RS780LQ-CM V1.0

09/7/23

SCHEMATICS TABLE:

Page	Index	Page	Index
1	COVER PAGE	17	SB710-STRAPS
2	BLOCK DIAGRAM	18	CRT(D-sub)-VGA
3	HT,CPU MEMORY	19	PCIE-16X/1X SLOT
4	CPU CONTROL & MISC	20	TPM, USB, 5VDUAL SWITCH
5	CPU PWR & GND	21	PCI SLOT
6	DDR3 DIMM	22	SIO IT8720-PS2/FDD/CIR
7	RS740/RS780-HT LINK I/F	23	LPT/COM PORT
8	RS740/RS780-PCIE I/F	24	LAN 8103EL/8102EL/8111DL
9	RS740/RS780-SYSTEM I/F	25	AUDIO ALC662/ALC888
10	RS740/RS780-SPMEM/STRAPS	26	ALC662/ALC888(PANEL)
11	RS740/RS780-POWER	27	ISL6323B VCORE VOLTAGE
12	CLOCK GENERATOR-ICS9LPRS471	28	DC POWER, DDRIII POWER
13	SB710-PCIE/PCI/CPU/LPC/CLK	29	NB CORE POWER
14	SB710-ACPI/GPIO/USB/AUDIO	30	PANEL,ATX24P,SMRT FAN,BUZZER
15	SB710-POWER & DECOUPLING	31	POWER ENABLE
16	SB710-SATA/IDE/HWM/SPI	32	Attention

*Reference Document:

42336_rs780_dg_nda_2.00

43303_sb700_dg_nda_1.05

PCB STACK:
L1:TOP
L2:PWR
L3:GND
L4:BOTTOM

REVISION HISTORY:

Rev	Date	Notes
V.A	2009.7.22	First release
V1.0	2009.8.14	P20, Modify GP40 pull-high to fix S3 issue
		P29, Modify U20 VDDA circuit
		P30, Modify Buzzer circuit
	2009.914	P09, Reserve the gate circuit to prevent from the glitch

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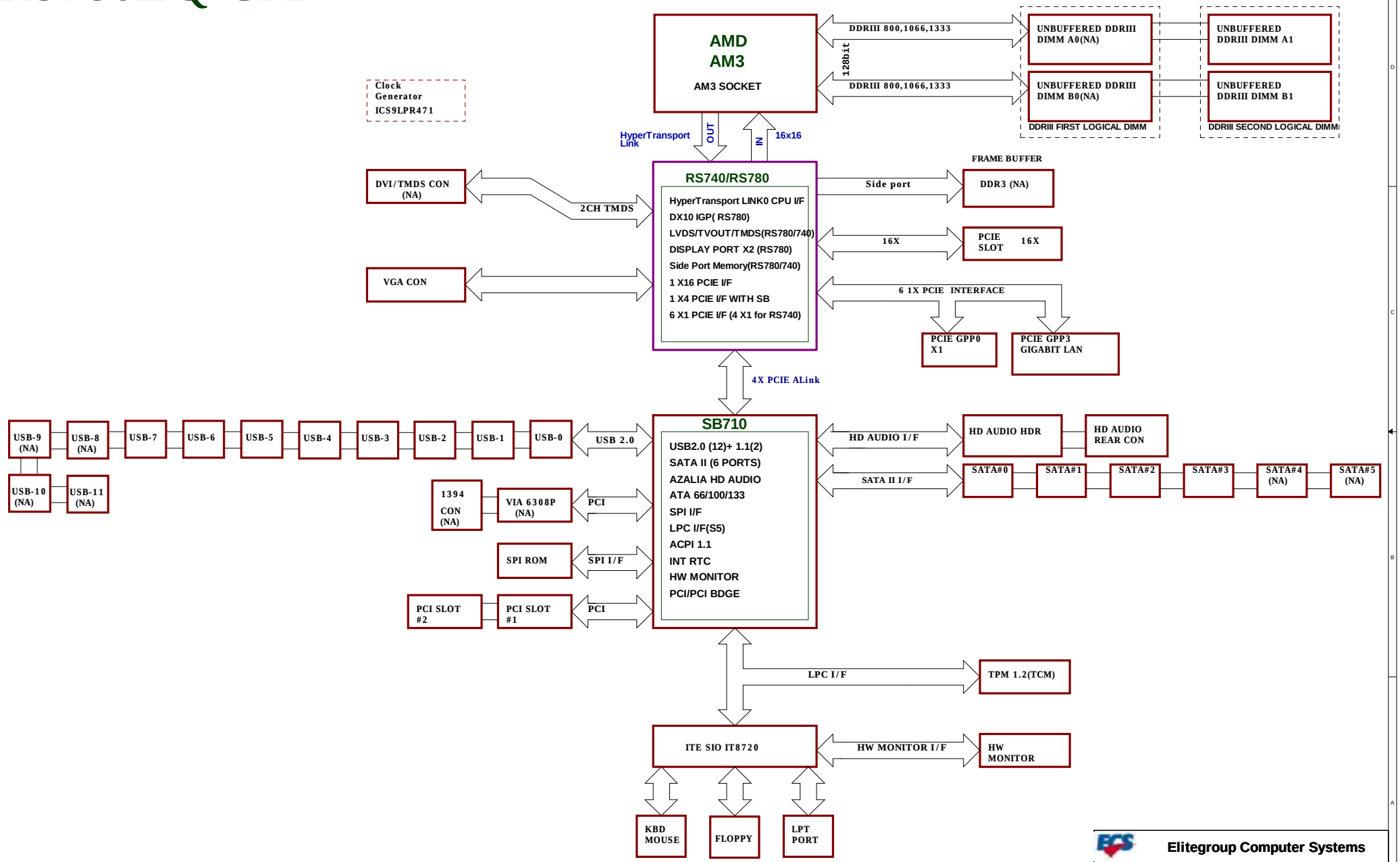
Title: Cover Page

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 1 of 32

RS780LQ-CM



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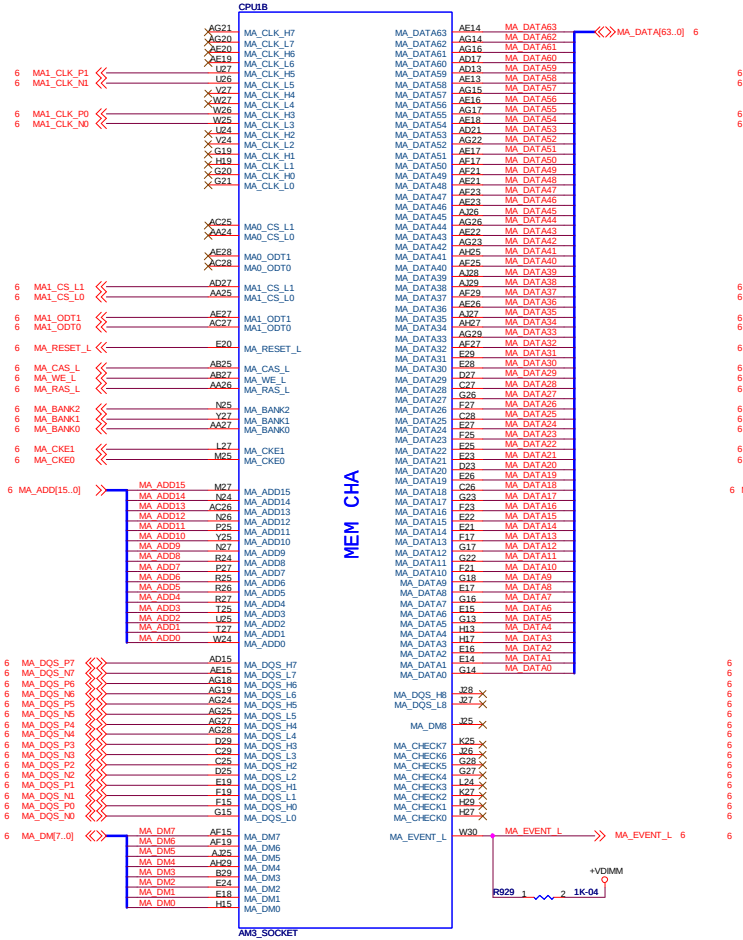
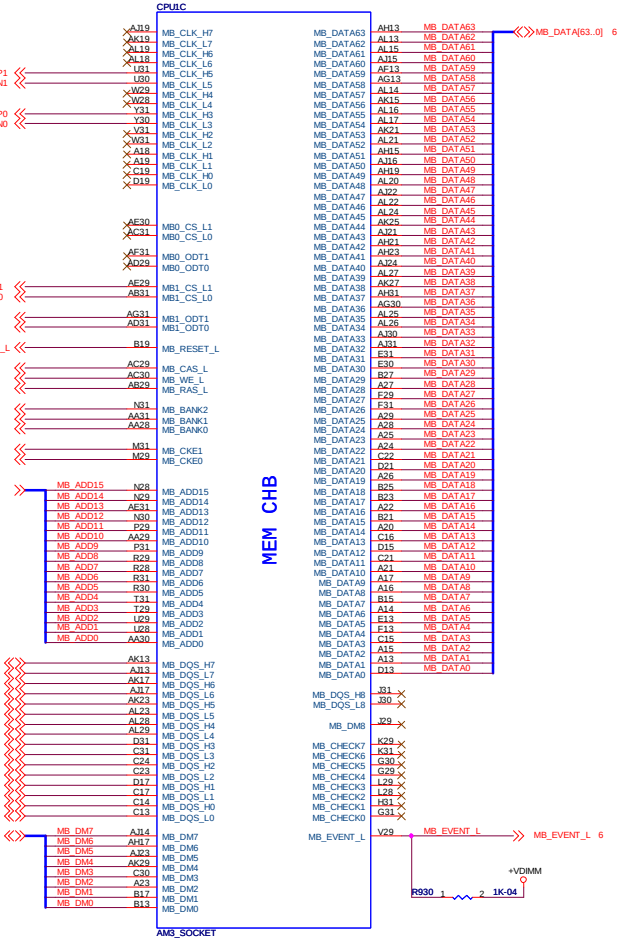
Title	BLOCK DIAGRAM	
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 2 of 32	

CPU Memory

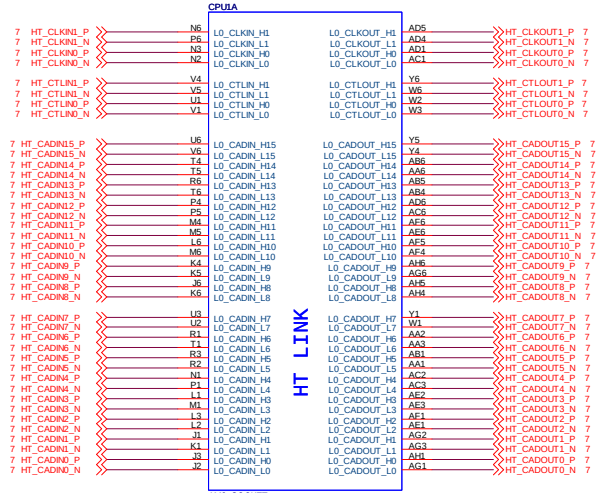
DDR3 Memory Interface A



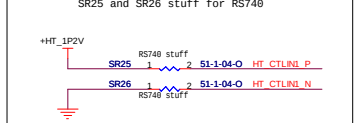
DDR3 Memory Interface B



HT LINK



SR25 and SR26 stuff for RS740



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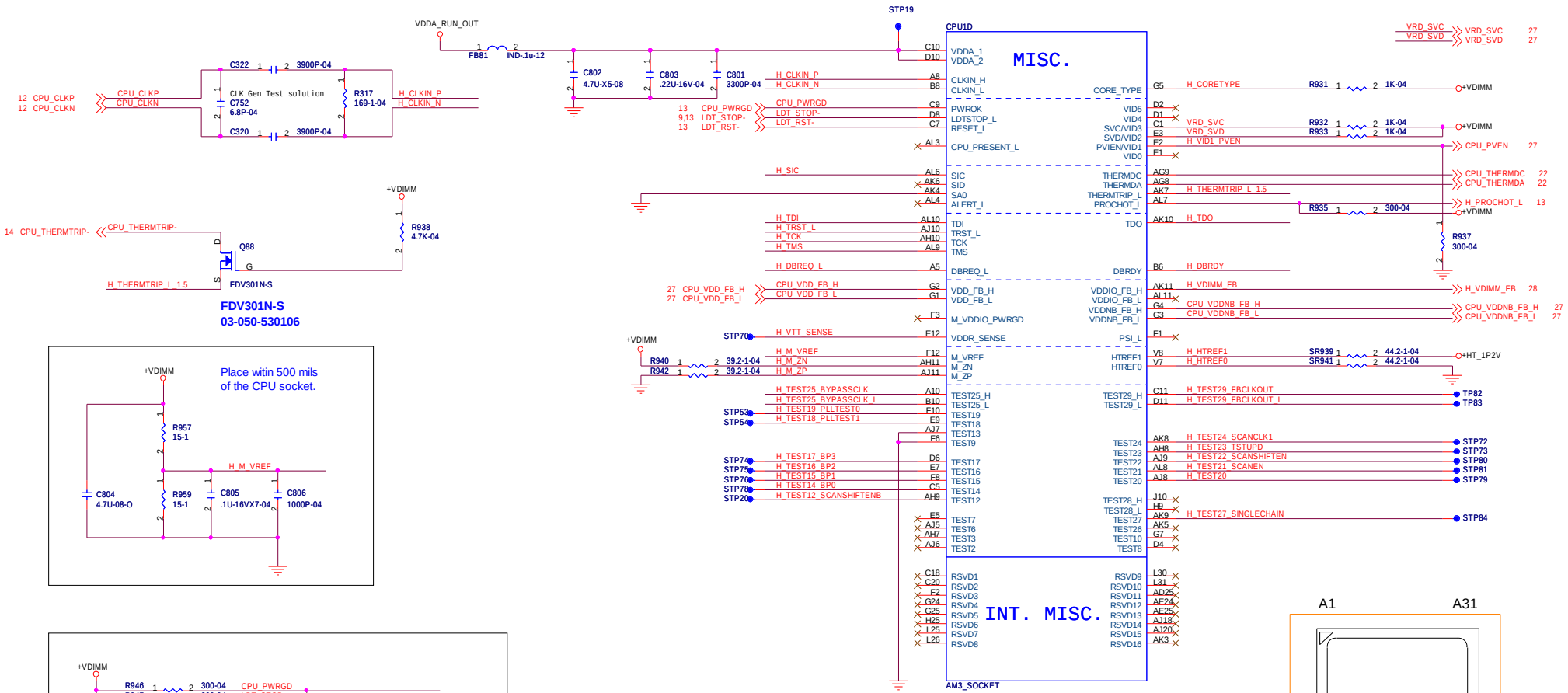
Title	BLOCK DIAGRAM		
Size: Custom	Document Number: RS780LQ-CM		Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 3 of 32		

CPU Control and Miscellaneous



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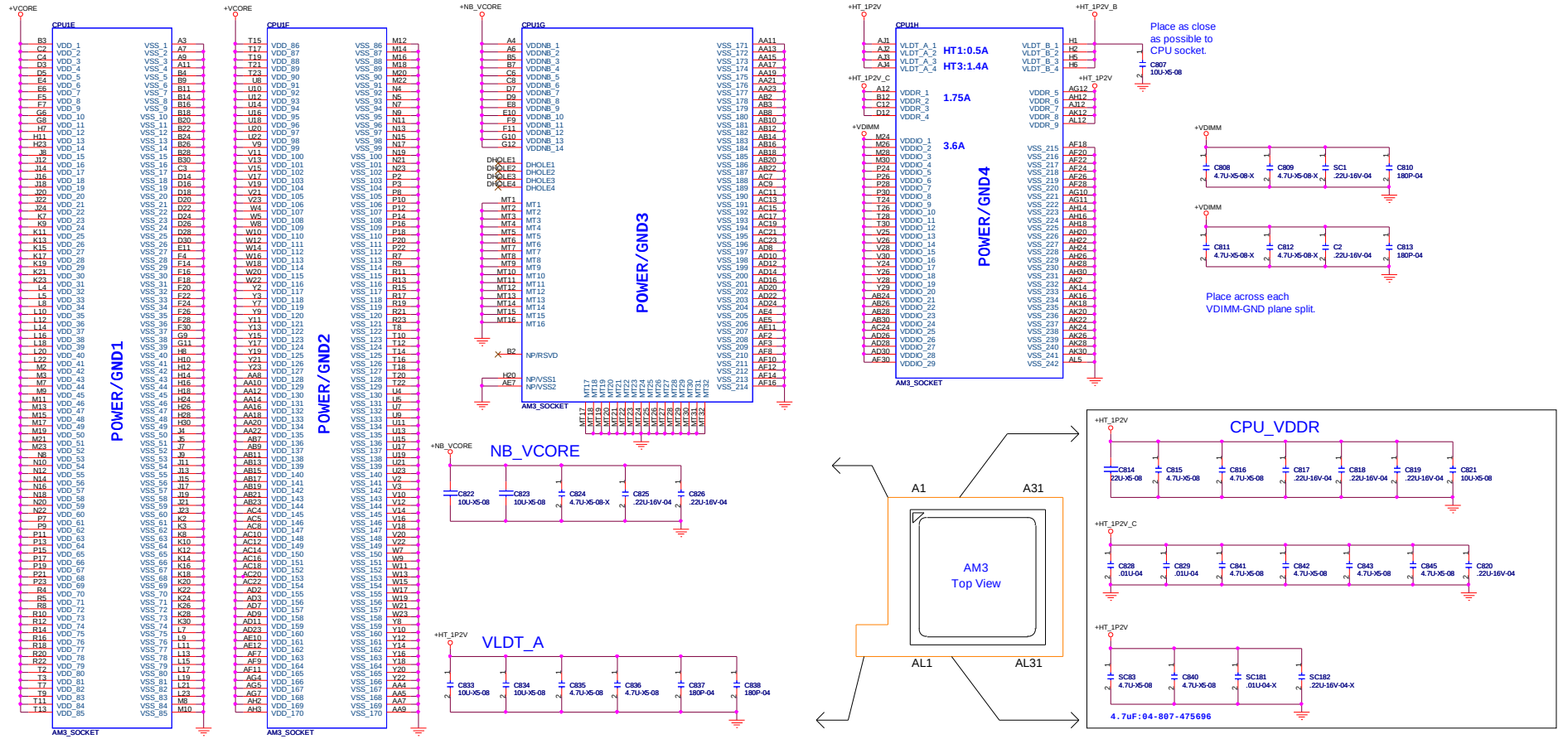
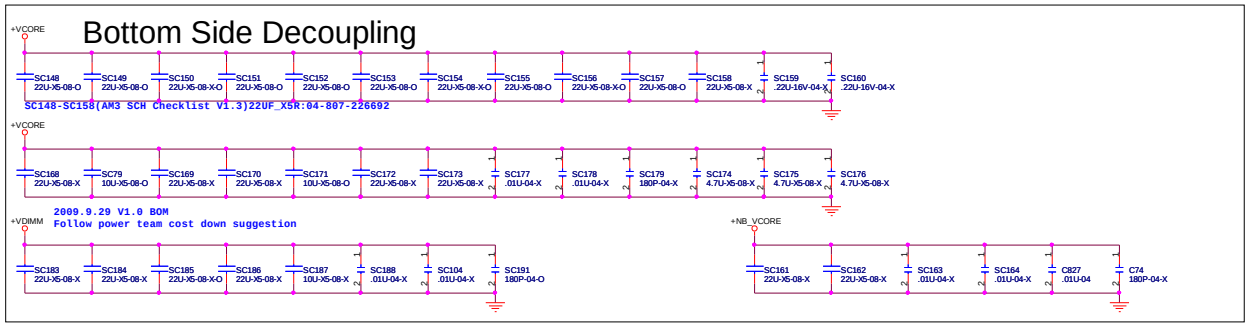
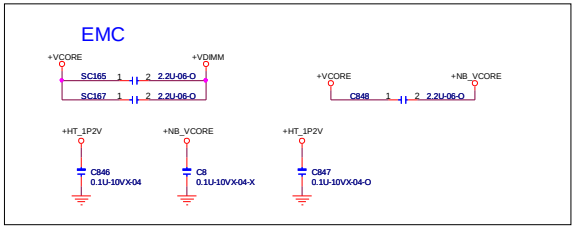
Title	BLOCK DIAGRAM	
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 4 of 32	

