

AMD KABINI EA/EG-40/50 PX /UMA Schematics Document AMD FT3 APU AMD GPU SUN XT M2/64bit

EAEG50 KB UMA

緯創資通

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

Title

Cover Page

Size
A4

Document Number

KABINI

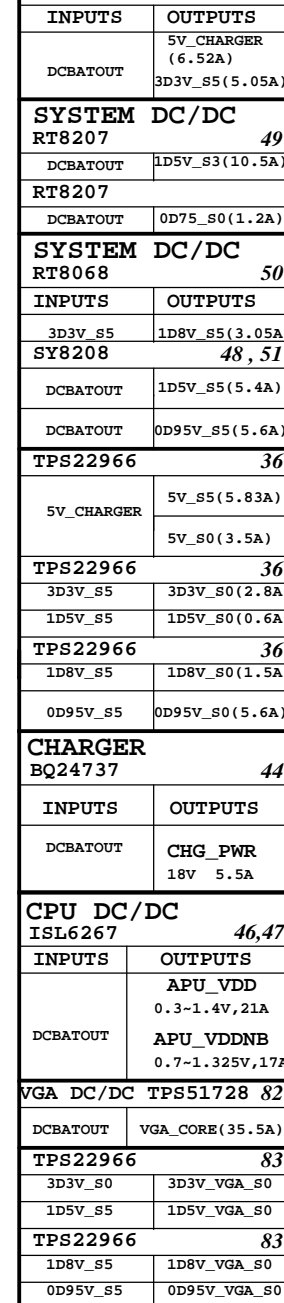
Rev

Date: Wednesday, October 24, 2012

Sheet 1 of 102

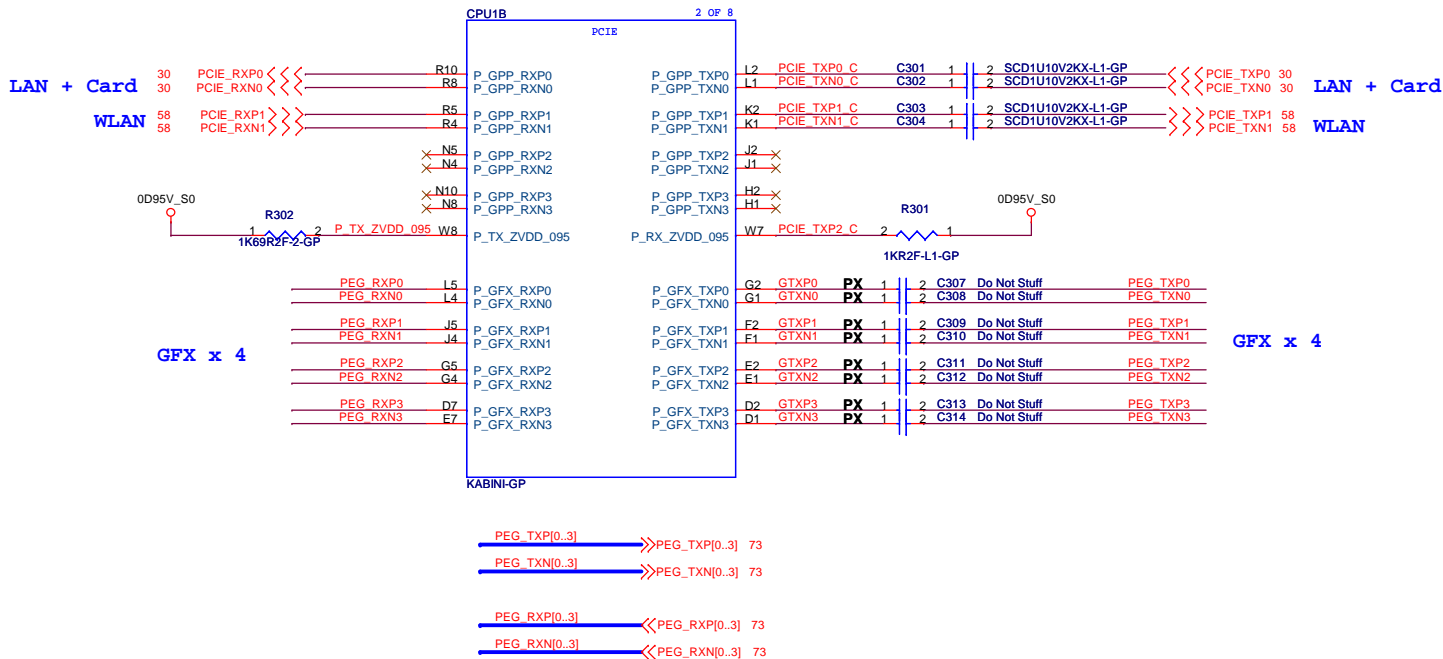
www.qdzbwx.com

SYSTEM DC/DC
TPS51223 45

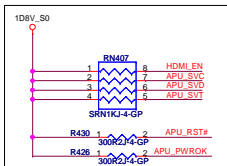


緯創資通 **Wistron Corporation**
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Title			
Block Diagram			
Size A3	Document Number		Rev
KABINI			
Date:	Friday, February 01, 2013	Sheet 2	of 102



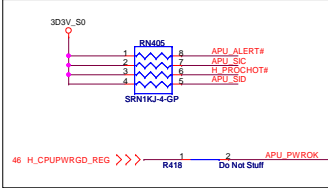
EAEG50 KB UMA



20120821 Follow Larne

TABLE 6. PRE-PWROK METAL VID CODES

SVC	SVD	OUTPUT VOLTAGE (V)
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8

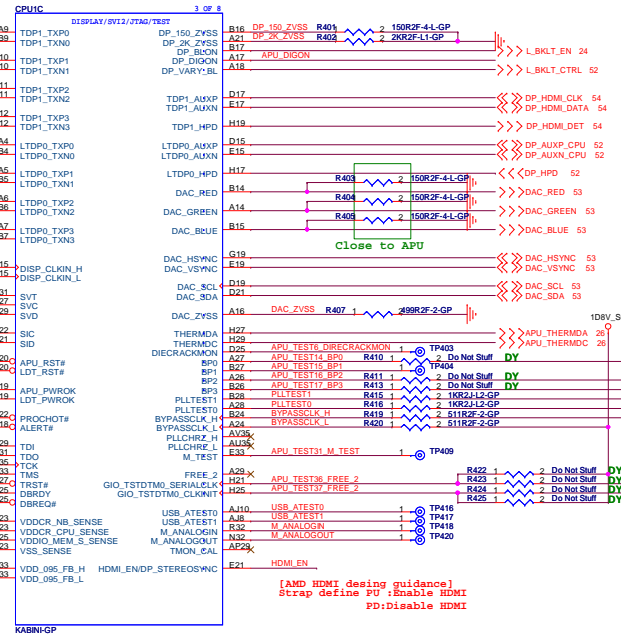
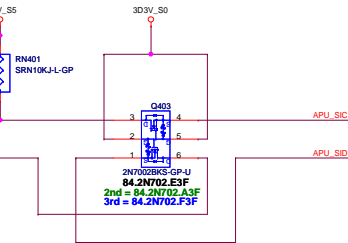


20120820 Follow Larne

APU HDMI

APU EDP

APU core control

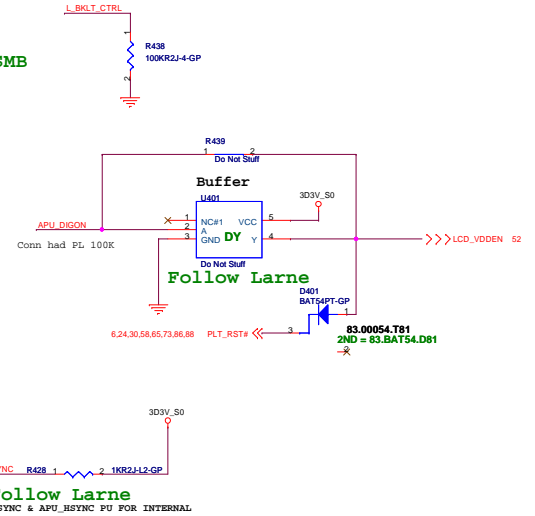


APU EDP

APU HDMI SMB

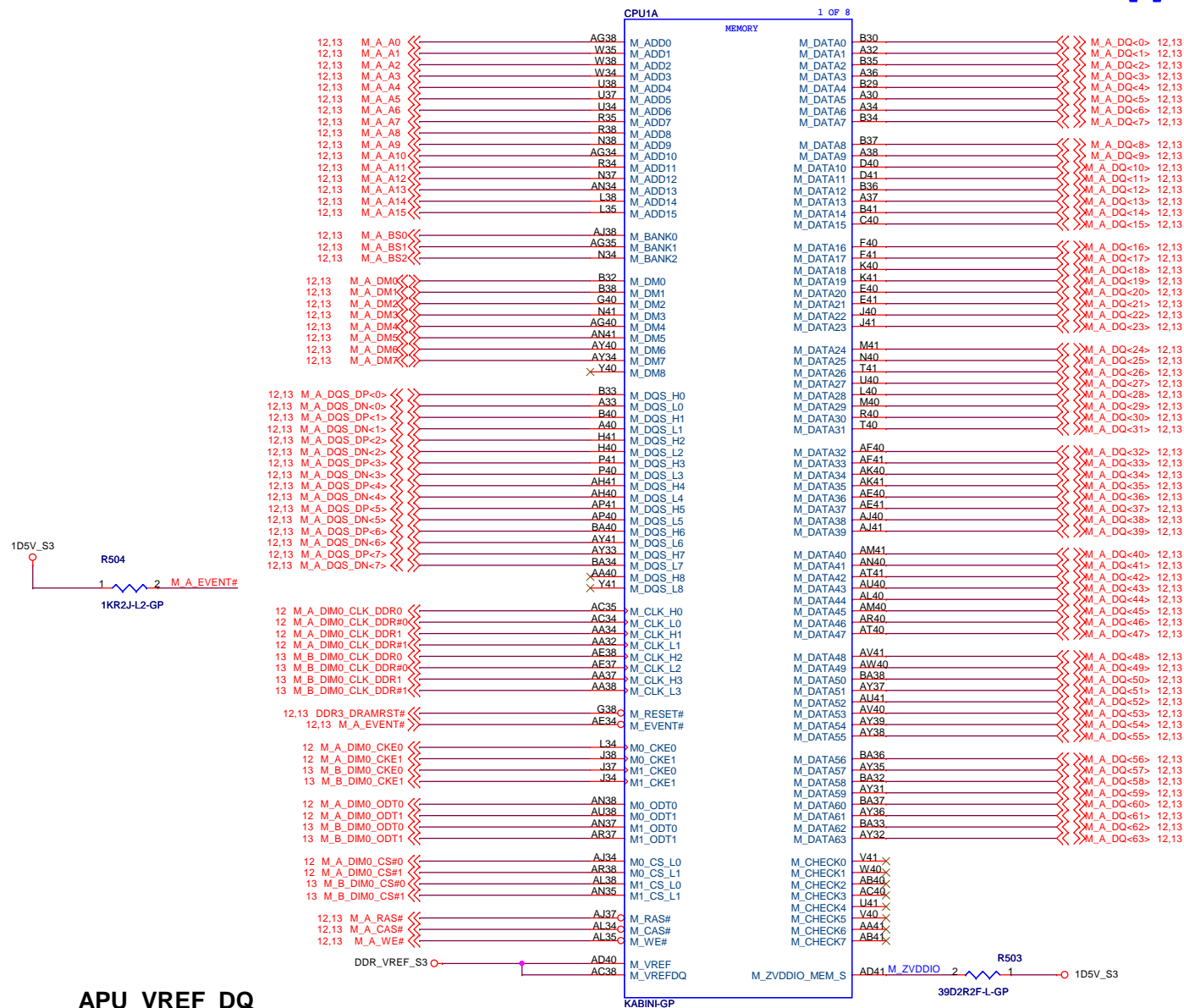
APU EDP

APU CRT

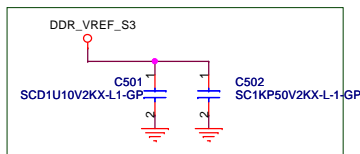


83.00054.T81
2ND = 83.BAT54.D81

Follow Larne
DP_STEREO SYNC & APU_HRTNC PU FOR INTERNAL



APU_VREF_DQ



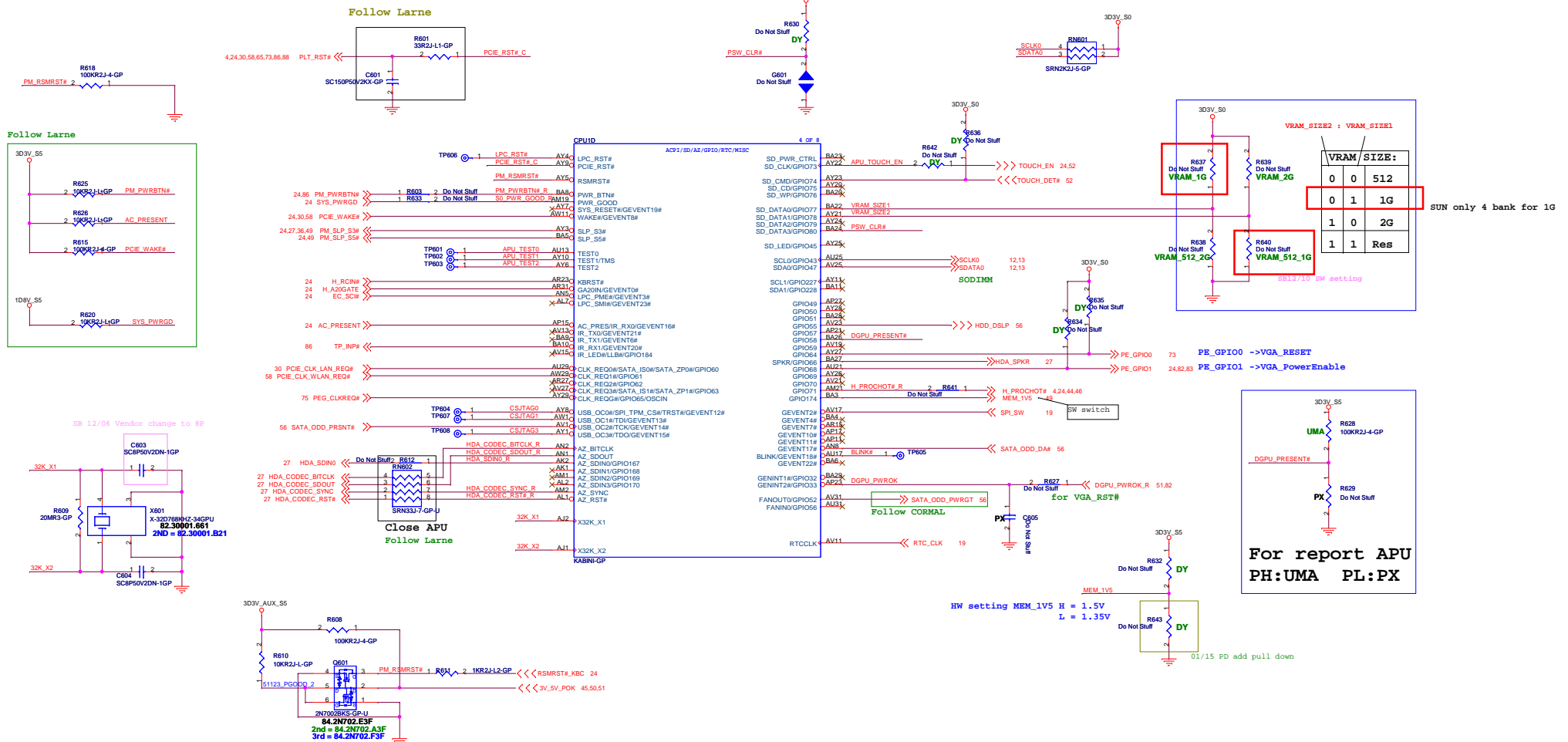
LAYOUT: place them close to APU

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Title		
CPU DDR		
Size	Document Number	Rev
A3	KABINI	
Date:	Monday, February 04, 2013	Sheet 5 of 102

Pass Word Clear





D

D

C

C

B

B

A

A

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Title

CPU VCC GFXCORE

Size
A4

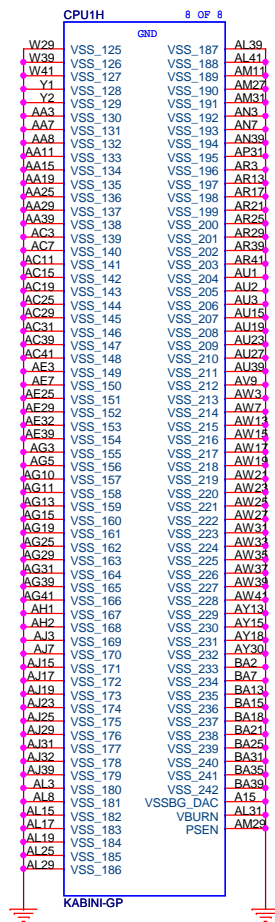
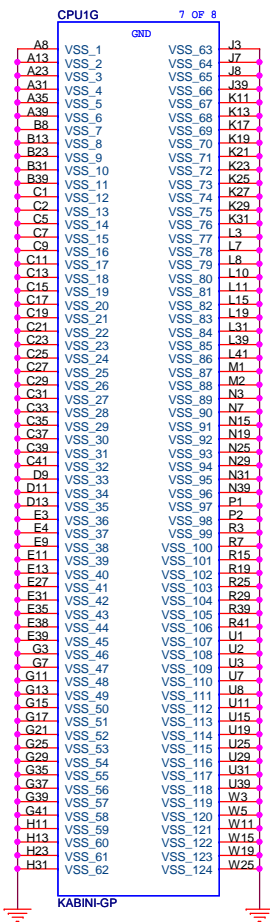
Document Number

KABINI

Rev

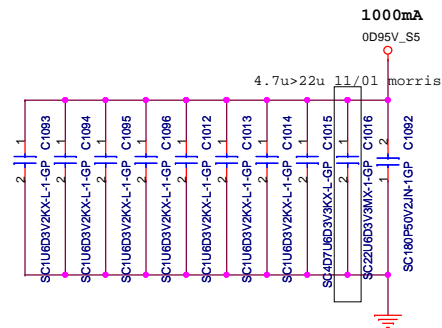
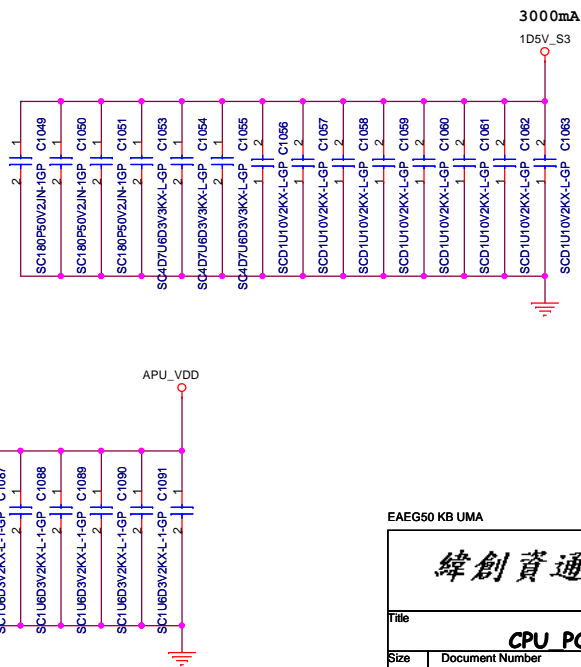
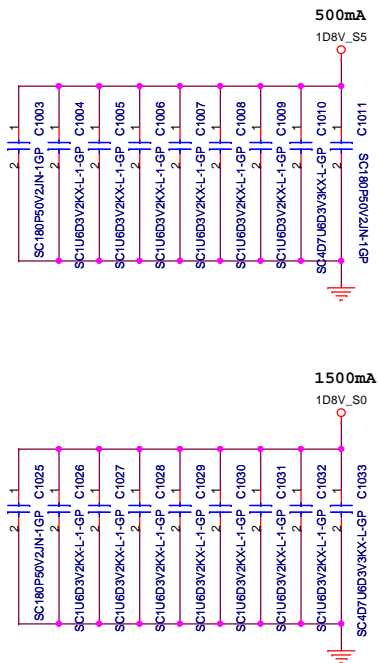
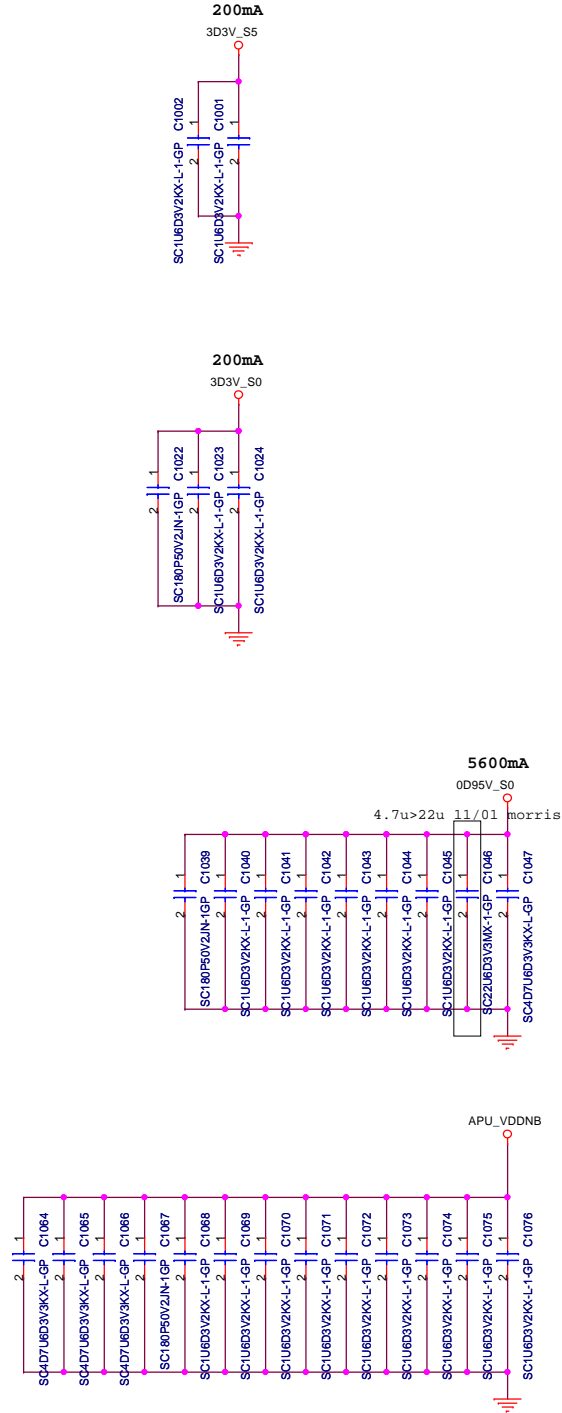
Date: Friday, September 07, 2012

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EAEG50 KB UMA

緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title CPU VSS		
Size A3	Document Number KABINI	Rev
Date: Wednesday, November 28, 2012	Sheet 9 of	102



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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 POWER CAP1		
Size A3	Document Number KABINI	Rev
Date: Tuesday, January 15, 2013	Sheet 10	of 102


5	4	3	2	1
D				D
C				C
B				B
A				A
5	4	3	2	1

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Title		
CPU_POWER CAP2		
Size	Document Number	Rev
A	KABINI	
Date:	Friday, September 07, 2012	Sheet 11 of 102

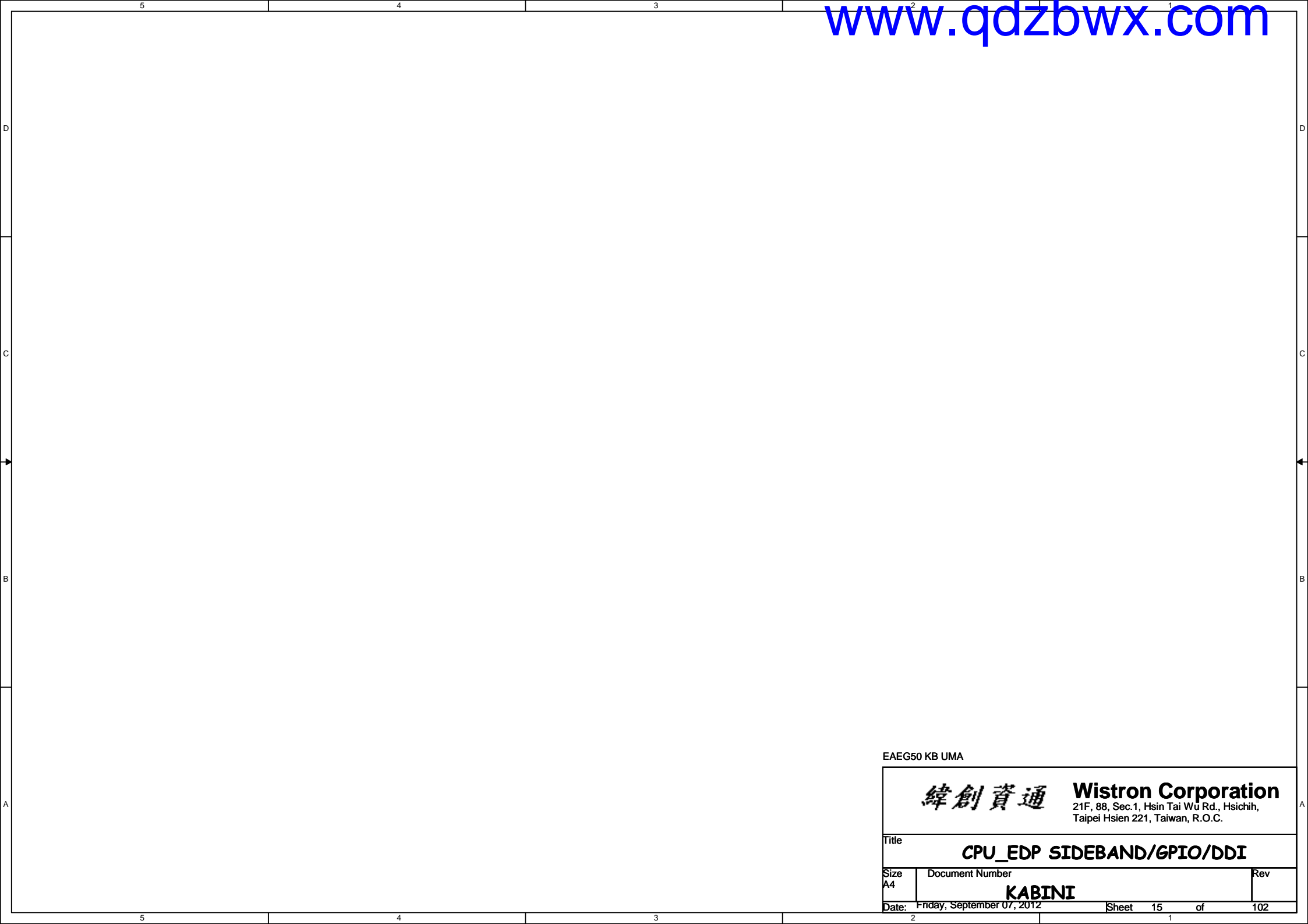
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D																								
C																								
B																								
A																								

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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title DDR3 SODIMM 3			
Size A4	Document Number KABINI		Rev
Date: Friday, September 07, 2012		Sheet 14 of	102

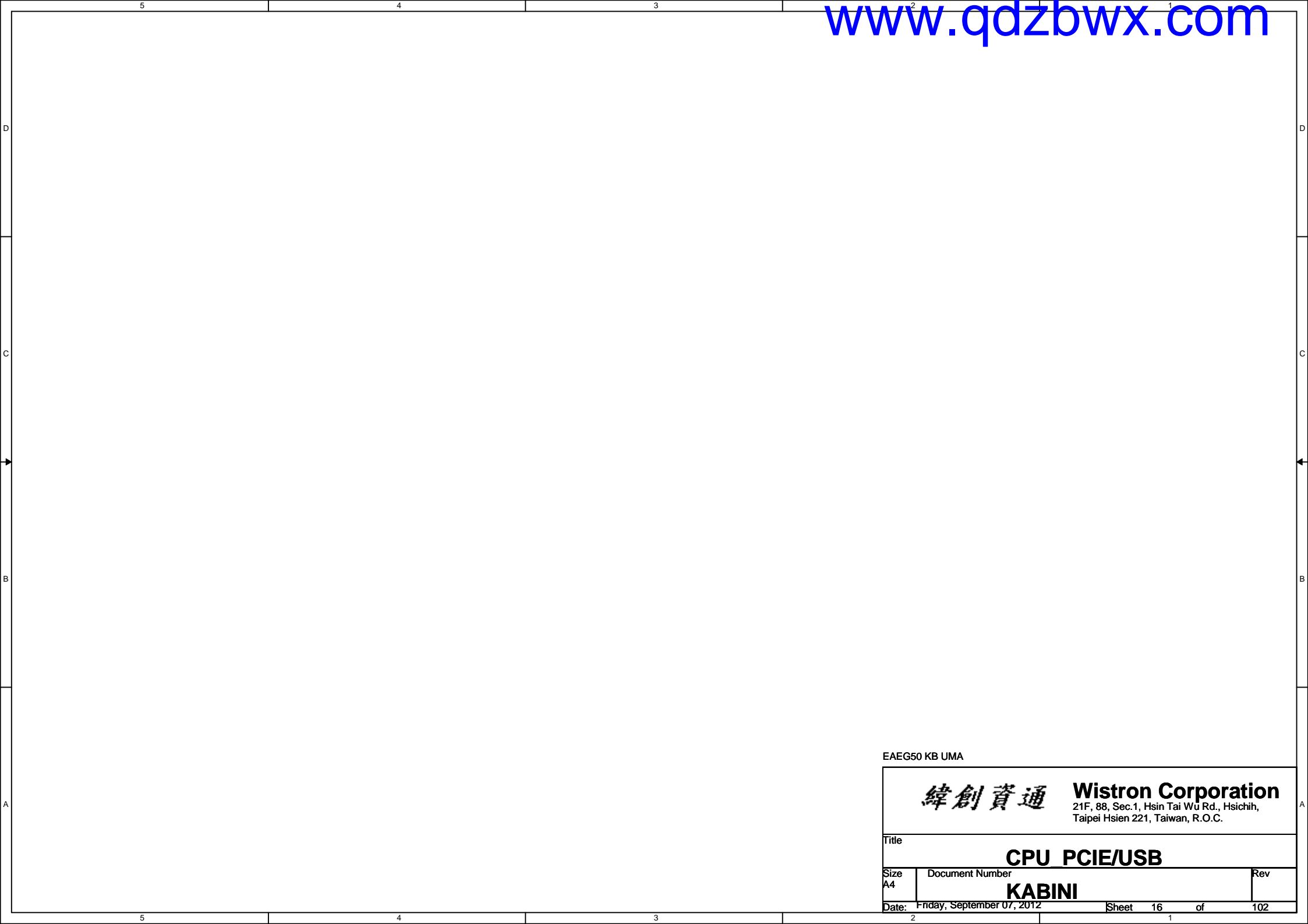
EAEG50 KB UMA

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Title <div>DDR3 SODIMM 3</div>		
Size <div>A4</div>	Document Number <div>KABINI</div>	Rev
Date: Friday, September 07, 2012		Sheet 14 of 102



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Title CPU_EDP SIDEBAND/GPIO/DDI		
Size A4	Document Number KABINI	Rev
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
CPU PCIE/USB			
Size A4	Document Number KABINI		Rev
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D				D
C				C
B				B
A				A
5	4	3	2	1

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Title		
CPU DMI/FDI/PM		
Size	Document Number	Rev
A	KABINI	
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5

4

3

2

1

D

C

B

A

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Title

CPU_PCIE/SMBUS/CLK/CL/SPI

Size A

Document Number

Rev

KABINI

Date: Friday, September 07, 2012

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5

4

3

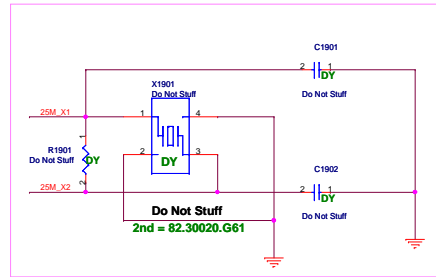
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1

