

Nike15-R-QC

CPU : Ivybridge BGA QC
Chip Set : Intel Panther Point
GFX : NVIDIA N13P-GS
INTEL HD 3000
Remarks : ChiefRiver Platform

Model Name : NIKE15-R-QC
PBA Name : MAIN
PCB Code : BA41-0XXXXA (GCE)
BA41-0XXXXA (NY)
BA41-0XXXXA (HAN)
Dev. Step : PVR
Revision : 0.9
T.R. Date : 2012.01.04

Design	CHECK	APPROVAL

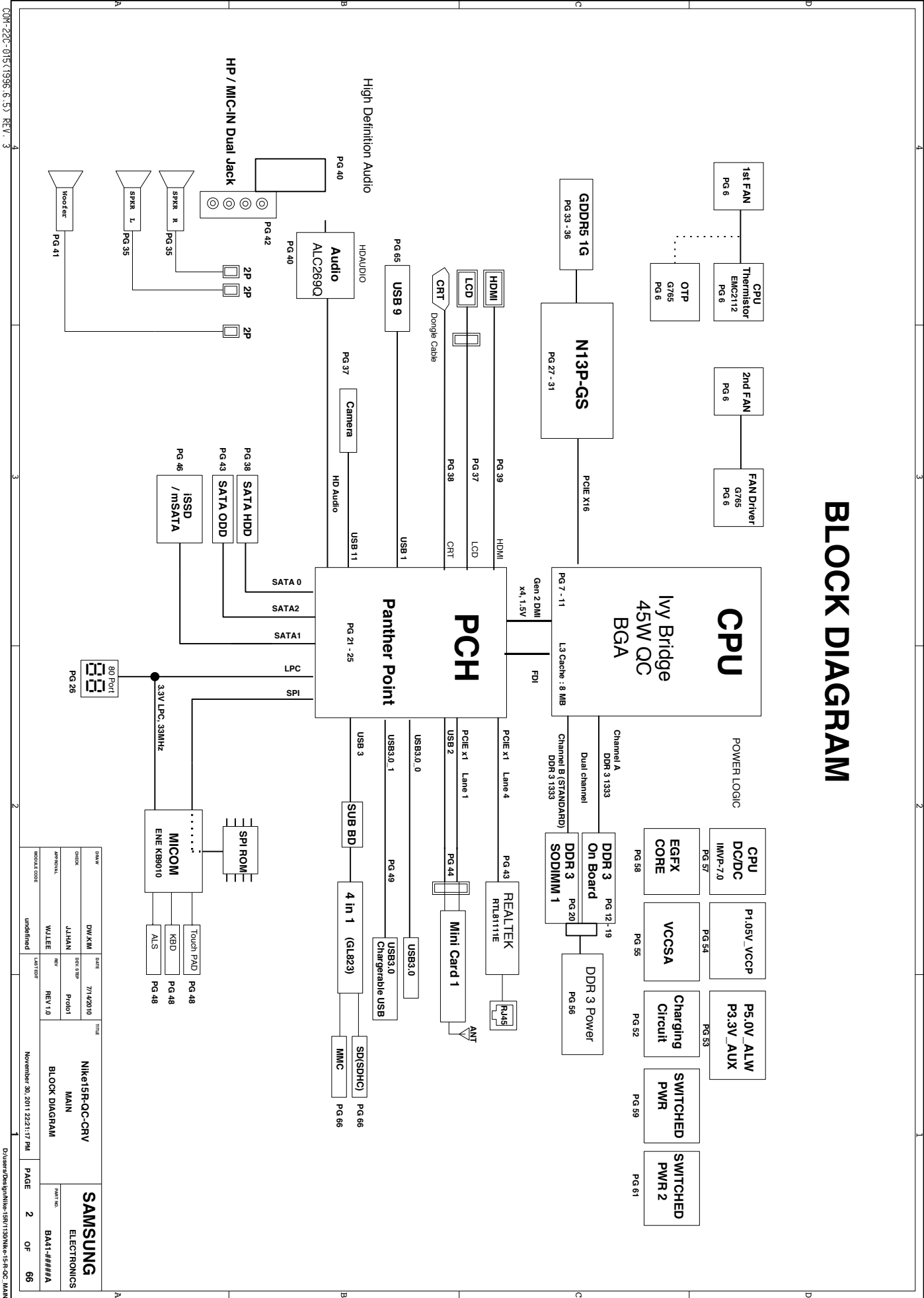
Owner : SEC Mobile R & D Signature : X

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DW/KIM	7/11/2010		NIKE15R-QC-CHV	1
CHECK	DU HAN	Proto1	MAIN	OF 66
APPROVAL	WALLEE	REV 1.0	COVER	
MOBILE CODE				

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BOARD INFORMATION

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

Voltage Rails	Active in
VDC P3.3V_MICOM P5.0V_ALW P5.0V_STB	Primary DC system power supply (7 to 21V) 3.3V always power rail (for Micom) 5.0V always power rail 5.0V always power rail
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 DDR3 (off in S4-S5)
P5.0V P3.3V P1.8V P1.5V 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) 0.75V power rail for DDR3 (off in S3-S5)
VCC_CORE VCC_CORE2 P1.05V_VDDCP	Core Voltage for CPU Core Voltage for GPU VDD for CDS/SENSOR
	S0

USB PORT Assign	PCI Express Assign
PORT #	PORT #
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	NC
9	NC
10	NC
11	NC
12	NC
13	NC

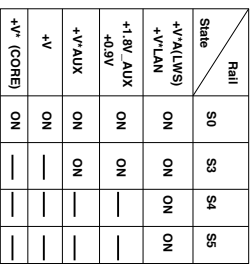
SATA PORT Assign
PORT #
0
1
2
3
4
5

Crystal / Oscillator
TYPE
FREQUENCY
DEVICE
USAGE
Crystal Crystal Crystal Crystal
32.768KHz 25MHz 25MHz 27MHz
PANTHER POINT LAN PANTHER POINT CHELSEA
Real Time Clock REALTEK

LCD Pannel Detect (TBD)
Devices
Resolution
PANNEL_DETECT_0

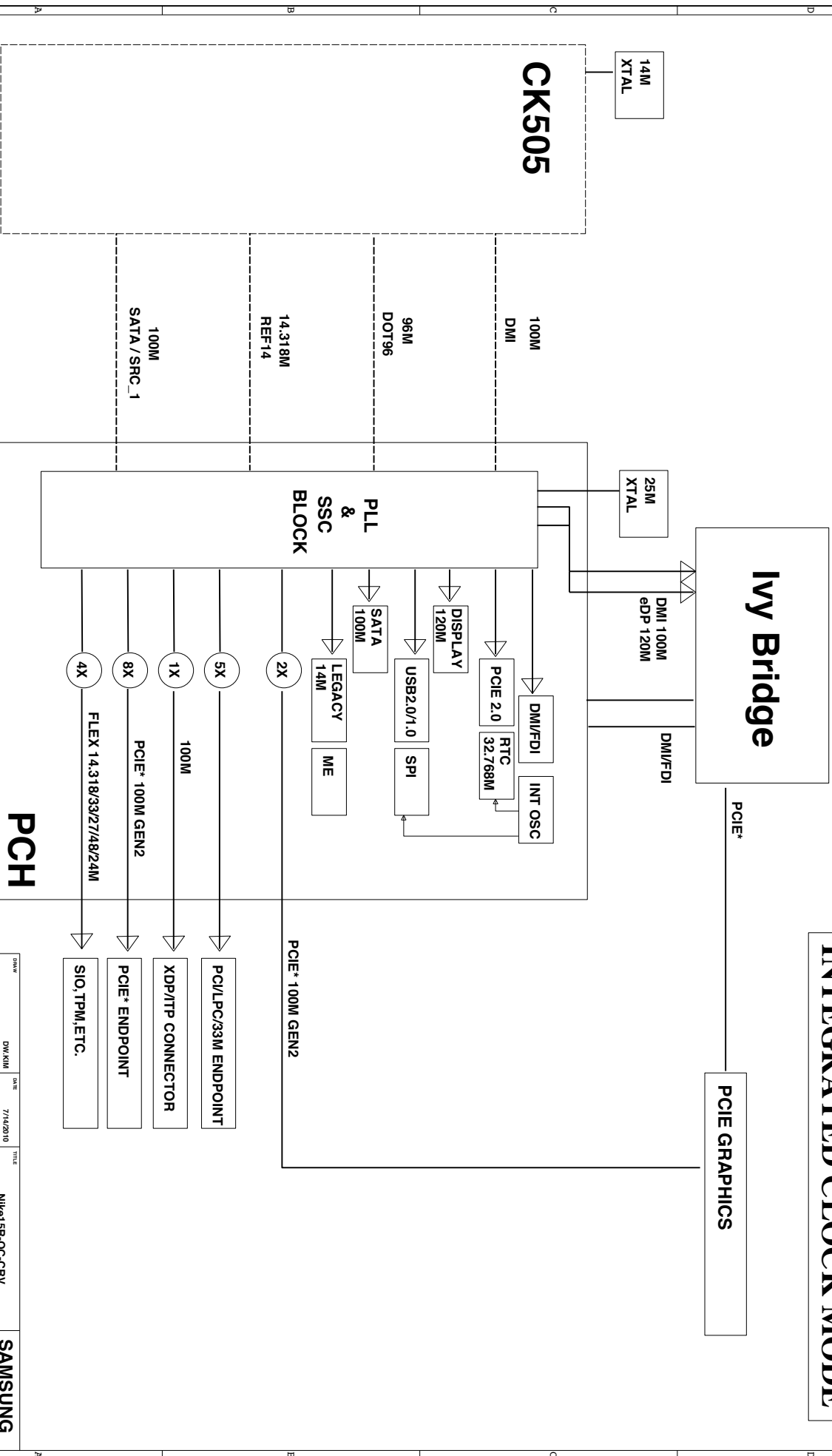
I ² C / SMB Address
Devices
Address
Hex
Bus
PANTHER POINT
CPU Thermal Sensor
0011 000X
30h
Master
SMBUS Master
Thermal Sensor
1010 000X
A0h
SODIMM
1010 010X
A4h
Thermal Sensor on SODIMM
1010 010X
A0h
Thermal Sensor on SODIMM
0011 010X
30h
Thermal Sensor on board DDR3 thermal Sensor
1001 100X
96h
Platform thermal management TS
1001 011X

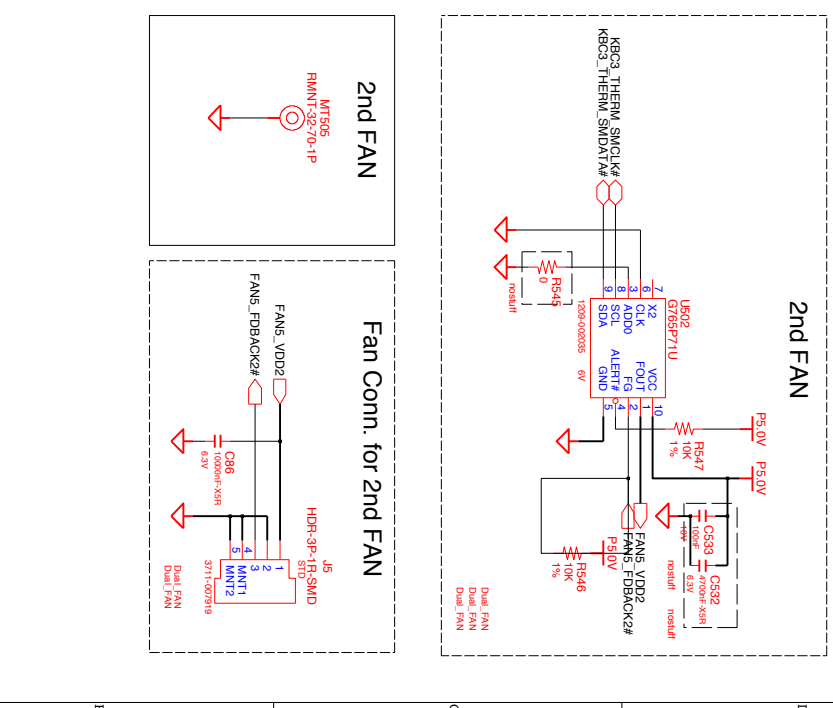
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7/14/2010	7/14/2010	Nike15R-OC-CHV	SAMSUNG
CHK	CHK	MAIN	ELECTRONICS
APPROVAL	REV	BOARD INFO	
WALLEE	REV 1.0		BA41-####A
MOBILE CODE	LAST EDIT	November 30, 2011 22:23:17 PM	PAGE 3 OF 66



