PEGATRON CONFIDENTIAL

MODEL NAME :

PCB NO :

69- P/N :

AIC70 Schematic

Intel Arrandale rPGA-989
PCH BGA 1071

2011-05-04

REV : R2.0

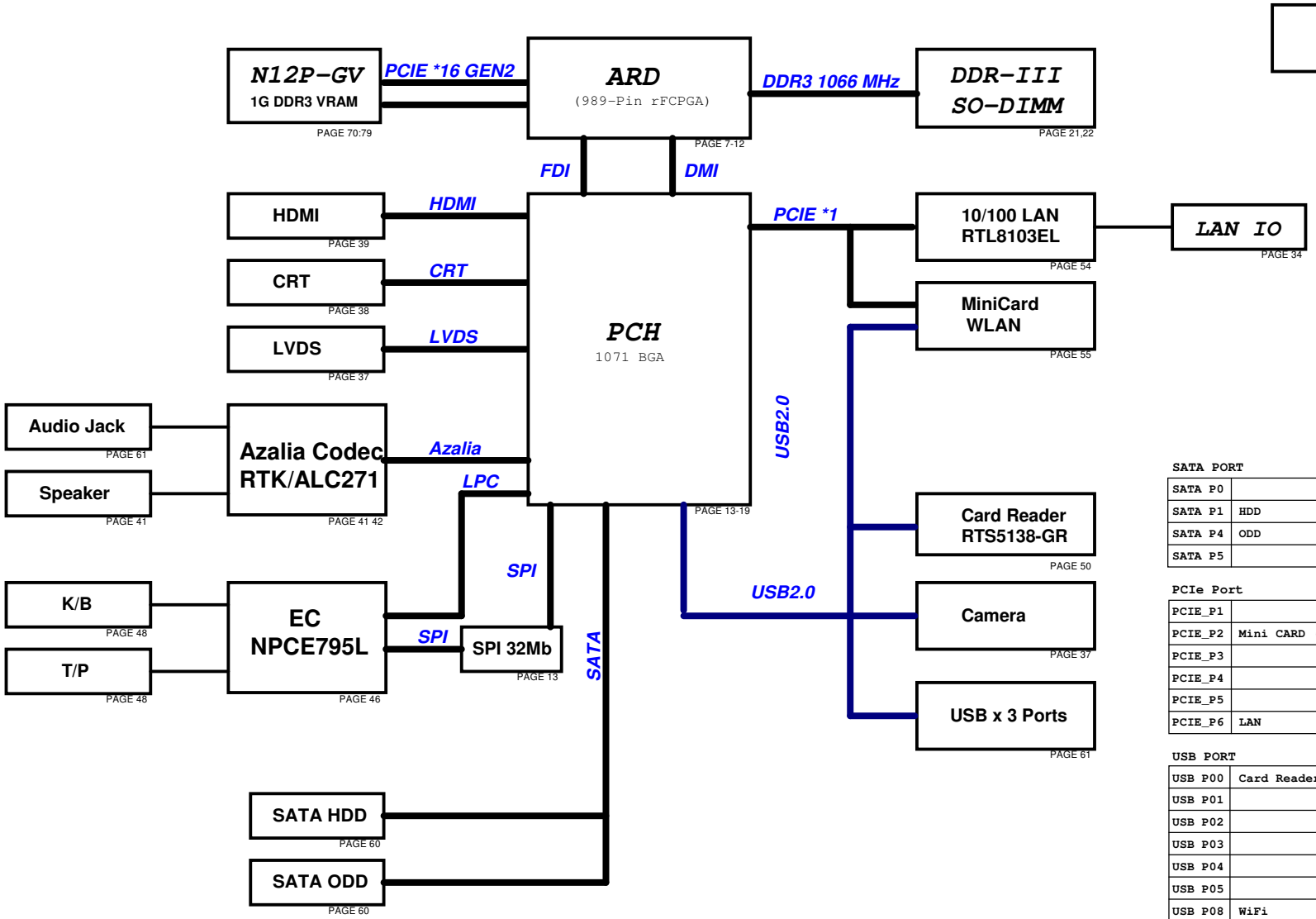
PEGATRON Title : Cover Page

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 1 of 77

AIC70 BLOCK DIAGRAM



POWER

CPU VCORE PAGE 80
SYSTEM, +3V, +5V PAGE 81
+VCCP PAGE 82
DDR & VTT PAGE 83
+VGFX_CORE PAGE 86
+VGA_CORE PAGE 87
SMART CHARGER PAGE 88
POWER DETECT PAGE 90
LOAD SWITCH PAGE 91
POWER PROTECT PAGE 92

SATA PORT

SATA P0	
SATA P1	HDD
SATA P4	ODD
SATA P5	

PCIe Port

PCIE_P1	
PCIE_P2	Mini CARD (WLAN)
PCIE_P3	
PCIE_P4	
PCIE_P5	
PCIE_P6	LAN

USB PORT

USB P00	Card Reader
USB P01	
USB P02	
USB P03	
USB P04	
USB P05	
USB P08	WiFi
USB P09	
USB P10	Camera
USB P11	External
USB P12	External
USB P13	External

Power Rails

Sleep State	RTC	VA	VSUS	V	VS
S0	ON	ON	ON	ON	ON
S3	ON	ON	ON	ON	OFF
S4	ON	ON	ON	OFF	OFF
S5/ AC	ON	ON	ON	OFF	OFF
S5/ DC	ON	ON	OFF	OFF	OFF

PEGATRON Title : BLOCK DIAGRAM

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

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SCHEMATIC INDEX V1.2

PAGE#	Description	NOTE
01	Cover Page	
02	Block Diagram	
03	PAGE INDEX	
07-12	CPU	
13-19	PCH	
21-22	DDR3 SO-DIMM	
24	Clock Generator	
33-34	LAN	
37	LVDS CON	
38	RGB CON	
39	HDMI (Level shift for UMA)	
41-42	AUDIO CODEC & De-POP	
46-48	EC NPCE795L / KB / TP	
49	THERMAL / FAN	
50	CARD READER	
55	MINI CARD -WiFi & BT3.0	
60	SATA(HDD & ODD)	
61	USB & AUDIO CONN	
63	DC-IN / BATTERY CONN / Discharge	
65	PWR CONN & Debug CONN	
66	Led & Nut & ME Pad	
70-79	dGPU Schematics	
80-94	Power Schematics	
95	EE History	
96	ODD Board	
97	PWR Board	
98	TP SW Board & LID Switch	
99	AUDIO Board	

PAGE#	Description	NOTE

PEGATRON Title : PAGE INDEX

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

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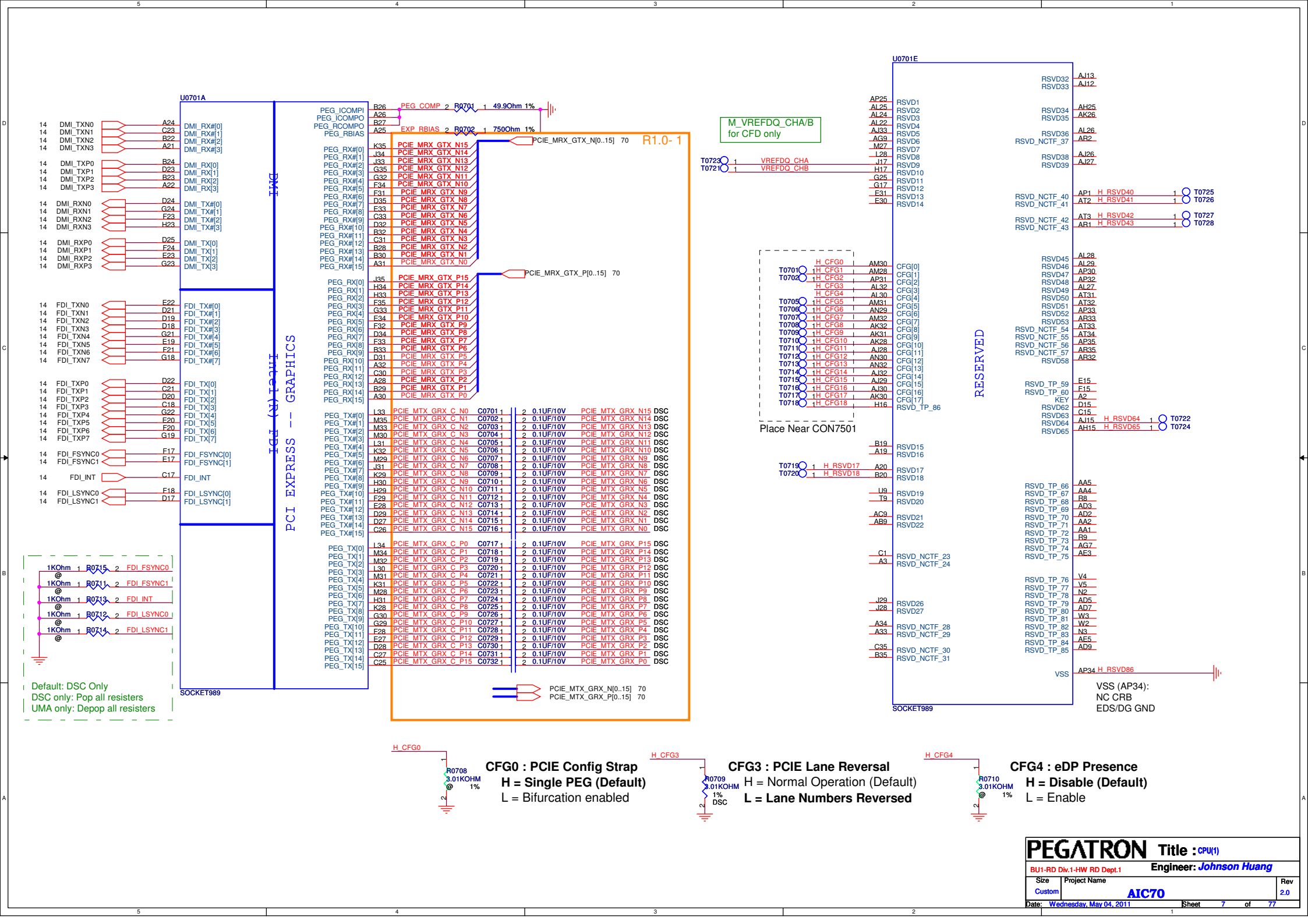
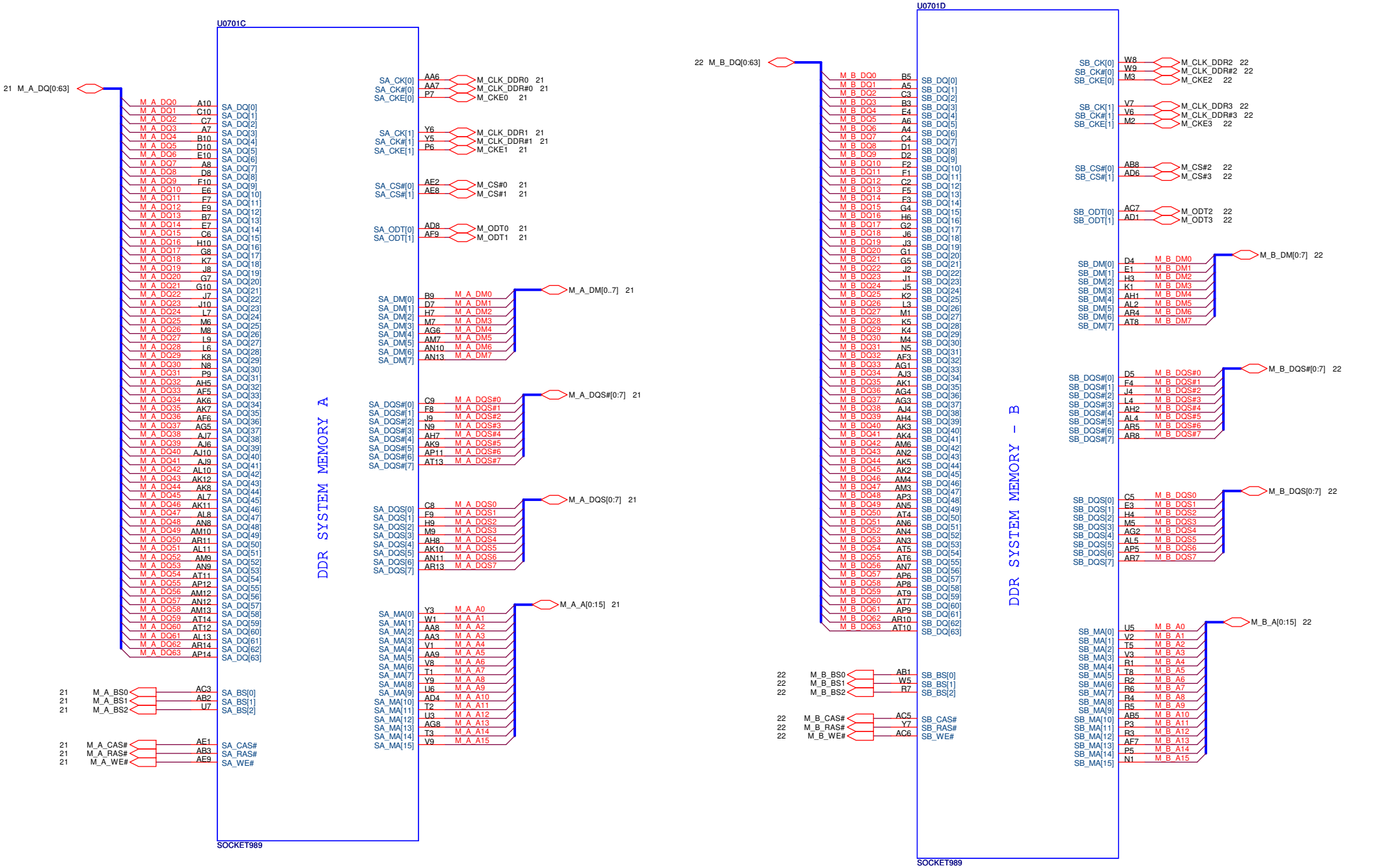

U0701A
DMI
PCI EXPRESS -- GRAPHICS
FDI (4 LANE)
SOCKET989
R1.0- 1
PCIE_MRX_GTX_N[0..15] 70
PCIE_MRX_GTX_P[0..15] 70
PCIE_MTX_GRX_N[0..15] 70
PCIE_MTX_GRX_P[0..15] 70
PEG_COMP R0701 49.9Ohm 1%
EXP_RBIAS R0702 750Ohm 1%
Default: DSC Only
DSC only: Pop all resisters
UMA only: Depop all resisters
M_VREFDQ_CHA/B
for CFD only
VREFDQ_CHA
VREFDQ_CHB
U0701E
RESERVED
Place Near CON7501
SOCKET989
VSS (AP34):
NC CRB
EDS/DG GND
CFG0 : PCIE Config Strap
H = Single PEG (Default)
L = Bifurcation enabled
CFG3 : PCIE Lane Reversal
H = Normal Operation (Default)
L = Lane Numbers Reversed
CFG4 : eDP Presence
H = Disable (Default)
L = Enable
PEGATRON
Title : CPU(1)
BU1-RD Div.1-HW RD Dept.1
Engineer: Johnson Huang
Size: Custom
Project Name: AIC70
Rev: 2.0
Date: Wednesday, May 04, 2011
Sheet 7 of 77

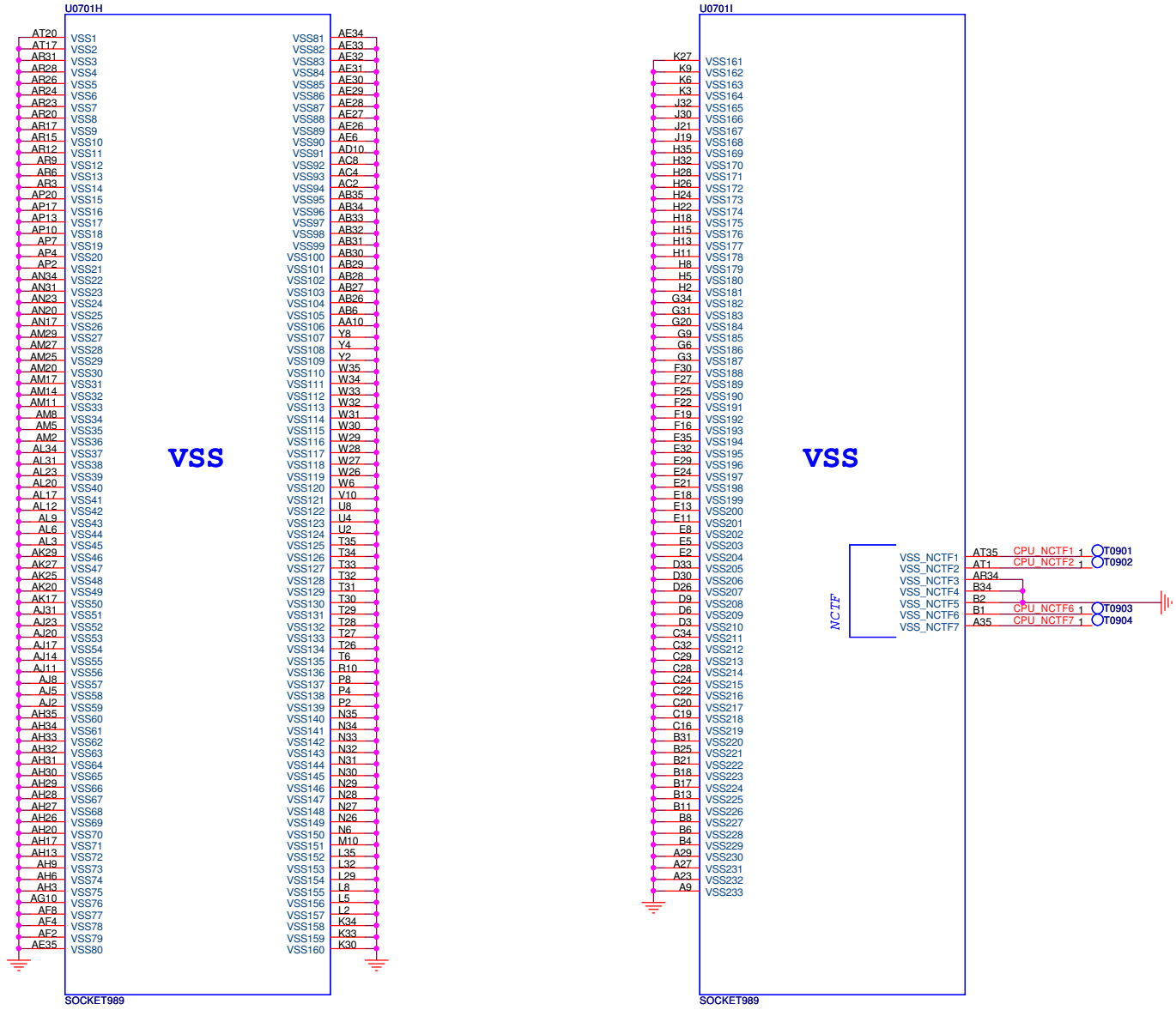


PEGATRON Title : CPU CLK/MISC/JTAG

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 8 of 77

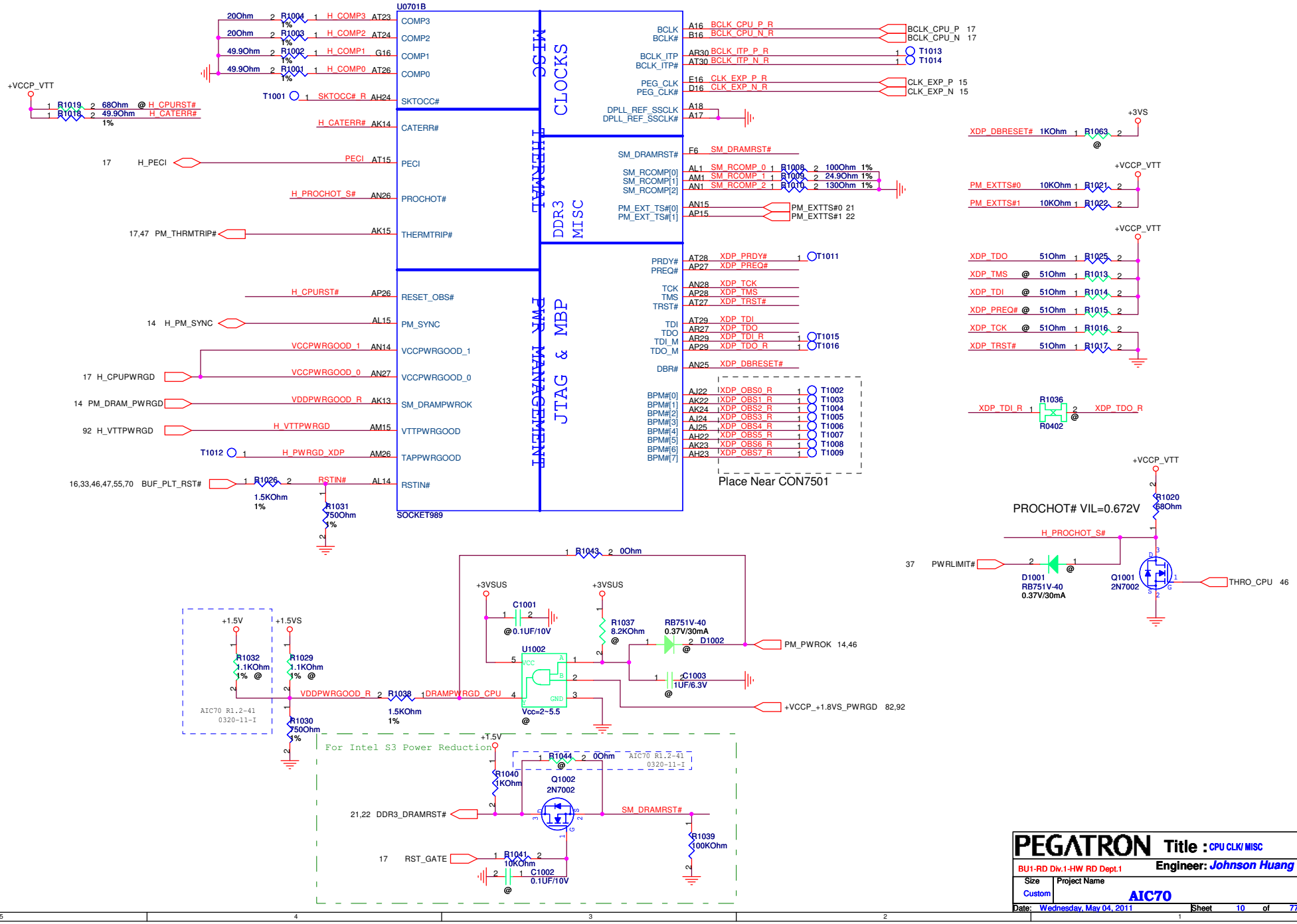


PEGATRON Title : CPU GND

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 9 of 77

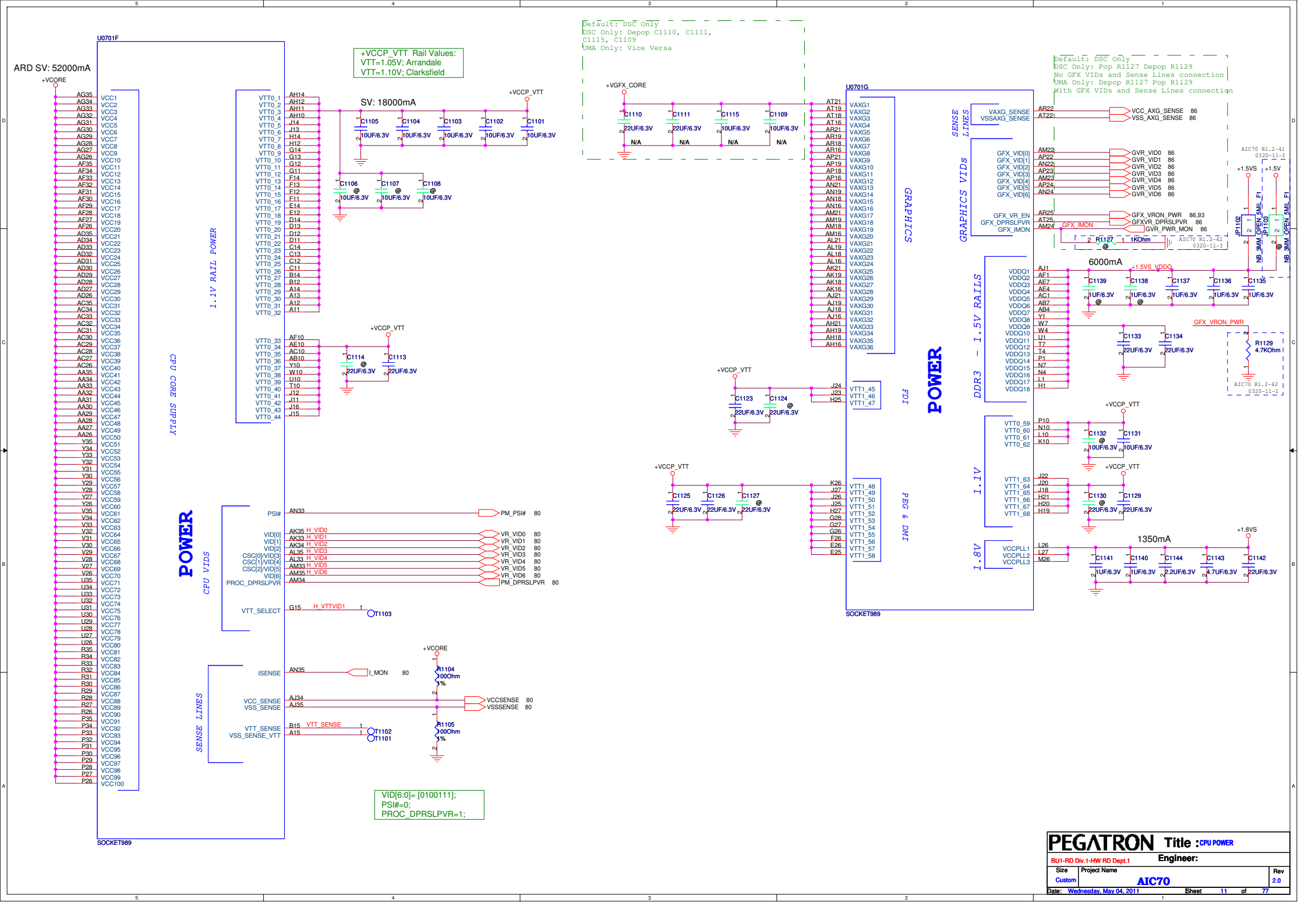


PEGATRON Title : CPU CLK/ MISC

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

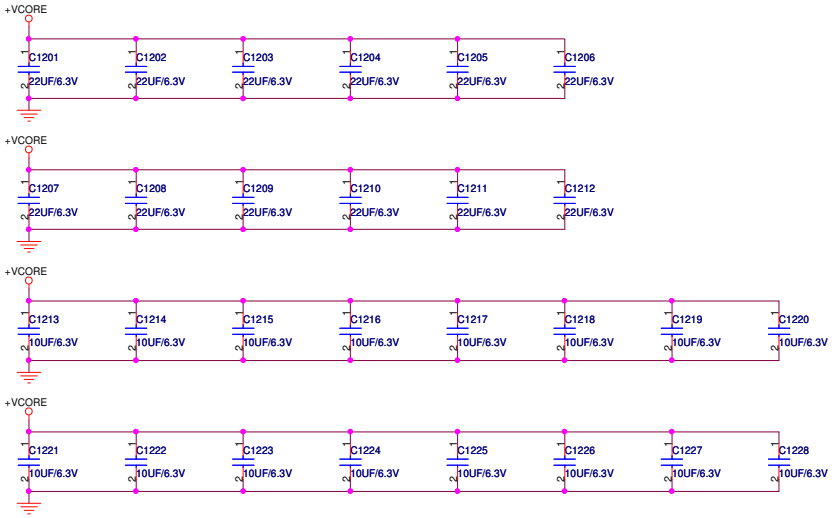
Date: Wednesday, May 04, 2011 Sheet 10 of 77



PEGATRON	Title : CPU POWER		
BU1-RD Div.1-HW RD Dept.1	Engineer:		
Size: Custom	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 11 of 77		

Decoupling guide from INTEL

VCORE	10uF	x 16pcs
	22uF	x 12pcs



PEGATRON Title : CPU CAPS

BU1-RD Div.1-HW RD Dept.1 Engineer:

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 12 of 77

RTC CMOS CLEAR

Place Under SO-DIMM

SATA PORT

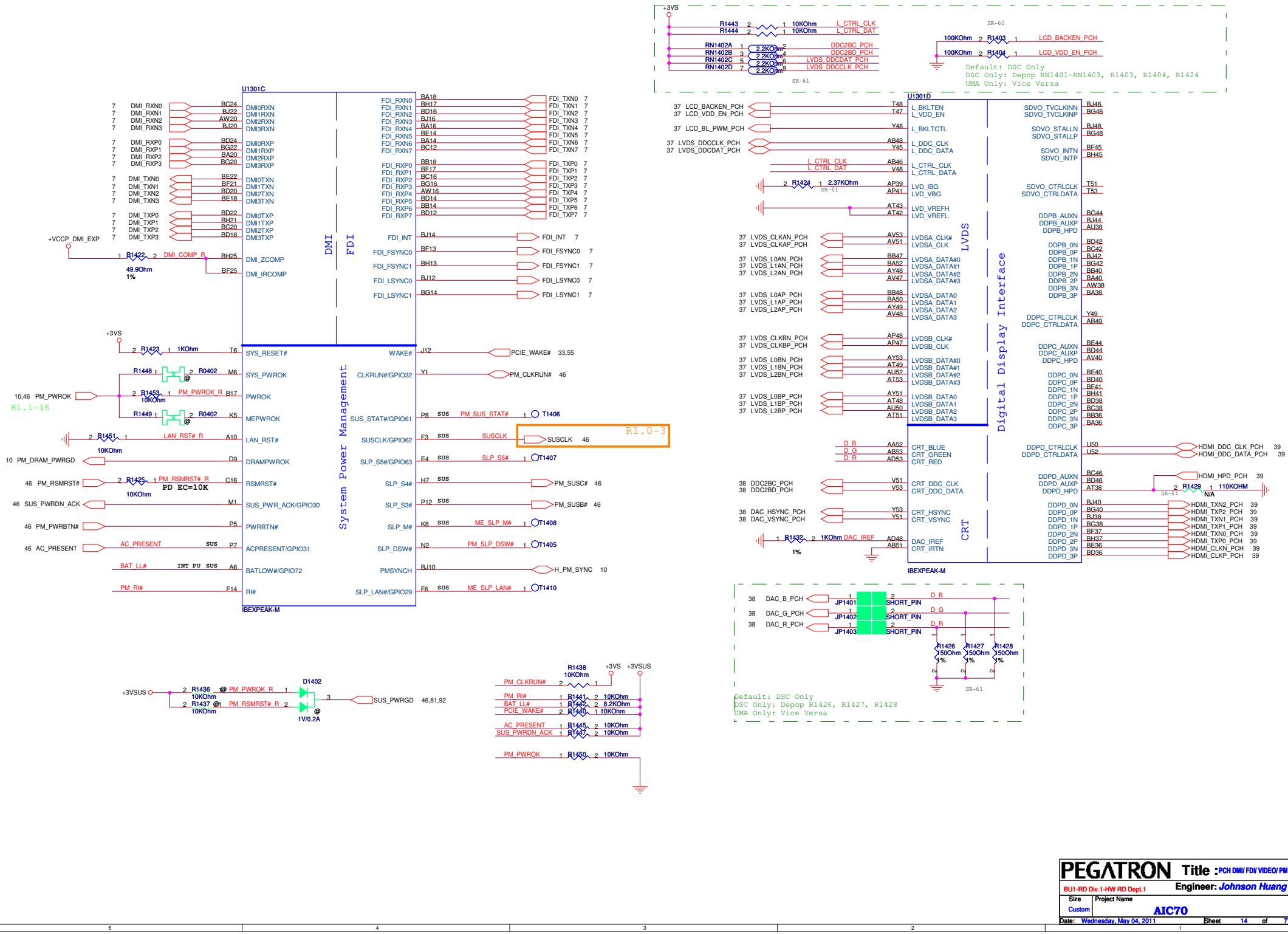
SATA P0	
SATA P1	HDD
SATA P4	ODD
SATA P5	eSATA Removed

HM55 Not Support

RTC BAT

2nd source: 0500-00NF000/0500-00J6000

PEGATRON	Title : PCH LPC/ SATA/ HDA		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70	Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 13 of 77		


U1301C
DMI
FDI
System Power Management
IBEXPEAK-M
U1301D
LVDS
Digital Display Interface
CRT
IBEXPEAK-M
SR-60
SR-61
Default: DSC Only
DSC Only: Depop RN1401~RN1403, R1403, R1404, R1424
UMA Only: Vice Versa
Default: DSC Only
DSC Only: Depop R1426, R1427, R1428
UMA Only: Vice Versa
R1.0-3
R1.1-16
PEGATRON
Title : PCH DMI/ FDI/ VIDEO/ PM
BU1-RD Div.1-HW RD Dept.1
Engineer: Johnson Huang
Size: Custom
Project Name: AIC70
Rev: 2.0
Date: Wednesday, May 04, 2011
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PCIE 1	
PCIE 2	Mini CARD (WLAN)
PCIE 3	
PCIE 4	
PCIE 5	
PCIE 6	LAN

U1301B

IBEXPEAK-M

PCI-E*

SMBus

C-Link

PEG

Clock Inputs from CLK BUFFER

Clock Flex

HM55 Not Support

PU +3VSUS at CON5501

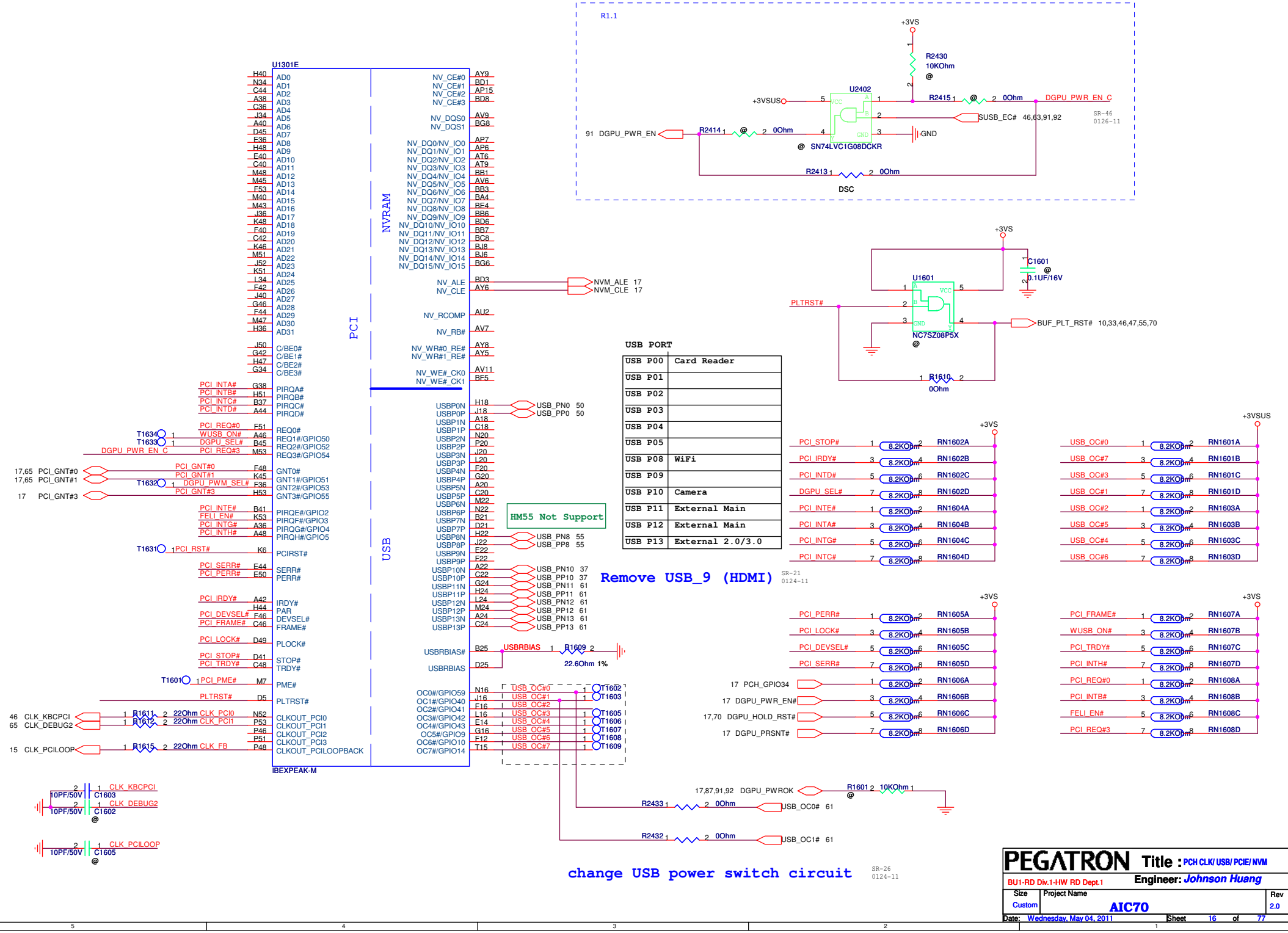
PU EC

Damping CPU Side

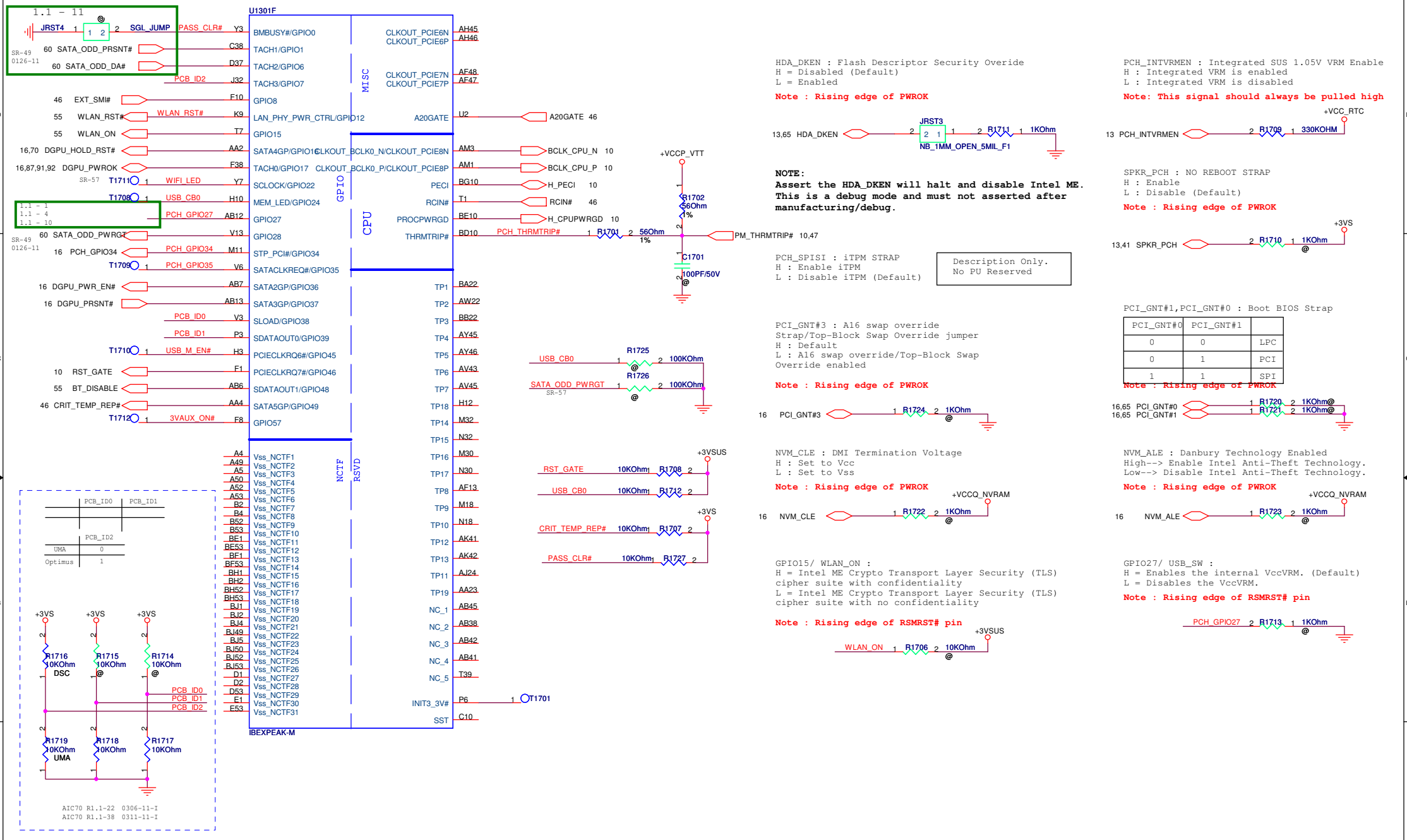
Plamrest Thermal

For UMA
Change to 10PF

PEGATRON	Title : PCH CLK/ USB/ PCIE/ NVM
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang
Size: Custom	Project Name: AIC70
Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 15 of 77



PEGATRON	Title : PCH CLK/ USB/ PCIE/ NVM		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70	Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 16 of 77		



HDA_DKEN : Flash Descriptor Security Overide
H = Disabled (Default)
L = Enabled

Note : Rising edge of PWROK

13,65 HDA_DKEN — JRST3 — R1711 1KOhm — NB_1MM_OPEN_5MIL_F1

NOTE:
Assert the HDA_DKEN will halt and disable Intel ME. This is a debug mode and must not asserted after manufacturing/debug.