SATA Table

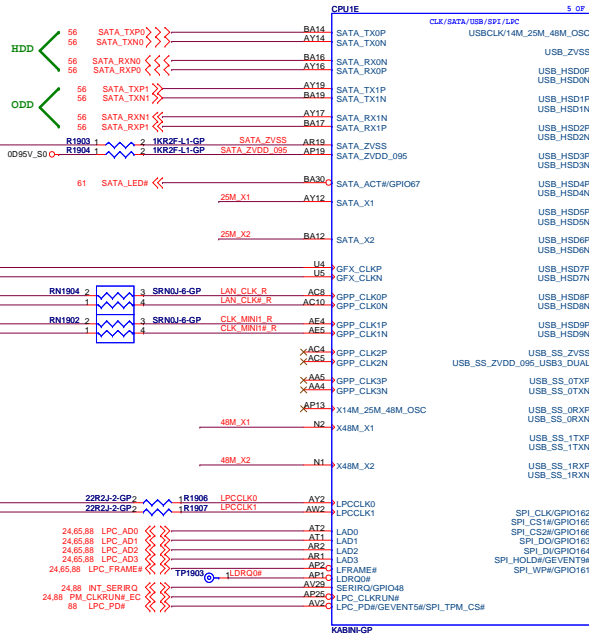
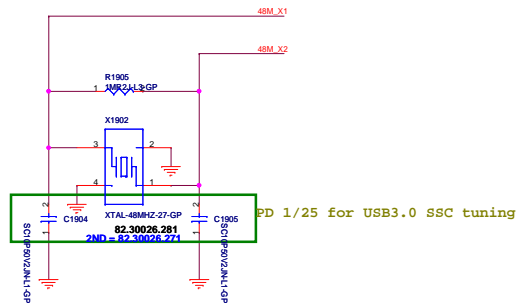
0	HDD
1	ODD

SB 11/27 25M XTAL Reserved for AMD

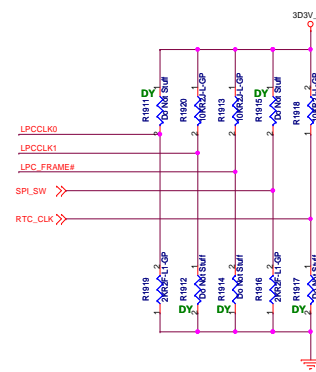


VGA 73 PCIE_CLK_VGA
73 PCIE_CLK_VGA#
Lan + Card Reader 30 PCIE_CLK_LAN
30 PCIE_CLK_LAN#
WLAN 58 PCIE_CLK_WLAN
58 PCIE_CLK_WLAN#

KBC 24.88 CLK_PCLKBC
65.88 CLK_PCLKBC
DBB/TPM



SYSTEM STRAPPINGS

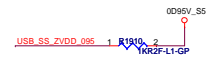


USB Table

Pair	Device
0	USB2.0 Debug (DB Conn)
1	USB2.0 (DB Conn)
2	Touch Panel
3	
4	CCD (CCD Conn)
5	WLAN + BT (Mini PCI-E)
6	
7	
0/8	USB3.0 & USB 2.0 Charger (NB)
1/9	

Xtal Table

	System & USB	CLK
0	RTC	48M
1	SATA	32.768K
2	LAN	25M
3	LAN	25M
4	VGA	27M



SPI SHARE ROM

	LPC_CLK0	LPC_CLK1	LFRAME#	EXPCARD_PCIE_PWREN#	RTC_CLK
FULL	BOOT FAIL TIMER ENABLED	CLNGEN ENABLED	SPI ROM	1.0V SPI ROM (DEFAULT)	NORMAL POWR UP/RESET TIMING (DEFAULT)
HIGH		DEFAULT	DEFAULT		
FULL	BOOT FAIL TIMER DISABLED	CLNGEN DISABLED	LPC ROM	3.0V SPI ROM	FAST POWER UP/RESET TIMING FOR SIMULATION
LOW	DEFAULT				

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Title

CPU GPIO/MISC

Size
A4

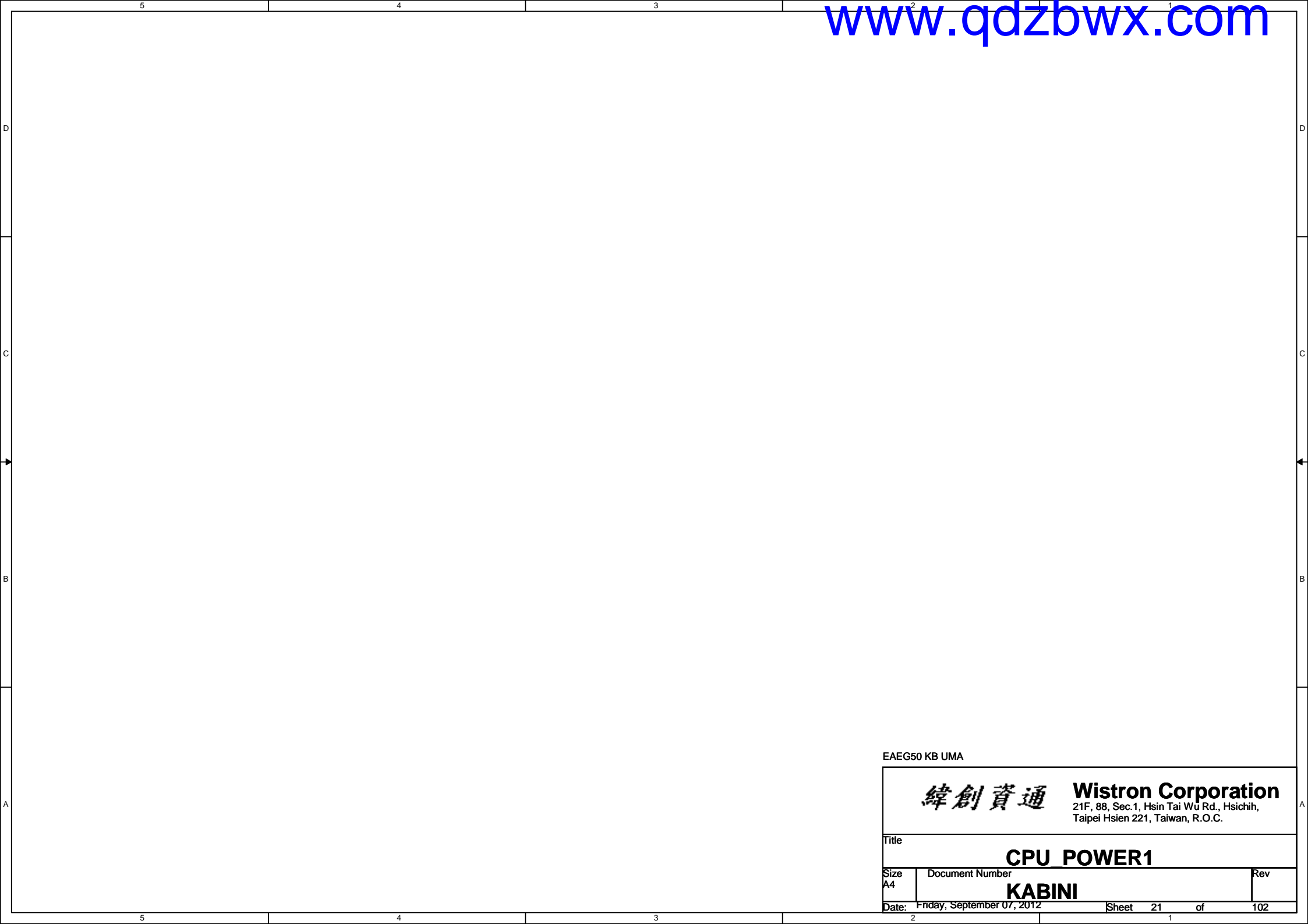
Document Number

KABINI

Rev

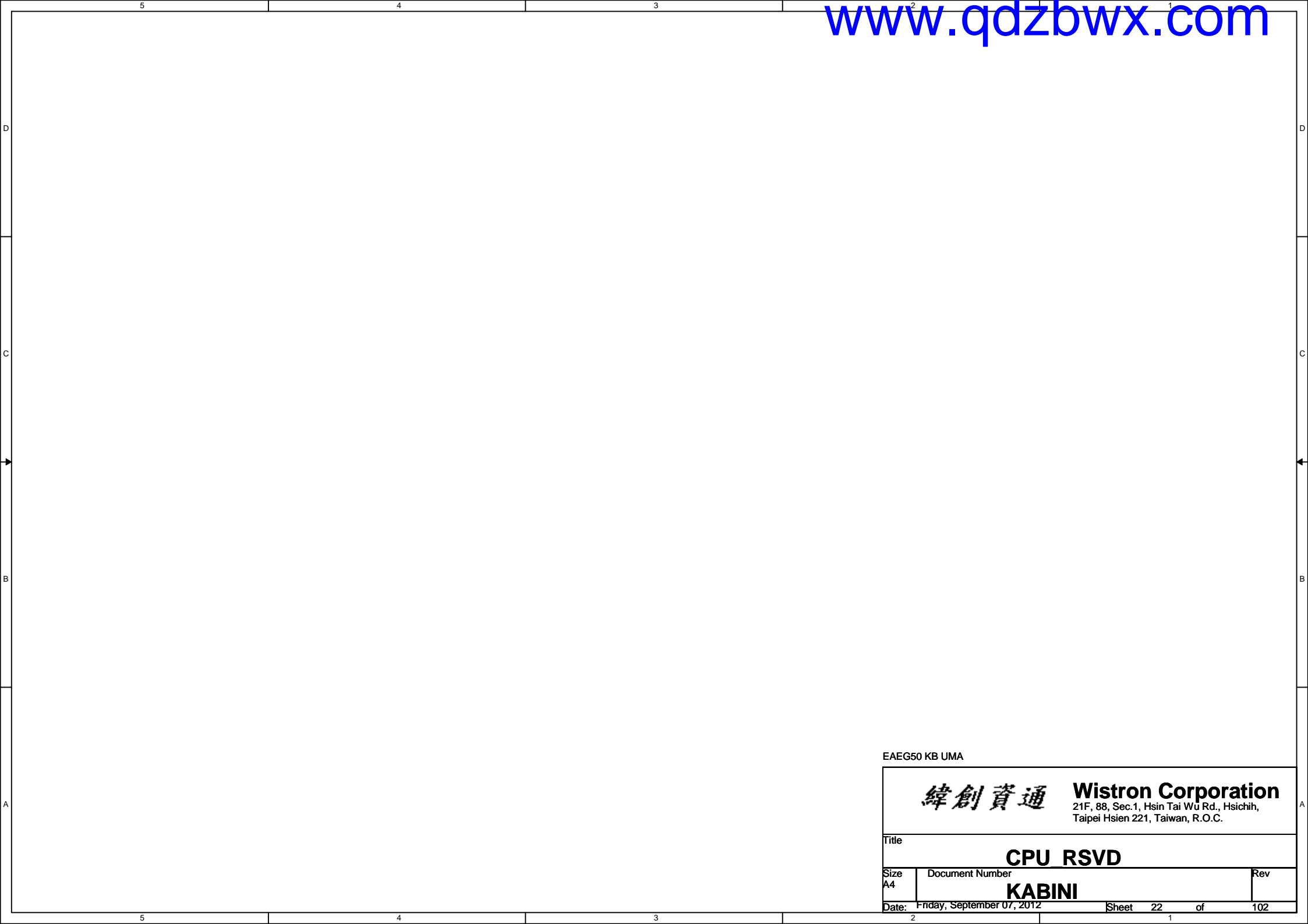
Date: Friday, September 07, 2012

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Title		
CPU POWER1		
Size	Document Number	Rev
A4	KABINI	
Date: Friday, September 07, 2012		Sheet 21 of 102



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Title		
CPU RSVD		
Size	Document Number	Rev
A4	KABINI	
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Title

CPU VSS

Size
A4

Document Number

KABINI

Rev

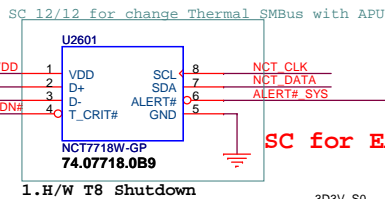
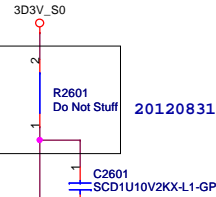
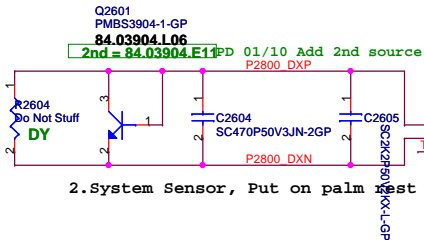
Date: Friday, September 07, 2012

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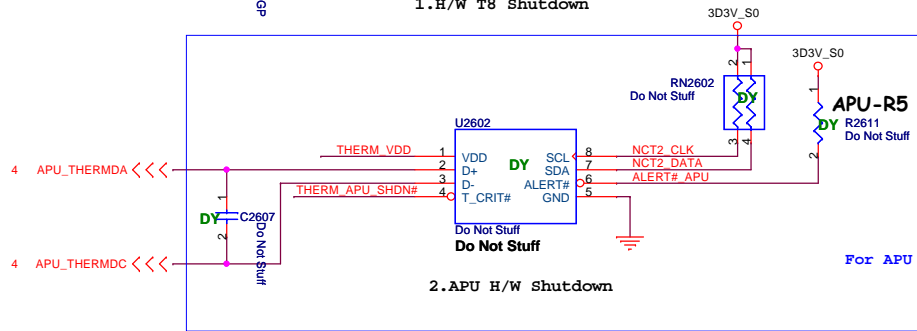
SSID = Thermal

Thermal sensor NCT 7718W

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



SC for EA50 & EA40: 74.83771.ABG



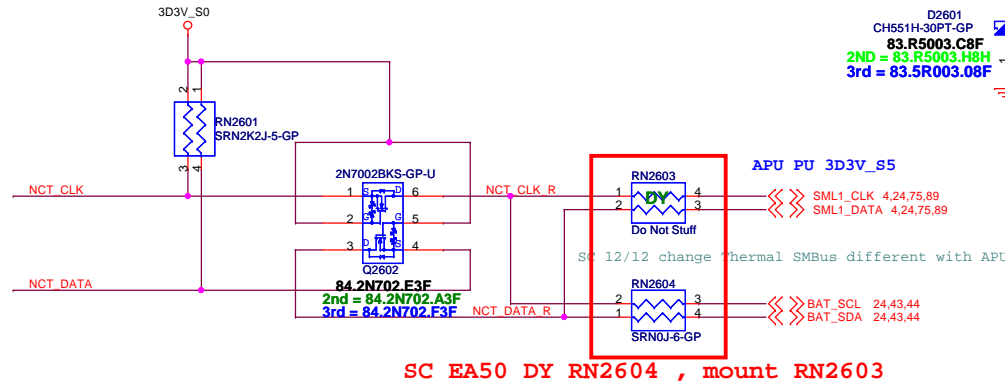
24,36 PURE_HW_SHUTDOWN# <<<

ALERT# /T CRIT#
Pull-up Resistor

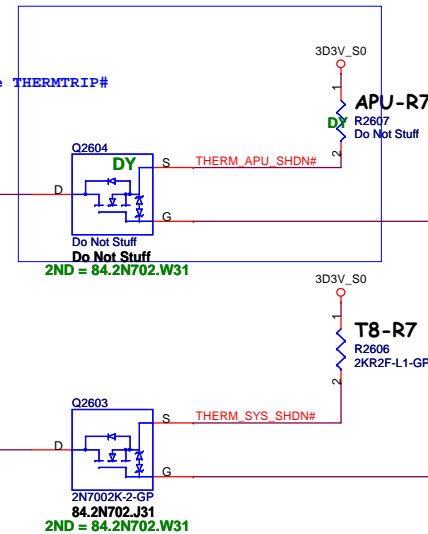
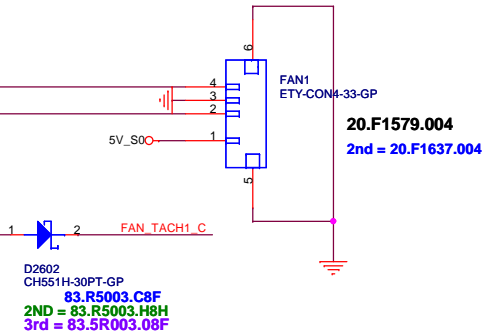
R5	2Kohm	7.5Kohm	10.5Kohm	14Kohm	18.7Kohm
77°C	87°C	97°C	107°C	117°C	
79°C	89°C	99°C	109°C	119°C	
81°C	91°C	101°C	111°C	121°C	
83°C	93°C	103°C	113°C	123°C	
85°C	95°C	105°C	115°C	125°C	

T_CRIT temperature strapping point

T8=85 degree
SYS=85 degree
APU=125 degree



24,86 FAN1_PWM >>>
86 FAN_TACH1_C >>>
For AFTE




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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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Title Thermal 7718/Fan Controller P2793
Size Project Name KABINI Rev SA
Date: Monday, February 04, 2013 Sheet 26 of 102



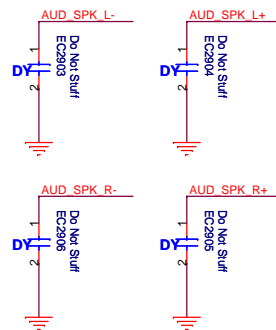
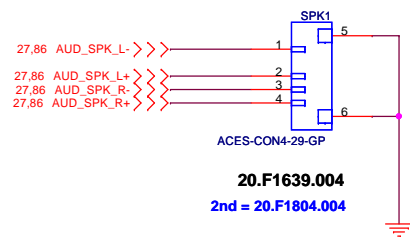
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title AMP ALC1001			
Size	Project Name KABINI		Rev SA
Date:	Friday, September 07, 2012	Sheet 28 of 102	

SSID = AUDIO

Speaker

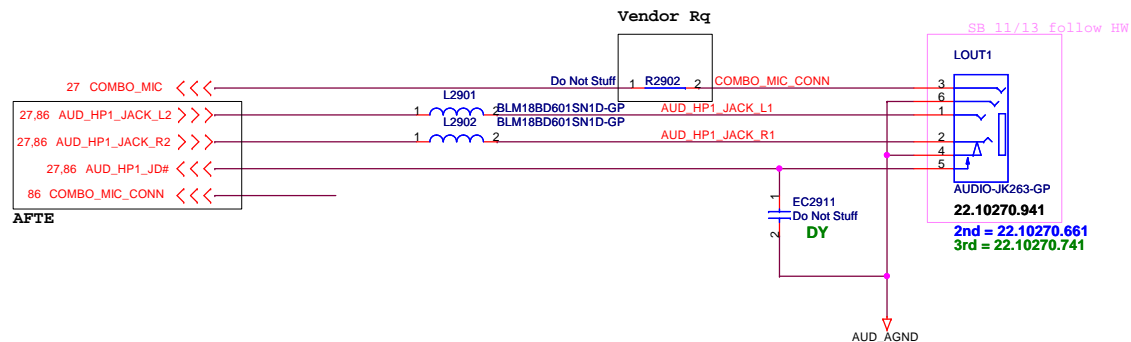
2W 4ohm X 2 speaker



Layout Note:

Trace width=40mil

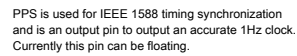
Combo Jack



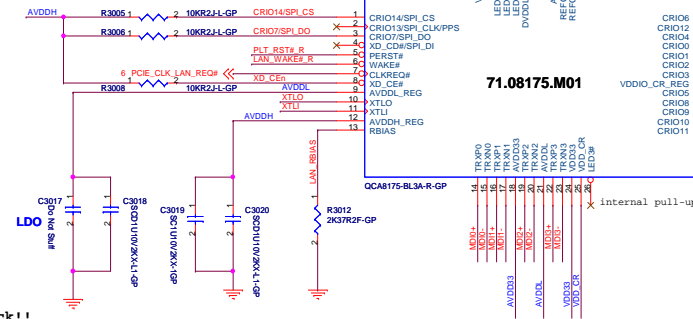
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Title		Audio Jack	
Size	Project Name	KABINI	
Date: Monday, February 04, 2013	Sheet	29	of 102
Rev		SA	

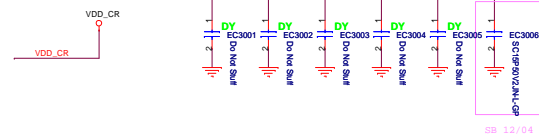
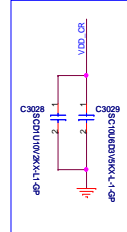
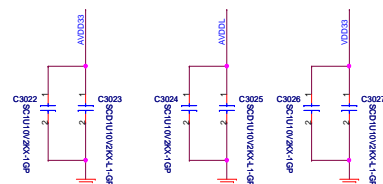
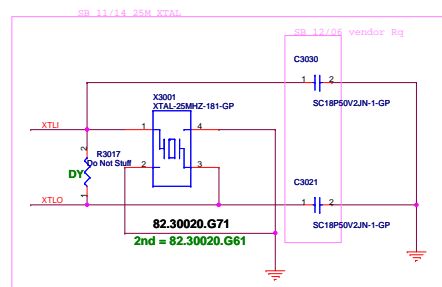


Pin	Description
LED[1]	1 Switch mode regulator (SWR) select
	0 Linear regulator (LDO) select
LED[3]	1 25MHz clock input
	0 48MHz clock input
[CRIO14, CRIO7]	10 <ul style="list-style-type: none"> 1. Support xD, not support SPI. 2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFuse.
	01 <ul style="list-style-type: none"> 1. Support SPI, not support SPI. 2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFuse.
	11 <ul style="list-style-type: none"> 1. Not support xD, not support SPI. 2. Only Support PPS, PPS always at CRIO13.



ISOLATn is active low to isolate the whole chip to place in lowest power consumption mode.

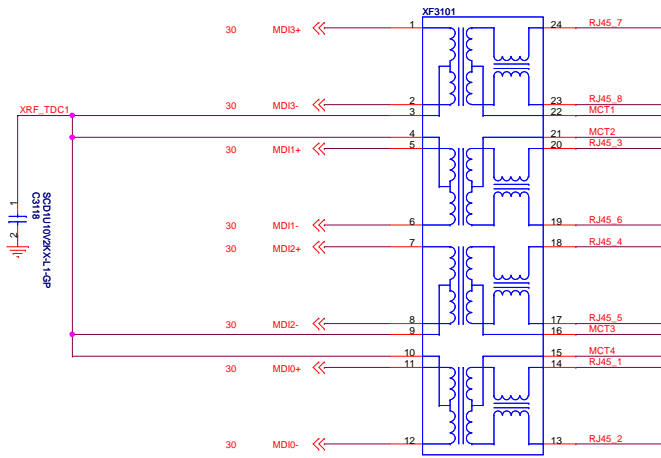
place at chip side FAE suggest



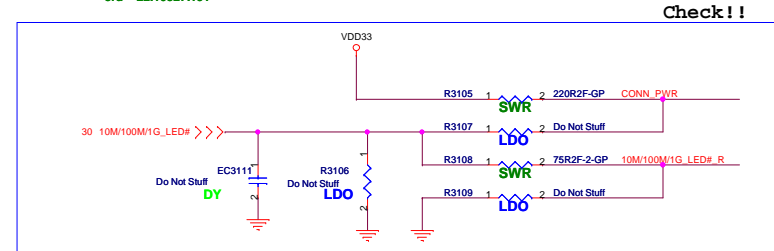
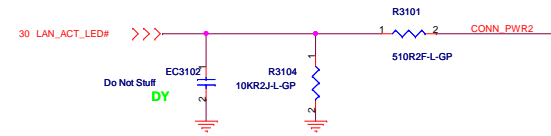
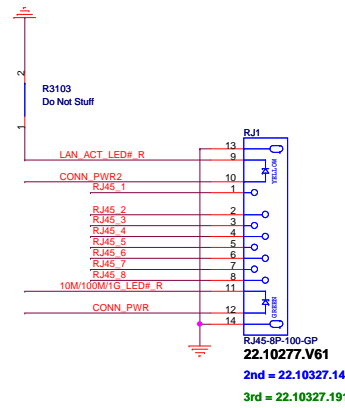
SB 12/04 vendor Rq mount

MD13-	}}	}}	MD13-	31
MD13+			MD13+	31
MD12-	}}	}}	MD12-	31
MD12+			MD12+	31
MD11-	}}	}}	MD11-	31
MD11+			MD11+	31
MD10-	}}	}}	MD10-	31
MD10+			MD10+	31

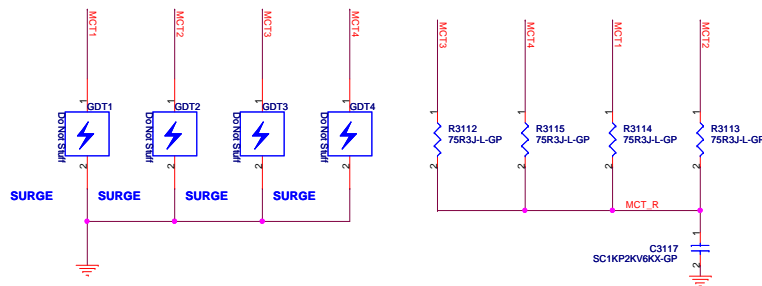
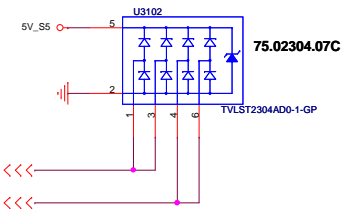
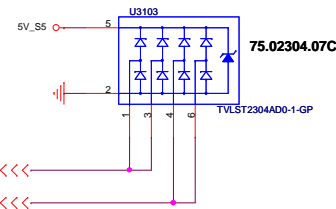
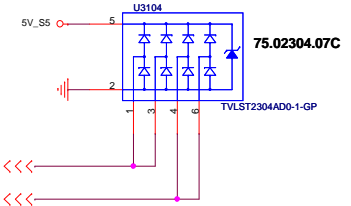
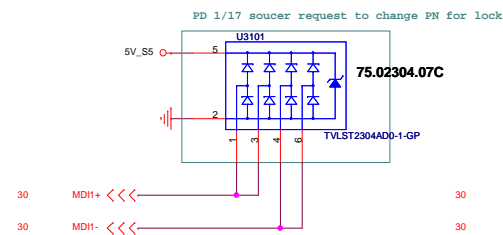
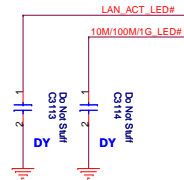
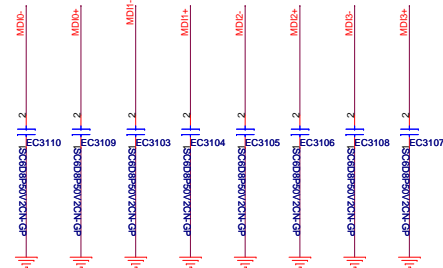
SSID = LAN



XFORM-270-GP-U
68.69241.301
2nd = 68.1115.30A
3rd = 68.00069.30A



Check!!



```

86 RJ45_1 >>>
86 RJ45_2 >>>
86 RJ45_3 >>>
86 RJ45_4 >>>
86 RJ45_5 >>>
86 RJ45_6 >>>
86 RJ45_7 >>>
86 RJ45_8 >>>


86 LAN_ACT_LED#_R >>>
10M/100M/1G_LED#_R >>>
86 CONN_PWR >>>
86 CONN_PWR2 >>>

```

For AFTE

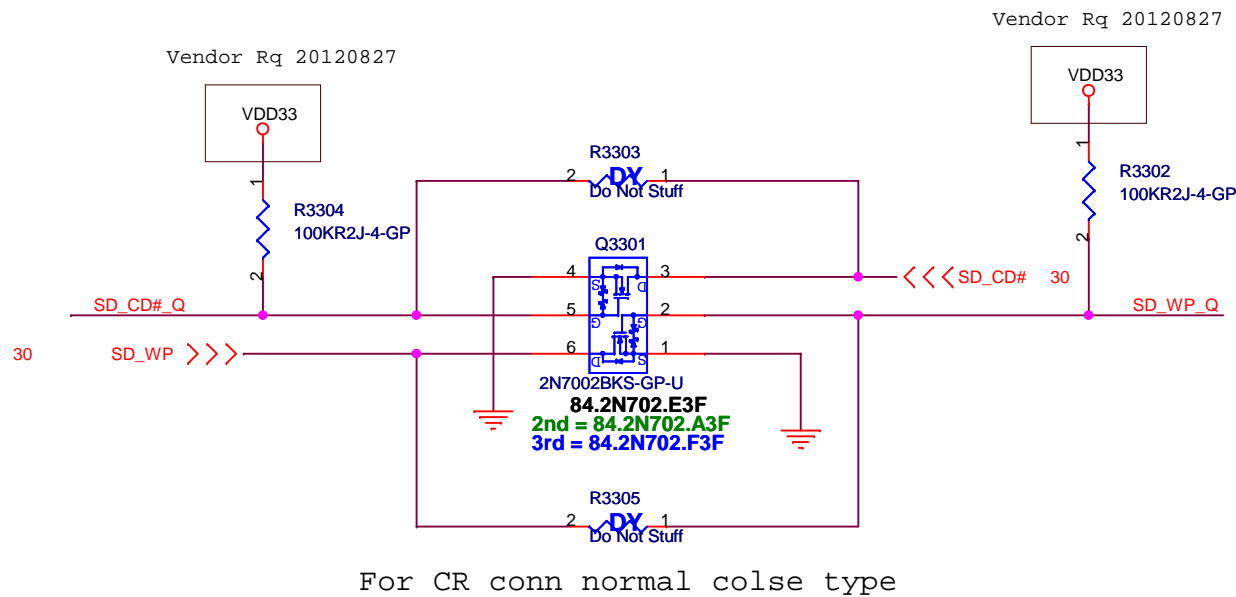
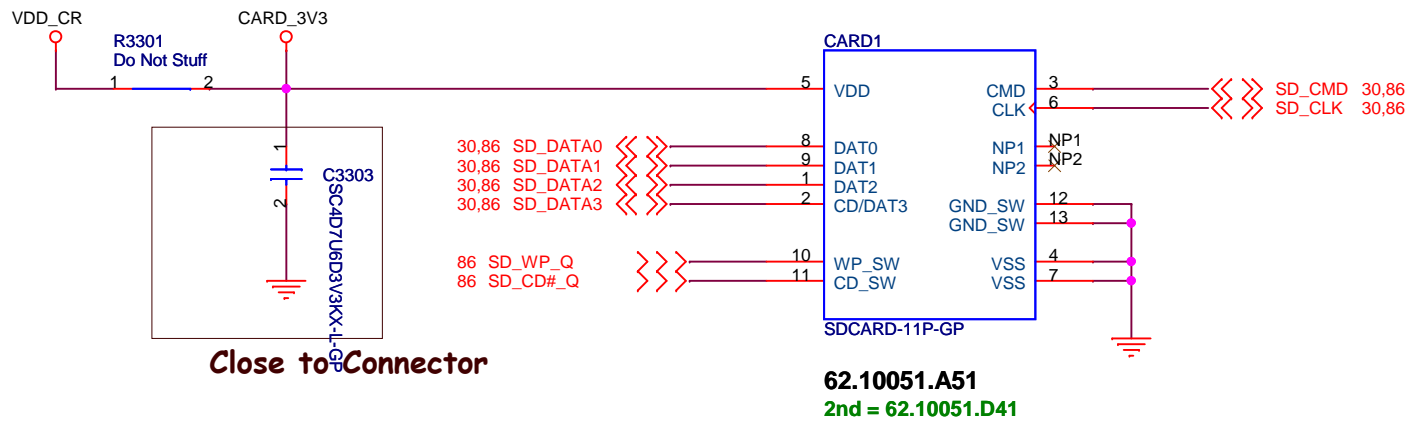


EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Card Reader IC			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet 32 of 102	

SSID = SDIO

SD//MS Card Reader



EAEG50 KB UMA

緯創資通

Wistron Corporation

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

Title

CARD Reader CONN

Size

Project Name

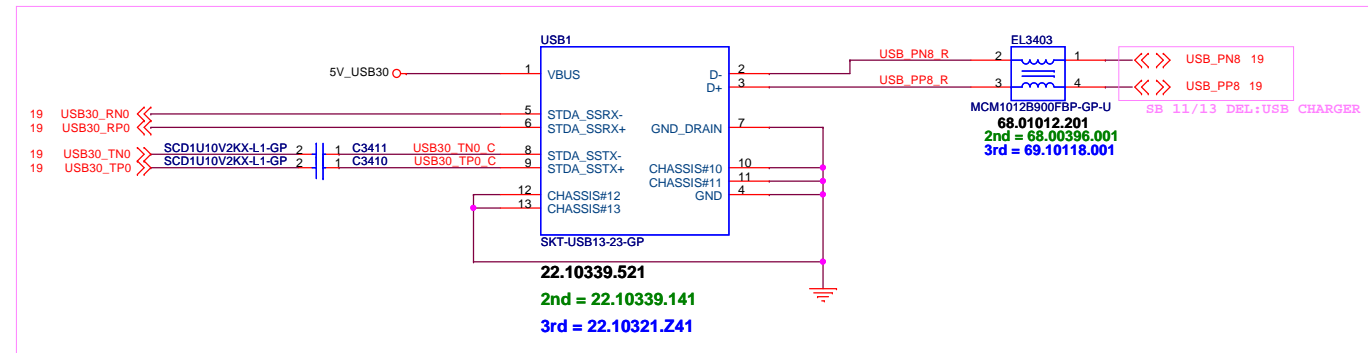
KABINI

Rev
SA

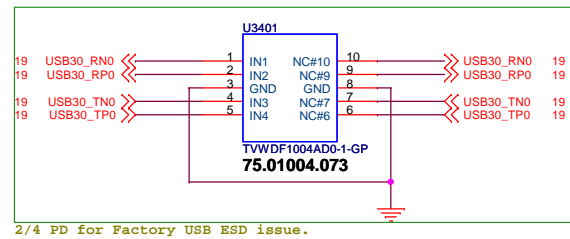
Date: Monday, February 04, 2013

Sheet 33 of 102

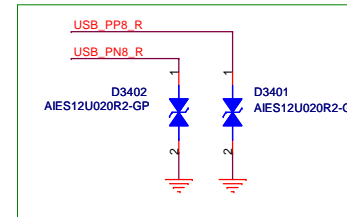
USB 2.0 CONTACT PIN		USB 3.0 CONTACT PIN	
PIN NO.	SIGNAL NAME	PIN NO.	SIGNAL NAME
1	VBUS	5	StdA_SSRX-
2	D-	6	StdA_SSRX+
3	D+	7	GND_DRAIN
4	GND	8	StdA_SSTX-
		9	StdA_SSTX+



SB 11/13 Change USB30 P/N



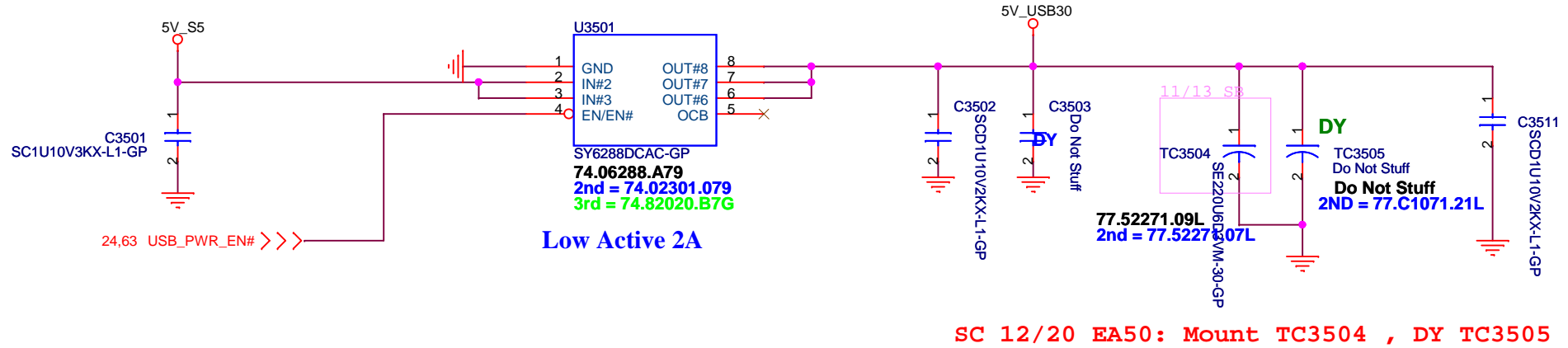
2/4 PD for Factory USB ESD issue.



1/28 PD for Factory USB ESD issue.

EAEG50 KB UMA

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
USB 3.0 Port			
Size	Project Name	Rev	
	KABINI	SA	
Date: Monday, February 04, 2013		Sheet 34 of 102	



EAEG50 KB UMA

緯創資通

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

Title

USB_Charger

Size

Project Name

KABINI

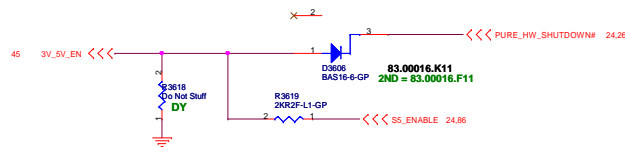
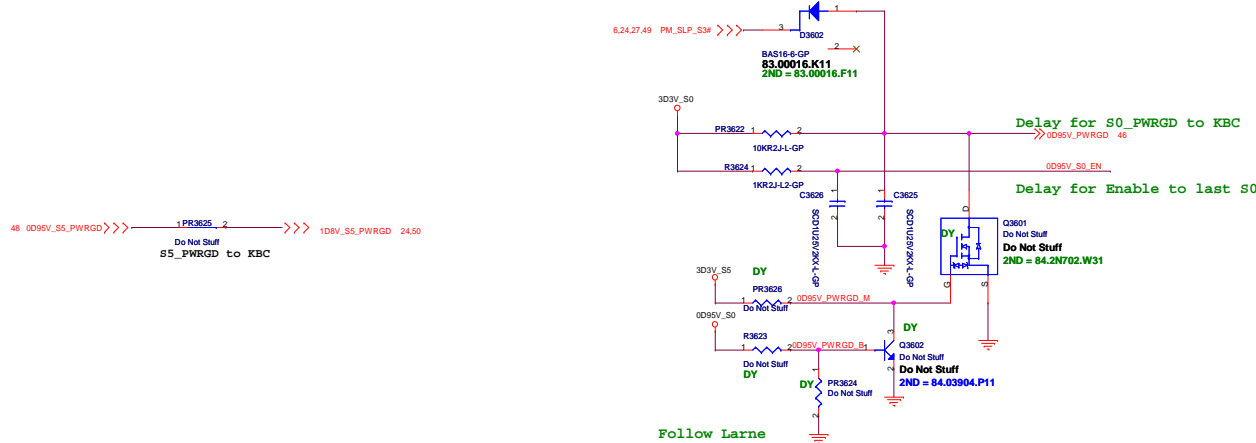
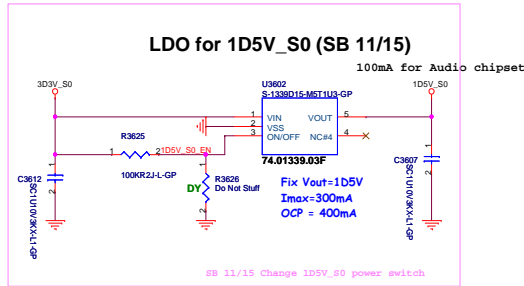
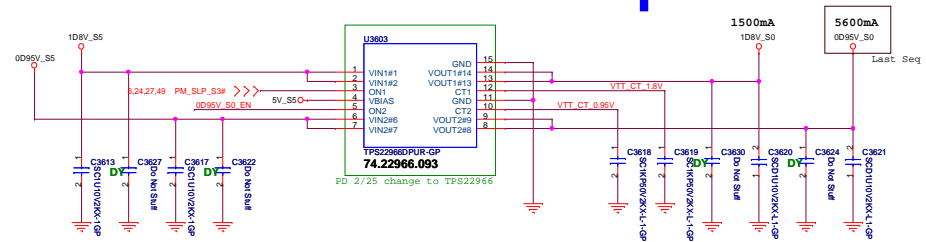
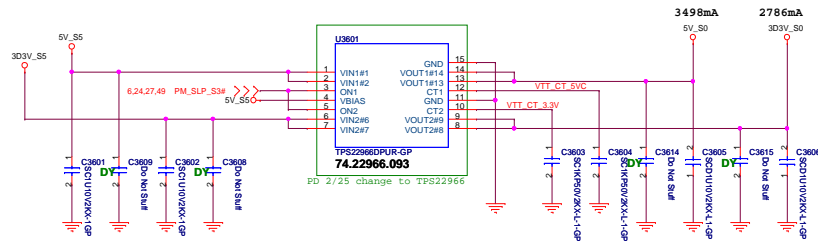
Rev

SA

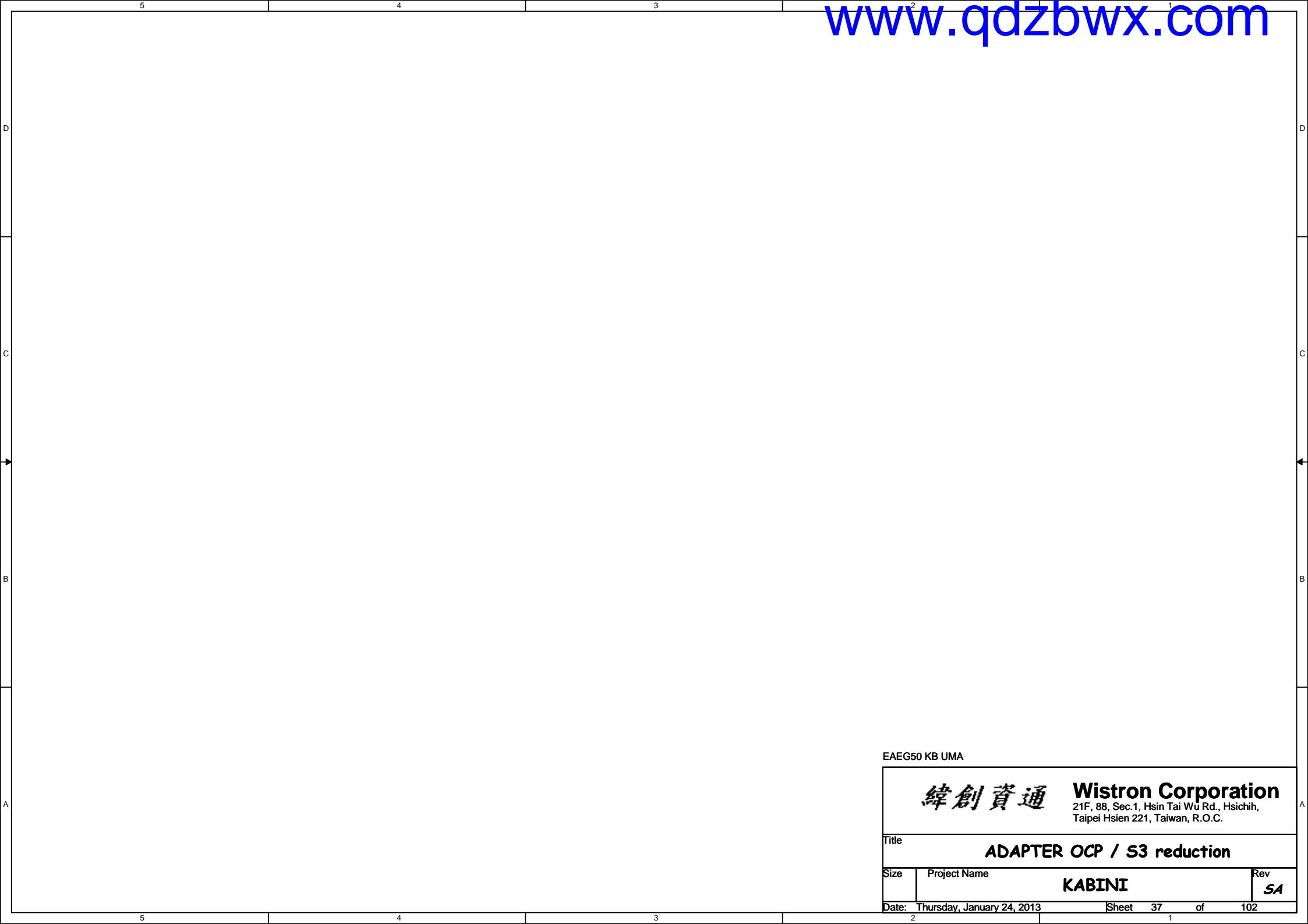
Date: Monday, February 04, 2013

Sheet 35 of 102

Power Sequence

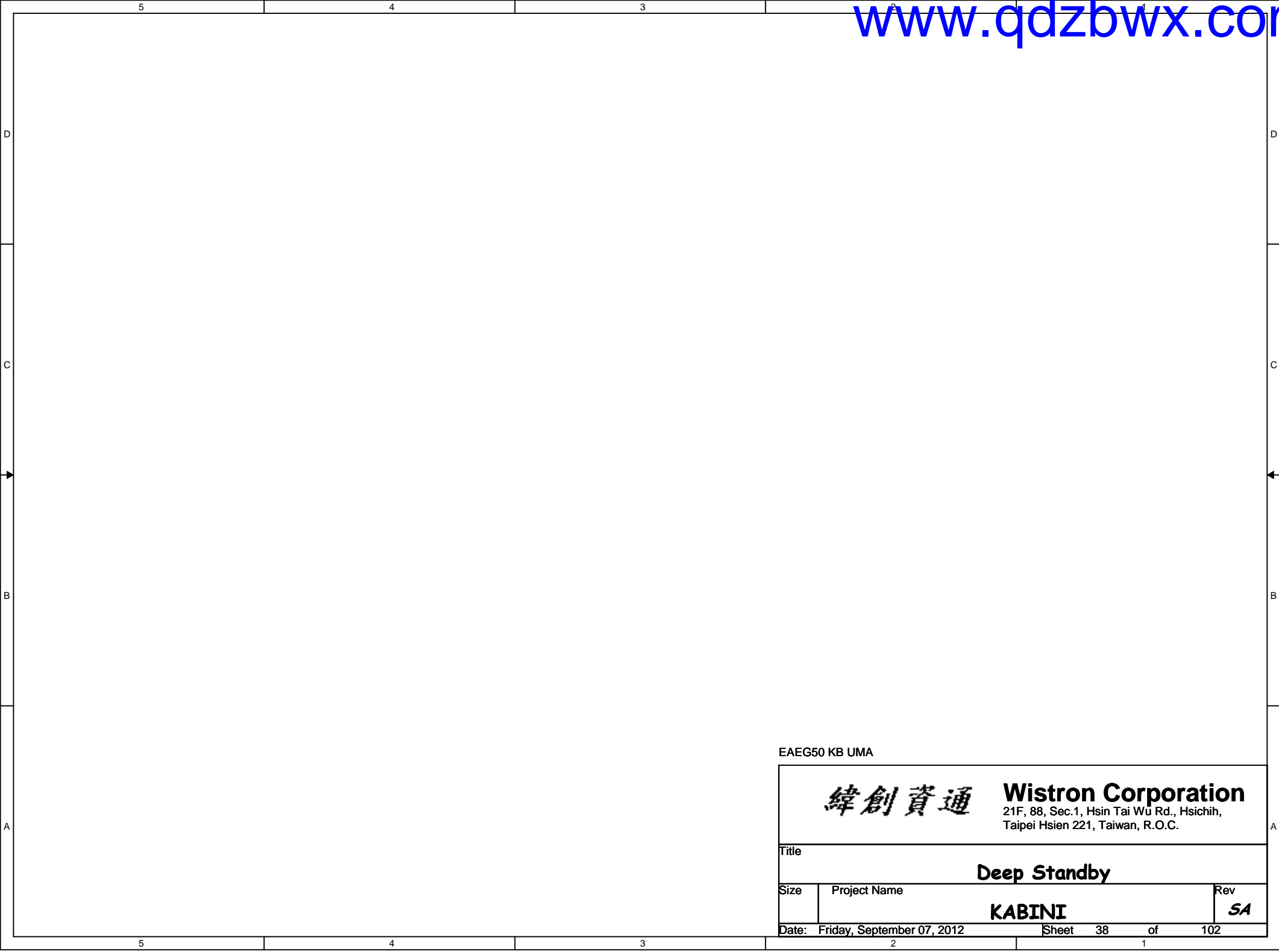


EAE650 KB UIM

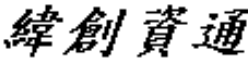


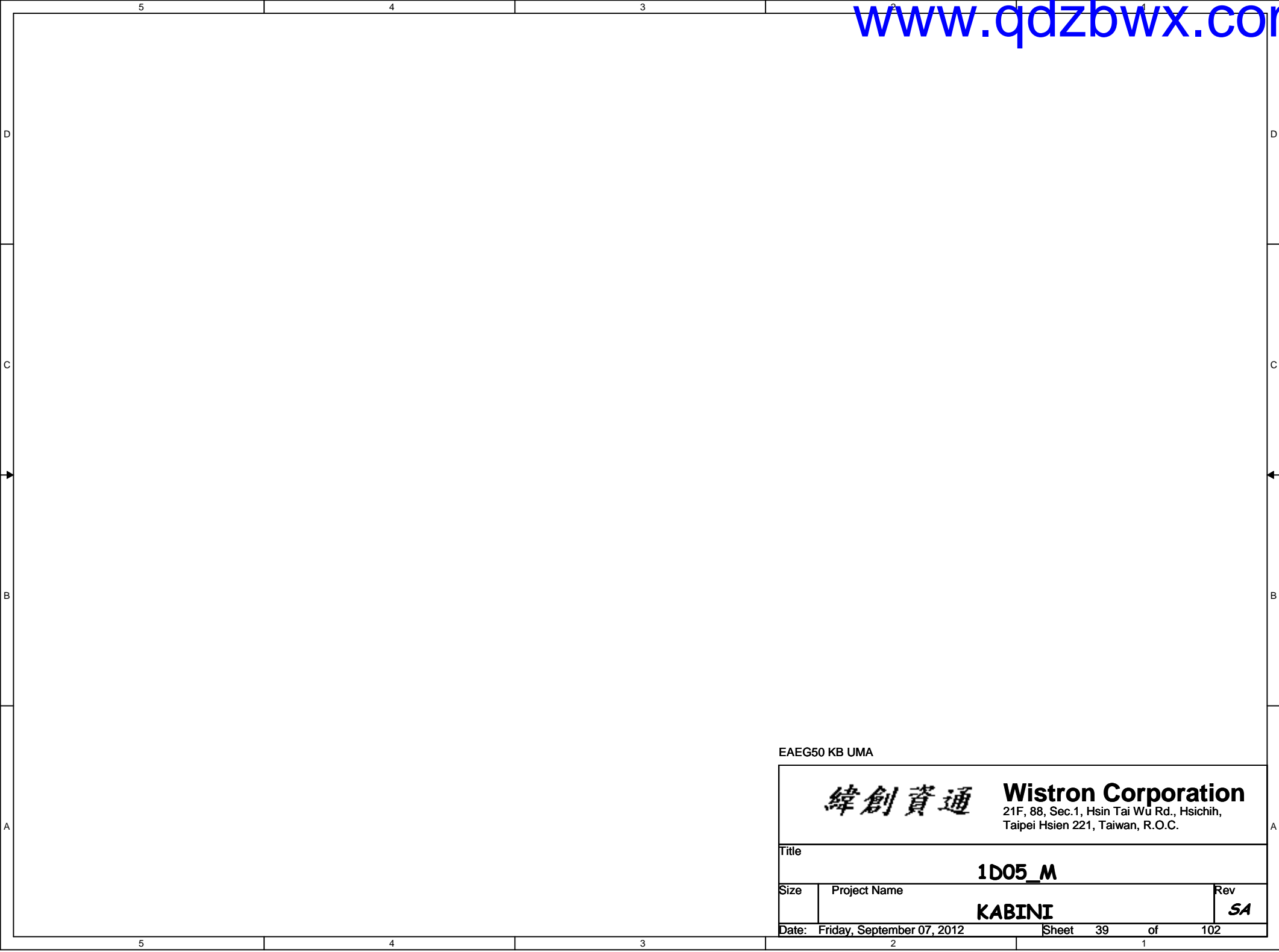
EAEG50 KB UMA

<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title ADAPTER OCP / S3 reduction		
Size	Project Name KABINI	Rev SA
Date: Thursday, January 24, 2013		Sheet 37 of 102



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Deep Standby			
Size	Project Name		Rev
	KABINI		SA
Date:	Friday, September 07, 2012		Sheet 38 of 102





EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet	40 of 102



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Size	Project Name		Rev
	KABINI		SA
Date:	Friday, September 07, 2012	Sheet 41 of	102



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

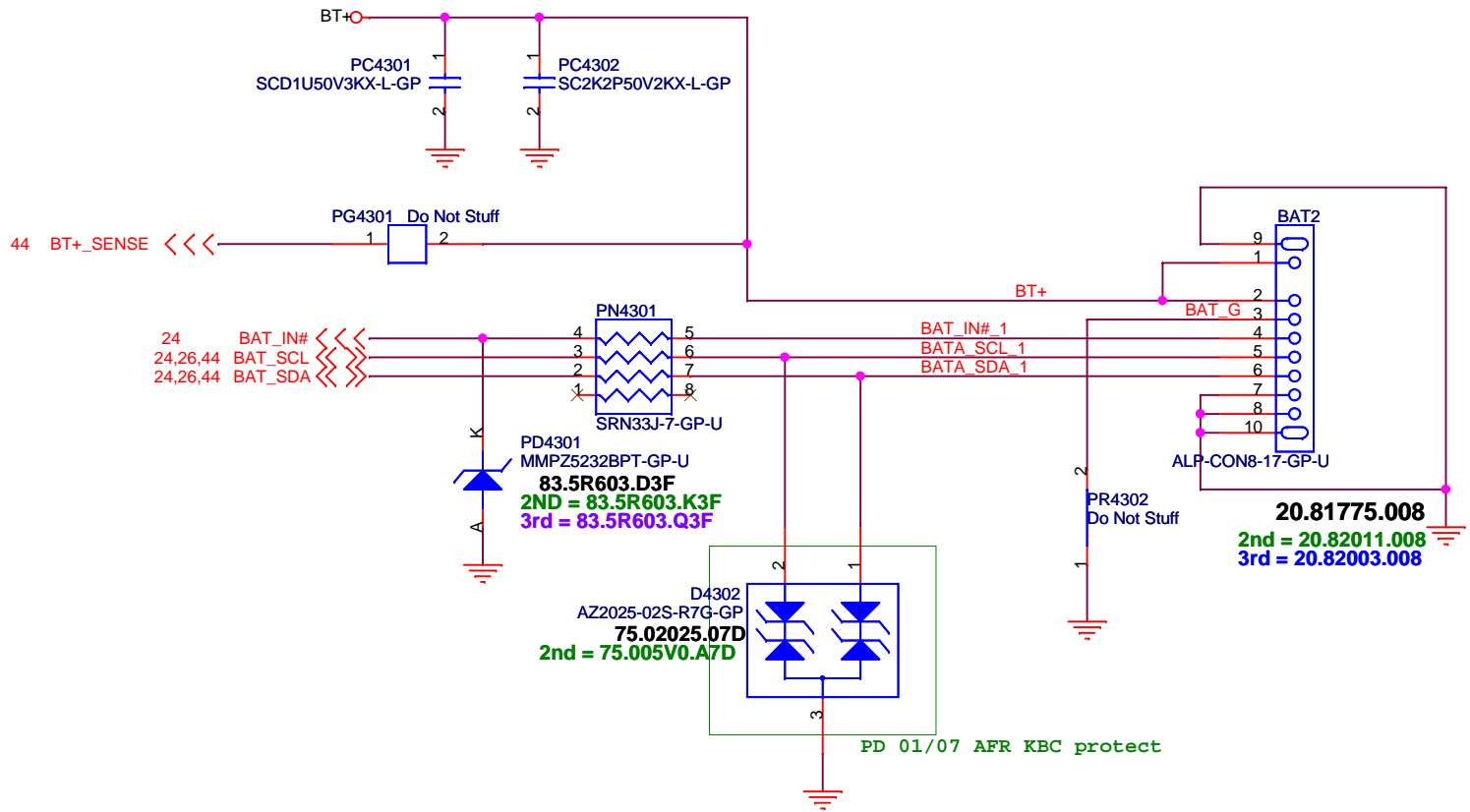
Rev
SA

Sheet 42 of 102

BATTERY CONNECTOR

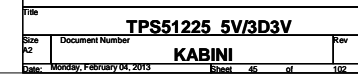
86	BATA_SDA_1	>>>	_____
86	BATA_SCL_1	>>>	_____
86	BAT_IN#_1	>>>	_____
86	BAT_G	>>>	_____

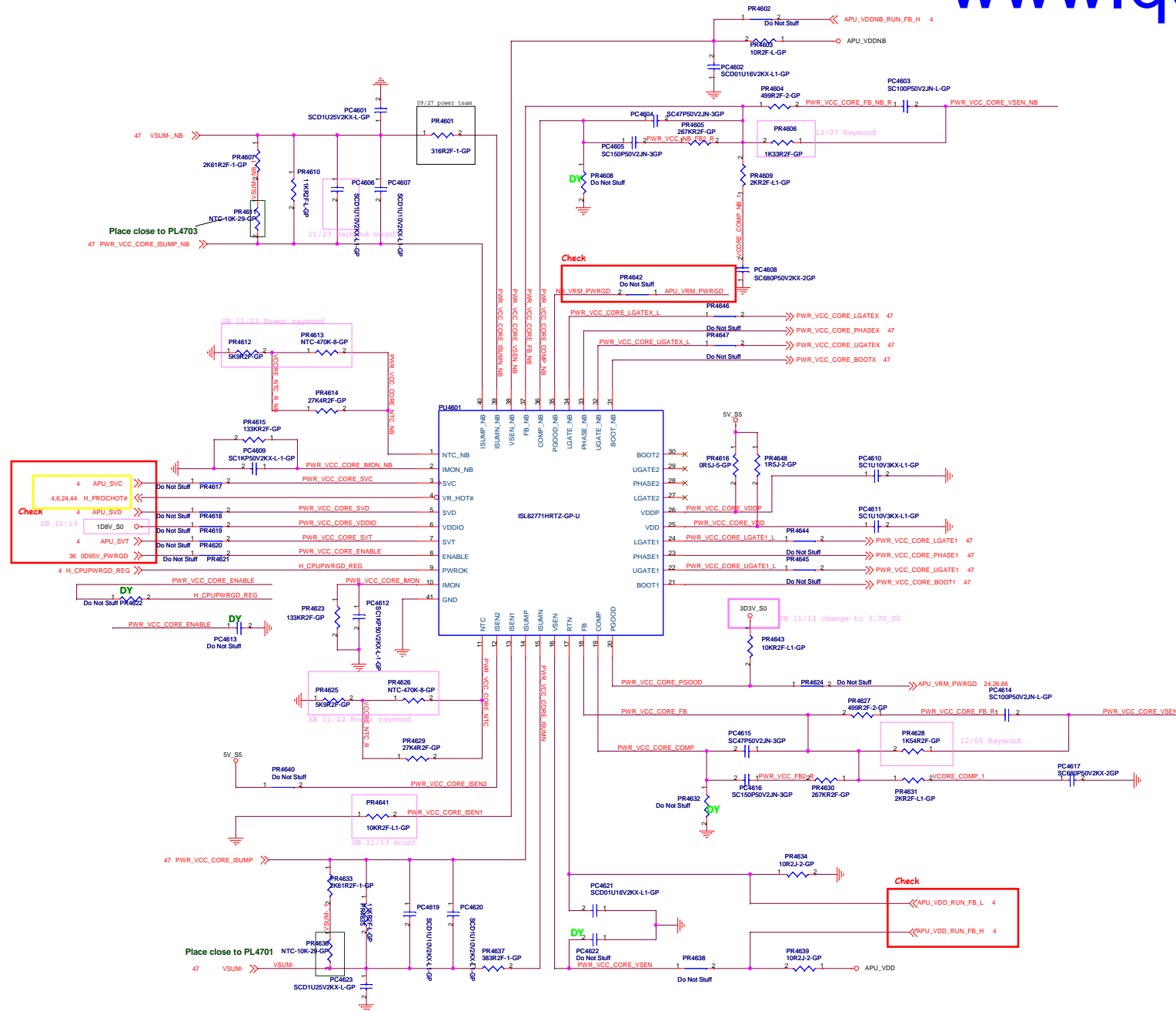
For AFTE

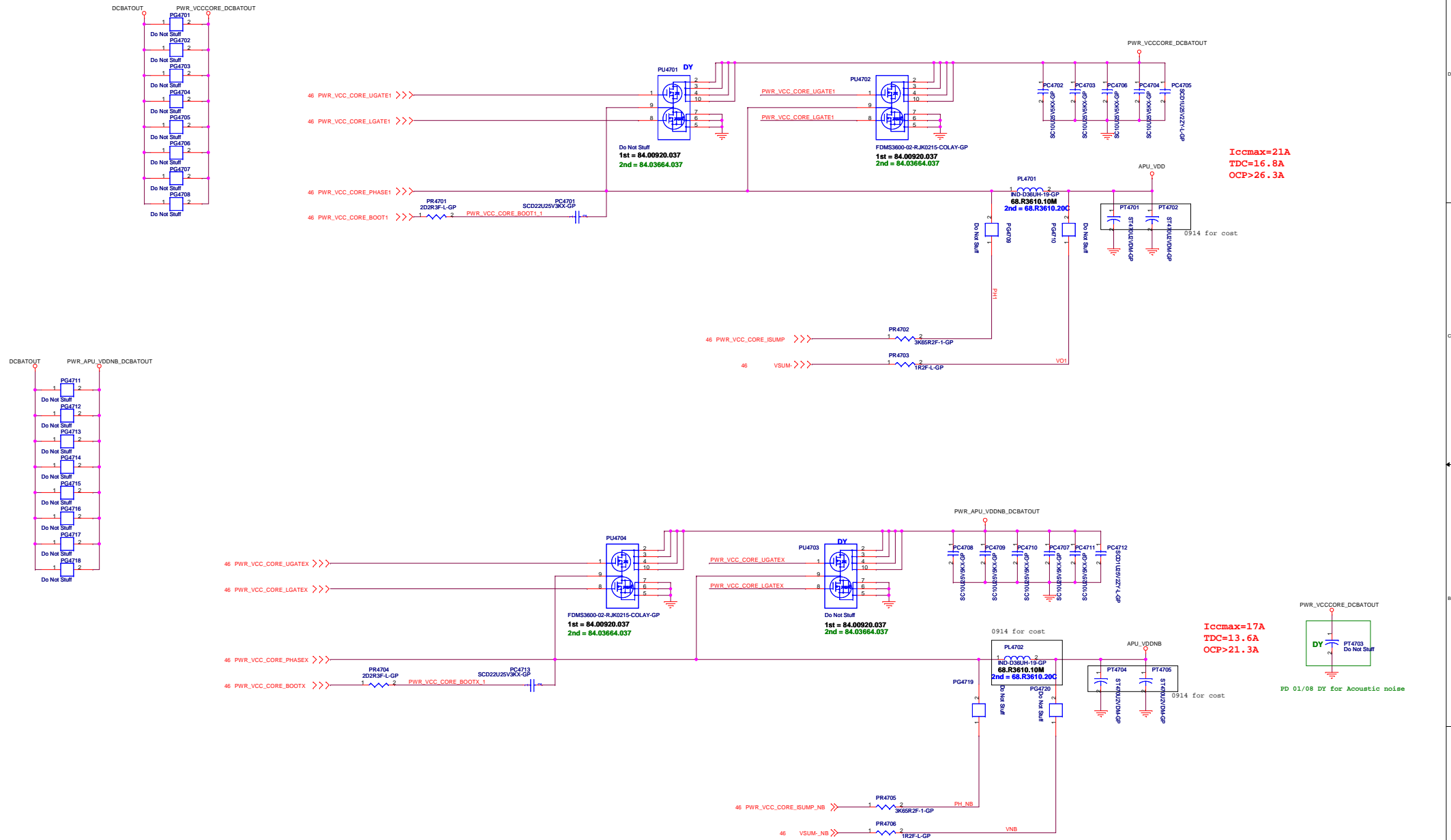


EAEG50 KB UMA

<p>緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</p>	
<p>Title BATT CONN</p>	
<p>Size</p>	<p>Project Name KABINI</p>
<p>Date Wednesday, February 20, 2013</p>	<p>Rev SA</p>
<p>Sheet 43 of 102</p>	

