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SCALA2-EXT

CPU : Arrandale PGA
Chip Set : Intel Ibex Peak
GFX : N11M
Remarks : Calpella Platform

Model Name : SCALA2-EXT

PBA Name : MAIN

PCB Code : BA41-01424A (GCE)
BA41-01423A (NY)
BA41-01425A (HAN)

Dev. Step : MP1.1

Revision : 1.1

T.R. Date : 2010.12.10

Design	CHECK	APPROVAL
<i>QZ DAI</i>	<i>SIMMAN WU</i>	<i>BC LEE</i>

■ Owner : SEC IT Solution N/P LAB Signature : wannu

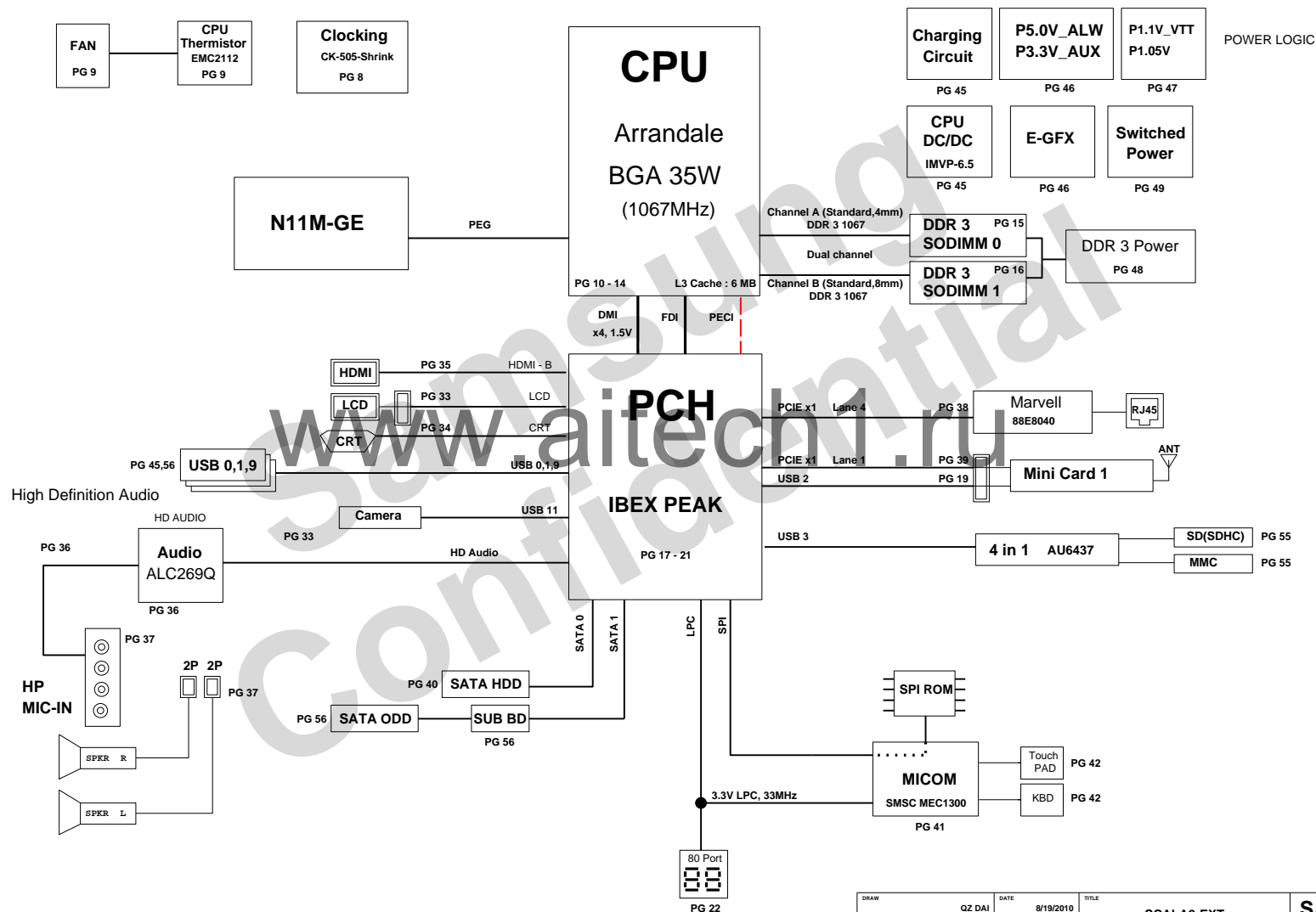
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sheet26 : GFX memory
sheet27 : GFX memory
sheet28 : LVDS / CAMERA
sheet29 : CRT
sheet30 : HDMI

sheet31 : Audio - ALC269
sheet32 : Audio - HP/MIC WOOFER(2.1CH)
sheet33 : LAN (Realtek 8111E)
sheet34 : WLAN
sheet35 : SATA interface
sheet36 : MICOM / BIOS
sheet37 : MICOM Glue Logic (KBD / TP)
sheet38 : USB connector Bluetooth
sheet39 : SUB B'D connector
sheet40 : Power - charger
sheet41 : Power - P3.3V_AUX / P5.0V_AUX
sheet42 : Power - P1.05V (Chipset Power)
sheet43 : Power - DDR3
sheet44 : Power - CPU VRM
sheet45 : Power - IGFX_CORE
sheet46 : Power - EGFX_CORE
sheet47 : Power - Switched Power 1
sheet48 : Power - Power Discharge
sheet49 : USB/POWER SW SUB BD
sheet50 : 3-in-1 card (GL823) & LED SUB BOARD
sheet51 : ODD Sub B'd / Battery Sub B'd(for 15")
sheet52 : Multimedia Sub B'd
sheet53 : MOUNT HOLE
sheet54 : Power - Switched Power 2
sheet55 : Power - VCCSA

DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP	MAIN		ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1	COVER		PART NO. BA41-01423A
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	1	OF 52

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BLOCK DIAGRAM



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT MAIN BLOCK DIAGRAM	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE	undefined	LAST EDIT		December 25, 2010 10:42:33 AM	PAGE 2 OF 52	

BOARD INFORMATION

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

Voltage Rails		Active in
VDC P12.0V_ALW P3.3V_MICOM P5.0V_ALW P5.0V_STB	Primary DC system power supply (7 to 21V) 12.0V always power rail 3.3V always power rail (for Micom) 5.0V always power rail 5.0V always power rail	S4 - S5
P5.0V_AUX P3.3V_AUX P1.5V_AUX	5.0V switched on power rail (off in S4-S5) 3.3V switched on power rail (off in S4-S5) 1.5V power rail for DDR (off in S4-S5)	S3
P5.0V P3.3V P1.8V P1.5V P1.05V P0.75V	5.0V switched power rail (off in S3-S5) 3.3V switched power rail (off in S3-S5) 1.8V switched power rail (off in S3-S5) 1.5V switched power rail (off in S3-S5) 1.05V power rail for chipset (off in S3-S5) 0.9V power rail for DDR (off in S3-S5)	S0
VCC_CORE IGFX_CORE EGFX_CORE P1.05V (VCCP)	Core Voltage for CPU Core Voltage for IGFX Core Voltage for GPU VCC for Arrandale & IBEX Peak	S0

USB PORT Assign		PCI Express Assign	
PORT #	ASSIGNED TO	PORT #	ASSIGNED TO
0	SYSTEM PORT 0	1	Mini Card 1 (WLAN)
1	SYSTEM PORT 1	2	NC
2	Mini PCI Express	3	NC
3	Multi Memory Card Controller	4	LAN CONTROLLER
4	NC	5	NC
5	NC	6	NC
6	NC (N/A WITH HM55)	7	NC (N/A WITH HM55)
7	NC (N/A WITH HM55)	8	NC (N/A WITH HM55)
8	NC		
9	SYSTEM PORT 2 (SUB BOARD)		
10	Bluetooth		
11	Camera		
12	NC		
13	NC		

SATA PORT Assign	
PORT #	ASSIGNED TO
0	HDD
1	ODD
2	(N/A WITH HM55)
3	(N/A WITH HM55)
4	
5	

Crystal / Oscillator			
TYPE	FREQUENCY	DEVICE	USAGE
Crystal	32.768KHz	IBEX-PEAK	Real Time Clock
Crystal	14.318MHz	CLOCK-Generator	CK-505
Crystal	25MHz	LAN	Intel LAN

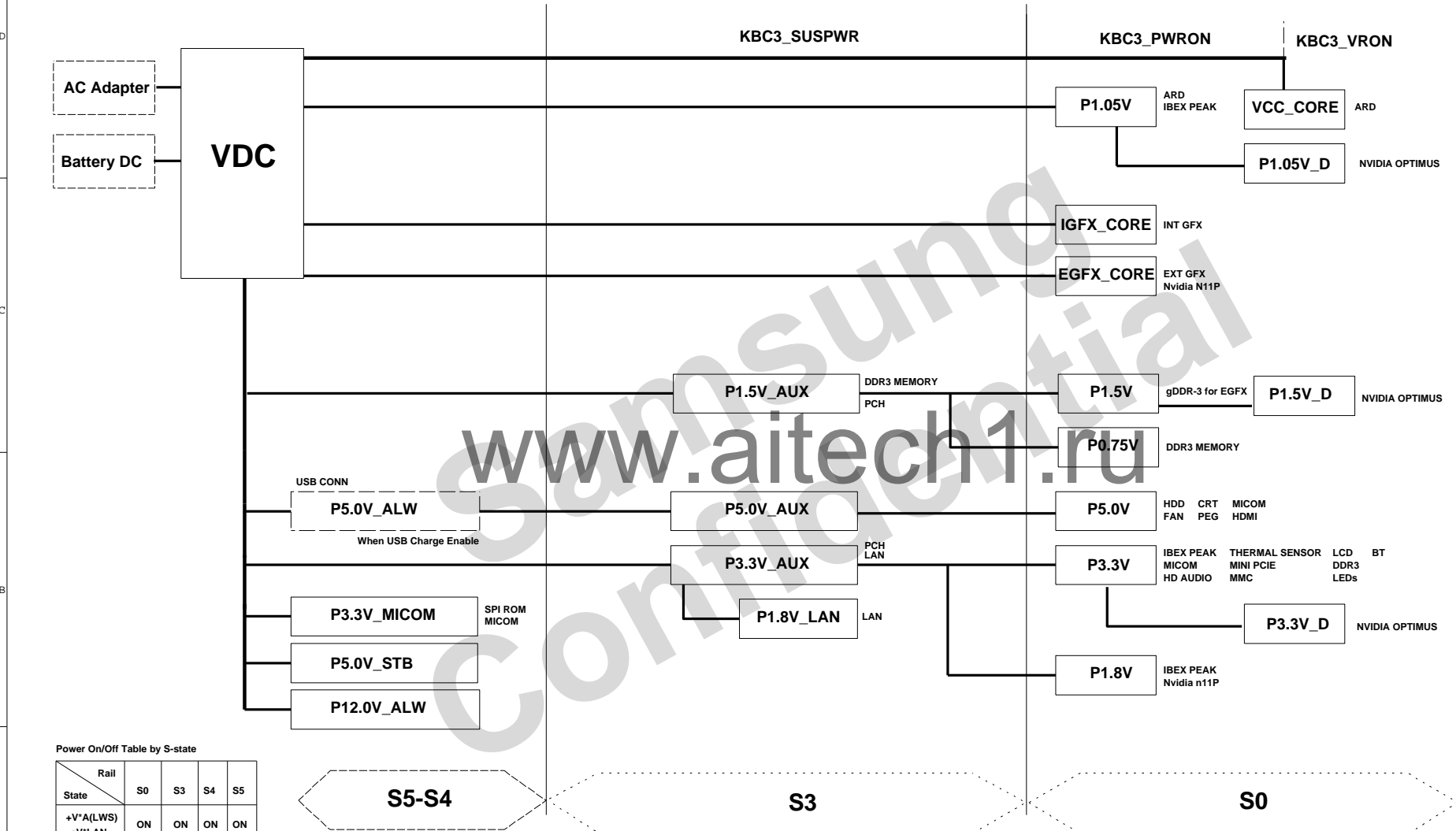
LCD Pannel Detect		
Devices	Resolution	PANNEL_DETECT_0
LTN140AT17	HD(1366x768)	SEC3250

I ² C / SMB Address			
Devices	Address	Hex	Bus
IBEX PEAK	Master	-	SMBUS Master
CPU Thermal Sensor	0111 101x	7Ah	
SODIMM0	1010 000x	A0h	Thermal Sensor
SODIMM1	1010 010x	A4h	-
Thermal Sensor on SODIMM0	0011 000x	30h	-
Thermal Sensor on SODIMM1	0011 010x	34h	-
CK-505M Shrink(Clock Generator)	1101 001x	D2h	Clock, Unused Clock Output Disable
Thermal Sensor on board	1101 100x	98h	
Power thermal management TS	1101 011x	96h	

DRAW	QZ DAI	DATE	8/19/2010	TITLE SCALA2-EXT MAIN BOARD INFO	SAMSUNG ELECTRONICS PART NO. BA41-01423A
CHECK	SIMMAN WU	DEV. STEP	MP		
APPROVAL	BC LEE	REV	rev. 1.1		
MODULE CODE	undefined	LAST EDIT	December 25, 2010 10:42:33 AM		
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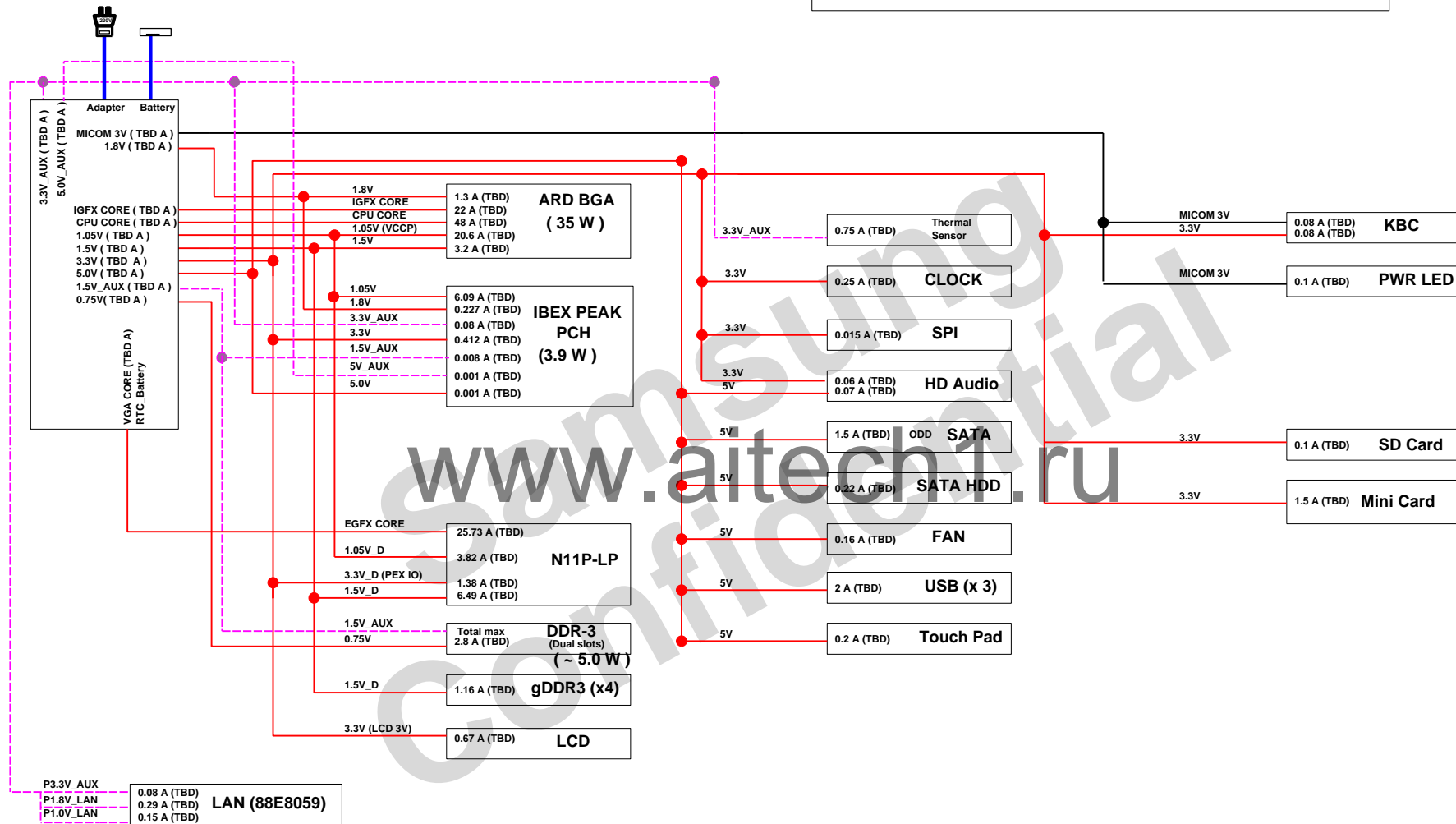
POWER DIAGRAM



DRAW	QZ DAI	DATE	5/10/2010	TITLE	SCALA2-EXT MAIN POWER DIAGRAM	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE	undefined	LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	4	OF 52

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POWER RAILS ANALYSIS



DRAW	QZ DAI	DATE	5/10/2010	TITLE	SCALA2-EXT MAIN POWER RAILS	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
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POWER SEQUENCE Rev. 1.0