PCH_SPISI : iTPM STRAP
H : Enable iTPM
L : Disable iTPM (Default)

Description Only.
No PU Reserved

PCI_GNT#3 : A16 swap override
Strap/Top-Block Swap Override jumper
H : Default
L : A16 swap override/Top-Block Swap Override enabled

Note : Rising edge of PWROK

16 PCI_GNT#3 — R1724 1KOhm @

NVM_CLE : DMI Termination Voltage
H : Set to Vcc
L : Set to Vss

Note : Rising edge of PWROK

16 NVM_CLE — R1722 1KOhm @ — +VCCQ_NVRAM

GPIO15/ WLAN_ON :
H = Intel ME Crypto Transport Layer Security (TLS) cipher suite with confidentiality
L = Intel ME Crypto Transport Layer Security (TLS) cipher suite with no confidentiality

Note : Rising edge of RSMRST# pin

WLAN_ON — R1706 10KOhm @ — +3VSUS

PCH_INTVRMEN : Integrated SUS 1.05V VRM Enable
H : Integrated VRM is enabled
L : Integrated VRM is disabled

Note: This signal should always be pulled high

13 PCH_INTVRMEN — R1709 330KOHM — +VCC_RTC

SPKR_PCH : NO REBOOT STRAP
H : Enable
L : Disable (Default)

Note : Rising edge of PWROK

13,41 SPKR_PCH — R1710 1KOhm @ — +3VS

PCI_GNT#1,PCI_GNT#0 : Boot BIOS Strap

PCI_GNT#0	PCI_GNT#1	
0	0	LPC
0	1	PCI
1	1	SPI

Note : Rising edge of PWROK

16,65 PCI_GNT#0 — R1720 1KOhm @
16,65 PCI_GNT#1 — R1721 1KOhm @

NVM_ALE : Danbury Technology Enabled
High--> Enable Intel Anti-Theft Technology.
Low--> Disable Intel Anti-Theft Technology.

Note : Rising edge of PWROK

16 NVM_ALE — R1723 1KOhm @ — +VCCQ_NVRAM

GPIO27/ USB_SW :
H = Enables the internal VccVRM. (Default)
L = Disables the VccVRM.

Note : Rising edge of RSMRST# pin

PCH_GPIO27 — R1713 1KOhm @

PEGATRON

Title : PCH GPIO

BU1-RD Div.1-HW RD Dept.1

Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

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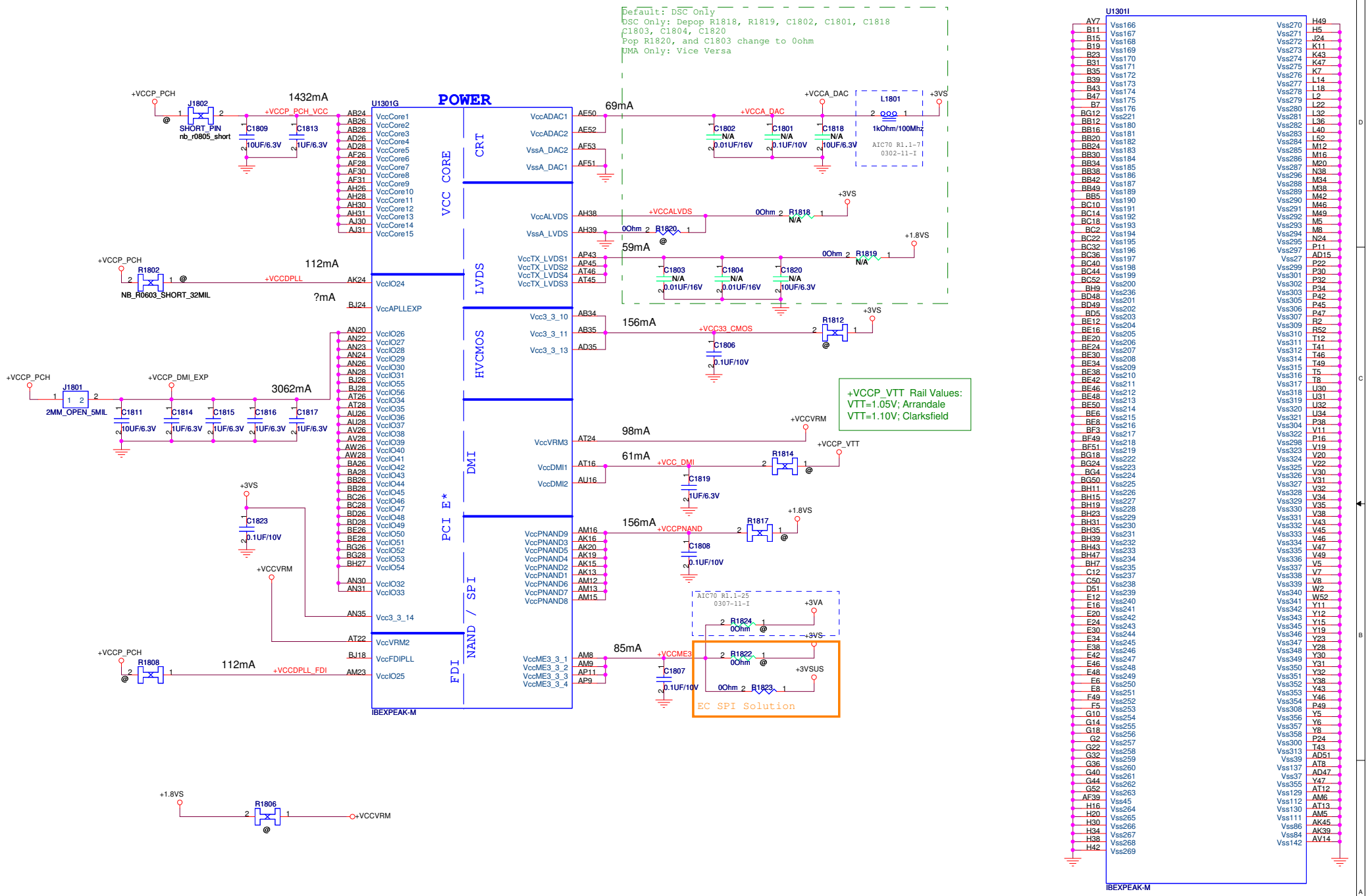

Title :	PCH PWR(1)
Engineer:	Johnson Huangn
Size	Custom
Project Name	AIC70
Rev	2.0
Date:	Wednesday, May 04, 2011
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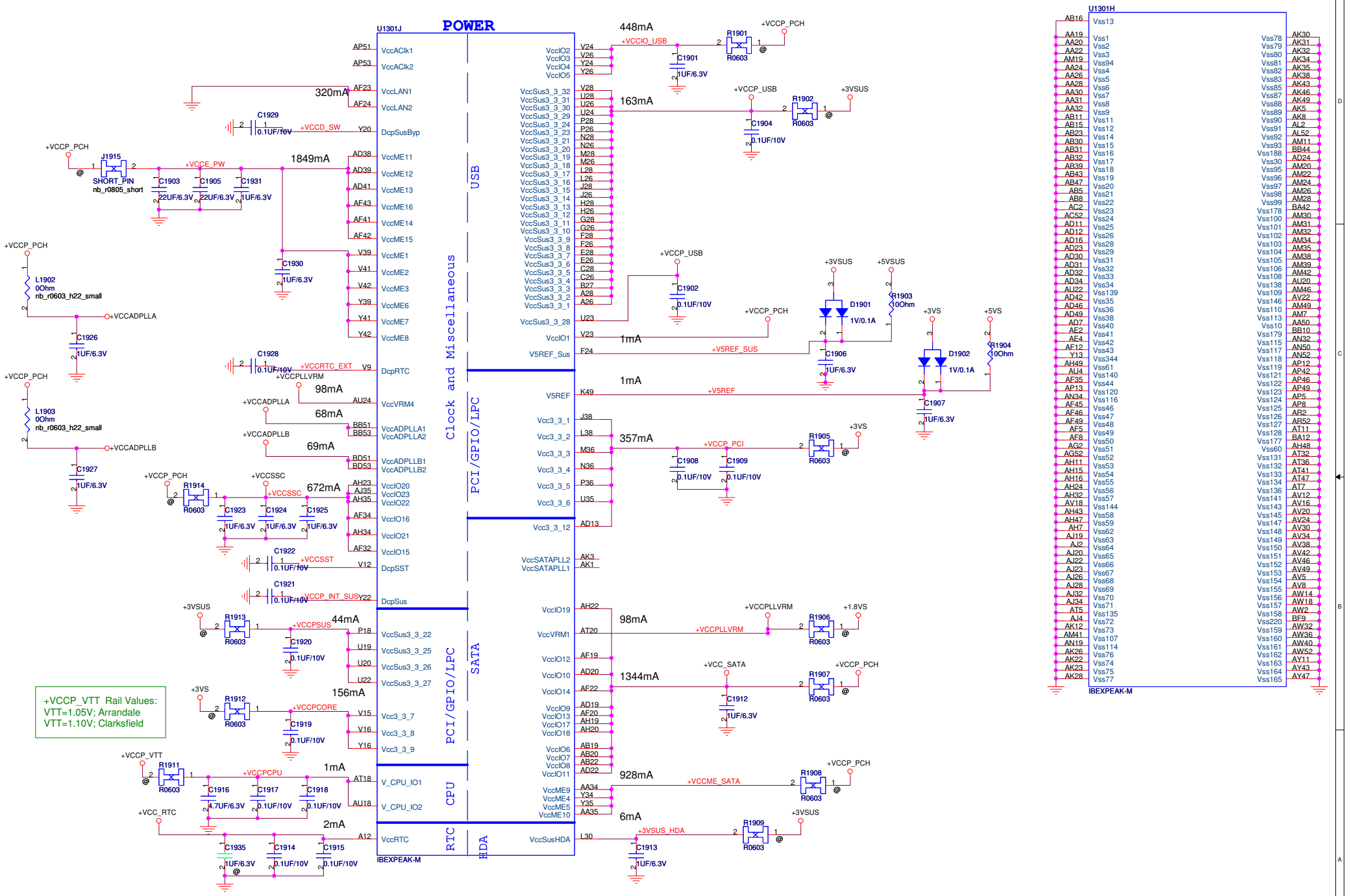
PEGATRON
BU1-RD Div.1-HW RD Dept.1



PEGATRON Title : PCH PWR

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

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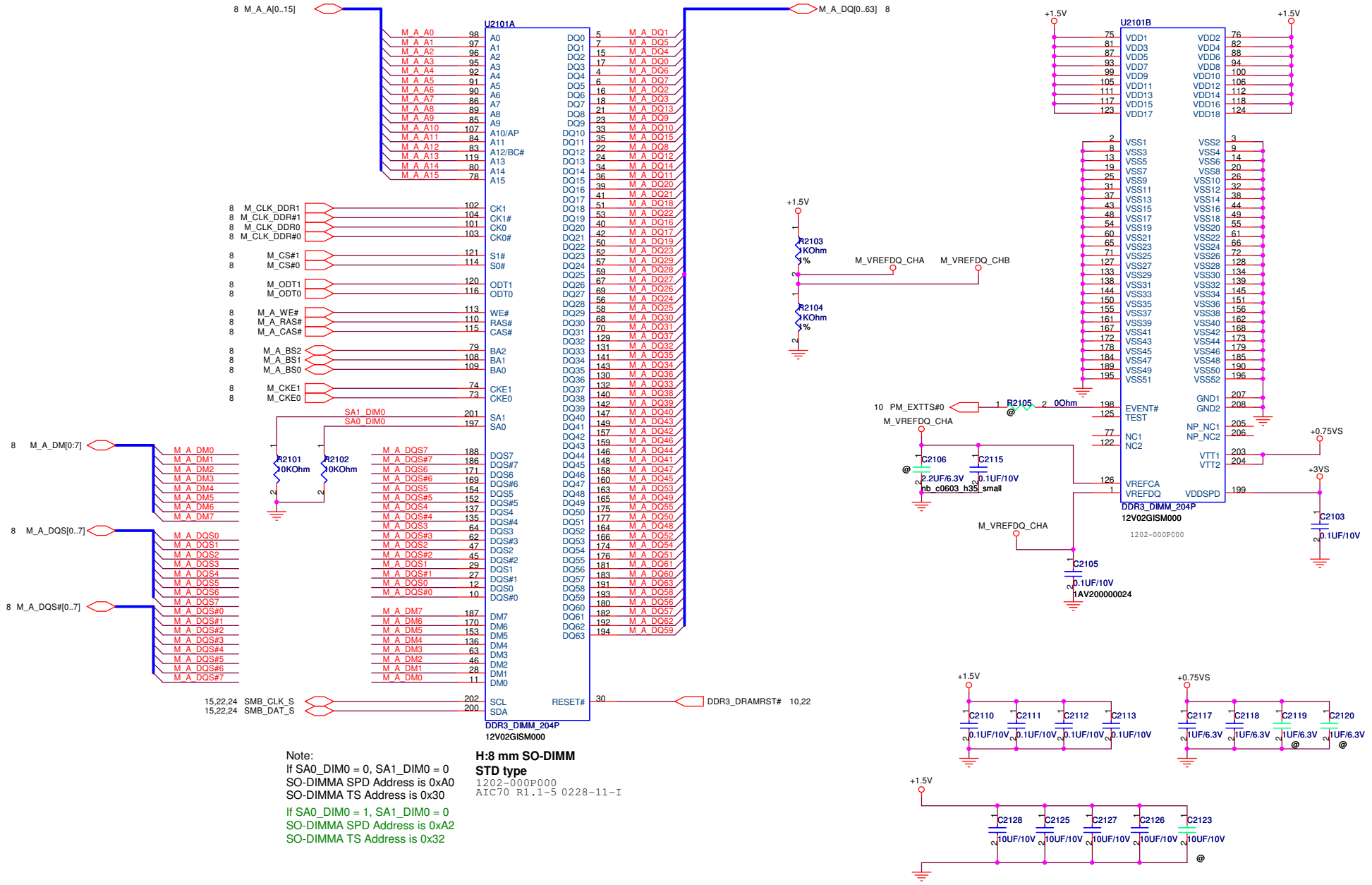


Note:
If SA0_DIM0 = 0, SA1_DIM0 = 0
SO-DIMMA SPD Address is 0xA0
SO-DIMMA TS Address is 0x30

If SA0_DIM0 = 1, SA1_DIM0 = 0
SO-DIMMA SPD Address is 0xA2
SO-DIMMA TS Address is 0x32

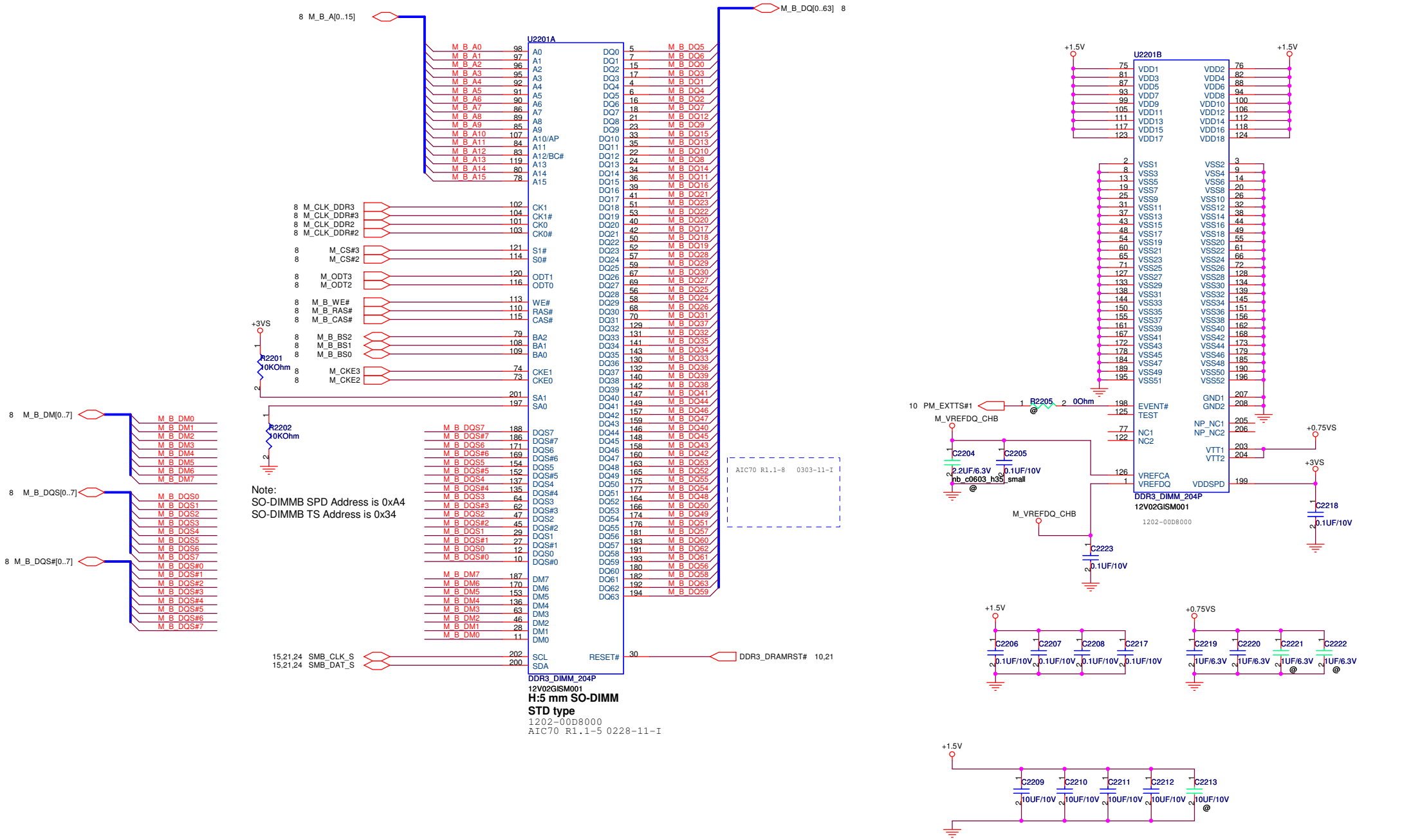
H:8 mm SO-DIMM
STD type
1202-000P000
AIC70 R1.1-5 0228-11-I

PEGATRON **Title : DDR3 SO-DIMM-Channel A**

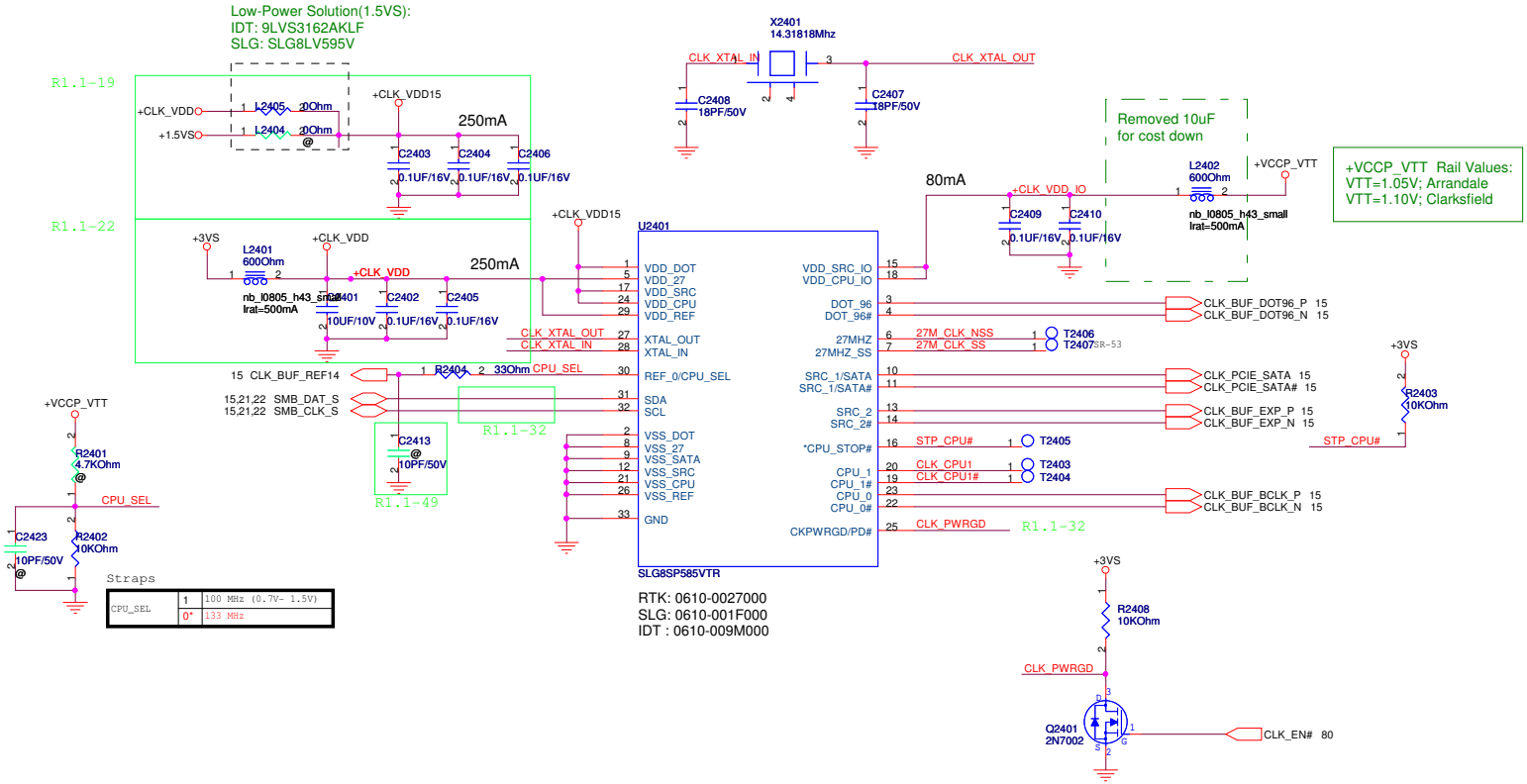
BU1-RD Div.1-HW RD Dept.1 **Engineer: *Johnson Huang***

Size	Project Name	Rev
Custom	**AIC70**	2.0

Date: Wednesday, May 04, 2011 Sheet 21 of 77



PEGATRON	Title : DDR3 SO-DIMM-Channel B		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70	Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 22 of 77		



PEGATRON	Title : CLK GEN. SLG8SP585V		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 24 of 77		

Close to LAN chip within 250mils

PCIE_RXP6_LOM C3323 0.1UF/10V PCIE_RXP6 15
PCIE_RXN6_LOM C3324 0.1UF/10V PCIE_RXN6 15
PCIE_TXP6 PCIE_TXP6 15
PCIE_TXN6 PCIE_TXN6 15
CLK_PCIE_LAN CLK_PCIE_LAN 15
CLK_PCIE_LAN# CLK_PCIE_LAN# 15

LED0 R3325 4.7KOhm +VDD33_LOM
LED1 R3331 4.7KOhm +VDD33_LOM

Powr-on strapping
(1) LED[0]: enable overclocking
pull-high: overlocking (default)
stuff R3326, R3324; Remove R3317, R3325, R3327;
pull-low: un-overclocking
stuff R2, R3325, R3327; Remove R3326, R3324

(2) LED[1]: selection for AR8158's internal VDDCT (SWR/LDO)
pull-high: SWR mode
stuff R3330, R3332; Remove R3313, R3331, R3333;
pull-low: LDO mode
stuff R3313, R3331, R3333; Remove R3330, R3332

R3313 1% 5.1KOhm
LED1 C3332 470PF/16V
AIC70 R1.1-20 0306-11-I R3717 1% 10KOhm
LED0 C3333 470PF/16V
C3302 1UF/6.3V
DVDDL C3339 0.1UF/16V

Modify H/W strap setting SR-41 0125-11

+VDDCT L3301 2.2UH LX
C3311 0.1UF/10V C3309 10UF/6.3V

+3VSUS L3302 1.5KOhm/100Mhz Irat=1A AIC70 R1.1-7 0302-11-I
C3313 10UF/6.3V C3314 1UF/6.3V C3315 0.1UF/16V +VDD33_LOM

Close to PIN2 within 400 mil
Close to PIN2 within 200 mil

AR8158 (SWR mode)
Stuff L3301, C3311, C3309；remove C3301, R3311
AR8158 (LDO mode)
Stuff R3311, C3301, C3303；Remove L3301, C3311, C3309

+3VS R3314 @ 4.7KOhm
C3338 0.1UF/16V
AIC70 R1.2-45 0321-11-I

U3301A
LED1 LED0 DVDDL PCIE_TXN6 PCIE_TXP6 AVDDL CLK_PCIE_LAN CLK_PCIE_LAN#
GND1 LED1[1] LED[0] DVDDL_REG RX_N RX_P AVDDL2 REFCLK_P REFCLK_N
1 LX
2 VDD33
3 PERSTN
4 WAKEn
5 VDDCT_REG
6 VDDCT
7 AVDDL_REG
8 XTLO
24 AVDDL1
23 TX_P
22 TX_N
21 NC
20 TESTMODE
19 SMDATA
18 SMCLK
17 CLKREQn
XTLI AVDDH_REG RBIAS TRXP0 TRXN0 TRXP1 TRXN1 LED[2]
9 10 11 12 13 14 15 16
AR8158-BL1A-RL

LX +VDD33_LOM
10,16,46,47,55,70 BUF_PLT_RST#
14,55 PCIE_WAKE#
VDDCT_REG +VDDCT
AVDDL L3303 0Ohm AVDDL_REG
XTALO
AVDDL PCIE_RXP6_LOM PCIE_RXN6_LOM
C3337 0.1UF/16V
R3316 0Ohm T3301 T3302
R3315 0Ohm CLKREQn PCIE_LOM_CLKREQ# 15

+VDDCT R3311 @ 0Ohm
C3301 @ 1UF/6.3V C3303 0.1UF/16V VDDCT_REG
AIC70 R1.1-20 0306-11-I
AIC70 R1.1-39 0311-11-I
C3310 0.1UF/10V C3316 1UF/6.3V C3317 0.1UF/16V
AIC70 R2.0-56 0406-11-I
AIC70 R2.0-65 0420-11-I

U3301B
GND2 GND9 GND3 GND8 GND4 GND7 GND5 GND6
34 35 36 37 41 40 39 38
AR8158-BL1A-RL
AIC70 R1.2-45 0321-11-I

Remove LAN LED circuit SR-29 0125-11

Modify R3311 as VP SR-31 0125-11

X3301 25MHZ XTALO XTALI
C3321 15PF/50V C3322 15PF/50V
AIC70_R2.0-59 0411-11-I

XTALI
AVDDH
RBIAS_LOM
C3320 1UF/6.3V C3304 0.1UF/16V
R3310 2.37KOhm

34 L_TDP
34 L_TDN
34 L_RDP
34 L_RDN

R3320 49.9Ohm R3321 49.9Ohm
R3322 49.9Ohm R3323 49.9Ohm
C3331 1000PF/16V C3305 0.1UF/16V
C3306 0.1UF/16V C3334 1000PF/16V

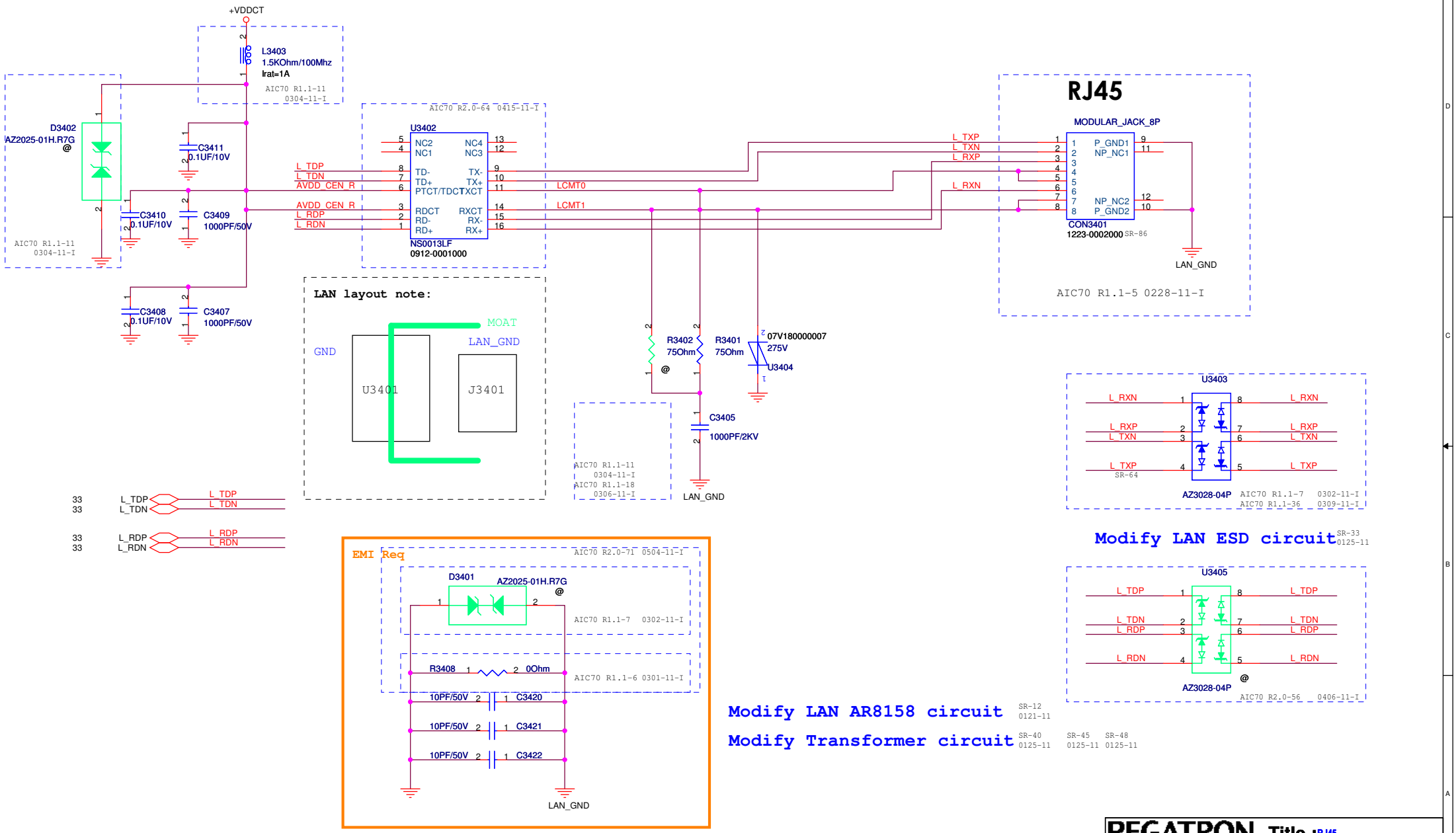
Close to LAN chip and less than 300mils

+VDD33_LOM
BUF_PLT_RST# R3328 4.7KOhm
PCIE_WAKE# R3329 4.7KOhm

Modify LAN AR8158 circuit SR-12 0121-11

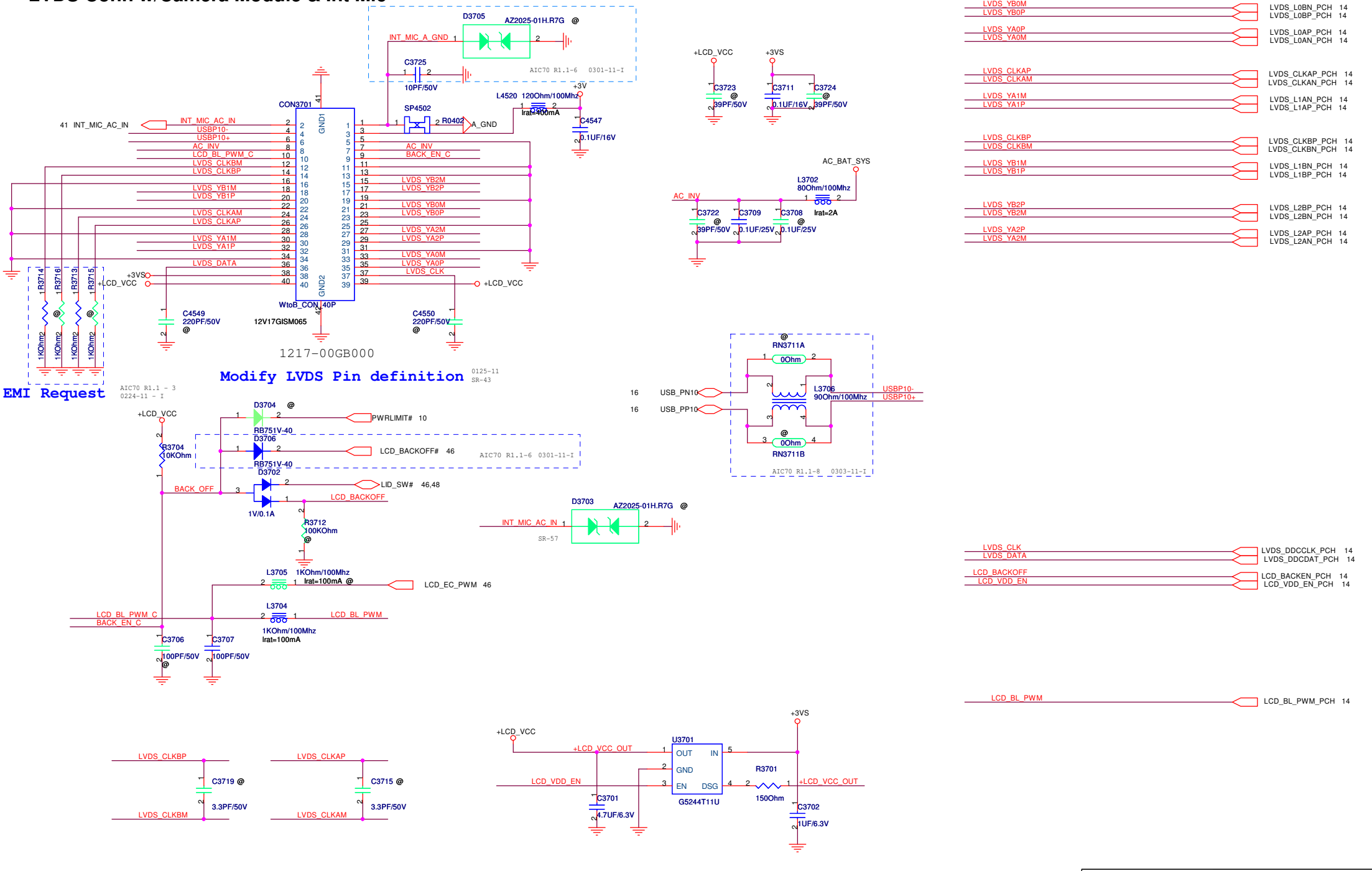
Change U3301 to AR8158 Part and remover SM BUS SR-32 0125-11

