

P17G

Ver: 1.0

Schematics Version History Table :

Circuit Ver.	PCB Ver.	Total Page	Modified Page(s)	Date
A	A	31	Strategic derivation from 945GCT/GZT-M(5.0) for advantage-competition of the M/B	01/15/ 07
B	B	31	All Parts Cost Down in 800 piece limitation	03/17/ 07
1.0	1.0	31	Fix A3,A4 bug,畫圈圈部份	04/09/ 07

Page Title of Schematic :

Title	Page	Title	Page
Cover Sheet	1		
System Block Diagram	2		
P4 LGA775P Part A	3		
P4 LGA775P Part B	4		
P4 LGA775P Part C	5		
P4 LGA775P Part D	6		
P4 LGA775P Part E	7		
Clock Generator(CK410)	8		
I-LP(GMCH)Part A & E & F	9		
I-LP(GMCH)Part D	10		
I-LP(GMCH)Part B & C	11		
I-LP(GMCH)Part G	12		
DIMM 1/2 (DDR2 SDRAMs)	13		
PCIEX2(X1 Bandwidth)	14		
DDR & V_FSB_VTT Power	15		
PCI EXPRESS 16-PORT	16		
ICH7 Part A & D (SATA-CONNECTOR)	17		
ICH7 Part B & C (RTC)	18		
ICH7 Part E & F (POWER & GND)	19		
IDE1 Connector	20		
USB/SPI/Rear IO	21		
LPC_FDD/KB/M	22		
I/O Ports	23		
H/W Monitor	24		
Azalia Codec	25		
Audio Interface	26		
ATX Power & Front Panel	27		
LAN	28		
Vcore DC-DC	29		
MIS DC-DC(DUAL & VDDQ)	30		
PCI Slot 1&2	31		

www.teknisi-indonesia.com

DEVICE	IDSEL	INT#	REQ#	GNT#
PCI1	17	C/D/E/F	PREQ-0	PGNT-0
PCI2	18	D/E/F/G	PREQ-1	PGNT-1
PCI3	19	E/F/G/H	PREQ-2	PGNT-2
1394	20	D	PREQ-3	PGNT-3
LAN	21	E	PREQ-4	PGNT-4
EPCI1	22	A/B/C/D	PREQ-5	PGNT-5
EPCI2	23	B/C/D/A	PREQ-5	PGNT-5

PCB : 244 x 200 mm ; 4 layers

BW : 4.1GB/s @ FSB : 533MHz & Freq : 133MHz
BW : 6.4GB/s @ FSB : 800MHz & Freq : 200MHz

**INTEL
P4 Processor
PSC, Smithfield -
LGA 775 pin**



**INTEL
i945GZ/GC
1202pin FC-BGA**

BW : 10.7GB/s @ DDR2 :533/400MHz

DIMM1: DDR2 Socket 240P

DIMM2: DDR2 Socket 240P

VGA (G only)

Analog Display
RAMDAC: 333MHz
Resolutions Up To 2048x1536@75Hz

BW : 2GB/s (Support Lsoch)

USB V2.0

USB1 2 ports → **USB2 2 ports** → **USB3 2 ports** → **USB4 2 ports**

**INTEL
ICH7
652pin EBGA**

PCIEX1 (16 True)

BW : 133MB/s @ Freq : 33MHz

**PCI1 Slot 120pin @ AD17
PCI2 Slot 120pin @ AD18**

IDE1 40pin
Up to Ultra ATA/133
One IDE Channel

Azalia I/F

**Audio Codec
IDT 92HD202**

**Line in
Line out
Mic in**

LPC bus

**intel
SPI
8pin DIP**

**Super I/O
ITE8712KX-L
128pin PQFP**

SATA1 7Pin
SATA2 7pin
SATA3 7Pin
SATA4 7pin

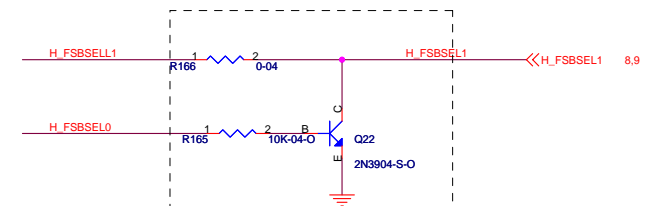
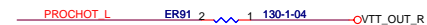
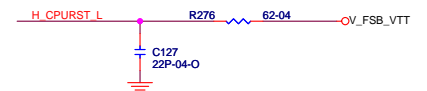
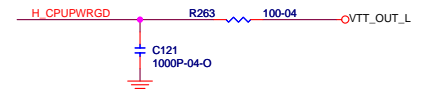
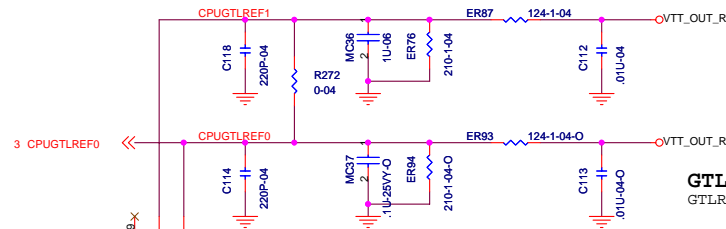
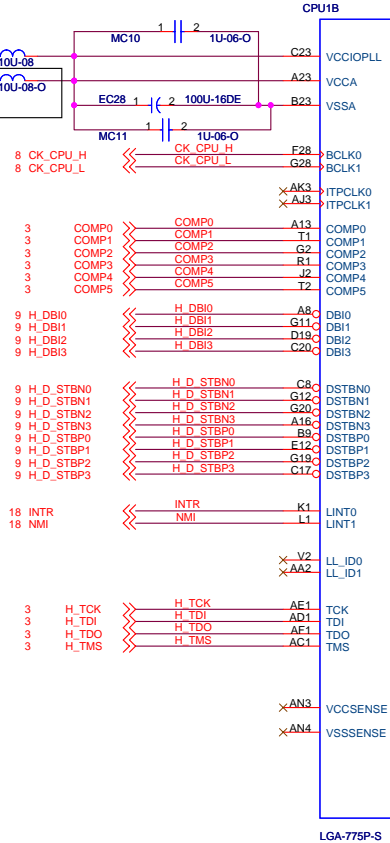
BW : 150MB/s

**10/100
Lan only**

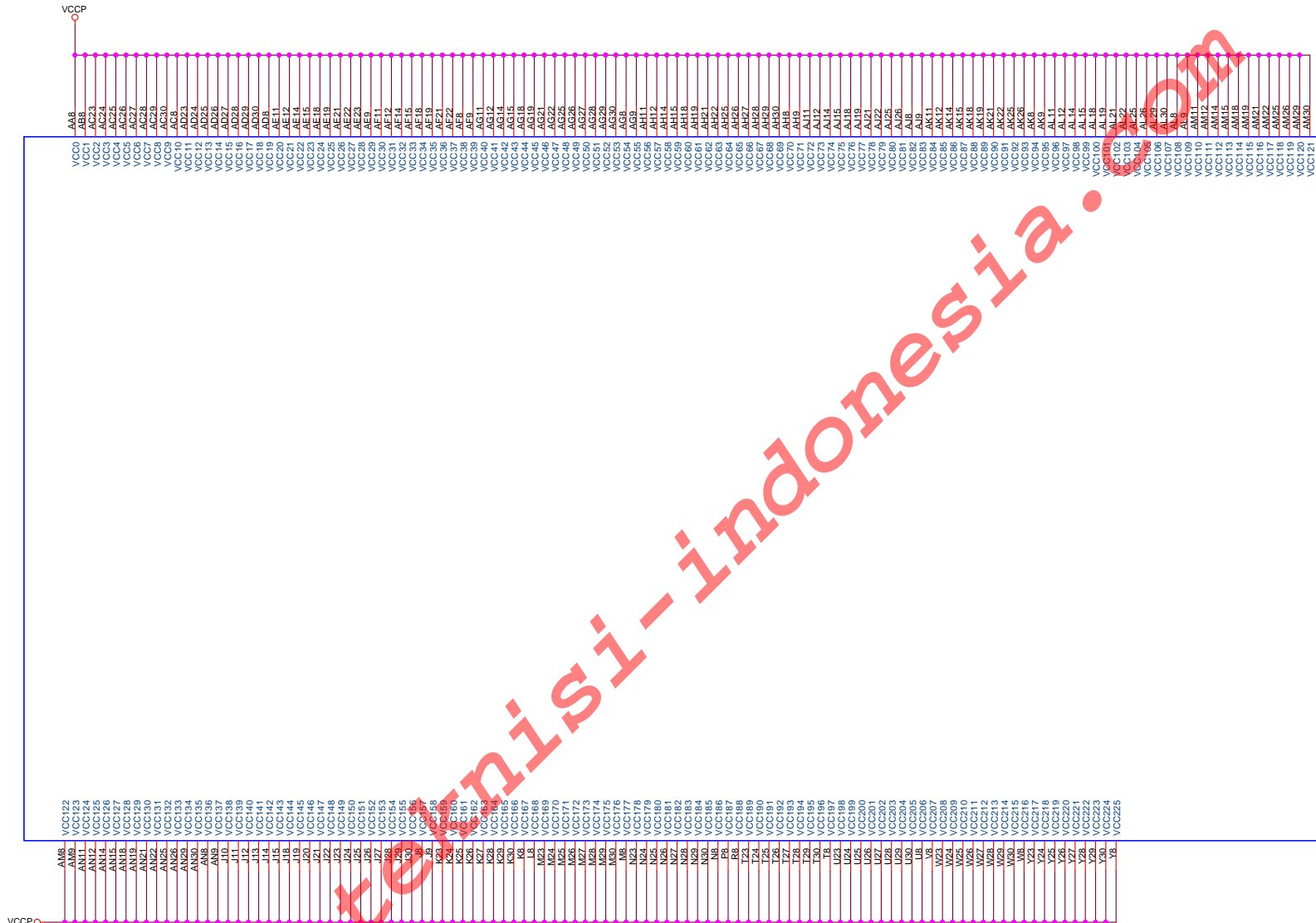
**USBLAN
RJ45**

Elitegroup Computer Systems			
Title System Block Diagram			
Size B	Document Number P17G	Rev 1.0	
Date: Monday, April 09, 2007	Sheet 2 of 31		

