

Weebill HW

UMA-MUXLESS Schematics Document

Haswell ULT Processor

DY :None Installed

*ANNIE: ONLY FOR ANNIE solution.
65W: for 65W adaptor installed.
90W: for 90W adaptor installed.*

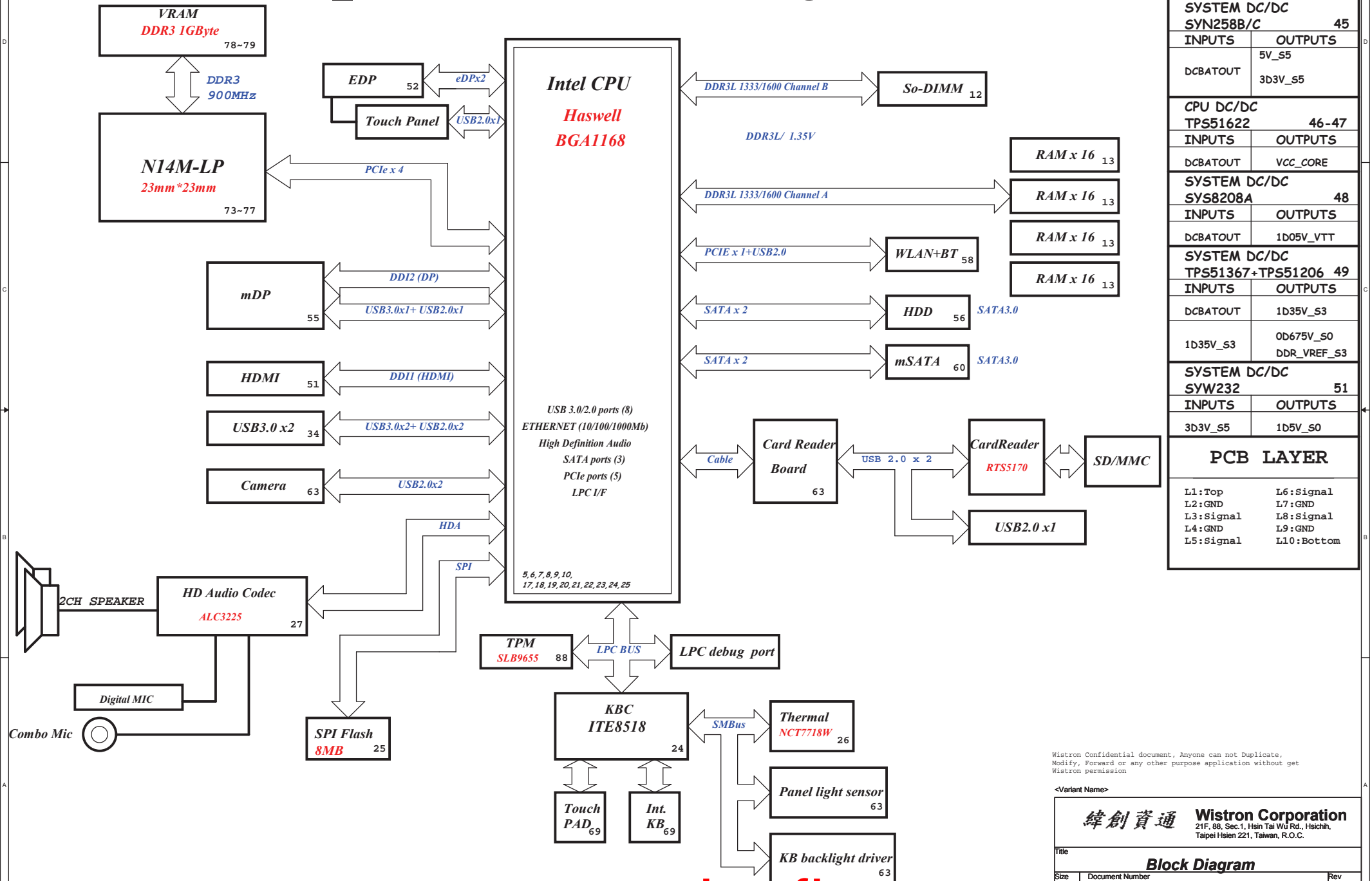
Wistron Confidential document, Anyone can not Duplicate,
Modify, Forward or any other purpose application without get
Wistron permission

<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 WEEBILL HW	Rev SA	
Date: Wednesday, September 18, 2013	Sheet 1	of 102	

WEEBILL_HW ULT Board Block Diagram

Project code : 91.4L501.A01
PCB P/N :
Revision : 12265-SB



CHARGER	
BQ24760	44
INPUTS	OUTPUTS
DCBATOUT	BT+
SYSTEM DC/DC	
SYN258B/C	45
INPUTS	OUTPUTS
DCBATOUT	5V_S5
	3D3V_S5
CPU DC/DC	
TPS51622	46-47
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE
SYSTEM DC/DC	
SYN8208A	48
INPUTS	OUTPUTS
DCBATOUT	1D05V_VTT
SYSTEM DC/DC	
TPS51367+TPS51206	49
INPUTS	OUTPUTS
DCBATOUT	1D35V_S3
1D35V_S3	0D675V_S0
	DDR_VREF_S3
SYSTEM DC/DC	
SYW232	51
INPUTS	OUTPUTS
3D3V_S5	1D5V_S0
PCB LAYER	
L1:Top	L6:Signal
L2:GND	L7:GND
L3:Signal	L8:Signal
L4:GND	L9:GND
L5:Signal	L10: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., Hsichin, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
Block Diagram	
Size	Document Number
Custom	WEEBILL_HW
Date:	Wednesday, September 18, 2013
Sheet	2 of 102
Rev	SA

D

C

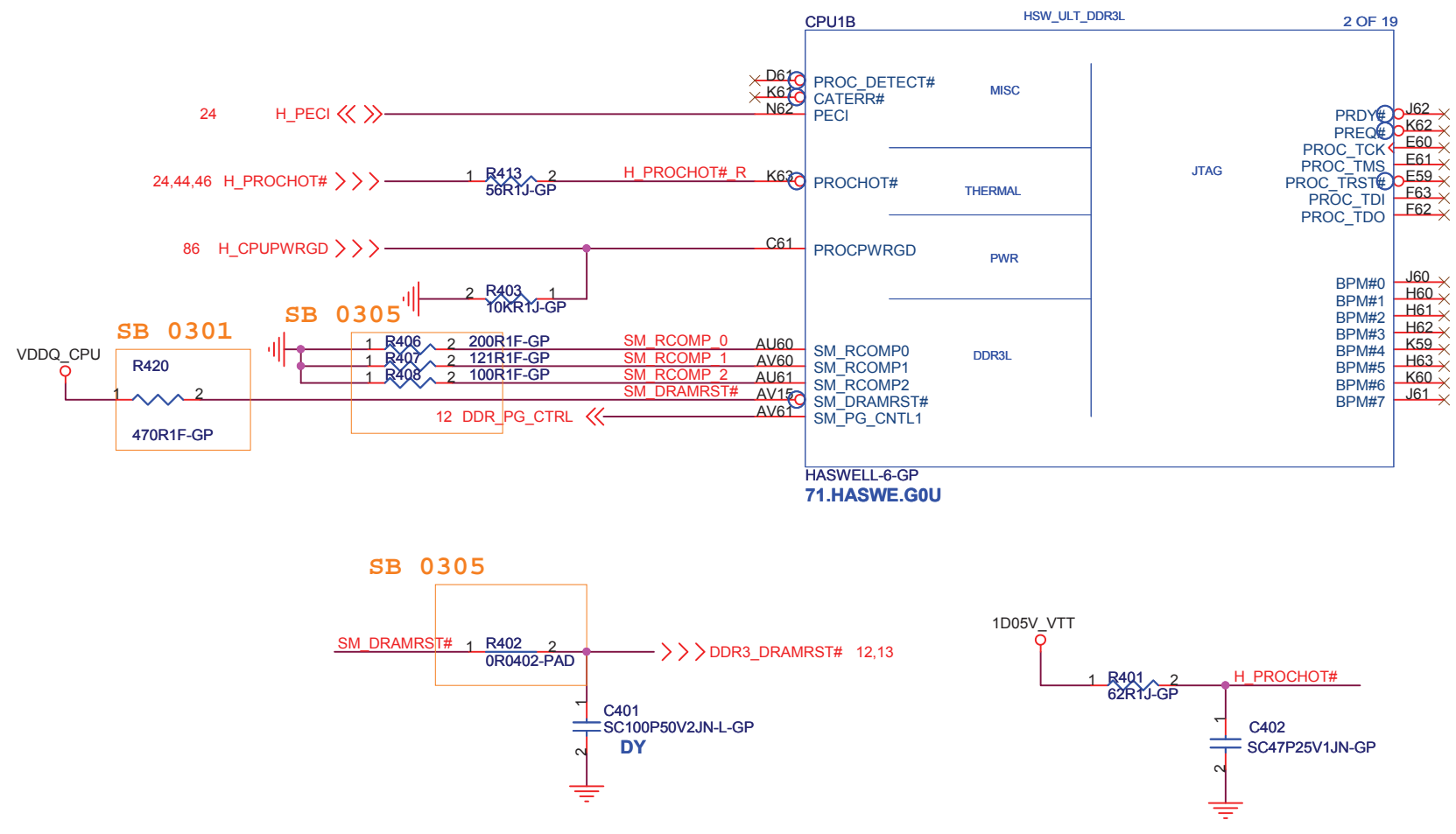
B

A

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		
CPU (Reserved)		
Size A4	Document Number WEEBILL_HW	Rev SA
Date: Wednesday, September 18, 2013	Sheet 3	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

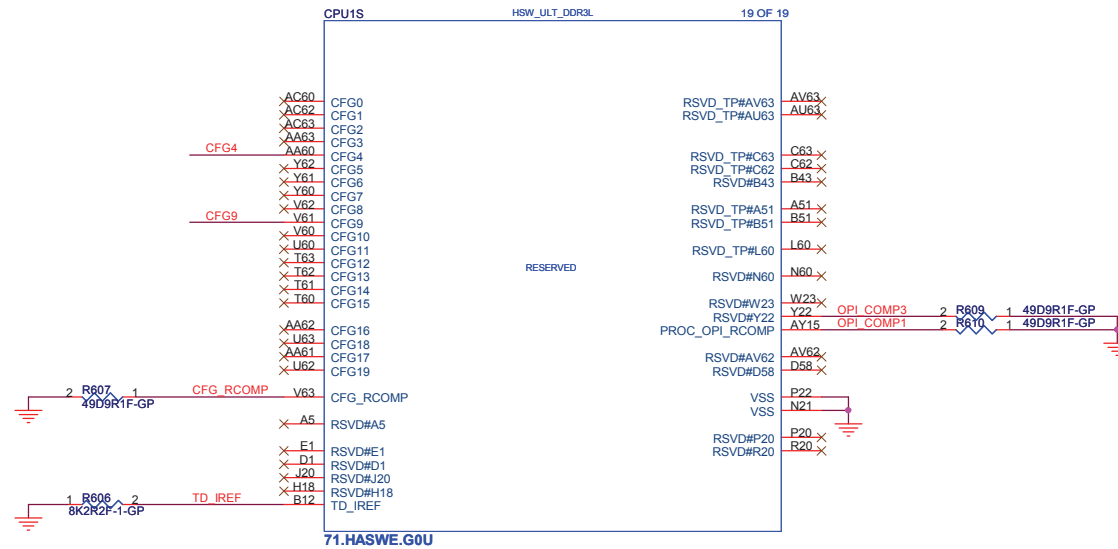
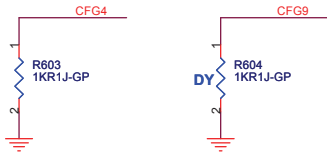
CPU (THERMAL/CLOCK/PM)

Size
A4

Document Number
WEEBILL_HW

Rev
SA

eDP Enable	
CFG4	1:Disable
	0:Enable



7.4

Reserved or Unused Signals

The following are the general types of reserved (RSVD) signals and connection guidelines:

- RSVD – these signals should not be connected
- RSVD_TP – these signals should be routed to a test point
- RSVD_NCTF – these signals are non-critical to function and may be left unconnected

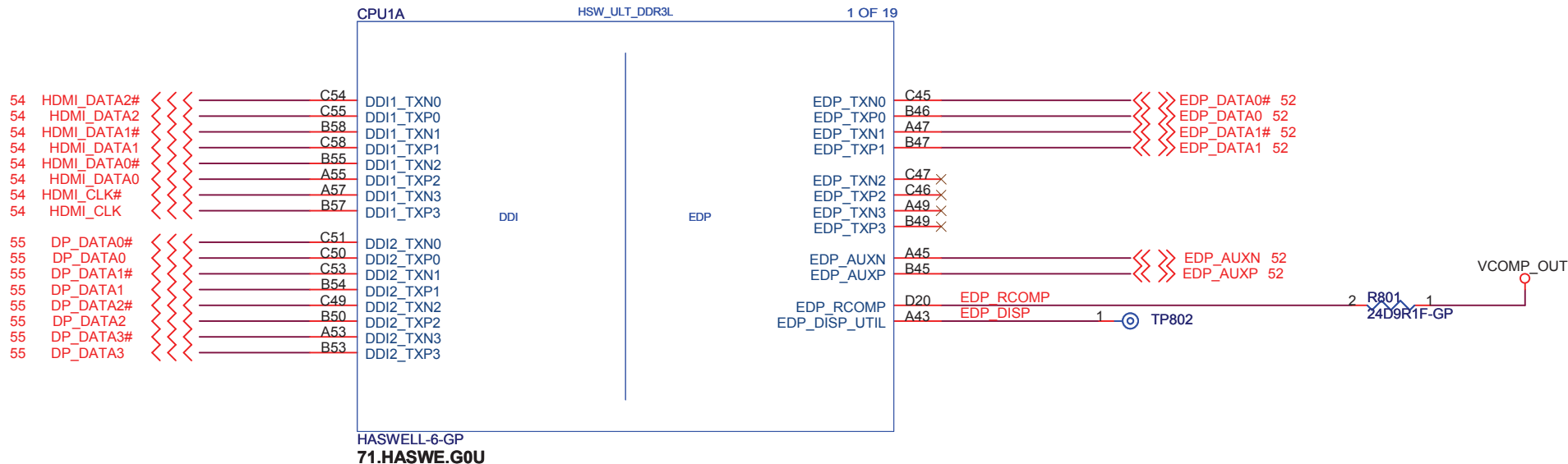
Signal Name	Description	Direction/Buffer Type
CFG[19:0]	Configuration Signals: The CFG signals have a default value of '1' if not terminated on the board. Refer to the appropriate platform design guide for pull-down recommendations when a logic low is desired. <ul style="list-style-type: none"> • CFG[3:0]: Reserved configuration lane. A test point may be placed on the board for these lanes. • PCI Express* Static x16 Lane Numbering Reversal. — — • CFG[4]: eDP enable <ul style="list-style-type: none"> — 1 = Disabled — 0 = Enabled • [19:5]: Reserved configuration lanes. A test point may be placed on the board for these lanes. 	I/O GTL
CFG_RCOMP	Configuration resistance compensation.	—
FC_x	FC signals are signals that are available for compatibility with other processors. A test point may be placed on the board for these lands. Refer to the appropriate platform design guide for implementation details.	

continued...

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

<Variant Name>

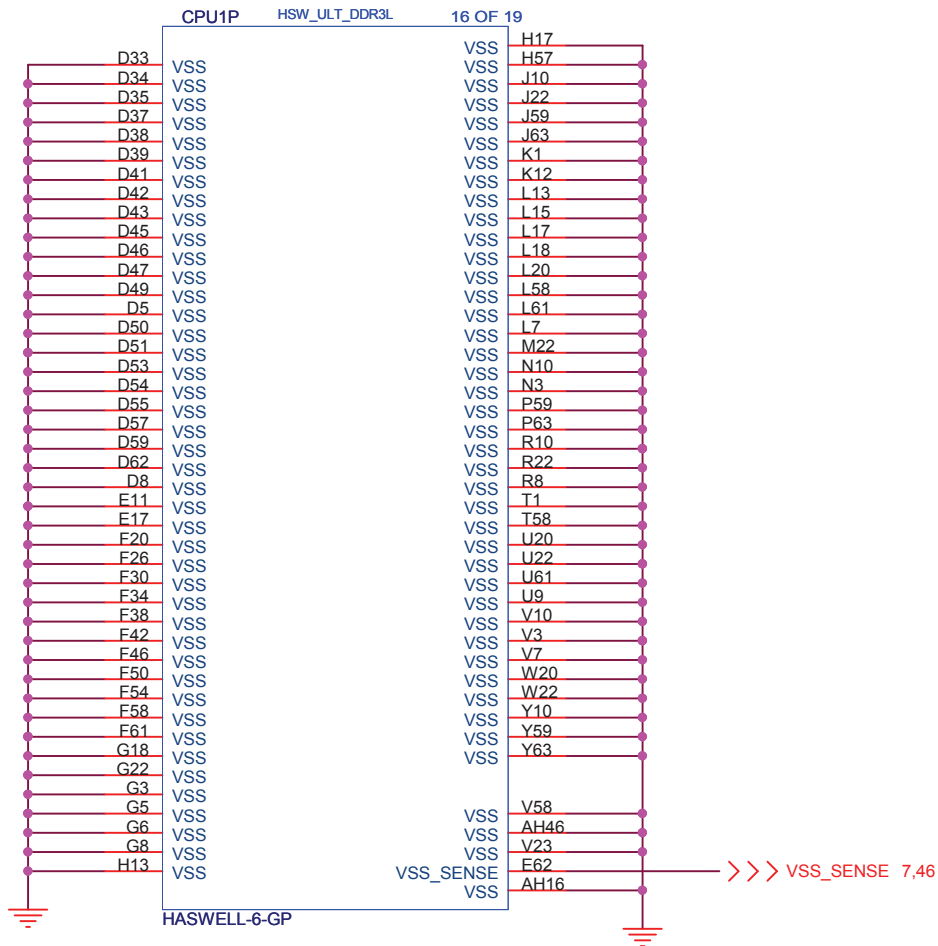
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
CPU (CFG)	
Size A3	Document Number
WEEBILL HW	
Date: Wednesday, September 18, 2013	Sheet 6 of 102
Rev	SA



