SF1 Rev: 1.1

Revision History :

1. Ver A: Initial L4S6MG
2. Ver B:
   I. P12 Del Pull-down when no 1394
   II. P14 Modify clock gen enable & bus select CKT
   III. P20 Modify PCI3 routing to DABC & Del AC97 reset CKT
   IV. P21 Add D30 for EZJ1-CDROM
   V. P22 Modify UD2+-, UD3+- NET
   VI.P25 Add COM2 CP8, CP9
   VII. P26 Modify FAN CTRL BJT for 772 to 2907
   VIII. P28 Modify FPMIC NET
   IX. P29 Modify VCCBUS CKT & Del CMF4, RN15
   X. P30 RTL8100C/8110S Co-layout
   XI. P31 Modify VCC3_DUAL, SB_M, SB1.8V, AUX_IVDD CKT
   XII. P32 Modify VCC1.8V, VDDQ, IVDD, DDRVTT CKT
   XIII. P33 ADP3180/RT9247 Co-layout
   XIV. P34 Add LJ2, LSMI1 & Modify EZJ1-CDROM & Modify BATOK CKT
3. Ver C:
   I. Del EZJ1(P11, P21, P34)
   II. Del FANCTL#2, WOL1 and Modify HW temp monitor for TF(P23, P26)
   III. Add Jack-detect circuit(P27, P28)
   IV. Del CNR1(P20)
   V. Del RN18(P14)
   VI. Modify VCC_DUAL circuit For S5(P31)
   VII. Add SR for 661FX and R371 for DDRVTT(P32)
   VIII. Add LAN RCR circuit(P30)
   IX. meet 648/661/660 new 3in1 trace length
4. Ver 1.0: ***15-K08-011001***
   I. Add LMDN1 & Modify for ALC202A&655(P27)
   II. USB+LUSB(P22)
   III. Add CPU Temp header(P04)
   IV. VGA1/COM3 co-layout(P25)
   V. Add WOL1, WOM1 and FAN_CTRL2(P26)
   VI. Modify IR header(P24)
   VII. Modify VRD for 9.0 + 10.0(P33)
5. Ver 1.1: ***15-K08-011101***
   I. Modify IO location
   II. Modify for ALC655(P27,P28)
   III. FAN Control Co-layout(P26)
   IV. IEEE1394a Add 4*2 header(P25)
   V. Modify RTL8110S Power(P30)

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Elitegroup Computer Systems

Title	SF1/648FX	
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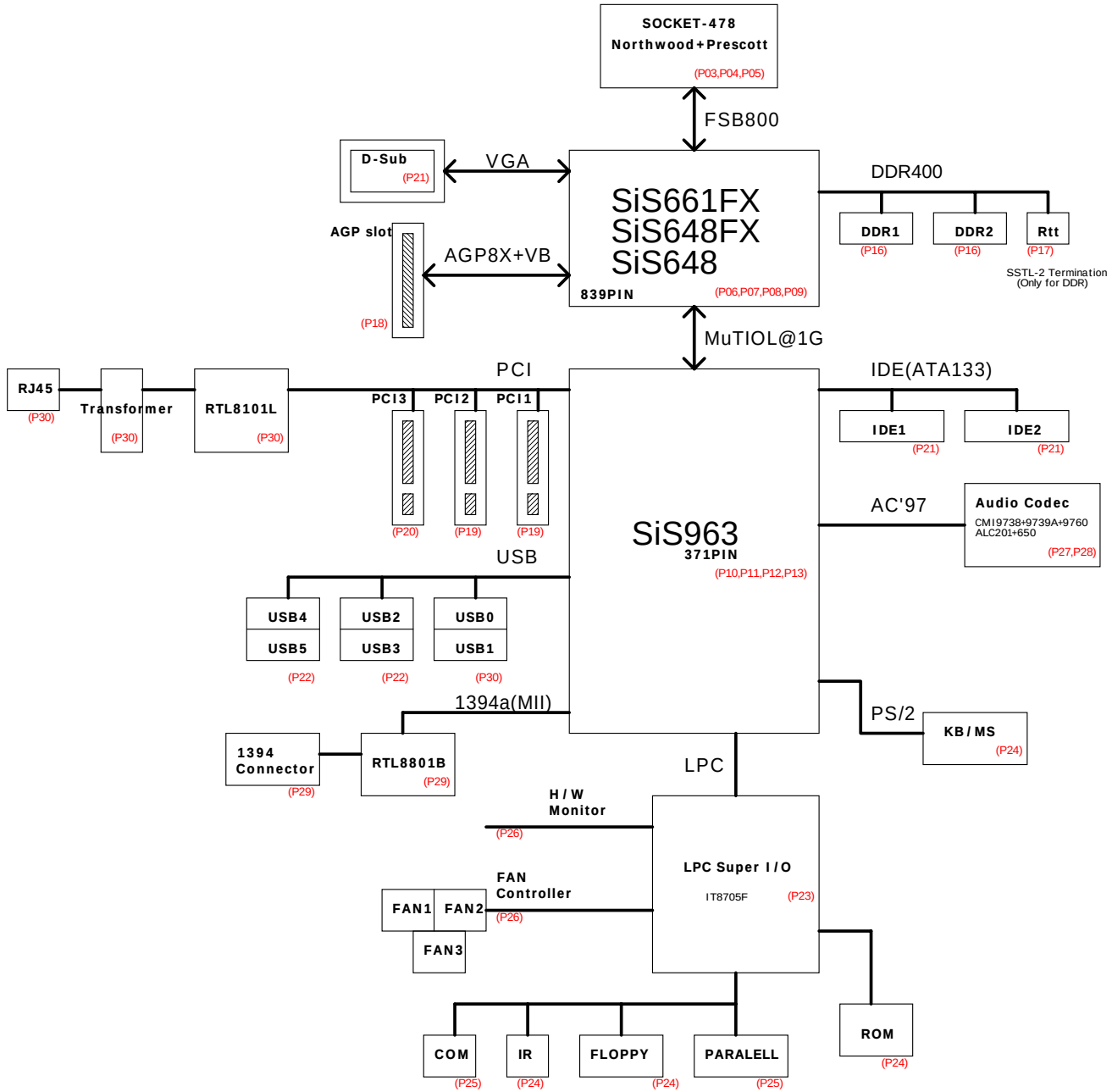
System Block Diagram



Clock

CPUCLK+-(200MHz)
660CCLK+-(200MHz)
SDCLK*1(200MHz)
PCI*8(33MHz)
AGP*2(66MHz)
USB*1(48MHz)
SIOCLK*1(24MHz)
REF*3(14.318MHz)

CLOCK GEN
ICS952005
(P14)

FWRSDCLKO
DDRCLK*9
FBOUT
FBIN

DDR CLOCK BUFFER
ICS93735
(P15)

Power

VCC
VCC3
+-12V
5VSB
12V_POWER

ATX+ATX12V
(P33,P34)
AC110/220V

VCCP

PWM
APD3180+APD3418*3
(P33)
12V_POWER

VCC1.8V

MC34063
(P32)
VCC3

VDDQ&IVDD
DDR_VTT
VCC_M
VCCVID

LM324+MOS
(P05,P32)
VCC1.8V
VCC3

SB_M=2.55V@0.8A
VCC3_DUAL=3.35V@1.2A

Regulator
EZ1117
AMS1084
(P31)
5VSB

SB1.8V=1.8V@20mA
AUX_IVDD=1.5V@10mA

2N2222
2N2222
(P31)
VCC3_DUAL

Elitegroup Computer Systems

Title: **SF1/648FX**

Size: Custom | Document Number: Block Diagram | Rev: 1.1

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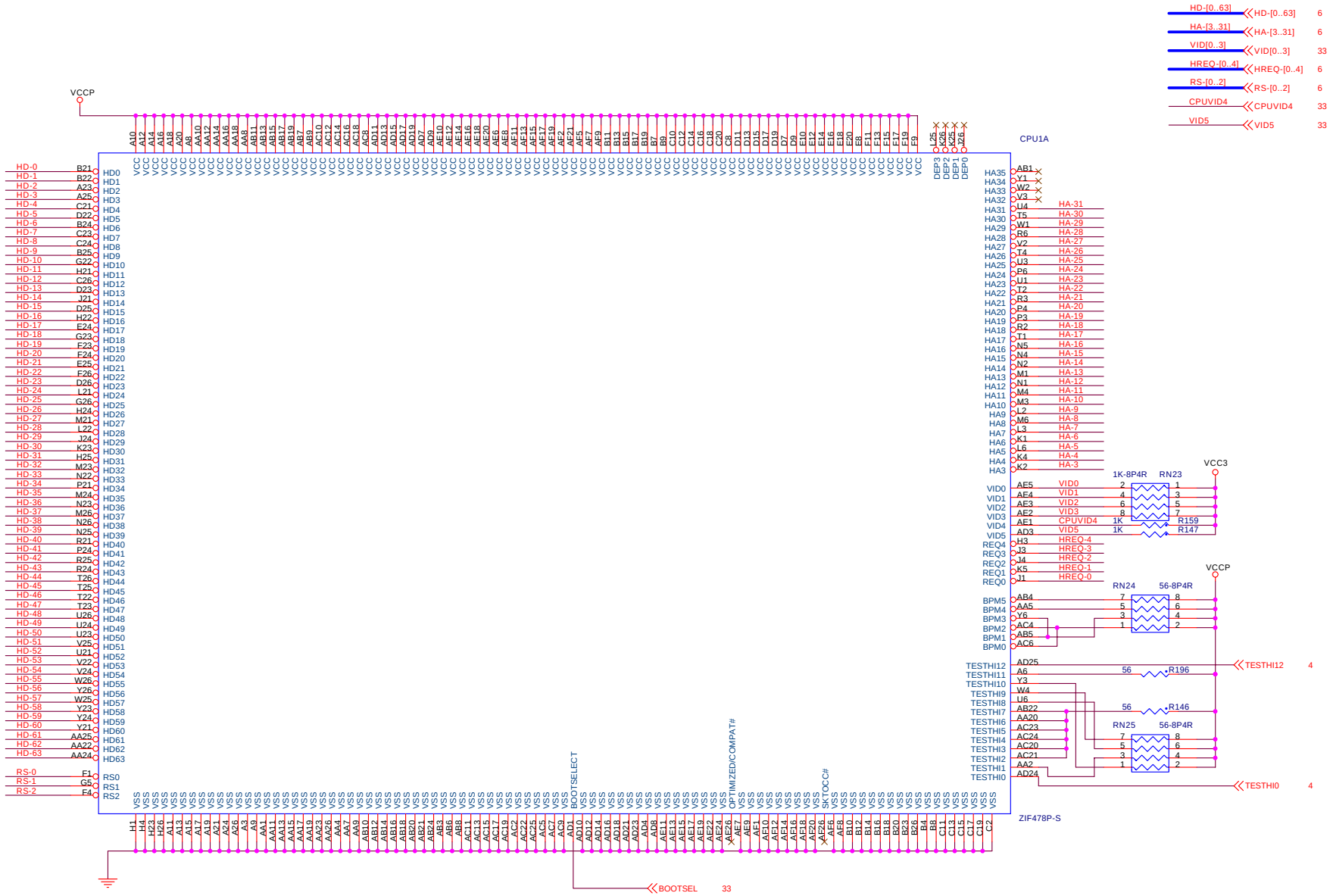

Elitegroup Computer Systems	
Title	SF1/648FX
Size: Custom	Document Number: Socket478-1
Rev	1.1
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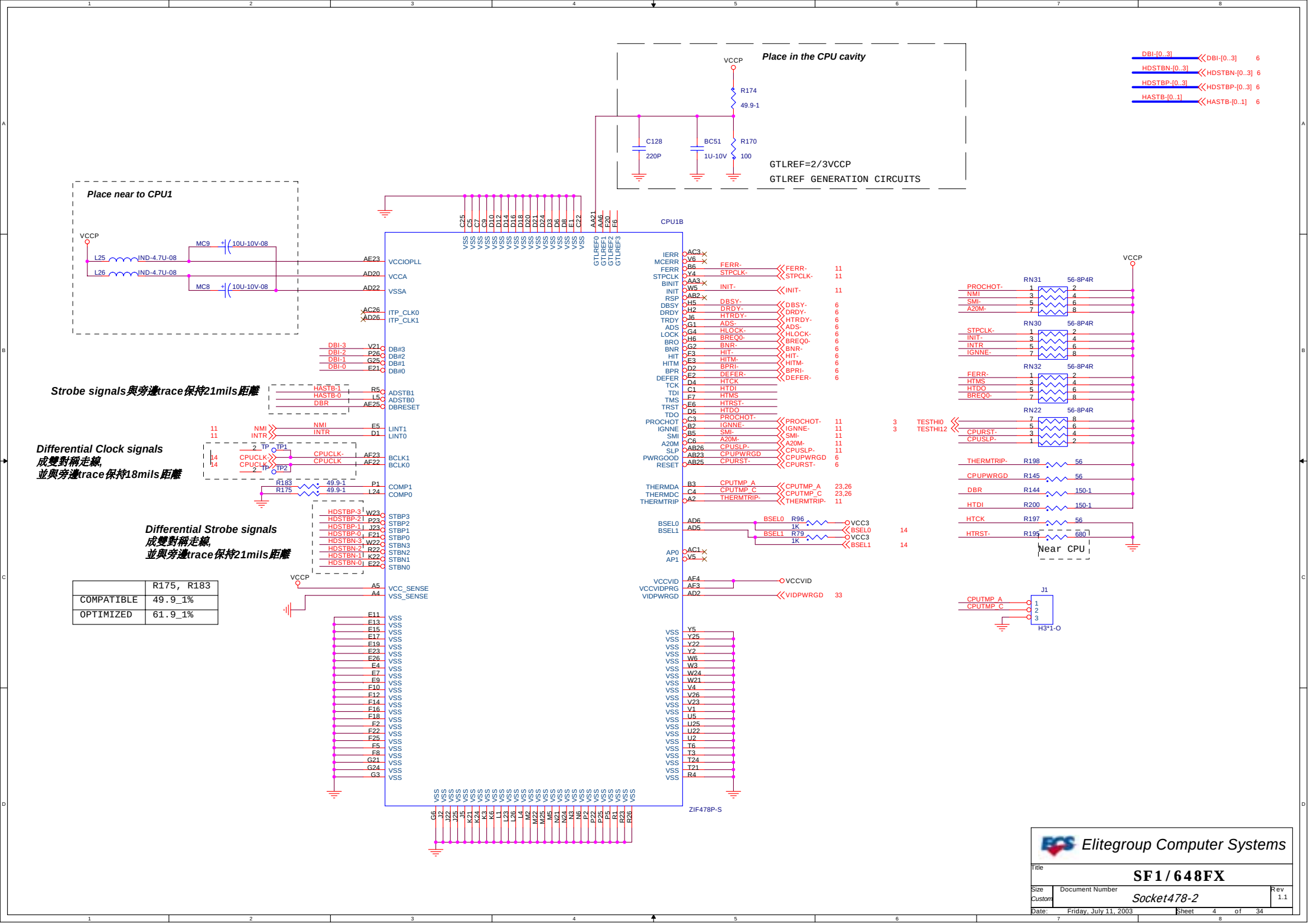

	R175, R183
COMPATIBLE	49.9_1%
OPTIMIZED	61.9_1%

Elitegroup Computer Systems

Title: SF1/648FX

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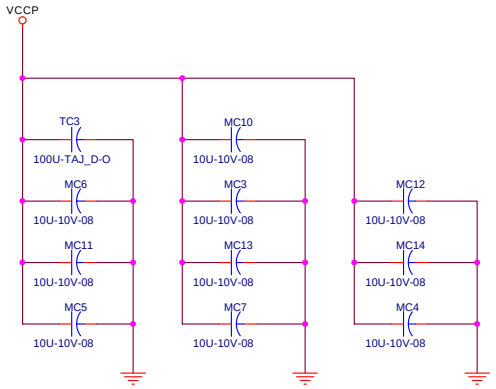
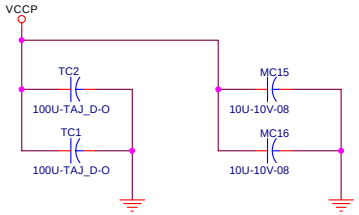
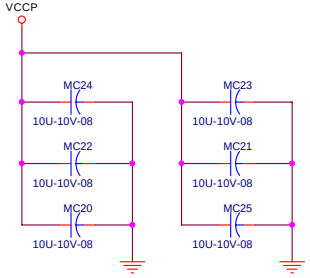
Put these capacitors at processor NORTH SIDE



Put these capacitors INSIDE PROCESSOR CAVITY

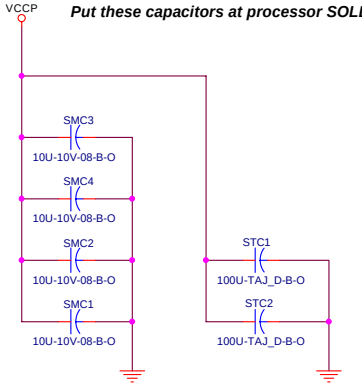


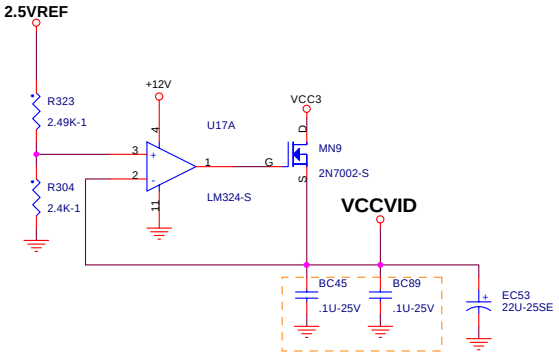
Put these capacitors at processor SOUTH SIDE



P.S. Choose X7R/X5R components instead of Y5V for all 10uF_1206 capacitors on this page.