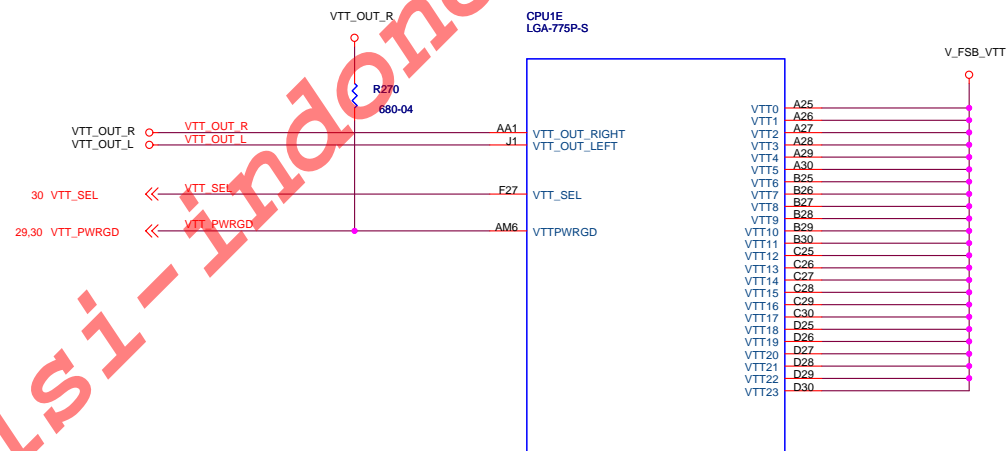
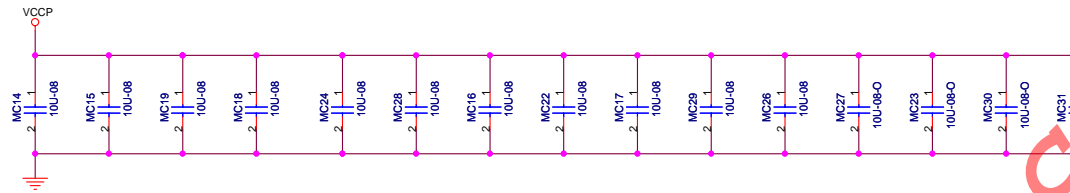
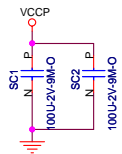
V_FSB_VTT

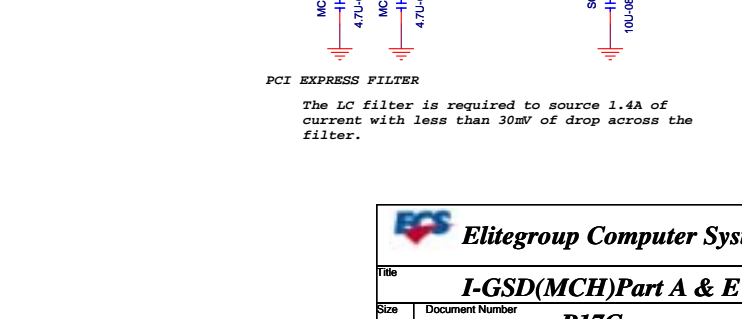
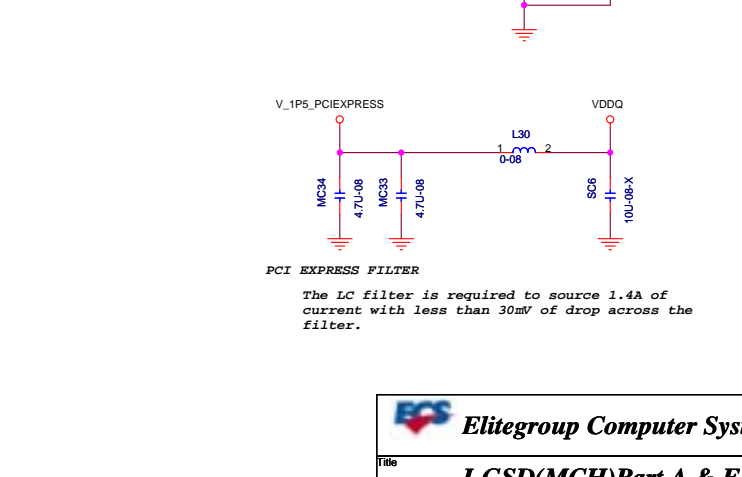
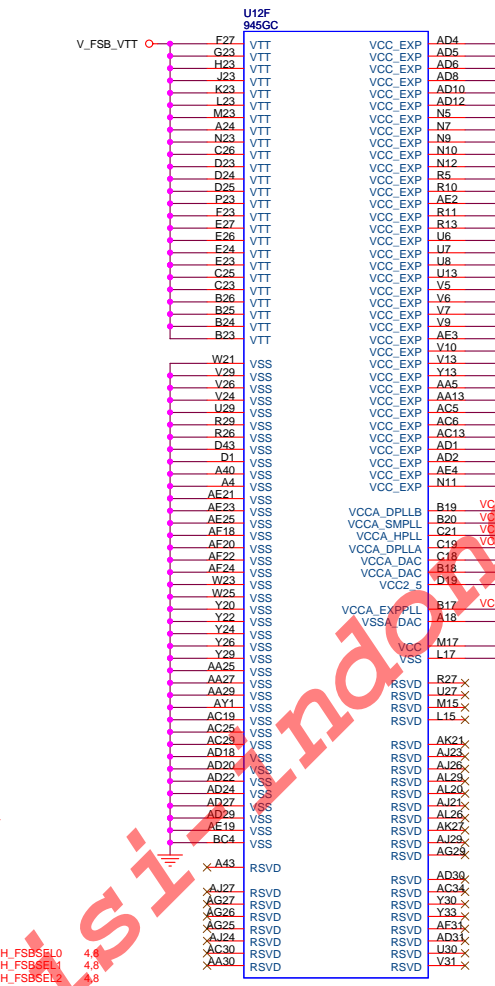


