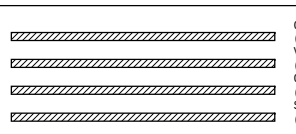
GIGABYTE XP-K8U-X Schematics

REV:1.0

SHEET	TITLE
1	COVER SHEET
2	BOM & PCB MODIFY HISTORY
3	BLOCK DIAGRAM
4,5,6,7	AMD K8 CLAWHAMMER
8 ~ 13	ULI M1689 SINGLE CHIP
14	CLOCK GENERATOR
15,16,17	DDR SDRAM DIMMS 1,2,3 & DDR Termination
18	AGP SLOT
19,20	PCI SLOT 1,2,3,4,5
21	IDE , FRONT USB , SATA
22	SMSC LPC I/O
23	BIOS & FDD
24	AUDIO AC97
25	AUDIO JACK & GAMEPORT
26	COM,PRT,KB/MS
27	RTL8100C & USB CONNECTOR
28	VCORE (PWM ISL6568CR)
29	FRONT PANEL
30	VCC12,VCC18,VCC25,VDDQ
31	ATX, DC POWER
32	DDR POWER(5VDUAL,3VDUAL,25VSTR,VTTDDR)
33	POWER SEQUENCE
34	R_USB , RESET
35	H/W SETTING

SHEET	TITLE



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Title: COVER SHEET

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

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XP-K8U-X REV. 1.0

Component value change history

Date	Change Item	Reason

ULi M1689 single chip FOR AMD K8_754

Circuit or PCB layout change for next version

Date	Change Item

Title	<Title>		
Size	Document Number		Rev
	CustomXP-K8U-X		<RevCode>
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XP-K8U-X REV. 1.0

Component value change history

Date	Change Item	Reason
2005/04/04	Form GA-K8U REV:1.01 to AXPER XP-K8U-X REV:1.0	PCB Modify
2005/05/11	FOR PVT	

ULi M1689 single chip FOR AMD K8_754

Circuit or PCB layout change for next version

Date	Change Item	Reason
		For RTCVDD AC plug off drop issue

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Title: BOM & PCB MODIFY HISTORY

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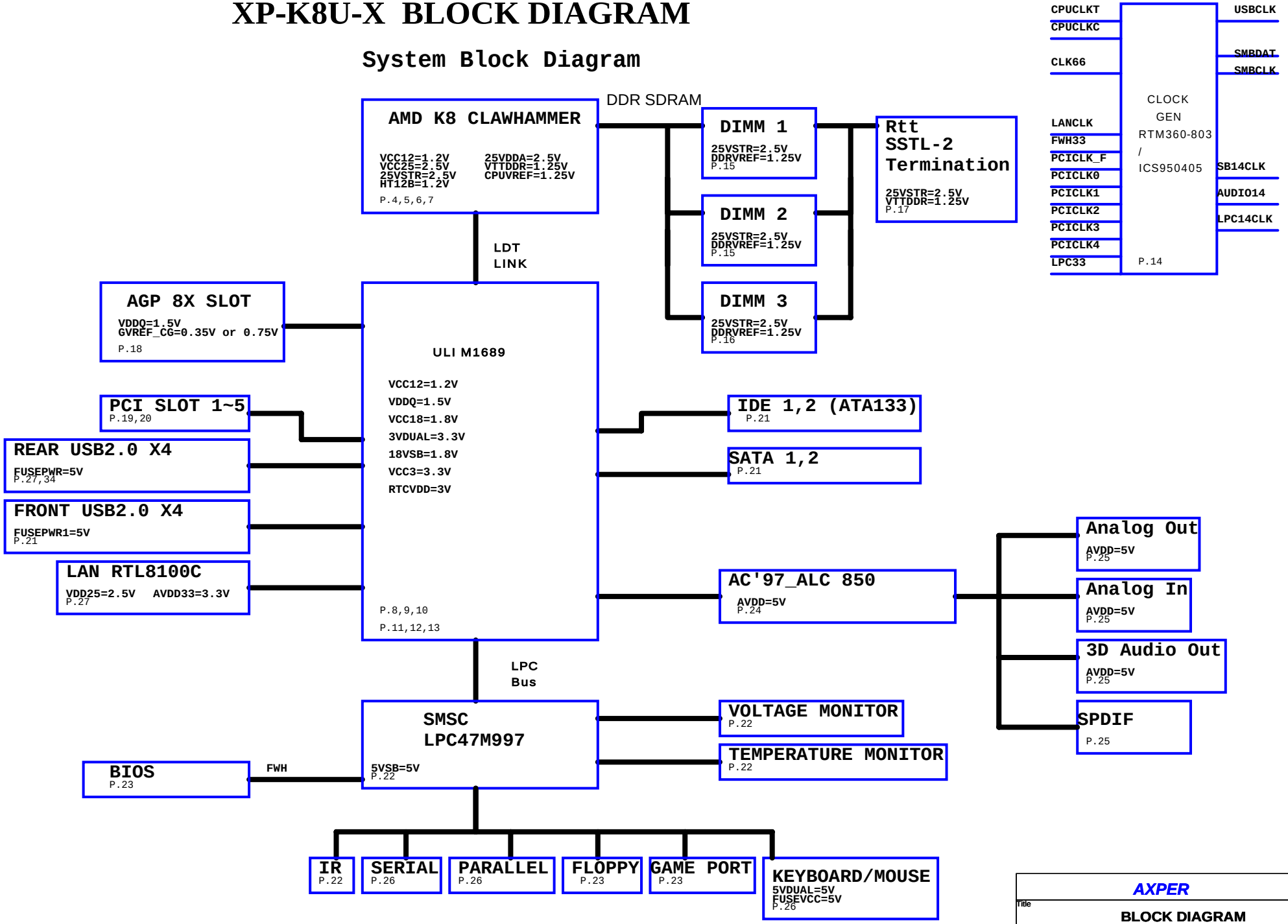
XP-K8U-X BLOCK DIAGRAM

System Block Diagram



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Title	BLOCK DIAGRAM	
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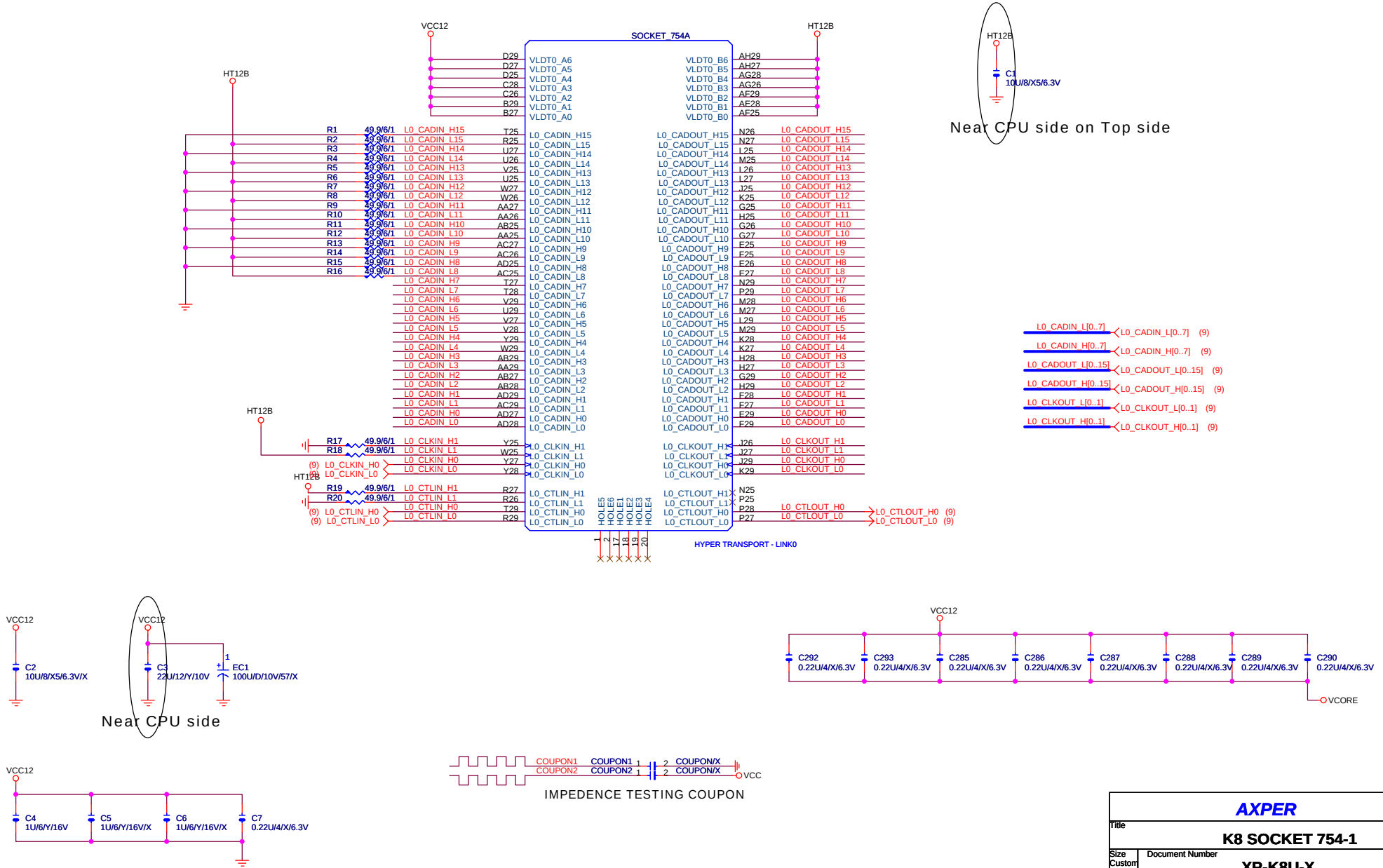
Clawhammer HT Interface



Title	K8 SOCKET 754-1
Size: Custom	Document Number: XP-K8U-X
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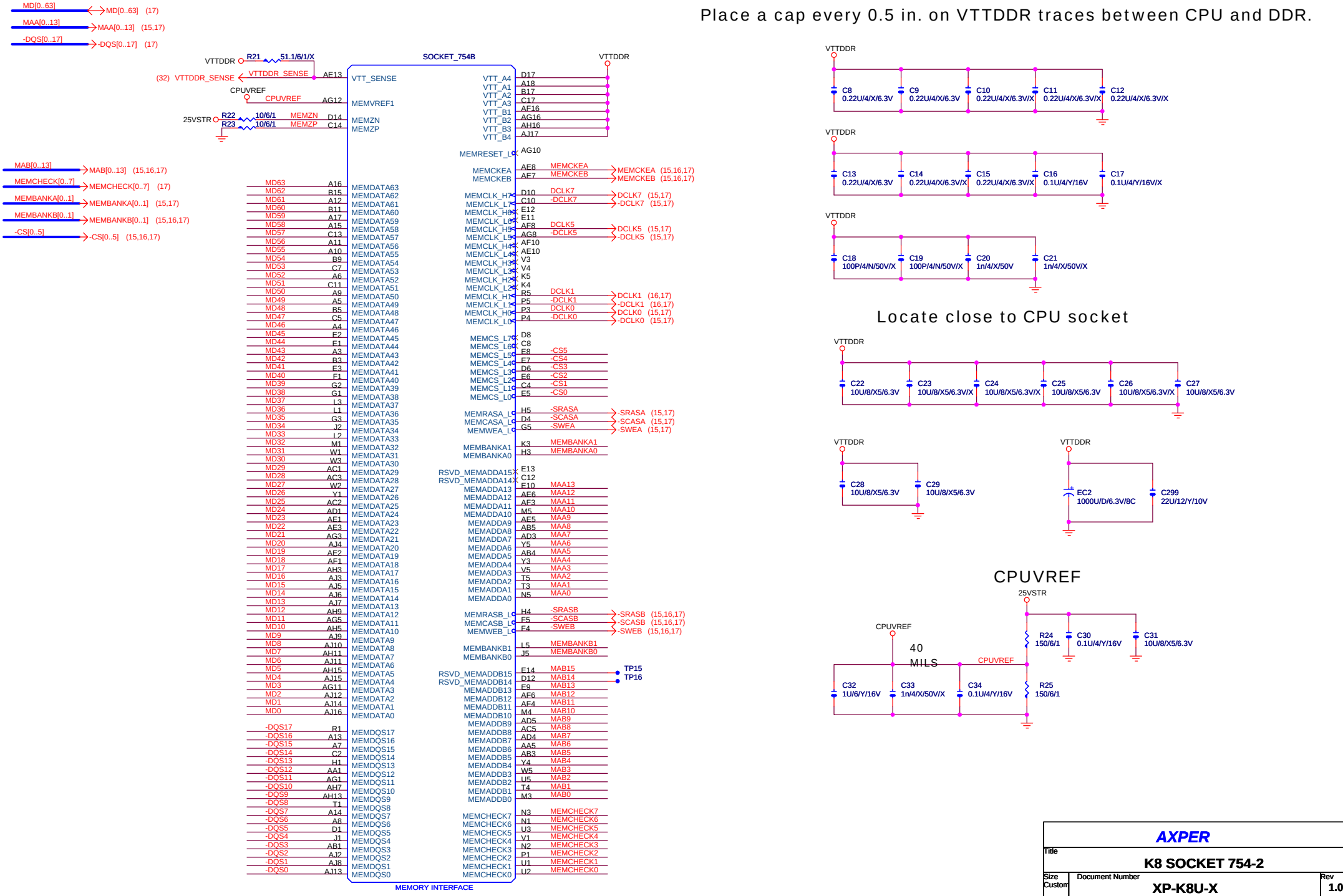
Place a cap every 0.5 in. on VTTDDR traces between CPU and DDR.
SOCKET_754B
MEMORY INTERFACE
MD[0..63]
MD[0..63] (17)
MAA[0..13]
MAA[0..13] (15,17)
-DQS[0..17]
-DQS[0..17] (17)
VTTDDR
R21
51.1/6/1/X
VTTDDR_SENSE
(32) VTTDDR_SENSE
AE13
VTT_SENSE
CPUVREF
CPUVREF
AG12
MEMVREF1
25VSTR
R22
10/6/1
MEMZN
D14
MEMZN
R23
10/6/1
MEMZP
C14
MEMZP
MAB[0..13]
MAB[0..13] (15,16,17)
MEMCHECK[0..7]
MEMCHECK[0..7] (17)
MEMBANKA[0..1]
MEMBANKA[0..1] (15,17)
MEMBANKB[0..1]
MEMBANKB[0..1] (15,16,17)
-CS[0..5]
-CS[0..5] (15,16,17)
VTT_A4
VTT_A1
VTT_A2
VTT_A3
VTT_B1
VTT_B2
VTT_B3
VTT_B4
D17
A18
B17
C17
AF16
AG16
AH16
AJ17
MEMRESET_L
AG10
MEMCKEA
MEMCKEB
AE8
AE7
MEMCKEA
MEMCKEB
MEMCKEA (15,16,17)
MEMCKEB (15,16,17)
MEMCLK_H7
MEMCLK_L7
MEMCLK_H6
MEMCLK_L6
MEMCLK_H5
MEMCLK_L5
MEMCLK_H4
MEMCLK_L4
MEMCLK_H3
MEMCLK_L3
MEMCLK_H2
MEMCLK_L2
MEMCLK_H1
MEMCLK_L1
MEMCLK_H0
MEMCLK_L0
D10
C10
E12
E11
AF8
AG8
AF10
AE10
V3
V4
K5
K4
R5
P5
P3
P4
DCLK7
-DCLK7
DCLK5
-DCLK5
DCLK1
-DCLK1
DCLK0
-DCLK0
DCLK7 (15,17)
-DCLK7 (15,17)
DCLK5 (15,17)
-DCLK5 (15,17)
DCLK1 (16,17)
-DCLK1 (16,17)
DCLK0 (15,17)
-DCLK0 (15,17)
MEMCS_L7
MEMCS_L6
MEMCS_L5
MEMCS_L4
MEMCS_L3
MEMCS_L2
MEMCS_L1
MEMCS_L0
D8
C8
E8
E7
D6
E6
C4
E5
-CS5
-CS4
-CS3
-CS2
-CS1
-CS0
MEMRASA_L
MEMCASA_L
MEMWEA_L
H5
D4
G5
-SRASA
-SCASA
-SWEA
-SRASA (15,17)
-SCASA (15,17)
-SWEA (15,17)
MEMBANKA1
MEMBANKA0
K3
H3
MEMBANKA1
MEMBANKA0
RSVD_MEMADDA15
RSVD_MEMADDA14
E13
C12
MEMADDA13
MEMADDA12
MEMADDA11
MEMADDA10
MEMADDA9
MEMADDA8
MEMADDA7
MEMADDA6
MEMADDA5
MEMADDA4
MEMADDA3
MEMADDA2
MEMADDA1
MEMADDA0
E10
AF6
AF3
M5
AE5
AB5
AD3
Y5
AB4
Y3
V5
T5
T3
N5
MAA13
MAA12
MAA11
MAA10
MAA9
MAA8
MAA7
MAA6
MAA5
MAA4
MAA3
MAA2
MAA1
MAA0
MEMRASB_L
MEMCASB_L
MEMWEB_L
H4
F5
E4
-SRASB
-SCASB
-SWEB
-SRASB (15,16,17)
-SCASB (15,16,17)
-SWEB (15,16,17)
MEMBANKB1
MEMBANKB0
L5
J5
MEMBANKB1
MEMBANKB0
RSVD_MEMADDB15
RSVD_MEMADDB14
MEMADDB13
MEMADDB12
MEMADDB11
MEMADDB10
MEMADDB9
MEMADDB8
MEMADDB7
MEMADDB6
MEMADDB5
MEMADDB4
MEMADDB3
MEMADDB2
MEMADDB1
MEMADDB0
E14
D12
E9
AF6
AF4
M4
AD5
AC5
AD4
AA5
AB3
Y4
W5
U5
T4
M3
MAB15
MAB14
MAB13
MAB12
MAB11
MAB10
MAB9
MAB8
MAB7
MAB6
MAB5
MAB4
MAB3
MAB2
MAB1
MAB0
TP15
TP16
MEMCHECK7
MEMCHECK6
MEMCHECK5
MEMCHECK4
MEMCHECK3
MEMCHECK2
MEMCHECK1
MEMCHECK0
N3
N1
U3
V1
N2
P1
U1
U2
MEMCHECK7
MEMCHECK6
MEMCHECK5
MEMCHECK4
MEMCHECK3
MEMCHECK2
MEMCHECK1
MEMCHECK0
MD63 A16
MD62 B15
MD61 A12
MD60 B11
MD59 A17
MD58 A15
MD57 C13
MD56 A11
MD55 A10
MD54 B9
MD53 C7
MD52 A6
MD51 C11
MD50 A9
MD49 A5
MD48 B5
MD47 C5
MD46 A4
MD45 E2
MD44 E1
MD43 A3
MD42 B3
MD41 E3
MD40 F1
MD39 G2
MD38 G1
MD37 L3
MD36 L1
MD35 G3
MD34 J2
MD33 L2
MD32 M1
MD31 W1
MD30 W3
MD29 AC1
MD28 AC3
MD27 W2
MD26 Y1
MD25 AC2
MD24 AD1
MD23 AE1
MD22 AE3
MD21 AG3
MD20 AJ4
MD19 AE2
MD18 AF1
MD17 AH3
MD16 AJ3
MD15 AJ5
MD14 AJ6
MD13 AJ7
MD12 AH9
MD11 AG5
MD10 AH5
MD9 AJ9
MD8 AJ10
MD7 AH11
MD6 AJ11
MD5 AH15
MD4 AJ15
MD3 AG11
MD2 AJ12
MD1 AJ14
MD0 AJ16
-DQS17 R1
-DQS16 A13
-DQS15 A7
-DQS14 C2
-DQS13 H1
-DQS12 AA1
-DQS11 AG1
-DQS10 AH7
-DQS9 AH13
-DQS8 T1
-DQS7 A14
-DQS6 A8
-DQS5 D1
-DQS4 J1
-DQS3 AB1
-DQS2 AJ2
-DQS1 AJ8
-DQS0 AJ13
MEMDATA63
MEMDATA62
MEMDATA61
MEMDATA60
MEMDATA59
MEMDATA58
MEMDATA57
MEMDATA56
MEMDATA55
MEMDATA54
MEMDATA53
MEMDATA52
MEMDATA51
MEMDATA50
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MEMDATA43
MEMDATA42
MEMDATA41
MEMDATA40
MEMDATA39
MEMDATA38
MEMDATA37
MEMDATA36
MEMDATA35
MEMDATA34
MEMDATA33
MEMDATA32
MEMDATA31
MEMDATA30
MEMDATA29
MEMDATA28
MEMDATA27
MEMDATA26
MEMDATA25
MEMDATA24
MEMDATA23
MEMDATA22
MEMDATA21
MEMDATA20
MEMDATA19
MEMDATA18
MEMDATA17
MEMDATA16
MEMDATA15
MEMDATA14
MEMDATA13
MEMDATA12
MEMDATA11
MEMDATA10
MEMDATA9
MEMDATA8
MEMDATA7
MEMDATA6
MEMDATA5
MEMDATA4
MEMDATA3
MEMDATA2
MEMDATA1
MEMDATA0
MEMDQS17
MEMDQS16
MEMDQS15
MEMDQS14
MEMDQS13
MEMDQS12
MEMDQS11
MEMDQS10
MEMDQS9
MEMDQS8
MEMDQS7
MEMDQS6
MEMDQS5
MEMDQS4
MEMDQS3
MEMDQS2
MEMDQS1
MEMDQS0
VTTDDR
C8 0.22U/4/X/6.3V
C9 0.22U/4/X/6.3V
C10 0.22U/4/X/6.3V/X
C11 0.22U/4/X/6.3V/X
C12 0.22U/4/X/6.3V/X
C13 0.22U/4/X/6.3V
C14 0.22U/4/X/6.3V/X
C15 0.22U/4/X/6.3V/X
C16 0.1U/4/Y/16V
C17 0.1U/4/Y/16V/X
C18 100P/4/N/50V/X
C19 100P/4/N/50V/X
C20 1n/4/X/50V
C21 1n/4/X/50V/X
Locate close to CPU socket
C22 10U/8/X5/6.3V
C23 10U/8/X5/6.3V/X
C24 10U/8/X5/6.3V/X
C25 10U/8/X5/6.3V
C26 10U/8/X5/6.3V/X
C27 10U/8/X5/6.3V
C28 10U/8/X5/6.3V
C29 10U/8/X5/6.3V
EC2 1000U/D/6.3V/8C
C299 22U/12/Y/10V
CPUVREF
25VSTR
CPUVREF
40 MILS
CPUVREF
R24 150/6/1
C30 0.1U/4/Y/16V
C31 10U/8/X5/6.3V
C32 1U/6/Y/16V
C33 1n/4/X50V/X
C34 0.1U/4/Y/16V
R25 150/6/1
AXPER
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K8 SOCKET 754-2
Size Custom
Document Number
XP-K8U-X
Rev 1.0
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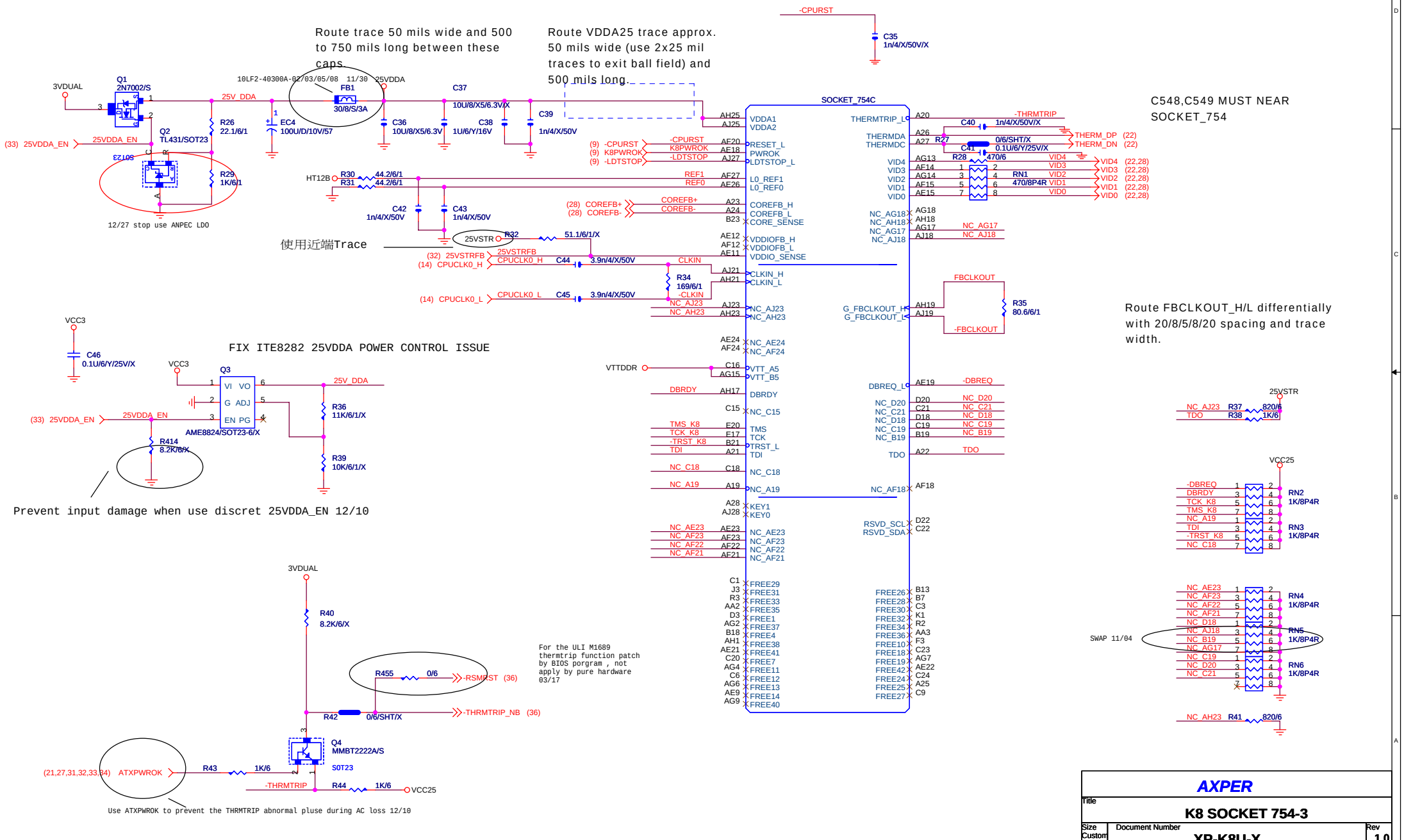
Route trace 50 mils wide and 500 to 750 mils long between these caps.
Route VDDA25 trace approx. 50 mils wide (use 2x25 mil traces to exit ball field) and 500 mils long.
C548,C549 MUST NEAR SOCKET_754
使用近端Trace
FIX ITE8282 25VDDA POWER CONTROL ISSUE
Route FBCLKOUT_H/L differentially with 20/8/5/8/20 spacing and trace width.
Prevent input damage when use discret 25VDDA_EN 12/10
Use ATXPWROK to prevent the THRMTRIP abnormal pluse during AC loss 12/10
12/27 stop use ANPEC LDO
For the ULI M1689 thermtrip function patch by BIOS porgram , not apply by pure hardware 03/17
SWAP 11/04
SOCKET_754C
Q1 2N7002/S
Q2 TL431/SOT23
Q3 AME8824/SOT23-6/X
Q4 MMBT2222A/S
FB1 30/8/S/3A
EC4 100U/D/10V/57
3VDUAL
25V_DDA
25VDDA
25VDDA_EN
25VSTR
VCC3
VCC25
VTTDDR
-CPURST
-THRMTRIP
-THRMTRIP_NB
-RSMRST
ATXPWROK
-FBCLKOUT
FBCLKOUT
-DBREQ
THERM_DP
THERM_DN
CLKIN
-CLKIN
CPUCLK0_H
CPUCLK0_L
25VSTRFB
COREFB+
COREFB-
-CPURST
K8PWROK
-LDTSTOP
VID4
VID3
VID2
VID1
VID0
TMS_K8
TCK_K8
-TRST_K8
TDI
TDO
DBRDY
NC_AJ23
NC_AH23
NC_AE24
NC_AF24
NC_C15
NC_C18
NC_A19
NC_AE23
NC_AF23
NC_AF22
NC_AF21
NC_AG18
NC_AH18
NC_AG17
NC_AJ18
NC_D20
NC_C21
NC_D18
NC_C19
NC_B19
NC_AF18
NC_AH23
NC_AJ23
NC_D18
NC_AJ18
NC_B19
NC_AG17
NC_C19
NC_D20
NC_C21
RSVD_SCL
RSVD_SDA
G_FBCLKOUT_H
G_FBCLKOUT_L
AXPER
K8 SOCKET 754-3
XP-K8U-X
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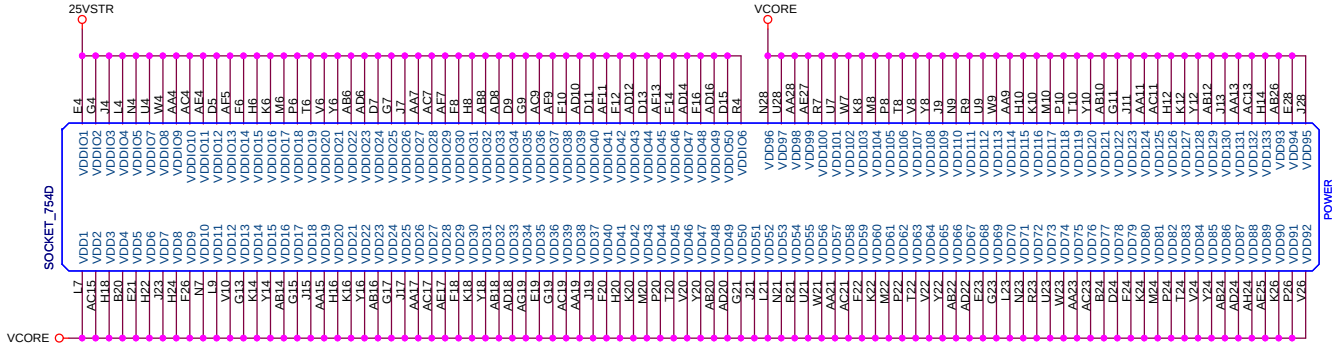

