

# AMD BRAZOS Muxless Discrete/UMA Schematics Document

## AMD Ontario CPU FT1

## AMD GPU Seymour XT S3

### 2010-12-01

### REV : SA

*DY :None Installed*  
*UMA:UMA platform installed*  
*PARK:DIS PARK platform installed*  
*MADISON:DIS MADISON platform installed*  
*Colay :Manual modify BOM*  
*MUX : PX*  
*ROB:ROBSON*

<Variant Name>

<b>緯創資通</b>			<b>Wistron Corporation</b>		
<small>21F, 88, Sec.1, Hsien Tai Wu Rd., Hsichien, Taipei Hsien 221, Taiwan, R.O.C.</small>			<small>21F, 88, Sec.1, Hsien Tai Wu Rd., Hsichien, Taipei Hsien 221, Taiwan, R.O.C.</small>		
Title					
<b>Cover Page</b>					
Size	Document Number				Rev
A3	<b>B575</b>				<b>-1</b>
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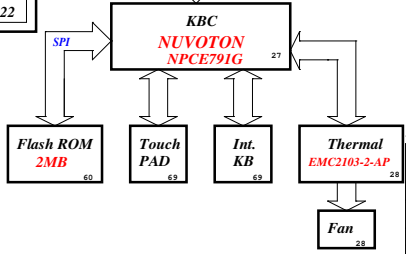
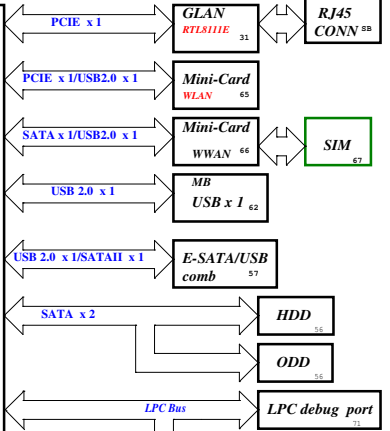
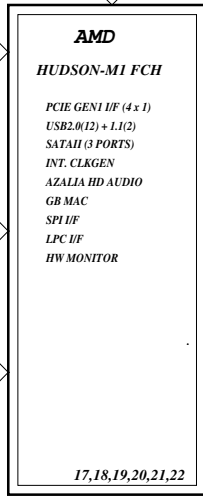
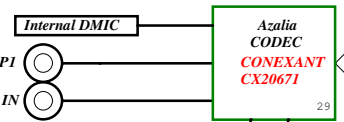
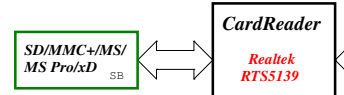
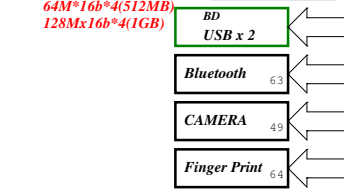
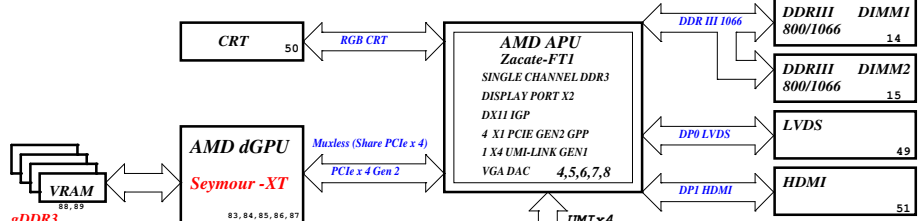
PROJECT CODE : 91.4PN01.001

PCB P/N : 10332

REVISION : SA

# Block Diagram

- LAN BD
- POWER BD
- CR BD
- LED BD
- BlueTooth MD
- FPR BD



VGA RT8208B 92	
INPUTS	OUTPUTS
DCBATOUT	VGA_CORE_PWR
AMD GPU CORE TP551218D 47	
INPUTS	OUTPUTS
DCBATOUT	1D8V_S0

SYSTEM DC/DC TPS51123 41	
INPUTS	OUTPUTS
DCBATOUT	5V_S5 3D3V_S5 5V_AUX_S5 3D3V_AUX_S5
TPS51218D 45	
INPUTS	OUTPUTS
DCBATOUT	1D0V_S0
DDR I I SUS TP551218 46	
INPUTS	OUTPUTS
DCBATOUT	1D5V_S3
RT9026 46	
INPUTS	OUTPUTS
5V_S5	DDR_VREF_S3
TPS51218 46	
INPUTS	OUTPUTS
DCBATOUT	1D1V_S5
CHARGER BQ24745 40	
INPUTS	OUTPUTS
DCBATOUT	CHG_PWR
CPU DC/DC ISL6265C 42	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE
GFX Core ISL6265C 45	
INPUTS	OUTPUTS
DCBATOUT	VDD_NB

### PCB STACKUP

- TOP L1
- VCC L2
- S L3
- S L4
- GND L5
- BOTTOM L6

Wistron Corporation  
 21F, 8F, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.

**BLOCK DIAGRAM**

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REQUIRED SYSTEM STRAPS ?

	AZ_SDOUT	PCI_CLK1	CLK_PCI_LPC	PCI_CLK4	LPC_CLK0	LPC_CLK1	LPC_CLK2
PULL HIGH	LOW POWER MODE	Allow PCIE GEN2 DEFAULT	USE DEBUG STRAPS	non_Fusion CLOCK mode	ENABLE EC	CLKGEN ENABLED (Use Internal) DEFAULT	Enable boot timer function
PULL LOW	PERFORMANCE MODE DEFAULT	Force PCIE GEN1	IGNORE DEBUG STRAPS DEFAULT	Fusion CLOCK mode DEFAULT	DISABLE EC DEFAULT	CLKGEN DISABLED (Use External)	Disable boot fail timer function DEFAULT

USB Table

Pair	Device
0	Internal #3 (MB)
1	WLAN/WIMAX
2	WWAN
3	E-SATS/LUSB
4	BLUETOOTH
5	External #1 (IO BD)
6	External #2 (IO BD)
7	CAMERA (HS)
8	Finger Print
9	CardReader
10	NC
11	NC
12	NC
13	NC

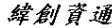
PCIe Routing

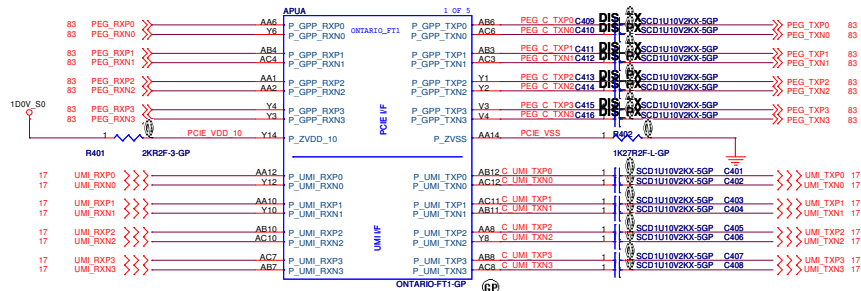
	APU
LANE0	PEG
LANE1	
LANE2	
LANE3	
	FCH
LANE0	LAN
LANE1	WWAN
LANE2	WLAN
LANE3	CardReader

TYPE ENABLED	EC_PWM2	EC_PWM3
Reserved	2.2-kohm 5% pull-down	2.2-kohm 5% pull-down
LPC ROM	Not connected.	2.2-kohm 5% pull-down
SPI ROM	2.2-kohm 5% pull-down	Not connected.
Reserved	Not connected.	Not connected.

Note: EC\_PWM2, EC\_PWM3 default have internal 10kohm PU.

<Variant Name>

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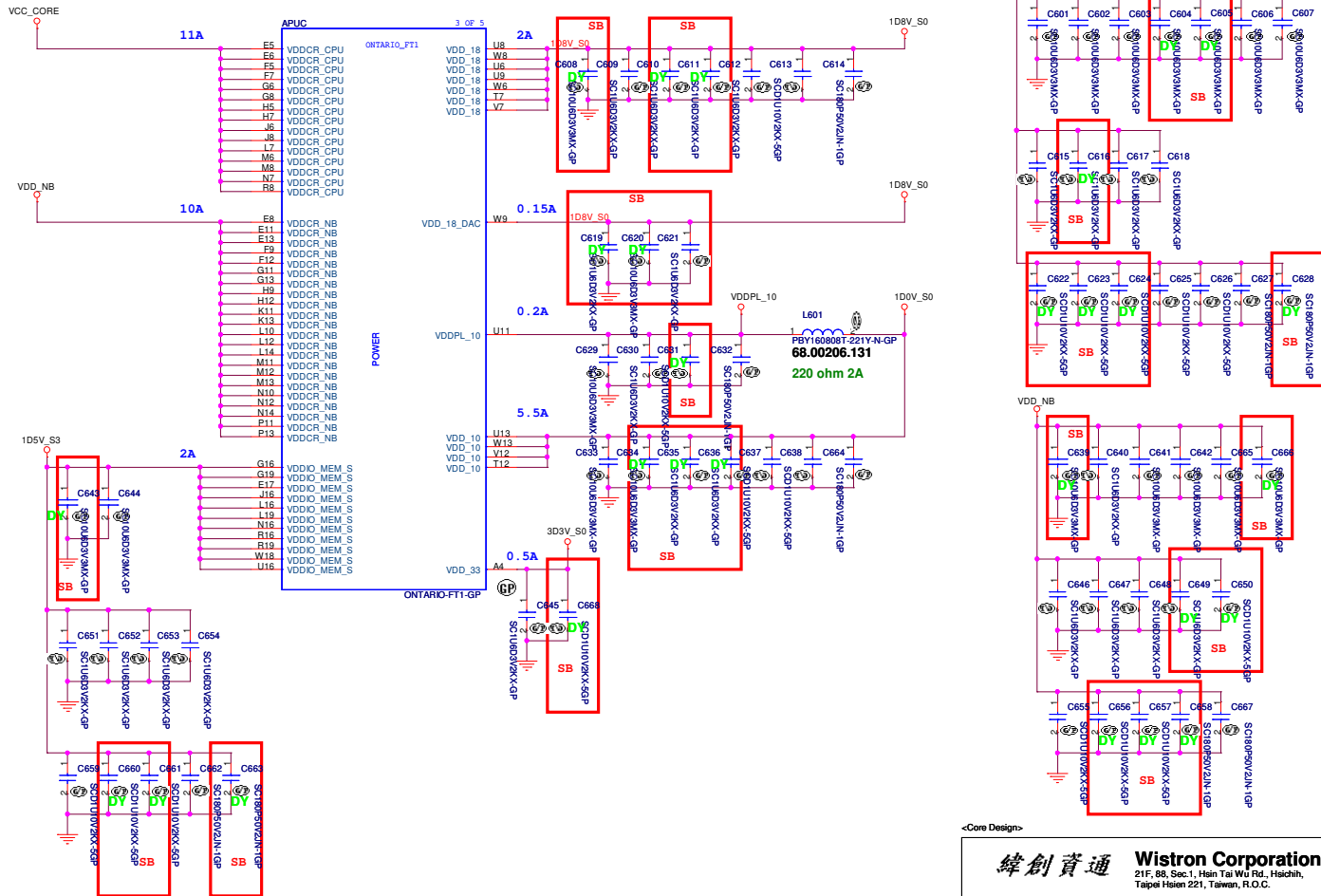


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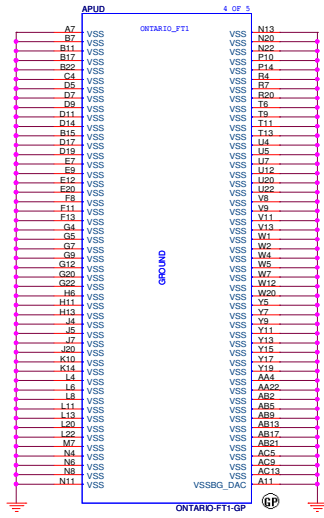


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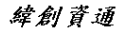
**緯創資通** **Wistron Corporation**  
 21F, Sec. 1, Hsin Tai Wu Rd., Hsinshih,  
 Taipei Hsien 221, TAIWAN, R.O.C.

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 <b>Wistron Corporation</b> 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
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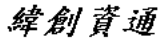
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<b>G-Sensor</b>	
<b>Size</b>	<b>Document Number</b>
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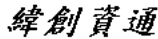
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<b>Title</b>			
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<b>Size</b>	<b>Document Number</b>		<b>Rev</b>
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<b>Size</b>	<b>Document Number</b>		<b>Rev</b>
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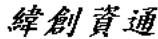
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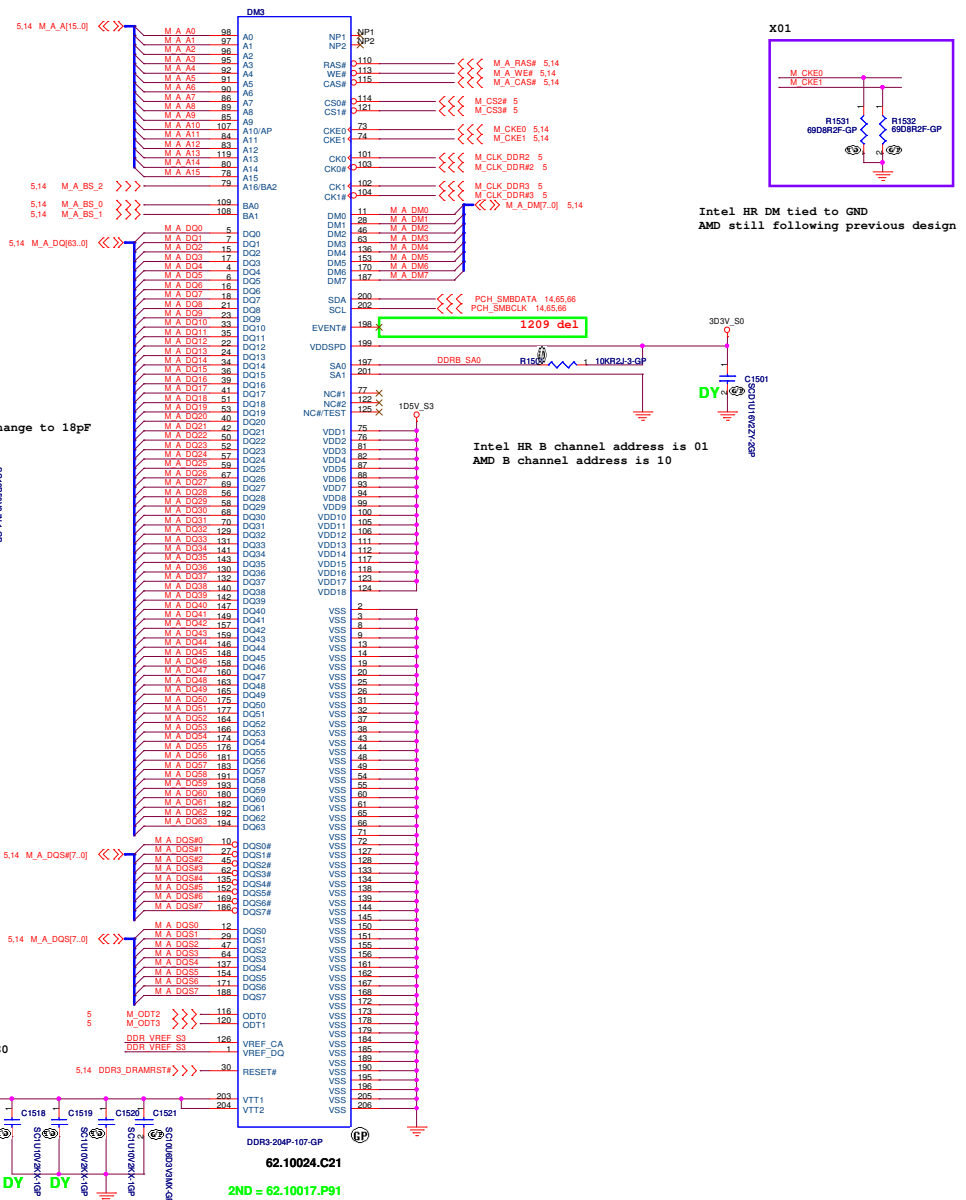
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# DDR3 SOCKET\_2



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<b>DDR3 Socket3</b>			
<b>Size</b>	<b>Document Number</b>	<b>Rev</b>	<b>SA</b>
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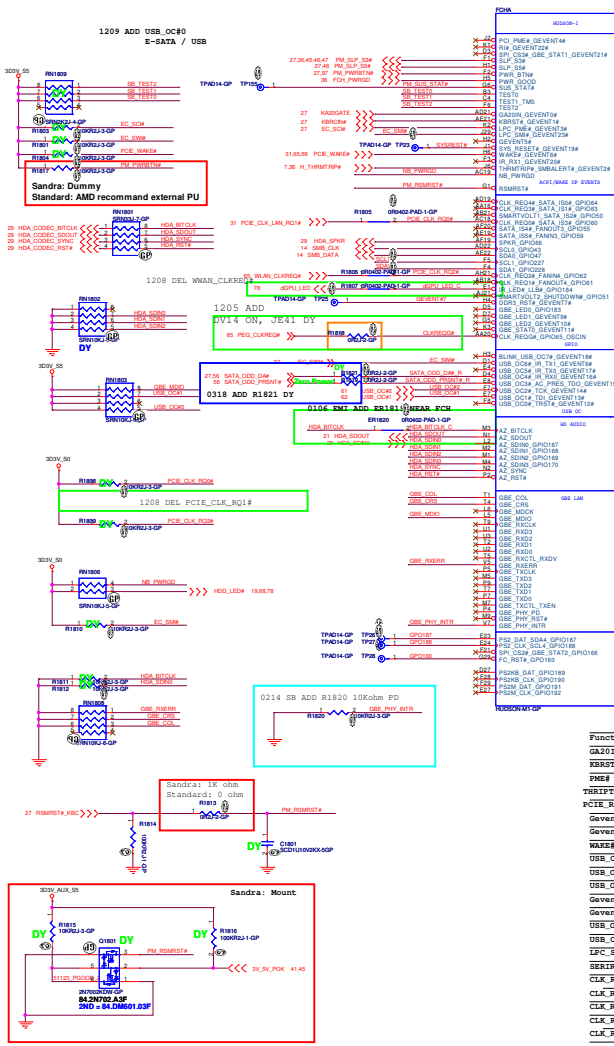
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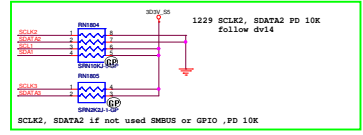
Function	Name	Integrated Resistor	External Resistor
GLD2V#	K82D2GATE	8.2K PU	8.2K PU 3.3_50
KBRST#	K8RCIN#	8.2K PU	10K PU 3.3_50
PME#	EC_SCI#	10K PU	10K PU 3.3_50
TRIPTRIP#	PM_TDRMTRIP#-A#	10K PU	10K PU 3.3_50
PCIE_RST#	FCM_PCIE_RST#	10K PU	
Event#5	MEM_Rst#	10K PU	
Event#6	EC_SMI#	10K PU	10K PU 3.3_50
WAKE#	PCIE_WAKE#	10K PU	10K PU 3.3_50
USB_OC#0	USB_OC#0	10K PU	
USB_OC#1	USB_OC#1	10K PU	
USB_OC#2	USB_OC#2	10K PU	
Event#1#	USB_OC#3	10K PU	
Event#1#	USB_OC#4	10K PU	
USB_OC#5	USB_OC#5	10K PU	
USB_OC#6	USB_OC#6	10K PU	
IFC_SMI#	EC_SMI#	8.2K PU	10K PU 3.3_50
SRRIRQ	INT_SRRIRQ	8.2K PU	10K PU 3.3_50 DY
CLK_REQ0	CLK_PCIE_NEW_REQ#	8.2K PU	
CLK_REQ0	CLK_PCIE_WMAN_REQ#	8.2K PU	
CLK_REQ0	CLK_PCIE_WMAN_REQ#	8.2K PU	
CLK_REQ0	PCIE_CLK_LAN_RST#	8.2K PU	
CLK_REQ0	PEG_CLKREQ#	8.2K PU	

### USB 1.0 Table

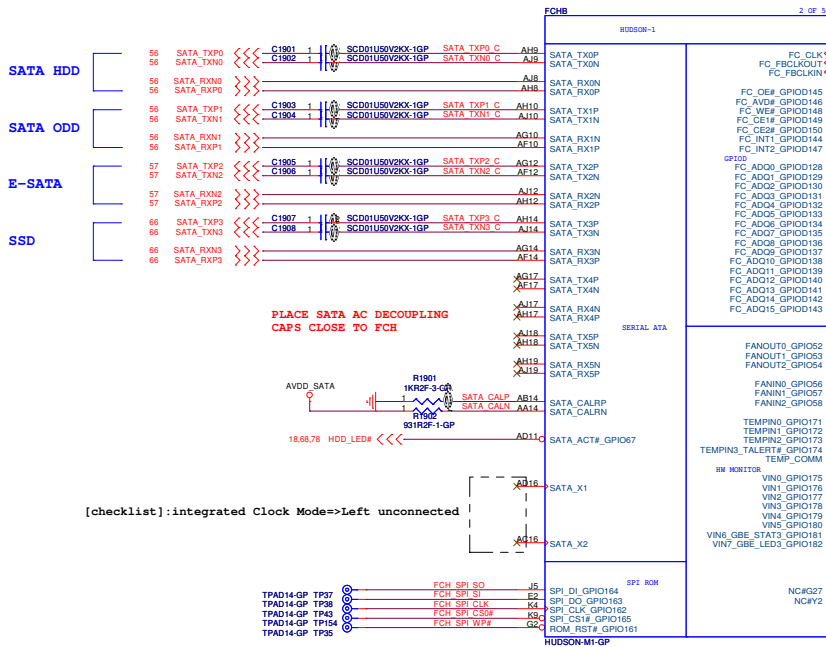
Pair	Device
0	Finger Print
1	NC

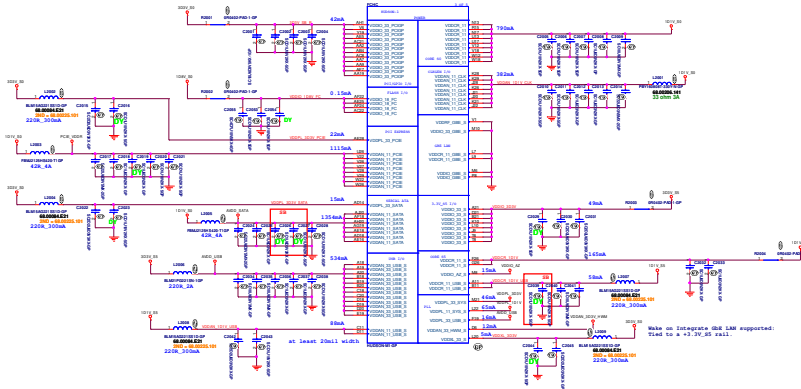
### USB 2.0 Table

Pair	Device
0	Internal #3 (NB)
1	WLAN/WiMAX
2	WLAN
3	E-SATA/S/USB
4	BLUETOOTH
5	External #1 (LAN BD)
6	External #2 (IO BD)
7	CAMERA (RS)
8	NC
9	CardReader
10	NC
11	NC
12	NC
13	NC



DVT 1ST



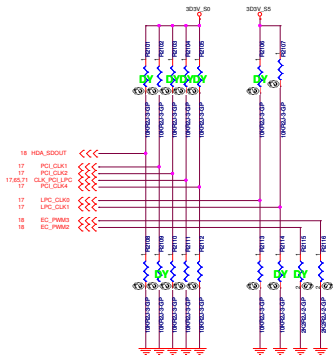


Wake on Integrator USB LAN supported:  
 Used to a +1V\_05 rail or tie to 30



### REQUIRED STRAPS

CBR-F0 3.0V\_AUX\_85  
 checker:PU 3.0V\_85  
 confirm by AMD, following CBR suggestion



#### REQUIRED SYSTEM STRAPS

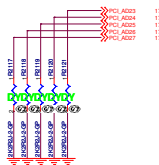
	AZ_SDOUT (ACE_SDATAOUT_1)	PCI_CLK1	PCI_CLK2	PCI_CLK3 (CLK_PCI_LPC)	PCI_CLK4	LPC_CLK0	LPC_CLK1
PULL HIGH	Low Power Mode	Allow PCE GEN2 <b>DEFAULT</b>	Watchdog Timer Enabled	USE DEBUG STRAPS	non-Fusion CLOCK mode	ENABLE EC	CLKGEN ENABLED (Use Internal) <b>DEFAULT</b>
PULL LOW	Performance Mode <b>DEFAULT</b>	Force PCE GEN1	Watchdog Timer Disabled <b>DEFAULT</b>	IGNORE DEBUG STRAPS <b>DEFAULT</b>	Fusion CLOCK mode <b>DEFAULT</b>	DISABLE EC <b>DEFAULT</b>	CLKGEN DISABLED (Use External)

USE this pin to determine INT/EXT CLK

TYPE ENABLED	EC_PWM2	EC_PWM3
Reserved	2.2kohm 5% pull-down	2.2kohm 5% pull-down
LPC ROM	Not connected.	2.2kohm 5% pull-down
SPIROM	2.2kohm 5% pull-down	Not connected.
Reserved	Not connected.	Not connected.

