

Storm 2
UMA Schematics Document

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Storm2

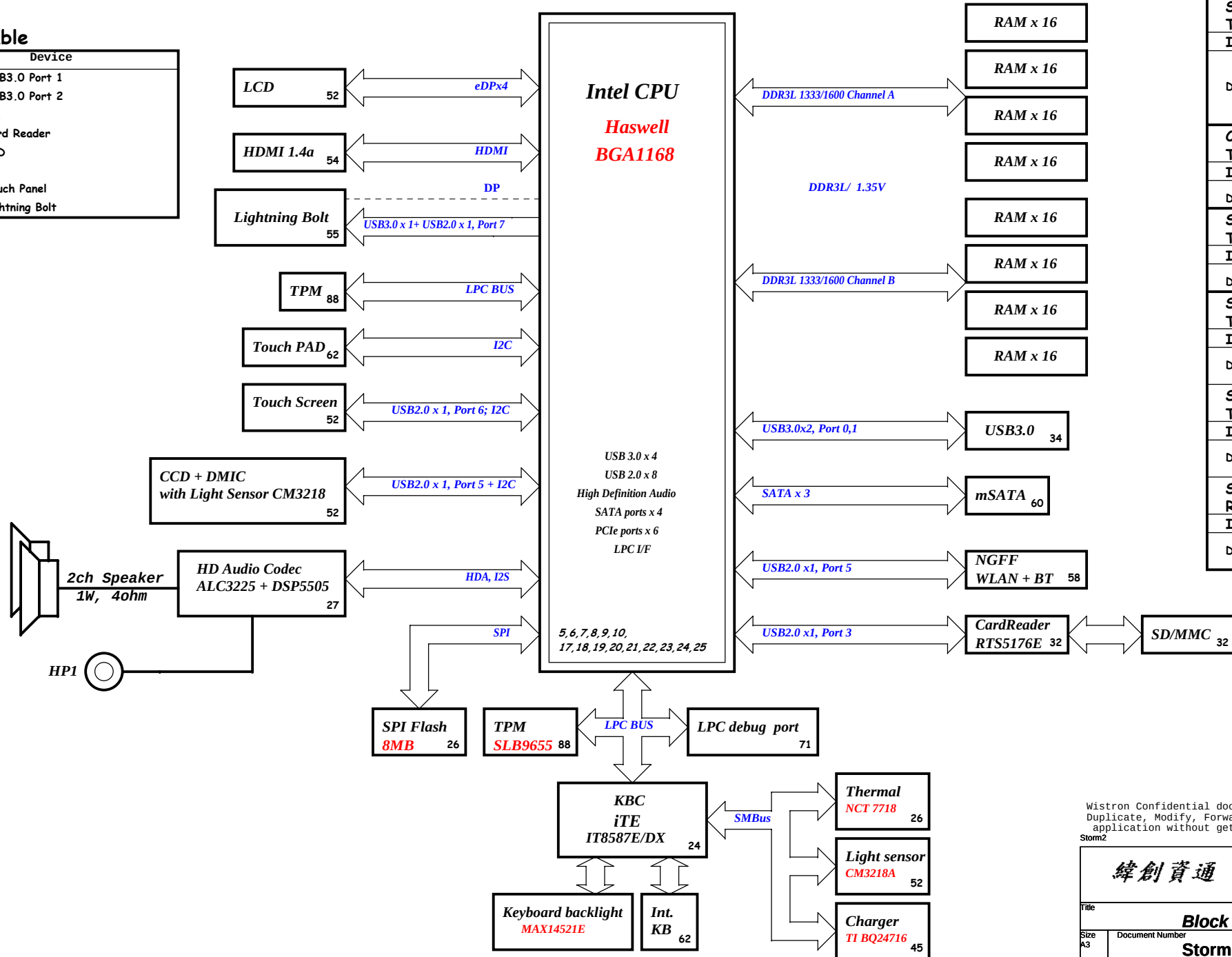
緯創資通			Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.					
Title					
Cover					
Size	Document Number				Rev
A4	Storm 2				-1
Date: Wednesday, March 13, 2013			Sheet 1 of 102		

Project code : 91.4LZ01.001
PCB P/N :12302-1
Revision : 1

Storm 2 Block Diagram

USB Table

Pair	Device
0	USB3.0 Port 1
1	USB3.0 Port 2
2	NA
3	Card Reader
4	CCD
5	BT
6	Touch Panel
7	Lightning Bolt



CHARGER BQ24737 44	
INPUTS	OUTPUTS
DCBATOUT	BT+
SYSTEM DC/DC TPS51285 45	
INPUTS	OUTPUTS
DCBATOUT	3D3V_DSW 3D3V_WLAN_S0 MSATA_VDD MSATA_VDD 5V_DSW 5V_S5 USB30_VCC
CPU DC/DC TPS51622 46, 47	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE
SYSTEM DC/DC TPS51367 48	
INPUTS	OUTPUTS
DCBATOUT	1D05V_VTT
SYSTEM DC/DC TPS51367+TPS51206 49	
INPUTS	OUTPUTS
DCBATOUT	1D35V_S3 VDDQ_VREF 0D675V_S0
SYSTEM DC/DC TLV62065 51	
INPUTS	OUTPUTS
DCBATOUT	1D5V_S0
SYSTEM DC/DC RT9013 58	
INPUTS	OUTPUTS
DCBATOUT	1D8V_S0

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Storm2

Title		Block Diagram	
Size A3	Document Number	Rev -1	
Date: Wednesday, March 13, 2013		Sheet 2 of 102	

SSID = CPU

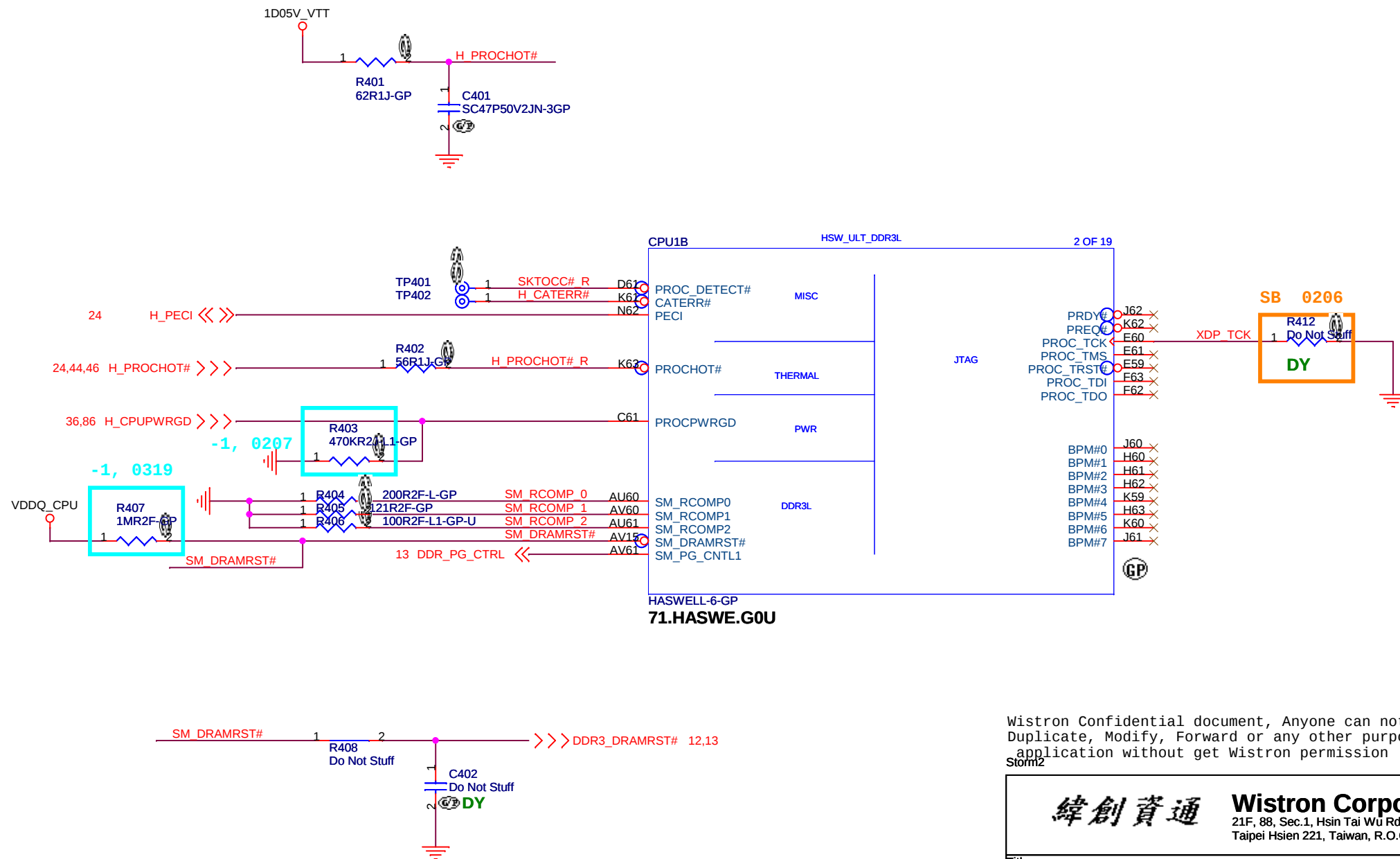
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Storm2

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
CPU (Reserved)			
Size A4	Document Number Storm 2		Rev -1
Date:	Friday, December 28, 2012	Sheet 3 of	102

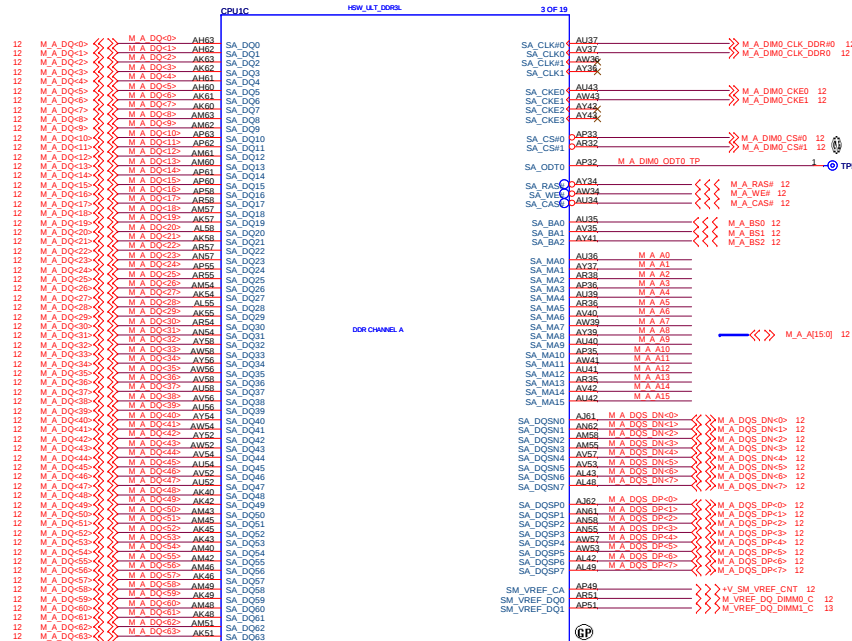
SSID = CPU



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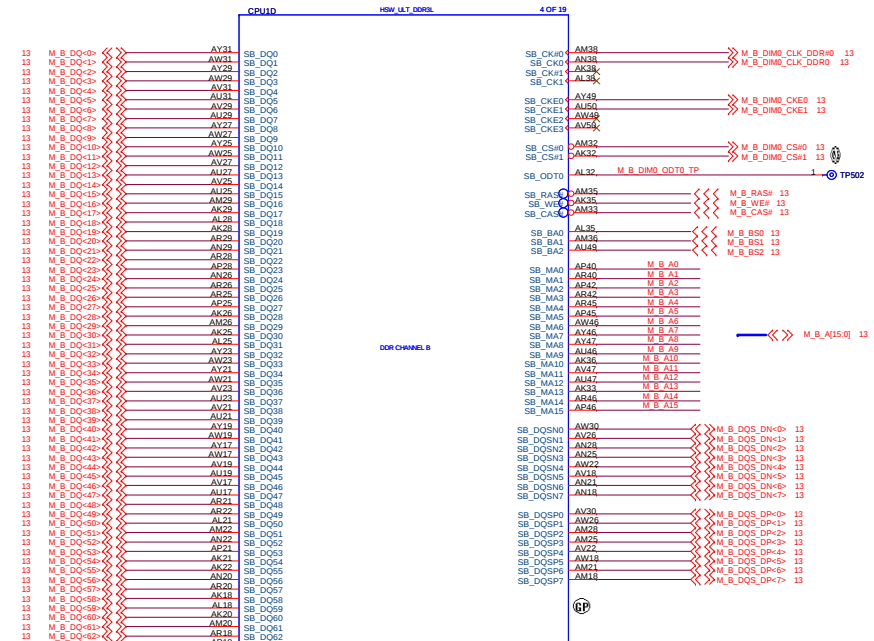
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
CPU (THERMAL/CLOCK/PM)	
Size A4	Document Number
Storm 2	
Date: Tuesday, April 02, 2013	Rev -1
Sheet 4	of 102

SSID = CPU



HASWELL-6-GP

71.HASWE.G0U

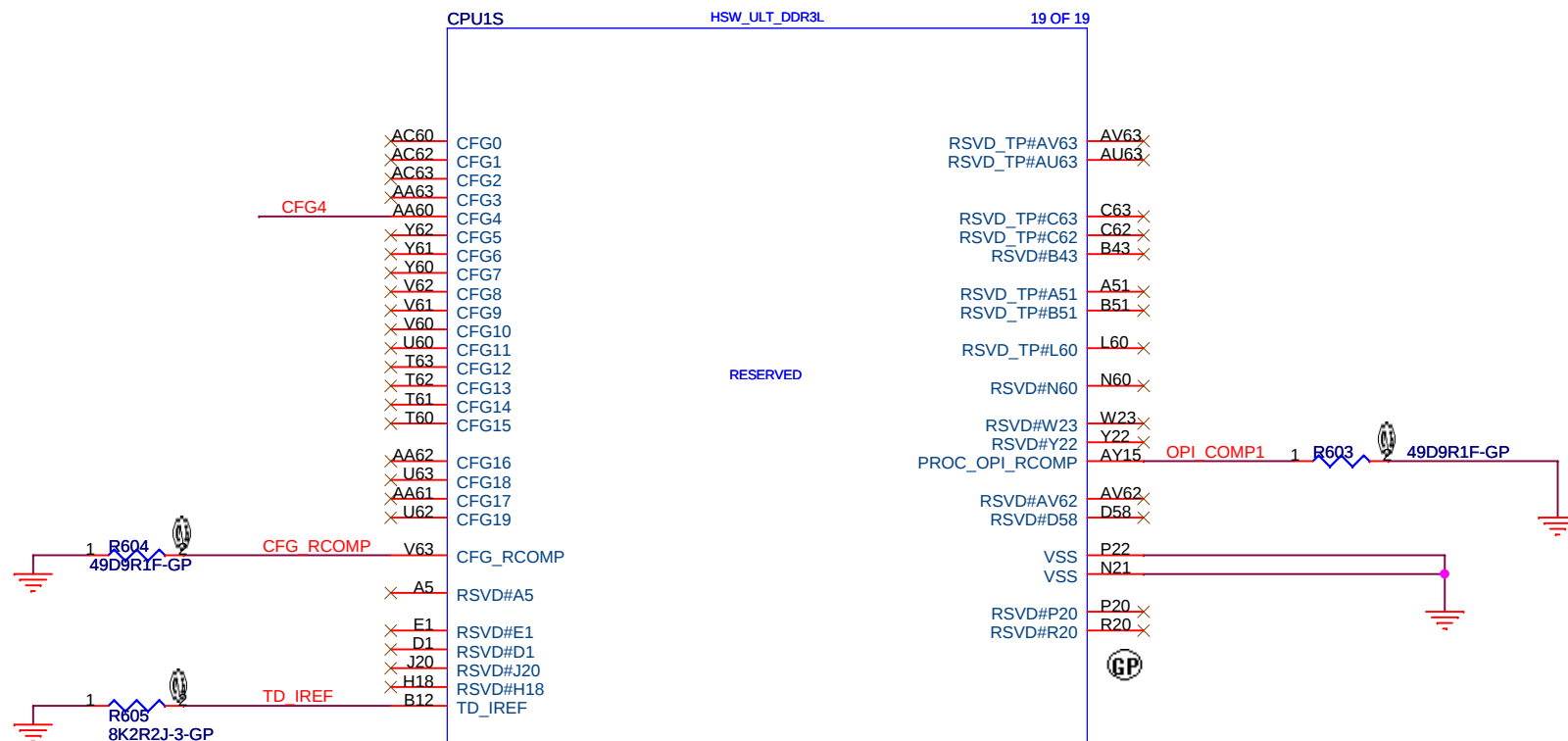


HASWELL-6-GF

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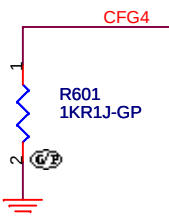
 Wistron Corporation 21F, 88, Sec.1, Hsueh Tai Wu Rd., Hsuehchih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
CPU (DDR)	
Size A2	Document Number Storm 2
	Rev -1
Date:	Tuesday, April 02, 2013 Sheet 5 of 102

SSID = CPU



71.HASWE.G0U

eDP Enable	
CFG4	1:Disable
	0:Enable



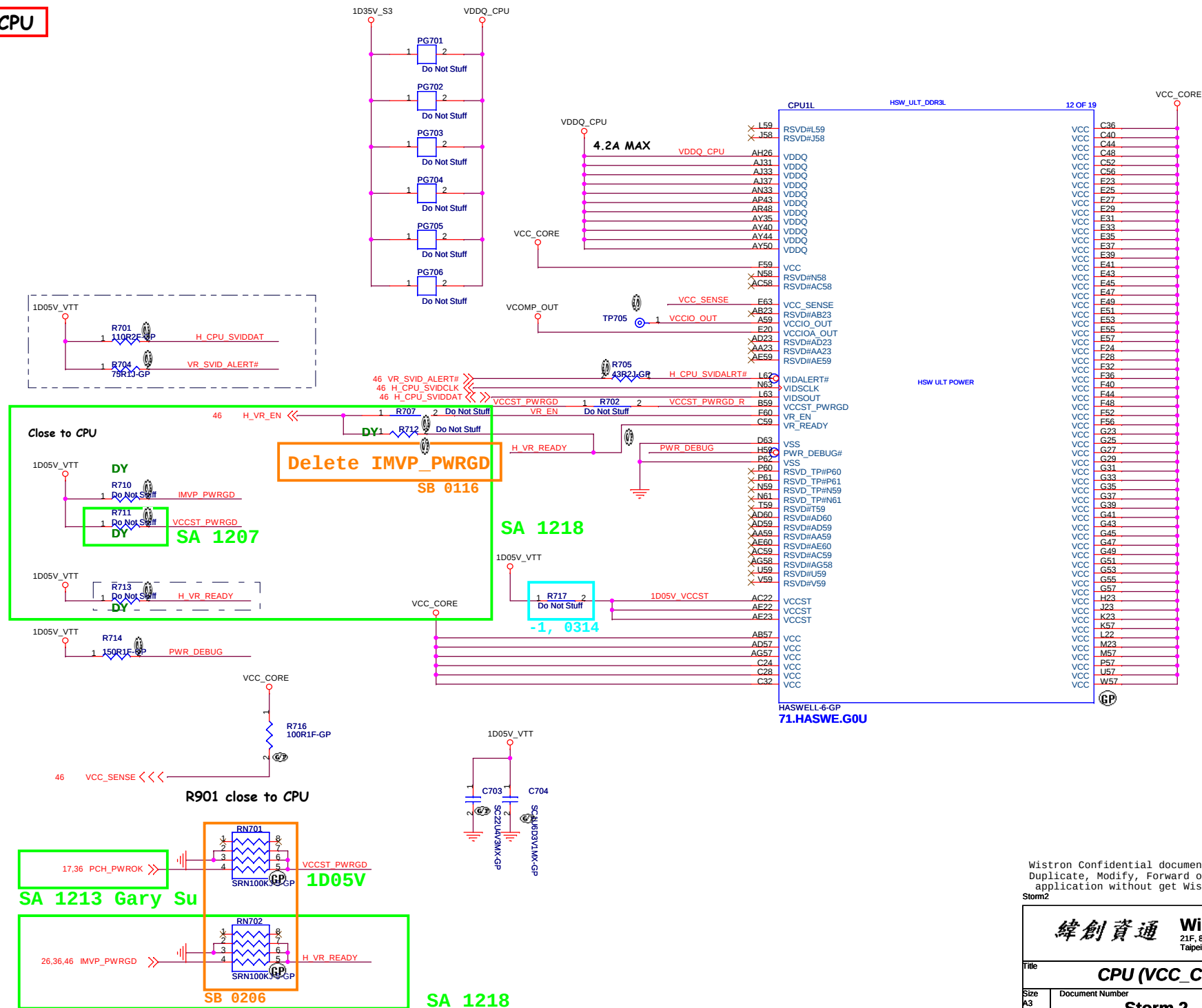
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Storm2

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Title CPU (CFG)		
Size A4	Document Number Storm 2	Rev -1
Date: Friday, December 28, 2012 Sheet 6 of 102		

SSID = CPU



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Title			
CPU (VCC_CORE)			
Size A3	Document Number		Rev
	Storm 2		-1
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SSID = CPU

HDMI

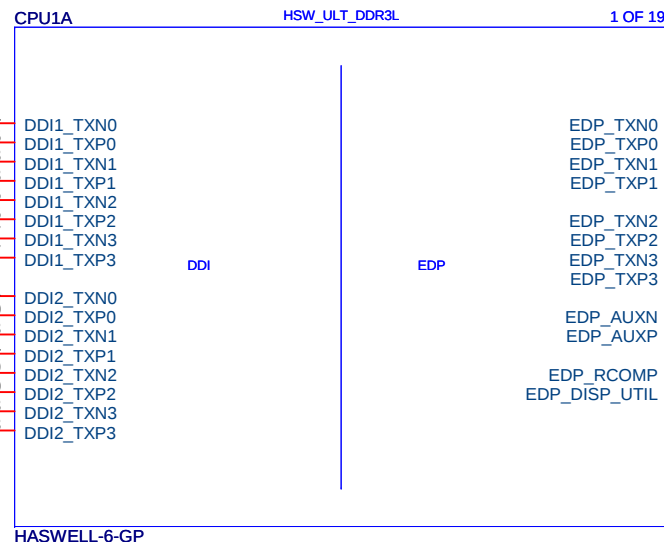
54 DDBP_DATA2#
54 DDBP_DATA2
54 DDBP_DATA1#
54 DDBP_DATA1
54 DDBP_DATA0#
54 DDBP_DATA0
54 DDBP_DATA3#
54 DDBP_DATA3

55 DP_DATA0#
55 DP_DATA0
55 DP_DATA1#
55 DP_DATA1
55 DP_DATA2#
55 DP_DATA2
55 DP_DATA3#
55 DP_DATA3

Lightning Bolt

C54
C55
B58
C58
B55
A55
A57
B57

C51
C50
C53
B54
C49
B50
A53
B53



C45
B46
A47
B47

C47
C46
A49
B49

A45
B45

D20
A43

CPU_EDP_DATA0# 52
CPU_EDP_DATA0 52
CPU_EDP_DATA1# 52
CPU_EDP_DATA1 52

CPU_EDP_DATA2# 52
CPU_EDP_DATA2 52
CPU_EDP_DATA3# 52
CPU_EDP_DATA3 52

CPU_EDP_AUX# 52
CPU_EDP_AUX 52

EDP_RCOMP

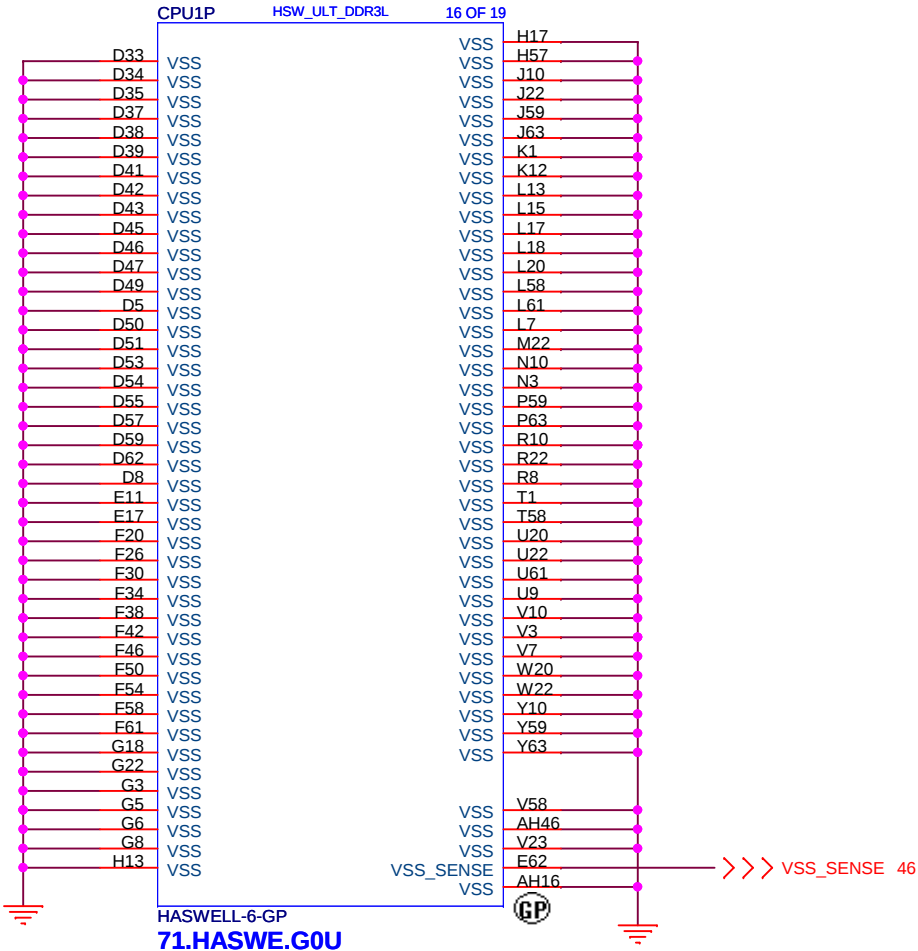
VCOMP_OUT

R801
24D9R2F-L-GP

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Title					
CPU (DDI/EDP)					
Size	Document Number				Rev
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Date:	Tuesday, April 02, 2013		Sheet	8	of 102

SSID = CPU



VSS SENSE

R901
100R1F-GP

R901 close to CPU

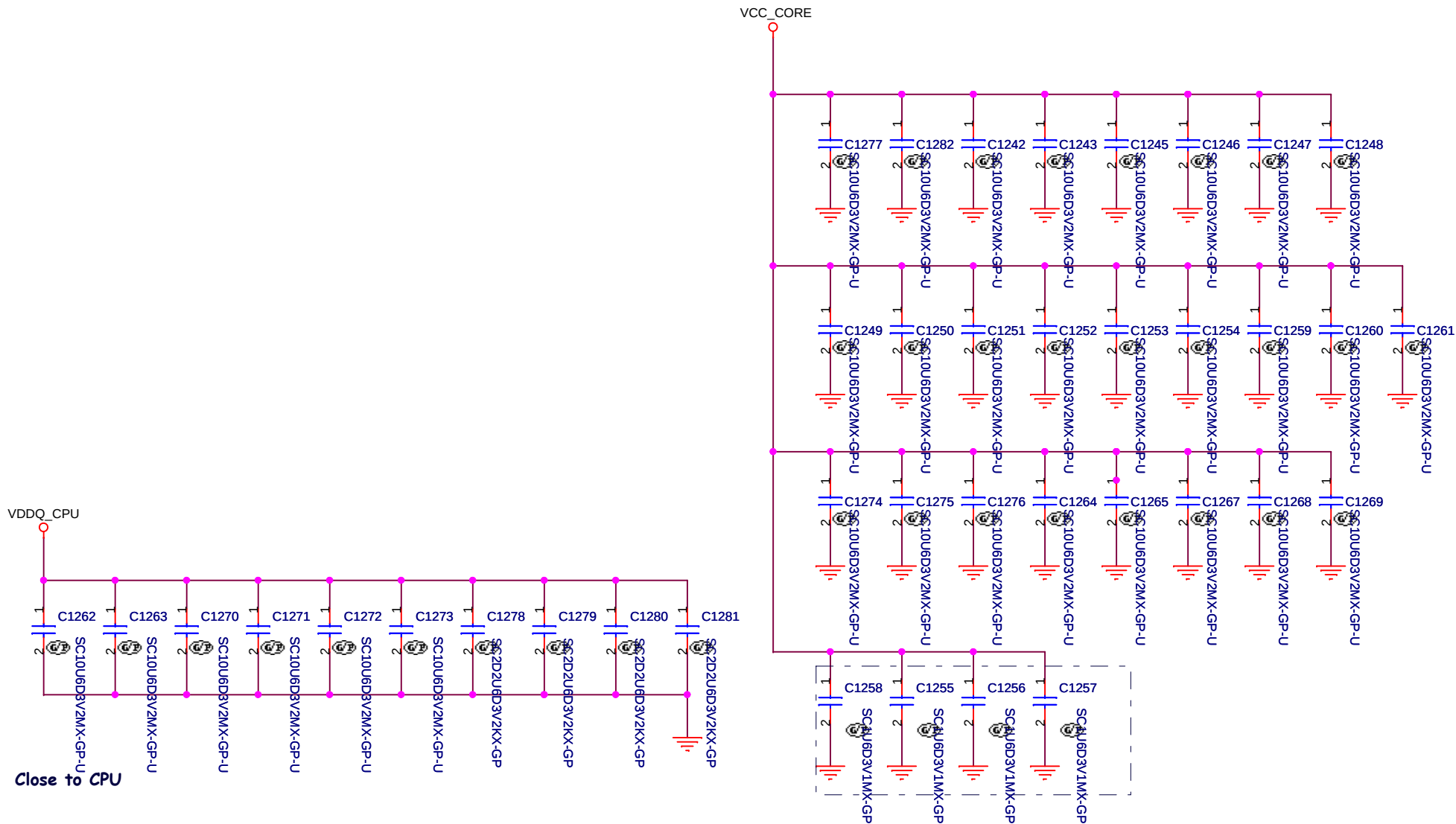
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Taipei Hsien 221, Taiwan, R.O.C.

