

P4M890T-M2

Rev : 1.0B

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8237R+,ALC655

8237A,ALC883

8237R+,ALC655

8237A,ALC883

8237R+,ALC655

8237A,ALC883

8237R+,ALC655

Schematics	PCB Lead-Free 244*244*1.6 -2116	BOM RoHS	SVID:1019(ECS) SSID:2171(Q71) Schedule			
			Schematics	Layout	Gerber Out	M/B return
A	15-Q74-010010 Purple	81-685-Q74000	2/28-3/3	3/4-3/12	3/12(3/16)	3/22 30/10
A	15-Q74-010010 Purple	81-685-Q74001				20/10
1.0	15-Q74-011000 Purple	89-386-Q74100 81-685-Q74100	3/27		4/6	150/60/12
1.0	15-Q74-011000 Purple	89-386-Q74101 81-685-Q74101				
1.0A	15-Q74-011010 Purple	89-386-Q74110	4/11		4/13	150/60/12
1.0A						
1.0B			6/1			

GPIO

IC	GPIO(PIN)	Function	Note
VT 8237R+	GP123(P21)	-IDE2 cable detect	
	GP18(AC9)	-IDE1 cable detect	
	GP18(Y4)	-PCIE PME SCI	
	GP19(U23)	-PCIE Hot Plug SCI	
	GP07(R2)	-TBL(Top Block Lock)	default=0
	GP010(R25)	V_DIMM volt adjust 0	
	GP011(T23)	V_DIMM volt adjust 1	
	GP05(AC7)	-WP_ROM	default=1
	GP029	PCIE reset	
	IO 8712KX	GP25(22)	CPU volt adjust 0
GP26(21)		CPU volt adjust 1	
GP41(78)		CTRL USB/PS2 volt in	S5 default=1
GP23(24)		CTRL over clock	1:enable
GP10(84)		MSG LED1	
GP53(77)		MSG LED2	
GP20(27)		CFG1	default=0
GP21(26)		CFG2	default=0

Rev:A Initial version

- 1.Base on P4M890-M(B).
- 2.VR11
- 3.Support CPU:CONROE
- 4.DDR*2 + DDRII*2
- 5.LAN(PHY,8100C,8110SC)
- 6.TPM(JLPC header)

Rev:A to 1.0

- 1.Update CPU:CONROE circuit(BPM0,VTT_SEL).
- 2.VTT_SEL control VTT_CPU power.
- 3.1394 routing:-INT_C => -INT_D
- 4.ALC655 add 100uF*2 for line out.
- 5.PCLK_ROM share with PCLK_SIO
- 6.Upper V_DIMM voltage:1.82V/2.54V
- 7.NB add pin AB32(CPUSLPIN#) for P4M900
- 8.DCLK[0:5]+/- del 799mil(stub length).

Rev:1.0 to 1.0A

- 1.VCC3 transfer to +1.5V_NB
- 2.CPU voltage adjustment.
- 3.add F_MIC2.

Rev:1.0A to 1.0B

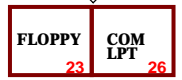
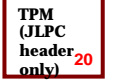
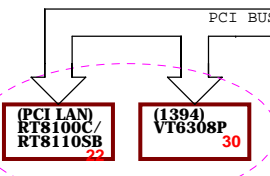
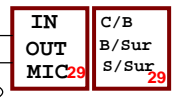
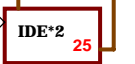
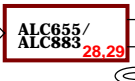
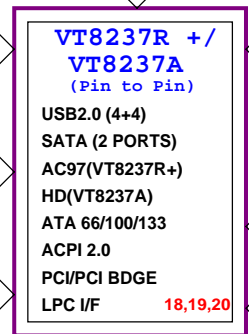
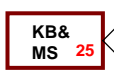
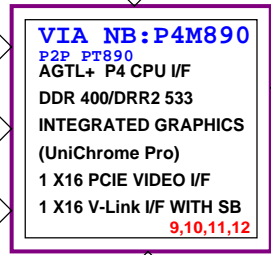
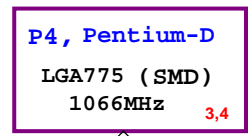
- 1.Conroe clock latch issue.
- 2.Add BSEL2 and level shift.
- 3.Modify VTT_SEL circuit.
- 4.Add cap for USB PLL&VCC25 power.
- 5.Super I/O:serial 22 ohm on 5VSB, Vbat add 1uF.



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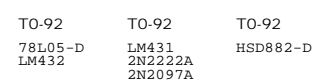
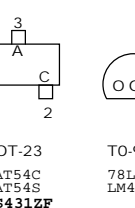
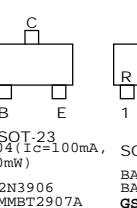
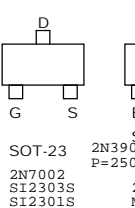
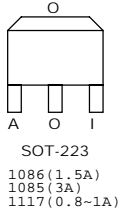
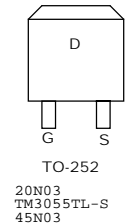
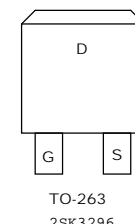
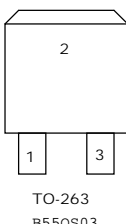
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3 Phase
hi-side:1 MOS
lo-side:2 MOS



1U-04 (最大耐壓6.3V) 1U-06 (BOM常用料耐壓10V)
0.1U-04 (最大耐壓16V) 0.1U-06 (BOM常用料耐壓25V)

22U/25DE	5*7 mm
100U/16DE	6.3*11 mm
220U/10DE	6.3*11 mm
470U/16DE	8*11 mm
680U/?DE	8*8 mm
1000U/10DE	8*14 mm
1500U/16DE	10*25 mm
3300U/25DE	10*25 mm



ITE8712	
ITE8716	add Dual sourcing
ITE8718	add PECl (CPU temp:digital)
ITE8726	add K8 power sequence

VT8237 CD	First released
VT8237R	LAN PHY license.
VT8237R+	SATA II detect support
VT8237A	HD support

	Impedance	PCB 2116
USB_P0+/-	(45/90)	20/7.5/7.5/7.5/20 20/7.5/7.5/7.5/20(VIA excel) 7.5/7.5/7.5(50/90 guide)
LAN RX+/- TX+/-	(50/100)	24/8/10/8/24 24/6/9/6/24(VIA excel) 8/12/8/47/91 guide)
SATA	(50/100)	20/5/7/5/20 20/5/7/7/20(VIA excel) group mismatch 5 mil.
R.G.B	NB->RES (37.5) RES->CON (75)	20/12/20/12/20/12/20 20/5/20/5/20/5/20 Put 75 ohm on NB

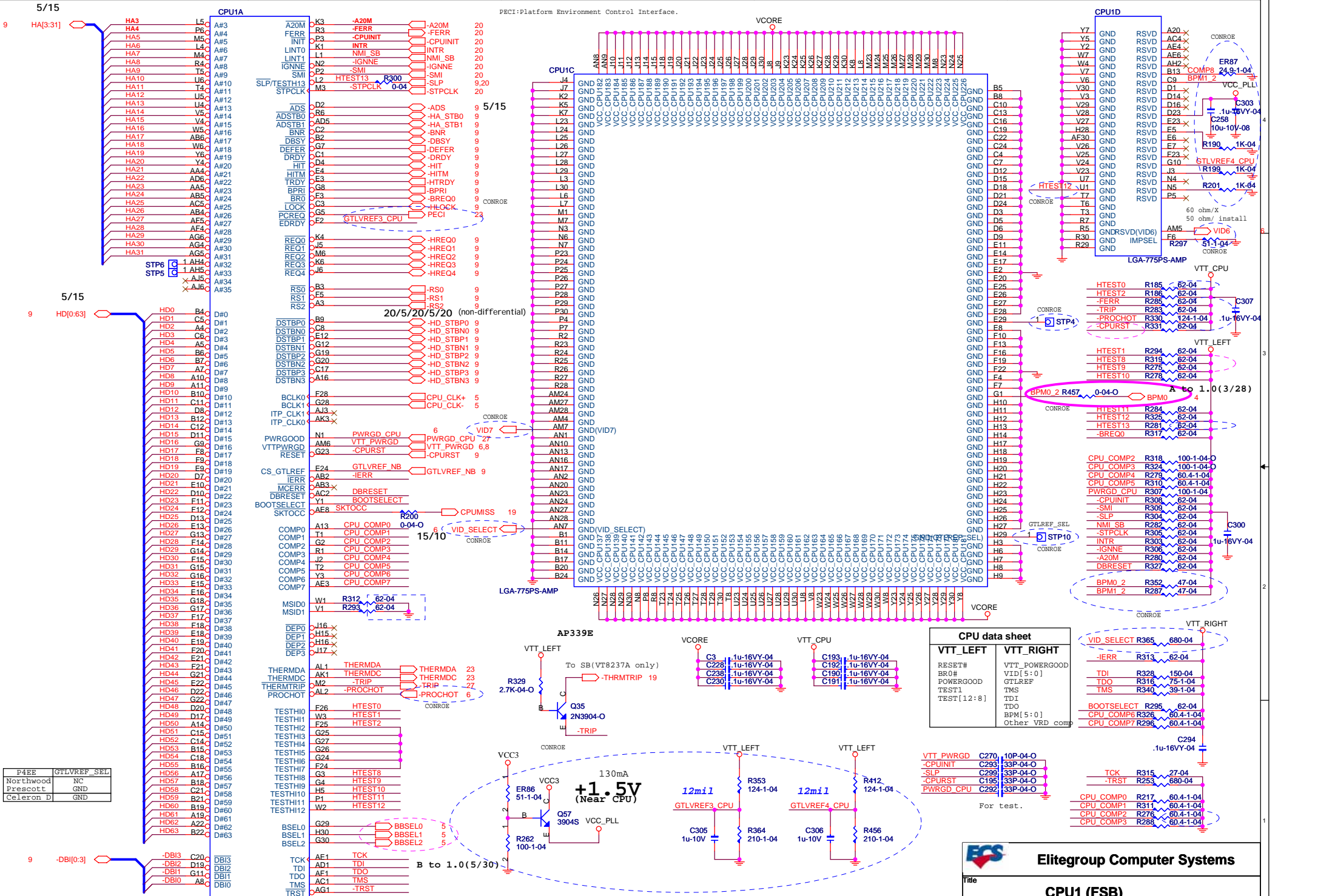
PCI1	AD19	INTA,BCD	REQ0
PCI2	AD20	INTB,CDA	REQ1
LAN	AD21	INTC	REQ2
1394	AD22	INTD	REQ3

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Title: **Block Diagram**

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P4EE	GTLVREF_SEL
Northwood	NC
Prescott	GND
Celeron D	GND

-PROCHOT:BI-direction(Enable FCC)
(FCC:Thermal Control Circuit)
Input pin:protect system component(VR)
Output pin:protect CPU.

1. don't support P4EE(Northwood)
2. support P4EE(Prescott)

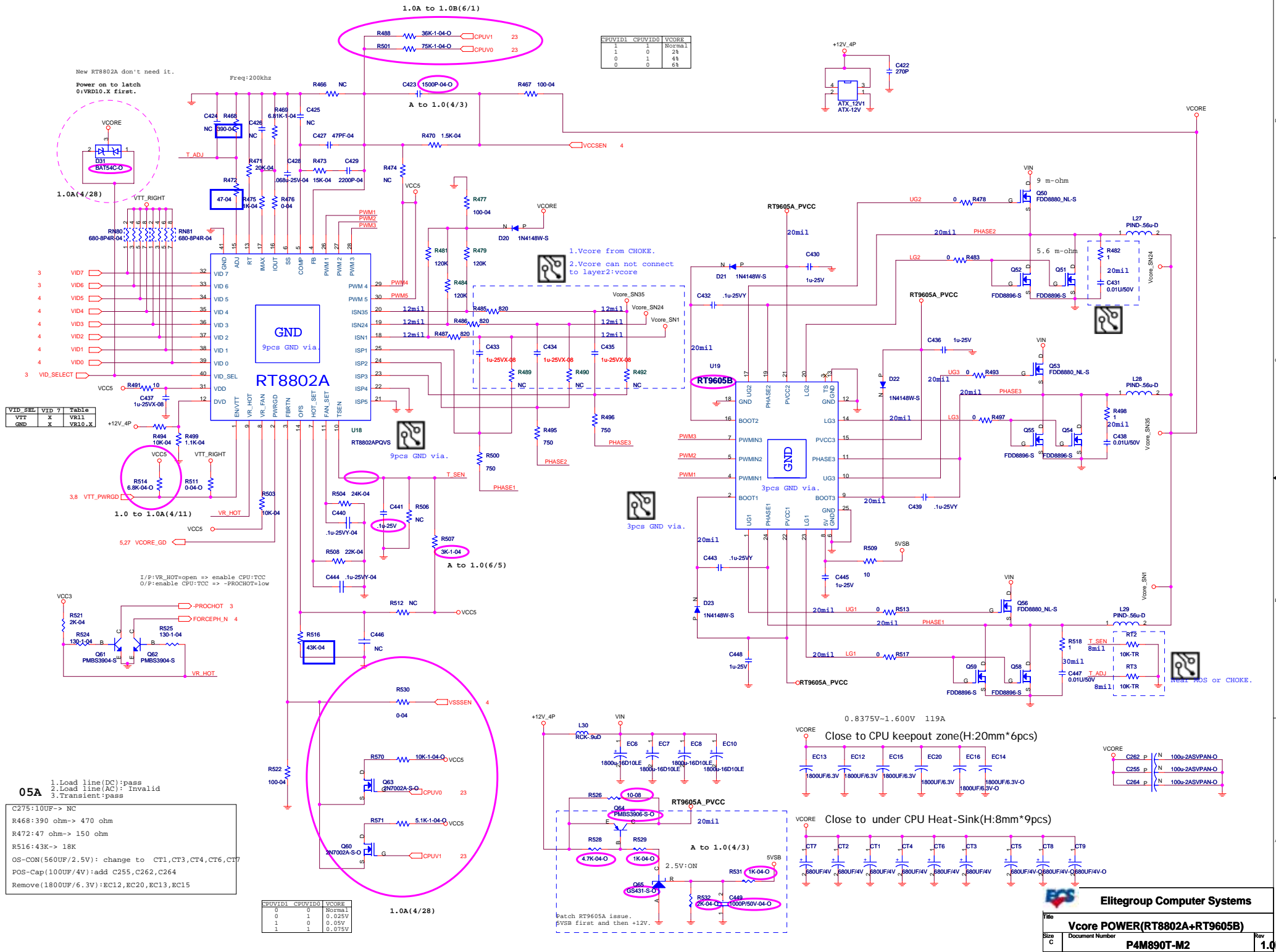
CPU data sheet	
VTT_LEFT	VTT_RIGHT
RESET#	VTT_POWERGOOD
BRO#	VID[5:0]
POWERGOOD	GTLREF
TEST1	TMS
TEST[2:8]	TDI
	TDO
	VID[5:0]
	Other: VRD comp

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Title: **CPU1 (FSB)**

Size C Document Number: **P4M890T-M2** Rev: **1.0B**

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CPUV1DI	CPUV1DO	VCORE
1	1	Normal
1	0	28
0	1	48
0	0	63

VID	SEL	VID	Table
VTT	X	VR11	
GND	X	VR10.X	

I/P:VR_HOT=open => enable CPU:TCO
 O/P:enable CPU:TCO => -PROCHOT=low

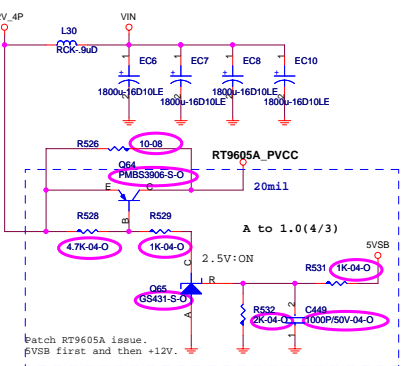
05A

- 1.Load line(DC):pass
- 2.Load line(AC): Invalid
- 3.Transient:pass

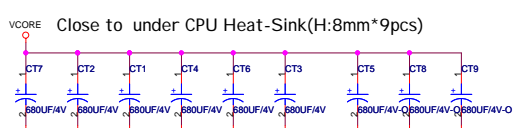
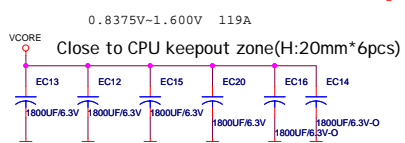
C275:10UF-> NC
 R468:390 ohm-> 470 ohm
 R472:47 ohm-> 150 ohm
 R516:43K-> 18K
 OS-CON(560UF/2.5V): change to CT1,CT3,CT4,CT6,CT7
 POS-Cap(100UF/4V):add C255,C262,C264
 Remove(1800UF/6.3V):EC12,EC20,EC13,EC15

