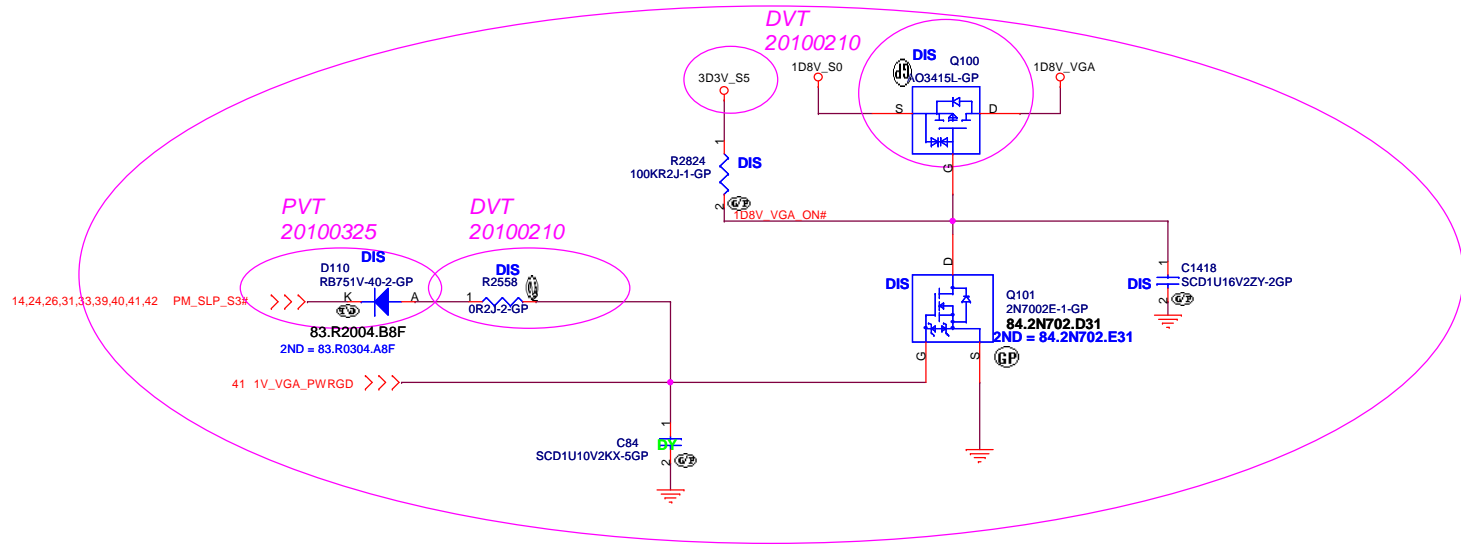
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20100210

PVT  
20100324



DVT  
20100222

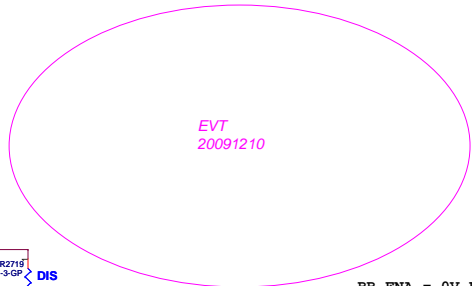
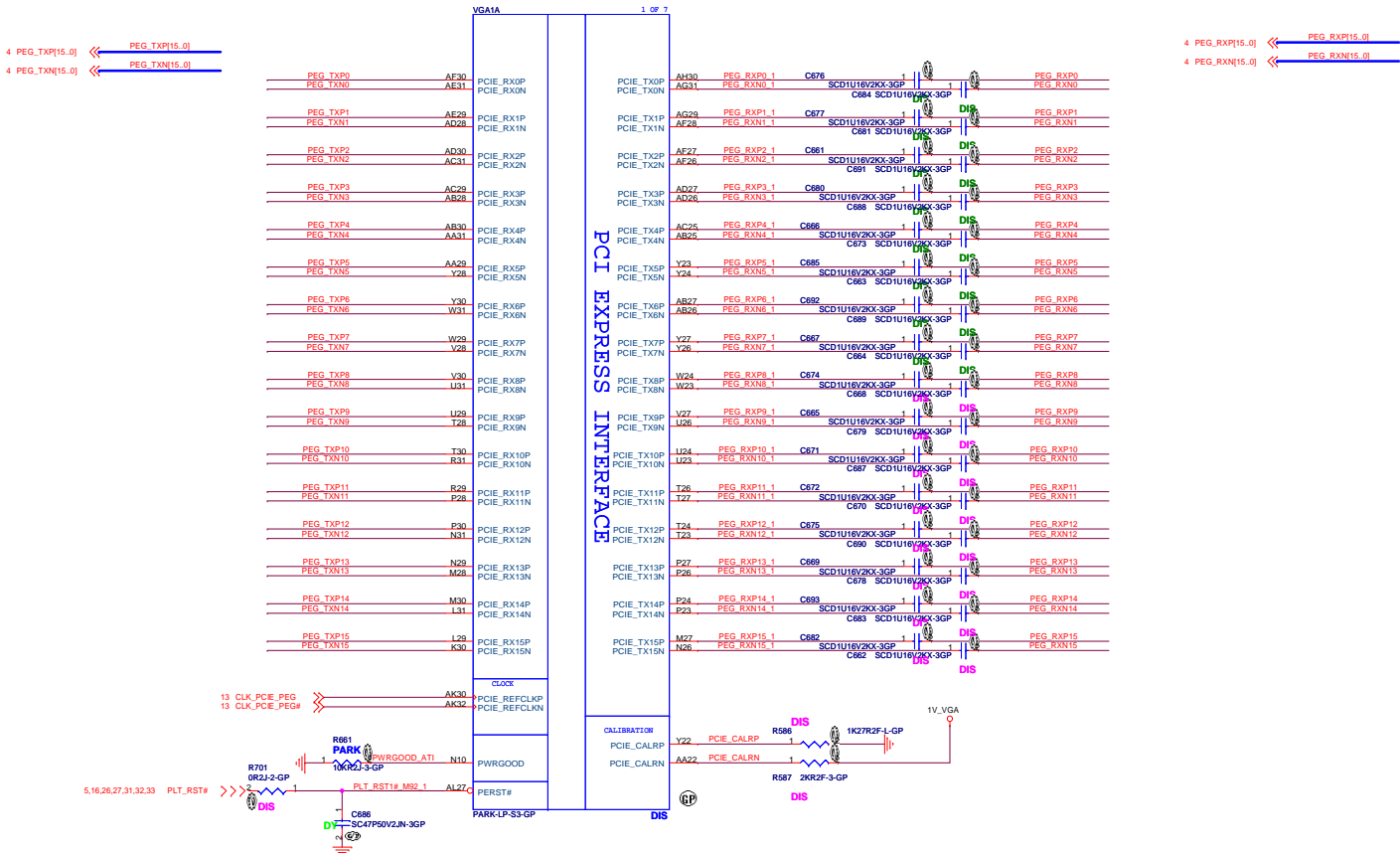
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20100222