2) VDC → ISL6255 CHARGER

3-1) ADT3_SEL# → KBC

4) POWER_SW# → KBC

5) KBC3_SUSPWR → TPS51125

3) P3.3V_MICOM → KBC

6) P5.0V_ALW → TPS51125

6) P5.0V_AUX → TPS51125

6) P3.3V_AUX → TPS51125

6) P1.5V_AUX → RT8207 MEM POWER

13) P1.5V → SWITCHED POWER

13) P3.3V → SWITCHED POWER

13) P5.0V → SWITCHED POWER

13) P1.8V → APL5930 P1.8V

13) P0.75V → RT8207 P0.75V

13) P1.05V → TPS51117 CHIPSET POWER

17) VTT3_PWRGD → PCH

12) KBC3_PWRON → SWITCHED POWER

12) KBC3_PWRON → APL5930 P1.8V

12) KBC3_PWRON → RT8207 P0.75V

12) KBC3_PWRON → TPS51117 CHIPSET POWER

12-1) CHP3_PEG_PWREN# → ISL958708 EGFX_CORE

12-2) EGFX_CORE_PWREN → ISL958708 EGFX_CORE

13) EGFX_CORE → ISL958708 EGFX_CORE

14) VRM3_EGFX_PWRGD → ISL958708 EGFX_CORE

15) GFX_VR_EN → ADP3211 IGFX_CORE

16) IGFX_CORE → ADP3211 IGFX_CORE

6) P3.3V_AUX → 88E8059 LAN MARVELL

6-1) P1.8V_LAN → 88E8059 LAN MARVELL

19-1) VRM3_CLKPWRGD#_INV → CK505 SHRINK

19) VRM3_CPU_PWRGD → KBC

18) KBC3_VRON → KBC

19) KBC3_PWRGD → PCH

19-1) ROMSHIP → SPI ROM

23) BIOS ACCESS → SPI ROM

3-2) MICOM CODE ACCESS → SPI ROM

20) CHP1_DRAM_PWRGD → SM_DRAMPWROK

21) CHP1_CPU_PWRGD → VCCPWRGD1

22) PLT3_RST# → PLT_RST#

22) PLT3_RST# → VTT_PWRGD

3.3V TO 1.1V VOLTAGE DIVIDER → VTT_PWRGD

3.3V TO 1.1V VOLTAGE DIVIDER → VTT_PWRGD

1) RTC → PCH

11) CHP3_SLP3# → PCH

10) CHP3_SLP4# → PCH

9) CHP3_SLP5# → PCH

8) KBC3_PWRBTN# → PCH

7) KBC3_RSMRST# → PCH

6) PCH_PWRGD → PCH

5) PCH_PWRGD → PCH

4) PCH_PWRGD → PCH

3) PCH_PWRGD → PCH

2) PCH_PWRGD → PCH

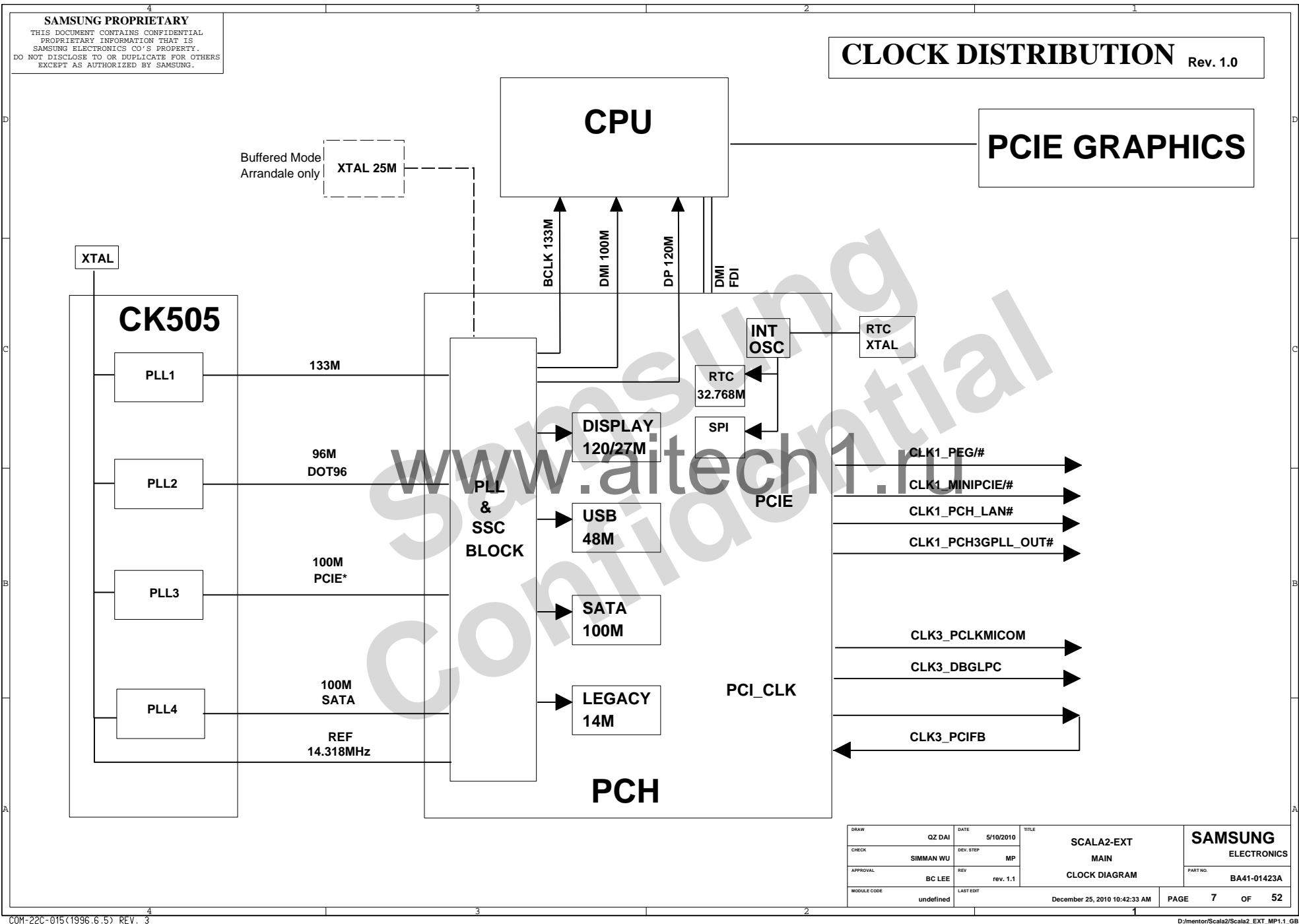
1) PCH_PWRGD → PCH

0) PCH_PWRGD → PCH

COM-22C-015(1996.6.5) REV. 3

0:../nent/or/Scala2/Scala2_EXT_MP1.1.1

DRAW	QZ DAI	DATE	5/10/2010	TITLE	SCALA2-EXT MAIN POWER SEQUENCE	SAMSUNG ELECTRONICS PART NO. BA41-01423A
CHECK	SIMMAN WU	DEV. STEP	MP			
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE	undefined	LAST EXT				
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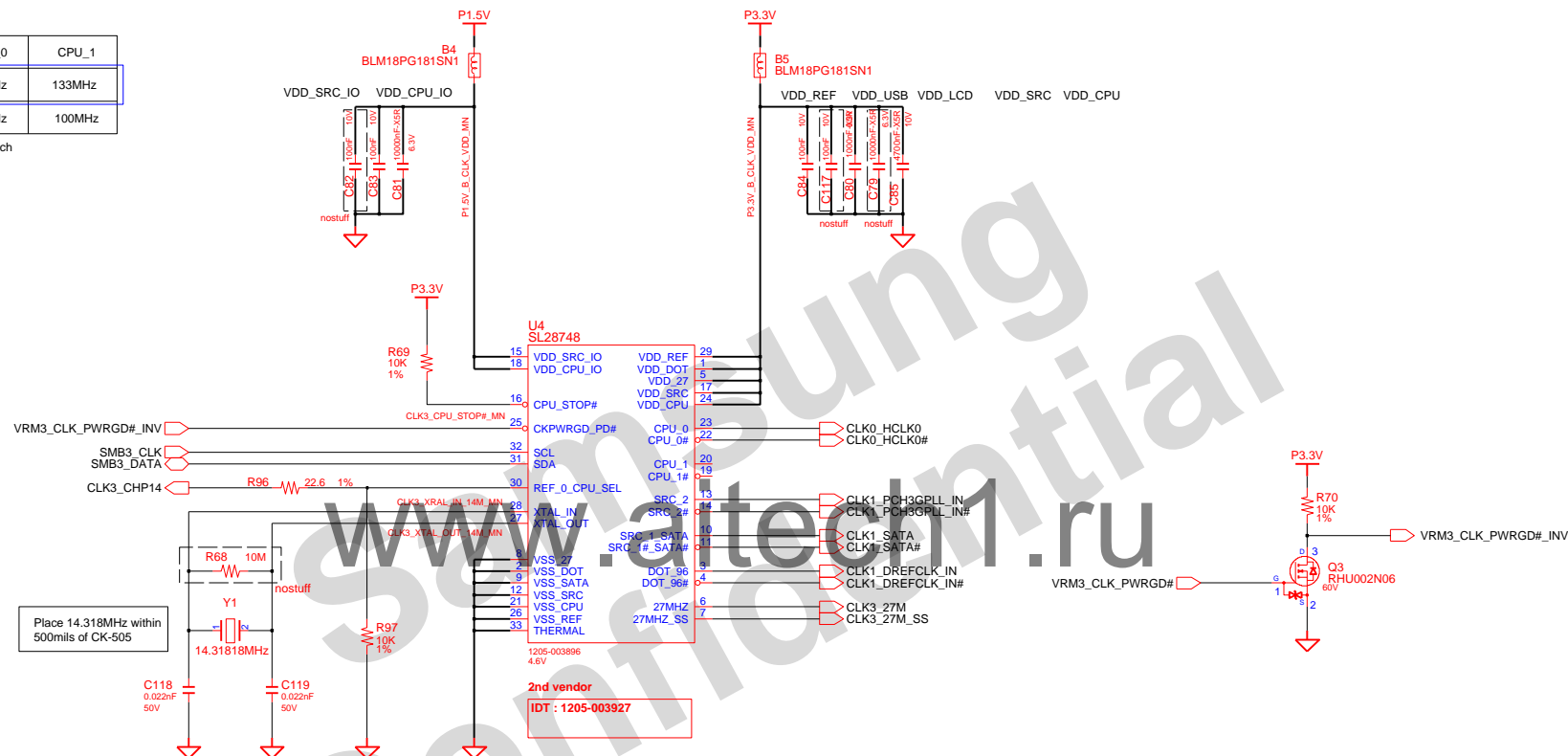


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CPU_MODE_SEL

Pin 30	CPU_0	CPU_1
CPU_SEL = 0	133MHz	133MHz
CPU_SEL = 1	100MHz	100MHz

*CPU SEL During CK PWRGD Latch



DESIGN	QZ DAI	DATE	8/19/2010	TITLE		SCALA2-EXT CLOCK CK505-SHRINK		SAMSUNG ELECTRONICS	
CHECK	SIMMAN WU	DEV. STEP	MP						
APPROVAL	BC LEE	REV	rev. 1.1	CK505-SHRINK		PART NO.		BA41-01423A	
MODULE CODE		LAST EDIT				December 25, 2010 10:42:33 AM		PAGE	8

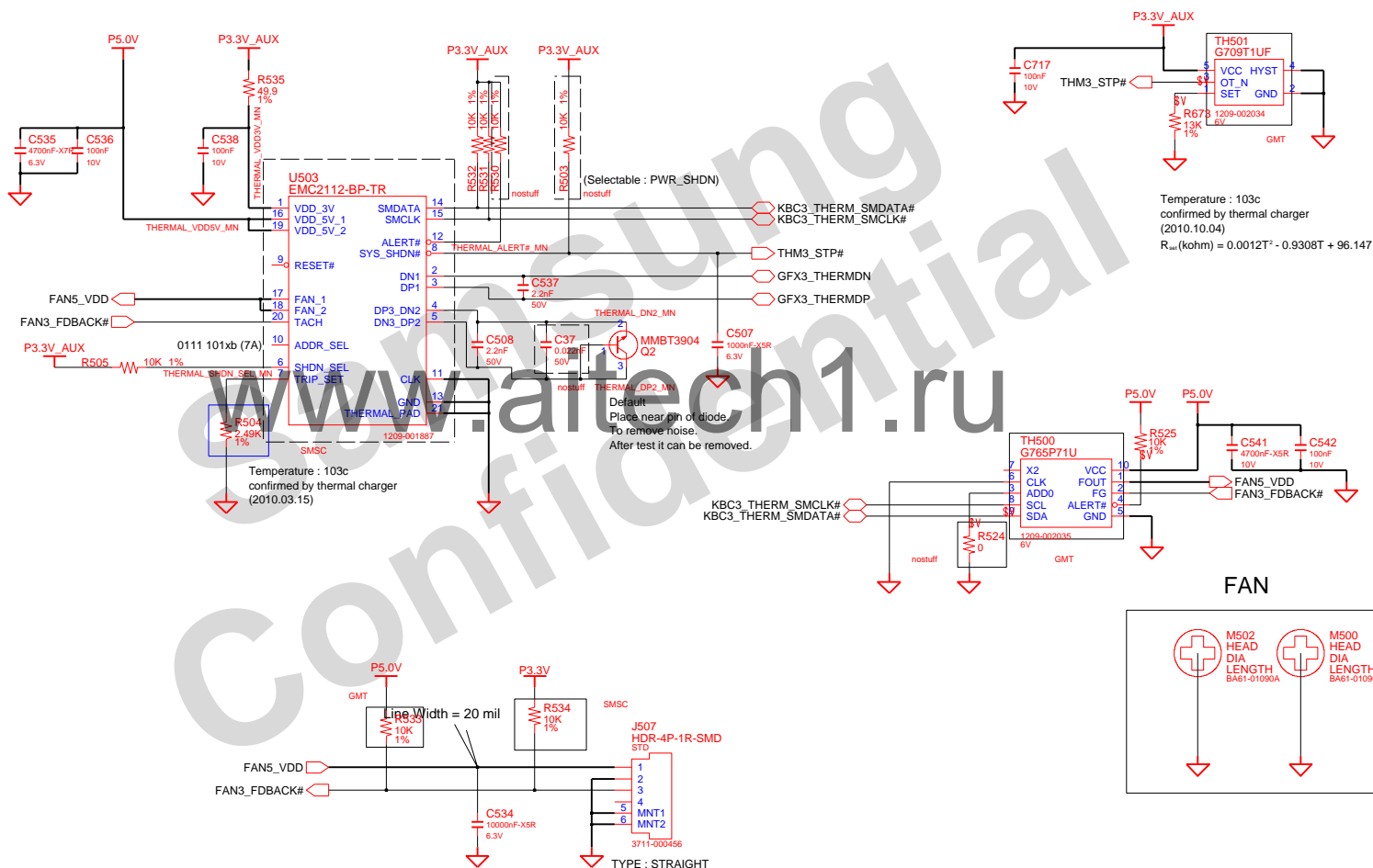
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THERMAL SENSOR & FAN CONTROL

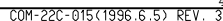
ADDRESSSEL MODE	
0	0101 111xb
✓ HIGH Z	0111 101xb (7A)
1	0101 110xb

SHDN_SEL MODE	
0	INTEL TR MODE
HIGH Z	AMD CPU/DIODE MODE
✓ 1	EXT.DIODE 2 MODE

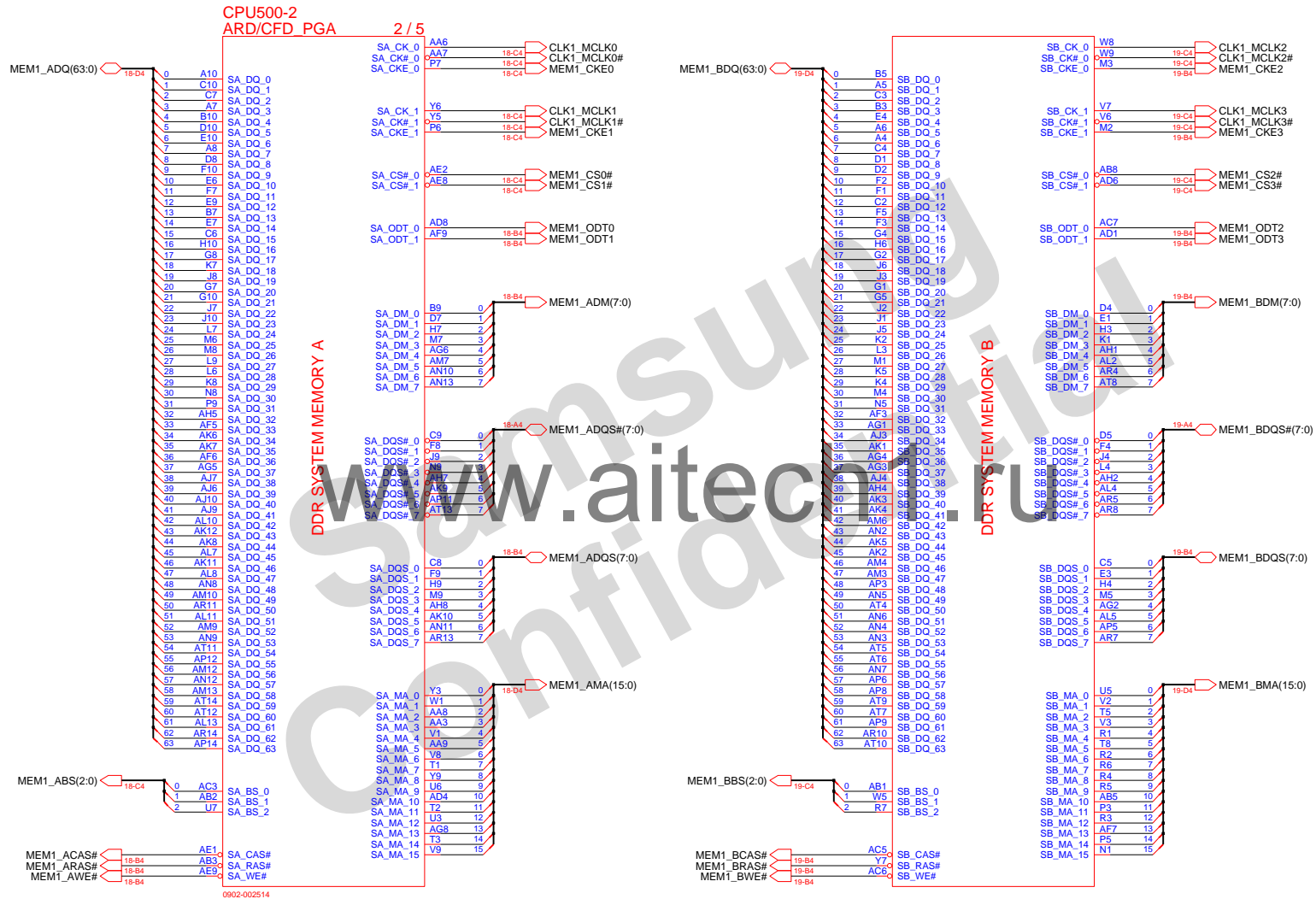


DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		THERMAL SENSOR	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		THERMAL SENSOR EMC2112	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
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ARRANDALE PROCESSOR (DMI,PEG, FDI)



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DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		CPU	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		BGA CPU (2/5)	PART NO.
MODULE CODE	undefined	LAST EDIT	December 25, 2010 10:42:33 AM			BA41-01423A
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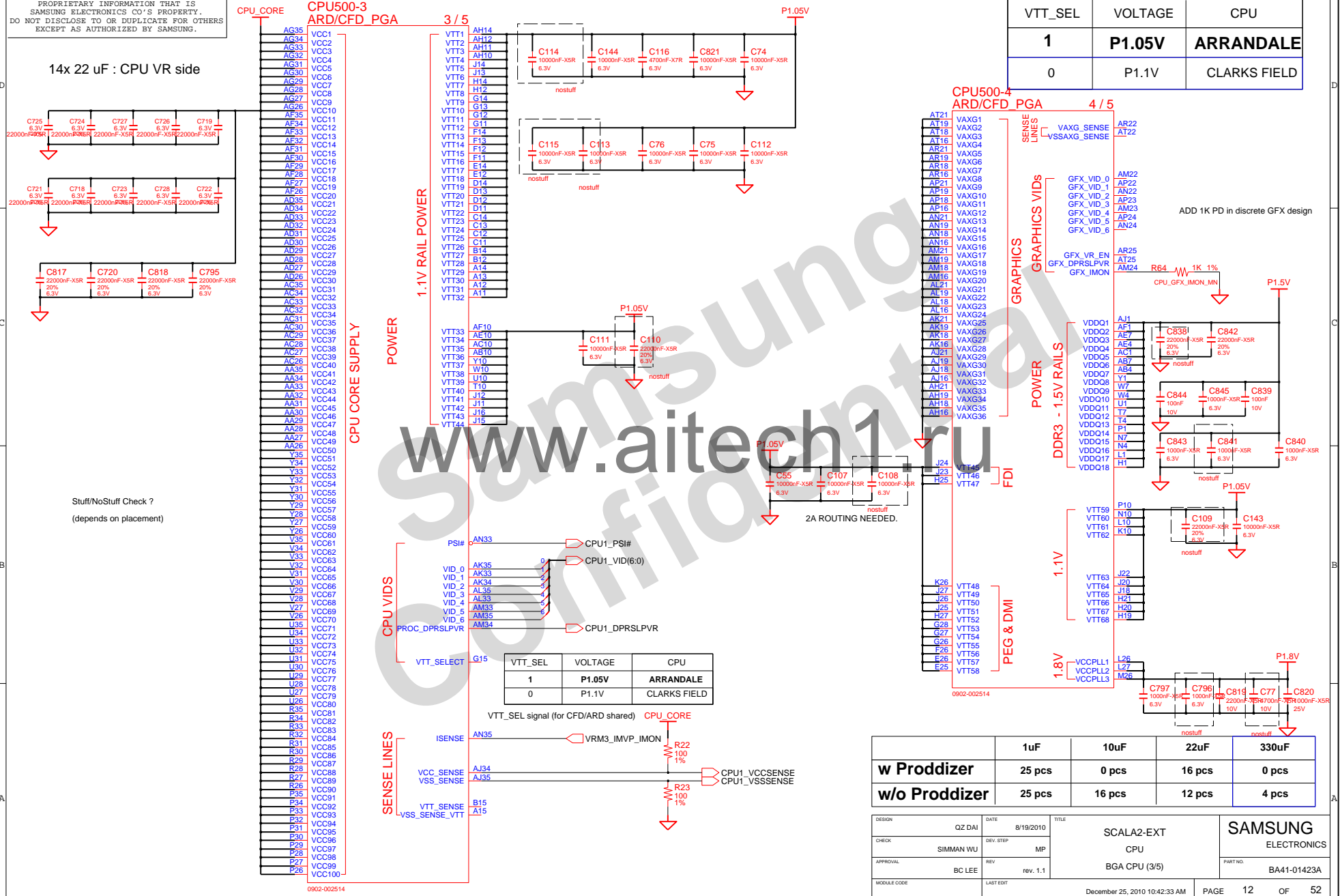
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14x 22 uF : CPU VR side