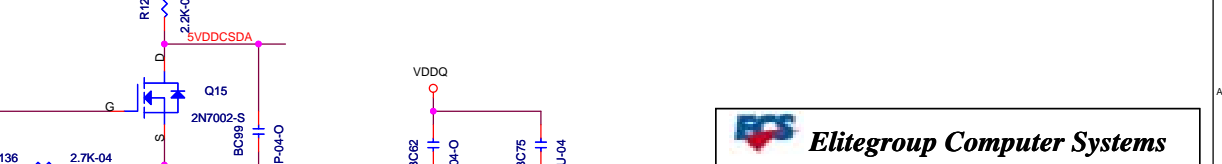
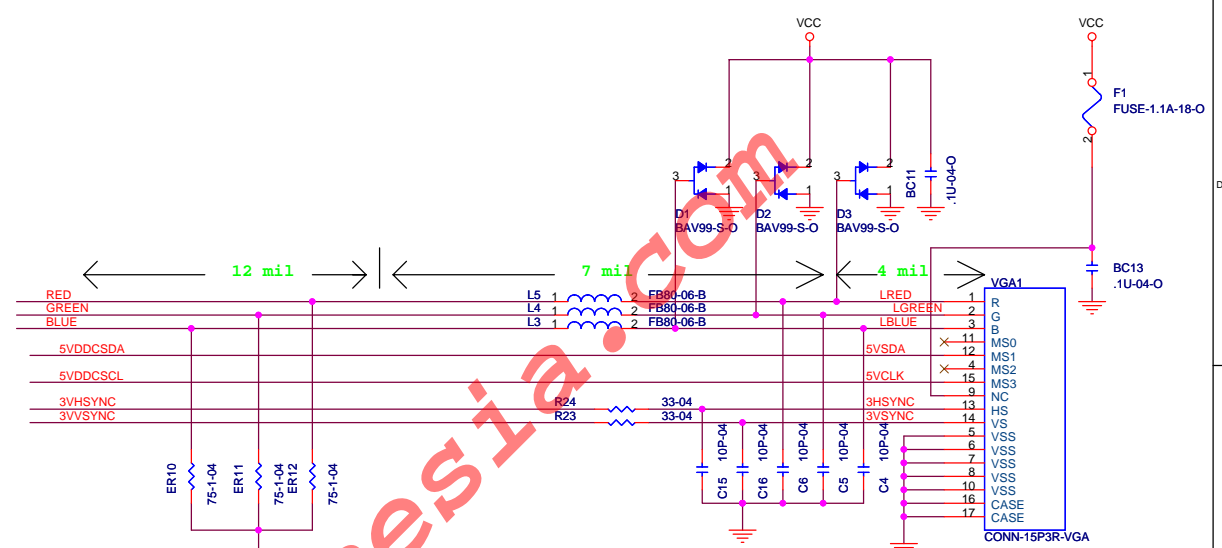
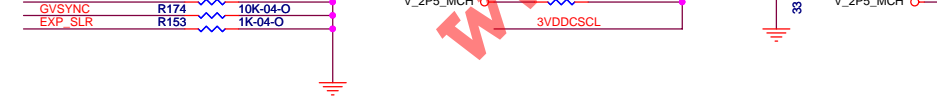
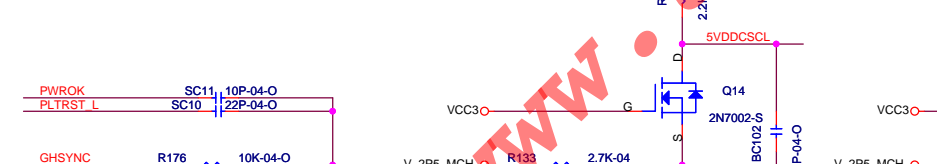
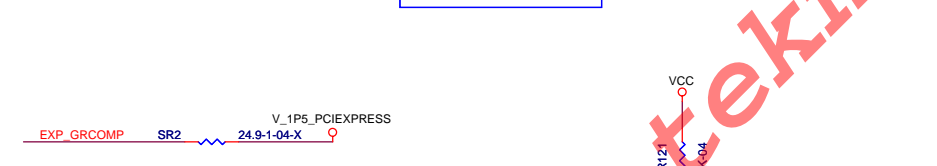
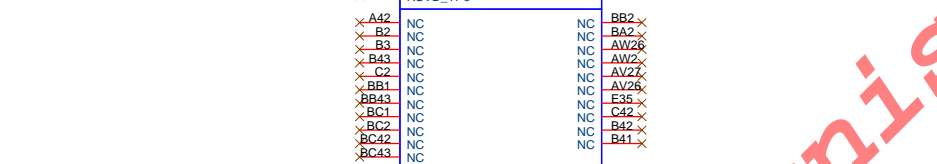
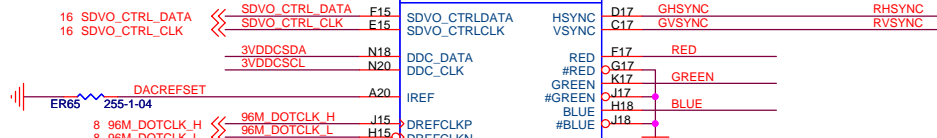
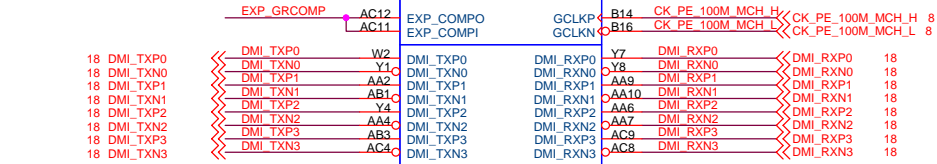
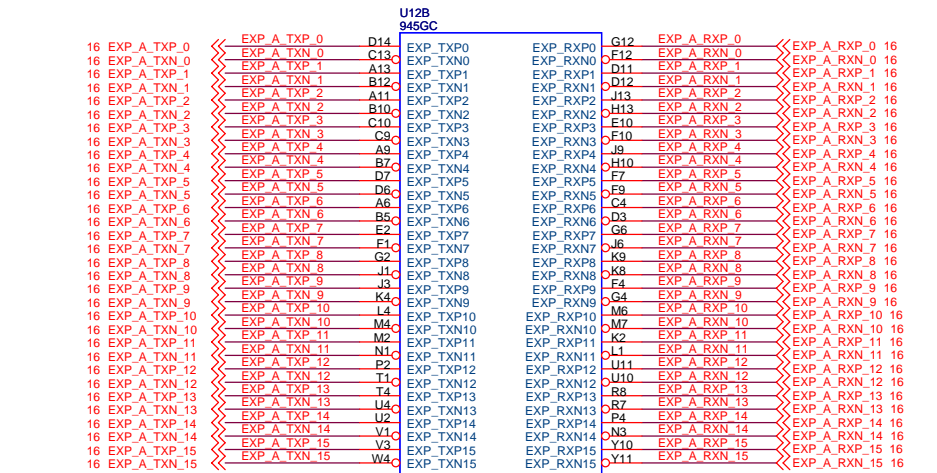
Change 1066 FSB to 800 FSB for bootable.
Maybe need remove for 945GC A2 chip

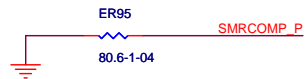


CPU1C
LGA-775P-S





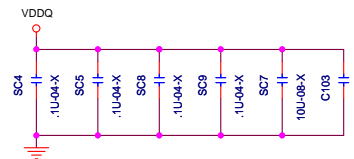
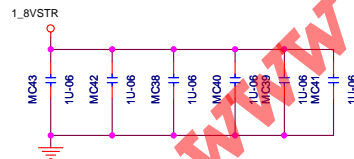
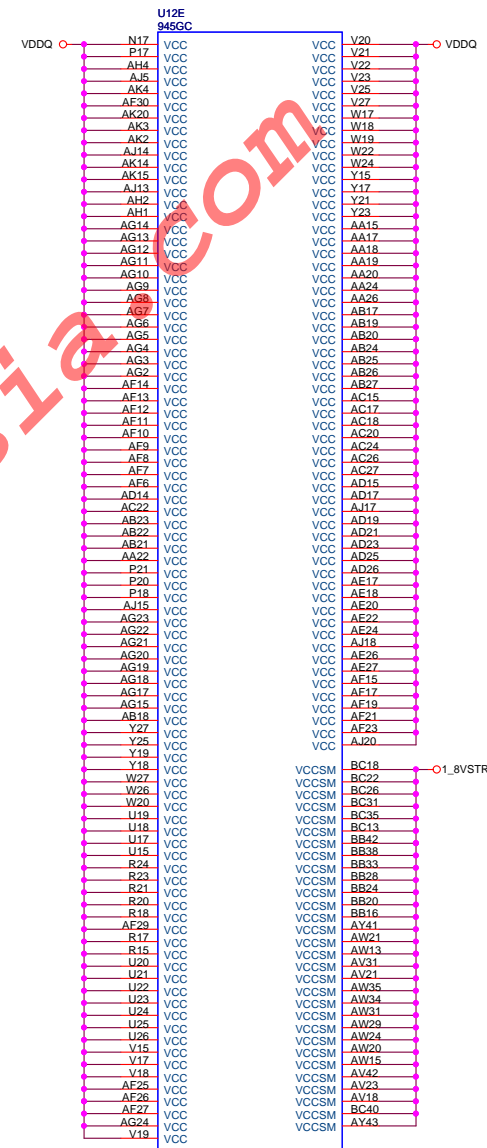
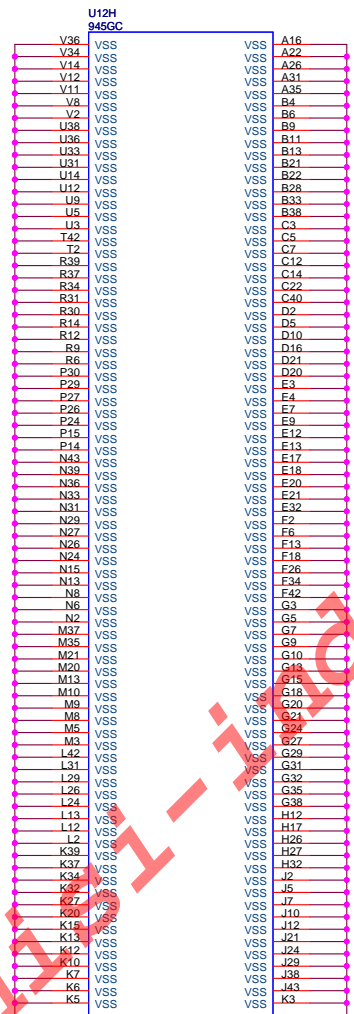
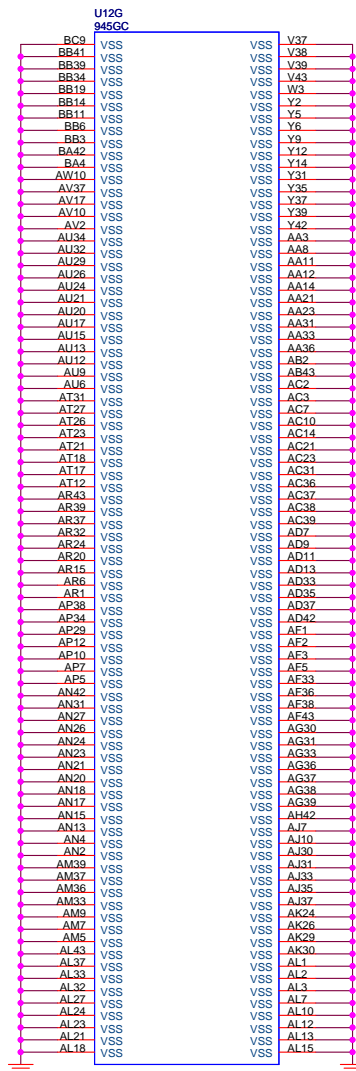


