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# QingDao\_ULCPC

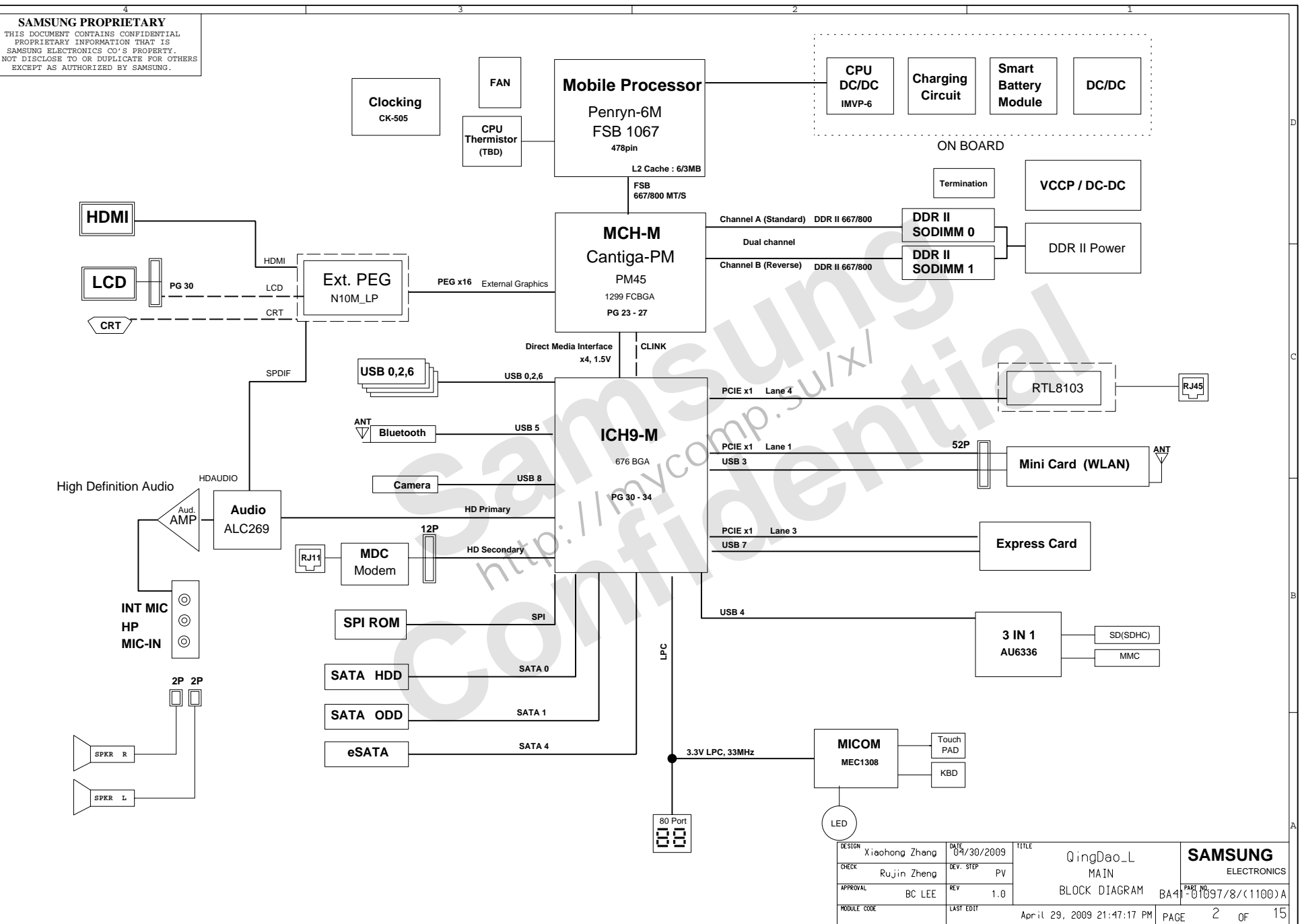
CPU : Intel Penryn  
Chip Set : Intel Cantiga & ICH9M  
Remarks : Montevina Platform

Model Name : QingDao\_ULCPC  
PBA Name : MAIN  
PCB Code : BA41-01100A NANYA  
BA41-01097A HANNST  
BA41-01098A GCE  
Dev. Step : PV  
Revision : 1.0  
T.R. Date : 2009.04.30

Design	CHECK	APPROVAL
XIAOHONG ZHANG	RUJIN ZHENG	BC LEE

■ Owner : SESC Mobile R & D      Signature : X

## BLOCK DESIGN



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## BOARD INFORMATION

## SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

## Voltage Rails

VDC	Primary DC system power supply (7 to 21V)
CPU_CORE	Core Voltage for CPU
EGFX_CORE	Core Voltage for GPU
P1.05V	VTT for CPU, Cantiga & ICH9-M
P1.1	VTT for N10M, GE1
P3.3V_MICOM	3.3V always power rail (for Micom)
P1.5V	1.5V switched power rail (off in S3-S5)
P1.8V	1.8V switched power rail (off in S3-S5)
P1.8V_AUX	1.8V power rail for DDR (off in S4-S5)
P0.9V	0.9V power rail for DDR (off in S3-S5)
P3.3V	3.3V switched power rail (off in S3-S5)
P3.3V_AUX	3.3V switched on power rail (off in S4-S5)
P5.0V	5.0V switched power rail (off in S3-S5)
P5.0V_AUX	5.0V switched on power rail (off in S4-S5)
P5.0V_ALW	5.0V always power rail
P12.0V_ALW	12.0V always power rail

## Crystal / Oscillator

TYPE	FREQUENCY	DEVICE	USAGE
Crystal	32.768KHz	ICH9-M	Real Time Clock
Crystal	10MHz	MICOM	HD64F2169/2160
Crystal	14.318MHz	CLOCK-Generator	CK-505
Crystal	25MHz	LAN	Intel LAN

I<sup>2</sup>C / SMB Address

Devices	Address	Hex	Bus
ICH9-M	Master	-	SMBUS Master
CPU Thermal Sensor	0111 101x	7Ah	Thermal Sensor
SODIMM0	1010 000x	A0h	-
SODIMM1	1010 010x	A4h	-
Thermal Sensor on SODIMM0	0011 000x	30h	-
Thermal Sensor on SODIMM1	0011 010x	34h	-
CK-505M (Clock Generator)	1101 0010	D2h	Clock, Unused Clock Output Disable

## USB PORT Assign

PORT #	ASSIGNED TO
0	SYSTEM PORT 0
1	Mini PCI Express
2	SYSTEM PORT 1
3	NC
4	3 IN 1
5	Bluetooth
6	SYSTEM PORT 2
7	EXPRESS CARD
8	Camera
9	NC
10	NC

## PCI Express Assign

PORT #	ASSIGNED TO
1	Mini Card 1 (WLAN)
2	NC
3	EXPRESS CARD
4	LOM
5	NC
6	NC

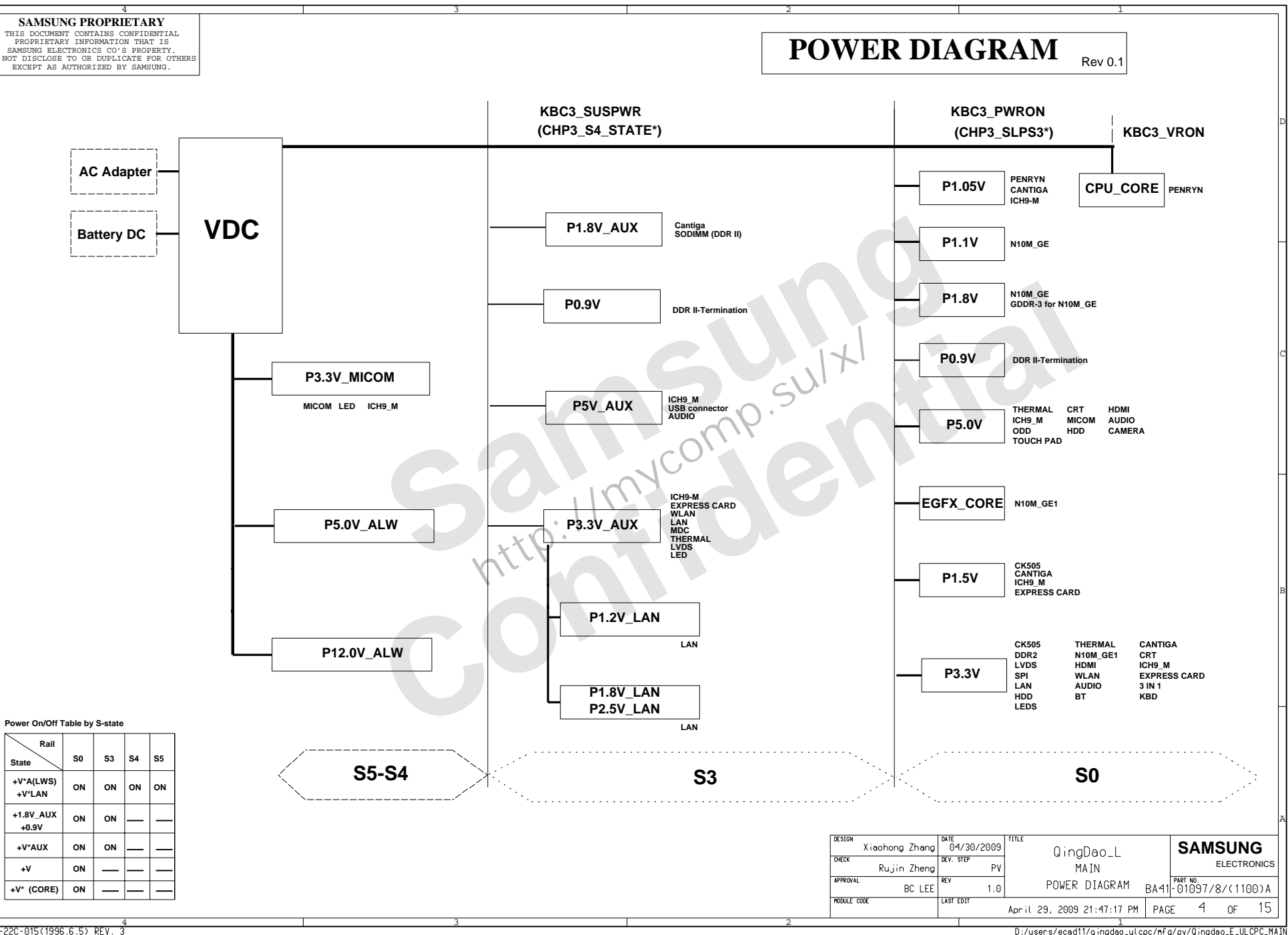
## LCD Pannel Detect (TBD)

Devices	Resolution	PANNEL_DETECT_0(strap0)

## REVISION HISTORY

See rev notes for more information.

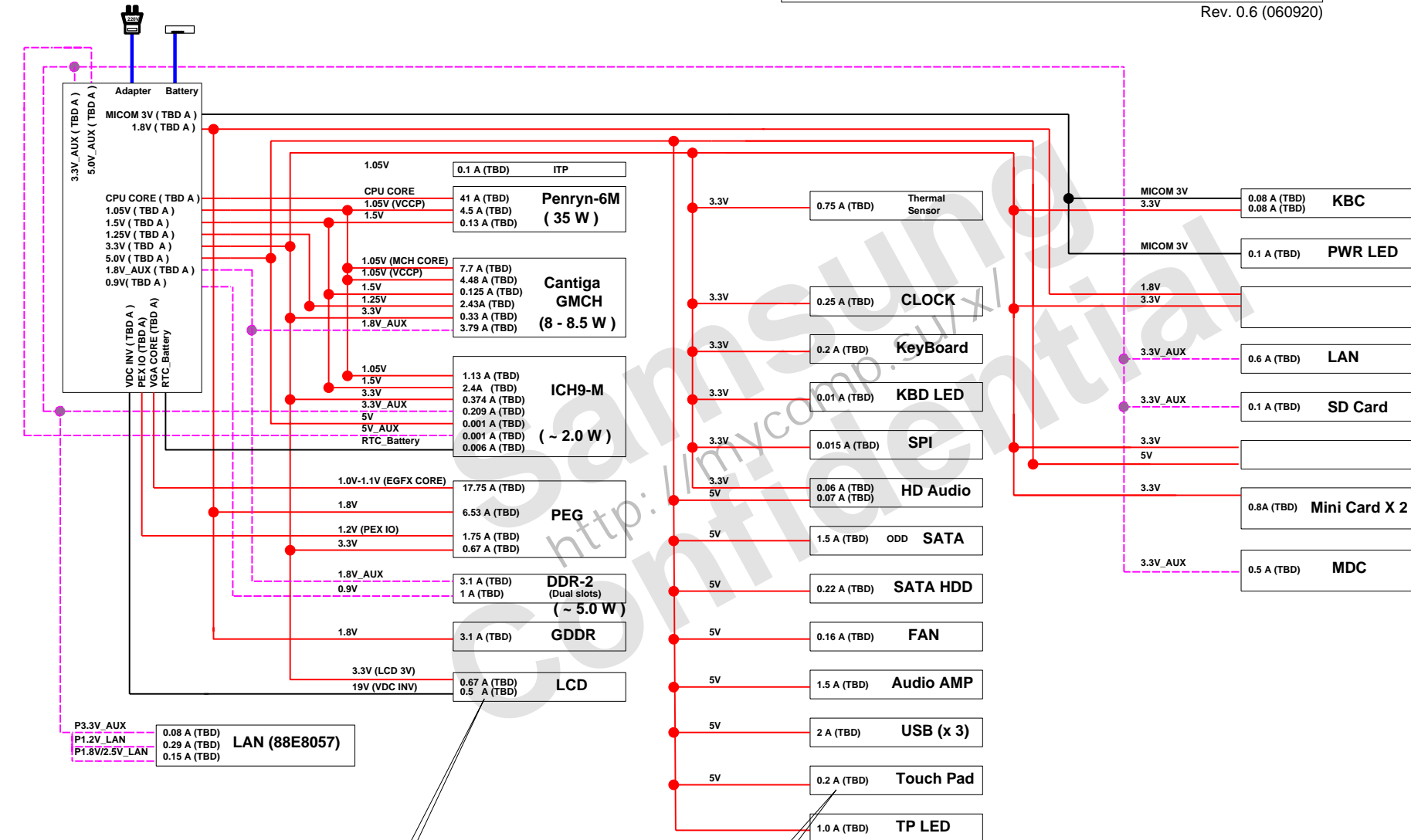
DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		MAIN	
APPROVAL	BC LEE	REV	1.0	BOARD INFO	BA41-01097/8/(1100)A	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	3 OF 15	



# POWER RAILS ANALYSIS

Rev. 0.6 (060920)

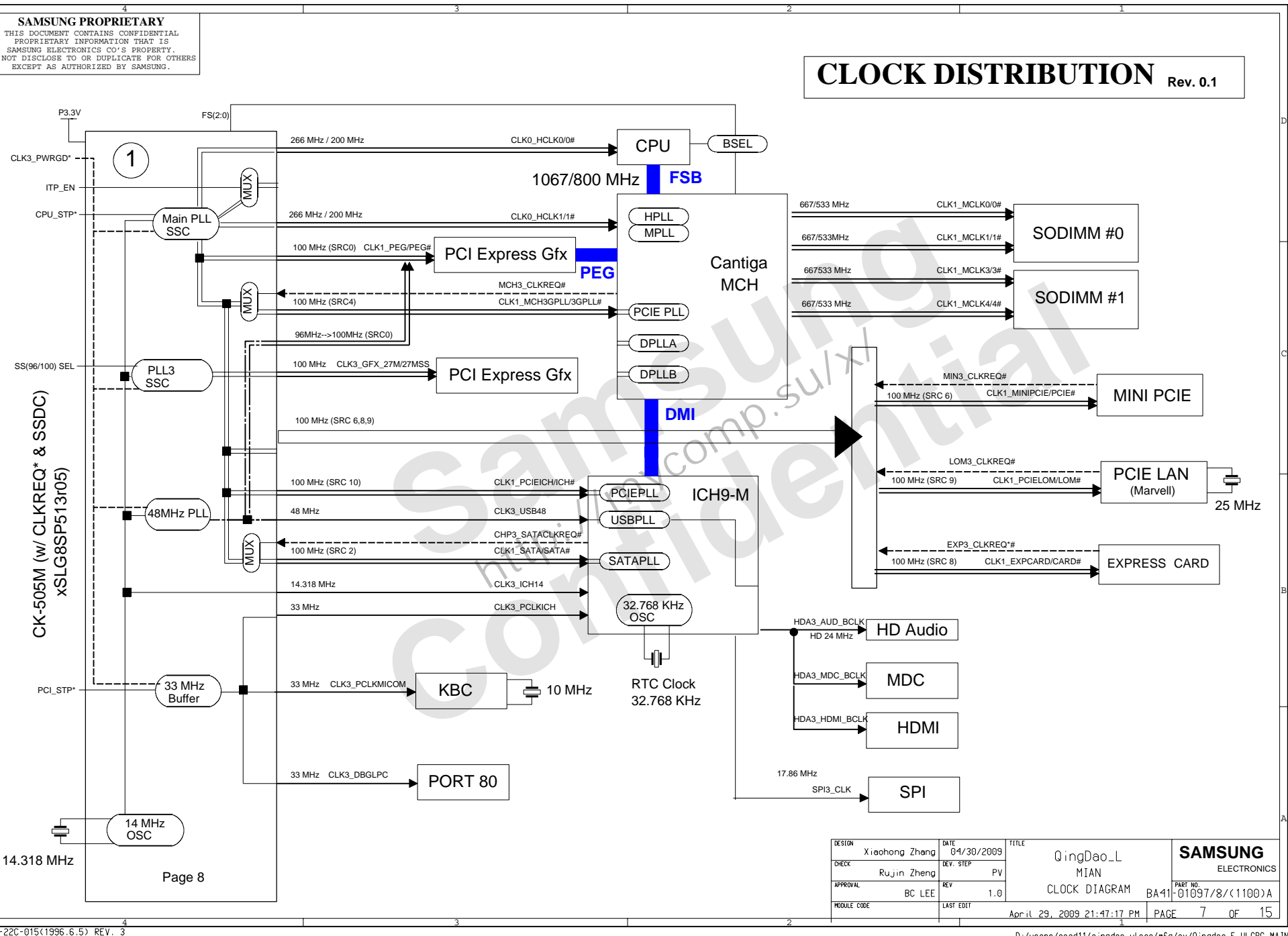
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Value by Datasheet/Application notes (Value by measurement)

DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	REV. STEP	PV	MAIN	POWER RAILS	
APPROVAL	BC LEE	REV	1.0	BA41-01097/8/(1100)A	PART NO.	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	5 OF 15	





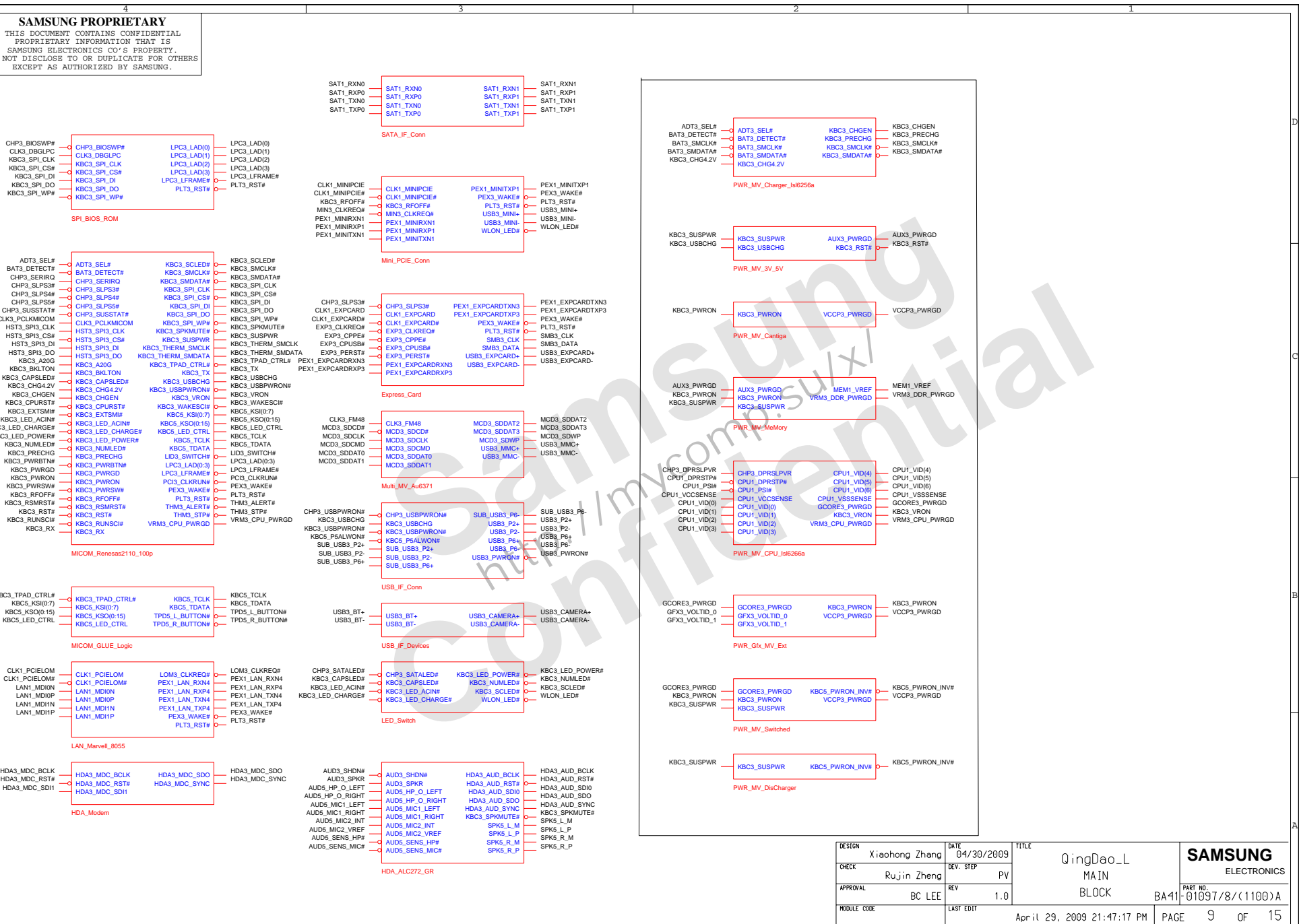
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[illegible]

DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE QingDao_L MAIN BLOCK	PART NO. 01097/8/(1100)A	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	LAST EDIT		April 29, 2009 21:47:17 PM			