Put these capacitors at processor SOLDER SIDE





Elitegroup Computer Systems

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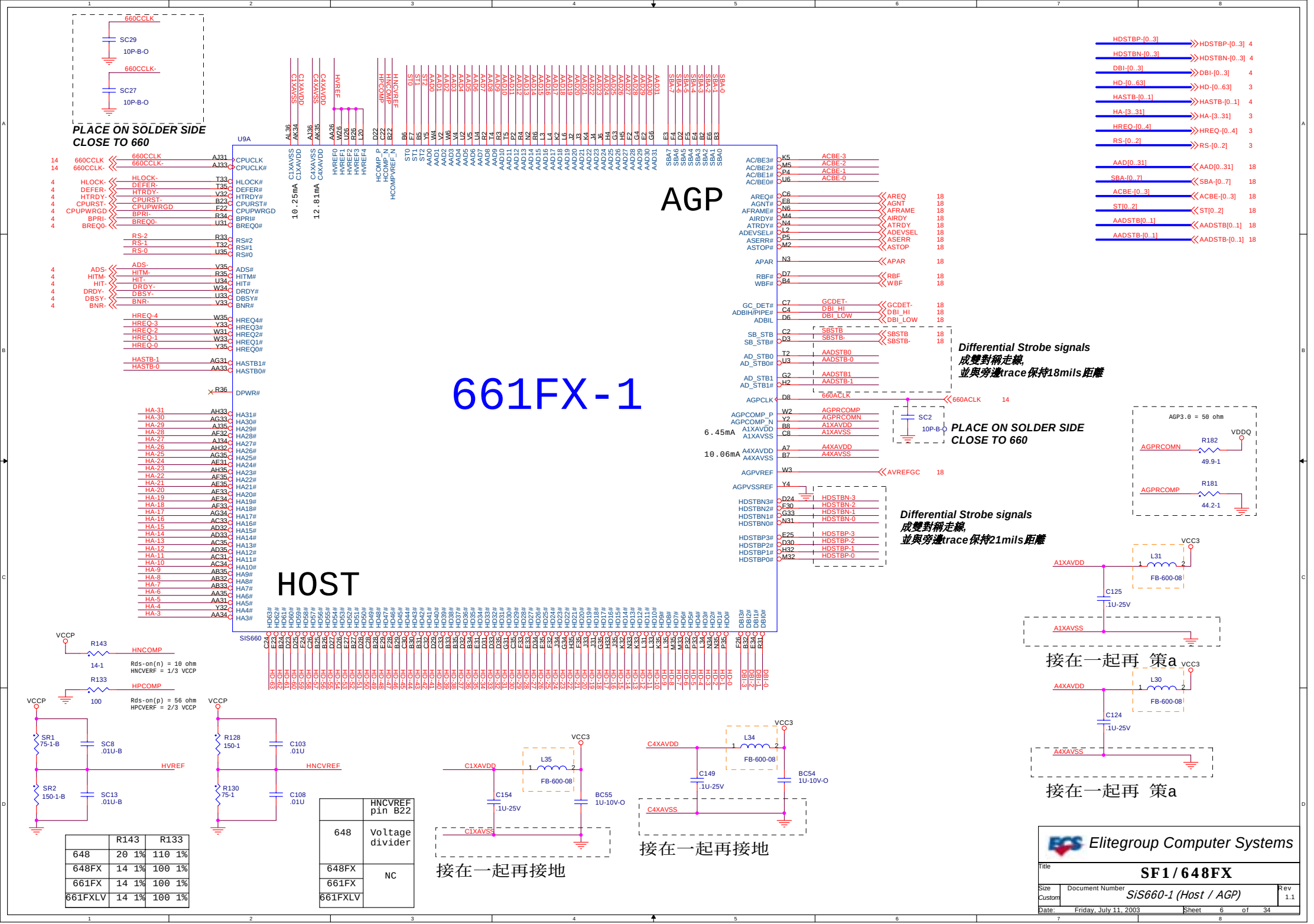

	R143	R133
648	20 1%	110 1%
648FX	14 1%	100 1%
661FX	14 1%	100 1%
661FXLV	14 1%	100 1%

	HNCVREF pin B22
648	Voltage divider
648FX	NC
661FX	
661FXLV	

Elitegroup Computer Systems

Title: SF1/648FX

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DMD[0..63] DMD[0..63] 16,17
DDQM[0..7] DDQM[0..7] 16,17
DDQS[0..7] DDQS[0..7] 16,17
DMA[0..14] DMA[0..14] 16,17
DCS-[0..3] DCS-[0..3] 16,17
CKE[0..3] CKE[0..3] 16

U9B

DMD0 AN35 MD0
DMD1 AP36 MD1
DMD2 AK33 MD2
DMD3 AM33 MD3
DMD4 AN34 MD4
DMD5 AK32 MD5
DMD6 AR34 MD6
DMD7 AN33 MD7
DDQM0 AR35 DQM0
DDQS0 AP34 DQS0/CSB0#
DMD8 AM32 MD8
DMD9 AL31 MD9
DMD10 AR31 MD10
DMD11 AL30 MD11
DMD12 AN32 MD12
DMD13 AR33 MD13
DMD14 AN31 MD14
DMD15 AM31 MD15
DDQM1 AR32 DQM1
DDQS1 AP32 DQS1/CSB1#
DMD16 AP30 MD16
DMD17 AR30 MD17
DMD18 AM29 MD18
DMD19 AL27 MD19
DMD20 AN30 MD20
DMD21 AN29 MD21
DMD22 AL28 MD22
DMD23 AN28 MD23
DDQM2 AL29 DQM2
DDQS2 AR29 DQS2/CSB2#
DMD24 AP26 MD24
DMD25 AN25 MD25
DMD26 AR24 MD26
DMD27 AL24 MD27
DMD28 AL25 MD28
DMD29 AR26 MD29
DMD30 AM25 MD30
DMD31 AN24 MD31
DDQM3 AP24 DQM3
DDQS3 AR25 DQS3/CSB3#
DMD32 AN21 MD32
DMD33 AP20 MD33
DMD34 AN20 MD34
DMD35 AL18 MD35
DMD36 AM21 MD36
DMD37 AR21 MD37
DMD38 AL19 MD38
DMD39 AM19 MD39
DDQM4 AL20 DQM4
DDQS4 AR20 DQS4/CSB4#
DMD40 AL15 MD40
DMD41 AL14 MD41
DMD42 AN15 MD42
DMD43 AR15 MD43
DMD44 AN16 MD44
DMD45 AM15 MD45
DMD46 AN14 MD46
DMD47 AL13 MD47
DDQM5 AP16 DQM5
DDQS5 AR16 DQS5/CSB5#
DMD48 AM13 MD48
DMD49 AL12 MD49
DMD50 AL11 MD50
DMD51 AR12 MD51
DMD52 AP14 MD52
DMD53 AR14 MD53
DMD54 AN13 MD54
DMD55 AP12 MD55
DDQM6 AN12 DQM6
DDQS6 AR13 DQS6/CSB6#
DMD56 AL10 MD56
DMD57 AR11 MD57
DMD58 AM9 MD58
DMD59 AR9 MD59
DMD60 AM11 MD60
DMD61 AN11 MD61
DMD62 AP10 MD62
DMD63 AN9 MD63
DDQM7 AN10 DQM7
DDQS7 AR10 DQS7/CSB7#

661FX-2

SIS660

MA0 AR23 DMA0
MA1 AN23 DMA1
MA2 AN22 DMA2
MA3 AM23 DMA3
MA4 AL23 DMA4
MA5 AL26 DMA5
MA6 AN26 DMA6
MA7 AN27 DMA7
MA8 AR27 DMA8
MA9 AR28 DMA9
MA10 AP22 DMA10
MA11 AN18 DMA11
MA12 AR22 DMA12
MA13 AP28 DMA13
MA14 AM27 DMA14
MA15 AT14

SRAS# AL17 DRAS- DRAS- 16,17
SCAS# AR19 DCAS- DCAS- 16,17
SWE# AN19 DWE- DWE- 16,17

CS0# AM17 DCS-0
CS1# AL16 DCS-1
CS2# AN17 DCS-2
CS3# AR17 DCS-3
CS4# AP18
CS5# AR18

CKE0 AP4 CKE0
CKE1 AT3 CKE1
CKE2 AR3 CKE2
CKE3 AP3 CKE3
CKE4 AR2
CKE5 AN4
S3AUXSW# AP2 S3AUXSW- S3AUXSW- 31

FWDSDCLKO AL21 FWDSDCLKO FWDSDCLKO 15
DRAMTEST AL22

10.15mA DLLAVDD AL35 DLLAVDD
DLLAVSS AL34 DLLAVSS

24.86mA DDRAVDD AM35 DDRAVDD
DDRAVSS AN36 DDRAVSS

DDRVREFB AF16 DDRVREFA
DDRVREFA AF23 DDRVREFB

TRAP2 AP1

DDRCOMP_P AR8 DDRCOMP
DDRCOMP_N AP8 DDRCOMN

SC33 10P-B

PLACE ON SOLDER SIDE CLOSE TO 660

VCC_DIMM
SC28 .01U-B
SR3 150-1-B
DDRVREFA
SC32 .01U-B
SR6 150-1-B

VCC_DIMM
SC31 .01U-B
SR4 150-1-B
DDRVREFB
SC30 .01U-B
SR5 150-1-B

VCC3
DLLAVDD
L40 FB-600-08
C161 .1U-25V
BC59 1U-10V-O
DLLAVSS

接在一起再接地

VCC3
DDRAVDD
L36 FB-600-08
C169 .1U-25V
BC64 1U-10V-O
DDRAVSS

接在一起再接地

VCC_DIMM
DDRCOMN
R212 40.2-1
DDRCOMP
R210 40.2-1

Elitegroup Computer Systems

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		Enable	Disable
RSYNC	VGA	1	0
LSYNC	panel link	1	0
CSYNC	VB	1	0

10 ZAD[0..16] ZAD[0..16]

660ZCLK SC26 10P-B-O

PLACE ON SOLDER SIDE CLOSE TO 660

REFCLK0 SC1 10P-B-O

PLACE ON SOLDER SIDE CLOSE TO 660

ZUREQ ZDREQ R194 680-O SR7 680-B-O

Differential Strobe signals
成雙對稱走線,
並與旁邊trace保持18mils距離

VCC1.8V R218 150-1 C171 .1U-25V ZVREF R220 49.9-1 C168 .1U-25V

U9C

HyperZip

661FX-3

SIS660

VGA

14	660ZCLK	660ZCLK	AL6	ZCLK	
10	ZUREQ	ZUREQ	AL4	ZUREQ	
10	ZDREQ	ZDREQ	AK5	ZDREQ	
10	ZSTB0	ZSTB0	AJ2	ZSTB0	
10	ZSTB-0	ZSTB-0	AJ3	ZSTB0#	
10	ZSTB1	ZSTB1	AE3	ZSTB1	
10	ZSTB-1	ZSTB-1	AE2	ZSTB1#	
		ZAD0	AH5	ZAD0	
		ZAD1	AK2	ZAD1	
		ZAD2	AJ4	ZAD2	
		ZAD3	AJ6	ZAD3	
		ZAD4	AH2	ZAD4	
		ZAD5	AH4	ZAD5	
		ZAD6	AG3	ZAD6	
		ZAD7	AG6	ZAD7	
		ZAD8	AF4	ZAD8	
		ZAD9	AG2	ZAD9	
		ZAD10	AF5	ZAD10	
		ZAD11	AG4	ZAD11	
		ZAD12	AD2	ZAD12	
		ZAD13	AE6	ZAD13	
		ZAD14	AE2	ZAD14	
		ZAD15	AE4	ZAD15	
		ZAD16	AL3	ZAD16	
		ZVREF	AK4	ZVREF	
		ZCMP_N	AD5	ZCOMP_N	
		ZCMP_P	AD4	ZCOMP_P	
		Z1XAVDD	AN1	Z1XAVDD	6.17mA
		Z1XAVSS	AM2	Z1XAVSS	
		Z4XAVDD	AL2	Z4XAVDD	19.45mA
		Z4XAVSS	AL1	Z4XAVSS	

	VOSCI	A15	REFCLK0	14	
	ROUT	B12	ROUT	21	
	GOUT	B13	GOUT	21	
	BOUT	A13	BOUT	21	
	HSYNC	A11	R148 33-O	HSYNC	21
	VSYNC	B11	R156 33-O	VSYNC	21
	VGPIO0	E13	R149 0-O	DDC1CLK	21
	VGPIO1	C11		DDC1DATA	21
	INT#A	C10		INT-A	10,18,19,20
	CSYNC	D12		CSYNC	18
	RSYNC	E12		RSYNC	18
	LSYNC	D11		LSYNC	18
	VCOMP	E15		VCOMP	
	VRSET	D15		VRSET	
	VVBWN	E14		VVBWN	
95.32mA	DACAVDD1	D13		DACAVDD	
	DACAVSS1	C12		DACAVSS	
7.39mA	DACAVDD2	D14		DACAVDD	
	DACAVSS2	C13		DACAVSS	
8.18mA	DCLKAVDD	B15		DCLKAVDD	
	DCLKAVSS	C15		DCLKAVSS	
8.43mA	ECLKAVDD	B14		ECLKAVDD	
	ECLKAVSS	C14		ECLKAVSS	

	PCIRST#	AN2			
	PWROK	AM4			
	AUXOK	AN3			
	TRAP1	F9			
	TRAP0	D10			
	TESTMODE2	C9			
	TESTMODE1	B9			
	TESTMODE0	B10			
	DLLEN#	E10			
	ENTEST	D9			
10	NBPCIRST-		NBPCIRST-		
34	NBPWRGD		NBPWRGD		
11,34	AUXOK		AUXOK		

VCC3 L39 FB-600-08 BC67 1U-10V-O C164 .1U-25V Z1XAVDD Z1XAVSS

接在一起再 策a

VCC3 L41 FB-600-08 C173 .1U-25V Z4XAVDD Z4XAVSS

接在一起再 策a

VCC1.8V L33 FB-600-08 C141 .1U-25V R185 56 ZCMP_N R184 56 ZCMP_P

接在一起再 策a

ENTEST R155 4.7K
NBPWRGD C174 .1U-25V
AUXOK C165 .1U-25V-O

VCC3 L29 FB-600-08-O C120 .1U-25V-O DCLKAVDD DCLKAVSS

接在一起再 策a

VCC3 L28 FB-600-08-O C119 .1U-25V-O ECLKAVDD ECLKAVSS

接在一起再 策a

VVBWN C121 .1U-25V-O VRSET
VCOMP C122 .1U-25V-O R150 130-1-O
VCC1.8V L27 FB-600-08-O
DACAVDD C113 .1U-25V-O BC47 1U-10V-O
DACAVSS

接在一起再 策a

Elitegroup Computer Systems

Title: SF1/648FX

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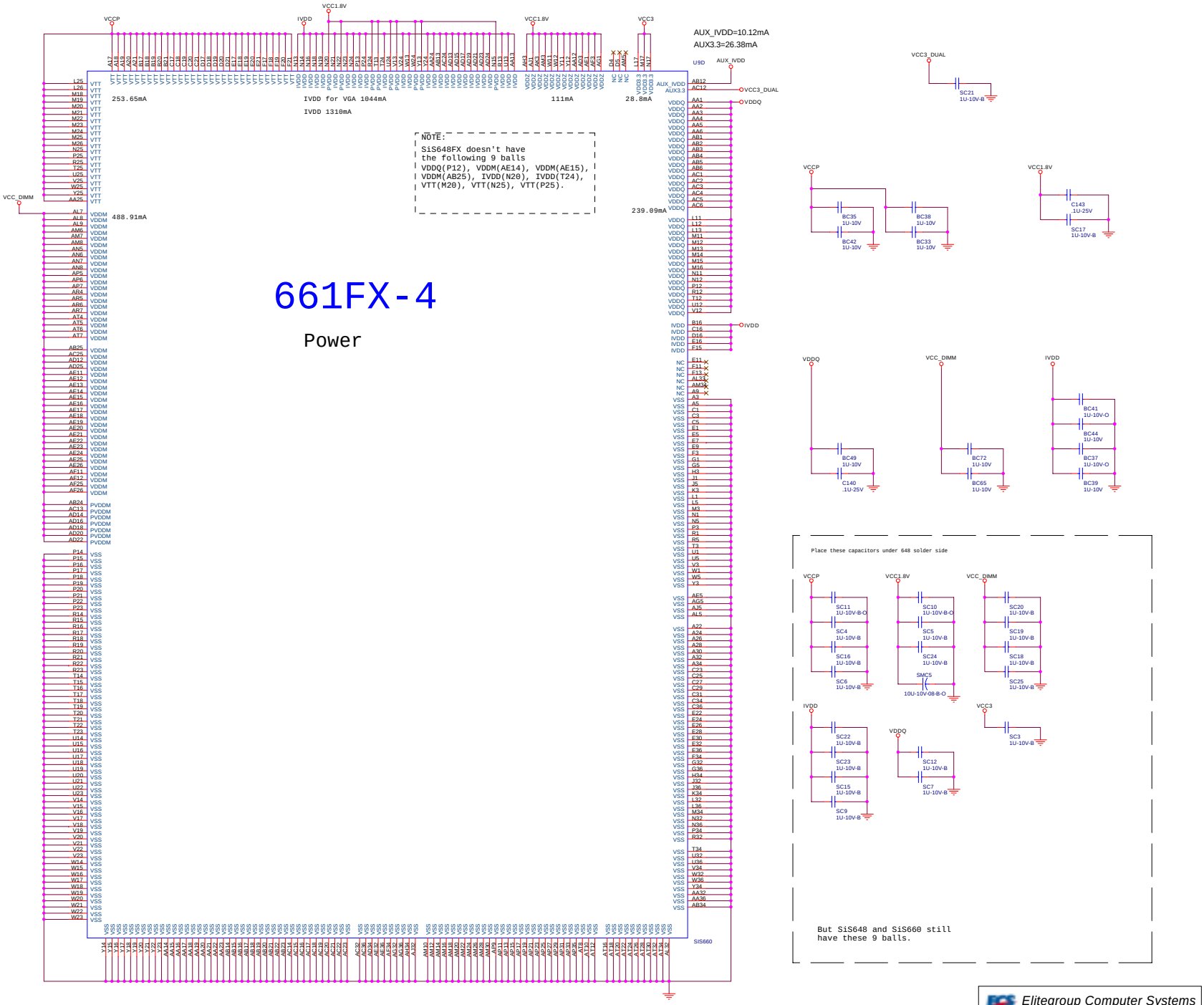

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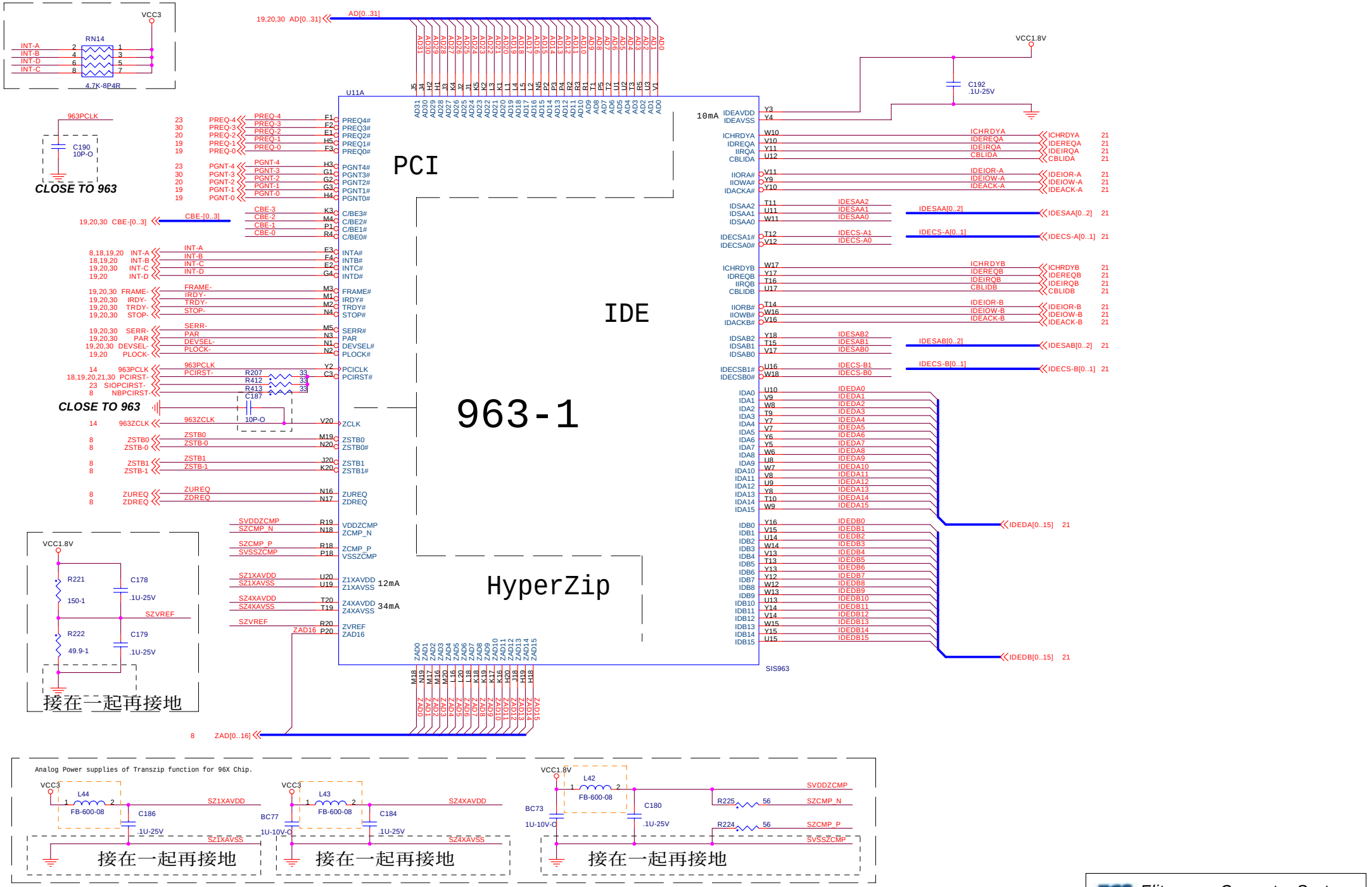
PCI
IDE
963-1
HyperZip
SIS963
U11A
RN14
4.7K-8P4R
VCC3
VCC1.8V
963PCLK
C190
10P-O
CLOSE TO 963
CBE-[0..3]
C187
C192
.1U-25V
R207
R412
R413
R221
150-1
R222
49.9-1
C178
C179
.1U-25V
SZVREF
接在一起再接地
Analog Power supplies of Transzip function for 96X Chip.
L44
L43
L42
FB-600-08
C186
C184
C180
BC77
BC73
1U-10V-O
SZ1XAVDD
SZ4XAVDD
SVDDZCMP
SZCMP_N
SZCMP_P
SVSSZCMP
SZ1XAVSS
SZ4XAVSS
Elitegroup Computer Systems
SF1/648FX
SiS963-1 (PCI / IDE)
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Rev 1.1