ALL VTT DECAP IS SHARED

**VTT POWER SELECTION

VTT_SEL	VOLTAGE	CPU
1	P1.05V	ARRANDALE
0	P1.1V	CLARKS FIELD



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CPU500-5
ARD/CFD_PG5/5

AT20	VSS1	VSS81	AE34
AT17	VSS2	VSS82	AE33
AR31	VSS3	VSS83	AE32
AR28	VSS4	VSS84	AE31
AR26	VSS5	VSS85	AE30
AR24	VSS6	VSS86	AE29
AR23	VSS7	VSS87	AE28
AR20	VSS8	VSS88	AE27
AR17	VSS9	VSS89	AE26
AR15	VSS10	VSS90	AE6
AR12	VSS11	VSS91	AD10
AR9	VSS12	VSS92	AC3
AR6	VSS13	VSS93	AC2
AR3	VSS14	VSS94	AC1
AP20	VSS15	VSS95	AB35
AP17	VSS16	VSS96	AB34
AP13	VSS17	VSS97	AB33
AP10	VSS18	VSS98	AB32
AP7	VSS19	VSS99	AB31
AP4	VSS20	VSS100	AB30
AP2	VSS21	VSS101	AB29
AN34	VSS22	VSS102	AB28
AN31	VSS23	VSS103	AB27
AN23	VSS24	VSS104	AB26
AN20	VSS25	VSS105	AB25
AN17	VSS26	VSS106	AB24
AM29	VSS27	VSS107	AB23
AM27	VSS28	VSS108	AB22
AM25	VSS29	VSS109	AB21
AM20	VSS30	VSS110	AB20
AM17	VSS31	VSS111	AB19
AM14	VSS32	VSS112	AB18
AM11	VSS33	VSS113	AB17
AM8	VSS34	VSS114	AB16
AM5	VSS35	VSS115	AB15
AM2	VSS36	VSS116	AB14
AL34	VSS37	VSS117	AB13
AL31	VSS38	VSS118	AB12
AL23	VSS39	VSS119	AB11
AL20	VSS40	VSS120	AB10
AL17	VSS41	VSS121	AB9
AL12	VSS42	VSS122	AB8
AL9	VSS43	VSS123	AB7
AL6	VSS44	VSS124	AB6
AK29	VSS45	VSS125	AB5
AK27	VSS46	VSS126	AB4
AK25	VSS47	VSS127	AB3
AK20	VSS48	VSS128	AB2
AK17	VSS49	VSS129	AB1
AK13	VSS50	VSS130	AB0
AK10	VSS51	VSS131	AB0
AK7	VSS52	VSS132	AB0
AK4	VSS53	VSS133	AB0
AK1	VSS54	VSS134	AB0
AK0	VSS55	VSS135	AB0
AK0	VSS56	VSS136	AB0
AK0	VSS57	VSS137	AB0
AK0	VSS58	VSS138	AB0
AK0	VSS59	VSS139	AB0
AK0	VSS60	VSS140	AB0
AK0	VSS61	VSS141	AB0
AK0	VSS62	VSS142	AB0
AK0	VSS63	VSS143	AB0
AK0	VSS64	VSS144	AB0
AK0	VSS65	VSS145	AB0
AK0	VSS66	VSS146	AB0
AK0	VSS67	VSS147	AB0
AK0	VSS68	VSS148	AB0
AK0	VSS69	VSS149	AB0
AK0	VSS70	VSS150	AB0
AK0	VSS71	VSS151	AB0
AK0	VSS72	VSS152	AB0
AK0	VSS73	VSS153	AB0
AK0	VSS74	VSS154	AB0
AK0	VSS75	VSS155	AB0
AK0	VSS76	VSS156	AB0
AK0	VSS77	VSS157	AB0
AK0	VSS78	VSS158	AB0
AK0	VSS79	VSS159	AB0
AK0	VSS80	VSS160	AB0

K27	VSS161	AE34
K9	VSS162	AE33
K6	VSS163	AE32
K3	VSS164	AE31
J32	VSS165	AE30
J30	VSS166	AE29
J21	VSS167	AE28
J19	VSS168	AE27
H35	VSS169	AE26
H32	VSS170	AE6
H28	VSS171	AD10
H26	VSS172	AC3
H24	VSS173	AC2
H22	VSS174	AC1
H18	VSS175	AB35
H15	VSS176	AB34
H13	VSS177	AB33
H11	VSS178	AB32
H8	VSS179	AB31
H5	VSS180	AB30
H2	VSS181	AB29
G34	VSS182	AB28
G31	VSS183	AB27
G20	VSS184	AB26
G9	VSS185	AB25
G6	VSS186	AB24
G3	VSS187	AB23
F30	VSS188	AB22
F27	VSS189	AB21
F25	VSS190	AB20
F22	VSS191	AB19
F19	VSS192	AB18
F16	VSS193	AB17
E35	VSS194	AB16
E32	VSS195	AB15
E29	VSS196	AB14
E24	VSS197	AB13
E21	VSS198	AB12
E18	VSS199	AB11
E13	VSS200	AB10
E11	VSS201	AB9
E8	VSS202	AB8
E5	VSS203	AB7
E2	VSS204	AB6
D33	VSS205	AB5
D30	VSS206	AB4
D26	VSS207	AB3
D9	VSS208	AB2
D6	VSS209	AB1
D3	VSS210	AB0
C34	VSS211	AB0
C32	VSS212	AB0
C29	VSS213	AB0
C28	VSS214	AB0
C24	VSS215	AB0
C22	VSS216	AB0
C20	VSS217	AB0
C19	VSS218	AB0
C16	VSS219	AB0
B31	VSS220	AB0
B25	VSS221	AB0
B21	VSS222	AB0
B18	VSS223	AB0
B17	VSS224	AB0
B13	VSS225	AB0
B11	VSS226	AB0
B8	VSS227	AB0
B6	VSS228	AB0
B4	VSS229	AB0
A29	VSS230	AB0
A27	VSS231	AB0
A23	VSS232	AB0
A9	VSS233	AB0

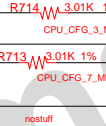
NCTF
AT35
AT1
AR34
B34
B2
B1
A35
VSS_NCTF1
VSS_NCTF2
VSS_NCTF3
VSS_NCTF4
VSS_NCTF5
VSS_NCTF6
VSS_NCTF7

VSS

AP25	RSVD1	RSVD32	AJ13
AL25	RSVD2	RSVD33	AJ12
AL24	RSVD3	RSVD34	AH25
AL22	RSVD4	RSVD35	AK26
AJ33	RSVD5	RSVD36	AL26
AG9	RSVD6	RSVD_NCTF_37	AR2
M27	RSVD7	RSVD38	AJ26
L28	RSVD8	RSVD39	AJ27
H17	SA_DIMM_VREFDQ		
H17	SB_DIMM_VREFDQ		
G25	RSVD11		
G17	RSVD12	RSVD_NCTF_40	AP1
E31	RSVD13	RSVD_NCTF_41	AT2
E30	RSVD14	RSVD_NCTF_42	AT3
		RSVD_NCTF_43	AR1
AM30	CFG_0	RSVD45	AL28
AM28	CFG_1	RSVD46	AL29
AP31	CFG_2	RSVD47	AP30
AL32	CFG_3	RSVD48	AP32
AL30	CFG_4	RSVD49	AL27
AM31	CFG_5	RSVD50	AT31
AM29	CFG_6	RSVD51	AP33
AM32	CFG_7	RSVD52	AR33
AK32	CFG_8	RSVD53	AT33
AK31	CFG_9	RSVD_NCTF_54	AT34
AK28	CFG_10	RSVD_NCTF_55	AR35
AJ28	CFG_11	RSVD_NCTF_56	AR32
AN30	CFG_12	RSVD_NCTF_57	
AN32	CFG_13	RSVD58	
AJ25	CFG_14		E15
AK30	CFG_15	RSVD_TP_59	E15
AK30	CFG_16	RSVD_TP_60	AE15
H16	CFG_17	RSVD_TP_61	AE15
	RSVD_TP_62	RSVD32	AE15
		RSVD33	AE15
		RSVD34	AE15
		RSVD35	AE15
		RSVD36	AE15
B19	RSVD15		
A19	RSVD16		
A20	RSVD17		
B20	RSVD18		
U9	RSVD19	RSVD_TP_66	AA5
T9	RSVD20	RSVD_TP_67	AA4
AC9	RSVD21	RSVD_TP_68	R8
AB9	RSVD22	RSVD_TP_69	AD3
		RSVD_TP_70	AD2
		RSVD_TP_71	AA2
		RSVD_TP_72	AA1
		RSVD_TP_73	R9
		RSVD_TP_74	AG7
		RSVD_TP_75	AE3
C1	RSVD_NCTF_23		
A3	RSVD_NCTF_24		
		RSVD_TP_76	V4
		RSVD_TP_77	V5
		RSVD_TP_78	N2
		RSVD_TP_79	AD5
J29	RSVD26	RSVD_TP_80	AD7
J28	RSVD27	RSVD_TP_81	W3
A34	RSVD_NCTF_28	RSVD_TP_82	W2
A33	RSVD_NCTF_29	RSVD_TP_83	N3
C35	RSVD_NCTF_30	RSVD_TP_84	AE5
B35	RSVD_NCTF_31	RSVD_TP_85	AD9

(VSS) RSVD86

RESERVED



CFG Straps for Processor

PCI Express Configuration Select	
CFG0	1: Single PEG 0: Bifunction enabled

PCI Express Static Lane Reversal	
CFG3	1: Normal operation 0: Lane Reversed

Display Port Presence	
CFG4	1: Disabled - No DP device is connected to eDP 0: Enabled - (DP device is connected to eDP

PCIe 2.0 SUPPORT	
CFG7	1: Normal operation 0: PCIe2.0 Jitter support

CRB is NC
EDS/DG is GND recommend

DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		CPU	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		BGA CPU (4/5)	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
				December 25, 2010 10:42:33 AM	PAGE	13 OF 52

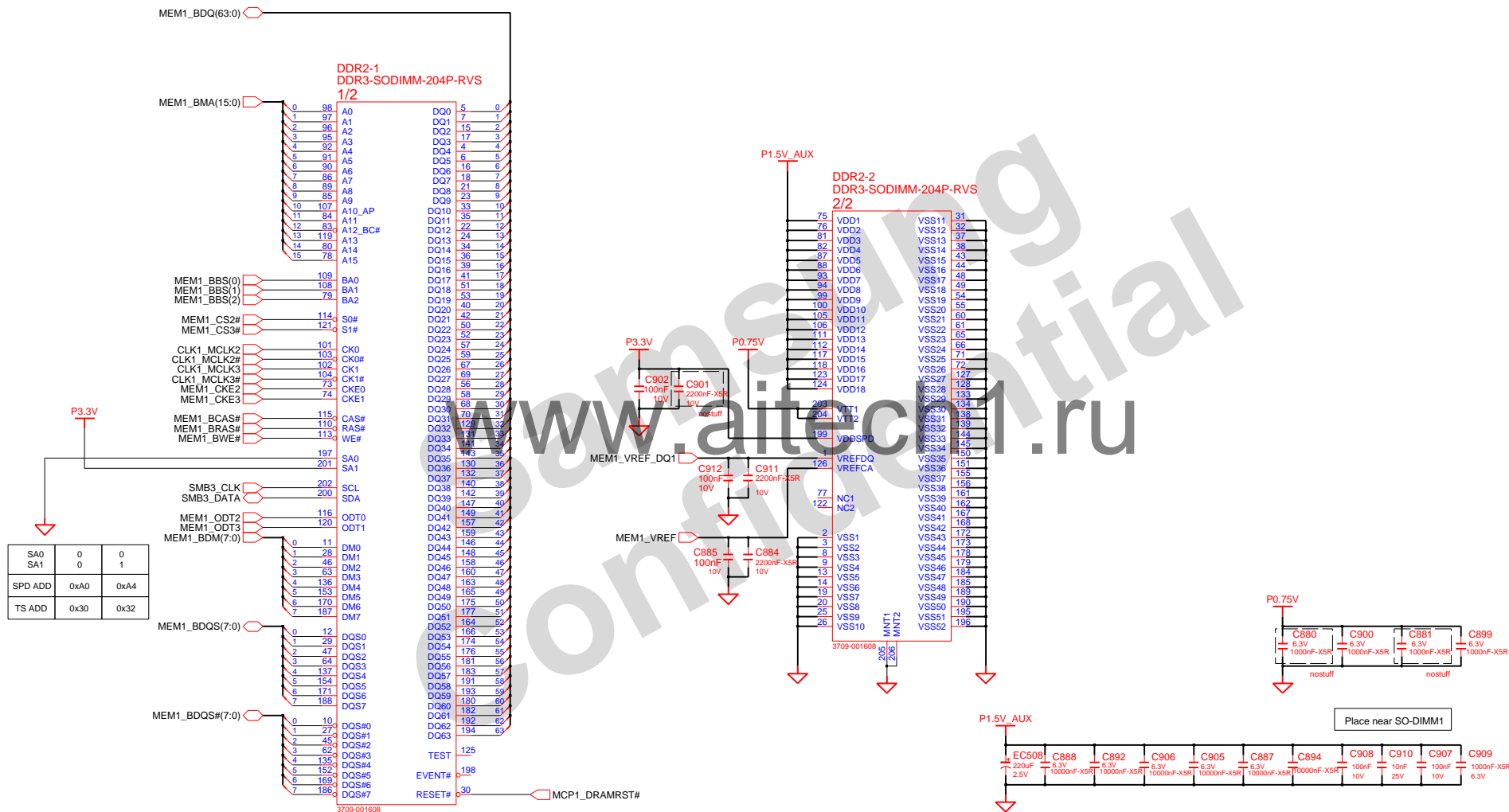
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DDR SO-DIMM #1

Height : 4 mm (STANDARD)

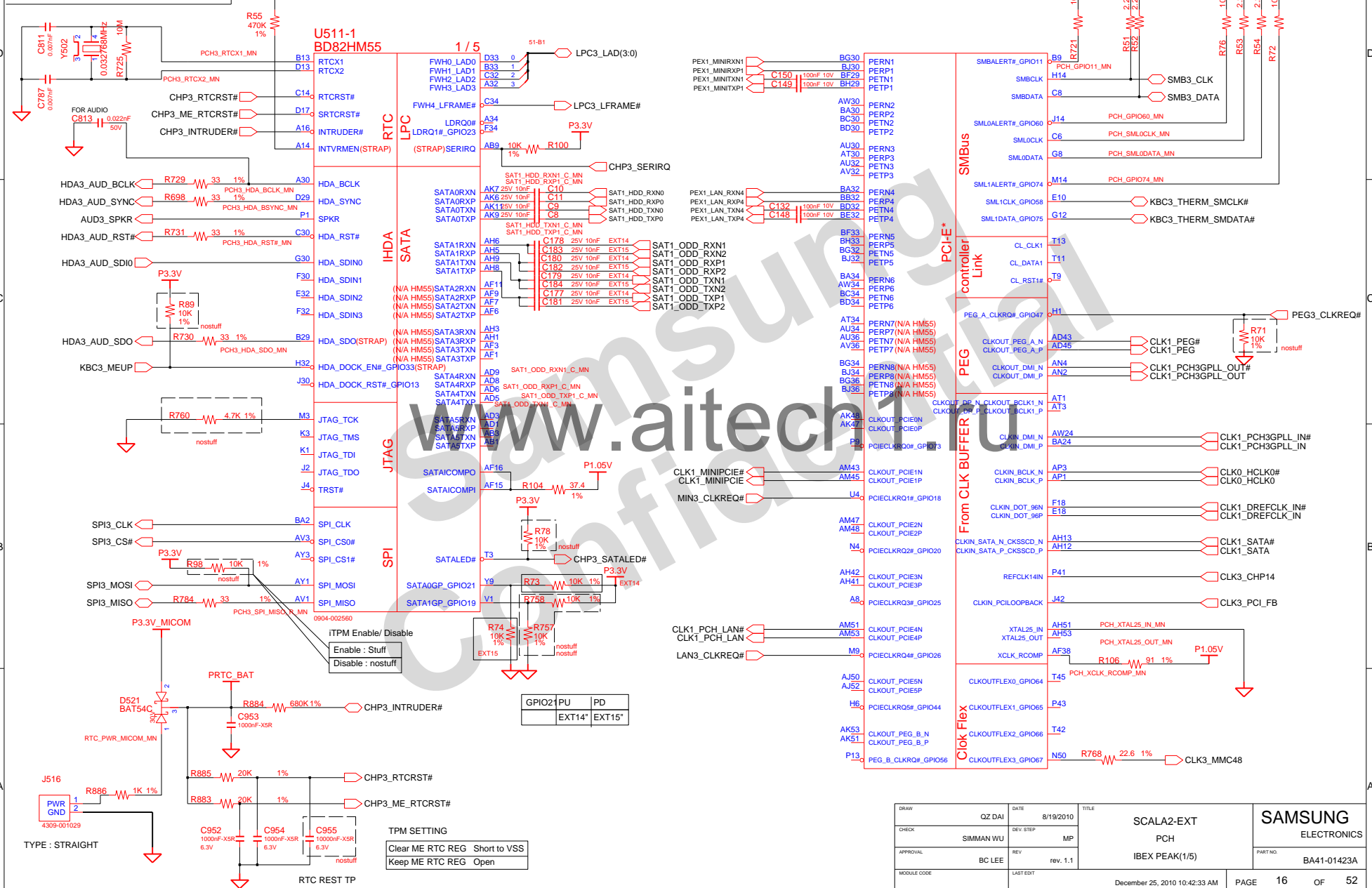
P/N : 3709-001560 (FOXCONN)

P/N : 3709-001607 (CONCRAFT)



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		SODIMM A	ELECTRONICS
APPROVAL	BC LEE	REV	REV. 1.1		DDR3	PART NO.
MODULE CODE		LAST ENT				BA41-01423A
December 25, 2010 10:42:33 AM						PAGE 14 OF 52

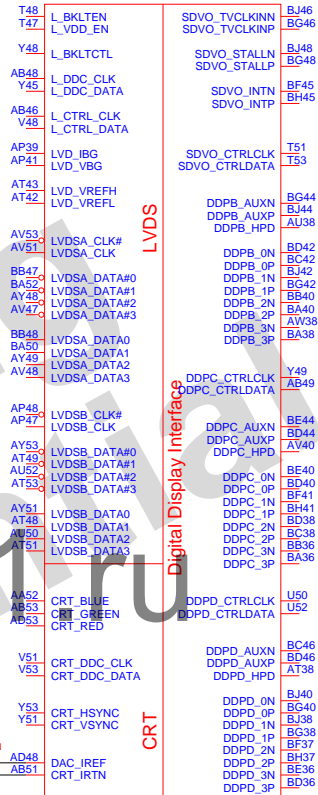
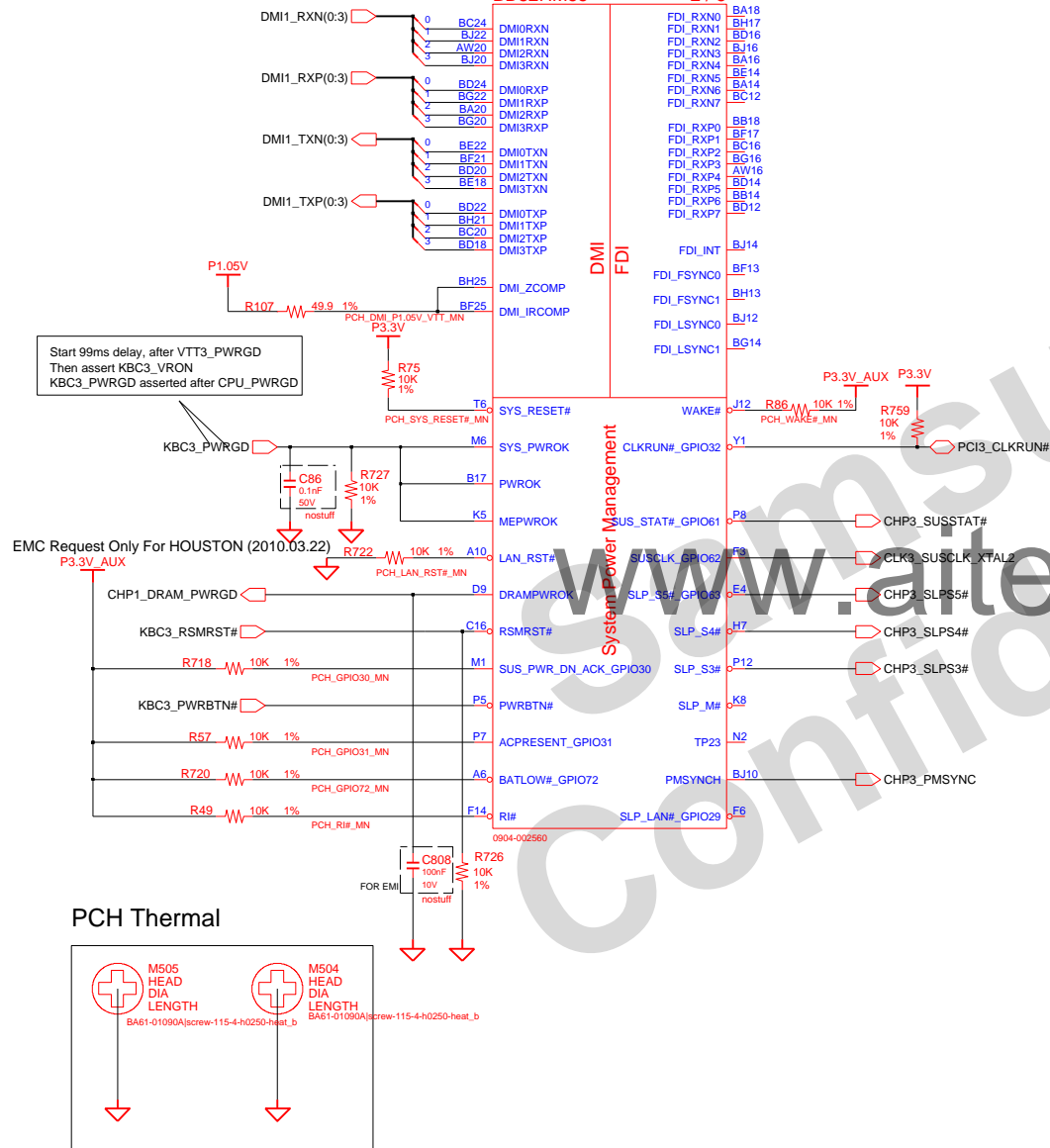
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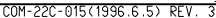
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U511-2
BD82HM55