PEGATRON Title : LAN_ATHEROS_AR8158
BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang
Size: Custom | Project Name: AIC70 | Rev: 2.0
Date: Wednesday, May 04, 2011 | Sheet 33 of 77



PEGATRON	Title : RJ45	
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang	
Size: B	Project Name: AIC70	Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 34 of 77	

LVDS Conn w/Camera Module & Int Mic



PEGATRON Title : LVDS CONN

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

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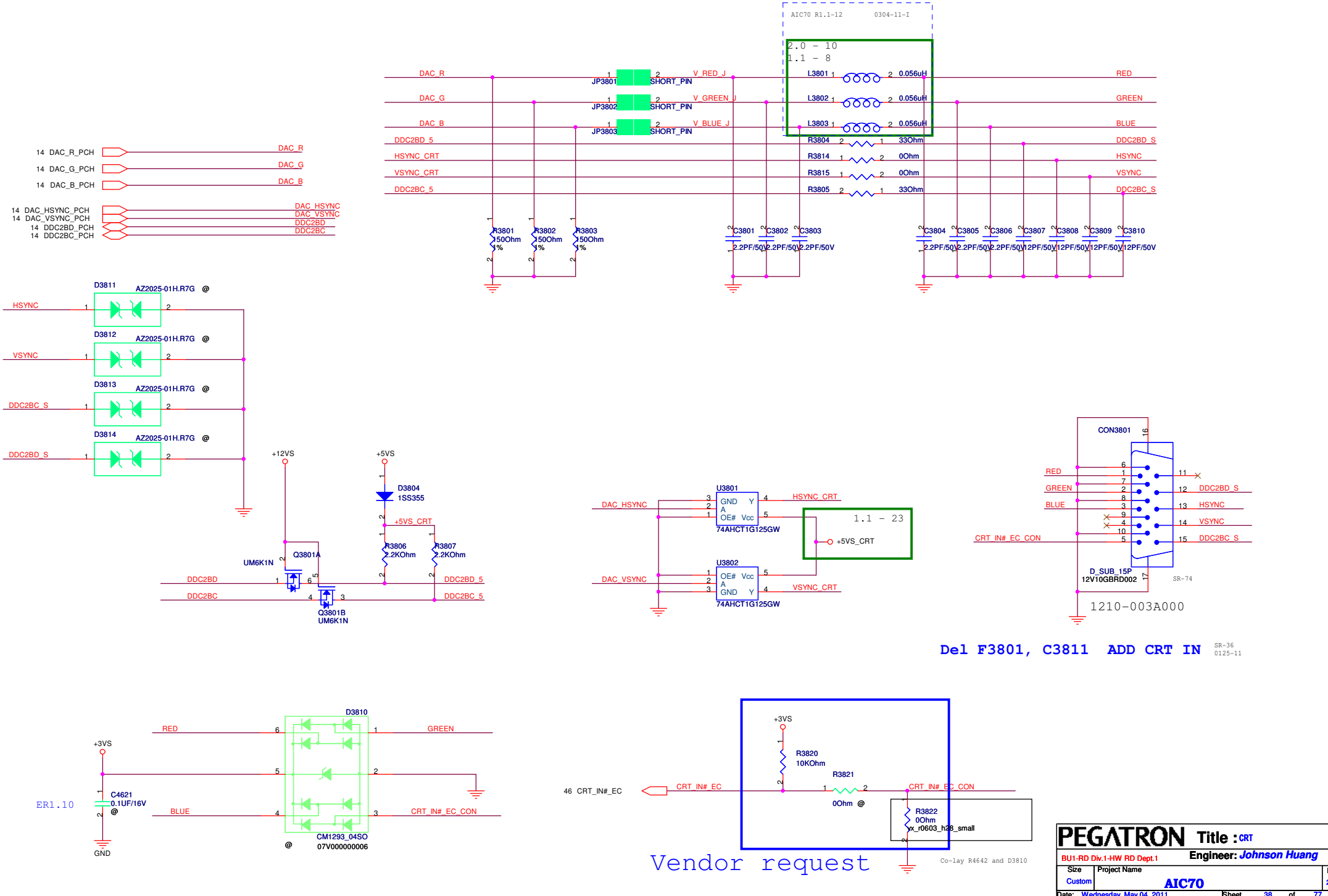
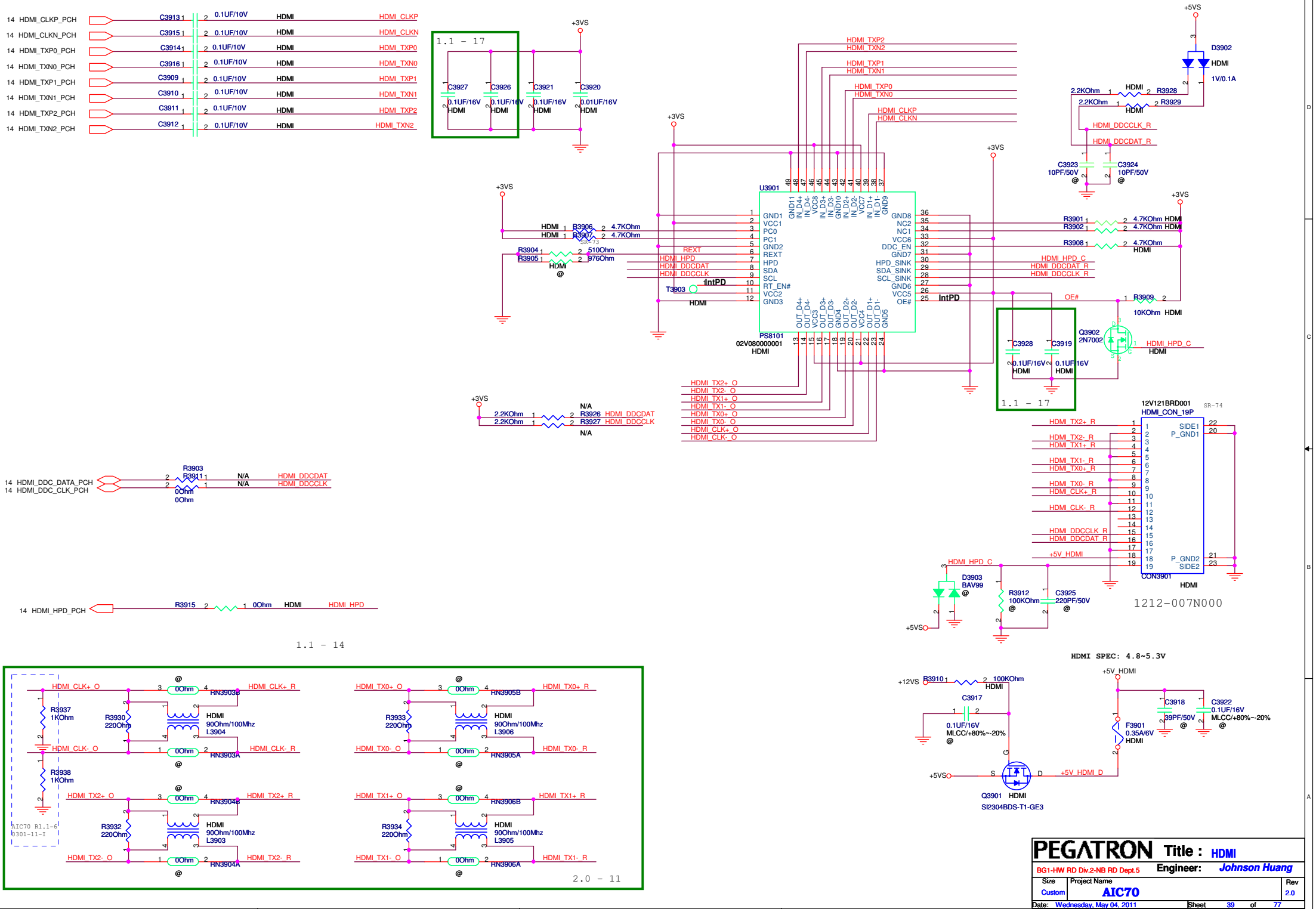


PEGATRON	Title : CRT		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70	Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 38 of 77		


14 HDMI_CLKP_PCH
14 HDMI_CLKN_PCH
14 HDMI_TXP0_PCH
14 HDMI_TXN0_PCH
14 HDMI_TXP1_PCH
14 HDMI_TXN1_PCH
14 HDMI_TXP2_PCH
14 HDMI_TXN2_PCH
C3913 0.1UF/10V HDMI HDMI_CLKP
C3915 0.1UF/10V HDMI HDMI_CLKN
C3914 0.1UF/10V HDMI HDMI_TXP0
C3916 0.1UF/10V HDMI HDMI_TXN0
C3909 0.1UF/10V HDMI HDMI_TXP1
C3910 0.1UF/10V HDMI HDMI_TXN1
C3911 0.1UF/10V HDMI HDMI_TXP2
C3912 0.1UF/10V HDMI HDMI_TXN2
1.1 - 17
C3927 C3926 C3921 C3920 0.1UF/16V HDMI
+3VS
HDMI_TXP2 HDMI_TXN2
HDMI_TXP1 HDMI_TXN1
HDMI_TXP0 HDMI_TXN0
HDMI_CLKP HDMI_CLKN
U3901
PS8101
02V080000001
HDMI
IntPD
T3903
R3906 R3907 4.7KOhm
R3904 R3905 510Ohm 976Ohm
REXT
HDMI_HPD
HDMI_DDCDAT
HDMI_DDCCLK
HDMI_TX2+_O
HDMI_TX2-_O
HDMI_TX1+_O
HDMI_TX1-_O
HDMI_TX0+_O
HDMI_TX0-_O
HDMI_CLK+_O
HDMI_CLK-_O
R3926 R3927 2.2KOhm N/A
D3902 1V/0.1A
R3928 R3929 2.2KOhm
HDMI_DDCCLK_R
HDMI_DDCDAT_R
C3923 C3924 10PF/50V
R3901 R3902 4.7KOhm
R3908 4.7KOhm
HDMI_HPD_C
HDMI_DDCDAT_R
HDMI_DDCCLK_R
OE#
R3909 10KOhm
Q3902 2N7002
C3928 C3919 0.1UF/16V
1.1 - 17
12V121BRD001
HDMI_CON_19P
SR-74
CON3901
HDMI_TX2+_R
HDMI_TX2-_R
HDMI_TX1+_R
HDMI_TX1-_R
HDMI_TX0+_R
HDMI_TX0-_R
HDMI_CLK+_R
HDMI_CLK-_R
+5V_HDMI
D3903 BAV99
R3912 100KOhm
C3925 220PF/50V
1212-007N000
HDMI SPEC: 4.8~5.3V
R3910 100KOhm
C3917 0.1UF/16V MLCC/+80%~-20%
F3901 0.35A/6V
C3918 39PF/50V
C3922 0.1UF/16V MLCC/+80%~-20%
Q3901 SI2304BDS-T1-GE3
14 HDMI_DDC_DATA_PCH
14 HDMI_DDC_CLK_PCH
R3903 R3911 0Ohm N/A HDMI_DDCDAT
R3903 R3911 0Ohm N/A HDMI_DDCCLK
14 HDMI_HPD_PCH
R3915 0Ohm HDMI HDMI_HPD
1.1 - 14
HDMI_CLK+_O HDMI_CLK-_O HDMI_TX2+_O HDMI_TX2-_O
HDMI_TX0+_O HDMI_TX0-_O HDMI_TX1+_O HDMI_TX1-_O
R3937 1KOhm
R3938 1KOhm
R3930 220Ohm
R3932 220Ohm
R3933 220Ohm
R3934 220Ohm
0Ohm
HDMI 90Ohm/100Mhz
L3904 L3903 L3906 L3905
RN3903B RN3903A RN3904B RN3904A RN3905B RN3905A RN3906B RN3906A
HDMI_CLK+_R HDMI_CLK-_R HDMI_TX2+_R HDMI_TX2-_R HDMI_TX0+_R HDMI_TX0-_R HDMI_TX1+_R HDMI_TX1-_R
AIC70 R1.1-6
0301-11-I
2.0 - 11
PEGATRON
Title : HDMI
BG1-HW RD Div.2-NB RD Dept.5
Engineer: Johnson Huang
Size Custom
Project Name AIC70
Rev 2.0
Date: Wednesday, May 04, 2011
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PEGATRON

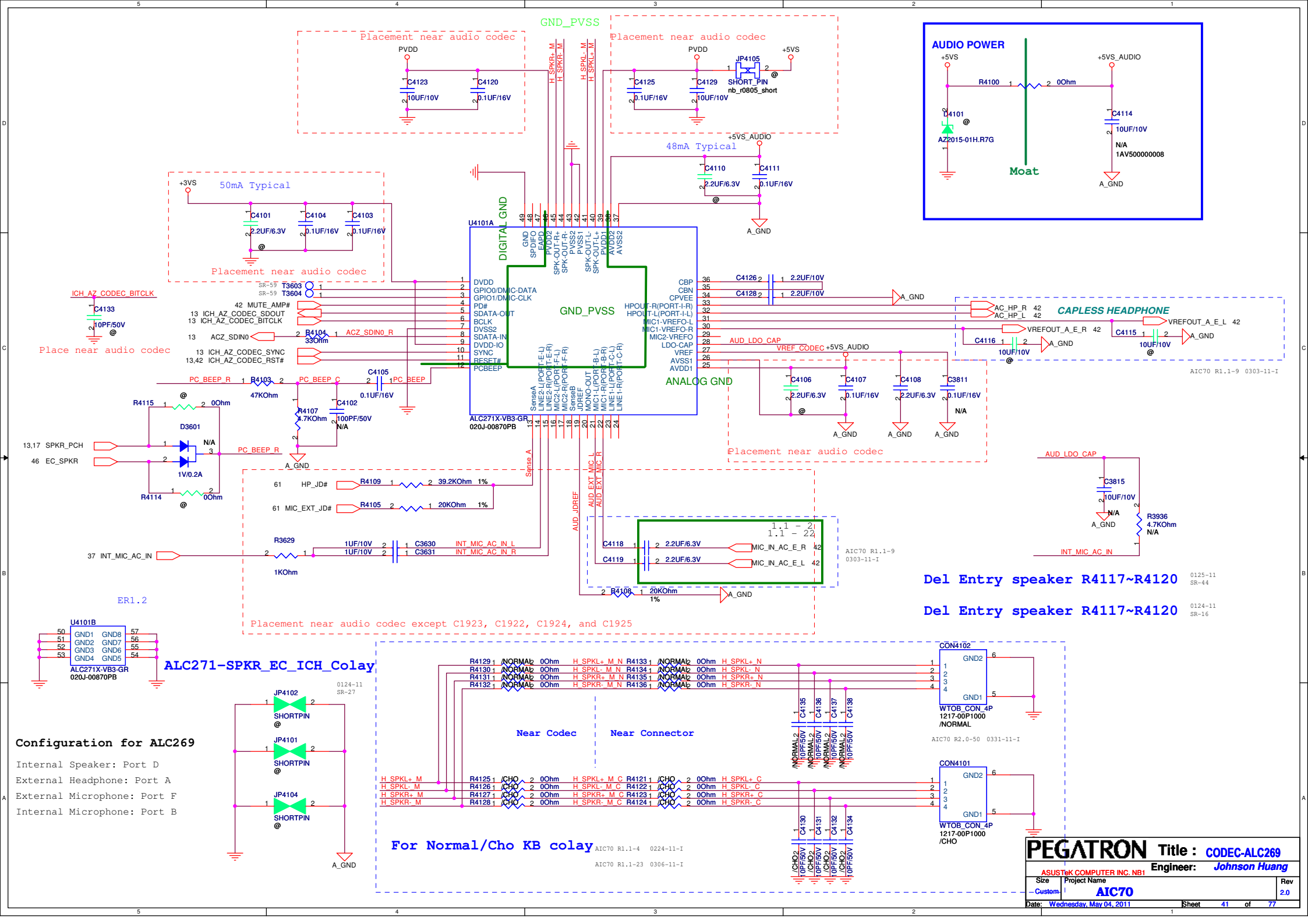
Title : Display Port

BU1-RD Div.1-HW RD Dept.1

Engineer: *Johnson Huang*

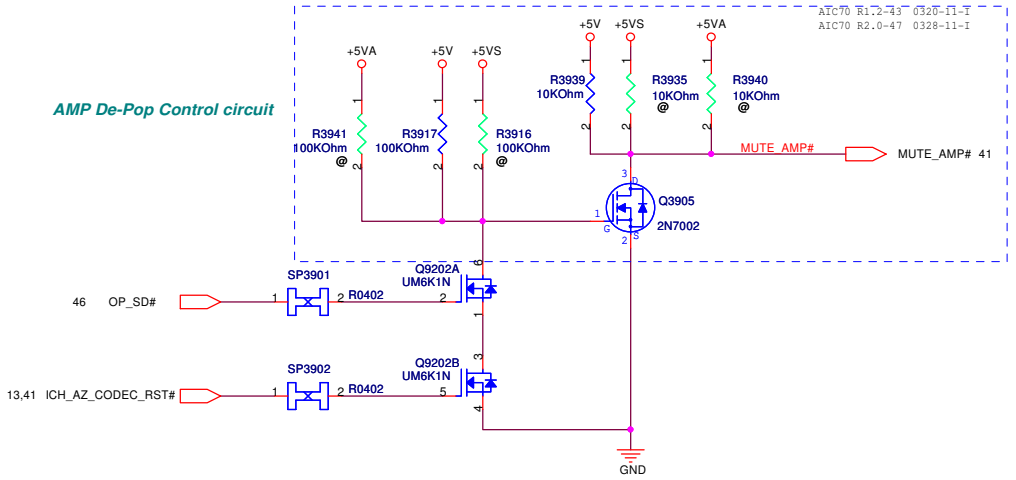
Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 40 of 77


AUDIO POWER
+5VS
+5VS_AUDIO
R4100 0Ohm
C4101 AZ2015-01H.R7G
C4114 10UF/10V
N/A
1AV500000008
Moat
A_GND
GND_PVSS
Placement near audio codec
PVDD
C4123 10UF/10V
C4120 0.1UF/16V
C4125 0.1UF/16V
C4129 10UF/10V
JP4105 SHORT_PIN nb_r0805_short
48mA Typical
C4110 2.2UF/6.3V
C4111 0.1UF/16V
50mA Typical
C4101 2.2UF/6.3V
C4104 0.1UF/16V
C4103 0.1UF/16V
U4101A
DIGITAL GND
ANALOG GND
GND_PVSS
DVDD
GPIO0/DMIC-DATA
GPIO1/DMIC-CLK
PD#
SDATA-OUT
BCLK
DVSS2
SDATA-IN
DVDD-IO
SYNC
RESET#
PCBEEP
CBP
CBN
CPVEE
HPOUT-R(PORT-I-R)
HPOUT-L(PORT-I-L)
MIC1-VREFO-L
MIC1-VREFO-R
MIC2-VREFO
LDO-CAP
VREF
AVSS1
AVDD1
ALC271X-VB3-GR
020J-00870PB
ICH_AZ_CODEC_BITCLK
C4133 10PF/50V
Place near audio codec
42 MUTE_AMP#
13 ICH_AZ_CODEC_SDOUT
13 ICH_AZ_CODEC_BITCLK
13 ACZ_SDIN0
ACZ_SDIN0_R
R4104 33Ohm
13 ICH_AZ_CODEC_SYNC
13,42 ICH_AZ_CODEC_RST#
T3603
T3604
C4126 2.2UF/10V
C4128 2.2UF/10V
AUD_LDO_CAP
VREF_CODEC
+5VS_AUDIO
C4106 2.2UF/6.3V
C4107 0.1UF/16V
C4108 2.2UF/6.3V
C3811 0.1UF/16V
N/A
CAPLESS HEADPHONE
AC_HP_R 42
AC_HP_L 42
VREFOUT_A_E_R 42
VREFOUT_A_E_L 42
C4116 10UF/10V
C4115 10UF/10V
AIC70 R1.1-9 0303-11-I
PC_BEEP_R
R4103 47KOhm
PC_BEEP_C
C4105 0.1UF/16V
PC_BEEP
R4115 0Ohm
D3601
13,17 SPKR_PCH
46 EC_SPKR
N/A
1V/0.2A
R4114 0Ohm
R4107 4.7KOhm
C4102 100PF/50V
N/A
Placement near audio codec
61 HP_JD#
R4109 39.2KOhm 1%
61 MIC_EXT_JD#
R4105 20KOhm 1%
Sense A
AUD_JDREF
AUD_EXT_MIC_L
AUD_EXT_MIC_R
37 INT_MIC_AC_IN
R3629 1KOhm
C3630 1UF/10V
C3631 1UF/10V
INT_MIC_AC_IN_L
INT_MIC_AC_IN_R
C4118 2.2UF/6.3V
C4119 2.2UF/6.3V
MIC_IN_AC_E_R 42
MIC_IN_AC_E_L 42
1.1 - 2
1.1 - 22
R4108 20KOhm 1%
AIC70 R1.1-9 0303-11-I
AUD_LDO_CAP
C3815 10UF/10V
N/A
R3936 4.7KOhm
N/A
INT_MIC_AC_IN
Del Entry speaker R4117~R4120
0125-11 SR-44
Del Entry speaker R4117~R4120
0124-11 SR-16
ER1.2
U4101B
ALC271X-VB3-GR
020J-00870PB
Placement near audio codec except C1923, C1922, C1924, and C1925
ALC271-SPKR_EC_ICH_Colay
0124-11 SR-27
JP4102 SHORTPIN
JP4101 SHORTPIN
JP4104 SHORTPIN
A_GND
Configuration for ALC269
Internal Speaker: Port D
External Headphone: Port A
External Microphone: Port F
Internal Microphone: Port B
R4129 R4130 R4131 R4132 NORMAL 0Ohm
H_SPKL+_M_N H_SPKL-_M_N H_SPKR+_M_N H_SPKR-_M_N
R4133 R4134 R4135 R4136 NORMAL 0Ohm
H_SPKL+_N H_SPKL-_N H_SPKR+_N H_SPKR-_N
Near Codec
Near Connector
C4135 C4136 C4137 C4138 /NORMAL2 10PF/50V
CON4102 WTOB_CON_4P 1217-00P1000 /NORMAL
AIC70 R2.0-50 0331-11-I
H_SPKL+_M H_SPKL-_M H_SPKR+_M H_SPKR-_M
R4125 R4126 R4127 R4128 /CHO 0Ohm
H_SPKL+_M_C H_SPKL-_M_C H_SPKR+_M_C H_SPKR-_M_C
R4121 R4122 R4123 R4124 /CHO 0Ohm
H_SPKL+_C H_SPKL-_C H_SPKR+_C H_SPKR-_C
C4130 C4131 C4132 C4134 /CHO2 10PF/50V
CON4101 WTOB_CON_4P 1217-00P1000 /CHO
For Normal/Cho KB colay
AIC70 R1.1-4 0224-11-I
AIC70 R1.1-23 0306-11-I
PEGATRON
Title : CODEC-ALC269
Engineer: Johnson Huang
ASUSTeK COMPUTER INC. NB1
Size Custom
Project Name AIC70
Rev 2.0
Date: Wednesday, May 04, 2011
Sheet 41 of 77

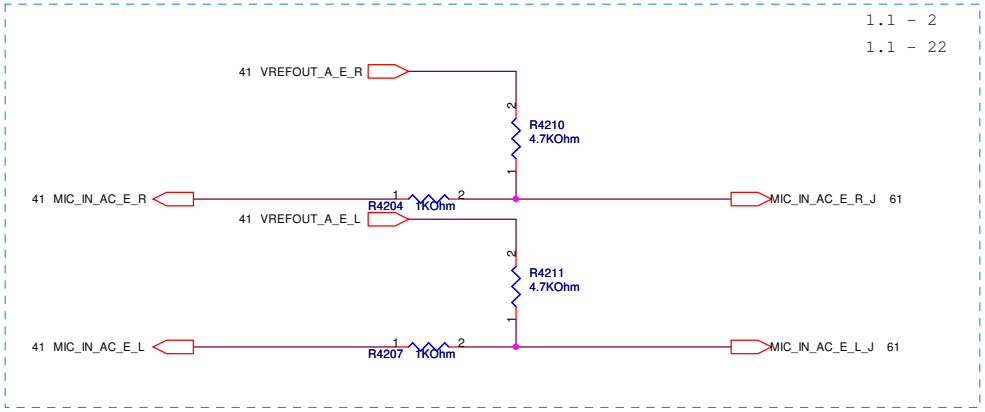
AIC70 R1.2-43 0320-11-I
AIC70 R2.0-47 0328-11-I

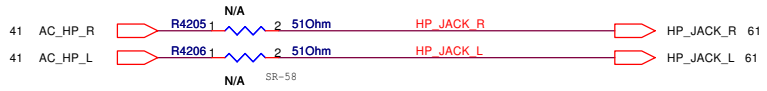
AMP De-Pop Control circuit



Modify De-Pop circuit SR-43 0125-11

1.1 - 2
1.1 - 22





PEGATRON Title : AUDIO ALC269
BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 42 of 77

PEGATRON Title : MDC CONN

BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang

Size	Project Name	Rev
C	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 43 of 77

Del Entry audio circuit

SR-8
0121-11

PEGATRON Title : CODEC-ALC269

ASUSTeK COMPUTER INC. NB1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 44 of 77

Del Entry audio circuit

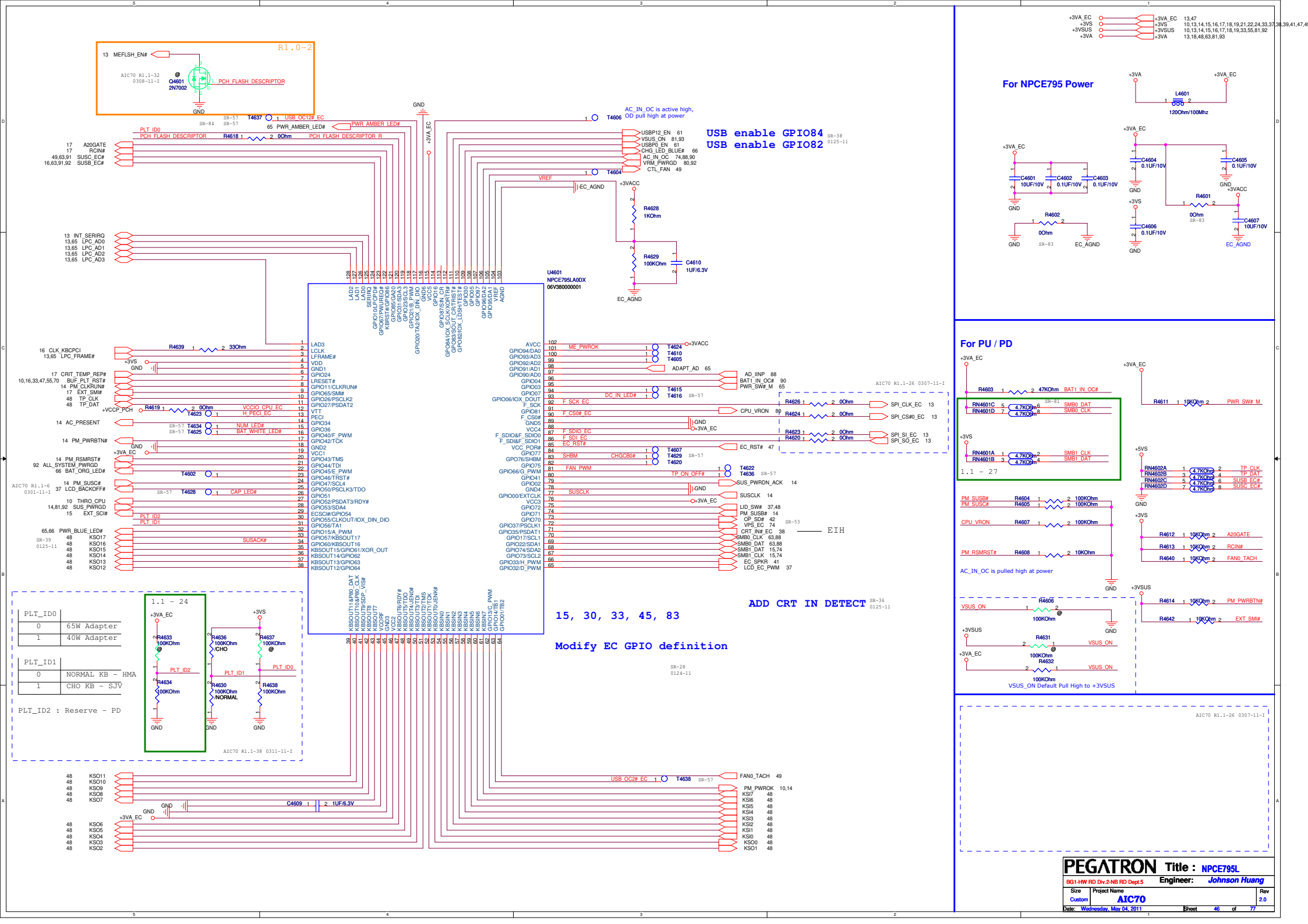
SR-8
0121-11

PEGATRON Title : AUDIO ALC269

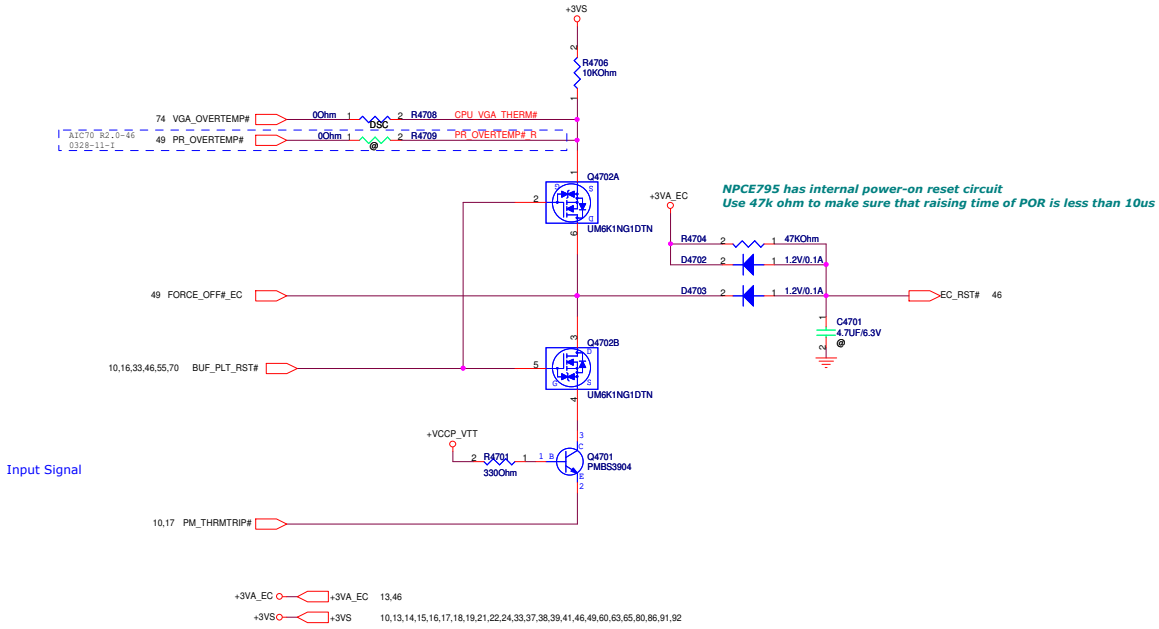
BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 45 of 77