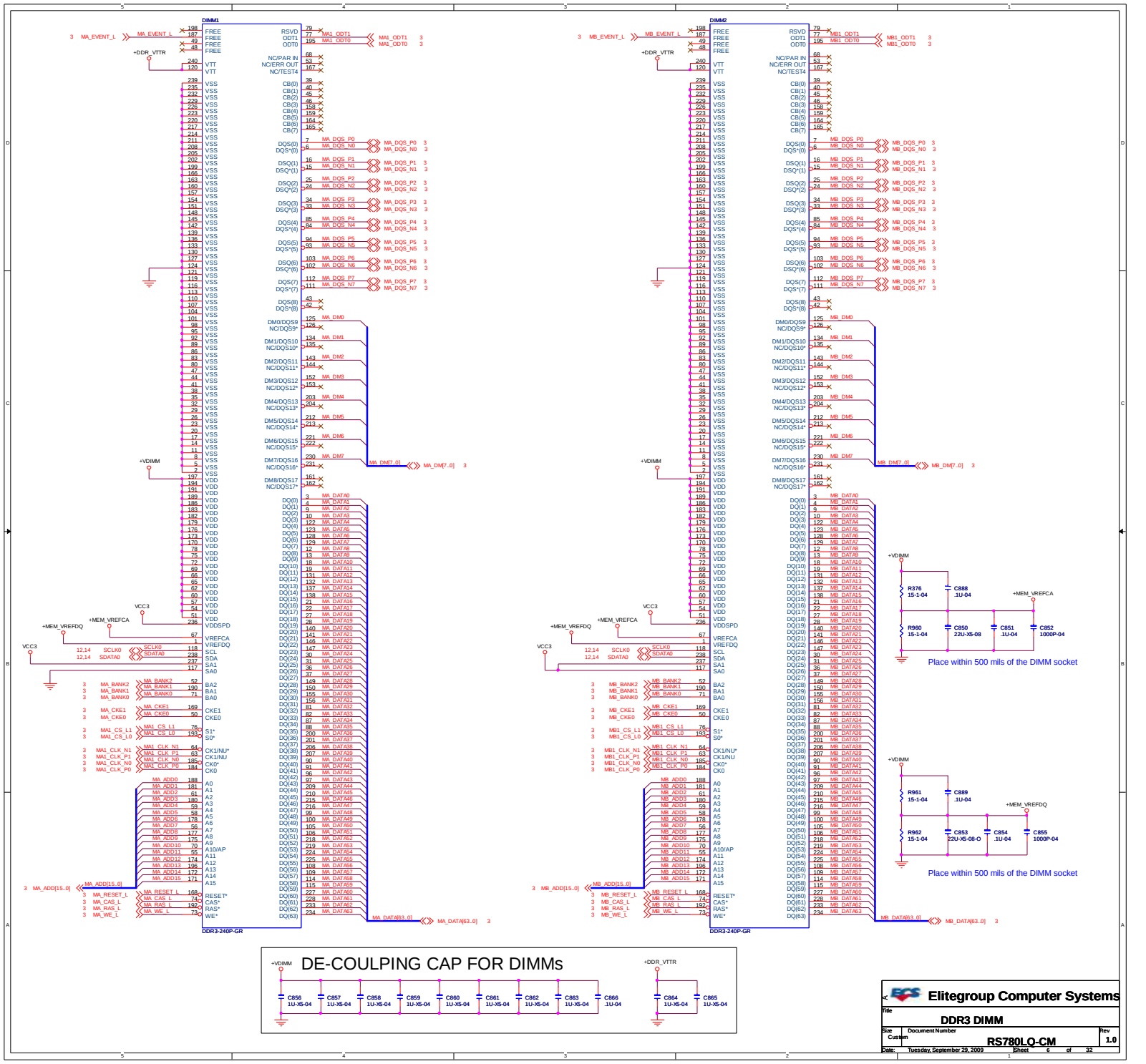
Processor Power and Ground

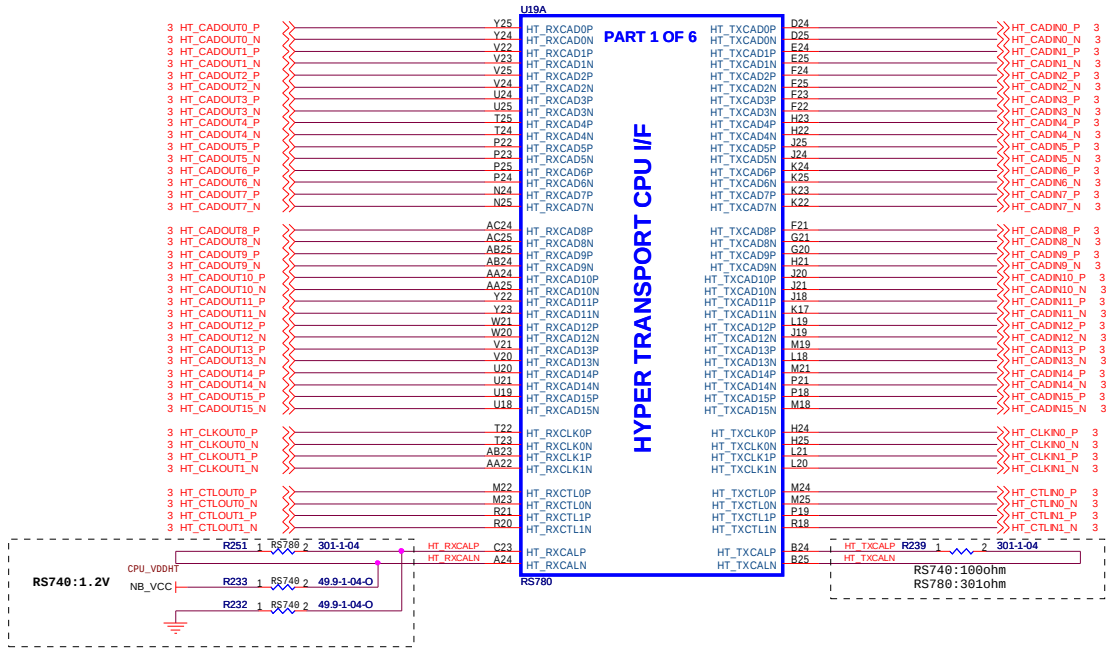




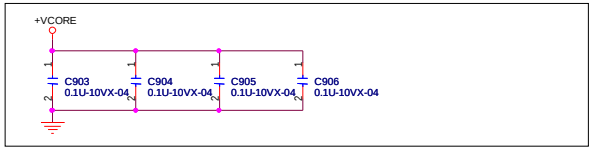


<OrgAddr1>	Elitegroup Computer Systems
Title	CPU PWR & GND
Size: Custom	Document Number: RS780LQ-CM
Rev	1.0
Date: Tuesday, September 29, 2009	Sheet 5 of 32


DIMM1
DIMM2
DDR3-240P-GR
+VDIMM
+DDR_VTTR
+MEM_VREFCA
+MEM_VREFDQ
VCC3
MA_EVENT_L
MB_EVENT_L
MA_DM[7..0]
MB_DM[7..0]
MA_DATA[63..0]
MB_DATA[63..0]
MA_ADD[15..0]
MB_ADD[15..0]
Place within 500 mils of the DIMM socket
DE-COULPING CAP FOR DIMMs
Elitegroup Computer Systems
DDR3 DIMM
RS780LQ-CM
Tuesday, September 29, 2009



HT LINK STITCHING CAPS.



RX780/RS740/RS780 difference table (HT LINK)

SIGNALS	RS740	RX780	RS780
HT_RXCALP	49.9R (GND)	1.21K	301R
HT_RXCALN	49.9R (VDDHT)		
HT_TXCALP HT_TXCALN	100R	1.21K	301R

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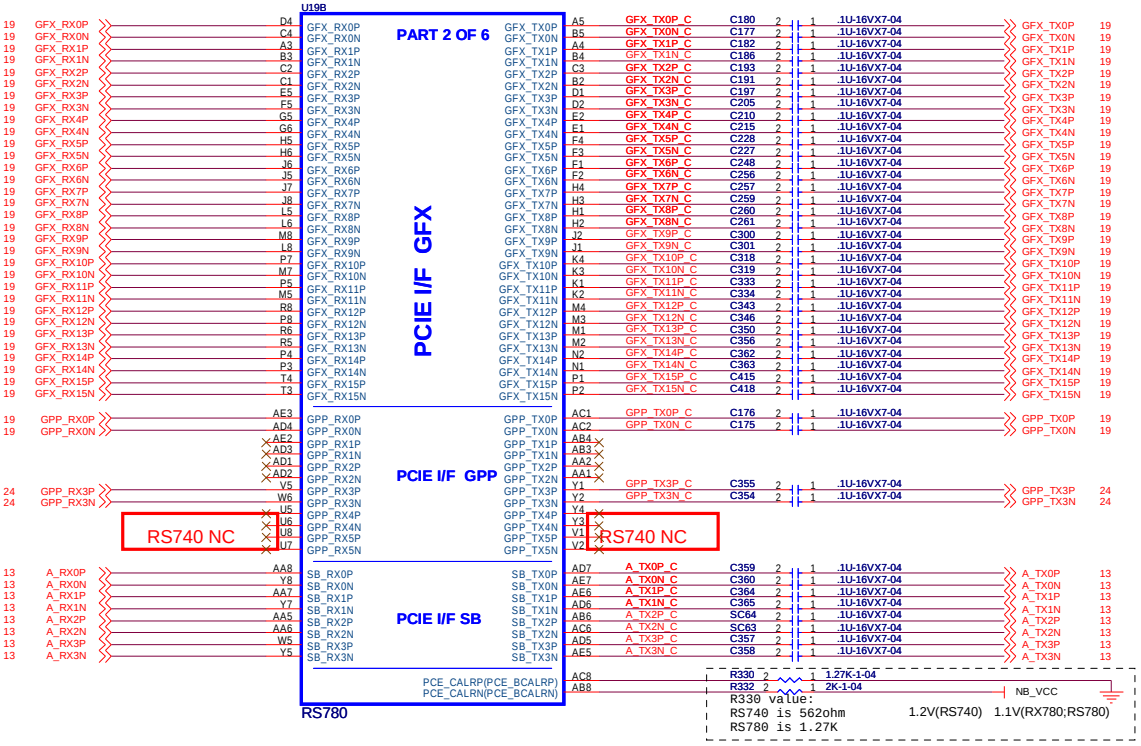
Title: RS740/RS780-HT LINK I/F

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 7 of 32



RS780 Display Port Support (muxed on GFX)

DP0	GFX_TX0,TX1,TX2 and TX3 AUX0 and HPD0
DP1	GFX_TX4,TX5,TX6 and TX7 AUX1 and HPD1

RX780/RS740/RS780 GPP difference table

	RS740	RX780/RS780
PCE_CALRP	562R (GND)	1.27K (GND)
GPP4	NC	GPP4
GPP5	NC	GPP5

RX780/RS740/RS780 GPP Routing table

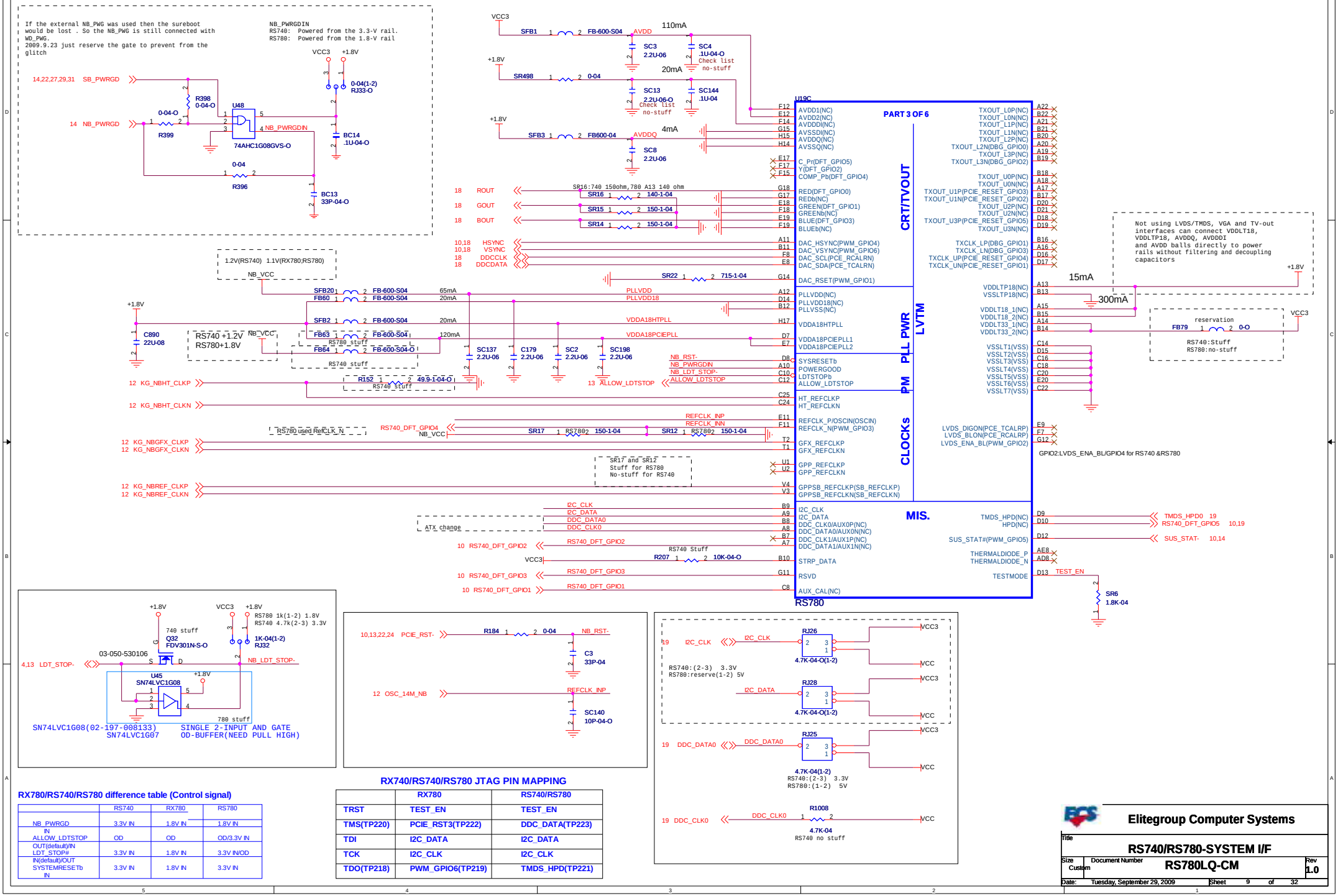
	RS740	RX780/RS780
GPP X4 CONNECTOR	GPP[2:0]	GPP[3:0]
GPP X1 CONNECTOR		GPP4
GIGABIT ETHERNET	GPP3	GPP5

Elitegroup Computer Systems

Title: RS740/RS780-PCIE I/F

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 8 of 32



RX780/RS740/RS780 difference table (Control signal)

	RS740	RX780	RS780
NB_PWRGD IN	3.3V IN	1.8V IN	1.8V IN
ALLOW_LDTSTOP	OD	OD	OD/3.3V IN
OUT(default)/IN LDT_STOP#	3.3V IN	1.8V IN	3.3V IN/OD
IN(default)/OUT SYSTEMRESETb IN	3.3V IN	1.8V IN	3.3V IN

RX740/RS740/RS780 JTAG PIN MAPPING

	RX780	RS740/RS780
TRST	TEST_EN	TEST_EN
TMS(TP220)	PCIE_RST3(TP222)	DDC_DATA(TP223)
TDI	I2C_DATA	I2C_DATA
TCK	I2C_CLK	I2C_CLK
TDO(TP218)	PWM_GPIO6(TP219)	TMDS_HPD(TP221)