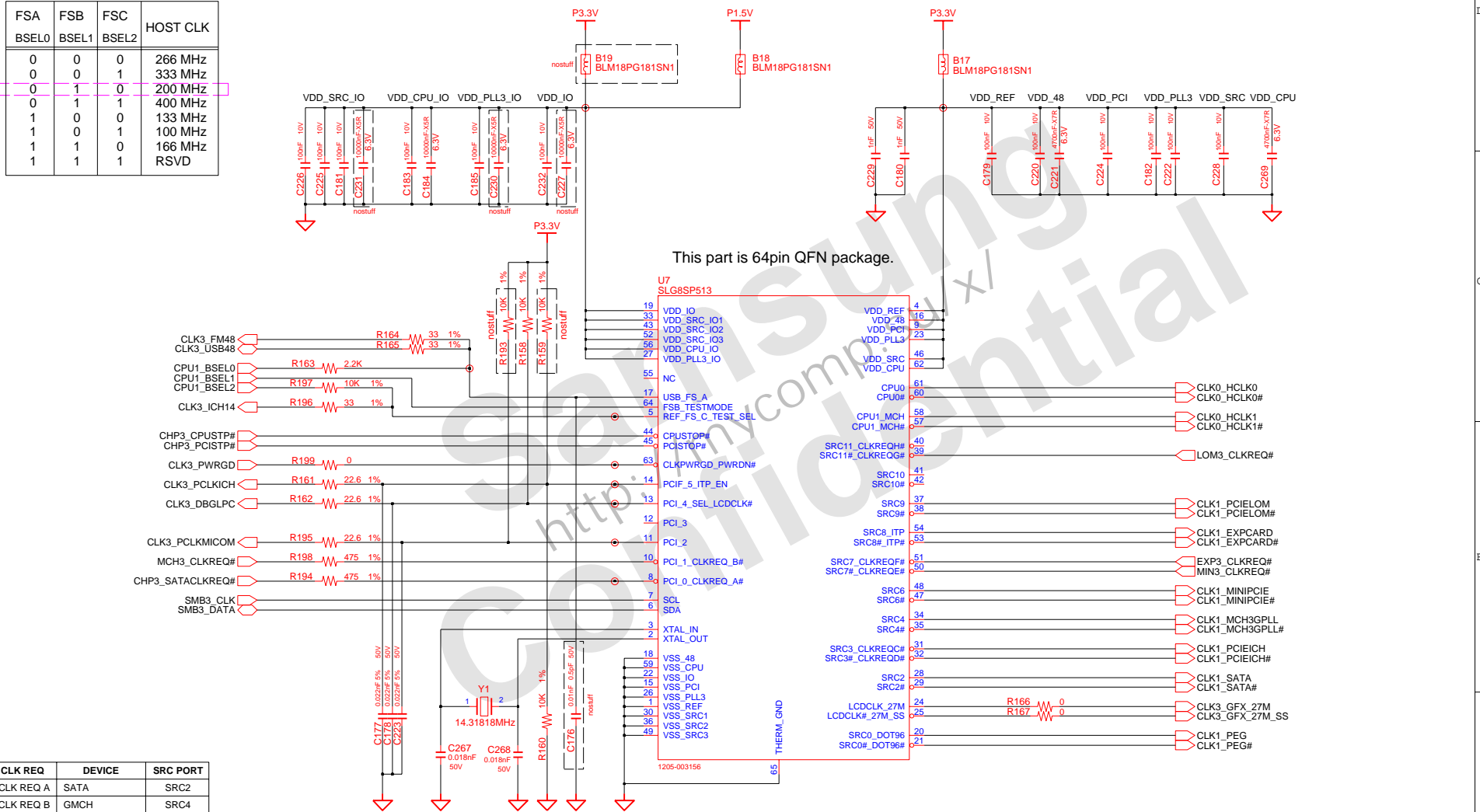




# CK505M

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FSA	FSB	FSC	HOST CLK
BSEL0	BSEL1	BSEL2	
0	0	0	266 MHz
0	0	1	333 MHz
0	1	0	200 MHz
0	1	1	400 MHz
1	0	0	133 MHz
1	0	1	100 MHz
1	1	0	166 MHz
1	1	1	RSVD

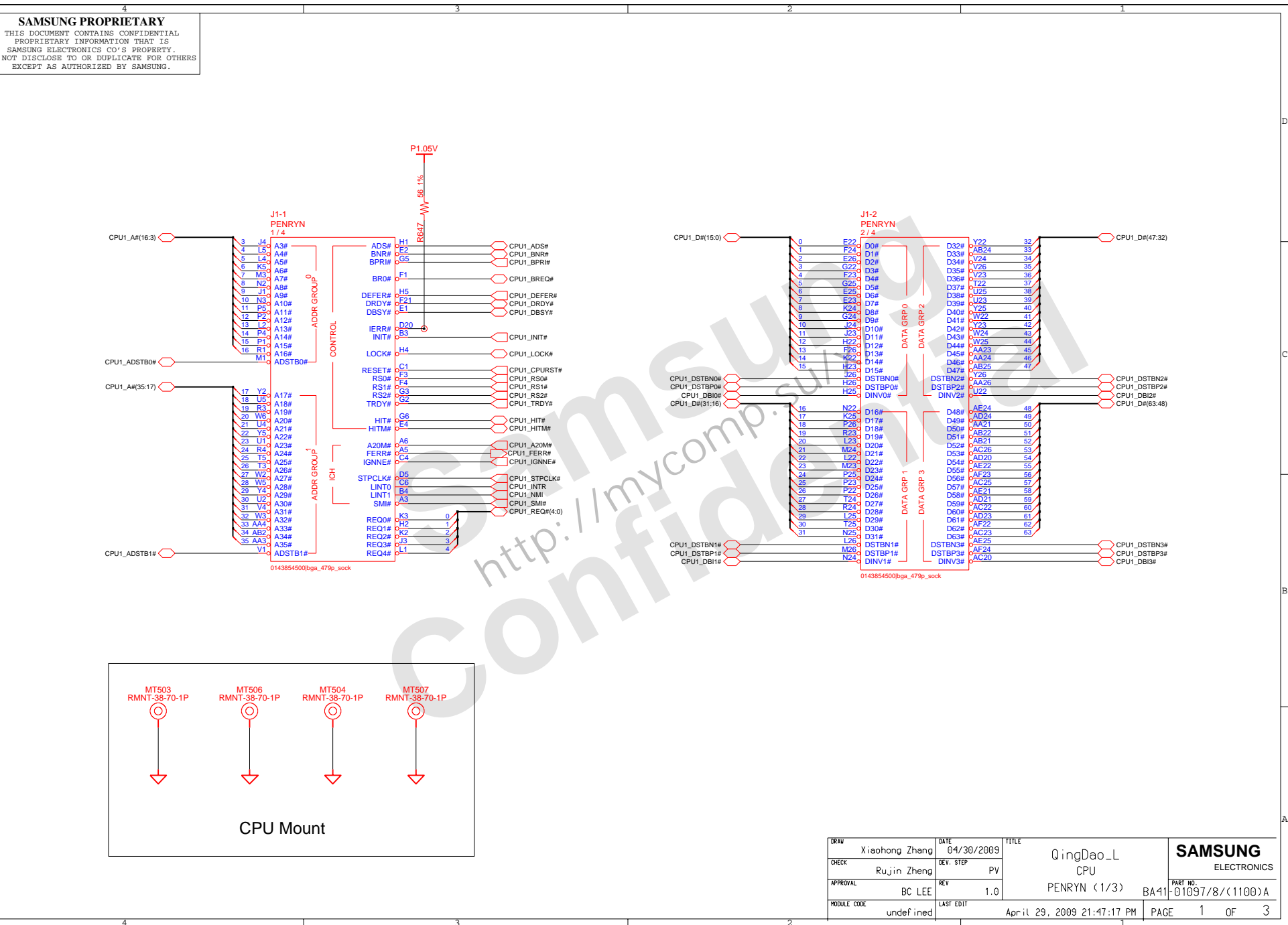


CLK REQ	DEVICE	SRC PORT
CLK REQ A	SATA	SRC2
CLK REQ B	GMCH	SRC4
CLK REQ E	MINI CARD	SRC6
CLK REQ F	EXP3_CLKREQ#	SRC8

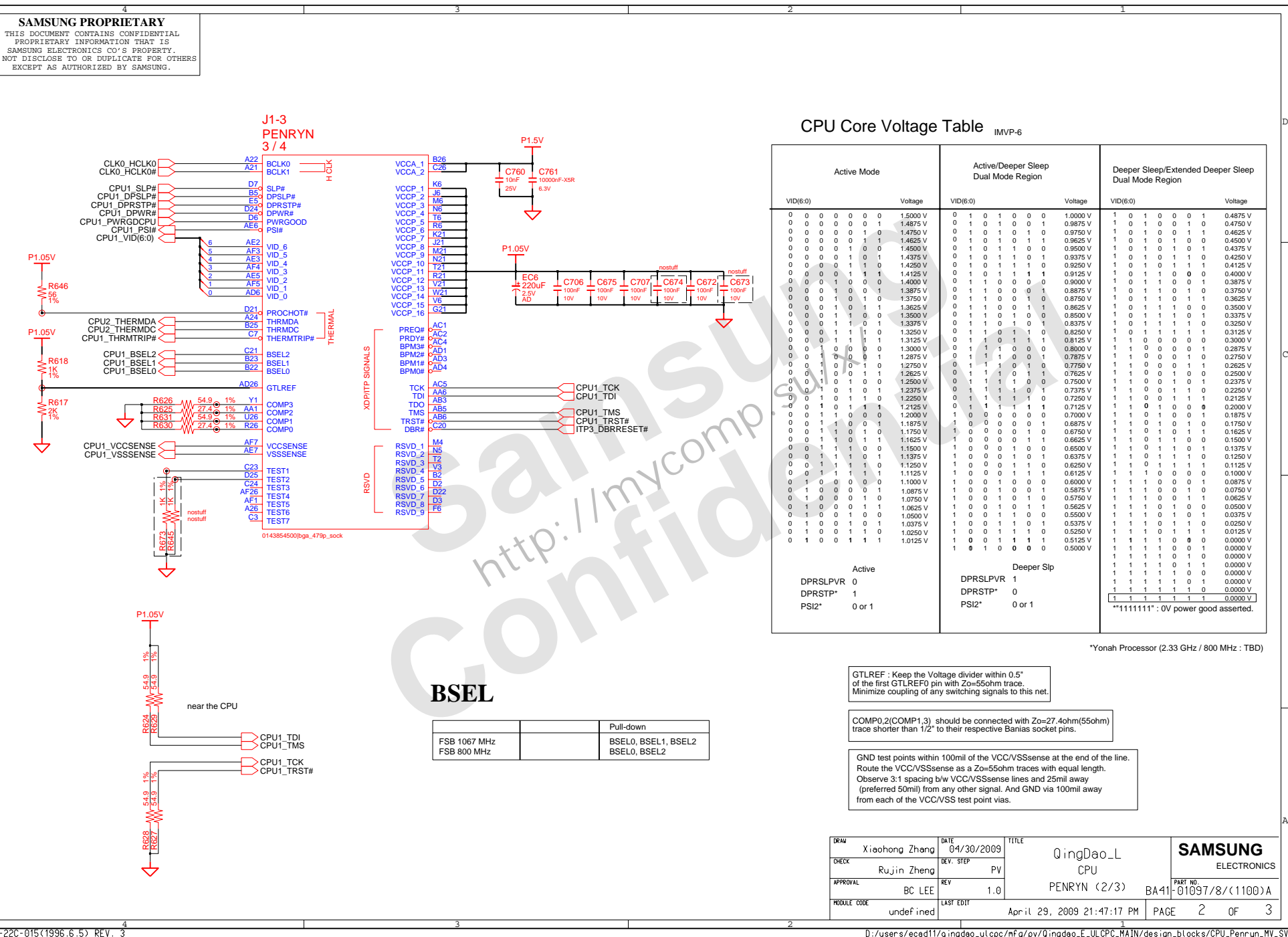
SEL_LCDCLK*	Pin 20/21	Pin 24/25
LOW	DOT_96/DOT_96#	PEG_CLK/PEG_CLK#
HIGH	SRC_0/SRC_0#	27M & 27M_SS

Place 14.318MHz within  
500mils of CK-505

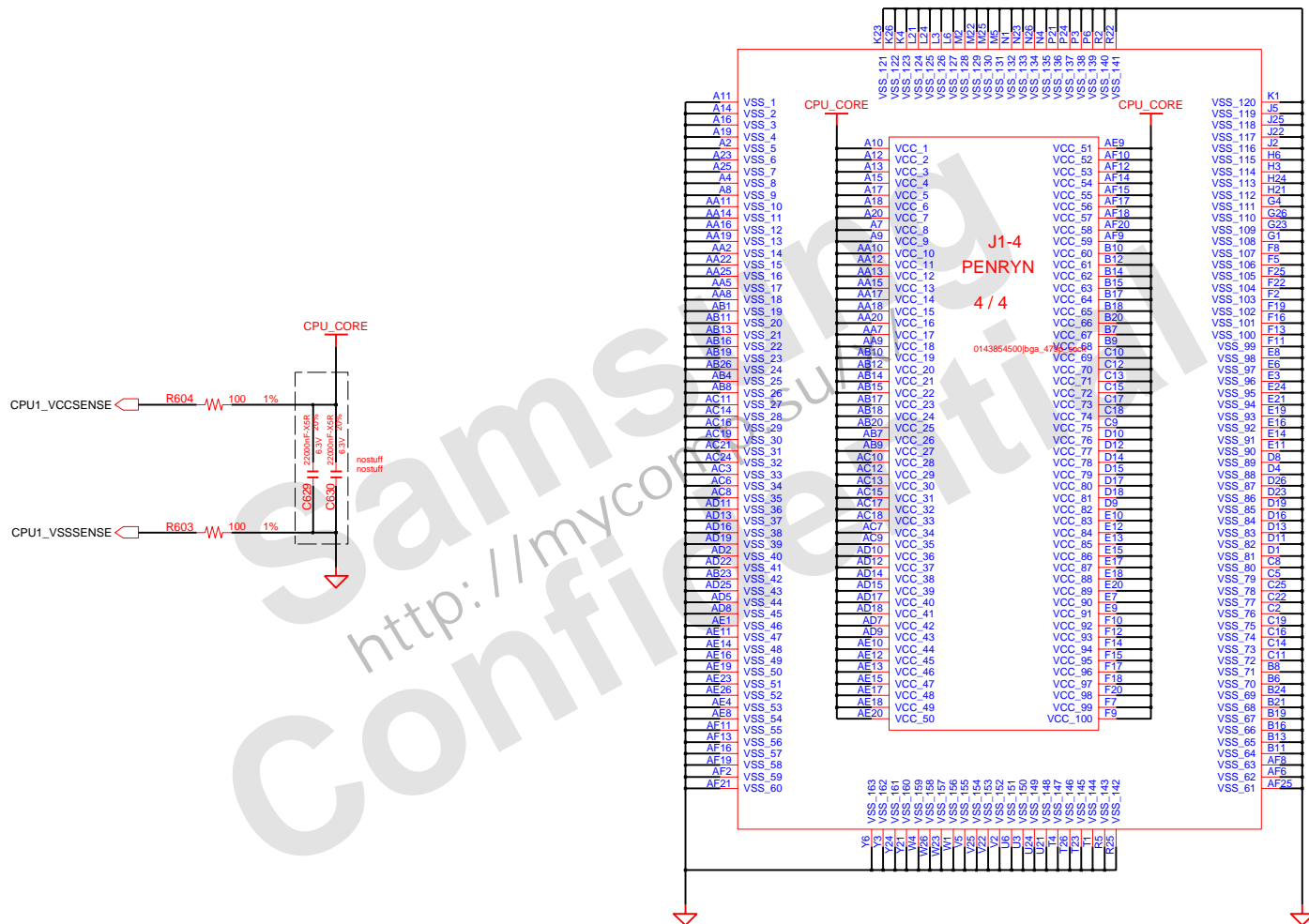
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CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 1	



DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L CPU PENRYN (1/3)	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	REV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM			
				BA11-	PART NO. 01097/8/(1100)A	
				PAGE	1	OF 3



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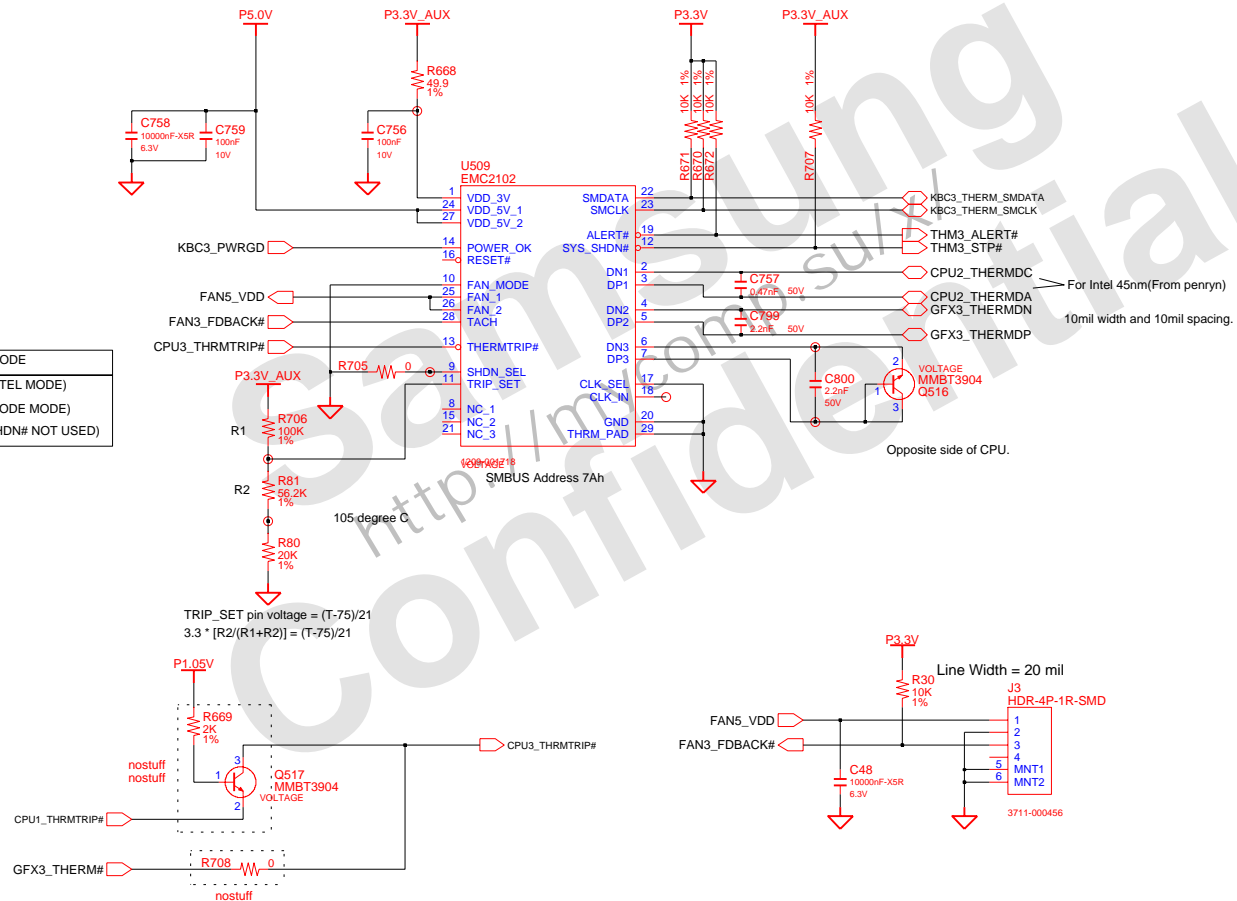


DRAW	Xiaohong Zhang	DATE	04/30/2009	QingDao_L CPU PENRYN (3/3)		<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	REV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE		LAST EDIT		April 29, 2009 21:47:17 PM		
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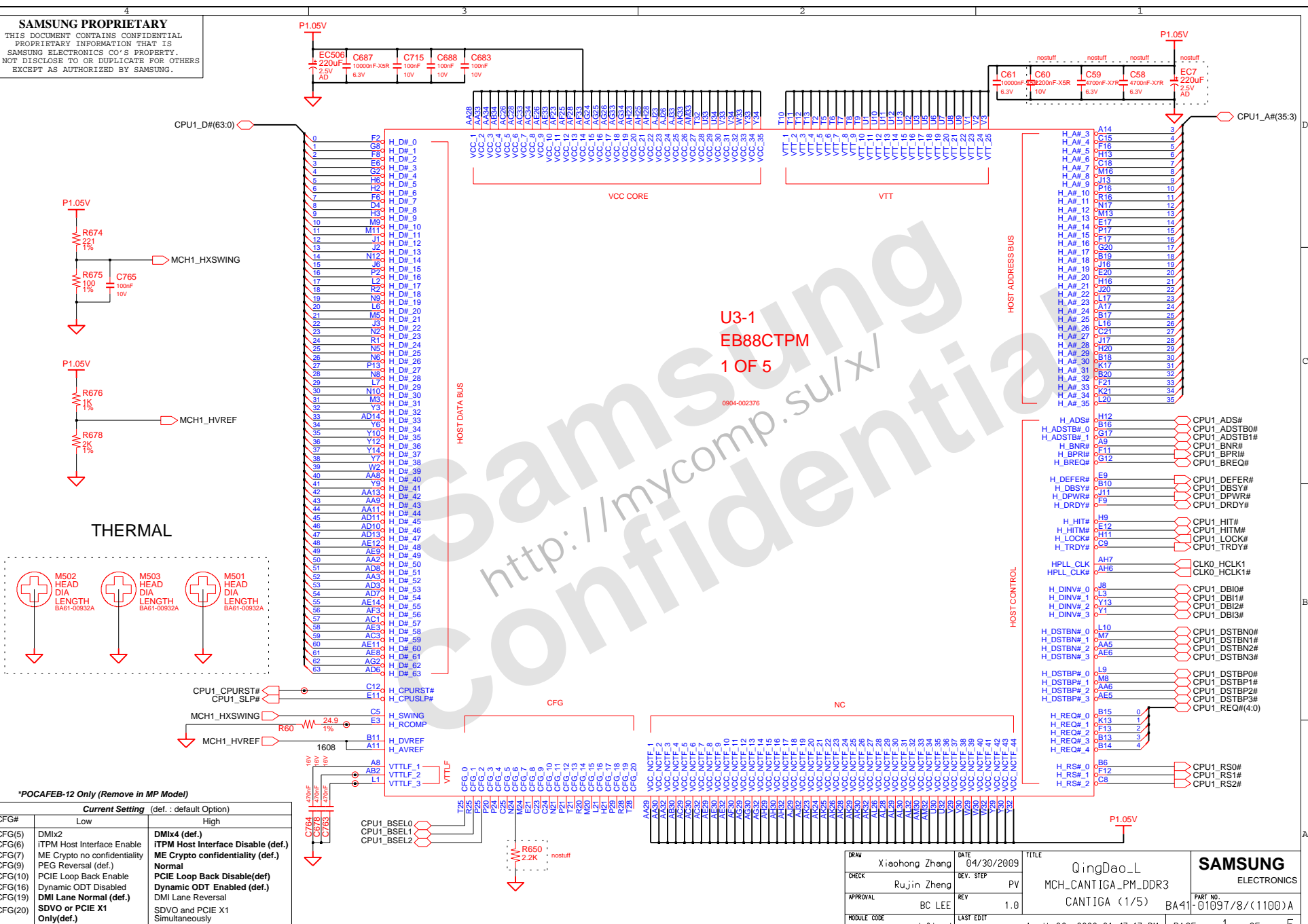
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# THERMAL SENSOR & FAN CONTROL

SHDN_SEL MODE	
0	CH1(INTEL MODE)
HIGH Z	CH3(DIODE MODE)
1	N/A (SHDN# NOT USED)

