RS485M-M

BASED ON RES485-M VER:A
PCB:244mm*244mm

Rev : 1.0

L2:PWR
L3:GND

1	Cover Page
2	Block Diagram
3	Clock Generator
4	Power (CPU Vcore),Intersil 6566(DCR Sense)
5	Power A(DC to DC)
6	Power B(DC to DC),PWR sequence&good
7	K8 - M2 CPU (HT) D
8	K8 - M2 CPU (MEM) A
9	K8 - M2 CPU (CTRL) B,C
10	K8 - M2 CPU (POWER,GND) E,F,G,H
11	NB - RS485(HT LINK0 IF) A
12	NB - RS485 (PCI-E LINK I/F) B
13	NB - RS485 (SYSTEM I/F) C
14	NB - RS485 (POWER & GND) D,E
15	DIMM1 & DIMM2(Dual Channel)
16	DIMM3 & DIMM4(Dual Channel)
17	DDR2 DIMMS POWER
18	DDR2 TERMINATION
19	PCI Express Slot x16 & x1
20	SB - ATI SB460/600(PCIE, PCI, CPU, LPC)
21	SB - ATI SB460/600(APIC, GPIO, AUDIO, USB)
22	SB - ATI SB460/600(SATA, IDE,HWM,SPI)
23	SB - ATI SB460/600(STRAPS, PWR, DECOUPLING)
24	LPC SIO-ITE8712F/IX, LPC ROM
25	PCI 1, PCI2
26	PCI Extender & VGA
27	USB, IDE
28	COM, LPT
29	Front Panel, FAN
30	LAN (RTL8100SB/8100C)
31	1394:VT6307/6308
32	AUDIO ALC883/655 (CHIP)
33	AUDIO ALC883/655 (PANEL)
34	POWER DELIVERY CHART
35	CLOCK DISTRIBUTION

VER:B ->C

1. FIX V_DIMM & GND SHORT BY THERMAL PAD IN LAYER3.
2. ADD D22.....P6
3. ADD C525.....P24

VER:C ->D

1. ADD R609,R610, CHANGE R554/R555 value.....P3
2. DEL U8,R586~R590. ADD R653~R655.....P7
3. CHANGE CODEC CIRCUIT TO STANDARD 655/883 CO LAY.. .....P21,P32
4. ADD TPM CIRCUIT.....P21,P24,P26
5. ADD IR1 & R656.....P24
6. CHANGE CPU & SYS FAN TO 3/4 pin CO LAY.....P24,P29
7. ADD Q62 FOR MSG LED.....P29
8. ADD 6307/6308P CO LAY CIRCUIT.....P31
9. ADD 655/833 CO LAY CIRCUIT.....P32,P33

RS485-M940 VER:D ->RS485M-M VER:1.0

1. CHANGE AC97_OSCIN TO U6 PIN 54.....P3
2. ADD C550 FOR EMI.....P3
3. ADD Q67 & R678 FOR PWM UPDATE.....P4
4. ADD C547.....P6
5. ADD R668~R673 FOR ATi UPDATE.....P7
6. ADD C552 FOR EMI.....P14
7. ADD C554~C556 FOR EMI.....P20
8. ADD SR4 & SR5 FOR ATi UPDATE.....P21
9. ADD C553 FOR EMI & IR1.....P24
10. DEL C546 & FB11.....P27
11. ADD F8.....P27
12. DEL 6308'S PME PIN FOR VIA UPDATE.....P31
13. ADD AUXIN P32

IDE Cable detect

-P66DET	SB: GPIO9

Voltage Adjustment

VCC18	SIO_GPO20
	SIO_GPO21

LED Blinking

G_LED1	SIO:GP10(PIN84)
G_LED2	SIO:GP53(PIN77)