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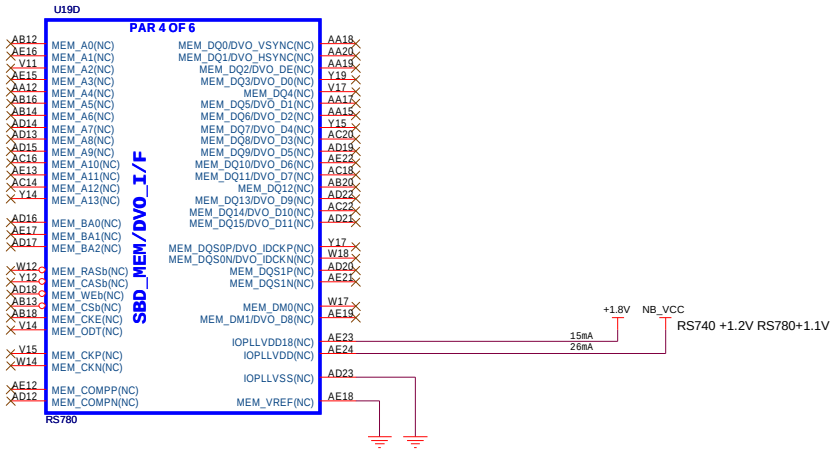
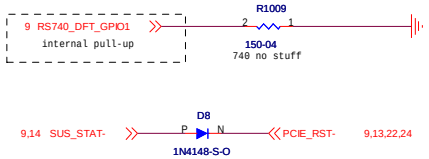
Title: RS740/RS780-SYSTEM I/F

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 9 of 32

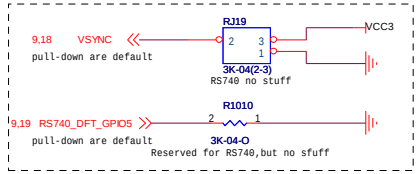


RS740/RS780 STRAPS



RS740/RS780: LOAD_EEPROM_STRAPS

Selects Loading of STRAPS from EPROM
1 : Bypass the loading of EEPROM straps and use Hardware Default Values
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected
RS740: pin DFT_GPIO1
RX780: pin DFT_GPIO1
RS780: pin SUS_STAT#

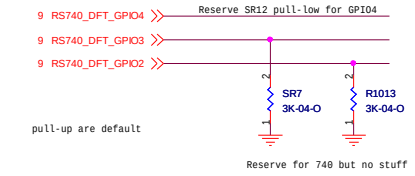


RS740/RX780/RS780: STRAP_DEBUG_BUS_GPIO_ENABLE

Enables the Test Debug Bus using GPIO and/or memory IO
1 : Disable (RS740/RS780); Enable (RX780)
0 : Enable (RS740/RS780); Disable(RX780)
RS740: pin DFT_GPIO5
RX780: pin DFT_GPIO5
RS780: pin VSYNC

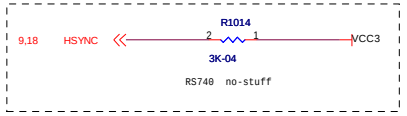
RS780: STRAP_PCIE_GPP_CFG[2:0]
(configure thru register setting)

1-1-1-1-1-1	Mode L default
1-1-1-1-1-1	Mode L
2-0-2-0-2-0	Mode C2
2-0-2-0-1-1	Mode K
2-0-1-1-1-1	Mode E
1-1-1-1-1-1	Mode L
4-0-0-0-1-1	Mode C
4-0-0-0-2-0	Mode B



RS740: STRAP_PCIE_SB/GPP_CFG[2:0] (Pins: RS740_DFT_GPIO[4:2])

These pin straps are used to configure PCI-E GPP mode.
111: register defined (register default to Config E) default
110: 4-0-0-0-0 Config A
101: 4-4-0-0-0 Config B
100: 4-2-2-0-0 Config C
011: 4-2-1-1-0 Config D
010: 4-1-1-1-1 Config E
others: register defined (default to Config E)



RS740/RX780/RS780: SIDE-PORT MEMORY ENABLE

Enables Side port memory
1. Disable (RS740/RS780)
0 : Enable (RS740/RS780)
RS740: pin DFT_GPIO0
RS780: pin HSYNC
RX780: Not Appicable

RX780/RS780: STRAP_DEBUG_BUS_PCIE_ENABLE

Enables Test debug bus using PCIE bus
1. Disable (can be enabled thru nbcfg register)
0 : Enable
RX780: pin DFT_GPIO0
RS780: configurable thru register setting only
RS740: Not supported

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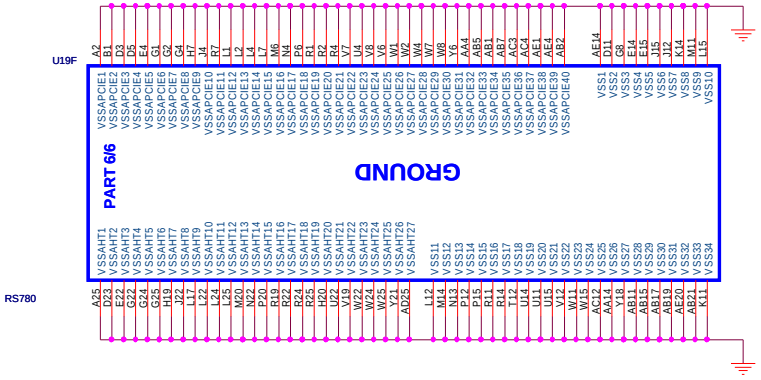
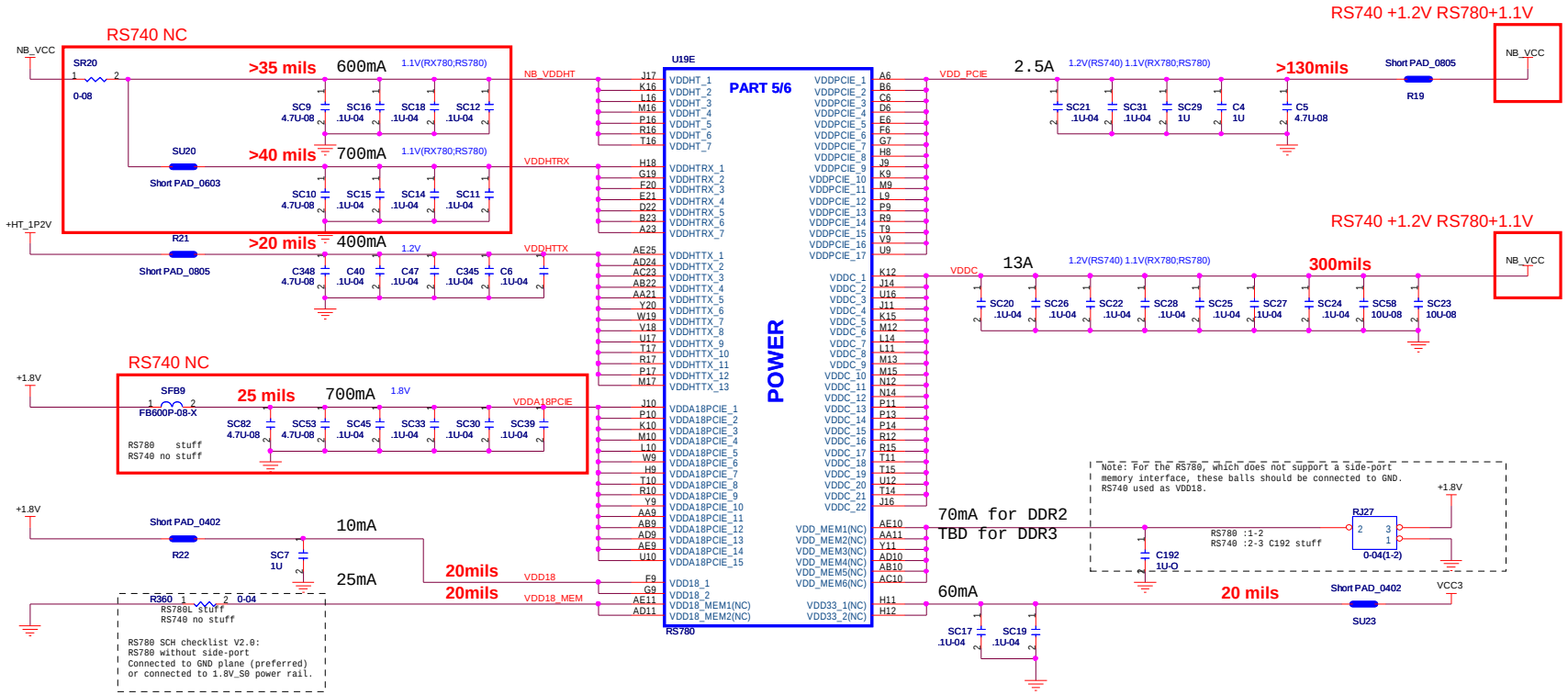
Title: RS740/RS780-SPMEM/STRAPS		
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 10 of 32	



RS740/RX780/RS780 POWER DIFFERENCE TABLE

PIN NAME	RS740	RS780	PIN NAME	RS740	RS780
VDDHT	NC	+1.1V	IOPLLVDD	+1.2V	+1.1V
VDDHTRX	NC	+1.1V	AVDD	+3.3V	+3.3V
VDDHTTX	+1.2V	+1.2V	AVDDDI	+1.8V	+1.8V
VDDA18PCIE	NC	+1.8V	AVDDQ	+1.8V	+1.8V
VDD18	+1.8V	+1.8V	PLLVDD	+1.2V	+1.1V
VDD18_MEM	NC	+1.8V	PLLVDD18	+1.8V	+1.8V
VDDPCIE	+1.2V	+1.1V	VDDA18PCIEPLL	+1.2V	+1.8V
VDDC	+1.2V	+1.1V	VDDA18HTPLL	+1.8V	+1.8V
VDD_MEM	+1.8V	+1.8V(DDR2) +1.5V(DDR3)	VDDLTP18	+1.8V	+1.8V
VDD33	+3.3V	+3.3V	VDDLT18	+1.8V	+1.8V
IOPLLVDD18	+1.8V	+1.8V	VDDLT33	+3.3V	NC



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Title: RS740/RS780-POWER

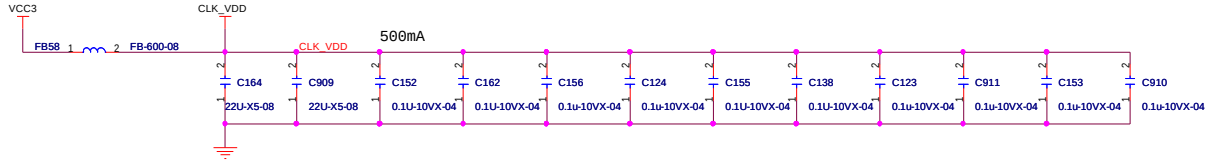
Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

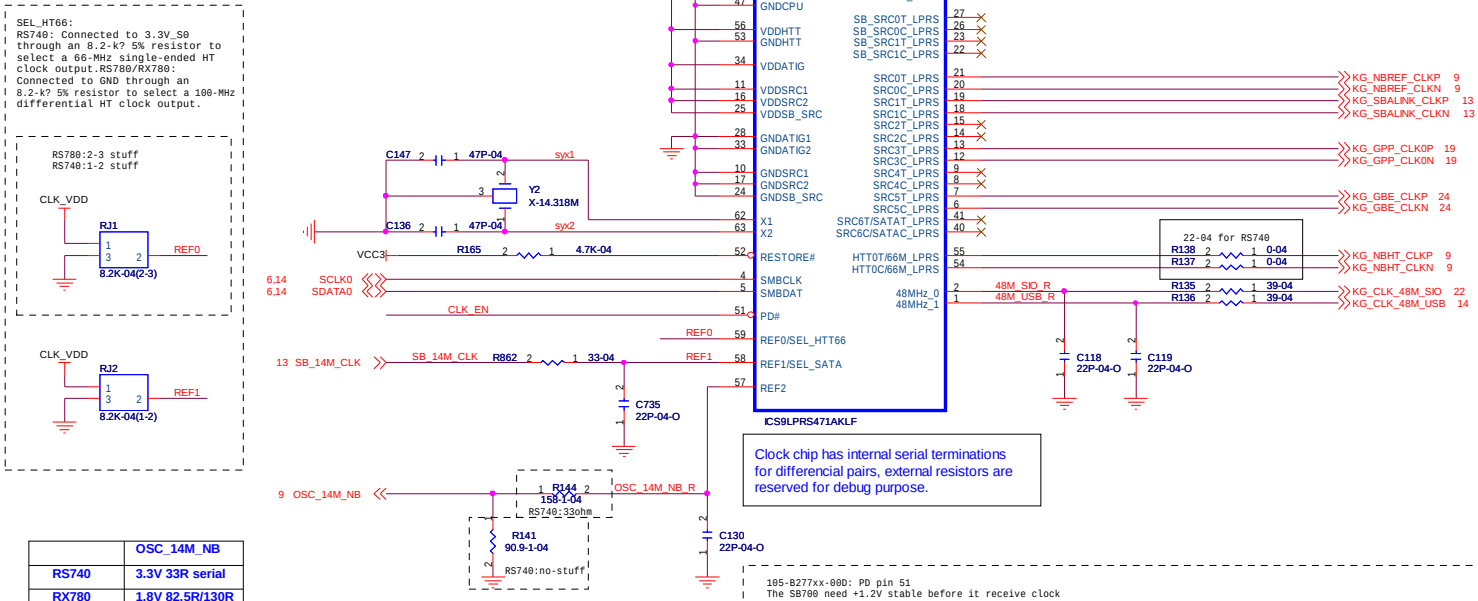
Date: Tuesday, September 29, 2009 | Sheet 11 of 32

NB CLOCK INPUT TABLE

NB CLOCKS	RS740	RX780	RS780	
HT_REFCLKP	66M SE(SE)	100M DIFF	100M DIFF	
HT_REFCLKN	NC	100M DIFF	100M DIFF	
REFCLK_P	14M SE (3.3V)	14M SE (1.8V)	14M SE (1.1V)	100M DIFF
REFCLK_N	NC	NC	vref	100M DIFF
GFX_REFCLK	100M DIFF	100M DIFF	100M DIFF(IN/OUT)*	
GPP_REFCLK	NC	100M DIFF	100M DIFF(OUT)	
GPPSB_REFCLK	100M DIFF	100M DIFF	100M DIFF	

* RS780 can be used as clock buffer to output two PCIE refererence clocks
By deault, chip will configured as input mode, BIOS can program it to output mode.





SEL_HT66:
RS740: Connected to 3.3V_S0 through an 8.2-k? 5% resistor to select a 66-MHz single-ended HT clock output.RS780/RX780: Connected to GND through an 8.2-k? 5% resistor to select a 100-MHz differential HT clock output.

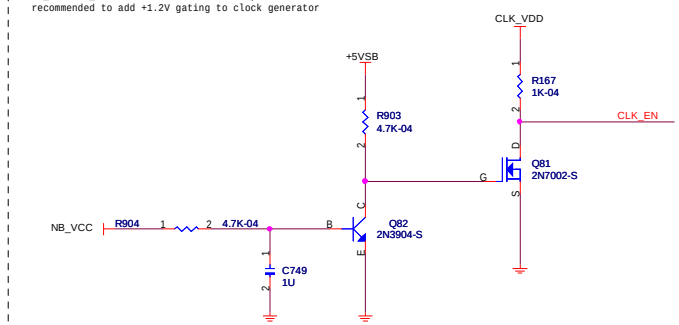
Clock chip has internal serial terminations for differential pairs, external resistors are reserved for debug purpose.

	OSC_14M_NB
RS740	3.3V 33R serial
RX780	1.8V 82.5R/130R
RS780 (Single-ended)	1.1V 158R/90.9R

REF0/SEL_HTT66	HTT CLOCK
0	100.00 DIFFERENTIAL
1	66.66 SINGLE END

REF1/SEL_SATA	SRC6/SATA
0	100.00 DIFFERENTIAL SPREADING SRC CLOCK
1	100.00 NON-SPREADING DIFFERENTIAL SATA CLOCK

105-B277xx-00D: PD pin 51
The SB700 need +1.2V stable before it receive clock KG_SBALINK_CLKP/N to make sure of that, it is recommended to add +1.2V gating to clock generator



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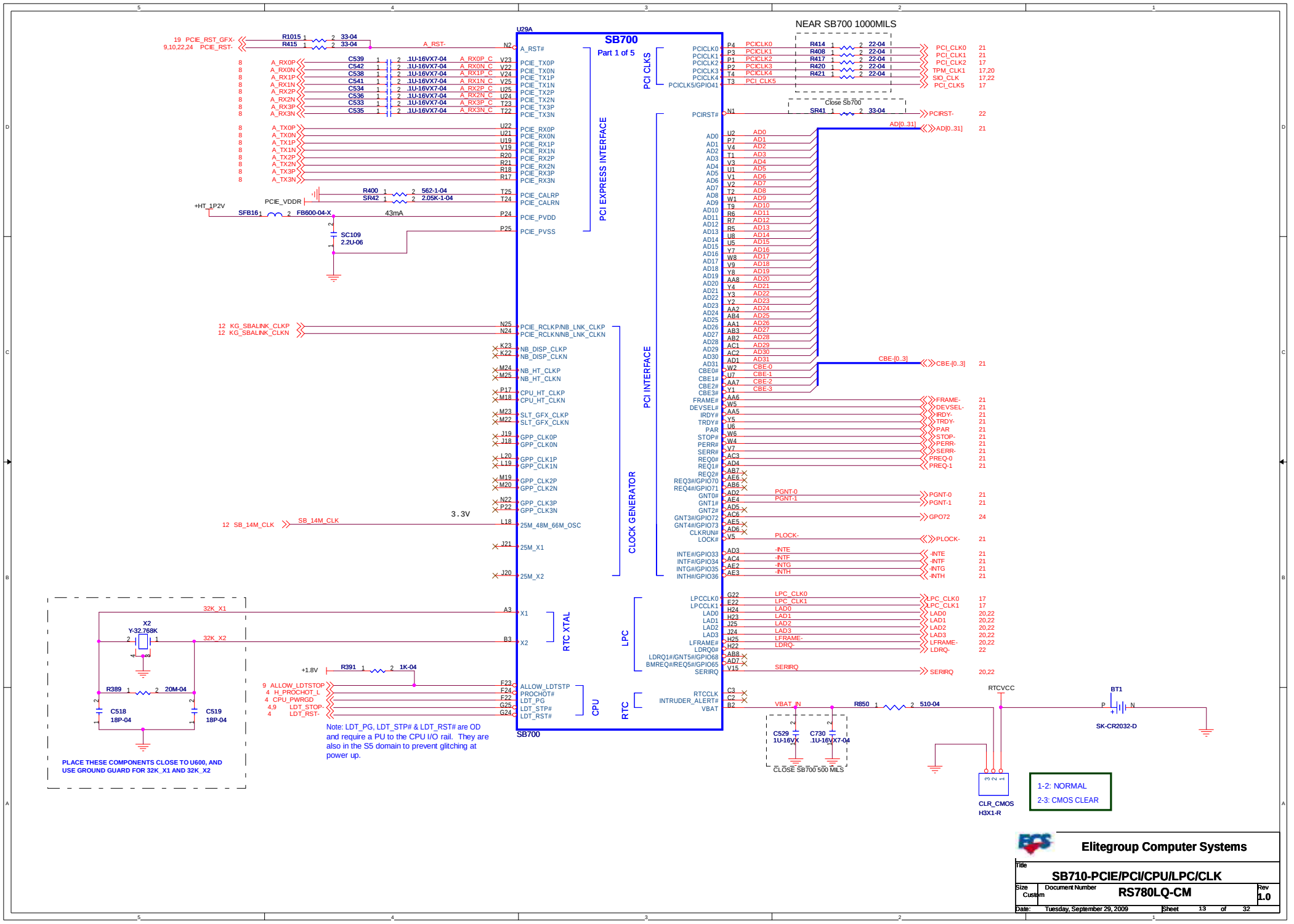
Title: CLOCK GENERATOR-ICS9LPRS47

