

Angel_CY

UMA Schematics Document

IVY Bridge

Intel PCH

DY :None Installed
DIS:DIS installed
DIS_Muxless :BOTH DIS or Muxless installed
DIS_PX:BOTH DIS or PX installed
DIS_PX_Muxless:DIS or PX or Muxless installed.
Muxless: Muxless installed.(PX4.0)
PX:MUX installed.(PX3.0)
PX_Muxless:BOTH PX or Muxless installed.
UMA:UMA installed
UMA_Muxless:BOTH UMA or Muxless installed
UMA_PX_Muxless:UMA or PX or Muxless installed

ANNIE: ONLY FOR ANNIE solution.
PSL: KBC795 PSL circuit for 10mW solution installed.
10mW: External circuit for 10mW solution installed.
65W: for 65W adaptor installed.
90W: for 90W adaptor installed.

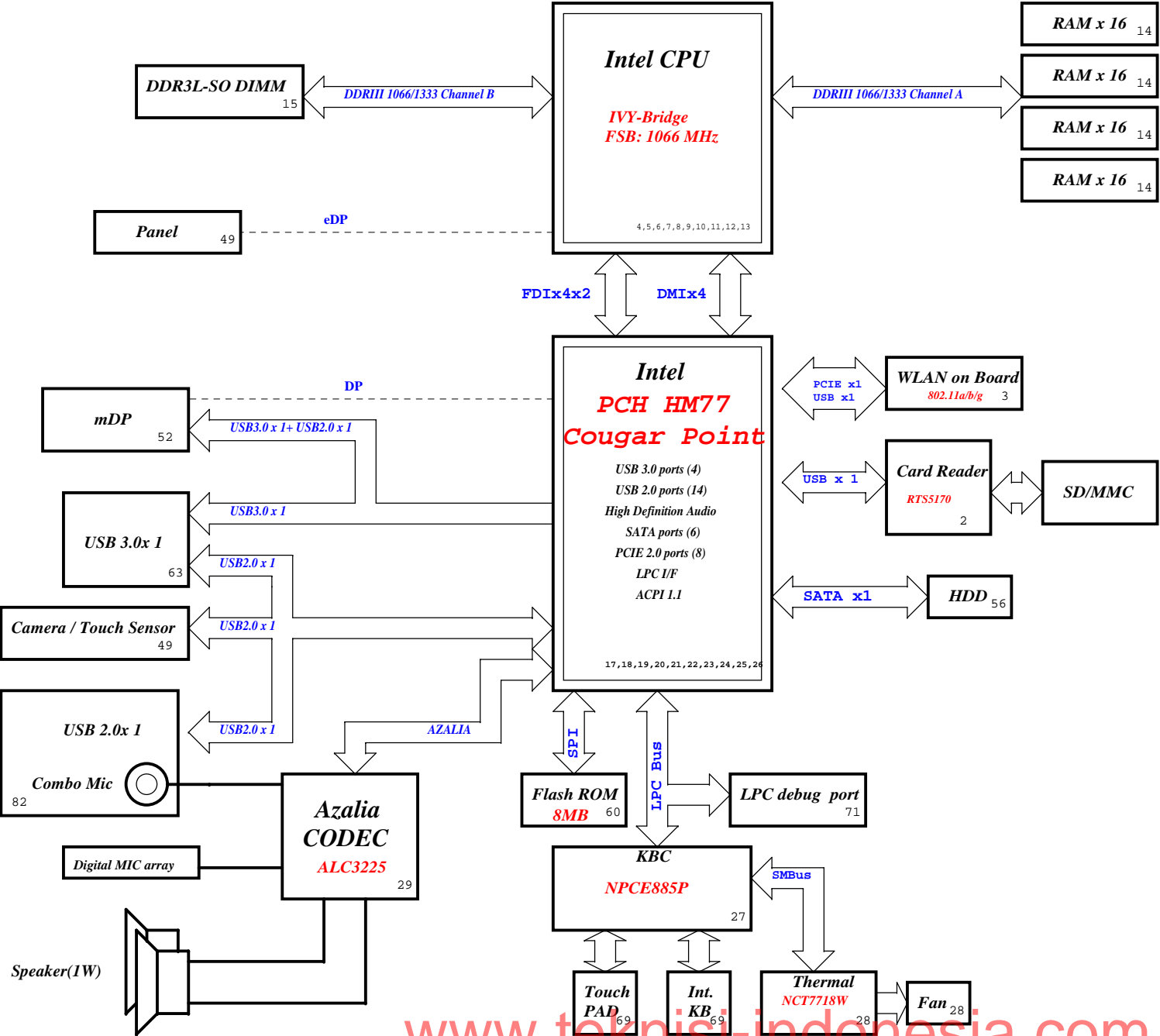
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
Cover Page			
Size A3	Document Number Angel-CY	Rev 1	
Date: Monday, April 22, 2013	Sheet 1	of 102	

Project code : 91.4LJ01.001
PCB P/N :
Revision : 12313-1

Angel-CY Block Diagram



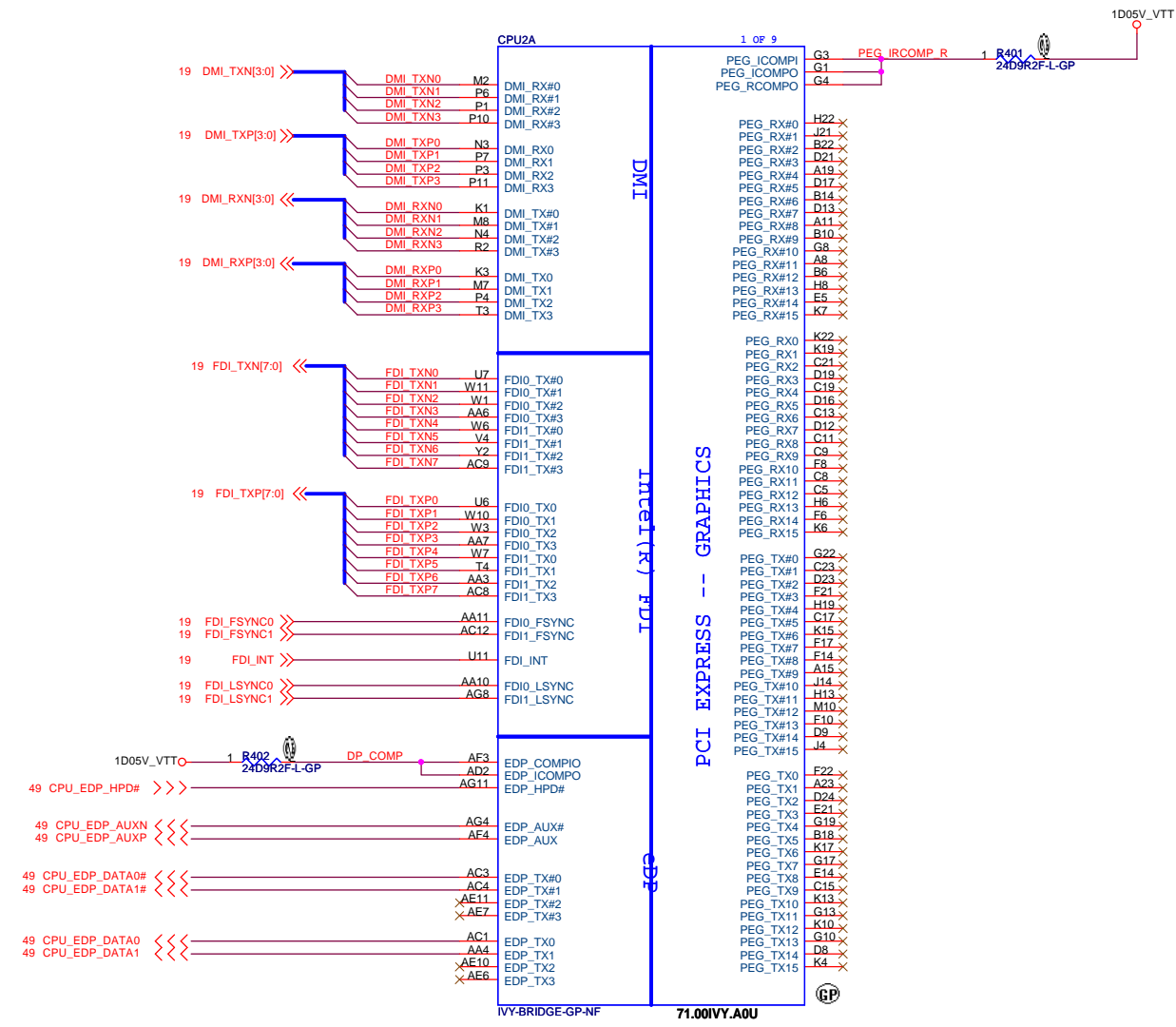
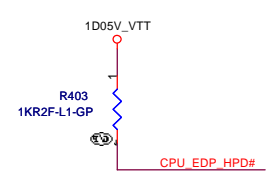
SYSTEM DC/DC	
BQ24727	40
INPUTS	OUTPUTS
DCBATOUT	BT+
SYSTEM DC/DC	
TPS51225	41
INPUTS	OUTPUTS
DCBATOUT	5V_AUX_S5 3D3V_AUX_S5 5V_S5 3D3V_S5
CPU DC/DC	
TPS51640	42~44
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE VCC_GFXCORE
SYSTEM DC/DC	
TPS51363	45
INPUTS	OUTPUTS
DCBATOUT	1D05V_VTT
SYSTEM DC/DC	
RT8207	46
INPUTS	OUTPUTS
DCBATOUT	1D35V_S3 0D675V_S0 DDR_VREF_S3
SYSTEM DC/DC	
SYW232	47
INPUTS	OUTPUTS
3D3V_S0	1D8V_S0
SYSTEM LOD	
S-1339D	47
INPUTS	OUTPUTS
1D8V_S0	1D5V_S0
SYSTEM DC/DC	
SY8037	48
INPUTS	OUTPUTS
5V_S5	0D85V_S0
PCB LAYER	
L1:Top	L5:Signal
L2:VCC	L6:Signal
L3:Signal	L7:GND
L4:GND	L8:Bottom

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Block Diagram			
Size A3	Document Number		Rev 1
Angel-CY			
Date: Monday, April 22, 2013	Sheet 2	of 102	

SSID = CPU

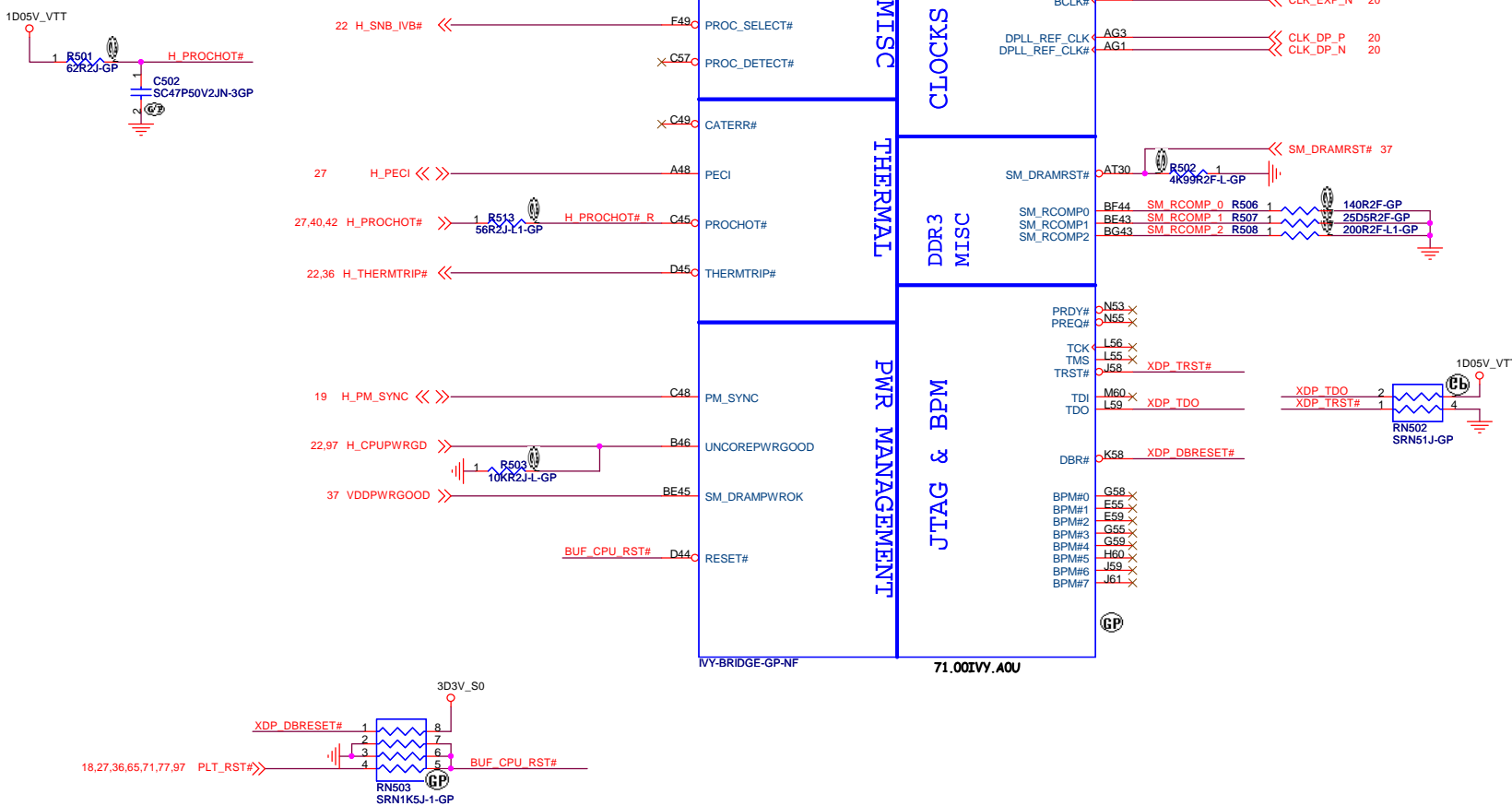


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title CPU (PCIE/DMI/FDI)			
Size A3	Document Number	Rev 1	
Date: Monday, April 22, 2013		Sheet 4	of 102

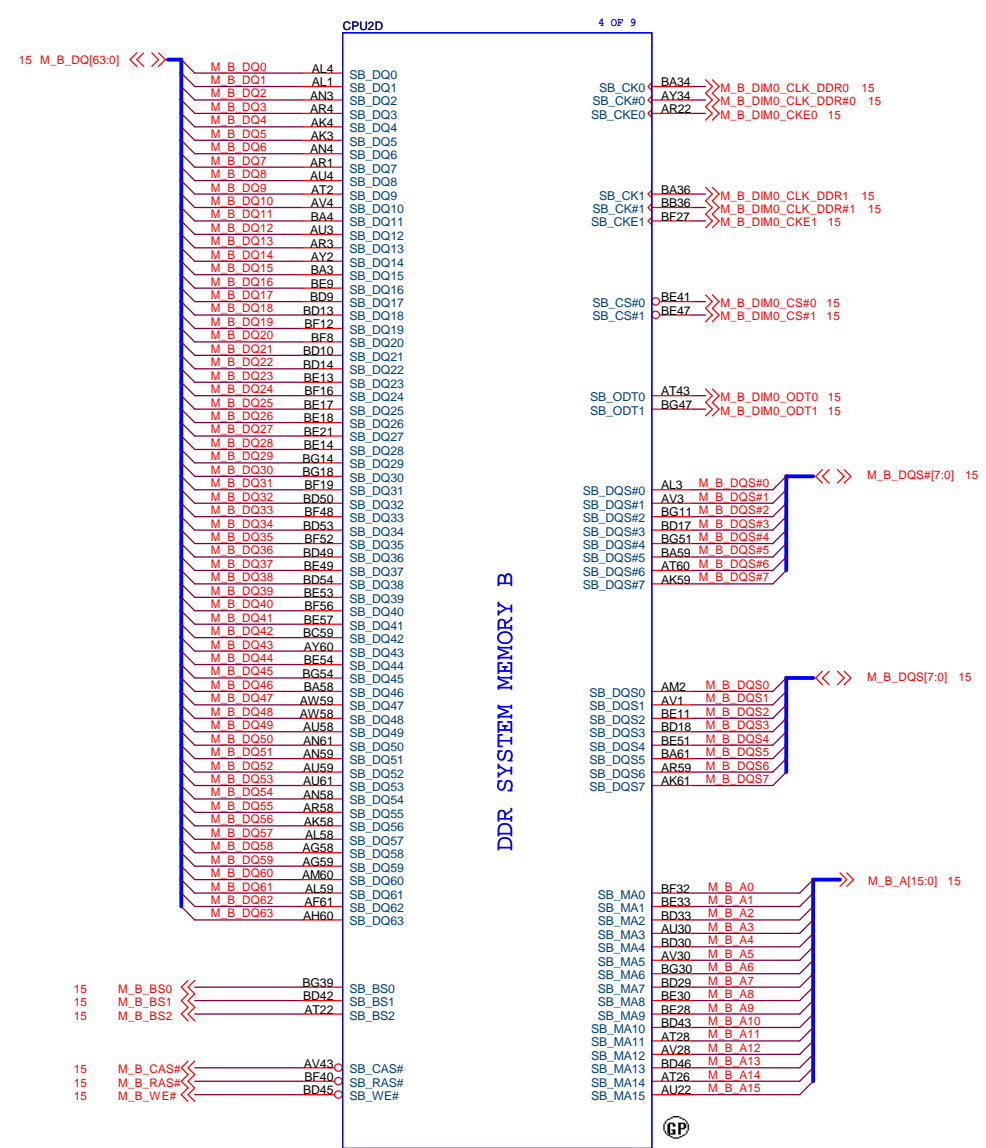
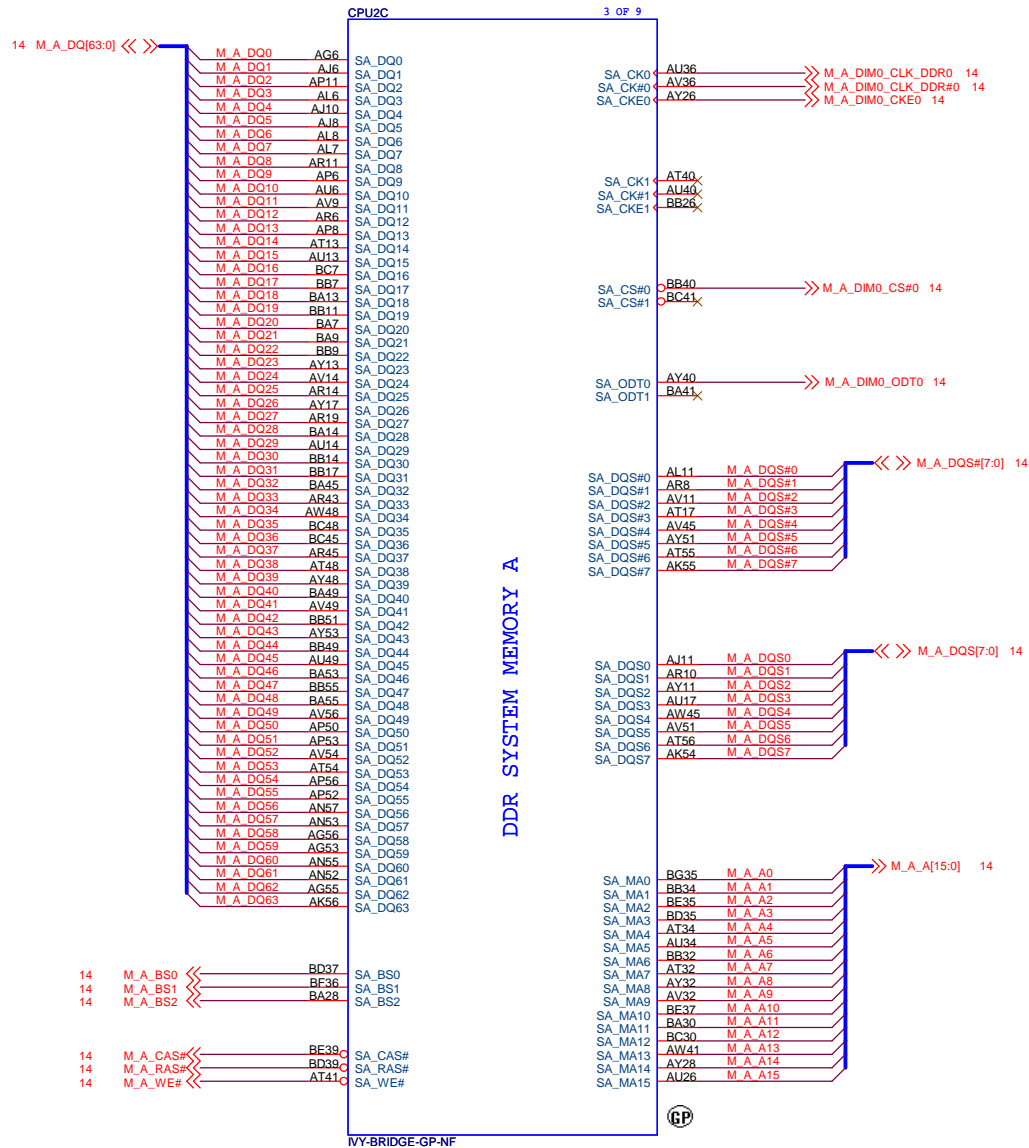
SSID = CPU



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title CPU (THERMAL/CLOCK/PM)			
Size A3	Document Number	Rev 1	
Date: Monday, April 22, 2013		Angel-CY	
Sheet 5		of 102	

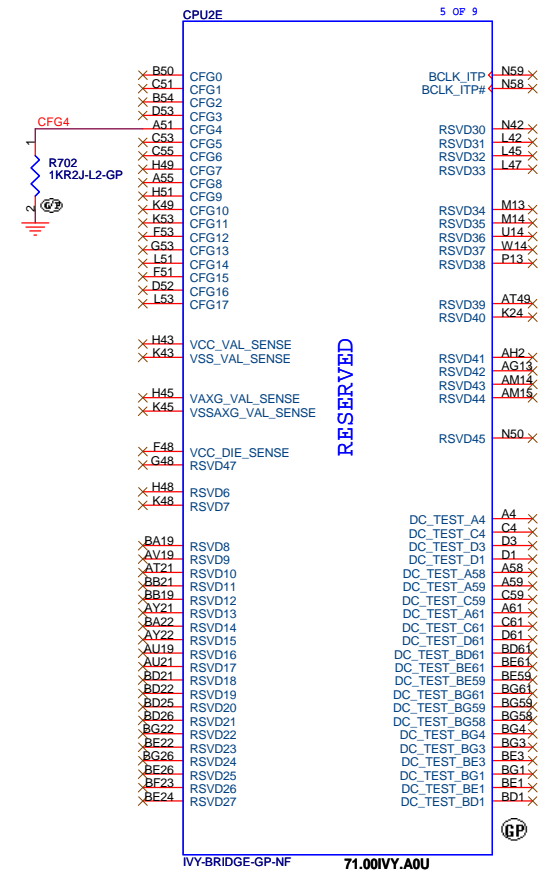


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
CPU (DDR)			
Size A3	Document Number	Rev	
	Angel-CY	1	
Date: Monday, April 22, 2013	Sheet 6	of	102

SSID = CPU



Pin Name	Strap Description	Configuration (Default value for each bit is 1 unless specified otherwise)	Default Value
CFG[0]		Connect a series 1 kOhms resistor on the critical CFG[0] trace in a manner which does not introduce any stubs to CFG[0] trace. Route as needed from the opposite side of this series isolation resistor to the debug port. ITP will drive the net to GND.	
CFG[2]	PCIe Static x16 Lane Numbering Reversal.	1: Normal Operation; Lane # definition matches socket pin map definition 0: Lane Reversed	0
CFG[4]	Display Port Presence strap	1: Disabled - No Physical Display Port attached to Embedded DisplayPort No connect for disable 0: Enabled - An external Display Port device is connected to the Embedded Display Port Pull-down to GND through a 1KΩ ± 5% resistor to enable port	0
CFG[6:5]	PCI-Express Port Bifurcation Straps	00 = 1 x 8, 2 x 4 PCI Express 01 = reserved 10 = 2 x 8 PCI Express 11 = 1 x 16 PCI Express	00
CFG[17:7]	Reserved configuration lands. A test point may be placed on the board for these lands.		