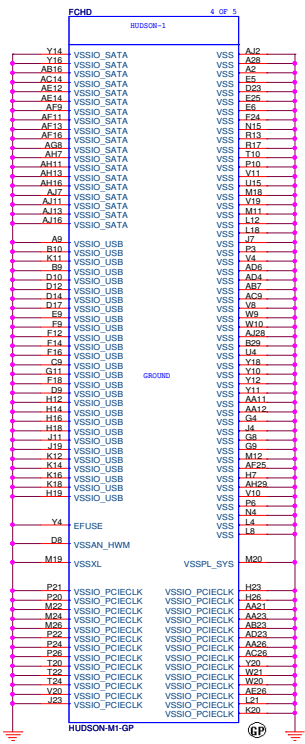
Note: EC\_PWM2, EC\_PWM3 default have internal 10kohm PU.

### DEBUG STRAPS



	PCI_AD27	PCI_AD28	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE PCI PLL <b>DEFAULT</b>	Disable ILA AUTORUN <b>DEFAULT</b>	USE FC PLL <b>DEFAULT</b>	USE DEFAULT PCIE STRAPS <b>DEFAULT</b>	Disable PCI MEM BOOT <b>DEFAULT</b>
PULL LOW	BYPASS PCI PLL	Enable ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	Enable PCI MEM BOOT

Note: FCH has 15K internal PU FOR PCI\_AD[27:23]



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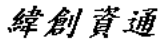
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<b>Title</b> <b>G-Sensor</b>	
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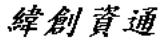
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<b>Title</b>	
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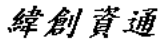
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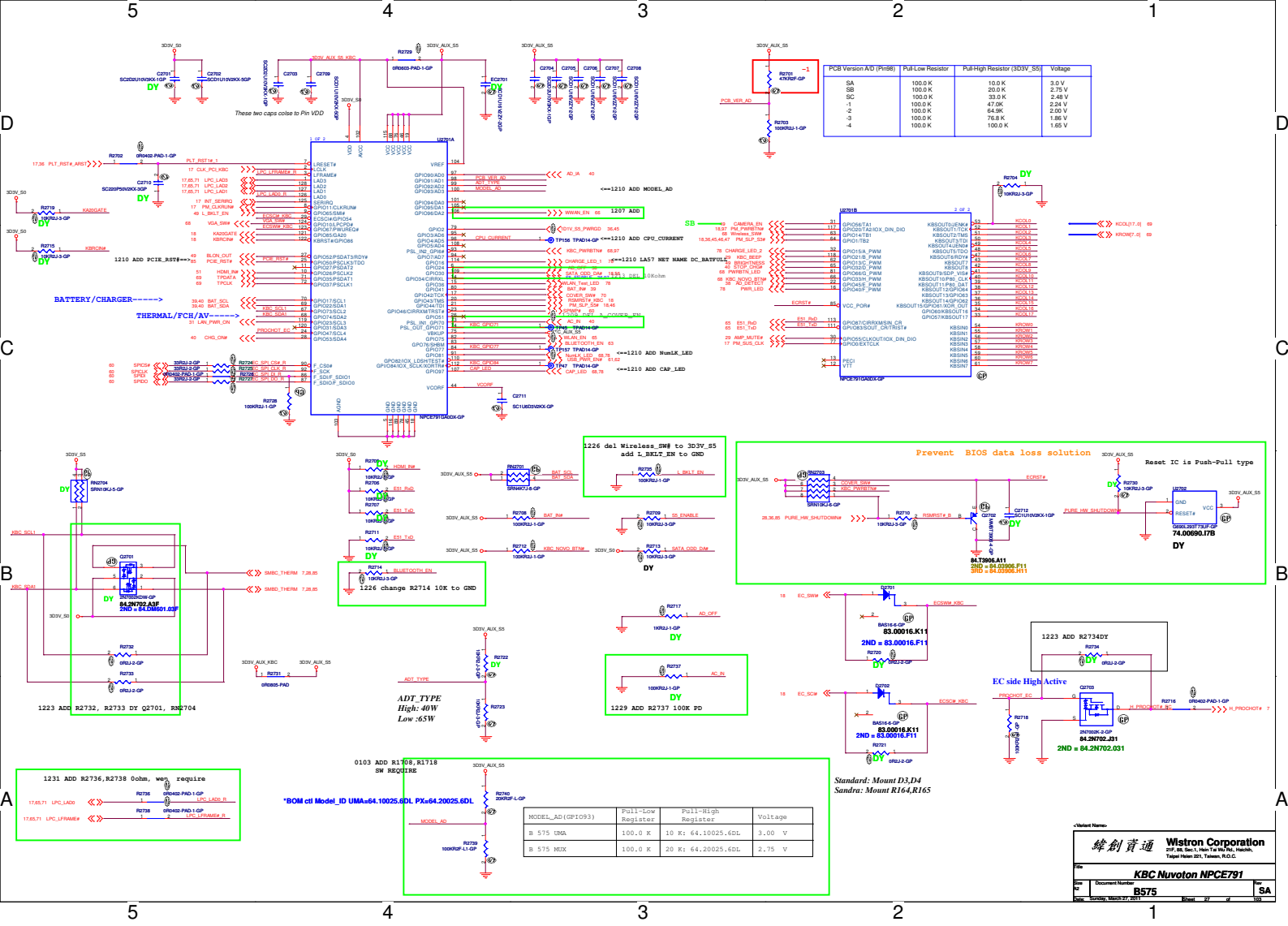
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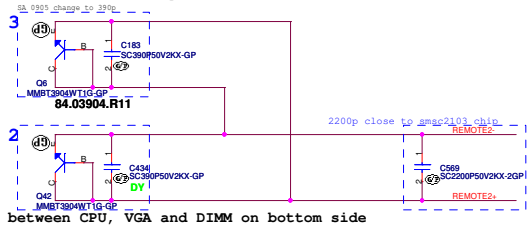
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		217, 8th, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 321, Taiwan, R.O.C.	
<b>Power Button</b>			
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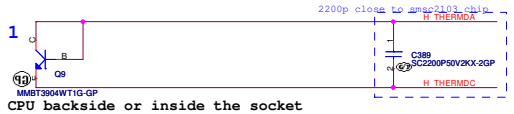
PCB Version AD (Pin#)	Pull Low Resistor	Pull High Resistor (303V_S5)	Voltage
SA	100 K	10.0 K	3.0 V
SB	100 K	20.0 K	2.75 V
SC	100 K	30.0 K	2.48 V
-1	100 K	40.0 K	2.24 V
-2	100 K	64.9 K	2.00 V
-3	100 K	76.8 K	1.86 V
-4	100 K	100.0 K	1.68 V

MODEL_AD (GPIO93)	Pull-Low Resistor	Pull-High Resistor	Voltage
B 575 UMA	100.0 K	10 K; 64.10025,60L	3.00 V
B 575 MDX	100.0 K	20 K; 64.20025,60L	2.75 V

Close to PCH on top side.



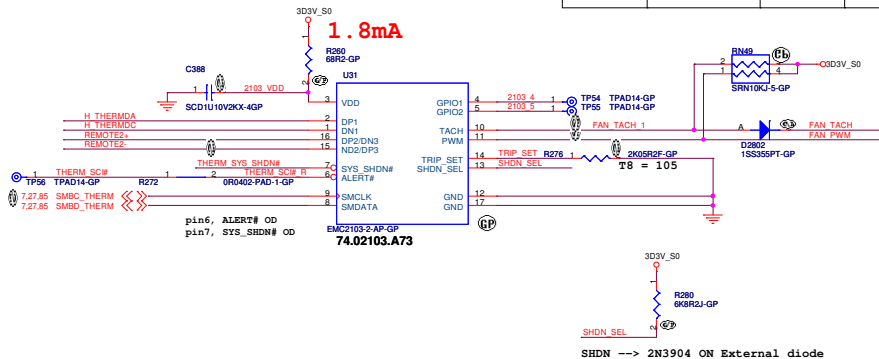
T8



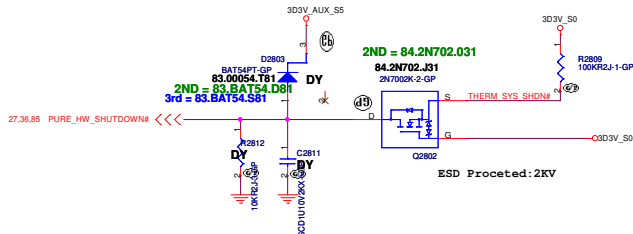
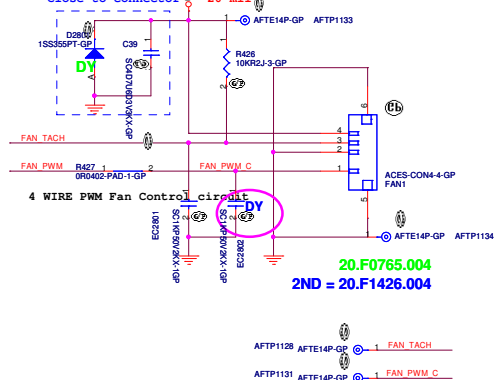
CPU TEMP:  
H\_THERMDA and H\_THERMDC routing 10mil trace width and spacing. Locate Capacity near Thermal diode.

Table 28.1- General Purpose Transistors multi-source

Supplier	Description	Lenovo P/N	Wistron P/N
ON	MMBT3904WT1G	N/A	84.03904.R11
PANJIT	MMBT3904W	N/A	84.M3904.A11



Close to connecto



<Core Design>

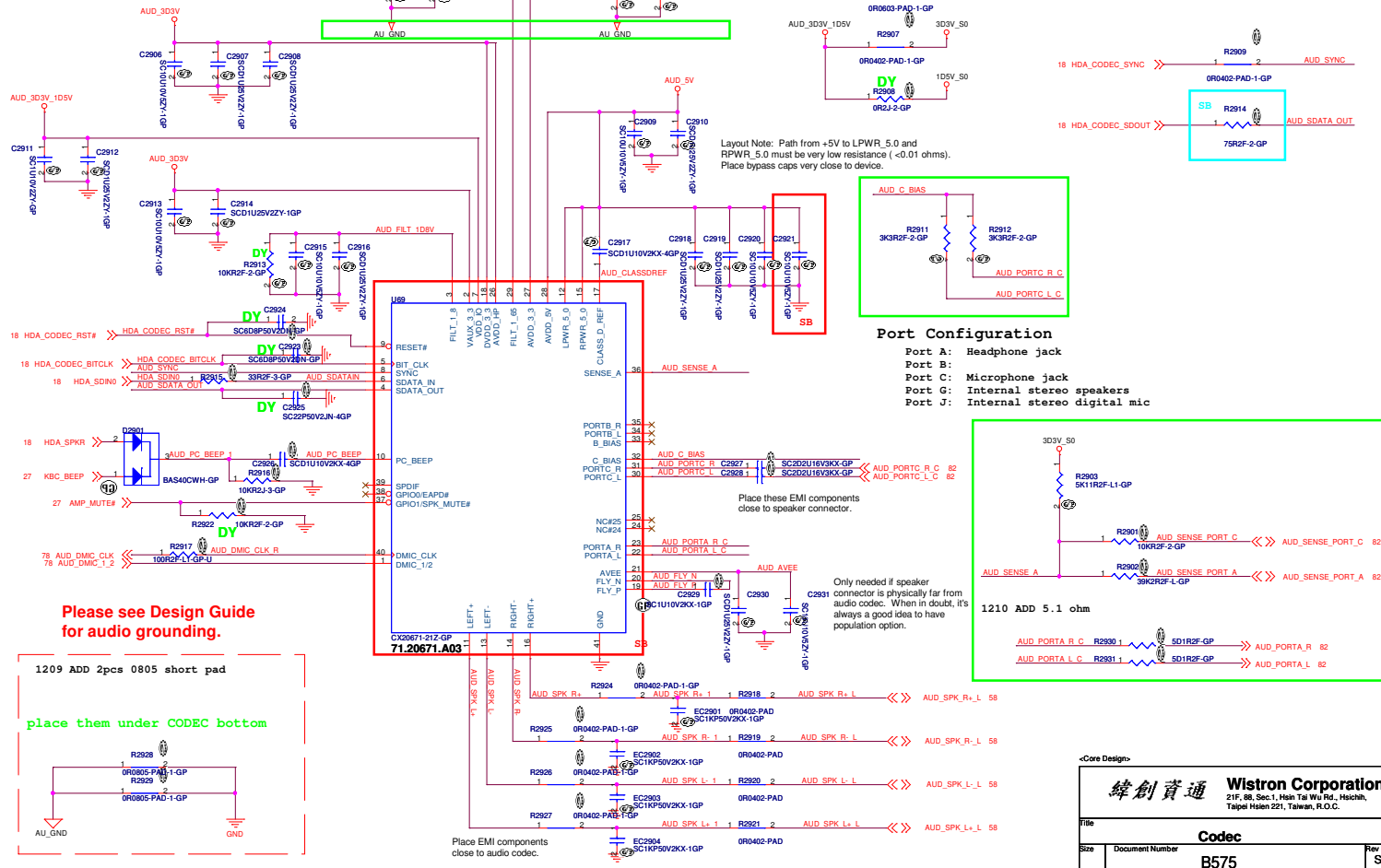
緯創資通 Wistron Corporation  
21F, 8F, Sect. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsin 221, Taiwan, R.O.C.

Title		Thermal/Fan Controller	
Size	Document Number	Rev	SA
	<b>B575</b>		

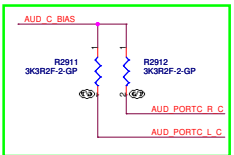
Date: Monday, March 28, 2011 Sheet 28 of 103

1210 10886-1 D1/D2/R15/R16/C15 DY  
 EC1/SC2/RC3 100pF  
 R17/R18 100ohm  
 C17/C18 100pF  
 R23/R24 100pF

BOM Control

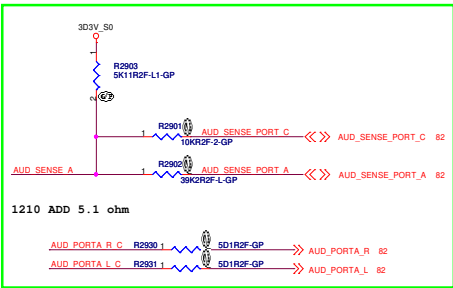


Layout Note: Path from -5V to LPWR\_5.0 and RPWR\_5.0 must be very low resistance (<0.01 ohms). Place bypass caps very close to device.

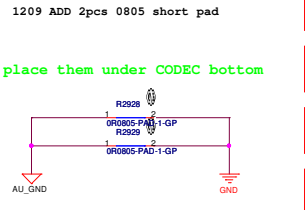


**Port Configuration**

- Port A: Headphone jack
- Port B: Microphone jack
- Port C: Internal stereo speaker
- Port G: Internal stereo speakers
- Port J: Internal stereo digital mic



Please see Design Guide for audio grounding.



Place EMI components close to audio codec.

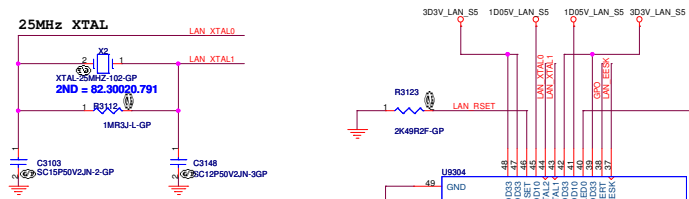
Place these EMI components close to speaker connector.

Only needed if speaker connector is physically far from audio codes. When in doubt, it's always a good idea to have population option.

blanking

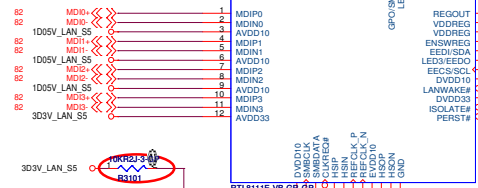
LA57 UMA

<b>緯創資通</b>		<b>Wistron Corporation</b>	
<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>		<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>	
<b>reserved</b>			
Size A4	Document Number <b>B575</b>		Rev <b>SA</b>
Date:	Friday, March 25, 2011	Sheet	30 of 103



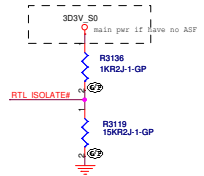
10/100-73-001039 G:73-001037

Pin-XTAL2 is External Clock Input Pin.  
R3121 is need when using external clock source.