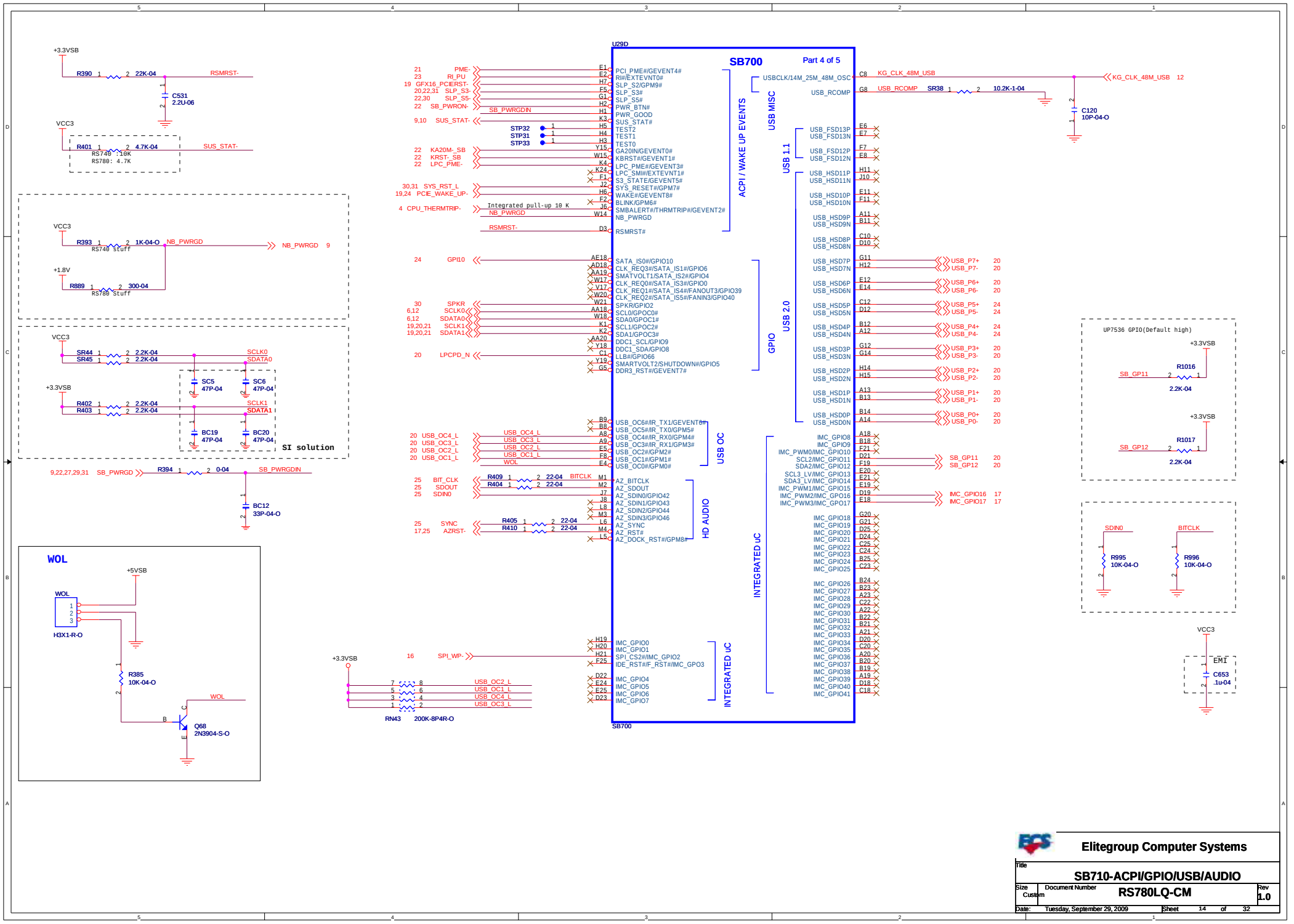
Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 12 of 32

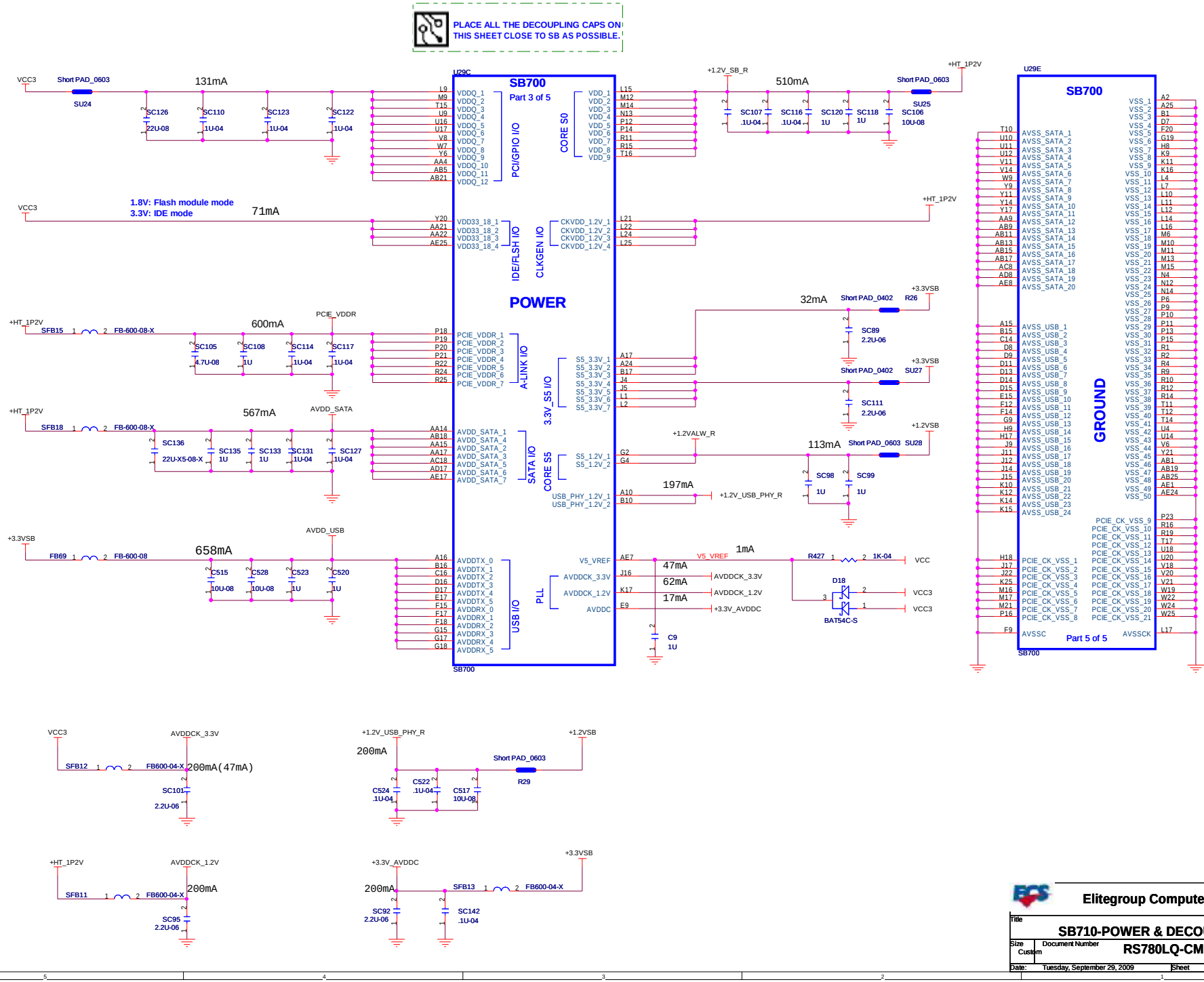


Elitegroup Computer Systems

Title	SB710-PCIE/PCI/CPU/LPC/CLK		
Size: Custom	Document Number: RS780LQ-CM		Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 13 of 32		



Company	Elitegroup Computer Systems
Title	SB710-ACPI/GPIO/USB/AUDIO
Size	Custom
Document Number	RS780LQ-CM
Rev	1.0
Date	Tuesday, September 29, 2009
Sheet	14 of 32


PLACE ALL THE DECOUPLING CAPS ON
THIS SHEET CLOSE TO SB AS POSSIBLE.
SB700
Part 3 of 5
POWER
GROUND
Part 5 of 5
1.8V: Flash module mode
3.3V: IDE mode
131mA
71mA
600mA
567mA
658mA
510mA
32mA
113mA
197mA
47mA
62mA
17mA
1mA
200mA(47mA)
200mA
SU24
SU25
SU27
SU28
R26
R29
D18
BAT54C-S
SFB15
SFB18
FB69
SFB12
SFB11
SFB13
FB-600-08-X
FB-600-08
FB600-04-X
Elitegroup Computer Systems
SB710-POWER & DECOUPLING
RS780LQ-CM
Rev 1.0
Tuesday, September 29, 2009
Sheet 15 of 32

NOTE: J600&J601&J602&J603 ARE THT CONNECTORS

SATA1
SATA-7P2R-OR
SATA_TX0+_C
SATA_TX0-_C
SATA_RX0-_C
SATA_RX0+_C

SATA2
SATA-7P2R-OR
SATA_TX1+_C
SATA_TX1-_C
SATA_RX1-_C
SATA_RX1+_C

SATA3
SATA-7P2R-OR
SATA_TX2+_C
SATA_TX2-_C
SATA_RX2-_C
SATA_RX2+_C

SATA4
SATA-7P2R-OR
SATA_TX3+_C
SATA_TX3-_C
SATA_RX3-_C
SATA_RX3+_C

U29B
SB700
Part 2 of 5
SB700

SERIAL ATA
SATA_TX0P
SATA_TX0N
SATA_RX0N
SATA_RX0P
SATA_TX1P
SATA_TX1N
SATA_RX1N
SATA_RX1P
SATA_TX2P
SATA_TX2N
SATA_RX2N
SATA_RX2P
SATA_TX3P
SATA_TX3N
SATA_RX3N
SATA_RX3P
SATA_TX4P
SATA_TX4N
SATA_RX4N
SATA_RX4P
SATA_TX5P
SATA_TX5N
SATA_RX5N
SATA_RX5P
SATA_CAL
SATA_X1
SATA_X2
SATA_ACT#/GPIO67
SR43 1K-1-04
-SATALED
93mA

SATA PWR
PLLVDD_SATA
XTLVDD_SATA
6mA

ATA 66/100/133
IDE_IORDY
IDE_IRQ
IDE_A0
IDE_A1
IDE_A2
IDE_DACK#
IDE_DRQ
IDE_IOR#
IDE_IOW#
IDE_CS1#
IDE_CS3#
IDE_D0/GPIO15
IDE_D1/GPIO16
IDE_D2/GPIO17
IDE_D3/GPIO18
IDE_D4/GPIO19
IDE_D5/GPIO20
IDE_D6/GPIO21
IDE_D7/GPIO22
IDE_D8/GPIO23
IDE_D9/GPIO24
IDE_D10/GPIO25
IDE_D11/GPIO26
IDE_D12/GPIO27
IDE_D13/GPIO28
IDE_D14/GPIO29
IDE_D15/GPIO30

SPI ROM
SPI_DI/GPIO12
SPI_DO/GPIO11
SPI_CLK/GPIO47
SPI_HOLD#/GPIO31
SPI_CS1#/GPIO32
LAN_RST#/GPIO13
ROM_RST#/GPIO14
SPI_DATAIN
SPI_DATAOUT
SPI_CLK
SPI_CS-

HW MONITOR
FANOUT0/GPIO3
FANOUT1/GPIO48
FANOUT2/GPIO49
FANIN0/GPIO50
FANIN1/GPIO51
FANIN2/GPIO52
TEMP_COMM
TEMPIN0/GPIO61
TEMPIN1/GPIO62
TEMPIN2/GPIO63
TEMPIN3/TALERT#/GPIO64
VIN0/GPIO53
VIN1/GPIO54
VIN2/GPIO55
VIN3/GPIO56
VIN4/GPIO57
VIN5/GPIO58
VIN6/GPIO59
VIN7/GPIO60
FRONT_AUD_DET
AVDD
AVSS

DIP SPI ROM
+3.3V_SPI
+3.3VSB
R30 Short PAD_0402
R464 10K-04
BC10 1U-04
MC2 10U-16V-08-O
SPI_ROM_D1
SPIB-D
CE#
SO
WP#
GND
VCC
HOLD#
SCK
SI
SPI_CS-
SPI_DATAIN
SPI_WP-
SPI_CLK
SPI_DATAOUT

BIOSWP	BIOS PROTECT
1-2	ENABLE

R438 4.7K-04
BIOS_WP
H2X1-O

SATA_X1
SATA_X2
C583 22P-04
C543 22P-04
R428 10M-04
Y3 X-25M
For SI

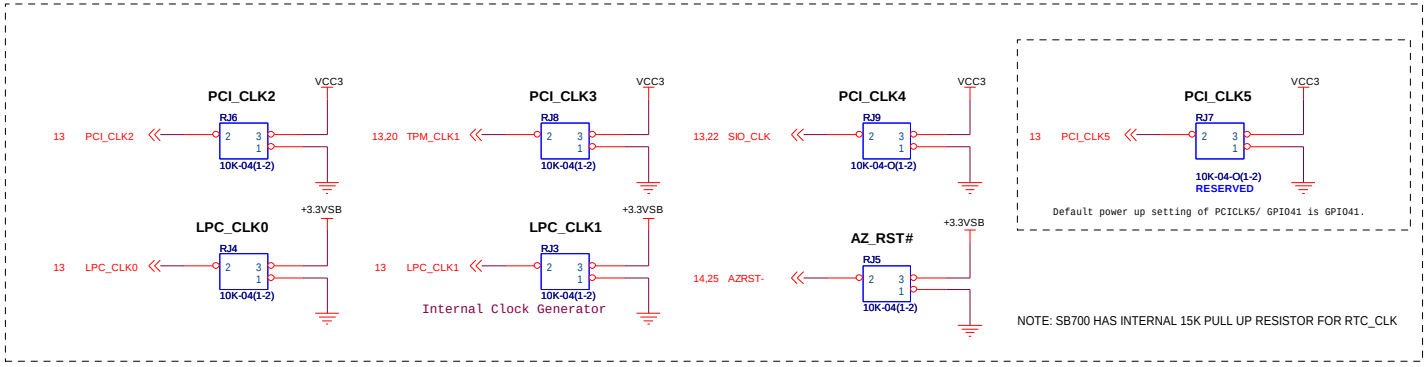
+HT_1P2V
PLLVDD_SATA
SFB19 FB600-04-X
200mA
SC134 2.2U-06
SC134 CLOSE TO THE BALL OF U600

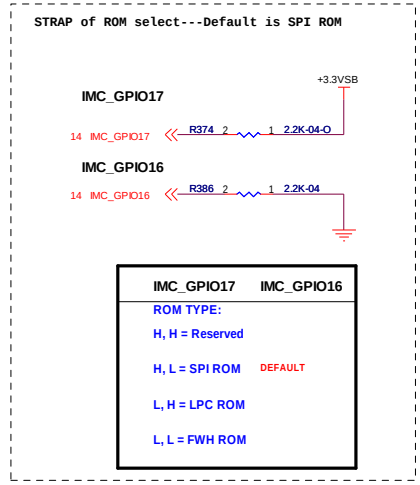
VCC3
XTLVDD_SATA
SFB17 FB600-04-X
200mA
SC132 1U
SC132 CLOSE TO THE BALL OF U600

AVDD_HWM
+3.3VSB
5mA
SFB10 FB600-04-X
SC96 .1U-04
SC91 2.2U-06
HWM not Implemented or HWM balls used as GPIOs:
Bead and Decoupling caps not used

Elitegroup Computer Systems

Title			
SB710-SATA/IDE/HWM/SPI			
Size: Custom	Document Number: RS780LQ-CM		Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 16 of 32		





REQUIRED STRAPS

	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	LPC_CLK0	LPC_CLK1	AZ_RST#	IMC_GPIO17 IMC_GPIO16
PULL HIGH	WATCHDOG TIMER ON NB_PWRGD ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	IMC ENABLED	CLKGEN ENABLED	ENABLE PCI MEM BOOT	ROM TYPE: H, H = Reserved H, L = SPI ROM DEFAULT L, H = LPC ROM L, L = FWH ROM
PULL LOW	WATCHDOG TIMER ON NB_PWRGD DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT			IMC DISABLED DEFAULT	CLKGEN DISABLED DEFAULT	DISABLE PCI MEM BOOT DEFAULT	

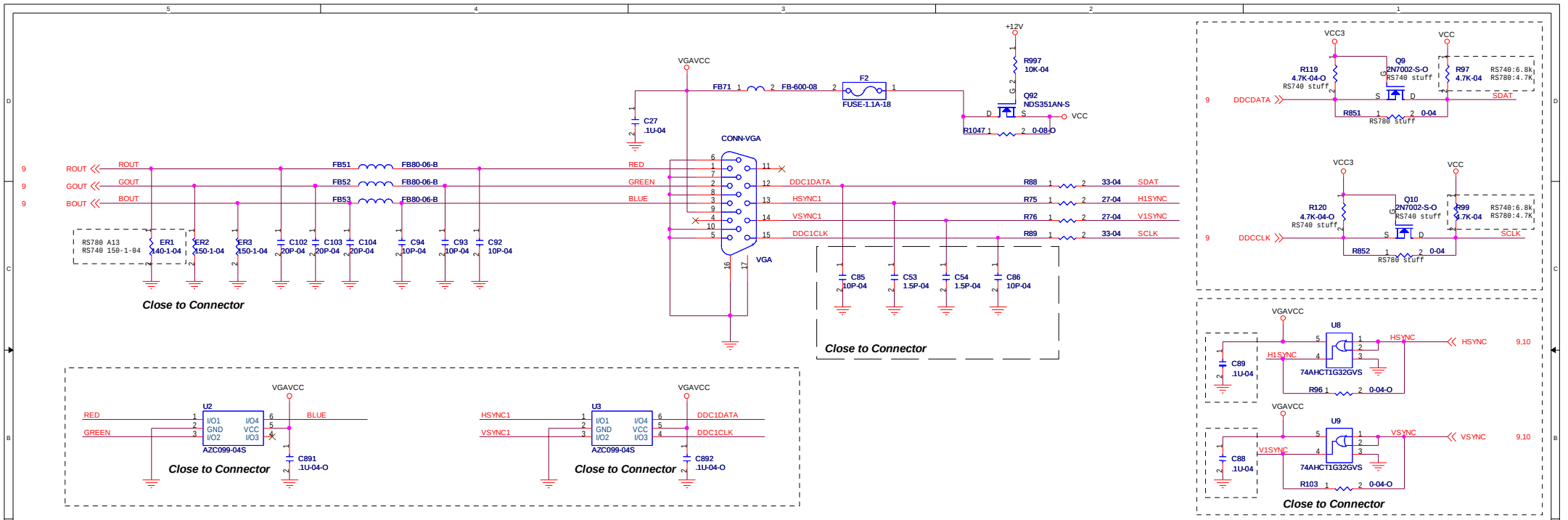
OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.

