662T-M Rev: 1.0

Revision History :

Ver A: 1. First Realse

Ver 1.0: 1. Remove RTL8201CL Co-lay
2. Change PWM Spec
3. Single Fuse For Each USB Port
4. Add SLP_S5- Signal For DIMM Power Control
5. FIX GLED GPIO Selection To GPIO14
6. Reverse GPIO 11 For Lan-Phy AC131 Reset
7. Modify DIMM SPD Power BY VCC3
8. Change LAN ESD Part From BAV99 to SRV05
9. Modify ICSPR600 Vttpwr GD By ISL6312 PWGD and Spilit NB TESTMODE2 Circuit
10. Modify 3-Pin Fan Control Transistor To TO-251

Page Index

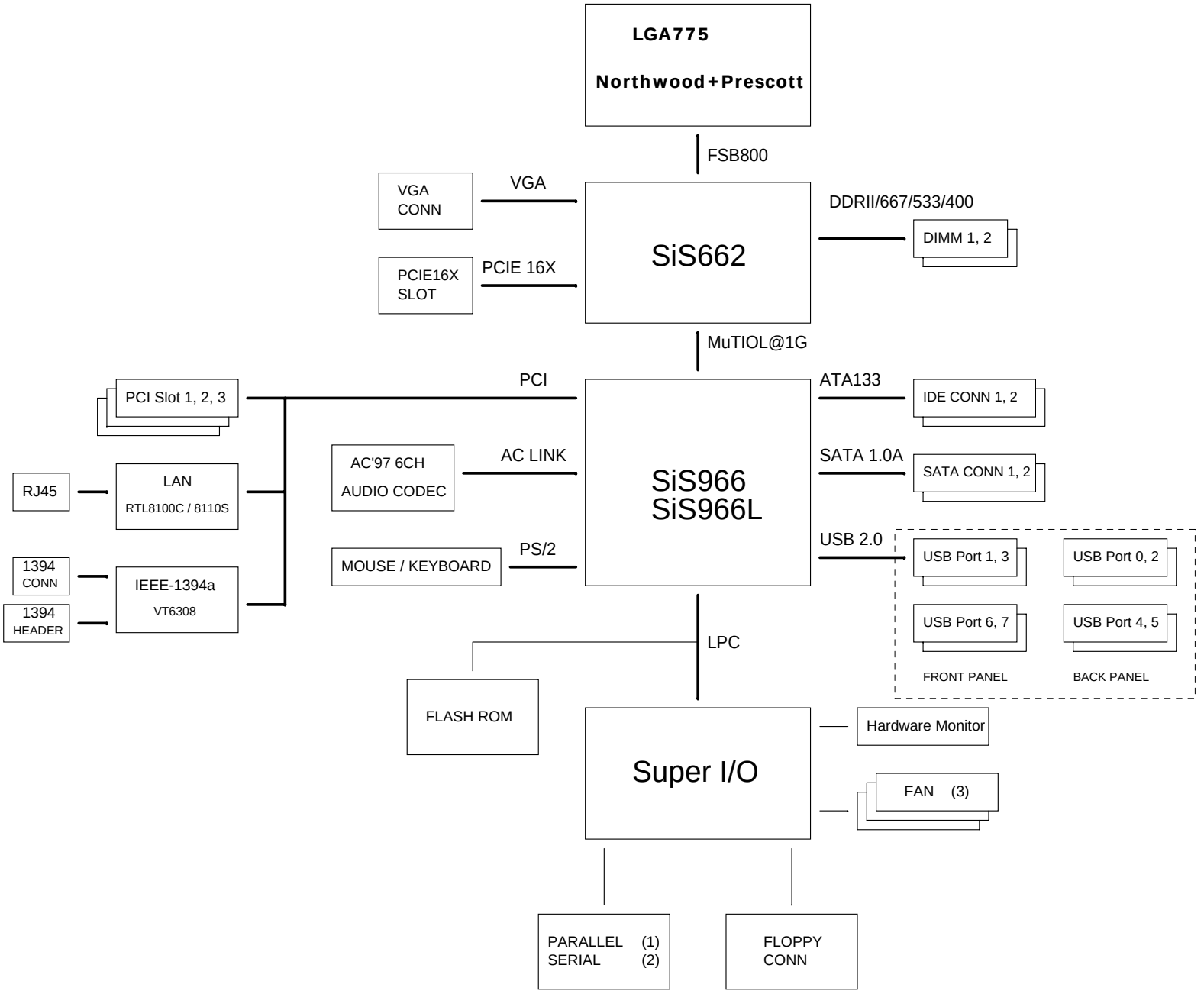
Update note:

1. Page 5, modified R162 from 100 to 49.9.
2. Page 7, modified R126 from 14 to 10.
   . Page 7, modified R117 from 100 to 120.
   . Page 7, modified R756 from 619 to 261.
   . Page 7, modified SR1 from 100 to 49.9.
   . Page 7, modified SR4 from 169 to 100.
3. Page 15, modified R840, R841, and R842 from 1K to 4.7K. and R843, R844, and R845 from 4.7K to 1K.
4. Page7, modified R804 from 124 to 150.
5. Page7, modified R805 from 500 to 680.
6. Page 34, modified PWM.
7. Page 8, R810 pull high to Vcc3.
8. Page 12, delete 965 KB/MS controller.
   . Page 12, modified R873, R874 from 1K to 4.7K.
9. Page 15, modified R73 from 22 to 33.
10. Page 15, modified C68 from 10p to 22p.
    . Page 15, modified C101 from 10p to 22p.
11. Page 21, add U26~U29 four ESD IC.
    . Page 21, add C1014 and C1016 for EMI.
12. Page 24, add D705~D708 four surge IC.
13. Page 26, add D703 and D704 for preventing pop noise.
14. Page 27, add C1018, C1019, and C1020 for EMI.
15. Page 27, add C1012(1U) to solve MIC issue.
16. Page 27, fine tune audio interface resistance and capacitance.
17. Page 28, changed ITE 8705 to ITE 8712.
18. Page 32, modified R288 from 200 to 187.
19. Page 33, use Q7 and Q8 to replace Vcc_Dual circuit.
20. Page 5, modified to support Smithfield.

	SIGNATURE	DATE
DESIGNER	Prowind	
LAYOUT	ECS Layout team	
CHECK	Prowind	
APPROVAL		

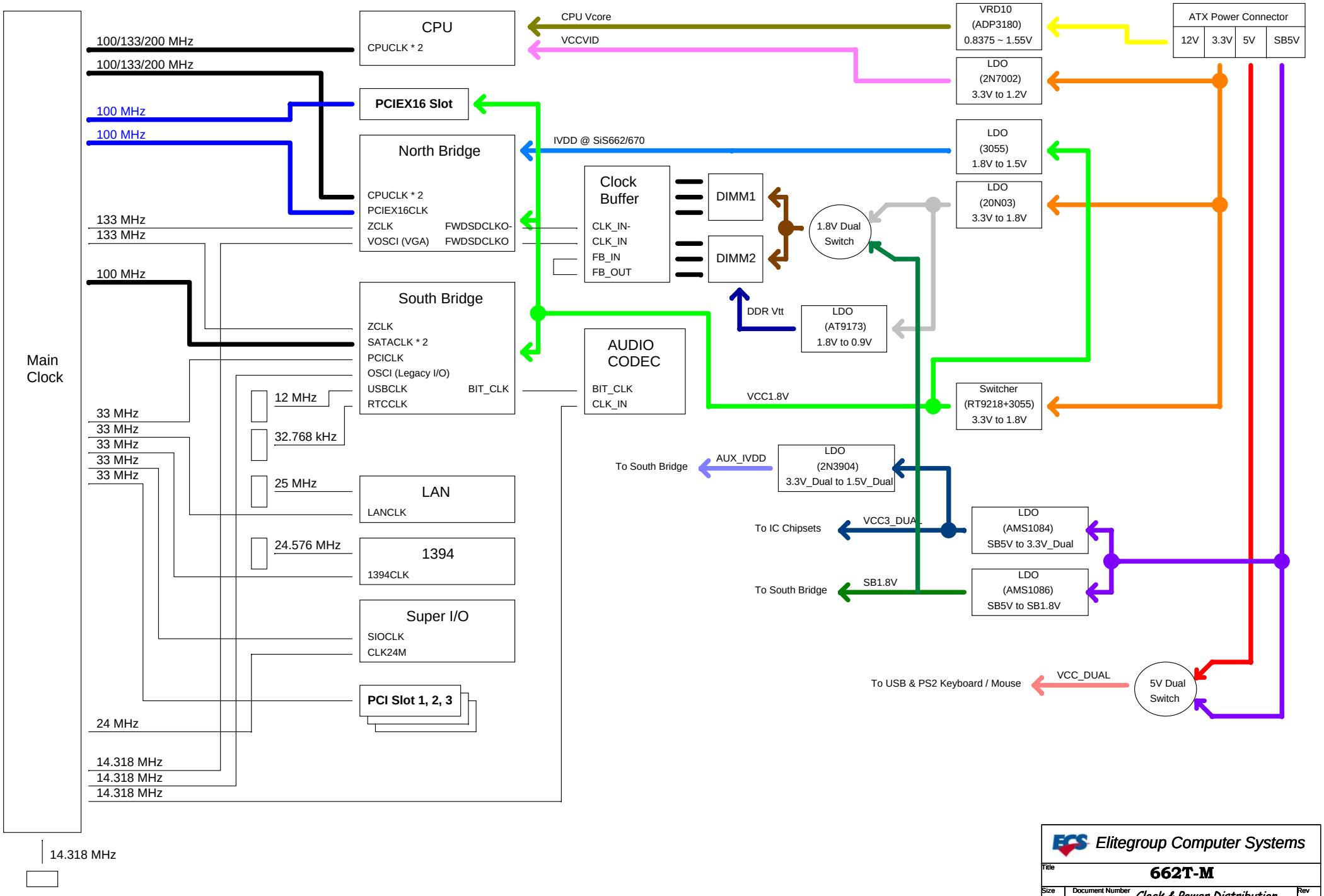
Elitegroup Computer Systems

Title: 662T-M		
Size: Custom	Document Number: Cover Sheet	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 1 of 36	



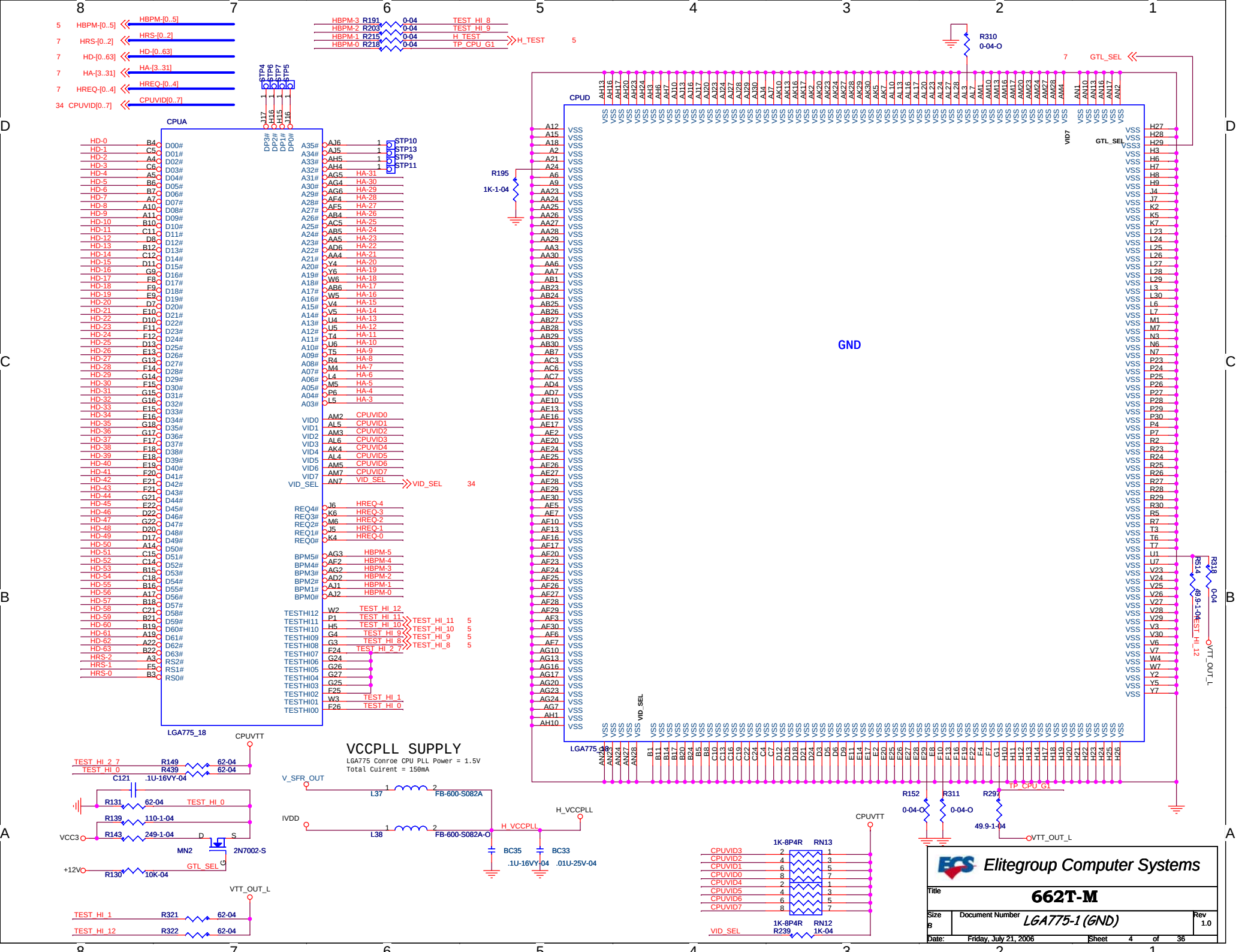
Elitegroup Computer Systems

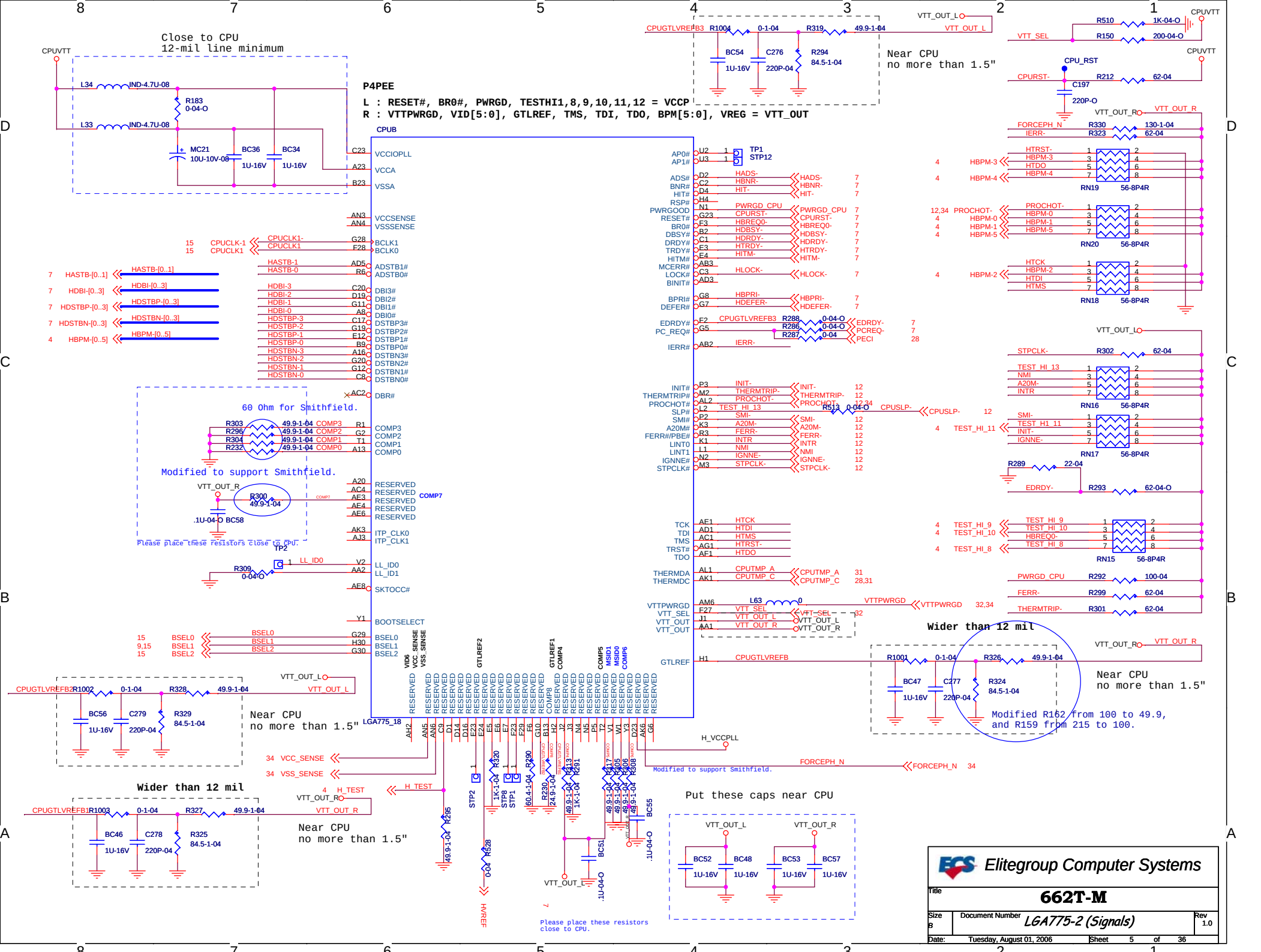
Title: 662T-M		
Size: Custom	Document Number: Block Diagram	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 2 of 36	



Elitegroup Computer Systems

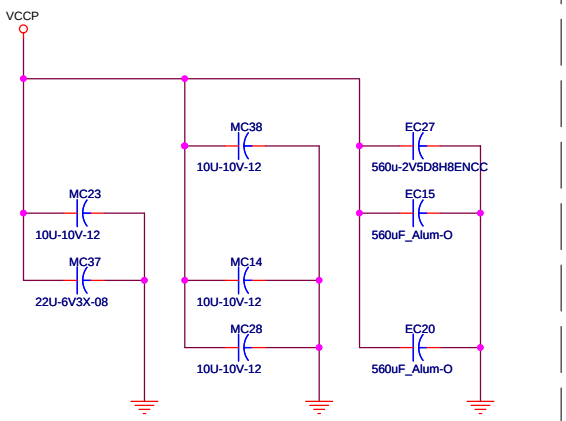
Title	662T-M	
Size: Custom	Document Number: Clock & Power Distribution	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 3 of 36	


CPUA
CPUD
LGA775_18
LGA775_CPU
GND
VCCPLL SUPPLY
LGA775 Conroe CPU PLL Power = 1.5V
Total Cuirent = 150mA
Elitegroup Computer Systems
Title
662T-M
Size B
Document Number
LGA775-1 (GND)
Rev 1.0
Date: Friday, July 21, 2006
Sheet 4 of 36

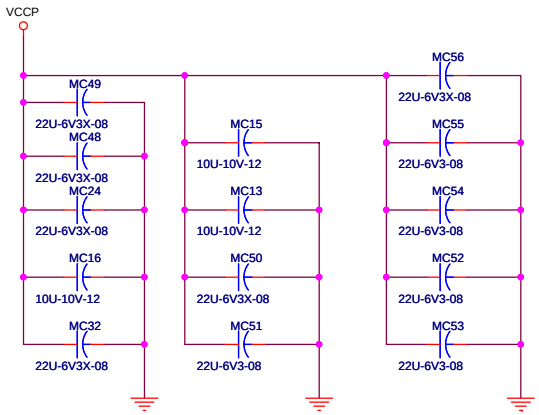

Close to CPU
12-mil line minimum
P4PEE
L : RESET#, BR0#, PWRGD, TESTHI1,8,9,10,11,12 = VCCP
R : VTTPWRGD, VID[5:0], GTLREF, TMS, TDI, TDO, BPM[5:0], VREG = VTT_OUT
CPUB
LGA775_18
Near CPU
no more than 1.5"
60 Ohm for Smithfield.
Modified to support Smithfield.
Please place these resistors close to CPU.
Wider than 12 mil
Modified R162 from 100 to 49.9,
and R159 from 215 to 100.
Put these caps near CPU
Elitegroup Computer Systems
662T-M
LGA775-2 (Signals)
Tuesday, August 01, 2006

P.S. Choose X5R components instead of Y5V for all 22uF_1206 capacitors on this page.

