

PCB Layer Stackup

L1:TOP
L2:Signal 1
L3:GND
L4:Signal 2
L5:GND
L6:VCC
L7:Signal 3
L8:GND
L9:Signal4
L10:BOTTOM

Battery Charger/Selector

BQ24760RSBR 75	
INPUTS	OUTPUTS
DOCK_PWR20_F	M-BAT-PWR S-BAT-PWR
System DC/DC	
TPS51220ARSNR 79	
VINT20	VCC5M VCC3M
CPU DC/DC	
VT1318MFQ/NT1326S 81	
VINT20	VCCCPUCORE
GFXCORE_D	
TPS51728RHAR 83	
VINT20	VCCGFXCORE
VCCIR5VIDEO	
MAX8792 88	
VCC5M	VCCIR5VIDEO
VCCIR5A/DDR3_REF	
VCC0R75B	
TPS51916RUKR 86	
VCC5M	DDR3_VREF VCC0R75B VCCIR5A
VCCIR8B	
BD9139MUV 92	
VCC3M VCC5M	VCCIR8B
VCCIR05B_VTT	
VCCIR05AMT	
VT356 84, 85	
VINT20 VCC5M	VCCIR05B_VT VCCIR05AMT

Symbol name	Value	Tolerance (J: 5%, F: 1%, D: 0.5%, B: 0.1 %)	Rating 0402=> 1/16W, 25V 0603 => 1/16W, 75V 0805 => 1/10W, 100V	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
10KR3	10K Ohm	If no letter, it means J: 5%	1/16W, 75V	0603
33D3R5	33.3 Ohm	If no letter, it means J: 5%	1/10W, 100V	0805
1KR3F	1K Ohm	F: 1%	1/16W, 75V	0603

Symbol name	Value	Tolerance (M: +/-20, K: +/-10, Z: +80/20)	Rating	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
SCD1U10V2MX-1	0.1uF	M/X5R	10V	0402
SC10U6D3V5MX	10uF	M/X5R	6.3V	0805
SC2D2U16V5ZY	2.2uF	Z/Y5V	16V	0805

PCH GPIO _{On}	39	38	49	48	Planar ID Version	Planar PCB Version
PLANAR_ID _{On}	3	2	1	0		
	0	0	0	1	SDV	SA
	0	0	1	0	SDV for 2nd SMT 8/22	SA
	0	0	1	1	SDV-R for N14P SMT 10/10	SB
	0	1	0	0	FVT SMT on 11/03	SB
	0	1	0	1	FVT-QS SMT on 12/05	SC
	0	1	1	0	SIT for N14P SMT on 01/09	SD
	0	1	1	1	SVT for N14P SMT on 03/26	-1

[illegible]

DEVICE	IDSEL	IRQ (Default)	REQ# / GNT#
MINIPCI SLOT	AD18	F, G	REQ# 3/ GNT#
CARDBUS R5C811	AD16	SERIRQ	REQ#0 / GNT#
USB UHCI	AD29	A, C, D	
USB 2.0 EHCI	AD29	H	
DMI-to-PCI/ AC97 Modem/ AC97 Audio	AD30	B B	
LPC Bridge IDE SATA SMBus	AD31	C C B	
PCI Express	AD28	A, B, C, D	

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
		EC HISTORY	
Size A3	Document Number	Kendo-4 WS	Rev -1
Date:	Wednesday, February 15, 2012	Sheet	2 of 105

<Variant Name>

From Panther Point

To Panther Point

To Panther Point

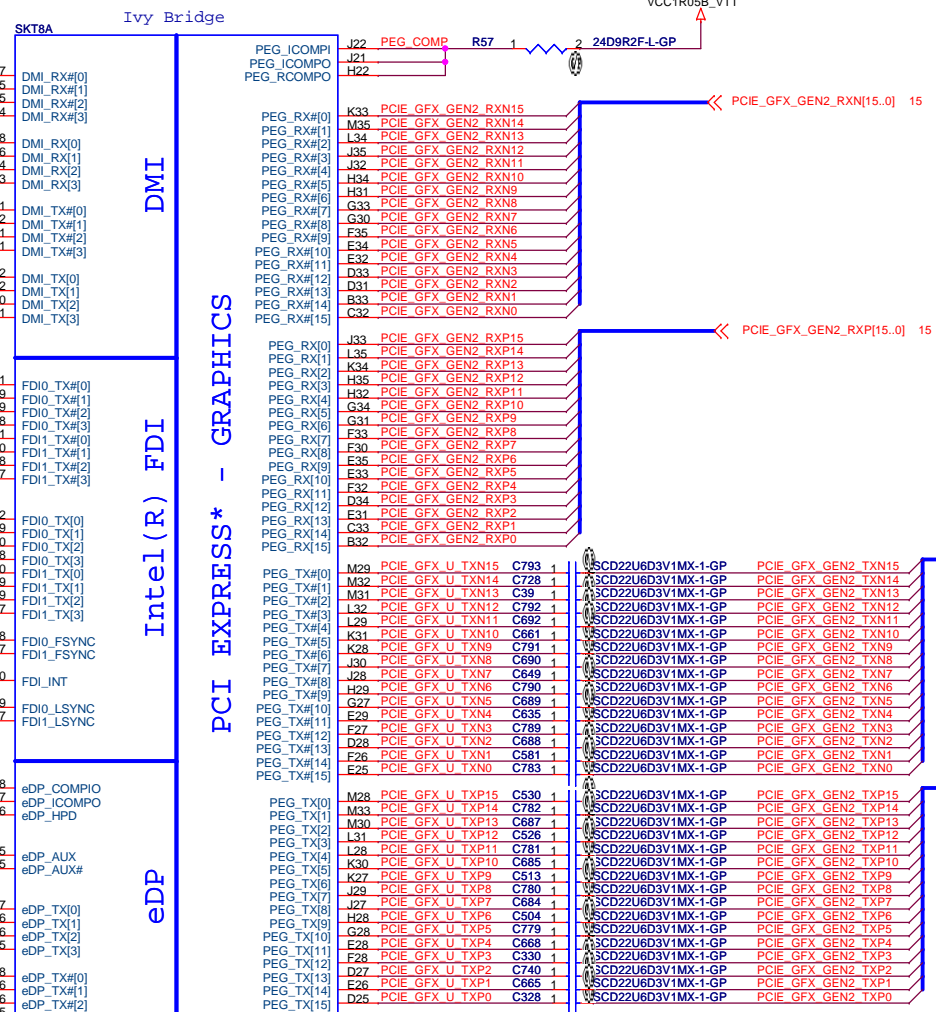
From Panther Point

VCC1R05B_VTT

Trace Width and length should be designed based on Intel Platform design guide.
Please see Doc No 29635 page 73.

These Pins can be floated.

AUBURNF,CLARKUNF
ELK Hill Library 0.7 is applied.



緯創資通

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

	Title
--	-------

7

CPU(1/7):
Document Number

W/PEG/FDI

A3

3 | Document Number:

Kendo-4 WS

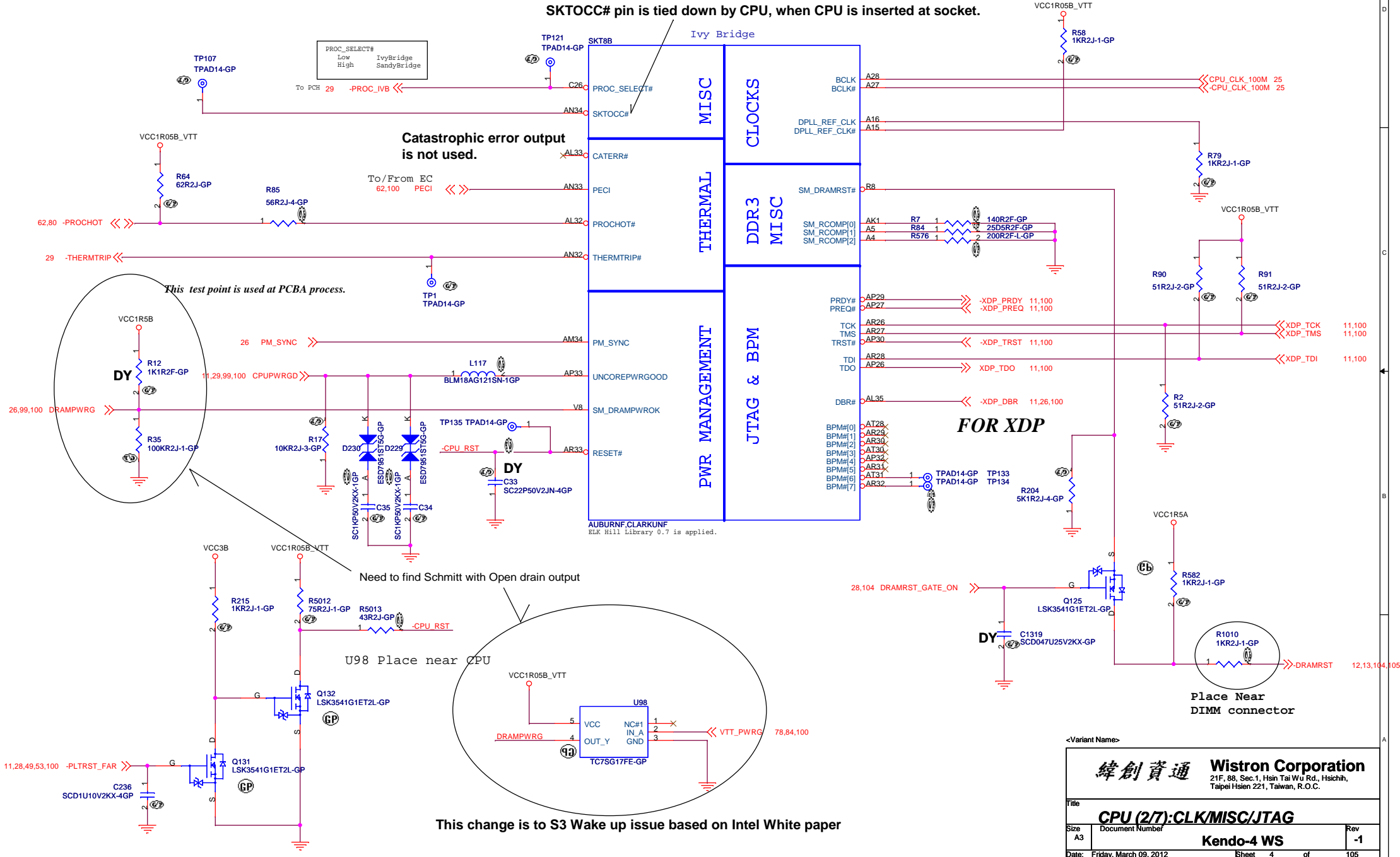
-1

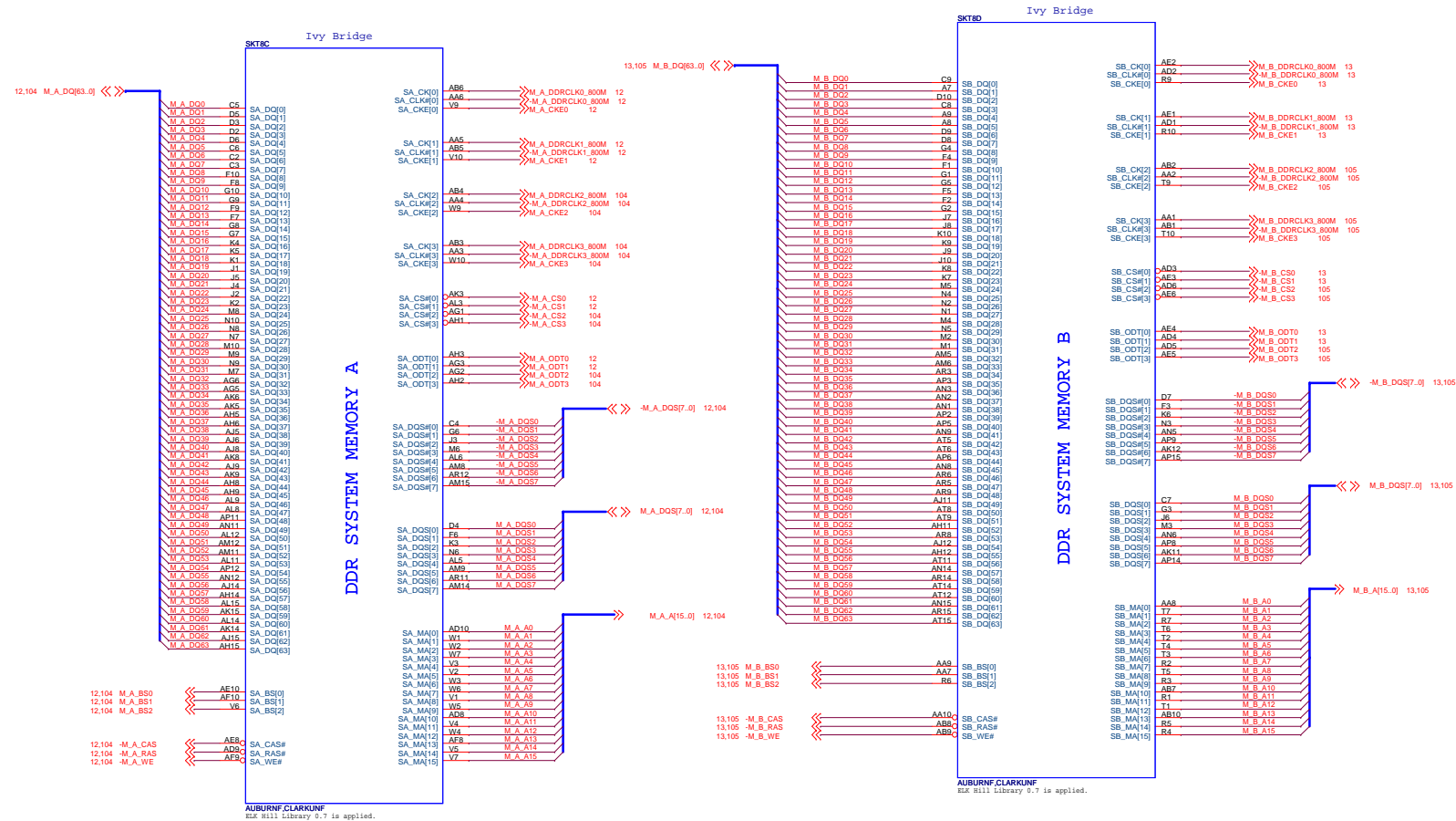
Date: Friday, March 09, 2012

Sheet 3

105

SKTOCC# pin is tied down by CPU, when CPU is inserted at socket.





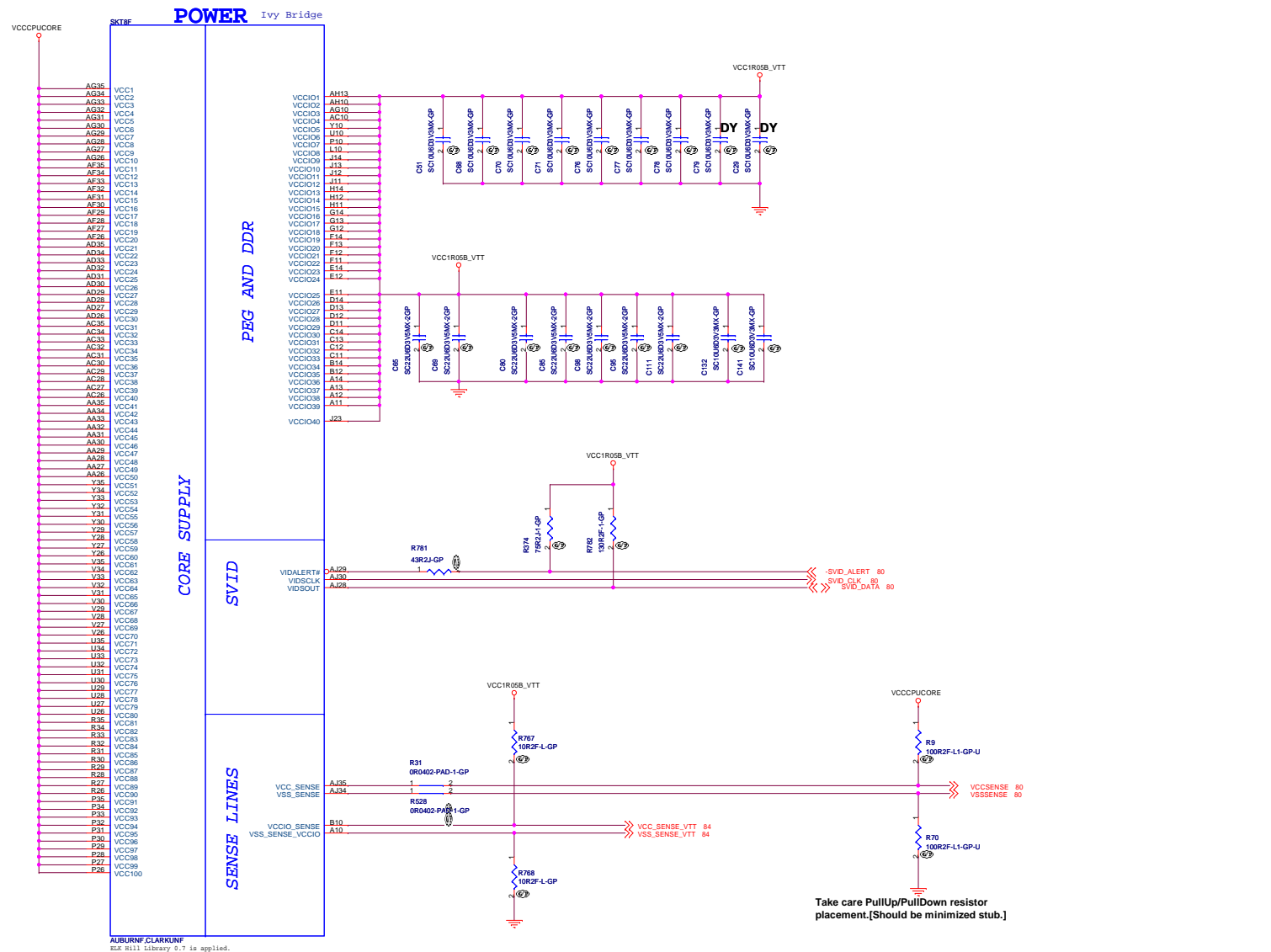
BLANK


<Variant Name>		
<div><div>緯創資通</div><div>Wistron Corporation</div><div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsuehshui, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title		
BLANK		
Size	Document Number	Rev
A2	Kendo-4 WS	-1
Date: Wednesday, February 15, 2012		Sheet 6 of 106

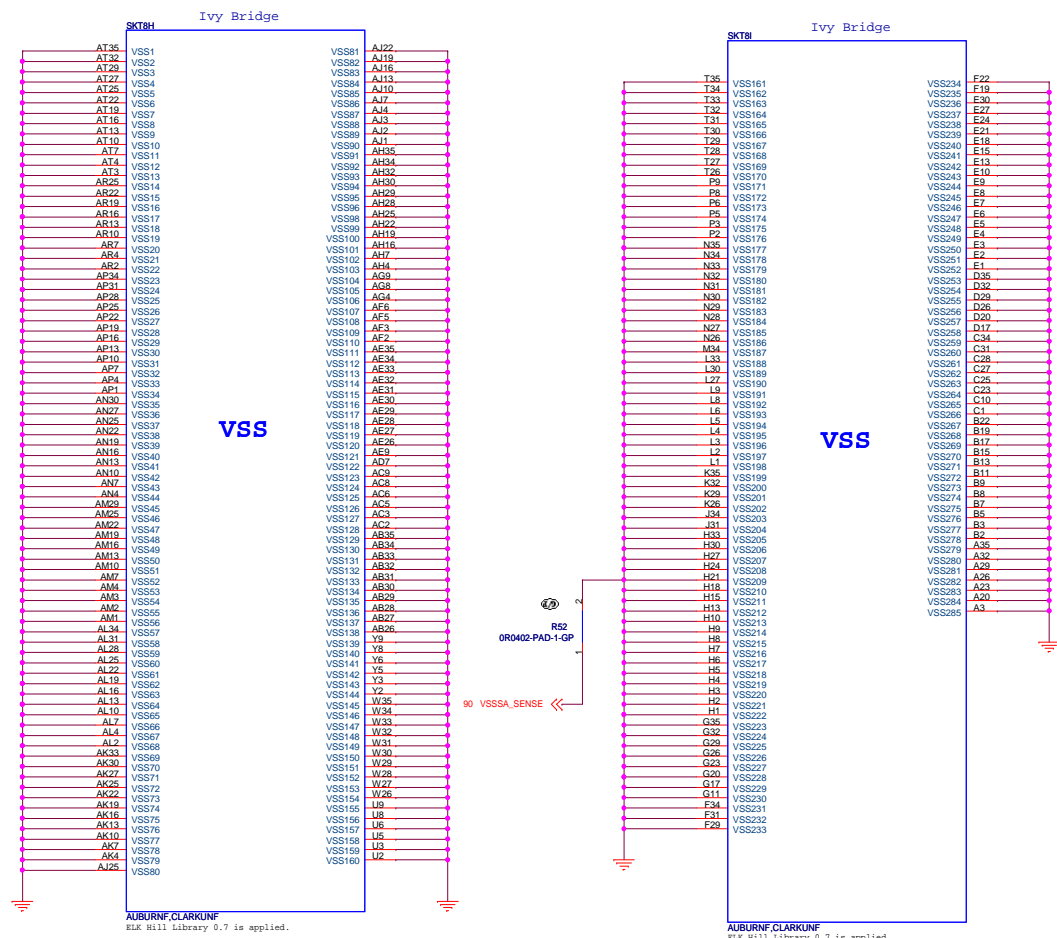
<Variant Name>

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

Title			
CPU(5/7): PWR			
Size A2	Document Number		Rev
	Kendo-4 WS		-1
Date:	Friday, March 09, 2012	Sheet 7 of	105



		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title <div style="border: 1px solid black; padding: 5px; text-align: center;"> CPU(6/7): GFX/PWR </div>			
Size Custom	Document Number <div style="border: 1px solid black; padding: 5px; text-align: center;"> Kendo-4 WS </div>	Rev <div style="border: 1px solid black; padding: 5px; text-align: center;"> -1 </div>	
Date: Friday, March 09, 2012		Sheet 8	of 105



Should be add pull down 1K based on configuration specification.

When PEG Lane reversible function is used,
CFG2 should have pull down.

When PCIe Port Bifurcation function is used,
CFG5 & 6 should have pull down.

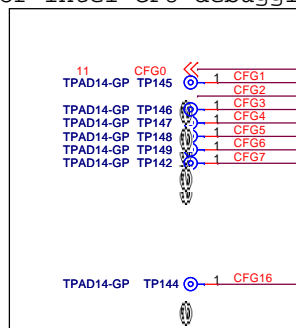
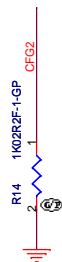
Low/Low : x8 , x4 and x4

Low/High : Reserved

High/Low : x8 and x8

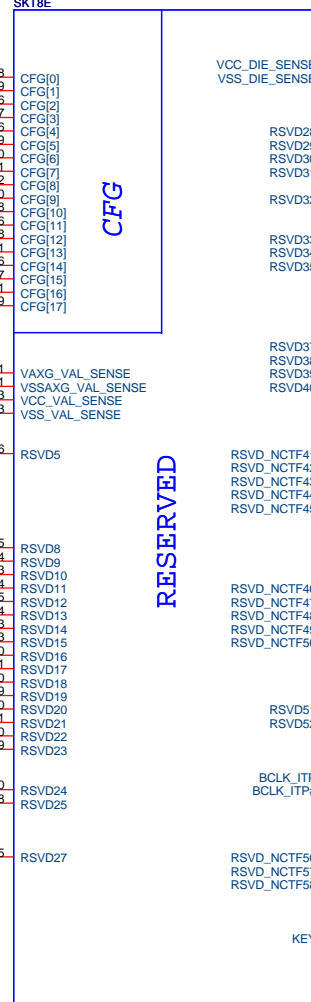
High/High : x16

Test point on CFG1, CFG3-CGF7, CFG16
are for Intel CPU debugging.

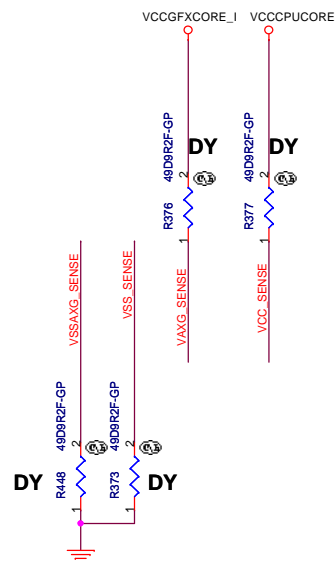


VAXG_SENSE
VSSAXG_SENSE
VCC_SENSE
VSS_SENSE

SKT8E Ivy Bridge



AUBURNF.CLARKUNF
ELK Hill Library 0.7 is applied.



<Variant Name>

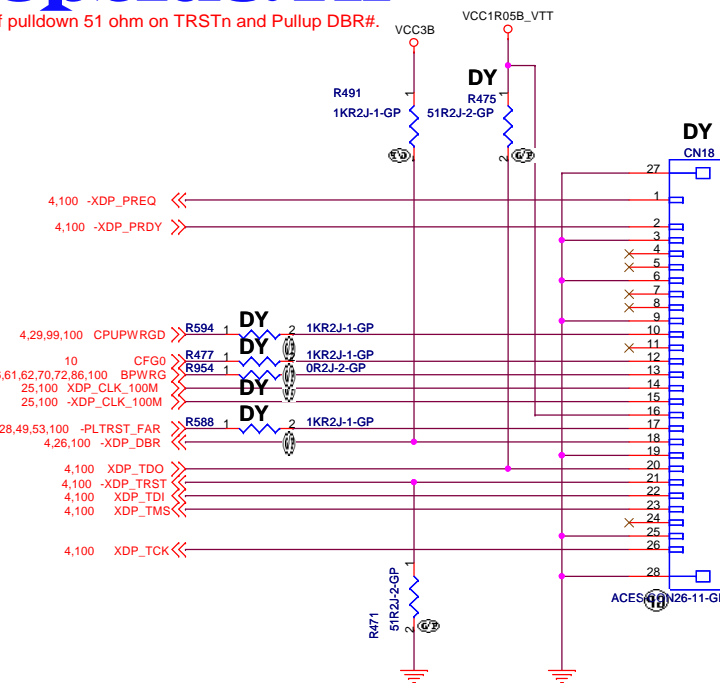
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title		
CPU(4/7): CFG/RSVD		
Size	Document Number	Rev
A3	Kendo-4 WS	-1
Date:	Friday, March 09, 2012	Sheet 10 of 105

In production, All of parts should be not moounted except of pulldown 51 ohm on TRSTn and Pullup DBR#.

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R475	ASM	NOASM
TRST#	R471	ASM	ASM
DBRST#	R491	ASM	ASM
RESET#	R588	ASM	NOASM
CFG0	R477	ASM	NOASM
PWRGD	R594	ASM	NOASM
BPWRG	R954	ASM	NOASM
	CN18	ASM	NOASM

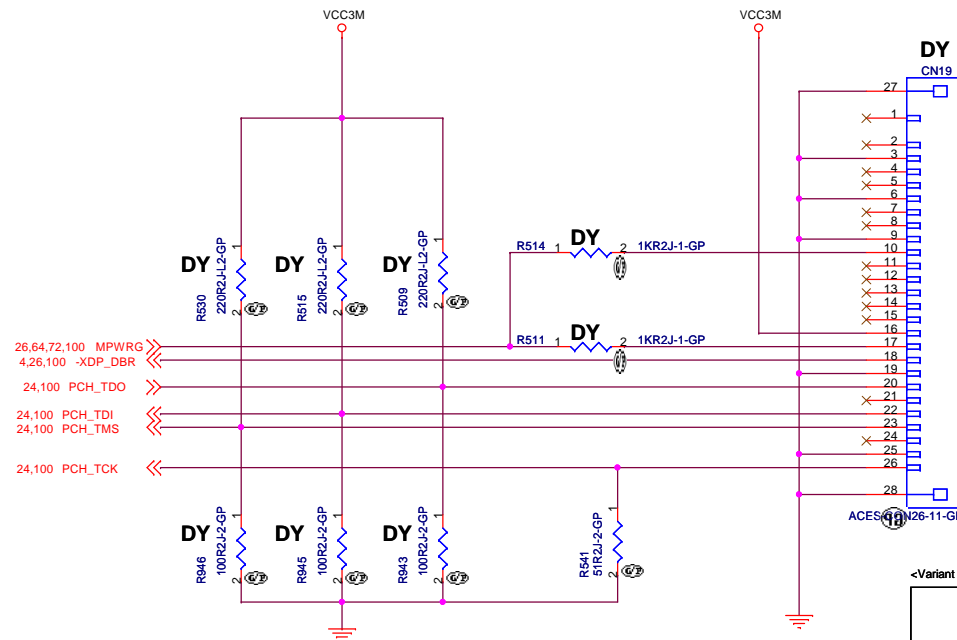
↑
LOGIC



CPU XDP SFF 26pin IF
Pin 1 OBSFN_A0 (PREQ#, I/O)
Pin 2 OBSFN_A1 (PRDY#, I/O)
Pin 3 GND
Pin 4 OBSDATA_A0 (Open, I/O)
Pin 5 OBSDATA_A1 (Open, I/O)
Pin 6 GND
Pin 7 OBSDATA_A2 (Open, I/O)
Pin 8 OBSDATA_A3 (Open, I/O)
Pin 9 GND
Pin 10 HOOK0 (PWRGD, In)
Pin 11 HOOK1 (BP_PWRGD_RST#, Out)
Pin 12 HOOK2 (CFG0, Out)
Pin 13 HOOK3 (vr_READYSYS_PWROK, Out)
Pin 14 HOOK4 (BCLK, In)
Pin 15 HOOK5 (BCLK#, In)
Pin 16 VCCOBS_AB (VCCP Voltage of CPU, In)
Pin 17 HOOK6 (RESET#, Out)
Pin 18 HOOK7 (DBR#, Out)
Pin 19 GND
Pin 20 TDO, In
Pin 21 TRST#, Out
Pin 22 TDI, Out
Pin 23 TMS, Out
Pin 24 TCK1 (Open)
Pin 25 GND
Pin 26 TCK0, Out

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R509 R943	220 100	NOASM NOASM
TMS	R530 R946	220 100	NOASM NOASM
TDI	R515 R945	220 100	NOASM NOASM
TCK	R541	51	51
MPWRG	R511 R514	ASM ASM	NOASM NOASM
	CN19	ASM	NOASM

↑
LOGIC



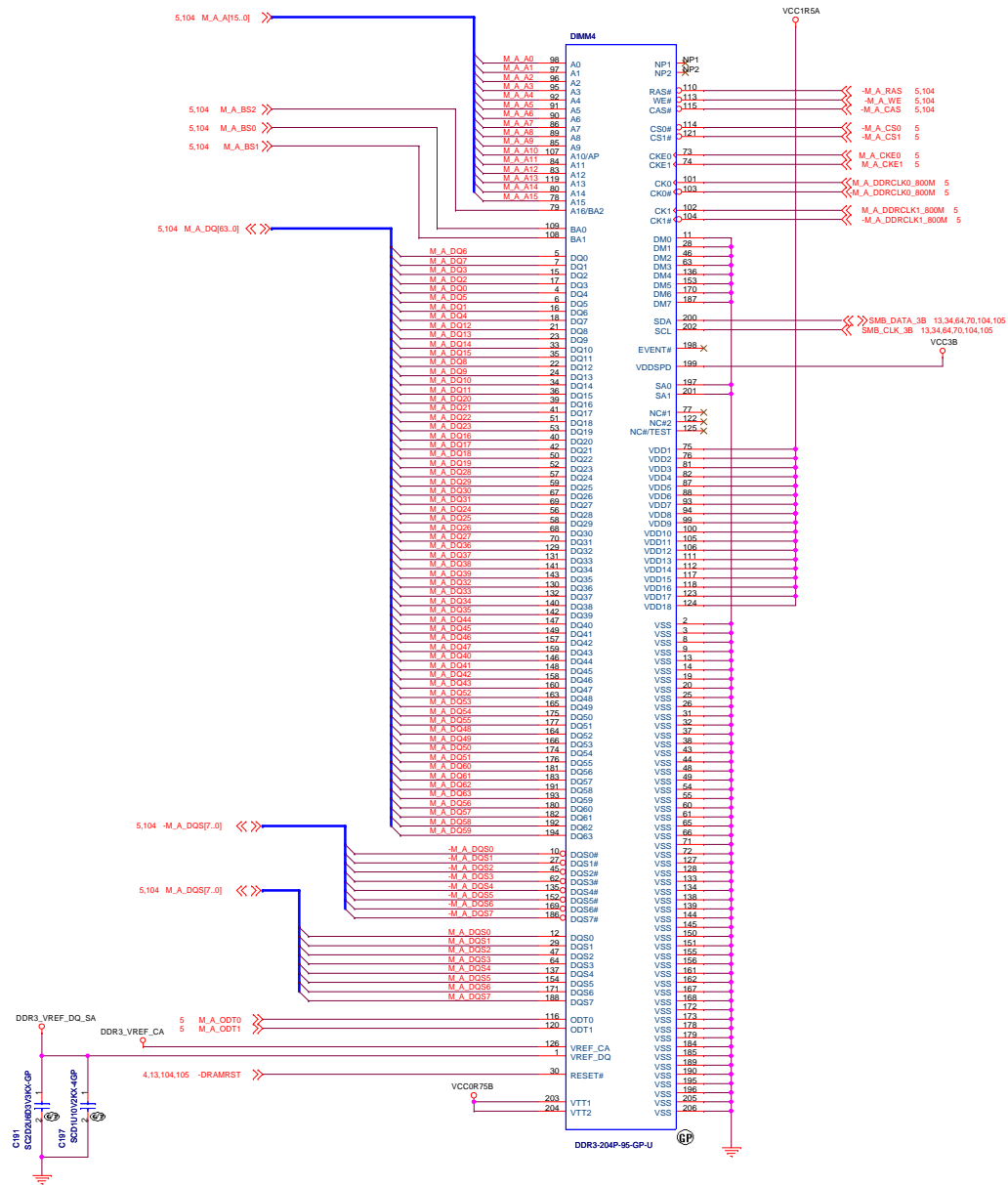
In production, All of parts should be not moounted except of pulldown 51 ohm on TCK.

DEBUG Interface for PCH.

PCH XDP SFF 26pin IF
Pin 1 OBSFN_A0 (Open, I/O)
Pin 2 OBSFN_A1 (Open, I/O)
Pin 3 GND
Pin 4 OBSDATA_A0 (Open, I/O)
Pin 5 OBSDATA_A1 (Open, I/O)
Pin 6 GND
Pin 7 OBSDATA_A2 (Open, I/O)
Pin 8 OBSDATA_A3 (Open, I/O)
Pin 9 GND
Pin 10 HOOK0 (RSMRST#, In)
Pin 11 HOOK1 (BP_PWRGD_RST#, Out)
Pin 12 HOOK2 (Open)
Pin 13 HOOK3 (Open)
Pin 14 HOOK4 (Open)
Pin 15 HOOK5 (Open)
Pin 16 VCCOBS_AB (3.3VSUS, In)
Pin 17 HOOK6 (RSMRST#, Out)
Pin 18 HOOK7 (DBR#, Out)
Pin 19 GND
Pin 20 TDO (JTAG, In)
Pin 21 TRST# (Open)
Pin 22 TDI (JTAG, Out)
Pin 23 TMS (JTAG, Out)
Pin 24 TCK1 (Open)
Pin 25 GND
Pin 26 TCK0 (JTAG, Out)

<Variant Name>

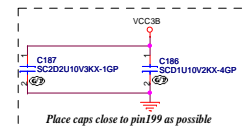
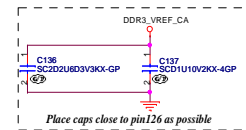
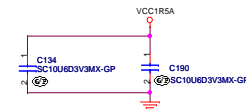
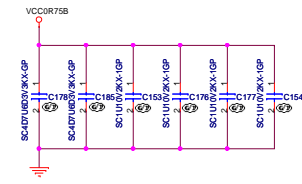
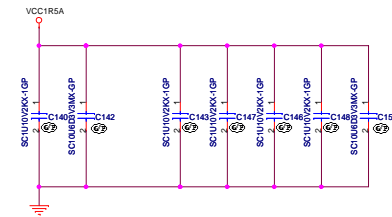
緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title		
XDP CONNECTOR		
Size	Document Number	Rev
A3		-1
Date:	Friday, March 09, 2012	Sheet 11 of 105



SODIMM IIC Address :
 CH-A Primary [DIMM4] : 50h
 CH-B Primary [DIMM3] : 51h
 CH-A Secondary [DIMM2] : 52h
 CH-B Secondary [DIMM1] : 53h

SPD Address : 50h
 SA0 [pin 197] : Low
 SA1 [pin 201] : Low

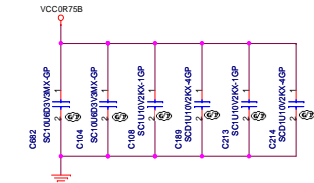
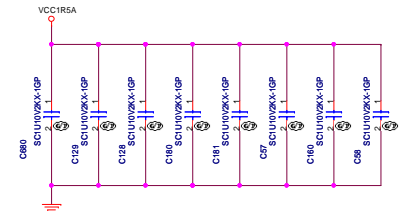
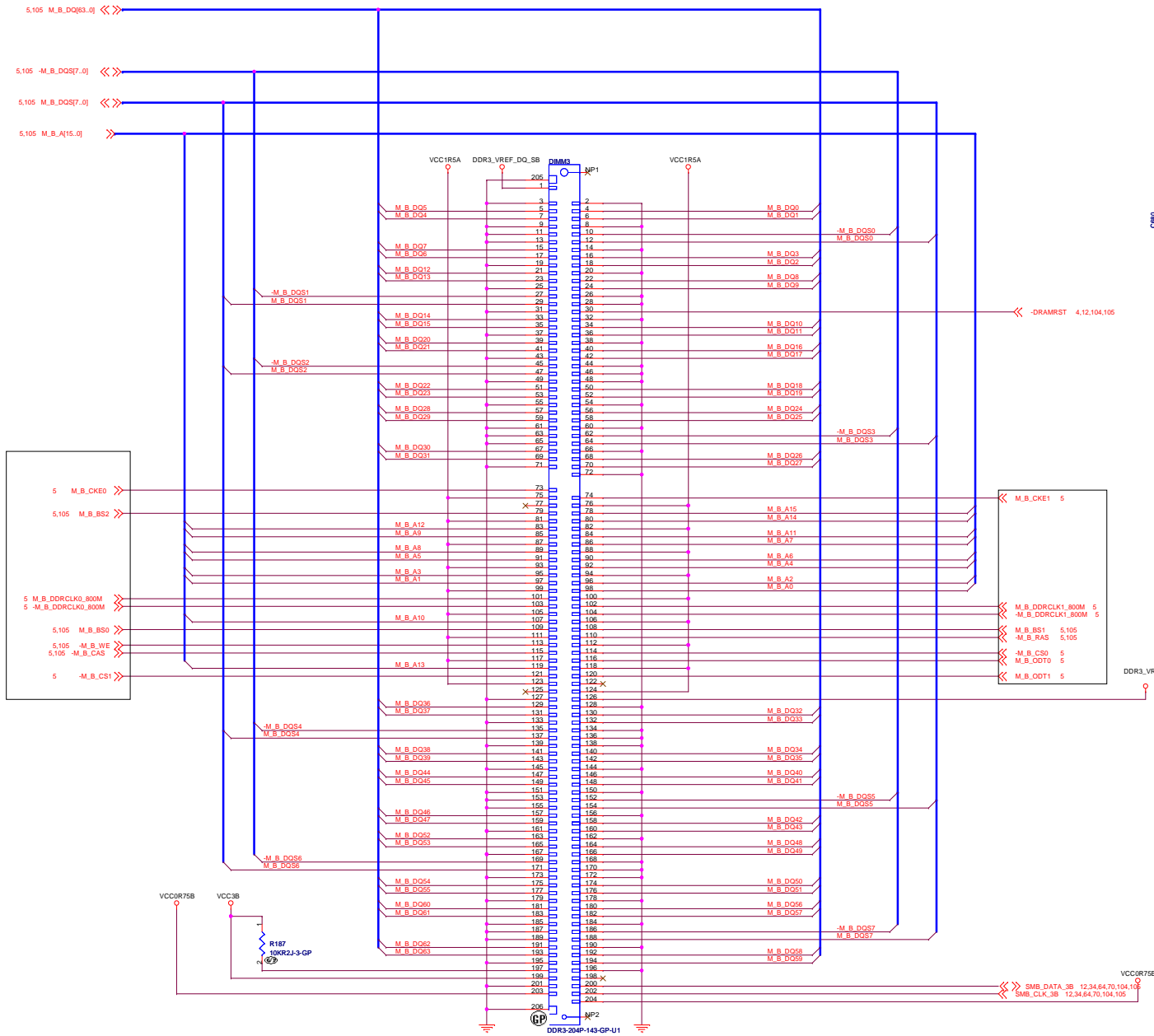
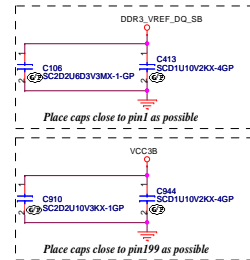
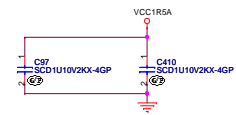
Please see SODIMM Configuration in Page 102



<Variant Name>

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

Title		
DDR3 SODIMM CH-A Primary		
Size	Document Number	Rev
A2	Kendo-4 WS	-1
Date: Friday, March 09, 2012		Sheet 12 of 106



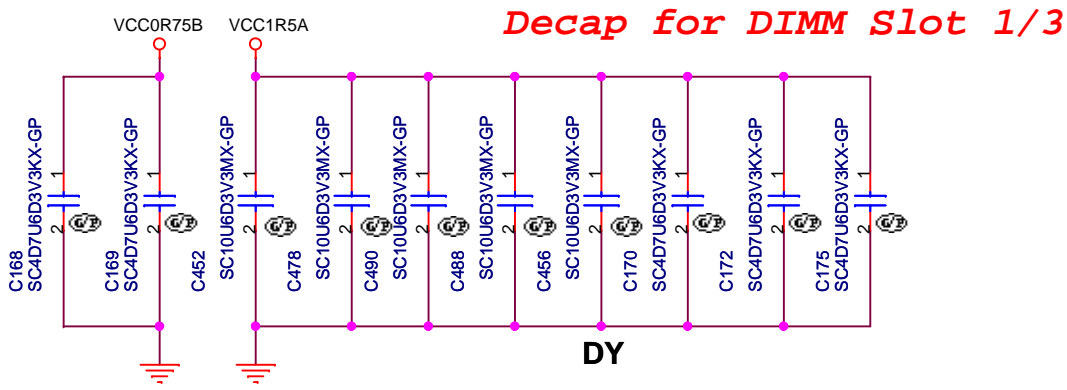
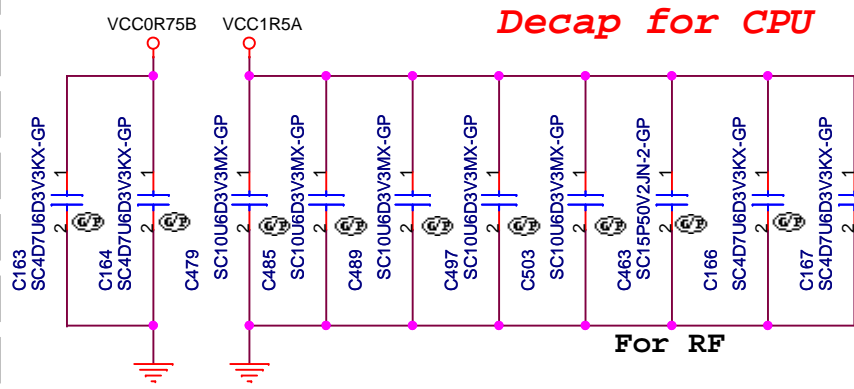
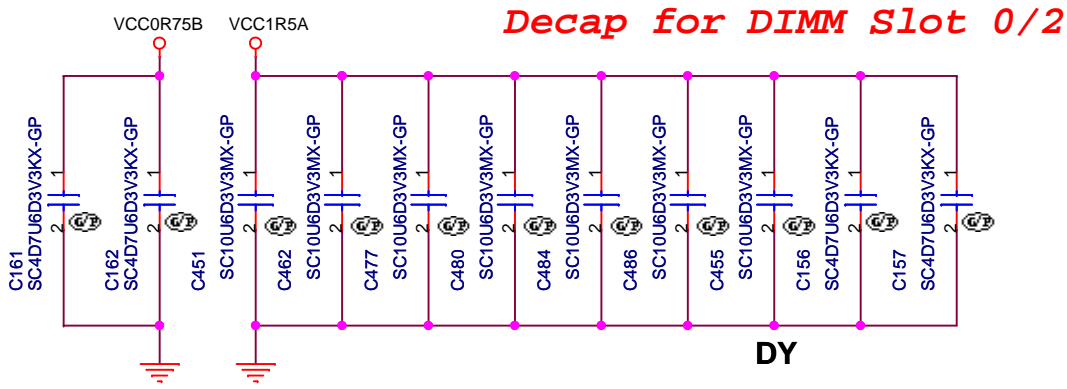
SODIMM IIC Address :
 CH-A Primary [DIMM4] : 50h
 CH-B Primary [DIMM3] : 51h
 CH-A Secondary [DIMM2] : 52h
 CH-B Secondary [DIMM1] : 53h

SPD Address : 51h
 SA0 [pin 197] : High
 SA1 [pin 201] : Low

This connector should be placed on far side from CPU.