CLOCK DISTRIBUTION INTEGRATED CLOCK MODE

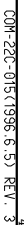
Rev. 1.0





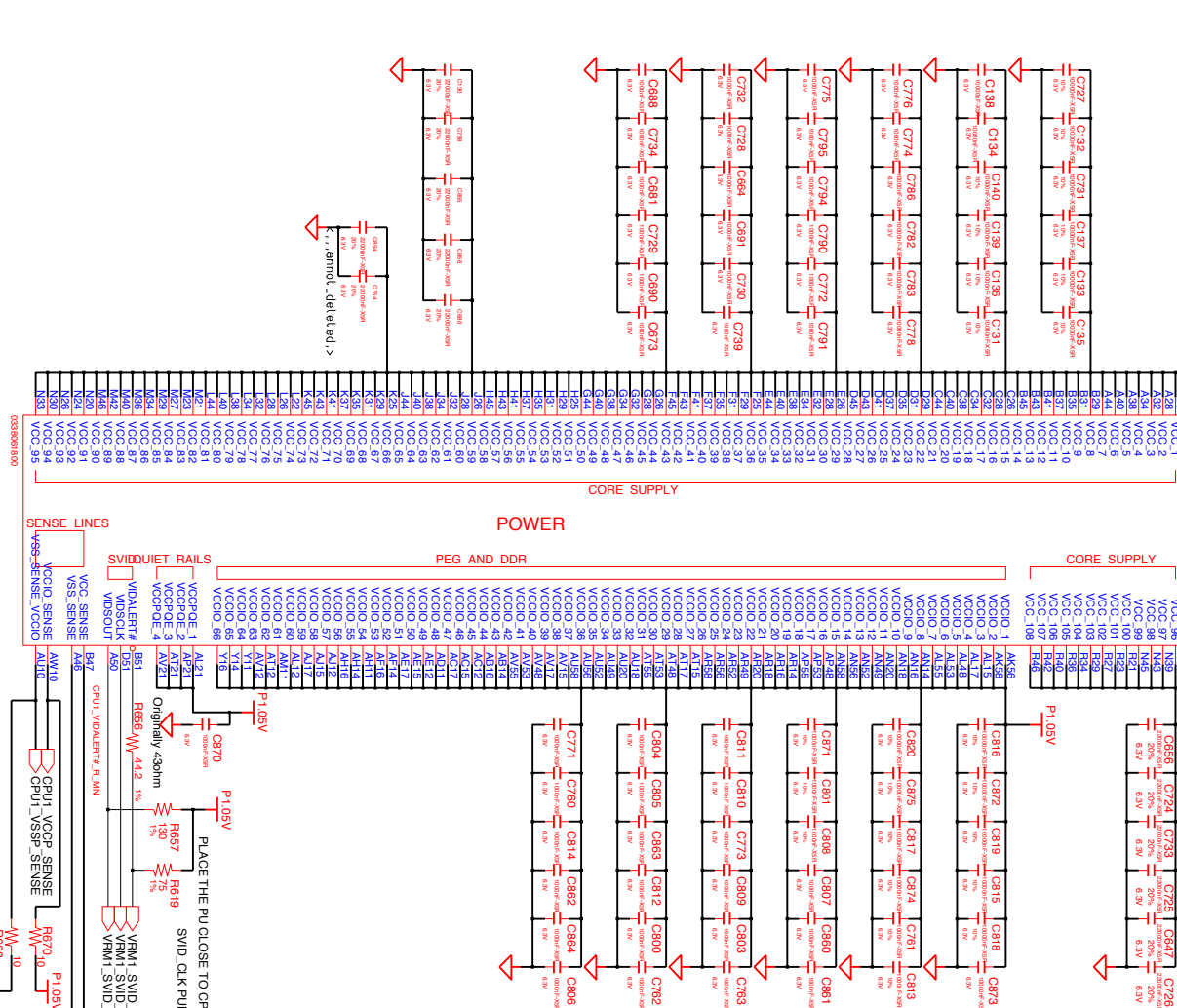
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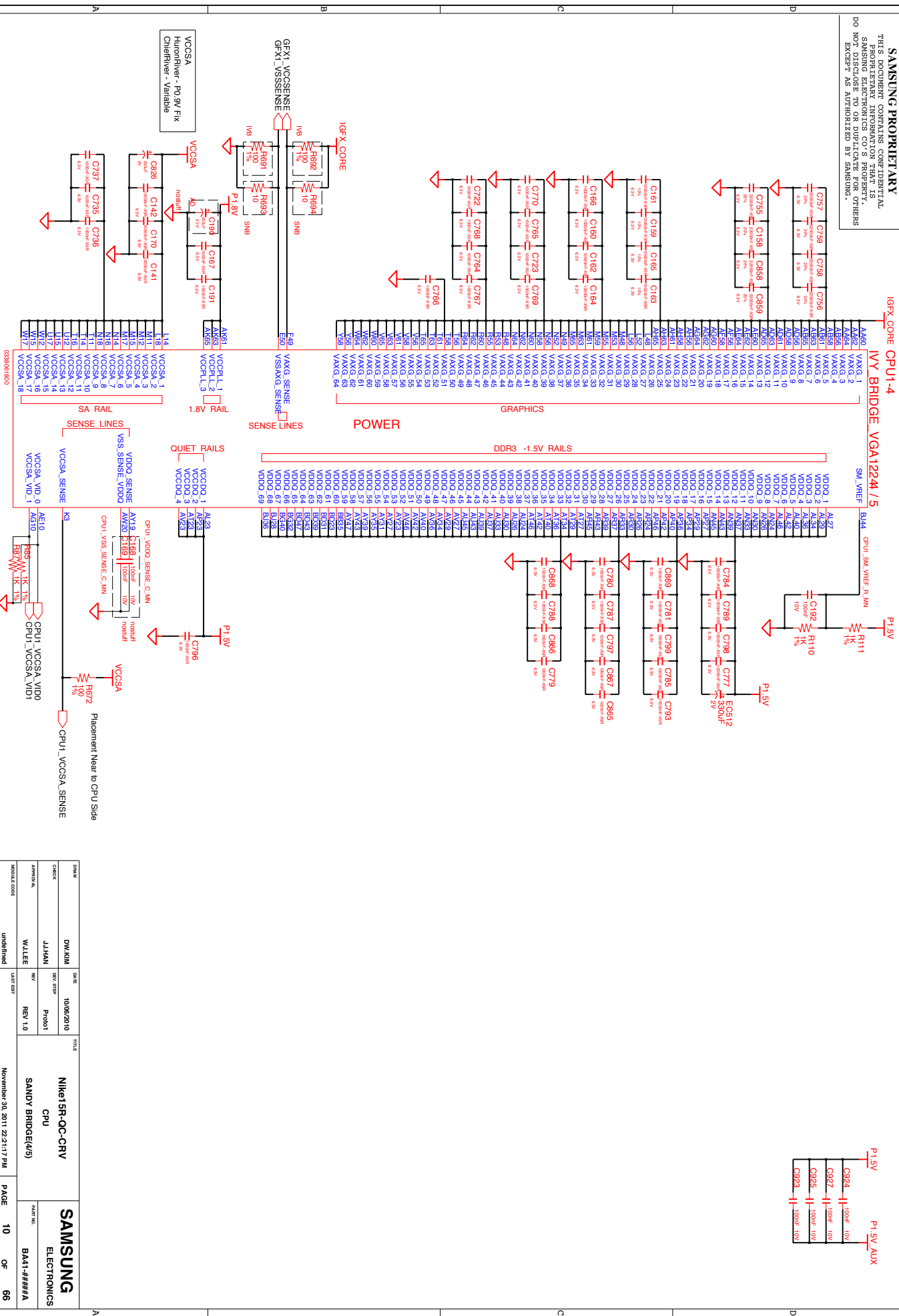




CPU CORE CPU1-3
IVY BRIDGE VGA1224/5

CPU CORE

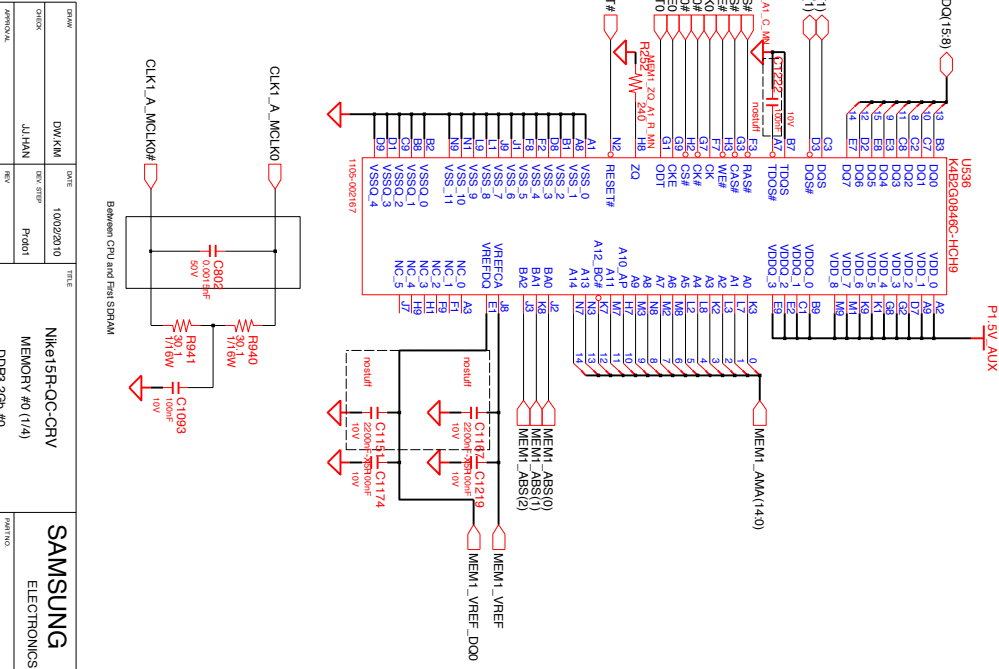




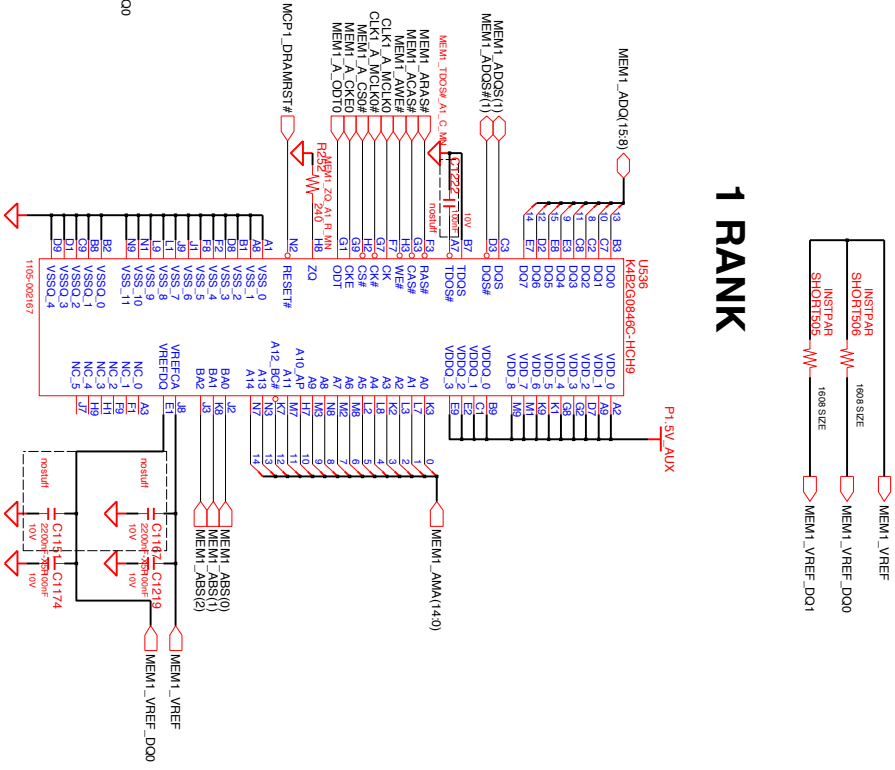
CPU1-5
I/OV BRIDGE VGB12P4

AV	VSS 1	VSS 61	A125	BE42	VSS 181	VSS 271	JE
AV2	VSS 2	VSS 62	A126	BE46	VSS 182	VSS 272	JE
AV3	VSS 3	VSS 63	A131	BE50	VSS 183	VSS 273	JE
AV4	VSS 4	VSS 64	A134	BE54	VSS 184	VSS 274	JE
AV5	VSS 5	VSS 65	A144	BE58	VSS 185	VSS 275	JE
AV6	VSS 6	VSS 66	A159	BE62	VSS 186	VSS 276	JE
AV7	VSS 7	VSS 67	A179	BE66	VSS 187	VSS 277	JE
AV8	VSS 8	VSS 68	A197	BE70	VSS 188	VSS 278	JE
AV9	VSS 9	VSS 69	A216	BE74	VSS 189	VSS 279	JE
AV10	VSS 10	VSS 70	A236	BE78	VSS 190	VSS 280	JE
AV11	VSS 11	VSS 71	A257	BE82	VSS 191	VSS 281	JE
AV12	VSS 12	VSS 72	A278	BE86	VSS 192	VSS 282	JE
AV13	VSS 13	VSS 73	A299	BE90	VSS 193	VSS 283	JE
AV14	VSS 14	VSS 74	A321	BE94	VSS 194	VSS 284	JE
AV15	VSS 15	VSS 75	A344	BE98	VSS 195	VSS 285	JE
AV16	VSS 16	VSS 76	A368	BE102	VSS 196	VSS 286	JE
AV17	VSS 17	VSS 77	A393	BE106	VSS 197	VSS 287	JE
AV18	VSS 18	VSS 78	A419	BE110	VSS 198	VSS 288	JE
AV19	VSS 19	VSS 79	A446	BE114	VSS 199	VSS 289	JE
AV20	VSS 20	VSS 80	A474	BE118	VSS 200	VSS 290	JE
AV21	VSS 21	VSS 81	A503	BE122	VSS 201	VSS 291	JE
AV22	VSS 22	VSS 82	A533	BE126	VSS 202	VSS 292	JE
AV23	VSS 23	VSS 83	A564	BE130	VSS 203	VSS 293	JE
AV24	VSS 24	VSS 84	A596	BE134	VSS 204	VSS 294	JE
AV25	VSS 25	VSS 85	A629	BE138	VSS 205	VSS 295	JE
AV26	VSS 26	VSS 86	A663	BE142	VSS 206	VSS 296	JE
AV27	VSS 27	VSS 87	A698	BE146	VSS 207	VSS 297	JE
AV28	VSS 28	VSS 88	A734	BE150	VSS 208	VSS 298	JE
AV29	VSS 29	VSS 89	A771	BE154	VSS 209	VSS 299	JE
AV30	VSS 30	VSS 90	A809	BE158	VSS 210	VSS 300	JE
AV31	VSS 31	VSS 91	A848	BE162	VSS 211	VSS 301	JE
AV32	VSS 32	VSS 92	A888	BE166	VSS 212	VSS 302	JE
AV33	VSS 33	VSS 93	A929	BE170	VSS 213	VSS 303	JE
AV34	VSS 34	VSS 94	A971	BE174	VSS 214	VSS 304	JE
AV35	VSS 35	VSS 95	A1014	BE178	VSS 215	VSS 305	JE
AV36	VSS 36	VSS 96	A1058	BE182	VSS 216	VSS 306	JE
AV37	VSS 37	VSS 97	A1103	BE186	VSS 217	VSS 307	JE
AV38	VSS 38	VSS 98	A1149	BE190	VSS 218	VSS 308	JE
AV39	VSS 39	VSS 99	A1196	BE194	VSS 219	VSS 309	JE
AV40	VSS 40	VSS 100	A1244	BE198	VSS 220	VSS 310	JE
AV41	VSS 41	VSS 101	A1293	BE202	VSS 221	VSS 311	JE
AV42	VSS 42	VSS 102	A1343	BE206	VSS 222	VSS 312	JE
AV43	VSS 43	VSS 103	A1394	BE210	VSS 223	VSS 313	JE
AV44	VSS 44	VSS 104	A1446	BE214	VSS 224	VSS 314	JE
AV45	VSS 45	VSS 105	A1500	BE218	VSS 225	VSS 315	JE
AV46	VSS 46	VSS 106	A1555	BE222	VSS 226	VSS 316	JE
AV47	VSS 47	VSS 107	A1611	BE226	VSS 227	VSS 317	JE
AV48	VSS 48	VSS 108	A1668	BE230	VSS 228	VSS 318	JE
AV49	VSS 49	VSS 109	A1726	BE234	VSS 229	VSS 319	JE
AV50	VSS 50	VSS 110	A1785	BE238	VSS 230	VSS 320	JE
AV51	VSS 51	VSS 111	A1845	BE242	VSS 231	VSS 321	JE
AV52	VSS 52	VSS 112	A1906	BE246	VSS 232	VSS 322	JE
AV53	VSS 53	VSS 113	A1968	BE250	VSS 233	VSS 323	JE
AV54	VSS 54	VSS 114	A2031	BE254	VSS 234	VSS 324	JE
AV55	VSS 55	VSS 115	A2095	BE258	VSS 235	VSS 325	JE
AV56	VSS 56	VSS 116	A2160	BE262	VSS 236	VSS 326	JE
AV57	VSS 57	VSS 117	A2226	BE266	VSS 237	VSS 327	JE
AV58	VSS 58	VSS 118	A2293	BE270	VSS 238	VSS 328	JE
AV59	VSS 59	VSS 119	A2361	BE274	VSS 239	VSS 329	JE
AV60	VSS 60	VSS 120	A2430	BE278	VSS 240	VSS 330	JE
AV61	VSS 61	VSS 121	A2500	BE282	VSS 241	VSS 331	JE
AV62	VSS 62	VSS 122	A2571	BE286	VSS 242	VSS 332	JE
AV63	VSS 63	VSS 123	A2643	BE290	VSS 243	VSS 333	JE
AV64	VSS 64	VSS 124	A2716	BE294	VSS 244	VSS 334	JE
AV65	VSS 65	VSS 125	A2790	BE298	VSS 245	VSS 335	JE
AV66	VSS 66	VSS 126	A2865	BE302	VSS 246	VSS 336	JE
AV67	VSS 67	VSS 127	A2941	BE306	VSS 247	VSS 337	JE
AV68	VSS 68	VSS 128	A3018	BE310	VSS 248	VSS 338	JE
AV69	VSS 69	VSS 129	A3096	BE314	VSS 249	VSS 339	JE
AV70	VSS 70	VSS 130	A3175	BE318	VSS 250	VSS 340	JE
AV71	VSS 71	VSS 131	A3255	BE322	VSS 251	VSS 341	JE
AV72	VSS 72	VSS 132	A3336	BE326	VSS 252	VSS 342	JE
AV73	VSS 73	VSS 133	A3418	BE330	VSS 253	VSS 343	JE
AV74	VSS 74	VSS 134	A3501	BE334	VSS 254	VSS 344	JE
AV75	VSS 75	VSS 135	A3585	BE338	VSS 255	VSS 345	JE
AV76	VSS 76	VSS 136	A3670	BE342	VSS 256	VSS 346	JE
AV77	VSS 77	VSS 137	A3756	BE346	VSS 257	VSS 347	JE
AV78	VSS 78	VSS 138	A3843	BE350	VSS 258	VSS 348	JE
AV79	VSS 79	VSS 139	A3931	BE354	VSS 259	VSS 349	JE
AV80	VSS 80	VSS 140	A4020	BE358	VSS 260	VSS 350	JE
AV81	VSS 81	VSS 141	A4110	BE362	VSS 261	VSS 351	JE
AV82	VSS 82	VSS 142	A4201	BE366	VSS 262	VSS 352	JE
AV83	VSS 83	VSS 143	A4293	BE370	VSS 263	VSS 353	JE
AV84	VSS 84	VSS 144	A4386	BE374	VSS 264	VSS 354	JE
AV85	VSS 85	VSS 145	A4480	BE378	VSS 265	VSS 355	JE
AV86	VSS 86	VSS 146	A4575	BE382	VSS 266	VSS 356	JE
AV87	VSS 87	VSS 147	A4671	BE386	VSS 267	VSS 357	JE
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AV90	VSS 90	VSS 150	A4965	BE398	VSS 270	VSS 360	JE
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AV92	VSS 92	VSS 152	A5166	BE406	VSS 272	VSS 362	JE
AV93	VSS 93	VSS 153	A5268	BE410	VSS 273	VSS 363	JE
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AV100	VSS 100	VSS 160	A6006	BE438	VSS 280	VSS 370	JE
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AV108	VSS 108	VSS 168	A6906	BE470	VSS 288	VSS 378	JE
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AV111	VSS 111	VSS 171	A7260	BE482	VSS 291	VSS 381	JE
AV112	VSS 112	VSS 172	A7380	BE486	VSS 292	VSS 382	JE
AV113	VSS 113	VSS 173	A7501	BE490	VSS 293	VSS 383	JE
AV114	VSS 114	VSS 174	A7623	BE494	VSS 294	VSS 384	JE
AV115	VSS 115	VSS 175	A7746	BE498	VSS 295	VSS 385	JE
AV116	VSS 116	VSS 176	A7870	BE502	VSS 296	VSS 386	JE
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AV120	VSS 120	VSS 180	A8376	BE518	VSS 300	VSS 390	JE
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AV122	VSS 122	VSS 182	A8635	BE526	VSS 302	VSS 392	JE
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AV125	VSS 125	VSS 185	A9031	BE538	VSS 305	VSS 395	JE
AV126	VSS 126	VSS 186	A9165	BE542	VSS 306	VSS 396	JE
AV127	VSS 127	VSS 187	A9300	BE546	VSS 307	VSS 397	JE
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AV146	VSS 146	VSS 206	A12335	BE622	VSS 326	VSS 416	JE
AV147	VSS 147	VSS 207	A12510	BE626	VSS 327	VSS 417	JE
AV148	VSS 148	VSS 208	A12686	BE630	VSS 328	VSS 418	JE
AV149	VSS 149	VSS 209	A12863	BE634	VSS 329	VSS 419	JE
AV150	VSS 150	VSS 210	A13041	BE638	VSS 330	VSS 420	JE
AV151	VSS 151	VSS 211	A13220	BE642	VSS 331	VSS 421	JE
AV152	VSS 152	VSS 212	A13400	BE646	VSS 332	VSS 422	JE
AV153	VSS 153	VSS 213	A13581	BE650	VSS 333	VSS 423	JE
AV154	VSS 154	VSS 214	A13763	BE654	VSS 334	VSS 424	JE
AV155	VSS 155	VSS 215	A13946	BE658	VSS 335	VSS 425	JE
AV156	VSS 156	VSS 216	A14130	BE662	VSS 336	VSS 426	JE
AV157	VSS 157	VSS 217	A14315	BE666	VSS 337	VSS 427	JE
AV158	VSS 158	VSS 218	A14501	BE670	VSS 338	VSS 428	JE
AV159	VSS 159	VSS 219	A14688	BE674	VSS 339	VSS 429	JE
AV160	VSS 160	VSS 220	A14876	BE678	VSS 340	VSS 430	JE
AV161	VSS 161	VSS 221	A15065	BE682	VSS 341	VSS 431	JE
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AV163							

