SF2

Rev: 1.0

Revision History :

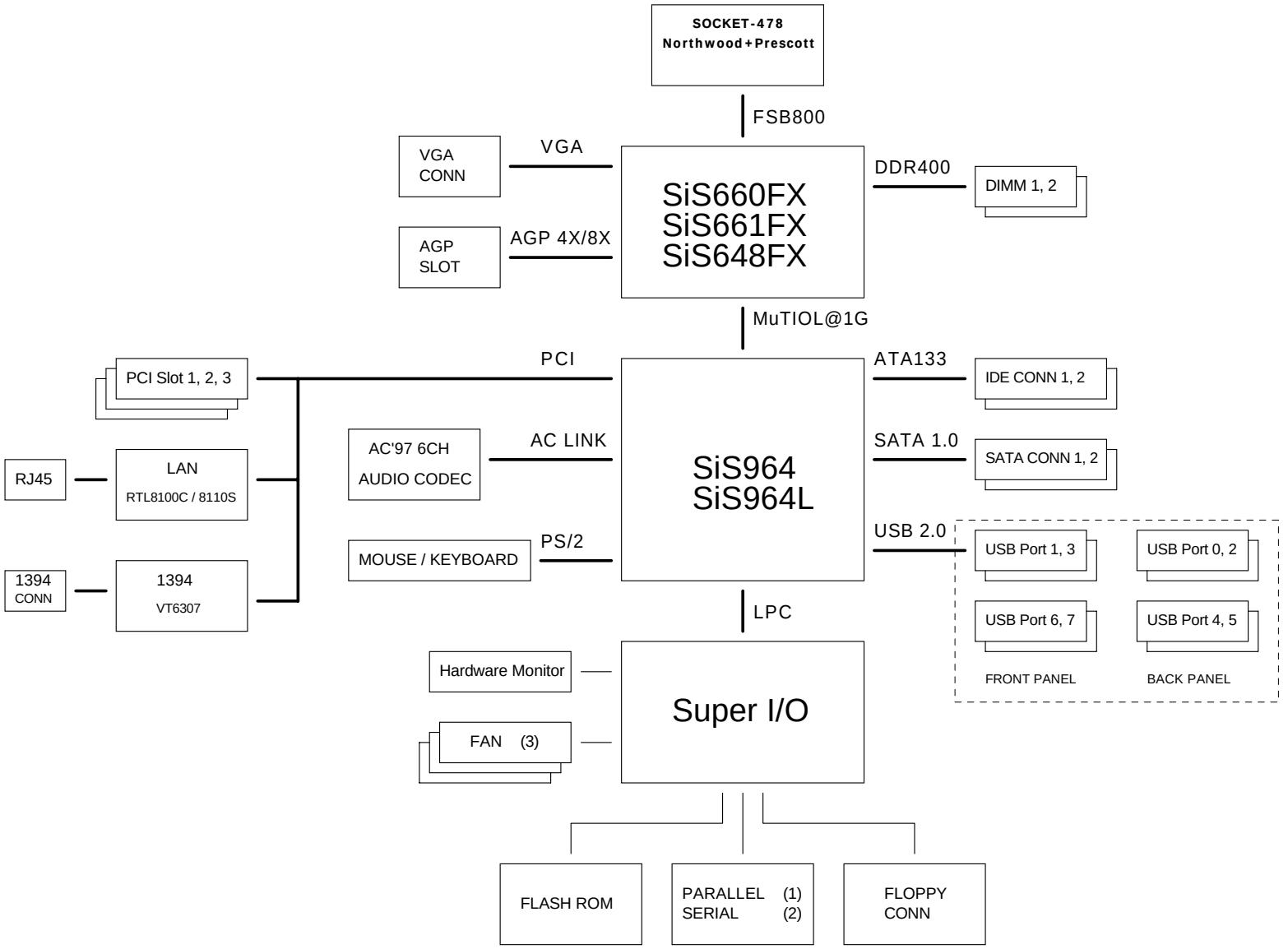
1. Ver A: Initial
2. Ver B:
   - (1) Add North Bridge Fan Sink Header
   - (2) Delete SATA Crystal
   - (3) Modify USB, AUDIO, S/P DIF Out, Front Panel Headers for ACER
   - (4) Add SATA Status LED Signal via Front Panel
   - (5) Modify USB Power Source on South Bridge due to SiS AP note
   - (6) Add One More Fuse for 1394 Header
   - (7) Add SPDIFO2 Header (Pitch 2.0mm) for HP S/P DIF Out
   - (8) Modify Hardware Reset Circuit
   - (9) Modify VCCVID Power Good Circuit
   - (10) Remove IR, SIRQ Headers
   - (11) Add JP4, JP5 Headers for HP
   - (12) Modify CPU Fan Control Circuit
   - (13) Change RT9173 for DDR Vtt
   - (14) Change LAN Connector Type
3. Ver 1.0:
   - (1) Add C289, MC40 for EMI Solution

Page Index

	SIGNATURE	DATE
DESIGNER		
LAYOUT		
CHECK		
APPROVAL		

Elitegroup Computer Systems

Title: SF2 / 661FX		
Size: Custom	Document Number: Cover Sheet	Rev: 1.0
Date: Friday, September 12, 2003	Sheet 1 of 36	

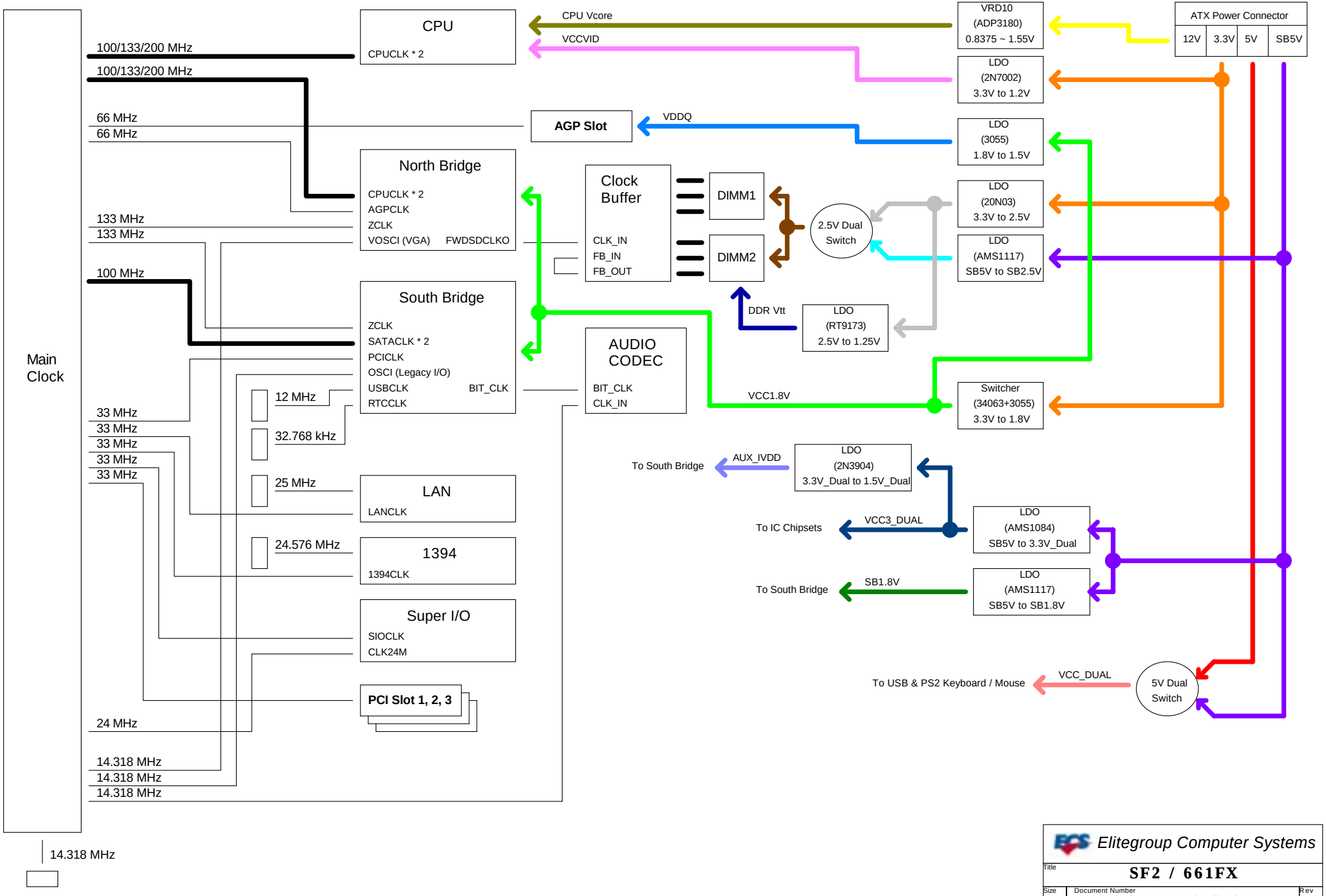


Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: Block Diagram | Rev: 1.0

Date: Friday, September 12, 2003 | Sheet 2 of 36

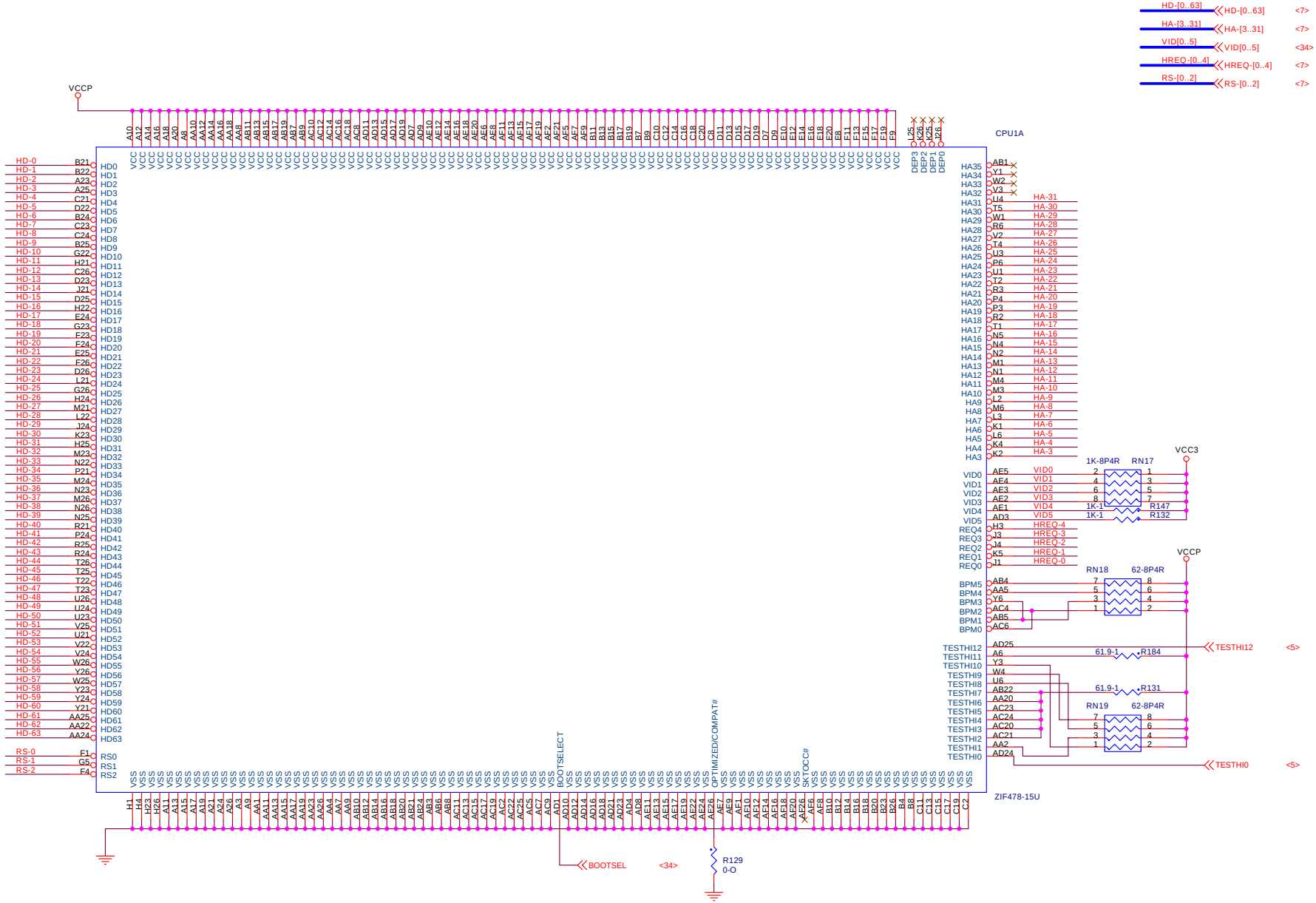


Elitegroup Computer Systems

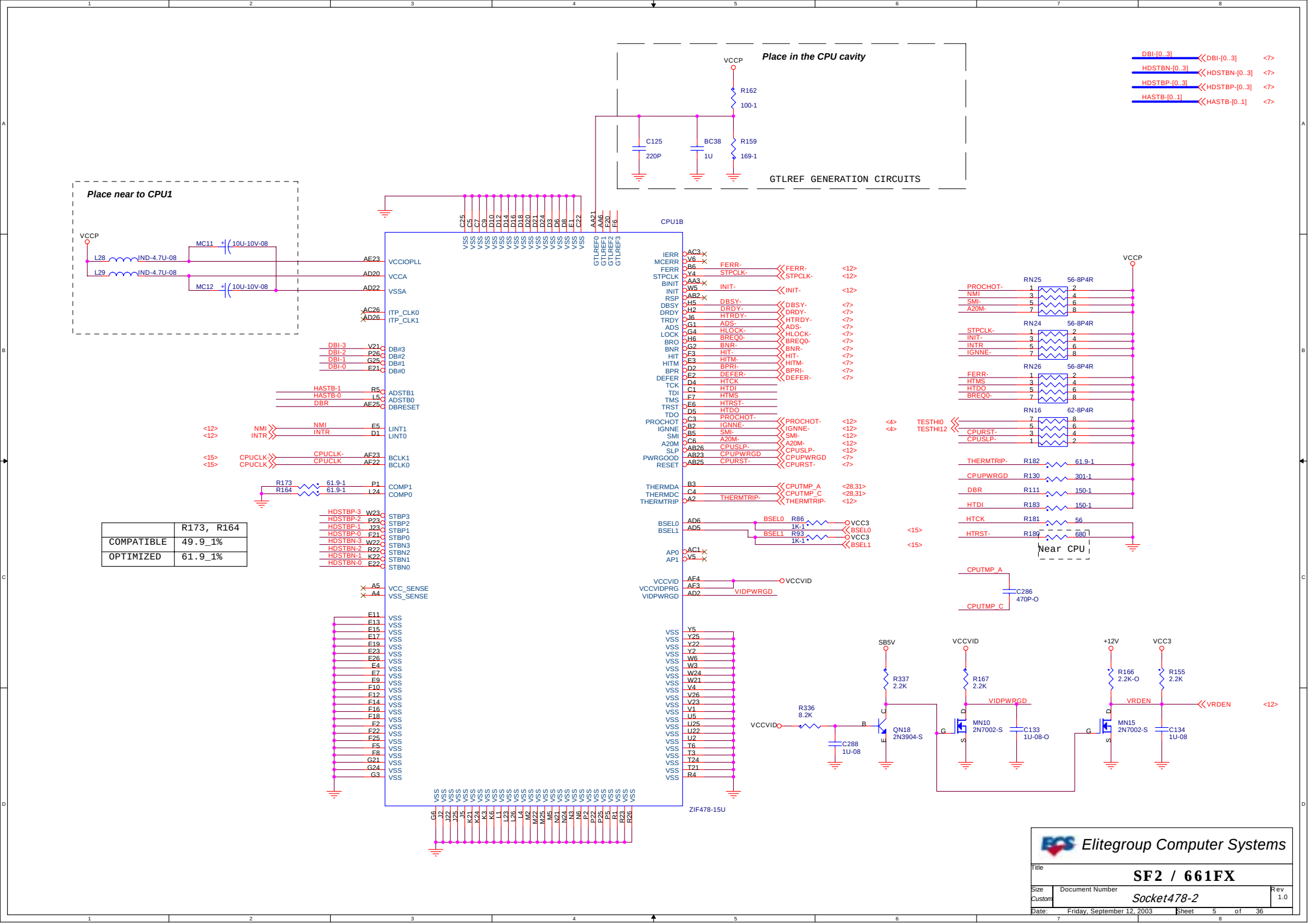
Title: SF2 / 661FX

Size: Custom | Document Number: Clock & Power Distribution | Rev: 1.0

Date: Friday, September 12, 2003 | Sheet 3 of 36

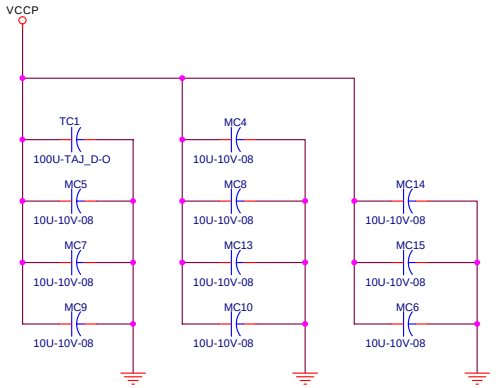


Elitegroup Computer Systems	
Title	SF2 / 661FX
Size: Custom	Document Number: Socket478-1
Rev: 1.0	
Date: Friday, September 12, 2003	Sheet 4 of 36

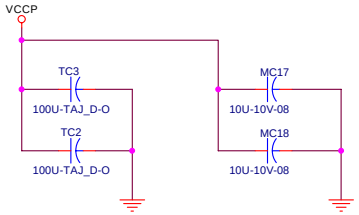


	R173, R164
COMPATIBLE	49.9_1%
OPTIMIZED	61.9_1%

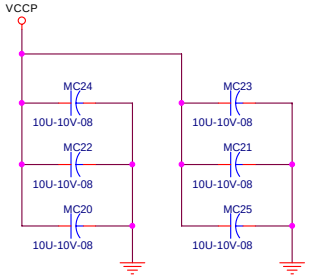
Put these capacitors at processor NORTH SIDE