Programable on-die pull-high strength for CPU_S:
(Infinite, 150, 110, 56 Ohm)

U11B

CPU_S
APIC
LPC
MII
RTC
963-2
GPIO
AC97
ACPI /others
GPIO
KBC /geyserville

SIS963

INIT- A20M- SMI- INTR NMI IGNNE- FERR- STPCLK- CPUSLP-
INIT# A20M# SMI# INTR NMI IGNNE# FERR# STPCLK# CPUSLP#

VCC3 R238 10K
PROCHOT- THERMTRIP- R330 GPOFF FB-120-06
APICCK/LDTREQ# APICD0/THERM2# APICD1/GPIOFF#

LAD[0..3]
LAD0 LAD1 LAD2 LAD3

LFRAME- LDRQ- SIRQ
LFRAME# LDRQ# SIRQ

OSC32KHI OSC32KHO
BATOK SBPWRGD
BATOK PWROK
RTCVDD C175 .1U-25V
RTCVDD
RTCVSS

SMBDAT SMBCLK
GPIO20 GPIO19

SDATI0 SDATI1
AC_SDIN0 AC_SDIN1
SDATO SYNC
AC_SDOUT AC_SYNC
AC97_RST- BIT_CLK
AC_RESET# AC_BIT_CLK

REFCLK1
OSCI ENTEST SPK
SPKR
PWRBTN- PME- PSON-
PWRBTN# PME# PSON#
AUXOK ACPILED
AUXOK ACPILED
C155 .1U-25V-O

FLASH_EN-
GPIO13

GLED
GPIO14

KBDAT
GPIO15/KBDAT
KBCLK
GPIO16/KBCLK
PMDAT
GPIO17/PMDAT
PMCLK
GPIO18/PMCLK

OSC25MHI A8 MCLK25I
OSC25MHO A9 MCLK25O
TXCLK A6
TXEN B6
TXD0 E8
TXD1 D7
TXD2 C6
TXD3 B4
RXCLK A7
RXDV C7
RXER C8
RXD0 D8
RXD1 A5
RXD2 B5
RXD3 A4
COL B7
CRS E9
MDC C5
MDIO E7

1mA MIIAVDD B9 MIIAVDD
MIIAVSS B8 MIIAVSS

GPIO0 V2
GPIO1/LDRQ1# T8
GPIO2/THERM# T4 THERM- THERM- 23
GPIO3/EXTSMI# T6 EXTSMI- EXTSMI- 34
GPIO4/CLKRUN# W1
GPIO5/PREQ5# U5
GPIO6/PGNT5# U4
GPIO7 C4 S5SW- S5SW- 31
GPIO8/RING C14 RING RING 26
GPIO9/AC_SDIN2 E6 WOL WOL 26
GPIO10/AC_SDIN3 B3 DDRVJ DDRVJ 32
GPIO11/OSC25M/STP_PCI# F5 GPIO11
GPIO12/CPUSTP# D4 CPUSTP- CPUSTP- 14

Put closed to 963
OSC32KHO
OSC32KHI
R213 10M
Y7 X-32.768K-CY
C167 15P
C170 22P

Place near to 96X
BIT_CLK
C188 10P-O

Put closed to 963
MCLK25I
C150 4.7K

SC PUT ON SOLDER SIDE
VCC3_DUAL
MIIAVDD
L37 FB-600-08
MIIAVSS
接在一起再 策a
Analog power of MII

VCC3_DUAL
PME- R203 4.7K

NEED NOT to place close to 963
VCC3
R186 4.7K
GPIO11
JPT3 H3*1-O
R189 1K

NEED NOT to place close to 963

NEED NOT to place close to 963
VCC3
SMBDAT SMBCLK CPUSTP-
RN29 4.7K-8P4R

S5SW-
R188 1K
MIIAVDD

	0	1
GPIO7	W 1394PHY	W/O 1394PHY
GPIO11	W/O S3	W S3

Elitegroup Computer Systems

Title: SF1/648FX

Size: Custom | Document Number: SIS963-2 (Misc. Signals) | Rev: 1.1

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EEDO	High	Low
1394	Enable	Disable

USBCLK48M
C191
10P-O

CLOSE TO 963

Differential signals
成雙 優脫姑u

U11C

USB

963-3

1394

SIS963

14	USBCLK48M	USBCLK48M	V4	USBCLK48M	
22	UV0+	UV0+	B18	UV0+	
22	UV0-	UV0-	C18	UV0-	
22	UV1+	UV1+	D18	UV1+	
22	UV1-	UV1-	D19	UV1-	
22	UV2+	UV2+	E14	UV2+	
22	UV2-	UV2-	D15	UV2-	
22	UV3+	UV3+	E18	UV3+	
22	UV3-	UV3-	F18	UV3-	
22	UV4+	UV4+	E16	UV4+	
22	UV4-	UV4-	E15	UV4-	
22	UV5+	UV5+	G18	UV5+	
22	UV5-	UV5-	G19	UV5-	
	OC0-	OC0-	G20	OC0#	
	OC1-	OC1-	G17	OC1#	
	OC2-	OC2-	J16	OC2#	
	OC3-	OC3-	H16	OC3#	
	OC4-	OC4-	H17	OC4#	
	OC5-	OC5-	G16	OC5#	
VCC3_DUAL		USBVDD	D16	USBVDD	330mA
		USBVDD	D17	USBVDD	
		USBVDD	E17	USBVDD	
		USBVDD	F17	USBVDD	
		USBVSS	F19	USBVSS	
		USBVSS	E19	USBVSS	
		USBVSS	B19	USBVSS	
		USBVSS	B17	USBVSS	
29	D0	D0	A12	D0	
29	D1	D1	B12	D1	
29	D2	D2	C12	D2	
29	D3	D3	D12	D3	
29	D4	D4	E12	D4	
29	D5	D5	A13	D5	
29	D6	D6	B13	D6	
29	D7	D7	C13	D7	
29	CTL0	CTL0	D11	CTL0	
29	CTL1	CTL1	C11	CTL1	

BC58 1U-10V-O
BC56 1U-10V
C148 .1U-25V

SCLK	E11	SCLK_1394	SCLK_1394	29	
LINKON	C19	LINKON	LINKON	29	
LREQ	A19	LREQ	LREQ	29	
LPS	A20	LPS	LPS	29	
GPIO21/EESK	F20	GPIO21			
GPIO22/EEDI	D20	GPIO22			
GPIO23/EEDO	E20	GPIO23			
GPIO24/EECS	C20	GPIO24			
OSC12MHI	B16	OSC12MHI			
OSC12MHO	A17	OSC12MHO			
USBREF	F16	USBREF			
48mA USBPVDD	A18	USBPVDD			
USBPVSS	C15	USBPVSS			
IVDD_AUX	C16	IVDD_AUX			
IVDD_AUX	C17	IVDD_AUX			
IPBRST#	B11				
TDFRAME	D10				
RDFRAME	A11				
IPB_RDCLK	E10				
IPB_TDCLK	D9				
IPB_OUT0/PLLENN	B10				
IPB_OUT1/ZCLKSEL	A10				
IPB_IN0	C10				
IPB_IN1	C9				
USBREFAVDD	B20	USBPVDD			

R206
402-1

VCC3_DUAL

EEPROM2
HT93LC46-S-O

GPIO24	1	CS	VCC 8
GPIO21	2	SK	NC 7
GPIO22	3	DI	NC 6
GPIO23	4	DO	GND 5

VCC3_DUAL
R219
4.7K
GPIO23
R217
4.7K-O

OSC12MHI
OSC12MHO
R192
10M
Y6
X12M
C152
15P
C145
10P

VCC3_DUAL
RN33
4.7K-8P4R
OC2-
OC3-
OC0-
OC1-
OC4-
OC5-

SB1.8V
IVDD_AUX
C163
1U-10V
接在一起再 策a

VCC3_DUAL
USBPVDD
L38
FB-600-08
BC62
1U-10V-O
C160
.1U-25V
USBPVSS
接在一起再 策a

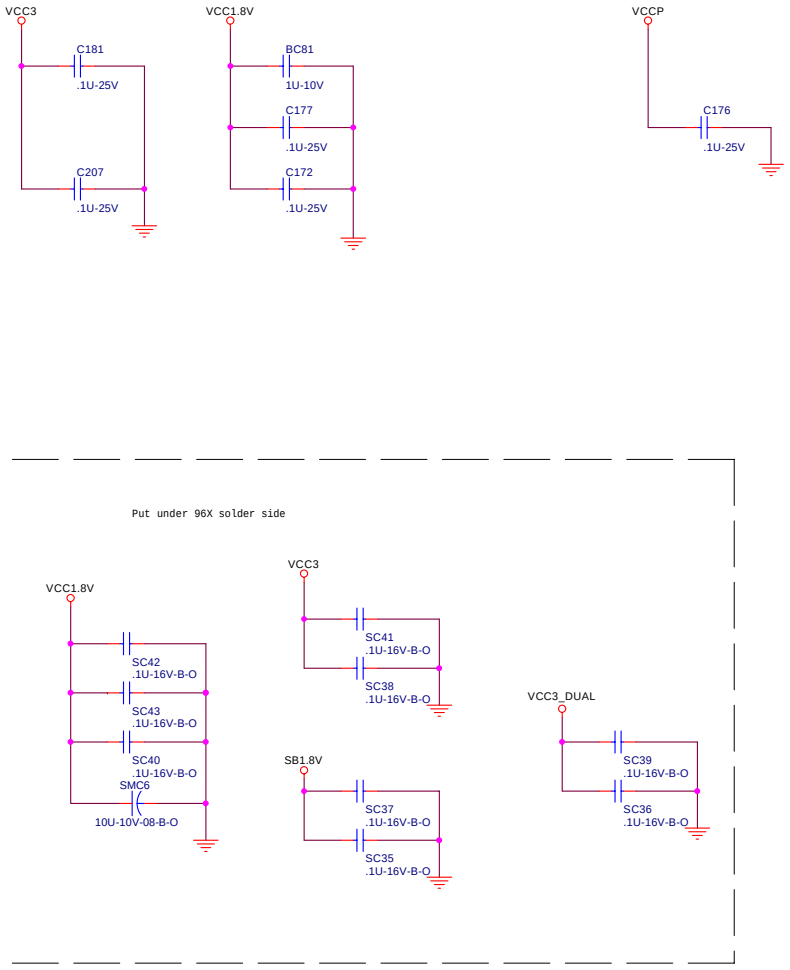
	0	1	Default	embedded pull-low (30~50K Ohm)
SPKR(LPC addr mapping)	disable	enable	R169 un-stuff	yes
SYNC(PCICLK PLL)	enable	disable	NONE	yes
OC2-(SB debug mode)	enable	disable	R171 un-stuff	NO
SDATO(Trap from)	PCI AD	ROM	R170 stuff	yes

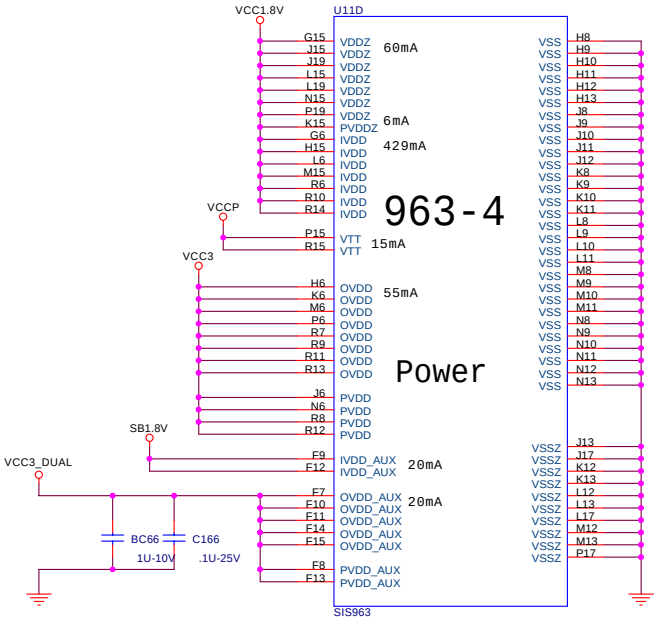
Elitegroup Computer Systems

Title: **SF1/648FX**

Size: Custom | Document Number: *SiS963-3 (USB)* | Rev: 1.1

Date: Friday, July 11, 2003 | Sheet 12 of 34

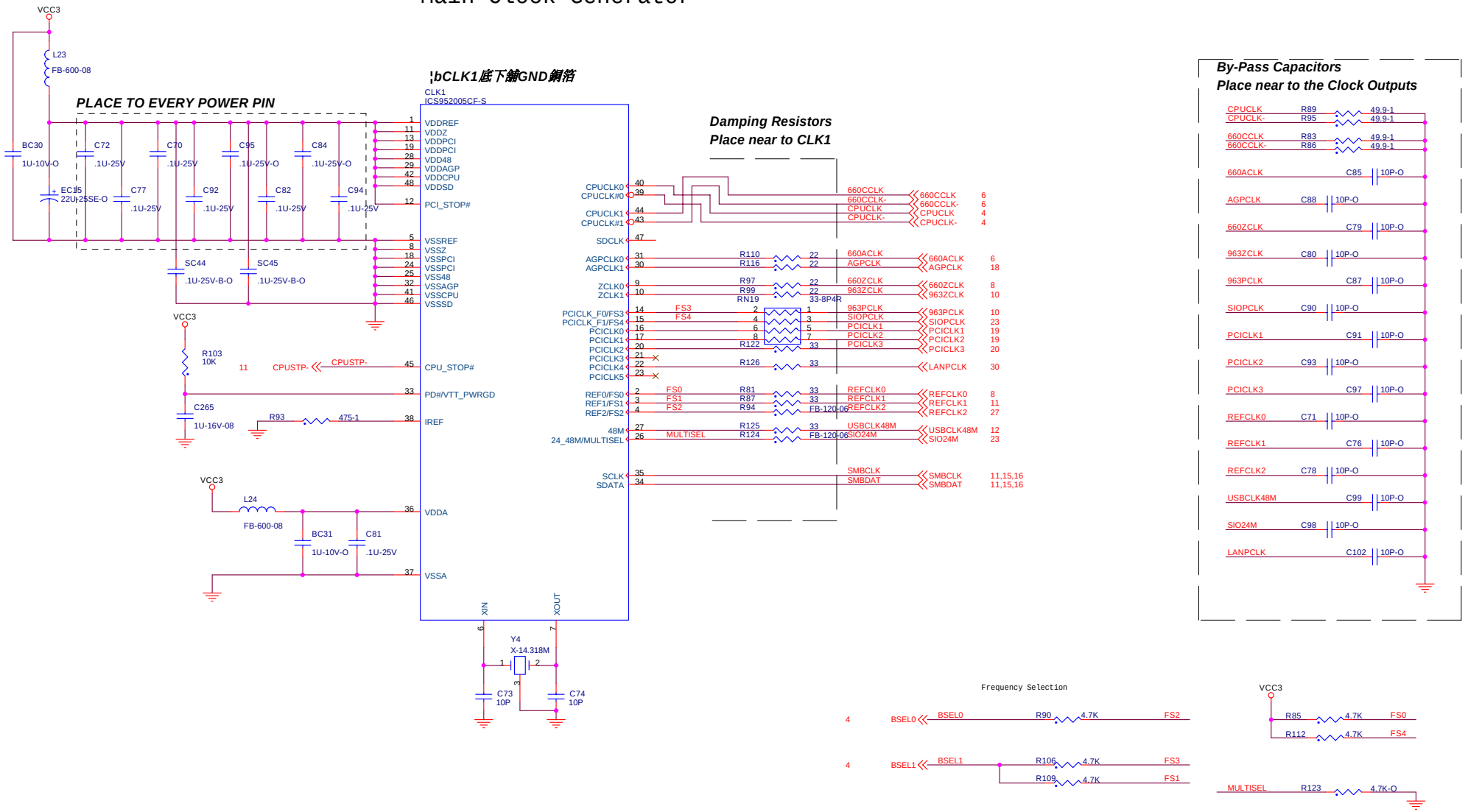




Elitegroup Computer Systems

Title	SF1/648FX	
Size: Custom	Document Number: SiS963-4 (Power)	Rev: 1.1
Date: Friday, July 11, 2003	Sheet 13 of 34	

Main Clock Generator



SIS660 CLOCK

FS4	FS3	FS2	FS1	FS0	CPU (MHz)	SDRAM (MHz)	AGPCLK (MHz)	PCICLK (MHz)	ZCLK (MHz)
0	0	0	0	0	100.20	100.20	66.80	33.40	80.16
0	0	0	0	1	100.20	133.60	66.80	33.40	80.16
0	0	0	1	0	100.20	200.40	66.80	33.40	80.16
0	0	0	1	1	100.20	167.00	66.80	33.40	80.16
0	0	1	0	0	133.60	100.20	66.80	33.40	80.16
0	0	1	0	1	133.60	133.60	66.80	33.40	80.16
0	0	1	1	0	133.60	200.40	66.80	33.40	80.16
0	0	1	1	1	133.60	167.00	66.80	33.40	80.16
0	1	1	0	0	200.50	100.03	66.68	33.34	80.02
0	1	1	0	1	200.50	133.37	66.68	33.34	80.02
0	1	1	1	0	200.50	200.50	66.68	33.34	80.02
0	1	1	1	1	200.50	160.04	66.68	33.34	80.02
0	1	0	0	0	166.70	100.03	66.68	33.40	80.16
0	1	0	0	1	166.70	133.36	66.80	33.40	80.16
0	1	0	1	0	160.04	200.50	66.68	33.34	80.02
0	1	0	1	1	166.70	166.70	66.68	33.34	80.02