<Variant Name>

緯創資通 Wistron Corporation	
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsuehchu, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
DDR3 SODIMM CH-B Primary	
Size	Document Number
A2	Kendo-4 WS
Date	Friday, March 09, 2012
Sheet	13 of 106

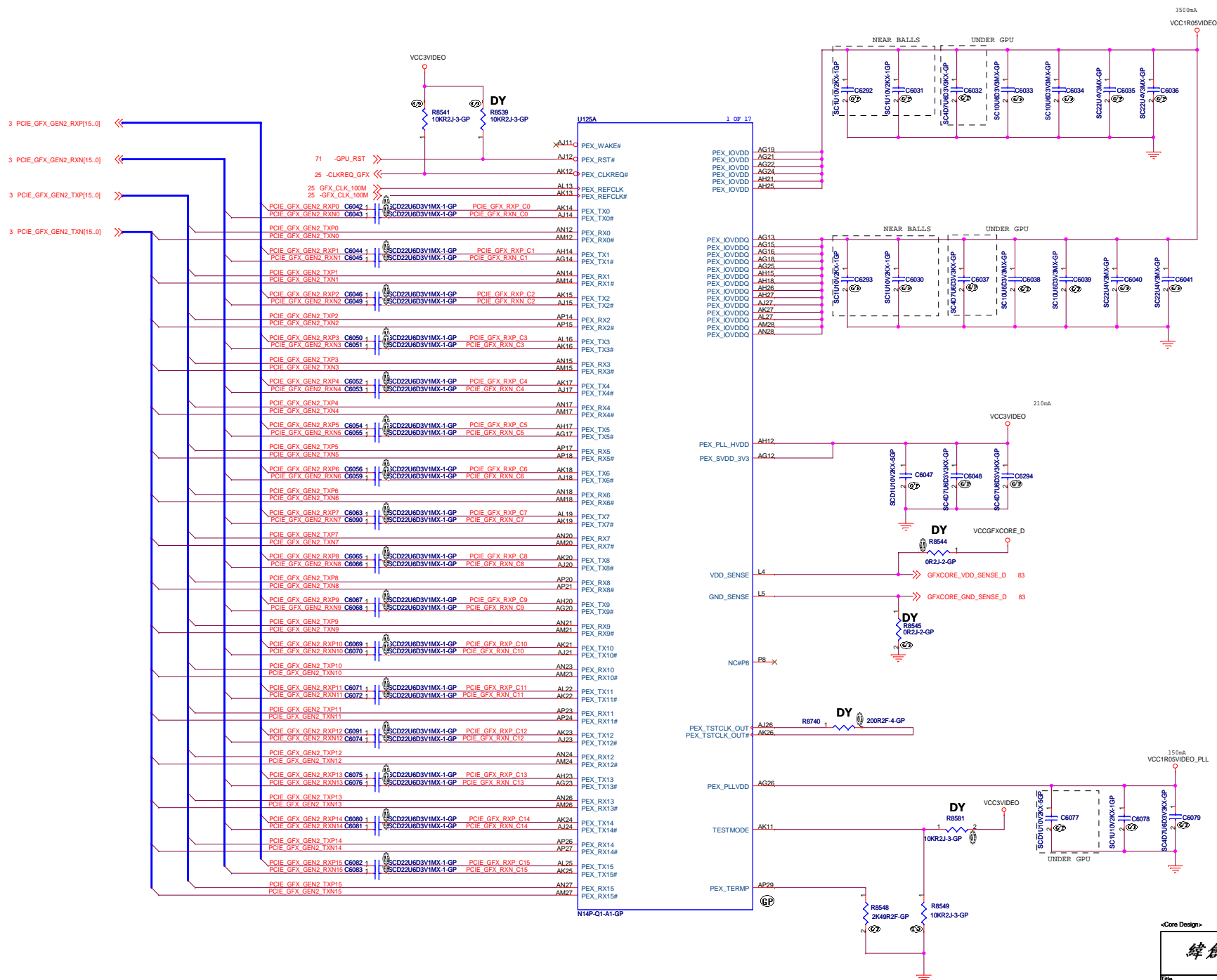


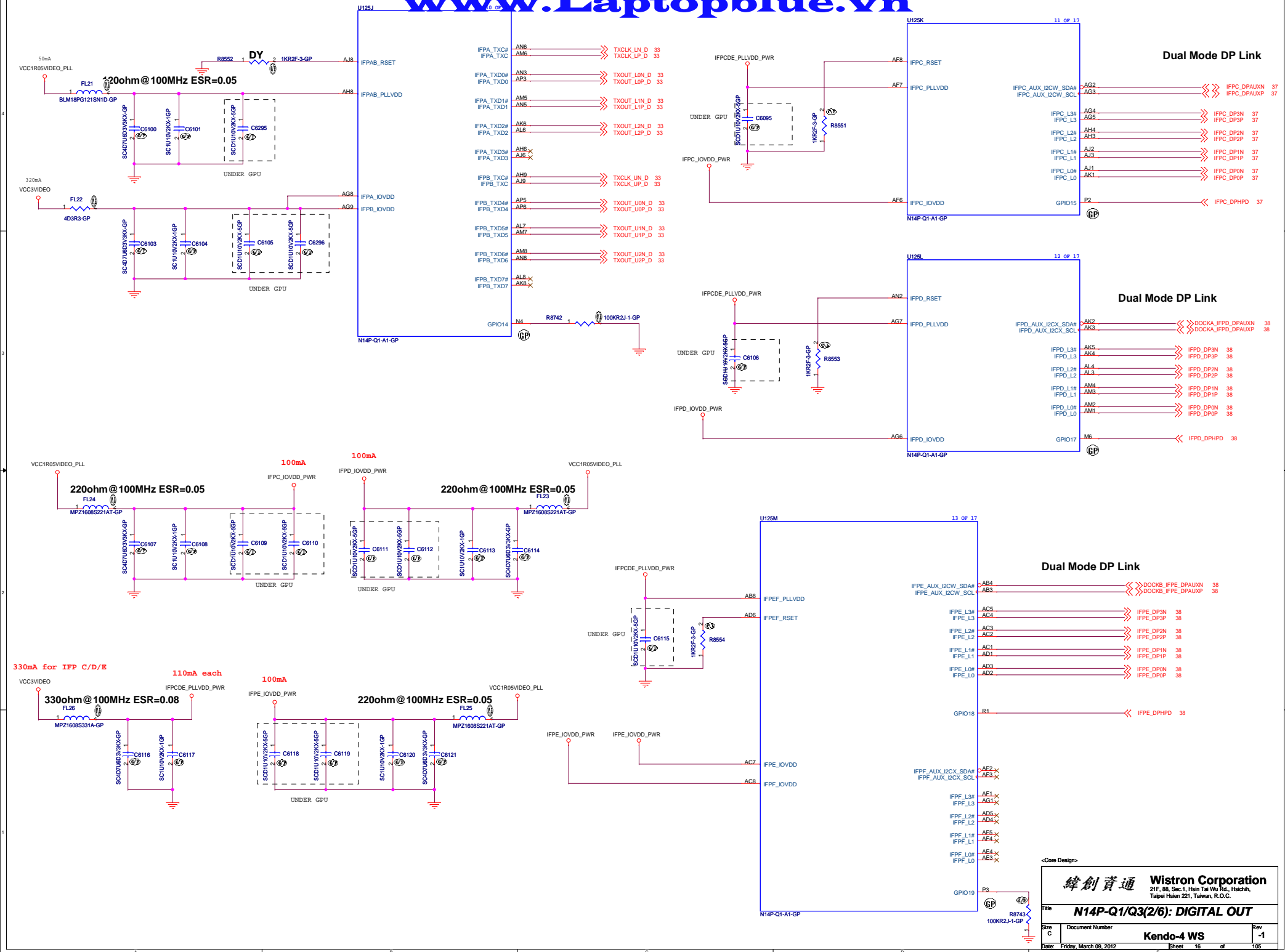
<Core Design>

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

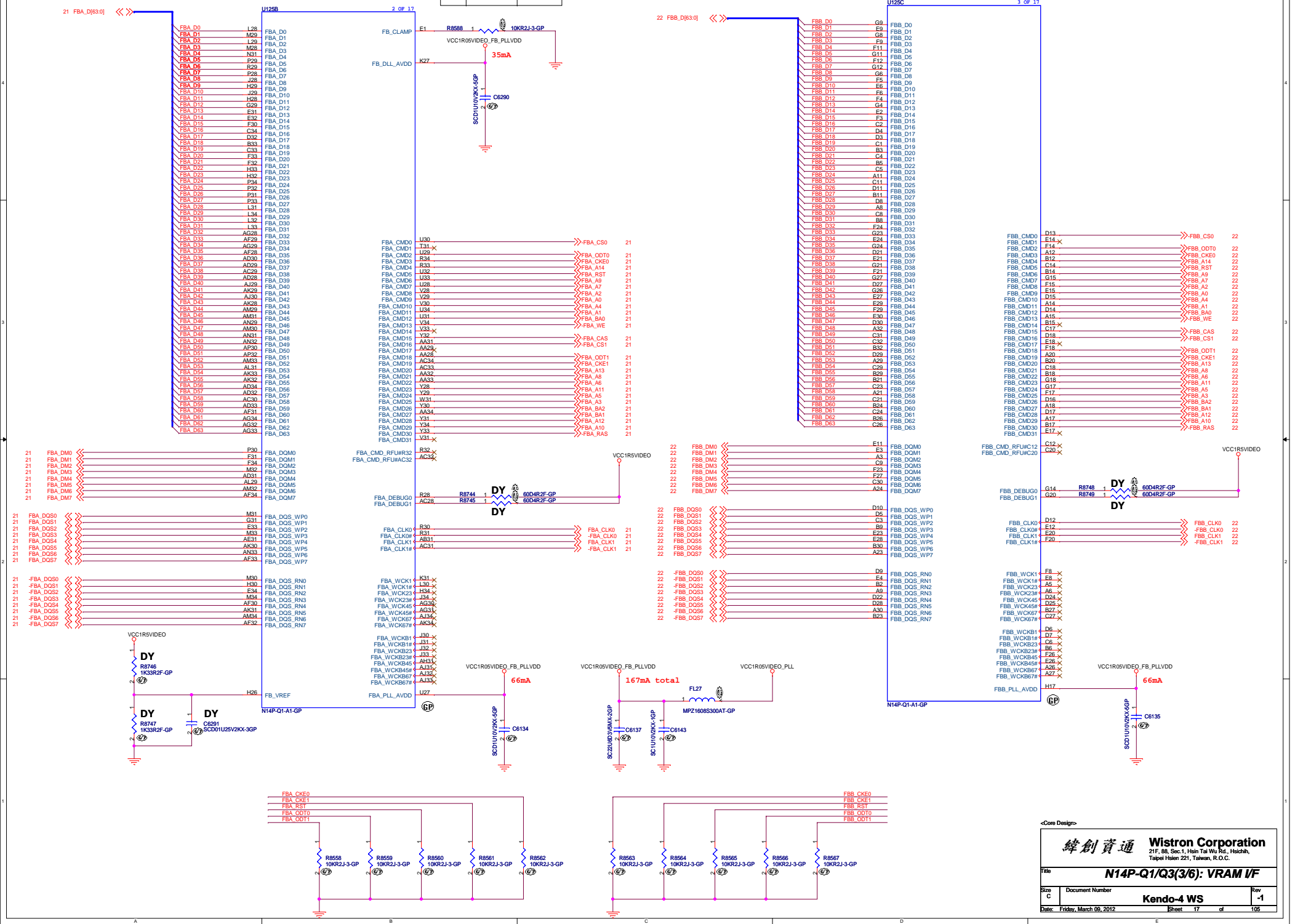
Tide **N14P-Q1/Q3(1/6): PEG I/F**

Size C	Document Number Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012	Sheet 15 of 105	





	N13P-PES	N14P-Qx
R8588	NO	ASM
	10k	5%



<Core Design>

緯創資通

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

File

N14P-Q1/Q3(3/6): VRAM I/F

Size

Document Number

Kendo-4 WS

Date

Friday, March 09, 2012

Sheet

17

of

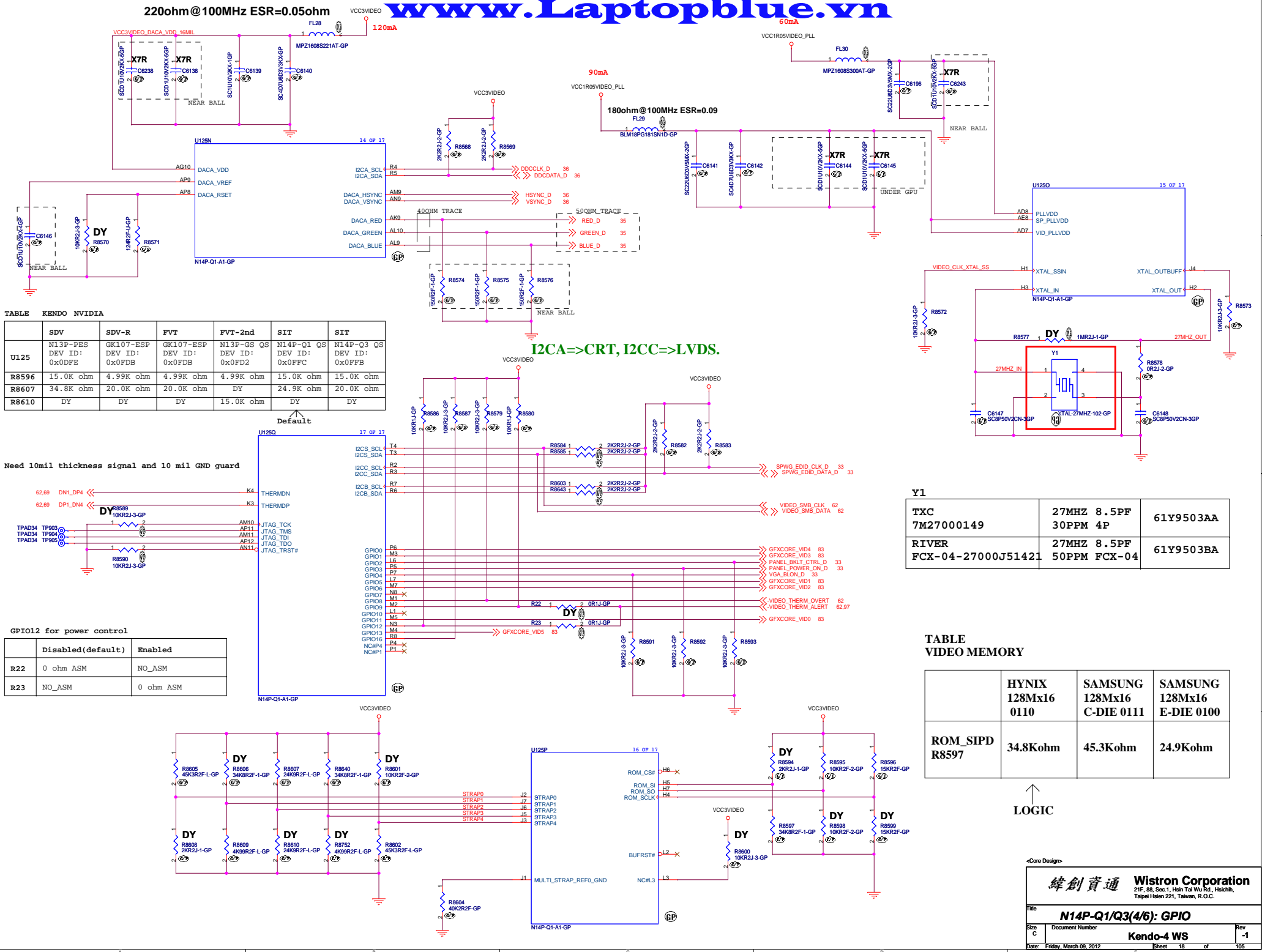
105

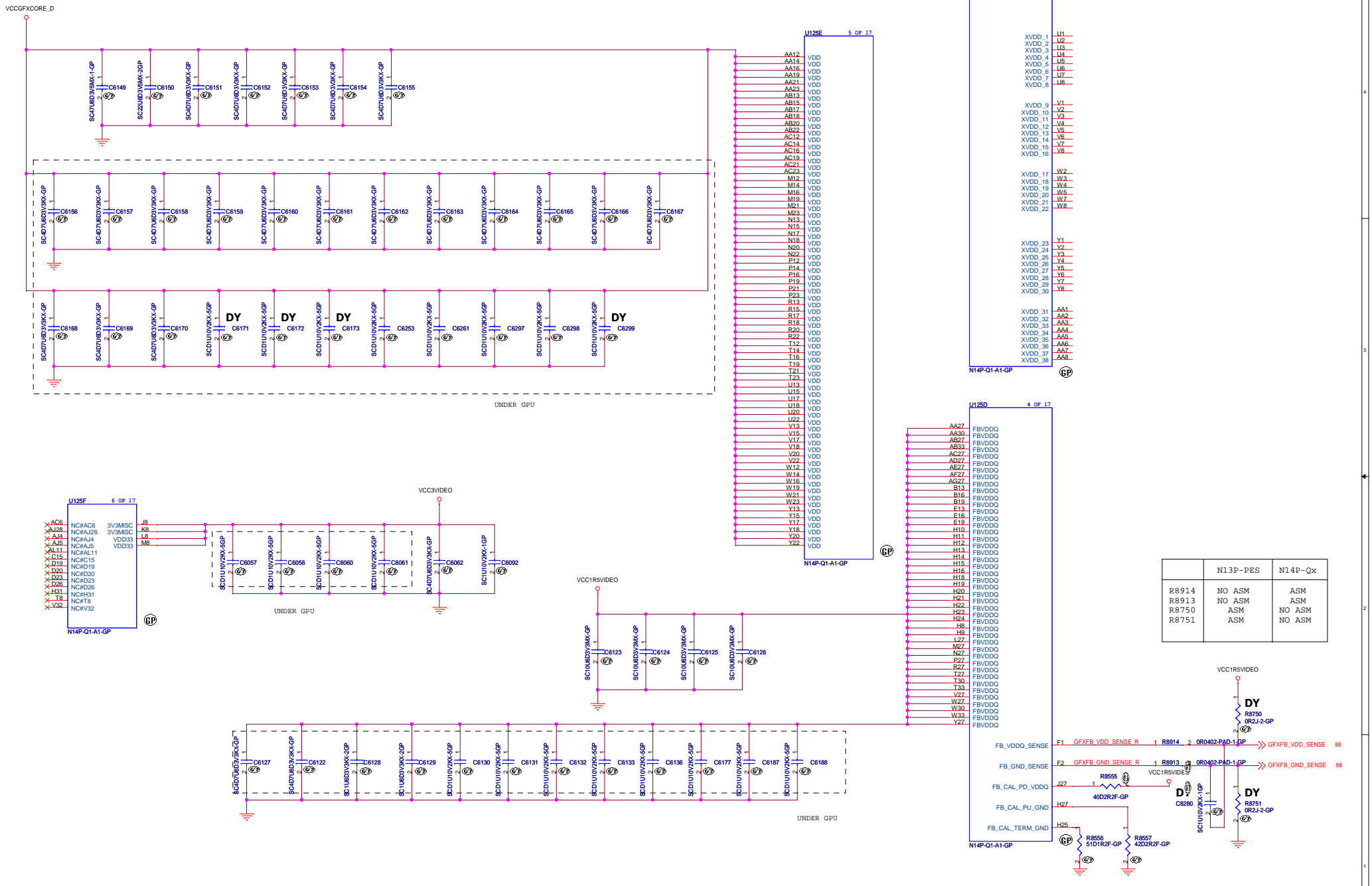
Rev

-1

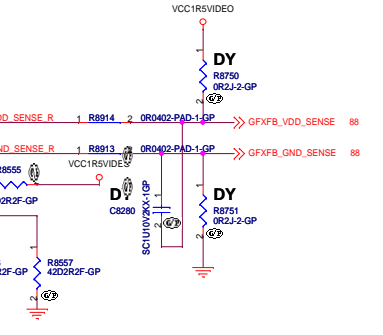
220ohm@100MHz ESR=0.05ohm

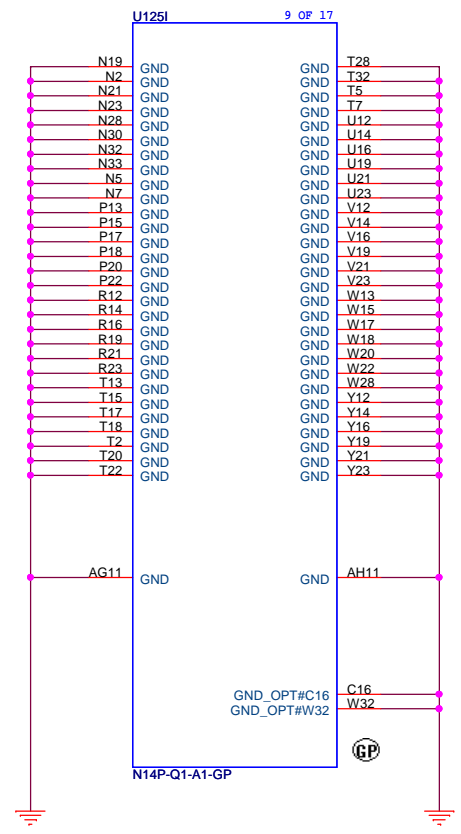
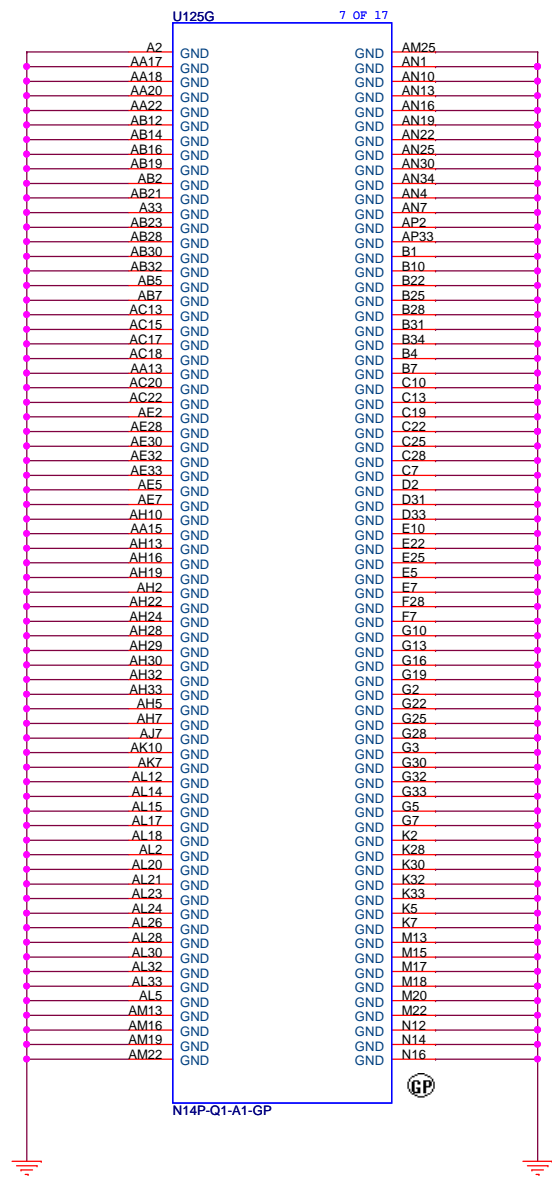
www.Laptopblue.vn





	N13P-PES	N14P-Qx
R8914	NO ASM	ASM
R8913	NO ASM	ASM
R8750	ASM	NO ASM
R8751	ASM	NO ASM

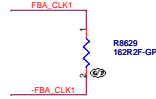
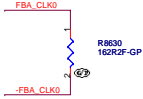




<Core Design>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wuj Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title N14P-Q1/Q3(6/6): GND		
Size B	Document Number Kendo-4 WS	Rev -1
Date: Wednesday, February 15, 2012		Sheet 20 of 105

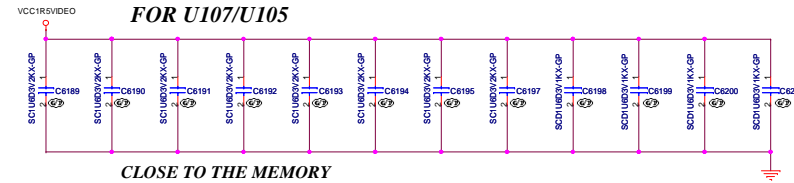
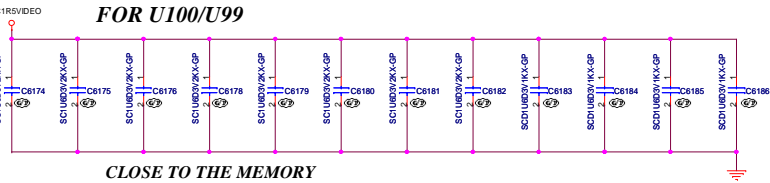
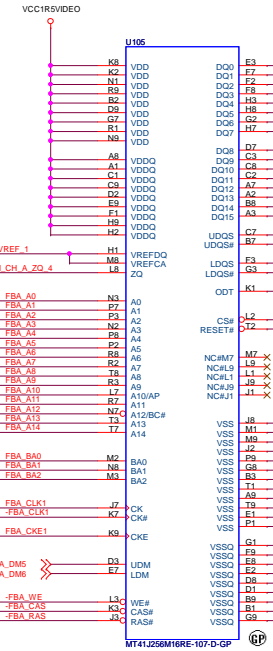
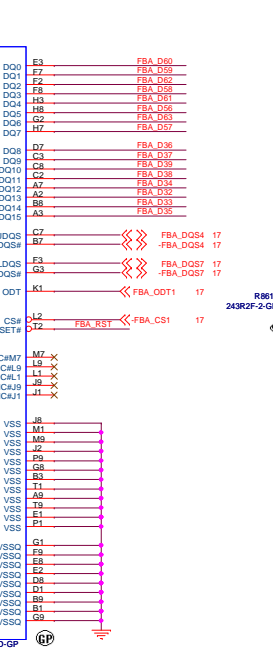
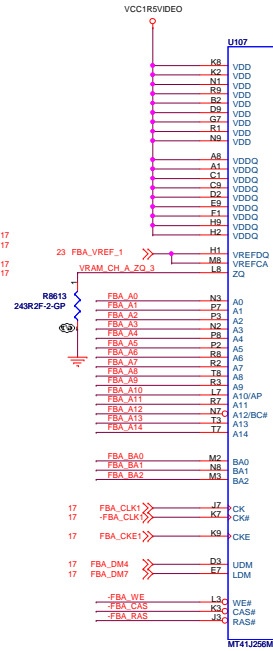
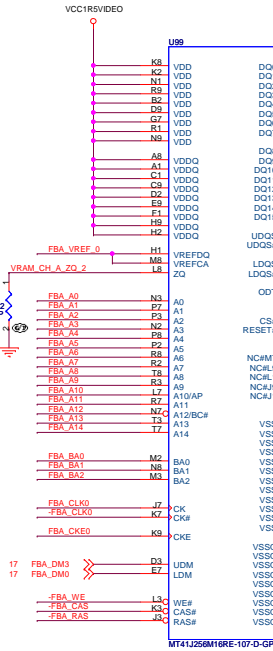
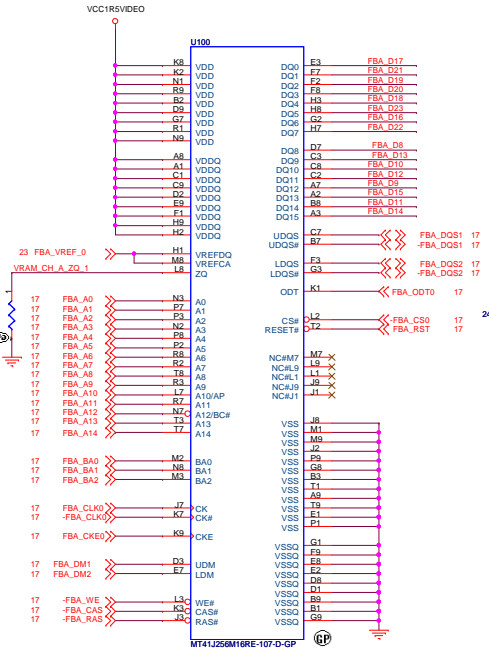
17 FBA_D[8:0] <<<



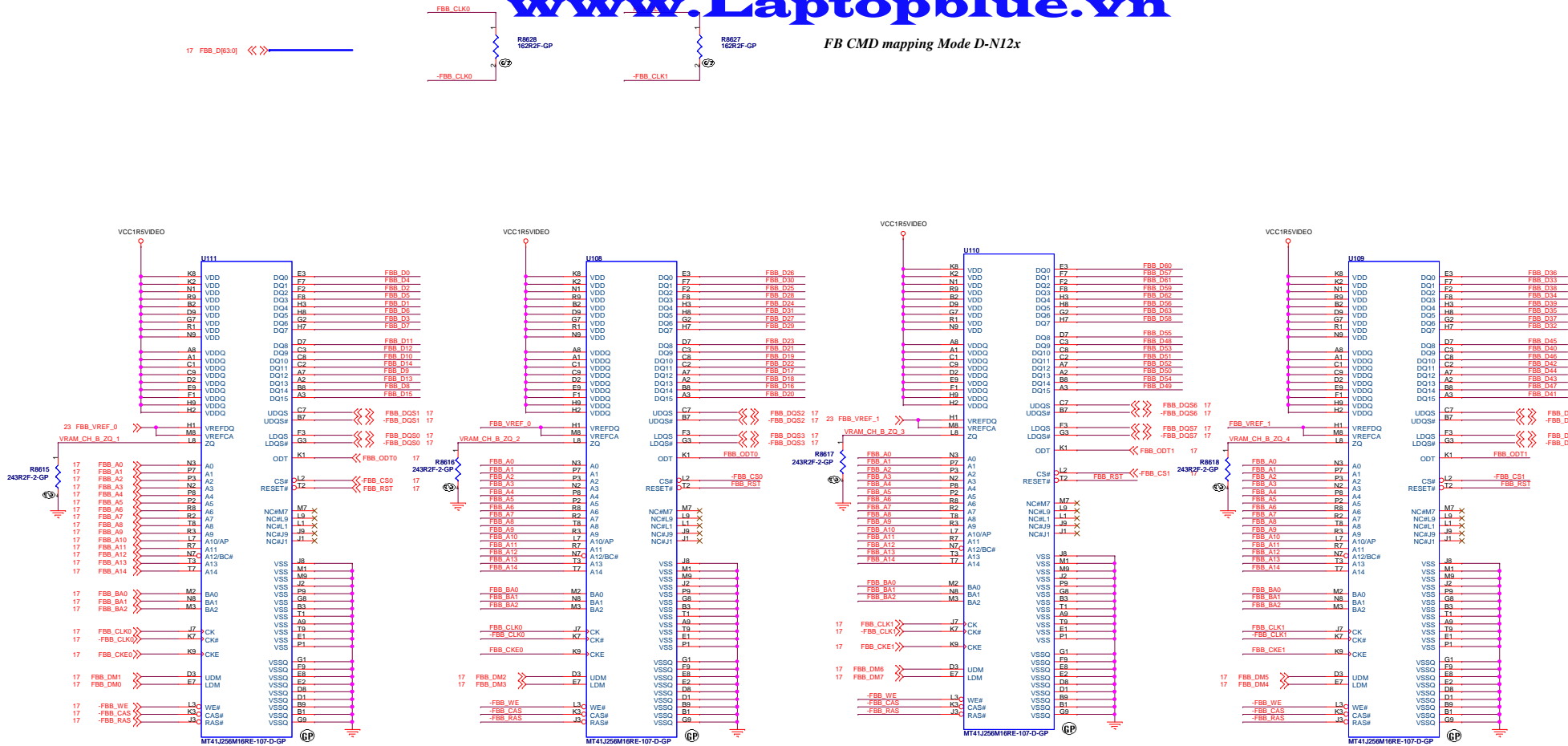
FB CMD mapping Mode D-N12x

TABLE
DDR3 VIDEO MEMORY

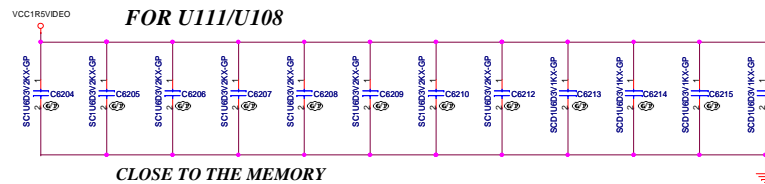
	HYNIX 2GBITS (128MX16) NEW DIE	SAMSUNG 2GBITS (128MX16) NEW DIE
U100 U111 U99 U108 U107 U110 U105 U109	H5TQ2G63DFR-11C	K4W2G1646E-BC11



FB CMD mapping Mode D-N12x

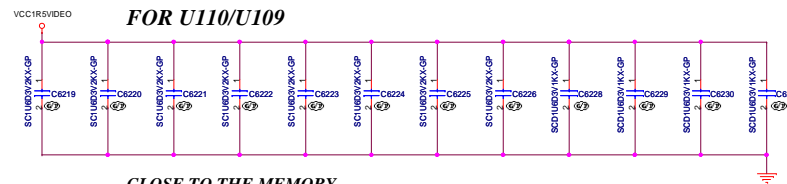


FOR U111/U108



CLOSE TO THE MEMORY

FOR U110/U109



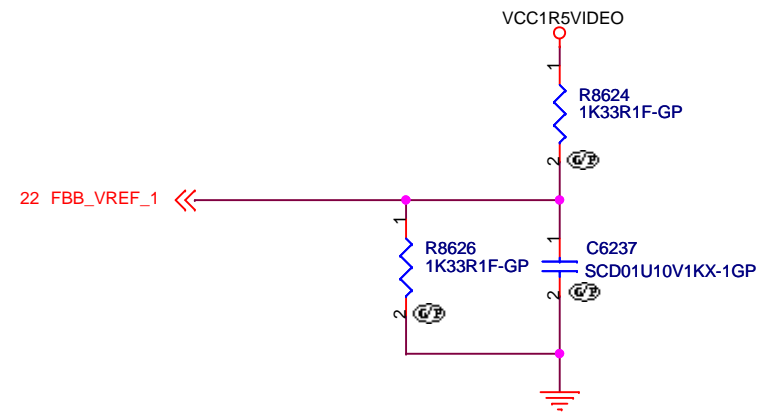
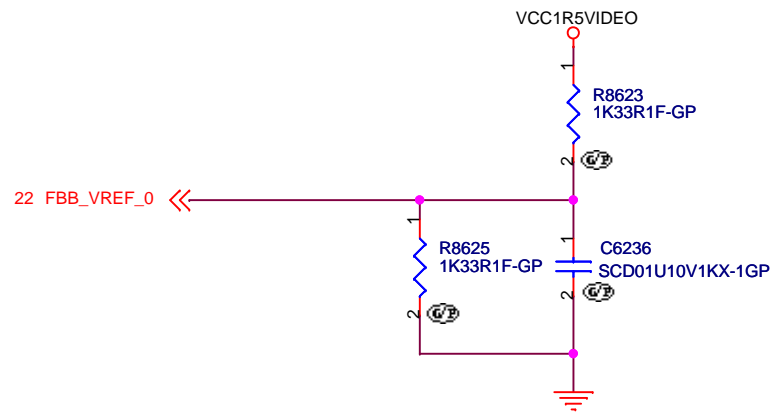
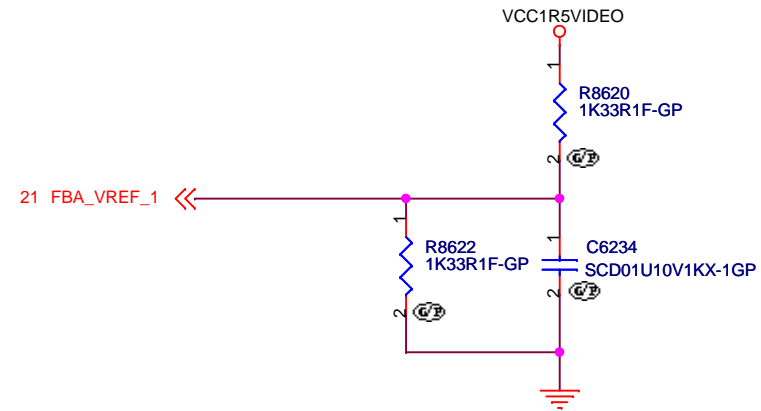
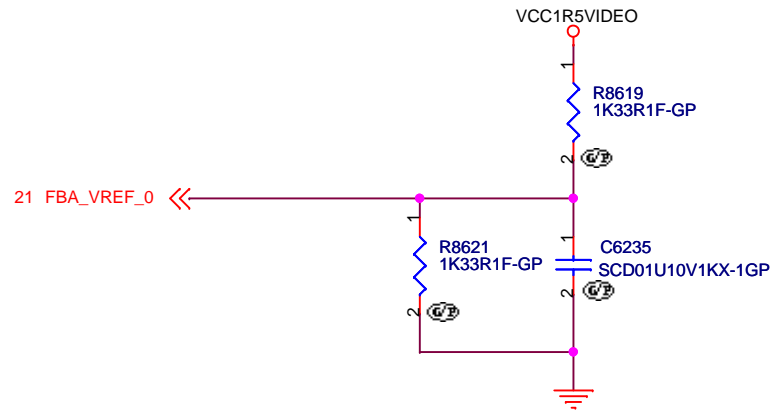
CLOSE TO THE MEMORY

«Core Design»

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

File VRAM CHANNEL-B

Size	Document Number	Rev
A2	Kendo-4 WS	-1
Date: Friday, March 09, 2012	Sheet 22	of 106



<Core Design>

緯創資通

Wistron Corporation

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

Title **VIDEO MEMORY TERMINATION**

Size
A4

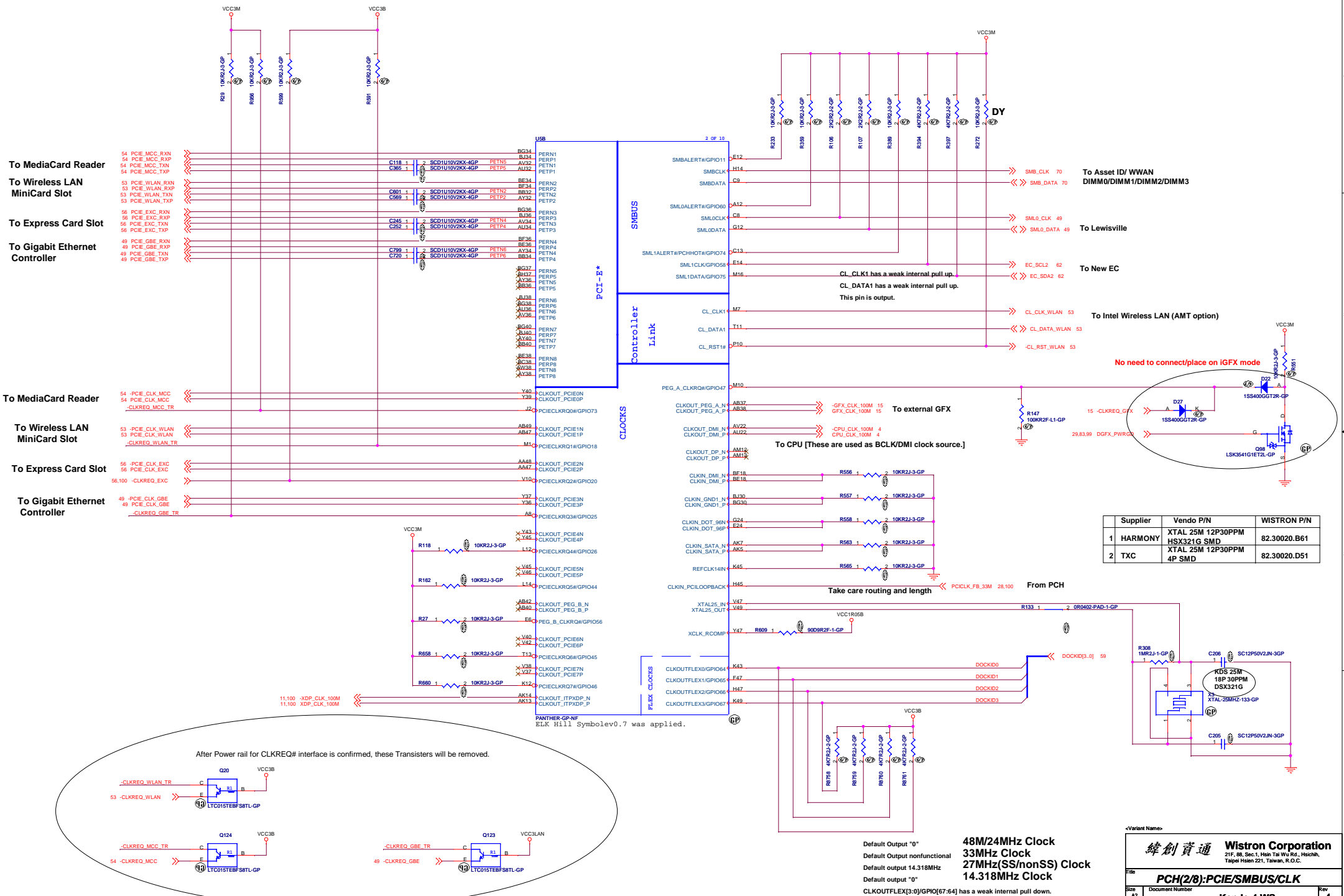
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