Put these capacitors INSIDE PROCESSOR CAVITY

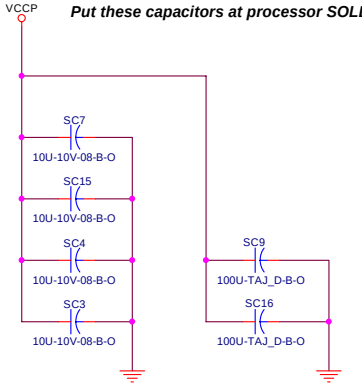


Put these capacitors at processor SOUTH SIDE



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

Title: SF2 / 661FX

Size: Custom | Document Number: Decoupling Circuit | Rev: 1.0

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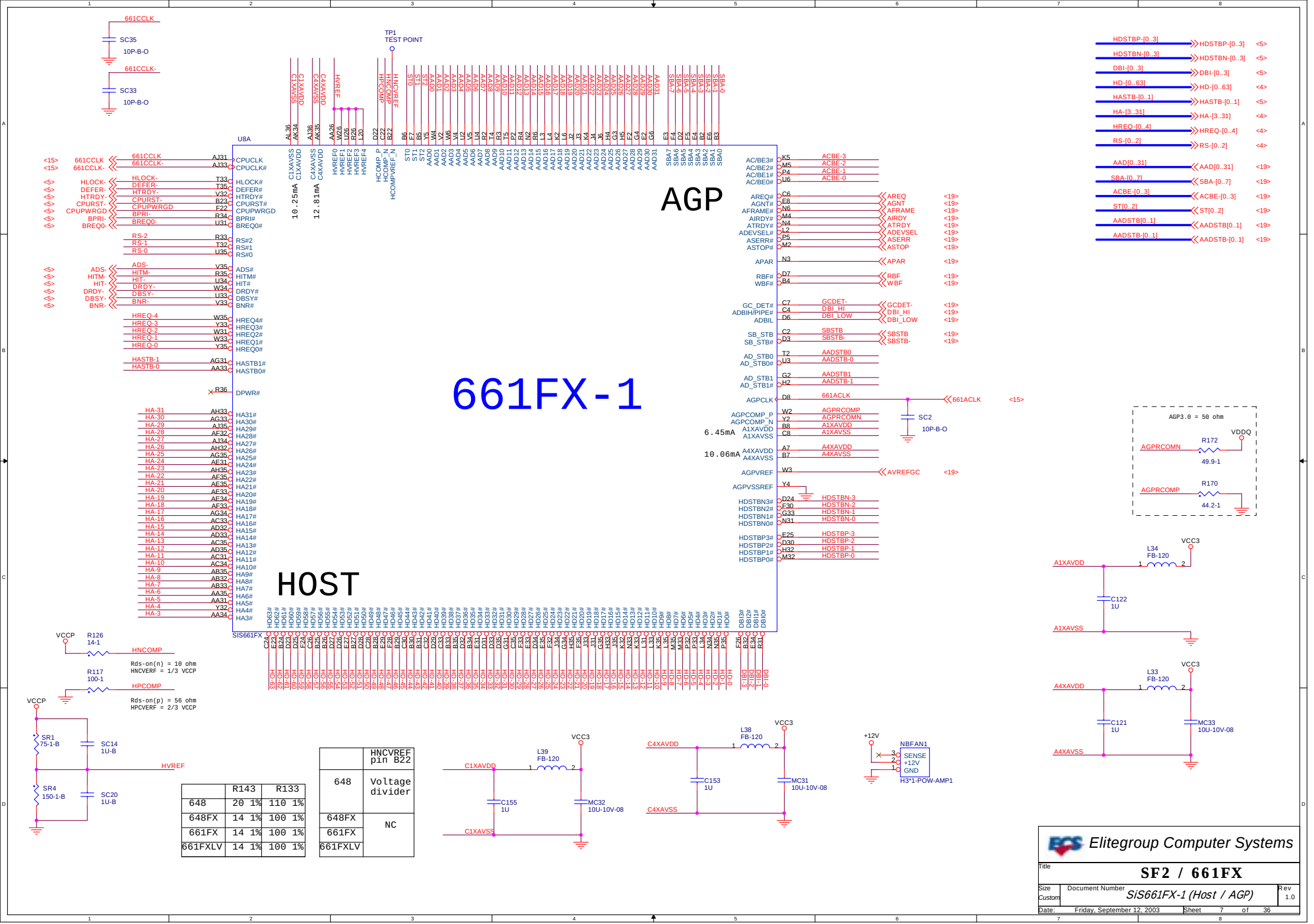

	R143	R133
648	20 1%	110 1%
648FX	14 1%	100 1%
661FX	14 1%	100 1%
661FXLV	14 1%	100 1%

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

Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: SiS661FX-1 (Host / AGP) | Rev: 1.0

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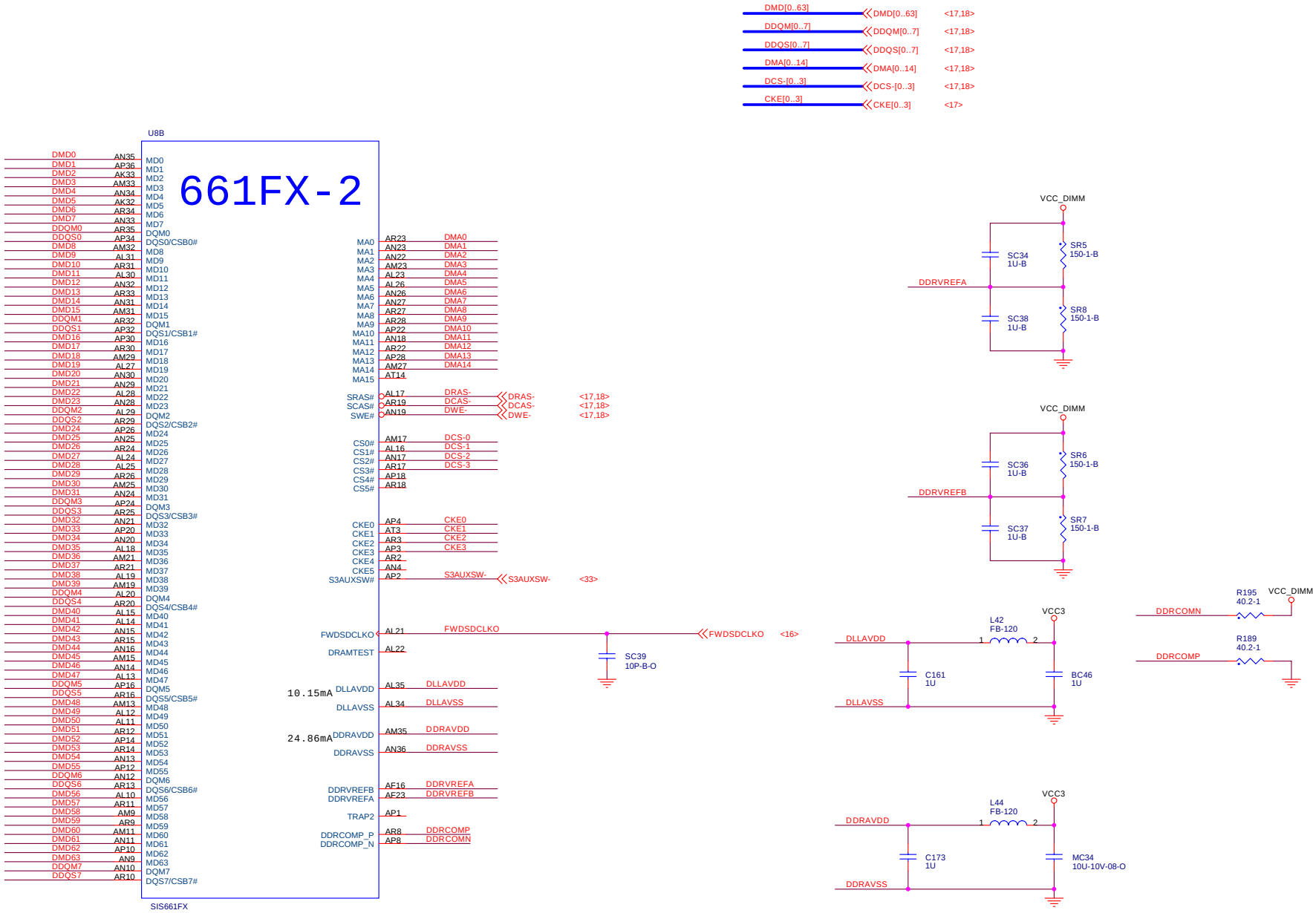

Elitegroup Computer Systems	
Title	SF2 / 661FX
Size: Custom	Document Number: SiS661FX-2 (Memory)
Rev: 1.0	
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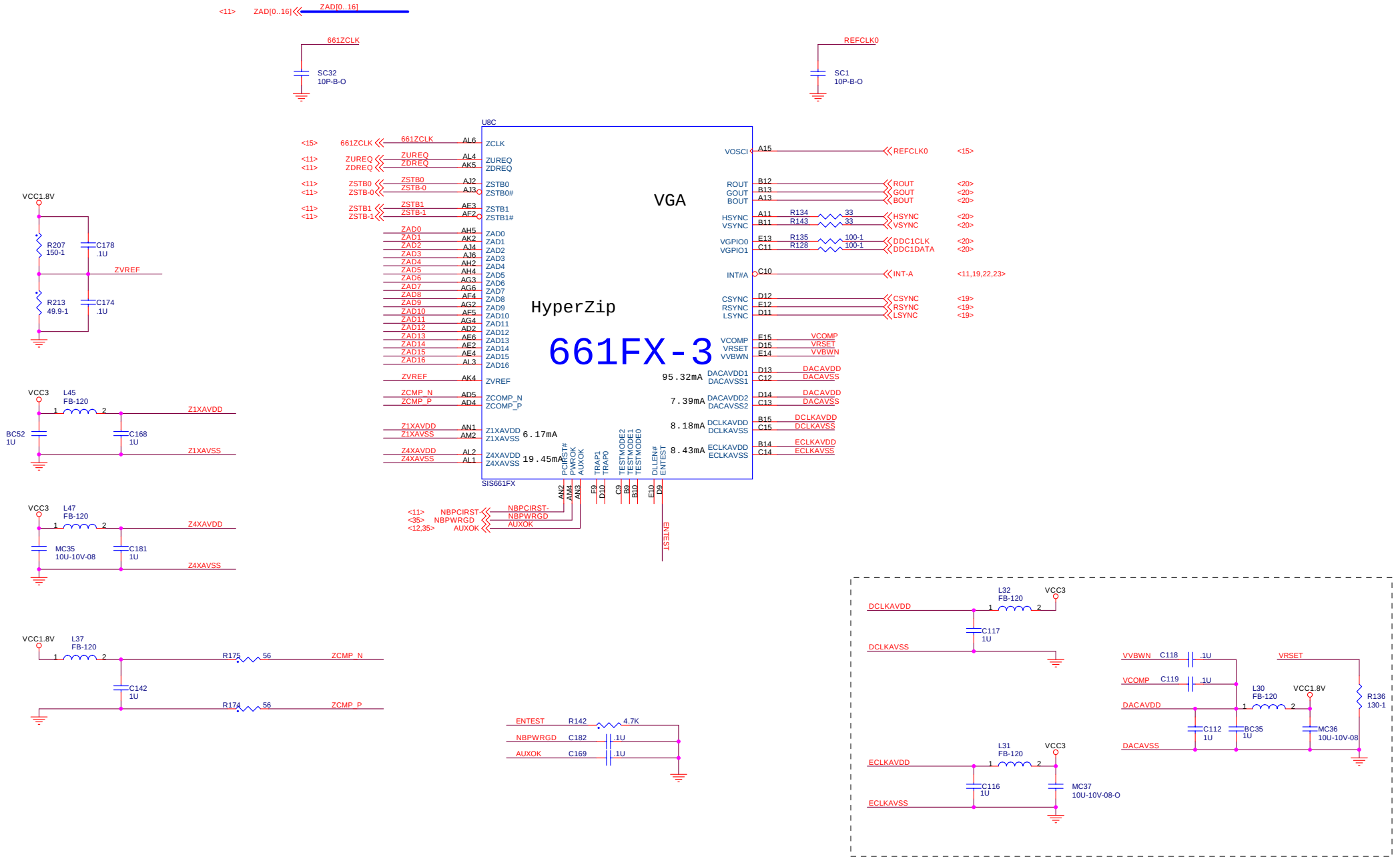
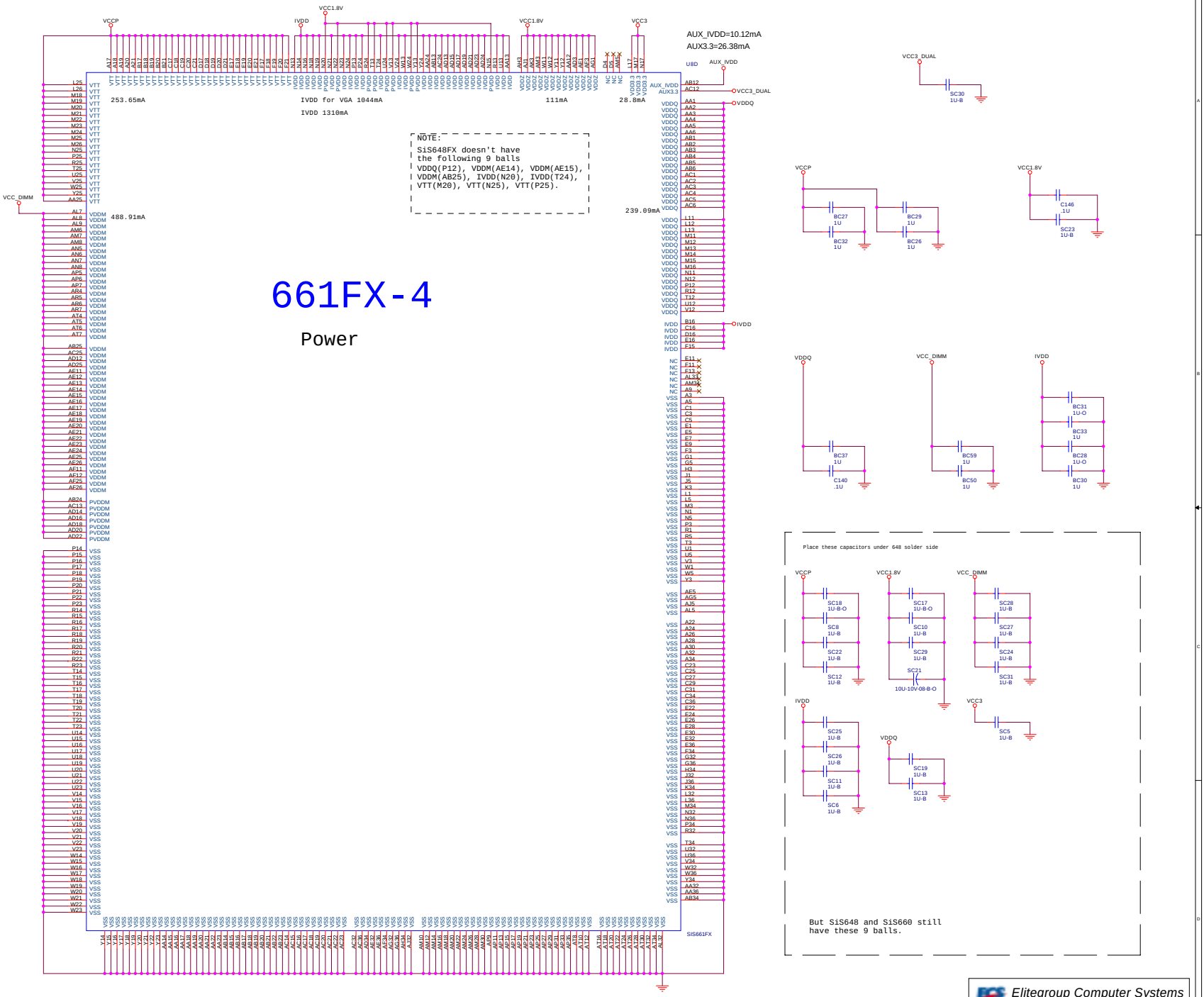
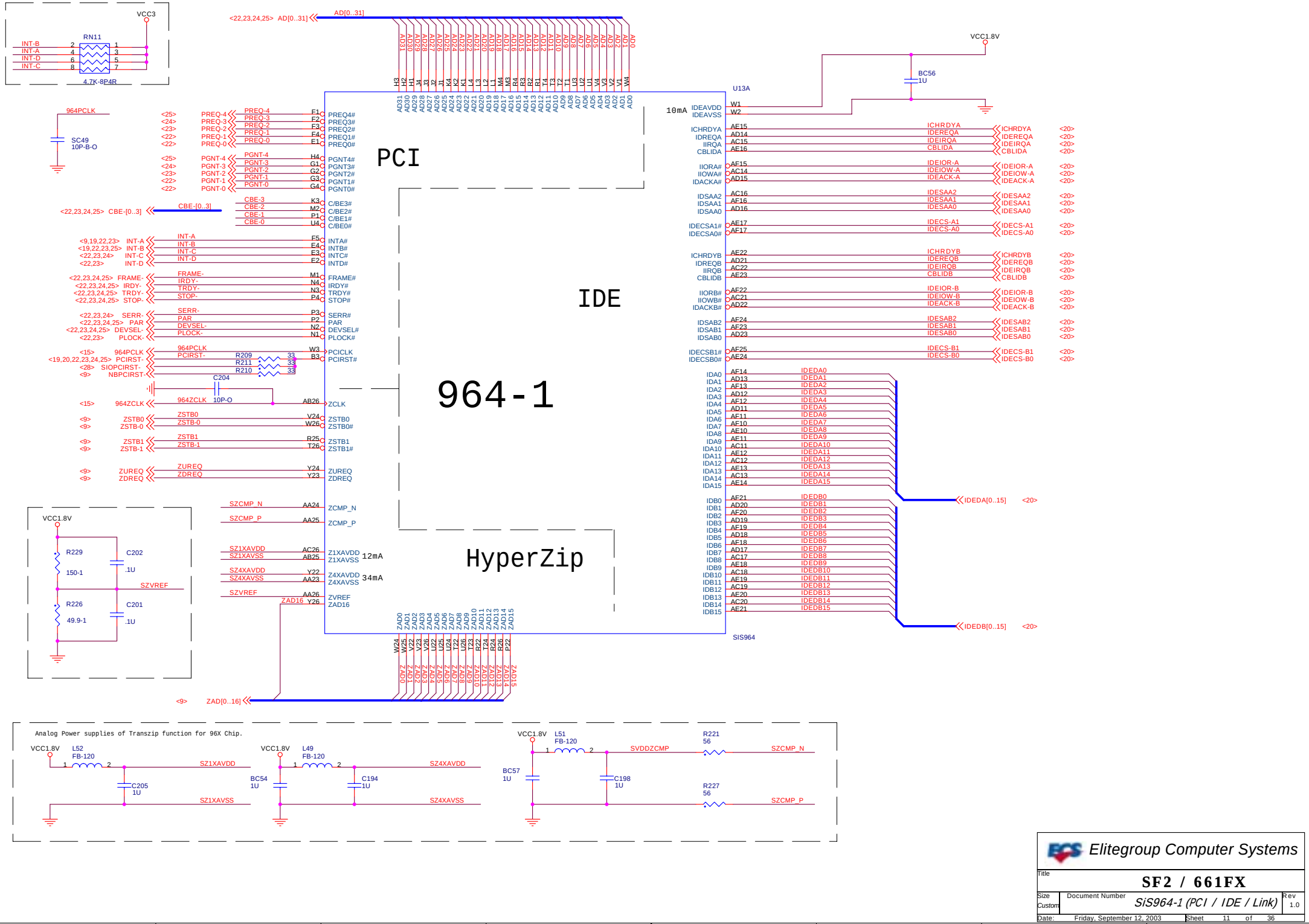