SIS660 CLOCK

FS4	FS3	FS2	FS1	FS0	CPU (MHz)	SDRAM (MHz)	AGPCLK (MHz)	PCICLK (MHz)	ZCLK (MHz)
1	0	0	0	0	100.20	100.20	66.80	33.40	133.60
1	0	0	0	1	100.20	133.60	66.80	33.40	133.60
1	0	0	1	0	100.20	200.40	66.80	33.40	133.60
1	0	0	1	1	100.20	167.00	66.80	33.40	133.60
1	0	1	0	0	133.60	100.20	66.80	33.40	133.60
1	0	1	0	1	133.60	133.60	66.80	33.40	133.60
1	0	1	1	0	133.60	200.40	66.80	33.40	133.60
1	0	1	1	1	133.60	167.00	66.80	33.40	133.60
1	1	1	0	0	200.50	100.03	66.68	33.34	133.37
1	1	1	0	1	200.50	133.37	66.68	33.34	133.37
1	1	1	1	0	200.50	200.50	66.68	33.34	133.37
1	1	1	1	1	200.50	160.04	66.68	33.34	133.37
1	1	0	0	0	166.70	100.03	66.68	33.40	133.60
1	1	0	0	1	166.70	133.36	66.80	33.40	133.60
1	1	0	1	0	160.04	200.50	66.68	33.34	133.37
1	1	0	1	1	166.70	166.70	66.68	33.34	133.37

CPU=100 (BSEL=00), FS=10001--->100/133/133
CPU=133 (BSEL=01), FS=10101--->133/133/133
CPU=166 (BSEL=11), FS=11111--->166/166/133
CPU=200 (BSEL=10), FS=11011--->200/160/133

Elitegroup Computer Systems

Title: **SF1/648FX**

Size: Custom | Document Number: Main Clock | Rev: 1.1

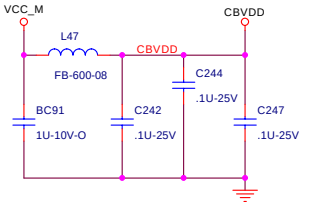
Date: Friday, July 11, 2003 | Sheet 14 of 34

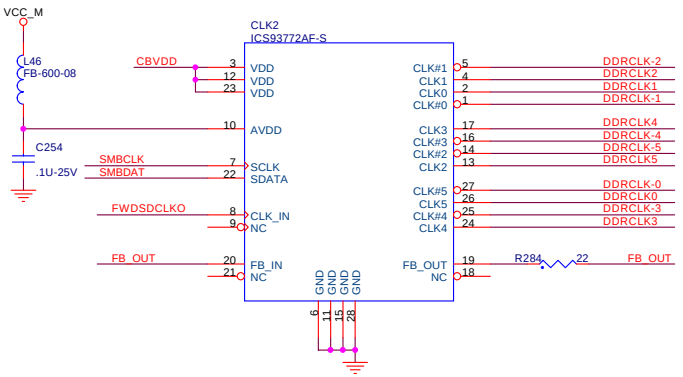
Change CLK2 footprint
Del BC90, R272, R273,
C255, C257, C239, C243,
C248, EC45

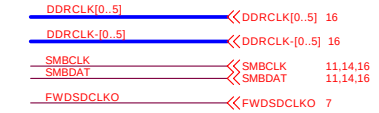
Clock Buffer (DDR)

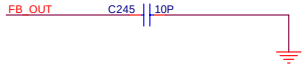
(5 OPTIONS)
1: (ICS) ICS93716
2: (Winbond)
3: (ICWorks)
4: (IMI)
5: (AMI)

By-Pass Capacitors
Place near to the Clock Buffer



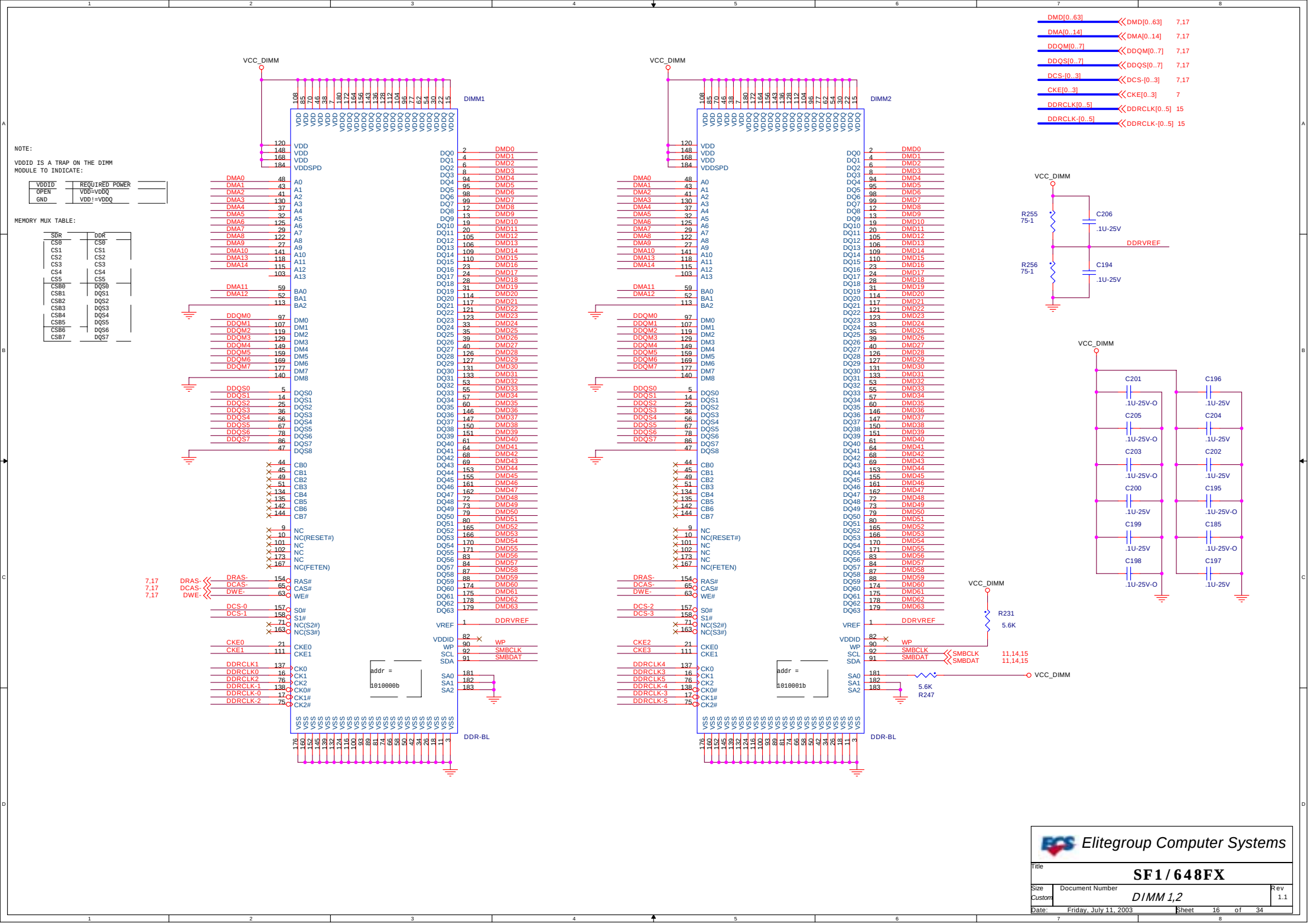






Elitegroup Computer Systems

Title	SF1/648FX	
Size: Custom	Document Number: Clock Buffer	Rev: 1.1
Date: Friday, July 11, 2003	Sheet 15 of 34	


NOTE:
VDDID IS A TRAP ON THE DIMM MODULE TO INDICATE:
VDDID | REQUIRED POWER
OPEN | VDD=VDDQ
GND | VDD!=VDDQ
MEMORY MUX TABLE:
SDR | DDR
CS0 | CS0
CS1 | CS1
CS2 | CS2
CS3 | CS3
CS4 | CS4
CS5 | CS5
CSB0 | DQS0
CSB1 | DQS1
CSB2 | DQS2
CSB3 | DQS3
CSB4 | DQS4
CSB5 | DQS5
CSB6 | DQS6
CSB7 | DQS7
VCC_DIMM
DIMM1
DIMM2
DDR-BL
addr = 1010000b
addr = 1010001b
DMD[0..63] DMD[0..63] 7,17
DMA[0..14] DMA[0..14] 7,17
DDQM[0..7] DDQM[0..7] 7,17
DDQS[0..7] DDQS[0..7] 7,17
DCS-[0..3] DCS-[0..3] 7,17
CKE[0..3] CKE[0..3] 7
DDRCLK[0..5] DDRCLK[0..5] 15
DDRCLK-[0..5] DDRCLK-[0..5] 15
R255 75-1
R256 75-1
C206 .1U-25V
C194 .1U-25V
DDRVREF
C201 .1U-25V-O
C205 .1U-25V-O
C203 .1U-25V-O
C200 .1U-25V
C199 .1U-25V
C198 .1U-25V-O
C196 .1U-25V
C204 .1U-25V
C202 .1U-25V
C195 .1U-25V-O
C185 .1U-25V-O
C197 .1U-25V
R231 5.6K
R247 5.6K
SMBCLK 11,14,15
SMBDAT 11,14,15
Elitegroup Computer Systems
Title SF1/648FX
Size Custom
Document Number DIMM 1,2
Rev 1.1
Date: Friday, July 11, 2003
Sheet 16 of 34

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		

DMD[0..63] — DMD[0..63] 7,16
DMA[0..14] — DMA[0..14] 7,16
DDQM[0..7] — DDQM[0..7] 7,16
DDQS[0..7] — DDQS[0..7] 7,16
DCS-[0..3] — DCS-[0..3] 7,16

DDR_VTT

RN35 56-8P4R: DMD1, DMD5, DMD0, DMD4
RN34 56-8P4R: DMD6, DMD2, DDQS0, DDQM0
RN47 56-8P4R: DMD9, DMD8, DMD3, DMD7
RN46 56-8P4R: DDQM1, DDQS1, DMD13, DMD12
RN45 56-8P4R: DMD11, DMD10, DMD15, DMD14
RN42 56-8P4R: DMA7, DMD22, DMD18, DMA9
RN44 56-8P4R: DMD17, DMA14, DMD16, DMD20
RN41 56-8P4R: DMA5, DMD19, DMD23, DMA8
RN38 56-8P4R: DMD26, DMD27, DMD30, DMA3
RN39 56-8P4R: DDQM3, DMA4, DDQS3, DMD25

RN57 56-8P4R: DMD34, DMD37, DDQS4, DMD33
RN56 56-8P4R: DMD39, DMA11, DMD38, DDQM4
7,16 DRAS- — RN55 56-8P4R: DRAS-, DMD44, DMD40, DMD35
RN51 56-8P4R: DMD42, DMD46, DDQS5, DDQM5
RN54 56-8P4R: DCS-0, DMD41, DMD45, DWE-
7,16 DWE-
RN50 56-8P4R: DMD52, DMD48, DMD47, DMD43
RN49 56-8P4R: DMD50, DDQS6, DMD54, DDQM6
RN53 56-8P4R: DMD56, DMD60, DMD51, DMD55
RN48 56-8P4R: DMD62, DDQM7, DMD57, DMD61
RN58 56-8P4R: DMD59, DMD63, DMD58, DDQS7
RN52 56-8P4R: DCS-3, DCS-1, DCS-2, DCAS-
7,16 DCAS-

DDR_VTT

RN37 56-8P4R: DMA0, DMA1, DMD31, DMA2
RN40 56-8P4R: DMD29, DMD28, DMA6, DMD24
RN36 56-8P4R: DMD36, DMD32, DMA12, DMA10
RN43 56-8P4R: DDQM2, DMA13, DMD21, DDQS2

DMD49 — R262 56
DMD53 — R261 56

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

DDR_VTT

C237 .1U-25V, C233 .1U-25V, C229 .1U-25V, C225 .1U-25V
C236 .1U-25V, C232 .1U-25V, C228 .1U-25V, C224 .1U-25V
C235 .1U-25V, C231 .1U-25V, C227 .1U-25V, C223 .1U-25V
C234 .1U-25V, C230 .1U-25V, C226 .1U-25V, C222 .1U-25V

Elitegroup Computer Systems

Title	SF1/648FX	
Size: Custom	Document Number: DDR Termination	Rev: 1.1
Date: Friday, July 11, 2003	Sheet 17 of 34	

NOTE: This AGP slot support both AGP3.0 display card and SiS301 video bridge card.

AGP1

AGP8X-ORANGE

	B		A
	B1	OVRCNT#	A1
	B2	5V	12V
	B3	5V	TYPEDET#
	B4	USB+	GC_DET#
	B5	GND	USB-
	B6	INTB#	GND
	B7	CLK	INTA#
	B8	REQ	RST#
	B9	VCC3.3	GNT
	B10	ST0	VCC3.3
	B11	ST2	ST1
	B12	RBF	MB_DET#
	B13	GND	DBI_HI
	B14	DBI_LO	GND
	B15	SBA0#	WBF
	B16	VCC3.3	SBA1#
	B17	SBA2#	VCC3.3
	B18	SB_STBF	SBA3#
	B19	GND	SB_STBS
	B20	SBA4#	GND
	B21	SBA6#	SBA5#
	B22	RSVD	SBA7#
	B23	GND	RSVD
	B24	3.3VAUX	GND
	B25	VCC3.3	RSVD(VBDET#)
	B26	AD31	VCC3.3
	B27	AD29	AD30
	B28	VCC3.3	AD28
	B29	AD27	VCC3.3
	B30	AD25	AD26
	B31	GND	AD24
	B32	AD_STBF1	GND
	B33	AD23	AD_STBS1
	B34	VDDQ	C#/BE3
	B35	AD21	VDDQ
	B36	AD19	AD22
	B37	GND	AD20
	B38	AD17	GND
	B39	C#/BE2	AD18
	B40	VDDQ	AD16
	B41	IRDY	VDDQ
	B42	KEY(3.3VAUX)	FRAME
	B43	KEY(GND)	KEY(RSYNC)
	B44	KEY(CSYNC)	KEY(GND)
	B45	KEY(VCC3.3)	KEY(LSYNC)
	B46	DEVSEL	KEY(VCC3.3)
	B47	VDDQ	TRDY
	B48	PERR	STOP
	B49	GND	PME#
	B50	SERR	GND
	B51	C#/BE1	PAR
	B52	VDDQ	AD15
	B53	AD14	VDDQ
	B54	AD12	AD13
	B55	GND	AD11
	B56	AD10	GND
	B57	AD8	AD9
	B58	VDDQ	C#/BE0
	B59	AD_STBF0	VDDQ
	B60	AD7	AD_STBS0
	B61	GND	AD6
	B62	AD5	GND
	B63	AD3	AD4
	B64	VDDQ	AD2
	B65	AD1	VDDQ
	B66	VREFCG	AD0
			VREFGC

10,19,20	INT-B	INT-B	
14	AGPCLK	AGPCLK	
6	AREQ	AREQ	
	ST0	ST0	
	ST2	ST2	
6	RBF	RBF	
6	DBI_LOW	DBI_LO	
	SBA-0	SBA0#	
	SBA-2	SBA2#	
6	SBSTB	SB_STBF	
	SBA-4	SBA4#	
	SBA-6	SBA6#	
	AAD31	AD31	
	AAD29	AD29	
	AAD27	AD27	
	AAD25	AD25	
	AADSTB1	AD_STBF1	
	AAD23	AD23	
	AAD21	AD21	
	AAD19	AD19	
	AAD17	AD17	
	ACBE-2	C#/BE2	
6	AIRDY	IRDY	
8	CSYNC	KEY(CSYNC)	
6	ADEVSEL	DEVSEL	
	APERR	PERR	
6	ASERR	SERR	
	ACBE-1	C#/BE1	
	AAD14	AD14	
	AAD12	AD12	
	AAD10	AD10	
	AAD8	AD8	
	AADSTB0	AD_STBF0	
	AAD7	AD7	
	AAD5	AD5	
	AAD3	AD3	
	AAD1	AD1	
	AVREFCG	VREFCG	

	GCDET-	GCDET-	6
	INT-A	INTA#	8,10,19,20
	PCIRST-	RST#	10,19,20,21,30
	AGNT	GNT	6
	ST1	ST1	
	DBI_HI	DBI_HI	6
	WBF	WBF	6
	SBA-1	SBA1#	
	SBA-3	SBA3#	
	SBSTB-	SB_STBS	6
	SBA-5	SBA5#	
	SBA-7	SBA7#	
	AAD30	AD30	
	AAD28	AD28	
	AAD26	AD26	
	AAD24	AD24	
	AADSTB-1	AD_STBS1	
	ACBE-3	C#/BE3	
	AAD22	AD22	
	AAD20	AD20	
	AAD18	AD18	
	AAD16	AD16	
	AFRAME	FRAME	
	AFRAME	KEY(RSYNC)	6
	RSYNC	KEY(GND)	8
	LSYNC	KEY(LSYNC)	8
	ATRDY	TRDY	6
	ASTOP	STOP	6
	PME-	PME#	11,19,20,23,30
	APAR	PAR	6
	AAD15	AD15	
	AAD13	AD13	
	AAD11	AD11	
	AAD9	AD9	
	ACBE-0	C#/BE0	
	AADSTB-0	AD_STBS0	
	AAD6	AD6	
	AAD4	AD4	
	AAD2	AD2	
	AAD0	AD0	
	AVREFGC	VREFGC	6

C139 .1U-25V

close to 660

AGP CONNECTOR DECOUPLING

put CAP close to AGP slot each POWER PIN

VCC: C58 .1U-25V; C75 .1U-25V

VCC3_DUAL: C106 .1U-25V; C131 .1U-25V-O

VCC3: EC27 1000U-10E-O

VCC3: C86 .1U-25V-O; C107 .1U-25V-O; C109 .1U-25V; BC52 1U-10V; BC46 1U-10V-O

VDDQ: C127 .1U-25V-O; C137 .1U-25V; C136 .1U-25V-O; BC48 1U-10V; BC53 1U-10V-O

Differential Strobe signals
成雙對稱走線,
並與旁邊trace保持18mils距離

6	SBA-[0..7]	SBA-[0..7]
6	ST[0..2]	ST[0..2]
6	ACBE-[0..3]	ACBE-[0..3]
6	AAD[0..31]	AAD[0..31]
6	AADSTB[0..1]	AADSTB[0..1]
6	AADSTB-[0..1]	AADSTB-[0..1]