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通

Wistron Corporation

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

Title

CPU (RESERVED)

Size

A3

Document Number

Angel-CY

Rev

1

Date

Monday, April 22, 2013

Sheet

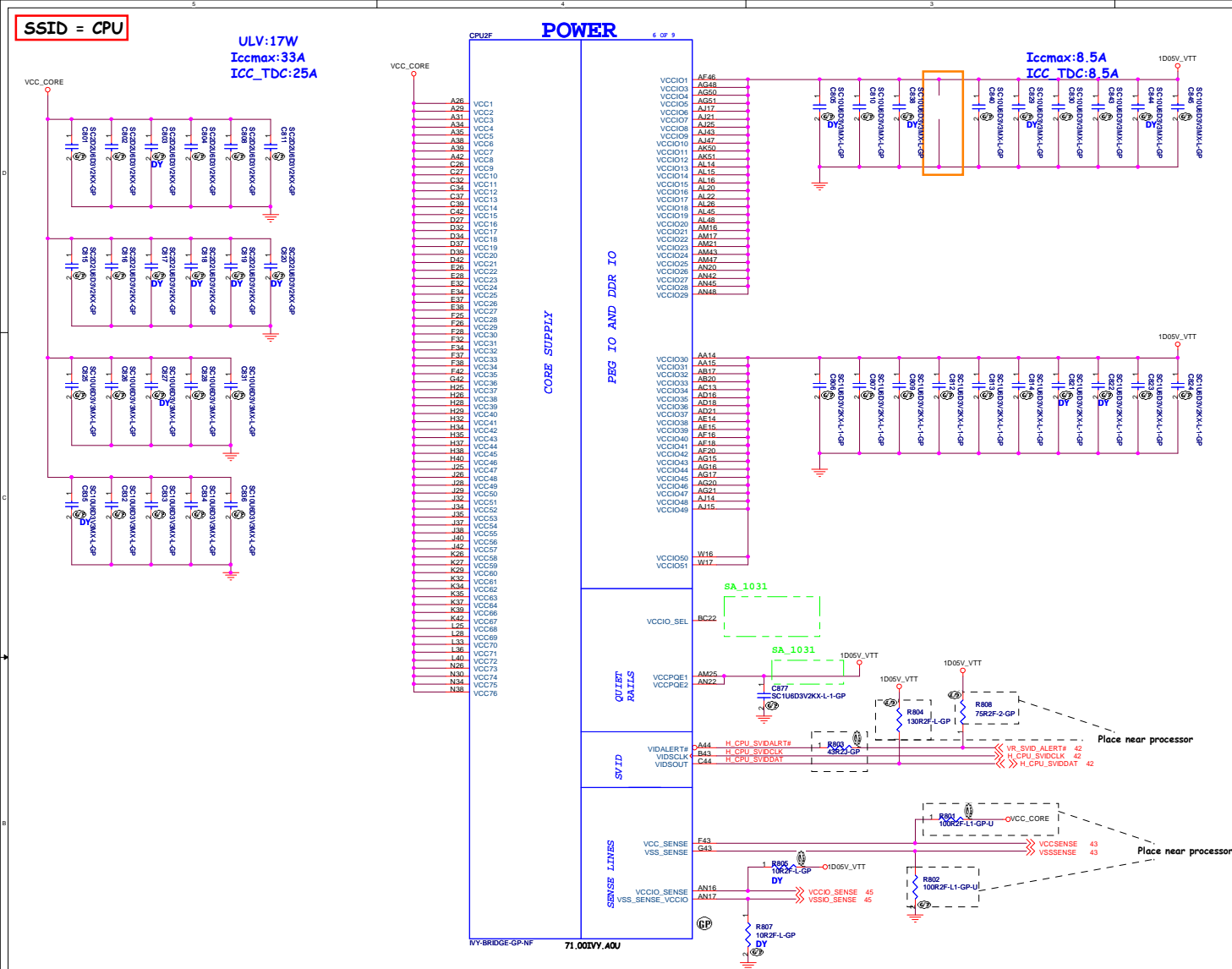
7

of

102

SSID = CPU

ULV:17W
Iccmax:33A
ICC_TDC:25A



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

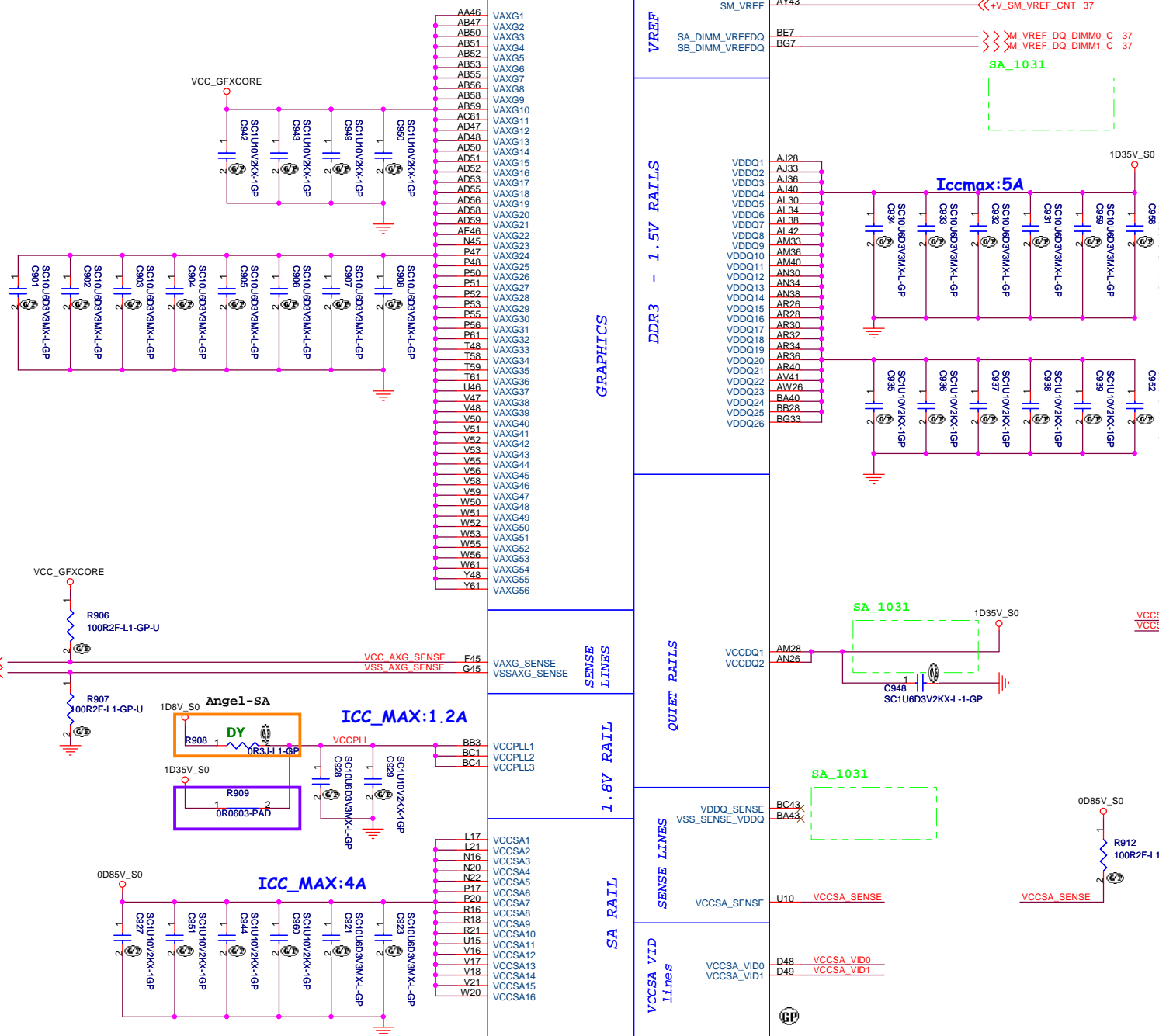
Title		
CPU (VCC_CORE)		
Size A2	Document Number	Rev
	Angel-CY	1
Date:	Monday, April 22, 2013	Sheet 8 of 102

SSID = CPU

Iccmax:18A(GT1)
ICC_TDC:12A(GT1)

POWER

Routing Guideline:
Power from DDR_VREF_S3 and +V_SM_VREF_CNT
should have 10 mils trace width.



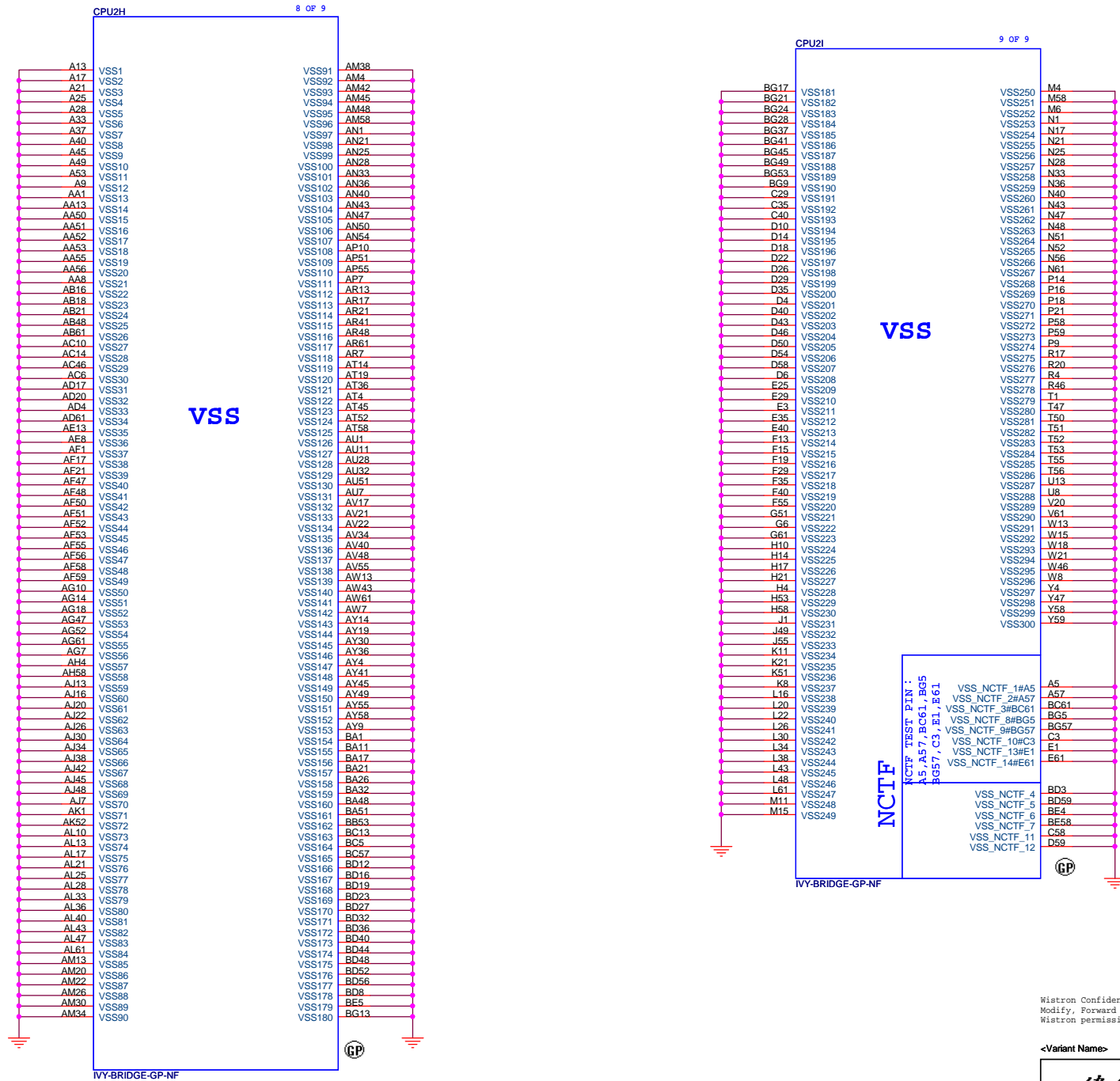
VID0	VID1	VCCSA ULV
L	L	0.9V
L	H	0.85V
H	L	0.775V
H	H	0.75V

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
CPU (VCC_GFXCORE)		
File	Document Number	Rev
Size	Angel-CY	1
Date	Monday, April 22, 2013	Sheet 9 of 102

SSID = CPU



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>		
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title CPU (VSS)		
Size A3	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet 10	of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
XDP			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 11 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size A4	Document Number Angel-CY		Rev 1
Date: Monday, April 22, 2013		Sheet 12 of	102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
Reserved		
Size	Document Number	Rev
A4	Angel-CY	1
Date	Monday, April 22, 2013	
2	Sheet	13 of 102

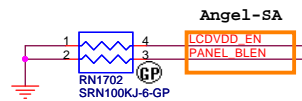


Blanking

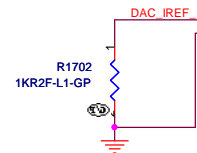
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
DDR3-SODIMM2			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 16 of 102



27 PANEL_BLEN
49 LCDVDD_EN
49 PCH_BKLT_CTL



PCH1D

J47 L_BKLTEN
M45 L_VDD_EN
P45 L_BKLTCTL
T40 L_DDC_CLK
K47 L_DDC_DATA
T45 L_CTRL_CLK
P39 L_CTRL_DATA
AF37 LVD_IBG
AF36 LVD_VBG
AF48 LVD_VREFH
AE47 LVD_VREFL
AK39 LVDSA_CLK#
AK40 LVDSA_CLK
AN48 LVDSA_DATA#0
AM47 LVDSA_DATA#1
AK47 LVDSA_DATA#2
AJ48 LVDSA_DATA#3
AN47 LVDSA_DATA0
AM49 LVDSA_DATA1
AK49 LVDSA_DATA2
AJ47 LVDSA_DATA3

LVDS

AF40 LVDSB_CLK#
AF39 LVDSB_CLK
AH45 LVDSB_DATA#0
AH47 LVDSB_DATA#1
AF49 LVDSB_DATA#2
AF45 LVDSB_DATA#3
AH43 LVDSB_DATA0
AH49 LVDSB_DATA1
AF47 LVDSB_DATA2
AF43 LVDSB_DATA3

N48 CRT_BLUE
P49 CRT_GREEN
T49 CRT_RED

T39 CRT_DDC_CLK
M40 CRT_DDC_DATA

M47 CRT_HSYNC
M49 CRT_VSYNC

T43 DAC_IREF
T42 CRT_IRTN

PANTHER-GP-NF

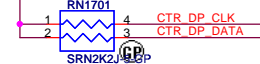
71.PANTH.00U

4 OF 10

SDVO_TVCLKINN AP43
SDVO_TVCLKINP AP45
SDVO_STALLN AM42
SDVO_STALLP AM49
SDVO_INTN AP39
SDVO_INTP AP40
SDVO_CTRLCLK P38
SDVO_CTRLDATA M39
DDPB_AUXN AT49
DDPB_AUXP AT47
DDPB_HPD AT40
DDPB_0N AV42
DDPB_0P AV40
DDPB_1N AV45
DDPB_1P AV46
DDPB_2N AU48
DDPB_2P AU47
DDPB_3N AV47
DDPB_3P AV49
DDPC_CTRLCLK P46
DDPC_CTRLDATA P42
DDPC_AUXN AP47
DDPC_AUXP AP49
DDPC_HPD AT38
DDPC_0N AY47
DDPC_0P AY49
DDPC_1N AY43
DDPC_1P AY45
DDPC_2N BA47
DDPC_2P BA48
DDPC_3N BB47
DDPC_3P BB49
DDPD_CTRLCLK M43
DDPD_CTRLDATA M36
DDPD_AUXN AT45
DDPD_AUXP AT43
DDPD_HPD BH41
DDPD_0N BB43
DDPD_0P BB45
DDPD_1N BF44
DDPD_1P BE44
DDPD_2N BE42
DDPD_2P BJ42
DDPD_3N BJ42
DDPD_3P BG42

CTR_DP_CLK 52
CTR_DP_DATA 52
PCH_DP_AUXN 52
PCH_DP_AUXP 52
PCH_DP_HPD 52
PCH_DP_DATA0# 52
PCH_DP_DATA0 52
PCH_DP_DATA1# 52
PCH_DP_DATA1 52
PCH_DP_DATA2# 52
PCH_DP_DATA2 52
PCH_DP_DATA3# 52
PCH_DP_DATA3 52

3D3V_S0

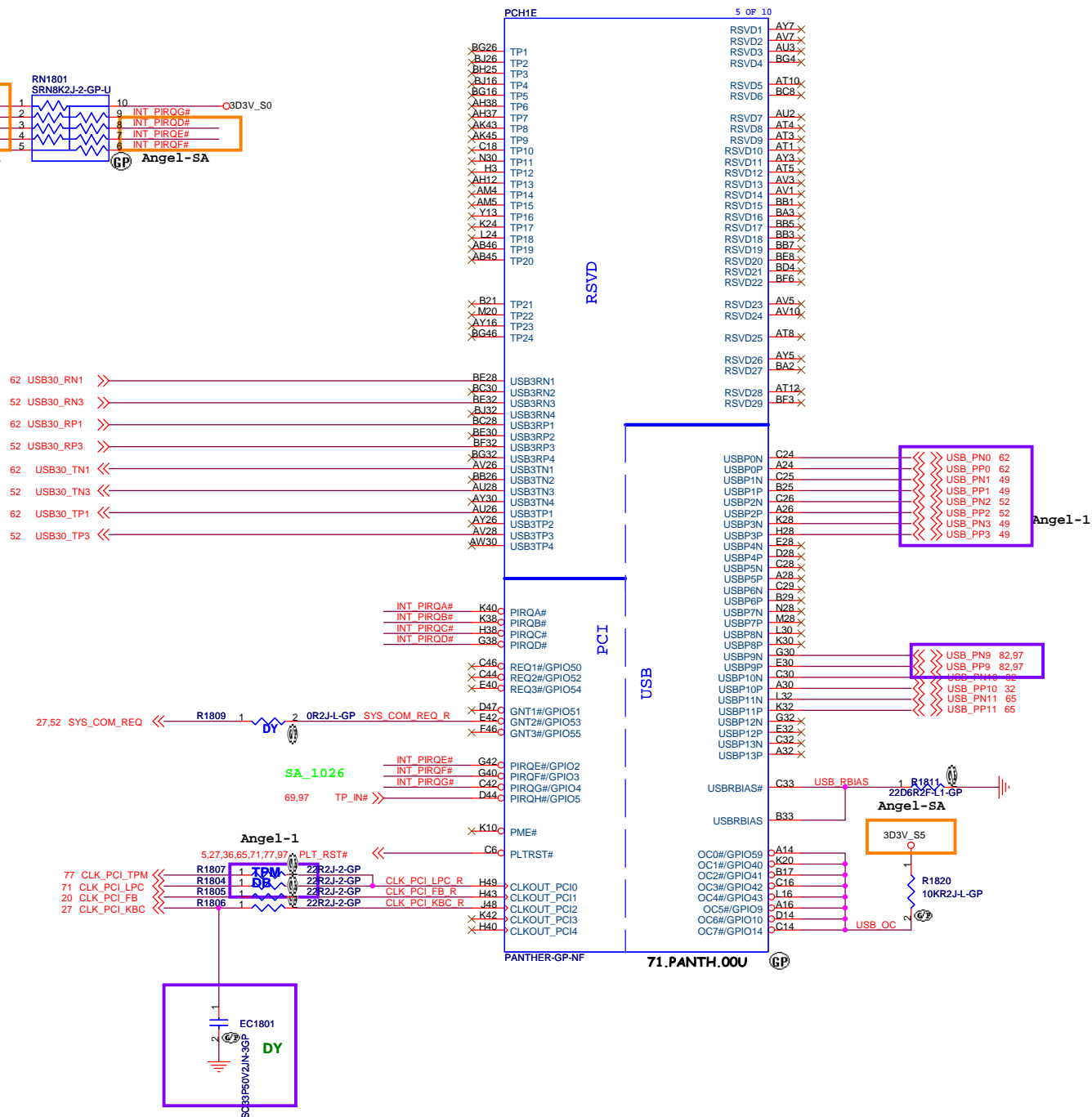
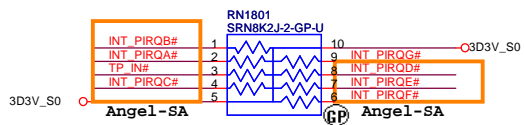


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
PCH (LVDS/CRT/DDI)			
Size	Document Number	Rev	
A3	Angel-CY	1	
Date:	Monday, April 22, 2013	Sheet	17 of 102

SSID = PCH



USB Table

Pair	Device
0	USB3.0 Ext. port 1
1	TOUCH PANEL
2	mDP
3	CCD
4	NC
5	NC
6	X
7	X
8	NC
9	USB2.0 Ext. port 1
10	Card Reader
11	Mini Card1 (BT)
12	NC

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

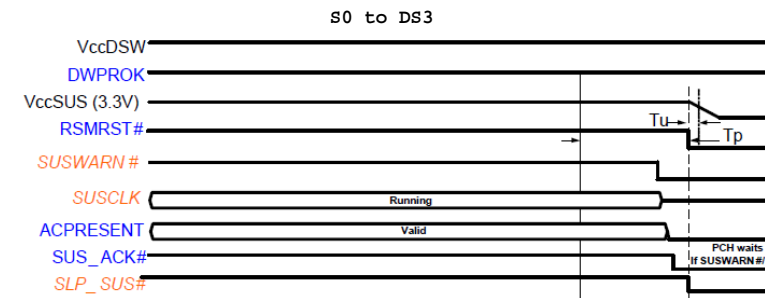
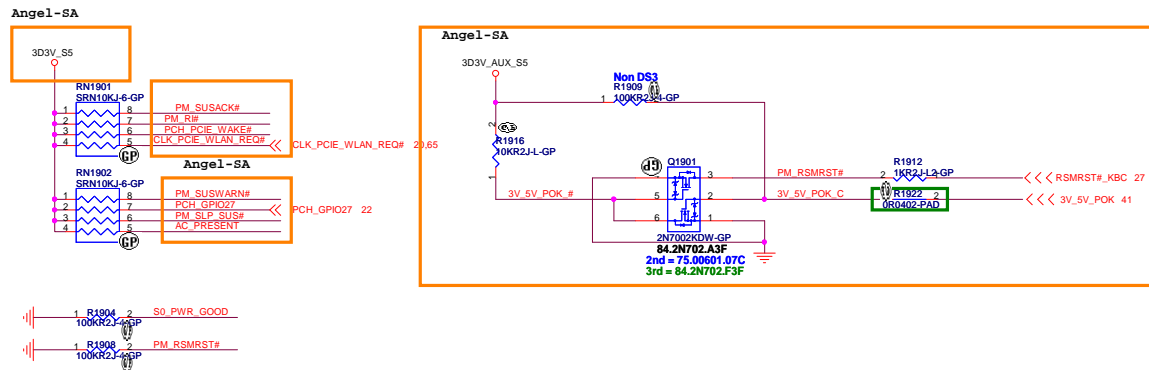
<Variant Name>

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

Title	PCH (PCI/USB/NVRAM)
-------	----------------------------


Size A3	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet 18 of 102	

Signal Routing Guideline:
DMI_ZCOMP keep W=4 mils and routing length less than 500 mils.
DMI_IRCOMP keep W=4 mils and routing length less than 500 mils.