Elitegroup Computer Systems			
Title	SF2 / 661FX		
Size: Custom	Document Number: SiS661FX-3 (HyperZip)		Rev: 1.0
Date: Friday, September 12, 2003	Sheet 9 of 36		



Elitegroup Computer Systems

Title	SF2 / 661FX	
Size: Custom	Document Number: SiS661FX-4 (Power)	Rev: 1.0
Date: Friday, September 12, 2003	Sheet 10 of 36	


PCI
IDE
964-1
HyperZip
SIS964
U13A
VCC3
RN11
4.7K-8P4R
INT-B
INT-A
INT-D
INT-C
AD[0..31]
<22,23,24,25> AD[0..31]
964PCLK
SC49
10P-B-O
PREQ-4
PREQ-3
PREQ-2
PREQ-1
PREQ-0
PGNT-4
PGNT-3
PGNT-2
PGNT-1
PGNT-0
CBE-[0..3]
<22,23,24,25> CBE-[0..3]
INT-A
INT-B
INT-C
INT-D
FRAME-
IRDY-
TRDY-
STOP-
SERR-
PAR
DEVSEL-
PLOCK-
964PCLK
PCIRST-
R209
R211
R210
33
C204
964ZCLK
10P-O
ZSTB0
ZSTB-0
ZSTB1
ZSTB-1
ZUREQ
ZDREQ
SZCMP_N
SZCMP_P
SZ1XAVDD
SZ1XAVSS
SZ4XAVDD
SZ4XAVSS
SZVREF
ZAD16
<9> ZAD[0..16]
VCC1.8V
R229
150-1
C202
.1U
SZVREF
R226
49.9-1
C201
.1U
10mA
IDEAVDD
IDEAVSS
BC56
1U
ICHRDYA
IDREQA
IIRQA
CBLIDA
IIORA#
IIOWA#
IDACKA#
IDSAA2
IDSAA1
IDSAA0
IDECSA1#
IDECSA0#
ICHRDYB
IDREQB
IIRQB
CBLIDB
IIORB#
IIOWB#
IDACKB#
IDSAB2
IDSAB1
IDSAB0
IDECSB1#
IDECSB0#
IDA0
IDA1
IDA2
IDA3
IDA4
IDA5
IDA6
IDA7
IDA8
IDA9
IDA10
IDA11
IDA12
IDA13
IDA14
IDA15
IDB0
IDB1
IDB2
IDB3
IDB4
IDB5
IDB6
IDB7
IDB8
IDB9
IDB10
IDB11
IDB12
IDB13
IDB14
IDB15
IDEDA[0..15]
IDEDB[0..15]
12mA
34mA
Analog Power supplies of Transzip function for 96X Chip.
L52
FB-120
L49
FB-120
L51
FB-120
SZ1XAVDD
SZ4XAVDD
SVDDZCMP
C205
1U
BC54
1U
C194
1U
BC57
1U
C198
1U
R221
56
R227
56
SZCMP_N
SZCMP_P
Elitegroup Computer Systems
SF2 / 661FX
SiS964-1 (PCI / IDE / Link)
Rev 1.0
Friday, September 12, 2003
Sheet 11 of 36

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

U13B

CPU_S
APIC
LPC
RTC
964-2
GPIO
AC97
ACPI /others
KBC /geyserville
MII
GPIO

SIS964

JP4		1-2	2-3
HP	Clear CMOS	Normal	Clear
TRIGEM	Suspen Mode	S1 & S3	S1

JP5		1-2	2-3
HP	Clear Password	Normal	Clear
TRIGEM	Logo Jumper	TG	Commaeul

NEED NOT to place close to 964

SiS963, 964 GPIO 0~7 internal pull up

SiS963, 964 GPIO 9,10 internal pull down

Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: SIS964-2 (Misc. Signals) | Rev: 1.0

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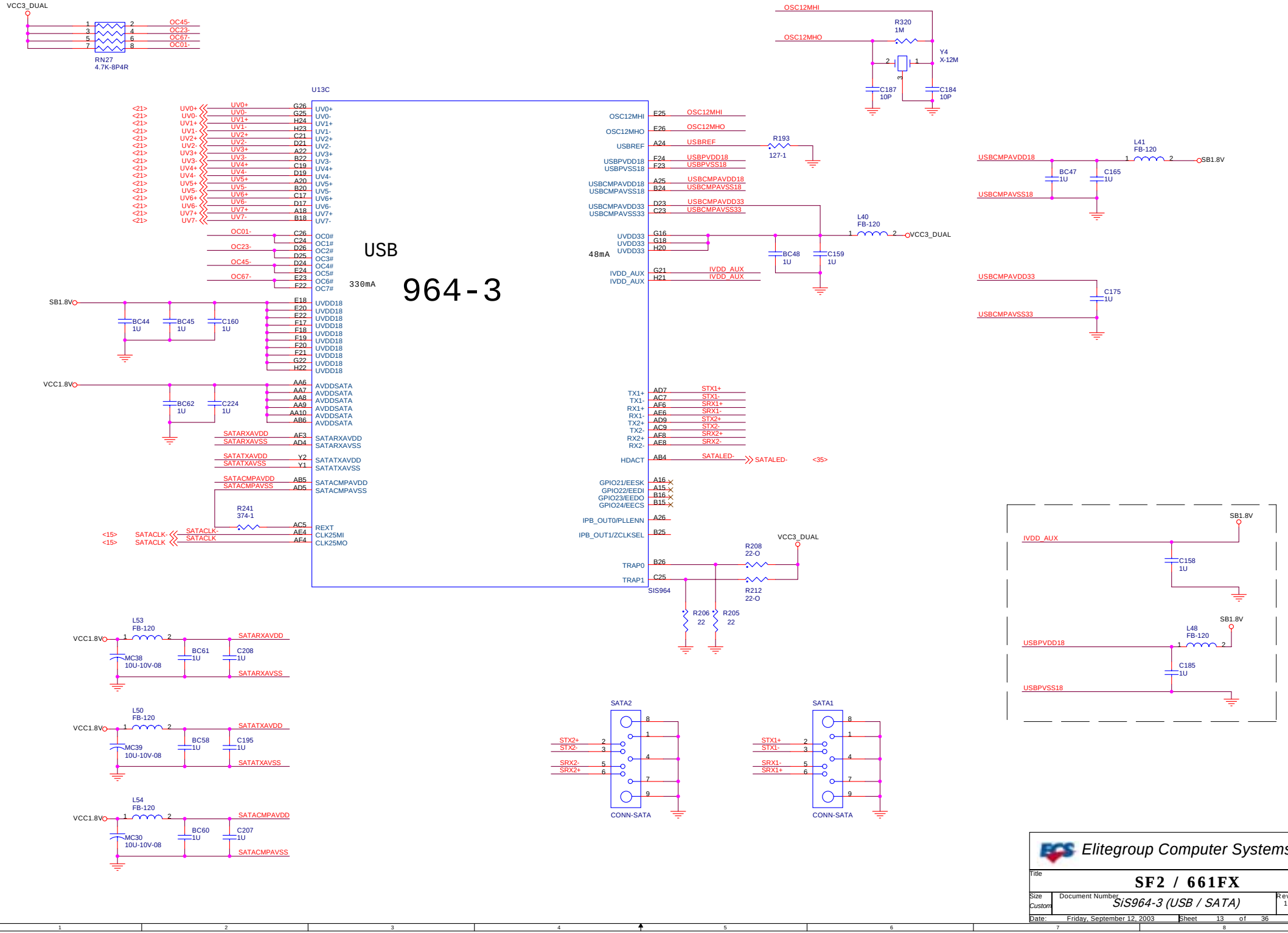
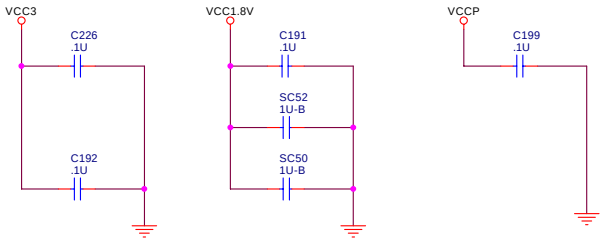
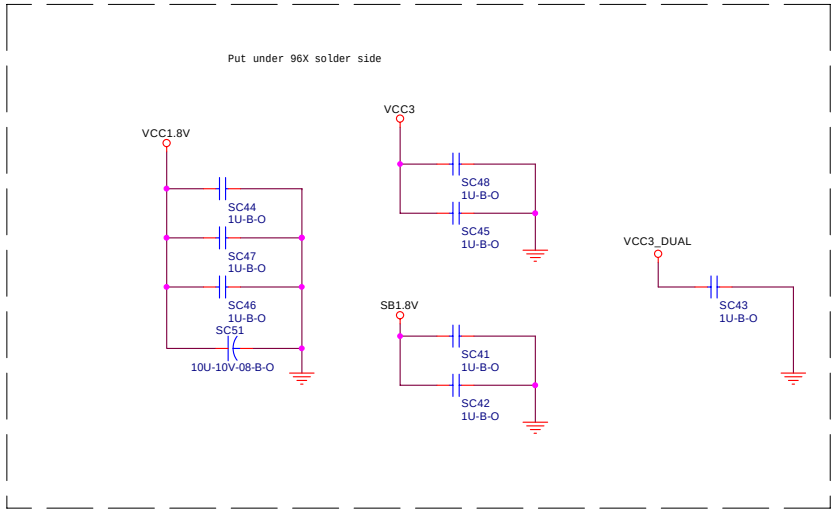
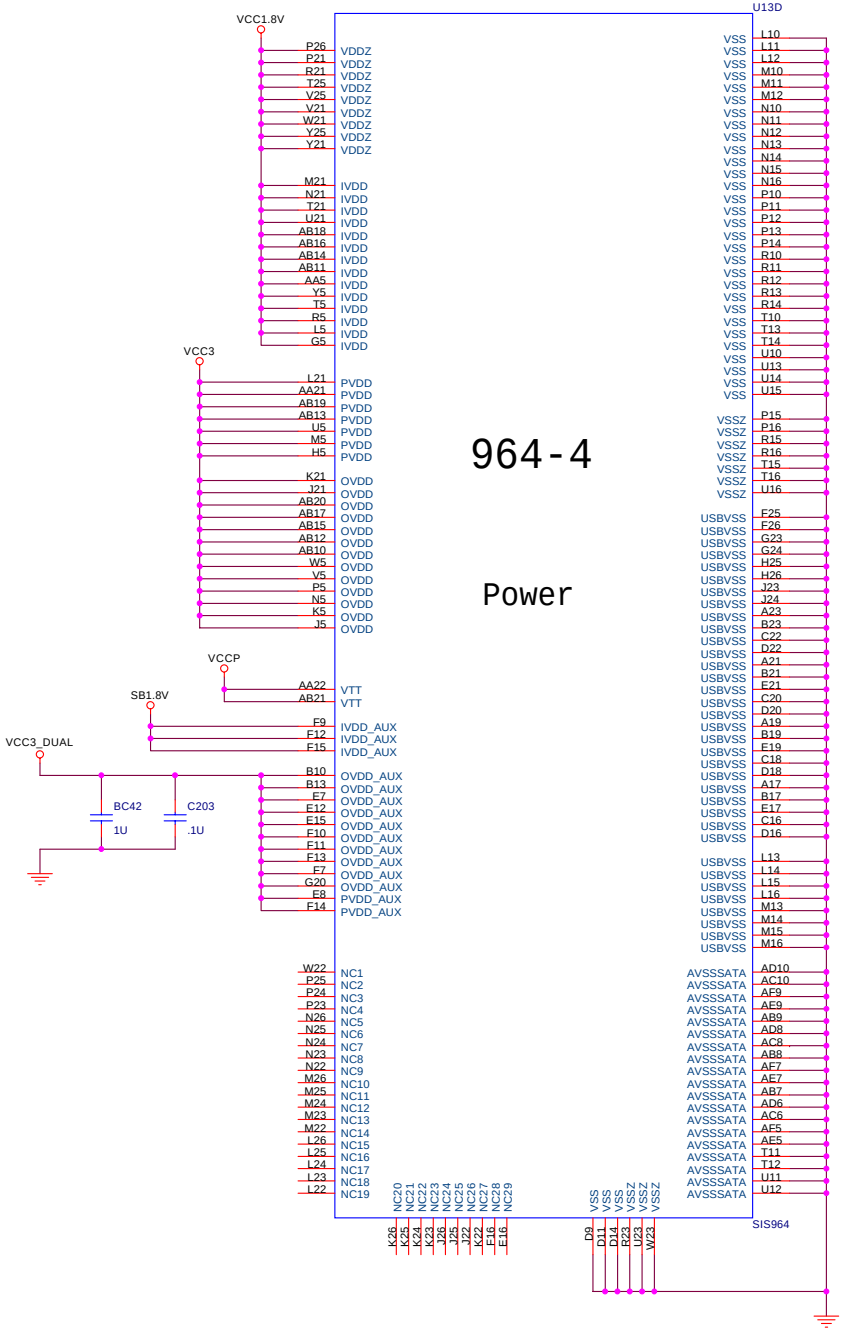


Elitegroup Computer Systems			
Title	SF2 / 661FX		
Size: Custom	Document Number: SiS964-3 (USB / SATA)		Rev: 1.0
Date: Friday, September 12, 2003	Sheet 13 of 36		







Elitegroup Computer Systems			
Title: SF2 / 661FX			
Size: Custom	Document Number: SiS964-4 (Power)		Rev: 1.0
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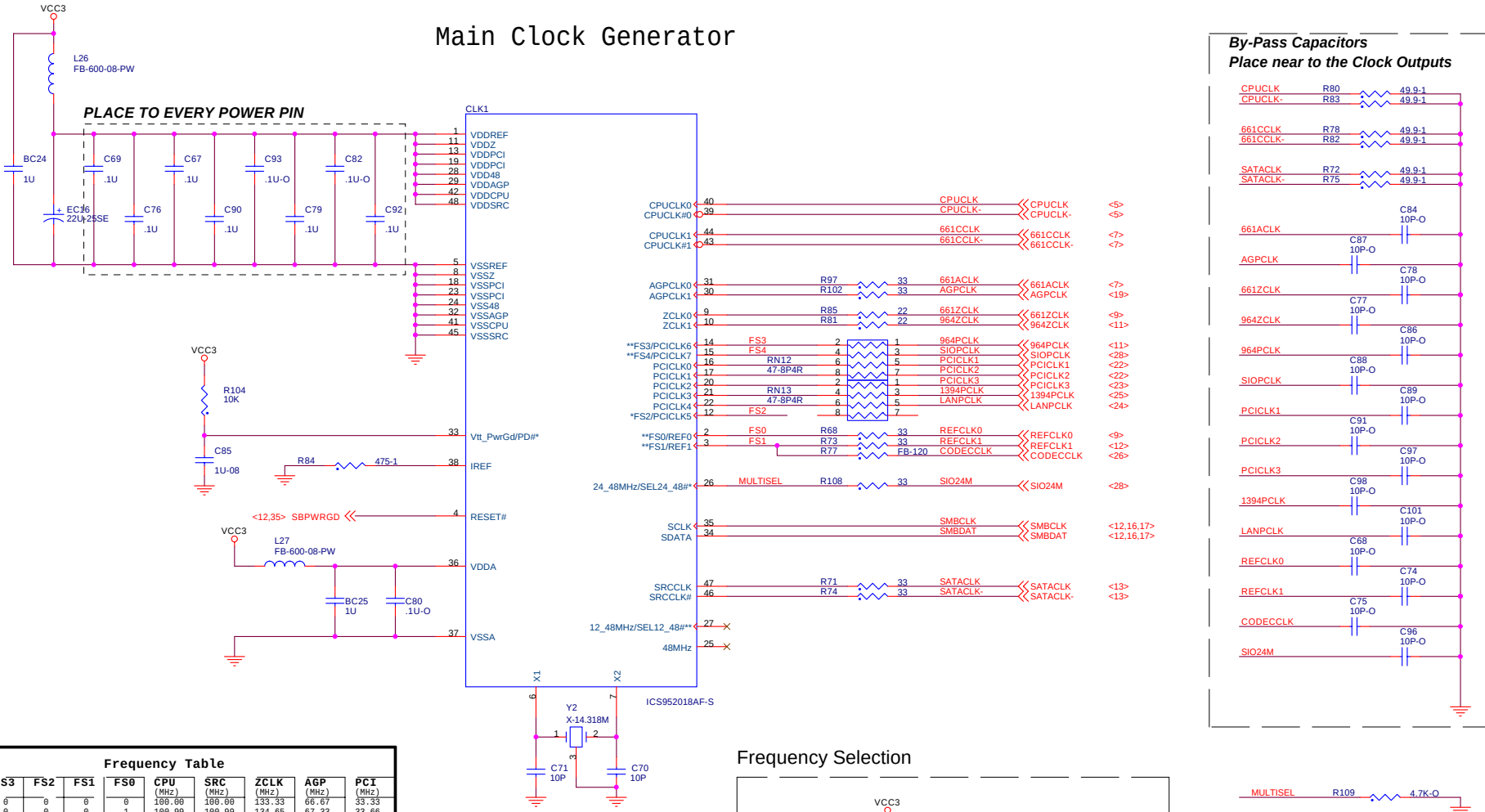
Main Clock Generator