Title	<i>CPU (VSS)</i>
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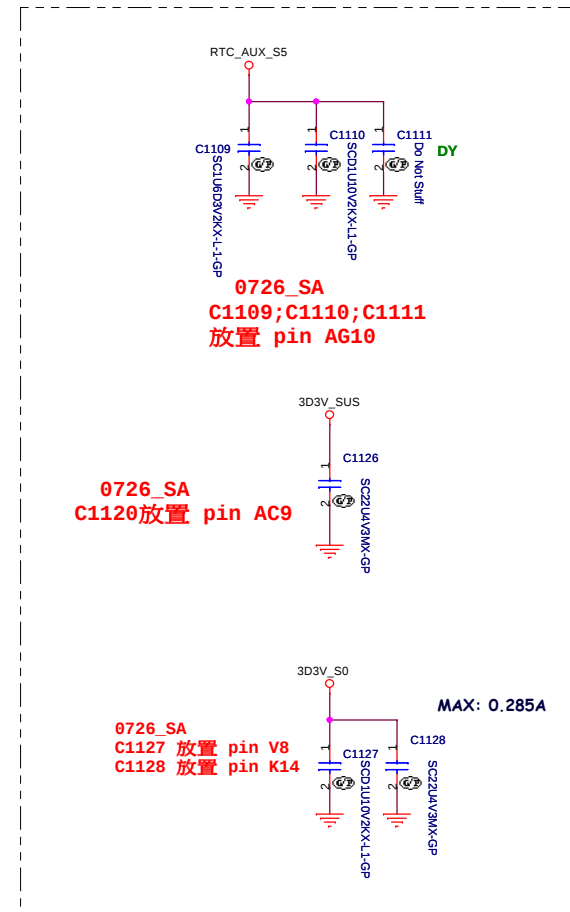
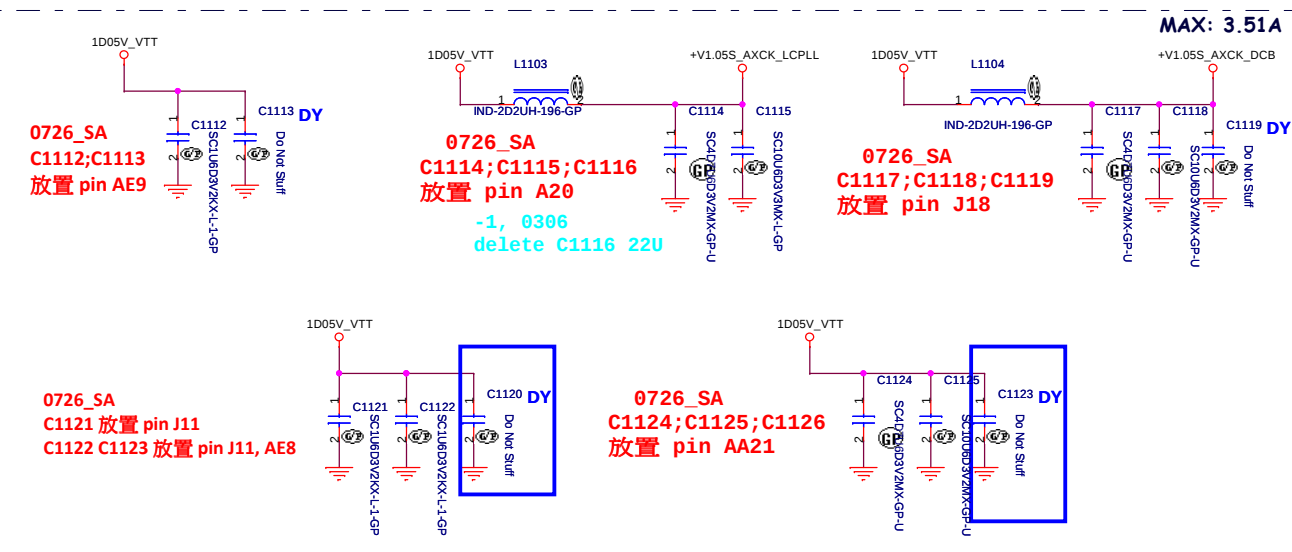
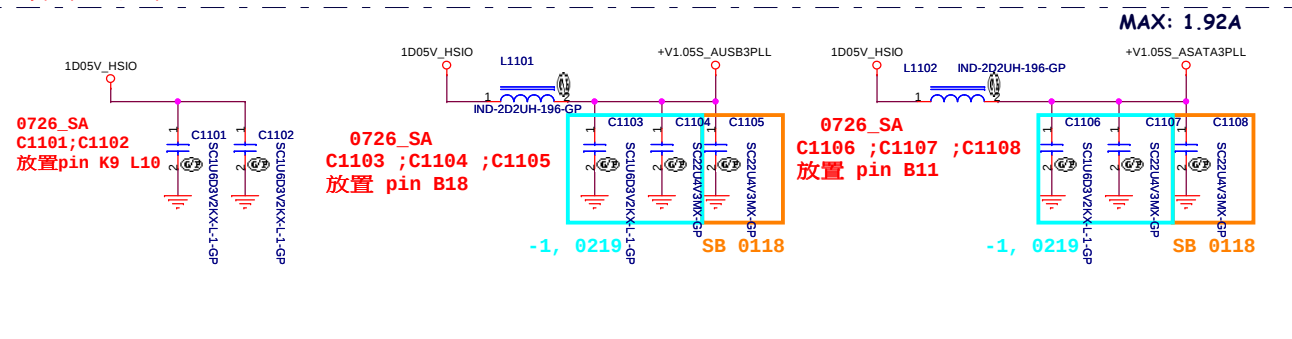
Size A4	Document Number Storm 2	Rev -1
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Date: Tuesday, April 02, 2013 Sheet 9 of 102

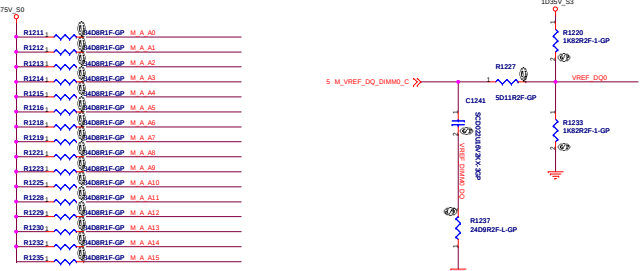
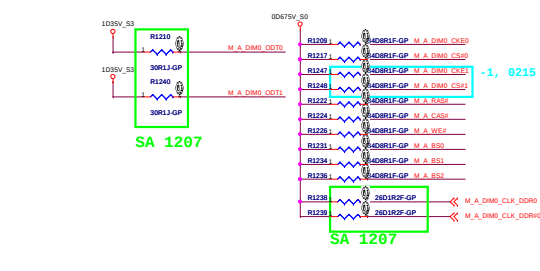
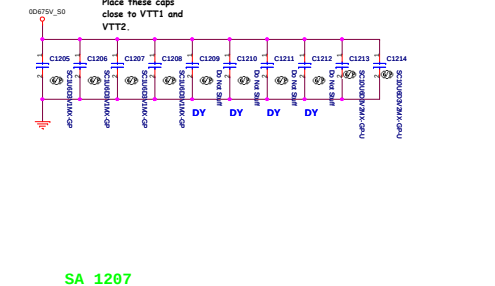
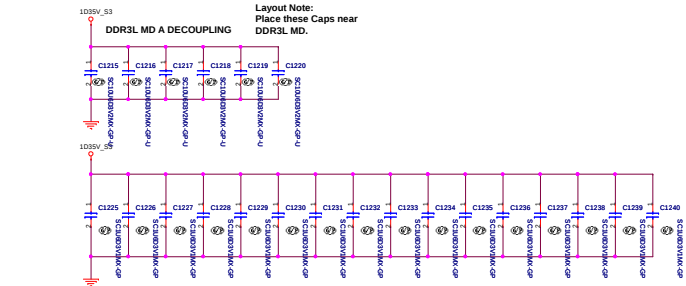
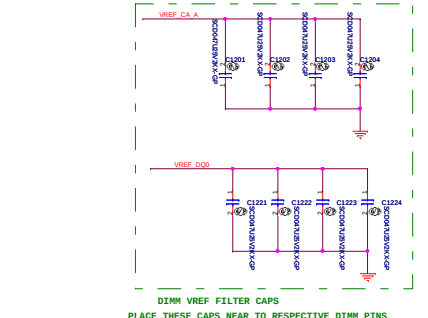
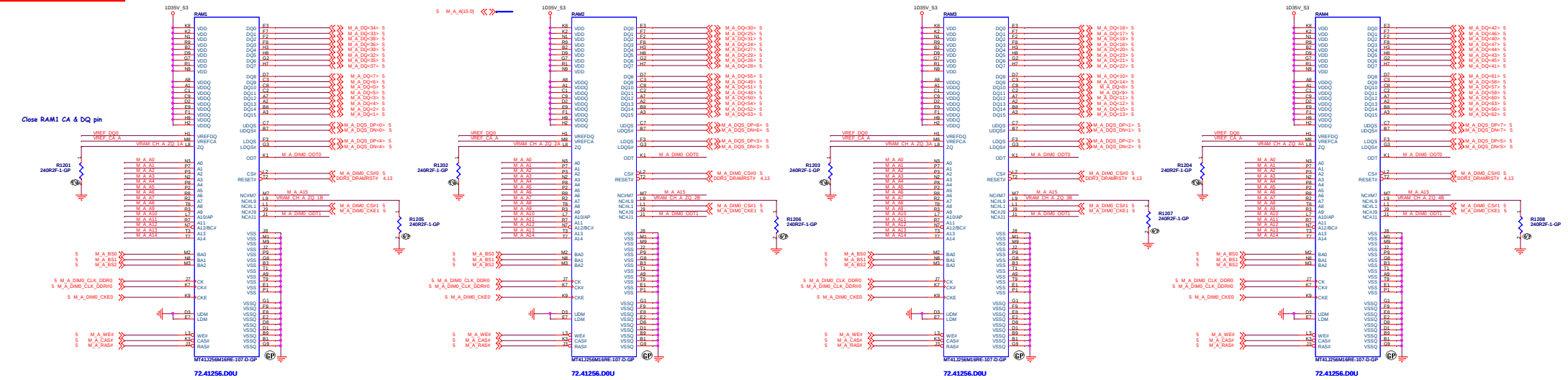


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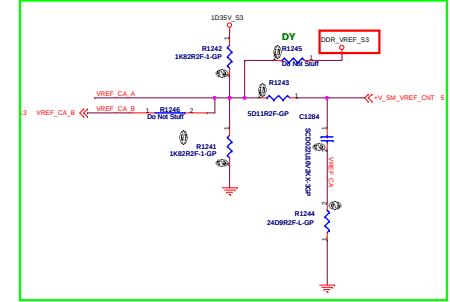
0726_SA 擺放電容的位置請參考Page 21
每個位置如下



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Storm2



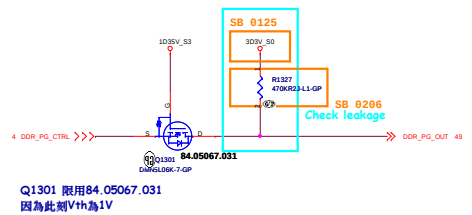
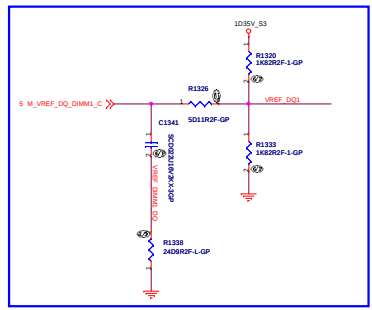
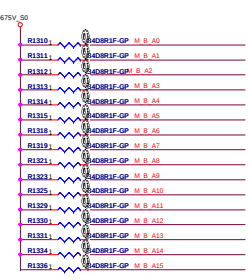
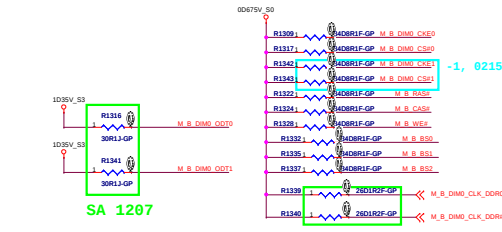
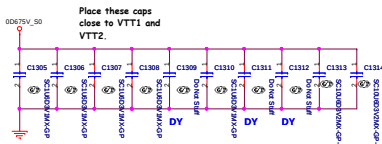
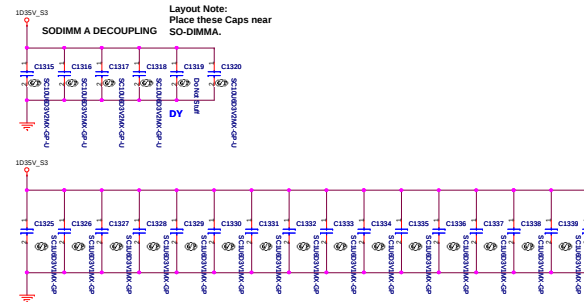
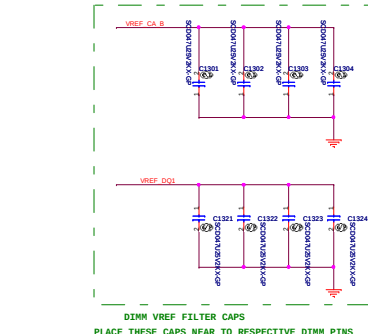
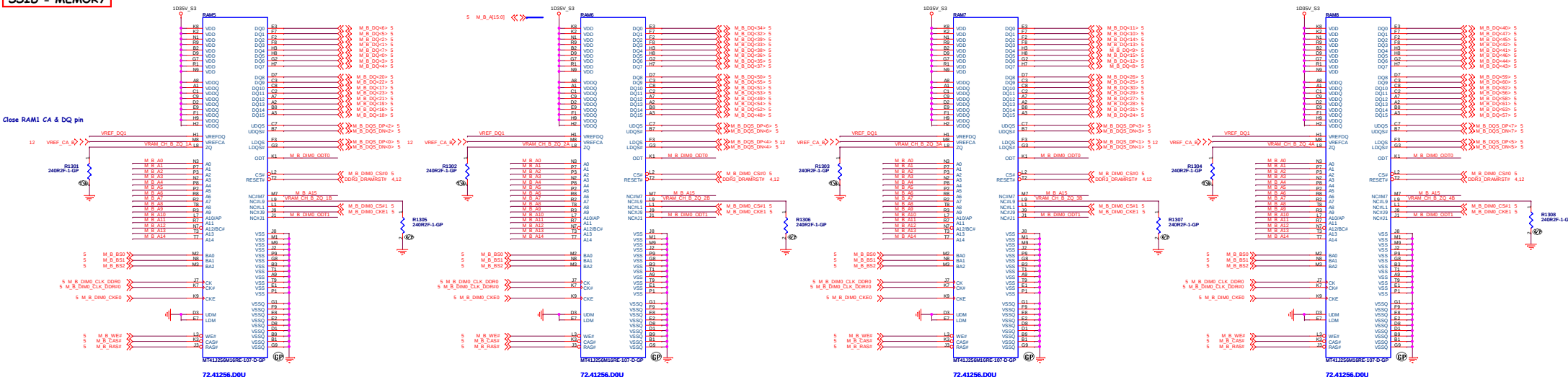
For Intel Recommend Close to DIMM



For Intel Recommend Close to DIMM

SSID = MEMORY

Close RAM1 CA & DQ pin

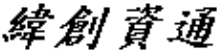


Q1301 用84.05067.031
因為此顆Vth為1V

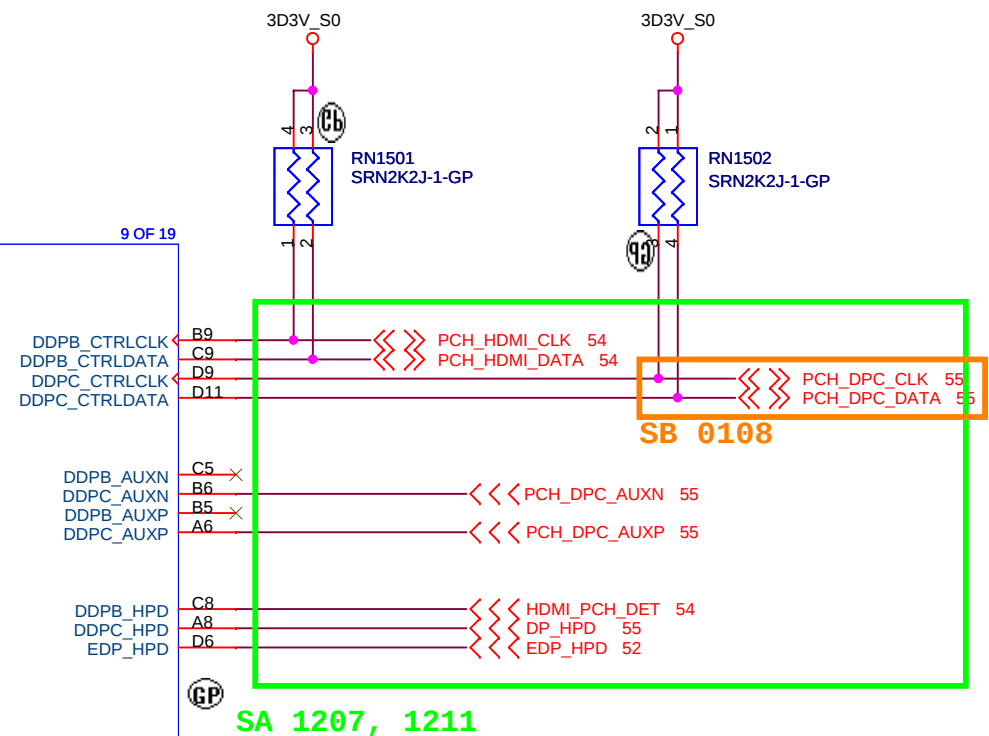
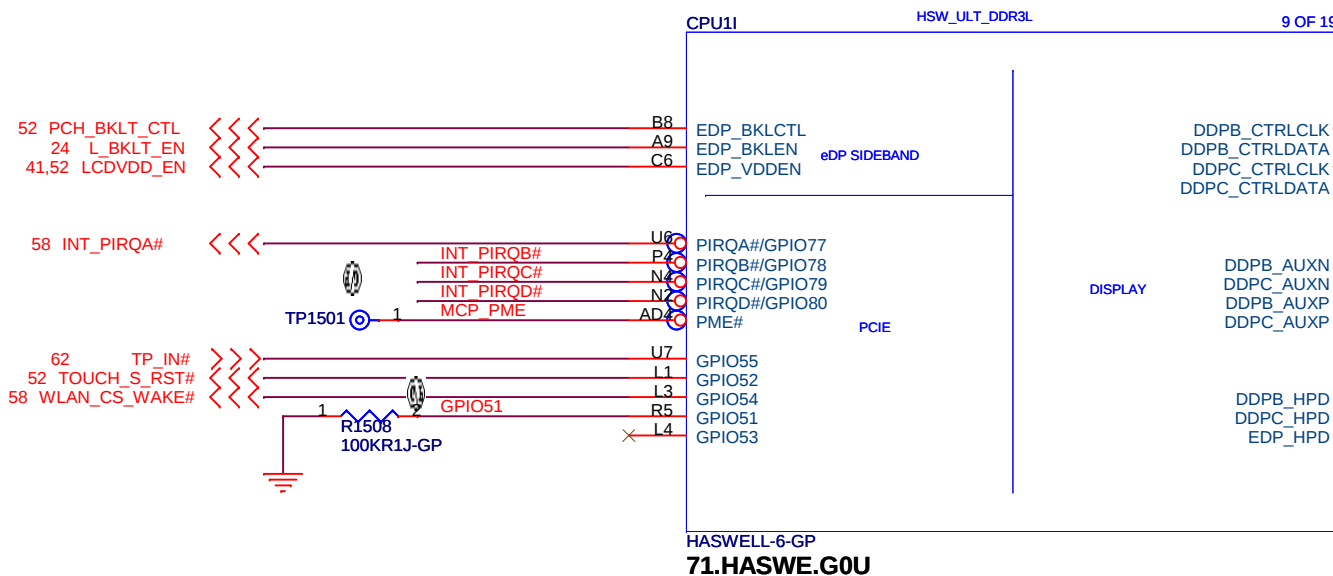
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Title SODIMM3_ SODIMM4 (Reserved)		
Size A4	Document Number Storm 2	Rev -1
Date: Friday, December 28, 2012		Sheet 14 of 102

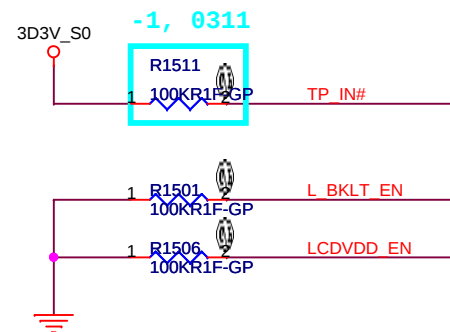
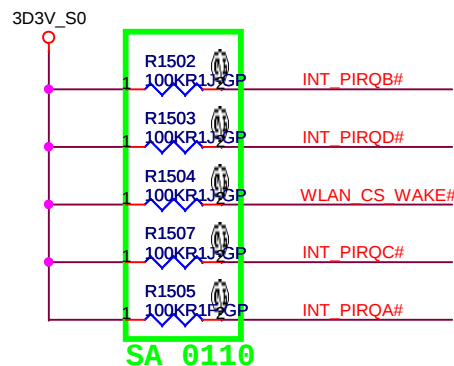
SSID = PCH



SA 1207, 1211

Port B: HDMI

Port C: Lightning bolt



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緯創資通

Wistron Corporation

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1	Title
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PCH (DDI)

Size
A4

Document Number

Storm 2

Rev
1

Date: Tuesday, April 02, 2013

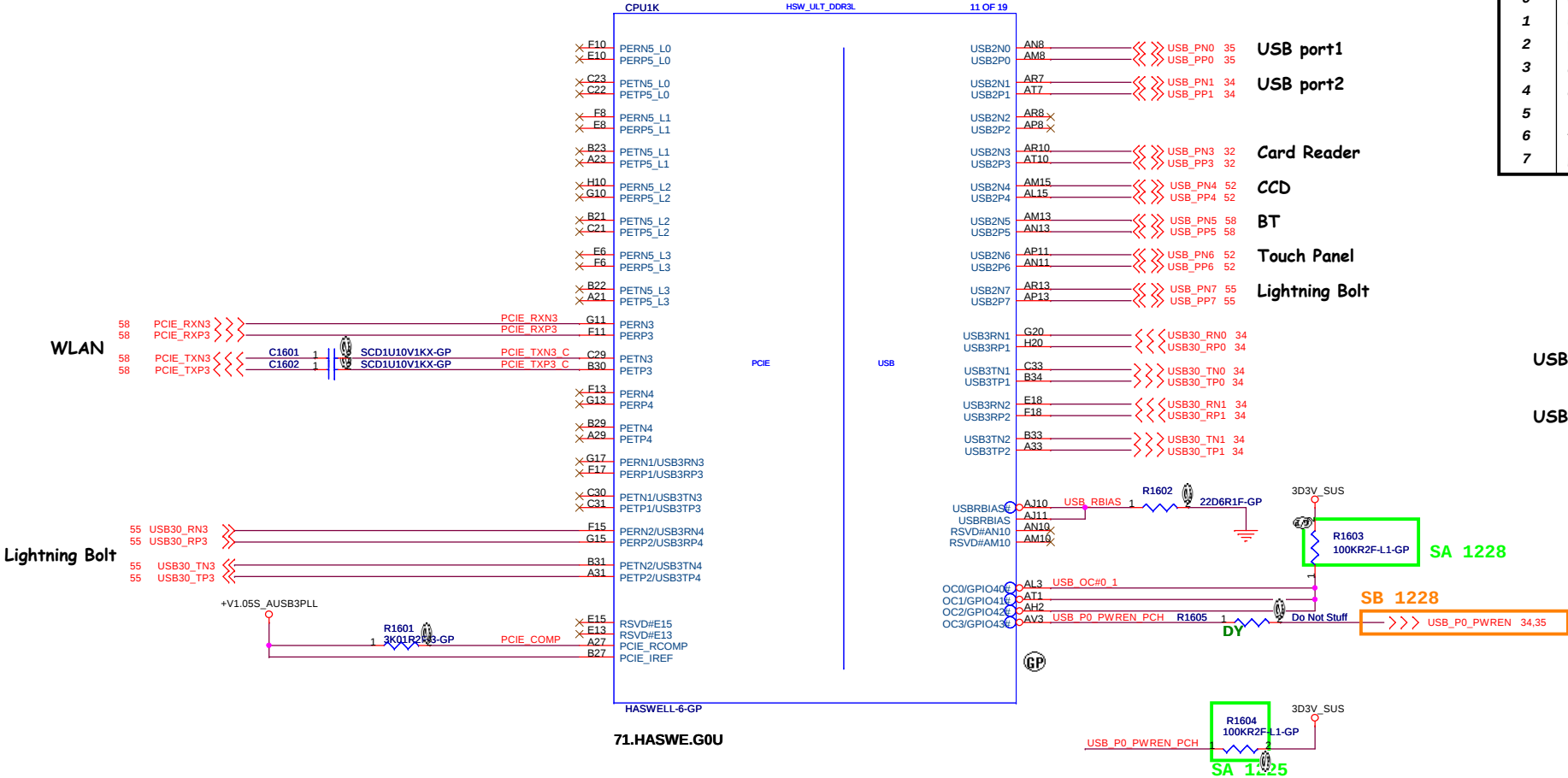
Sheet 15 of

102

SSID = PCH

USB Table

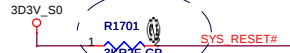
Pair	Device
0	USB3.0 Port 1
1	USB3.0 Port 2
2	NA
3	Card Reader
4	CCD
5	BT
6	Touch Panel
7	Lightning Bolt