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


<Variant Name>

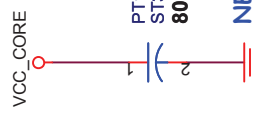
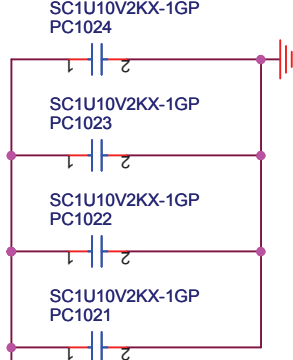
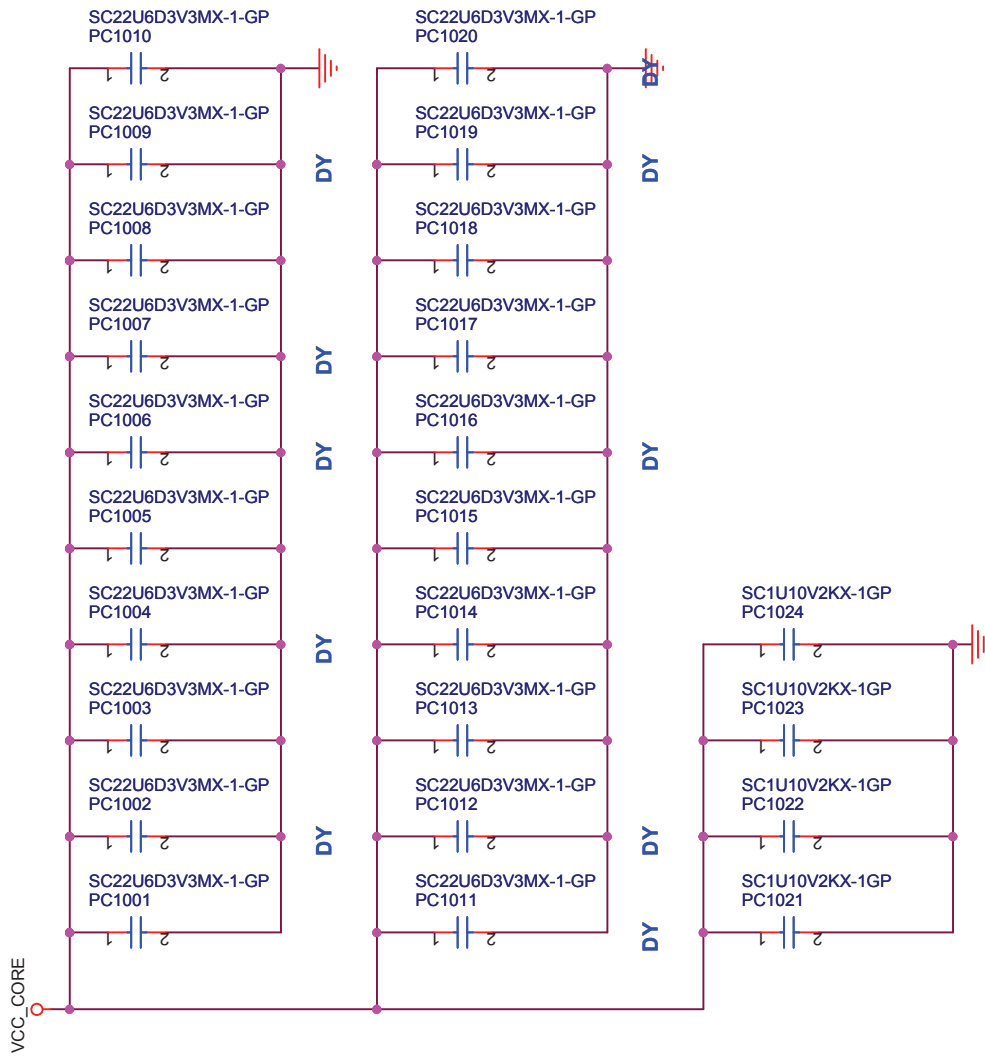
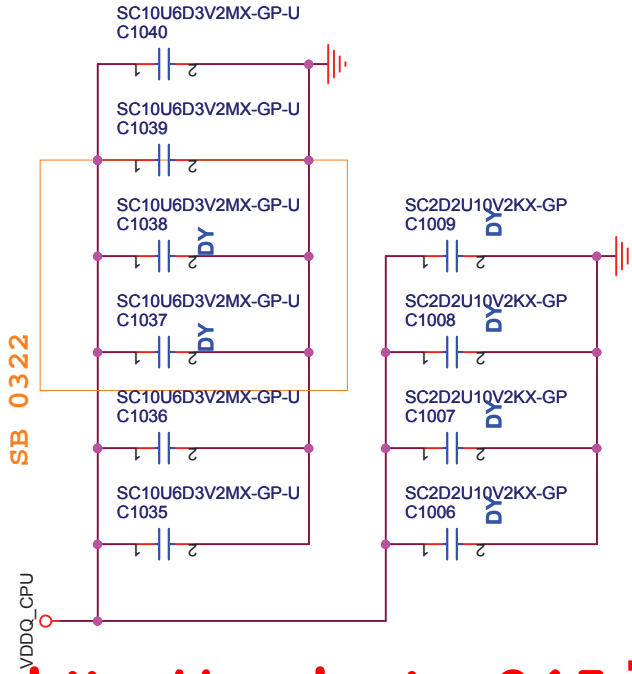
緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
CPU (DDI/EDP)			
Size A4	Document Number WEEBILL_HW		Rev SB
Date:	Wednesday, September 18, 2013		Sheet 8 of 102



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.	
CPU (VSS)	
Size A4	Document Number WEEBILL_HW
Date: Wednesday, September 18, 2013	Sheet 9 of 102



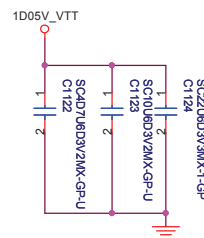
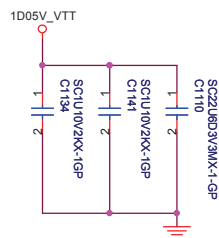
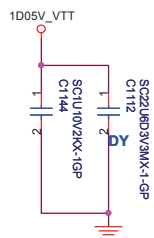
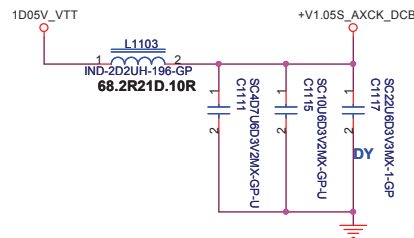
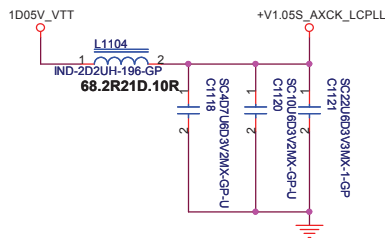
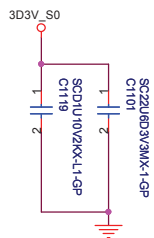
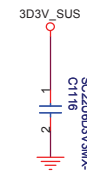
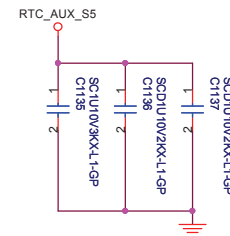
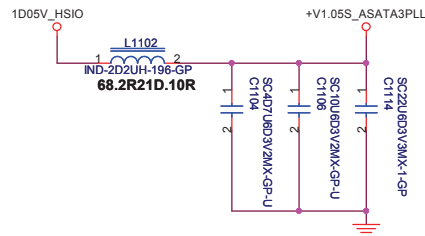
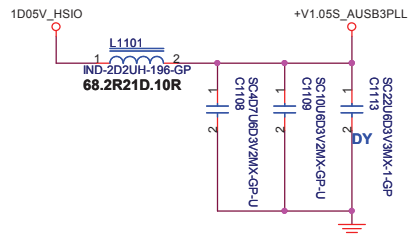
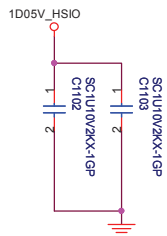
NEC/TOKIN. B2
ESR: 9 mOhm
Cap : 330 uF

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.

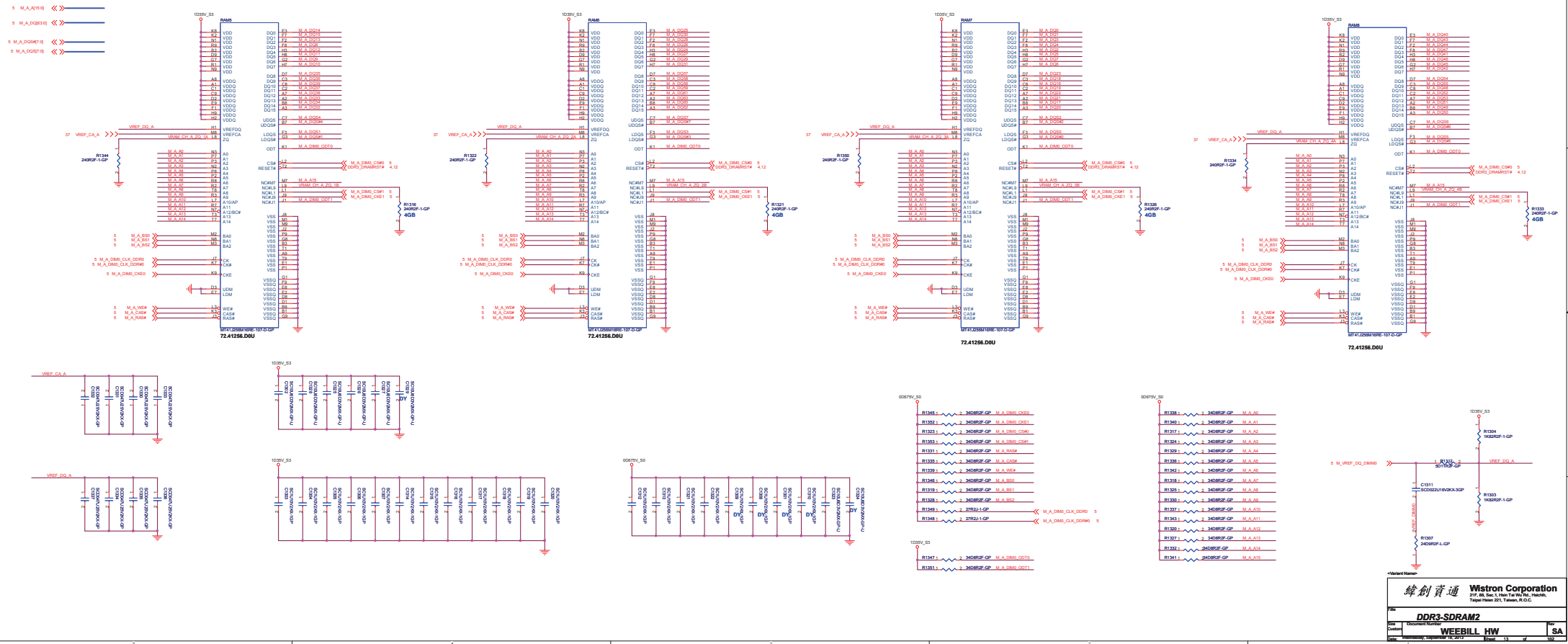
Title	
CPU (Power CAP1)	
Size	Document Number
A4	WEEBILL_HW
Rev	SA
1	102
Date: Wednesday, September 18, 2013	
Sheet	of
10	1



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 (Power CAP2)
Size A3	Document Number WEEBILL HW
Date: Wednesday, September 18, 2013	Rev SA
Sheet 11	of 102

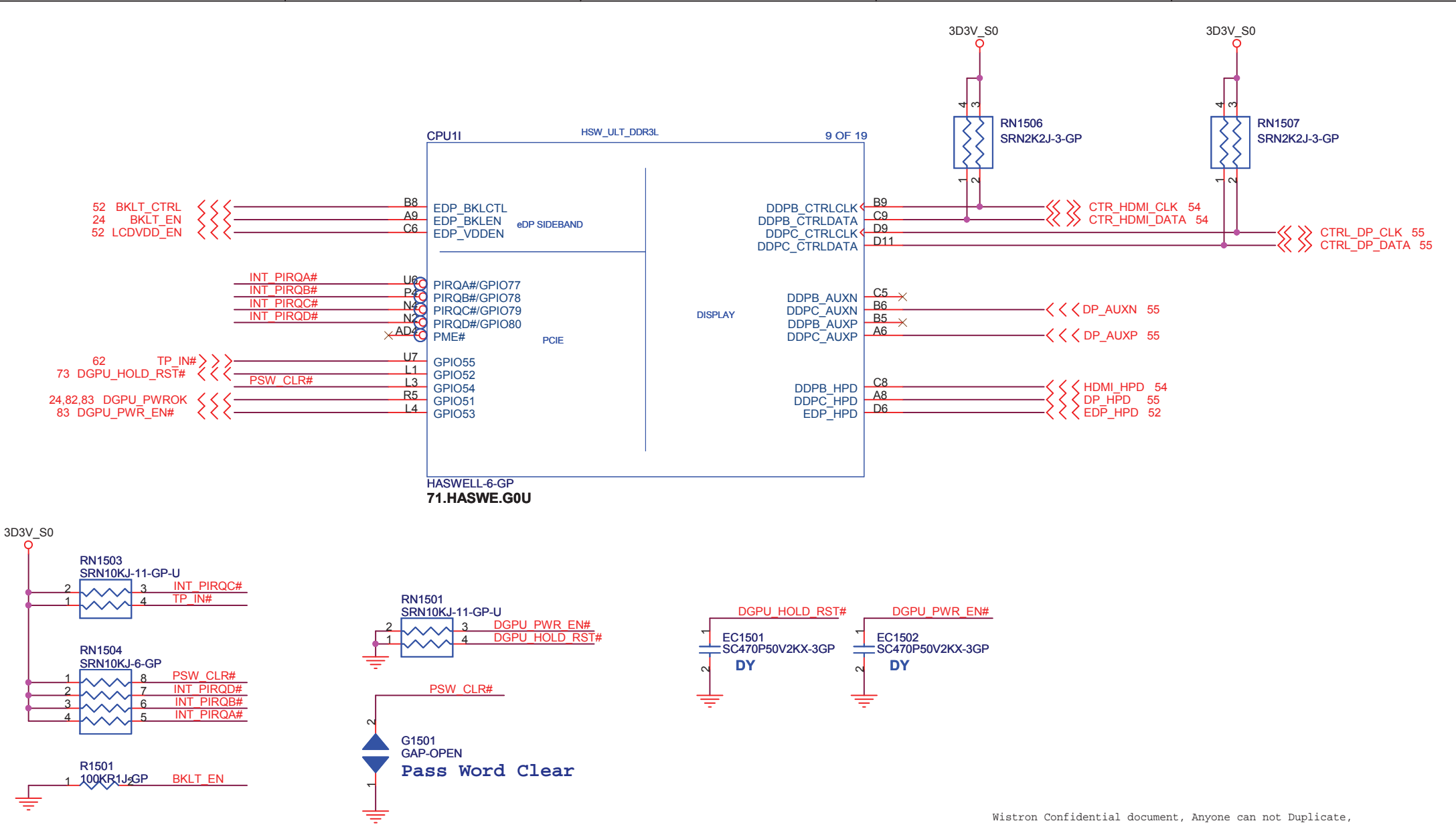


Blanking

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) SODIMM SODIMM4			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 14	of	102

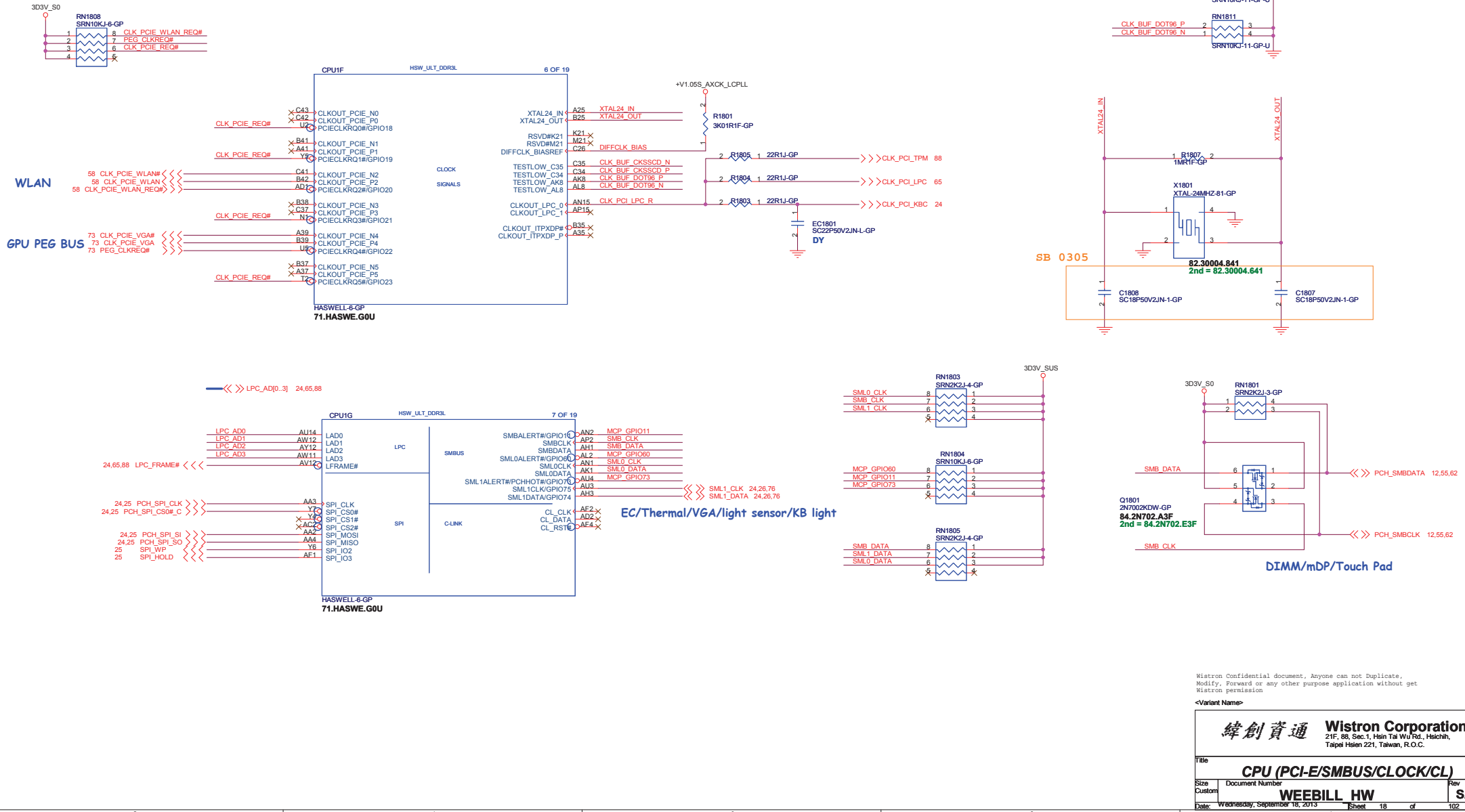


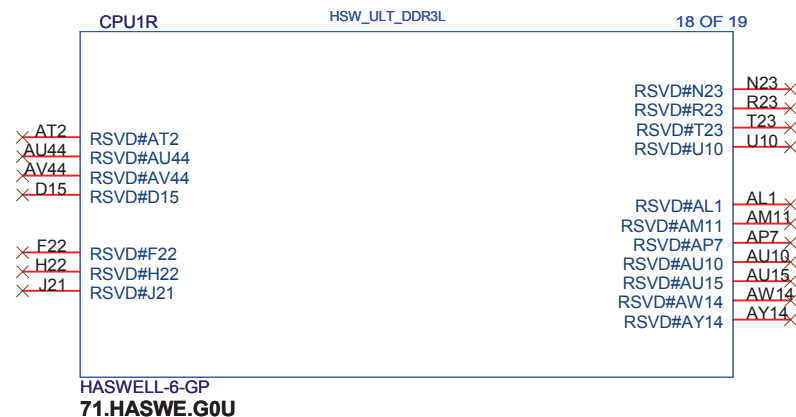
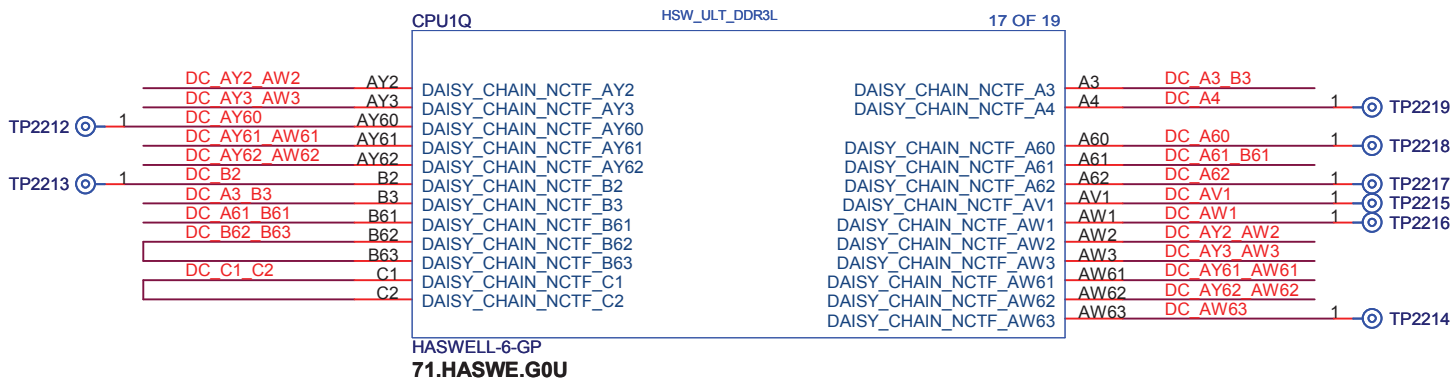
Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission
<Variant Name>

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

Title CPU(EDP SIDEBAND/GPIO/DDI)		
Size A4	Document Number WEEBILL_HW	Rev SA
Date: Wednesday, September 18, 2013	Sheet 15 of 102	