By-Pass Capacitors
Place near to the Clock Outputs

MULTISEL R109 4.7K-O

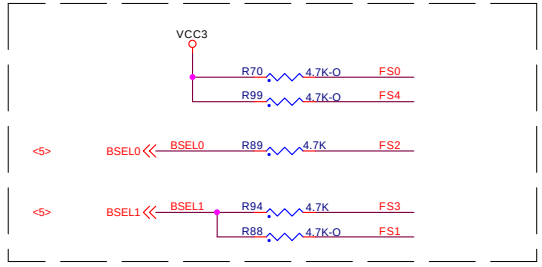
Frequency Table

	FS4	FS3	FS2	FS1	FS0	CPU (MHz)	SRC (MHz)	ZCLK (MHz)	AGP (MHz)	PCI (MHz)
FSB400	0	0	0	0	0	100.00	100.00	133.33	66.67	33.33
	0	0	0	0	1	100.99	100.99	134.65	67.33	33.66
	0	0	0	1	0	103.00	103.00	137.33	68.67	34.33
	0	0	0	1	1	100.00	100.00	133.33	66.67	33.33
FSB533	0	0	1	0	0	133.33	100.00	133.33	66.66	33.33
	0	0	1	0	1	134.65	100.99	134.65	67.32	33.66
	0	0	1	1	0	137.33	103.00	137.33	68.66	34.33
	0	0	1	1	1	133.33	100.00	133.33	66.67	33.33
FSB800	0	1	0	0	0	200.00	100.00	133.33	66.67	33.33
	0	1	0	0	1	201.98	100.99	134.65	67.33	33.66
	0	1	0	1	0	206.00	103.00	137.33	68.67	34.33
	0	1	0	1	1	200.00	100.00	133.33	66.67	33.33
	0	1	1	0	0	166.66	125.00	125.00	66.66	33.33
	0	1	1	0	1	168.31	126.23	126.23	67.32	33.66
	0	1	1	1	0	171.66	128.74	128.74	68.66	34.33
	0	1	1	1	1	166.66	125.00	125.00	66.66	33.33

Frequency Table

FS4	FS3	FS2	FS1	FS0	CPU (MHz)	SRC (MHz)	ZCLK (MHz)	AGP (MHz)	PCI (MHz)
1	0	0	0	0	105.00	105.00	140.00	70.00	35.00
1	0	0	0	1	107.00	107.00	142.67	71.33	35.67
1	0	0	1	0	109.00	109.00	145.33	72.67	36.33
1	0	0	1	1	110.00	110.00	146.67	73.33	36.67
1	0	1	0	0	140.00	105.00	140.00	70.00	35.00
1	0	1	0	1	142.66	107.00	142.67	71.33	35.67
1	0	1	1	0	145.33	109.00	145.33	72.66	36.33
1	0	1	1	1	146.66	110.00	146.66	73.33	36.67
1	1	0	0	0	210.00	105.00	140.00	70.00	35.00
1	1	0	0	1	214.00	107.00	142.67	71.33	35.67
1	1	0	1	0	218.00	109.00	145.33	72.67	36.33
1	1	0	1	1	220.00	110.00	146.67	73.33	36.67
1	1	1	0	0	266.66	100.00	133.33	66.67	33.33
1	1	1	0	1	269.33	101.00	134.67	67.33	33.67
1	1	1	1	0	274.66	103.00	137.33	68.67	34.33
1	1	1	1	1	266.66	100.00	133.33	66.67	33.33

Frequency Selection



Clock Generator Table / Hardware Traping	FS4 Low	FS3 BSEL1	FS2 BSEL0	FS1 Low	FS0 Low
CPU=100 (BSEL[1:0]=00)	0	0	0	0	0
CPU=133 (BSEL[1:0]=01)	0	0	1	0	0
CPU=200 (BSEL[1:0]=10)	0	1	0	0	0

Elitegroup Computer Systems

Title: **SF2 / 661FX**

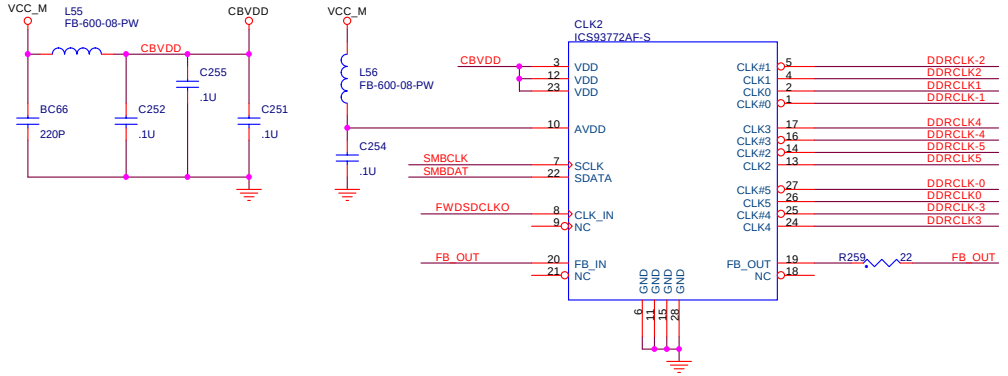
Size: Custom | Document Number: Main Clock | Rev: 1.0

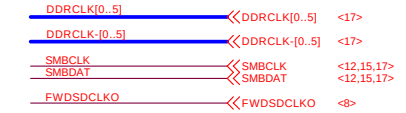
Date: Friday, September 12, 2003 | Sheet 15 of 36

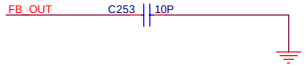
Clock Buffer (DDR)

(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: SF2 / 661FX

Size: Custom | Document Number: Clock Buffer | Rev: 1.0

Date: Friday, September 12, 2003 | Sheet 16 of 36

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

DMD[0..63] DMD[0..63] <8,18>
DMA[0..14] DMA[0..14] <8,18>
DDQM[0..7] DDQM[0..7] <8,18>
DDQS[0..7] DDQS[0..7] <8,18>
DCS-[0..3] DCS-[0..3] <8,18>
CKE[0..3] CKE[0..3] <8>
DDRCLK[0..5] DDRCLK[0..5] <16>
DDRCLK-[0..5] DDRCLK-[0..5] <16>

VCC_DIMM

DIMM1

DIMM-DDR-BL

addr = 1010000b

DRAS- <8,18>
DCAS- <8,18>
DWE- <8,18>

DIMM2

addr = 1010001b

SMBCLK <12,15,16>
SMBDAT <12,15,16>

R242 75-1
R237 75-1
C222 .1U
C221 .1U
DDRVREF

C216 .1U
C220 .1U
C218 .1U
C215 .1U
C214 .1U
C213 .1U
C210 .1U
C219 .1U
C217 .1U
C209 .1U
C200 .1U
C212 .1U

R235 5.6K
R236 5.6K

Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: DIMM 1,2 | Rev: 1.0

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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] <8,17>
DMA[0..14] — DMA[0..14] <8,17>
DDQM[0..7] — DDQM[0..7] <8,17>
DDQS[0..7] — DDQS[0..7] <8,17>
DCS-[0..3] — DCS-[0..3] <8,17>

DDR_VTT

DMD1 DMD5 DMD0 DMD4 — RN30 56-8P4R
DMD6 DMD2 DDQS0 DDQM0 — RN29 56-8P4R
DMD9 DMD8 DMD3 DMD7 — RN42 56-8P4R
DDQM1 DDQS1 DMD13 DMD12 — RN41 56-8P4R
DMD11 DMD10 DMD15 DMD14 — RN40 56-8P4R
DMA7 DMD22 DMD18 DMA9 — RN37 56-8P4R
DMD17 DMA14 DMD16 DMD20 — RN39 56-8P4R
DMA5 DMD19 DMD23 DMA8 — RN36 56-8P4R
DMD26 DMD27 DMD30 DMA3 — RN33 56-8P4R
DDQM3 DMA4 DDQS3 DMD25 — RN34 56-8P4R

<8,17> DRAS- — DRAS- DMD44 DMD40 DMD35 — RN50 56-8P4R
<8,17> DWE- — DWE- DMD45 DCS-0 DMD41 — RN49 56-8P4R
<8,17> DCAS- — DCAS- DCS-2 DCS-1 DCS-3 — RN47 56-8P4R

DMD34 DMD37 DDQS4 DMD33 — RN52 56-8P4R
DMD39 DMA11 DMD38 DDQM4 — RN51 56-8P4R
DMD42 DMD46 DDQS5 DDQM5 — RN46 56-8P4R
DMD52 DMD48 DMD47 DMD43 — RN45 56-8P4R
DMD50 DDQS6 DMD54 DDQM6 — RN44 56-8P4R
DMD56 DMD60 DMD51 DMD55 — RN48 56-8P4R
DMD62 DDQM7 DMD57 DMD61 — RN43 56-8P4R
DMD59 DMD63 DMD58 DDQS7 — RN53 56-8P4R

DDR_VTT

DMA0 DMA1 DMD31 DMA2 — RN32 56-8P4R
DMD29 DMD28 DMA6 DMD24 — RN35 56-8P4R
DMD36 DMD32 DMA12 DMA10 — RN31 56-8P4R
DDQM2 DMA13 DMD21 DDQS2 — RN38 56-8P4R
DMD49 DMD53 — R250 R249 56 56

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

DDR_VTT

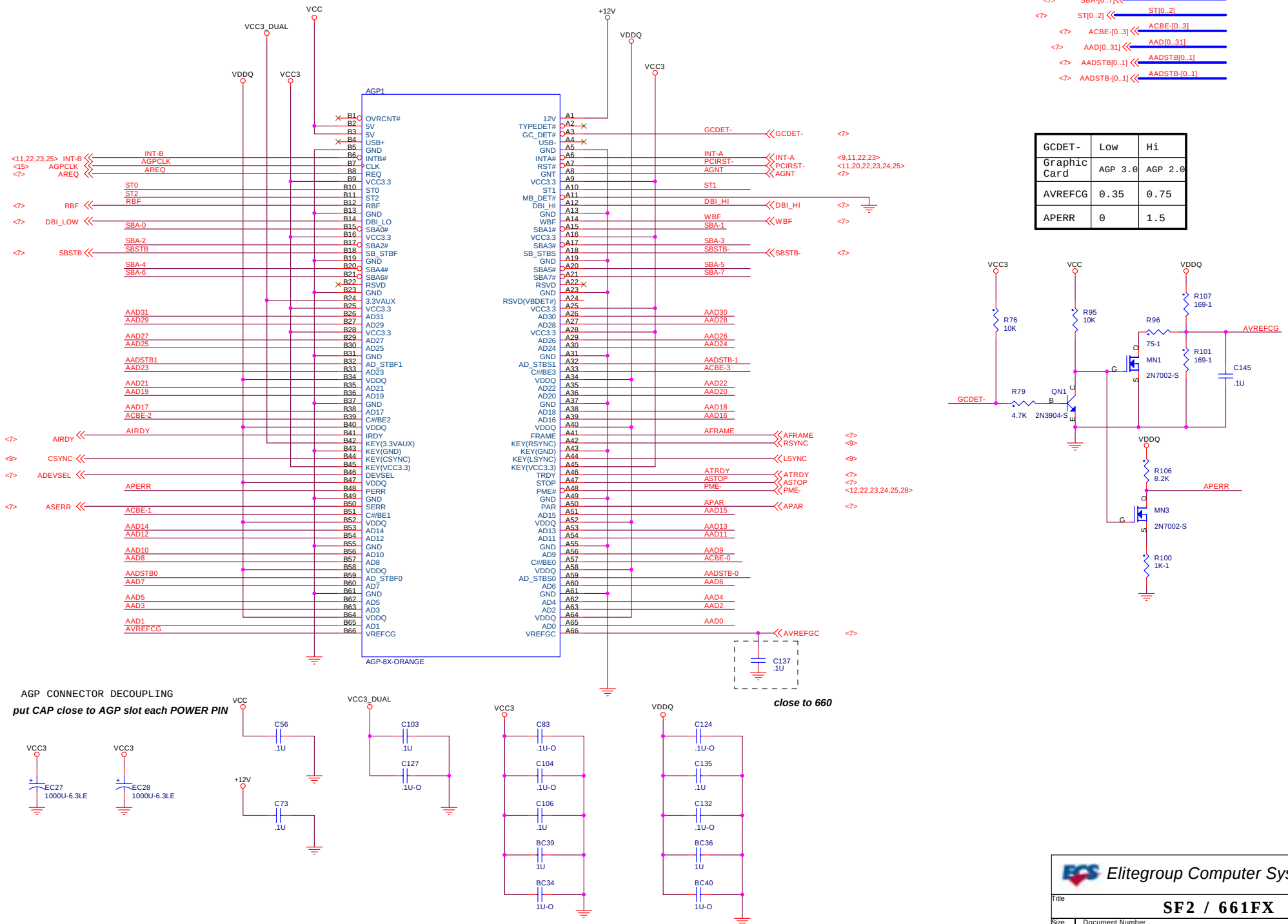
C248 C244 C240 C236 — .1U
C247 C243 C239 C235 — .1U
C246 C242 C238 C234 — .1U
C245 C241 C237 C233 — .1U

Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: DDR Termination | Rev: 1.0

Date: Friday, September 12, 2003 | Sheet 18 of 36

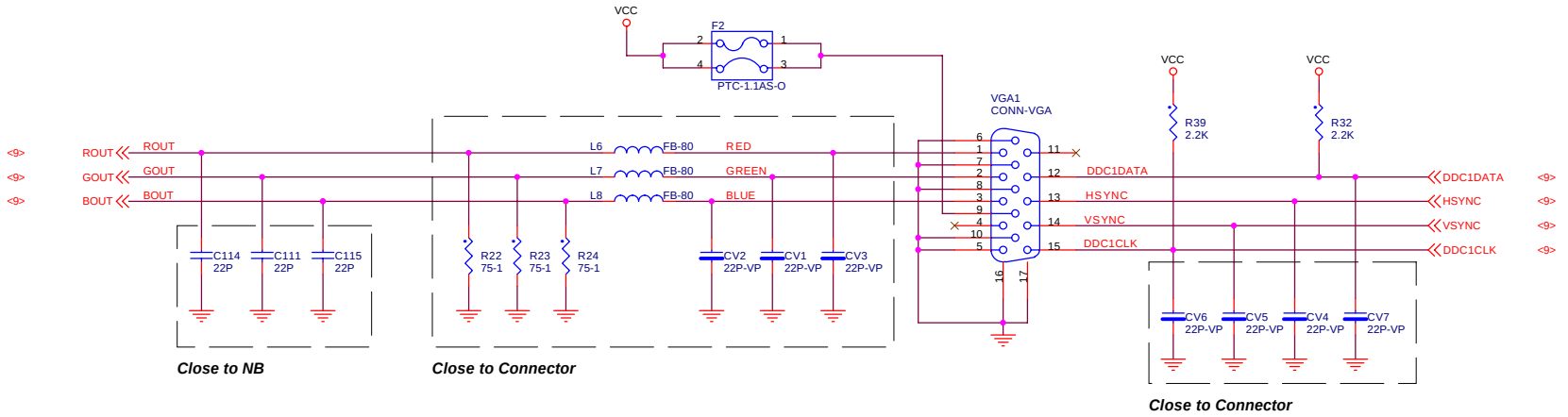


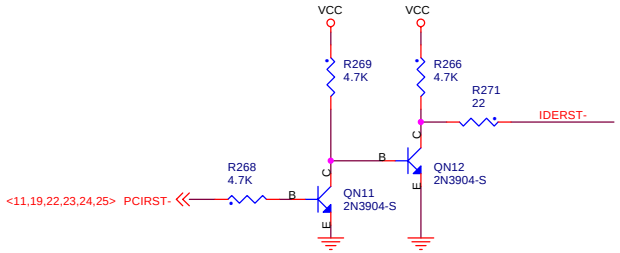
Elitegroup Computer Systems

Title: SF2 / 661FX

Size: Custom | Document Number: AGP Slot | Rev: 1.0

Date: Friday, September 12, 2003 | Sheet 19 of 36



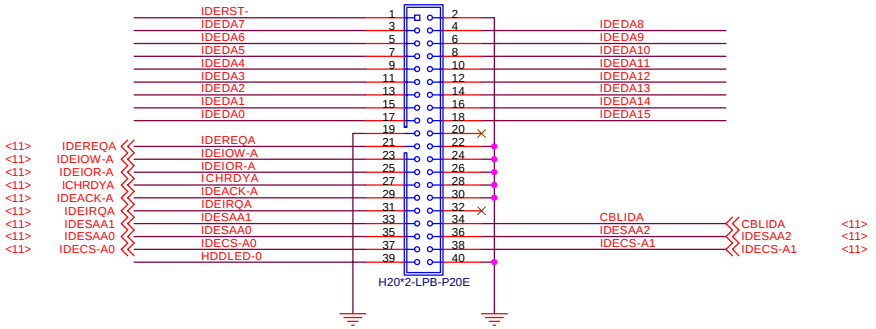


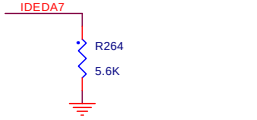
<11> IDEDA[0..15] IDEDA[0..15]

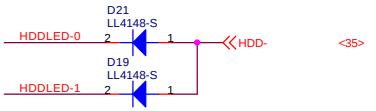
<11> IDEDB[0..15] IDEDB[0..15]

PRIMARY

IDE1

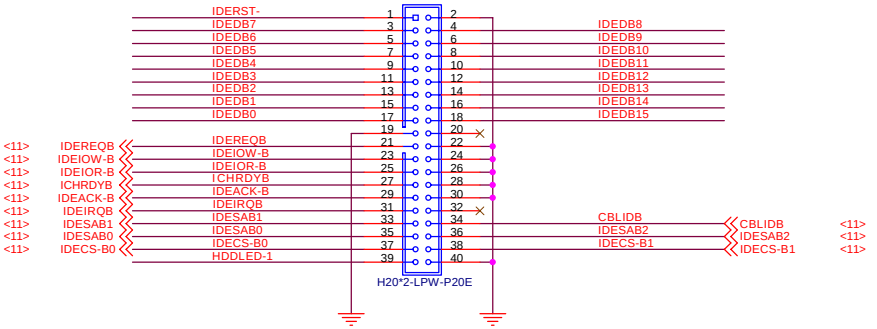


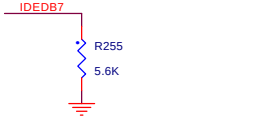




SECONDARY

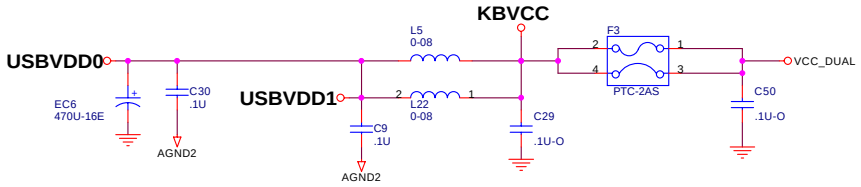
IDE2

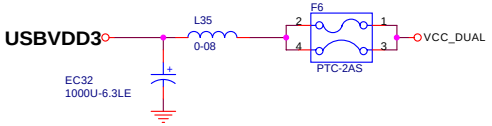


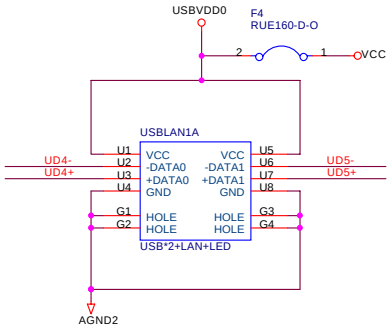


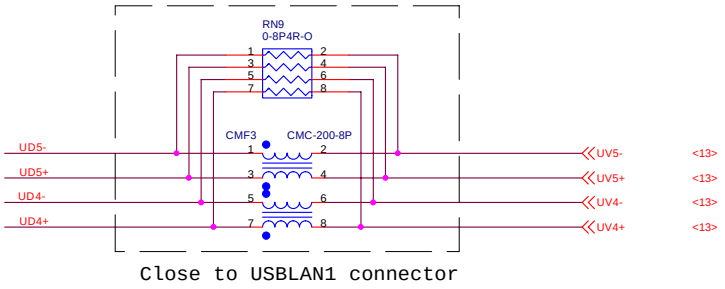
Elitegroup Computer Systems

Title	SF2 / 661FX	
Size: Custom	Document Number: VGA / IDE	Rev: 1.0
Date: Friday, September 12, 2003	Sheet 20 of 36	