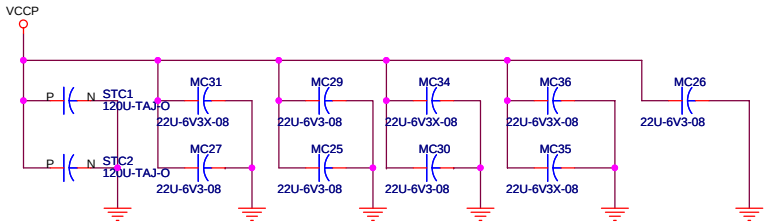
Put these capacitors at processor TOP SIDE

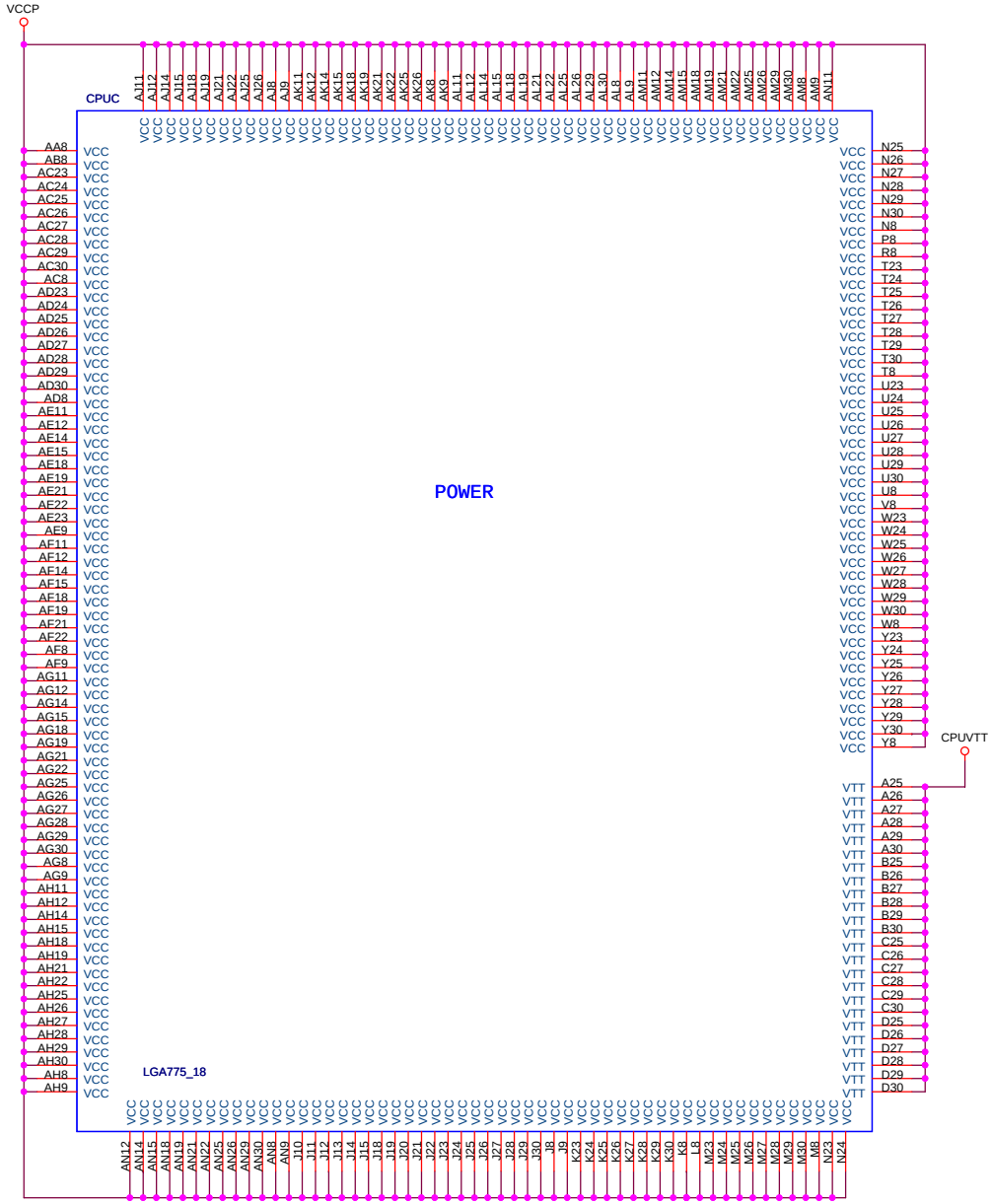


Put these capacitors at processor LEFT SIDE

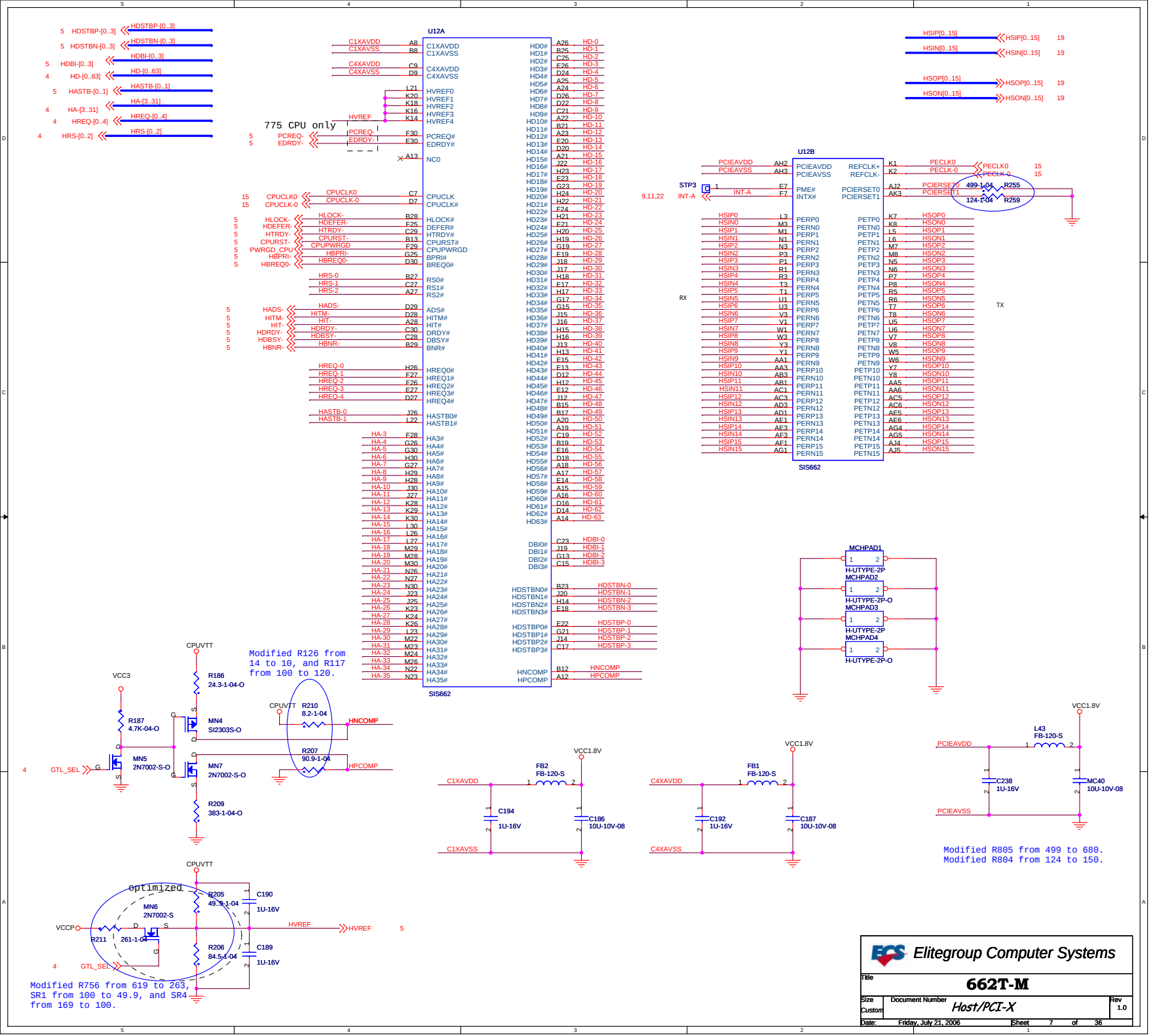


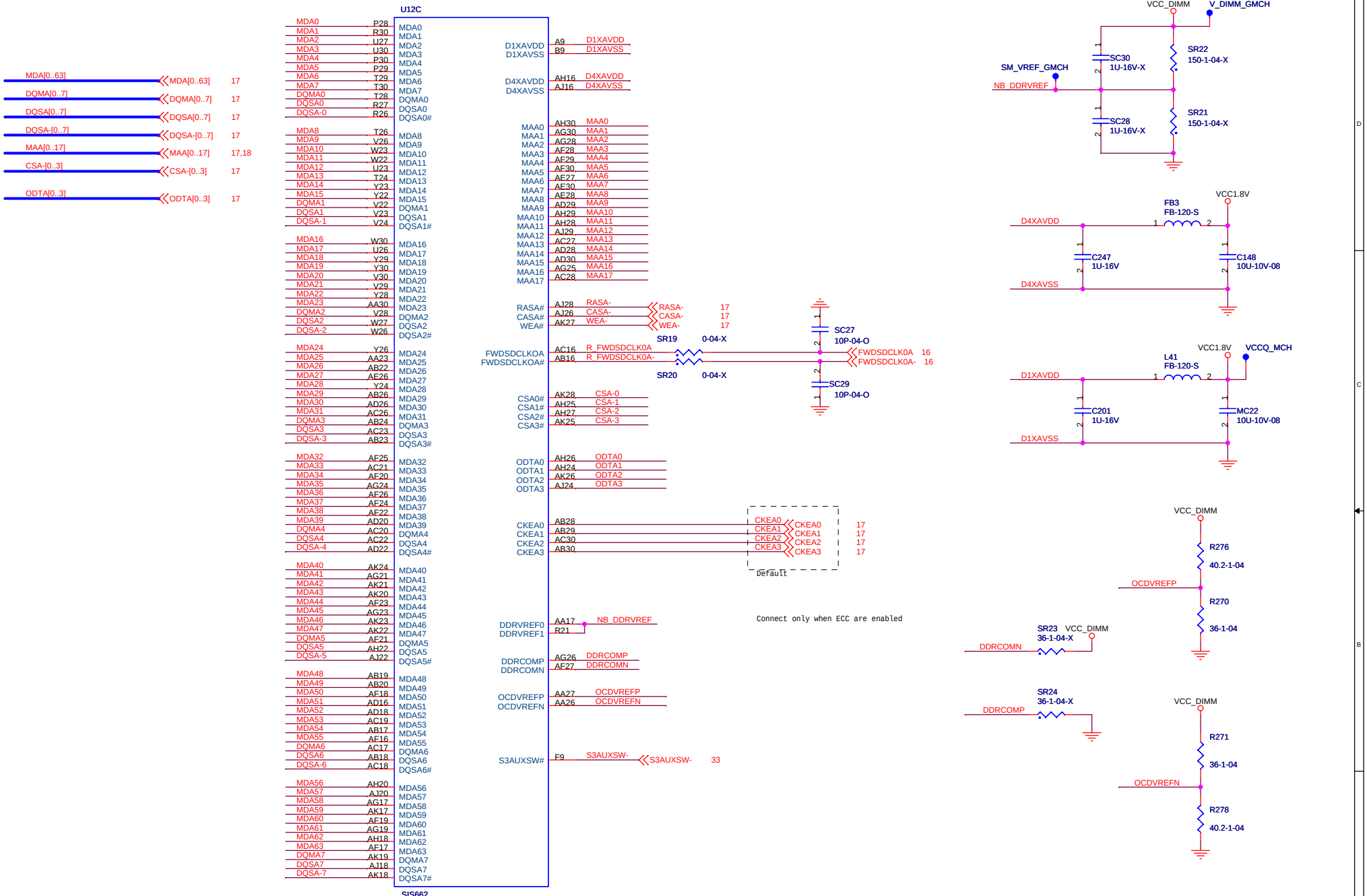
Put these capacitors INSIDE PROCESSOR CAVITY

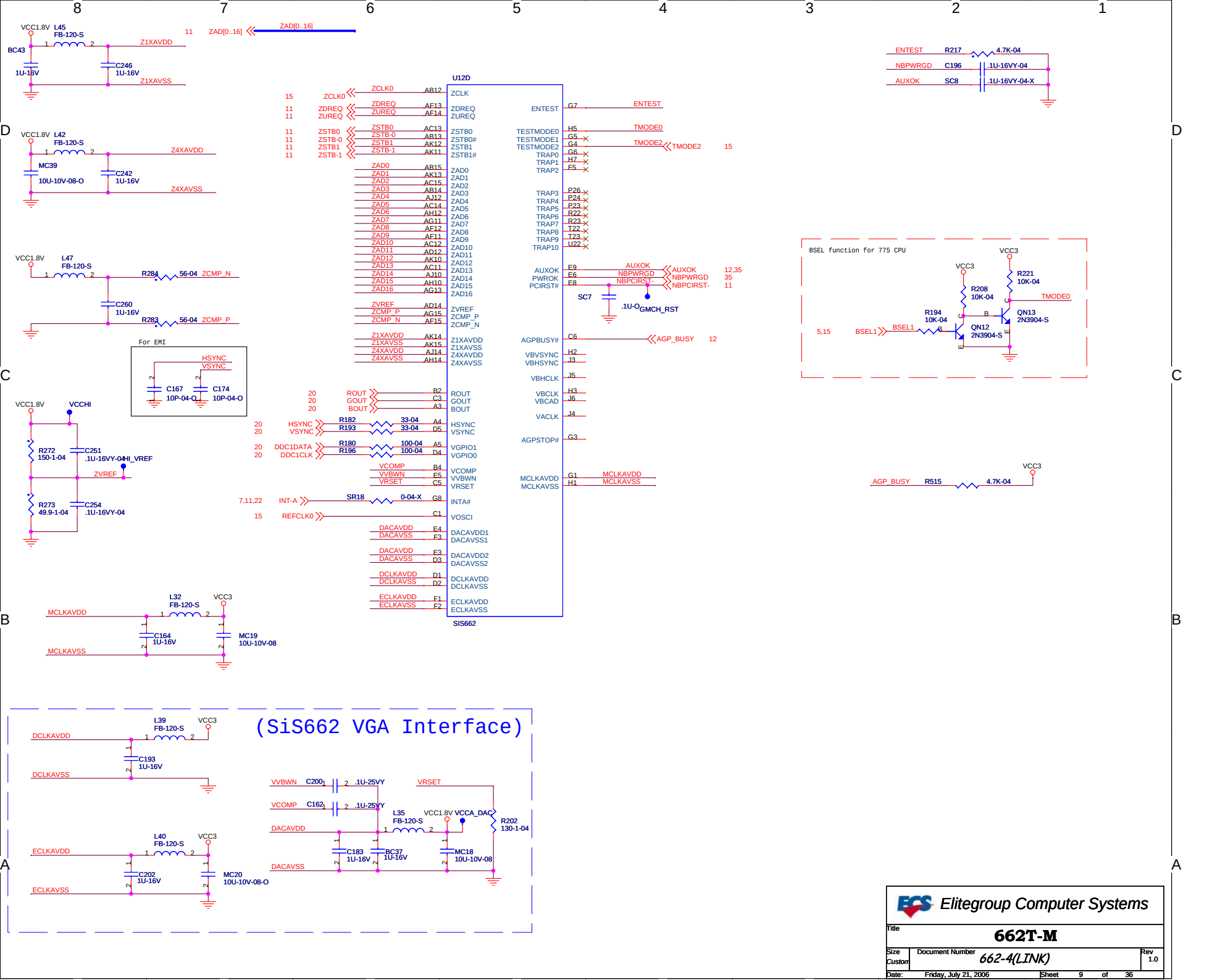


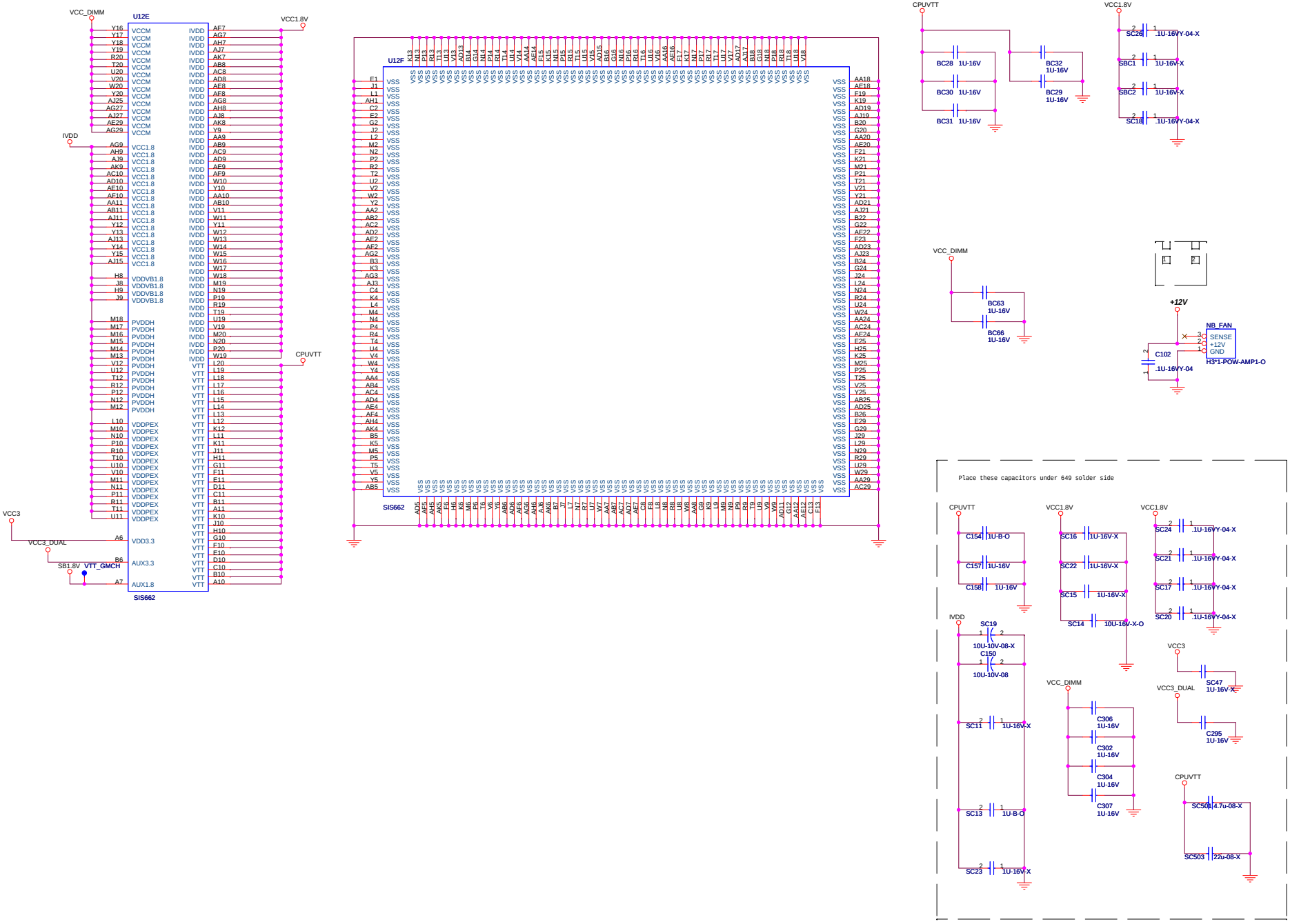


Elitegroup Computer Systems		
Title: 662T-M		
Size: B	Document Number: LGA755-3 (Power)	Rev: 1.0
Date: Tuesday, August 01, 2006	Sheet 6 of 36	

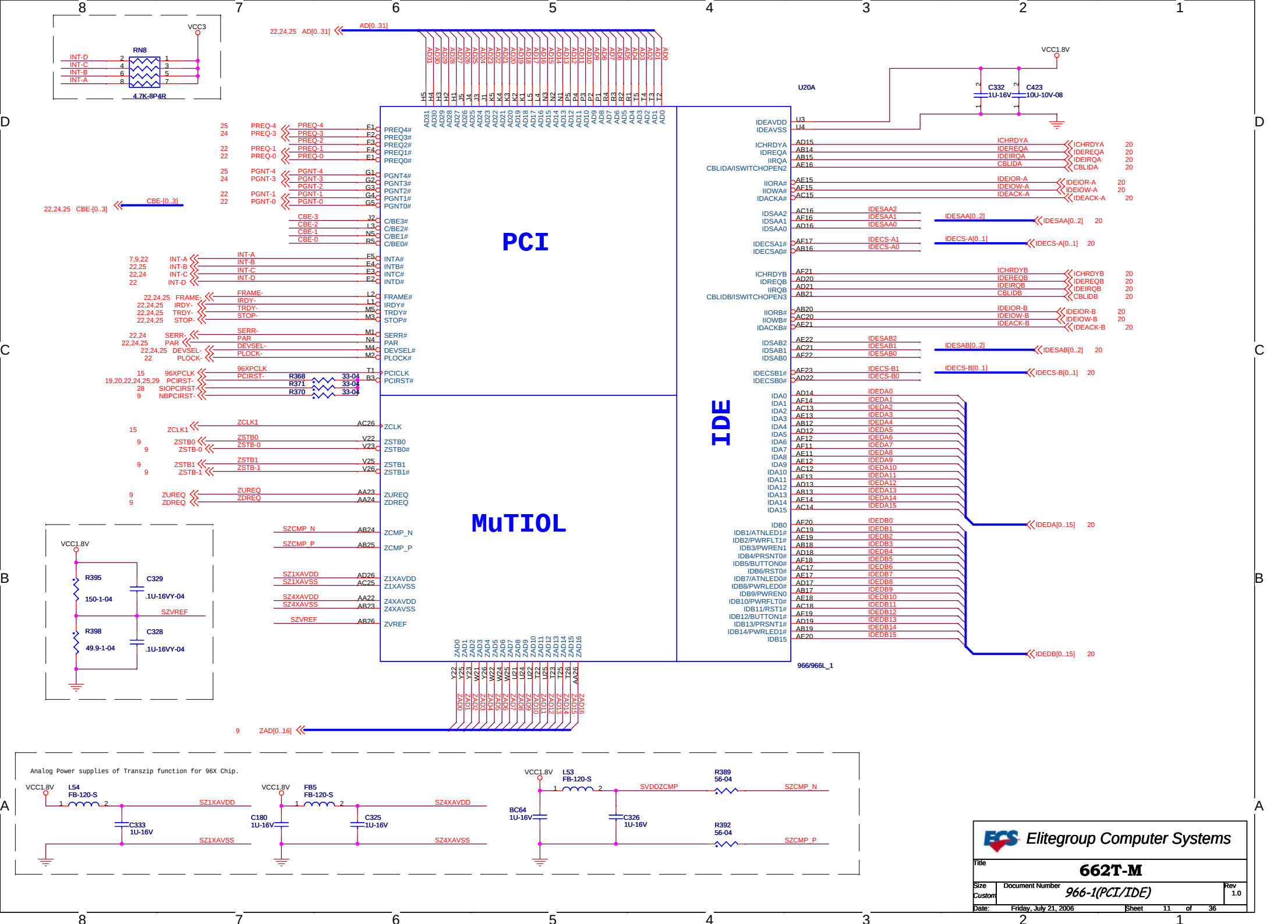

U12A
SIS662
775 CPU only
U12B
SIS662
Modified R126 from 14 to 10, and R117 from 100 to 120.
Modified R756 from 619 to 263, SR1 from 100 to 49.9, and SR4 from 169 to 100.
Modified R805 from 499 to 680.
Modified R804 from 124 to 150.
optimized
Elitegroup Computer Systems
662T-M
Host/PCI-X
Friday, July 21, 2006