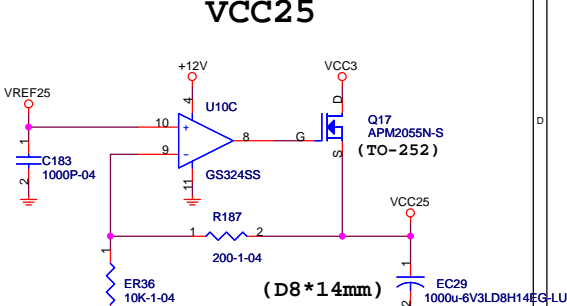
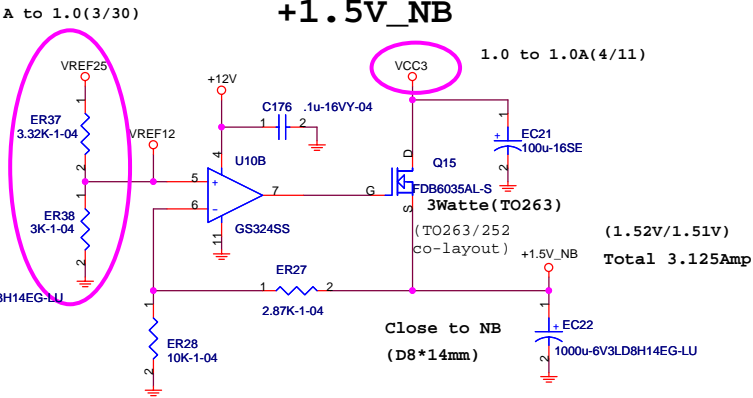
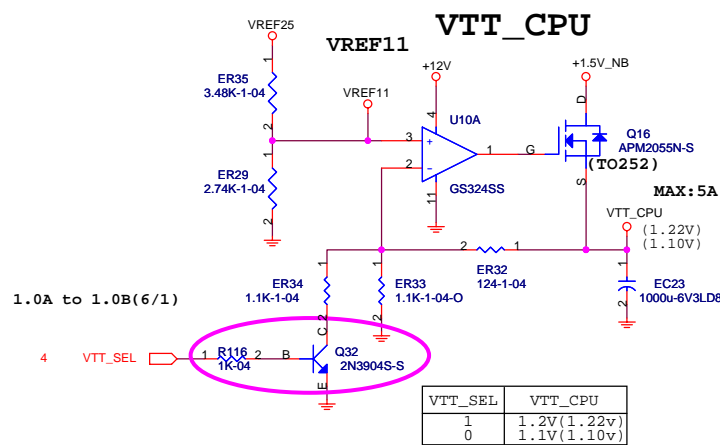
CPUV1DI	CPUV1DO	VCORE
0	0	Normal
1	0	0.025V
0	1	0.05V
1	1	0.075V

1.0A(4/28)



1.Vcore from CHOKE.
 2.Vcore can not connect to layer2:vcore

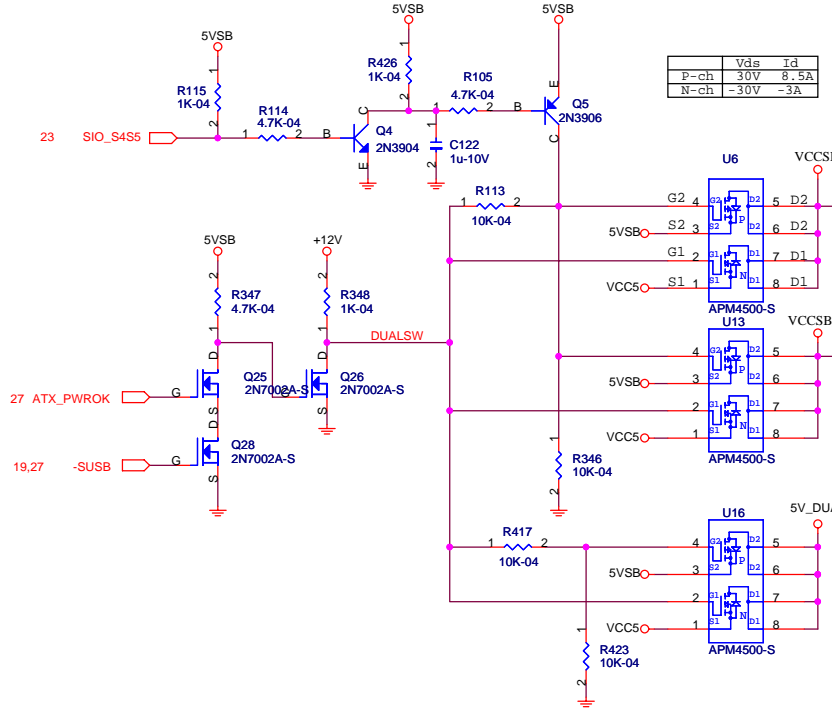
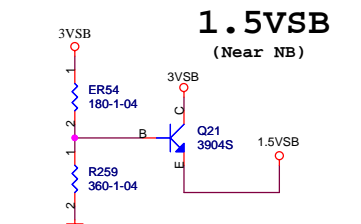
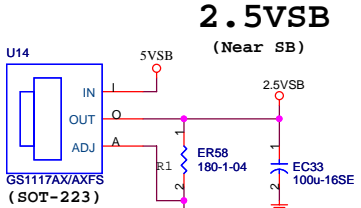
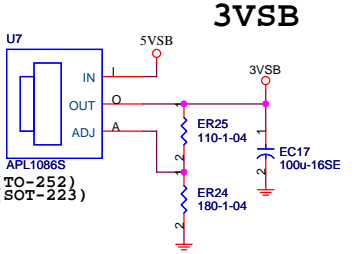
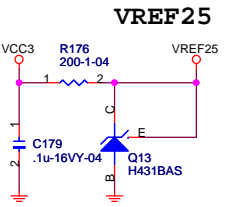




Status	Target	Super I/O F/GXS
AC plug	5V_DUAL=0	SIO_S4S5=0,D.=1
S0,S1	5V_DUAL=VCC	SIO_S4S5=1
S3	5V_DUAL=5VSB	SIO_S4S5=0
S4,S5	5V_DUAL=5VSB	SIO_S4S5=1
S4,S5	5V_DUAL=0	SIO_S4S5=1

APL1086 spec

1. 10mA < Iout < 1.5A
2. 1.4V < (Vin - Vout) < 9.75V



USB_Connector Voltage

VCC5 VCCSB

VCC5 VCCSB

USB_Header Voltage

VCC5 VCCSB_F

VCC5 VCCSB_F

For DDR2 DIMM Voltage

VCC5 5V_DUAL

VCC5 5V_DUAL

Vds	Id
P-ch 30V	8.5A
N-ch -30V	-3A

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Title: **POWER (DC to DC)**

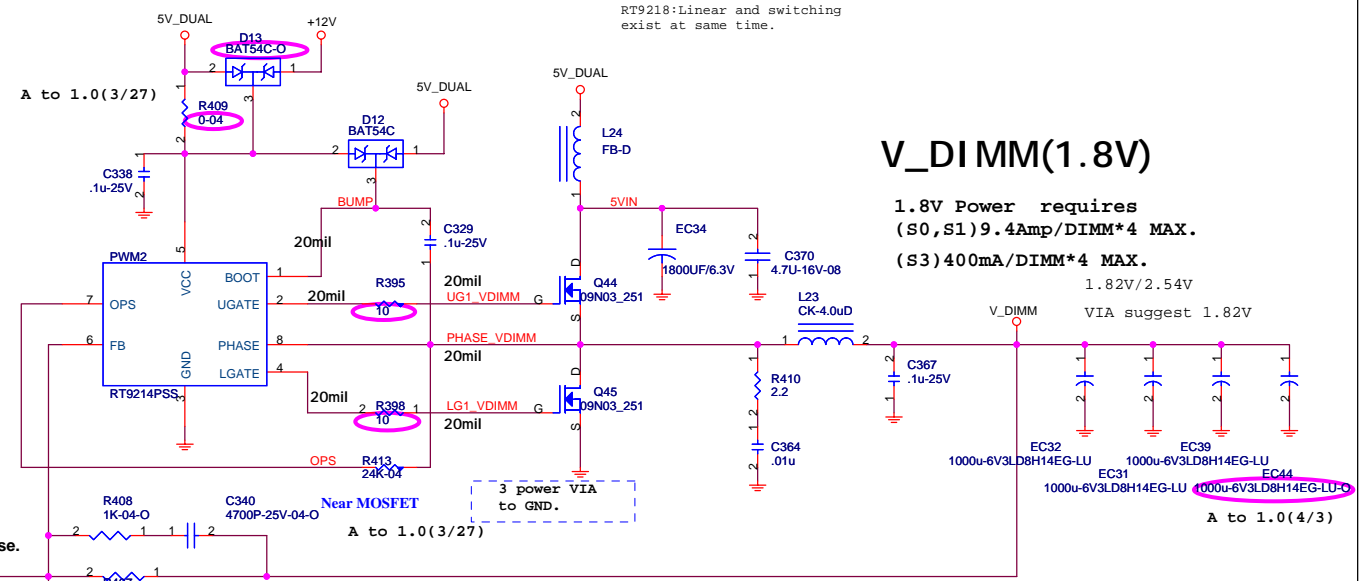
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Dual N-CH
 APM7312 Vds=20V Vgs=16V
 *AO4812 Vds=30V Vgs=20V Id=6.9A
 RT9218: Linear and switching exist at same time.

MEMVADJ1	MEMVADJ0	V_DIMM	DDR400
1	1	Normal (2.56V)	
1	0	+50mV (2.61V)	
0	1	+100mV (2.66V)	
0	0	+150mV (2.71V)	

MEMVADJ1	MEMVADJ0	V_DIMM
1	1	Normal (1.82V)
1	0	+50mV (1.87V)
0	1	+100mV (1.92V)
0	0	+150mV (1.97V)



V_DIMM(1.8V)

1.8V Power requires
 (S0, S1) 9.4Amp/DIMM*4 MAX.
 (S3) 400mA/DIMM*4 MAX.

1.82V/2.54V
 VIA suggest 1.82V

$$\frac{0.8}{100} = \frac{V_{out}}{(100+130)}$$

DDR2 Vout = 1.840V (measure 1.82v)

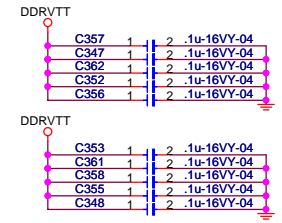
$$100 // 137 = 57.8$$

$$\frac{0.8}{57.8} = \frac{V_{out}}{(57.8+130)}$$

DDR1 Vout = 2.59V (measure 2.56v)

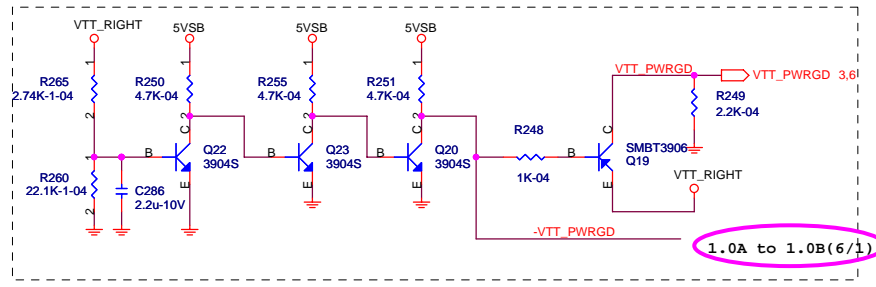
Note PHASE noise.
 Vref=0.8V

OD 20 MEMVADJ1
 20 MEMVADJ0

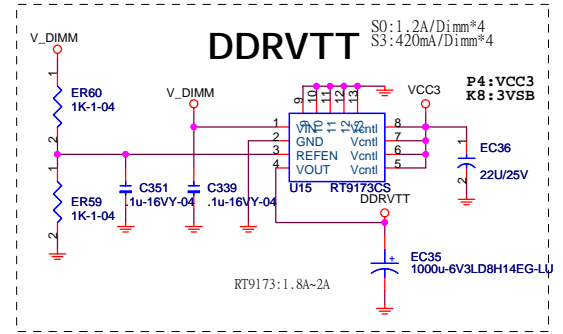
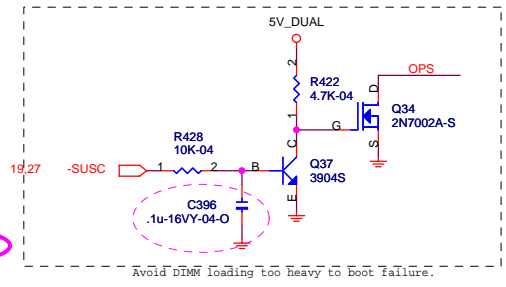


For VTT Power Good Signal

- VTT to VTT_PWRGD delay time: 1-20ms
- Match rising time.

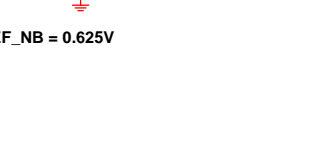
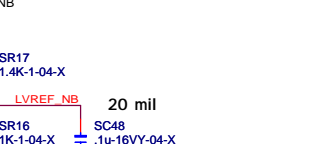
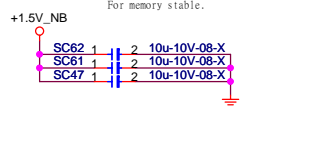
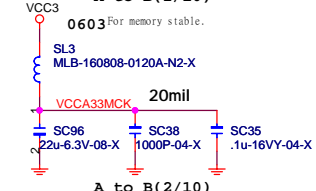
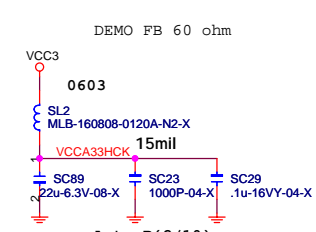
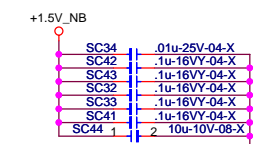
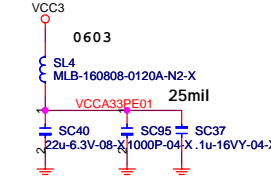
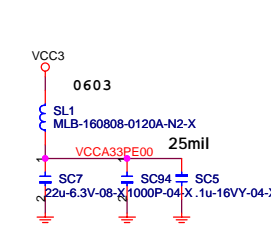
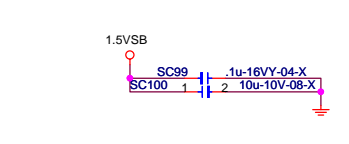
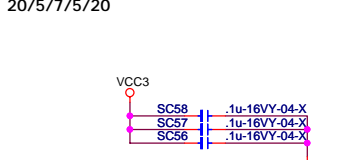
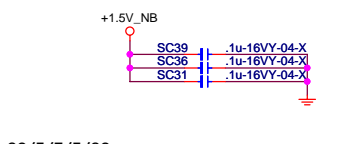
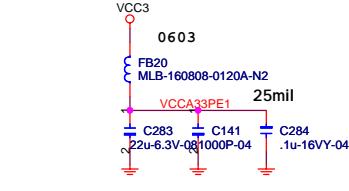
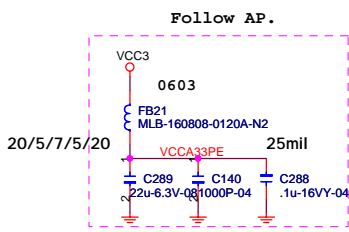
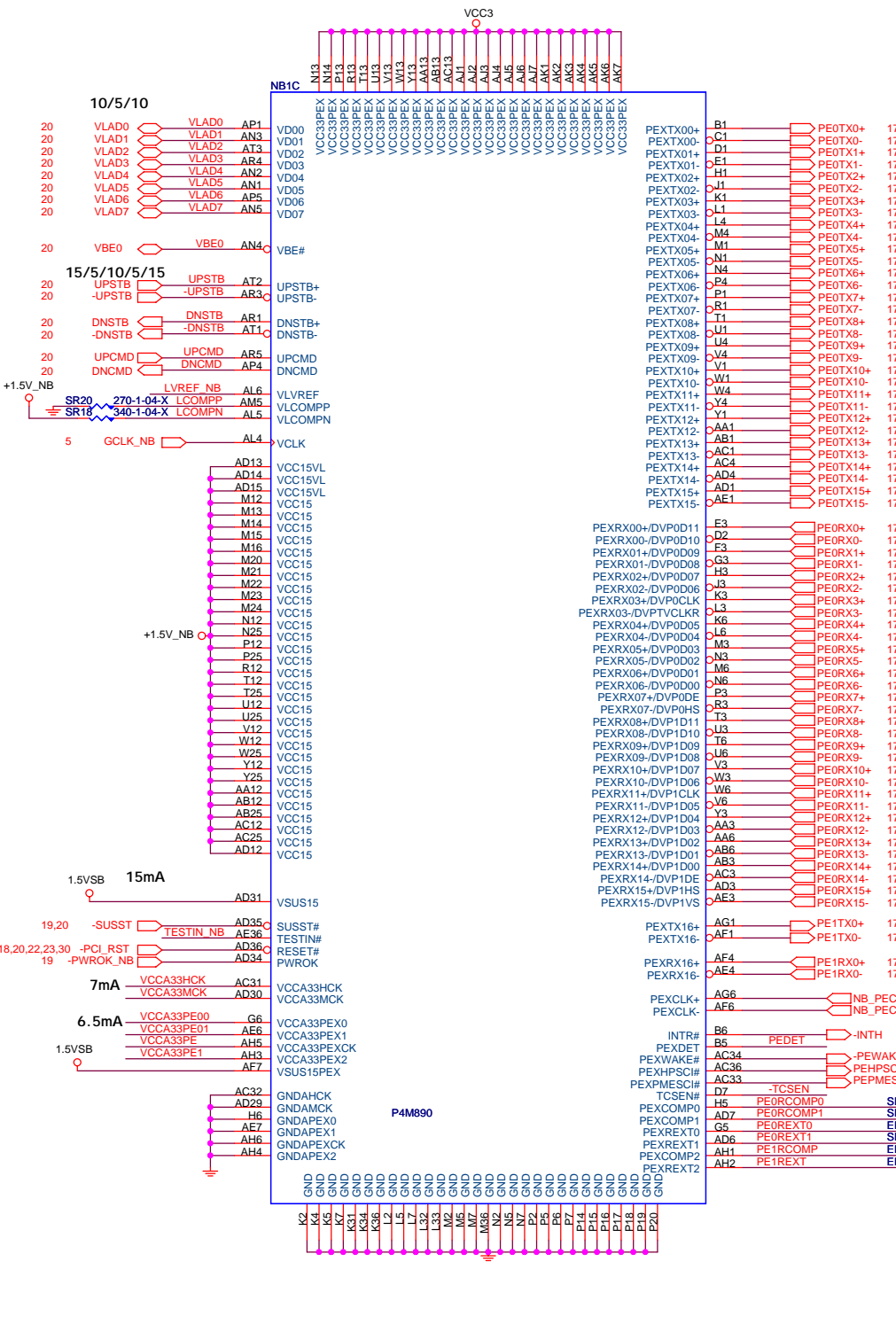