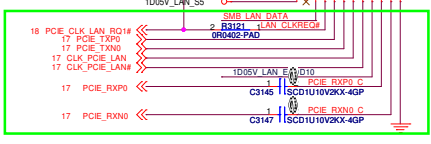
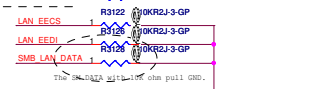


71.08111.103

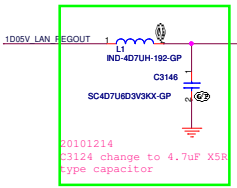
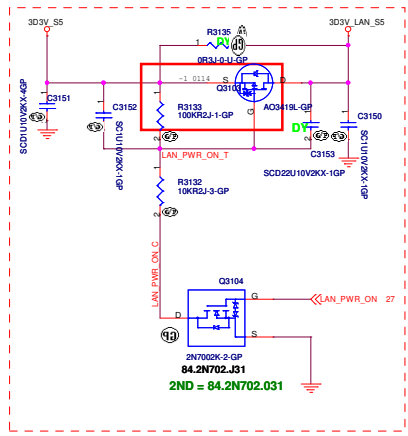
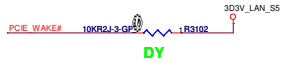
Make sure PCIE\_Wake# & PCIE\_CLK\_LAN\_RQ1 connected to 10K resistor pull high close to PCH side



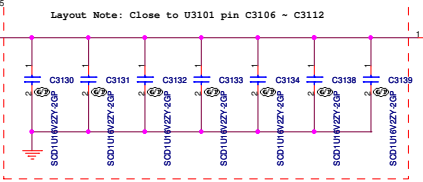
HighLink up LowLink down



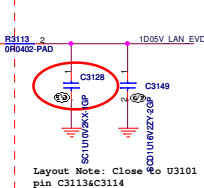
201010706



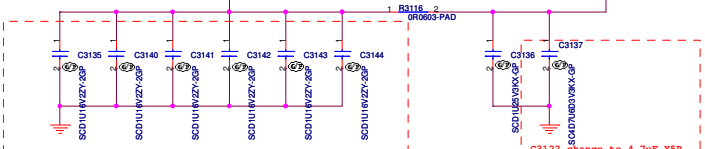
20101214  
C3124 change to 4.7uF X5R type capacitor



Layout Note: Close to U3101 pin C3106 ~ C3112



Layout Note: Close to U3101 pin C3113&C3114  
C3113 value modify to 1uF capacitor



Layout Note: Close to U3101 pin C3115 ~ C3120

C3122 change to 4.7uF X5R type capacitor

<Core Design>

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

File	LAN RTL8111E		
Size	Document Number	B575	Rev SA
Date:	Monday, March 28, 2011	Sheet	31 of 103

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<Core Design>

 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsueh Ta Wu Rd., Hsuehchen, Taipei Hsien 221, Taiwan, R.O.C.		<b>RTS5159 (CARD READER)</b>
Size A3	Document Number <b>B575</b>	Rev <b>SA</b>
Date: Friday, March 25, 2011		Sheet 32 of 103



(Blanking)

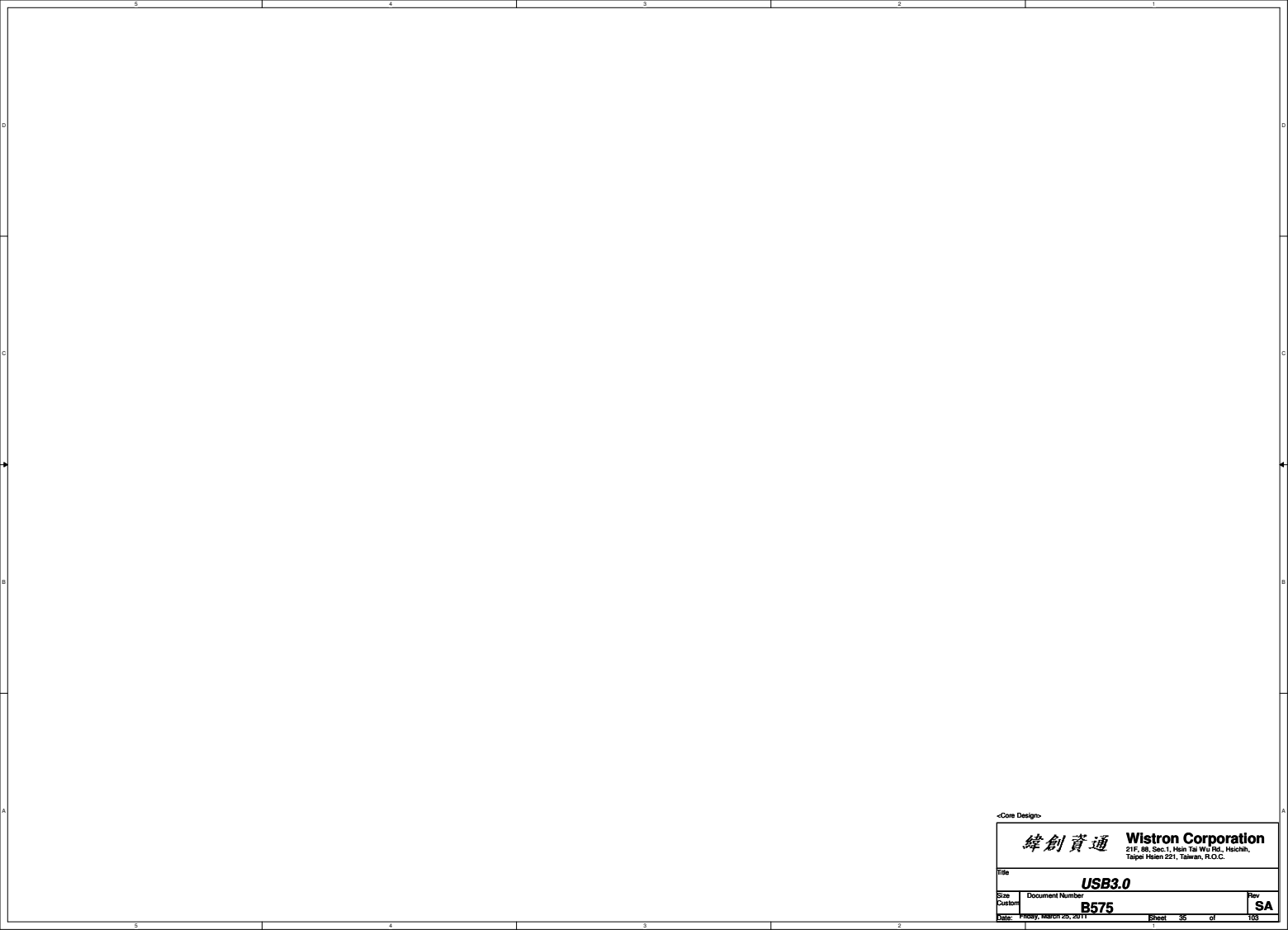
<Core Design>

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.	
Title			
<b>Reserved</b>			
Size	Document Number		Rev
A4	<b>B575</b>		<b>SA</b>
Date:	Friday, March 25, 2011	Sheet	33 of 103

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<Core Design>

<b>緯創資通</b>		<b>Wistron Corporation</b>	
<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>		<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>	
<b>Title</b>			
<b>Reserved</b>			
<b>Size</b> A4	<b>Document Number</b> <b>B575</b>		<b>Rev</b> <b>SA</b>
<b>Date:</b> Friday, March 25, 2011		<b>Sheet</b> 34	<b>of</b> 103

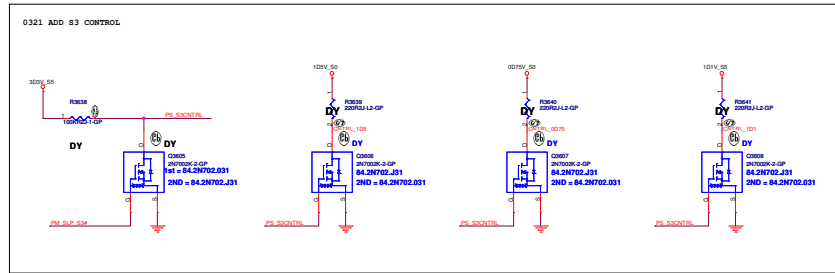
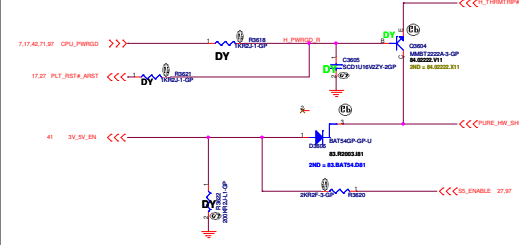
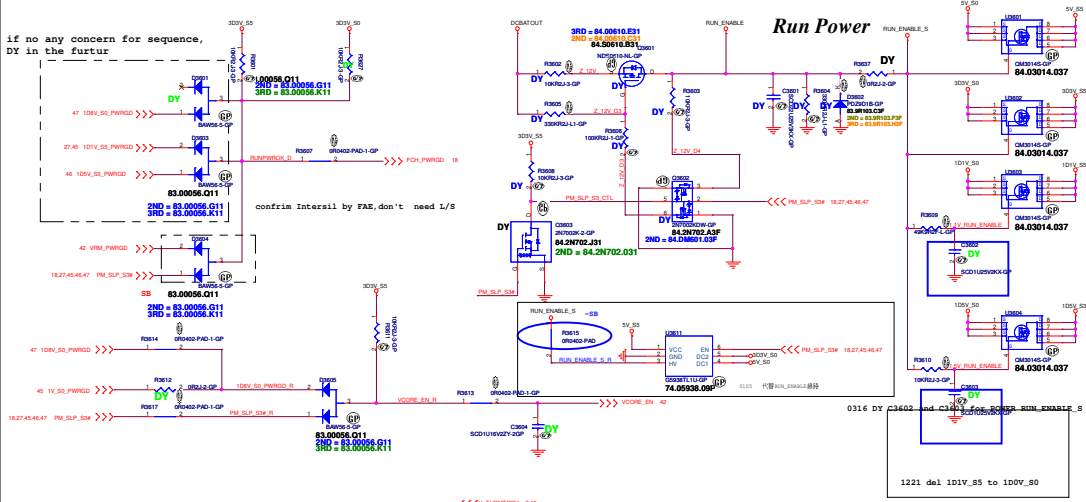


-Core Design-

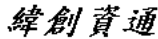
Title		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
Document Number		Rev	
USB3.0		SA	
Size	Date		105
Outline	Friday, March 26, 2011		Sheet 36 of 105

if no any concern for sequence,  
DY in the futur

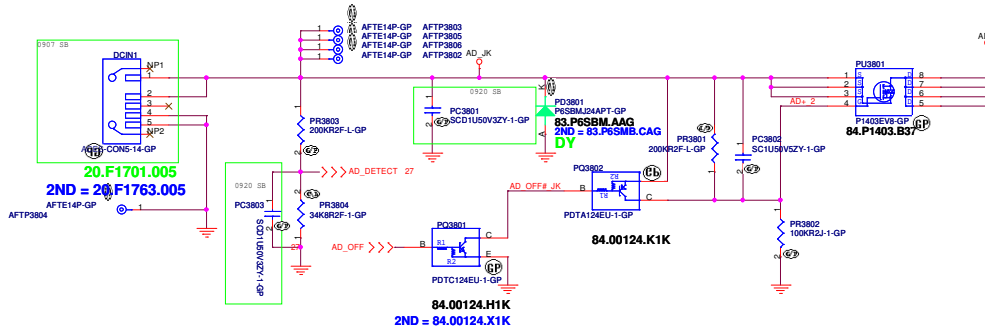
### Run Power



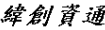
<Core Design>

 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
<b>G-Sensor</b>	
Size	Document Number
	<b>B575</b>
Date: Friday, March 25, 2011	Sheet 37 of 103
Rev	SA

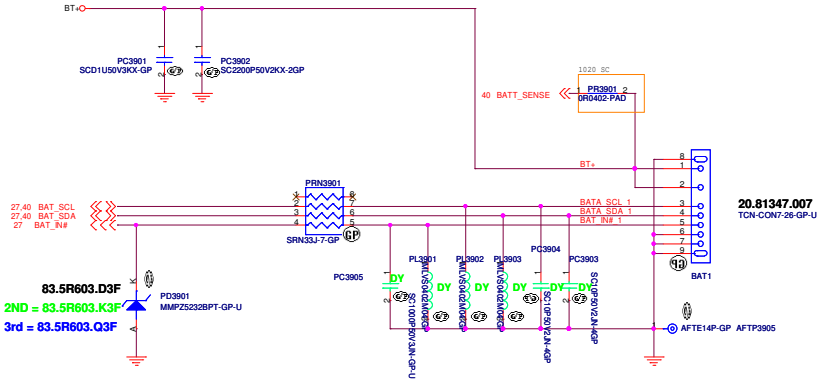
## Adaptor in to generate DCBATOUT



JV10-CS

 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Ta Wu Rd., Hsinchu, Taipei Hsin 221, Taiwan, R.O.C.	
<b>DCIN_JACK</b>	
Title	
Size	Document Number
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# BATTERY CONNECTOR



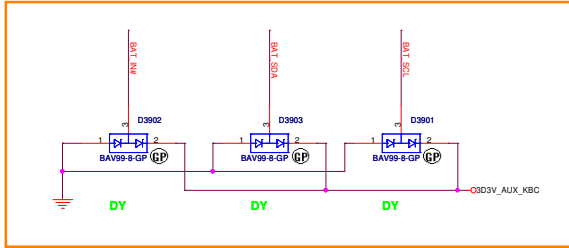
27.40 BAT\_SCL  
27.40 BAT\_SDA  
27 BAT\_IN#

**83.5R603.D3F**  
2ND = 83.5R603.K3F  
3rd = 83.5R603.Q3F

PD3901  
MMP252328PT-GP-U

**20.81347.007**  
TCN-CONT-05-GP-U

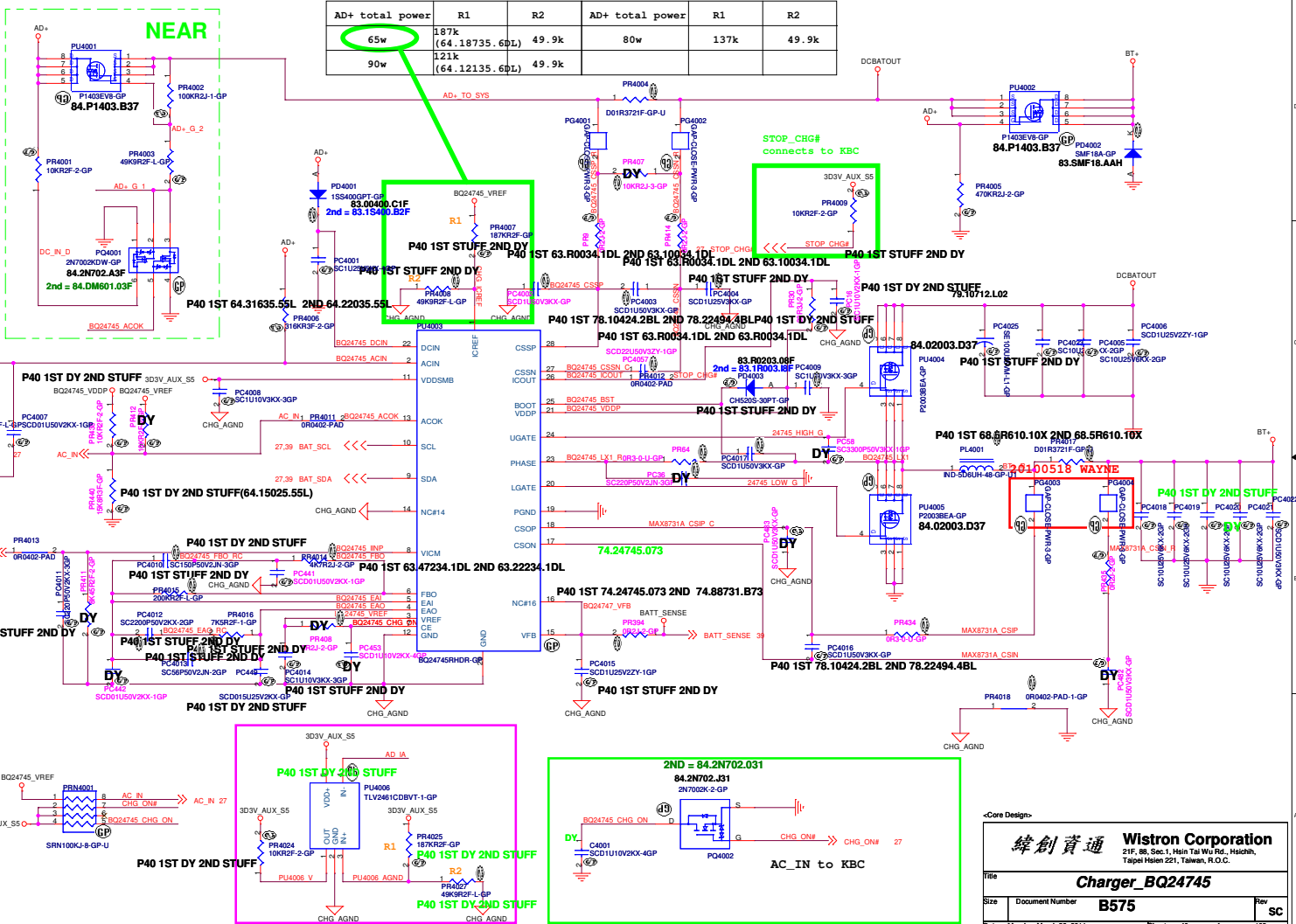
- 1 BAT\_IN#\_1
- 1 BATA\_SDA\_1
- 1 BATA\_SCL\_1
- 1 BT+



<Core Design>

		<b>Wistron Corporation</b> 21F, 8th Sec. 1, Hsien Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.	
<b>AD / BATT CONN</b>			
File	AD / BATT CONN		
Size	Document Number	Rev	
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AD+ total power	R1	R2	AD+ total power	R1	R2
65w	187k (64.18735.6DL)	49.9k	80w	137k	49.9k
90w	121k (64.12135.6DL)	49.9k			



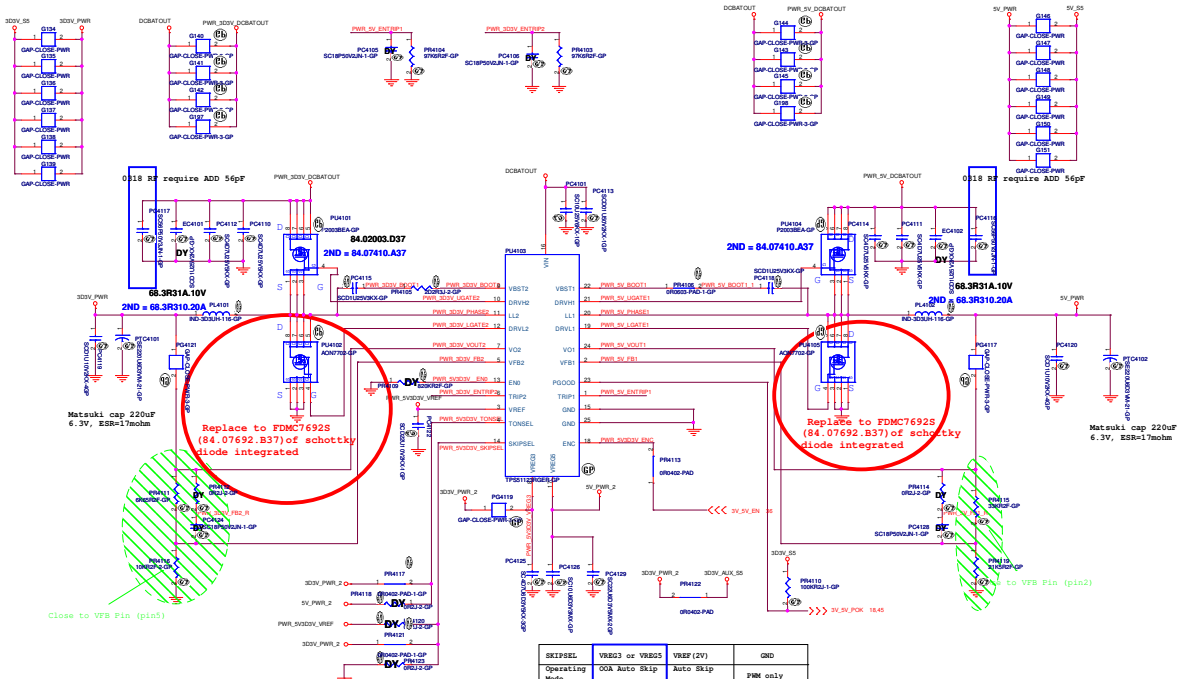
•Core Design-

**緯創資通**  
Wistron Corporation  
21F, 8F, Sec.1, Hsin Tai Wu Rd., Hsinchu,  
Taipei Hsin 221, Taiwan, R.O.C.

Title	<b>Charger_BQ24745</b>		
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SSID = PWR.Plane.Regulator\_5v3p3v



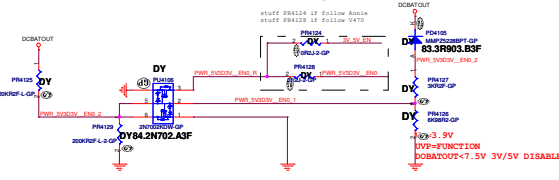
Replace to FDMC7692S (84.07692.B37) of schottky diode integrated

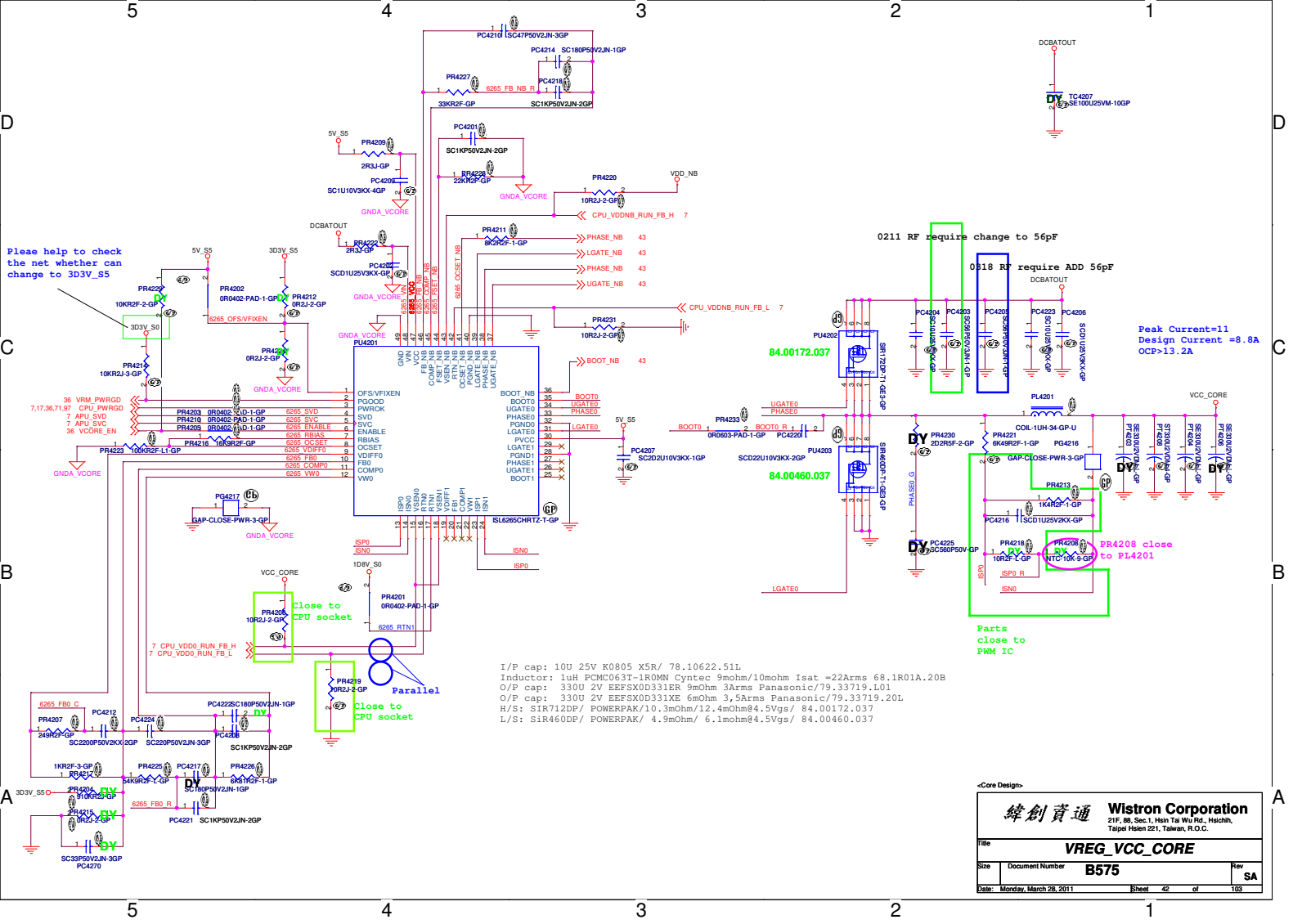
Replace to FDMC7692S (84.07692.B37) of schottky diode integrated

Close to VFB Pin (pin2)

to VFB Pin (pin2)