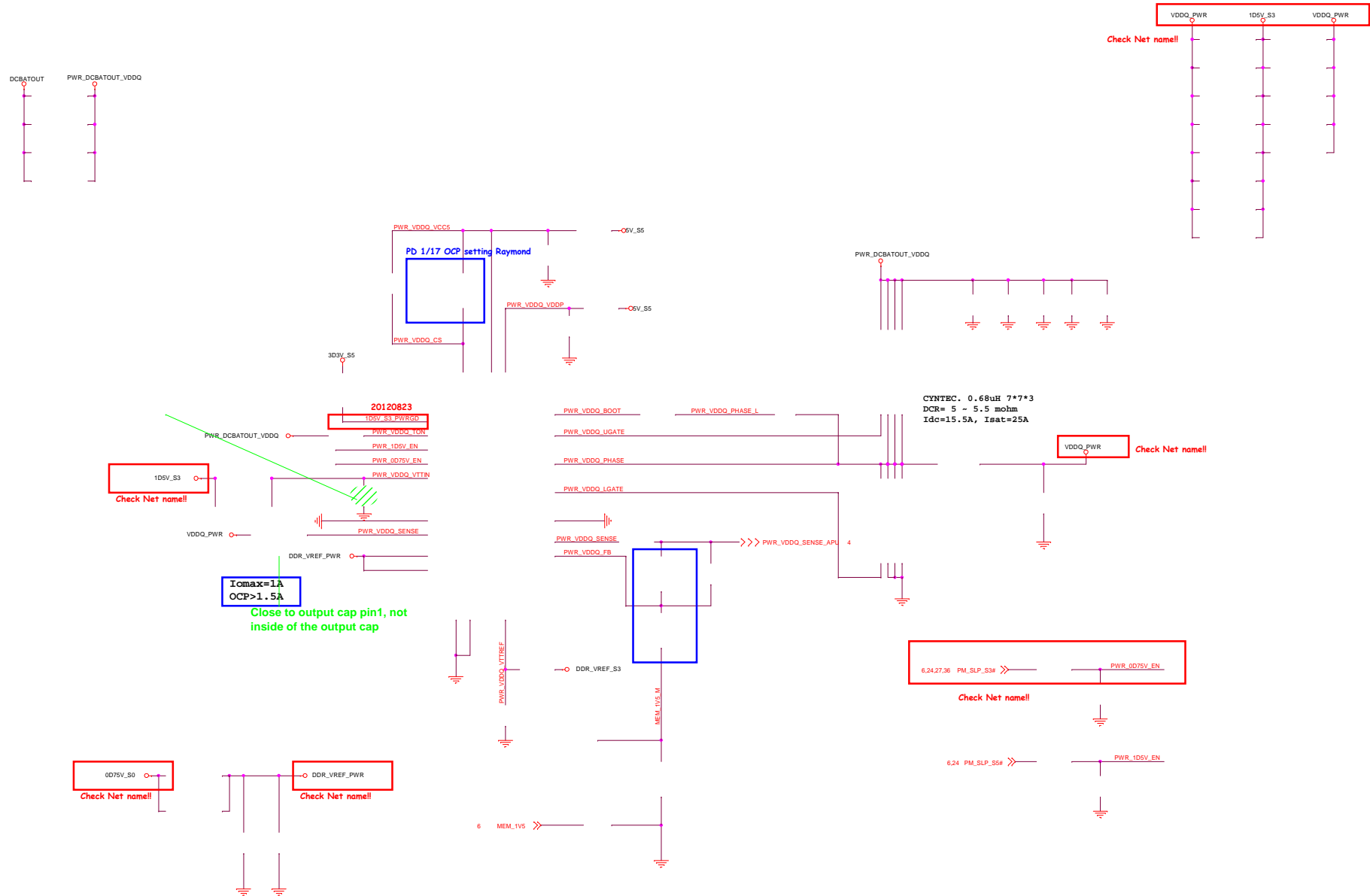




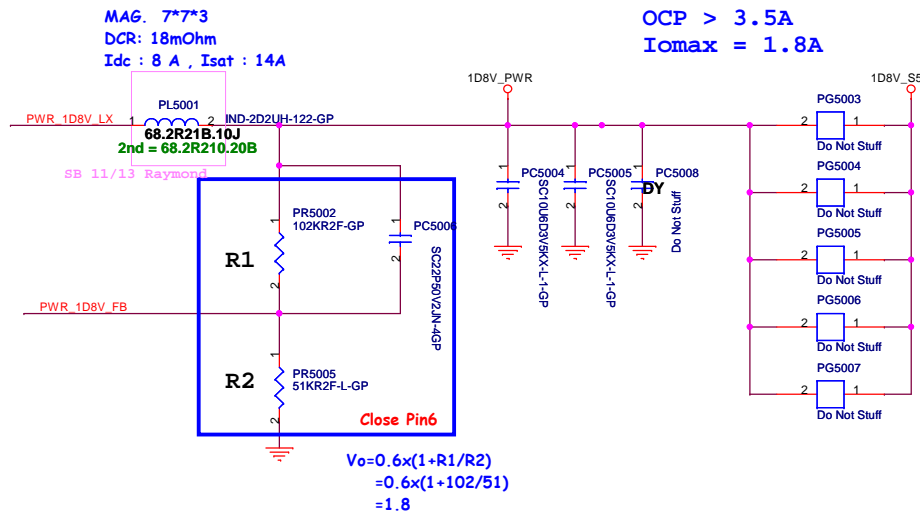
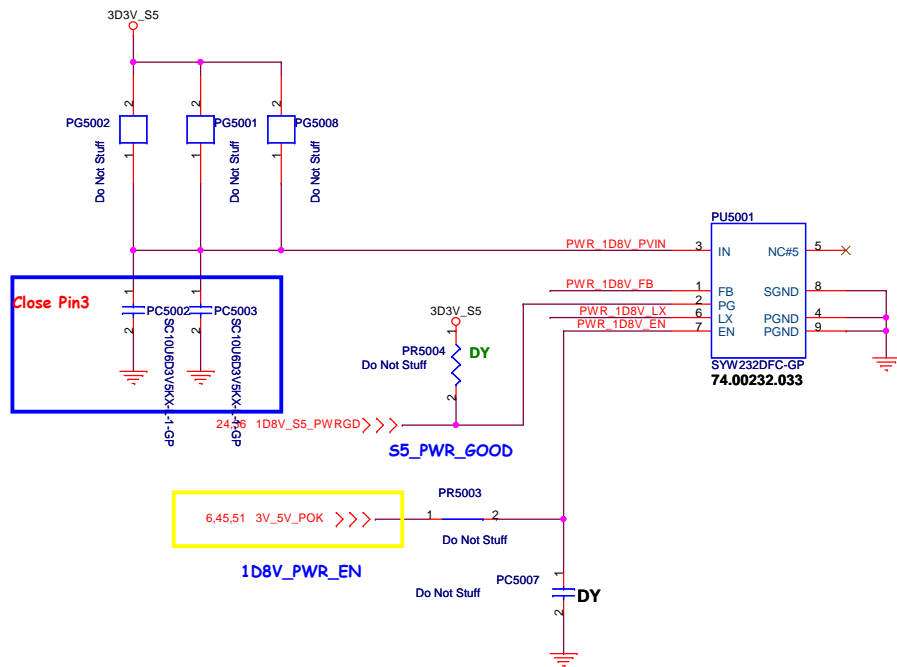


Iccmax=21A
TDC=16.8A
OCP>26.3A

Iccmax=17A
TDC=13.6A
OCP>21.3A



SSID = PWR.Plane.Regulator_1p8v



EAEG50 KB UMA

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

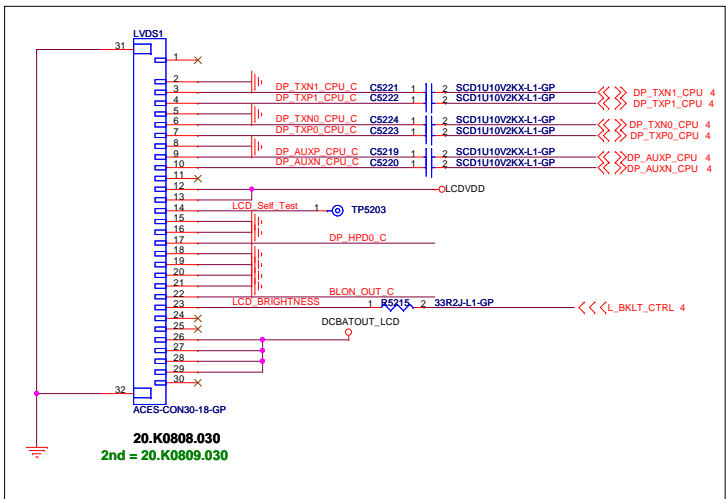
Title 1D8V_S0 SYW232

Size A3 Document Number KABINI Rev

Date: Monday, February 04, 2013 Sheet 50 of 102

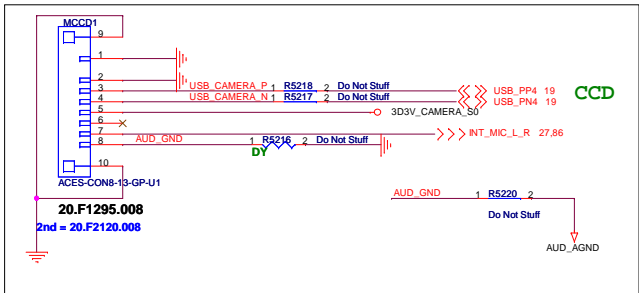
SSID = VIDEO

eDP Conn.



10/04 change to 20.K0808.030 for ME request

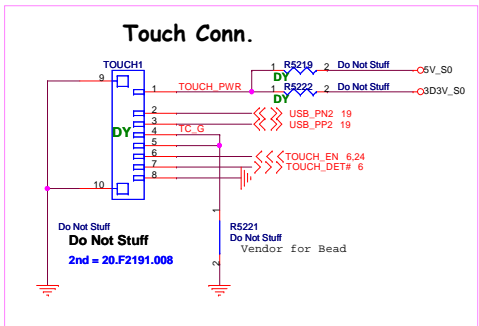
Camera+MIC Conn.



10/03 change to 8pin for del DMIC

10/15 change to 20.F1295.008 follow HW

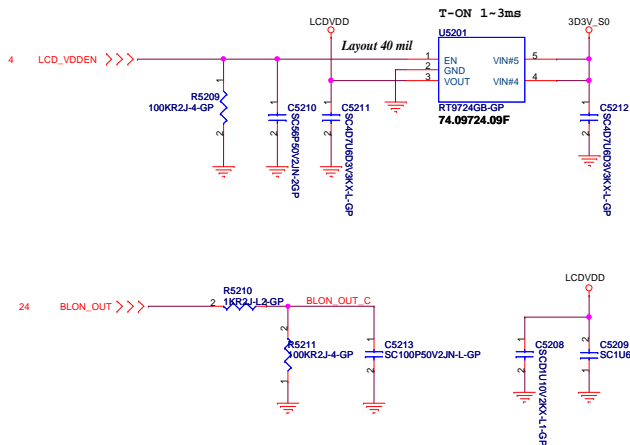
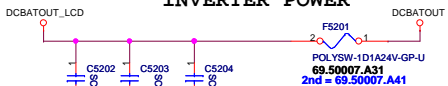
Touch Conn.



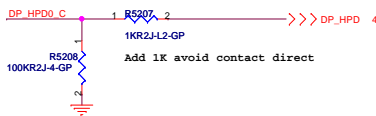
SB 12/12 DUMMY for ME issue

SC NO support

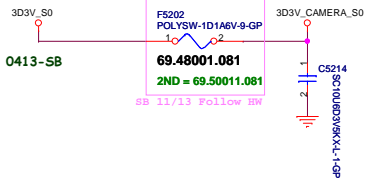
INVERTER POWER



EDP HPD High active

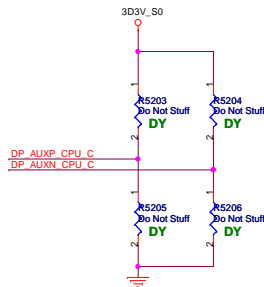


Camera Power



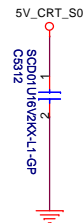
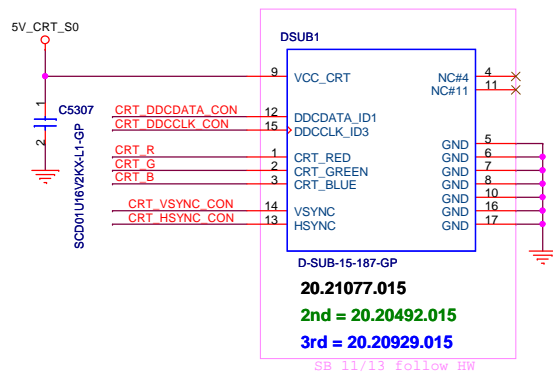
86 AUD_GND <<<
86 DP_HP00_C >>>
86 BLON_OUT_C >>>
86 LCD_BRIGHTNESS >>>
86 DP_TXN1_CPU_C >>>
86 DP_TXP1_CPU_C >>>
86 DP_TXN0_CPU_C >>>
86 DP_TXP0_CPU_C >>>
86 DP_AUXN_CPU_C <<<
86 DP_AUXN_CPU_C <<<

For AFTE

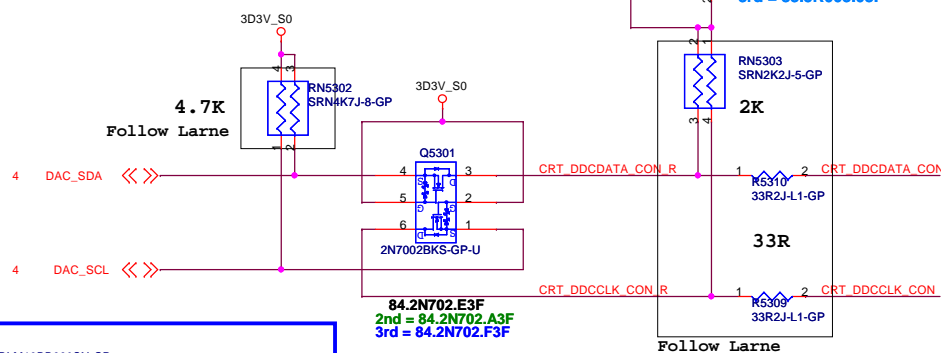


EAEG50 KB UMA

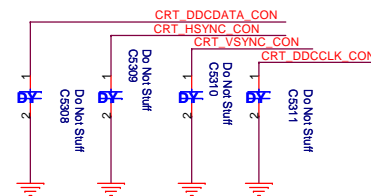
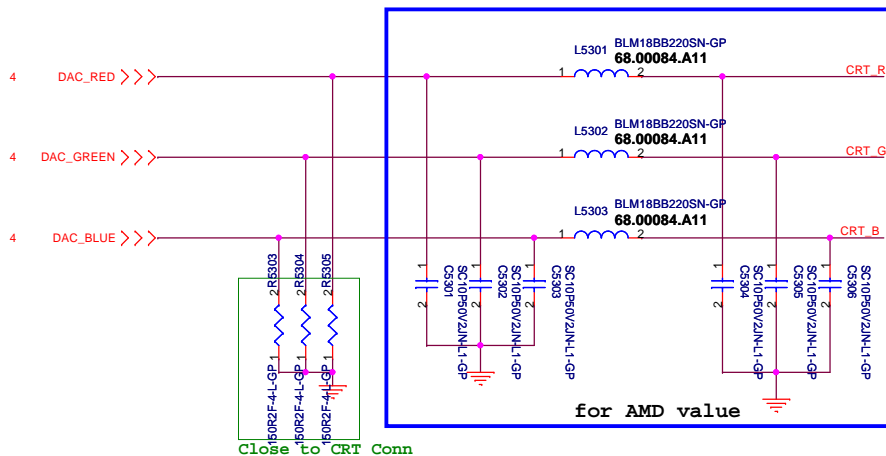
緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichin, Taipei Hsien 221, Taiwan, R.O.C.		
Title LCD Connector		
Size	Project Name KABINI	Rev SA
Date: Monday, February 25, 2013 Sheet 52 of 102		



CRT DDCDATA & DDCCLK level shift

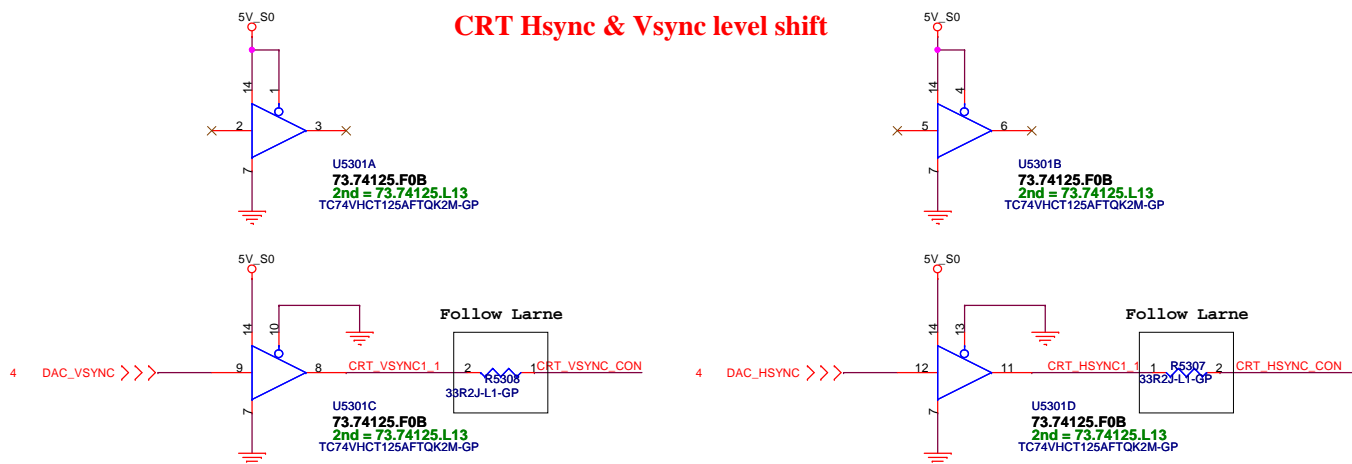


APU to CRT



10/16 follow COMAL

CRT Hsync & Vsync level shift



EAEG50 KB UMA

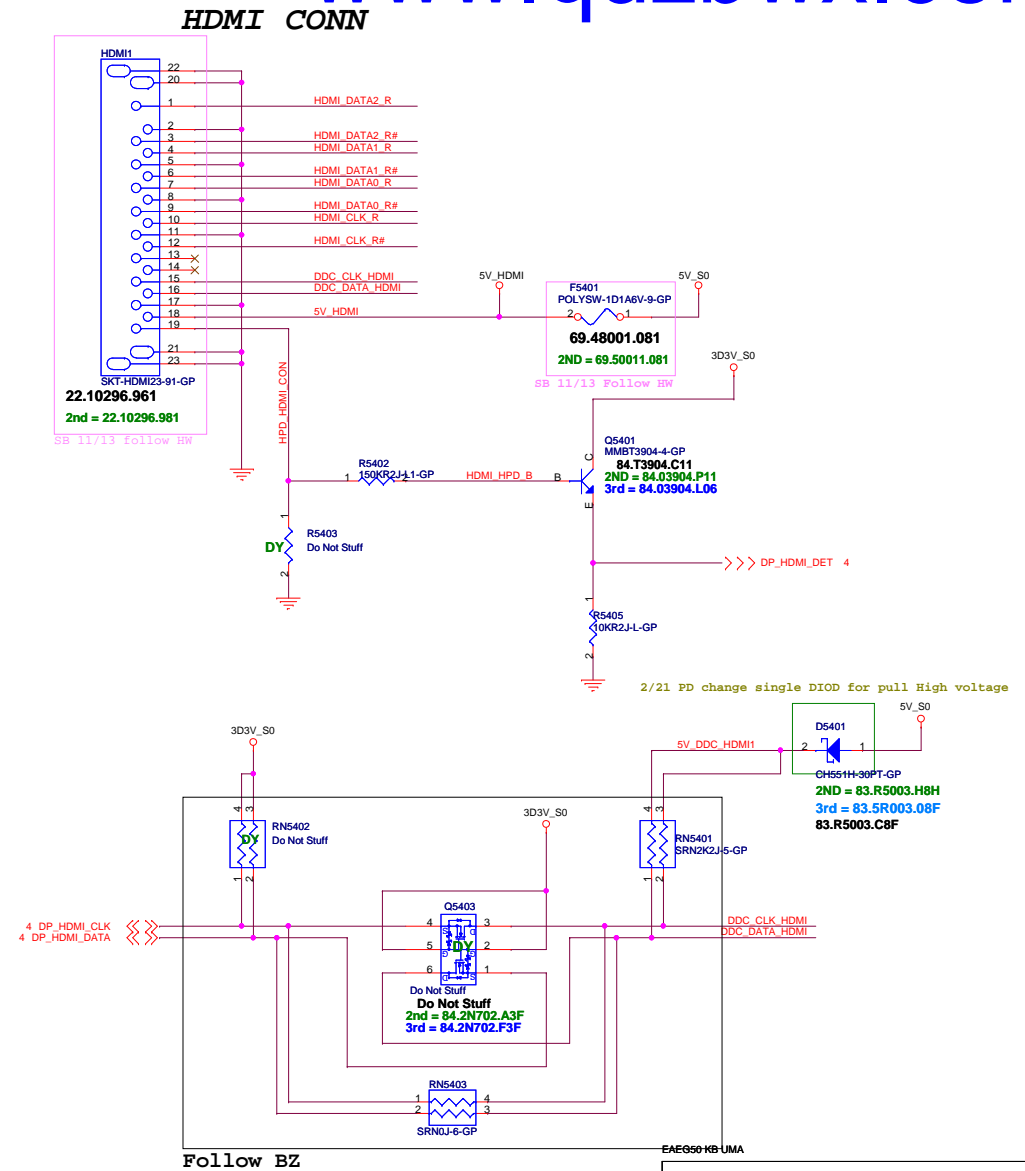
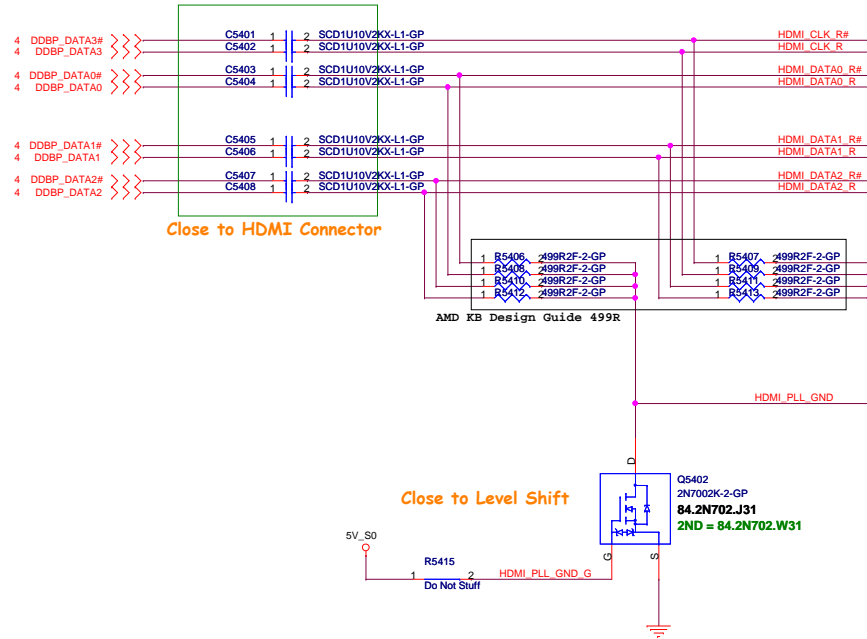
緯創資通 Wistron Corporation

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

CRT Board Connector			
Size	Project Name	KABINI	
Date	Monday, February 04, 2013	Sheet	53 of 102
Rev	SA		

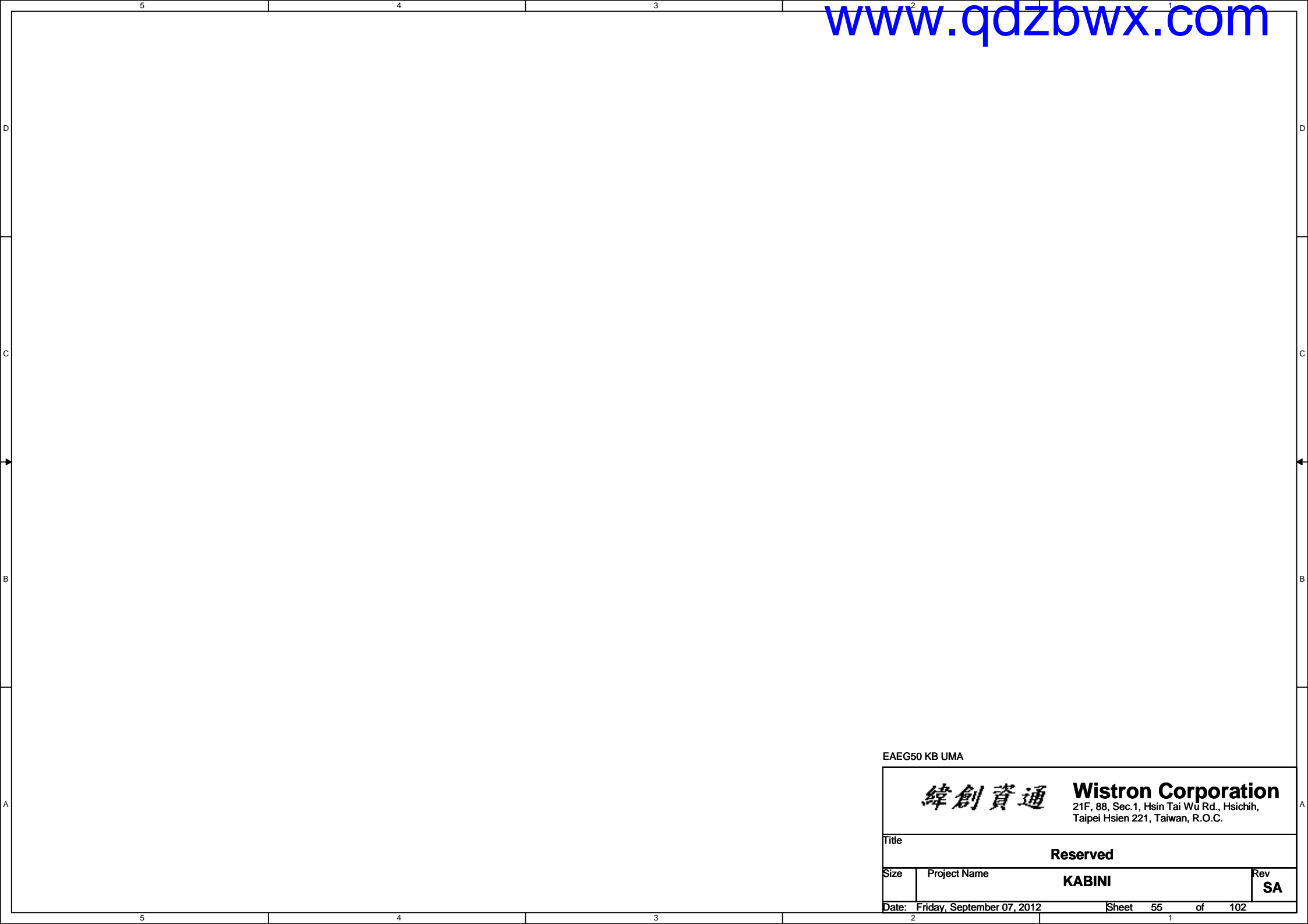
SSID = VIDEO

HDMI Level Shifter & CONNECTOR



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

Title			
HDMI Level Shifter/Connector			
Size	Project Name		Rev
	KABINI		SA
Date:	Thursday, February 21, 2013	Sheet 54 of 102	

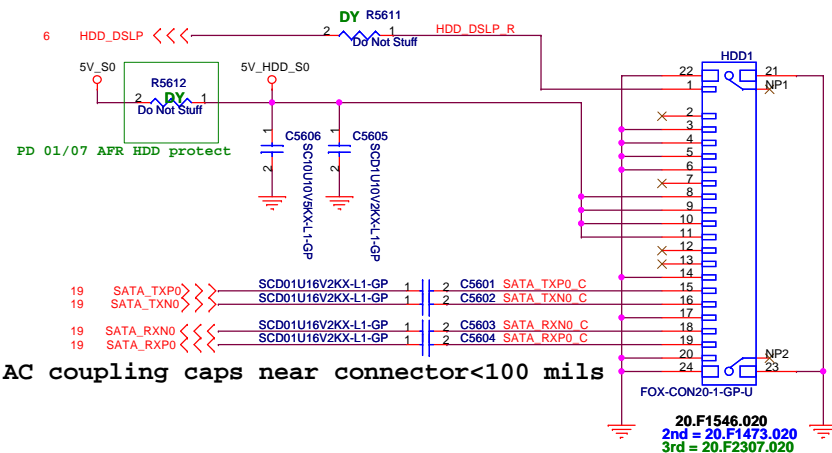
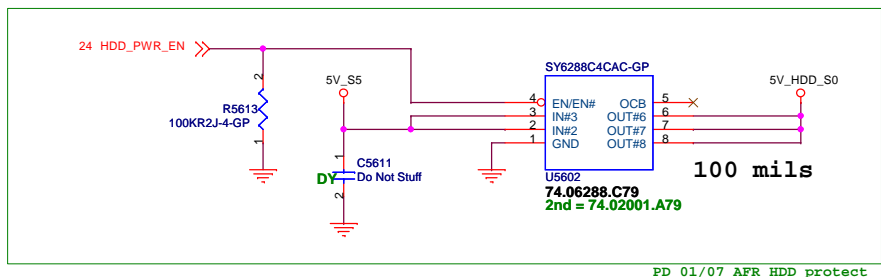


EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Reserved			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	55 of 102