S5: disable V_DIMM



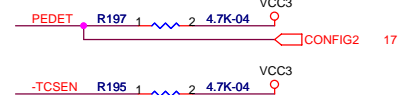
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VDIMM & DDR VTT			1.0B
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Strapping For NB_TEST Mode				
TESTIN	BISTIN	RBF	WBF	
1	1	x	x	

Disable all TEST mode

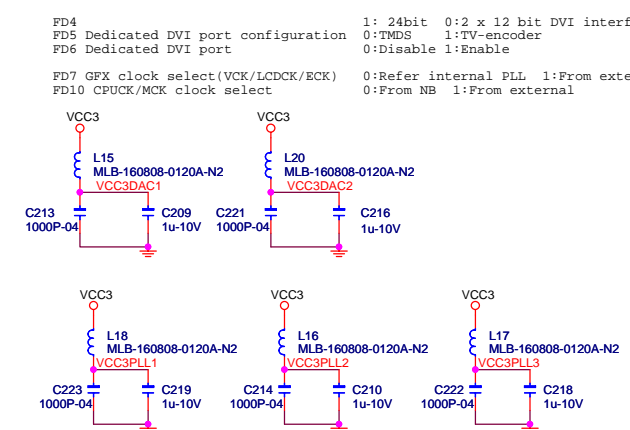
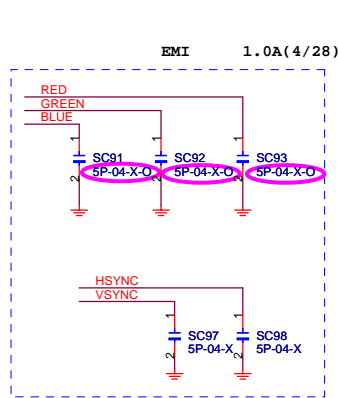
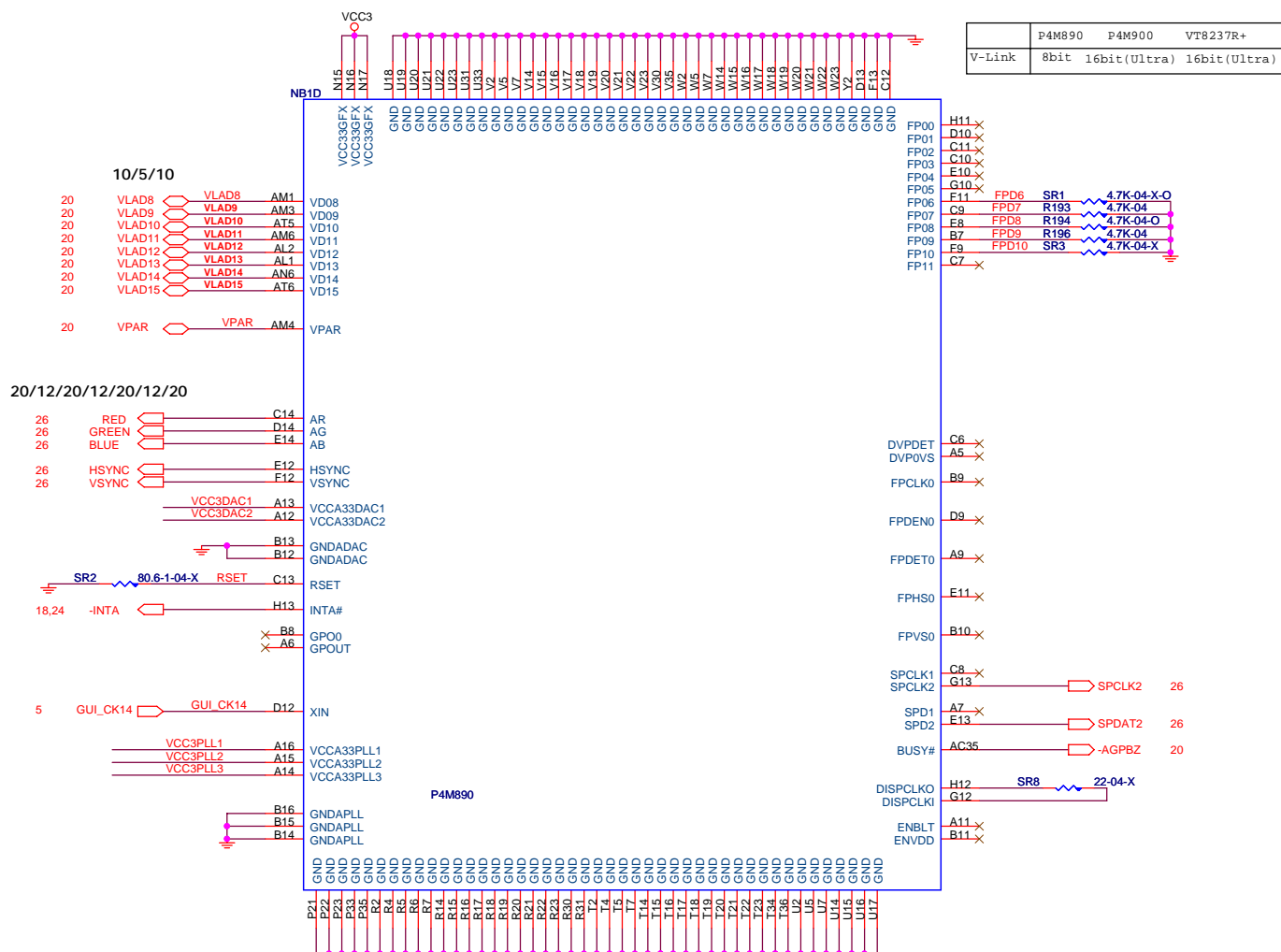


Elitegroup Computer Systems

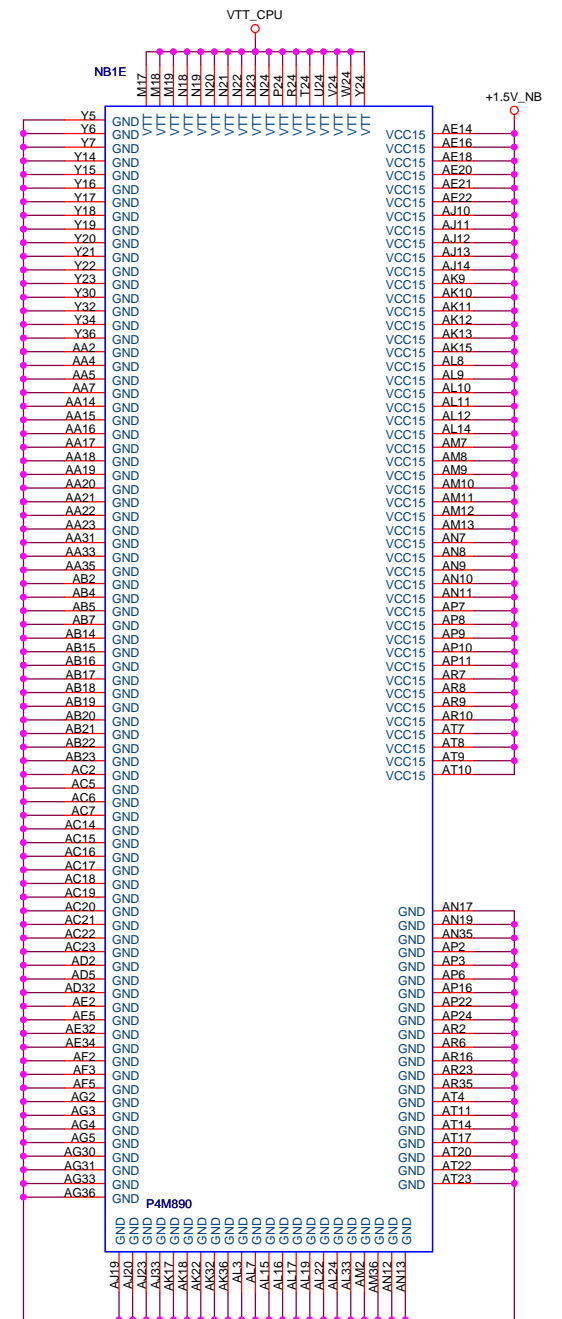
Title: **NB3 (PCIE, VLINK)**

Size C Document Number: **P4M890T-M2** Rev: **1.0B**

Date: Wednesday, June 07, 2006 Sheet 11 of 32



	P4M890	P4M900	VT8237R+
V-Link	8bit	16bit(Ultra)	16bit(Ultra)



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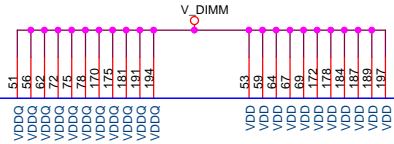
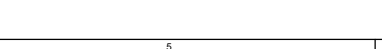
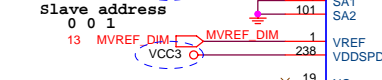
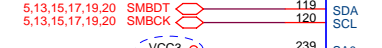
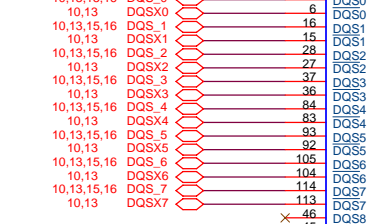
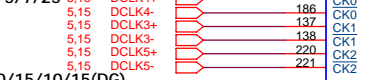
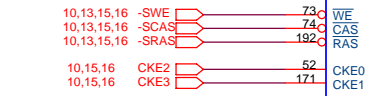
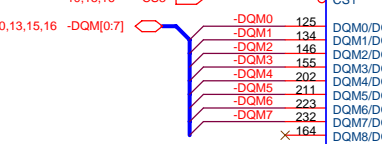
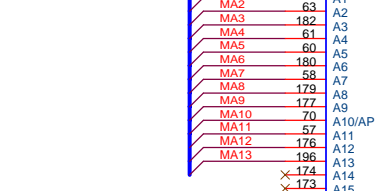
Title **NB4 (VGA)**

Size Document Number **P4M890T-M2** Rev **1.0B**

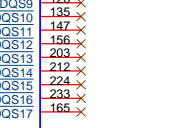
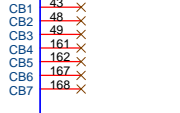
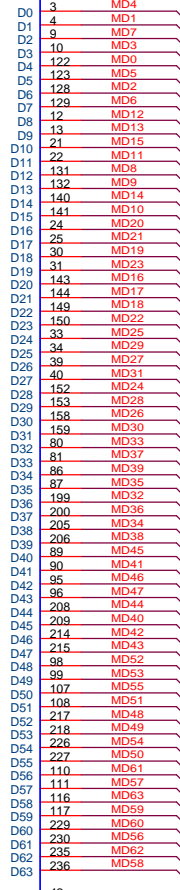
Date: Saturday, June 03, 2006 Sheet 12 of 32

NB location issue
5/10 (DG:10/15)

10,13,15,16 MA[0:13]



DDR2 DIMM 240PIN



MD[0:63]

10,13,15,16

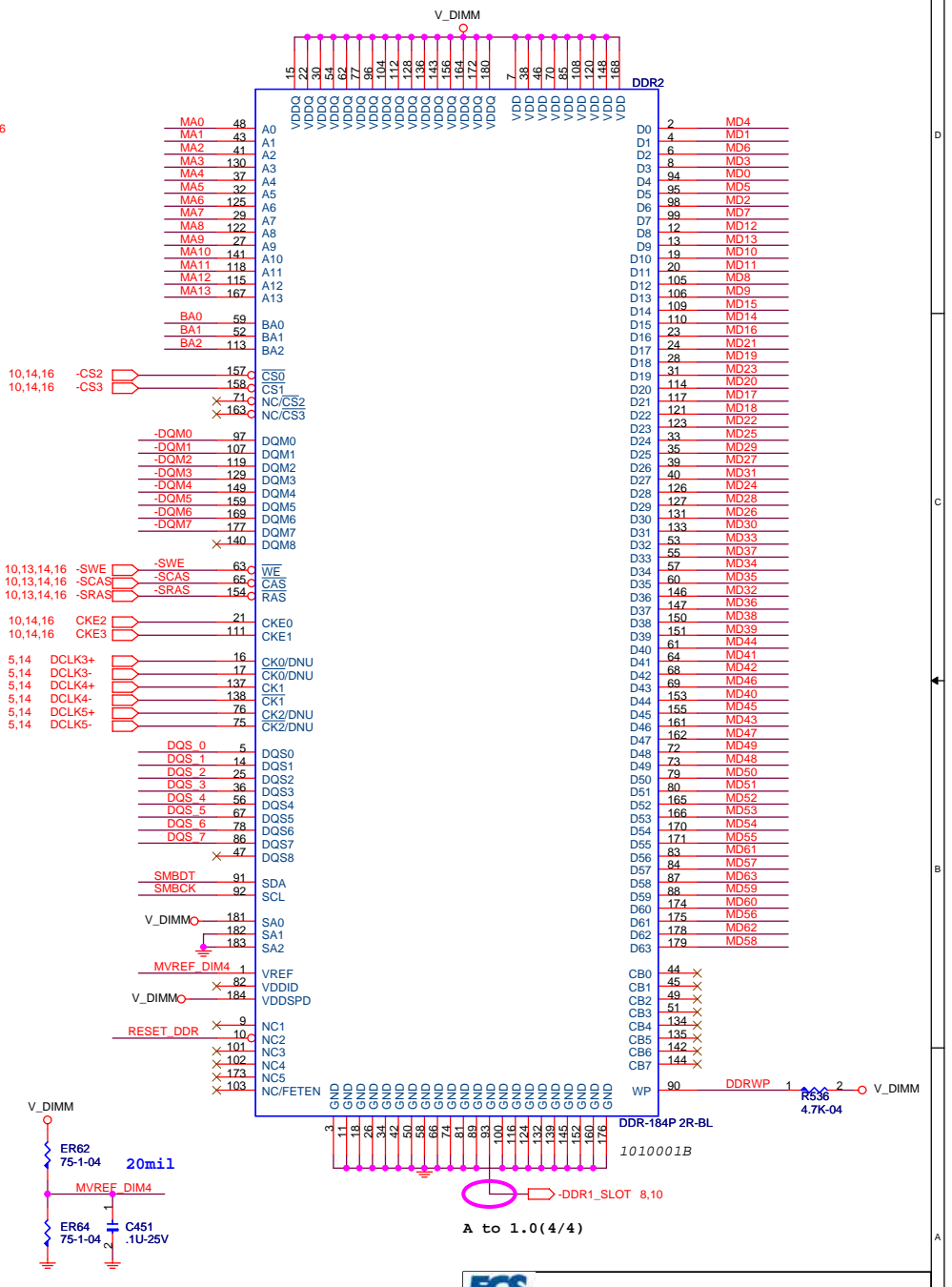
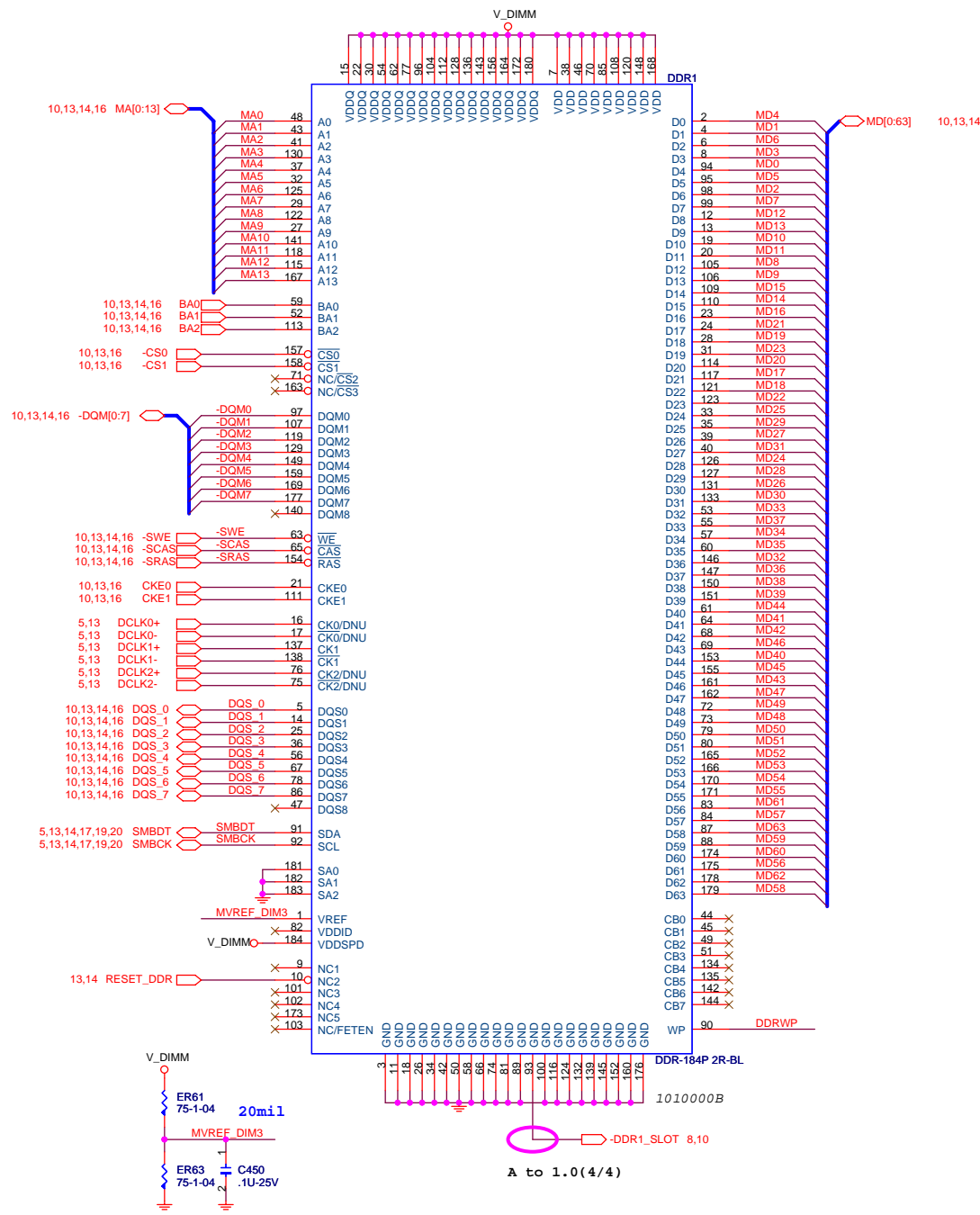
-DDR2_SLOT 8,10,13