Other

BIOS_WP	SIO:GP41(PIN28)
WT_BEEP	SIO:GP16(PIN29)
SIO_S4S5	SIO:GP40(PIN79)
GPO_1394	SIO:GP31
GPO_LAN	SIO:GP30

PCI Bus Resource

PCI1	AD16	INT E,FGH	REQ0
PCI2	AD17	INT F,GHE	REQ1
LAN	AD21	INT G	REQ3
1394	AD24	INT H	REQ4

Elitegroup Computer Systems

Title: Cover Page

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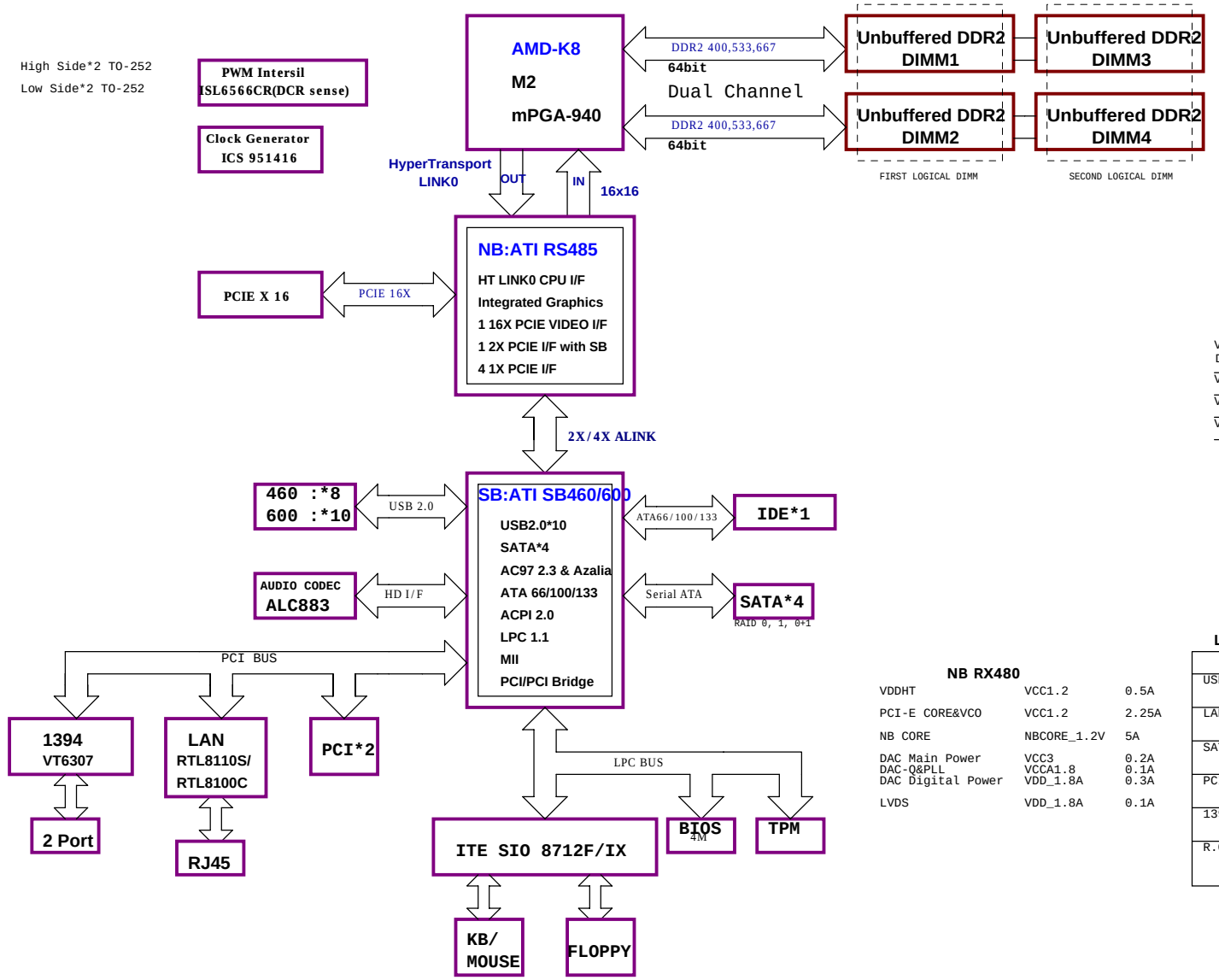
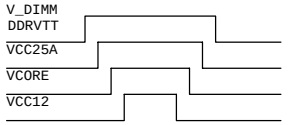


K8 POWER UP SEQUENCE	
RX480	AMD DESIGN GUIDE
1.-PS_ON	1.-PS_ON
2.V_DIMM DDRVTT	2.VDDIO(V_DIMM) VTT(DDRVTT)
3.VCC25A	3.VDDA(VCC25A)
4.VCORE	4.VDD(VCORE)
5.VCC12	5.VLDT(VCC12)
	6.PWROK