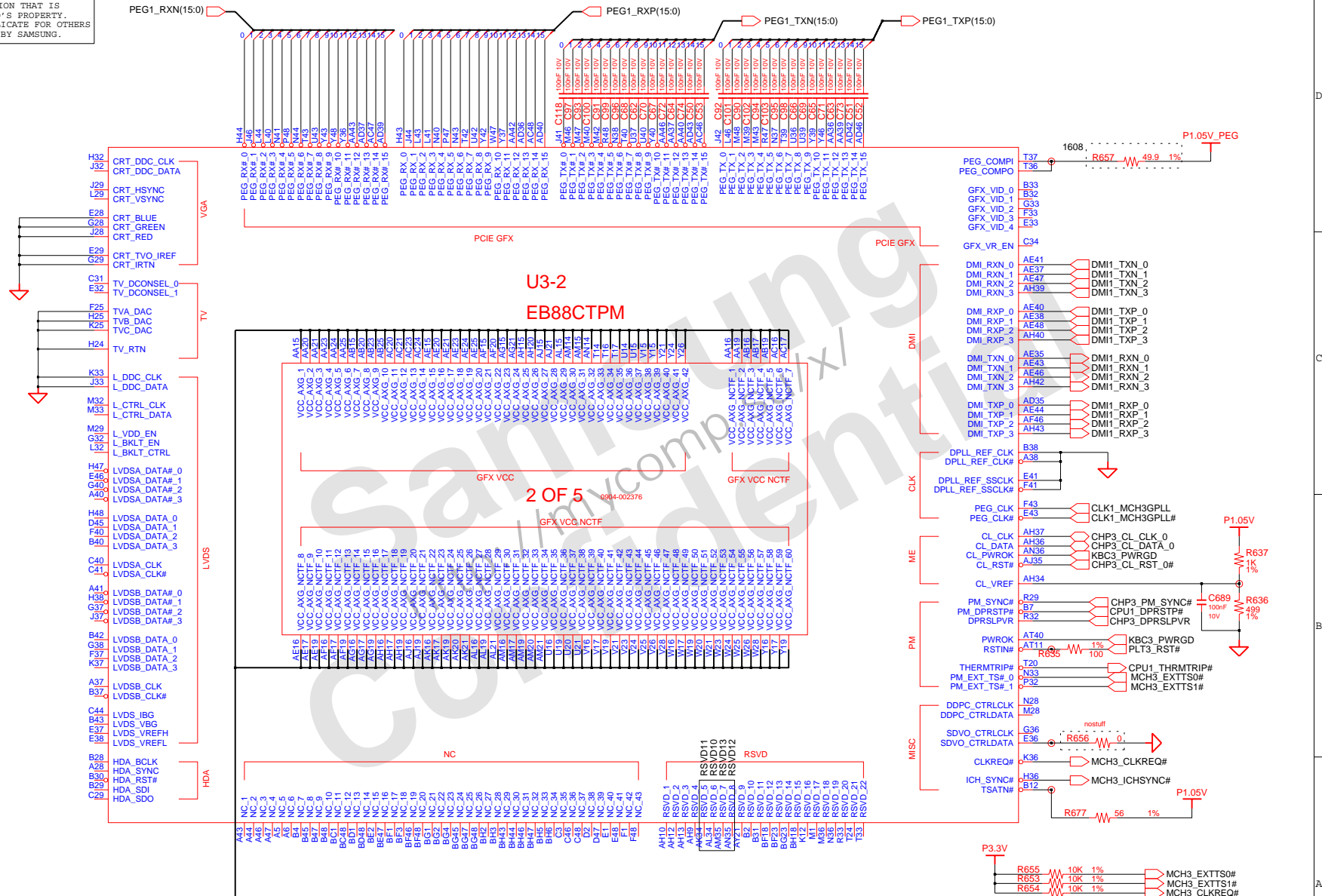


DESIGN	XIAOHONG, ZHANG	DATE	12/3/2008	TITLE	QingDao_Ext	SAMSUNG ELECTRONICS PART NO. BA41-xxxxxA
CHECK	RUJIN, ZHENG	DEV. STEP	ADV1		THERMAL SENSOR EMC2102	
APPROVAL	BC, LEE	REV	1.0			
MODULE CODE		LAST EDIT	December, 3, 2008 12:55:11 PM	PAGE	1 OF 1	



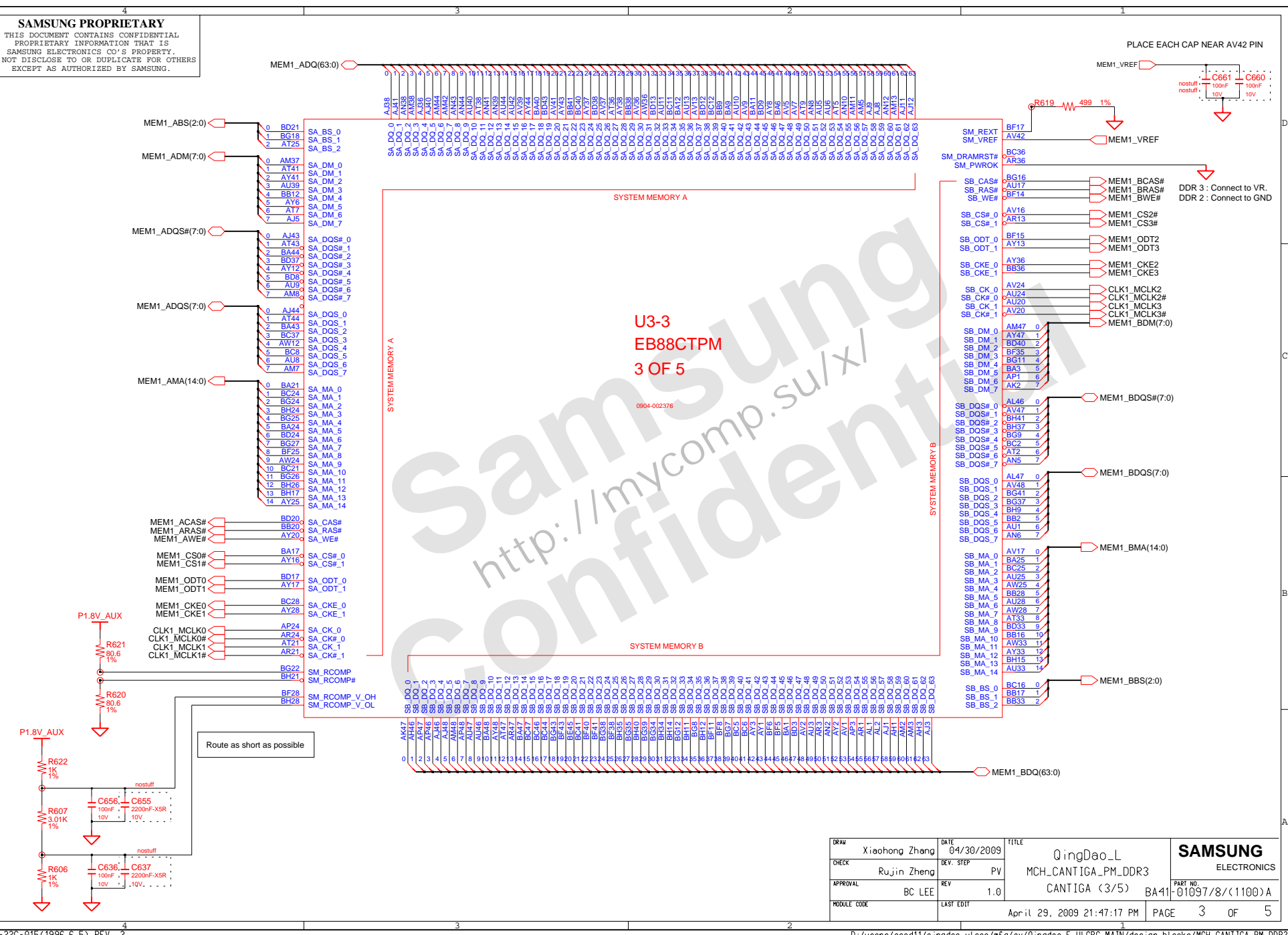


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DRN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-01097/8/(1100)A
CHECK	Rujin Zheng	DEV. STEP	PV		MCH_CANTIGA_PM_DDR3	
APPROVAL	BC LEE	REV	1.0		CANTIGA (2/5)	
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	2 OF 5	



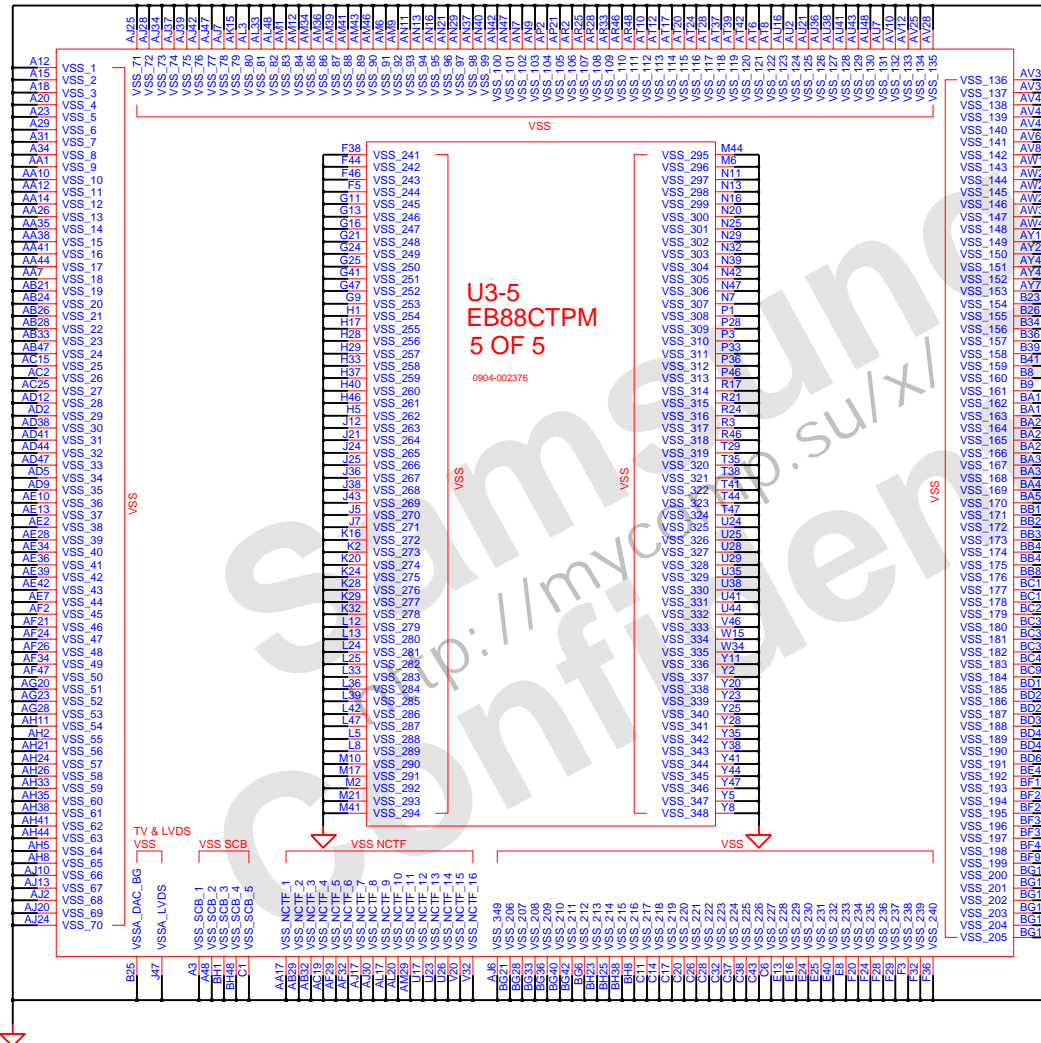


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DRAW	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV	MCH_CANTIGA_PM_DDR3		
APPROVAL	BC LEE	REV	1.0	CANTIGA (5/5)	BA41	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	5 OF 5	

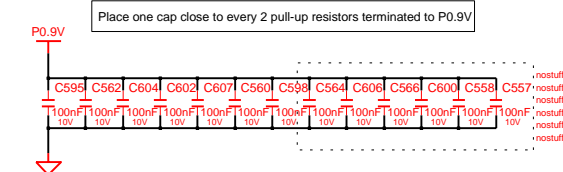
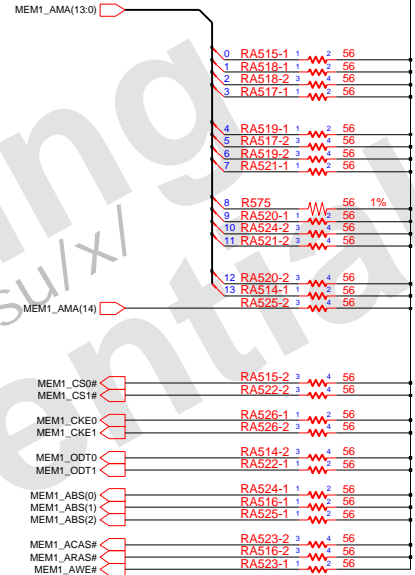
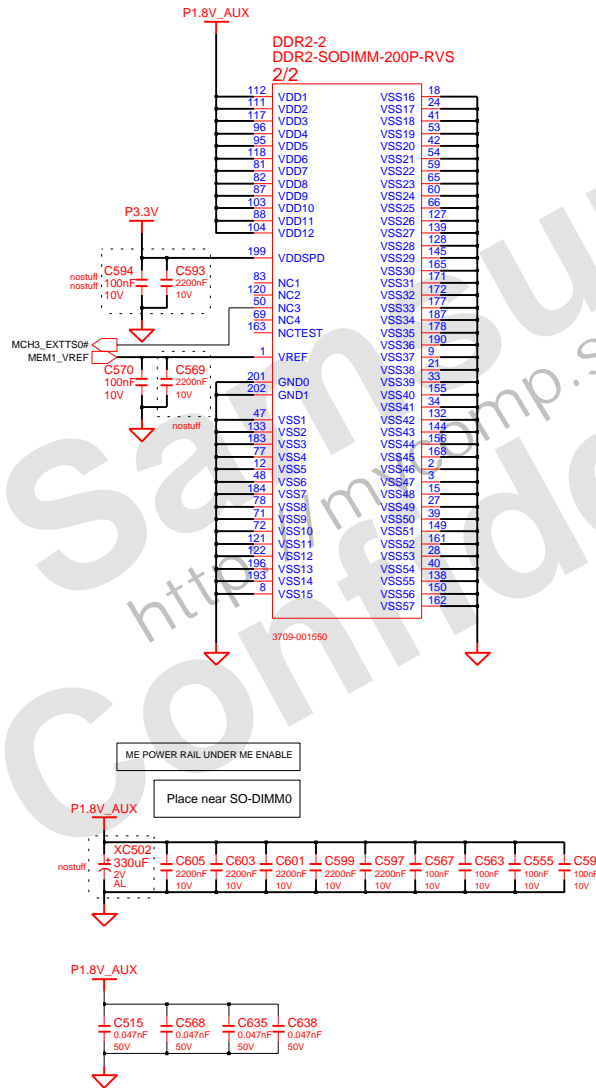
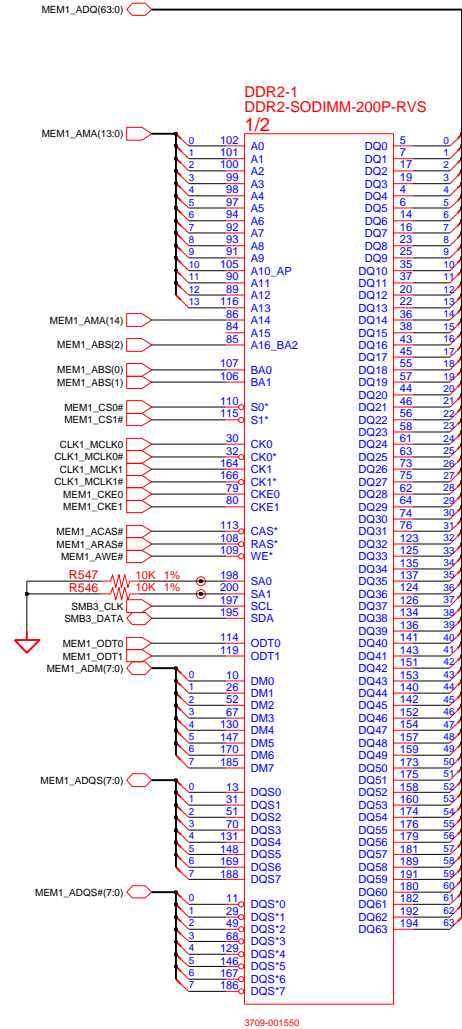
# DDR SO-DIMM #0

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ME POWER RAIL UNDER ME ENABLE

Array resistors & Single resistors used to improve layout & routing.



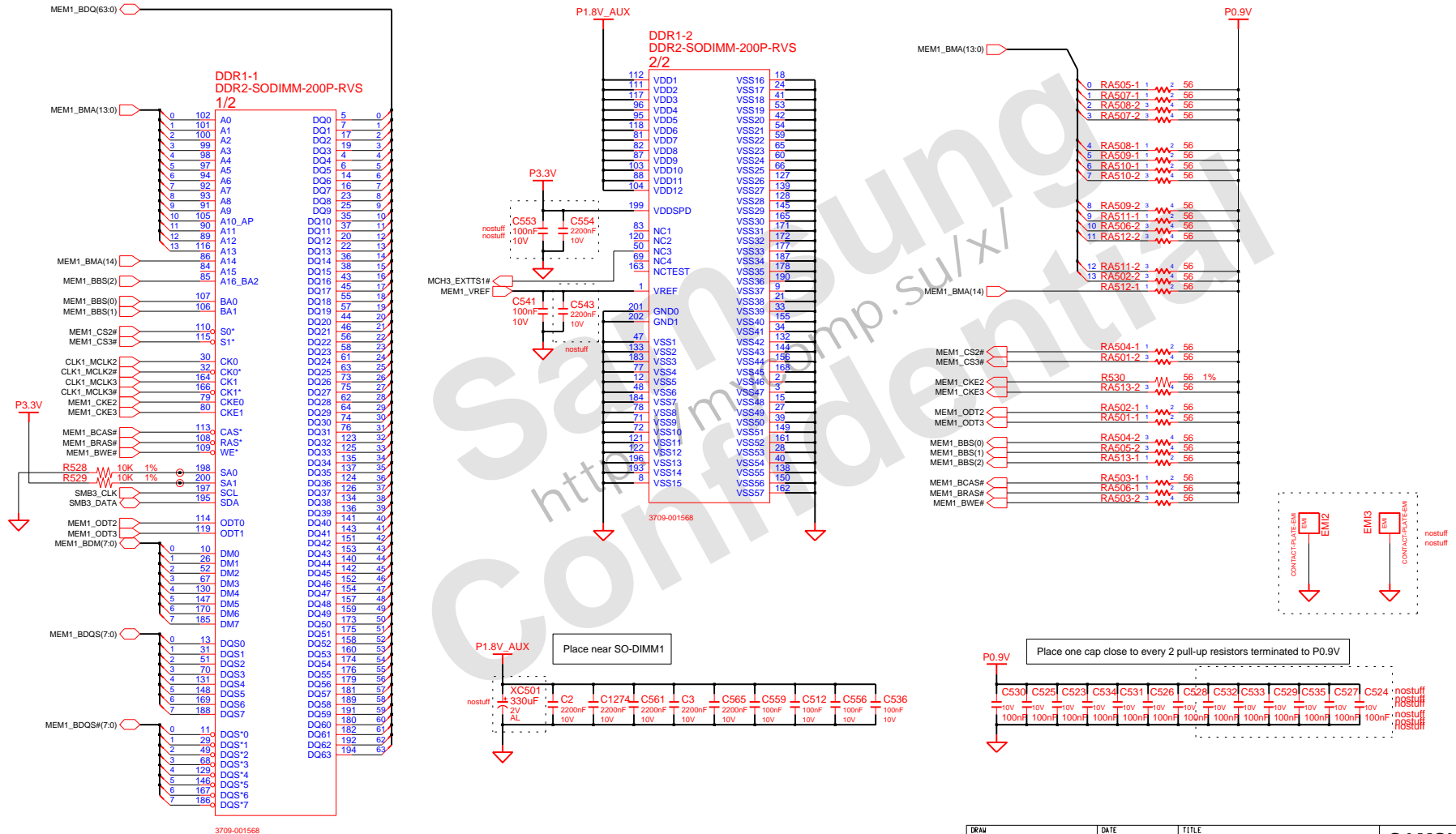
DRAW	XiaoHong Zheng	DATE	12/03/2008	TITLE	QingDao_Ext SODIMM_DDR2 SODIMM_DDR2 #1	SAMSUNG ELECTRONICS
CHECK	RuJin Zheng	DEV. STEP	ADV1			PART NO. BA41-xxxxxA
APPROVAL	BC LEE	REV	1.0			
MODULE CODE		LAST EDIT	December 03, 2008 20:55:25 PM	PAGE	1 OF 2	