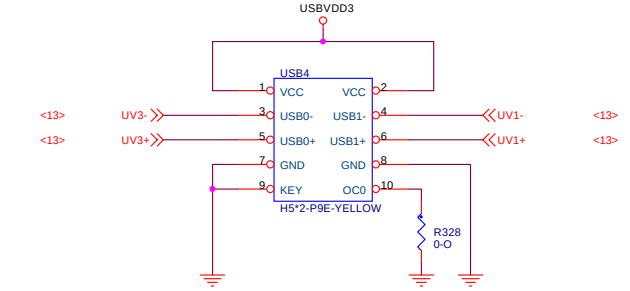


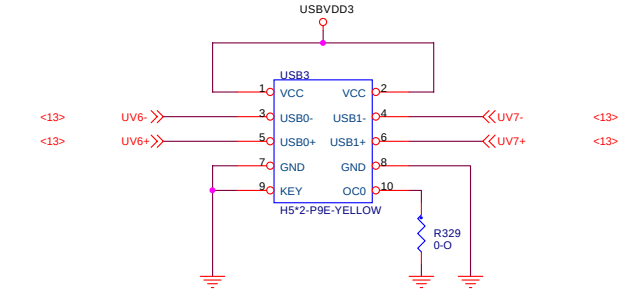


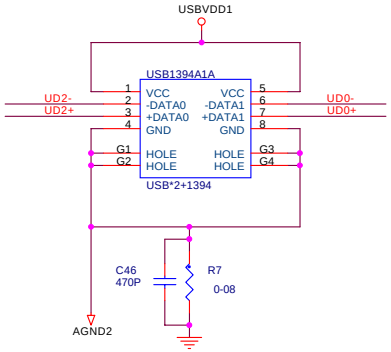


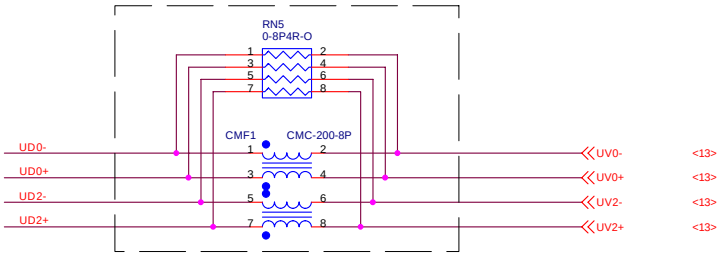


Close to USBLAN1 connector

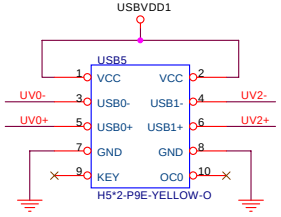






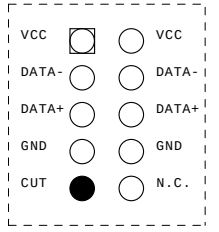


Close to USB1394A_J1 connector

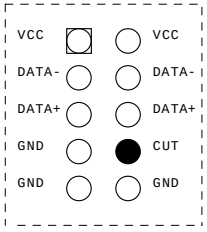


	USB port
Control 0	0, 3, 6
Control 1	1, 4, 7
Control 2	2, 5

Intel USB Header



ACER USB Header



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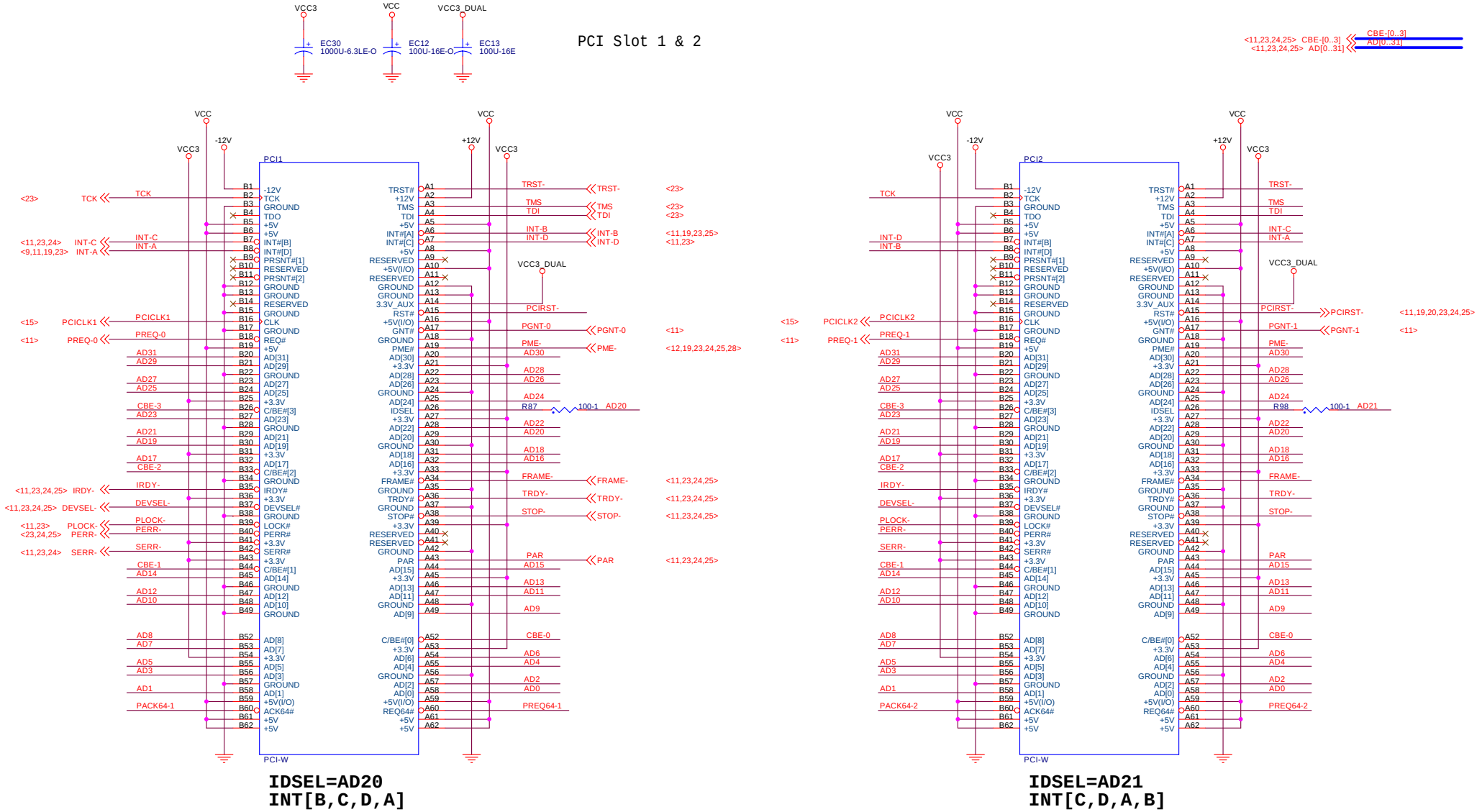
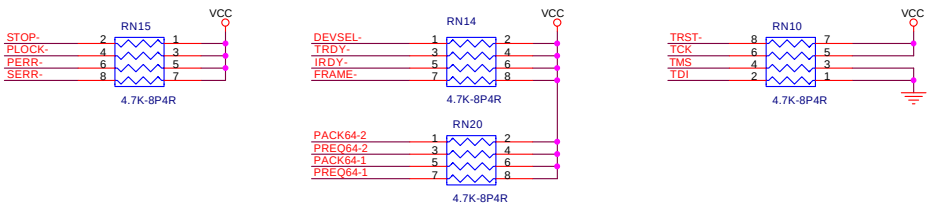
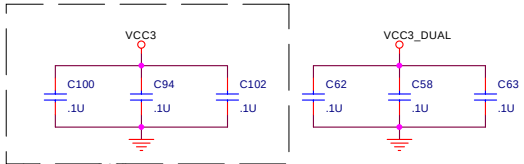
PCI Slot 1 & 2



IDSEL=AD20
INT[B,C,D,A]

IDSEL=AD21
INT[C,D,A,B]





每個 PCI 插槽 pin A33
各放一顆

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Title	SF2 / 661FX	
Size: Custom	Document Number: PCI Slot1,2	Rev: 1.0
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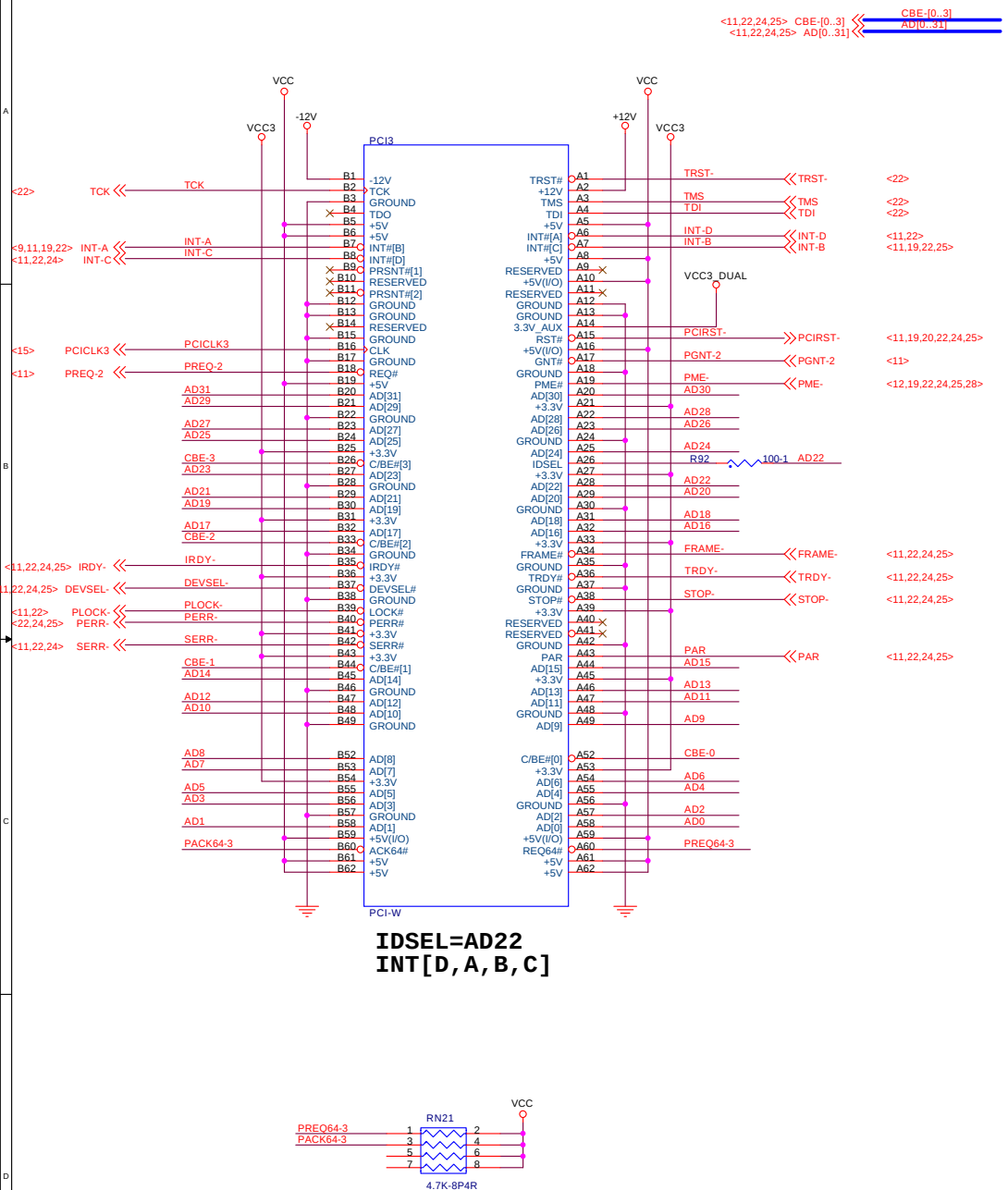

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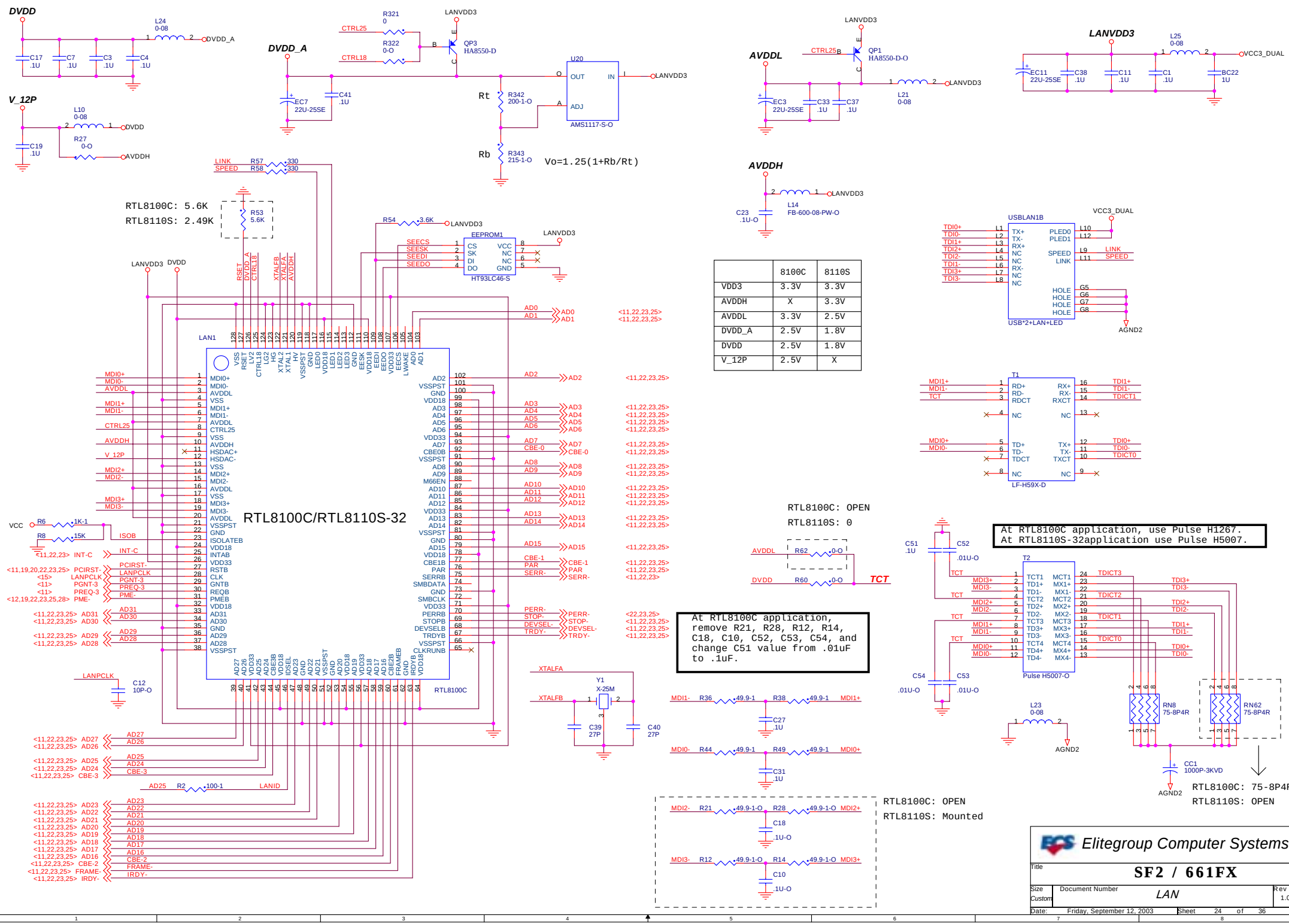
Title	SF2 / 661FX	
Size: Custom	Document Number: PCI Slot3	Rev: 1.0
Date: Friday, September 12, 2003	Sheet 23 of 36	