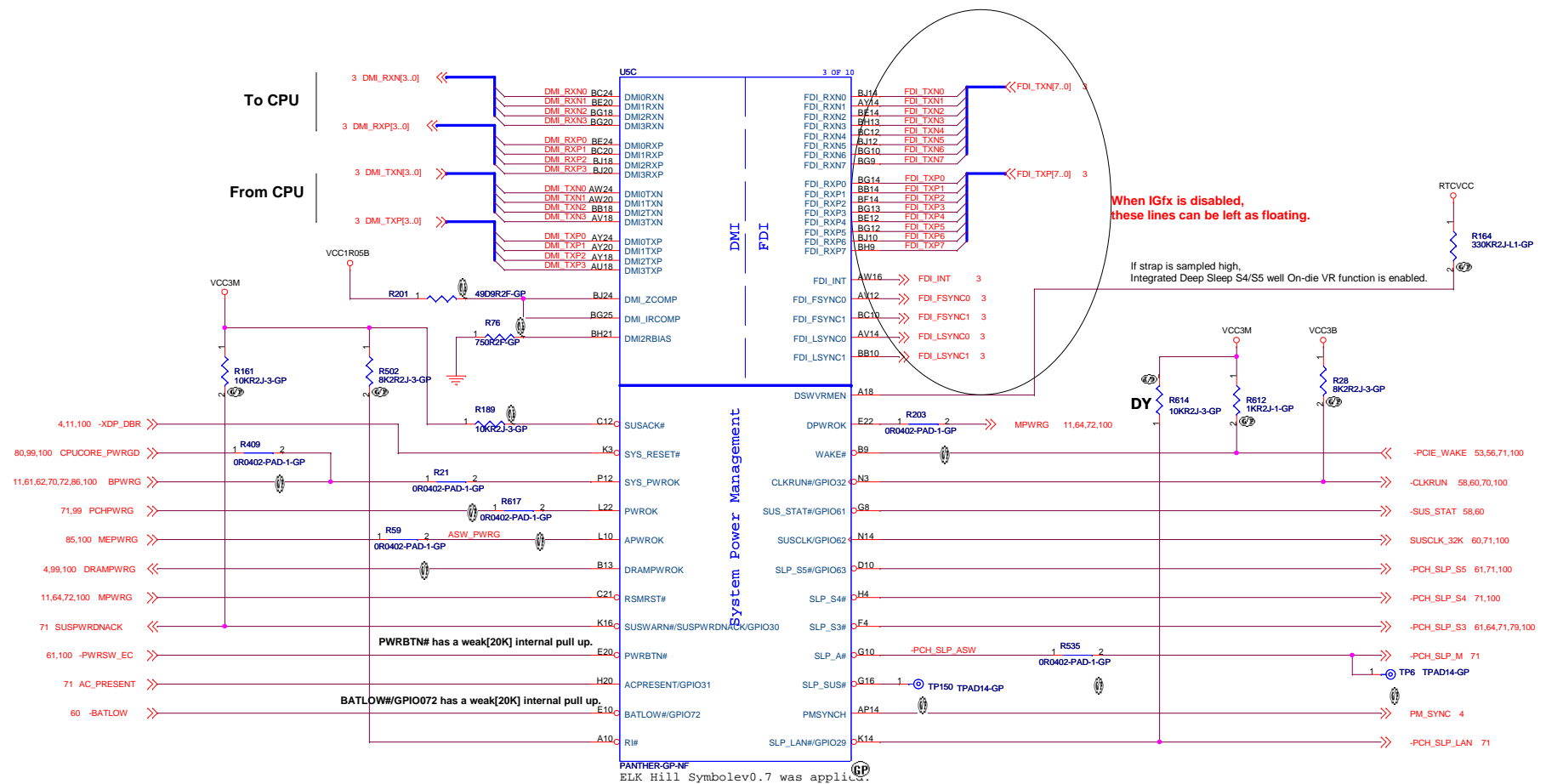
Sheet 23 of 105



	Supplier	Vendo P/N	WISTRON P/N
1	HARMONY	XTAL 25M 12P30PPM HSX321G SMD	82.30020.B61
2	TXC	XTAL 25M 12P30PPM 4P SMD	82.30020.D51

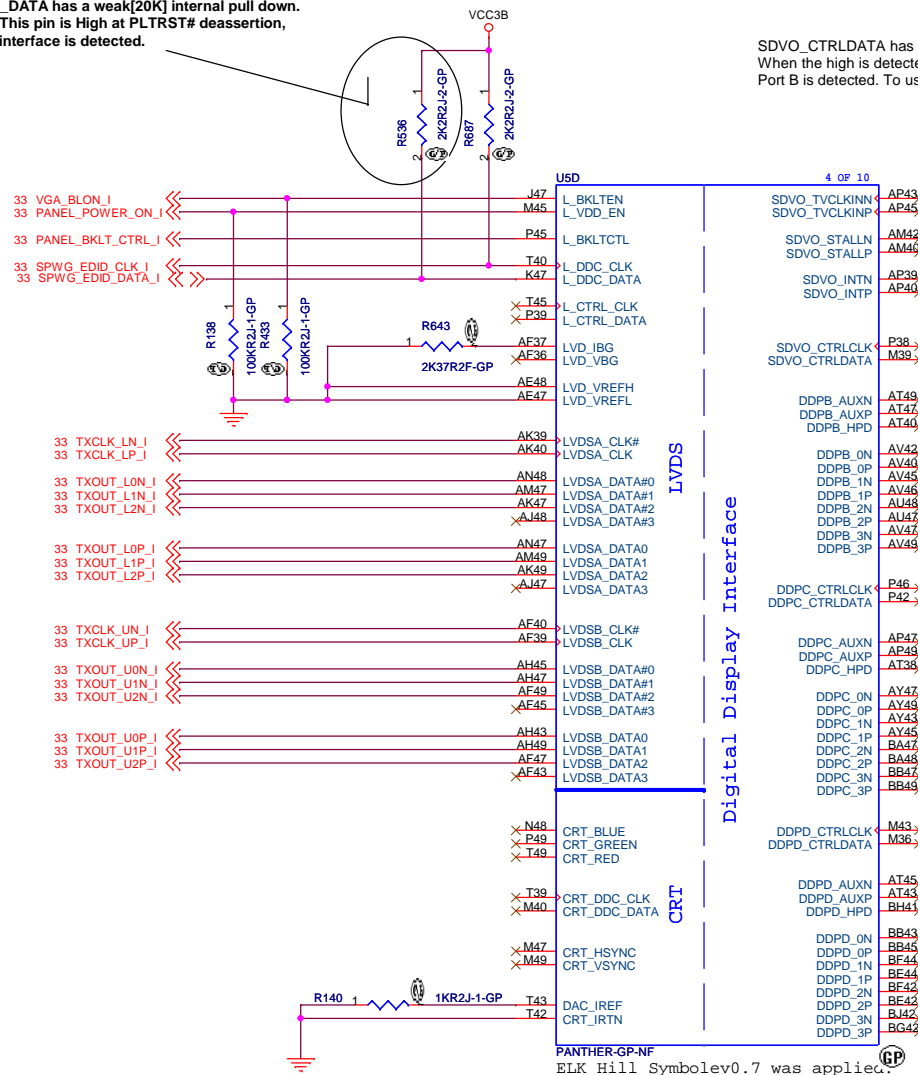
<Variant Name>	
	<p>緯創資通</p> <p>Wistron Corporation</p> <p>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</p>

Title PCH(2/8):PCIE/SMBUS/CLK			
Size A2	Document Number Kendo-4 WS		Rev -1
Date: Friday, March 09, 2012	Sheet 25	of 105	



**L_DDC_DATA has a weak[20K] internal pull down.
When This pin is High at PLTRST# deassertion,
LVDS interface is detected.**

SDVO_CTRLDATA has internal pull down.
When the high is detected at PLTRST# deassertion,
Port B is detected. To use Port B, need to add external pull up.



DDPD_CTRLDATA has internal pull down.
When the high is detected at PLTRST# deassertion,
Port D is detected. To use Port D, need to add external pull up.

Because PCI IF is not used, ADx.C/BEx and GNTx are left as NC.

GNT0# has a weak[20K] internal pull up.
GNT1#/GPIO51 has a weak[20K] internal pull up.
To use SPI IF flash BIOS, GNT1#/GPIO51 and GNT0# should not place external pull down.

GNT2#/GPIO53 has a weak[20K] internal pull up.
This pin should not have external pull down.

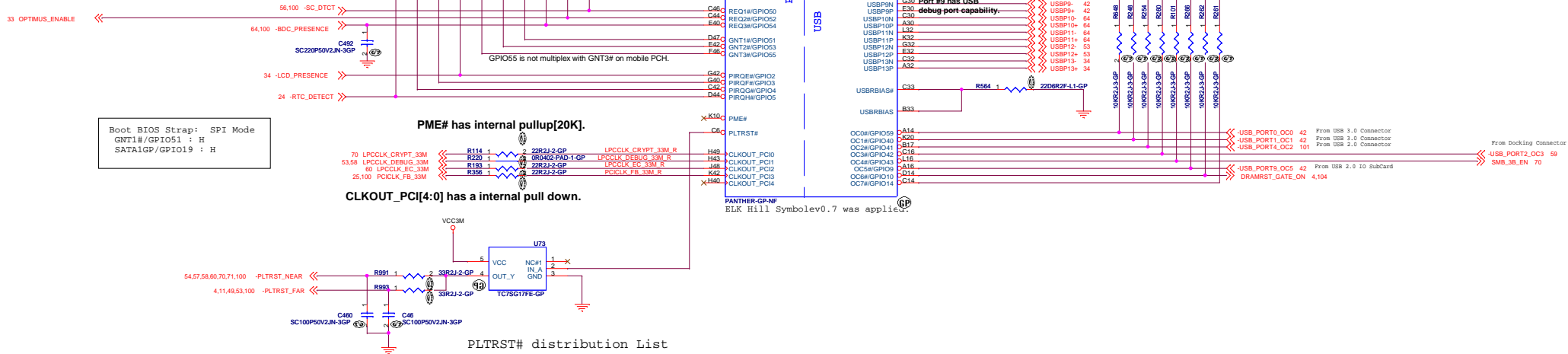
GNT3#/GPIO55 has a weak[20K] internal pull up.
The internal pull up is disabled after PLTRST#.
If external pull down is applied,
PCH will be "topblock swap" mode.

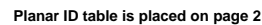
USB 3.0 ports assignment :

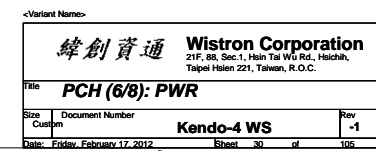
Port 0: Left Side Double Deck connector (Upper)
Port 1: Left Side Double Deck Connector (Lower)
Port 2: Docking Connector

TABLE

OPTIMUS_ENABLE	
LVDS/VGA	
HIGH	IGPU
LOW	DGPU



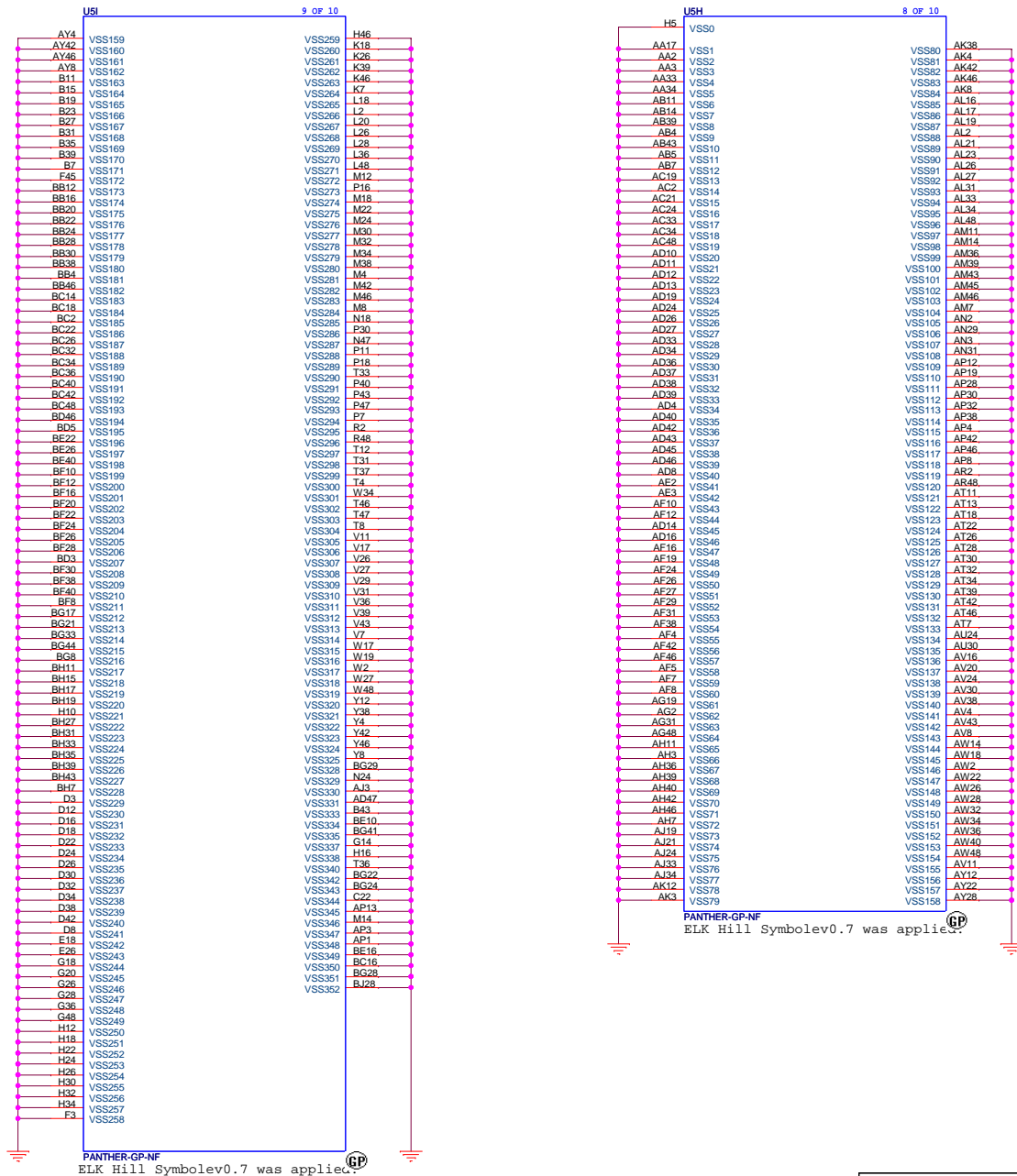




BLANK

<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>	
<div>Title</div> <div>BLANK</div>			
<div>Size</div> <div>A3</div>	<div>Document Number</div> <div>Kendo-4 WS</div>		<div>Rev</div> <div>-1</div>
<div>Date: Wednesday, February 15, 2012</div>		<div>Sheet</div> <div>E</div>	<div>31 of 105</div>



緯創資通

Wistron Corporation

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.Title
PCH (8/8):GNDSize
Custom

Kendo-4 WS

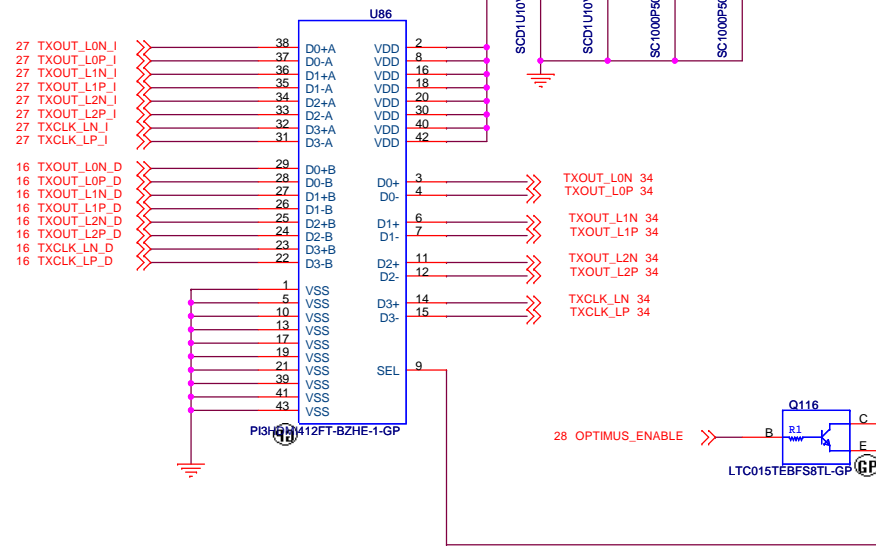
Rev

-1

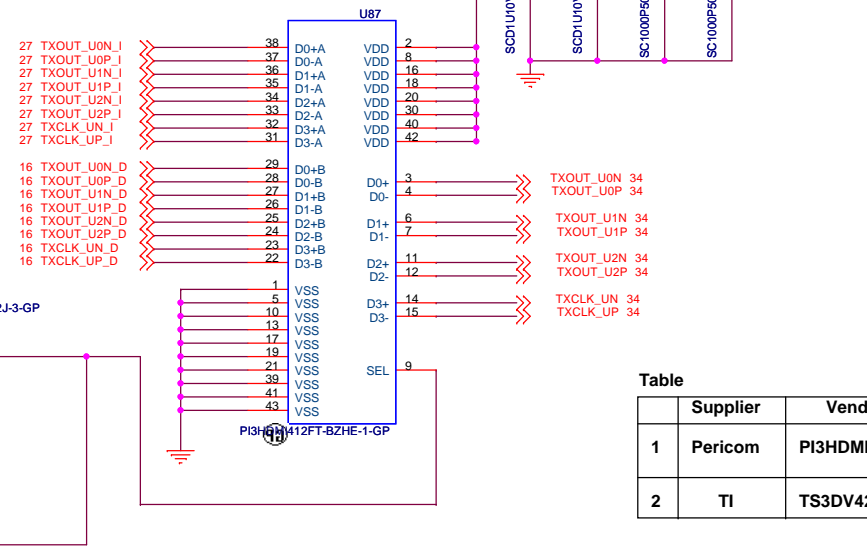
Date: Friday, February 17, 2012

Sheet 32 of 105

Signals can be arranged
if there is wiring issue.



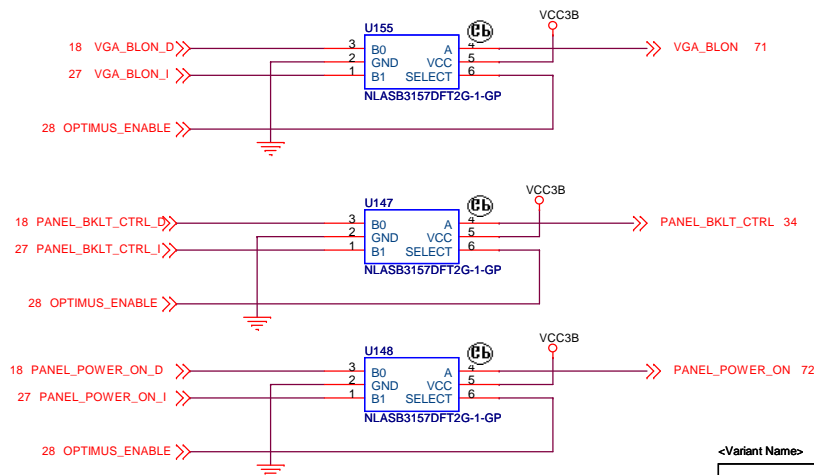
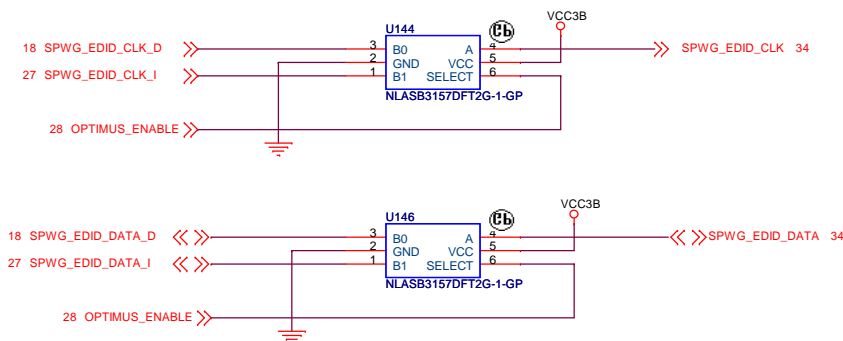
Signals can be arranged
if there is wiring issue.



Table

	Supplier	Vendo P/N	WISTRON P/N
1	Pericom	PI3HDMI412FT-BZHE	71.03412.B0G 54Y9032AA
2	TI	TS3DV421RUAR	71.03421.003

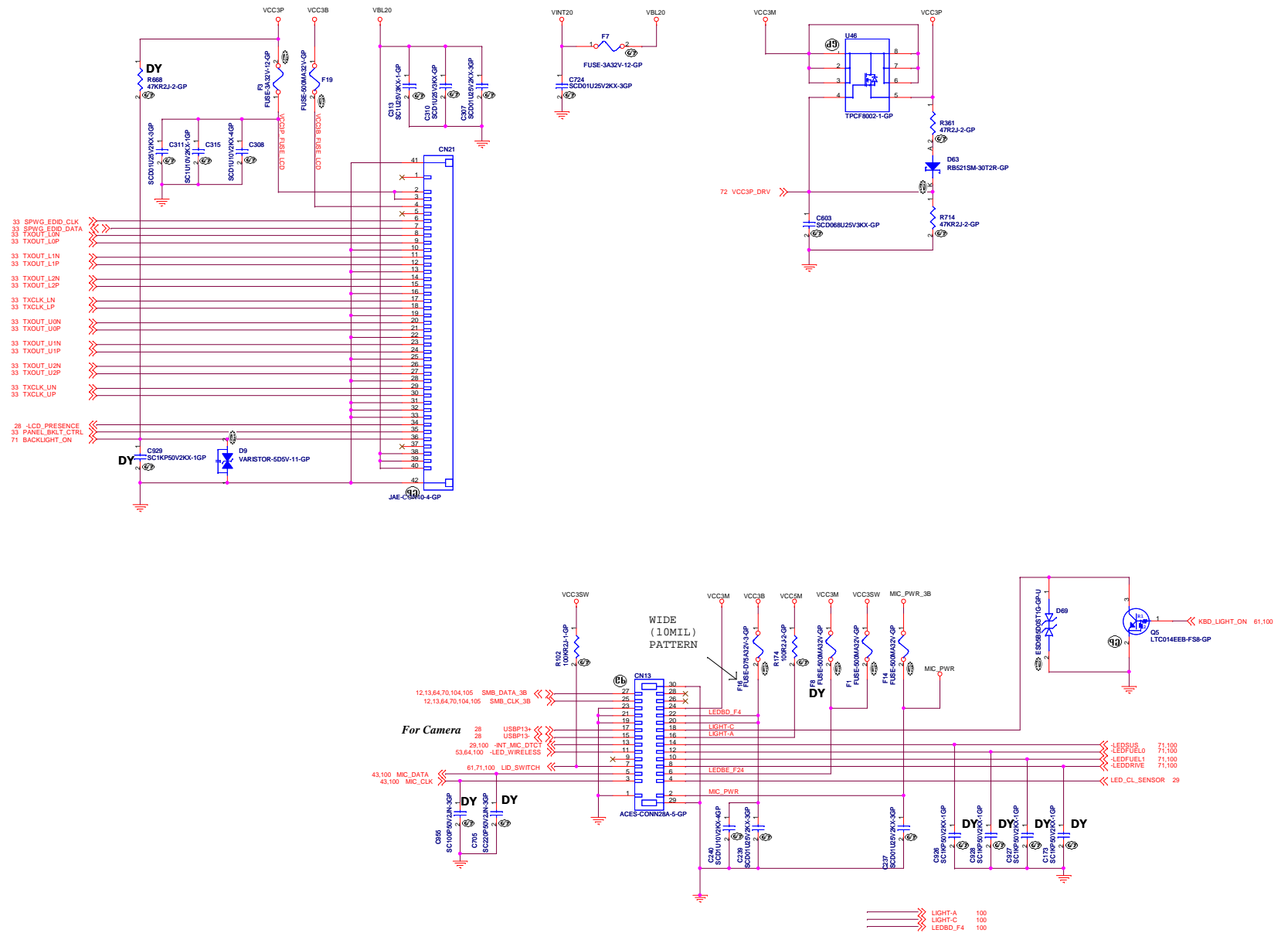
NZ-3 uses two of CBT3257ABQ due to space limitation.



<Variant Name>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LVDS SWITCH			
Size A3	Document Number	Kendo-4 WS	Rev -1
Date	Friday, March 09, 2012	Sheet 33 of	105

LCD / Inverter Connector

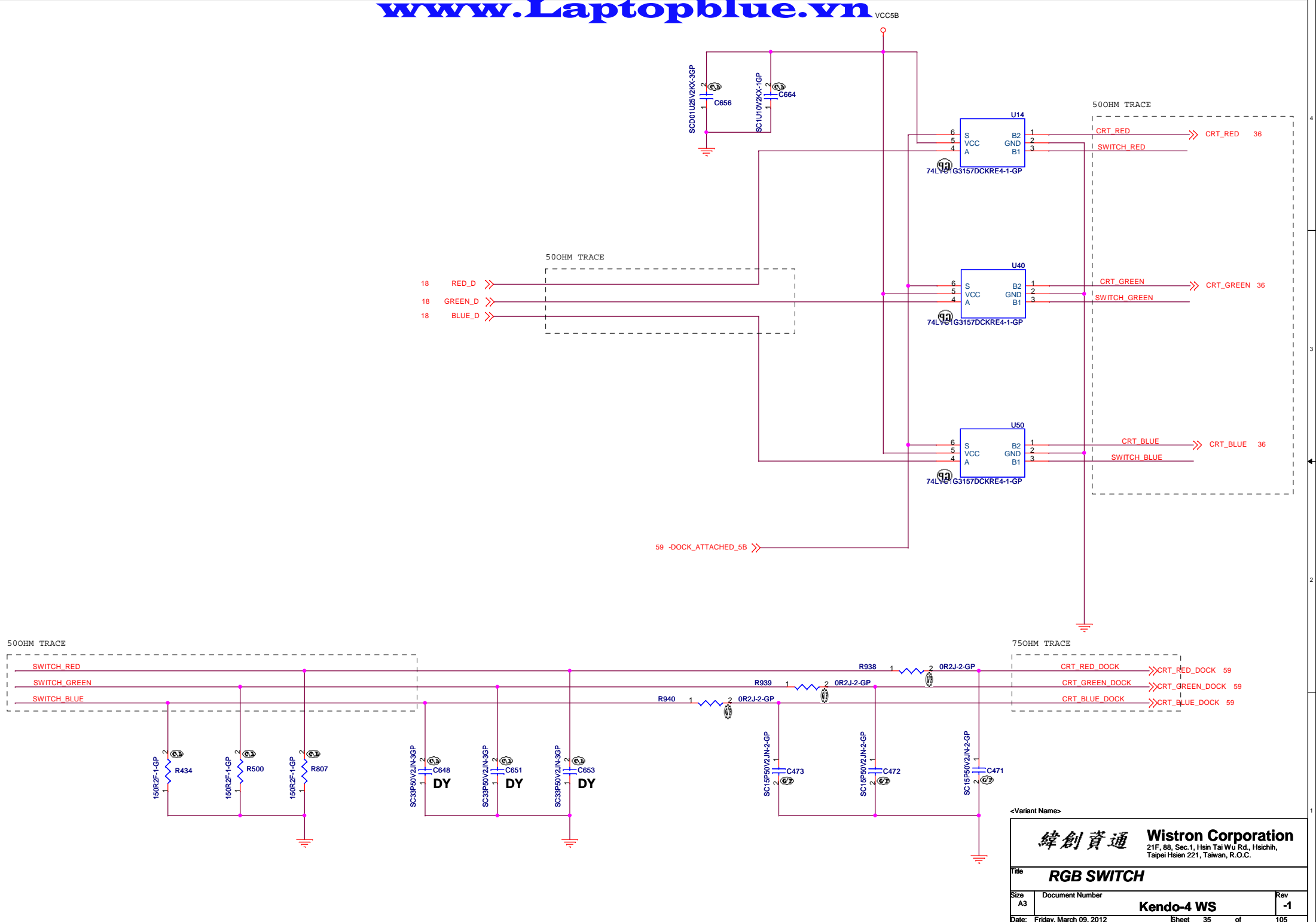


<Variant Name>

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

Title	LCD CONNECTOR
-------	----------------------

Size A2	Document Number Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012	Sheet 34 of	105



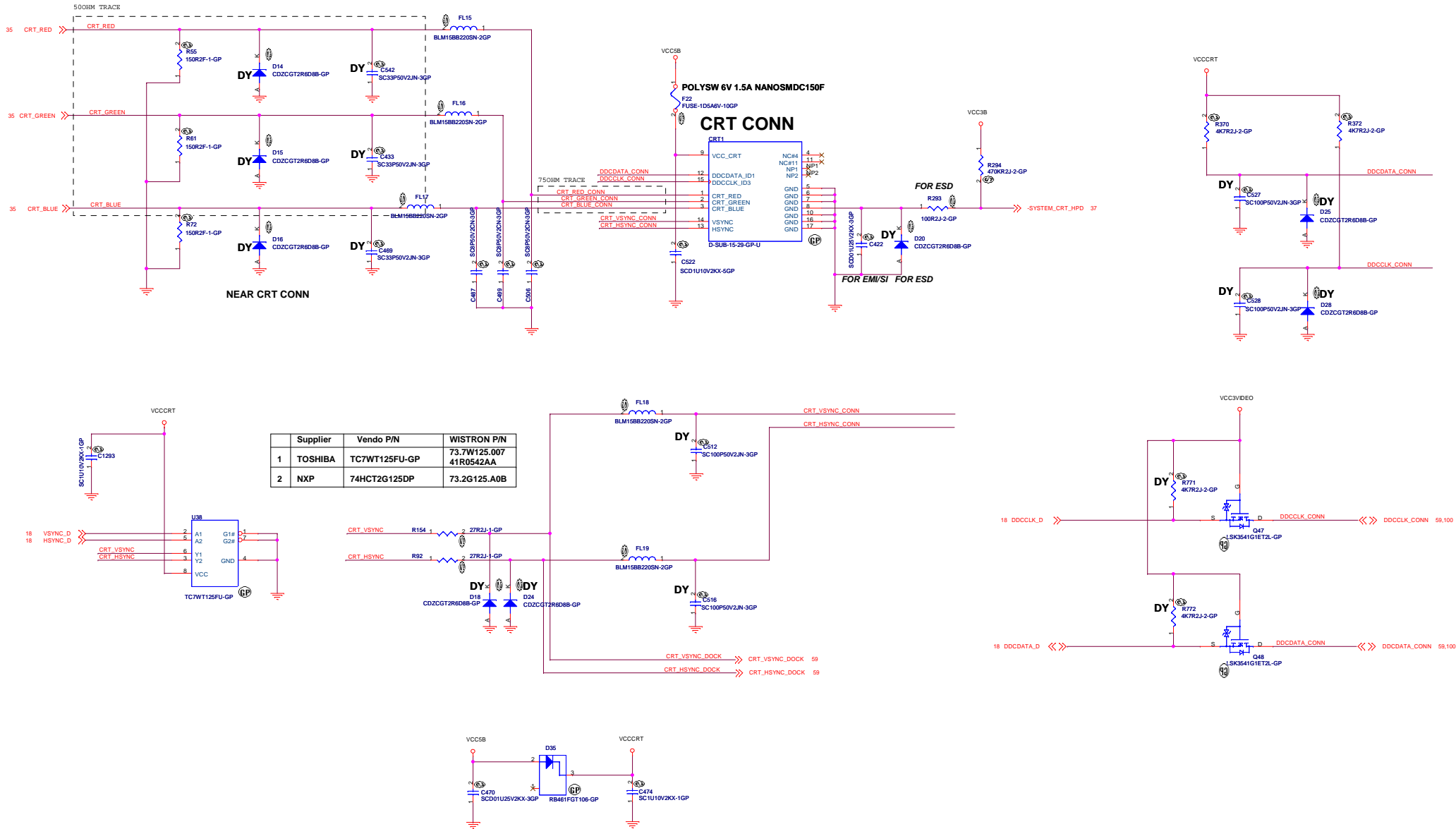
<Variant Name>

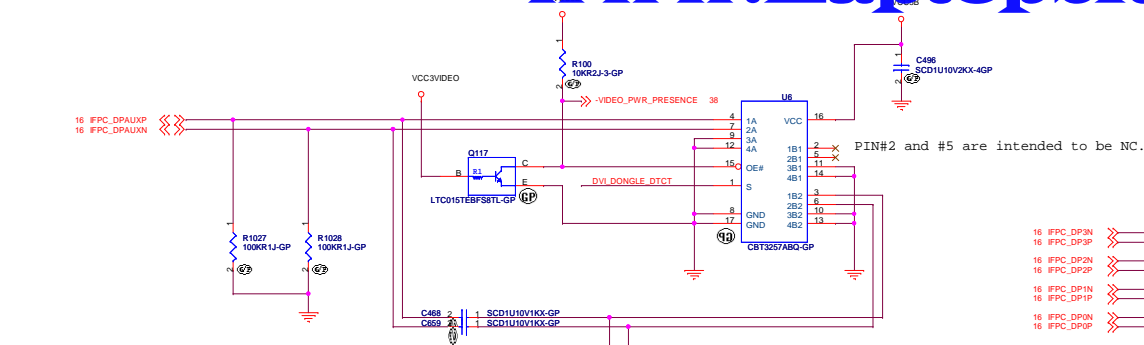
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title **RGB SWITCH**

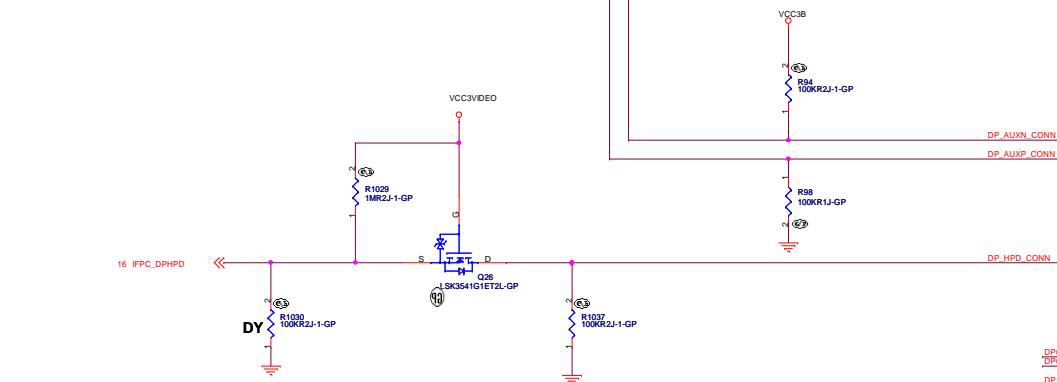
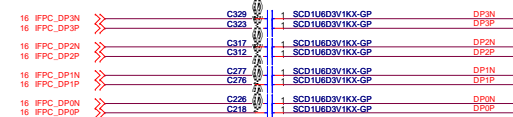
Size A3	Document Number	Rev -1
Date: Friday, March 09, 2012	Sheet 35 of 105	

Kendo-4 WS

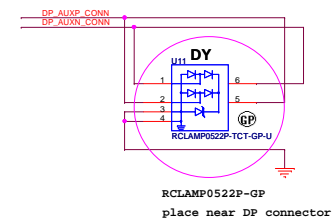
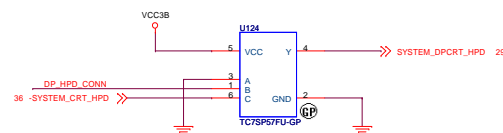
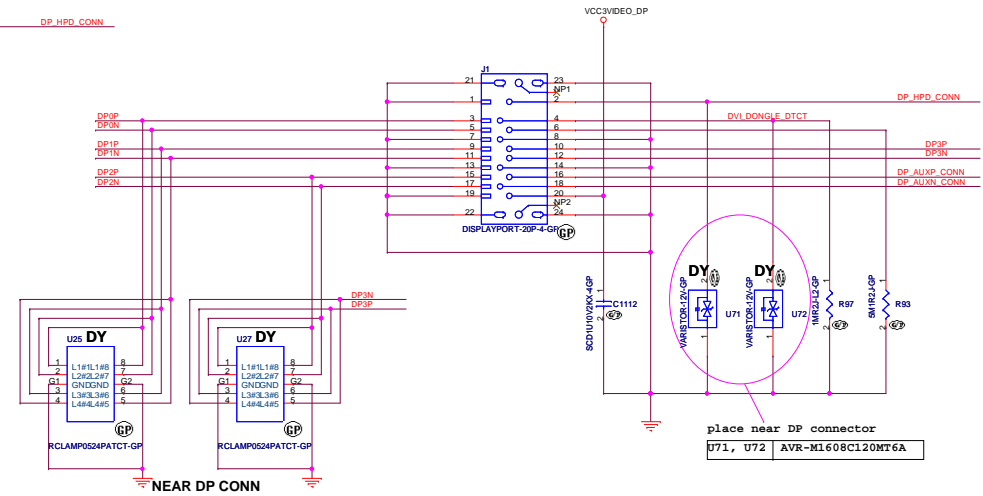
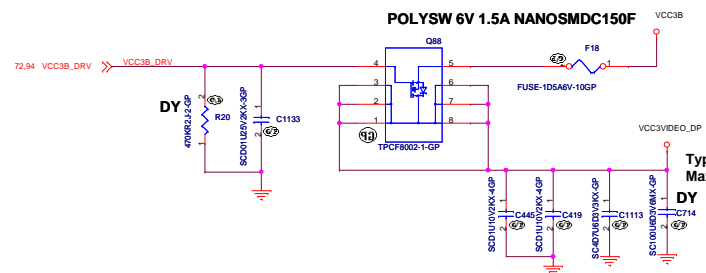




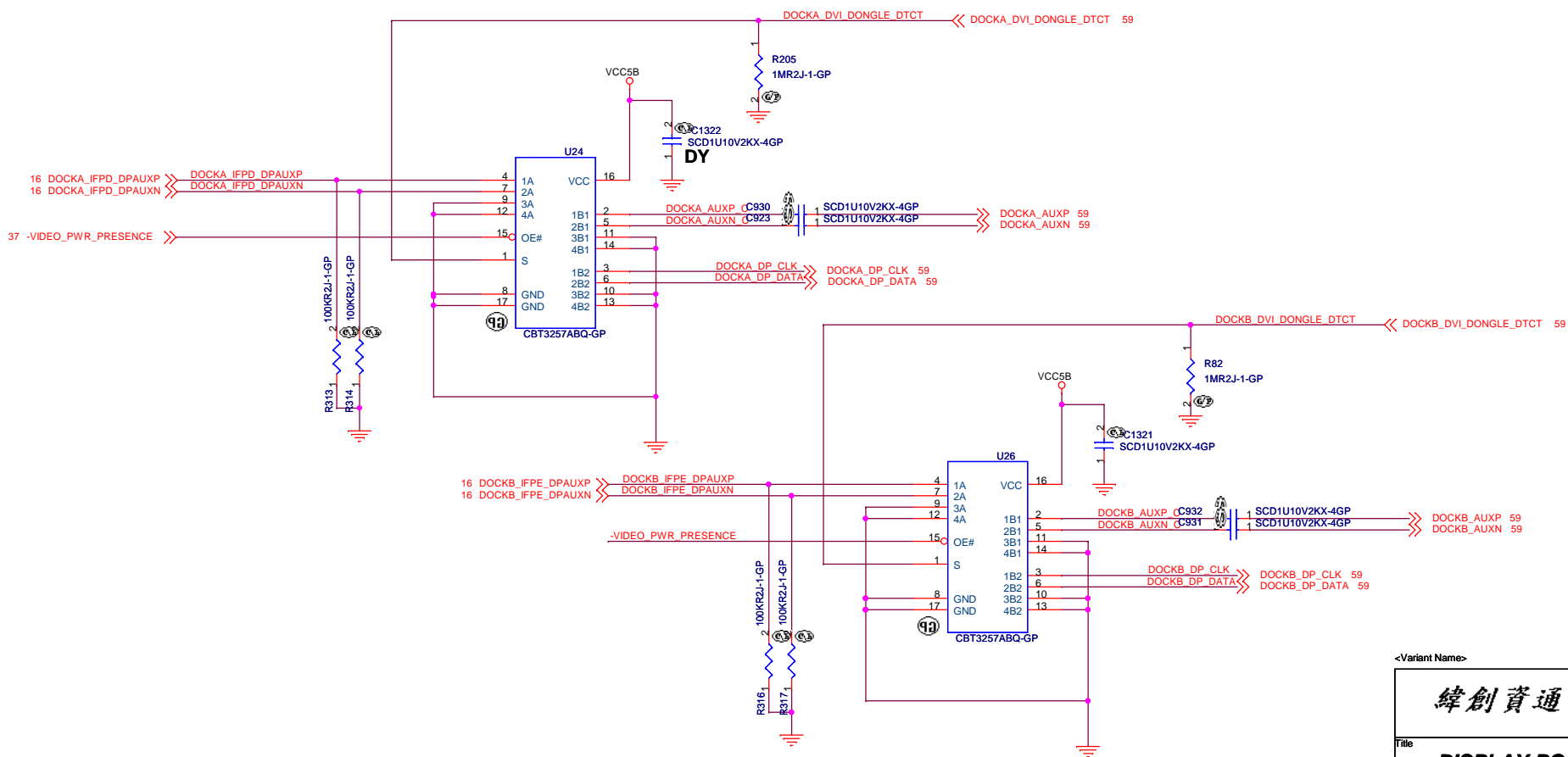
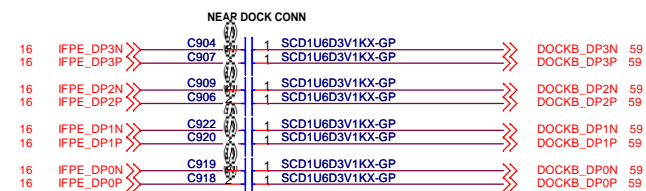
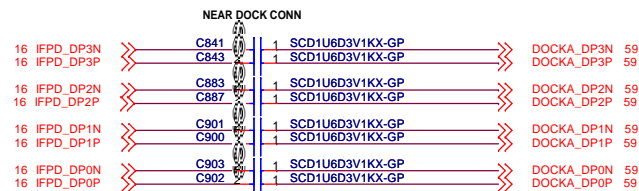
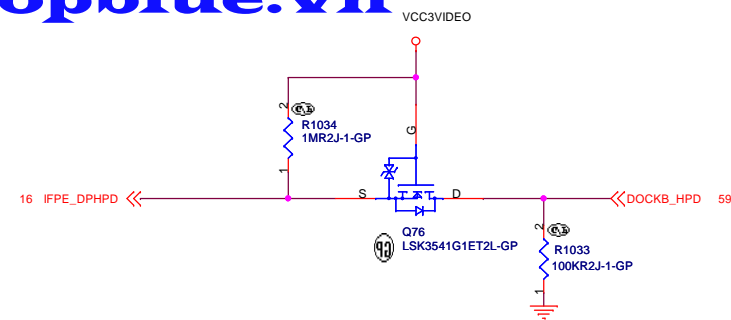
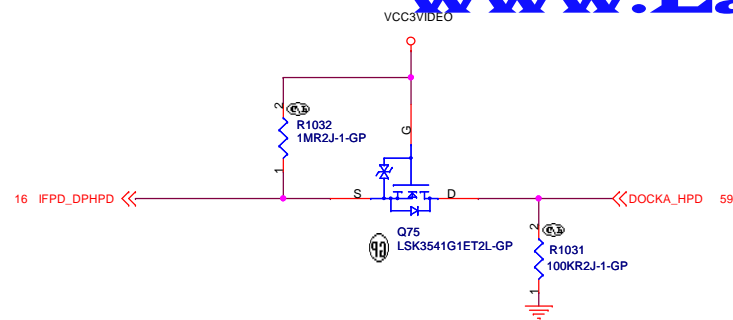
FOR SYSTEM DP NEAR DP CONN