DSWODVREN - On Die DSW VR Enable	
HIGH	Enabled (DEFAULT)
LOW	Disabled

RTC_AUX_SS

DSWODVREN R1917 1  330KR2F1-GP

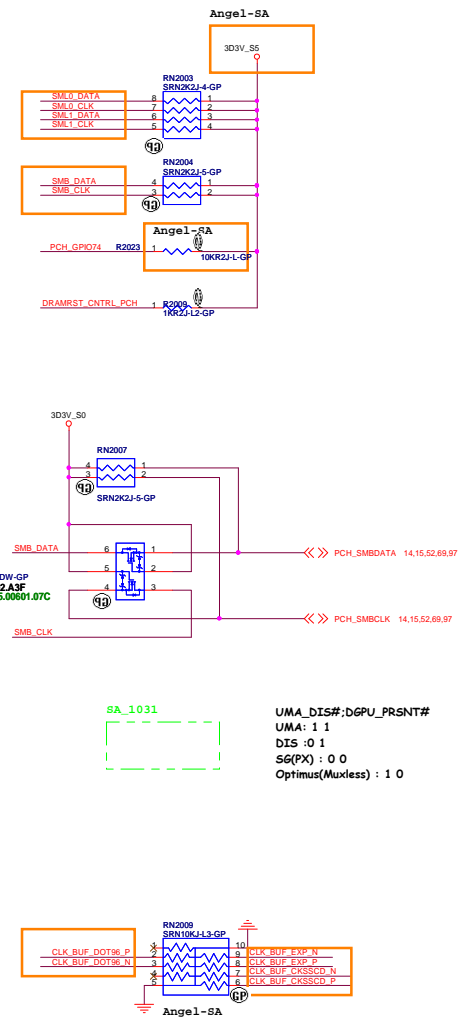
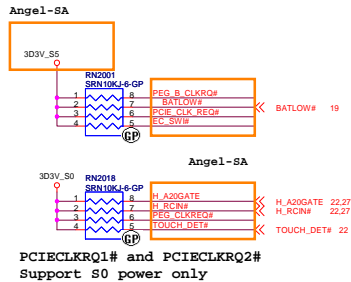
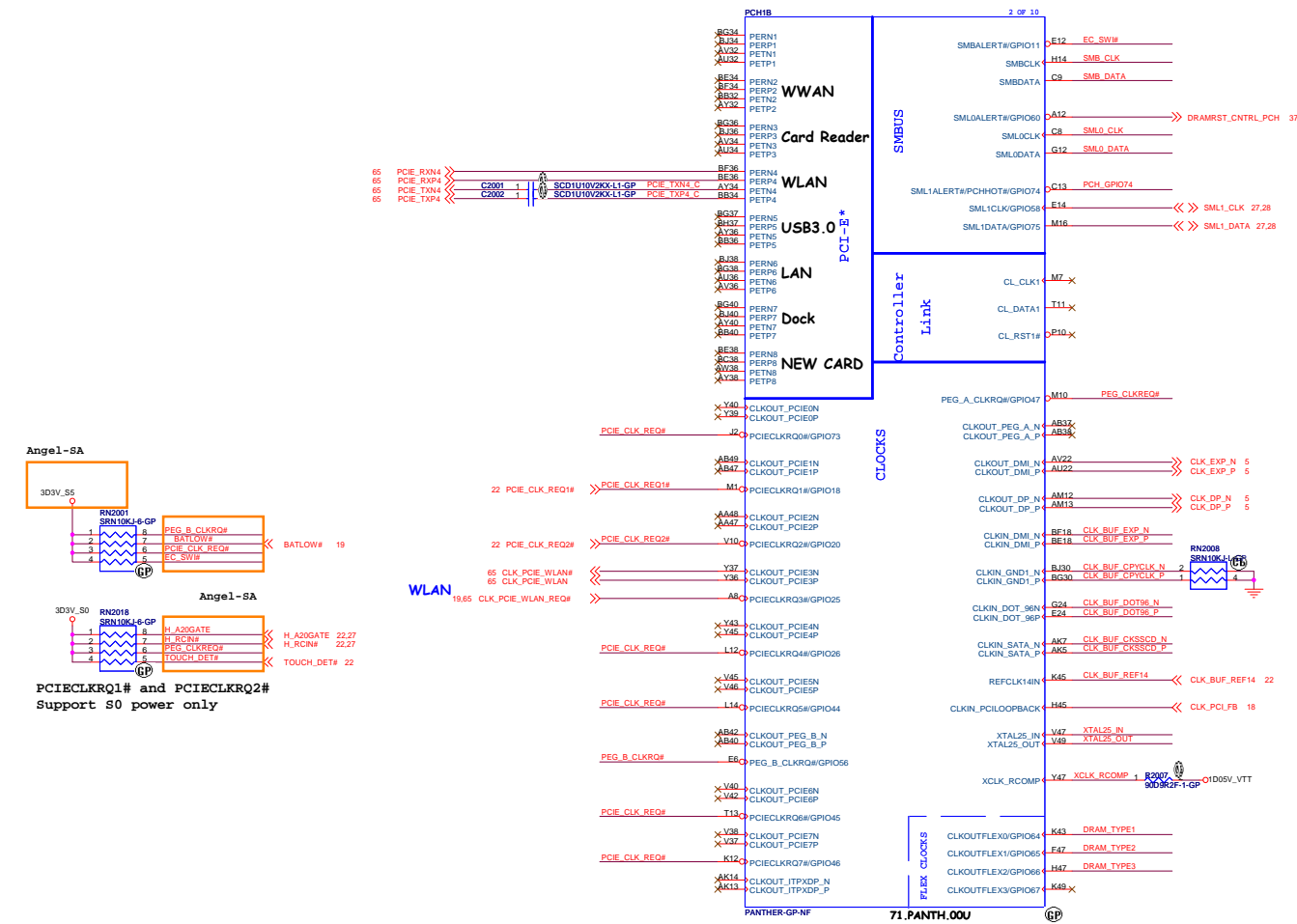
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

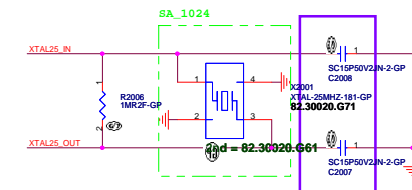
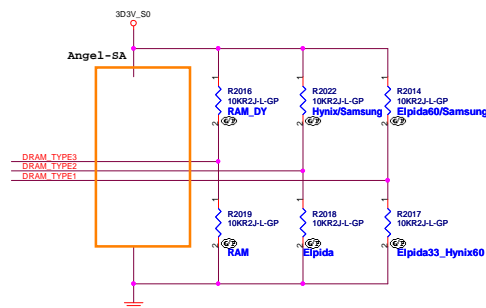
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
PCH (DM I/FDI/PM)			
Size	Document Number	Rev	
Custom	Angel-CY	1	
Date:	Monday, April 22, 2013	Sheet 19 of	102

SSID = PCH



GPIO66 DRAM_Type3	GPIO65 DRAM_Type2	GPIO64 DRAM_Type1	Status
0	0	0	ELPIDA_KM.4GB09.003 ELPIDA DDR3L 1333 4Gb ED/4216EBBG-D1-F
0	0	1	ELPIDA_KN.00409.002 ELPIDA DDR3L 1600 4Gb ED/4216EBBG-GNL-F
0	1	0	Hynix_KN.0040G.007 HYNIX DDR3L 1600 4Gb H5TC4G63AFR-PBA LF+HF 256*16 29nm

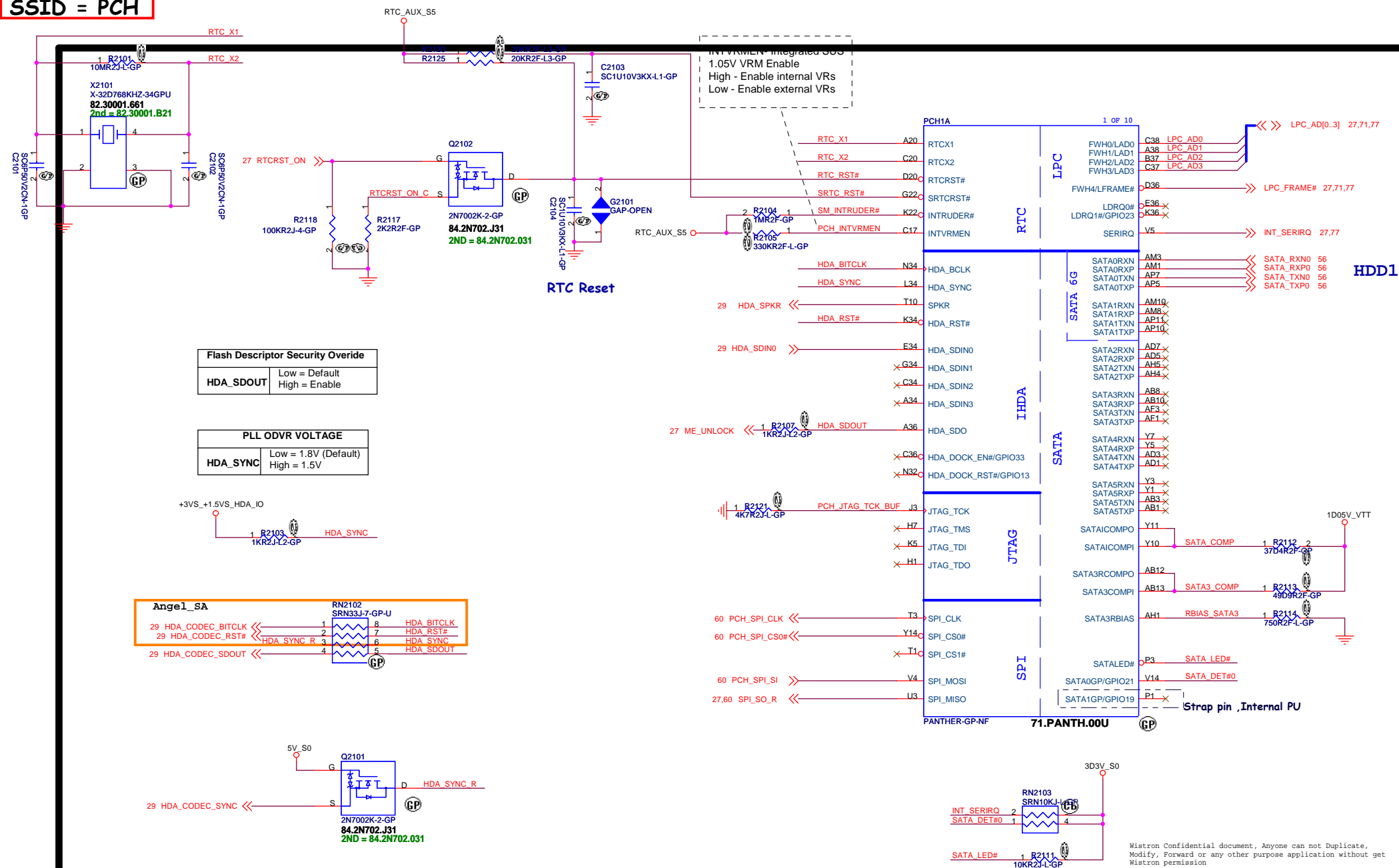


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

Variant Name:

緯創資通 Wistron Corporation	
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsueh, Taipei Hsien 221, Taiwan, R.O.C.	
Title	PCH (PCI-E/SMBUS/CLOCK/CL)
Size	Document Number
Rev	Angel-CY
Date	Monday, April 22, 2013
Sheet	20 of 102

SSID = PCH



HDA_SYNC: This strap is sampled on rising edge of RSMRST# and is used to sample 1.5V VccVRM supply mode. 1K external pull-up resistor is required on this signal on the board. Signal may have leakage paths via powered off devices(Audio Codec) and hence contend with the external pull-up. A blocking FET is recommended in such a case to isolate HDA_SYNC from the Audio Codec device until after the Strap sampling is complete.

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

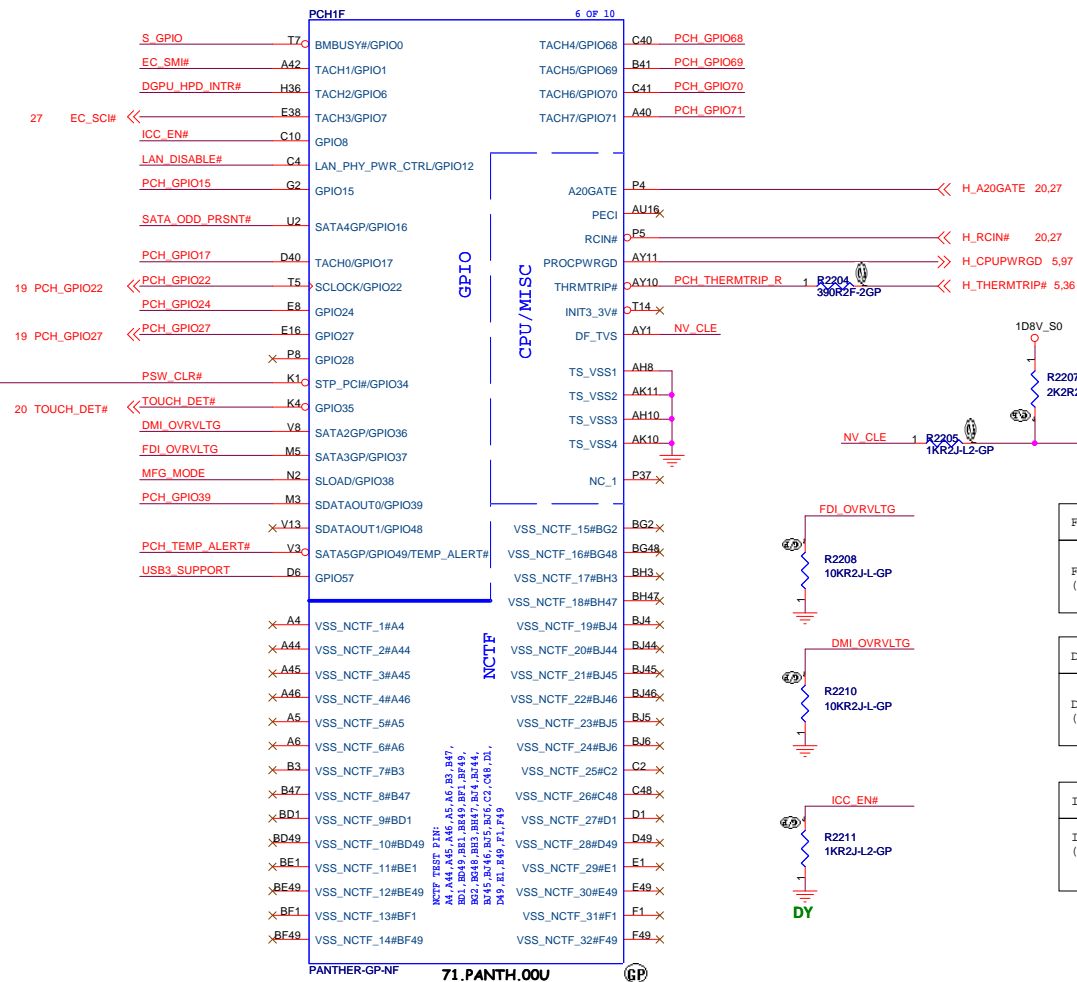
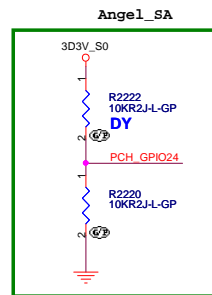
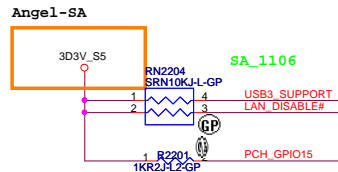
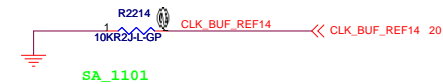
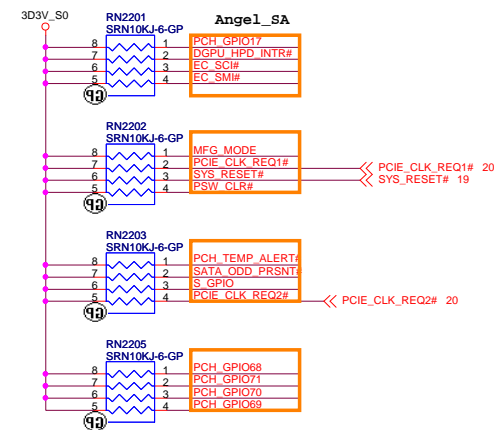
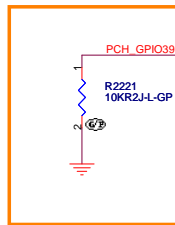
<Variant Names>

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

Title	PCH (SPI/RTC/LPC/SATA/IHDA)
-------	------------------------------------

Size A3	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet 21 of 102	

SSID = PCH



FDI TERMINATION VOLTAGE OVERRIDE(Reserved)	
FDI_OVRVLTG (GPIO37)	LOW - Tx, Rx terminated to same voltage (DC Coupling Model DEFAULT)

DMI_TERMINATION_VOLTAGE_OVERRIDE(Reserved)	
DMI_OVRVLTG (GPIO36)	LOW - Tx, Rx terminated to same voltage (DC Coupling Model DEFAULT)

Integrated Clock Chip Enable(Reserved)	
ICC_EN# (GPIO8)	HIGH- DISABLED [DEFAULT] LOW - ENABLED

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

Title	<i>PCH (GPIO/CPU)</i>
-------	------------------------------

Size	Document Number	Rev
Custom	<i>Angel-CY</i>	<i>1</i>
Date:	Monday, April 22, 2013	Sheet 22 of 102

SSID = PCH

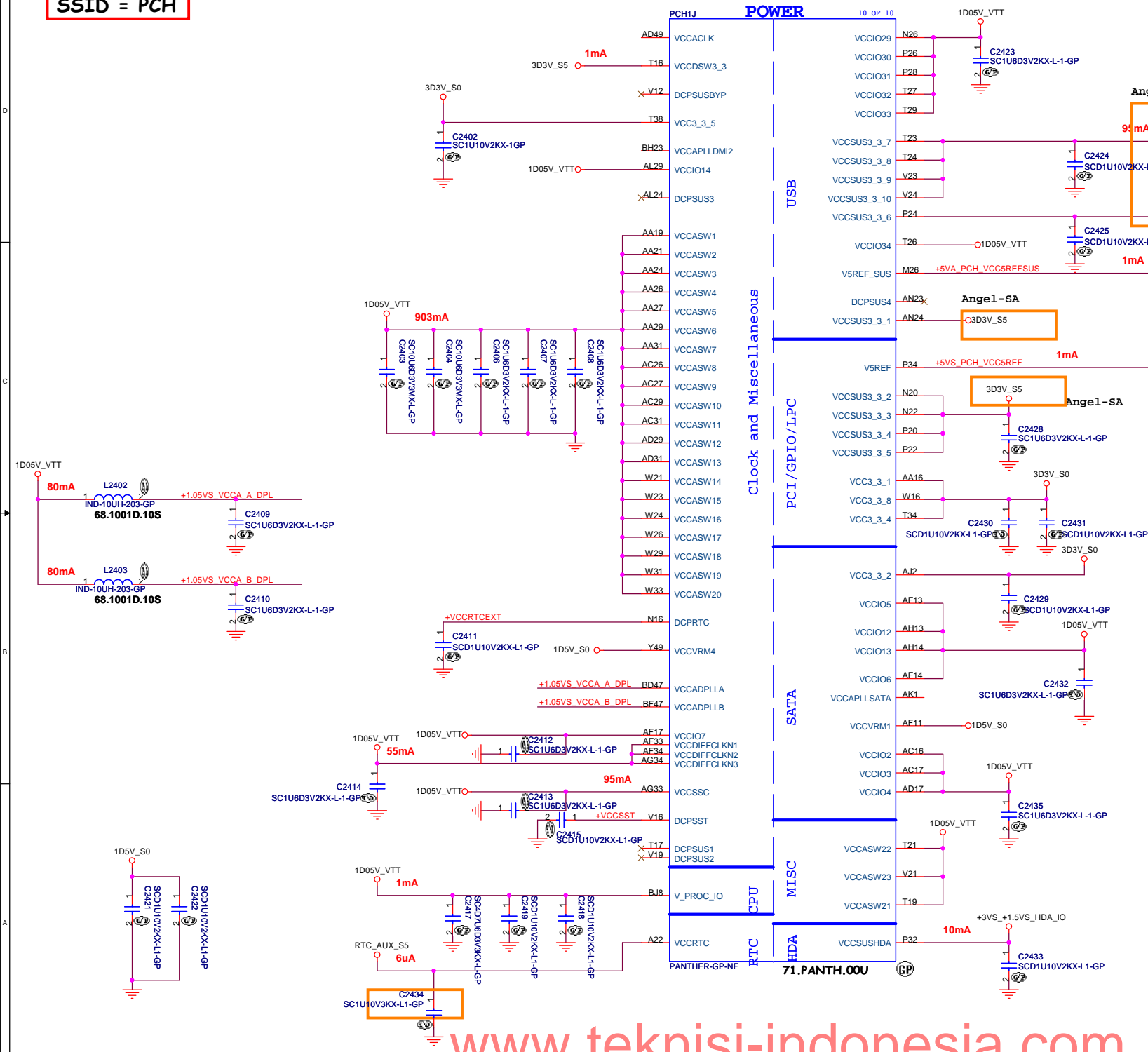
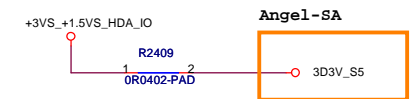


Table 5-1. Voltage Ramp Up/Down Requirements for the PCH Suspend Well Voltage Rails

Va	Vb	Power-Up Requirement	Power-Down Requirement
VSREF_SUS	VCCSUS3_3	<p>a) VCCSREF_SUS must be powered up before VCCSUS3_3 or after VCCSUS3_3 within 0.7 V.</p> <p>b) If VCCSREF_SUS is more than VCCSUS3_3 by 3 V, then the duration of this condition needs to be less than 20 ms.</p>	a) VSREF_SUS must be powered down after VCCSUS3_3 or before VCCSUS3_3 within 0.7 V.
VSREF	VCC3_3	<p>a) VSREF must be powered up before VCC3_3 or after VCC3_3 within 0.7 V.</p> <p>b) For power up, if VCCSREF is more than VCC3_3 by 3 V, then the duration of this condition needs to be less than 20 ms</p>	a) VSREF must be powered down after VCC3_3 or before VCC3_3 within 0.7 V.

VccVRM	Internal PLL and VRMs (1.5V for Mobile)
VccVRM	1.8 V Internal PLL and VRMs (1.8 V for Desktop)



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

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

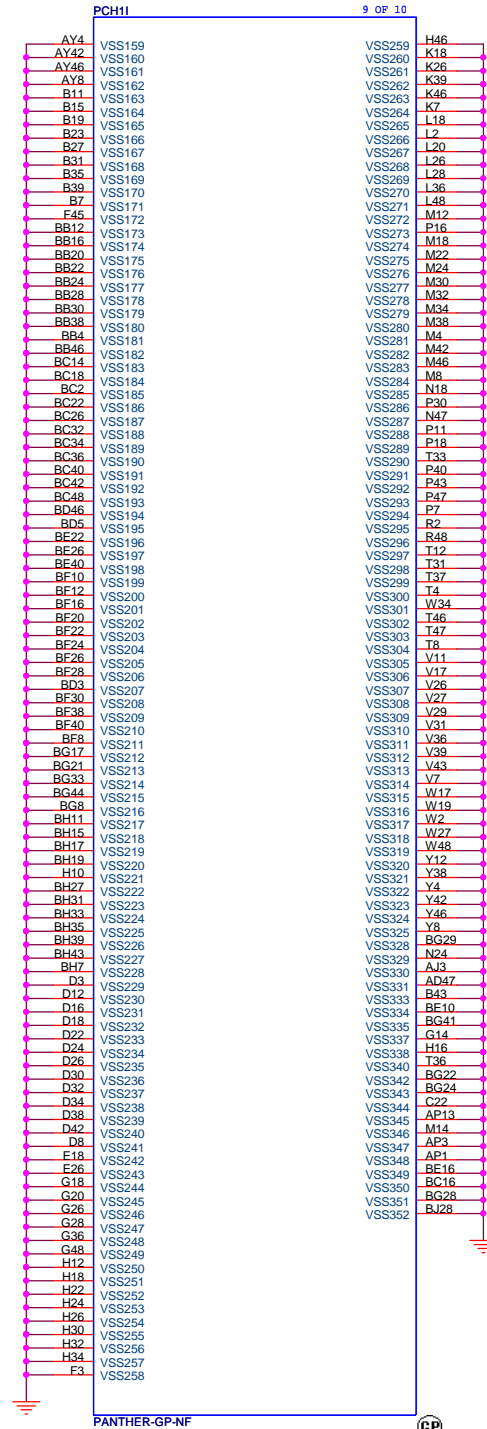
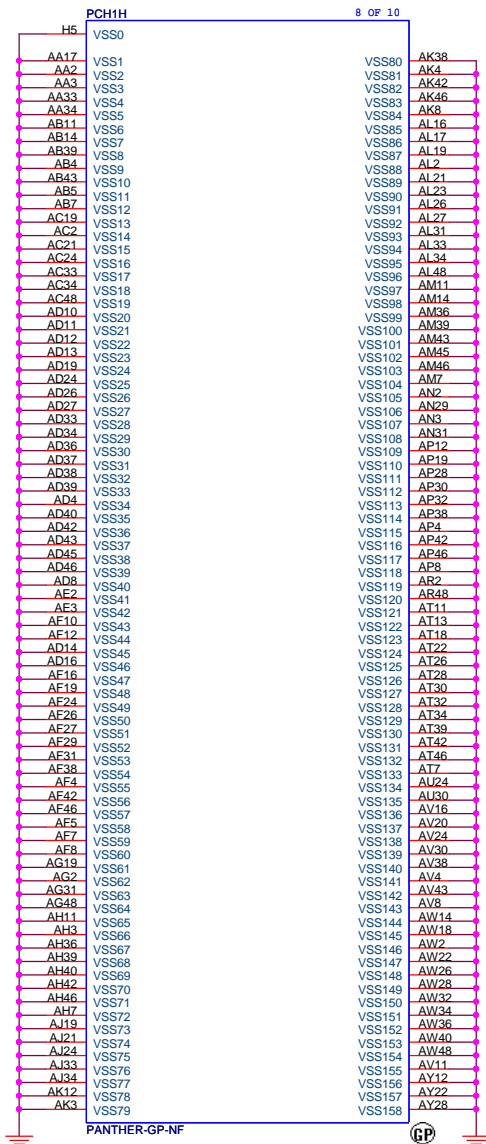
Title	<i>PCH (POWER2)</i>
-------	----------------------------

Size	Document Number
------	-----------------

Angel-CY

ev

SSID = PCH



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通 Wistron Corporation

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

Title PCH (VSS)

Size A3 Document Number Angel-CY Rev 1

Date: Monday, April 22, 2013 Sheet 25 of 102

Blanking

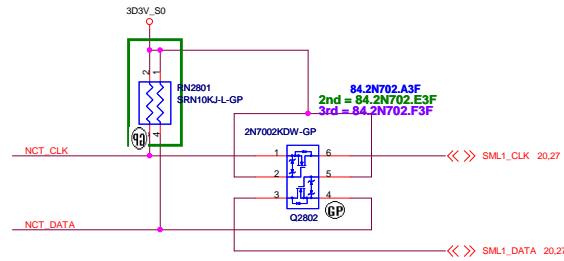
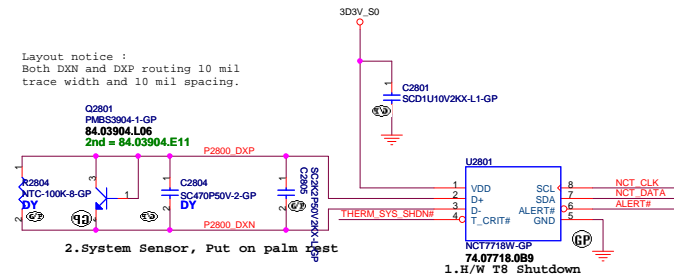
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

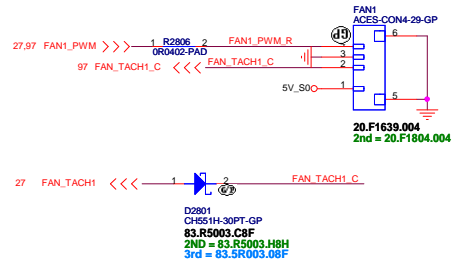
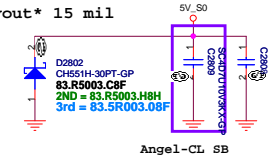
<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
Clock(colay)		
Size	Document Number	Rev
A4	Angel-CY	1
Date: Monday, April 22, 2013		Sheet 26 of 102

Thermal sensor NCT 7718W

Layout notice :
Both DXN and DXP routing 10 mil
trace width and 10 mil spacing.