GCDET-	Low	Hi
Graphic Card	AGP 3.0	AGP 2.0

VCC3 R88 10K

VCC R107 10K

GCDET- R92 4.7K

QN5 2N3904-S

VDDQ R121 150-1

R108 75

MN2 2N7002-S

R114 150-1

AVREFCG

C89 .1U-25V

VDDQ R120 5.6K

APERR

MN4 2N7002-S

R113 1K

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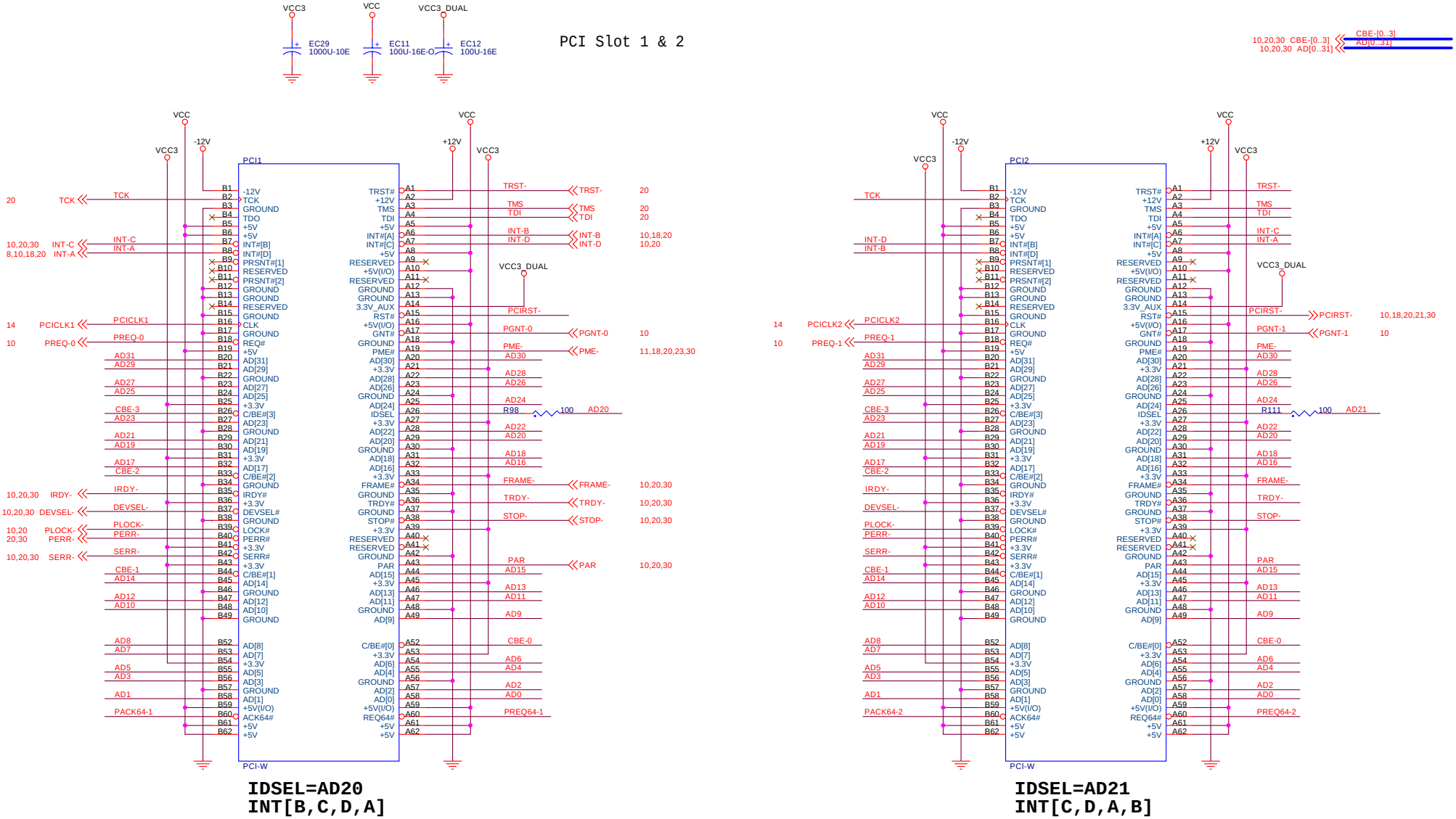
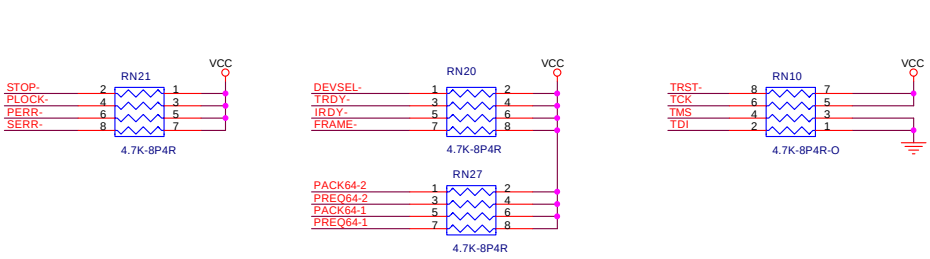
PCI Slot 1 & 2





Elitegroup Computer Systems

Title	SF1/648FX	
Size: Custom	Document Number: PCI 1,2	Rev: 1.1
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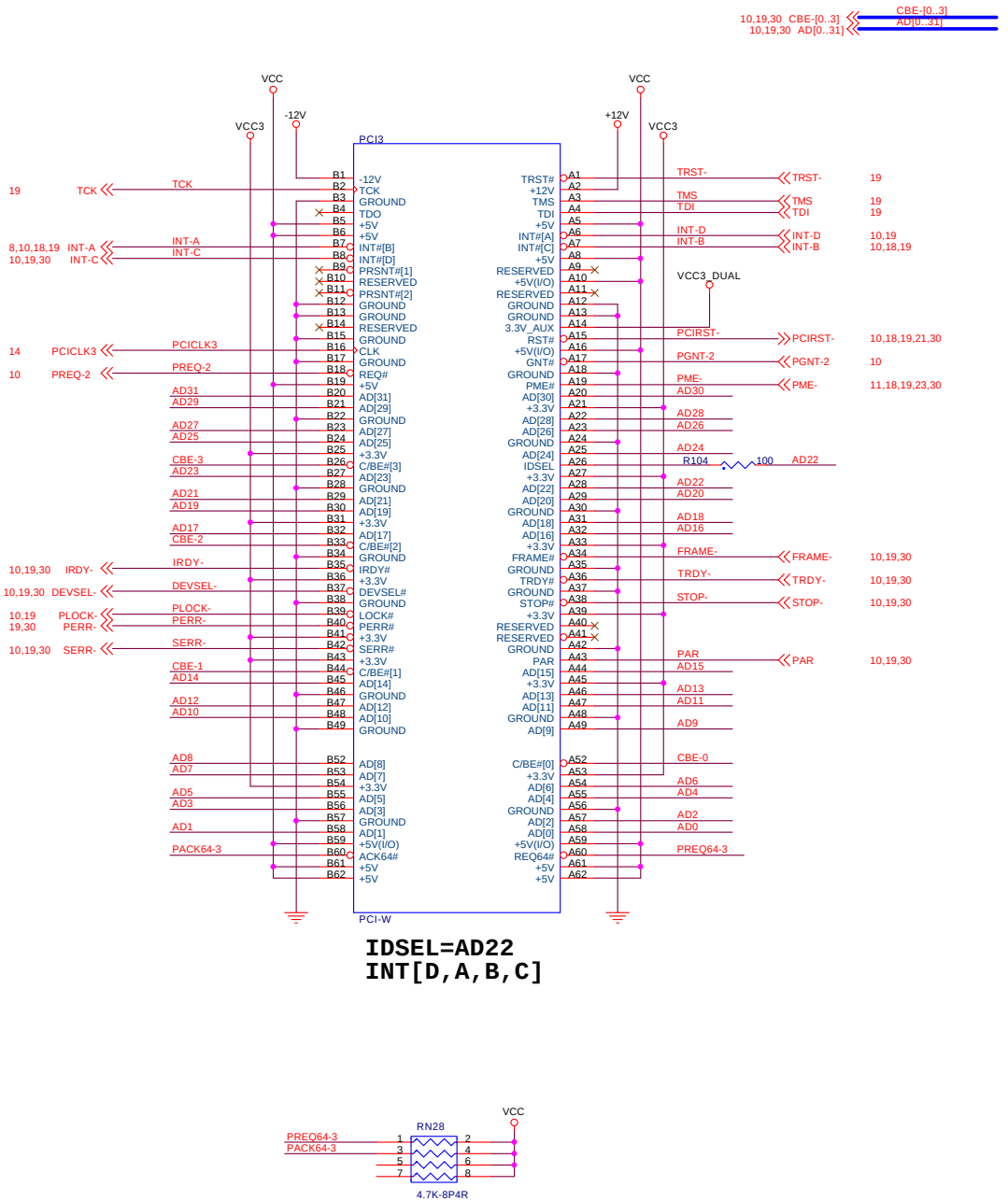

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Elitegroup Computer Systems

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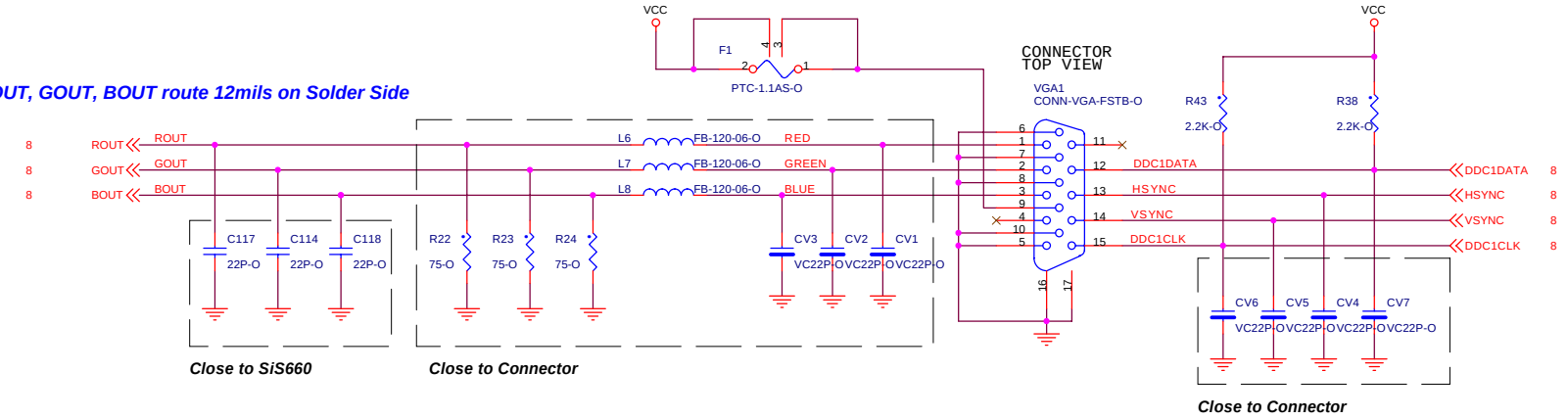
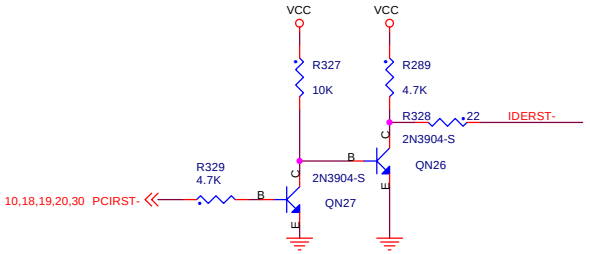
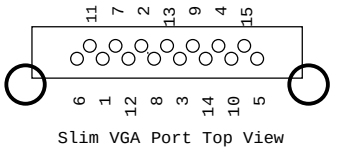
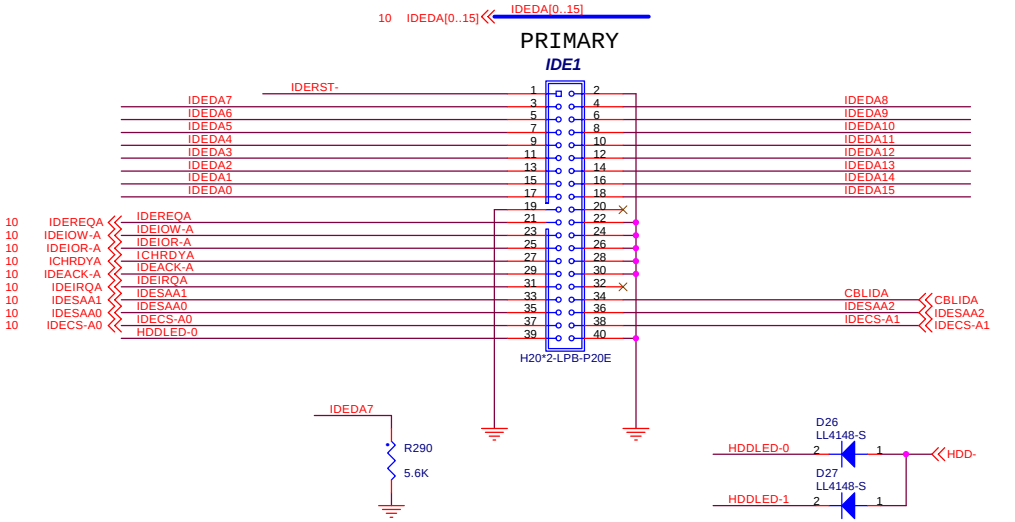
ROUT, GOUT, BOUT route 12mils on Solder Side

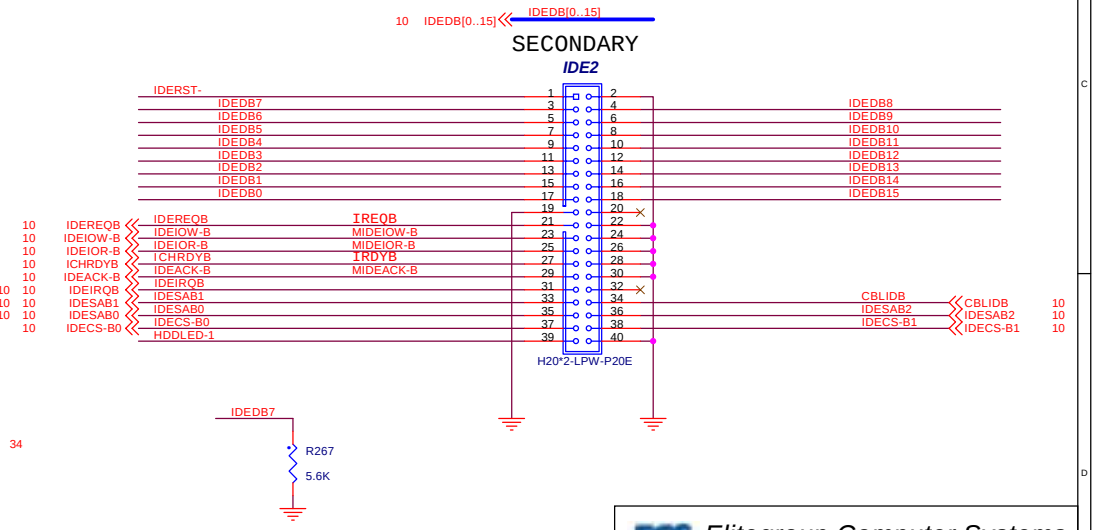






Slim VGA Port Top View





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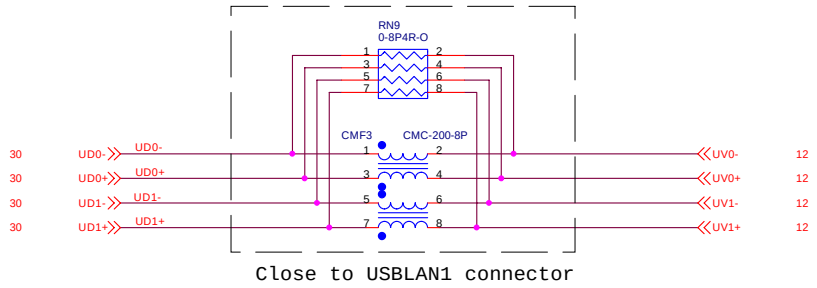

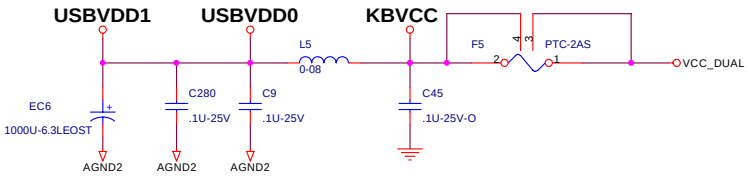

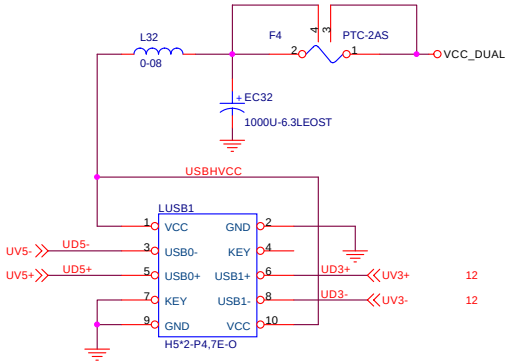

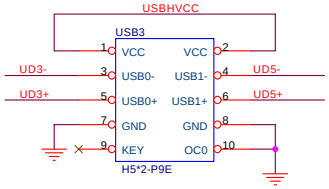

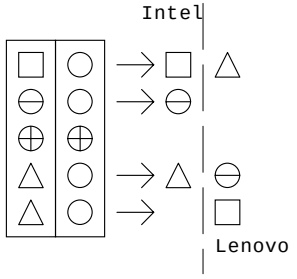

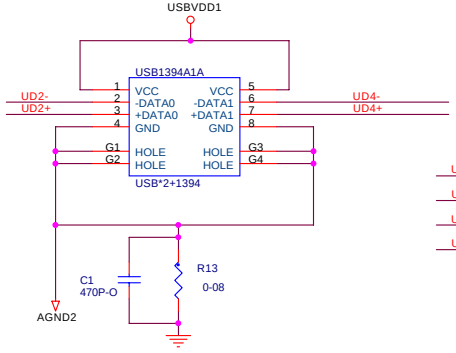

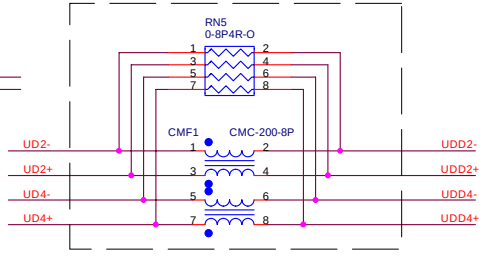

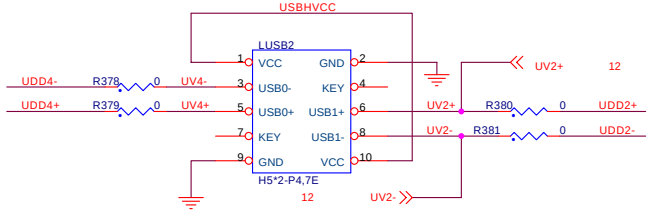

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Title	SF1/648FX	
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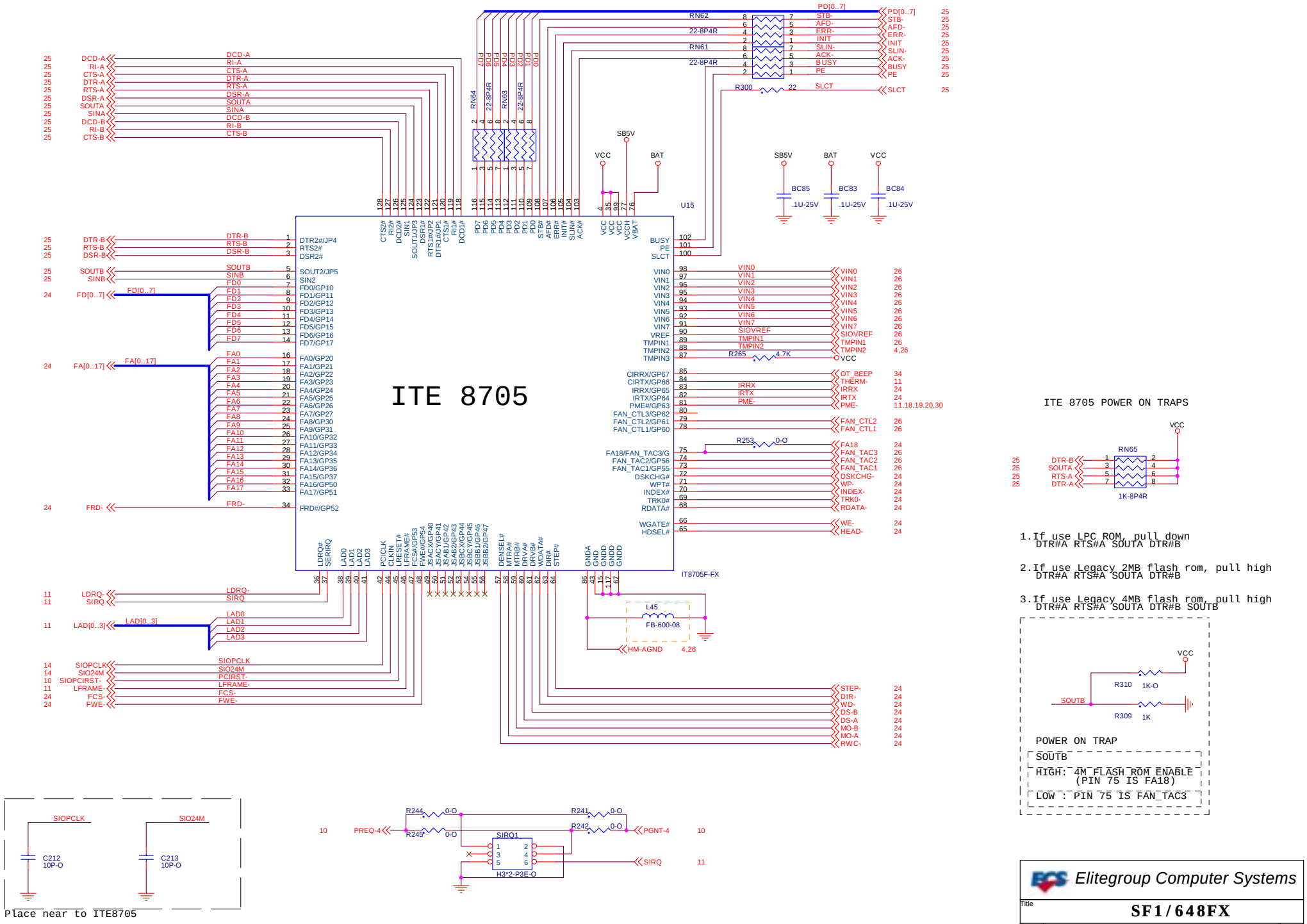