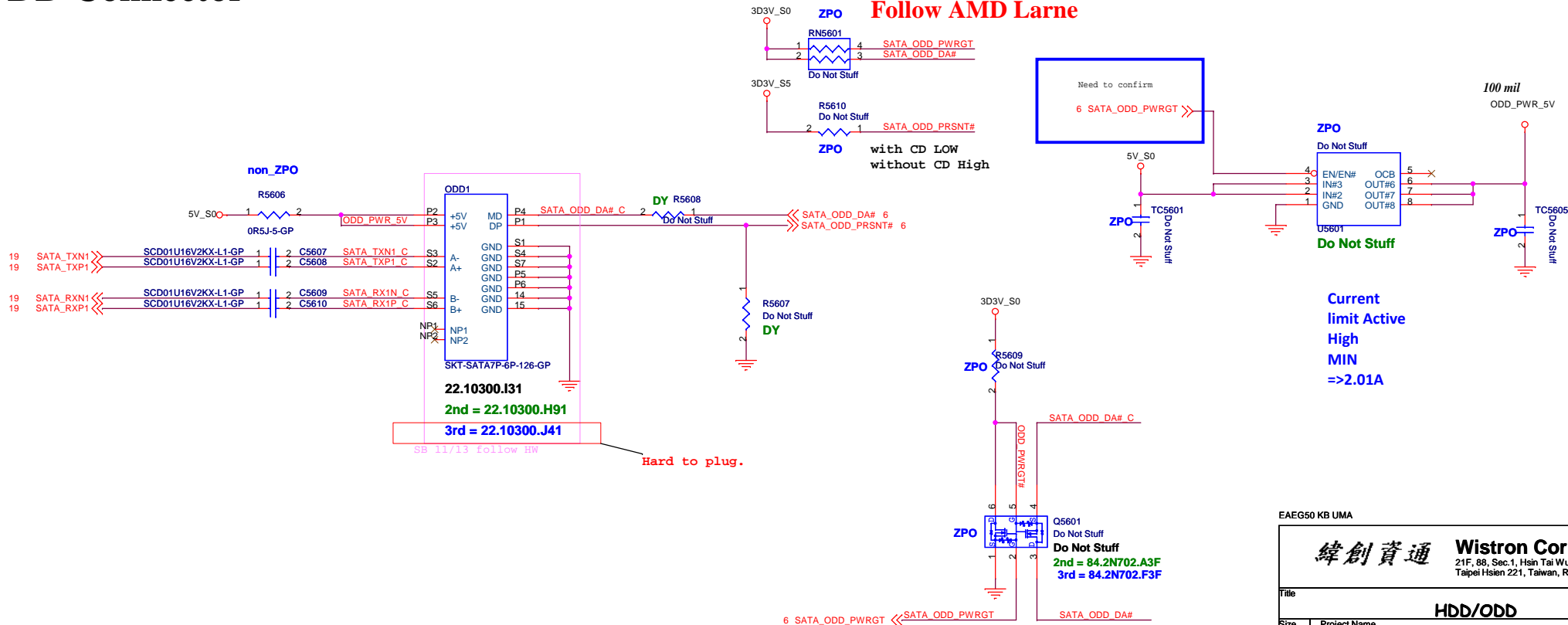
SSID = SATA

SATA HDD Connector



ODD Connector

SATA Zero Power ODD Follow AMD Larne

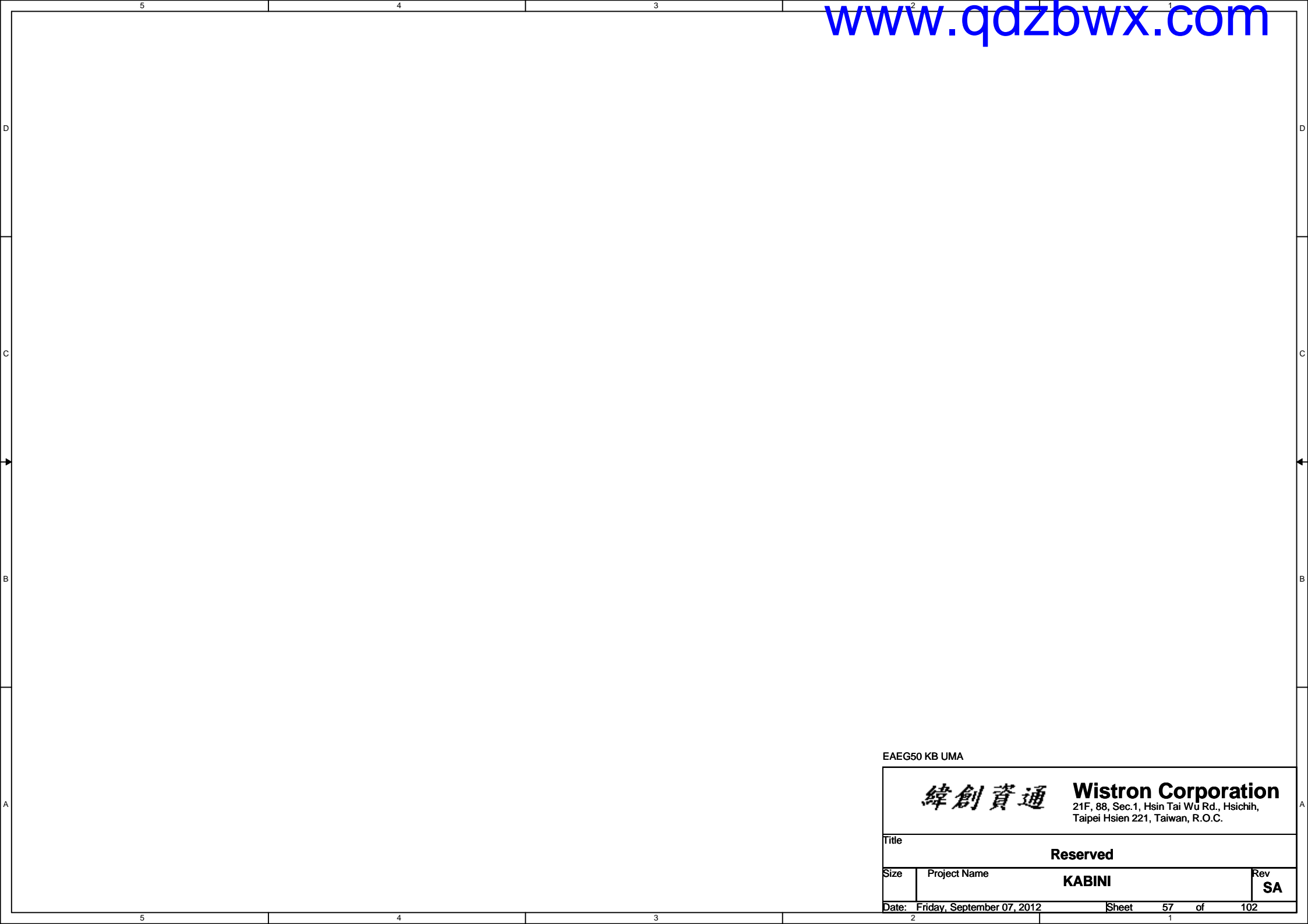


EAEG50 KB UMA

緯創資通

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

Title		HDD/ODD	
Size	Project Name	KABINI	
Date	Monday, February 04, 2013	Sheet	56 of 102
		Rev	SA



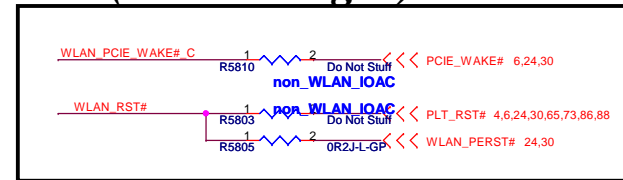
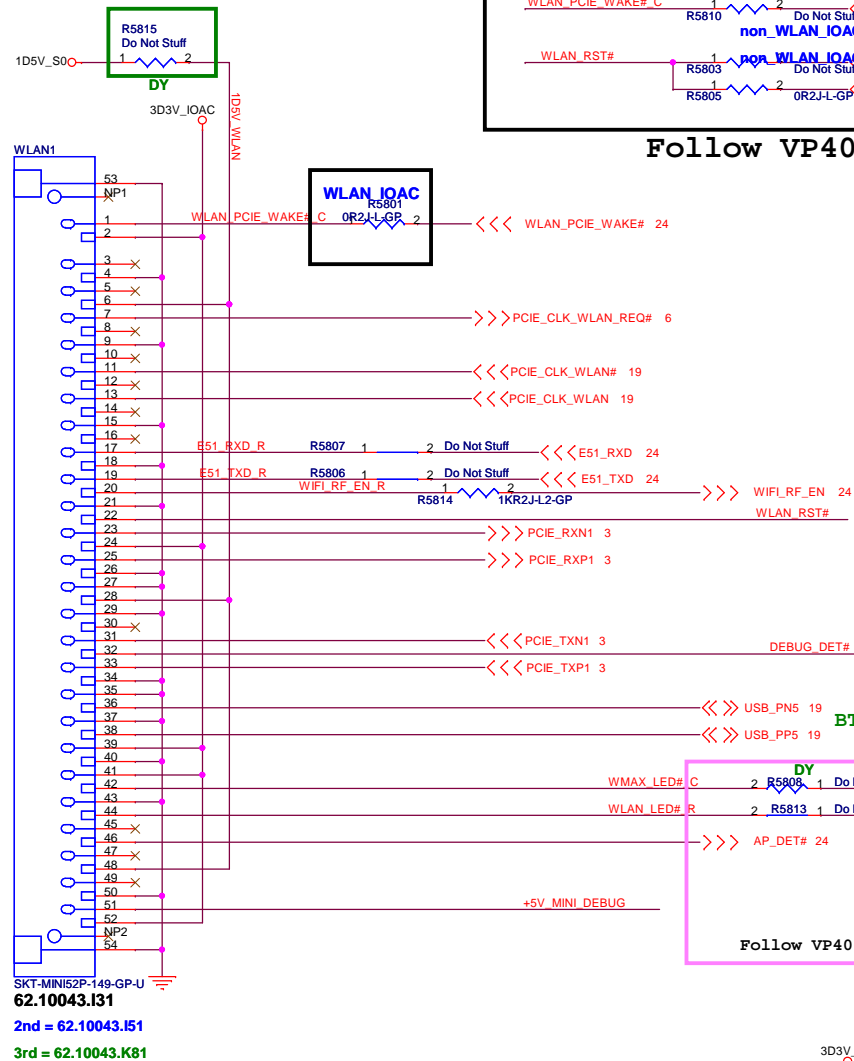
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Reserved			
Size	Project Name KABINI		Rev SA
Date:	Friday, September 07, 2012	Sheet	57 of 102

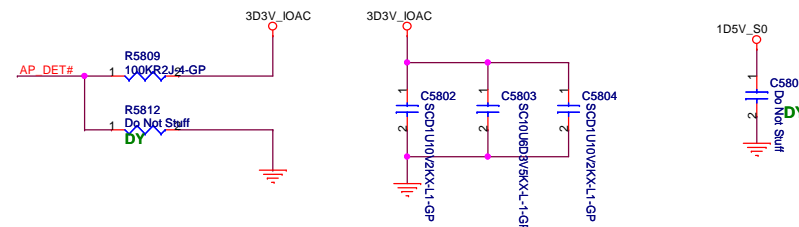
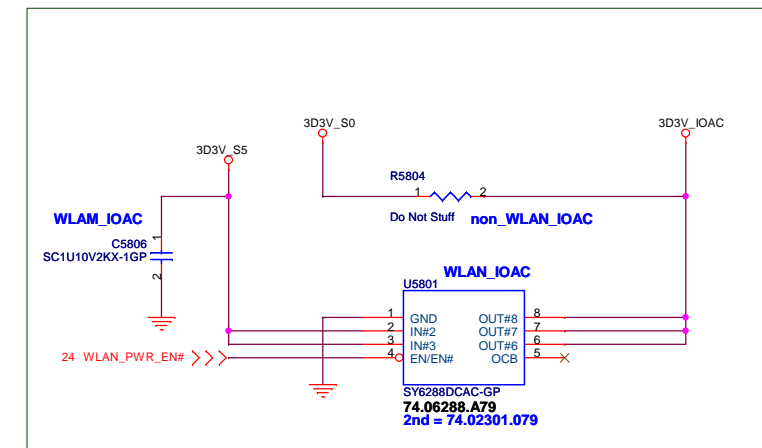
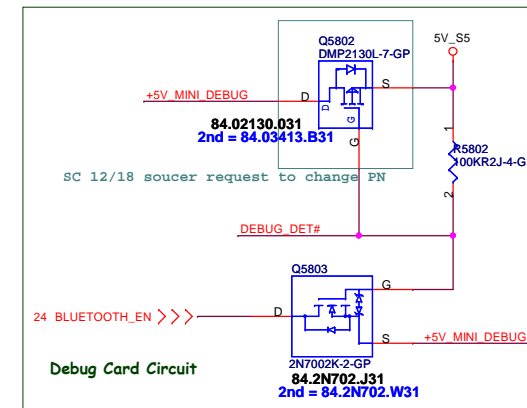
SSID = Wireless

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

10/15 follow EA40-HW



Follow VP40



SSID = Wireless

Mini Card Connector(WWAN)

EAEG50 KB UMA

緯創資通


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

Title			WWAN CONN		
Size	Project Name				Rev
	KABINI				SA
Date: Friday, September 07, 2012			Sheet	59	of 102

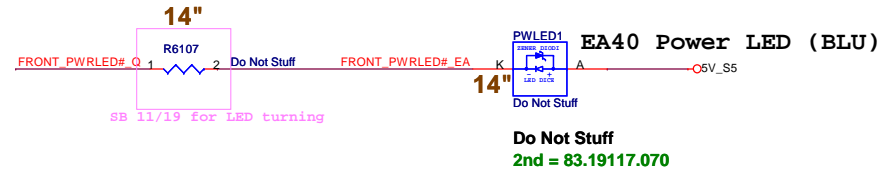
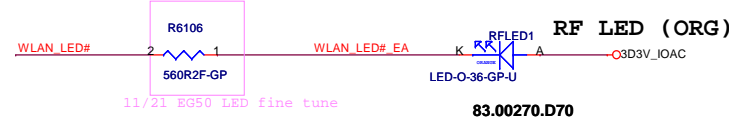
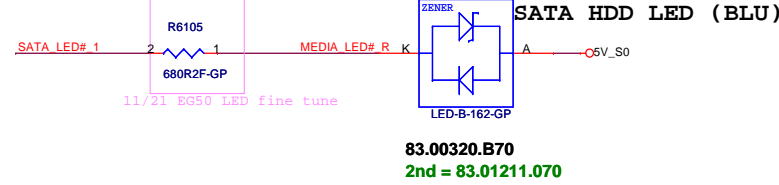
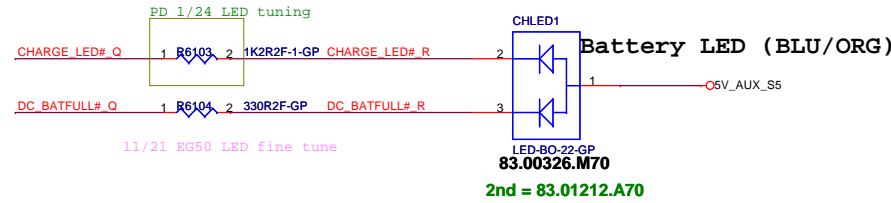
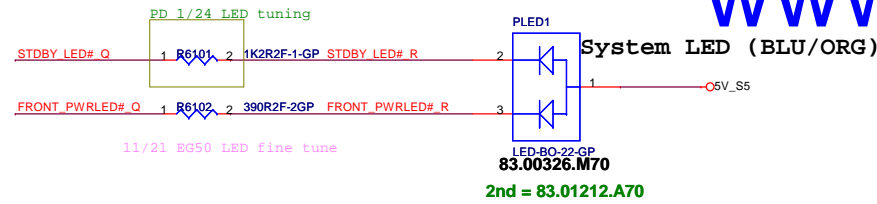
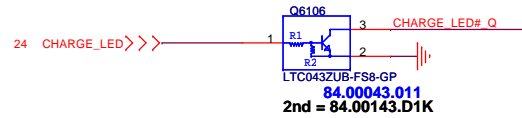
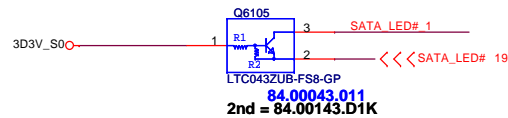
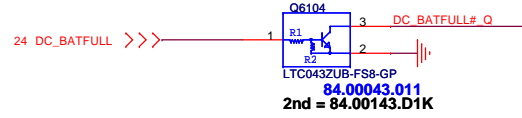
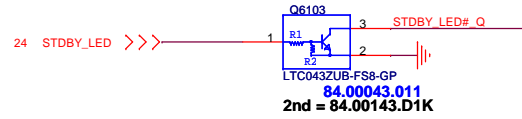
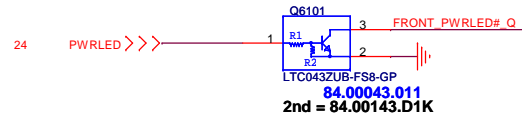
SSID = mSATA

Mini Card Connector(mSATA)

EAEG50 KB UMA

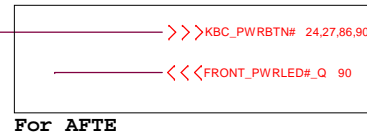
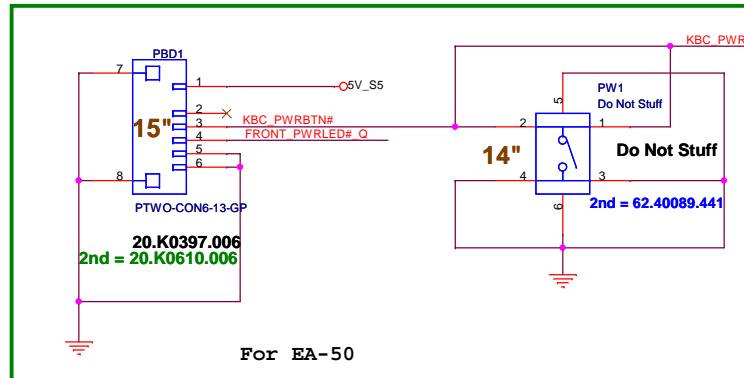
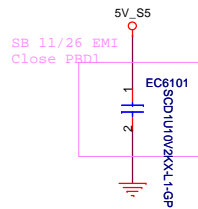
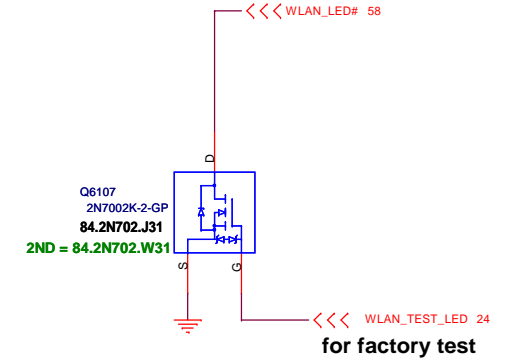
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title mSATA Connector			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet 60 of 102	

SSID = User.Interface



WLAN_LED

From module



EAEG50 KB UMA

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

Title				
LED Bard/Power Button				
Size	Project Name			Rev
	KABINI			SA
Date:	Monday, February 04, 2013		Sheet 61 of 102	

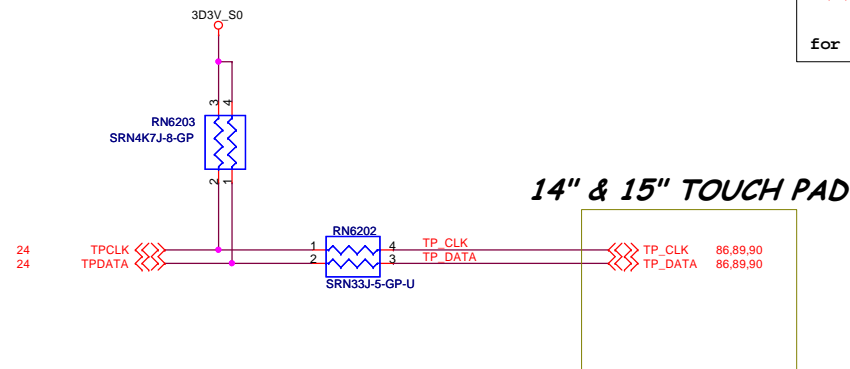
SSID = KBC

Internal KeyBoard Connector

www.qdzbw.com

86,89,90 TP_DATA >>>
86,89,90 TP_CLK >>>
86,89,90 SWR >>>
86,89,90 SWL >>>

for AFTP



PD 1/14 Different 14" & 15" TOUCH PAD reversion

14"& 15" use the same KB

for EA/EG-50

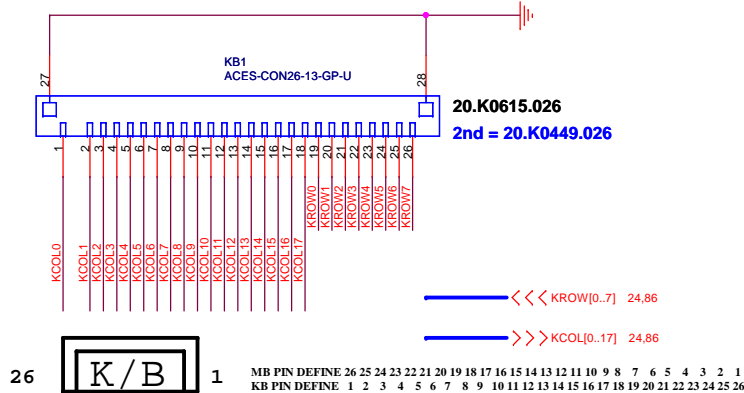
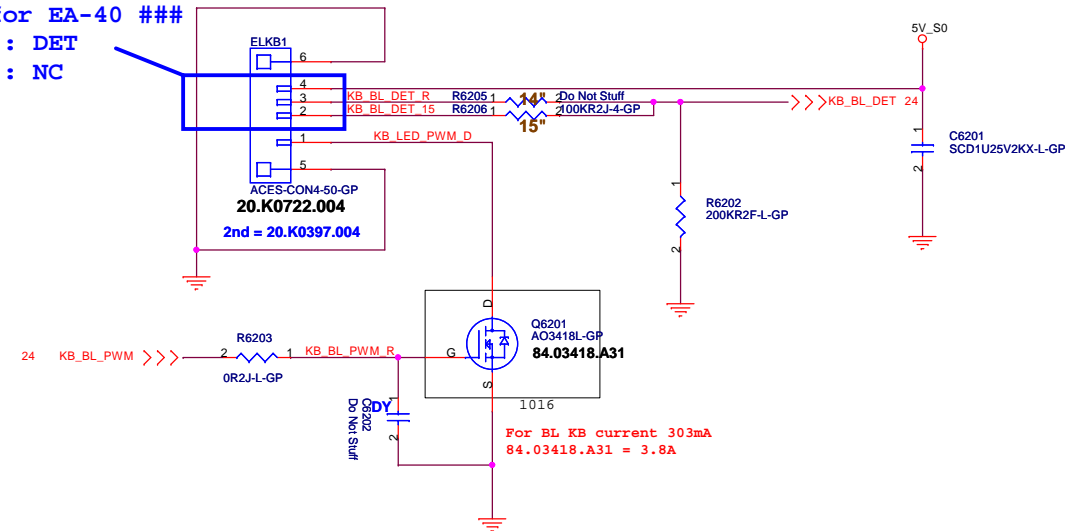
Pin3 : NC

Pin2 : DET

for EA-40

Pin3 : DET

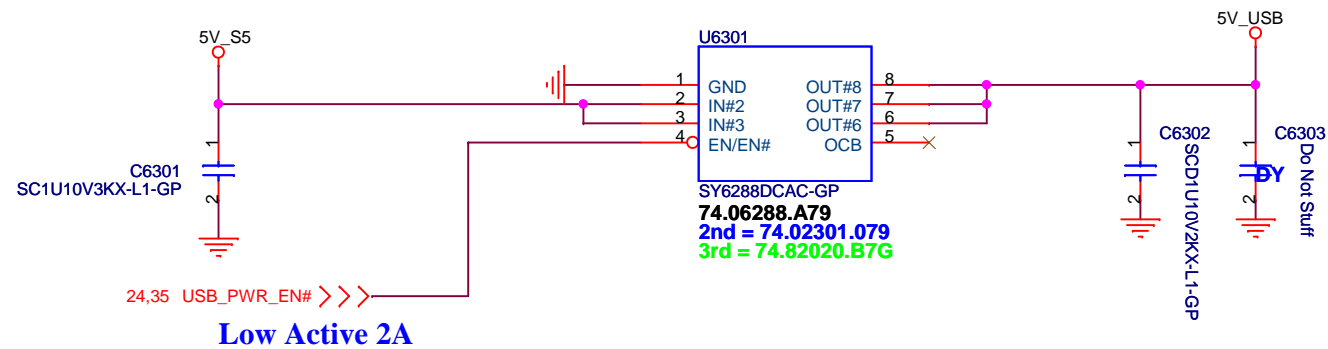
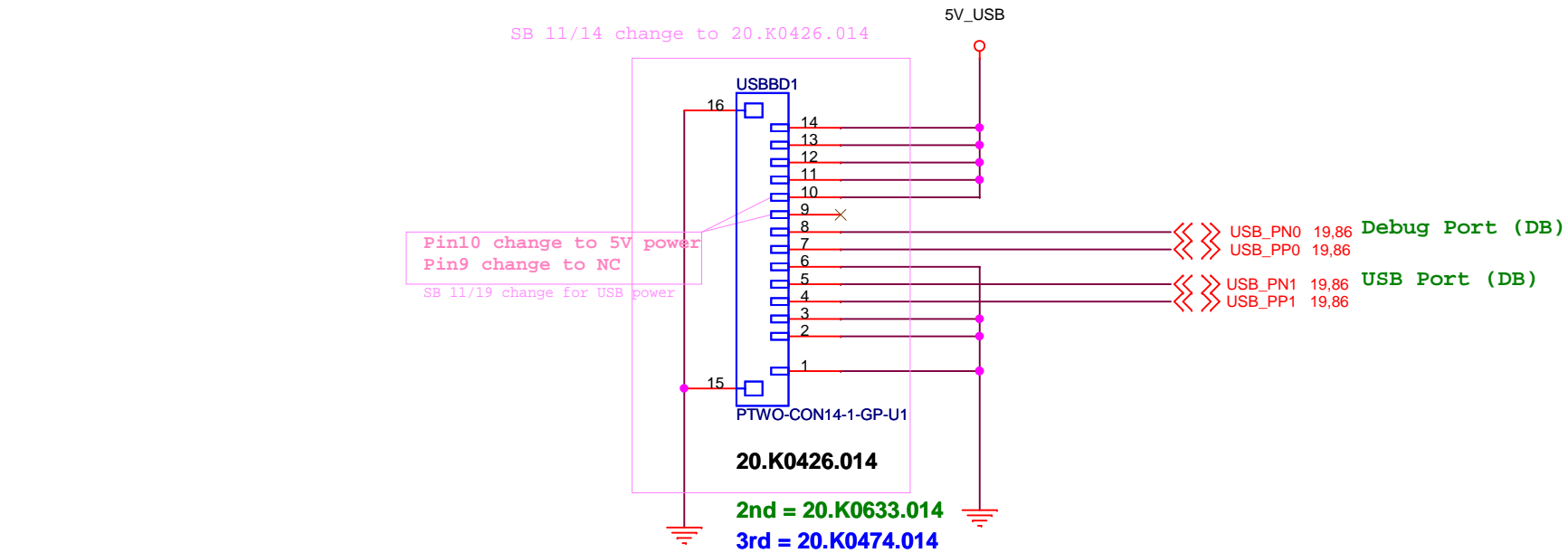
Pin2 : NC



EAEG50 KB UMA

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

Title Key Board/Touch Pad
Size Project Name KABINI Rev SA
Date: Tuesday, February 19, 2013 Sheet 62 of 102



EAEG50 KB UMA

緯創資通

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

Title

IO Board Connector

Size

Project Name

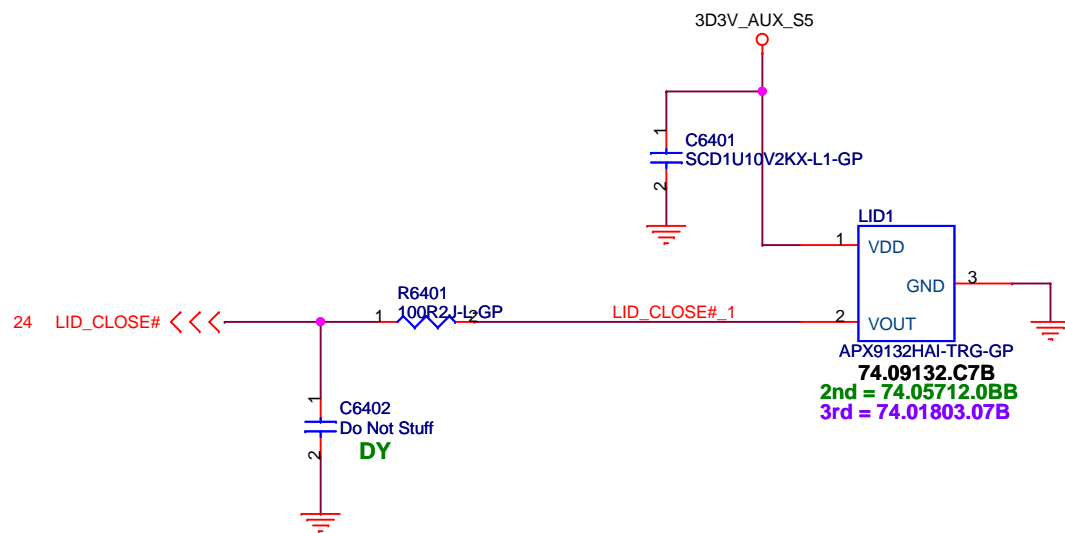
KABINI

Rev

SA

Date: Monday, February 04, 2013

Sheet 63 of 102



EAEG50 KB UMA

緯創資通

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

Title

Hall Sensor

Size

Project Name

KABINI

Rev

SA

Date: Monday, February 04, 2013

Sheet 64 of 102

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

Title

Dubug connector

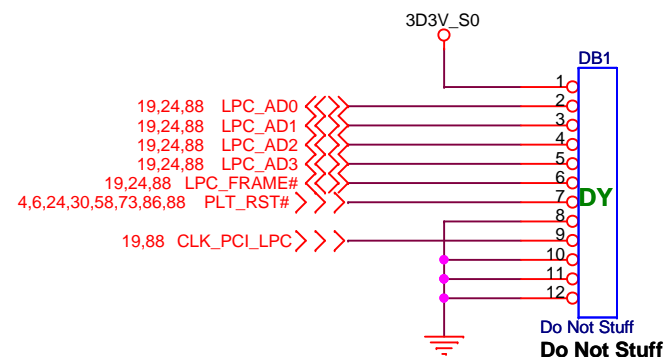
Size	Project Name
------	--------------

KABINI

Rev
SA

Date: Monday, February 04, 2013

Sheet 65 of 102



(Blanking)

EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Reserved			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	66 of 102