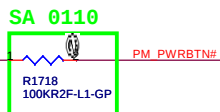
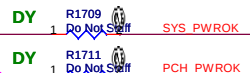
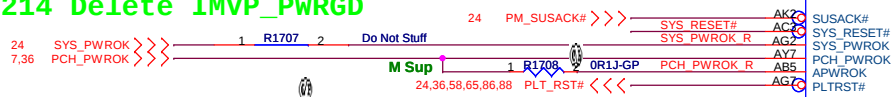
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SSID = PCH

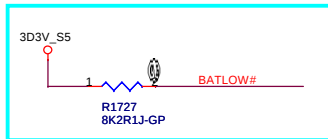
Follow Intel CRB



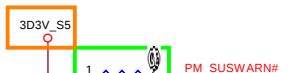
SA 1214 Delete IMVP_PWRGD



-1, 0318, for reauming from DSx

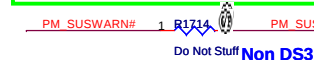
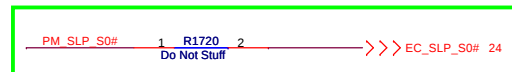


SB 1228

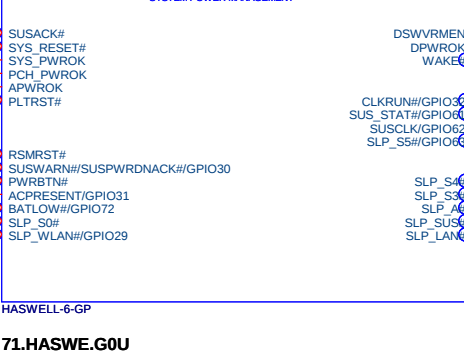


SA 1225

SA 1220



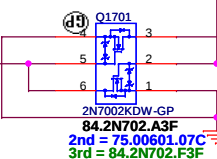
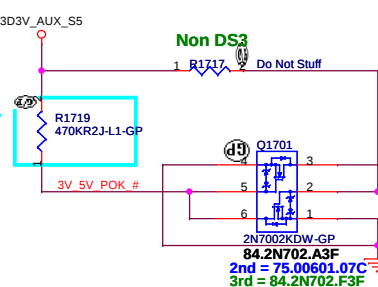
CPU1H HSW_ULI_DDR3L 8 OF 19 SYSTEM POWER MANAGEMENT



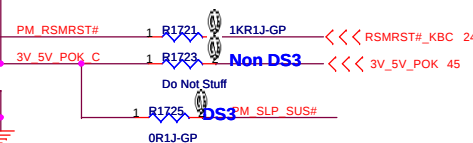
HASWELL-6-GP 71.HASWE.G0U

Non DS3

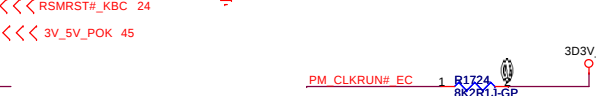
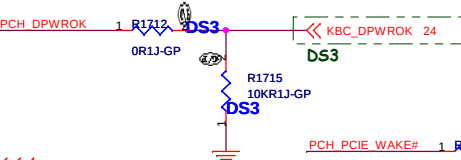
-1, 0207



84.2N702.A3F
2nd = 75.00601.07C
3rd = 84.2N702.F3F



SA 1220



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

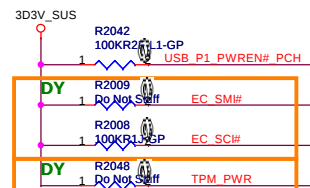
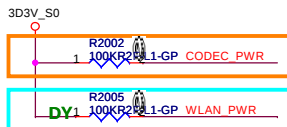
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Title		PCH (PM)	
Size	Document Number	Rev	
A3	Storm 2	-1	
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SSID = PCH

SB 0223

-1, 0401



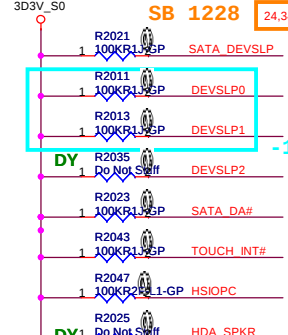
SB 0207

SA 1219

58 BT_CS_NOTICE <<<

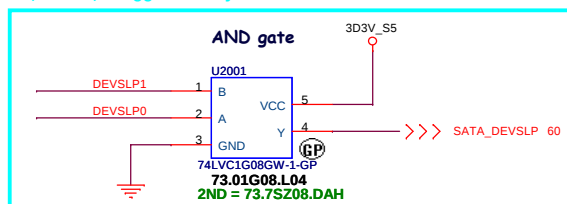


SB 0116



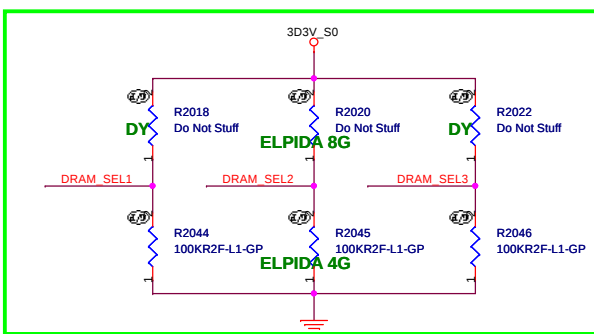
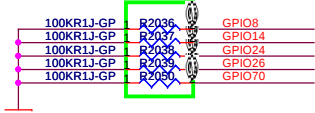
-1, 0314

-1, 0208, suggested by vender for RAID0



No Reboot Strap	
HDA_SPKR	Low = Default High = No Reboot

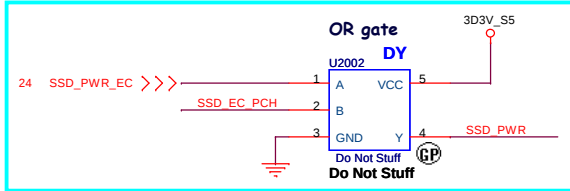
SA 0110



SA 1212 DRAM SEL

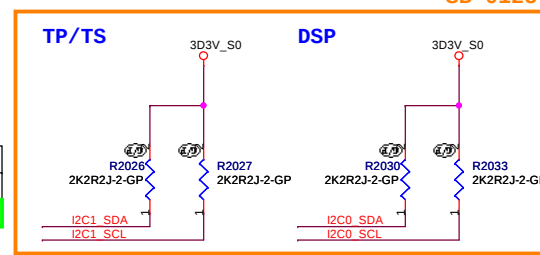
A16 SWAP OVERRIDE STRAP(SDIO_D0)	
STP_A16OVR	LOW = A16 SWAP OVERRIDE HIGH = NO OVERRIDE

GPIO91 DRAM_SEL1 Dual/Single channel	GPIO92 DRAM_SEL2	GPIO93 DRAM_SEL3	Status
0	0	0	ELPIDA 4G (Dual)
0	0	1	Hynix 4G (Dual 1Rx16)
0	1	0	ELPIDA 8G (Dual)
0	1	1	Micron 8G (Dual)
1	0	0	
1	0	1	
1	1	0	
1	1	1	ELPIDA 4G (Single)

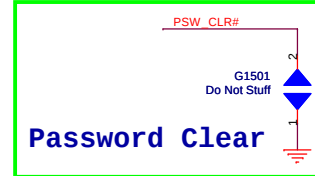


-1, 0304

6SPI0_MOSI_BB50_R(SSD_PWR)	
PU	RESERVED
PD	SPI BUS

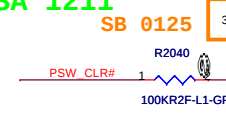


SB 0125



SA 1211

SB 0125

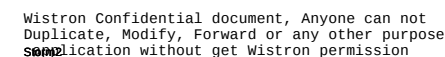


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PCH (GPIO)		
Title	Document Number	Rev
Size A3	Storm 2	-1
Date: Tuesday, April 02, 2013	Sheet 20 of 102	

1. Required only on external SUS.
2. Placeholder only. Does not need to be stuffed.
3. The following pins are not to be connected and be left floating. Test point is optional on these pins: AC20, Y20, K18, M20, V21.
4. Note that some decoupling capacitors are shared between more than 1 rail. Follow the "Place capacitors near balls" instructions above to ensure this sharing is optimized.
5. Capacitors should be placed less than 100 mils (2.54 mm) from the edge of package.
6. For description of (R)unway, and (E)dge decoupling capacitor placement, please refer to [Section 41.3, "Loop Inductance Reduction Decoupling"](#) on page 532.

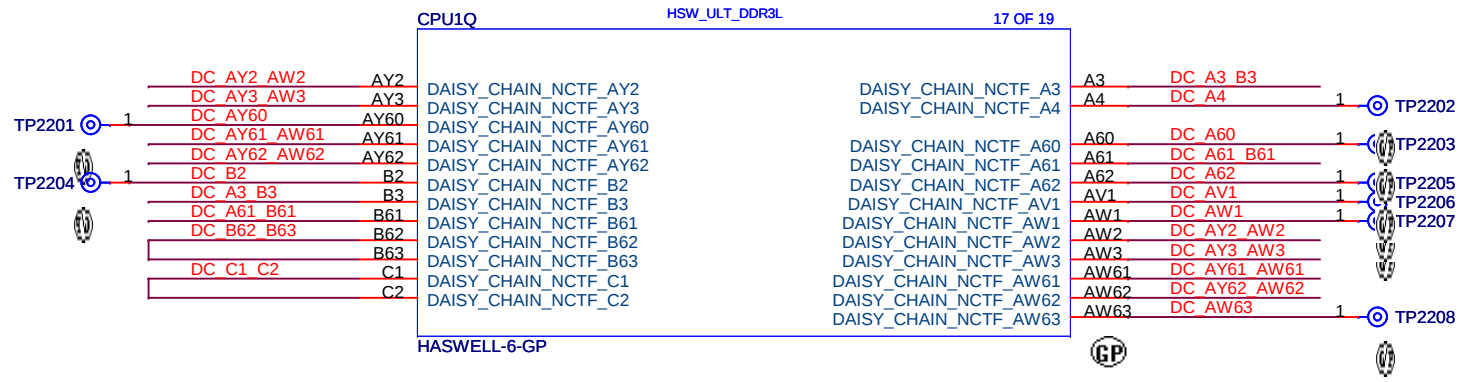


緯創資通 **Wistron Corporation**
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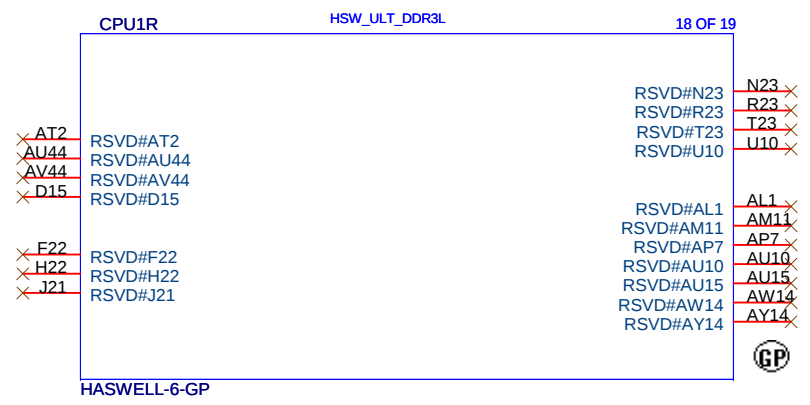
Title	CPU (POWER)
-------	--------------------

Size A3	Document Number Storm 2	Rev -1
Date: Monday, March 18, 2013	Sheet 21 of 102	

SSID = CPU



71.HASWE.G0U

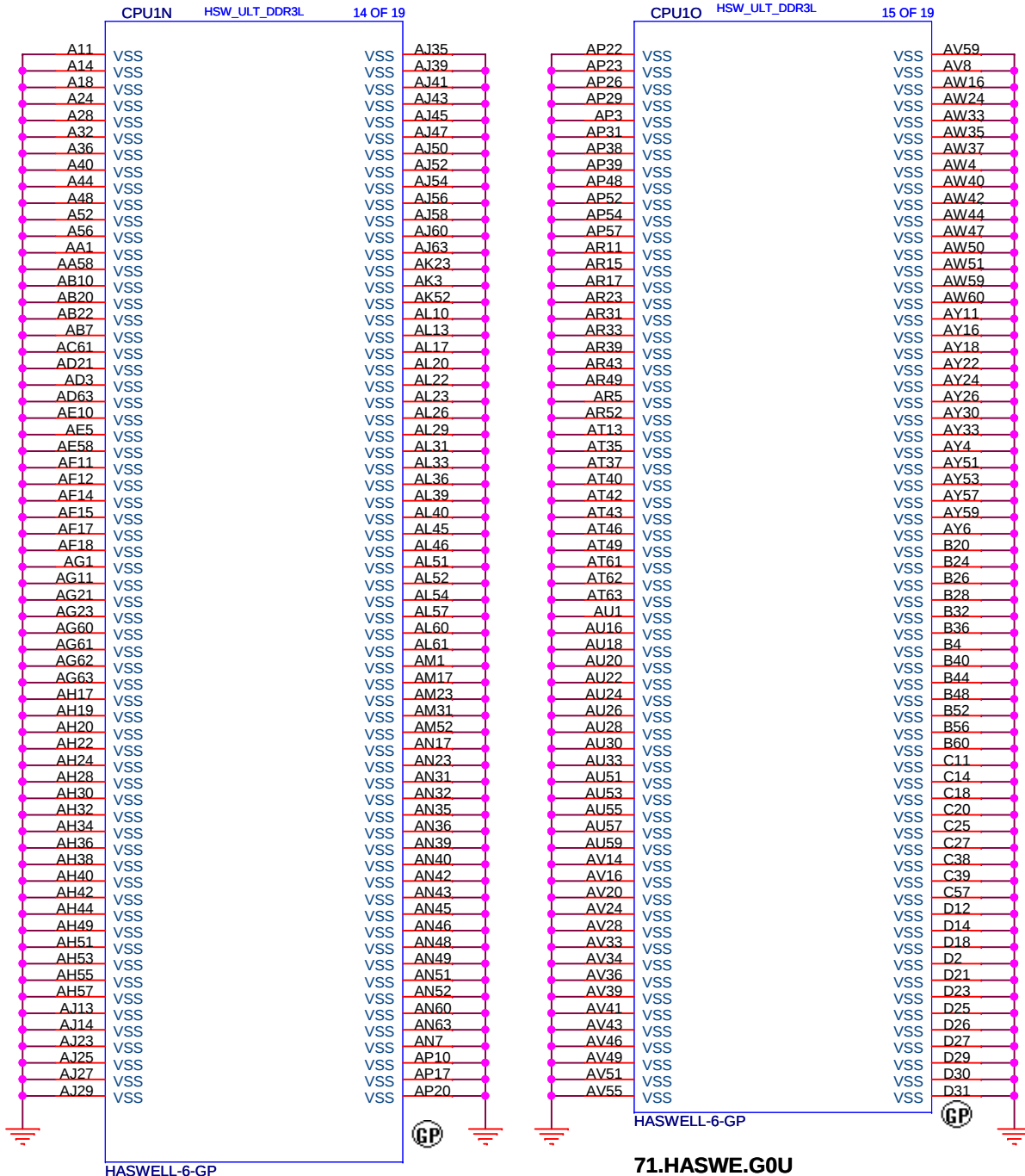


71.HASWE.G0U

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Title CPU (RSVD)		
Size A4	Document Number Storm 2	Rev -1
Date: Friday, February 01, 2013	Sheet 22	of 102

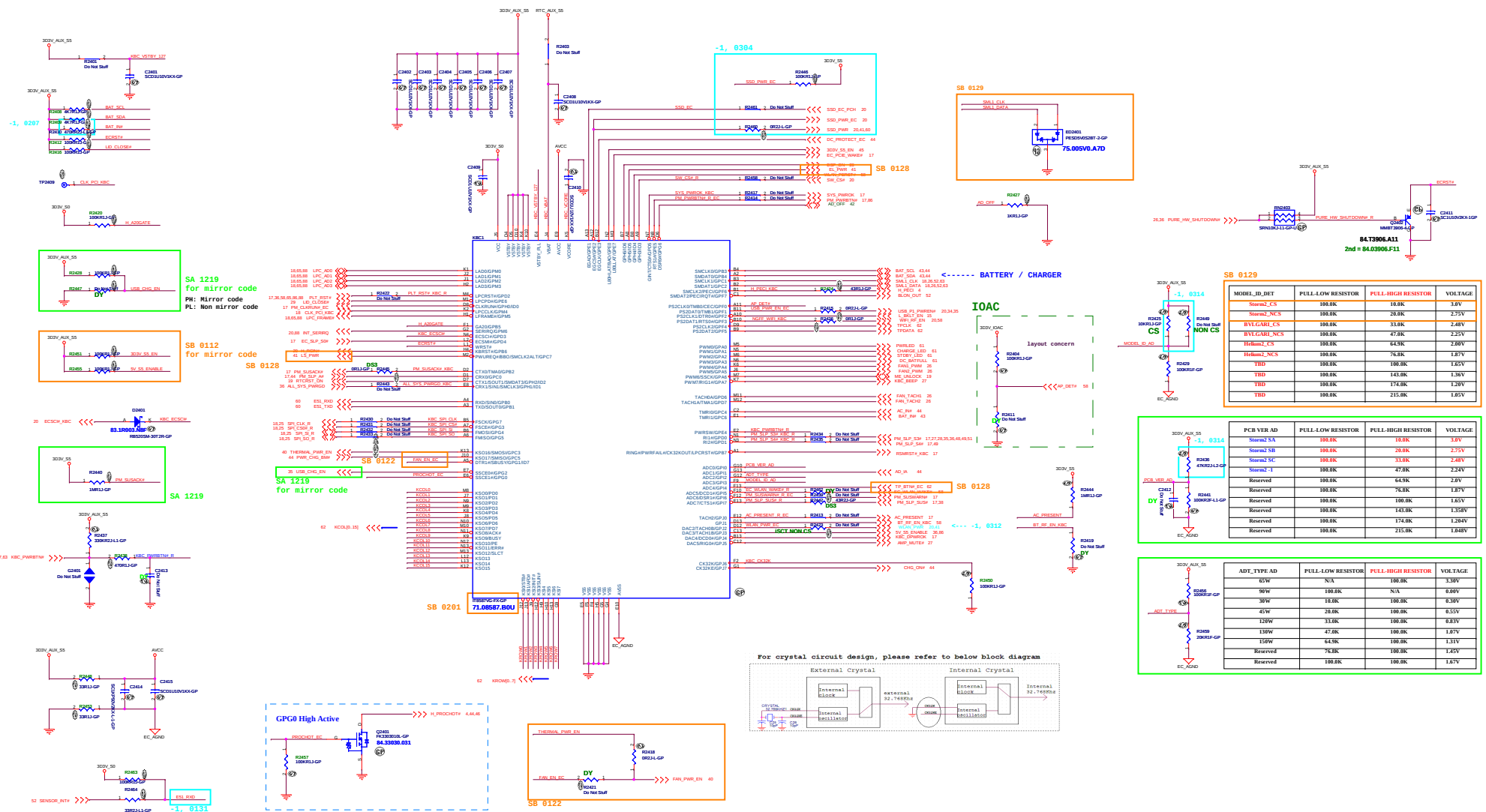
SSID = PCH



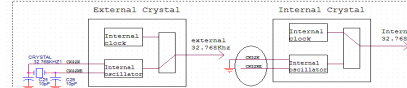
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Title PCH (VSS)			
Size A4	Document Number Storm 2		Rev -1
Date: Friday, December 28, 2012	Sheet 23	of 102	

SSID = KBC



For crystal circuit design, please refer to below block diagram



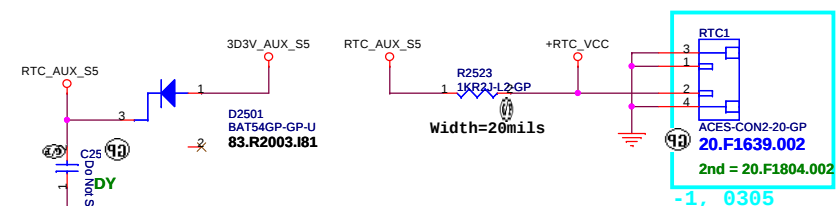
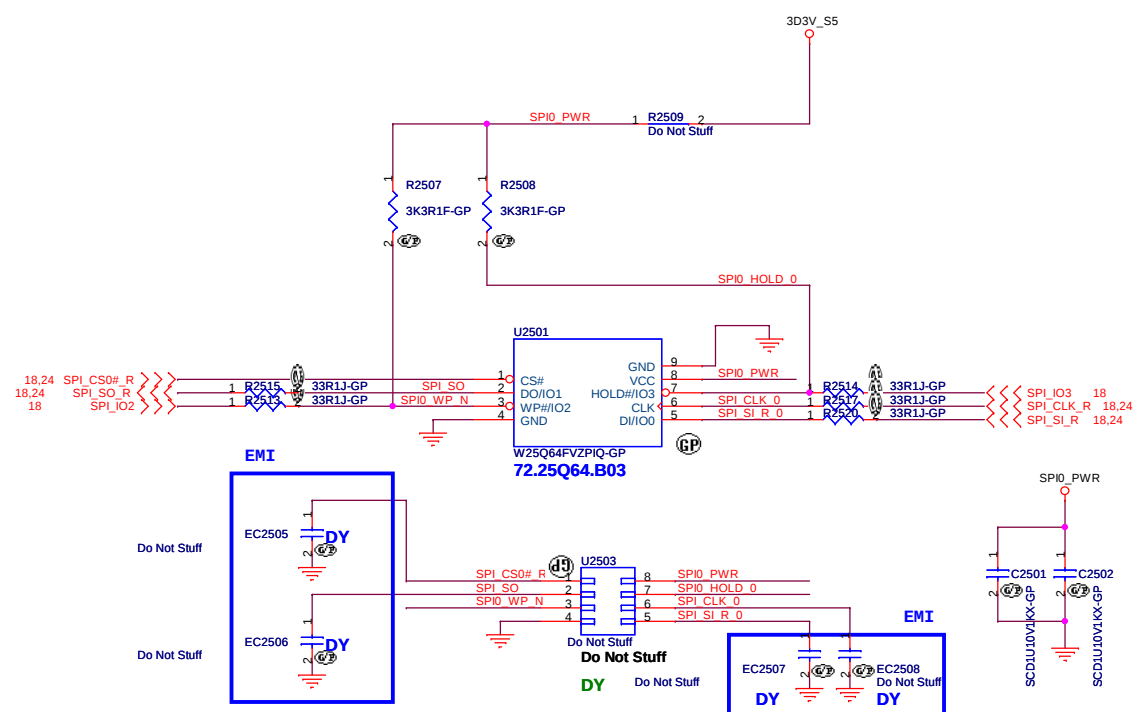
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SSID = Flash.ROM

SPI FLASH ROM (8M byte) for PCH

SSID = RBAT

SPI ROM Equal length need to less than 500mil

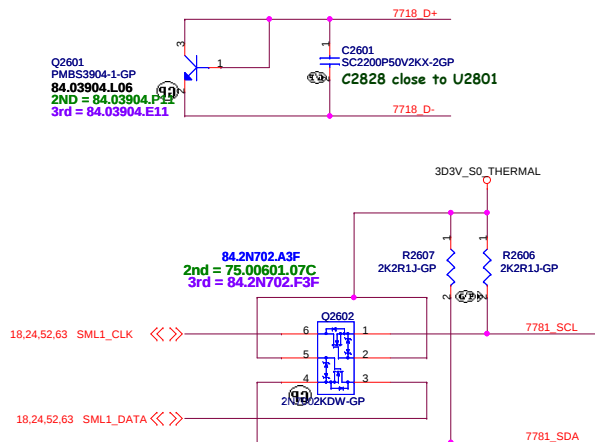


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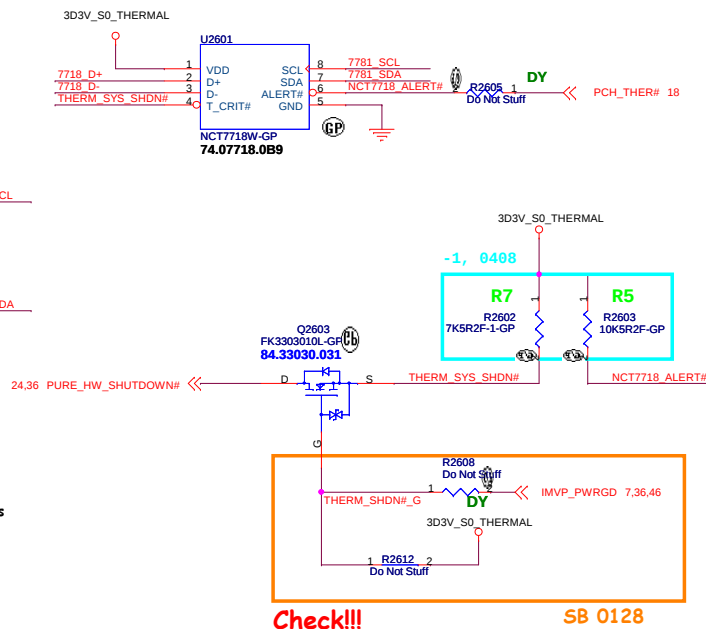
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Title			
Flash/RTC			
Size A3	Document Number		Rev
	Storm 2		-1
Date:	Tuesday, April 02, 2013	Sheet	25 of 102

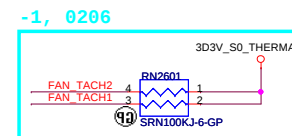
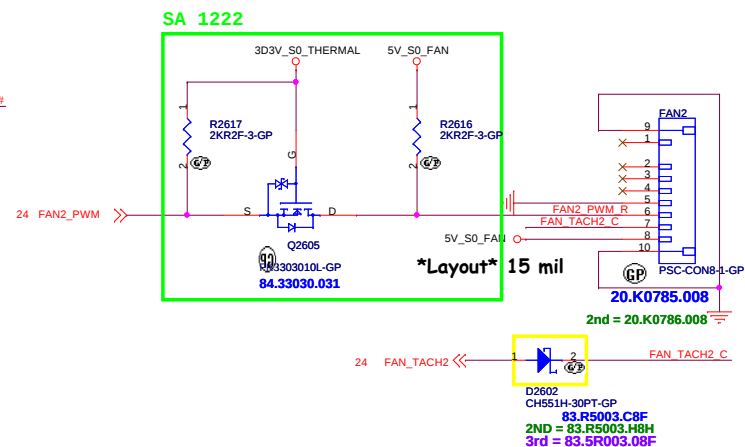
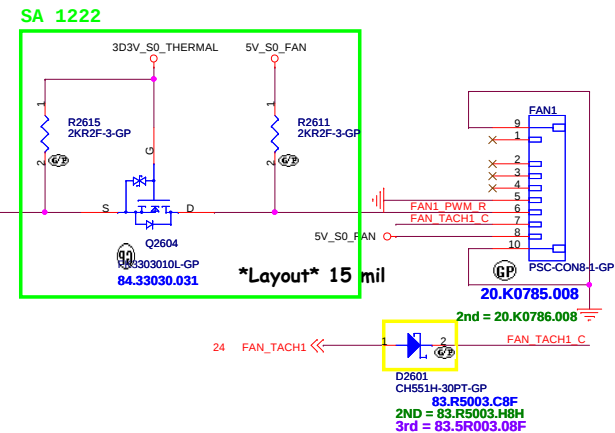
SSID = Thermal