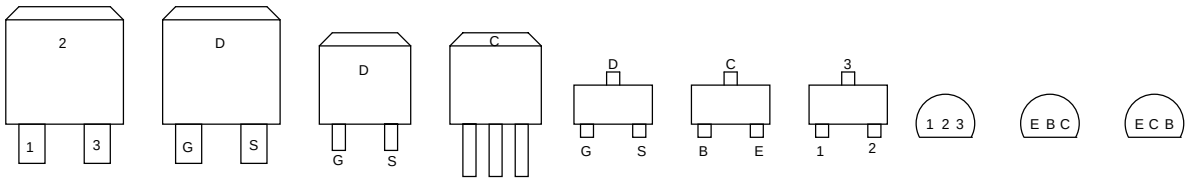
NB RX480

VDDHT	VCC1.2	0.5A
PCI-E CORE&VCO	VCC1.2	2.25A
NB CORE	NBCORE_1.2V	5A
DAC Main Power	VCC3	0.2A
DAC-Q&PLL	VCCA1.8	0.1A
DAC Digital Power	VDD_1.8A	0.3A
LVDS	VDD_1.8A	0.1A

Layout width/space

	PCB 2116	
USB(45/90)	20/8/8/8/20 20/8/8/8/20	(47/87) layout(47/87)
LAN(50/100)	20/8/12/8/20 20/8/10/8/20	(47/91) layout(47/90)
SATA(50/100)	20/6/6/6/20 20/5/7/5/20	(57/98) layout(62/111)
PCI-E(50/100)	20/6/6/6/20 20/5/7/5/20	(57/98) layout(62/111)
1394(55/110)	20/6/9/6/20 20/6/9/6/20	(56/105) layout(56/105)
R.G.B (37.5)	20/9/18/9/18/9/20 25/5/25/5/25/5/25 Put 75 ohm on NB (Impedence=37.5 ohm)	ATI DEMO layout

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



TO-263	TO-263	TO-252	TO-251	SOT-23	SOT-23	SOT-23	T0-92	T0-92	T0-92
B55QS03	2SK3296	20N03 TM3055TL-S 45N03 FDD6030L	HI772(1.4W) (PNP)	2N7002 SI2303S SI2301S	2N3904 2N3906 MMBT2907A	BAT54C BAT54S	LM431 78L05-D LM432	2N2222A 2N2097A	HSD882-D

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Title: **Block Diagram**

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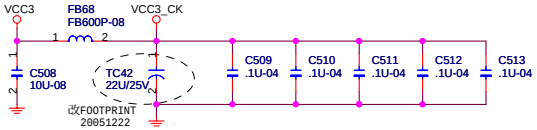
SRC(=PCI-E):Serial Reference Clock