<http://sualaptop365.com/mafiafix.vn>



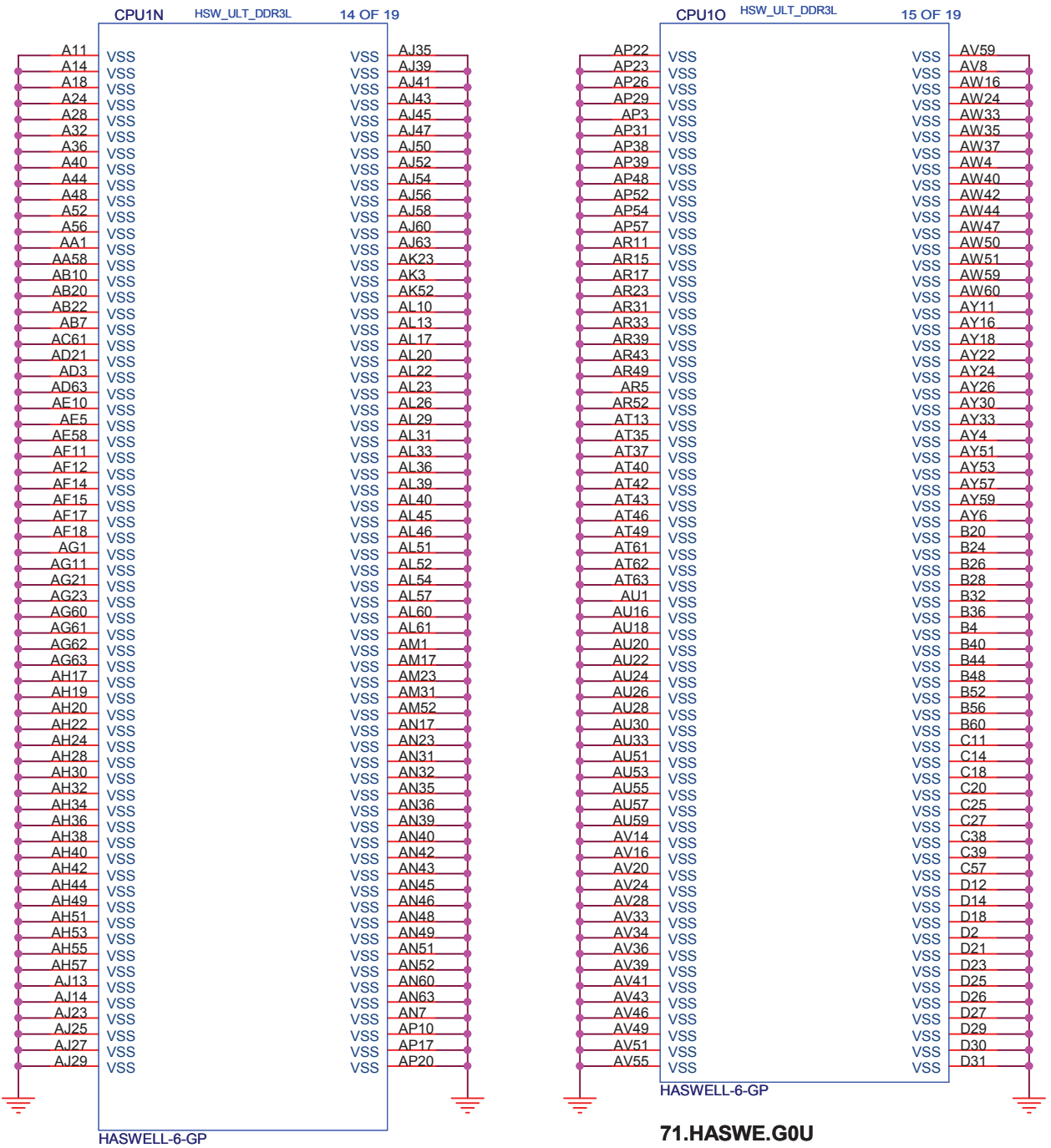


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<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 (RSVD)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 22	of 102	

SSID = PCH

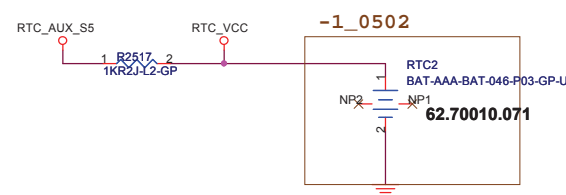
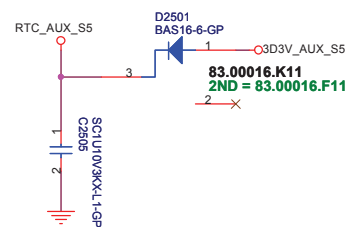
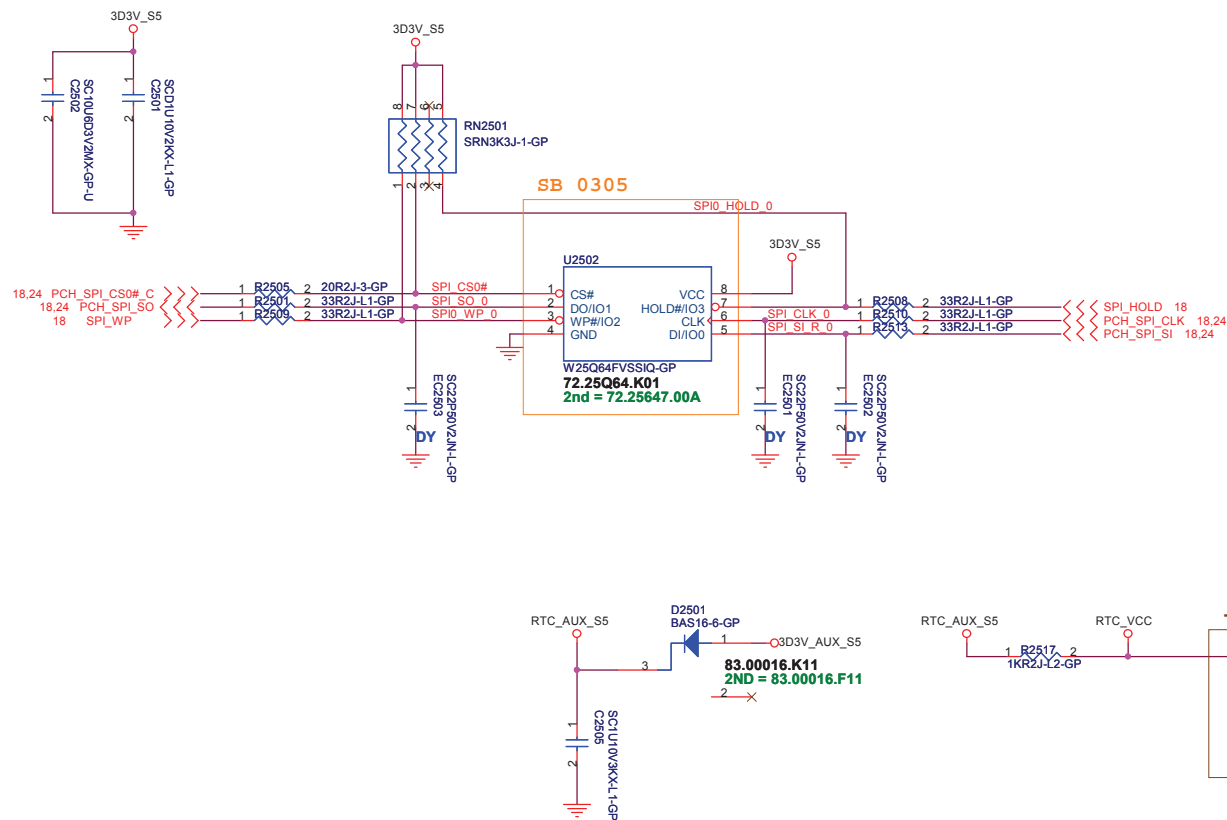


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<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			
CPU (VSS)			
Size	Document Number		Rev
A4	WEEBILL_HW		SA
Date:	Wednesday, September 18, 2013		Sheet 23 of 102

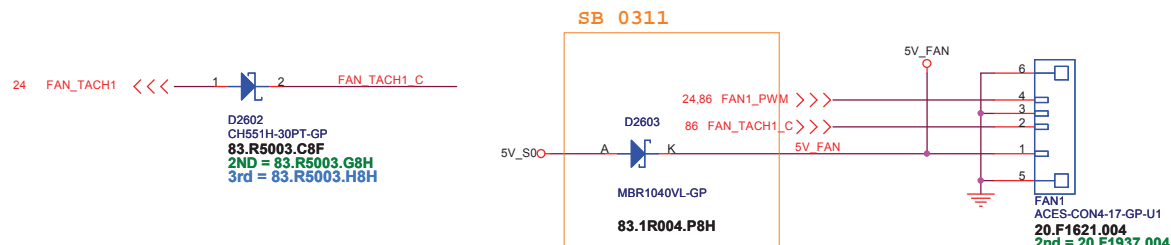
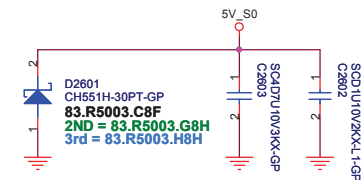
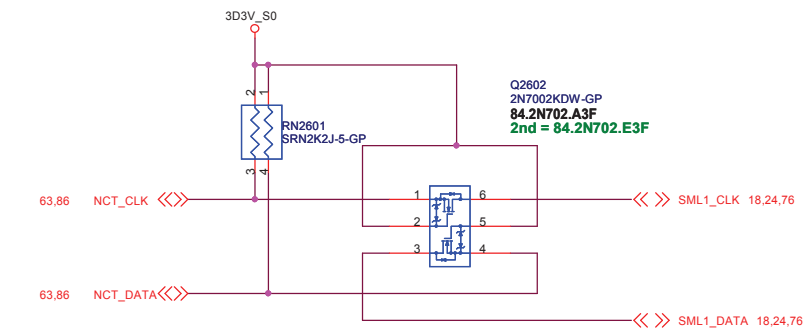
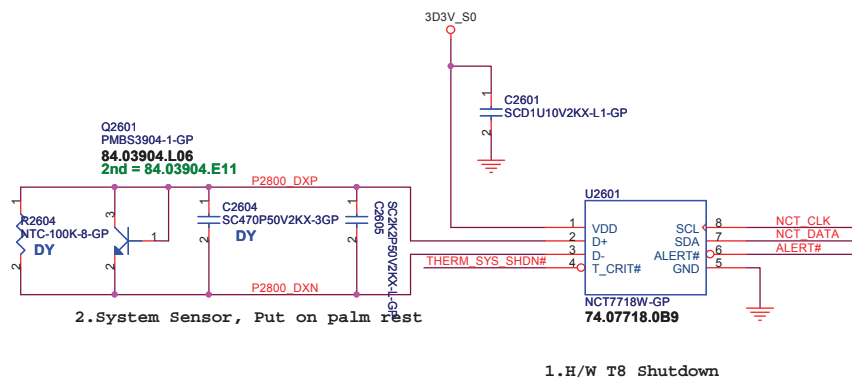
http://sualaptop365.com/ www.vinafix.vn



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			
Flash(KBC+PCH)/RTC			
Size A3	Document Number	Rev	SB
WEEBILL HW			
Date:	Wednesday, September 18, 2013	Sheet 25 of	102

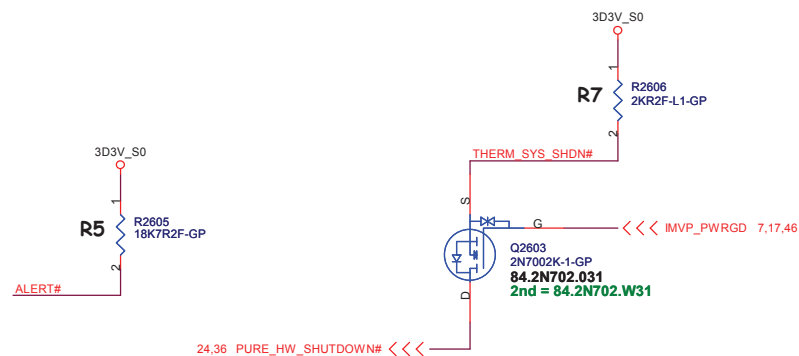


ALERT# /T CRIT#
Pull-up Resistor

	R7				
	2Kohm	7.5Kohm	10.5Kohm	14Kohm	18.7Kohm
R5	77°C	87°C	97°C	107°C	117°C
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

T8=85 degree



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 Thermal 7718/Fan Controller P2793

Size A3 Document Number WEEBILL HW SA

Date: Wednesday, September 18, 2013 Sheet 26 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

Audio AMP 1001

Size
A4

Document Number

WEEBILL_HW

Rev
SA

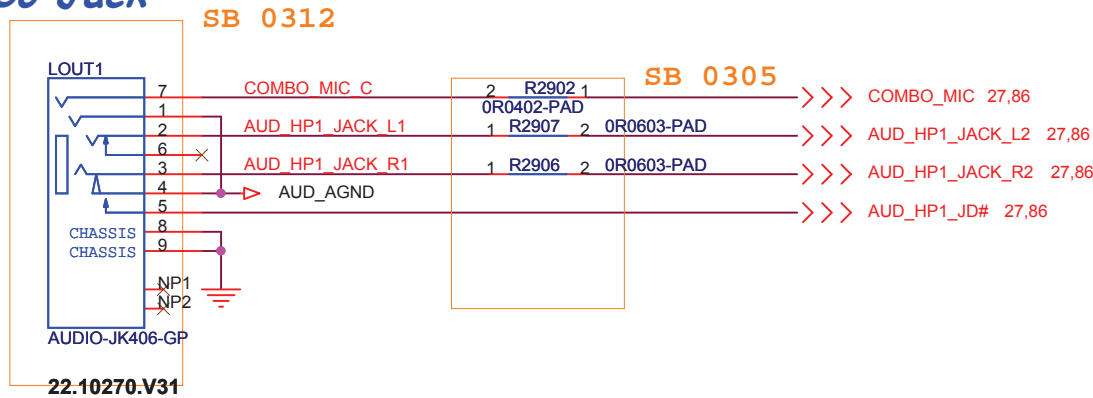
Date: Wednesday, September 18, 2013

Sheet 28 of 102

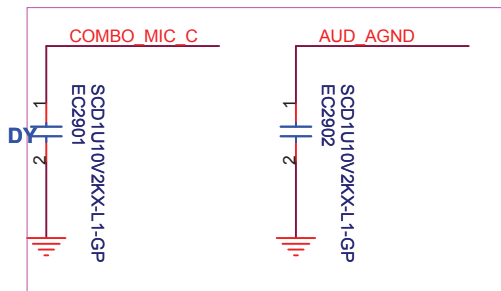
Speaker



Combo Jack



SA_1224



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			
<div>Audio Jack</div>			
Size A4	Document Number <div>WEEBILL_HW</div>		Rev <div>SA</div>
Date: Wednesday, September 18, 2013	Sheet	29 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 LAN(RTL8411)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 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>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title (LAN+VGA) CONNECTOR			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 31	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)Card Reader			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 32	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

CARD Reader CONN

Size
A4

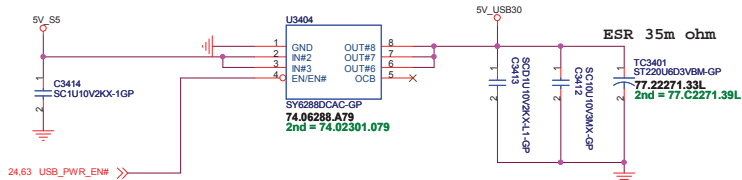
Document Number

WEEBILL_HW

Rev
SA

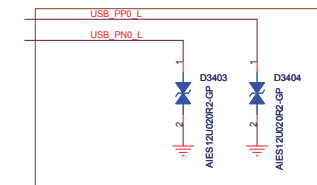
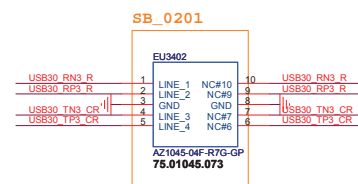
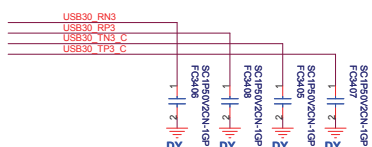
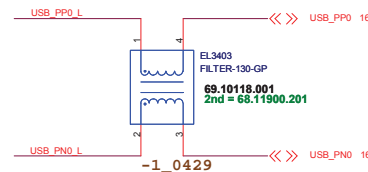
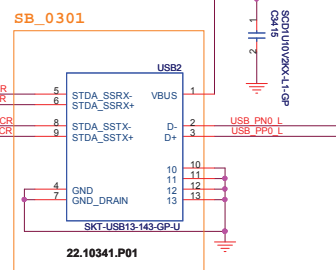
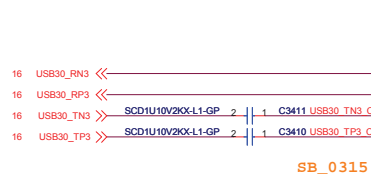
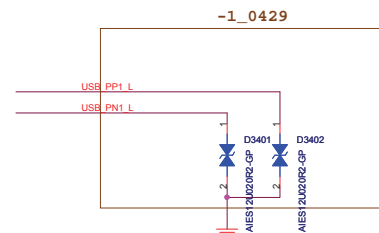
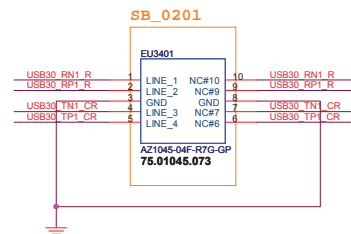
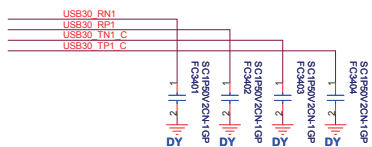
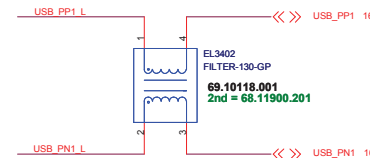
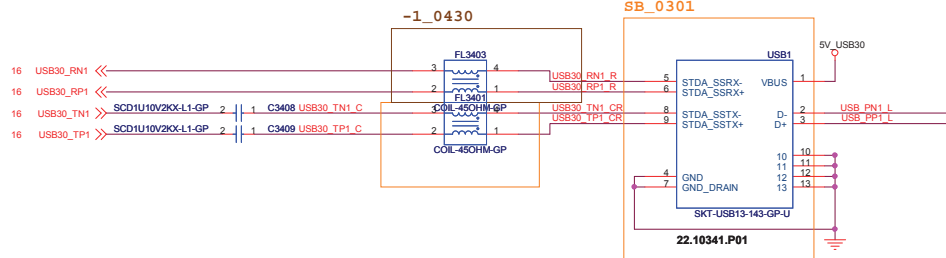
Date: Wednesday, September 18, 2013

Sheet 33 of 102



USB 3.0 Connector Pin definition	
1	POWER
2	USB 2.0 D-
3	USB 2.0 D+
4	GND
5	StdA_SSRX- SuperSpeed RX
6	StdA_SSRX+ SuperSpeed RX
7	GND
8	StdA_SSTX- SuperSpeed TX
9	StdA_SSTX+ SuperSpeed TX

SB_0315



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,
Taipei Hsien 301, Taiwan, R.O.C.