- * Put the C1 2200pF to close the nct7718W
- * Add ground shielding for D+ and D- traces
- * D+/D- route has to be away from the high noise area
- * The recommended traces width and ground shielding spacing are 10mils



SB 0128



Setting 91°C

R7

The default value is trapping after power up 100ms by different pull-up resistors of T_CRIT# and ALERT# pin:

TEMPERATURE (°C)		T_CRIT#				
		2KΩ	7.5KΩ	10.5KΩ	14KΩ	18.7KΩ
ALERT#	2KΩ	77	87	97	107	117
	7.5KΩ	79	89	99	109	119
	10.5KΩ	81	91	101	111	121
	14KΩ	83	93	103	113	123
	18.7KΩ	85	95	105	115	125

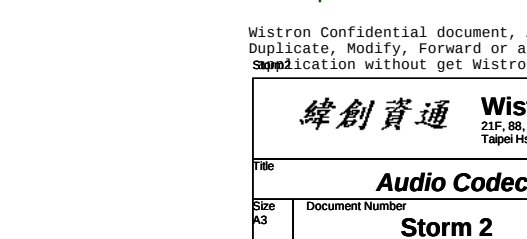
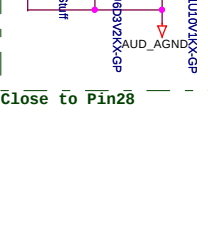
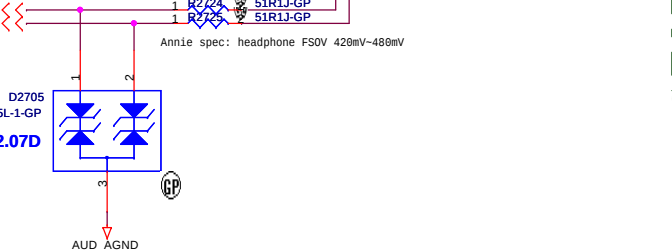
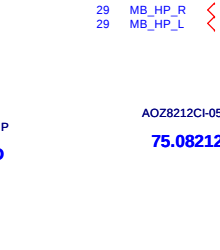
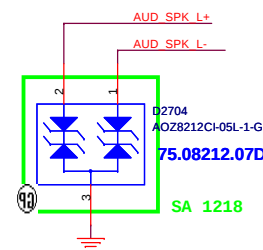
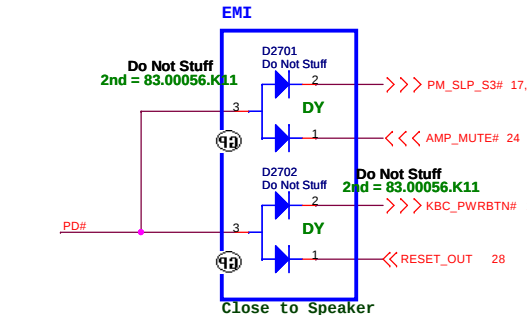
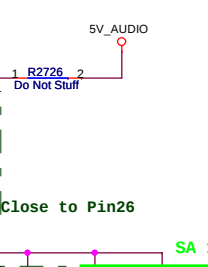
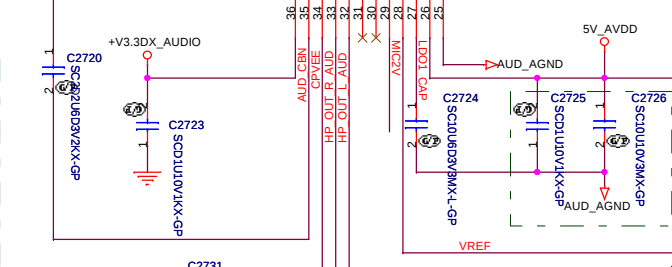
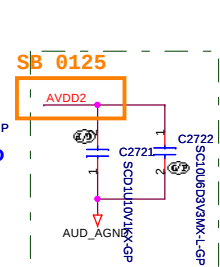
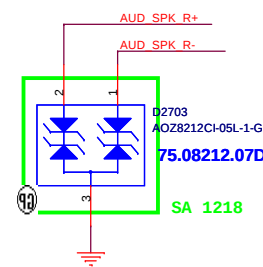
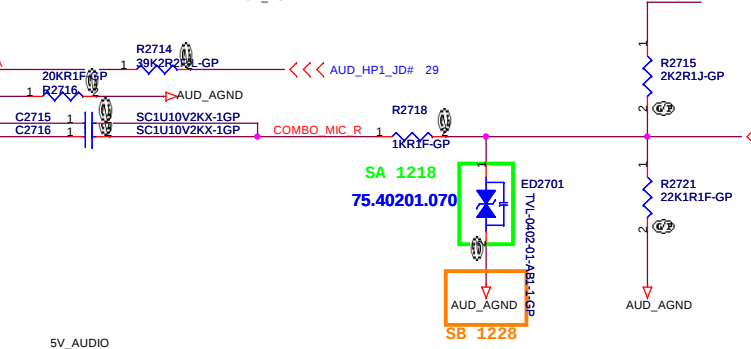
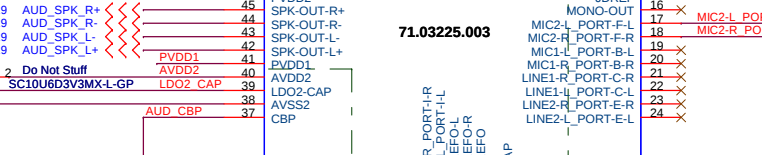
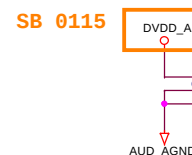
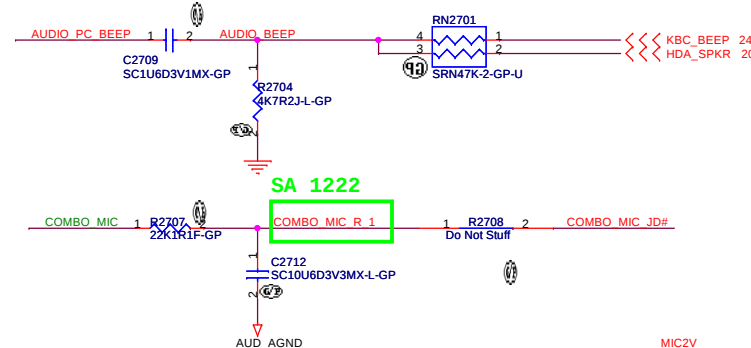
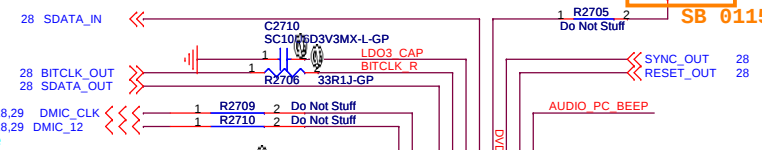
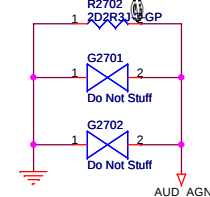
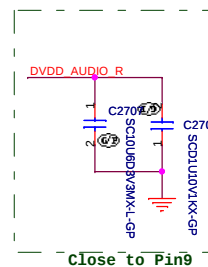
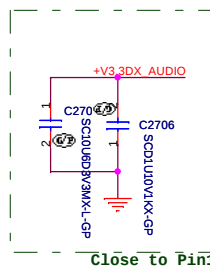
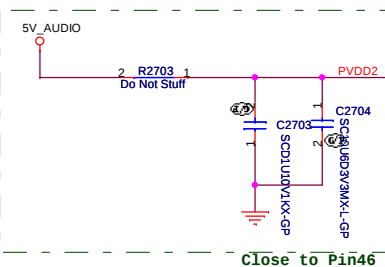
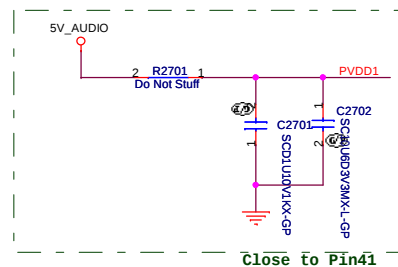
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Title	NUVOTON_NCT7718W
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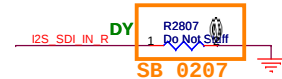
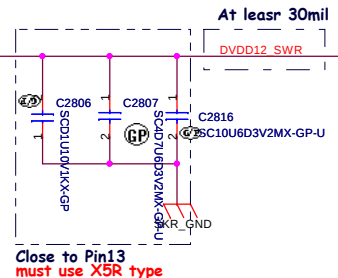
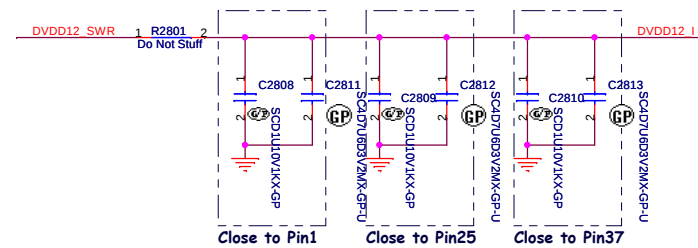
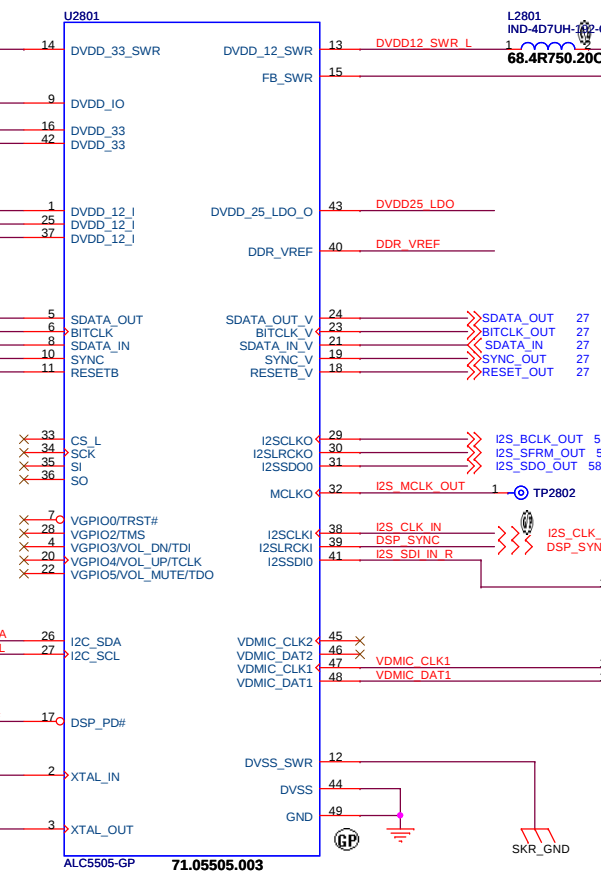
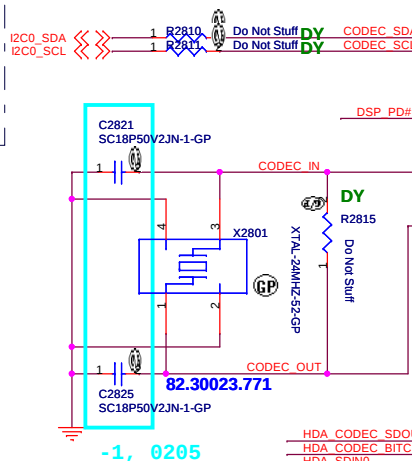
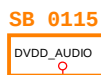
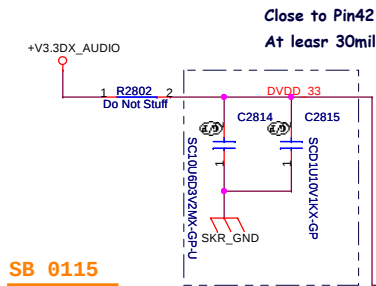
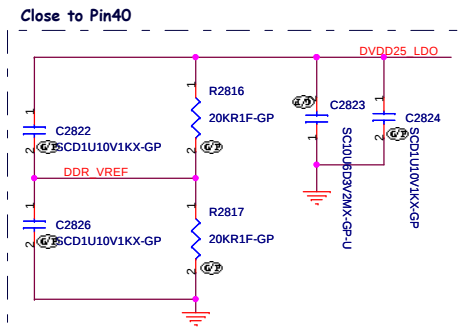
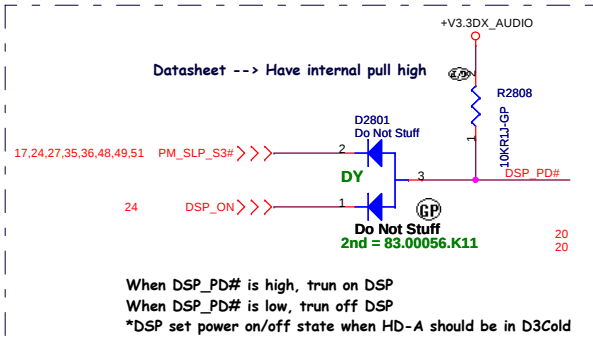
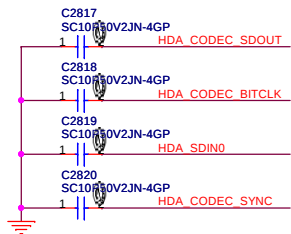
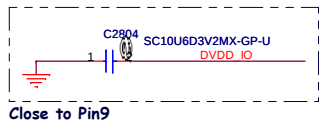
Size Custom	Document Number	Rev
	Storm 2	-1
Date:	Monday, April 08, 2013	Sheet 26 of 102

Date: Monday, April 08, 2013 Sheet 26 of 102



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Title	Audio Codec (ALC3225)	
Size A3	Document Number	Rev
	Storm 2	-1
Date: Tuesday, April 02, 2013	Sheet 27	of 102



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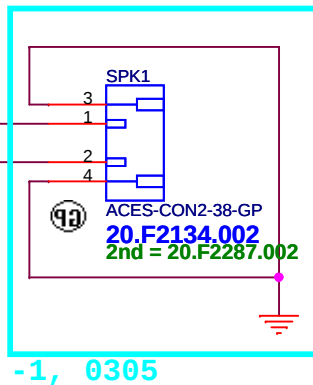
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Speaker

27 AUD_SPK_L- >>>
27 AUD_SPK_L+ >>>

Layout Note:

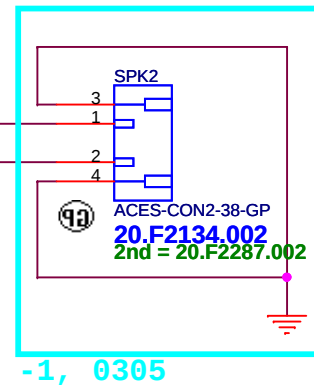
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27 AUD_SPK_R+ >>>

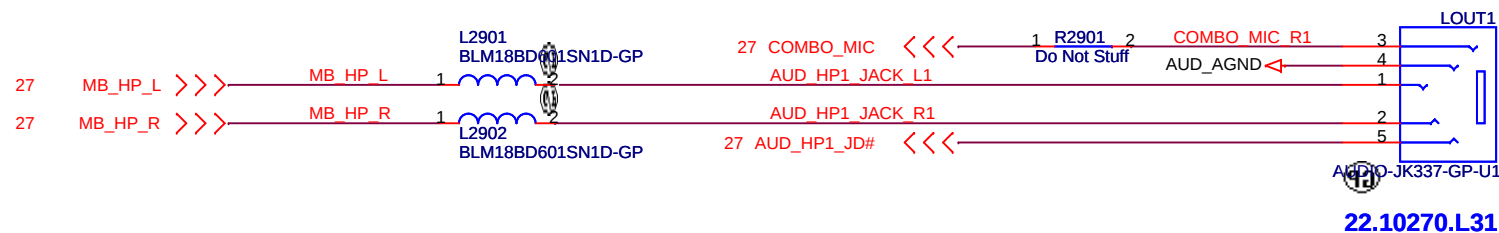
Layout Note:

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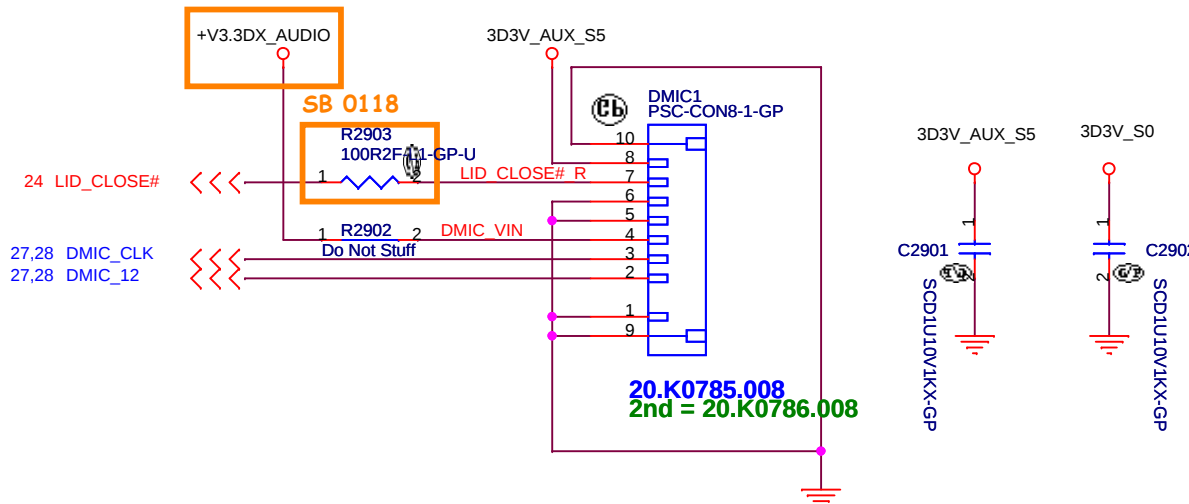


Combo Jack

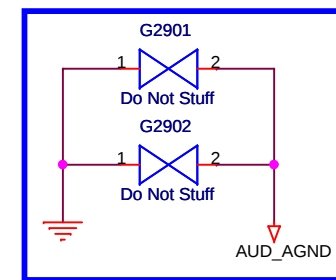
600ohm 100MHz
200mA 0.5ohm DC



DMIC & Hall Sensor



EMI



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Title **Audio Jack & Hall Sensor**

Size A4	Document Number Storm 2	Rev -1
Date Tuesday, April 02, 2013	Sheet 29	of 102

SSID = User.Interface

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Storm2

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Title LAN (Reserved)

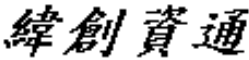
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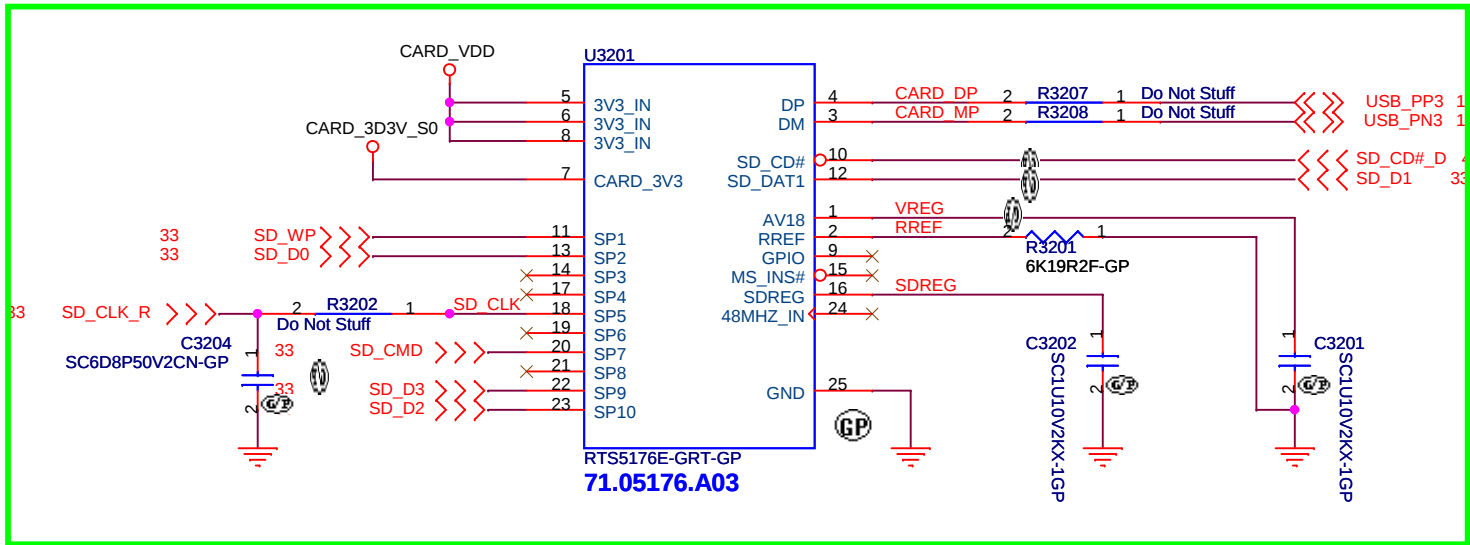
Date: Friday, December 28, 2012 Sheet 30 of 102

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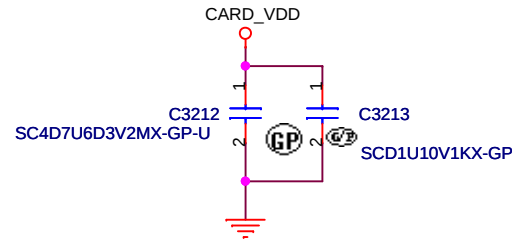
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Storm2

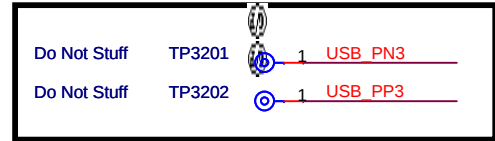
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Title RJ45 + Transformer (Reserved)			
Size A	Document Number Storm 2		Rev -1
Date:	Friday, December 28, 2012	Sheet 31 of	102



SA 0104



FOR SIV, PLS near U3201



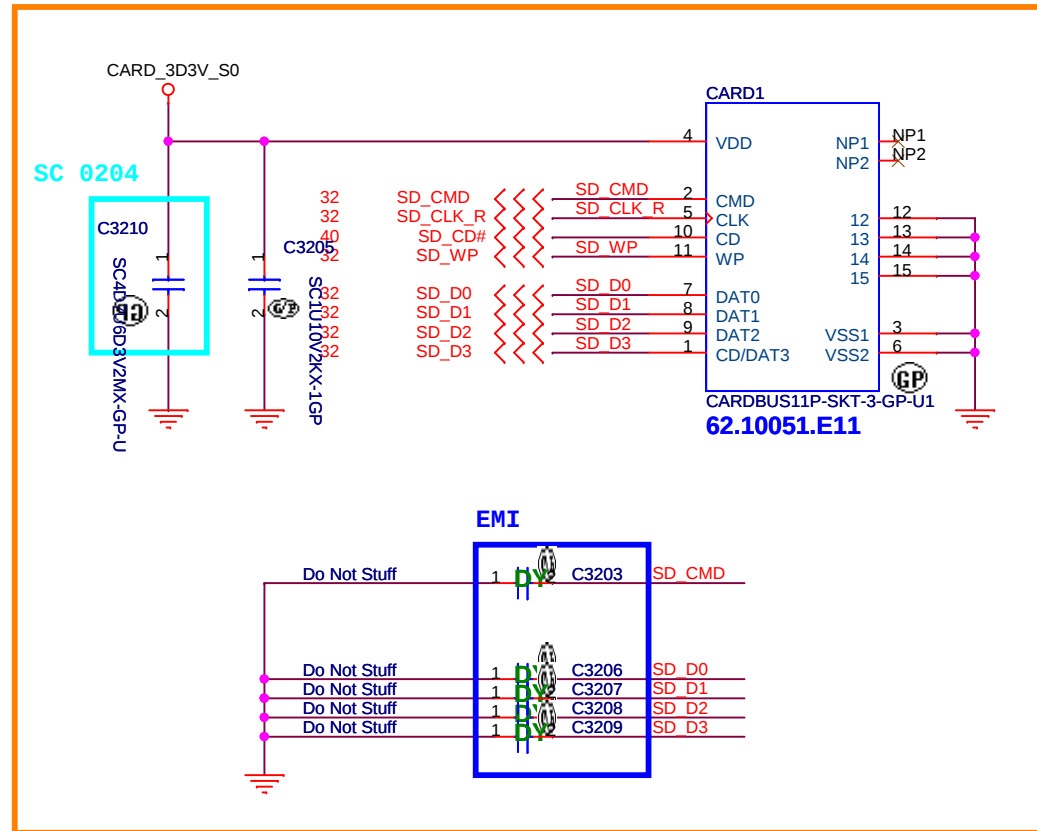
Pin#	Name	I/O Type	Description
1	AV18	O	Internal regulator for Analog blocks. An external capacitor should be connected
2	RREF	I	Connect external resistor (6.2K $\pm$ 1%) to reference ground
3	DM	I/O	USB2.0 D- signal
4	DP	I/O	USB2.0 D+ signal
5	3V3_IN	I	3.3V power input
6	3V3_IN	I	3.3V power input
7	CARD_3V3	O	3.3V power supplied for all media cards
8	3V3_IN	I	3.3V power input
9	GPIO	I/O	General purpose input/output. Now it's used for LED blinking
10	SD_CD#	I	SD Card Detect pin
11	SP1	I/O	SD Write Protect pin and MS Data 1
12	SD_DAT1	I/O	SD/MMC Data 1
13	SP2	I/O	SD/MMC Data 0 and MS Data 5
14	SP3	I/O	MMC Data 7 and MS Data 4
15	MS_INS#	I	MS Card Detect pin
16	SDREG	O	Internal regulator for SD card. An external capacitor should be connected
17	SP4	I/O	MMC Data 6 and MS Data 0
18	SP5	I/O	SD/MMC Clock pin and MS Data 2
19	SP6	I/O	MMC Data 5 and MS Data 6
20	SP7	I/O	SD/MMC Command pin and MS Data 3
21	SP8	I/O	MMC Data 4 and MS Data 7
22	SP9	I/O	SD/MMC Data 3 and MS Clock pin
23	SP10	I/O	SD/MMC Data 2 and MS BS pin
24	48MHz_In	I	48MHz clock input
	Exposed PAD		The Exposed PAD must be connected to the reference ground

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Title CARD READER_ RTS5176E	
Size A4	Document Number Storm 2
Date Tuesday, April 02, 2013	Rev -1
Sheet 32	of 102

SD Card Reader CONN.

SB 1228



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Storm2

緯創資通

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Title

CARD Reader CONN.