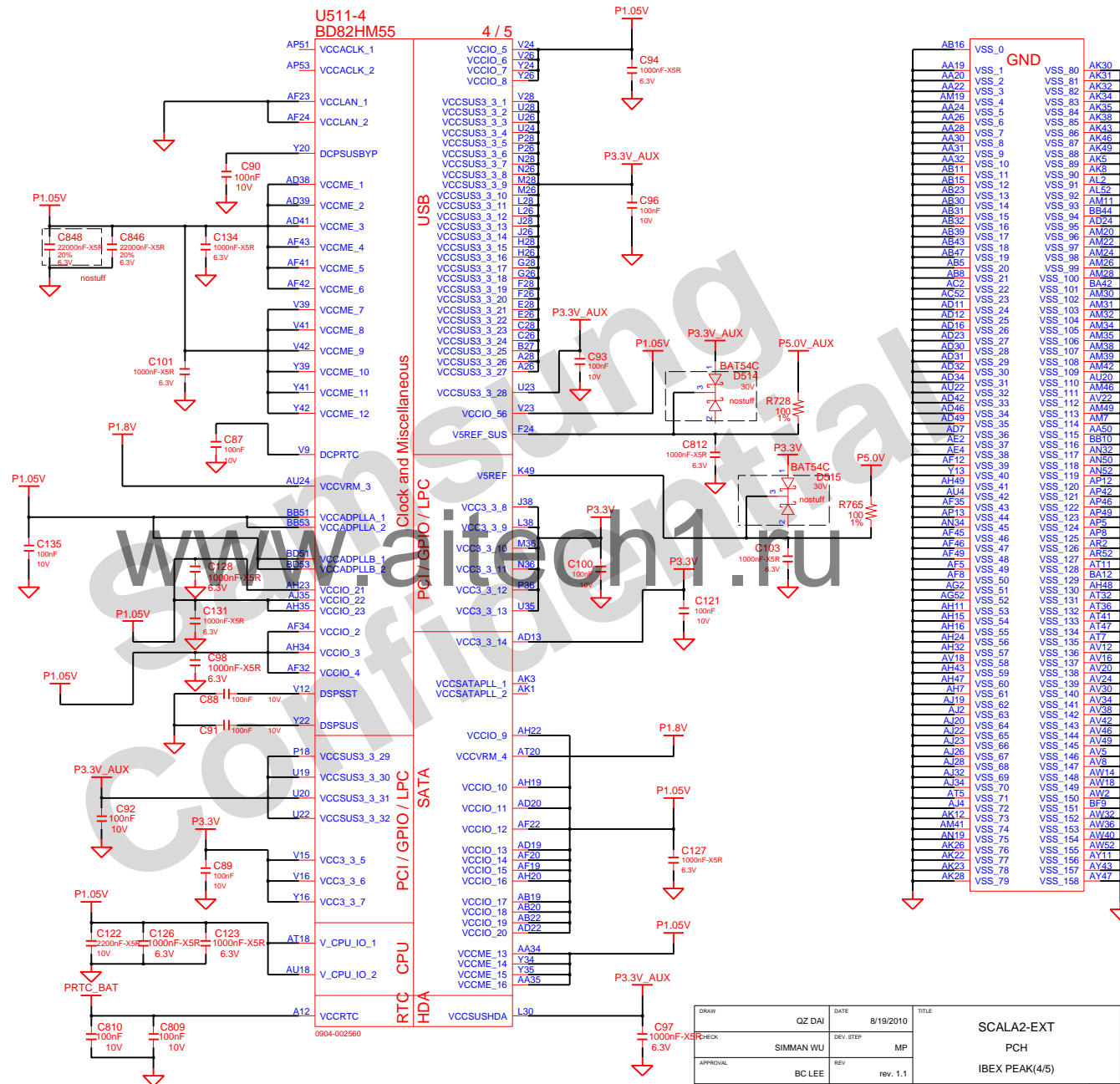
2 / 5



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		PCH	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		IBEX PEAK(2/5)	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
				December 25, 2010 10:42:33 AM	PAGE	17 OF 52



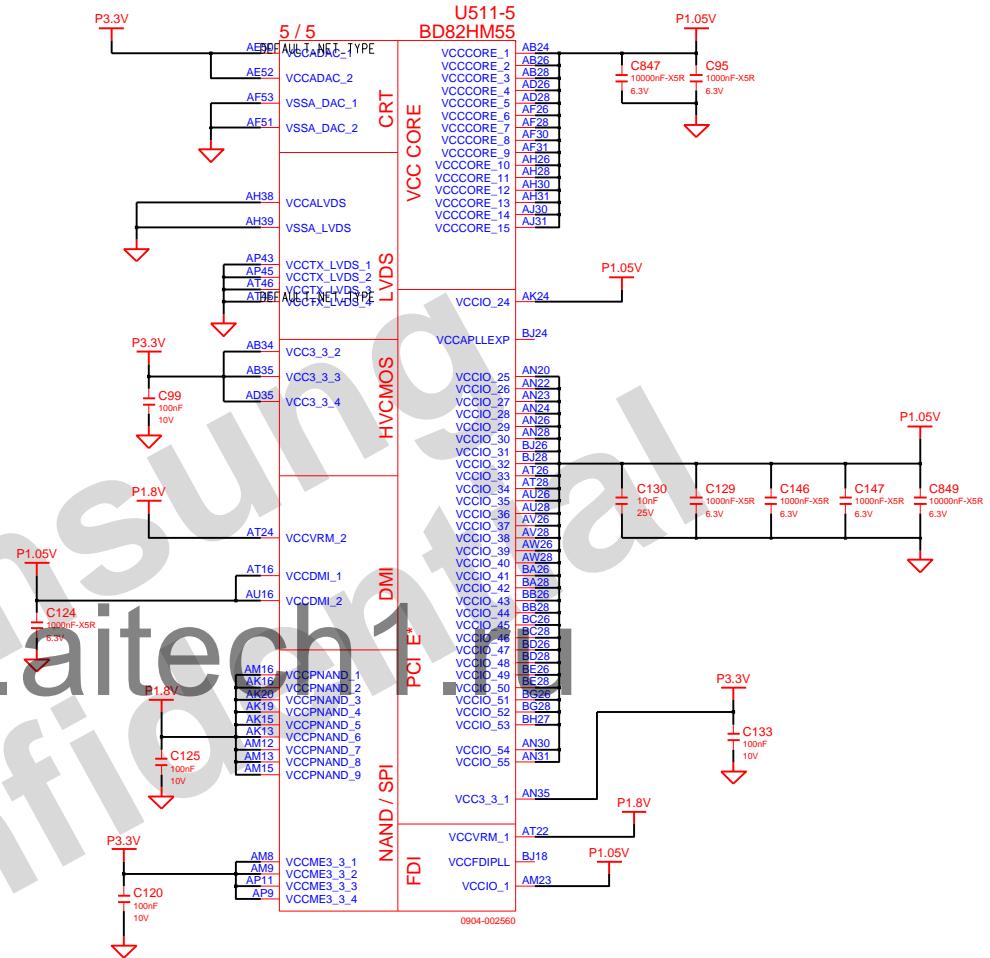
VTT_SEL	VOLTAGE	CPU
1	P1.05V	ARRANDALE
0	P1.1V	CLARKS FIELD



DRAW	QZ DAI	DATE	8/19/2010	TITLE SCALA2-EXT PCH IBEX PEAK(4/5)	SAMSUNG ELECTRONICS	
CHECK	SIMMAN WU	DEV. STEP	MP			
APPROVAL	BC LEE	REV	REV. 1.1			
MODULE CODE						PART NO.
52	LAST EDIT				December 25, 2010 10:42:33 AM	19 OF 60

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H49	VSS_255	VSS_159	AV7
H5	VSS_261	VSS_160	B11
J24	VSS_261	VSS_161	B15
K11	VSS_262	VSS_162	B19
K43	VSS_263	VSS_163	B23
K47	VSS_263	VSS_163	B31
K7	VSS_264	VSS_164	B35
L14	VSS_265	VSS_165	B39
L18	VSS_266	VSS_166	B43
L2	VSS_267	VSS_167	B47
L22	VSS_268	VSS_168	B51
L32	VSS_269	VSS_169	B55
L36	VSS_270	VSS_170	B59
L40	VSS_271	VSS_171	B63
L52	VSS_272	VSS_172	B67
M12	VSS_273	VSS_173	B71
M16	VSS_274	VSS_174	B75
M20	VSS_275	VSS_175	B79
N38	VSS_276	VSS_176	B83
M34	VSS_277	VSS_177	B87
M38	VSS_278	VSS_178	B91
M42	VSS_279	VSS_179	B95
M46	VSS_280	VSS_180	BC10
M49	VSS_281	VSS_181	BC14
M5	VSS_282	VSS_182	BC18
M8	VSS_283	VSS_183	BC22
N24	VSS_284	VSS_184	BC26
P11	VSS_285	VSS_185	BC30
AD15	VSS_286	VSS_186	BC34
P22	VSS_287	VSS_187	BC38
P30	VSS_288	VSS_188	BC42
P32	VSS_289	VSS_189	BC46
P34	VSS_290	VSS_190	BC50
P42	VSS_291	VSS_191	BC54
P45	VSS_292	VSS_192	BC58
P47	VSS_293	VSS_193	BC62
K2	VSS_294	VSS_194	BC66
R52	VSS_295	VSS_195	BC70
T12	VSS_296	VSS_196	BC74
T41	VSS_297	VSS_197	BC78
T46	VSS_298	VSS_198	BC82
T49	VSS_299	VSS_199	BC86
T5	VSS_300	VSS_200	BC90
T8	VSS_301	VSS_201	BC94
U30	VSS_302	VSS_202	BC98
U31	VSS_303	VSS_203	BC102
U32	VSS_304	VSS_204	BC106
U34	VSS_305	VSS_205	BC110
P38	VSS_306	VSS_206	BC114
P39	VSS_307	VSS_207	BC118
P16	VSS_308	VSS_208	BC122
V19	VSS_309	VSS_209	BC126
V20	VSS_310	VSS_210	BC130
V22	VSS_311	VSS_211	BC134
V30	VSS_312	VSS_212	BC138
V31	VSS_313	VSS_213	BC142
V32	VSS_314	VSS_214	BC146
V34	VSS_315	VSS_215	BC150
V35	VSS_316	VSS_216	BC154
V38	VSS_317	VSS_217	BC158
V43	VSS_318	VSS_218	BC162
V45	VSS_319	VSS_219	BC166
V46	VSS_320	VSS_220	BC170
V47	VSS_321	VSS_221	BC174
V49	VSS_322	VSS_222	BC178
V5	VSS_323	VSS_223	BC182
V7	VSS_324	VSS_224	BC186
V8	VSS_325	VSS_225	BC190
V2	VSS_326	VSS_226	BC194
V52	VSS_327	VSS_227	BC198
Y11	VSS_328	VSS_228	BC202
Y12	VSS_329	VSS_229	BC206
Y15	VSS_330	VSS_230	BC210
Y19	VSS_331	VSS_231	BC214
Y23	VSS_332	VSS_232	BC218
Y28	VSS_333	VSS_233	BC222
Y30	VSS_334	VSS_234	BC226
Y30	VSS_335	VSS_235	BC230
Y31	VSS_336	VSS_236	BC234
Y32	VSS_337	VSS_237	BC238
Y38	VSS_338	VSS_238	BC242
Y43	VSS_339	VSS_239	BC246
Y46	VSS_340	VSS_240	BC250
P49	VSS_341	VSS_241	BC254
Y5	VSS_342	VSS_242	BC258
Y6	VSS_343	VSS_243	BC262
Y8	VSS_344	VSS_244	BC266
P24	VSS_345	VSS_245	BC270
T43	VSS_346	VSS_246	BC274
AD51	VSS_347	VSS_247	BC278
AT8	VSS_348	VSS_248	BC282
AD47	VSS_349	VSS_249	BC286
Y47	VSS_350	VSS_250	BC290
AT12	VSS_351	VSS_251	BC294
AM6	VSS_352	VSS_252	BC298
AT13	VSS_353	VSS_253	BC302
AM5	VSS_354	VSS_254	BC306
AK45	VSS_355	VSS_255	BC310
AK39	VSS_356	VSS_256	BC314
AV14	VSS_357	VSS_257	BC318
	VSS_358	VSS_258	BC322

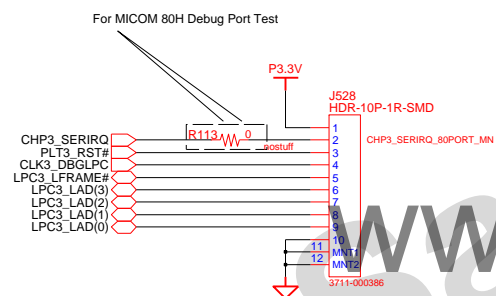


DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		PCH	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		IBEX PEAK(5/5)	PART NO.
MODULE CODE	undefined	LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	20	BA41-01423A
				OF	52	

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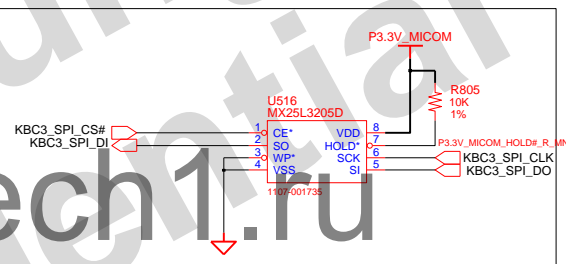
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80H PORT DEBUG

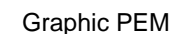



BE CAUTION SPI ROM SIZE!!

SPI_ROM_SOCKET

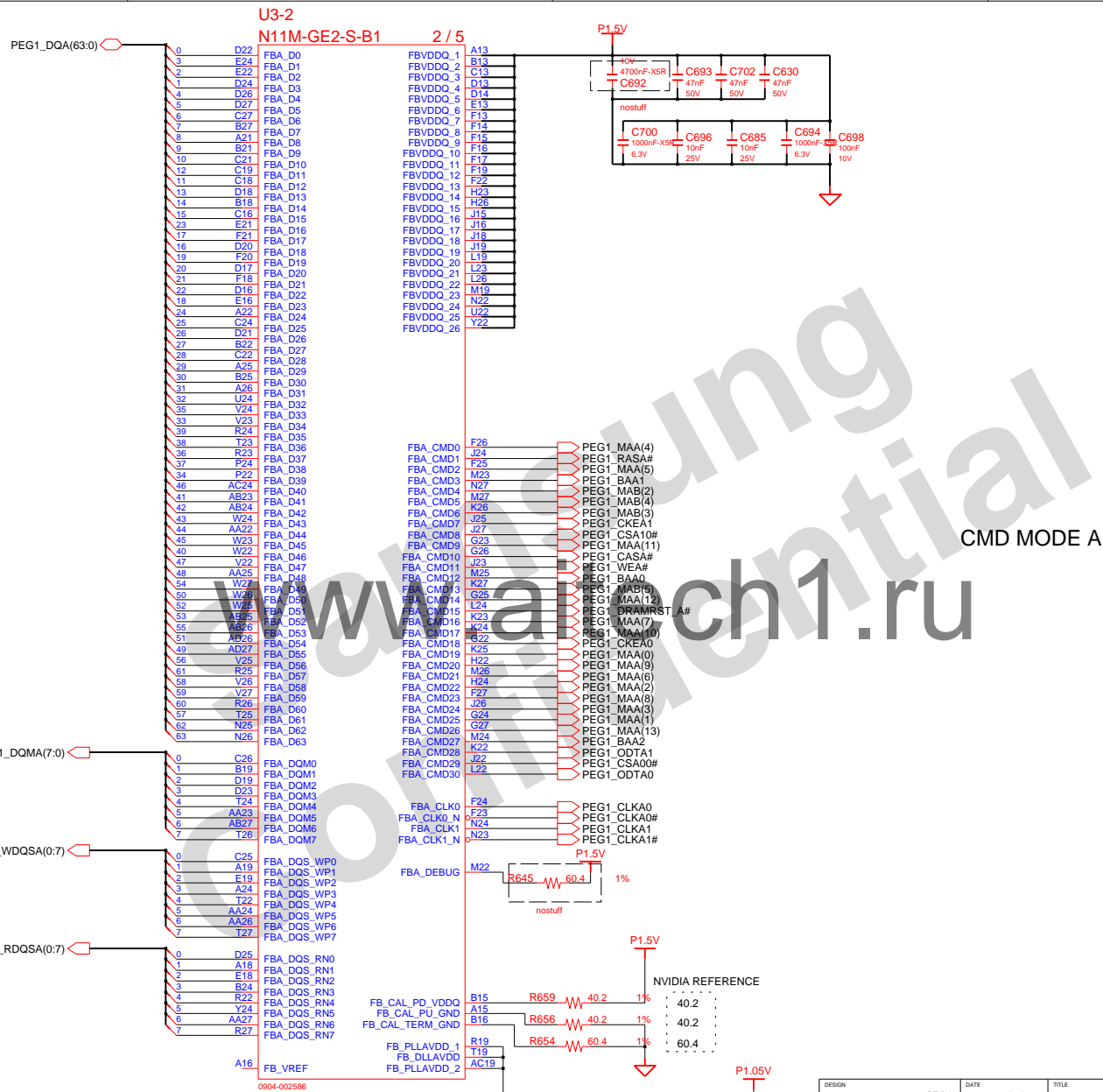


DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT DEBUG PORT 80H DECODER	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	21	OF 52



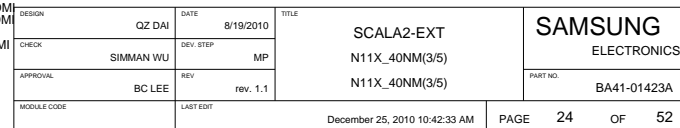
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CHECK	SIMMAN WU	DEV. STEP	MP		N11X_40NM(1/5)		
APPROVAL	BC LEE	REV	rev. 1.1		N11X_40NM(1/5)	PART NO.	BA41-01423A
MODULE CODE	LAST EDIT		December 25, 2010 10:42:33 AM			PAGE	22 OF 52

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DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		N11X_40NM(2/5)	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		N11X_40NM(2/5)	PART NO. BA41-01423A
MODULE CODE		LAST EDIT				
December 25, 2010 10:42:33 AM				PAGE	23	OF 52

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Pin	Description	Activate
GPIO(0)	General Purpose	NC
GPIO(1)	HPD-C	NC
GPIO(2)	LCD0_BL_PWM	High
GPIO(3)	LCD0_VDD	High
GPIO(4)	LCD0_BL_EN	High
GPIO(5)	GPU VID0	00 0.8V 10 0.95V
GPIO(6)	GPU VID1	01 0.85V 11 1.03V
GPIO(7)	GPU VID2	NC
GPIO(8)	OVERT	LOW
GPIO(9)	ALERT	NC
GPIO(10)	MEM_VREF	NC
GPIO(11)	SLI_SYNC	NC
GPIO(12)	PWR_LEVEL	NC
GPIO(13)	MEM_VID	NC
GPIO(14)	PWR_CTRL1	NC
GPIO(15)	HPD-E	High
GPIO(16)	FAN_PWM	NC
GPIO(17)	Reserved	NC
GPIO(18)	Reserved	NC
GPIO(19)	HPD-D	NC

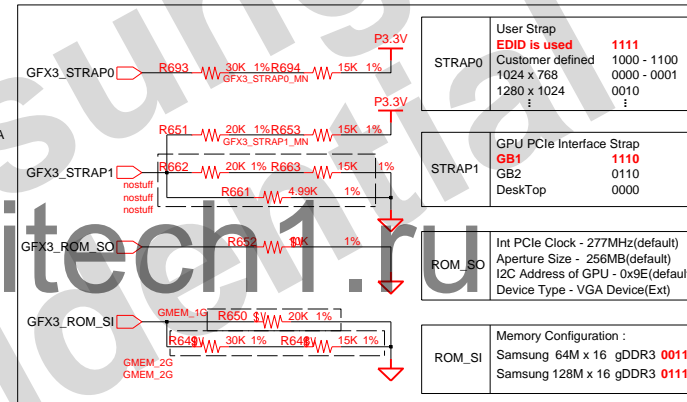
Strap option	Bit 3	Bit 2	Bit 1	Bit 0
ROM_SO	XCLK_417	FB_0_BAR_SIZE	SMB_ALT_ADDR	VGA_DEVICE
ROM_SCLK	DEVID[4]	VENID	CLK_CFG	PLL_TERM
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
STRAP2	DEVID[3]	DEVID[2]	DEVID[1]	DEVID[0]
STRAP1	PADCFG[3]	PADCFG[2]	PADCFG[1]	PADCFG[0]
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
Resistor value	PU to VDD	PD to GND	XCLK417 = 0 27MHz	
5K ohm	1000	0000	RAM CFG (SEC)	
10 Kohm	1001	0001	0011 gDDR3 1Gb	
15K ohm	1010	0010	USER[3:0]=1111 for EDID	
20K ohm	1011	0011	PADCFG[3:0]=0110 for NB	
25K ohm	1100	0100		
30K ohm	1101	0101		
35K ohm	1110	0110		
45K ohm	1111	0111		