DP CONN
DisplayPort ver.1.2
5.4Gbps supported



	Supplier	Vendo P/N	WISTRON P/N
1	TOSHIBA	TC7SP57FU	73.7SP57.0AJ
2	TI	SN74LVC1G57DCKR	73.01G57.AHJ



<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

DISPLAY PORT MUXSize
A3

Document Number

Kendo-4 WSRev
-1

Date: Friday, March 09, 2012

Sheet 38 of 105

BLANK

<Variant Name>

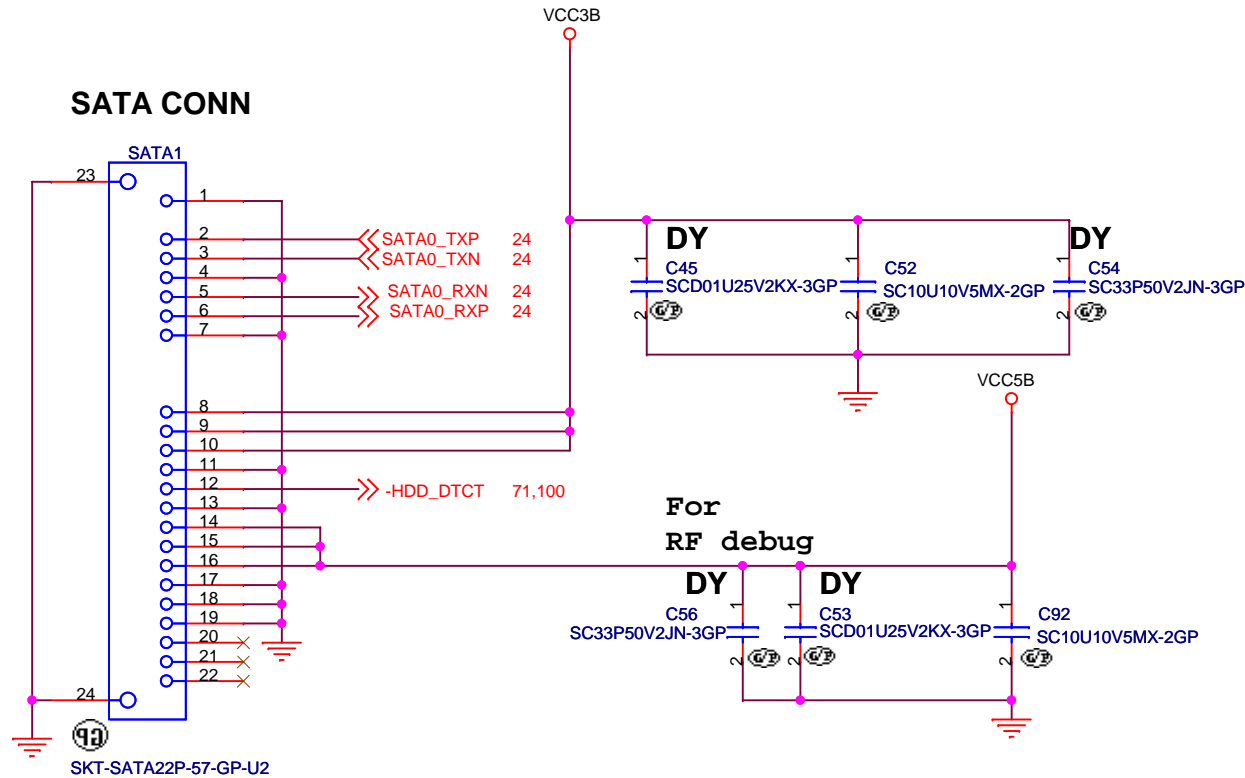
緯創資通

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

Title **BLANK**

Size A4	Document Number Kendo-4 WS	Rev -1
------------	--------------------------------------	------------------

Date: Wednesday, February 15, 2012	Sheet 39 of 105
------------------------------------	-----------------



<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

SATA HDD CONN

Size
A4

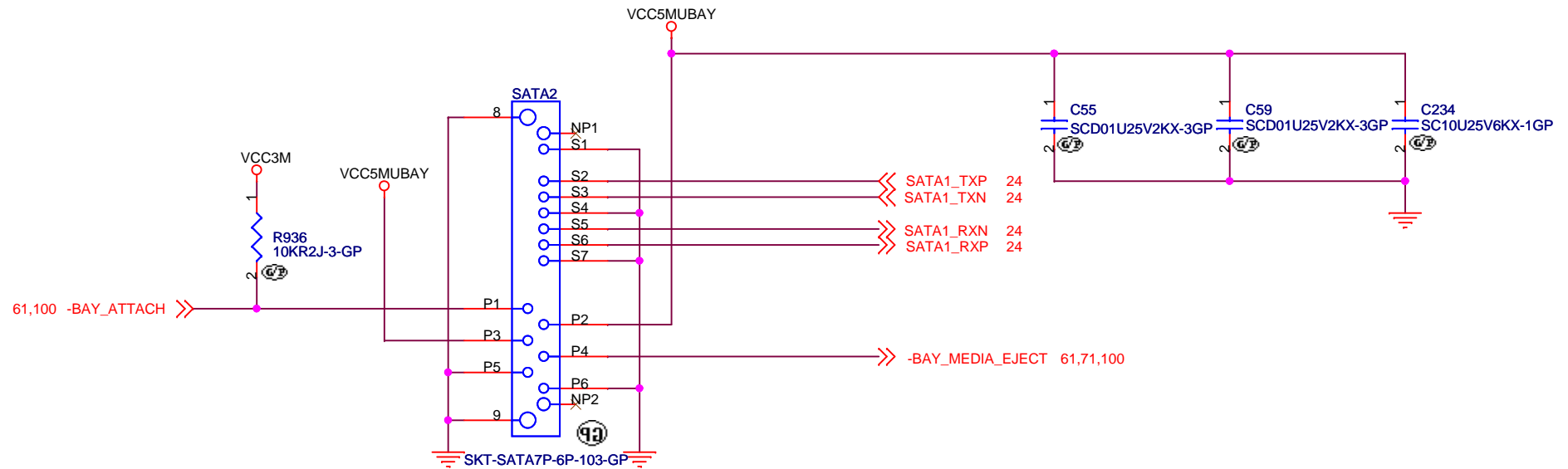
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 40 of 105



<Variant Name>

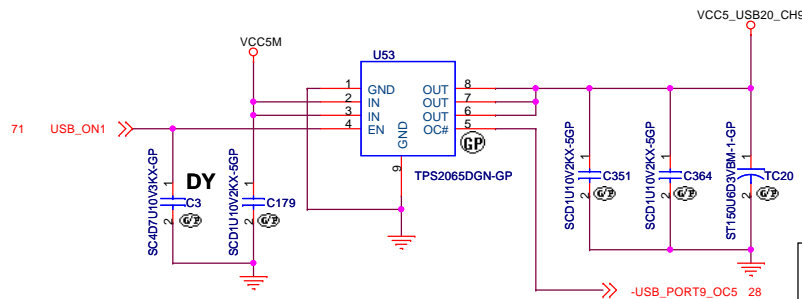
緯創資通

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

Title
SATA BAY I/F CONN

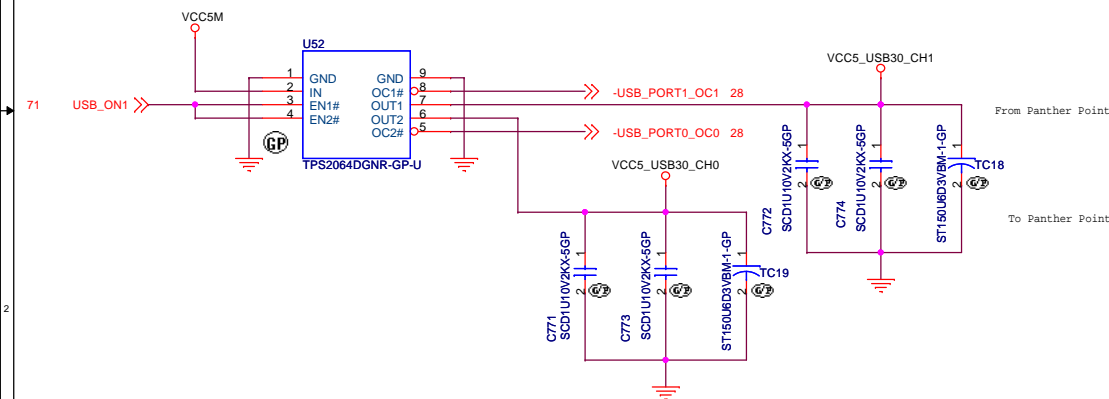
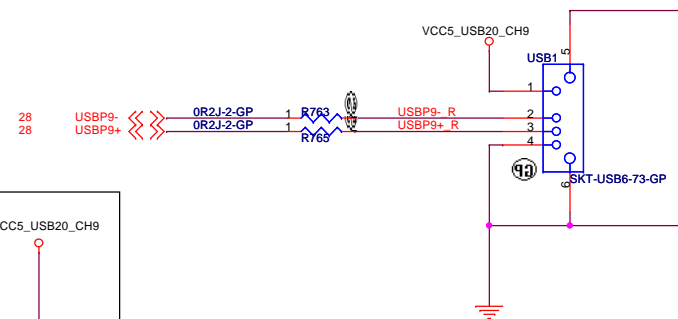
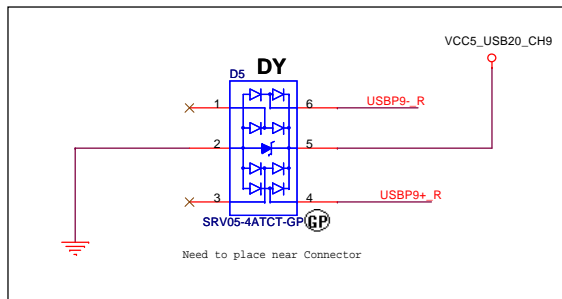
Size A4	Document Number Kendo-4 WS	Rev -1
------------	--------------------------------------	------------------

Date: Friday, March 09, 2012	Sheet 41 of 105
------------------------------	-----------------



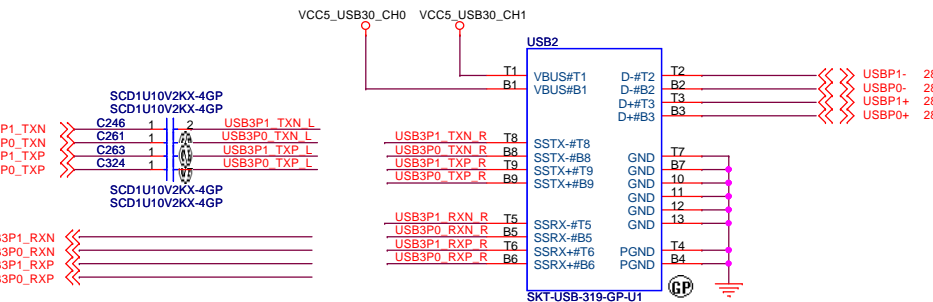
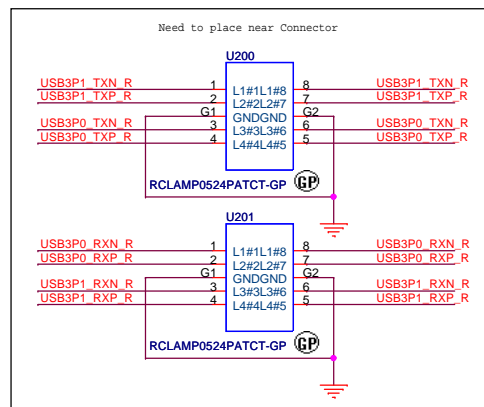
1CH USB Power Switch w/o Output Discharge Function

U53	Supplier	Vendo P/N	WISTRON P/N
4	TI	TPS2065DGN-GP	74.02065.079 54Y9024BA
1	ROHM	BD8012FVJ-GE2	74.08012.A7G
2	GMT	G548B1F51U	74.00548.B79
3	ROHM	BD82020FVJ	74.82020.07G



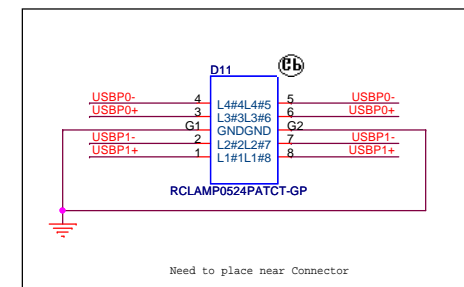
2CH USB Power Switch w/o Output Discharge Function

U52	Supplier	Vendo P/N	WISTRON P/N
1	TI	TPS2064DGNR-GP	74.02064.079 41R0511BA
2	GMT	G546A1F51U	74.00546.B79



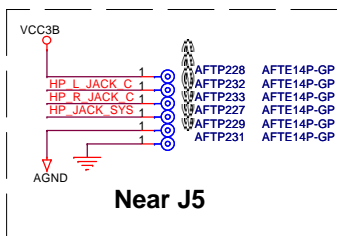
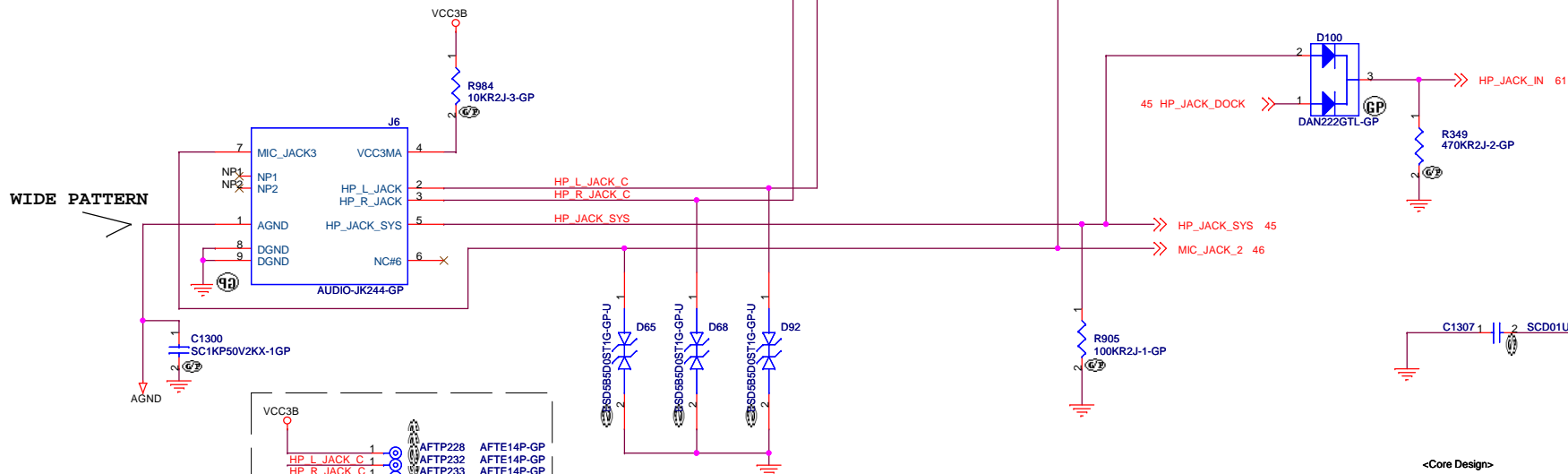
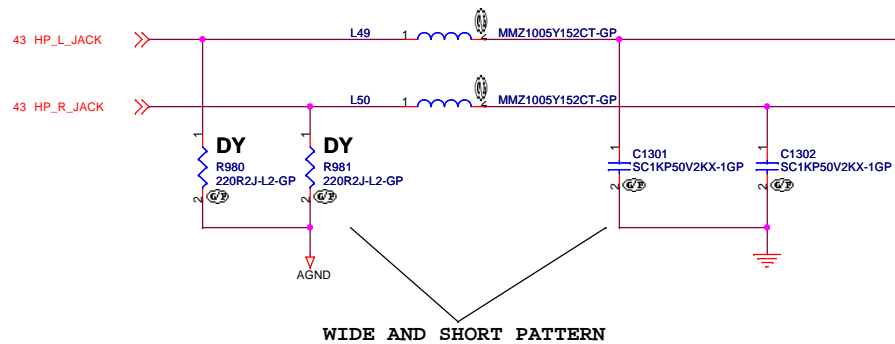
USB3.0 CONNECTOR

Lower Slot is assigned to USB Port 0
Upper Slot is assigned to USB Port 1



<Variant Name>

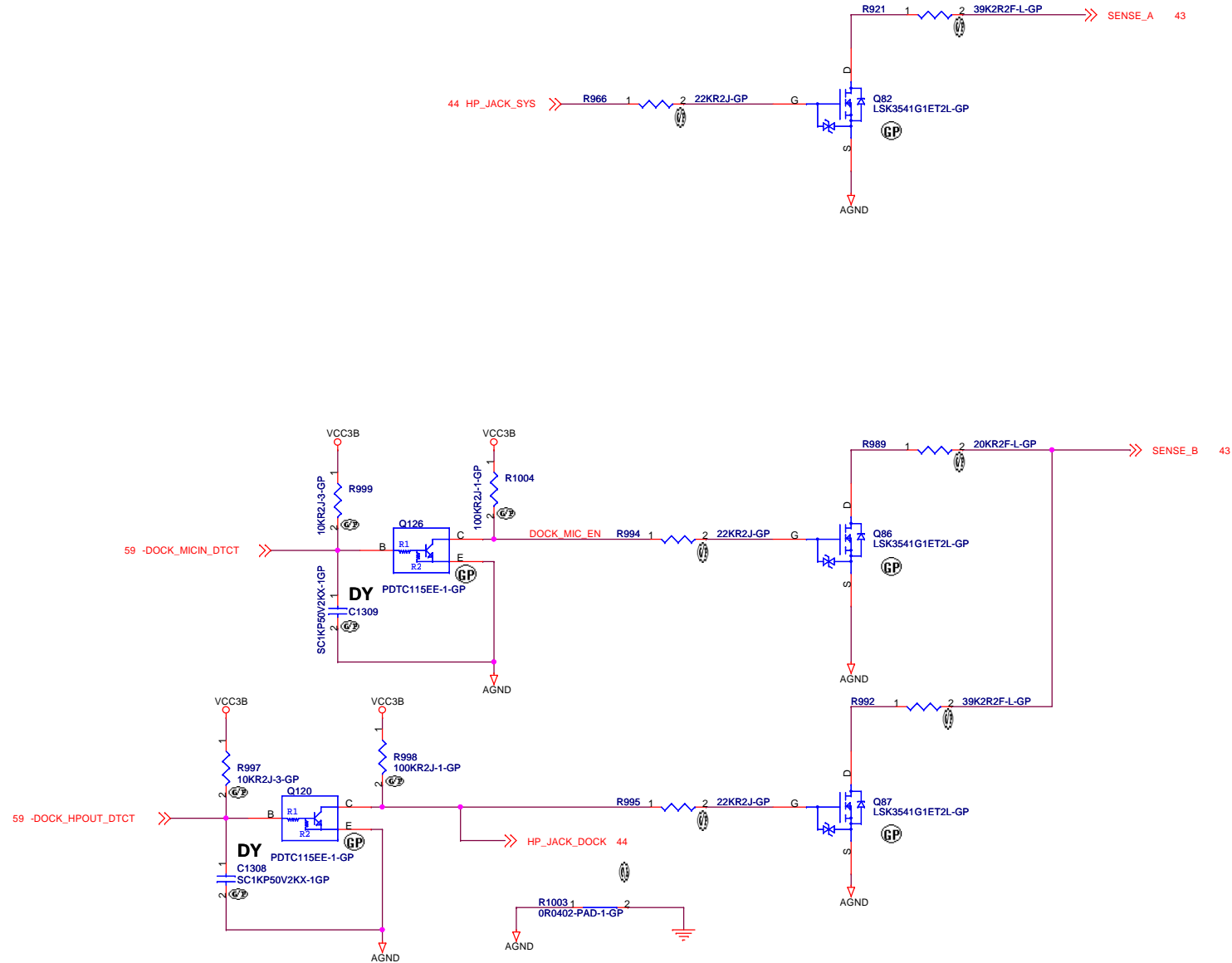




	Supplier	Vendo P/N	PART NUMBER
1	OnSemi	ESD5B5D0ST1G-GP	83.ESD5B.0AF 48Y9647BA
2	ROHM	RSB5.6SMT2R	83.RSB56.BAF
3	NXP	PESD5V0S1BB	83.0005V.0AF

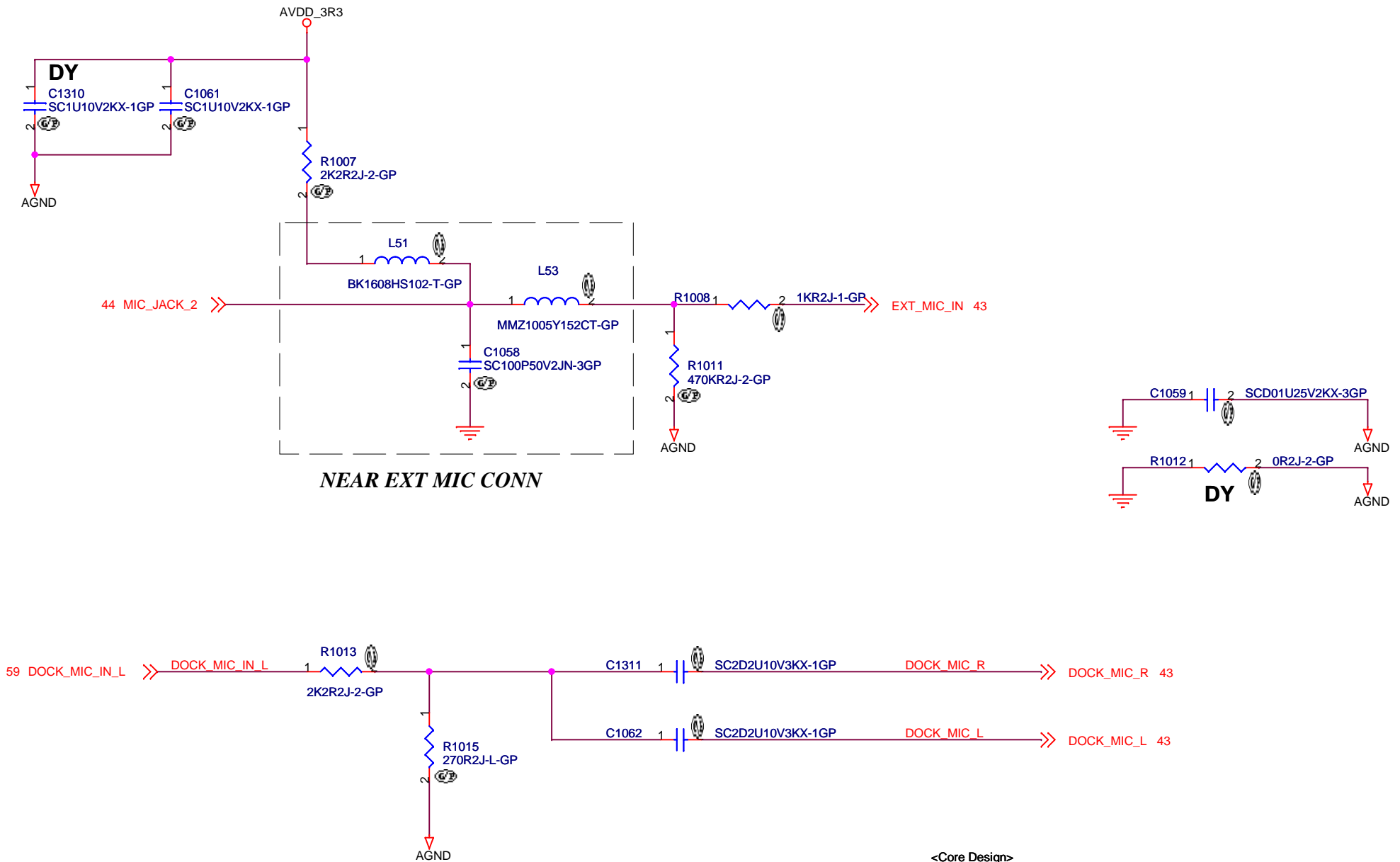
<Core Design>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
AUDIO CONNECTOR	
Title Size A3 Date: Friday, March 09, 2012	Document Number Kendo-4 WS Sheet 44 of 105
Rev -1	



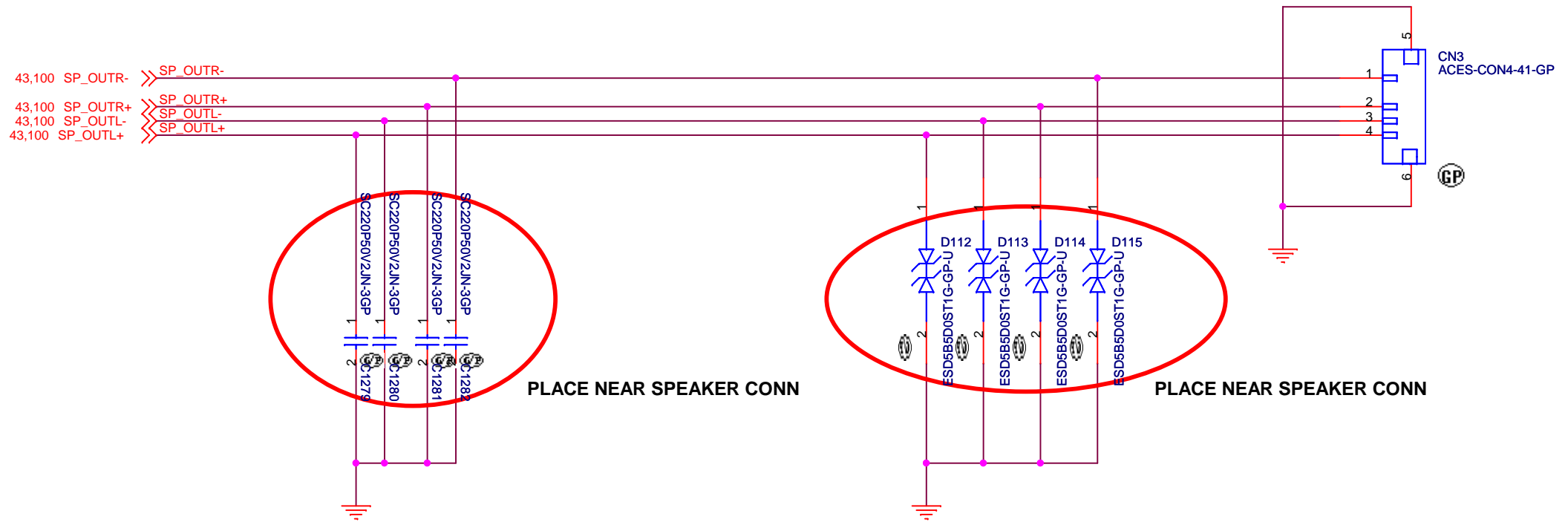
<Core Design>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
AUDIO JACK SENSE			
Size A3	Document Number Kendo-4 WS		Rev -1
Date: Friday, March 09, 2012	Sheet 45	of 105	



<Core Design>

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
AUDIO EXT MIC I/F			
Size	Document Number		Rev
A4	Kendo-4 WS		-1
Date:	Friday, March 09, 2012	Sheet	46 of 105



<Core Design>

緯創資通

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

Title

AUDIO SPEAKER

Size
A4

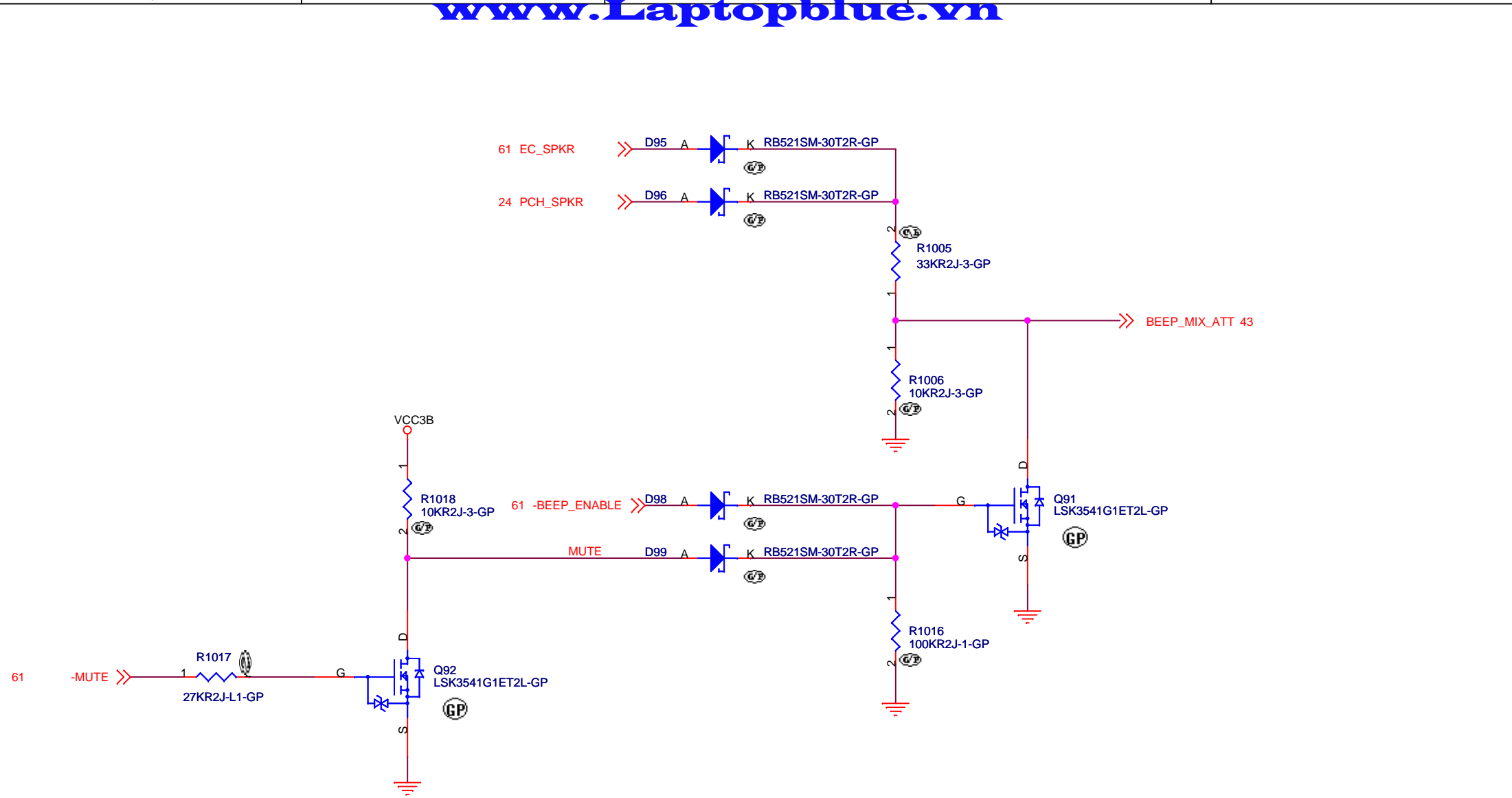
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 47 of 105



<Core Design>

緯創資通

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

Title

BEEP CONTROL

Size
A4

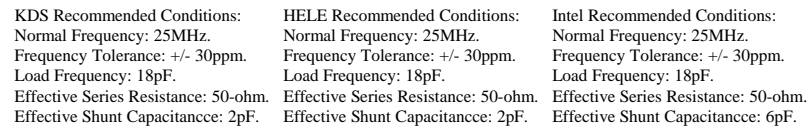
Document Number

Kendo-4 WS

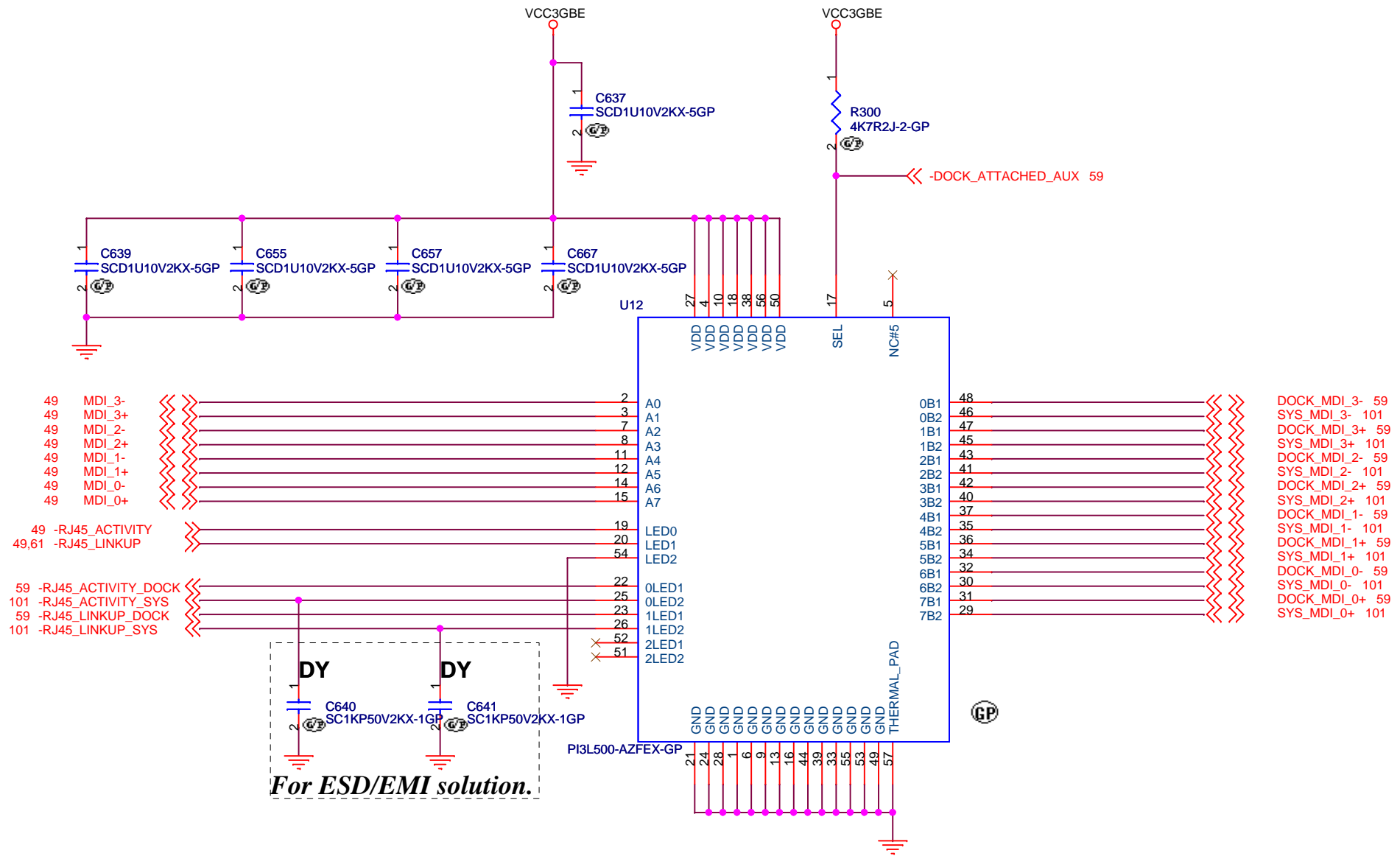
Rev
-1

Date: Friday, March 09, 2012

Sheet 48 of 105



	Supplier	Vendo P/N	WISTRON P/N
1	HARMONY	XTAL 25M 18P30PPM HSX321G SMD	82.30020.B21
2	TXC	XTAL 25M 18P30PPM 4P SMD	82.30020.D21



[Source Cadidate]				
1st	Pericom	PI3L500AZFEX	73.3L500.003	41R0539AA
2nd	TI	TS3L500AERHUR	73.3L500.A0V	41R0539BA
3th	ONSEMI	NS3L500MTTWG	73.03500.003	

<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					
GBE LAN SW					
Size A4	Document Number		Rev -1		
		Kendo-4 WS			
Date: Friday, March 09, 2012		Sheet 50	of 105		

BLANK

<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 **BLANK**

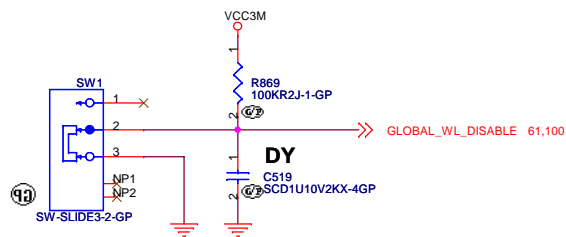
Size A4	Document Number Kendo-4 WS	Rev -1
------------	--------------------------------------	------------------

Date: Wednesday, February 15, 2012	Sheet 51 of 105
------------------------------------	-----------------

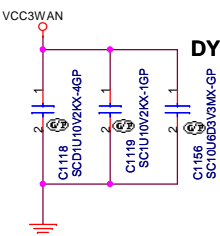
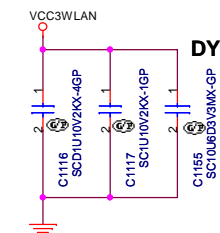
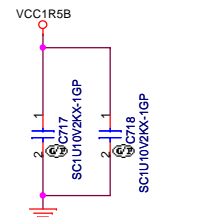
BLANK

<Variant Name>		
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title BLANK		
Size A3	Document Number Kendo-4 WS	Rev -1
Date: Wednesday, February 15, 2012		Sheet 52 of 105

WIRELESS DISABLE SWITCH

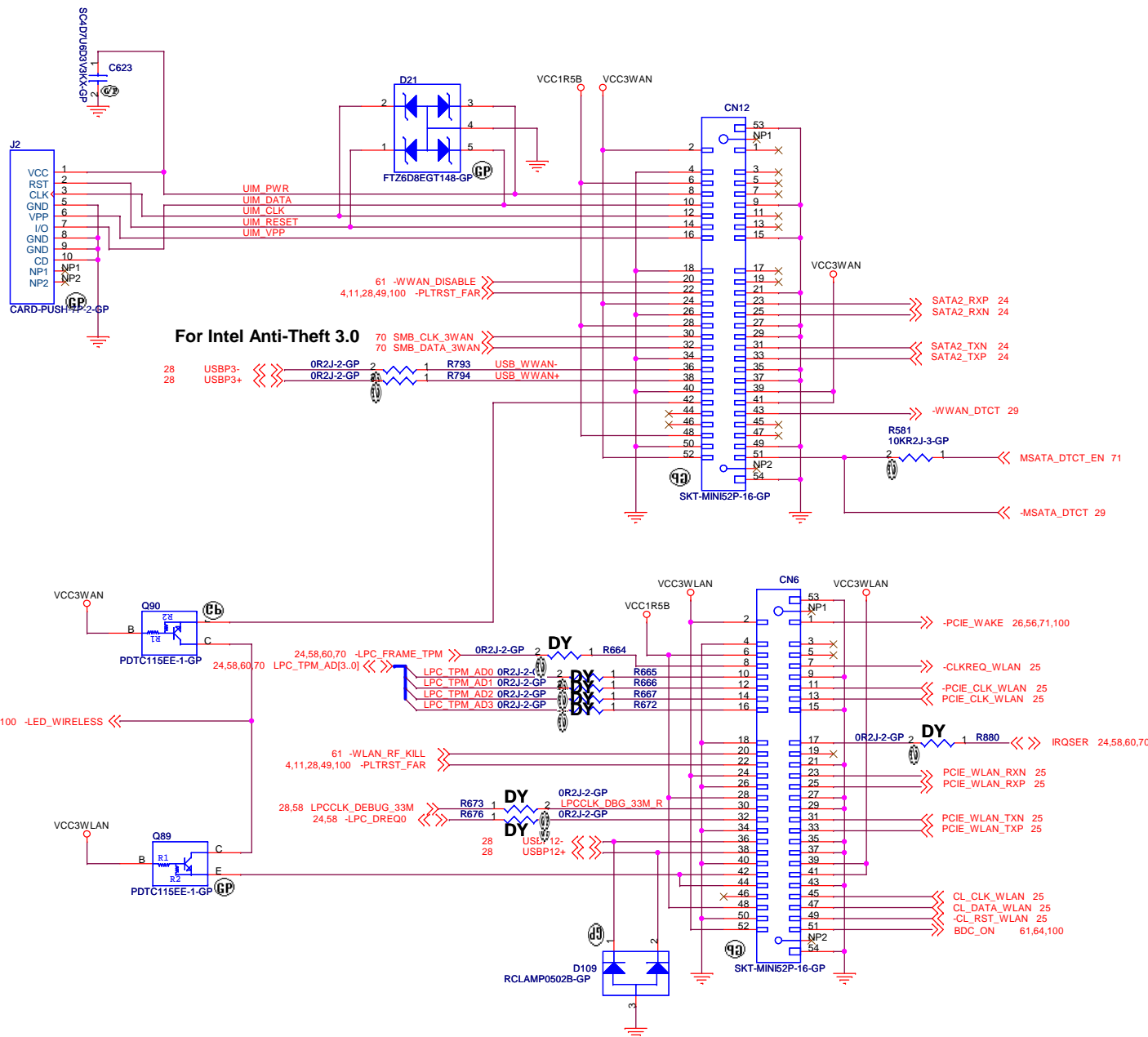


On WWAN Always on regular mode,
This component have to be assembled,
instead of above D+/D- jumper.



WWAN	YES	NO
CN12	ASM	No_ASM
J2	ASM	No_ASM
C1118	ASM	No_ASM
C1119	ASM	No_ASM
C623	ASM	No_ASM

LOGIC

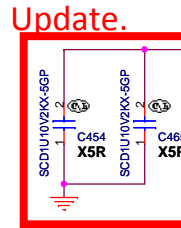
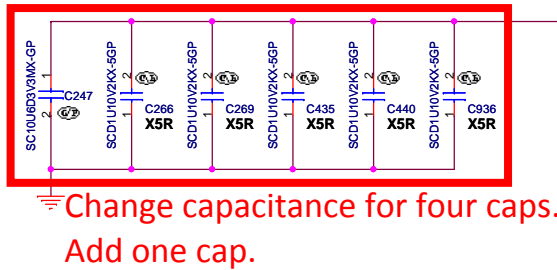


<Variant Name>

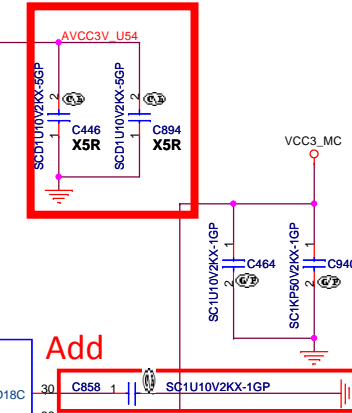
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title		
PCIE MINI CARD SLOT		
Size	Document Number	Rev
A3	Kendo-4 WS	-1
Date:	Friday, March 09, 2012	Sheet 53 of 105

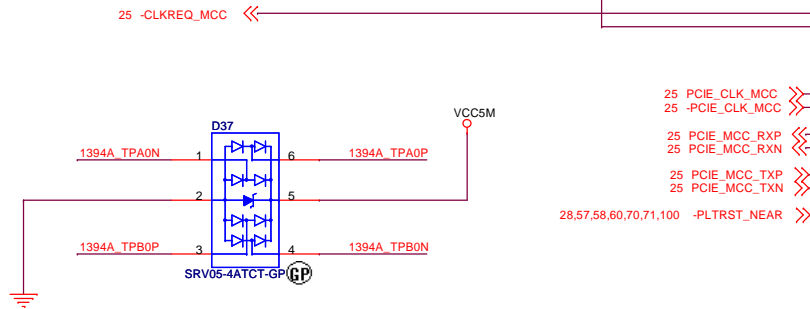
MEDIA I/F	SD/MMC	MEMORYSTICK	XD
MFIO00	SDWP#	MSBS	XD_D7
MFIO01	SD_D1		XD_D6
MFIO02	SD_D0	MS_D1	XD_D5
MFIO03	(SD_D7)		XD_D4
MFIO04	(SD_D6)	(MS_D5)	XD_D3
MFIO05	SD_CLK	MS_D0	XD_D2
MFIO06			XD_D1
MFIO07	(SD_D5)	(MS_D4)	XD_D0
MFIO08	SD_CMD	MS_D2	XD_WP#
MFIO09	(SD_D4)	(MS_D6)	XD_WE#
MFIO10	SD_D3	MS_D3	XD_ALE
MFIO11	SD_D2		XD_CLE
MFIO12		(MS_D7)	XD_CE#
MFIO13		MS_CLK	XD_RE#
MFIO14			XD_R/B
MFCD0#	SDCD#		XDCD0#
MFCD1#		MSINS#	XDCD1#



Update.