PVT  
20100325

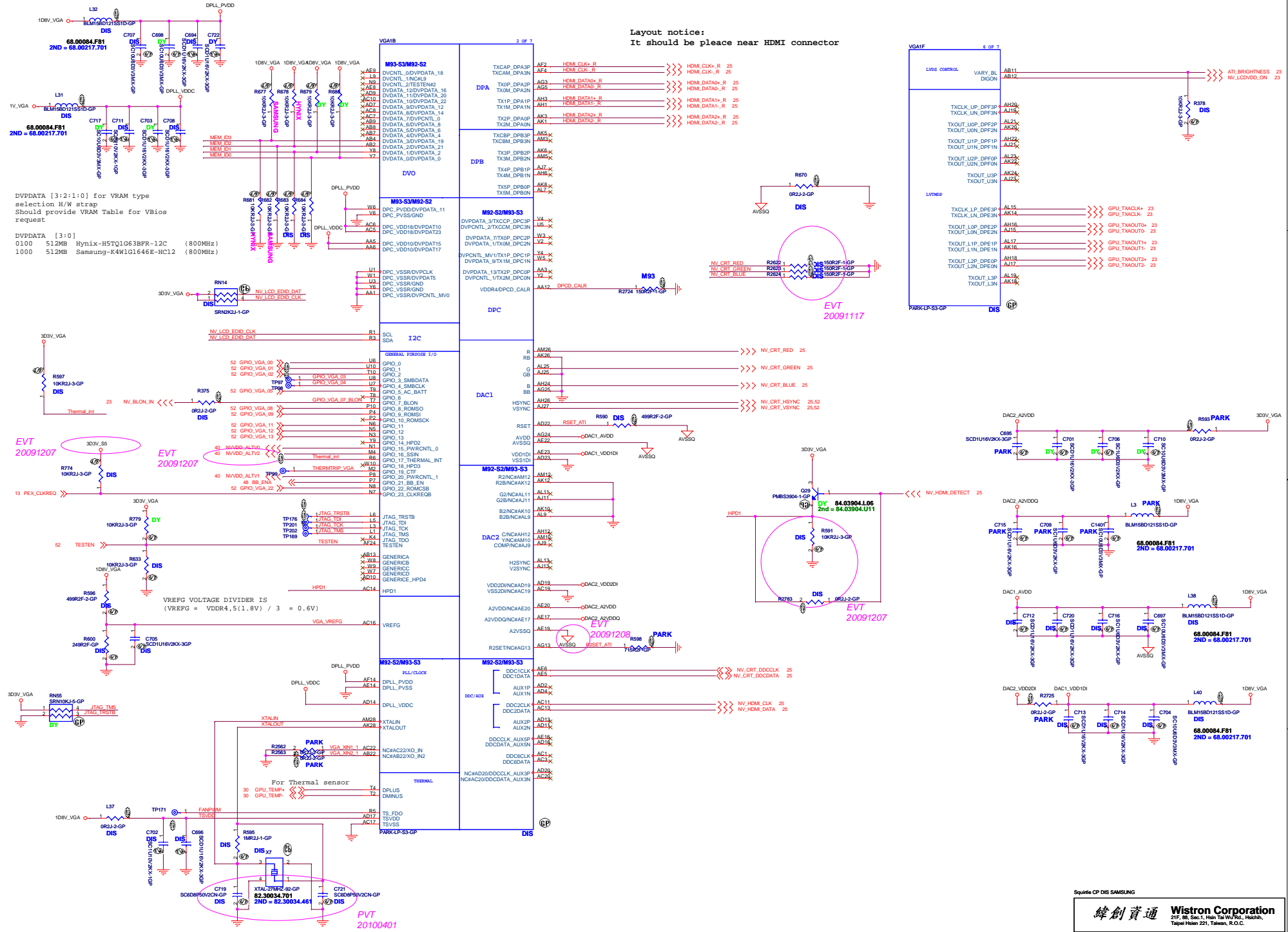
DVT  
20100210

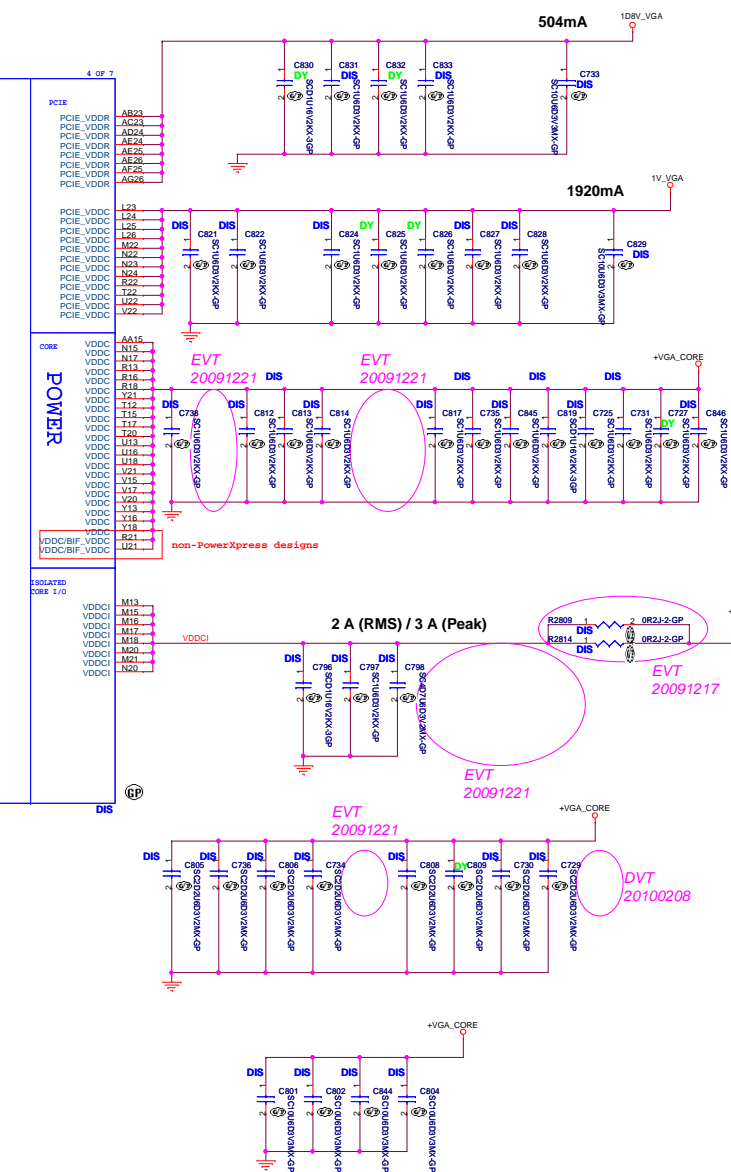
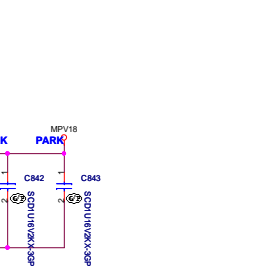
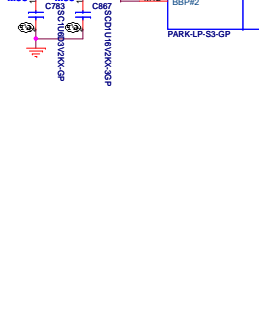
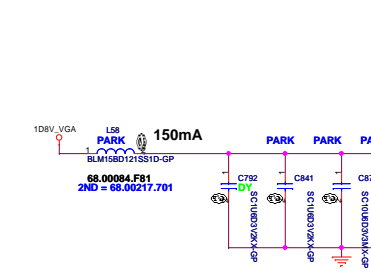
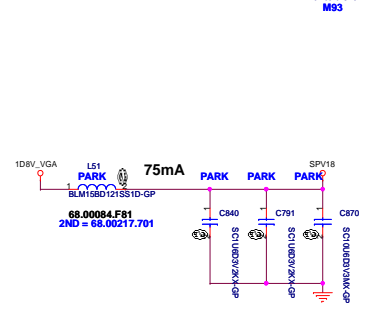
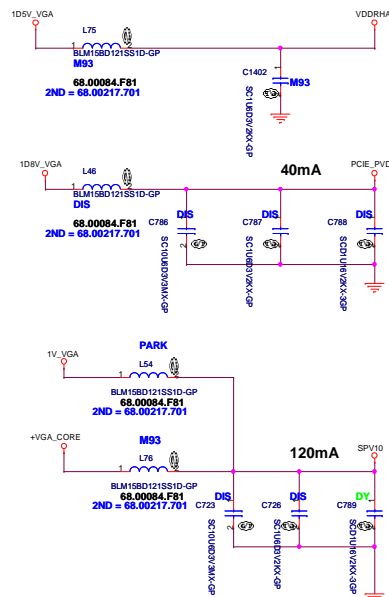
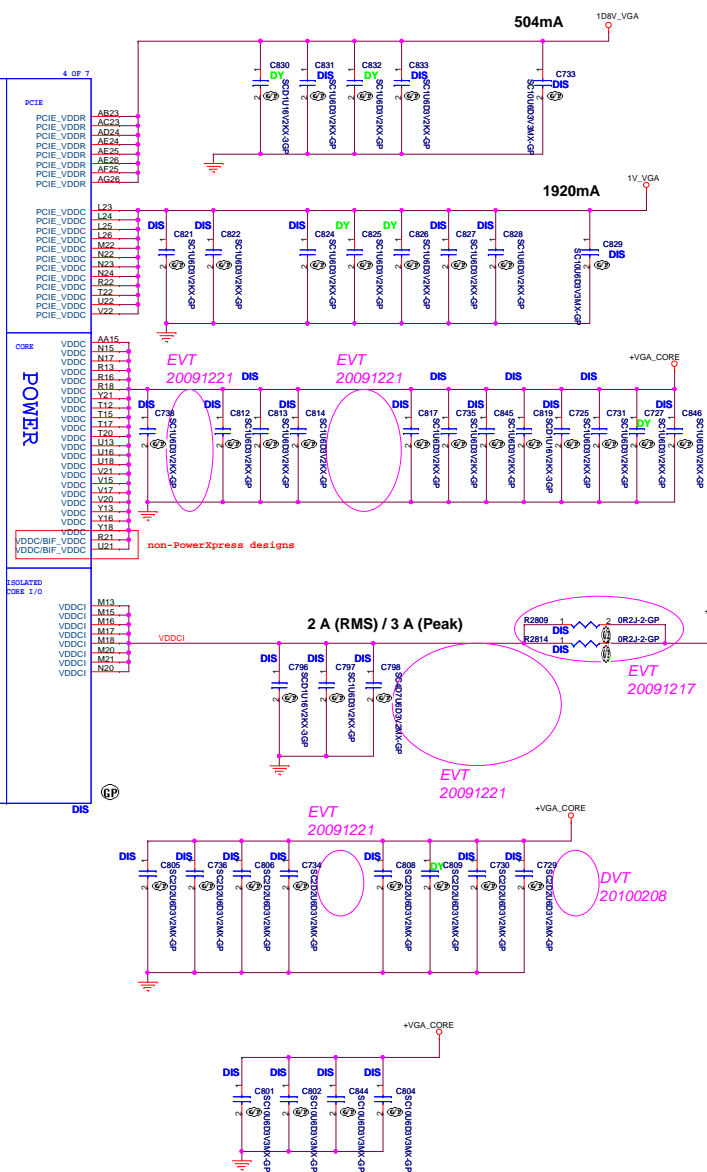
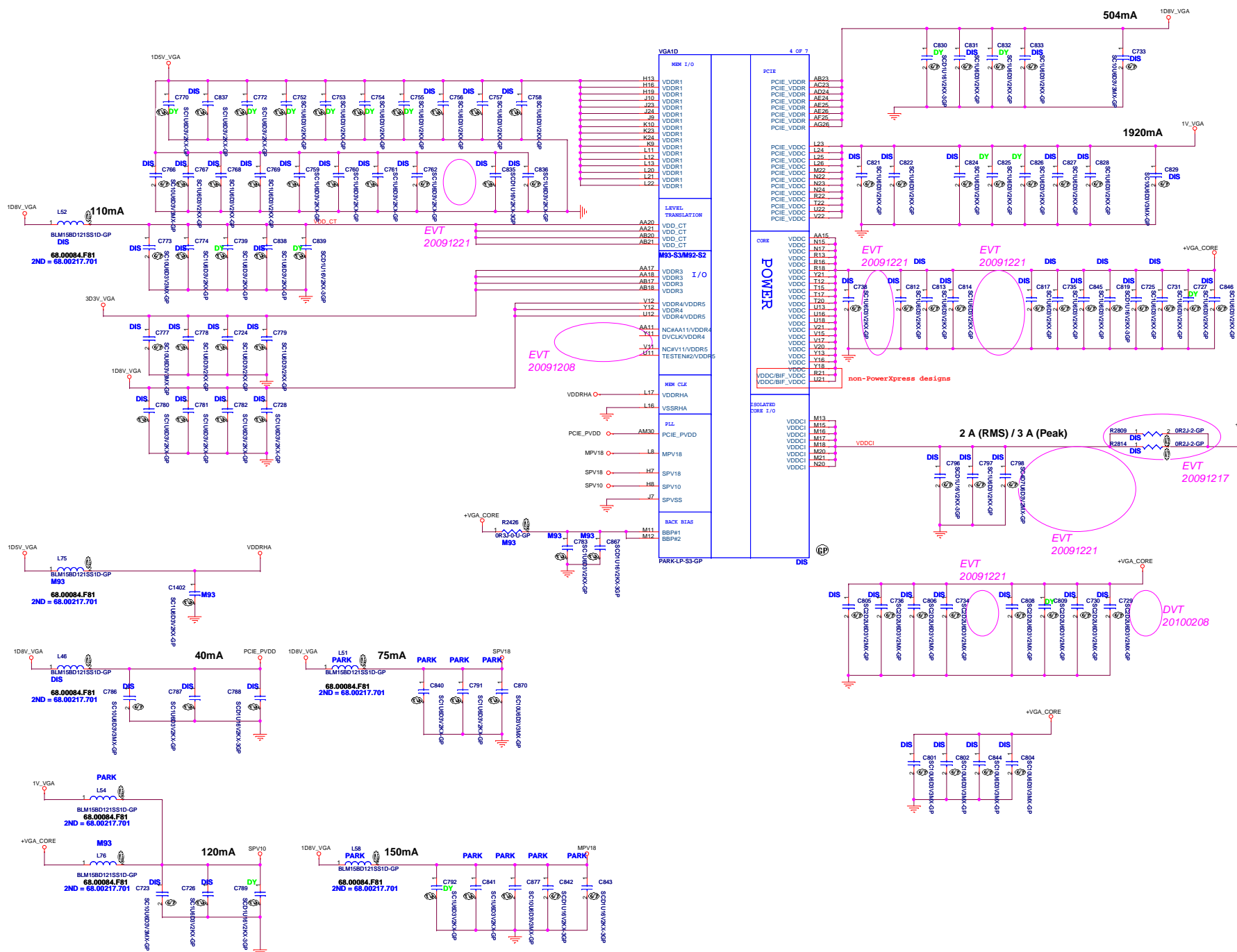
DVT  
20100210