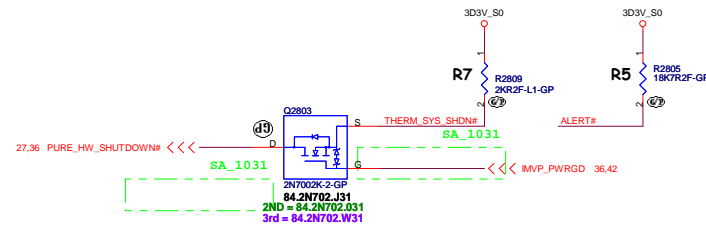
Layout 15 mil



ALERT# /T CRIT#
Pull-up Resistor

	R7				
	2Kohm	7.5Kohm	10.5Kohm	14Kohm	18.7Kohm
R5					
2Kohm	77°C	87°C	97°C	107°C	117°C
7.5Kohm	79°C	89°C	99°C	109°C	119°C
10.5Kohm	81°C	91°C	101°C	111°C	121°C
14Kohm	83°C	93°C	103°C	113°C	123°C
18.7Kohm	85°C	95°C	105°C	115°C	125°C

T_CRIT temperature strapping point



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

File
Size
Custom
Document Number
Thermal Sensor NCT7718W
Angel-CY
Date: Monday, April 22, 2013
Sheet 28 of 102
Rev 1

AUDIO OP AMPLIFIER

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

Title

Audio AMP

Size

Document Number

Rev

A4

Angel-CY

1

Date: Monday, April 22, 2013

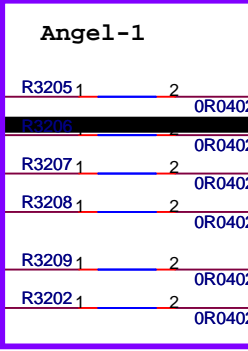
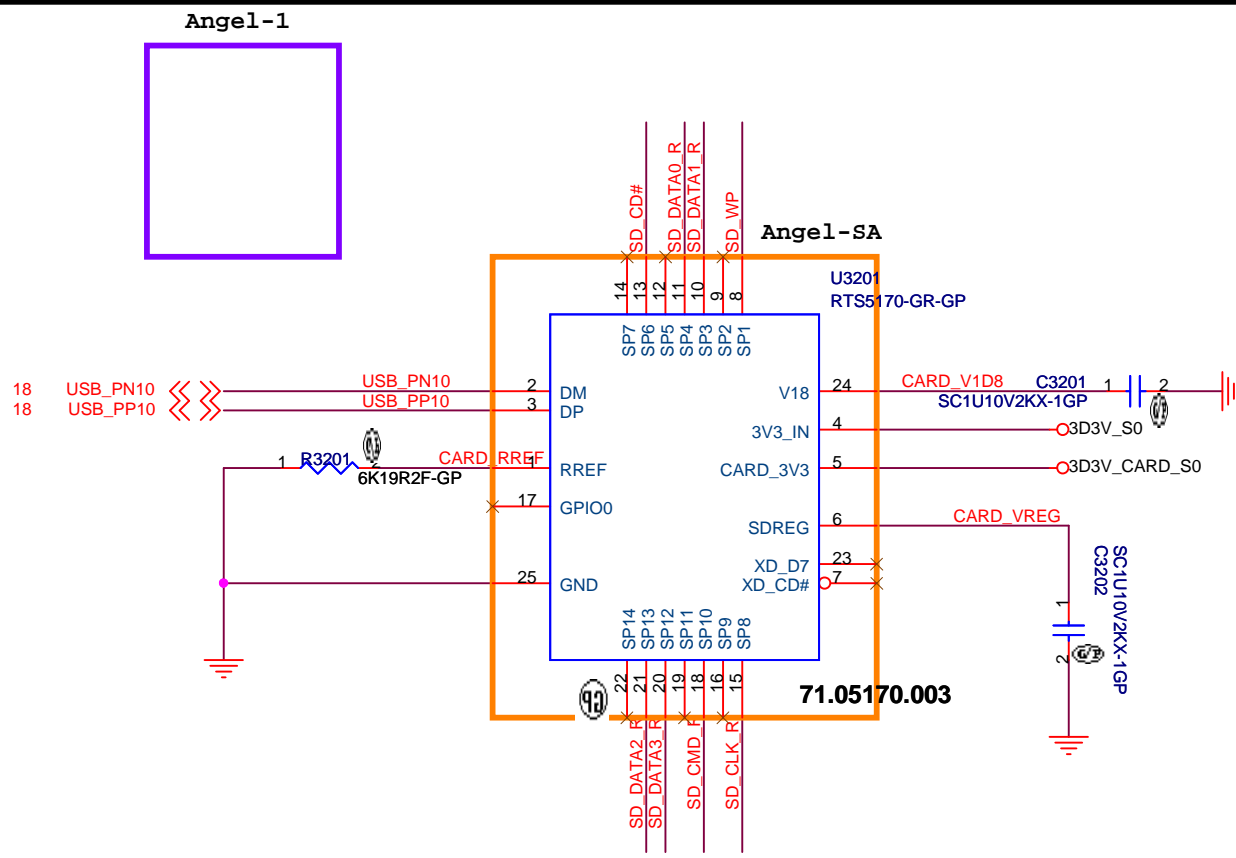
Sheet 30 of 102

Blanking

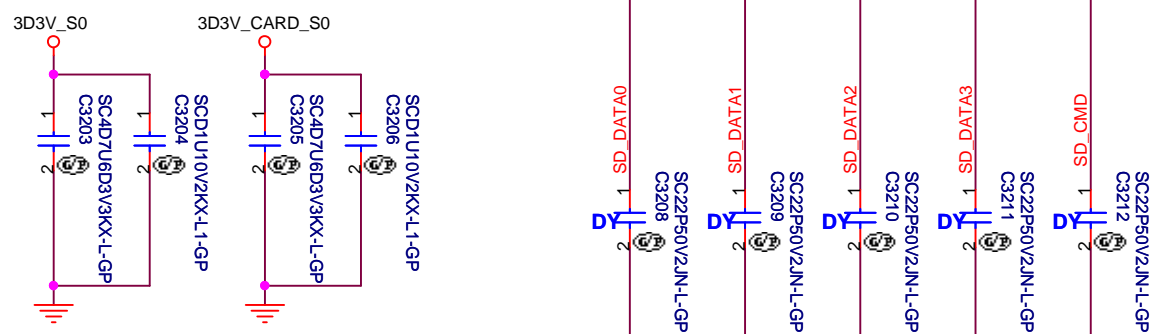
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
AR8158			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 31 of 102



SD_DATA0_R	R3205_1	2	0R0402-PAD	<<>>	SD_DATA0	74,97
SD_DATA1_R	R3206	1	0R0402-PAD	<<>>	SD_DATA1	74,97
SD_DATA2_R	R3207_1	2	0R0402-PAD	<<>>	SD_DATA2	74,97
SD_DATA3_R	R3208_1	2	0R0402-PAD	<<>>	SD_DATA3	74,97
SD_CMD_R	R3209_1	2	0R0402-PAD	<<>>	SD_CMD	74,97
SD_CLK_R	R3202_1	2	0R0402-PAD	<<>>	SD_CLK	74,97
SD_WP				<<>>	SD_WP	74,97
SD_CD#				<<>>	SD_CD#	74,97



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
RTS5159 (CARD READER)		
Size A4	Document Number	Rev 1
Date: Monday, April 22, 2013	Sheet 32 of 102	Angel-CY

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size A4	Document Number Angel-CY		Rev 1
Date: Monday, April 22, 2013		Sheet 33 of	102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size A4	Document Number Angel-CY		Rev 1
Date Monday, April 22, 2013	Sheet 34	of 1	102

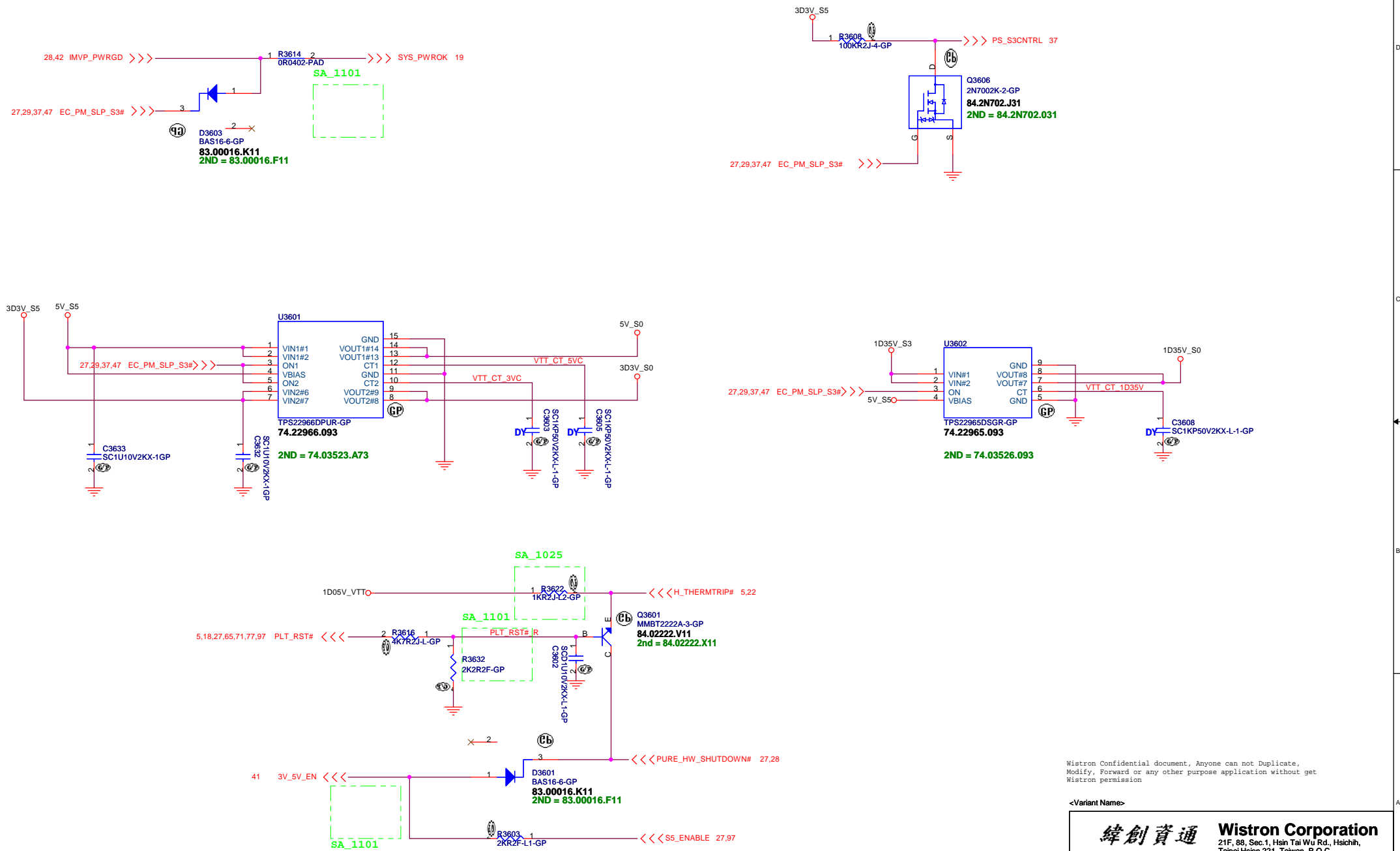
Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
USB 3.0 Controller			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 35 of 102

Power Sequence

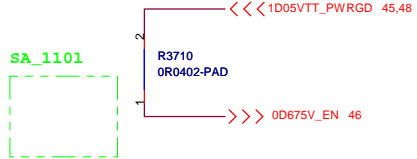
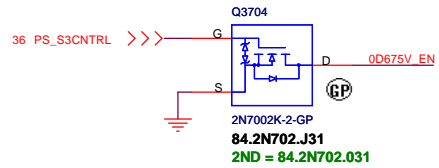
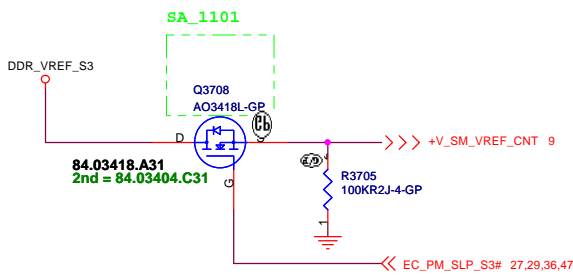


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

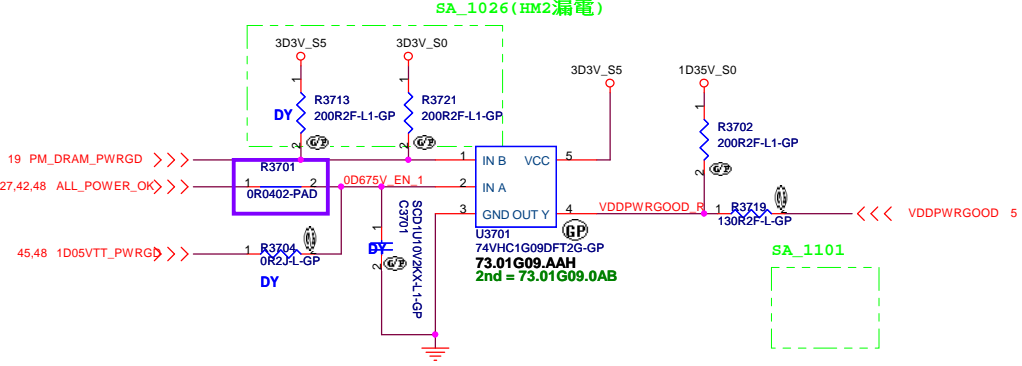
<Variant Name>

緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title		
Power Plane Enable		
Size A3	Document Number	Rev 1
Angel-CY		
Date: Monday, April 22, 2013	Sheet 36	of 102

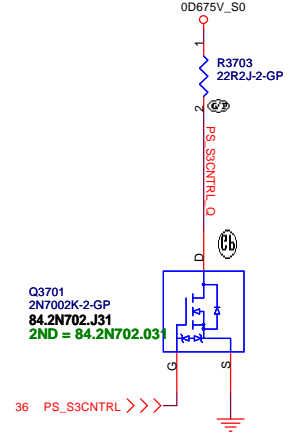
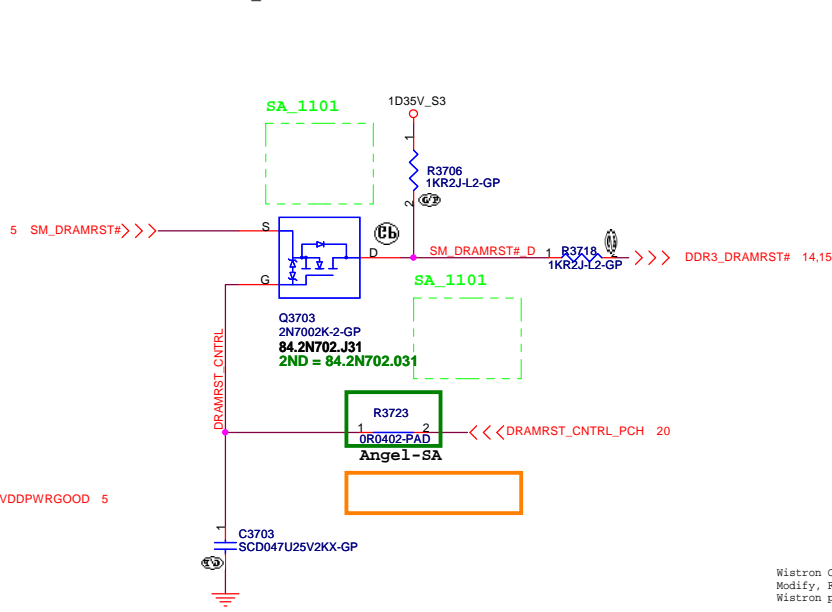
Close to CPU
S3 Power Reduction Circuit Processor VREF_DQ Implementation



Close to CPU
S3 Power Reduction Circuit SM_DRAMPWROK



S3 Power Reduction Circuit
SM_DRAMRST#



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

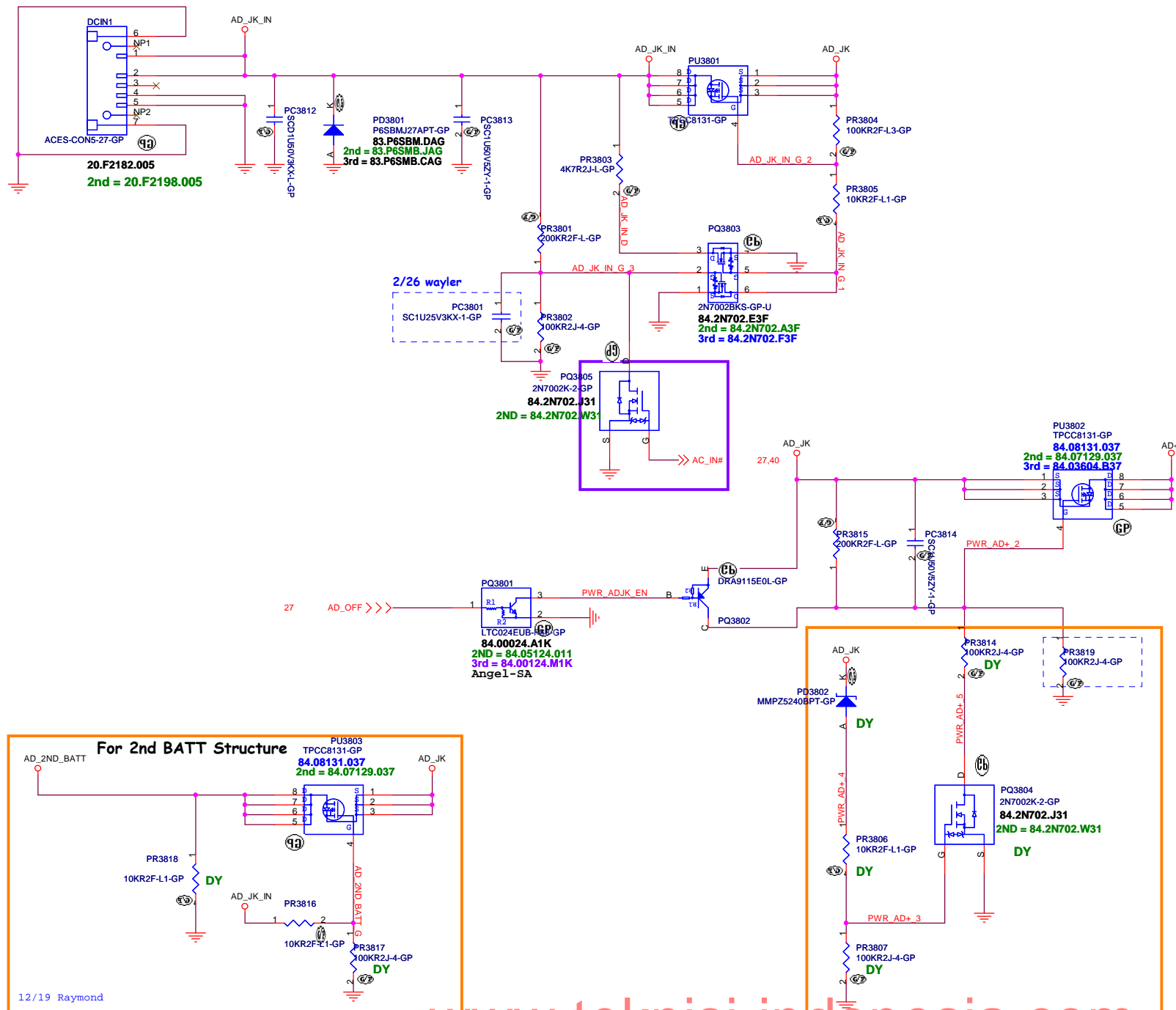
<Variant Name>

緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title ADAPTER		
Size A3	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet 37 of 102	