Elitegroup Computer Systems

Title: SB710-STRAPS

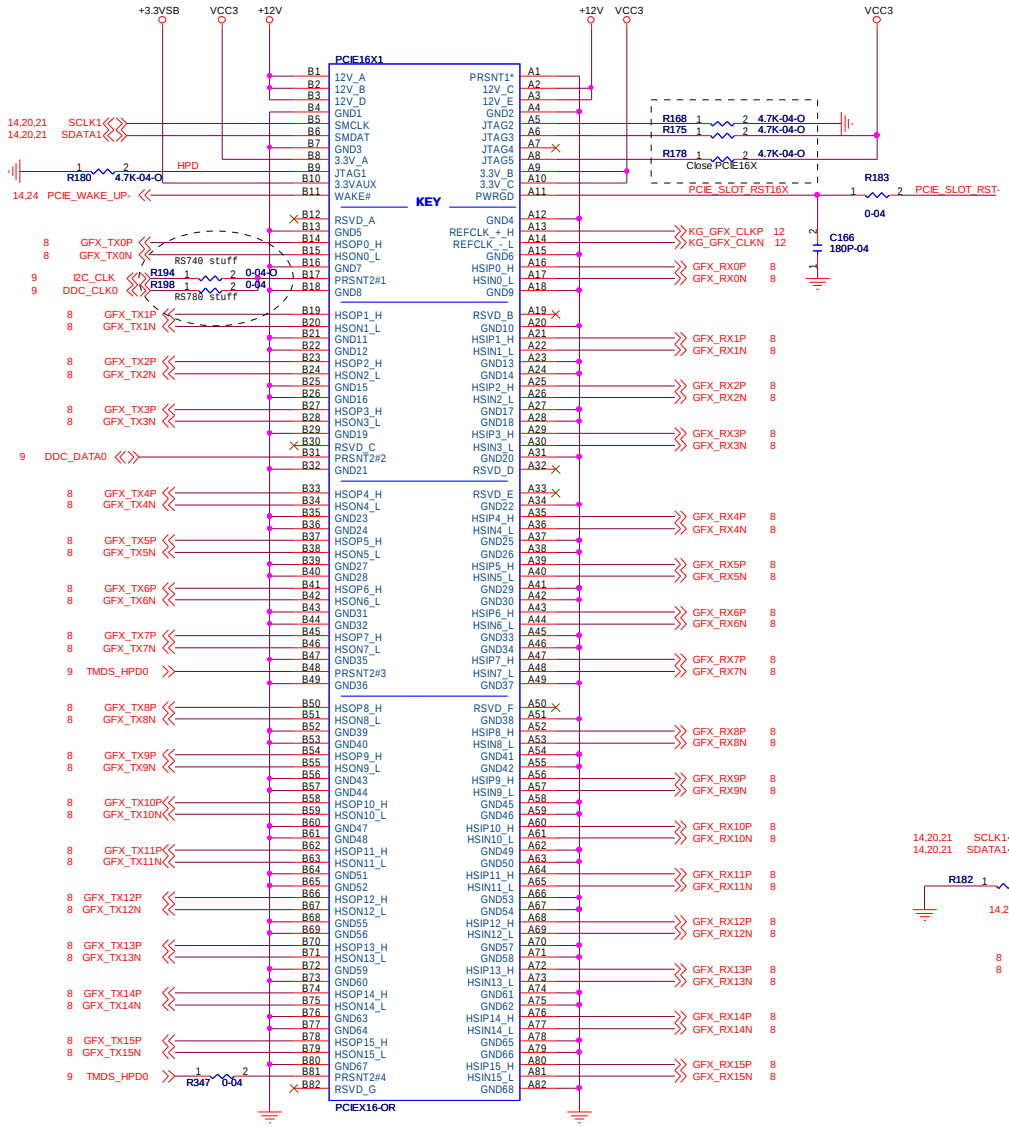
Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

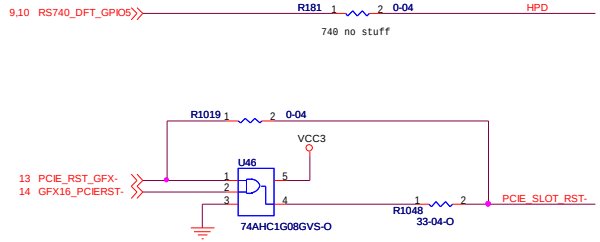
Date: Tuesday, September 29, 2009 | Sheet 17 of 32

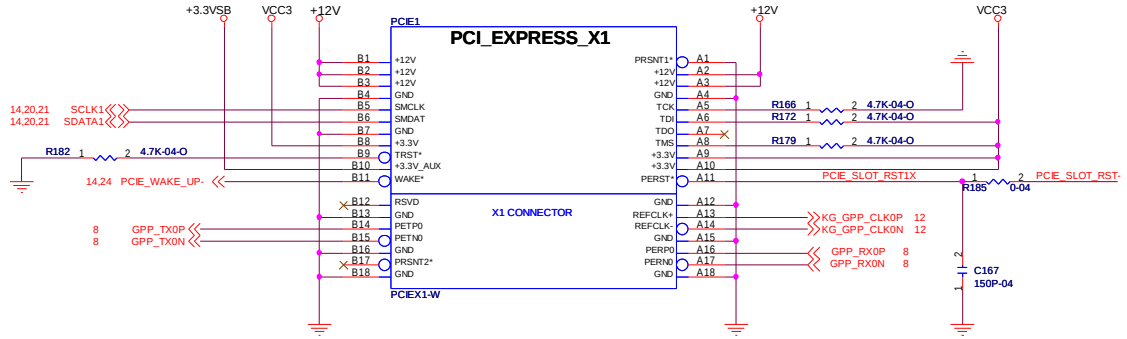


Elitegroup Computer Systems

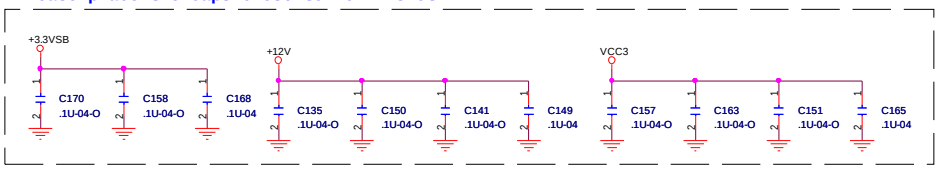
Title	CRT(D-sub)-VGA	
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 18 of 32	



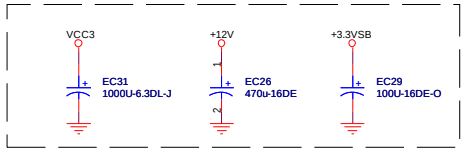




Please place the caps close to PCI-E Slot.



Please place the caps close to PCI-E Slot.



Elitegroup Computer Systems

Title	PCIE/16X/1X	
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 19 of 32	

DIMM_5VDUAL

	S0	S3	S4	S5
GPIO40	high	low	high	high
DIMM_5VDUAL	VCC	5VSB	low	low

Reserve soft start

+5VSB
Q37 2N7002-S-O
Q39 2N7002-S-O
C918 1U-O
R130 4.7K-04-O
+5VDUAL_MEM
R1028 4.7K-04
5VDLSB
Q94 APM2301ACTRL-S
+5VSB
R129 10K-04
R1030 4.7K-04
R1029 1K-04
Q95 2N3904-S
2009.08.14
modify to fix S3 issue
+12V
R1033 4.7K-04
22 GP40
R1032 4.7K-04
Q96 2N3904-S
DUALSW
Q97 IRLR8726TRPBF-D
22,30 ATX_PWRGD
R1031 10K-04-O
C912 1U-O
VCC
R1034 1K-04
Q121 2N3904-S
R1035 1K-04
Stuff for S5 discharge
GND

TPM Function

+3.3VSB
R842 8.2K-04
C659 .1U-04-O
R769 0-04-O
C654 .1U-04-O
TPM1
13,17 TPM_CLK1
13,22 LFRAME-
22 PCIRST_L2
13,22 LAD3
13,22 LAD0
14 LPCPD_N
H10X2-P4E-B
R843 0-04-O
R772 0-04-O
SDATA1 14,19,21
LAD2 13,22
LAD1 13,22
SERIRQ 13,22
SCLK1 14,19,21
C747 10P-04-O PCIRST_L2
C620 10P-04-O TPM_CLK1

USB stitching caps

VCC
C867 .1U-04
AUGND2

Rear

EN_B
SB_GP11 14

Front

EN_F
SB_GP12 14

Stuff GP11,GP12 default high
2009.09.15 del GPIO default low

USBVCC4
F_USB1
USB2- USB2+ USB3- USB3+
H5X2-P9E-Y
CHOKE4
0-8P4R
U22
USBLC6-4SC6-O

USBVCC3
F_USB2
USB1- USB1+ USB0- USB0+
H5X2-P9E-Y
CHOKE5
0-8P4R
U23
USBLC6-4SC6-O

USBVCC2
USB1
USB6- USB6+ USB7- USB7+
USBX2
AUGND2
CHOKE8
CMK-90-1206
EMI
U5
USBLC6-4SC6-O

U18
1A
VCC +5VSB EN_B
uP7536-SOT28
USB_OC1_L
SLP_S3-
R1037 1K-04-O
EC12 470U-6.3DE
C72 .1U-04
USBVCC1
AUGND2

U25
1A
VCC +5VSB EN_B
uP7536-SOT28
USB_OC2_L
SLP_S3-
R1038 1K-04-O
EC11 470U-6.3DE
C66 .1U-04
USBVCC2
AUGND2

U24
1A
VCC +5VSB EN_F
uP7536-SOT28
USB_OC3_L
SLP_S3-
R1039 1K-04-O
EC10 470U-6.3DE
C64 .1U-04
USBVCC3

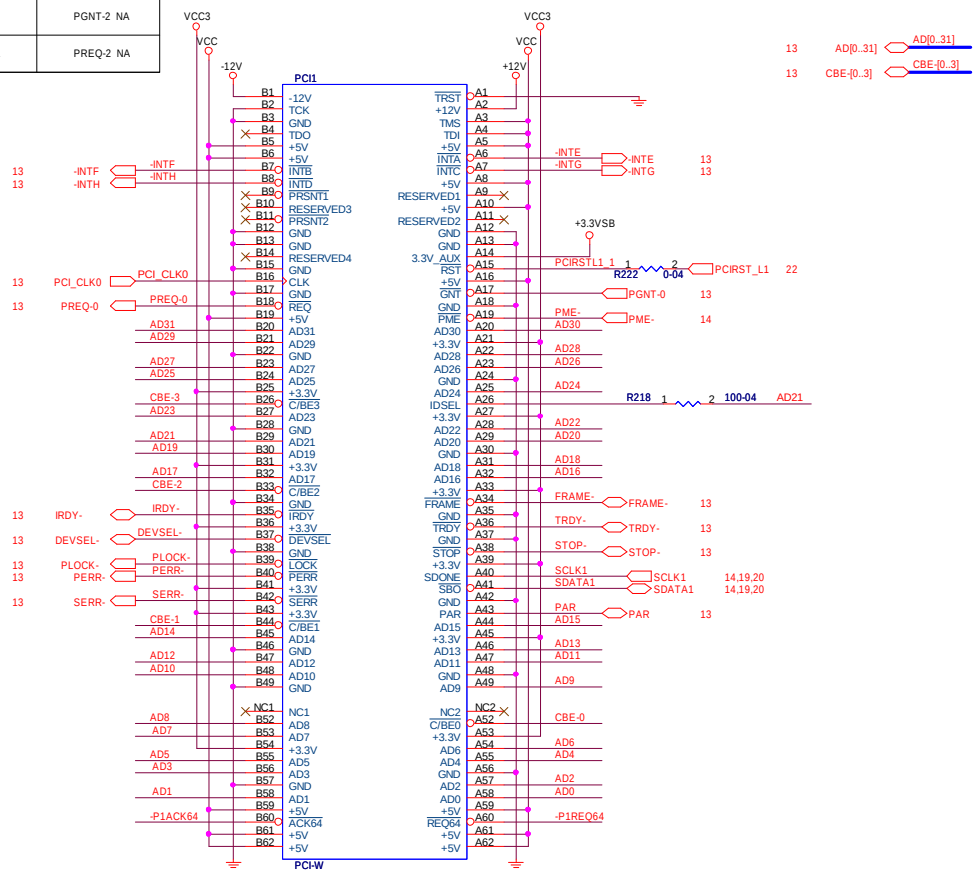
U30
1A
VCC +5VSB EN_F
uP7536-SOT28
USB_OC4_L
SLP_S3-
R1040 1K-04-O
EC49 470U-6.3DE
C368 .1U-04
USBVCC4

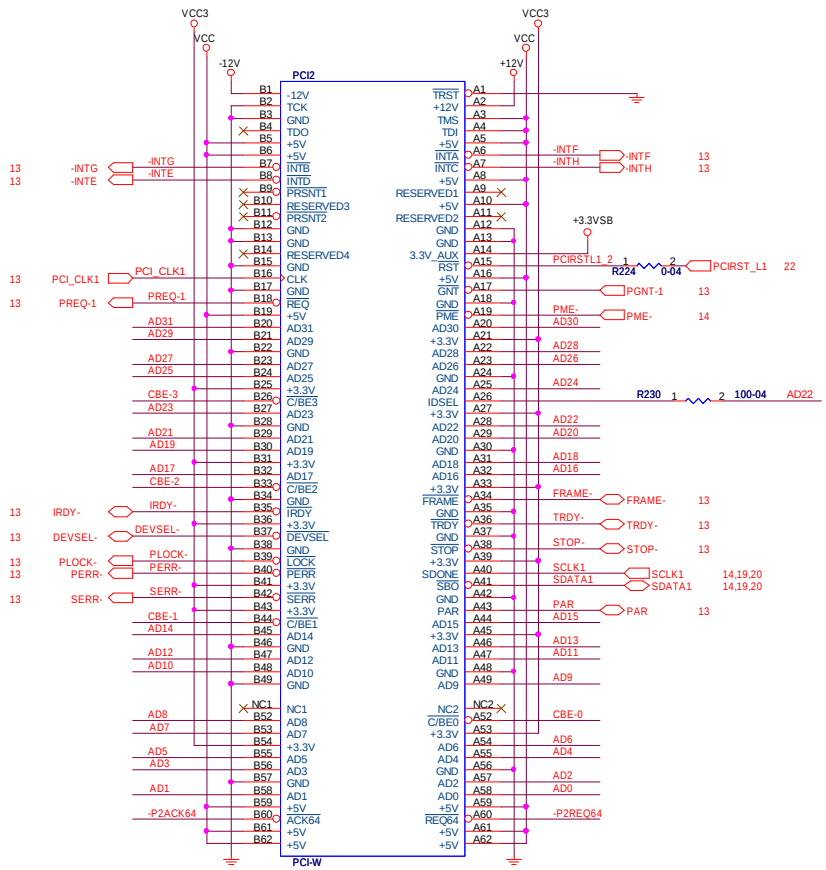
VCC
C893 1U-6V3-04
C894 1U-6V3-04
C895 1U-6V3-04
C896 1U-6V3-04
Near UP7536 Pin
+5VSB
C897 1U-6V3-04
C898 1U-6V3-04
C899 1U-6V3-04
C900 1U-6V3-04

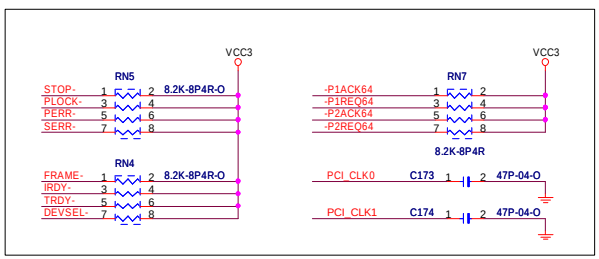
Elitegroup Computer Systems

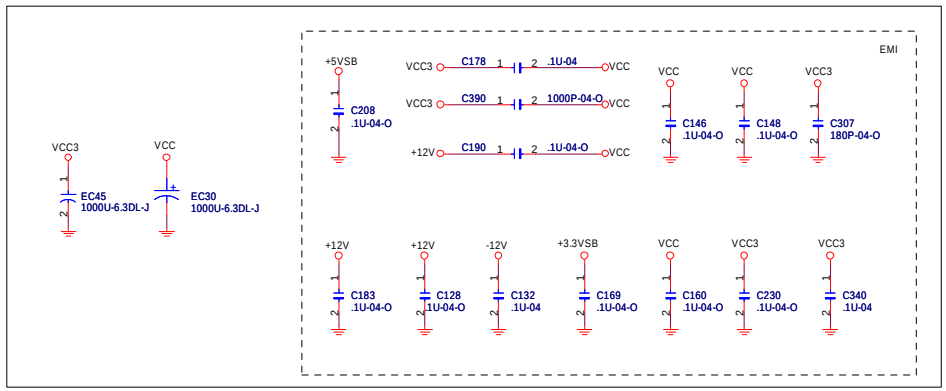
Title		
TPM, USB,5VDUAL SWITCH		
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 20 of 32	