1022 for S3/S5 leakage





Please help to check the net whether can change to 3D3V\_S5

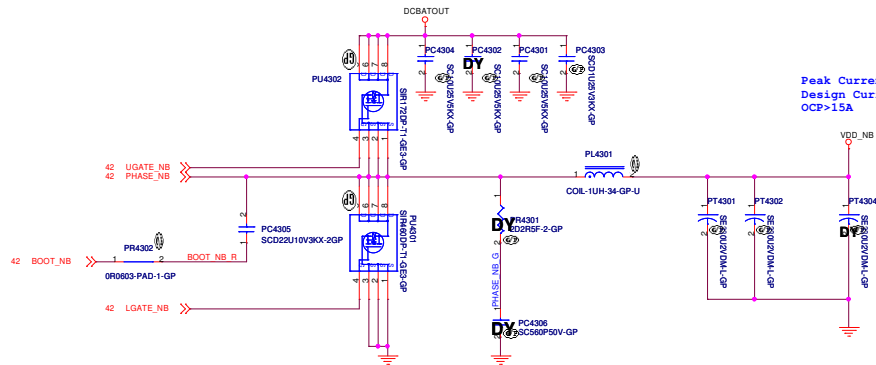
0211 RF require change to 56pF  
 0818 RF require ADD 56pF

Peak Current=11  
 Design Current = 8.8A  
 OCP=13.2A

I/P cap: 10U 25V K0805 X5R/ 78.10622.51L  
 Inductor: 1uH PFCM063T-1R0NM Cynotec 9mohm/10mohm Isat =22Arms 68.1R01A.20B  
 O/P cap: 330U 2V EEPFX0331ER 9mohm 3Arms Panasonic/79.33719.L01  
 C/P cap: 330U 2V EEPFX0331ER 6mohm 3.5Arms Panasonic/79.33719.20L  
 H/S: SIR172DP/ POWERPAK/10.3mohm/12.4mOhm84.5Vgs/ 84.00172.037  
 L/S: SIR460DP/ POWERPAK/ 4.9mohm/ 6.1mohm84.5Vgs/ 84.00460.037

<Core Design>

緯創資通 Wistron Corporation		
2/F, 88, Sec 1, Hsin Tai Wu Rd., Hsichn, Taipei 10521, Taiwan, R.O.C.		
<b>VREG_VCC_CORE</b>		
Title	<b>B575</b>	
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Peak Current=10  
Design Current =8A  
OCP>15A

I/P cap: 10U 25V K0805 X5R/ 79.10622.51L  
Inductor: 1uH PCMC063T-1R0MN Cyntec 3mohm/10mohm Isat =22Arms 68.1R01A.20B  
O/P cap: 330U 2V EEF5X0D331ER 9mOhm 3Arms Panasonic/79.33719.L01  
H/S: SIR712DF/ POWERPAK/10.3mOhm/12.4mOhm@4.5Vgs/ 84.00172.037  
L/S: SIR460DP/ POWERPAK/ 4.9mOhm/ 6.1mohm@4.5Vgs/ 84.00460.037

<Core Design>

		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsein 221, Taiwan, R.O.C.	
Title		SA	
Size	Document Number	B575	
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<Core Design>

<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.	
Title			
Size	Document Number		Rev
	<b>B575</b>		<b>SA</b>
Date: Friday, March 25, 2011		Sheet 44	of 103

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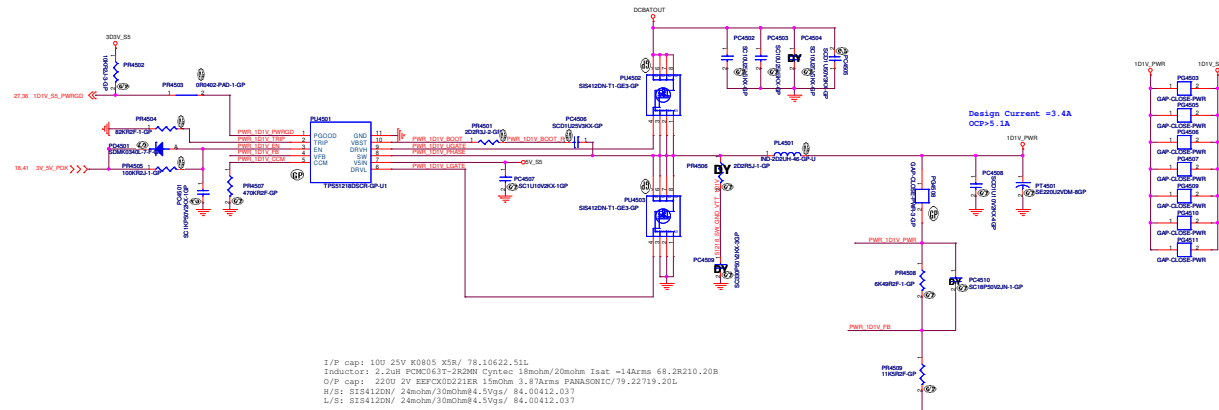
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SSID = PWR.Plane.Regulator\_1D1V\_S5



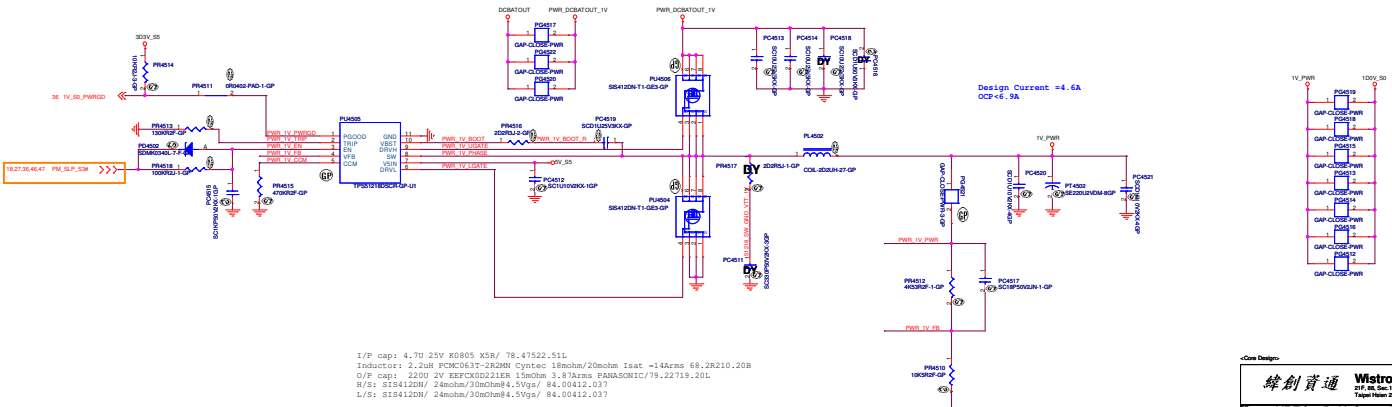
I/P cap: 10U 25V K0805 X5R/ 78.10622.51L  
 Inductor: 2.2uH PCMC063T-2R20H Cyntec 18mohm/20mohm Isat ~14Arms 68.2R210.20B  
 O/P cap: 220U 2V EEPCK0221E18 15mohm 3.8Arms PANASONIC/79.22719.20L  
 R/S: S1S412DN/ 24mohm/30mohm@4.5Vgs/ 84.00412.037  
 L/S: S1S412DN/ 24mohm/30mohm@4.5Vgs/ 84.00412.037

$$V_{out} = 0.704V * (R1+R2) / R2$$

Clone Design

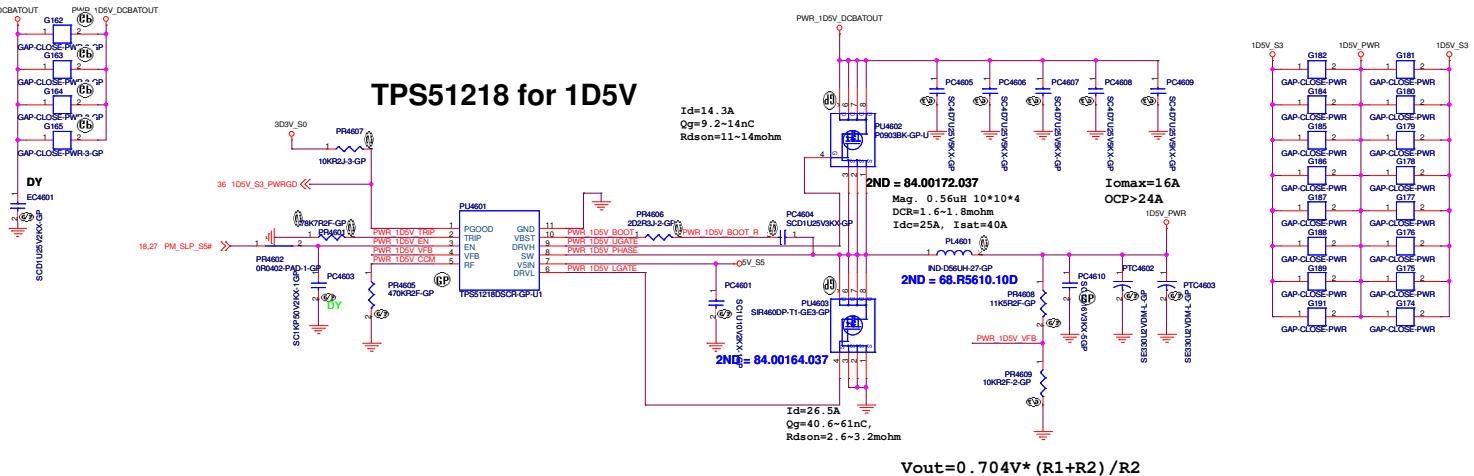
**Wistron Corporation**  
 217, 4th Sec. 1, Hsin Yu Rd, Hsinchu, Taiwan, R.O.C.  
 Part No: **VREG\_1D1V\_S5 & 1V\_S0**  
 Rev: **B575**

$$V_{out} = 0.704V * (R1+R2) / R2$$

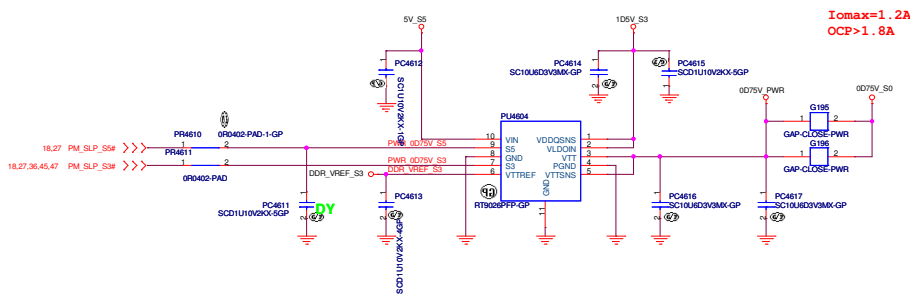


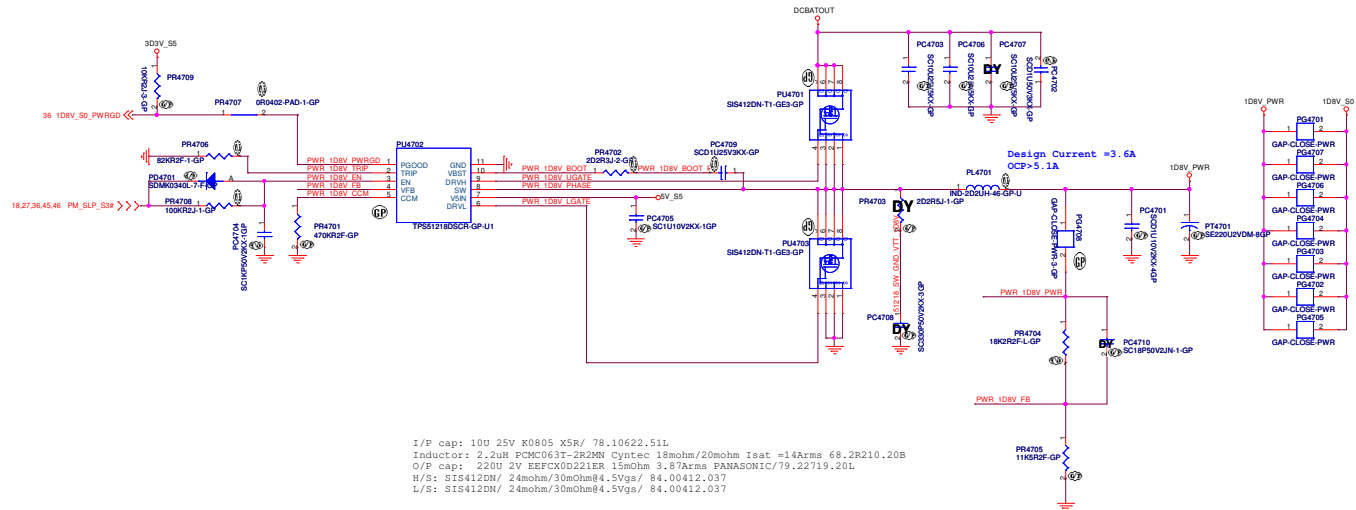
I/P cap: 4.7U 25V K0805 X5R/ 78.47522.51L  
 Inductor: 2.2uH PCMC063T-2R20H Cyntec 18mohm/20mohm Isat ~14Arms 68.2R210.20B  
 O/P cap: 220U 2V EEPCK0221E18 15mohm 3.8Arms PANASONIC/79.22719.20L  
 R/S: S1S412DN/ 24mohm/30mohm@4.5Vgs/ 84.00412.037  
 L/S: S1S412DN/ 24mohm/30mohm@4.5Vgs/ 84.00412.037

$$V_{out} = 0.704V * (R1+R2) / R2$$



### RT9026 for 0D75V\_S3





I/P cap: 10U 25V K0805 X5R/ 78.10622.51L  
 Inductor: 2.2uH PCMC0637-2R2MN Cyntec 18mohm/20mohm Isat =14Arms 68.2R210.20B  
 O/P cap: 220U 2V EEPCK0D221ER 15mohm 3.87Arms PANASONIC/79.22719.20L  
 //S: SIS412DN/ 24mohm/30mOhm@4.5Vgs/ 84.00412.037  
 L/S: SIS412DN/ 24mohm/30mOhm@4.5Vgs/ 84.00412.037

$$V_{out} = 0.704V * (R1 + R2) / R2$$

-Core Design-

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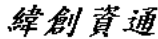
B

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<Core Design>

 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
<b>G-Sensor</b>	
Size	Document Number
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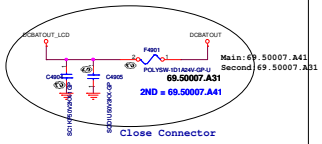
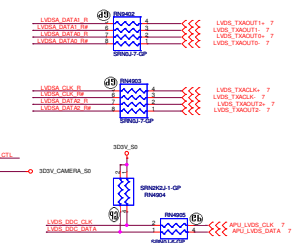
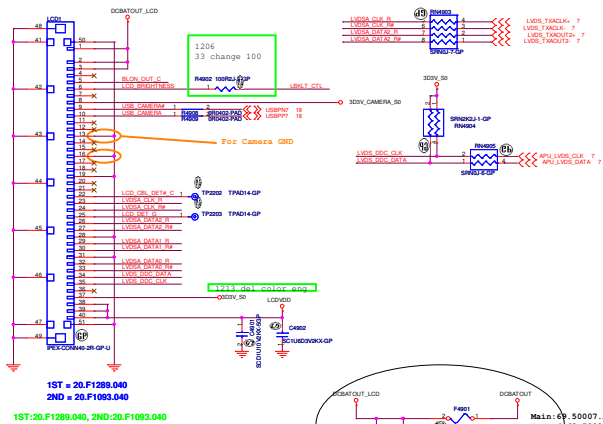
2

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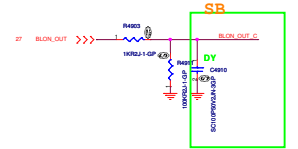
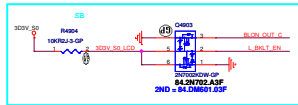
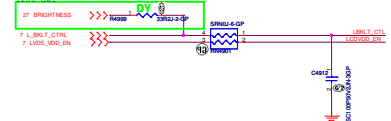


# SSID = VIDEO

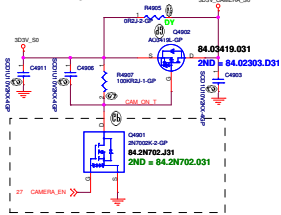
## LVDS CONNECTOR



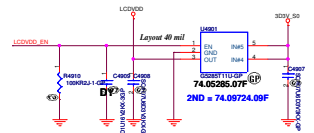
## Panel BL brightness/Power En/BL En



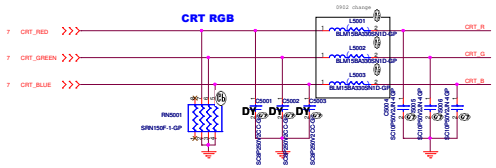
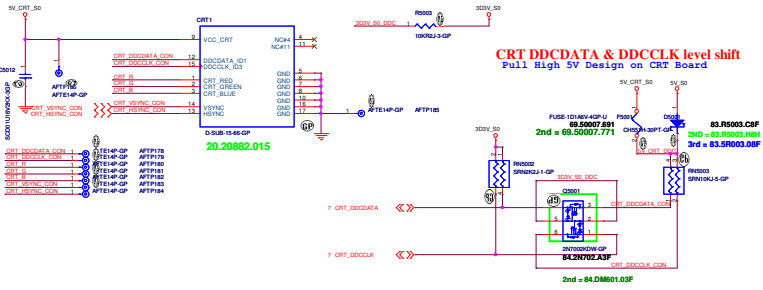
# CAMERA POWER



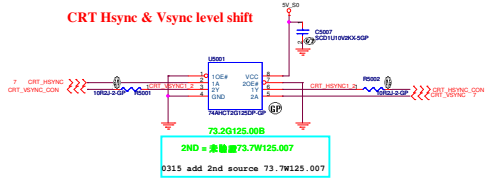
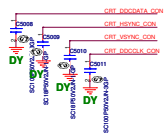
# SSID = VIDEO



©Core Design

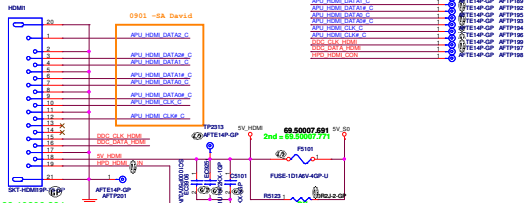


Pull high 在 CRT

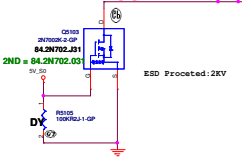
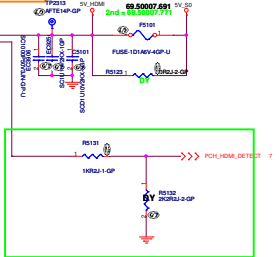
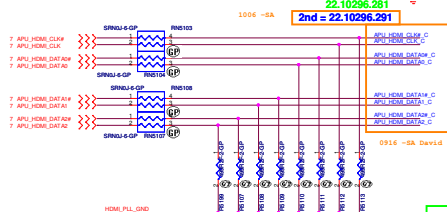


# HDMI Level Shifter & CONNECTOR

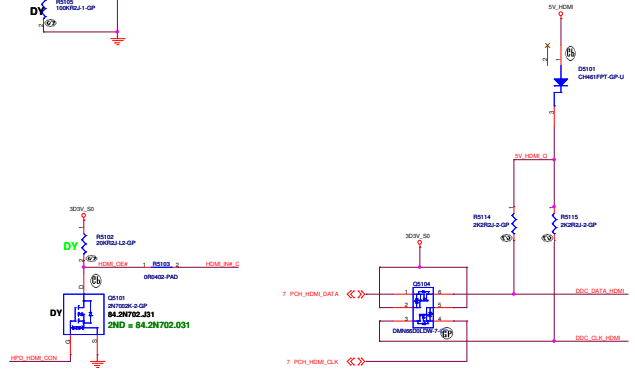
## HDMI CONN



- 1 TV\_HDMI-GP AFFP121
- 2 TV\_HDMI-GP AFFP122
- 3 TV\_HDMI-GP AFFP123
- 4 TV\_HDMI-GP AFFP124
- 5 TV\_HDMI-GP AFFP125
- 6 TV\_HDMI-GP AFFP126
- 7 TV\_HDMI-GP AFFP127
- 8 TV\_HDMI-GP AFFP128
- 9 TV\_HDMI-GP AFFP129
- 10 TV\_HDMI-GP AFFP130
- 11 TV\_HDMI-GP AFFP131
- 12 TV\_HDMI-GP AFFP132
- 13 TV\_HDMI-GP AFFP133
- 14 TV\_HDMI-GP AFFP134
- 15 TV\_HDMI-GP AFFP135
- 16 TV\_HDMI-GP AFFP136
- 17 TV\_HDMI-GP AFFP137
- 18 TV\_HDMI-GP AFFP138



## HDMI DDC Passive Level Shifter



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<b>緯創資通</b>		<b>Wistron Corporation</b>	
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Title			
<b>S-VIDEO</b>			
Size	Document Number		Rev
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(Blanking)

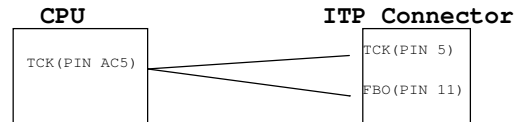
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<b>緯創資通</b>		<b>Wistron Corporation</b>	
<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>		<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>	
<b>Title</b>			
<b>Reserved</b>			
<b>Size</b> A4	<b>Document Number</b> <b>B575</b>		<b>Rev</b> <b>SA</b>
<b>Date:</b> Friday, March 25, 2011		<b>Sheet</b> 54	<b>of</b> 103

**SSID = User.Interface**

## *ITP Connector*

H\_CPURST# use pull-up Resistor close  
ITP connector 500 mil ( max ),  
others place near CPU side.