SSID = User.Interface

EAEG50 KB UMA

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

Project Name

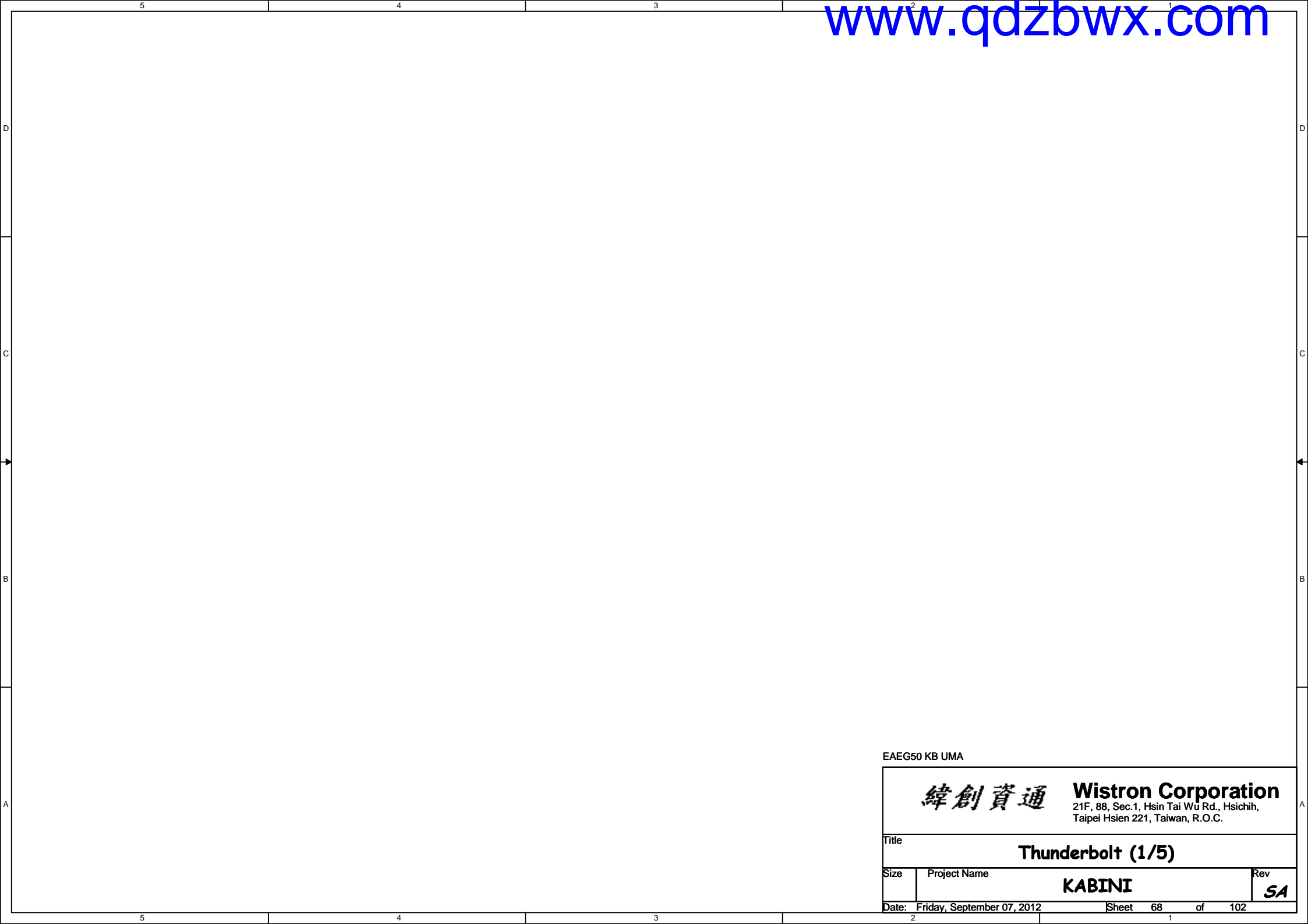
KABINI

Rev


SA

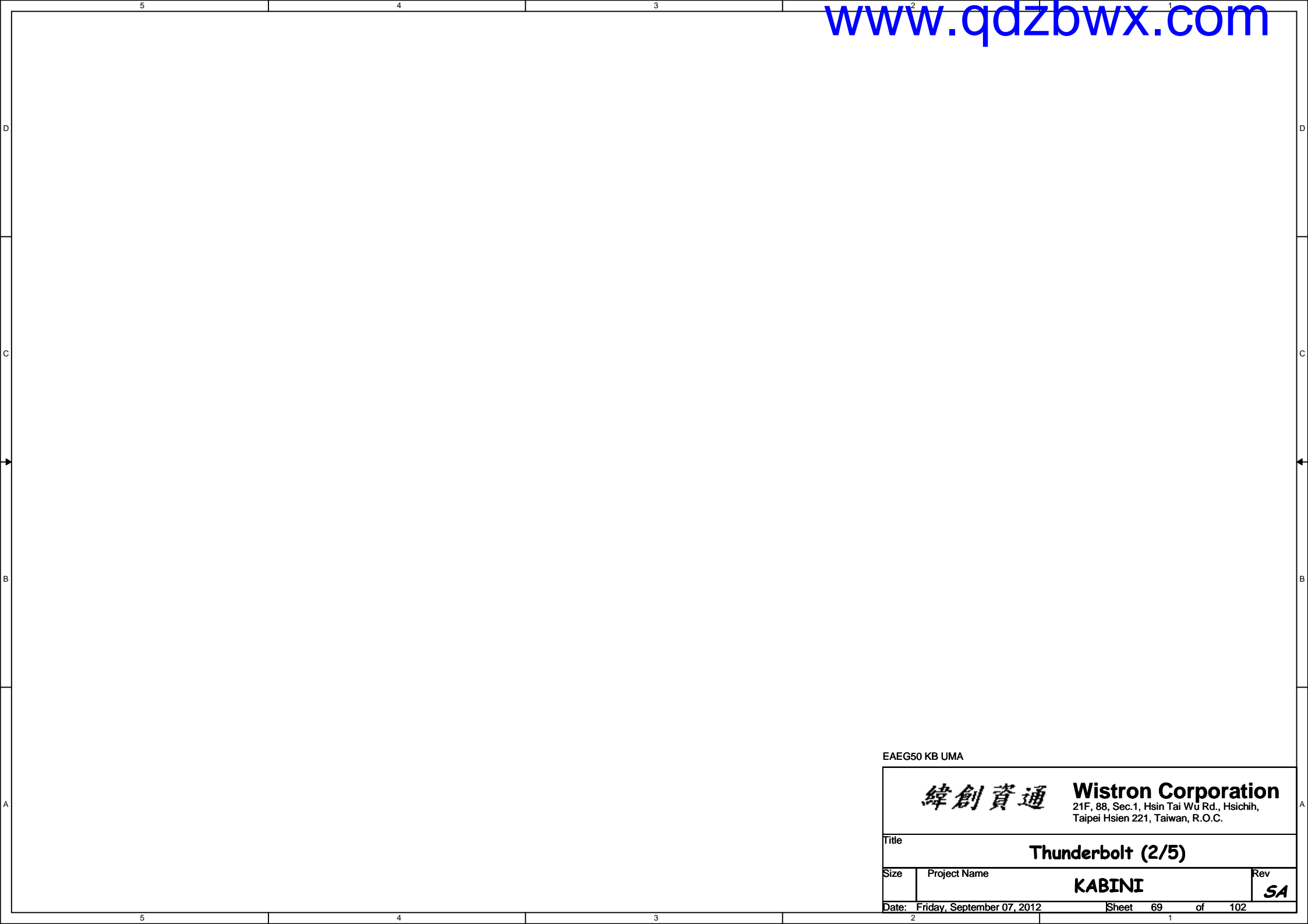
Date: Friday, September 07, 2012

Sheet 67 of 102




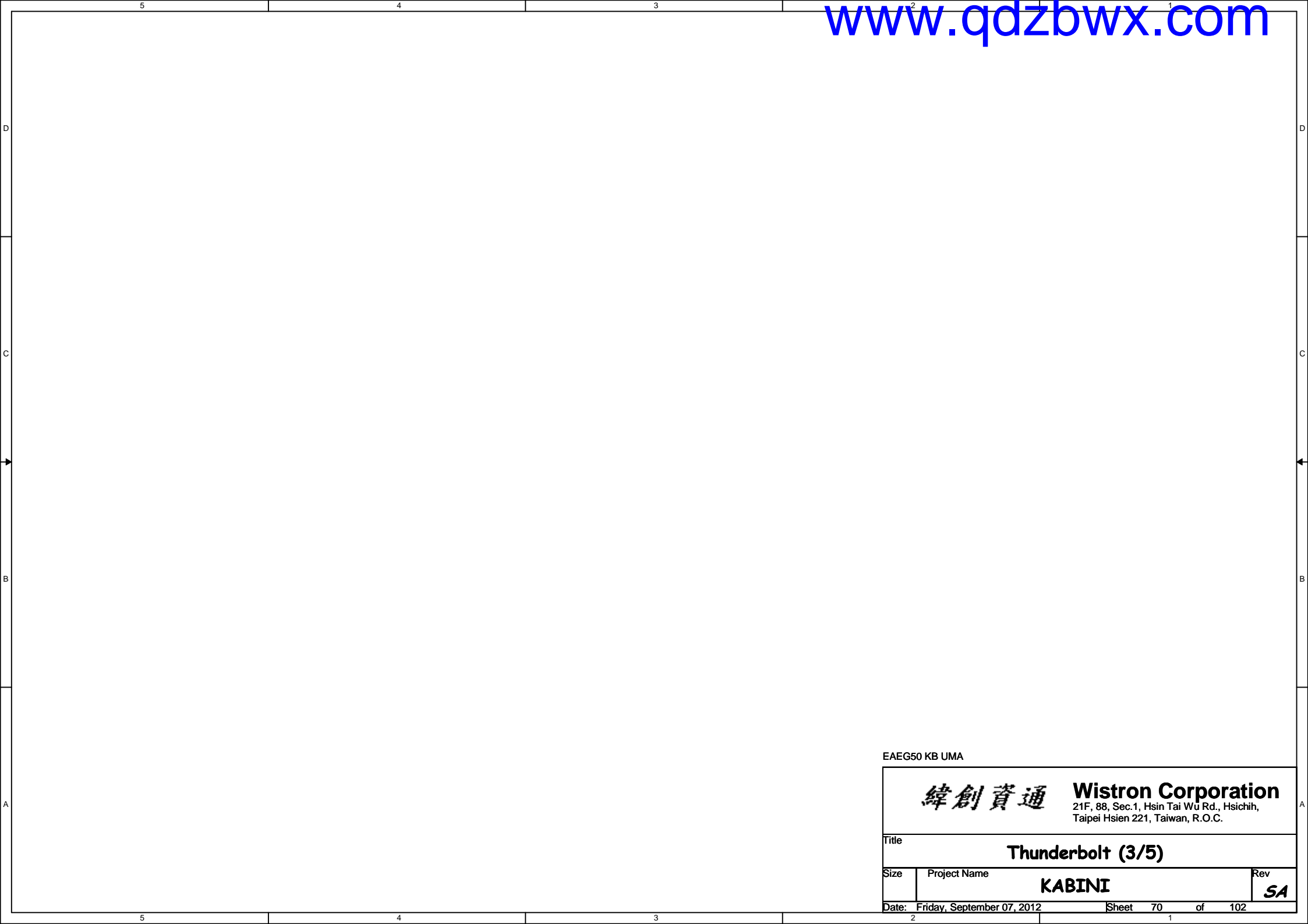
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (1/5)			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	68 of 102




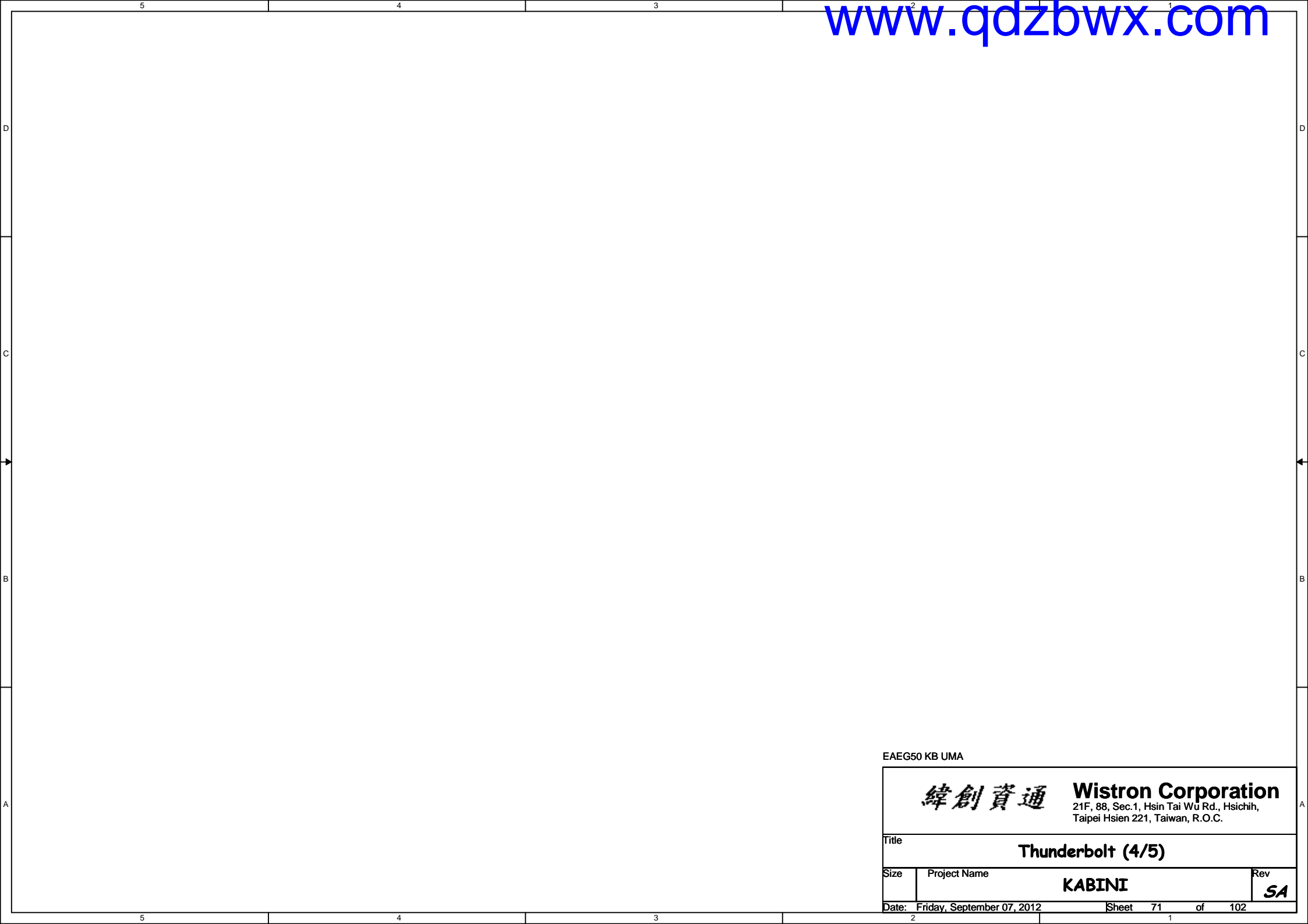
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (2/5)			
Size	Project Name KABINI		Rev SA
Date:	Friday, September 07, 2012	Sheet 69	of 102




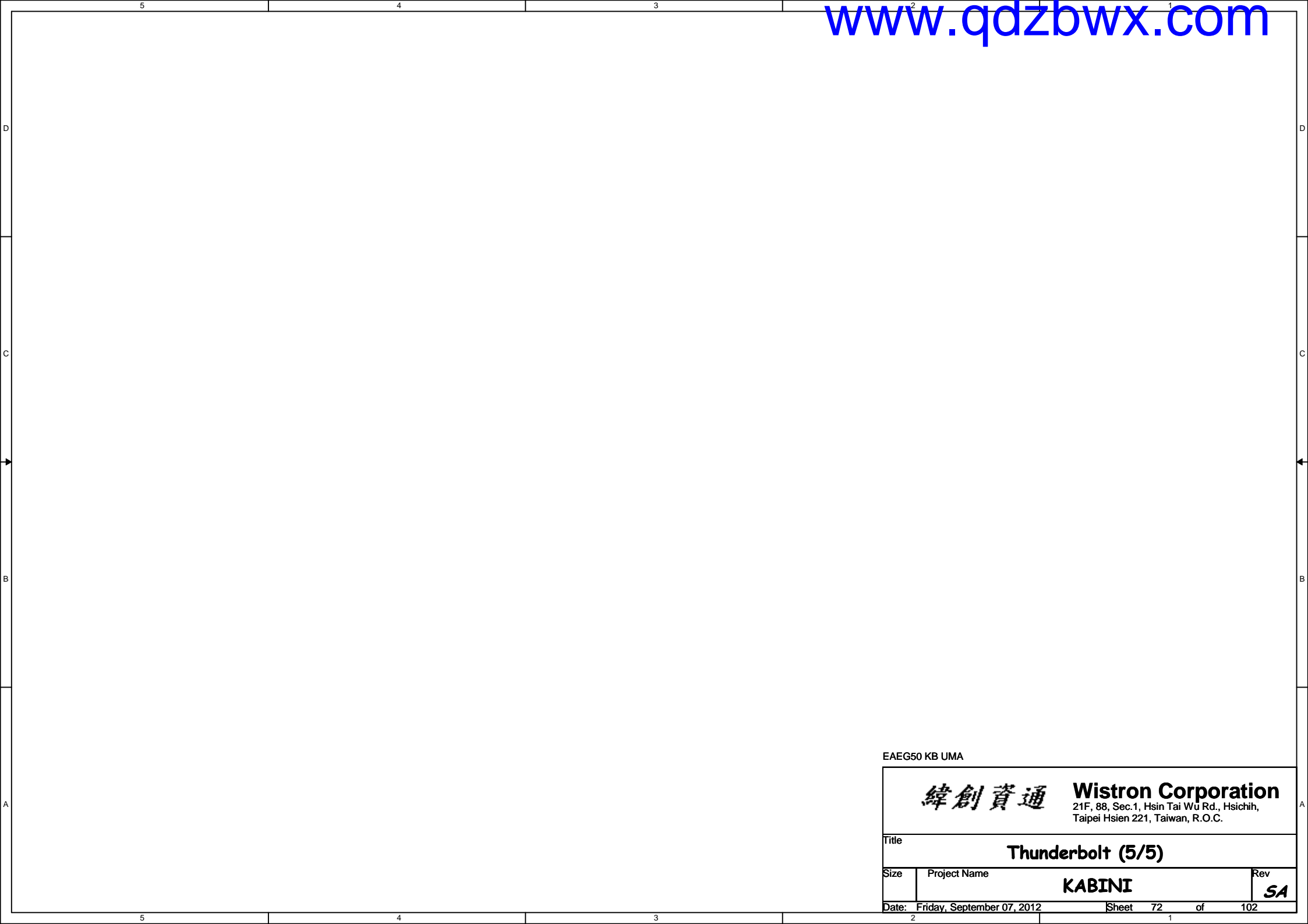
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (3/5)			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	70 of 102




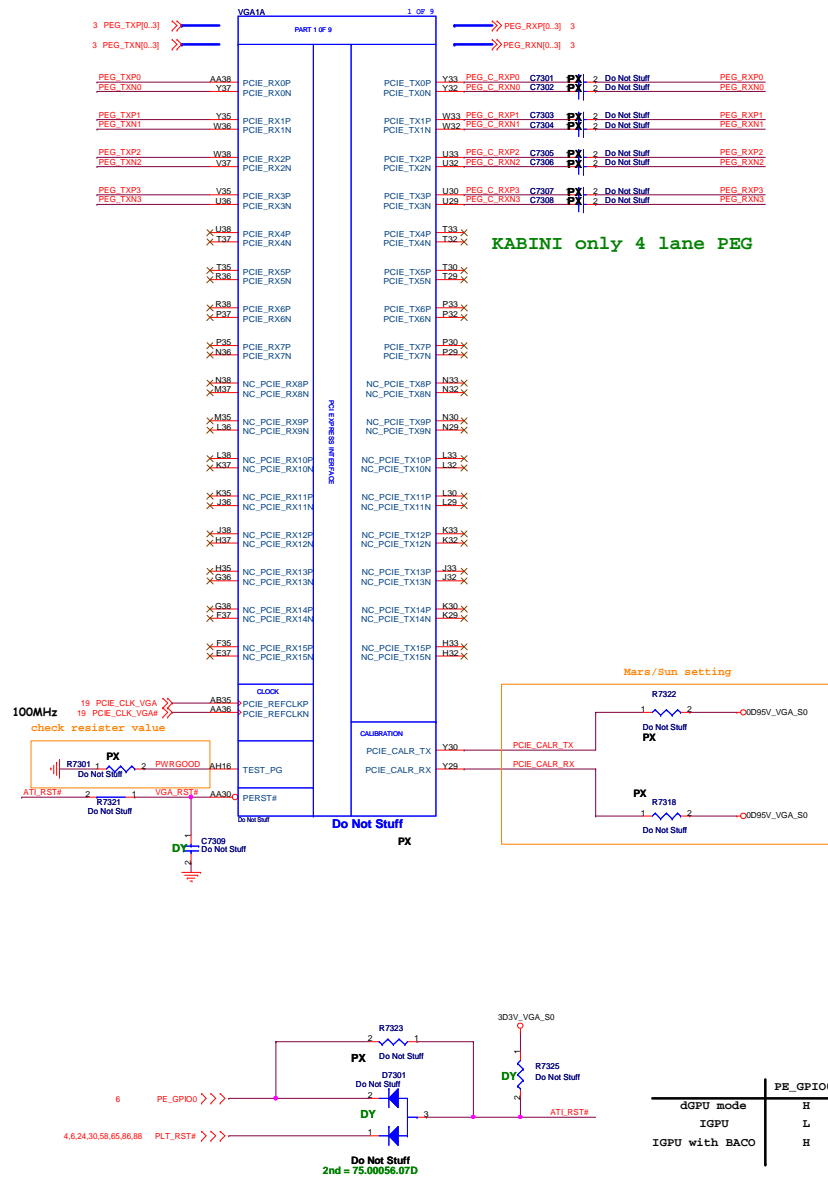
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (4/5)			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	71 of 102



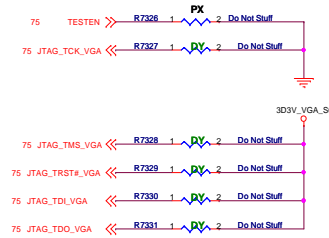
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Thunderbolt (5/5)			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet 72 of 102	



JTAG SIGNAL OPTION

Signal	Normal mode	Debug mode	pilot run mode
TESTEN	"0" (PD)	"1" (PU)	"0" (PD)
JTAG_TRST#	"1" (PU)	"1" (PU)	NC
JTAG_TCK	"0" (PD)	"1" (PU)	NC
JTAG_TMS	"1" (PU)	"1" (PU)	NC





1D5V_VGA_S0

04_2

Do Not Stuff

MEM_RST 78,79,80,81

if for Mannhattan, have to change to other value

Title			
GPU_Digitalout			
Size	Project Name		Rev
	KABINI		S.
Date:	Monday, February 04, 2013	Sheet	74 of 102

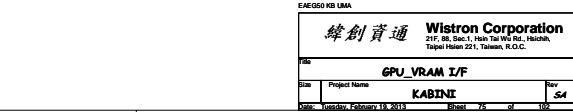
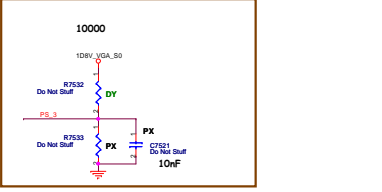
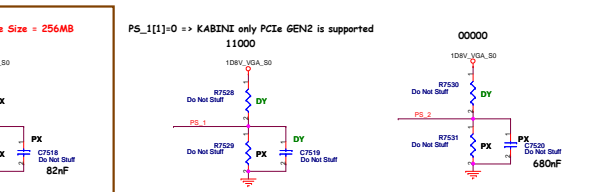
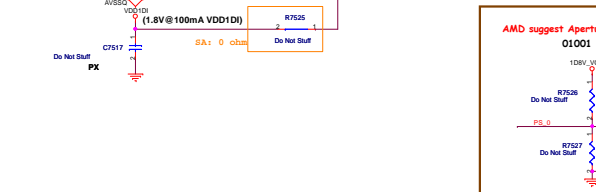
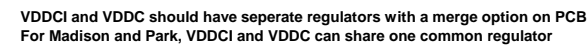
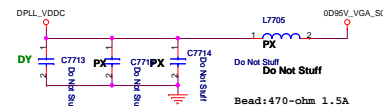
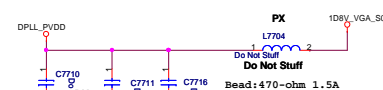
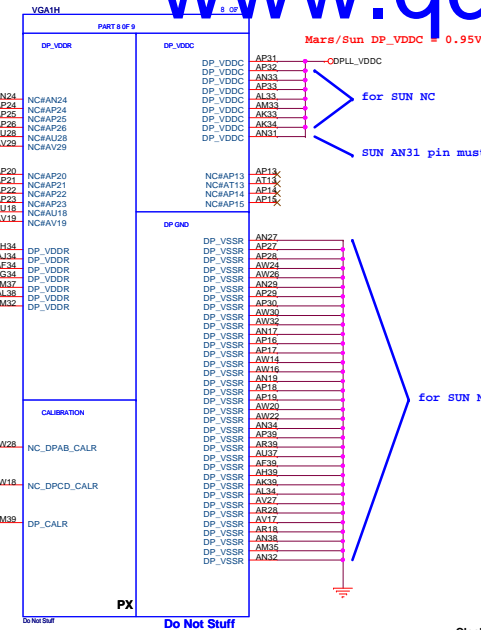
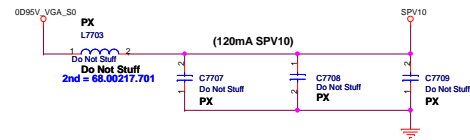
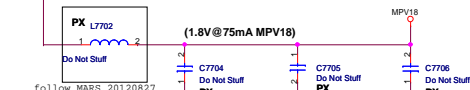
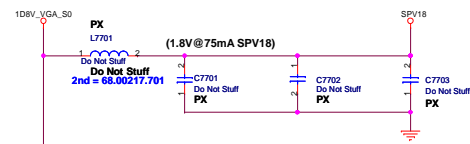
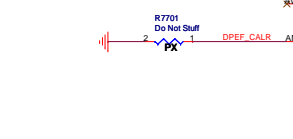
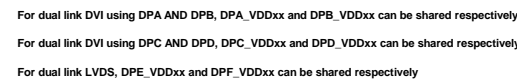


Table 3-33 Multi-Level Pin Straps			
MLPS Bit	Strap Name	Description	Recommended Settings
PS_01[3]	ROM_CONFIG[0]	If STRAP_BIOS_ROM_EN = 1, ROM_CONFIG[0] defines the ROM VPP.	Design dependent; see the description.
PS_01[2]	ROM_CONFIG[1]		
PS_01[1]	ROM_CONFIG[2]	If STRAP_BIOS_ROM_EN = 0, ROM_CONFIG[2] defines the primary memory aperture size (see Primary Memory Aperture Size Up to 40).	
PS_01[0]	N/A	Reserved for internal use only. Must be 1 at reset.	1
PS_03[5]	AUD_PORT_CONN_PFNSTRAP[0]	The LSB (least significant bit) of the strap outputs that indicates the number of audio-capable display outputs.	Design dependent; see the description.
PS_11[1]	STRAP_BIF_GEN3_EN_A	PCIe GEN3 capability: 1 = PCIe GEN3 is supported. 0 = PCIe GEN3 is not supported.	Design dependent; see the description.
PS_11[2]	STRAP_BIF_CPLX_EN_A	Determines whether or not the PCIe reference clock power management capability is reported in the PCI configuration space (reference clocks are CLEVERCER).	
PS_11[3]	STRAP_BIF_CPLX_EN_A	0 = The CLEVERCER power management capability is disabled. 1 = The CLEVERCER power management capability is enabled.	0
PS_11[4]	N/A	Reserved for internal use only. Must be 1 at reset.	0
PS_11[5]	STRAP_TX_CFG_DRV_FUTILL_SWING	Control the transmitter full-half-swing mode: 0 = The transmitter half-swing is enabled. 1 = The transmitter full-swing is enabled.	1
PS_11[6]	STRAP_TX_DEEMPEN_EN	PCI EXPRESS Tx deemphasis disabled: 0 = Tx deemphasis disabled. 1 = Tx deemphasis enabled.	Design dependent; see the description.
PS_21[1]	N/A	Reserved.	N/A
PS_21[2]	N/A	Reserved.	N/A
PS_21[3]	STRAP_BIOS_ROM_EN	To enable the external BIOS ROM device: 0 = Disable the external BIOS ROM device. 1 = Enable the external BIOS ROM device.	Design dependent; see the description.
MLPS Bit	Strap Name	Description	Recommended Settings
PS_21[4]	STRAP_BIF_VGA_DIS	VGA disable determines whether or not the card will be recognized as the system's VGA controller (through the SUBCLASS field in the PCI configuration space). 0 = VGA controller capacity enabled. 1 = The device will not be recognized as the system's VGA controller.	0
PS_21[5]	N/A	Reserved.	N/A
PS_31[1]	BOARD_CONFIG[0]	Board configuration related strapings; such as for memory ID.	Design dependent; see the description.
PS_31[2]	BOARD_CONFIG[1]		
PS_31[3]	BOARD_CONFIG[2]	Determines the maximum number of digital display audio endpoints that will be presented to the OS and user. This should be set to the maximum number of digital display audio outputs that can be enabled simultaneously in the product, which is limited by the ASIC silicon itself. The number and type of connectors on the board (DVI/ HDMI) and the number of cables for each DP connector (the DP MITT link policy of the video driver). Unused outputs should be disabled. This pin strap is encoded as an active low binary bit to ensure zero state enables all endpoints.	
PS_31[4]	AUD_PORT_CONN_PFNSTRAP[1]	The LSB (least significant bit) of the strap outputs that indicates the number of audio-capable display outputs.	Design dependent; see the description.
PS_31[5]	AUD_PORT_CONN_PFNSTRAP[2]		
		111 = No usable endpoints. 110 = One usable endpoint. 101 = Two usable endpoints. 100 = Three usable endpoints. 011 = Four usable endpoints. 010 = Five usable endpoints. 001 = Six usable endpoints. 000 = All endpoints are usable.	

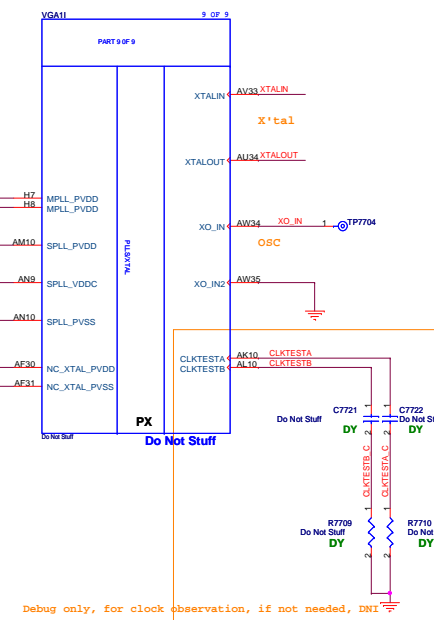
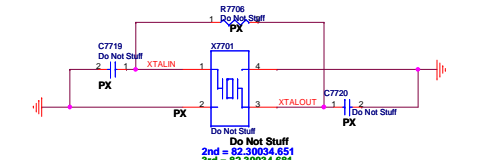
Note: AUD[1] (on RVN90) and AUD[0] (on VSN30) strap should be properly pin strapped even in a MIPS-based design.