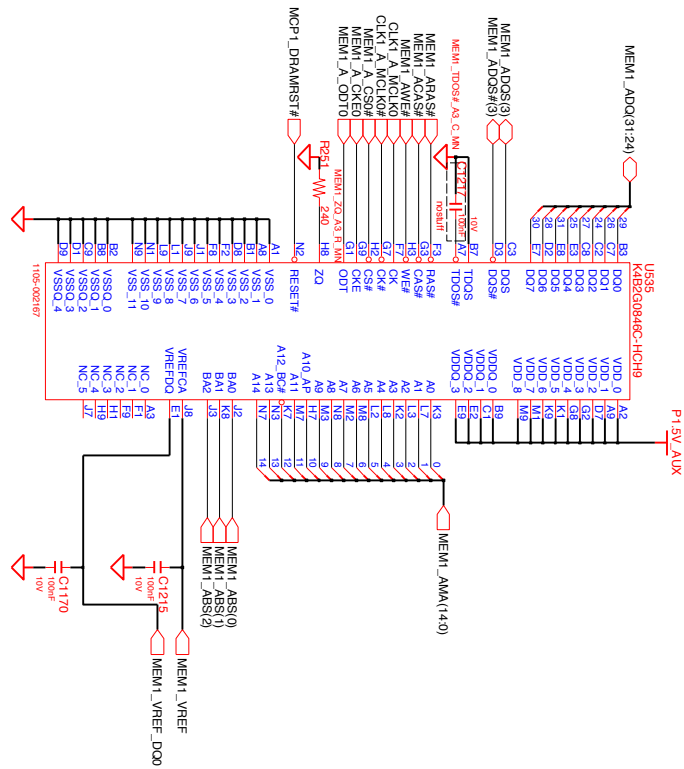
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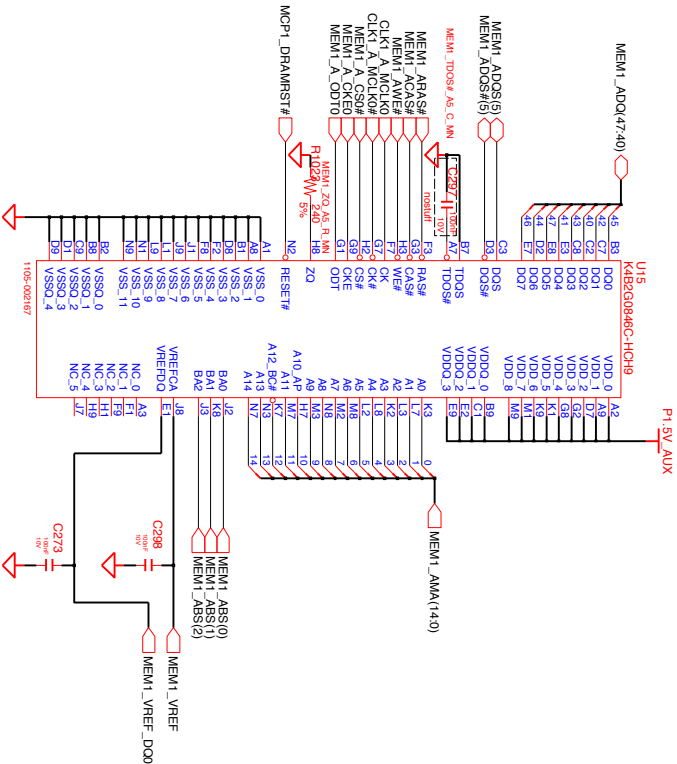


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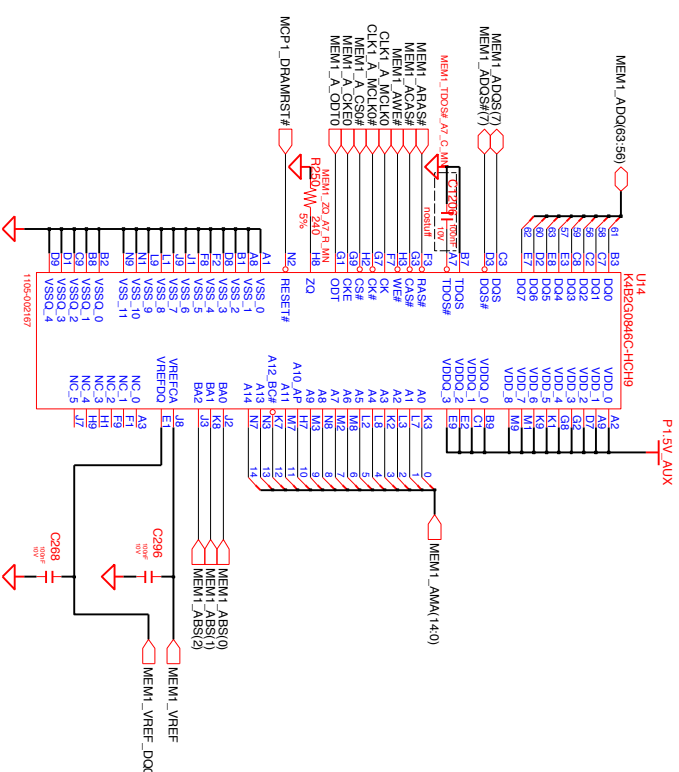
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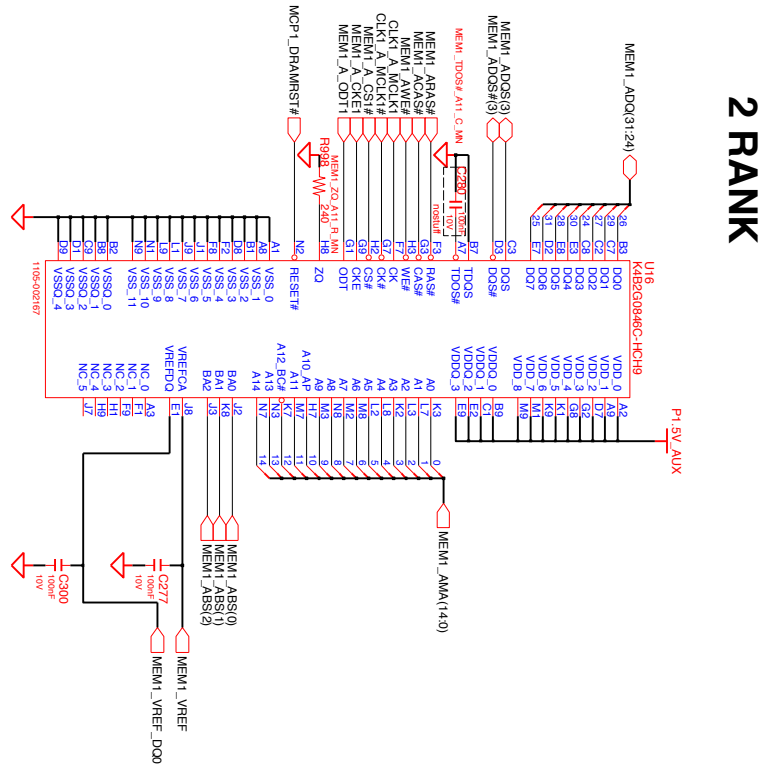


NAME	DATE	TITLE	SAMSUNG ELECTRONICS	
DESIGN	10/02/2010	NIKE15R-QC-CRV	PART NO	BA41-####A
CHIEF	DRY GRP	MEMORY #0 (3/4)		
APPROVA	REV	DDH3 ZCB #0		
MOD CODE	REV 1.0			
unfilled	DATE EDIT	November 30, 2011 22:21:17 PM	PAGE 14	OF 66

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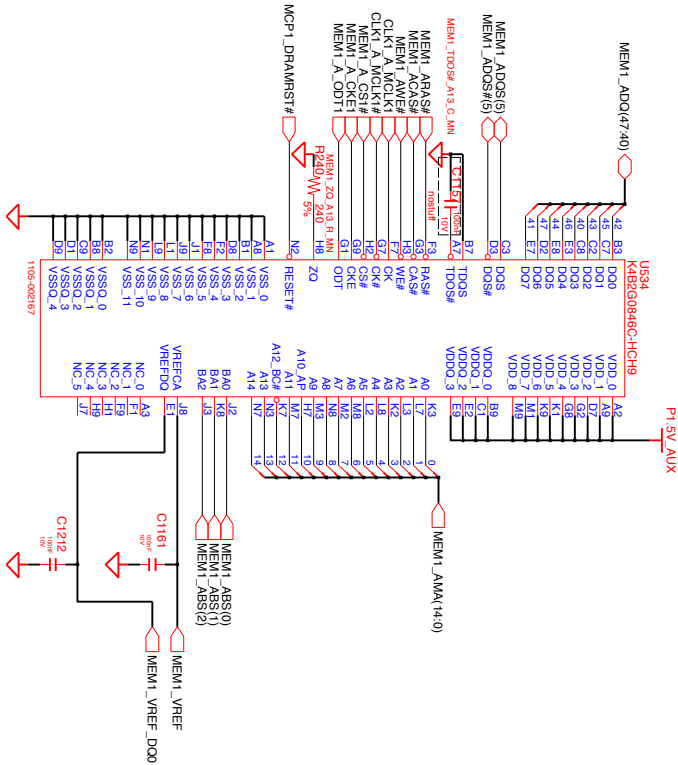


DATE	DATE	FIG. #	SAMSUNG ELECTRONICS Part No. BAA1-####A
CHKD	DW/KN	10022010	
CRKCD	JL HAN	REV. 2/89 P-2001	
APPROVAL	REV	REV 1.0	
MODULE CODE	WJLEE		
LAST EDIT		November 20, 2011 12:21:17 PM	PAGE 15 OF 66

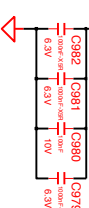


DATE	DATE	TIME	SAMSUNG ELECTRONICS
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CHICK	DRY REP	P-001	
APPROVAL	REV	REV 1.0	
MODEL CODE	LAST EDIT		
unfilled	unfilled	November 30, 2011 22:21:17 PM	PAGE 17 OF 66

2 RANK



DATE	10/22/2010	TIME	SAMSUNG		
NAME	DW KIM		ELECTRONICS		
CHICK	DRY STEP	Pr601	MEMORY #0 2BAKK(4)		
APPROVAL	REV	REV 1.0	DDB3 ZGP #0		
MODEL CODE	LATEST		PAGE	18	OF 66
undfilled	November 30, 2011 22:11:17 PM				