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

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Title: SF2 / 661FX

Size: Custom | Document Number: LAN | Rev: 1.0

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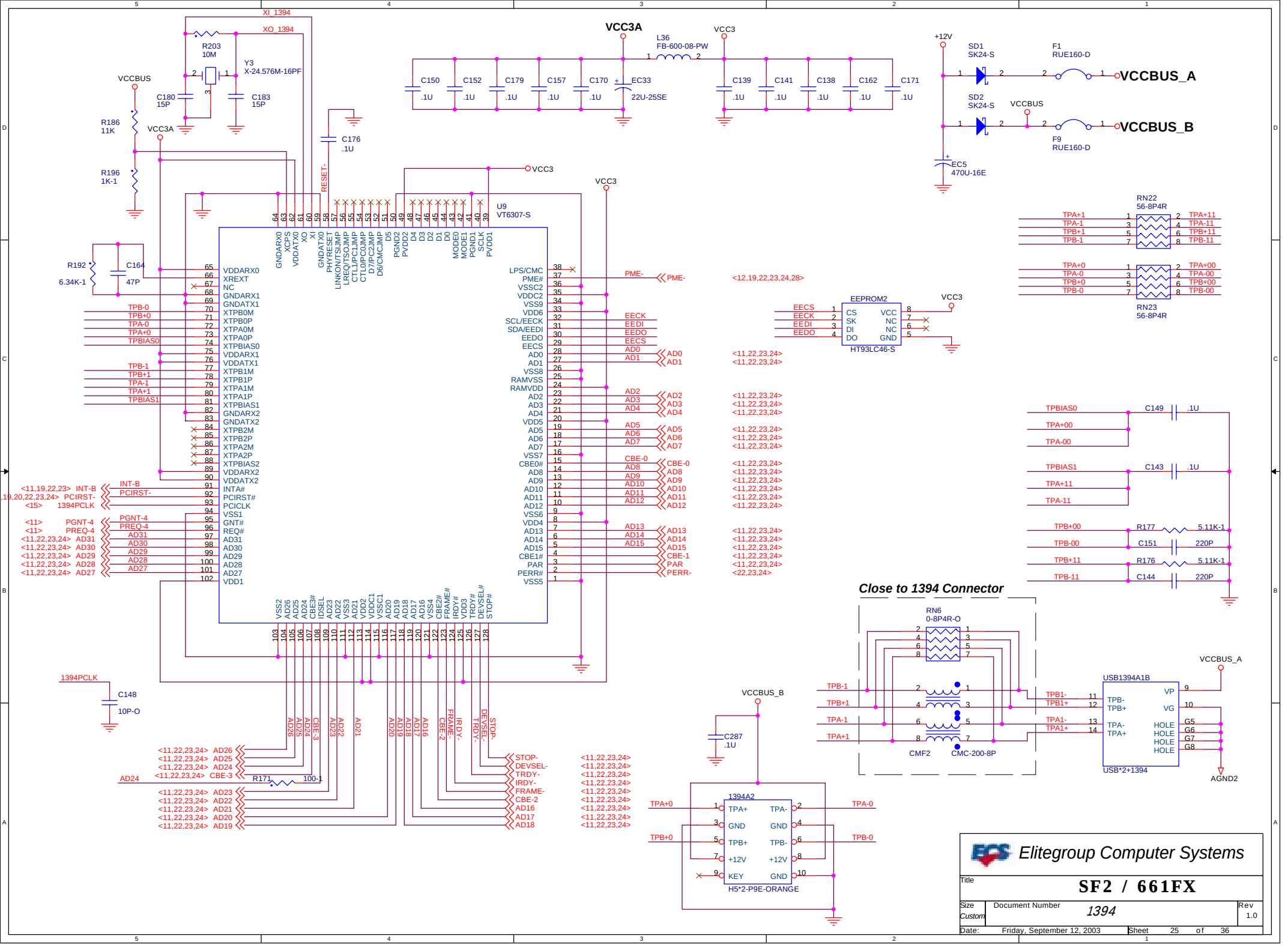
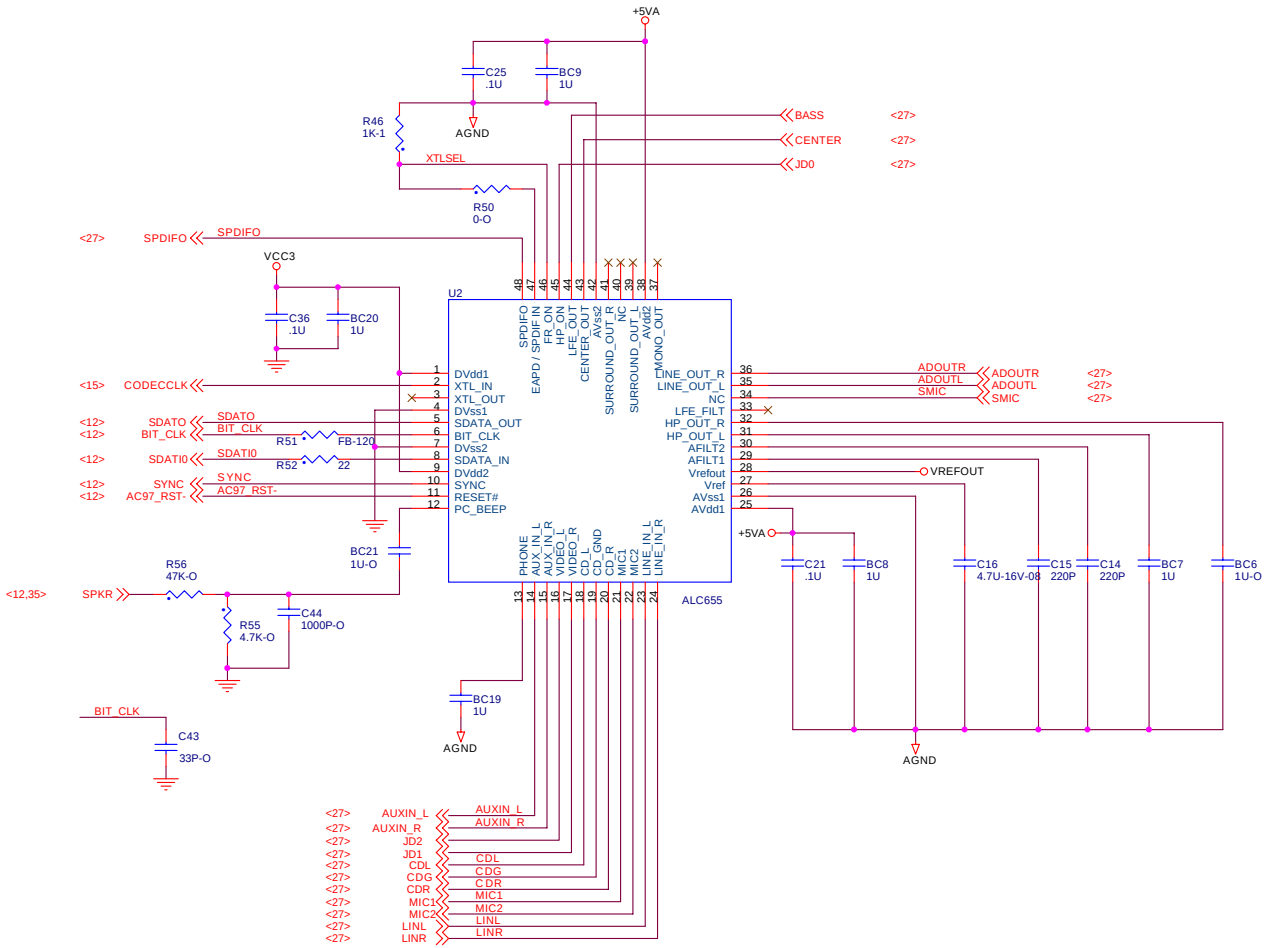
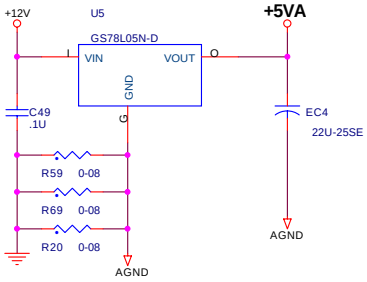


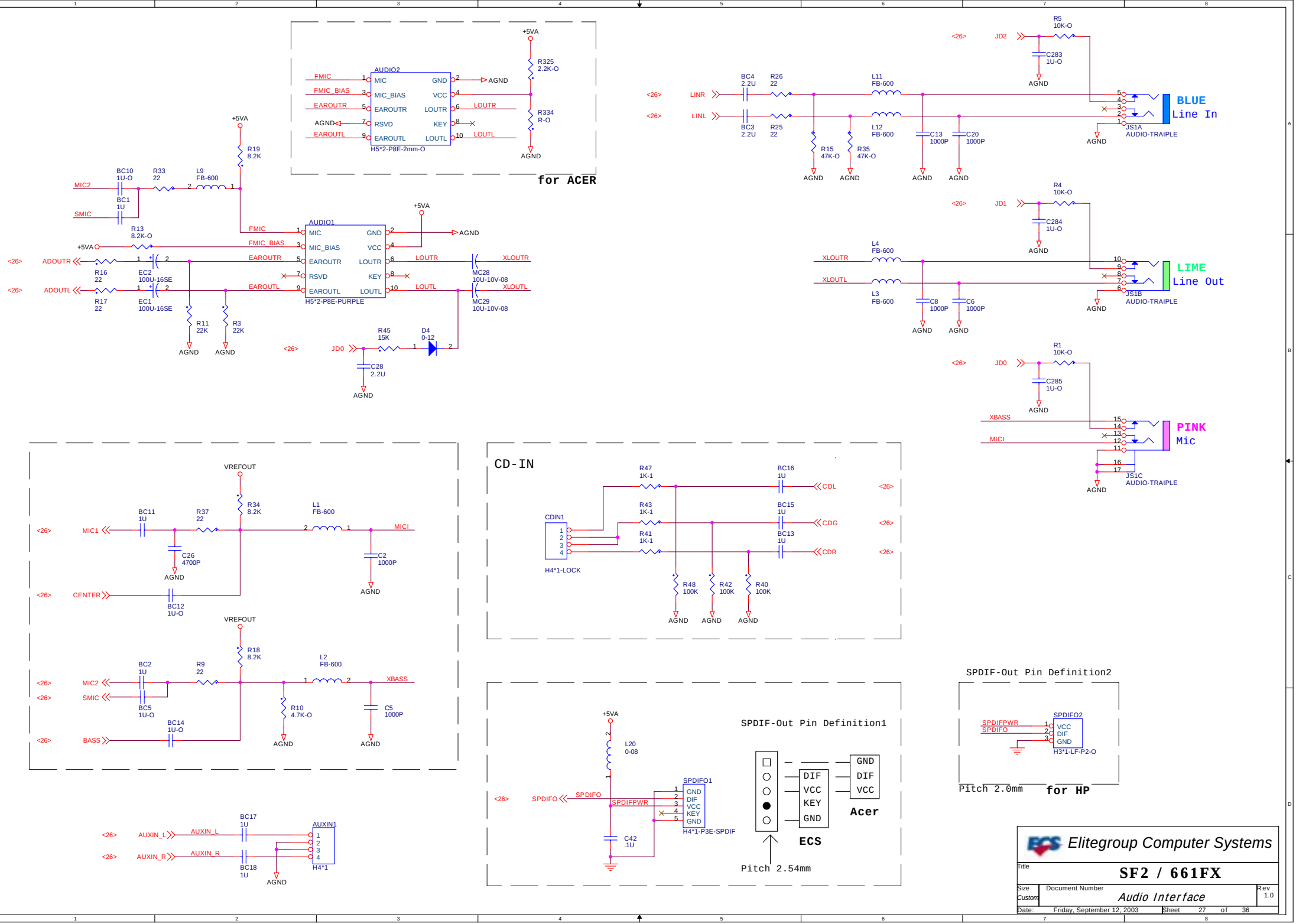
Elitegroup Computer Systems

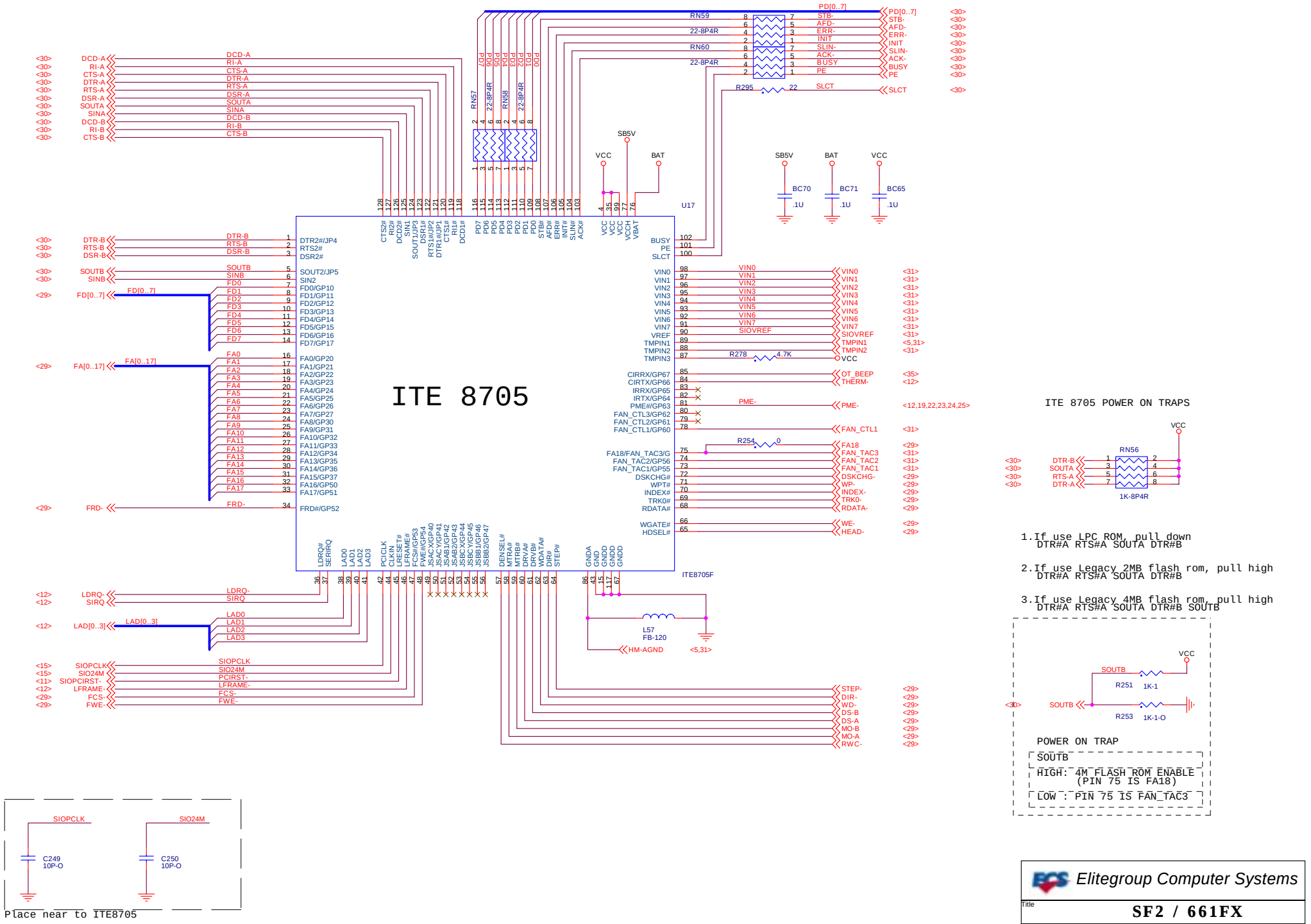
Title	SF2 / 661FX	
Size: Custom	Document Number: 1394	Rev: 1.0
Date: Friday, September 12, 2003	Sheet 25 of 36	





Elitegroup Computer Systems			
Title	SF2 / 661FX		
Size: Custom	Document Number: Audio Codec		Rev: 1.0
Date: Friday, September 12, 2003	Sheet 26 of 36		


for ACER
AUDIO2
H5*2-P8E-2mm-O
AUDIO1
H5*2-P8E-PURPLE
BLUE
Line In
LIME
Line Out
PINK
Mic
JS1A
AUDIO-TRAIPLE
JS1B
JS1C
CD-IN
CDIN1
H4*1-LOCK
SPDIF-Out Pin Definition1
SPDIF-Out Pin Definition2
SPDIFO1
H4*1-P3E-SPDIF
SPDIFO2
H3*1-LF-P2-O
Acer
ECS
Pitch 2.54mm
Pitch 2.0mm
for HP
AUXIN1
H4*1
Elitegroup Computer Systems
SF2 / 661FX
Audio Interface
Friday, September 12, 2003



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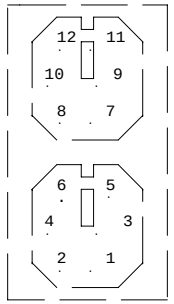
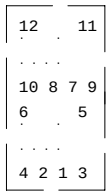
CONNECTOR VIEW



TOP VIEW



KBVCC

KBDAT
PMDAT
KBCLK
PMCLK

RN7
4.7K-8P4R

L19
FB-600-08-PW

L18
FB-120

L16
FB-120

L17
FB-120

L15
FB-120

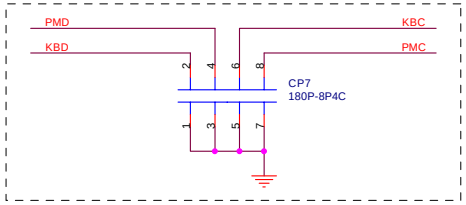
<12> KBDAT — KBDAT — KBD
<12> KBCLK — KBCLK — KBC
<12> PMDAT — PMDAT — PMD
<12> PMCLK — PMCLK — PMC

PSKBM1
MINI-DUAL-6P-CSR

C24
.1U

R29
0

PLACE NEAR CONNECTOR



VCC

R257
4.7K-O

R258
330-O

QN9
2N3904-S-O

QN10
2N3904-S-O

FLASH_EN-

FWE-

R273
10K

JP3
H3*1

JP3	BIOS PROTECT
1-2	Write Enable
2-3	Write Disable

<28> FD[0..7]
<28> FA[0..17]

R252
4.7K

FCS-
FRD-
FA18
PGM-

ROM1
PLCC-32PBR

BC64
.1U

RN55
4.7K-8P4R

RN54
4.7K-8P4R

FD0 FD1 FD2 FD3 FD4 FD5 FD6 FD7

FDC

R306
150-1

RN61
150-8P4R

FDD1
H17*2-LPW-P5E

RWC-
INDEX-
MO-A
DS-B
DS-A
MO-B
DIR-
STEP-
WD-
WE-
TRK0-
WP-
RDATA-
HEAD-
DSKCHG-

Title: SF2 / 661FX

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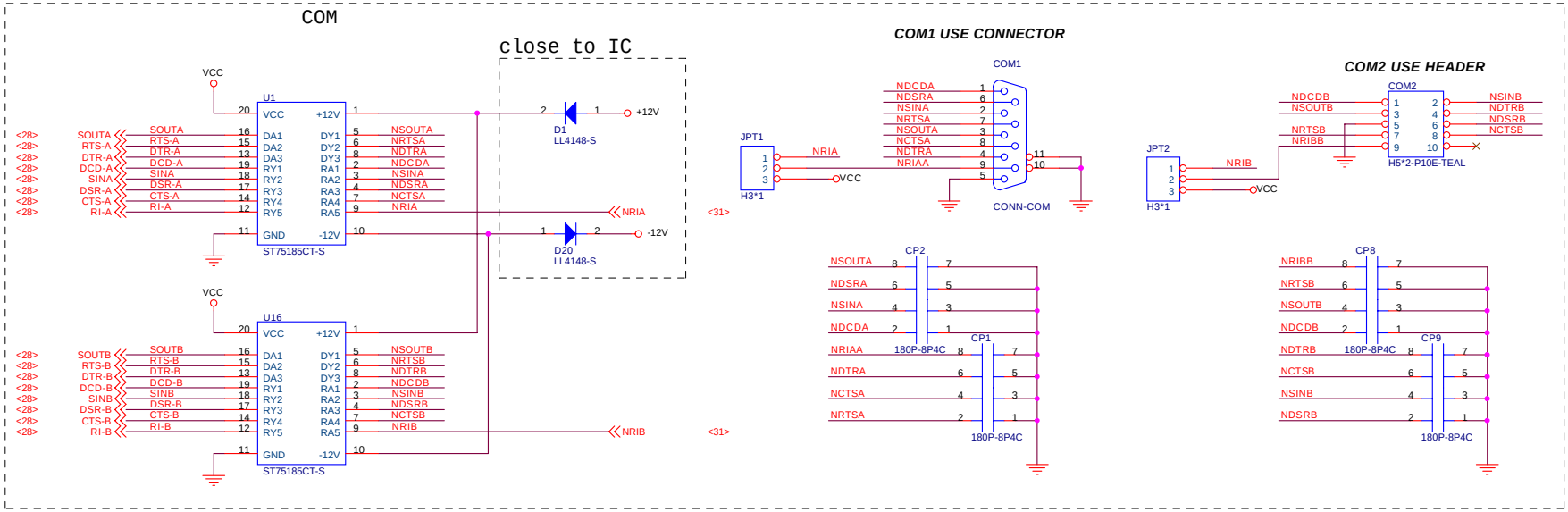