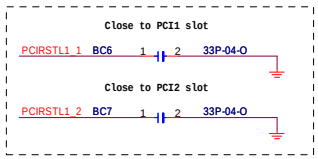
SLOT1	SLOT2	1394 NA
AD21	AD22	AD23 NA
PGNT-0	PGNT-1	PGNT-2 NA
PREQ-0	PREQ-1	PREQ-2 NA





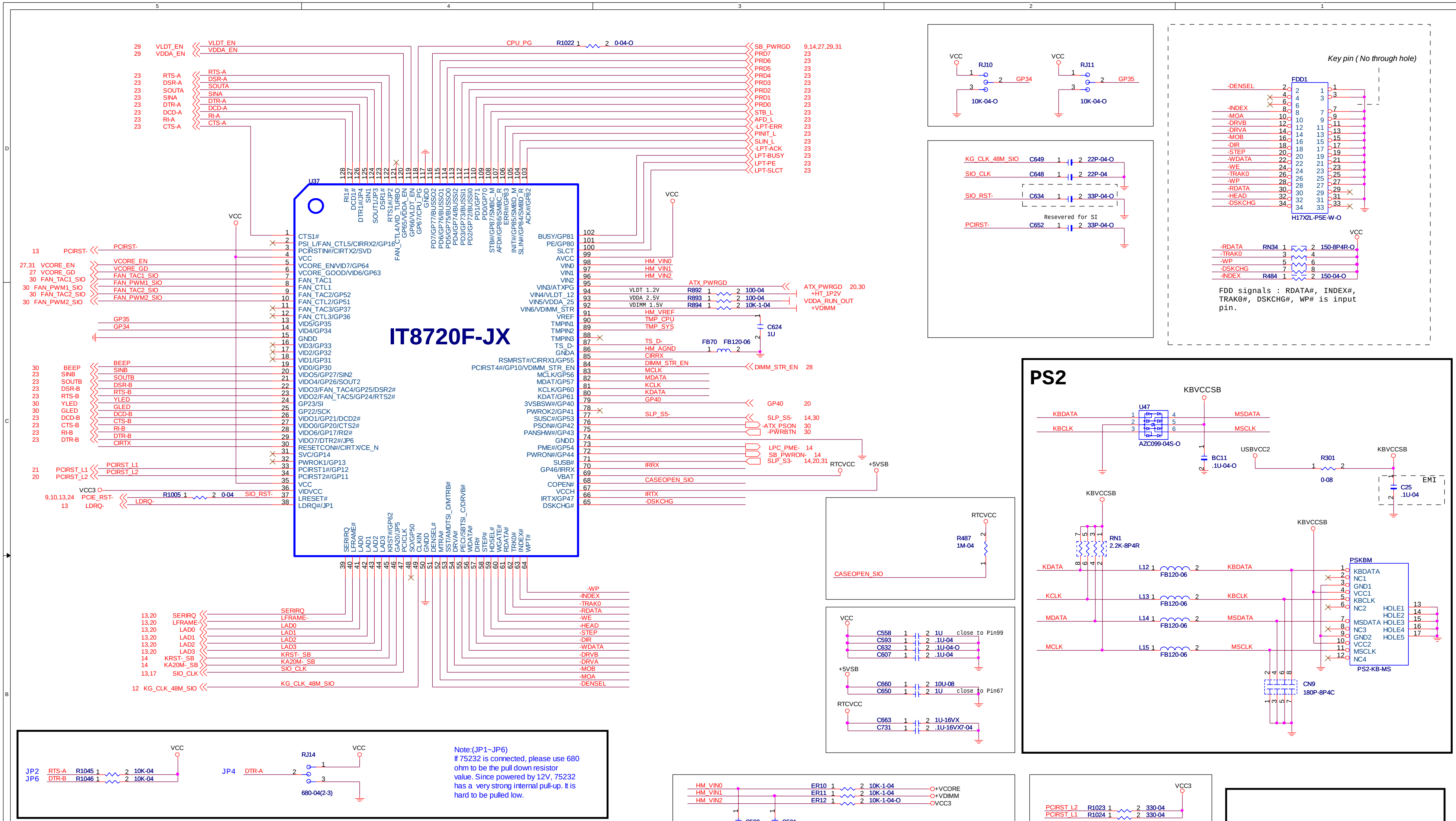






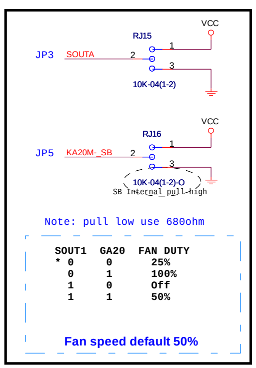
Elitegroup Computer Systems

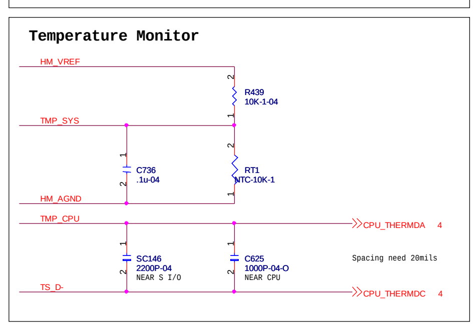
Title		
PCI SLOT		
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 21 of 32	

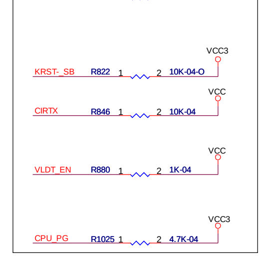


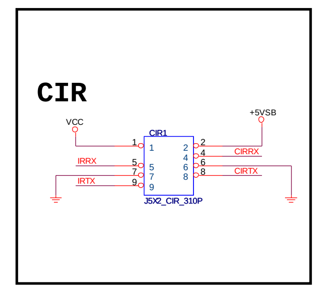
IT8720 Power On Strapping Options

Symbol		Strapping Event	Value	Description
[JP2,JP3] Pin 122 & 101	VIDO_SEL	Internal VCC OK / LRESET#	11	Disable VID0~VID7 output pins
			01	For Intel Platform. Enable VID0~VID6 output pins
			10	[illegible] Enable SVD [illegible] output pins
			00	For AMD Platform [illegible] Enable VID0~VID7 output pins
JP3 Pin 124	Flash [illegible]	Internal VCC OK / LRESET#	1	Disable
			0	Flash ... Address Segment FFF0_0000~FFFF_FFFF ... are enabled
JP4 Pin 126	KBPWR_EN	Internal VCC OK	1	KB power-on [illegible] disabled
			0	KB power-on [illegible] is enabled
[JP5,JP6] Pin 124 & 46	FAN_CTL_SEL	Internal VCC OK	11	The default value of EC Index 13h/15h/17h is 40h.
			10	The default value of EC Index 13h/15h/17h is FFh.
			01	The default value of EC Index 13h/15h/17h is 00h.
			00	The default value of EC Index 13h/15h/17h is 20h.
JP5 Pin 46	WDT_EN	Internal VCC OK	1	Disable WDT to reset PWROK
			0	Enable WDT to reset PWROK





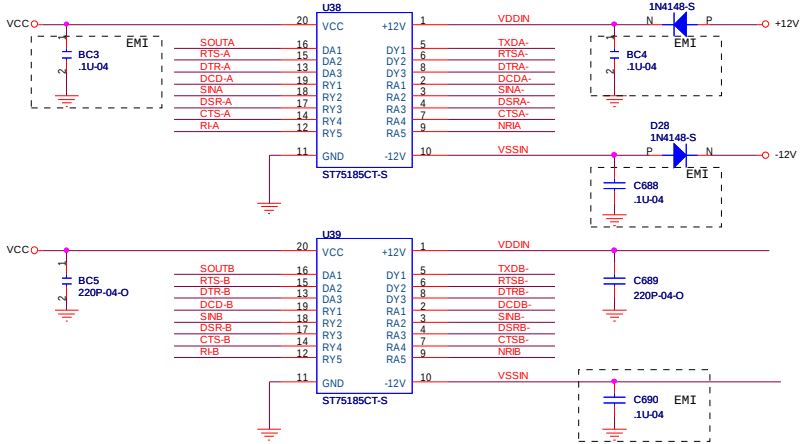


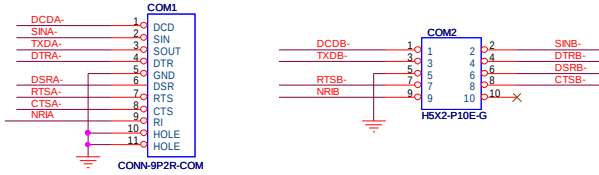


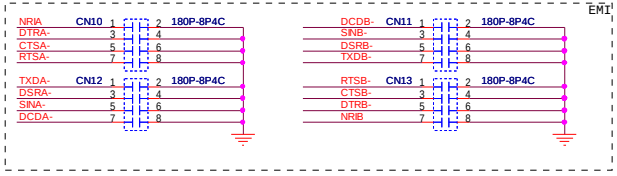
Elitegroup Computer Systems

Title	SIO ITE8720,PS2,FDD,CIR		
Size C	Document Number RS780LQ-CM		Rev 1.0
Date: Tuesday, September 29, 2009	Sheet 22 of 32		

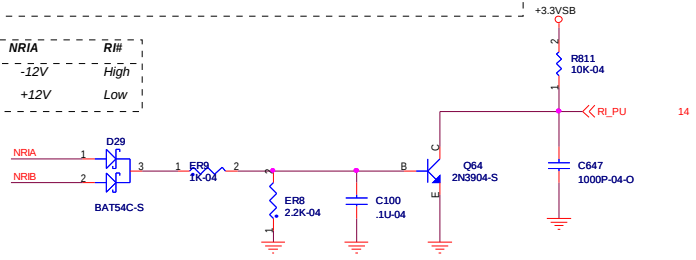
COM







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



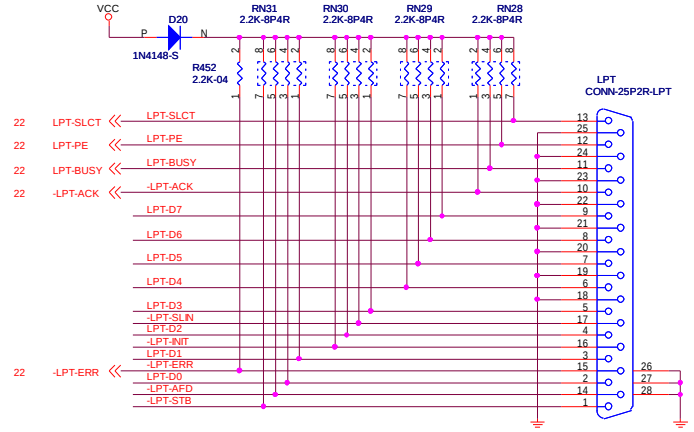
COM1 Port

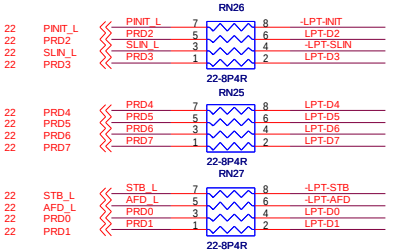
22	DCD-A	DCD-A
22	RI-A	RI-A
22	CTS-A	CTS-A
22	DTR-A	DTR-A
22	RTS-A	RTS-A
22	DSR-A	DSR-A
22	SOUTA	SOUTA
22	SINA	SINA

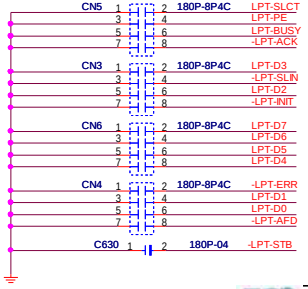
COM2 Port

22	DCD-B	DCD-B
22	RI-B	RI-B
22	CTS-B	CTS-B
22	DTR-B	DTR-B
22	RTS-B	RTS-B
22	DSR-B	DSR-B
22	SOUTB	SOUTB
22	SINB	SINB

LPT

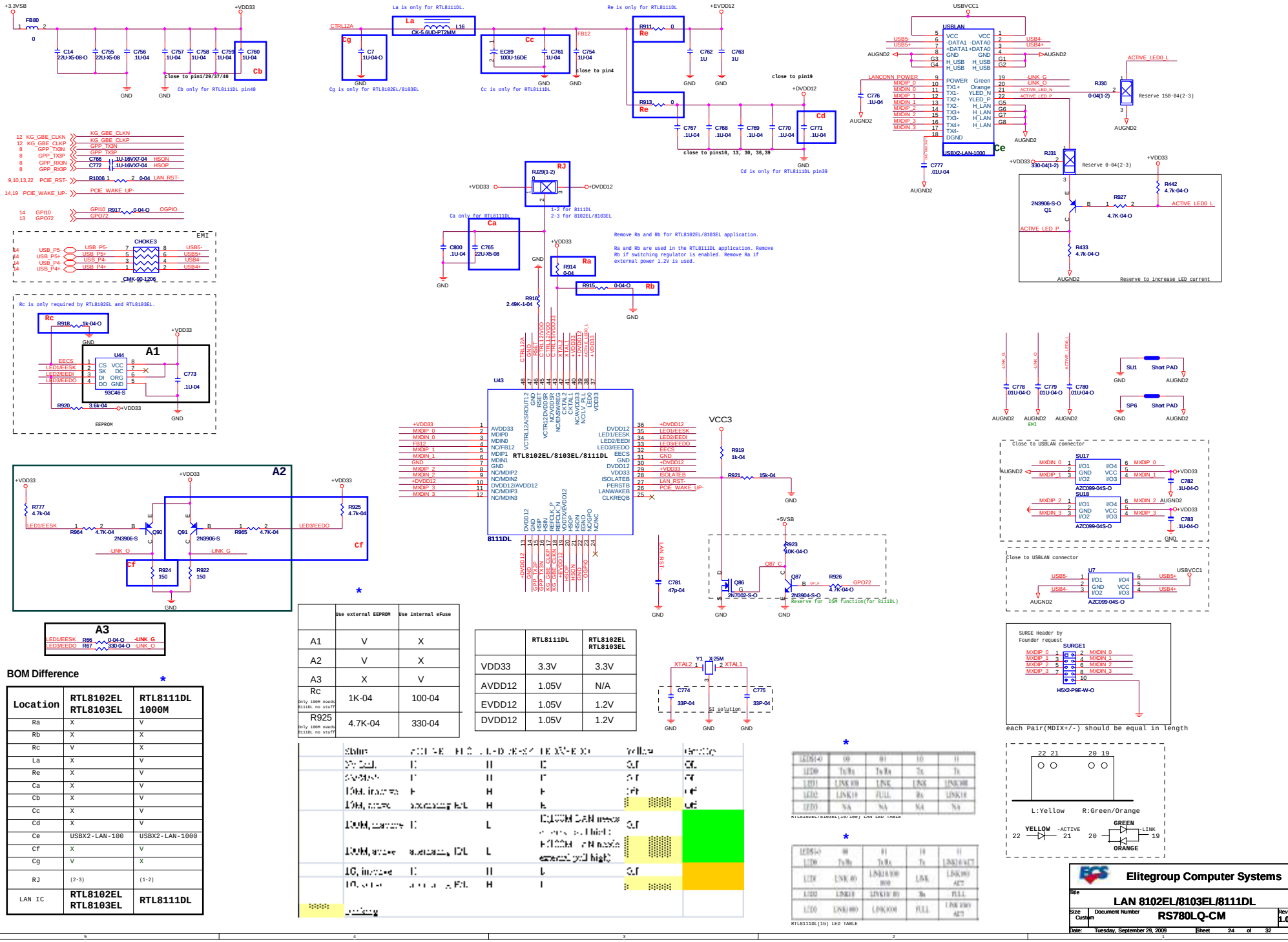






Elitegroup Computer Systems

Title	LPT/COM PORT		
Size: Custom	Document Number: RS780LQ-CM		Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 23 of 32		

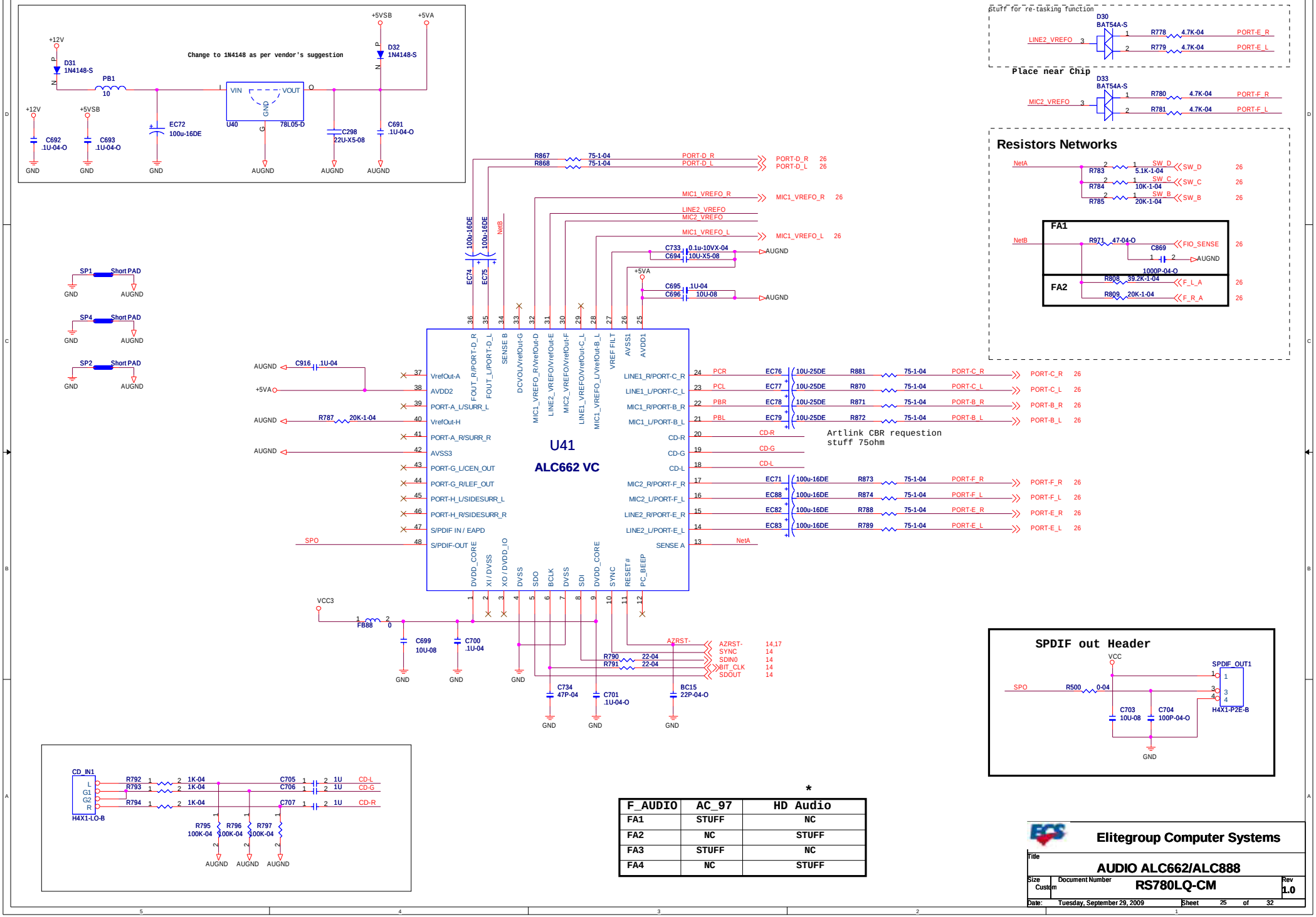


BOM Difference

Location	RTL8102EL RTL8103EL	RTL8111DL 1000M
Ra	X	V
Rb	X	X
Rc	V	X
La	X	V
Re	X	V
Ca	X	V
Cb	X	V
Cc	X	V
Cd	X	V
Ce	USBX2-LAN-100	USBX2-LAN-1000
Cf	X	V
Cg	V	X
RJ	(2-3)	(1-2)
LAN IC	RTL8102EL RTL8103EL	RTL8111DL