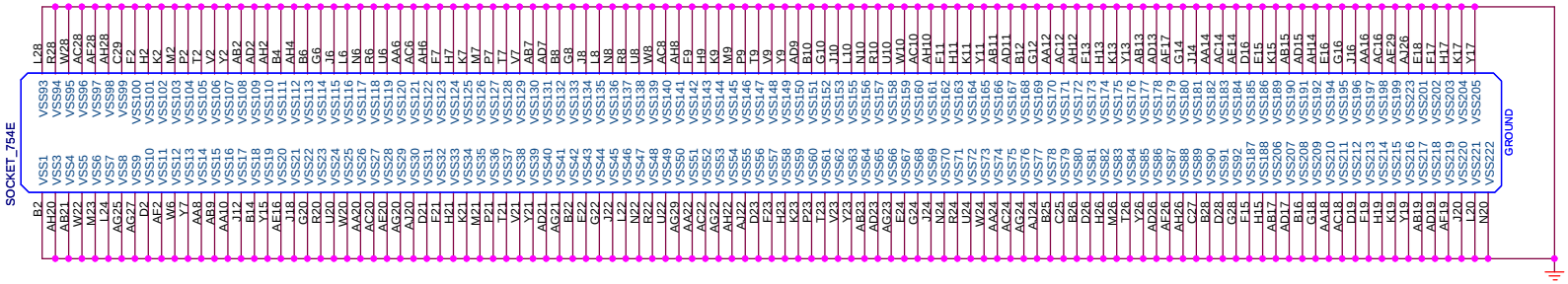

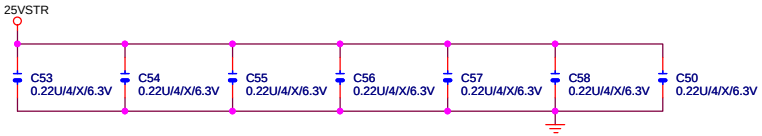

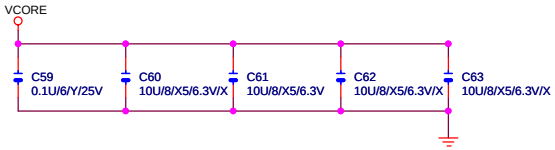

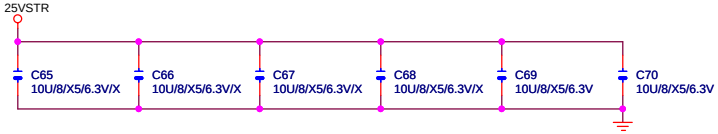

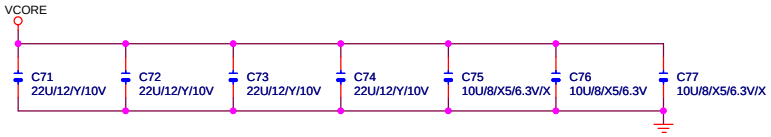

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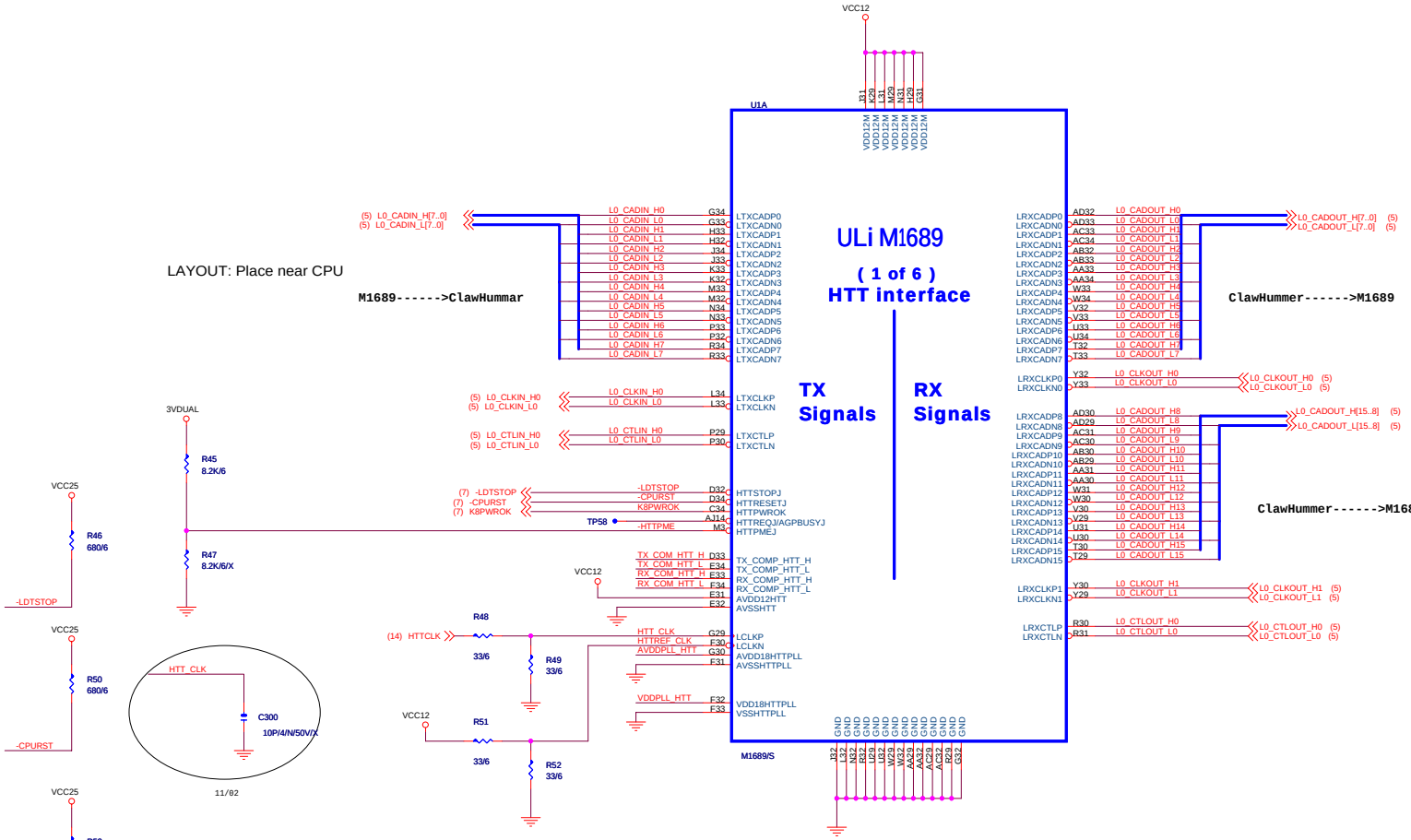
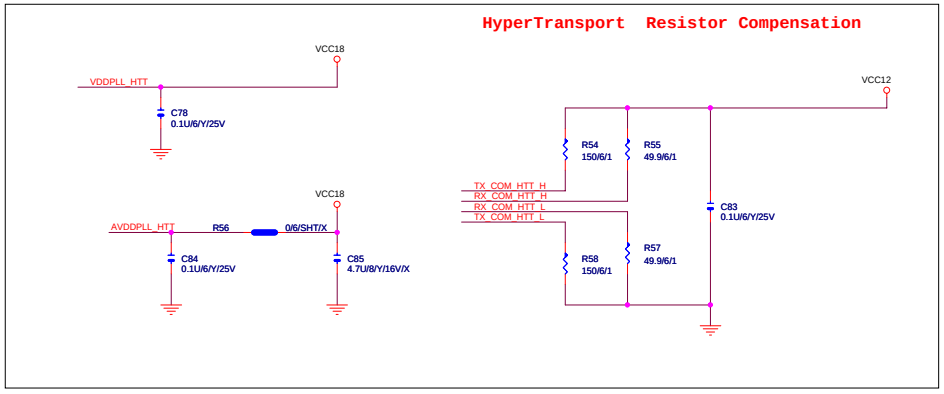
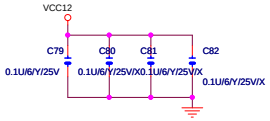


GND SINGLE USE TRACE
TO SYS GND PLACE



LAYOUT: Place HTT bypass caps on topside near connected M1689 HTT link.