R1.0-2
13 MEFLSH_EN#
Q4601
2N7002
PCH_FLASH_DESCRIPTOR
GND
T4637
USB_OC12# EC
65 PWR_AMBER_LED#
PWR_AMBER_LED#
PLT_ID0
PCH_FLASH_DESCRIPTOR
R4618 0Ohm
PCH_FLASH_DESCRIPTOR_R
17 A20GATE
17 RCIN#
49,63,91 SUSC_EC#
16,63,91,92 SUSB_EC#
+3VA_EC
T4606
AC_IN_OC is active high, OD pull high at power
USBP12_EN 61
VSUS_ON 81,93
USBP0_EN 61
CHG_LED_BLUE# 66
AC_IN_OC 74,88,90
VRM_PWRGD 80,92
CTL_FAN 49
T4604
USB enable GPIO84
USB enable GPIO82
SR-38 0125-11
VREF
EC_AGND
+3VACC
R4628 1KOhm
R4629 100KOhm
C4610 1UF/6.3V
13 INT_SERIRQ
13,65 LPC_AD0
13,65 LPC_AD1
13,65 LPC_AD2
13,65 LPC_AD3
U4601
NPCE795LA0DX
06V380000001
LAD2 LAD1 LAD0 SERIRQ GPIO10/LPCPD# GPIO67/PWUREQ# KBRST#/GPIO66 GPIO65/GA20 GPIO64/KBRC# GPIO23/SCL3 GPIO22/SDA3 GPIO21/B_PWM GPIO20/TA2/EX_DIN_DIO
GPO94/IOX_SCLK/OUT# GPO93/IOX_SDA/OUT# GPO83/SCOUT_CRT/RST# GPO82/IOX_LDSH/TEST# GPIO30 GPIO35 GPIO97 GPO96/DA2 GPO95/DA1 AGND
LAD3 LCLK LFRAME# VDD GND1 GPIO24 LRESET# GPIO11/CLKRUN# GPIO65/SMI# GPIO26/PSCLK2 GPIO27/PSDAT2 VTT PECI GPIO34 GPIO36 GPIO40/F_PWM GPIO42/TCK GND2 VCC1 GPIO43/TMS GPIO44/TDI GPIO45/E_PWM GPIO46/TRST# GPIO47/SCL4 GPIO50/PSCLK3/TDO GPIO51 GPIO52/PSDAT3/RDY# GPIO53/SDA4 ECSCI#/GPIO54 GPIO55/CLKOUT/IOX_DIN_DIO GPIO56/TA1 GPIO15/A_PWM GPIO57/KBSOUT17 GPIO60/KBSOUT16 KBSOUT15/GPIO61/XOR_OUT KBSOUT14/GPIO62 KBSOUT13/GPIO63 KBSOUT12/GPIO64
AVCC GPIO94/DA0 GPIO93/AD3 GPIO92/AD2 GPIO91/AD1 GPIO90/AD0 GPIO04 GPIO03 GPIO07 GPIO06/IOX_DOUT F_SCK GPIO81 F_CS0# GND5 VCC4 F_SDIO&F_SDIO0 F_SDI&F_SDIO1 VCC_POR# GPIO77 GPO76/SHBM GPIO75 GPIO66/G_PWM GPIO41 GPIO02 GND4 GPIO00/EXTCLK VCC3 GPIO72 GPIO71 GPIO70 GPIO37/PSCLK1 GPIO35/PSDAT1 GPIO17/SCL1 GPIO22/SDA1 GPIO74/SDA2 GPIO73/SCL2 GPIO33/H_PWM GPIO32/D_PWM
KBSOUT11&P80_DAT KBSOUT10&P80_CLK KBSOUT9/SDP_VIS# KBSOUT8 KBSOUT17 VCORF GND3 VCC2 KBSOUT7/E_RDY# KBSOUT6/JENK# KBSOUT5/TDO KBSOUT4/JENI# KBSOUT3/TDI KBSOUT2/TMS KBSOUT1/TCK KBSOUT0/JENK# KBSIN0 KBSIN1 KBSIN2 KBSIN3 KBSIN4 KBSIN5 KBSIN6 KBSIN7 GPIO13/C_PWM GPIO14/TB1 GPIO01/TB2
ME_PWROK T4624 +3VACC
T4610
T4605
ADAPT_AD 65
AD_IINP 88
BAT1_IN_OC# 90
PWR_SW#_M 65
DC_IN_LED# T4615 T4616 SR-57
F_SCK_EC
CPU_VRON 80
F_CS0#_EC
GND
+3VA_EC
F_SDIO_EC
F_SDI_EC
EC_RST#
EC_RST# 47
SHBM CHGCB0# T4607 T4629 T4620 SR-57
FAN_PWM
TP_ON_OFF# T4622 T4636 SR-57
SUS_PWRDN_ACK 14
SUSCLK
SUSCLK 14
LID_SW# 37,48
PM_SUSB# 14
OP_SD# 42
VPS_EC 74
CRT_IN# EC 38
SMB0_CLK 63,88
SMB0_DAT 63,88
SMB1_DAT 15,74
SMB1_CLK 15,74
EC_SPWR 41
LCD_EC_PWM 37
EIH
AIC70 R1.1-26 0307-11-I
R4626 0Ohm SPI_CLK_EC 13
R4624 0Ohm SPI_CS#0_EC 13
R4623 0Ohm SPI_SI_EC 13
R4620 0Ohm SPI_SO_EC 13
16 CLK_KBCPCI
13,65 LPC_FRAME#
R4639 33Ohm
+3VS
GND
17 CRIT_TEMP_REP#
10,16,33,47,55,70 BUF_PLT_RST#
14 PM_CLKRUN#
17 EXT_SMI#
48 TP_CLK
48 TP_DAT
+VCCP_PCH
R4619 0Ohm
T4623
VCCIO_CPU_EC
H_PECI_EC
14 AC_PRESENT
SR-57 T4634 NUM_LED#
SR-57 T4625 BAT_WHITE_LED#
14 PM_PWRBTN#
+3VA_EC
14 PM_RSMRST#
92 ALL_SYSTEM_PWRGD
66 BAT_ORG_LED#
T4602
AIC70 R1.1-6 0301-11-I
14 PM_SUSC#
37 LCD_BACKOFF#
SR-57 T4628 CAP_LED#
10 THRO_CPU
14,81,92 SUS_PWRGD
15 EXT_SCI#
PLT_ID2
PLT_ID1
65,66 PWR_BLUE_LED#
48 KSO17
SR-39 0125-11
48 KSO16
48 KSO15
48 KSO14
48 KSO13
48 KSO12
SUSACK#
15, 30, 33, 45, 83
Modify EC GPIO definition
SR-28 0124-11
ADD CRT IN DETECT
SR-36 0125-11
PLT_ID0
0 65W Adapter
1 40W Adapter
PLT_ID1
0 NORMAL KB - HMA
1 CHO KB - SJV
PLT_ID2 : Reserve - PD
1.1 - 24
+3VA_EC
R4633 100KOhm
PLT_ID2
R4634 100KOhm
GND
+3VS
R4636 100KOhm /CHO
PLT_ID1
R4630 100KOhm /NORMAL
R4637 100KOhm
PLT_ID0
R4638 100KOhm
AIC70 R1.1-38 0311-11-I
48 KSO11
48 KSO10
48 KSO9
48 KSO8
48 KSO7
48 KSO6
48 KSO5
48 KSO4
48 KSO3
48 KSO2
C4609 1UF/6.3V
USB_OC2# EC T4638 SR-57
FAN0_TACH 49
PM_PWROK 10,14
KSI7 48
KSI6 48
KSI5 48
KSI4 48
KSI3 48
KSI2 48
KSI1 48
KSI0 48
KSO0 48
KSO1 48
+3VA EC 13,47
+3VS 10,13,14,15,16,17,18,19,21,22,24,33,37,38,39,41,47,48
+3VSUS 10,13,14,15,16,17,18,19,33,55,81,92
+3VA 13,18,48,63,81,93
For NPCE795 Power
+3VA
+3VA_EC
L4601
120Ohm/100Mhz
C4601 10UF/10V
C4602 0.1UF/10V
C4603 0.1UF/10V
C4604 0.1UF/10V
C4605 0.1UF/10V
R4601 0Ohm SR-83
C4606 0.1UF/10V
C4607 10UF/10V
R4602 0Ohm SR-83
EC_AGND
For PU / PD
R4603 47KOhm BAT1_IN_OC#
SR-81
RN4601C 4.7KOhm SMB0_DAT
RN4601D 4.7KOhm SMB0_CLK
RN4601A 4.7KOhm SMB1_CLK
RN4601B 4.7KOhm SMB1_DAT
1.1 - 27
R4611 10KOhm PWR_SW#_M
+5VS
RN4602A 4.7KOhm TP_CLK
RN4602B 4.7KOhm TP_DAT
RN4602C 4.7KOhm SUSB_EC#
RN4602D 4.7KOhm SUSC_EC#
PM_SUSB# R4604 100KOhm
PM_SUSC# R4605 100KOhm
CPU_VRON R4607 100KOhm
PM_RSMRST# R4608 10KOhm
AC_IN_OC is pulled high at power
R4612 10KOhm A20GATE
R4613 10KOhm RCIN#
R4640 10KOhm FAN0_TACH
+3VSUS
VSUS_ON R4605 100KOhm
R4631 100KOhm VSUS_ON
R4632 100KOhm VSUS_ON
VSUS_ON Default Pull High to +3VSUS
R4614 10KOhm PM_PWRBTN#
R4642 10KOhm EXT_SMI#
AIC70 R1.1-26 0307-11-I
PEGATRON
Title : NPCE795L
BG1-HW RD Div.2-NB RD Dept.5
Engineer: Johnson Huang
Size Custom
Project Name AIC70
Rev 2.0
Date: Wednesday, May 04, 2011
Sheet 46 of 77

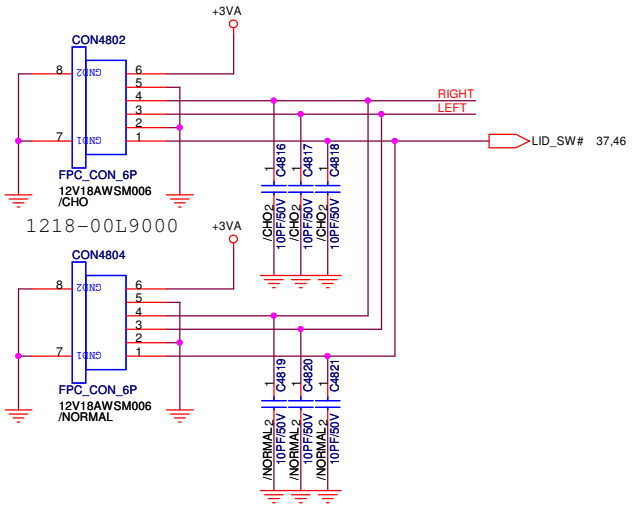
Thermal Policy



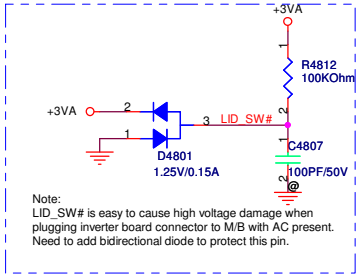
PEGATRON	Title : RST_Reset Circuit	
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang	
Size: C	Project Name: AIC70	Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 47 of 77	

Touch Pad Button/ Hall Sensor

AIC70 R1.1-23 0306-11-I
AIC70 R1.1-35 0309-11-I

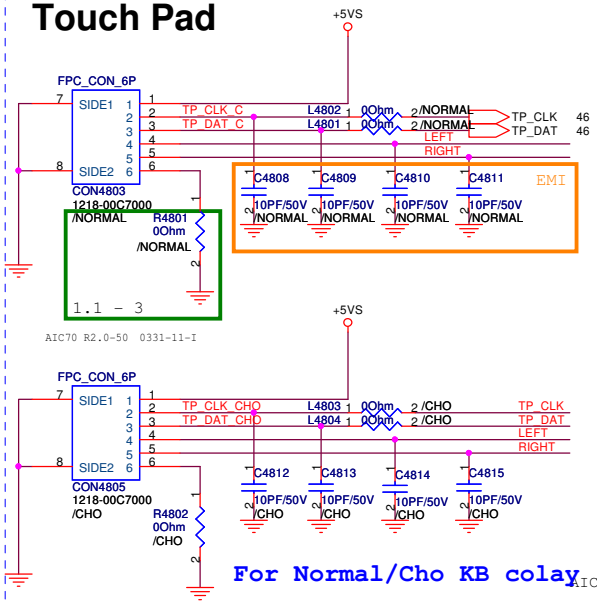


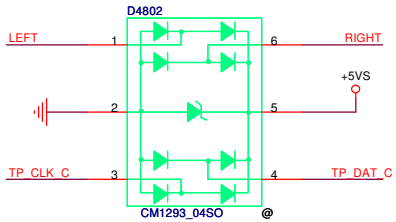
close toU4601



Note:
LID_SW# is easy to cause high voltage damage when plugging inverter board connector to M/B with AC present. Need to add bidirectional diode to protect this pin.

Touch Pad

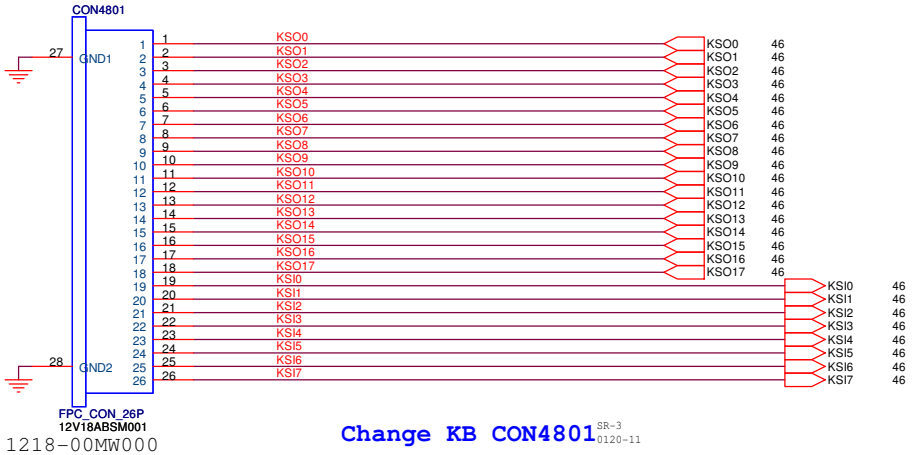




For Normal/Cho KB colay 0224-11-I
AIC70 R1.1-4

Remove TP button circuit SR-22 0124-11

Keyboard FOR 17"



Change KB CON4801 SR-3 0120-11

Change KB CON4801 PIN definition SR-25 0124-11
Reverse KB CON4801 SR-19 0124-11 SR-52 0126-11

Remove 15'' KB connector AIC70 R1.1 - 1 0224-11 - I

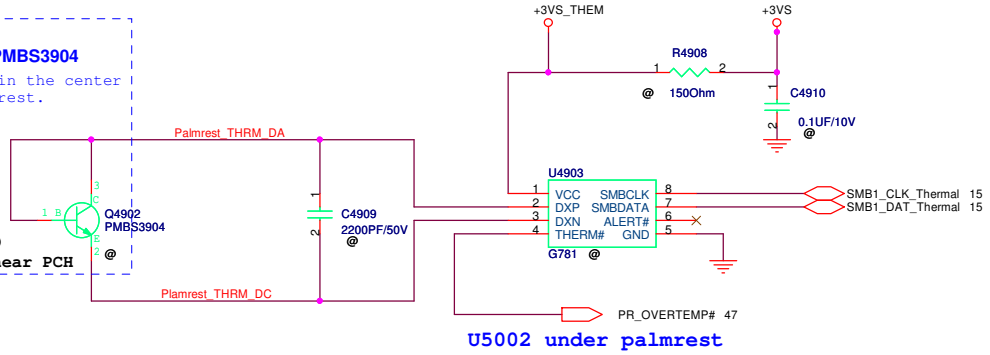
PEGATRON Title : KB/ TP/ FLASH
BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang
Size: Custom | Project Name: AIC70 | Rev: 2.0
Date: Wednesday, May 04, 2011 | Sheet 48 of 77

AIC70 R2.0-46 0328-11-I
AIC70 R2.0-49 0330-11-I

Palm Rest Thermal Sensor

PHILIP PMBS3904
Please in the center of Plamrest.

ER 1129
Place near PCH

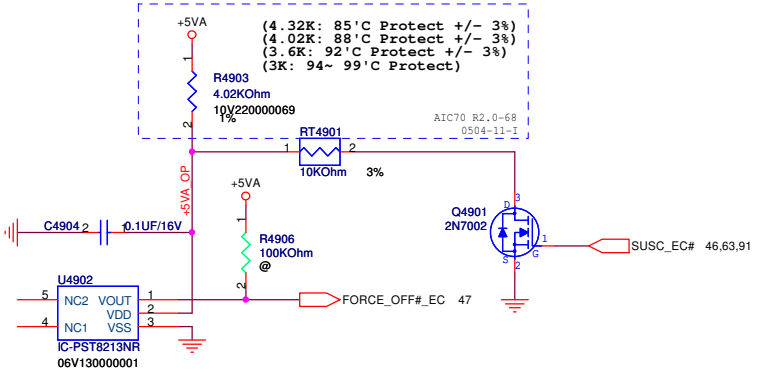


U5002 under palmrest

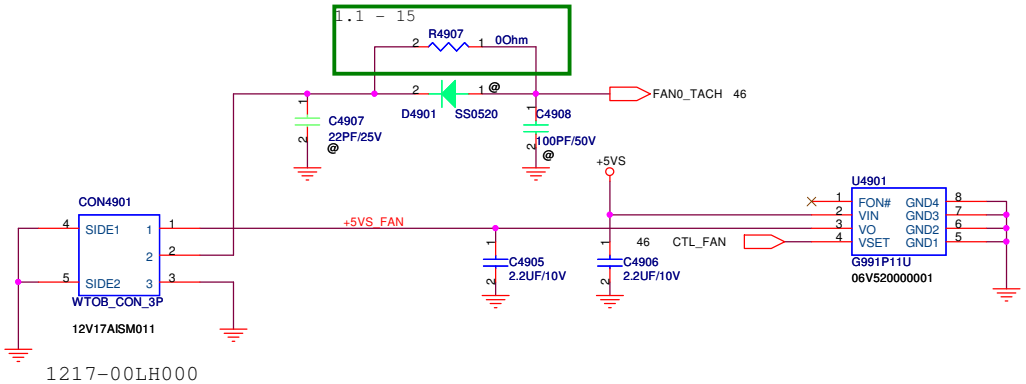
SMBUS addr=1001100x (98)

U5002: Remote(Local) thermal sensor,use remote mode.

Thermister



FAN



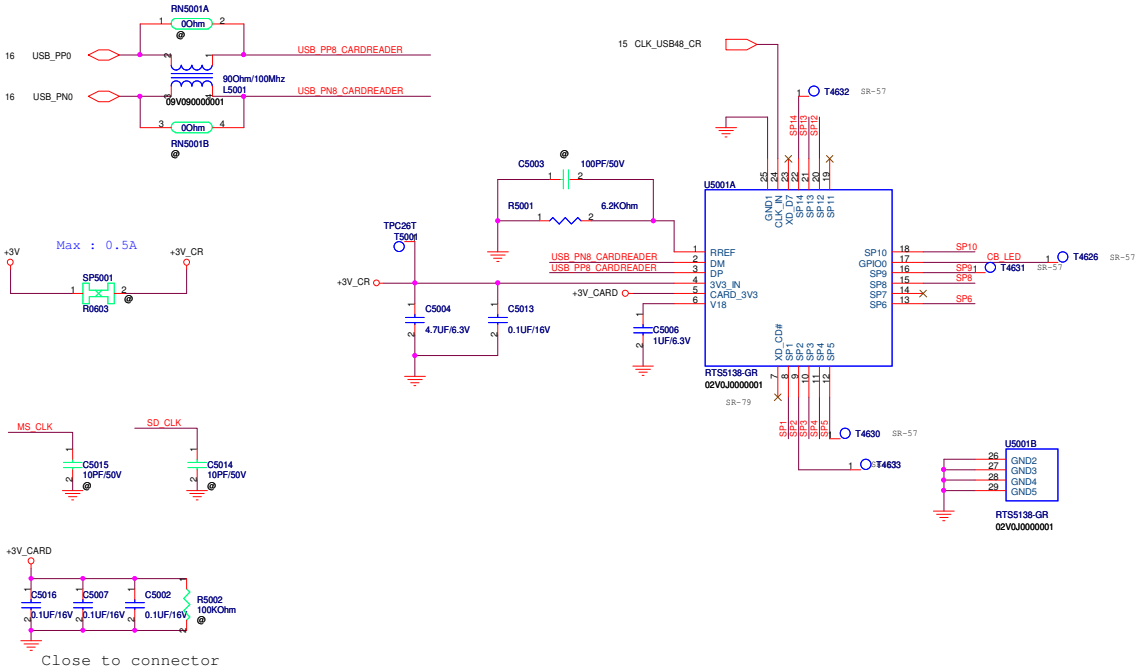
1217-00LH000

PEGATRON **Title : THERMAL/ FAN**

BU1-RD Div.1-HW RD Dept.1 **Engineer: *Johnson Huang***

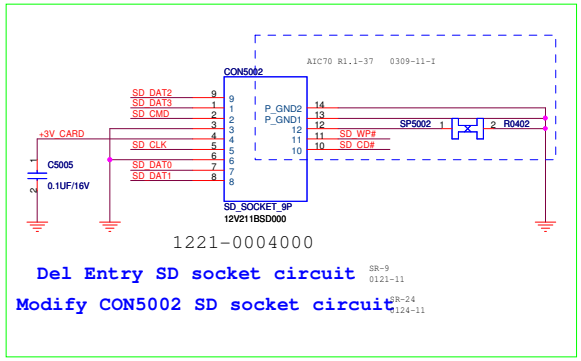
Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 49 of 77



Pin Name	Description
SP1	SDWP# / MSCLK
SP2	MS_INS#
SP3	SD_DAT1
SP4	SD_DAT0
SP5	MS_D3
SP6	SD_CD#
SP8	SD_CLK / MS_D2
SP9	MS_D0
SP10	SD_CMD
SP12	SD_DAT3 / MS_D1
SP13	SD_DAT2
SP14	MS_BS

SP1	SD_WP#	MS_CLK
SP2		MS_INS#
SP3	SD_DAT1	
SP4	SD_DAT0	
SP5		MS_D3
SP6	SD_CD#	
SP8	SD_CLK	MS_D2
SP9		MS_D0
SP10	SD_CMD	
SP12	SD_DAT3	MS_D1
SP13	SD_DAT2	
SP14		MS_BS



PEGATRON Title : Realtek_RTS5138

BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang

Size	Project Name	Rev
C	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 50 of 77

PEGATRON Title : USB3.0 uPD720200

BG1\HW1 Engineer: Johnson Huang

Size	Project Name	Rev
C	AIC70	2.0

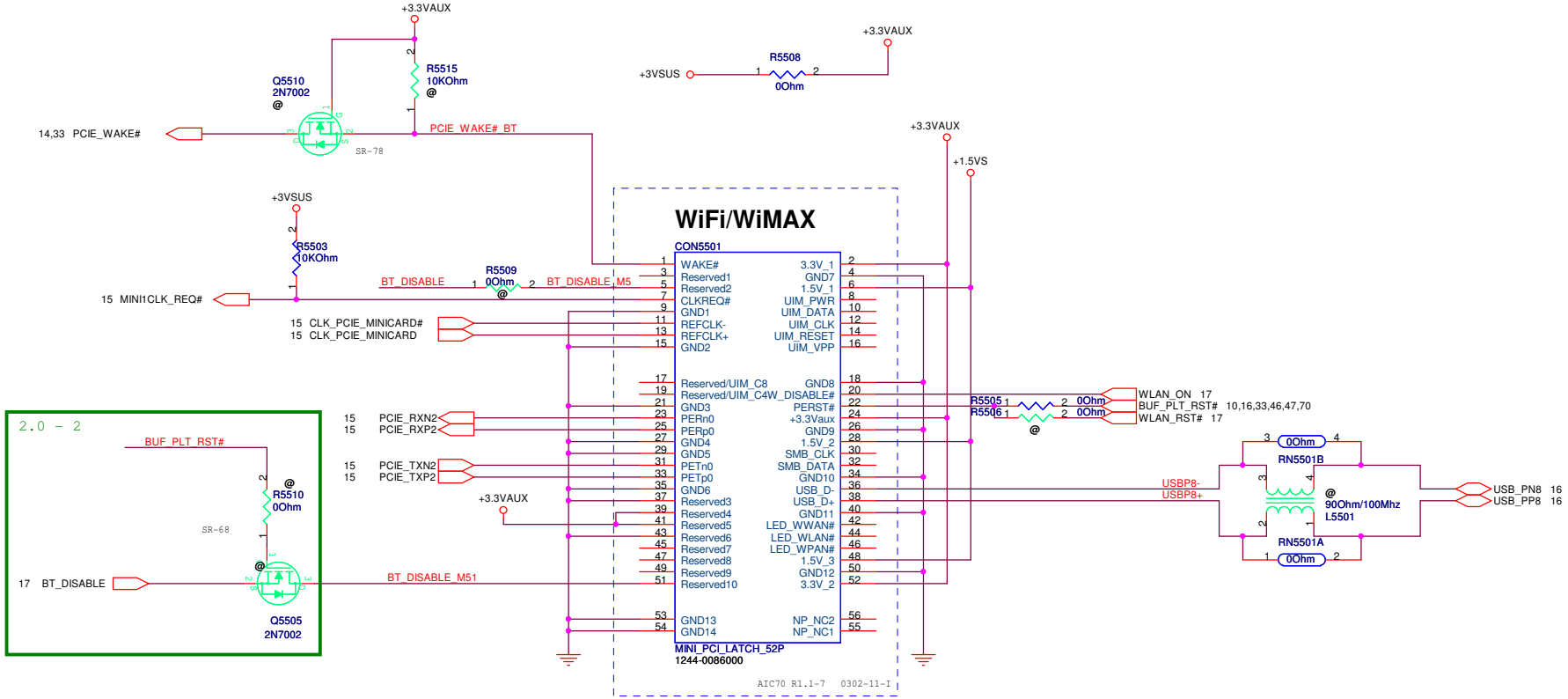
Date: Wednesday, May 04, 2011 Sheet 53 of 77

PEGATRON Title : PCIE NEW CARD

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 54 of 77



PEGATRON Title : WiFi/WiMAX

BU1-RD Div.1-HW RD Dept.1 Engineer:

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 55 of 77

PEGATRON

Title : MINICARD (WWAN)

BU1-RD Div.1-HW RD Dept.1

Engineer:

Size	Project Name	Rev
Custom		2.0

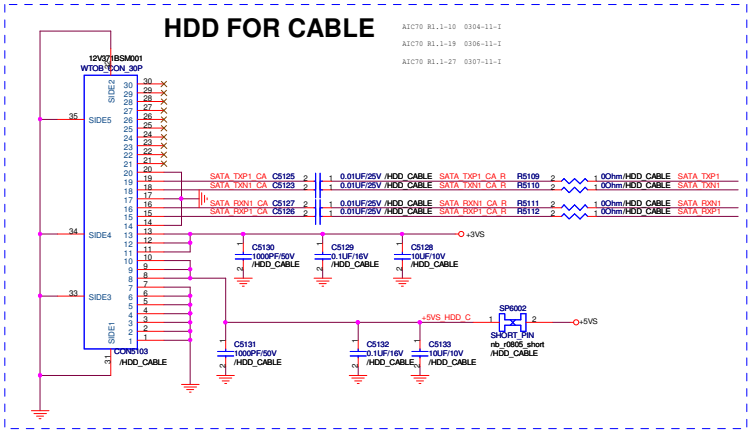
Date: Wednesday, May 04, 2011 Sheet 56 of 77

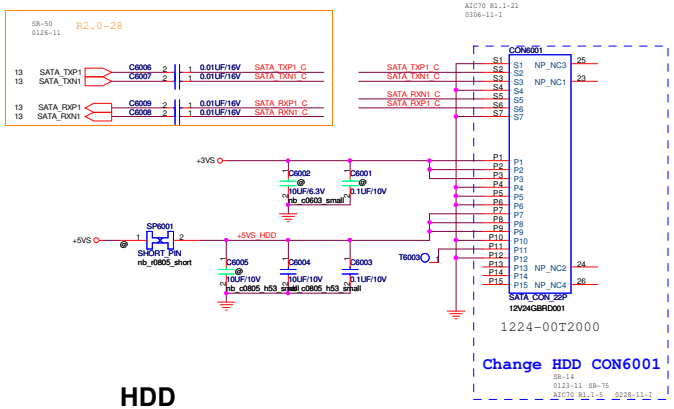
PEGATRON Title : MINICARD (WUSB /UPCONVERT)

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 57 of 77

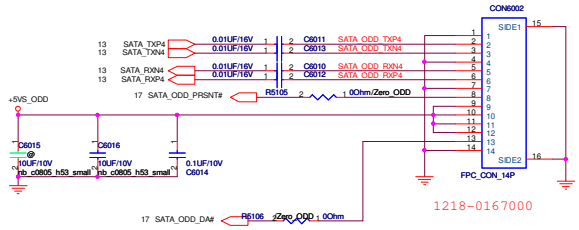




HDD

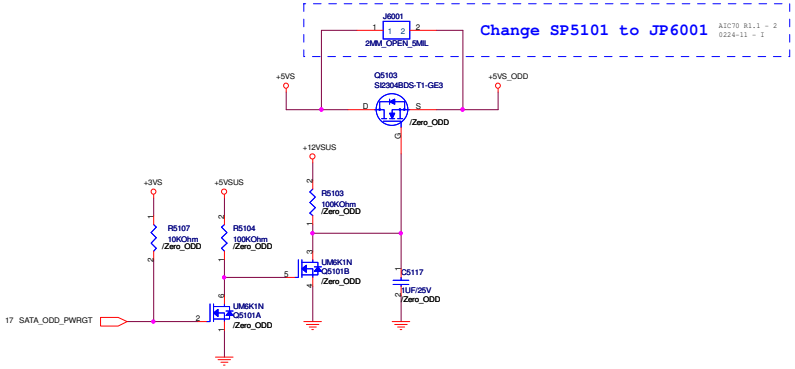
Remove 15'' ODD connector

AIC70 R1.1 - 1
0224-11 - I



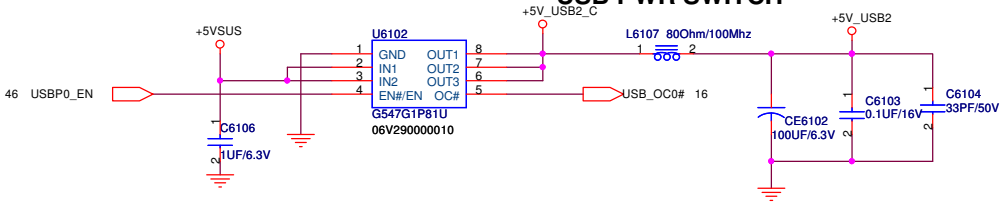
ZERO POWER ODD SUPPORT

support Hokey turn off ODD power



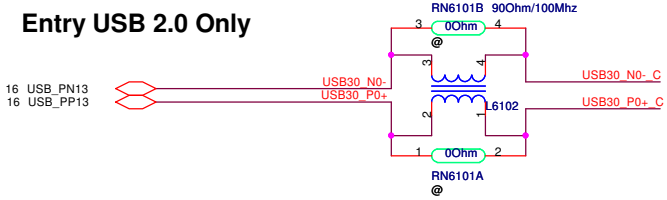
PEGATRON	Title : SATA HDD/ ODD		
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 60 of 77		

USB PWR SWITCH



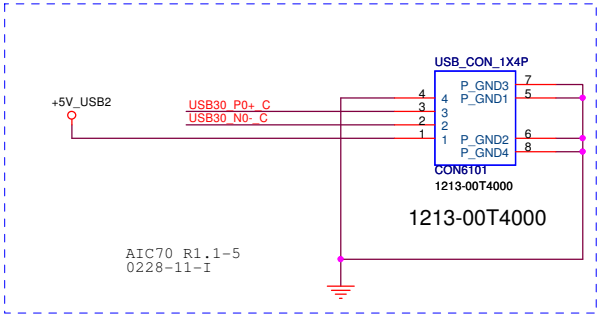
change USB power switch circuit SR-1 0120-11 SR-26 0124-11 SR-34 0125-11

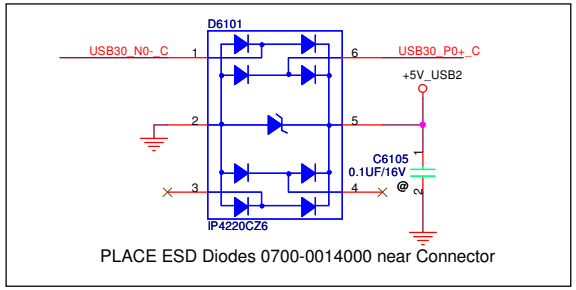
Entry USB 2.0 Only



Modify D6101, RN6101, RN6105, RN6106 SR-30 0125-11

USB 2.0



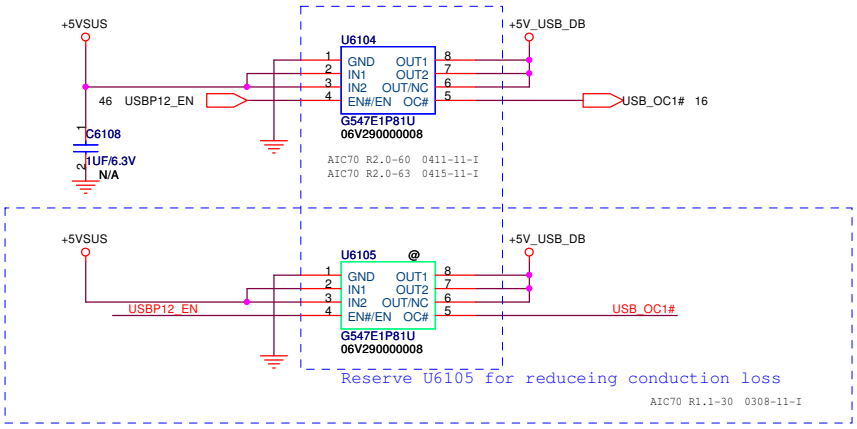


USB Conn. for Entry colay HDMI USB 2.0

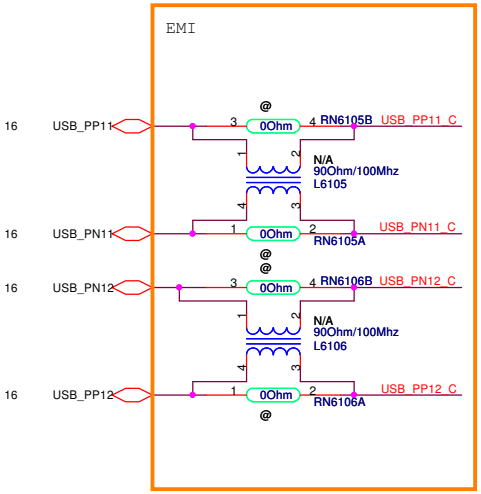
Remove USB_9 (HDMI) SR-21 0124-11

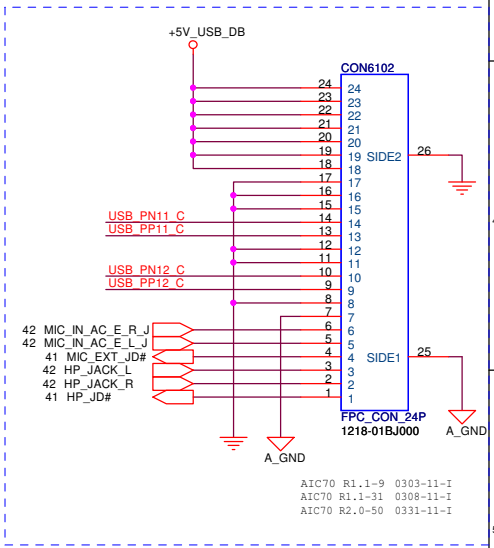
USB Power Switch for USB DB Main

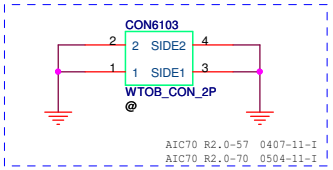
change USB power switch circuit SR-26 0124-12 SR-38 0125-13