Size
A4

Document Number

Storm 2

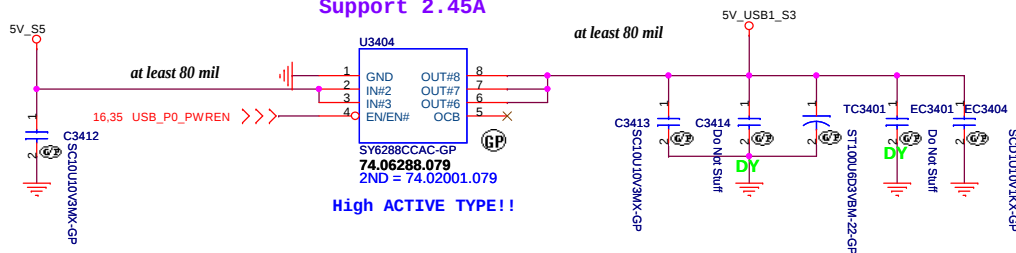
Rev
-1

Date: Tuesday, April 02, 2013

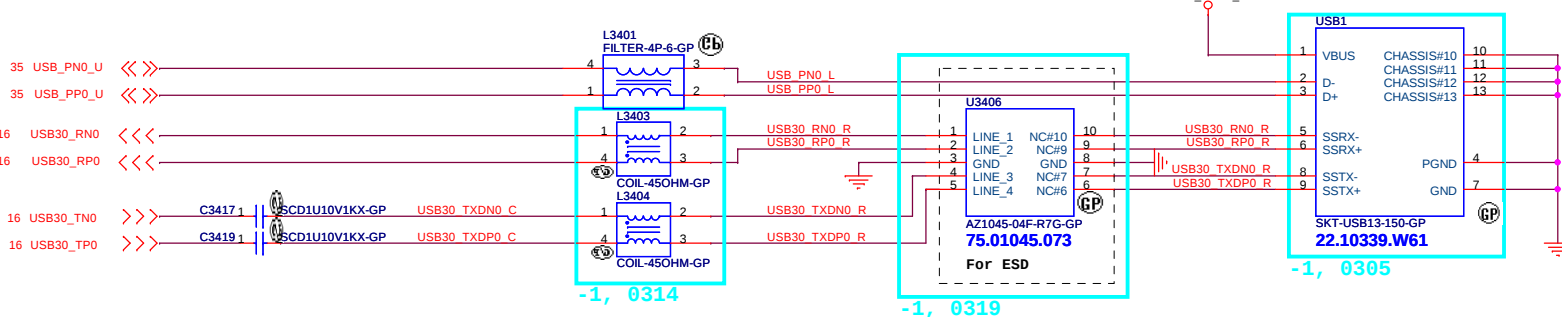
Sheet 33 of 102

SSID = USB

Change Main source
Support 2.45A



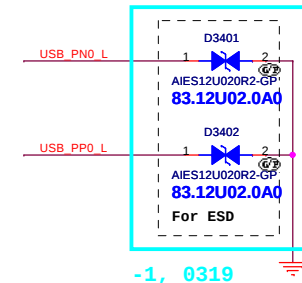
USB Charger Port
USB3.0 Port1



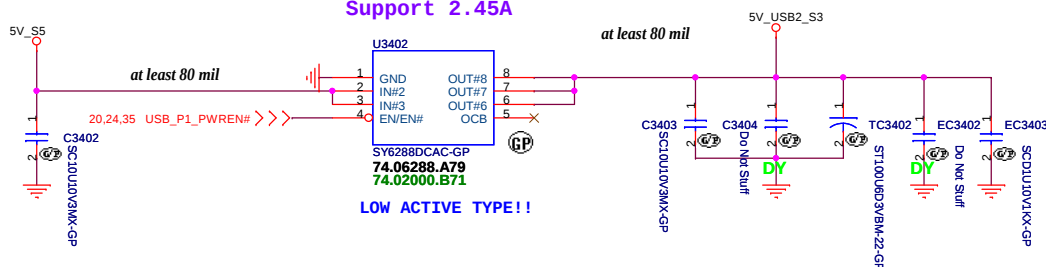
JE40 modify

USB 3.0 Connector
Pin definition

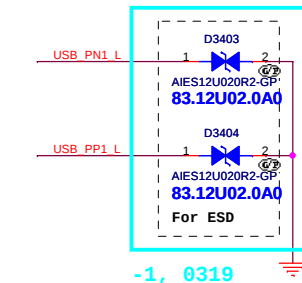
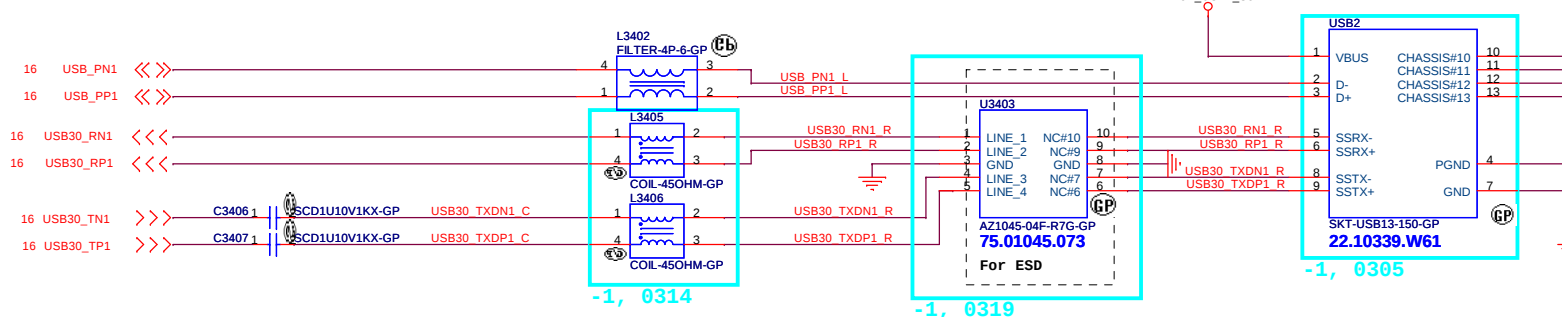
1	POWER
2	USB 2.0 D-
3	USB 2.0 D+
4	GND
5	StdA_SSRX-
6	StdA_SSRX+
7	GND
8	StdA_SSTX-
9	StdA_SSTX+



Change Main source
Support 2.45A



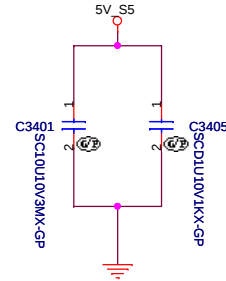
USB3.0 Port2



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USB Charger



Pin Description - SLG55583A

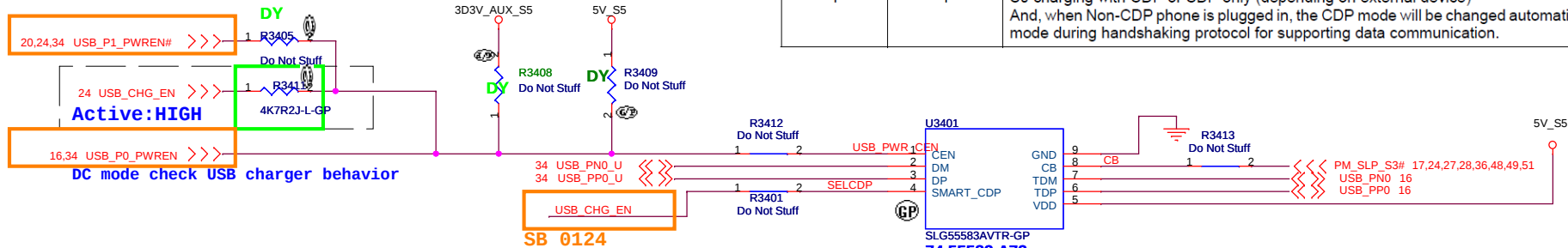
Pin Define

The symbol by pin number.

Pin #	Name	Type	Description
1	CEN	Output	N-FET Open Drain Output. Current Limit Switch (CLS) Control Output. CB changes from 0 to 1 or 1 to 0. CEN will be low for 2 seconds (typ)
2	DM	Input/Output	USB Connector D-
3	DP	Input/Output	USB Connector D+
4	SMART-CDP	Input	Input Control logic (see truth table)
5	VDD	PWR	Power Supply. Connect a 0.1μF capacitor between VDD and GND as close as possible to the device.
6	TDP	Input/Output	Host USB Transceiver D+ Connection
7	TDM	Input/Output	Host USB Transceiver D- Connection
8	CB	Input	Switch Control Bit 0 = autodetection charger identification active 1 = charging downstream port with active USB2.0 data communication mode with 1.5A support
9	Thermal Pad	GND	Ground

Truth Table

CB	SMART-CDP	Function
0	X	DCP autodetect with mouse/keyboard wakeup
1	0	S0 charging with SDP only
1	1	S0 charging with CDP or SDP only (depending on external device) And, when Non-CDP phone is plugged in, the CDP mode will be changed automatically to SDP mode during handshaking protocol for supporting data communication.



SB 1228

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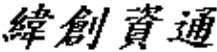
緯創資通 Wistron Corporation
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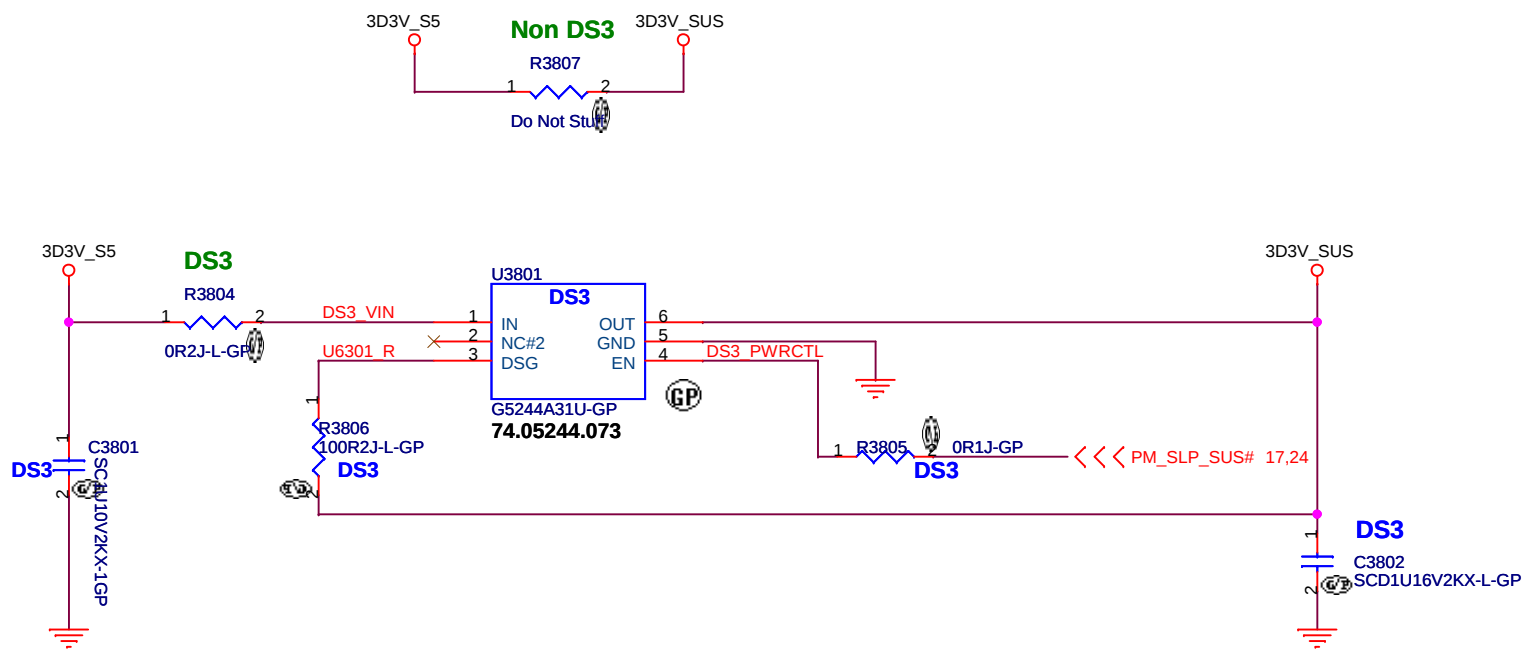
Title		USB Charger (reserved)	
Size B	Document Number	Storm 2	
Date: Tuesday, April 02, 2013	Sheet 35 of 102	Rev -1	

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Storm2

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Title ADAPTER OCP / S3 reduction			
Size A4	Document Number Storm 2		Rev -1
Date: Friday, December 28, 2012		Sheet 37 of	102

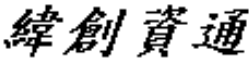


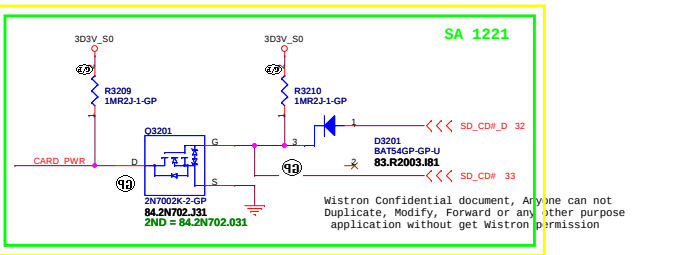
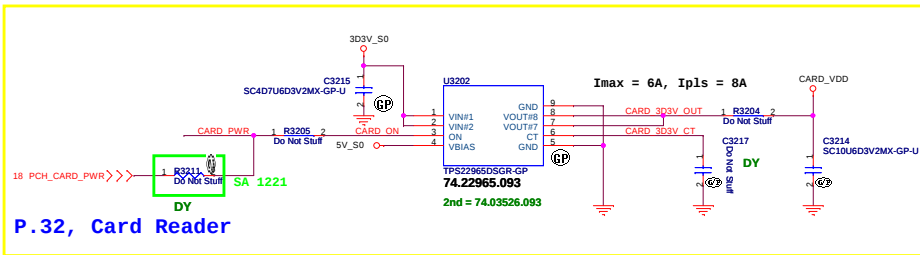
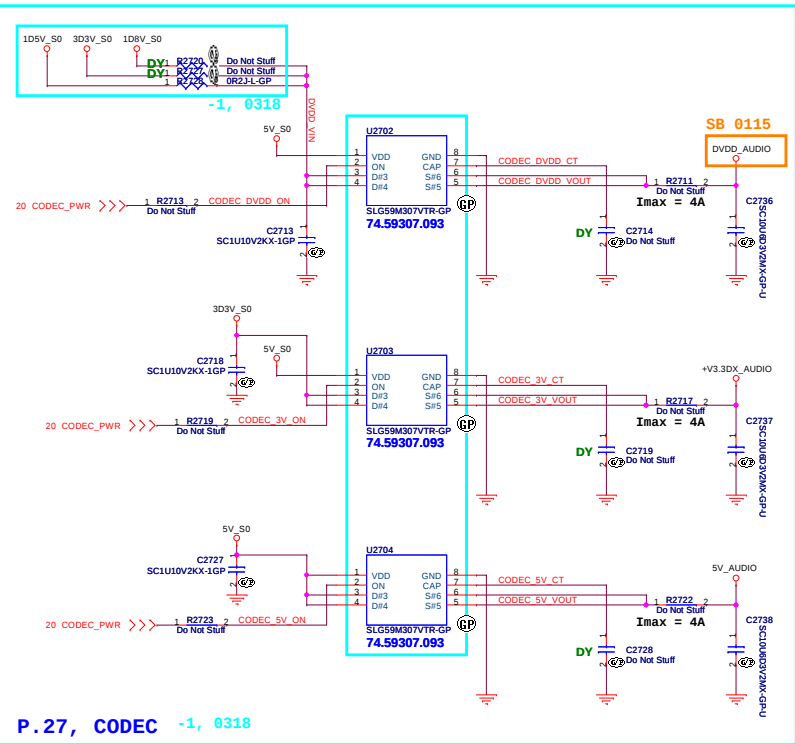
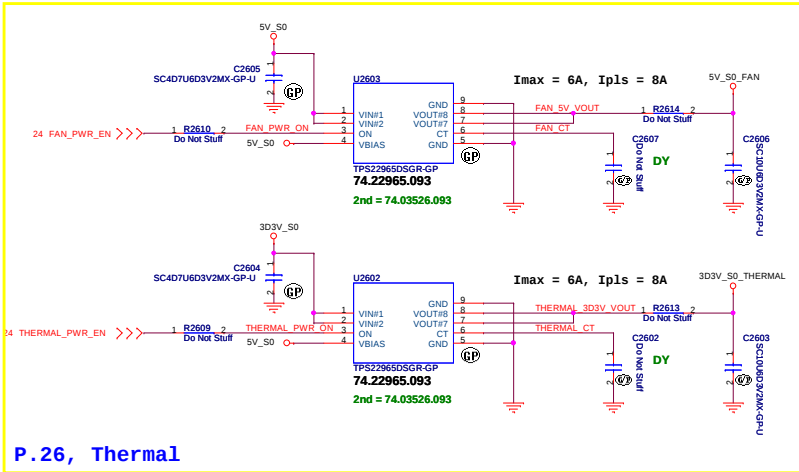
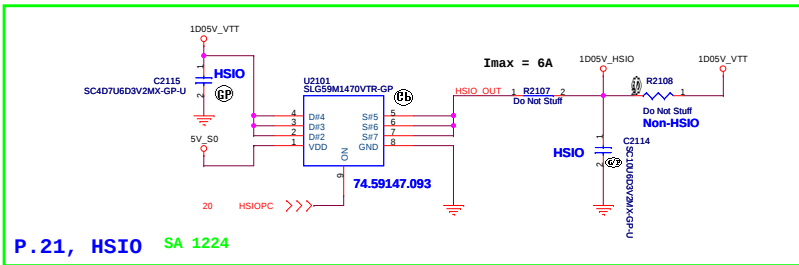
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Size A4	Document Number Storm 2
	Rev -1
Date: Tuesday, April 02, 2013	Sheet 38 of 102

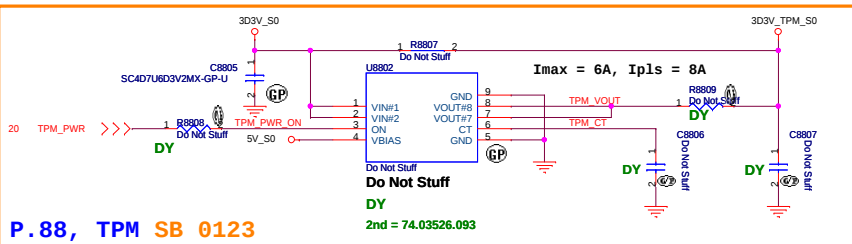
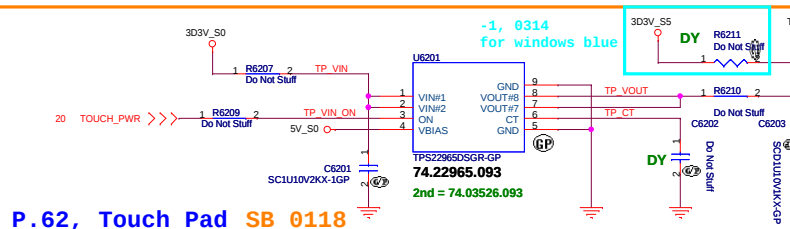
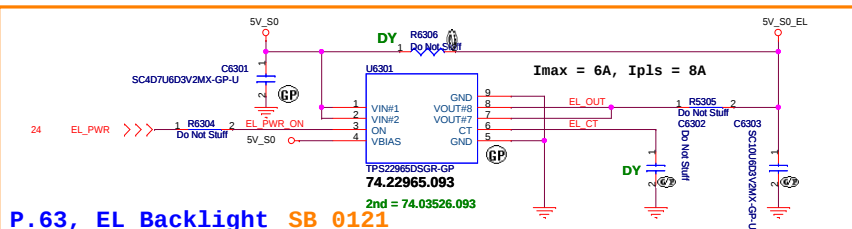
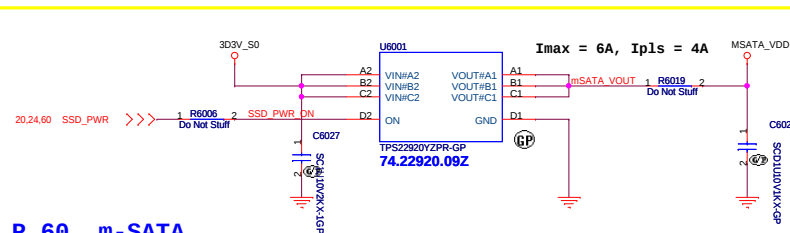
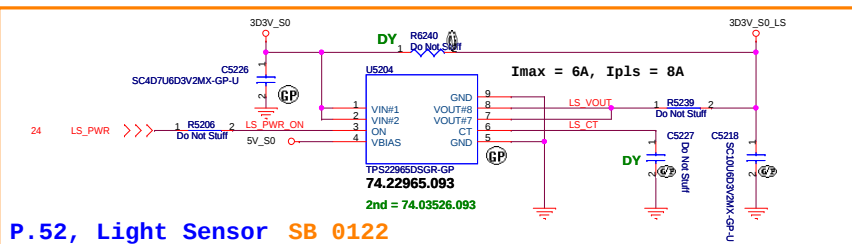
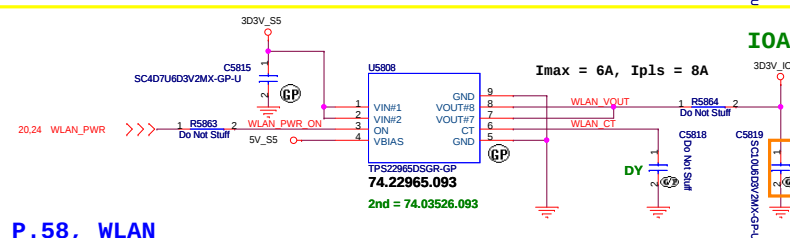
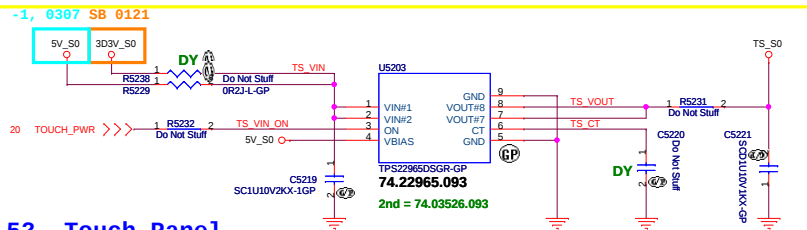
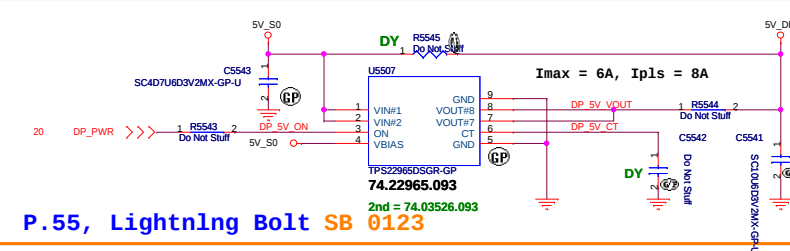
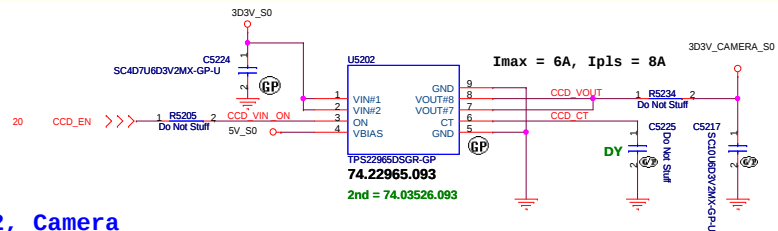
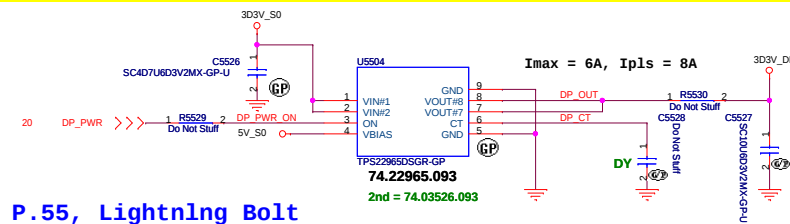
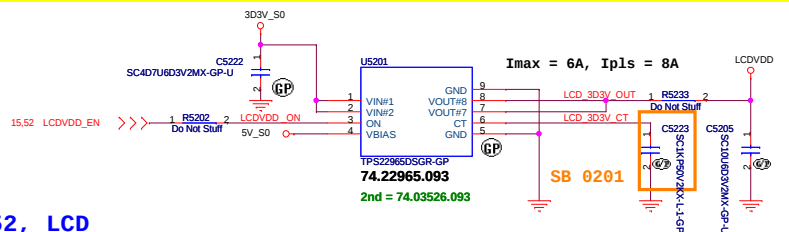
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Size A	Document Number		Rev
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Date:	Friday, December 28, 2012	Sheet	39 of 102