	Bit3	Bit2	Bit1	Bit0	
ROMSO	0	0	0	0	27M
SCLK	1	0	1	0	N11M-GE GFX TPYE
	0	0	1	0	N11M-LP1
SI	0	0	1	1	gDDR3 1Gb
SI	0	1	1	1	gDDR3 2Gb
Strap2	0	0	0	0	N11M-GE2
Strap2	0	1	0	1	N11M-GE1 DEVICE ID
Strap1	1	1	1	0	PEG PCIe swing level
Strap0	1	1	1	1	EDID_EN

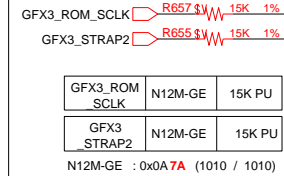
U3-5
N11M-GE2-S-B1

5 / 5

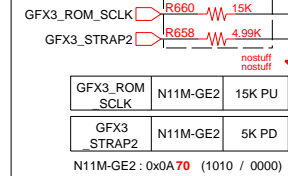
Function Straps



Chip Select Straps (N12M-GB1)



Chip Select Straps (N11M-GB1)

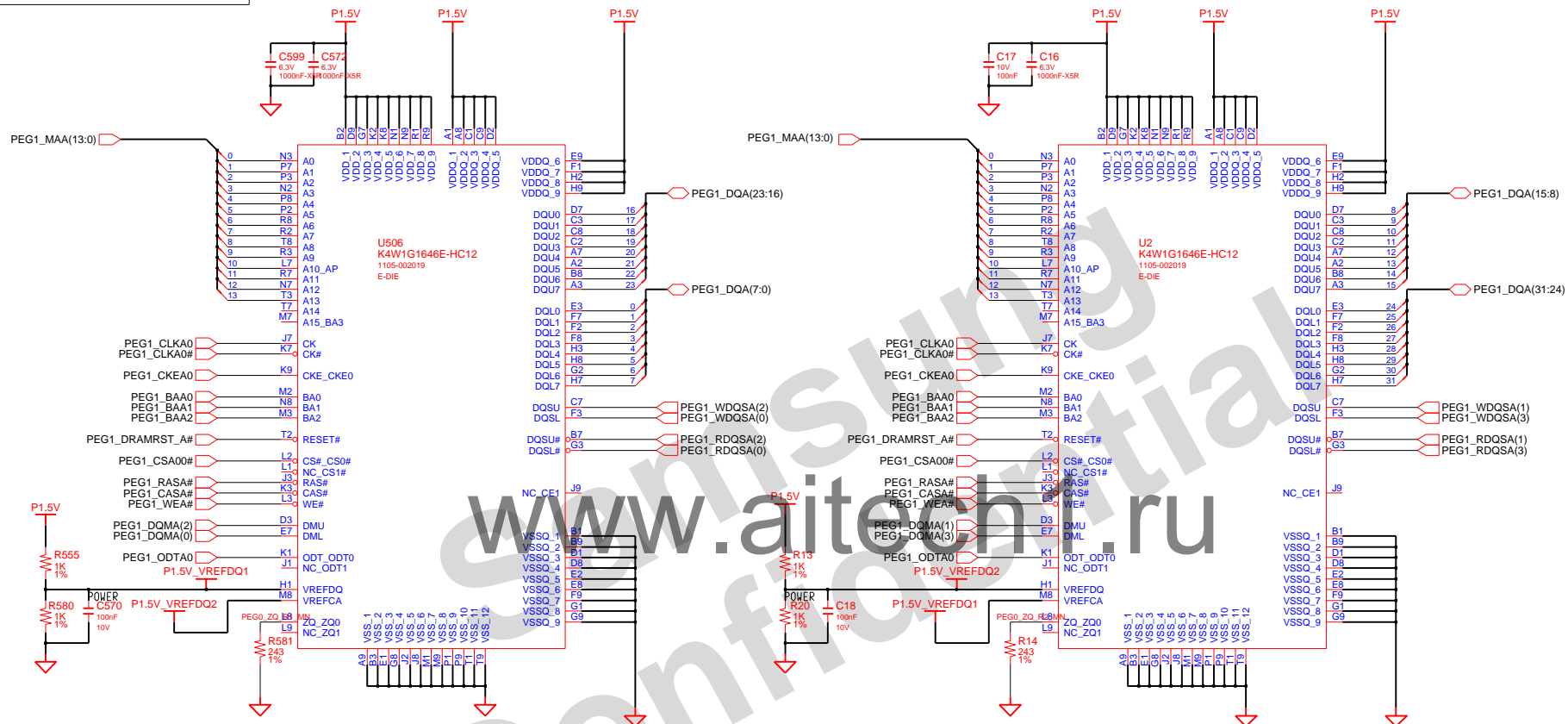


DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		N11X_40NM(4/5)	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		N11X_40NM(4/5)	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
December 25, 2010 10:42:33 AM						PAGE 25 OF 52

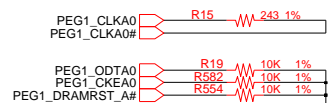
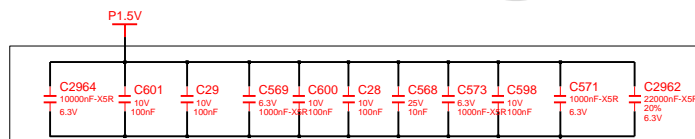
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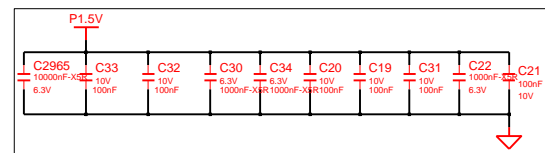
A-Channel #0



Place near to VDDQ



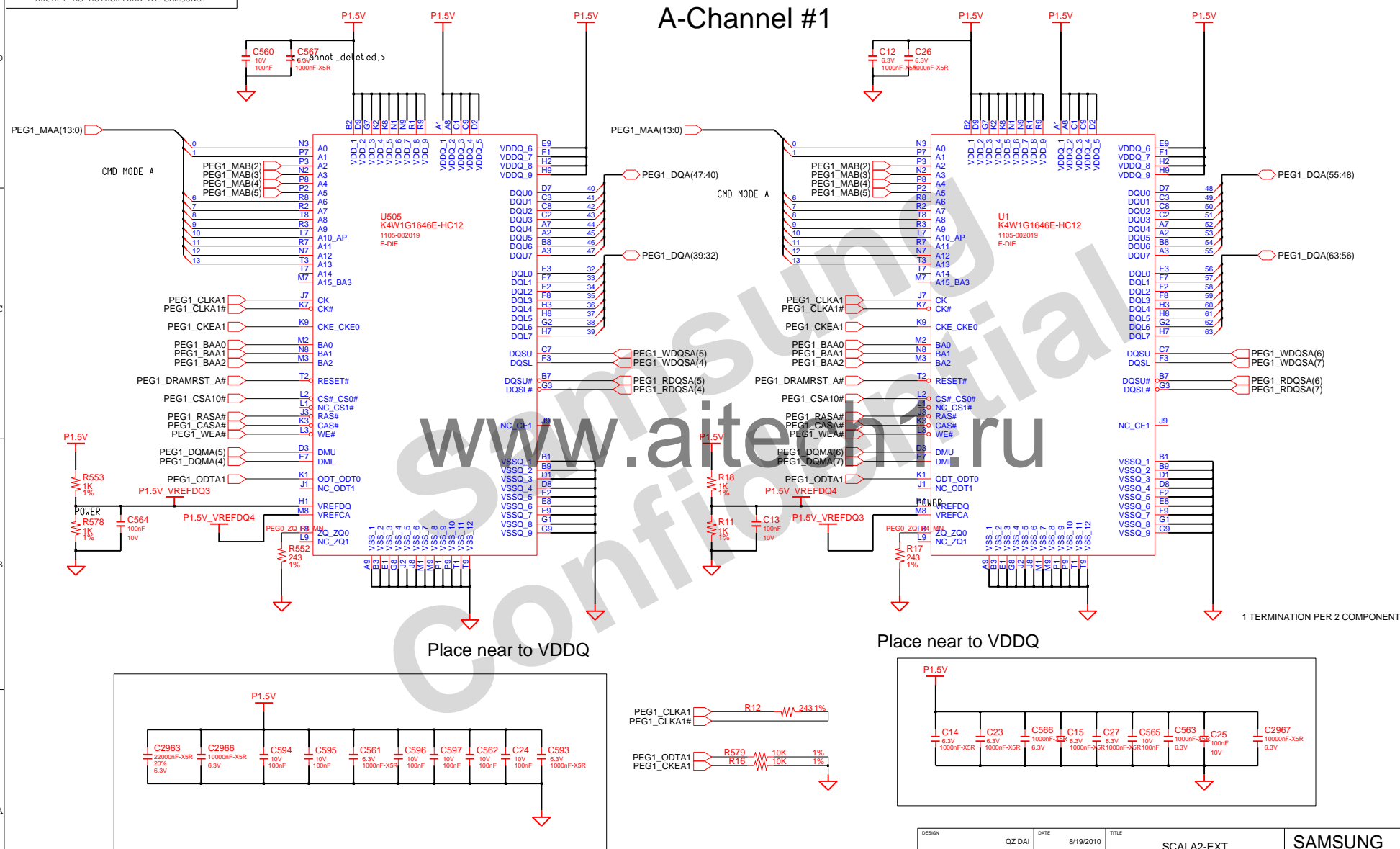
Place near to VDDQ



DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP		N11X_40NM(5/5)	
APPROVAL	BC LEE	REV	rev. 1.1		N11X_40NM(5/5)	PART NO. BA41-01423A
MODULE CODE		LAST EDIT				

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A-Channel #1



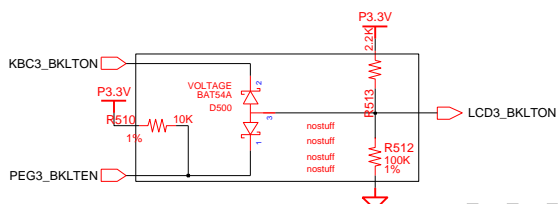
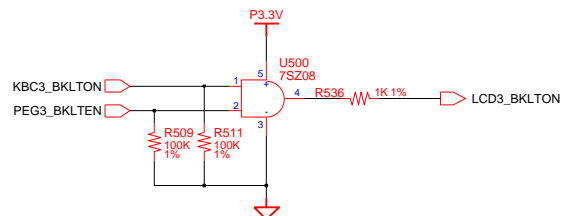
DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP		GRAPHIC_MEM A#0	
APPROVAL	BC LEE	REV	rev. 1.1		GRAPHIC_MEM A#0	
MODULE CODE		LAST EDIT				
December 25, 2010 10:42:33 AM						PAGE 27 OF 52

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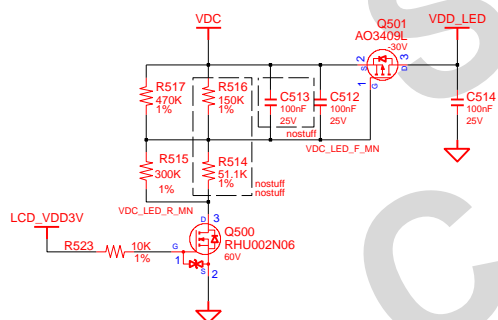
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LVDS LOGIC

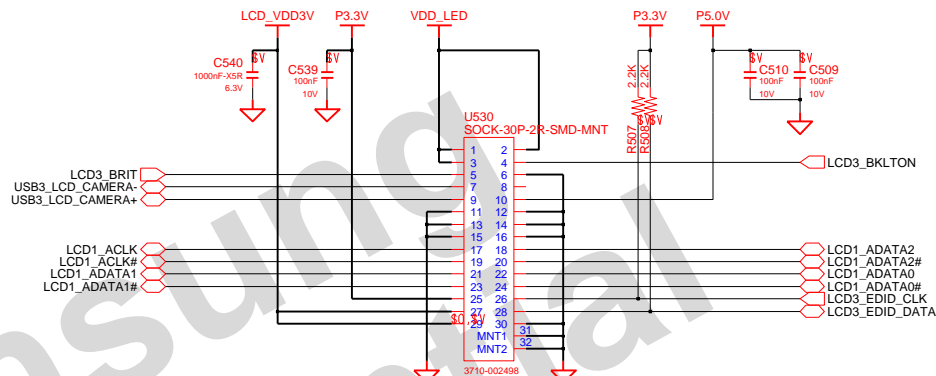
Backlight On



LED Power

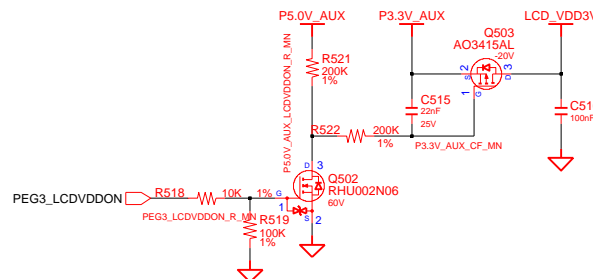


LCD Connector + CAMERA



TYPE: ANGLE

LCD Power

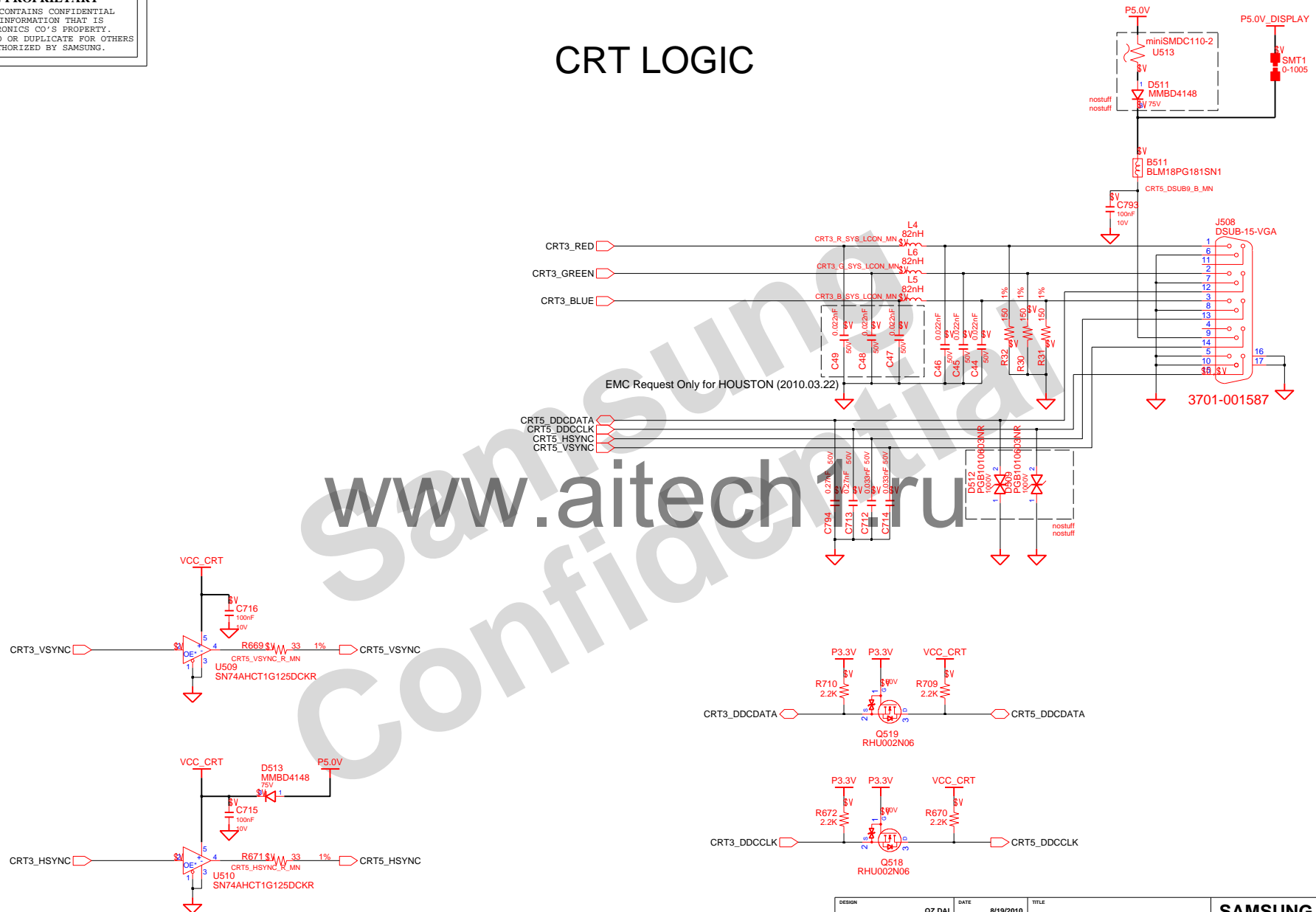


DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP	GRAPHICS_IF		
APPROVAL	BC LEE	REV	rev. 1.1	LVDS		
MODULE CODE		LAST EDIT		December 25, 2010 10:42:33 AM	PAGE	28 OF 52

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CRT LOGIC



DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP		GRAPHICS_IF	
APPROVAL	BC LEE	REV	rev. 1.1		CRT	
MODULE CODE		LAST EDIT				
December 25, 2010 10:42:33 AM						PAGE 29 OF 52

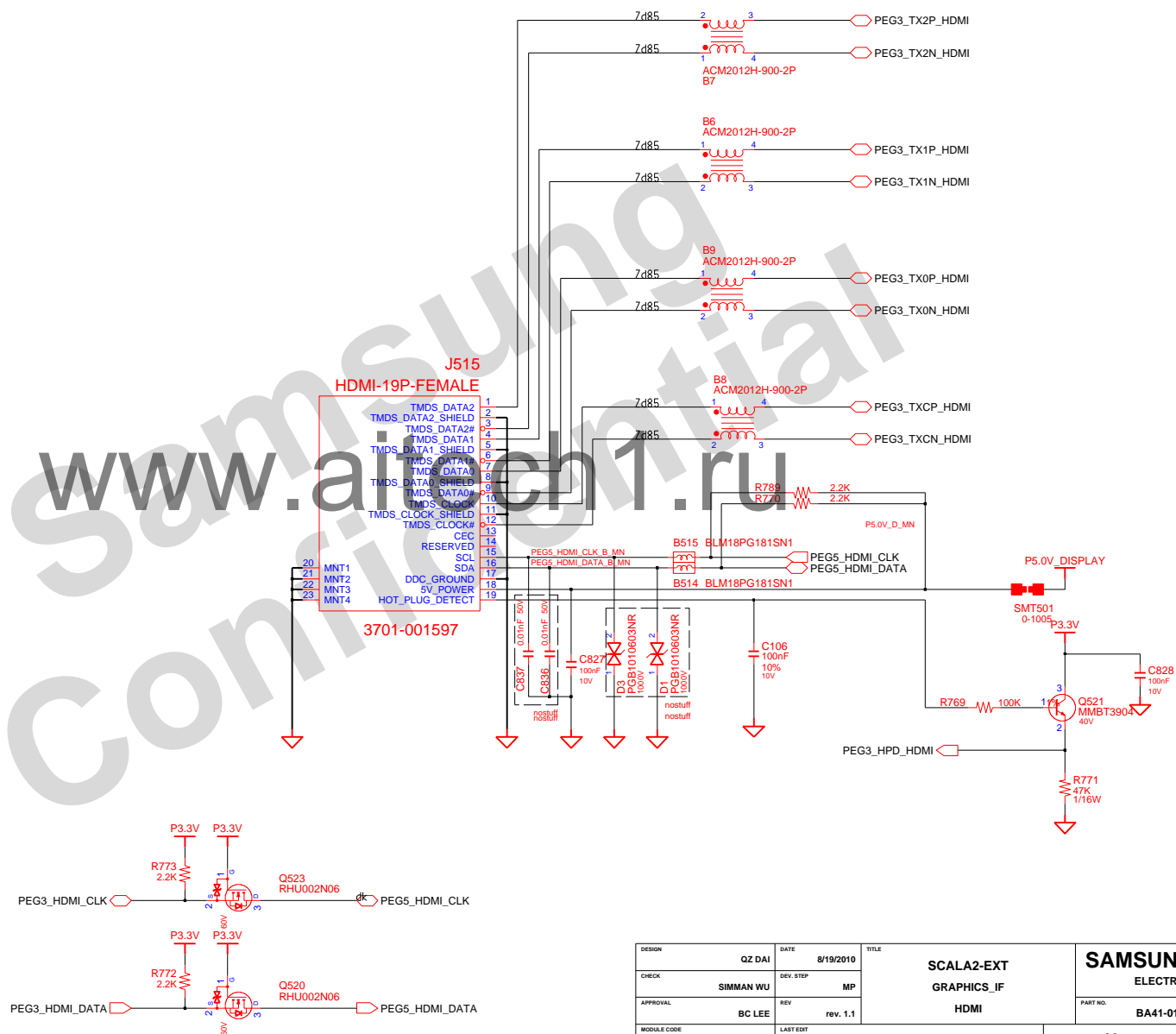
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HDMI Graphic

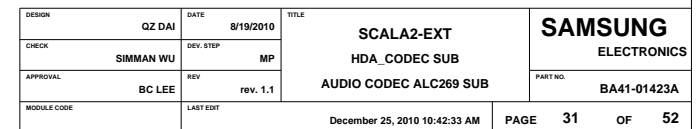
After checking, Houston need to use CMC for each signal.