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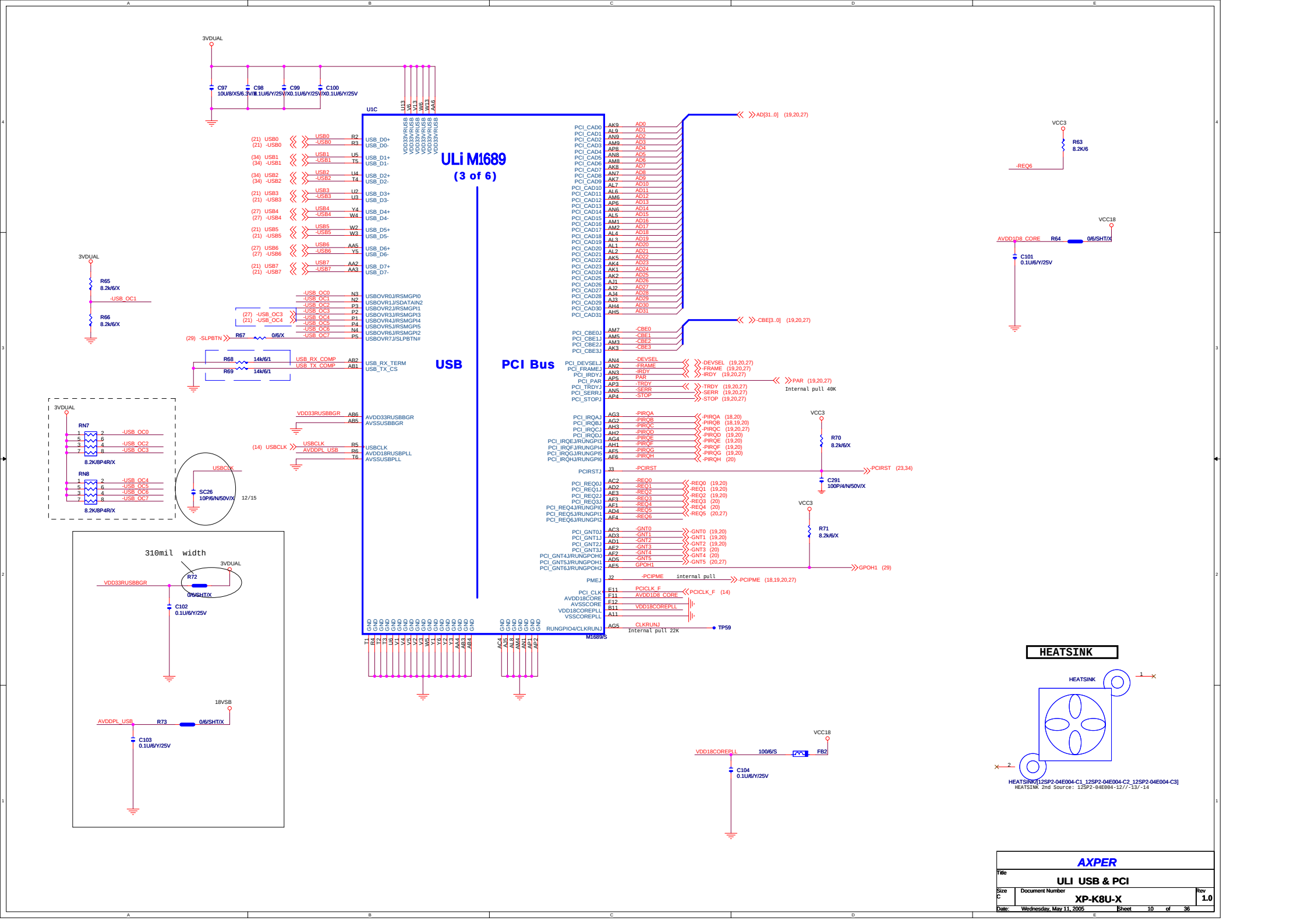
ULi M1689
(3 of 6)
U1C
M1689/S
USB
PCI Bus
3VDUAL
C97 10U/8/X5/6.3V/M
C98 0.1U/6/Y/25V/X
C99 0.1U/6/Y/25V/X
C100 0.1U/6/Y/25V/X
VDD33VRUSB
USB_D0+
USB_D0-
USB_D1+
USB_D1-
USB_D2+
USB_D2-
USB_D3+
USB_D3-
USB_D4+
USB_D4-
USB_D5+
USB_D5-
USB_D6+
USB_D6-
USB_D7+
USB_D7-
USBOVR0J/RSMGPI0
USBOVR1J/SDATAIN2
USBOVR2J/RSMGPI1
USBOVR3J/RSMGPI3
USBOVR4J/RSMGPI4
USBOVR5J/RSMGPI5
USBOVR6J/RSMGPI2
USBOVR7J/SLPBTN#
R65 8.2k/6/X
R66 8.2k/6/X
R67 0/6/X
R68 14k/6/1
R69 14k/6/1
USB_RX_TERM
USB_TX_CS
AVDD33RUSBBGR
AVSSUSBBGR
USBCLK
AVDDPL_USB
AVDD18RUSBPLL
AVSSUSBPLL
RN7
RN8
8.2K/8P4R/X
SC26 10P/6/N/50V/X
12/15
310mil width
R72 0/6/SHT/X
C102 0.1U/6/Y/25V
18VSB
AVDDPL_USB
R73 0/6/SHT/X
C103 0.1U/6/Y/25V
AD[31..0]
-CBE[3..0]
-DEVSEL
-FRAME
-IRDY
PAR
-TRDY
-SERR
-STOP
Internal pull 40K
-PIRQA
-PIRQB
-PIRQC
-PIRQD
-PIRQE
-PIRQF
-PIRQG
-PIRQH
R70 8.2k/6/X
-PCIRST
C291 100P/4/N/50V/X
-REQ0
-REQ1
-REQ2
-REQ3
-REQ4
-REQ5
-REQ6
R71 8.2k/6/X
-GNT0
-GNT1
-GNT2
-GNT3
-GNT4
-GNT5
GPOH1
-PCIPME
internal pull
PCICLK_F
AVDD1D8_CORE
VDD18COREPLL
CLKRUNJ
Internal pull 22K
TP59
VCC3
R63 8.2K/6
-REQ6
VCC18
AVDD1D8_CORE
R64 0/6/SHT/X
C101 0.1U/6/Y/25V
VDD18COREPLL
100/6/S
FB2
C104 0.1U/6/Y/25V
HEATSINK
HEATSINK[12SP2-04E004-C1_12SP2-04E004-C2_12SP2-04E004-C3]
HEATSINK 2nd Source: 12SP2-04E004-12/-13/-14
AXPER
ULI USB & PCI
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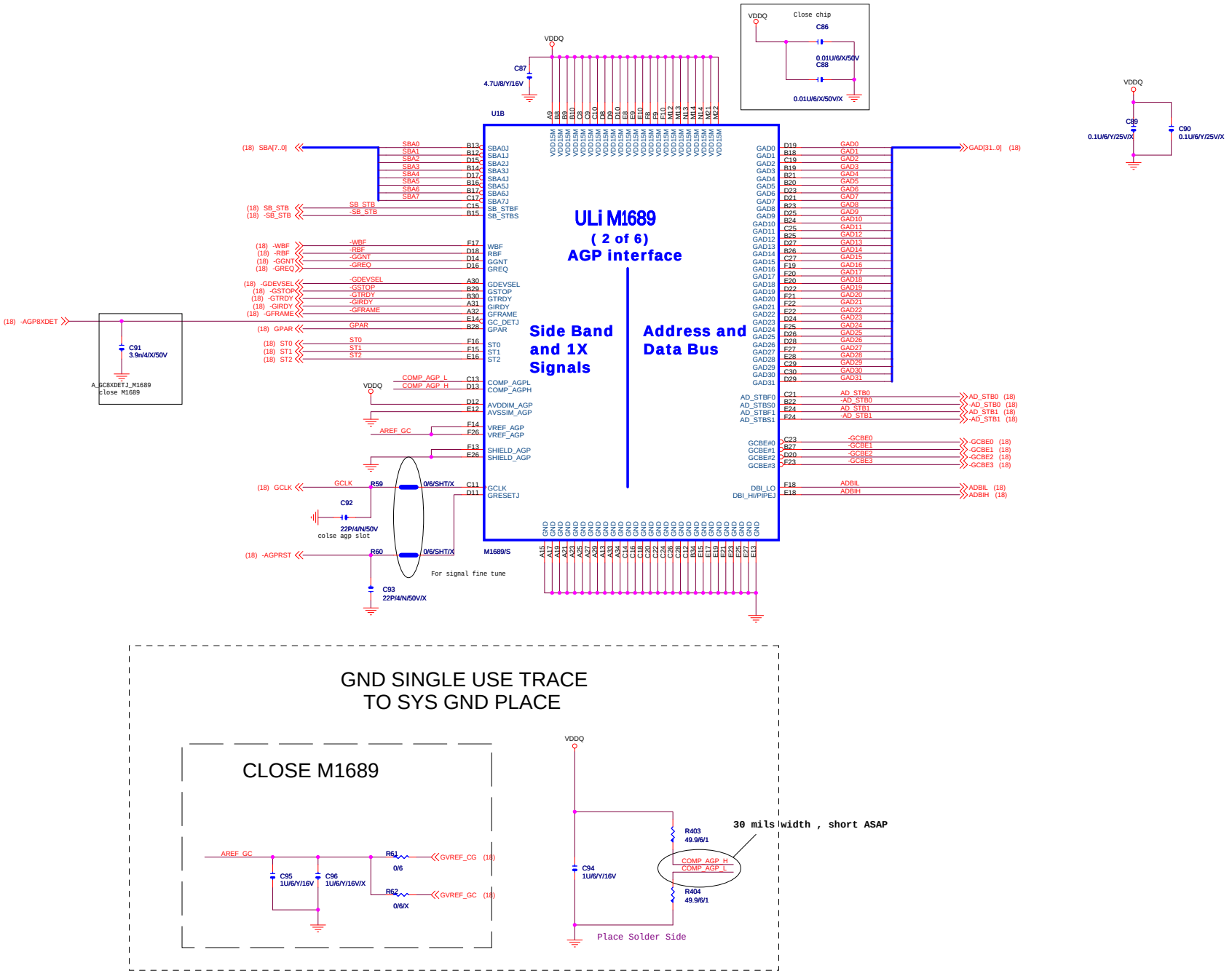
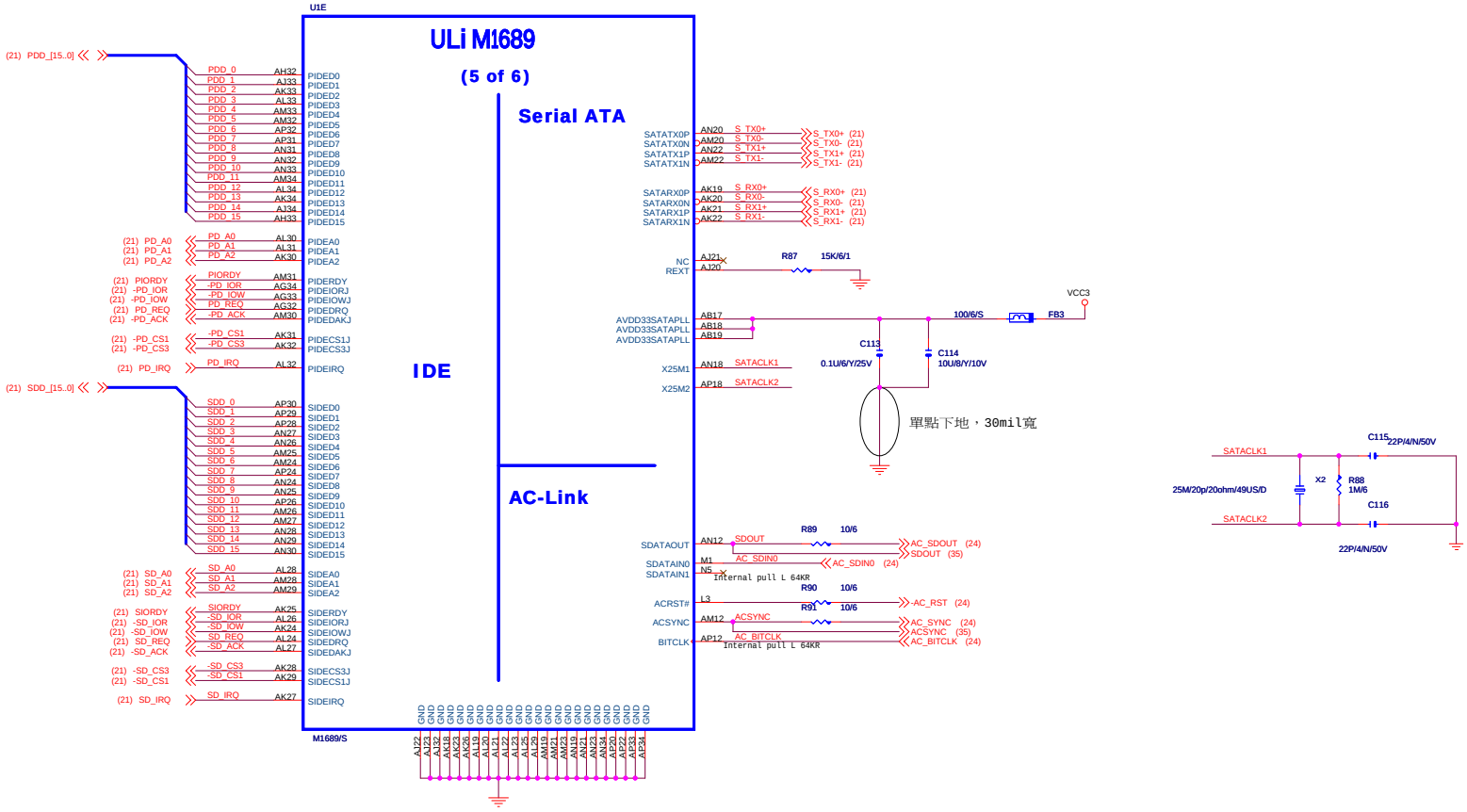


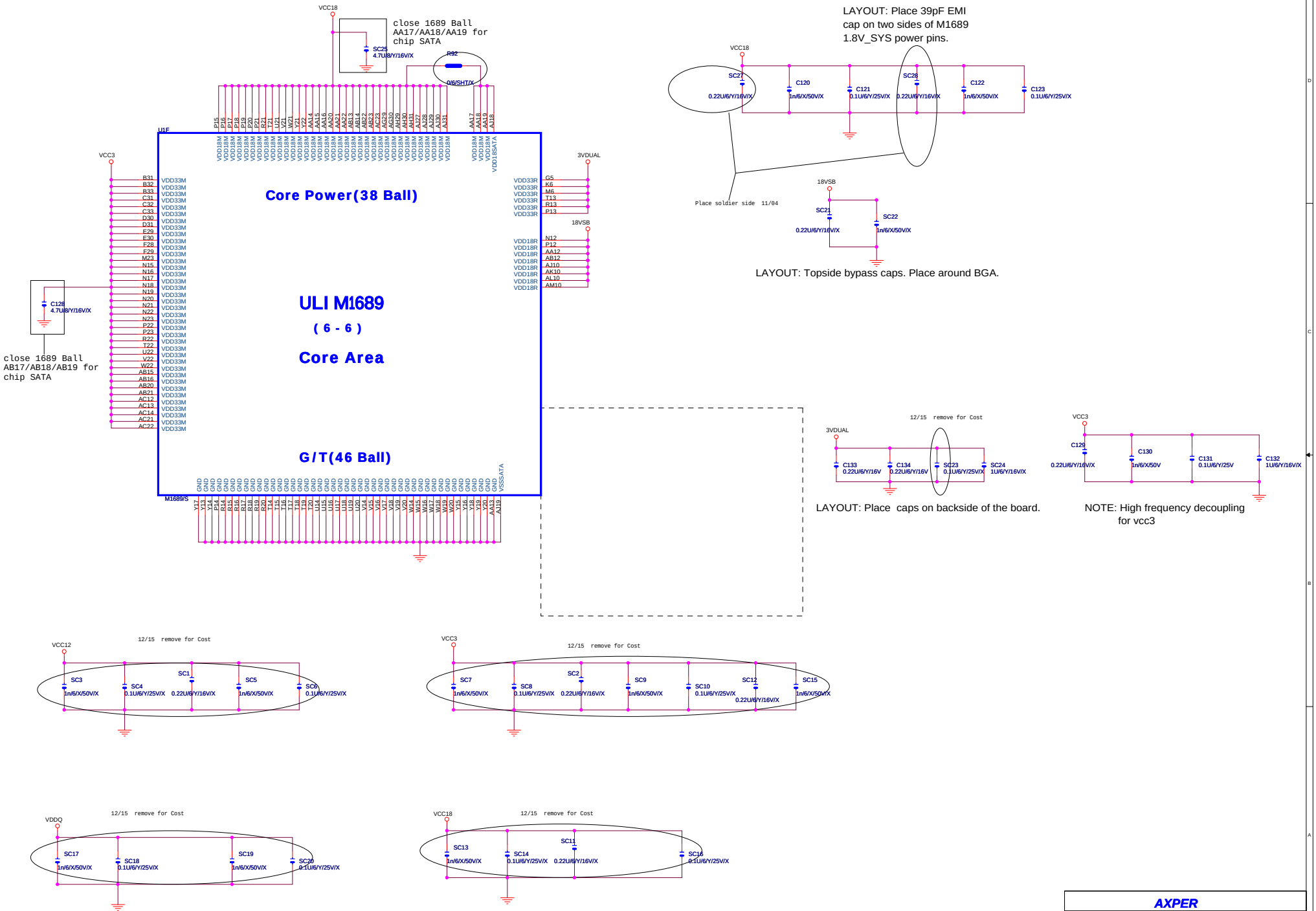
GND SINGLE USE TRACE TO SYS GND PLACE

CLOSE M1689

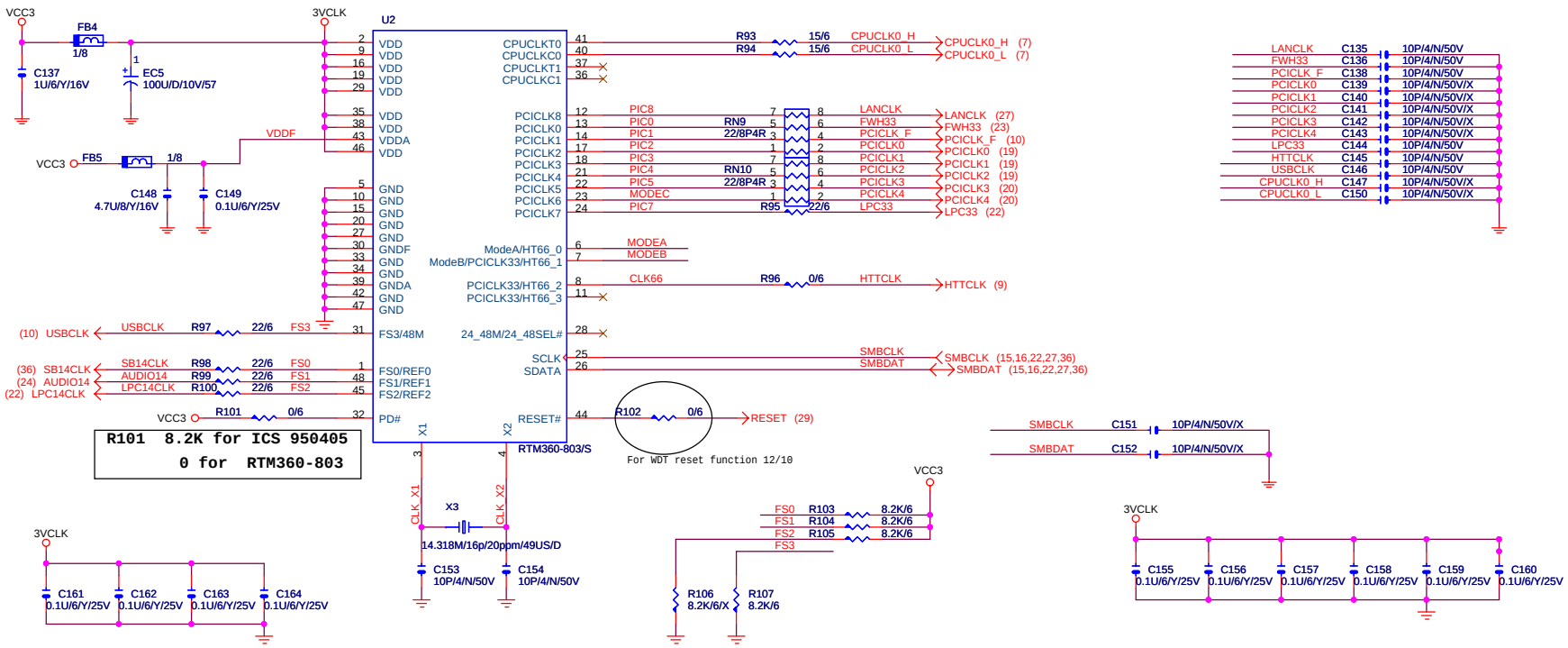
AXPER		
Title	ULI AGP8X & CONTROL	
Size C	Document Number XP-K8U-X	Rev 1.0
Date: Thursday, July 21, 2005	Sheet 11 of 36	



AXPER			
Title: ULI IDE & SATA			
Size: C	Document Number: XP-K8U-X		Rev: 1.0
Date: Wednesday, May 11, 2005	Sheet 12 of 36		



AXPER	
Title	ULI POWER & GND
Size C	Document Number XP-K8U-X
Rev	1.0
Date:	Thursday, July 21, 2005
Sheet	13 of 36



Internal PH *
Internal PL **

** FS3	* FS2	* FS1	* FS0	CPU MHz	HTT MHz	PCI MHz	
0	0	0	0	100.90	67.27	33.63	
0	0	0	1	133.90	66.95	33.48	
0	0	1	0	168.00	67.20	33.60	
0	0	1	1	202.00	67.33	33.67	
0	1	0	0	100.20	66.80	33.40	
0	1	0	1	133.50	66.75	33.38	
0	1	1	0	166.70	66.68	33.34	
0	1	1	1	200.40	66.80	33.40	Default
1	0	0	0	150.00	60.00	30.00	
1	0	0	1	180.00	60.00	30.00	
1	0	1	0	210.00	70.00	35.00	
1	0	1	1	240.00	60.00	30.00	
1	1	0	0	270.00	67.50	33.75	
1	1	0	1	233.33	66.67	33.33	
1	1	1	0	266.67	66.67	33.33	
1	1	1	1	300.00	75.00	37.50	

Internal PH *

24_48_sel	Pin 28	
0	48MHz	
1 *	24MHz	(Default)

Internal PH *

MODE_A	MODE_B	Pin 6	Pin 7	Pin 8	Pin 11	
0	0	HTTCLK0	HTTCLK1	HTTCLK2	PCICLK10	(Default)
0	1	MODE_A (Input Only)	HTTCLK1	HTTCLK2	HTTCLK3	
1	0	PCICLK7	PCICLK8	PCICLK9	PCICLK10	
1 *	1 *	MODE_A (Input Only)	PCICLK8	PCICLK9	PCICLK10	

MODEC	Pin 23	Pin 24	
0	33MHz	33MHz	(Default)
1	33MHz	PCI_STOP#	

MODEC only for RTM360-803

AXPER

Title: CLOCK GEN

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

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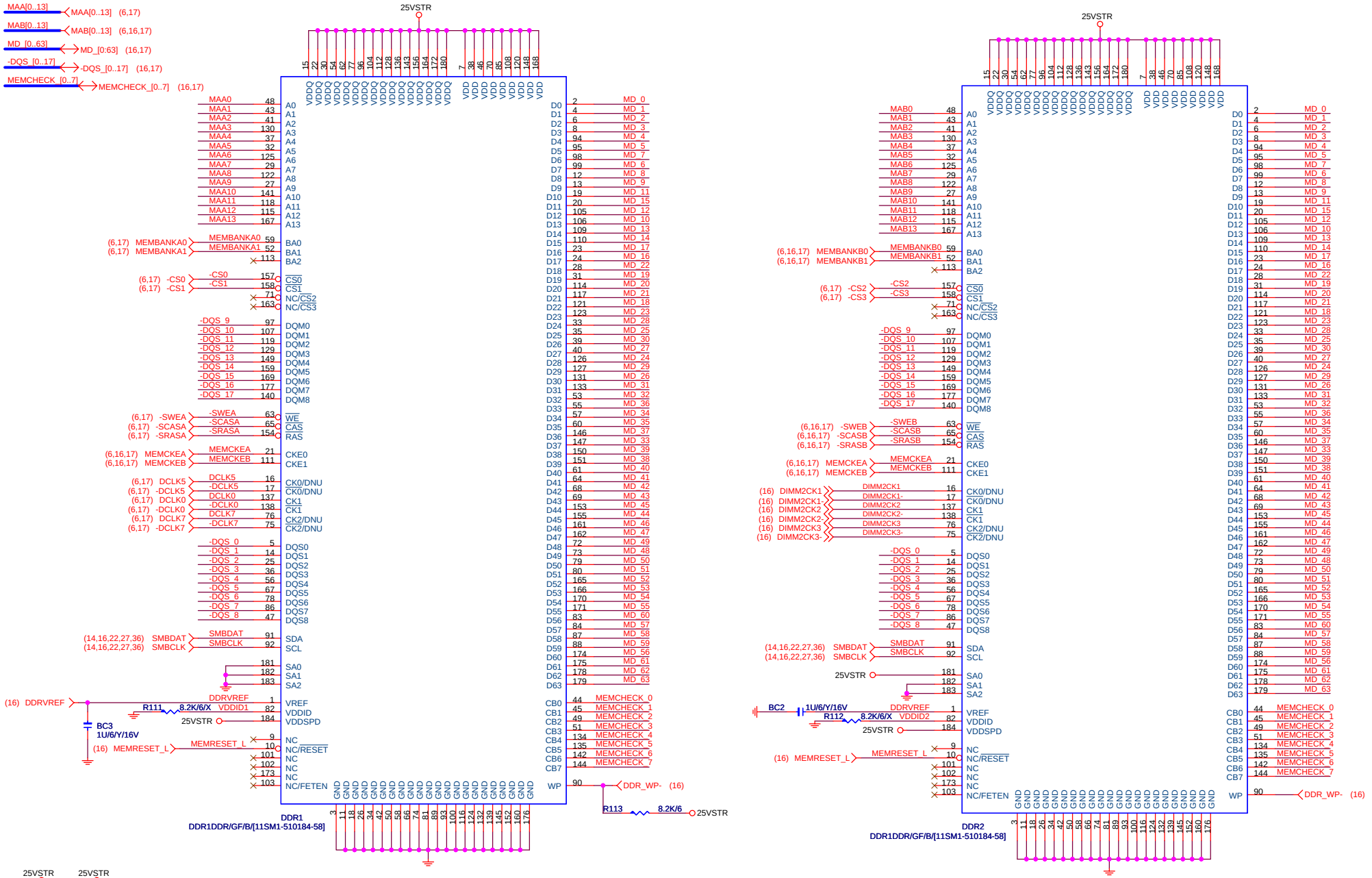
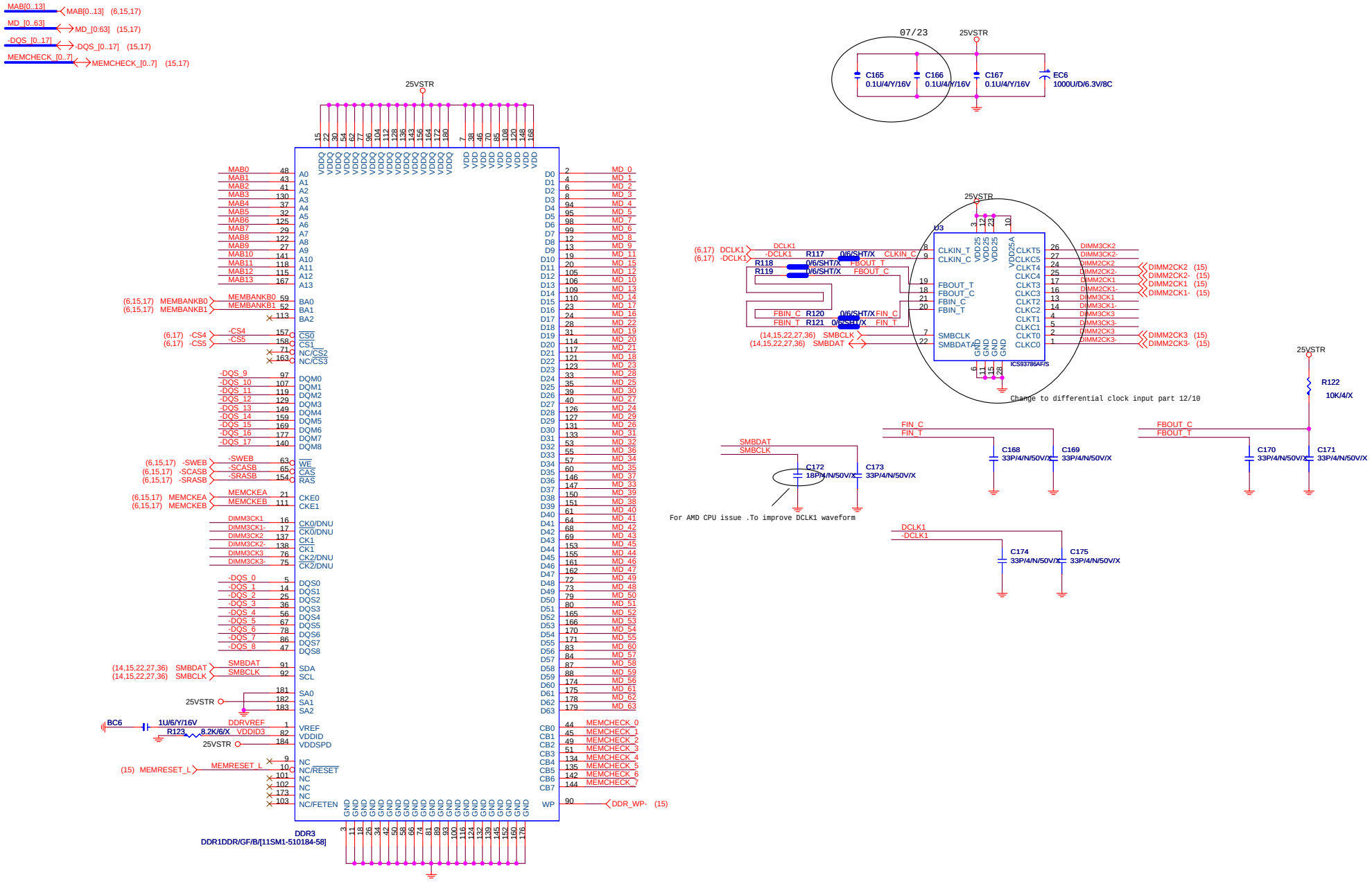