PU is Placed on PCH page.



Add

UDIO	Default
01	CLKREQ#
02	SCL/SROM_EN
03	SDA

MFCDxN	Card Type
T	0
H	H
L	L
L	H
L	L

Richo Recommended Conditions:
Normal Frequency: 24.576MHz
Frequency Tolerance: +/- 50ppm.
Load Capacitance: 10pF.
Effective Series Resistance: 50-ohm.
Effective Shunt Capacitance: 7pF.

KDS Recommended Conditions:
Normal Frequency: 24.576MHz
Frequency Tolerance: +/- 30ppm.
Load Capacitance: 12pF+/-0.2.
Effective Series Resistance: 50-ohm.
Effective Shunt Capacitance: 7pF.

Supplier	Vendo P/N	WISTRON P/N
1 HARMONY	XTAL 24.576M 12P30PPM HSX530G SMD	82.30023.611
2 TXC	XTAL 24.576M 12P30PPM SMD	82.30023.651

KDS 24.576MHz
12P 50PPM
HCX-6F

Update.

Update.

<Variant Name>

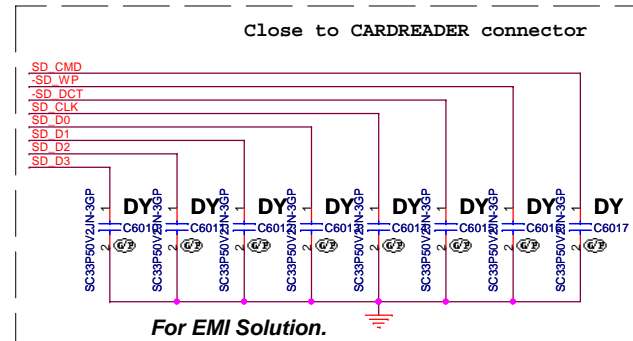
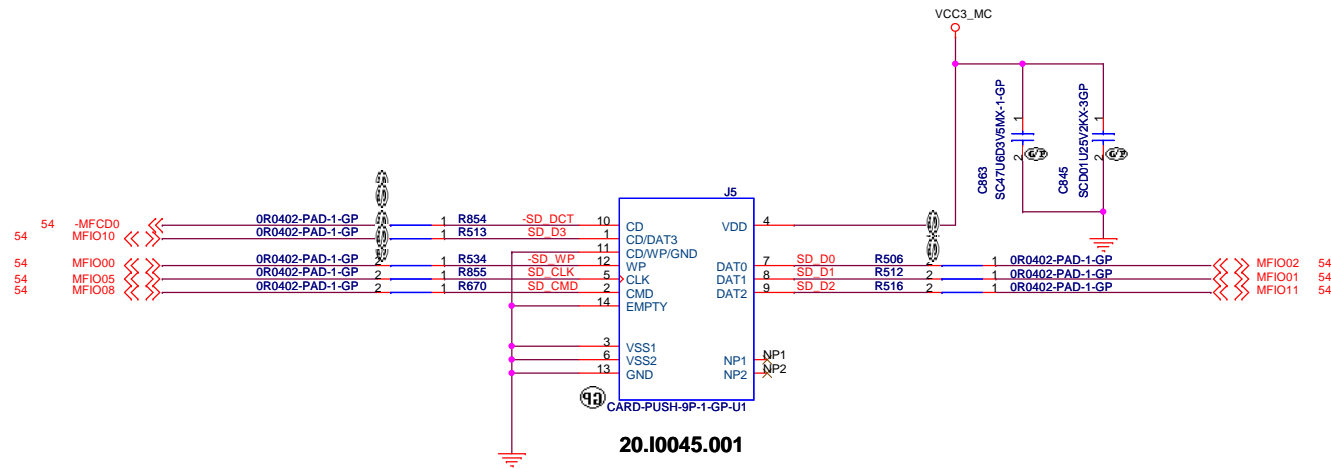
緯創資通 Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

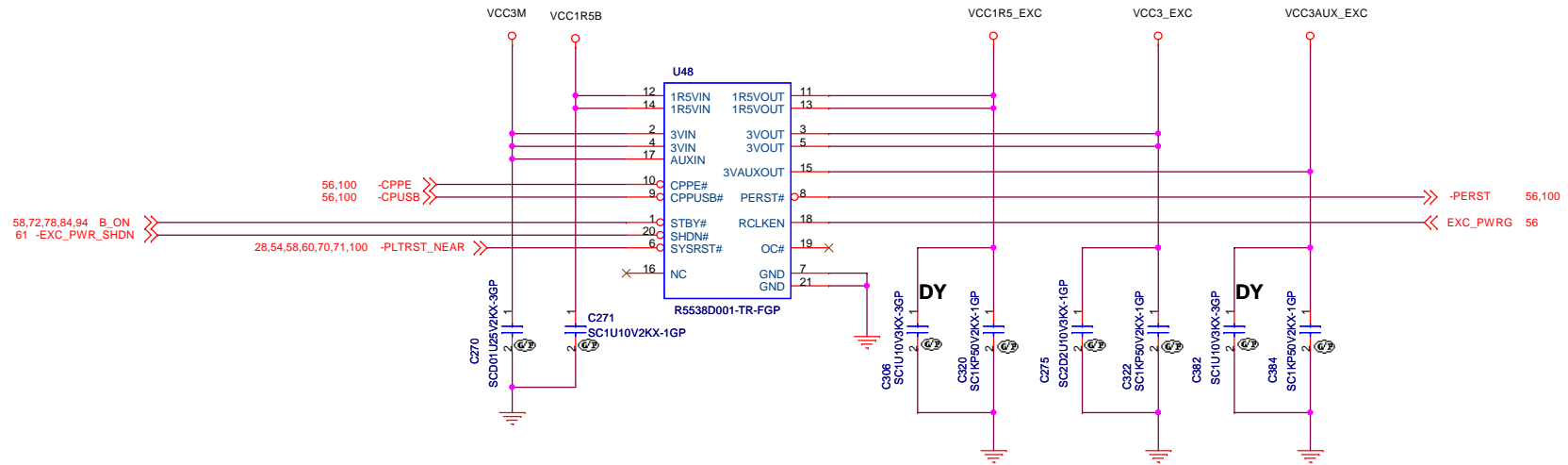
Title 1394/MEDIA CARD CONTROLLER

Size A3 Document Number Kendo-4 WS Rev -1

Date: Friday, March 09, 2012 Sheet 54 of 105

SD/MMC/MMC+ Card Reader

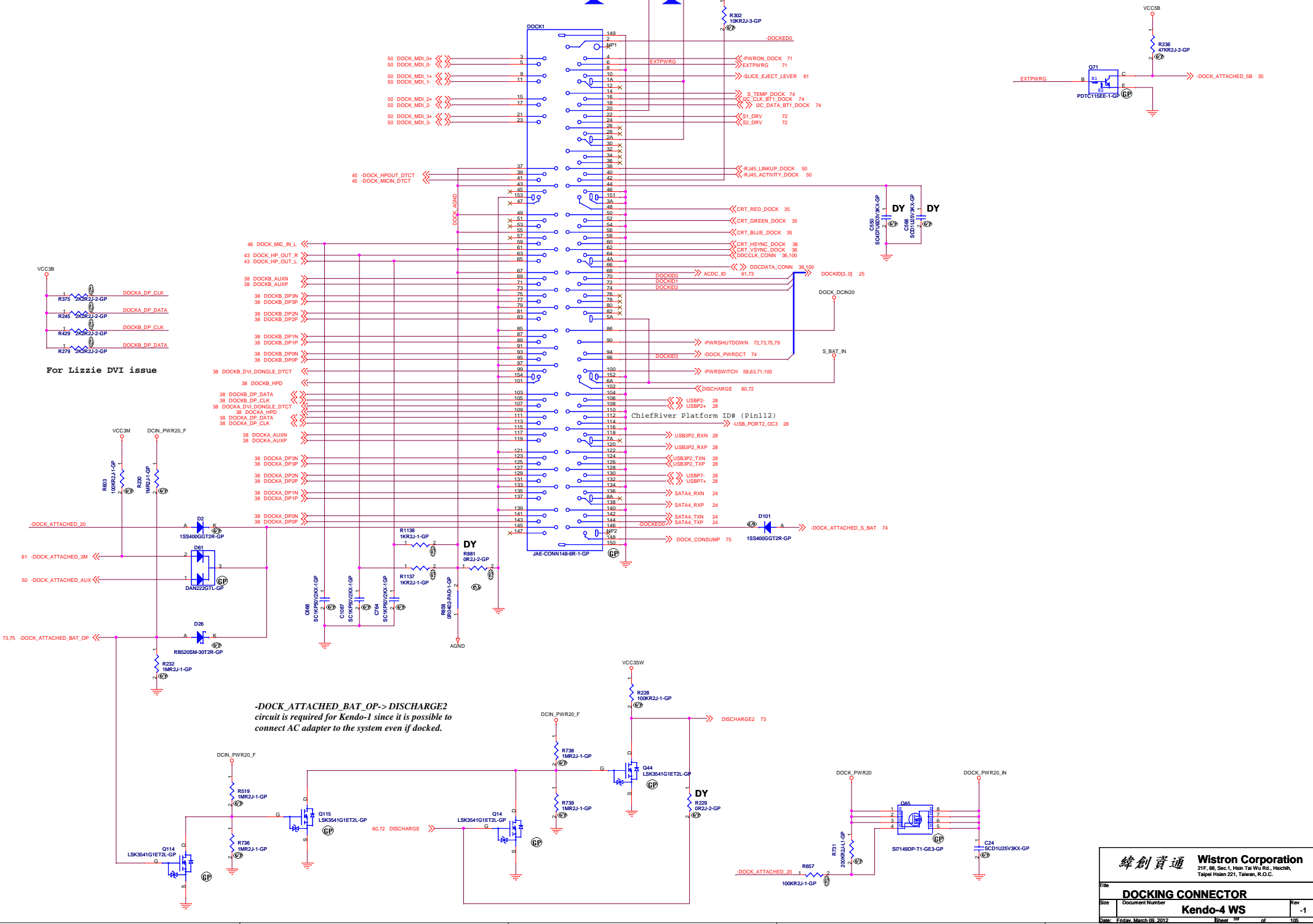


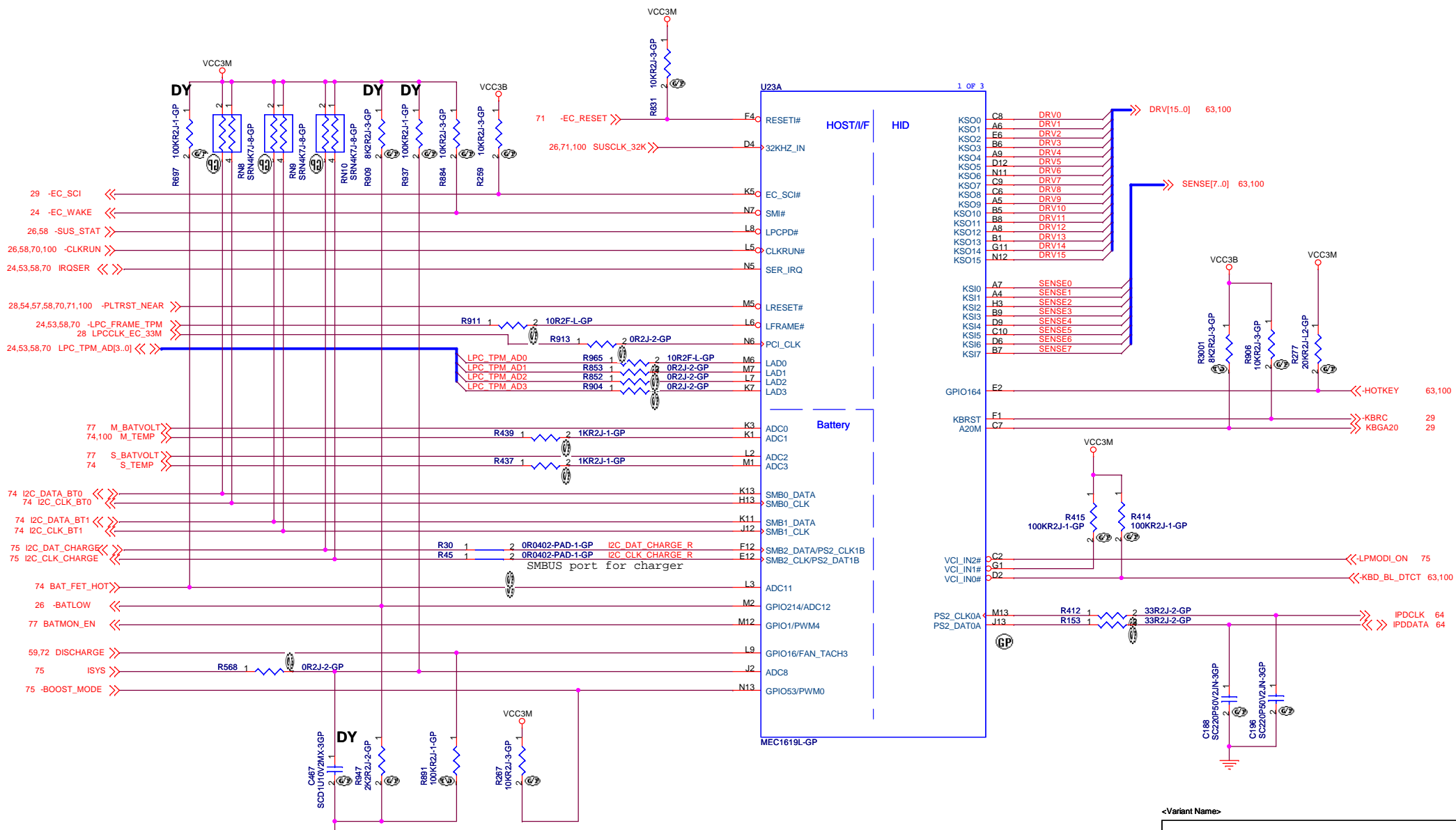


EXPRESS POWER SW table

		U48	Wistron part number
1	TI	TPS2231MRGPR-3	74.02231.D73 45K0234BA
2	NUVOTON	W83L351YG V.ASA	74.83351.A73
3	ROHM	BD4157MUV-GE2	74.04157.A73 (HF)
4	ROHM	BD4156MUV-GTR	74.04156.A73

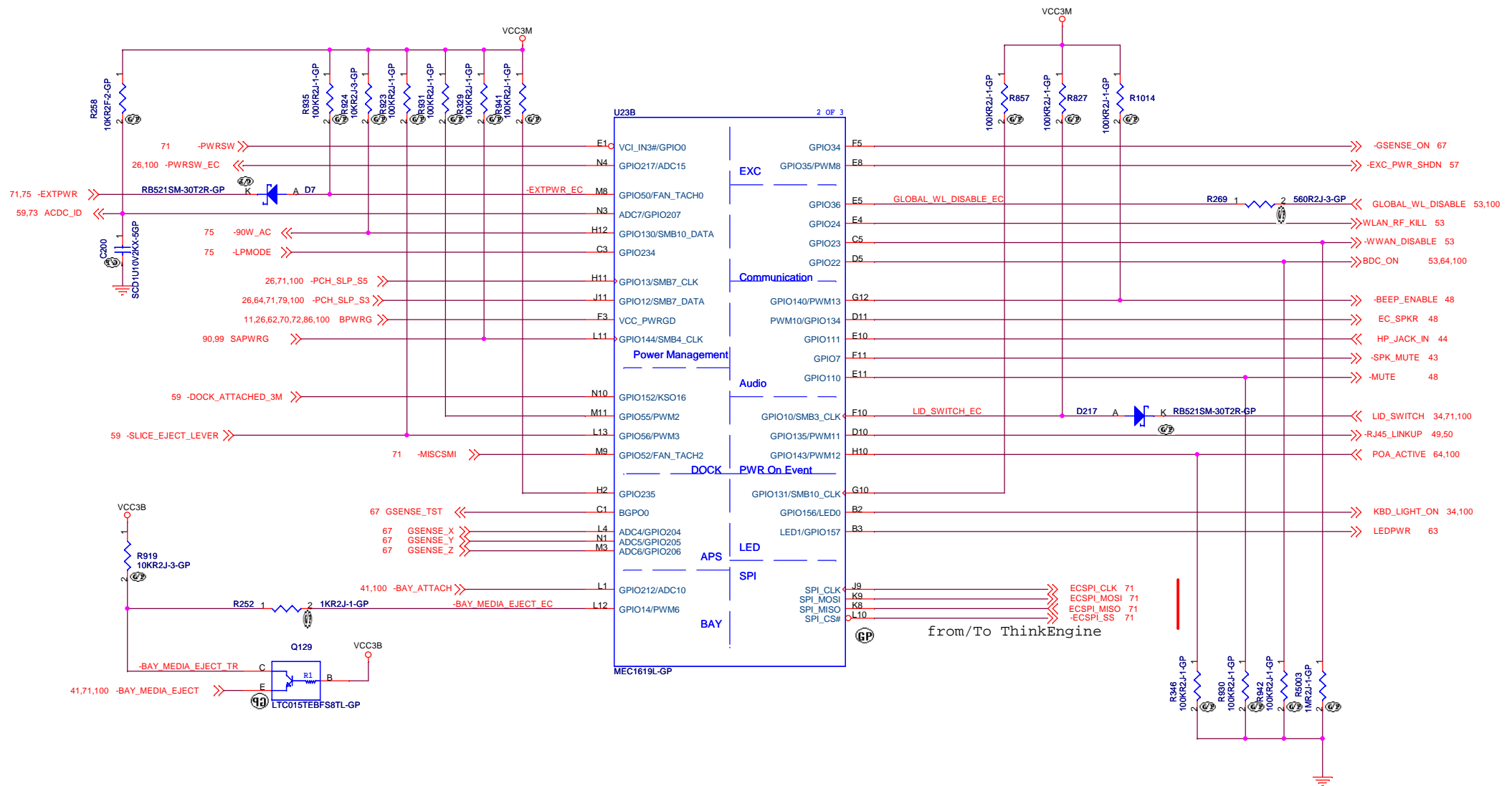
<Variant Name>





New EC (1/3)

<Core Design>

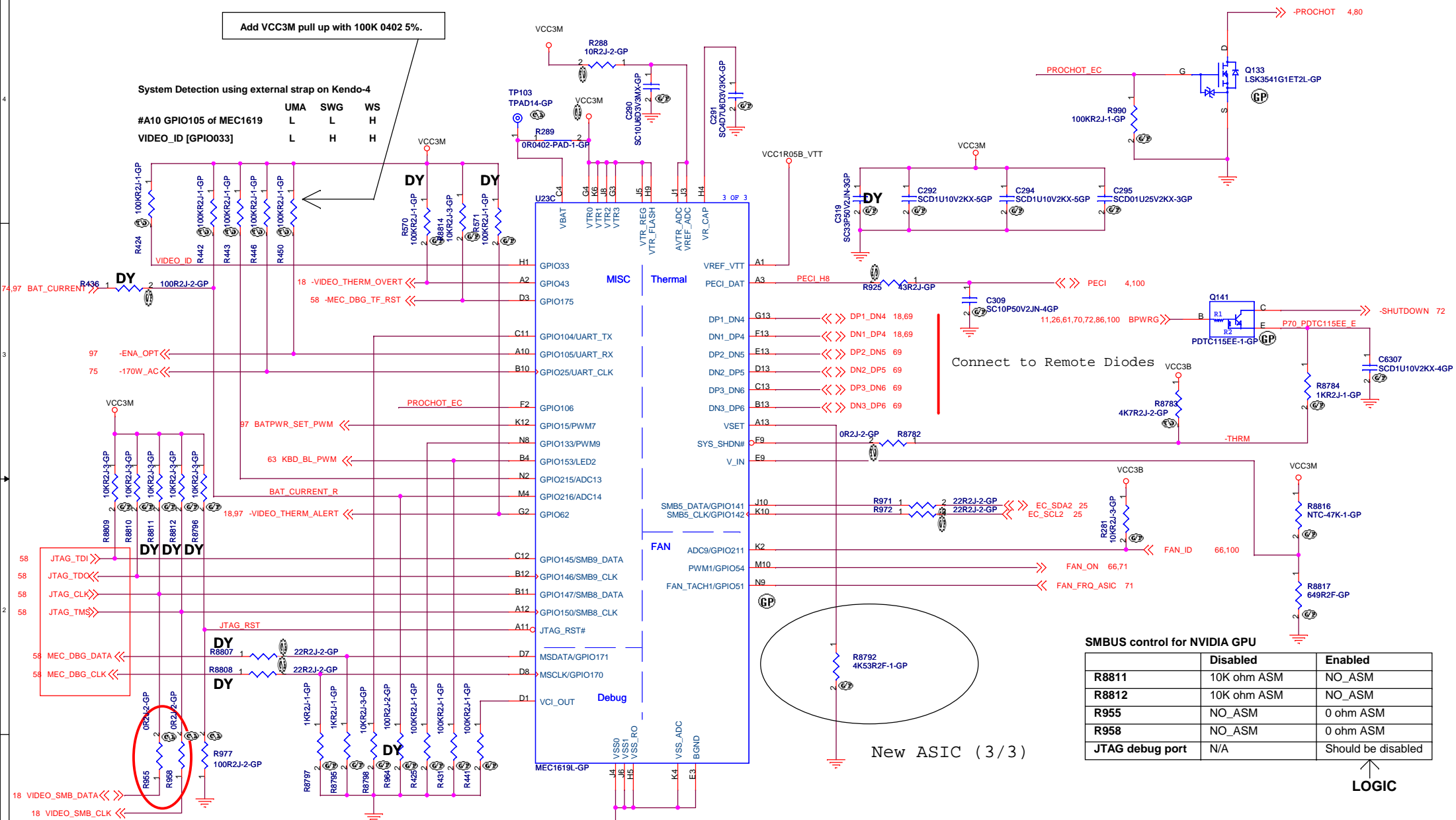


Add VCC3M pull up with 100K 0402 5%.

System Detection using external strap on Kendo-4

#A10 GPIO105 of MEC1619
VIDEO_ID [GPIO033]

UMA L SWG L WS H
L H H



JTAG debug port

	Enable	Disable
R8796	ASM	NO ASM
C6330	0.1uF	100 ohm (R977)

LOGIC

Trace FIFO debug port

	Enable	Disable
R8807	ASM	NO ASM
R8808	ASM	NO ASM
R8797	NO ASM	ASM

LOGIC

Battery current input to SMSC for power management

	Disabled	Enabled
R436	NO_ASM	100K ohm ASM
R964	NO_ASM	100K ohm ASM
R442	100K ohm ASM	NO_ASM

LOGIC

SMBUS control for NVIDIA GPU

	Disabled	Enabled
R8811	10K ohm ASM	NO_ASM
R8812	10K ohm ASM	NO_ASM
R955	NO_ASM	0 ohm ASM
R958	NO_ASM	0 ohm ASM
JTAG debug port	N/A	Should be disabled

LOGIC

New ASIC (3/3)

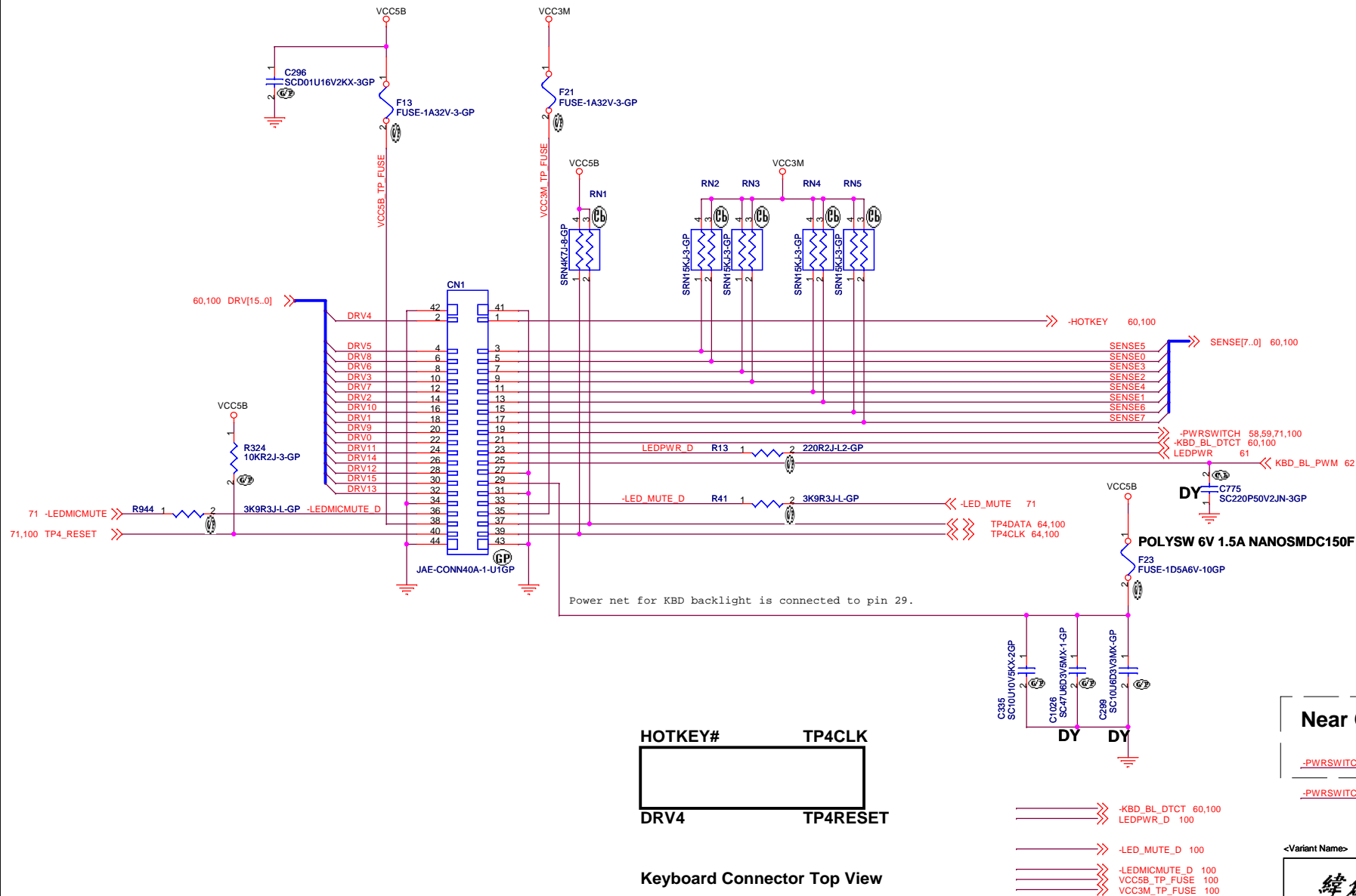
<Variant Name>

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

New EC (3/3)

Size A3	Document Number	Rev -1
Date: Friday, March 09, 2012	Sheet 62 of 105	

Keyboard Connector



Near CN1

-PWRSWITCH TP81 TPAD60
-PWRSWITCH TP82 TPAD60

<Variant Name>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
KEYBOARD CONN	
Title Size A3 Date: Friday, March 09, 2012	Document Number Kendo-4 WS Sheet 63 of 105
Rev	-1

BLANK

<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

BLANK

Size
A4

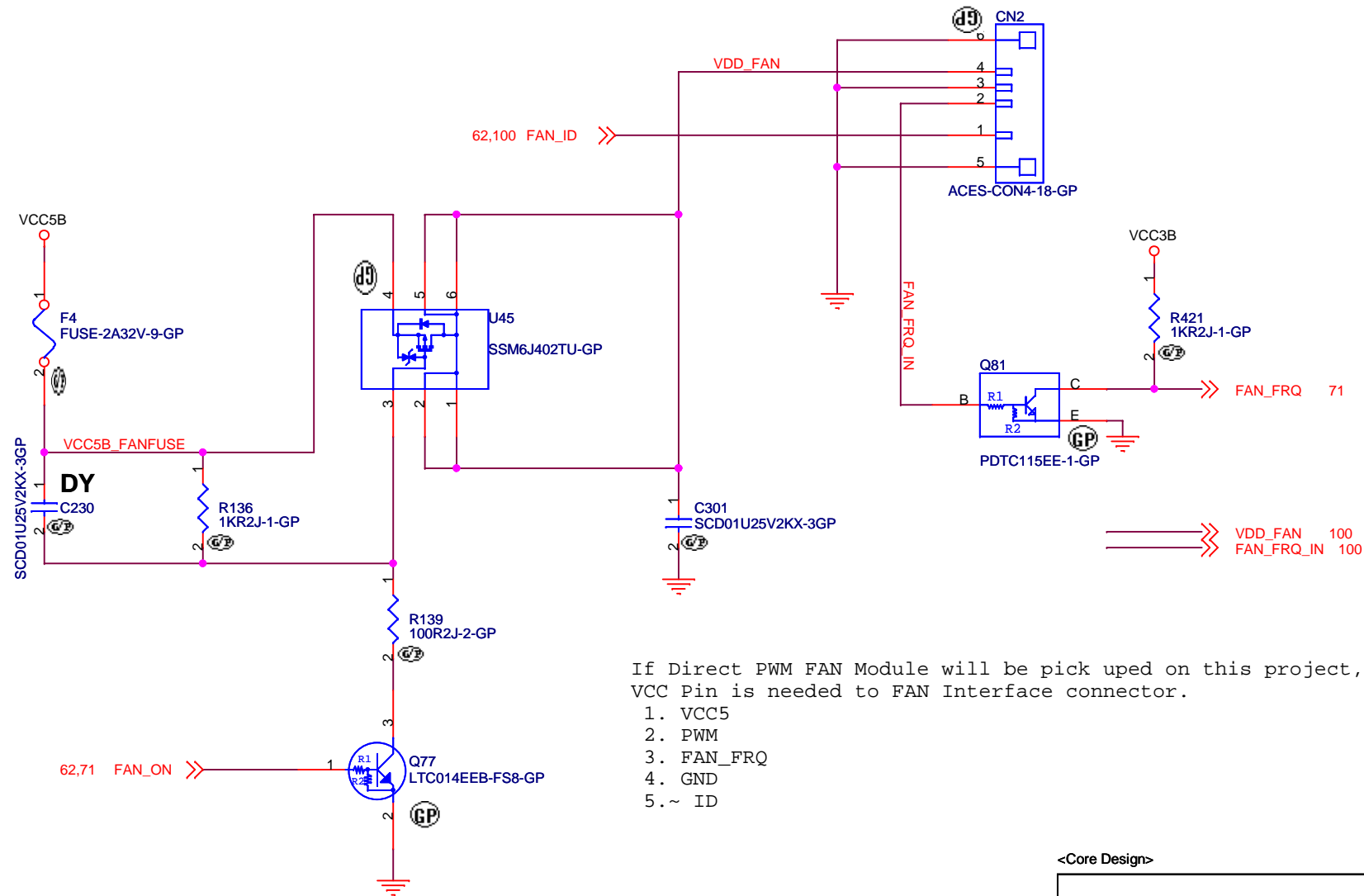
Document Number

Kendo-4 WS

Rev
-1

Date: Wednesday, February 15, 2012

Sheet 65 of 105



<Core Design>

緯創資通

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

Title

FAN CONNECTOR

Size
A4

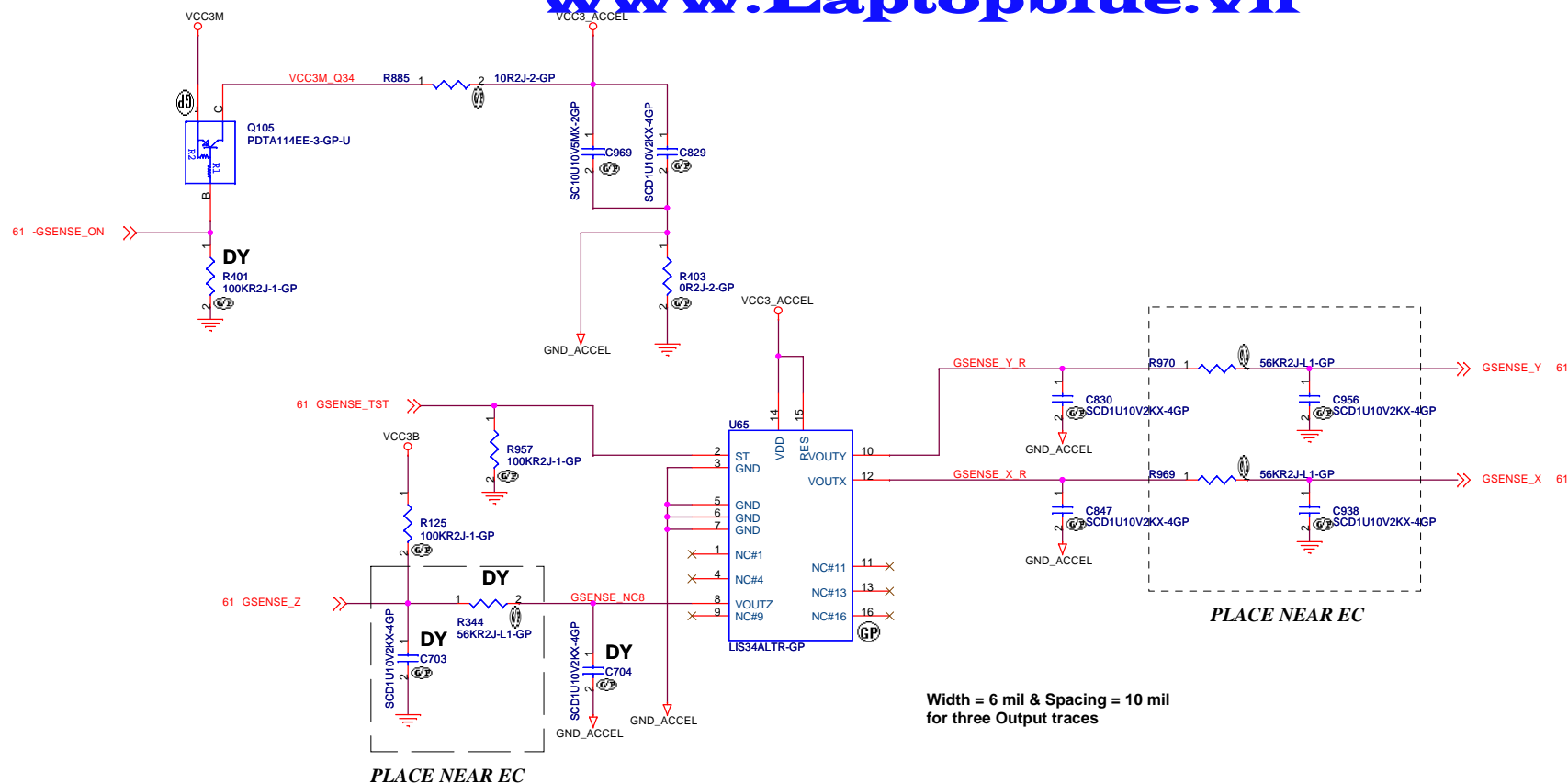
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 66 of 105



**Width = 6 mil & Spacing = 10 mil
for three Output traces**

	LIS34AL	NO ACC.
R401	NO-ASM	ASM
R957	ASM	ASM
U65	ASM	NO-ASM
Q105	ASM	NO-ASM
R885	10-OHM	NO-ASM
C829	ASM	NO-ASM
C969	ASM	NO-ASM
C830	ASM	NO-ASM
C847	ASM	NO-ASM
R970	56K	NO-ASM
C956	ASM	NO-ASM
R969	56K	NO-ASM
C938	ASM	NO-ASM
C704	NO-ASM	NO-ASM
R344	NO-ASM	NO-ASM
C703	NO-ASM	NO-ASM
R125	ASM	ASM

Table

	Supplier	Vendo P/N	WISTRON P/N
1	ST	LIS34ALTR	74.00034.0BZ 41R0828AA
2	Kionix	KXTC8-2850	74.KXTC8.0BZ 45K0278AA

Layout Comment :

(1) Place C586, C588, Q17, R415, R417, C584, C585, R420 close to U34.

(2) Avoid routing under DCDC switching area.

<Core Design>

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
A3

Document Number

Kendo-4 WS

Rev	-1
-----	----

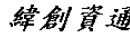
Date: Friday, March 09, 2012

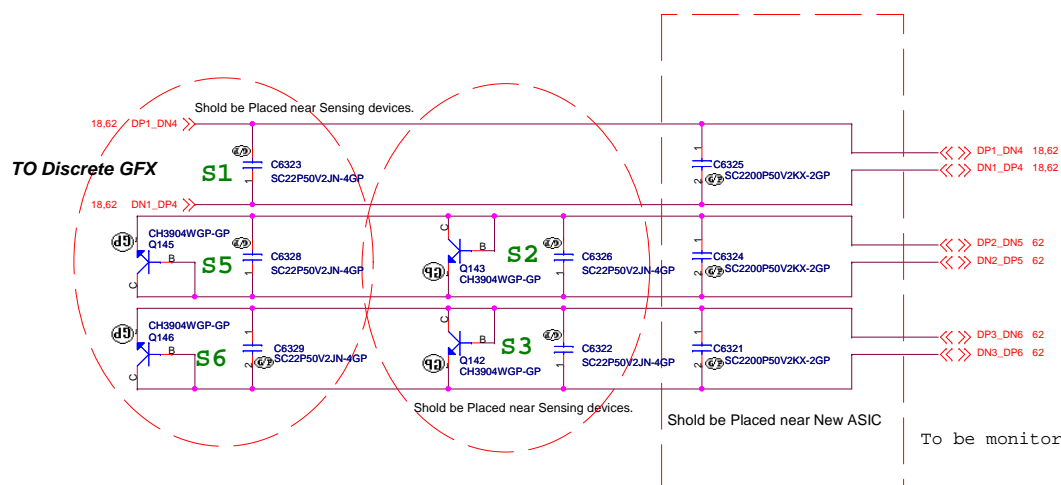
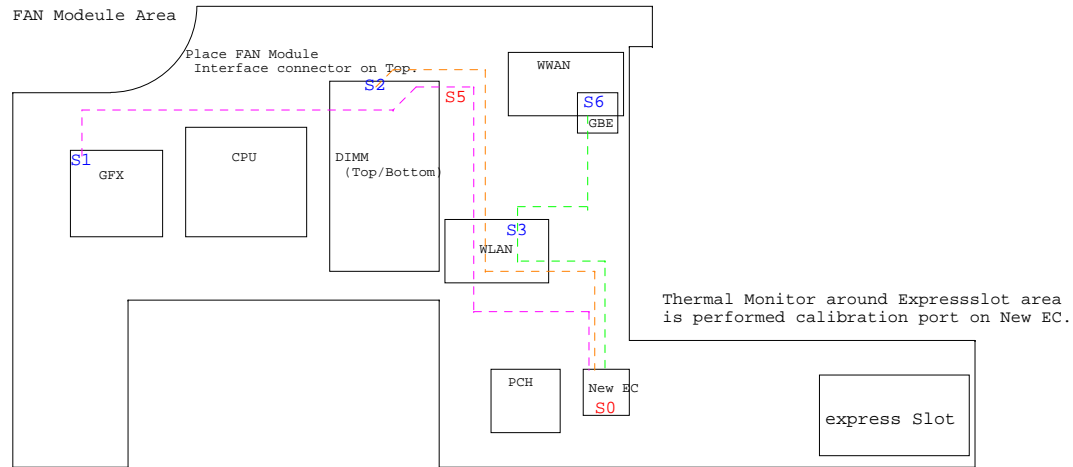
Sheet 67 of 100

105

BLANK

<Core Design>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title BLANK			
Size Custom	Document Number Kendo-4 WS		Rev -1
Date: Wednesday, February 15, 2012		Sheet 68 of	105



Sensor	Device	Placed on
S0 (Body)	PCH/BASE COVER	Bottom
S1	GFX_D	Connect to IC
S2	DIMM (TOP)	Top
S3	WLAN	Top
S4	N/A	N/A
S5	DIMM (BOT)	Bottom
S6	GBE WAN	Top

Sensor Location will be decided based on the placement.

Layout Comment :

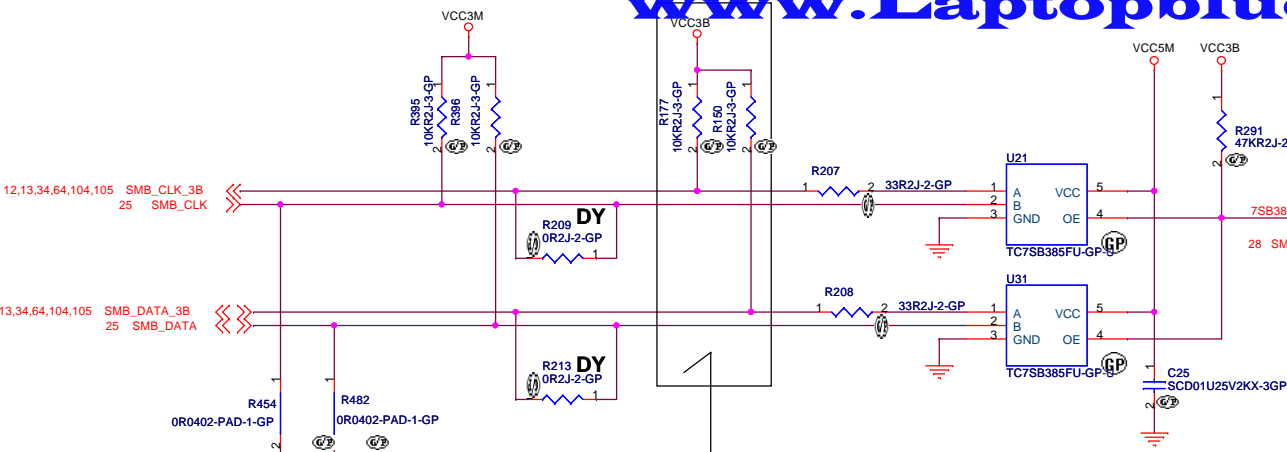
(1) Thermal sensor trace lines should not be overlapped with other high frequency trace lines in other layers.

(2) Also, it should not be overlapped with large amplitude trace lines either.