(EMC request at 2010.04.15)



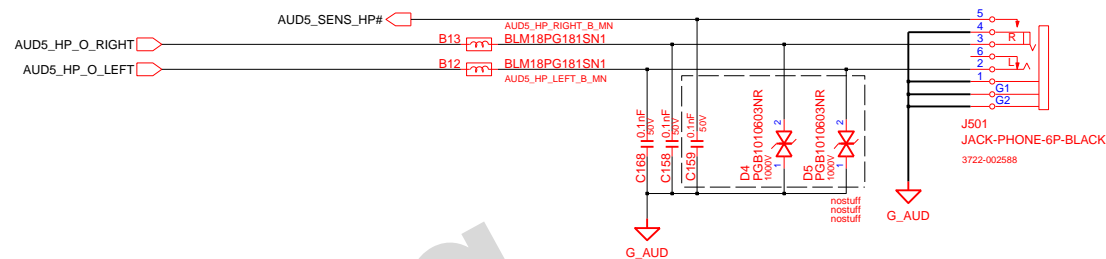
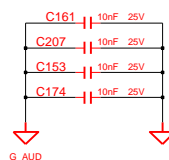
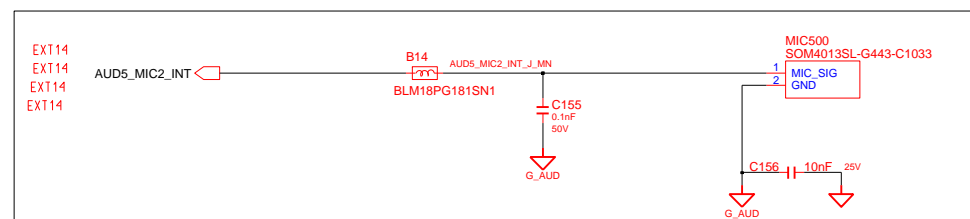
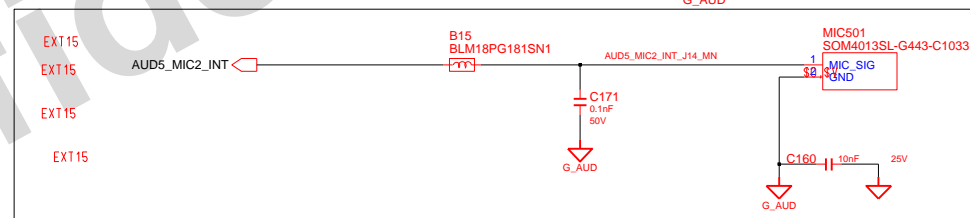
DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP	GRAPHICS_IF	ELECTRONICS	
APPROVAL	BC LEE	REV	rev. 1.1	HDMI	PART NO.	BA41-01423A
MODULE CODE		LAST EDIT				
				December 25, 2010 10:42:33 AM	PAGE	30 OF 52

HD AUDIO



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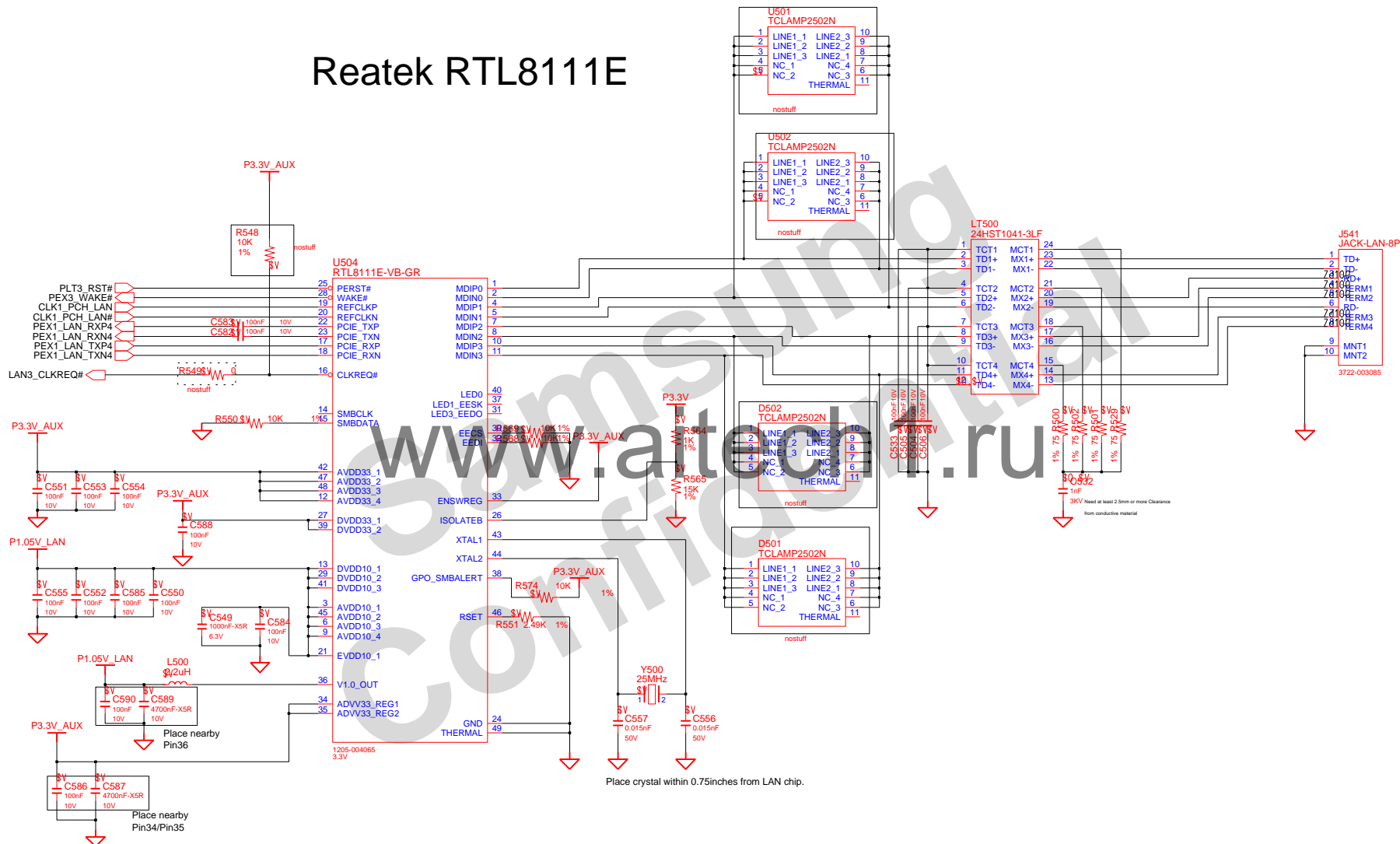
HEADPHONE**MIC JACK****Internal MIC**

DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		HDA_CODEC & LED SUB	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		AUDIO JACK & LED SUB	PART NO.
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM			BA41-01423A
				PAGE	32	OF 52

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Reatek RTL8111E



Place crystal within 0.75inches from LAN chip.

DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT LAN LAN_Realtelk_RTL8111	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE		LAST EDIT				
				December 25, 2010 10:42:33 AM	PAGE 33	OF 52

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WLAN Height : 7.0mm

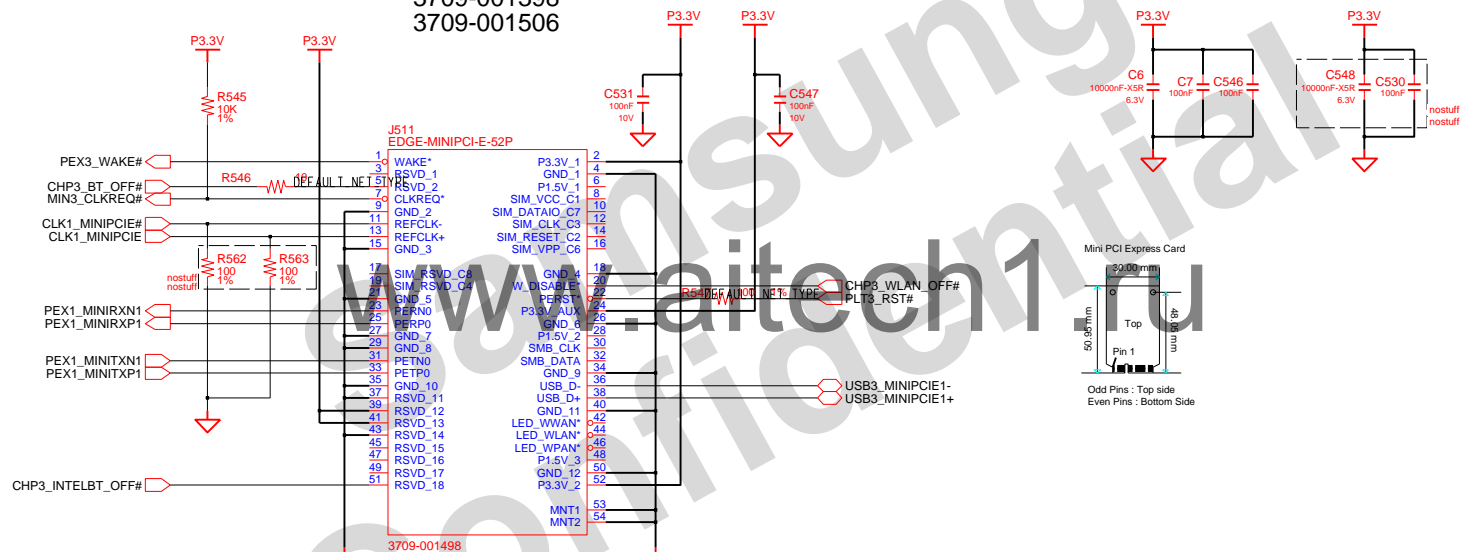
3709-001398
3709-001506

AMT 6.0 : P3.3V = P3.3V_ALW (Check?)

wakeup pull-up power rail ?

Puma Peak -WiFi (AMT 6.0)

Kilmer Peak - WiFi/WiMax



DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT MULTICARD 3 IN 1 CARD(GL827S)	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	34	OF 52

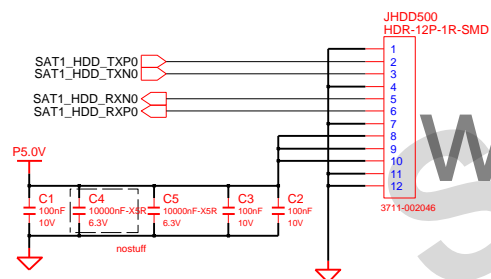
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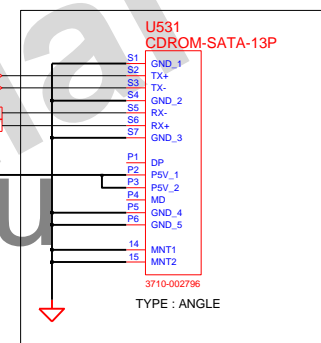
SATA I/F CONN

SATA HDD CONN

Cable Connector Type

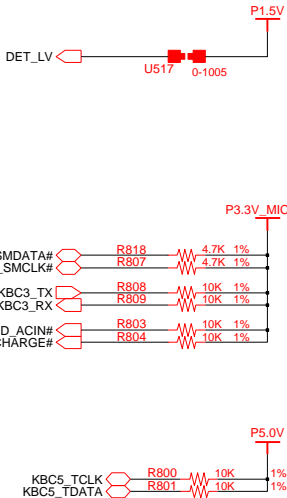


SATA ODD CONN



DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP	SATA I/F		ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1	SATA I/F		PART NO.
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM			BA41-01423A
				PAGE	35	OF 52

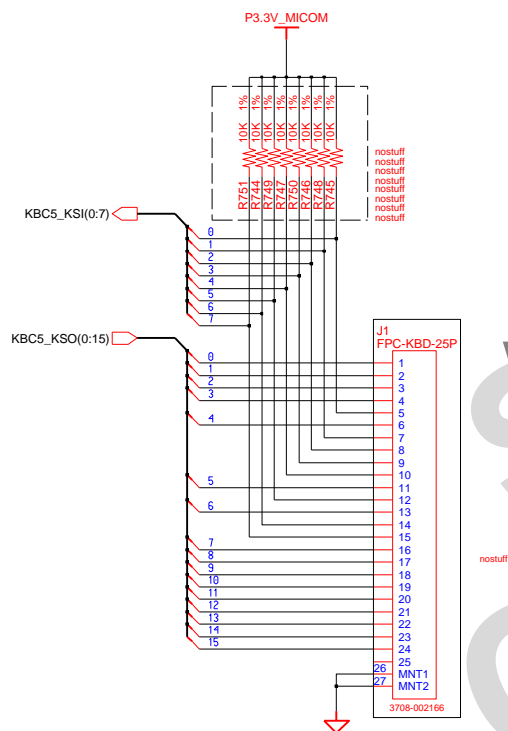
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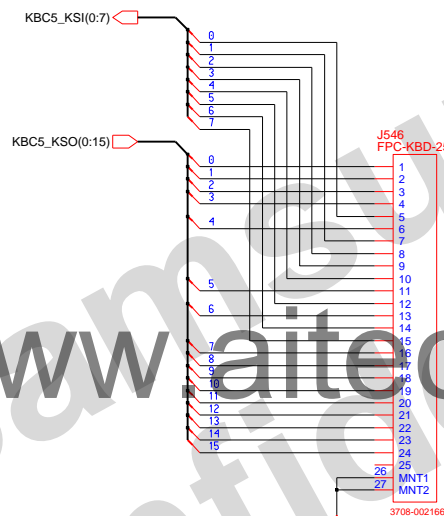
COM-22C-015 (1996.6.5) REV. 3

Micom Glue Logic

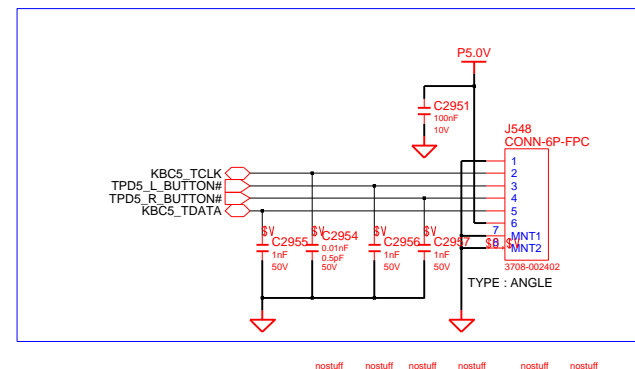
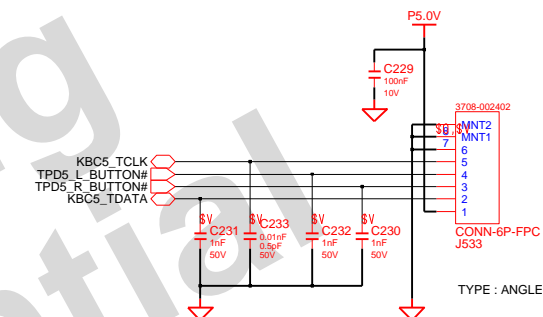
KEYBOARD on TOP



KEYBOARD on Bottom



TOUCHPAD



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		MICOM GLUE LOGIC	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		MICOM GLUE LOGIC	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
				December 25, 2010 10:42:33 AM	PAGE	37 OF 52

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[illegible]

FOR IR

P3.3V P3.3V_AUX

R2 0 R1 0

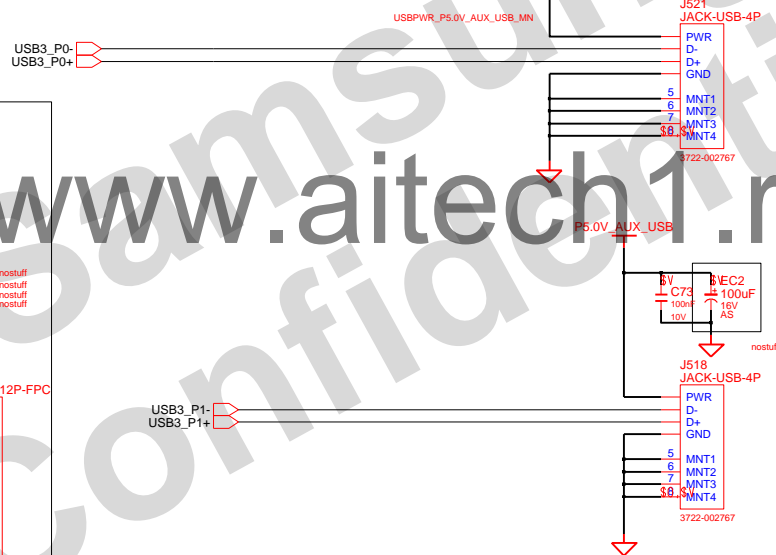
R3 0 R4 0 R5 0 R6 0

J544
CONN-12P-FPC

1
2
3
4
5
6
7
8
9
10
11
12
13
14
MNT1
MNT2

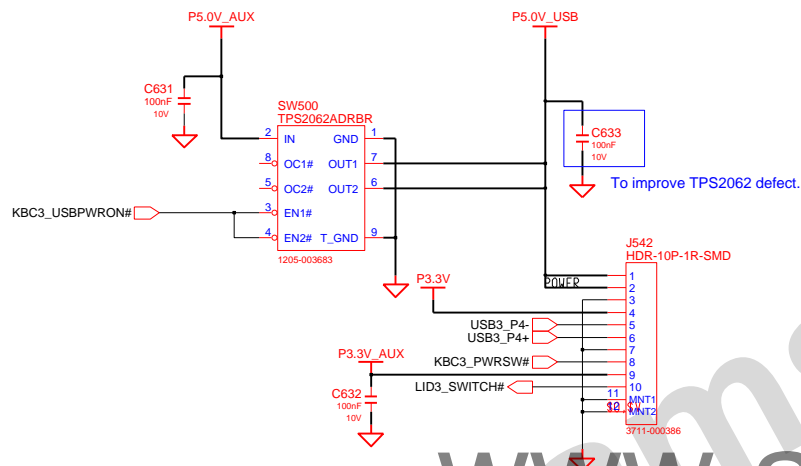
3708-002582

TYPE : STRAIGHT

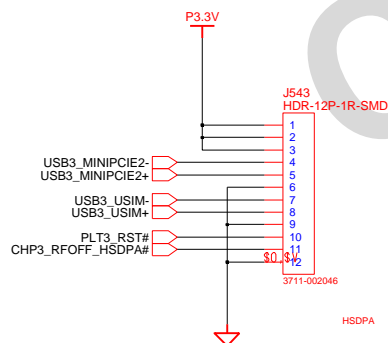


DRAW	QZ DAI	DATE	8/19/2010	TITLE SCALTA2-EXT USB CONN & BLUETOOTH		SAMSUNG ELECTRONICS	
CHECK	SIMMAN WU	DEV. STEP	MP				
APPROVAL	BC LEE	REV	REV. 1.1	USB		PART NO.	
MODULE CODE	LAST EDIT					December 25, 2010 10:42:33 AM	
BA41-01423A							

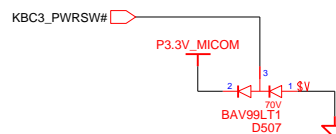
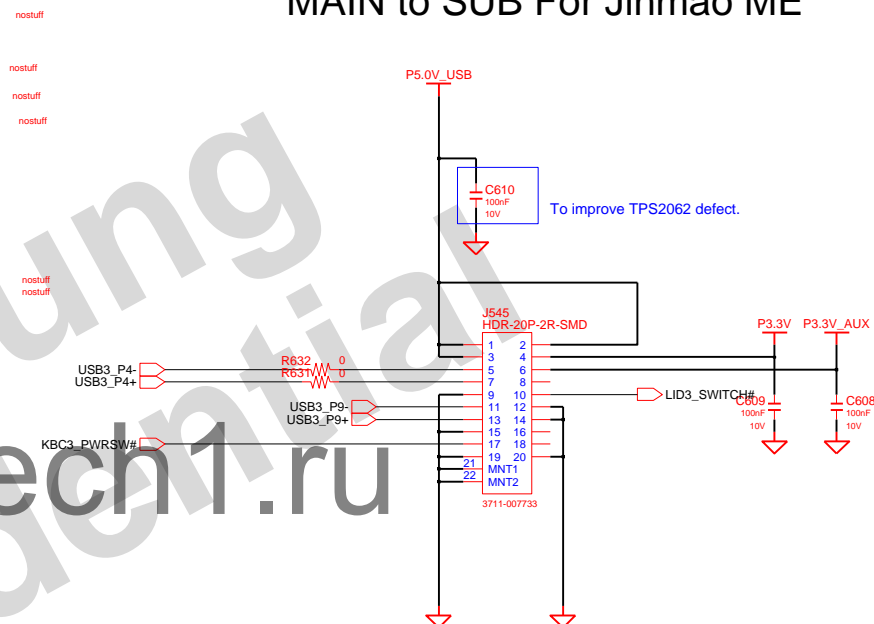
MAIN to SUB