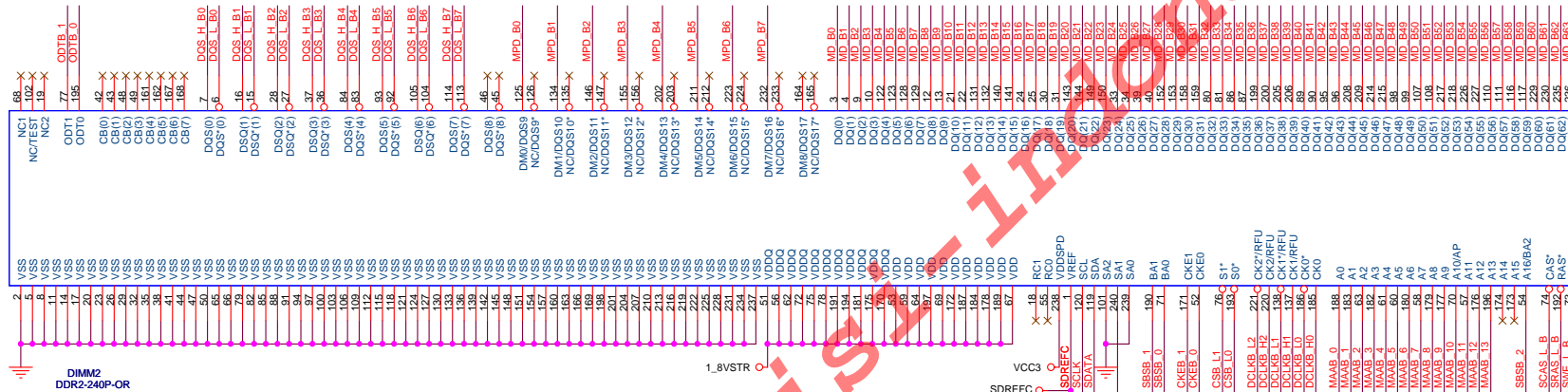
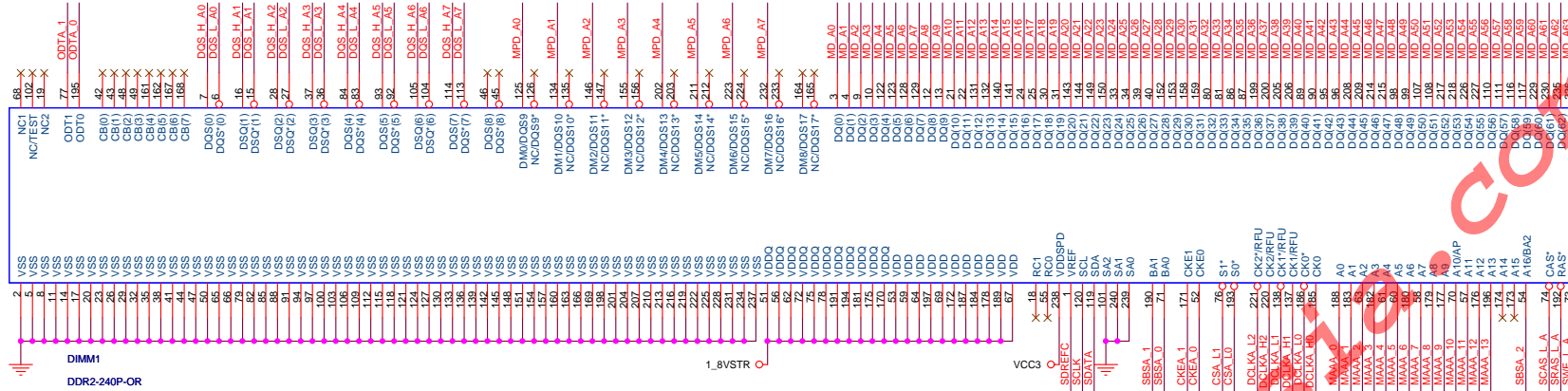
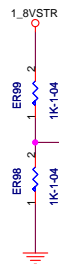


U12D
945GC

DQS H B4	AT29	SDQS_B4		SDQS_B0		AM6	DQS H B0
DQS L B4	AV29	#SDQS_B4		#SDQS_B0		AM8	DQS L B0
MPD B4	AR29	SDM_B4		SDM_B0		AL11	MPD B0
MD B32	AU27	SDQ_B32		SDQ_B0		AL6	MD B0
MD B33	AN29	SDQ_B33		SDQ_B1		AL8	MD B1
MD B34	AR31	SDQ_B34		SDQ_B2		AP8	MD B2
MD B35	AM31	SDQ_B35		SDQ_B3		AP9	MD B3
MD B36	AP27	SDQ_B36		SDQ_B4		AI11	MD B4
MD B37	AR27	SDQ_B37		SDQ_B5		AL9	MD B5
MD B38	AP31	SDQ_B38		SDQ_B6		AM10	MD B6
MD B39	AU31	SDQ_B39		SDQ_B7		AP6	MD B7
DQS H B5	AP36	SDQS_B5		SDQS_B1		AV7	DQS H B1
DQS L B5	AM36	#SDQS_B5		#SDQS_B1		AR9	DQS L B1
MPD B5	AR38	SDM_B5		SDM_B1		AW7	MPD B1
MD B40	AP35	SDQ_B40		SDQ_B8		AV7	MD B8
MD B41	AP37	SDQ_B41		SDQ_B9		AU6	MD B9
MD B42	AN32	SDQ_B42		SDQ_B10		AV12	MD B10
MD B43	AI36	SDQ_B43		SDQ_B11		AM11	MD B11
MD B44	AR35	SDQ_B44		SDQ_B12		AR5	MD B12
MD B45	AU38	SDQ_B45		SDQ_B13		AR7	MD B13
MD B46	AM38	SDQ_B46		SDQ_B14		AR12	MD B14
MD B47	AM34	SDQ_B47		SDQ_B15		AR10	MD B15
DQS H B6	AG34	SDQS_B6		SDQS_B2		AV13	DQS H B2
DQS L B6	AG32	#SDQS_B6		#SDQS_B2		AT13	DQS L B2
MPD B6	AJ38	SDM_B6		SDM_B2		AP13	MPD B2
MD B48	AL34	SDQ_B48		SDQ_B16		AM15	MD B16
MD B49	AJ34	SDQ_B49		SDQ_B17		AM3	MD B17
MD B50	AE32	SDQ_B50		SDQ_B18		AV15	MD B18
MD B51	AE34	SDQ_B51		SDQ_B19		AM17	MD B19
MD B52	AL31	SDQ_B52		SDQ_B20		AN12	MD B20
MD B53	AJ32	SDQ_B53		SDQ_B21		AR13	MD B21
MD B54	AG35	SDQ_B54		SDQ_B22		AP15	MD B22
MD B55	AD32	SDQ_B55		SDQ_B23		AT15	MD B23
DQS H B7	AD36	SDQS_B7		SDQS_B3		AU23	DQS H B3
DQS L B7	AD38	#SDQS_B7		#SDQS_B3		AR23	DQS L B3
MPD B7	AD39	SDM_B7		SDM_B3		AP23	MPD B3
MD B56	AC32	SDQ_B56		SDQ_B24		AM24	MD B24
MD B57	AD34	SDQ_B57		SDQ_B25		AM23	MD B25
MD B58	Y32	SDQ_B58		SDQ_B26		AV24	MD B26
MD B59	AA32	SDQ_B59		SDQ_B27		AM26	MD B27
MD B60	AF36	SDQ_B60		SDQ_B28		AP21	MD B28
MD B61	AF37	SDQ_B61		SDQ_B29		AR21	MD B29
MD B62	AC33	SDQ_B62		SDQ_B30		AP24	MD B30
MD B63	AC35	SDQ_B63		SDQ_B31		AT24	MD B31
MAAB 0	BB22	SMA_B0		#SWE_B		BB23	SWE L B
MAAB 1	BB21	SMA_B1		#SCAS_B		BA24	SCAS L B
MAAB 2	BA24	SMA_B2		#SRAS_B		BA23	SRAS L B
MAAB 3	AY21	SMA_B3					
MAAB 4	BC20	SMA_B4		SBS_B0		AW/23	SBSB 0
MAAB 5	AY19	SMA_B5		SBS_B1		AY23	SBSB 1
MAAB 6	AY20	SMA_B6		SBS_B2		AY17	SBSB 2
MAAB 7	BA18	SMA_B7					
MAAB 8	BA19	SMA_B8		#SCS_B0		BA40	CSB L0
MAAB 9	BB18	SMA_B9		#SCS_B1		AW41	CSB L1
MAAB 10	BA22	SMA_B10		#SCS_B2		BA41	
MAAB 11	BB17	SMA_B11		#SCS_B3		AW40	
MAAB 12	BA17	SMA_B12					
MAAB 13	AW42	SMA_B13		SCKE_B0		BA14	CKEB 0
DCLKB H0	AM29	SCLK_B0		SCKE_B1		AY16	CKEB 1
DCLKB L0	AM27	#SCLK_B0		SCKE_B2		BA13	
DCLKB H1	AV9	#SCLK_B1		SCKE_B3		BB13	
DCLKB L1	AW9	#SCLK_B1		SODT_B0		AY42	ODTB 0
DCLKB H2	AL38	SCLK_B2		SODT_B1		AV40	ODTB 1
DCLKB L2	AL36	#SCLK_B2		SODT_B2		AV43	
	AP26	SCLK_B3		SODT_B3		AU40	
	AR26	#SCLK_B3					
	AU10	SCLK_B4		SOCOMP1		AM3	
	AT10	#SCLK_B4		SOCOMP0		AJ8	
	AJ8	SCLK_B5		SRCOMP1		AJ6	SMRCOMP F
	AJ36	#SCLK_B5		SRCOMP0		AL5	SMRCOMP F
	AK18	RSVD_TP3		RSVD		AL39	
	AK23	RSVD_TP2					
				SVRFE1		AM2	SDRFEF