ECS Elitegroup Computer Systems

Title: **DDR2 SLOT2**

Size: Document Number **P4M890T-M2** Rev: **1.0B**

Date: Saturday, June 03, 2006 Sheet 14 of 32

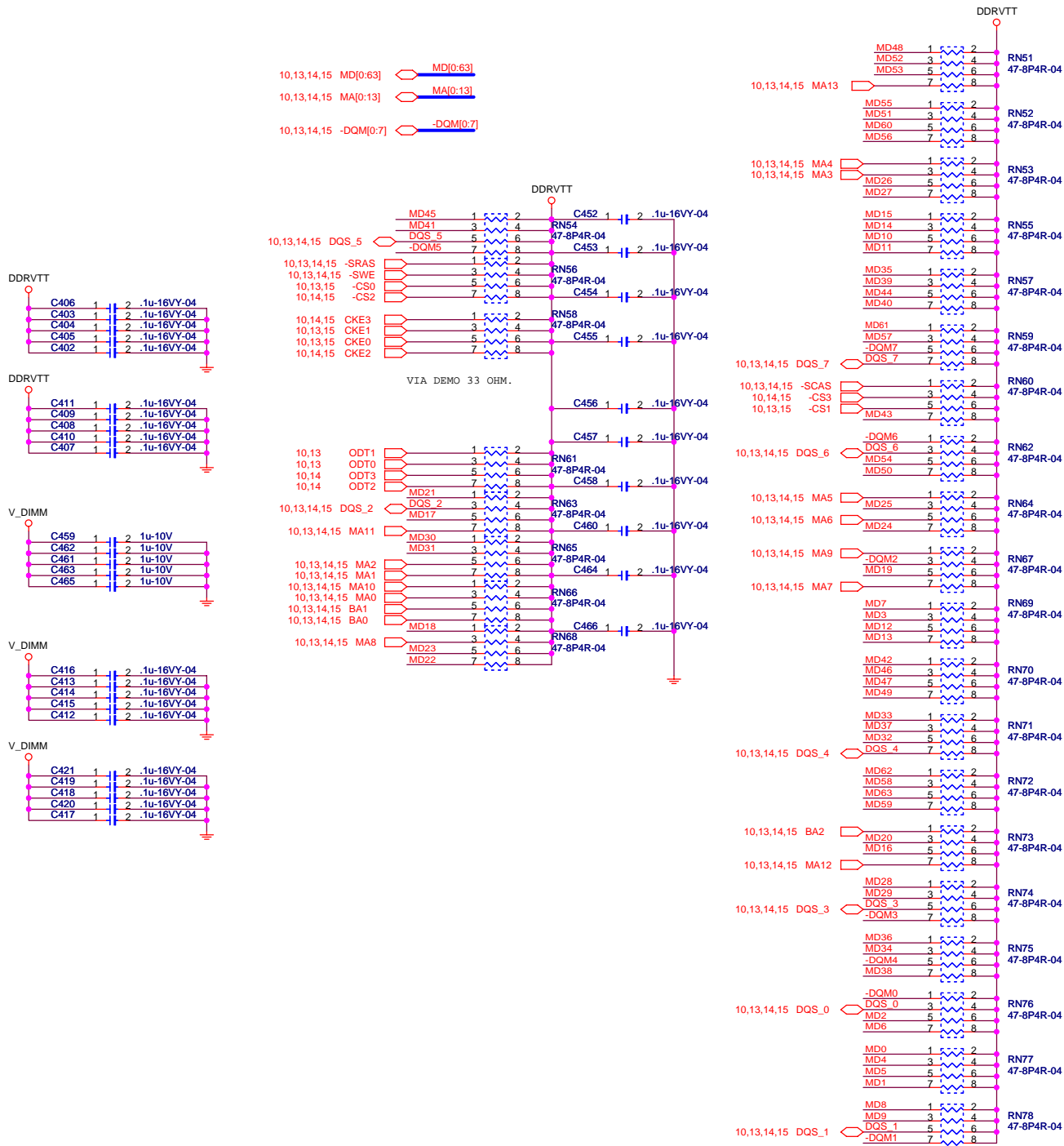



Elitegroup Computer Systems

Title: **DDR SLOT*2pcs**

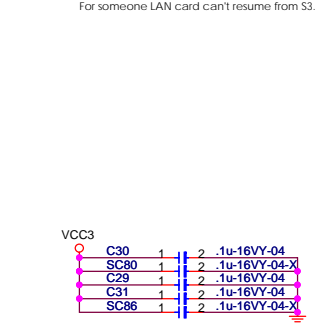
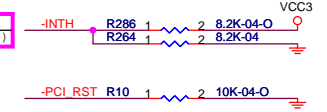
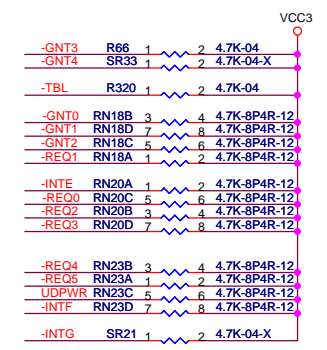
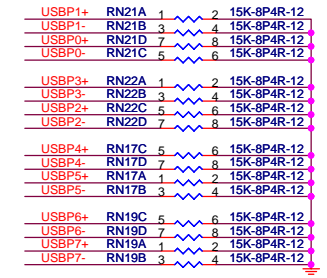
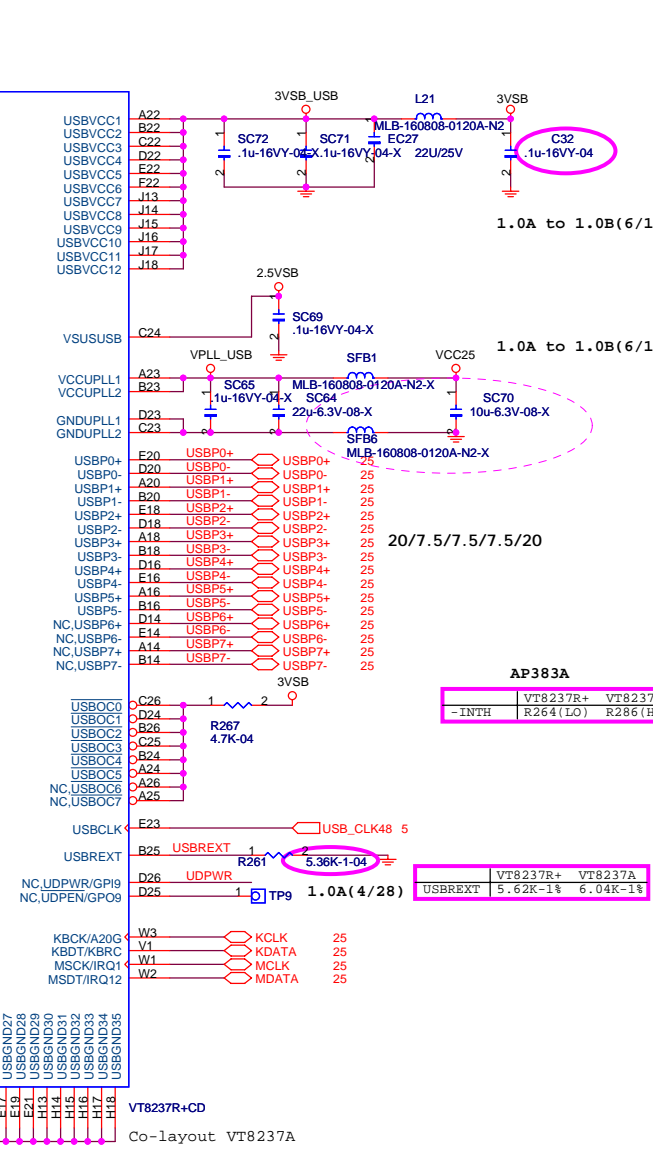
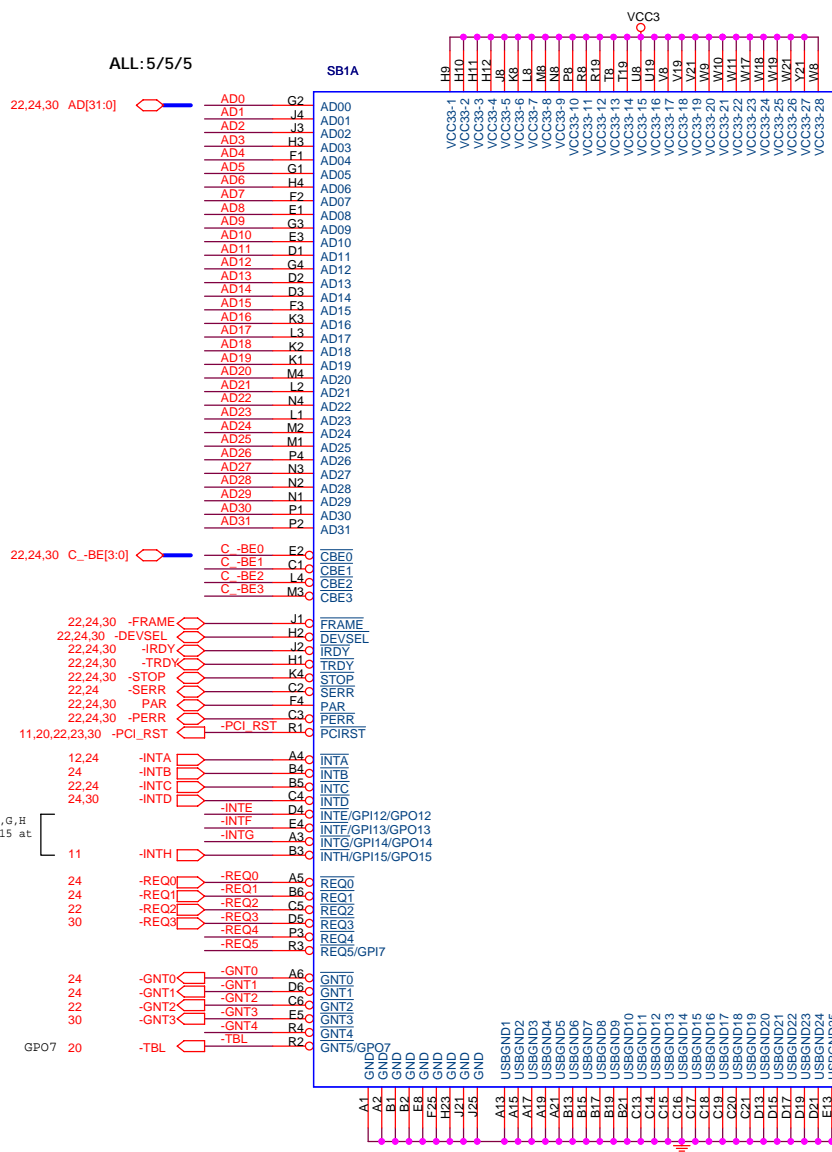
Size: Document Number **P4M890T-M2** Rev: **1.0B**

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 Elitegroup Computer Systems		Title	
		DDR Termination	
Size	Document Number	Rev	
Custom	P4M890T-M2	1.0B	
Date:	Saturday, June 03, 2006	Sheet	16 of 32

	VT8237R+	VT8237A
External 15K pull down	Required	Remove (Internal pull down)



Elitegroup Computer Systems

Title: **SB (PCI_USB)**

Size: Document Number

Rev: **1.0B**

Part Number: **P4M890T-M2**

Date: Saturday, June 03, 2006

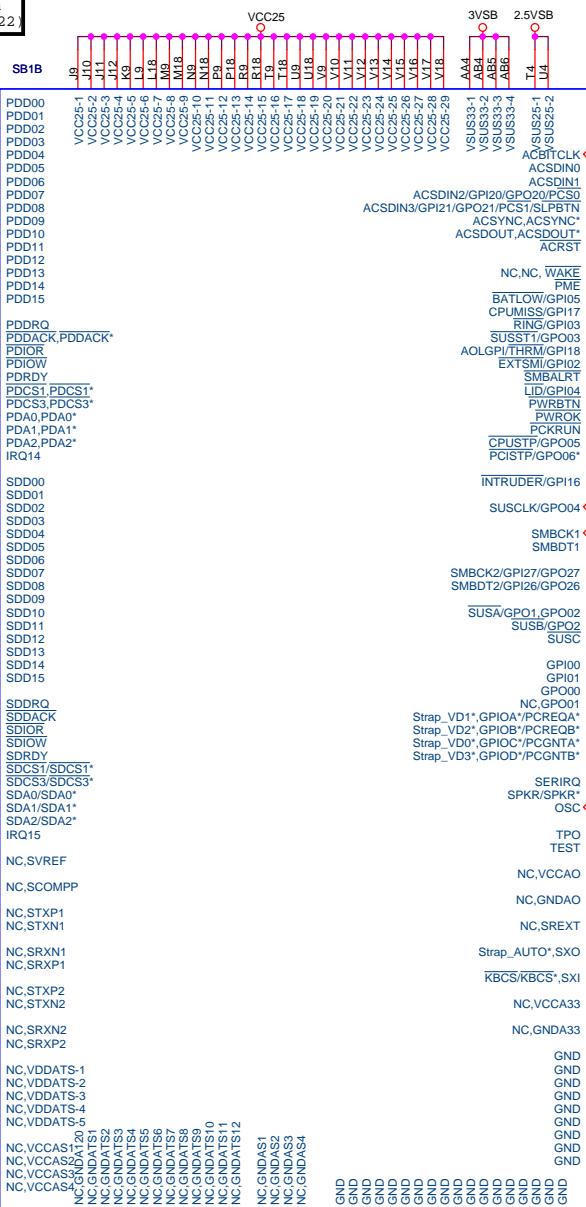
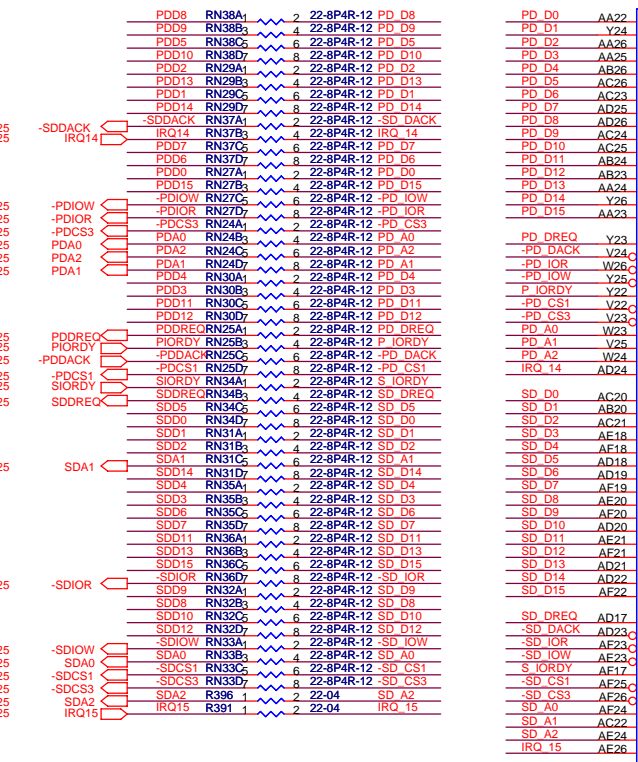
Sheet 18 of 32

25 PDD[15:0]

25 SDD[15:0]

	VT8237R+	VT8237A
IDE damping resistors	Required	change to 0 ohm (Internal pull 22)

ALL: 10/5/10



Pin 8237R	8237A
V5	NC
V4	GP118
U23	GP119
	-PEWAKE
	-PEPMESCI
	-PEHPSCI

GPIOC	GPIOA	Host Clock
0	0	100MHz
1	0	133MHz
0	1	200MHz
1	1	Auto Mode

GPIOB	IOQ Depth
1	1 Level
0	8 Level

GPIOD	GTL pullup
1	Disable
0	Enable

SPKR	CPU Freq strap
1	Disable
0	Enable

GPU ration/freq is locked, don't need this feature.