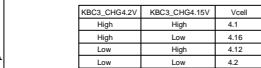
HSPA MAIN TO SUB CONN



MAIN to SUB For Jinmao ME



DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT USB_CONN	
CHECK	SIMMAN WU	DEV. STEP	MP			
APPROVAL	BC LEE	REV	REV. 1.1			
MODULE CODE	LAST EDIT					
December 25, 2010 10:42:33 AM					PAGE	39 OF 52

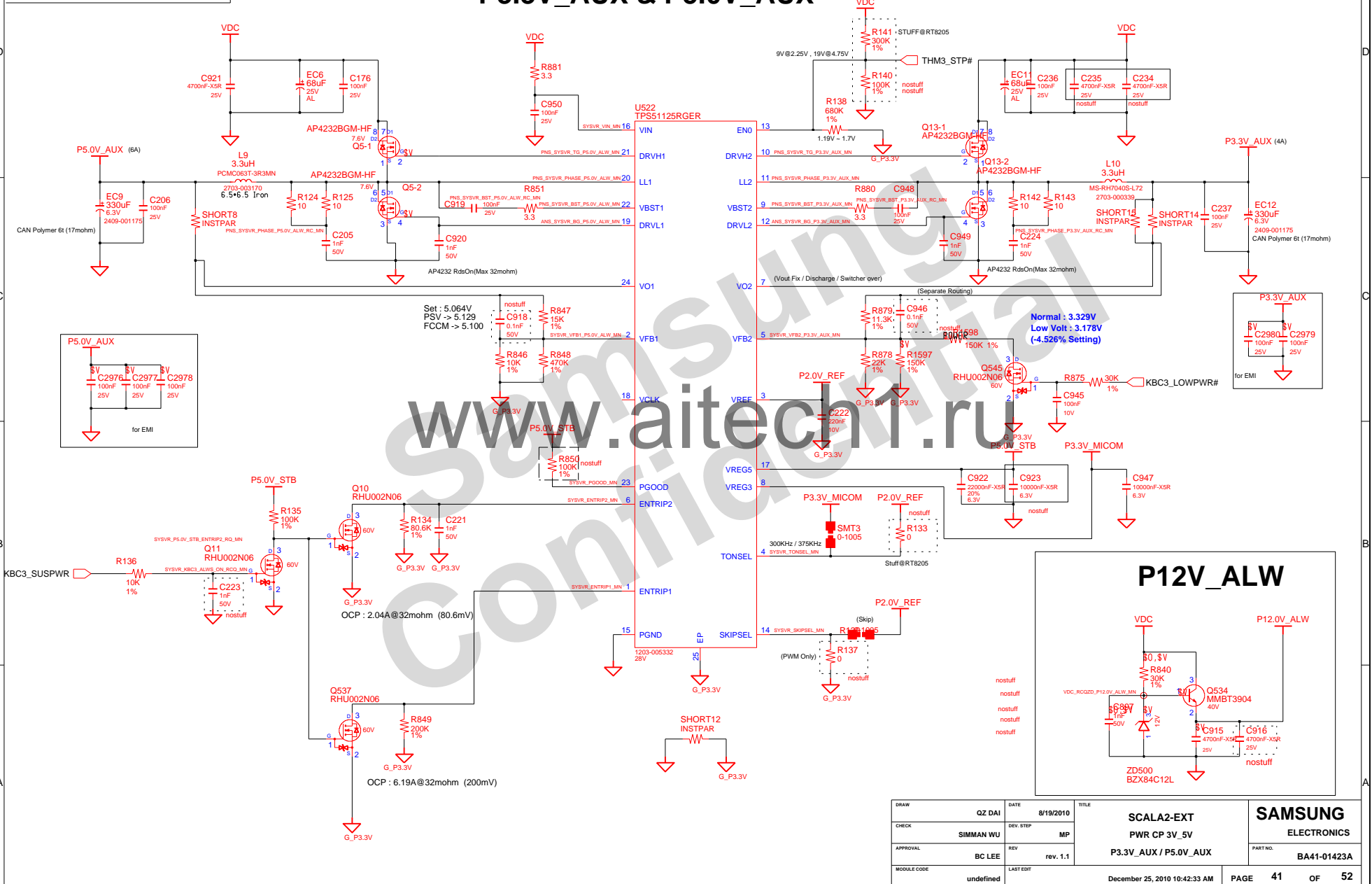
[illegible]

	Adapter configuration			
	60W / 3.03A / 96%		90W / 4.32A / 91.2%	
	Value	SEC Code	Value	SEC Code
Rtop	200K	2007-007334	10K	2007-007142
Rbot	27.4K	2007-007274	30K	2007-008275

DESIGN	QZ DAI	DATE	8/19/2010	SCAL2-EXT CHARGER CHARGER (ISL6255A)	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP		
APPROVAL	BC LEE	REV	REV. 1.1		
MODULE CODE	LAST EDIT				
				December 25, 2010 10:42:33 AM	PAGE 40 OF 52

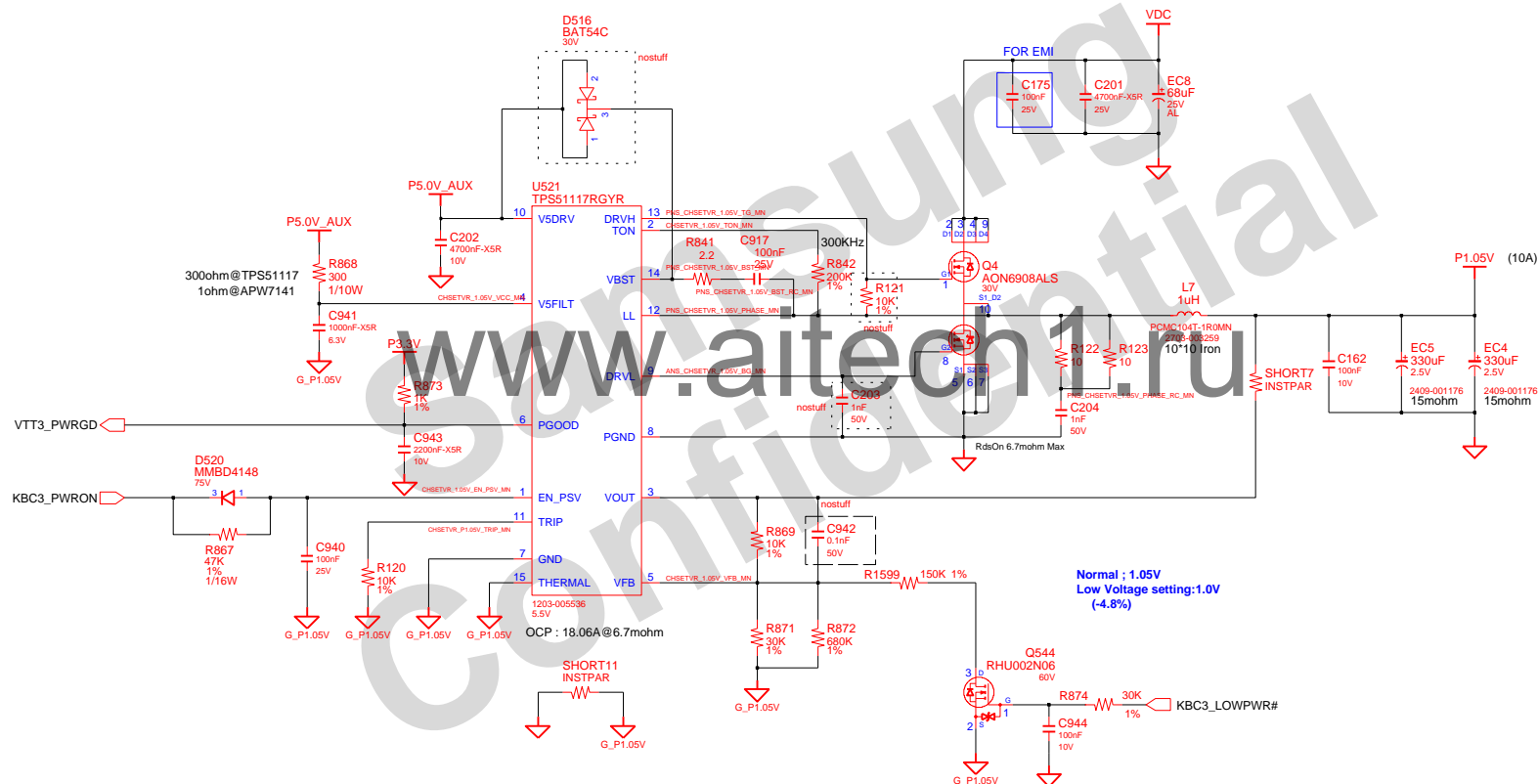
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P3.3V_AUX & P5.0V_AUX



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		PWR CP 3V_5V	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		P3.3V_AUX / P5.0V_AUX	PART NO.
MODULE CODE	undefined	LAST EDIT			December 25, 2010 10:42:33 AM	BA41-01423A
					PAGE	41 OF 52

CHIPSET POWER(P1.05V)

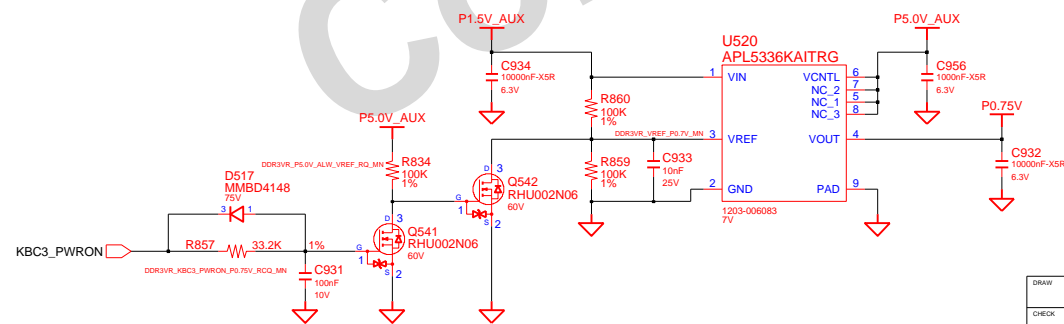


DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT P1.05V TI TPSS1117R	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE	LAST EDIT			December 25, 2010 10:42:33 AM	PAGE	42 OF 52

DDR3 Power

[illegible]

DDR3 VTT(0.75V)

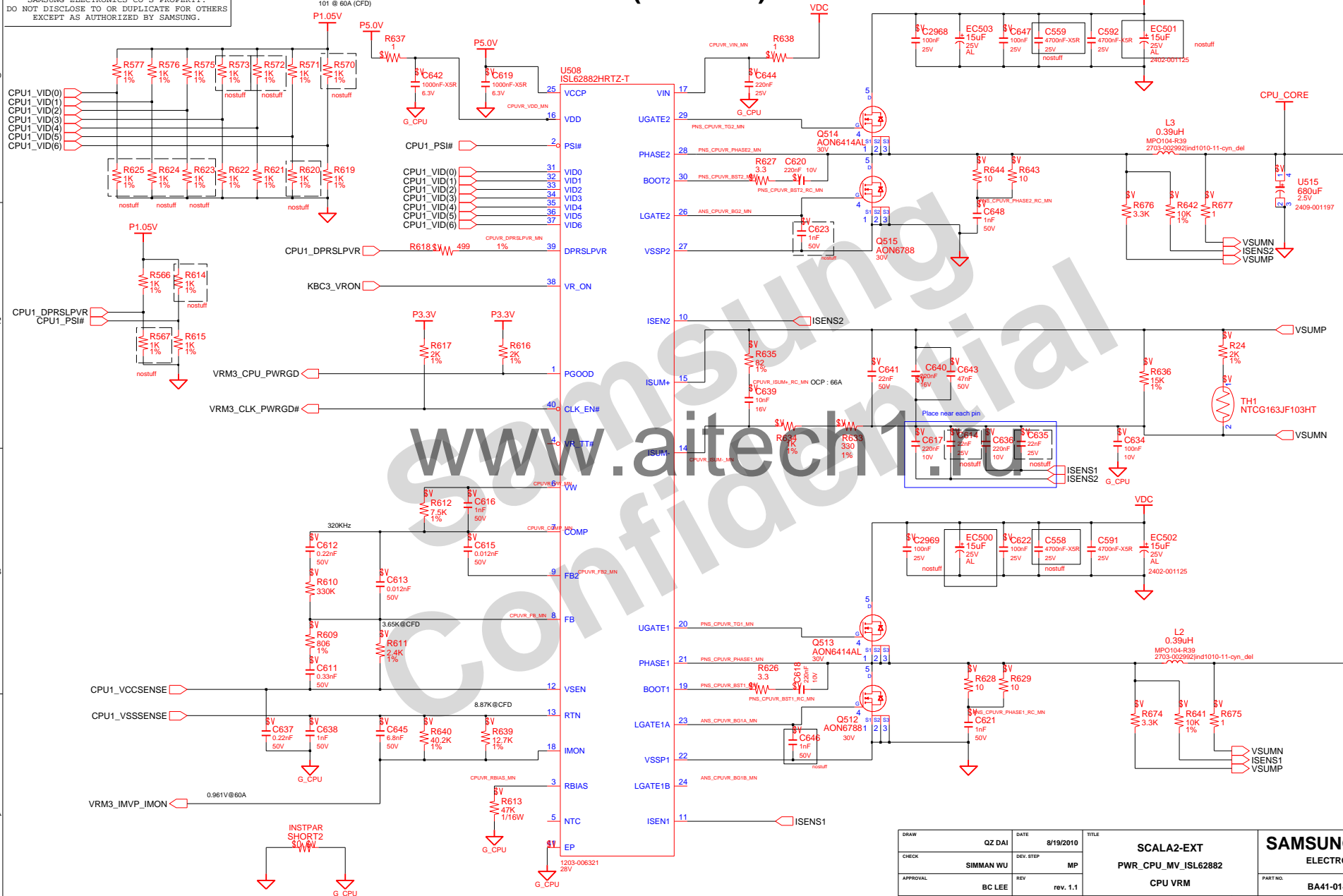


COM-22C-015(1996.6.5) REV. 3

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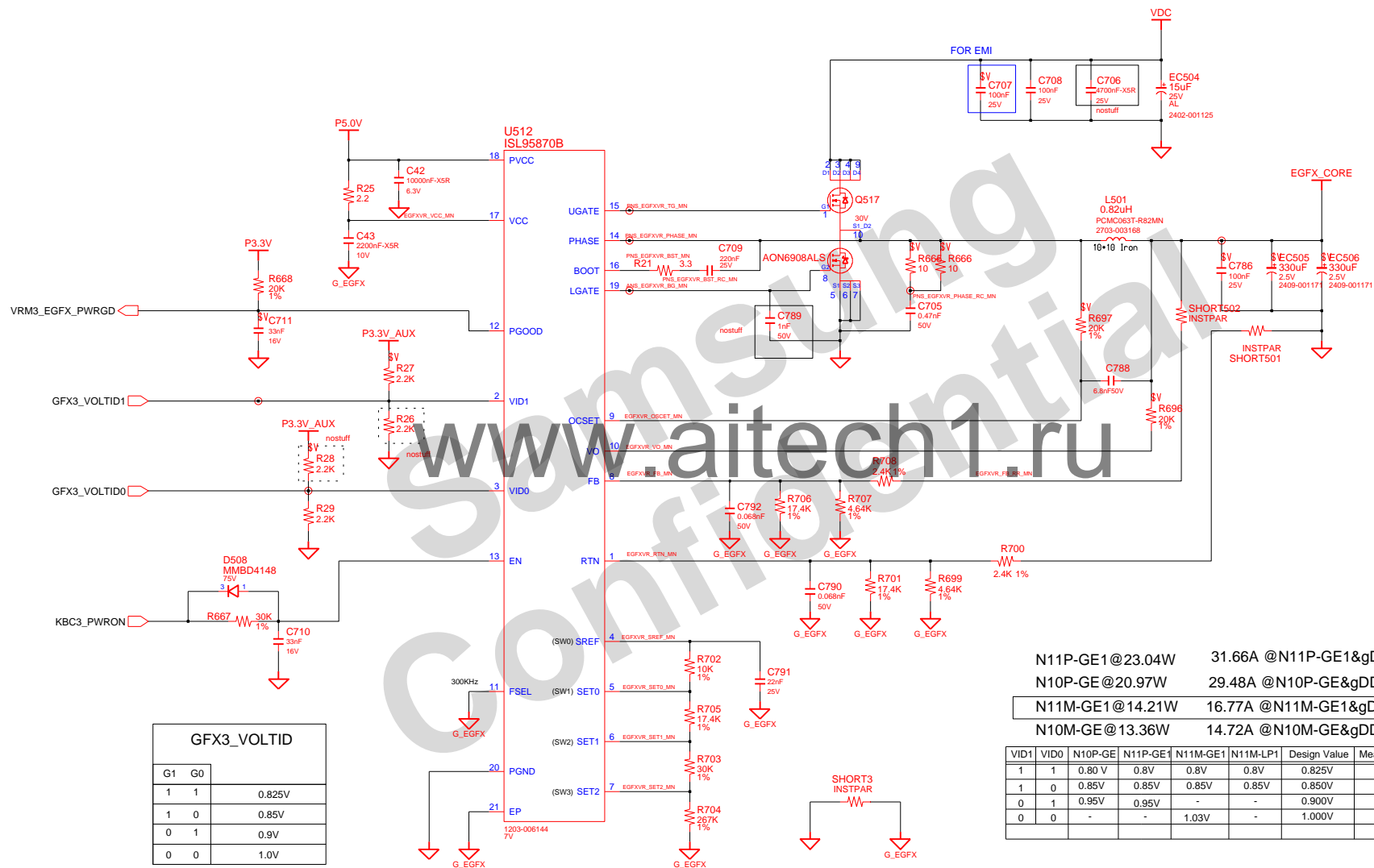
VID[5:3] @ IMON CPU Gain
100 @ 50A (ARD)
101 @ 60A (CFD)

CPU VRM (IMVP-6.5)



DRAW	QZ DAI	DATE	8/19/2010	TITLE		SCALA2-EXT		SAMSUNG				
CHECK	SIMMAN WU	DEV. STEP	MP			PWR_CPU_MV_ISL62882		ELECTRONICS				
APPROVAL	BC LEE	REV	rev., 1.1	CPU VRM		PART NO.		BA41-01423A				
MODULE CODE	undefined			LAST EDIT			December 25, 2010 10:42:33 AM		PAGE	44	OF	52

External GFX Core Power



N11P-GE1@23.04W	31.66A @N11P-GE1&gDDR3
N10P-GE@20.97W	29.48A @N10P-GE&gDDR3
N11M-GE1@14.21W	16.77A @N11M-GE1&gDDR3
N10M-GE@13.36W	14.72A @N10M-GE&gDDR3

VID1	VID0	N10P-GE	N11P-GE1	N11M-GE1	N11M-LP1	Design Value	Measured Value
1	1	0.80 V	0.8V	0.8V	0.8V	0.825V	
1	0	0.85V	0.85V	0.85V	0.85V	0.850V	
0	1	0.95V	0.95V	-	-	0.900V	
0	0	-	-	1.03V	-	1.000V	

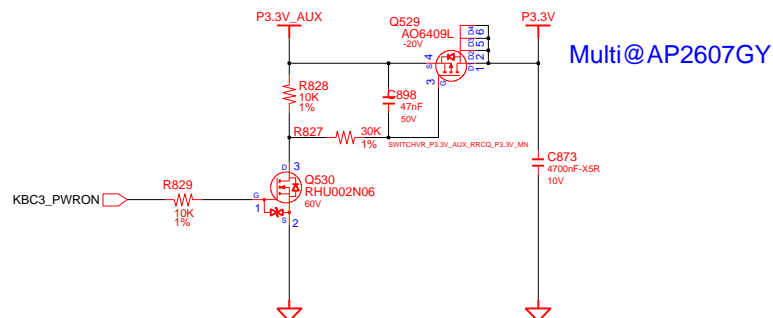
DESIGN	QZ DAI	DATE	8/19/2010	TITLE SCALA2-EXT PWR_GFX_MV_EXT External Graphic Power	SAMSUNG ELECTRONICS			
CHECK	SIMMAN WU	DEV. STEP	MP		PART NO.	BA41-01423A		
APPROVAL	BC LEE	REV	rev. 1.1					
MODULE CODE	LAST EDIT							
				December 25, 2010 10:42:33 AM	PAGE	45	OF	52