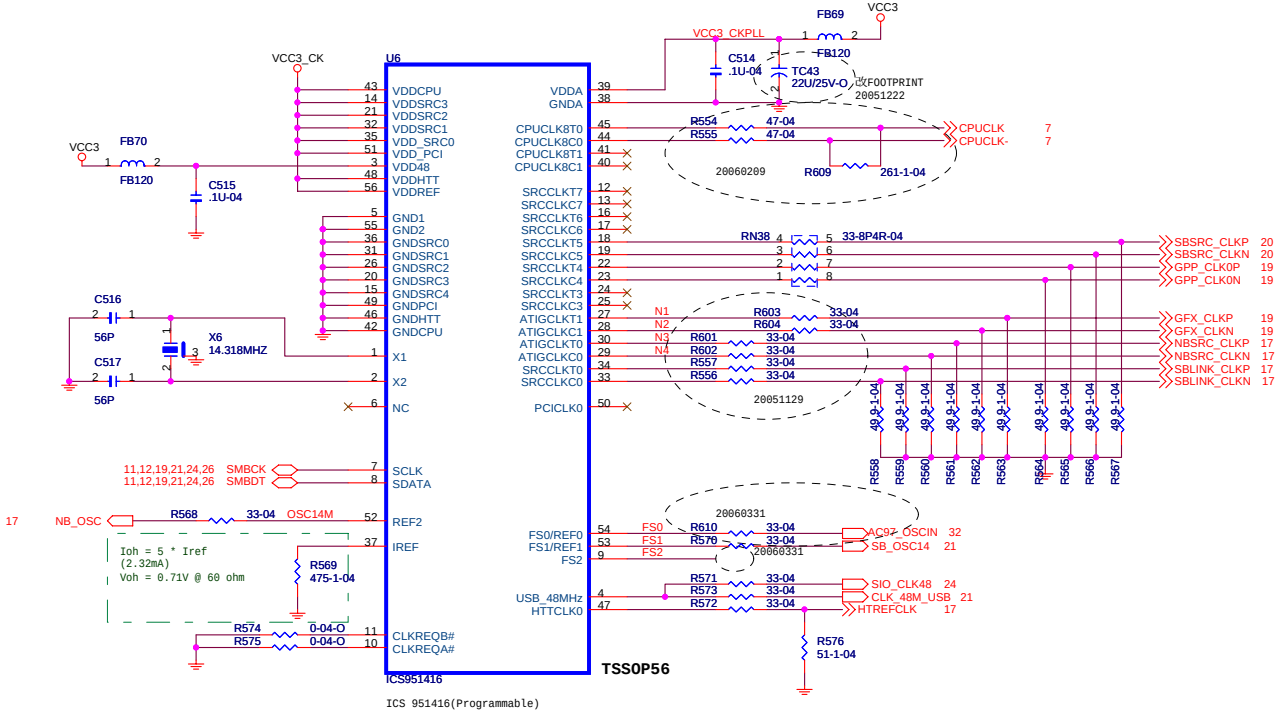
ATIGCLK Divider Selection

ATIG_Div(3:0)	ATIG_Div(3:0) (MHz)
1000	100.00
0011	114.29
TBD	133.33
0010	160.00



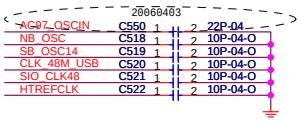
1- PLACE ALL SERIAL TERMINATION RESISTORS CLOSE TO CLOCK GEN

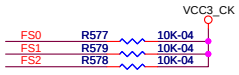
2- PUT DECOUPLING CAPS CLOSE TO CLOCK GEN POWER PIN

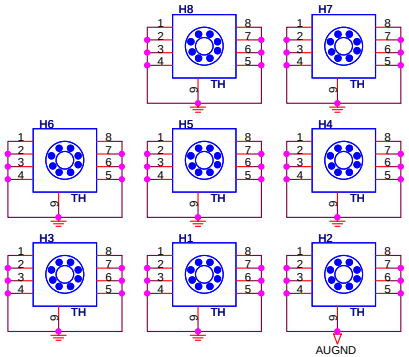


ICS 951416(Programmable)

CUSTOMER CAN ALSO USE CY28RS480 CLOCK GENERATOR TO REPLACE ICS951412 WITHOUT HARDWARE CHANGE. BOTH CHIPs HAVE THE SAME FOOTPRINT.







EXT CLK FREQUENCY SELECT TABLE(MHZ)

	FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	PCI	USB	COMMENT
	0	0	0	Hi-Z	100.00	Hi-Z	Hi-Z	48.00	Reserved
	0	0	1	X	100.00	X/3	X/6	48.00	Reserved
	0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
	0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
	1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
	1	0	1	133.33	100.00	66.66	33.33	48.00	Reserved
*	1	1	1	200.00	100.00	66.66	33.33	48.00	Normal ATHLON64 operation

FS0,1,2 internal pull low(120K ohm)