P1.5V_AUX

Place near SO-DIMM1

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NO REBOOT STRAP

DISABLED: LOW DEFAULT
ENABLED: HIGH

PANTHER POINT

U9-1

RTIC1

RTIC2

RTIC3

RTIC4

RTIC5

RTIC6

RTIC7

RTIC8

RTIC9

RTIC10

RTIC11

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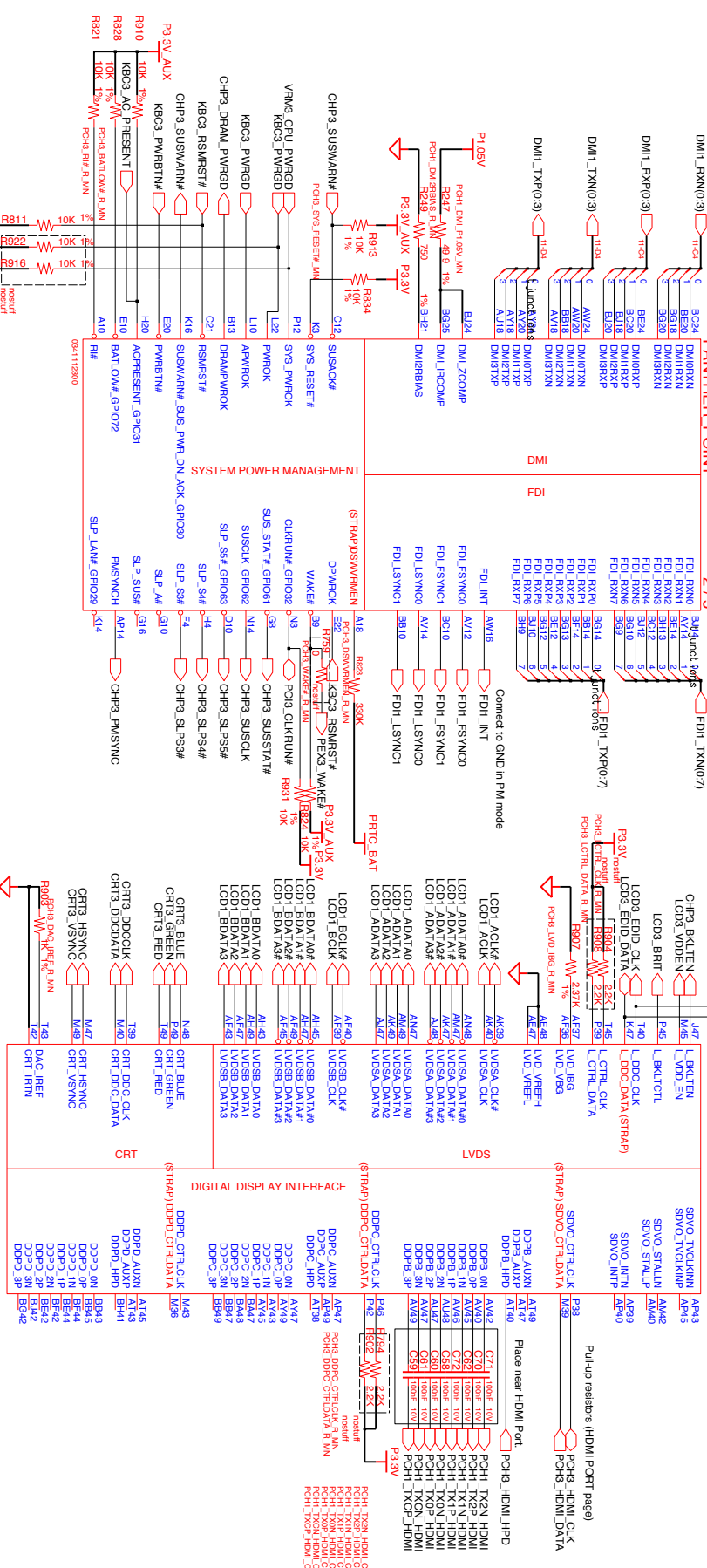
RTIC276

RTIC277

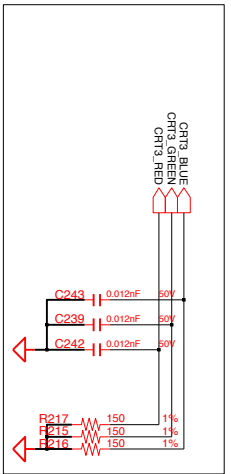
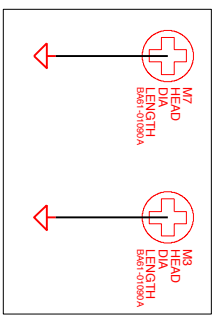
RTIC278

U9-2
PANTHER POINT

2/5



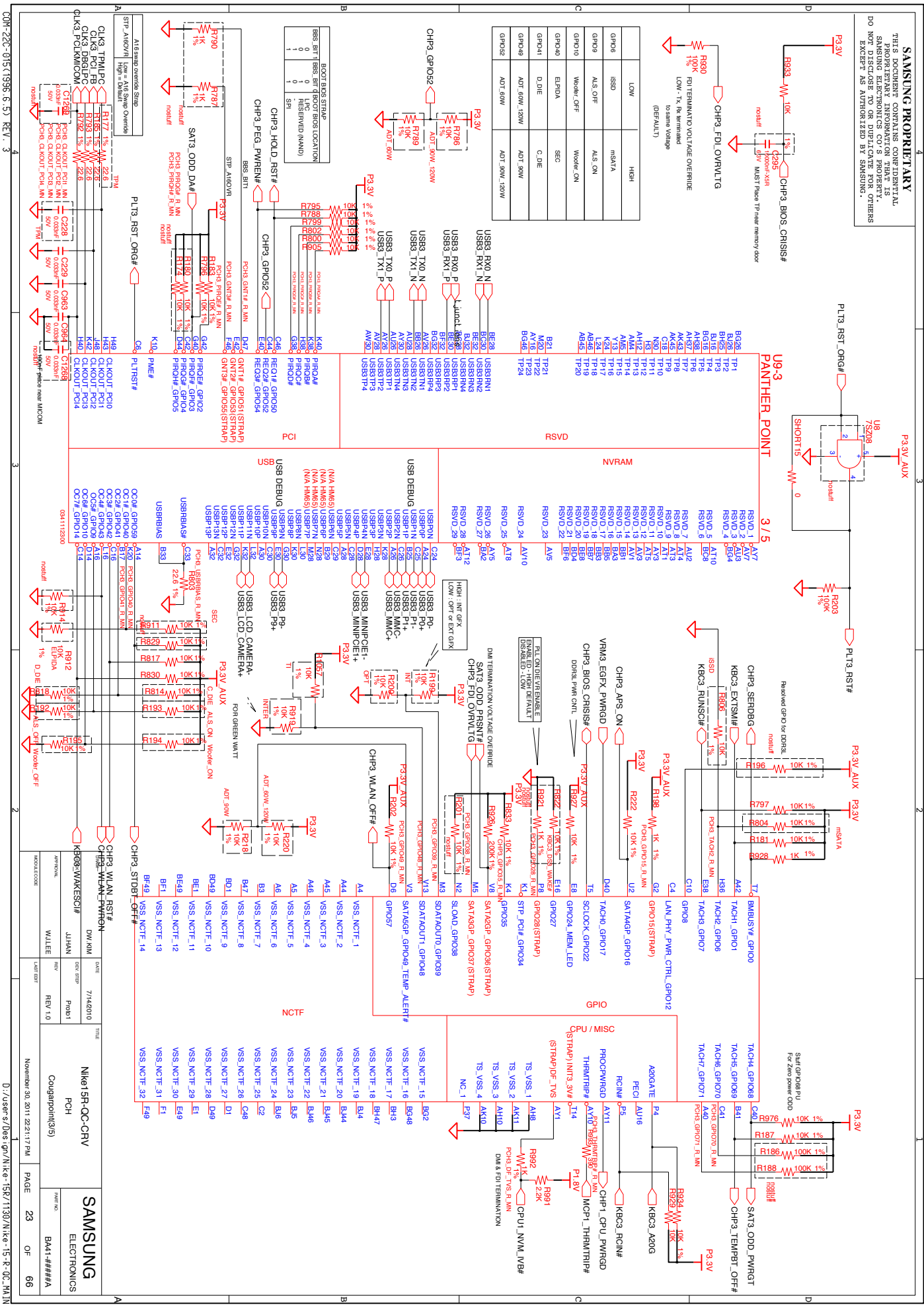
PCH Thermal



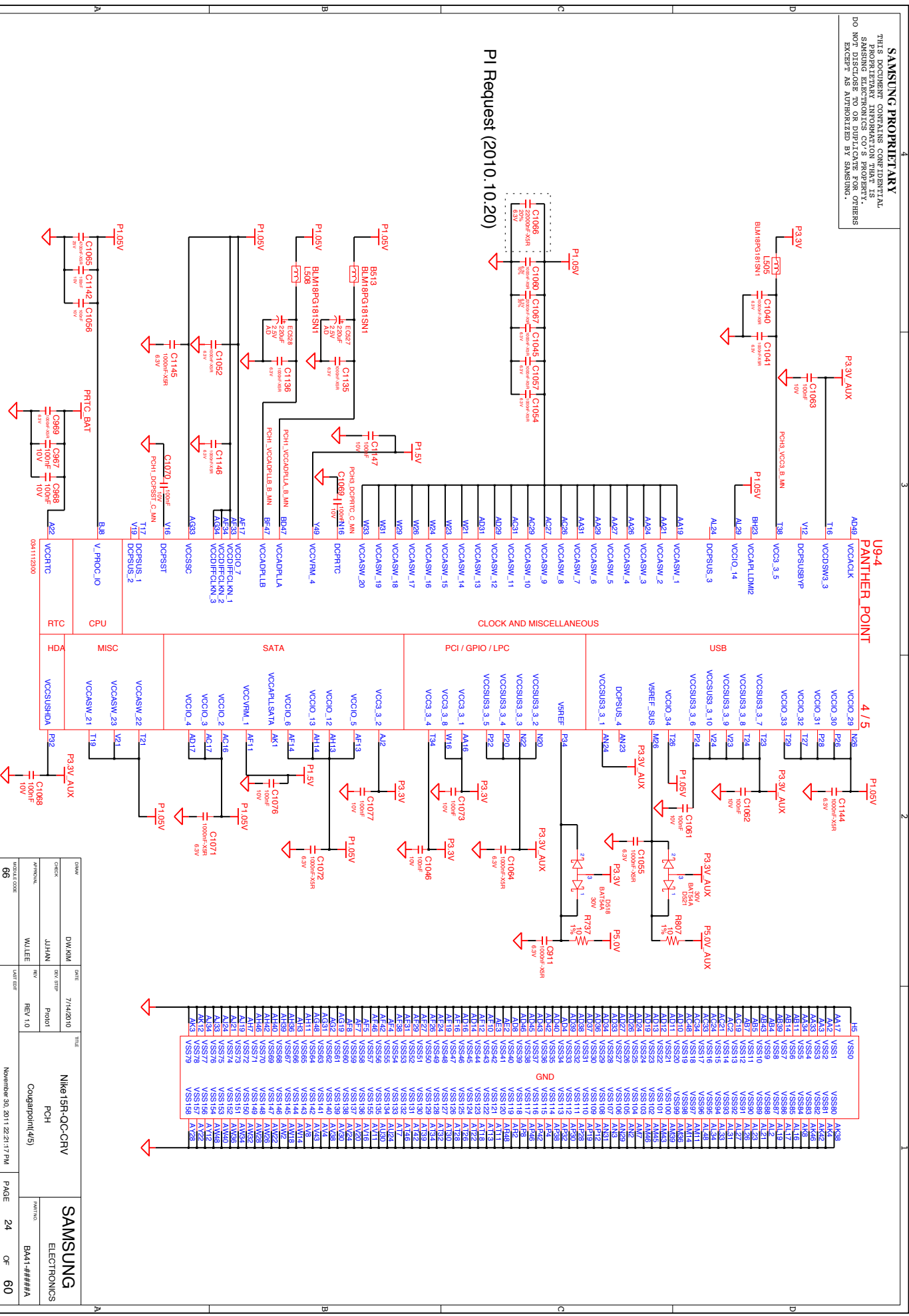
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2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0
2010/11/17	10:10	U9-2	U9-2	1.0	2010/11/17	10:10	U9-2	U9-2	1.0

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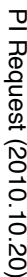
P1 Request (2010.10.20)



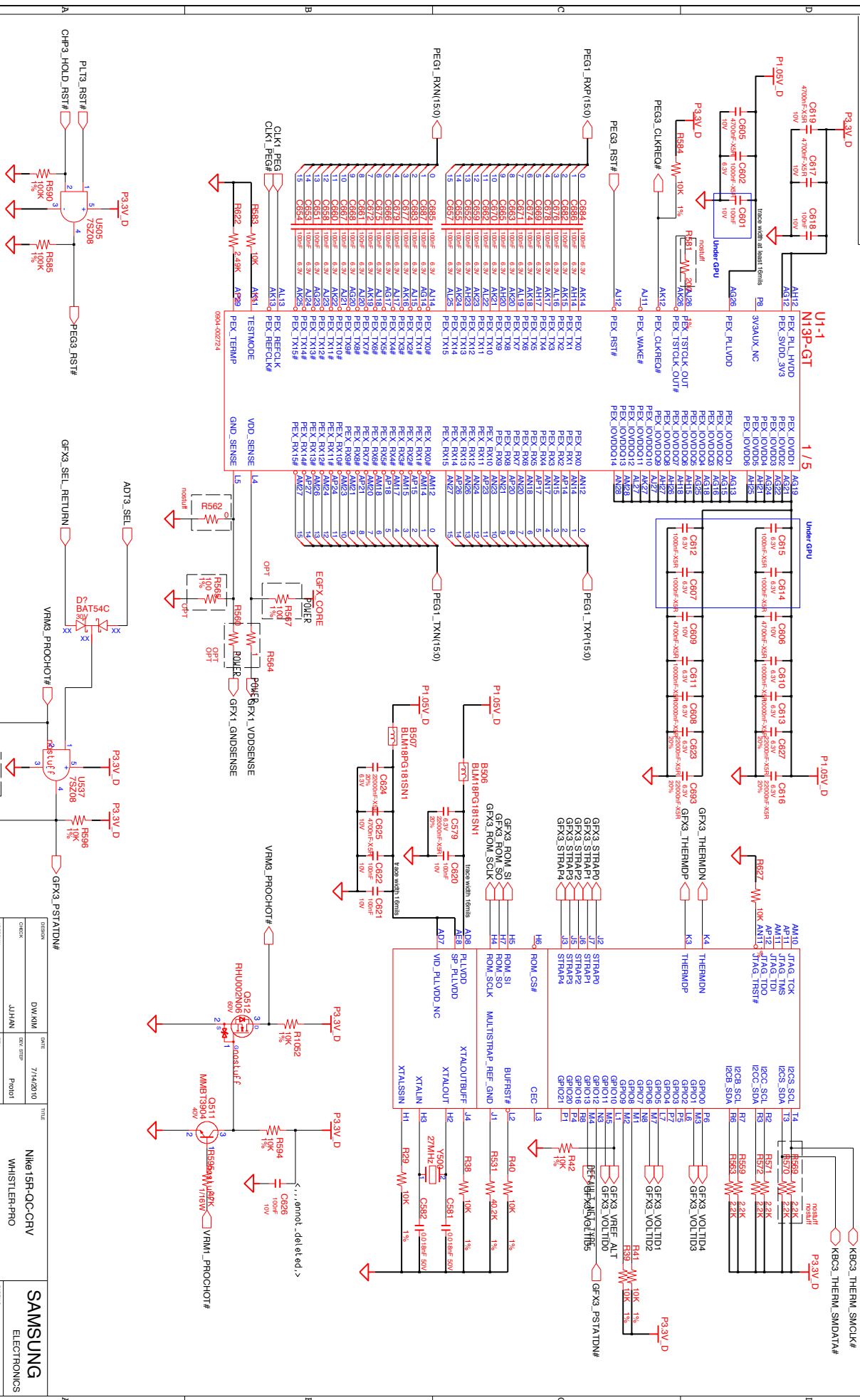
DATE	7/14/2010	TITLE	Nike15R-OC-GRV	SAMSUNG
DESIGNER	DW/KIM	REV	STEP	ELECTRONICS
APPROVAL	JJ/HAN	REV	PROJ	
WILEE	REV 1.0		Outpoint(4/5)	BA11####A
DATE	November 30, 2011 22:21:17 PM	PAGE	24	OF 60

U9-5

This power share with thermal sensor



DRAW	DATE	TITLE
DW.KIM	7/14/2010	Nike15R-QC-CRV

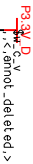




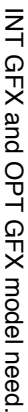
SAMPLING



SAMSUNG ELECTRONICS		TITLE	
DESIGN NO.	BA41-####A	DATE	7/14/2010
REV.		REV. STEP	Proto1
DESIGNER		REV. 1.0	
DATE	November 30, 2011 22:21:17 PM		