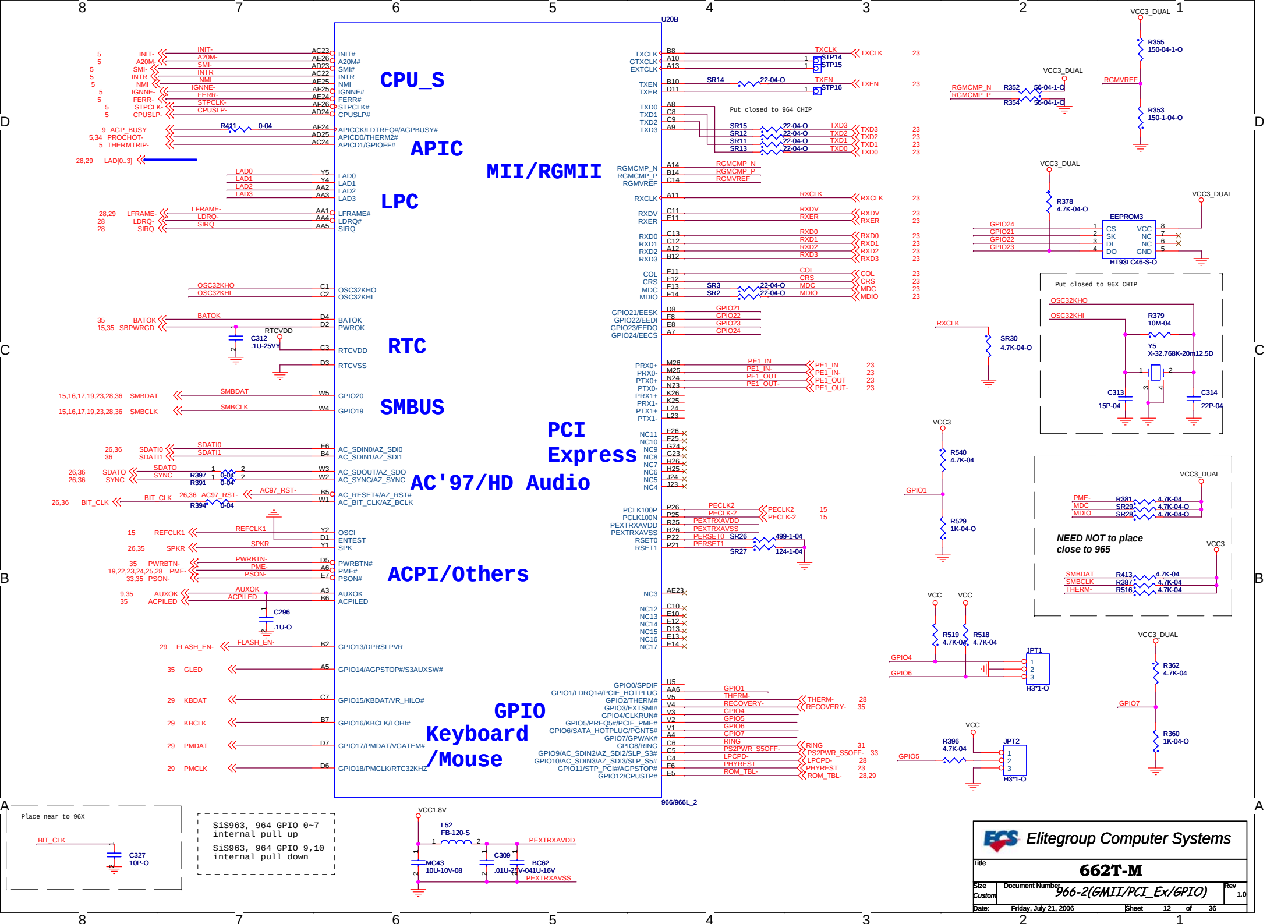

U12C
MDA[0..63] 17
DQMA[0..7] 17
DQSA[0..7] 17
DQSA-[0..7] 17
MAA[0..17] 17,18
CSA-[0..3] 17
ODTA[0..3] 17
SIS662
SR19 0-04-X
SR20 0-04-X
SC27 10P-04-O
SC29 10P-04-O
Default
Connect only when ECC are enabled
VCC_DIMM
V_DIMM_GMCH
SM_VREF_GMCH
NB_DDRVREF
SC30 1U-16V-X
SC28 1U-16V-X
SR22 150-1-04-X
SR21 150-1-04-X
VCC1.8V
FB3 FB-120-S
D4XAVDD
D4XAVSS
C247 1U-16V
C148 10U-10V-08
VCCQ_MCH
L41 FB-120-S
D1XAVDD
D1XAVSS
C201 1U-16V
MC22 10U-10V-08
R276 40.2-1-04
OCDVREFP
R270 36-1-04
SR23 36-1-04-X
DDRCOMN
SR24 36-1-04-X
DDRCOMP
R271 36-1-04
OCDVREFN
R278 40.2-1-04
Elitegroup Computer Systems
662T-M
662-2(UMCA)
Friday, July 21, 2006
Sheet 8 of 36

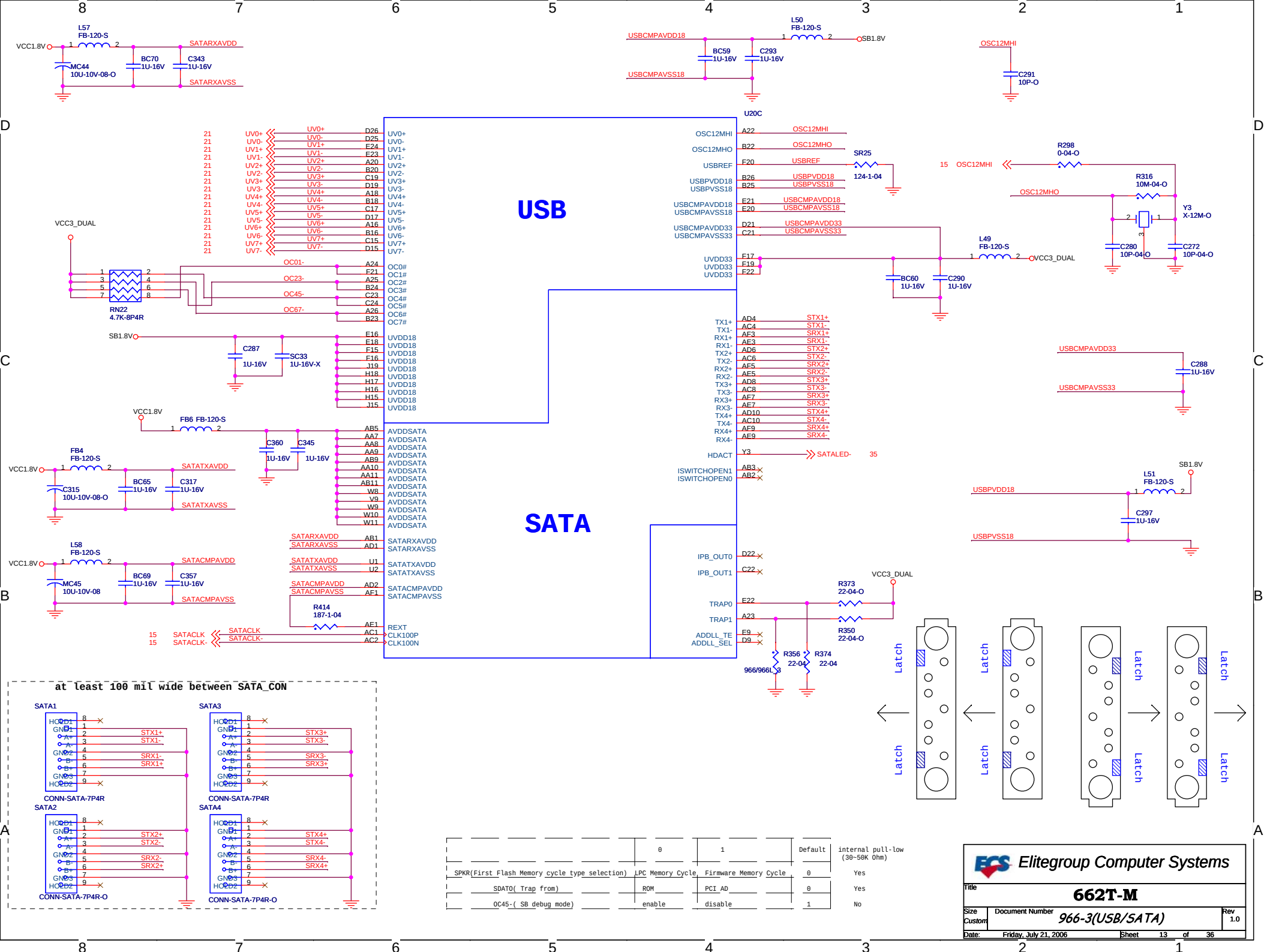

U12D
SIS662
(SiS662 VGA Interface)
For EMI
BSEL function for 775 CPU
Elitegroup Computer Systems
662T-M
662-4(LINK)
Friday, July 21, 2006
Sheet 9 of 36



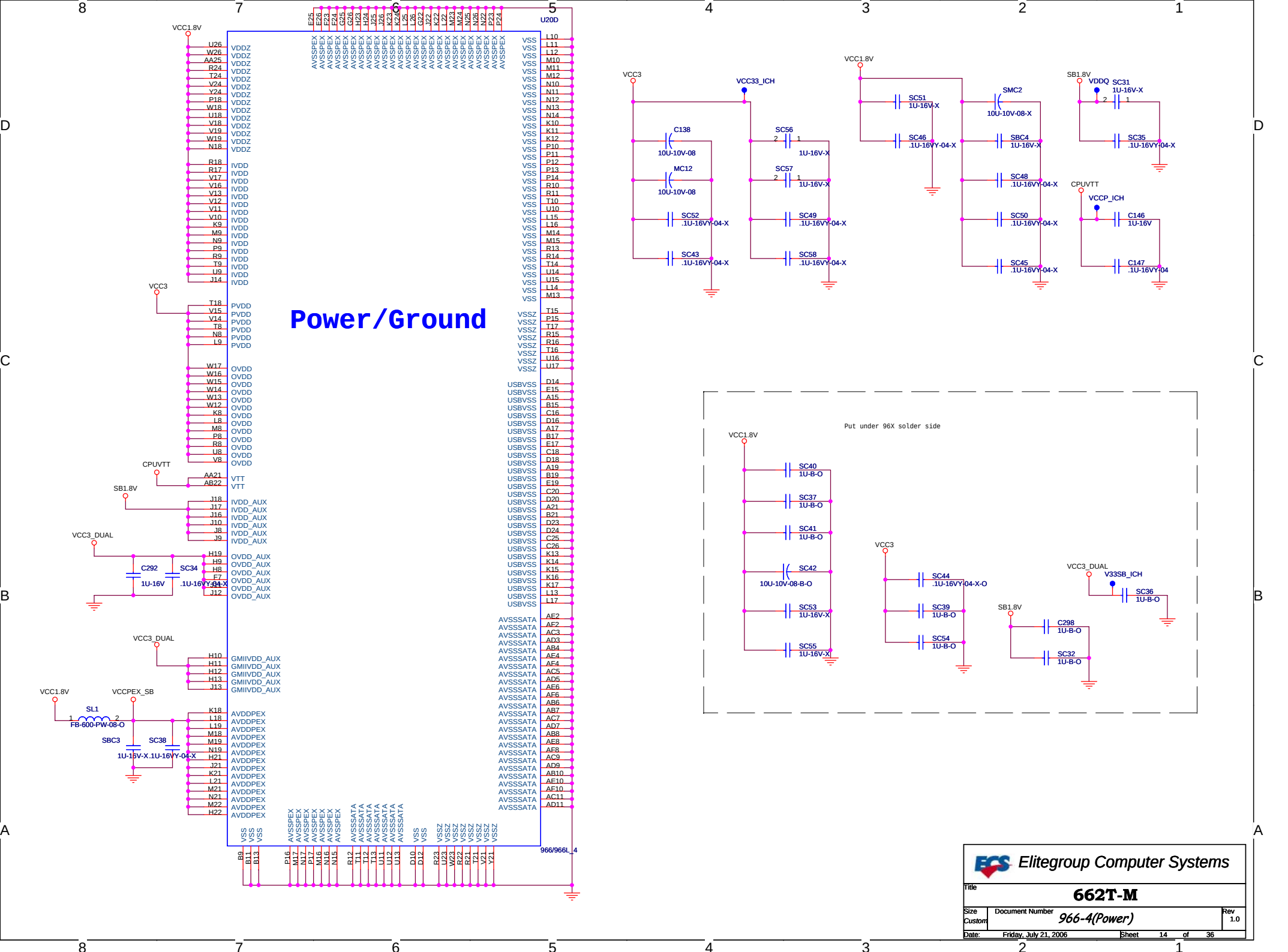
Elitegroup Computer Systems			
Title	662T-M		
Size: Custom	Document Number: 662-4(Power)		Rev: 1.0
Date: Monday, July 31, 2006	Sheet 10 of 36		


PCI
MuTIOL
IDE
U20A
966/966L_1
RN8
4.7K-8P4R
VCC3
VCC1.8V
C332 1U-16V
C423 10U-10V-08
R395 150-1-04
R398 49.9-1-04
C329 .1U-16VY-04
C328 .1U-16VY-04
SZVREF
Analog Power supplies of Transzip function for 96X Chip.
L54 FB-120-S
L53 FB-120-S
FB5 FB-120-S
C333 1U-16V
C180 1U-16V
C325 1U-16V
BC64 1U-16V
C326 1U-16V
R389 56-04
R392 56-04
SZ1XAVDD
SZ1XAVSS
SZ4XAVDD
SZ4XAVSS
SVDDZCMP
SZCMP_N
SZCMP_P
Elitegroup Computer Systems
662T-M
966-1(PCI/IDE)
Friday, July 21, 2006
Sheet 11 of 36


CPU_S
APIC
MII/RGMII
LPC
RTC
SMBUS
PCI Express
AC'97/HD Audio
ACPI/Others
GPIO
Keyboard /Mouse
U20B
966/966L_2
Put closed to 964 CHIP
Put closed to 96X CHIP
NEED NOT to place close to 965
EEPROM3
HT93LC46-S-O
SiS963, 964 GPIO 0~7 internal pull up
SiS963, 964 GPIO 9,10 internal pull down
Place near to 96X
Elitegroup Computer Systems
662T-M
966-2(GMII/PCI_Ex/GPIO)
Friday, July 21, 2006
Sheet 12 of 36

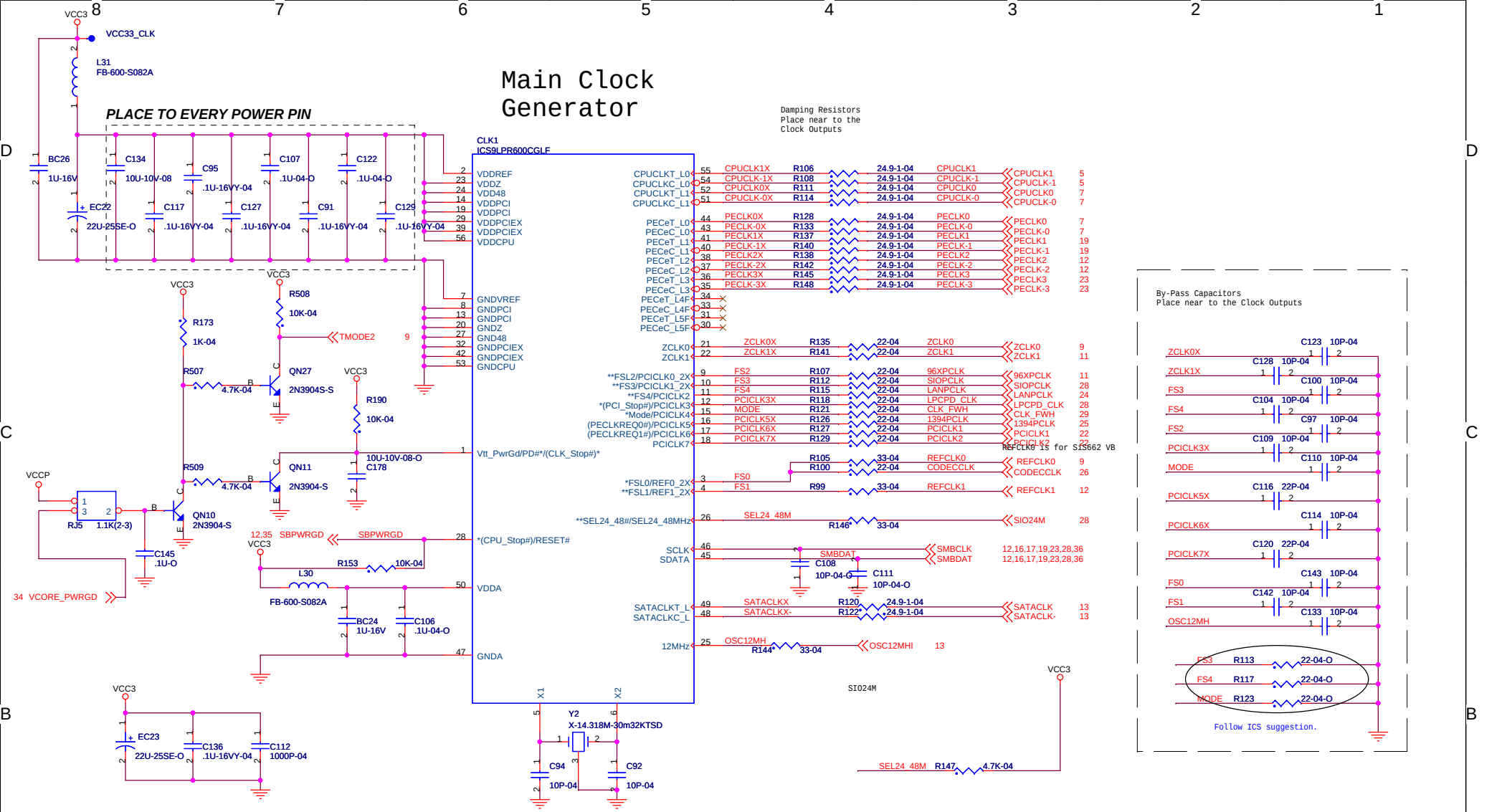


	0	1	Default	internal pull-low (30~50K Ohm)
SPKR(First Flash Memory cycle type selection)	LPC Memory Cycle	Firmware Memory Cycle	0	Yes
SDAT0(Trap from)	ROM	PCI AD	0	Yes
OC45-(SB debug mode)	enable	disable	1	No



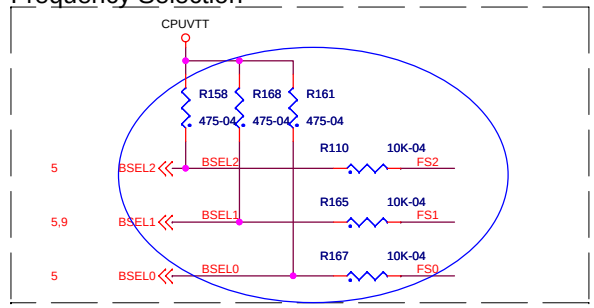
Company	Elitegroup Computer Systems
Title	662T-M
Size	Custom
Document Number	966-4(Power)
Rev	1.0
Date:	Friday, July 21, 2006
Sheet	14 of 36

Main Clock Generator



Clock Generator Table	FS4	FS3	FS2	FS1	FS0
Hardware Traping	Low	Low	BSEL2	BSEL1	BSEL0
CPU=100 (BSEL[2:0]=101)	0	0	1	0	1
CPU=133 (BSEL[2:0]=001)	0	0	0	0	1
CPU=166 (BSEL[2:0]=011)	0	0	0	1	1
CPU=200 (BSEL[2:0]=010)	0	0	0	1	0
CPU=266 (BSEL[2:0]=000)	0	0	0	0	0
CPU=333 (BSEL[2:0]=100)	0	0	1	0	0
CPU=400 (BSEL[2:0]=110)	0	0	1	1	0

Frequency Selection



Modified R840, R841, and R842 from 1K to 4.7K, and R843, R844, and R845 from 4.7K to 1K.