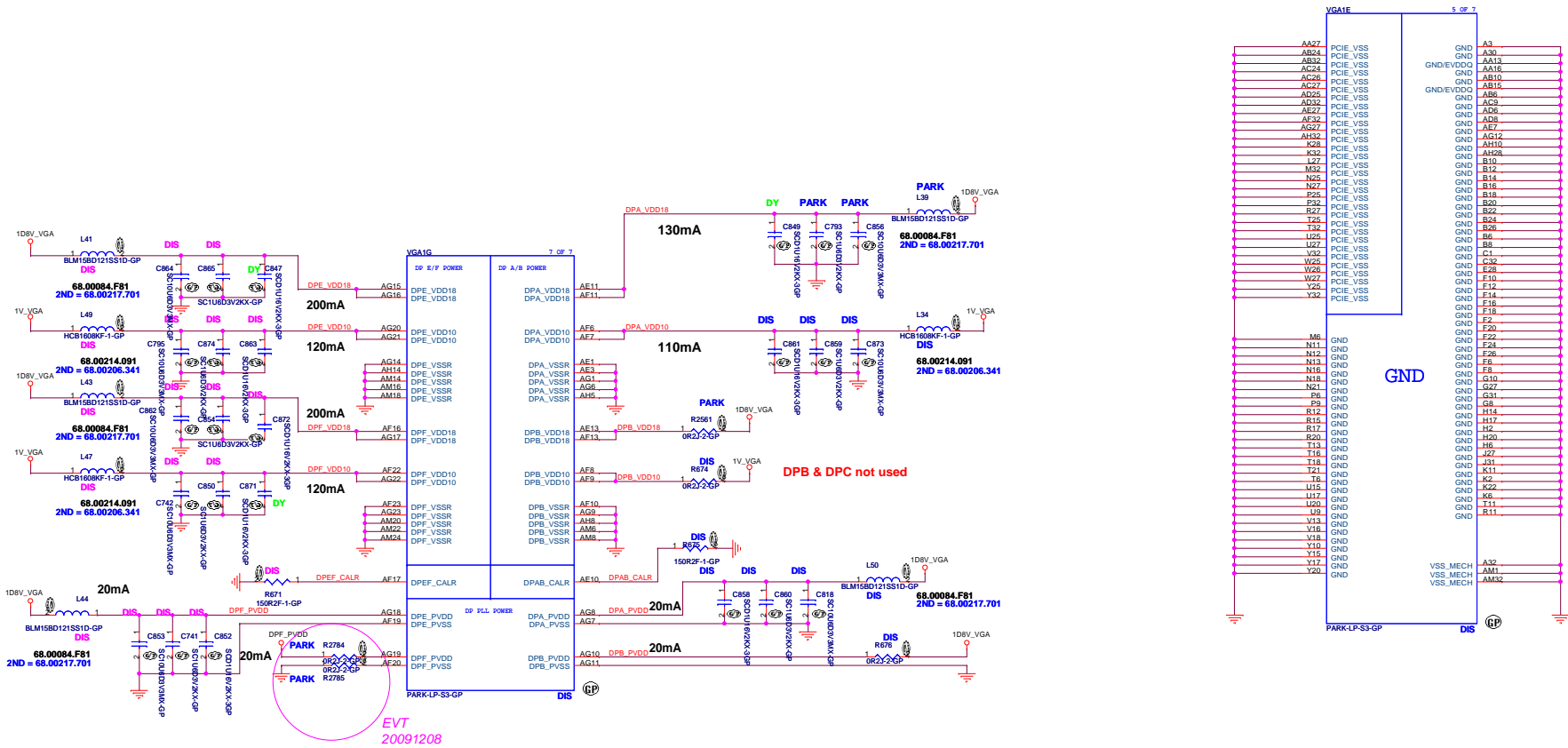


**BB\_ENA = 0V FOR BACK BIASING DISABLED**  
**N FET Q5 = OFF, P FET Q4 = OFF, N FET Q3 = ON**  
**+BBP = VDD\_CORE**  
**BB\_ENA = +3.3V FOR BACK BIASING ENABLED**  
**N FET Q5 = ON, P FET Q4 = ON, N FET Q3 = OFF**  
**+BBP = +1.8V**