Elitegroup Computer Systems

Title: Clock Generator

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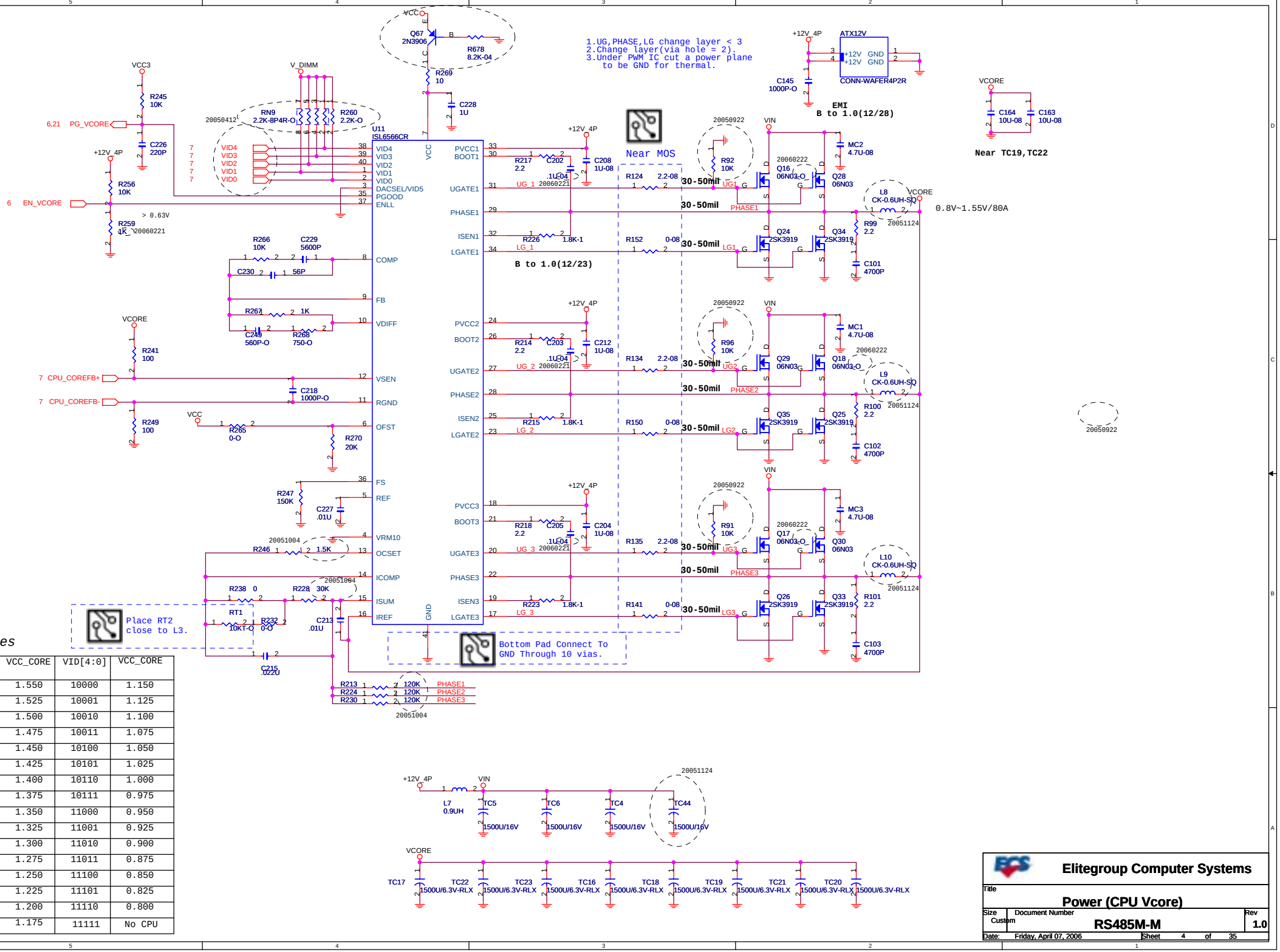

VID Codes

VID[4:0]	VCC_CORE	VID[4:0]	VCC_CORE
00000	1.550	10000	1.150
00001	1.525	10001	1.125
00010	1.500	10010	1.100
00011	1.475	10011	1.075
00100	1.450	10100	1.050
00101	1.425	10101	1.025
00110	1.400	10110	1.000
00111	1.375	10111	0.975
01000	1.350	11000	0.950
01001	1.325	11001	0.925
01010	1.300	11010	0.900
01011	1.275	11011	0.875
01100	1.250	11100	0.850
01101	1.225	11101	0.825
01110	1.200	11110	0.800
01111	1.175	11111	No CPU

Company	Elitegroup Computer Systems
Title	Power (CPU Vcore)
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Status	Target	Super I/O F/GXS
AC plug	5V_DUAL=0	SIO_S4S5=0.D=1
S0,S1	5V_DUAL=VCC	SIO_S4S5=1
S3	5V_DUAL=5VSB	SIO_S4S5=0
S4,S5	5V_DUAL=5VSB	SIO_S4S5=0
* S4,S5	5V_DUAL=0	SIO_S4S5=1

20050922

3VSB

5VSB U15 3VSB
MC4 1U-O
TC35 100U/16V-O
AMS1086
ER23 110-1
ER24 180-1
TC37 100U/16V
TO-223 & TO-252 CO-LAY
Vo=1.25(1+Rb/Rt)
AMS1086(SOT223)=1.5A

1.8VSB

CHANGE TO 1.2VSB FOR SB600.