Title	
USB 2.0 / 3.0 Port	
Rev	SB
Doc No.	WE11111111
Rev	1
Page	34 of 102

<http://sualaptop365.com/fix/vn>

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 CHARGER

Size
A4

Document Number

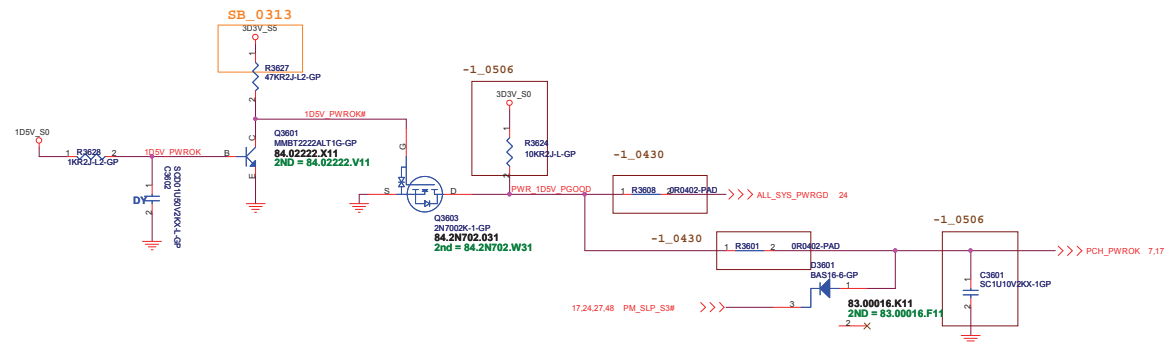
WEEBILL_HW

Rev
SA

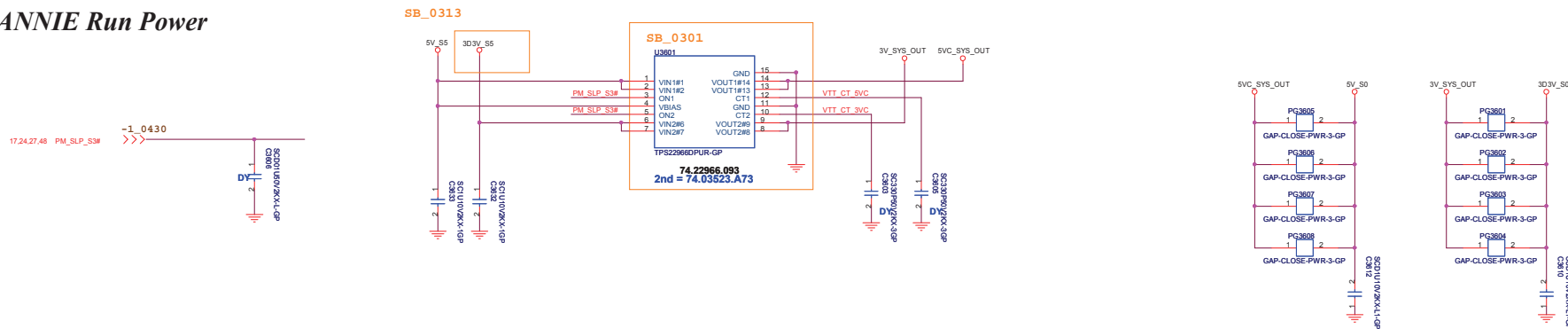
Date: Wednesday, September 18, 2013

Sheet 35 of 102

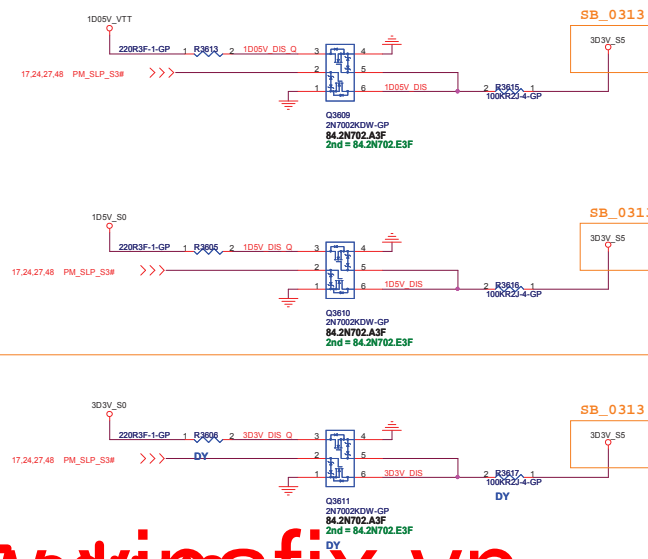
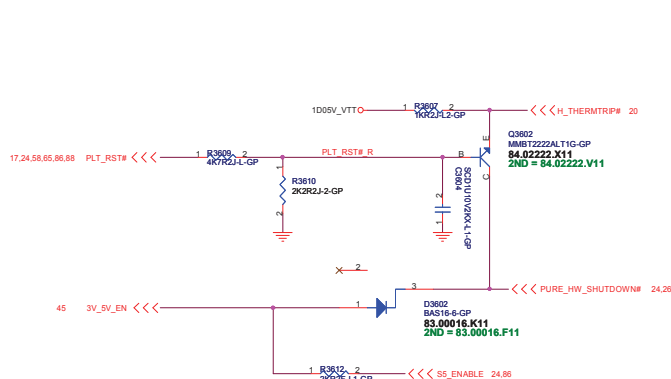
Power Sequence

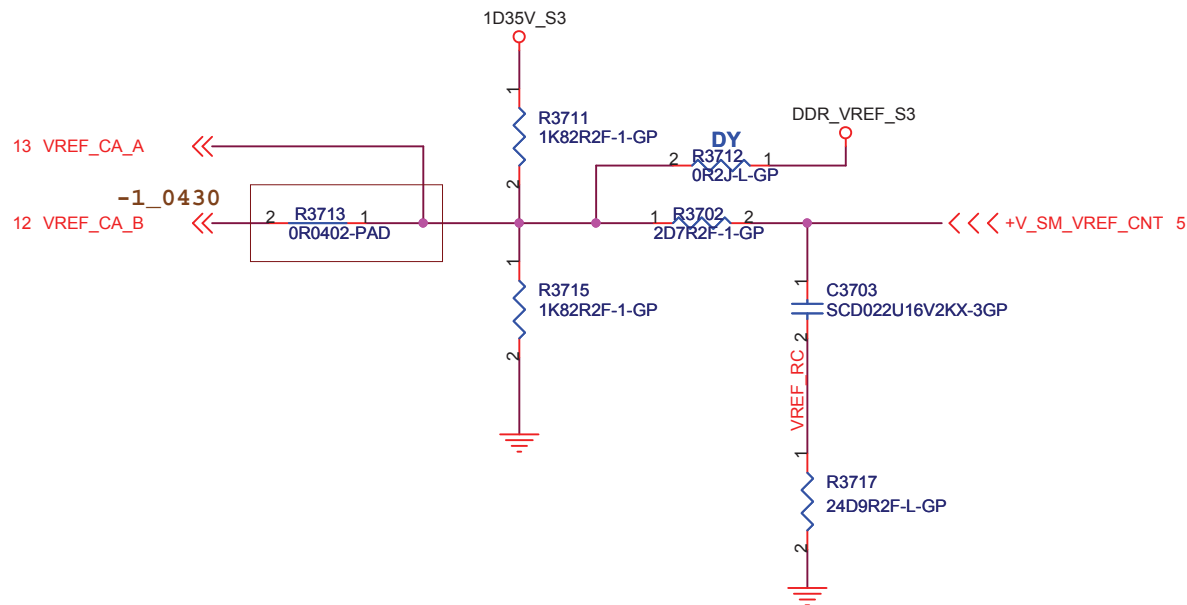


ANNIE Run Power



Discharge circuit

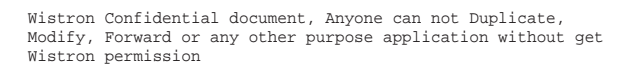




Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<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 OCP / S3 reduction	
Size A4	Document Number WEEBILL_HW
Date: Wednesday, September 18, 2013	Rev SA
Sheet 37 of 102	



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

DS3

Rev

WEEBILL HW

SA

102

Power Sequence

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

1D05 M

Size
A4

Document Number

WEEBILL_HW

Rev

SA


Date: Wednesday, September 18, 2013

Sheet 39 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 Connected Standby1			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 40	of	102

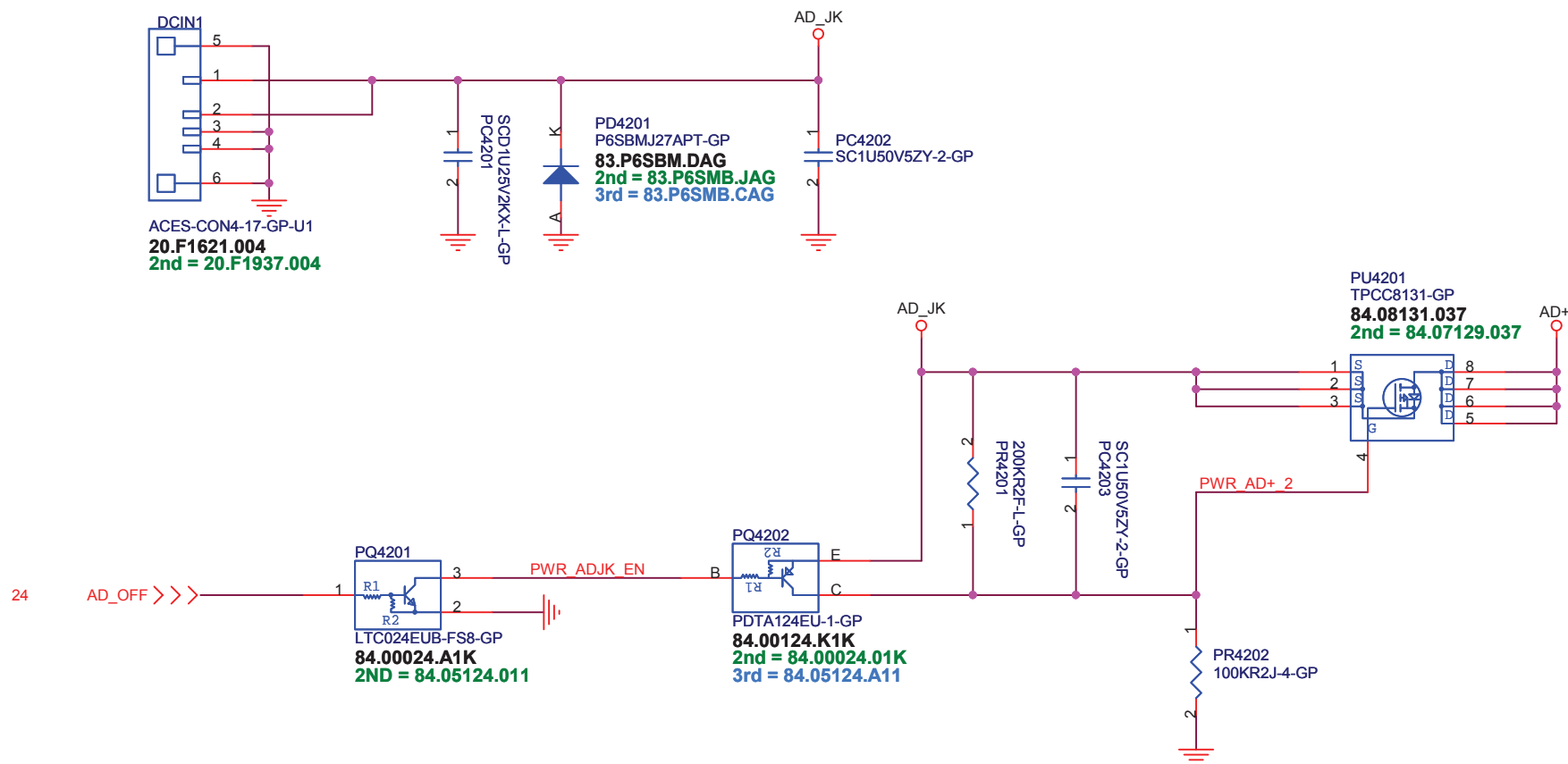
Blanking

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 Connected Standby2			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 41	of	102

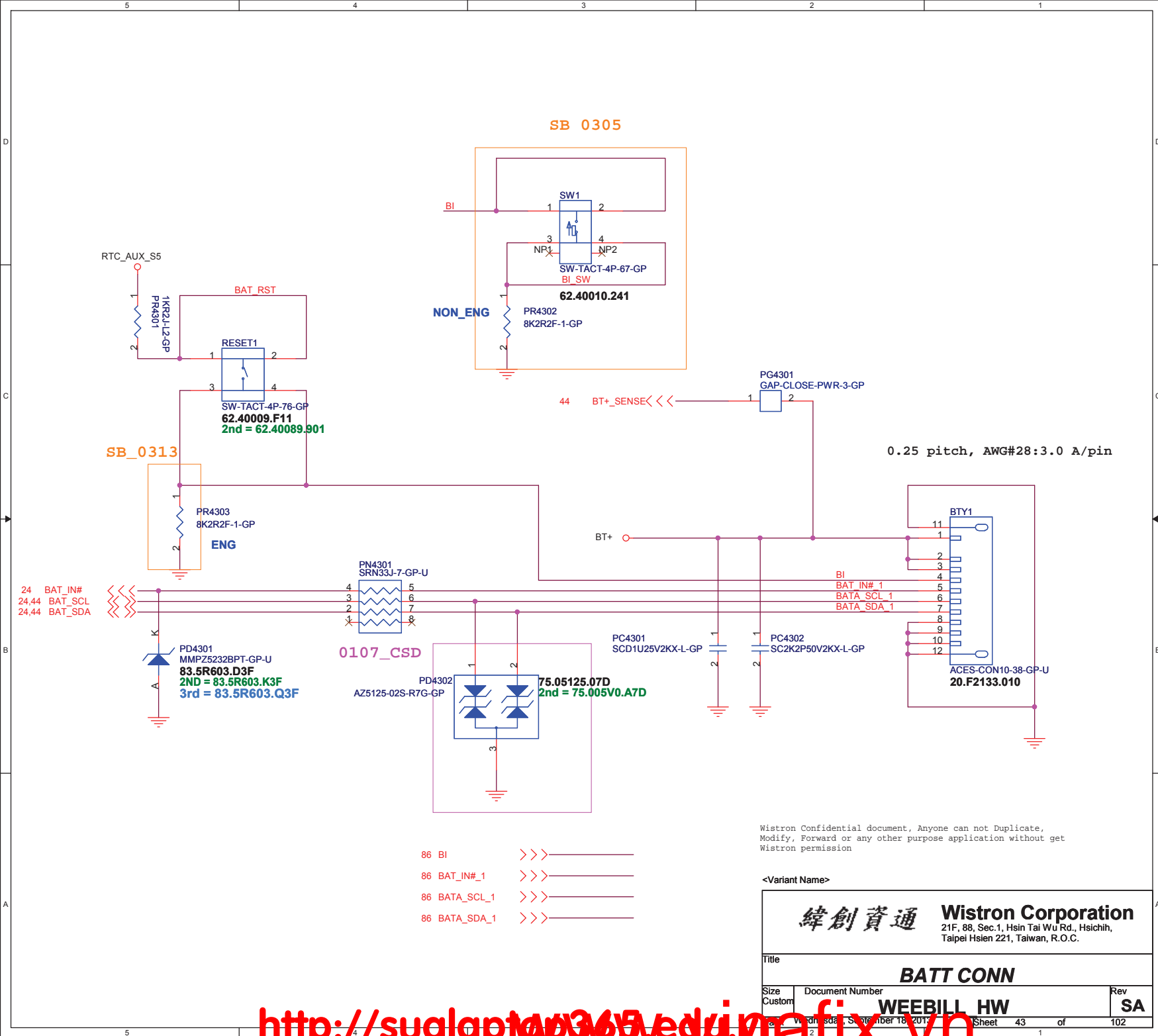
0.4 pitch, AWG#28:2.0 A/pin



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

<Variant Name>

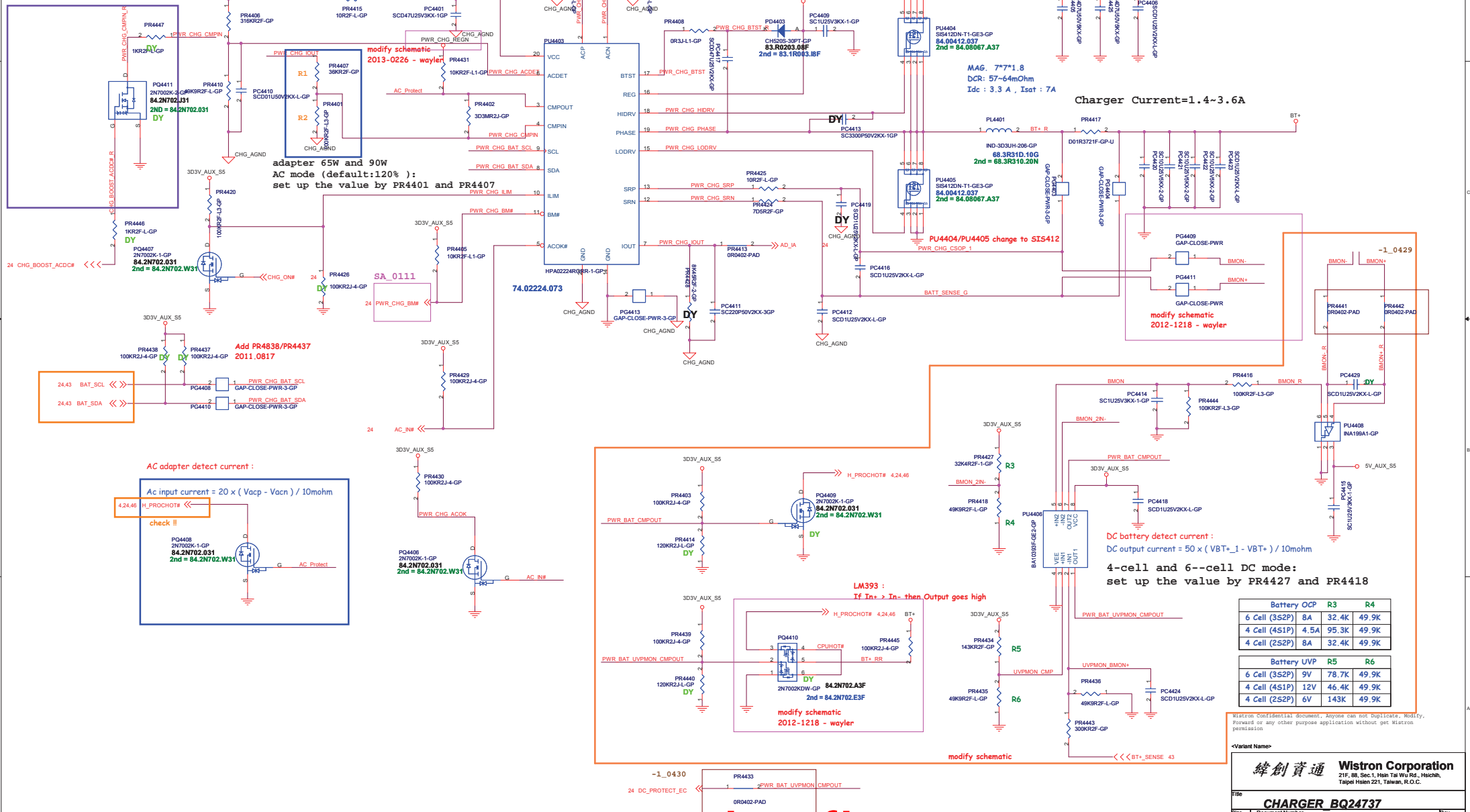
緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title DCIN JACK			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 42	of 102



SSID = Charger

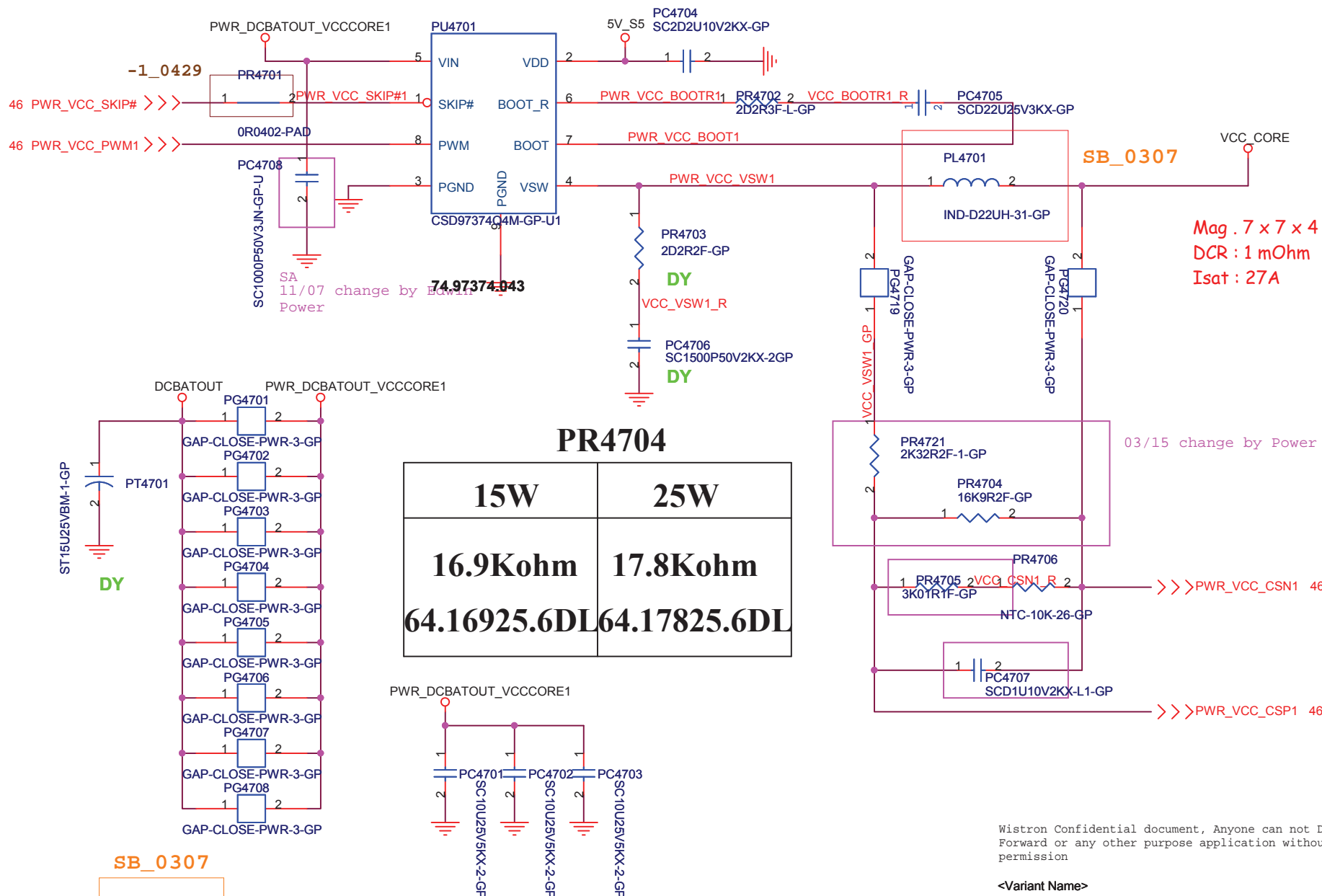
AD+ total power	R1	R2
65w	36K	100K
90w	90K9	100K