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Title	SF1/648FX		
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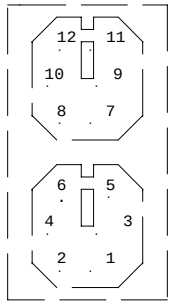
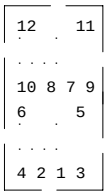
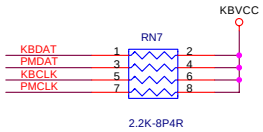
CONNECTOR VIEW

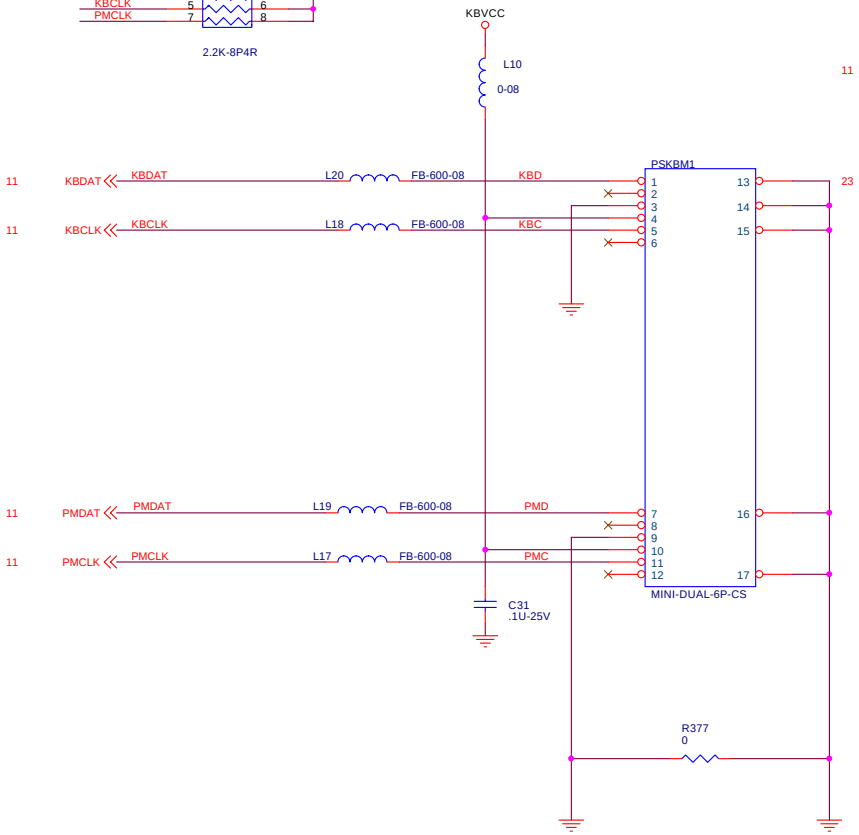


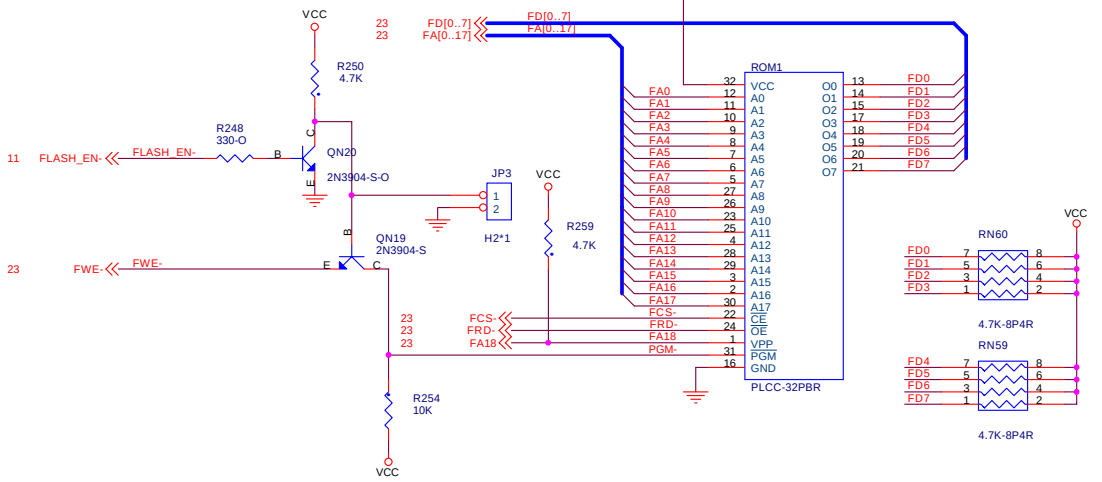
TOP VIEW



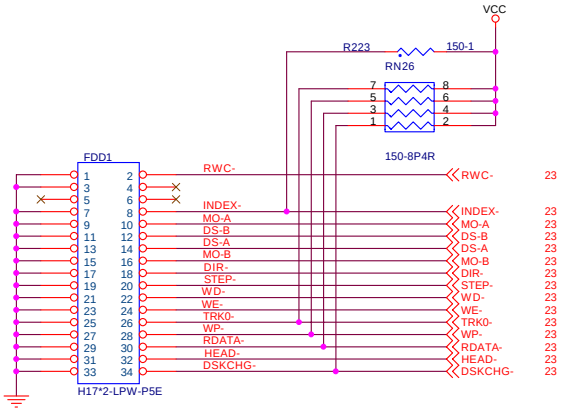
JP3	BIOS PROTECT
OPEN	DISABLE
SHORT	ENABLE





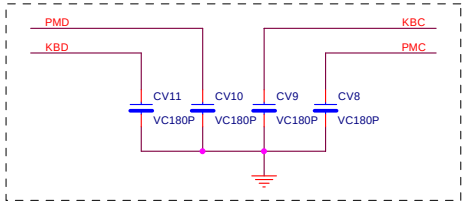


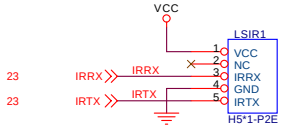
FDC



modify CP7--> CV8,CV9,CV10,CV11 by BA PCB

PLACE NEAR CONNECTOR





IR CONNECTOR

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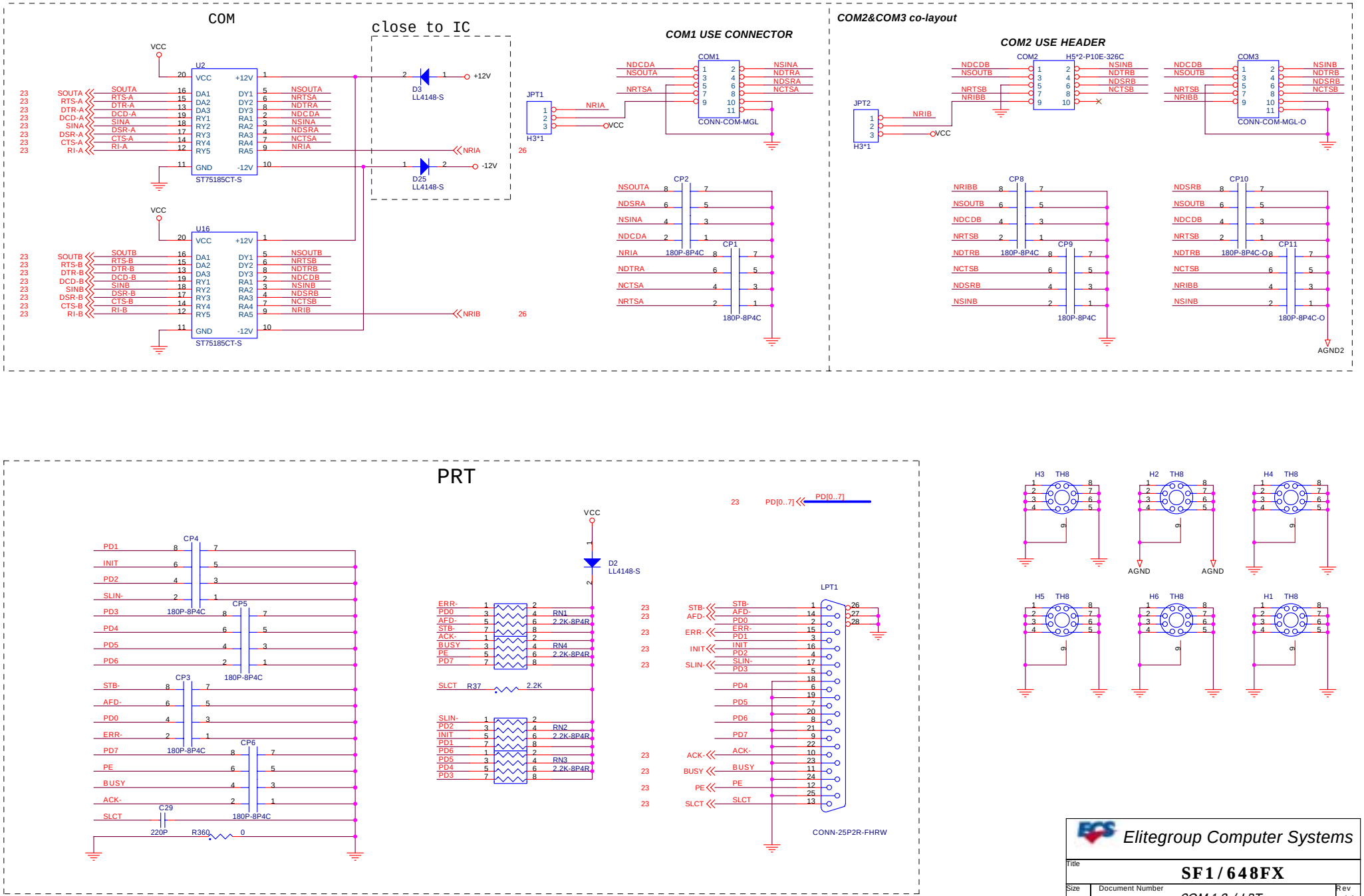

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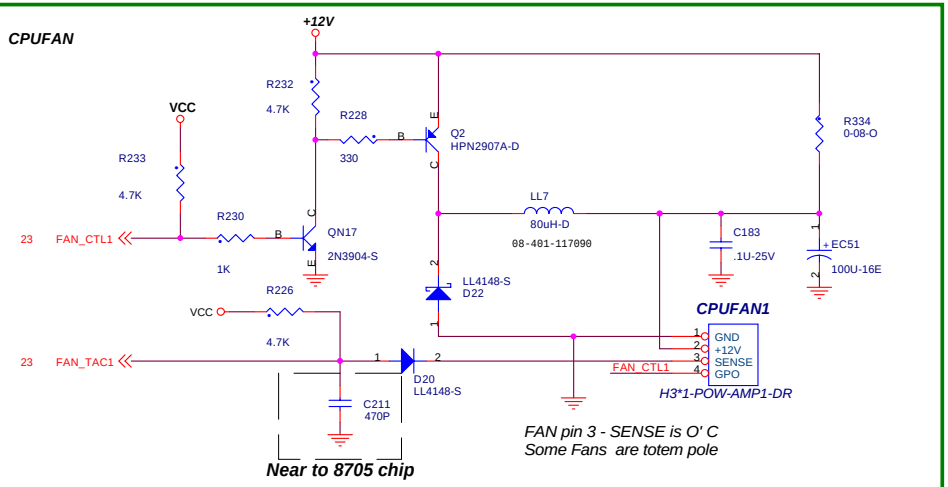
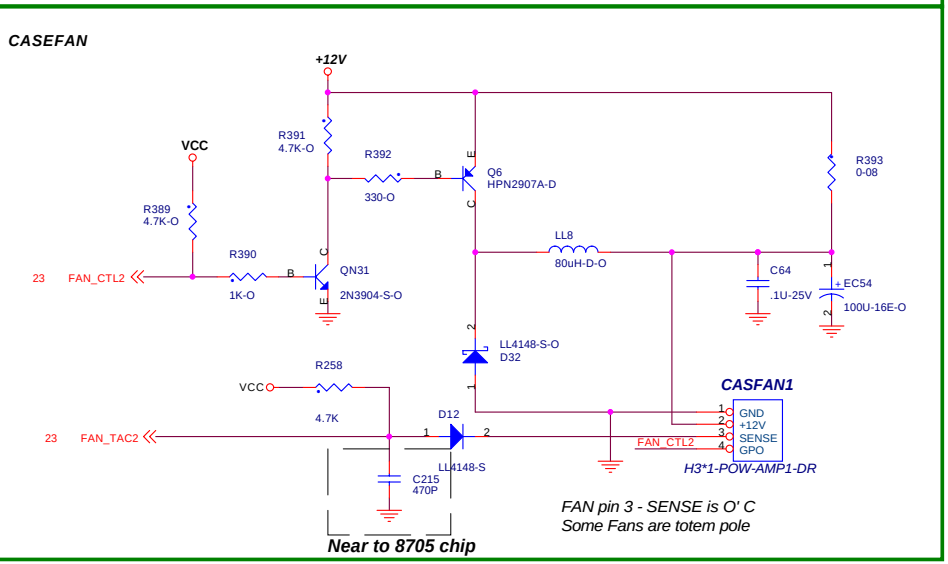
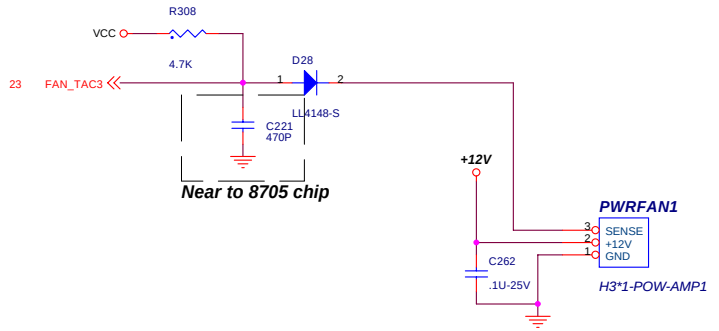
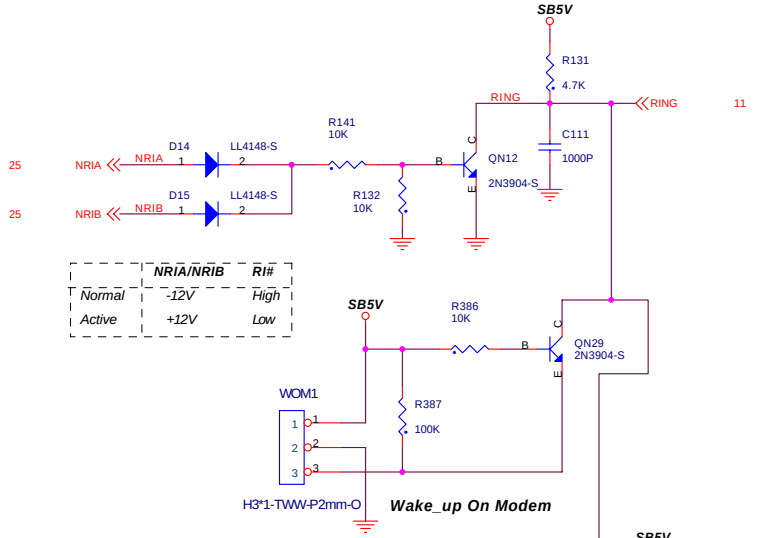
Layout :
Power Signals : CPUFAN, CASEFAN, PWRFAN trace width should > 20 mil with current 200 mA .