5VSB U12 1.8VSB
MC5 1U
EZ1117-S
ER20 124-1
ER21 54.9-1-04
TC34 100U/16V
Vo=1.25(1+Rb/Rt)
20060221

5V_DUAL

VCC R94 0-08-O R85 0-08-O 5V_DUAL
FOR FRONT
VCC R307 0-08-O R294 0-08-O 5V_DUAL 20051122
FOR REAR CONN

5VSB R305 1K R306 4.7K-04 Q46 2N3906
20050923 24 SIO_S4S5
R304 10K
Q45 APM4500 5V_DUAL
5VSB R303 4.7K-04 R118 1K
20060221
DUALSW
6,29 ATX_PWRGD Q48 2N7002 Q47 2N7002
21,24 -OFFPWRS3 Q49 2N7002
VCC Q27 20N03

VCC3 R512 220 VREF25
C482 .1U-04
D18 LM431

20050923

VCC25A

6 EN_VCC25A
VREF25 R509 10K
+12V U23A LM324
VCC3 Q38 2N7002
VCC25A
R494 0 100 FOR 2.525V 30mil
R495 10K-O
20051003
TC24 100U/16V
Near CPU.

DDRVTT

20051011
V_DIMM
3VSB U20 RT9173
Vcntl VIN Vcntl GND Vcntl REFEN Vcntl VOUT
ER26 10K-1-04
VTT_DDR
20060221
DDRREF
EC10 100U/16V-O
MC7 1U
ER27 10K-1-04
EC8 1000U/6.3V-O
EC7 1000U/6.3V

5VDUAL_IN
R488 0-08-O
R489 0-08-O
Q57 SI2301S
VCC Q54 45N02 5VSB
DUALSW
R501 10K
R505 20K

5VSB +12V
R497 10-O D17 BAT54C
C430
20060221 .1U-04
U21 RT9214
GND VCC BOOT UGATE PHASE COMP/OCSET LGATE FB
R465 200-04
24 SIO_GP20 R485 4.02K-1
24 SIO_GP21 R484 2K
R464 1K-O C427 4700P-O
R463 249-1
D16 BAT54C
R499 24K-O
C453 .1U-04
R486 0
R490 30K
R480 0
Q53 20N03
Q52 20N03
5VDUAL_IN
L15 FBX2
EC12 1000U/6.3V
C454 10U-08
L14 4.0UH
R483 2.2
C460 .01U
V_DIMM
EC6 EC9 EC11 1000U/6.3V
20051003

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

5VSB R496 4.7K-04 20060221 Q56 2N7002
21,29 -OFFPWRS4_S5 R491 22K
6 -SUSC_S5 R583 22K-O Q55 2N3904
20051122

Elitegroup Computer Systems

Title: Power A(DC to DC)