change the table



<http://sualaptop365.com>

www.vimafix.vn

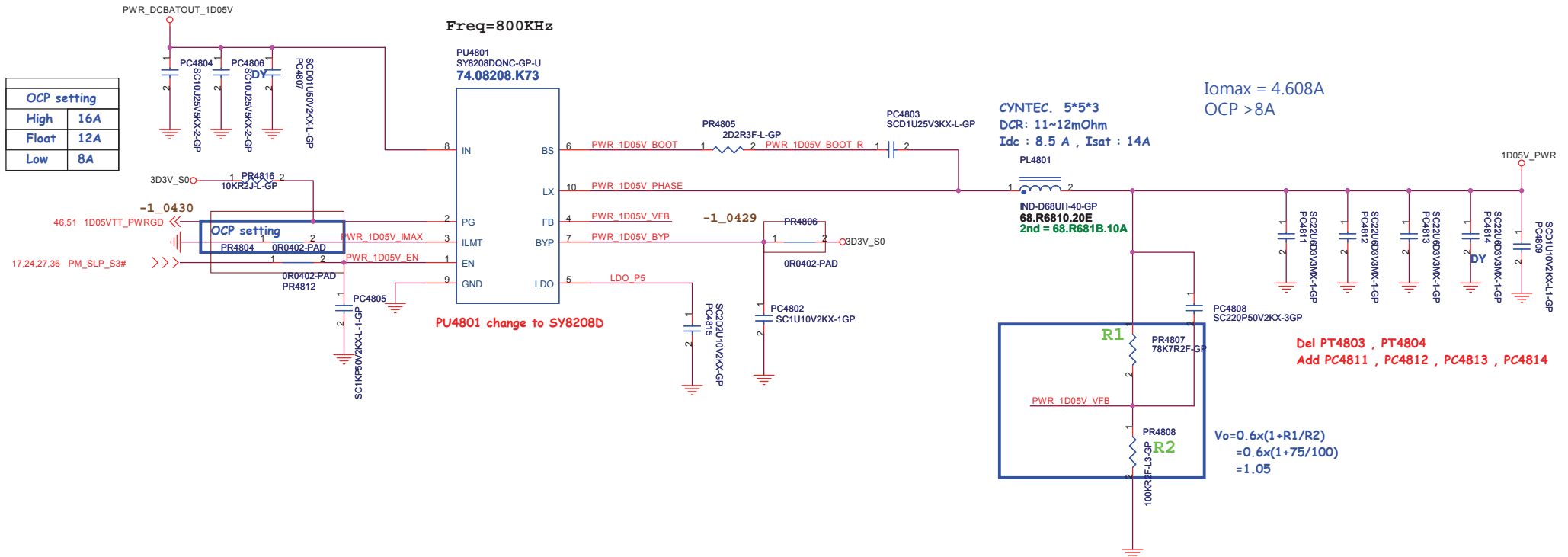
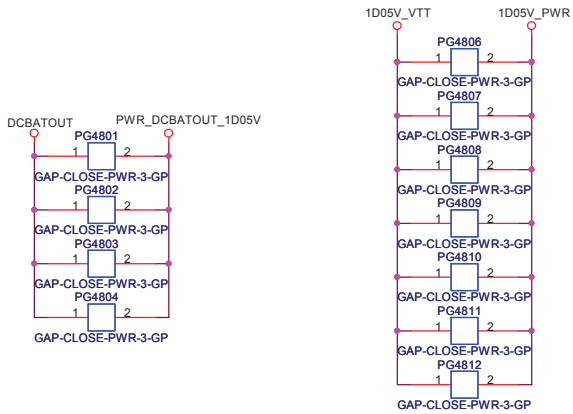


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<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			
TPS51622_CPUCORE(2/2)			
Size A4	Document Number WEEBILL HW		Rev SB
Date:	Wednesday, September 18, 2013	Sheet 47 of	102

SY8208D for 1D05V



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

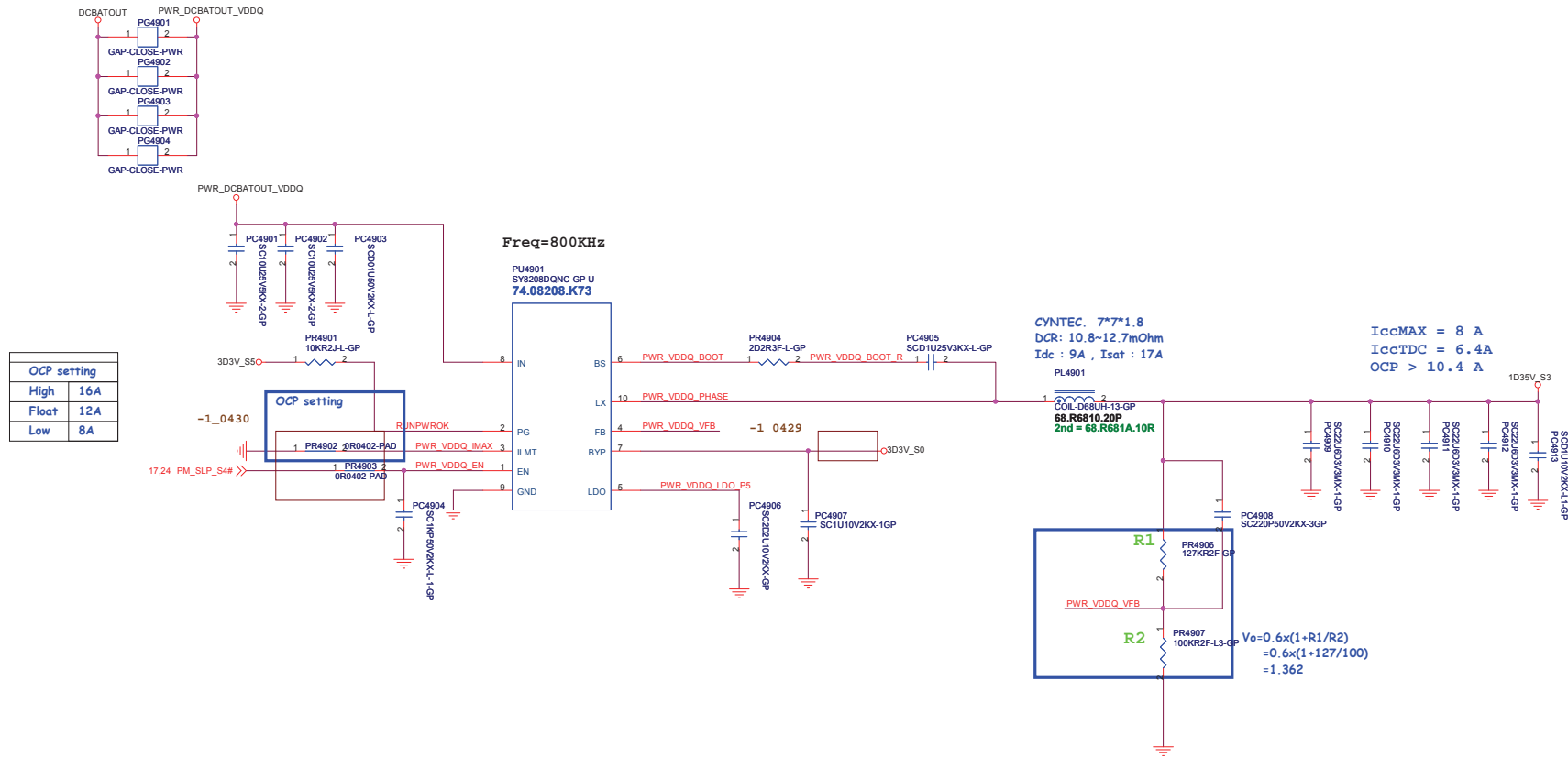
<Variant Name>

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

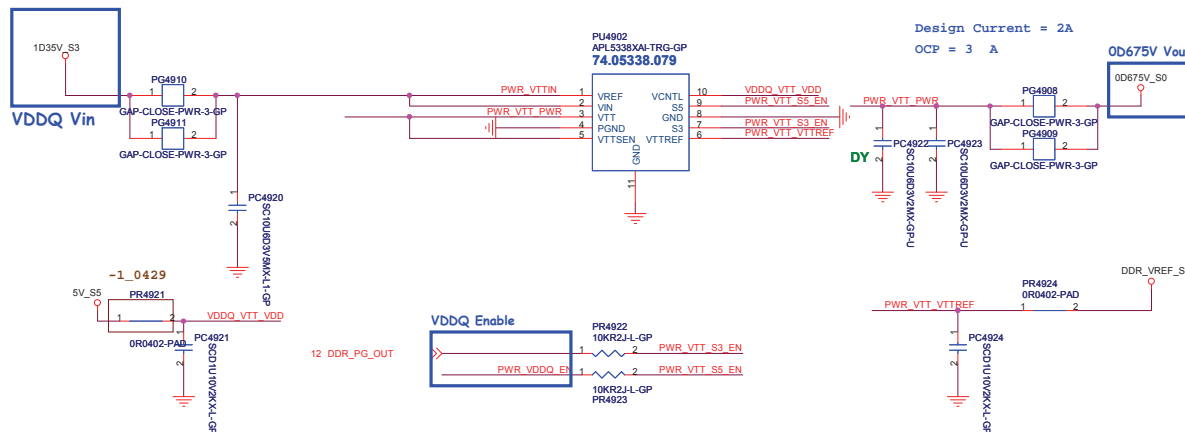
Title			
DC to DC 1D05V(SY8208D)			
Size A3	Document Number		Rev
	WEEBILL HW		SA
Date:	Wednesday, September 18, 2013	Sheet 48 of	102

<http://sualaptop365.edu.vn>

SSID = PWR.Plane.Regulator_1p35v0p675v



+0.675VS
Iomax: 1.2A



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, Hei Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
SY8208D+G2997(VDDQ VTT)			
Size	Document Number	Rev	SA
Custom	WEEBILL HW		
Date:	Wednesday, September 18, 2013	Sheet	49 of 102

http://sualaptop365.com/mafrix.vn

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

iSSD power

Size
A4

Document Number

WEEBILL_HW

Rev

SA

Date: Wednesday, September 18, 2013

Sheet 50 of 102

Sheet 51 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 Board Connector

Size
A4

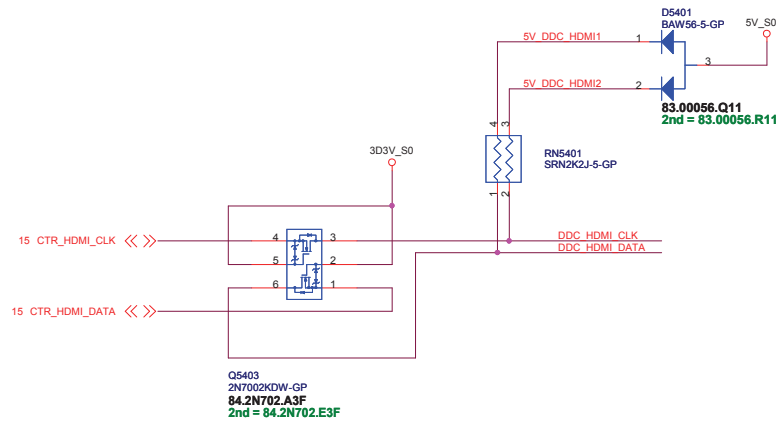
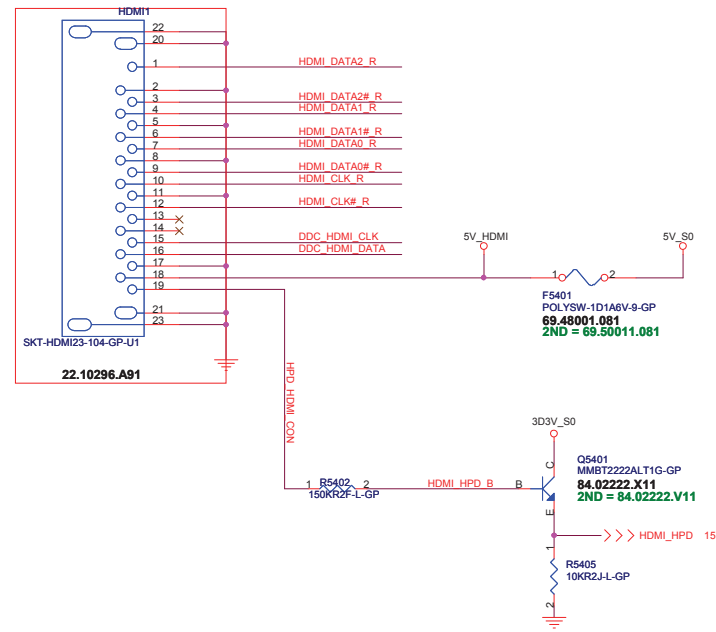
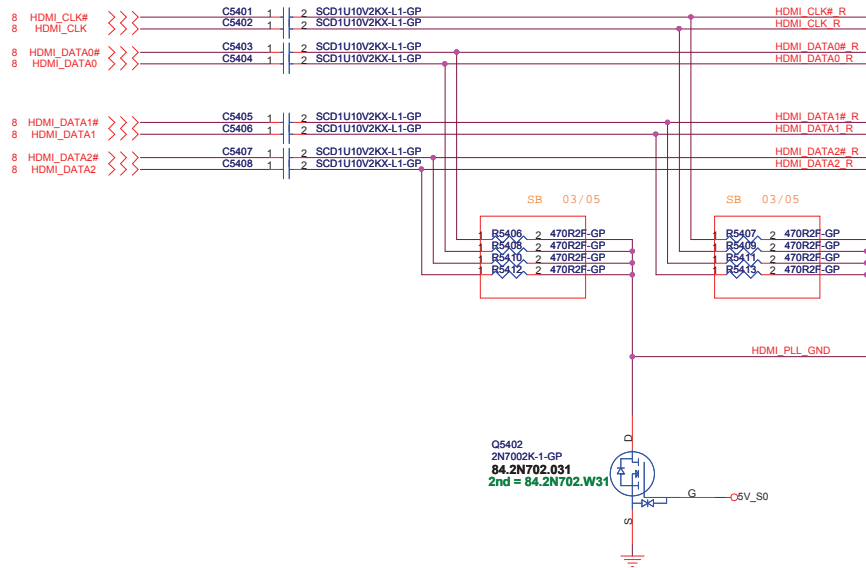
Document Number

WEEBILL_HW

Rev
SA

Date: Wednesday, September 18, 2013

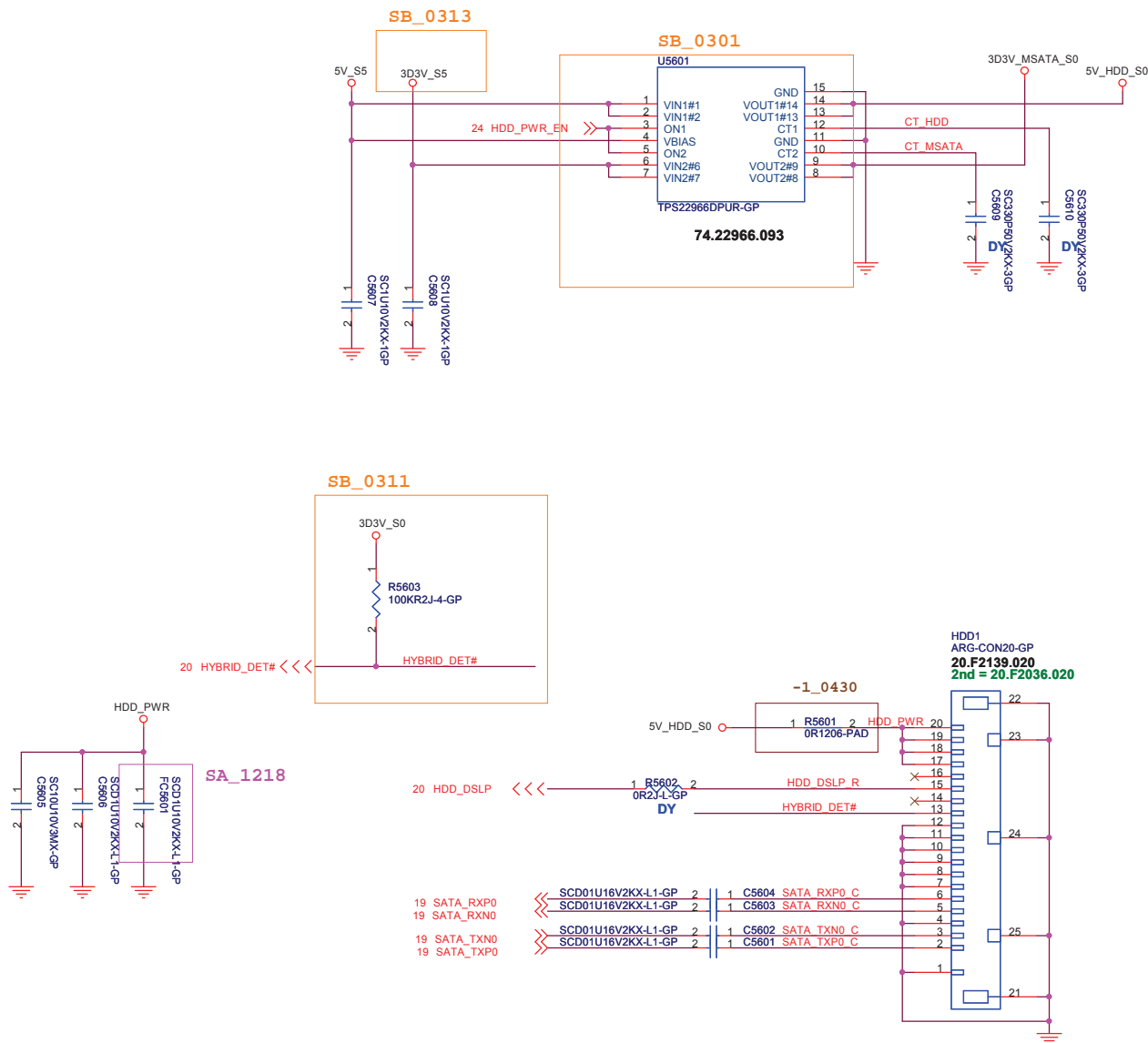
Sheet 53 of 102



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.	
File	HDMI Level Shifter/Connector
Size	Document Number
Custom	WEEBILL HW
Date	Wednesday, September 18, 2013
Sheet	54 of 102
Rev	SA



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			
HDD / ODD / NGFF SSD			
Size A3	Document Number		Rev
WEEBILL HW		SA	
Date:	Wednesday, September 18, 2013	Sheet 56 of 102	

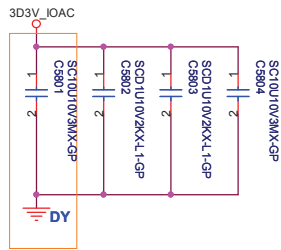
Blanking

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

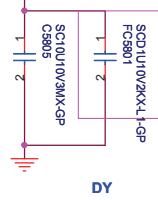
<Variant Name>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
E-SATA			
Size A4	Document Number WEEBILL_HW		Rev SA
Date:	Wednesday, September 18, 2013		Sheet 57 of 102

SB 0322



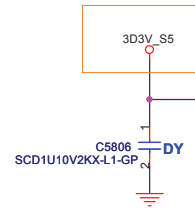
1D5V_S0



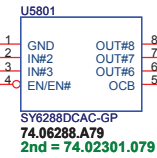
SA 1218

SB 03/01

SB_0313



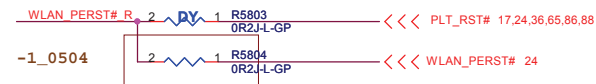
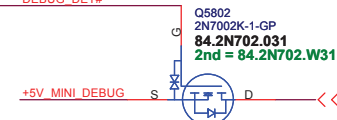
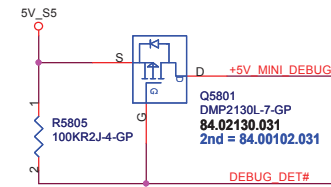
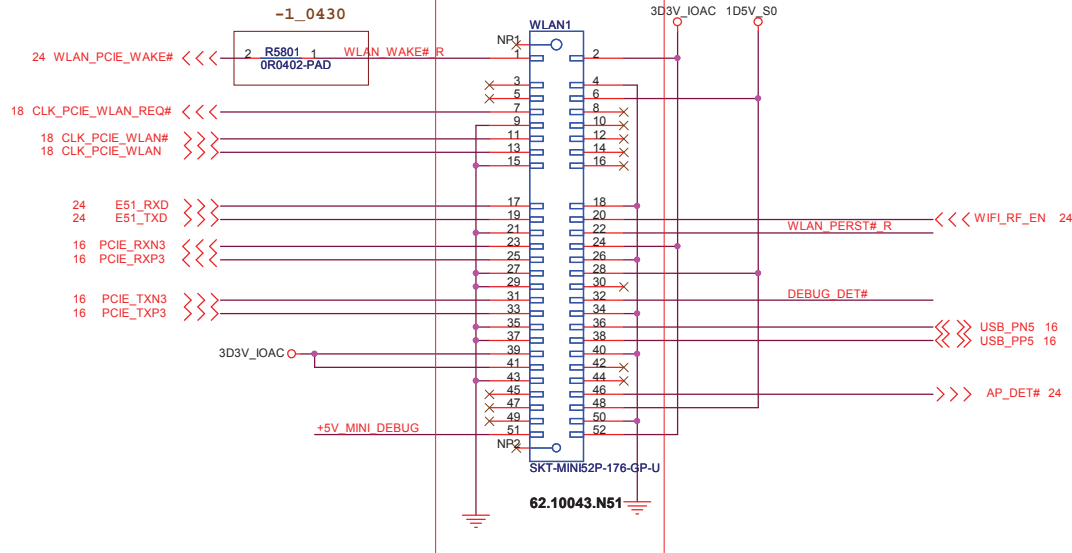
24 WLAN_PWR_EN# >>>