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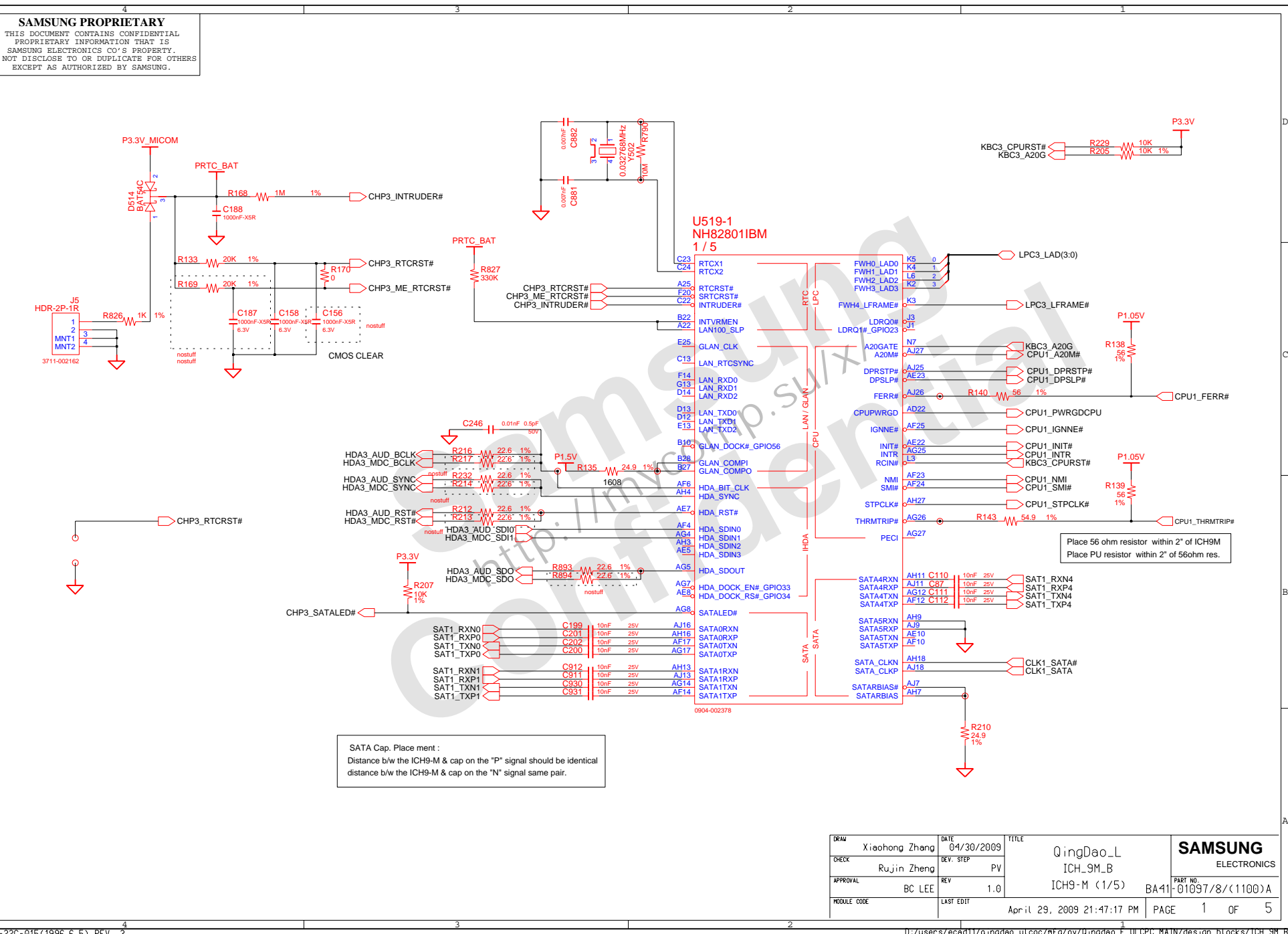
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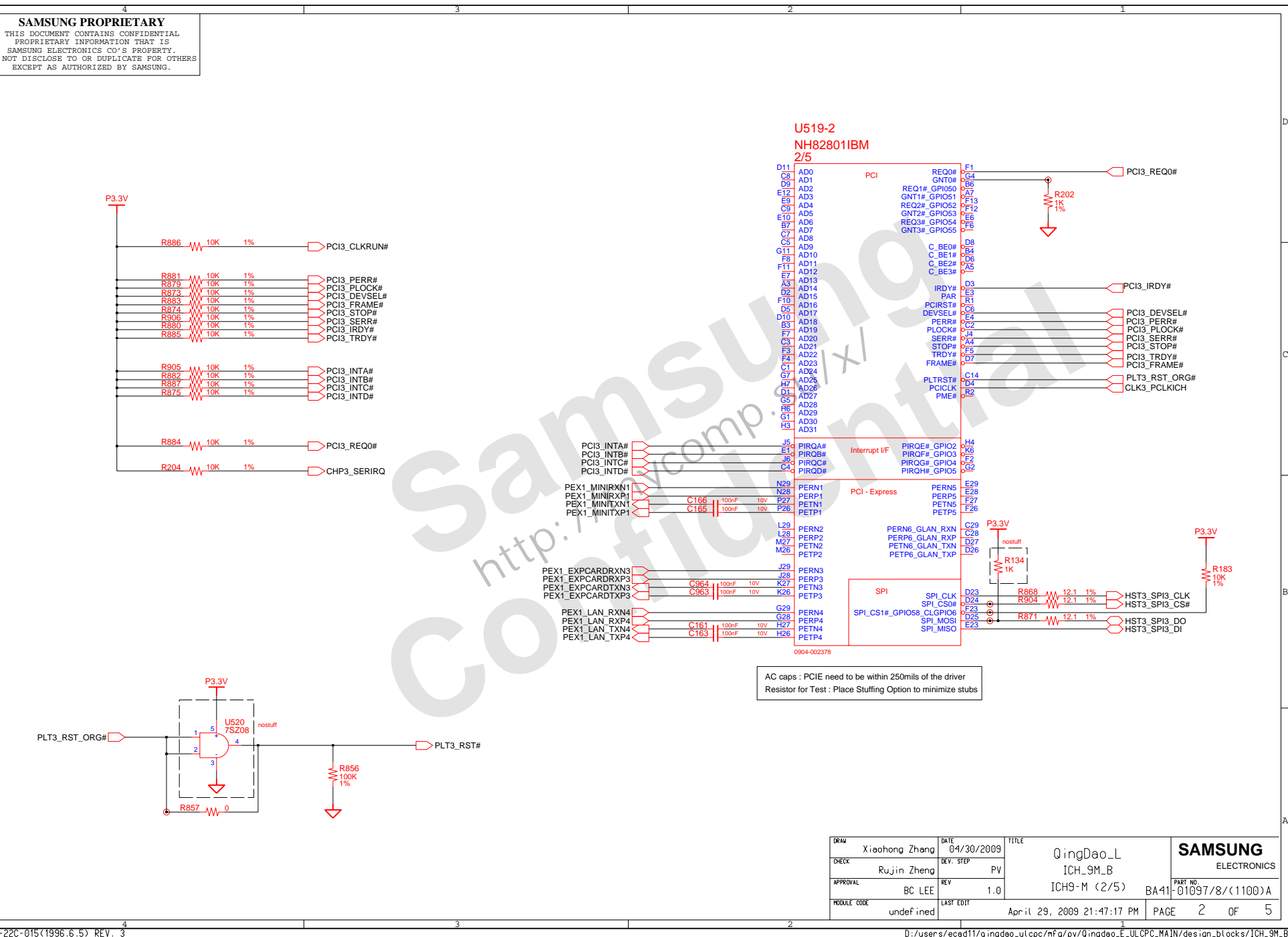
# DDR SO-DIMM #1

Array resistors & Single resistors used to improve layout & routing.



DRAW	XiaoHong Zhang	DATE	12/03/2008	TITLE	QingDao_Ext	<b>SAMSUNG</b> ELECTRONICS	
CHECK	Rulin Zheng	DEV. STEP	ADV1		SODIMM_DDR2		
APPROVAL	BC LEE	REV	1.0		SODIMM_DDR2 #2		
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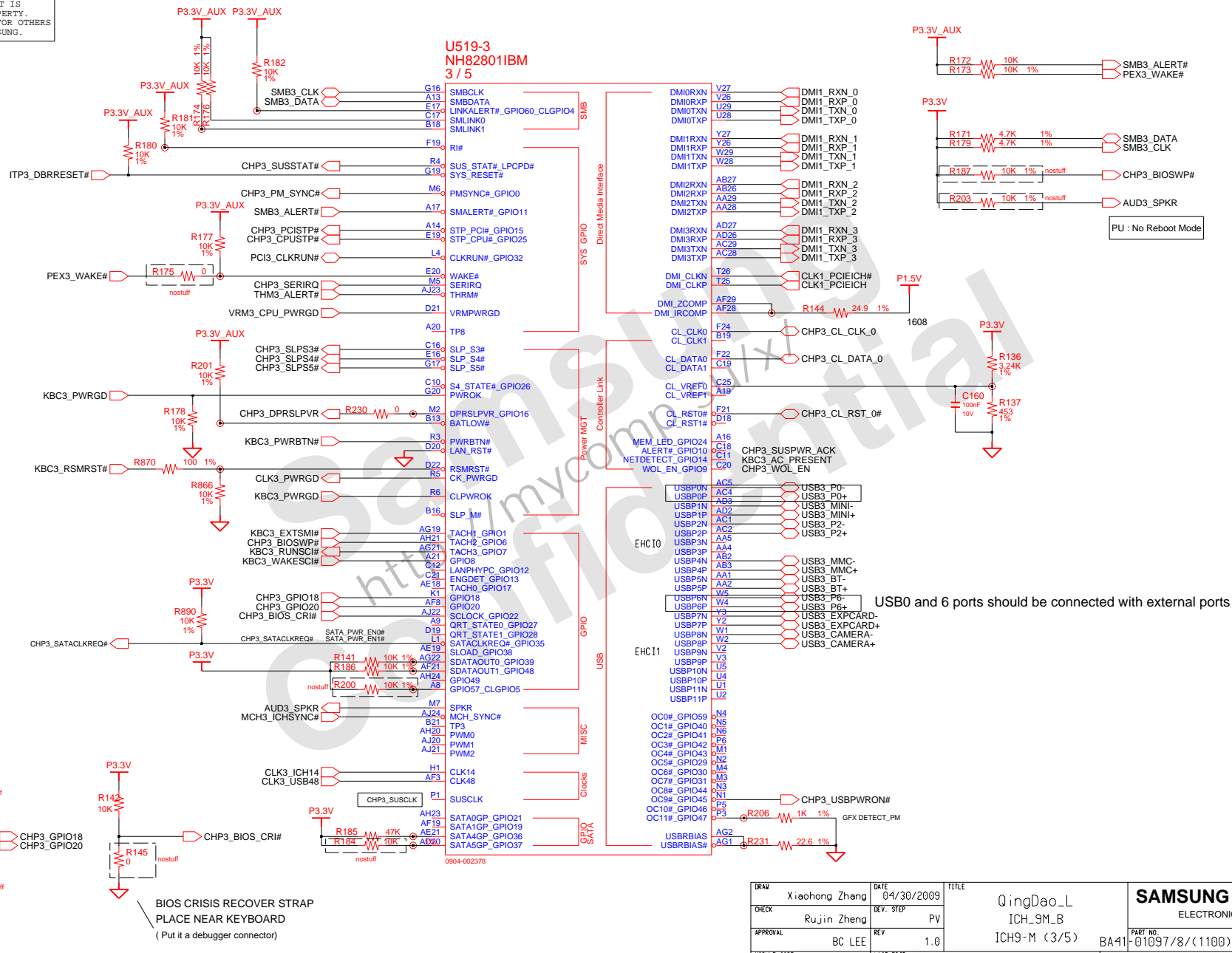






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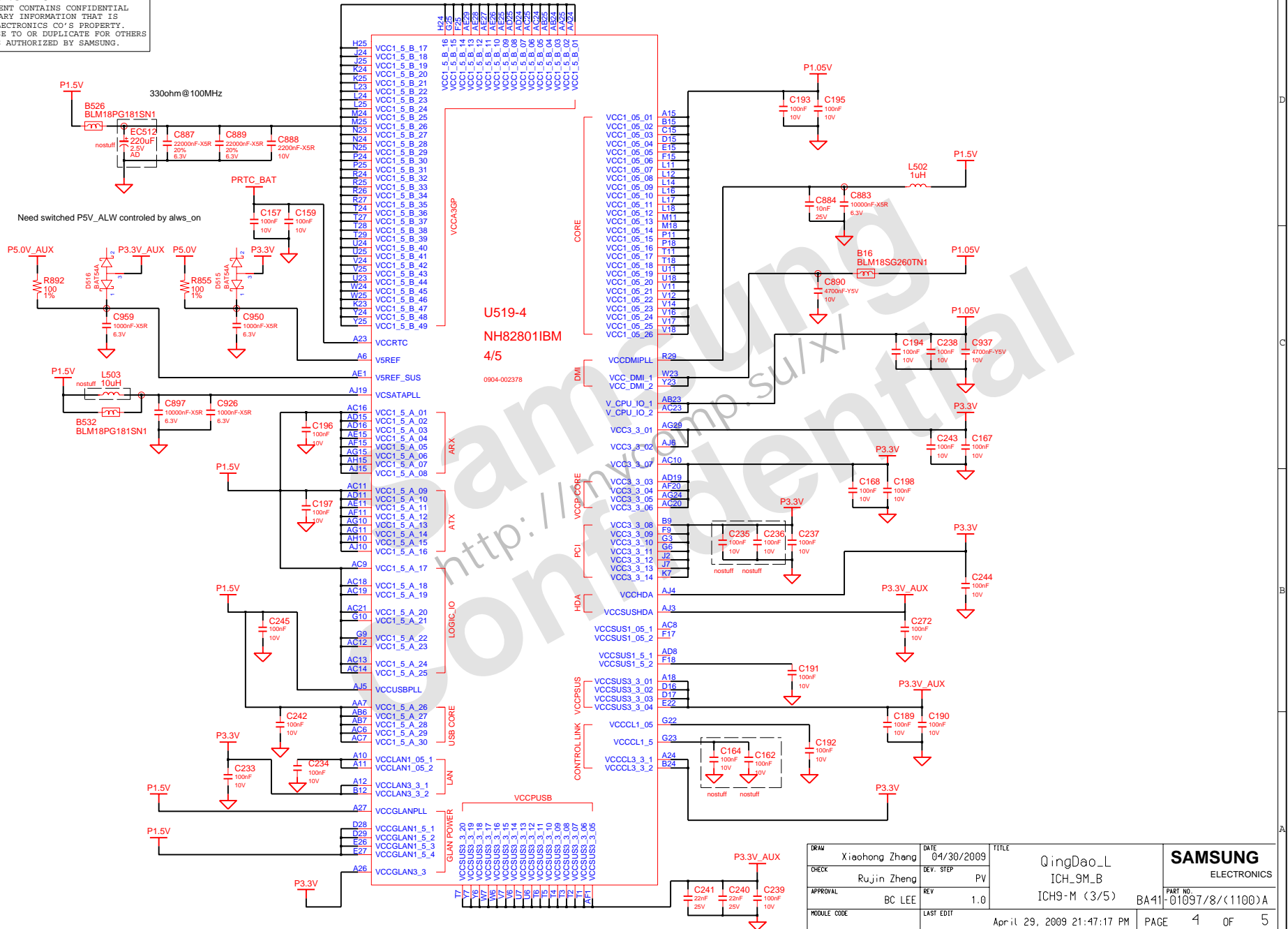


DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L ICH_9M.B ICH9-M (3/5)	SAMSUNG ELECTRONICS
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APPROVAL	BC LEE	REV	1.0			
MODULE CODE	LAST EDIT		April 29, 2009 21:47:17 PM			
				BA41	PART NO.	01097/8/(1100)A
				PAGE	3	OF 5



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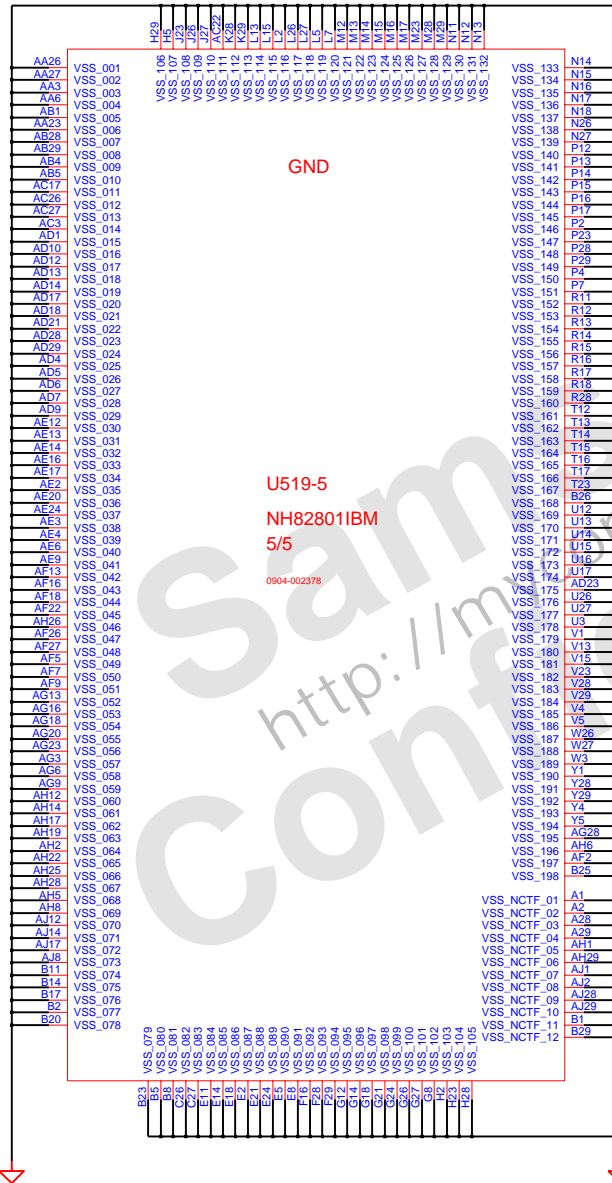
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DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L ICH_9M.B ICH9-M (3/5)	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	LAST EDIT		April 29, 2009 21:47:17 PM			
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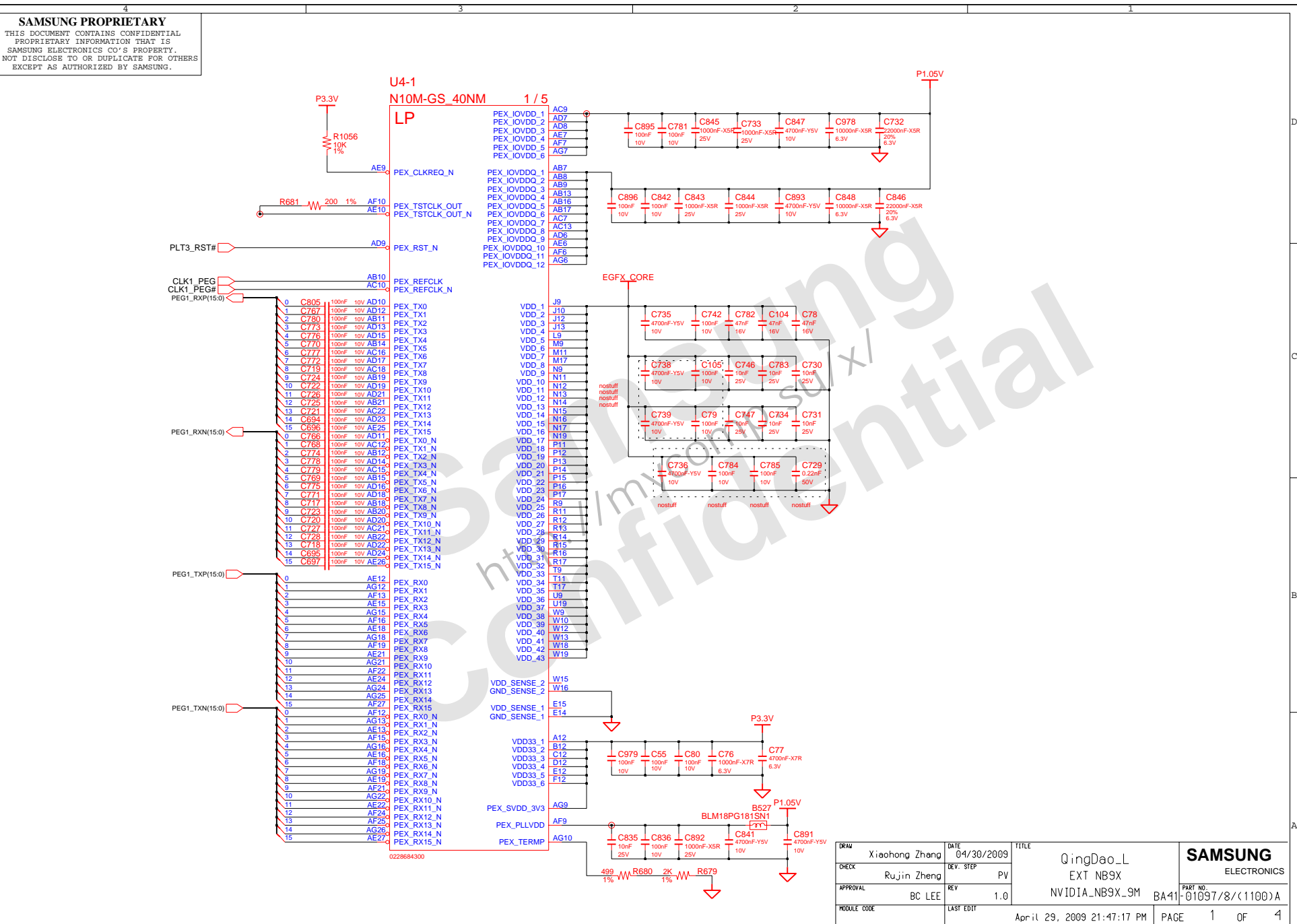
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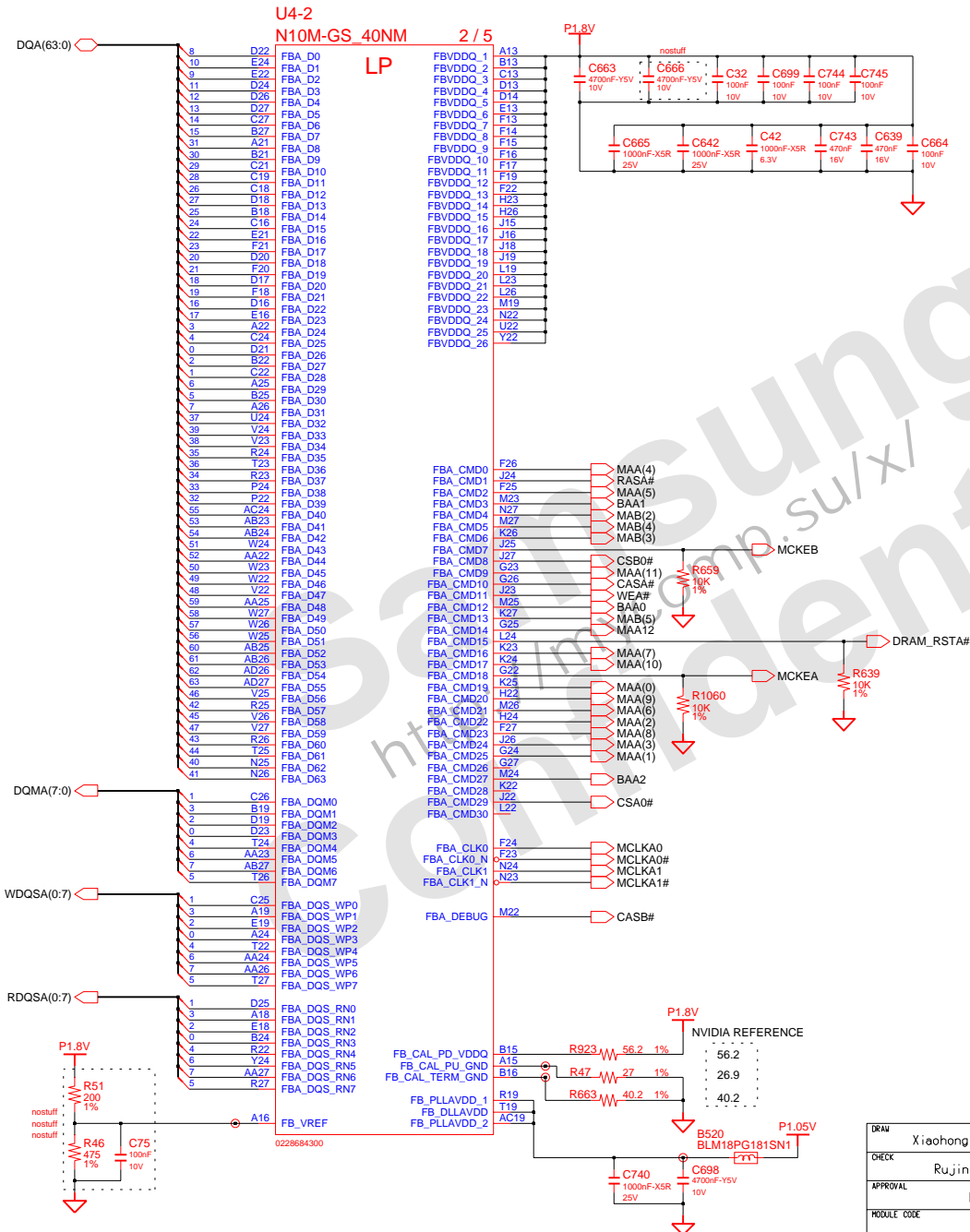
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CHECK	Rujin Zheng	DEV. STEP	PV		ICH_9M_B	
APPROVAL	BC LEE	REV	1.0		ICH9-M (3/5)	PART NO.
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	4	OF 5