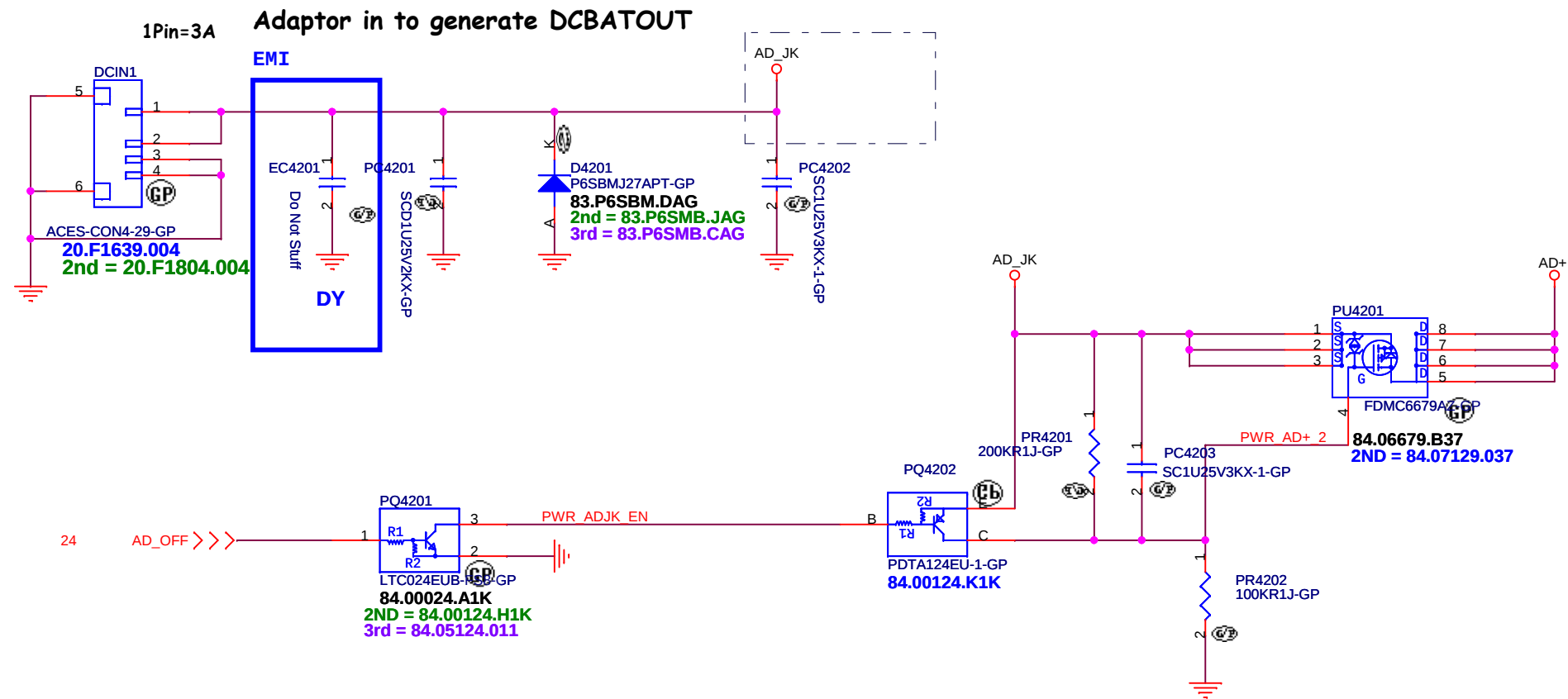


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ANNIE solution

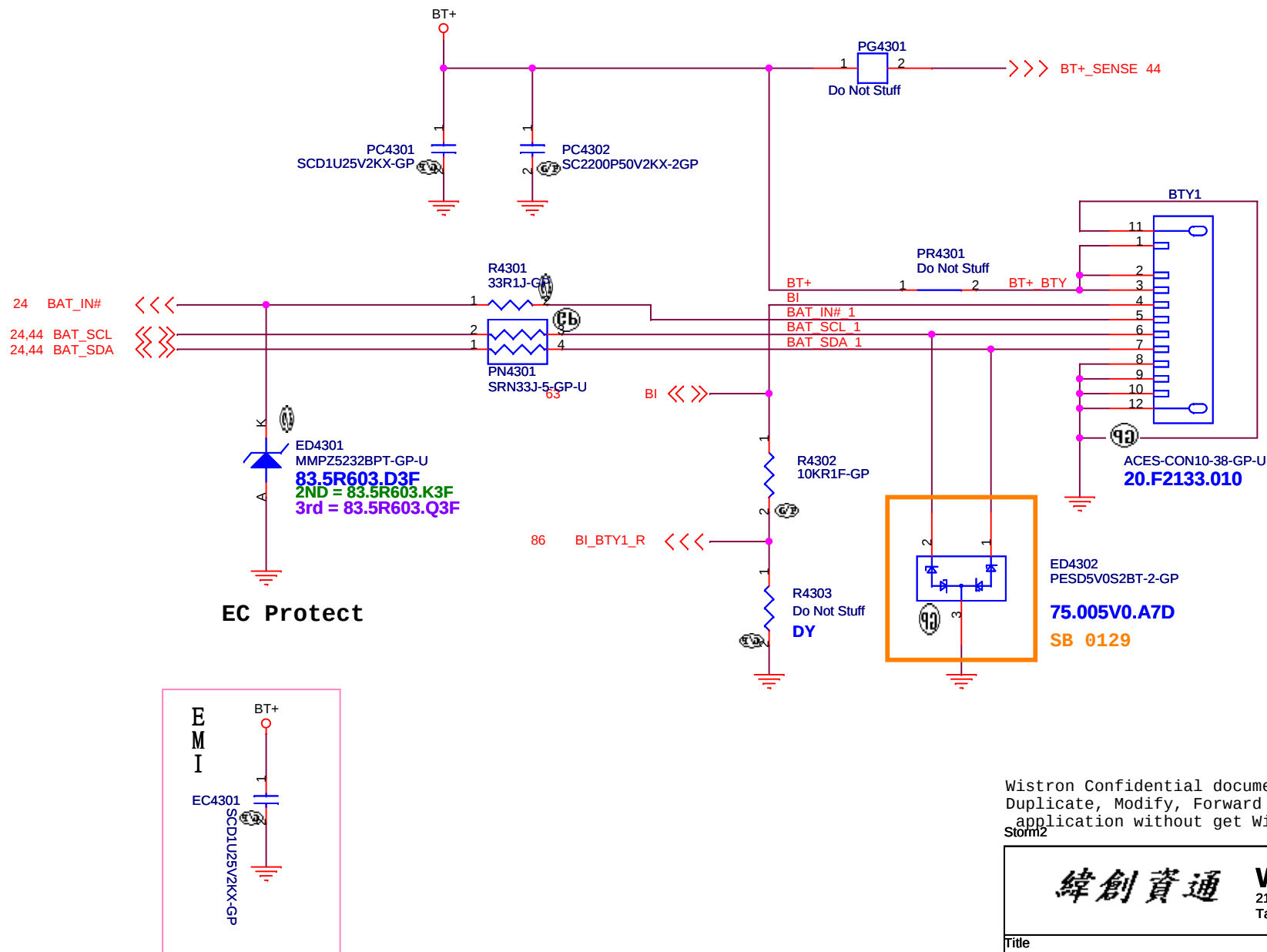


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Title			
DCIN JACK			
Size	Document Number		Rev
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Date:	Tuesday, April 02, 2013	Sheet	42 of 102

BATTERY CONNECTOR



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Title BATT CONN			
Size A4	Document Number Storm 2		Rev -1
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SSID = Charger		
AD+ total power	R1	R2
45w	56K	100K
65w	106K	100K

2N7002K-2-GP
 84.2N702_J31
 2ND = 84.2N702.031

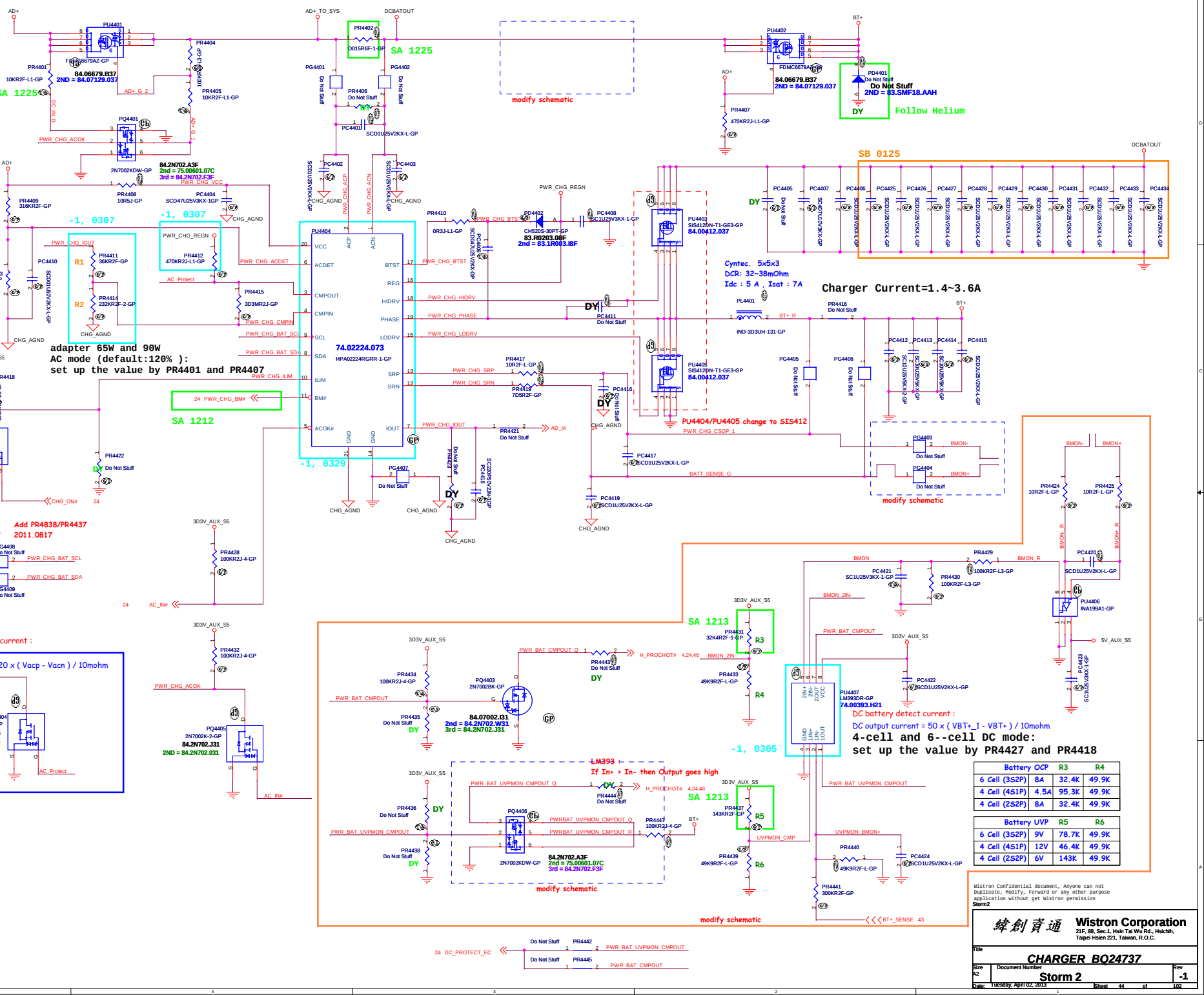
24.43 BAT_SCL <<<>>>

AC adapter detected

Ac input current
4.24 A H_PROCHOT <<<
check !!
P
2N7002K-
8A 2N702



5



Battery	OCV	R3	R4
6 Cell (3S2P)	8A	32.4K	49.9K
4 Cell (4S1P)	4.5A	95.3K	49.9K
4 Cell (2S2P)	8A	32.4K	49.9K

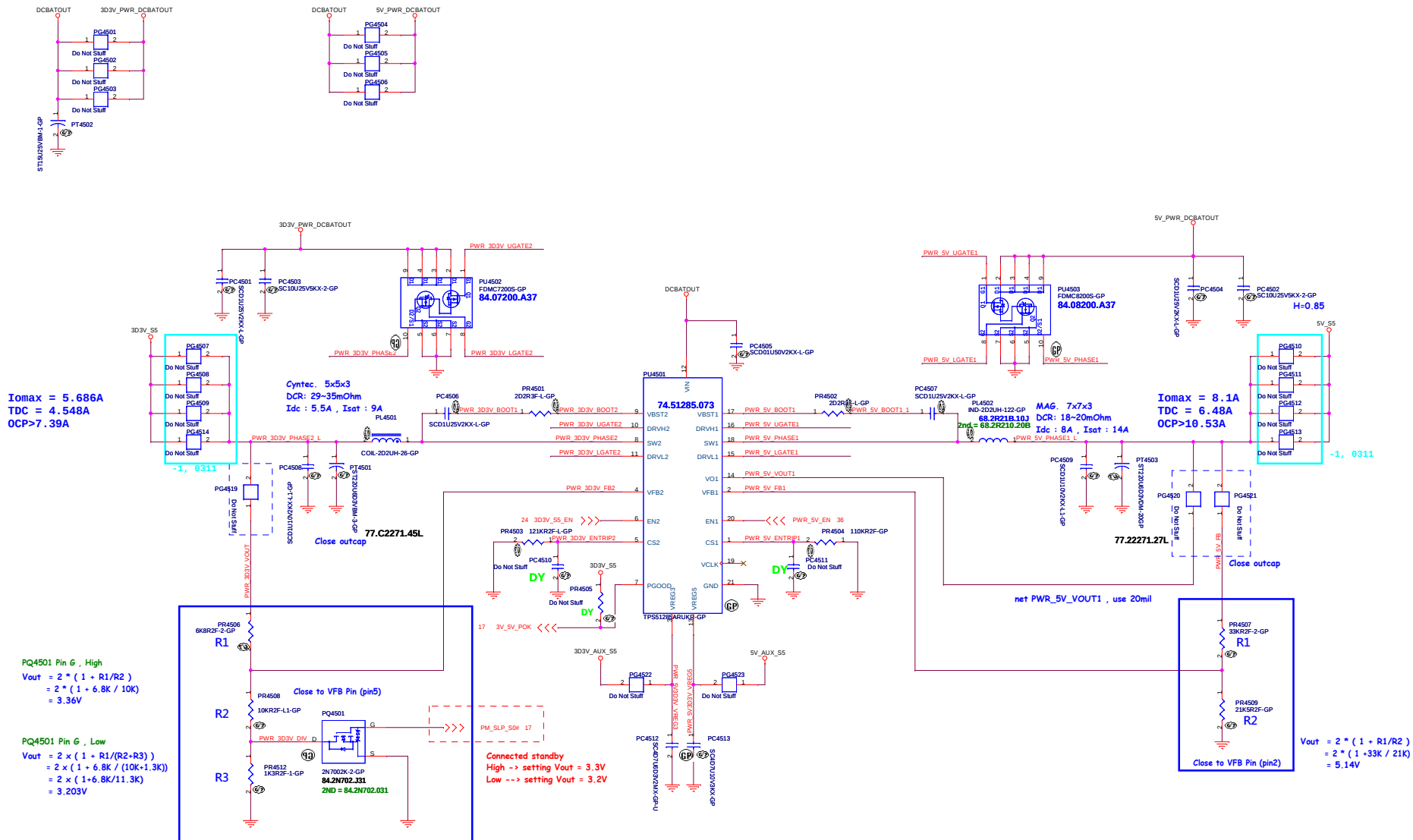
Battery	UVP	R5	R6
6 Cell (3S2P)	9V	78.7K	49.9K
4 Cell (4S1P)	12V	46.4K	49.9K
4 Cell (2S2P)	6V	143K	49.9K

21F, 88, Sec.1, Hsin
Taipei Hsien 221, Ta

CHARGER BO247

Storm 2

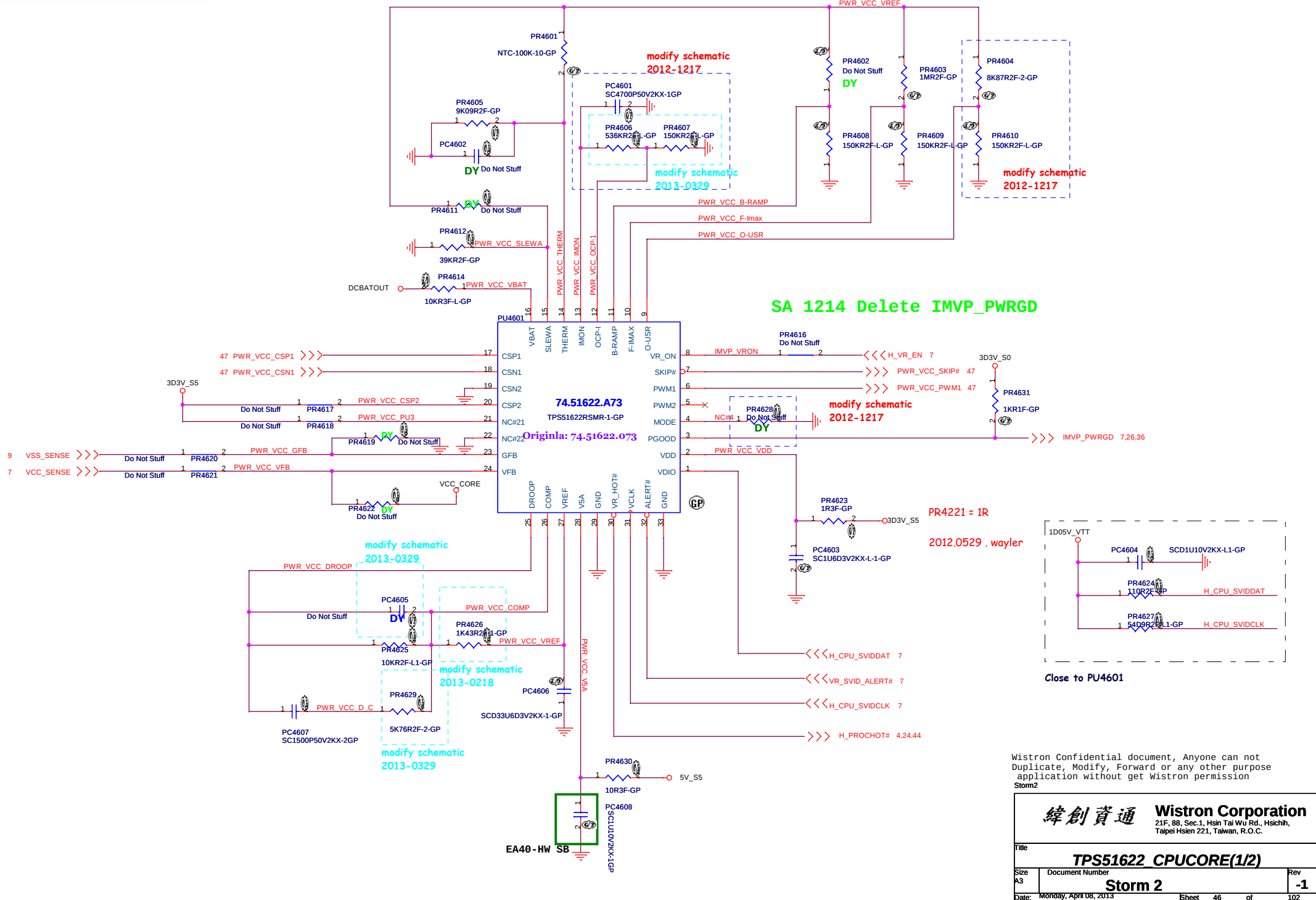
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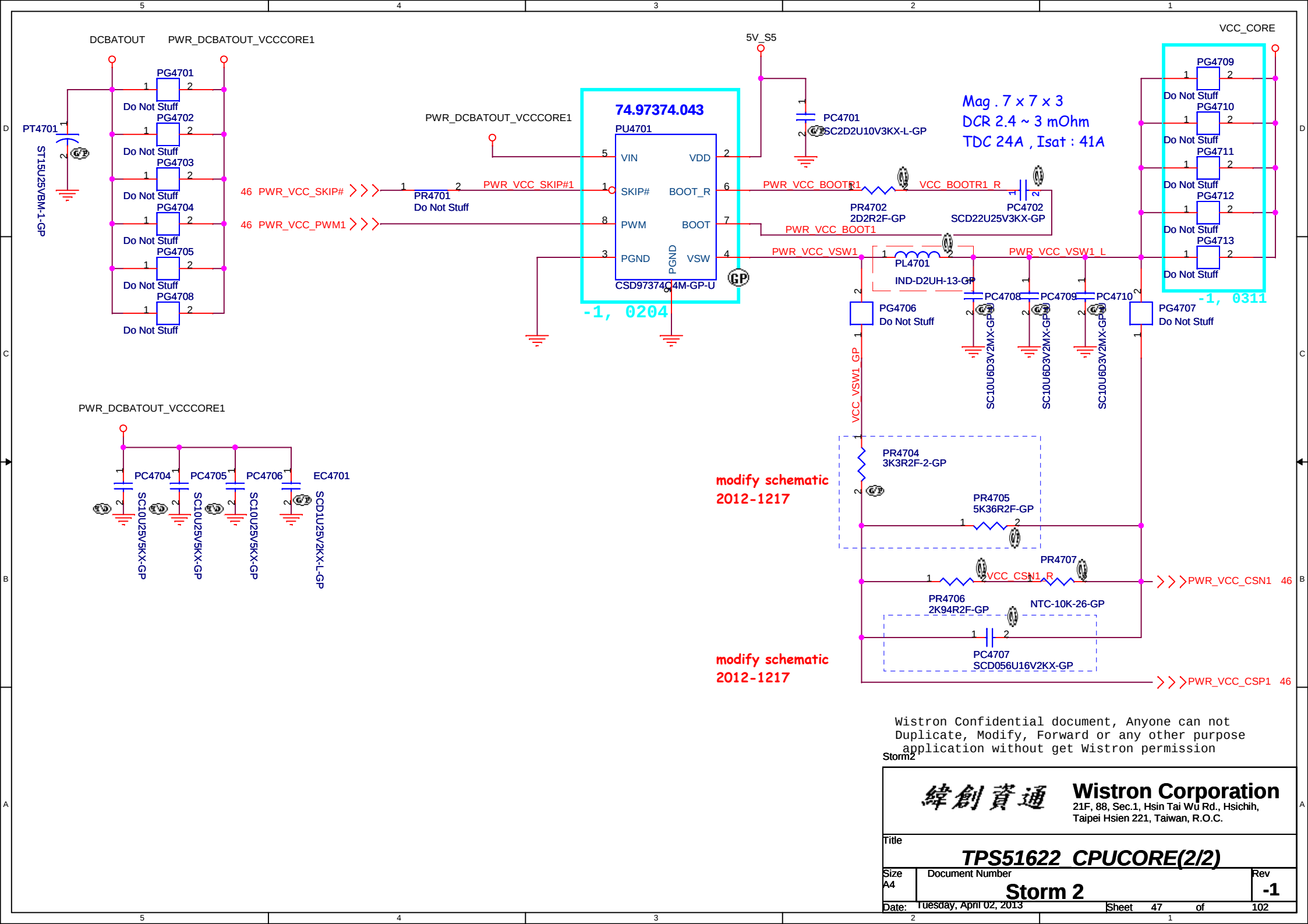


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TPSS1285 5V/3D3V	
File Size Custom	Document Number Storm 2
Date: 10/29/2012	Rev: -1 Sheet: 45 of 102

SSID = CPU_Regulator

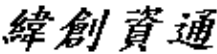




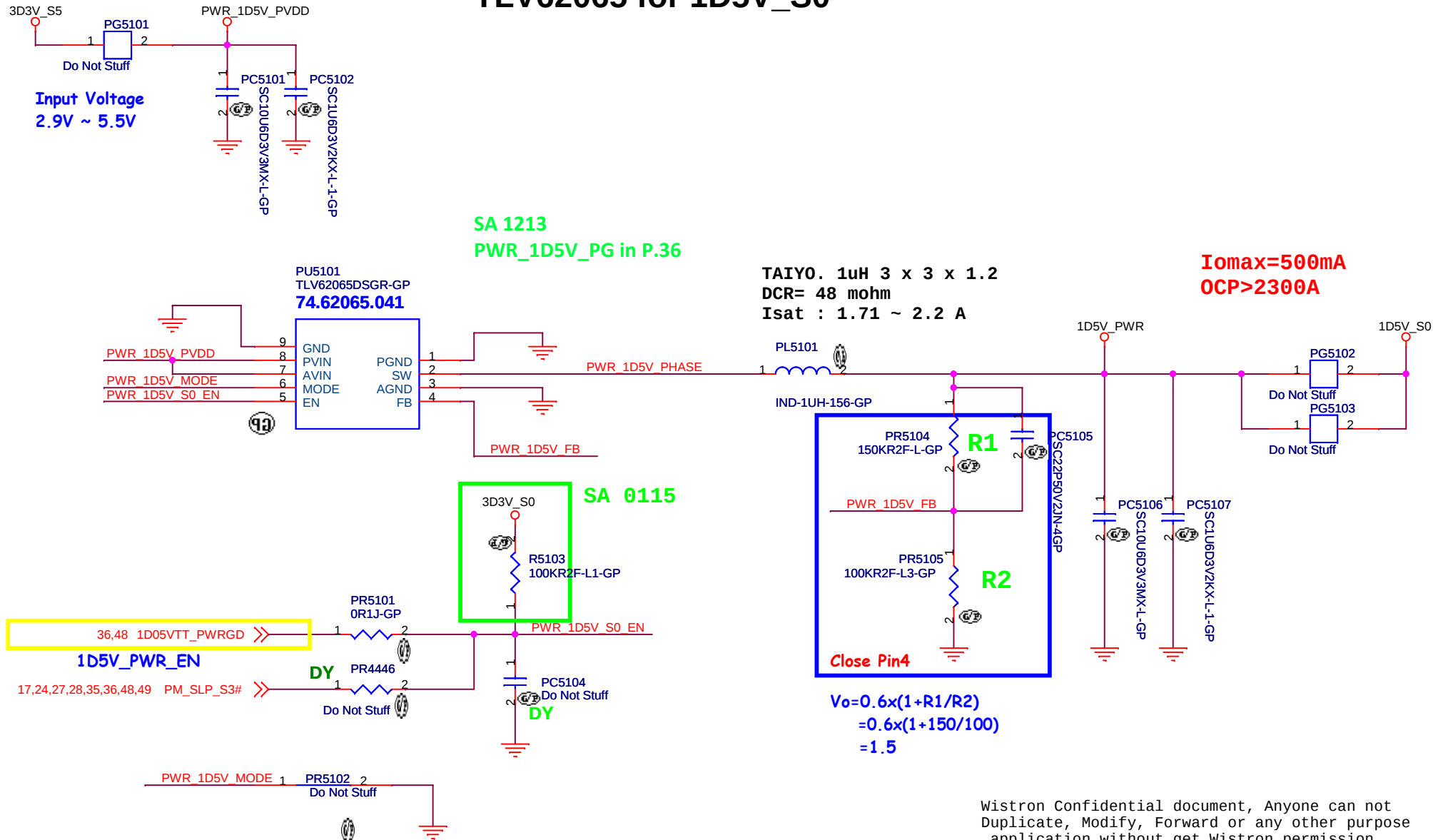
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1D8V S0 (Reserved)			
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TLV62065 for 1D5V_S0



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MODE pin	Function
High	Fixed Freq. PWM mode
Low	Power Save Mode with automatic transition from PFM mode to fixed freq. PWM mode

緯創資通

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Title

1D5V S0 TLV62065

Size
A4

Document Number

Storm 2

Rev
-1

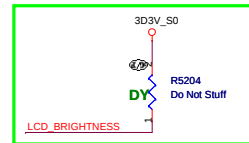
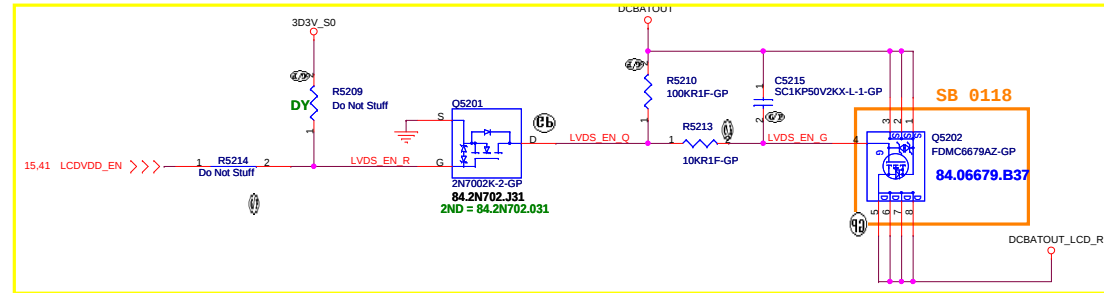
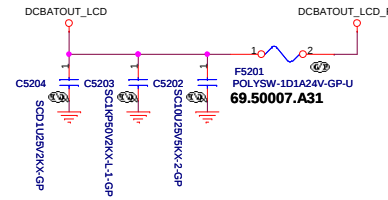
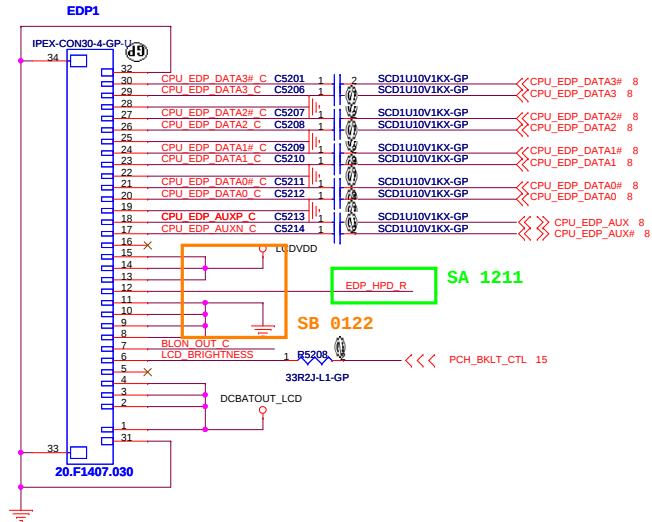
Date: Tuesday, April 02, 2013

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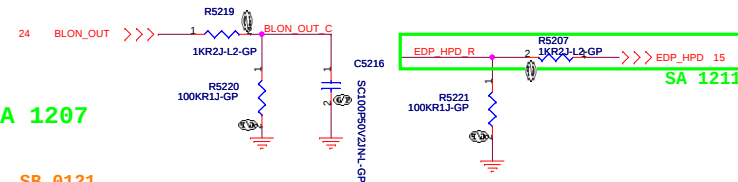
SSID = VIDEO