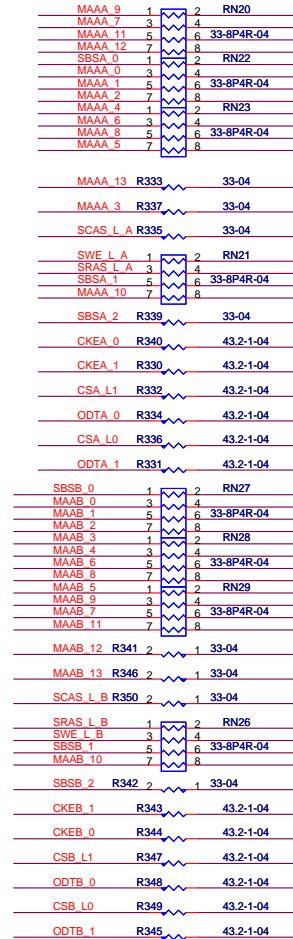
13 MD_A[0..63]	《	MD_A[0..63]
13 DQS_L_A[0..7]	《	DQS_L_A[0..7]
13 DQS_H_A[0..7]	《	DQS_H_A[0..7]
13 MPD_A[0..7]	《	MPD_A[0..7]
13 MAAA_[0..13]	《	MAAA_[0..13]
13 CSA_L[0..1]	《	CSA_L[0..1]
13 CKEA_[0..1]	《	CKEA_[0..1]
13 DCLKA_L[0..2]	《	DCLKA_L[0..2]
13 DCLKA_H[0..2]	《	DCLKA_H[0..2]
13 ODTA_[0..1]	《	ODTA_[0..1]
13 SBSA_[0..2]	《	SBSA_[0..2]
13 SWE_L_A	《	SWE_L_A
13 SCAS_L_A	《	SCAS_L_A
13 SRAS_L_A	《	SRAS_L_A
13 MD_B[0..63]	《	MD_B[0..63]
13 DQS_L_B[0..7]	《	DQS_L_B[0..7]
13 DQS_H_B[0..7]	《	DQS_H_B[0..7]
13 MPD_B[0..7]	《	MPD_B[0..7]
13 MAAB_[0..13]	《	MAAB_[0..13]
13 CSB_L[0..1]	《	CSB_L[0..1]
13 CKEB_[0..1]	《	CKEB_[0..1]
13 DCLKB_L[0..2]	《	DCLKB_L[0..2]
13 DCLKB_H[0..2]	《	DCLKB_H[0..2]
13 ODTB_[0..1]	《	ODTB_[0..1]
13 SBSB_[0..2]	《	SBSB_[0..2]
13 SWE_L_B	《	SWE_L_B
13 SCAS_L_B	《	SCAS_L_B
13 SRAS_L_B	《	SRAS_L_B



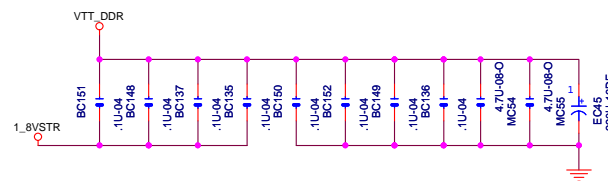


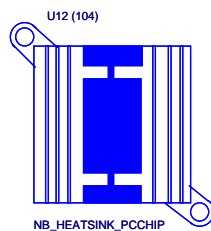
11 DCLKB_H[0..2] << DCLKB_H[0..2]
11 ODTB_0[0..1] << ODTB_0[0..1]
11 SBSB_0[0..2] << SBSB_0[0..2]
11 SWE_L_B << SWE_L_B
11 SCAS_L_B << SCAS_L_B
11 SRAS_L_B << SRAS_L_B
8,16,17,31 SDATA << SDATA
8,16,17,31 SCLK << SCLK


11 MD_A[0..63] << MD_A[0..63]
11 DQS_L_A[0..7] << DQS_L_A[0..7]
11 DQS_H_A[0..7] << DQS_H_A[0..7]
11 MPD_A[0..7] << MPD_A[0..7]
11 MAAA_0[0..13] << MAAA_0[0..13]
11 CSA_L[0..1] << CSA_L[0..1]
11 CKEA_0[0..1] << CKEA_0[0..1]
11 DCLKA_L[0..2] << DCLKA_L[0..2]
11 DCLKA_H[0..2] << DCLKA_H[0..2]
11 ODTA_0[0..1] << ODTA_0[0..1]
11 SBSA_0[0..2] << SBSA_0[0..2]
11 SWE_L_A << SWE_L_A
11 SCAS_L_A << SCAS_L_A
11 SRAS_L_A << SRAS_L_A



11 MD_B[0..63] << MD_B[0..63]
11 DQS_L_B[0..7] << DQS_L_B[0..7]
11 DQS_H_B[0..7] << DQS_H_B[0..7]
11 MPD_B[0..7] << MPD_B[0..7]
11 MAAA_0[0..13] << MAAA_0[0..13]
11 CSA_L[0..1] << CSA_L[0..1]
11 CKEA_0[0..1] << CKEA_0[0..1]
11 DCLKA_L[0..2] << DCLKA_L[0..2]
11 DCLKA_H[0..2] << DCLKA_H[0..2]
11 ODTA_0[0..1] << ODTA_0[0..1]
11 SBSA_0[0..2] << SBSA_0[0..2]
11 SWE_L_A << SWE_L_A
11 SCAS_L_A << SCAS_L_A
11 SRAS_L_A << SRAS_L_A





 Elitegroup Computer Systems		
Title 104 COMPONENT		
Size Custom	Document Number P17G	Rev 1.0
Date: Monday, April 09, 2007 Sheet 14 of 31		