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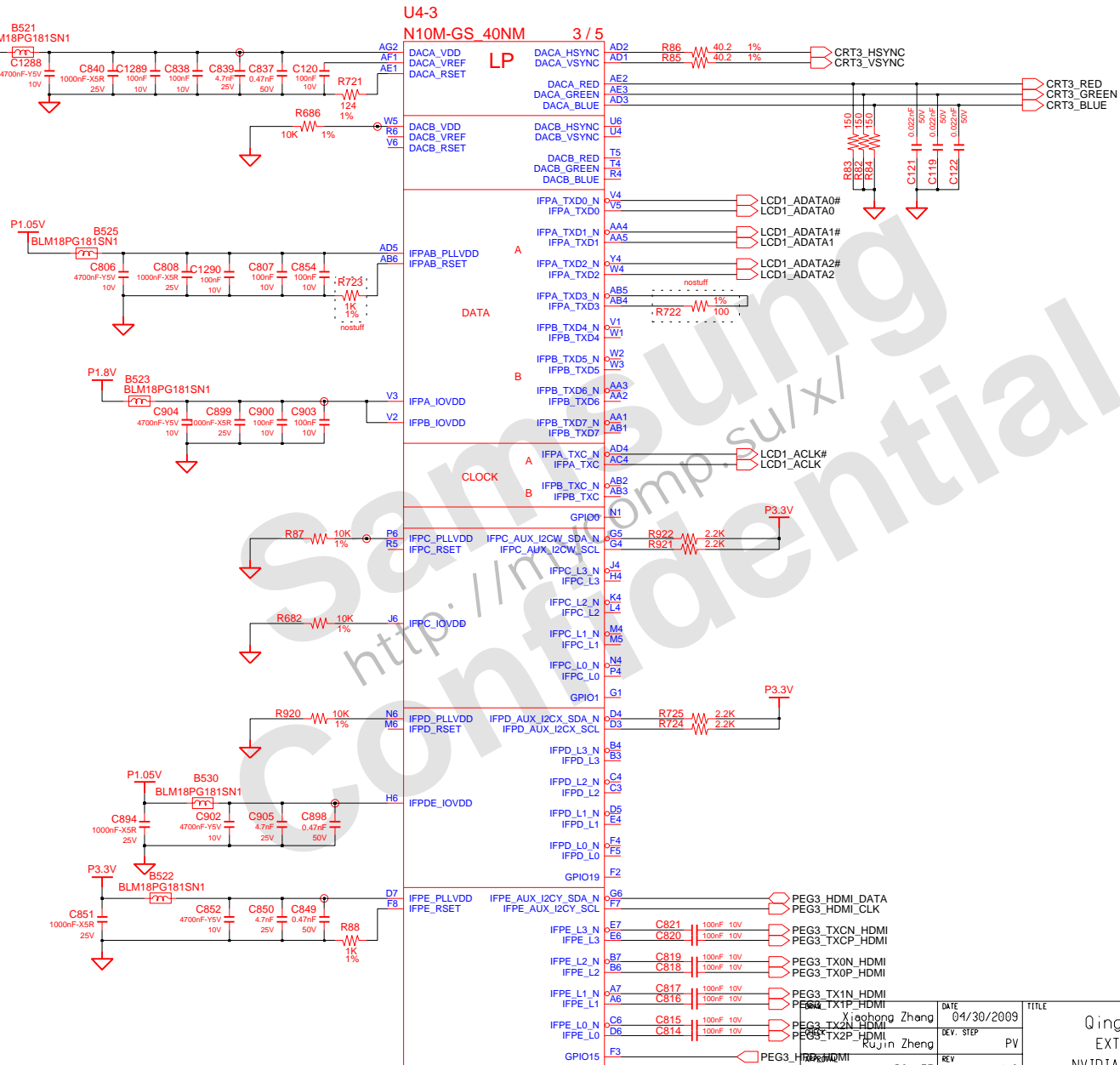
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DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE QingDao_L EXT NB9X NVIDIA_NB9X_9M	PART NO. 01097/8/(1100)A	<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	LAST EDIT					
				April 29, 2009 21:47:17 PM	PAGE	2 OF 4

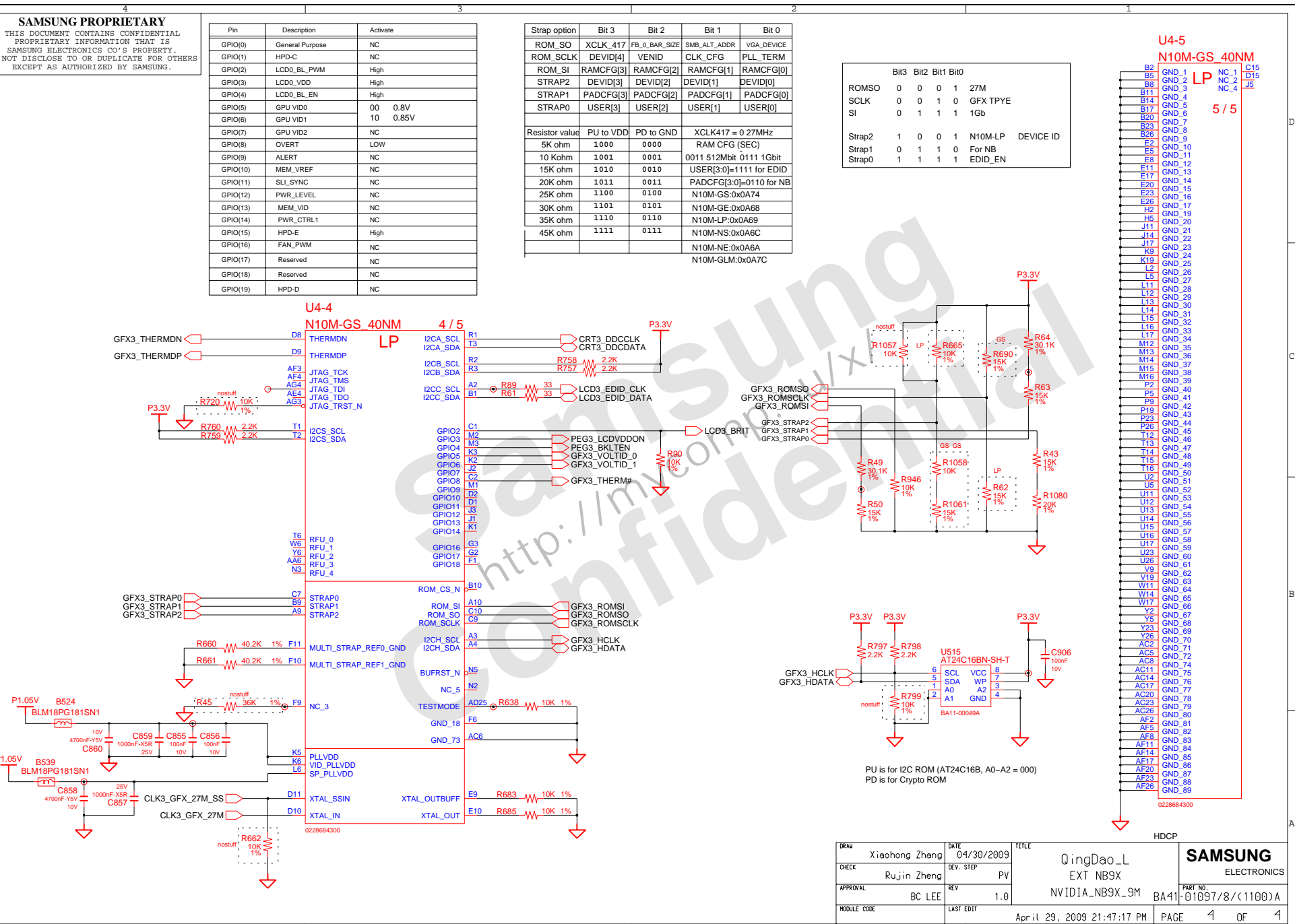
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0228684300

PCB: TX1P-HDMI	DATE	04/30/2009		<b>QingDao_L</b> <b>EXT NB9X</b> <b>NVIDIA_NB9X_9M</b>	<b>SAMSUNG</b> <b>ELECTRONICS</b>		
PEGA: TX2P-HDMI	DEV. STEP	PV	<b>BA1I</b>				
PGS: TX2P-HDMI	REV	1.0					
PCB: TX2P-HDMI	BA1I	1.0				PART NO: 010978/(1100)A	
PCB: TX2P-HDMI	BA1I	1.0	PART NO: 010978/(1100)A	MODULE CODE	LAST EDIT April 29, 2009 21:47:17 PM	PAGE 3	OF 4



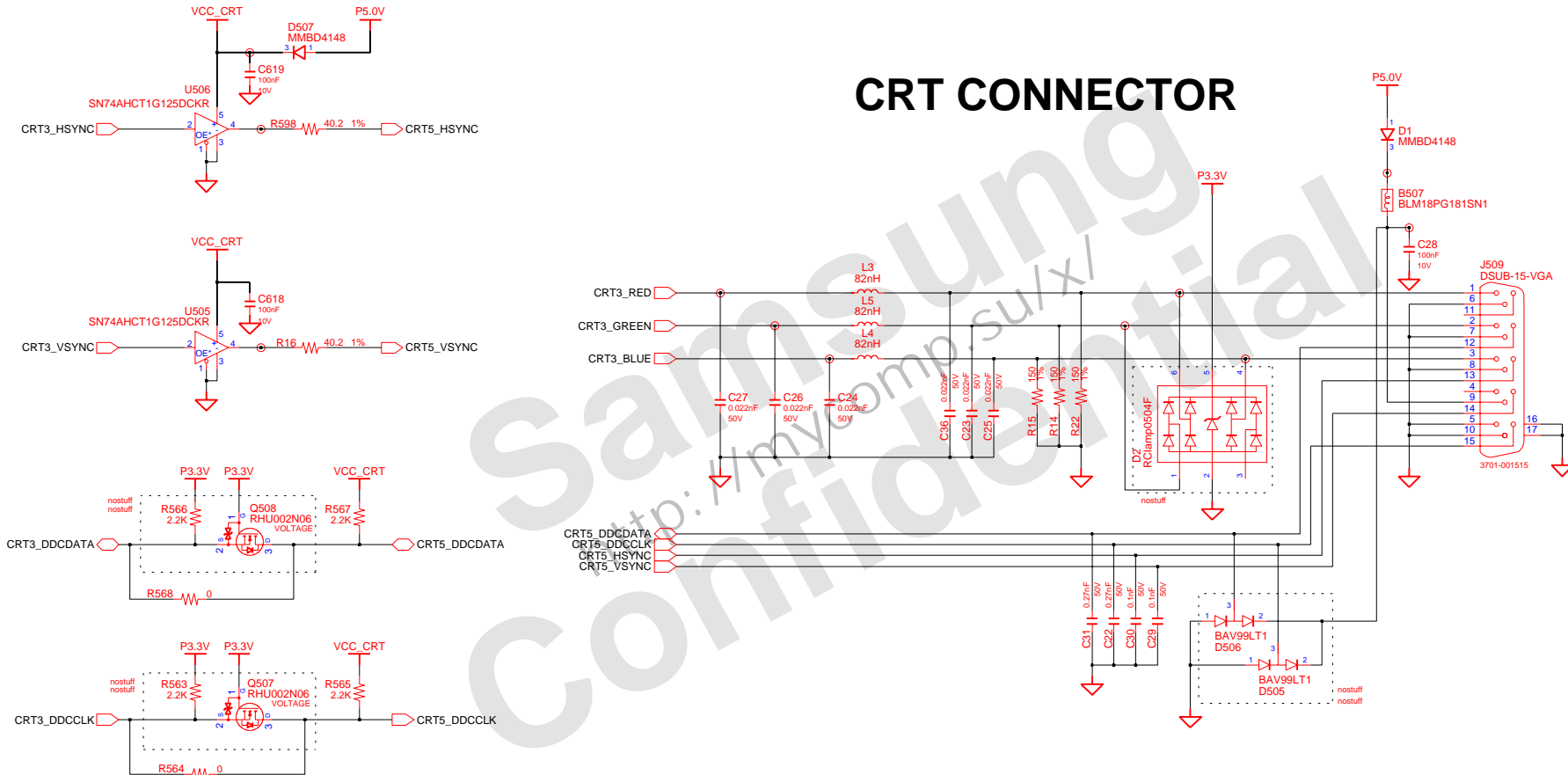


MCK  
SA



# CRT

## CRT CONNECTOR



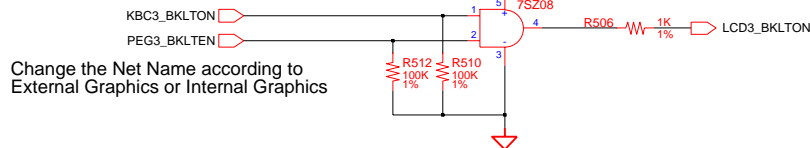
Check "CRT3\_DDCCLK/DATA" Voltage Level  
2N06 Can be replaced with SM6K2

DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV	GRAPHICS_IF		
APPROVAL	BC LEE	REV	1.0	CRT	BA41-01097/8/(1100)A	PART NO.
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	undefined	

# LVDS

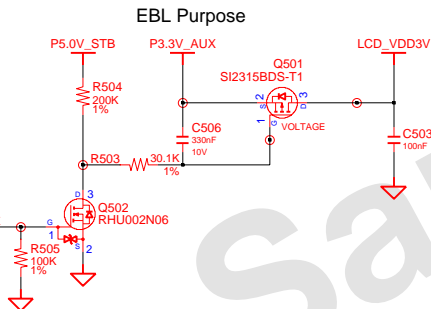
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## Backlight On

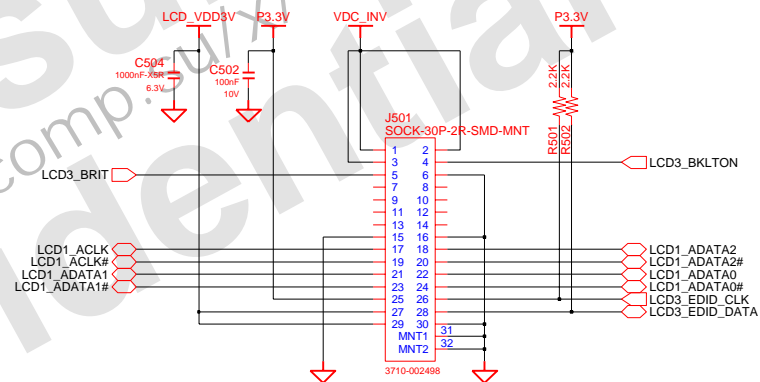


## LCD Power

Change the Net Name according to  
External Graphics or Internal Graphics

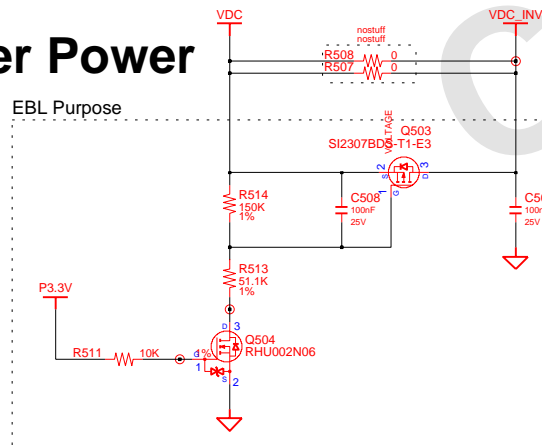


## 1Ch. LCD Connector



## Inverter Power

EBL Purpose

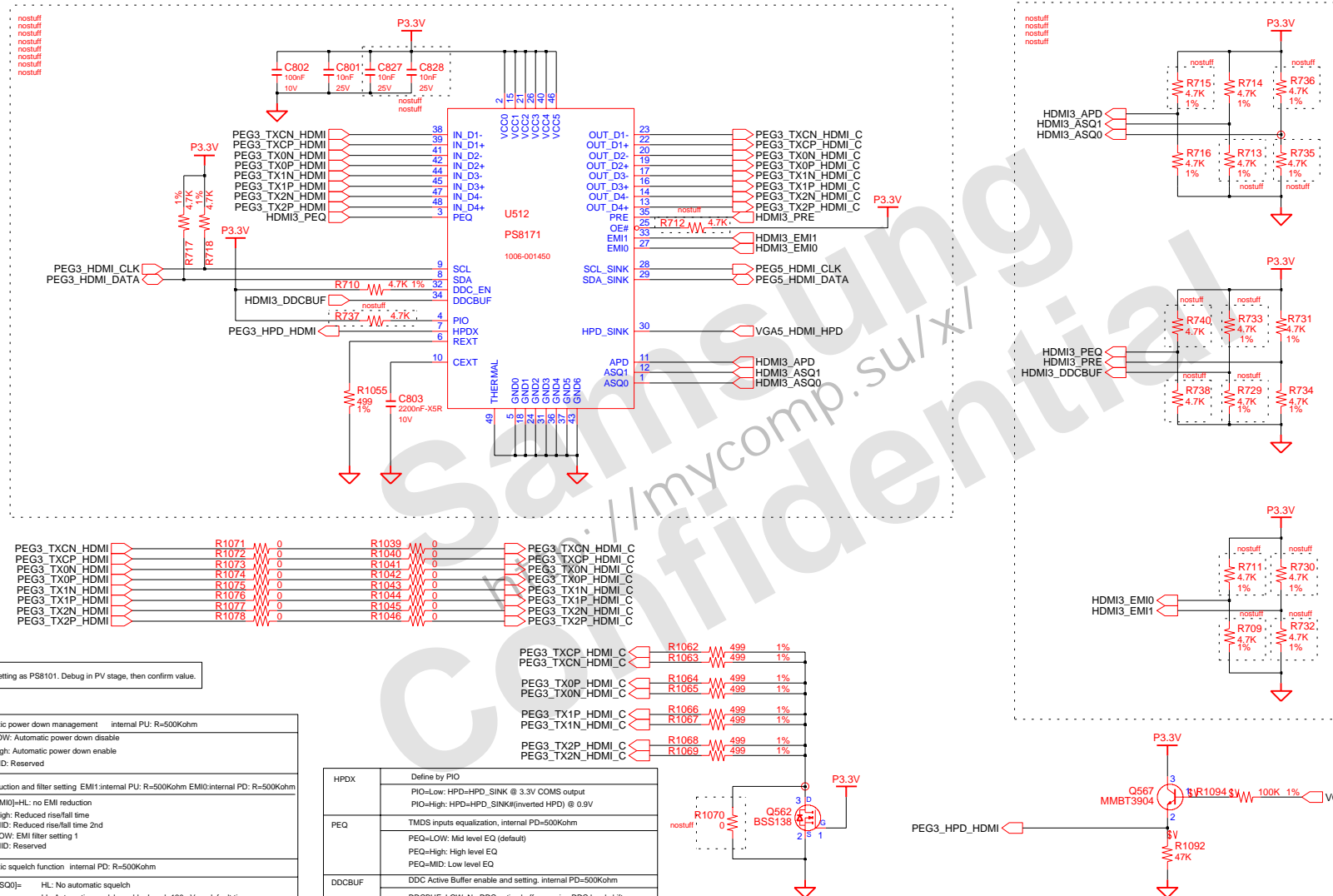


DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L GRAPHICS_IF LCD	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			PART NO. 01097/8/(1100)A
APPROVAL	BC LEE	REV	1.0			BA41
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	2	undefined

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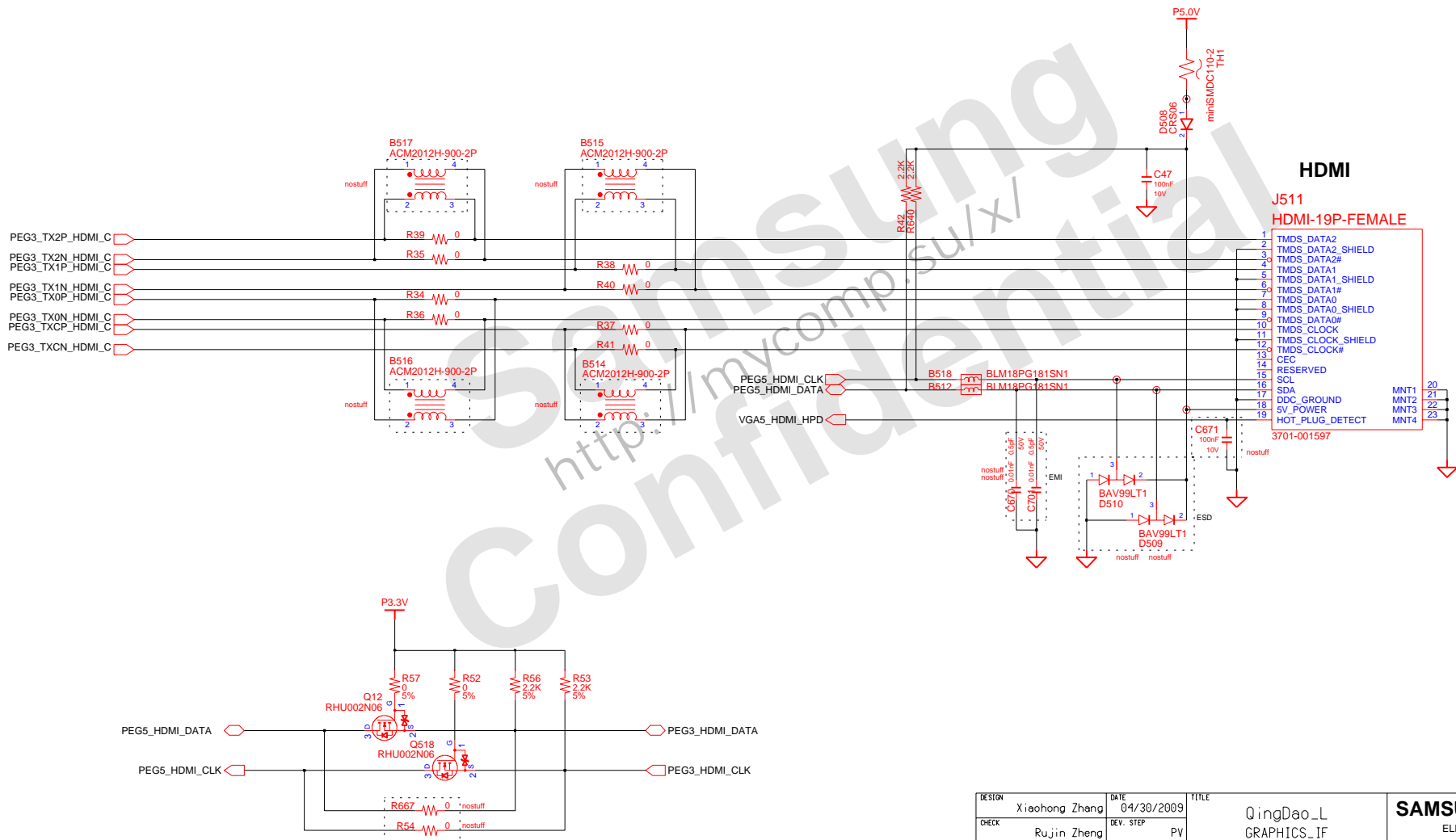
## HDMI Level Shifter(Pre-emp)



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# HDMI



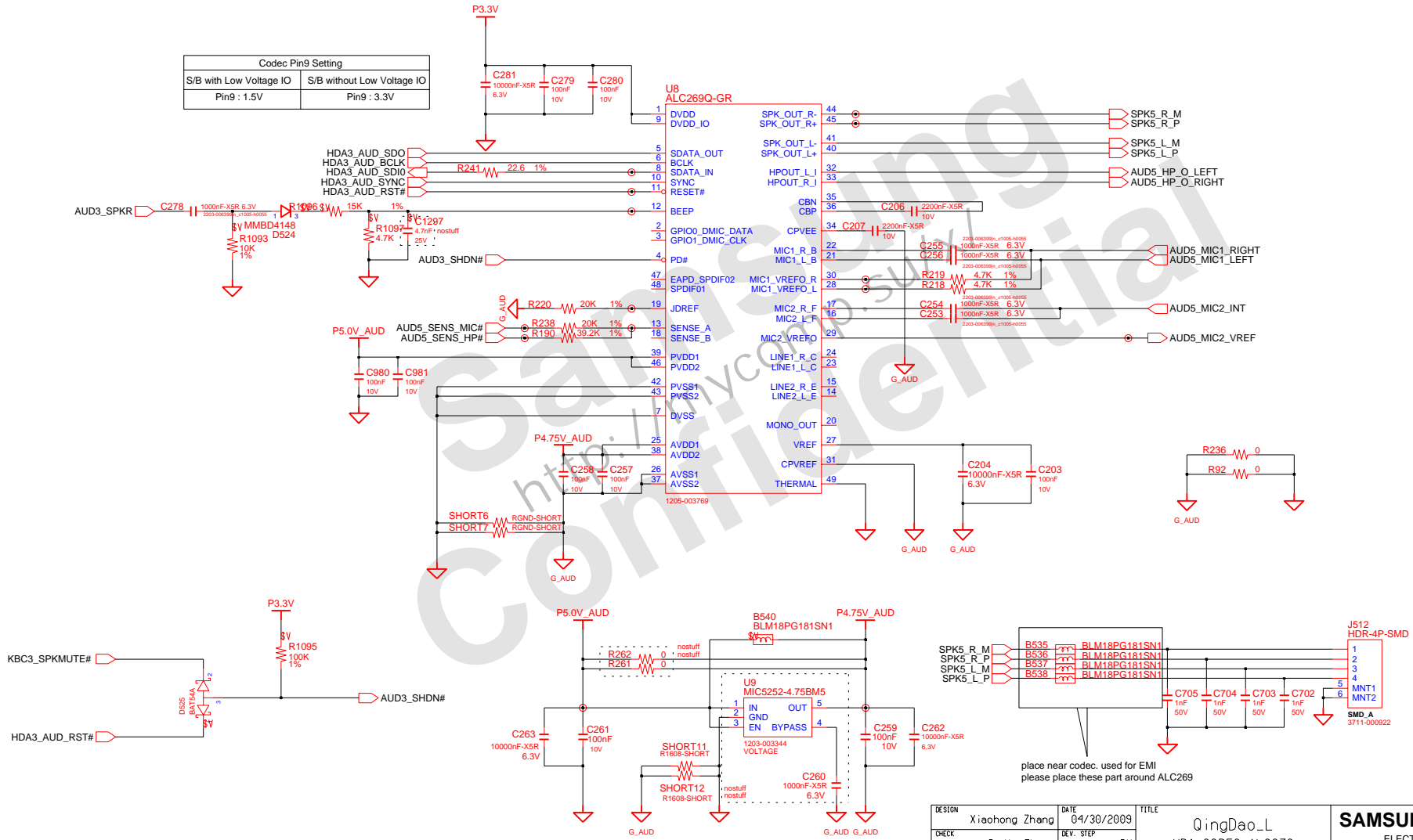
DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L GRAPHICS_IF HDMI	PART NO. 01097/8/(1100)A	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV				
APPROVAL	BC LEE	REV	1.0				
MODULE CODE	LAST EDIT						
				April 29, 2009 21:47:17 PM	PAGE	3	of 4