AXPER

Title	DDR DIMM 1,2
Size: Custom	Document Number: XP-K8U-X
Rev	1.0
Date: Wednesday, May 11, 2005	Sheet 15 of 36

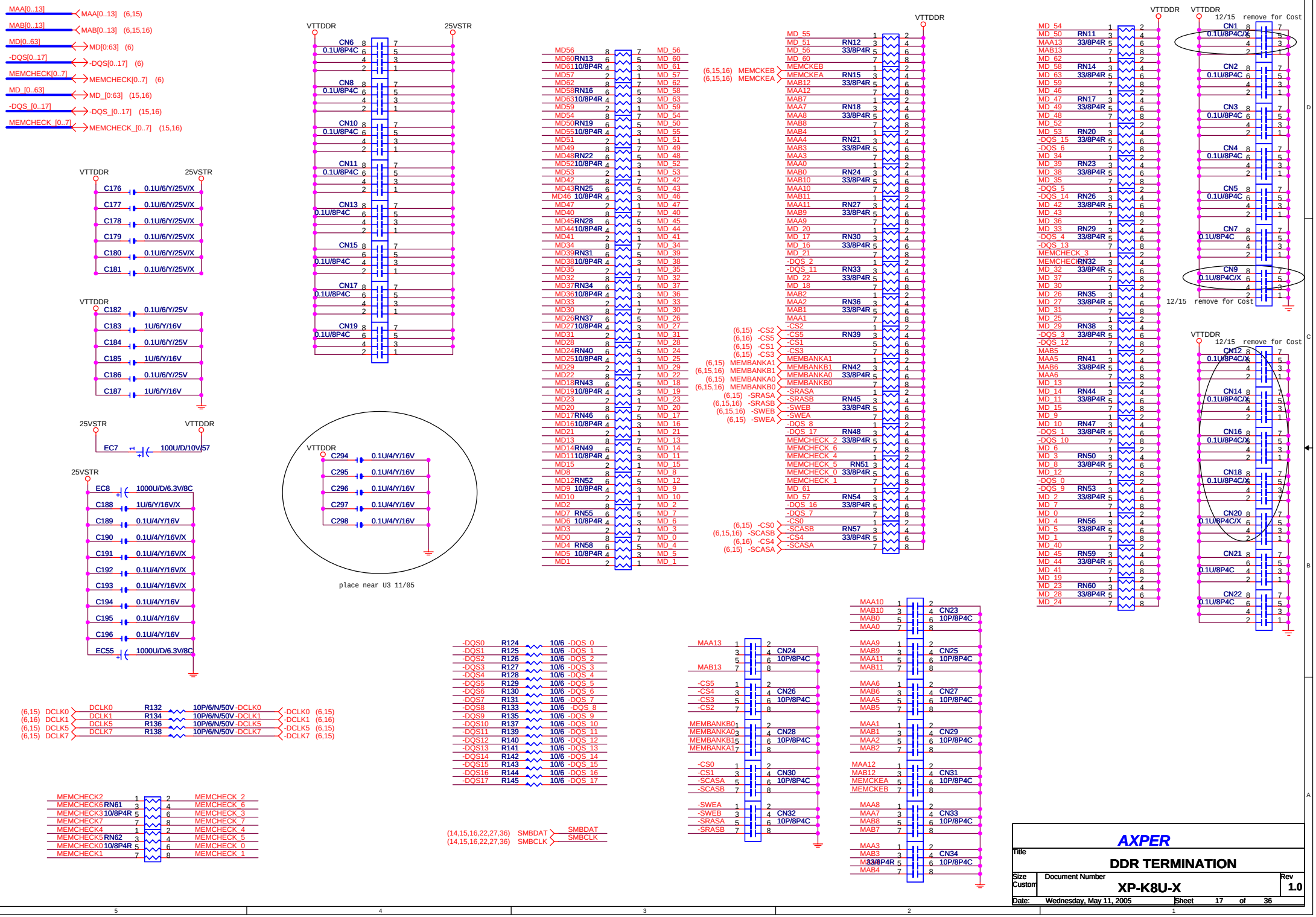


AXPER

Title: DDR DIMM3

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

Date: Wednesday, May 11, 2005 | Sheet 16 of 36


MAA[0..13] MAA[0..13] (6,15)
MAB[0..13] MAB[0..13] (6,15,16)
MD[0..63] MD[0:63] (6)
-DQS[0..17] -DQS[0..17] (6)
MEMCHECK[0..7] MEMCHECK[0..7] (6)
MD_[0..63] MD_[0:63] (15,16)
-DQS_[0..17] -DQS_[0..17] (15,16)
MEMCHECK_[0..7] MEMCHECK_[0..7] (15,16)
VTTDDR
25VSTR
C176 0.1U/6/Y/25V/X
C177 0.1U/6/Y/25V/X
C178 0.1U/6/Y/25V/X
C179 0.1U/6/Y/25V/X
C180 0.1U/6/Y/25V/X
C181 0.1U/6/Y/25V/X
C182 0.1U/6/Y/25V
C183 1U/6/Y/16V
C184 0.1U/6/Y/25V
C185 1U/6/Y/16V
C186 0.1U/6/Y/25V
C187 1U/6/Y/16V
EC7 100U/D/10V/57
EC8 1000U/D/6.3V/8C
C188 1U/6/Y/16V/X
C189 0.1U/4/Y/16V
C190 0.1U/4/Y/16V/X
C191 0.1U/4/Y/16V/X
C192 0.1U/4/Y/16V/X
C193 0.1U/4/Y/16V/X
C194 0.1U/4/Y/16V
C195 0.1U/4/Y/16V
C196 0.1U/4/Y/16V
EC55 1000U/D/6.3V/8C
CN6 CN8 CN10 CN11 CN13 CN15 CN17 CN19 0.1U/8P4C
C294 C295 C296 C297 C298 0.1U/4/Y/16V
place near U3 11/05
MD56 MD60 MD61 MD57 MD62 MD58 MD63 MD59 MD54 MD50 MD55 MD51 MD49 MD48 MD52 MD53 MD42 MD43 MD46 MD47 MD40 MD45 MD44 MD41 MD34 MD39 MD38 MD35 MD32 MD37 MD36 MD33 MD30 MD26 MD27 MD31 MD28 MD24 MD25 MD29 MD22 MD18 MD19 MD23 MD20 MD17 MD16 MD21 MD13 MD14 MD11 MD15 MD8 MD12 MD9 MD10 MD2 MD7 MD6 MD3 MD0 MD4 MD5 MD1
RN13 RN16 RN19 RN22 RN25 RN28 RN31 RN34 RN37 RN40 RN43 RN46 RN49 RN52 RN55 RN58 10/8P4R
MD_55 MD_51 MD_56 MD_60 MD_58 MD_63 MD_59 MD_54 MD_50 MD_55 MD_51 MD_49 MD_48 MD_52 MD_53 MD_42 MD_43 MD_46 MD_47 MD_40 MD_45 MD_44 MD_41 MD_34 MD_39 MD_38 MD_35 MD_32 MD_37 MD_36 MD_33 MD_30 MD_26 MD_27 MD_31 MD_28 MD_24 MD_25 MD_29 MD_22 MD_18 MD_19 MD_23 MD_20 MD_17 MD_16 MD_21 MD_13 MD_14 MD_11 MD_15 MD_9 MD_10 MD_6 MD_3 MD_8 MD_12 MD_0 MD_4 MD_2 MD_7 MD_5 MD_1
RN12 RN15 RN18 RN21 RN24 RN27 RN30 RN33 RN36 RN39 RN42 RN45 RN48 RN51 RN54 RN57 33/8P4R
(6,15,16) MEMCKEB (6,15,16) MEMCKEA
(6,15) -CS2 (6,16) -CS5 (6,15) -CS1 (6,15) -CS3
(6,15) MEMBANKA1 (6,15,16) MEMBANKB1 (6,15) MEMBANKA0 (6,15,16) MEMBANKB0
(6,15) -SRASA (6,15,16) -SRASB (6,15,16) -SWEB (6,15) -SWEA
(6,15) -CS0 (6,15,16) -SCASB (6,16) -CS4 (6,15) -SCASA
MD_54 MD_50 MAA13 MAB13 MD_62 MD_58 MD_63 MD_59 MD_46 MD_47 MD_49 MD_48 MD_52 MD_53 -DQS_15 -DQS_6 MD_34 MD_39 MD_38 MD_35 -DQS_5 -DQS_14 MD_42 MD_43 MD_36 MD_33 -DQS_4 -DQS_13 MEMCHECK_3 MEMCHECK_2 MD_32 MD_37 MD_30 MD_26 MD_27 MD_31 MD_25 MD_29 -DQS_3 -DQS_12 MAB5 MAA5 MAB6 MAA6 MD_13 MD_14 MD_11 MD_15 MD_9 MD_10 -DQS_1 -DQS_10 MD_6 MD_3 MD_8 MD_12 -DQS_0 -DQS_9 MD_2 MD_7 MD_0 MD_4 MD_5 MD_1 MD_40 MD_45 MD_44 MD_41 MD_19 MD_23 MD_28 MD_24
RN11 RN14 RN17 RN20 RN23 RN26 RN29 RN32 RN35 RN38 RN41 RN44 RN47 RN50 RN53 RN56 RN59 RN60 33/8P4R
CN1 CN2 CN3 CN4 CN5 CN7 CN9 0.1U/8P4C/X
CN12 CN14 CN16 CN18 CN20 CN21 CN22 0.1U/8P4C/X
12/15 remove for Cost
-DQS0 -DQS1 -DQS2 -DQS3 -DQS4 -DQS5 -DQS6 -DQS7 -DQS8 -DQS9 -DQS10 -DQS11 -DQS12 -DQS13 -DQS14 -DQS15 -DQS16 -DQS17
R124 R125 R126 R127 R128 R129 R130 R131 R133 R135 R137 R139 R140 R141 R142 R143 R144 R145
10/6 -DQS_0 10/6 -DQS_1 10/6 -DQS_2 10/6 -DQS_3 10/6 -DQS_4 10/6 -DQS_5 10/6 -DQS_6 10/6 -DQS_7 10/6 -DQS_8 10/6 -DQS_9 10/6 -DQS_10 10/6 -DQS_11 10/6 -DQS_12 10/6 -DQS_13 10/6 -DQS_14 10/6 -DQS_15 10/6 -DQS_16 10/6 -DQS_17
(6,15) DCLK0 (6,16) DCLK1 (6,15) DCLK5 (6,15) DCLK7
DCLK0 DCLK1 DCLK5 DCLK7
R132 R134 R136 R138
10P/6/N/50V -DCLK0 10P/6/N/50V -DCLK1 10P/6/N/50V -DCLK5 10P/6/N/50V -DCLK7
-DCLK0 (6,15) -DCLK1 (6,16) -DCLK5 (6,15) -DCLK7 (6,15)
MEMCHECK2 MEMCHECK6 MEMCHECK3 MEMCHECK7 MEMCHECK4 MEMCHECK5 MEMCHECK0 MEMCHECK1
RN61 10/8P4R RN62 10/8P4R
MEMCHECK_2 MEMCHECK_6 MEMCHECK_3 MEMCHECK_7 MEMCHECK_4 MEMCHECK_5 MEMCHECK_0 MEMCHECK_1
(14,15,16,22,27,36) SMBDAT (14,15,16,22,27,36) SMBCLK
SMBDAT SMBCLK
MAA13 MAB13 -CS5 -CS4 -CS3 -CS2 MEMBANKB0 MEMBANKA0 MEMBANKB1 MEMBANKA1 -CS0 -CS1 -SCASA -SCASB -SWEA -SWEB -SRASA -SRASB
CN24 CN26 CN28 CN30 CN32 10P/8P4C
MAA10 MAB10 MAB0 MAA0 MAA9 MAB9 MAA11 MAB11 MAA6 MAB6 MAA5 MAB5 MAA1 MAB1 MAA2 MAB2 MAA12 MAB12 MEMCKEA MEMCKEB MAA8 MAB8 MAA7 MAB7 MAA3 MAB3 MAB4
CN23 CN25 CN27 CN29 CN31 CN33 CN34 10P/8P4C
AXPER
Title
DDR TERMINATION
Size Custom
Document Number
XP-K8U-X
Rev 1.0
Date: Wednesday, May 11, 2005
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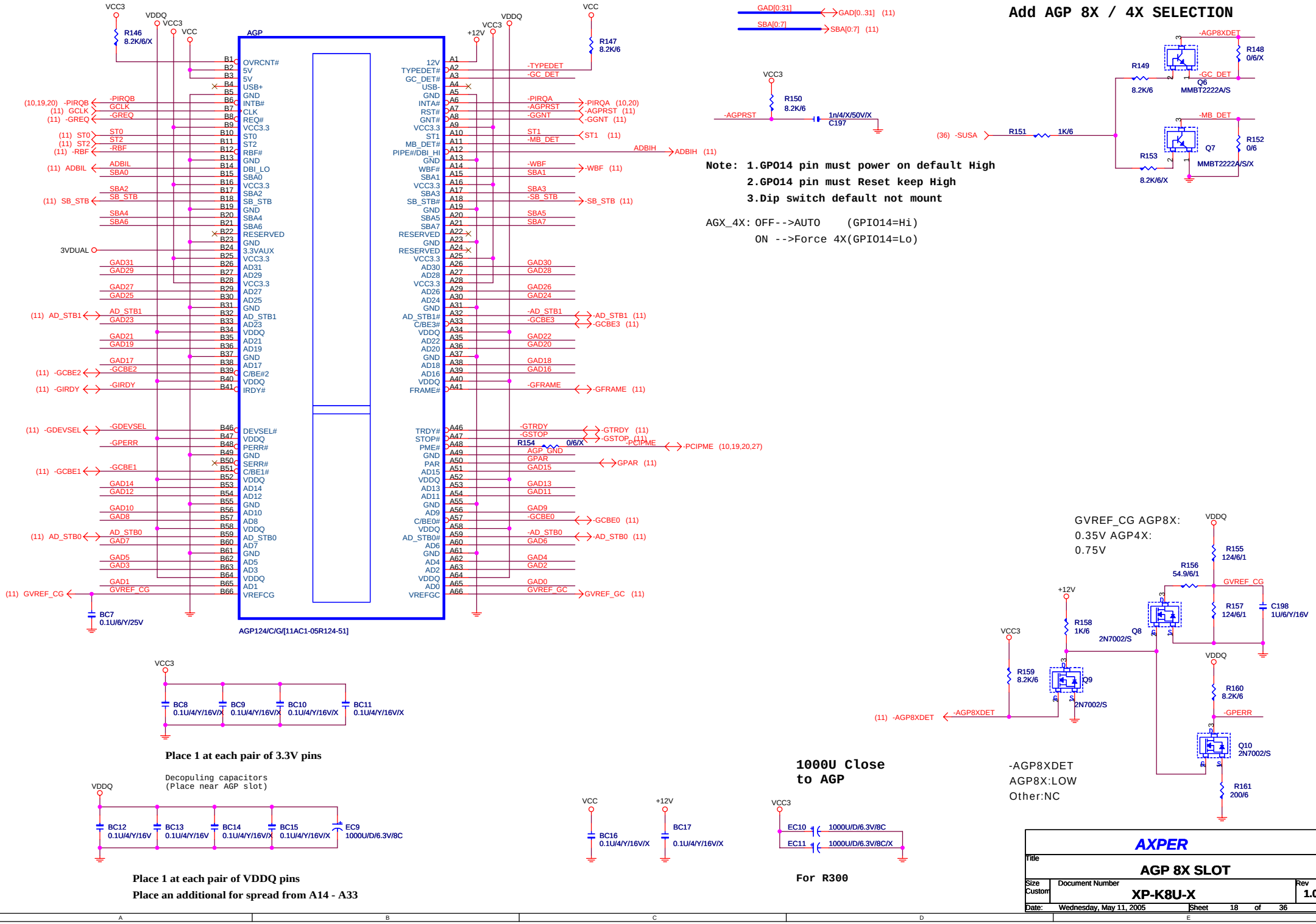
AGP
AGP124/C/G/[11AC1-05R124-51]
Add AGP 8X / 4X SELECTION
Note: 1.GPO14 pin must power on default High
2.GPO14 pin must Reset keep High
3.Dip switch default not mount
AGX_4X: OFF-->AUTO (GPIO14=Hi)
ON -->Force 4X(GPIO14=Lo)
GVREF_CG AGP8X:
0.35V AGP4X:
0.75V
-AGP8XDET
AGP8X:LOW
Other:NC
Place 1 at each pair of 3.3V pins
Decoupling capacitors
(Place near AGP slot)
Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33
1000U Close
to AGP
For R300
AXPER
AGP 8X SLOT
XP-K8U-X
1.0
Wednesday, May 11, 2005
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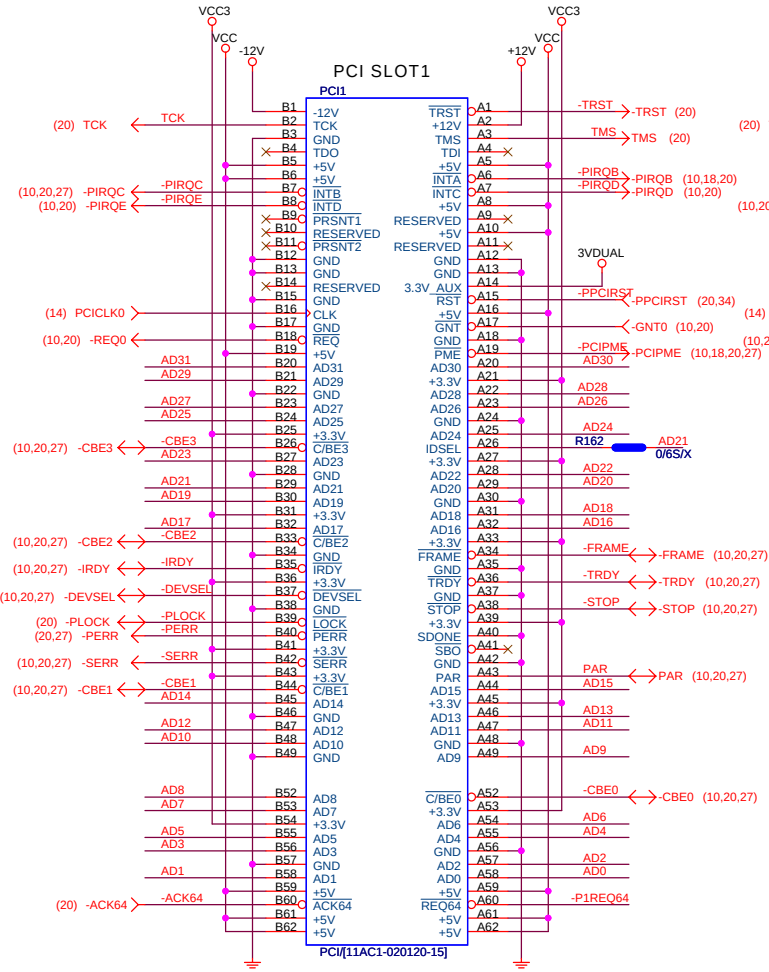
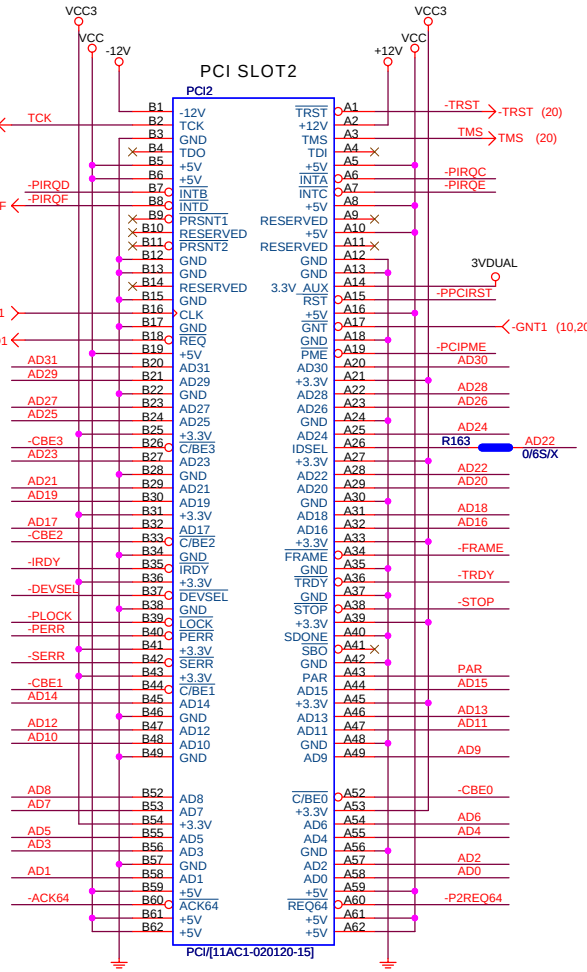
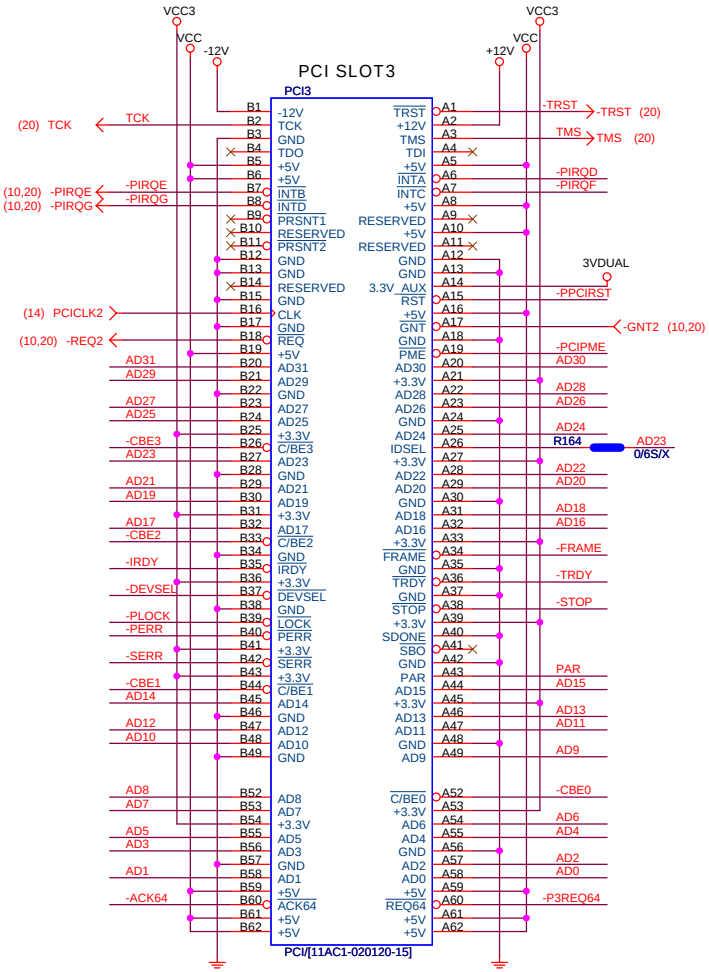
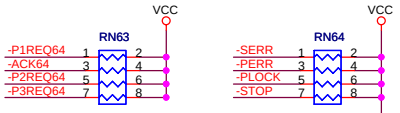
PCI SLOT 1,2,3