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緯創資通

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

Title

**ITP**

Size

A4

Document Number

**B575**

Rev

**SA**

Date:

Friday, March 25, 2011

Sheet

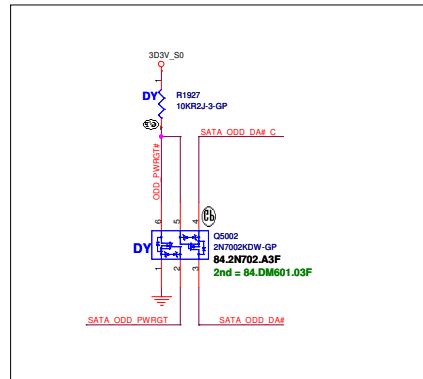
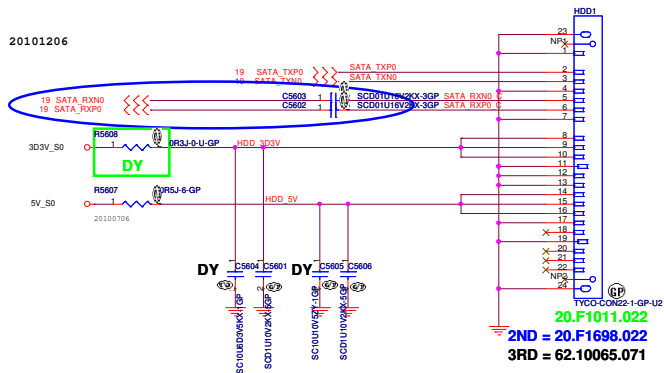
55

of

103

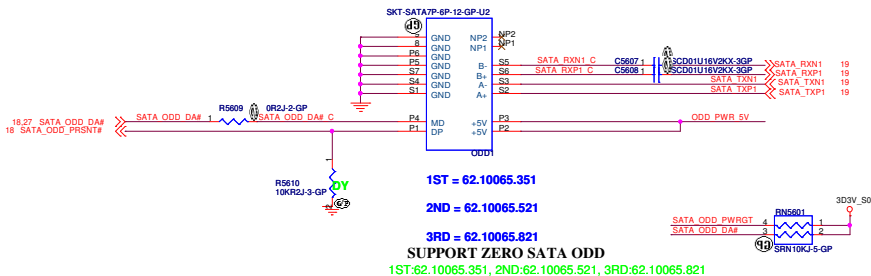
# SATA HDD Connector

20101206

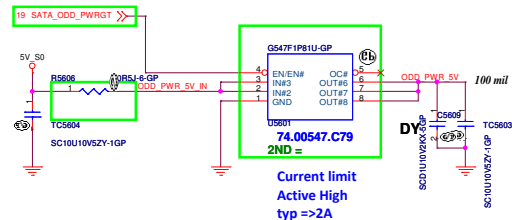


# ODD Connector

SATA\_RX- and SATA\_RX+ Trace Length match within 20 mil  
 Mars:  
 Exchange ODD and ESATA differential pair each other.

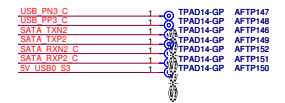
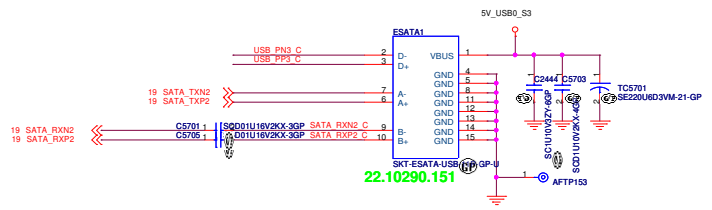
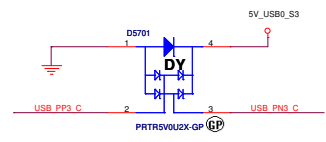
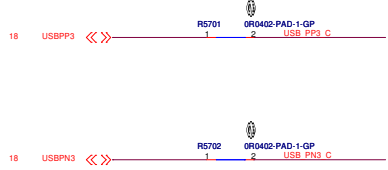


# SATA Zero Power ODD



<Core Design>





<-Core Design-

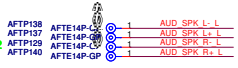
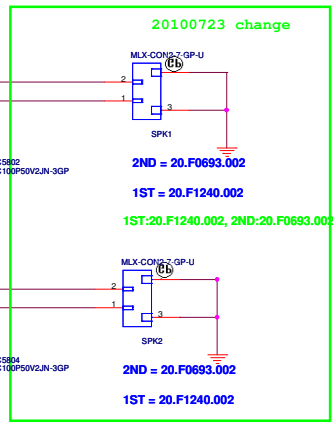
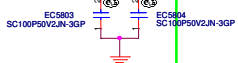
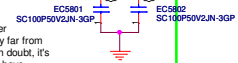
<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
<b>E-SATA/LUSB</b>			
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29 AUD\_SPK\_L+L  
29 AUD\_SPK\_L+L

29 AUD\_SPK\_R+L  
29 AUD\_SPK\_R+L

Place these EMI components close to speaker connector.

Only needed if speaker connector is physically far from audio codec. When in doubt, it's always a good idea to have population option.



<Core Design>

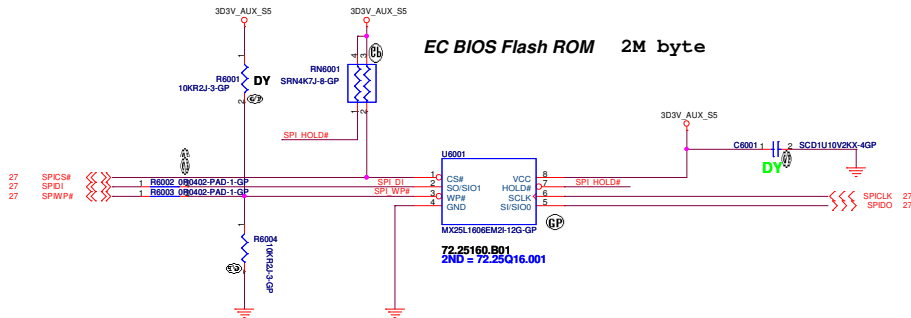
**緯創資通** **Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.

File		<b>SPEAKER</b>	
Size	Document Number	Rev	
A3	<b>B575</b>	<b>SA</b>	
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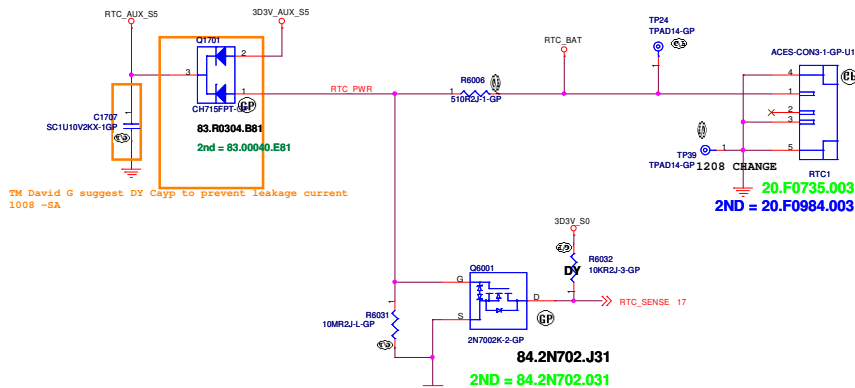
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<Core Design>

<b>緯創資通</b>		<b>Wistron Corporation</b>	
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File			
<b>Reserved</b>			
Size	Document Number		Rev
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DN have accounter RTC battery no power from field side feedback for Larry suggestion, add Diode when 3.3V\_Aux\_S5 provide power to FCH RTC

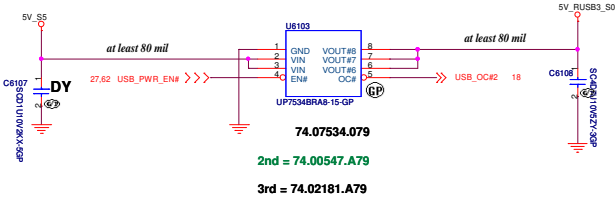


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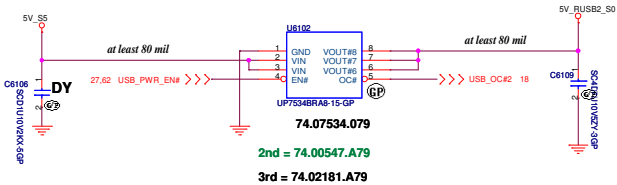
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21F, 8th, Sec.1, Hsiao Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.		21F, 8th, Sec.1, Hsiao Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.	
File			
<b>BIOS / RTC</b>			
Size	Document Number	Rev	SA
<b>B575</b>			
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SSID = USB

# RJ45\_USB Board USB Power



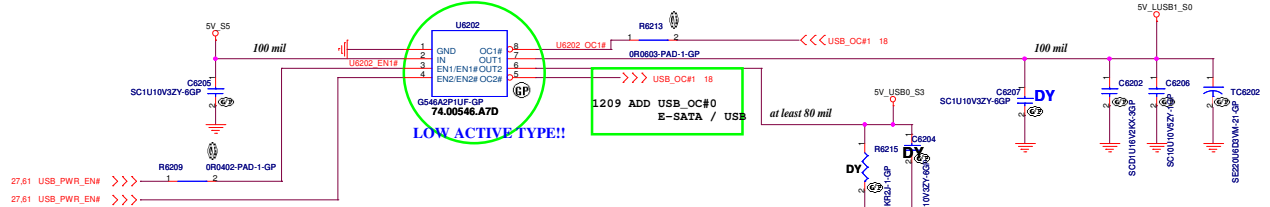
# I/O Board USB Power



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<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>USB Power SW</b>			
File	Document Number		
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Left Side USB Power Switch



<Core Design>

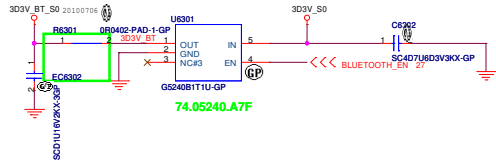
**緯創資通** Wistron Corporation  
 21F, 88, Sec.1, Hsai Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.

File: **USB CONN**

Size: Document Number: **B575** Rev: **SA**

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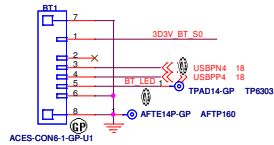
# Bluetooth Power



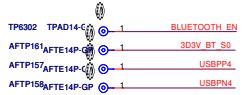
BT CONN.

EC6302 put near BLUE1 / all USB put one choke near connector by EMI request

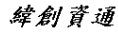
200mA

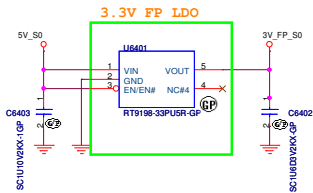


20.F0772.006  
2ND = 20.F1804.006

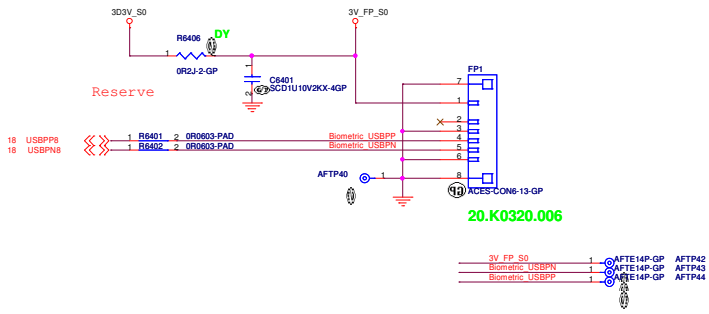


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 <b>Wistron Corporation</b> 21F, 8th, Sec.1, Hsueh Tai Wu Rd., Hsuehchen, Taipei Hsien 221, Taiwan, R.O.C.	
<b>Bluetooth CONN</b>	
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### Finger Printer Connector



LAST LIMA

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21F, 88, Sec.1, Hsueh Tai Wu Rd., Hsinchu,  
Taipai Hsien 221, Taiwan, R.O.C.

File  
**RESERVED**

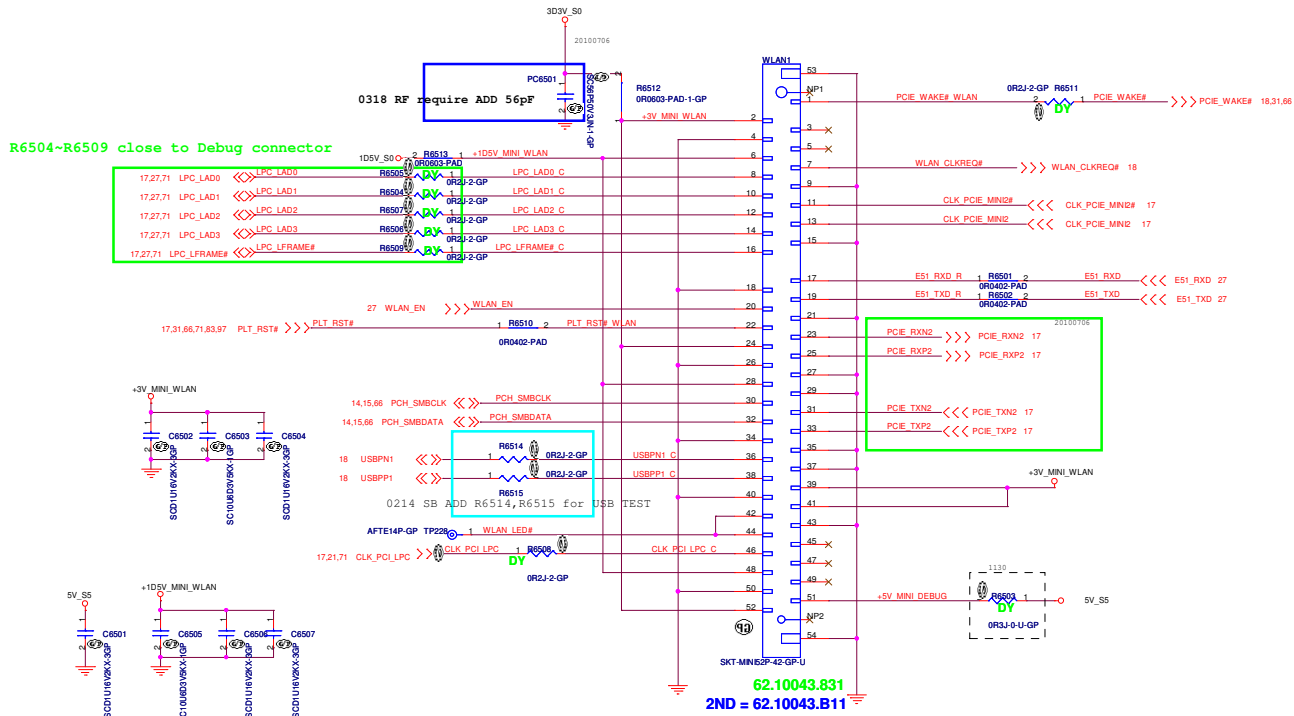
Size 43 Document Number **B575** Rev SA

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SSID = Wireless

# Mini Card Connector(802.11a/b/g/n)



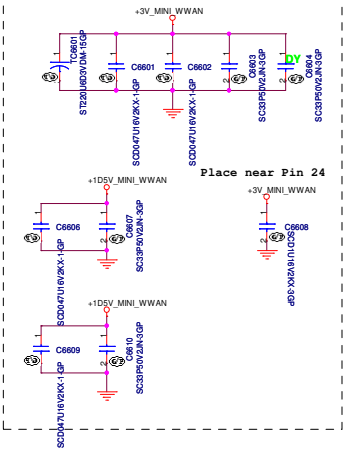
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File		Wistron Corporation	
Size		21F, 8B, Sec.1, Hsiao Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
Document Number		<b>MINICARD WLAN</b>	
Date: Monday, March 28, 2011		<b>B575</b>	
Sheet 86 of 103		Rev SA	

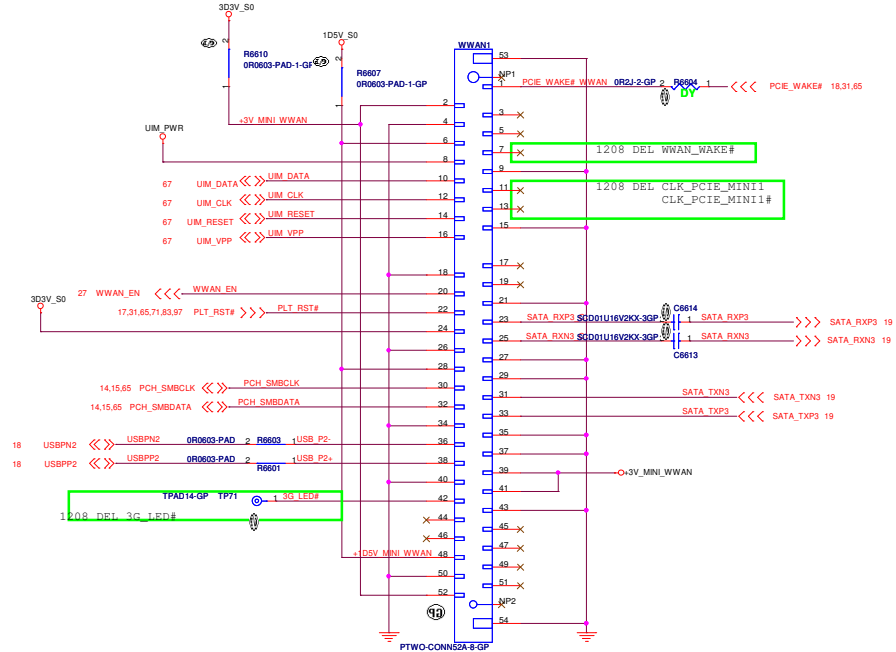
**SSID = Wireless**

# Mini Card Connector(WWAN)

Place near MINI Card CONN



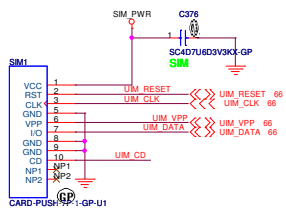
Place near Pin 24



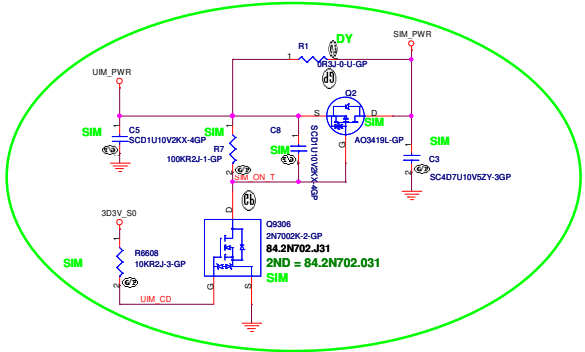
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<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 8F, Sec.1, Hsin Tai Wu Rd., Hsueh, Taipei Hsien 221, Taiwan, R.O.C.		21F, 8F, Sec.1, Hsin Tai Wu Rd., Hsueh, Taipei Hsien 221, Taiwan, R.O.C.	
<b>MINICARD WWAN</b>			
File	Document Number	Rev	SA
	<b>B575</b>		
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SIM



20.I0073.001

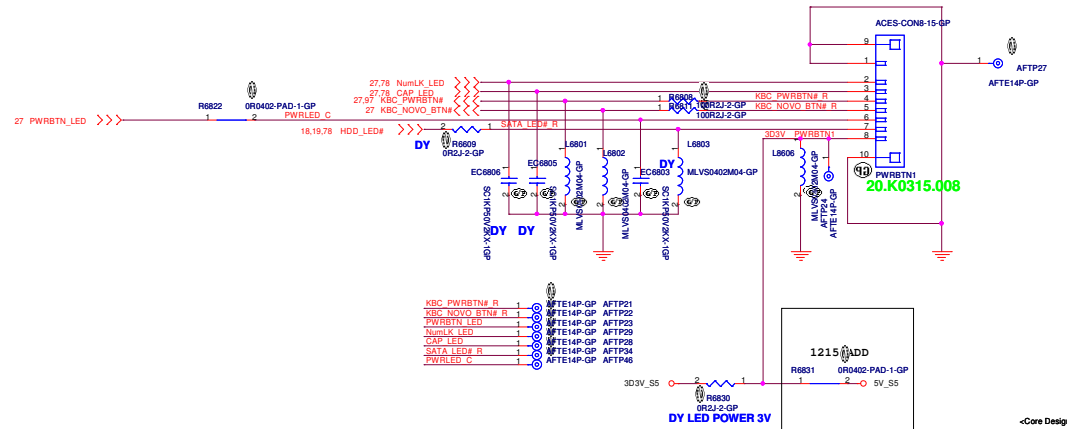
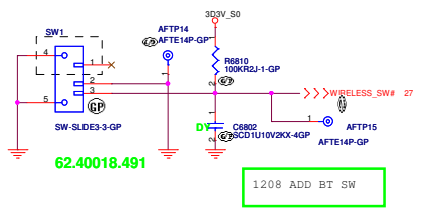
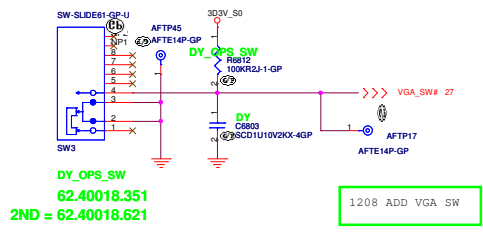


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 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

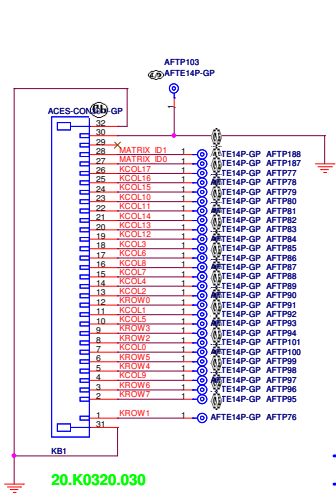
File		<b>SIM CARD</b>	
Size	Document Number		Rev
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# SSID = User.Interface