8,13,17,31 SMBCLK
8,13,17,31 SMBDATA

17 PCIE_WAKE_L

10 SDVO_CTRL_CLK

10 SDVO_CTRL_DATA

10 PRSNT2_N

PRSNT2_N



Elitegroup Computer Systems

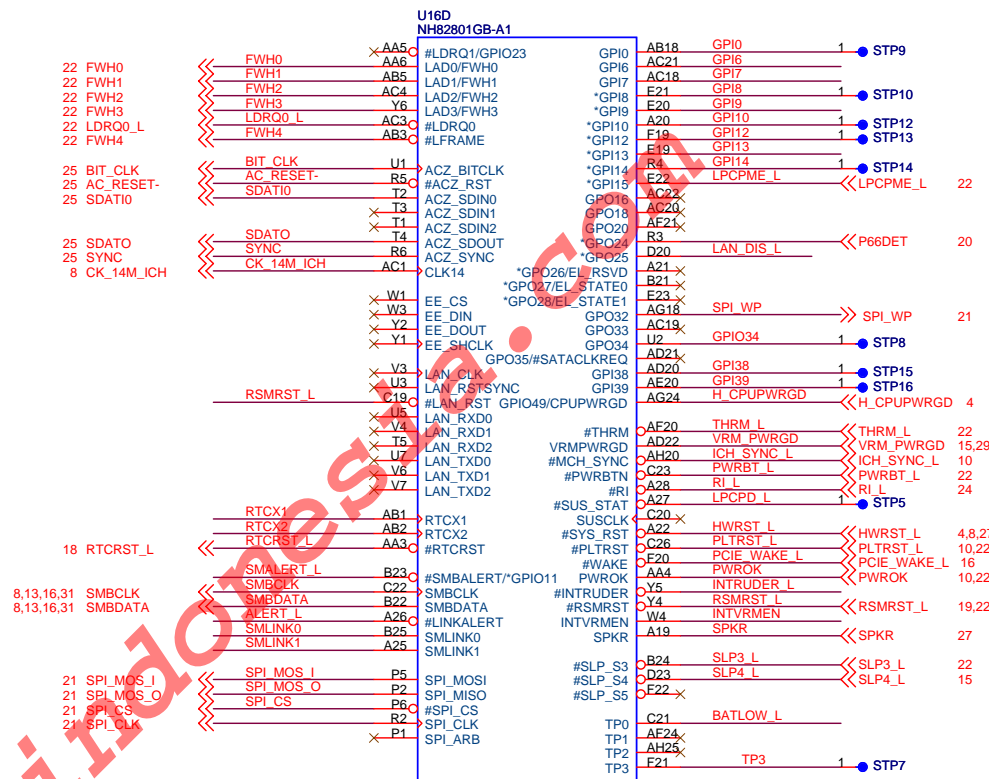
Title: **PCIEX16 slot**

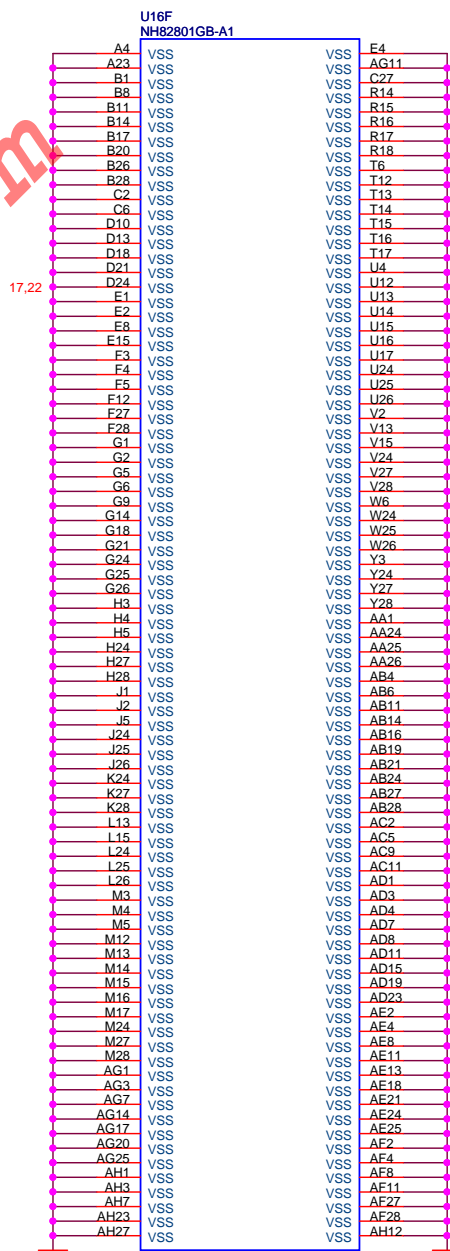
Size: **P17G**

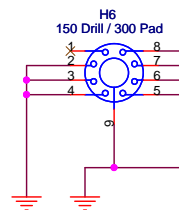
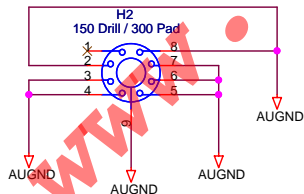
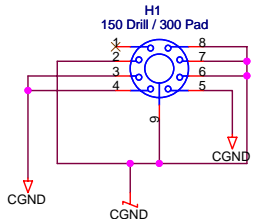
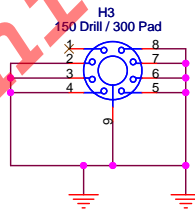
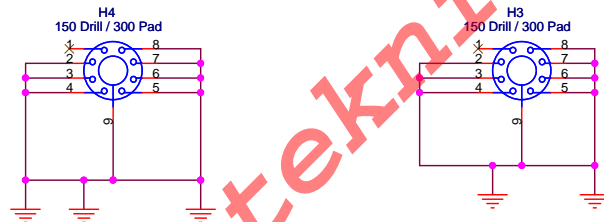
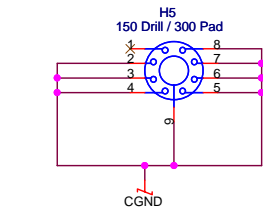
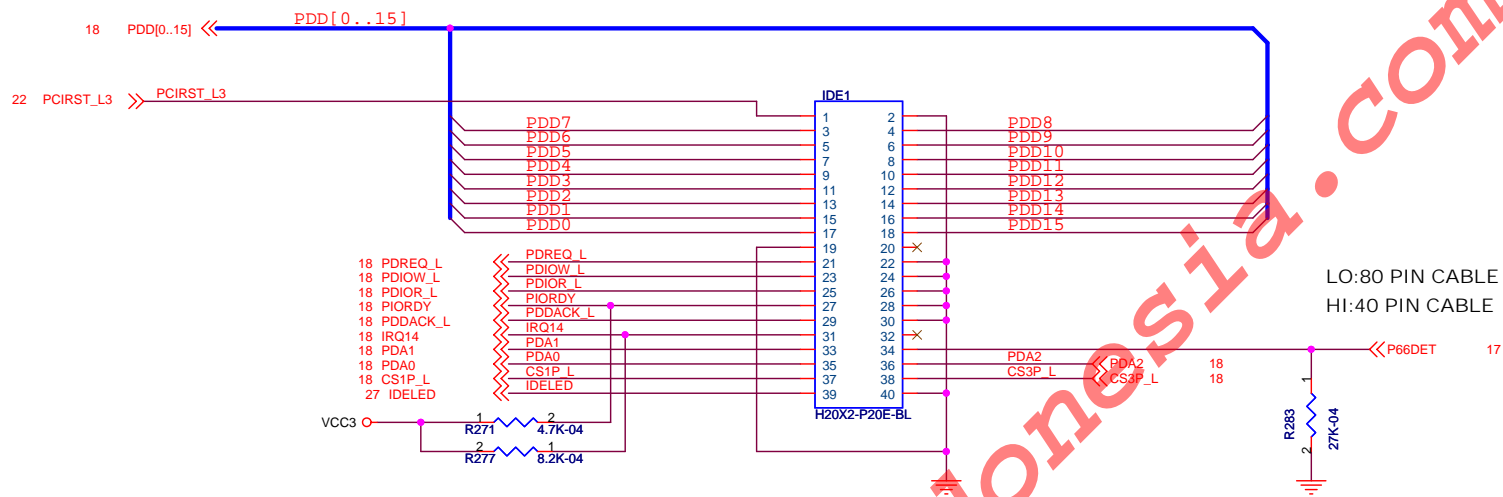
Date: Tuesday, April 10, 2007