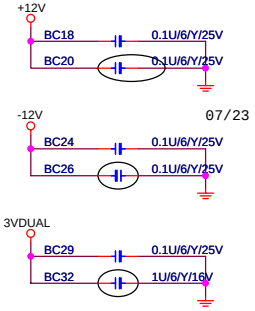
AD[0..31] <-> AD[0..31] (10,20,27)

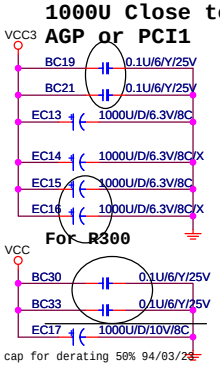


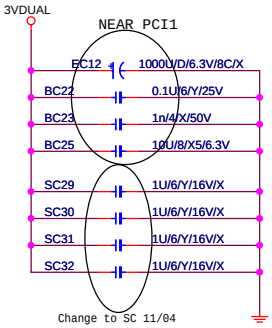












AXPER		
Title: PCI SLOT 1,2,3		
Size: Custom	Document Number: XP-K8U-X	Rev: 1.0
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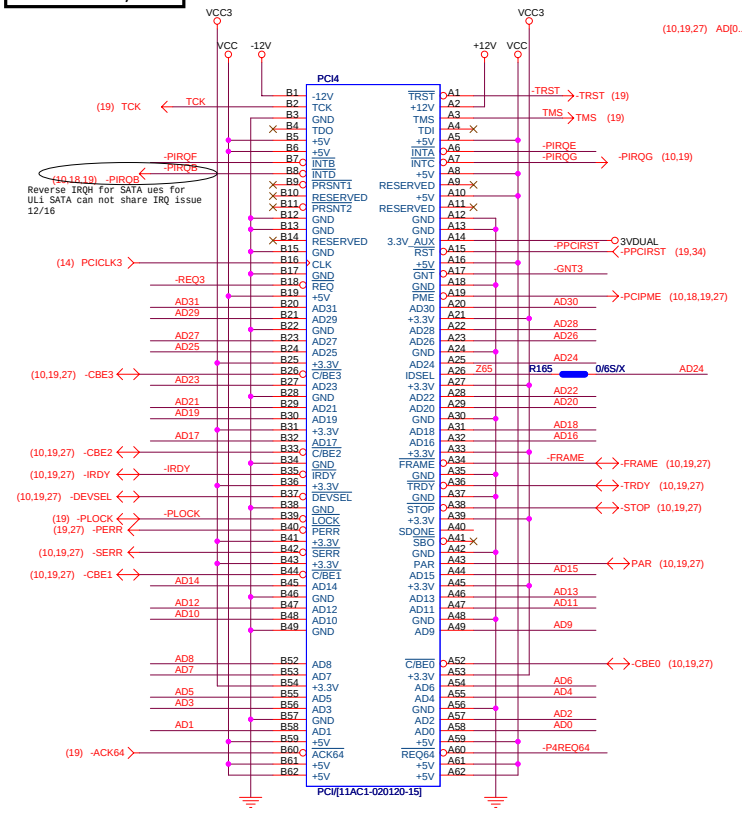
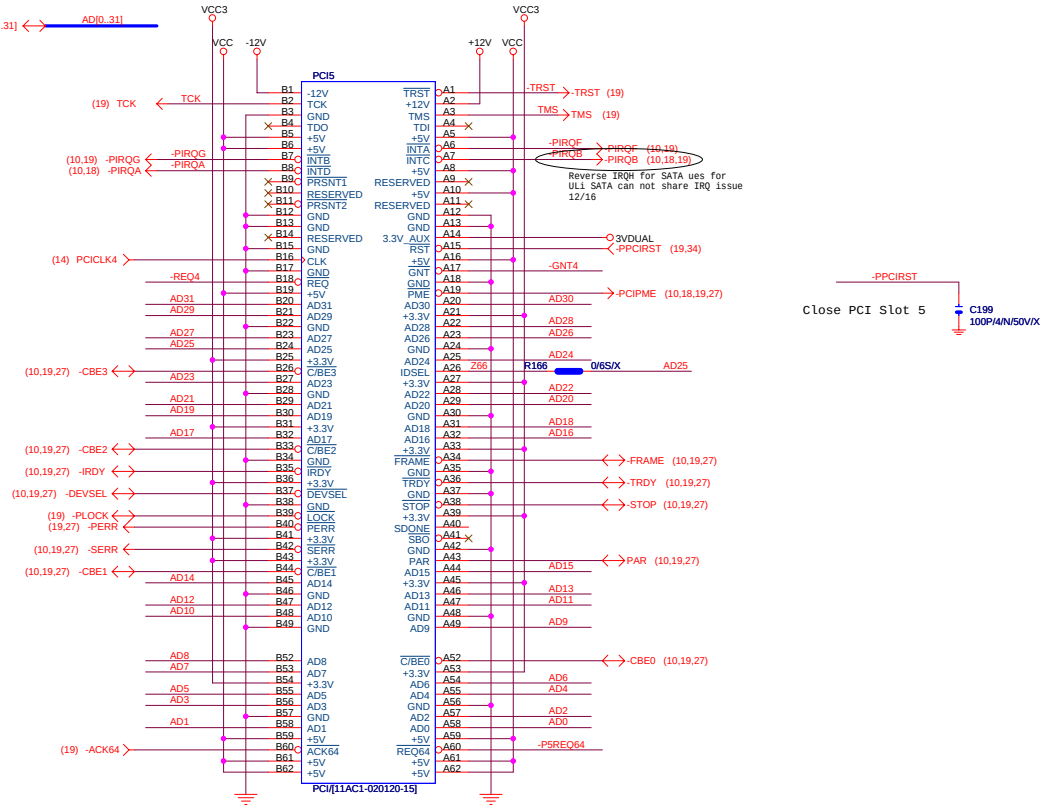
PCI SLOT 4,5



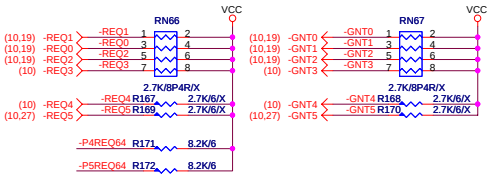
IDSEL(A24)

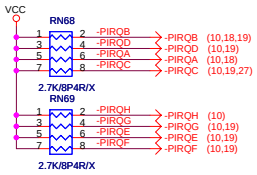
(A)

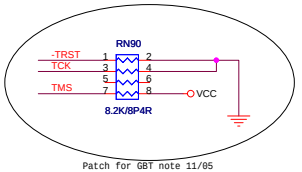


IDSEL(A25)

(B)







AXPER

Title	PCI SLOT 4, 5
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SATA

TC1~TC8 value change to 0.01U/6/X/50V from 0.01U/4/X/25V to fit footprint 11/30

Width & Space --> 20:5:10:5:20

PRIMARY IDE

SECONDARY IDE

SIRQ

FRONT SIDE USB1,2

FUSEVCC,GAMEVCC

NEAR F_USB1 CONNECTOR

NEAR F_USB2 CONNECTOR

AXPER

Title	IDE, F_USB , SATA	
Size: Custom	Document Number: XP-K8U-X	Rev: 1.0
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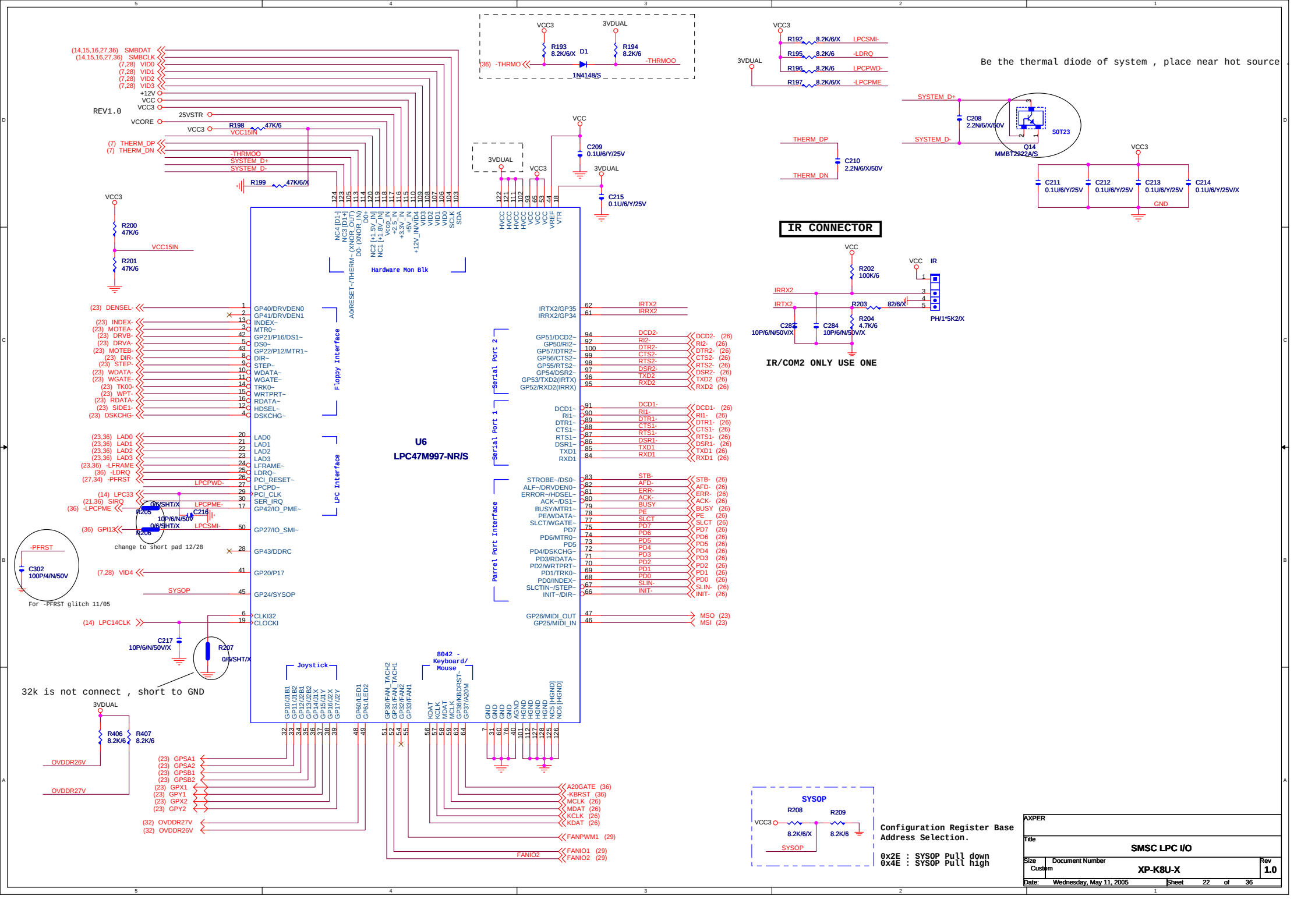
Be the thermal diode of system , place near hot source .
REV1.0
U6
LPC47M997-NR/S
Hardware Mon Blk
Floppy Interface
LPC Interface
Serial Port 2
Serial Port 1
Parrel Port Interface
Joystick
8042 - Keyboard/ Mouse
IR CONNECTOR
IR/COM2 ONLY USE ONE
change to short pad 12/28
For -PFRST glitch 11/05
32k is not connect , short to GND
SYSOP
Configuration Register Base Address Selection.
0x2E : SYSOP Pull down
0x4E : SYSOP Pull high
SMSC LPC I/O
XP-K8U-X
AXPER
Custom
1.0
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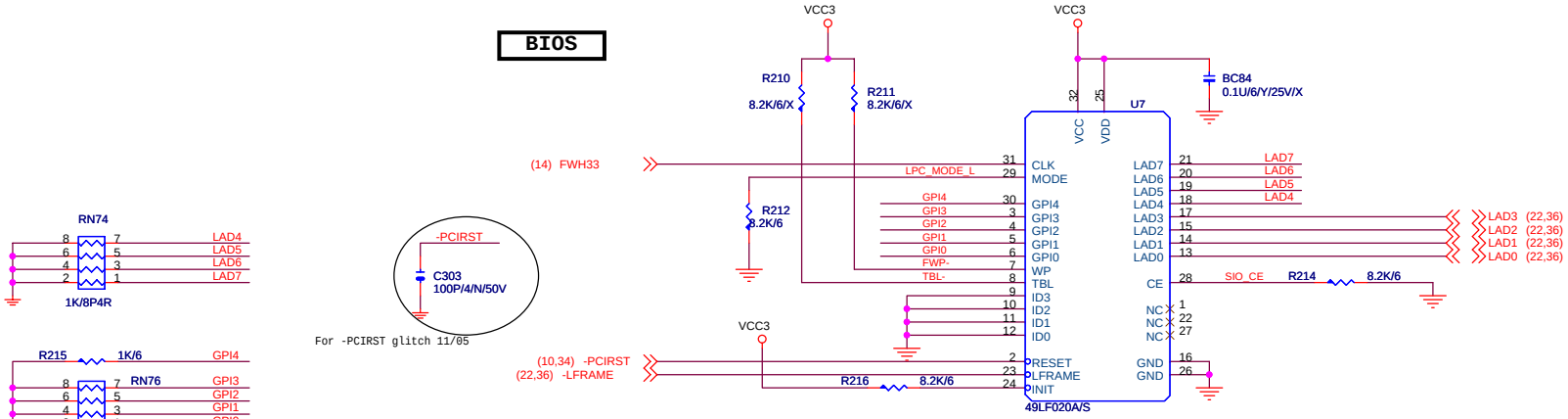
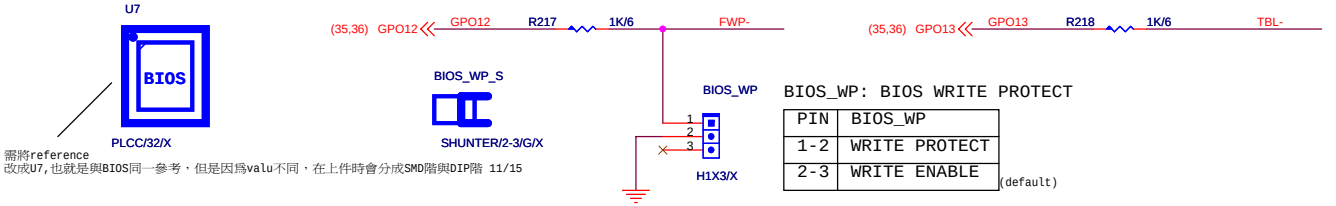
BIOS



NOTE: INIT and RESET have the same function internally.

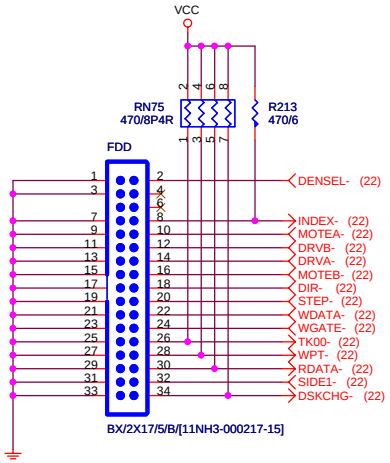
REV 1.0



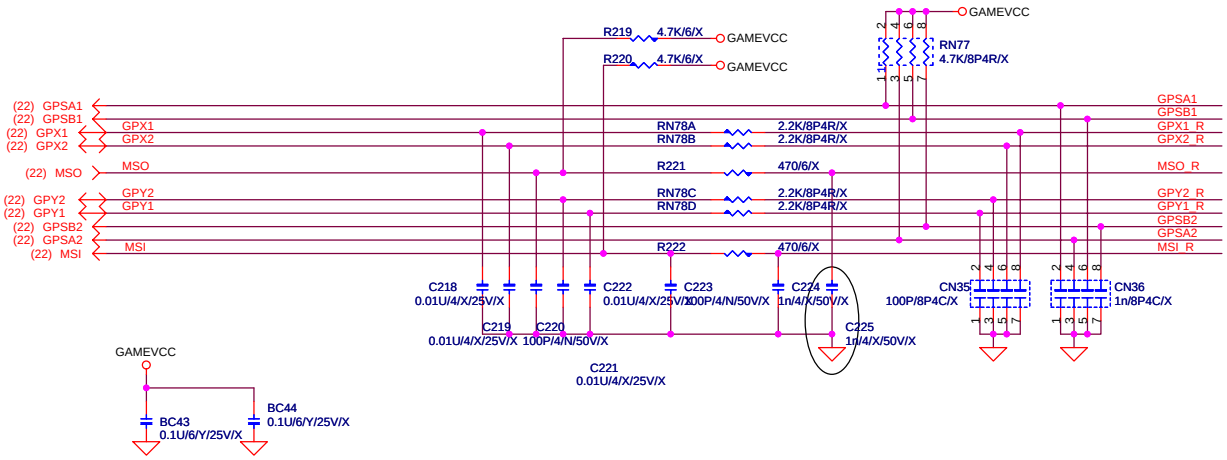
BIOS_WP: BIOS WRITE PROTECT

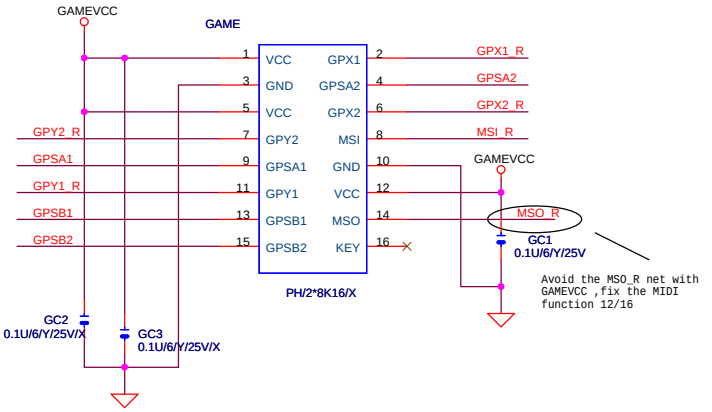
PIN	BIOS_WP
1-2	WRITE PROTECT
2-3	WRITE ENABLE (default)