10x for W/CODEB
4.7k for W/O CODEB

R354	1	0-04	-PEWAKE
R355	1	2	-THRMTrip

R354	1	0-04	-PEWAKE
R355	1	2	-THRMTrip

8237R+	8237A
-PEWAKE	R354
	R355

GPIO0	GPIO1	GPIO2	GPIO3	GPIO4	GPIO5	GPIO6	GPIO7	GPIO8	GPIO9	GPIO10	GPIO11	GPIO12	GPIO13	GPIO14	GPIO15	GPIO16	GPIO17	GPIO18	GPIO19	GPIO20	GPIO21	GPIO22	GPIO23	GPIO24	GPIO25	GPIO26	GPIO27	GPIO28	GPIO29	GPIO30	GPIO31	GPIO32	GPIO33	GPIO34	GPIO35	GPIO36	GPIO37	GPIO38	GPIO39	GPIO40	GPIO41	GPIO42	GPIO43	GPIO44	GPIO45	GPIO46	GPIO47	GPIO48	GPIO49	GPIO50	GPIO51	GPIO52	GPIO53	GPIO54	GPIO55	GPIO56	GPIO57	GPIO58	GPIO59	GPIO60	GPIO61	GPIO62	GPIO63	GPIO64	GPIO65	GPIO66	GPIO67	GPIO68	GPIO69	GPIO70	GPIO71	GPIO72	GPIO73	GPIO74	GPIO75	GPIO76	GPIO77	GPIO78	GPIO79	GPIO80	GPIO81	GPIO82	GPIO83	GPIO84	GPIO85	GPIO86	GPIO87	GPIO88	GPIO89	GPIO90	GPIO91	GPIO92	GPIO93	GPIO94	GPIO95	GPIO96	GPIO97	GPIO98	GPIO99	GPIO100
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R363	Unused	3VSB
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R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
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R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
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R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
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R363	Unused	3VSB
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R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
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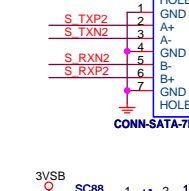
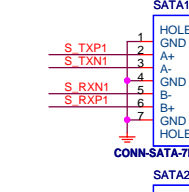
R363	Unused	3VSB
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R363	Unused	3VSB
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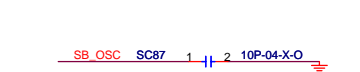
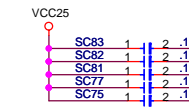
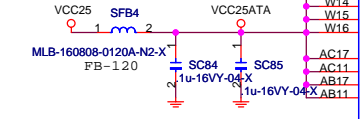
R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
------	--------	------

R363	Unused	3VSB
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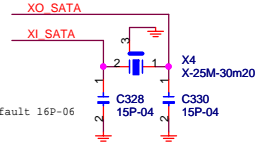


20/5/7/5/20



VT8237R+/VT8237A
PEPMESCI connect to GP118
PEHPSCI connect to GP119

	8237R+	8237A
-PEWAKE	GP11 (AC2)	-WAKE (V5)
PEPMESCI	GP118	GP118
PEHPSCI	GP119	GP119
-THRMTrip	NA	GP11 (AC2)



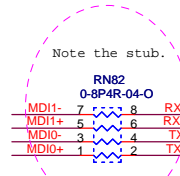
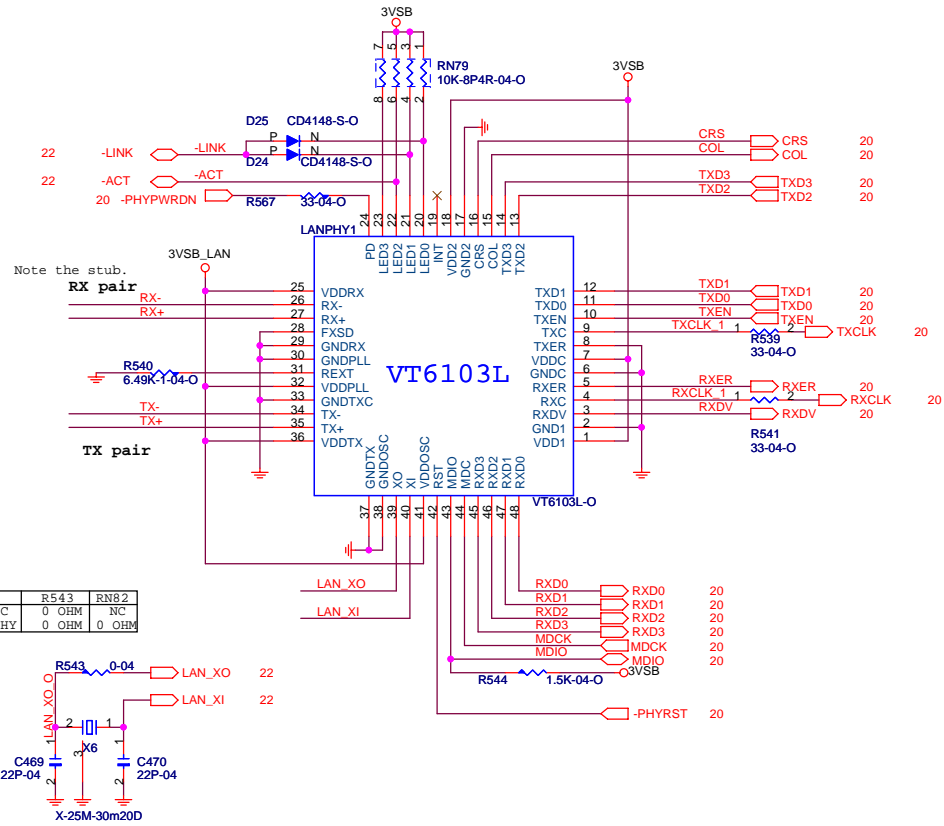
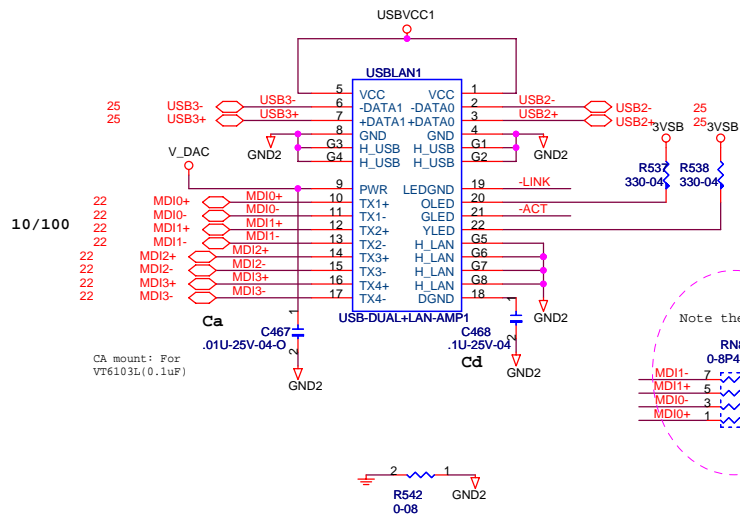
-PD DACK	8237R+	8237A
External SATA PHY	1:Disable	N/A

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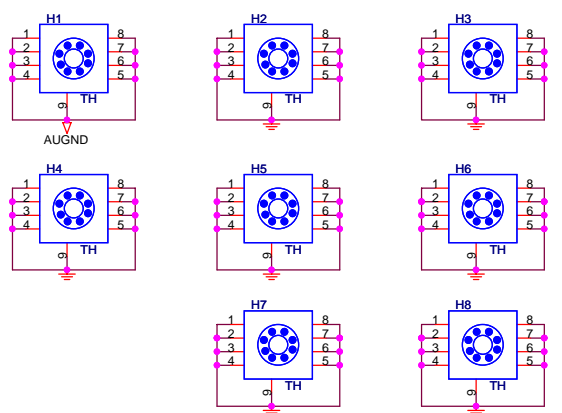
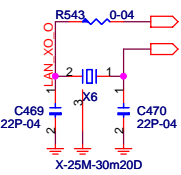
SB (IDE, GPIO, AC-LINK)

Size: Custom Document Number: P4M890T-M2 Rev: 1.0B

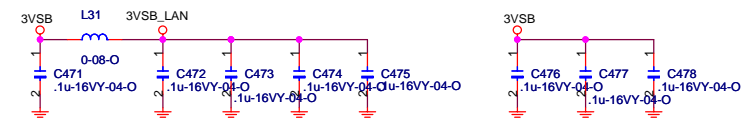
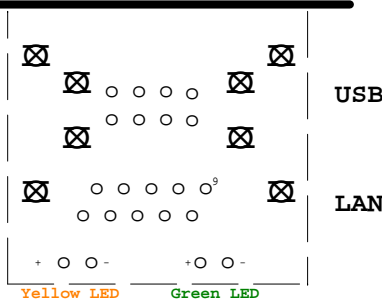
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LAN IC	R543	RN82
LAN PHY	0 OHM	0 OHM



Top View



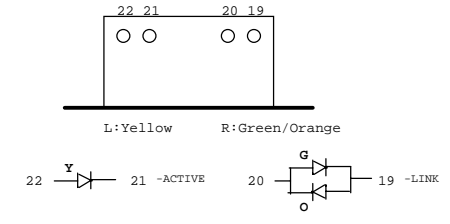
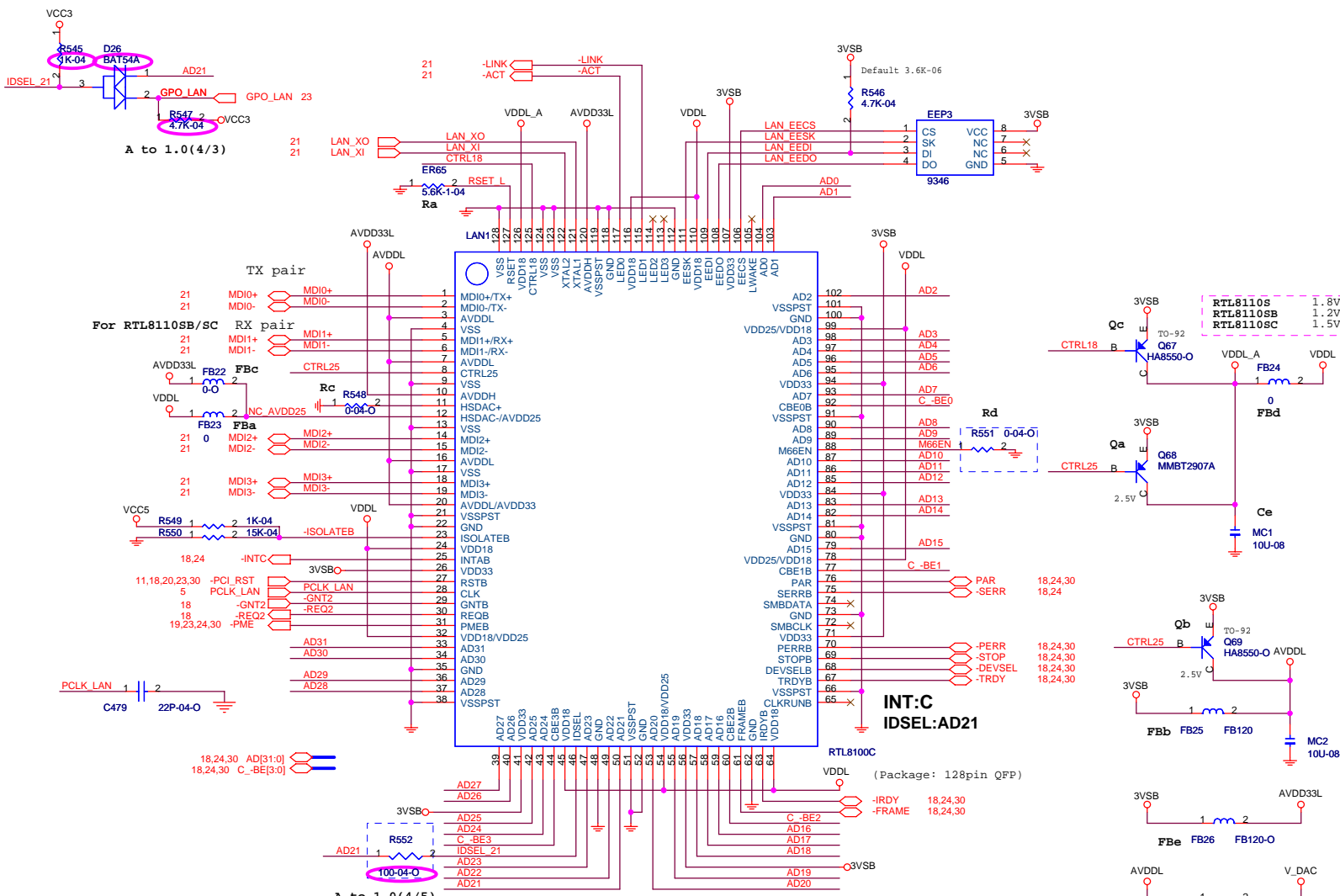
	LED0	LED1	LED2	LED3	
00	LINK /ACT	SPEED	DUPLEX	COL	
01	PWR /TXACT	LINK/RXACT	SPEED	DUPLEX	
10	SPEED 100	SPEED 10	ACT	DUPLEX	Default
11	PWR /TXACT	LINK/RXACT	SPEED	COL	

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Title: **LAN PHY(VT6103L)**

Size: Document Number **P4M890T-M2** Rev: **1.0B**

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	VCC3_DUAL	V_DAC	pin12	VDDL	VDDL_A	AVDDL	AVDD33L
* 8100C	3.3V	NC	2.5VA	2.5V	NC	3.3VA	NC
8110S	3.3V	2.5VA	NC	1.8V 500mA	1.8VA	2.5VA 650mA	3.3VA
8110SB	3.3V	2.5VA	3.3VA	1.2V	1.2VA	2.5VA	3.3VA
Don't use.							
cost down	3.3V	NC	3.3VA	1.5V	1.5VA	1.8VA	3.3VA

	Ra	FBa	Rb	Qa	Qb	FBb	FBc	Qc	LAN1	ERa	ERb	Eca	ECb	Connector+Tran	FBc	Rc	Ca	Cd	FBd	Rd	Ce
* 8100C	5.6K	0	NC	V	V	X	X	X	8100C	X	V	X	X	10-084-022232(LF)	X	X	P.22	P.22	0	X	10uF
8110S	2.49K	NC	0-06	X	V	X	V	V	8110S	V	V	X	X	10-084-022233(LF)	X	X	0.01uF	0ohm	FB120	V	10uF
8110SB	2.49K	NC	0-06	X	V	V	V	V	8110SB	V	V	0.01	X	10-084-022233(LF)	V	V	0.01uF	0ohm	FB120	V	10uF
8110SC	2.49K	NC	NC	X	V	X	V	V	8110SC	X	X	X	X	10-084-022233(LF)	0ohm	V	X	0ohm	0	V	22uF

10/100 connector
(替)10-084-022690(LF)
(替)10-084-022498(LF)

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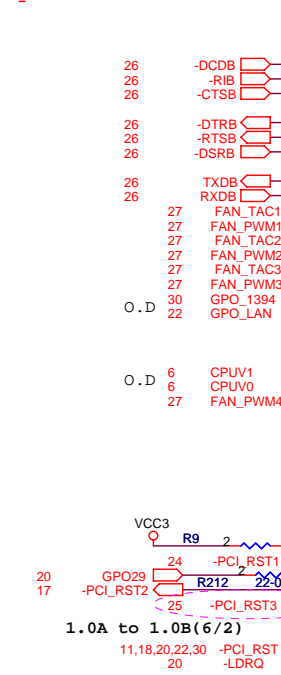
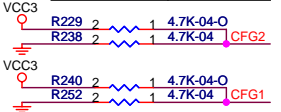
File: **RTL8100C/8110SC**

Size: Custom Document Number: **P4M890T-M2** Rev: **1.0B**

Date: Thursday, June 22, 2006 Sheet 22 of 32

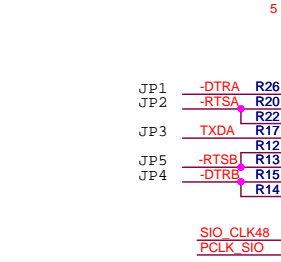
(替)10-084-022503(LF)

CFG2	CFG1	Real S3
0	0	Pseudo S3
1	1	
0	0	
1	1	

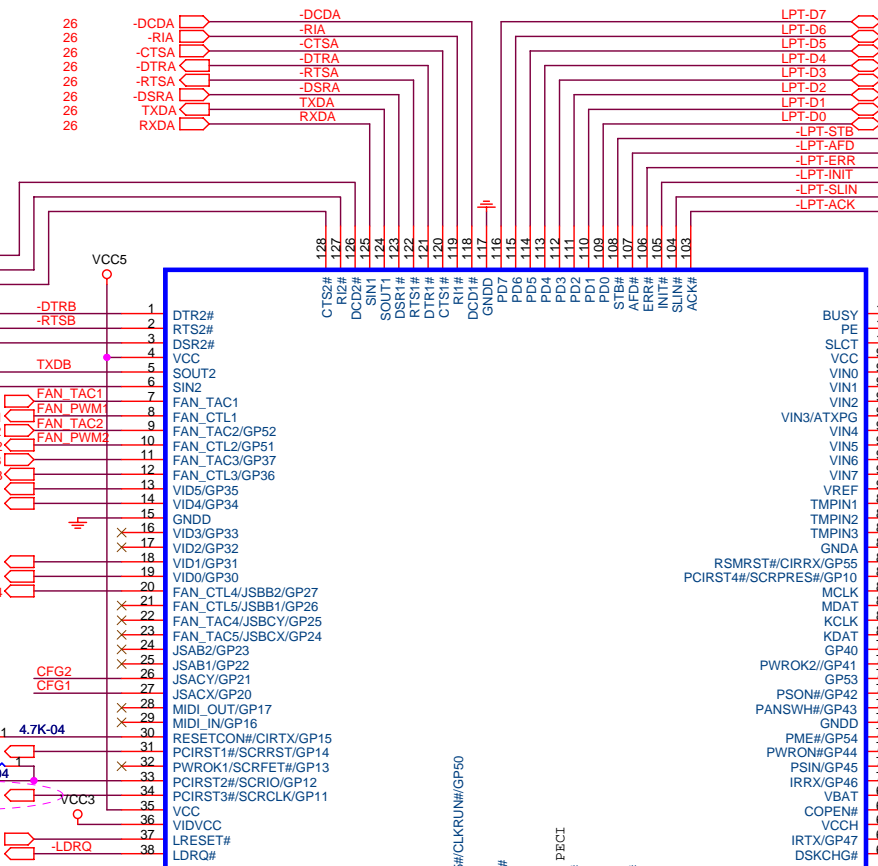


Pin	ITE8712F	ITE8712F/KX
JP1	Flashsegl_EN(for SPI)	1:Disable
JP2	SerFlh_SO_SEL(SO1/SO2)	1:SEL FLH_SO2(don't care)
JP3	CHIP_SEL(for 2pcs iTE)	don't care(2 ITE, 4 COMs)
JP4	BUF_SEL(OD/push pull)	1:PCIRST# O.D.
JP5	FAN_CTL_SEL	1:FAN full turn. 0:FAN mid turn.
JP6	VID_ISEL(CPU478/775)	Don't care.