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## AUDIO

Codec Pin9 Setting	
S/B with Low Voltage IO	S/B without Low Voltage IO
Pin9 : 1.5V	Pin9 : 3.3V

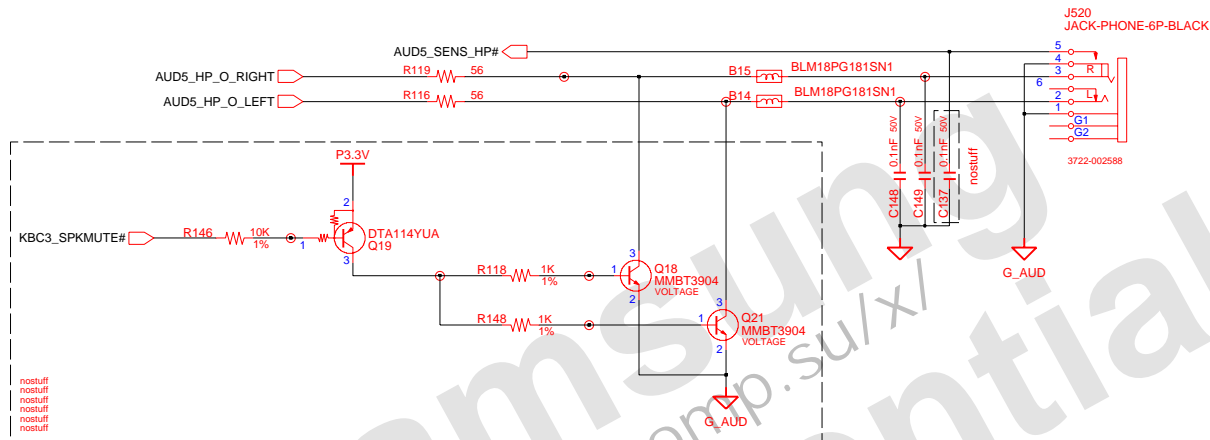


DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L HDA_CODEC_ALC272 AUDIO CODEC ALC272	SAMSUNG ELECTRONICS PART NO. -01097/8/(1100)A
CHECK	Rujin Zheng	DEV. STEP	PV	REV	1.0	
APPROVAL	BC LEE	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 5	
MODULE CODE						

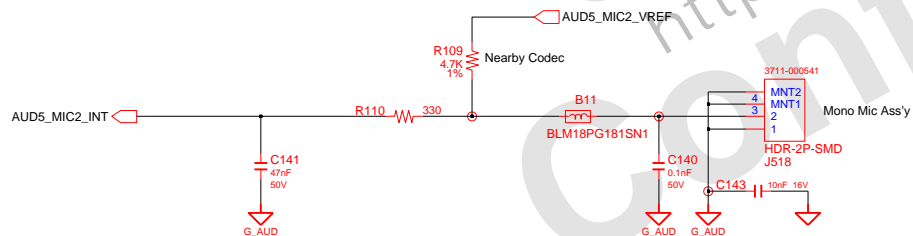
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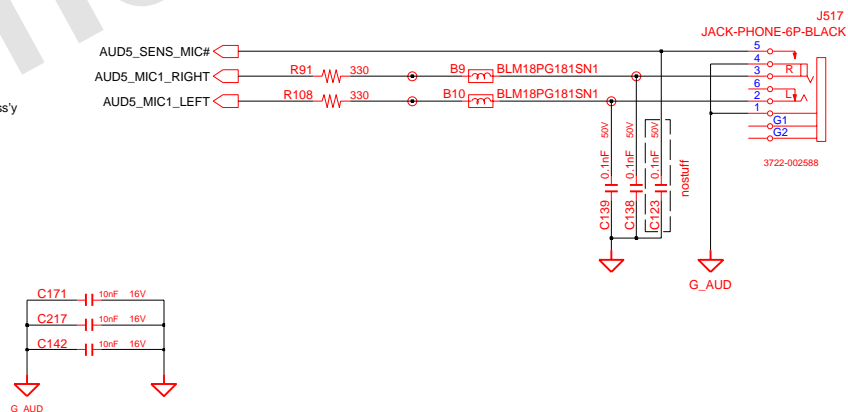
# HEADPHONE



## Analog MIC

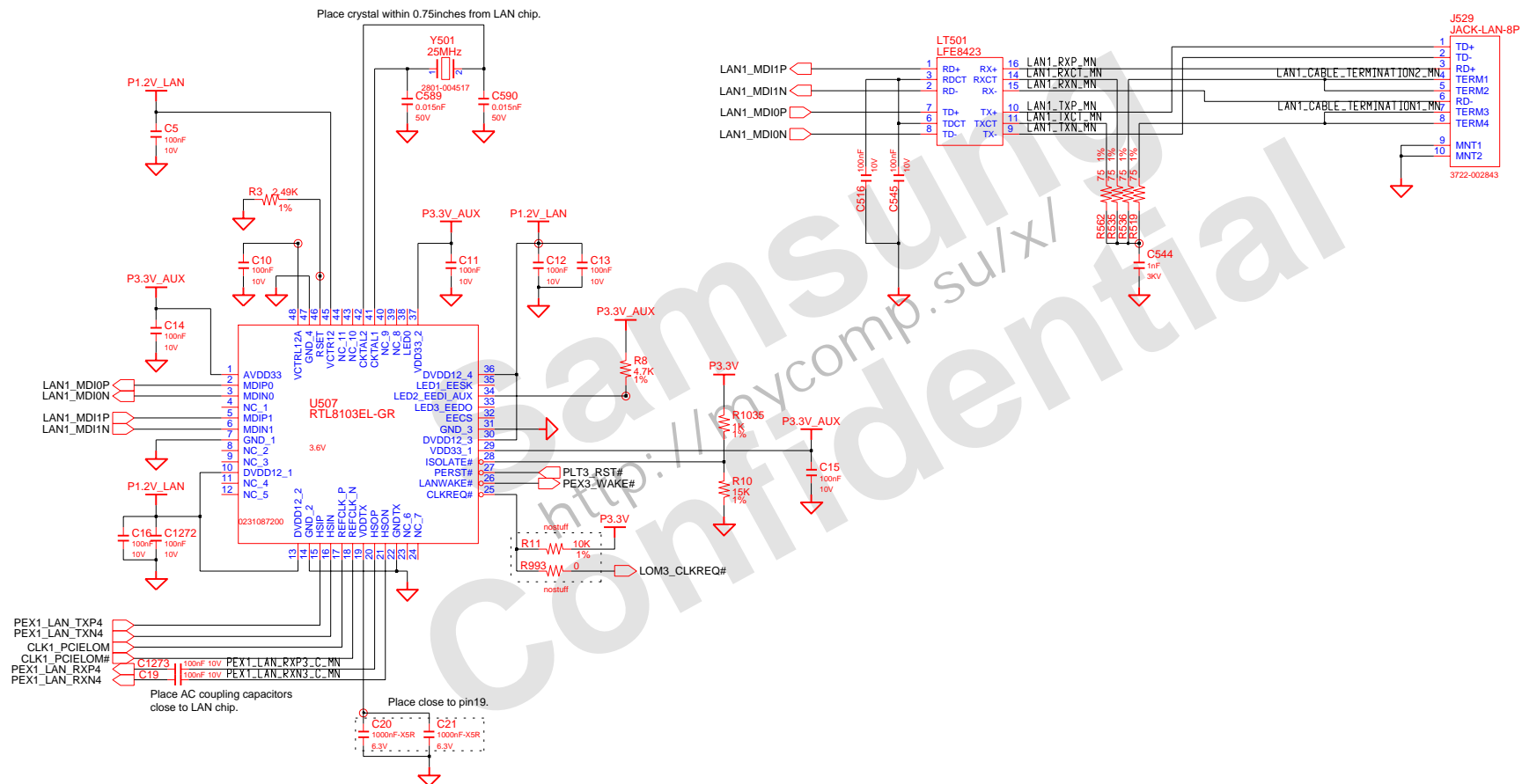


## MIC JACK



DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS PART NO. 01097/8/(1100)A
CHECK	Rujin Zheng	DEV. STEP	PV		HDA_CODEC_ALC272	
APPROVAL	BC LEE	REV	1.0		SPK AMP TPA6017	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	2 OF 5	

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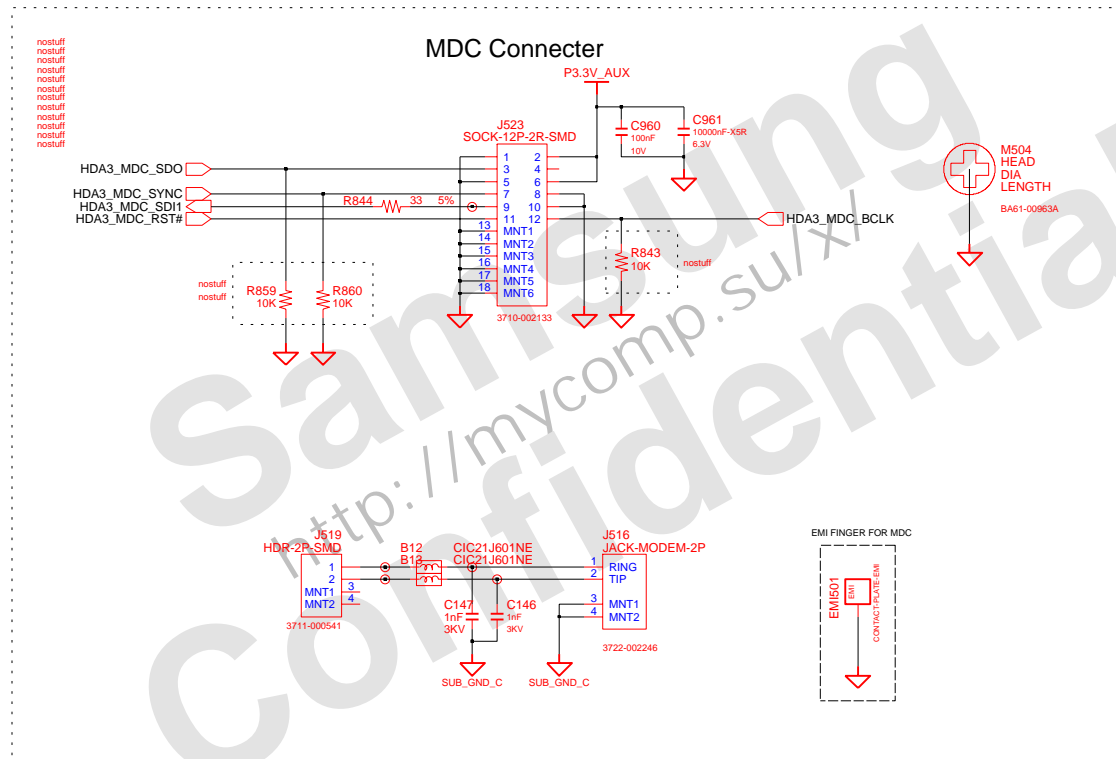


DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV	LAN_MARVELL-8055		
APPROVAL	BC LEE	REV	1.0	LAN	BA41	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 of 1	

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# MDC



DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		HDA_Modem	
APPROVAL	BC LEE	REV	1.0		HDA_Modem	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 1	



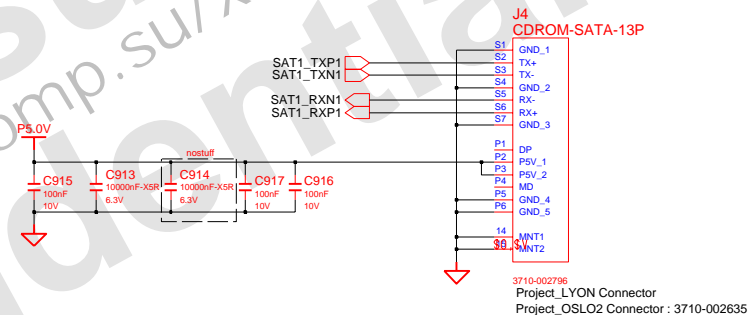
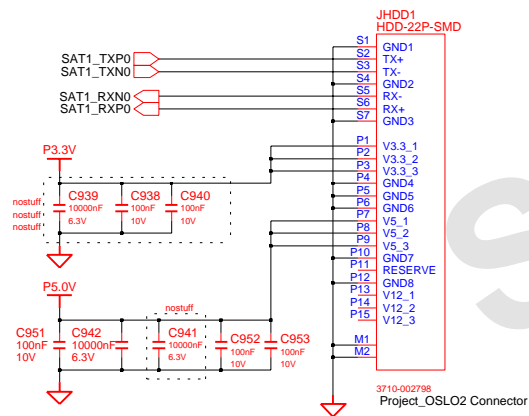
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# SATA I/F CONN

## SATA HDD CONN

## SATA ODD CONN

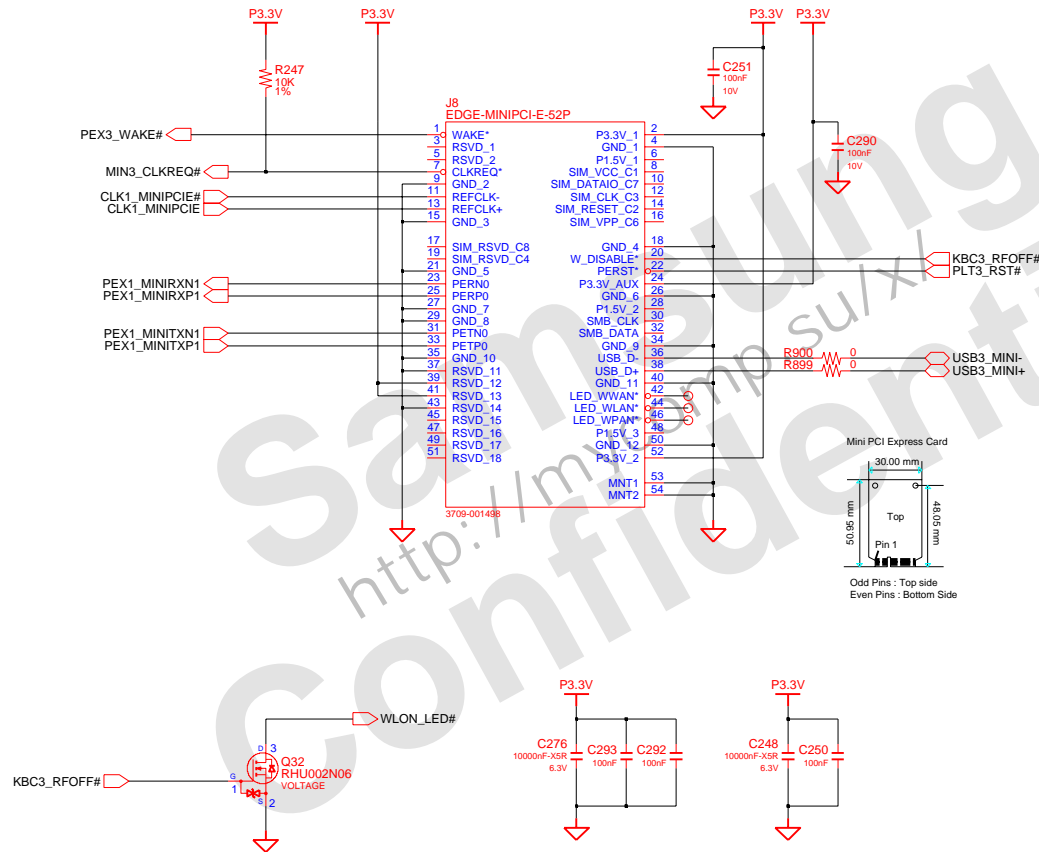


DESIGN	XiaoHong Zheng	DATE	12/3/2008	TITLE	QingDao_Ext SATA_DEVICES HDD ODD	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-xxxxxA
CHECK	RuJin Zheng	DEV. STEP	ADV1			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	undef ined	LAST EDIT	December , 3, 2008 12:06:51 PM	PAGE	1 OF	

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# WLAN 7mm



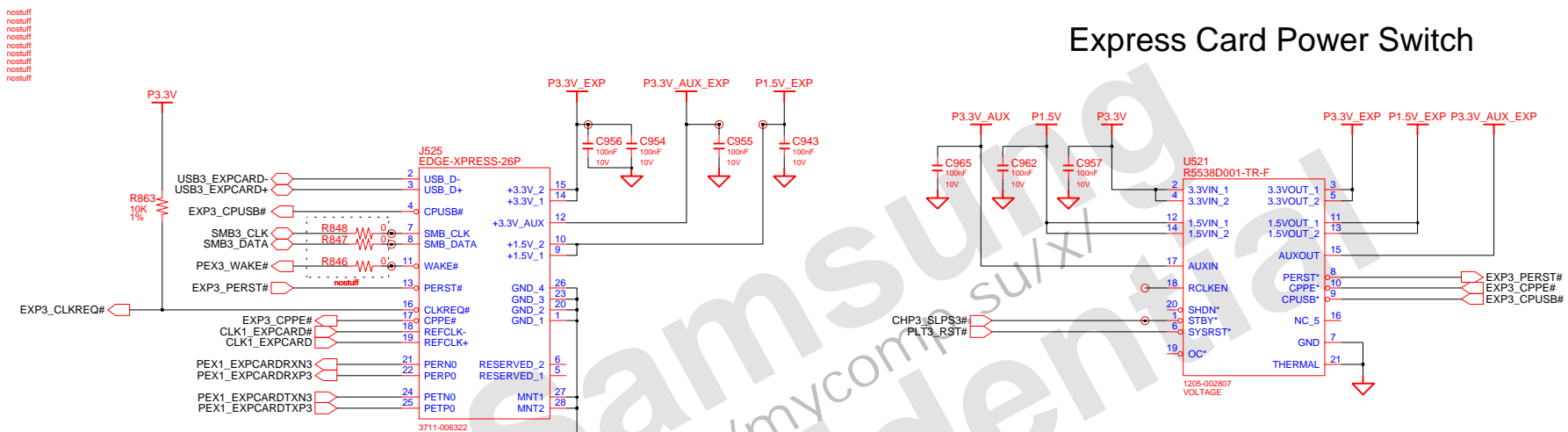
DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L MINI_PCIE_CONN	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0		WLAN	PART NO. BA41-01097/8/(1100)A
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1	OF

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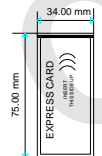
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## Express Card

### Express Card Power Switch



Type 1 module



34.00 mm W  
X  
75.00 mm L  
X  
5.00 mm H

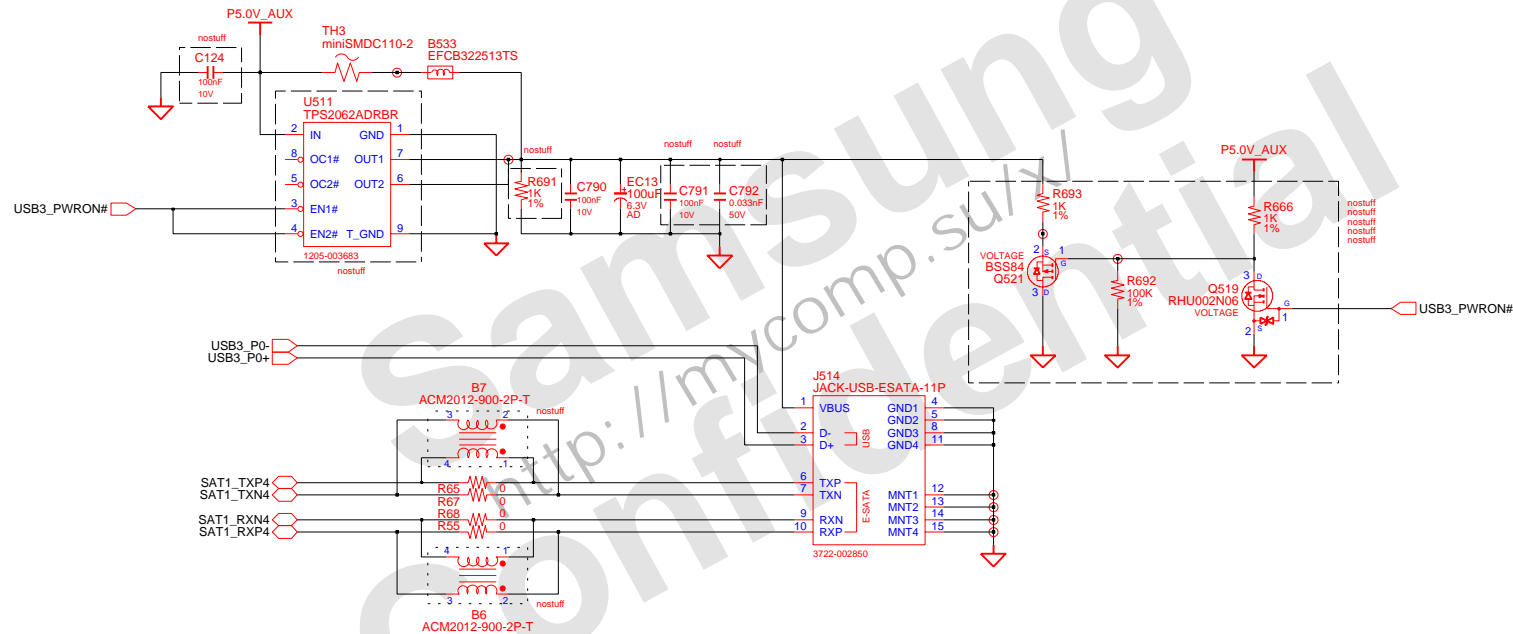


DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L EXPRESS CARD	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF	