Layout notice:  
It should be placed near HDMI connector







Squire CP DIS SAMSUNG

<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsein 221, Taiwan, R.O.C.		21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsein 221, Taiwan, R.O.C.	
File	<b>DP POWER_GND</b>		
Size	Document Number	Rev	-1M
A2	<b>CADIZ-CP</b>		
Date	Samsung, April 24, 2010	Sheet	51 of 57

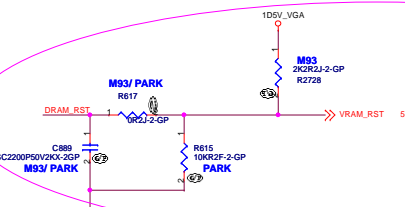
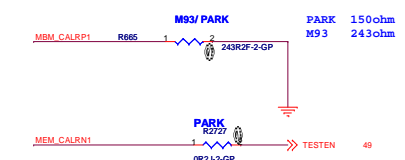
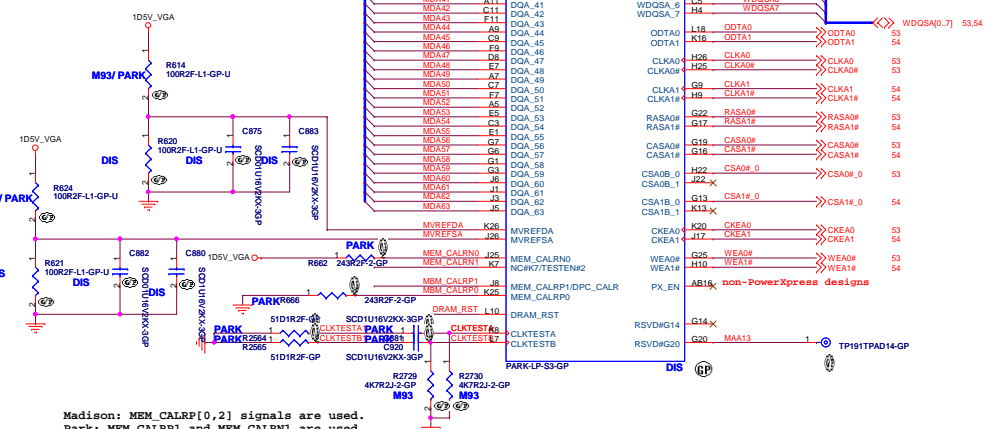
53.54 MDA[0..63] <<< VGA1C 3 OF 7 >>> MAA[0..12] 53.54

For M9X-S2/S3

DIVIDER RESISTORS	DDR2/DDR3	GDDR3
MVREF TO 1.8V (Ra)	100R	40.2R
MVREF TO GND (Rb)	100R	100R

For Park-S3

DIVIDER RESISTORS	DDR2/DDR3	GDDR3
MVREF TO 1.8V (Ra)	40.2R	40.2R
MVREF TO GND (Rb)	100R	100R



Designator	For M9X-S2 and M9X-S3	For Park-S3
R_MEM_1	001	100R
R_MEM_2	0R/Short	51R
R_MEM_3	2.2K	001
C_MEM	2.2uF	68pF

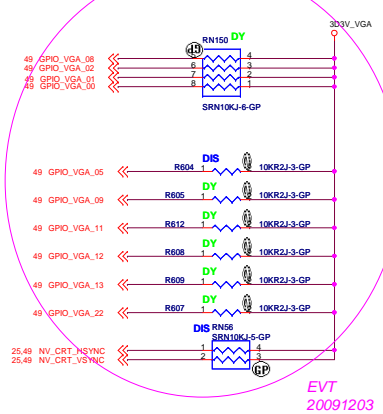
Madison: MEM\_CALRP[0,2] signals are used.  
Park: MEM\_CALRP1 and MEM\_CALRN1 are used

STRAPS	PIN	DESCRIPTION	RECOMMENDED SETTINGS (0= DO NOT INSTALL RESISTOR 1= INSTALL 10K RESISTOR X= DESIGN DEPENDANT NA= NOT APPLICABLE)
TX_PWRS_ENB (Internal PD)	GPIO0	PCIe FULL TX OUTPUT SWING Transmitter Power Savings Enable 0= 50% Tx output swing 1= Full Tx output swing	X
TX_DEEMPH_EN (Internal PD)	GPIO1	Transmitter De-emphasis Enable 0= Tx de-emphasis disabled 1= Tx de-emphasis enabled	X
BIF_GEN2_EN_A	GPIO2	PCIe GEN2 ENABLED	0
RESERVED	GPIO8	RESERVED	0
BIF_VGA_DIS	GPIO9	VGA ENABLED	0
RESERVED	GPIO21	RESERVED	0
BIOS_ROM_EN	GPIO22_ROMCSB	ENABLE EXTERNAL BIOS ROM	0
VIP_DEVICE_STRAP_ENA (Internal PD)	GPIO[13,12,11]	SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT if BIOS_ROM_EN=1, then Config[3:0] defines the ROM type if BIOS_ROM_EN=0, then Config[3:0] defines the primary memory aperture size	X X X
RSVD	V2SYNC		0
RSVD	H2SYNC		0
AUD[1] AUD[0] (Internal PD)	VGA_HSYNC VGA_VSYNC	AUD[1:0] 00:No audio function 01:Audio for DisplayPort and HDMI (if adapter is detected) 10:Audio for DisplayPort only 11:Audio for both DisplayPort and HDMI	X X

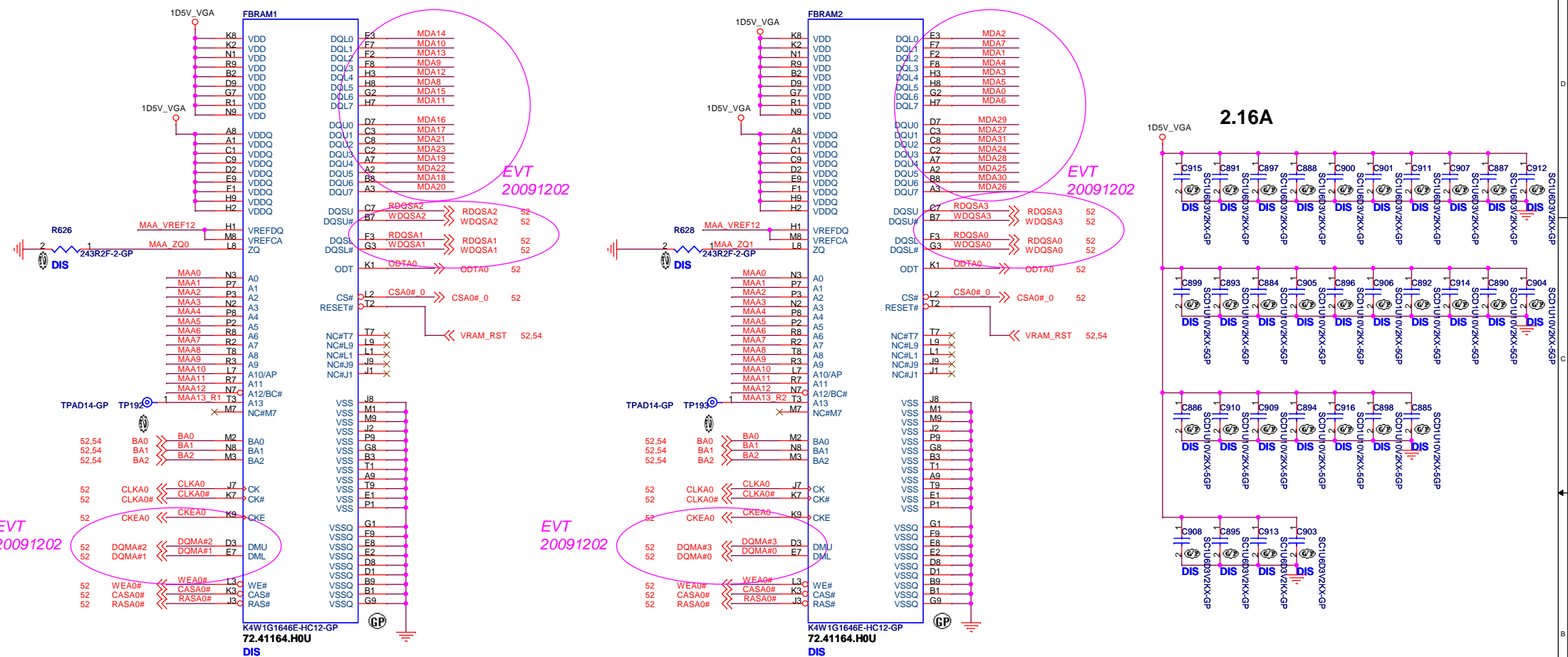
**AMD RESERVED CONFIGURATION STRAPS**  
ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED,  
THEY MUST NOT CONFLICT DURING RESET