-1 0430



3D3V_IOAC

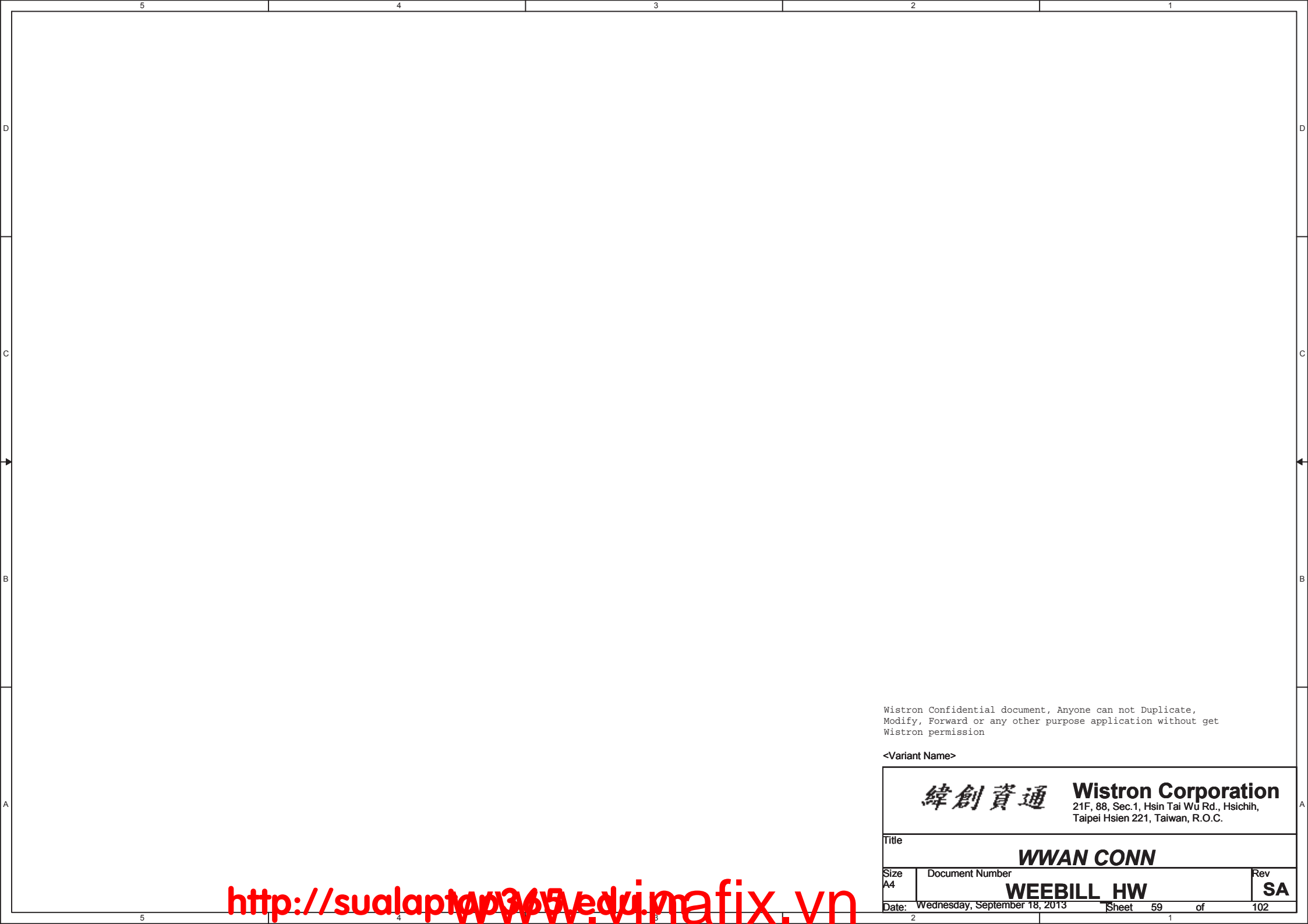


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<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	
MINICARD(WLAN)		Size	
Document Number		Rev	
WEEBILL HW		SA	
Date: Wednesday, September 18, 2013		Sheet 58 of 102	

http://sualaptop365.com/ www.vinafix.vn



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

<Variant Name>

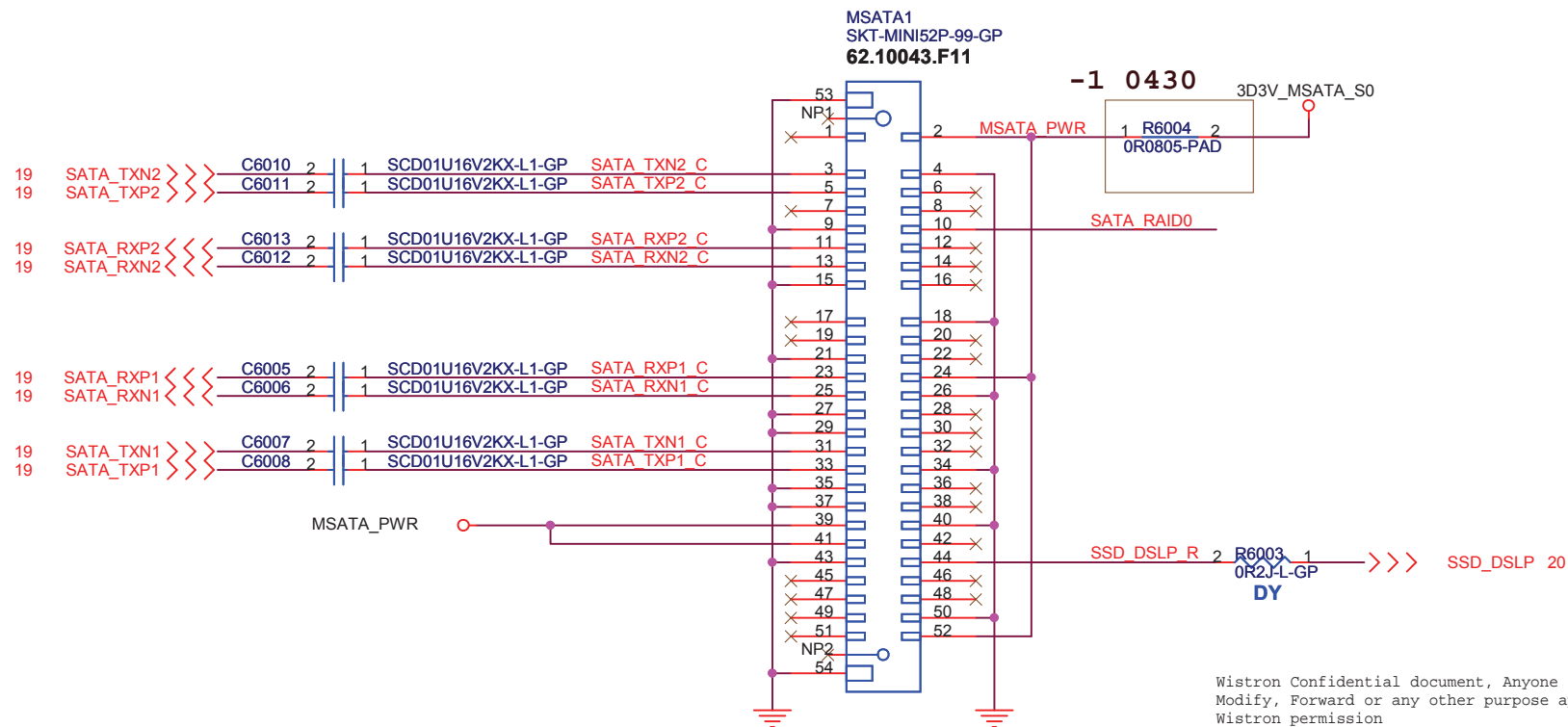
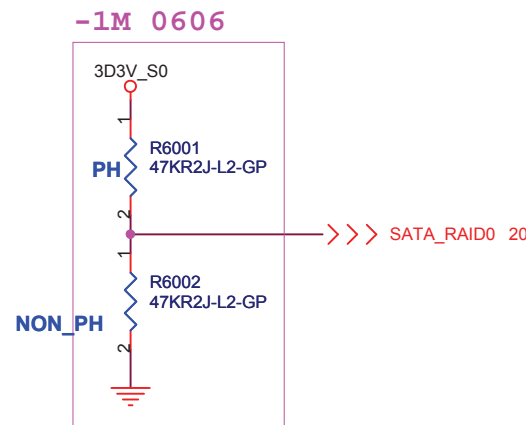
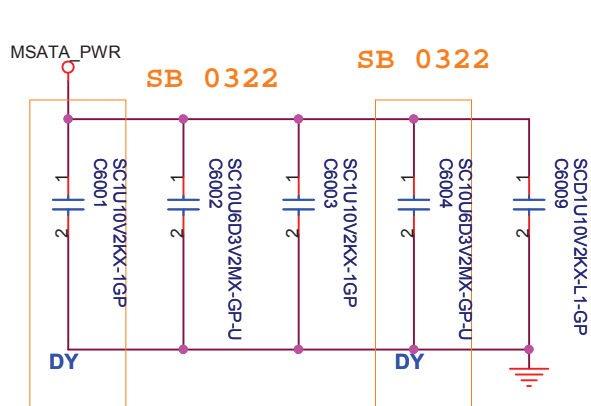
緯創資通

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

Title

WWAN CONN

Size A4	Document Number WEEBILL_HW	Rev SA
------------	--------------------------------------	------------------



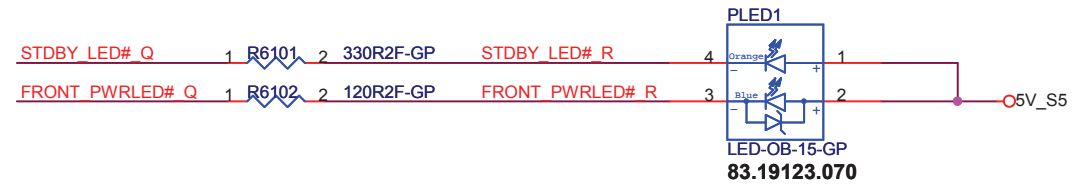
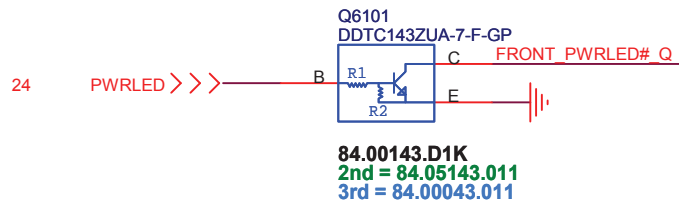
Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission
<Variant Name>

緯創資通

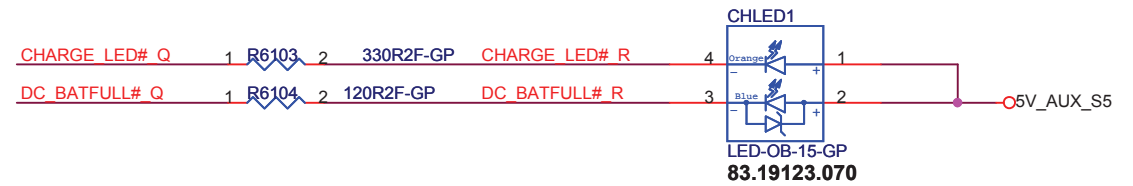
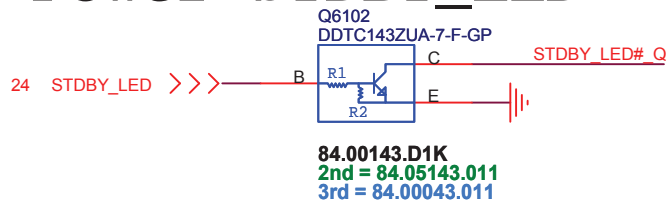
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title		
mSATA Connector		
Size A4	Document Number WEEBILL_HW	Rev SA
Date: Wednesday, September 18, 2013	Sheet 60	of 102

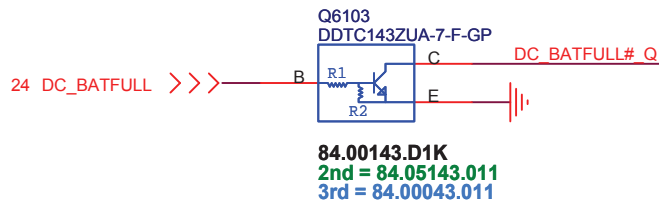
Power LED



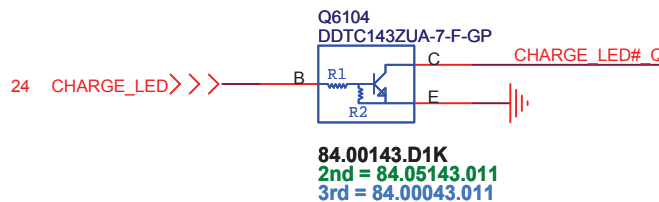
Power STDBY_LED



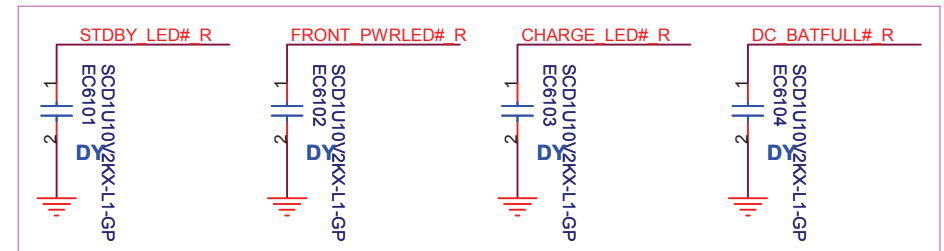
Battery LED (DC_BATFULL)



Battery LED (CHARGE)



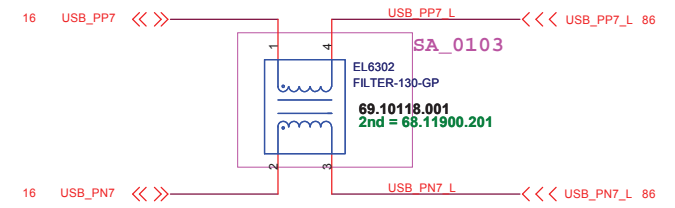
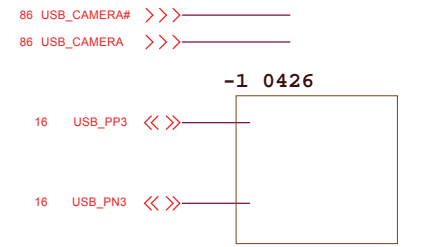
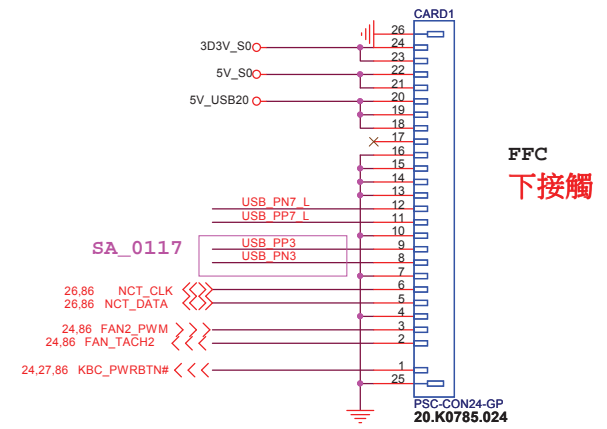
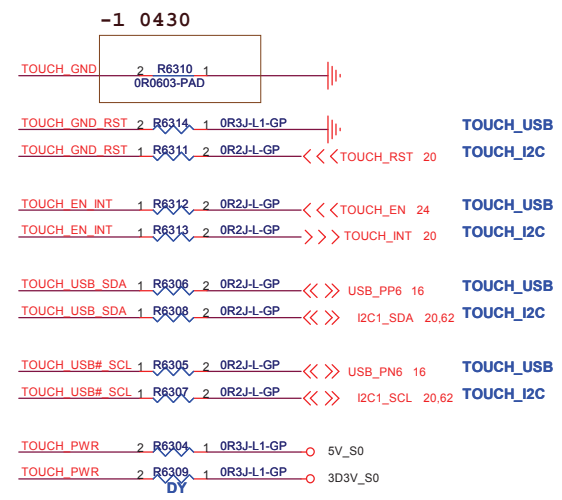
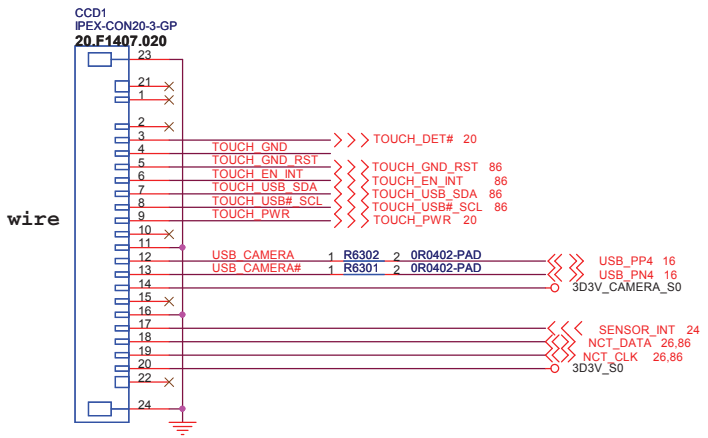
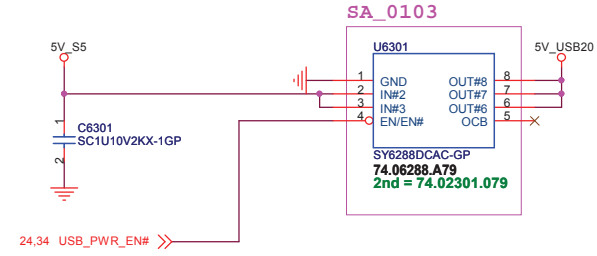
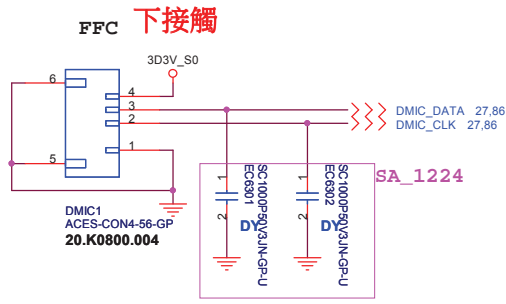
SA_1224



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			
<div>LED Bard/Power Button</div>			
Size A4	Document Number		Rev
	WEEBILL_HW		SA
Date:	Wednesday, September 18, 2013	Sheet 61 of	102

