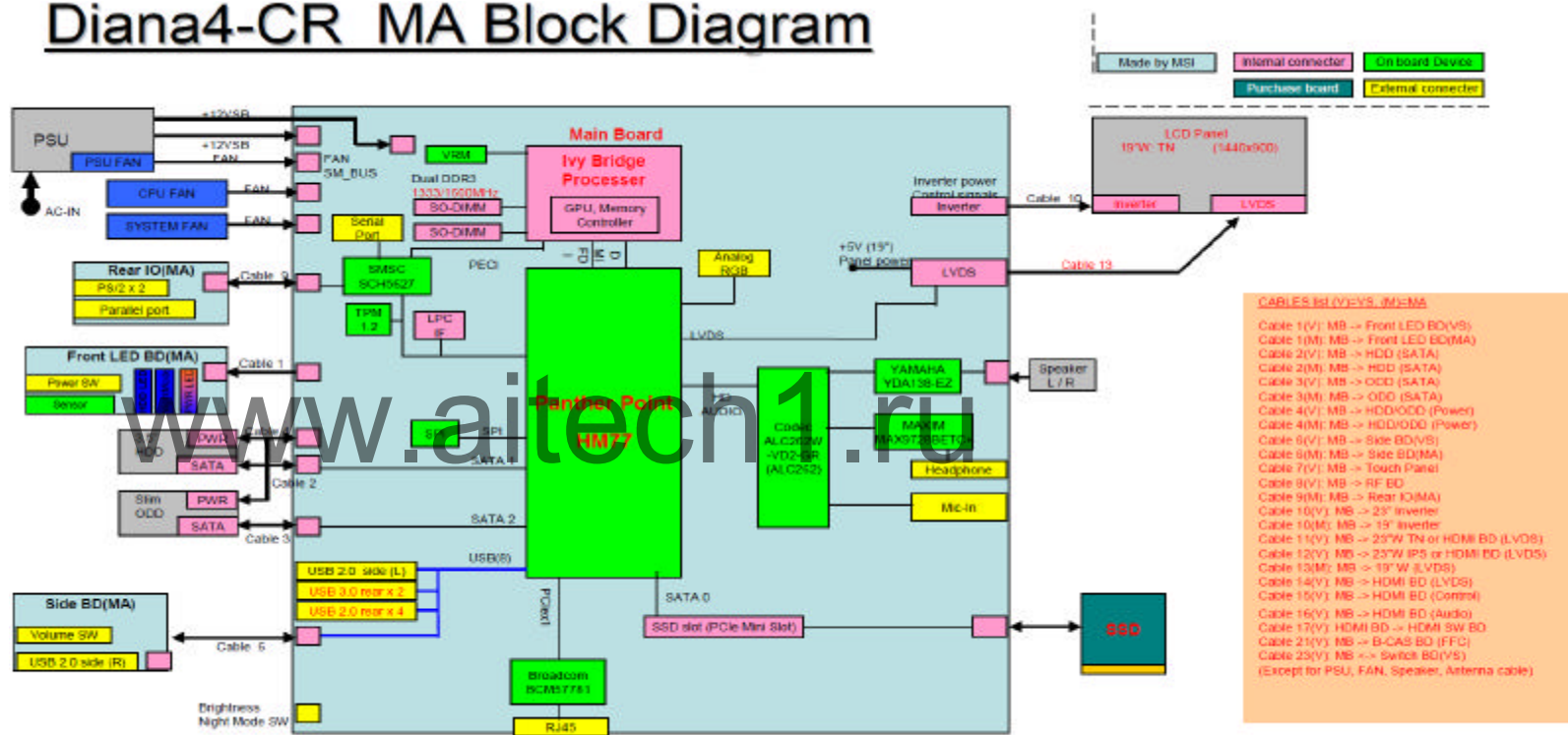






MS-A9311N1 Ver : 1.0

- 01 : TITLE
- 02 : NOTES
- 03 : PROCESSOR-1 (HOST BUS)
- 04 : PROCESSOR-2 (DDR3)
- 05 : PROCESSOR-3 (POWER)
- 06 : PROCESSOR-4 (GRAPHICS POWER)
- 07 : PROCESSOR-5 (GND,RESERVE)
- 08 : DDR3 SODIMM 0
- 09 : DDR3 SODIMM 1
- 10 : PCH-1 (HDA/JTAG/SATA)
- 11 : PCH-2 (PCI-E/SMBUS/CLK)
- 12 : PCH-3 (DMI/FDI/GPIO)
- 13 : PCH-4 (LVDS/DDI)
- 14 : PCH-5 (PCI/USB/NVRAM)
- 15 : PCH-6 (GPIO/NCTF/RSVD)
- 16 : PCH-7 (POWER)
- 17 : PCH-8 (POWER)
- 18 : PCH-9 (GND)
- 19 : D-SUB, Inveter
- 20 : USB 3.0
- 21 : USB 2.0
- 22 : LAN(BCM57781)
- 23 : HPS,Switch BUTTON, LED
- 24 : SATA, SSD, POSISTER&OVP
- 25 : HDA ALC262
- 26 : HDMI / AUDIO Switch & Woofer
- 27 : SPEAKER, BUZZER
- 28 : SIO(SCH5627)
- 29 : PS/2, COM, LPT, TPM
- 30 : CPU/SYS/PSU FAN
- 31 : PSU, Power contrller
- 32 : SYSTEM POWER VR
- 33 : DDRIII 1.5V_DIMM
- 34 : CPU & PCH VTT, VCCSA
- 35 : IMPV7- NCP6132B (3+2Phase)
- 36 : IMVP7 Driver NCP5911
- 37 : Screw,EMI,BOM-Option Parts
- 38 : POWER MAP
- 39 : GPIO PIN Definitions/confige
- 40 : PWROK MAP / CLOCK MAP
- 41 : History-1

Diana4-CR MA Block Diagram



NEC Personal Products, Ltd. Internal Use Only

- | | |
|---|--|
|  | BLUE Color which mean all model need use |
|  | PURPLE Color |
|  | ORANGE Color |
|  | BROWN Color which mean the part reserve |

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

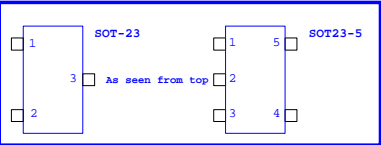
Voltage Rails

POWER PLANE	VOLTAGE	ACTIVE IN	DESCRIPTION
+12VSB	12V	S0, (S3-S5)	
+5VALW	5V	S0, (S3-S5)	
+5V	5V	S0	
+5VSB	5V	S0, (S3-S5)	
+3VALW	3.3V	S0, (S3-S5)	
+3VSB	3.3V	S0, (S3-S5)	
+3V	3.3V	S0	
+1_5VDIMM	1.5V	S0, S3	DDR core
+1_5VRUN	1.5V	S0	
VTT	1.05V	S0	CPU&PCH
+0_75VRUN	0.75V	S0	DDR command & control pull up.
+VCC_CORE	1.05V-1.1V	S0	CPU core rail
+VCC_GFXCORE	1.1V	S0	GMCH Graphics core rail
+12V	12V	S0	
+1_8VRUN	1.8V	S0	
VCCSA	0.85V	S0	VCCSA

Net Naming Conventions

Suffix
= Active Low Signal
Prefix
H = Host
M = DDR Memory
TP = Test Point (does not connect anywhere else)

PCB Footprints

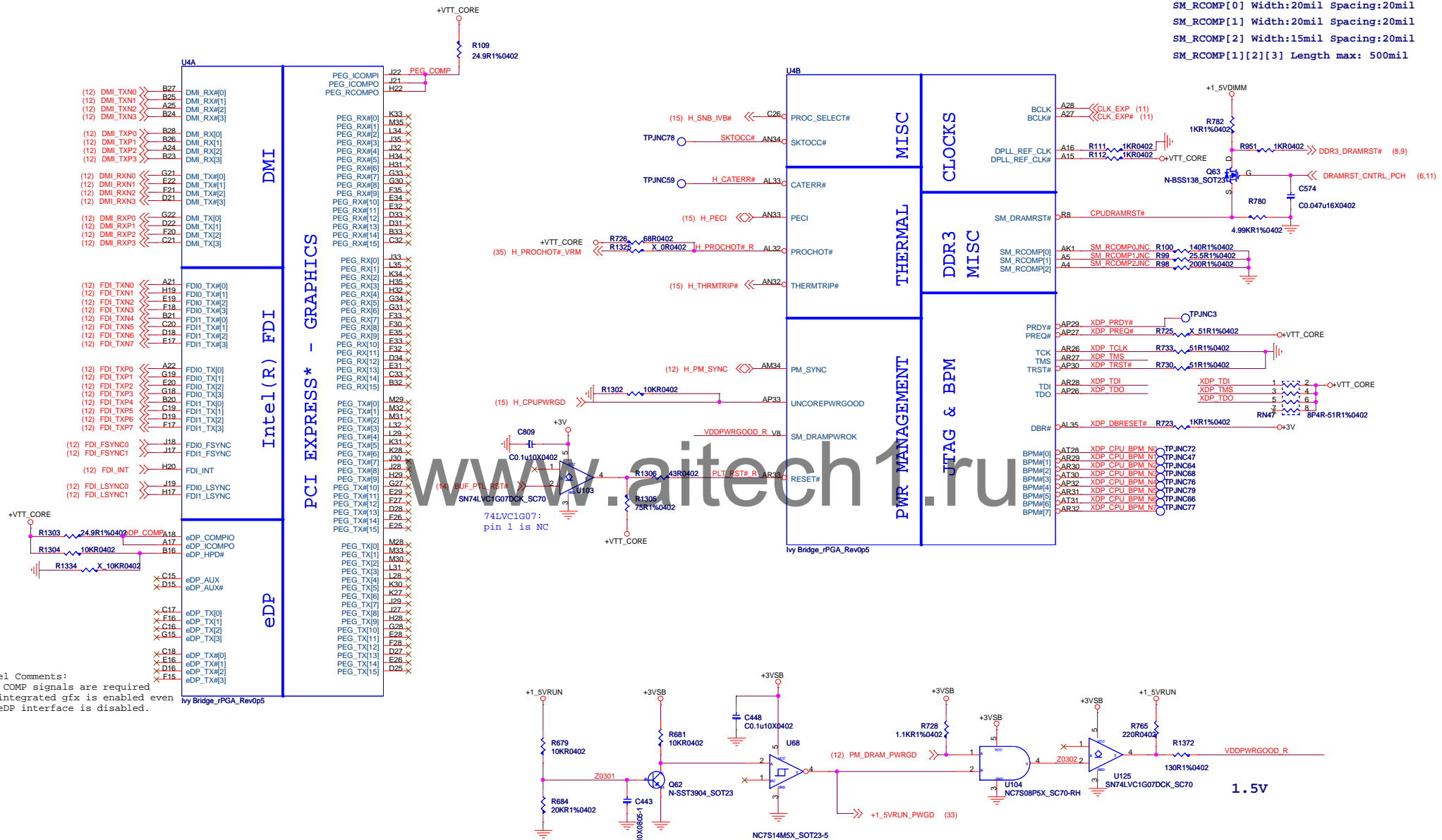


Power States

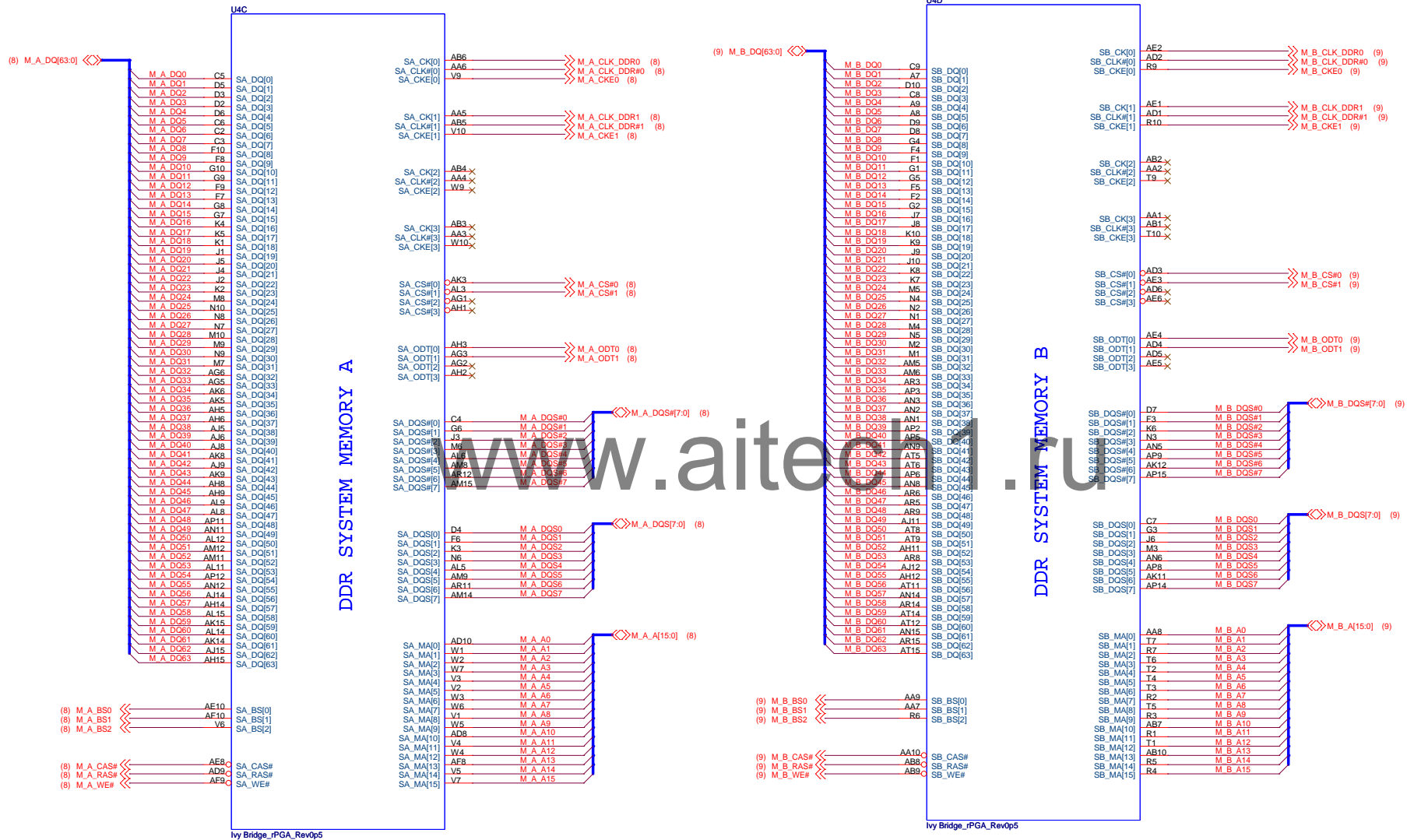
	SLP_S3#	SLP_S4#	SLP_S5#	+V*ALWAYS	+V*SUS	+V*RUN	CLK
S0 (Full on)	HIGH	HIGH	HIGH	ON	ON	ON	ON
S3 (Suspend to RAM)	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft Off)	LOW	LOW	LOW	ON	OFF	OFF	OFF

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IVY BRIDGE PROCESSOR (CLK,MISC,JTAG)



IVY BRIDGE PROCESSOR (DDR3)



POWER

IVY BRIDGE PROCESSOR (POWER)

CORE SUPPLY

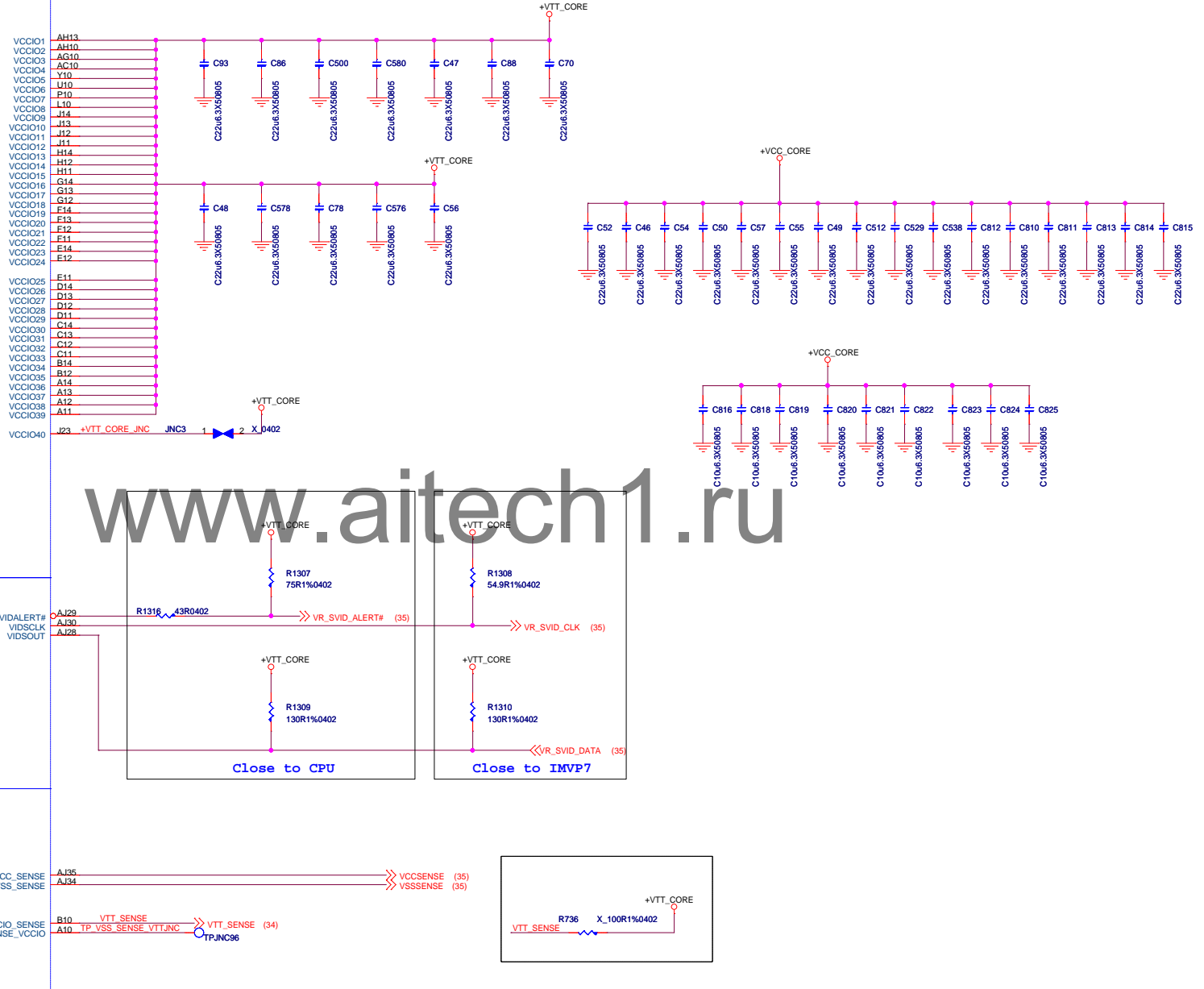
SVID

SENSE LINES

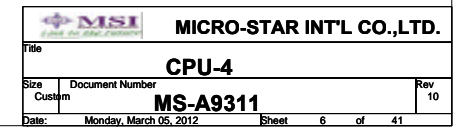
PEG AND DDR

U4F
AG35 VCC1
AG34 VCC2
AG33 VCC3
AG32 VCC4
AG31 VCC5
AG30 VCC6
AG29 VCC7
AG28 VCC8
AG27 VCC9
AG26 VCC10
AF35 VCC11
AF34 VCC12
AF33 VCC13
AF32 VCC14
AF31 VCC15
AF30 VCC16
AF29 VCC17
AF28 VCC18
AF27 VCC19
AD35 VCC20
AD34 VCC21
AD33 VCC22
AD32 VCC23
AD31 VCC24
AD30 VCC25
AD29 VCC26
AD28 VCC27
AD27 VCC28
AD26 VCC29
AC35 VCC30
AC34 VCC31
AC33 VCC32
AC32 VCC33
AC31 VCC34
AC30 VCC35
AC29 VCC36
AC28 VCC37
AC27 VCC38
AC26 VCC39
AA35 VCC40
AA34 VCC41
AA33 VCC42
AA32 VCC43
AA31 VCC44
AA30 VCC45
AA29 VCC46
AA28 VCC47
AA27 VCC48
AA26 VCC49
Y35 VCC50
Y34 VCC51
Y33 VCC52
Y32 VCC53
Y31 VCC54
Y30 VCC55
Y29 VCC56
Y28 VCC57
Y27 VCC58
Y26 VCC59
Y25 VCC60
Y24 VCC61
Y23 VCC62
Y22 VCC63
Y21 VCC64
Y20 VCC65
Y19 VCC66
Y18 VCC67
Y17 VCC68
Y16 VCC69
Y15 VCC70
Y14 VCC71
Y13 VCC72
Y12 VCC73
Y11 VCC74
Y10 VCC75
Y09 VCC76
Y08 VCC77
Y07 VCC78
Y06 VCC79
Y05 VCC80
Y04 VCC81
Y03 VCC82
Y02 VCC83
Y01 VCC84
Y00 VCC85
R35 VCC86
R34 VCC87
R33 VCC88
R32 VCC89
R31 VCC90
R30 VCC91
R29 VCC92
R28 VCC93
R27 VCC94
R26 VCC95
R25 VCC96
R24 VCC97
R23 VCC98
R22 VCC99
R21 VCC100