SSID = KBC

Internal KeyBoard Connector

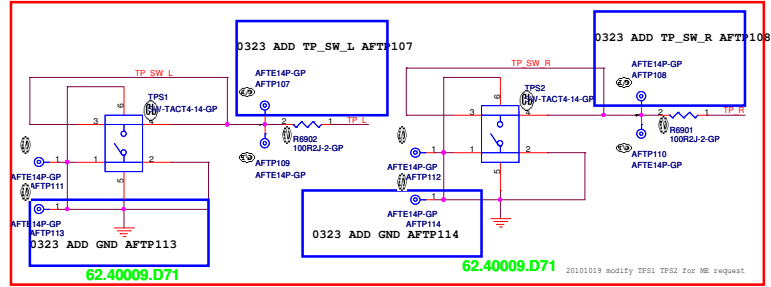
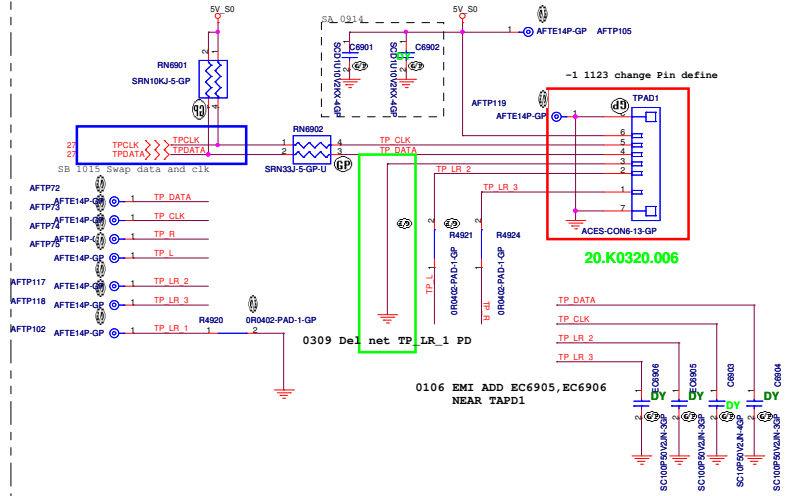


S205少種PIN, 厥為測點已補上

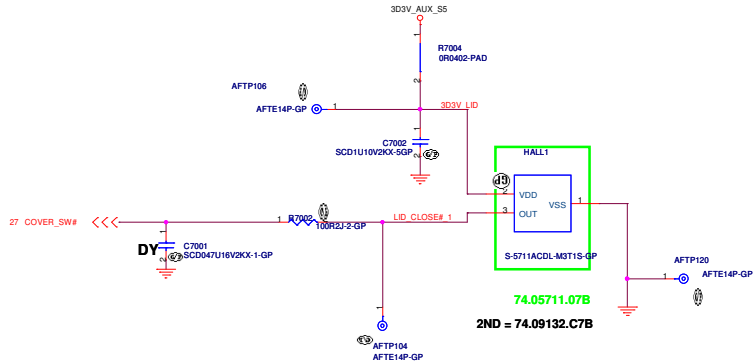
ID KEY MATRIX	SENSE			
	27	28	29	30
	ID0	ID1	ID2	GND
US	GND	GND	X	GND
GB	GND	X	X	GND
JP	X	GND	X	GND

《 KROW[7..0] 27  
《 KOOL[17..0] 27

SSID = Touch.Pad

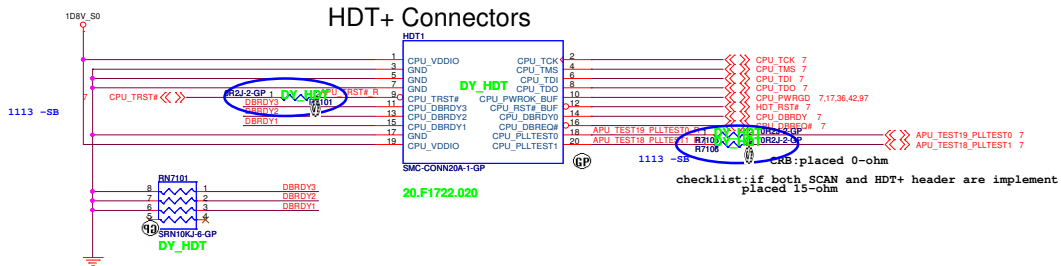


# Hall Sensor

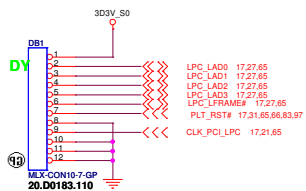


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緯創資通		<b>Wistron Corporation</b> 21F, 8th, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipai Hsien 321, Taiwan, R.O.C.	
File			
<b>HALL Sensor</b>			
Size	Document Number	Rev	SA
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### GOLDEN FINGER FOR DEBUG BOARD



<Core Design>

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LA57 UMA

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.	
Title			
<b>Reserved</b>			
Size A4	Document Number <b>B575</b>		Rev <b>SA</b>
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LA57 UMA

<b>緯創資通</b>		<b>Wistron Corporation</b>	
<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>		<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>	
<b>Title</b>			
<b>Reserved</b>			
<b>Size</b> A4	<b>Document Number</b> <b>B575</b>		<b>Rev</b> <b>SA</b>
<b>Date:</b> Friday, March 25, 2011		<b>Sheet</b> 73	<b>of</b> 103

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C

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B

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A

LA57 UMA

緯創資通

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

Title

**CARD Reader CONN**

Size  
A4

Document Number

**B575**

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**SA**

Date: Friday, March 25, 2011

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D

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B

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A

LA57 UMA

緯創資通

**Wistron Corporation**

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Tapei Hsien 221, Taiwan, R.O.C.

Title

***New Card***

Size  
A4

Document Number

**B575**

Rev  
**SA**

Date: Friday, March 25, 2011

Sheet 75 of 103

D

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C

B

B

A

A

(Blanking)

LA57 UMA

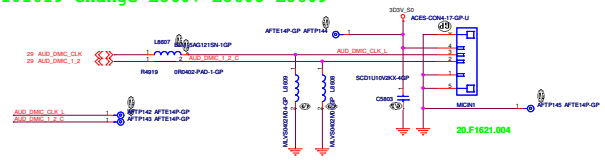
<b>緯創資通</b> <b>Wistron Corporation</b> <small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,        Taipei Hsien 221, Taiwan, R.O.C.</small>		
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Size A4	Document Number <b>B575</b>	Rev <b>SA</b>
Date: Friday, March 25, 2011	Sheet 76	of 103

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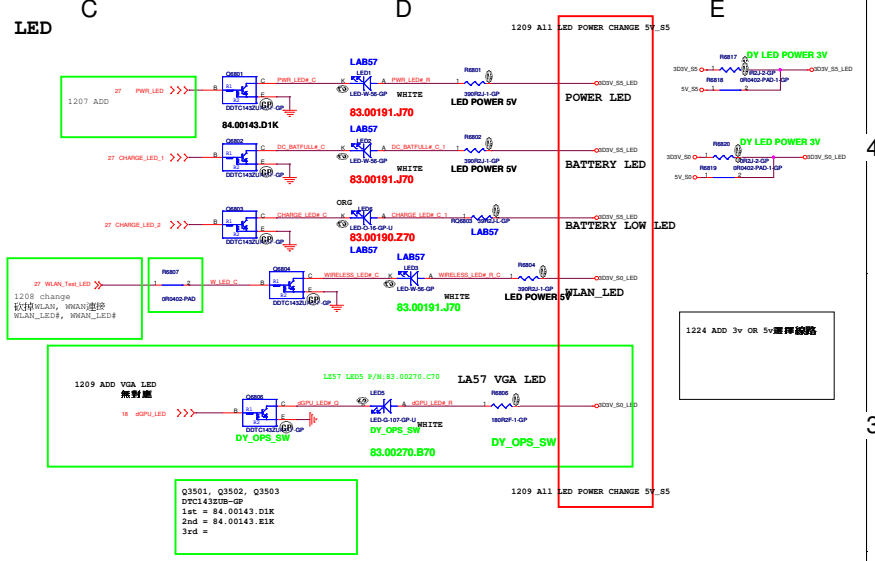
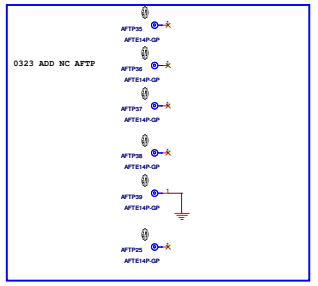
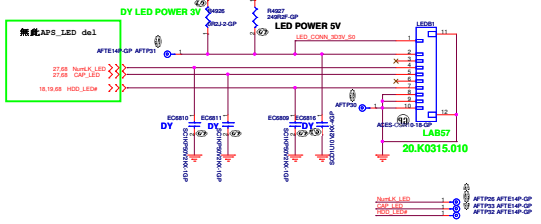
LA57 UMA

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.	
Title			
<b>Reserved</b>			
Size A4	Document Number <b>B575</b>		Rev <b>SA</b>
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20101019 change L8607 L8608 L8609



LED Bord CONN.

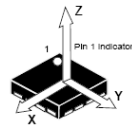


	ADXL322	
	LIS244AL	No Accel
	LIS34AL	
R530	NO_ASM	ASM
R509	ASM	ASM
All other	ASM	NO_ASM

STMicro LIS34AL: 74.00034.0BZ  
 ADXL335 : 74.00335.0BZ

**Layout Comment :**

- (1) Place C483, C484, Q46, R528, R530, C479, C476, R509, R508 close to U55.
- (2) Avoid routing under DCDC switching area.



<Core Design>

 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsien Tai Wu Rd., Hsuehchen, Taipei Hsien 221, Taiwan, R.O.C.	
<b>G-Sensor</b>	
File	
Size	Document Number
Custom	<b>B575</b>
Date: Friday, March 25, 2011	Sheet 79 of 103
Rev	<b>SA</b>

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LA57 UMA

緯創資通

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

Title

**Reserved**

Size  
A4

Document Number

**B575**

Rev  
**SA**

Date: Friday, March 25, 2011

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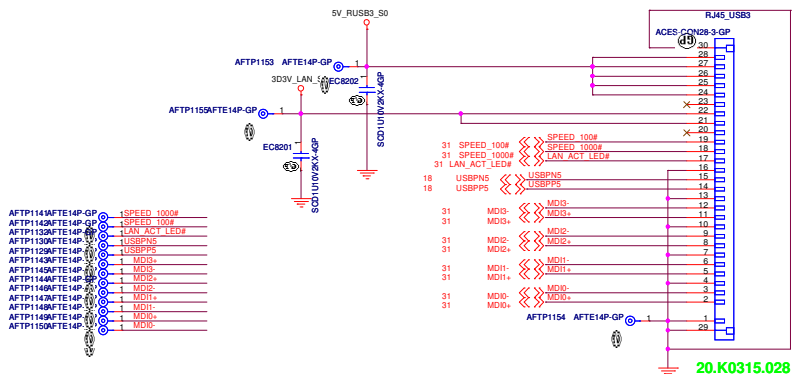


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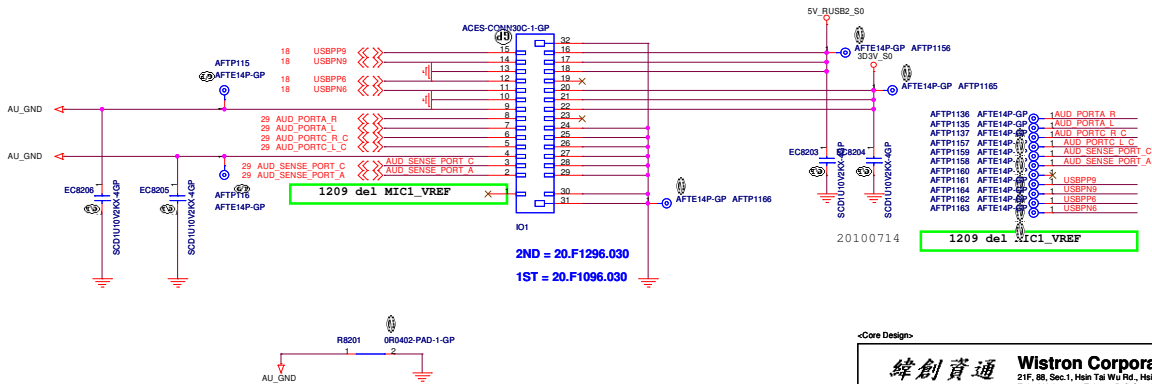
LA57 UMA

<b>緯創資通</b>		<b>Wistron Corporation</b>	
<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>		<small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C.</small>	
<b>Title</b>			
<b>Reserved</b>			
<b>Size</b> A4	<b>Document Number</b> <b>B575</b>		<b>Rev</b> <b>SA</b>
<b>Date:</b> Friday, March 25, 2011		<b>Sheet</b> 81	<b>of</b> 103

### RJ45\_USB CONN.

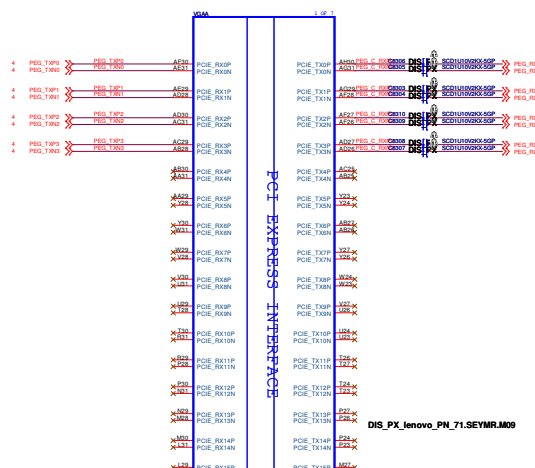


### Card Reader Board CONN.



<Core Design>

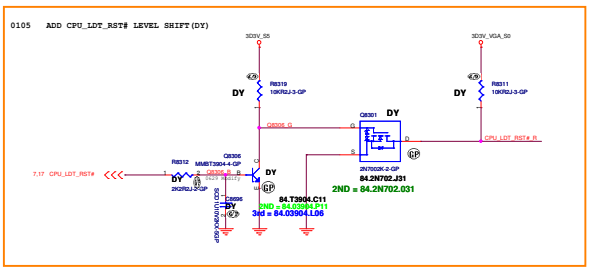
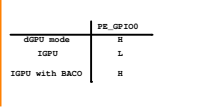
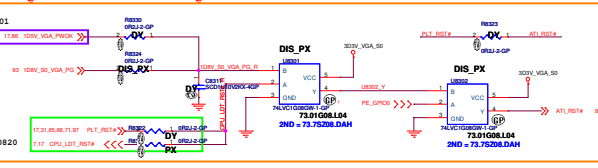
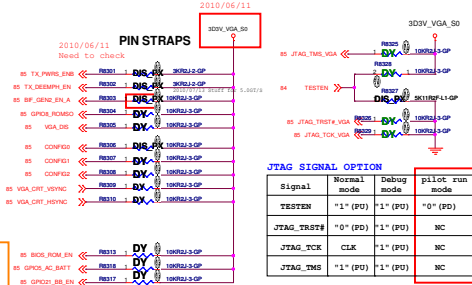
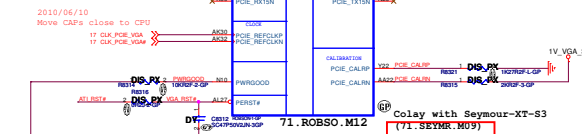
 <b>Wistron Corporation</b> 21F, 8th, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
<b>IO BD CONN</b>	
<b>B575</b>	
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**ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET**

STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS	PLATFOR SETTING
TX_PWRS_ENB	GPIO0	Transmitter Power Savings Enable 0-50% Tx output swing, 1-Full Tx output swing	X	1
TX_DEEMPH_EN	GPIO1	PCIe Transmitter De-emphasis Enabled 0-Tx de-emphasis disabled, 1-Tx de-emphasis enabled	X	1
BIF_GEN2_EN_A	GPIO2	0-Advertises the PCIe device as 2.0 Gb/s capable at power on. 1-Advertises the PCIe device as 5.0 Gb/s capable at power on.	0	0
GPIO5_AC_BATT	GPIO5	optional input allow the system to request a fast power reduction by asserting GPIO5 to low.	?	0
GPIO8_ROMSO	GPIO8	RESERVED	0	0
VGA_DIS	GPIO9	0-VGA Controller capacity enabled 1-The device won't be recognized as the system's VGA controller	0	0
ROMIDCFG[2:0]	GPIO[13:11]	RESERVED	X	X
GPIO21_BB_EN	GPIO21	RESERVED	0	0
BIOS_ROM_EN	GPIO_22_ROMCS#	0-Disable external BIOS ROM device 1-Enable external BIOS ROM device	X	0
VP_DEVICE_STRAP_EN	V2SYNC	VP Device Strap Enable indicates to the software driver that it sense whether or not a VP device is connected on the VIP Host Interface.	X	0
RSVD	H2SYNC	RESERVED	0	0
RSVD	GENERIC	RESERVED	0	0
AUD[1]	HSYNC	AUD[1:0]:11-Audio for both DisplayPort and HDMI	X	1
AUD[0]	VSYSN		X	1

RECOMMENDED SETTINGS  
0-DO NOT INSTALL MODIUM  
1-INSTALL BY REVISION  
X-VERSION DEPENDANT  
NA - NOT APPLICABLE



Notes:

mode	PE_GPIO
dI2P mode	H
I2P	L
I2P with BACO	L

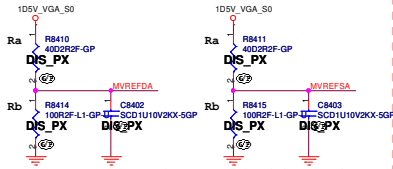
Wistron Corporation  
2/F, No. 361-1, Neihu Rd, Neihu, Taipei, Taiwan, R.O.C.

**GPU PCIe(STRAPPING)1/5**

Document Number: **B575**

Rev: **1.0**

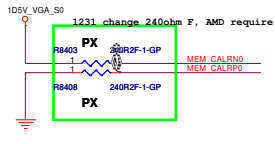
PLACE MVREF DIVIDERS AND CAPS CLOSE TO ASIC



DDR3/GDDR3 Memory Stuff Option (ROBSON-S3/SEYMOUR-XT-S3)

	DDR5	DDR3
MVDDQ	1.5V	1.5V/1.8V
Ra	40.2R	40.2R
Rb	100R	100R

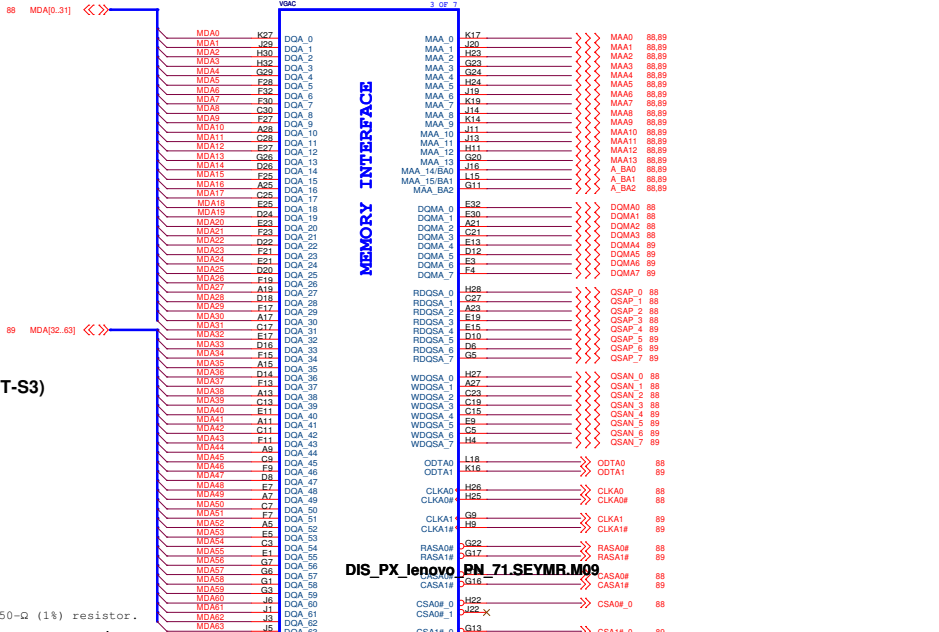
DPX\_CALR (Park/Robson-S3): Analog calibration. Connect DPx\_CALR to GND through a 150-Ω (1%) resistor.



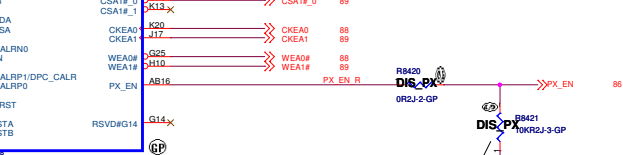
\*\*\* This basic topology should be used for DRAM\_RST for GDR3/GDDR3/GDDR5. These Capacitors and Resistor values are an example only. The Series R and || Cap values will depend on the DRAM Load and will have to be calculated for different Memory, DRAM Load and board to pass Reset Signal Spec.

Designator	For SEYMOUR	For Robson
R_MEM_1	10R	10R
R_MEM_2	50R	50R
R_MEM_3	5K	5K
C_MEM	120pF	120pF

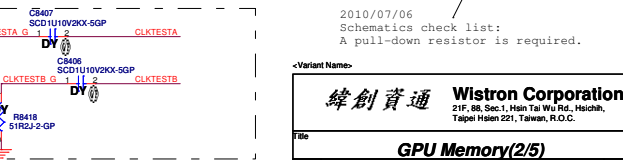
Place all these components very close to GPU (Within 25mm) and keep all component close to each Other (within 5mm) except R\_MEM\_2



DIS\_PX lenovo PN 71\_SEYMR.M09



71. ROBSON.M12 Colay with Seymour-XT-S3 (71\_SEYMR.M01)



2010/07/06  
Schematics check list:  
A pull-down resistor is required.