AUDIO BOARD/w USB2.0 x2







PEGATRON Title : USB PORTS/ eSATA

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 61 of 77

TouchPanel CON

Camera Module CON

B/T MODULE

FELICA MODULE

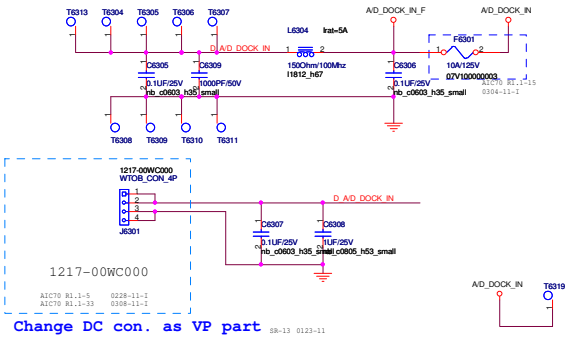
PEGATRON Title : Camera/ BT/ FL CONN

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 62 of 77

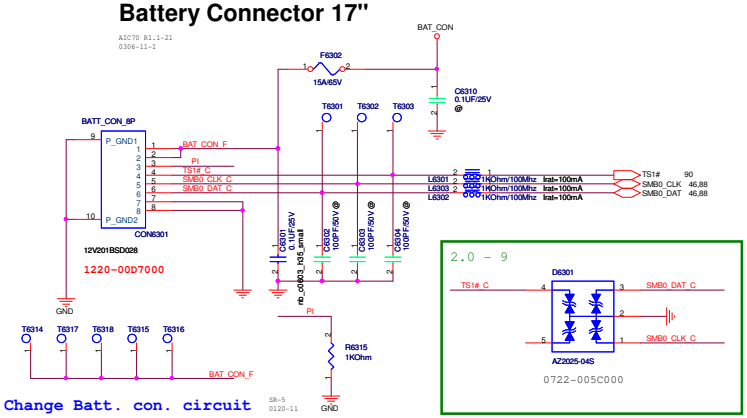
DC IN



Change DC con. as VP part
Reverse J6301

Change to 1217-00WC000

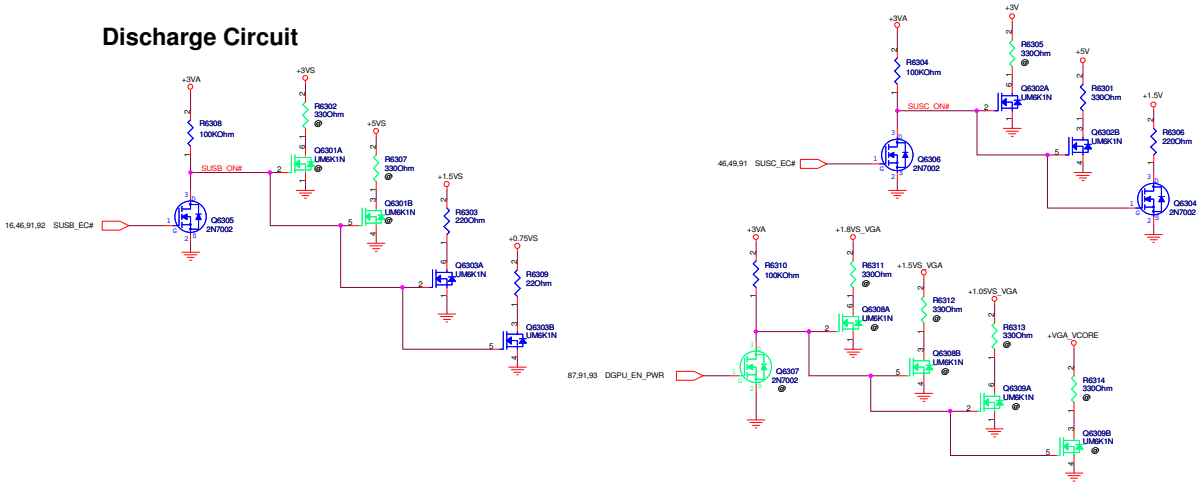
Battery Connector 17"



Remove 15'' Battery connector

Change Batt. con. circuit

Discharge Circuit



PEGATRON Title : DC-IN/ DISCHARGE

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 63 of 77

Notes:
BRAIDWOOD right angled Connector (1.8V keyed)
Compatible BRAIDWOOD Modules
1.8V Mobile NVM 4GB 31.60mm x21.5mm
1.8V Mobile NVM 8GB 31.60mm x 21.5mm
1.8V Mobile NVM 16GB 31.60mm x 32.5mm

PEGATRON Title : NVM

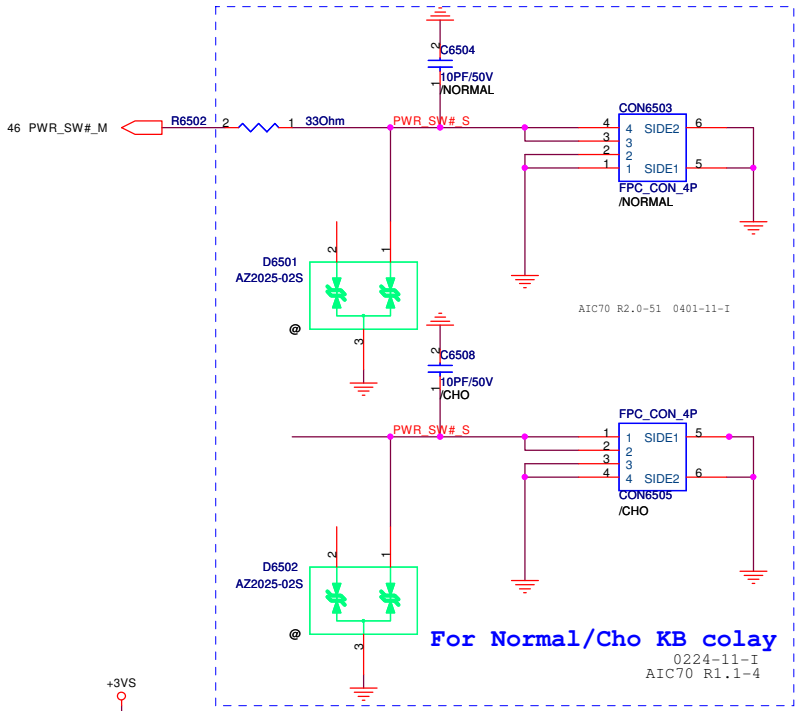
BU1-RD Div.1-HW RD Dept.1 Engineer: *Johnson Huang*

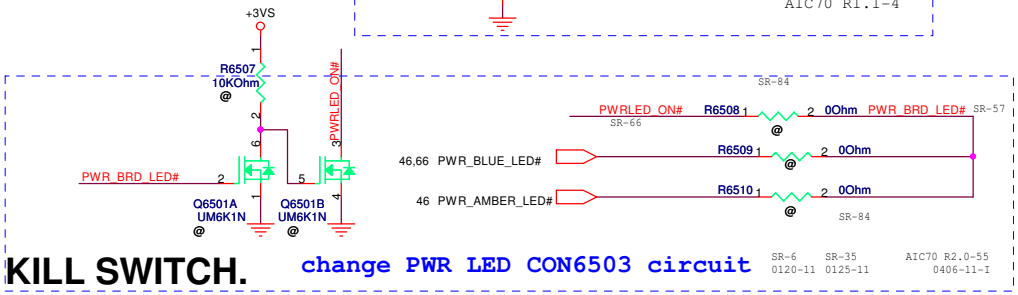
Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 64 of 77

PWR BRD/ AMBIENT/ HALL CONN.

1.1 - 12 SR-66





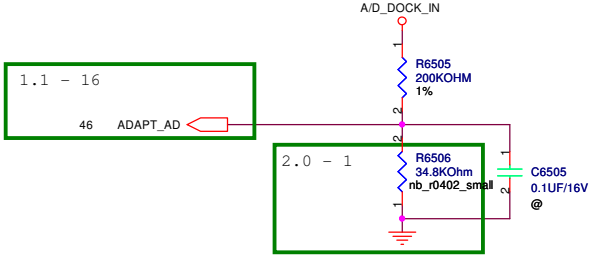
KILL SWITCH.

change PWR LED CON6503 circuit

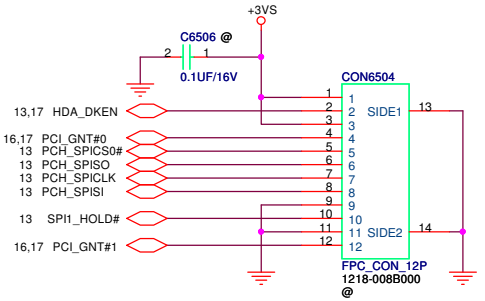
SR-6 0120-11 SR-35 0125-11 AIC70 R2.0-55 0406-11-I

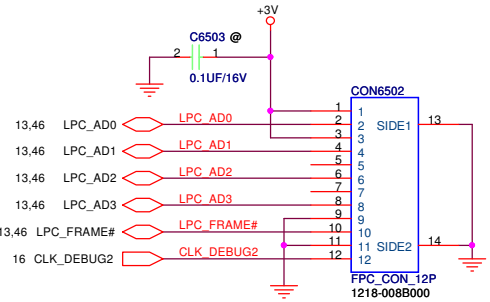
MODEM MODULE

ADAPTOR VOLTAGE DETECTOR.



DEBUG CARD CONN.





PEGATRON Title : MDC/ PWR SW/ Debug

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 65 of 77

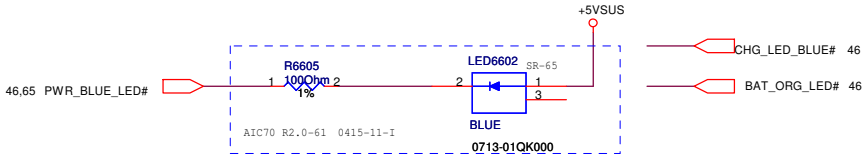
LED (Main)

Left ⟷ Right

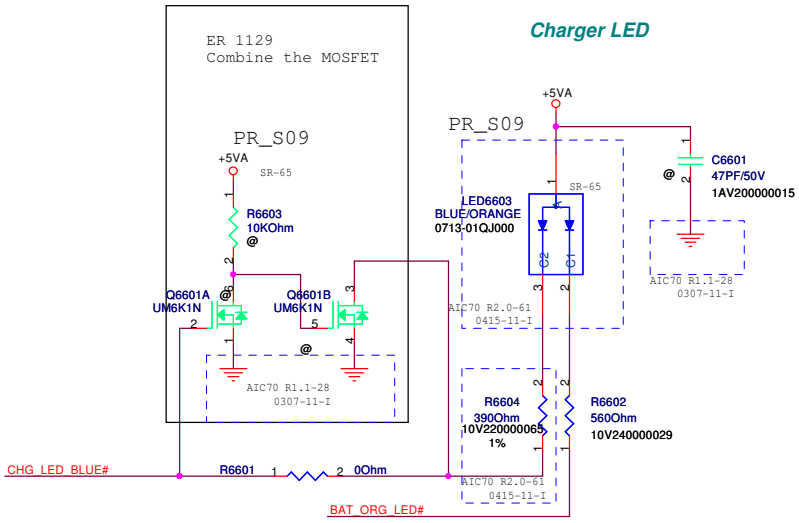
DC-IN	Power	Main Battery	HDD/ODD	Bridge Media	WiFi
White	White Amber (Blink)	White Amber (Blink)	White	White	Amber

Battery

Power LED



Charger LED

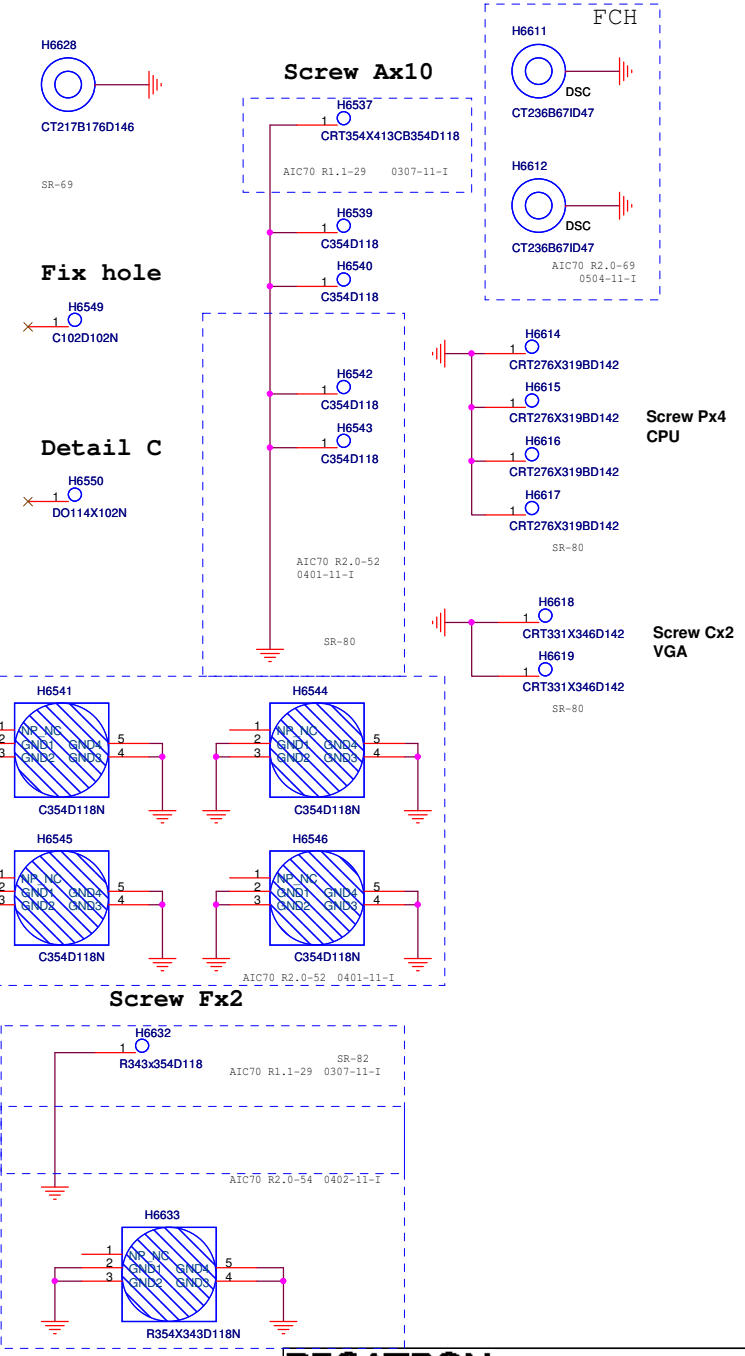


Remover LED circuit SR-18 0124-11

Modify LED circuit SR-28 0124-11 SR-39 0125-11

PCH Local Side Symbol

WLAN NUT



PEGATRON Title : LED/ CIR/FN SCREW

BU1-RD Div.1-HW RD Dept.1 Engineer: Johnson Huang

Size	Project Name	Rev
Custom	AIC70	2.0

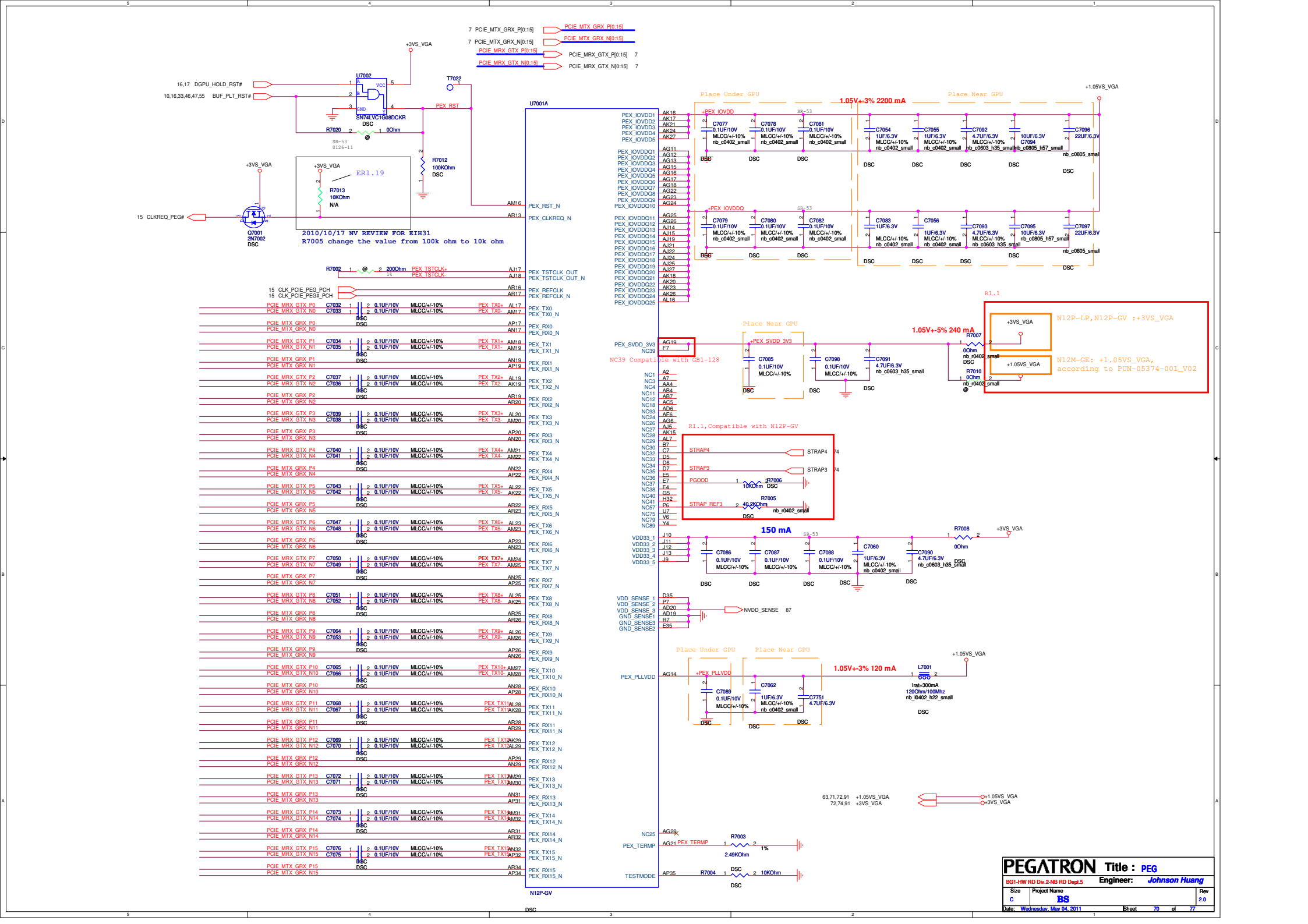
Date: Wednesday, May 04, 2011 Sheet 66 of 77

PEGATRON Title : G-Sensor TSH35TR

BU1-RD Div.1-HW RD Dept.1 Engineer: *Johnson Huang*

Size	Project Name	Rev
Custom		2.0

Date: Wednesday, May 04, 2011 Sheet 69 of 77



PEGATRON	Title : PEG
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang
Size: C	Project Name: BS
Rev: 2.0	
Date: Wednesday, May 04, 2011	Sheet 70 of 77

76 FBAD[0..63]
76 FBA_CMD[0..31]
76 FBADQM[0..7]
76 FBADQS_WP[0..7]
76 FBADQS_RN[0..7]

1720 mA

BOT SIDE

U7001B

FBAD0	L32	FBA_D00	
FBAD1	N33	FBA_D01	
FBAD2	L33	FBA_D02	
FBAD3	N34	FBA_D03	
FBAD4	N35	FBA_D04	
FBAD5	P35	FBA_D05	
FBAD6	P33	FBA_D06	
FBAD7	P34	FBA_D07	
FBAD8	K35	FBA_D08	
FBAD9	K33	FBA_D09	
FBAD10	K34	FBA_D10	
FBAD11	H33	FBA_D11	
FBAD12	G34	FBA_D12	
FBAD13	G33	FBA_D13	
FBAD14	E34	FBA_D14	
FBAD15	E33	FBA_D15	
FBAD16	G31	FBA_D16	
FBAD17	F30	FBA_D17	
FBAD18	G30	FBA_D18	
FBAD19	G32	FBA_D19	
FBAD20	K30	FBA_D20	
FBAD21	K32	FBA_D21	
FBAD22	H30	FBA_D22	
FBAD23	K31	FBA_D23	
FBAD24	L31	FBA_D24	
FBAD25	L30	FBA_D25	
FBAD26	M32	FBA_D26	
FBAD27	N30	FBA_D27	
FBAD28	M30	FBA_D28	
FBAD29	P31	FBA_D29	
FBAD30	R32	FBA_D30	
FBAD31	R30	FBA_D31	
FBAD32	AG30	FBA_D32	
FBAD33	AG32	FBA_D33	
FBAD34	AH31	FBA_D34	
FBAD35	AF31	FBA_D35	
FBAD36	AF30	FBA_D36	
FBAD37	AE30	FBA_D37	
FBAD38	AC32	FBA_D38	
FBAD39	AD30	FBA_D39	
FBAD40	AN33	FBA_D40	
FBAD41	AL31	FBA_D41	
FBAD42	AM33	FBA_D42	
FBAD43	AL33	FBA_D43	
FBAD44	AK30	FBA_D44	
FBAD45	AK32	FBA_D45	
FBAD46	AJ30	FBA_D46	
FBAD47	AH30	FBA_D47	
FBAD48	AH33	FBA_D48	
FBAD49	AH35	FBA_D49	
FBAD50	AH34	FBA_D50	
FBAD51	AH32	FBA_D51	
FBAD52	AJ33	FBA_D52	
FBAD53	AL35	FBA_D53	
FBAD54	AM34	FBA_D54	
FBAD55	AM35	FBA_D55	
FBAD56	AF33	FBA_D56	
FBAD57	AE32	FBA_D57	
FBAD58	AF34	FBA_D58	
FBAD59	AE35	FBA_D59	
FBAD60	AE34	FBA_D60	
FBAD61	AE33	FBA_D61	
FBAD62	AB32	FBA_D62	
FBAD63	AC35	FBA_D63	

FBADQM0	P32	FBA_DQM0	
FBADQM1	H34	FBA_DQM1	
FBADQM2	J30	FBA_DQM2	
FBADQM3	P30	FBA_DQM3	
FBADQM4	AF32	FBA_DQM4	
FBADQM5	AL32	FBA_DQM5	
FBADQM6	AL34	FBA_DQM6	
FBADQM7	AF35	FBA_DQM7	

FBADQS_WP0	L34	FBA_DQS_WP0	
FBADQS_WP1	H35	FBA_DQS_WP1	
FBADQS_WP2	J32	FBA_DQS_WP2	
FBADQS_WP3	N31	FBA_DQS_WP3	
FBADQS_WP4	AE31	FBA_DQS_WP4	
FBADQS_WP5	AJ32	FBA_DQS_WP5	
FBADQS_WP6	AJ34	FBA_DQS_WP6	
FBADQS_WP7	AC33	FBA_DQS_WP7	

FBADQS_RN0	L35	FBA_DQS_RN0	
FBADQS_RN1	G35	FBA_DQS_RN1	
FBADQS_RN2	H31	FBA_DQS_RN2	
FBADQS_RN3	N32	FBA_DQS_RN3	
FBADQS_RN4	AD32	FBA_DQS_RN4	
FBADQS_RN5	AJ31	FBA_DQS_RN5	
FBADQS_RN6	AJ35	FBA_DQS_RN6	
FBADQS_RN7	AC34	FBA_DQS_RN7	

	P29	FBA_WCK0	
	R29	FBA_WCK0_N	
	L29	FBA_WCK1	
	M29	FBA_WCK1_N	
	AG29	FBA_WCK2	
	AH29	FBA_WCK2_N	
	AD29	FBA_WCK3	
	AE29	FBA_WCK3_N	

	J27	NC44	

N12P-GV DSC

FBVDDQ1	AA27		
FBVDDQ2	AA29		
FBVDDQ3	AA31		
FBVDDQ4	AB27		
FBVDDQ5	AB29		
FBVDDQ6	AC27		
FBVDDQ7	AD27		
FBVDDQ8	AE27		
FBVDDQ9	AJ28		
FBVDDQ10	B18		
FBVDDQ11	E21		
FBVDDQ12	G17		
FBVDDQ13	G18		
FBVDDQ14	G22		
FBVDDQ15	G8		
FBVDDQ16	G9		
FBVDDQ17	H29		
FBVDDQ18	J14		
FBVDDQ19	J15		
FBVDDQ20	J16		
FBVDDQ21	J17		
FBVDDQ22	J20		
FBVDDQ23	J21		
FBVDDQ24	J22		
FBVDDQ25	J23		
FBVDDQ26	J24		
FBVDDQ27	J29		

Place Under GPU / Place Near GPU

+1.5VS_VGA

C7101 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7102 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7103 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7110 4.7UF/6.3V nb_c0603_h35_small @
C7104 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7105 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7106 1UF/6.3V MLCC/+/-10% nb_c0402_small DSC

FBA_CMD0	U30	FBA_CMD0	
FBA_CMD1	V30	FBA_CMD1	
FBA_CMD2	U31	FBA_CMD2	
FBA_CMD3	V32	FBA_CMD3	
FBA_CMD4	T35	FBA_CMD4	
FBA_CMD5	U33	FBA_CMD5	
FBA_CMD6	W32	FBA_CMD6	
FBA_CMD7	W33	FBA_CMD7	
FBA_CMD8	W31	FBA_CMD8	
FBA_CMD9	W34	FBA_CMD9	
FBA_CMD10	U34	FBA_CMD10	
FBA_CMD11	U35	FBA_CMD11	
FBA_CMD12	U32	FBA_CMD12	
FBA_CMD13	T34	FBA_CMD13	
FBA_CMD14	T33	FBA_CMD14	
FBA_CMD15	W30	FBA_CMD15	
FBA_CMD16	AB30	FBA_CMD16	
FBA_CMD17	AA30	FBA_CMD17	
FBA_CMD18	AB31	FBA_CMD18	
FBA_CMD19	AA32	FBA_CMD19	
FBA_CMD20	AB33	FBA_CMD20	
FBA_CMD21	Y32	FBA_CMD21	
FBA_CMD22	Y33	FBA_CMD22	
FBA_CMD23	AB34	FBA_CMD23	
FBA_CMD24	AB35	FBA_CMD24	
FBA_CMD25	Y35	FBA_CMD25	
FBA_CMD26	W35	FBA_CMD26	
FBA_CMD27	Y34	FBA_CMD27	
FBA_CMD28	Y31	FBA_CMD28	
FBA_CMD29	Y30	FBA_CMD29	
FBA_CMD30	W29	FBA_CMD30	
FBA_CMD31	Y29	FBA_CMD31	Y29 NC compatible with GB1-128

T7102 T7103

FBA_ODT
FBA_CMD0 R7108 2 1 10KOhm
FBA_CMD19 R7109 2 1 10KOhm
DSC
FBA_RST#
FBA_CMD20 R7110 2 1 10KOhm
FBA_CKE
DSC
FBA_CMD3 R7111 2 1 10KOhm
FBA_CMD16 R7112 2 1 10KOhm
DSC

FBA_CLK0	T32	FBA_CLK0	FBA_CLK0 76
FBA_CLK0_N	T31	FBA_CLK0#	FBA_CLK0# 76
FBA_CLK1	AC31	FBA_CLK1	FBA_CLK1 76
FBA_CLK1_N	AC30	FBA_CLK1#	FBA_CLK1# 76

FBA_DEBUG0	T30	FBA_DEBUG	R7101 @ +1.5VS_VGA, 60.4Ohm 1% SR-62
FBA_DEBUG1	T29		T29 NC compatible with GB1-128

R7208 10KOhm nb_r0402_h16_small @ SR-53

FB_DLLAVDD	AG27		
FB_PLLAVDD	AF27		

C7115 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC

FB_DLLAVDD2	J19		
FB_PLLAVDD1	J18		J19,J18 Compatible with GB1-128

1.05V+-3% 100 mA

+1.05VS_VGA
+FB_PLLAVDD
L7101 30Ohm/100Mhz nb_l0603_small DSC

C7109 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7112 1UF/6.3V MLCC/+/-10% nb_c0402_small DSC
C7119 10UF/6.3V MLCC/+/-10% nb_c0805_h53_small DSC
C7113 1UF/6.3V MLCC/+/-10% nb_c0402_small DSC

Place Under GPU / Place Near GPU

T7104 1 FB_VREF

1720 mA

BOT SIDE

U7001C

B13	FBB_D00		
D13	FBB_D01		
A13	FBB_D02		
A14	FBB_D03		
C16	FBB_D04		
B16	FBB_D05		
A17	FBB_D06		
D16	FBB_D07		
C13	FBB_D08		
B11	FBB_D09		
C11	FBB_D10		
A11	FBB_D11		
C10	FBB_D12		
C8	FBB_D13		
B8	FBB_D14		
A8	FBB_D15		
E8	FBB_D16		
F8	FBB_D17		
F10	FBB_D18		
F9	FBB_D19		
F12	FBB_D20		
D8	FBB_D21		
D11	FBB_D22		
E11	FBB_D23		
D12	FBB_D24		
E13	FBB_D25		
F13	FBB_D26		
F14	FBB_D27		
F15	FBB_D28		
E16	FBB_D29		
F16	FBB_D30		
F17	FBB_D31		
D29	FBB_D32		
F27	FBB_D33		
F28	FBB_D34		
E28	FBB_D35		
D26	FBB_D36		
F25	FBB_D37		
D24	FBB_D38		
E25	FBB_D39		
E32	FBB_D40		
F32	FBB_D41		
D33	FBB_D42		
E31	FBB_D43		
C33	FBB_D44		
F29	FBB_D45		
D30	FBB_D46		
E29	FBB_D47		
B29	FBB_D48		
C31	FBB_D49		
C29	FBB_D50		
B31	FBB_D51		
C32	FBB_D52		
B32	FBB_D53		
B35	FBB_D54		
B34	FBB_D55		
A29	FBB_D56		
B28	FBB_D57		
A28	FBB_D58		
C28	FBB_D59		
C26	FBB_D60		
D25	FBB_D61		
B25	FBB_D62		
A25	FBB_D63		

A16	FBB_DQM0		
D10	FBB_DQM1		
F11	FBB_DQM2		
D15	FBB_DQM3		
D27	FBB_DQM4		
D34	FBB_DQM5		
A34	FBB_DQM6		
D28	FBB_DQM7		

C14	FBB_DQS_WP0		
A10	FBB_DQS_WP1		
E10	FBB_DQS_WP2		
D14	FBB_DQS_WP3		
E26	FBB_DQS_WP4		
D32	FBB_DQS_WP5		
A32	FBB_DQS_WP6		
B26	FBB_DQS_WP7		

B14	FBB_DQS_RN0		
B10	FBB_DQS_RN1		
D9	FBB_DQS_RN2		
E14	FBB_DQS_RN3		
F26	FBB_DQS_RN4		
D31	FBB_DQS_RN5		
A31	FBB_DQS_RN6		
A26	FBB_DQS_RN7		

G14	FBB_WCK0		
G15	FBB_WCK0_N		
G11	FBB_WCK1		
G12	FBB_WCK1_N		
G27	FBB_WCK2		
G28	FBB_WCK2_N		
G24	FBB_WCK3		
G25	FBB_WCK3_N		

N12P-GV DSC

FBVDDQ28	N27		
FBVDDQ29	P27		
FBVDDQ30	R27		
FBVDDQ31	T27		
FBVDDQ32	U27		
FBVDDQ33	U29		
FBVDDQ34	V27		
FBVDDQ35	V29		
FBVDDQ36	V34		
FBVDDQ37	W27		
FBVDDQ38	Y27		

Place Under GPU / Place Near GPU

+1.5VS_VGA

C7107 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7108 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7114 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7111 4.7UF/6.3V nb_c0603_h35_small @
C7116 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7118 0.1UF/10V MLCC/+/-10% nb_c0402_small DSC
C7117 1UF/6.3V MLCC/+/-10% nb_c0402_small @ DSC

Remove GPU Channel B dummy NET ER-20 8124-11

FBB_CMD0	E18		
FBB_CMD1	E19		
FBB_CMD2	D18		
FBB_CMD3	C17		
FBB_CMD4	E19		
FBB_CMD5	C19		
FBB_CMD6	B17		
FBB_CMD7	E20		
FBB_CMD8	B19		
FBB_CMD9	D20		
FBB_CMD10	A19		
FBB_CMD11	D19		
FBB_CMD12	C20		
FBB_CMD13	F20		
FBB_CMD14	B20		
FBB_CMD15	G21		
FBB_CMD16	F22		
FBB_CMD17	F24		
FBB_CMD18	F23		
FBB_CMD19	C25		
FBB_CMD20	C23		
FBB_CMD21	F21		
FBB_CMD22	F22		
FBB_CMD23	D21		
FBB_CMD24	A23		
FBB_CMD25	D22		
FBB_CMD26	B23		
FBB_CMD27	C22		
FBB_CMD28	B22		
FBB_CMD29	A22		
FBB_CMD30	A20		
FBB_CMD31	G20		G20 NC compatible with GB1-128

FBB_CLK0	E17		
FBB_CLK0_N	D17		
FBB_CLK1	D23		
FBB_CLK1_N	E23		

FBB_DEBUG0	G19	FBC_DEBUG	R7103 1 2 @ +1.5VS_VGA, 60.4Ohm 1% SR-62
FBB_DEBUG1	G16		G16 NC compatible with GB1-128

R7212 10KOhm nb_r0402_h16_small @ SR-53

FB_CAL_PD_VDDQ	K27	FBCAL_PD	R7107 1% 2 40.2Ohm
FB_CAL_PU_GND	L27	FBCAL_PU	R7106 1% 2 40.2Ohm
FB_CAL_TERM_GND	M27	FBCAL_TERM	R7105 1% 2 60.4Ohm

+1.5VS_VGA
DSC

63,70,72,91 +1.05VS_VGA
63,76,91 +1.5VS_VGA

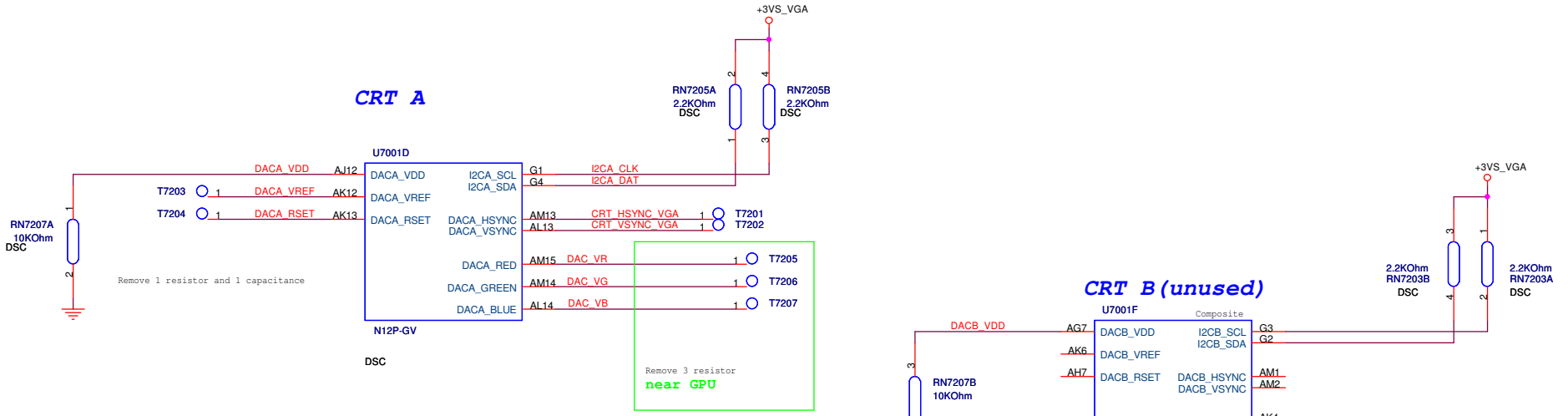
+1.05VS_VGA
+1.5VS_VGA

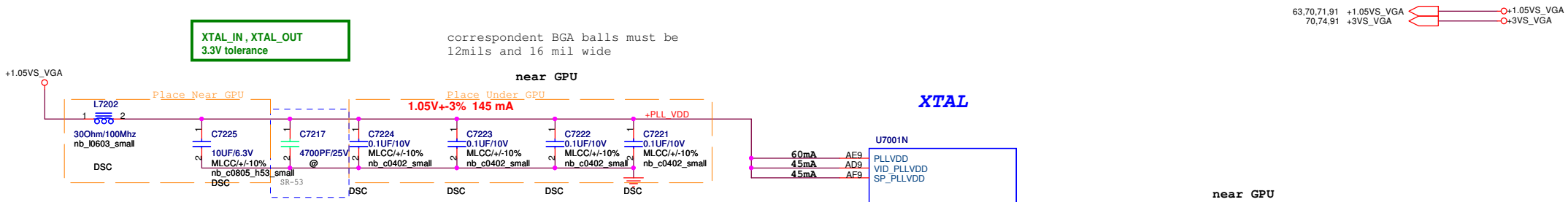
PEGATRON Title : FrameBuffer

BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang

Size	Project Name	Rev
C	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 71 of 77