Elitegroup Computer Systems

Title: 662T-M

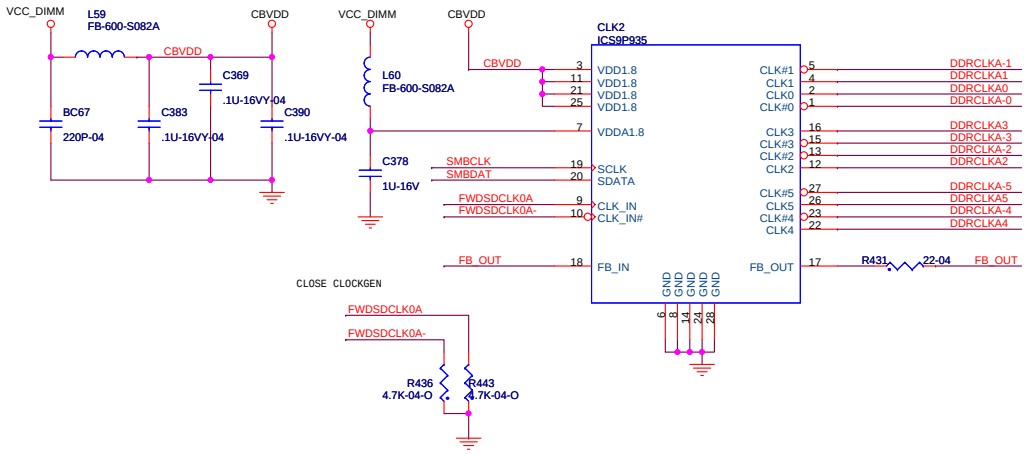
Size: B | Document Number: Clock Generator | Rev: 1.0

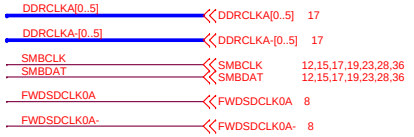
Date: Friday, July 21, 2006 | Sheet 15 of 36

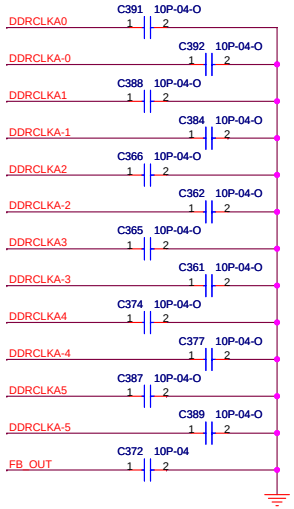
Clock Buffer (DDRII)

(5 OPTIONS)
1: (ICS) ICS93716
2: (Winbond)
3: (ICWorks)
4: (IMI)
5: (AMI)

By-Pass Capacitors
Place near to the Clock Buffer

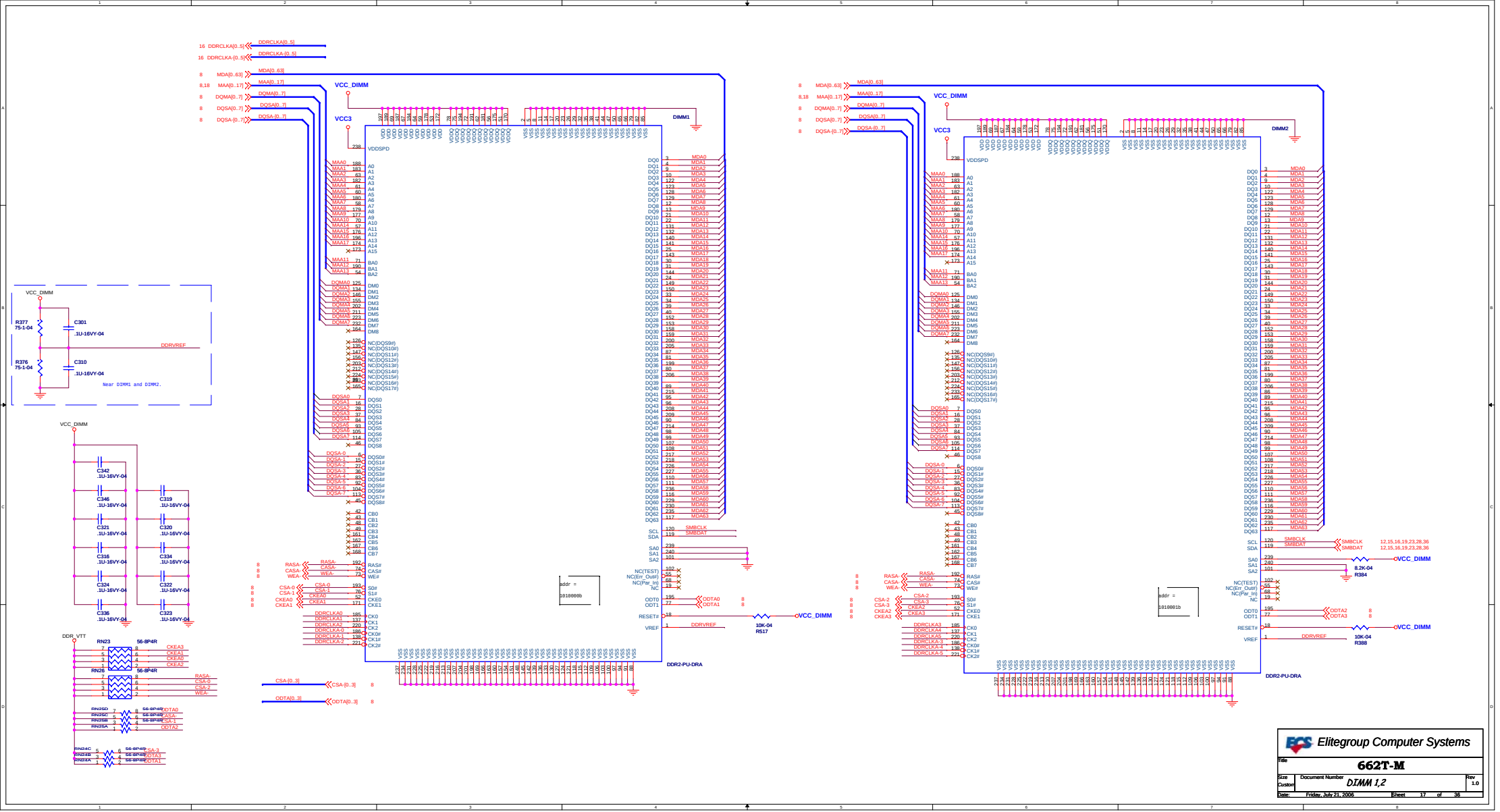






Elitegroup Computer Systems

Title	662T-M	
Size: Custom	Document Number: Clock Buffer	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 16 of 36	

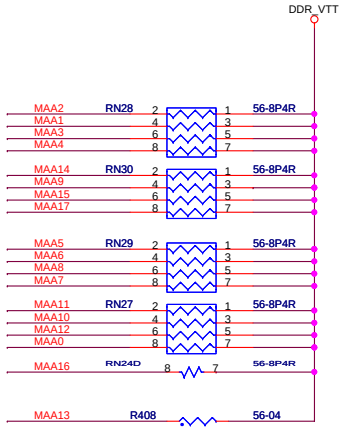


Elitegroup Computer Systems	
Title	662T-M
Size: Custom	Document Number: DIMM 1,2 — Rev: 1.0
Date: Friday, July 21, 2006	Sheet 17 of 36

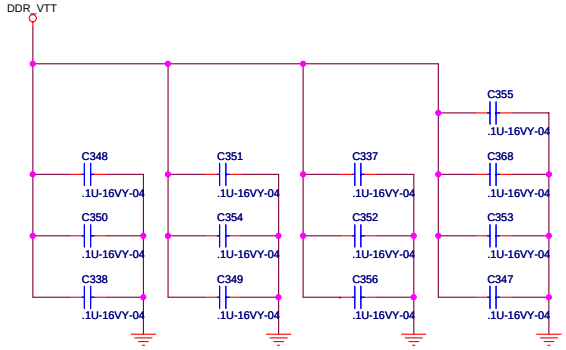
SSTL-2 Termination Resistors

	SDR		DDR		
		Rs		Rs	Rtt
MD/DQM(/DQS)	LV-CMOS	0/10/-	SSTL-2	10	33
MA/Control	LV-CMOS	10	SSTL-2	0	33
CS	LV-CMOS	0	SSTL-2	0	47
CKE	OD 3.3V		OD 2.5V		

MAA[0..17] MAA[0..17] 8,17

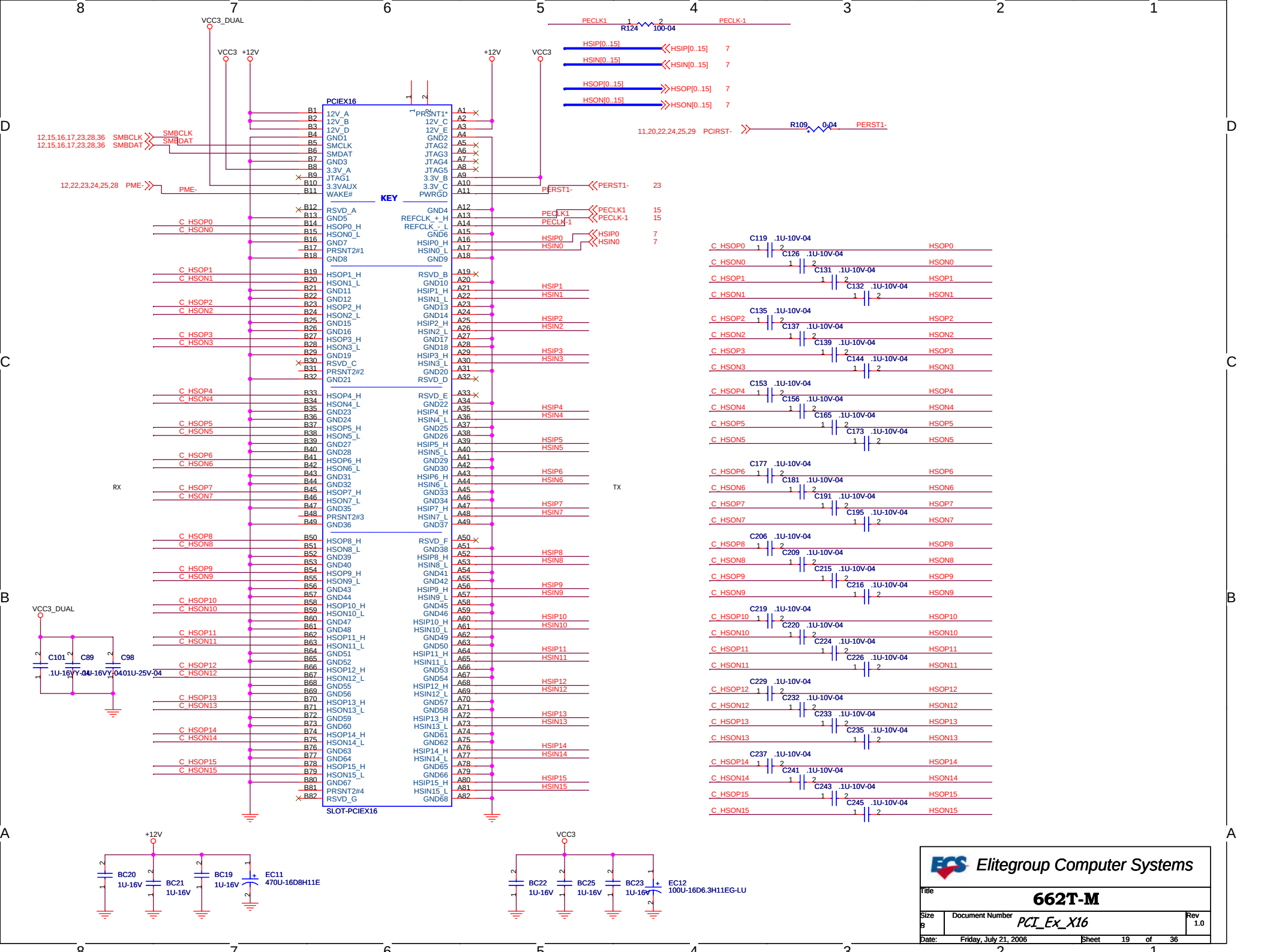


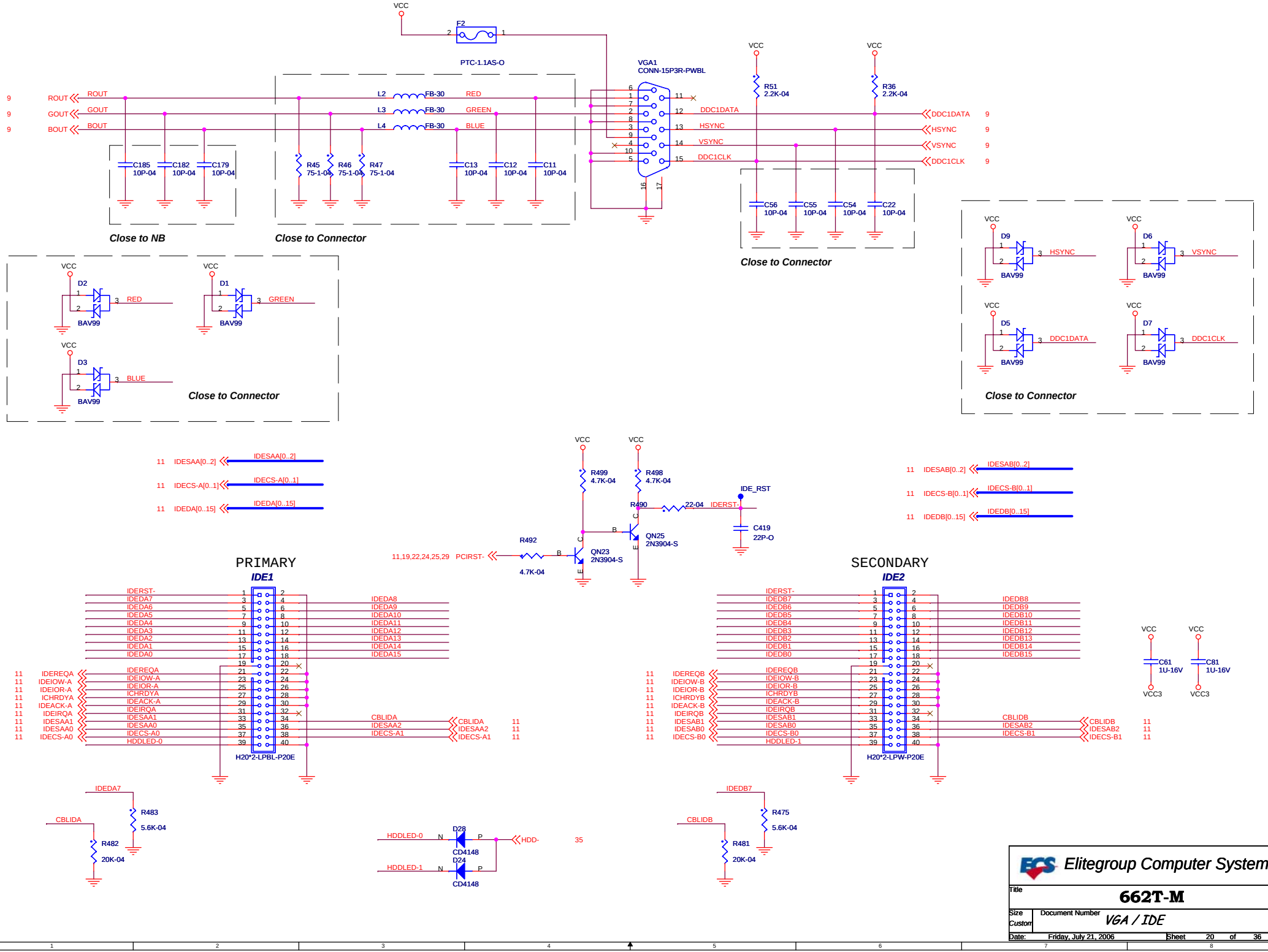
DECOUPLING CAPACITOR FOR SSTL-2 END TERMIANTION VTT ISLAND
0603 Package placed within 200mils of VTT Termination R-packs



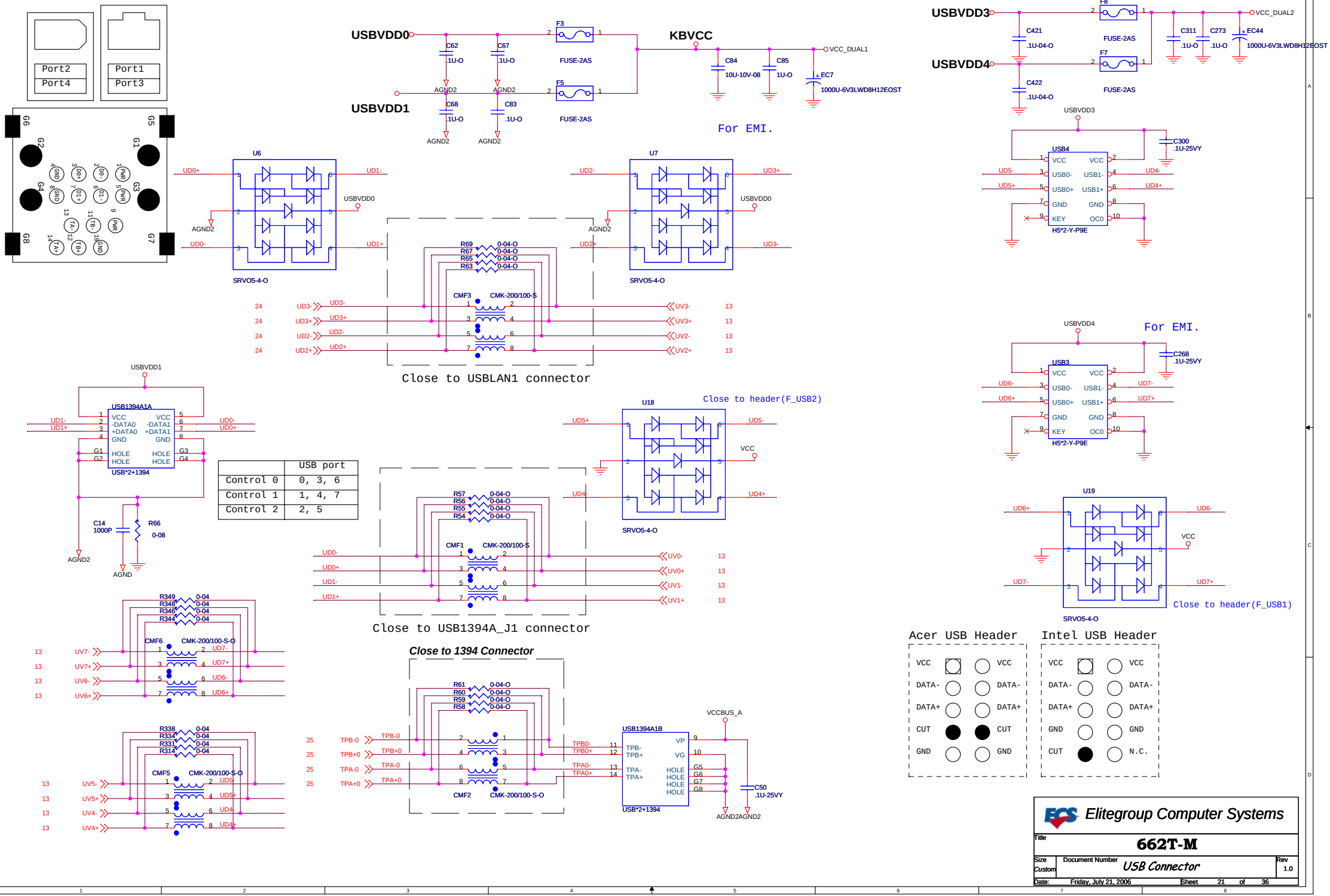
Elitegroup Computer Systems

Title	662T-M	
Size: Custom	Document Number: DDRII Termination	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 18 of 36	


PCIEX16
SLOT-PCIEX16
KEY
RX
TX
VCC3_DUAL
VCC3
+12V
SMBCLK
SMBDAT
PME-
PERST1-
PECLK1
PECLK-1
PCIRST-
R109 0-04
R124 100-04
HSIP[0..15]
HSIN[0..15]
HSOP[0..15]
HSON[0..15]
C101 C89 C98
.1U-16V
.01U-25V-04
BC20 1U-16V
BC21 1U-16V
BC19 1U-16V
EC11 470U-16D8H11E
BC22 1U-16V
BC25 1U-16V
BC23 1U-16V
EC12 100U-16D6.3H11EG-LU
.1U-10V-04
Elitegroup Computer Systems
662T-M
PCI_Ex_X16
Friday, July 21, 2006
Sheet 19 of 36