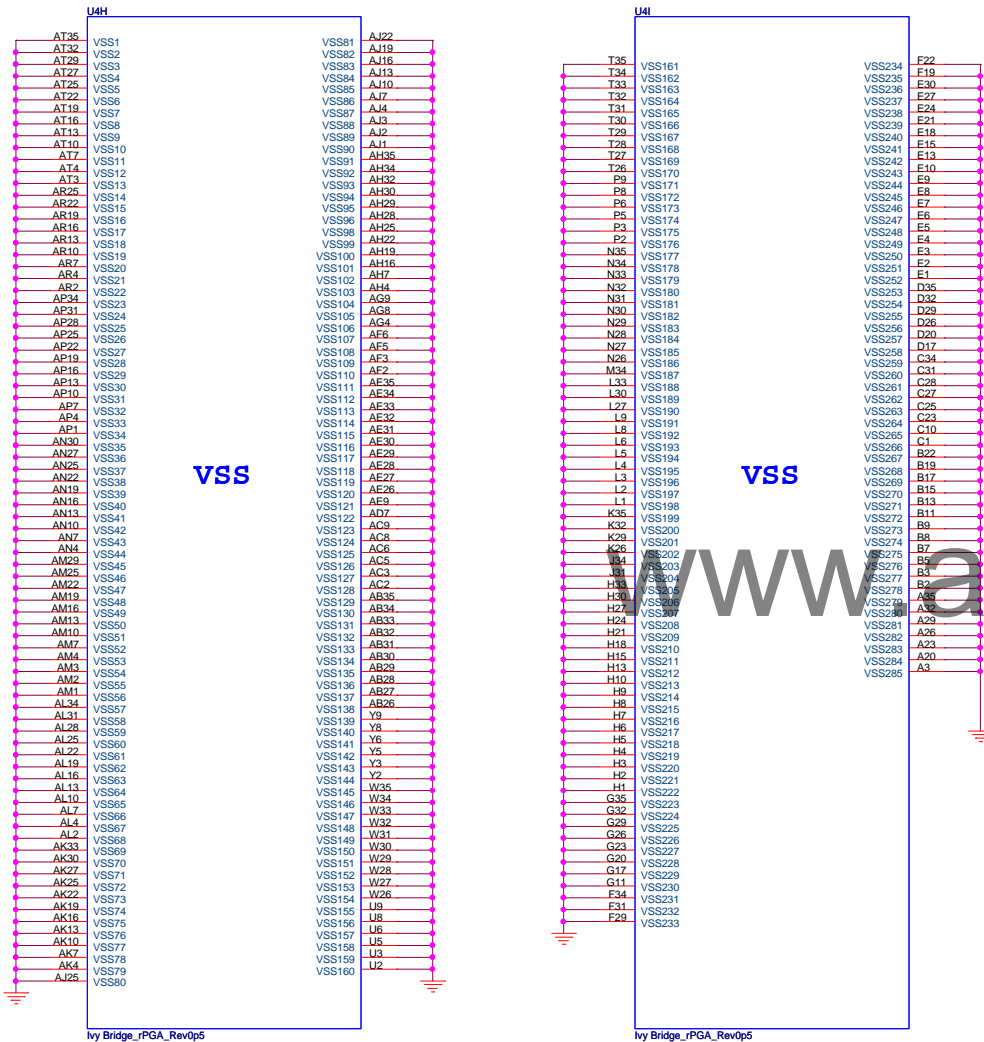
Ivy Bridge_PGA_Rev0p5



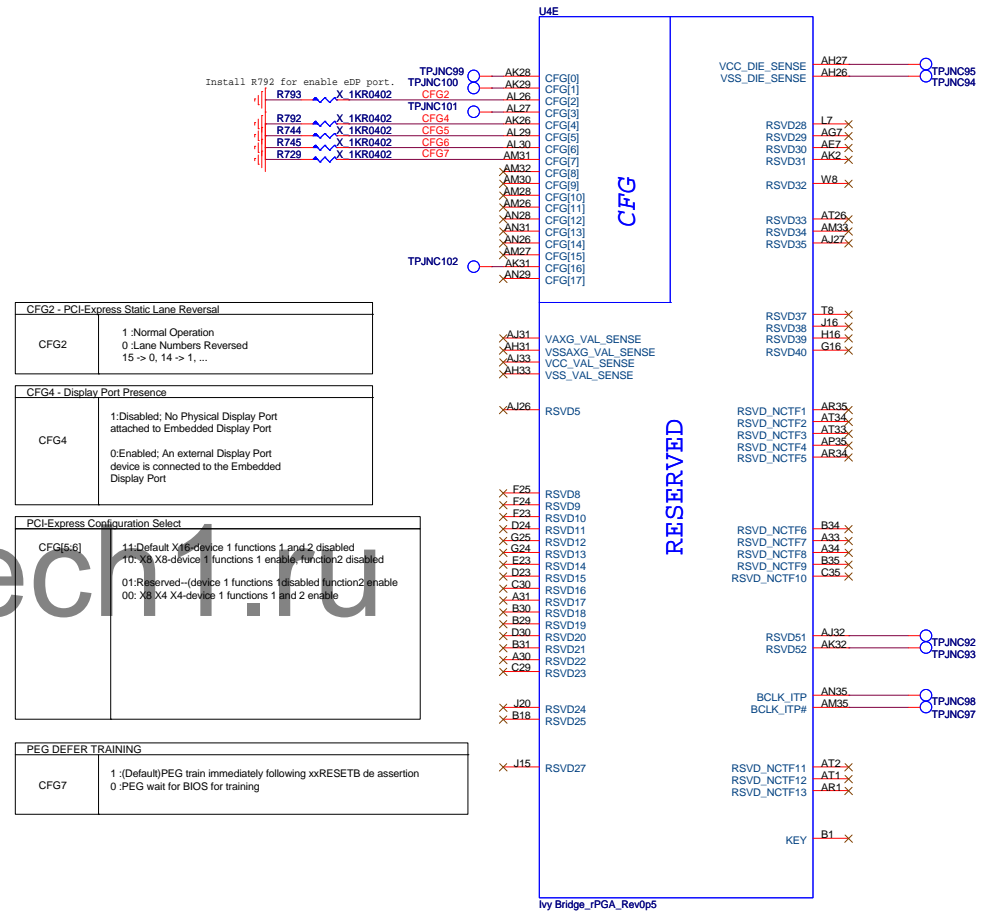
POWER



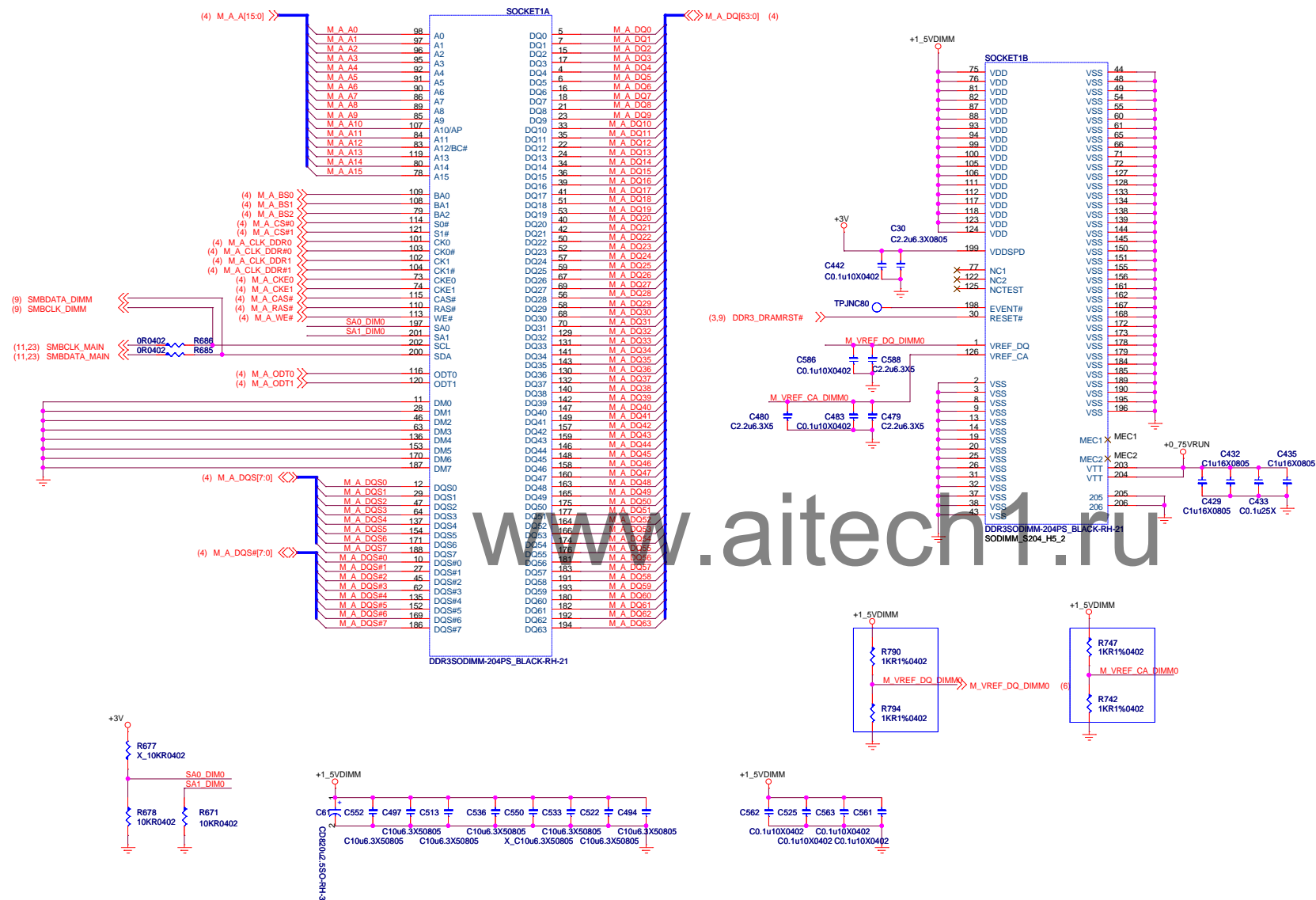
IVY BRIDGE PROCESSOR (GND)



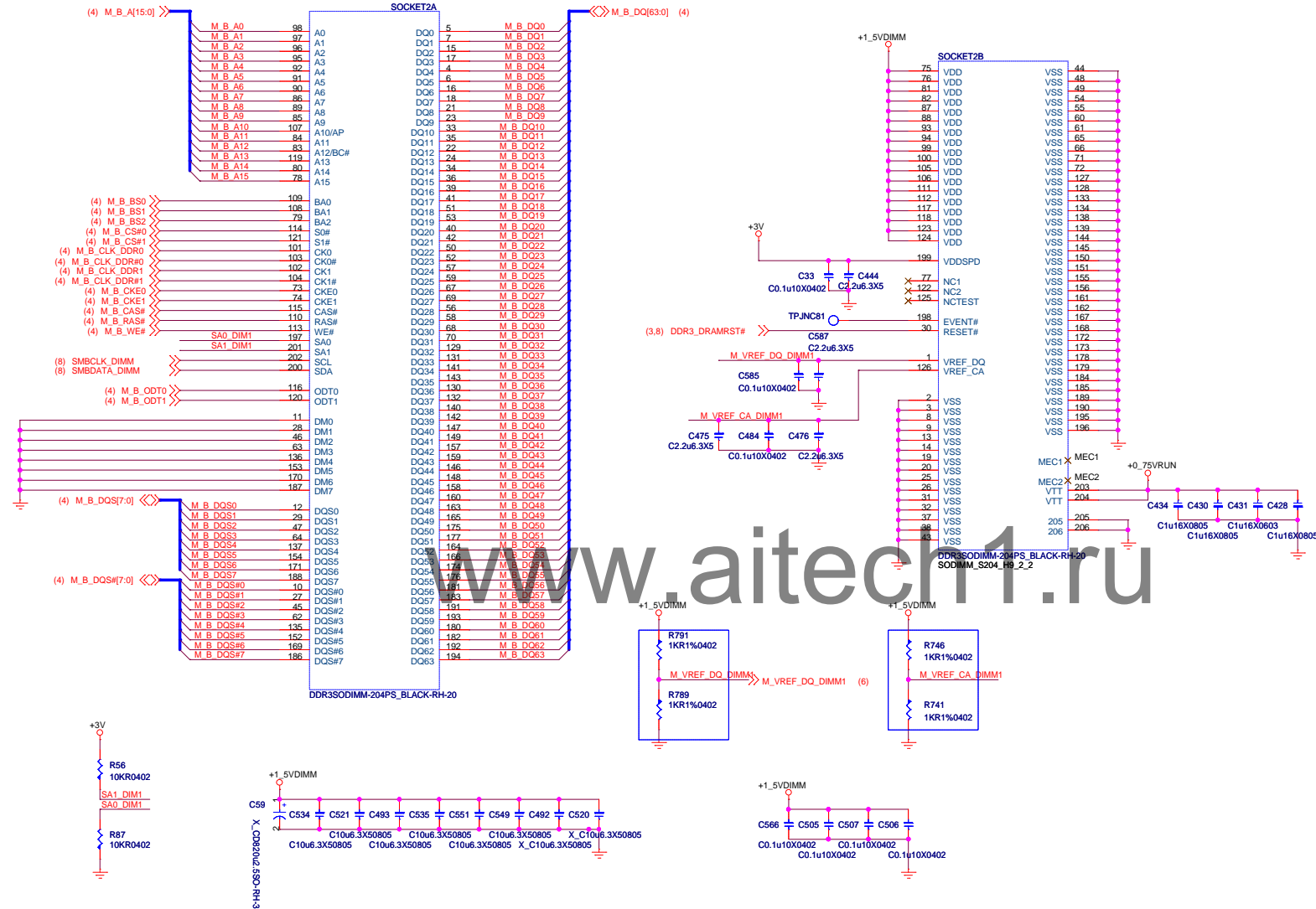
IVY BRIDGE PROCESSOR (RESERVED)



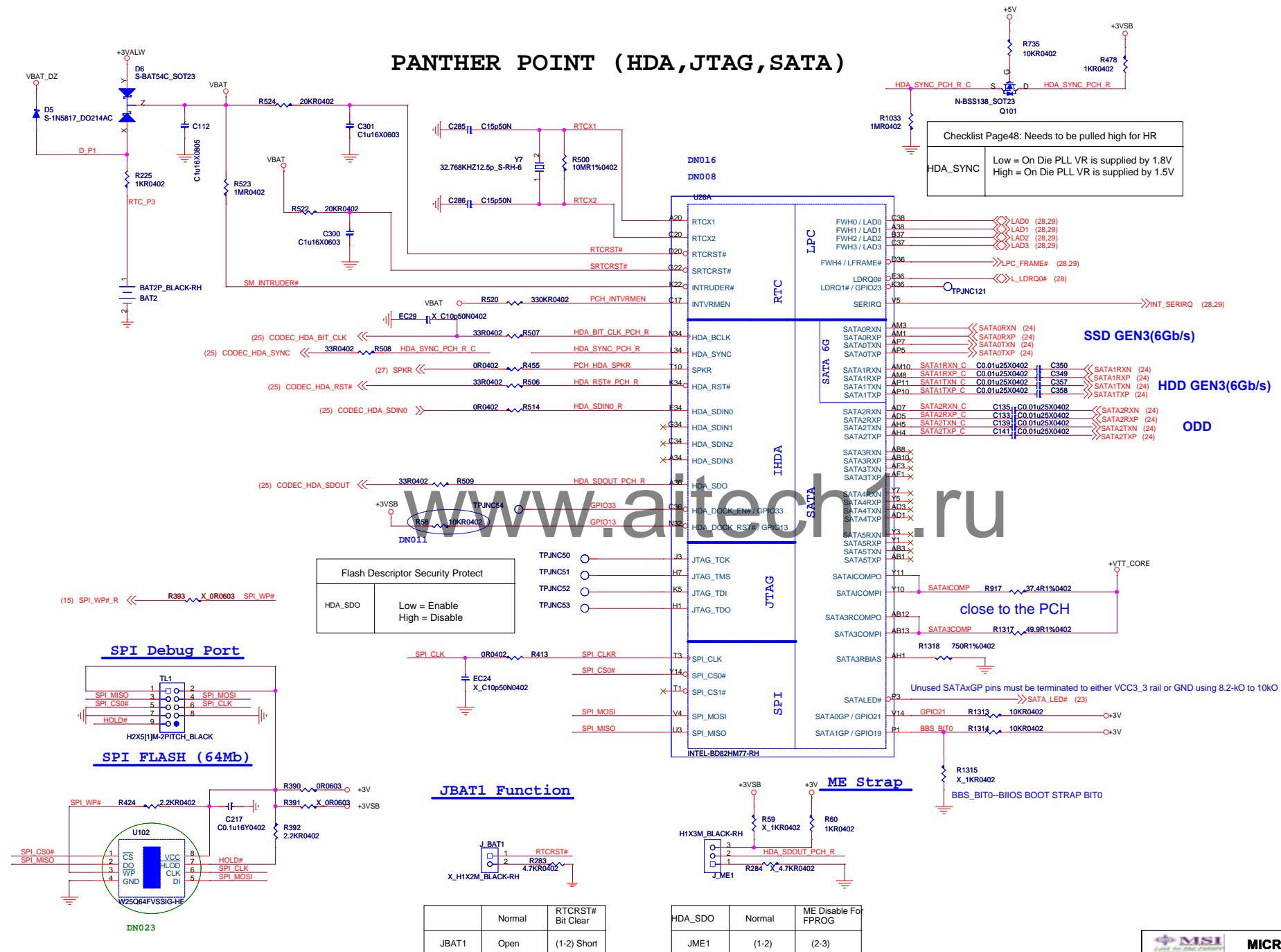
SODIMM#A



SODIMM#B

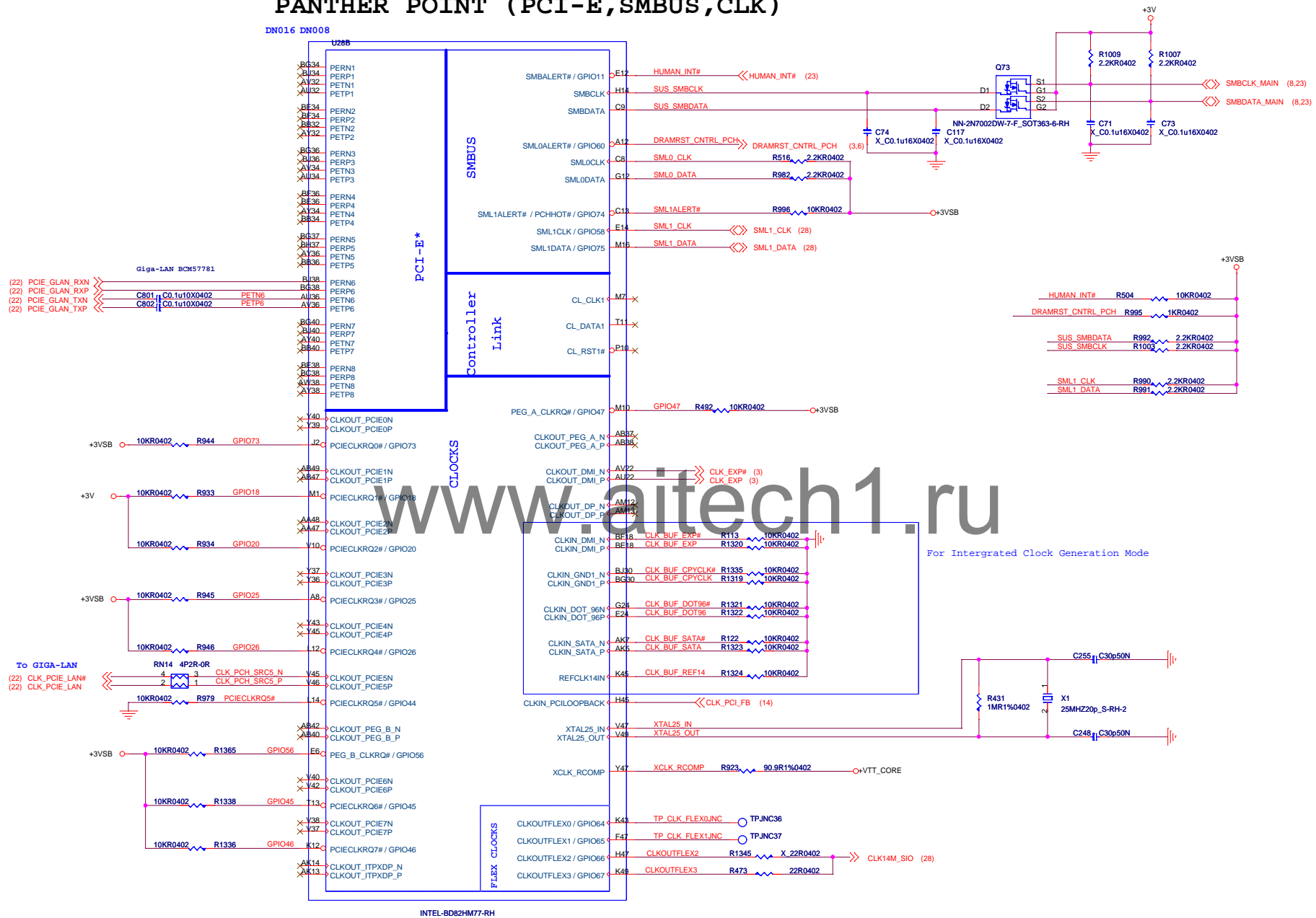


PANTHER POINT (HDA, JTAG, SATA)



PANTHER POINT (PCI-E, SMBUS, CLK)

DN016 DN008



Intel Comments:
If CLKREQ# control is not needed, say for a free running clock, DO NOT pull-down signal to GND. This will increase leakage in Sx states.
PCIe devices or addin cards that do NOT support CLKREQ# functionality should not route this signal to PCH.
Intel recommends terminating PCIECLKREQ# pin on PCH with 10 kΩ ±10% external pull-up resistor instead of No Connect.
Only PCIECLKREQ[2:1]# on PCH are core well powered. All other PCIECLKREQ# are suspend well powered.