	Use external EEPROM	Use internal eFuse
A1	V	X
A2	V	X
A3	X	V
Rc (Only 100M needs 8111DL no stuff)	1K-04	100-04
R925 (Only 100M needs 8111DL no stuff)	4.7K-04	330-04

	RTL8111DL	RTL8102EL RTL8103EL
VDD33	3.3V	3.3V
AVDD12	1.05V	N/A
EVDD12	1.05V	1.2V
DVDD12	1.05V	1.2V



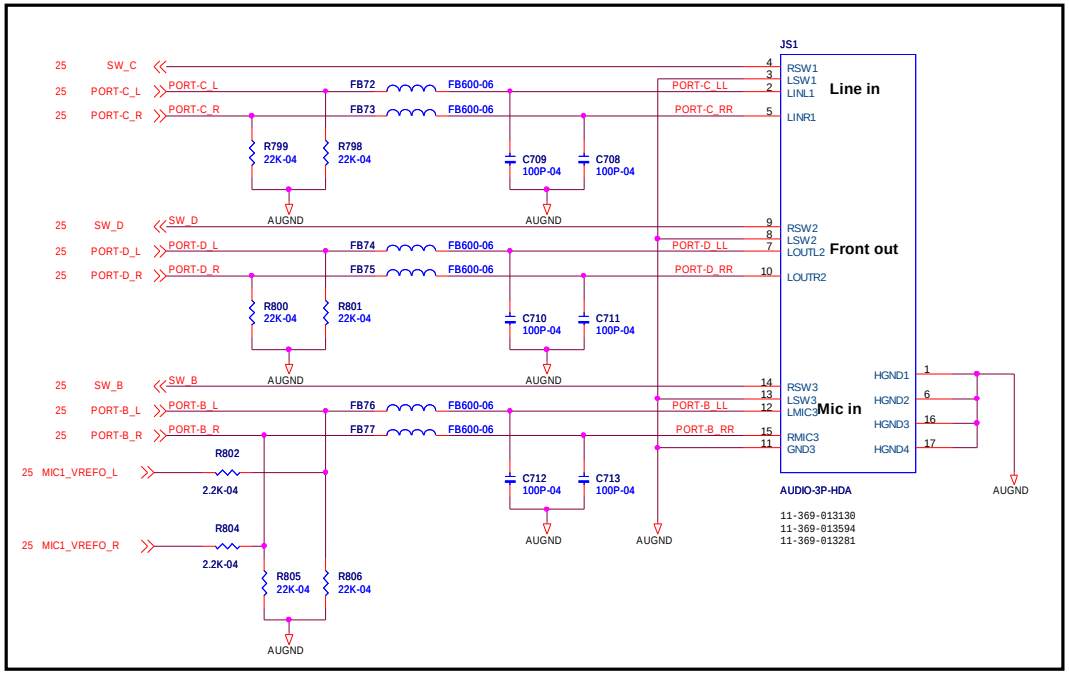
F_AUDIO	AC_97	HD Audio
FA1	STUFF	NC
FA2	NC	STUFF
FA3	STUFF	NC
FA4	NC	STUFF

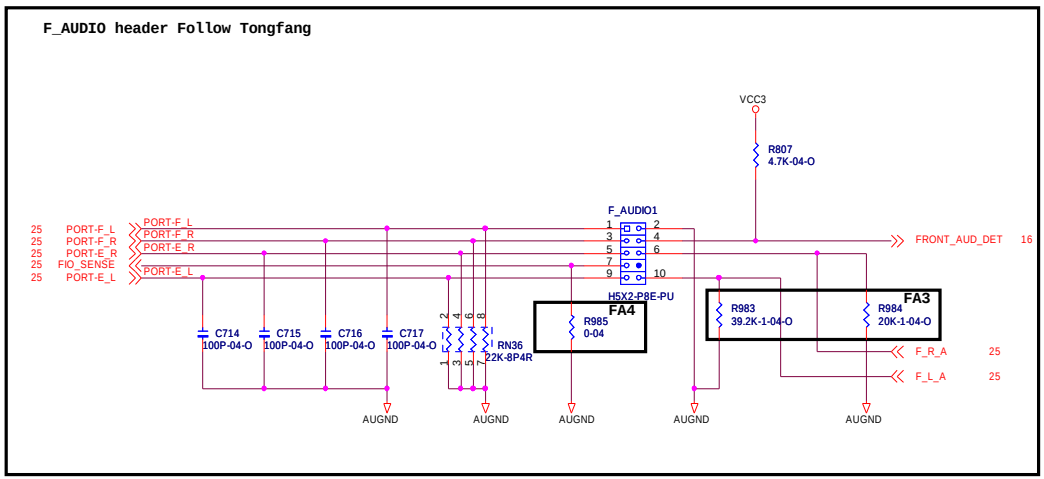
Elitegroup Computer Systems

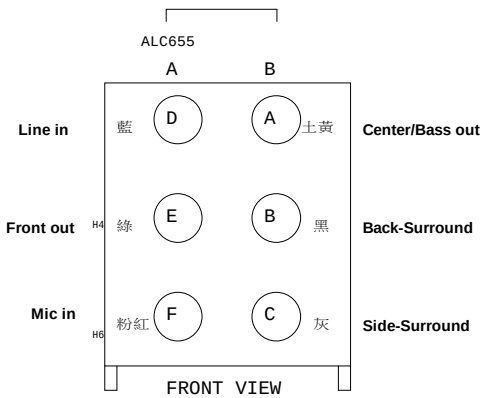
Title: AUDIO ALC662/ALC888

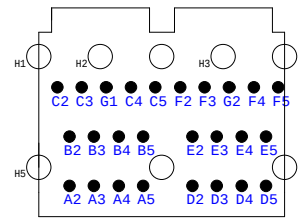
Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 25 of 32









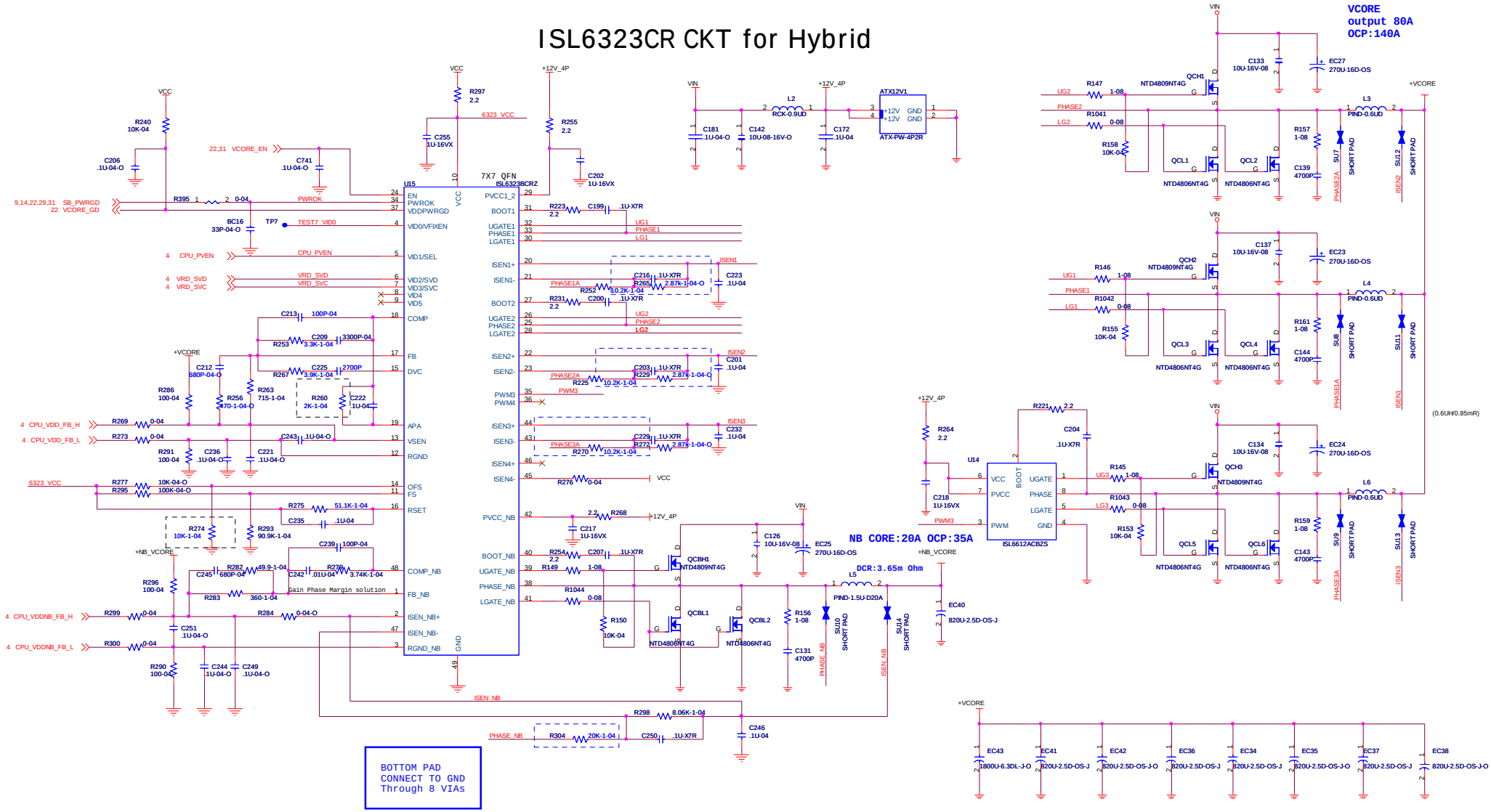
Elitegroup Computer Systems

Title: AUDIO ALC662/ALC888(Panel)

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 26 of 32

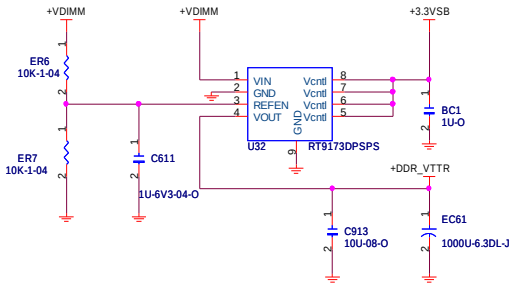
ISL6323CR CKT for Hybrid



Elitegroup Computer Systems	
Title	ISL6323B VCORE VOLTAGE
Size: Custom	Document Number: RS780LQ-CM
Rev: 1.0	
Date: Tuesday, September 29, 2009	Sheet 27 of 32

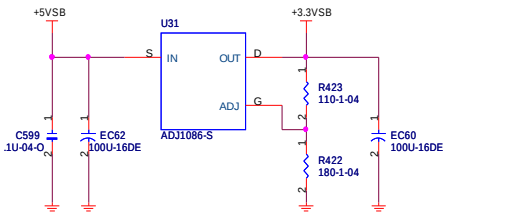
DDRVTT

0.9A



3VSB

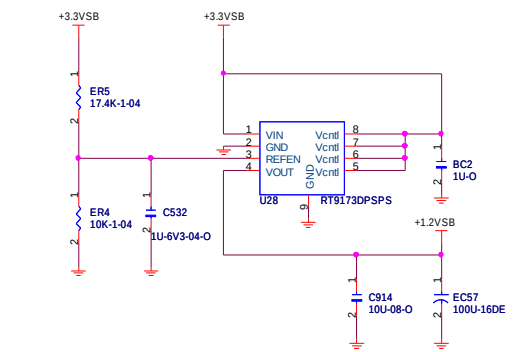
1A



Vo=1.25(1+Rb/Rt)
TO-223 & TO-252 CO-LAY

1.2VSB

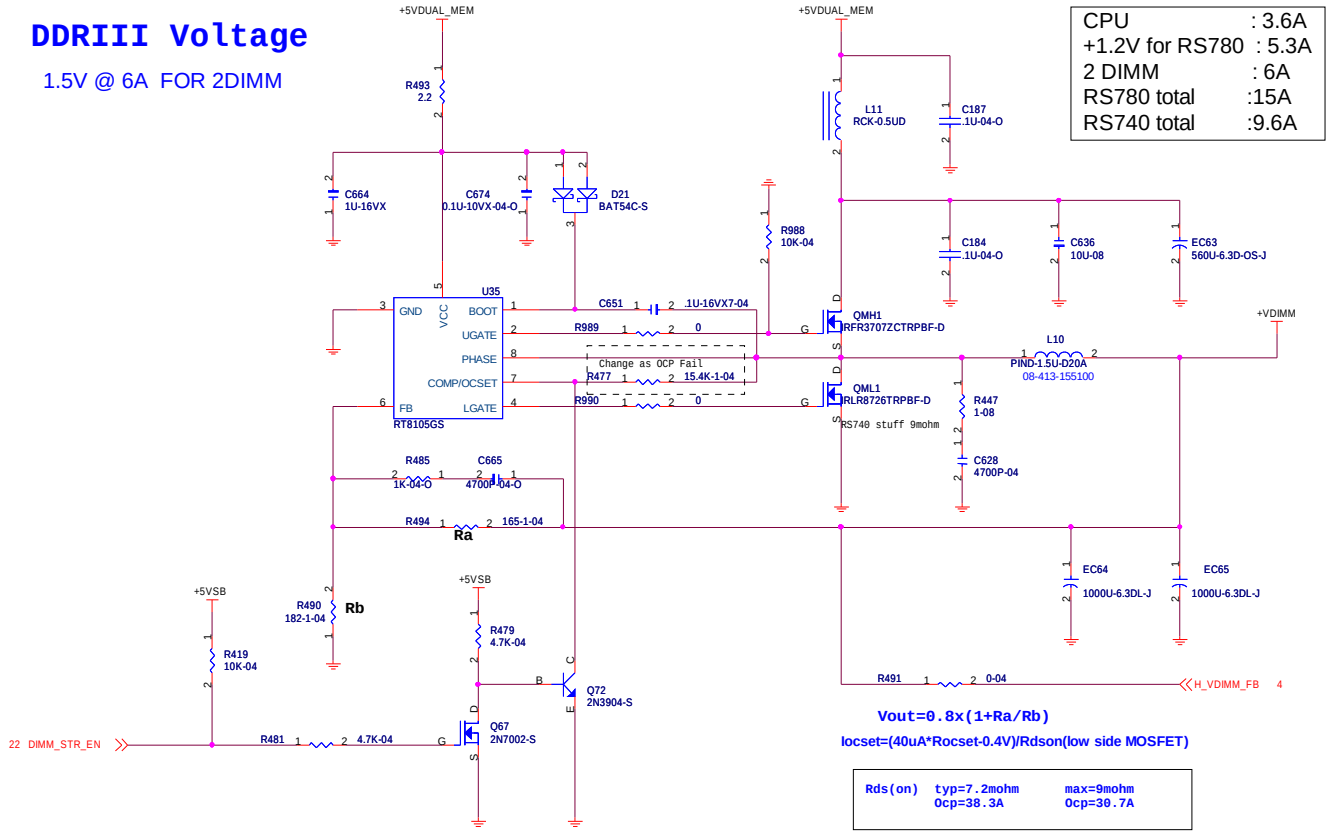
0.22A



DDRIII Voltage

1.5V @ 6A FOR 2DIMM

CPU	: 3.6A
+1.2V for RS780	: 5.3A
2 DIMM	: 6A
RS780 total	:15A
RS740 total	:9.6A



Vout=0.8x(1+Ra/Rb)

Iocset=(40uA*Rocset-0.4V)/Rdson(low side MOSFET)

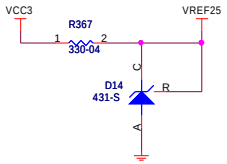
Rds(on)	typ=7.2mohm	max=9mohm
	Ocp=38.3A	Ocp=30.7A