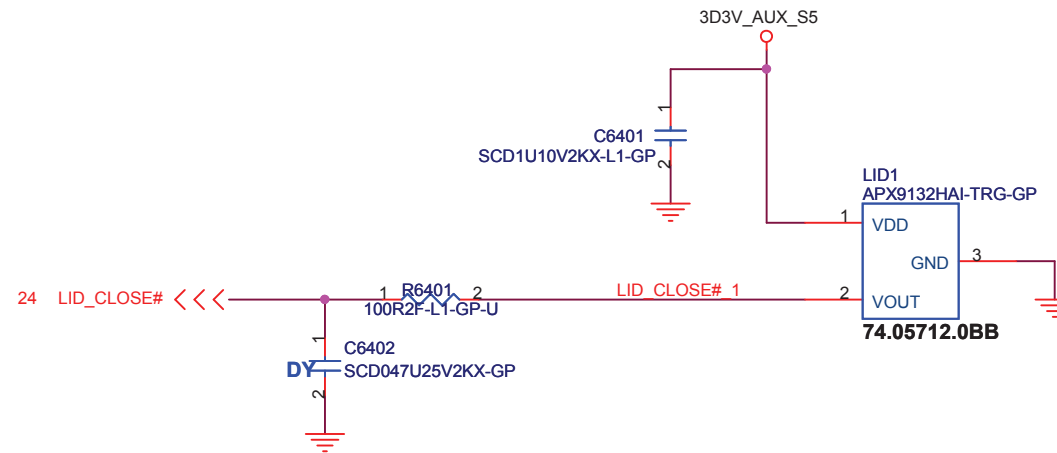


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

<Variant Name>


緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
IO Board Connector	
Title Size A3 Date: Wednesday, September 18, 2013	Document Number WEEBILL HW Sheet 63 of 102
Rev SA	

<http://sualaptop365.com/mafiafix.vn>



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.	
Hall Sensor	
Size A4	Document Number WEEBILL_HW
Date: Wednesday, September 18, 2013	Sheet 64 of 102
Rev SA	



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 WEEBILL_HW		Rev SA
Date:	Wednesday, September 18, 2013		Sheet 65 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 SENSOR HUB			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 66	of 102

Free Fall Sensor

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

Blanking

```
SDO="H"; address="3Ah"  
*SDO="L"; address="38h"
```

```
*CS="H"; mode="I2C"  
CS="L"; mode="SPI"
```

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

G Sensor

Size
A4

Document Number

WEEBILL_HW

Rev
SA


Date: Wednesday, September 18, 2013

Sheet 67 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 Thunderbolt (1/5)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 68 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 Thunderbolt (2/5)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 69 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 Thunderbolt (3/5)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 70 of	102

Blanking

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


<Variant Name>

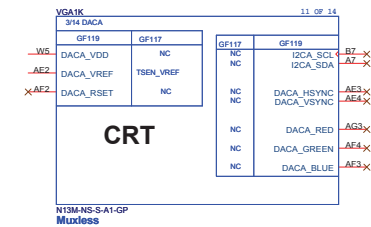
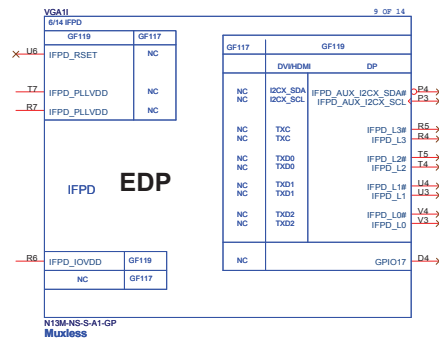
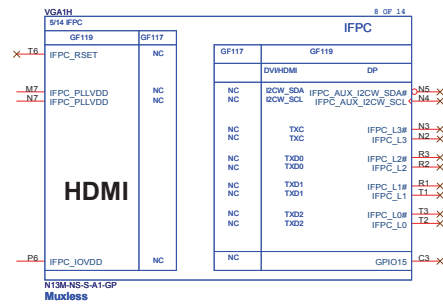
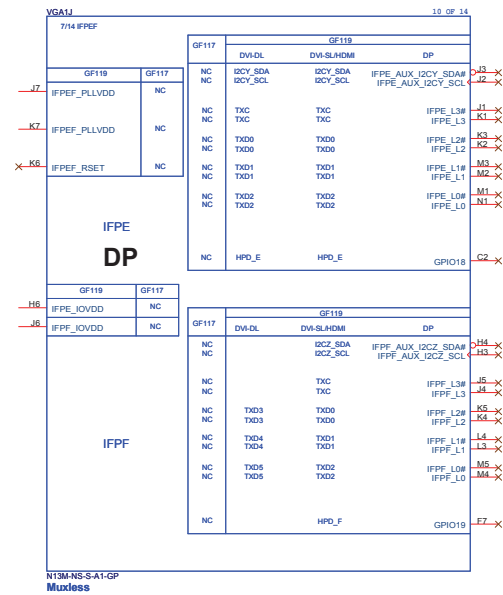
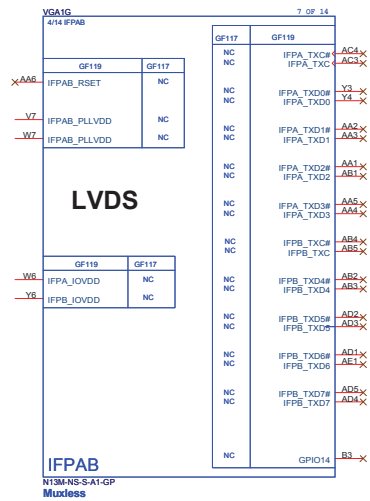
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (4/5)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 71	of	102

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 Thunderbolt (5/5)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 72	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, 8B, Sec.1, Hsin Tai Wu Rd., Hsichang, Taipei Hsien 221, Taiwan, R.O.C.			
Title: GPU (DIGITALOUT)			
Size: A2	Document Number: WEEBILL_HW	Rev: SA	
Date: Wednesday, September 18, 2013	Sheet: 74	of	102

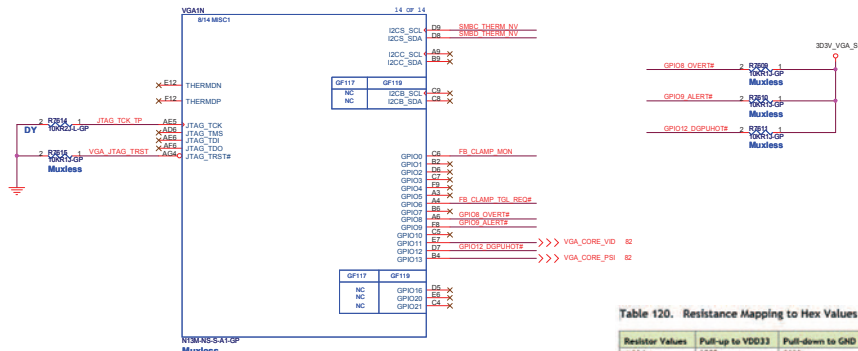
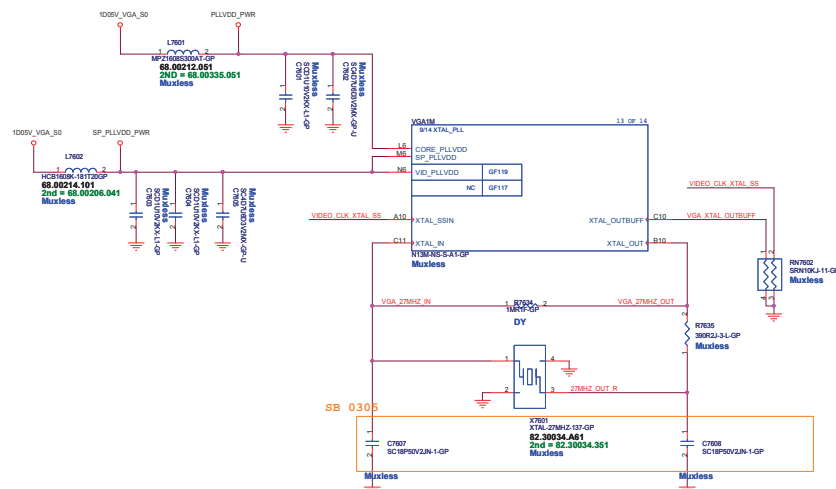
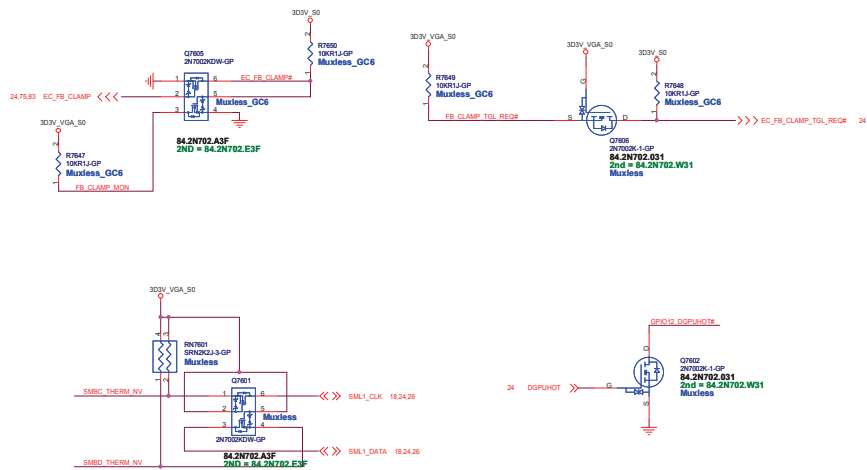


Table 120. Resistance Mapping to Hex Values

Resistor Values	Pull-up to VDD33	Pull-down to GND
4.99 k	1000	0000
10.0 k	1010	0001
15.0 k	1010	0010
20.0 k	1011	0011
24.9 k	1100	0100
30.1 k	1101	0101
34.8 k	1110	0110
45.3 k	1111	0111

VRAM Table(N14M-LP)

	Hynix 2G 0110(0x6) H5TQ2G	Hynix 2G 0100(0x4) H5TC2G
ROM_SI	34.8Kohm	24.9Kohm
	64.34825.6DL	64.24925.6DL

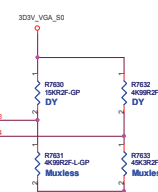
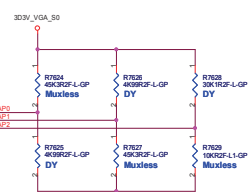
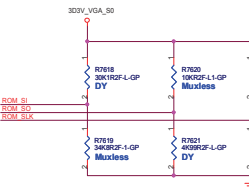


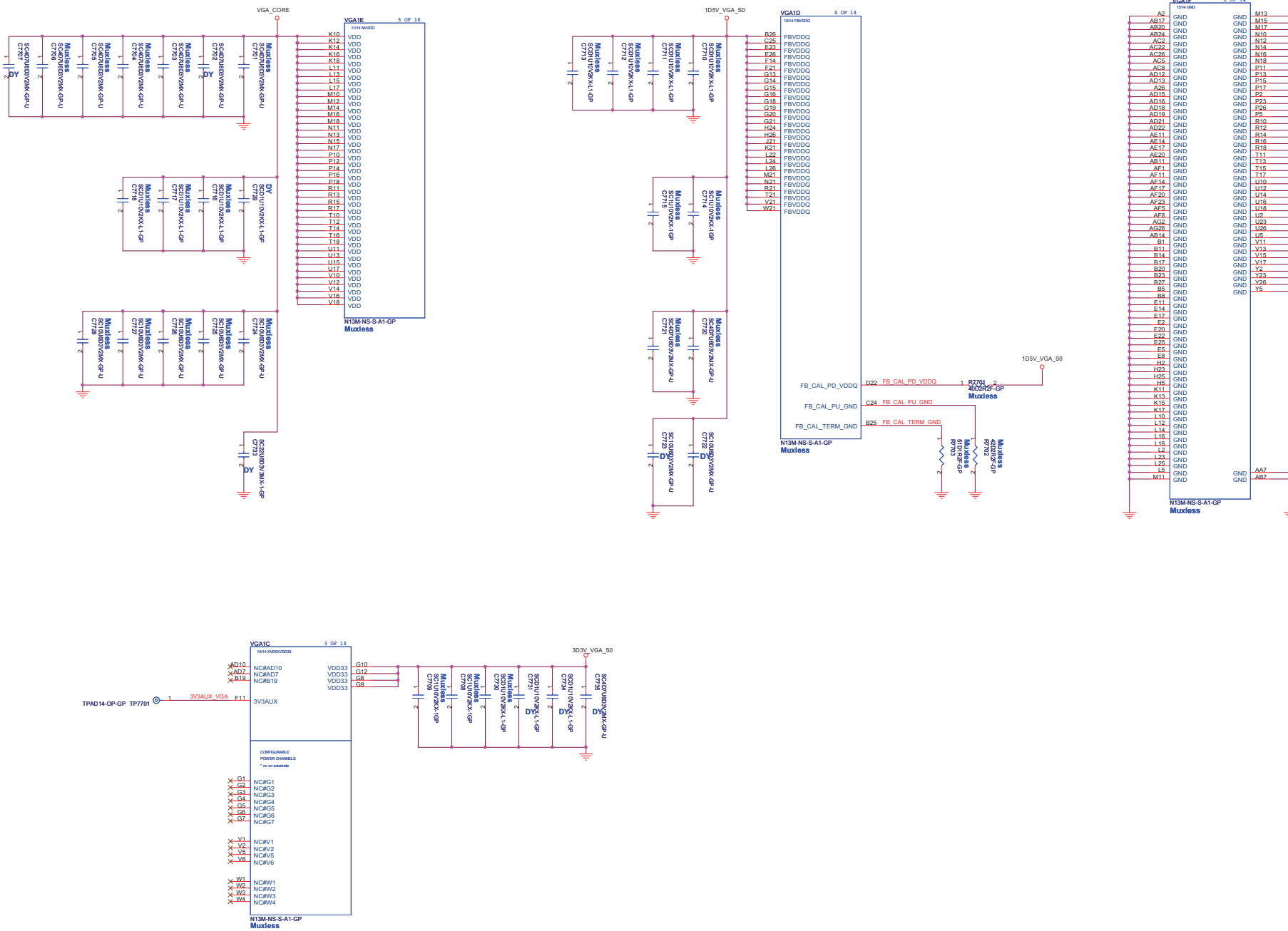
Table 114. GB2-64 and GB4-128 GPIO Description

Pin Name	Normal Function	I/O	Functional Description	Recommended Default Pull-up or Pull-down
GPIO0	FB_CLAMP_MCHN	I	FB Clamp event	
GPIO1	MEM_VDD_CTL	O	Memory VDD VDD	MEM VDD: Strap to boot FB/VDD/I/O
GPIO2	LCD_BL_PWM	O	Panel Backlight PWM	100 K pull-down
GPIO3	LCD_VCC	O	Panel Power Enable	LCD_VCC: 100K pull-down
GPIO4	LCD_BLDH	O	Panel Backlight Enable	100 K pull-down
GPIO5	Reserved			
GPIO6	FB_CLAMP_TOL_REQ	O	Active low FB Clamp toggle request	
GPIO7	3D_Vision	O	3D Vision L/R signal	100 K pull-down
GPIO8	OVERT	I/O	Active Low Thermal Catastrophic Over Temperature	100 K pull-up
GPIO9	ALERT	I/O	Active Low Thermal Alert	100 K pull-up
GPIO10	MEM_VREF_CTL	O	Memory VREF Control	100 K pull-down
GPIO11	PMU_VDD	O	CPU Core VDD PMU control signal	
GPIO12	PWR_LEVEL	I	AC power detect or power supply undervoltage input	100 K pull-up
GPIO13	PSI	O	Phase Shedding	PSI: 10K pull-up to enable two phase.
GPIO14	VDD_A	I	Hot Plug Detect for I/FPA used as DisplayPort or for I/FPA when used as Dual Link DVI	See Figure 73
GPIO15	HFD_C	I	Hot Plug Detect for I/FPA	See Figure 73
GPIO16	FWM_LOCK	O	27 Frame Lock signal	See Figure 73
GPIO17	HFD_D	I	Hot Plug Detect for I/FPA	See Figure 73
GPIO18	HFD_E	I	Hot Plug Detect for I/FPA	See Figure 73
GPIO19	HFD_F or HFD_S	I	Hot Plug Detect for I/FPA or for I/FPA used as DisplayPort	See Figure 73
GPIO20	Reserved			
GPIO21	Reserved			

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, 8th, Sec. 1, Hsin Tai Wu Rd, Hsinchu, Taiwan 305, Taiwan, R.O.C.
 File: GPU (GPIO/STRAP)
 Size: 1000
 Date: Wednesday, September 10, 2014 10:00 AM
 SA


http://sualaptop360.vn/ww.vi.mafix.vn



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 WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 80	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-VRAM7,8 (4/4)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 81	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 Switchable GFX LCD(1/2)			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 84	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

Switchable GFX LCD(2/2)

Size
A4

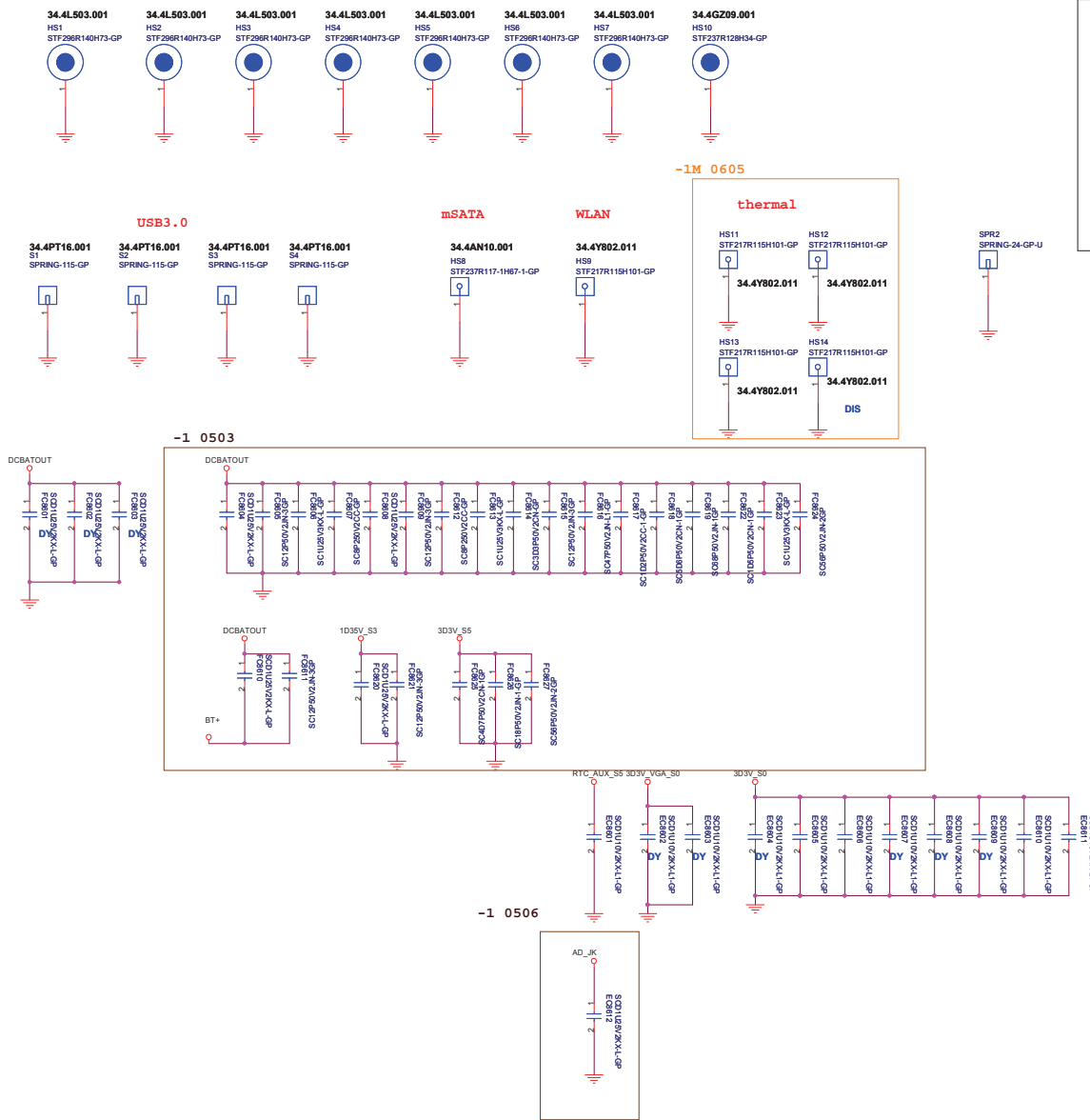
Document Number

WEEBILL_HW

Rev
SA

Date: Wednesday, September 18, 2013

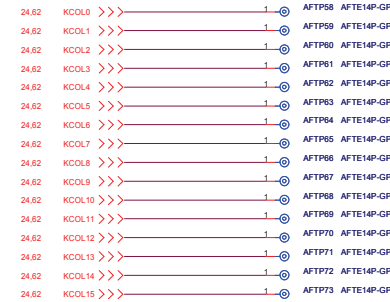
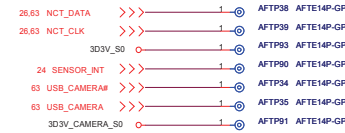
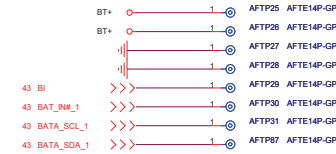
Sheet 85 of 102