Elitegroup Computer Systems			
Title	662T-M		
Size: Custom	Document Number: VGA / IDE		Rev: 1.0
Date: Friday, July 21, 2006	Sheet 20 of 36		



	USB port
Control 0	0, 3, 6
Control 1	1, 4, 7
Control 2	2, 5

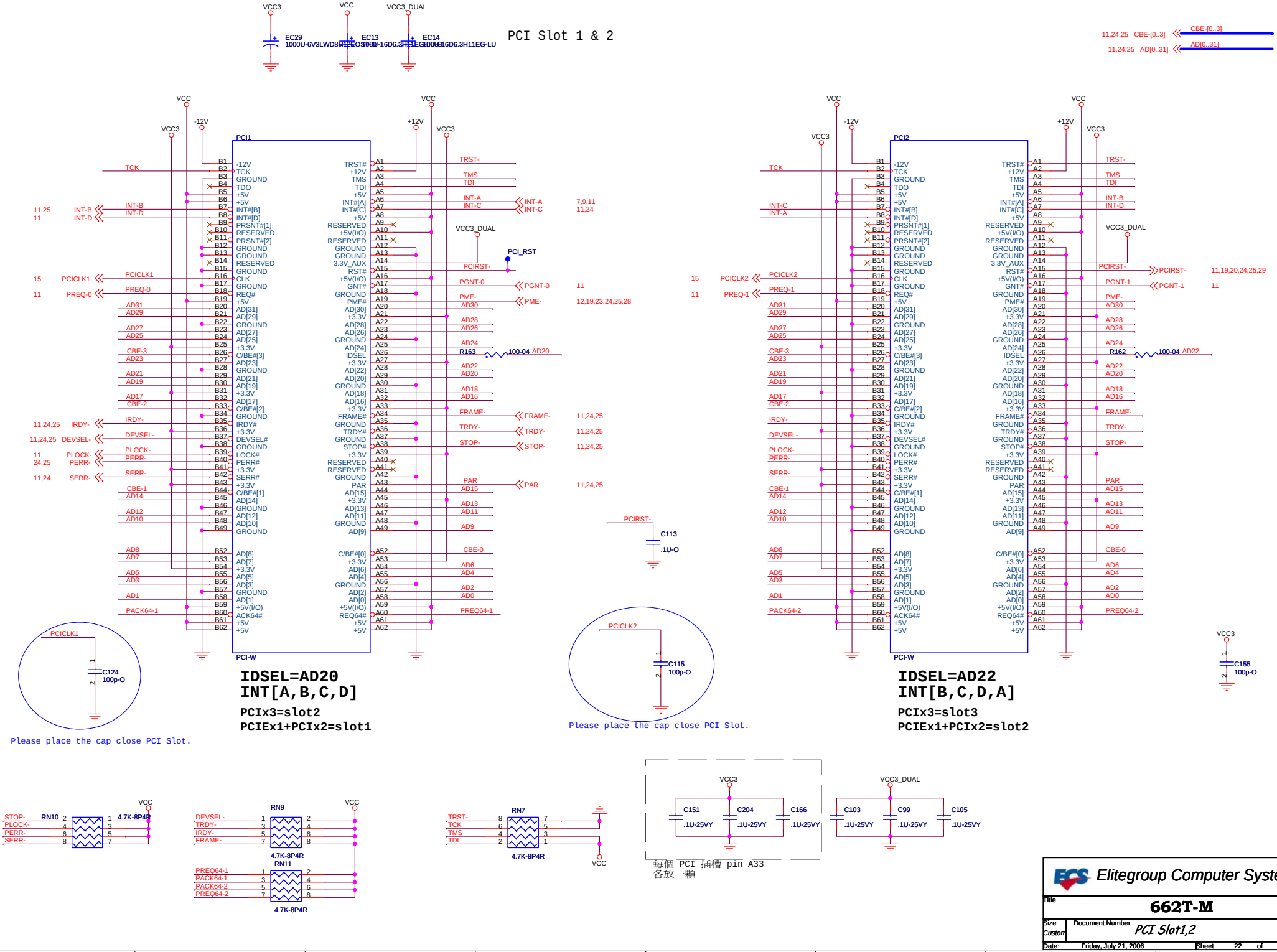
Elitegroup Computer Systems

Title: 662T-M

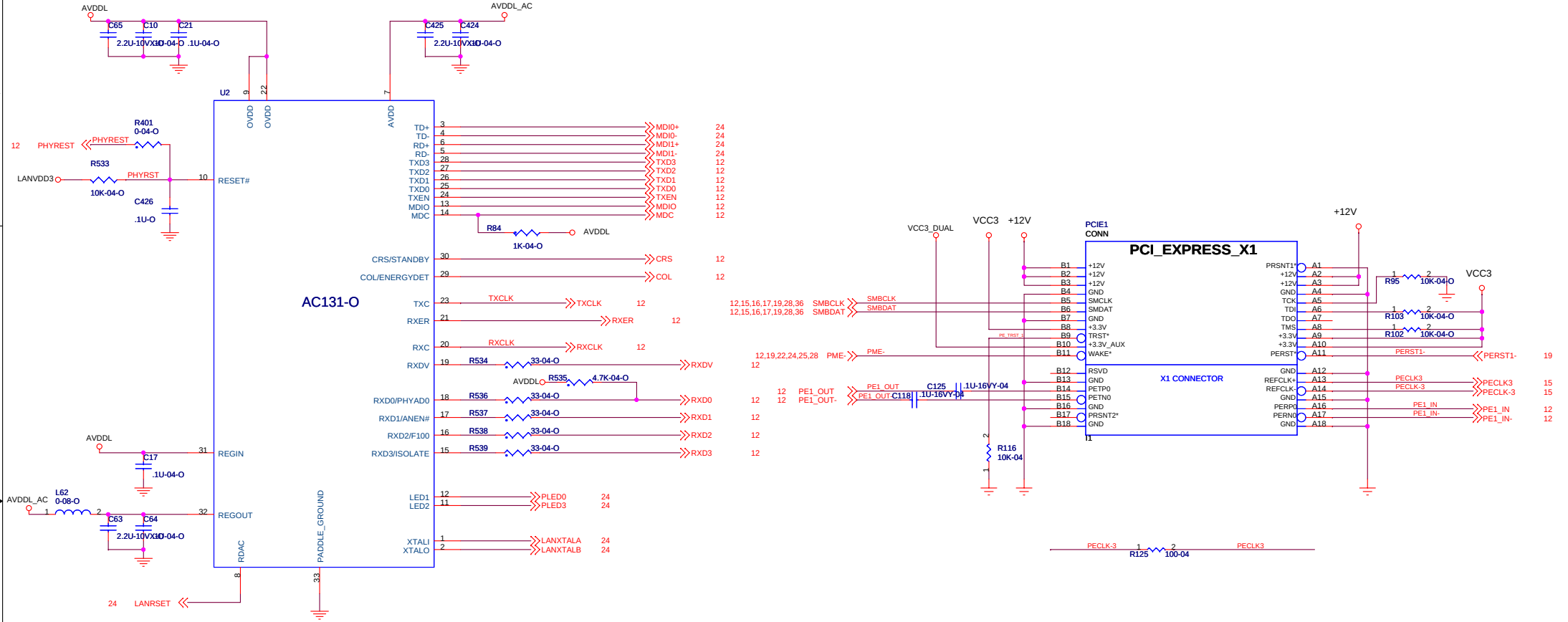
Size: Custom | Document Number: USB Connector | Rev: 1.0

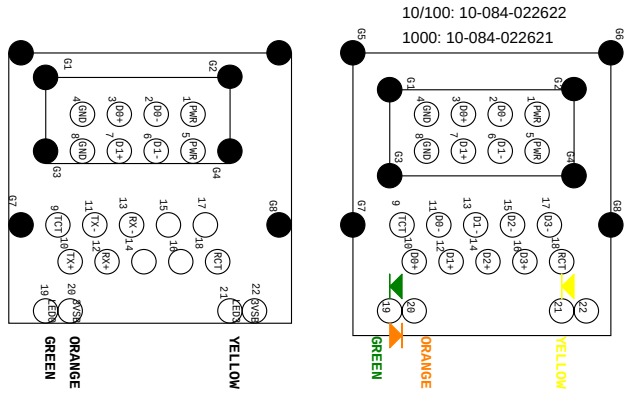
Date: Friday, July 21, 2006 | Sheet 21 of 36

PCI Slot 1 & 2

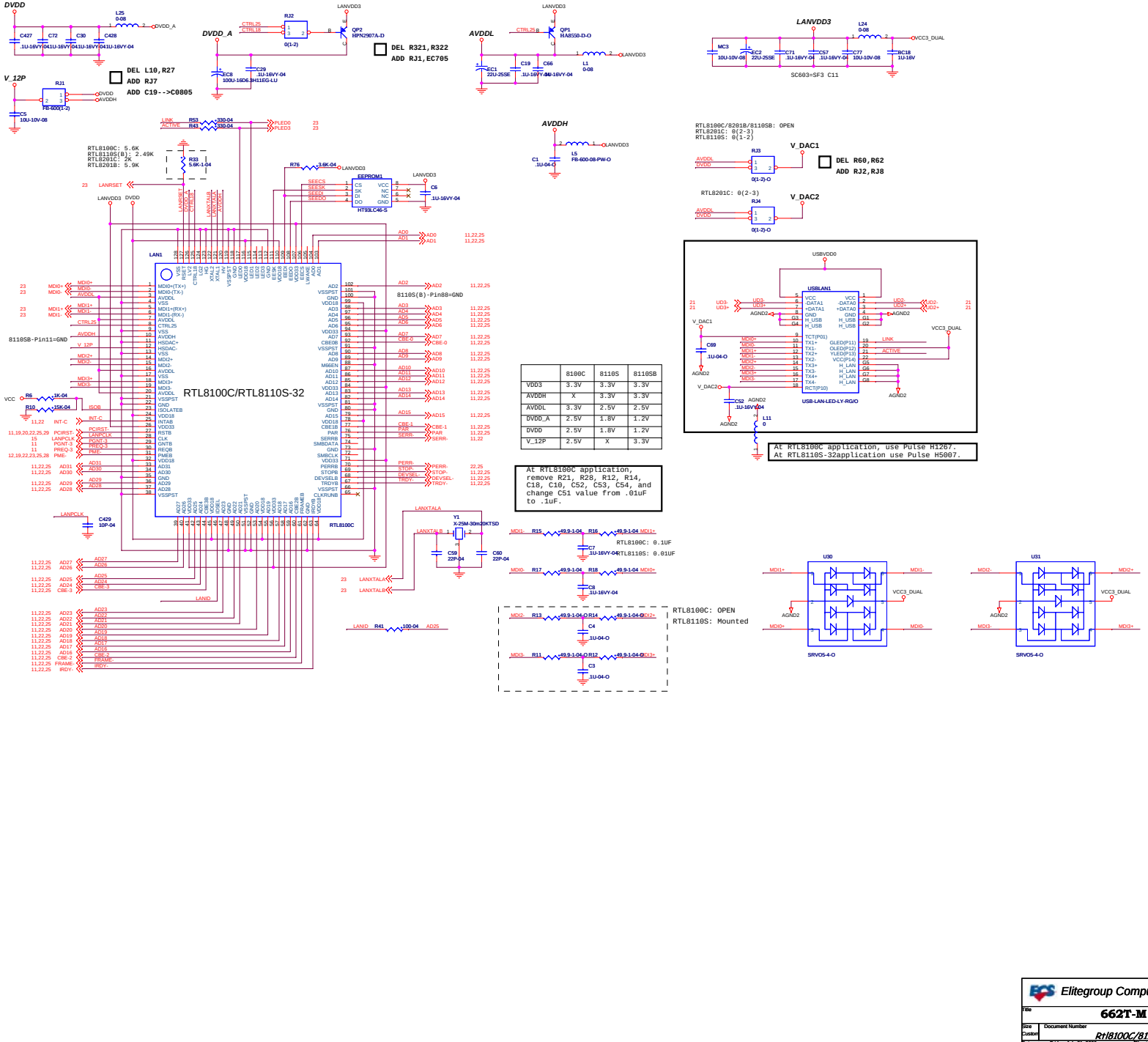


Elitegroup Computer Systems	
Title	662T-M
Size: Custom	Document Number: PCI Slot1,2
Rev	1.0
Date: Friday, July 21, 2006	Sheet 22 of 36



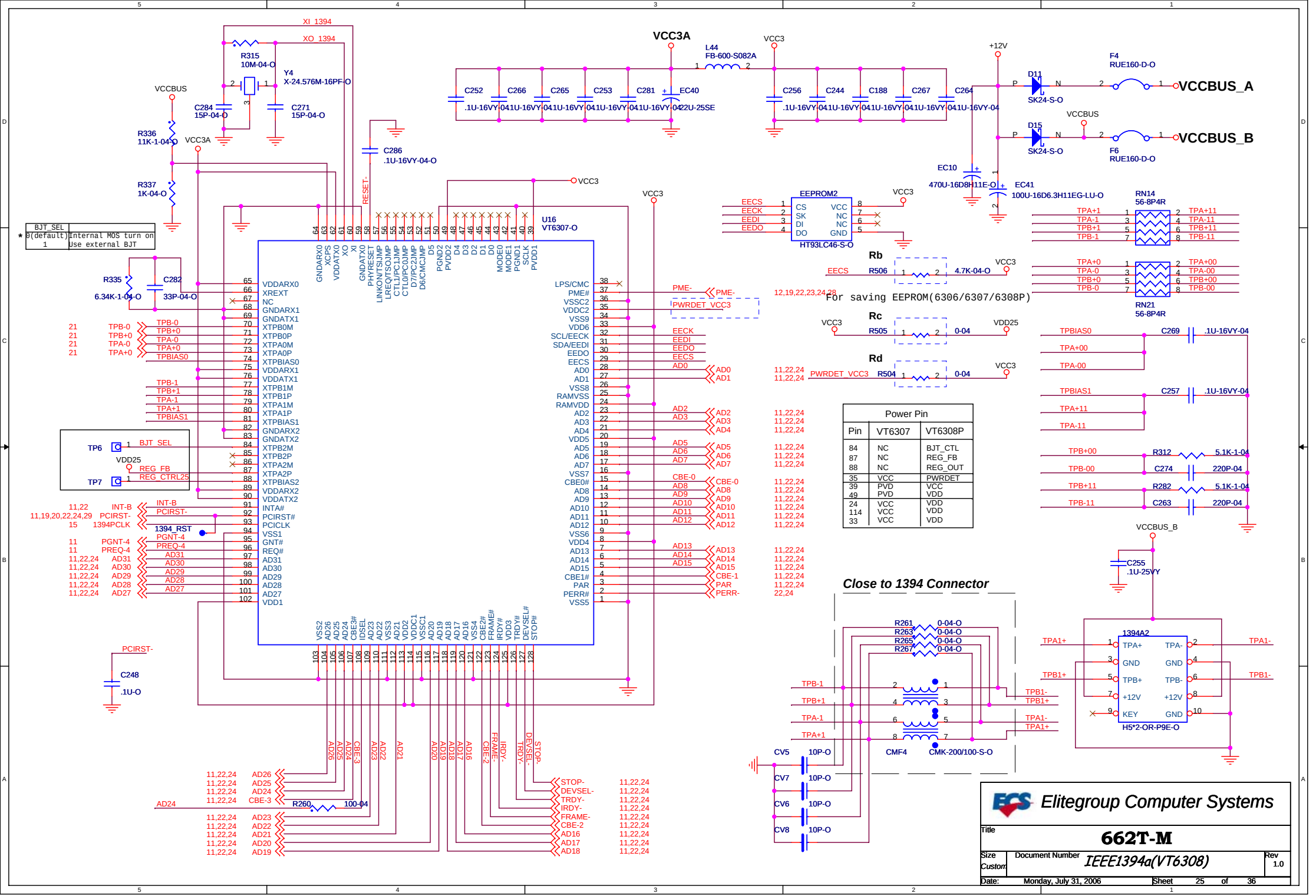


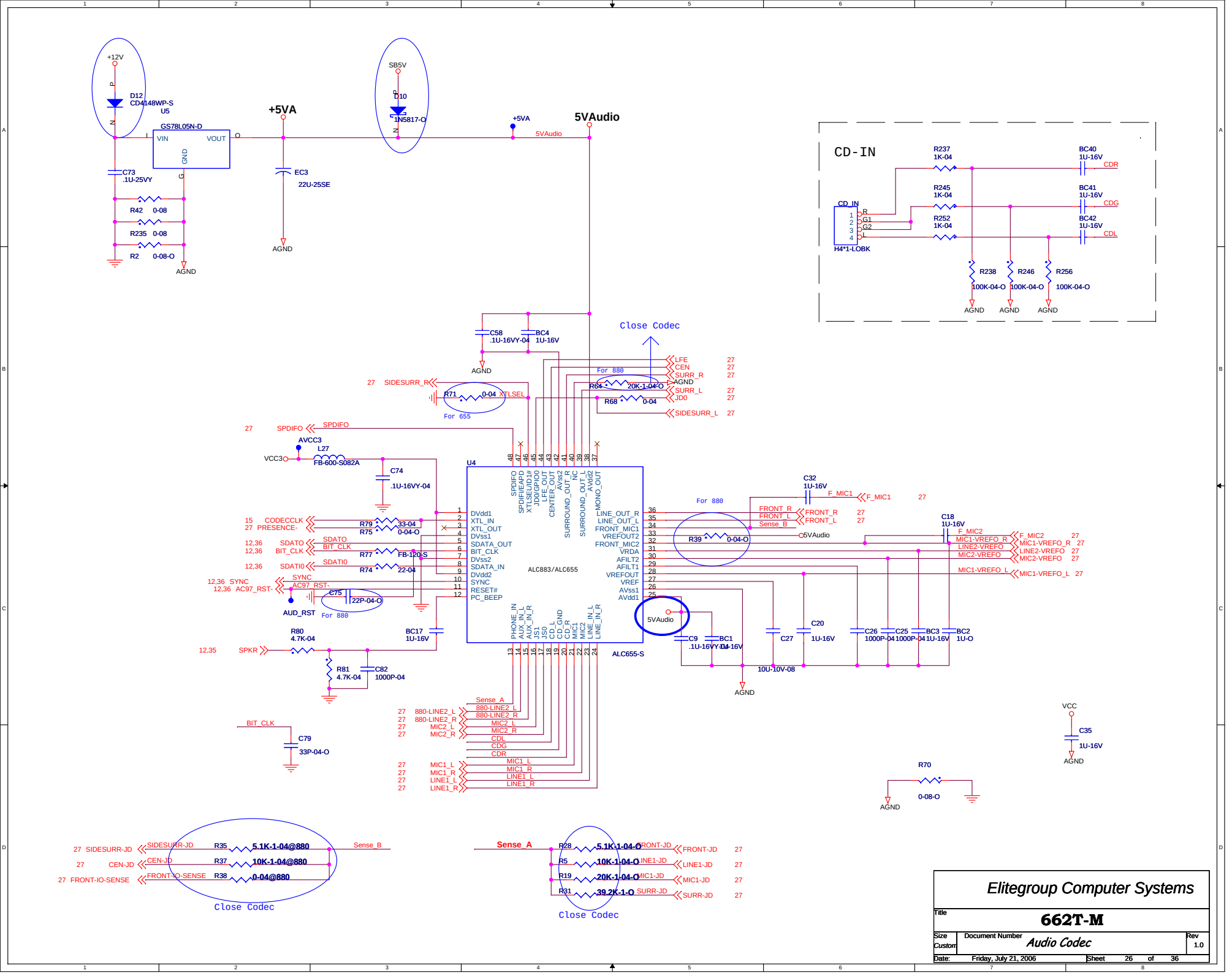
Elitegroup Computer Systems		
Title: 662T-M		
Size: Custom	Document Number: PCI Slot1 / LANPHY	Rev: 1.0
Date: Tuesday, August 01, 2006	Sheet 23 of 36	



	8100C	8110S	8110SB
VDD3	3.3V	3.3V	3.3V
AVDDH	X	3.3V	3.3V
AVDDL	3.3V	2.5V	2.5V
DVDD_A	2.5V	1.8V	1.2V
DVDD	2.5V	1.8V	1.2V
V_12P	2.5V	X	3.3V

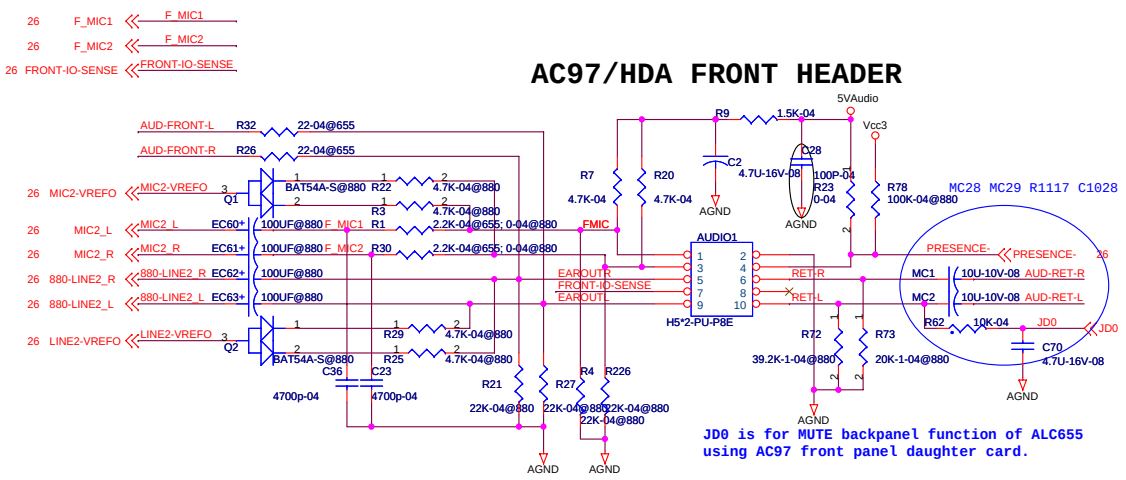
Elitegroup Computer Systems	
Title	662T-M
Size: Custom	Document Number: RtI8100C/8110SC
Rev: 1.0	
Date: Friday, July 21, 2006	Sheet 24 of 36