MSI		MICRO-STAR INT'L CO.,LTD.	
File	PCH-M (PCI-E, SMBUS, CLK)		
Size	Custom	Document Number	MS-A9311
Date:	Monday, March 05, 2012	Sheet	11 of 41

DN016 DN008



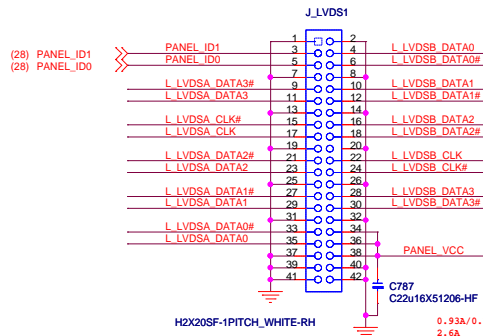
PANTHER POINT (LVDS,DDI)

1.MXM only LVD_IBG, LVD_VREFH and LVD_VREFL floating. VCCA_LCD and VCCTX_LVD can be connected to GND.
2.If use LVDS, LVD_IBG connect 2.37k to GND. LVD_VREFH and LVD_VREFL connect to GND. VCCA_LCD and VCCTX_LVD connect to power.

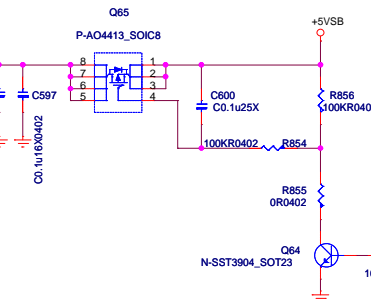
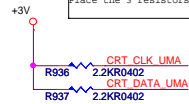
There resistors are reserved by EMI request

L LVDSA DATA3#	ER1	X	120R0402	L LVDSA DATA3
L LVDSA CLK#	ER2	X	120R0402	L LVDSA CLK
L LVDSA DATA2#	ER8	X	120R0402	L LVDSA DATA2
L LVDSA DATA1#	ER9	X	120R0402	L LVDSA DATA1
L LVDSA DATA0#	ER10	X	120R0402	L LVDSA DATA0
L LVDSB DATA0	ER3	X	120R0402	L LVDSB DATA0#
L LVDSB DATA1	ER4	X	120R0402	L LVDSB DATA1#
L LVDSB DATA2	ER5	X	120R0402	L LVDSB DATA2#
L LVDSB CLK#	ER6	X	120R0402	L LVDSB CLK#
L LVDSB DATA3	ER7	X	120R0402	L LVDSB DATA3#

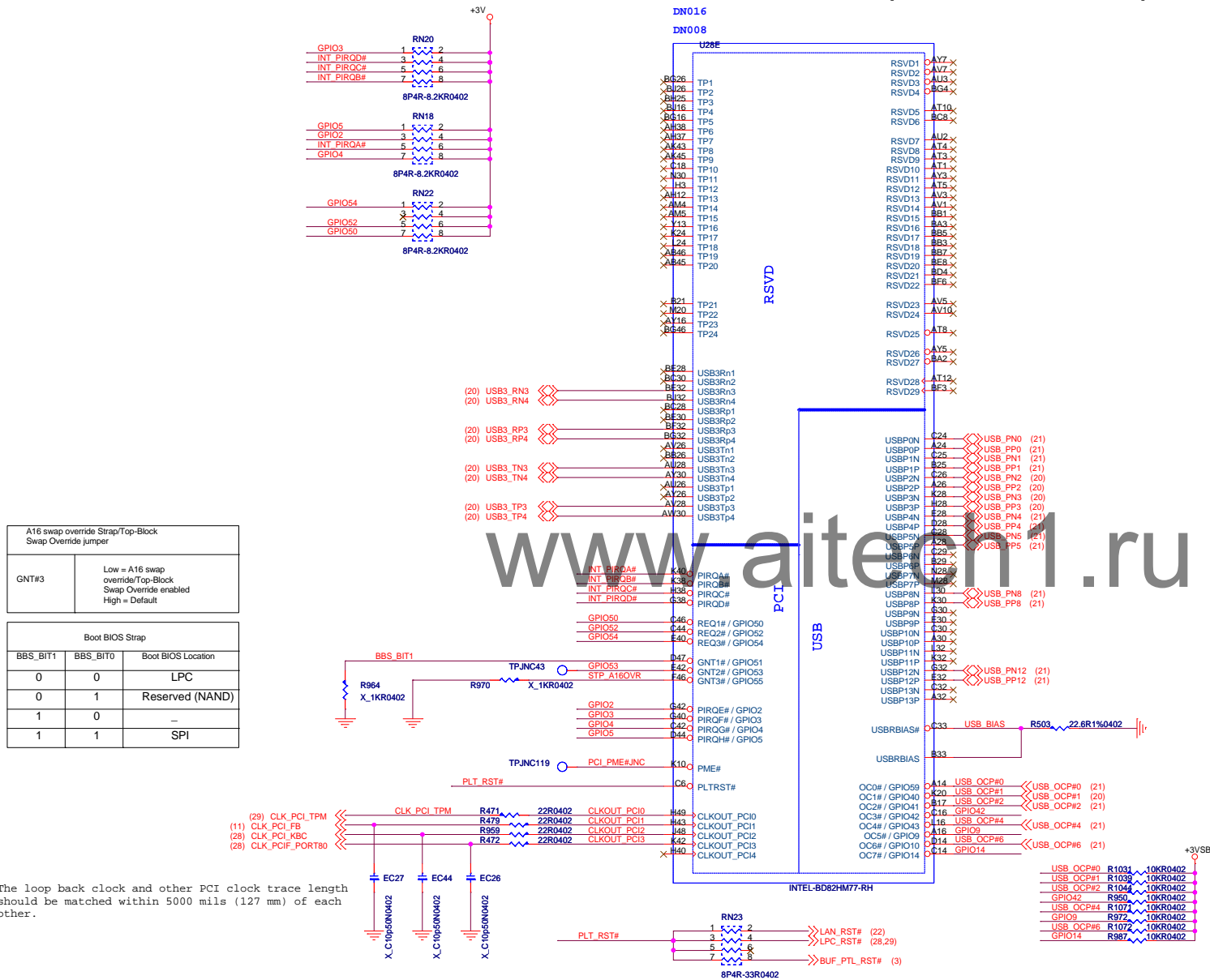
LVDS Connector



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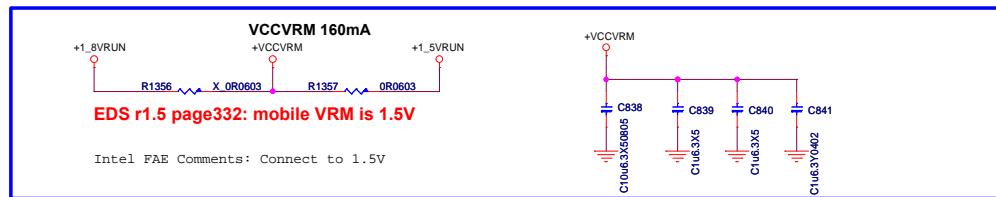
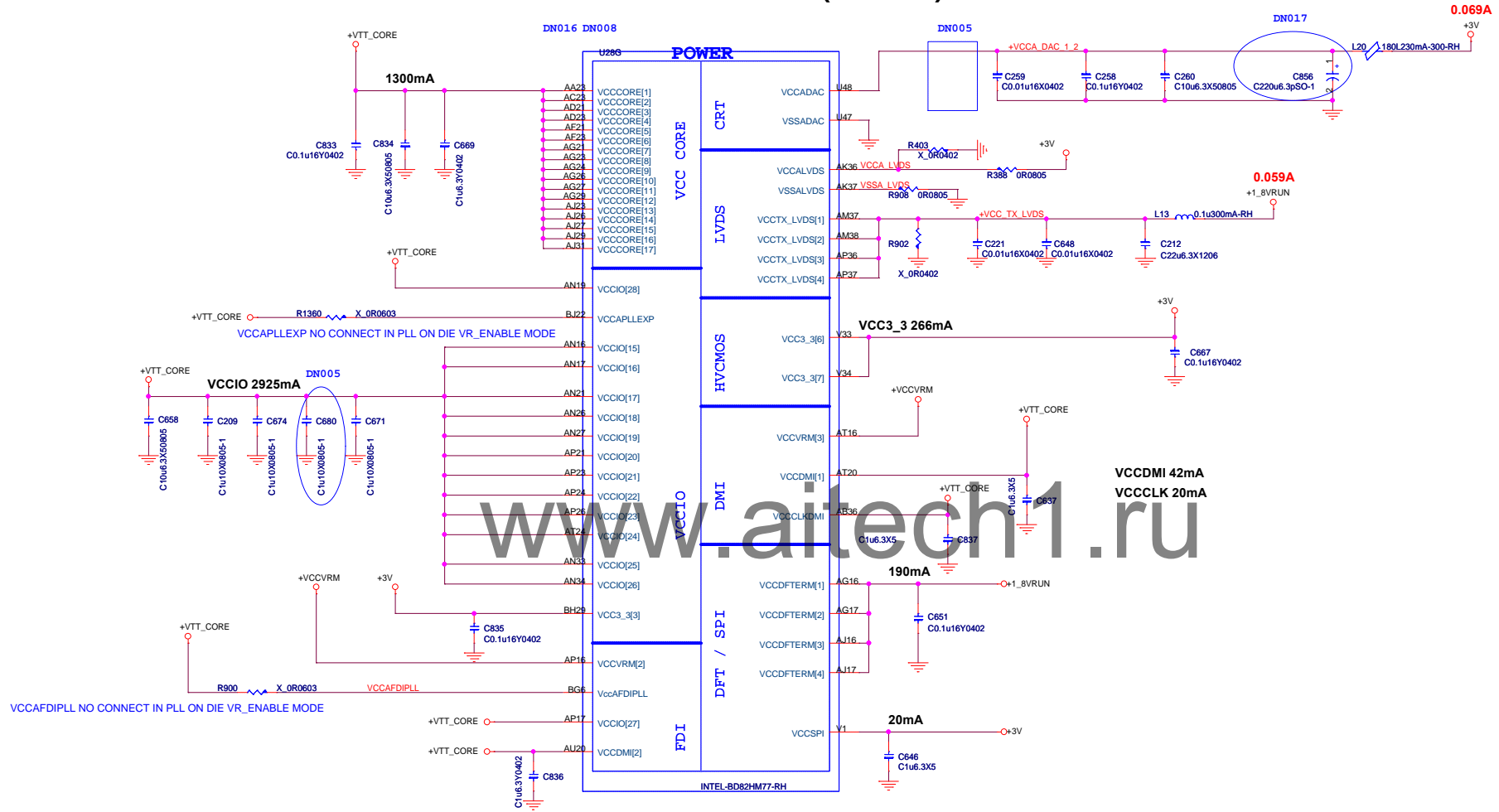
PANTHER POINT (PCI,USB,NVRAM)



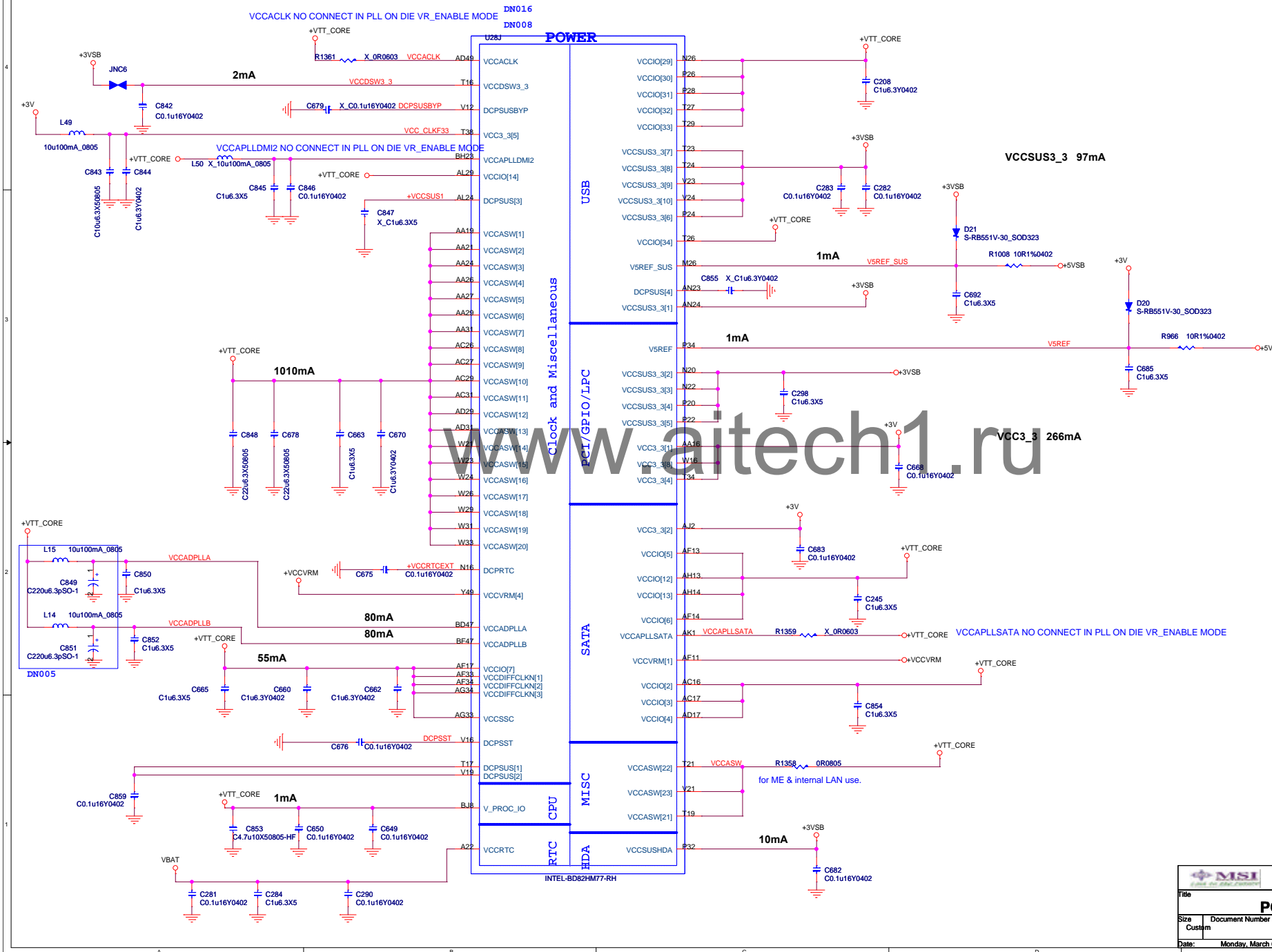
USB 2.0 Port Number	USB 3.0 Port Number	USB 2.0 OC# Default Usage	USB 2.0 Port	USB 3.0 Port	OC# Status	Layout Location	ID Location
0	1	0	▼	▼	▼	USB3 (up)	Rear
1	2	0	▼	▼	▼	USB3 (down)	
2	3	1	▼	▼	▼	USB1	
3	4	1	▼	▼	▼	USB5	
4	5	2	▼	▼	▼	USB2 (up)	
5	6	3	▼	▼	▼	USB2 (down)	Right
6	7	4	▼	▼	▼	USB4	
7	8	5	▼	▼	▼	USB4	
8	9	6	▼	▼	▼	USB4	
9	10	7	▼	▼	▼	USB4	
10	11	8	▼	▼	▼	USB4	Left
11	12	9	▼	▼	▼	USB4	
12	13	10	▼	▼	▼	USB4	
13	14	11	▼	▼	▼	USB4	

GPIO35 --Define to EDID Select (If not used,require pull down)

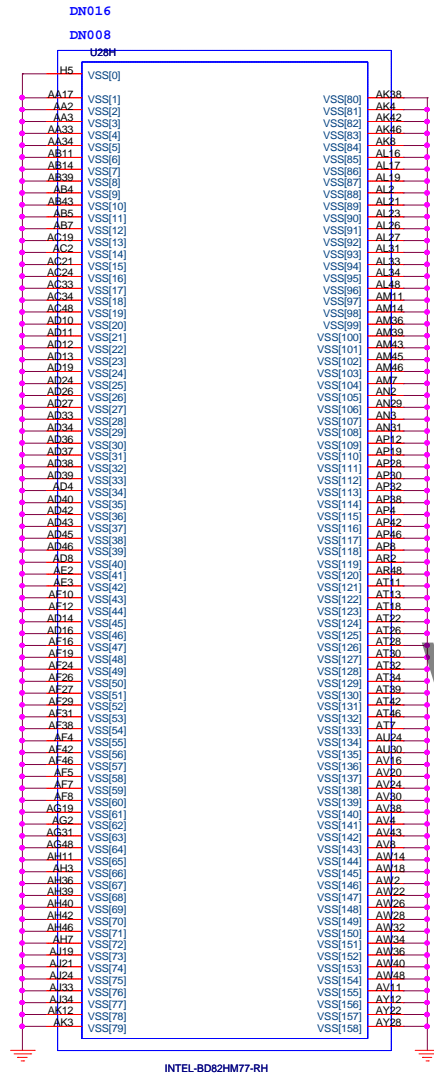
PANTHER POINT (POWER)



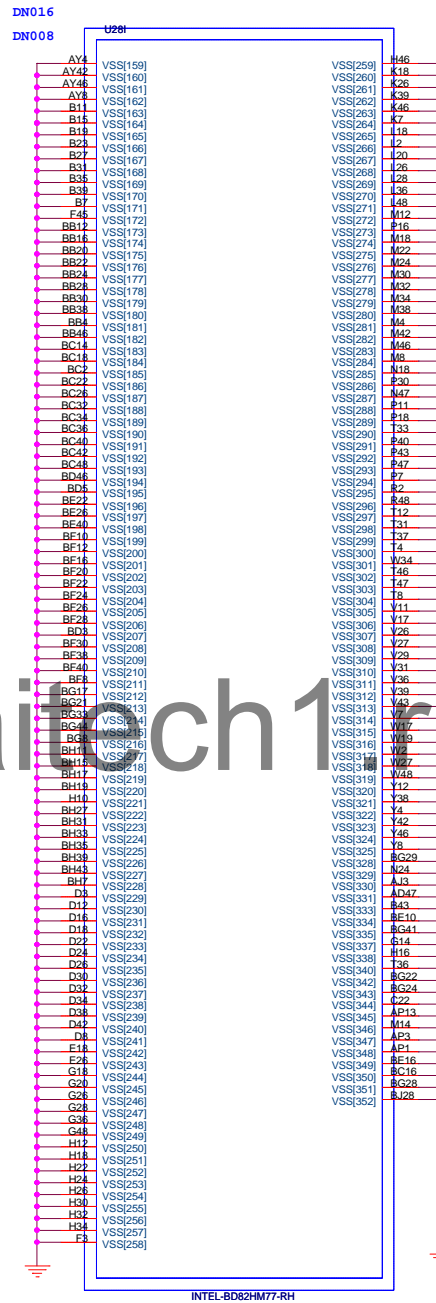
PANTHER POINT (POWER)



PANTHER POINT (GND)