ANNIE solution

remember to check pin define

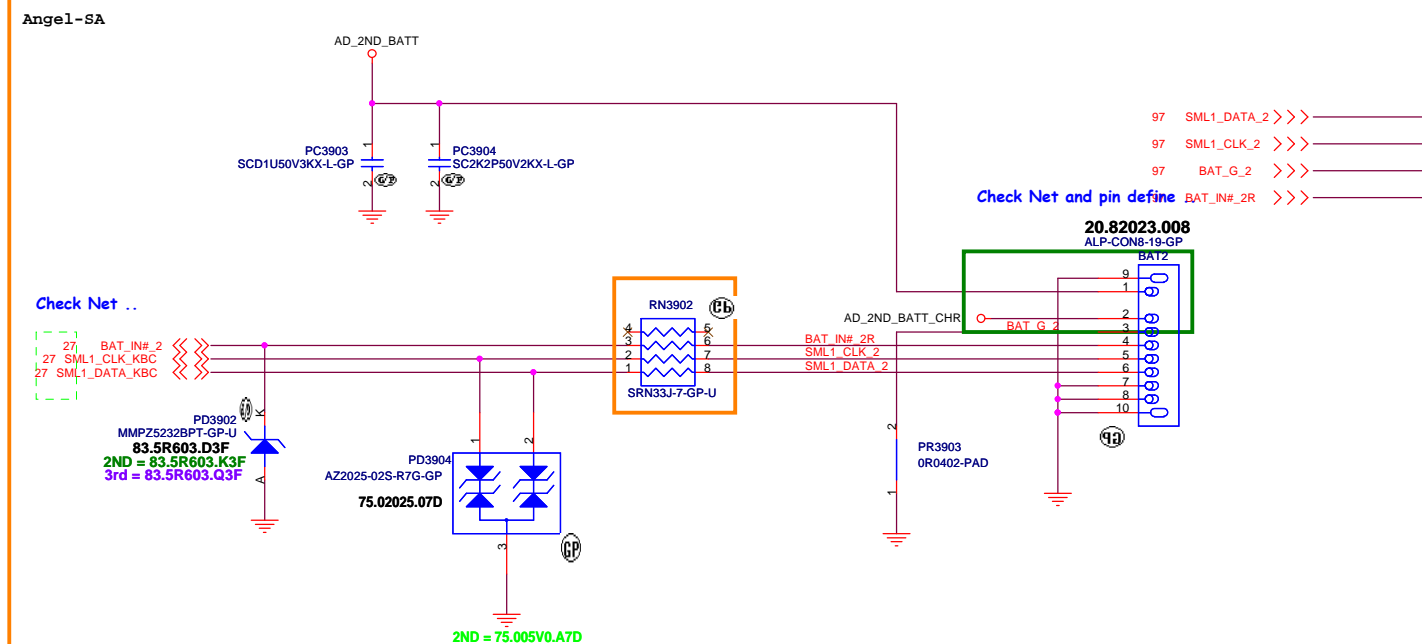
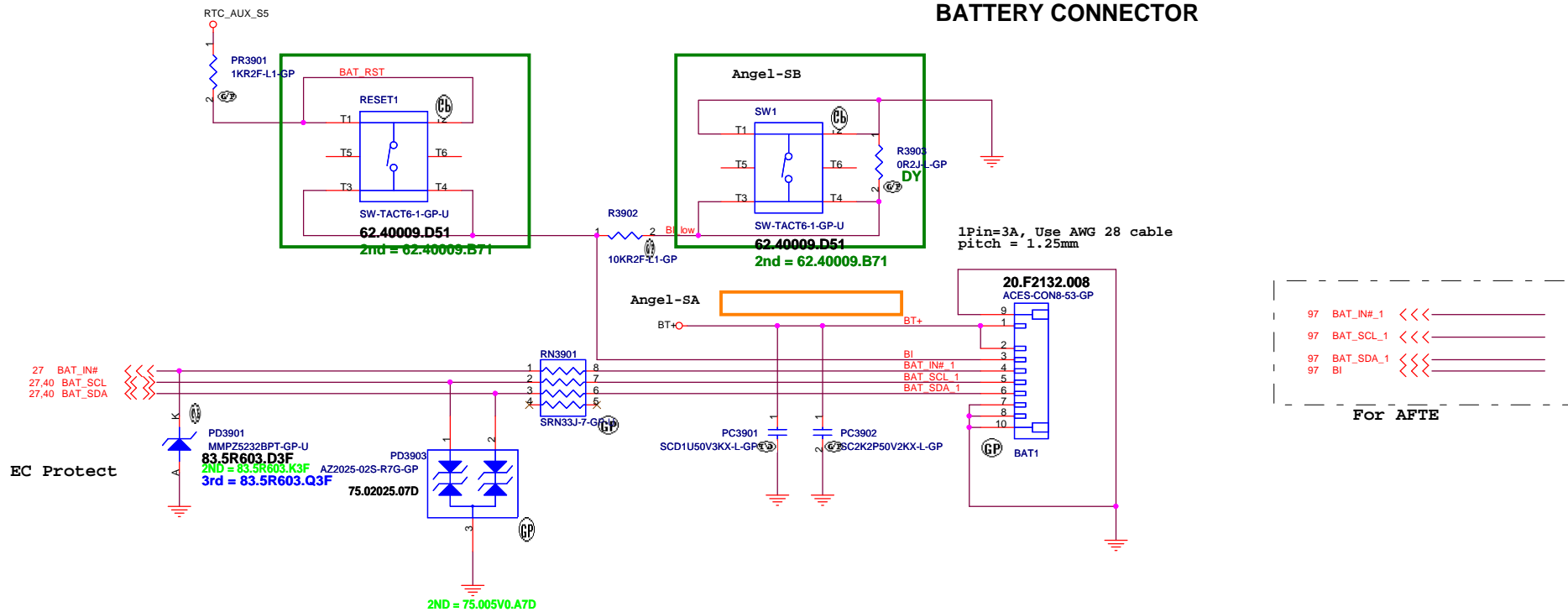
pitch = 2mm



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get permission

Title		DCIN JACK	
Size	Document Number	Rev	
A3		1	
Date:	Monday, April 22, 2013	Sheet	38 of 102
Wistron Corporation		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
12/19 Raymond		Angel-CY	

BATTERY CONNECTOR



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

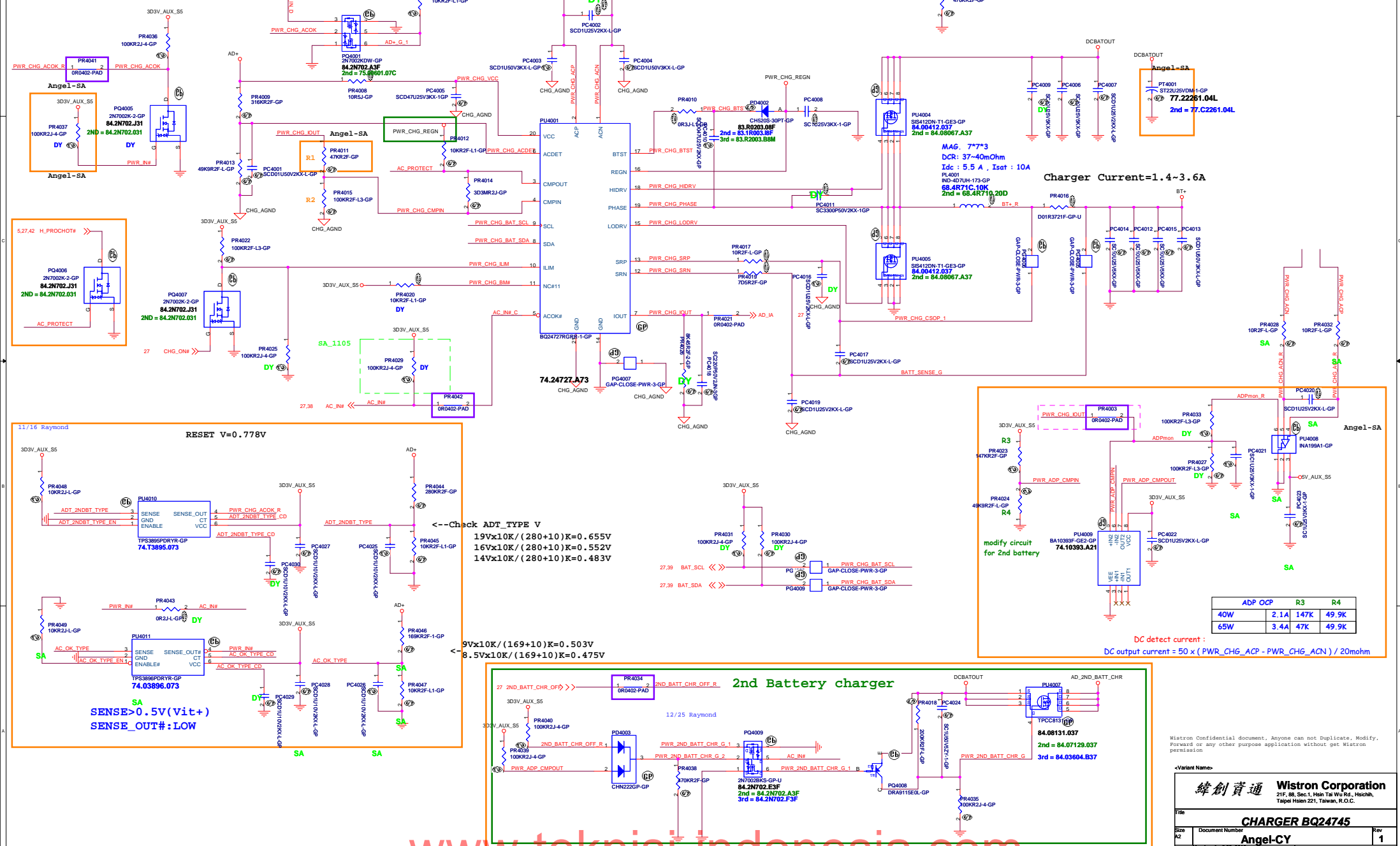
<Variant Name>

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

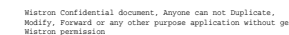
Title			BATT CONN		
Size	Document Number	Rev			1
A3	Angel-CY				
Date:	Monday, April 22, 2013	Sheet	39	of	102

SSID = Charger

AD+ total power	R1	R2
40w	47K	100K
65w	137K	100K



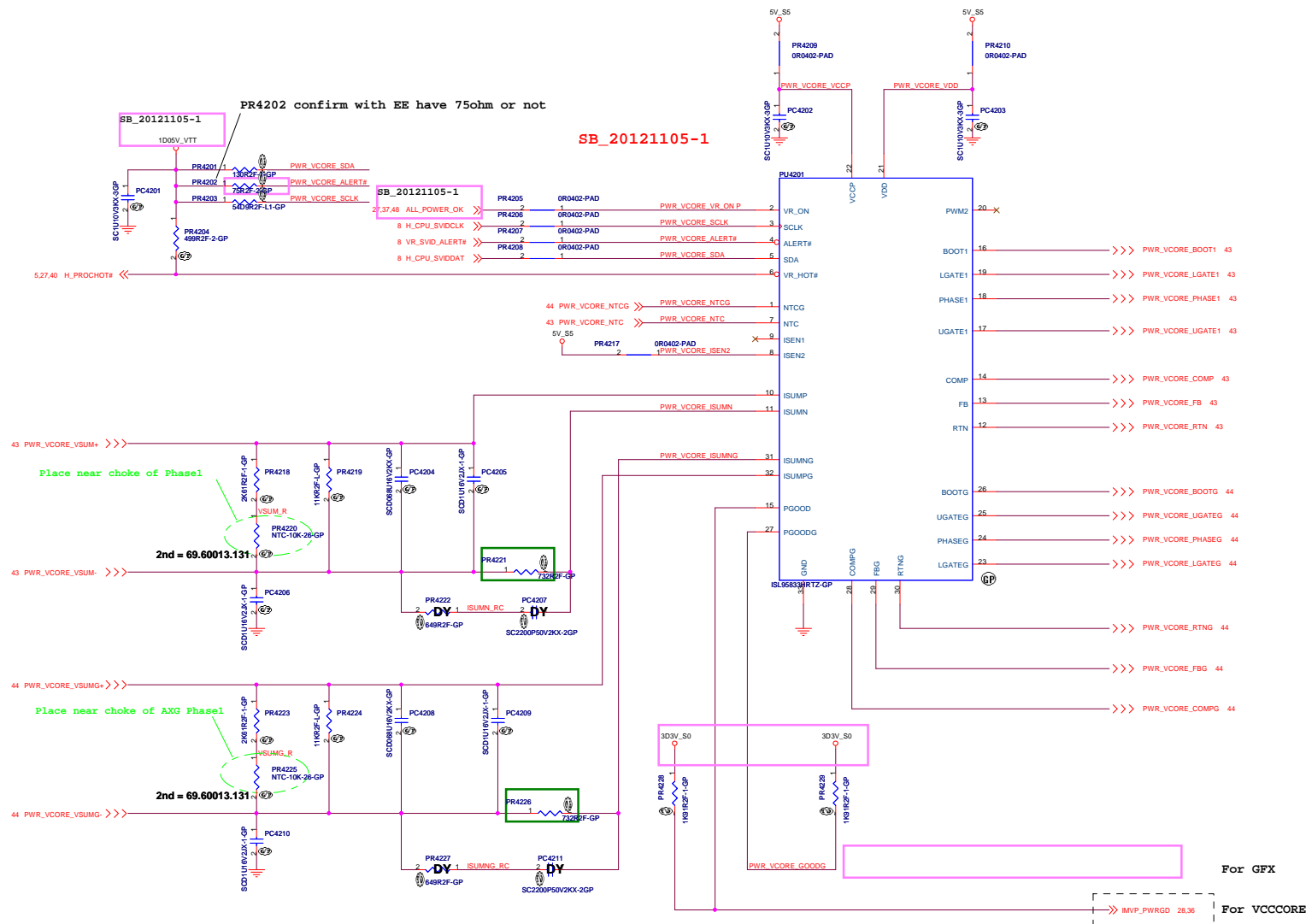
check (UVP)



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

Title			
TPS51125A 5V/3D3V			
Size	Document Number		Rev
Custom	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 41 of 102

SSID = CPU.Regulator

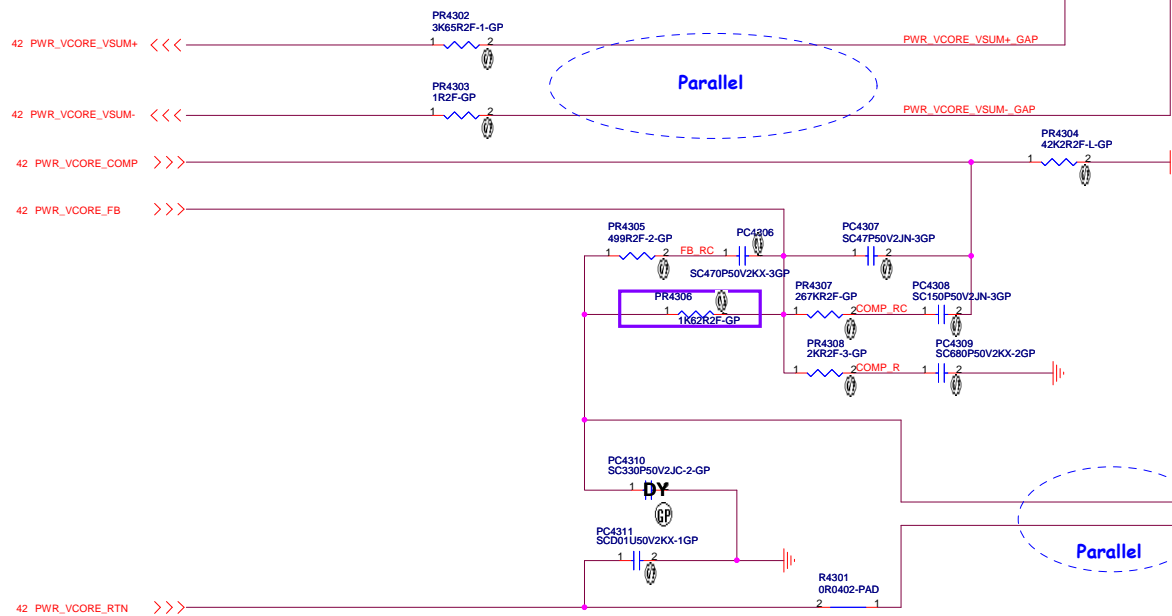
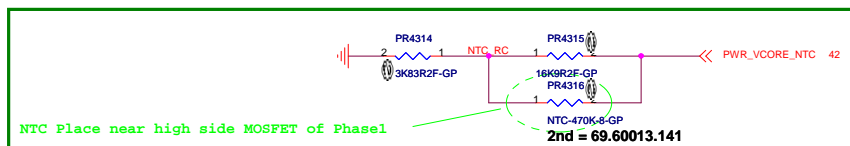
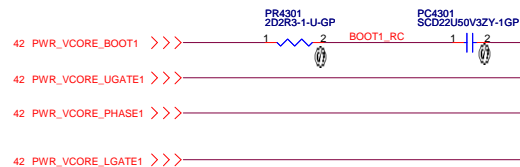
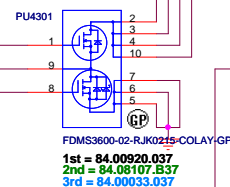


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

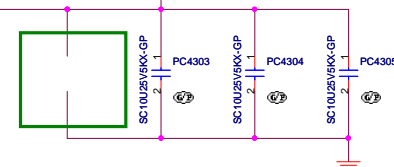
BOM control

	Main source	2nd source
PU4301	84.03664.037 (FDM33664S)	Mount
PU4302	84.03664.037 (FDM33664S)	DY

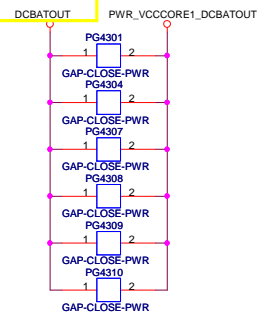
BOM control



PWR_VCCCORE1_DCBATOUT

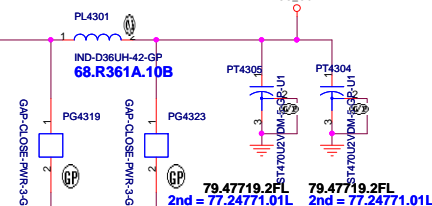


SA_20121019

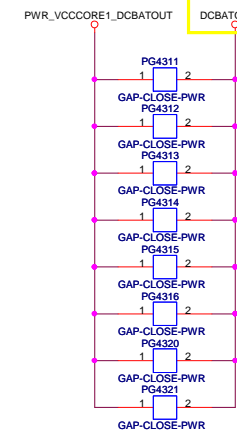


Pana . 7 x 7 x 4
DCR 1.8~2.3 mOhm
Isat : 32A

VCC_CORE



SA_20121019



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

UMA C

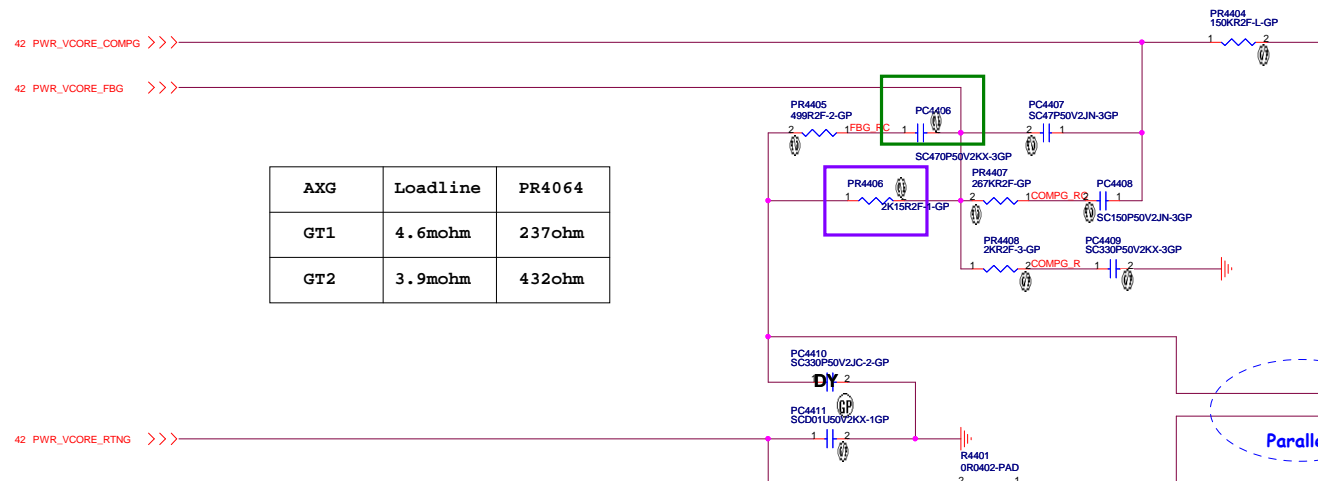
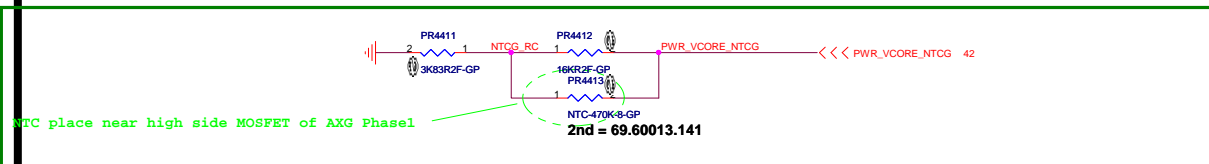
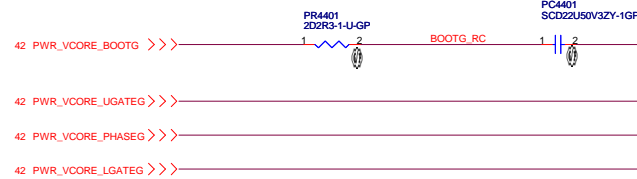
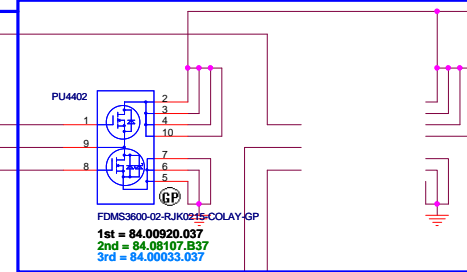
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title	ISL95833_CPU_CORE(2/3)		
Size	Document Number	Rev	1
Custom	Angel-CY		
Date: Monday, April 22, 2013	Sheet 43	of	103

BOM control

	Main source	2nd source
PU4401	84.03664.037 (FDMS3664S)	Mount
PU4402	84.03664.037 (FDMS3664S)	DY

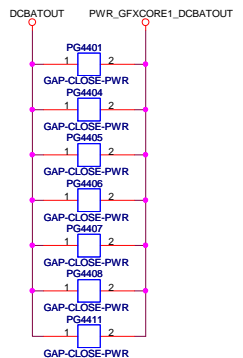
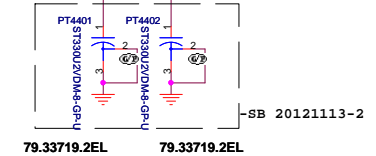
BOM control



AXG	Loadline	PR4064
GT1	4.6mohm	237ohm
GT2	3.9mohm	432ohm

Pana . 7 x 7 x 4
DCR 1.8~2.3 mOhm
Isat : 32A

PL4401
IND-D36UH-42-GP
68.R361A.1DB

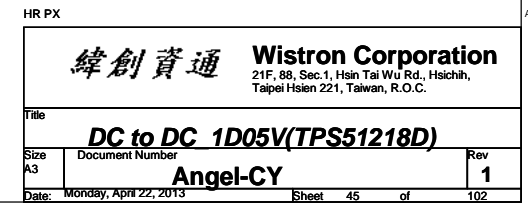


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

UMA C

緯創資通 Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsein 221, Taiwan, R.O.C.	
Title ISL95833_CPU_CORE(3/3)	
Size Custom	Document Number
Date: Monday, April 22, 2013	Angel-CY
Sheet 44	of 103

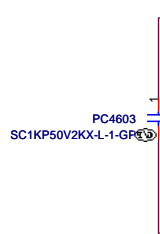
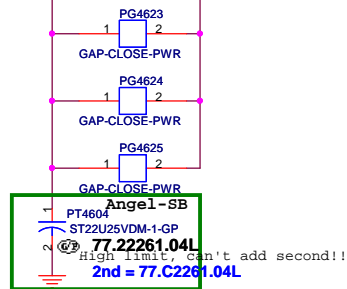
www.teknisi-indonesia.com



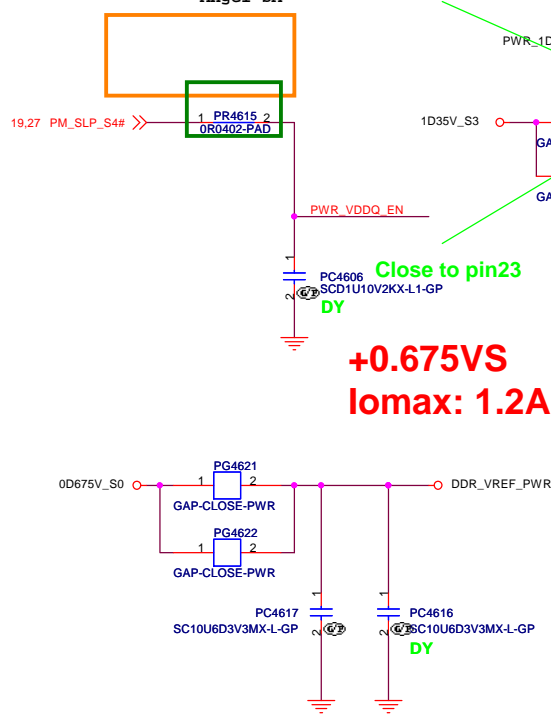
SSID = PWR.Plane.Regulator_lp35v0p675v

RT8207L for VDDQ

DCBATOUT PWR_ID35V_DCBATOUT



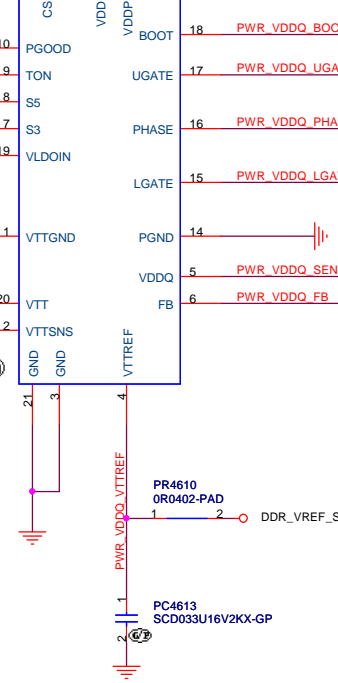
Angel-SA Close to pin23



+0.675VS
Iomax: 1.2A

Iomax=1A
OCP>1.5A

PU4601
RT8207MZQW-GP-U
74.08207.C73
2nd = 74.01566.073



Angel-SA

PU4605
SIS412DN-T1-GE3-GP
84.00412.037
2ND = 84.08067.A37

PWR_VDDQ_UGATE
PWR_VDDQ_PHASE

PWR_VDDQ_LGATE

PU4603
SIS780DN-T1-GE3-GP
84.00780.037
2ND = 84.08065.B37

PR4602
5D1R2F-GP
PC4602
SC10U25V5KX-L-1-GP
PC4608
SC10U25V5KX-L-1-GP

PR4606
2D2R3F-L-GP

PC4609
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

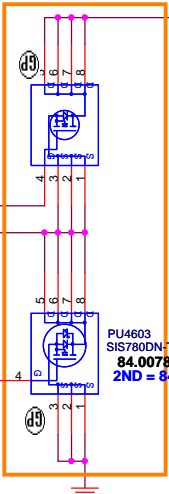
PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP