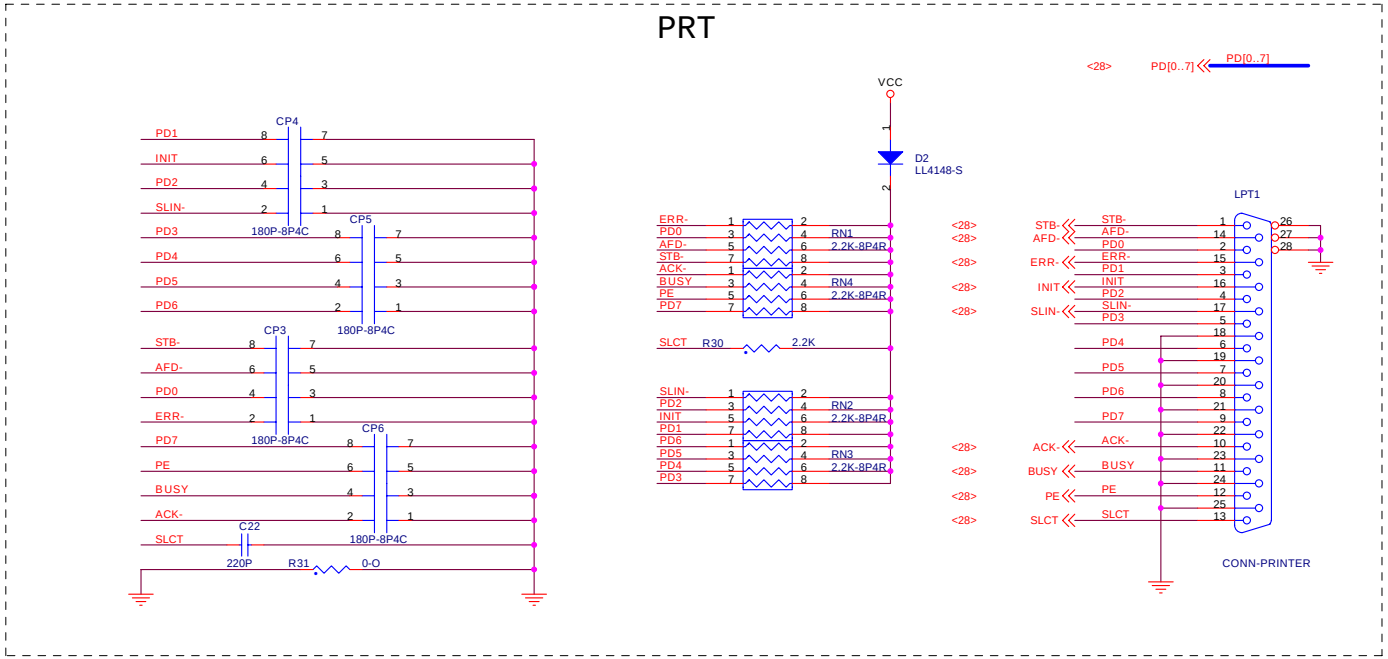

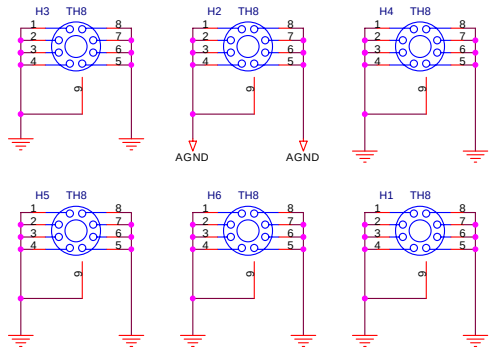

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Title	SF2 / 661FX	
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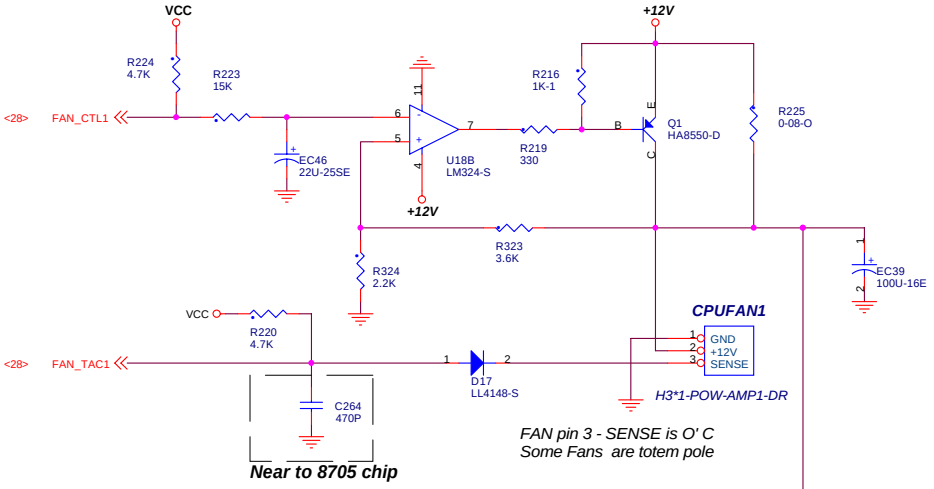
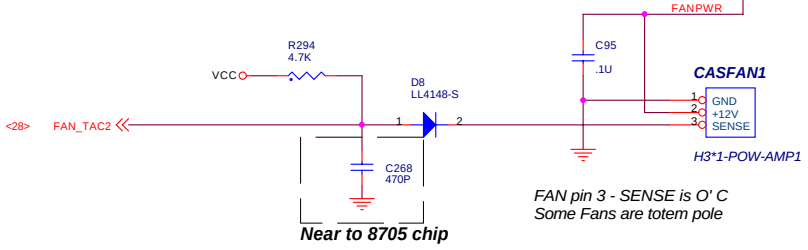
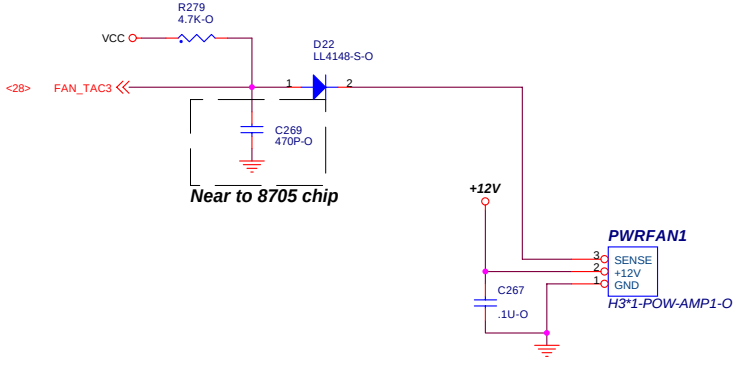
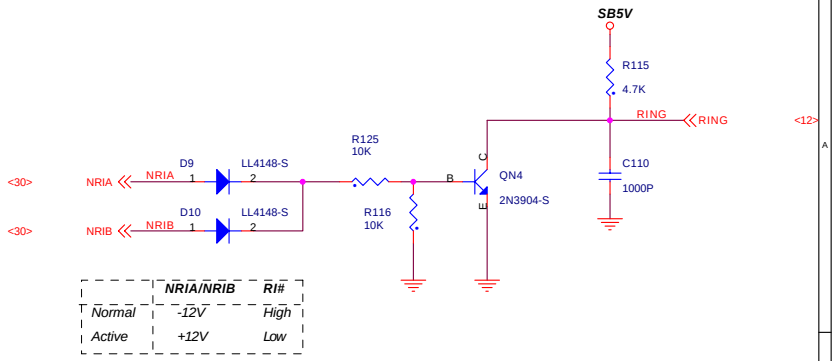
Layout :

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





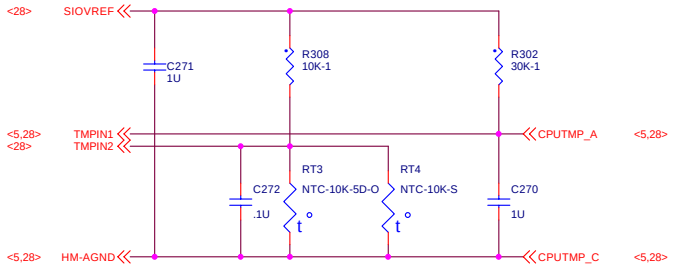




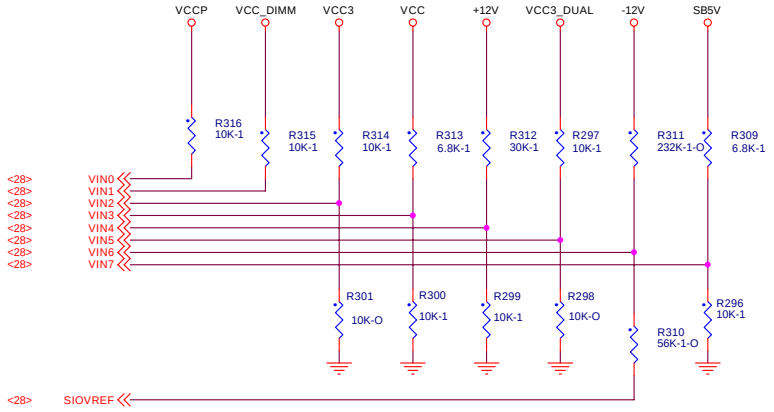
	NRIA/NRIB	RI#
Normal	-12V	High
Active	+12V	Low

Temperature Monitor

Choosing method of measuring temperature by either thermistor or diode



Voltage Monitor



Elitegroup Computer Systems

Title: **SF2 / 661FX**

Size: Custom | Document Number: HM / FAN / RING | Rev: 1.0

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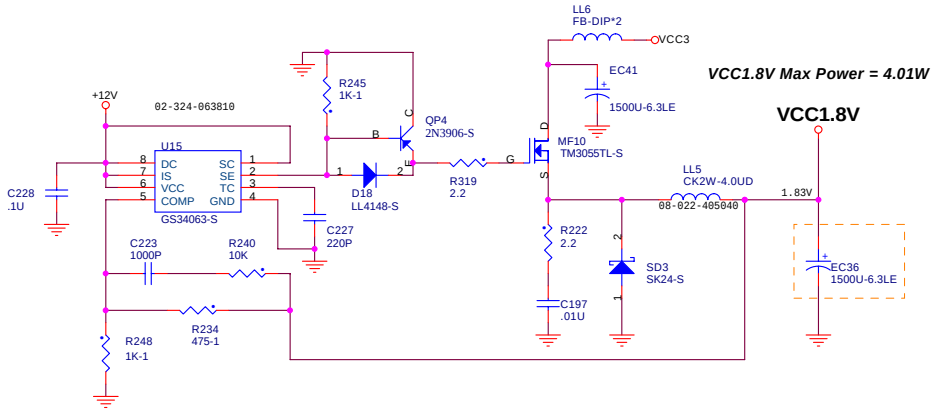
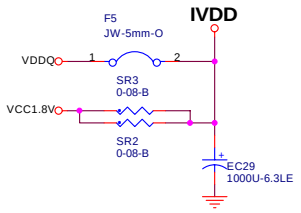
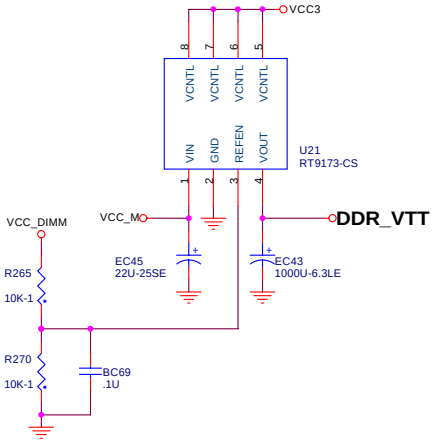
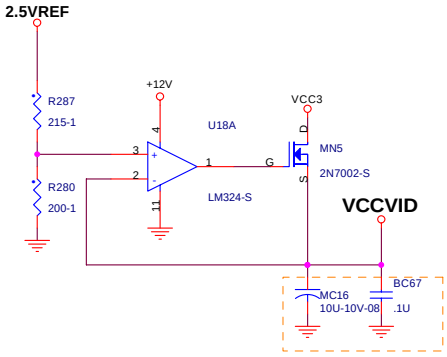


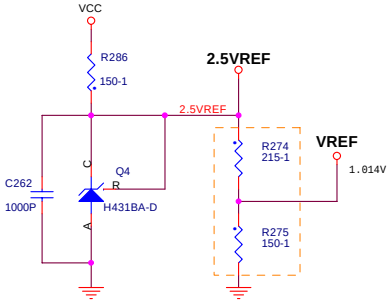


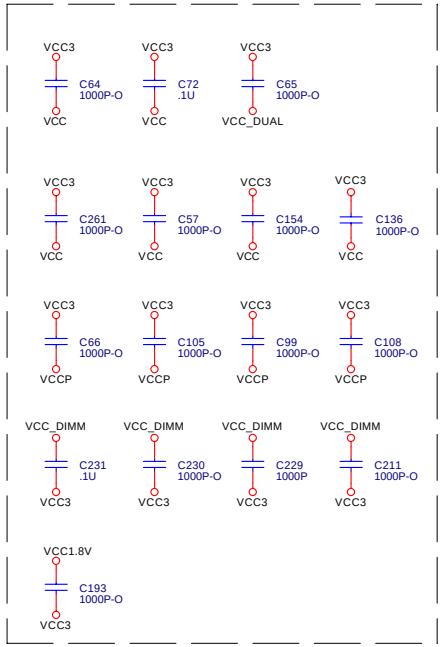




	IVDD	VCC1.8V	
648	1.8V	1.8V	short two power plane, one regulator
648FX	1.9V	1.9V	short two power plane, one regulator
661FX	1.8V	1.8V	short two power plane, one regulator or two regulator
661FXLV	1.5V	1.8V	two regulator

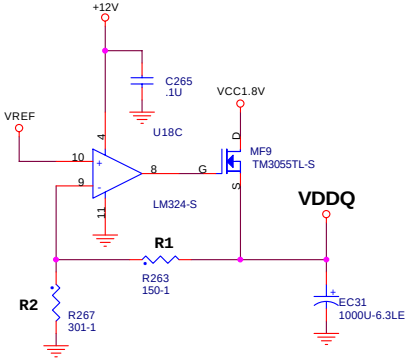
	AUX_IVDD	SB1.8V	
648	1.8V	1.8V	short two power plane, one regulator
648FX	1.9V	1.9V	short two power plane, one regulator
661FX	1.8V	1.8V	short two power plane, one regulator
661FXLV	1.5V	1.8V	two regulator



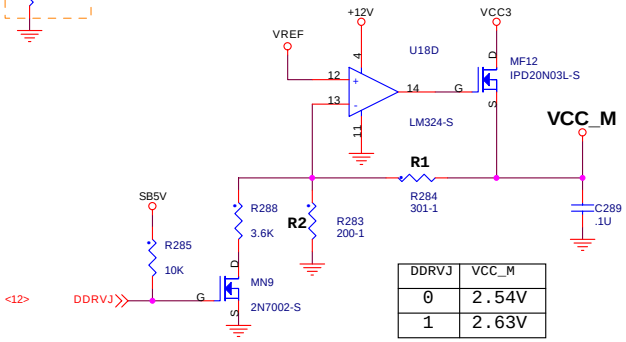


平均分佈在POWER PLAN 和 PLAN 之間

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



Vo=VREF(1 + R1/R2)



DDRVJ	VCC_M
0	2.54V
1	2.63V

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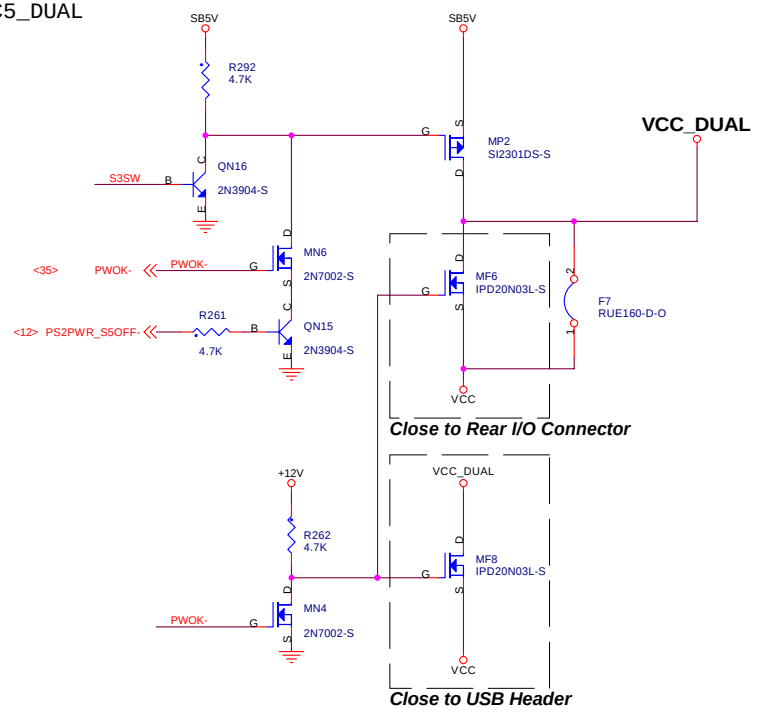
AUTO VOLTAGE SWITCH FOR ACPI STATE 3