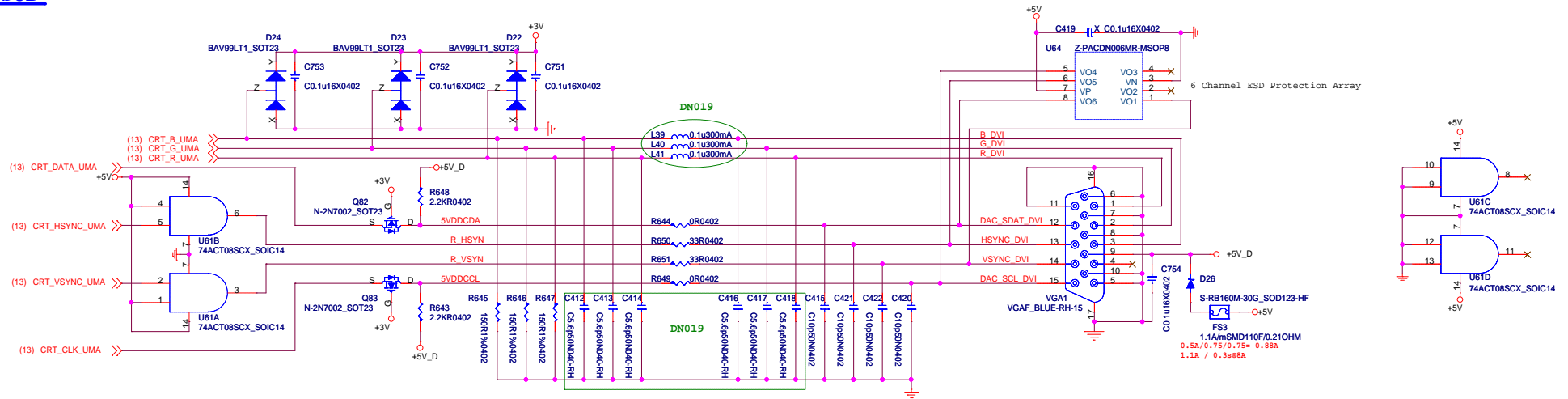


INTEL-BD82HM77-RH

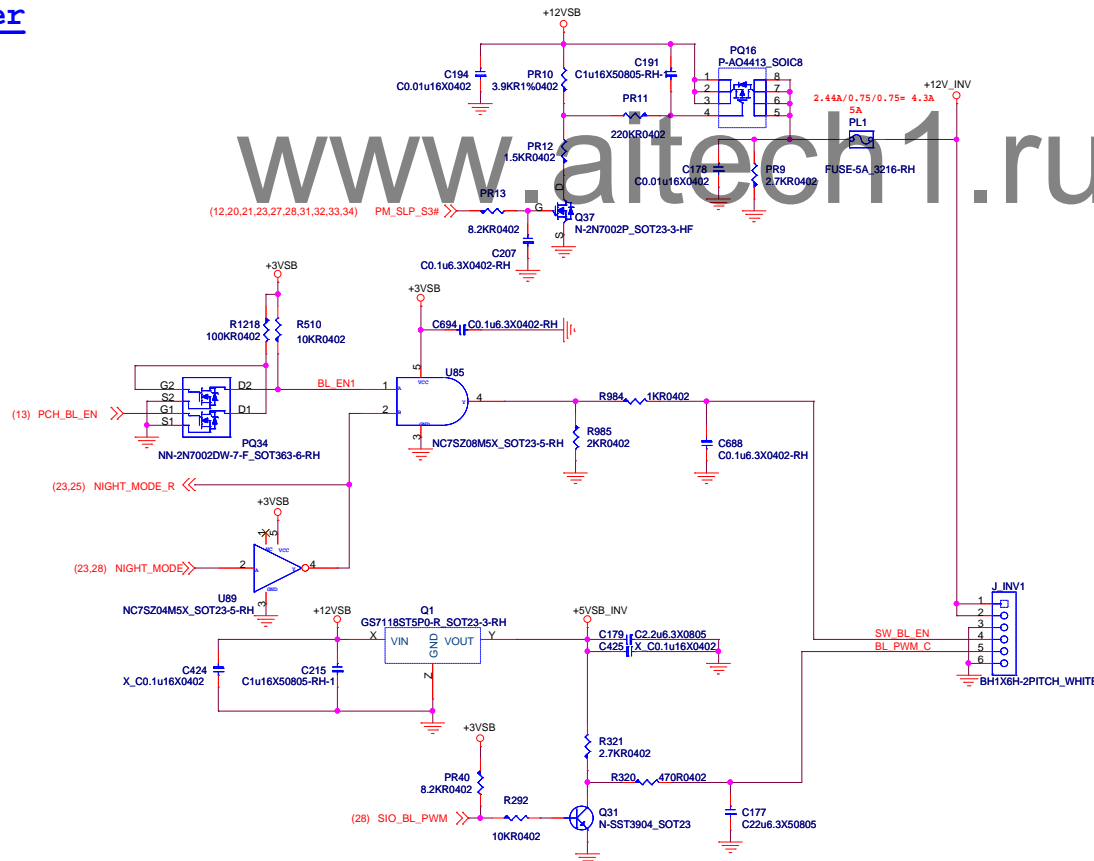


INTEL-BD82HM77-RH

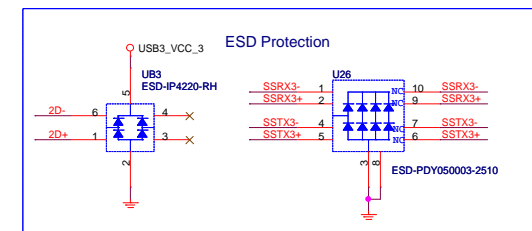
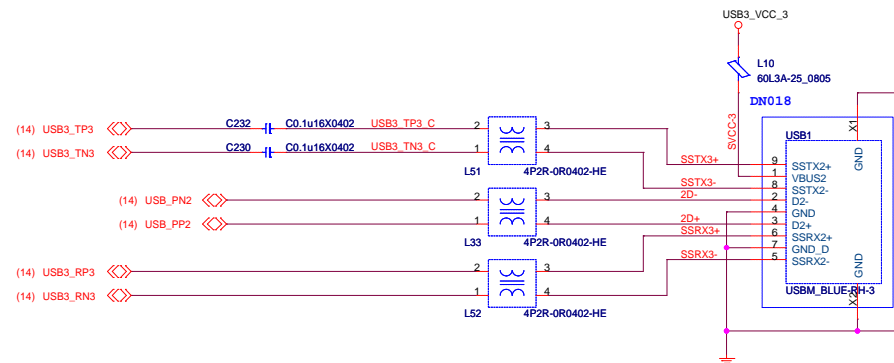
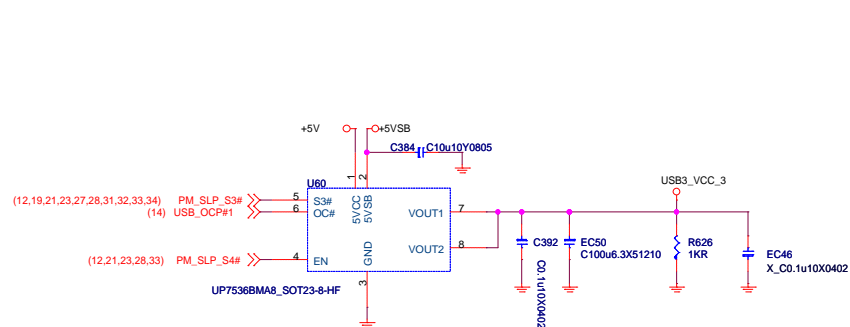
D-SUB



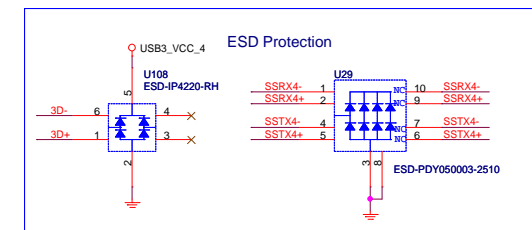
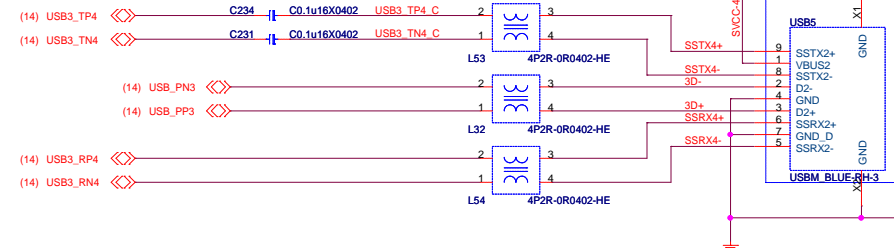
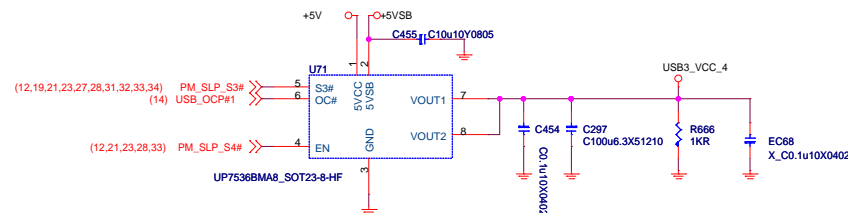
Inveter/LED Converter



Rear Side USB3.0 Port 3

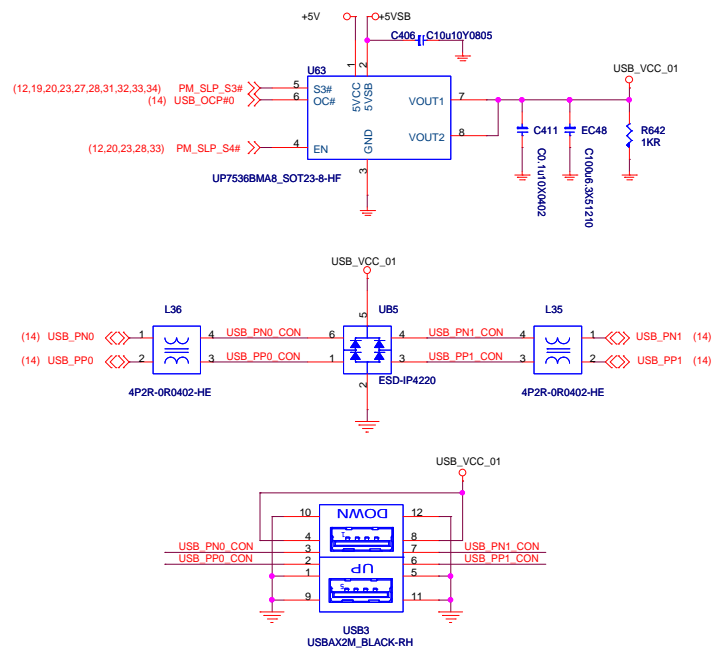


Rear Side USB3.0 Port 4

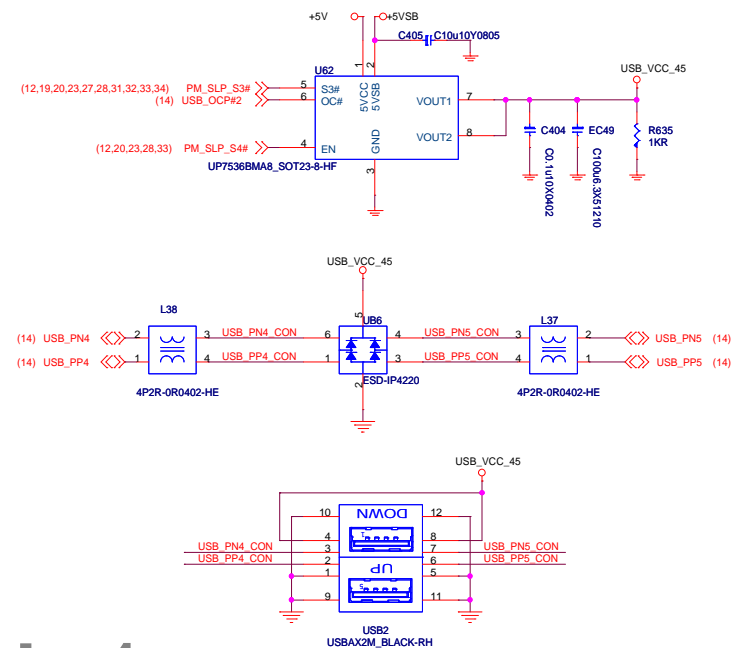


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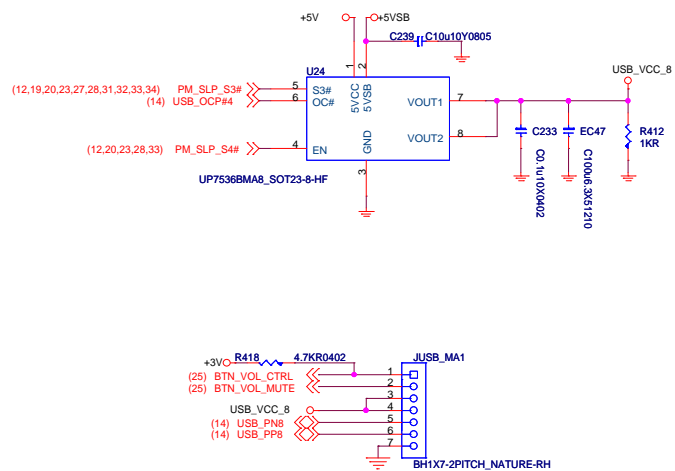
Rear Side USB Port 0,1



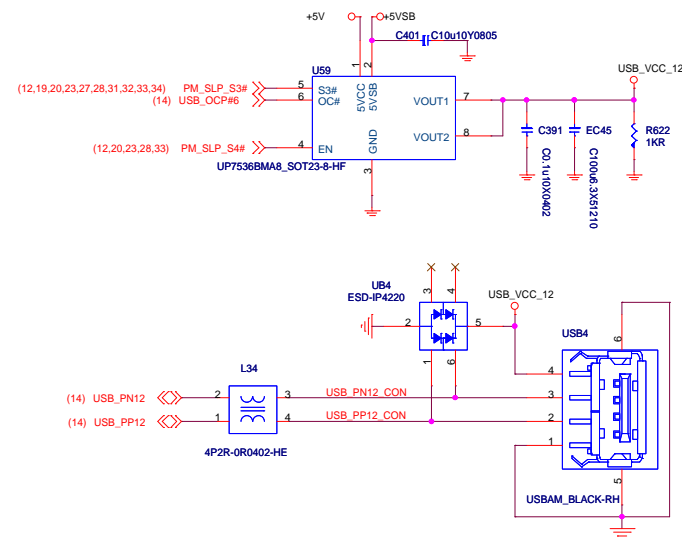
Rear Side USB Port 4,5



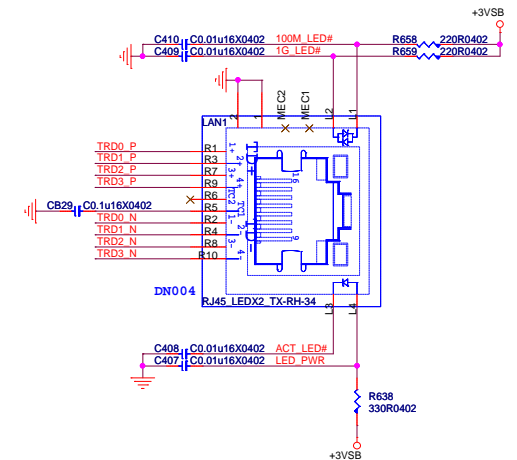
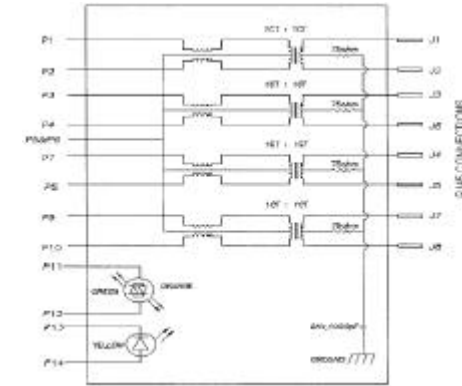
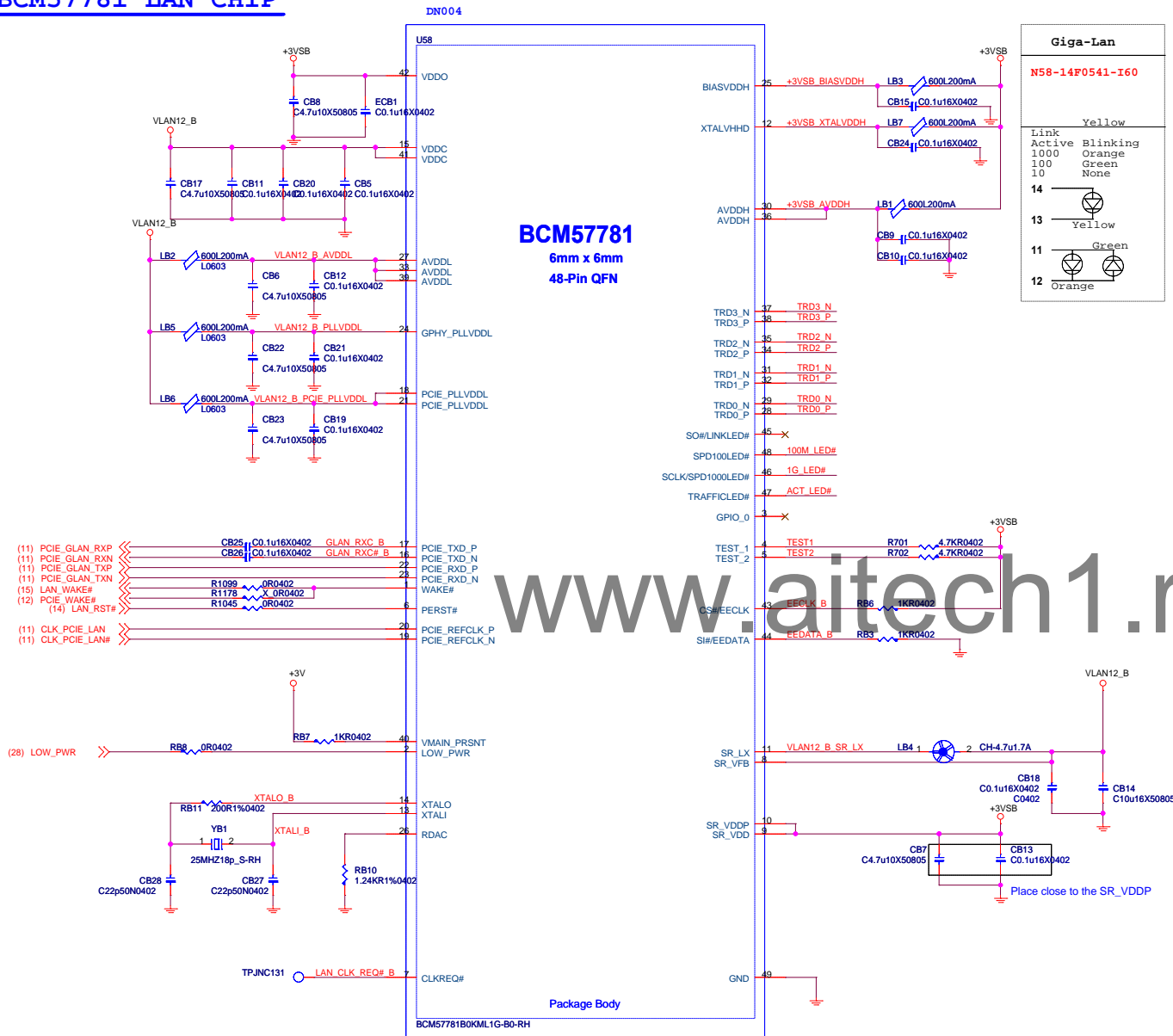
Right Side USB Port 8



Left Side USB Port 12

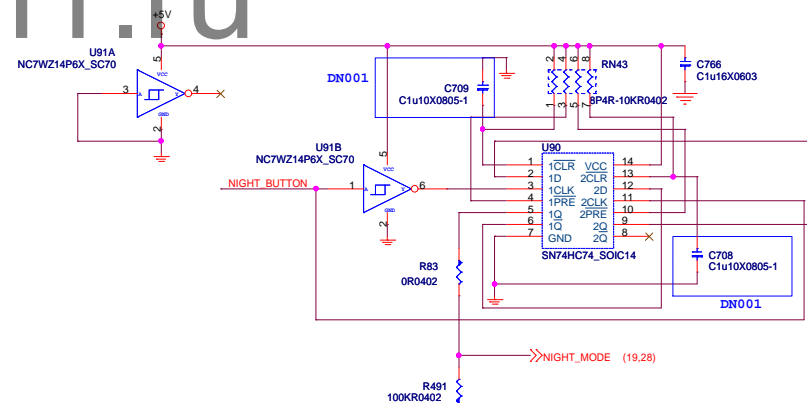


BCM57781 LAN CHIP

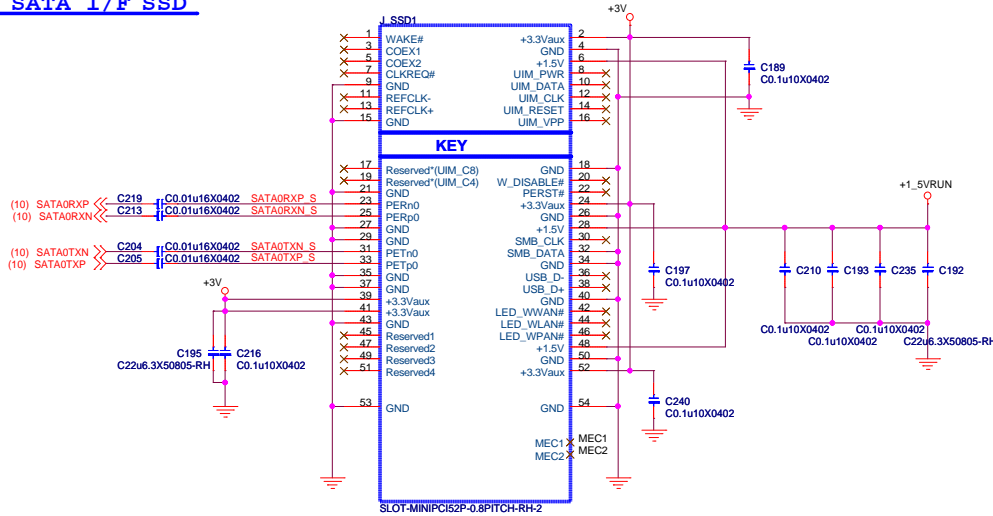


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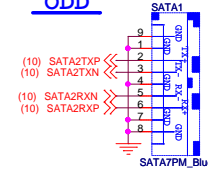
Switch Button



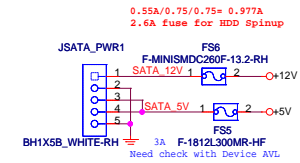
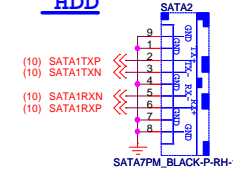
SATA I/F SSD