EDP CONNECTOR

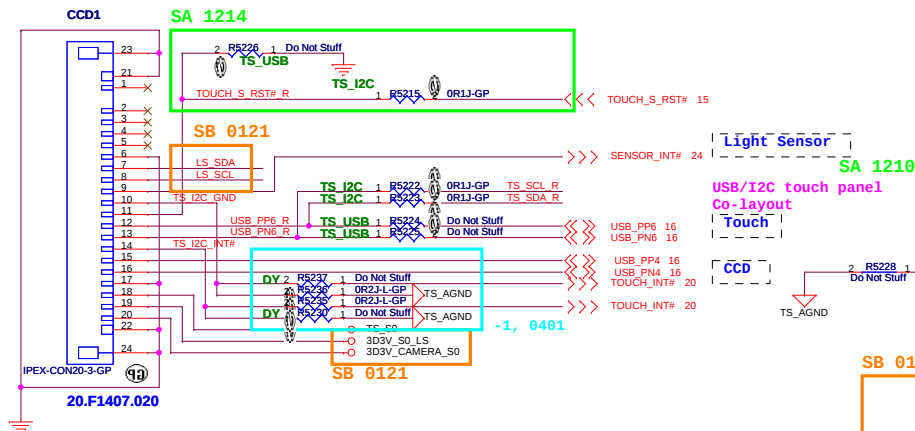
output turn-on Rising Time:1.3ms~2.7ms
current limit:2~3.3A
Previous parts(74.05285.07F)rise time:1.5ms ~5ms
current limit:1.5ms~ 3.5ms



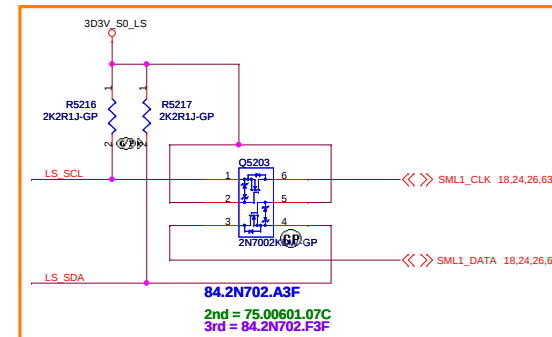
SA 1207



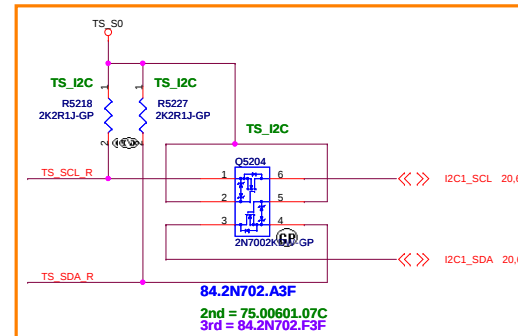
CCD/TS/LS CONNECTOR



SB 0121



SB 0125



Storm / Helium / MA50 /
Petra / MA40 / Husk / MA52

USB interface pin define

Pin Assignment	
1	VBus
2	USB_dm
3	USB_DP
4	GND
5	GND
6	INT

Need to modify cable



Storm2 / Helium2 / Angel

USB / I2C interface pin define

pin	define	pin	define
1	VUSB_5V	1	+3.3V touch panel
2	USB_DM	2	SCL
3	USB_DP	3	SDA
4	UA_PA4	4	INT
5	GND	5	RESET
6	GND	6	GND

Need to rework component
to switch USB and I2C I/F on PCBa

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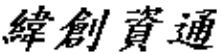
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Title	LCD/Inverter CONN
Size	Document Number
Custom	Storm 2
Date	Wednesday, April 05, 2013
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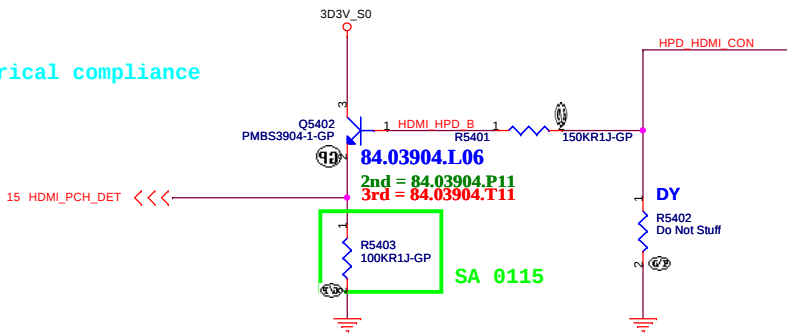
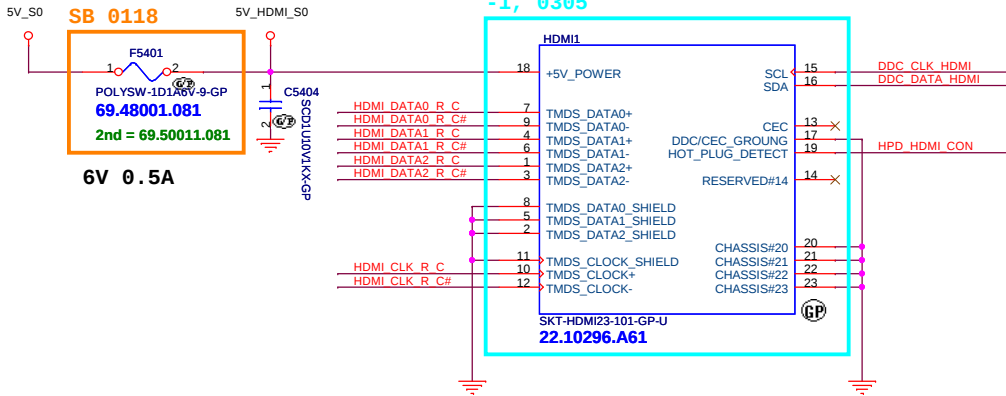
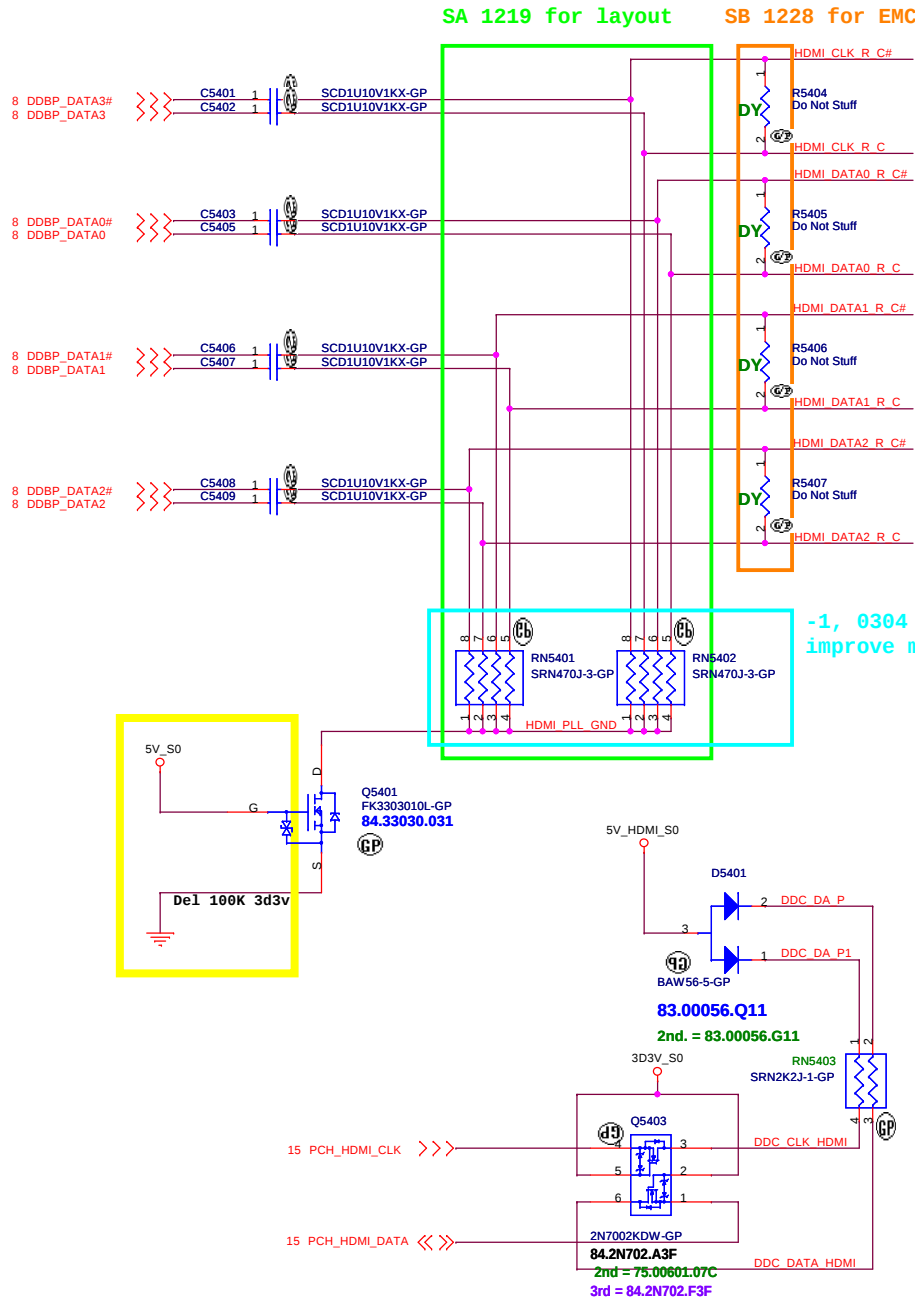
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SSID = VIDEO

HDMI CONN.

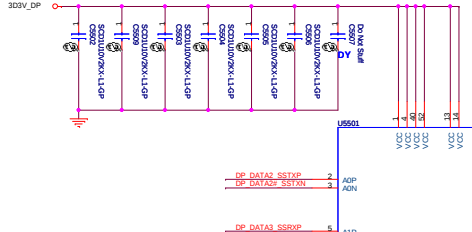
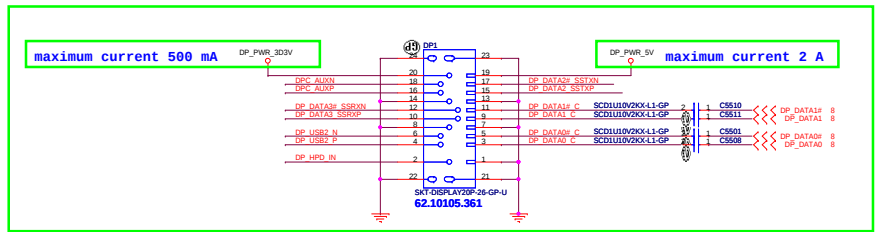


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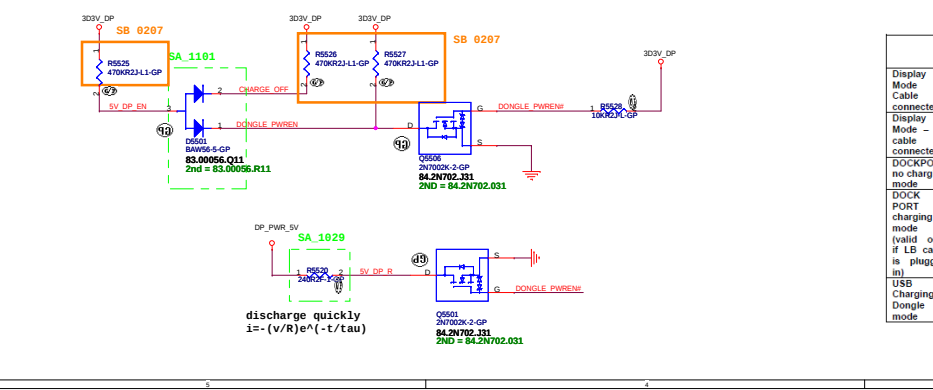
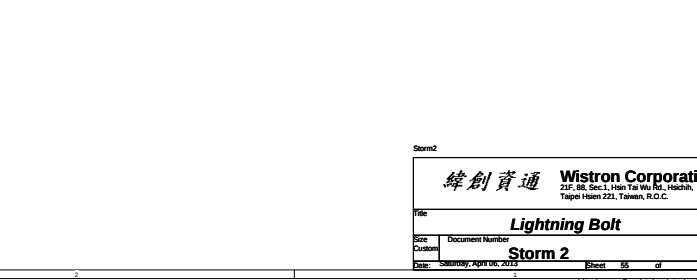
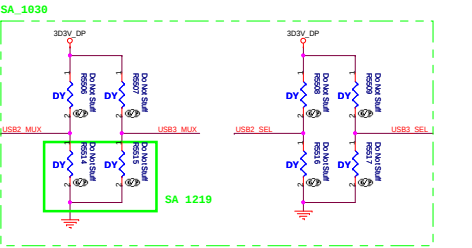
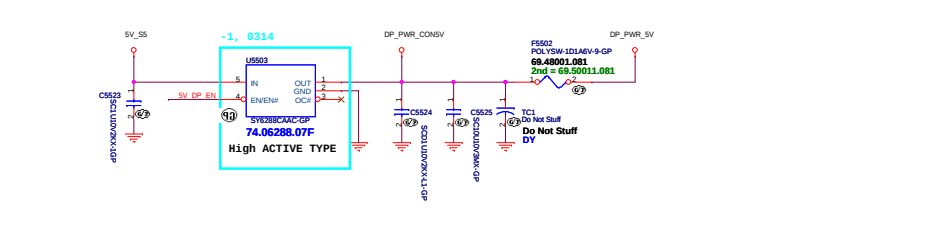
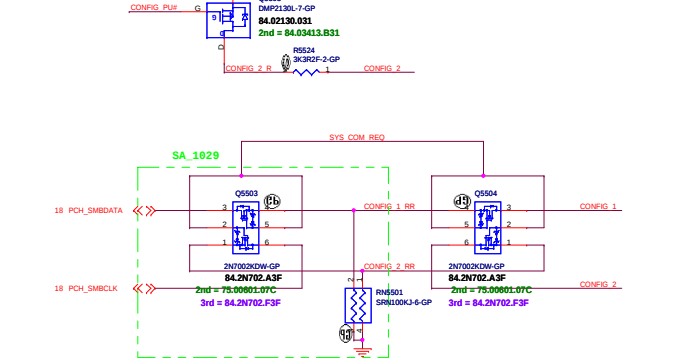
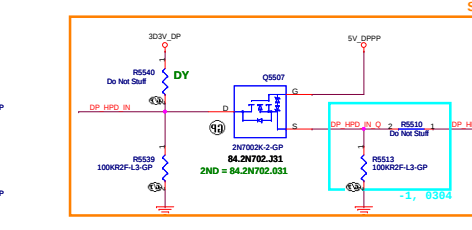
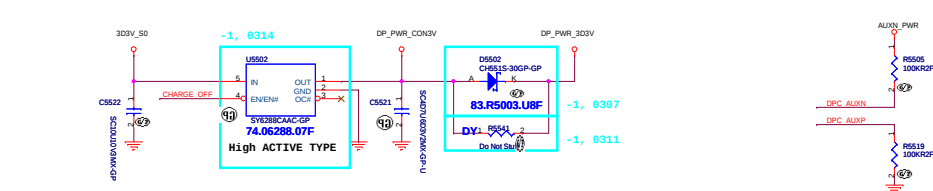
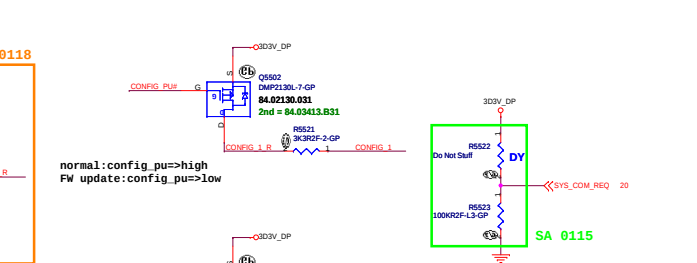
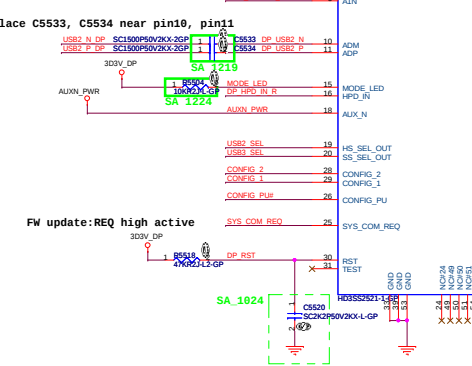
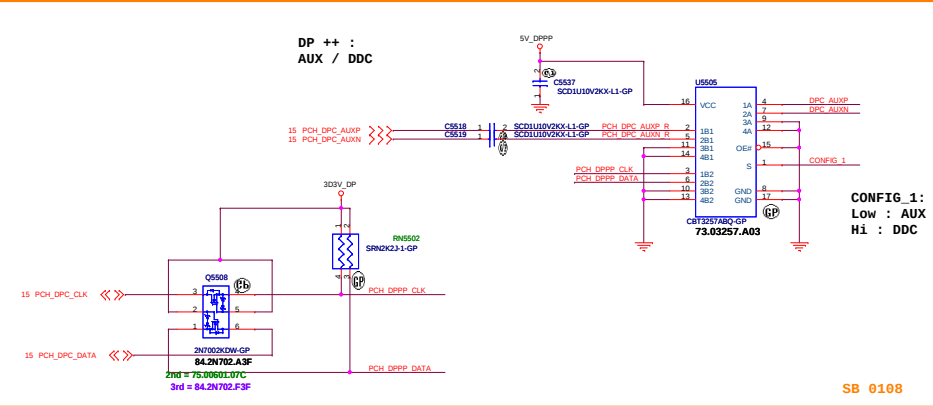
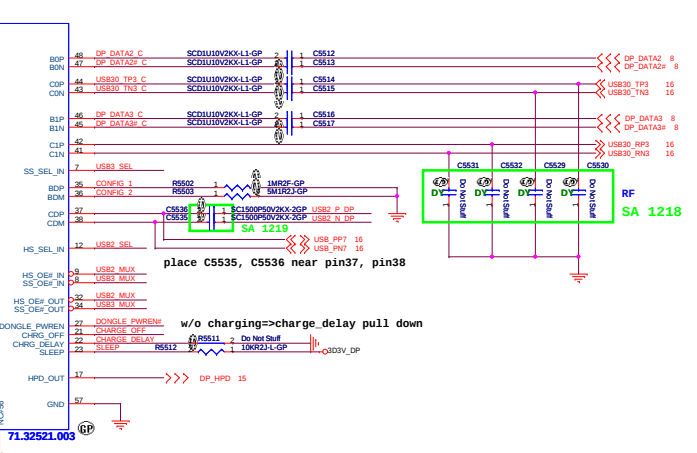
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Title	HDMI Level Shifter/Connector
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Lightning Bolt Switch

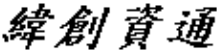


	Dongle PWREN#	CHARGE_OFF	CHARGE_DELAY	Notebook Adaptor	DP Cable	LB Cable	DP_PWR	DP_RETURN
Display Mode - Cable connected	1	1	0	Don't care	x	3.3V OUT	GND	
Display Mode - no cable connected	1	1	0	Don't care	NC	NC	3.3V OUT	GND
DOCKPORT no charging mode	0	0	0	x	x	Floating	Floating	
DOCK PORT charging mode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

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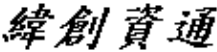
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Size A4	Document Number Storm 2		Rev -1
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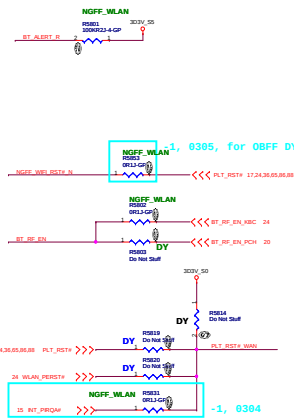
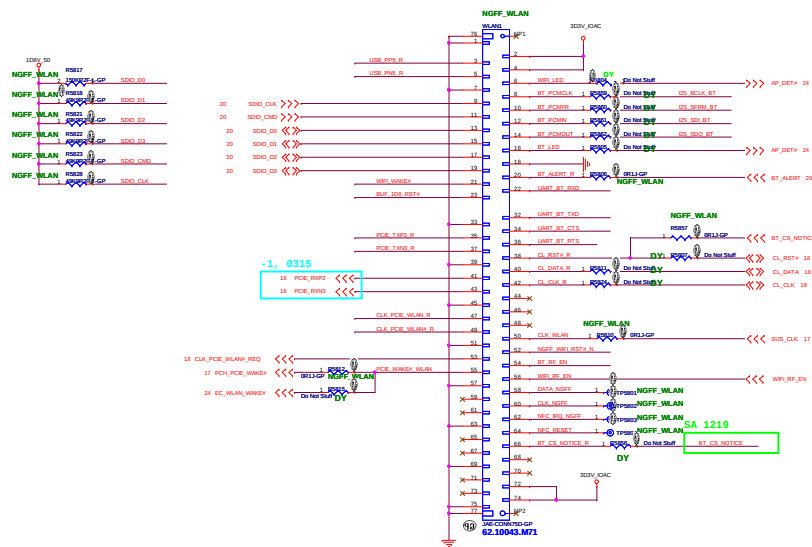
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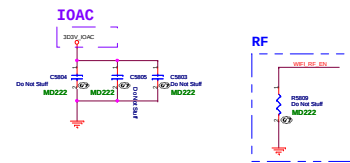
Storm2

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Title Reserved			
Size A4	Document Number Storm 2		Rev -1
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SSID = Wireless

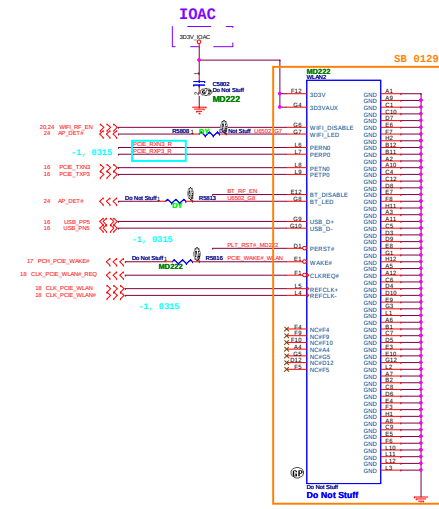


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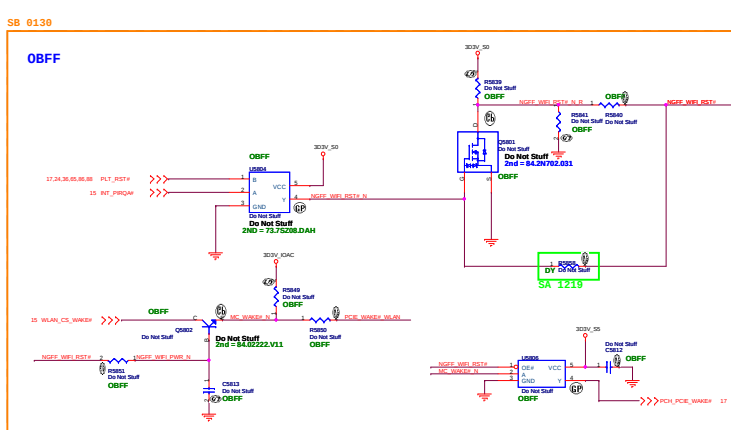
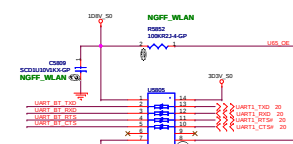
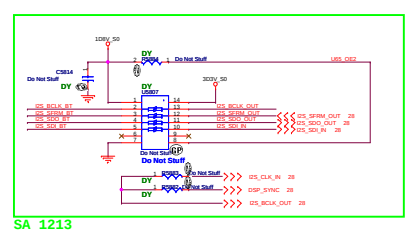
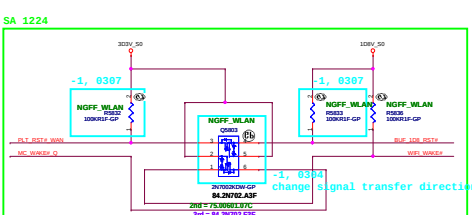
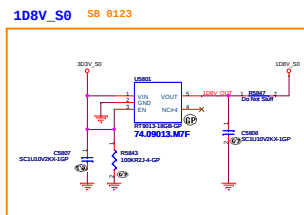
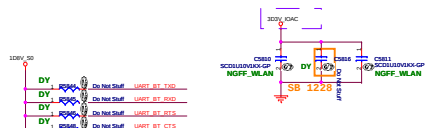


Co-layout with MD222 & NGFF

Place RS826 closed to WLAI1



always low during S3 and S4 state with iRST



SSID = Wireless

NGFF Conn(WWAN) Reserved

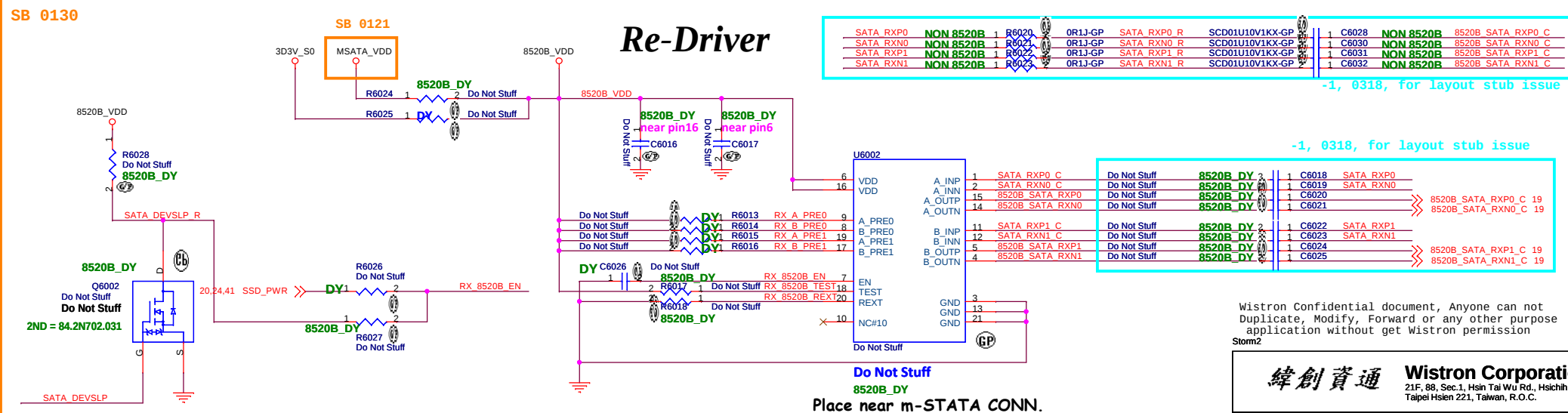
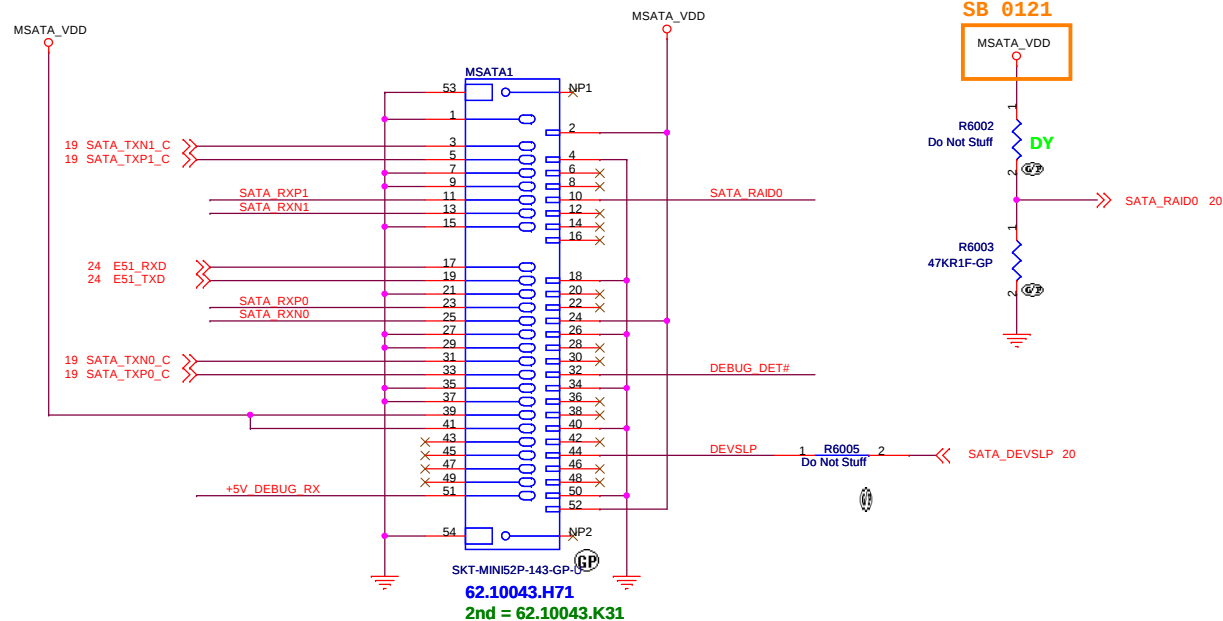
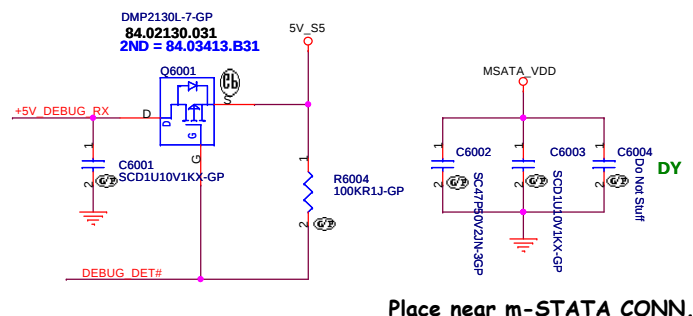
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Storm2