<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 SENSOR			
Size	Document Number	Rev	
Custom		Kendo-4 WS	-1
Date:	Friday, March 09, 2012	Sheet	69 of 105

EEPROM

12,13,34,64,104,105 SMB_CLK_3B
25 SMB_CLK2,13,34,64,104,105 SMB_DATA_3B
25 SMB_DATAFor Intel Anti-Theft 3.0
53 SMB_CLK_3WAN
53 SMB_DATA_3WAN

		U21, U31	Wistron part number
1	TOSHIBA	TC7SB385FU-GP	73.7S385.0AH 54Y9027AA
2	Pericom	PI5A121CEX	73.5A121.00H
3	OnSemi	NS5B1G385DFT2G	73.51385.00H

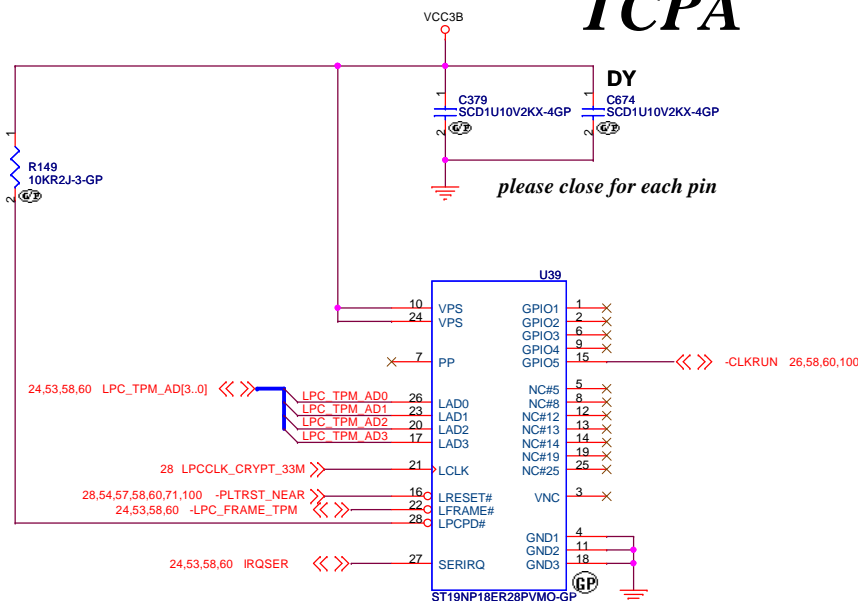
When Asset ID function in new EC will be confirmed,
These Asset ID and external pull up will be removed.
As for Bus Sw, if the requirement is exist, need to keep to prevent current leak.

		U22	Wistron part number
2	NXP	PCA24S08ADP	72.24S08.A0Q
1	ROHM	BUL08-1FVJ-WGE2	72.BUL08.00Q 54Y9016AA
3	SANYO	LE26CAP08TT-TLM-H	72.26C08.00R

	NO TPM	ST Micro ST19NP18ER28PVMK
U39	NO_ASM	ASM
C379	NO_ASM	ASM
C674	NO_ASM	NO_ASM
R149	NO_ASM	ASM

LOGIC

TCPA

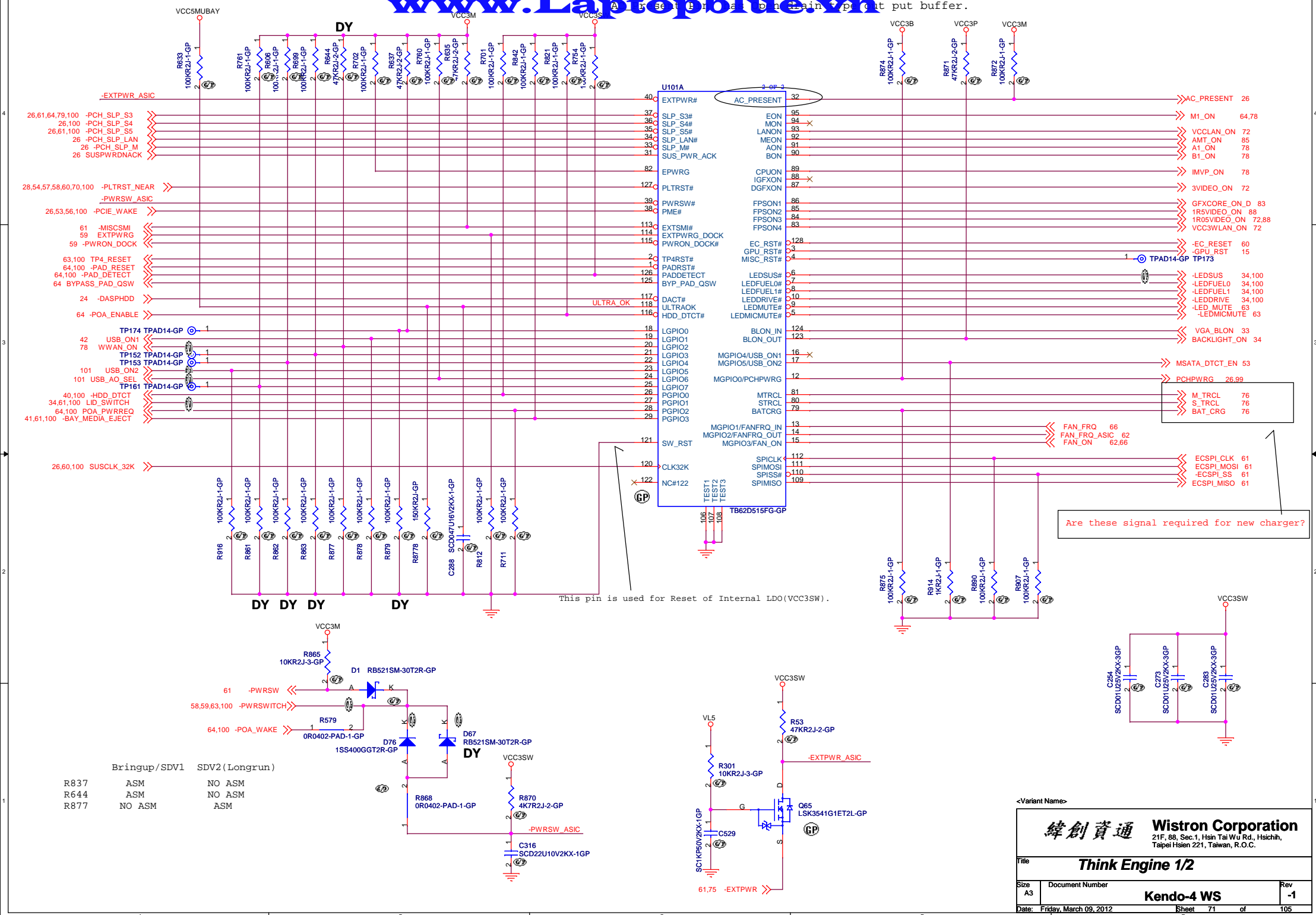


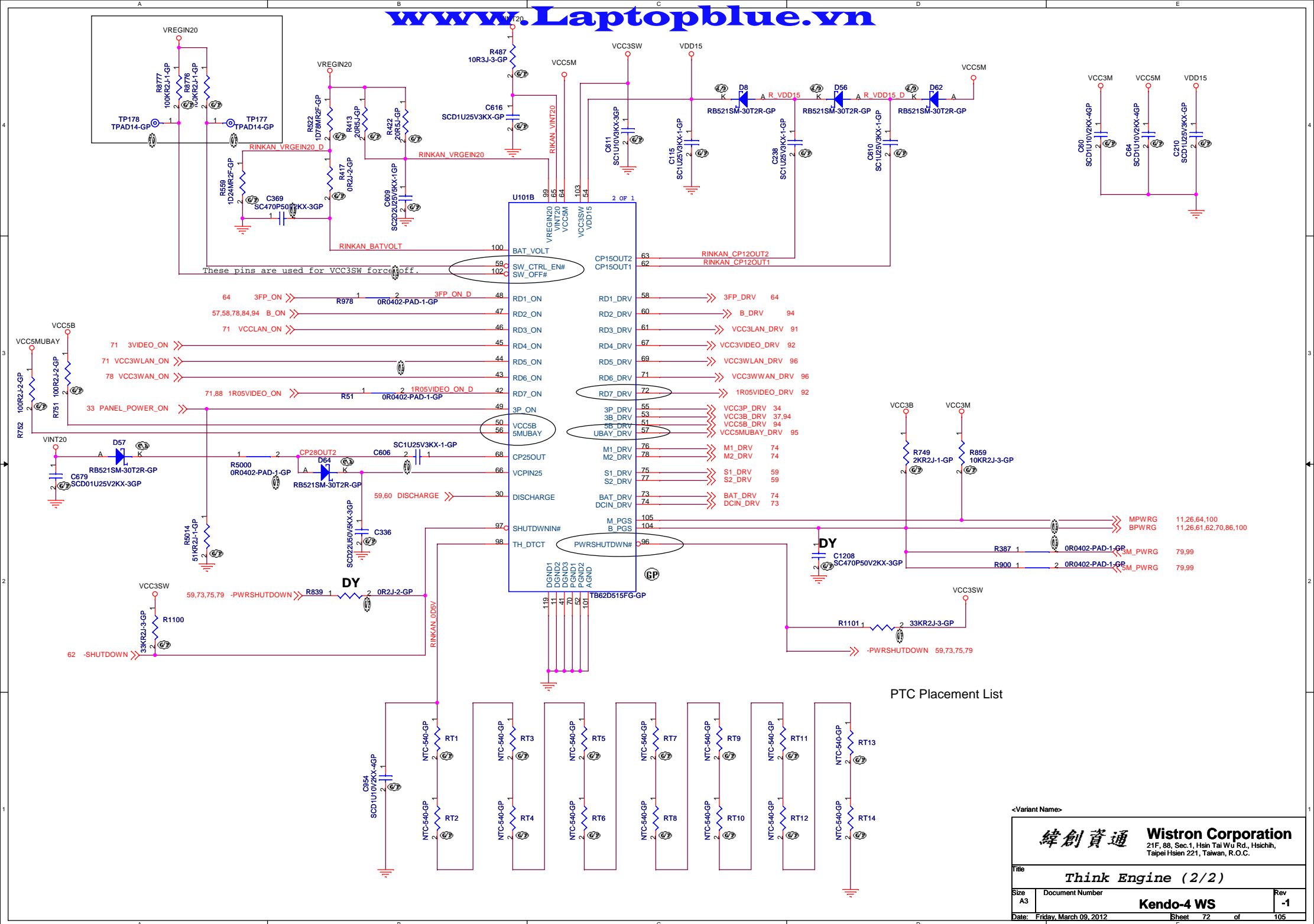
please close for each pin

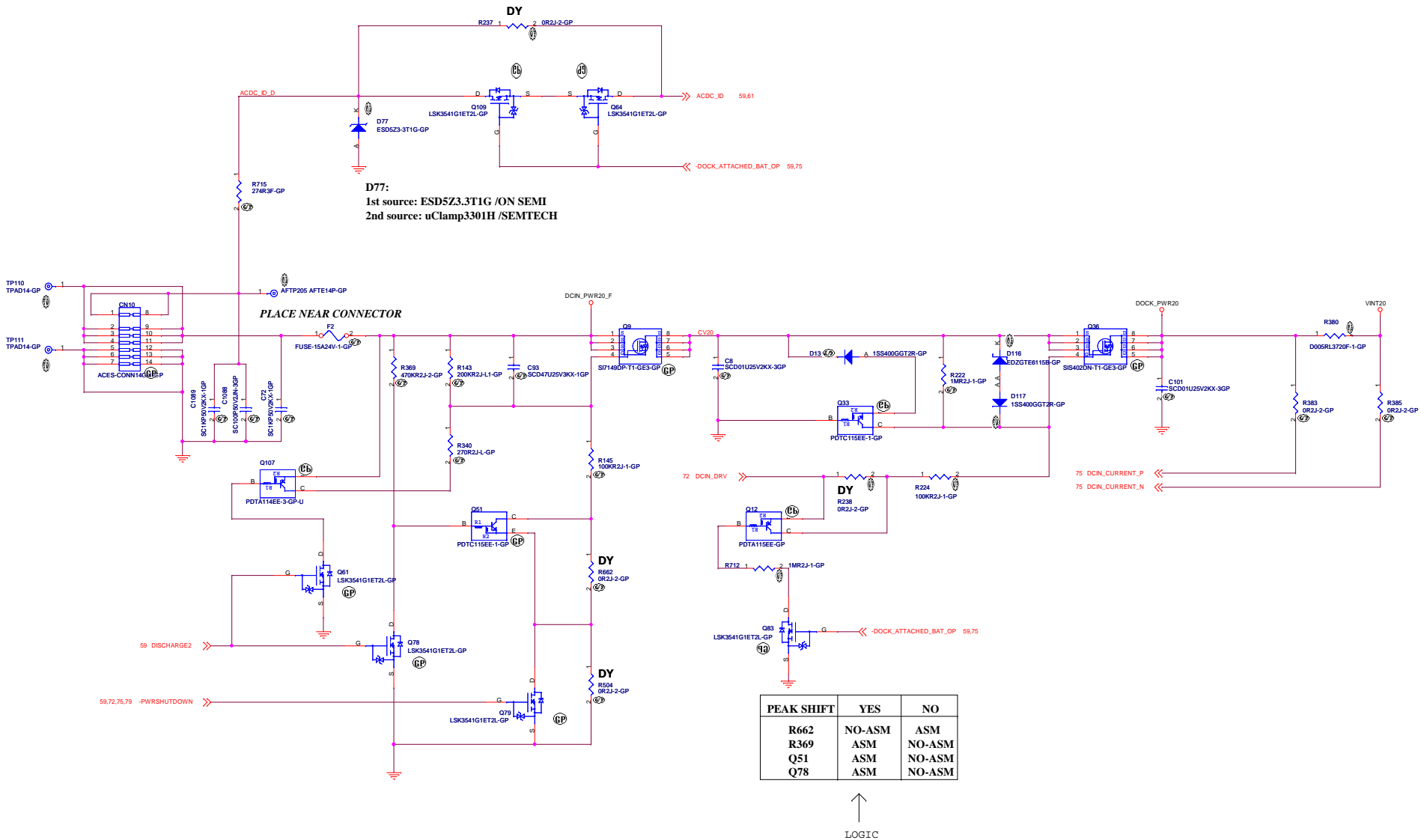
<Core Design>

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

Title		
EEPROM/TCPA		
Size A3	Document Number	Rev -1
Date: Friday, March 09, 2012	Sheet 70 of 105	



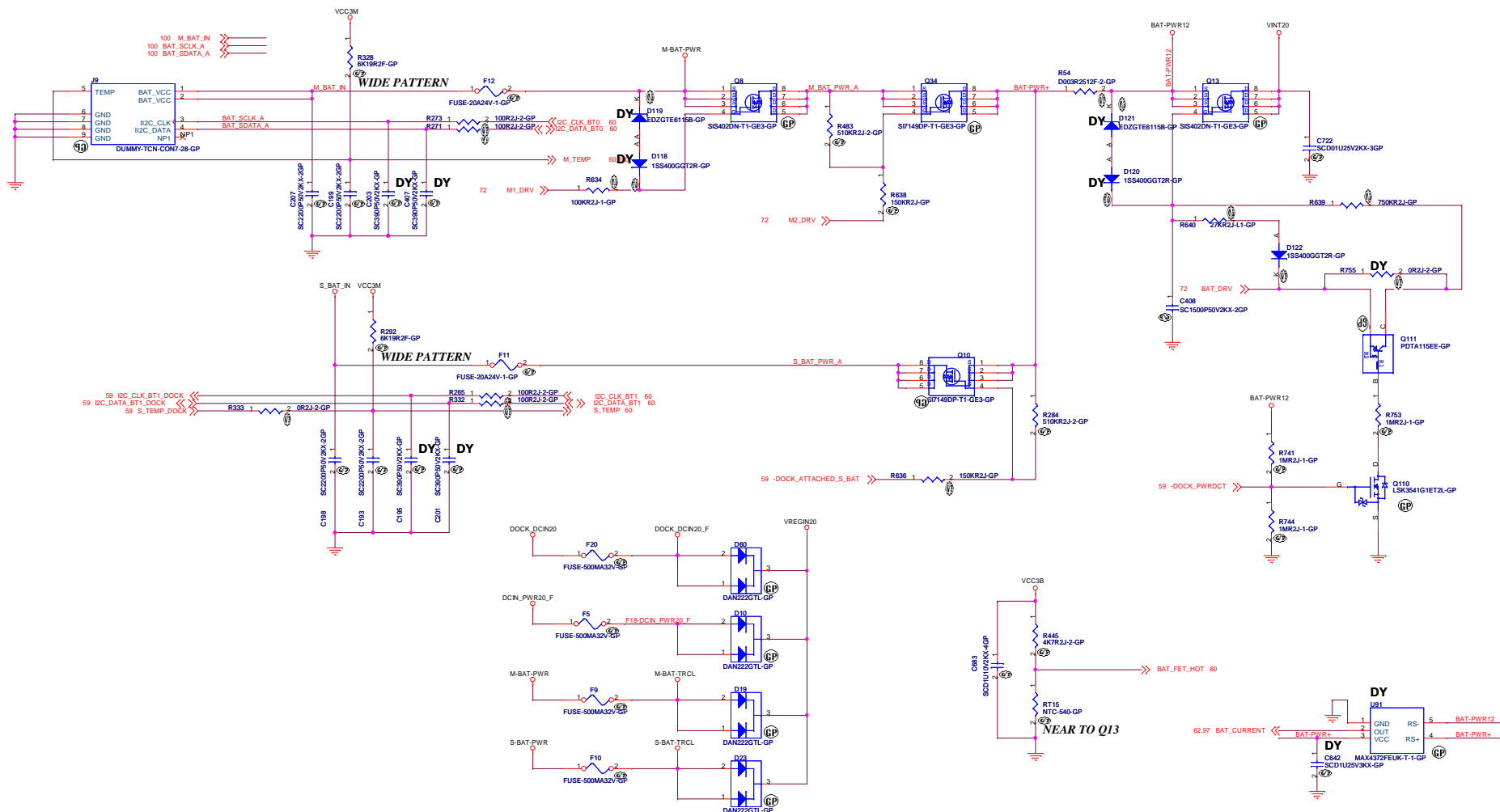


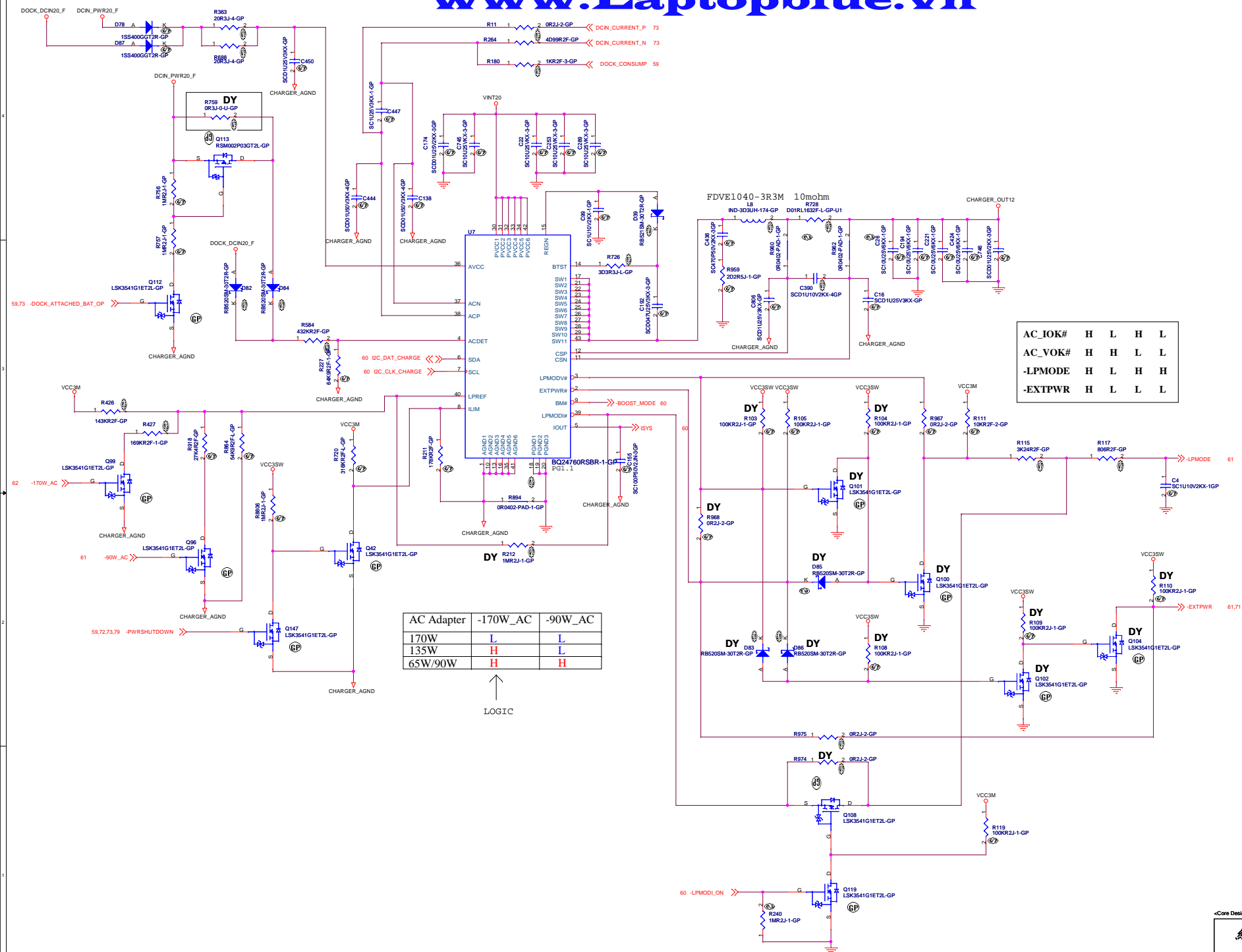


<Core Design>

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

Title			
BATTERY INPUT			
Size A2	Document Number	Rev	
	Kendo-4 WS	-1	
Date: Friday, March 09, 2012		Sheet 74	of 105



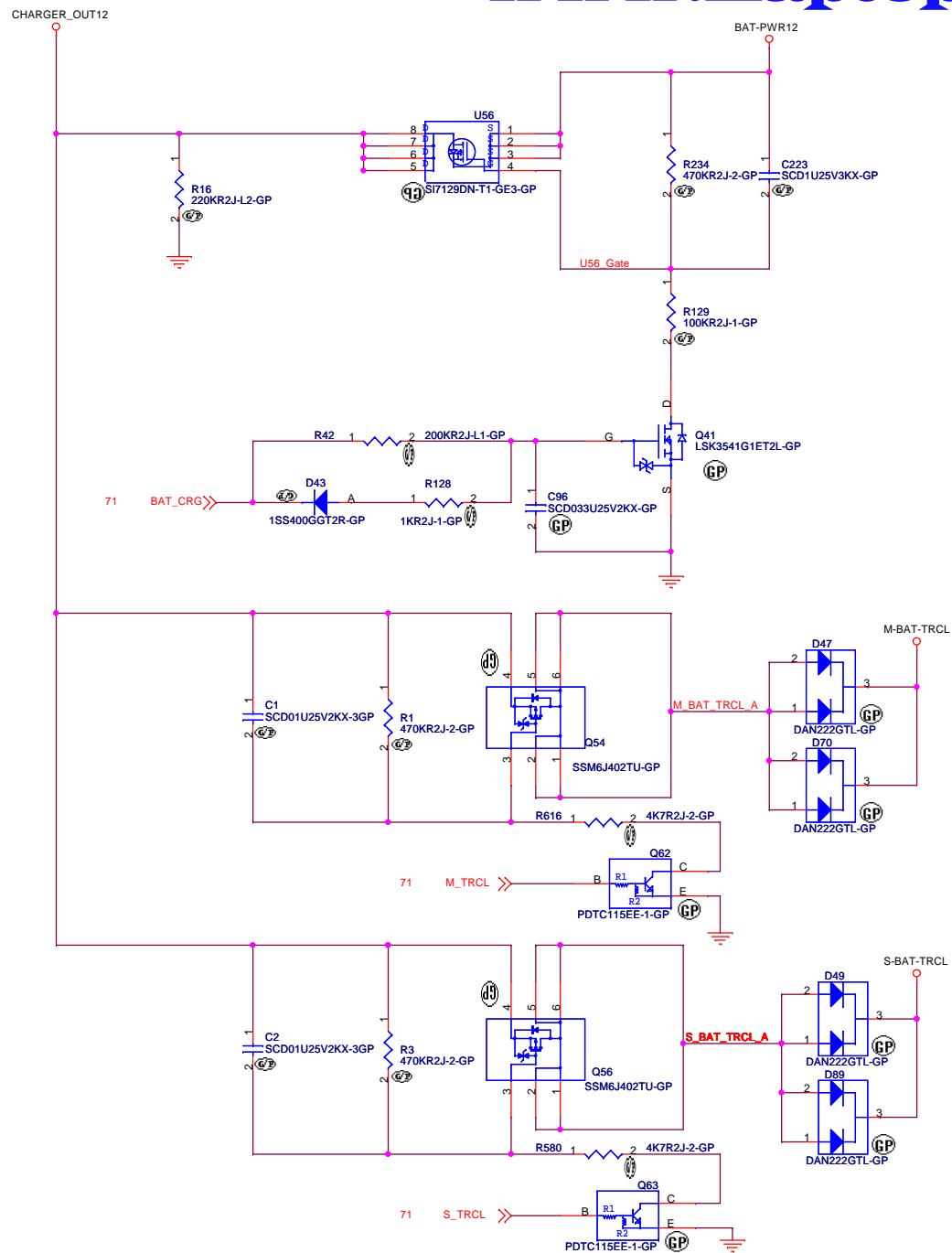


<Core Design>

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

Title	BATTERY CHARGER (BQ24760)
-------	----------------------------------

Size A2	Document Number Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012	Sheet 75 of	105

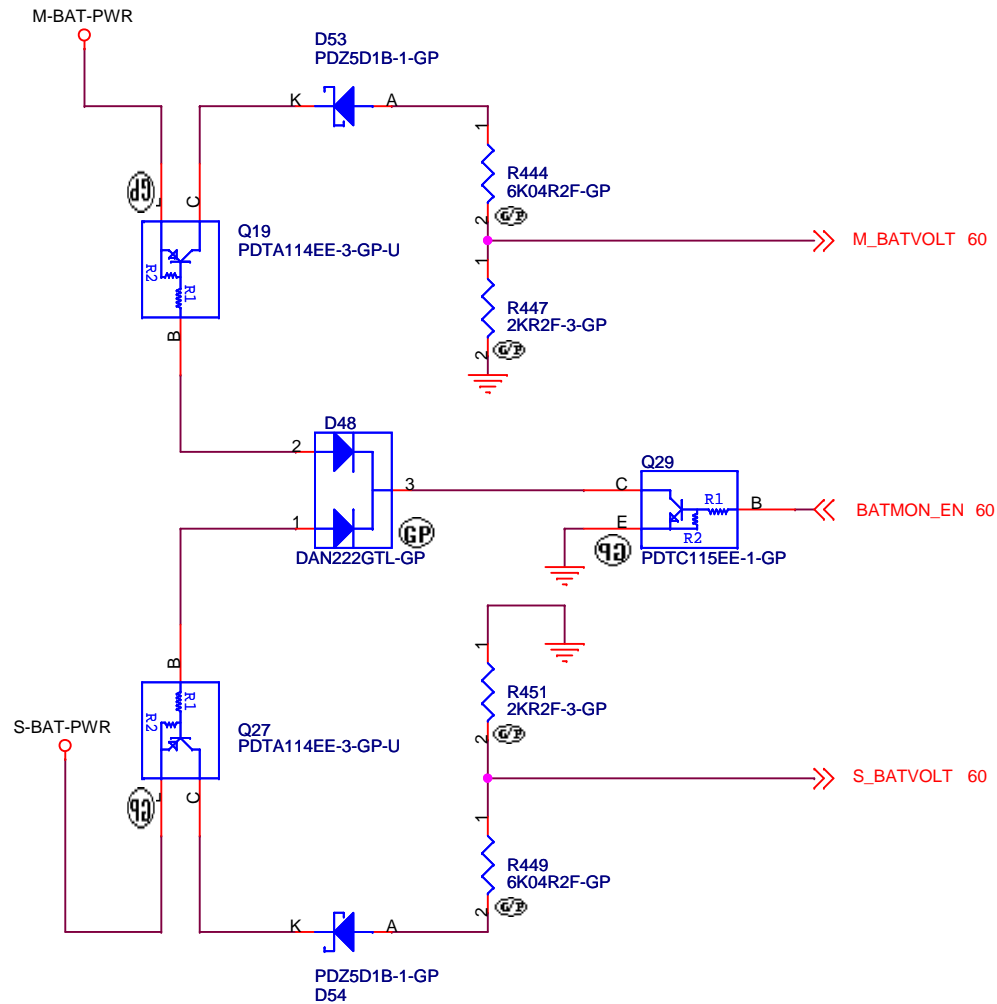


<Core Design>

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

Title		
CHARGER SELECT		
Size	Document Number	Rev
A3	Kendo-4 WS	-1
Date: Friday, March 09, 2012		Sheet 76 of 105

$$V_{OUT} = 0.249 (V_{BAT} - 5)$$



<Core Design>

緯創資通

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

Title

BATTERY MONITOR

Size
A4

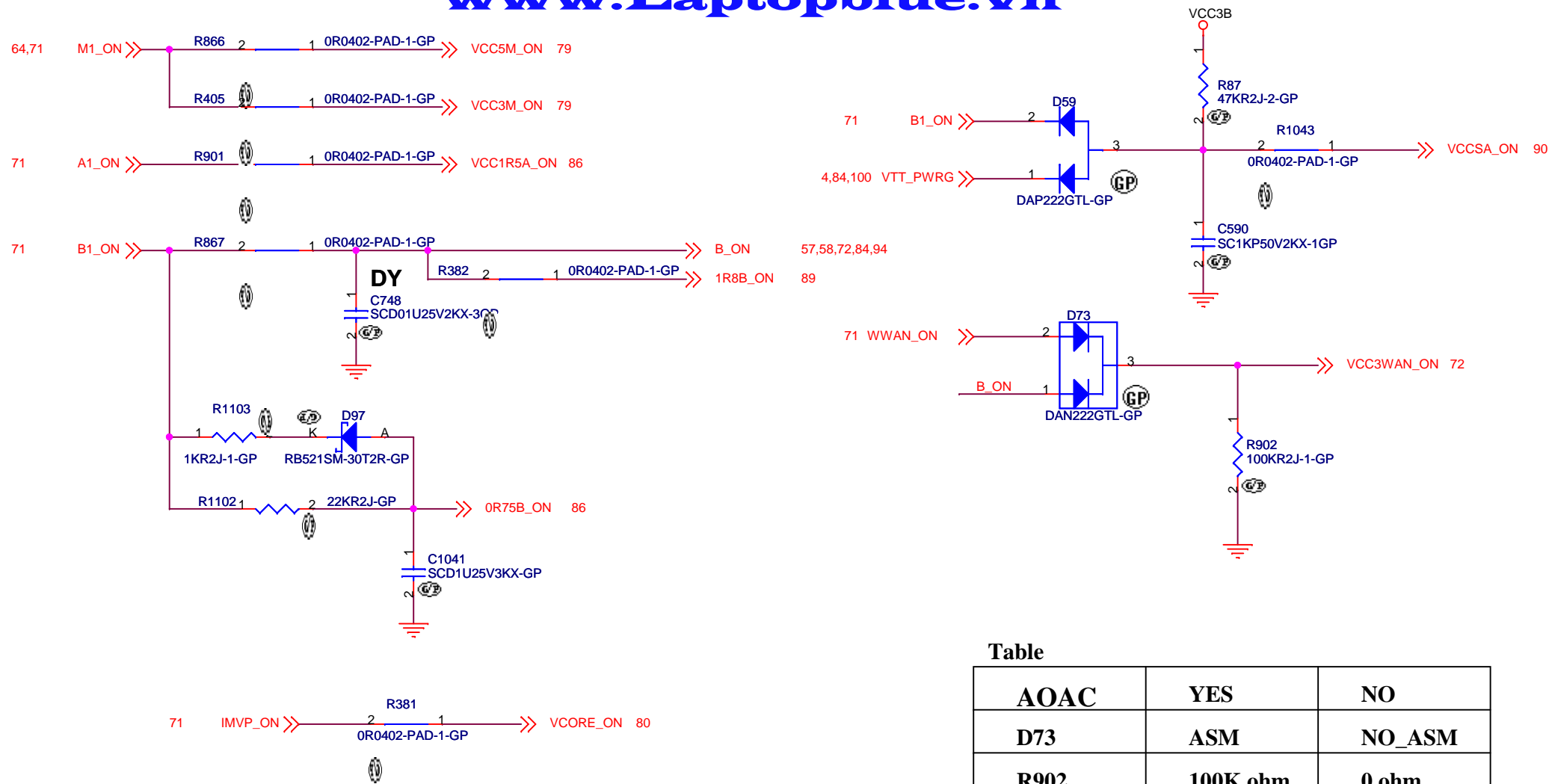
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 77 of 105



Table

AOAC	YES	NO
D73	ASM	NO_ASM
R902	100K ohm	0 ohm

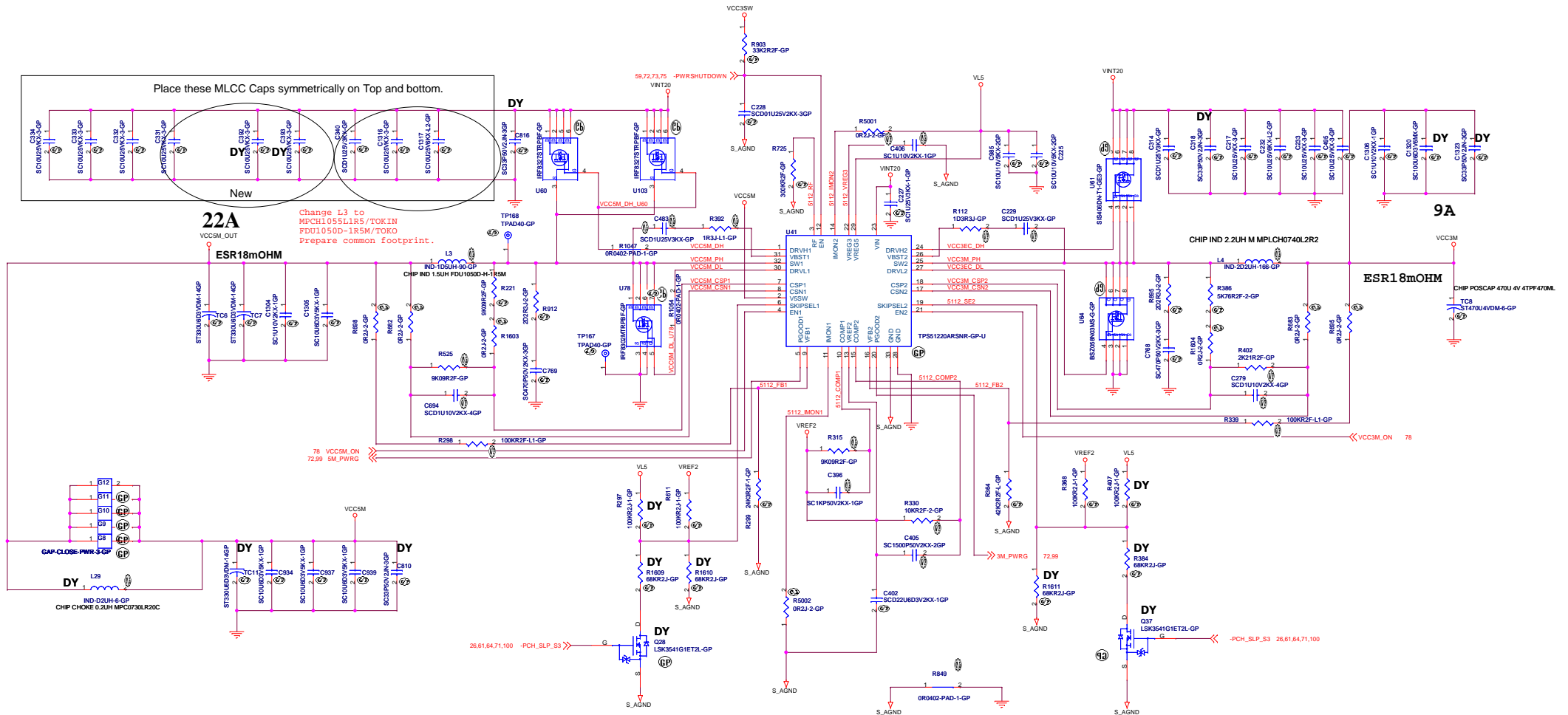
<Core Design>

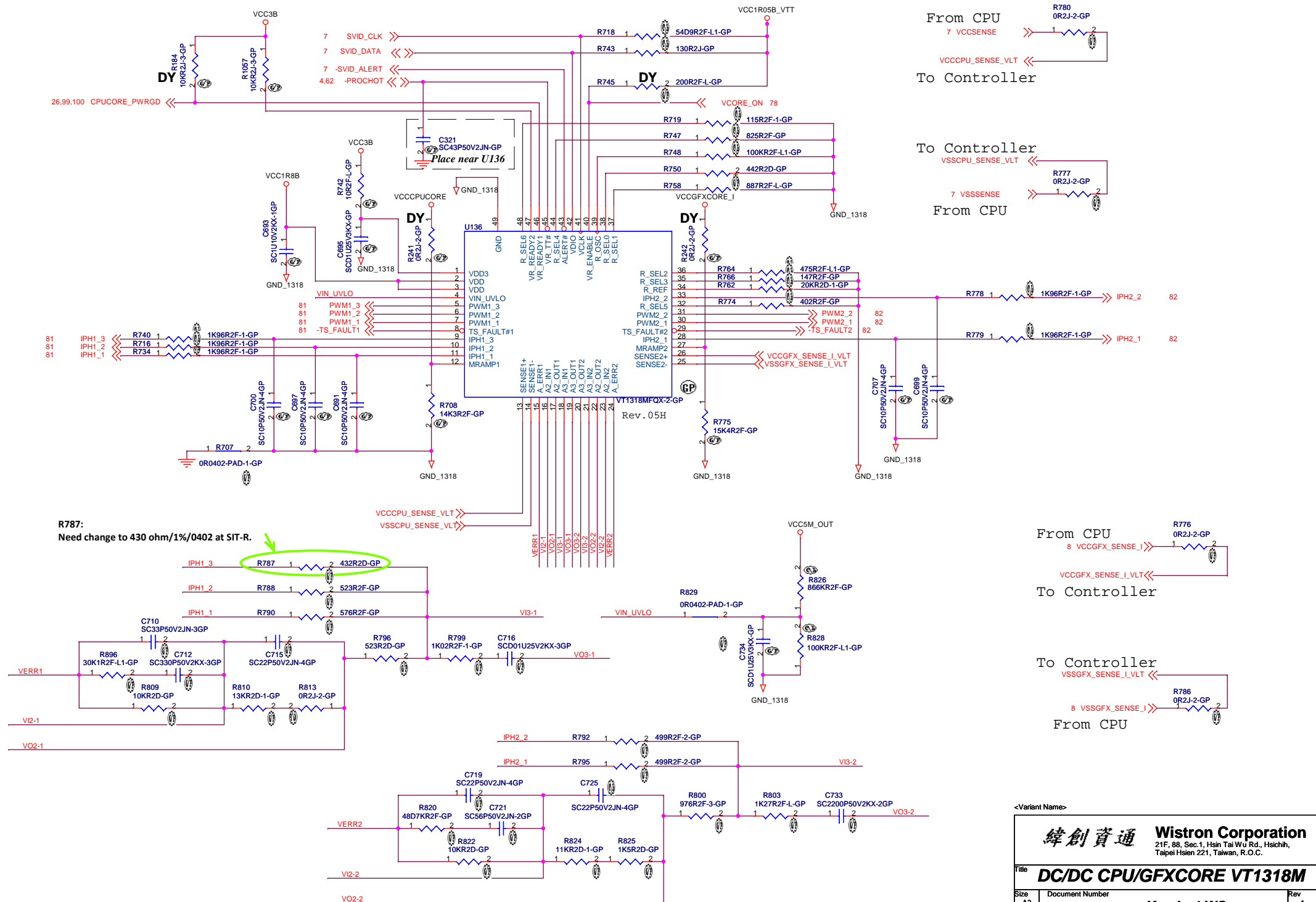
緯創資通			Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.					
Title					
POWER SEQUENCE					
Size A4	Document Number				Rev -1
Date: Friday, March 09, 2012				Sheet 78 of 105	

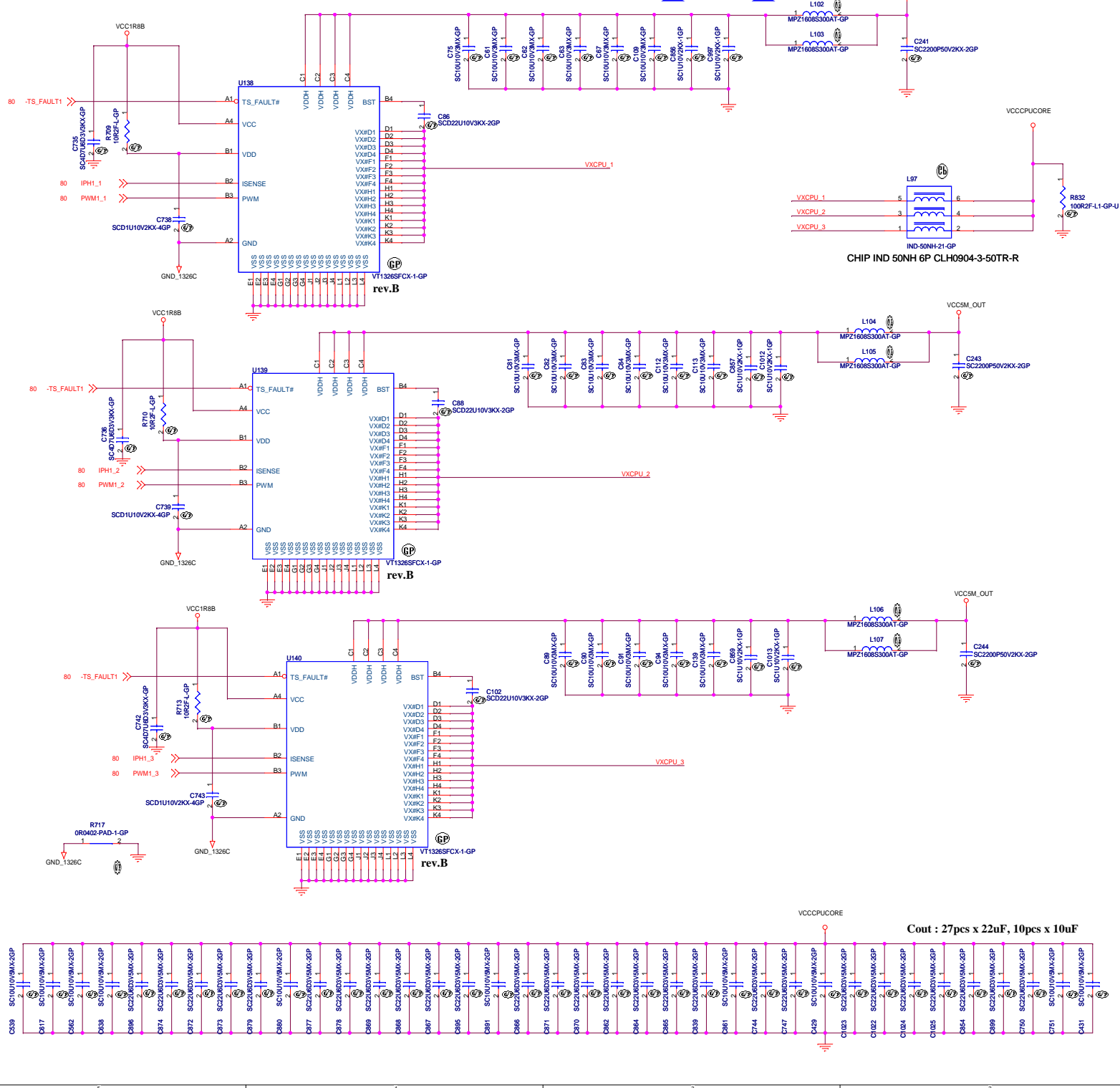
◀Core Design▶

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

Title			
DC/DC VCC5M/VCC3M			
Size	Document Number		Rev
A2	Kendo-4 WS		-1
Date:	Friday, March 09, 2012	Sheet 79 of	105