Elitegroup Computer Systems

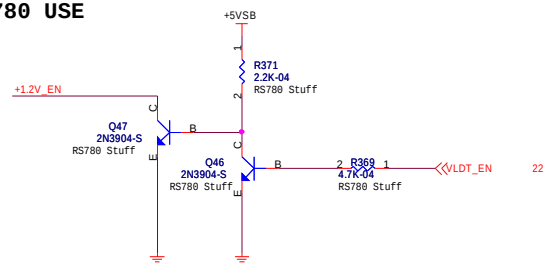
Title: DC POWER, DDRIII POWER

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

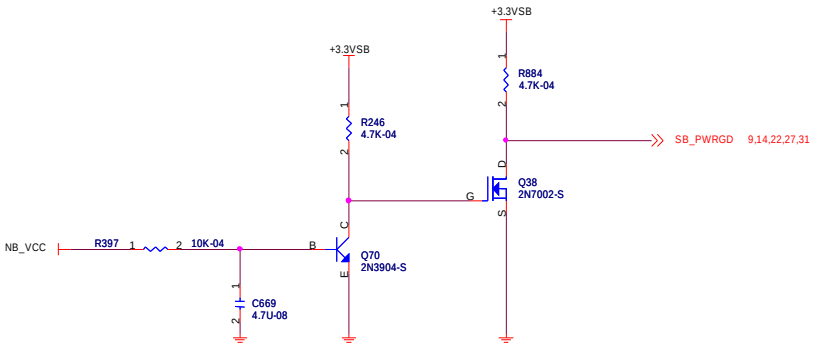
Date: Tuesday, September 29, 2009 | Sheet 28 of 32



RS780 USE

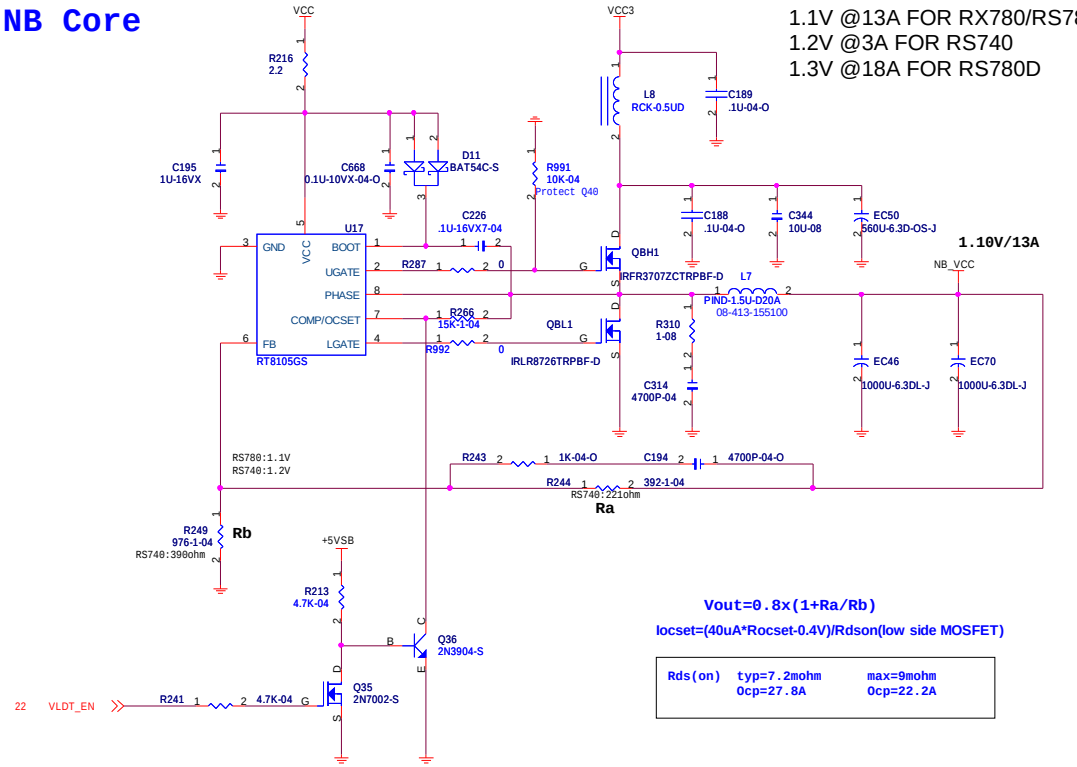


SB_PWRGOOD Sequence



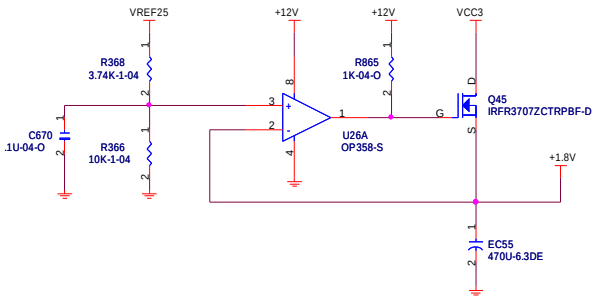
NB Core

1.1V @13A FOR RX780/RS780
1.2V @3A FOR RS740
1.3V @18A FOR RS780D



0.8A

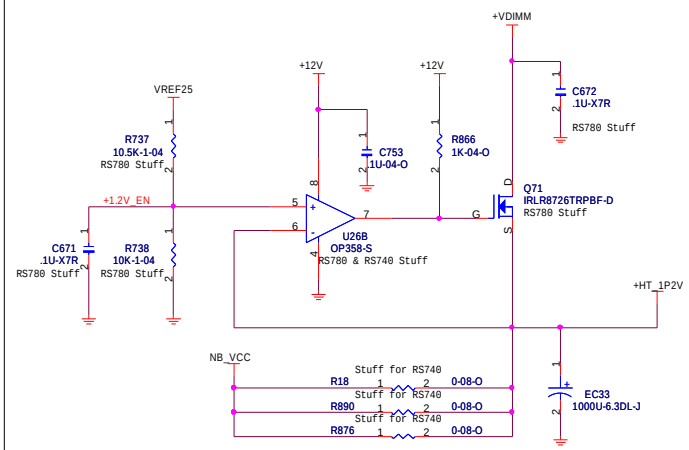
Pd(max)=1.2W



RS780 USE

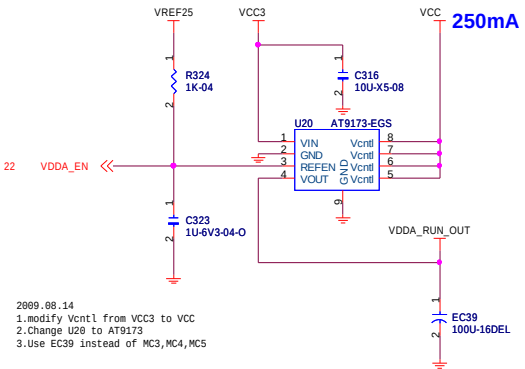
CPU VLDT:1.4A
CPU VDDR:1.75A
NB VDDHTTX:0.25A
SB VDD:0.6A
SB PCIE VDDR:0.8A
SB AVDD SATA:0.5A
TOTAL:5.3A

Pd(max)=1.59W



Total :Max 3A

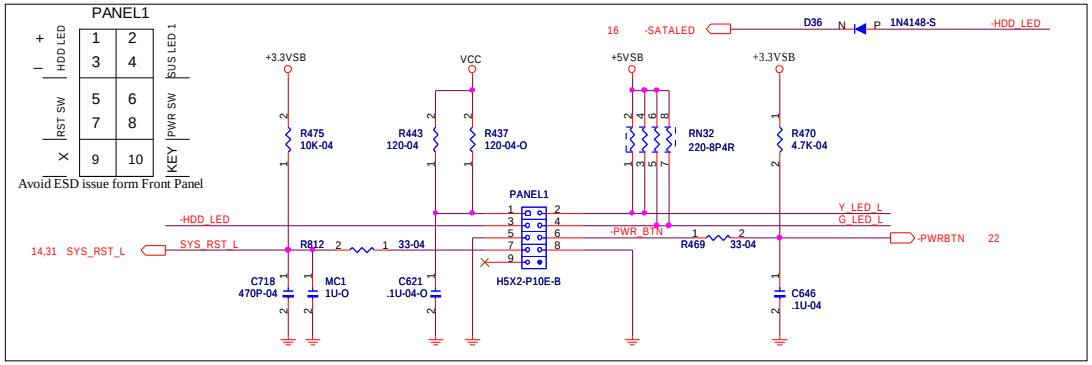
250mA

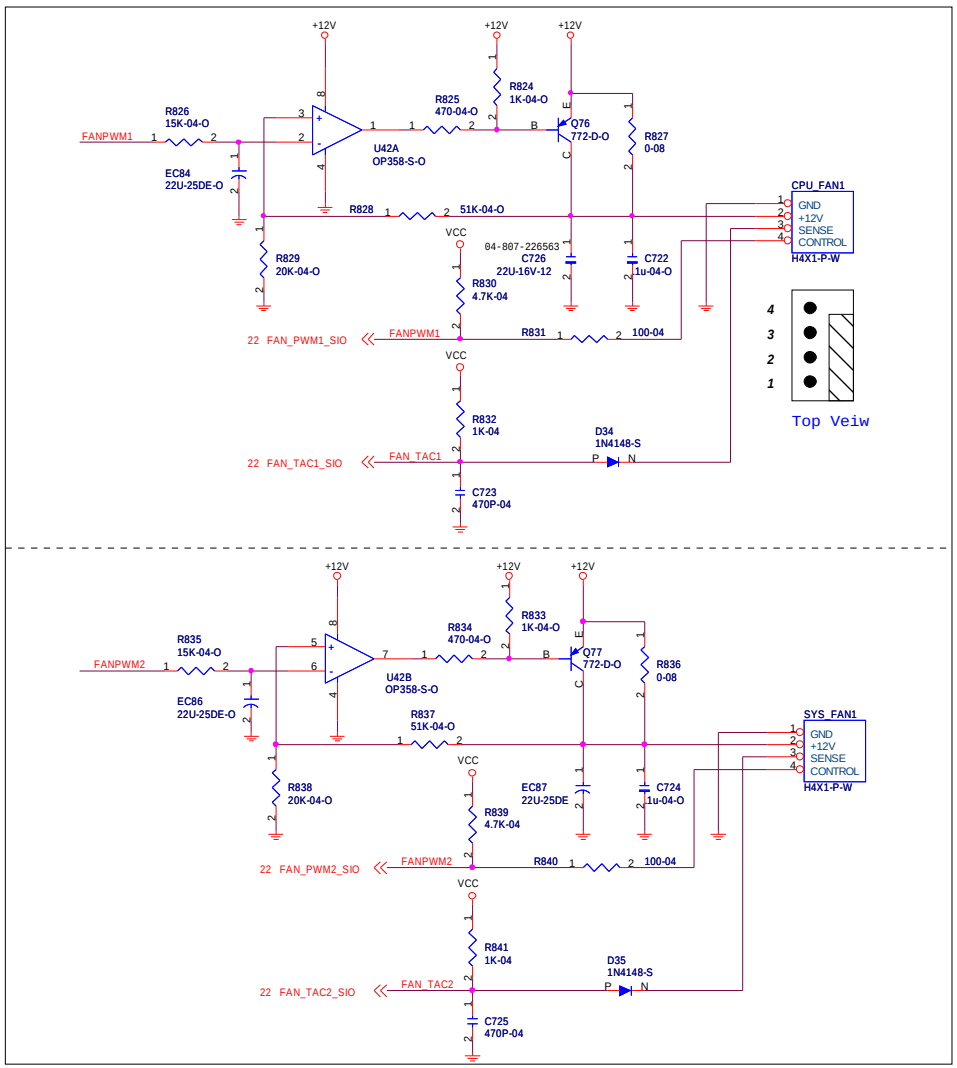


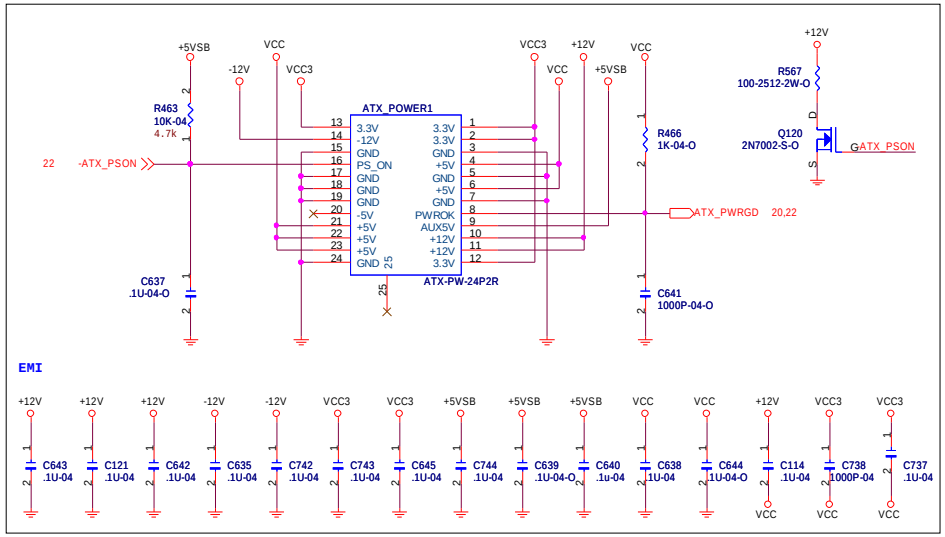
2009.08.14
1.modify Vcntl from VCC3 to VCC
2.Change U20 to AT9173
3.Use EC39 instead of MC3,MC4,MC5

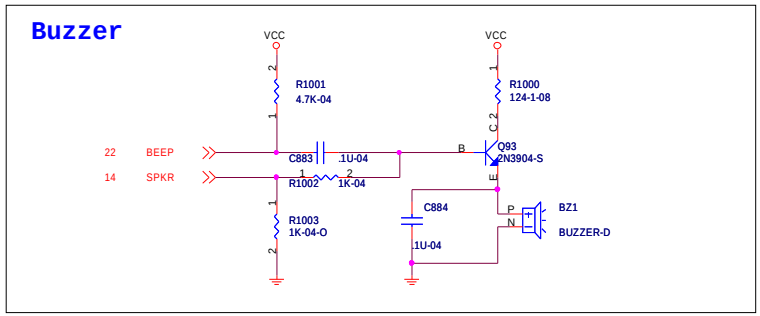
Elitegroup Computer Systems

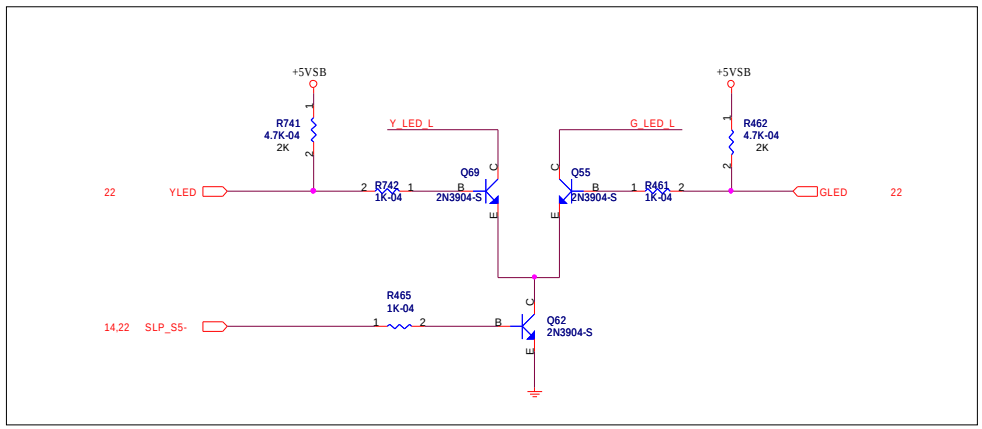
Title	NB CORE POWER	
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 29 of 32	











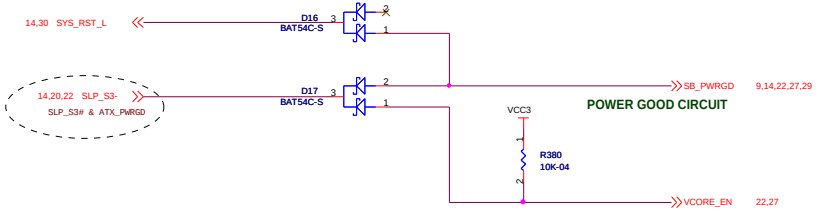
Elitegroup Computer Systems

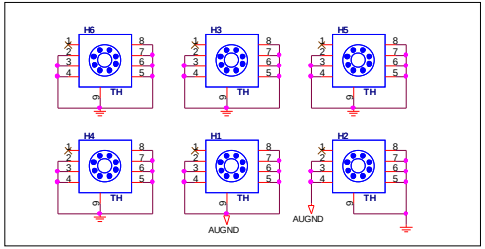
Title: PANEL,ATX24P,SMRTFAN

Size	Document Number	Rev
Custom	RS780LQ-CM	1.0

Date: Tuesday, September 29, 2009 Sheet 30 of 32

POWER GOOD & ENABLES

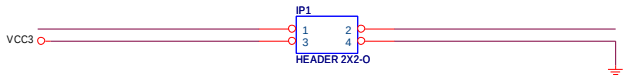




Elitegroup Computer Systems		
Title: POWER ENABLE		
Size: Custom	Document Number: RS780LQ-CM	Rev: 1.0
Date: Tuesday, September 29, 2009	Sheet 31 of 32	

NOTE:若為LAYOUT方便可改為兩個1X2 HEADER

不上件　　CUPON

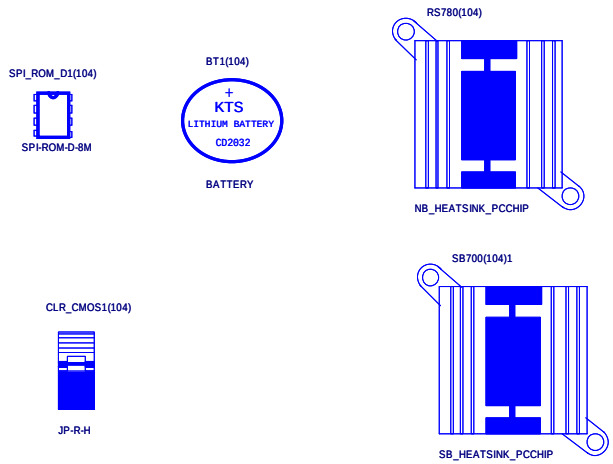


2116 : trace width 5 mil 60 ohm
Trace Length 6096 mils
Spacing: 1.clearance to itself 20/5/20(S:W:S)
2.clearance to other signal 3W

1080 : trace width 4 mil 50 ohm
Trace Length 6096 mils
Spacing: 1.clearance to itself 50/4/50(S:W:S)
2.clearance to other signal 3W

For 103

For 104



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Title: Attention

Size: Custom | Document Number: RS780LQ-CM | Rev: 1.0

Date: Tuesday, September 29, 2009 | Sheet 32 of 32