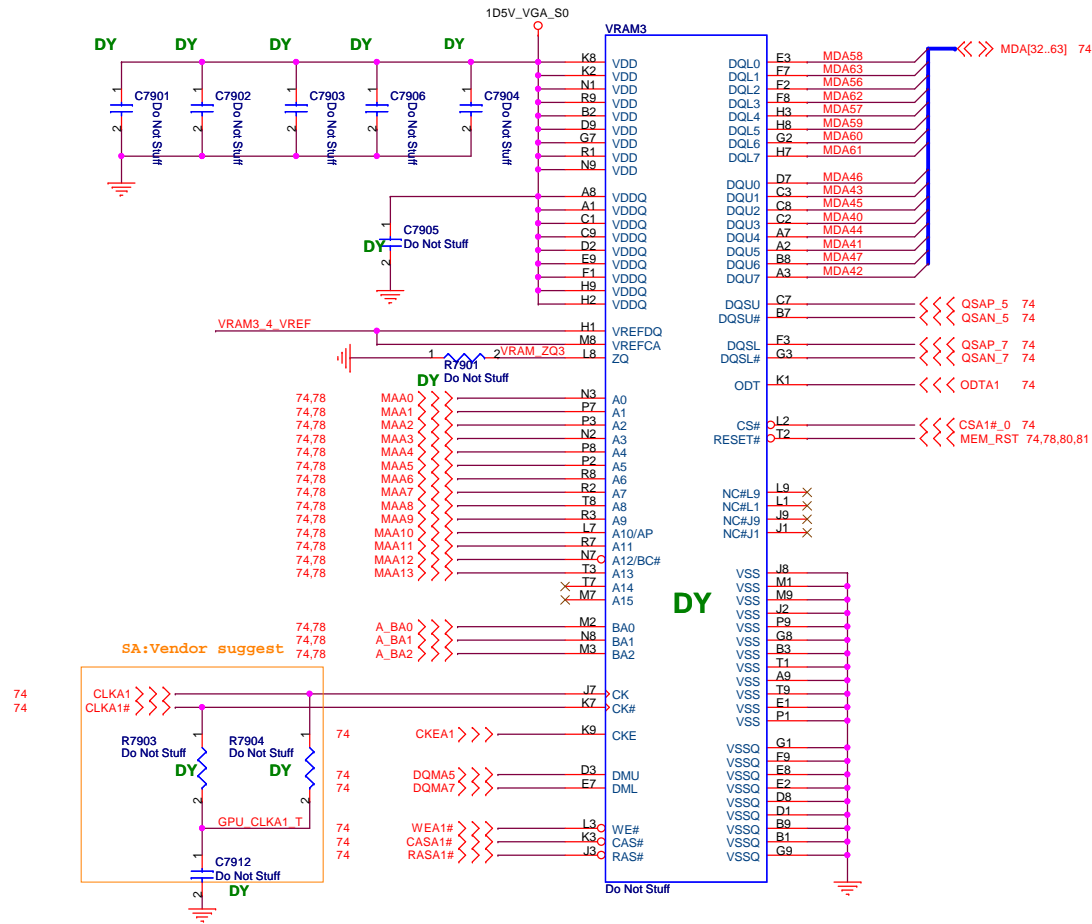


Clock Input Configuraiton -GDDR3/DDR3

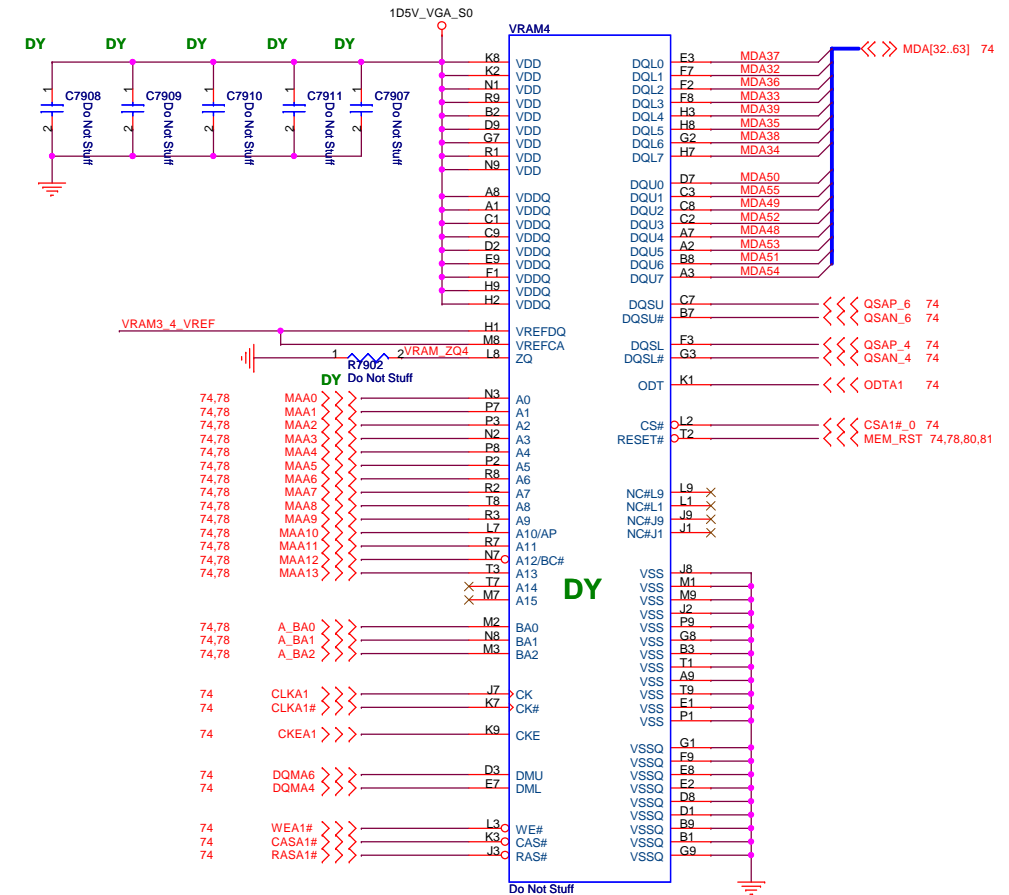
- a) 27MHz crystal connected to XTALIN or XTALOUT or
- b) 27MHz (1.8V) oscillator connected to XTALIN or
- c) 27MHz (3.3V) oscillator connected to XO_IN (Park, Madison, and Broadway only)



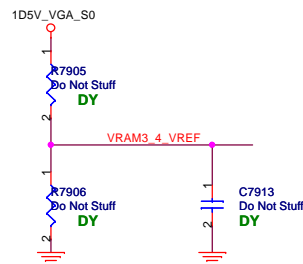




Do Not Stuff



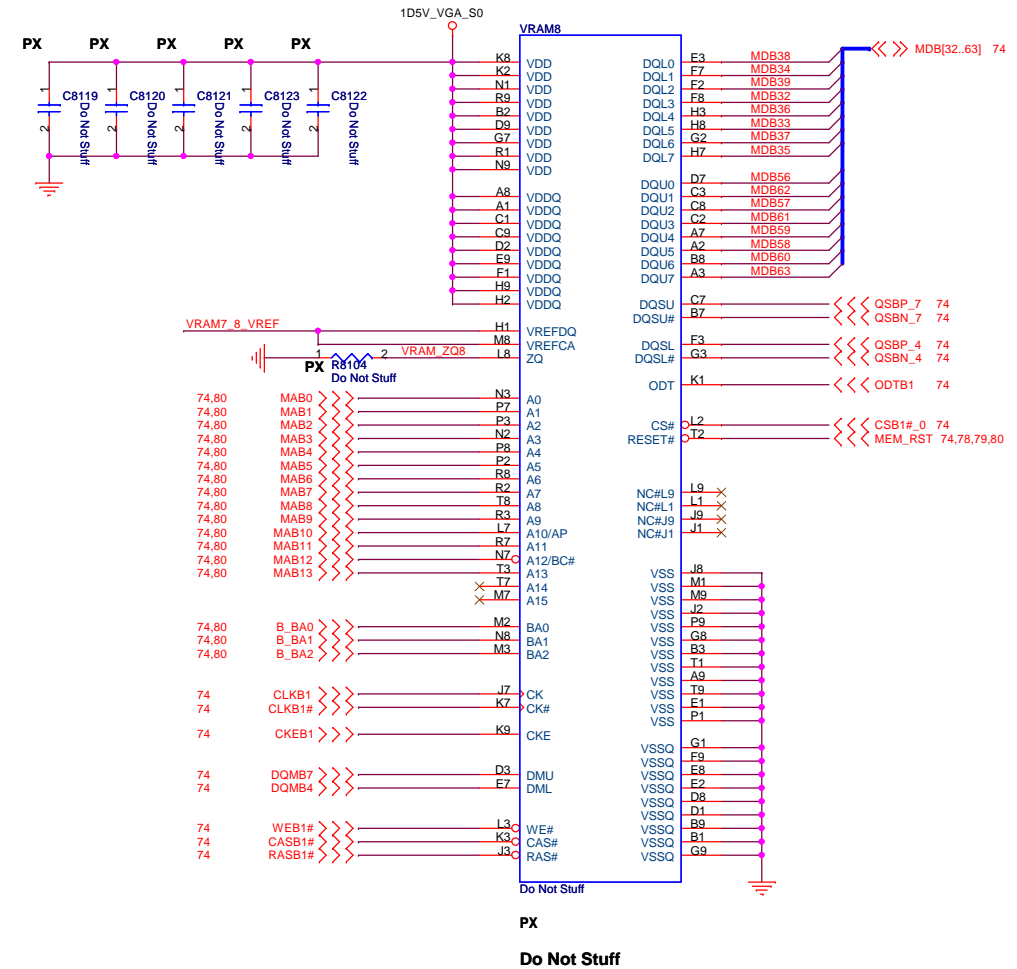
Do Not Stuff



EAEG50 KB UMA

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

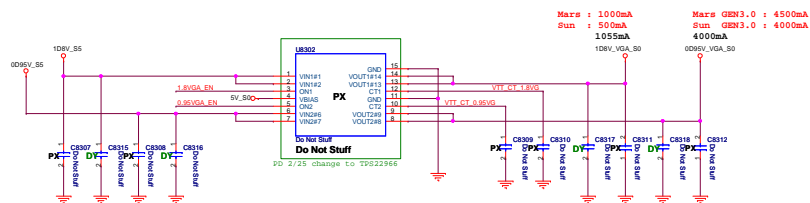
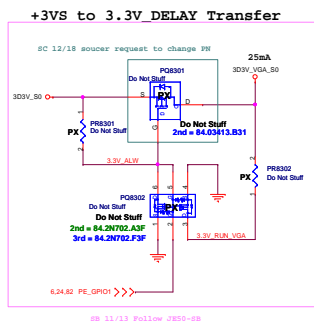
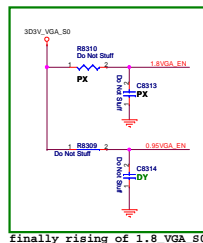
Title			VRAM 3,4
Size			KABINI
Date: Monday, February 04, 2013			Rev 5A
Sheet 79 of 102			



		KABINI		SA	
Date: Monday, February 04, 2013		Sheet 81 of 102			

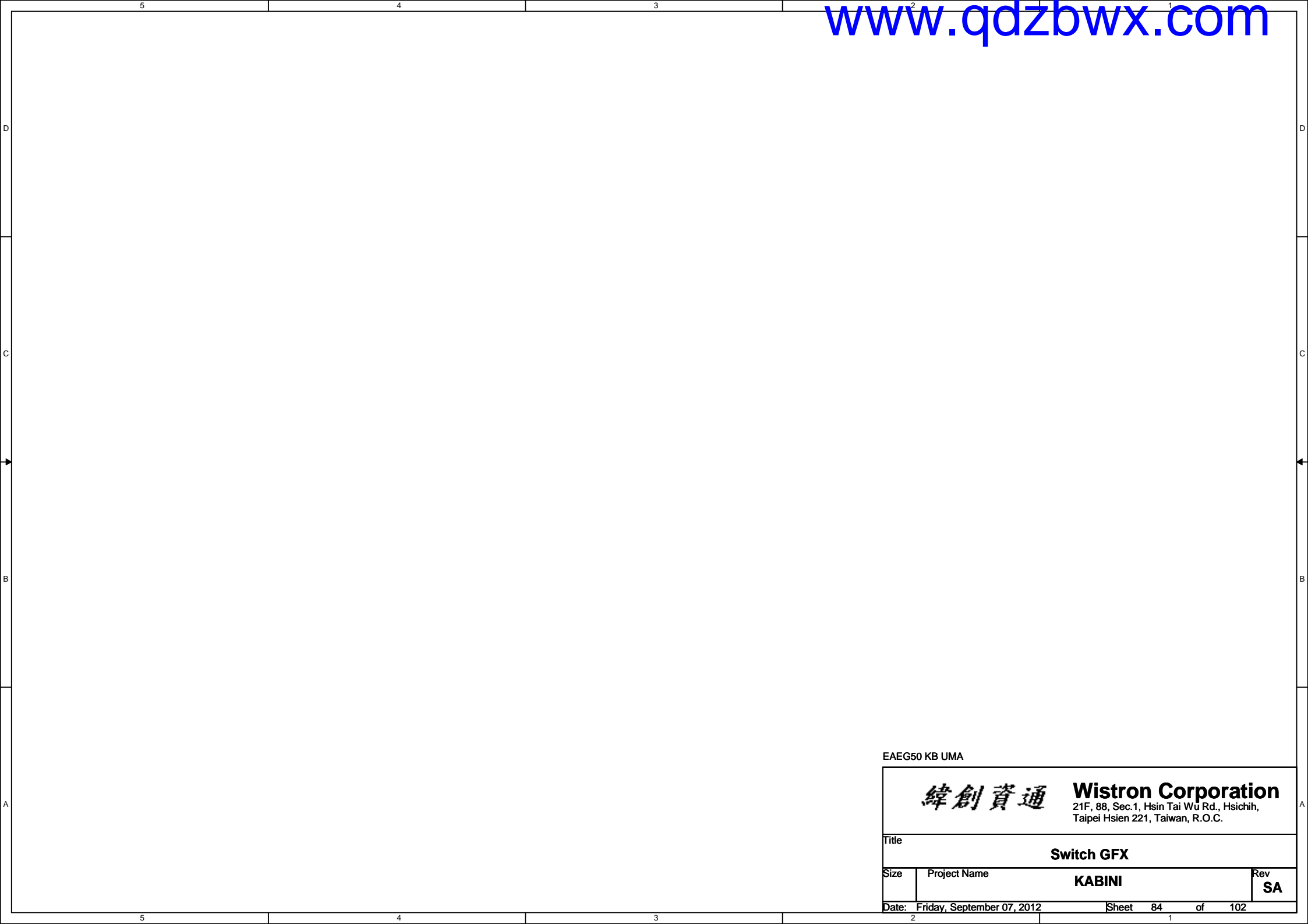
APL3523 for VGA_Power

	FE_GP100	FE_GP101
dGPU mode	H	H
IGPU	L	L
IGPU with BACO	H	H




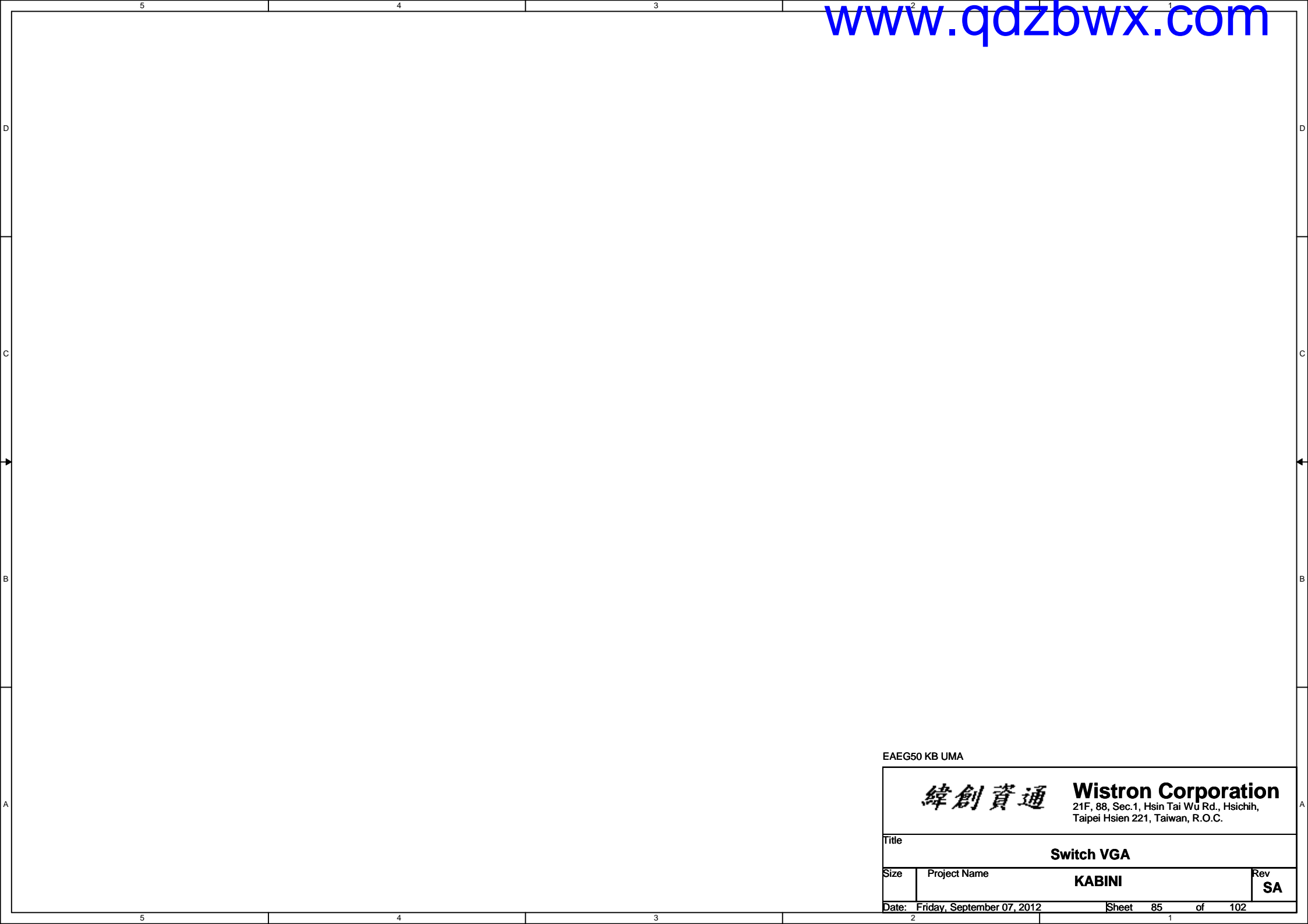
EM6050 KB LMA

緯創資通		Wistron Corporation	
21F, 88, Sec. 1, Hsin Tai Wld Rd., Hsinshih, Taipei 10601, Taiwan, R.O.C.		21F, 88, Sec. 1, Hsin Tai Wld Rd., Hsinshih, Taipei 10601, Taiwan, R.O.C.	
DISCRETE VGA POWER			
KABINI			
Date: 2013/01/25	Drawn: 83	of	100



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Switch GFX			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet 84 of 102	



EAEG50 KB UMA

緯創資通

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

Title

Switch VGA

Size

Project Name

KABINI

Rev

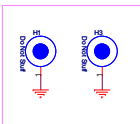
SA

Date: Friday, September 07, 2012

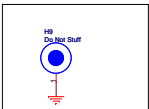
Sheet 85 of 102

ZZ.00PAD.2N1

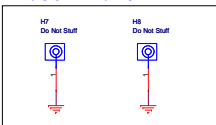
SB 11/14 follow HW for factory issue



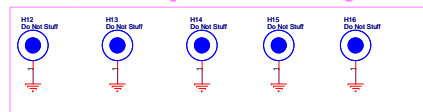
ZZ.00PAD.D01



ZZ.00PAD.E01



SB 11/20 ZZ.00pad.2T1 for change BKT size

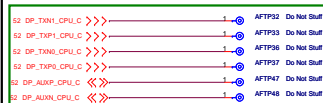


Check test point



Test Point放在Dimm Door打開可量測處

10/15 follow HW 24.27.81.90_KBC_PWRBTN AFTP91 Do Not Stuff



EDP + MIC connector



LAN_RJ45 connector

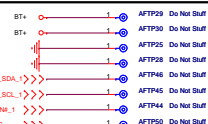
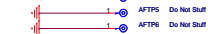


Card reader connector



USBBD connector

DC IN connector



Battery connector



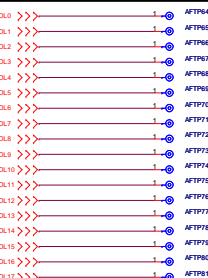
Speaker connector



HP connector



FAN connector

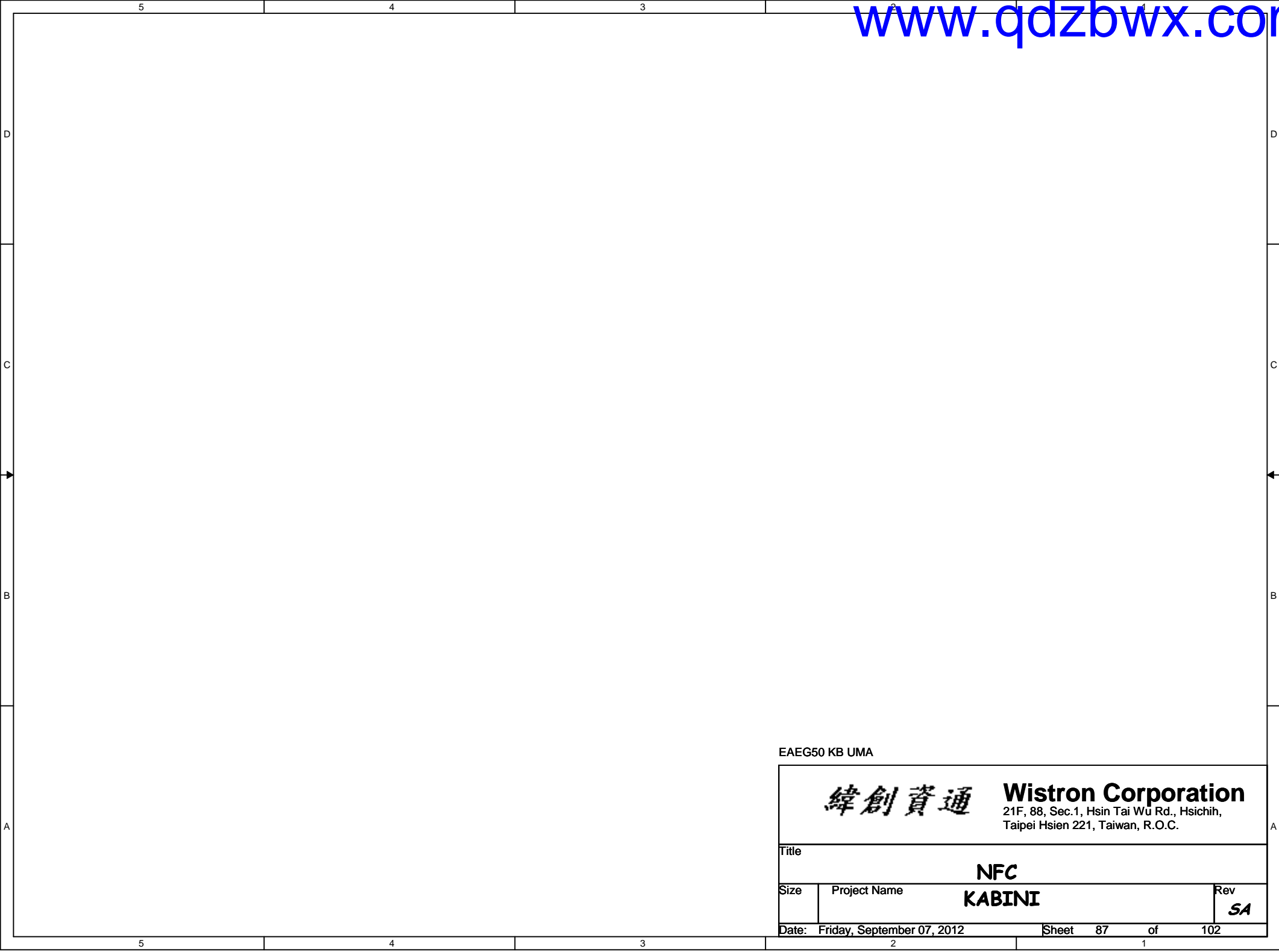


Normal KB connector



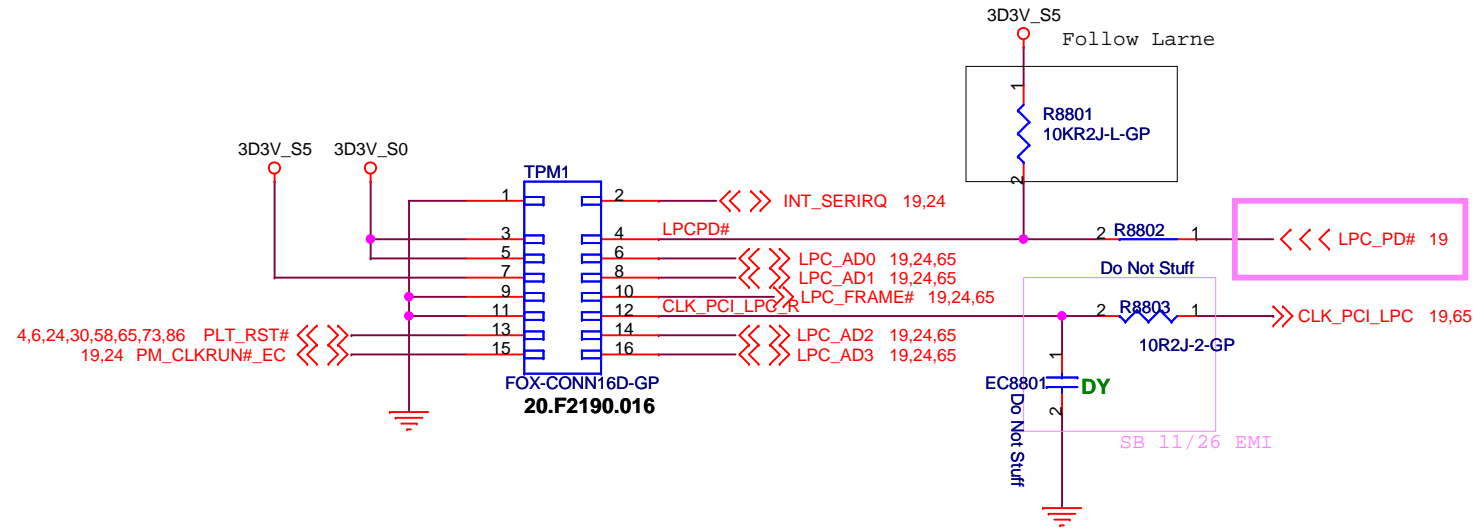
10/15 follow HW 89.90_SWR AFTP95 Do Not Stuff
89.90_SWL AFTP97 Do Not Stuff
SB 11/20 F03140-0540-02

Touch Pad connector



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
NFC			
Size	Project Name		Rev
	KABINI		SA
Date:	Friday, September 07, 2012		Sheet 87 of 102



EAEG50 KB UMA

緯創資通

Wistron Corporation21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

TPM

Size

Project Name

KABINI

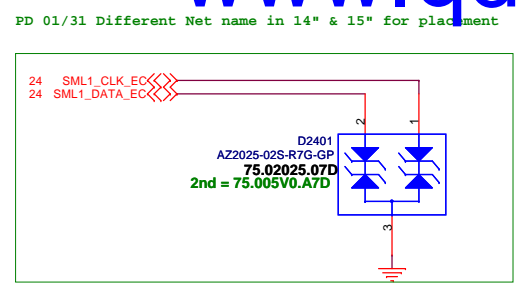
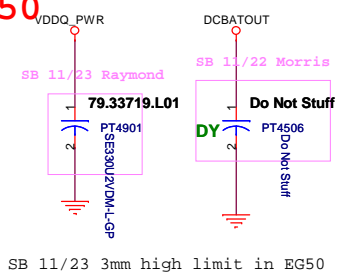
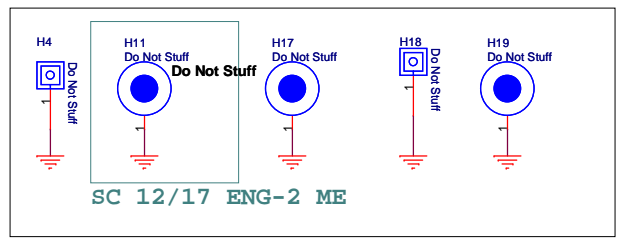
Rev

SA

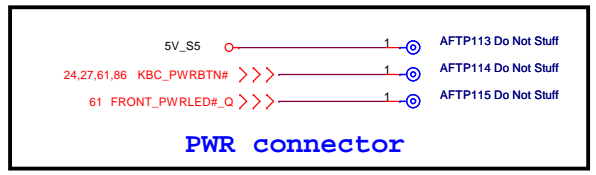
Date: Monday, February 04, 2013

Sheet 88 of 102

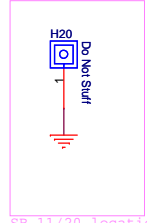
H4 & H11 & H17 & H18 & H19 for EG50



PWRBD AFTP for EG50

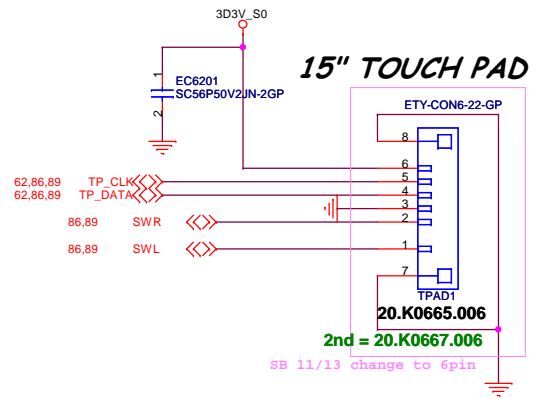
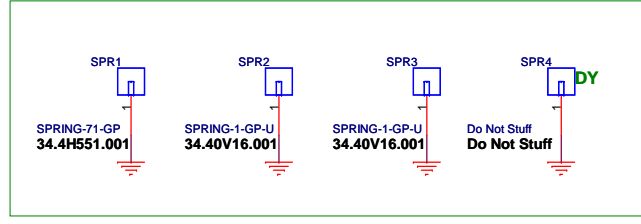


ZZ.00PAD.571



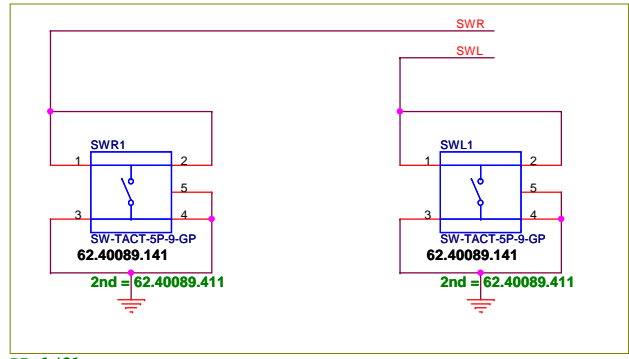
SB 11/20 location same with 14" H2

PD 1/23 EMI Jen



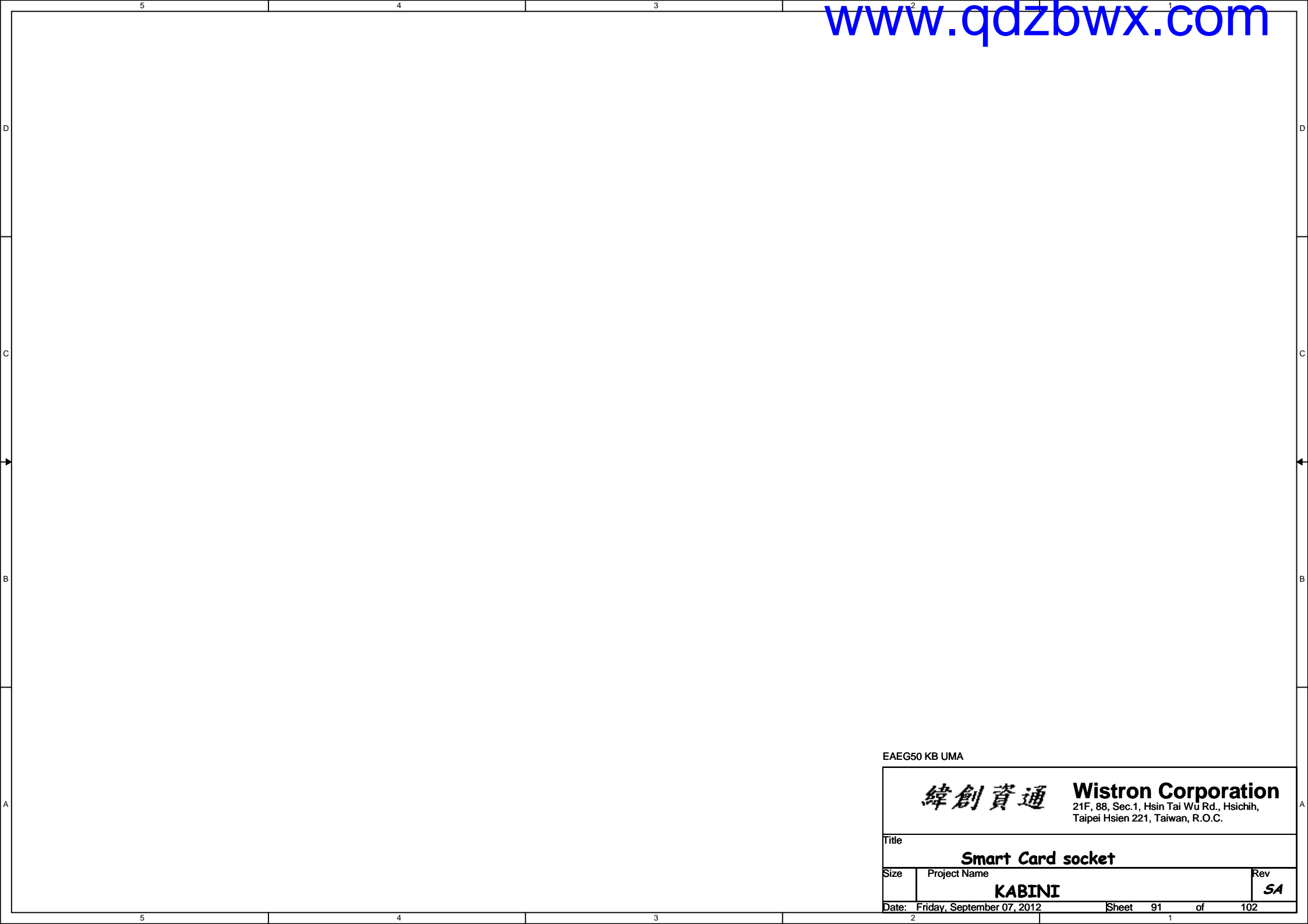
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24,62,86	KCOL1	>>>
24,62,86	KCOL2	>>>
24,62,86	KCOL3	>>>
24,62,86	KCOL4	>>>
24,62,86	KCOL5	>>>
24,62,86	KCOL6	>>>
24,62,86	KCOL7	>>>
24,62,86	KCOL8	>>>
24,62,86	KCOL9	>>>
24,62,86	KCOL10	>>>
24,62,86	KCOL11	>>>
24,62,86	KCOL12	>>>
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24,62,86	KCOL15	>>>
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24,62,86	KCOL17	>>>
24,62,86	KROW0	>>>
24,62,86	KROW1	>>>
24,62,86	KROW2	>>>
24,62,86	KROW3	>>>
24,62,86	KROW4	>>>
24,62,86	KROW5	>>>
24,62,86	KROW6	>>>
24,62,86	KROW7	>>>

For AFTE



PD 1/21
SWL1 / SWR1 1st change to 62.40089.141, 2nd change to 62.40089.411 ,
because 160kg change to 100kg.