~Variant Name~

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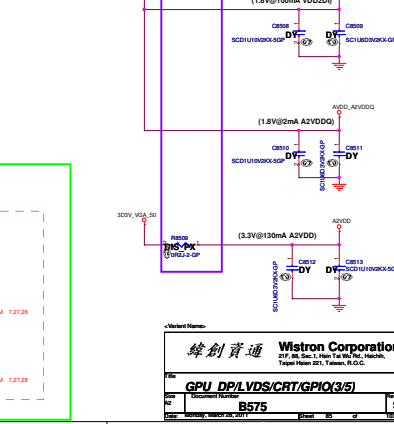
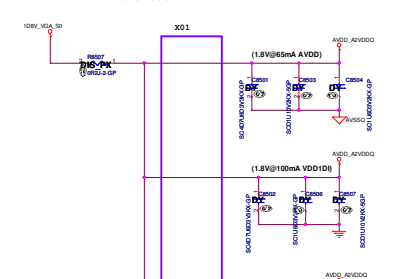
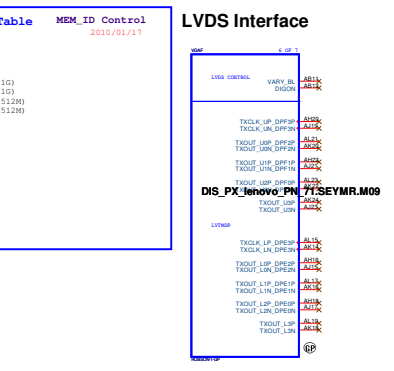
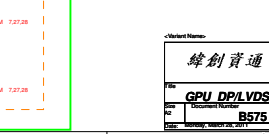
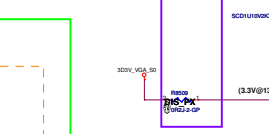
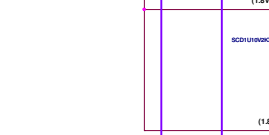
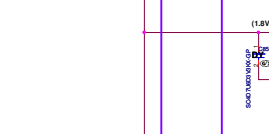
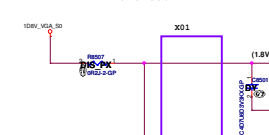
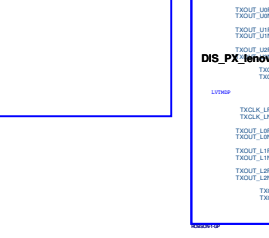
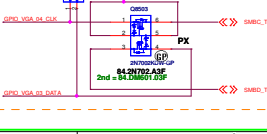
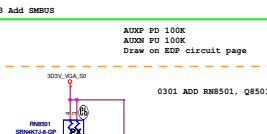
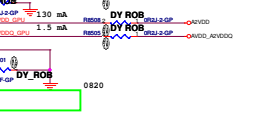
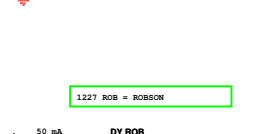
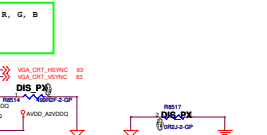
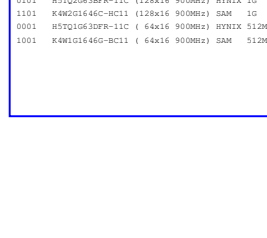
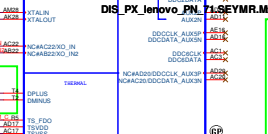
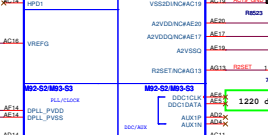
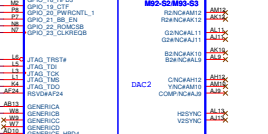
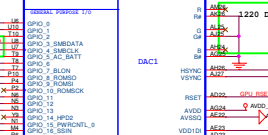
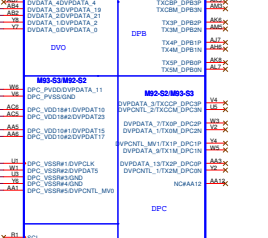
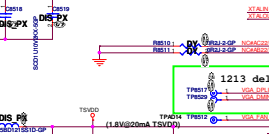
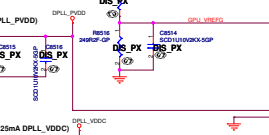
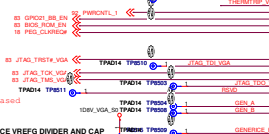
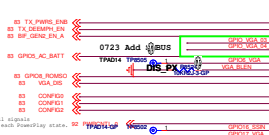
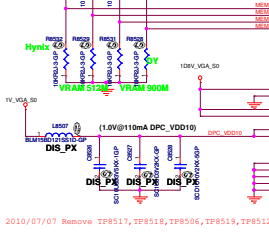
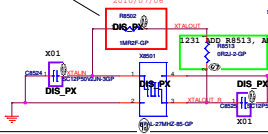
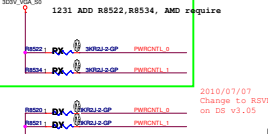
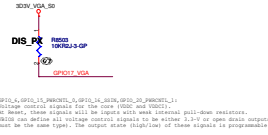
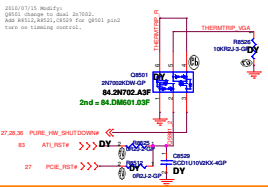
File: **GPU Memory(2/5)**

Size: 43 Document Number: **B575** Rev: SA

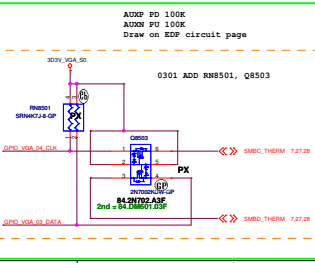
Date: MONDAY, MAR 08, 2011 Sheet: 84 of 103

For normal GPU operation, these signals can be left floating (do not populate the capacitors and resistors).

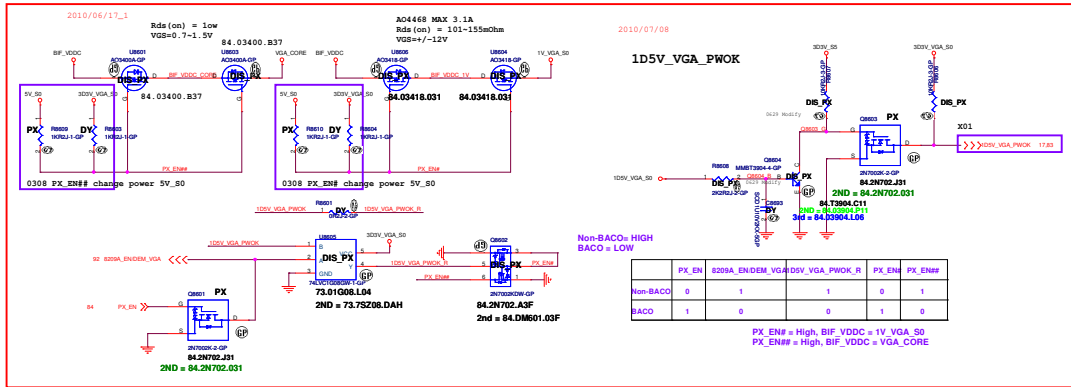
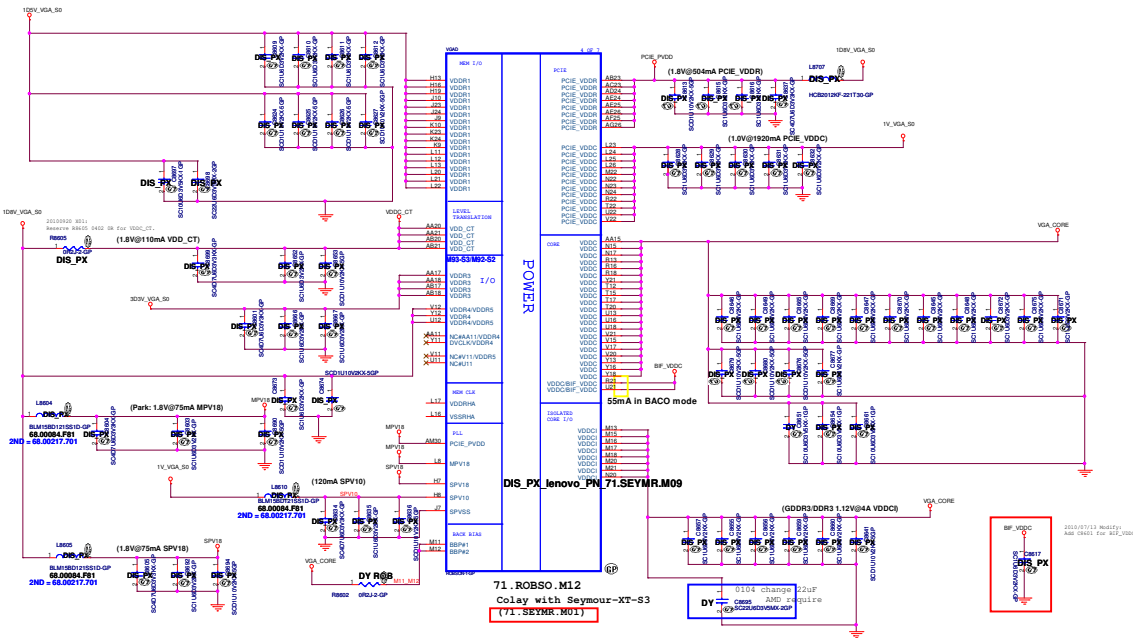
For Seymour,  
DPC\_PVD0 is DPC\_VDD01  
DPC\_PVSS and all DPC\_VSSR are DP\_VSSR

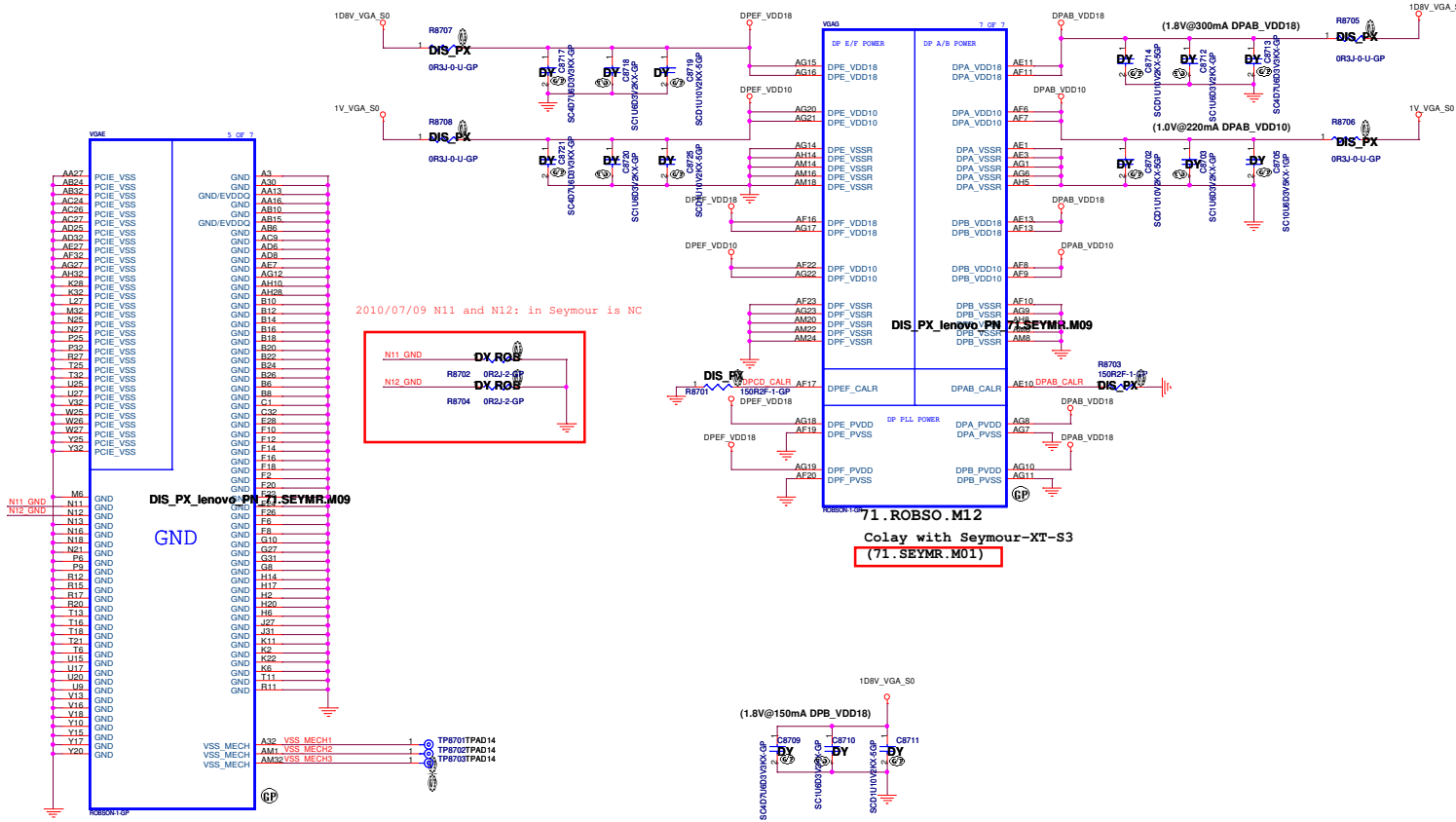


Clock Input Configuration -GDDR3/DDR3  
a) 27MHz crystal connected to XTALIN or XTALOUT or  
b) 27MHz (1.8V) oscillator connected to XTALIN or  
c) 27MHz (3.3V) oscillator connected to XO\_IN (Park, Madison, and Broadway only)

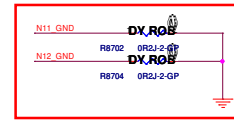


Wistron Corporation  
GPU DPLVDS/CRTP/GPIO(3/5)  
B575





2010/07/09 N11 and N12: in Seymour is NC



71.ROBSO.M12  
Colay with Seymour-XT-S3  
(71.SEYMR.M01)

71.ROBSO.M12

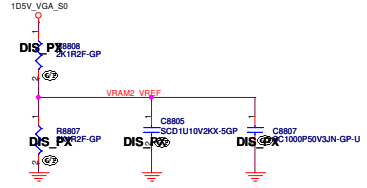
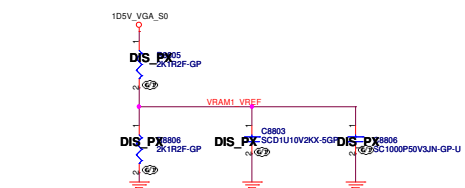
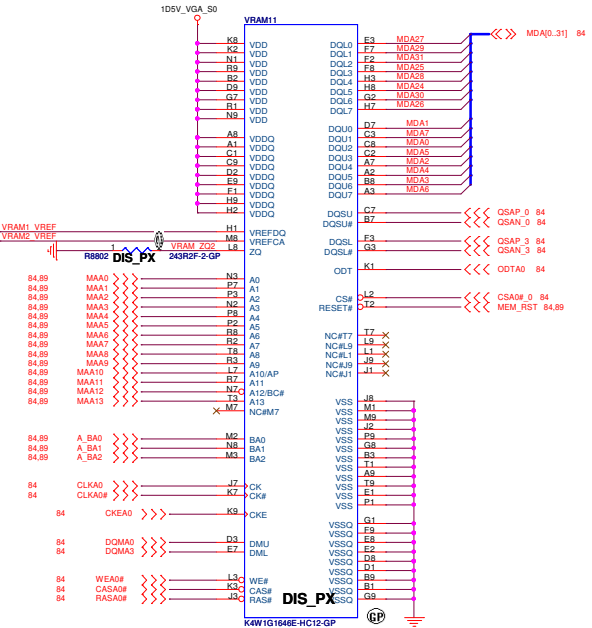
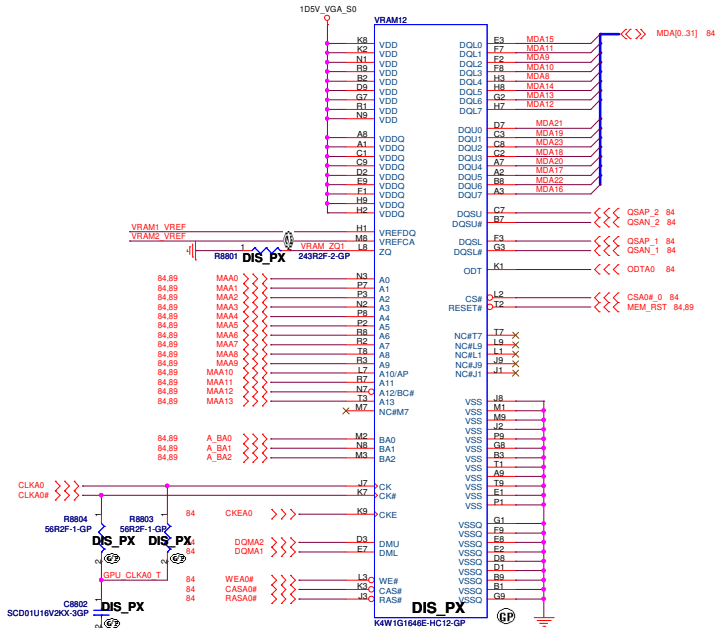
<Variant Name>

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Title: **GPU DPPWR/GND(5/5)**

Size: A3 Document Number: **B575** Rev: SA

Date: FROSB, MB0H 25, 2011 Sheet: 67 of 103

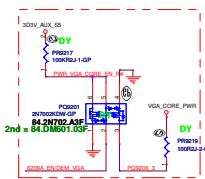
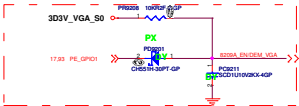
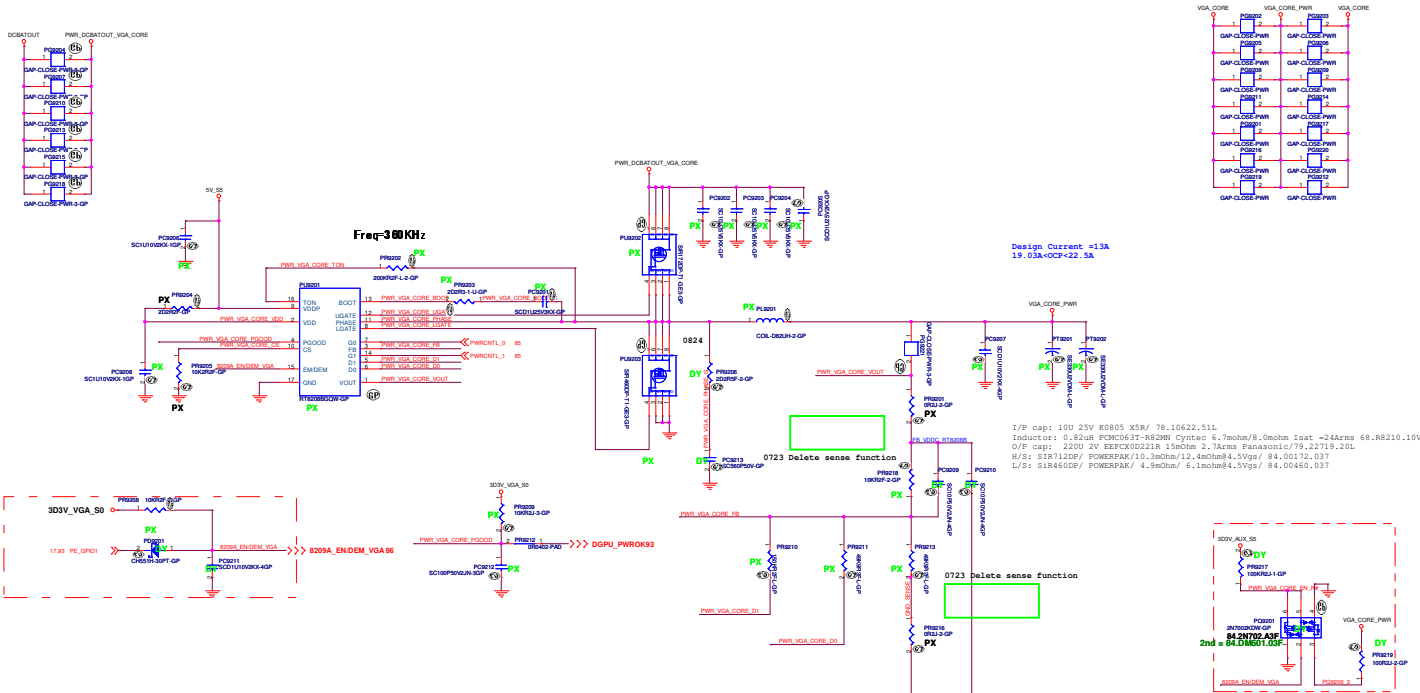


<Variant Name>

<b>緯創資通</b>		<b>Wistron Corporation</b>
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichah, Taipei Hsin 221, Taiwan, R.O.C.		
Title <b>GPU_VRAM1,2 (1/4)</b>		
Size	Document Number	Rev
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**Robson-XT**

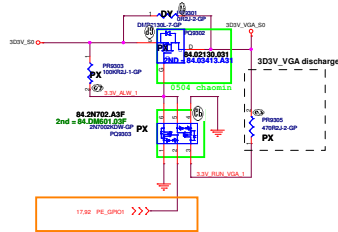
PWR_VGA_CORE_D1	PWR_VGA_CORE_D0	VGA_CORE_PWR
L	L	1.1V
L	L	1.10V
L	L	1.10V
L	L	1.05V
L	L	0.9V

**Seymour-XT**

PWR_VGA_CORE_D1	PWR_VGA_CORE_D0	VGA_CORE_PWR
L	L	1.1V
L	L	1.10V
L	L	1.10V
L	L	1.05V
L	L	0.9V

$V_{out} = 0.75V * (R1+R2) / R2$   
 For ROBSON  
 PR9210=44K.2K (64.44225.6DL)  
 PR9211=150K (64.15035.6DL)

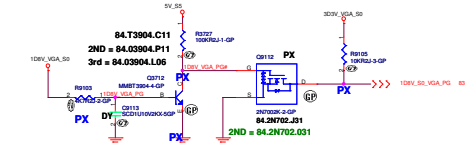
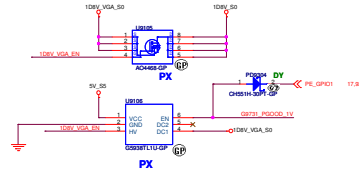
### +3VS to 3.3V\_DELAY Transfer