PC4601
SCD1U25V3KX-L-GP



CYNTEC. 0.68uH 7*7*3
DCR= 5 ~ 5.5 mohm
Idc=15.5A, Isat=25A

Icc_Max:11A
TDC: 8.8A
OCP:14.3A

PL4601
IND-D68UH-36-GP
68.R681A.10A
2nd = 68.R6810.20J

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

PC4611
SCD1U25V3KX-L-GP

PT4601
SE330U2D5VM-8-GP

77.53371.18L

Close to output cap pin1, not
inside of the output cap

Vout=0.75 x (1+R1/R2)
=0.75 x (1+40/49.9)
=1.35

Close to PIN9

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

Title	TPS51116 +1.5V SUS		
Size	Document Number	Rev	
A3	Angel-CY	1	
Date:	Monday, April 22, 2013	Sheet	46 of 102

[illegible]

Vccsa Power Good

Vccsa EN

D0	D1	V _O , MODE=0	V _O , MODE=1
0	0	0.9V	0.9V
0	1	0.8V	0.85V
1	0	0.725V	0.775V
1	1	0.675V	0.75V

VEN/MODE Logic

VEN/MODE (VPP=5V)	EN logic	VEN/MODE (VPP=5V)	MODE logic
<0.6V	0	<2.0V	0
>1.0V	1	>2.6V	1

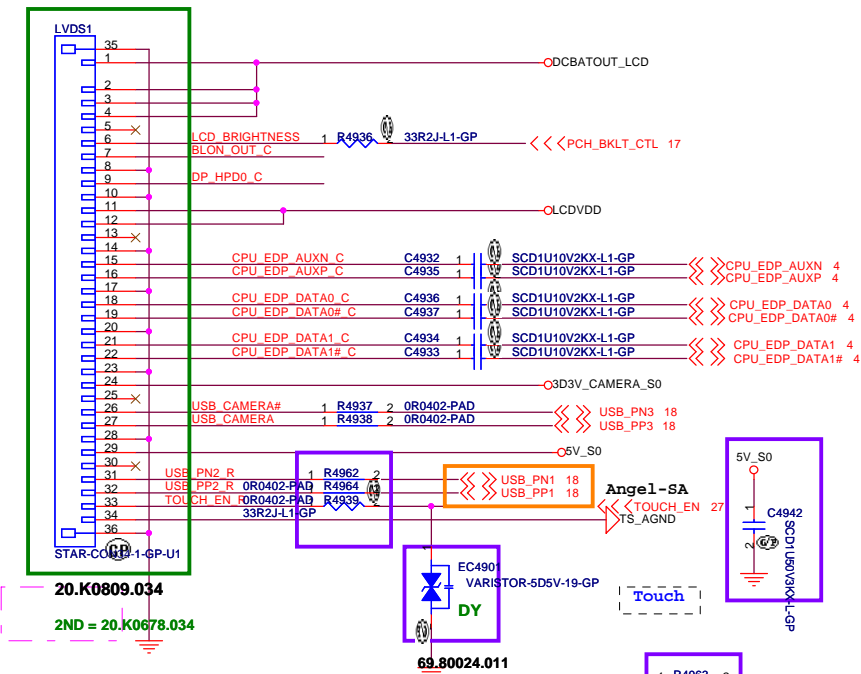
[illegible]

G978F11U-GP
74.00978.031

UMA C

Title			
VCCSA LDO G978			
Size	Document Number	Rev	
A3	Angel-CY	1	
Date:	Monday, April 22, 2013	Sheet	48 of 103

SSID = VIDEO



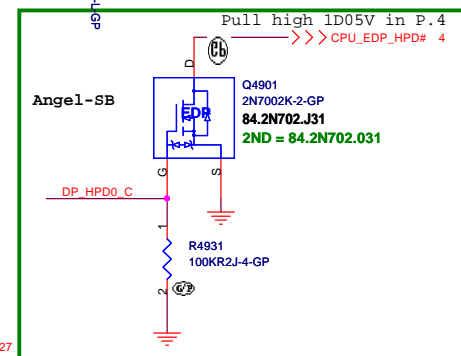
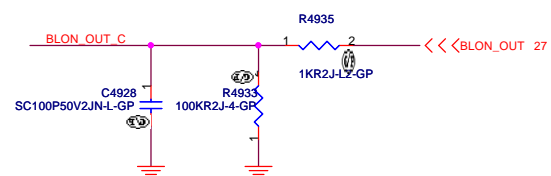
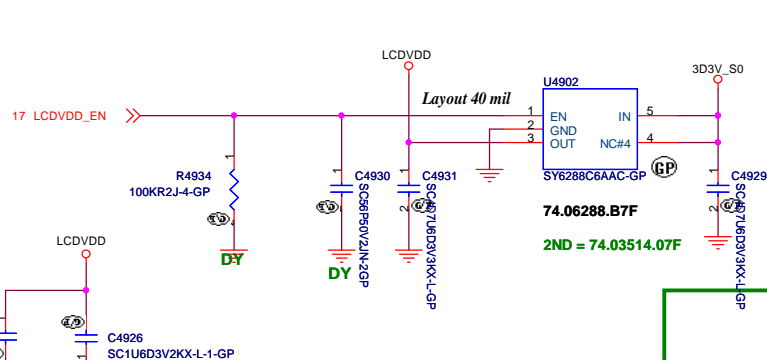
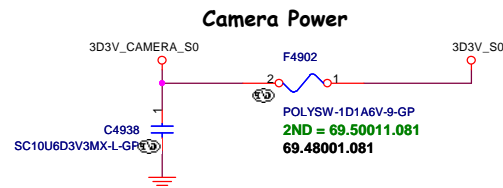
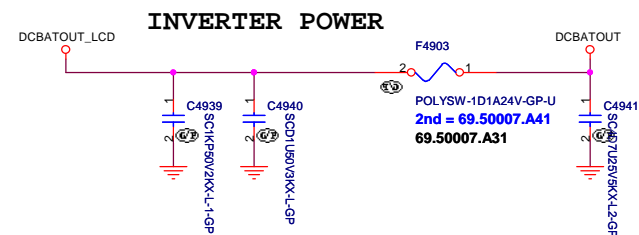
J1 Pin Assignment	
1	USB5V
2	D-
3	D+
4	GND
5	GND
6	INT

```

97 DP_HPD0_C >>>-----
97 BLON_OUT_C >>>-----
97 LCD_BRIGHTNESS >>>-----
97 CPU_EDP_DATA1_C >>>-----
97 CPU_EDP_DATA1#_C >>>-----
97 CPU_EDP_DATA0_C >>>-----
97 CPU_EDP_DATA0#_C >>>-----
97 CPU_EDP_AUXP_C >>>-----
97 CPU_EDP_AUXN_C >>>-----

```

For AFTE



Wistron Confidential document, Anyone can not Duplicate, Modify
Forward or any other purpose application without get Wistron
permission

<Variant Name>

緯創資通

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

Title

LCD Connector

Size
A3

Document Number	
-----------------	--

Angel-CY

Date: Monday, April 22, 2013

Sheet 40

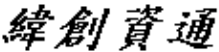
Rev	1
-----	---

102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

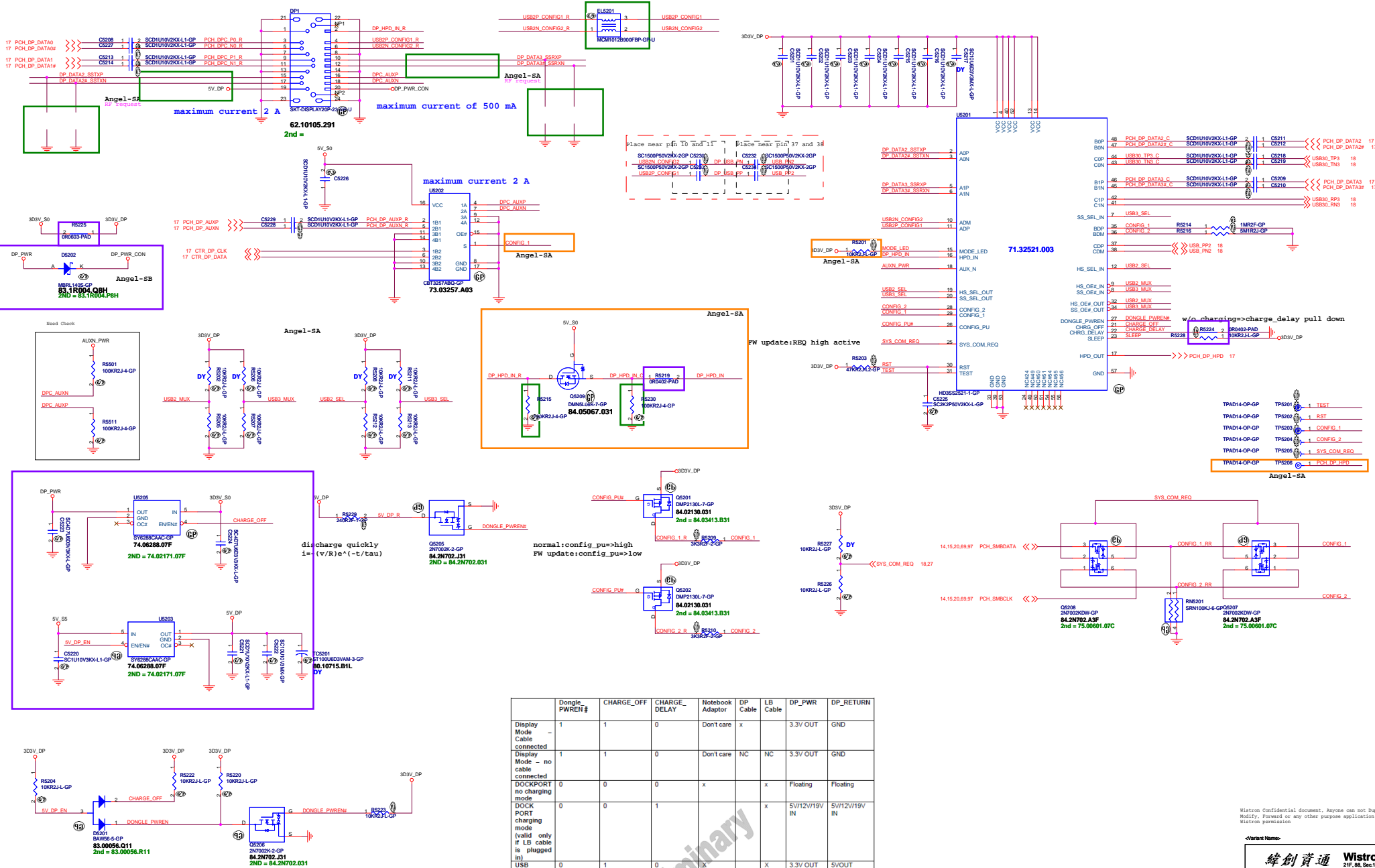
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
CRT Connector			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 50 of 102

HDMI Level Shifter & CONNECTOR

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
HDMI Level Shifter/Connector			
Size A3	Document Number Angel-CY		Rev 1
Date:	Monday, April 22, 2013	Sheet 51 of	102



	Dongle PWREN#	CHARGE_OFF	CHARGE_DELAY	Notebook Adaptor	DP Cable	LB Cable	DP_PWR	DP_RETURN
Display Mode	1	1	0	Don't care	x		3.3V OUT	GND
Cable connected	1	1	0	Don't care	NC	NC	3.3V OUT	GND
Display Mode - no cable connected	0	0	0	x		x	Floating	Floating
DOCKPORT no charging mode	0	0	1			x	5V/12V/19V IN	5V/12V/19V IN
DOCK PORT charging mode (valid only if LB cable is plugged in)	0	1	0	x		x	3.3V OUT	5VOUT
USB Charging/ Dongle mode	0	1	0					

Watson Confidential document. Anyone can not Duplicate, Modify, Forward or any other purpose application without get Watson permission

緯創資通

Wistron Corporation

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

Display Port

Angel-CY

Rev

1

File

Doc

Rev

Document Number

Monday, April 22, 2019

Rev

1

Sheet

62

of

102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
S-VIDEO			
Size A4	Document Number Angel-CY		Rev 1
Date: Monday, April 22, 2013		Sheet 53 of	102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size A4	Document Number Angel-CY		Rev 1
Date Monday, April 22, 2013	Sheet 54	of 1	102

SSID = User.Interface

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

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

Title

ITP

Size

Document Number

Rev

A4

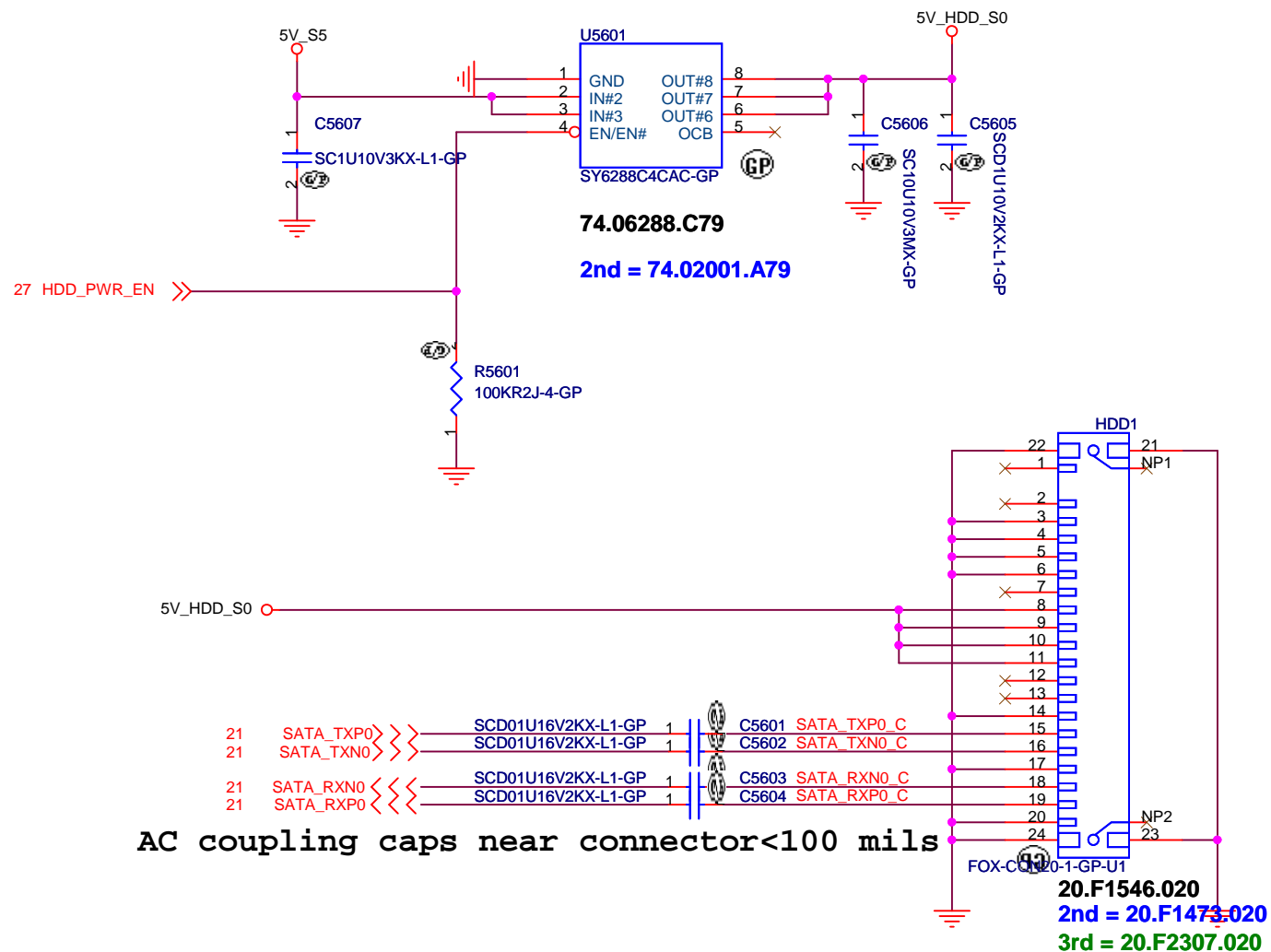
Angel-CY

1

Date: Monday, April 22, 2013

Sheet 55 of 102

SATA HDD Connector



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

Title

HDDSize
A4

Document Number

Angel-CY

Rev

1

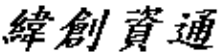
Date: Monday, April 22, 2013

Sheet 56 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
E-SATA/USB CHARGER		
Size A4	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet 57 of	102

SSID = AUDIO

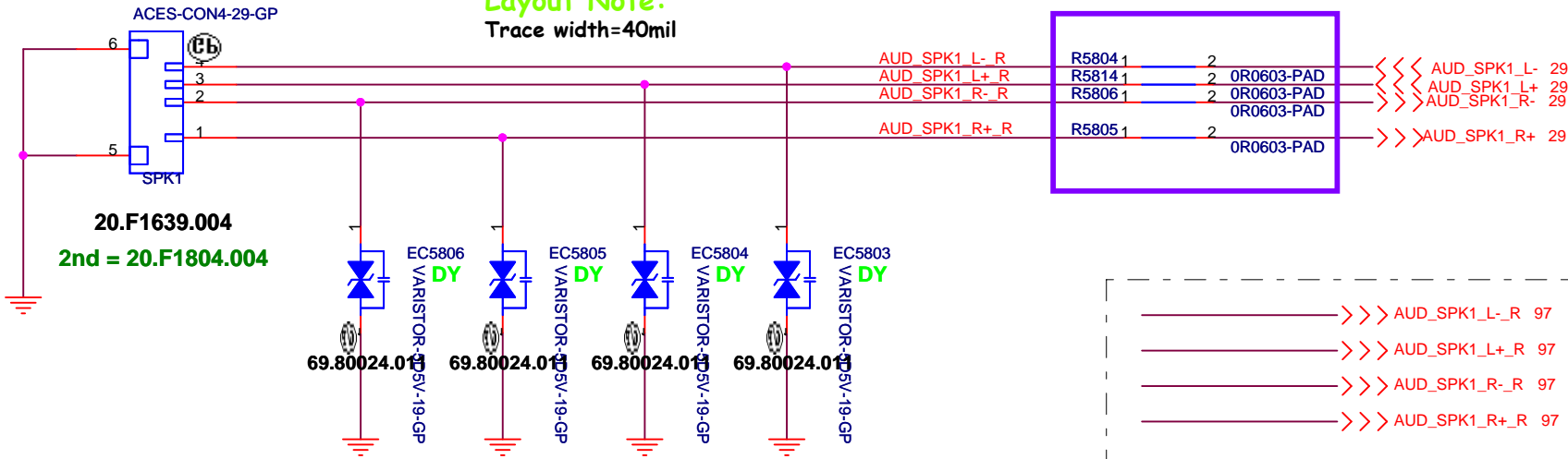
SSID = AUDIO

Speaker

SA
10/22 change by Edwin
Pin Define SWAP

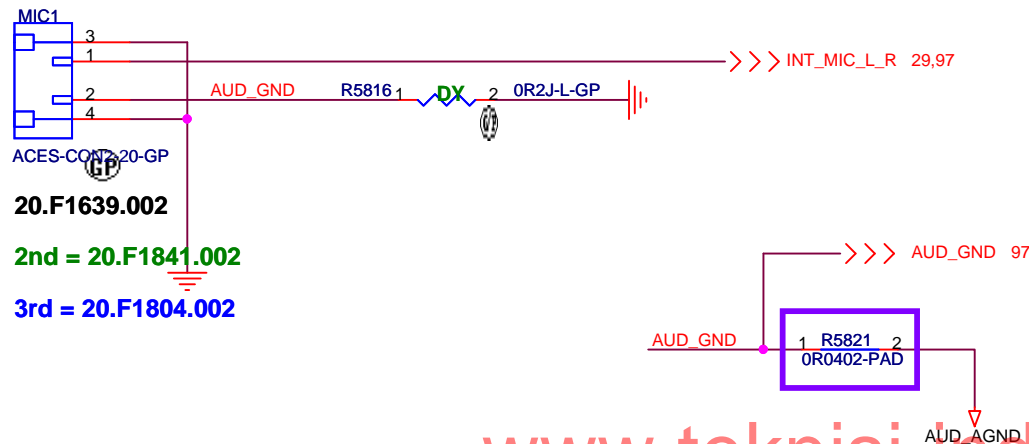
Layout Note:

Trace width=40mil



Combo Jack on Small Board

For AFTE



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

Wistron Corporation

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

Title

MIC/SPEAKER/JACK

Size

Document Number

Rev

A4

Angel-CY

1

Date: Monday, April 22, 2013

Sheet 58 of 102

- 1.route on bottom as differential pairs.
- 2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
- 3.No vias, No 90 degree bends.
- 4.pairs must be equal lengths.
- 5.6mil trace width, 12mil separation.
- 6.36mil between pairs and any other trace.
- 7.Must not cross ground moat,except RJ-45 moat.

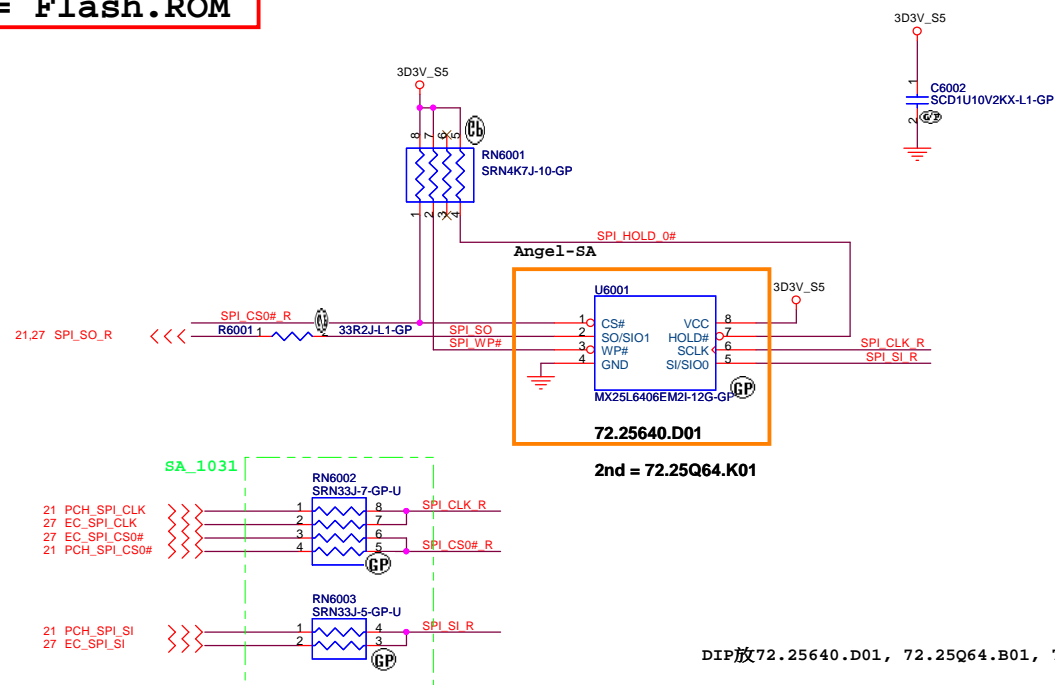
Blanking

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

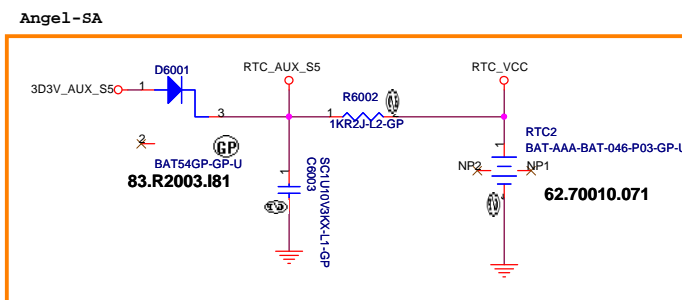
<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LAN CONNECTOR			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 59 of 102

SSID = Flash.ROM



SSID = RBATT



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

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

[illegible]**Flash/RTC**Size
Custom

Document Number

Angel-CY

Rev

1

Date: 2

Monday, April 22, 2013

Sheet 60

of

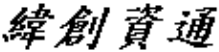
102

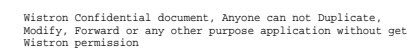
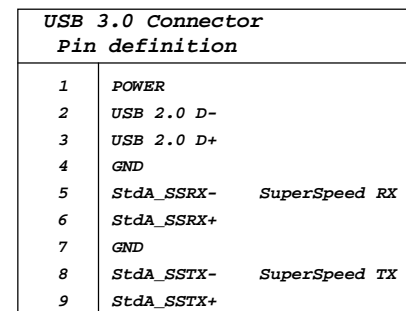
102

SSID = USB

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
USB Power SW		
Size A4	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013		Sheet 61 of 102



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

Title			
USB 3.0 Port			
Size A3	Document Number		Rev
	Angel-CY		1
Date:	Monday, April 22, 2013	Sheet 62 of	102

SSID = User.Interface
Bluetooth Module conn.