H2SYNC, GENERIC\_C, GPIO2, GPIO21

If BIOS_ROM_EN (GPIO22) = 0		If BIOS_ROM_EN (GPIO22) = 1	
Size of the primary memory apertures	GPIO[13,12,11]	Manufacturer	Part Number
128MB	x000	ST Microelectronics	M25P05A 0100
256MB	x001		M25P10A 0101
64MB	x010		M25P20 0101
32MB	x	Chingis (formerly PMC)	M25P40 0101
512MB	x		M25P80 0101
1GB	x		Pm25LV512A 0100
2GB	x		Pm25LV010A 0101
4GB	x		

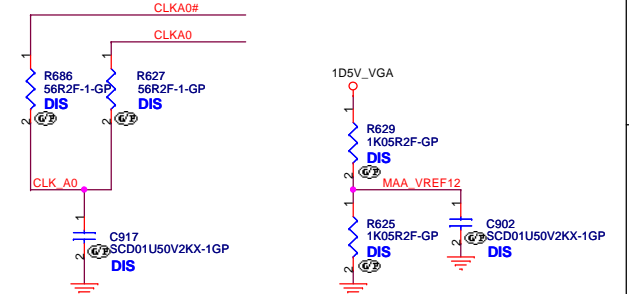


# DDR3



SAMSUNG: 72.41164.H0U  
 HYNIX: 72.51G63.C0U

- 52.54 DQMA#[0..7] <<>
- 52.54 RDQSA#[0..7] <<>
- 52.54 WDOQA#[0..7] <<>
- 52.54 MAA#[0..12] <<
- 52.54 MDA#[0..63] <<>



Squirrel CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

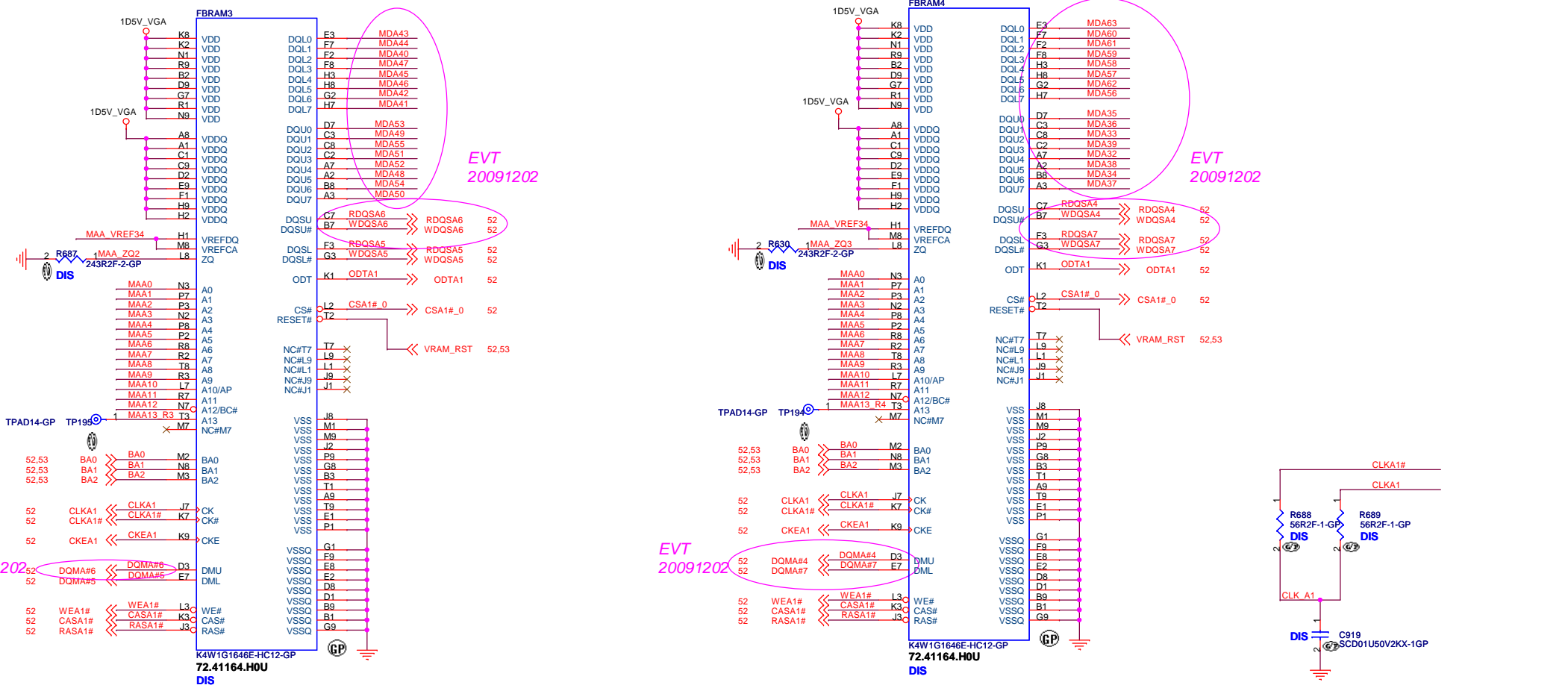
Title: **VRAM(1/2)**

Size: A3 Document Number: **CADIZ-CP** Rev: **-1M**

Date: Saturday, April 24, 2010 Sheet: 53 of 57



# DDR3



**SAMSUNG: 72.41164.H0U**  
**HYNIX: 72.51G63.C0U**

- 52,53 DQMA#[0..7] <<>
- 52,53 RDQSA#[0..7] <<>
- 52,53 WDQSA#[0..7] <<>
- 52,53 MAA#[0..12] <<>
- 52,53 MDA#[0..63] <<>