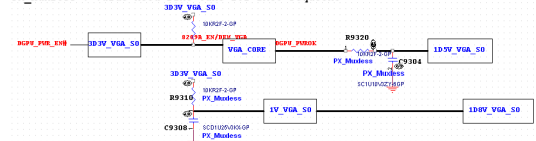
Diffrent To Intel, AMD is High Active

	FE_GPI00	FE_GPI01
IGPU mode	L	R
IGPU	L	L
IGPU with BACO	R	R

### G9731 for 1D8V\_VGA

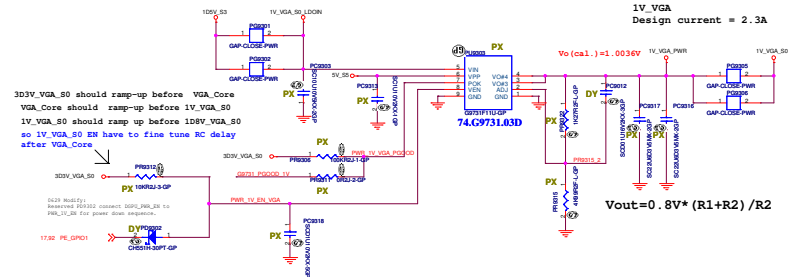


PX\_Muxless : value need fine tune for BACO sequene

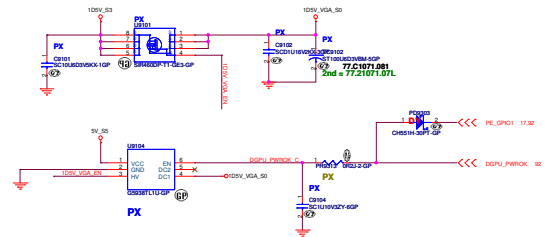


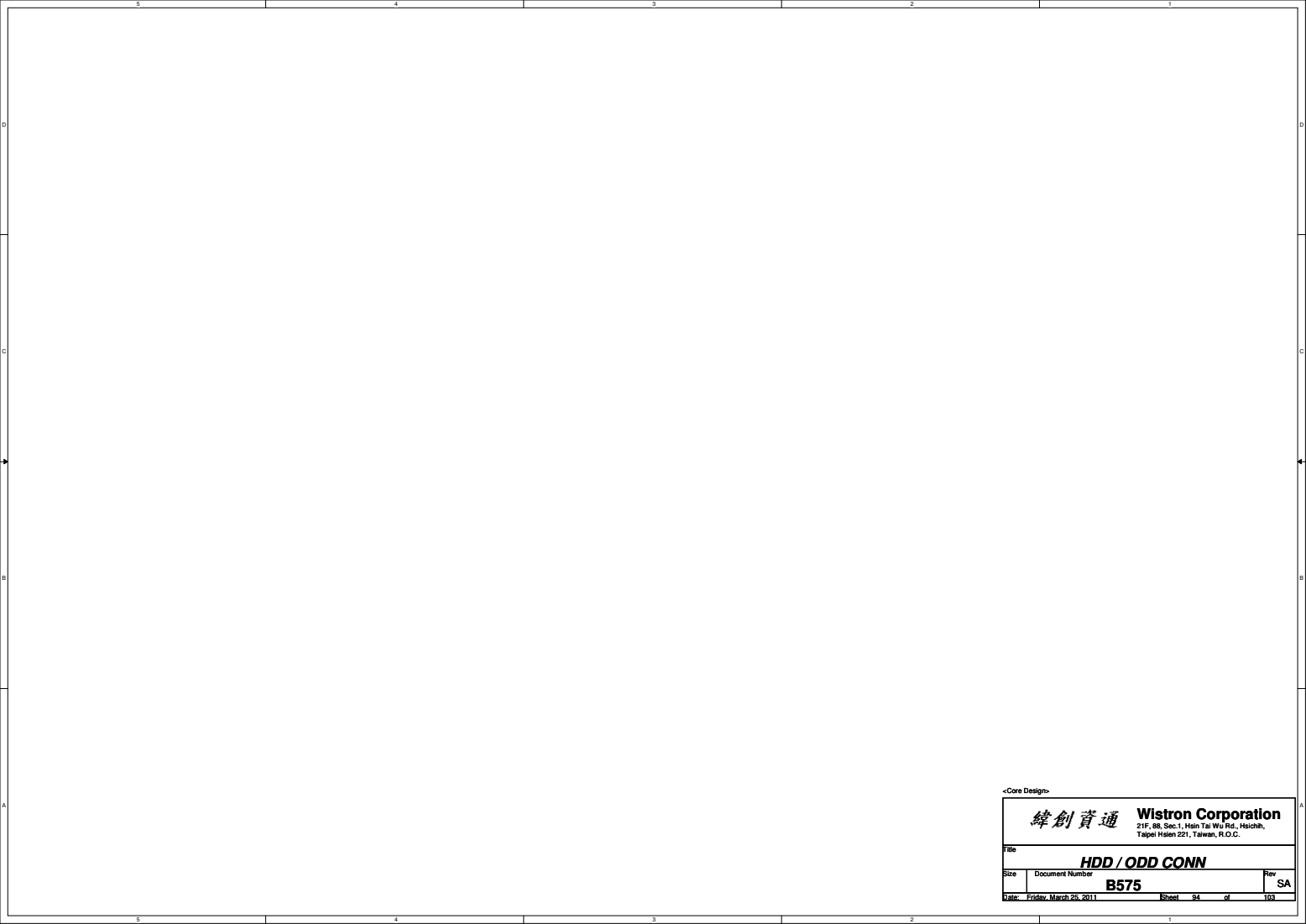
### G9731 for 1V\_VGA\_S0

Park\_Madison Does Not Support BACO, So follow Old Sequence  
Seymour\_Whitlier\_Robson Support BACO, So Change Sequence



### 1D5V\_VGA\_S0





<Core Design>

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<b>HDD / ODD CONN</b>			
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<b>B575</b>			
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4

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2

1

D

D

C

C

B

B

A

A

<Variant Name>

<b>緯創資通</b> <b>Wistron Corporation</b> <small>21F, 88, Sec.1, Hsien Ta Wu Rd., Hsueh,        Taipei Hsien 221, Taiwan, R.O.C.</small>		<b>CRT Switch</b>
<b>Date:</b> Friday, March 25, 2011	<b>Sheet</b> 96	<b>of</b> 103

5

4

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2

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D

D

C

C

B

B

A

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LA57 UMA

緯創資通

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

Title

**TOUCH PANEL**

Size  
A4

Document Number

**B575**

Rev

**SA**

Date: Friday, March 25, 2011

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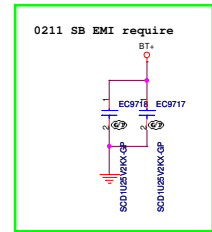
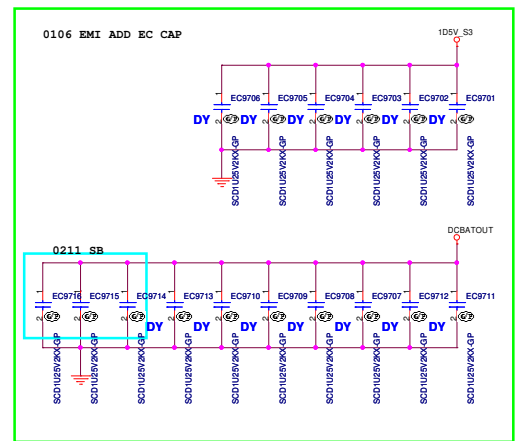
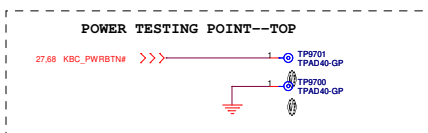
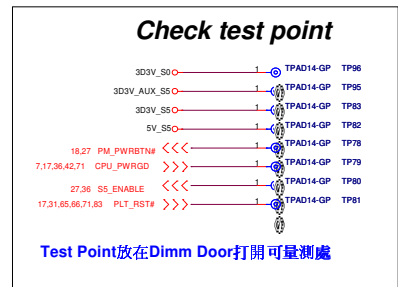
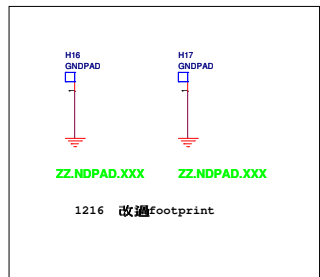
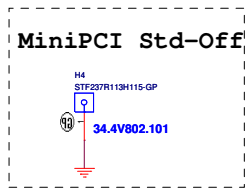
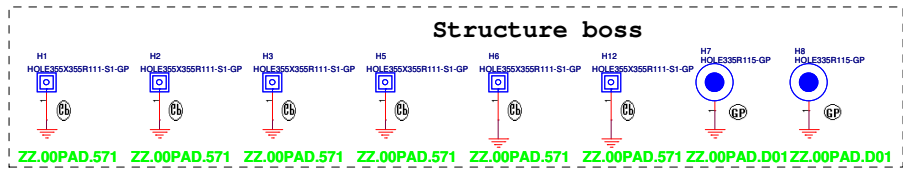
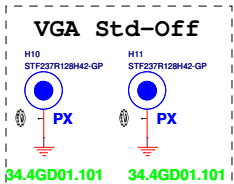
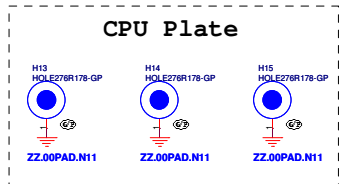
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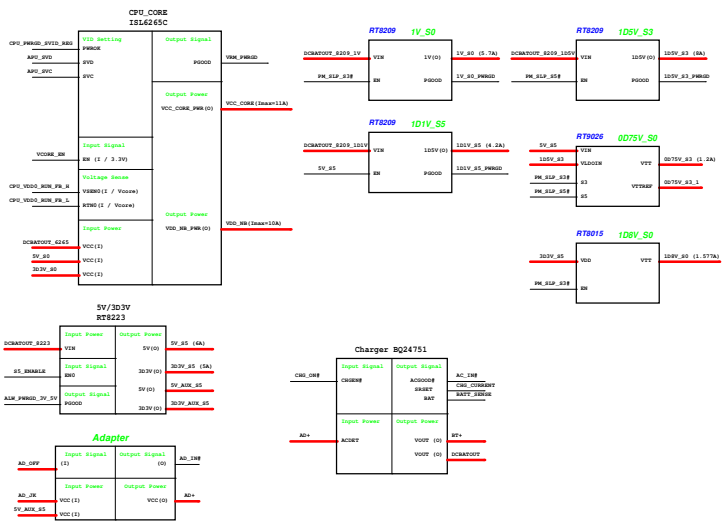
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Title			
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Size A4	Document Number <b>B575</b>		Rev <b>SA</b>
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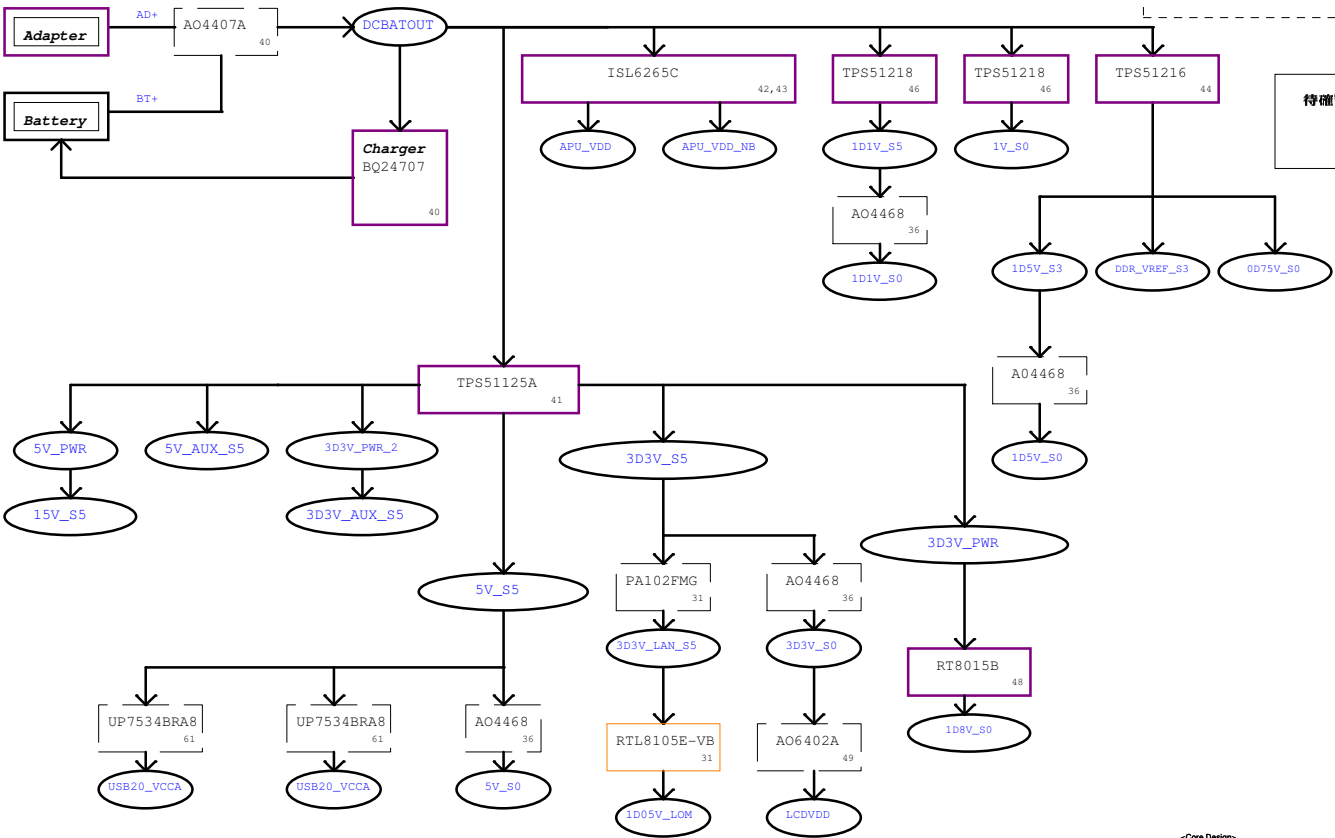


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# Power Delivery Block Diagram

Power Shape



待確認

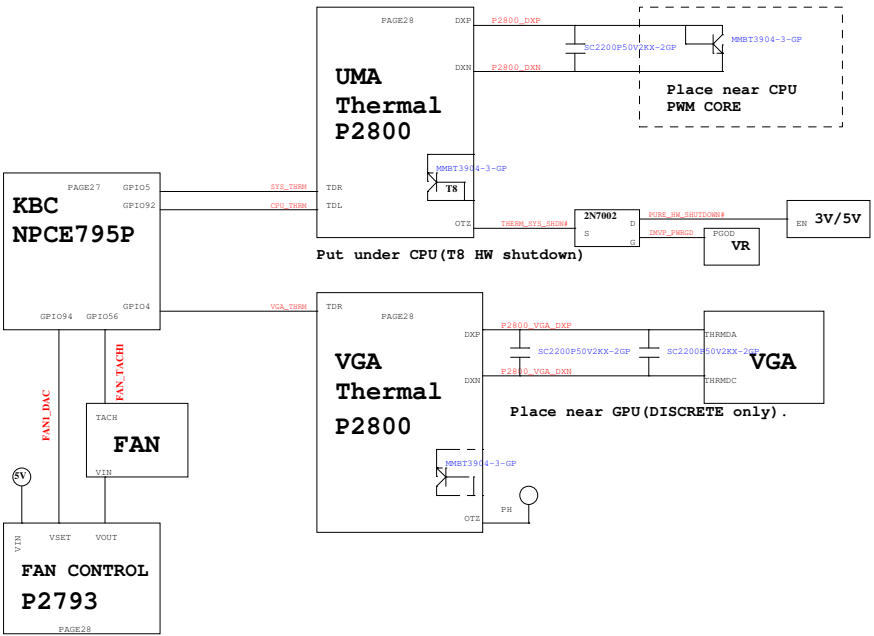
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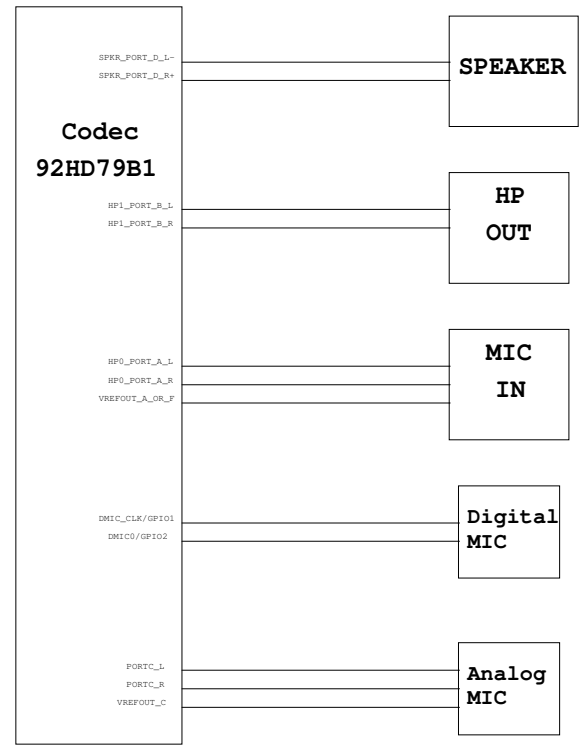
File	<b>Power Block Diagram</b>		Rev
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# Thermal Block Diagram

待確認



# Audio Block Diagram



<Core Design>

+10DV_MIN_WLAN	→	+10DV_MIN_WLAN	65	SV_PWR	→	SV_PWR	41	PWR_30DV_DCBATOUT	→	PWR_30DV_DCBATOUT	41	AU_GND	←	AU_GND	29,82
+10DV_MIN_WWAN	→	+10DV_MIN_WWAN	65	SV_PWR_2	→	SV_PWR_2	41	PWR_30DV_VREF	→	PWR_30DV_VREF	41	CHG_AKND	←	CHG_AKND	40
-3V_MIN_WLAN	→	-3V_MIN_WLAN	65	SV_RUSB2_50	→	SV_RUSB2_50	61,82	PWR_SV_DCBATOUT	→	PWR_SV_DCBATOUT	41	AVSSO	←	AVSSO	85
-3V_MIN_WWAN	→	-3V_MIN_WWAN	65	SV_RUSB3_50	→	SV_RUSB3_50	61,82	PWR_DCBATOUT_1V	→	PWR_DCBATOUT_1V	45	QMDA_VCORE	←	QMDA_VCORE	42
10TSV_PWR	→	10TSV_PWR	46	SV_S0	→	SV_S0	7,28,29,30,55,56,54,69,78,86	PWR_DCBATOUT_VGA_CORE	→	PWR_DCBATOUT_VGA_CORE	52				
10TSV_S0	→	10TSV_S0	14,15,36,46	SV_S5	→	SV_S5	36,41,42,45,46,47,61,62,65,66,78,92,93,97	RTC_AIK_S5	→	RTC_AIK_S5	17,27,60				
10DV_LAN_S0	→	10DV_LAN_S0	31	SV_USB2_50	→	SV_USB2_50	57,62	RTC_BAT	→	RTC_BAT	40				
10DV_S0	→	10DV_S0	4,6,45	ADVDD	→	ADVDD	93	RUN_ENABLE	→	RUN_ENABLE	36				
10DV_PWR	→	10DV_PWR	45	AD_	→	AD_	36,40	RUN_ENABLE_S	→	RUN_ENABLE_S	36				
10DV_S0	→	10DV_S0	20,36	AD_JK	→	AD_JK	36	SM_PWR	→	SM_PWR	67				
10DV_S0	→	10DV_S0	20,36,45	AUD_30DV	→	AUD_30DV	29	SP18	→	SP18	86				
10DV_PWR	→	10DV_PWR	46	AUD_30DV_10DV	→	AUD_30DV_10DV	29	TSVDD	→	TSVDD	85				
10DV_S0	→	10DV_S0	29,35,65,66	AUD_3V	→	AUD_3V	29	UM_PWR	→	UM_PWR	66,67				
10DV_S0	→	10DV_S0	5,6,14,15,36,46,93,97	AVDD_ADVDD	→	AVDD_ADVDD	85	VCC_CORE	→	VCC_CORE	6,42				
10DV_VGA_S0	→	10DV_VGA_S0	84,86,88,89,93	AVDD_SATA	→	AVDD_SATA	19,20	VDD_NB	→	VDD_NB	6,42,43				
10DV_PWR	→	10DV_PWR	47	AVDD_USB	→	AVDD_USB	20	VDDAN_30DV_HRM	→	VDDAN_30DV_HRM	20				
10DV_S0	→	10DV_S0	6,7,17,20,42,47,71,93	BF_VDDC	→	BF_VDDC	86	VDDC_CT	→	VDDC_CT	86				
10DV_VGA_S0	→	10DV_VGA_S0	83,86,87,93	BQ2474_VREF	→	BQ2474_VREF	40	VDDO_A2	→	VDDO_A2	20				
1V_PWR	→	1V_PWR	45	BT_	→	BT_	35,45,97	VDDPL_10DV	→	VDDPL_10DV	20				
1V_VGA_S0	→	1V_VGA_S0	83,85,86,87,93	DCBATOUT	→	DCBATOUT	36,40,41,42,43,45,46,47,49,92,97	VDDPL_30DV	→	VDDPL_30DV	20				
1V_VGA_S0_L1D0N	→	1V_VGA_S0_L1D0N	93	DCBATOUT_L1D0	→	DCBATOUT_L1D0	49	VGA_CORE	→	VGA_CORE	86,92				
30DV_AIK_NBC	→	30DV_AIK_NBC	27,30	DDR_VREF_S3	→	DDR_VREF_S3	5,14,15,46	VGA_CORE_PWR	→	VGA_CORE_PWR	92				
30DV_AIK_S5	→	30DV_AIK_S5	18,27,28,40,41,60,70,92,97	DPAB_VDD10	→	DPAB_VDD10	87								
30DV_BT_S0	→	30DV_BT_S0	63	DPAB_VDD18	→	DPAB_VDD18	87								
30DV_CAMERA_S0	→	30DV_CAMERA_S0	49	DREF_VDD10	→	DREF_VDD10	87								
30DV_LAN_S0	→	30DV_LAN_S0	31,82	DREF_VDD18	→	DREF_VDD18	87								
30DV_LAN_VDDREG	→	30DV_LAN_VDDREG	31	DPFL_PVDD	→	DPFL_PVDD	85								
30DV_PWR	→	30DV_PWR	41	DPFL_VDDC	→	DPFL_VDDC	85								
30DV_PWR_2	→	30DV_PWR_2	41	LCDVDD	→	LCDVDD	49								
30DV_S0	→	30DV_S0	6,7,14,15,17,18,19,20,21,27,28,29,31,36,42,46,49,50,51,56,60,63,64,65,66,67,68,71,78,92,93,97	MP18	→	MP18	86								
30DV_S0_LED	→	30DV_S0_LED	78	PCIE_VDDH	→	PCIE_VDDH	17,20								
30DV_S0	→	30DV_S0	7,18,20,21,27,31,36,41,42,45,47,68,78,80,86,97	PWR_10DV_DCBATOUT	→	PWR_10DV_DCBATOUT	46								
30DV_S0_LED	→	30DV_S0_LED	78												
30DV_VGA_S0	→	30DV_VGA_S0	83,85,86,93,93												
3V_PP_S0	→	3V_PP_S0	64												
3V_CRT_S0	→	3V_CRT_S0	50												
3V_ICM8	→	3V_ICM8	51												
3V_L1USB1_S0	→	3V_L1USB1_S0	62												

<Variant Name>

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Rev: **Change History**

Doc No: **B575**

Rev: **SA**

Doc: **Assembly Material list (AMT)**      Sheet: **186** of **217**