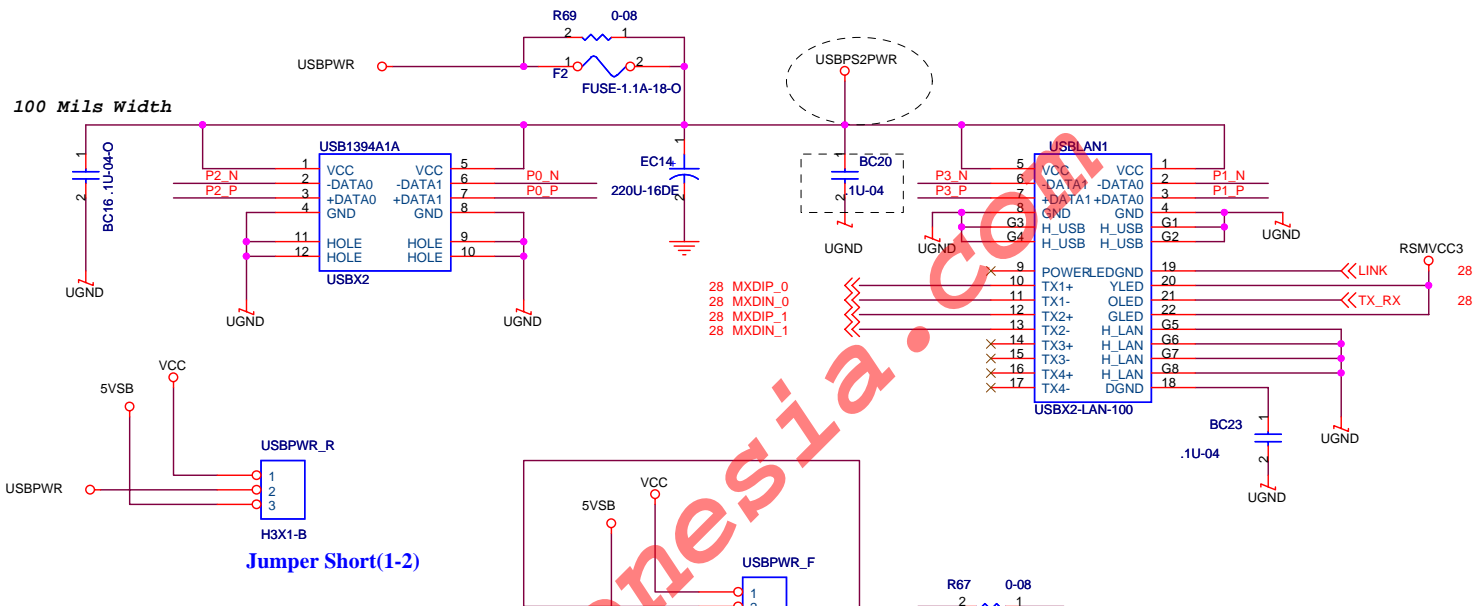
Sheet: 16 of 31

Rev: 1.0

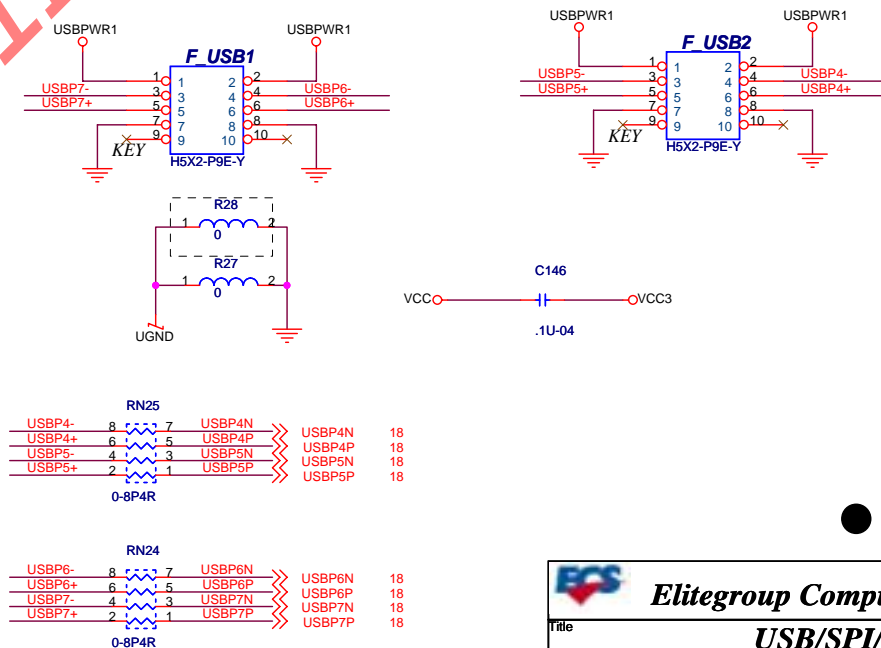


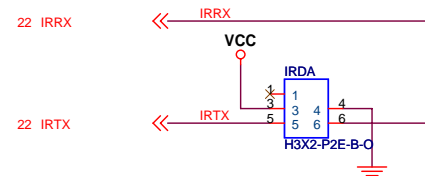
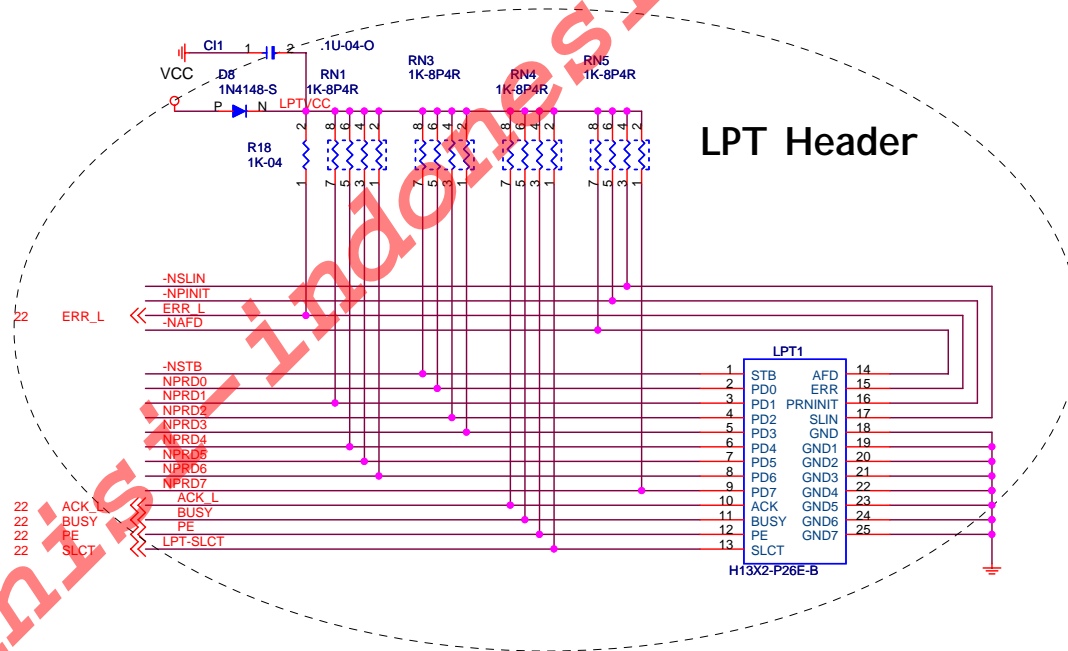
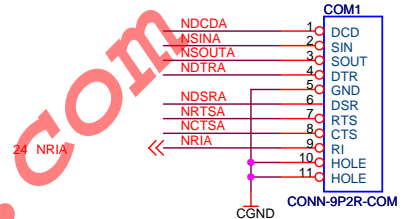
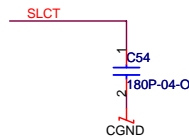


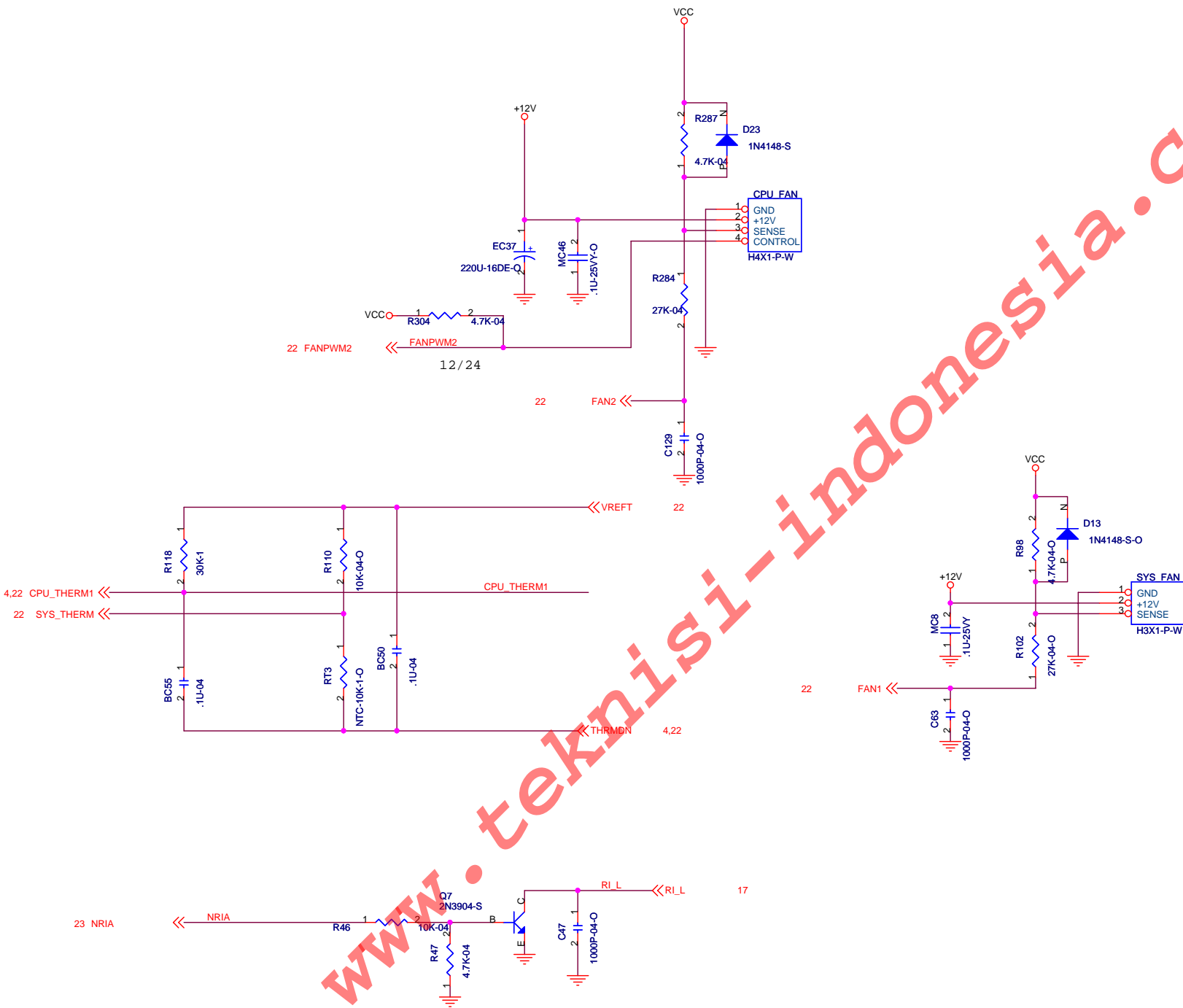




USB PORT INTERFACE

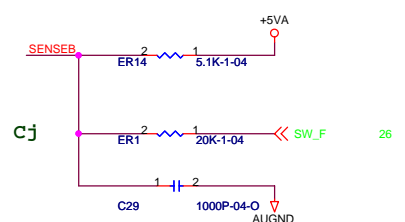
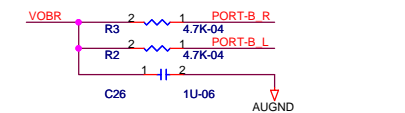
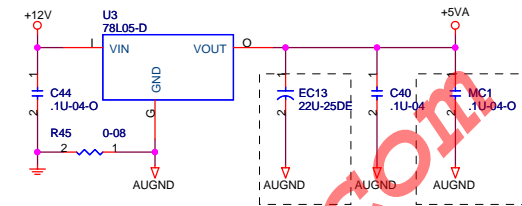