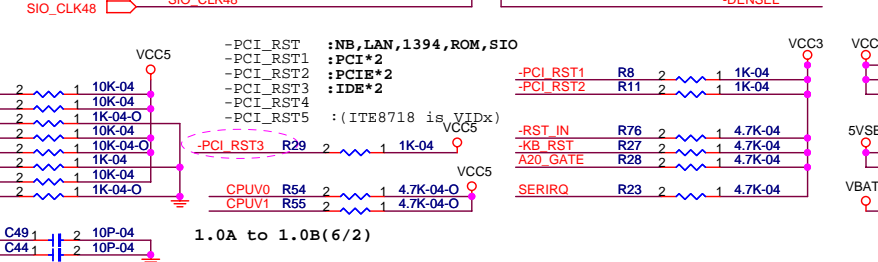
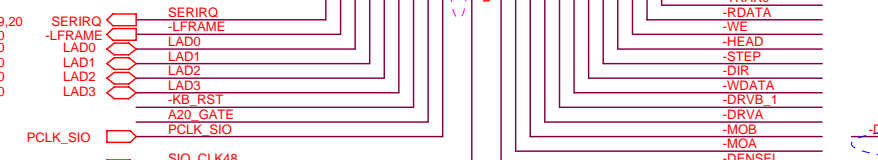
Pin	ITE8718F
55	add Peci
48	Non PCIRST5
21	Non FAN_CTL4
22	Non FAN_CTL5
53	add SST
92	VIN6/VID6
93	VIN5/VID7



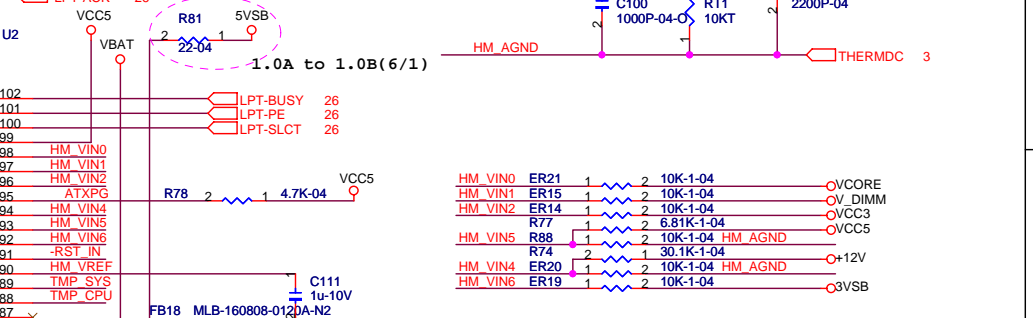
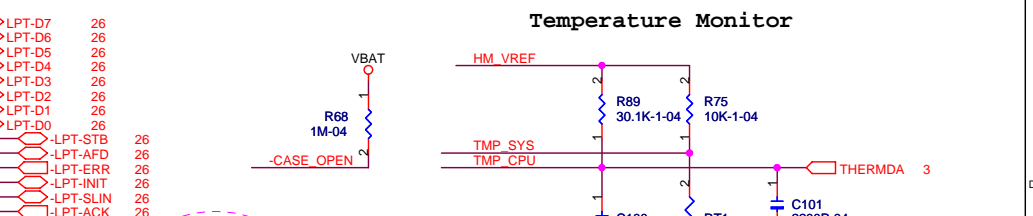
SIO_CLK48	C49	2	10P-04
PCLK_SIO	C44	2	10P-04



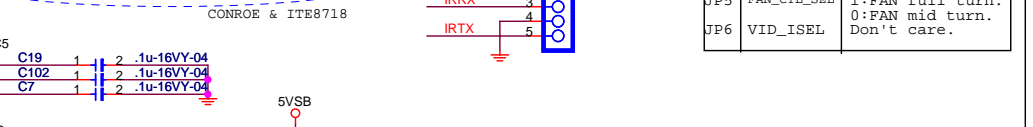
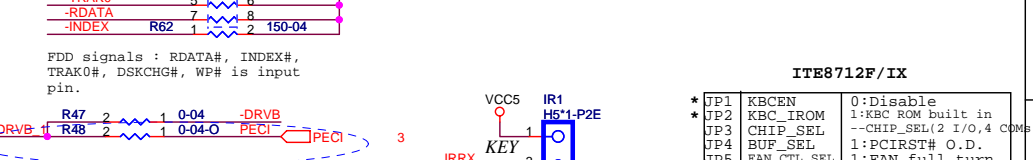
Pin	ITE8712F-KX
39	SERIRQ
40	LFRAME
41	LAD0
42	LAD1
43	LAD2
44	LAD3
45	KRST#
46	GA20
47	PCCLK
48	CLKIN
50	GNDD
51	DENSEL#
52	MTRB#
53	DRVA#
54	DRVB#
55	DRVA#
56	WDATA#
57	DIR#
58	STEP#
59	HDSEL#
60	WGATE#
61	RDATA#
62	IRX0#
63	INDEX#
64	WPT#



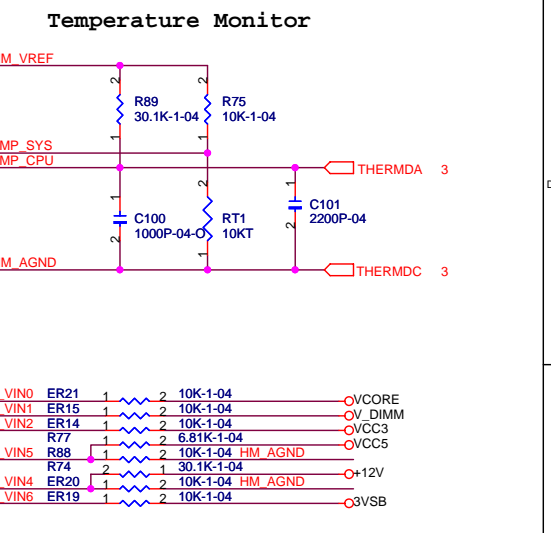
-PCI_RST	R8	2	1K-04
-PCI_RST1	R11	2	1K-04
-RST_IN	R76	2	4.7K-04
-KB_RST	R27	2	4.7K-04
A20_GATE	R28	2	4.7K-04
SERIRQ	R23	2	4.7K-04



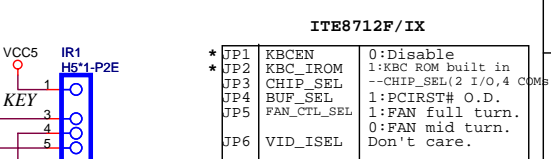
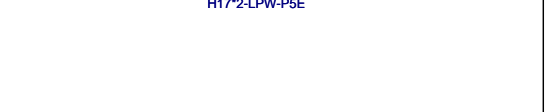
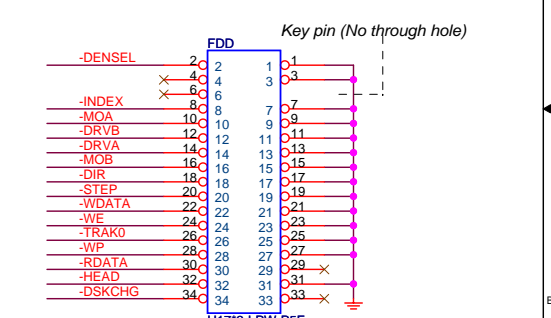
IX: GP10,GP40~46,GP53~55:Powered by VCCH(stand by)
 KX: GP10,GP41~46,GP53~55:Powered by VCCH(stand by)



C19	1	2	1u-16VY-04
C102	1	2	1u-16VY-04
C7	1	2	1u-16VY-04
C105	1	2	1u-10V
C99	1	2	10u-10V-08
C97	1	2	1u-16VY



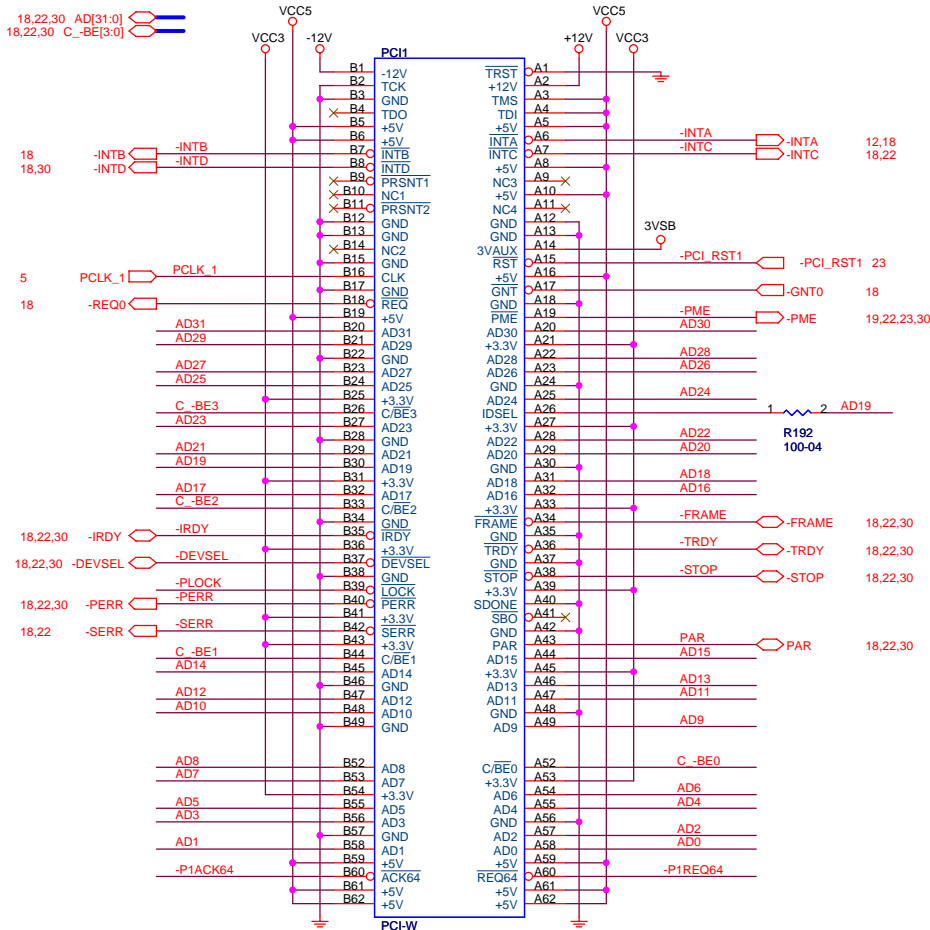
Avoid noise.



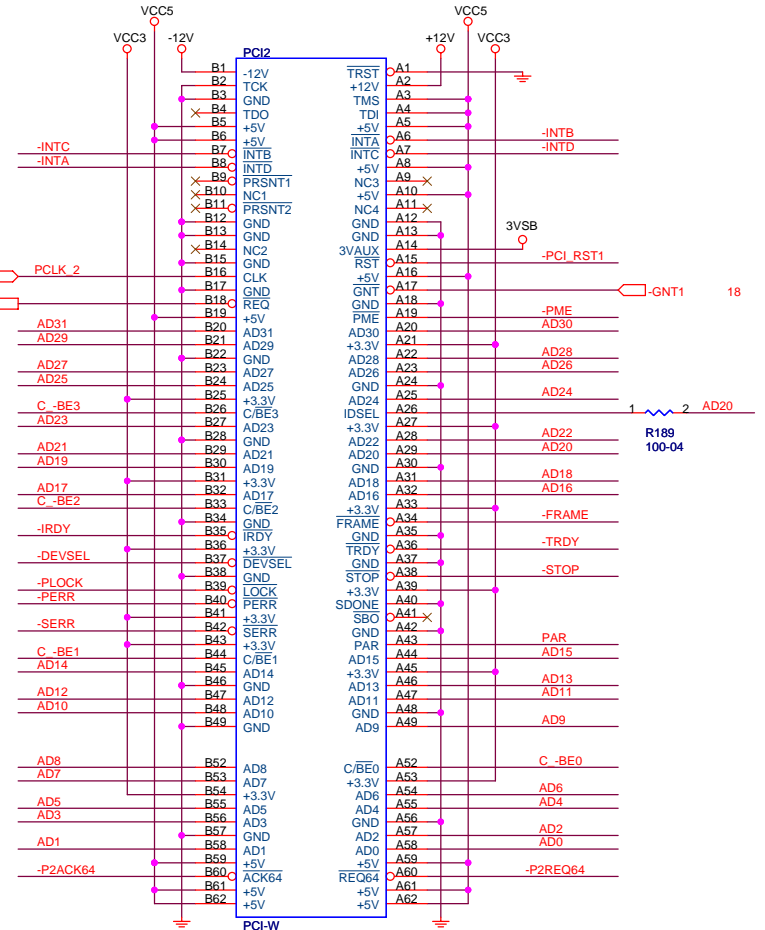
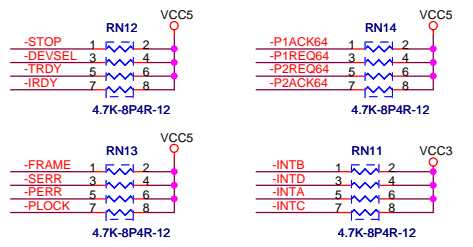
Pin	ITE8712F/IX	ITE8712F/KX
JP1	KBCEN	0:Disable
JP2	KBC_IROM	1:KBC ROM built in
JP3	CHIP_SEL	--CHIP_SEL(2 I/O, 4 COMs)
JP4	BUF_SEL	1:PCIRST# O.D.
JP5	FAN_CTL_SEL	1:FAN full turn. 0:FAN mid turn.
JP6	VID_ISEL	Don't care.

Elitegroup Computer Systems

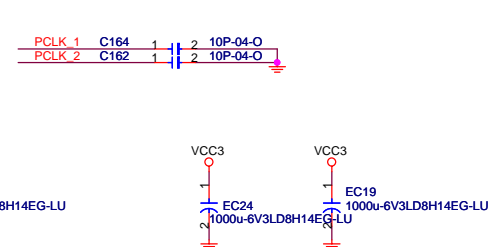
SIO ITE8712F/KX		
Size	Document Number	P4M890T-M2
Custom		Rev 1.0B
Date:	Wednesday, June 21, 2006	Sheet 23 of 32



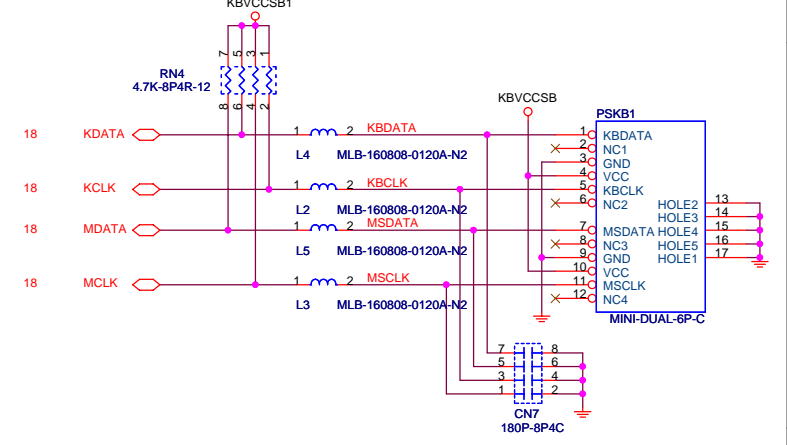
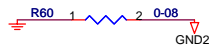
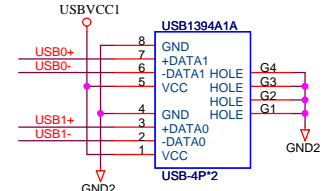
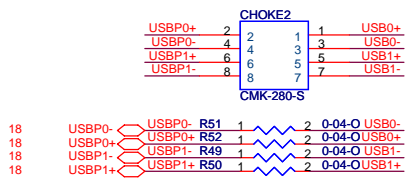
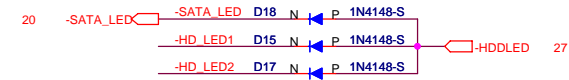
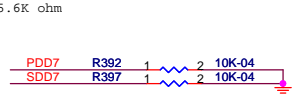
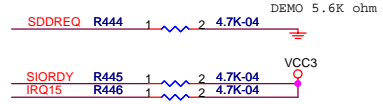
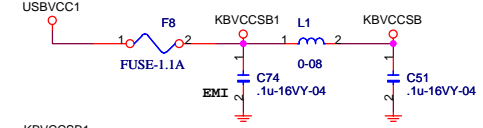
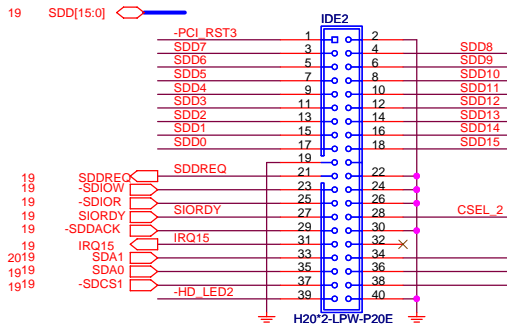
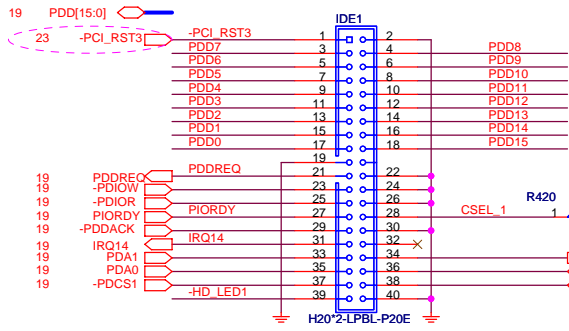
**INT:A
IDSEL:AD19**