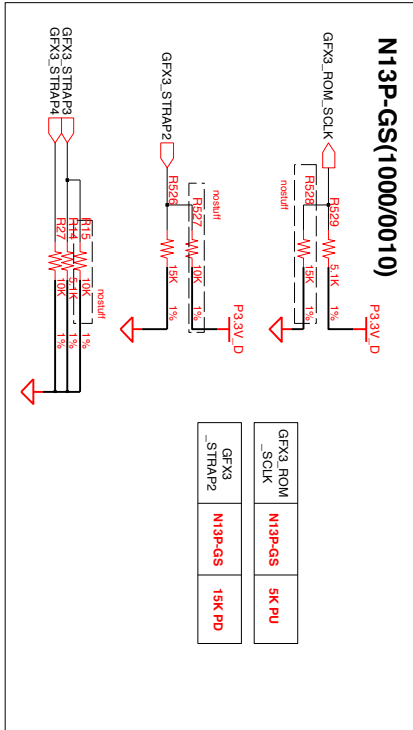
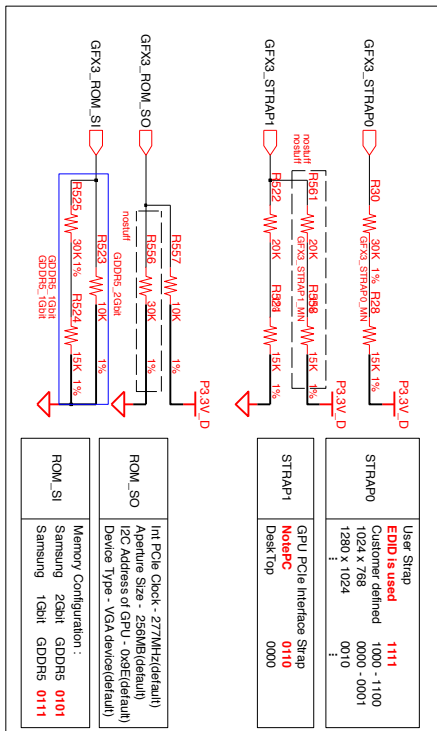


DATE	7/14/2010	TITLE	SAMSUNG ELECTRONICS			
ENV. STEP	Proto1		Nile15R-QC-CRV WHISTLER-PRO			
ENV.			PART NO BAA1-####A			
REV	REV 1.0		WHISTLER-PRO (4/5)			
LAST EDIT	November 30, 2011 5:21:17 PM		PAGE	30	OF	66



N13x STRAP

Function Straps



RESISTOR	PULL UP	PULL DOWN
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

STRAP PIN	BIT 3	BIT 2	BIT 1	BIT0
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	3GIO_PADC[9]	3GIO_PADC[9]	3GIO_PADC[1]	3GIO_PADC[0]
ROM_SO	XCLK 417	FB 0 BAR SIZE	SMB ALT_ADDR	VGA_DEVICE
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
STRAP2	PCI_DEVICE[3]	PCI_DEVICE[2]	PCI_DEVICE[1]	PCI_DEVICE[0]
ROM_SCLK	PCI_DEVICE[4]	SUB_VENDOR	SLOT_CLK_CPG	PEX_PULL_EN_TERM

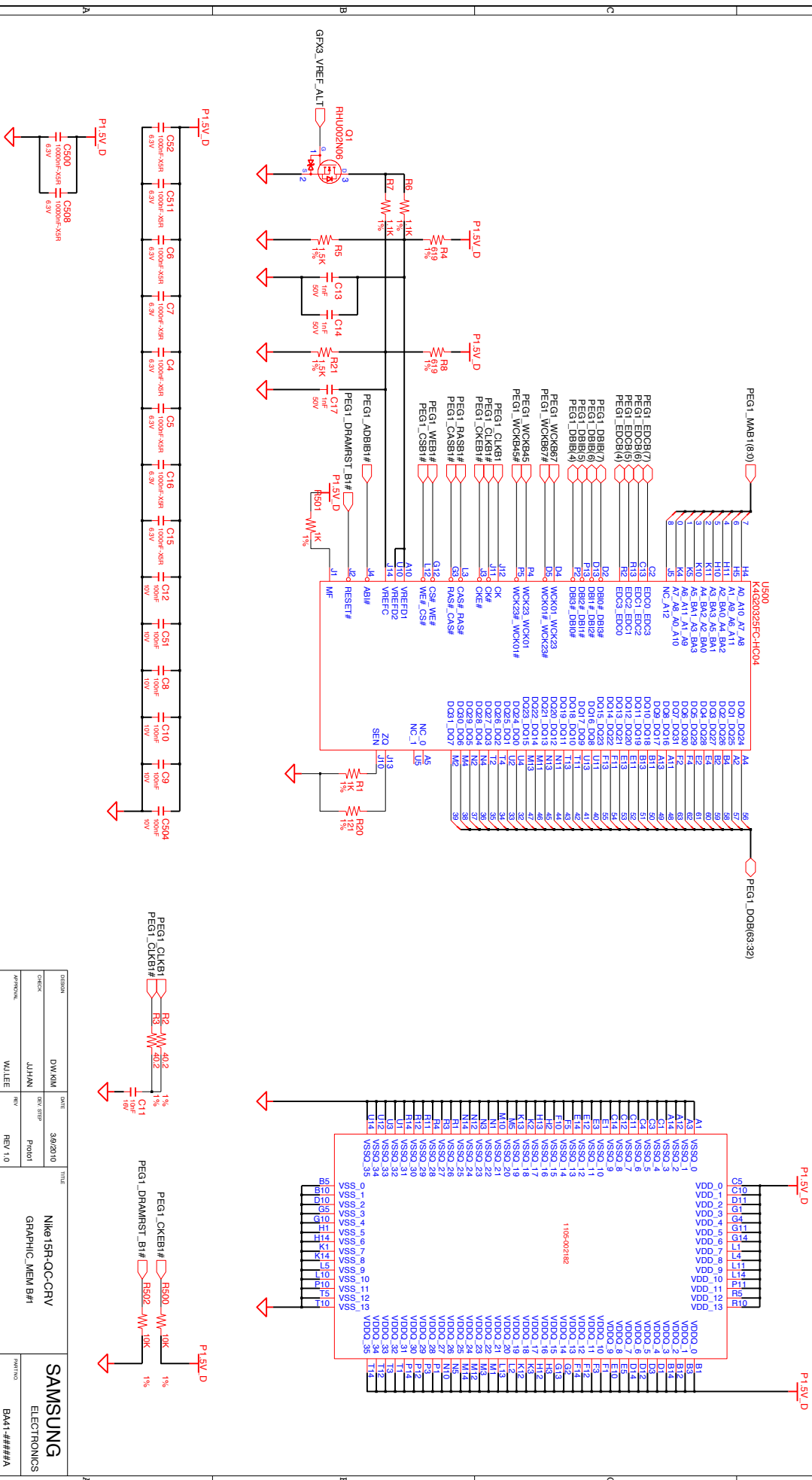
DESIGN	DATE	TITLE	SAMSUNG
DESIGN	DW/KM	7/14/2010	NIKE15R-QC-GRV
CHECK	JJ/HAN	REV 010	GRAPHIC STRAP
APPROVAL	WJLEE	REV 1.0	GRAPHIC STRAP
MOBILE CODE	LAST EDIT	November 30, 2011 22:21:17 PM	PAGE 32 OF 66



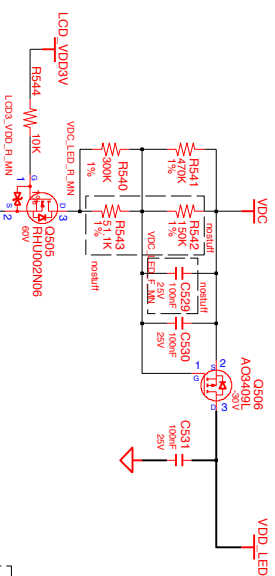


COM-22C-015 (1936, 6, 5) REV. 3	4
	3
	2
D:\user\Design\ntake 1591\130Nae-15-H-QC_MAIN	1

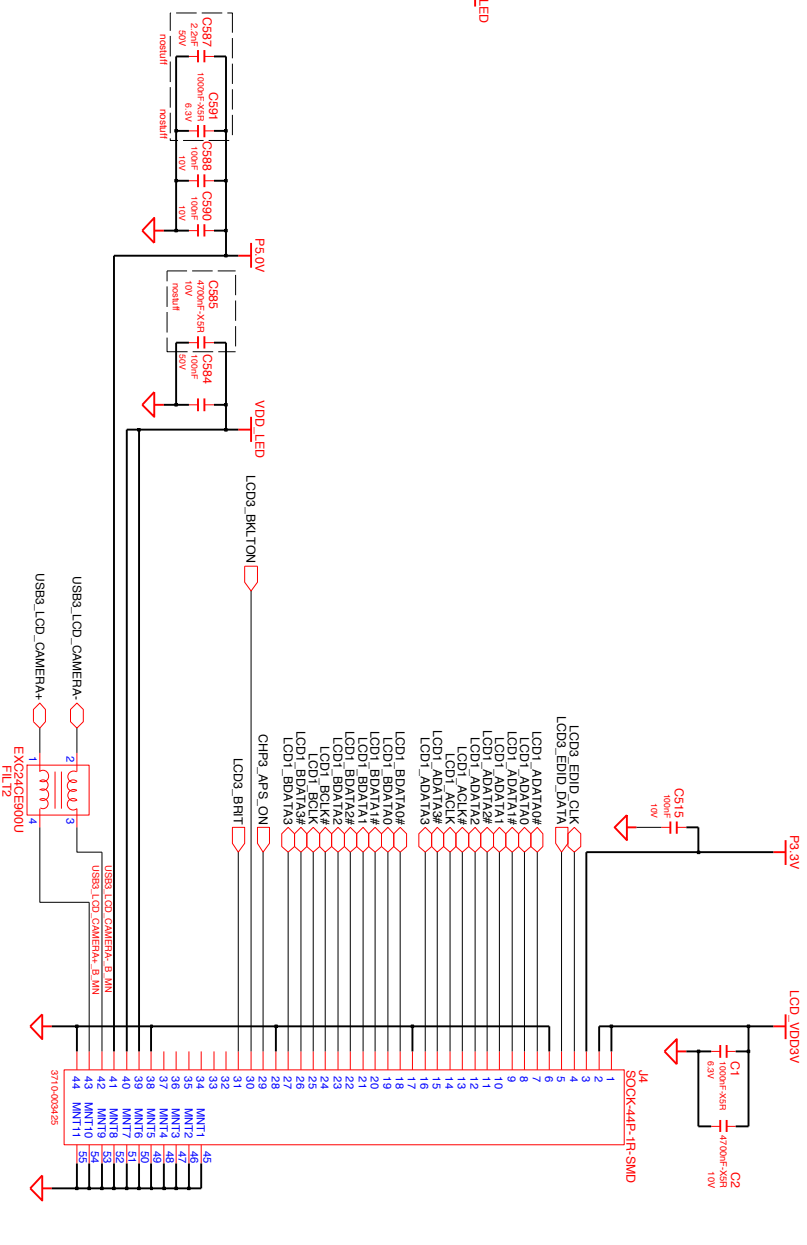
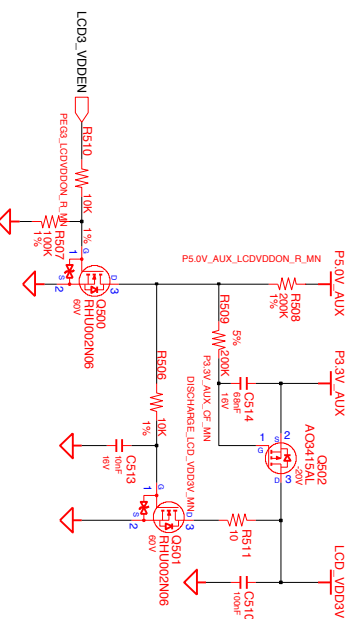




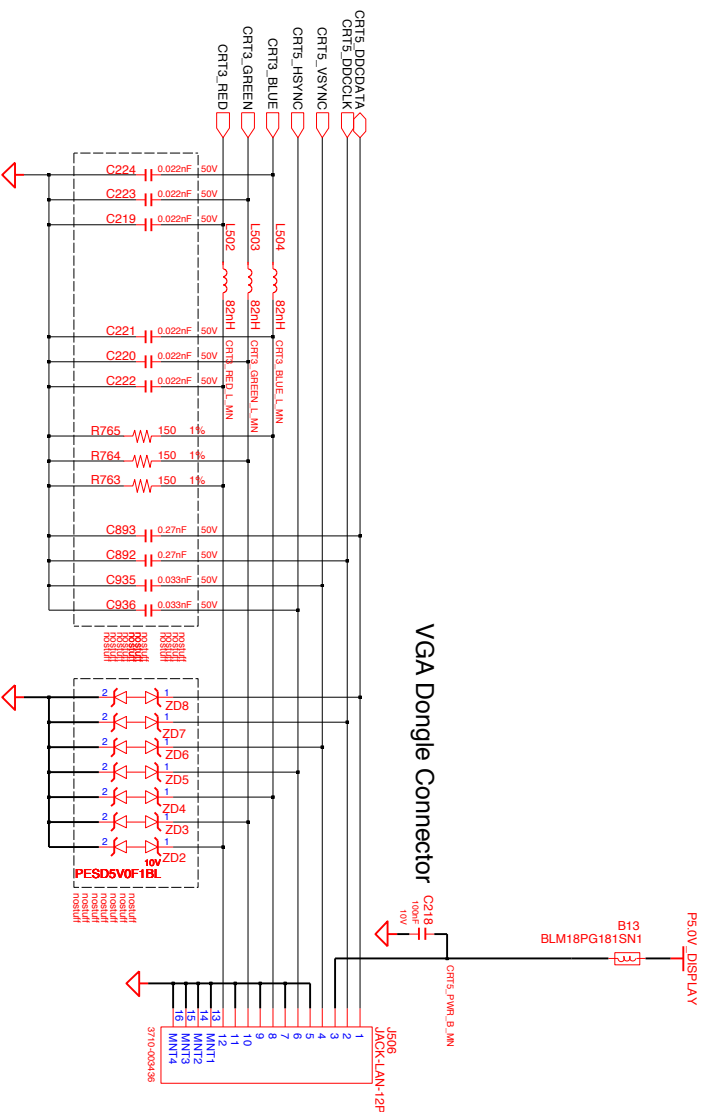
LED Power



EBL Purpose



DESIGN	DATE	TITLE	SAMSUNG	
DW/KIM	7/14/2010	NI615R-OC-CRV	ELECTRONICS	
CHUCK	REV. STEP	GRAPHICS, I/F		
APPROVAL	REV	LVD5 / CAMERA	PART NO.	BA41-####A
WALLE	REV 1.0			
MODULE CODE	LAYER EDIT	November 30, 2011 12:24:17 PM	PAGE 37	OF 66



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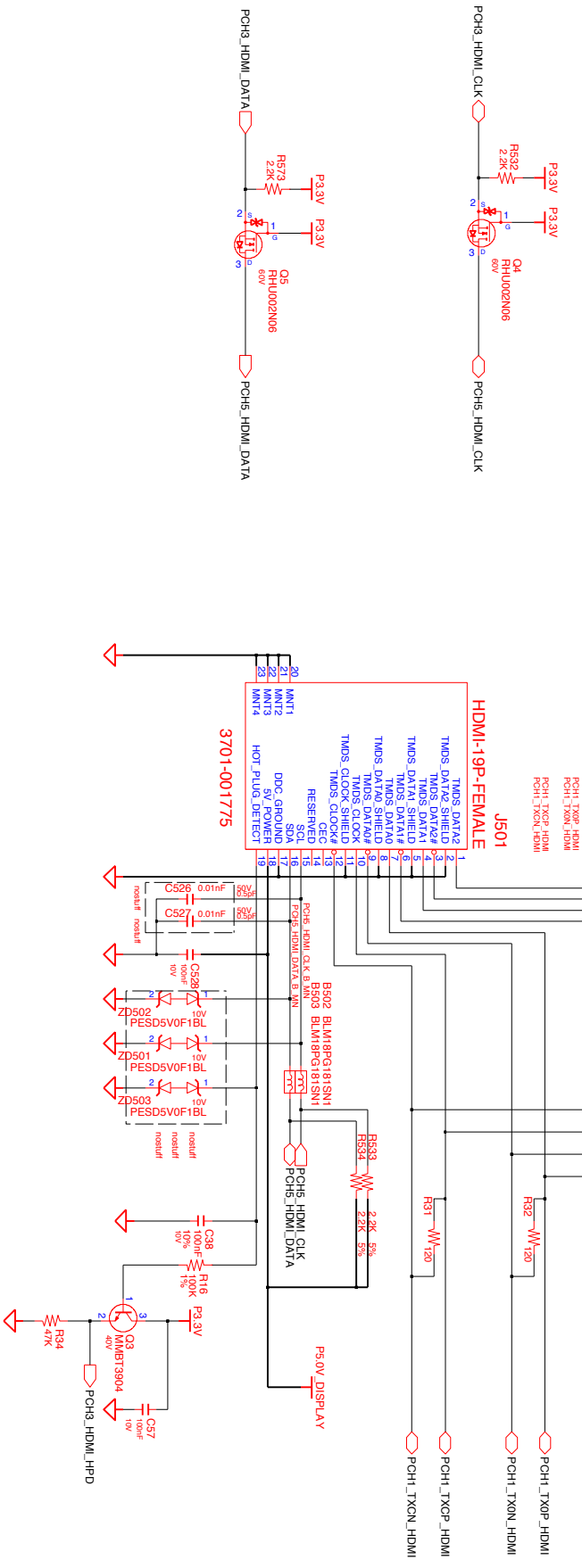
HDMI Graphic