Without BT

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

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

Title

Bluetooth

Size

Document Number

Rev

A4

Angel-CY

1

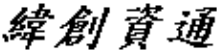
Date: Monday, April 22, 2013

Sheet 63 of 102

Blanking

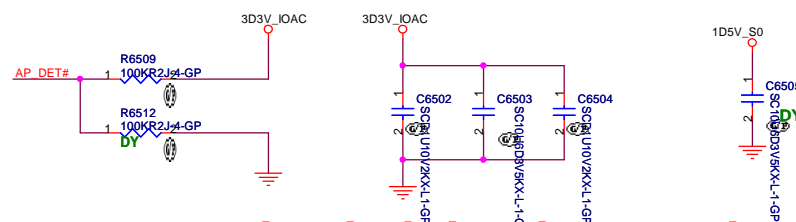
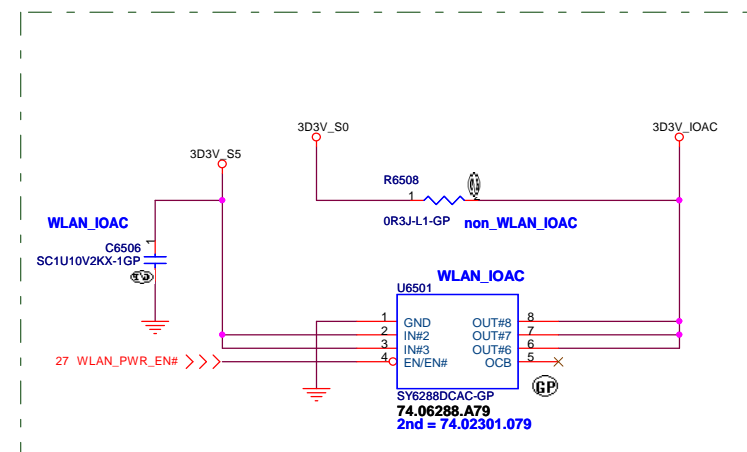
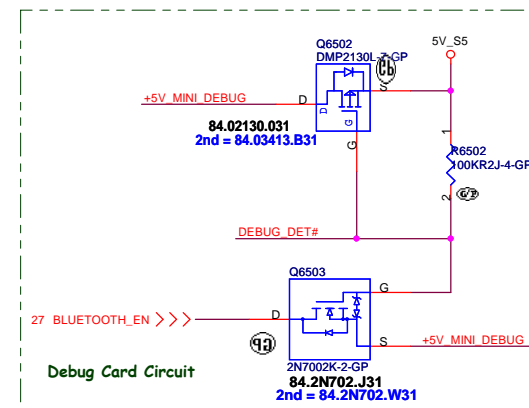
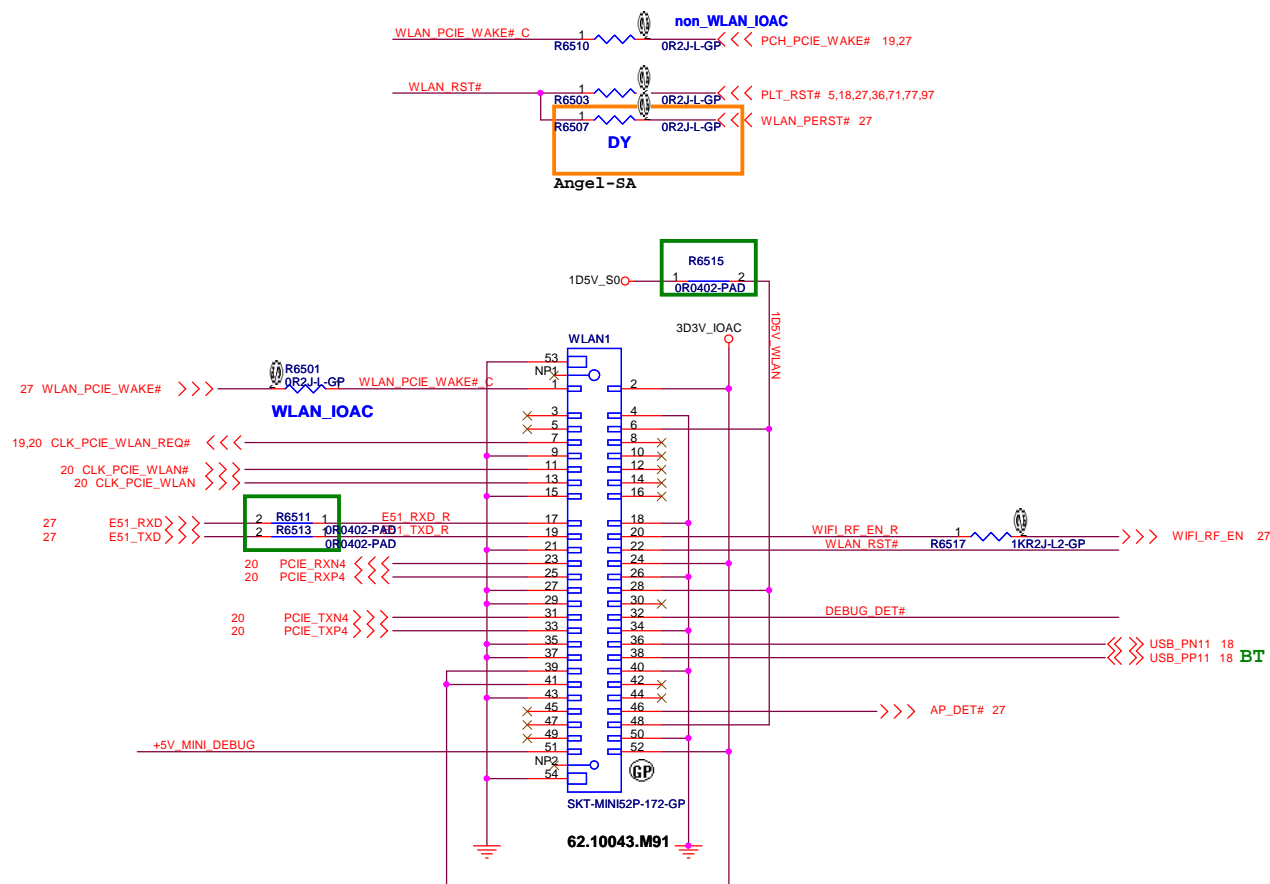
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
RESERVED		
Size A4	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013		Sheet 64 of 102

SSID = Wireless

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



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Names>

緯創資通

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

Title

MINICARD(WLAN)

Size

Document Number	
-----------------	--

Angel-CY

Rev

Date: Monday, April 22, 2013

Sheet 65 of 102

www.teknisi-indonesia.com

SSID = Wireless

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

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

Title

WWAN Connector

Size

Document Number

Rev

A4

Angel-CY


1

Date: Monday, April 22, 2013

Sheet 66 of 102

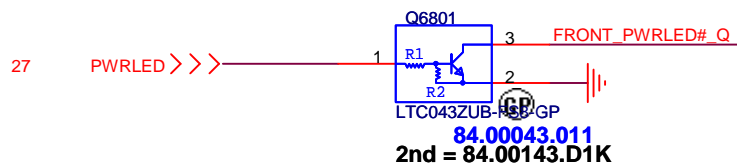
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

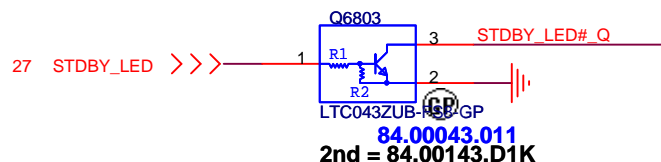
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
M-SATA			
Size A4	Document Number Angel-CY		Rev 1
Date: Monday, April 22, 2013	Sheet 67	of	102

SSID = User.Interface

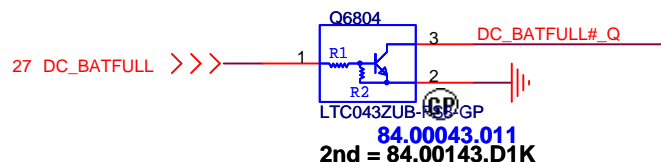
Power button LED



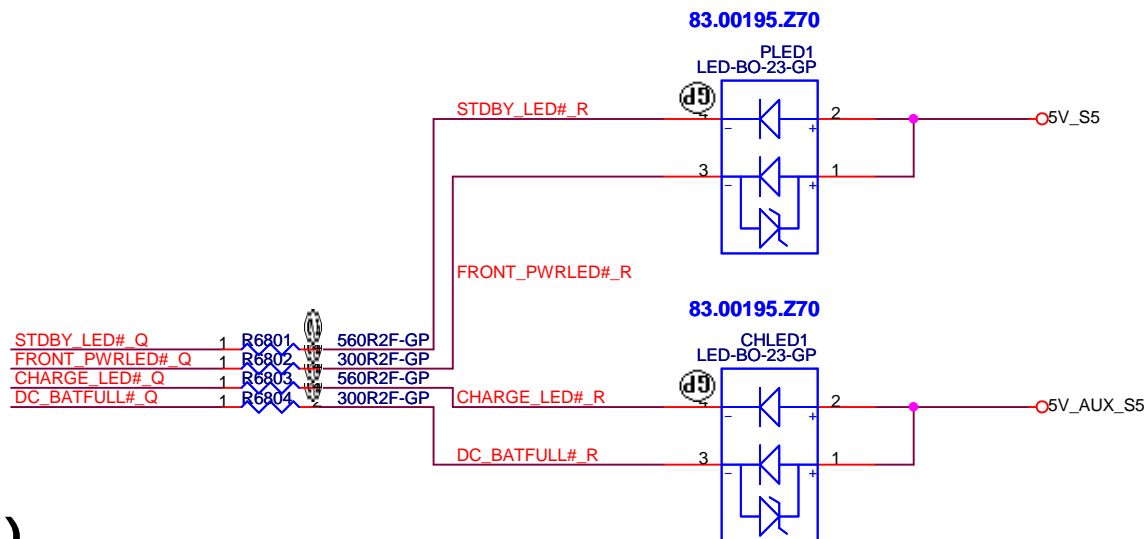
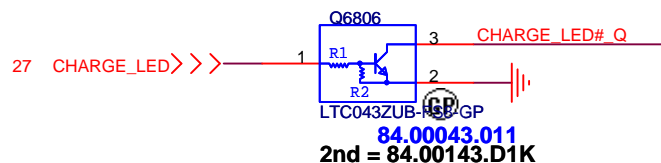
Power STDBY_LED



Battery LED2 (DC_BATFULL)



Battery LED1 (CHARGE)



Devices

Part No.	Lens	Source Color	Pin Assignment
LTST-C195ZBKFKT	Water Clear	InGaN Blue	1,3
		AlInGaP Orange	2,4

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

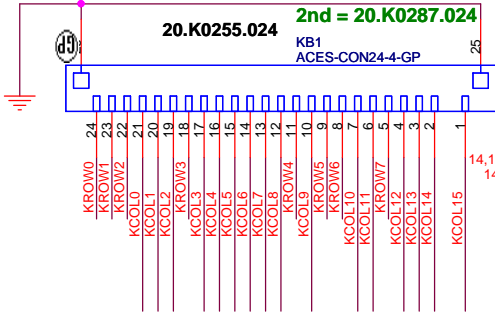
緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
LED Bard/Power Button			
Size	Document Number	Rev	
A4		1	
Date: Monday, April 22, 2013		Sheet	68 of 102

TOUCH PAD

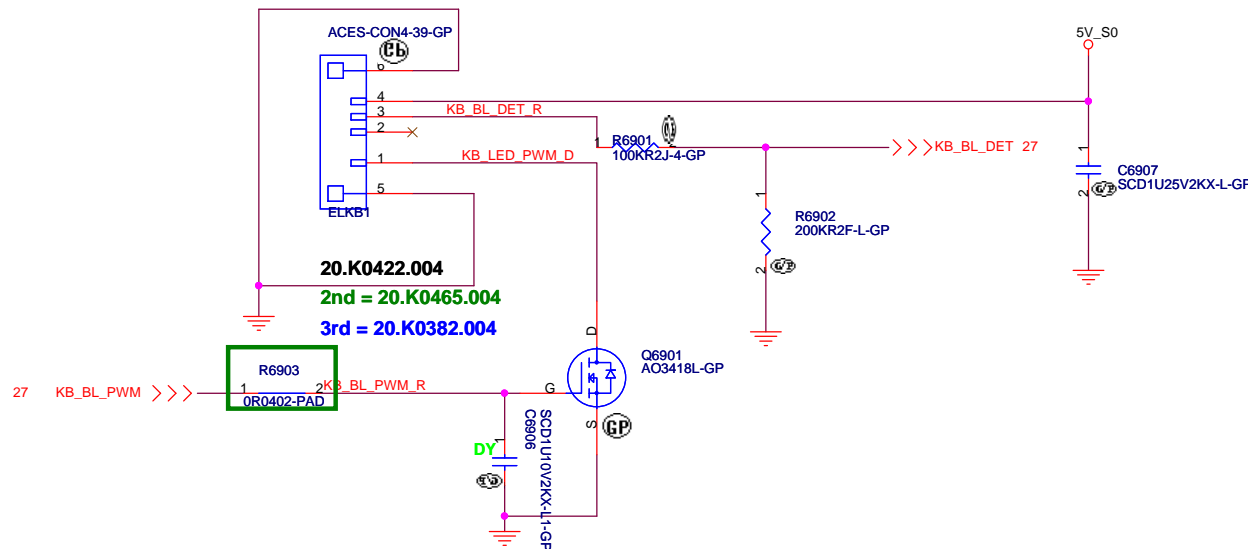
D = KBC

Internal KeyBoard Connector

上接觸



KB Pin define need to check again



27,97	KCOL0	>>>
27,97	KCOL1	>>>
27,97	KCOL2	>>>
27,97	KCOL3	>>>
27,97	KCOL4	>>>
27,97	KCOL5	>>>
27,97	KCOL6	>>>
27,97	KCOL7	>>>
27,97	KCOL8	>>>
27,97	KCOL9	>>>
27,97	KCOL10	>>>
27,97	KCOL11	>>>
27,97	KCOL12	>>>
27,97	KCOL13	>>>
27,97	KCOL14	>>>
27,97	KCOL15	>>>

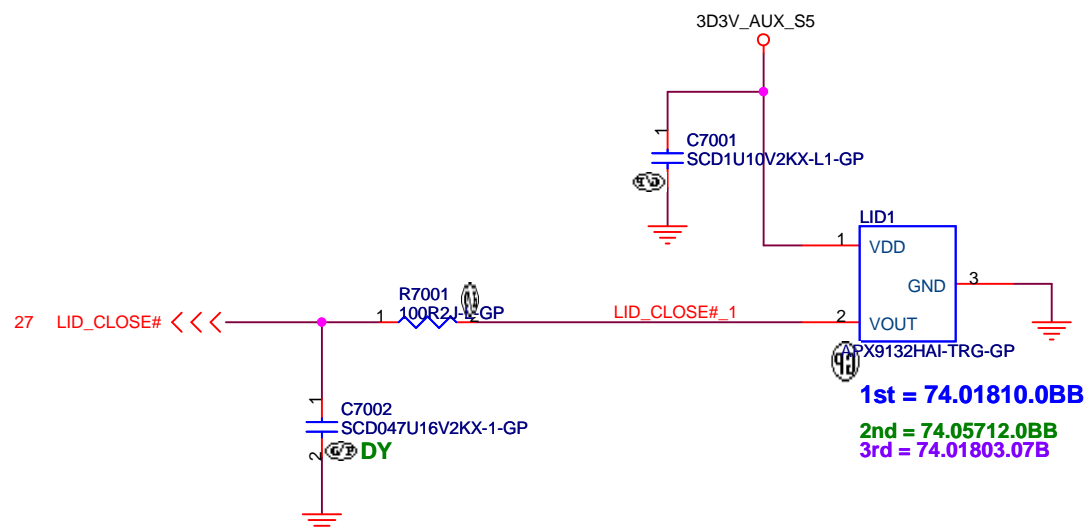
27,97	KROW0	>>>
27,97	KROW1	>>>
27,97	KROW2	>>>
27,97	KROW3	>>>
27,97	KROW4	>>>
27,97	KROW5	>>>
27,97	KROW6	>>>
27,97	KROW7	>>>
97	TP_DATA	>>>
97	TP_CLK	>>>

For AFTE

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title Key Board/Touch Pad		
Size	Document Number	Rev
Custom	Angel-CY	1
Date:	Monday, April 22, 2013	Sheet 69 of 102



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

Wistron Corporation

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

Title

Hall Sensor

Size

A4

Document Number

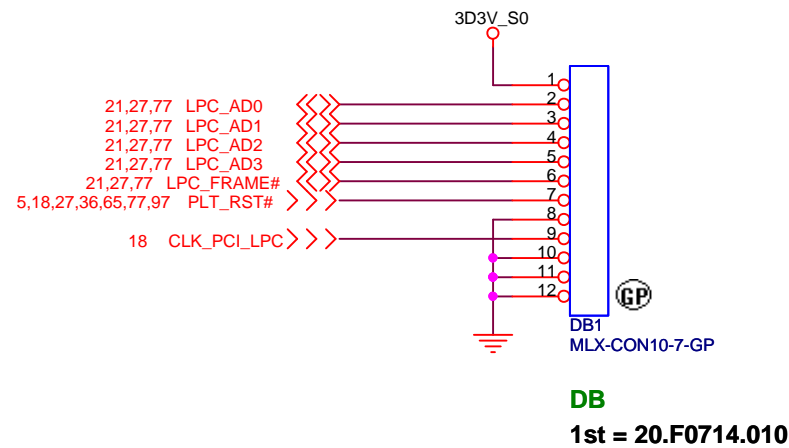
Angel-CY

Rev

1

Date: Monday, April 22, 2013

Sheet 70 of 102



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Dubug connector			
Size A4	Document Number Angel-CY		Rev 1
Date Monday, April 22, 2013	Sheet 71 of 102		

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A4	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013		Sheet 72 of 102

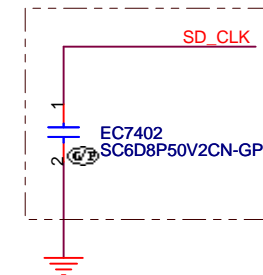
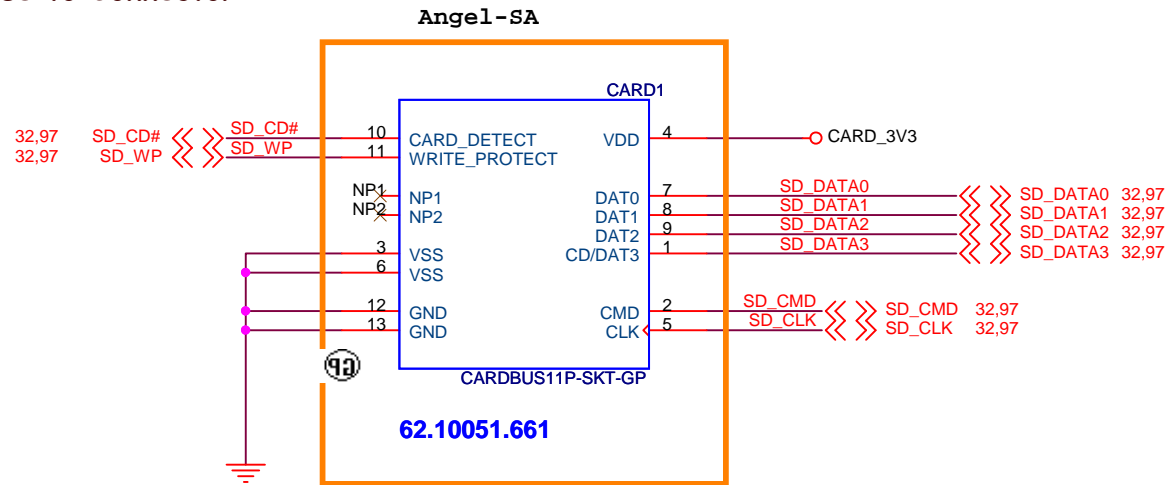
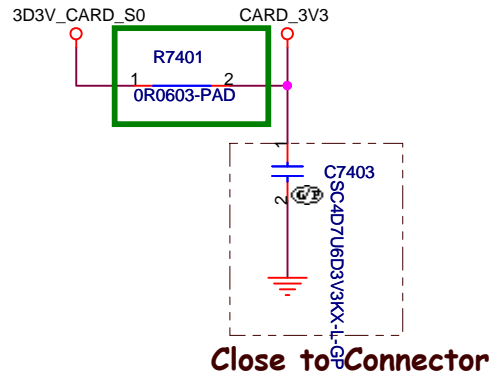
Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
Reserved		
Size	Document Number	Rev
A4	Angel-CY	1
Date	Monday, April 22, 2013	
2	Sheet	73 of 102

SD/XD/MS Card Reader



Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

Wistron Corporation

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

Title

CARD Reader CONN

Size

Document Number

A4

Angel-CY

Rev

1

Date: Monday, April 22, 2013

Sheet 74 of 102

SSID = ExpressCard

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
New Card			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 75 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size A4	Document Number Angel-CY		Rev 1
Date Monday, April 22, 2013	Sheet 76	of 1	102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 78 of 102

SSID - User Interface

Free Fall Sensor

Blanking

Note

- no via trace under the sensor (keep out area around 2mm)
- stay away from the screw hole or metal shield soldering joints
- design PCB pad based on our sensor LGA pad size (add 0.1mm)
- solder stencil opening to 90% of the PCB pad size
- mount the sensor near the center of mass of the NB as possible as you can

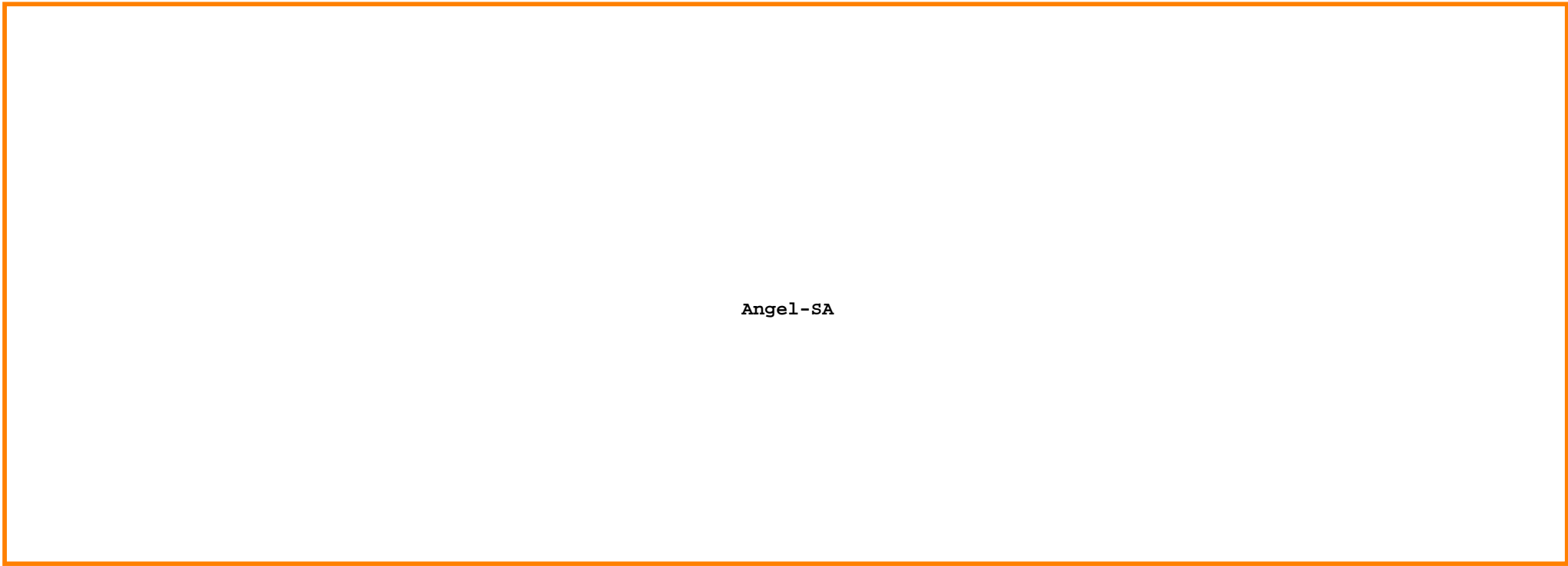
Note

- 1) Keep all signals are the same trace width. (included VDD, GND).
- 2) No VIA under IC bottom.