PEGATRON

Title : CRT, XTAL

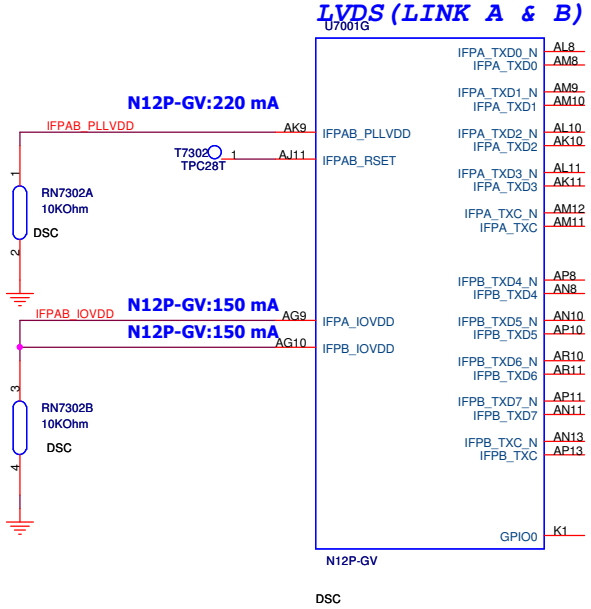
BG1-HW RD Div.2-NB RD Dept.5

Engineer: Johnson Huang

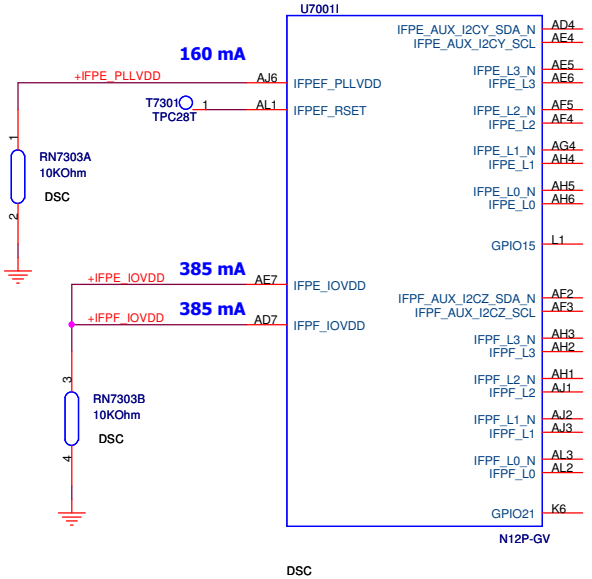
Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 72 of 77

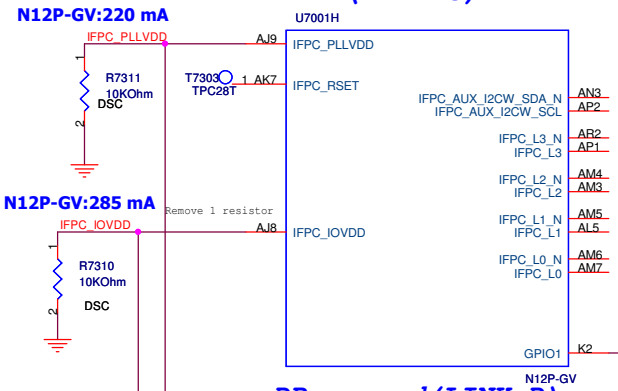
LVDS (LINK A & B)



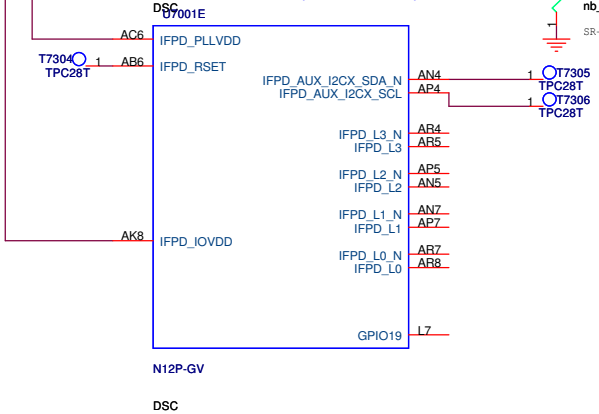
DP unused (LINK E & F)



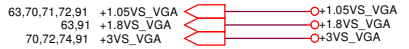
HDMI (LINK C)



DP unused (LINK D)



IFPx	A	B	C	D E F
TURKEY	LVDS A	LVDS B	HDMI	unused



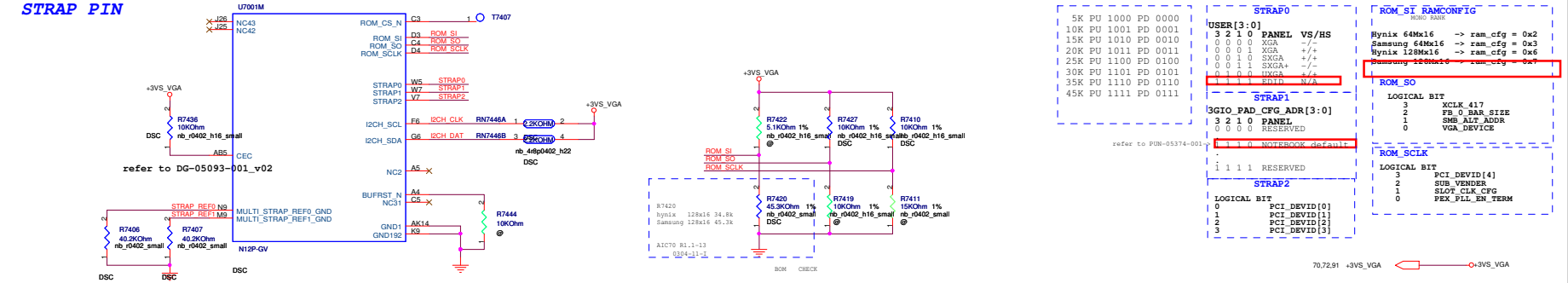
PEGATRON Title : LVDS, HDMI

BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang

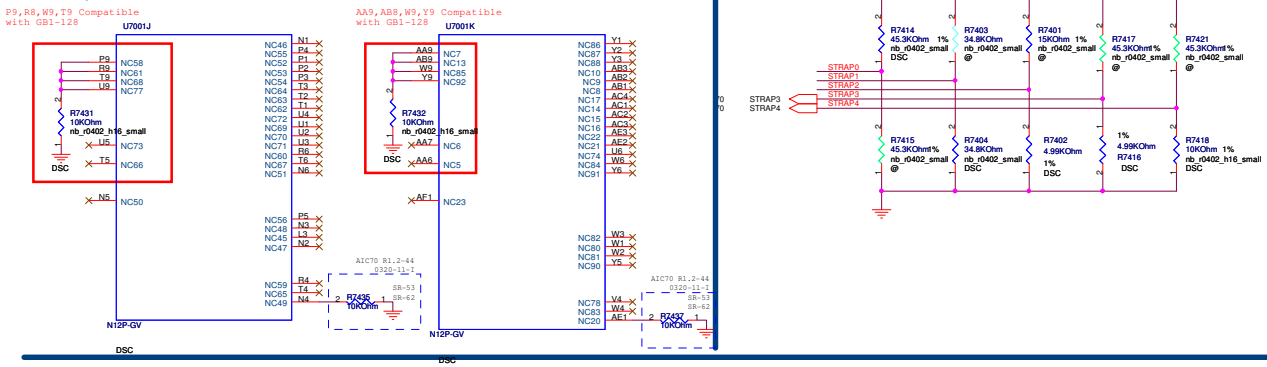
Size	Project Name	Rev
Custom	AIC70	2.0

Date: Wednesday, May 04, 2011 Sheet 73 of 77

STRAP PIN

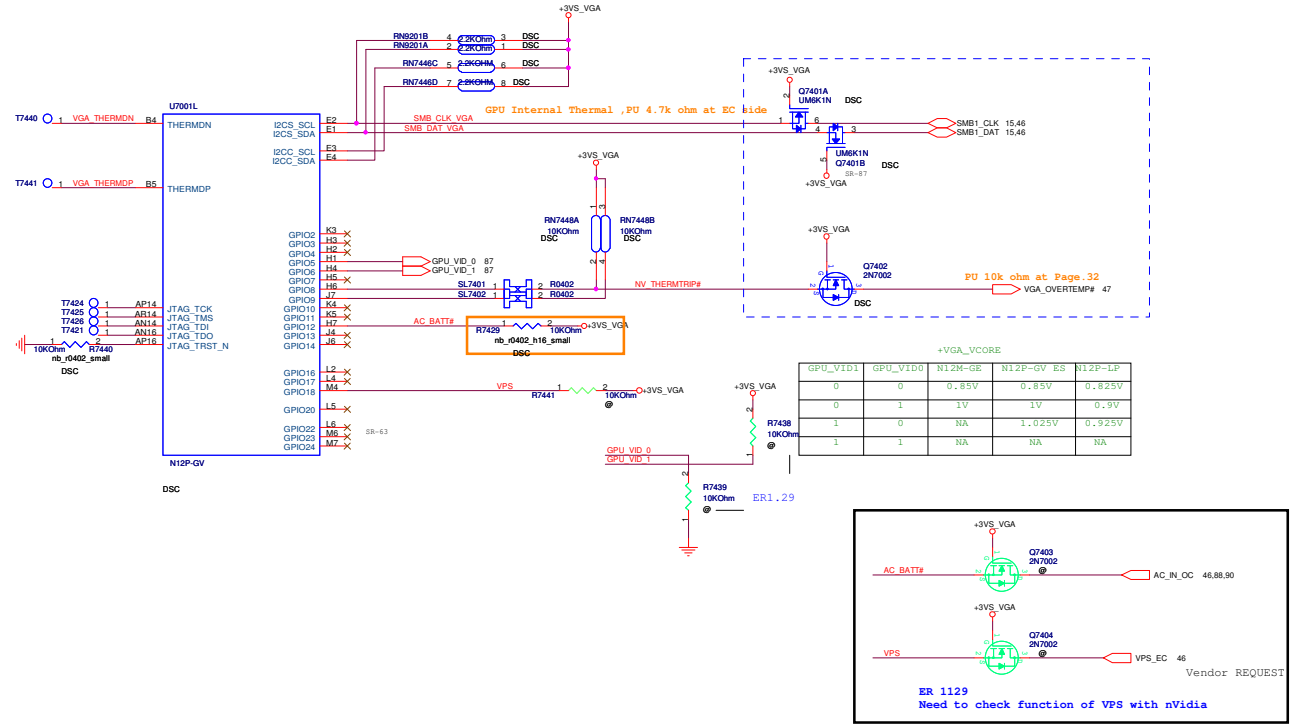


Muti I/O unused



			N12P-LP QS		N12P-GV ES		N12M-GE QS	
			PU	PD	PU	PD	PU	PD
ROM_SO	R7427	R7419	@	10K	@	10K	@	10K
ROM_SCLK	R7410	R7411	@	15K	15K	@	15K	@
ROM_SI	R7422	R7420	@	H 64:15K S 64:20K	@	H 64:15K S 64:20K	@	H 64:15K S 64:20K
Strap2	R7401	R7402	25K	@	45K	@	15K	@
Strap1	R7403	R7404	@	35K	@	35K	@	35K
Strap0	R7414	R7415	45K	@	45K	@	45K	@
Strap3	R7417	R7416	@	@	@	20k	@	@
Strap4	R7421	R7418	@	@	@	10k	@	@

GPIO, THERM, SMBUS, JTAG, LVDS MISC, GPU_VID



GPU_VID1	GPU_VID0	N12M-GE	N12P-GV ES	N12P-LP
0	0	0.85V	0.85V	0.825V
0	1	1V	1V	0.9V
1	0	NA	1.025V	0.925V
1	1	NA	NA	NA

Table 12.1 GPIO Description

GPIO PIN Name	Normal Function	I/O	Functional Description
GPIO0	General Purpose		
GPIO1	HPD_C	I	Hot Plug Detect for IFPC
GPIO2	LCD0_BL_PWM	O	Panel Backlight Brightness Control (PWM capable)
GPIO3	LCD0_VCC	O	Panel Power Enable
GPIO4	LCD0_BLEN	O	Panel Backlight ON/OFF Control (PWM capable)
GPIO5	GPU_VID0	O	GPU Core VDD VID0
GPIO6	GPU_VID1	O	GPU Core VDD VID1
GPIO7	GPU_VID2	O	GPU Core VDD VID2
GPIO8	OVERT	I/O	Thermal Catastrophic Over Temperature
GPIO9	ALERT	I/O	Thermal Alert
GPIO10	MEM_VREF_CTL	O	Memory VREF Control
GPIO11	SLI_RASTER_SYNC	I/O	SLI Raster Sync
GPIO12	PWR_LEVEL	I	AC Power Detect Input
GPIO13	THERM_LOAD_STEP_DOWN	O	Power Supply Control
GPIO14	THERM_LOAD_STEP_UP	O	Power Supply Control
GPIO15	HPD_E	I	Hot Plug Detect for IFPE
GPIO16	FAN_PWM	O	Programmable Fan Control
GPIO17	Reserved		
GPIO18	Reserved		
GPIO19	HPD_D	I	Hot Plug Detect for IFPD
GPIO20	Reserved		
GPIO21	HPD_F	I	Hot Plug Detect for IFPF
GPIO22	SWAPRDY	I	SLI Swap Ready Signal
GPIO23	3DVision	O	3DVision functions
GPIO24	General Purpose		

PEGATRON Title : STRAP,THERM,ROM,MIO

BG1-HW RD Div.2-NB RD Dept.5 Engineer: Johnson Huang

Size: Custom | Project Name: AIC70 | Rev: 2.0

Date: Wednesday, May 04, 2011 | Sheet 74 of 77

GND

U7001O

AA11	GND2	GND97	E15
AA12	GND3	GND98	E18
AA13	GND4	GND99	E24
AA14	GND5	GND100	E27
AA15	GND6	GND101	E30
AA16	GND7	GND102	E6
AA17	GND8	GND103	E9
AA18	GND9	GND104	F2
AA19	GND10	GND105	F31
AA2	GND11	GND106	F34
AA20	GND12	GND107	F5
AA21	GND13	GND108	J2
AA22	GND14	GND109	J31
AA23	GND15	GND110	J34
AA24	GND16	GND111	J5
AA25	GND17	GND112	L9
AA34	GND18	GND113	M11
AA5	GND19	GND114	M13
AB12	GND20	GND115	M15
AB14	GND21	GND116	M17
AB16	GND22	GND117	M19
AB18	GND23	GND118	M2
AB20	GND24	GND119	M21
AB22	GND25	GND120	M23
AB24	GND26	GND121	M25
AC9	GND27	GND122	M31
AD11	GND28	GND123	M34
AD13	GND29	GND124	M5
AD15	GND30	GND125	N11
AD17	GND31	GND126	N12
AD2	GND32	GND127	N13
AD21	GND33	GND128	N14
AD23	GND34	GND129	N15
AD25	GND35	GND130	N16
AD31	GND36	GND131	N17
AD34	GND37	GND132	N18
AD5	GND38	GND133	N19
AE11	GND39	GND134	N20
AE12	GND40	GND135	N21
AE13	GND41	GND136	N22
AE14	GND42	GND137	N23
AE15	GND43	GND138	N24
AE16	GND44	GND139	N25
AE17	GND45	GND140	P12
AE18	GND46	GND141	P14
AE19	GND47	GND142	P16
AE20	GND48	GND143	P18
AE21	GND49	GND144	P20
AE22	GND50	GND145	P22
AE23	GND51	GND146	P24
AE24	GND52	GND147	R2
AE25	GND53	GND148	R31
AG2	GND54	GND149	R34
AG31	GND55	GND150	R5
AG34	GND56	GND151	T11
AG5	GND57	GND152	T13
AK2	GND58	GND153	T15
AK31	GND59	GND154	T17
AK34	GND60	GND155	T19
AK5	GND61	GND156	T21
AL12	GND62	GND157	T23
AL15	GND63	GND158	T25
AL18	GND64	GND159	U11
AL21	GND65	GND160	U12
AL24	GND66	GND161	U13
AL27	GND67	GND162	U14
AL30	GND68	GND163	U15
AL6	GND69	GND164	U16
AL9	GND70	GND165	U17
AN2	GND71	GND166	U18
AN34	GND72	GND167	U19
AP12	GND73	GND168	U20
AP15	GND74	GND169	U21
AP18	GND75	GND170	U22
AP21	GND76	GND171	U23
AP24	GND77	GND172	U24
AP27	GND78	GND173	U25
AP3	GND79	GND174	V12
AP30	GND80	GND175	V14
AP33	GND81	GND176	V16
AP6	GND82	GND177	V18
AP9	GND83	GND178	V2
B12	GND84	GND179	V20
B15	GND85	GND180	V22
B21	GND86	GND181	V24
B24	GND87	GND182	V31
B27	GND88	GND183	V5
B3	GND89	GND184	V9
B30	GND90	GND185	Y11
B33	GND91	GND186	Y13
B6	GND92	GND187	Y15
B9	GND93	GND188	Y17
C2	GND94	GND189	Y19
C34	GND95	GND190	Y21
E12	GND96	GND191	Y23
		GND192	Y25

N12P-GV

DSC

VAG_VCORE

+VGA_VCORE +VGA_VCORE

U7001P

AB11	VDD1	VDD57	P21
AB13	VDD2	VDD58	P23
AB15	VDD3	VDD59	P25
AB17	VDD4	VDD60	R11
AB19	VDD5	VDD61	R12
AB21	VDD6	VDD62	R13
AB23	VDD7	VDD63	R14
AB25	VDD8	VDD64	R15
AC11	VDD9	VDD65	R16
AC12	VDD10	VDD66	R17
AC13	VDD11	VDD67	R18
AC14	VDD12	VDD68	R19
AC15	VDD13	VDD69	R20
AC16	VDD14	VDD70	R21
AC17	VDD15	VDD71	R22
AC18	VDD16	VDD72	R23
AC19	VDD17	VDD73	R24
AC20	VDD18	VDD74	R25
AC21	VDD19	VDD75	T12
AC22	VDD20	VDD76	T14
AC23	VDD21	VDD77	T16
AC24	VDD22	VDD78	T18
AC25	VDD23	VDD79	T20
AD12	VDD24	VDD80	T22
AD14	VDD25	VDD81	T24
AD16	VDD26	VDD82	V11
AD18	VDD27	VDD83	V13
AD22	VDD28	VDD84	V15
AD24	VDD29	VDD85	V17
L11	VDD30	VDD86	V19
L12	VDD31	VDD87	V21
L13	VDD32	VDD88	V23
L14	VDD112	VDD89	V25
L15	VDD34	VDD90	W11
L16	VDD35	VDD91	W12
L17	VDD36	VDD92	W13
L18	VDD37	VDD93	W14
L19	VDD38	VDD94	W15
L20	VDD39	VDD95	W16
L21	VDD40	VDD96	W17
L22	VDD41	VDD97	W18
L23	VDD42	VDD98	W19
L24	VDD43	VDD99	W20
L25	VDD44	VDD100	W21
M12	VDD45	VDD101	W22
M14	VDD46	VDD102	W23
M16	VDD47	VDD103	W24
M18	VDD48	VDD104	W25
M20	VDD49	VDD105	Y12
M22	VDD50	VDD106	Y14
M24	VDD51	VDD107	Y16
P11	VDD52	VDD108	Y18
P13	VDD53	VDD109	Y20
P15	VDD54	VDD110	Y22
P17	VDD55	VDD111	Y24
P19	VDD56		

N12P-GV

DSC

20.3 A

+VGA_VCORE

C7501 0.01UF/16V nb_c0402_small	C7502 0.01UF/16V nb_c0402_small	C7503 0.01UF/16V nb_c0402_small	C7504 0.01UF/16V nb_c0402_small	C7505 0.01UF/16V nb_c0402_small	C7506 0.01UF/16V nb_c0402_small
C7507 0.01UF/16V nb_c0402_small	C7509 0.022UF/16V nb_c0402_small	C7510 0.022UF/16V nb_c0402_small	C7511 0.022UF/16V nb_c0402_small	C7512 0.047UF/16V nb_c0402_small	C7513 0.047UF/16V nb_c0402_small
C7514 0.047UF/16V nb_c0402_small	C7515 0.1UF/10V MLCC/+/-10% nb_c0402_small	C7518 0.1UF/10V MLCC/+/-10% nb_c0402_small	C7519 0.22UF/10V nb_c0402_small	C7520 0.22UF/10V nb_c0402_small	C7521 0.22UF/10V nb_c0402_small
C7522 1UF/6.3V nb_c0402_small	C7523 4.7UF/6.3V DSC	C7524 10UF/6.3V nb_r0805_h26_small @	C7525 10UF/6.3V nb_r0805_h26_small @	C7526 10UF/6.3V nb_r0805_h26_small @	C7527 22UF/6.3V nb_c0805_h57_small

DSC

SR-53

PLACE Under GPU

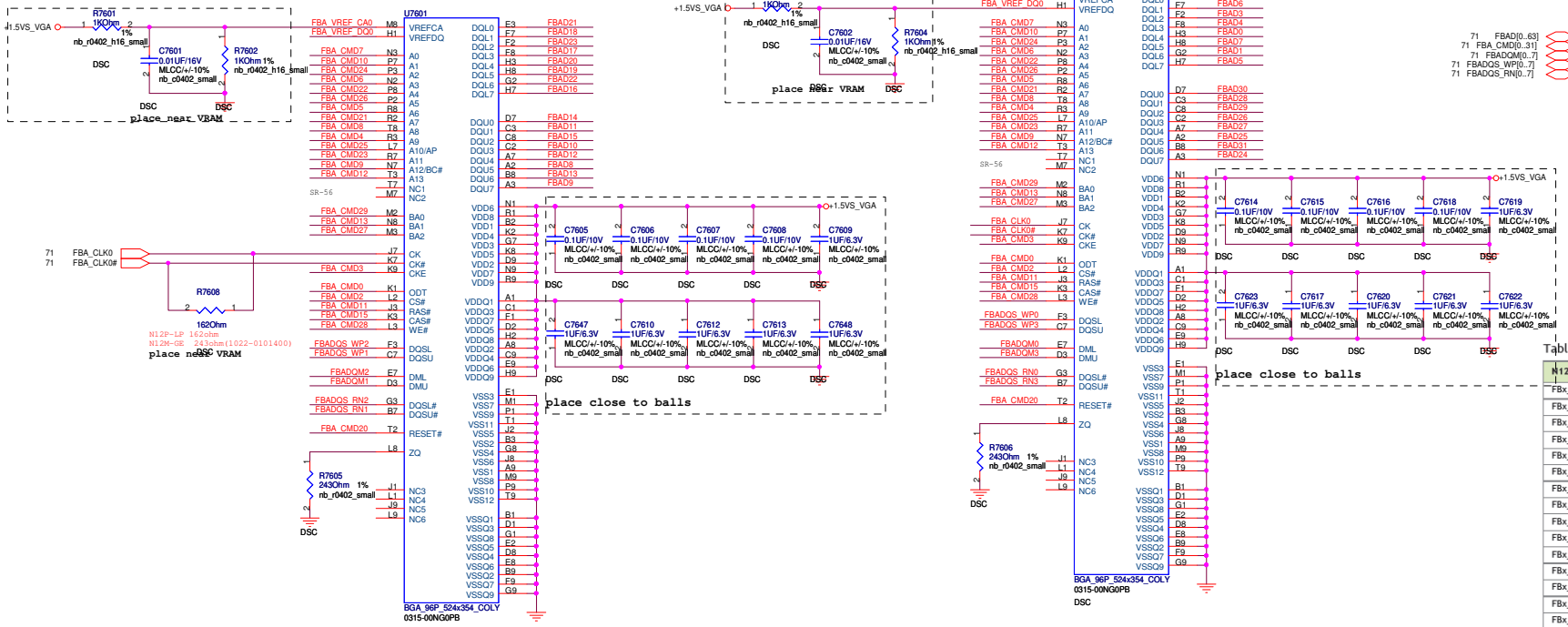
CE7528 470UF/2V PANASONIC/EEFSX0D471E4 @

63,87 +VGA_VCORE +VGA_VCORE

PEGATRON	Title : GPU PWR/GND	
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang	
Size: Custom	Project Name: AIC70	Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 75 of 77	

VRAM CH A

TOP SIDE



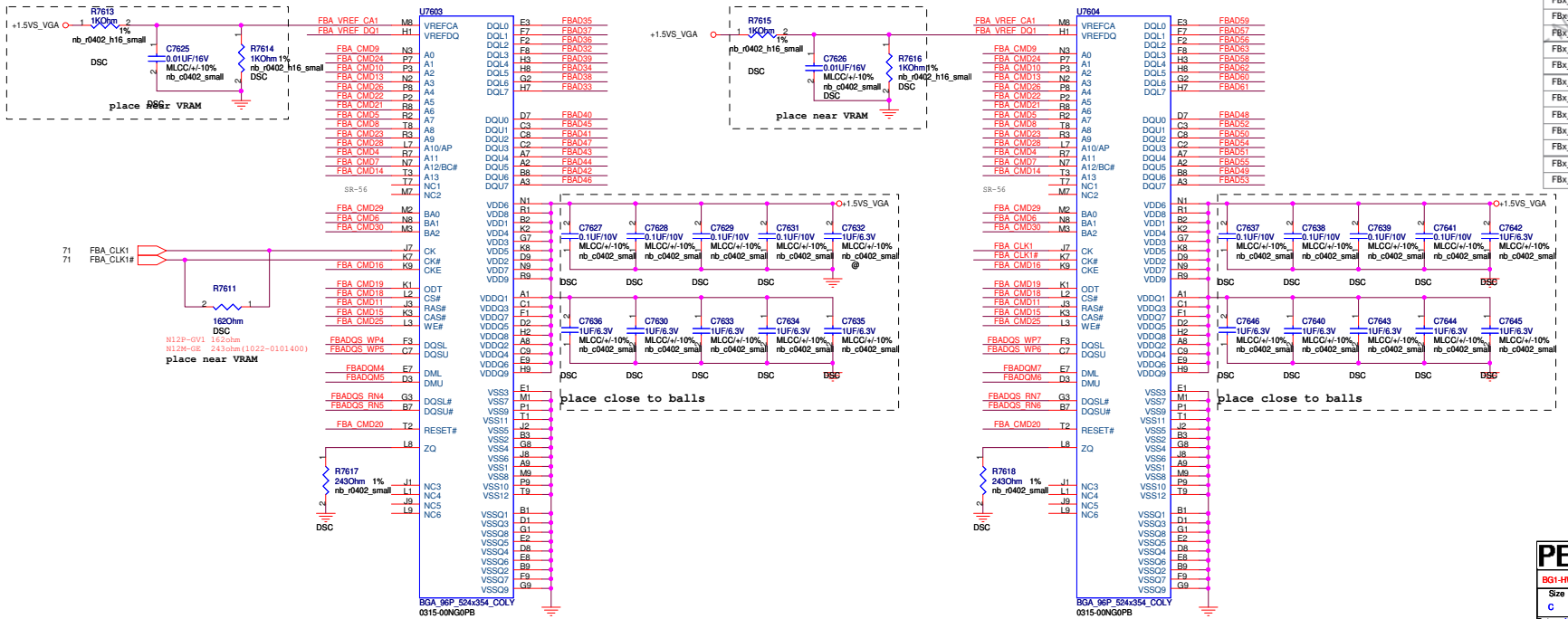
BOT SIDE

71 FBAD[0..63]
71 FBA_CMD[0..31]
71 FBADQM[0..7]
71 FBADQS_WP[0..7]
71 FBADQS_RN[0..7]

Table 5.4 Mode E Command Mapping

N12x Fermi DDR3 mode E	Data Bits [31:0]	Data Bits [63:32]
FBx_CMD0	ODT	
FBx_CMD1	CS1*	
FBx_CMD2	CS0*	
FBx_CMD3	CKE	
FBx_CMD4	A9	A11
FBx_CMD5	A6	A7
FBx_CMD6	A3	BA1
FBx_CMD7	A0	A12
FBx_CMD8	A8	A8
FBx_CMD9	A12	A0
FBx_CMD10	A1	A2
FBx_CMD11	RAS*	RAS*
FBx_CMD12	A13	A14
FBx_CMD13	BA1	A3
FBx_CMD14	A14	A13
FBx_CMD15	CAS*	CAS*
FBx_CMD16		CKE
FBx_CMD17		CS1*
FBx_CMD18		CS0*
FBx_CMD19		ODT
FBx_CMD20	RST	RST
FBx_CMD21	A7	A6
FBx_CMD22	A4	A5
FBx_CMD23	A11	A9
FBx_CMD24	A2	A1
FBx_CMD25	A10	WE*
FBx_CMD26	A5	A4
FBx_CMD27	BA2	A15
FBx_CMD28	WE*	A10
FBx_CMD29	BA0	BA0
FBx_CMD30	A15	BA2
FBx_CMD31		

TOP SIDE



BOT SIDE

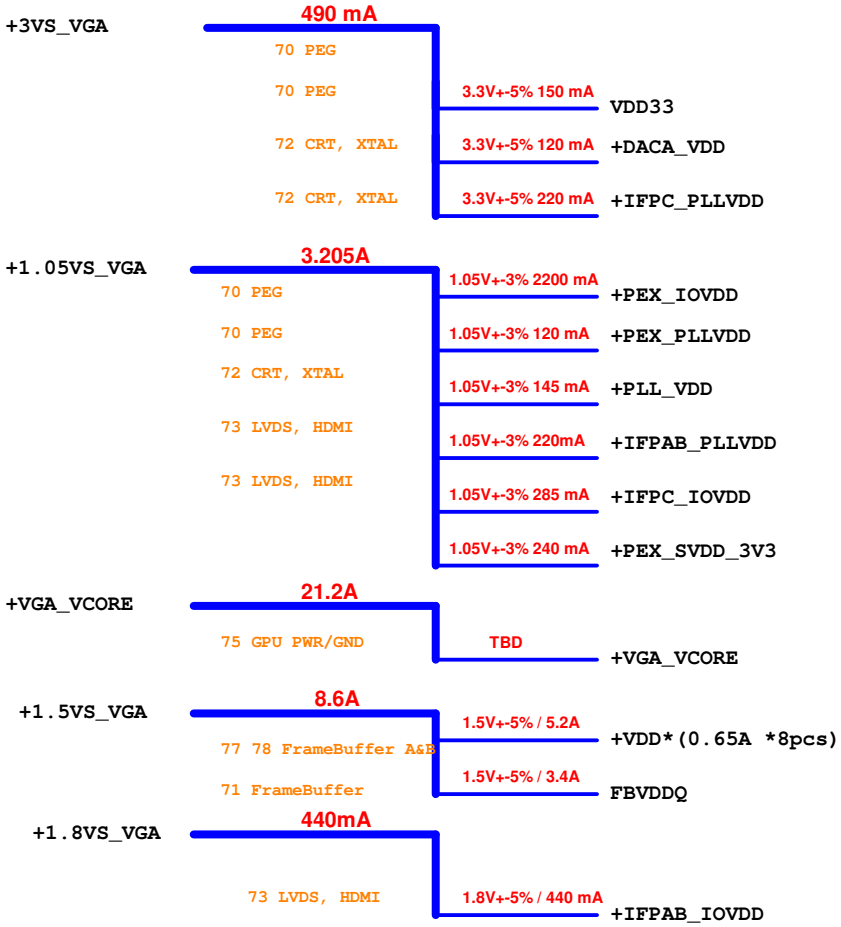
63,71,91 +1.5VS_VGA

PEGATRON	Title : FRAME BUFFER A		
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huangi		
Size: C	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 76 of 77		

Del B channel VRAM * 4 circuit

SR-10
0121-11

PEGATRON	Title : FRAME BUFFER C		
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang		
Size: C	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 77 of 77		



N12P-LP Total:40W (w/VRAM)

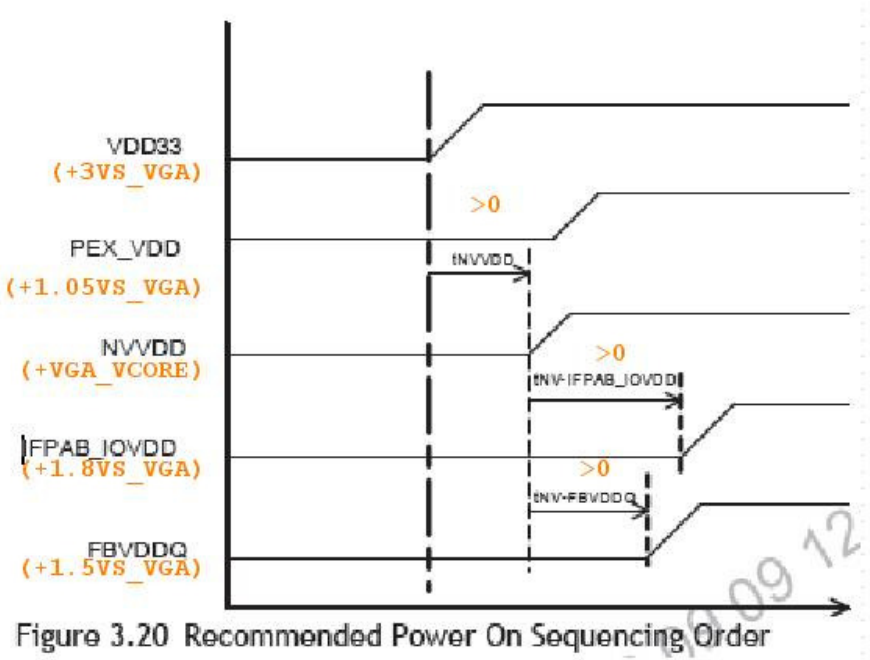


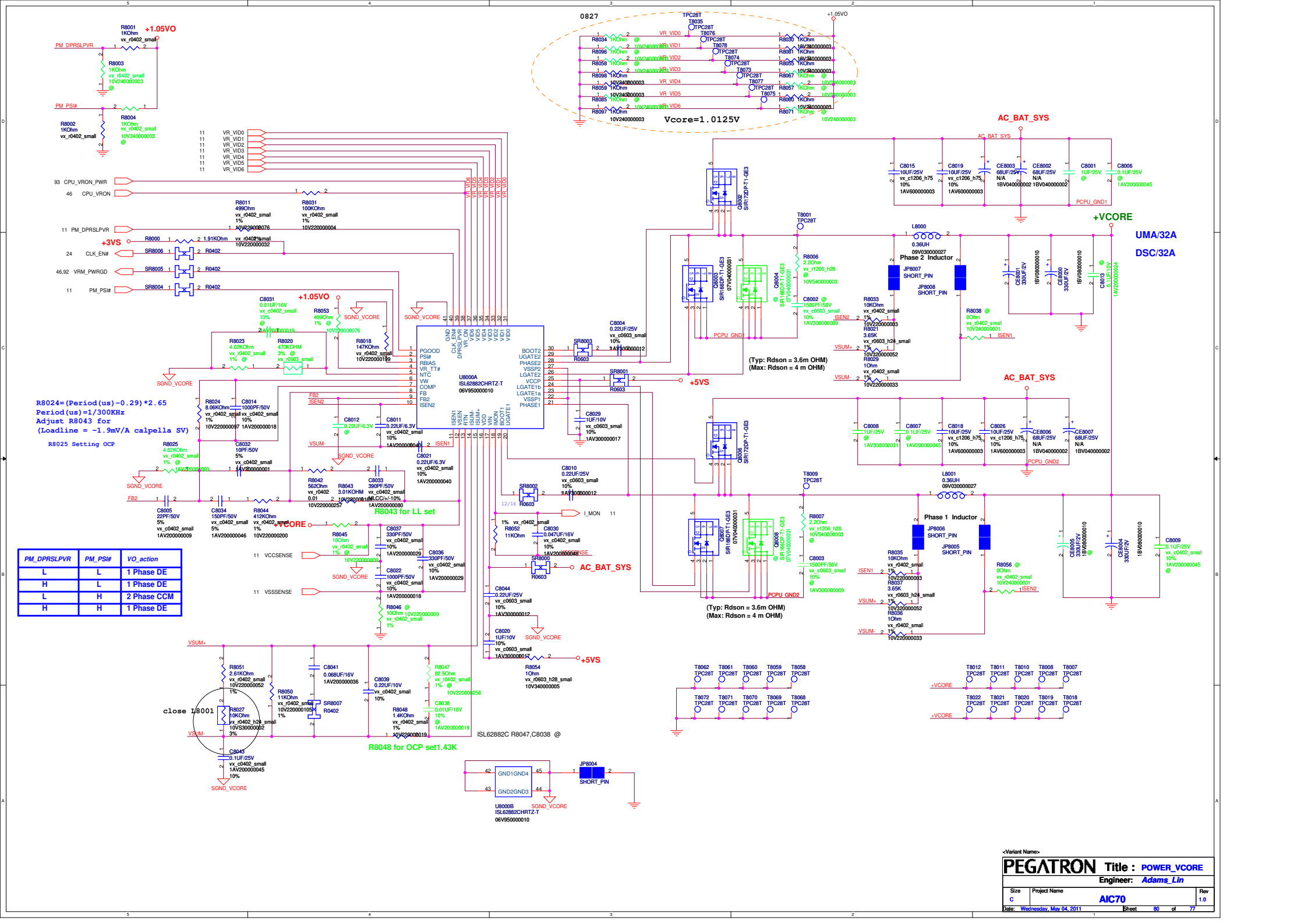
Figure 3.20 Recommended Power On Sequencing Order