XI_1394
XO_1394
R315
10M-04-O
Y4
X-24.576M-16PF-O
C284
15P-04-O
C271
15P-04-O
VCCBUS
R336
11K-1-04-O
VCC3A
R337
1K-04-O
C286
.1U-16VY-04-O
VCC3A
L44
FB-600-S082A
C252
.1U-16VY-04
C266
1U-16VY-04
C265
1U-16VY-04
C253
1U-16VY-04
C281
EC40
22U-25SE
VCC3
C256
.1U-16VY-04
C244
1U-16VY-04
C188
1U-16VY-04
C267
1U-16VY-04
C264
1U-16VY-04
+12V
D11
SK24-S-O
F4
RUE160-D-O
VCCBUS_A
VCCBUS
D15
SK24-S-O
F6
RUE160-D-O
VCCBUS_B
EC10
470U-16D8H11E-O
EC41
100U-16D6.3H11EG-LU-O
BJT_SEL
* 0(default) Internal MOS turn on
1 Use external BJT
R335
6.34K-1-04-O
C282
33P-04-O
U16
VT6307-O
VDDARX0
XREXT
NC
GNDARX1
GNDATX1
XTPB0M
XTPB0P
XTPA0M
XTPA0P
XTPBIAS0
VDDARX1
VDDATX1
XTPB1M
XTPB1P
XTPA1M
XTPA1P
XTPBIAS1
GNDARX2
GNDATX2
XTPB2M
XTPB2P
XTPA2M
XTPA2P
XTPBIAS2
VDDARX2
VDDATX2
INTA#
PCIRST#
PCICLK
VSS1
GNT#
REQ#
AD31
AD30
AD29
AD28
AD27
VDD1
GNDARX0
XCPS
VDDATX0
XO
XI
GNDATX0
PHYRESET
LINKON/TSJMP
LREQ/TSOJMP
CTLJ/PCJMP
CTLO/PCOJMP
D7/PCZJMP
D6/CMCJMP
D5
PGND2
PVDD2
D4
D3
D2
D1
D0
MODE0
MODE1
PGND1
SCLK
PVDD1
LPS/CMC
PME#
VSSC2
VDDC2
VSS9
VDD6
SCL/EECK
SDA/EEDI
EEDO
EECS
AD0
AD1
VSS8
RAMVSS
RAMVDD
AD2
AD3
AD4
VDD5
AD5
AD6
AD7
VSS7
CBE0#
AD8
AD9
AD10
AD11
AD12
VSS6
VDD4
AD13
AD14
AD15
CBE1#
PAR
PERR#
VSS5
VSS2
AD26
AD25
AD24
CBE3#
IDSEL
AD23
AD22
VSS3
AD21
VDD2
VDDC1
VSSC1
AD20
AD19
AD18
AD17
AD16
VSS4
CBE2#
FRAME#
IRDY#
VDD3
TRDY#
DEVSEL#
STOP#
TP6
TP7
BJT_SEL
VDD25
REG_FB
REG_CTRL25
TPB-0
TPB+0
TPA-0
TPA+0
TPBIAS0
TPB-1
TPB+1
TPA-1
TPA+1
TPBIAS1
INT-B
PCIRST-
1394_RST
PGNT-4
PREQ-4
AD31
AD30
AD29
AD28
AD27
PCIRST-
C248
.1U-O
PME-
PWRDET_VCC3
EECK
EEDI
EEDO
EECS
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
CBE-0
AD8
AD9
AD10
AD11
AD12
AD13
AD14
AD15
CBE-1
PAR
PERR-
EEPROM2
HT93LC46-S-O
EECS
EECK
EEDI
EEDO
Rb
R506
4.7K-04-O
Rc
R505
0-04
Rd
R504
0-04
For saving EEPROM(6306/6307/6308P)
Power Pin
Pin | VT6307 | VT6308P
84 NC BJT_CTL
87 NC REG_FB
88 NC REG_OUT
35 VCC PWRDET
39 PVD VCC
49 PVD VDD
24 VCC VDD
114 VCC VDD
33 VCC VDD
RN14
56-8P4R
TPA+1
TPA-1
TPB+1
TPB-1
TPA+11
TPA-11
TPB+11
TPB-11
RN21
56-8P4R
TPA+0
TPA-0
TPB+0
TPB-0
TPA+00
TPA-00
TPB+00
TPB-00
TPBIAS0
TPA+00
TPA-00
C269
.1U-16VY-04
TPBIAS1
TPA+11
TPA-11
C257
.1U-16VY-04
TPB+00
TPB-00
TPB+11
TPB-11
R312
5.1K-1-04
C274
220P-04
R282
5.1K-1-04
C263
220P-04
VCCBUS_B
C255
.1U-25VY
Close to 1394 Connector
R261
R263
R265
R267
0-04-O
CMF4
CMK-200/100-S-O
CV5
CV7
CV6
CV8
10P-O
1394A2
H5*2-OR-P9E-O
TPA+
TPA-
GND
TPB+
TPB-
+12V
KEY
R260
100-04
Elitegroup Computer Systems
Title
662T-M
Size
Custom
Document Number
IEEE1394a(VT6308)
Rev
1.0
Date:
Monday, July 31, 2006
Sheet
25
of
36



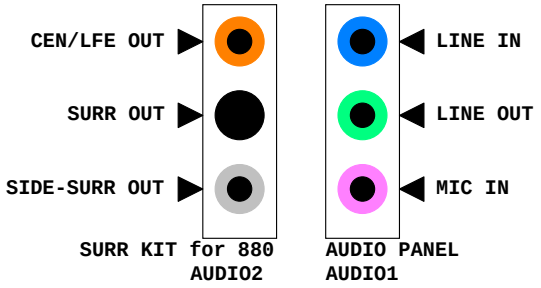
Elitegroup Computer Systems			
Title: 662T-M			
Size: Custom	Document Number: Audio Codec		Rev: 1.0
Date: Friday, July 21, 2006	Sheet 26 of 36		

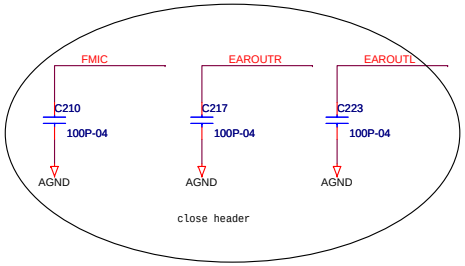
AC97/HDA FRONT HEADER

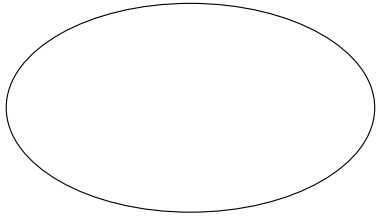


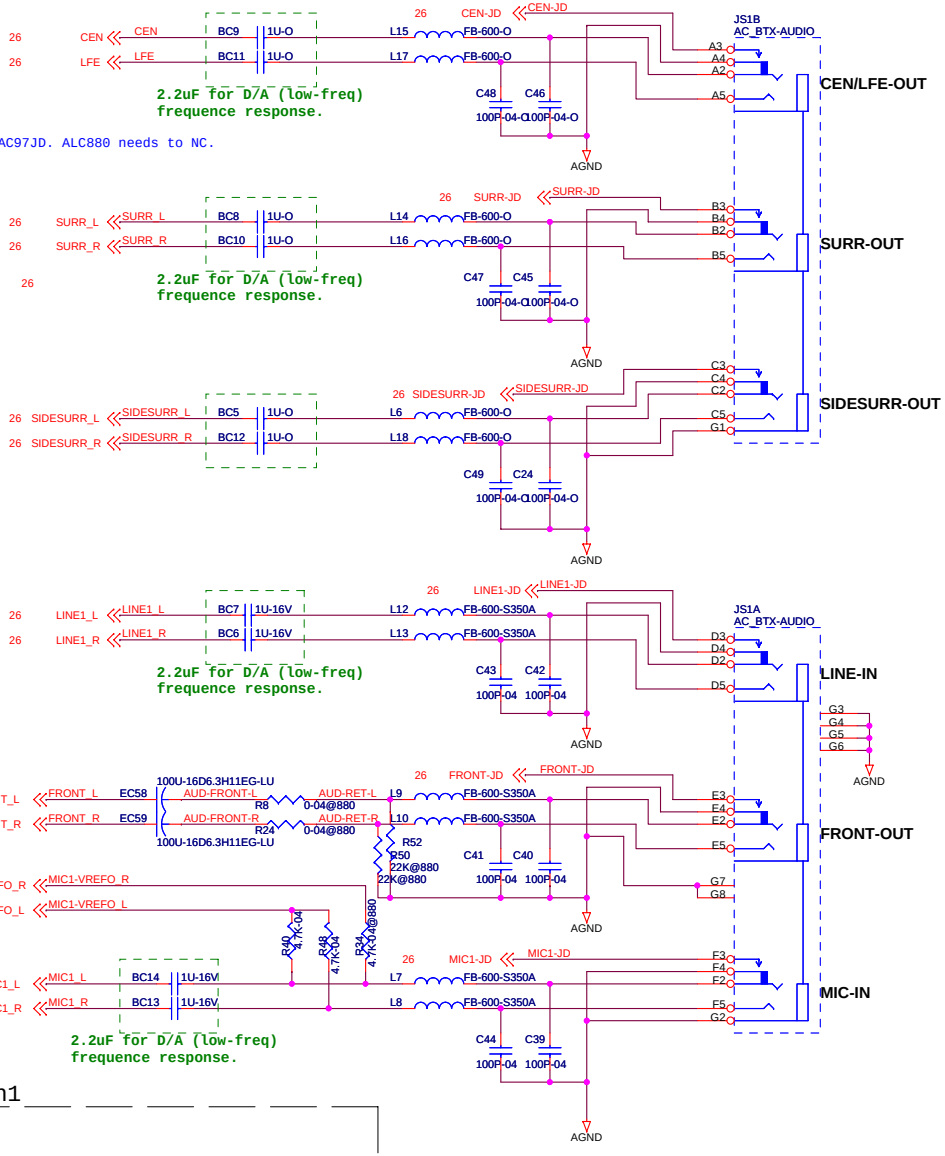
MC28 MC29 R1117 C1028 FOR AC97JD. ALC880 needs to NC.

JD0 is for MUTE backpanel function of ALC655 using AC97 front panel daughter card.

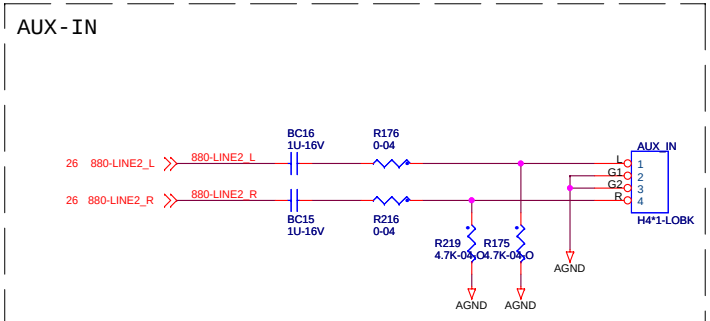




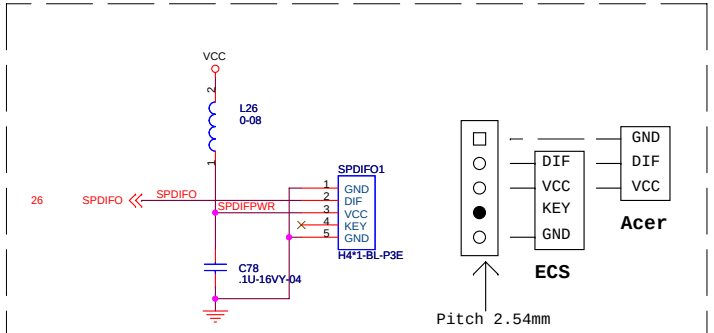




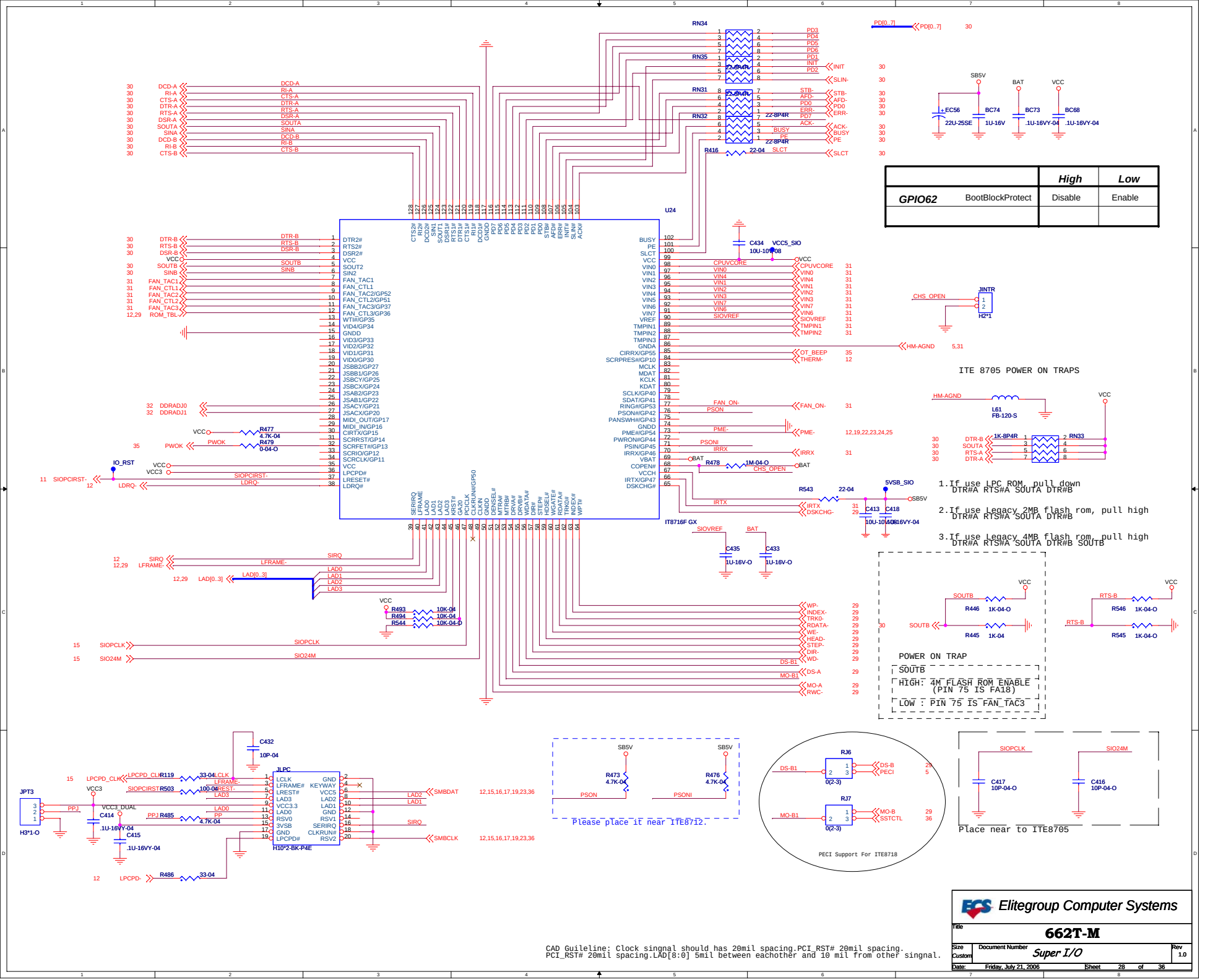
AUX-IN



SPDIF-Out Pin Definition1



Elitegroup Computer Systems			
Title: 662T-M			
Size: Custom	Document Number: Audio Interface		Rev: 1.0
Date: Friday, July 21, 2006	Sheet 27 of 36		



		High	Low
GPIO62	BootBlockProtect	Disable	Enable

CAD Guileline: Clock singnal should has 20mil spacing.PCI_RST# 20mil spacing.
PCI_RST# 20mil spacing.LAD[8:0] 5mil between eachother and 10 mil from other singnal.

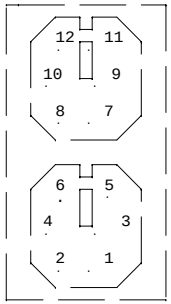
Elitegroup Computer Systems

Title: 662T-M

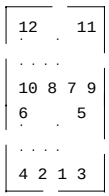
Size: Custom | Document Number: Super I/O | Rev: 1.0

Date: Friday, July 21, 2006 | Sheet 28 of 36

CONNECTOR VIEW



TOP VIEW



JP3	BIOS PROTECT
OPEN	DISABLE
SHORT	ENABLE

LPC INTERFACE ROM

JP3	BIOS PROTECT
OPEN	DISABLE
SHORT	ENABLE

LPC INTERFACE ROM

KBDAT
PMDAT
KBCLK
PMCLK
RN5
2.2K-8P4R
KBVCC
C801 10P-4-O
C802 10P-4-O
C803 10P-4-O
C804 10P-4-O
EMI
L23
FB-600-S082A
C53 .01U-25VY
F1
FUSE-1.1AS
L22 FB-300-S
L19 FB-300-S
L21 FB-300-S
L20 FB-300-S
KBD
KBC
PMD
PMC
PSKBM1
MINI-DUAL-6P-CSR
C34 .01U-O
VCC3
R390 1K-04
RN36 4.7K-8P4R
BIOS_WP
H2*1
FWP-
R382 1K-04
QN19 2N3904-S
FLASH_EN-
R423 10K-04
ROM_TBL-
LAD[0..3]
ROM1
A7/GPI1
A6/GPI0
A5/WP#
A4/TBL#
A3/RSV
A2/RSV
A1/RSV
A0/RSV
LAD0/DQ0
LAD0
LAD1
LAD2
LAD3
W39V040AP
VCC33_FWH
R444 10K-04
R484 10K-04
FWH_RST
PCIRST-
CLK_FWH
R449 4.7K-04
LFRAME-
MODE
NC
GND
VDD
OE#/INIT#
WE#/LFRAME#
DQ7/RSV

FDC

VCC
R491 150-04
RN37 150-8P4R
FDD
H17*2-LPW-P5E
RWC-
INDEX-
MO-A
DS-B
DS-A
MO-B
DIR-
STEP-
WD-
WE-
TRK0-
WP-
RDATA-
HEAD-
DSKCHG-

PLACE NEAR CONNECTOR

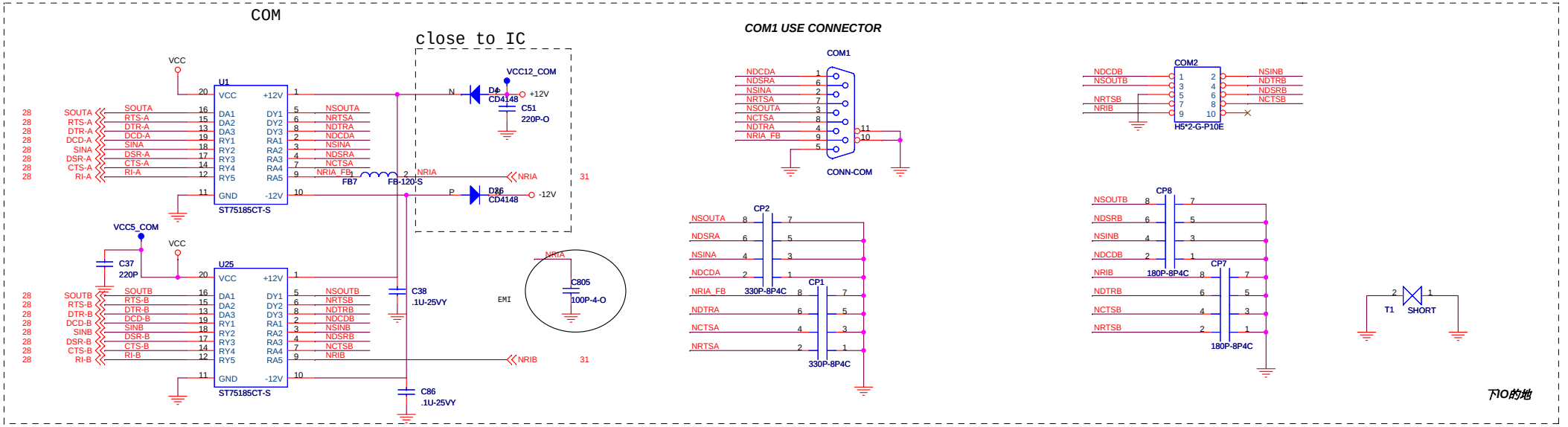
PMD
KBD
KBC
PMC
CV4 330P
CV3 330P
CV1 330P
CV2 330P