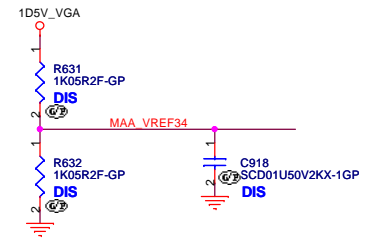
Squirrel CP DIS SAMSUNG

**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

Title: **VRAM(2/2)**

Size: A3 Document Number: **CADIZ-CP** Rev: **-1M**

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## EVT

(2009/11/17)		
P.8 [CPU SFF(5 of 8)-PWR/DDR/GFX]	Delete R2263 (GFX_VR_EN double pull-low)	
P.15 [PCH 4 of 9(LVDS/CRT/DP)]	Delete RN22 (CLK_DDC_EDID, DAT_DDC_EDID double pull-high)	
P.15 [PCH 4 of 9(LVDS/CRT/DP)]	Modify RN112 and add RN147	
P.15 [PCH 4 of 9(LVDS/CRT/DP)]	Change RN113 to three single resistors for PCH RGB signal.	
P.23 [LCD CONN]	Add R2621, R2625 100Kohm pull-low for BLON_IN and BLON_OUT_R	
P.25 [CRT BD CONN]	Add RN146 pull-high to 3D3V_S0 for CRT_DDCCLK1 and CRT_DDCDATA1	
P.47 [EMI/Spring/Boss]	ME add stand off KS1-KS4 and H10	
P.50 [PARK-S3 IO]	Change RN86 to three single resistors for VGA RGB signal.	
(2009/11/20)		
P.13 PCH (2 of 9)-PCIE/CLK/SMB	Modify PCI express ports connection assigned table	
P.16 PCH (5 of 9)-PCI/USB	Modify USB ports connection assigned table	
P.27 MINI BD CONN	Add USB port for MINI1 WIMAX function	
(2009/11/23)		
P.25 [CRT BD CONN]	Delete RN126-RN129	
(2009/11/25)		
P.24 [HDD CONN & TOUCHPAD]	Add HDD protection circuit	
P.27 MINI BD CONN	Modify WIMAX USB pair connection	
P.25 [CRT BD CONN]	Change HDMI 0.1UF caps to BTBCRT1 side..	
(2009/11/27)		
P.32 [BIOS & SW/C & BAT ID & Felic]	Add 10Kohm pull low for SPL_WP#	
(2009/11/30)		
P.27 MINI BD CONN	Modify 5V_MINI_S5, 3d3v_s3 and USB8 net arrangement	
P.3 Clock Generator	Add damping resistor for the 14MHz crystal	
P.12 PCH (1 of 9)-SATA/RTC/HDA	Add damping resistor for the 32KHz crystal	
(2009/12/01)		
P.13 PCH (2 of 9)-PCIE/CLK/SMB	Modify PCI express clock connection assigned table	
P.40 ADP3211_GFX_CORE/ VGA_CORE	Modify VGA/ GFX co-lay power circuit	
P.30 Thermal/Fan Controller	Modify thermal control circuit.	
P.32 [BIOS & SW/C & BAT ID & Felic]	Modify net name SPL_MOSO_R to SPL_MISO_R	
P.32 [BIOS & SW/C & BAT ID & Felic]	Add 100K ohms pull-down resistors on each SPI0_CLK, SPI0_MOSI and SPI0_CS# net.	
P.12 PCH (1 of 9)-SATA/RTC/HDA	Add damping resistor for LPC_LAD0-LPC_LAD3 and LPC_LFRAME#	
P.7 CPU SFF(4 of 8)-POWER/VTT	Delete VCORE SENSE pin double pull high/low resistors.	
P.39 RT8209_1D05V	Add sequence circuit for VTPWRGOOD and VTT.	
(2009/12/02)		
P.29 AUDIO JACK	Add speaker protection circuit.	
P.32 [BIOS & SW/C & BAT ID & Felic]	Add golden finger debug connector GF1 and only install it on EVT	
P.37 [RT8223_5V/3D3V]	Delete 3D3V_PWR 7pcs gaps for more place.	
P.12 PCH (1 of 9)-SATA/RTC/HDA	Add test point for JTAG.	
P.25 [CRT BD CONN]	Change HDMI_CLK, HDMI_DATA, CRT_DDCCLK1, CRT_DDCDATA1 pull high resistors to 3.83Kohm.	
P.53 [VRAM(1/2)]	Swap VRAM DQ, DQS, DIM net.	
P.54 [VRAM(3/4)]	Swap VRAM DQ, DQS, DIM net.	
(2009/12/03)		
P.13 PCH (2 of 9)-PCIE/CLK/SMB	Change PCIE_CLK_RQ2# to pull low for cardreader.	
P.23 [LCD CONN]	Change discrete brightness source from EC to VGA.	
P.52 [M93/ PARK-S3 Memory / Straps]	Modify GPIO setting	
(2009/12/04)		
P.40 ADP3211_GFX_CORE/ VGA_CORE	Modify sense pin circuit.	
P.28 Audio Codec ALC275	Modify speaker protection circuit.	
P.29 AUDIO JACK	Modify speaker protection circuit.	
P.39 RT8209_1D05V	Delete 1D05V output gaps.	
P.42 G9661_1D8V/ RT9026_0D75	Add S3 Power Reduction schematics.	
P.5 CPU SFF(2 of 8)-CLK/Thermal	Add S3 Power Reduction schematics.	
P.17 PCH (6 of 9)-GPIO/RSVD	Add S3 Power Reduction schematics.	
P.33 RUN POWER	Add S3 Power Reduction schematics.	
P.8 CPU SFF(5 of 8)-PWR/DDR/GFX	Add S3 Power Reduction schematics.	
P.21 DDR3-SOCKET_1	Add S3 Power Reduction schematics.	
P.14 PCH (3 of 9)-DMI/FDI	Add S3 Power Reduction schematics.	
(2009/12/07)		
P.31 KBC_NPCE781L / KB	Modify W_Disable# direction to output from EC	
P.27 MINI BD CONN	Modify W_Disable# direction to output from EC	
P.13 PCH (2 of 9)-PCIE/CLK/SMB	Delete RN102 and omit the routing prom PCH to CPU	
P.5 CPU SFF(2 of 8)-CLK/Thermal	always install RN89 for UMA and DIS.	
P.27 MINI BD CONN	Modify power source 6 pins of 3D3V_S3 to 3D3V_S5 for WWAN power off sequence by software request.	
P.36 ADP3211_CPU CORE	Power team update circuit and add EL CAP at DCBATOUT for acoustic noise.	
P.38 RT8209_1D5V	Power team modify circuit.	
P.39 RT8209_1D05V	Power team modify circuit	
P.40 ADP3211_GFX_CORE/ VGA_CORE	Power team modify circuit and VID GPIO setting.	
P.49 M93/ PARK-S3 IO	Delete VGA_XIN1 net from VGA to CLKGEN and add TP for VGA_JTAG pins and modify PEX_CLKREQ pull high to 3D3V_S5	
P.3 Clock Generator	Delete the net "VGA_XIN1" net from VGA to CLKGEN routing.	

(2009/12/08)  
P.46 EMI/Spring/Boss  
P.50 M93/ PARK-S3 POWER  
P.51 M93/ PARK-S3 DP POWER\_GND  
P.49 M93/ PARK-S3 IO  
P.52 M93/ PARK-S3 Memory / Straps  
P.39 RT8209\_1D05V  
P.40 ADP3211\_GFX\_CORE/ VGA\_CORE  
P.41 APL5930\_1V  
P.48 M93/ PARK-S3 PCIE

Delete SDF4, KS4 and add GND9, GND10 for ME request.  
Pins A11, Y11, V11, U11 can left unconnected at M93-S3 and PARK-S3.  
DPF\_PVDD, DPF\_PVSS add damping resistor for PARK-S3.  
Change A2VSSQ connection to clean ground.  
Modify "DRAM\_RST" output circuit.  
Power team modify circuit (delete U107)  
Modify VGA power sequence  
Modify VGA power sequence  
Modify VGA power sequence

(2009/12/09)  
P.33 RUN POWER  
P.3 Clock Generator  
P.31 KBC\_NPCE781L / KB  
P.36 ADP3211\_CPU CORE  
P.9 CPU SFF(6 of 8)-CPUCORE  
P.17 PCH (6 of 9)-GPIO/RSVD

Delete R344 and C28.  
Modify symbol to 9LVS3197BKLFT that only one CLKGEN source we will use. Delete pin16 CPU\_STOP# to NC for 9LVS3197BKLFT.  
Add 100Kohm pull up resistor for ME\_UNLOCK# and combine 3pcs 100Kohm pull up to one 8P4R resistor.  
Change TC60 power plane from DCBATOUT to DCBATOUT\_3211\_CPU and add TC61 for DCBATOUT  
Delete C978, C979, C982, C983 for placement.  
Change PCH\_GPIO57 DIS/UMA selection to KBC.