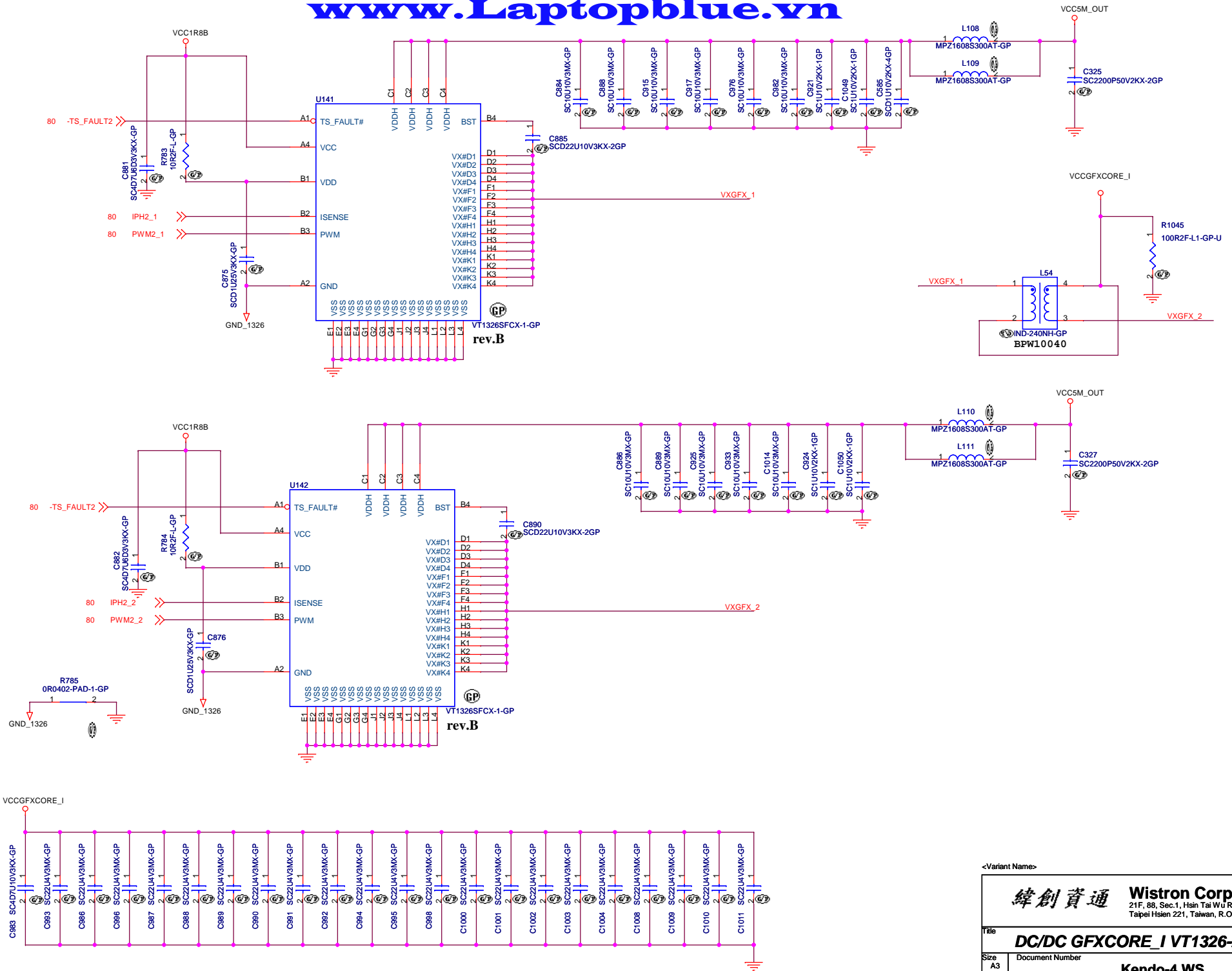


<Variant Name>

緯創資通

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

File	DC/DC CPUCORE VT1326-3P		
Size	Document Number	Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012	Sheet 81	of 105	



<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/DC GFXCORE_I VT1326-2P		Document Number	
Date: Friday, March 09, 2012		Kendo-4 WS	
Sheet 82 of 105		Rev -1	

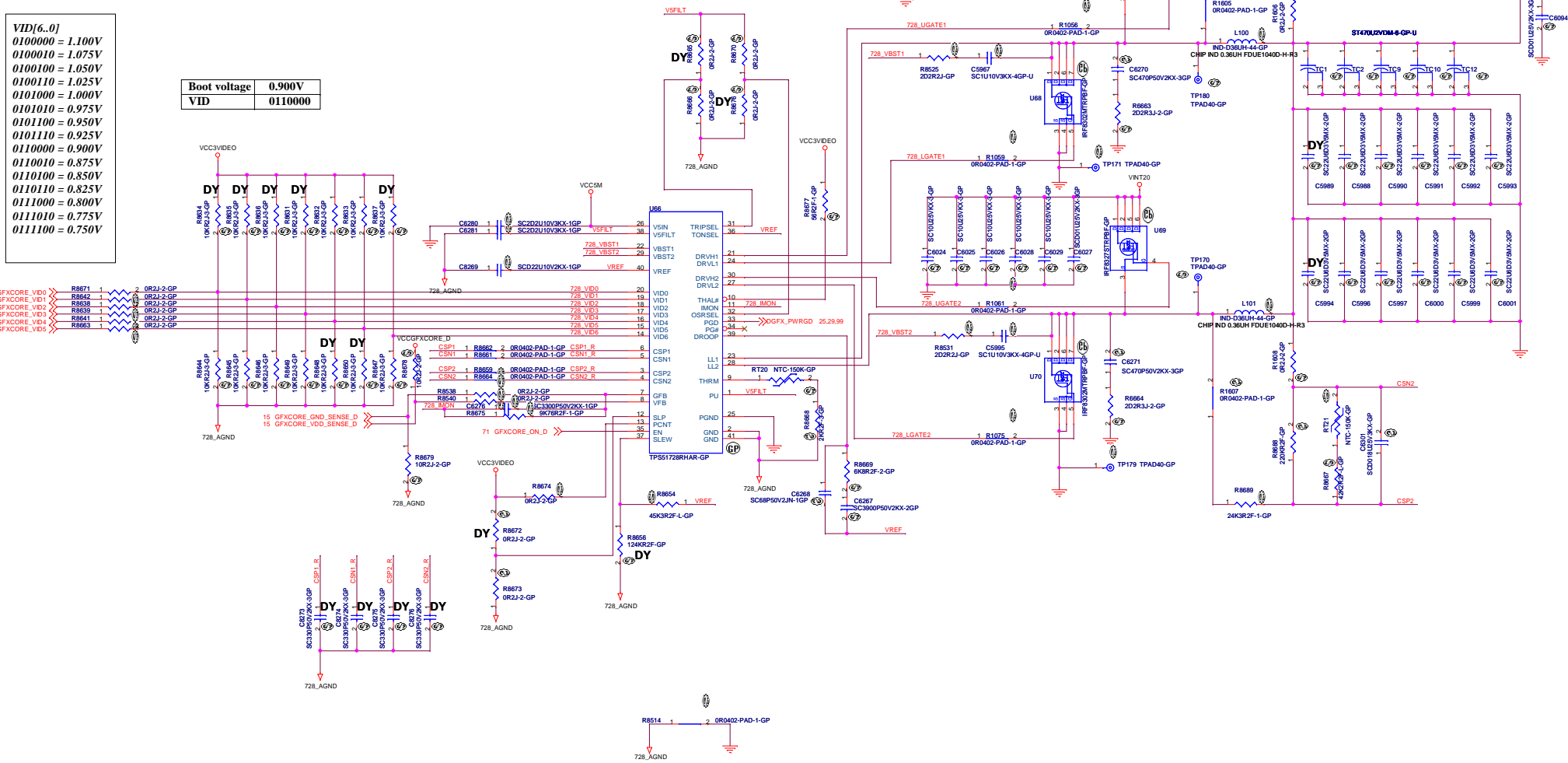
Two-phase Mode

EDP-peak 1.3xEDP-continuous
EDP-continuous 60A
TDC 42A

Loadline = zero load-line
Frequency = 300kHz

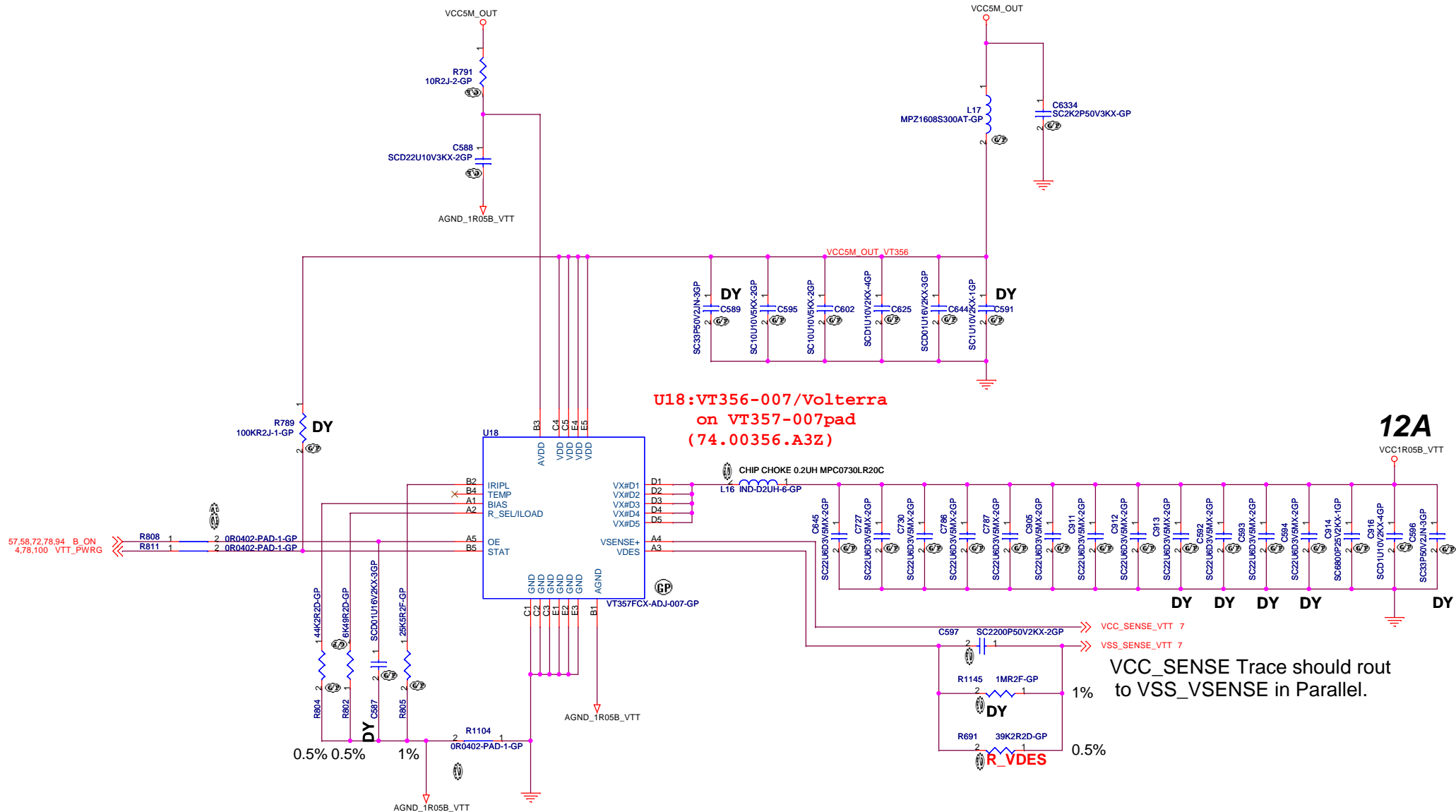
VID[6..0]
0100000 = 1.100V
0100010 = 1.075V
0100100 = 1.050V
0100110 = 1.025V
0101000 = 1.000V
0101010 = 0.975V
0101100 = 0.950V
0101110 = 0.925V
0110000 = 0.900V
0110010 = 0.875V
0110100 = 0.850V
0110110 = 0.825V
0111000 = 0.800V
0111010 = 0.775V
0111100 = 0.750V

Boot voltage	0.900V
VID	0110000

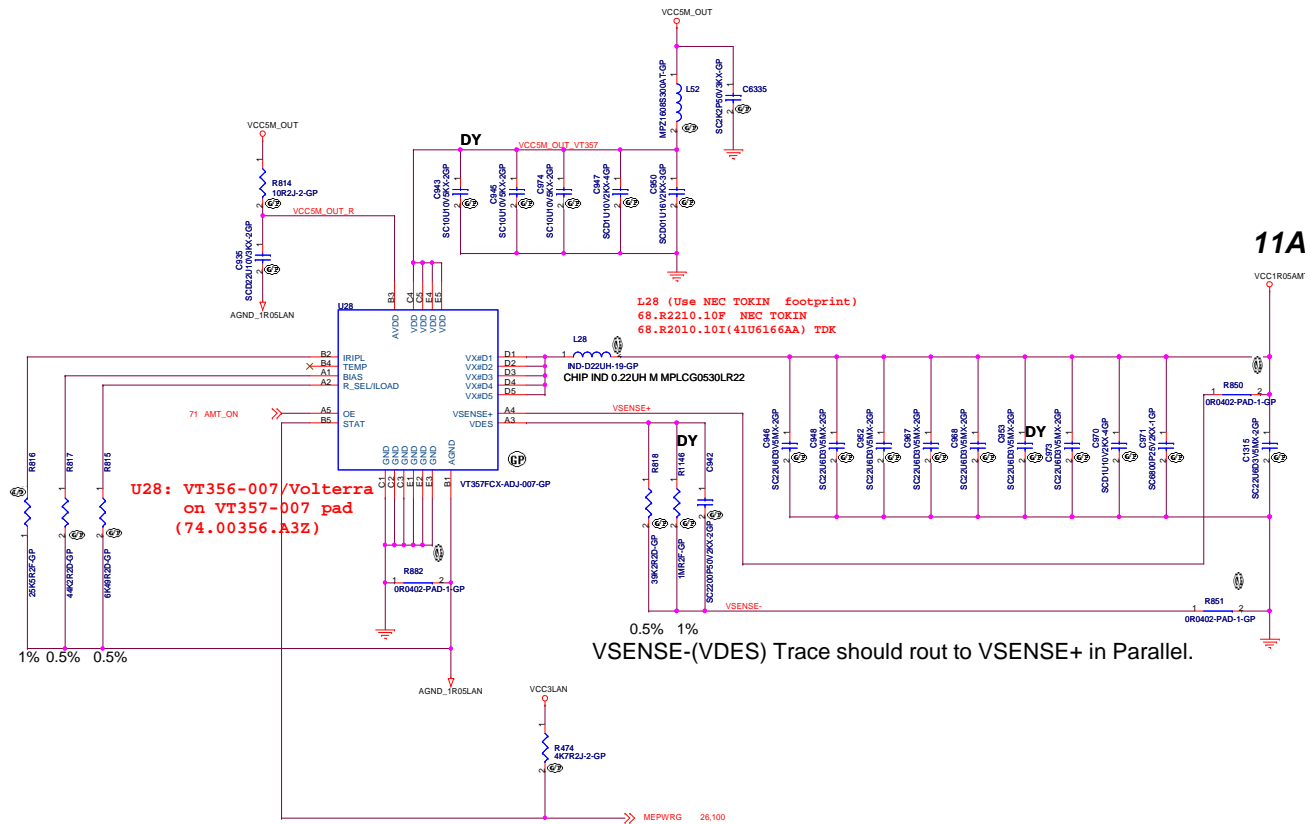


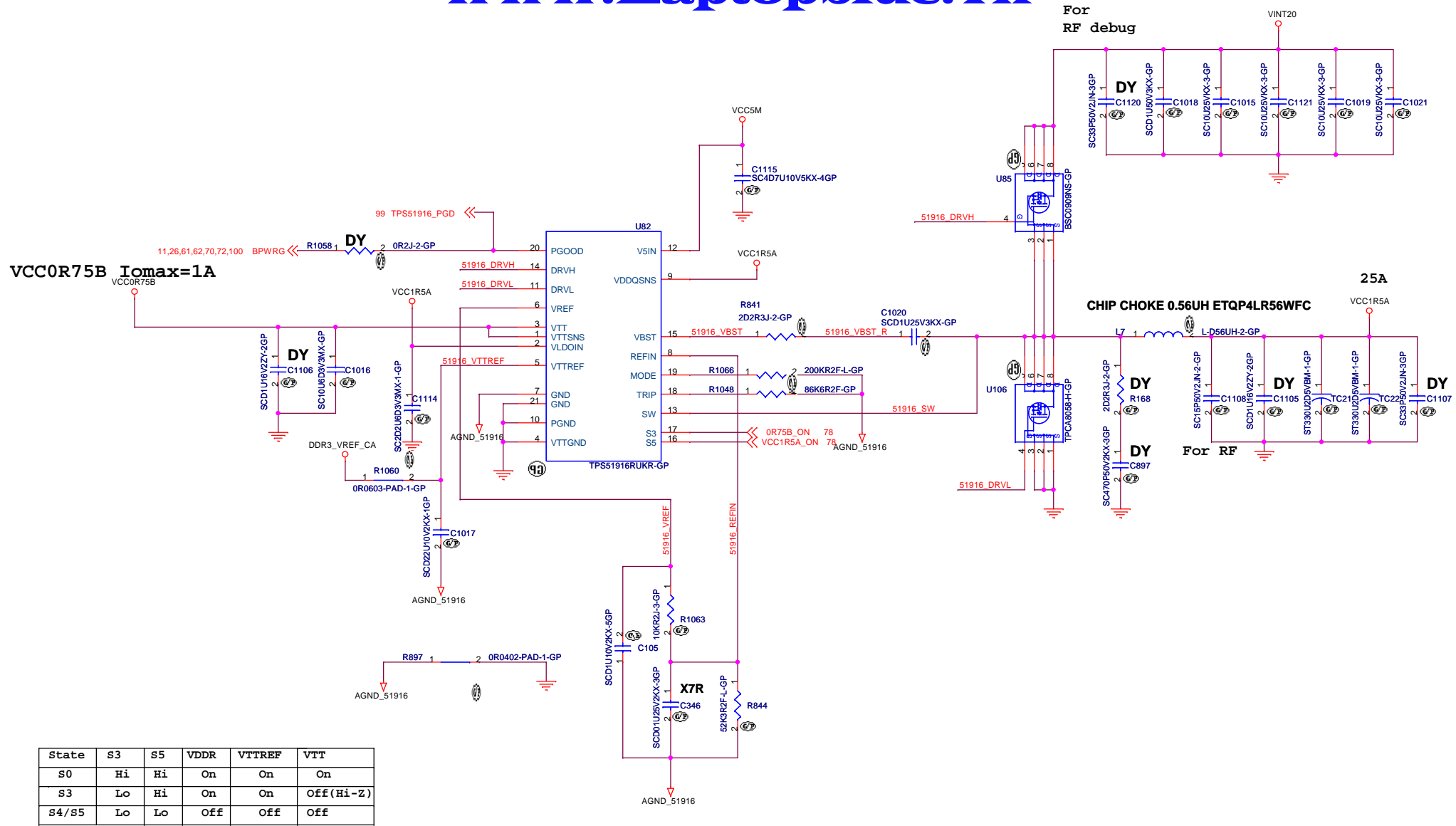
<Core Design>

<Variant Names>



VCC_SENSE Trace should route to VSS_VSENSE in Parallel.





State	S3	S5	VDDR	VTTREF	VTT
S0	Hi	Hi	On	On	On
S3	Lo	Hi	On	On	Off (Hi-Z)
S4/S5	Lo	Lo	Off	Off	Off

<Core Design>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
DC/DC VCC1R5A/VCC0R75B	
Title Size A3	Document Number Kendo-4 WS
Date: Friday, March 09, 2012	Sheet 86 of 105

BLANK

<Variant Name>

緯創資通

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

Title

Size
Custom

Document Number

Rev
-1

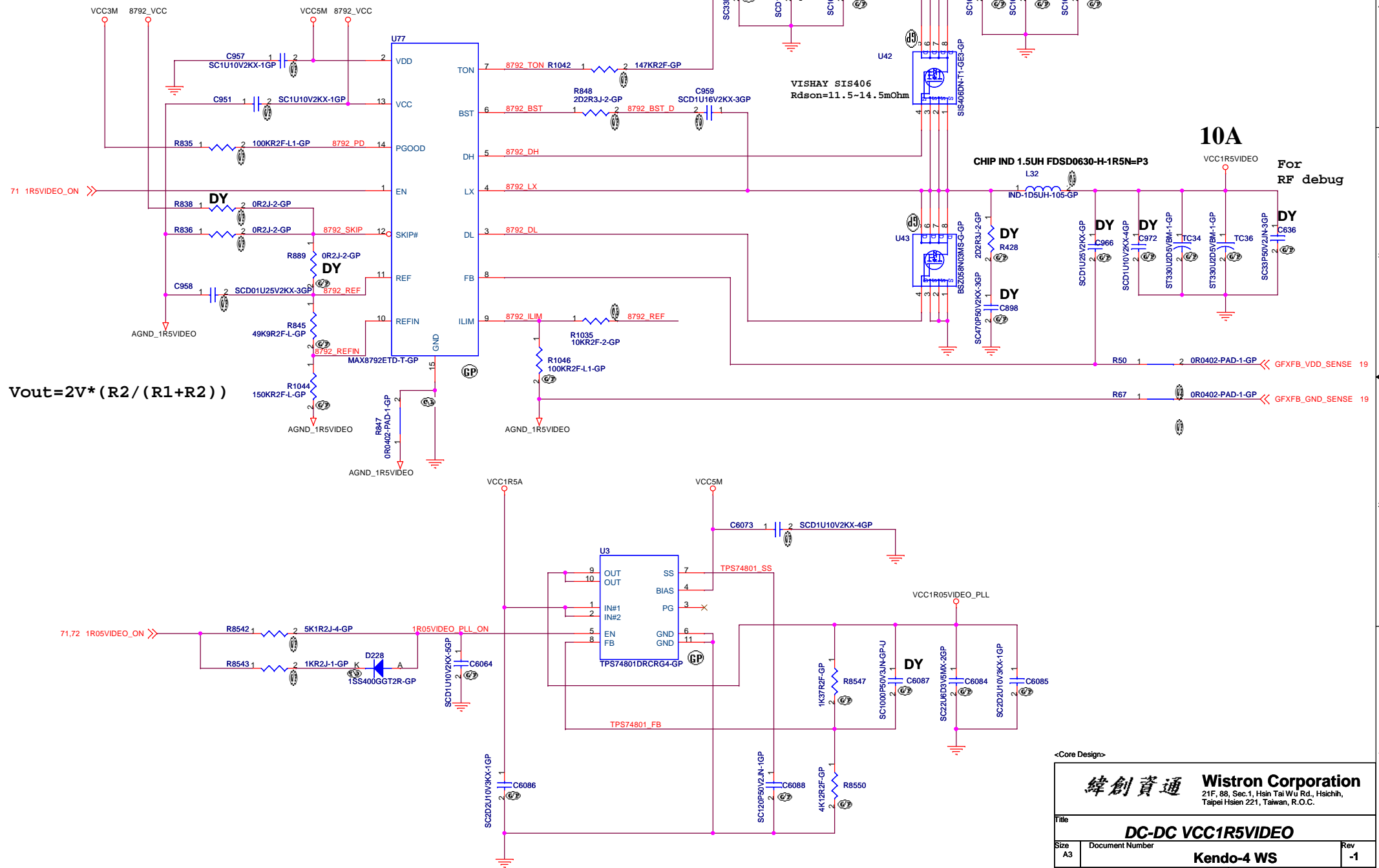
Date: Wednesday, February 15, 2012

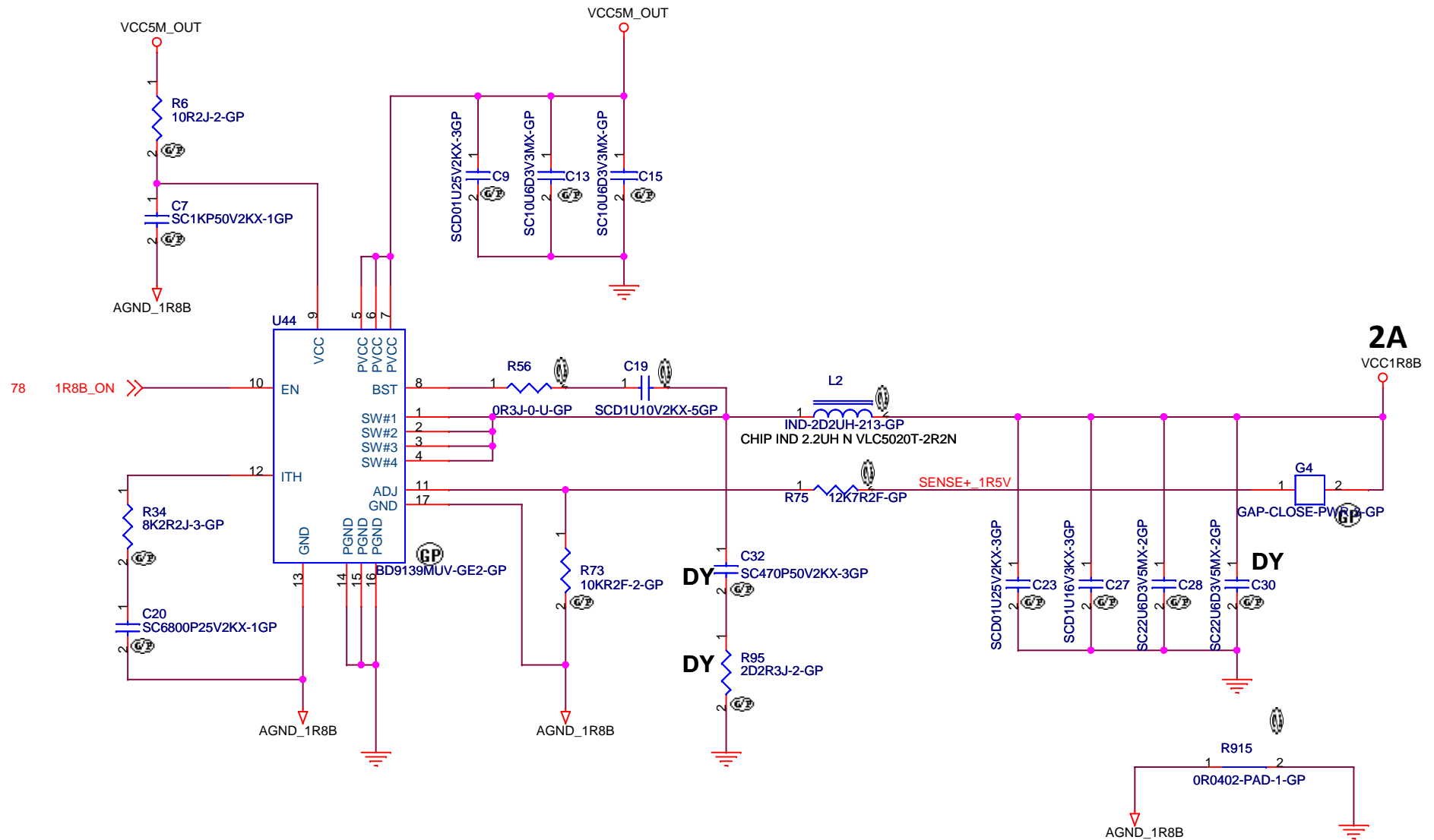
Sheet 87 of 105

21

BLANK

Kendo-4 WS





<Core Design>

緯創資通

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

Title

DC-DC VCC1R8B

Size
A4

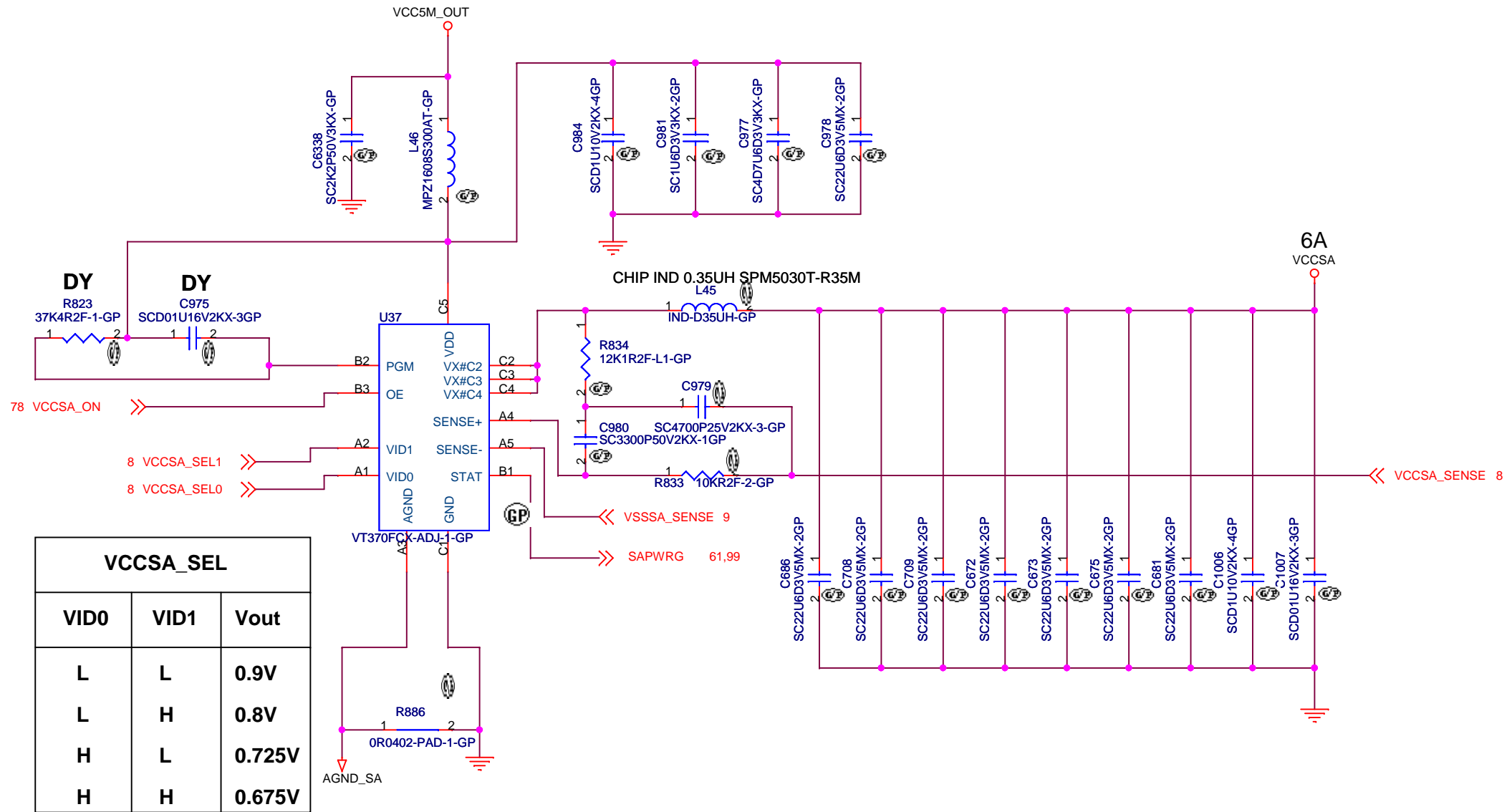
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 89 of 105



<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/DC VCC_SA**

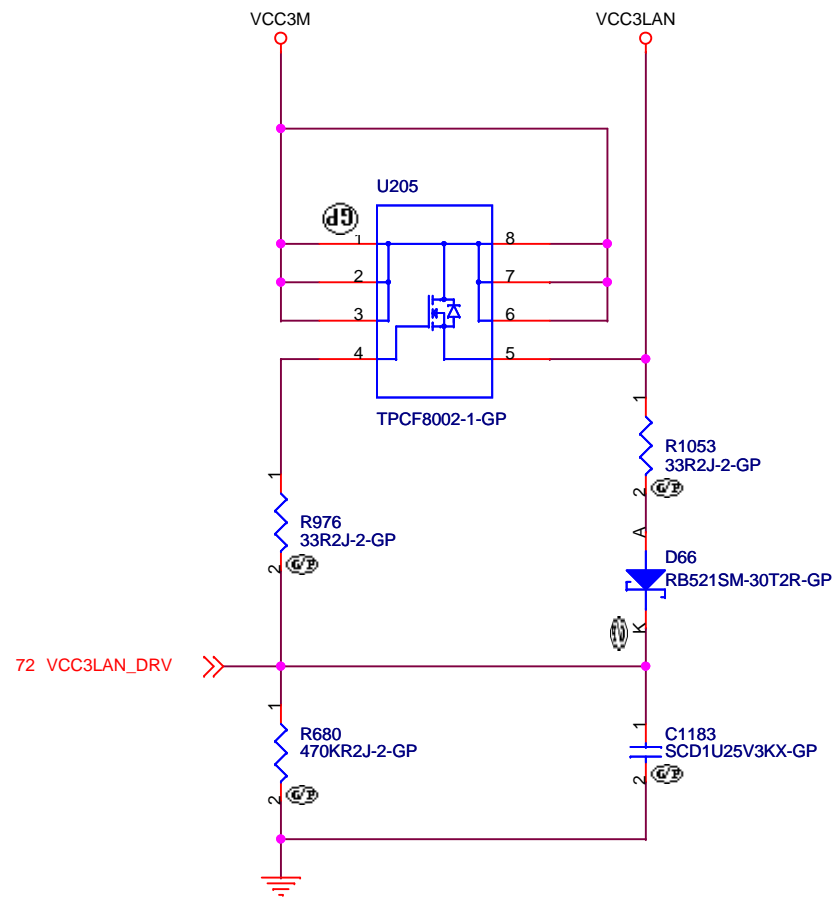
Size A4 Document Number

Kendo-4 WS

Rev -1

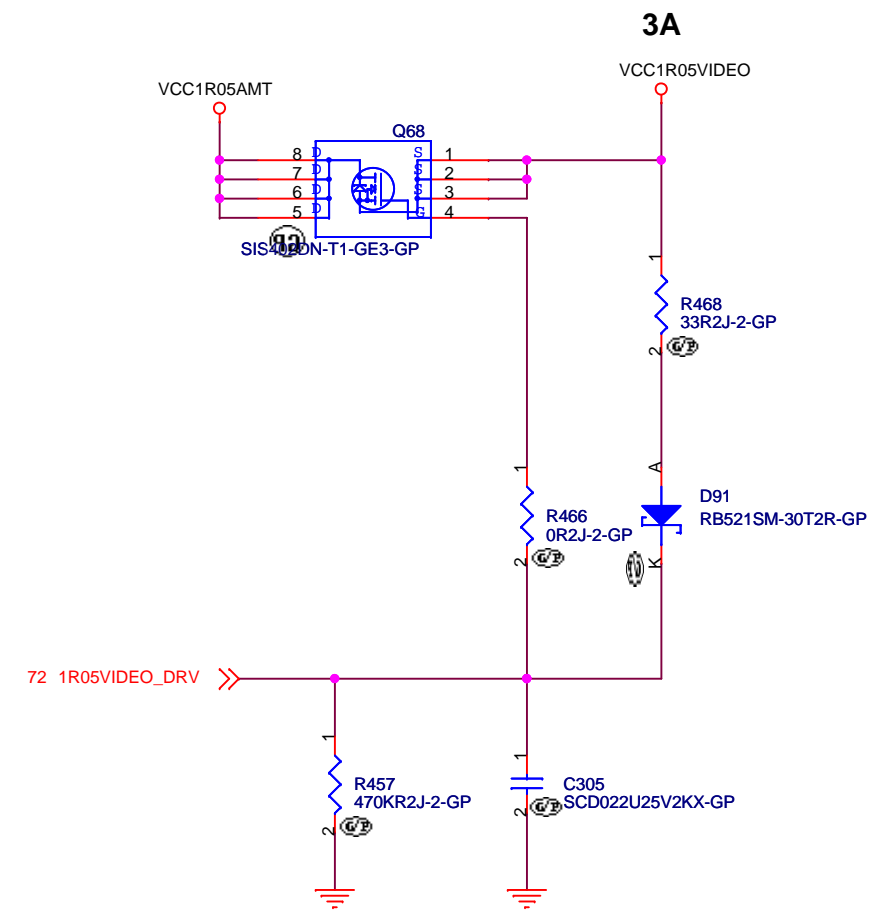
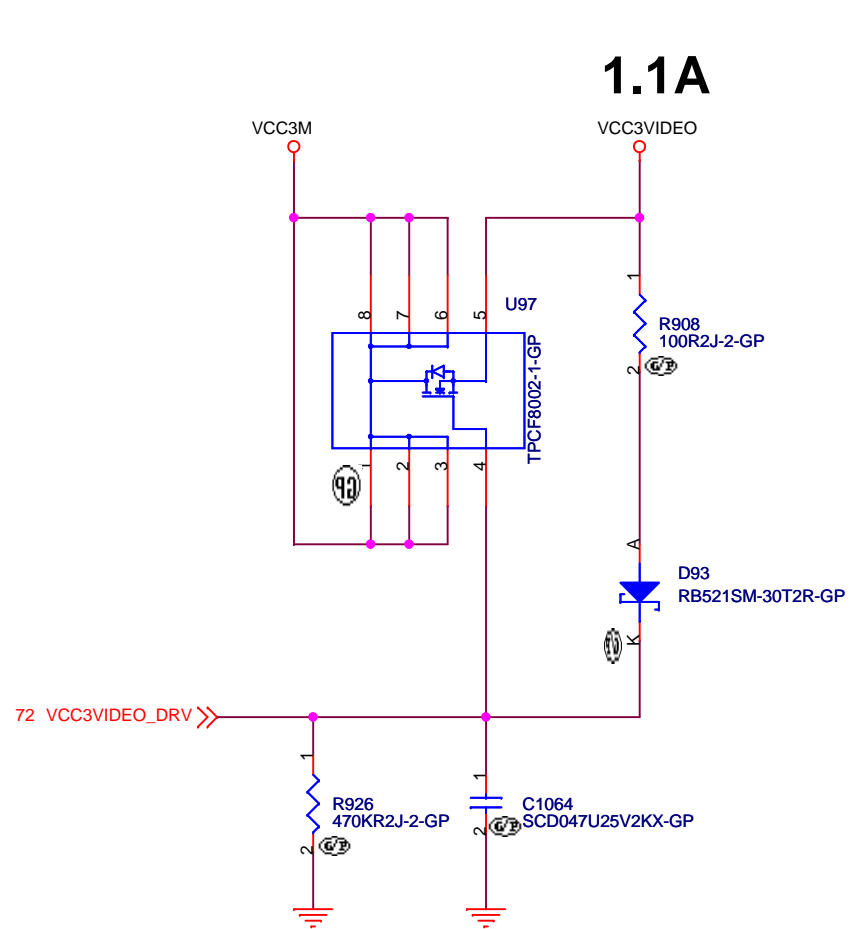
Date: Friday, March 09, 2012

Sheet 90 of 105



<Core Design>

<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	
LOAD SW LAN & LANPWRG	
Size	Document Number
A4	Kendo-4 WS
Date: Friday, March 09, 2012	Rev -1
Sheet 91 of 105	



<Core Design>

<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	
LOAD SW VIDEO	
Size A4	Document Number Kendo-4 WS
Date: Friday, March 09, 2012	Rev -1
Sheet 92 of 105	

BLANK

<Core Design>

緯創資通

Wistron Corporation

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

Title

BLANK

Size
A4

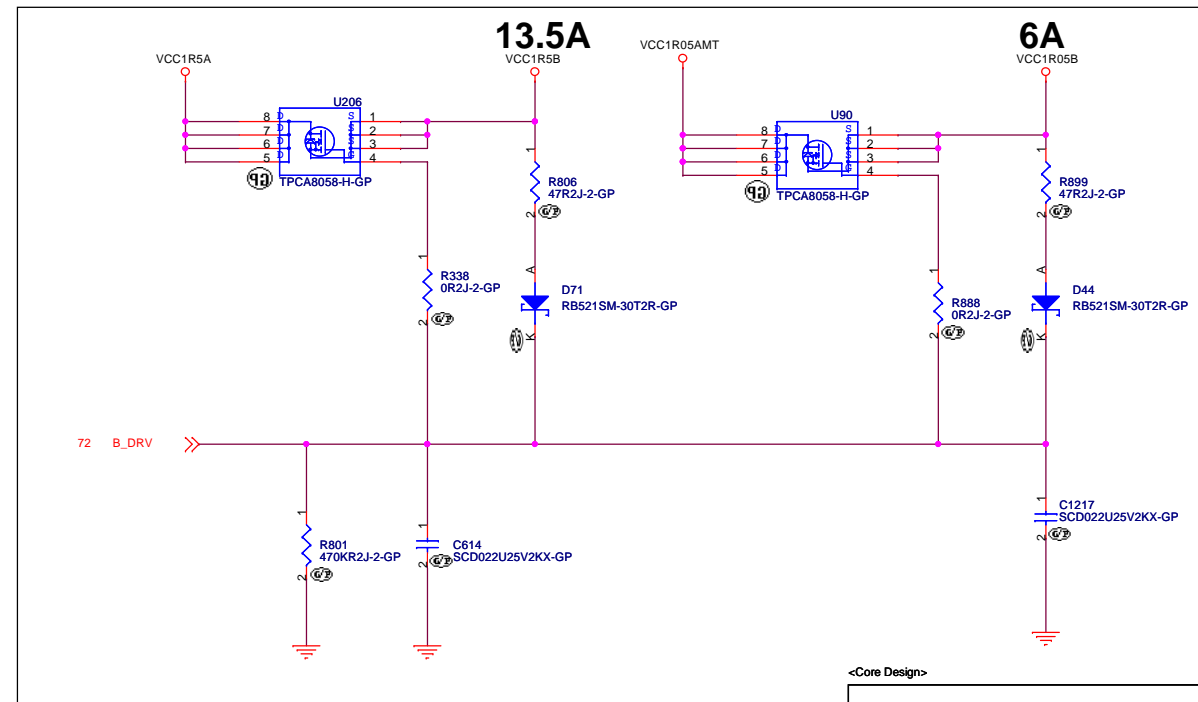
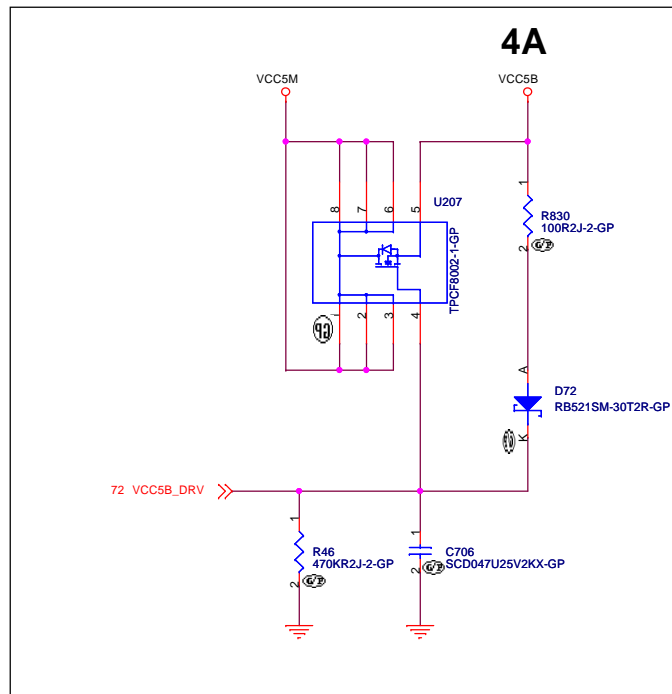
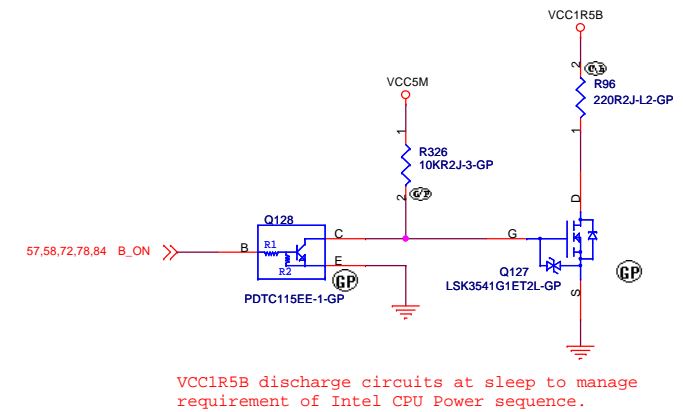
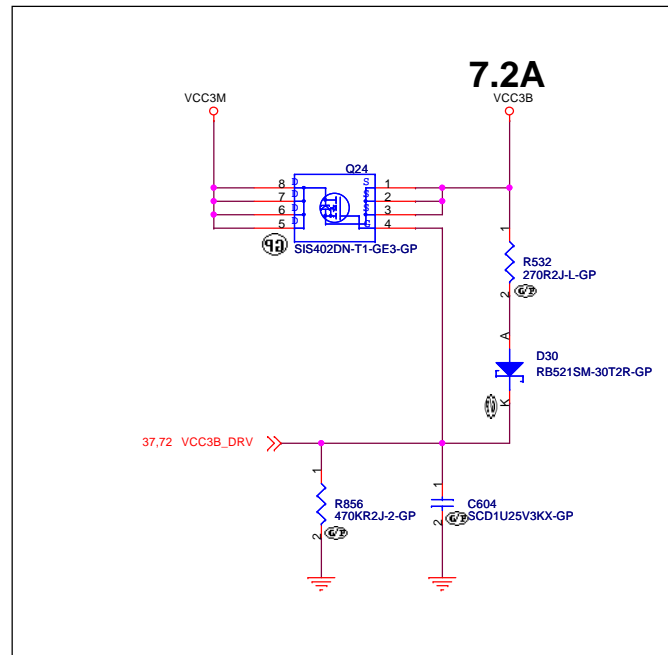
Document Number