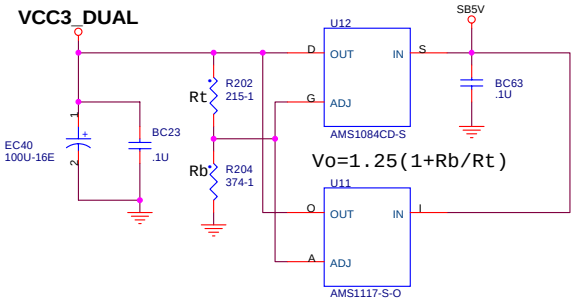
1.IN S0,S1
THIS CIRCUIT PASSES THE NORMAL POWER

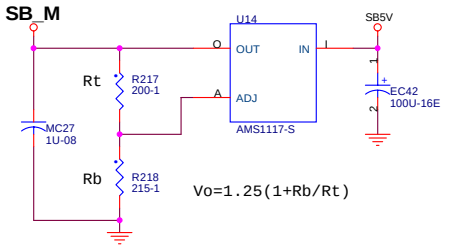
2.IN S3,S4,S5
THIS CIRCUIT PASSES THE STANDBY POWER

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)

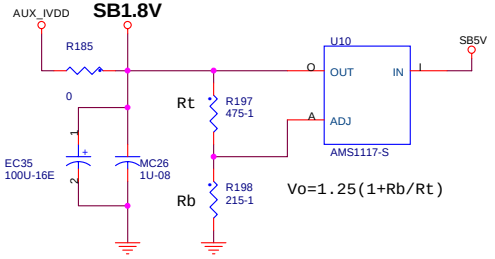
VCC3_DUAL & VCC5_DUAL



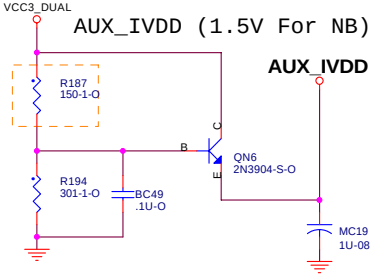


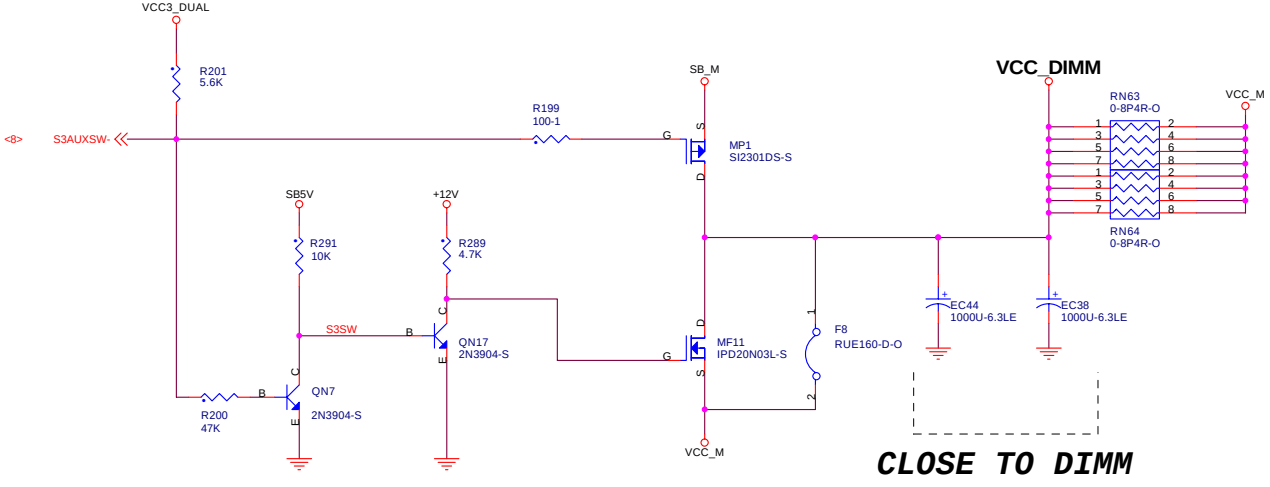


SB1.8V (For SB) 450mA



AUX_IVDD (1.5V For NB) 10mA





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Title	SF2 / 661FX	
Size: Custom	Document Number: Dual 5V&3V, STR	Rev: 1.0
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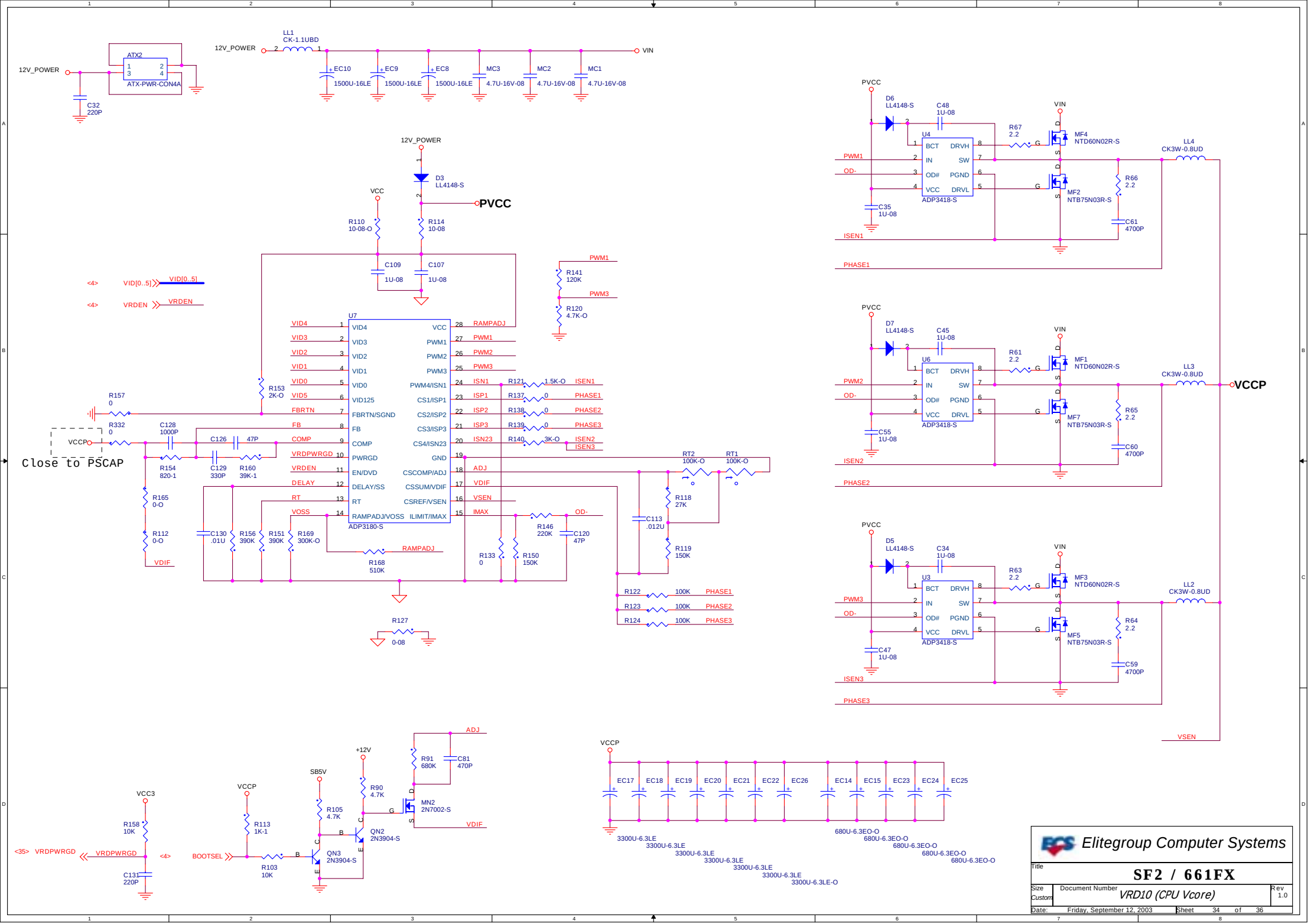
12V_POWER
ATX2
ATX-PWR-CON4A
C32 220P
LL1 CK-1.1UBD
EC10 1500U-16LE
EC9 1500U-16LE
EC8 1500U-16LE
MC3 4.7U-16V-08
MC2 4.7U-16V-08
MC1 4.7U-16V-08
VIN
D3 LL4148-S
PVCC
VCC
R110 10-08-O
R114 10-08
C109 1U-08
C107 1U-08
PWM1
R141 120K
PWM3
R120 4.7K-O
<4> VID[0..5]
<4> VRDEN
U7
ADP3180-S
VID4
VID3
VID2
VID1
VID0
VID125
FBRTN/SGND
FB
COMP
PWRGD
EN/DVD
DELAY/SS
RT
RAMPADJ/VOSS
RAMPADJ
VCC
PWM1
PWM2
PWM3
PWM4/ISN1
CS1/ISP1
CS2/ISP2
CS3/ISP3
CS4/ISN23
GND
CSCOMP/ADJ
CSSUM/VDIF
CSREF/VSEN
ILIMIT/IMAX
ADJ
VDIF
VSEN
IMAX
ISN1
ISP1
ISP2
ISP3
ISN23
R153 2K-O
R157 0
R332 0
C128 1000P
C126 47P
C129 330P
R160 39K-1
R154 820-1
R165 0-O
R112 0-O
C130 .01U
R156 390K
R151 390K
R169 300K-O
R168 510K
R127 0-08
R121 1.5K-O
R137 0
R138 0
R139 0
R140 3K-O
ISEN1
ISEN2
ISEN3
PHASE1
PHASE2
PHASE3
RT2 100K-O
RT1 100K-O
R118 27K
R119 150K
C113 .012U
R146 220K
C120 47P
R133 0
R150 150K
R122 100K
R123 100K
R124 100K
OD-
VCCP
Close to PSCAP
D6 LL4148-S
C48 1U-08
U4 ADP3418-S
BCT
IN
OD#
VCC
DRVH
SW
PGND
DRVL
R67 2.2
MF4 NTD60N02R-S
MF2 NTB75N03R-S
R66 2.2
C61 4700P
C35 1U-08
LL4 CK3W-0.8UD
D7 LL4148-S
C45 1U-08
U6 ADP3418-S
R61 2.2
MF1 NTD60N02R-S
MF7 NTB75N03R-S
R65 2.2
C60 4700P
C55 1U-08
LL3 CK3W-0.8UD
D5 LL4148-S
C34 1U-08
U3 ADP3418-S
R63 2.2
MF3 NTD60N02R-S
MF5 NTB75N03R-S
R64 2.2
C59 4700P
C47 1U-08
LL2 CK3W-0.8UD
VCC3
R158 10K
C131 220P
<35> VRDPWRGD
VRDPWRGD
<4>
BOOTSEL
R113 1K-1
R103 10K
SB5V
R105 4.7K
QN3 2N3904-S
QN2 2N3904-S
+12V
R90 4.7K
MN2 2N7002-S
R91 680K
C81 470P
EC17 3300U-6.3LE
EC18 3300U-6.3LE
EC19 3300U-6.3LE
EC20 3300U-6.3LE
EC21 3300U-6.3LE
EC22 3300U-6.3LE
EC26 3300U-6.3LE-O
EC14 680U-6.3EO-O
EC15 680U-6.3EO-O
EC23 680U-6.3EO-O
EC24 680U-6.3EO-O
EC25 680U-6.3EO-O
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Title
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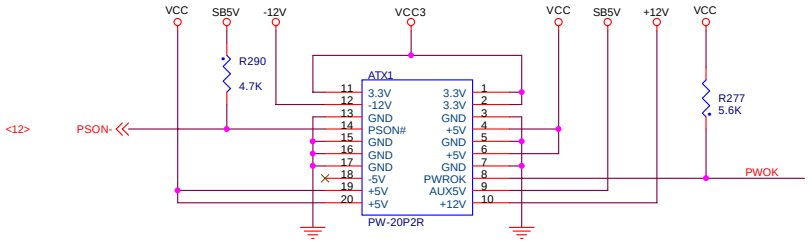
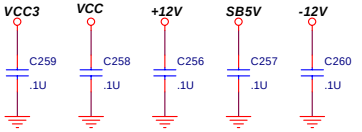
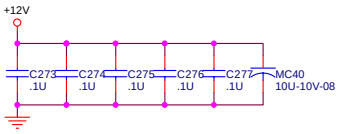
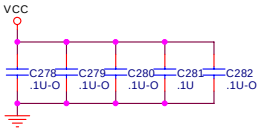


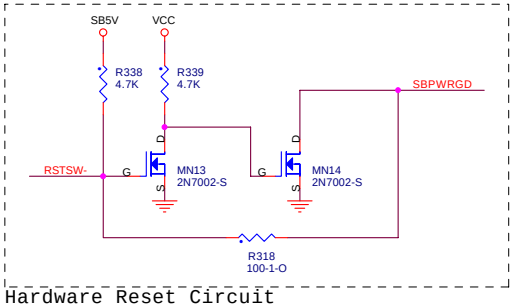


Layout :

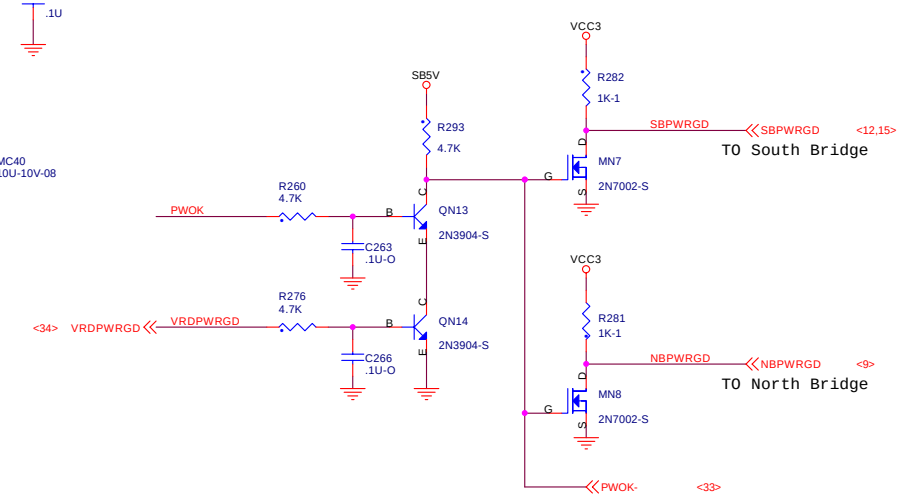
Bypass capacitors close to ATX power connector for EMI solution.





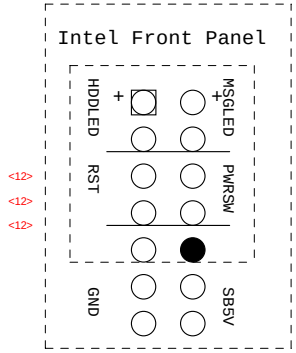


Hardware Reset Circuit

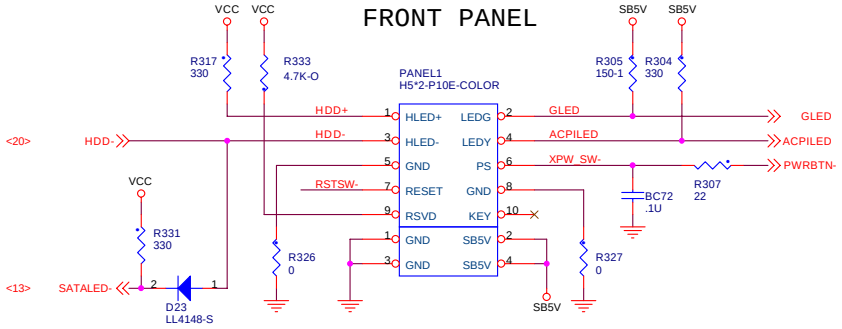


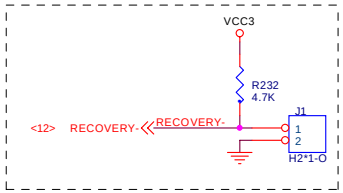
Acer Front Panel

Intel Front Panel

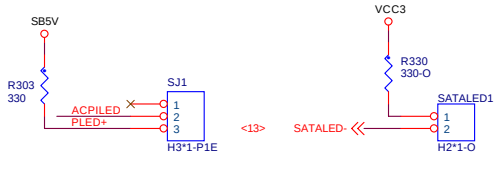


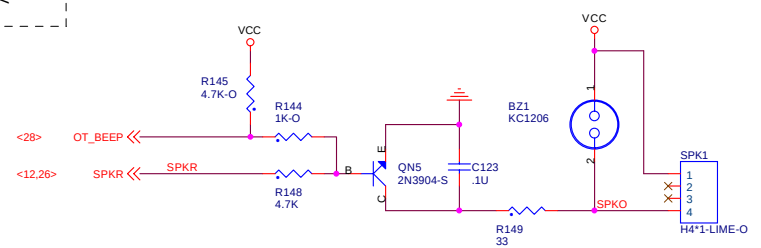
FRONT PANEL



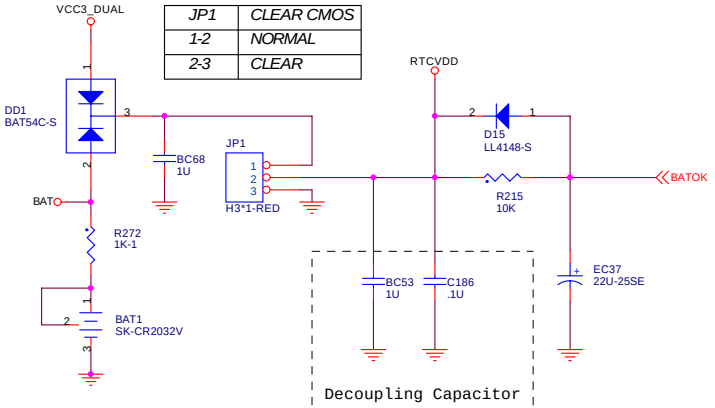


For Acer





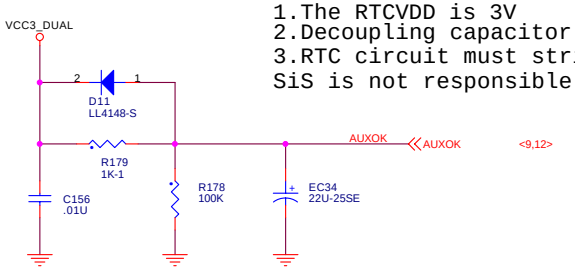
RTC



JP1	CLEAR CMOS
1-2	NORMAL
2-3	CLEAR

Decoupling Capacitor

Place close to 963



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.

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