(2009/12/10)  
P.36 ADP3211\_CPU CORE  
P.12 PCH (1 of 9)-SATA/RTC/HDA  
P.33 RUN POWER  
P.14 PCH (3 of 9)-DMI/FDI  
P.48 M93/ PARK-S3 PCIE  
P.27 MINI BD CONN  
P.36 ADP3211\_CPU CORE  
P.26 CARDREADER BD CONN  
P.27 MINI BD CONN  
P.40 ADP3211\_GFX\_CORE/ VGA\_CORE  
P.12 PCH (1 of 9)-SATA/RTC/HDA  
P.39 RT8209\_1D05V  
P.14 PCH (3 of 9)-DMI/FDI

Change net 3211\_PWRGD pull high 1Kohm to 3D3V\_S0  
Change 4pcs TP to two dummy 0402 resistor for layout space.  
Delete R2720 and R513.  
Delete R464 and PM\_PWROK connection to PCH.B17(PWROK).  
Delete M93+BBP circuit.  
Add one more power pin on BTBMINI1 for 3D3V\_S3.  
Modify VID[5:3] setting for 27A CPU core power rating.  
Modify WLAN\_BT\_DATA direction  
Modify WLAN\_BT\_DATA direction  
Add R2791 0ohm resistor installed on UMA SKU to separate the connection between VGA power circuit and CPU  
Add R2793 pull low resistor on Ia  
Add sequence circuit for VTPWRGOOD and VTT when system suddenly moves to G3 by removing both AC and battery at the same time.  
Add sequence circuit for SYS\_PWROK , PWROK, MEPWROK when system suddenly moves to G3 by removing both AC and battery at the same time.

(2009/12/11)  
P.5 CPU SFF(2 of 8)-CLK/Thermal  
P.40 ADP3211\_GFX\_CORE/ VGA\_CORE  
P.41 APL5930\_1V  
P.47 ATI POWER  
P.41 APL5930\_1V  
P.47 ATI POWER  
P.27 MINI BD CONN  
P.33 RUN POWER

Modify RN93 resistor to two single resistors.  
Delete R2644 and change R2642 to 10Kohm.  
Delete R2482.  
Modify R2330 pull-up from 3D3V\_S3 to 3D3V\_S0.  
Modify R2479 pull-up from 3D3V\_S3 to 3D3V\_S0.  
Modify 3D3V\_VGA sequence circuit.  
Modify to 8pin 3D3V\_S3.  
Change U138 to AO4406AL.

(2009/12/12)  
P.27 MINI BD CONN

Modify BTBMINI1 to 3pins of 3D3V\_S3 and 6pins of 3D3V\_S5.

(2009/12/14)  
P.36 ADP3211\_CPU CORE  
P.26 CARDREADER BD CONN  
P.16 PCH (5 of 9)-PCI/USB  
P.39 RT8209\_1D05V  
P.8 CPU SFF(5 of 8)-PWR/DDR/GFX  
P.9 CPU SFF(6 of 8)-CPUCORE  
P.14 PCH (3 of 9)-DMI/FDI

Change R2573 from 1.91Kohm to 10Kohm.  
Modify 5V\_S0 power to 1D5V\_S0 because 5V\_S0 has not used on cardreader board.  
Modify USB\_OC#3-USB\_OC#7 to single pull-up.  
Delete G227, G225.  
Change R669,R668,R685,R695 to 0402 resistors.  
Delete C1313, C1314.  
Add D112 to match the sequence IMVP\_VR\_EN and SYS\_PWROK/PCH\_PWROK.

(2009/12/14)  
P.50 M93/ PARK-S3 POWER

Add 0ohm 0805 resistor for VDDCI.

(2009/12/15)

P.14 PCH (3 of 9)-DMI/FDI  
P.13 PCH (2 of 9)-PCIE/CLK/SMB

Modify reset circuit for POWEROK and VTPWRGOOD sequence when system suddenly moves to G3.  
Add 0ohm resistor for XTAL25\_OUT.

(2009/12/16)

P.14 PCH (3 of 9)-DMI/FDI  
P.40 ADP3211\_GFX\_CORE/ VGA\_CORE  
P.17 PCH (6 of 9)-GPIO/RSVD  
P.36 ADP3211\_CPU CORE  
P.39 RT8209\_1D05V

Modify reset circuit for POWEROK,PM\_RSMRST# and VTPWRGOOD sequence when system suddenly moves to G3.  
Modify VCC\_AXG\_SENSE,VSS\_AXG\_SENSE connection.  
[Bom change] change RN119 from 10Kohm to 33Kohm.  
[Bom change] change R2580 from 1Kohm to 3.3Kohm.  
[Bom change] delete Q84, R2742.

(2009/12/17)

P.14 PCH (3 of 9)-DMI/FDI  
P.50 M93/ PARK-S3 POWER  
P.40 ADP3211\_GFX\_CORE/ VGA\_CORE

Change D112 direction.  
Change one 0805 resistor to two 0402 resistors for layout placement space.  
Change R2660 size from 0402 to 0805 for VCC\_AXG\_SENSE/ VSS\_AXG\_SENSE routing.

(2009/12/21)

P.46 EMI/Spring/Boss  
P.8 CPU SFF(5 of 8)-PWR/DDR/GFX  
P.50 M93/ PARK-S3 POWER  
P.46 EMI/Spring/Boss  
P.31 KBC\_NPCE781L / KB  
P.39 RT8209\_1D05V  
P.37 [RT8223\_5V/3D3V]


EMC add EC103, EC106-EC117 for 3D3V\_S0, 3D3V\_S5, 5V\_S5, 1D5V\_S3, 1V\_VGA, 1D5V\_VGA.  
Delete C1282, C1281 and change C1264, C1265 to 4.7uF for layout placement space.  
Delete C834, C807, C800, C811, C816, C815, C737, C799 and change C789 to 4.7uF for layout placement space.  
Delete EC80, EC79, EC82, EC59, EC58, EC51, EC12, SPR2 for layout placement space.  
Change PCB version setting for power saving in S5.  
Add VTT\_PWRGD pull-up resistor.  
Because the shortage of FDMC8296, change U100, U101 to FDMC7692.

(2010/01/09)

P.17 PCH (6 of 9)-GPIO/RSVD  
P.33 RUN POWER

[BOM Change] change Q92 from transistor to MOS 2N7002 and change C1411 from 0.047uF to 0.1uF.  
[BOM Change] change Q94, Q95 from transistor to MOS 2N7002.