VCC3 ○ ————— ○ VCC3

+12V ○ ————— ○ +12V



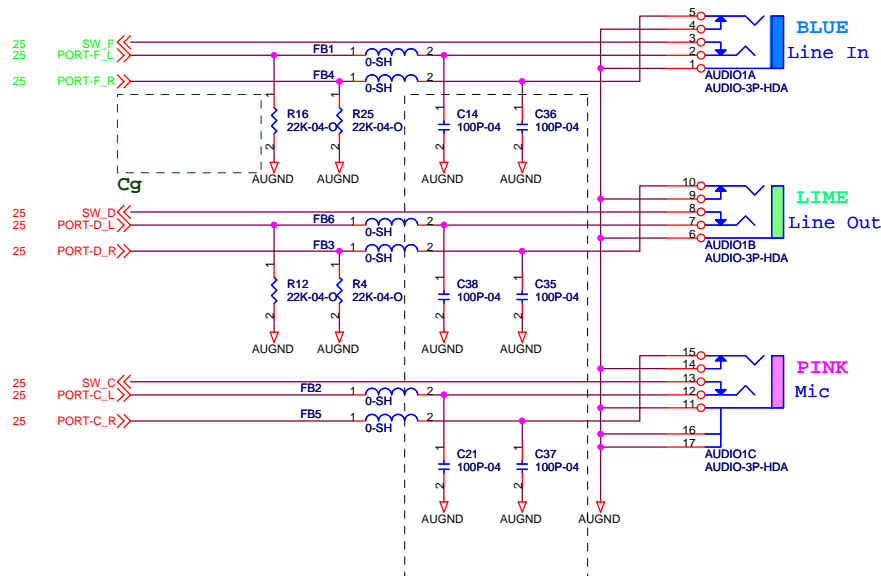
Port	pin	signal	206	202
A	39,41	F-Line out	A	A
B	21,22	F-Mic in	B	B
C	23,24	R-Mic in	C	C
D	35,36	R-Line out	D	D
E	14,15	R-Surround	F	
F	16,17	R-Line in	E	F
G	43,44	R-Cen/Bass	G	
H	45,46	R-Side surr	H	
	18,20	CD In		CD In
	48	SPDIF Out		SPDIF Out

Location	92HD206	92HD202
Ca	X	820P-04
Cb	0-04	X
Cc	92H206	92HD202
Cd	V	X
Ce	AUDIO-6P	AUDIO-3P
Cf	10U-08	1U-08
Cg	X	V
Ch	V	X
Ci	V	X
Cj	V	X

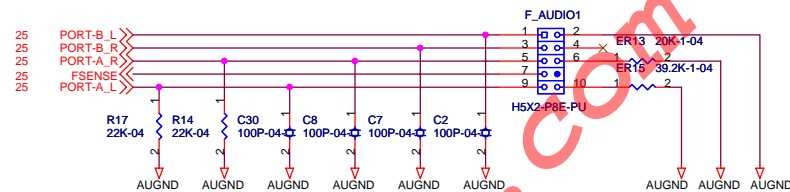
External Connection

VCC  VCC5

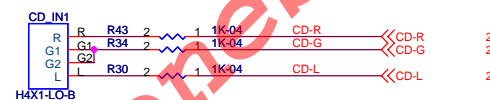
REAR-AUDIO



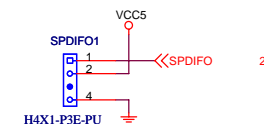
FRONT-AUDIO



CD_IN



SPDIF-OUT



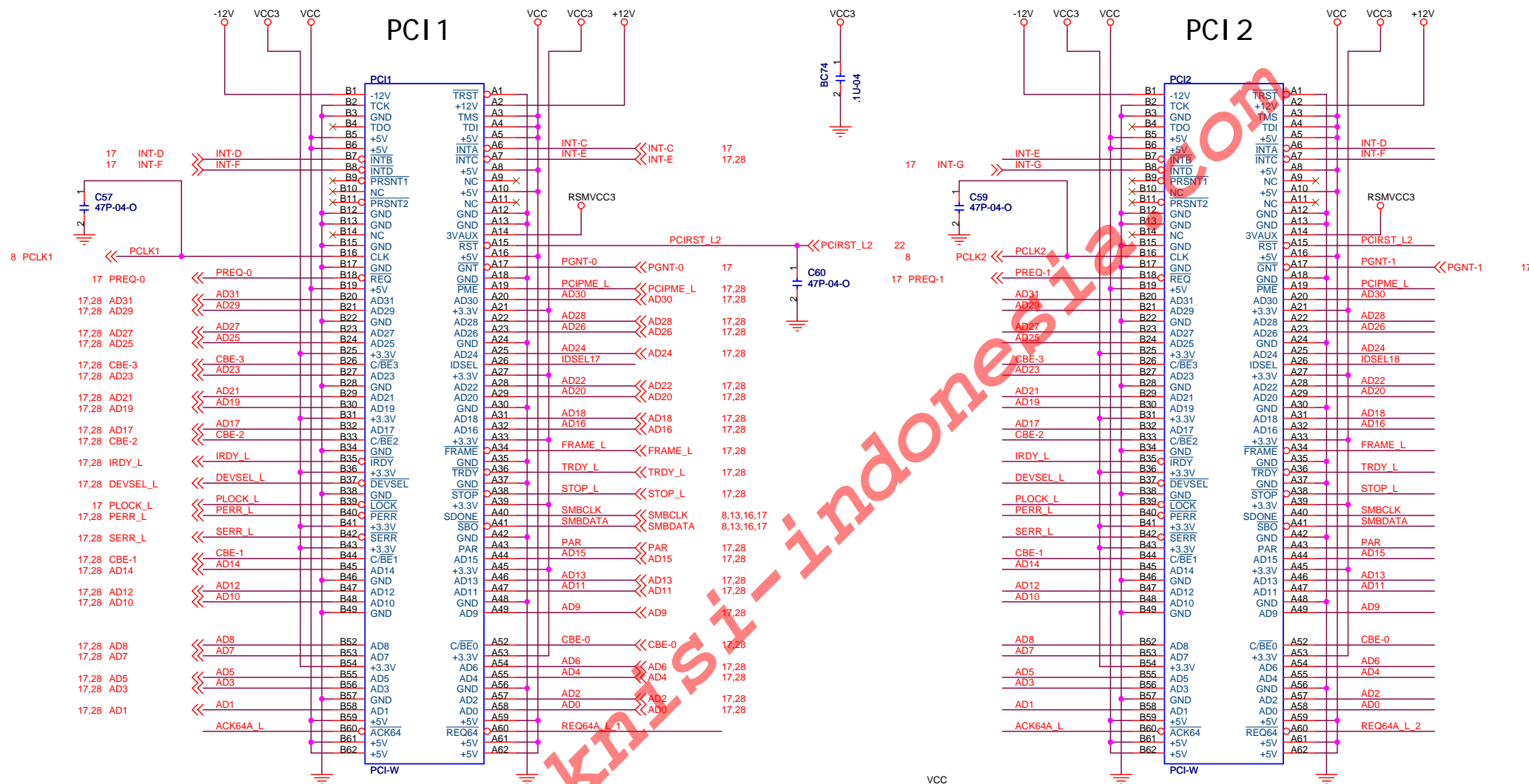
www.teknisi-indonesia.com

Not Need on P17G Now!			
GPIO52	GPIO51	GPIO50	VCCP
1	1	1	+0.175
1	1	0	+0.15
1	0	1	+0.125
1	0	0	+0.1
0	1	1	+0.075
0	1	0	+0.05
0	0	1	+0.025
0	0	0	Normal

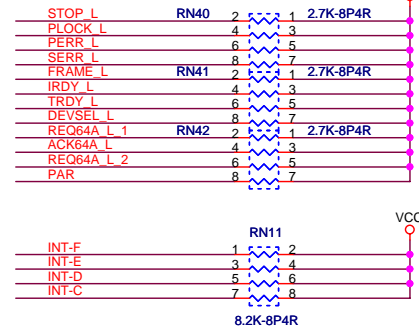
17,28 AD[0..31] << ADIO[0..31]

PCI1

PCI2



PCI1-INT: IDSEL=AD17
INTA:INTC
INTB:INTD
INTC:INTE
INTD:INTF



PCI2-INT: IDSEL=AD18
INTA:INTD
INTB:INTE
INTC:INTF
INTD:INTG