After checking, Houston need to use CMC for each signal.
(EMC request at 2010.04.15)

STANDARD NET NAME

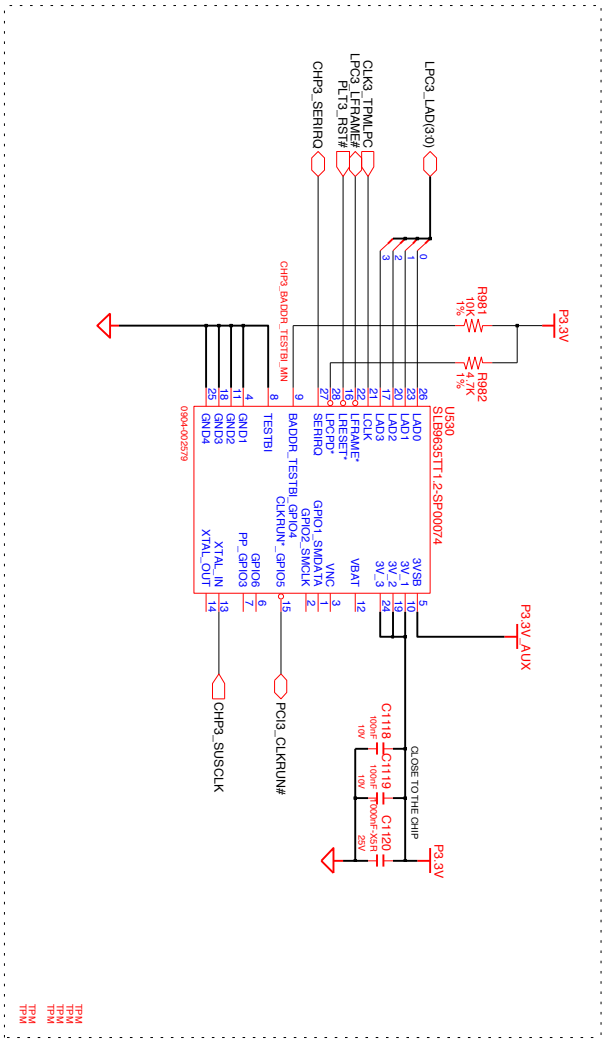
Display from PCH	Display from GPU
PCH3_HDMI_XXX	PEG3_HDMI_XXX
PCH1_XXX_HDMI	PEG3_XXX_HDMI

FOR HDMI VERIFICATION TEST



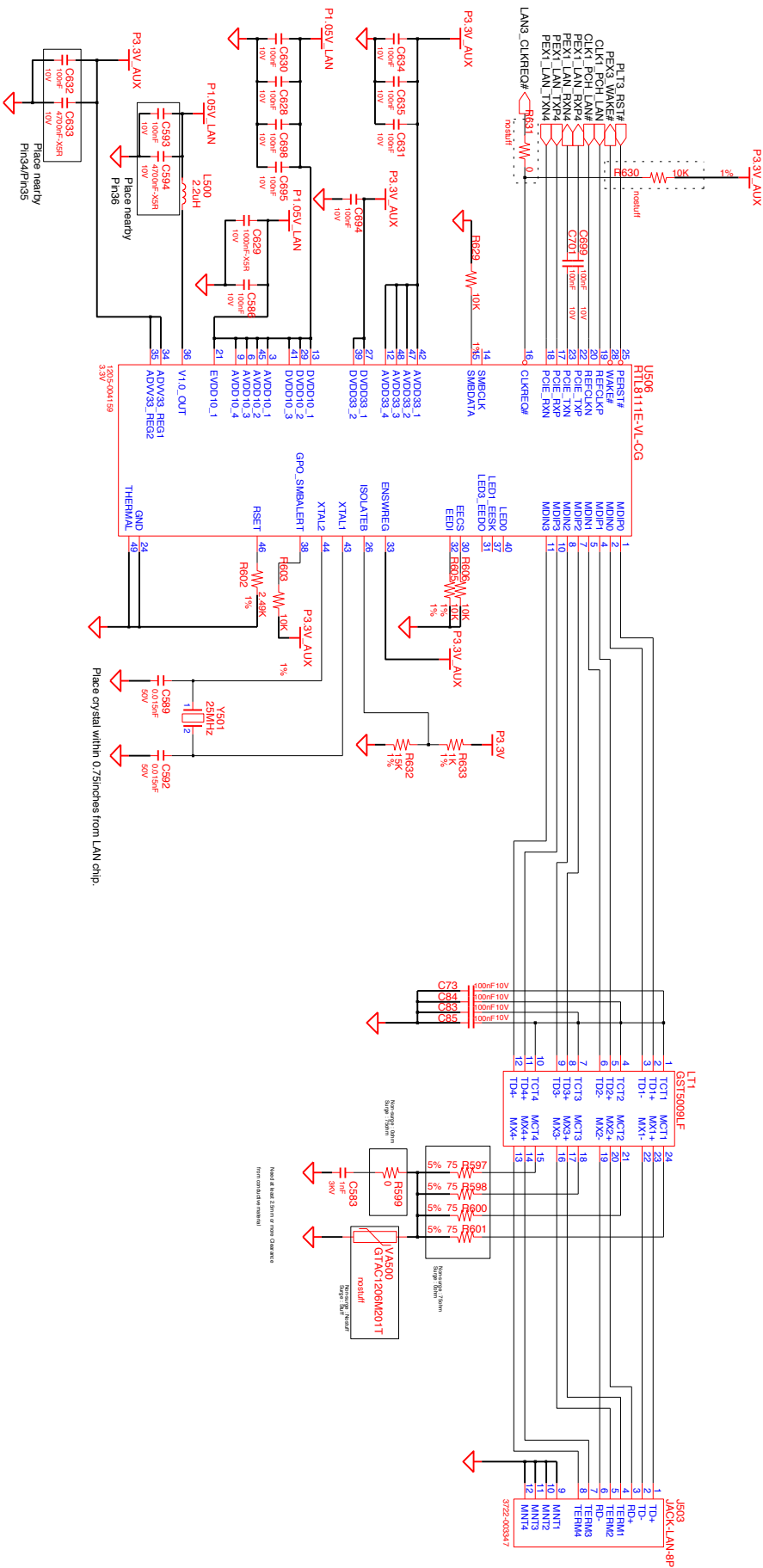


TPM1.2

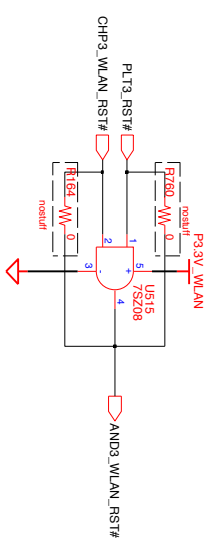
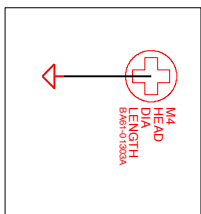
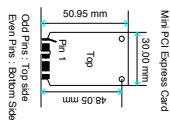
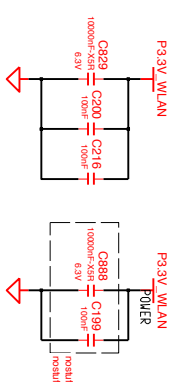


DESIGN	DW/KIM	DATE	7/14/2010	TITLE	Nike15R-OC-CHV	SAMSUNG
CHECK	J.J.HAN	REV. STEP	Proto1		TPM	ELECTRONICS
APPROVAL	WALLEE	REV	REV 1.0		TPM	BA41-####A
MOBILE CODE		LAST EDIT	November 30, 2011 22:23:17 PM	PAGE	42	OF 66

Realtek RTL8111E (Gigabit)



DESIGN	DATE	TITLE	SAMSUNG
DESIGN	7/11/2010	NIKE15R-OC-CHV	ELECTRONICS
CHECK	J.J.HAN	LAN	
APPROVAL	REV	Protol	
MOBILE CODE	WALLE	REV 1.0	
	LAN_Atheros_AR8161	November 30, 2011 22:21:17 PM	
		PAGE 43	OF 66

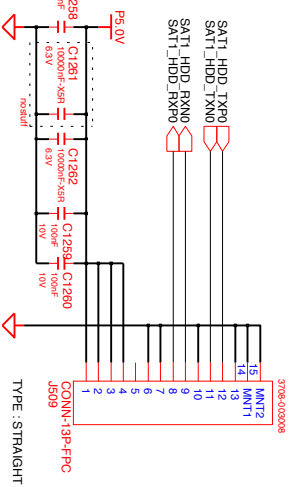


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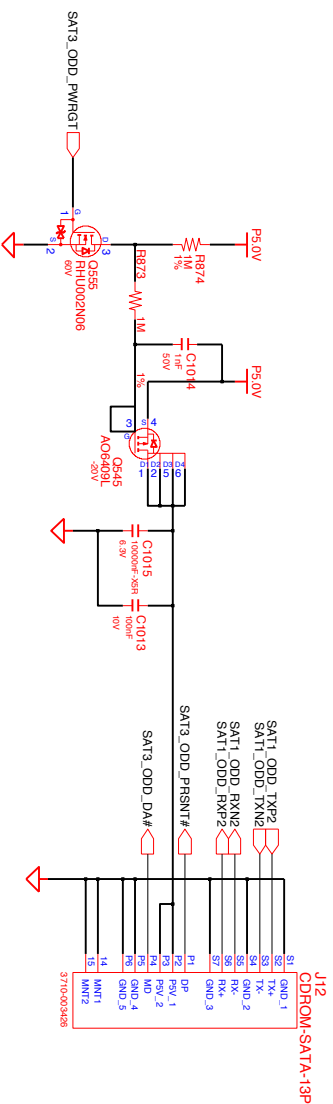
SATA I/F CONN

SATA HDD CONN

Cable Connector Type



SATA ODD



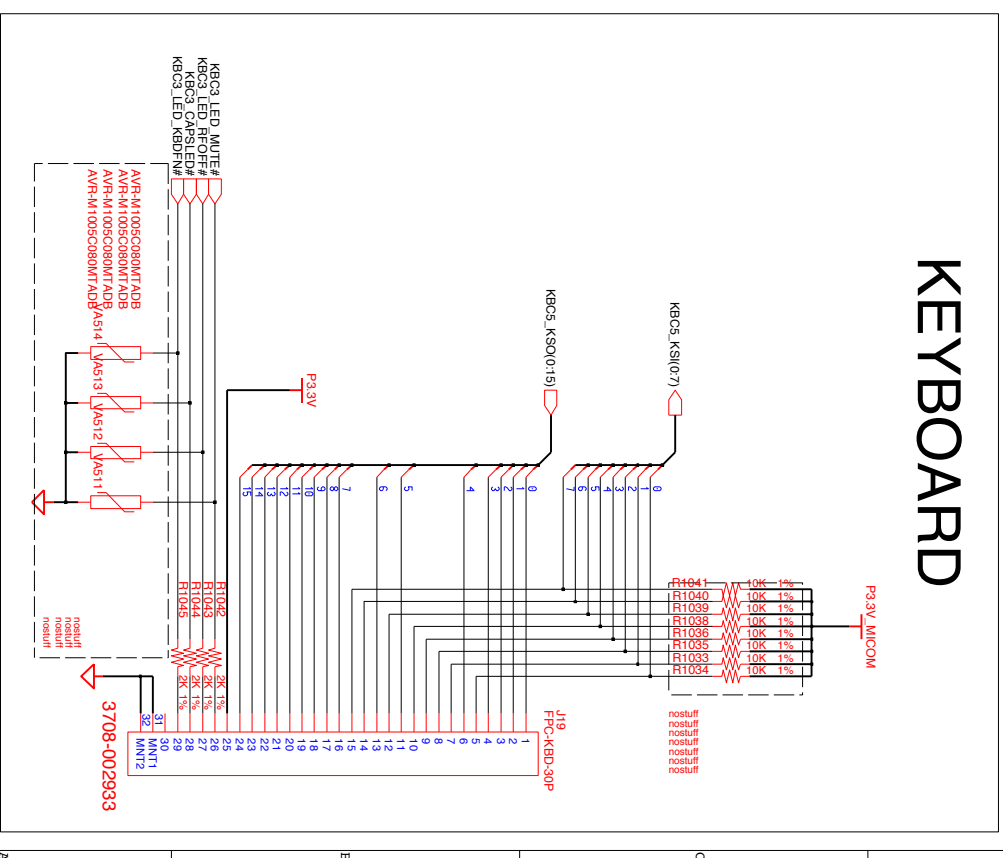
DESIGN	DW/KIM	DATE	7/11/2010	TITLE	NIKE15R-OC-CRV	SAMSUNG
CHECK	J.JIHAN	REV STEP	Proto1		SATA I/F	ELECTRONICS
APPROVAL	WALLEE	REV	REV 1.0		SATA I/F	BA41-####A
MOBILE CODE		LAST EDIT	November 30, 2011 22:21:17 PM	PAGE	45	OF 66