FDD



GAME PORT





AXPER

Title: BIOS , FDD , GAME PORT

Size	Document Number	Rev
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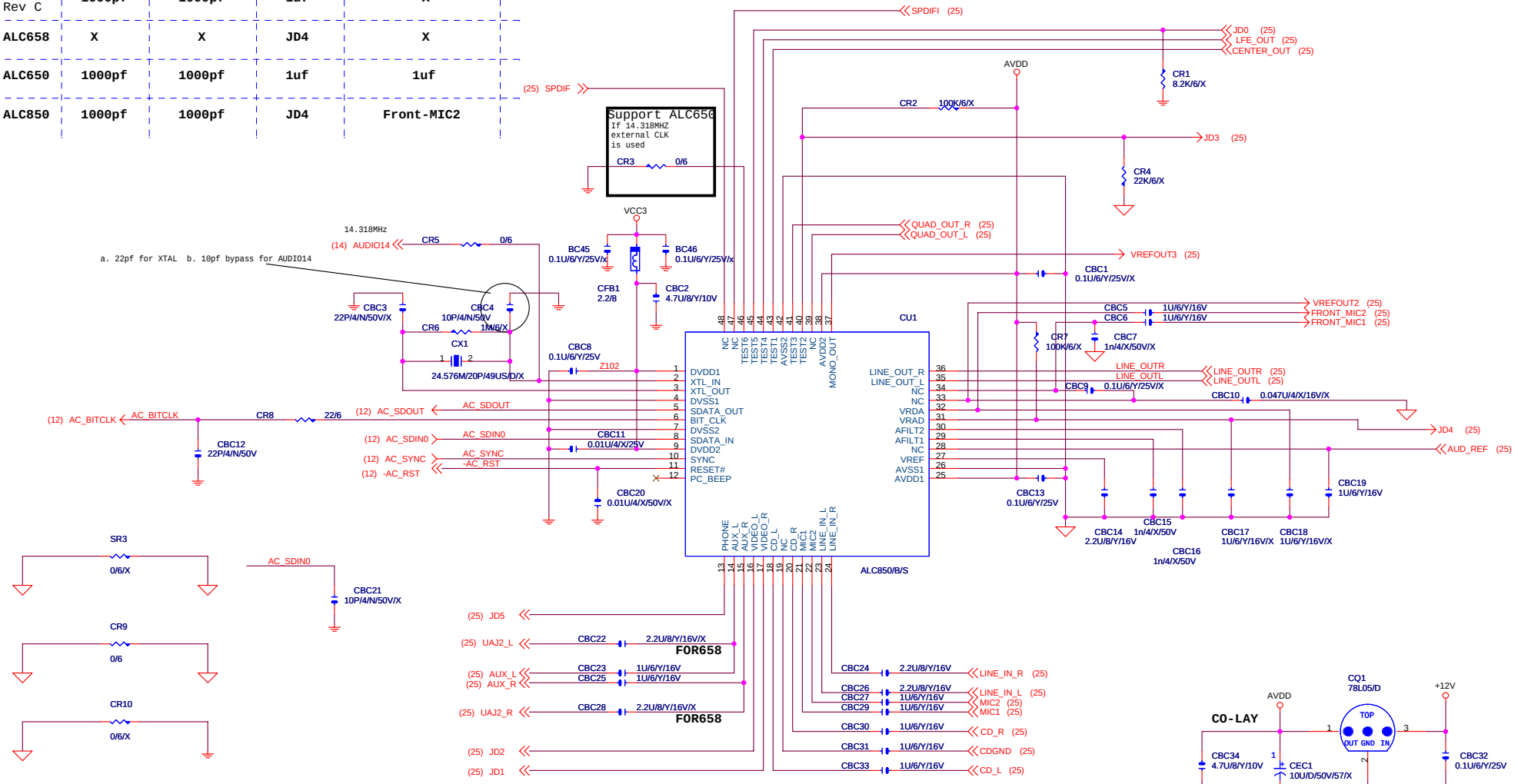
Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf
ALC850	1000pf	1000pf	JD4	Front-MIC2



Arrangement of Jack detection Pin:

	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)	Pin-13(JD5)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN			
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed	
ALC850	for MIC-IN	for Front Pannel OUT	for Front Pannel IN	for FRONT-OUT	for LINE-IN	for SurrBack Out

AXPER	
Title	AUDIO AC97
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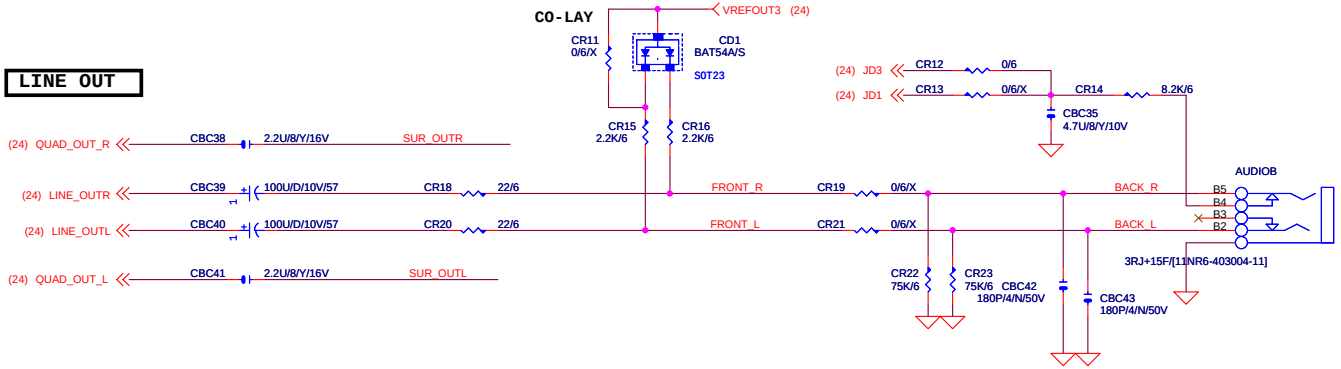
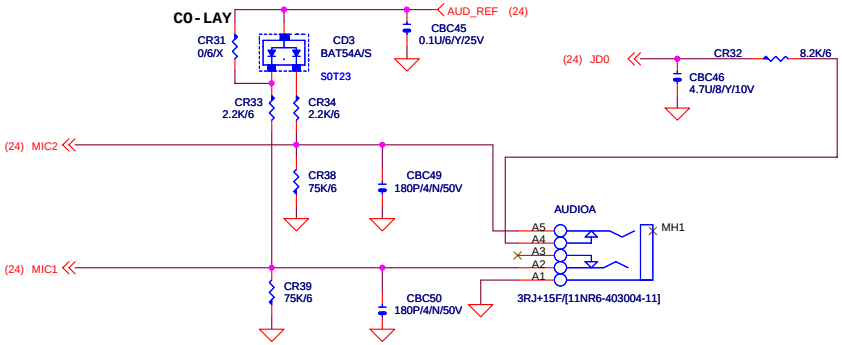
LINE OUT

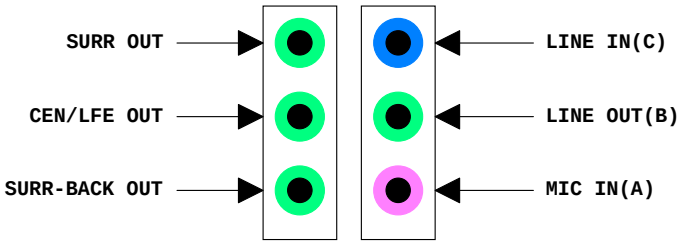


MIC



MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓與CR43,CR32 並聯求出阻抗)
7.1k ohm>R>2.3k ohm===>microphone in
R<2.3k ohm or R>7.1k ohm===>unknown device

MICROPHONE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

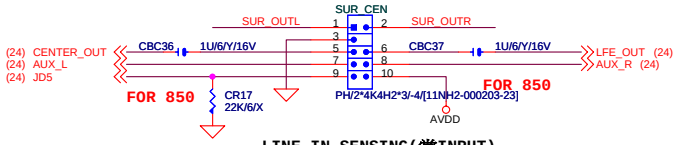


SURR KIT for 850 AUDIO PANEL

2x5 header for 850
For 850 if JD5 = low AUX-In is configued as input
For 850 if JD5 = high AUX-In is configued as output, Surr-Back out

FOR SUPPORT 6 CHANNEL, SURROUND OUT

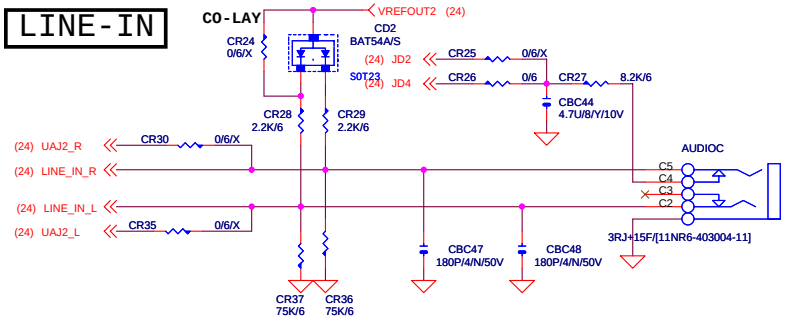
CENTER OUT,LOW FREQUENCY EFFECT OUT



LINE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

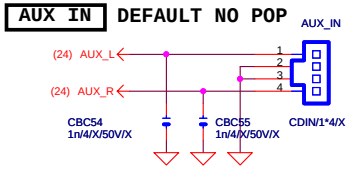
LINE IN SENSING(當INPUT)
swing of input signal>-40dbv(10mv)===>line in device active
swing of input signal<-40dbv(10mv)===>unknown line in device

LINE-IN

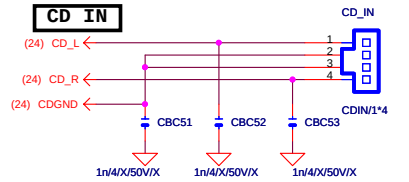


AUX IN

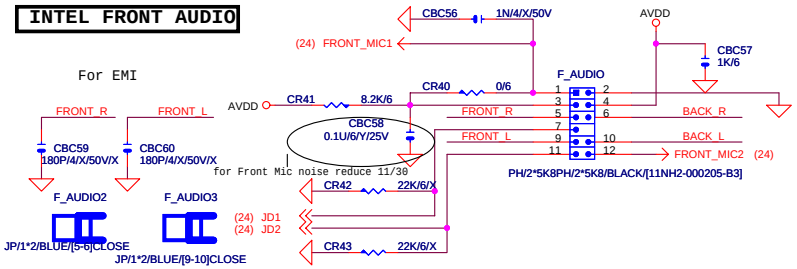
DEFAULT NO POP



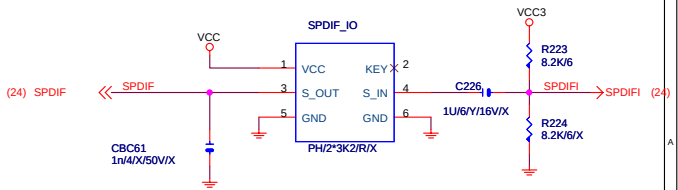
CD IN



INTEL FRONT AUDIO



SPDIF



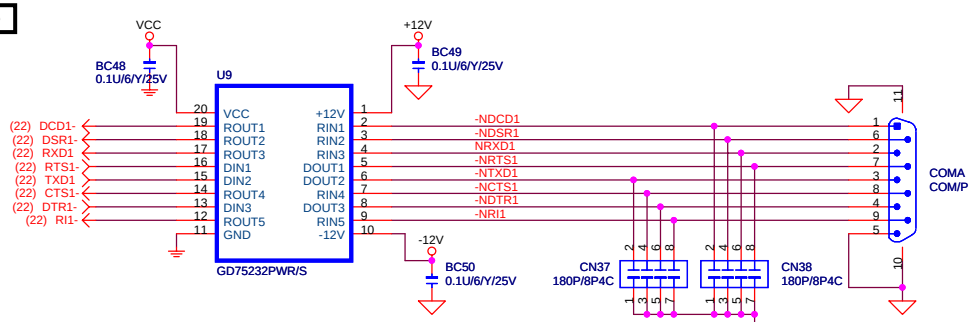
AXPER

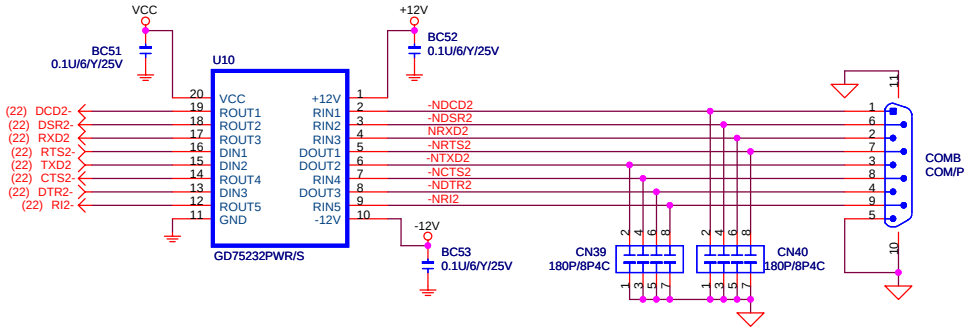
Title: AUDIO OUTPUT,GAME PORT

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

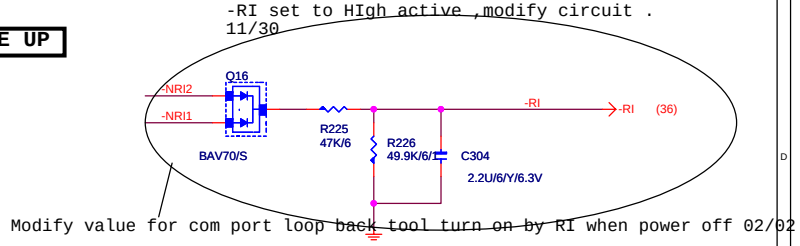
Date: Wednesday, May 11, 2005 | Sheet 25 of 36

COM A,B

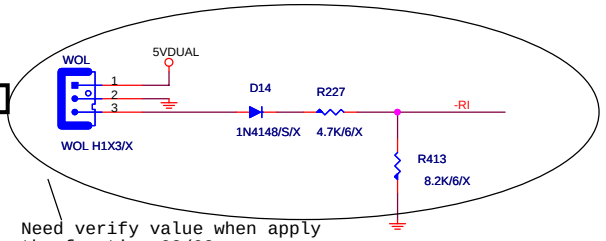




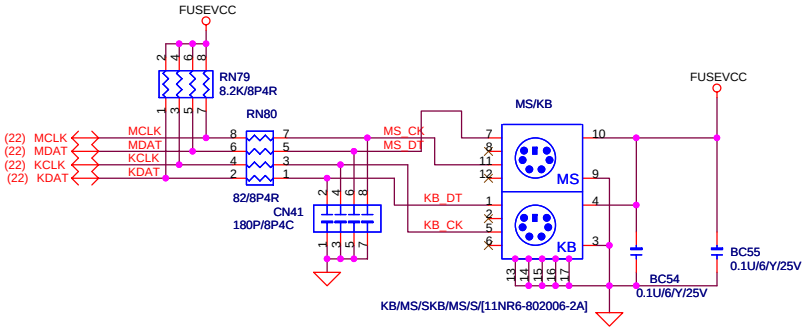
WAKE UP



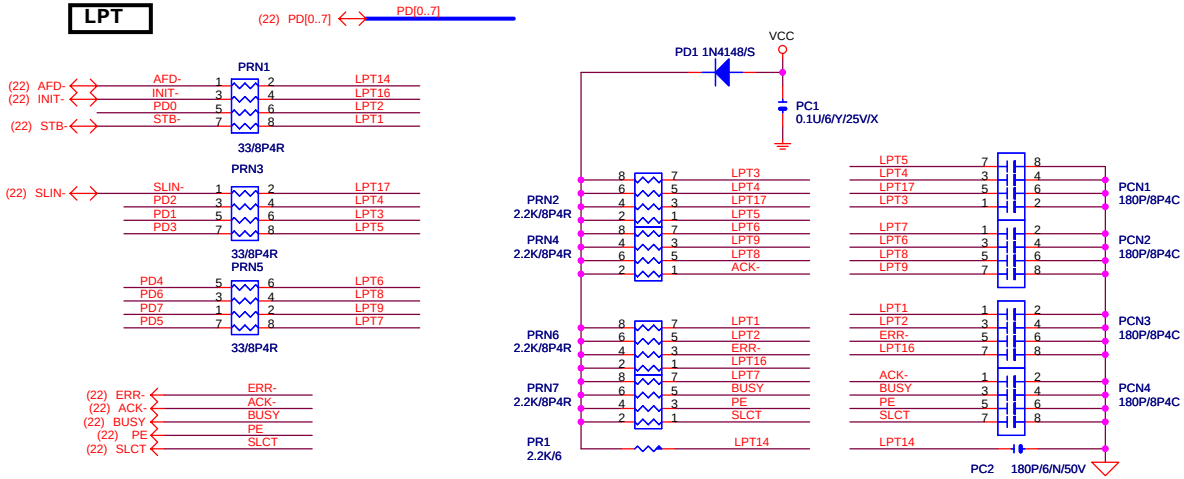
WAKE ON LAN



KBC/PS2



LPT



AXPER

Title	COM,PRT,KB/MS,IR	
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Date: Wednesday, May 11, 2005	Sheet 26 of 36	

	10/100 8100C	Giga 8110S	Giga 8110SB
AVDDH	N/A	3.3V	3.3V
V_12P	2.5V	N/A	3.3V
AVDDL	3.3V	2.5V	2.5V
V_DAC	N/A	2.5V	2.5V
DVDD	2.5V	1.8V	1.3V
DVDD_A	2.5V	1.8V	1.3V

		Dual Color LED	
	Yellow	Green	Orange
10Mb	---	OFF	OFF
100Mb	---	ON	OFF
1Gb	---	OFF	ON
Link	ON	---	---
Active	Blink	---	---

POWER DECOUPLING CAP

3VDUAL — LEC1 100U/D/10V/57; LBC1–LBC7 1U/6Y/16V

07/23

LU1: 100M:RTL8100C 1G:RTL8110S

AD[0..31] AD[0..31] (10,19,20)

25M/20p/20ohm/49US/D; LX1; LC1 27P/4/N/50V; LC2 27P/4/N/50V; LC3 0.1U/4/Y/16V; LR4 5.9K/6/1

LR1 5.6K/6 3VDUAL — L_EESK, L_EEDI, L_EEDO, L_EECS

LR2 8.2K/6/X 3VDUAL

LR2: 93C46:N/A 93C56:8.2K/6

LR4: 100M:5.9K/6/1 1G:2.49K/6/1

RSET, DVDD_A, CTRL18, XTAL2, XTAL1, AVDDH, YELLOW-, DVDD, GREEN-, L_10M-, ORANGE-, DVDD, ADD, ADD1

LU1 RTL8100C/S

MDI0+, MDI0-, AVDDL, VSS, MDI1+, MDI1-, AVDDL, CTRL25, VSS, AVDDH, HSDAC+, HSDAC-, VSS, MDI2+, MDI2-, AVDDL, VSS, MDI3+, MDI3-, AVDDL, VSSPST, GND, ISOLATEB, VDD18, INTAB, VDD33, RSTB, CLK, GNTB, REQB, PMEB, VDD18, AD31, AD30, GND, AD29, AD28, VSSPST

AD2, VSSPST, GND, VDD18, AD3, AD4, AD5, AD6, VDD33, AD7, CBE0B, VSSPST, AD8, AD9, M66EN, AD10, AD11, AD12, VDD33, AD13, AD14, VSSPST, GND, AD15, VDD18, CBE1B, PAR, SERRB, SMBDATA, GND, SMBCLK, VDD33, PERRB, STOPB, DEVSELB, TRDYB, VSSPST, CLKRUNB

AD27, AD26, VDD33, AD25, AD24, CBE3B, VDD18, IDSEL, AD23, GND, AD22, AD21, VSSPST, GND, AD20, VDD18, AD19, VDD33, AD18, AD17, AD16, CBE2B, FRAMEB, GND, IRDYB, VDD18, DVDD

-PFRST; LC4 100P/6/N/50V; LR5 0/6/X; **LR5: 100M:N/A 8110SB:0/6**

VCC, LR10 1K/6, ISOLATE, DVDD; LR11 15K/6

(10,19,20) -PIRQC; 3VDUAL; (22,34) -PFRST; (14) LANCLK; (10,20) -GNT5; (10,20) -REQ5; (10,18,19,20) -PCIPME

-CBE0 (10,19,20); -CBE1 (10,19,20); PAR (10,19,20); -SERR (10,19,20); LR12 22/6/X; LR13 22/6/X; SMBDAT (14,15,16,22,36); SMBCLK (14,15,16,22,36); -PERR (19,20); -STOP (10,19,20); -DEVSEL (10,19,20); -TRDY (10,19,20); LR14 8.2K/6/X

07/23

IDESEL 26
-REQ5/-GNT(5)
-PIRQC

-IRDY (10,19,20); -FRAME (10,19,20); -CBE2 (10,19,20); (10,19,20) -CBE3 -CBE3

LAN EEPROM

LU2 AT93C46/S — L_EECS, L_EESK, L_EEDI, L_EEDO; 3VDUAL; LBC25 0.1U/4/Y/16V

LR24~LR27: 100M:N/A 1G:49.9/6/1

LBC32, LBC33: 100M:N/A 1G:0.01U/6

LFB1: 100M:N/A 1G:0/8

3VDUAL — LFB1 0/8/X — AVDDH — LR3 0/8/X — V_12P — LFB2 0/8 — DVDD

LBC8 0.1U/6/Y/25V/X; LBC9 0.1U/6/Y/25V/X; LBC10 0.1U/6/Y/25; LBC11 0.1U/6/Y/25; LBC12 0.1U/6/Y/25; LBC13 0.1U/6/Y/25; LBC14 0.1U/6/Y/25

LR16: 100M:N/A 8110SB:0/8

LFB2: 100M:0/8 1G:N/A

LFB3: 100M:0/8 1G:N/A

AVDDL — LFB3 0/8 — LBC15 0.1U/6/Y/25; LBC16 0.1U/6/Y/25; LBC17 0.1U/6/Y/25; LBC18 0.1U/6/Y/25; LEC2 100U/D/10V/57

LQ1: 100M:N/A 2SB1132

LQ1 2SB1132/SOT89/X; CTRL25; 3VDUAL; AVDDL

For : Gigabyte LAN

LQ3: 100M:2N2907A 1G:N/A

CTRL_DVDD — LR6 0/6 CTRL25 — LQ3 2907/SOT23

DVDD: 100M:2.5V 1G:1.8V

DVDD — LR8 0/6 DVDD_A — LEC3 100U/D/10V/57; LBC20 0.1U/6/Y/25; LBC21 0.1U/6/Y/25; LBC22 0.1U/6/Y/25; LBC23 0.1U/6/Y/25; LBC24 0.1U/6/Y/25

LR7 100/6/1/X; LQ2 AMS1117/SOT223/X; CTRL18; LR9 44.2/6/1/X; 3VDUAL; LBC19 0.1U/6/Y/25V/X

REAR USBX2

FUSEVCC — EC21 100U/D/10V/57 — R228 47K/6 — R229 56K/6 — -USB_OC3 (10)

Close to USB port

R230 0/6/X; R231 0/6/X; SR4 9/6/SHT/X; R232 0/6/X; R233 0/6/X

07/28

FOR EMI

(10) USB6, (10) -USB6, (10) USB4, (10) -USB4 — RN81 0/8P4R/SHT/X — RUSB6, -RUSB6, RUSB4, -RUSB4

L3; RN82 15K/8P4R; OD6560T/X

NEAR USB_LAN CONNECTOR

U11 9701/X — VOUTVOUT, GND, VIN, CE — FUSEVCC; VCC; ATXPWROK — ATXPWROK (7,21,31,32,33,34); C227 0.1U/4/Y/16V/X

In sloder side 11/04

SLU1 SLVU2.8-4/S/X; SLU2 SLVU2.8-4/S/X

Spacing : at least 50 mils between each differential pair

MDI0+, MDI0-, MDI1+, MDI1-, MDI2+, MDI2-, MDI3+, MDI3-

LBC26: 100M:N/A 1G:N/A

LR15: 100M:N/A 1G:0/6

AVDDL — LR15 0/6/X — LBC26 0.1U/6/Y/25V/X

USB_LAN — L1–L10; UP; DOWN; USB/LAN/100

D1 L_YEL-; D2 YELLOW — LR16 150/6; D3 GREEN-; D4 ORANGE- — LR17 150/6

U1 FUSEVCC; U2 -RUSB4; U3 RUSB4; U4; U5; U6 -RUSB6; U7 RUSB6; U8

3VDUAL — LFB4 0/8 — For EMI — LBC27 0.1U/6/Y/25V

For 8100C

YELLOW- LR19 0/6 L_YEL-

LR20 49.9/6/1; LR21 49.9/6/1; LR22 49.9/6/1; LR23 49.9/6/1; LR24 49.9/6/1/X; LR25 49.9/6/1/X; LR26 49.9/6/1/X; LR27 49.9/6/1/X

VCC25 — LR18 0/6/X — LBC28 0.1U/6/Y/25V/X

LBC29 0.1U/6/Y/25V/X — **FOR EMI**

LBC25: 100M:0.1U/6 1G:0.01U/6

LBC30 0.01U/6/X/50V; LBC31 0.01U/6/X/50V; LBC32 0.01U/6/X/50V/X; LBC33 0.01U/6/X/50V/X

FOR 1G:P35-152-19W9 11NR6-702009-01

FOR 100M:P35-152-11Z9 11NR6-702010-01

For 8110S

YELLOW- LR28 0/6/X YELLOW; L_10M- D2 1N4148/S/X L_YEL-; GREEN-; ORANGE-; D3 SOT23 BAW56/S/X

LR22, LR23, LBC26 Close to Lan Chip
Realtek suggestion (TX+, TX-).