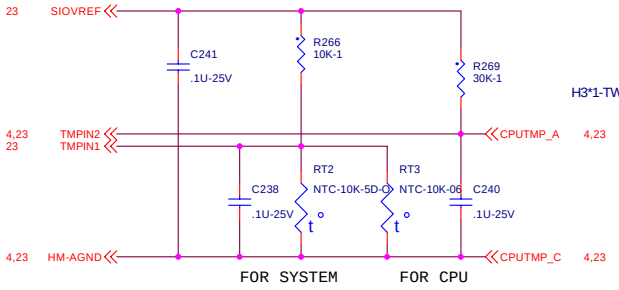


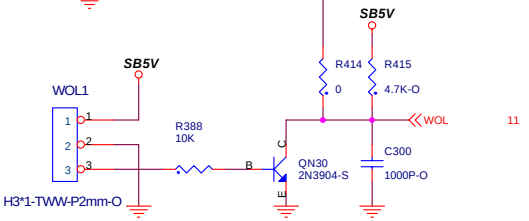




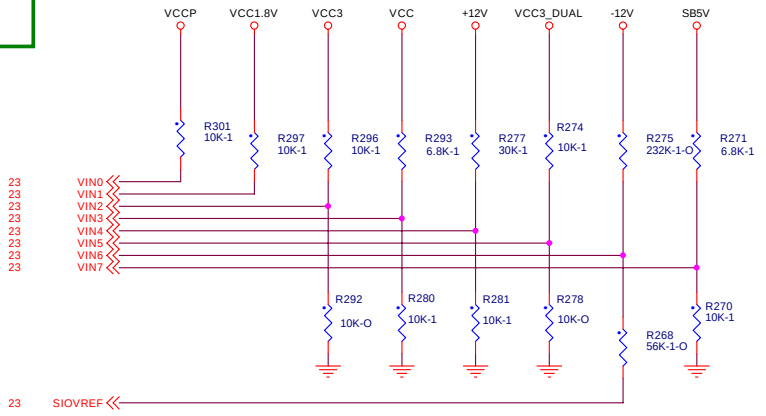
Temperature Monitor

Choosing method of measuring temperature by
either thermistor or diode





Voltage Monitor



Elitegroup Computer Systems

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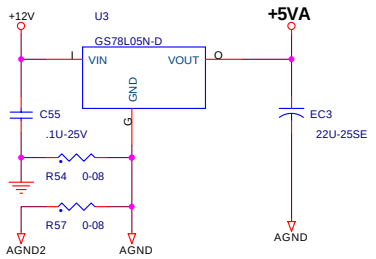
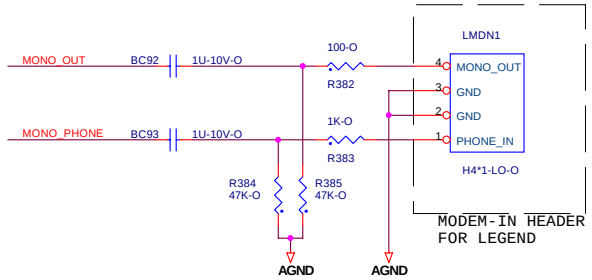
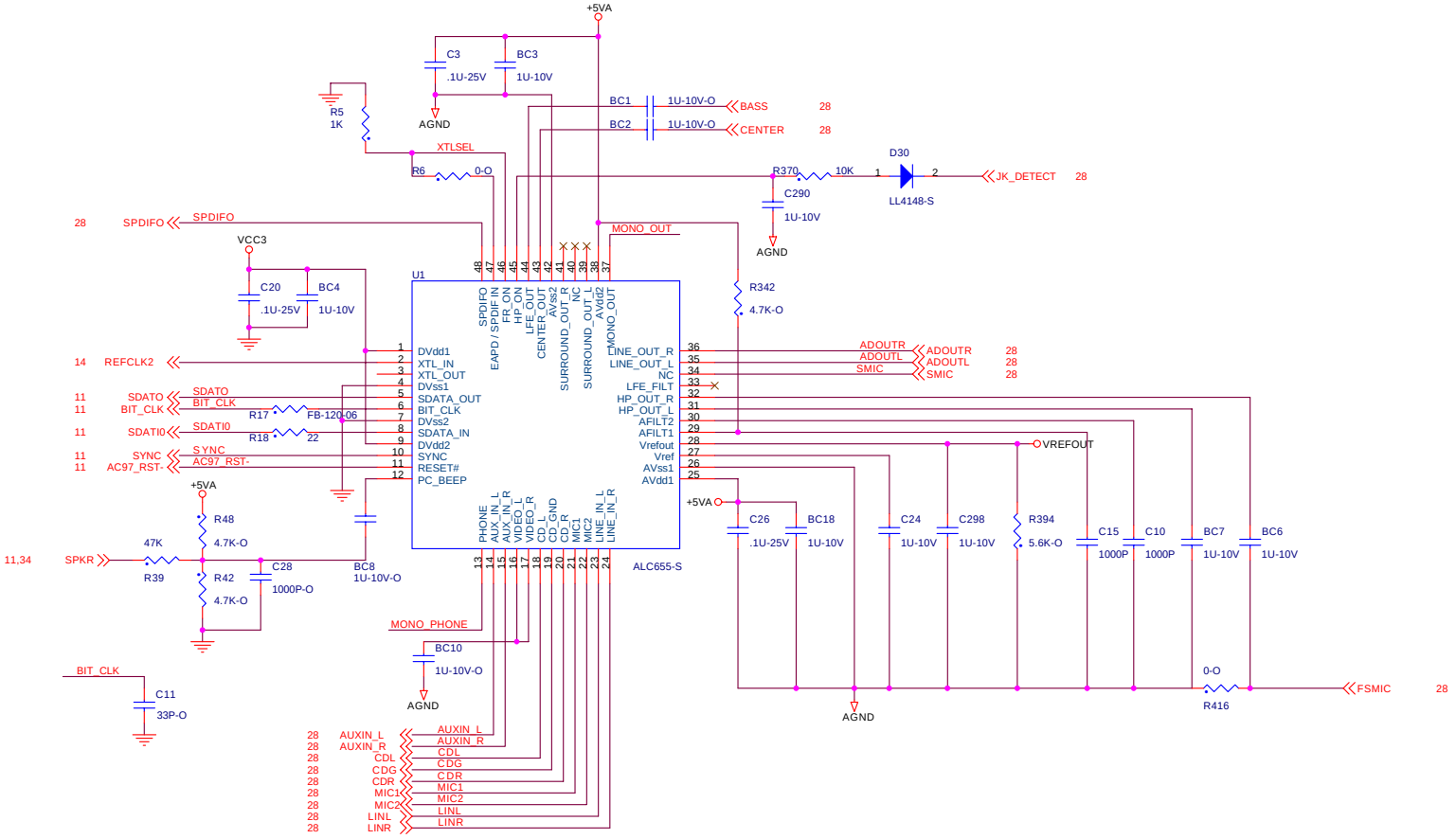
	R2	BC9	BC5	R26	BC9	BC20	R27	L2	BC6	BC7
CMI9738	0	Open	Open	Open	Open	Open	Open	Open	Open	Open
CMI9739A	Open	Open	Open	Open	Open	1U	3K	FB	Open	Open
CMI9760	Open	Open	1U	3K	Open	1U	3K	FB	Open	Open
ALC655	Open	1U	Open	3K	1U	Open	3K	FB	1U	1U







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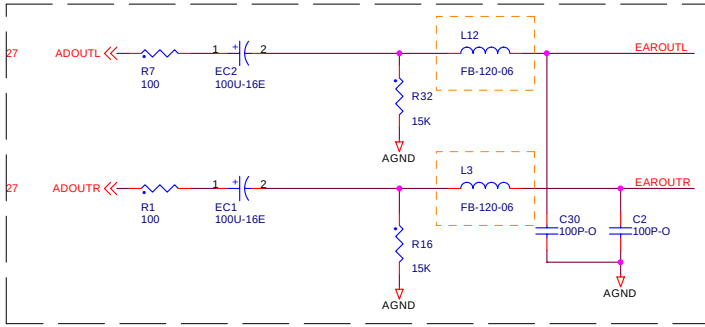
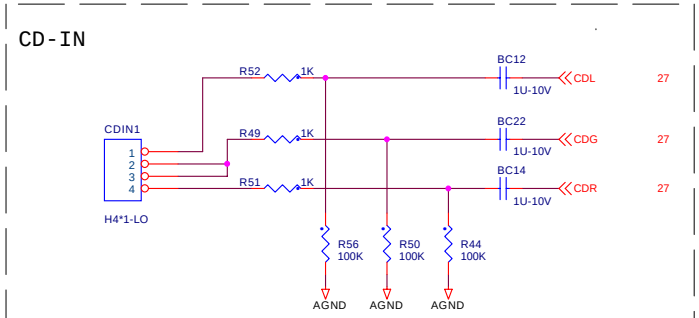
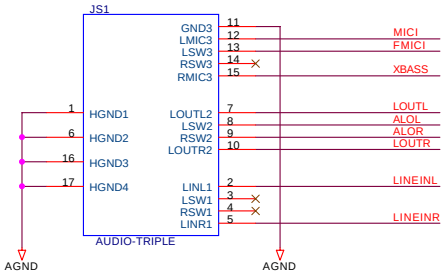
SPEAKER-OUT

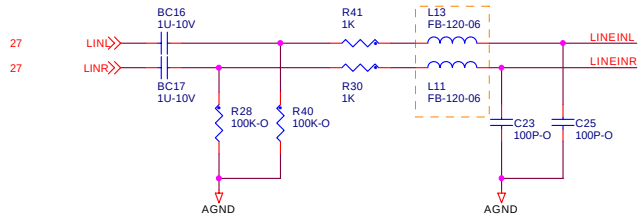


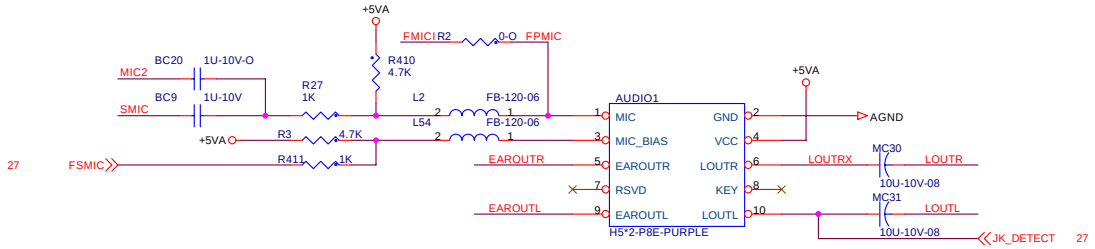
CD-IN



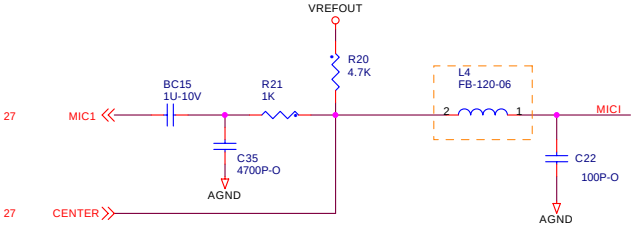


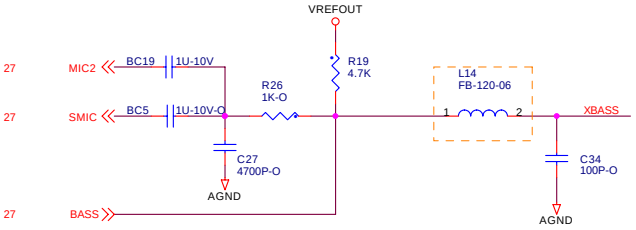
LINE-IN / SURROUND-OUT

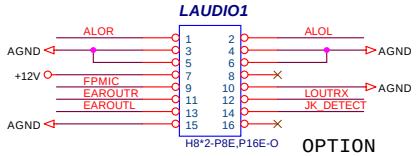




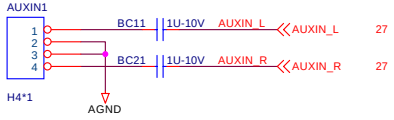
MIC-IN / CENTER-BASS OUT





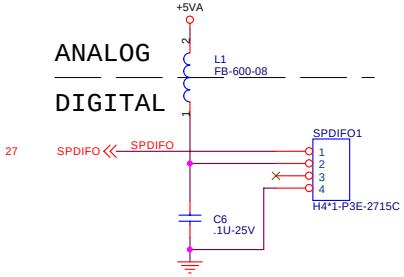


OPTION



ANALOG

DIGITAL



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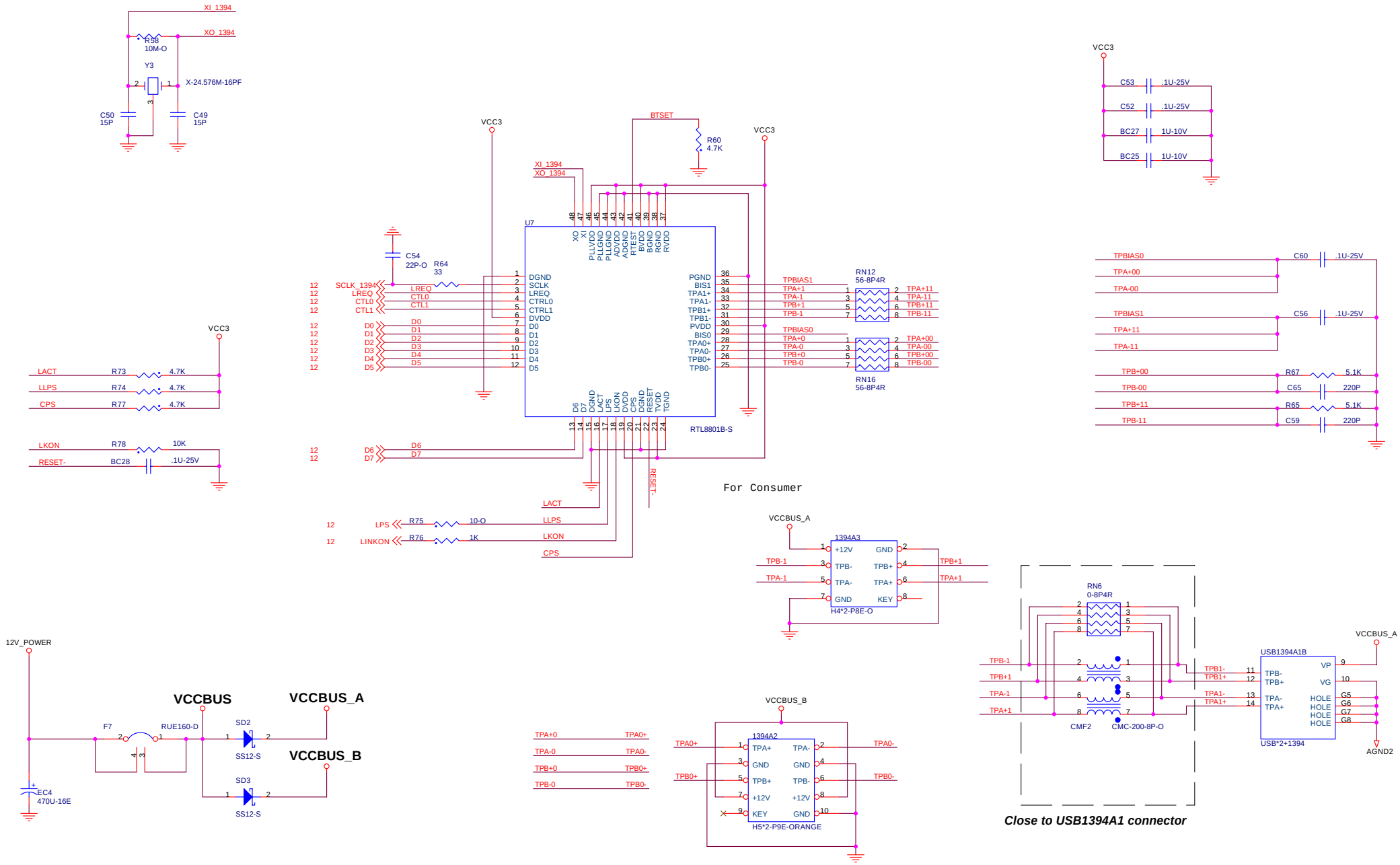

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R25 value should be 5.6K at RTL8100C application, and use 2.49K for RTL8110S-32 application.

At RTL8100C application, use Pulse H1267. At RTL8110S-32application use Pulse H5007.

At RTL8100C application, remove R23, R24, R25, R26, C11, C12, C6, C7, C10, and change C9 value from .01uF to .1uF.

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

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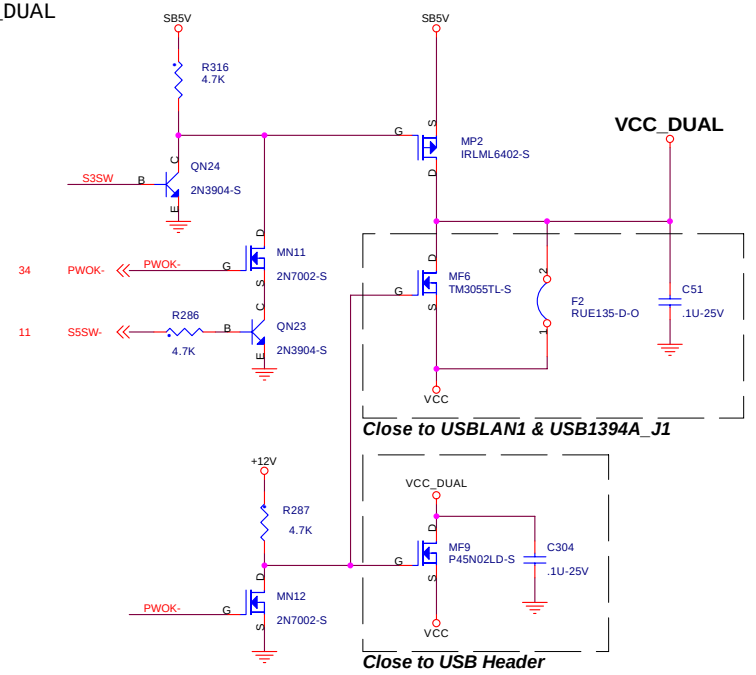
AUTO VOLTAGE SWITCH FOR ACPI STATE 3

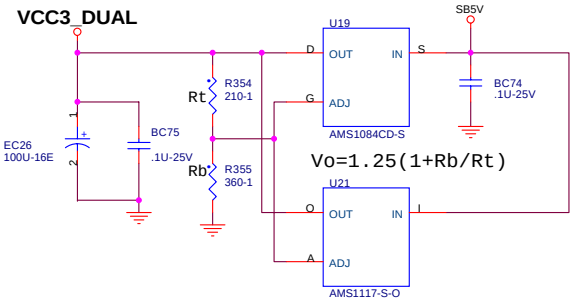
1.IN S0,S1
THIS CIRCUIT PASSES THE NORMAL POWER

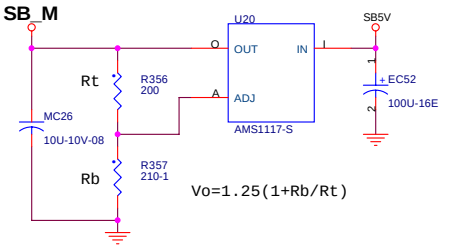
2.IN S3,S4,S5
THIS CIRCUIT PASSES THE STANDBY POWER

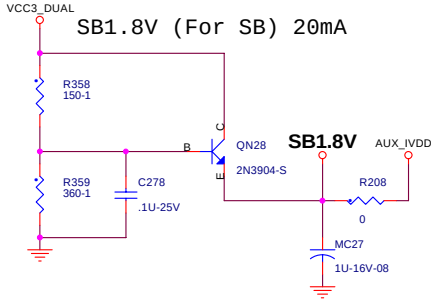
NOTE:
BECAUSE OF THE MAXIMUM CURRENT FROM POWER SUPPLY IS ONLY ABOUT 750~1000mA SO IF YOU WANT TO SUPPORT WAKE UP FROM S3 BY USB, YOU MUST HAVE A POWER SUPPLY WITH LARGER POWER.(ADDITIONAL 500mA PER USB PORT)