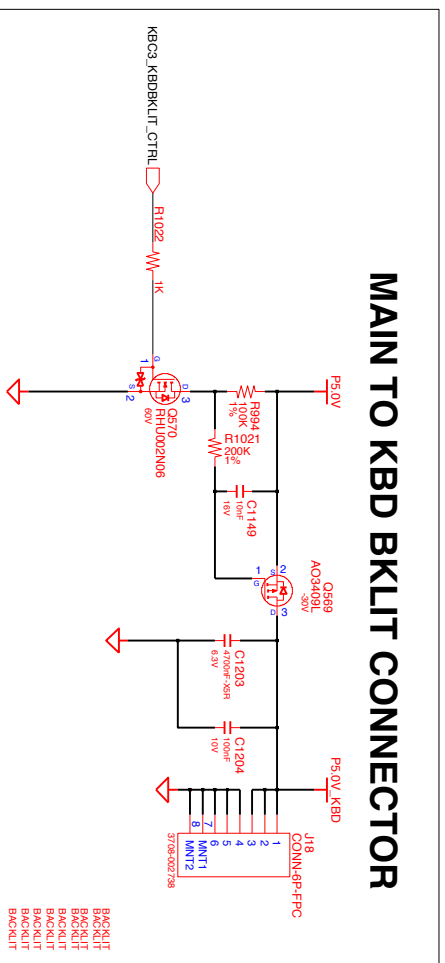


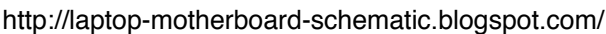
Micom Glue Logic MAIN TO SUB

KEYBOARD



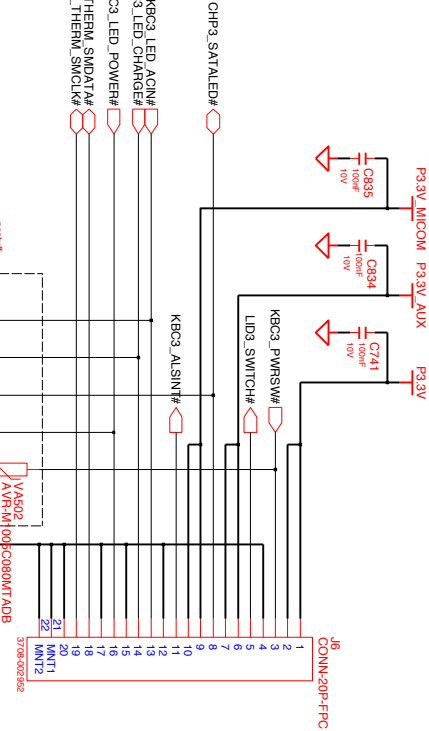
MAIN TO KBD BKLIT CONNECTOR



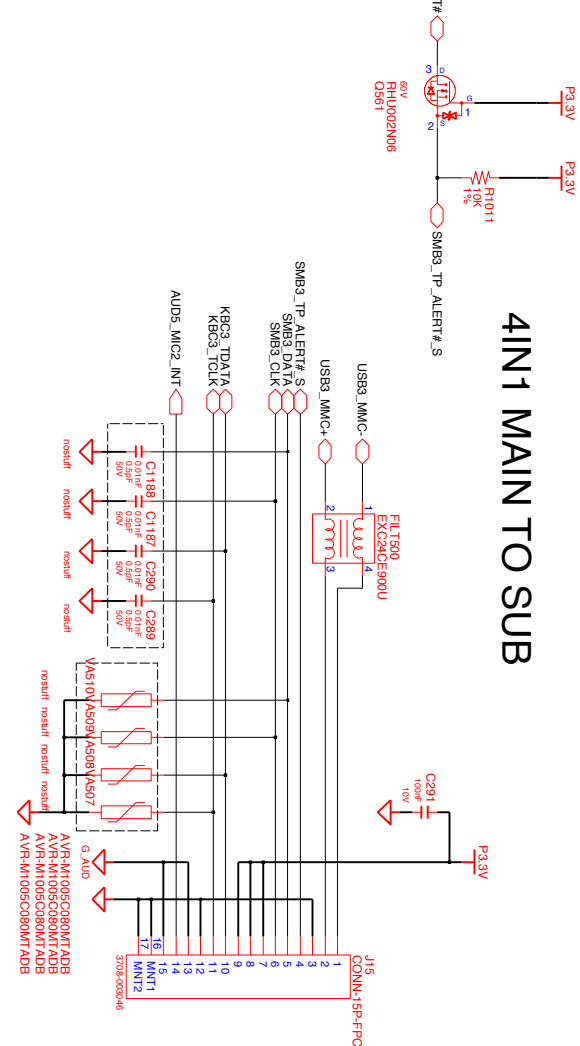


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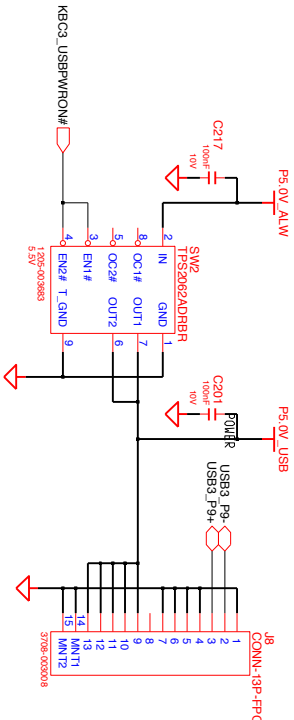
PWR SW MAIN TO SUB



4IN1 MAIN TO SUB

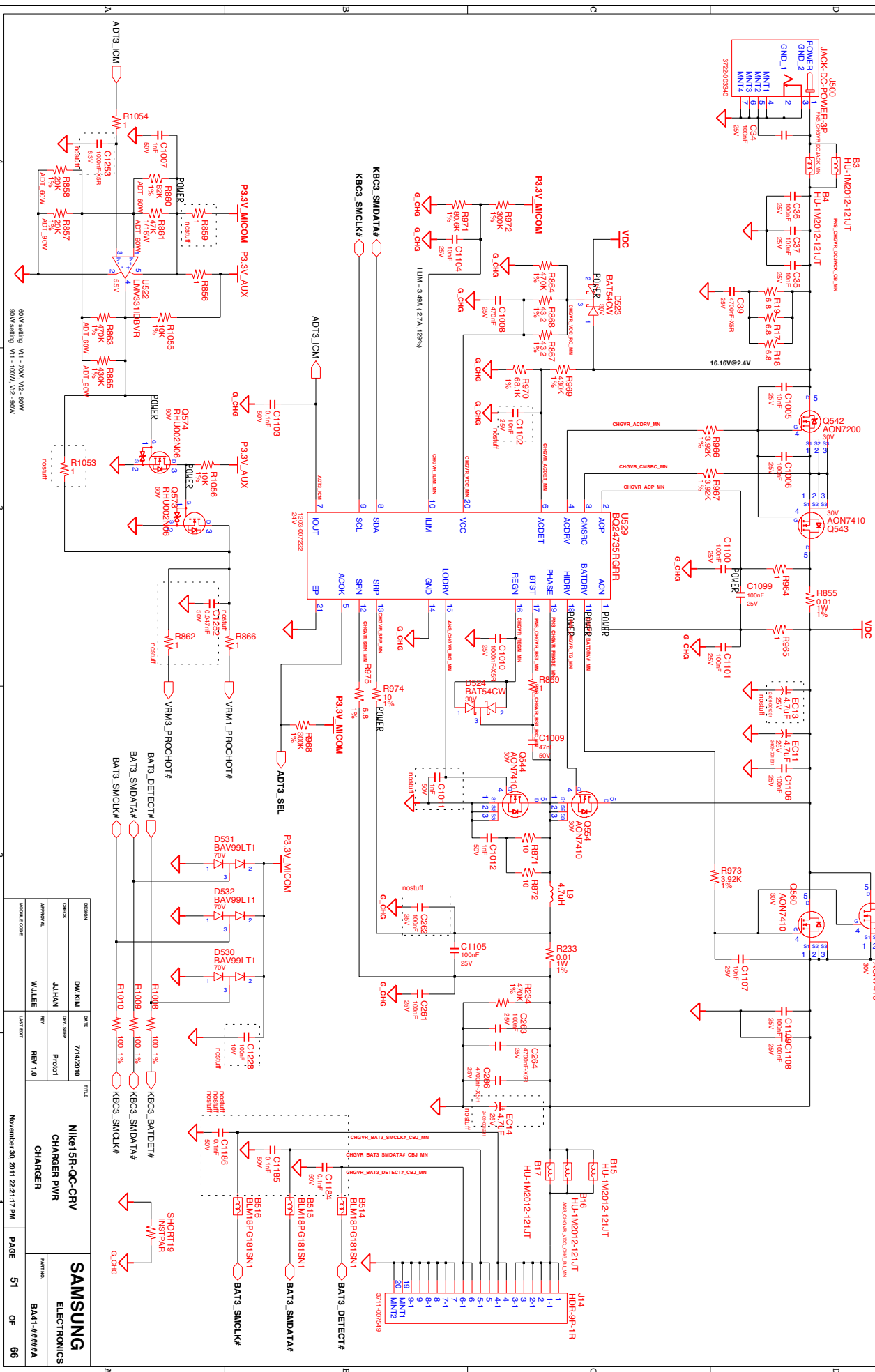


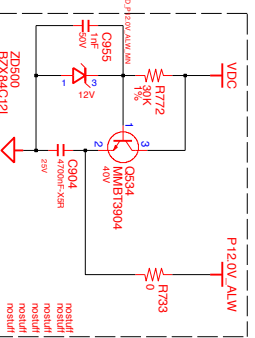
USB2.0 MAIN TO SUB

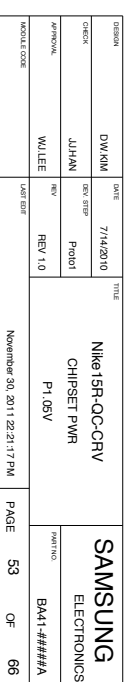


REVISION	DATE	TITLE	SAMSUNG
015	7/11/2010	NIKE15R-OC-CRV	ELECTRONICS
CHECK	ENV STEP	SUB BOARD CONNECTOR	
APPROVAL	REV	MAIN TO SUB	BA41-####A
WALLEE	REV 1.0		
DATE	11/22/2011		
TIME	22:21:17 PM		
PAGE	50	OF	66

CHARGER & POWER MANAGEMENT

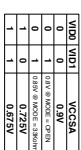




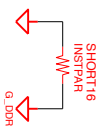


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DM.KJM	1/20/2011	Nike15R-QC-CRV	ELECTRONICS
DECK	REV. STEP	P1.0V	
JU.HAN	Proto1	VCCIO	
APPROVAL	REV	REV 1.0	PART NO. BA-41-#####A
WJ.LEE	LSF EDIT	November 30, 2011 22:21:17 PM	PAGE 54 OF 66
ROUTE CODE			



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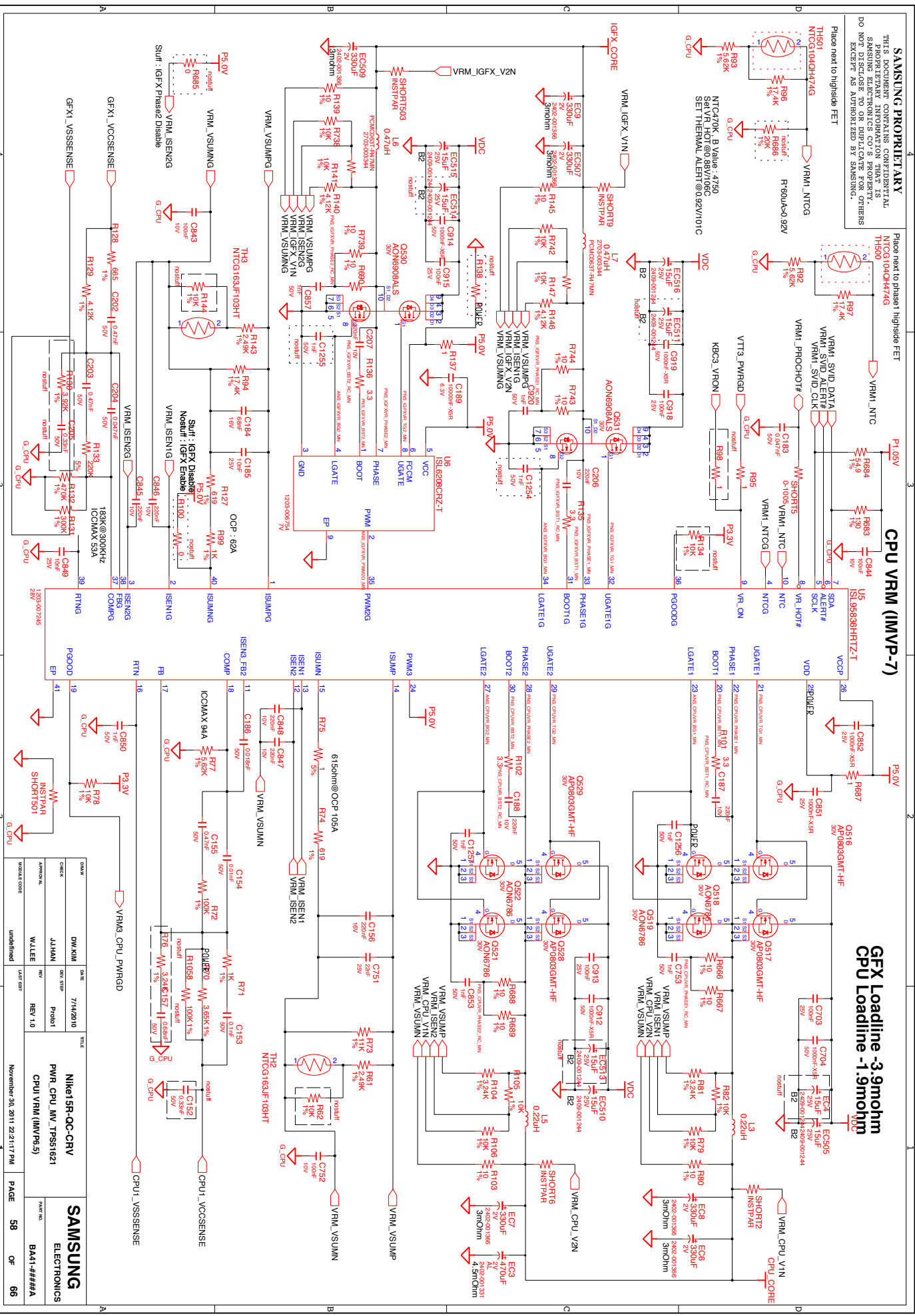
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DESIGN	DATE	TITLE	SAMSUNG
DM.KJM	3/22/2011	Nike15R-QC-CRV	ELECTRONICS
DECK	REV. STEP	P1.5V	PART NO.
JU.HAN	Proto1	VCCIO	BA-41-#####A
APPROVAL	REV	REV 1.0	
WJ.LEE	LSF EDIT	November 30, 2011 22:21:17 PM	PAGE 57 OF 66
ROUTE CODE			

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CPU VRM (IMVP-7)

GFX Loadline -3.9mohm
CPU Loadline -1.9mohm

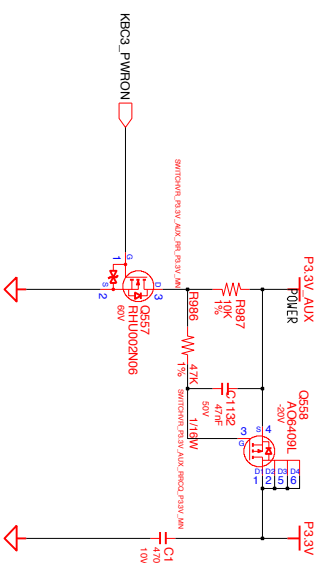




Switched Power

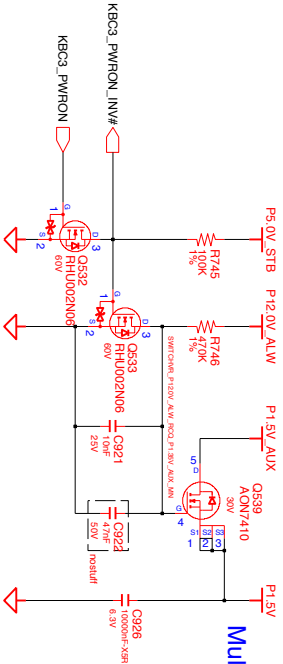
Switched Power On (P3.3V)

Multi@AP2607GY



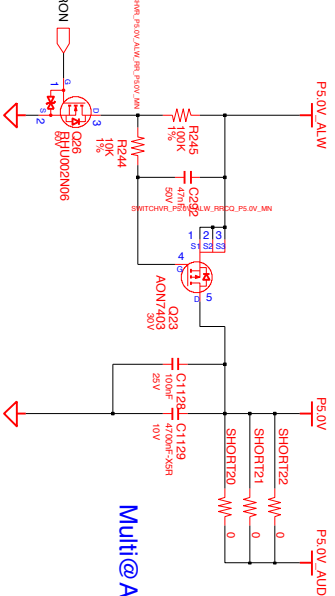
Switched Power On (P1.5V)

Multi@AP9402GYT



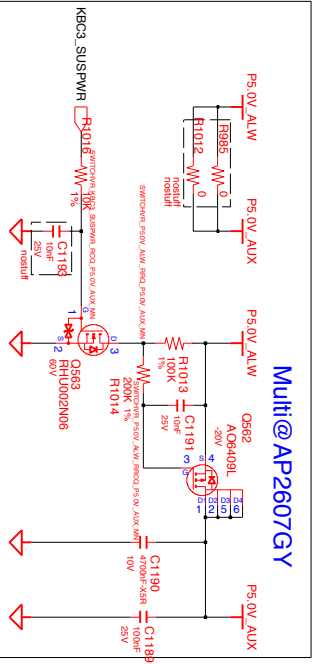
Switched Power On (P5.0V)