**INT:B
IDSEL:AD20**

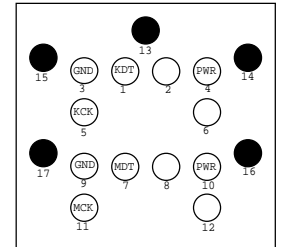
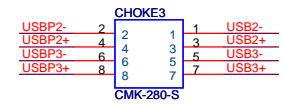
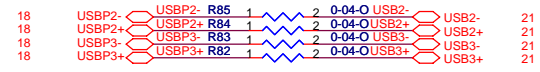
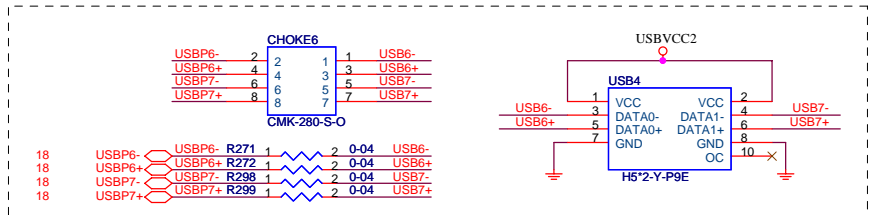
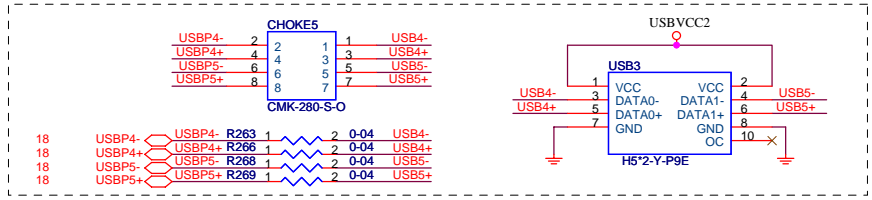
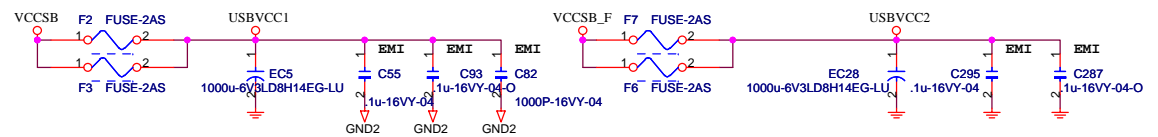


Elitegroup Computer Systems		
Title		
PCI 1 & PCI 2		
Size	Document Number	Rev
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USB 0~3

USB 4~7



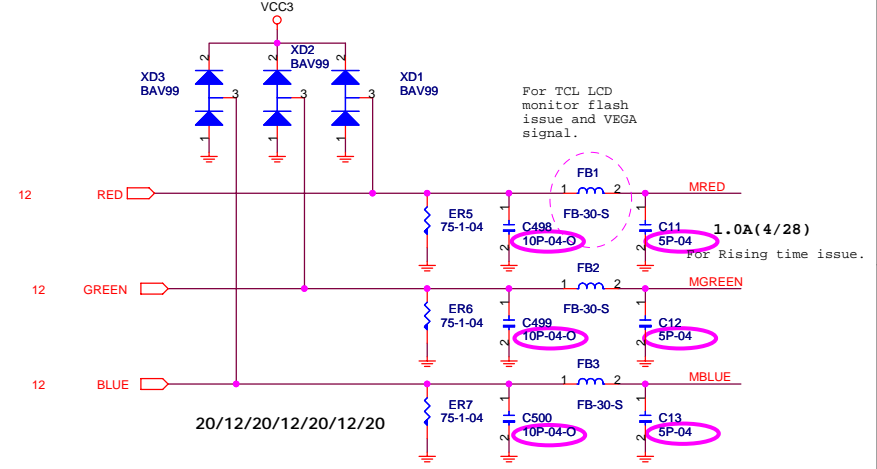
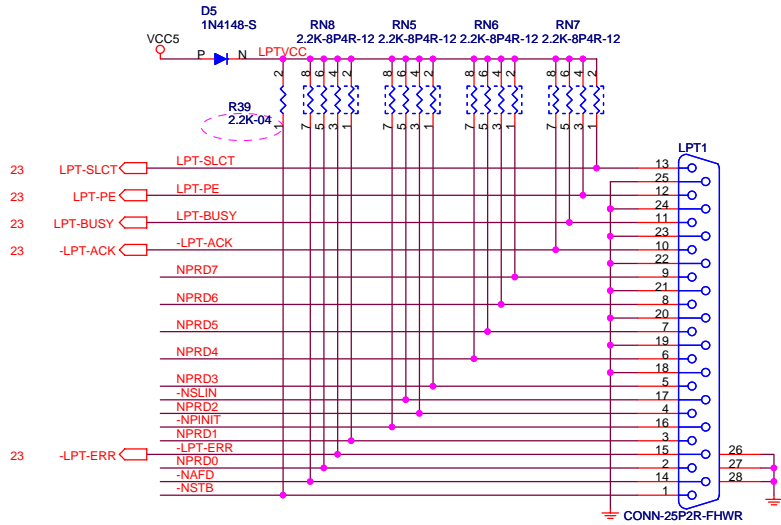
Elitegroup Computer Systems

Title: **USB, PS2, IDE**

Size: Document Number **P4M890T-M2** Rev **1.0B**

Date: Monday, June 05, 2006 Sheet 25 of 32

LPT

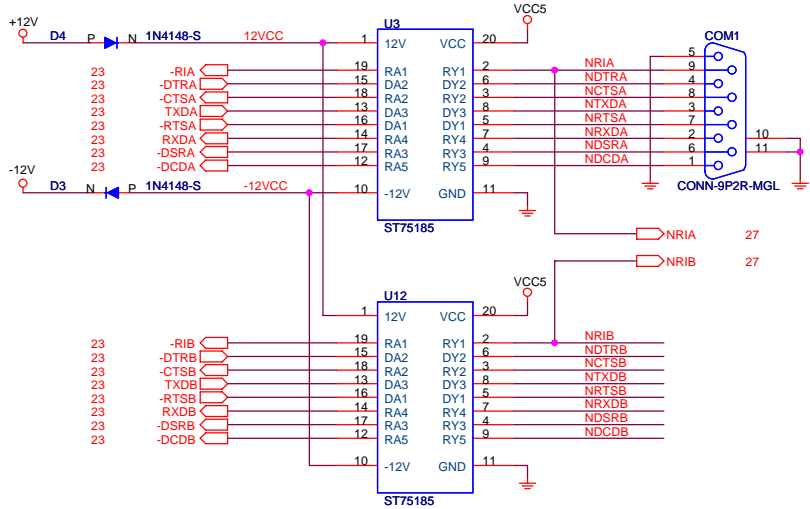


23	LPT-D7	LPT-D7	RN1	1	2	33-8P4R-12	NPRD7
23	LPT-D6	LPT-D6		3	4		NPRD6
23	LPT-D5	LPT-D5		5	6		NPRD5
23	LPT-D4	LPT-D4		7	8		NPRD4
23	LPT-D3	LPT-D3	RN3	1	2	33-8P4R-12	NPRD3
23	LPT-D2	LPT-D2		3	4		NPRD2
23	-LPT-SLIN			5	6		-NPINIT
23	-LPT-INIT			7	8		
23	-LPT-STB		RN2	1	2	33-8P4R-12	-NSTB
23	LPT-D1	LPT-D1		3	4		NPRD1
23	LPT-D0	LPT-D0		5	6		NPRD0
23	-LPT-AFD			7	8		-NAFD

-LPT-ACK	CN5	1	2	180P-8P4C
LPT-BUSY		3	4	
LPT-PE		5	6	
LPT-SLCT		7	8	
NPRD4	CN4	1	2	180P-8P4C
NPRD5		3	4	
NPRD6		5	6	
NPRD7		7	8	
-NPINIT	CN3	1	2	180P-8P4C
-NSLIN		3	4	
NPRD2		5	6	
NPRD3		7	8	
-NAFD	CN6	1	2	180P-8P4C
NPRD0		3	4	
-LPT-ERR		5	6	
NPRD1		7	8	
-NSTB	C48	1	2	270P

BOM coherence

COM 1

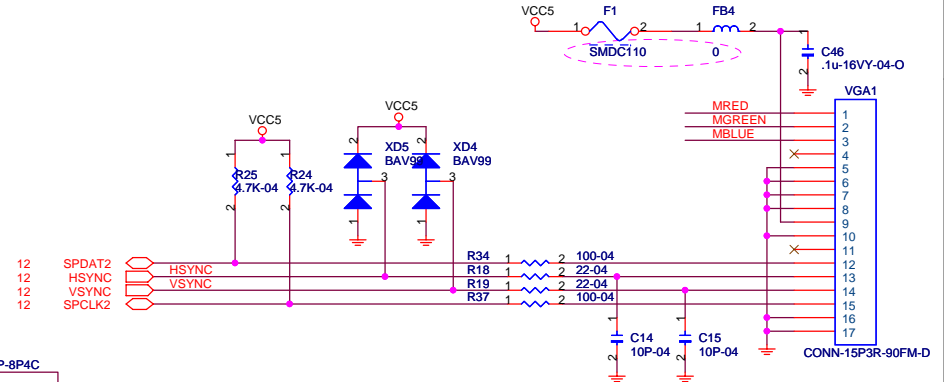


NRIA	CN2	7	8	180P-8P4C
NCTSA		5	6	
NDSRA		3	4	
NRTSA		1	2	
NDTRA	CN1	7	8	180P-8P4C
NRXDA		5	6	
NTXDA		3	4	
NDCDA		1	2	

COM 2

NDCDB	1	2	NRXDB	
NTXDB	3	4	NDTRB	
	5	6	NDSRB	
NRTSB	7	8	NCTSB	
NRIB	9			
NDTRB	CN9	7	8	180P-8P4C
NRXDB		5	6	
NTXDB		3	4	
NDCDB		1	2	
NRIB	CN8	7	8	180P-8P4C
NCTSB		5	6	
NDSRB		3	4	
NRTSB		1	2	

VGA



Elitegroup Computer Systems

Title: **COM, LPT, VGA**

Size: Custom

Document Number: **P4M890T-M2**

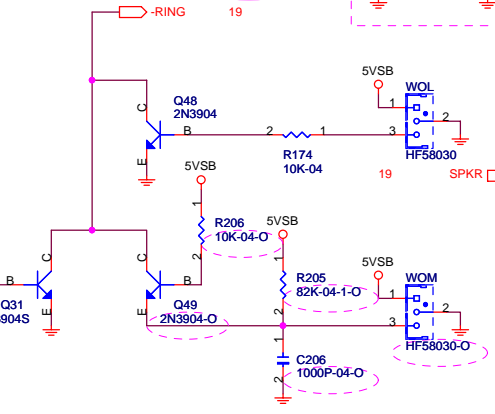
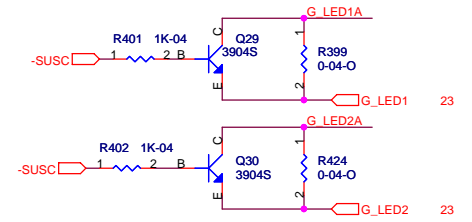
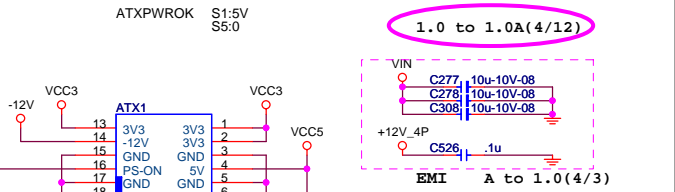
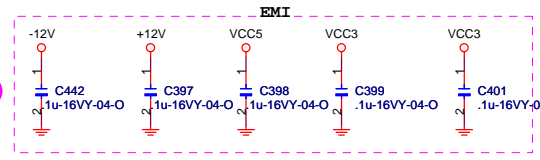
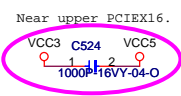
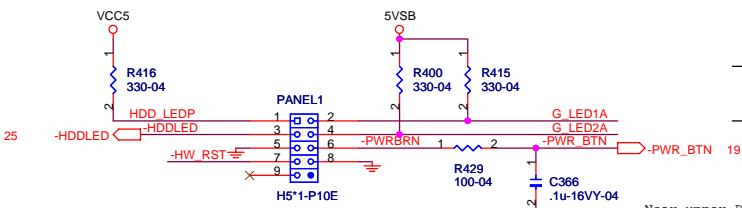
Date: Saturday, June 03, 2006

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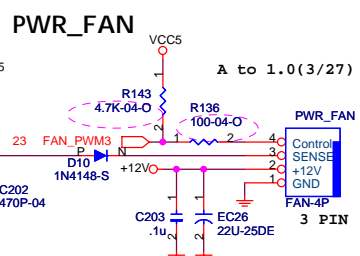
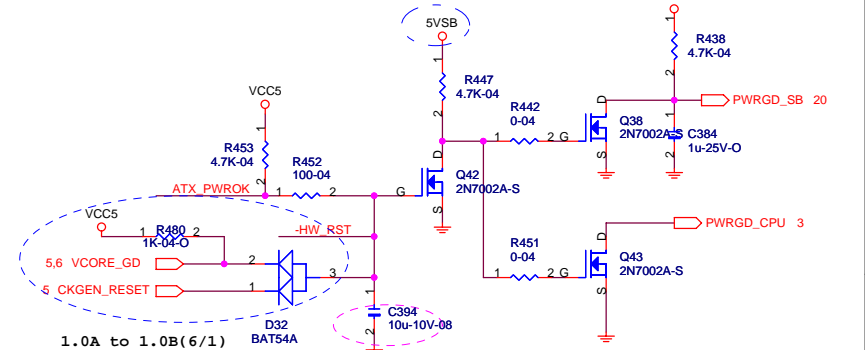
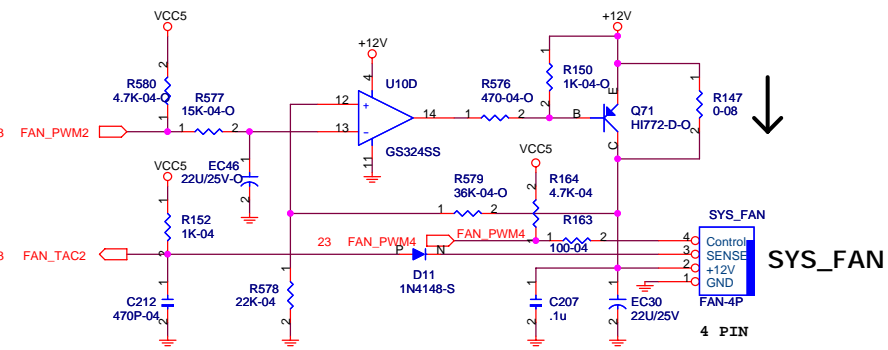
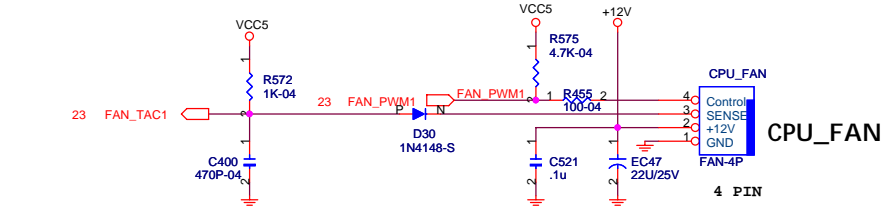
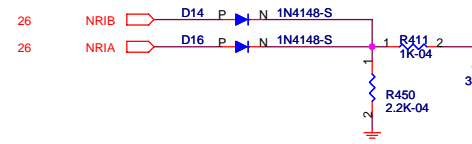
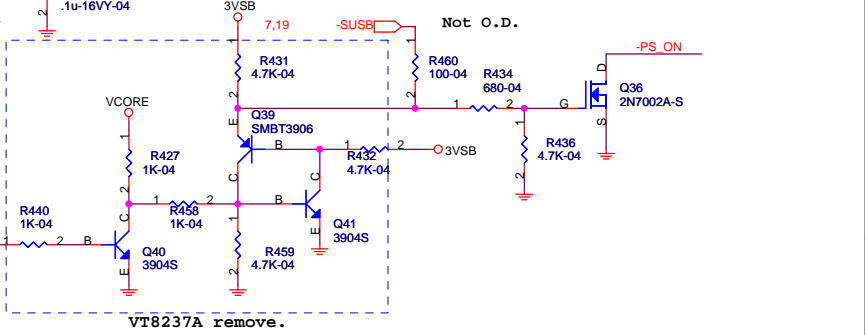
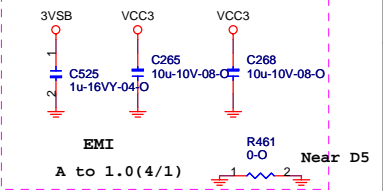
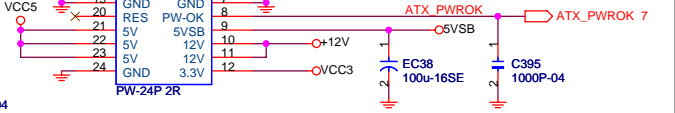
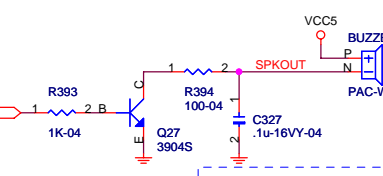
Rev: **1.0B**

PANEL1

1	2
3	4
5	6
7	8
9	X



A to 1.0(3/27)
TF don't staff on WOM.