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# eSATA



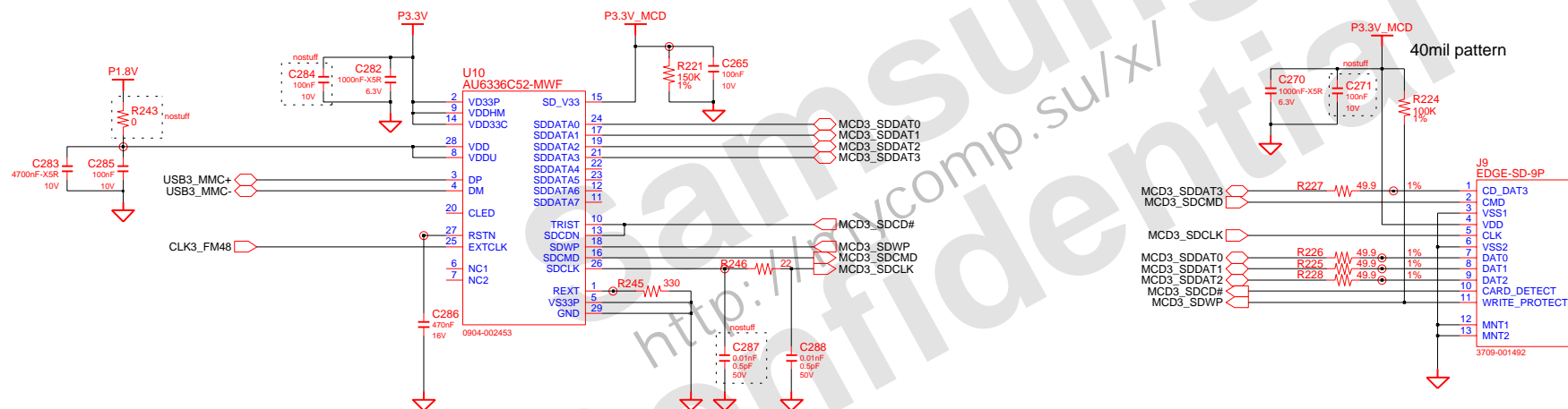
DESIGN	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV	MAIN	BA41-01097/8/(1100)A	
APPROVAL	BC LEE	REV	1.0	eSATA		
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	10 OF 15	

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# 3 IN 1

P3.3V\_MCD distance between R5U880 and socket should be less than 2 inches



40 mil trace for medica card socket ground

MSEL5	SD Write Protec Selection
Connected to VCC	High Enable
Connected to GND	Low Enable
MSEL7	PLL BASE CLOCK SELECTION
Connected to VCC	12MHz
Connected to GND	48MHz

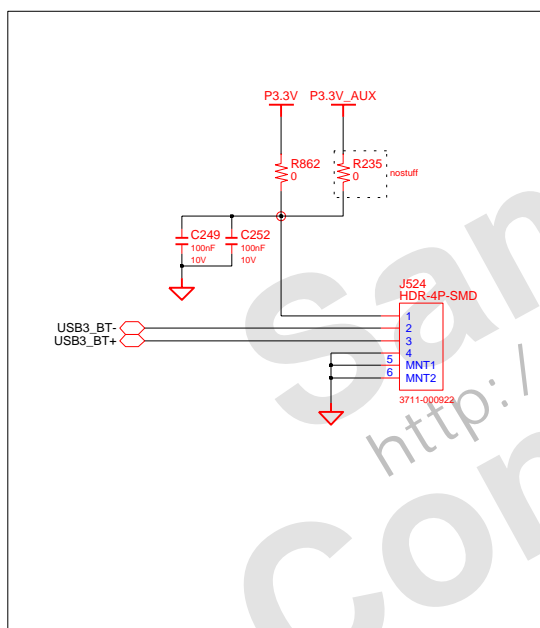
DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE  QingDao_L AU6336	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		
APPROVAL	BC LEE	REV	1.0		
MODULE CODE	undef ined	LAST EDIT	April 29, 2009 21:47:17 PM		
				BA1-	PART NO. -01097/8/(1100)A
				PAGE	1 OF

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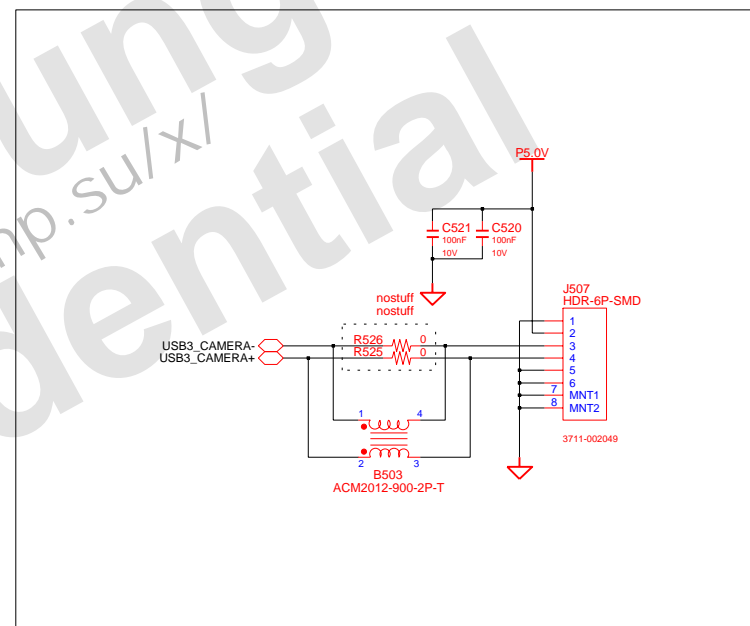
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# USB I/F Devices

## Bluetooth Interface



## CAMERA



DESIGN	XiaoHong Zhang	DATE	12/3/2008	TITLE	QingDao_Ext	SAMSUNG ELECTRONICS
CHECK	RuJin Zheng	DEV. STEP	ADV1		USB_DEVICES	
APPROVAL	BC LEE	REV	1.0		BT CAMERA	
MODULE CODE		LAST EDIT	December, 3, 2008 12:12:55 PM	PAGE	undefined	

PART NO. BA41-xxxxxA

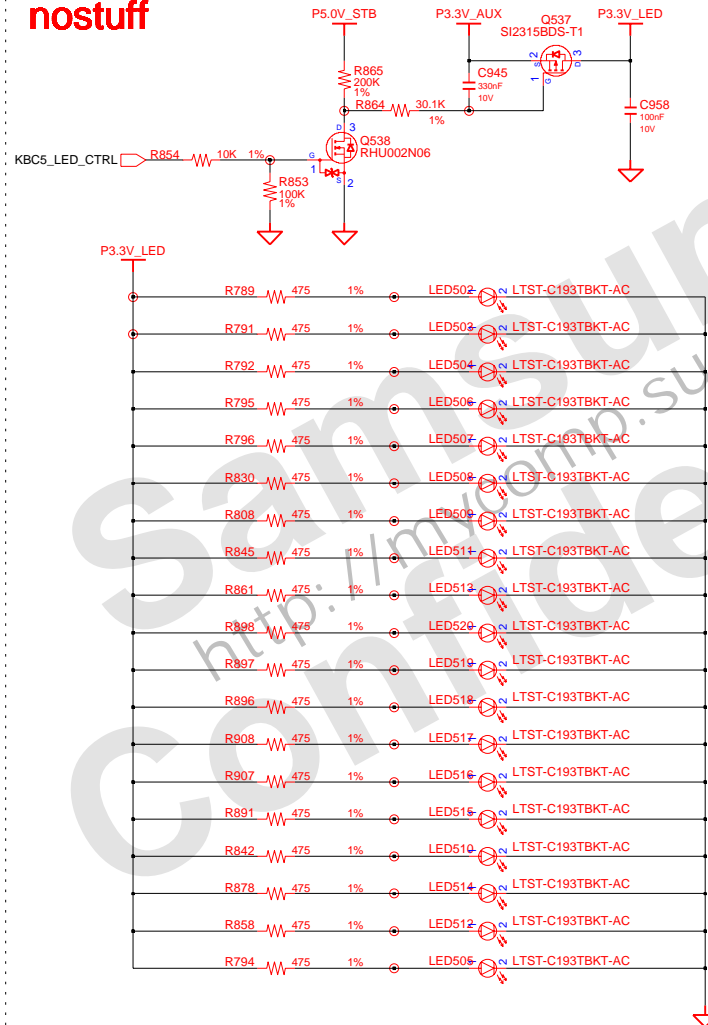
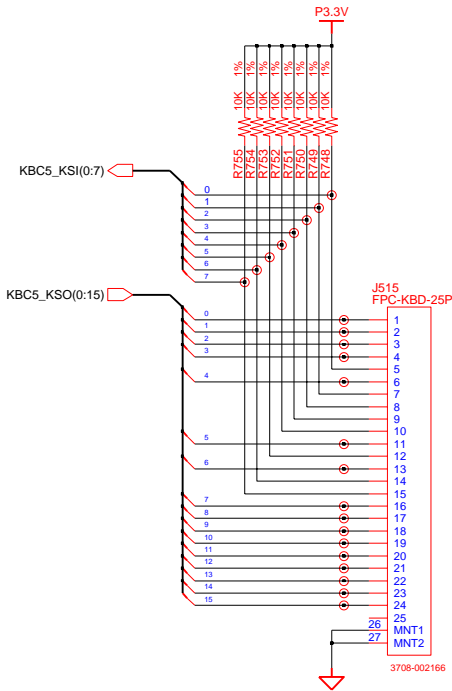




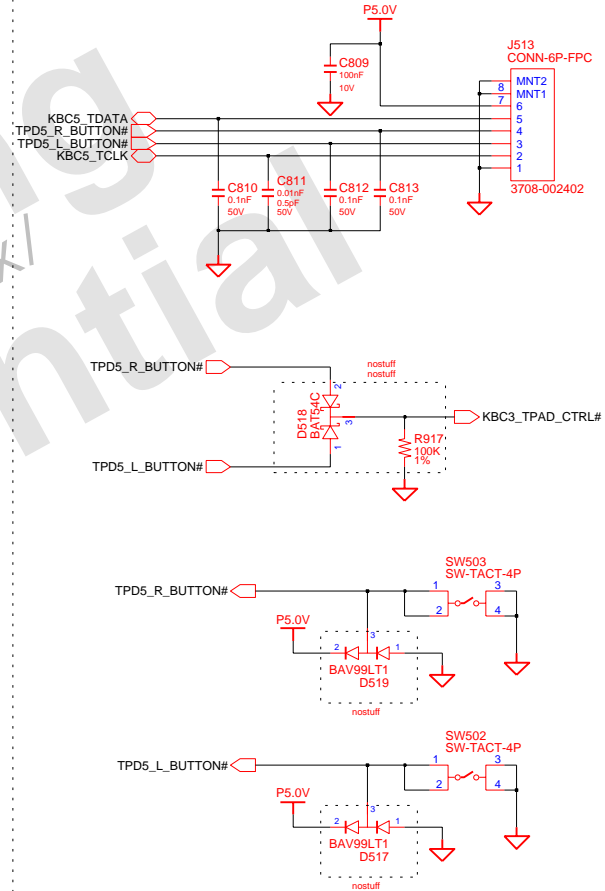


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**nostuff**



## TOUCHPAD

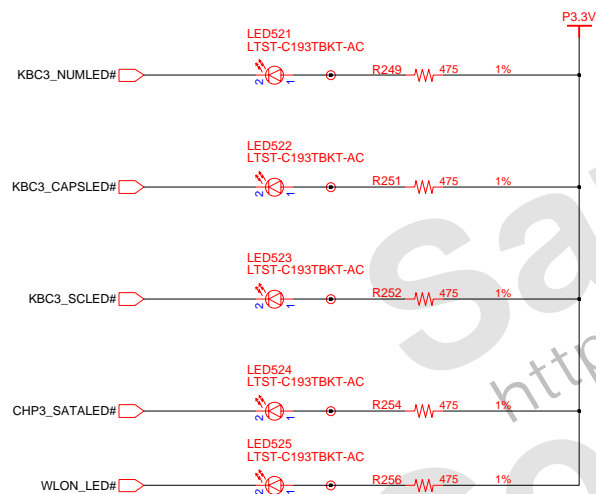


DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV	MICOM_GLUE_LOGIC		
APPROVAL	BC LEE	REV	1.0	KBD TP	BA41	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 of 1	

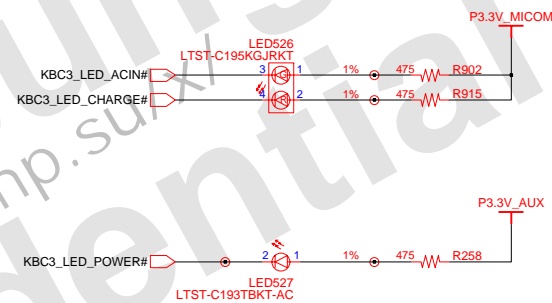
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# LED SWITCH LOGIC

## Function Key LEDS



## ADAPTERIN/CHARGING LED



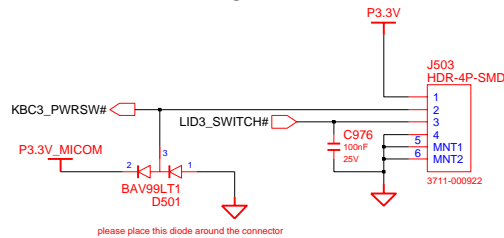
DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE QingDao_L LED_Switch LED_Switch BA41		<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV			
APPROVAL	BC LEE	REV	1.0			
MODULE CODE	LAST EDIT			April 29, 2009 21:47:17 PM		
				PAGE	1	OF 1

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## SUB Board

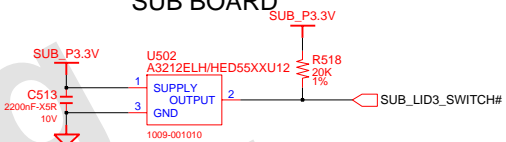
### MAIN BOARD



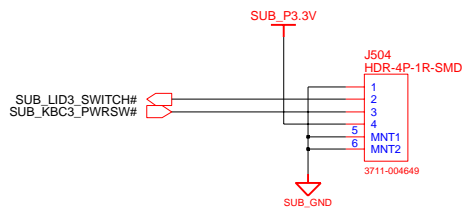
### Power LED SUB BOARD



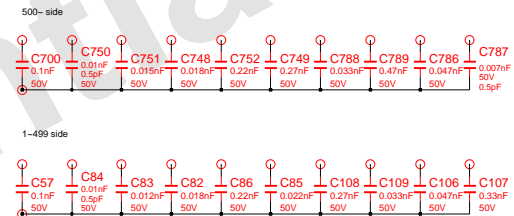
### LID\_SWITCH SUB BOARD



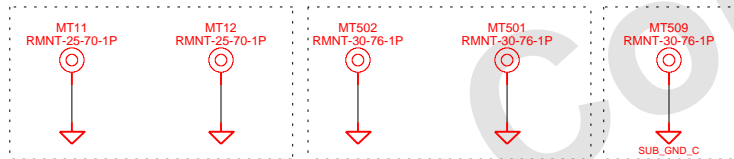
### SUB BOARD



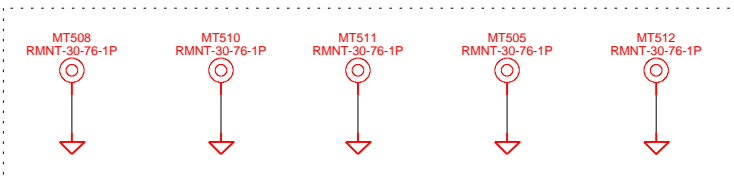
### Power Switch SUB BOARD



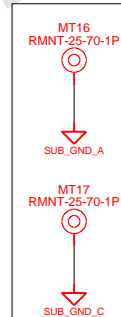
#### PCB & BOTTOM



#### KBD & BOTTOM



#### USB SUB & BOTTOM



#### USB S/B MT



REV1  
1  
2 0 3

PCB REVISION CONTROL (ICT)				
NO	CONNECTION	DATE(Y/M/D)	REVISION	STEP
1	N.C.			
2	1-2			
3	2-3			
4	3-1			
5	1-2-3			
6	N.C.			
7	1-2			
8	2-3			
9	3-1			
10	1-2-3			

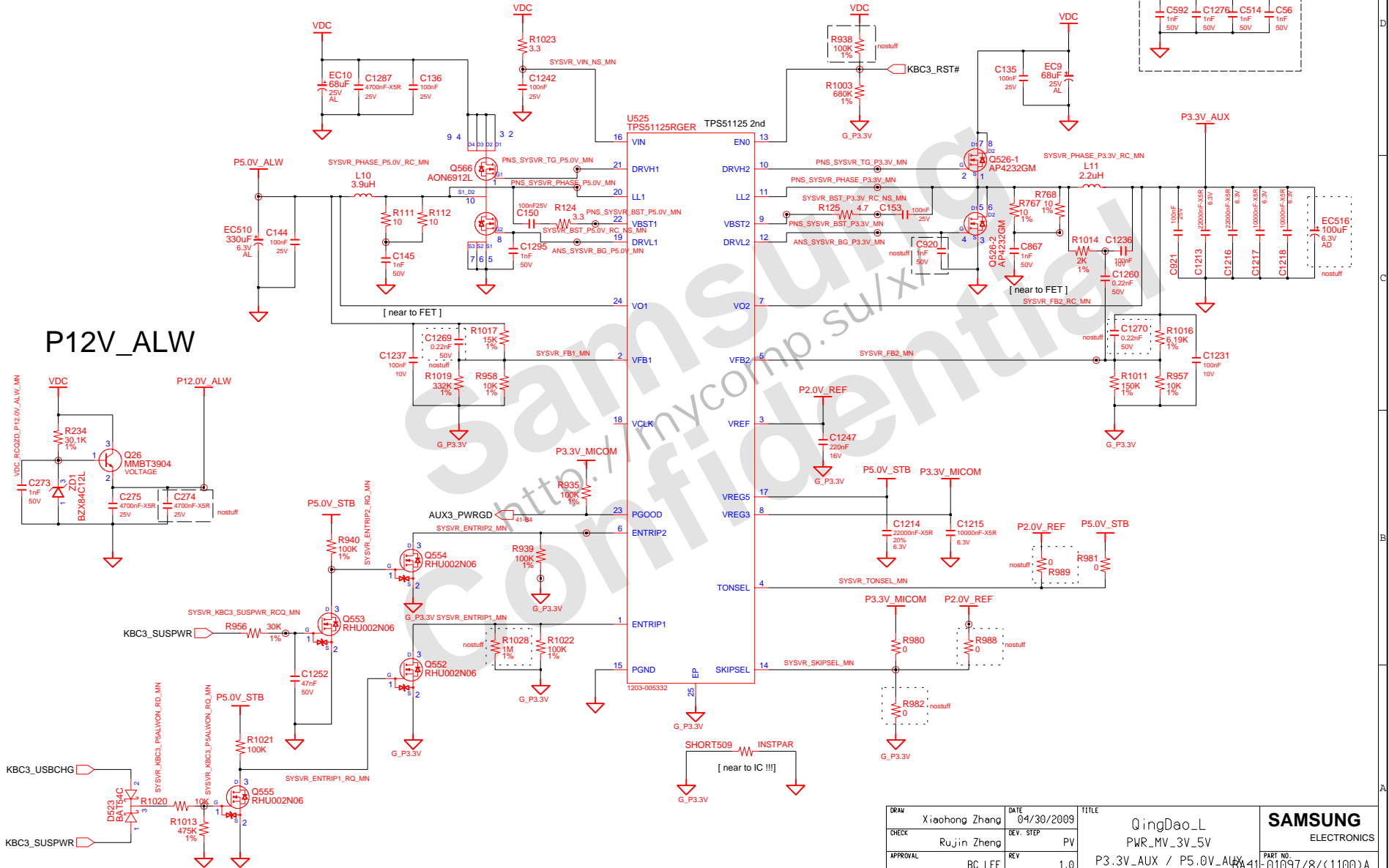
DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		MAIN	
APPROVAL	BC LEE	REV	1.0		PWR SW SUB	PART NO.
MODULE CODE		LAST EDIT				BA11-01097/8/(1100)A
				April 29, 2009 21:47:17 PM	PAGE	11 OF 15



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# P3.3V\_AUX & P5.0V\_AUX

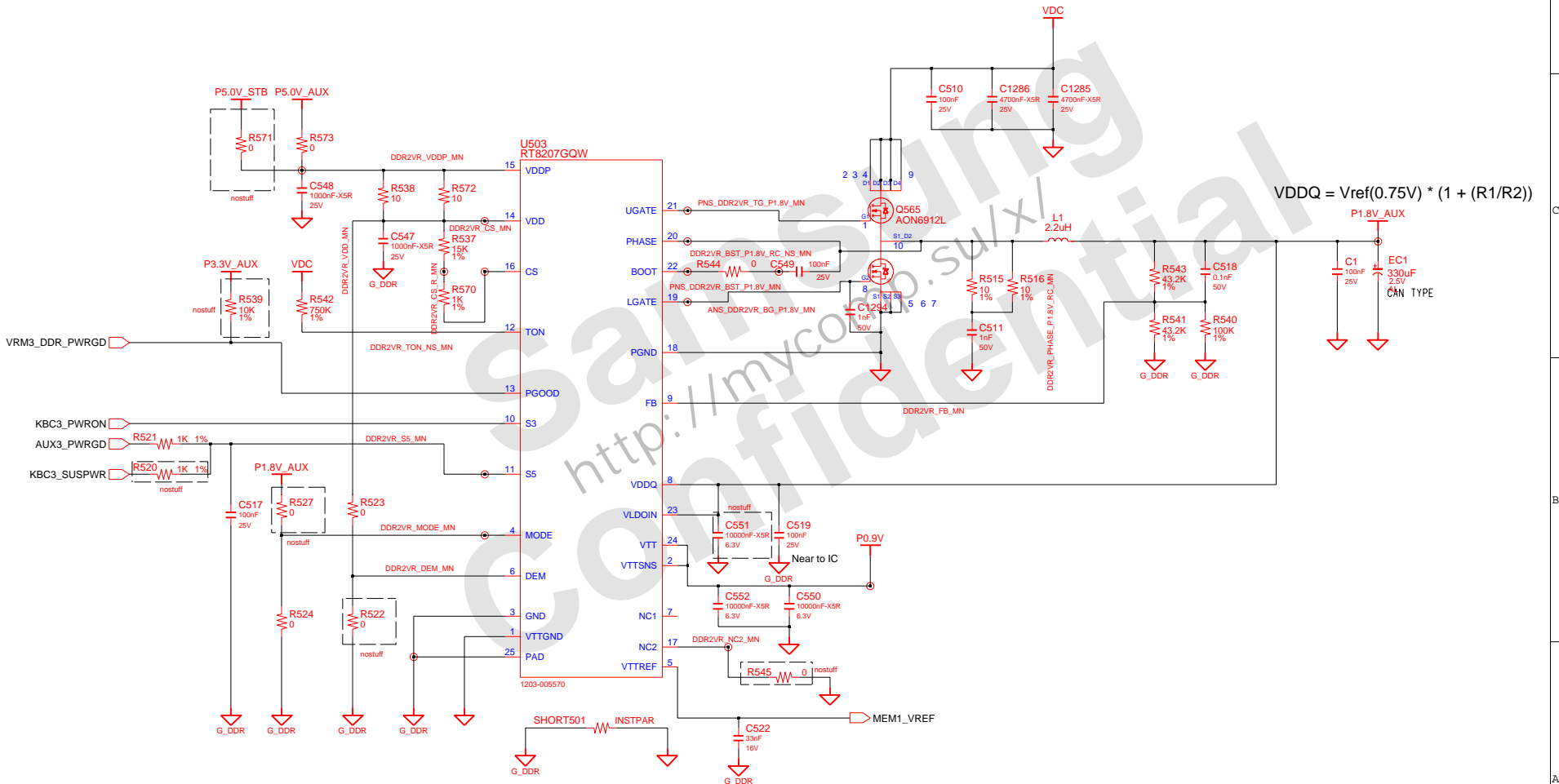


DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		PWR_MV_3V_5V	
APPROVAL	BC LEE	REV	1.0		P3.3V_AUX / P5.0V_AUX	PART NO.
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1	OF 1