LR24, LR25, LBC27 Close to Lan Chip
Realtek Suggestion (RX+, RX-).

AXPER

Title: **LAN RTL8100C**

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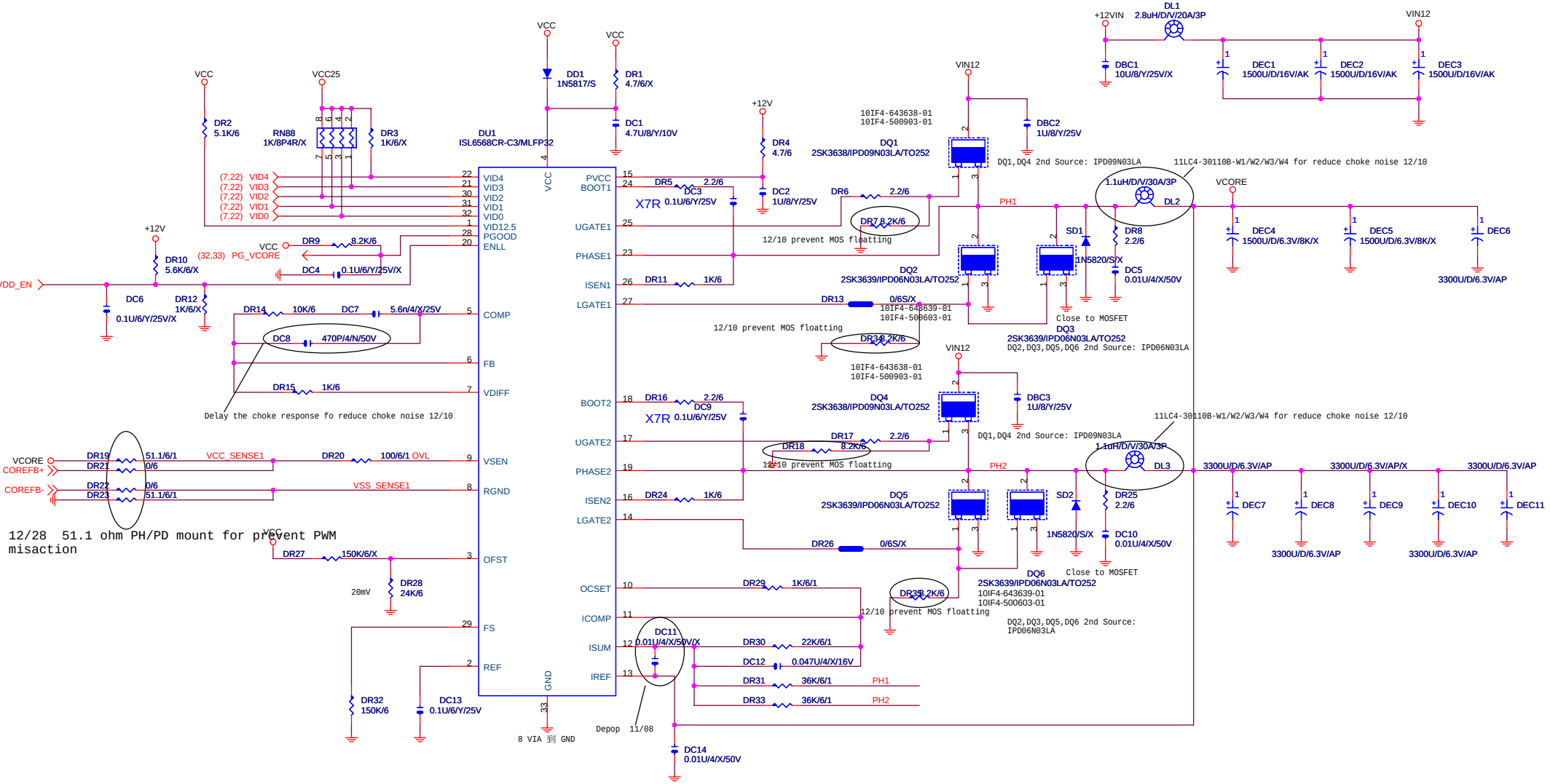
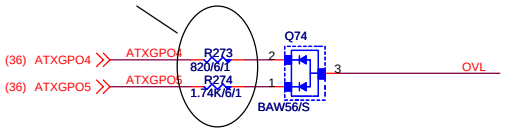
ATXGP05



12/28 51.1 ohm PH/PD mount for prevent PWM misaction

Fine tune the vaule for over voltage 12/09



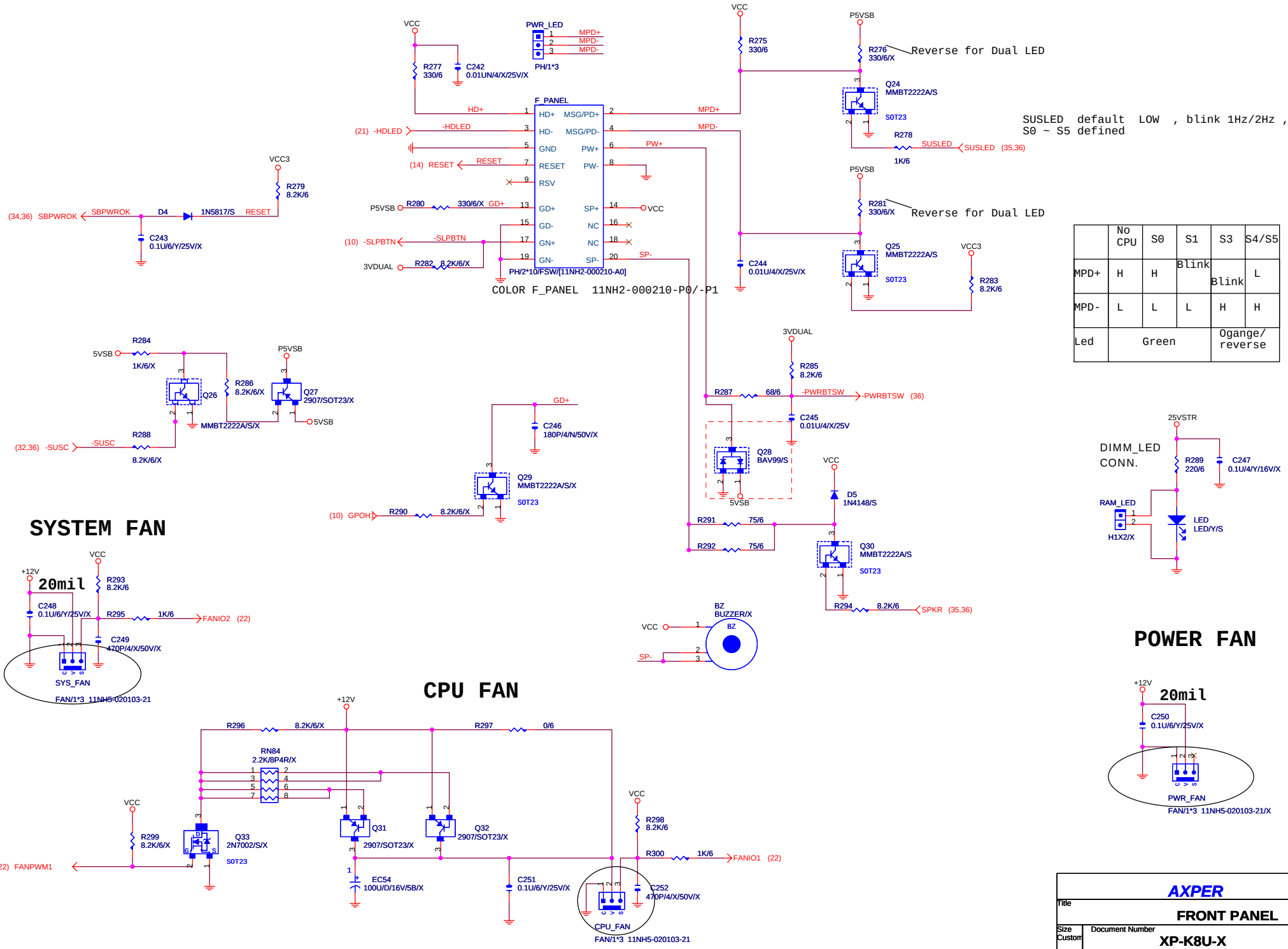
	ATXGPO4	ATXGP05
5%	HI	LO
7.5%	LO	HI
10%	LO	LO
Default	HI	HI

AXPER

Title: VCORE (PWM ISL6568CR)

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

Date: Wednesday, May 11, 2005 | Sheet 28 of 36


PWR_LED
MPD+
MPD-
MPD-
PH/1*3
F_PANEL
HD+
HD-
GND
RESET
RSV
MSG/PD+
MSG/PD-
PW+
PW-
GD+
GD-
GN+
GN-
SP+
NC
NC
SP-
PH/2*10/FSW/[11NH2-000210-A0]
COLOR F_PANEL 11NH2-000210-P0/-P1
Reverse for Dual LED
Reverse for Dual LED
SUSLED default LOW , blink 1Hz/2Hz ,
S0 ~ S5 defined
No CPU
S0
S1
S3
S4/S5
MPD+
Blink
Blink
MPD-
Led
Green
Ogange/ reverse
SYSTEM FAN
CPU FAN
POWER FAN
DIMM_LED CONN.
SYS_FAN
FAN/1*3 11NH5-020103-21
CPU_FAN
FAN/1*3 11NH5-020103-21
PWR_FAN
FAN/1*3 11NH5-020103-21/X
AXPER
FRONT PANEL
XP-K8U-X
1.0
Wednesday, May 11, 2005
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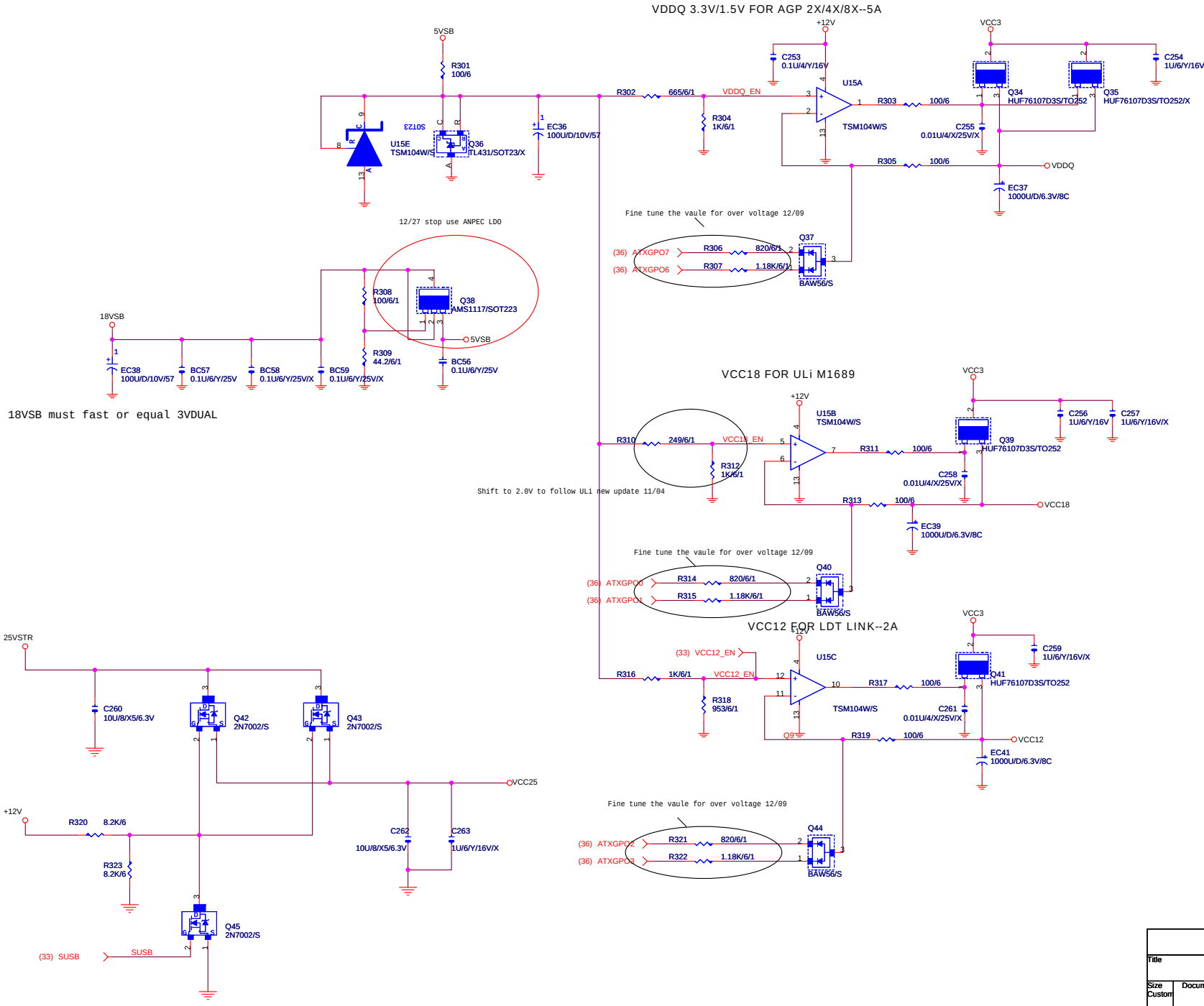

AXPER

Title: VCC12,VCC18,VCC25,VDDQ

Size: Custom | Document Number: XP-K8U-X | Rev: 1.0

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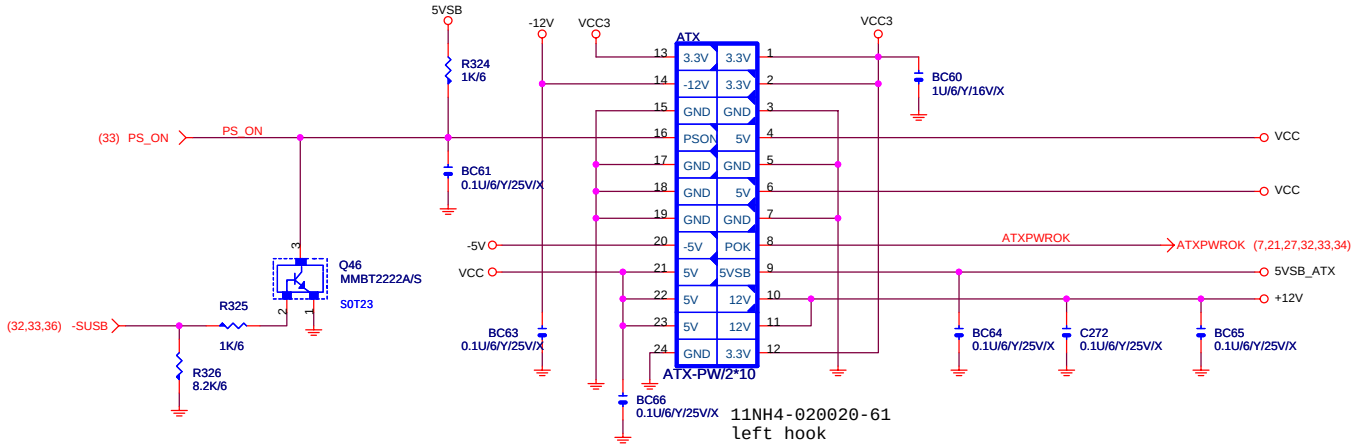
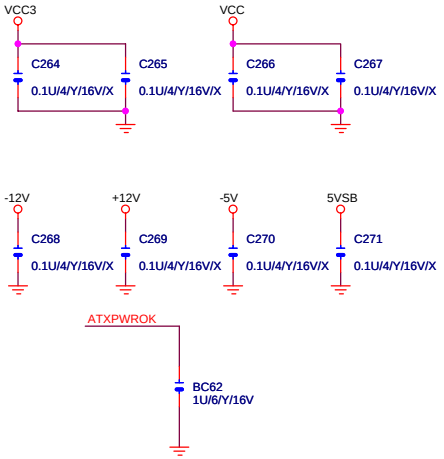
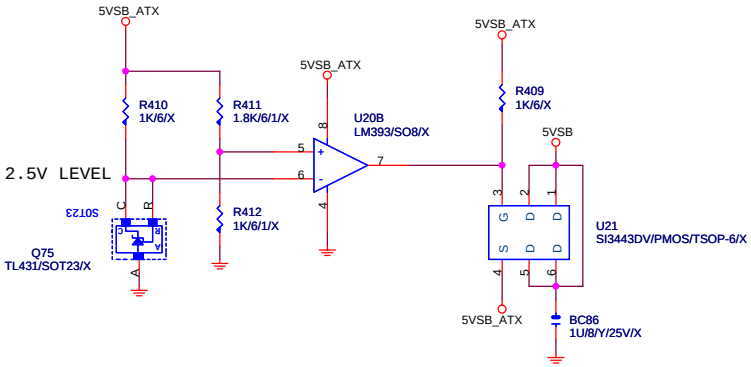
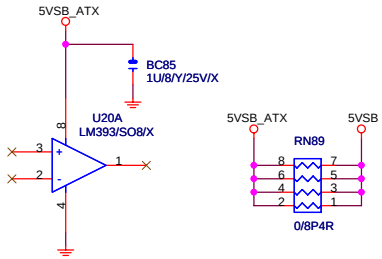
ATX CONN, DC POWER

ATX POWER CONNECTOR

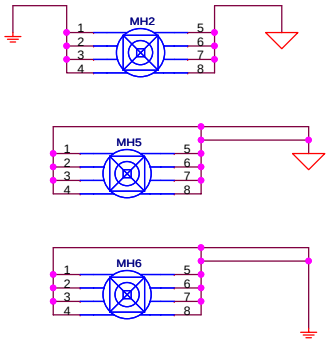






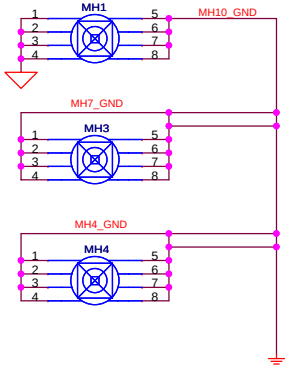


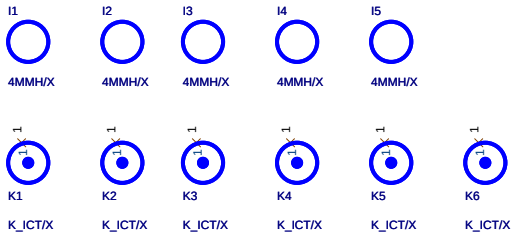
NOTE: MH2 is placed near audio.