Multi@AP4435GYT



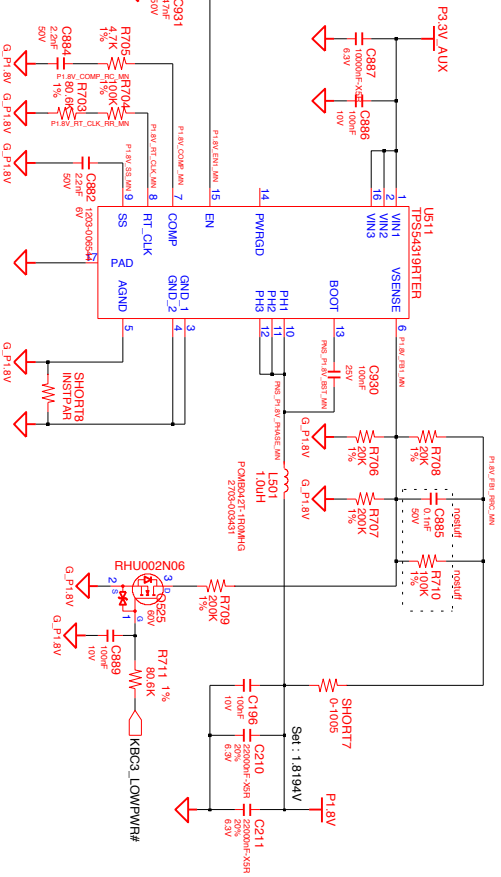
P5.0V_AUX

Multi@AP2607GY



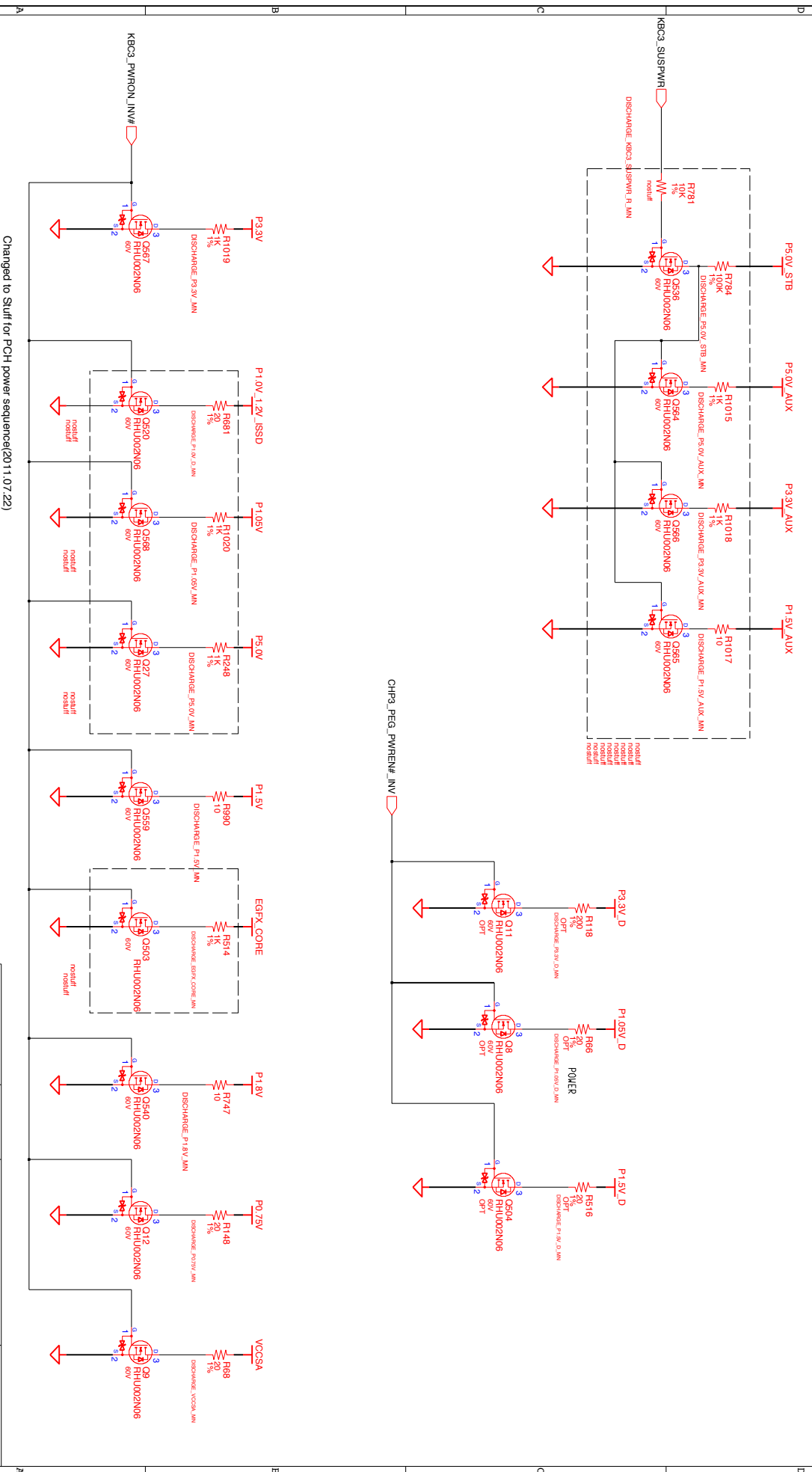
P1.8V (LVDS,PCH Core,LAN , MEIO)

Multi@G5173R41D(1203-006777)



DATE	BY	REASON	DATE	BY	REASON
2010.07.14	DW/KIM	SWP	2010.07.14	DW/KIM	SWP
2010.07.14	JJ/HAN	SWP	2010.07.14	JJ/HAN	SWP
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV
2010.07.14	WALLE	REV	2010.07.14	WALLE	REV

POWER DISCHARGER

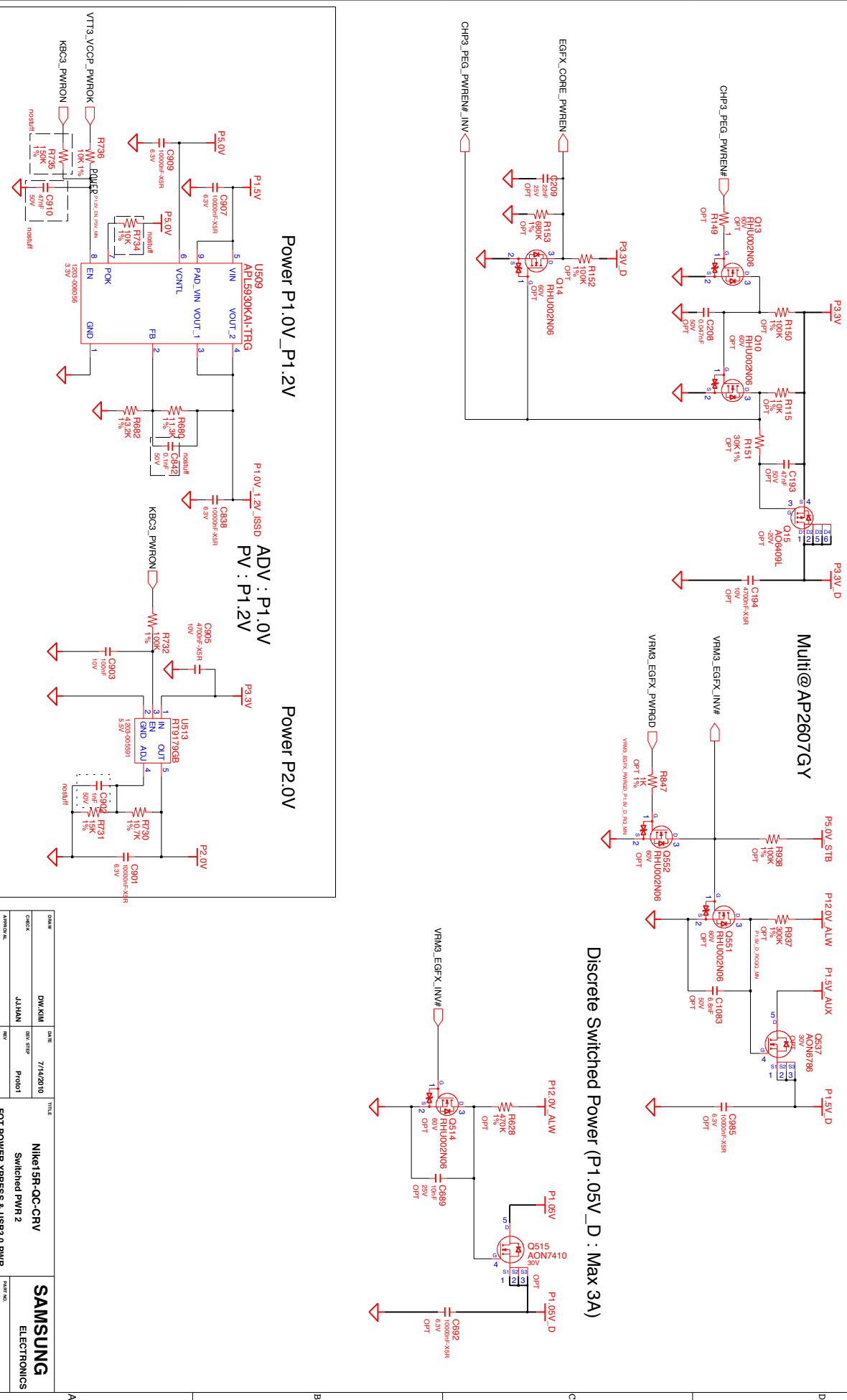


DATE	7/14/2010	TITLE	Nike15R-OC-CRV	SAMSUNG
DESIGNER	DW/KIM	REV STEP	Pwr1	ELECTRONICS
APPROVAL	WALLE	REV 1.0	DISCHARGING LOGIC	BA41-####A
MOBILE CODE	undfnd	LATE EDIT	November 30, 2011 22:21:17 PM	PAGE 61 OF 66

Switched Power 2 (For ATI GFX Powerpress Power Sequence) & ISSD

Discrete Switched Power (P3.3V_D : Max 1.2A)

Discrete Switched Power (P1.5V_D : Max 5.0A)

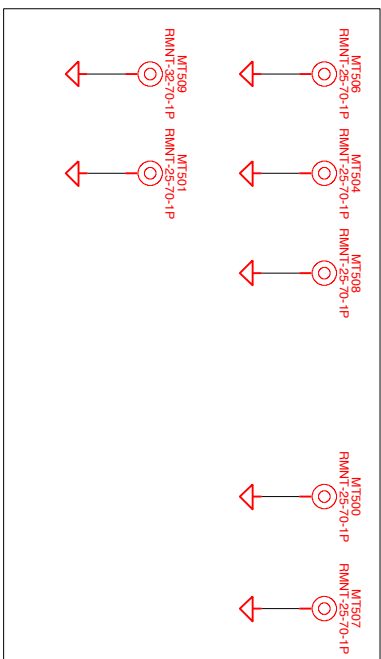


DATE	DATE	TITLE	SAMSUNG
7/11/2010	7/11/2010	Nike15R-OC-CHV	ELECTRONICS
CHK	CHK	Switched PWR 2	
JJHAN	JJHAN	Proto1	
REV	REV	FOT POWER XPRESS & USB3.0 PWR	
WALLEE	WALLEE	REV 1.0	
LATE EDIT	LATE EDIT	November 30, 2011 22:21:17 PM	
PAGE	PAGE	62	OF 66

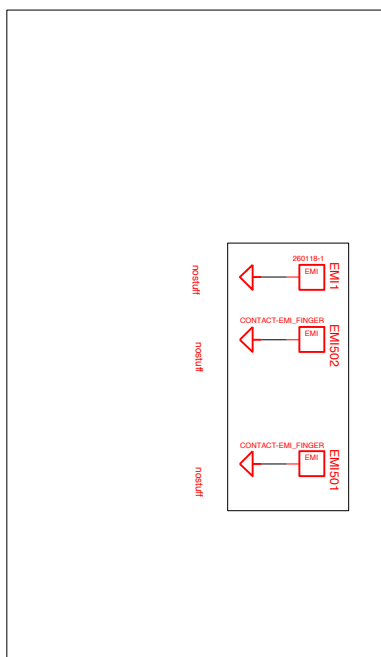
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 EXCEPT AS AUTHORIZED BY SAMSUNG.

DESIGN	DW/KIM	DATE	7/14/2010	SAMSUNG ELECTRONICS
CHECK	REV: STRIP	PROJ	DEEP S3 POWER	
APPROVAL	REV: 1.0	PART NO.	BA41-####A	
MODEL CODE	WALLE	DATE EXT	November 30, 2011 22:17 PM	
		PAGE	63 OF 66	

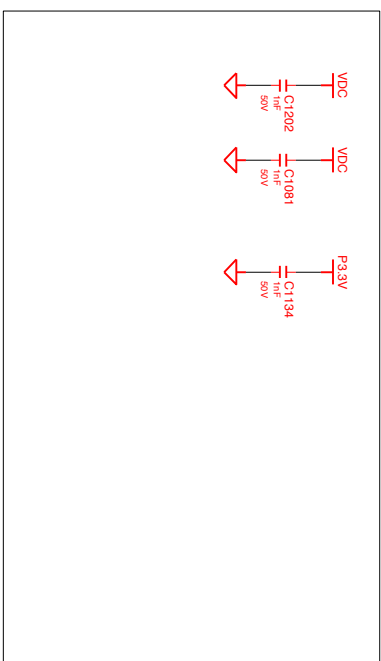
Mainboard Mount ((25-70)X8EA)



EMI FINGER



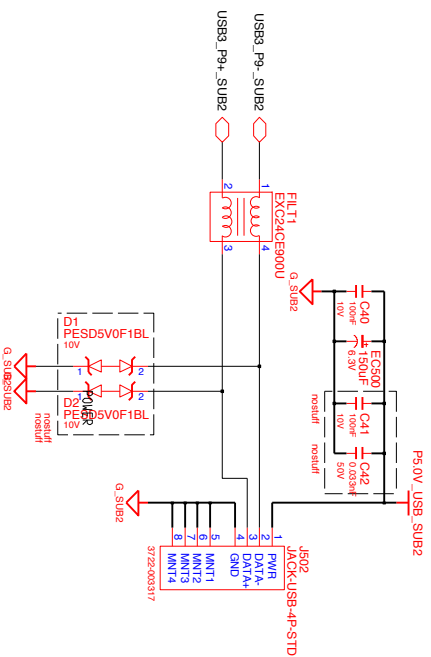
EMI Request (2011.07.01)



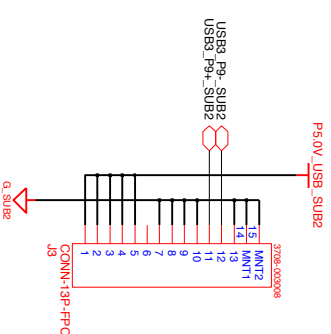
REVISION	DATE	TITLE	SAMSUNG
DW/KIM	7/14/2010	NIKE15R-OC-CHV	ELECTRONICS
CHECK	J.J.HAN	SUB BOARD1	
APPROVAL	WALLEE	REV 1.0	BA41-####A
MOBILE CODE	LATENT	November 30, 2011 22:21:17 PM	PAGE 64 OF 66

1 USB PORT SUB B'D 2

USB 1PORT

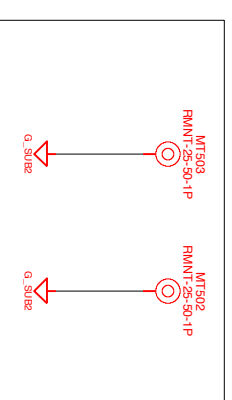


USB SUB TO MAIN



(PIN ASSIGNMENT SHOULD BE OPPOSITE FROM MAIN)

SUB TO MAIN USB



USB sub board mount hole

DATE	7/14/2010	TITLE	Nike15R-OC-CHV	SAMSUNG
CHECK	J.JIHAN	REV STEP	PROT	ELECTRONICS
APPROVAL	WALLEE	REV 1.0	USB SUB BD	BA41-####A
MOBILE CODE	LATENT	November 30, 2011 22:21:17 PM	PAGE 65	OF 66

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DESIGN	DATE	TITLE	SAMSUNG
DM.KJM	6/2/2011	Nike15R-QC-ORV	ELECTRONICS
CHECK	REV. STEP	PWRL EGFX_P0.935	
JU.HAN	Protol		
APPROVAL	REV	EGFX PCIE 9.0	PART NO.
WJ.LEE	REV 1.0		BA-41 - #####A
ROUTE CODE	LAST EDIT	November 30, 2011 22:21:17 PM	PAGE 66 OF 66