EAEG50 KB UMA



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Smart Card socket			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet	91 of 102



EAEG50 KB UMA

緯創資通

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

Title

Switchable GFX eDP

Size

Project Name

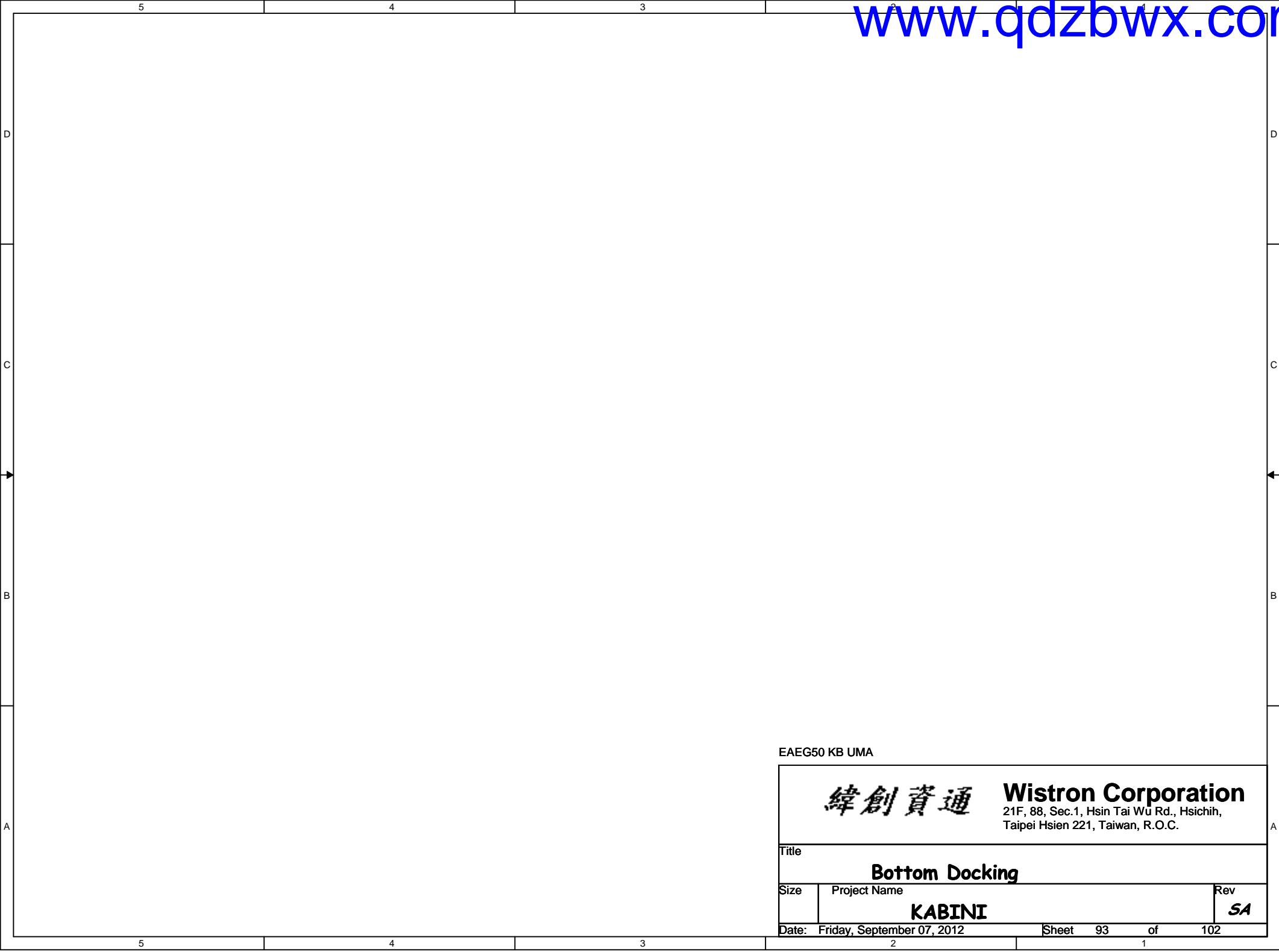
KABINI

Rev

SA

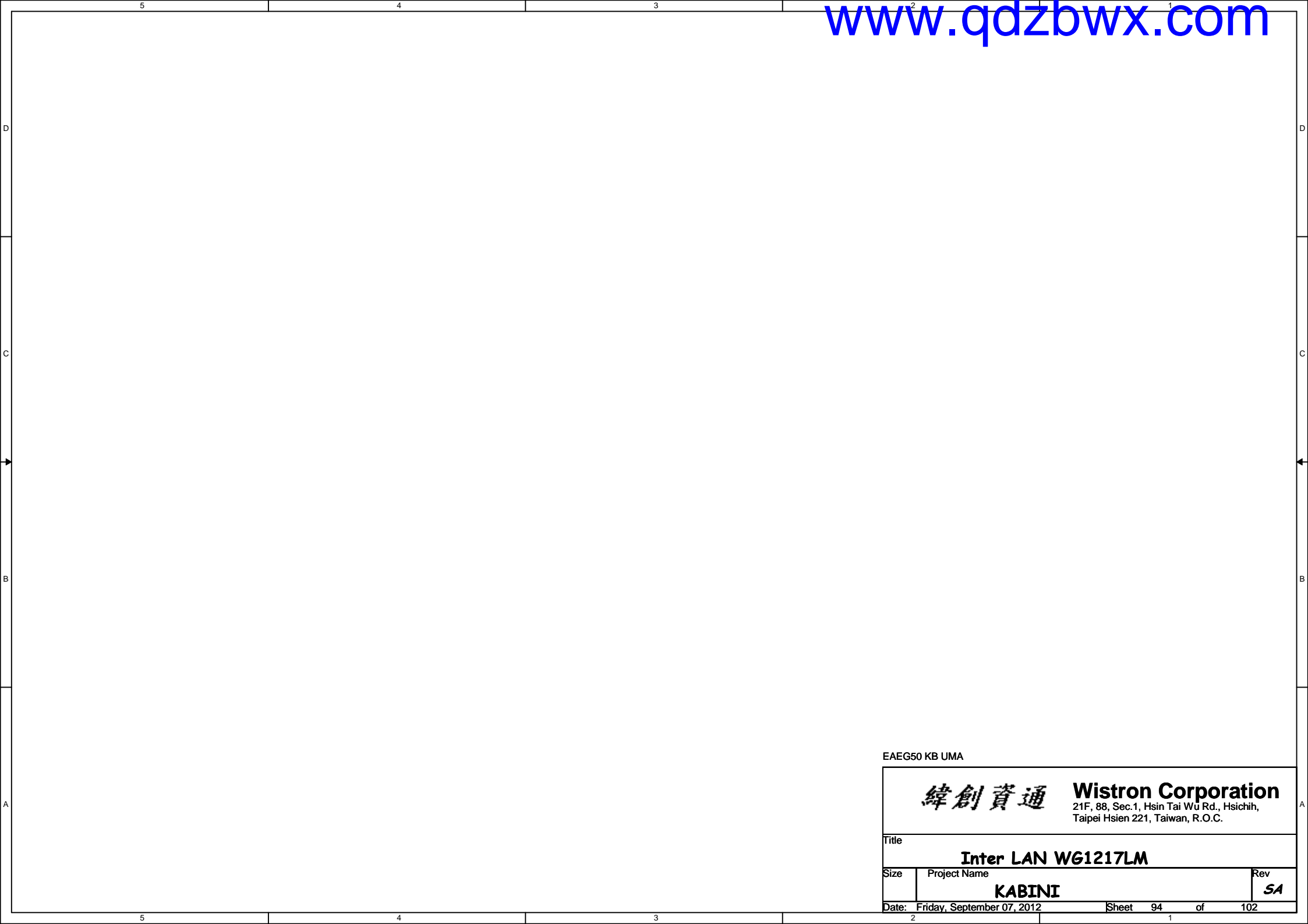
Date: Friday, September 07, 2012

Sheet 92 of 102



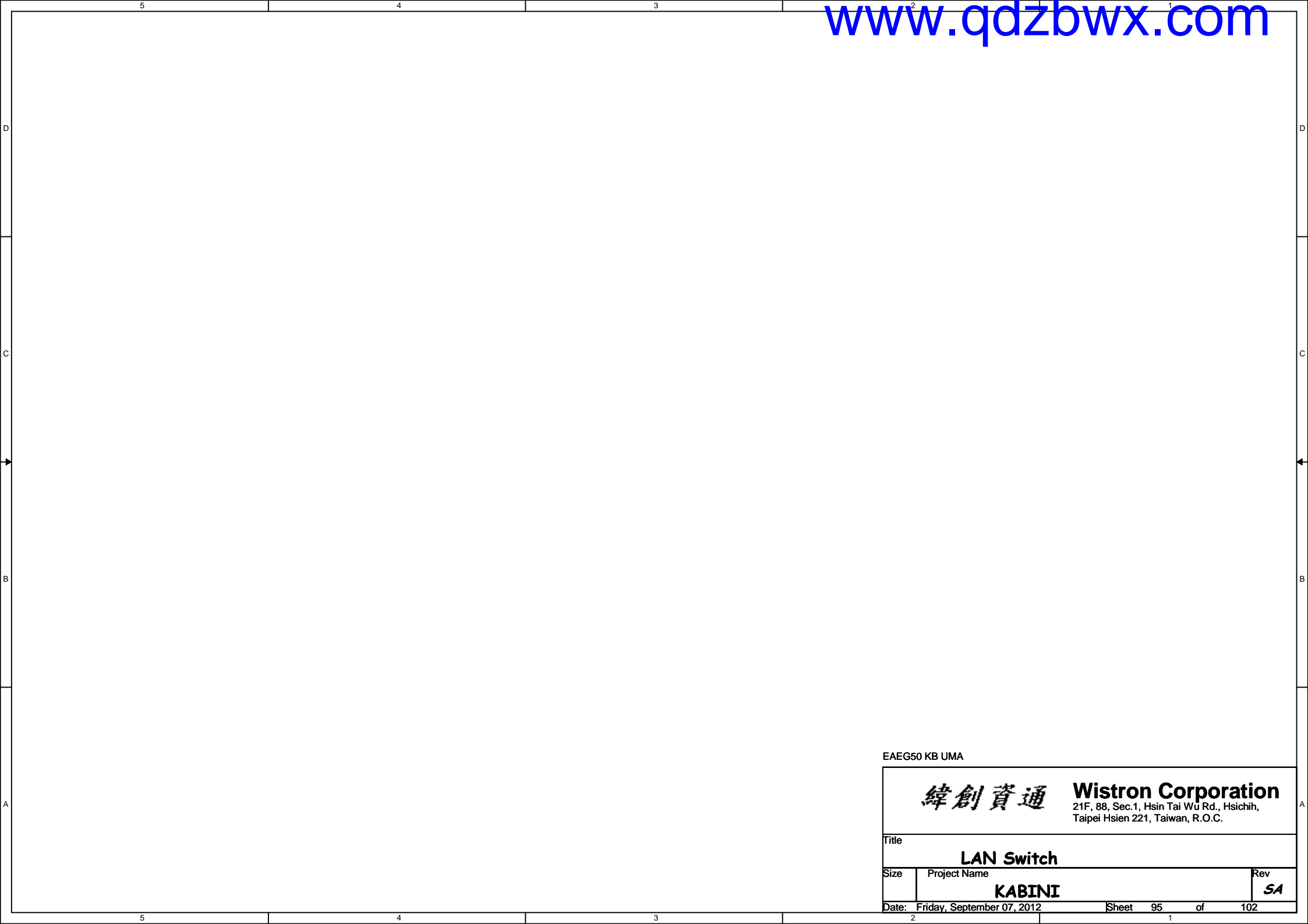
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Bottom Docking			
Size	Project Name		Rev
	KABINI		SA
Date:	Friday, September 07, 2012		Sheet 93 of 102




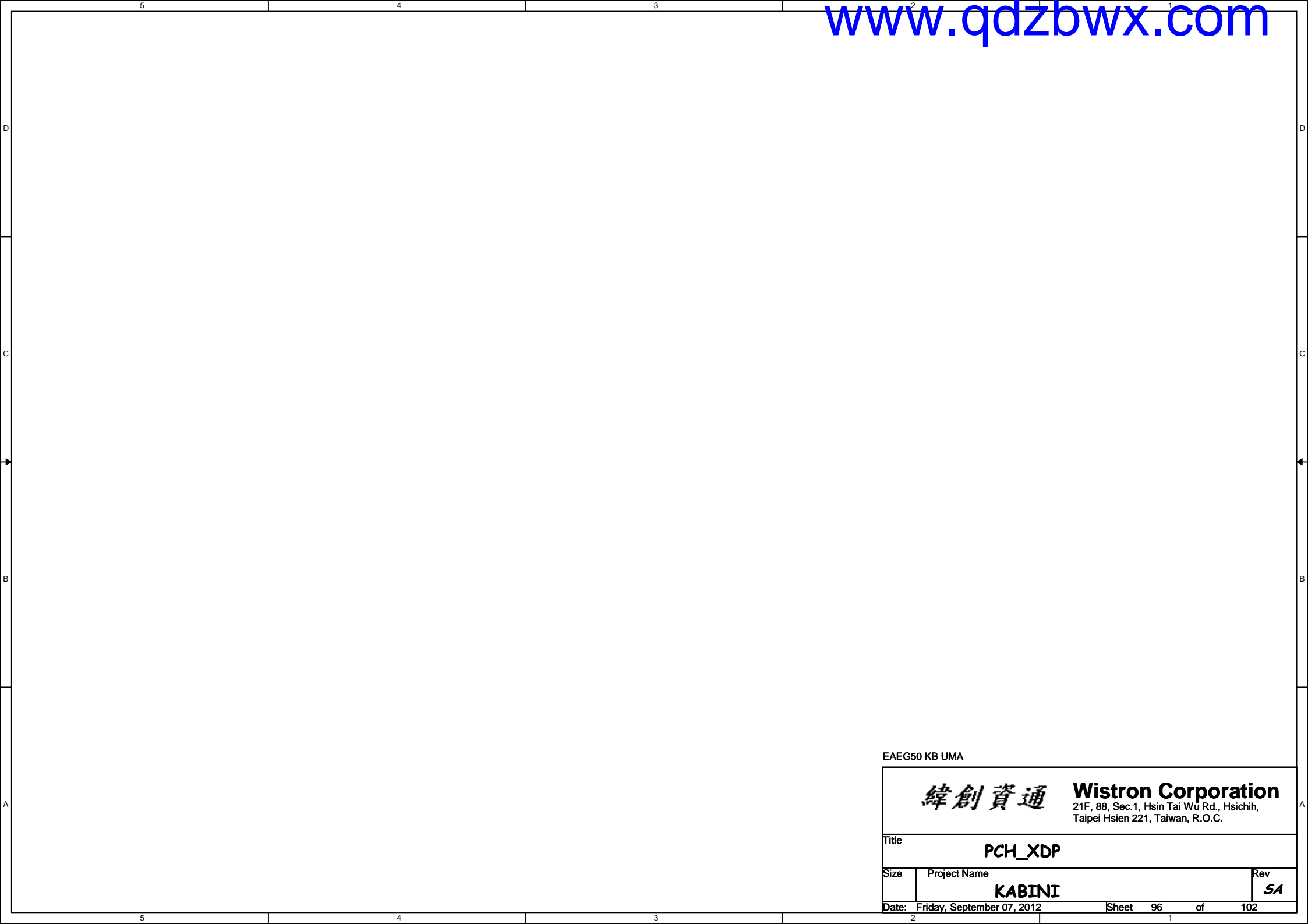
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title Inter LAN WG1217LM			
Size	Project Name KABINI		Rev SA
Date:	Friday, September 07, 2012	Sheet 94 of	102



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LAN Switch			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet 95 of	102



EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title PCH_XDP			
Size	Project Name KABINI		Rev SA
Date: Friday, September 07, 2012		Sheet 96	of 102



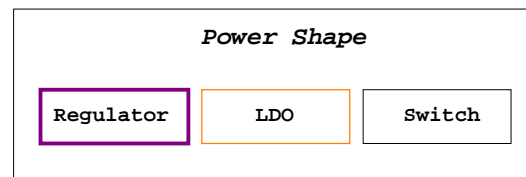
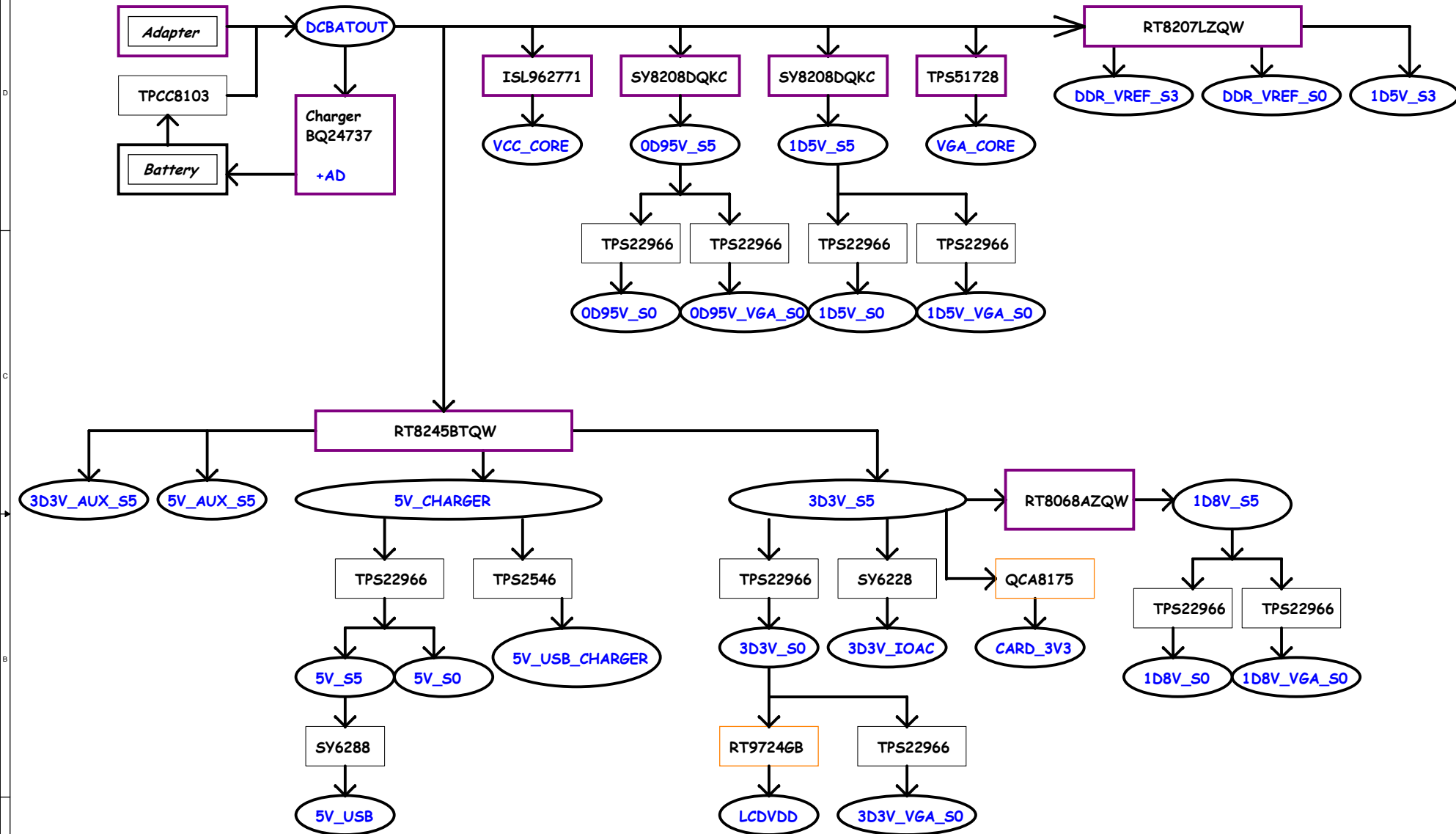
EAEG50 KB UMA

<div>緯創資通</div>		<div>Wistron Corporation</div>			
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title					
table of content					
Size	Project Name		Rev		
	KABINI		SA		
Date:	Friday, September 07, 2012	Sheet 97	of 102		



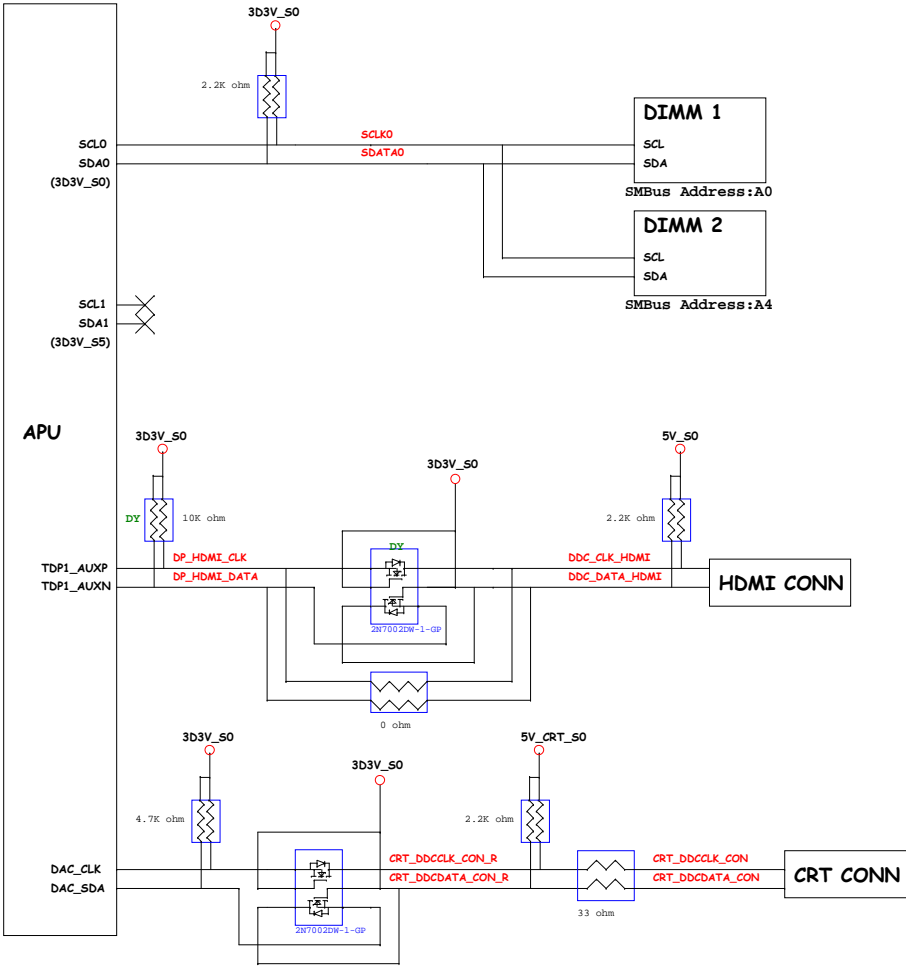
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Change History			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet	98 of 102

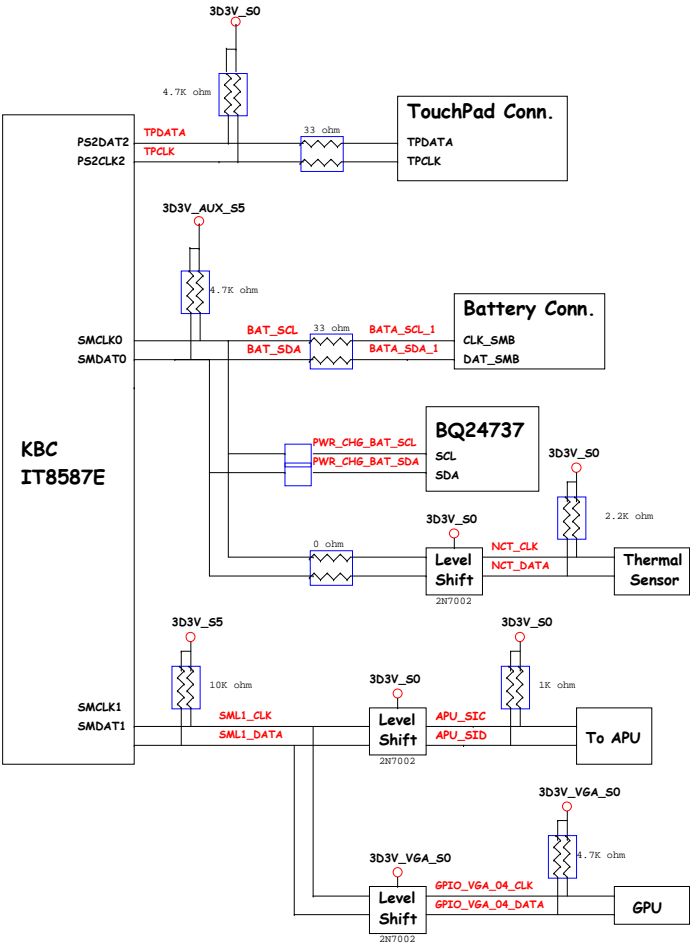


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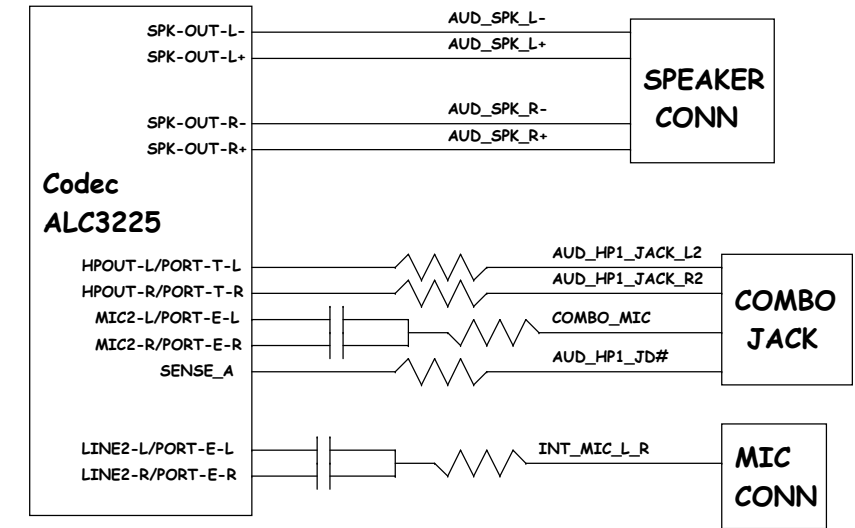
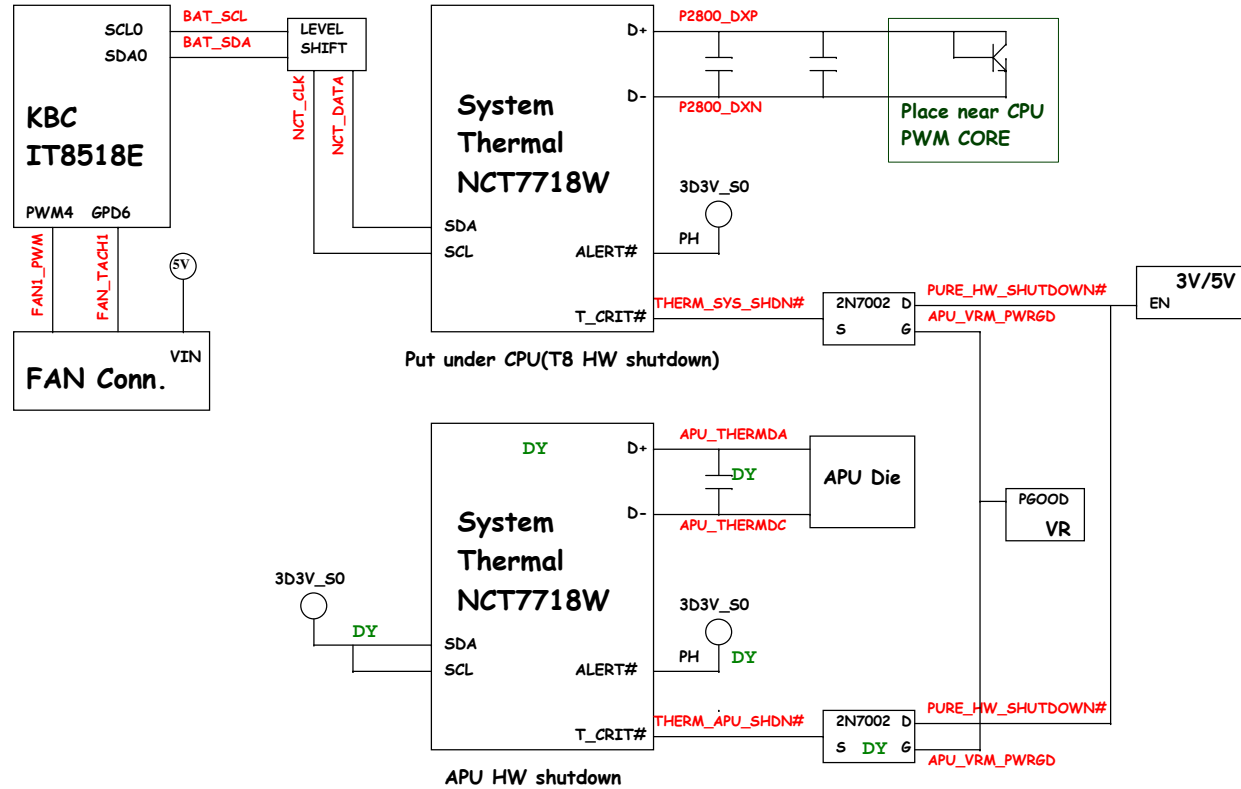
SMBus Block Diagram



KBC SMBus Block Diagram



Thermal Block Diagram



EAEG50 KB UMA