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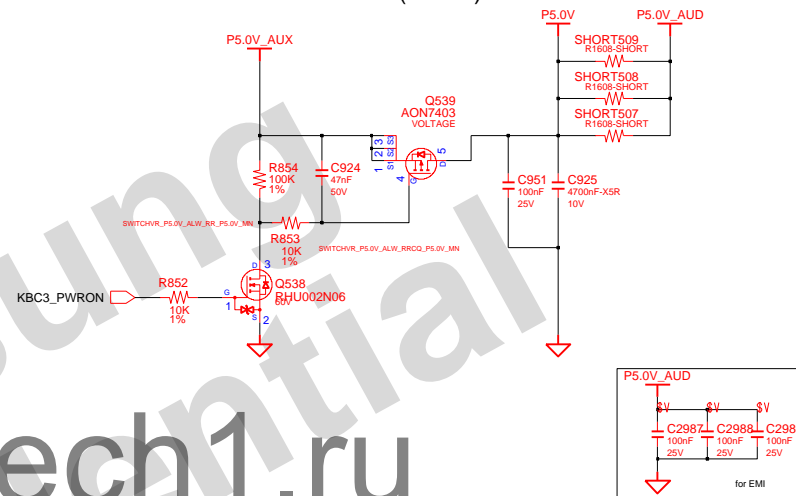
Switched Power

Switched Power On (P3.3V)



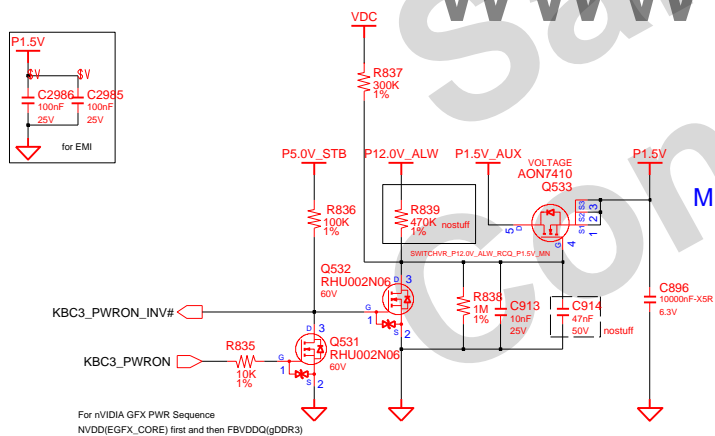
Switched Power On (P5.0V)

Multi@Si443DDY

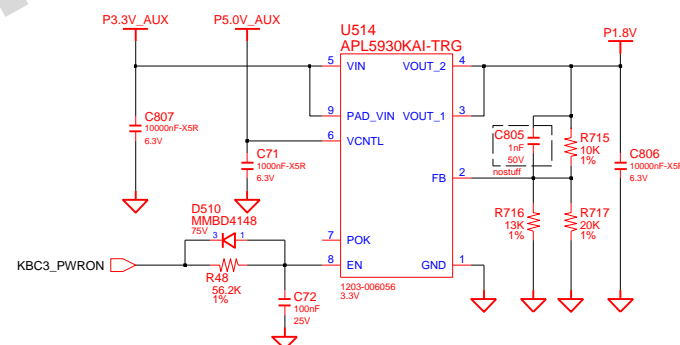


Switched Power On (P1.5V)

Multi@AO4476



P1.8V(LDO)

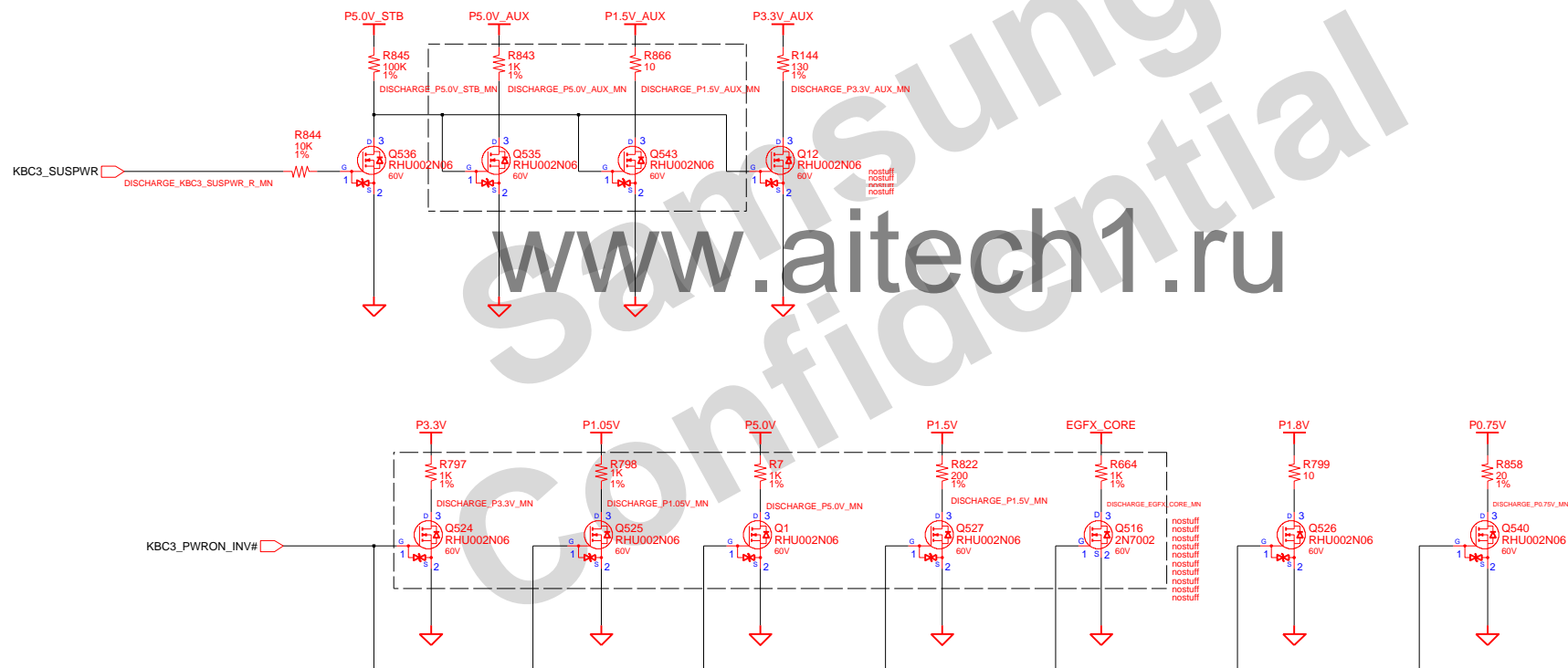


DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		PWR_MV_SWITCHED	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		SWITCHED POWER	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
				December 25, 2010 10:42:33 AM	PAGE	46 OF 52

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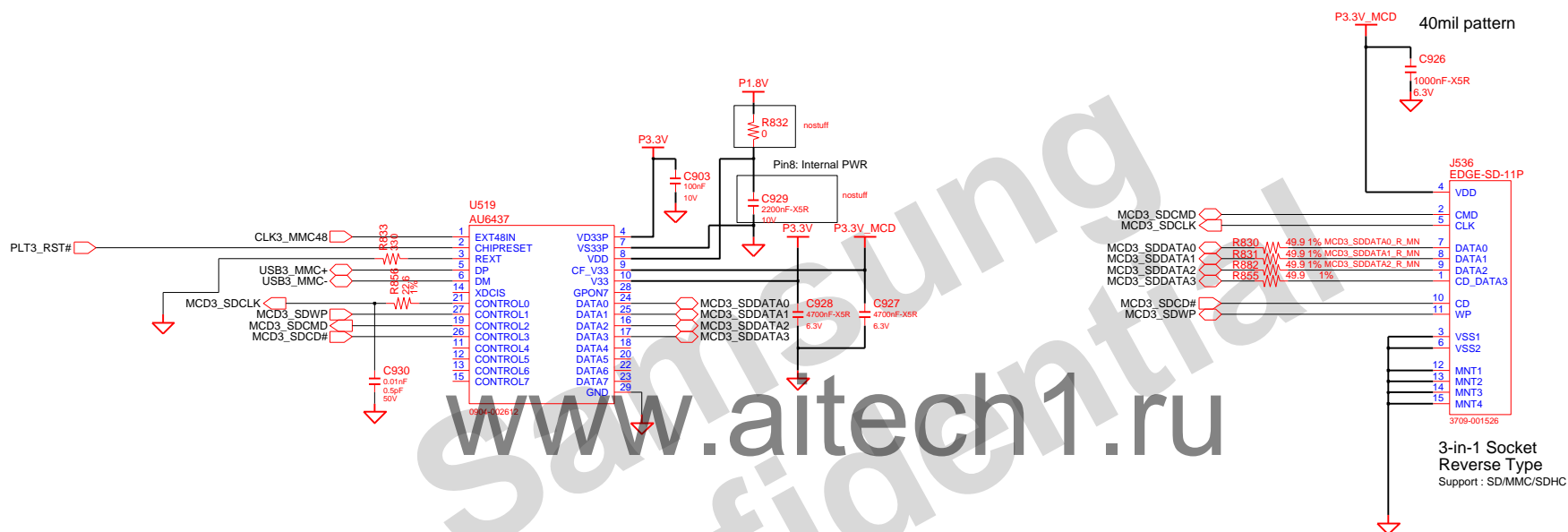
POWER DISCHARGER



DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP	PWR_MV_DISCHARGER	ELECTRONICS	
APPROVAL	BC LEE	REV	rev. 1.1	DISCHARGING LOGIC	PART NO.	BA41-01423A
MODULE CODE	undefined	LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	47	OF 52

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3 IN 1 CARD (AU6437)

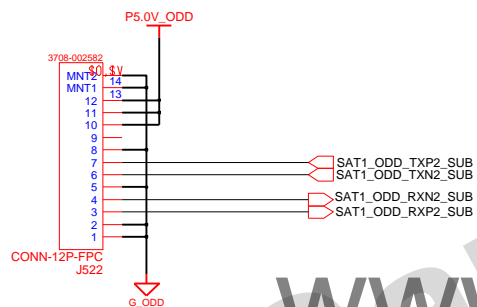
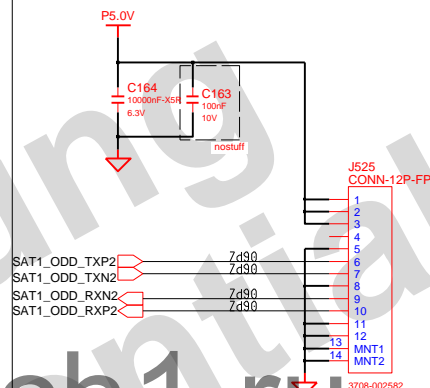
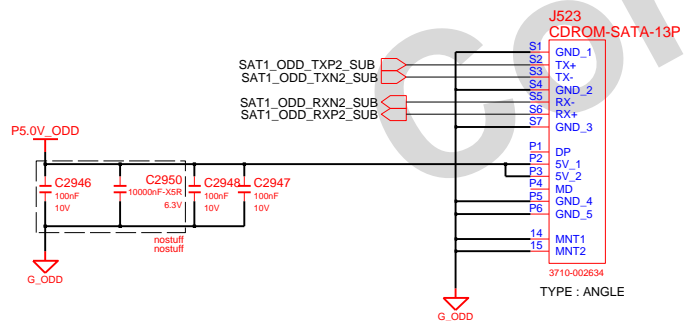


DESIGN	QZ DAI	DATE	8/19/2010	SCALA2-EXT SUB BOARD2 3 in 1 SUB	SAMSUNG ELECTRONICS		
CHECK	SIMMAN WU	DEV. STEP	MP				
APPROVAL	BC LEE	REV	REV. 1.1				
MODULE CODE	LAST EDIT		December 25, 2010 10:42:33 AM				
				PAGE	48	OF	52

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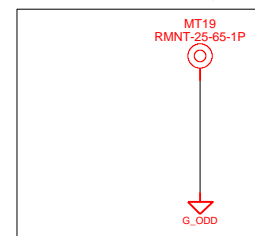
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SATA ODD SUB BOARD

15.6"**SUB TO MAIN : SATA ODD CONN**EXT15
EXT15
EXT15**MAIN TO SUB : SATA ODD CONN**EXT15
EXT15**SATA ODD CONN**

EXT16

EXT15



ODD sub board mount hole

DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT SUB BOARD3 ODD SUB	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE		LAST EDIT		December 25, 2010 10:42:33 AM	PAGE 49 OF 52	

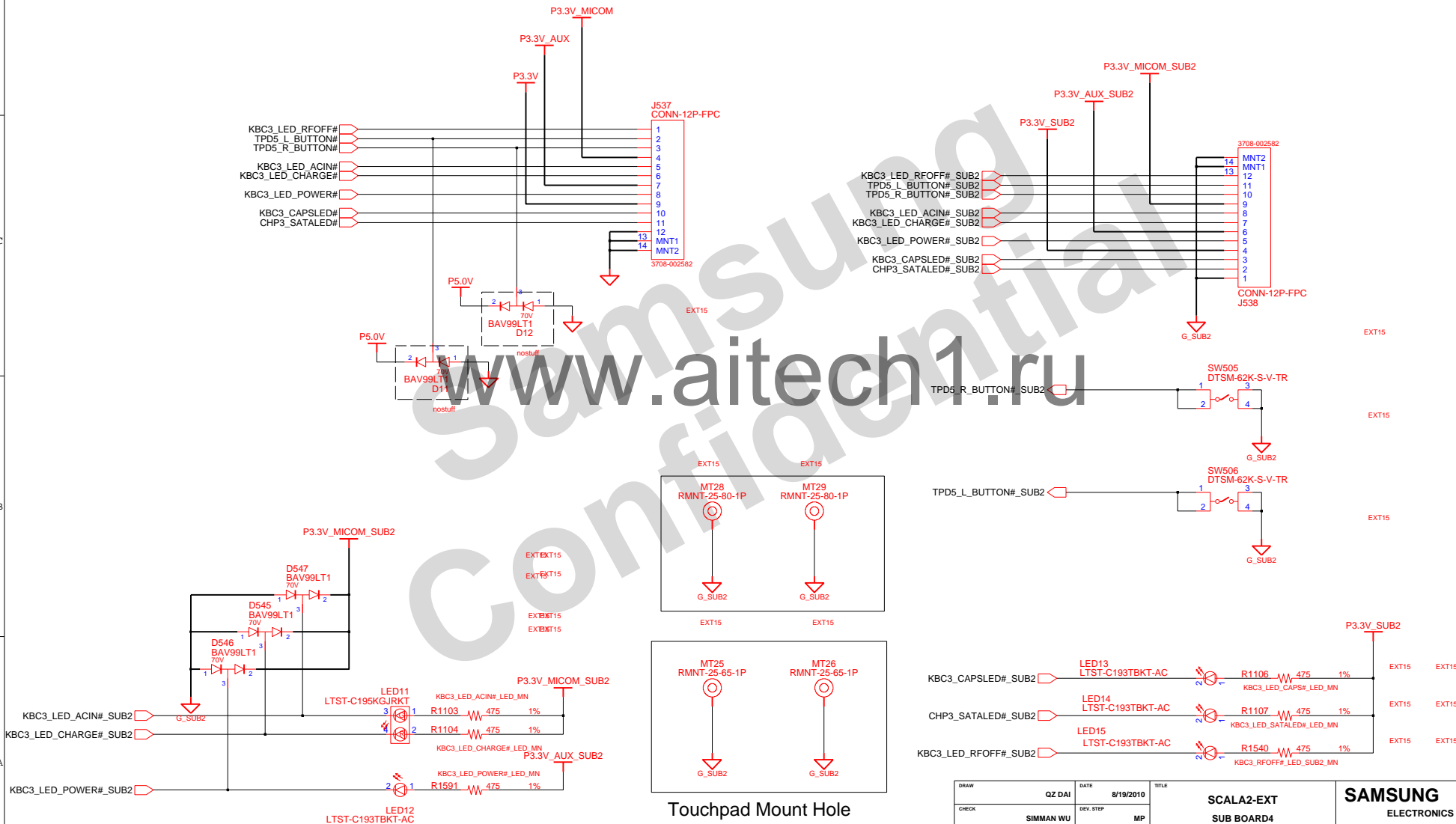
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15.6"

TOUCHPAD MAIN TO SUB

TOUCHPAD SUB TO MAIN



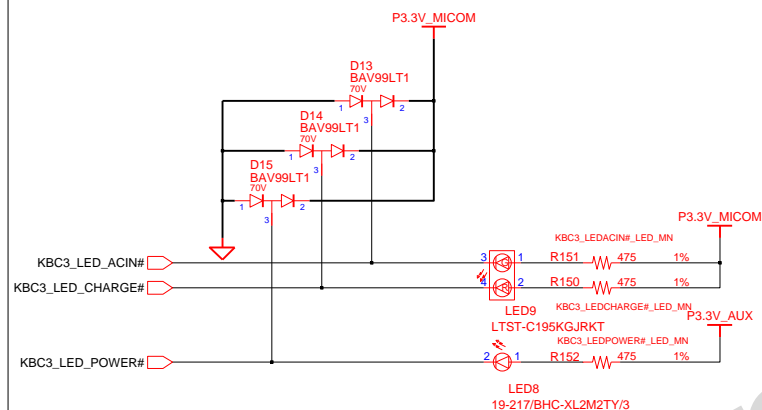
Touchpad Mount Hole

DRAW	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT SUB BOARD4 MULTIMEDIA SUB	SAMSUNG ELECTRONICS
CHECK	SIMMAN WU	DEV. STEP	MP			PART NO. BA41-01423A
APPROVAL	BC LEE	REV	rev. 1.1			
MODULE CODE		LAST EDIT				
December 25, 2010 10:42:33 AM						PAGE 50 OF 52

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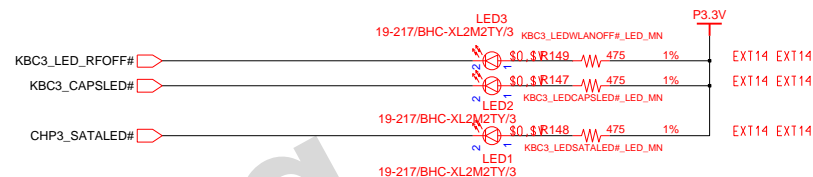
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ADAPTERIN/CHARGING LED

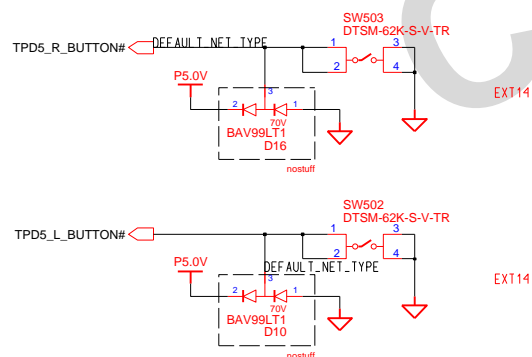
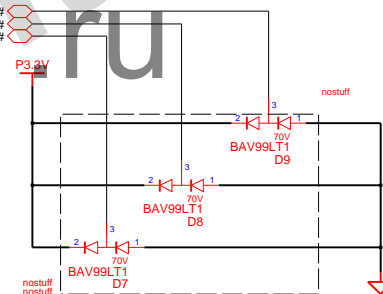


EXT14
 EXT14 EXT14
 EXT14 EXT14
 EXT14 EXT14
 EXT14

ADAPTERIN/CHARGING LED



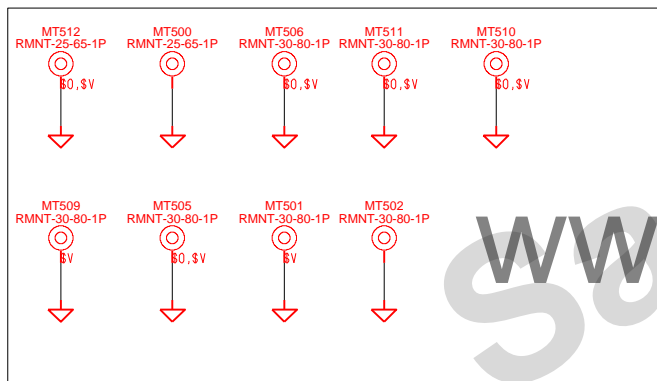
KBC3_LED_RFOFF#
 KBC3_CAPSLED#
 CHP3_SATALED#



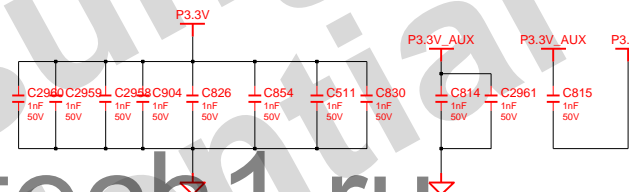
DESIGN	QZ DAI	DATE	8/19/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP		MNT hole	ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1		MNT hole	PART NO.
MODULE CODE		LAST EDIT				BA41-01423A
				December 25, 2010 10:42:33 AM	PAGE	51 OF 52

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Mainboard Mount ((25-65)X2EA, (30-80)X7EA)



EMI CAP



DRAW	QZ DAI	DATE	5/10/2010	TITLE	SCALA2-EXT	SAMSUNG
CHECK	SIMMAN WU	DEV. STEP	MP	Switched PWR 2		ELECTRONICS
APPROVAL	BC LEE	REV	rev. 1.1	FOR OPTIMUS PWR	PART NO.	BA41-01423A
MODULE CODE		LAST EDIT	December 25, 2010 10:42:33 AM	PAGE	52	OF 52