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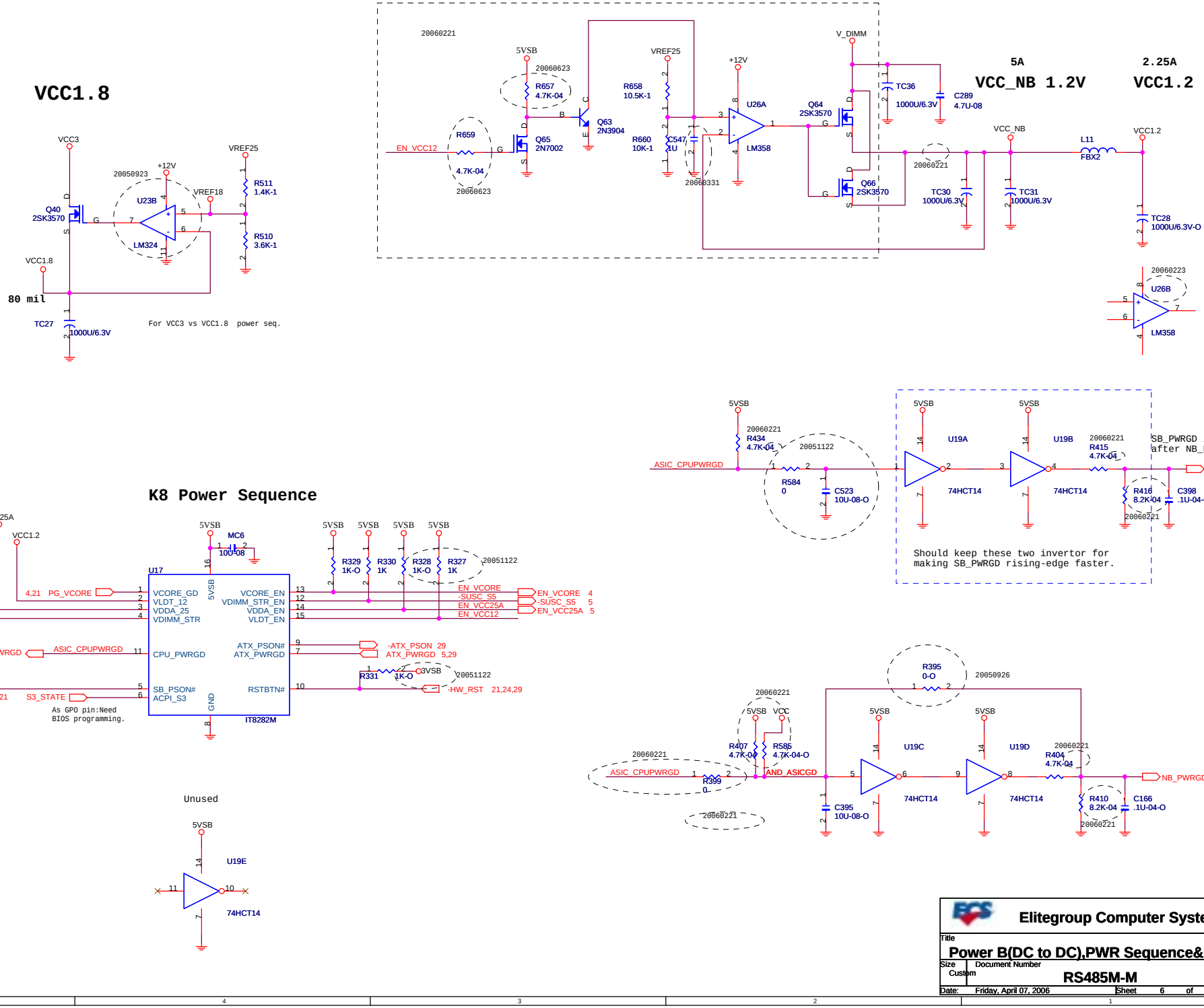

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Title: Power B(DC to DC),PWR Sequence&good

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ATHLON Control and Debug

Required for compatibility with future processors

LAYOUT: Route VDDA trace approx. 50 mils wide (use 2x25 mil traces to exit ball field) and 500 mils long.

Keep trace to resistors less than 1" from CPU pin

Keep trace to resistor less than 1.25" from CPU pin

Route as 80-Ohm differential impedance Keep trace to resistor less than 1" from CPU pin

HDT Connector

NOTE: HDT termination is required for Rev Ax silicon only.