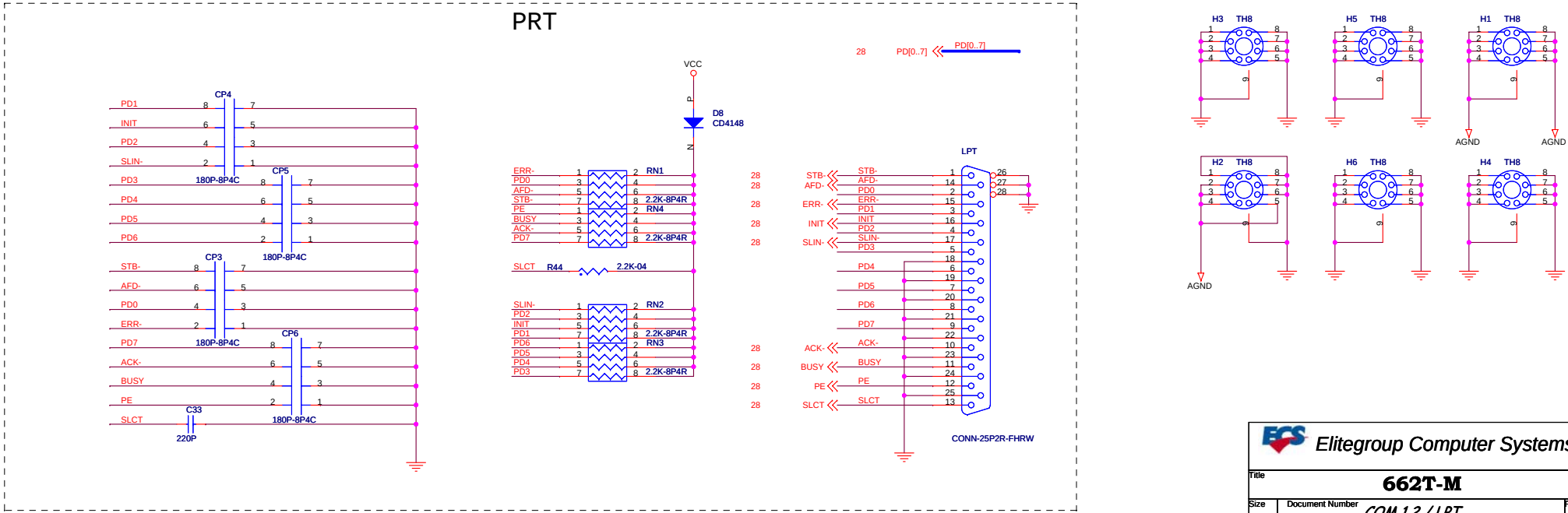
Elitegroup Computer Systems

Title: 662T-M

Size: Custom | Document Number: KB/MS/ROM/FDC/IR | Rev: 1.0

Date: Friday, July 21, 2006 | Sheet 29 of 36

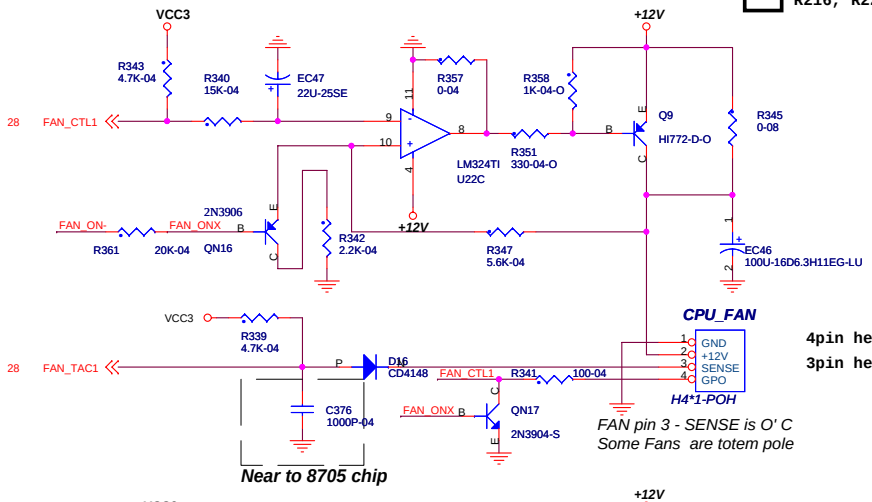




Elitegroup Computer Systems			
Title: 662T-M			
Size: Custom	Document Number: COM 1,2 / LPT		Rev: 1.0
Date: Friday, July 21, 2006	Sheet 30 of 36		

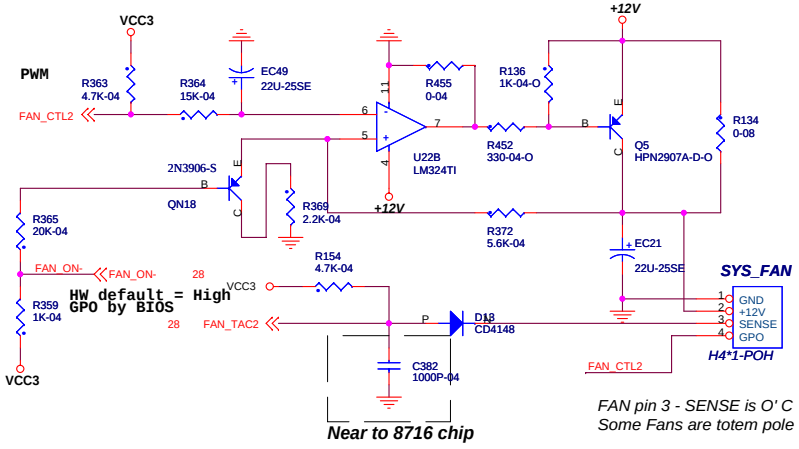
Layout :
Power Signals : CPUFAN, CASEFAN, PWRFAN trace width should > 20 mil with current 200 mA .

ADD R223, EC46, R323, R324, R219, R216, R225, Q5, QN704

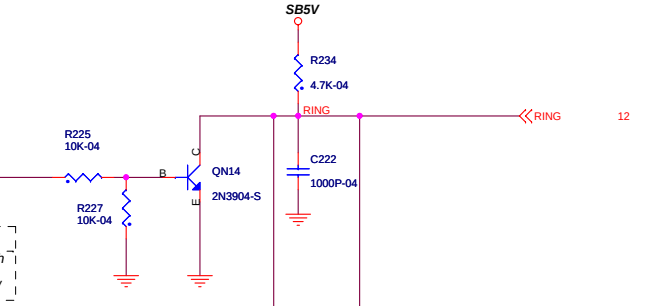


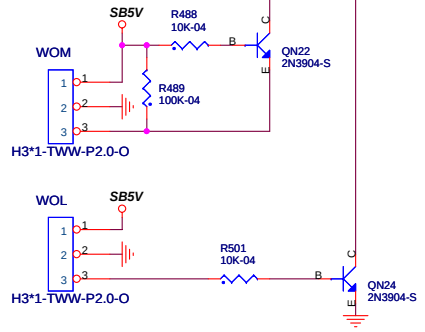
FAN pin 3 - SENSE is O' C
Some Fans are totem pole

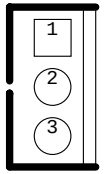
4pin header: QN17, R341=100ohm, R345=0ohm-0805
3pin header: R223, EC46, R216, R219, Q5, R324, QN704, R323

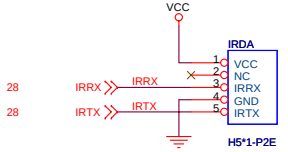


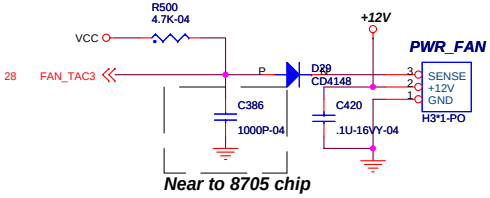
FAN pin 3 - SENSE is O' C
Some Fans are totem pole



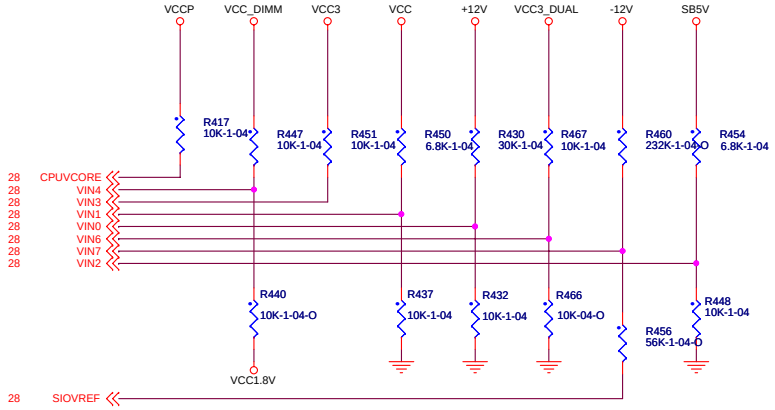






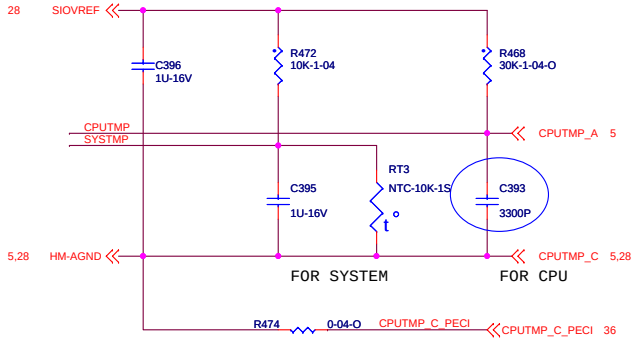


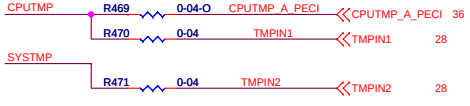
Voltage Monitor



Temperature Monitor

Choosing method of measuring temperature by either thermistor or diode





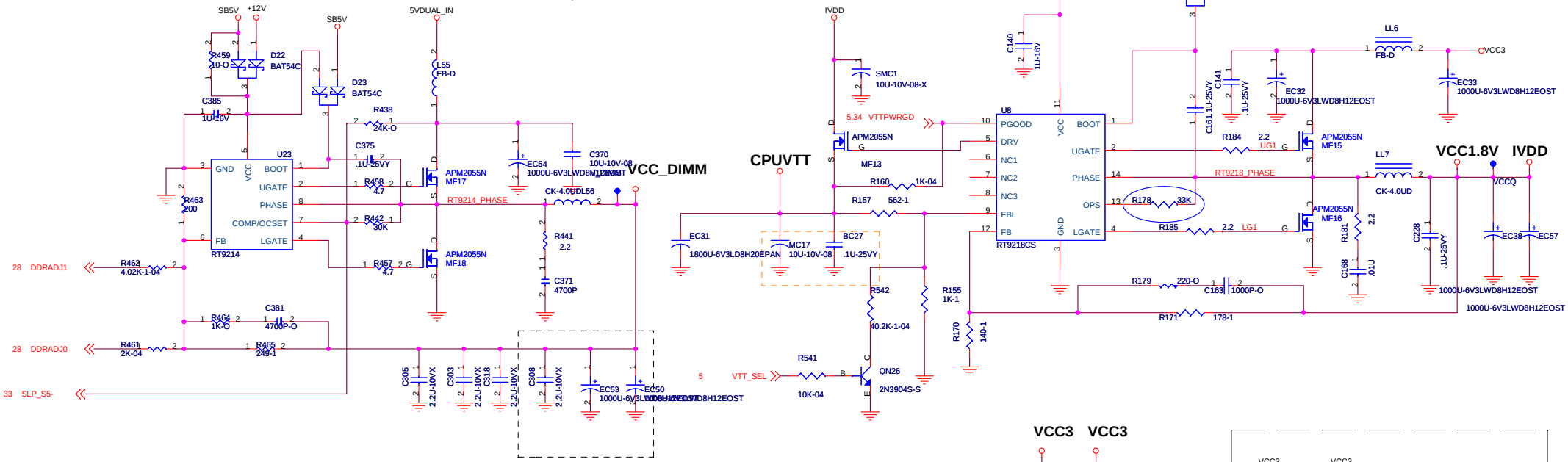
FOR SYSTEM FOR CPU

Elitegroup Computer Systems

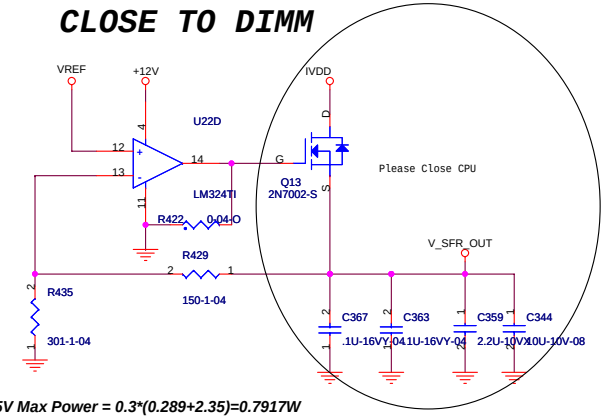
Title	662T-M	
Size: Custom	Document Number: HM / FAN / RING	Rev: 1.0
Date: Tuesday, August 01, 2006	Sheet 31 of 36	

	RT9202	RT9214
R345	10	X
D30	X	V
R344	X	30K
R752	24K	X

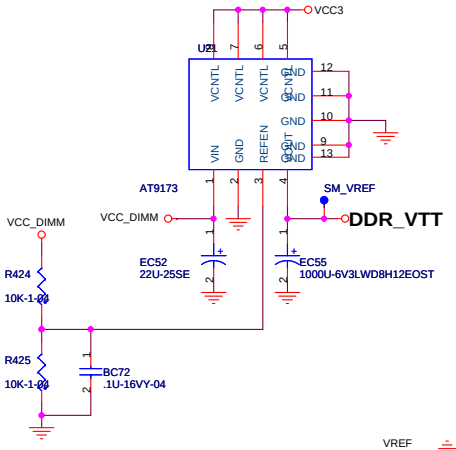
SIO_GP20	SIO_GP21	V_DIMM
1	1	Normal
0	1	+50mV
1	0	+100mV
0	0	+150mV

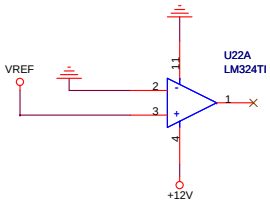


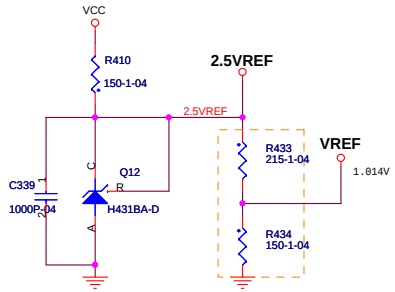
CLOSE TO DIMM

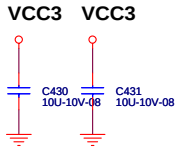


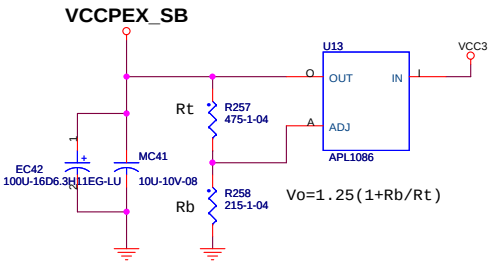
VCC1.5V Max Power = 0.3*(0.289+2.35)=0.7917W

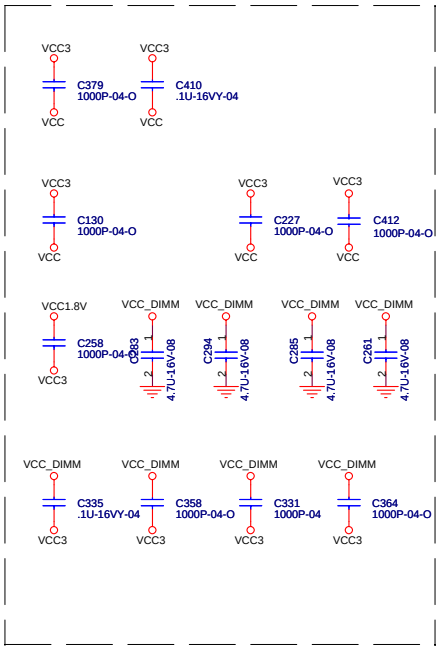












平均分佈在POWER PLAN 和 PLAN 之間

Elitegroup Computer Systems

Title	662T-M	
Size: Custom	Document Number: Voltage Regulator	Rev: 1.0
Date: Friday, July 21, 2006	Sheet 32 of 36	

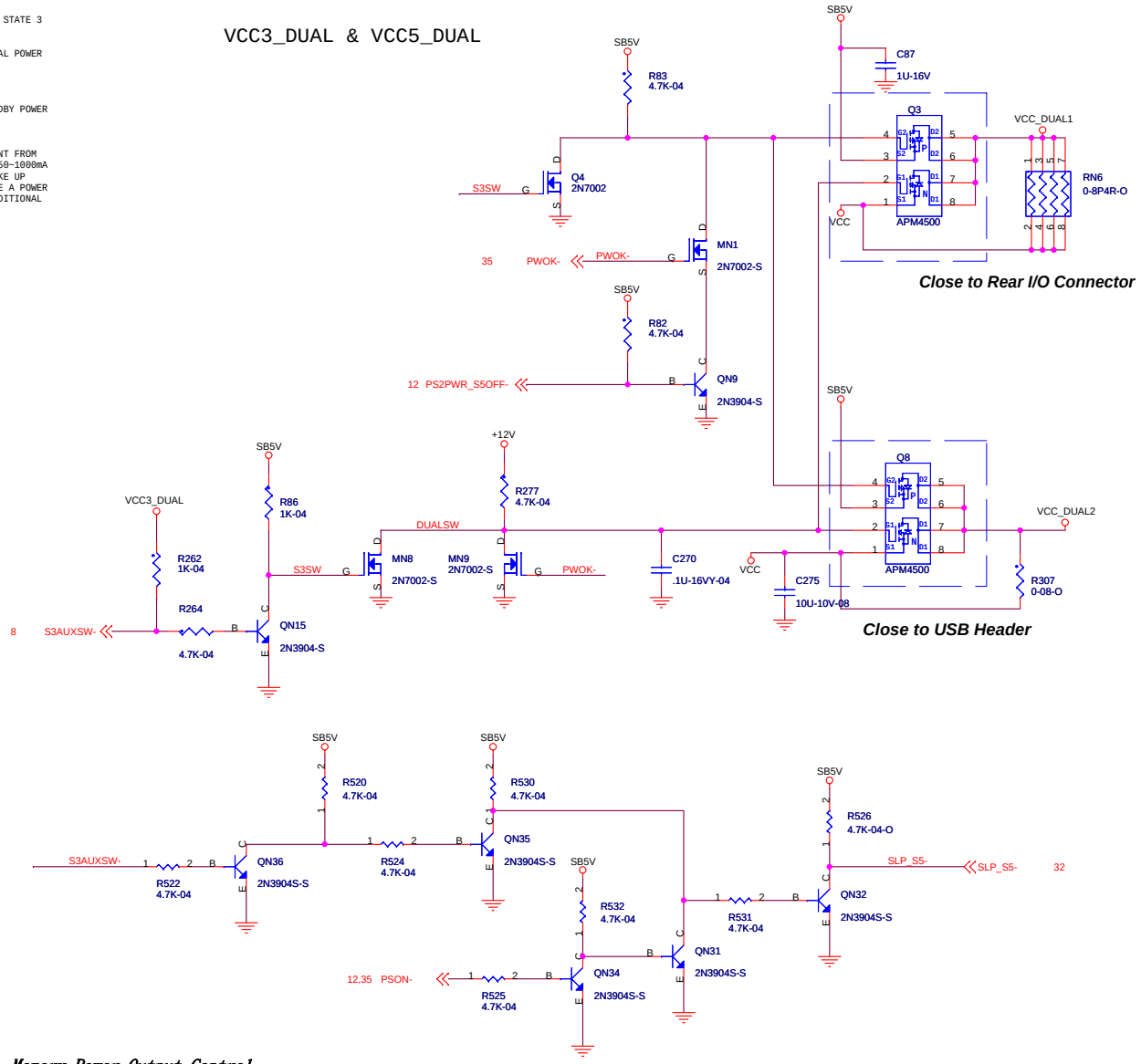
AUTO VOLTAGE SWITCH FOR ACPI STATE 3

1.IN S0,S1
THIS CIRCUIT PASSES THE NORMAL POWER

2.IN S3,S4,S5
THIS CIRCUIT PASSES THE STANDBY POWER

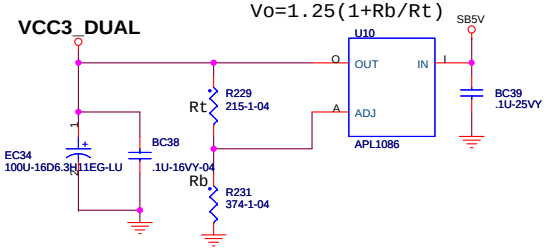
NOTE:
BECAUSE OF THE MAXIMUM CURRENT FROM POWER SUPPLY IS ONLY ABOUT 750~1000mA SO IF YOU WANT TO SUPPORT WAKE UP FROM S3 BY USB, YOU MUST HAVE A POWER SUPPLY WITH LARGER POWER.(ADDITIONAL 500mA PER USB PORT)