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**DVT**

(2010/01/21)  
 P.38 [RT8209\_1D5V] [BOM change] R2409 change from 30Kohm to 31.6Kohm.  
 P.37 [RT8223\_5V/3D3V] [BOM change] R2393 change from 30Kohm to 31.6Kohm.  
 (2010/01/25)  
 P.13 [PCH (2 of 9)-PCIE/CLK/SMB] [BOM change] C1023, C1024 change from 18pF to 15pF.  
 P.49 [M93/ PARK-S3 IO] [BOM change] C719, C721 change from 10pF to 12pF.  
 P.32 [BIOS & SW/C & BAT ID & Felic] [BOM change] Add EC83, EC84 to 330pF for EMC request.  
 (2010/01/29)  
 P.23 [LCD CONN] [BOM change] Change DIS brightness source to EC control.  
 P.46 [EMI/Spring/Boss] Add EC51, 58,59 to 0.1uF for EMC request.  
 (2010/02/03)  
 P.24 [HDD CONN & TOUCHPAD] Change R2701 to 91Kohm and add C1417 to 2,2uF for HDD protection.  
 P.33 [RUN POWER] [BOM change] change R2779 to 100Kohm for 1D5V\_S0\_PWRGD.  
 P.42 [G9661\_1D8V/ RT9026\_0D75] [BOM change] change R2780 to 0ohm for 1D5V\_S0\_PWRGD.  
 (2010/02/04)  
 P.36 [ADP3211\_CPU CORE] Change TC60 from EL CAP to POSCAP and change R2593 to 91Kohm.  
 P.37 [RT8223\_5V/3D3V] Change R2384 to 75Kohm and change R2385 to 97.6Kohm.  
 P.39 [RT8209\_1D05V] Change R2421 to 10.2Kohm.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Modify +VGA\_CORE feedback trace connection and change C1373 to 820pF  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Change R2645 to 8.66Kohm for GFX.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Change R2657 to 63.4Kohm and cahnge R2647 to 6.65Kohm for VGA.  
 P.45 [UVP Protect] Change Q72 to P-MOSFET and add R2816, R2817 to 200Kohm.  
 P.36 [ADP3211\_CPU CORE] Dummy R2613.  
 Close all open power gaps.  
 (2010/02/05)  
 P.31 [KBC\_NPCE781L / KB] Change R2714 to 20Kohm for PCB version.  
 P.33 [RUN POWER] Add a dummy resistor R2818 to 100Kohm.  
 Close all open power gaps.  
 (2010/02/08)  
 P.14 [PCH (3 of 9)-DMI/FDI] Change R2812 to 165Kohm.  
 P.49 [M93/ PARK-S3 IO] Change R2562, R2563 options to PARK.  
 P.50 [M93/ PARK-S3 POWER] Change L75, R2426, C783, C867 options to M93.  
 P.50 [M93/ PARK-S3 POWER] Change L58, C841, C877, C842, C843 options to PARK.  
 P.52 [M93/ PARK-S3 Memory / Straps] Change R665 to 243ohm, R617 to 0ohm, C889 to 2.2nF for M93.  
 P.41 [APL5930\_1V] Change R2483 to 59Kohm for M93.  
 P.50 [M93/ PARK-S3 POWER] Delete C810 for placement space.  
 P.33 [RUN POWER] Cahnge Q94 to transistor, C1412 to 1uF, R2818 to 330Kohm and stuff it.  
 P.31 [KBC\_NPCE781L / KB] Add R2819 pull-up to 3D3V\_AUX\_S5 and change C364 to 1uF for vender request.  
 P.24 [HDD CONN & TOUCHPAD] Modify R2701pull-up to 5V\_AUX\_S5 and dummy D105.  
 P.47 [ATI POWER] Change 3D3V\_VGA solution from MOS to switch.  
 (2010/02/09)  
 P.42 [RT8015\_1D8V/ RT9026\_0D75] Change 1D8V\_S0 power solution to RT8015.  
 P.46 [EMI/Spring/Boss] Add EC118 to 0.1uF at AD+ for EMC request.  
 P.47 [ATI POWER] Change 1D8V\_VGA power solution and R2558 to 1Kohm.  
 P.7 [CPU SFF(4 of 8)-POWER/VTI] Delete C1238 for placement space.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Add R2823 to 267Kohm and dummy R2689.  
 P.14 [PCH (3 of 9)-DMI/FDI] Change U139 VCC to 3D3V\_AUX\_S5.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Change D107 to 83.R2004.B8F and R2786 to 47Kohm.  
 P.41 [APL5930\_1V] Change D108 to 83.R2004.B8F and R2480 to 10Kohm.  
 P.12 [PCH (1 of 9)-SATA/RTC/HDA] Change R2733-R2737 to 56ohm.  
 P.47 [ATI POWER] Modify 3D3V\_VGA solution.  
 (2010/02/10)  
 P.47 [ATI POWER] Change R2824 pull up to 3D3V\_S5.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Change R2642 pull up to 3D3V\_S5.  
 P.47 [ATI POWER] Change R2558 to 0ohm, delete D109, R2788, C1415.  
 P.12 [PCH (1 of 9)-SATA/RTC/HDA] Change C1008, C1009 to 5pF.  
 P.13 [PCH (2 of 9)-PCIE/CLK/SMB] Delete EC91 for placement space.  
 P.16 [PCH (5 of 9)-PCI/USB] Delete EC93 for placement space.  
 P.31 [KBC\_NPCE781L / KB] Delete C363 for placement space.  
 P.50 [M93/ PARK-S3 POWER] Stuff C821 to 1uF.  
 P.47 [ATI POWER] Change Q100 to AO3415.  
 P.24 [HDD CONN & TOUCHPAD] Change Q77 to AO3419.  
 P.17 [PCH (6 of 9)-GPIO/RSVD] Stuff R2298 to 54.9ohm and dummy RN120 for THERMTRIP#.  
 P.33 [RUN POWER] Stuff R167 to 56ohm for THERMTRIP#.  
 P.5 [CPU SFF(2 of 8)-CLK/Thermal] Stuff R2305 to 0ohm for PROCHOT#.  
 (2010/02/11)  
 P.42 [RT8015\_1D8V/ RT9026\_0D75] Add more one gap G330 for 1D8V\_S0.  
 P.42 [RT8015\_1D8V/ RT9026\_0D75] Add EC119 to 0.1uF for EMC request.  
 (2010/02/22)  
 P.41 [APL5930\_1V] Change R2479 to 10Kohm for vga sequence.  
 P.47 [ATI POWER] Change C743 to 0.01uF, R583 to 47Kohm and R655 to 4.7Kohm for vga sequence.  
 P.33 [RUN POWER] Dummy R2818.  
 (2010/02/23)  
 P.17 [PCH (6 of 9)-GPIO/RSVD] Dummy R2298 and stuff RN120 for THERMTRIP#.  
 P.33 [RUN POWER] Dummy R167 for THERMTRIP#.  
 P.47 [ATI POWER] Change U94 to AO4430 Rds=5.5-7.5mohm  
 P.31 [KBC\_NPCE781L / KB] Change U135 to G691L293173UF.

(2010/02/24)  
 P.38 [RT8209\_1D5V] [BOM change] R2409 change from 31.6Kohm to 30Kohm.  
 P.43 [BQ24751\_Charger] [BOM change] R2512 change from 120Kohm to 63.4Kohm for DIS.  
 P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] [BOM change] R2823 change from 267Kohm to 160Kohm for DIS.

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**PVT**

(2010/03/18)

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Modify +VGA\_CORE feedback trace connection.

P.14 [PCH (3 of 9)-DMI/FDI] Change U139 VCC from 3D3V\_AUX\_S5 to 5V\_AUX\_S5.

(2010/03/22)

P.31 [KBC\_NPCE781L / KB] [BOM change] Dummy R142 double pull low.

(2010/03/24)

P.47 [ATI POWER] [BOM change] Change U94 to SI4168 Rds=5.7~7.6mohm.

P.33 [RUN POWER] Delete R2818 and change Q10 pin5 connection to PM\_SLP\_S3\_CTL.

(2010/03/25)

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] [BOM change] Change R2642 to 100Kohm for VGA sequence.

P.41 [APL5930\_1V] [BOM change] Change R2479 to 100Kohm for VGA sequence.

P.47 [ATI POWER] [BOM change] Change D110 to RB751V for VGA sequence.

P.47 [ATI POWER] [BOM change] C1419 to 0.22uF for VGA sequence PARK only.

(2010/03/29)

P.24 [HDD CONN &amp; TOUCHPAD] [BOM change] Change R2701 to 133Kohm and change R2702 to 3.3Kohm for HDD protection sequence.

P.24 [HDD CONN &amp; TOUCHPAD] Add C1379 to 0.1uF for HDD protection sequence.

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] Change R2660 0ohm resistor to 0805 size.

(2010/03/30)

P.36 [ADP3211\_CPU CORE] Change U127 to TPCA8030 and change U128, U129 to TPCA8028 for VCC\_CORE quality.

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] [BOM change] Dummy R2823 and add R2689 to 100Kohm for VGACORE level.

(2010/03/31)

P.31 [KBC\_NPCE781L / KB] Add CP and CP2 option circuit.

Change 0ohm resistors to 0ohm pads 0402-pad: R2547, R2732, R2566, R2553, R2568, R2567, R2574, R2552, R2554, R2572, R2550, R2570, R2549, R2731, R2569, R2551, R2578, R2548

0603-pad: R2669, R2246, R2247

(2010/04/01)

P.38 [RT8209\_1D5V] [BOM change] Change R2411 to 10Kohm and change R2409 to 10.2Kohm to rise 1% of 1D5V\_S3 level.

P.49 [M93/ PARK-S3 IO] [BOM change] C719, C721 change to 6.8pF.

P.13 [PCH (2 of 9)-PCIE/CLK/SMB] [BOM change] C1023, C1024 change to 12pF.

(2010/04/02)

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] [BOM change] Change R2659, R2698 to 0ohm resistor for VGA\_CORE transition overshoot.

(2010/04/07)

P.40 [ADP3211\_GFX\_CORE/ VGA\_CORE] [BOM change] Change C1414 0.1uF capacitor from Y5V to X7R.

(2010/04/12)

P.49 [M93/ PARK-S3 IO] [BOM change] Add 2nd source for X7.

**MP**

(2010/04/21)

P.19 [PCH (8 of 9)-PWRSATA/USB] Change VCCSUSHDA power plane to 1.5V\_S5.

(2010/04/24)

P.19 [PCH (8 of 9)-PWRSATA/USB] Add R2826 dummy pull low resistor for enable pin.

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<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 8th, Sec.1, Hsin Tai Wu Rd., Hsichang, Taipei Hsien 221, Taiwan, R.O.C.		21F, 8th, Sec.1, Hsin Tai Wu Rd., Hsichang, Taipei Hsien 221, Taiwan, R.O.C.	
<b>HISTORY EVT</b>			
<b>CADIZ-CP</b>			
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