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Free Fall Sensor			
Size A4	Document Number Angel-CY		Rev 1
Date Monday, April 22, 2013	Sheet 79	of 1	102



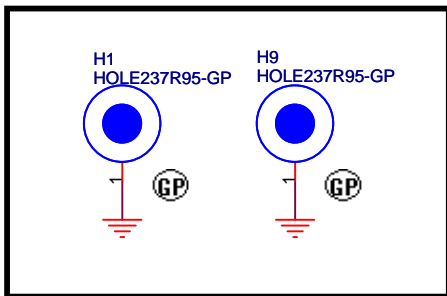
Angel-SA

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

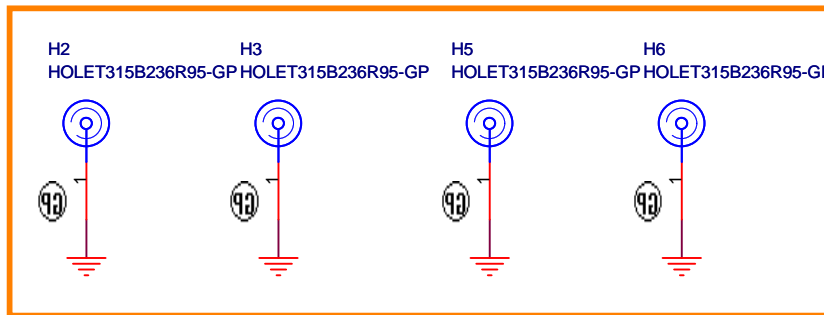
<Variant Name>

			Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title					
Reserved					
Size	Document Number				Rev
A4	Angel-CY				1
Date:	Monday, April 22, 2013			Sheet	80 of 102

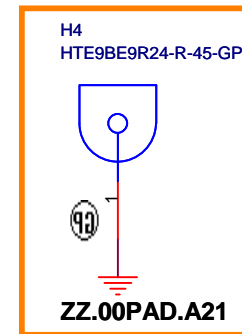
ZZ.00PAD.921



ZZ.00PAD.931

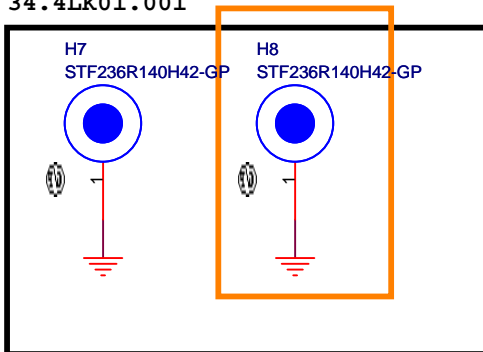


Angel-SA



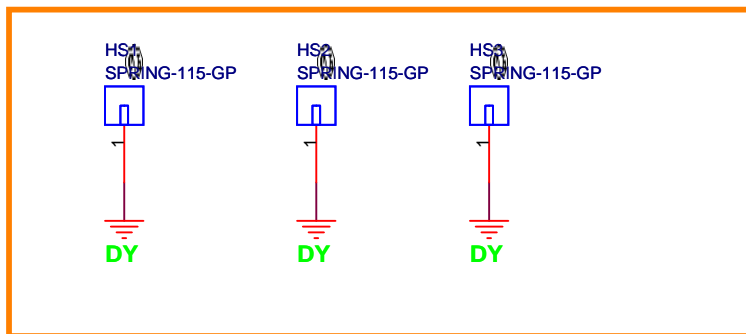
34.4LK01.001

Angel-SA

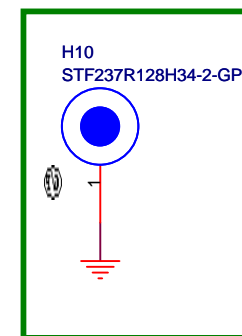


34.4PT16.001

Angel-SA



H10
STF237R128H34-2-GP



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通

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

Title

Reserved

Size
A4

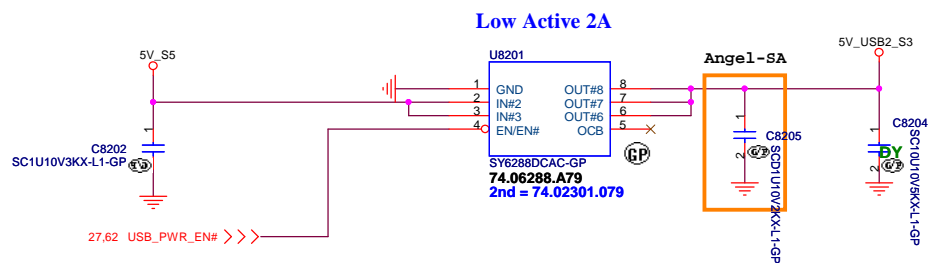
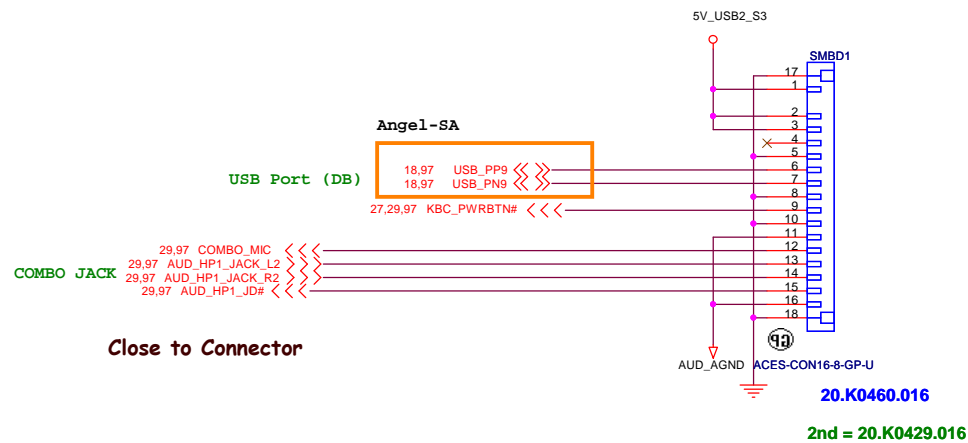
Document Number

Rev
1

Angel-CY

Date: Monday, April 22, 2013

Sheet 81 of 102



Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
IO Board Connector			
Size A3	Document Number		Rev 1
Angel-CY			
Date:	Monday, April 22, 2013	Sheet	82 of 102

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

緯創資通			Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.					
Title					
GPU(PEG)					
Size	Document Number				Rev
A2	Angel-CY				1
Date	Monday, April 22, 2013		Sheet	83	of 102

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

緯創資通		Wistron Corporation	
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
GPU (DIGITALOUT)			
Size	Document Number	Rev	
A2	Angel-CY	1	
Date	Monday, April 22, 2013	Sheet	84 of 102

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

-Variant Name-		
<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
GPU (VRAM /F)		
Size	Document Number	Rev
A2	Angel-CY	1
Date	Monday, April 22, 2013	Sheet 85 of 102

Wistron Confidential document - Anyone can not duplicate,
modify, forward or any other purpose application without get
Wistron permission.

<Variant Name>	
緯創資通 Wistron Corporation	
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinshu, Tapei Hsien 321, Taiwan, R.O.C.	
File	
GPU (GPIO/STRAP)	
Doc Control	Document Number Angel-CY
Date: Monday, April 22, 2013	Page: 88 of 105

Wistron Confidential document. Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec-1, Main Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
GPU (POWER/GND)			
Size	Document Number	Rev	
Custom	Angel-CY	1	
Date: Monday, April 22, 2013	Sheet 87	of	102

	5	4	3	2	1
D					
C					
B					
A					

Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

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

Title
GPU-VRAM1,2 (1/4)

Size
A3

Document Number
Angel-CY

Rev
1

Date:
Monday, April 22, 2013
Sheet
88
of
102

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

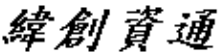
<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
GPU-VRAM3,4 (2/4)			
Size	Document Number		Rev
A3	Angel-CY		1
Date:	Monday, April 22, 2013	Sheet 89	of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
GPU-VRAM5,6 (3/4)		
Size A4	Document Number Angel-CY	Rev 1
Date: Monday, April 22, 2013		Sheet 90 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
GPU-VRAM7,8 (4/4)			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 91 of 102

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

-Variant Name-	
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
RT8812A VGA CORE	
Size A2	Document Number Angel-CY
Date: Monday, April 22, 2013	Rev 1
Sheet 92 of 102	

Wistron Confidential document. Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
DISCRETE VGA POWER			
Size	Document Number	Rev	
Custom	Angel-CY	1	
Date:	Monday, April 22, 2013	Sheet	93 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LVDS Switch			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 94 of 102

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
CRT Switch			
Size	Document Number		Rev
A4	Angel-CY		1
Date:	Monday, April 22, 2013		Sheet 95 of 102

SSID = SDIO

Blanking

Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<Variant Name>

緯創資通

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

Title

TOUCH PANEL

Size

A4

Document Number

Angel-CY

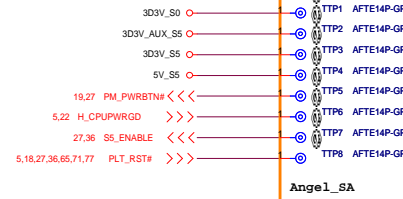
Rev

1

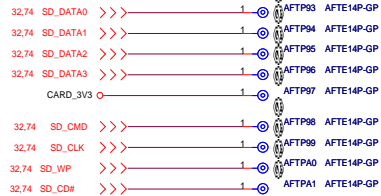
Date: Monday, April 22, 2013

Sheet 96 of 102

Check test point



Test Point放在Dimm Door打開可量測處



Card reader connector

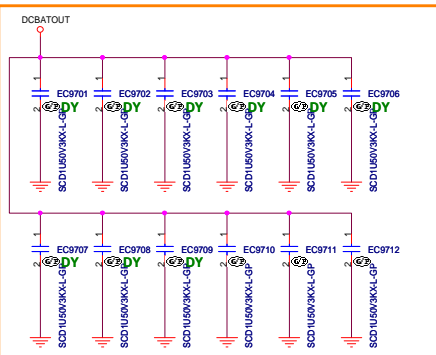


USBBD connector

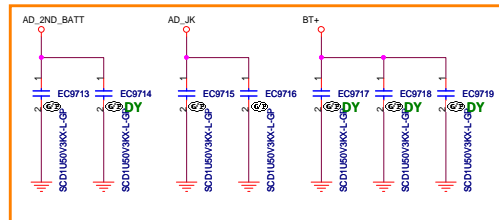


PWR connector

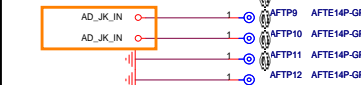
Angel_SA



Angel_SA



Angel_SA

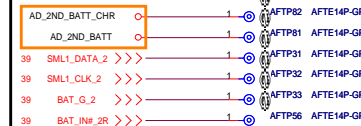


DC IN connector



Battery connector

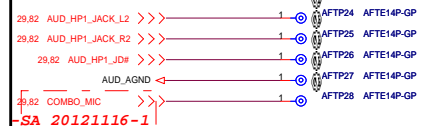
Angel_SA



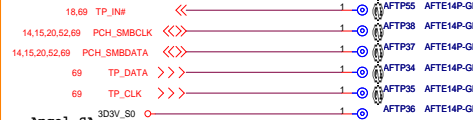
Second Battery connector



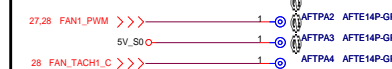
Speaker connector



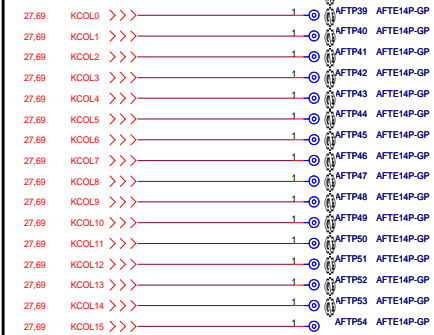
HP connector



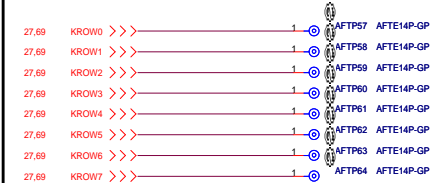
Angel_SA



FAN connector



Normal KB connector



Wistron Confidential document. Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>

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

Title		UNUSED PARTS/EMI Capacitors	
Size	Document Number	Angel-CY	Rev 1
Date: Monday, April 22, 2013	Sheet	97	of 102

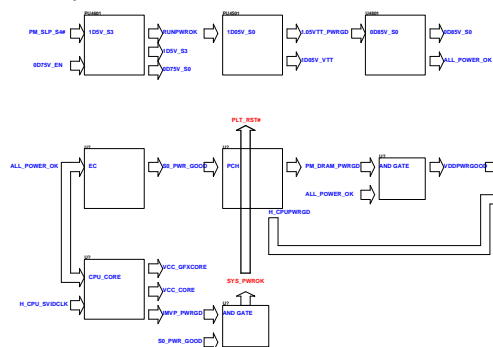
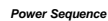


Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

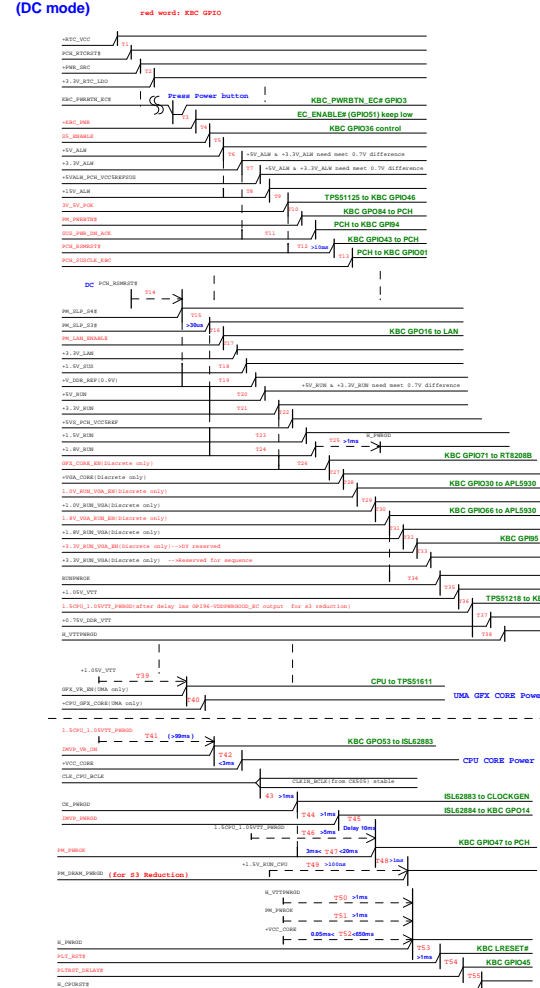
<Variant Name>

<div><div>緯創資通</div><div>Wistron Corporation</div><div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title		
Change History		
Size A4	Document Number Angel-CY	Rev 1
Date Monday, April 22, 2013	Sheet 98 of	102

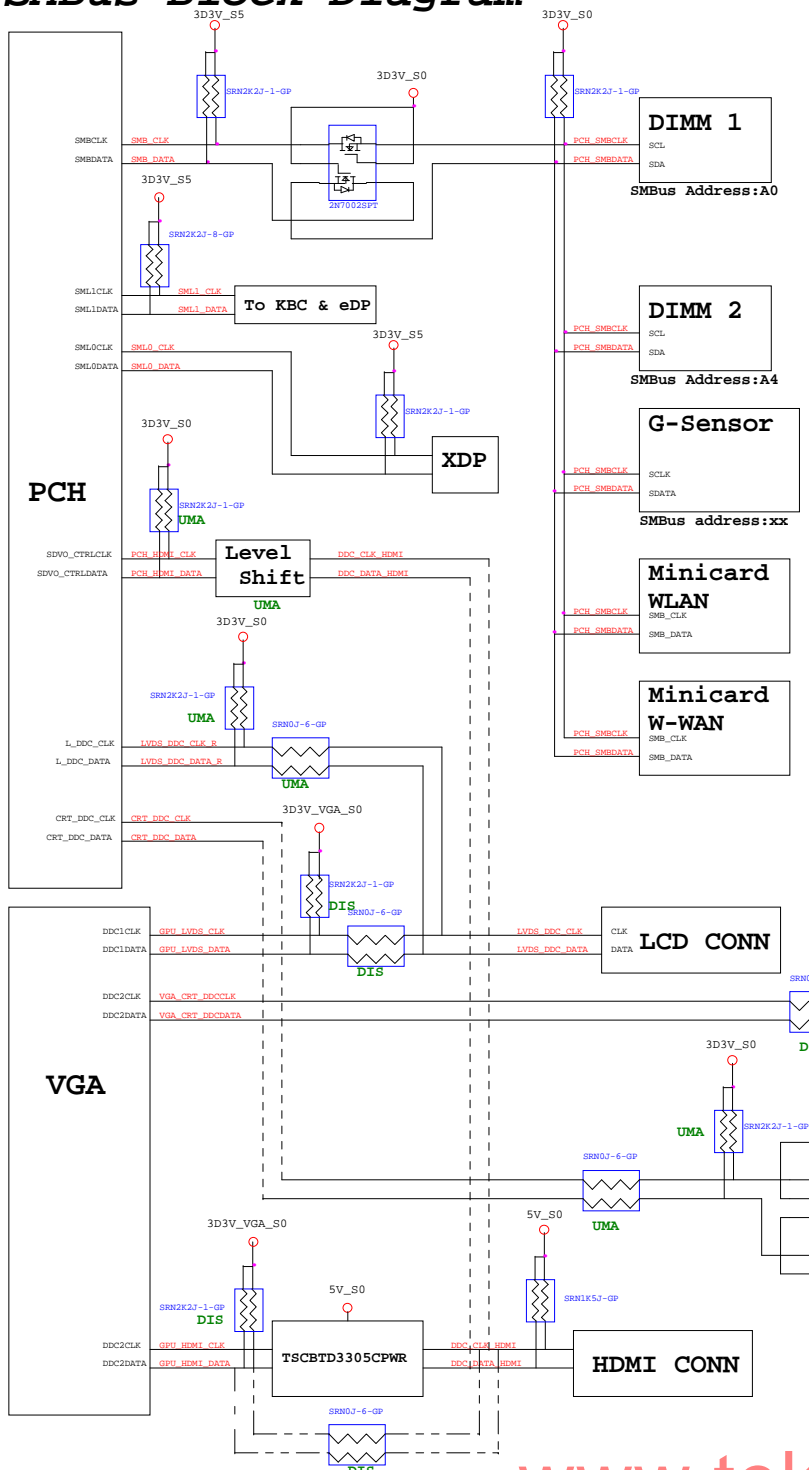
(AC mode)



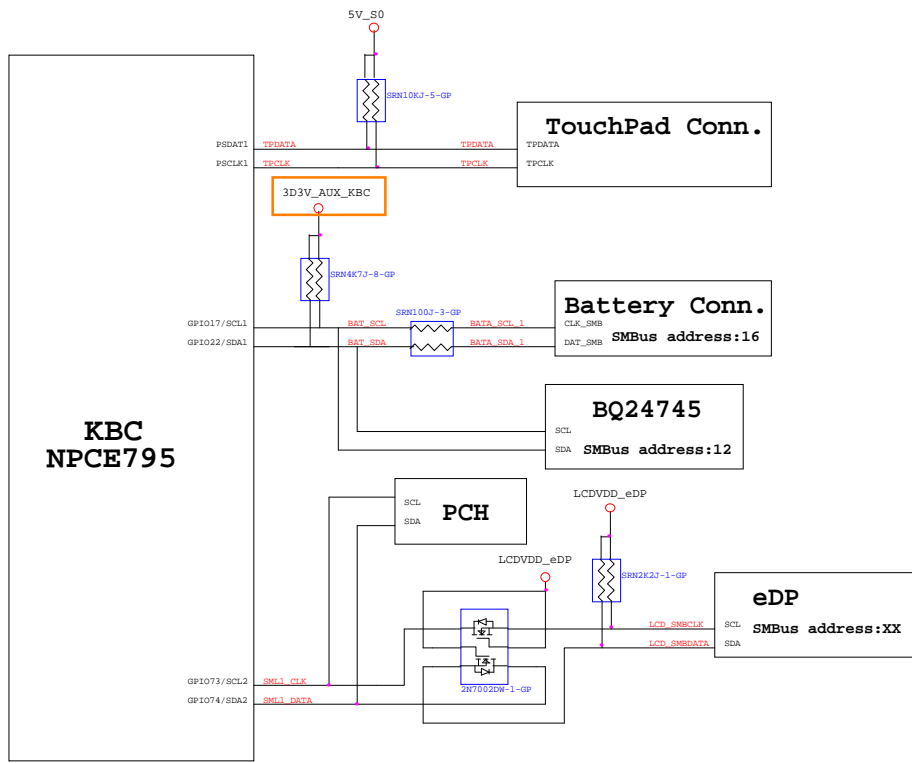
(DC mode)



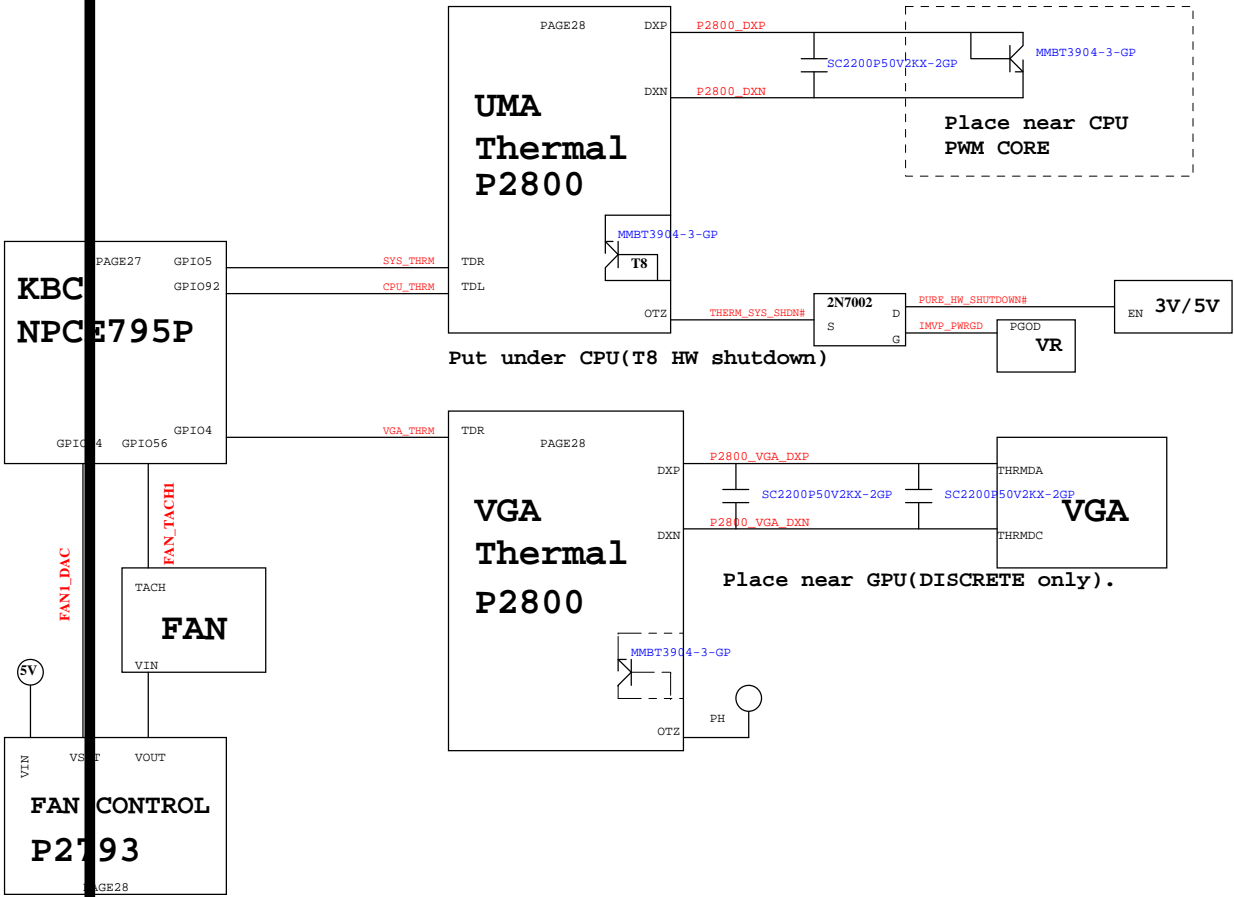
PCH SMBus Block Diagram



KBC SMBus Block Diagram



Thermal Block Diagram



Audio Block Diagram