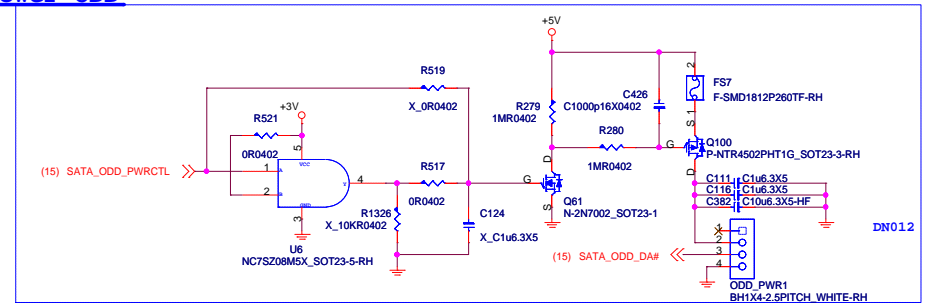
ODD



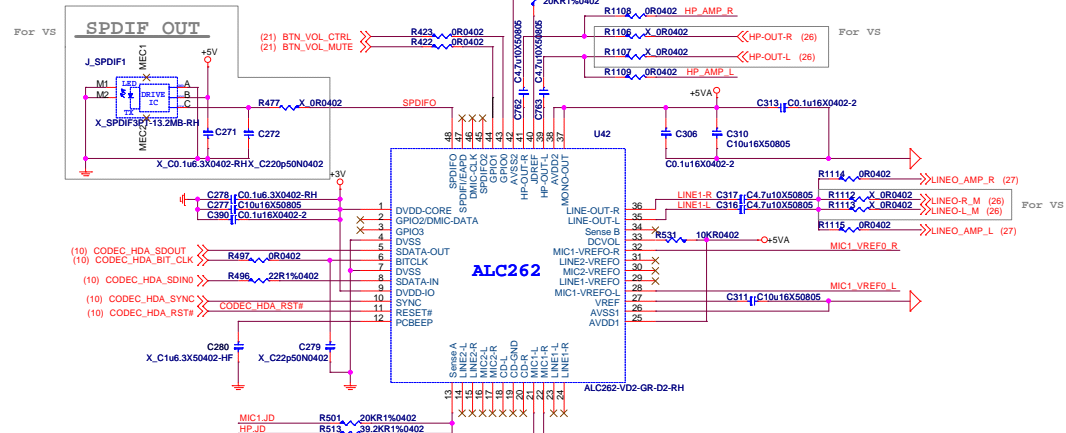
HDD



Zero Power ODD

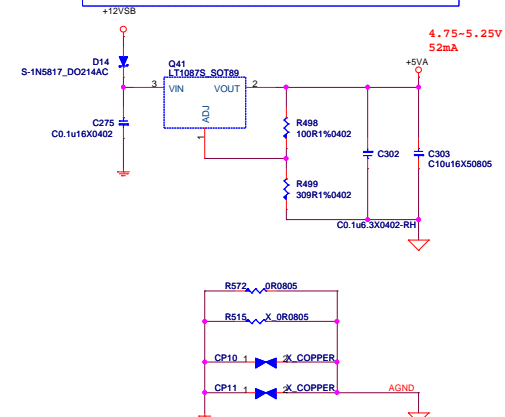


Realtek HD ALC262VD2

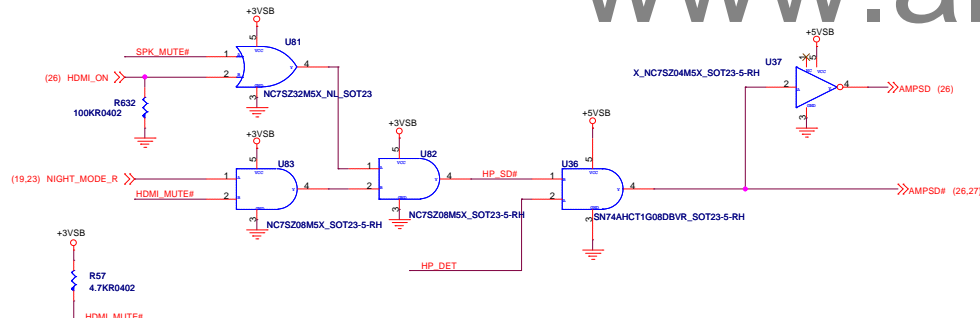


AUDIO CODE REGULATORS

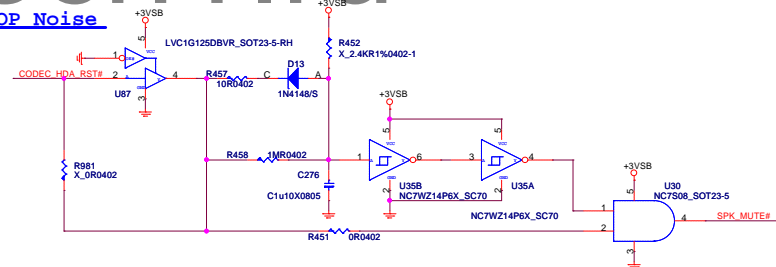
$$+5V_A(S_0) = 1.25 * (1 + 309/100) + 55 * 309 * 10e(-6) = 5.129495$$



Audio mute

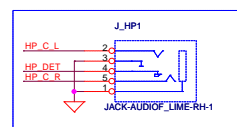
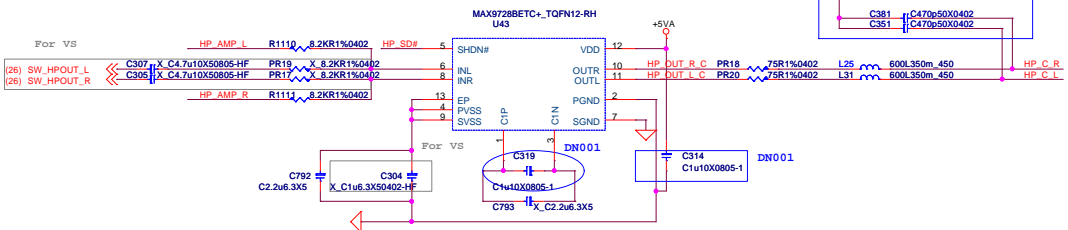
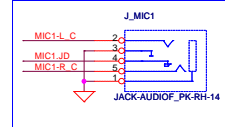


POP Noise

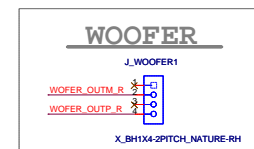
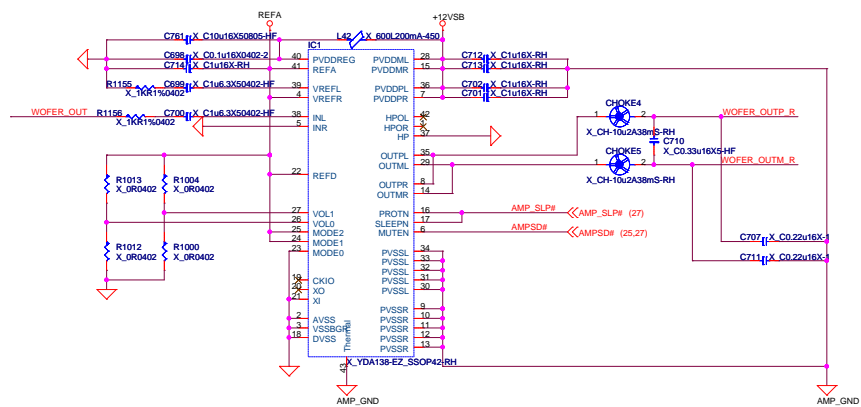
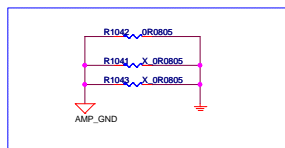
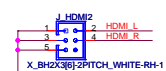
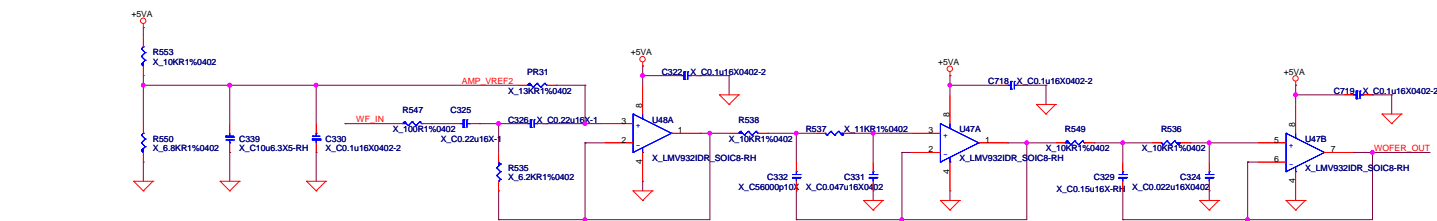
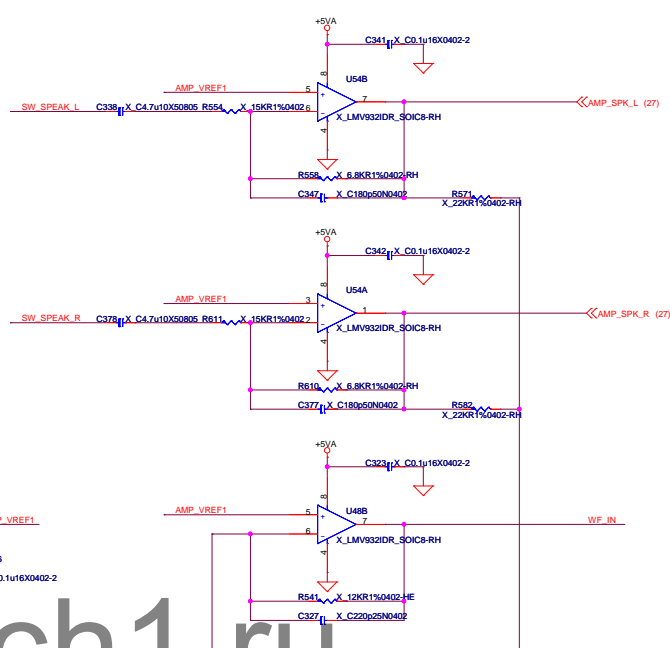
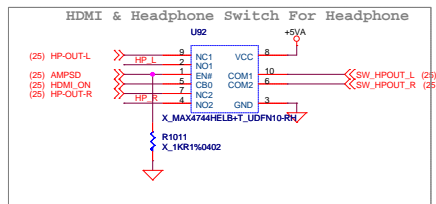
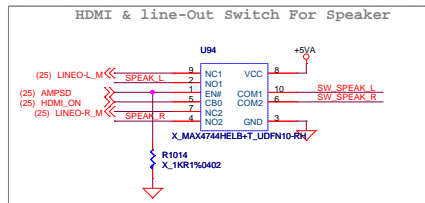
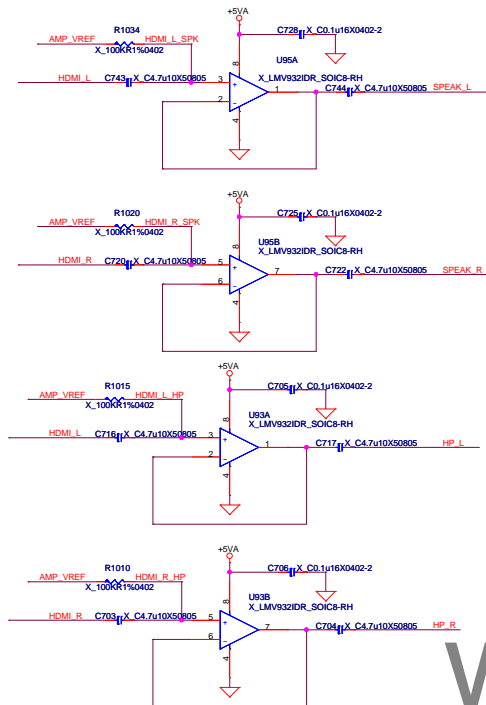


There resistors are reserved
by EMI request

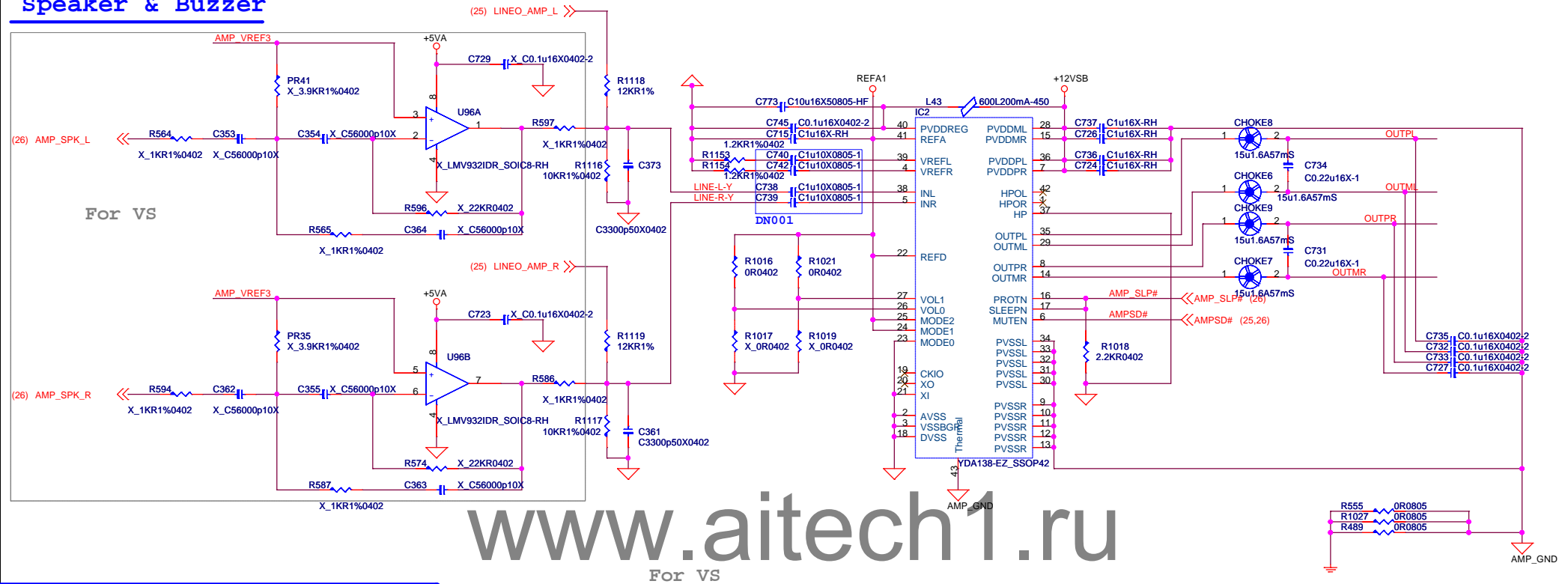
Headphone

MIC

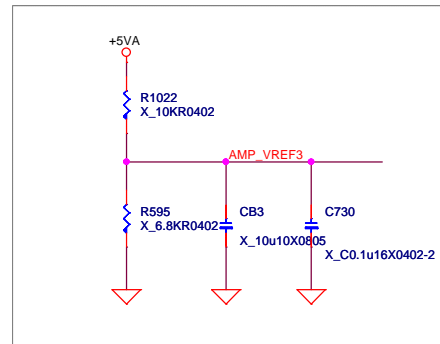
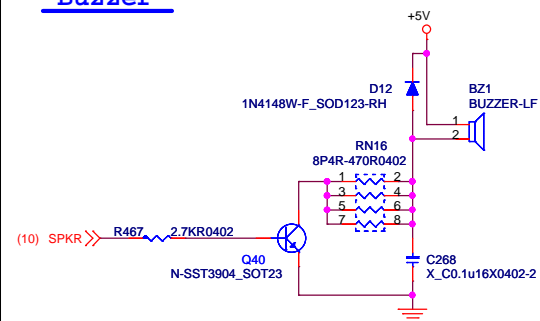
HDMI/AUDIO Switch & Woofer For VS



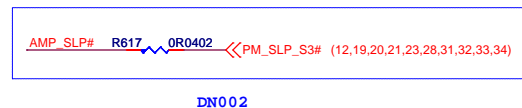
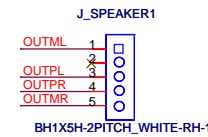
Speaker & Buzzer




Buzzer

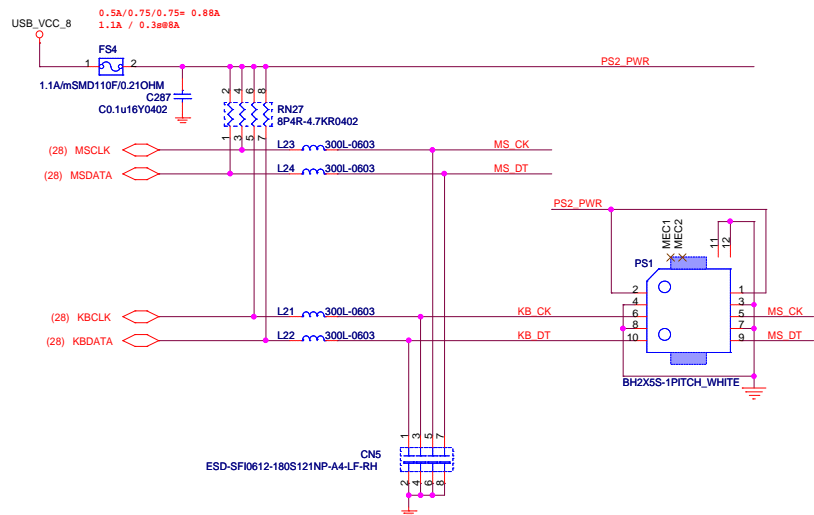


Speaker

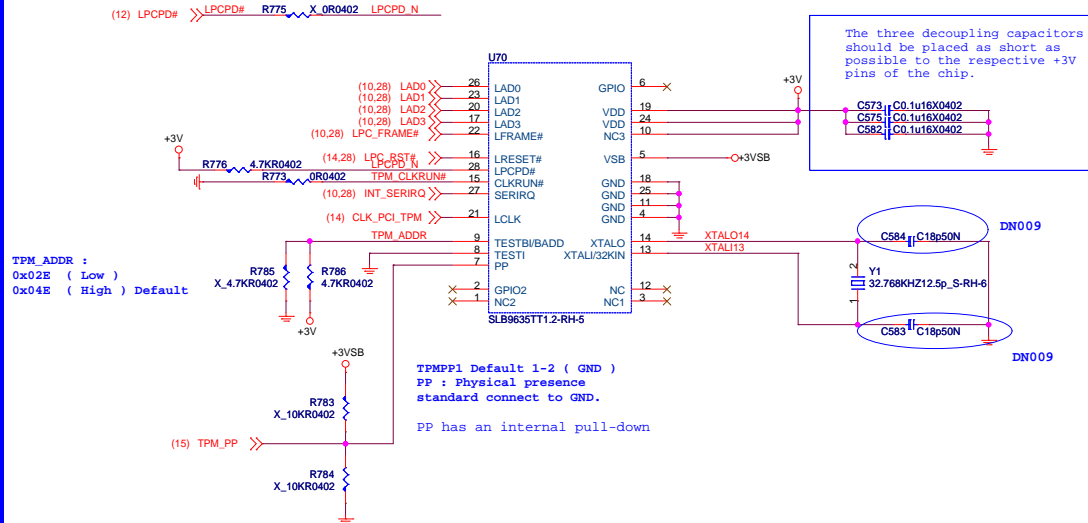


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Title			
SPEAKER & BUZZER			
Size	Document Number		Rev
Custom	MS-A9311		10
Date:	Monday, March 05, 2012	Sheet	27 of 41

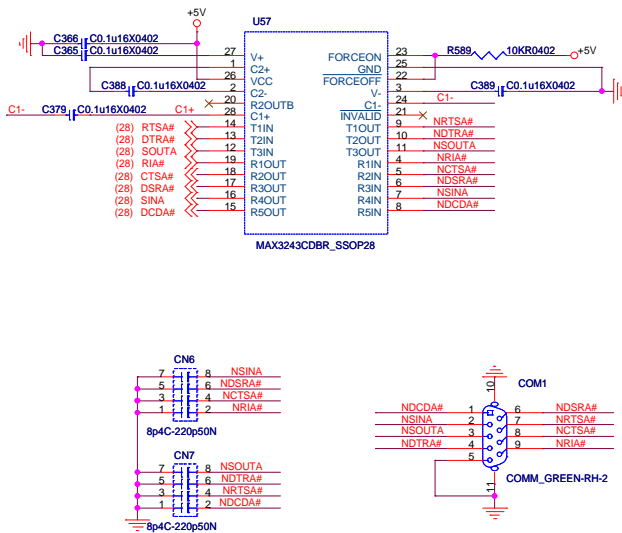
PS2 Keyboard & Mouse



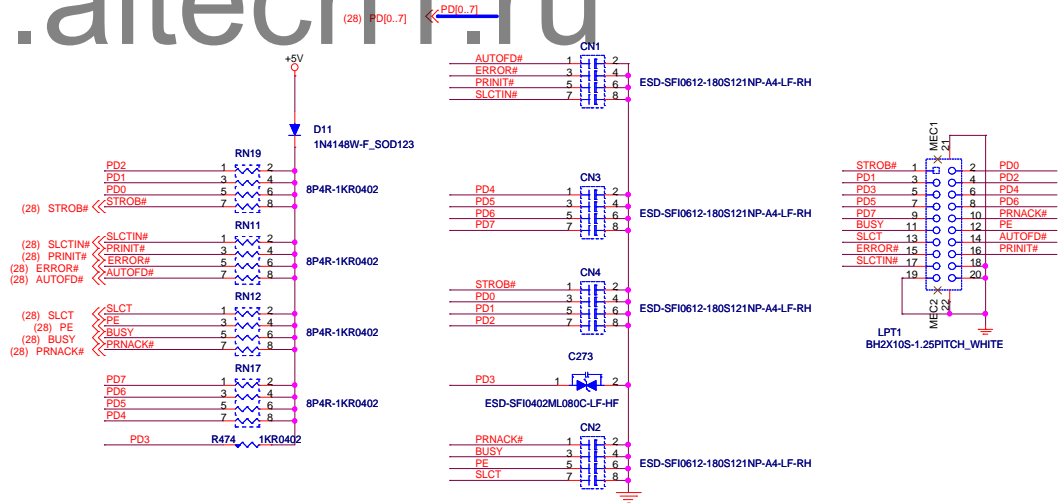
T.P.M.