Check test point



Test Point放在Dimm Door打開可量測處



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., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
UNUSED PARTS/EMI Capacitors			
Size	Document Number		Rev
	WEEBILL_HW		SA
Date:	Wednesday, September 18, 2013	Sheet 86	of 102

http://sualaptop365.com/mafiafix.vn

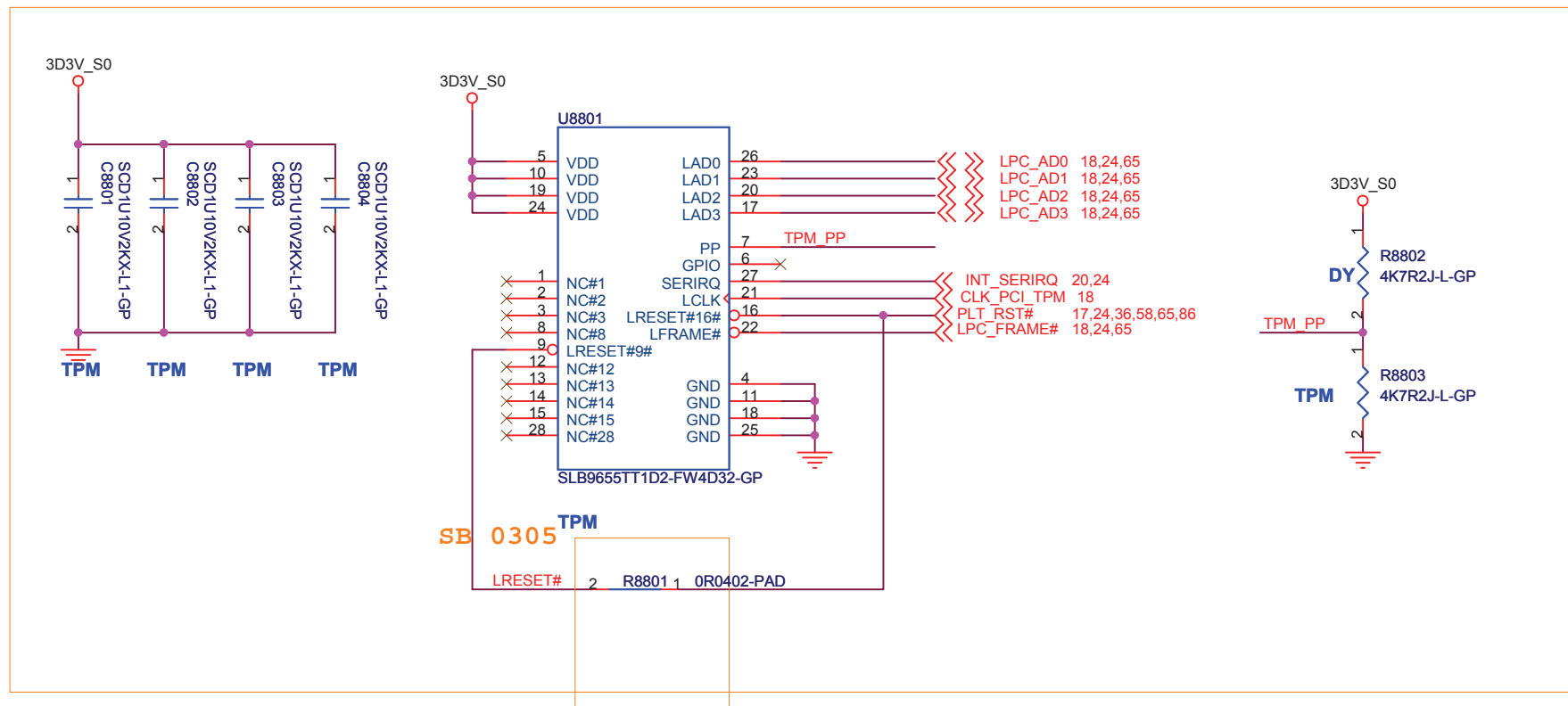
Blanking

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 NFC			
Size A4	Document Number WEEBILL_HW		Rev SA
Date:	Wednesday, September 18, 2013		Sheet 87 of 102

-1M 0606



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	
TPM	
Size A4	Document Number
	WEEBILL HW
Date:	Wednesday, September 18, 2013
Sheet	88 of 102
	SA

<http://sualaptop365.com/mafix.vn>

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			
Finger Print			
Size A4	Document Number WEEBILL_HW		Rev SA
Date:	Wednesday, September 18, 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>

緯創資通

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

Title

Express Card

Size
A4

Document Number

WEEBILL_HW

Rev
SA


Date: Wednesday, September 18, 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>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Smart Card socket			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 91	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 Switchable GFX eDP			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 92	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 Bottom Docking			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 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>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Inter LAN WG1217LM			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 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>


		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title LAN Switch			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 95	of	102

Blanking

Pin	XDP Signal Name	Target Signal	I/O	Device	Pin	XDP Signal Name	Target Signal	I/O	Device
1	OBSFN_A0	Open	I/O		2	OBSFN_A1	Open	I/O	
3	GND	GND	NA		4	OBSDATA_A[0]	Open	I/O	
5	OBSDATA_A[1]	Open	I/O		6	GND	GND	NA	
7	OBSDATA_A[2]	Open	I/O		8	OBSDATA_A[3]	Open	I/O	
9	GND	GND	NA		10	HOOK0 ¹	RSMRST#	I	System
11	HOOK1	BP_PWRGD_RST# ¹	O	System	12	HOOK2	Open	NA	
13	HOOK3	Open	NA		14	HOOK4 ¹	1.05V core	NA	
15	HOOK5	Open	NA		16	VCCOBS_AB	3.3V SUS	I	System
17	HOOK6	RSMRST# ¹	O	System	18	HOOK7	DBR# ¹	O	System
19	GND	GND	NA		20	TDO	JTAG_TDO	I	PCH
21	TRSTn	Open	NA		22	TDI	JTAG_TDI	O	PCH
23	TMS	JTAG_TMS	O	PCH	24	ICHI	Open	NA	
25	GND	GND	NA		26	IC2	Open	NA	

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 PCH_XDP			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013		Sheet 96	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			
<i>table of content</i>			
Size A4	Document Number WEEBILL HW		Rev SA
Date:	Wednesday, September 18, 2013	Sheet 97 of	102

Blanking

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

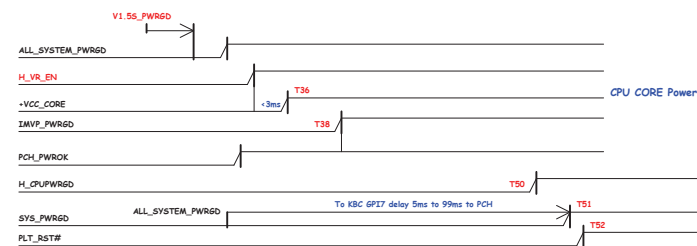
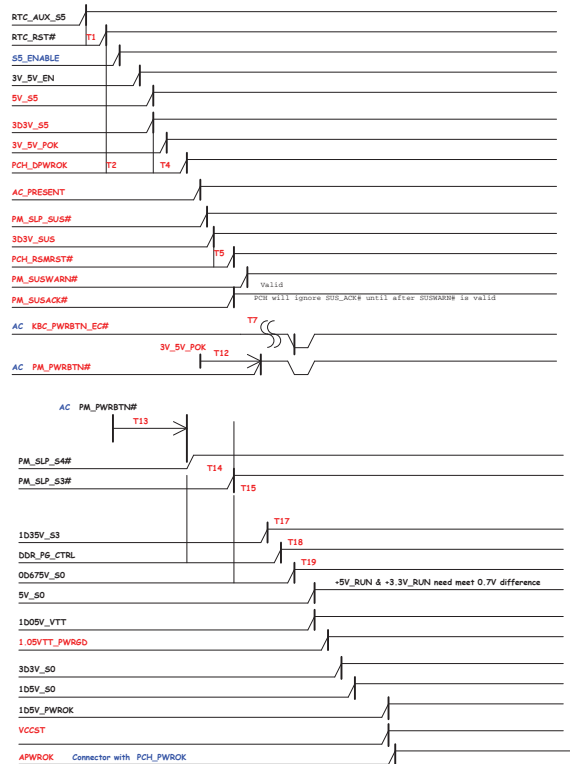
<Variant Name>

緯創資通

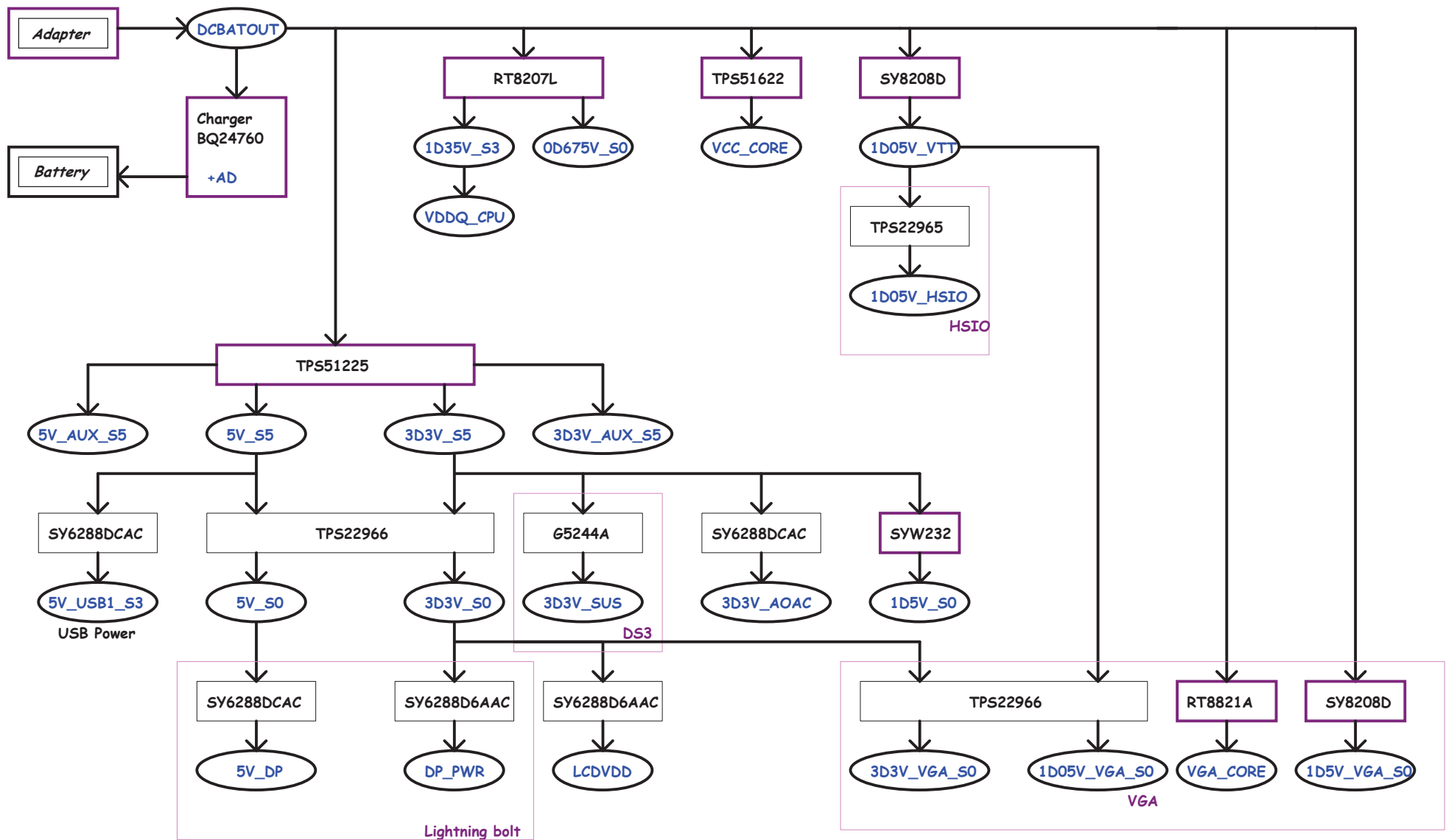
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
Change History			
Size A4	Document Number WEEBILL_HW		Rev SA
Date: Wednesday, September 18, 2013	Sheet 98	of	102

(AC mode)



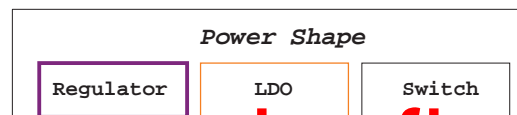
The schematic diagram illustrates the power management system for the Shark Bay ULT CPU. It shows the power flow from an AC adapter and DC battery through various regulators and switches to the CPU and other components. Key components include the BQ24737 Charger, KBC IT8587, and several voltage regulators (SYN256, SYN258, SY8208, SY8208-APL5338, TP522966, S-1339D1). The diagram is annotated with callouts 1 through 21, 1a through 1c, and 1b, indicating specific points of interest or connections.



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

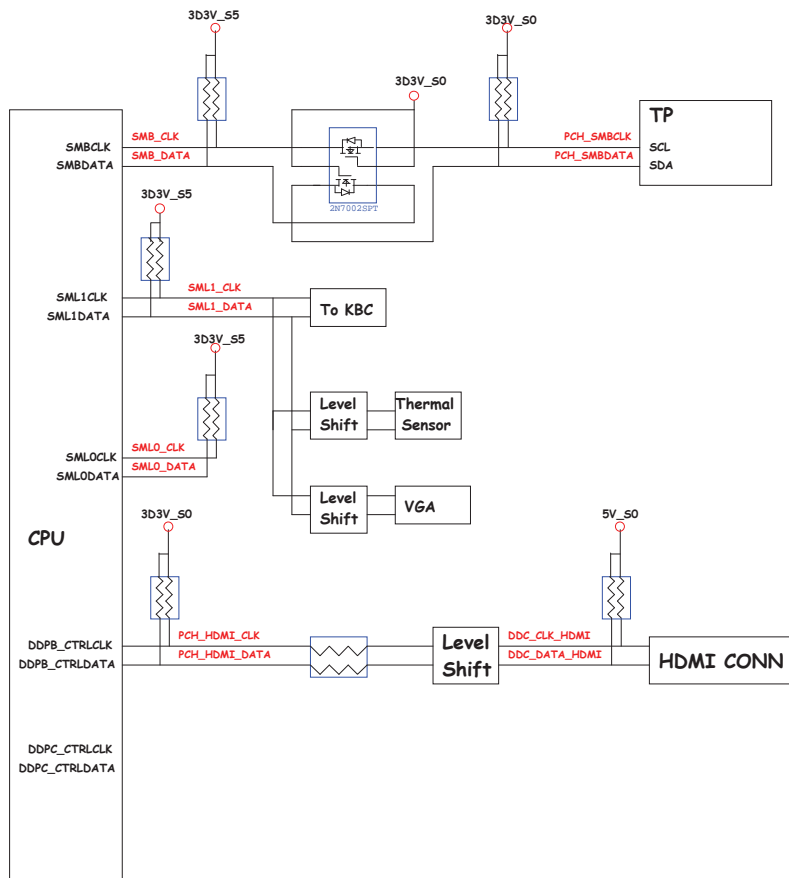
<Variant Name>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Power Block Diagram	
Title Size A3 Date: Wednesday, September 18, 2013	Document Number WEEBILL HW Sheet 100 of 102
Rev SA	

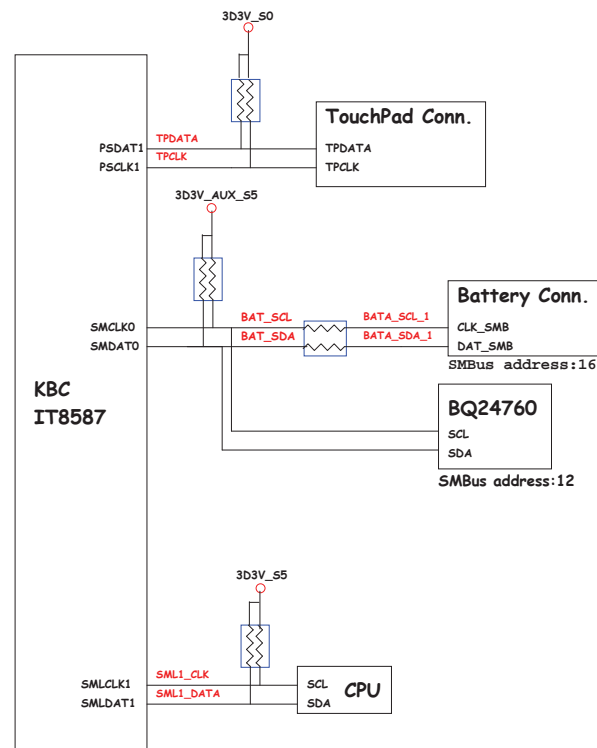


<http://sualaptop365.com/vinafix.vn>

PCH SMBus Block Diagram



KBC SMBus Block Diagram

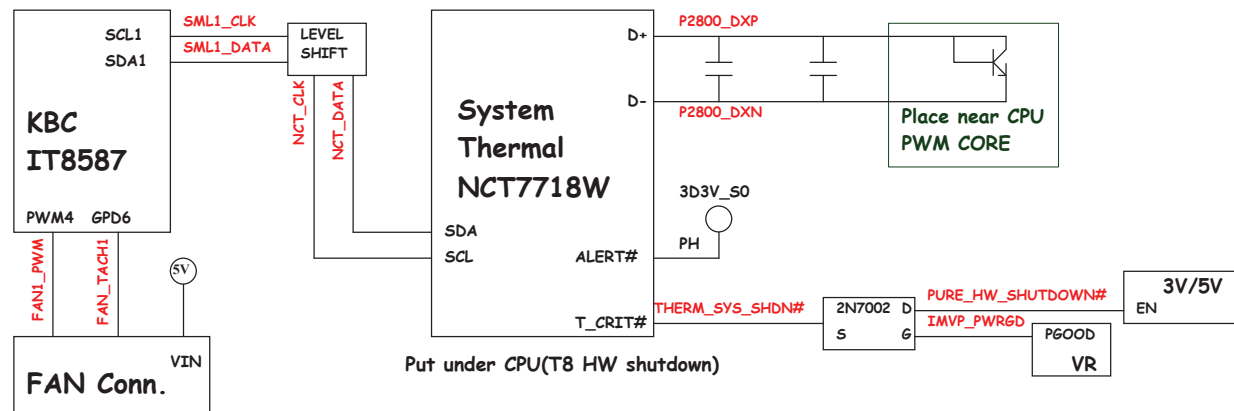


Wistron Confidential document, Anyone can not Duplicate, Modify, Forward or any other purpose application without get Wistron permission

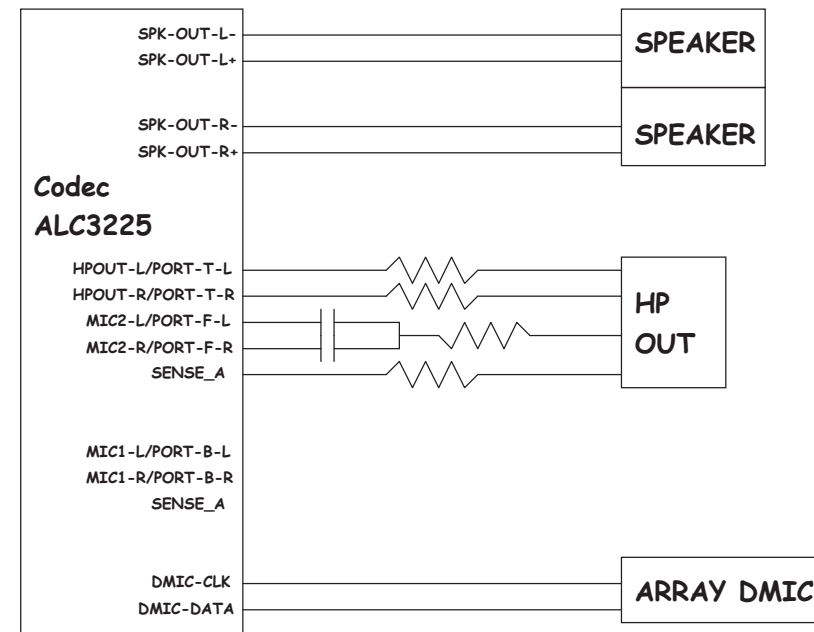
<Variant Name>

緯創資通		Wistron Corporation	
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
SMBUS BLOCK DIAGRAM			
Size	Document Number	Rev	
A2	WEEBILL_HW	SA	
Date	Wednesday, September 18, 2013	Sheet	101 of 102

Thermal Block Diagram



Audio Block Diagram



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.	
THERMAL/AUDIO BLOCK DIAGRAM	
Title THERMAL/AUDIO BLOCK DIAGRAM	Document Number WEEBILL HW
Date: Wednesday, September 18, 2013	Sheet 102 of 102