Power Up Sequence :
+3VS_VGA -> +1.05VS_VGA -> +VGA_VCORE -> +1.5VS_VGA -> +1.8VS_VGA

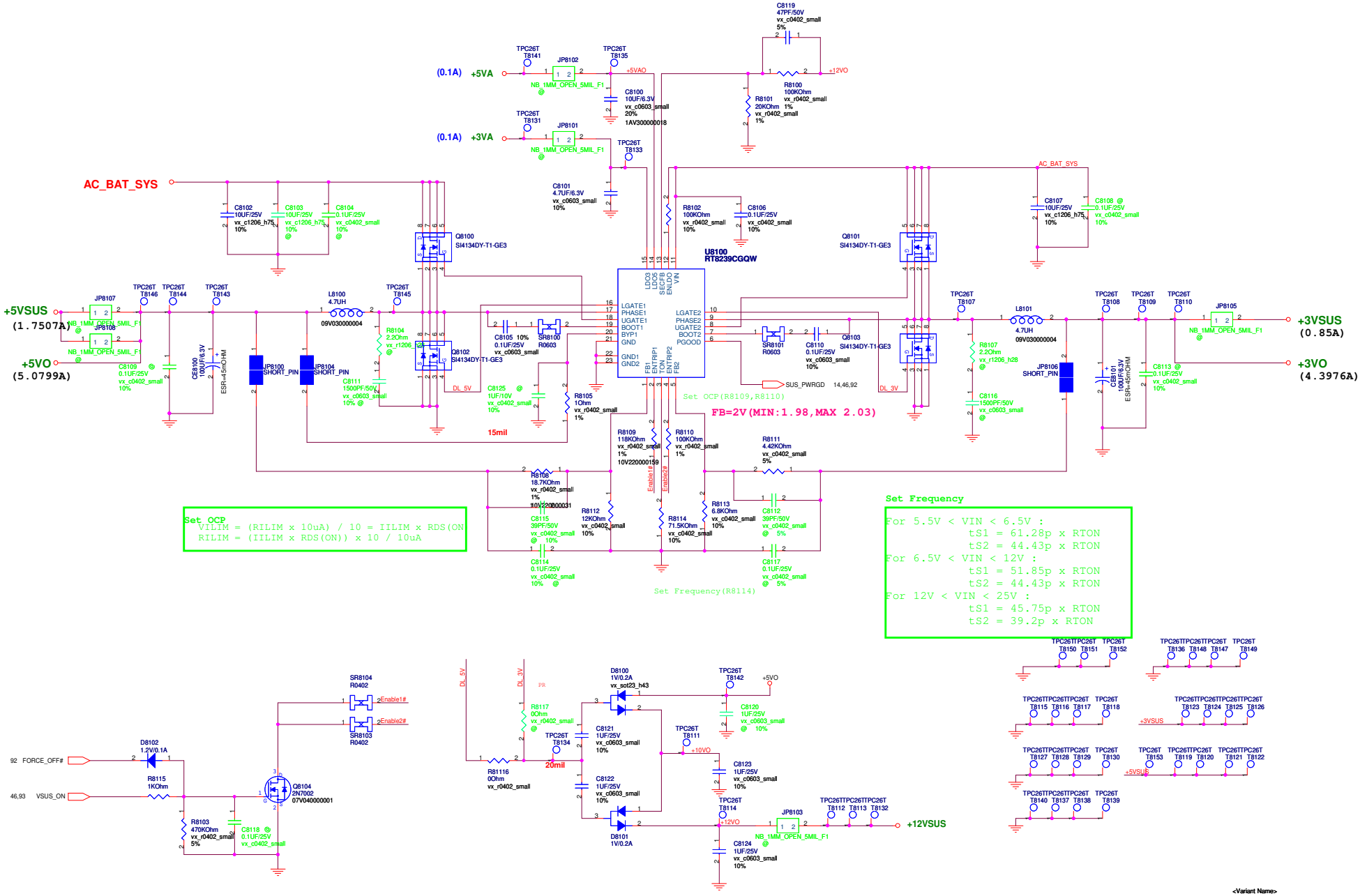
Power Down Sequence :
+1.8VS_VGA -> +1.5VS_VGA -> +VGA_VCORE -> 1.05VS_VGA -> +3VS_VGA

according to Page 63, DG-05093-001_v02

PEGATRON	Title : POWER FOLW		
BG1-HW RD Div.2-NB RD Dept.5	Engineer: Johnson Huang		
Size: Custom	Project Name: AIC70		Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 79 of 77		



PM_DPRSLPVR	PM_PSI#	VO_action
L	L	1 Phase DE
H	L	1 Phase DE
L	H	2 Phase CCM
H	H	1 Phase DE



<Variant Name>

PEGATRON Title : POWER_SYSTEM

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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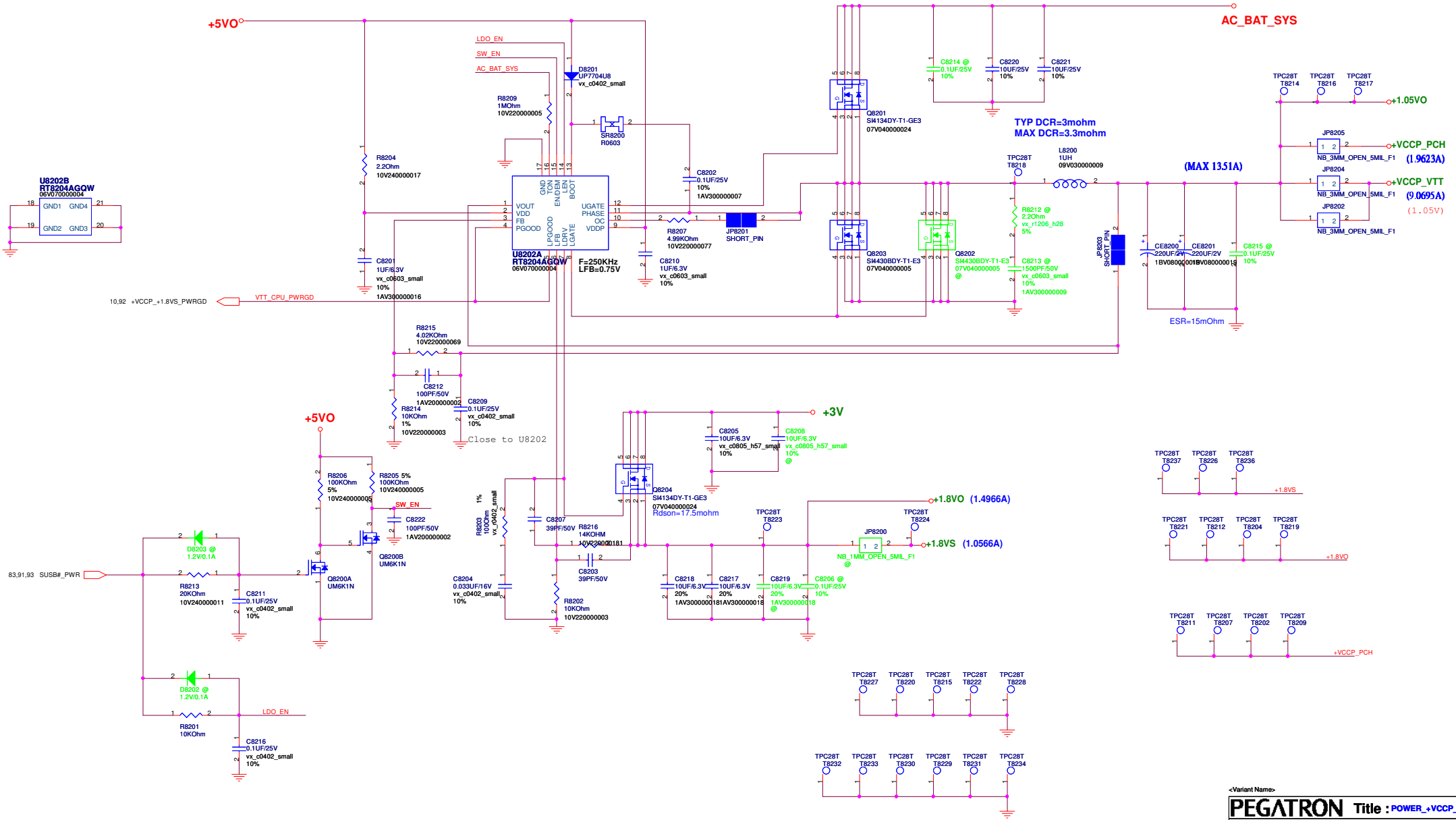

<Variant Name>

PEGATRON Title : POWER_+VCCP_+1.8VS

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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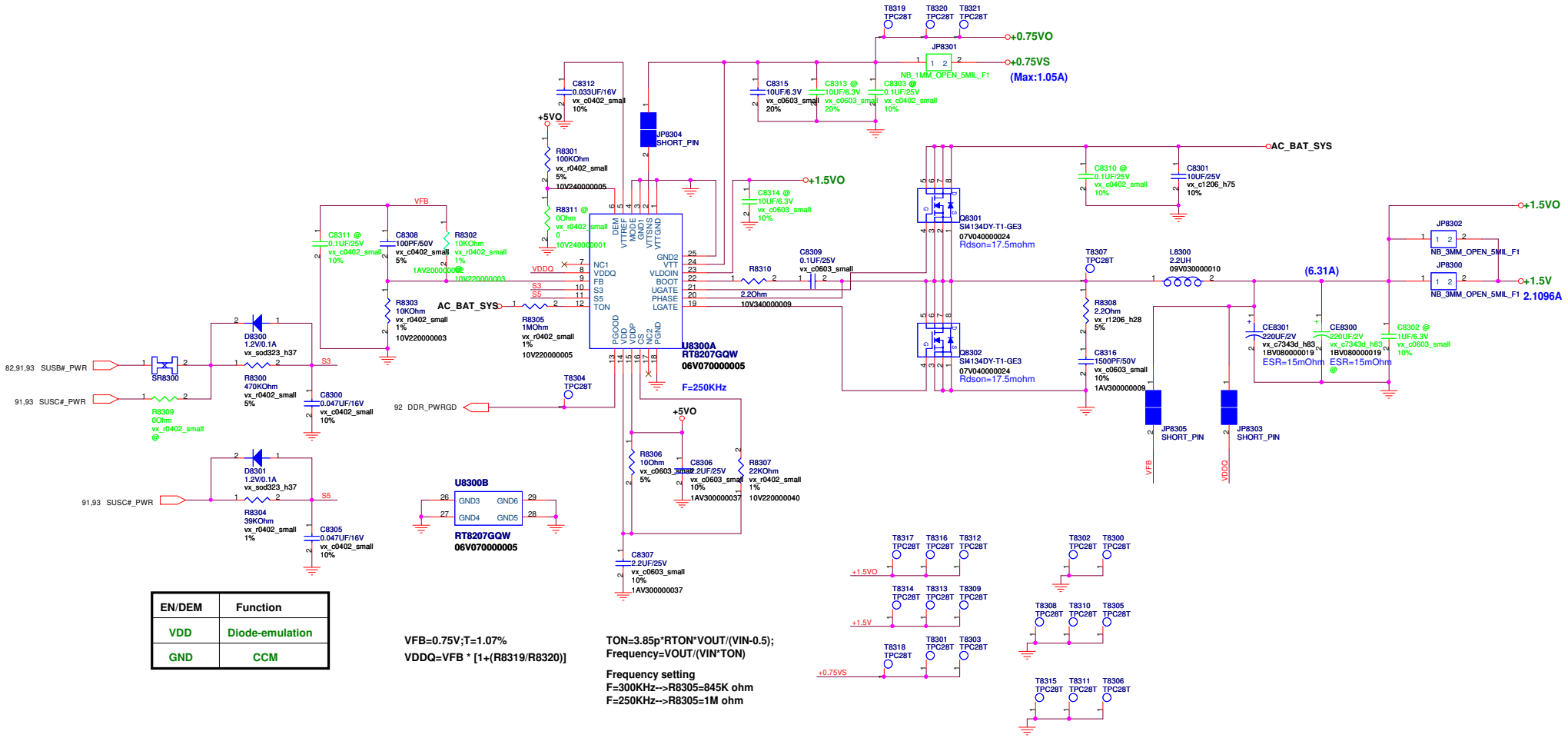

EN/DEM	Function
VDD	Diode-emulation
GND	CCM

VFB=0.75V;T=1.07%

VDDQ=VFB * [1+(R8319/R8320)]

TON=3.85p*RTON*VOUT/(VIN-0.5);
Frequency=VOUT/(VIN*TON)

Frequency setting
F=300KHz-->R8305=845K ohm
F=250KHz-->R8305=1M ohm

<Variant Name>

PEGATRON Title : POWER_DDR & VTT

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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<Variant Name>

PEGATRON Title : POWER_N/A

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 84 of 77

<Variant Name>

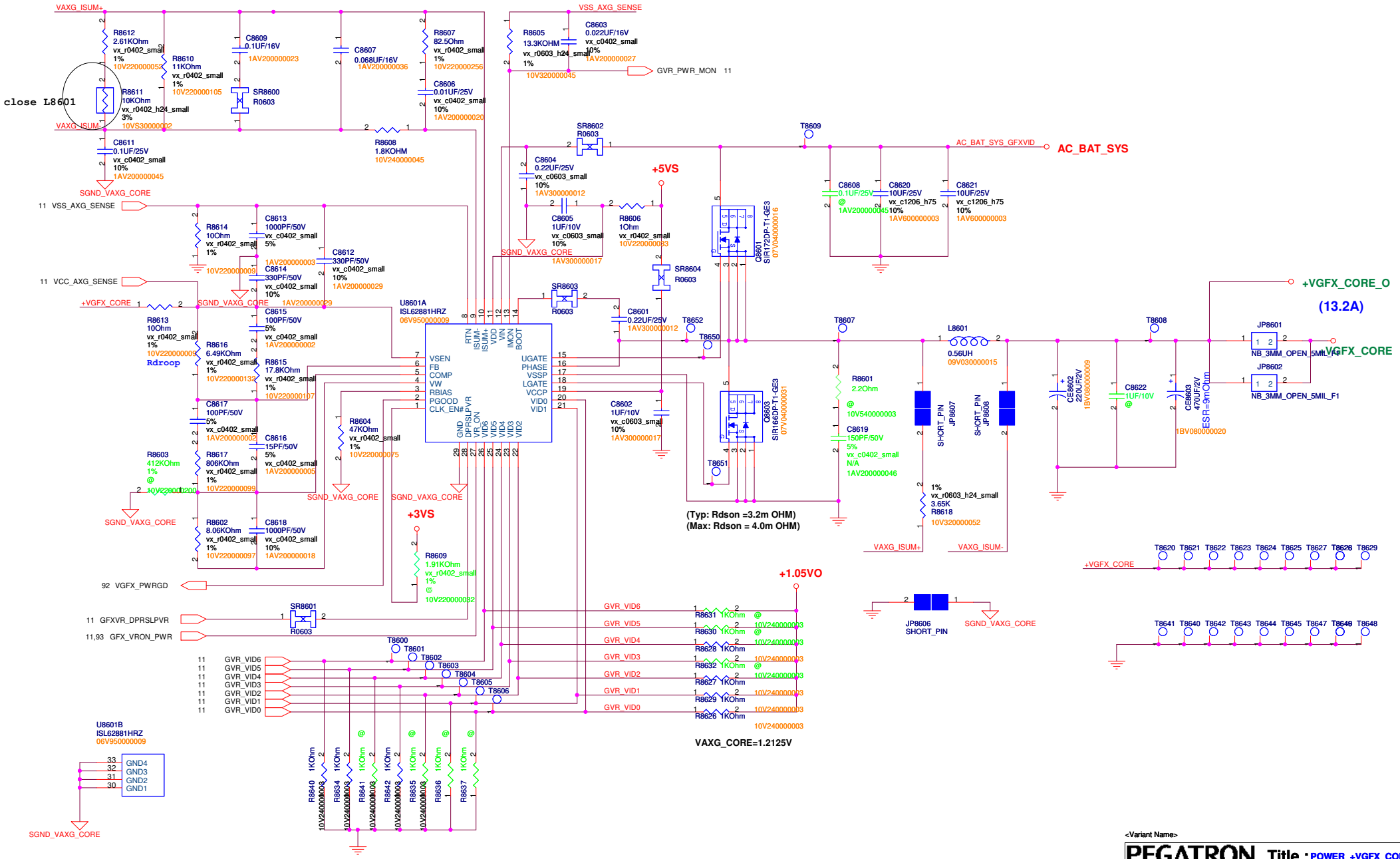
PEGATRON

Title : POWER_N/A

Engineer: Adams_Lin

Size	Project Name	Rev
A	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 85 of 77



<Variant Name>

PEGATRON Title : POWER_+VGFX_CORE

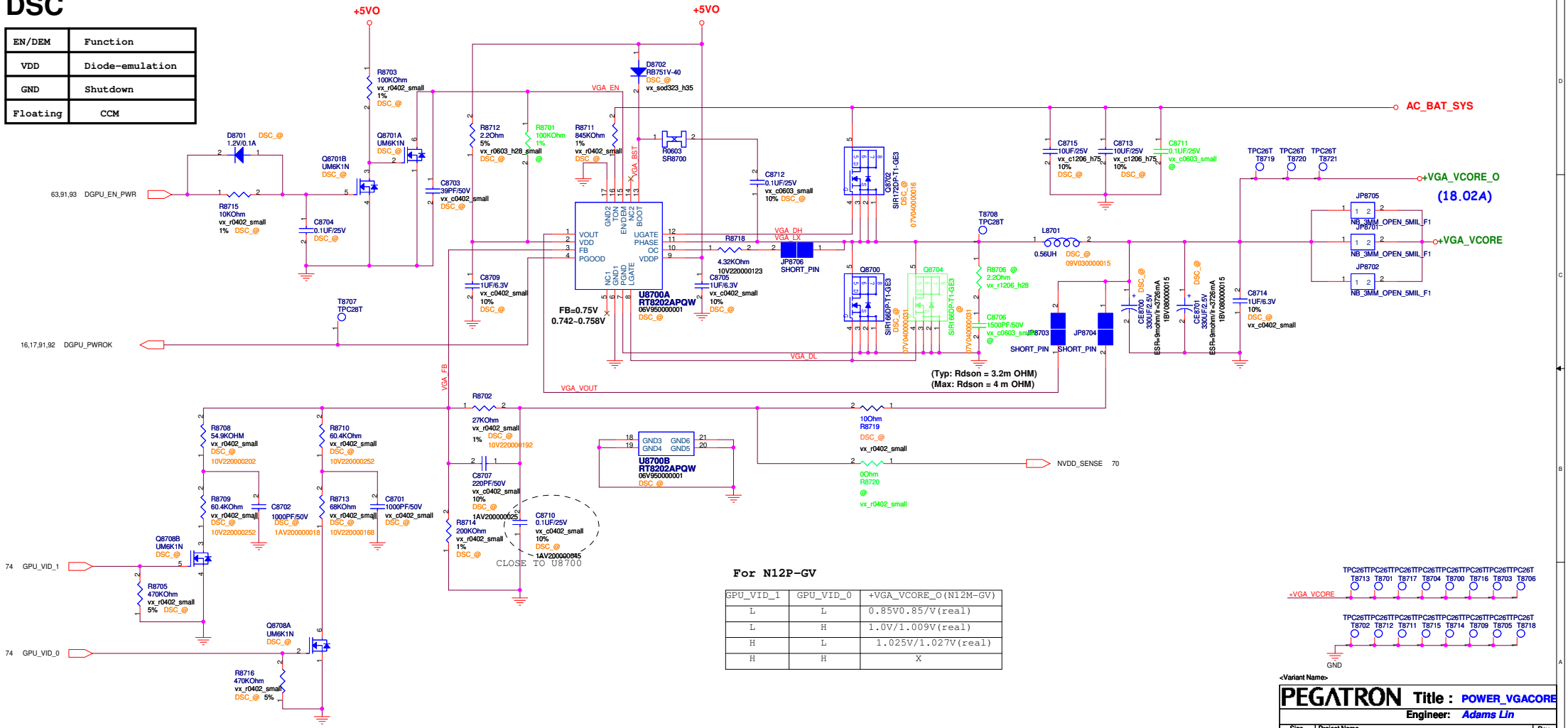
Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 86 of 77

DSC

EN/DEM	Function
VDD	Diode-emulation
GND	Shutdown
Floating	CCM



For N12P-GV

GPU_VID_1	GPU_VID_0	+VGA_VCORE_O(N12M-GV)
L	L	0.85V0.85/V(real)
L	H	1.0V/1.009V(real)
H	L	1.025V/1.027V(real)
H	H	X

<Variant Name>

PEGATRON Title : POWER_VGACORE

Engineer: Adams Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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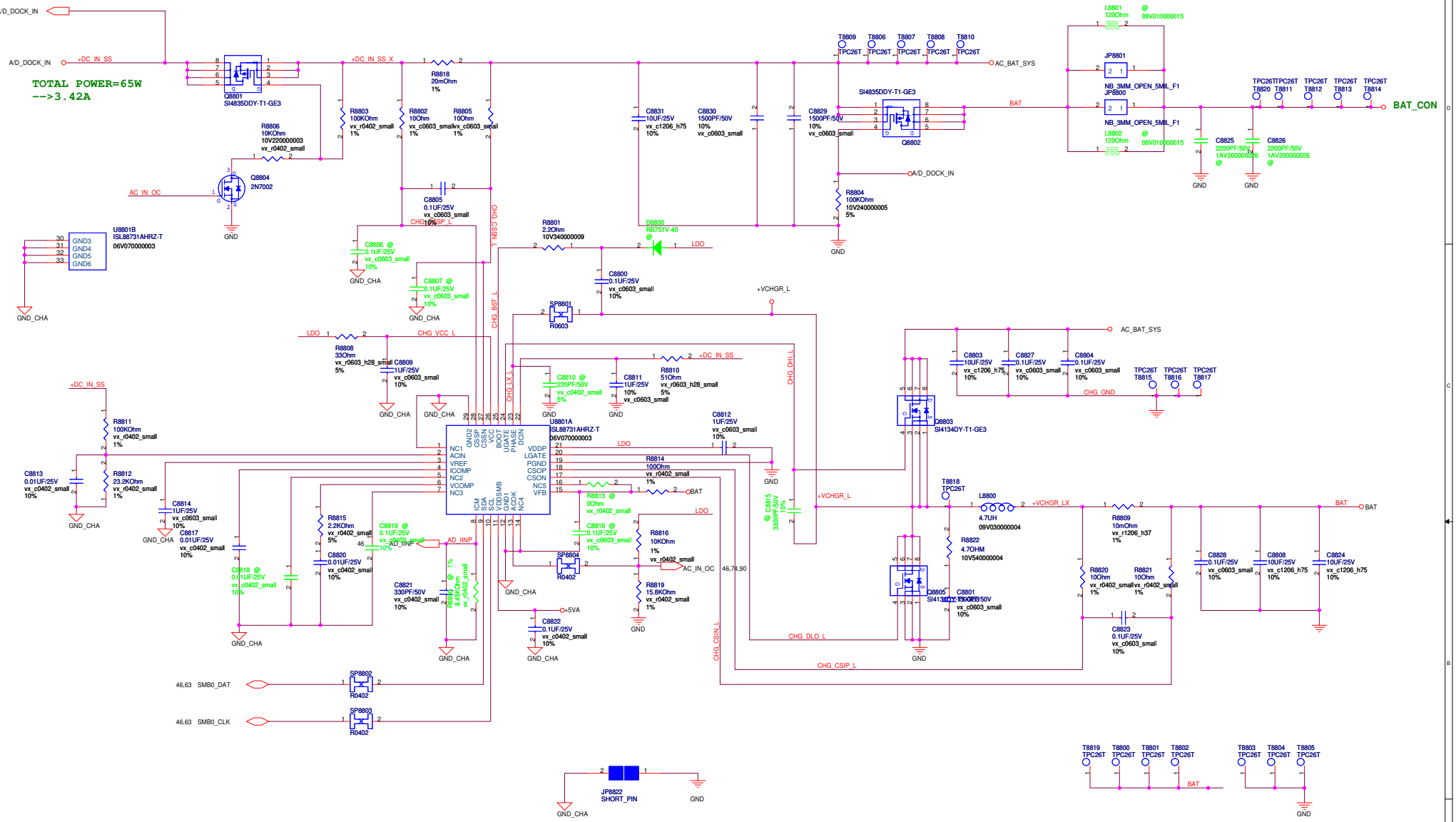


<Variant Name>

PEGATRON Title : POWER CHARGER

Engineer: Adams_Lin

Size	Project Name	Rev
C	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 88 of 77

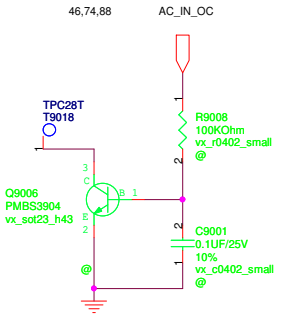
<Variant Name>

PEGATRON	Title : POWER_N/A	
	Engineer: *Adams_Lin*	
Size: A	Project Name: AIC70	Rev: 1.0
Date: Wednesday, May 04, 2011	Sheet 89 of 77	

BATTERY IN DETECT

ADAPTER IN DETECT

Use MAX17015 IC function to Cost down component



<Variant Name>

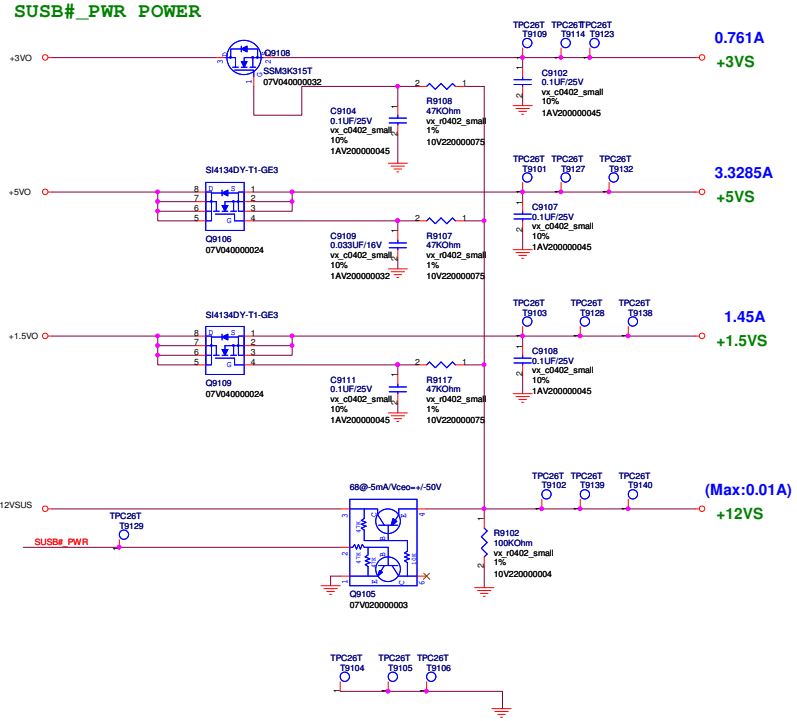
PEGATRON Title : POWER_DETECT

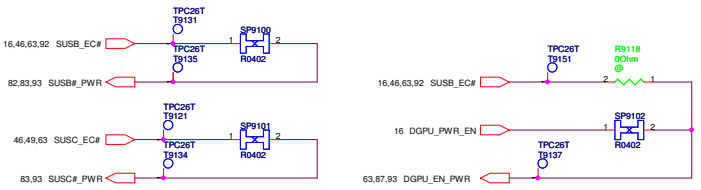
Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 90 of 77

SUSB#_PWR POWER

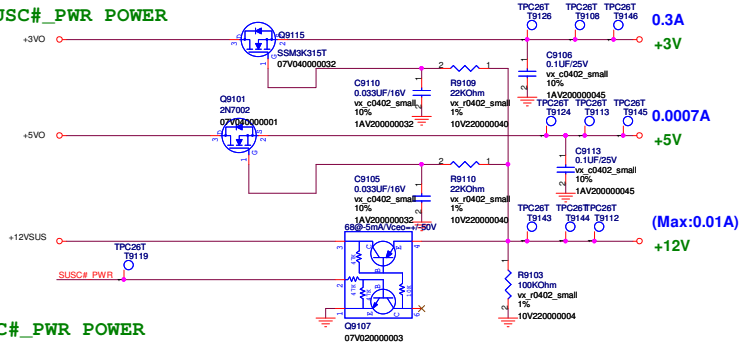




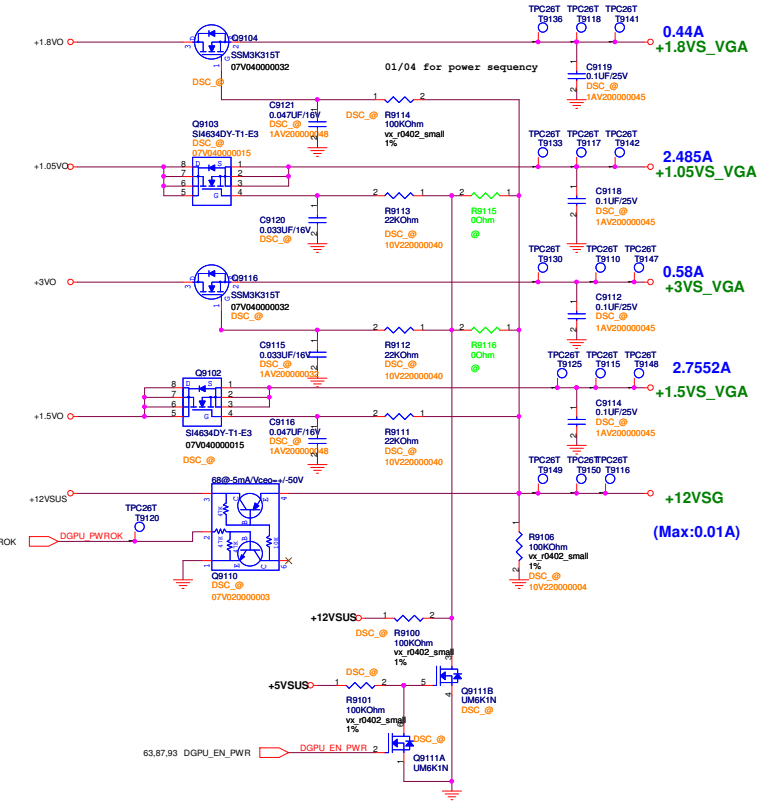
SUSC#_PWR POWER

Ron = 41.5 mΩ (max) (@VGS = 4.5 V)
Ron = 27.6 mΩ (max) (@VGS = 10 V)

NOTE:+3V=0.3A(EE)+1.4978A(+3V Provide to 1.8V PWR)=1.7978A



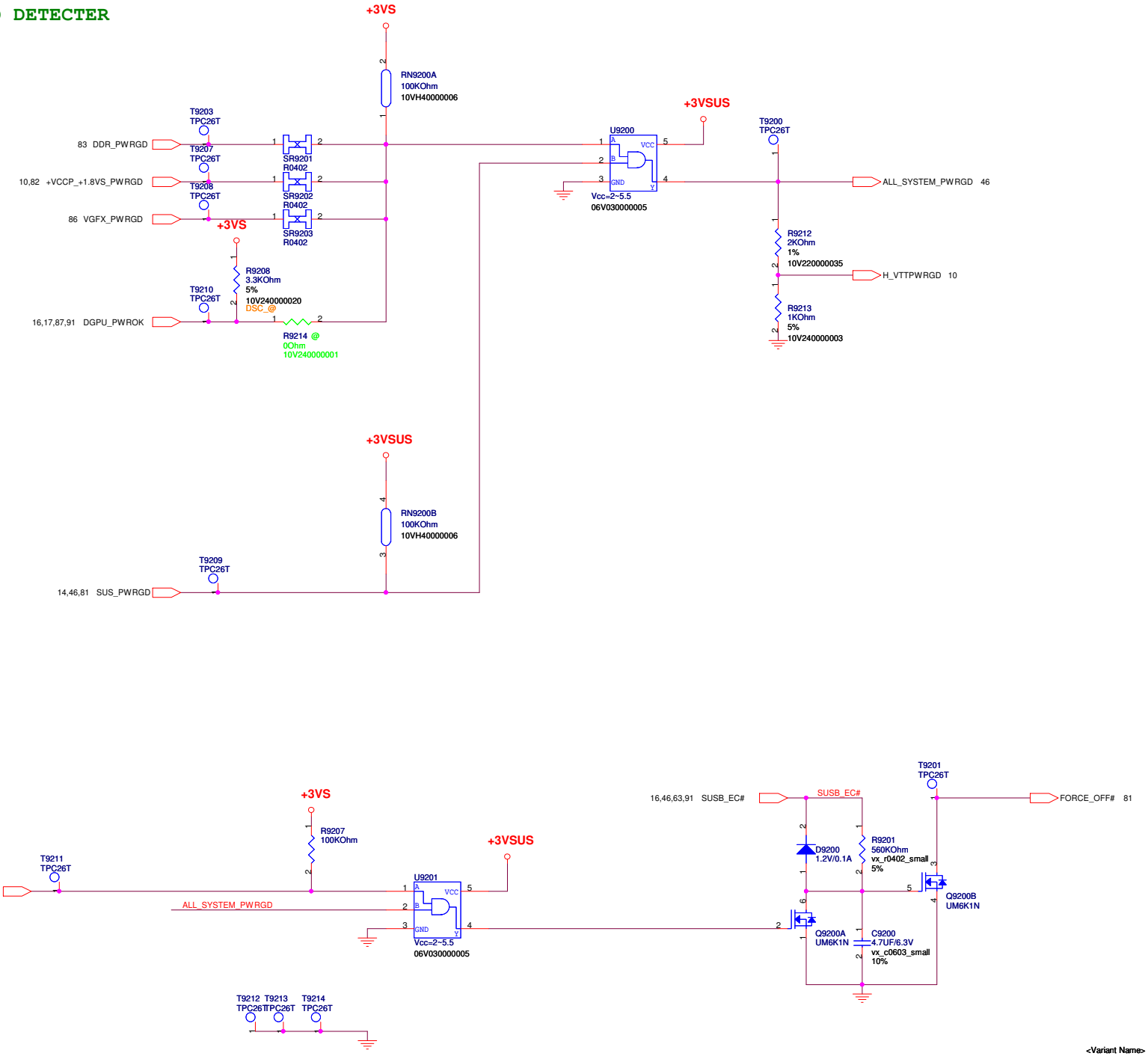
DSC#_PWR POWER



<Variant Name>

PEGATRON	Title : POWER_LOAD SWITCH	
	Engineer: Adams_Lin	
Size: Custom	Project Name: AIC70	Rev: 1.0
Date: Wednesday, May 04, 2011	Sheet 91 of 77	