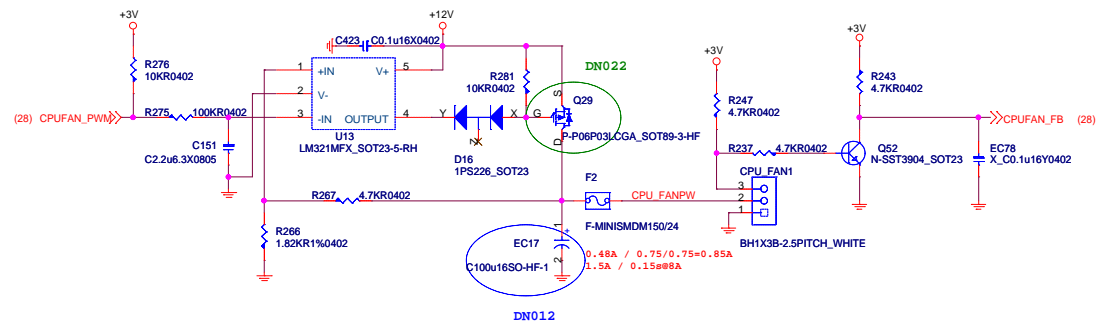
Serial Port



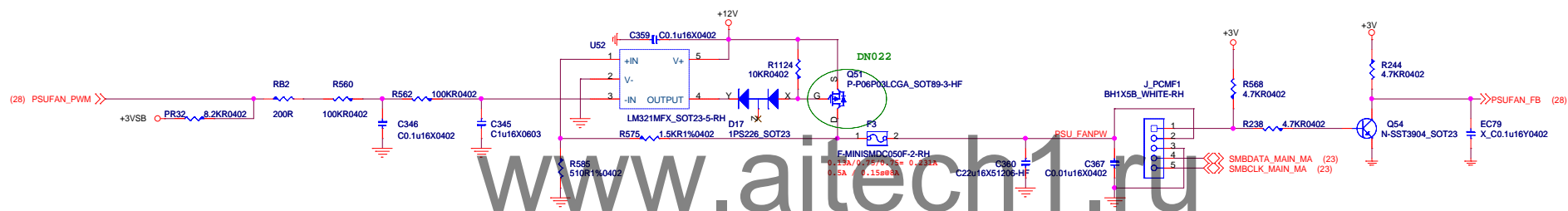
Parallel Port



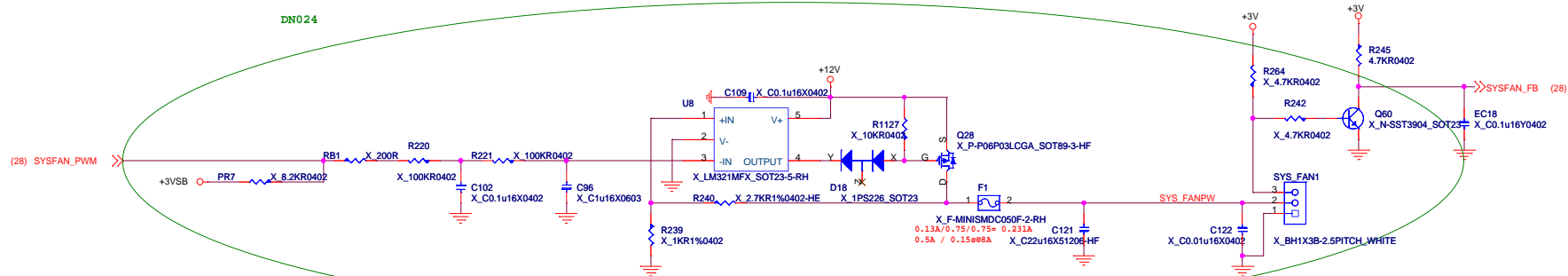
CPU FAN



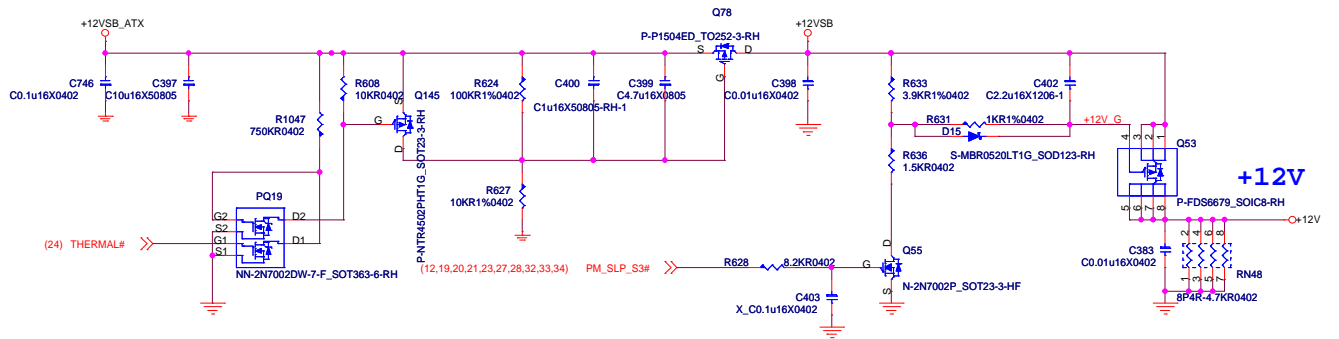
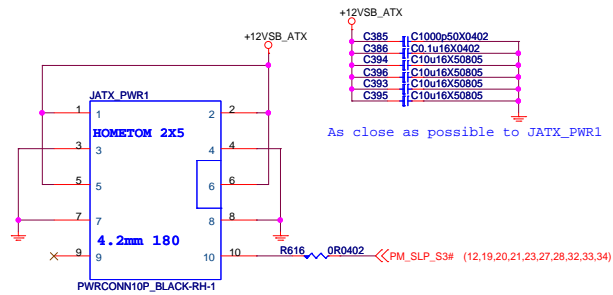
PSU FAN(PCMF)



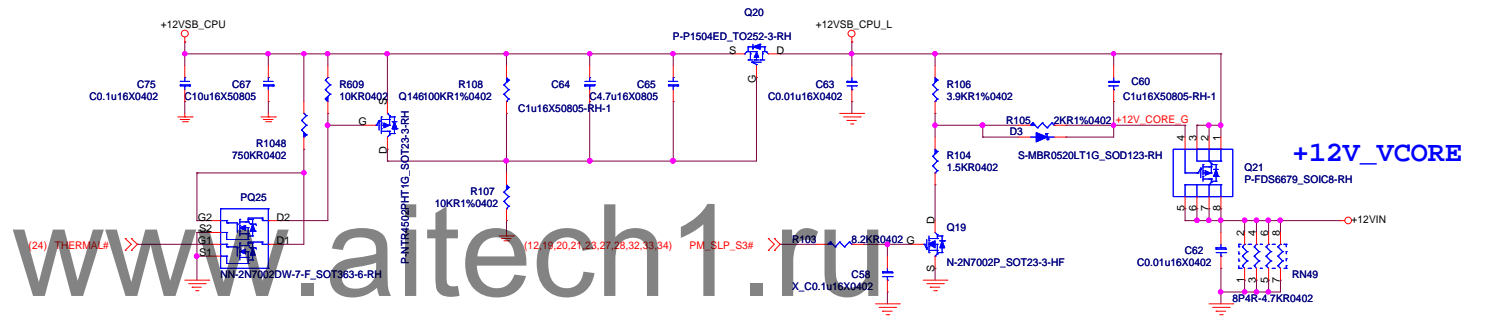
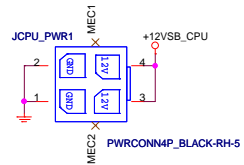
SYS FAN



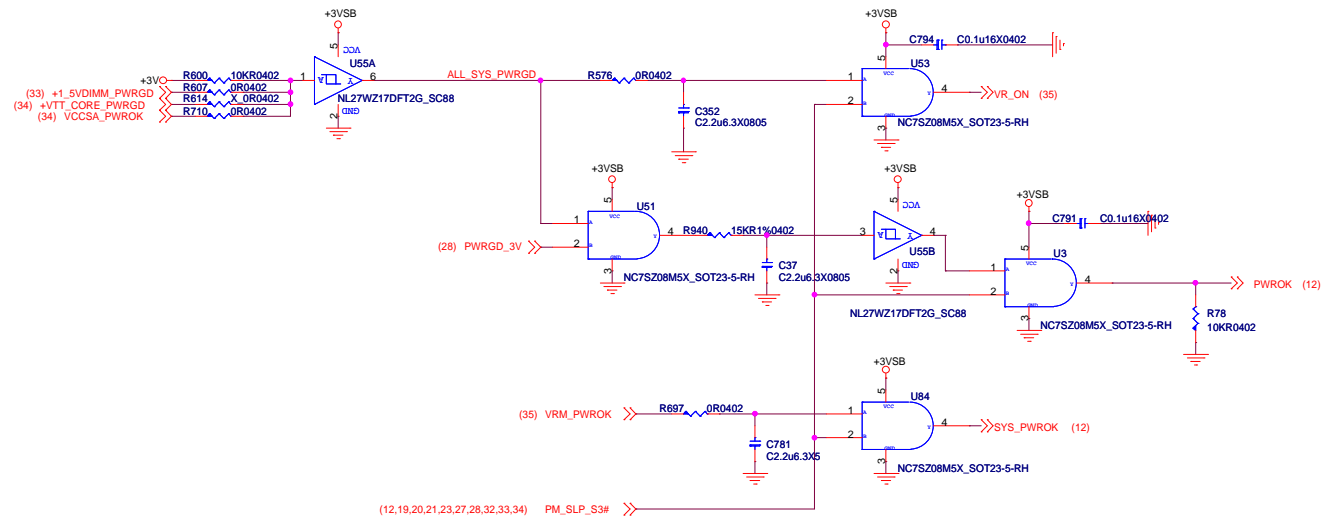
PSU connector



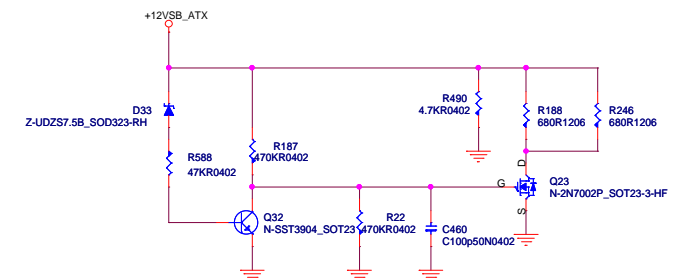
CPU POWER CONNECTOR



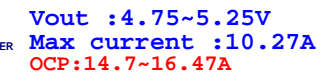
Power Sequence Control



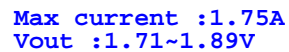
PSU Discharge



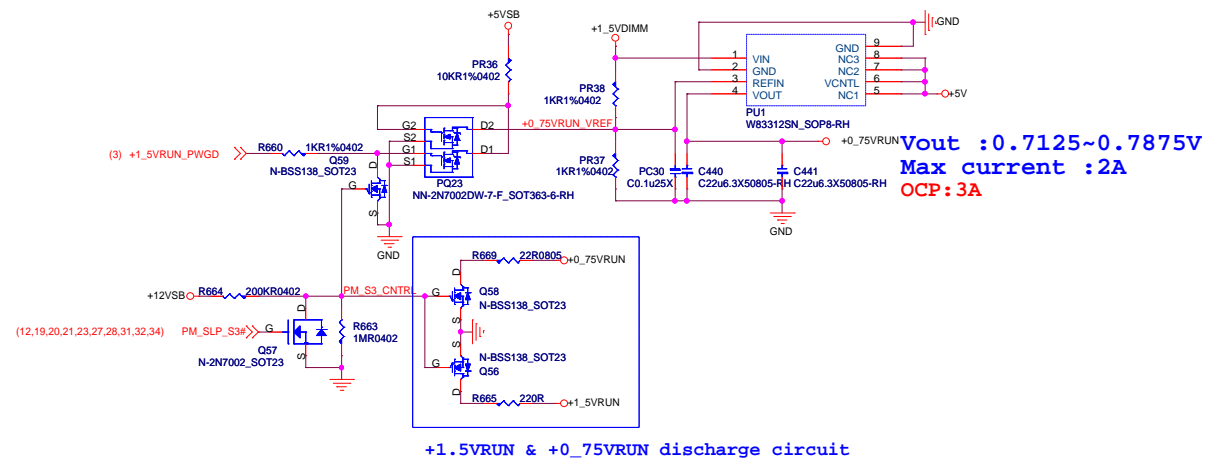
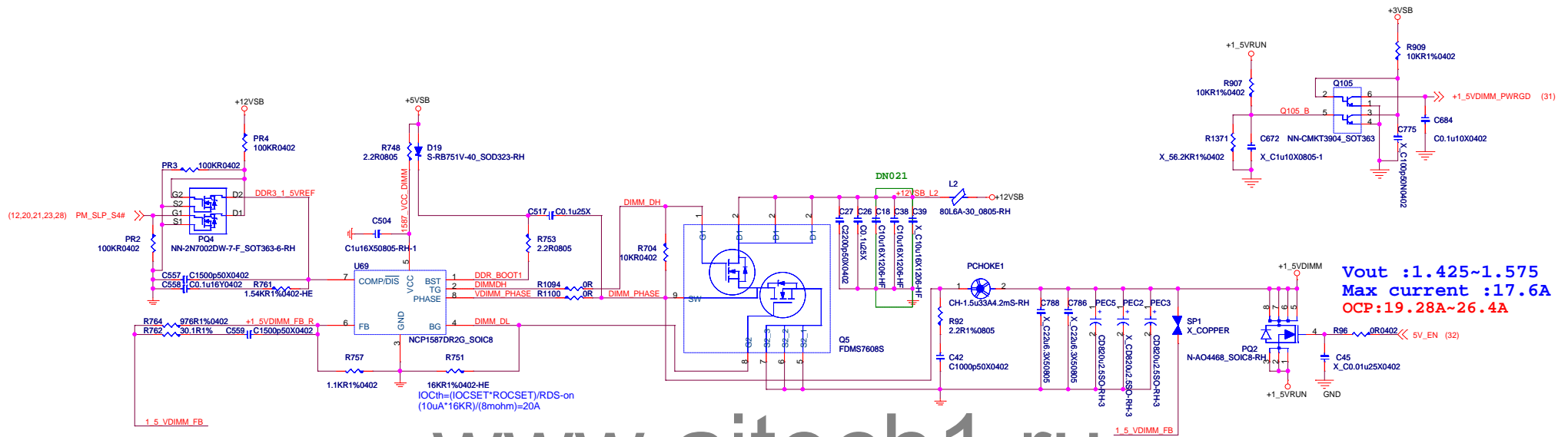
Vout :3.135~3.465V
Max current :7.83A
OCP:14.7~15.8A



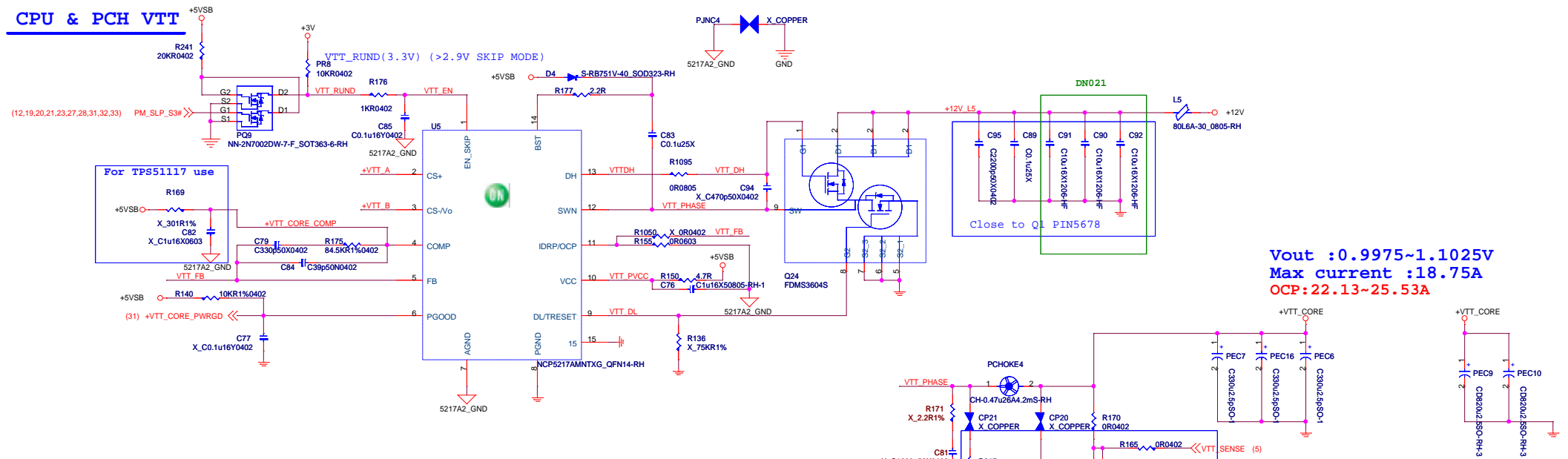
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DDRIII 1.5V_DIMM

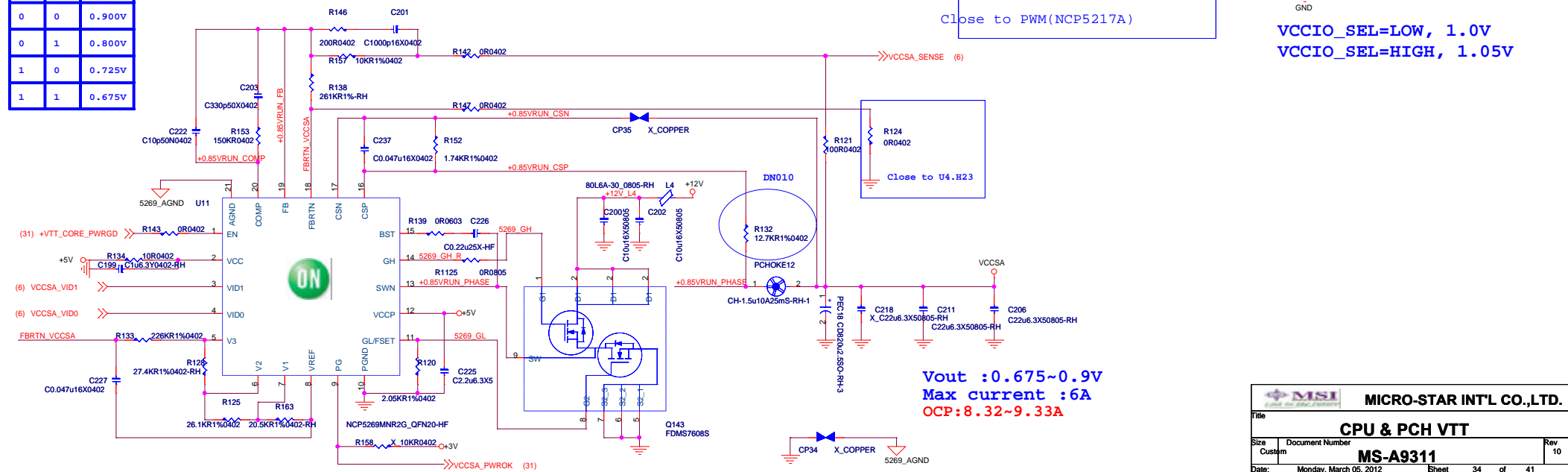


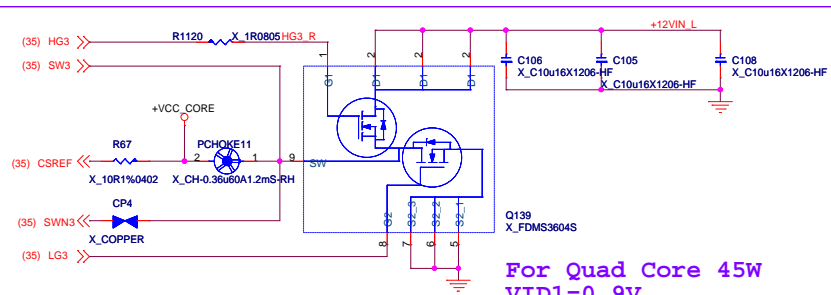
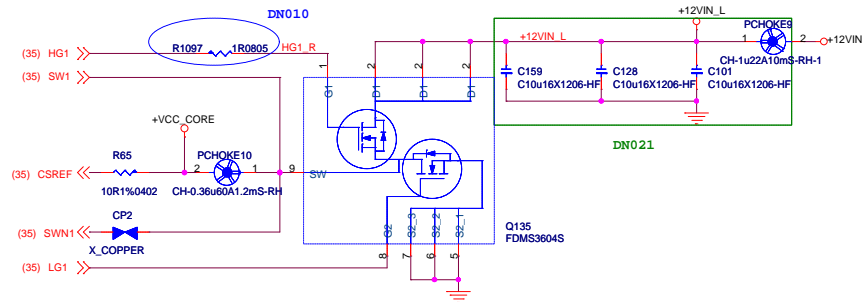
CPU & PCH VTT



CPU_SA POWER(VCCSA)

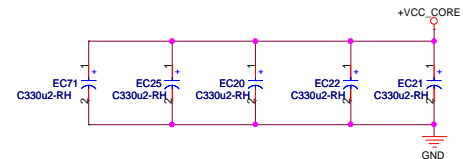
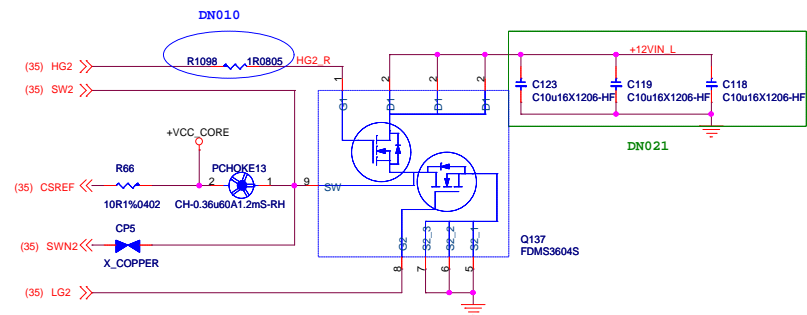
VID0	VID1	Vout
0	0	0.900V
0	1	0.800V
1	0	0.725V
1	1	0.675V