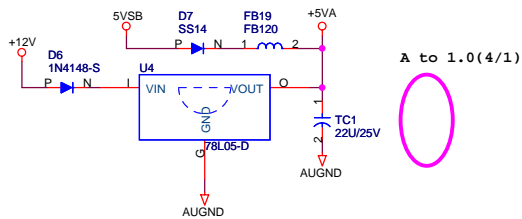


Elitegroup Computer Systems

Title: **FRONT PANEL, FAN, ATX24P, WOM, WOL**

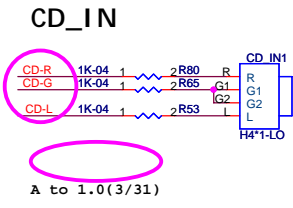
Size: Custom Document Number: **P4M890T-M2** Rev: **1.0B**

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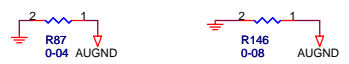


ALC655	R6
ALC883	NC
ALC861	NC

enable standard mode



	ALC655	ALC883
R5	X	2.2K
R7	4.7K	2.2K
R204	4.7K	X

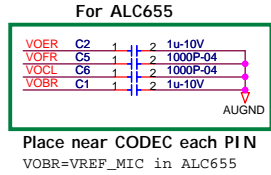


D6: 3*5mm
04-711-101032

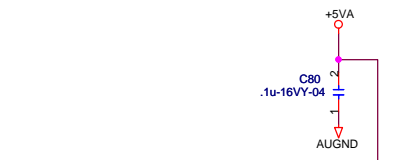
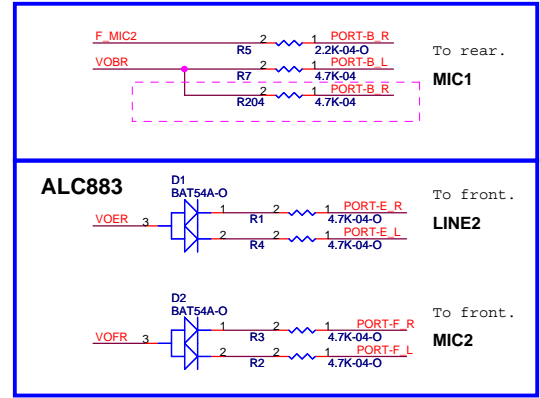
	EC40	EC41
ALC655	100uF/16V	
ALC883	470uF/10V	

1.0 to 1.0A(4/12)

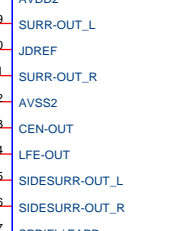
1.0 to 1.0A(4/13)



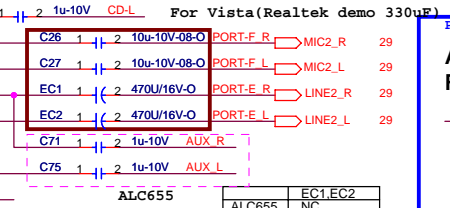
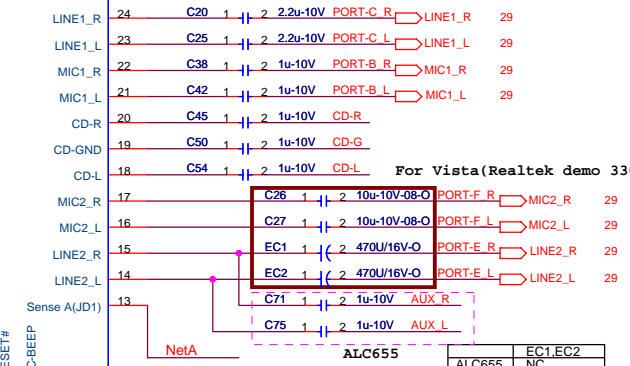
VREF bias for stereo MIC.



For Vista

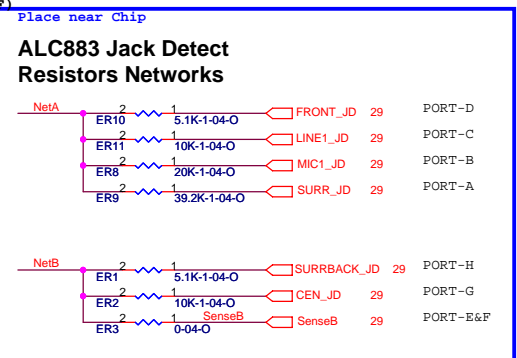


U1

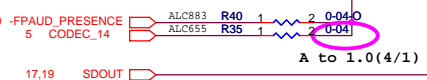


ALC655	EC1, EC2
ALC883	NC
	470uF/10V

For Vista
(Realtek demo 330uF)

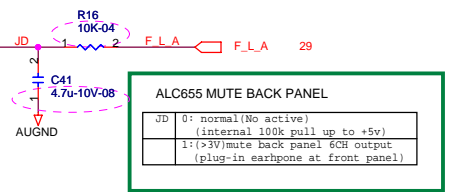


	EXT 14.318M
ALC655	Yes
ALC883	No

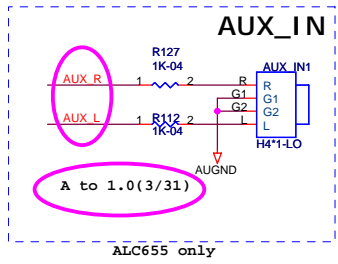


A to 1.0(4/1)

	BITCLK
ALC883	SB->CODEC(14MHz)
ALC655	CODEC->SB(12.288MHz)



A to 1.0(4/1)



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ALC883(861) & ALC655 CODEC

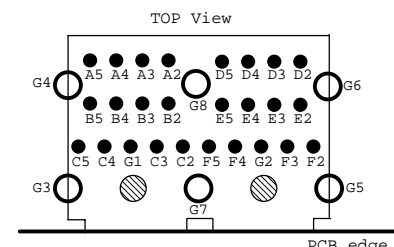
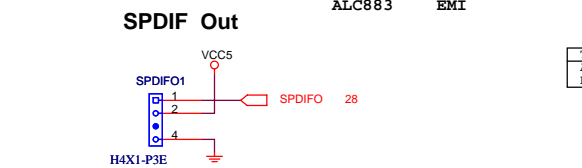
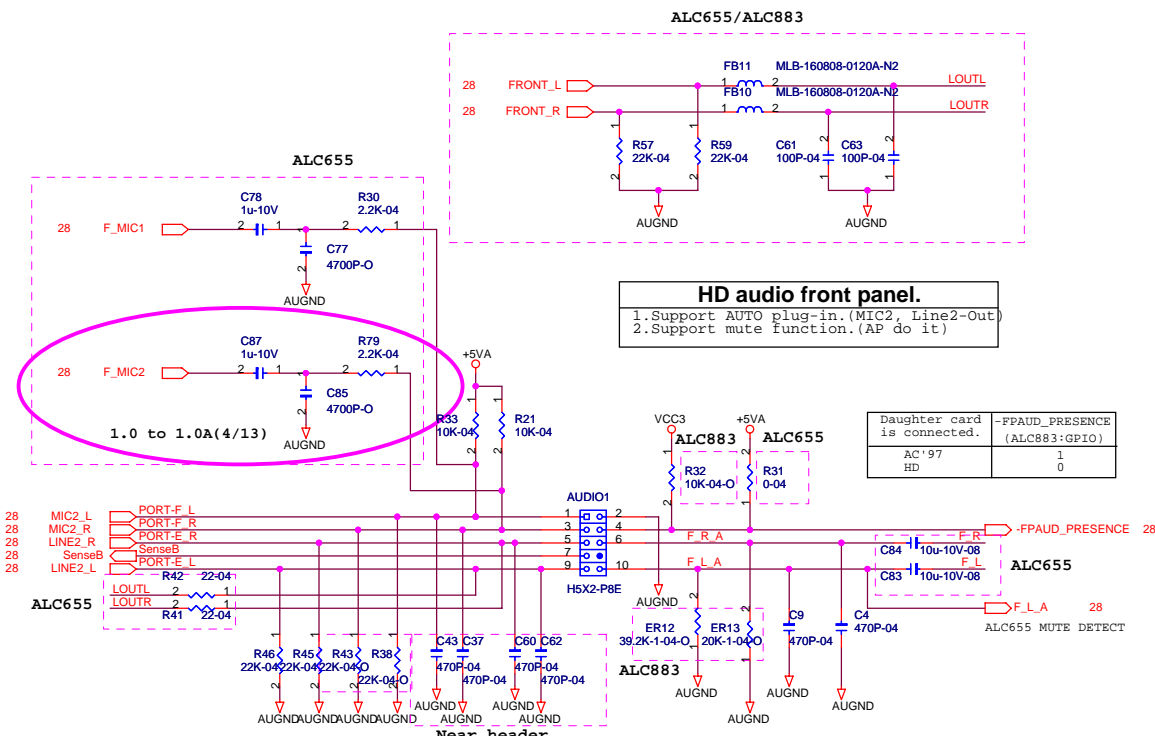
File: _____

Size: Document Number _____ Rev: 1.0B

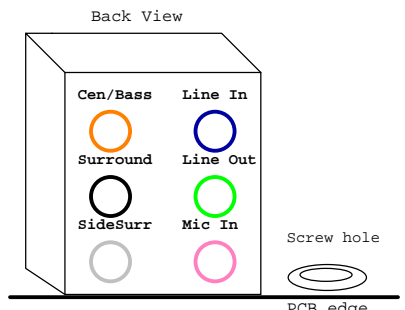
Custom: _____

Date: Monday, June 19, 2006 Sheet 28 of 32

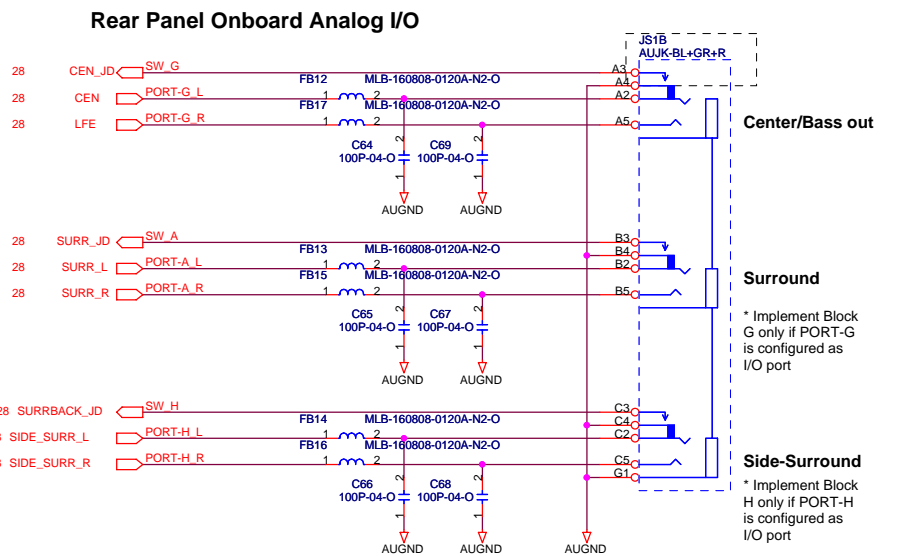
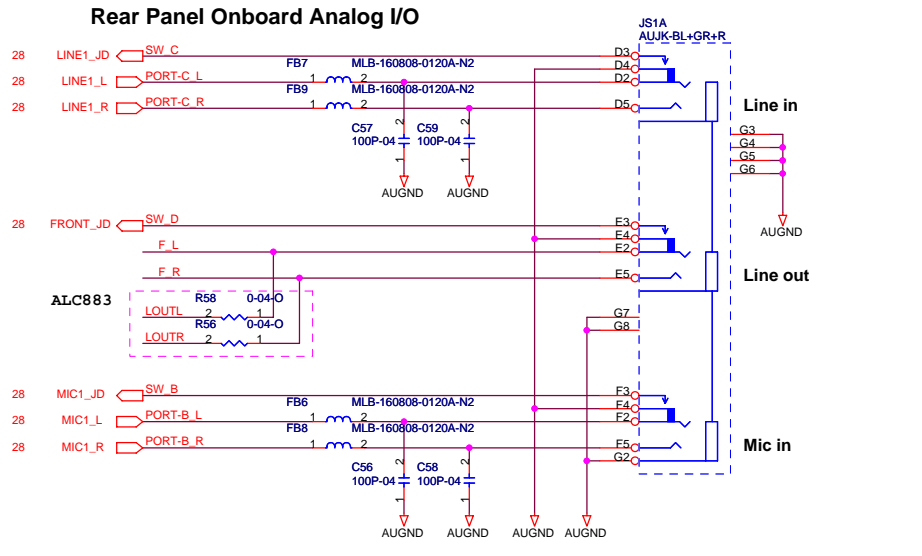
P4M890T-M2



Cen/LFE: Center/Lower Frequency Enhancement (Bass)



HD connector
 1.Pin x3,x4 Normal open(Combo Jack).
 2.Pin x3 ,x4 short if jack is plug-in.
 3.Support Semi-AUTO plug-in.(Line-In, Line-Out, Mic)



	ALC655	ALC883
JS1	6-CH	8-CH
AUDIO1 header	Purple	Green
AUDIO1(5-6,9-10)	Short	NC

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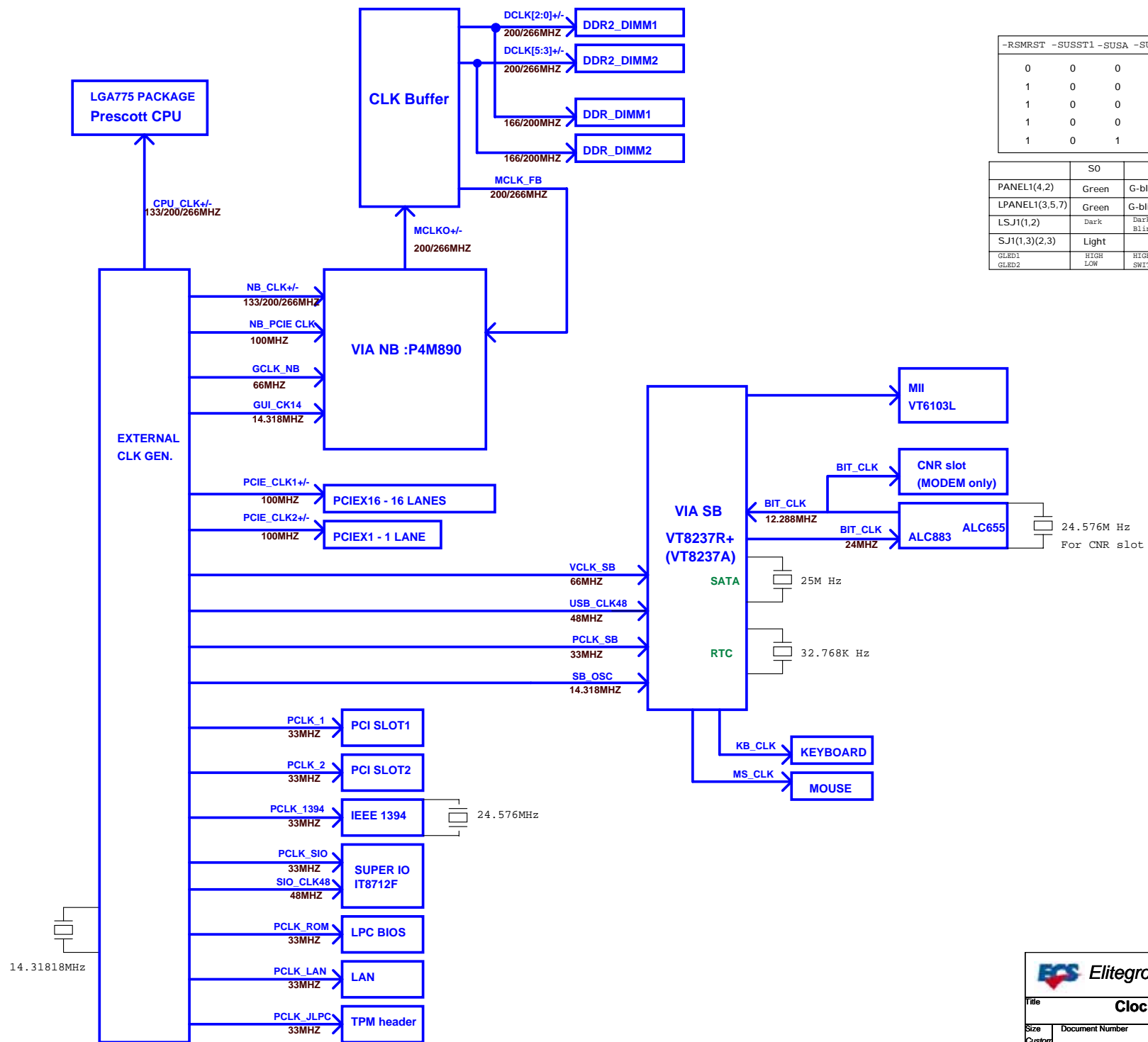
ALC883 & ALC655 Connector

File: **ALC883 & ALC655 Connector**

Size: Document Number **P4M890T-M2** Rev **1.0B**

Custom: **P4M890T-M2**

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-RSMRST	-SUSST1	-SUSA	-SUSB	-SUSC	MODE
0	0	0	0	0	Mechanical off
1	0	0	0	0	S4/S5
1	0	0	0	1	S3
1	0	0	1	1	S1
1	0	1	1	1	S0 (ON)

	S0	S1	S3	S4,S5
PANEL1(4,2)	Green	G-blinking	Y-blinking	Dark
LPANEL1(3,5,7)	Green	G-blinking	G-blinking Yellow	Dark
LSJ1(1,2)	Dark	Dark Blinking	Light	Dark
SJ1(1,3)(2,3)	Light		Blinking	Dark
GLD1	HIGH	HIGH	LOW	HIGH
GLD2	LOW	SWITCH	SWITCH	HIGH