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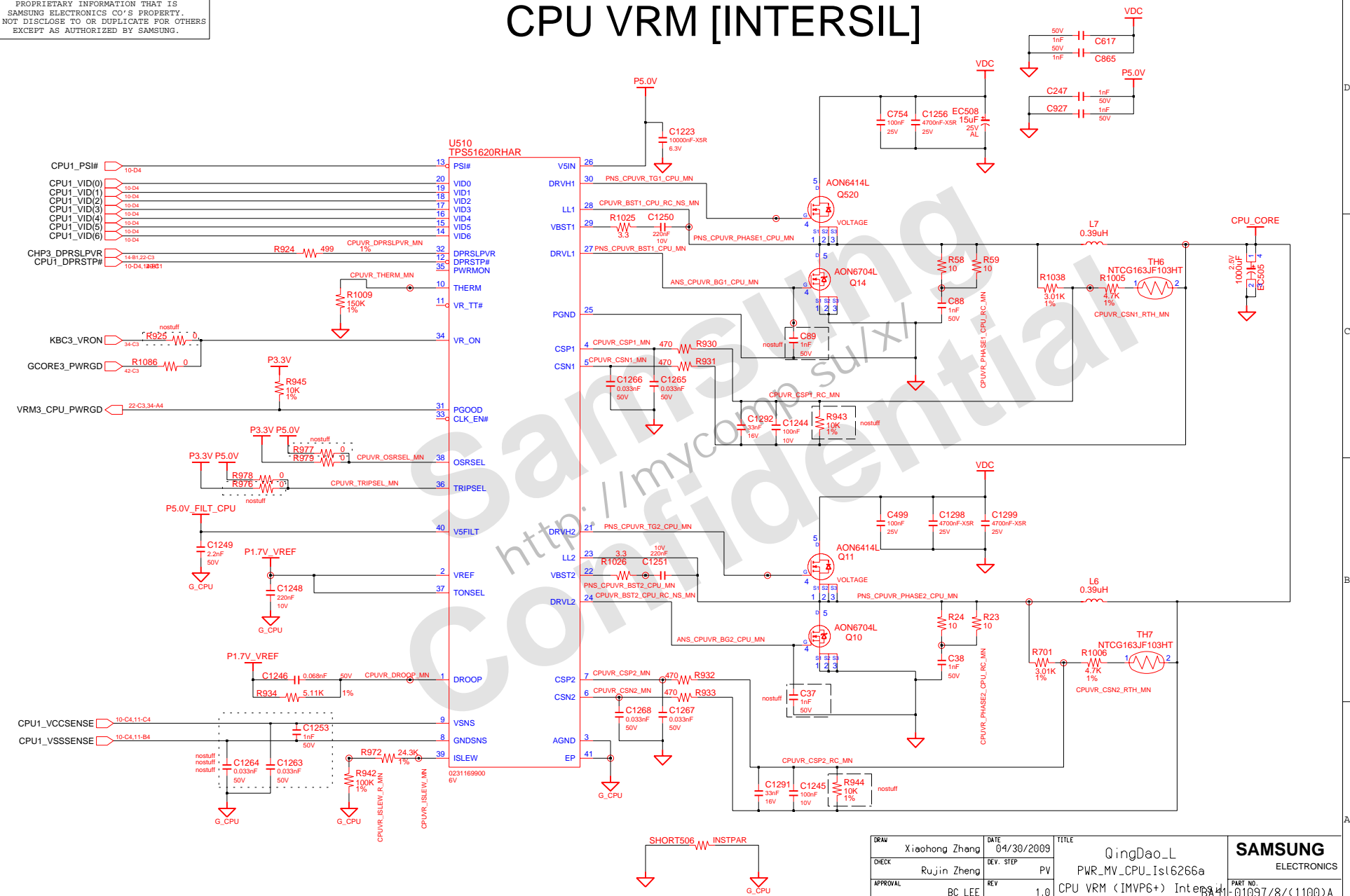
# DDR2 Power



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## CPU VRM [INTERSIL]



DRAW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS
CHECK	Rujin Zheng	REV. STEP	PV	PWR_MV_CPU_IsI6266a		
APPROVAL	BC LEE	REV	1.0	CPU VRM (IMVP6+) Intergral	PART NO.	
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 1	

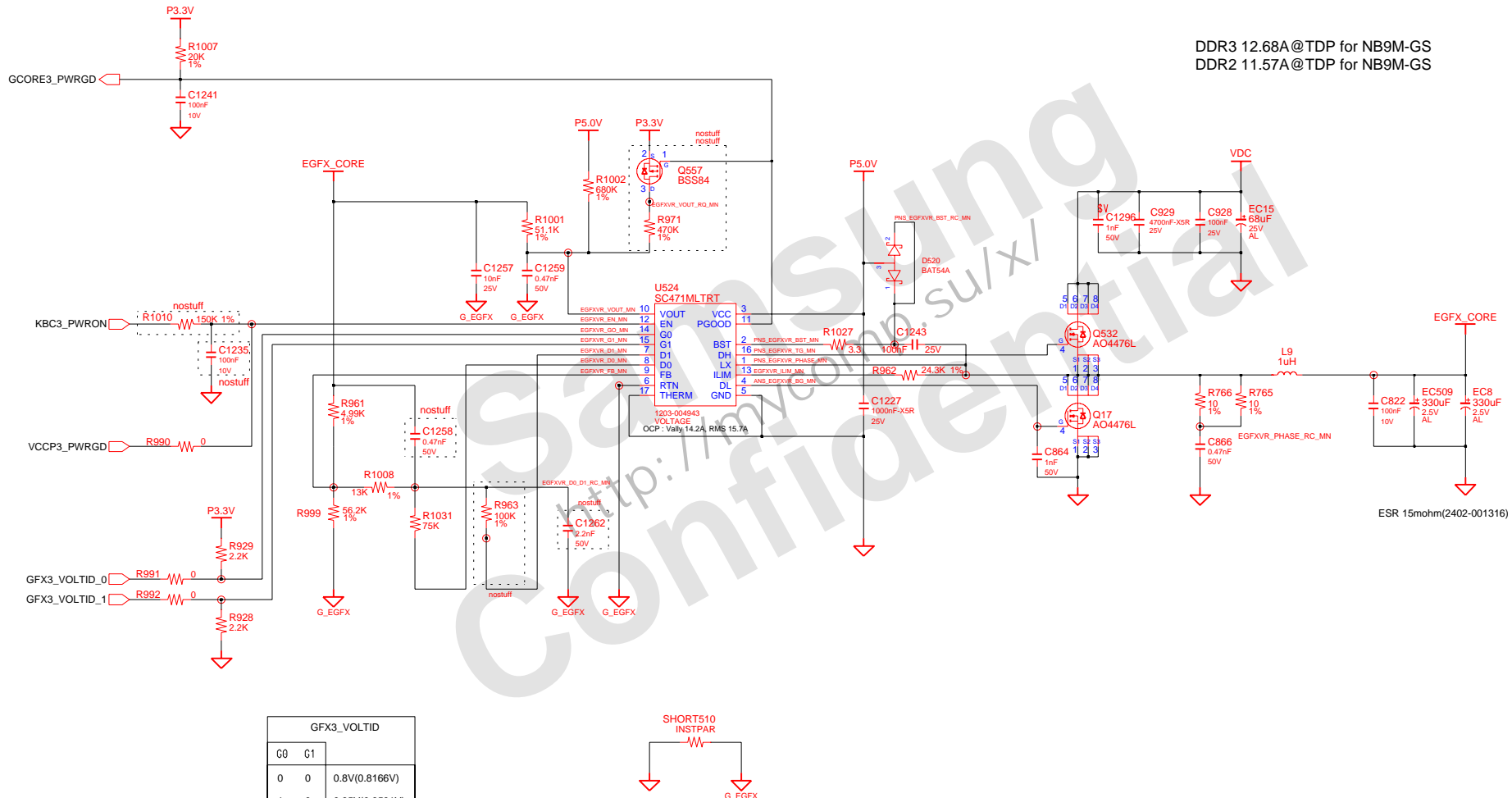


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## Graphic Core Power

DDR3 12.68A@TDP for NB9M-GS  
 DDR2 11.57A@TDP for NB9M-GS

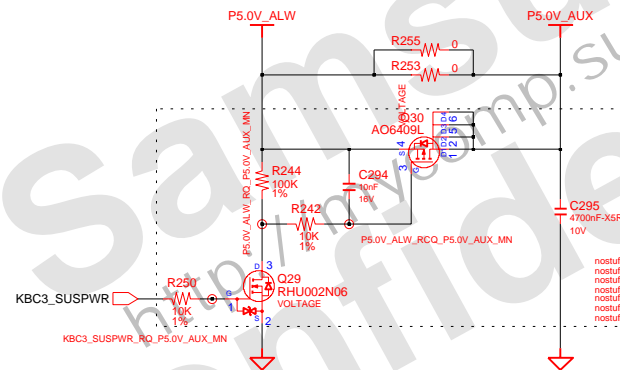


DRW	Xiaohong Zhang	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		PWR_Gfx_MV_Ext	
APPROVAL	BC LEE	REV	1.0		Ext Gfx Memory(SC486)	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM		PART NO. 01097/8/(1100)A	

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## Switched Power

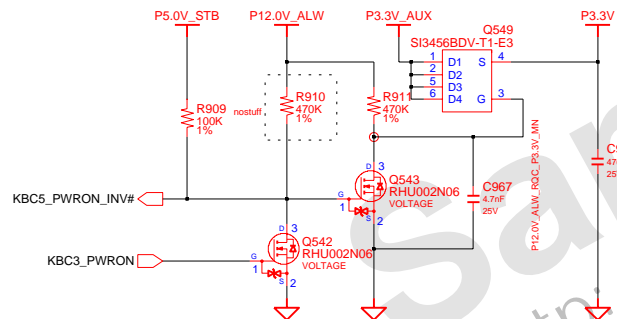


DRAW	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	SAMSUNG ELECTRONICS
CHECK	Rujin Zheng	DEV. STEP	PV		PWR_MV_Switched	
APPROVAL	BC LEE	REV	1.0		SWITCHED POWER	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 2	

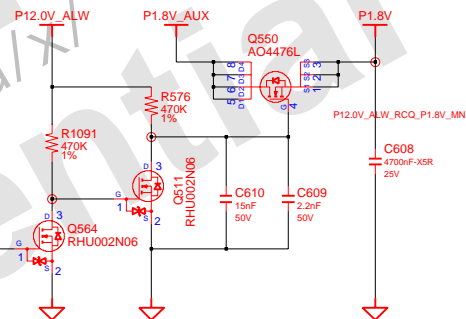
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## Switched Power

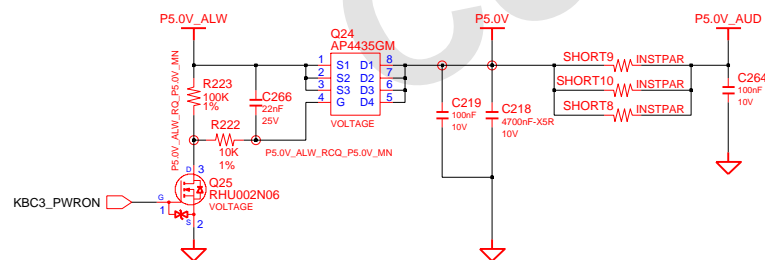
Switched Power On (P3.3V)



Switched Power On (P1.8V)



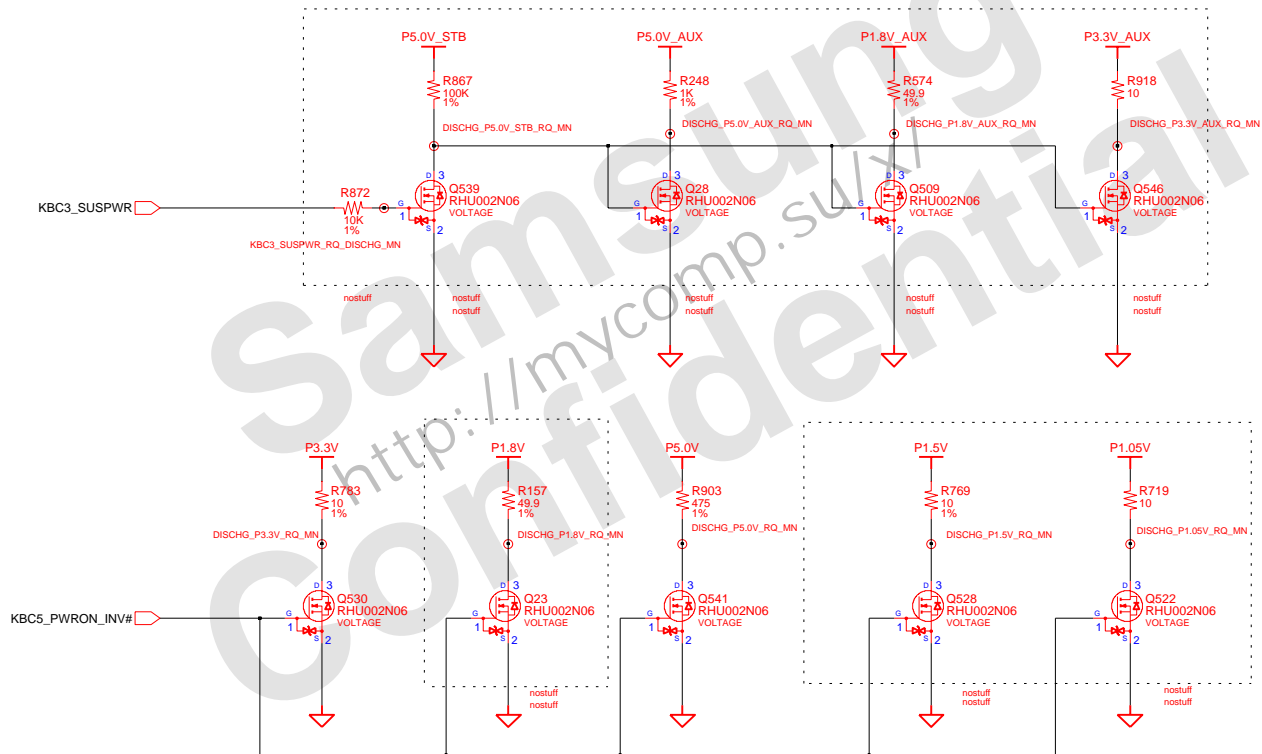
Switched Power On (P5.0V)



DESIGN	XIAOHONG, ZHANG	DATE	12/3/2008	TITLE	QingDao_Ext PWR_MV_SWITCHED Switched Power	<b>SAMSUNG</b> ELECTRONICS
CHECK	RUJIN, ZHENG	DEV. STEP	ADV1			PART NO. BA41-xxxxxA
APPROVAL	BC, LEE	REV	1.0			
MODULE CODE		LAST EDIT	December, 3, 2008 3:39:16 PM	PAGE	2	OF

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# POWER DISCHARGER



DRAW	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS PART NO. 01097/8/(1100)A
CHECK	Rujin Zheng	DEV. STEP	PV		PWR_MV_DisCharger	
APPROVAL	BC LEE	REV	1.0		DISCHARGING LOGIC BA41	
MODULE CODE	undefined	LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	1 OF 1	

4	3	2	1
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<p>○CPU1_NMI# ○CPU1_TCK ○CPU1_TDI ○CPU1_TMS ○FAN5_VDD ○SMB3_CLK</p> <p>○ADT3_SEL# ○CLK3_FMR# ○CPU1_ADS# ○CPU1_BNR# ○CPU1_HIT# ○CPU1_INTR# ○CPU1_PSI#</p> <p>○CPU1_SMI# ○GFX3_HCLK ○KBC3_A20G</p> <p>○KBC3_VRON ○KBC5_TCLK ○LCD3_BRIT ○MCD3_SDWP# ○MEM1_VREF ○PLT3_RST# ○SMB3_DATA</p> <p>○THM3_STP# ○WLOK_LED# ○CLK3_PWRGD ○CLK3_ICH14 ○CLK3_PWRGD ○CLK3_USB4# ○CPU1_A20M# ○CPU1_BPR# ○CPU1_BREQ# ○CPU1_DBSY# ○CPU1_DPWR# ○CPU1_DRDY# ○CPU1_FERR#</p> <p>○CPU1_INIT# ○CPU1_LOCK# ○CPU1_TRDY# ○CPU1_TRST# ○CRT3_HSYNC ○CRT3_VSYNC ○CRT3_HSYNC ○CRT3_VSYNC ○DRAM_RST# ○EXP3_OPPE# ○GFX3_HDATA ○GFX3_ROMS# ○GFX3_ROMSO ○KBC3_CHGEN ○KBC3_PWRGD ○KBC3_PVRON ○KBC5_TDATA</p> <p>○MCD3_SDOD# ○MCD3_SDCLK ○MCD3_SDCMD ○MCH1_HVREF ○PCB3_INTA# ○PCB3_INTB# ○PCB3_INTC# ○PCB3_INTD# ○PCB3_IRDY# ○PCB3_PERR#</p> <p>○PCB3_SERR# ○PCB3_STOP# ○PCB3_TRDY# ○PEX3_WAKE# ○BAT3_SMCLK# ○CHP3_GPIO18 ○CHP3_GPIO20 ○CHP3_SERIRQ ○CHP3_SLP#4# ○CHP3_SLP#5#</p>	<p>○CLK3_DBGCLPC</p> <p>○CPU1_DPSLP# ○CPU1_IGNNE# ○CPU1_VID(0) ○CPU1_VID(1) ○CPU1_VID(2) ○CPU1_VID(3) ○CPU1_VID(4) ○CPU1_VID(5) ○CPU1_VID(6) ○CRT3_DDCCLK ○CRT5_DDCCLK ○EXP3_PUSB# ○EXP3_PERST#</p> <p>○GFX3_STRAP2</p> <p>○KBC3_BKLTON ○KBC3_PRECHG ○KBC3_PWRSW# ○KBC3_RFOFF# ○KBC3_SCLED# ○KBC3_SMCLK# ○KBC3_SUSPWR ○LCD3_BKLTON ○LPC3_LAD(0) ○LPC3_LAD(1) ○LPC3_LAD(2) ○LPC3_LAD(3) ○MCD3_SDDAT0 ○MCD3_SDDAT1 ○MCD3_SDDAT2 ○MCD3_SDDAT3</p> <p>○PCB3_FRAME# ○PCB3_PLOCK# ○PEG3_BKLTON ○SMB3_ALERT# ○THM3_ALERT# ○USB3_PVRON# ○VCCP3_PWRGD ○BAT3_DETECT# ○BAT3_SMDATA# ○CHP3_BIOSWP# ○CHP3_CPUSTP# ○CHP3_PCISTP# ○CLK3_GFX_27M ○CLK3_PCLKICH ○CPU1_DPRSTP# ○CPU1_DSTBN#</p> <p>○CPU2_THERMDA ○CPU2_THERMDC ○CRT3_DDCDATA ○CRT5_DDCDATA ○EXP3_CLKREQ# ○FAN3_FBACK# ○SCORE3_PWRGD</p> <p>○GFX3_ROMSCLK ○GFX3_THERMON ○GFX3_THERMDP ○HDA3_MDC_SDO ○KBC3_CHG1.2V ○KBC3_CPUREST# ○KBC3_EXTSMI# ○KBC3_NUMLED#</p>	<p>○KBC3_PWRBTN# ○KBC3_RSMRST# ○KBC3_RUNSC# ○KBC3_SMDATA# ○KBC3_SPMUTE# ○LID3_SWITCH# ○LOM3_CLKREQ# ○LPC3_LFRAME# ○MCH1_HASWING ○MCH3_CLKREQ# ○MCH3_EXTTS# ○MCH3_EXTTS1# ○MIN3_CLKREQ# ○PCB3_CLKRUN# ○PCB3_DEVSEL# ○CHP3_CL_CLK_0 ○CHP3_DPRSPLVR ○CHP3_PM_SYNC# ○CHP3_SATALED# ○CHP3_SUSSTAT# ○CPU1_PWRGDPCU ○CPU1_VCCSENSE ○CPU1_VSSSENSE</p> <p>○GFX3_VOLDID_0 ○GFX3_VOLDID_1</p> <p>○HDA3_MDC_BCLK ○HDA3_MDC_RST# ○HDA3_MDC_SDI# ○HDA3_MDC_SYNC ○KBC3_CAPSLED# ○KBC5_LED_CTRL ○KBC5_WAKESCH# ○KBC5_P5ALWON# ○LCD3_EDID_CLK ○MCH3_IHVSNC# ○PEG3_HDMI_CLK ○PEG3_HPD_HDMI ○PEG3_LCDVDON ○PEG5_HDMI_CLK</p> <p>○CHP3_BIOS_CR# ○CHP3_CL_DATA_0 ○CHP3_CL_RST_0# ○CHP3_INTRUDER# ○CHP3_USBPWRON# ○CLK3_PCLKMCOM ○CPU1_THRMTRIP# ○CPU3_THRMTRIP#</p> <p>○ITP3_DBRESET#</p> <p>○KBC3_LED_ACIN# ○KBC3_USBPWRON# ○LCD3_EDID_DATA ○PEG3_HDMI_DATA ○PEG5_HDMI_DATA ○TPD5_L_BUTTON# ○TPD5_R_BUTTON# ○VRM3_CPU_PWRGD ○VRM3_DDR_PWRGD ○CHP3_ME_RTCRST# ○CLK3_GFX_27M_SS</p> <p>○KBC5_PVRON_INV#</p> <p>○CHP3_SATACLKREQ# ○KBC3_LED_CHARGE# ○KBC3_THERM_SMCLK ○SUB_LID3_SWITCH#</p> <p>○KBC3_THERM_SMDATA</p>	<p>○P3.3V_MCOM</p> <p>○SUB_GND</p> <p>○SUB_GND_A</p> <p>○SUB_GND_C</p> <p>○SUB_P3.3V</p> <p>○P5.0V_AUX</p>

DESIGN	Xiaohong Zheng	DATE	04/30/2009	TITLE	QingDao_L	<b>SAMSUNG</b> ELECTRONICS PART NO. 01097/8/(1100)A
CHECK	Rujin Zheng	DEV. STEP	PV		MAIN	
APPROVAL	BC LEE	REV	1.0		TP	
MODULE CODE		LAST EDIT	April 29, 2009 21:47:17 PM	PAGE	12 OF 15	

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- HDMI3\_APD
- HDMI3\_PEQ
- HDMI3\_PRE
- AUD5\_MIC2\_INT
- HDA3\_AUD\_SDO
- CPU1\_BSEL0
- CPU1\_BSEL1
- CPU1\_BSEL2
- CPU1\_HITM#

- HDMI3\_ASO1
- HDMI3\_EMI0
- HDMI3\_EMI1

- GFX3\_THERM#
- KBC3\_SPI\_DI
- KBC3\_SPI\_DO
- KBC3\_USBCHG
- CPU1\_STPCLK#
- HDMI3\_DDCBUF
- HST3\_SPI3\_DI
- HST3\_SPI3\_DO
- KBC3\_SPI\_CLK
- KBC3\_SPI\_CS#
- KBC3\_SPI\_WP#

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- HDA3\_AUD\_BCLK
- HDA3\_AUD\_S0IO
- HDA3\_AUD\_SYNC
- HST3\_SPI0\_CLK
- HST3\_SPI0\_CS#
- VGA5\_HDMI\_HPD
- AUD5\_HP\_O\_LEFT
- AUD5\_MIC1\_LEFT
- AUD5\_HP\_O\_RIGHT
- AUD5\_MIC1\_RIGHT
- KBC3\_TPAD\_CTRL#

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D  
C  
B  
A