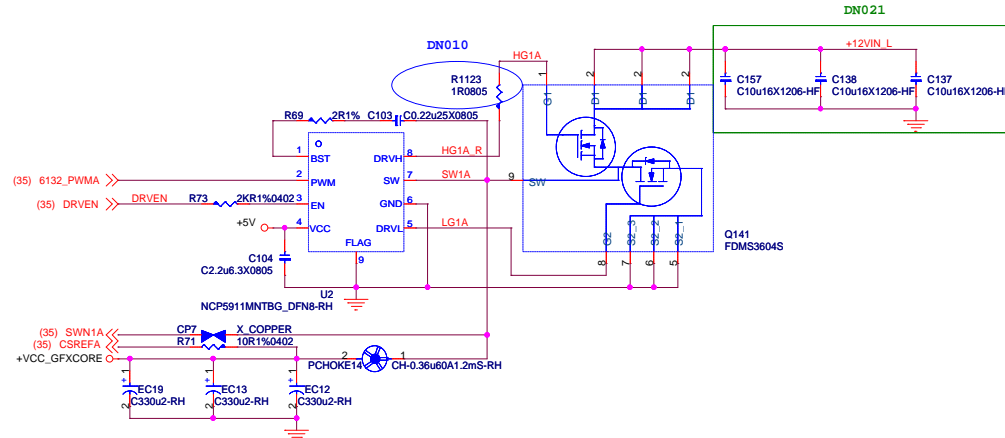
Reserved for Quad Core 45W

For Quad Core 45W
VID1=0.9V
Max current :94A
OCP:100.0~122.2A

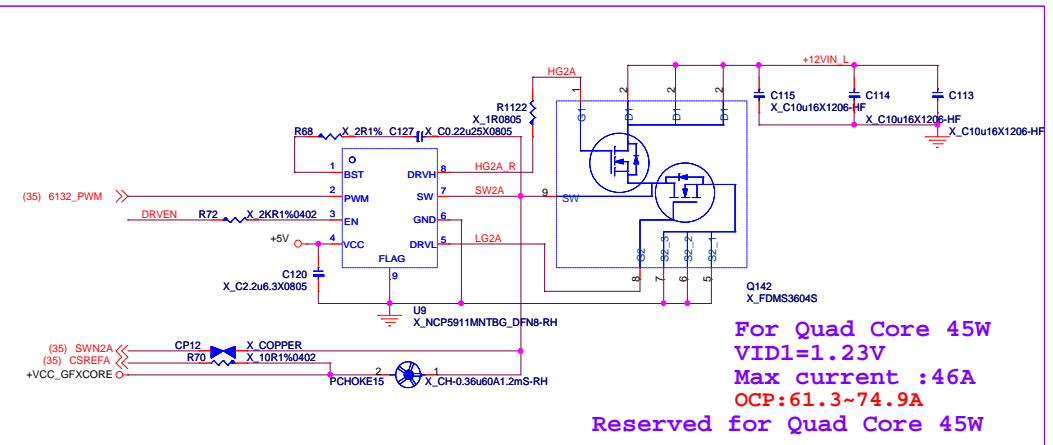


For SV 35W (default)
VID1=1.05V
Max current :53A
OCP:60.1 ~ 73.4A

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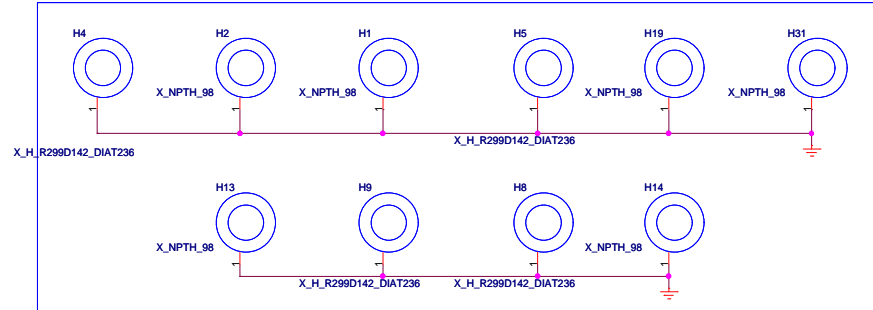
For SV 35W (default)
VID1=1.23V
Max current :33A
OCP:37.2 ~ 45.5A



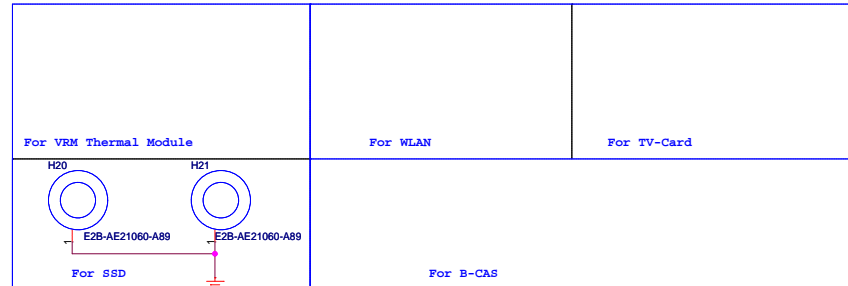
For Quad Core 45W
VID1=1.23V
Max current :46A
OCP:61.3~74.9A
Reserved for Quad Core 45W

Mounting Holes/Standoff

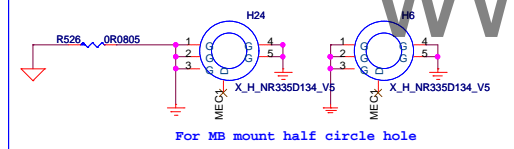
Footprint: H_R335D157



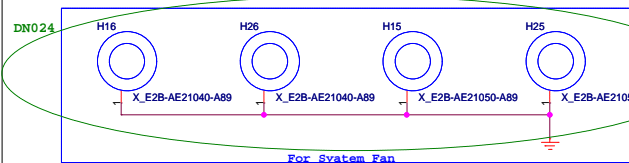
Footprint: H_R217D79BR91_PT



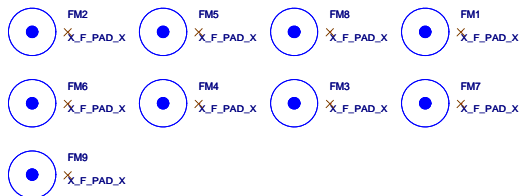
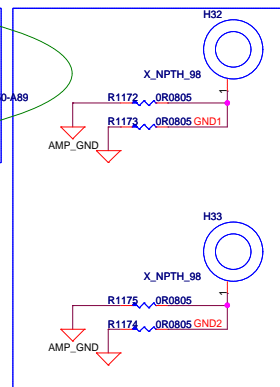
Footprint: H_NR335D134_V5



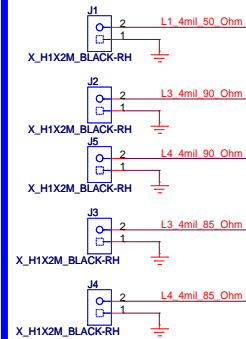
Footprint: H_R315D79BR91_PT



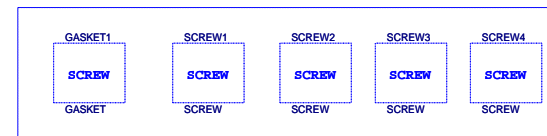
Footprint: H_R335D157



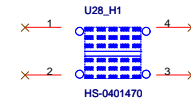
Simulation



DN015



PCH HEAT-SINK



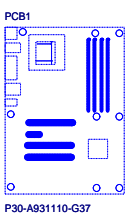
Jumpers (N33-1020331-H06)



UEFI BIOS LABEL



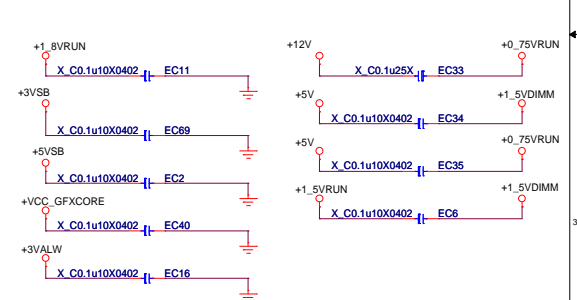
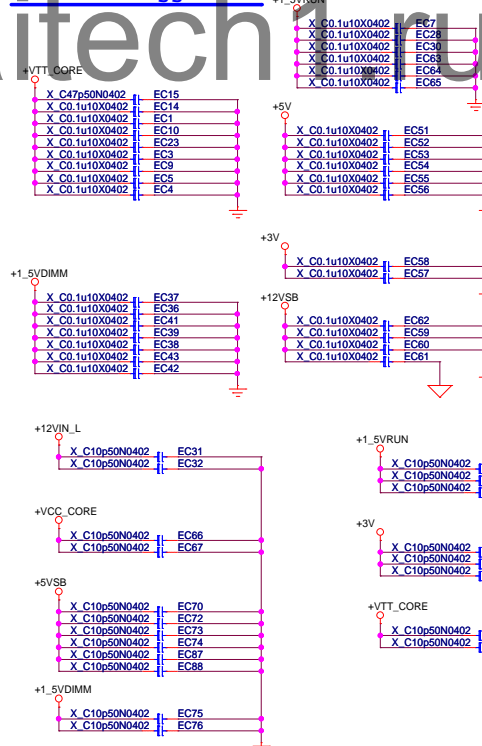
PCB

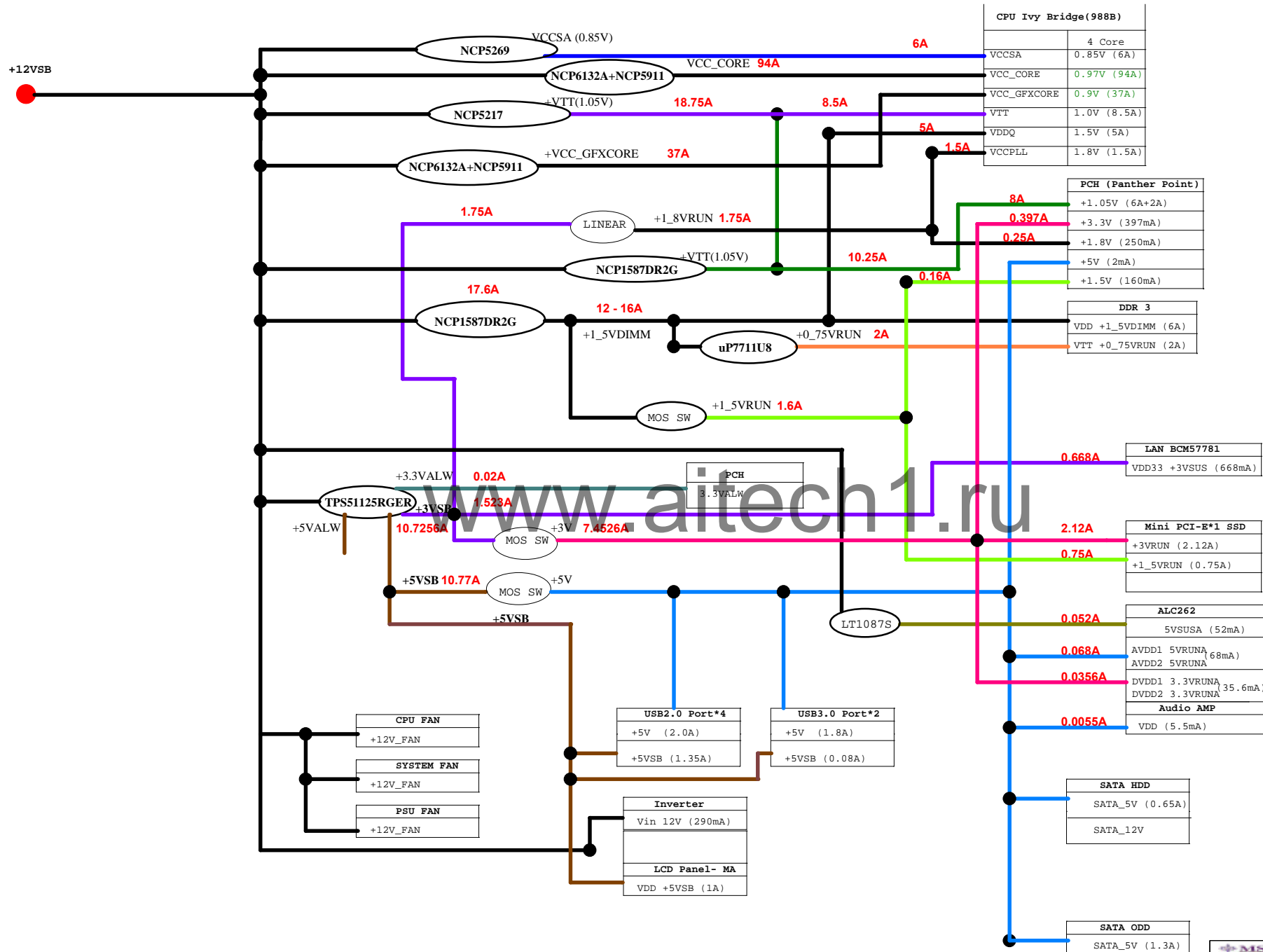


BATTERY



For EMI Suggestion





Signal Name	Type	Power Well	Default	Usage	Processing
BINDU# / GP000	I	3.3V core	GPIO	PCCL_REQUEST#	Pull-up 10kOhm to +3V
GP001	I	3.3V core	GPIO	ID_DONE#	Reserve pull-up 10kOhm to +3V
PIRQ# / GP102	I/O	3.3V core	GPIO	GP102	Pull-up 0.2kOhm to +3V
PIRQ# / GP103	I/O	3.3V core	GPIO	GP103	Pull-up 0.2kOhm to +3V
PIRQ# / GP104	I/O	3.3V core	GPIO	GP104	Pull-up 0.2kOhm to +3V
PIRQ# / GP105	I/O	3.3V core	GPIO	GP105	Pull-up 0.2kOhm to +3V
GP106	I	3.3V core	GPIO	SPL_WF#_R	Reserve pull-up 10kOhm to +3V
GP107	I	3.3V core	GPIO	CLK_FW	Reserve pull-up 10kOhm to +3V
GP108	I/O	3.3V suspend	GPIO	KCC_DONE	Reserve pull-down 10kOhm
OCSE / GP109	I	3.3V suspend	Native	GP109	Pull-up 10kOhm to +3VSB
OC0# / GP110	I	3.3V suspend	Native	USB_OCP#0	Pull-up 10kOhm to +3VSB
SHALERT# / GP111	I	3.3V suspend	Native	HUMAN_INT#	Pull-up 10kOhm to +3VSB
LAM_FWE_PWL_CTL# / GP112	O	3.3V suspend	Native	GP112	Pull-up 10kOhm to +3VSB
HDA_DOCK_RST# / GP113	O	3.3V suspend	GPIO	GP113	Reserve pull-up +3VSB
OC# / GP114	I	3.3V suspend	Native	GP114	Pull-up 10kOhm to +3VSB
GP115	I/O	3.3V suspend	GPIO	KCC_DONE	Pull-up 10kOhm to +3VSB
SATA0P / GP116	I	3.3V core	GPIO	GP116	Reserve pull-up 10kOhm to +3V and pull-down 10kOhm
GP117	I	3.3V core	GPIO	GP117	Pull-down 10kOhm
PCIECLKREQ# / GP118	I	3.3V core	Native	GP118	Pull-up 10kOhm to +3V
SATA1GP / GP119	I	3.3V core	GPIO	DOE_BT0	Pull-up 10kOhm to +3V, Reserve 1K to GND
PCIECLKREQ# / GP120	I/O/O	3.3V core	Native	GP120	Pull-up 10kOhm to +3V
SATA0P / GP121	I	3.3V core	GPIO	GP121	Pull-up 10kOhm to +3V
SCLOCK / GP122	O/O	3.3V core	GPIO	GP122	Pull-up 10kOhm to +3V
LDQ# / GP123	I	3.3V core	Native	TPM321	
GP124	I/O	3.3V suspend	GPIO	GP124	Reserve 10kOhm to +3VSB
PCIECLKREQ# / GP125	I	3.3V suspend	Native	GP125	Pull-up 10kOhm to +3VSB
PCIECLKREQ# / GP126	I	3.3V suspend	Native	GP126	Pull-up 10kOhm to +3VSB
GP127	I/O	3.3V core	GPIO	LAM_WAKER#	Reserve pull-up 10kOhm to +3VSB ; Reserve pull-down 10kOhm
GP128	I/O	3.3V suspend	GPIO	PULL_DOWN_EN	Reserve pull-down 10kOhm
SLEP_LAN# / GP129	O	3.3V suspend	GPIO	GP129	Pull-up 10kOhm to +3VSB
SUSWAKE# / SUSPWAKE# / GP130	O	3.3V suspend	Native	SUSPWAKE#	Pull-up 10kOhm to +3VSB
ACPRESENT / GP131	I	3.3V core	GPIO	GP131	Pull-up 10kOhm to +3VSB
CLKRUN# / GP132	I/O	3.3V core	Native	PH_CLKRUN#	Pull-up 0.2kOhm to +3V
HDA_DOCK_EN# / GP133	O	3.3V core	GPIO	TPM3C4	
STP_PCL# / GP134	O	3.3V core	GPIO	GP134	Pull-up 10kOhm to +3V
GP135	O/O	3.3V core	GPIO	GP135	Reserve pull-up 10kOhm to +3V
SATA0P / GP136	I	3.3V core	GPIO	GP136	Reserve pull-up 10kOhm to +3V; Pull-down 10kOhm
SATA0P / GP137	I	3.3V core	GPIO	GP137	Reserve pull-up 1K Ohm to +3V; Pull-down 10kOhm
SLOW / GP138	O/O	3.3V core	GPIO	GP138	Pull-up 10kOhm to +3V; Reserve pull-down 10kOhm
SDATADQ# / GP139	O/O	3.3V core	GPIO	CKD_SW_DET	Pull-up 10kOhm to +3V
OC1# / GP140	I	3.3V suspend	Native	USB_OCP#1	Pull-up 10kOhm to +3VSB
OC2# / GP141	I	3.3V suspend	Native	USB_OCP#2	Pull-up 10kOhm to +3VSB
OC3# / GP142	I	3.3V suspend	Native	GP142	Pull-up 10kOhm to +3VSB
OC4# / GP143	I	3.3V suspend	Native	USB_OCP#4	Pull-up 10kOhm to +3VSB
PCIECLKREQ# / GP144	I	3.3V suspend	Native	PCIECLKREQ#	Pull-down 10kOhm
PCIECLKREQ# / GP145	I	3.3V suspend	Native	GP145	Pull-up 10kOhm to +3VSB
PCIECLKREQ# / GP146	I	3.3V suspend	Native	GP146	Pull-up 10kOhm to +3VSB
PEG_A_CLKREQ# / GP147	I	3.3V suspend	Native	GP147	Pull-up 10kOhm to +3VSB
SDATAQ#1 / GP148	O/O	3.3V core	GPIO	GP148	Pull-up 10kOhm to +3V

SATA0P / GP149 / TEMP_ALERT#	I	3.3V core	GPIO	GP149	Pull-up 10kOhm to +3V
REQ1# / GP150	I	3.3V core	Native	GP150	Pull-up 8.2kOhm to +3V
GNT1# / GP151	O	3.3V core	Native	HS_BT1	Reserve pull-down 10kOhm
REQ2# / GP152	I	3.3V core	Native	GP152	Pull-up 8.2kOhm to +3V
GNT2# / GP153	O	3.3V core	Native	TPM3C4	
REQ3# / GP154	I	3.3V core	Native	GP154	Pull-up 8.2kOhm to +3V
GNT3# / GP155	O	3.3V core	Native	STP_A16DR	Reserve pull-down 10kOhm
PEG_B_CLKREQ# / GP156	I	3.3V suspend	Native	GP156	Pull-up 10K to +3VSB
GP157	I/O	3.3V suspend	GPIO	TPM_PP	Reserve Pull-up 10kOhm to +3VSB and reserve pull-down 10kOhm
SPLCLK / GP158	I/O	3.3V suspend	Native	SML_CLK	Pull-up 2.2K to +3VSB
OC4# / GP159	I	3.3V suspend	Native	USB_OCP#0	Pull-up 10kOhm to +3VSB
SMLALERT# / GP160	O/O	3.3V suspend	Native	D6AMST_CNTRL_PCH	Pull-up 10kOhm to +3VSB
SUS_STAT# / GP161	O	3.3V suspend	Native	UOPD#	
SUSCLK / GP162	O	3.3V suspend	Native	SUSCLK	Connect to SIO
SLEP_SS# / GP163	O	3.3V suspend	Native	PH_SLEP_SS#	
CLKOUTFLEX0 / GP164	O	3.3V core	Native	TPM3C6	
CLKOUTFLEX1 / GP165	O	3.3V core	Native	TPM3C7	
CLKOUTFLEX2 / GP166	O	3.3V core	Native	CLKOUTFLEX2	N/C
CLKOUTFLEX3 / GP167	O	3.3V core	Native	CLKOUTFLEX3	Connect to SIO
GP168	I	3.3V core	GPIO	NC	
GP169	I	3.3V core	GPIO	NC	
GP170	I	3.3V core	Native	NC	
GP171	I	3.3V core	Native	NC	
BATLOW# / GP172	I	3.3V suspend	Native	GP172	Pull-up 10kOhm to +3VSB
PCIECLKREQ# / GP173	I	3.3V suspend	Native	GP173	Pull-up 10kOhm to +3VSB
SMLALERT# / PCHOT# / GP174	O/O	3.3V suspend	Native	SMLALERT#	Pull-up 10kOhm
SMLDATA / GP175	I/O	3.3V suspend	Native	SML_DATA	Pull-up 2.2K to +3VSB

DDR3 DIMM Configuration

DEVICE	ADDRESS	CLOCK
DIMM 1	A0H	M_A_CLK_DDR0 / M_A_CLK_DDR#0 M_A_CLK_DDR1 / M_A_CLK_DDR#1
DIMM 2	A4H	M_B_CLK_DDR0 / M_B_CLK_DDR#0 M_B_CLK_DDR1 / M_B_CLK_DDR#1