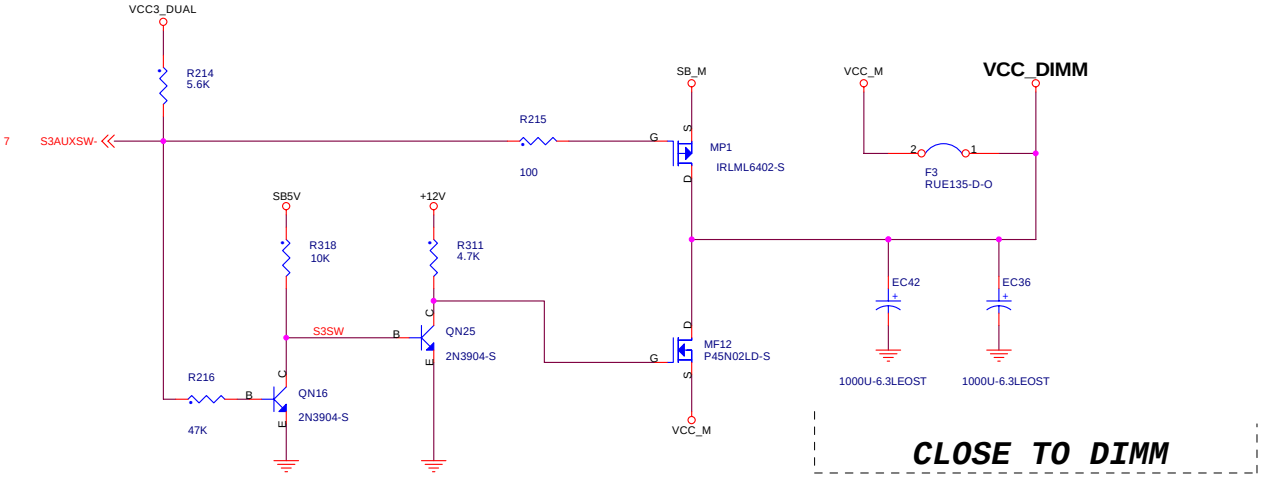
VCC3_DUAL & VCC5_DUAL

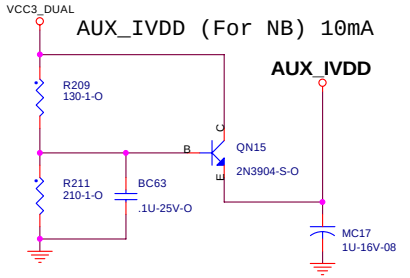












Quanta Computer Systems		
Title	SF1/648FX	
Size: Custom	Document Number: Dual 5V&3V, STR	Rev: 1.1
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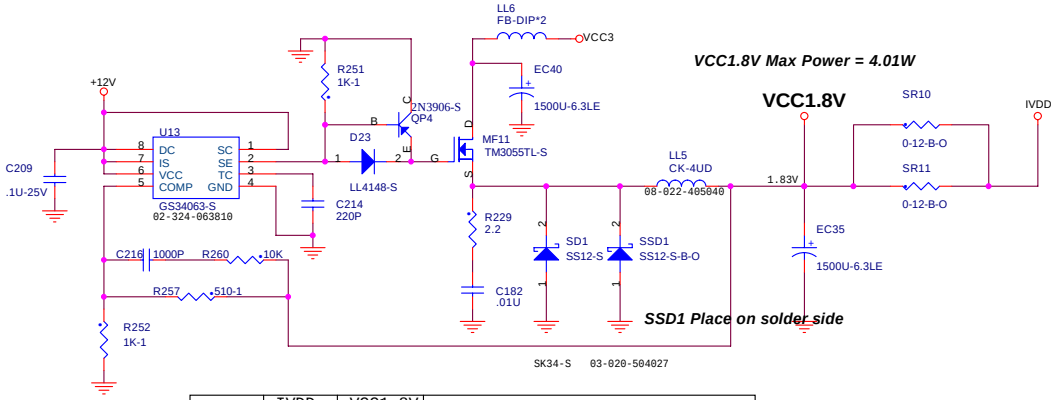
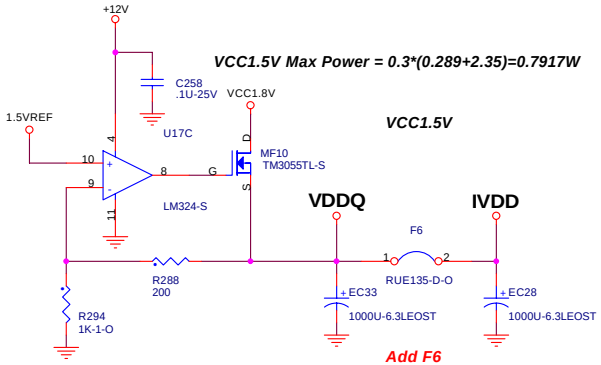
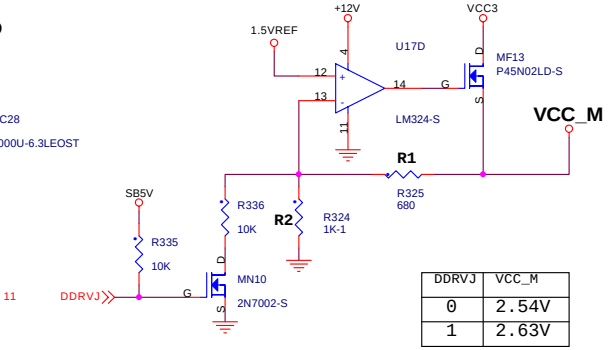


	IVDD	VCC1.8V	
648	1.8V	1.8V	short two power plane, one regulator
648FX	1.9V	1.9V	short two power plane, one regulator
661FX	1.8V	1.8V	short two power plane, one regulator or two regulator
661FXLV	1.5V	1.8V	two regulator

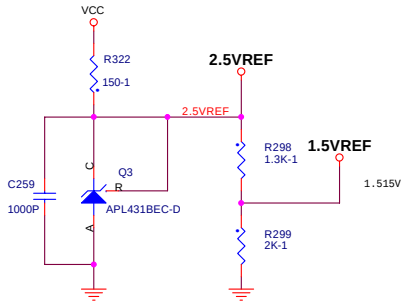
	AUX_IVDD	SB1.8V	
648	1.8V	1.8V	short two power plane, one regulator
648FX	1.9V	1.9V	short two power plane, one regulator
661FX	1.8V	1.8V	short two power plane, one regulator
661FXLV	1.5V	1.8V	two regulator

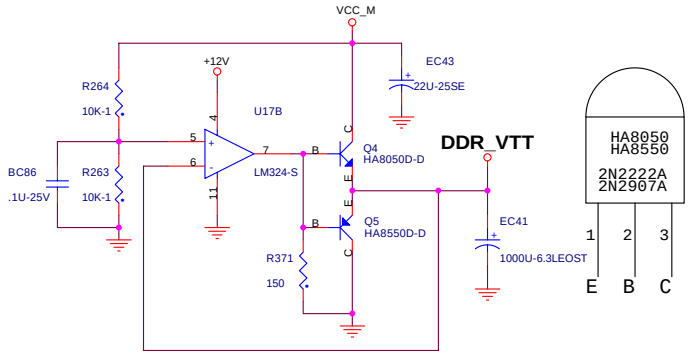


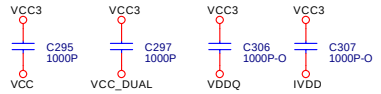
F6	
661LV	SHORT
648	OPEN

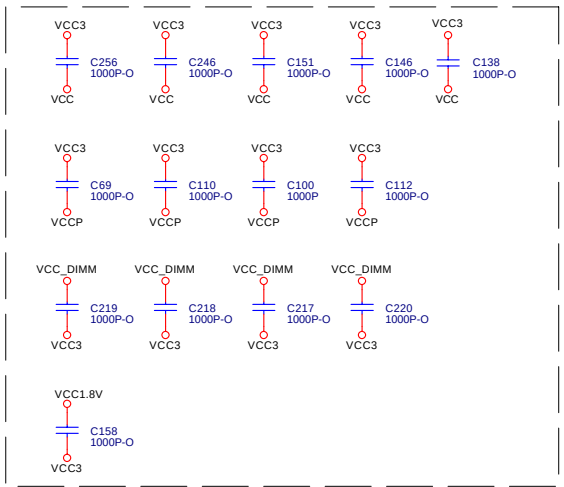


DDRVJ	VCC_M
0	2.54V
1	2.63V









平均分佈在POWER PLAN 和 PLAN 之間

Elitegroup Computer Systems

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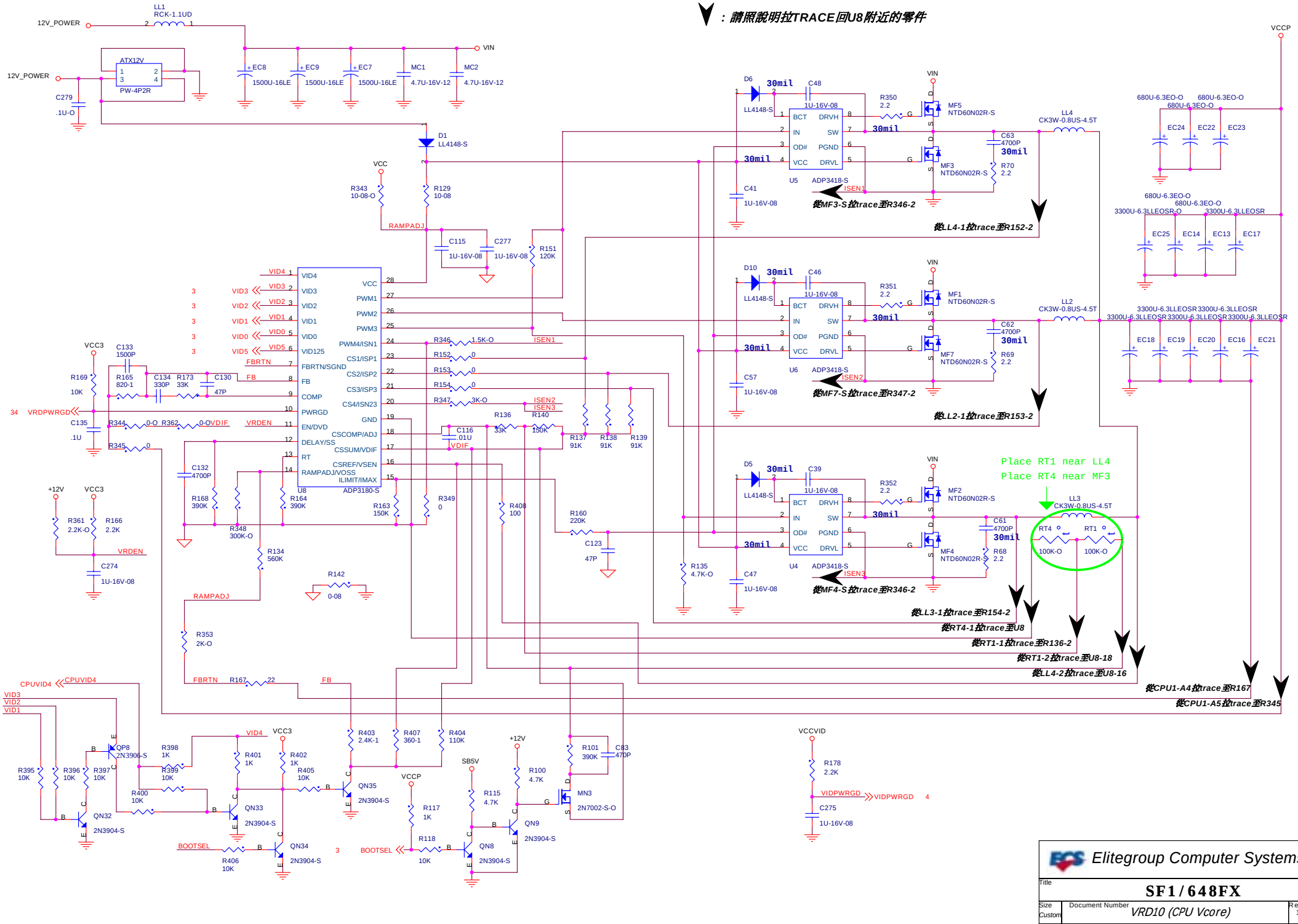
：請照說明拉TRACE回U8附近的零件
12V_POWER
LL1
RCK-1.1UD
ATX12V
PW-4P2R
C279
.1U-O
EC8
EC9
EC7
MC1
MC2
1500U-16LE
4.7U-16V-12
VIN
D1
LL4148-S
VCC
R343
10-08-O
R129
10-08
RAMPADJ
C115
C277
1U-16V-08
R151
120K
VID4
VID3
VID2
VID1
VID0
VID5
FBRTN
FB
COMP
PWRGD
EN/DVD
DELAY/SS
RT
RAMPADJ/VOSS
CSCOMP/ADJ
CSSUM/VDIF
CSREF/VSEN
ILIMIT/IMAX
PWM1
PWM2
PWM3
PWM4/ISN1
CS1/ISP1
CS2/ISP2
CS3/ISP3
CS4/ISN23
GND
VCC
U8
ADP3180-S
VCC3
C133
1500P
R169
10K
R165
820-1
C134
330P
R173
33K
C130
47P
VRDPWRGD
C135
.1U
R344
0-O
R362
0-OVDIF
VRDEN
R345
0
C132
4700P
R168
390K
R348
300K-O
R164
390K
R134
560K
R163
150K
R349
0
R346
1.5K-O
R152
0
R153
0
R154
0
R347
3K-O
ISEN1
ISEN2
ISEN3
R140
C116
.01U
VDIF
R136
33K
150K
R137
91K
R138
91K
R139
91K
R408
100
R160
220K
C123
47P
R135
4.7K-O
R142
0-08
R353
2K-O
FBRTN
R167
22
FB
+12V
R361
2.2K-O
R166
2.2K
C274
1U-16V-08
CPUVID4
VID3
VID2
VID1
QP8
2N3906-S
R398
1K
R399
10K
R395
10K
R396
10K
R397
10K
QN32
2N3904-S
R400
10K
QN33
2N3904-S
R401
1K
R402
1K
R405
10K
QN35
2N3904-S
R403
2.4K-1
R407
360-1
R404
110K
BOOTSEL
R406
10K
QN34
2N3904-S
VCCP
R117
1K
R118
10K
QN8
2N3904-S
SB5V
R115
4.7K
QN9
2N3904-S
R100
4.7K
MN3
2N7002-S-O
R101
390K
C83
470P
D6
D10
D5
LL4148-S
30mil
C48
C46
C39
1U-16V-08
U5
U6
U4
ADP3418-S
R350
2.2
R351
2.2
R352
2.2
MF5
MF3
MF1
MF7
MF2
MF4
NTD60N02R-S
C63
C62
C61
4700P
R70
R69
R68
2.2
C41
C57
C47
ISEN1
ISEN2
ISEN3
從MF3-S拉trace至R346-2
從MF7-S拉trace至R347-2
從MF4-S拉trace至R346-2
從LL4-1拉trace至R152-2
從LL2-1拉trace至R153-2
從LL3-1拉trace至R154-2
從RT4-1拉trace至U8
從RT1-1拉trace至R136-2
從RT1-2拉trace至U8-18
從LL4-2拉trace至U8-16
從CPU1-A4拉trace至R167
從CPU1-A5拉trace至R345
LL4
LL2
LL3
CK3W-0.8US-4.5T
680U-6.3EO-O
3300U-6.3LLEOSR-O
EC24
EC22
EC23
EC25
EC14
EC13
EC17
EC18
EC19
EC20
EC16
EC21
Place RT1 near LL4
Place RT4 near MF3
RT4
RT1
100K-O
VCCP
VCCVID
R178
2.2K
VIDPWRGD
C275
1U-16V-08
Elitegroup Computer Systems
SF1/648FX
VRD10 (CPU Vcore)
Rev 1.1
Tuesday, August 26, 2003
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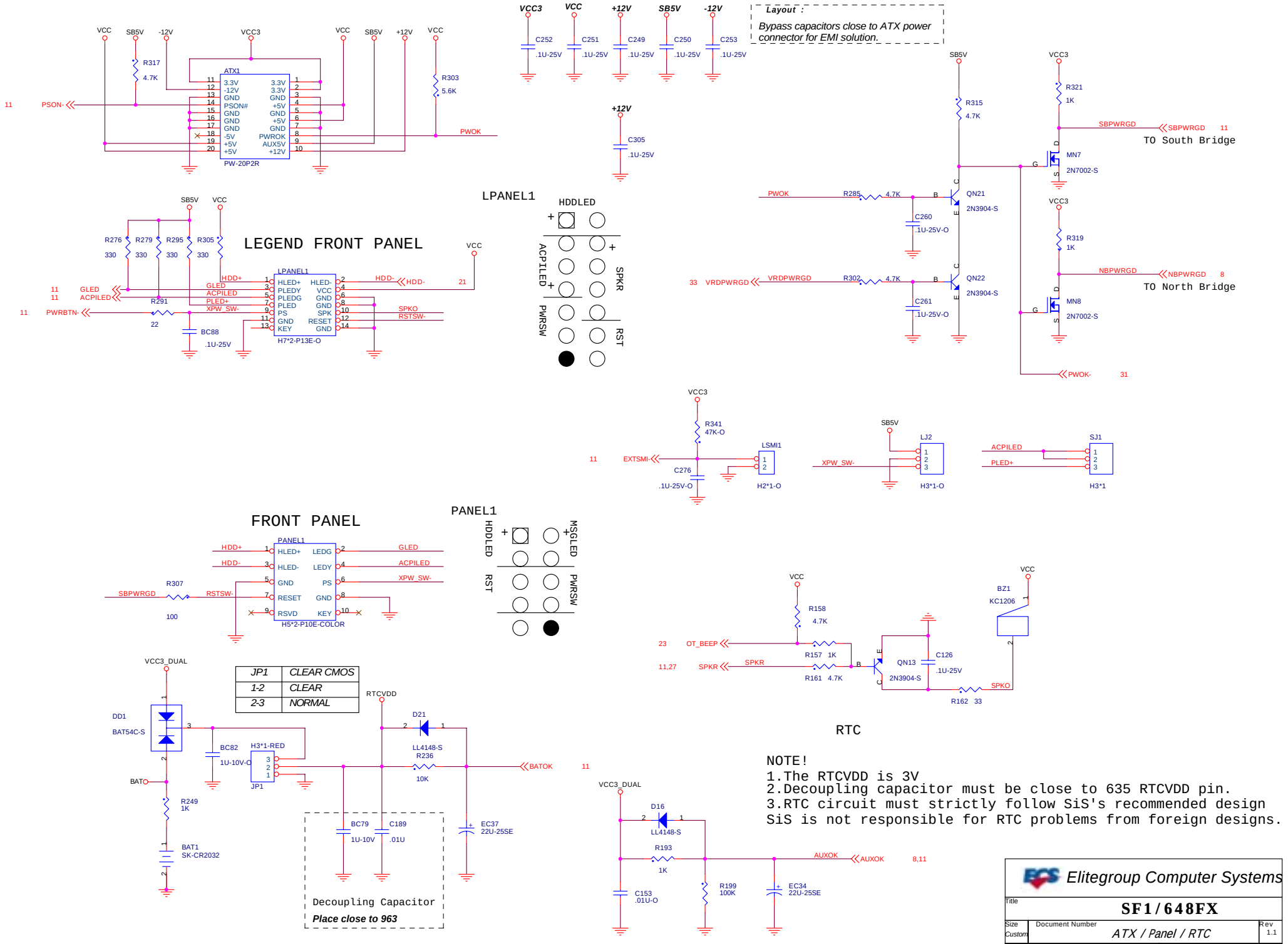
VCC3
VCC
+12V
SB5V
-12V
C252 .1U-25V
C251 .1U-25V
C249 .1U-25V
C250 .1U-25V
C253 .1U-25V
C305 .1U-25V
Layout :
Bypass capacitors close to ATX power connector for EMI solution.
ATX1
PW-20P2R
PSON-
PWOK
R317 4.7K
R303 5.6K
LPANEL1
H7*2-P13E-O
HDDLED
ACPILED
SPKR
PWRSW
RST
LEGEND FRONT PANEL
R276 330
R279 330
R295 330
R305 330
R291 22
BC88 .1U-25V
GLED
ACPILED
PLED+
XPW_SW-
PWRBTN-
HDD+
HDD-
SPKO
RSTSW-
R315 4.7K
R321 1K
SBPWRGD
TO South Bridge
MN7 2N7002-S
QN21 2N3904-S
R285 4.7K
C260 .1U-25V-O
PWOK
R319 1K
NBPWRGD
TO North Bridge
MN8 2N7002-S
QN22 2N3904-S
R302 4.7K
C261 .1U-25V-O
VRDPWRGD
PWOK-
R341 47K-O
LSMI1
EXTSMI-
C276 .1U-25V-O
H2*1-O
LJ2
H3*1-O
XPW_SW-
SJ1
H3*1
ACPILED
PLED+
FRONT PANEL
PANEL1
H5*2-P10E-COLOR
HDDLED
MSGLED
RST
PWRSW
R307 100
SBPWRGD
RSTSW-
GLED
ACPILED
XPW_SW-
VCC3_DUAL
DD1
BAT54C-S
BAT
BAT1
SK-CR2032
R249 1K
BC82 1U-10V-O
H3*1-RED
JP1
RTCVDD
D21
LL4148-S
R236 10K
BATOK
BC79 1U-10V
C189 .01U
EC37 22U-25SE
Decoupling Capacitor
Place close to 963
JP1 | CLEAR CMOS
1-2 | CLEAR
2-3 | NORMAL
R158 4.7K
OT_BEEP
SPKR
R157 1K
R161 4.7K
QN13 2N3904-S
C126 .1U-25V
BZ1 KC1206
R162 33
SPKO
RTC
D16
LL4148-S
R193 1K
C153 .01U-O
R199 100K
EC34 22U-25SE
AUXOK
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.
Elitegroup Computer Systems
SF1/648FX
ATX / Panel / RTC
Rev 1.1
Friday, July 11, 2003
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