VCC3_DUAL & VCC5_DUAL

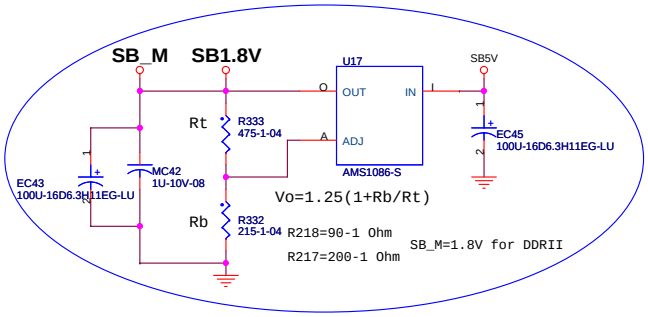


VCC3_DUAL

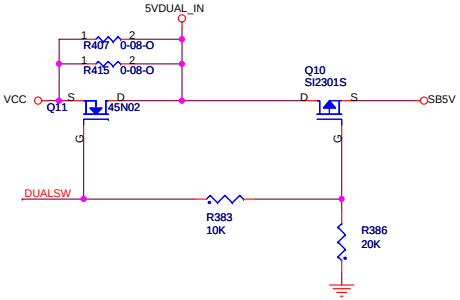
Vo=1.25(1+Rb/Rt)



SB_M SB1.8V



SB1.8V (For SB and DDRII) 800mA



Memory Power Output Control

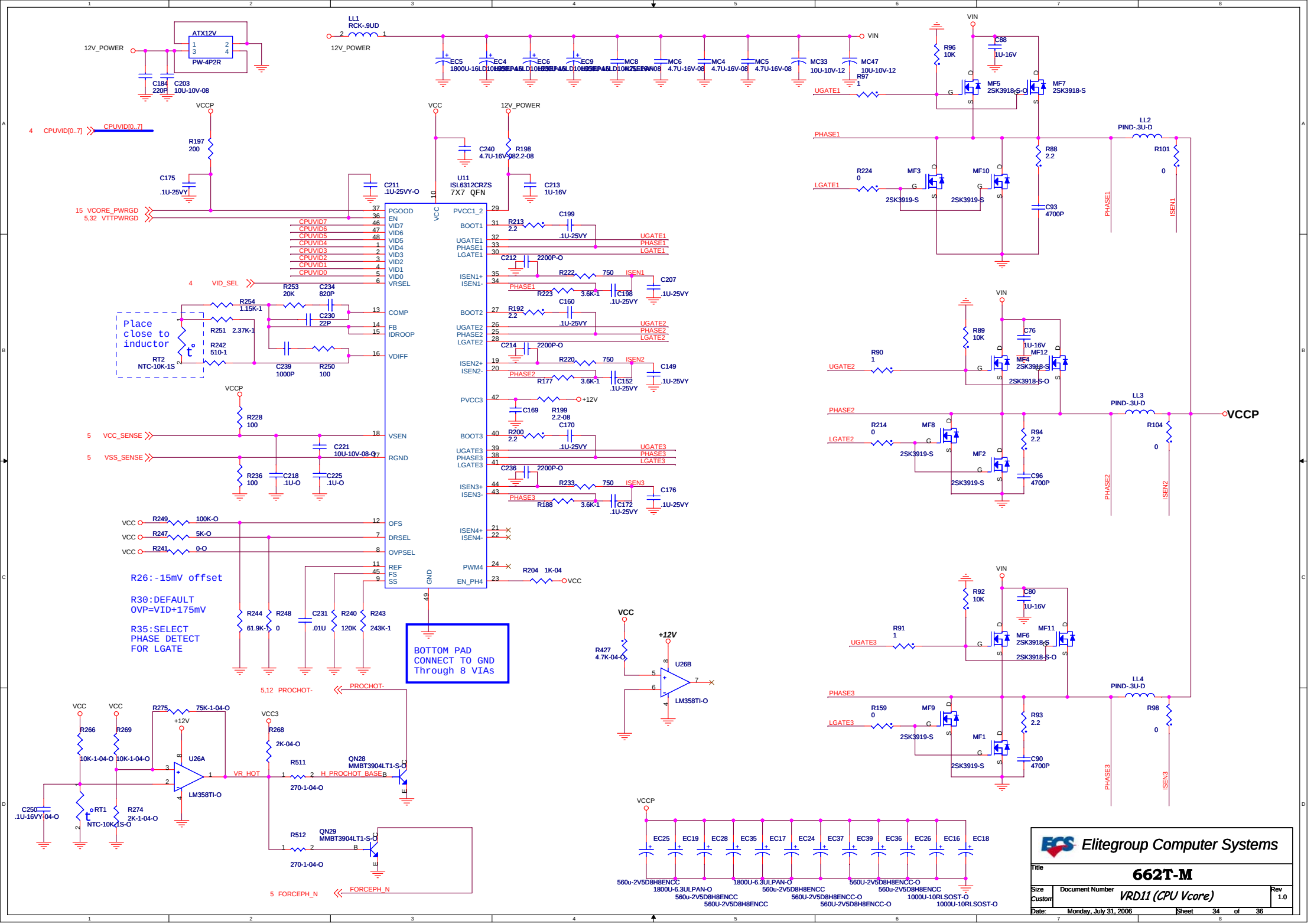
	S3AUXSW-	PSON-	SLP_S5-
S0	1	0	1
S1	1	0	1
S3	0	1	1
S4	1	1	0
S5	1	1	0

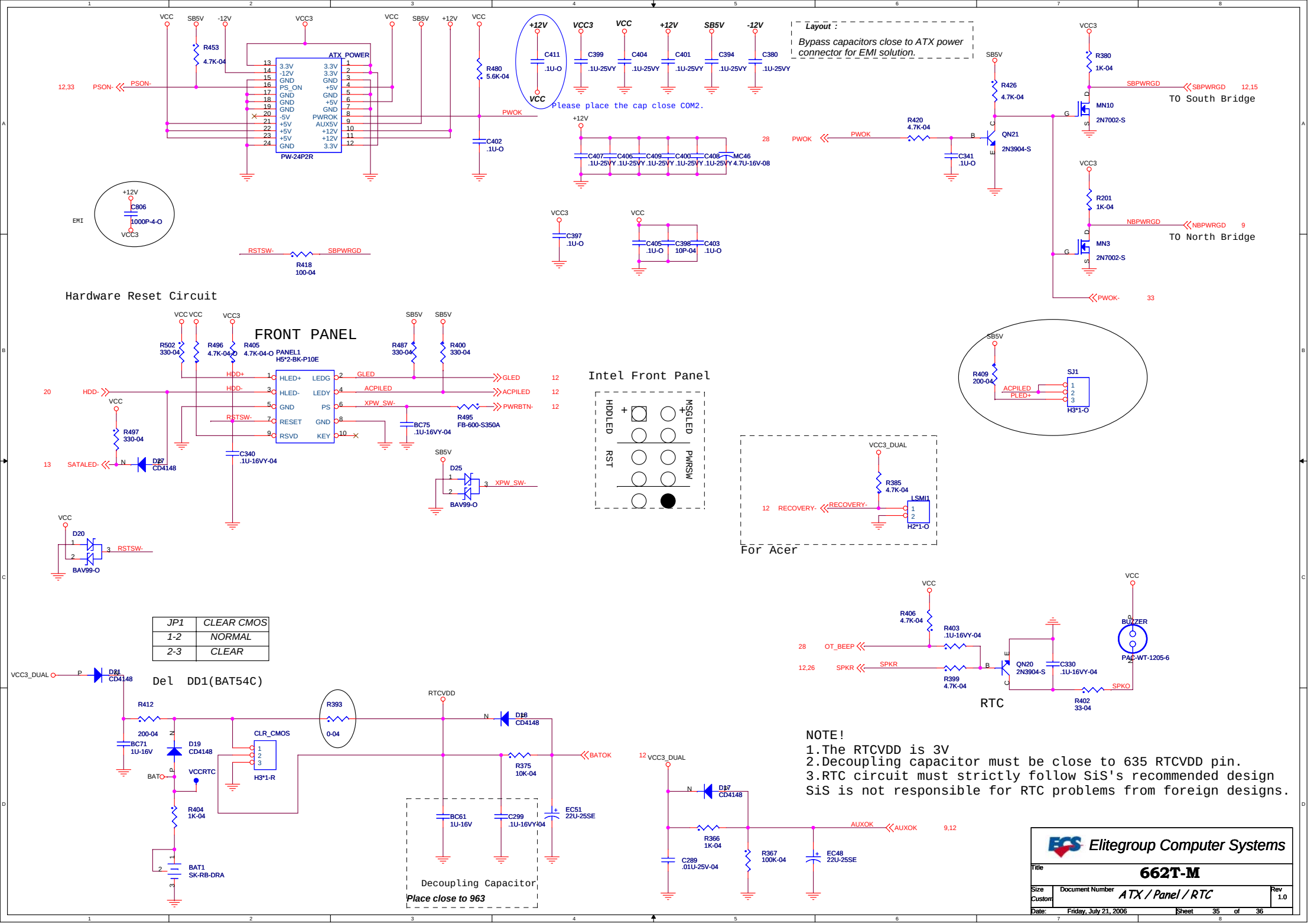
Elitegroup Computer Systems

Title: 662T-M

Size: Custom | Document Number: Dual 5V&3V, STR | Rev: 1.0

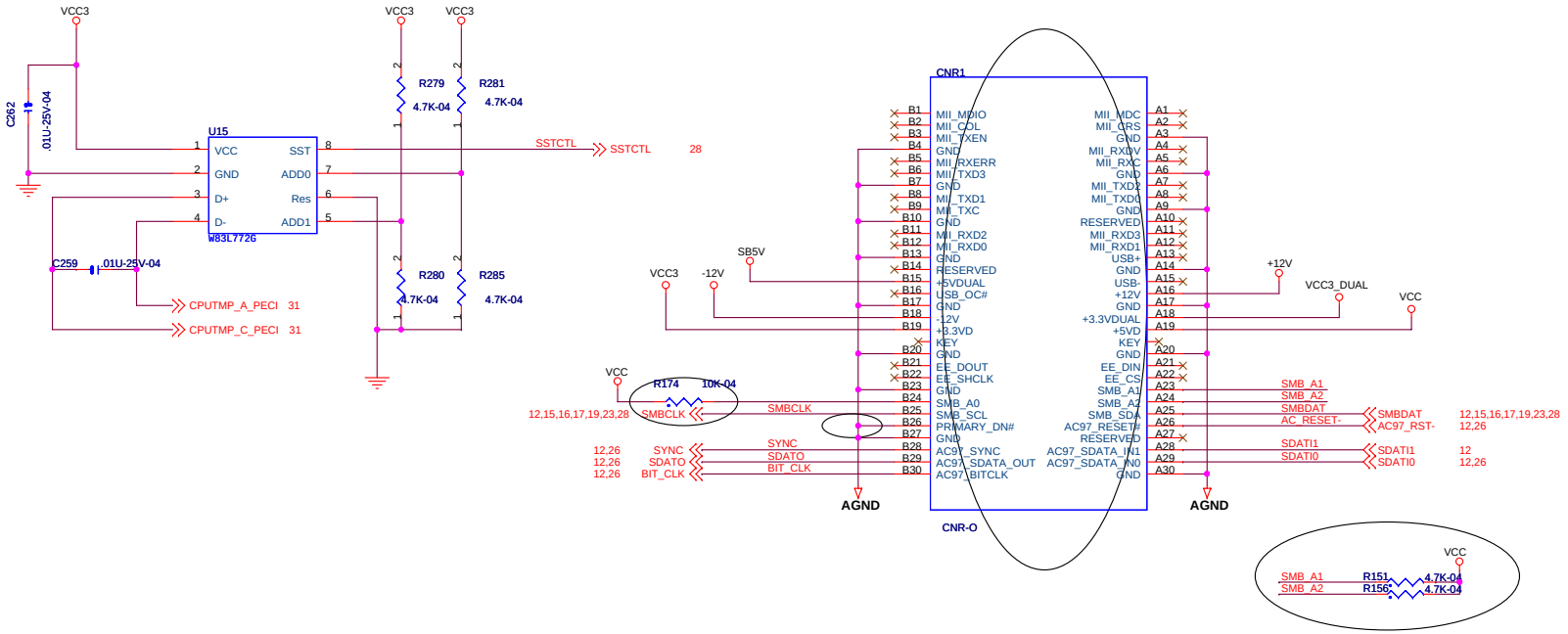
Date: Friday, July 21, 2006 | Sheet 33 of 36


ATX12V
PW-4P2R
12V_POWER
C184 220F
C203 10U-10V-08
LL1 RCK-.9UD
EC5 1800U-16LD10
EC4
EC6
EC9
MC8 4.7U-16V-08
MC6 4.7U-16V-08
MC4 4.7U-16V-08
MC5 4.7U-16V-08
MC33 10U-10V-12
MC47 10U-10V-12
R97 1
VIN
R96 10K
C88 1U-16V
MF5 2SK3918-S-O
MF7 2SK3918-S
UGATE1
PHASE1
LGATE1
LL2 PIND-.3U-D
R88 2.2
R101 0
C93 4700P
R224 0
MF3 2SK3919-S
MF10 2SK3919-S
PHASE1
ISEN1
4 CPUVID[0..7]
CPUVID[0..7]
R197 200
C175 .1U-25VY
C211 .1U-25VY-O
VCCP
VCC
12V_POWER
C240 4.7U-16V
R198 82.2-08
C213 1U-16V
U11 ISL6312CRZS 7X7 QFN
15 VCORE_PWRGD
5,32 VTTPWRGD
PGOOD
EN
VID7
VID6
VID5
VID4
VID3
VID2
VID1
VID0
VRSEL
CPUVID7
CPUVID6
CPUVID5
CPUVID4
CPUVID3
CPUVID2
CPUVID1
CPUVID0
4 VID_SEL
R253 20K
C234 820P
R254 1.15K-1
C230 22P
R251 2.37K-1
R242 510-1
RT2 NTC-10K-1S
C239 1000P
R250 100
COMP
FB
IDROOP
VDIFF
Place close to inductor
PVCC1_2
BOOT1
UGATE1
PHASE1
LGATE1
ISEN1+
ISEN1-
R213 2.2
C199 .1U-25VY
C212 2200P-O
R222 750
C198 .1U-25VY
C207 .1U-25VY
BOOT2
UGATE2
PHASE2
LGATE2
ISEN2+
ISEN2-
R192 2.2
C160 .1U-25VY
C214 2200P-O
R220 750
R177 3.6K-1
C152 .1U-25VY
C149 .1U-25VY
PVCC3
+12V
R199 2.2-08
C169
C170
BOOT3
UGATE3
PHASE3
LGATE3
ISEN3+
ISEN3-
R200 2.2
C236 2200P-O
R233 750
R188 3.6K-1
C172 .1U-25VY
C176 .1U-25VY
ISEN4+
ISEN4-
PWM4
EN_PH4
R204 1K-04
5 VCC_SENSE
5 VSS_SENSE
VSEN
RGND
R228 100
C221 10U-10V-08-O
R236 100
C218 .1U-O
C225 .1U-O
R249 100K-O
R247 5K-O
R241 0-O
OFS
DRSEL
OVPSEL
REF
FS
SS
GND
R244 61.9K-1
R248 0
C231 .01U
R240 120K
R243 243K-1
R26:-15mV offset
R30:DEFAULT
OVP=VID+175mV
R35:SELECT
PHASE DETECT
FOR LGATE
BOTTOM PAD
CONNECT TO GND
Through 8 VIAs
R427 4.7K-04-O
U26B
LM358TI-O
5,12 PROCHOT-
PROCHOT-
R275 75K-1-04-O
R266 10K-1-04-O
R269 10K-1-04-O
U26A
LM358TI-O
VR_HOT
R268 2K-04-O
R511 270-1-04-O
QN28 MMBT3904LT1-S-O
H_PROCHOT_BASE
C250 .1U-16VY-04-O
RT1 NTC-10K-1S-O
R274 2K-1-04-O
R512 270-1-04-O
QN29 MMBT3904LT1-S-O
5 FORCEPH_N
FORCEPH_N
R89 10K
C76 1U-16V
MF4 2SK3918-S-O
MF12 2SK3918-S-O
R90 1
R214 0
MF8 2SK3919-S
MF2 2SK3919-S
R94 2.2
C96 4700P
LL3 PIND-.3U-D
R104 0
VCCP
R92 10K
C80 1U-16V
MF6 2SK3918-S-O
MF11 2SK3918-S-O
R91 1
R159 0
MF9 2SK3919-S
MF1 2SK3919-S
R93 2.2
C90 4700P
LL4 PIND-.3U-D
R98 0
EC25 560u-2V5D8H8ENCC
EC19 1800U-6.3ULPAN-O
EC28 560u-2V5D8H8ENCC
EC35 560U-2V5D8H8ENCC
EC17 1800U-6.3ULPAN-O
EC24 560u-2V5D8H8ENCC
EC37 560U-2V5D8H8ENCC-O
EC39 560U-2V5D8H8ENCC-O
EC36 560u-2V5D8H8ENCC-O
EC26 1000U-10RLSOST-O
EC16 1000U-10RLSOST-O
EC18
Elitegroup Computer Systems
Title
662T-M
Size Custom
Document Number VRD11 (CPU Vcore)
Rev 1.0
Date: Monday, July 31, 2006
Sheet 34 of 36


ATX_POWER
PW-24P2R
PSON-
PWOK
R453 4.7K-04
R480 5.6K-04
C402 .1U-O
C411 .1U-O
C399 .1U-25VY
C404 .1U-25VY
C401 .1U-25VY
C394 .1U-25VY
C380 .1U-25VY
Please place the cap close COM2.
Layout :
Bypass capacitors close to ATX power connector for EMI solution.
C407 .1U-25VY
C406 .1U-25VY
C409 .1U-25VY
C400 .1U-25VY
C408 .1U-25VY
MC46 4.7U-16V-08
R420 4.7K-04
C341 .1U-O
R426 4.7K-04
QN21 2N3904-S
R380 1K-04
MN10 2N7002-S
SBPWRGD
TO South Bridge
R201 1K-04
MN3 2N7002-S
NBPWRGD
TO North Bridge
PWOK-
C806 1000P-4-O
EMI
R418 100-04
RSTSW-
C397 .1U-O
C405 .1U-O
C398 10P-04
C403 .1U-O
Hardware Reset Circuit
FRONT PANEL
PANEL1 H5*2-BK-P10E
R502 330-04
R496 4.7K-04
R405 4.7K-04-O
R487 330-04
R400 330-04
HDD+
HDD-
RSTSW-
GLED
ACPILED
XPW_SW-
PWRBTN-
R495 FB-600-S350A
BC75 .1U-16VY-04
C340 .1U-16VY-04
R497 330-04
D27 CD4148
SATALED-
D25
BAV99-O
D20
Intel Front Panel
HDDLED
MSGLED
RST
PWRSW
R409 200-04
SJ1
H3*1-O
PLED+
VCC3_DUAL
R385 4.7K-04
LSMI1
H2*1-O
RECOVERY-
For Acer
JP1 | CLEAR CMOS
1-2 | NORMAL
2-3 | CLEAR
Del DD1(BAT54C)
D24 CD4148
R412 200-04
BC71 1U-16V
D19 CD4148
CLR_CMOS
H3*1-R
VCCRTC
BAT
R404 1K-04
BAT1 SK-RB-DRA
R393 0-04
D18 CD4148
R375 10K-04
BATOK
BC61 1U-16V
C299 .1U-16VY-04
EC51 22U-25SE
Decoupling Capacitor
Place close to 963
R406 4.7K-04
R403 .1U-16VY-04
OT_BEEP
SPKR
QN20 2N3904-S
C330 .1U-16VY-04
R399 4.7K-04
R402 33-04
SPKO
BUZZER
PAC-WT-1205-6
RTC
NOTE!
1.The RTCVDD is 3V
2.Decoupling capacitor must be close to 635 RTCVDD pin.
3.RTC circuit must strictly follow SiS's recommended design
SiS is not responsible for RTC problems from foreign designs.
D17 CD4148
R366 1K-04
C289 .01U-25V-04
R367 100K-04
EC48 22U-25SE
AUXOK
Elitegroup Computer Systems
Title 662T-M
Size Custom
Document Number ATX / Panel / RTC
Rev 1.0
Date: Friday, July 21, 2006
Sheet 35 of 36

R1,R2,R3,R4 depend on the address selection.

ADD0	ADD1	ADDRESS
GND	GND	0x48
OPEN	GND	0x49
VCC	GND	0x4A
GND	OPEN	0x4B
OPEN	OPEN	0x4C
VCC	OPEN	0x4D
GND	VCC	0x4E
OPEN	VCC	0x4F
VCC	VCC	0x50



Elitegroup Computer Systems	
Title	662T-M
Size: Custom	Document Number: CNR / BCM_LANPHY
Rev: 1.0	
Date: Friday, July 21, 2006	Sheet 36 of 36