SMBus Distribution

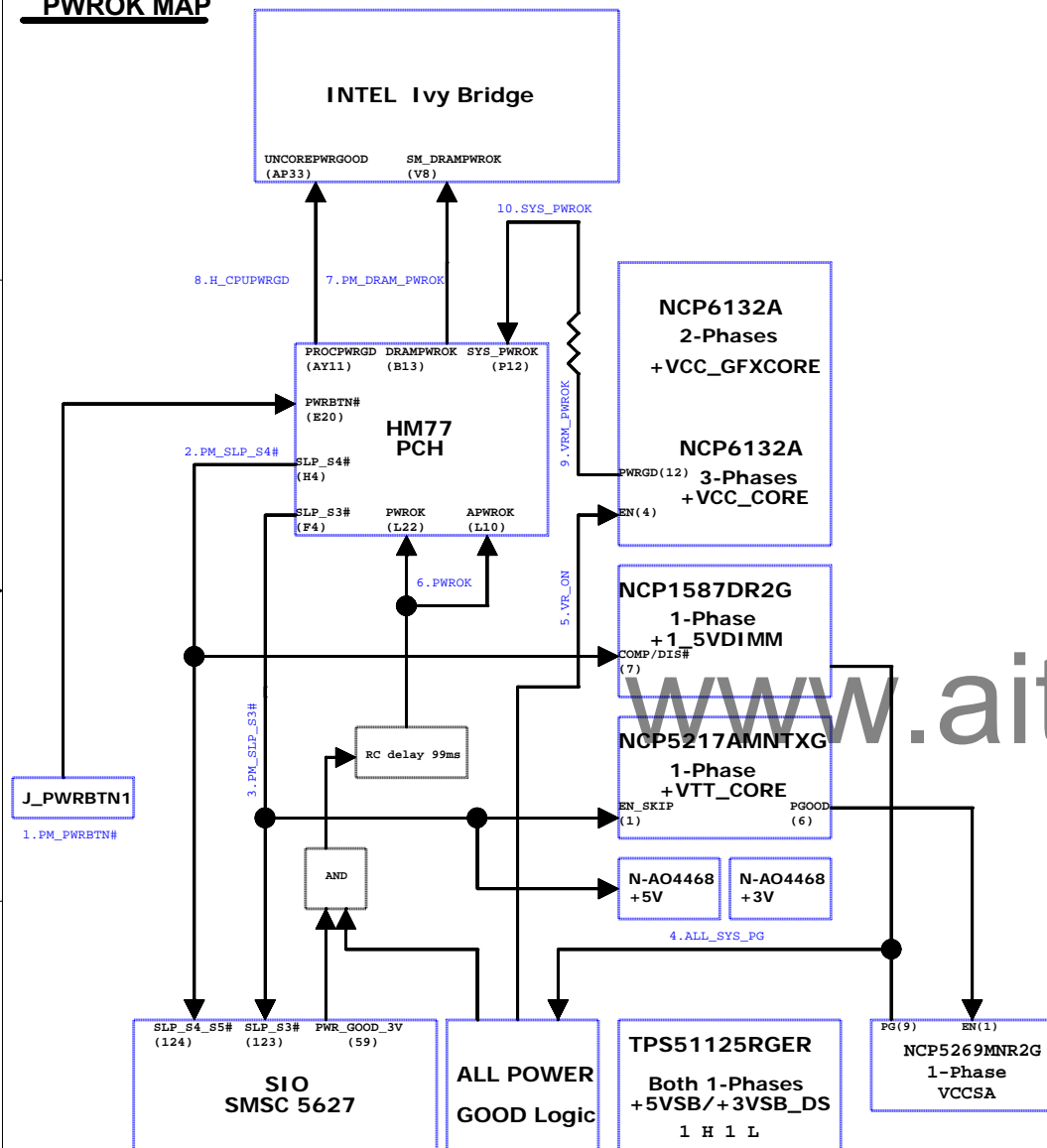
SMBus	Power	Load
SMBCLK_MAIN	VCC3	DIMM, MXM, CLK GEN

Jumper Setting

J_BAT1	Normal Open	(1-2)Clear CMOS
J_ME1	(1-2)Normal	(2-3)ME Disable for FPROG
J_PWC1	(1-2)short: Normal	(1-2)Open: Clear PW

Signal Name	Type	Power Well	Default	Usage	Processing
CR00 / PWR#	I/O	3.3V	GPIO	SIO_B_PWM	Pull up to +3VSB through 8.2k Ohm
CR01 / TACH	I/O	3.3V	GPIO	NC	
CR02 / PCIRST_OUT#	I/O	3.3V	GPIO	PCIRST	Pull up to +3V through 2.2k Ohm
CR03 / PCIRST_OUT#	I/O	3.3V	GPIO	NC	
SPL_D0 / GP004	I/O	3.3V / 3.0V	GPIO	NC	
CR05 / PECT_REQUEST#	I/O	3.3V / 3.0V	GPIO	PECT_REQUEST#	Connect to PCH
LED1 / GP006	I/O	3.3V / 3.0V	GPIO	LED1P	Pull up to +3VSB through 2.2k Ohm
LED2 / GP007	I/O	3.3V / 3.0V	GPIO	LED2P	Pull up to +3VSB through 2.2k Ohm
SMBDAT2 / GP008	I/O	3.3V / 3.0V	GPIO	SMBDAT2	Pull up to +3VSB through 10k Ohm
SMBCLK2 / GP009	I/O	3.3V / 3.0V	GPIO	SMBCLK2	Pull up to +3VSB through 10k Ohm
SPL_D1 / GP011	I/O	3.3V	GPIO	NC	
SPL_D2 / GP013	I/O	3.3V / 3.0V	GPIO	GP013	Pull up to +3VSB through 10k Ohm
CR04 / INTU330H	I/O	3.3V / 3.0V	GPIO	GP014 / INTU330H	Pull up to VBAT through 1K Ohm
PWRBTN# / GP015	I/O	3.3V	GPIO	PM_B	
PRODCT_IN# / PRODCT_OUT# / GP016	I/O	3.3V / 3.0V / 1V1000	PRODCT_IN#	PL_PRODCT#	Pull up to +VTT_CORE through 51 Ohm
TACH / GP017	I/O	3.3V	TACH	CPM3AN_FH	Pull up to +3V through 10k Ohm
TACH / GP018	I/O	3.3V	TACH	SYSAN_FH	Pull up to +3V through 10k Ohm
TACH / GP019	I/O	3.3V	TACH	PSIFAN_FH	Pull up to +3V through 10k Ohm
CR02 / PWR#	I/O	3.3V	GPIO	CPM3AN_PWN	Pull up to +3V through 10k Ohm
CR03 / PWR#	I/O	3.3V	GPIO	SYSAN_PWN	Pull up to +3VSB through 8.2k Ohm
CR04 / PWR#	I/O	3.3V	GPIO	PSIFAN_PWN	Pull up to +3VSB through 8.2k Ohm
CR05 / BC_DAT	I/O	3.3V / 3.0V	GPIO	GP025 / BC_DAT	TPM3C1
PCI_RST_OUT# / GP016	I/O	3.3V / 3.0V	GPIO	PCI_RST_OUT#	NC
PCI_RST_OUT# / GP017	I/O	3.3V / 3.0V	GPIO	PCI_RST_OUT#	NC
PS_ON# / GP020	I/O	3.3V / 3.0V	GPIO	PS_ON#	TPM3C3
CR05 / BC_OUT# / BACKFEED_OUT#	I/O	3.3V / 3.0V	GPIO	BACKFEED_OUT#	PMEL_J04
SPL_CS# / GP027	I/O	3.3V / 3.0V	GPIO	GP027	BOARD_130
SPL_CS# / GP028	I/O	3.3V / 3.0V	GPIO	PMW_C000_30	GPW020_3V
CR06 / GP029	I/O	3.3V	GPIO	GP029	BOARD_130
CR07 / GP030	I/O	3.3V	GPIO	GP030	BOARD_130
CR08 / GP031	I/O	3.3V / 3.0V	GPIO	GP031	BOARD_130
CR09 / GP032	I/O	3.3V / 3.0V	GPIO	GP032	BOARD_130
CR10 / GP033	I/O	3.3V / 3.0V	GPIO	GP033	BOARD_130
CR11 / GP034	I/O	3.3V / 3.0V	GPIO	GP034	BOARD_130
CR12 / GP035	I/O	3.3V / 3.0V	GPIO	GP035	BOARD_130
CR13 / GP036	I/O	3.3V / 3.0V	GPIO	GP036	BOARD_130
CR14 / GP037	I/O	3.3V / 3.0V	GPIO	GP037	BOARD_130
CR15 / GP038	I/O	3.3V / 3.0V	GPIO	GP038	BOARD_130
CR16 / GP039	I/O	3.3V / 3.0V	GPIO	GP039	BOARD_130
CR17 / GP040	I/O	3.3V / 3.0V	GPIO	GP040	BOARD_130
CR18 / GP041	I/O	3.3V / 3.0V	GPIO	GP041	BOARD_130
CR19 / GP042	I/O	3.3V / 3.0V	GPIO	GP042	BOARD_130
CR20 / GP043	I/O	3.3V / 3.0V	GPIO	GP043	BOARD_130
CR21 / GP044	I/O	3.3V / 3.0V	GPIO	GP044	BOARD_130
CR22 / GP045	I/O	3.3V / 3.0V	GPIO	GP045	BOARD_130
CR23 / GP046	I/O	3.3V / 3.0V	GPIO	GP046	BOARD_130
CR24 / GP047	I/O	3.3V / 3.0V	GPIO	GP047	BOARD_130
CR25 / GP048	I/O	3.3V / 3.0V	GPIO	GP048	BOARD_130
CR26 / GP049	I/O	3.3V / 3.0V	GPIO	GP049	BOARD_130
CR27 / GP050	I/O	3.3V / 3.0V	GPIO	GP050	BOARD_130
CR28 / GP051	I/O	3.3V / 3.0V	GPIO	GP051	BOARD_130
CR29 / GP052	I/O	3.3V / 3.0V	GPIO	GP052	BOARD_130
CR30 / GP053	I/O	3.3V / 3.0V	GPIO	GP053	BOARD_130
CR31 / GP054	I/O	3.3V / 3.0V	GPIO	GP054	BOARD_130
CR32 / GP055	I/O	3.3V / 3.0V	GPIO	GP055	BOARD_130
CR33 / GP056	I/O	3.3V / 3.0V	GPIO	GP056	BOARD_130
CR34 / GP057	I/O	3.3V / 3.0V	GPIO	GP057	BOARD_130
CR35 / GP058	I/O	3.3V / 3.0V	GPIO	GP058	BOARD_130
CR36 / GP059	I/O	3.3V / 3.0V	GPIO	GP059	BOARD_130
CR37 / GP060	I/O	3.3V / 3.0V	GPIO	GP060	BOARD_130
CR38 / GP061	I/O	3.3V / 3.0V	GPIO	GP061	BOARD_130
CR39 / GP062	I/O	3.3V / 3.0V	GPIO	GP062	BOARD_130
CR40 / GP063	I/O	3.3V / 3.0V	GPIO	GP063	BOARD_130
CR41 / GP064	I/O	3.3V / 3.0V	GPIO	GP064	BOARD_130
CR42 / GP065	I/O	3.3V / 3.0V	GPIO	GP065	BOARD_130
CR43 / GP066	I/O	3.3V / 3.0V	GPIO	GP066	BOARD_130
CR44 / GP067	I/O	3.3V / 3.0V	GPIO	GP067	BOARD_130
CR45 / GP068	I/O	3.3V / 3.0V	GPIO	GP068	BOARD_130
CR46 / GP069	I/O	3.3V / 3.0V	GPIO	GP069	BOARD_130
CR47 / GP070	I/O	3.3V / 3.0V	GPIO	GP070	BOARD_130
CR48 / GP071	I/O	3.3V / 3.0V	GPIO	GP071	BOARD_130
CR49 / GP072	I/O	3.3V / 3.0V	GPIO	GP072	BOARD_130
CR50 / GP073	I/O	3.3V / 3.0V	GPIO	GP073	BOARD_130
CR51 / GP074	I/O	3.3V / 3.0V	GPIO	GP074	BOARD_130
CR52 / GP075	I/O	3.3V / 3.0V	GPIO	GP075	BOARD_130
CR53 / GP076	I/O	3.3V / 3.0V	GPIO	GP076	BOARD_130
CR54 / GP077	I/O	3.3V / 3.0V	GPIO	GP077	BOARD_130
CR55 / GP078	I/O	3.3V / 3.0V	GPIO	GP078	BOARD_130
CR56 / GP079	I/O	3.3V / 3.0V	GPIO	GP079	BOARD_130
CR57 / GP080	I/O	3.3V / 3.0V	GPIO	GP080	BOARD_130
CR58 / GP081	I/O	3.3V / 3.0V	GPIO	GP081	BOARD_130
CR59 / GP082	I/O	3.3V / 3.0V	GPIO	GP082	BOARD_130
CR60 / GP083	I/O	3.3V / 3.0V	GPIO	GP083	BOARD_130
CR61 / GP084	I/O	3.3V / 3.0V	GPIO	GP084	BOARD_130
CR62 / GP085	I/O	3.3V / 3.0V	GPIO	GP085	BOARD_130
CR63 / GP086	I/O	3.3V / 3.0V	GPIO	GP086	BOARD_130
CR64 / GP087	I/O	3.3V / 3.0V	GPIO	GP087	BOARD_130
CR65 / GP088	I/O	3.3V / 3.0V	GPIO	GP088	BOARD_130
CR66 / GP089	I/O	3.3V / 3.0V	GPIO	GP089	BOARD_130
CR67 / GP090	I/O	3.3V / 3.0V	GPIO	GP090	BOARD_130
CR68 / GP091	I/O	3.3V / 3.0V	GPIO	GP091	BOARD_130
CR69 / GP092	I/O	3.3V / 3.0V	GPIO	GP092	BOARD_130
CR70 / GP093	I/O	3.3V / 3.0V	GPIO	GP093	BOARD_130
CR71 / GP094	I/O	3.3V / 3.0V	GPIO	GP094	BOARD_130
CR72 / GP095	I/O	3.3V / 3.0V	GPIO	GP095	BOARD_130
CR73 / GP096	I/O	3.3V / 3.0V	GPIO	GP096	BOARD_130
CR74 / GP097	I/O	3.3V / 3.0V	GPIO	GP097	BOARD_130
CR75 / GP098	I/O	3.3V / 3.0V	GPIO	GP098	BOARD_130
CR76 / GP099	I/O	3.3V / 3.0V	GPIO	GP099	BOARD_130
CR77 / GP100	I/O	3.3V / 3.0V	GPIO	GP100	BOARD_130
CR78 / GP101	I/O	3.3V / 3.0V	GPIO	GP101	BOARD_130
CR79 / GP102	I/O	3.3V / 3.0V	GPIO	GP102	BOARD_130
CR80 / GP103	I/O	3.3V / 3.0V	GPIO	GP103	BOARD_130
CR81 / GP104	I/O	3.3V / 3.0V	GPIO	GP104	BOARD_130
CR82 / GP105	I/O	3.3V / 3.0V	GPIO	GP105	BOARD_130
CR83 / GP106	I/O	3.3V / 3.0V	GPIO	GP106	BOARD_130
CR84 / GP107	I/O	3.3V / 3.0V	GPIO	GP107	BOARD_130
CR85 / GP108	I/O	3.3V / 3.0V	GPIO	GP108	BOARD_130
CR86 / GP109	I/O	3.3V / 3.0V	GPIO	GP109	BOARD_130
CR87 / GP110	I/O	3.3V / 3.0V	GPIO	GP110	BOARD_130
CR88 / GP111	I/O	3.3V / 3.0V	GPIO	GP111	BOARD_130
CR89 / GP112	I/O	3.3V / 3.0V	GPIO	GP112	BOARD_130
CR90 / GP113	I/O	3.3V / 3.0V	GPIO	GP113	BOARD_130
CR91 / GP114	I/O	3.3V / 3.0V	GPIO	GP114	BOARD_130
CR92 / GP115	I/O	3.3V / 3.0V	GPIO	GP115	BOARD_130
CR93 / GP116	I/O	3.3V / 3.0V	GPIO	GP116	BOARD_130
CR94 / GP117	I/O	3.3V / 3.0V	GPIO	GP117	BOARD_130
CR95 / GP118	I/O	3.3V / 3.0V	GPIO	GP118	BOARD_130
CR96 / GP119	I/O	3.3V / 3.0V	GPIO	GP119	BOARD_130
CR97 / GP120	I/O	3.3V / 3.0V	GPIO	GP120	BOARD_130
CR98 / GP121	I/O	3.3V / 3.0V	GPIO	GP121	BOARD_130
CR99 / GP122	I/O	3.3V / 3.0V	GPIO	GP122	BOARD_130
CR100 / GP123	I/O	3.3V / 3.0V	GPIO	GP123	BOARD_130
CR101 / GP124	I/O	3.3V / 3.0V	GPIO	GP124	BOARD_130
CR102 / GP125	I/O	3.3V / 3.0V	GPIO	GP125	BOARD_130
CR103 / GP126	I/O	3.3V / 3.0V	GPIO	GP126	BOARD_130
CR104 / GP127	I/O	3.3V / 3.0V	GPIO	GP127	BOARD_130
CR105 / GP128	I/O	3.3V / 3.0V	GPIO	GP128	BOARD_130
CR106 / GP129	I/O	3.3V / 3.0V	GPIO	GP129	BOARD_130
CR107 / GP130	I/O	3.3V / 3.0V	GPIO	GP130	BOARD_130
CR108 / GP131	I/O	3.3V / 3.0V	GPIO	GP131	BOARD_130
CR109 / GP132	I/O	3.3V / 3.0V	GPIO	GP132	BOARD_130
CR110 / GP133	I/O	3.3V / 3.0V	GPIO	GP133	BOARD_130
CR111 / GP134	I/O	3.3V / 3.0V	GPIO	GP134	BOARD_130
CR112 / GP135	I/O	3.3V / 3.0V	GPIO	GP135	BOARD_130
CR113 / GP136	I/O	3.3V / 3.0V	GPIO	GP136	BOARD_130
CR114 / GP137	I/O	3.3V / 3.0V	GPIO	GP137	BOARD_130
CR115 / GP138	I/O	3.3V / 3.0V	GPIO	GP138	BOARD_130
CR116 / GP139	I/O	3.3V / 3.0V	GPIO	GP139	BOARD_130
CR117 / GP140	I/O	3.3V / 3.0V	GPIO	GP140	BOARD_130
CR118 / GP141	I/O	3.3V / 3.0V	GPIO	GP141	BOARD_130
CR119 / GP142	I/O	3.3V / 3.0V	GPIO	GP142	BOARD_130
CR120 / GP143	I/O	3.3V / 3.0V	GPIO	GP143	BOARD_130
CR121 / GP144	I/O	3.3V / 3.0V	GPIO	GP144	BOARD_130
CR122 / GP145	I/O	3.3V / 3.0V	GPIO	GP145	BOARD_130
CR123 / GP146	I/O	3.3V / 3.0V	GPIO	GP146	BOARD_130
CR124 / GP147	I/O	3.3V / 3.0V	GPIO	GP147	BOARD_130
CR125 / GP148	I/O	3.3V / 3.0V	GPIO	GP148	BOARD_130
CR126 / GP149	I/O	3.3V / 3.0V	GPIO	GP149	BOARD_130
CR127 / GP150	I/O	3.3V / 3.0V	GPIO	GP150	BOARD_130
CR128 / GP151	I/O	3.3V / 3.0V	GPIO	GP151	BOARD_130
CR129 / GP152	I/O	3.3V / 3.0V	GPIO	GP152	BOARD_130
CR130 / GP153	I/O	3.3V / 3.0V	GPIO	GP153	BOARD_130
CR131 / GP154	I/O	3.3V / 3.0V	GPIO	GP154	BOARD_130
CR132 / GP155	I/O	3.3V / 3.0V	GPIO	GP155	BOARD_130
CR133 / GP156	I/O	3.3V / 3.0V	GPIO	GP156	BOARD_130
CR134 / GP157	I/O	3.3V / 3.0V	GPIO	GP157	BOARD_130
CR135 / GP158	I/O	3.3V / 3.0V	GPIO	GP158	BOARD_130
CR136 / GP159	I/O	3.3V / 3.0V	GPIO	GP159	BOARD_130
CR137 / GP160	I/O	3.3V / 3.0V	GPIO	GP160	BOARD_130
CR138 / GP161	I/O	3.3V / 3.0V	GPIO	GP161	BOARD_130
CR139 / GP162	I/O	3.3V / 3.0V	GPIO	GP162	BOARD_130
CR140 / GP163	I/O	3.3V / 3.0V	GPIO	GP163	BOARD_130
CR141 / GP164	I/O	3.3V / 3.0V	GPIO	GP164	BOARD_130
CR142 / GP165	I/O	3.3V / 3.0V	GPIO	GP165	BOARD_130
CR143 / GP166	I/O	3.3V / 3.0V	GPIO	GP166	BOARD_130
CR144 / GP167	I/O	3.3V / 3.0V	GPIO	GP167	BOARD_130
CR145 / GP168	I/O	3.3V / 3.0V	GPIO	GP168	BOARD_130
CR146 / GP169	I/O	3.3V / 3.0V	GPIO	GP169	BOARD_130
CR147 / GP170	I/O	3.3V / 3.0V	GPIO	GP170	BOARD_130
CR148 / GP171	I/O	3.3V / 3.0V	GPIO	GP171	BOARD_130
CR149 / GP172	I/O	3.3V / 3.0V	GPIO	GP172	BOARD_130
CR150 / GP173	I/O	3.3V / 3.0V	GPIO	GP173	BOARD_130
CR151 / GP174	I/O	3.3V / 3.0V	GPIO	GP174	BOARD_130
CR152 / GP175	I/O	3.3V / 3.0V	GPIO	GP175	BOARD_130
CR153 / GP176	I/O	3.3V / 3.0V	GPIO	GP176	BOARD_130
CR154 / GP177	I/O	3.3V / 3.0V	GPIO	GP177	BOARD_130
CR155 / GP178	I/O	3.3V / 3.0V	GPIO	GP178	BOARD_130
CR156 / GP179	I/O	3.3V / 3.0V	GPIO	GP179	BOARD_130
CR157 / GP180	I/O	3.3V / 3.0V	GPIO	GP180	BOARD_130
CR158 / GP181	I/O	3.3V / 3.0V	GPIO	GP181	BOARD_130
CR159 / GP182	I/O	3.3V / 3.0V	GPIO	GP182	BOARD_130
CR160 / GP183	I/O	3.3V / 3.0V	GPIO	GP183	BOARD_130
CR161 / GP184	I/O	3.3V / 3.0V	GPIO	GP184	BOARD_130
CR162 / GP185	I/O	3.3V / 3.0V	GPIO	GP185	BOARD_130
CR163 / GP186	I/O	3.3V / 3.0V	GPIO	GP186	BOARD_130
CR164 / GP187	I/O	3.3V / 3.0V	GPIO	GP187	BOARD_130
CR165 / GP188	I/O	3.3V / 3.0V	GPIO	GP188	BOARD_130
CR166 / GP189	I/O	3.3V / 3.0V	GPIO	GP189	BOARD_130
CR167 / GP190	I/O	3.3V / 3.0V	GPIO	GP190	BOARD_130
CR168 / GP191	I/O	3.3V / 3.0V	GPIO	GP191	BOARD_130
CR169 / GP192	I/O	3.3V / 3.0V	GPIO	GP192	BOARD_130
CR170 / GP193	I/O	3.3V / 3.0V	GPIO	GP193	BOARD_130
CR171 / GP194	I/O	3.3V / 3.0V	GPIO	GP194	BOARD_130
CR172 / GP195	I/O	3.			

PWROK MAP



CLOCK MAP