Kendo-4 WS

Rev
-1

Date: Wednesday, February 15, 2012

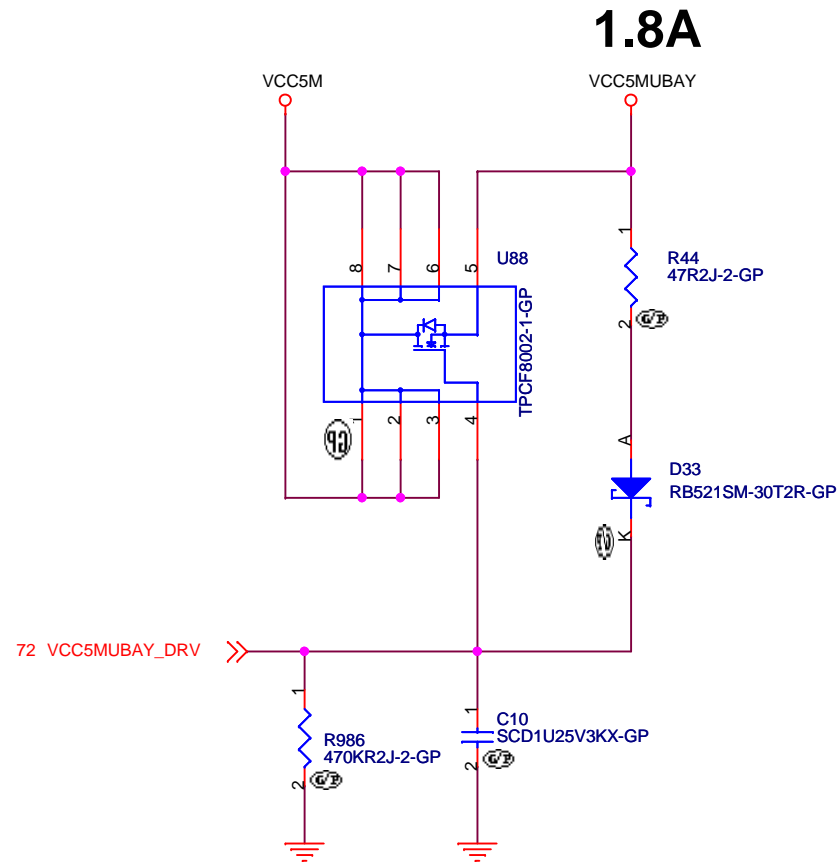
Sheet 93 of 105



<Core Design>

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

Title		
LOAD SW B		
Size A3	Document Number Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012	Sheet 94 of 105	



<Core Design>

緯創資通

Wistron Corporation

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

Title **LOAD SW VCC5MBAY**

Size
A4

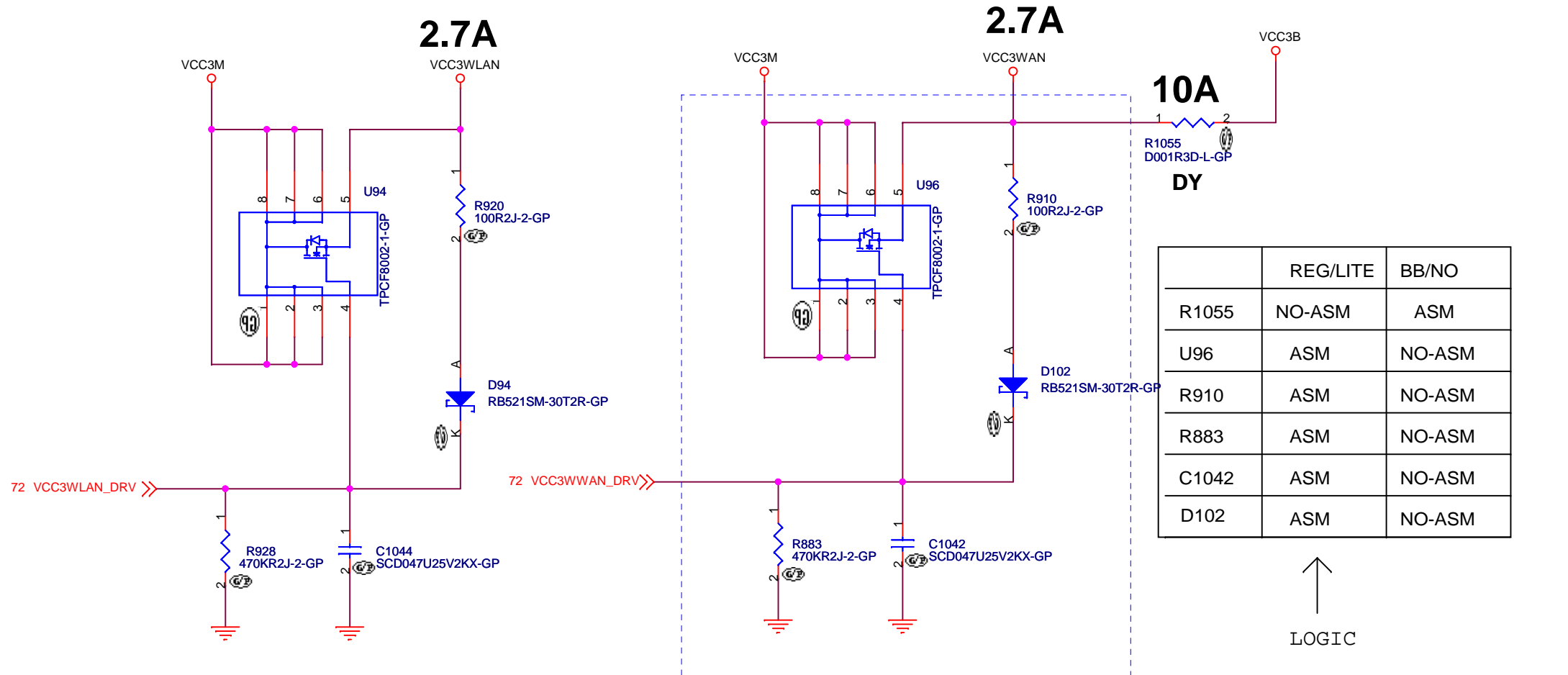
Document Number

Kendo-4 WS

Rev
-1

Date: Friday, March 09, 2012

Sheet 95 of 105



10A

R1055
D001R3D-L-GP

DY

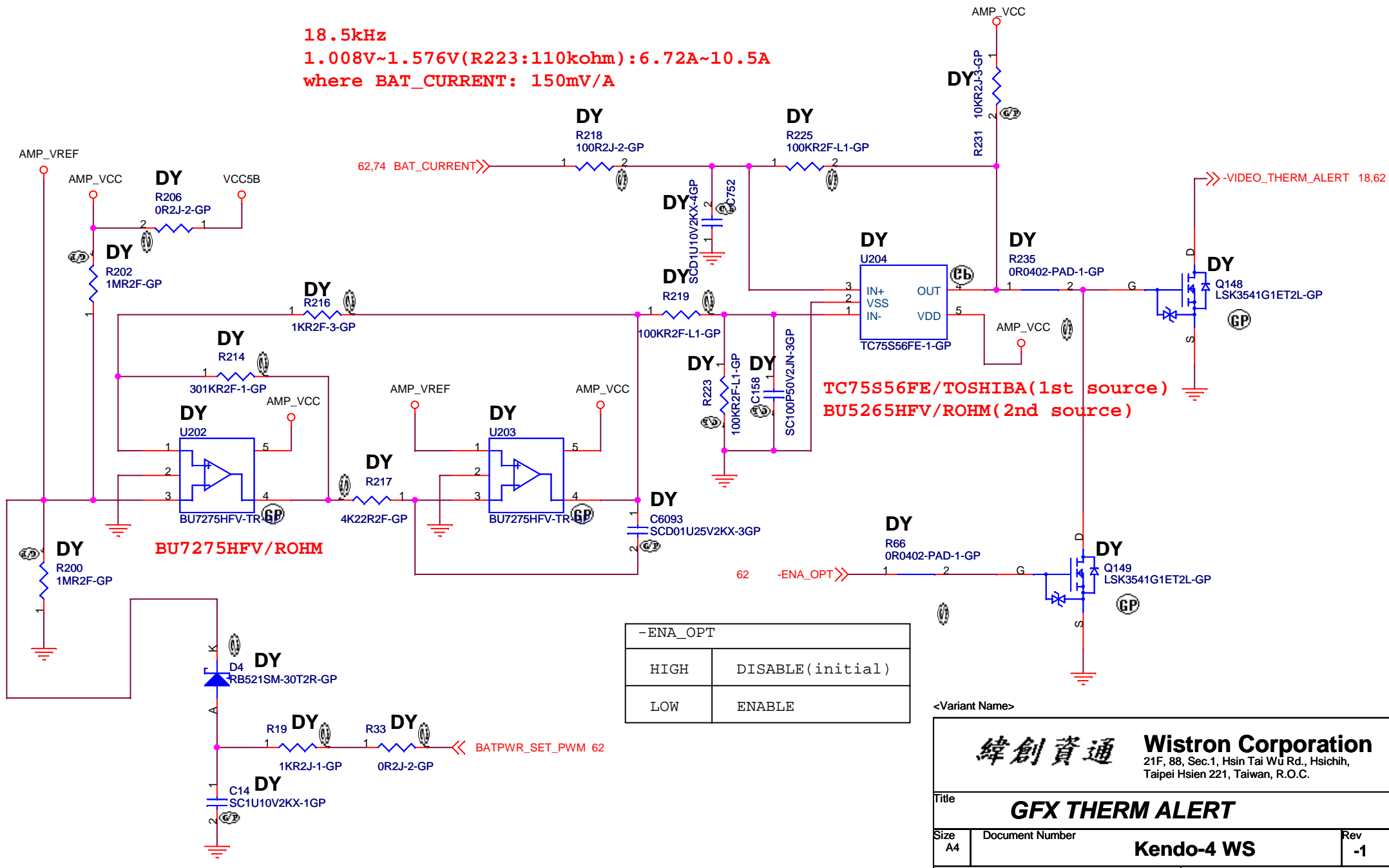
	REG/LITE	BB/NO
R1055	NO-ASM	ASM
U96	ASM	NO-ASM
R910	ASM	NO-ASM
R883	ASM	NO-ASM
C1042	ASM	NO-ASM
D102	ASM	NO-ASM

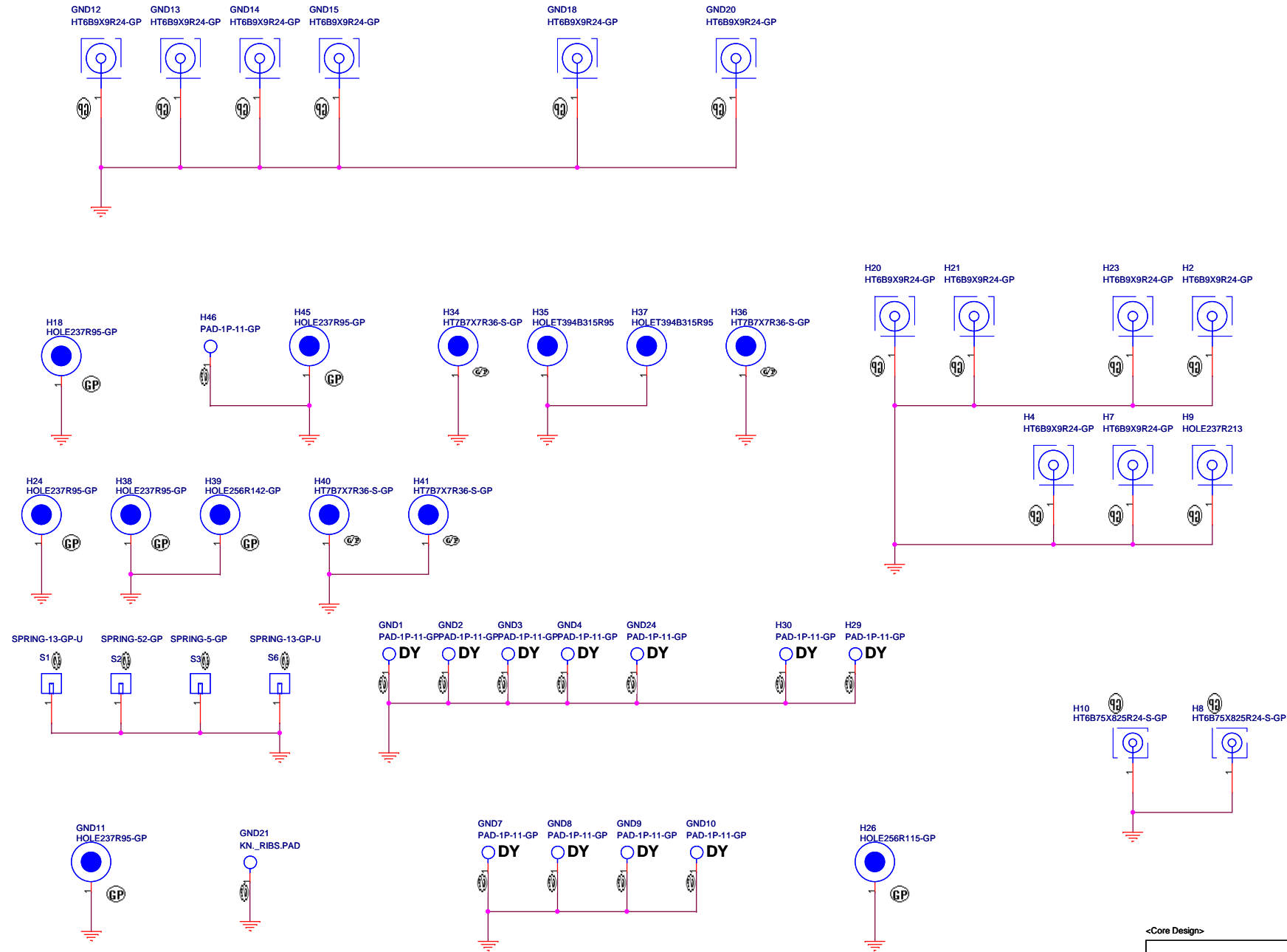
↑
LOGIC

<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 LOAD SW VCC3WLAN/VCC3WAN		
Size A4	Document Number Kendo-4 WS	Rev -1
Date: Friday, March 09, 2012		Sheet 96 of 105

18.5kHz
1.008V~1.576V(R223:110kohm):6.72A~10.5A
where BAT_CURRENT: 150mV/A

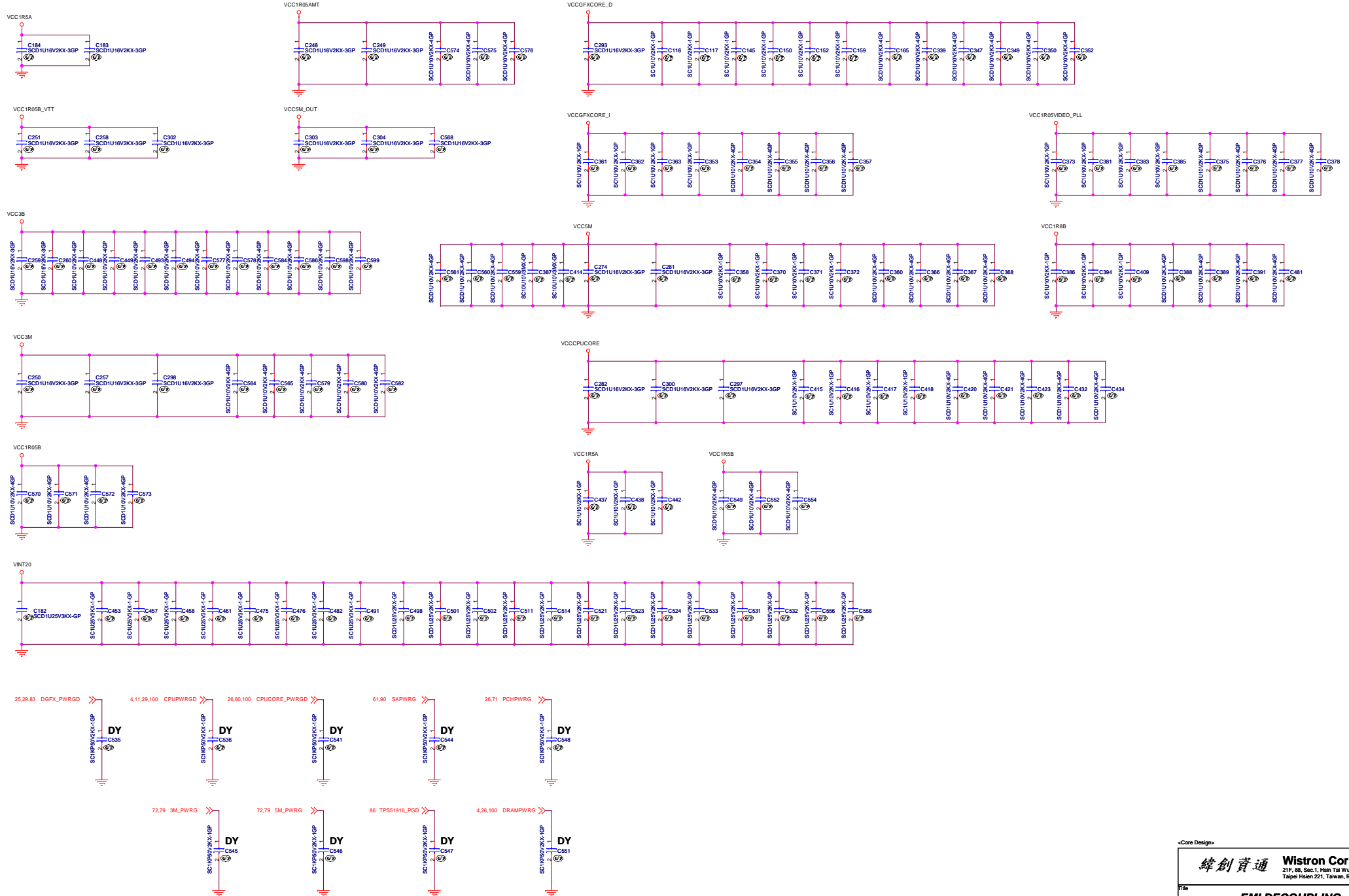


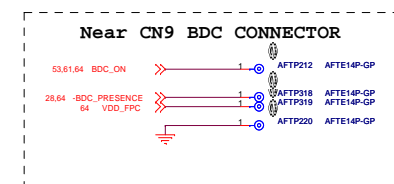


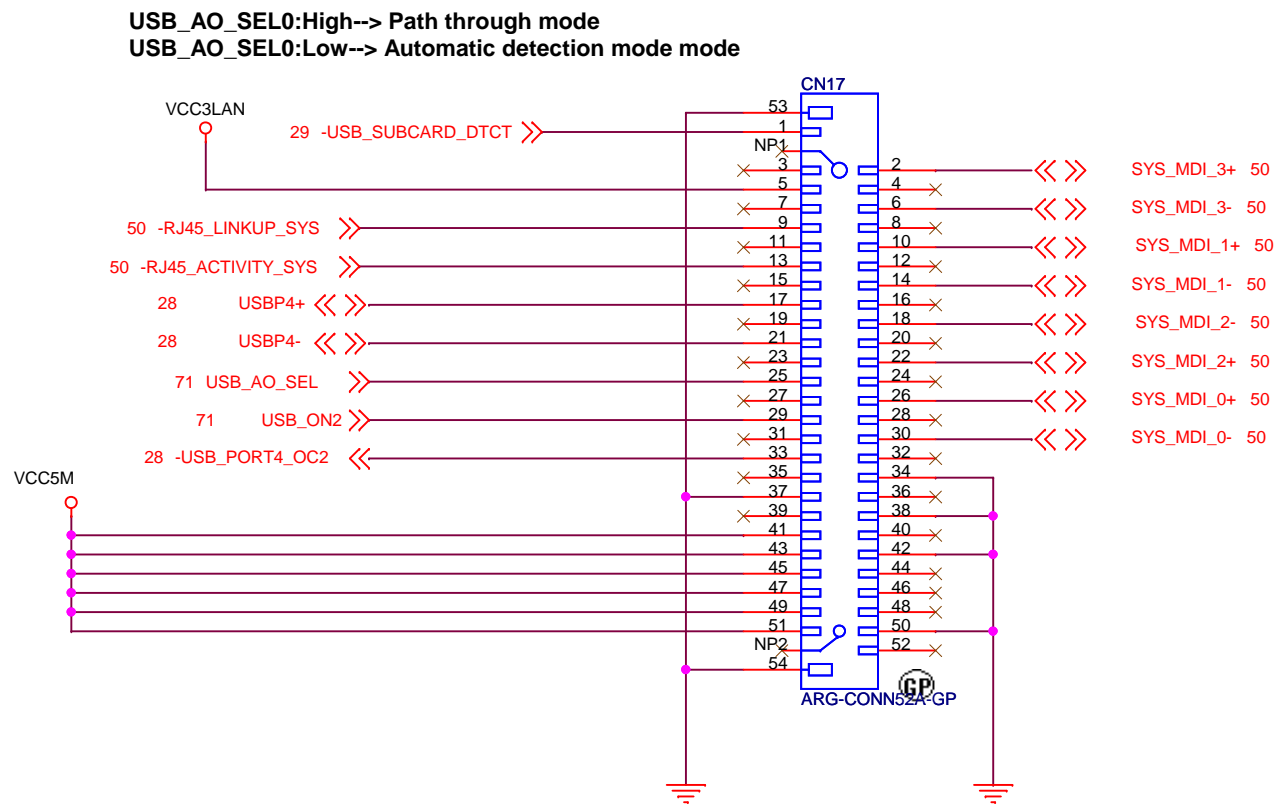
<Core Design>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
PTH FOR SCREW HOLES			
Size A3	Document Number Kendo-4 WS		Rev -1
Date: Wednesday, February 15, 2012		Sheet 98 of	105

Long power trace EMI decoupling caps



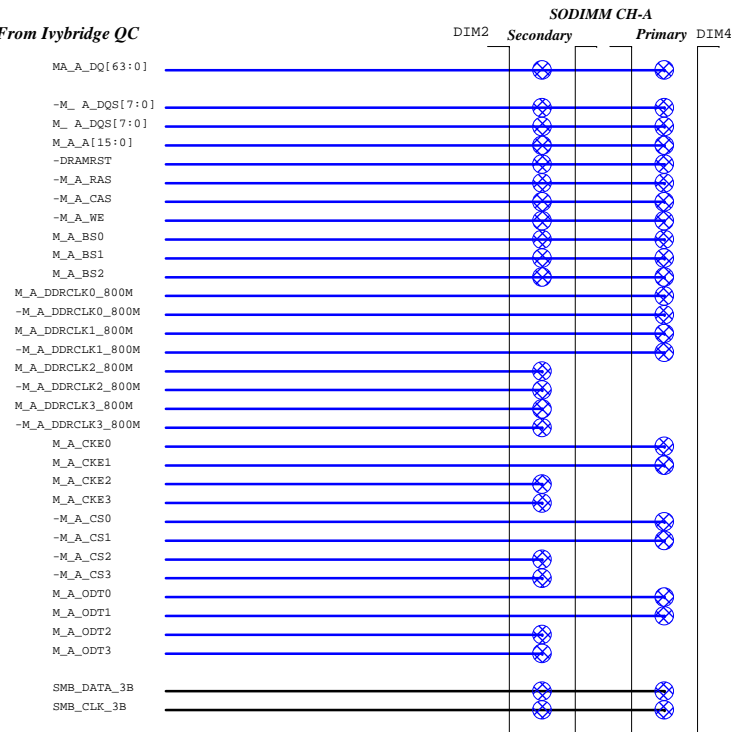




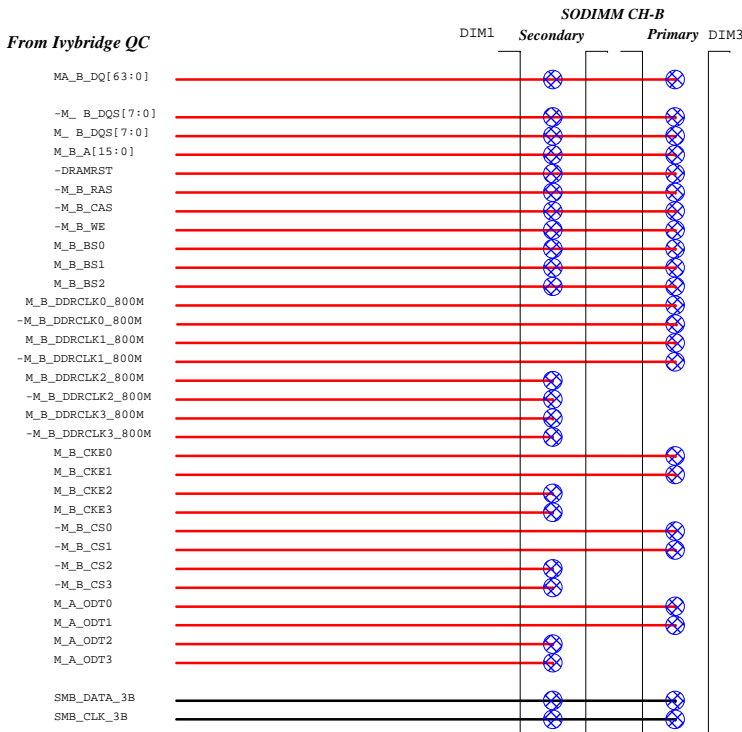
<Variant Name>

緯創資通			Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.					
Title					
USB BOARD CONN					
Size A4	Document Number				Rev -1
Kendo-4 WS					
Date: Friday, March 09, 2012			Sheet 101 of 105		

From Ivybridge QC



From Ivybridge QC



SODIMM IIC Address :

CH-A Primary [DIMM4] : 50h

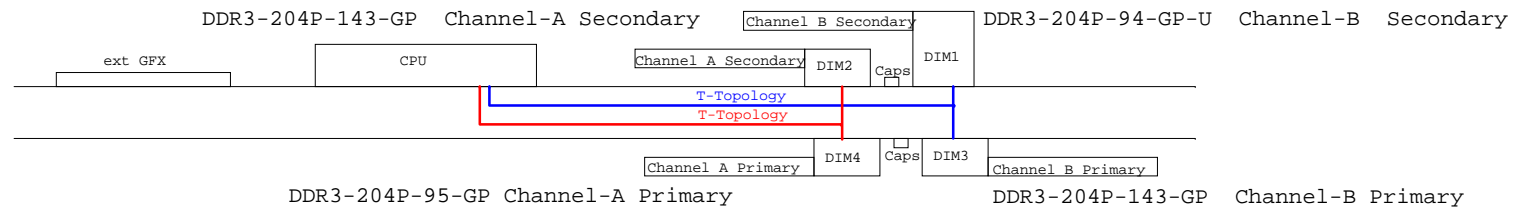
CH-B Primary [DIMM3] : 51h

CH-A Secondary [DIMM2] : 52h

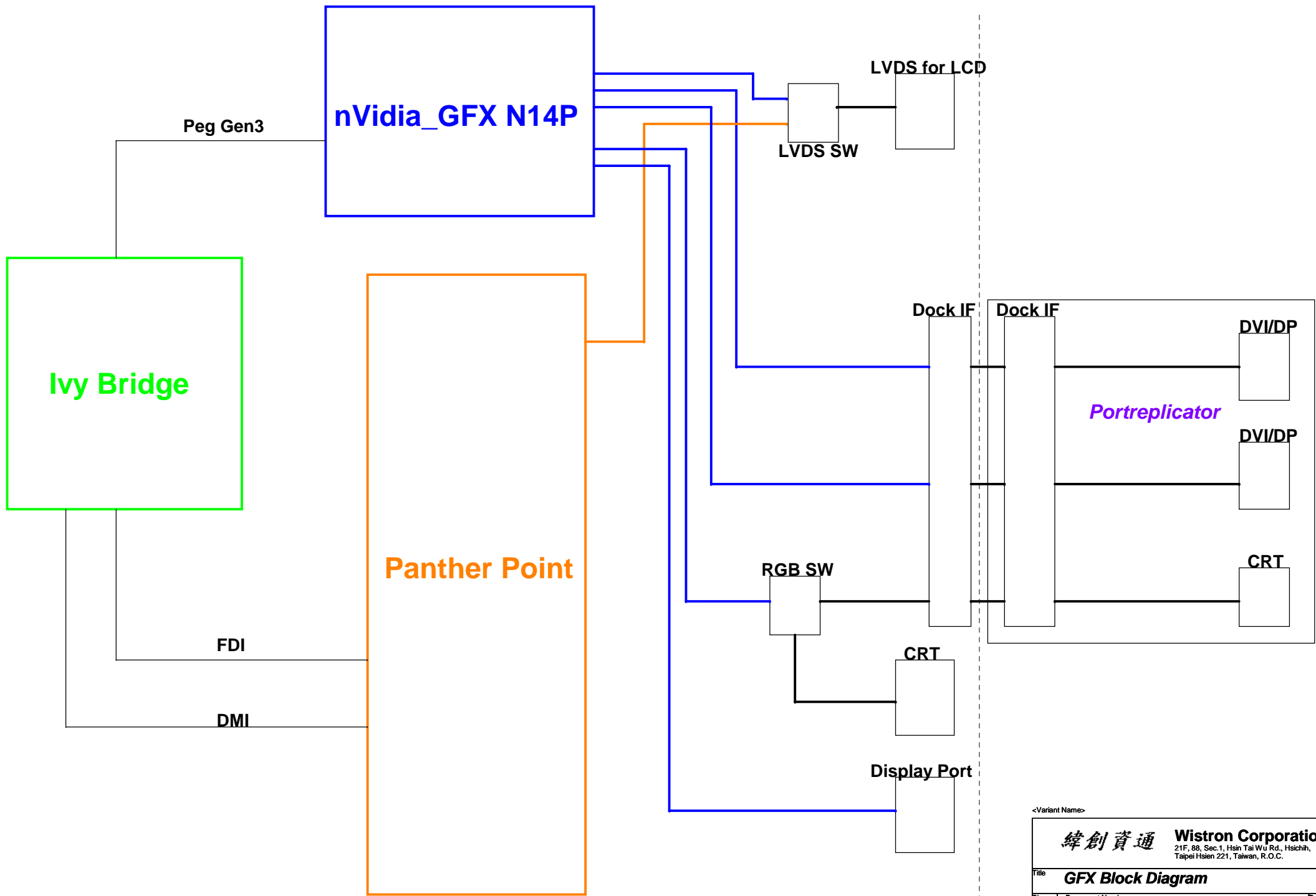
CH-B Secondary [DIMM1] : 53h

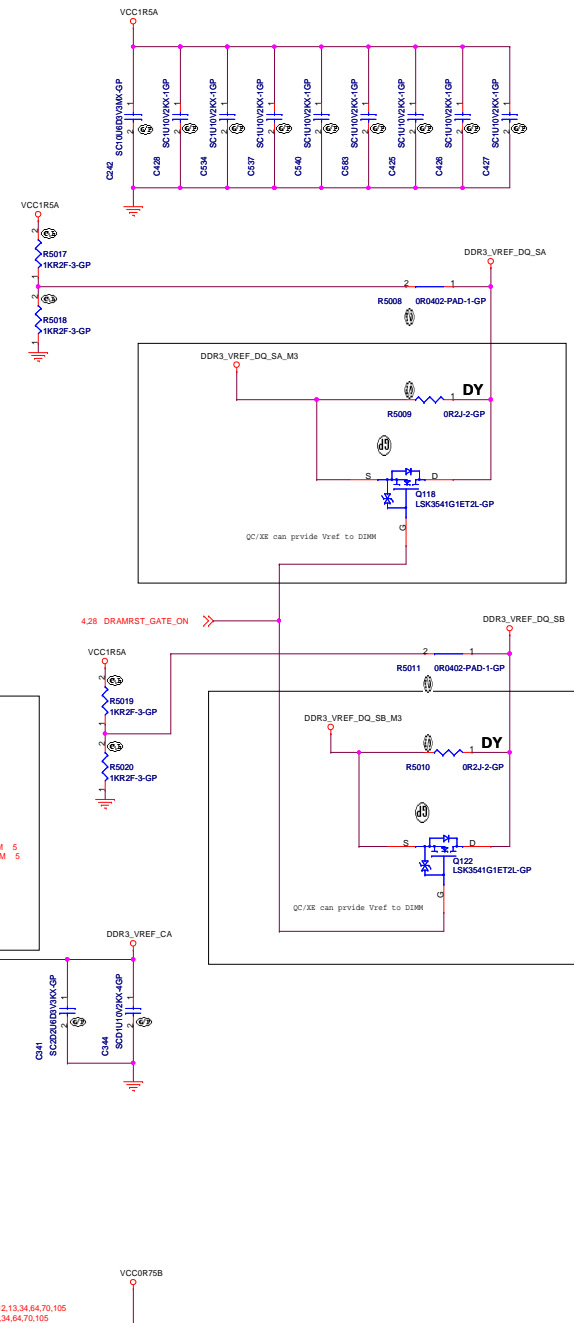
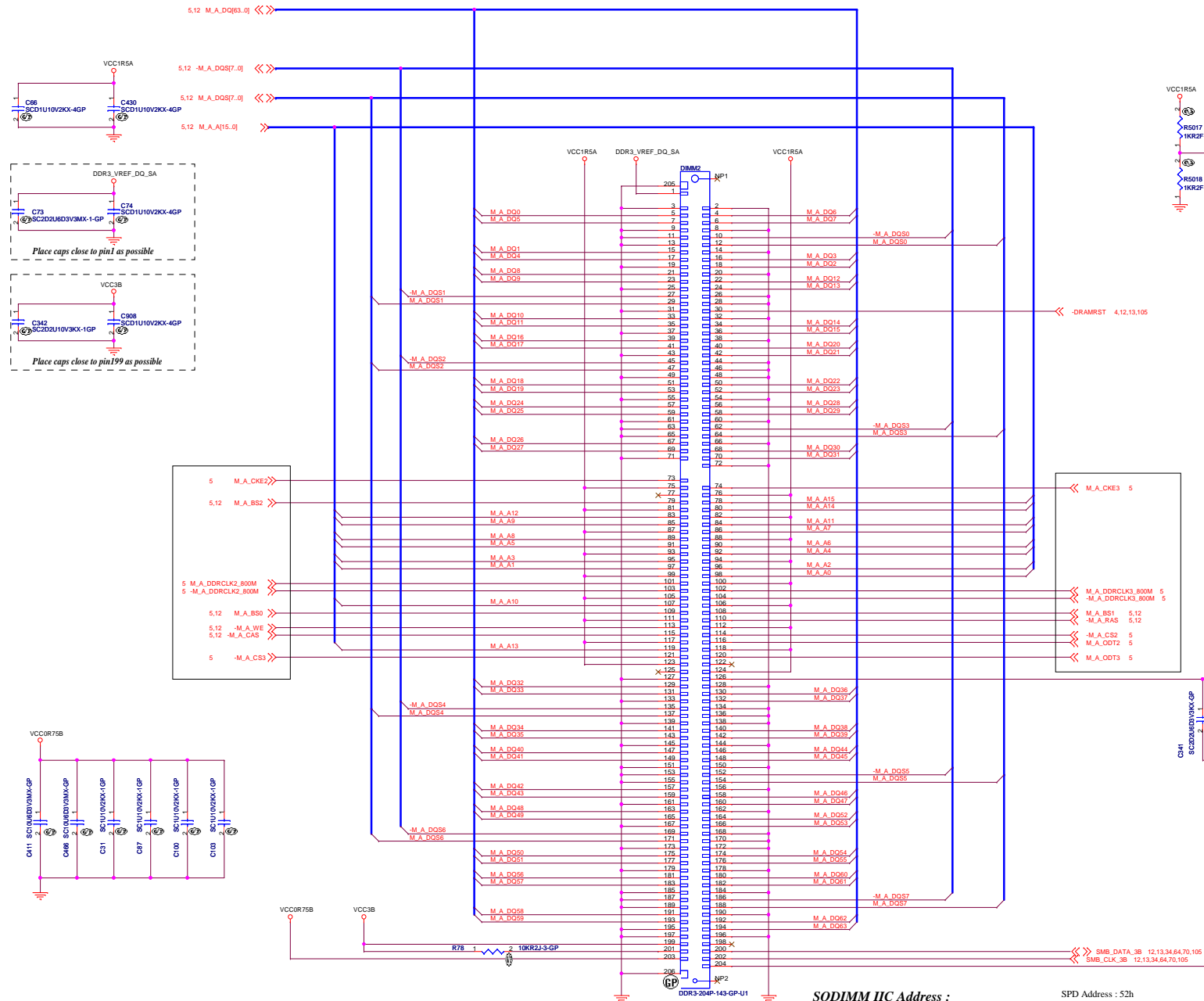
DQx on Secondary slot are swapped to minimize the trace length and manage routing

Keyboard Side



<Variant Name>





SODIMM IIC Address :
CH-A Primary [DIMM4] : 50h
CH-B Primary [DIMM3]: 51h
CH-A Secondary [DIMM2] : 52h
CH-B Secondary [DIMM1]: 53h

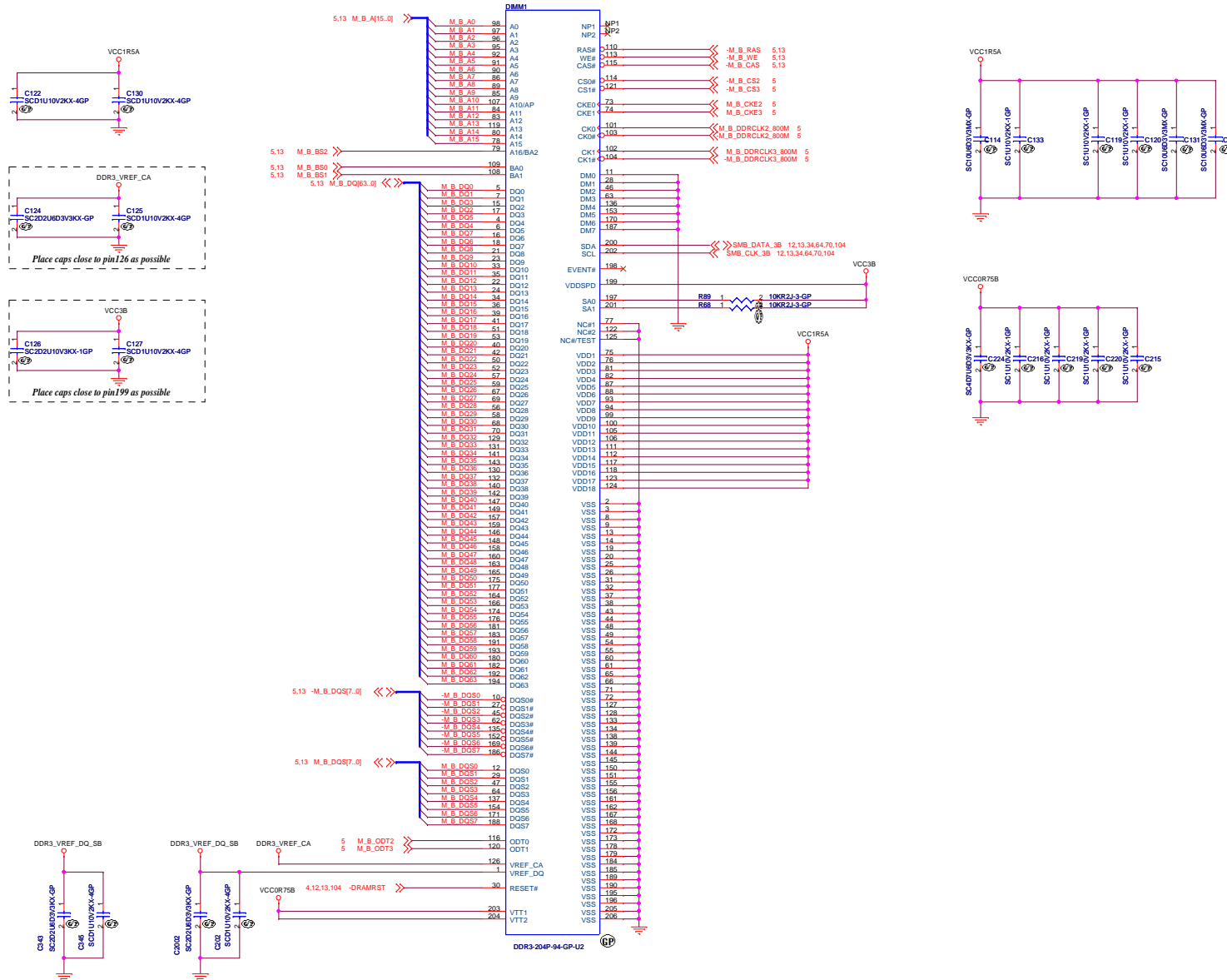
SPD Address : 52h
SA0 [pin 197] : Low
SA1 [pin 201] : High

<Variant Name>

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

Title		
DDR3 SODIMM CH-A Secondary		
Size A2	Document Number	Rev
	Kendo-4 WS	-1
Date:	Friday, March 09, 2012	Sheet 104 of 105

<Variant Name>



SODIMM IIC Address :

CH-A Primary [DIMM4] : 50h

CH-B Primary [DIMM3]: 51h

CH-A Secondary [DIMM2] : 52h

CH-B Secondary [DIMM1]: 53h

SPD Address : 53h
SA0 [pin 197] : High
SA1 [pin 201] : High

Please see SODIMM Configuration in Page 102