POWER GOOD DETECTER



<Variant Name>

PEGATRON Title :POWER_PROTECT

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

Date: Wednesday, May 04, 2011 Sheet 92 of 77

AC_BAT_SYS → AC_BAT_SYS 37,80,81,82,83,86,87,88

BAT_CON → BAT_CON 63,88

BAT → BAT 88

+5VA → +5VA 42,49,66,81,88

+3VA → +3VA 13,18,46,48,63,81

+5VO → +5VO 81,82,83,87,91

+3VO → +3VO 81,91

+1.8VO → +1.8VO 82,91

+1.5VO → +1.5VO 83,91

+1.05VO → +1.05VO 80,82,86,91

+VGFX_CORE_O → +VGFX_CORE_O 86

+VGA_VCORE_O → +VGA_VCORE_O 87

+0.75VO → +0.75VO 83

+12VS → +12VS 38,39,91

+5VS → +5VS 15,19,38,39,41,42,46,48,49,60,63,80,86,91

+3VS → +3VS 10,13,14,15,16,17,18,19,21,22,24,33,37,38,39,41,46,47,49,60,63,65,80,86,91,92

+1.8VS → +1.8VS 11,18,19,82

+1.5VS → +1.5VS 10,11,24,55,63,91

+0.75VS → +0.75VS 21,22,63,83

+12VSUS → +12VSUS 60,81,91

+5VSUS → +5VSUS 19,60,61,66,81,91

+3VSUS → +3VSUS 10,13,14,15,16,17,18,19,33,46,55,81,92

+12V → +12V 91

+5V → +5V 42,63,91

+3V → +3V 37,50,63,65,82,91

+1.5V → +1.5V 10,11,21,22,63,83

+VGA_VCORE → +VGA_VCORE 63,75,87

+VGFX_CORE → +VGFX_CORE 11,86

+VCORE → +VCORE 11,12,80

+12VSG → +12VSG 91

+3VS_VGA → +3VS_VGA 70,72,74,91

+1.8VS_VGA → +1.8VS_VGA 63,91

+1.5VS_VGA → +1.5VS_VGA 63,71,76,91

+1.05VS_VGA → +1.05VS_VGA 63,70,71,72,91

FOR POWER TEST

+3VA

JP9300 @ SGL_JUMP (1 2) → T9300 TPC26T → CPU_VRON_PWR 80

JP9301 @ SGL_JUMP (1 2) → T9301 TPC26T → SUSB#_PWR 82,83,91

JP9302 @ SGL_JUMP (1 2) → T9302 TPC26T → SUSC#_PWR 83,91

JP9303 @ SGL_JUMP (1 2) → T9303 TPC26T → VSUS_ON 46,81

JP9304 @ SGL_JUMP (1 2) → T9304 TPC26T → DGPU_EN_PWR 63,87,91

+1.05VO

JP9305 @ SGL_JUMP (1 2) → T9305 TPC26T → GFX_VRON_PWR 11,86

<Variant Name>

PEGATRON Title : POWER_SIGNAL

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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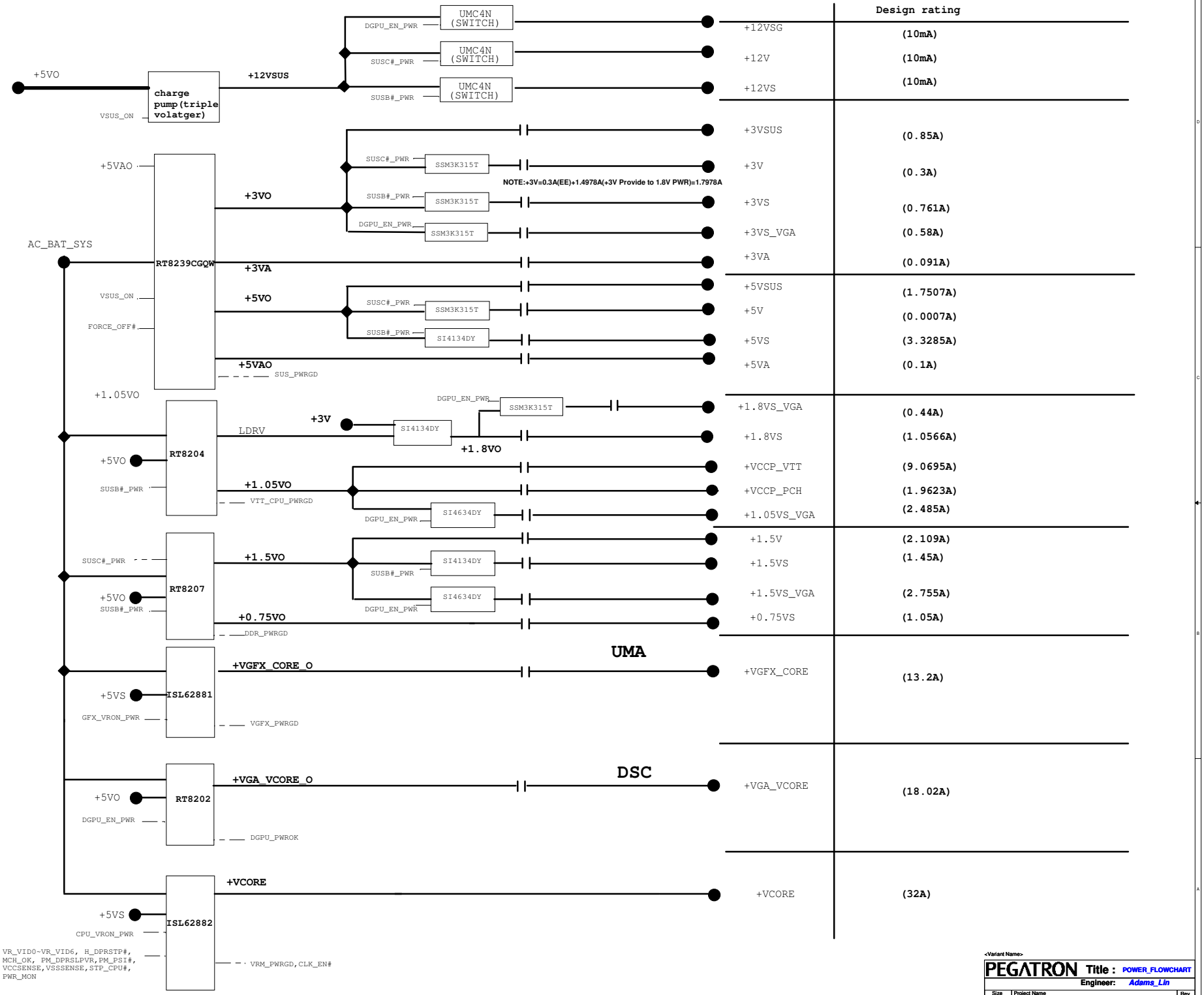

<Variant Name>

PEGATRON Title : POWER_FLOWCHART

Engineer: Adams_Lin

Size	Project Name	Rev
Custom	AIC70	1.0

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modify notice

Item	Date	Description
SR-1	0120-11	P61, A04IO. change USB power switch circuit
SR-2	0120-11	Del P67, P68. Add P33, P34 for LAN
SR-3	0120-11	P48. change KB CON4801
SR-4	0120-11	P34. change RJ45 CON3401
SR-5	0120-11	P63. change BATT. con. circuit
SR-6	0120-11	P65, A02 change PWR LED CON6503 circuit
SR-7	0120-11	P60. change HDD CON6001
SR-8	0121-11	P44, P45 Del Entry audio circuit (Full)
SR-9	0121-11	P50. Del Entry SD socket circuit
SR-10	0121-11	P77. Del B channel VRAM * 4 circuit
SR-11	0121-11	P46. Add EC GPIO35 DGPU_PWR_EN for Power
SR-12	0121-11	P34, P35. Modify LAN AR8158 (Full)
SR-13	0123-11	P63. Change DC con. as VP part
SR-14	0123-11	P60. Change HDD CON6001
SR-15	0123-11	P7-P37 Change VP part
SR-16	0124-11	P41 Del Entry speaker R4117-R4120
SR-17	0124-11	P38-P39 Change VP part
SR-18	0124-11	P66 Remove LED circuit
SR-19	0124-11	P48. Reverse KB CON4801
SR-20	0124-11	P71. Remove GPU Channel B dummy NET
SR-21	0124-11	P16, P61. Remove USB_9(HDMI)
SR-22	0124-11	P48. Remove TP button circuit
SR-23	0124-11	P13. Remove Entry AZ R1318, R1346, R1347, R1348, R1349
SR-24	0124-11	P50. Modify CON5002 SD socket circuit
SR-25	0124-11	P48. Change KB CON4801 PIN definintion
SR-26	0124-11	P16, P61. change USB power switch circuit
SR-27	0124-11	P41, P46. ALC271-SPKR_EC_ICH_Colay
SR-28	0124-11	P46, P65. Modify LED circuit and EC GPIO definition
SR-29	0125-11	P33 Remove LAN LED circuit
SR-30	0125-11	P61 Modify D6101, RN6101, RN6105, RN6106
SR-31	0125-11	P33 Change R3311 as VP
SR-32	0125-11	P33 Change U3301 to AR8158 and delete SM BUS
SR-33	0125-11	P34 Modify LAN ESD circuit
SR-34	0125-11	P61. Modify Q6101
SR-35	0125-11	P65. Modify Q6501
SR-36	0125-11	P38, P46. Del F3801, C3811 Add CRT IN Detect
SR-37	0125-11	P63. Reverse J6301
SR-38	0125-11	P61, P46. change USB power switch and GPIO
SR-39	0125-11	P46,P66. change LED power and Net name
SR-40	0125-11	P34. Modify Transformer circuit
SR-41	0125-11	P33. Modify H/W strap setting
SR-42	0125-11	P37. Modify LVDS PIN definintion
SR-43	0125-11	P42. Modify De-Pop circuit
SR-44	0125-11	P41. Modify Audio Pin 14, 15, 27-31
SR-45	0126-11	P34. Modify Transformer circuit
SR-46	0126-11	P16. GPIO54 DGPU_PWR_EN
SR-47	0126-11	U1301, U7001 keypart no; U4602, F6302 Modify for BOM
SR-48	0126-11	P34. Modify Transformer circuit
SR-49	0126-11	P63, P60, P17, P48. Add 15" circuit BATT, ODD, Keyboard
SR-50	0126-11	P13, P60 Rename SATA 0 to SATA 1
SR-51	0126-11	P63. Reverse DC-IN J6301 PIN1 as GND
SR-52	0126-11	P48. Reverse KB CON4801
SR-53	0126-11	DGPU Sync with EIH31
SR-54	0126-11	P.76. T7, M7 Setting
SR-55	0126-11	Modify as OPT display output
SR-56	0127-11	P.76. Cancel T7, M7 Setting
SR-57	0127-11	P.46, P50 Modify single net
SR-58	0127-11	P.42 Change R4205, R4206 = 51 ohm
SR-59	0127-11	P.41 DEL C4109, C4112
SR-60	0127-11	P.14 R1403, R1404 option N/A
SR-61	0127-11	P.14 R1443, R1444, RN1402, R1424, R1426, R1427, R1428 option N/A; R1429 option /HDMI_HPD_PCH
SR-62	0127-11	P71, P74. R7101, R7103, R7435, R7437 option @
SR-63	0127-11	P74. Del R7433, R7434, GPIO Test Pad
SR-64	0128-11	P34. U3403.4 RXN
SR-65	0128-11	P66. change R6603.1 (+5VA), LED6602, LED6603
SR-66	0128-11	P65. change R6508.1 (PWRLED_ON#), CON6503.6 (+5VSUS)
SR-67	0128-11	P97. Modify A04 Pwr Board
SR-68	0128-11	P55. Un-mount Q5505, R5510
SR-69	0128-11	P66. Modify Screw Hole (Sync with AAB70)
SR-70	0128-11	P63. Modify Battery CON6302, D6302 signal name

Item	Date		
SR-71	0128-11	P15. Add C1510 (22pF) for Clock fine-tune	
SR-72	0128-11	P33. change R3325, R3331 (4.7k ohm)	
SR-73	0128-11	P39. Un-mount R3907 (HDMI)	
SR-74	0128-11	Change connector by list of 0128-11	
SR-75	0129-11	Change HDD CON6001(1224-001N000)	
SR-76	0129-11	P97 (A02). Change Hotbar 6 Pad (PWR_U01)	
SR-77	0129-11	P41-P50 Change VP part	
SR-78	0129-11	P55. Add Q5510, R5515 for BT PCI-E wake up event	
SR-79	0130-11	P50. change footprint for U5001 Card reader controller	
SR-80	0130-11	P66. change CPU*4, GPU*2, System screw hole*10	
SR-81	0130-11	P46. change RN4601C (RN9202C)	
SR-82	0130-11	P66. change F screw hole *2	
SR-83	0130-11	P46. change SHORT PIN (R4601,R4602)	
SR-84	0130-11	P46, P65. change EC GPIO21 (PWR_AMBER_LED#) for PWR Brd.	
SR-85	0130-11	Modify Sub board screw hole	
SR-86	0130-11	P34. Change RJ45 CON3401 1223-00BT000	
SR-87	0131-11	P74. Change Q7401B(Q9203B)	
SR-88	0131-11	P96, P99. Del Screw hole ODD_H02, change IOH3	
SR-89	0131-11	P97. Change Power Board LED PWR_LED01	
SR-90	0131-11	P60. Change 15" ODD CON6505 as VP	
SR-91	0131-11	P96-P99. Copy from AAB70 (sub board)	
	AIC70 R1.1	Rename for AIC70_0202-11_BOM and merge AIC70_0225_PWR_B power BOM	
	AIC70 R1.1-1	0224-11-I P48. Delete CON4804 P60. Delete CON6505,C5123,C5118,C5121,C5119,R5109,C5120,C5122,R5108 P63. Delete CON6302,F6303,C6314,C6312,C6315,C6313,C6311,R6316,D6302, L6307,L6306,L6305,T6320,T6324,T6323,T6321,T6322	
	AIC70 R1.1-2	0224-11-I P60. Change SP5101 to JP6001 for optional ZOPODD	
	AIC70 R1.1-3	0224-11-I P37. Add R3713,R3714,R3715,R3716 for EMI request	
	AIC70 R1.1-4	0224-11-I P41. Delete CN4101,add C4130-C4138,R4125-R4136,CON4102 P48. Add C4816-C4821,CON4804 Change C4808-C4811 to 10pF,add C4812-C4815,CON4805,L4803,L4804,R4802 P65. Change C6504 to 10pF, add C6507,CON6505,D6502,C6508,C6509	
	AIC70 R1.1-5	0228-11-I P61. Change CON6101 to 1213-007H000 form 1213-00EC000 P34. Change CON3401 to 1223-0002000 from 1223-00BT000 P63. Change J6301 to 1217-00WC000 from 1217-0037000 P60. Change CON6001 to 1224-007Z000(12V24GBRD001) form 1224-001N000 p98. Change TP_SW1,TP_SW2 to 1209-00HY000 from 1209-0064M000 P21. Change DIMM U2101 to 1202-000P000 from 1202-002P000 P22. Change DIMM U2201 to 1202-00D8000 from 1201-002G000	
	AIC70 R1.1-6	0301-11-I P39. Add R3937 and R3938 for EMI request P34. Change R3408 to 080S size for EMI request P37. Add C3725 and reserve TVS D3705 for EMI request P37. Add D3706 and net LCD_BACKOFF# P46. Add net LCD_BACKOFF# and delete T4627 P60. Add SP6001	
	AIC70 R1.1-7	0302-11-I P55. Change Mini-PCIE connector to 1244-0086000 from 1244-000T000	
	AIC70 R1.1-8	0303-11-I P37. RH3711,L3706 swap P22. M_B_DQ53 and M_B_DQ50 swap P99. delete IOCE2 100uF/6.3V for USB port	
	AIC70 R1.1-9	0303-11-I P41. Add C4116,C4119,net VREFOUT_A_K_L,MIC_IN_AC_K_L P42. Add R4211,R4207,net MIC_IN_AC_K_J P61. Change CON6102 to 20 pin 1218-016R000 and add one +5V_USB_DB pin, one MIC_IN_AC_K_L_J P99. Change IOCON5 to 20 pin 1218-016R000 and add one +5VUSB_IO_C pin, one MIC_IN_AC_K_L_IO	
	AIC70 R1.1-10	0304-11-I P60. Add CON5103,C5123,C5125,C5126,C5127,C5128,C5129,C5130,C5131,C5132,C5133 for HDD cable	
	AIC70 R1.1-11	0304-11-I P34. Change L3403 to bead 1kohm/100MHz,add TVS D3402,add ESD cap C3406	
	AIC70 R1.1-12	0304-11-I P38. Change L3801-L3803 to 0.056uH	
	AIC70 R1.1-13	0304-11-I P74. Change R7420 to 45.3k for default samsung 128 x 16 VRAM P76. Chagne U7601-U7604 VRAM to Samsung VRAM	
	AIC70 R1.1-14	0304-11-I P41. Change U4101 to ALC271X_VB3 020J-00870PB	
	AIC70 R1.1-15	0304-11-I P63. Change F6301 to 07V100000003(0710-007V000)	
	AIC70 R1.1-16	0304-11-I P80-P94. Update power circuit AIC70_0304_PWR_R11.DSN - C8207 change size	

Item	Date		
AIC70 R1.1-17	0306-11-I	P99. Add IOC7,IOD7	
AIC70 R1.1-18	0306-11-I	P34. Delete C3406	
AIC70 R1.1-19	0306-11-I	P60. Add SP6002 and use /HDD_CABLE option for HDD cable	
AIC70 R1.1-20	0306-11-I	P33. Change R3717 to 10k pull down for disable OC mode and nostuff C3303	
AIC70 R1.1-21	0306-11-I	P60. Delete /17" option P63. Delete /17" option	
AIC70 R1.1-22	0306-11-I	P17. Add PCB ID define	
AIC70 R1.1-23	0306-11-I	P48. Modify TP Button optional decription P41. Modify speaker optional decription and related net name	
AIC70 R1.1-24	0306-11-I	P1-P99. Midofy schematic optional	
AIC70 R1.1-25	0307-11-I	P18. Add R1824 for PCH SPI +3VA power	
AIC70 R1.1-26	0307-11-I	P46. delete R4627,R4625,R4621,R4622,R4615,R4616,R4617,C4608,U4602	
AIC70 R1.1-27	0307-11-I	P60. Add R5109,R5110,R5111,R5112	
AIC70 R1.1-28	0307-11-I	P66. Change GND_LEDDB to GND	
AIC70 R1.1-29	0307-11-I	P66. Delete H6538, change H6537,H6633,H6632 P98. Change TP_H1,TP_H2 P99. Change IOH6	
AIC70 R1.1-30	0308-11-I	P61. Reserve U6105 for reduceing conduction loss	
AIC70 R1.1-31	0308-11-I	P61.Change CON6102 to 24 pin (1218-00Q2000) P99. Change IOCON5 to 24 pin (1218-00Q2000)	
AIC70 R1.1-32	0308-11-I	P46. Mirror vertically Q4601	
AIC70 R1.1-33	0308-11-I	P63. Mirror vertically J6301	
AIC70 R1.1-34	0309-11-I	P80-P94. Merge power schematic AIC70_R11_201103082200.DSN	
AIC70 R1.1-35	0309-11-I	P98. Add TPC02 P48. Link C4821 Pin1 to CON4804 pin1	
AIC70 R1.1-36	0309-11-I	P34. LAN swap on U3403	
AIC70 R1.1-37	0309-11-I	P50. Add SP5002 for CON5002 pin12 connecting to GND	
AIC70 R1.1-38	0311-11-I	P46. Change PLT_ID P17. Change PCB_ID	
AIC70 R1.1-39	0311-11-I	P33. Stuff C3303	
AIC70 R1.1-40	0311-11-I	P80-P94. Update power circuit AIC70_R11_20110311_EE.DSN	
AIC70 R1.2		AIC70_R12_201103202330_I is renamed from AIC70_R11_201103111800_BOM_I.DSN	
AIC70 R1.2-41	0320-11-I	P10. Reserve R1032, R1044 for S3 CPU power P11. Reserve JP1103 for S3 CPU power	
AIC70 R1.2-42	0320-11-I	P11. R1127 nostuff and R1129 stuff for UMA and Optimus	
AIC70 R1.2-43	0320-11-I	P42. Add R3917,R3939 to +5V and nostuff R3916,R3935 for solving pop noise	
AIC70 R1.2-44	0320-11-I	P74. Stuff R7435, R7437 for NV request	
AIC70 R1.2-45	0321-11-I	P33. Change LAN footprint	
AIC70 R2.0		AIC70_R20_201103282000_I is renamed from AIC70_R12_201103211630_I.DSN	
AIC70 R2.0-46	0328-11-I	P49. Reserve Plam Rest thermal sensor, add Q4902,C4909,U4903,R4908,C4910 P47. Add R4709 P15. Add SP1501,SP1502	
AIC70 R2.0-47	0328-11-I	P42. Add R3940,R3941	
AIC70 R2.0-48	0330-11-I	P98. Colay CHO TP_SW, add TP_SW3,TP_SW4	
AIC70 R2.0-49	0330-11-I	P49. Nostuff palm rest thermal sensor	
AIC70 R2.0-50	0331-11-I	P41. Update CON4101,CON4102 P61. Update CON6102 P99. Update IOCON5 P48. Update CON4803,CON4805	
AIC70 R2.0-50	0331-11-I	P99. Rename IOCON5	
AIC70 R2.0-51	0401-11-I	P65. Change CON6503,CON6505 to 4 pin, delete C6507,C6509 P97. Change PWR_U01 to 4 pin, delete PWR_R2, PWR_LED2	
AIC70 R2.0-52	0401-11-I	P66. Change H6541,H6544,H6545,H6546 to NPTH	
AIC70 R2.0-53	0401-11-I	P80-P94. Update power circuit AIC70_R11_20110401.DSN	
AIC70 R2.0-54	0402-11-I	P66. Change H6633 to NPTH	
AIC70 R2.0-55	0406-11-I	P65. Nostuff R6507,Q6501,R6509	
AIC70 R2.0-56	0406-11-I	P33. Add L3303, U3405	
AIC70 R2.0-57	0407-11-I	P61. Add CON6103 P99. Add IOCON6	
AIC70 R2.0-58	0407-11-I	P80-P94. Update power circuit AIC70_R20_20110407_F.DSN	
AIC70 R2.0-59	0411-11-I	P33. Change C3321,C3322 to 15pF P72. Change C7208,C7209 to 15pF	
AIC70 R2.0-60	0411-11-I	P61. Change U6104, U6105 to 1.5A and stuff U6105	

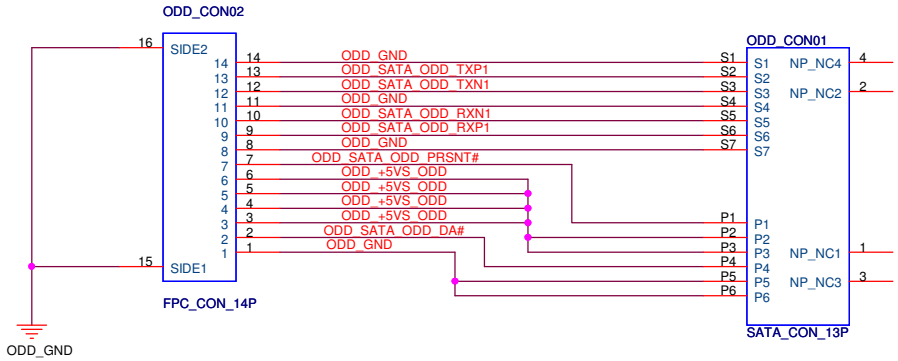
Item	Date		
AIC70 R2.0-61	0415-11-I	P66. Change LED6602 to 0713-01QK000, LED6603 to 0713-01QJ000, R6605 to 100 ohm, R6604 to 390 ohm	
AIC70 R2.0-62	0415-11-I	P49. Change R4903 to 4.32k	
AIC70 R2.0-63	0415-11-I	P61. Change U6104 to USB POWER SW. G547E1P81U: 06V290000008 , nostuff U6105	
AIC70 R2.0-64	0415-11-I	P34. Change U3402 P/N to 0912-0001000 (only change P/N)	
AIC70 R2.0-65	0420-11-I	P33. Change L3303 to 0 ohm	
AIC70 R2.0-66	0421-11-I	P98. Reserve TPC02	
AIC70 R2.0-67	0421-11-I	P98. Delete TP_SW3, TP_SW4	
AIC70 R2.0-68	0504-11-I	P49. Change R4903 to 4.02k	
AIC70 R2.0-69	0504-11-I	P66. Change H6611, H6612 to DSC optional	
AIC70 R2.0-70	0504-11-I	P61. Nostuff CON6103 P99. Nostuff IOCON6	
AIC70 R2.0-71	0504-11-I	P34. Nostuff D3401, stuff R3408	

PEGATRON Title : Power History

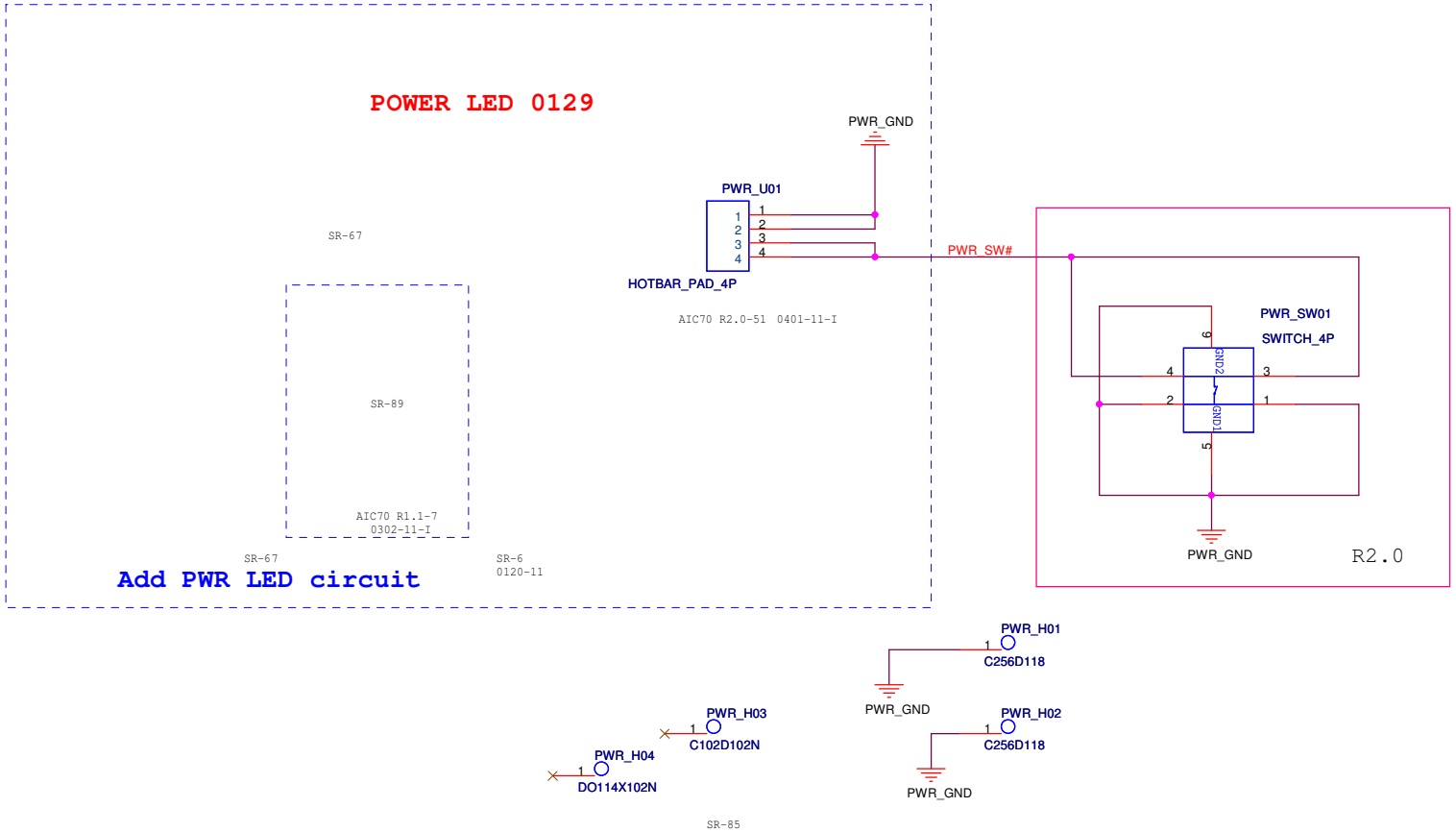
Engineer:

Size: Custom | Project Name | Rev: xx

Date: Wednesday, May 04, 2011 | Sheet 96 of 77



PEGATRON	Title : ODD	
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang	
Size: B	Project Name: TOD ODD BOARD	Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 96 of 77	



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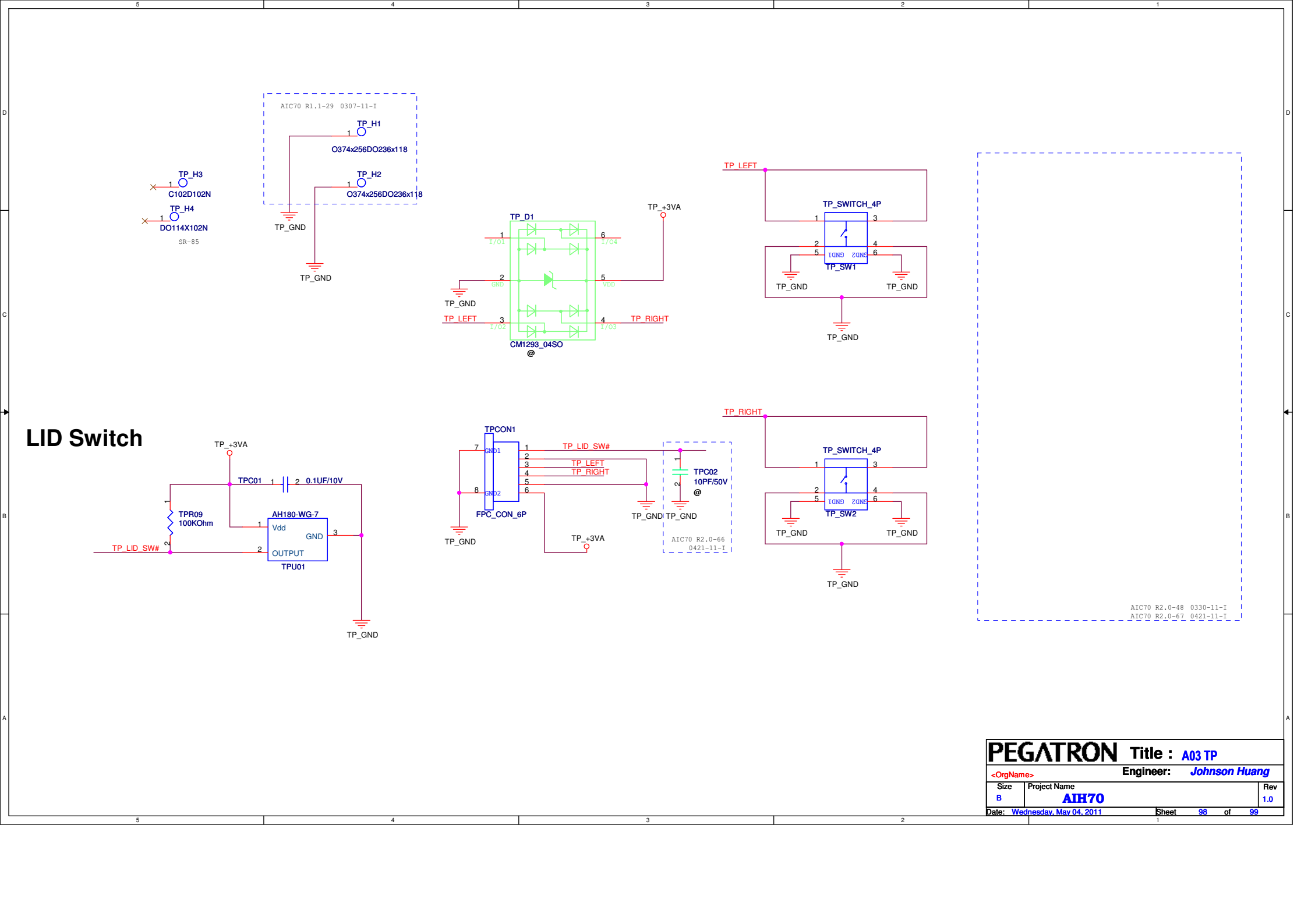
BU1-RD Div.1-HW RD Dept.1	Engineer: Johnson Huang	
Size: B	Project Name: TOD POWER SW	Rev: 2.0
Date: Wednesday, May 04, 2011	Sheet 97 of 77	



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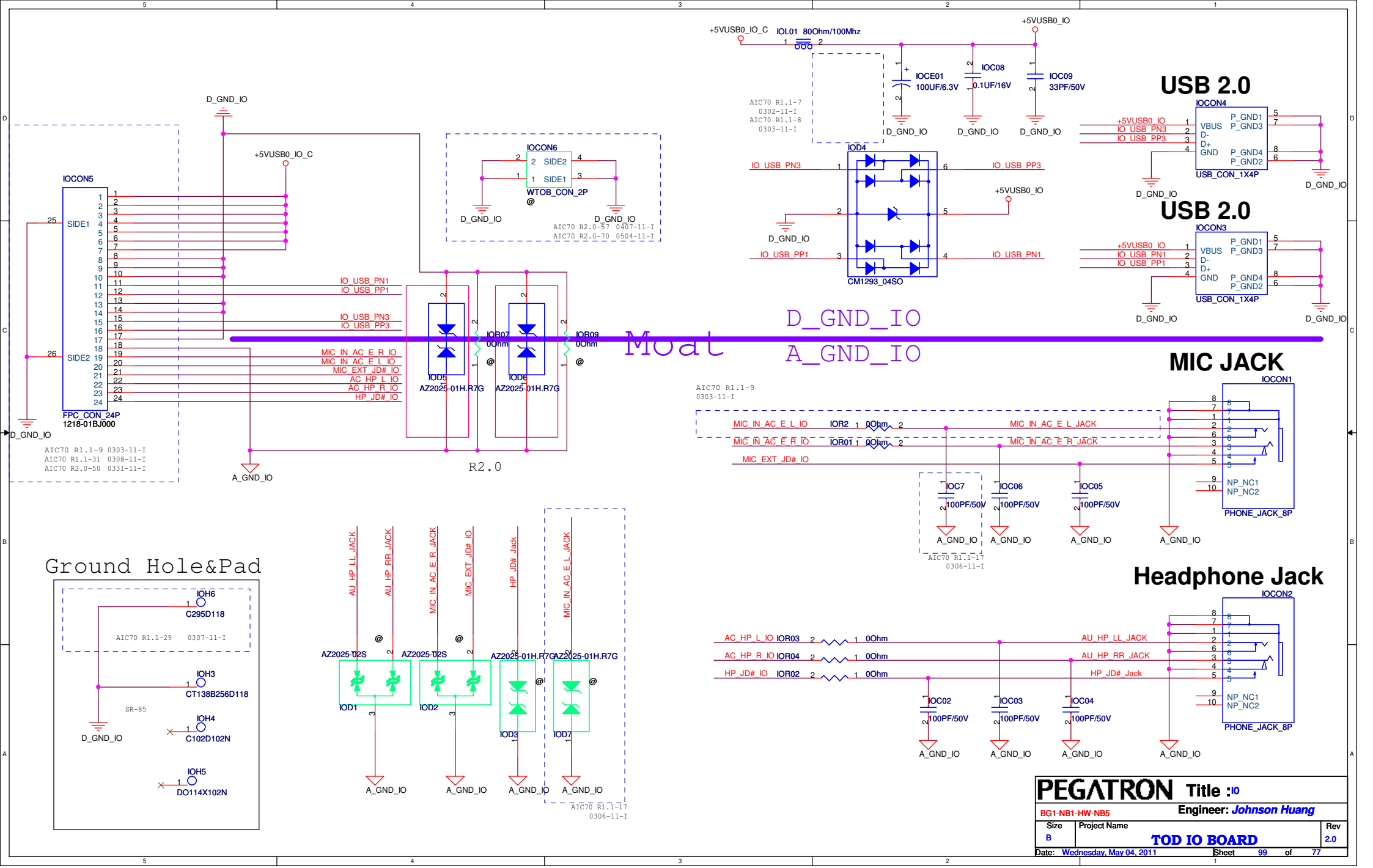
<OrgName>	Engineer: Johnson Huang	
Size: B	Project Name: AIH70	Rev: 1.0
Date: Wednesday, May 04, 2011	Sheet 98 of 99	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USB_CON_1X4P
USB 2.0
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USB_CON_1X4P
IOCON5
FPC_CON_24P
1218-01BJ000
IOCON6
WTOB_CON_2P
IOD4
CM1293_04SO
IOD5
AZ2025-01H.R7G
IOD6
AZ2025-01H.R7G
Moat
D_GND_IO
A_GND_IO
R2.0
MIC JACK
IOCON1
PHONE_JACK_8P
Headphone Jack
IOCON2
PHONE_JACK_8P
Ground Hole&Pad
IOH6
C295D118
IOH3
CT138B256D118
IOH4
C102D102N
IOH5
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PEGATRON
Title :IO
BG1-NB1-HW-NB5
Engineer: Johnson Huang
Size B
Project Name TOD IO BOARD
Rev 2.0
Date: Wednesday, May 04, 2011
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