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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title reserved			
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Mini Card Connector(mSATA)

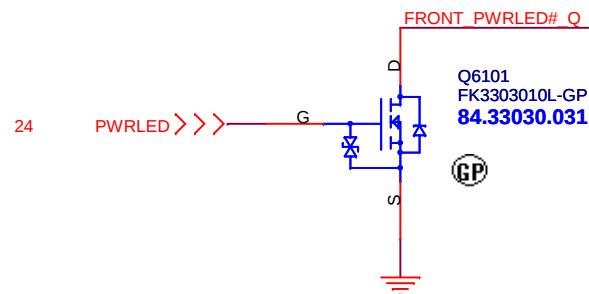


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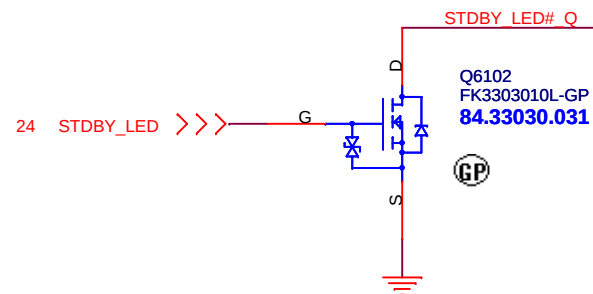
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

SSID = User.Interface

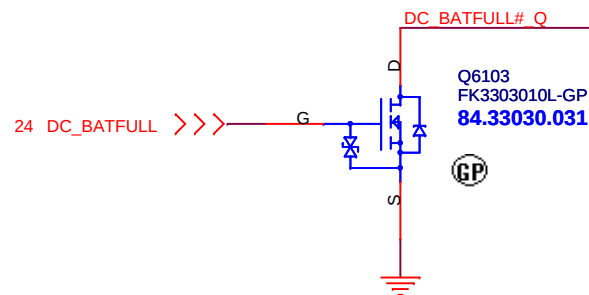
Power button LED



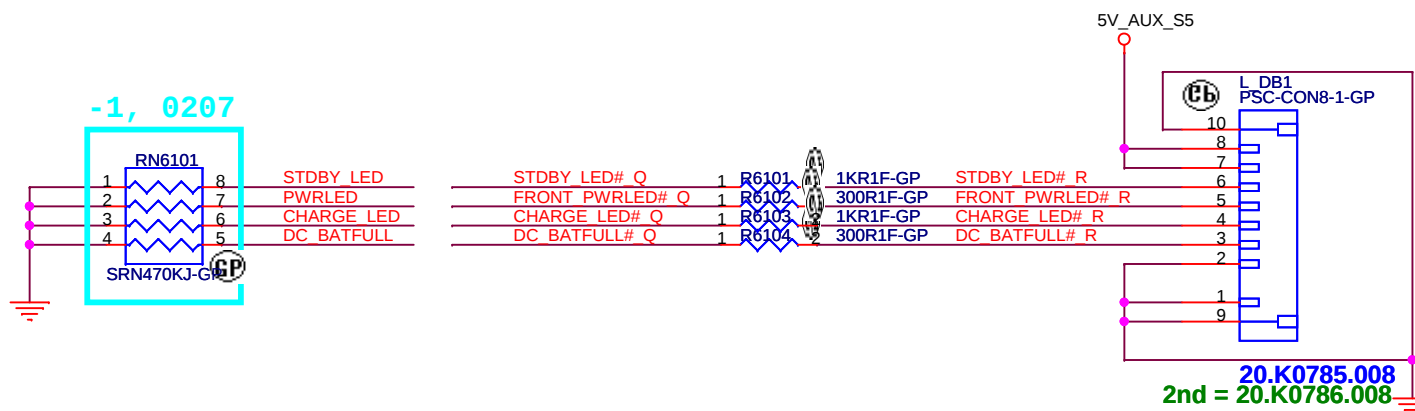
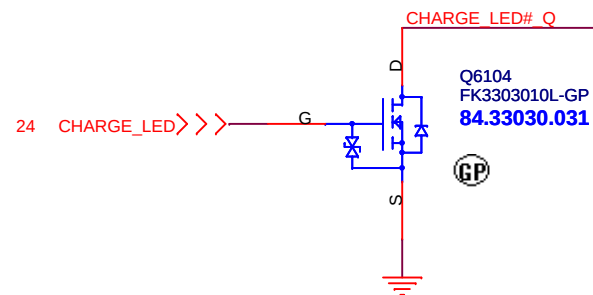
Power STDBY_LED



Battery LED2(DC_BATFULL)



Battery LED1(CHARGE)



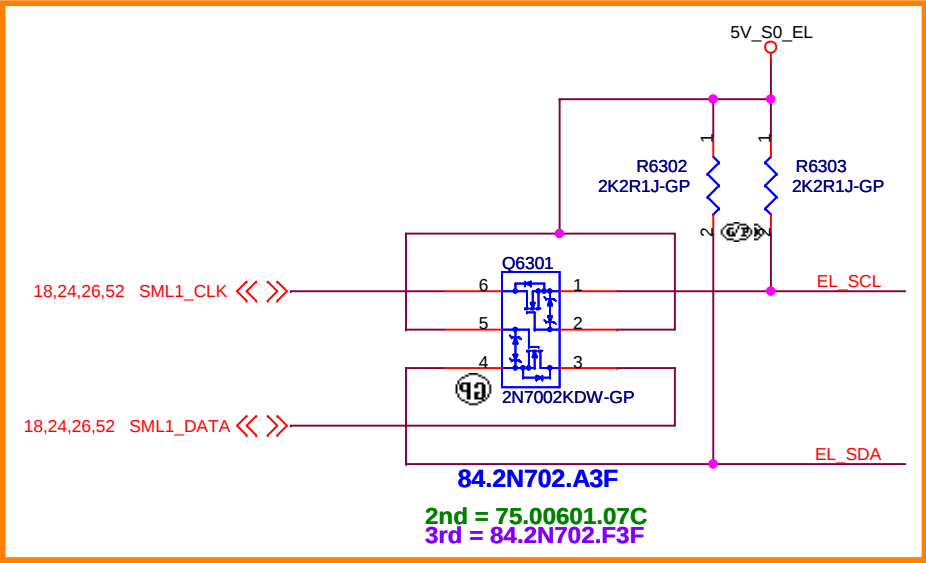
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緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

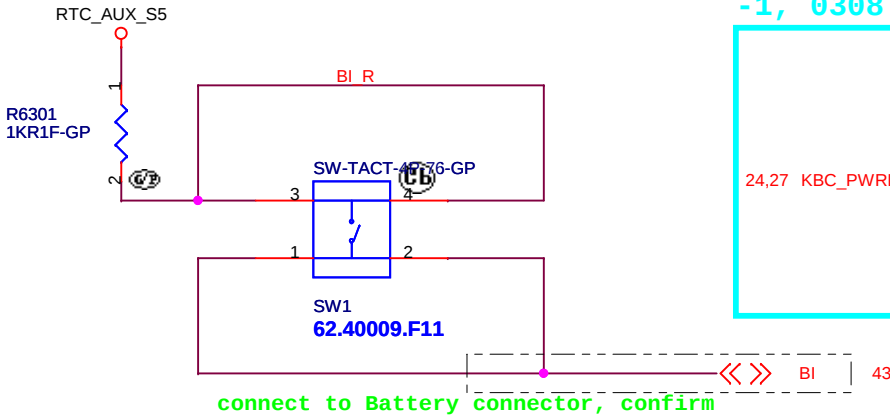
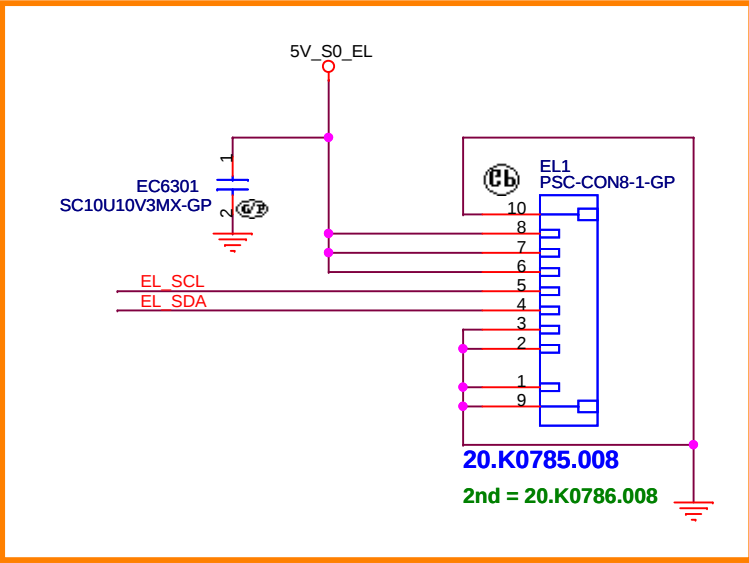
Title			LED Board/Power Button	
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EL Backlight

SB 0121



SB 1228



-1, 0308

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Storm2

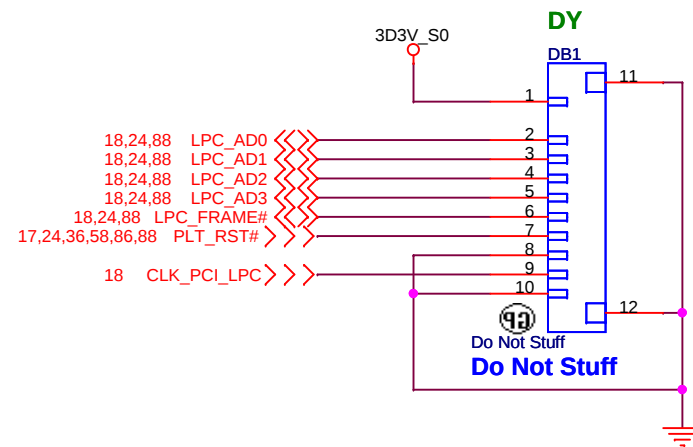
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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
<i>IO Board Connector</i>			
Size A4	Document Number Storm 2		Rev -1
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Storm2

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Title Hall Sensor (Reserved)		
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Storm2

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

Title

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A4

Document Number

Storm 2

Rev
-1

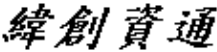
Date: Tuesday, April 02, 2013

Sheet 65 of 102

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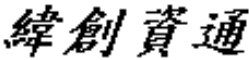
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Sensor Hub			
Size A4	Document Number Storm 2		Rev -1
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-1

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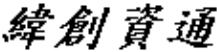
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Title Thunderbolt 1/5 (Reserved)		
Size A4	Document Number Storm 2	Rev -1
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Title Thunderbolt 2/5 (Reserved)		
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Title Thunderbolt 3/5 (Reserved)		
Size A4	Document Number Storm 2	Rev -1
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Title Thunderbolt 5/5 (Reserved)		
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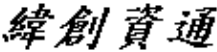
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Title			
GPU DIGIOUT (Reserved)			
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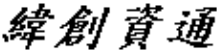
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緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title		
GPU VRAM I/F (Reserved)		
Size	Document Number	Rev
A4	Storm 2	-1
Date: Friday, December 28, 2012		Sheet 75 of 102

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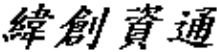
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Title		
GPU GPIO (Reserved)		
Size A4	Document Number Storm 2	Rev -1
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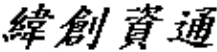
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Title			
GPU PWR (Reserved)			
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VRAM 1,2 (Reserved)		
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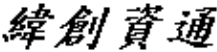
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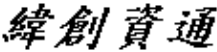
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Title			
VRAM 5,6 (Reserved)			
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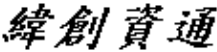
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Title			
VRAM 7,8 (Reserved)			
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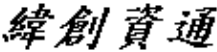
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Title			
VGA CORE (Reserved)			
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Title		
VGA Power (Reserved)		
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Title		
Switchable LCD (Reserved)		
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Title		
Switchable CRT (Reserved)		
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Do Not Stuff



Do Not Stuff



Do Not Stuff

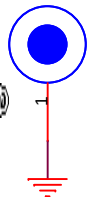


-1, 0306

SB 0118

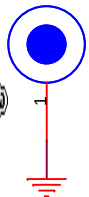
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HS1
STF236R128H34-1-GP



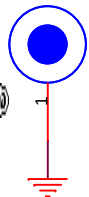
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HS2
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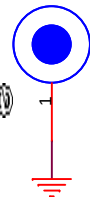
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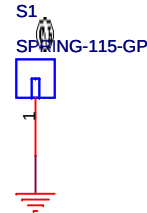


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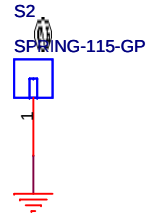
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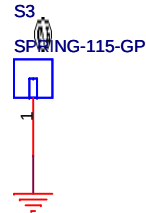
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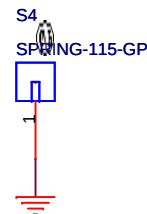
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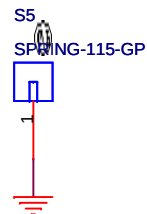
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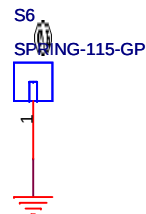
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34.4PT16.001

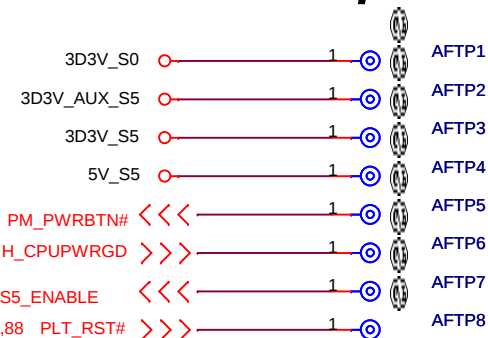


34.4PT16.001



SB 0123

Check test point



Do Not Stuff

GNDPADS213X99-NP

H6



Do Not Stuff

GNDPADS213X99-NP

H7



Do Not Stuff

GNDPADS213X99-NP

H8



Do Not Stuff

GNDPADS213X99-NP

H9



Do Not Stuff

GNDPADS213X99-NP

H10



Do Not Stuff

GNDPADS213X99-NP

H11



Do Not Stuff

GNDPADS213X99-NP

H12



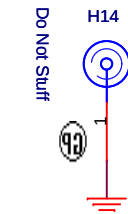
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GNDPADS213X99-NP

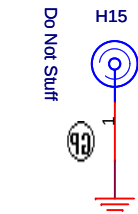
H13



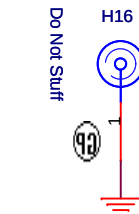
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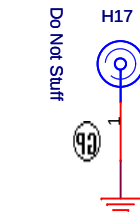
Do Not Stuff



Do Not Stuff

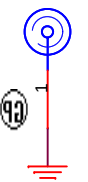


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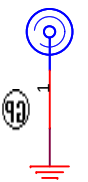
Do Not Stuff

H18



Do Not Stuff

H19



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Storm2

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Title
UNUSED PARTS/EMI Capacitors

Size A4 Document Number Rev

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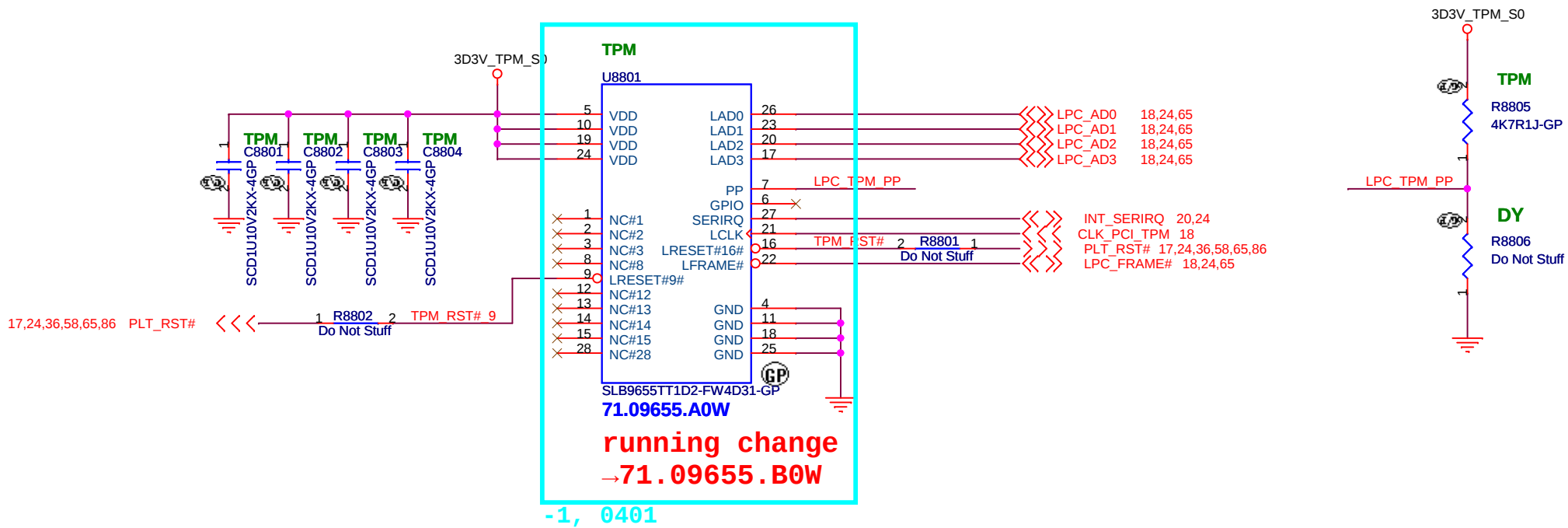
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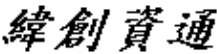
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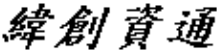
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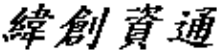
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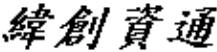
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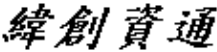
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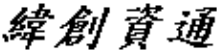
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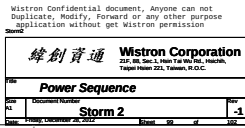
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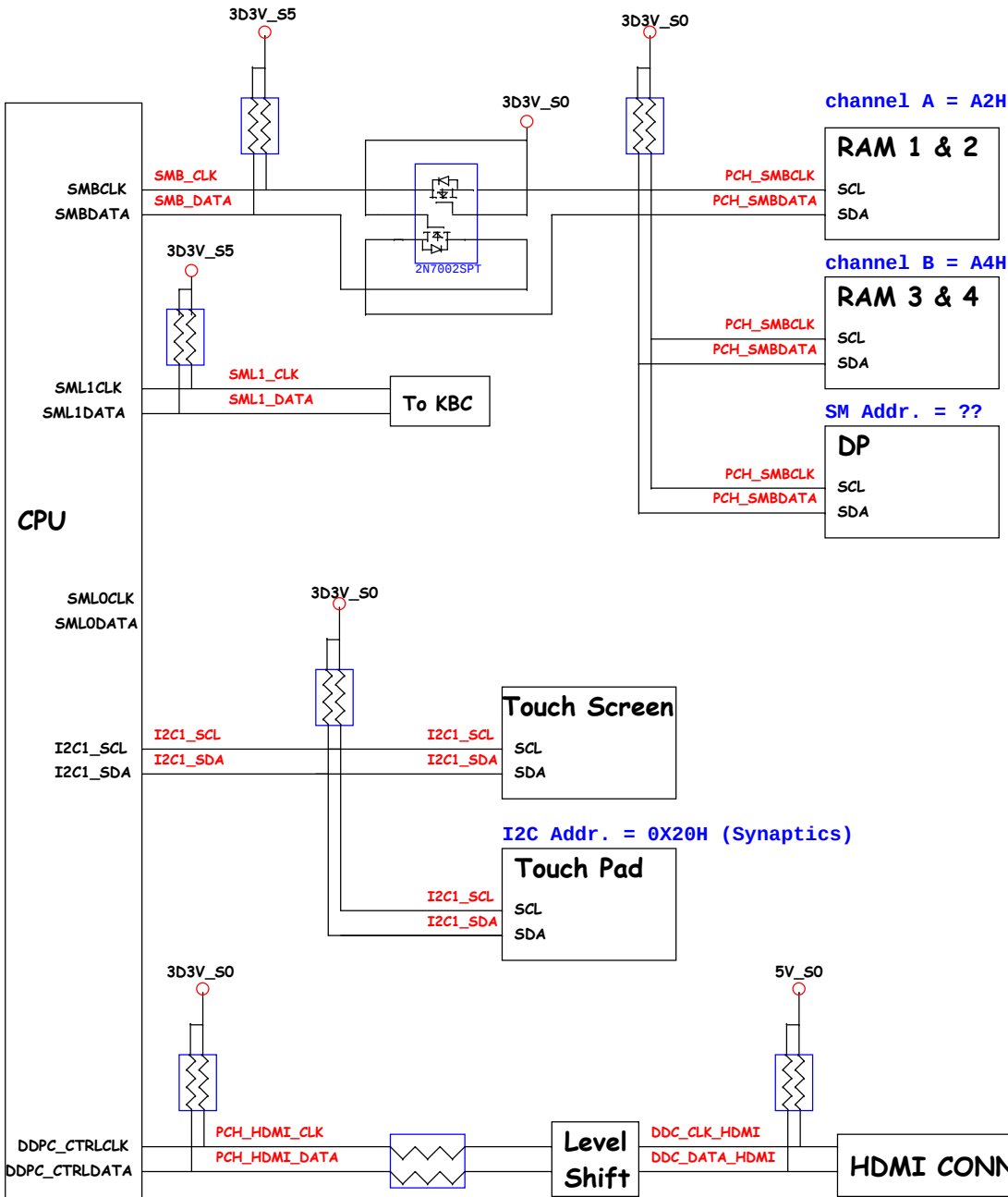
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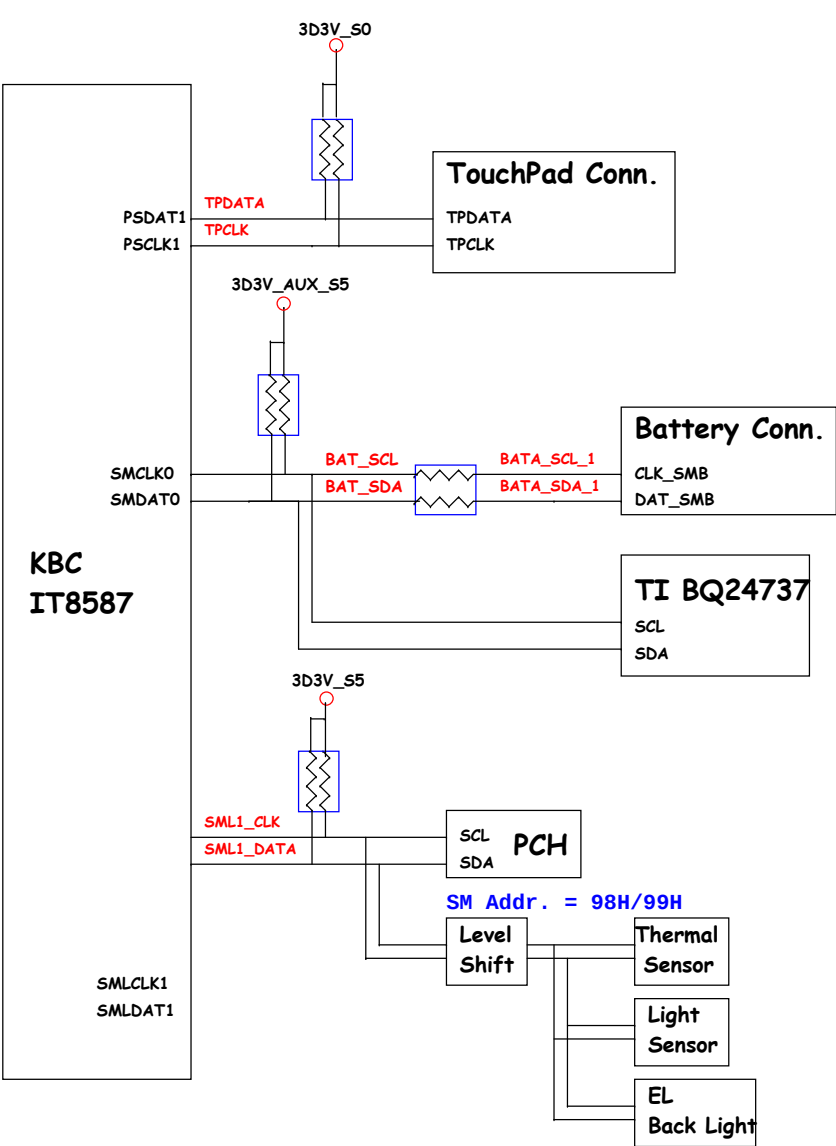
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CPU SMBus Block Diagram

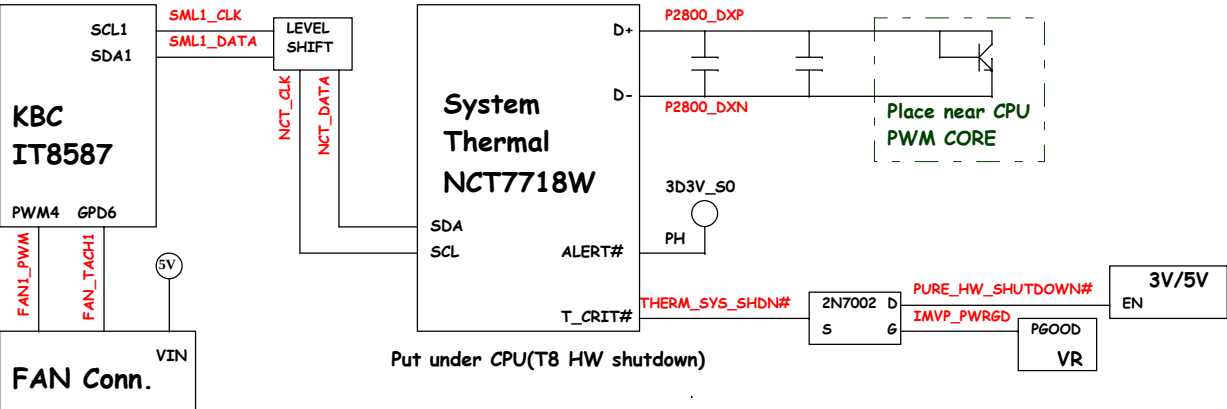


KBC SMBus Block Diagram



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Thermal Block Diagram



Audio Block Diagram