LAYOUT: Located near PS/2 ports and connects all I/O port CGND's

ATX-12V CONNECTOR





AXPER		
Title	ATX, DC POWER	
Size: Custom	Document Number: XP-K8U-X	Rev: 1.0
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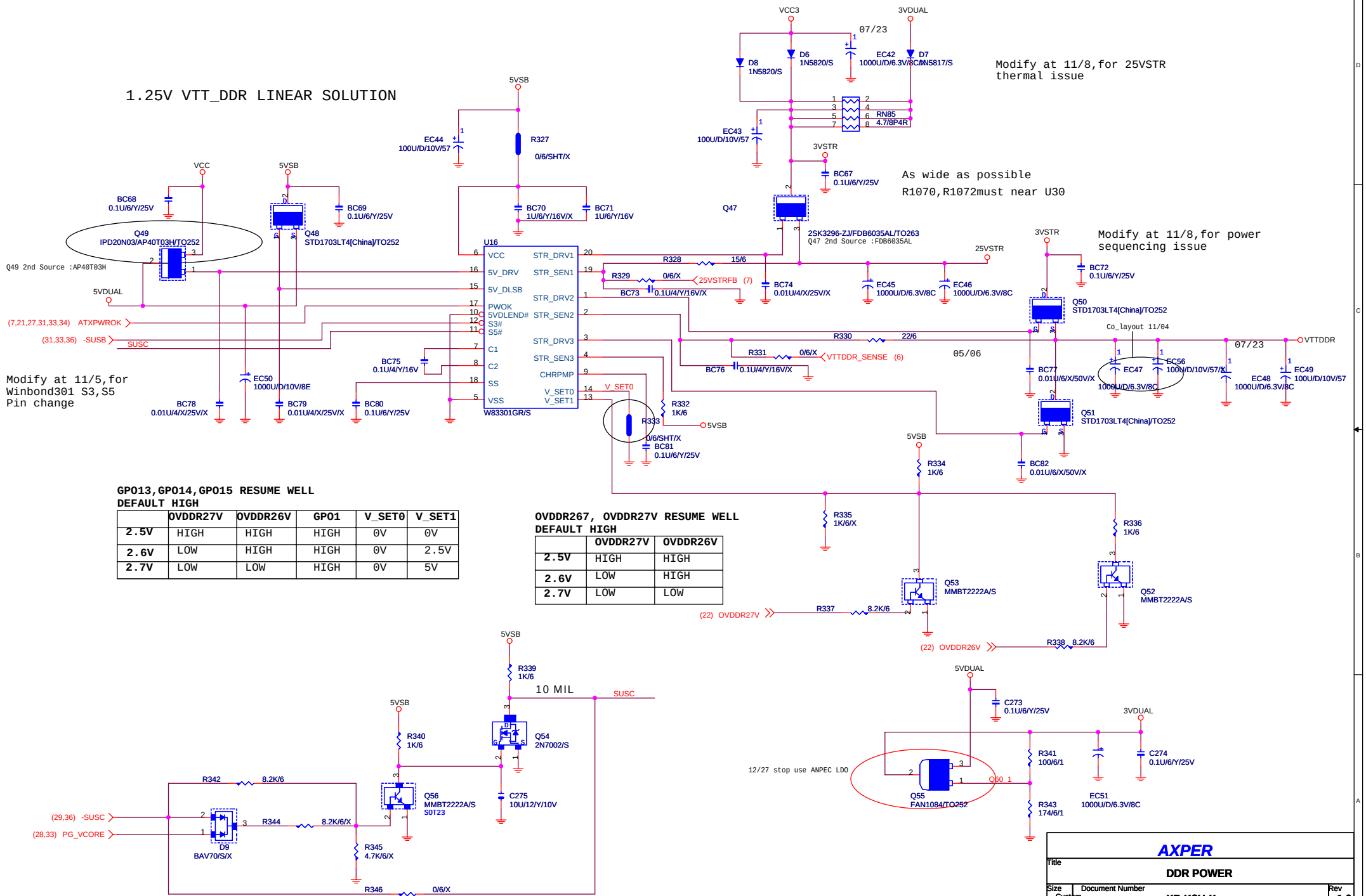
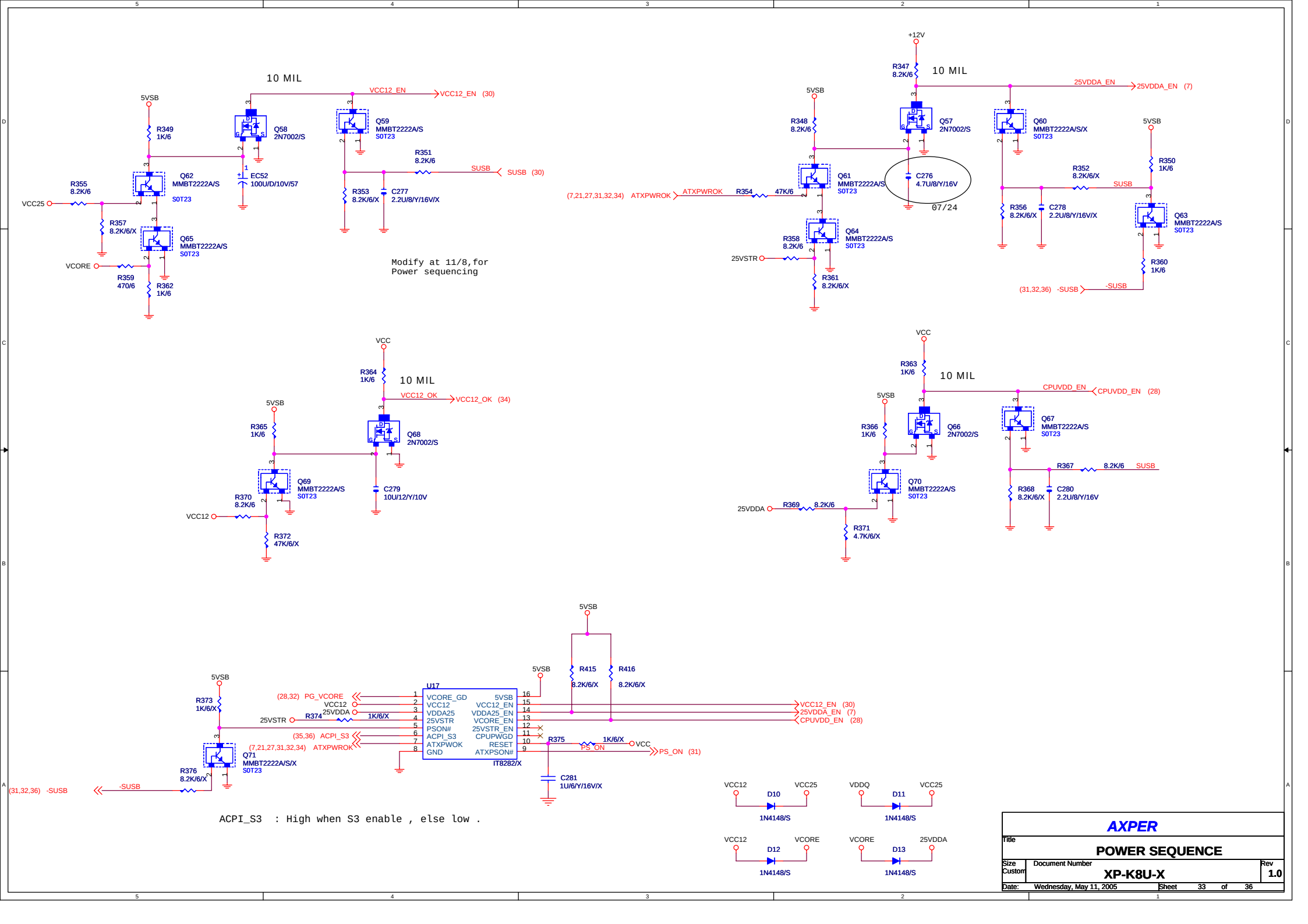


GP013,GP014,GP015 RESUME WELL DEFAULT HIGH

	OVDDR27V	OVDDR26V	GPO1	V_SET0	V_SET1
2.5V	HIGH	HIGH	HIGH	0V	0V
2.6V	LOW	HIGH	HIGH	0V	2.5V
2.7V	LOW	LOW	HIGH	0V	5V

OVDDR267, OVDDR27V RESUME WELL DEFAULT HIGH

	OVDDR27V	OVDDR26V
2.5V	HIGH	HIGH
2.6V	LOW	HIGH
2.7V	LOW	LOW


10 MIL
5VSB
VCC12_EN
VCC12_EN (30)
R349 1K/6
Q58 2N7002/S
Q59 MMBT2222A/S S0T23
R351 8.2K/6
SUSB
SUSB (30)
R355 8.2K/6
Q62 MMBT2222A/S S0T23
EC52 100U/D/10V/57
R353 8.2K/6/X
C277 2.2U/8/Y/16V/X
VCC25
R357 8.2K/6/X
Q65 MMBT2222A/S S0T23
VCORE
R359 470/6
R362 1K/6
Modify at 11/8,for
Power sequencing
+12V
R347 8.2K/6
10 MIL
25VDDA_EN
25VDDA_EN (7)
5VSB
R348 8.2K/6
Q57 2N7002/S
Q60 MMBT2222A/S/X S0T23
Q61 MMBT2222A/S S0T23
C276 4.7U/8/Y/16V
07/24
R352 8.2K/6/X
SUSB
R350 1K/6
(7,21,27,31,32,34) ATXPWROK
ATXPWROK
R354 47K/6
R356 8.2K/6/X
C278 2.2U/8/Y/16V/X
Q63 MMBT2222A/S S0T23
R358 8.2K/6
Q64 MMBT2222A/S S0T23
25VSTR
R361 8.2K/6/X
R360 1K/6
(31,32,36) -SUSB
-SUSB
VCC
R364 1K/6
10 MIL
VCC12_OK
VCC12_OK (34)
5VSB
R365 1K/6
Q68 2N7002/S
Q69 MMBT2222A/S S0T23
C279 10U/12/Y/10V
R370 8.2K/6
VCC12
R372 47K/6/X
VCC
R363 1K/6
10 MIL
CPUVDD_EN
CPUVDD_EN (28)
5VSB
R366 1K/6
Q66 2N7002/S
Q67 MMBT2222A/S S0T23
R367 8.2K/6 SUSB
Q70 MMBT2222A/S S0T23
25VDDA
R369 8.2K/6
R368 8.2K/6/X
C280 2.2U/8/Y/16V
R371 4.7K/6/X
5VSB
R373 1K/6/X
U17
(28,32) PG_VCORE
VCC12
25VDDA
R374 1K/6/X
25VSTR
(35,36) ACPI_S3
(7,21,27,31,32,34) ATXPWROK
VCORE_GD
VCC12
VDDA25
25VSTR
PSON#
ACPI_S3
ATXPWOK
GND
5VSB
VCC12_EN
VDDA25_EN
VCORE_EN
25VSTR_EN
CPUPWGD
RESET
ATXPSON#
IT8282/X
5VSB
R415 8.2K/6/X
R416 8.2K/6/X
VCC12_EN (30)
25VDDA_EN (7)
CPUVDD_EN (28)
R375 1K/6/X
PS_ON
VCC
PS_ON (31)
C281 1U/6/Y/16V/X
Q71 MMBT2222A/S/X S0T23
R376 8.2K/6/X
(31,32,36) -SUSB
-SUSB
ACPI_S3 : High when S3 enable , else low .
VCC12
VCC25
D10
1N4148/S
VDDQ
VCC25
D11
1N4148/S
VCC12
VCORE
D12
1N4148/S
VCORE
25VDDA
D13
1N4148/S
AXPER
Title
POWER SEQUENCE
Size
Custom
Document Number
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Rev
1.0
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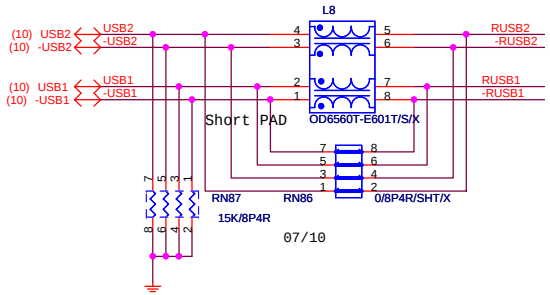
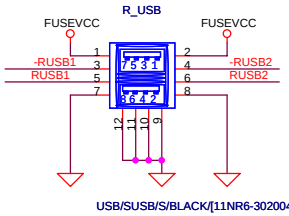
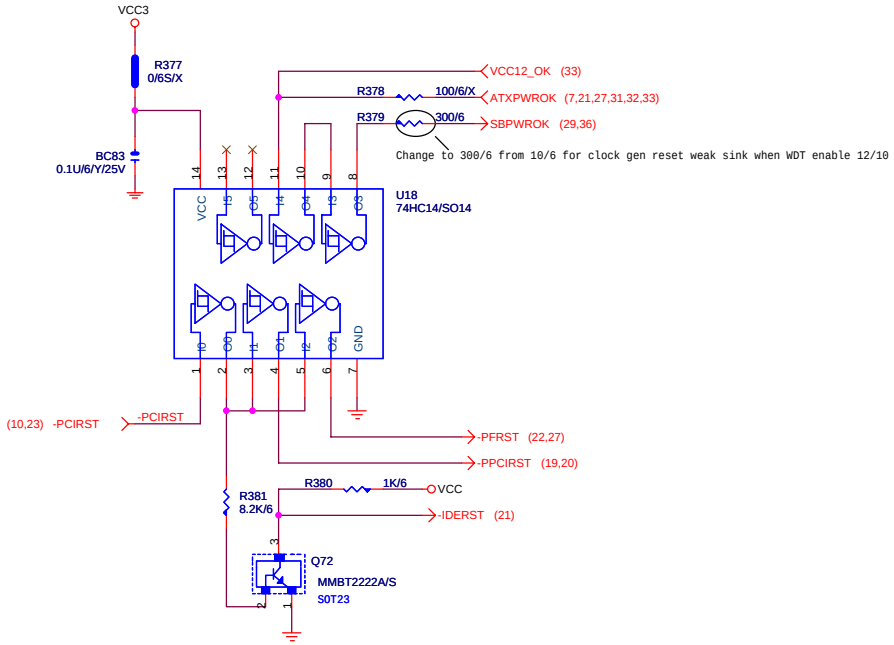
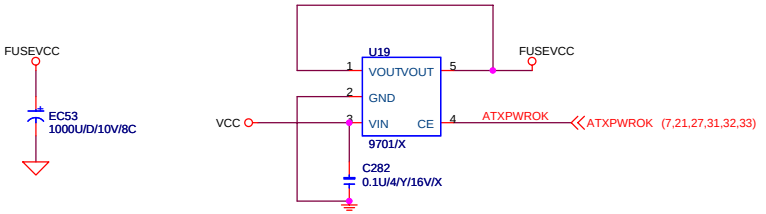
REAR USBX2







NEAR R_USB CONNECTOR



AXPER

Title: REAR USB & RESET

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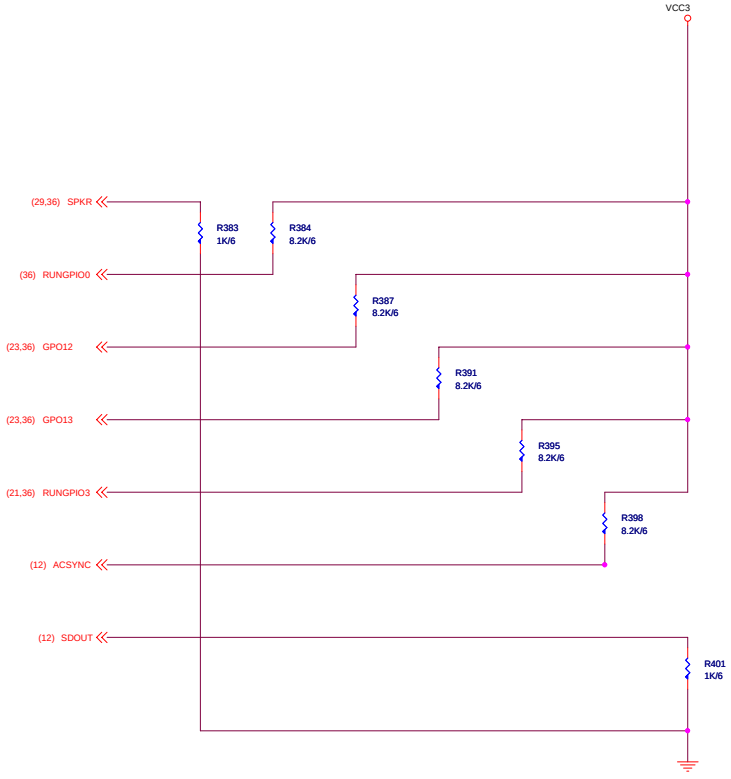
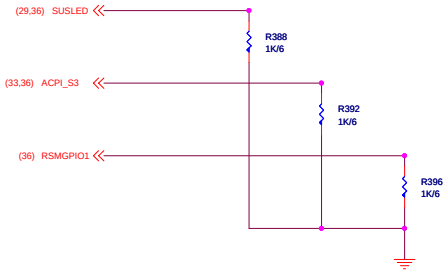
HW SETTING

The HW setting fixed for MP , remove the unuse resistor footprint





H:8.2K L:1K			
R388 SUSLED	(Default)	L	Normal Operation Mode
		H	Enable 32K Test Mode to select external 32K clock source from 32K Clock Test input pin ACPWR
R383 SPKR	(Default)	L	Normal Operation Mode
		H	Enable Debug Mode to route requests of internal high-speed PCI devices externally and replace requests form PCI slots
R384 RUNGPIO0		L	33MHz reference input for HTT PHY PLL
	(Default)	H	66MHz reference input for HTT PHY PLL
R387 GPO12		L	Enable Simulatio Mode to reduce reset active duration for pattern simulation
	(Default)	H	Normal Operation Mode
R391 GPO13		L	Enable Tester Mode to bypass PLL clock and select the external clock source form input pad PCICLK
	(Default)	H	Normal Operation Mode
R395 RUNGPIO3		L	External PCI bus type select to BUS0
	(Default)	H	External PCI bus type select to BUSN

H:8.2K L:1K				
R398 ACSYNC	R401 SDOUT	L	L	On chip core PLL output clock setting 33MHZ
		L	H	66MHZ
		H	L	133MHZ (Default)
		H	H	33MHZ
R396 RSMGPIO1	R392 ACPI_S3	L	L	HTT Unit ID of on-chip host bridge is assigned as 0 (Default)
		L	H	HTT Unit ID of on-chip host bridge is assigned as 2
		H	L	HTT Unit ID of on-chip host bridge is assigned as 3
		H	H	HTT Unit ID of on-chip host bridge is assigned as 4
RSMGPIO2	Look page 11			

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H/W SETTING		
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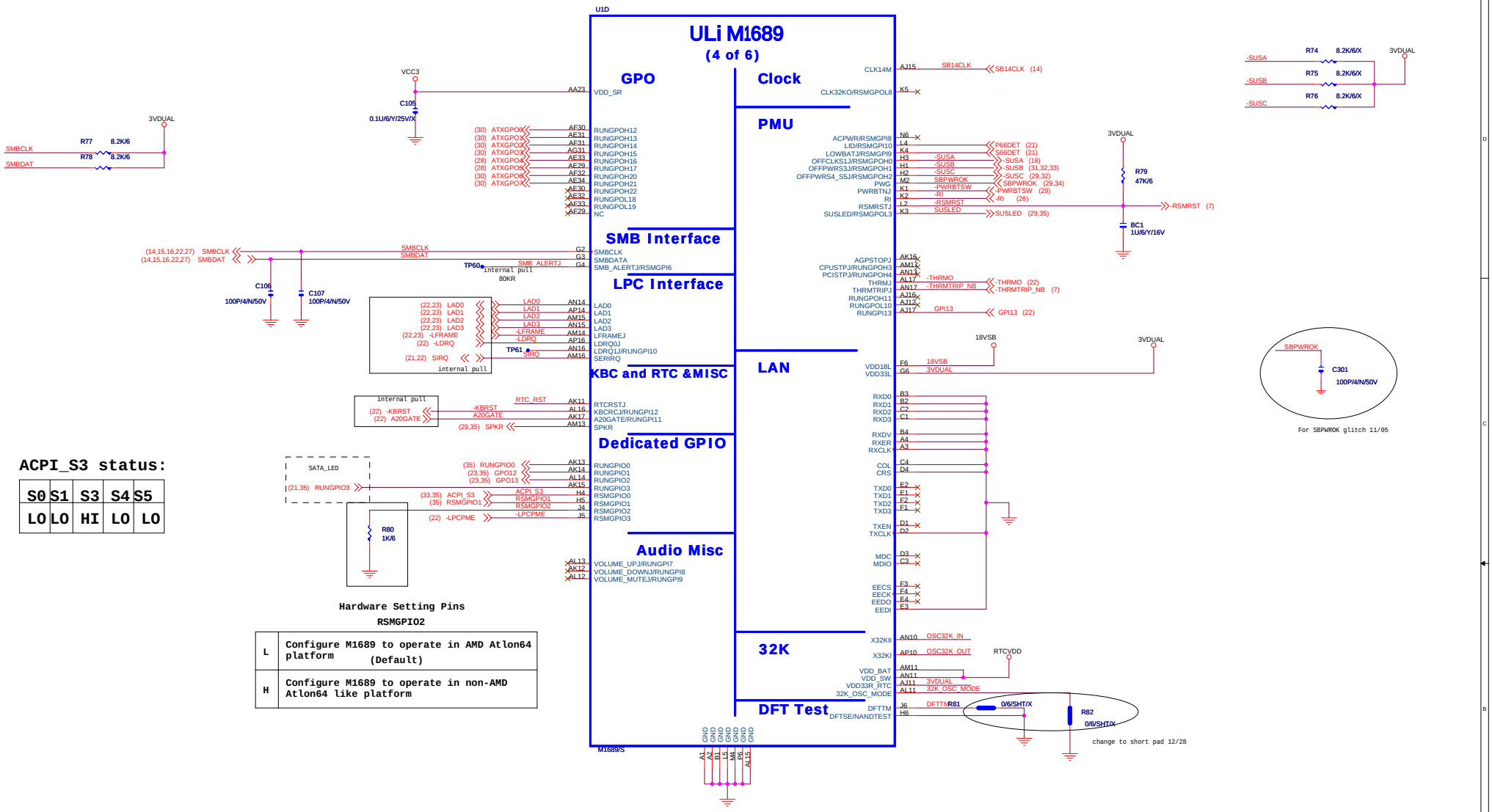
U1D
ULi M1689
(4 of 6)
GPO
Clock
PMU
SMB Interface
LPC Interface
KBC and RTC &MISC
LAN
Dedicated GPIO
Audio Misc
32K
DFT Test
M1689/S
ACPI_S3 status:
S0 S1 S3 S4 S5
LO LO HI LO LO
Hardware Setting Pins
RSMGPIO2
L Configure M1689 to operate in AMD Atlon64 platform (Default)
H Configure M1689 to operate in non-AMD Atlon64 like platform
SBPWROK
C301
100P/4/N/50V
For SBPWROK glitch 11/05
change to short pad 12/28
Use High pin socket 11/30
BATTERY
CR2032
BAT-SK/H/P
CLR_CMOS
PH/1*2/[11NH2-000102-03]
20mil
Add short wire 11NH2-010005-00 11/30
R86 change to 1K , C112 turn to RTCVDD plane for ac plug off drop off issue 11/30
CLR_CMOS CLEAR COMS JUMPER
1-2 Enable
2-3 Disable (Default)
AXPER
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ULI GBE & SMB
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