AMD NPT M2 SOCKET
Processor Socket

Company	Elitegroup Computer System
Title	M2 HT I/F ,CTRL & DEBUG PART1
Size	C
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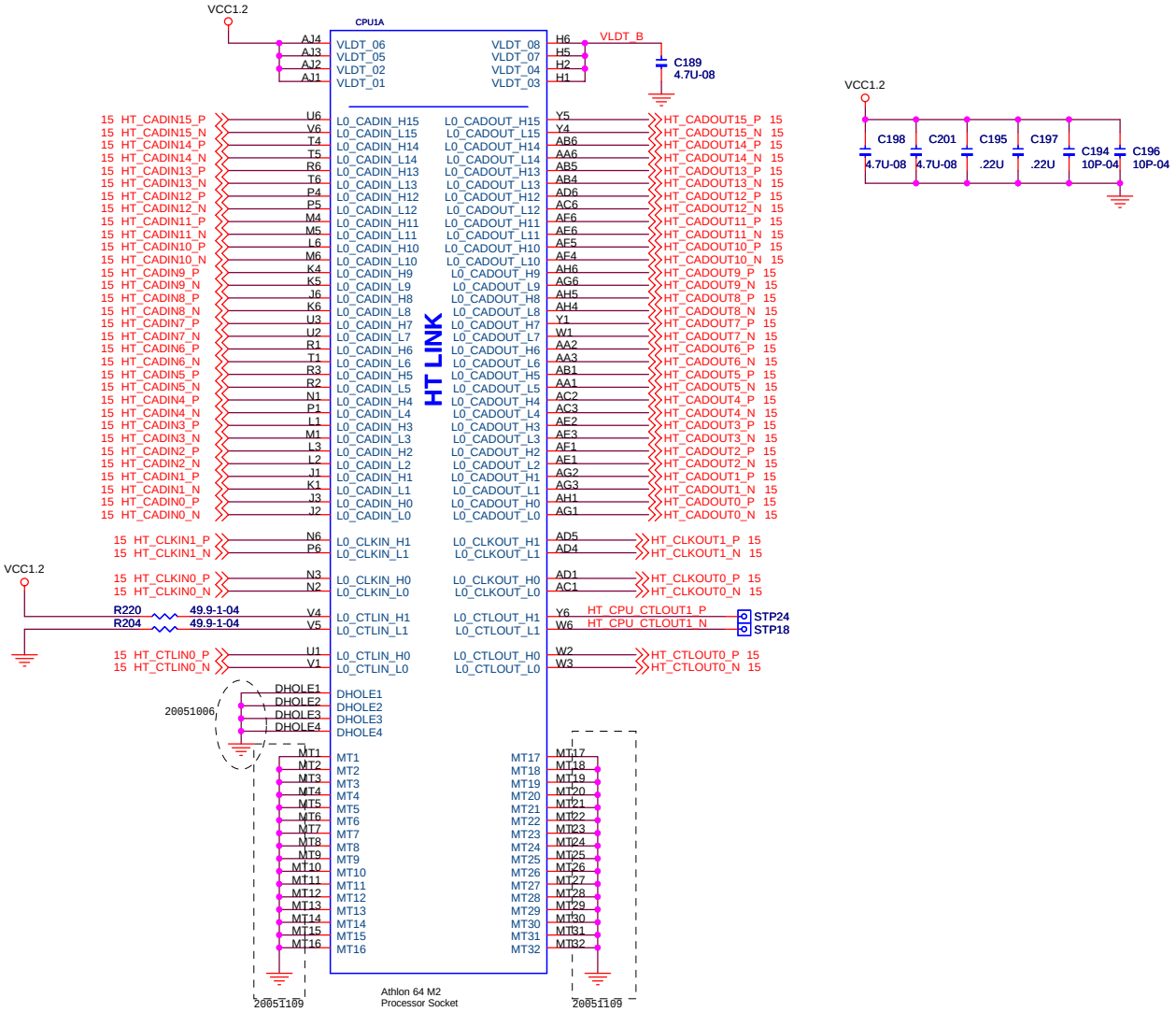
CPU HyperTransport Interface

VDDLDTRUNCPU is connected to the VDD_LDT_RUN power supply through the package or on the die. It is only connected on the board to decoupling near the CPU package.



Elitegroup Computer System		
Title: M2 HT I/F,CTRL & DEBUG PART2		
Size: C	Document Number: RS485M-M	Rev: 1.0
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Processor DDR2 Memory Interface

VDD_VTT_SUS_CPU is connected to the VDD_VTT_SUS power supply through the package or on the die. It is only connected on the board to decoupling near the CPU package.

To upper DIMM sockets for each Logical DIMM (DIMM2 and DIMM4).

To lower DIMM sockets for each Logical DIMM (DIMM1 and DIMM3).

Keep trace to resistors less than 1" from CPU pin

DDRII: DATA

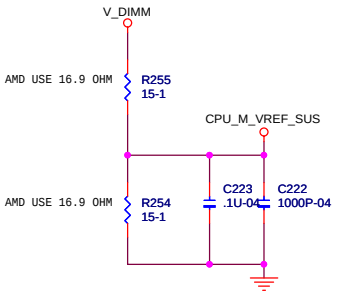
DDR II: CMD/CTRL/CLK

CPU1C

CPU1B

Athlon 64 M2 Processor Socket

VDD_VREF_SUS_CPU



Elitegroup Computer System	
Title	M2 DDR2 MEMORY I/F
Size C	Document Number RS485M-M
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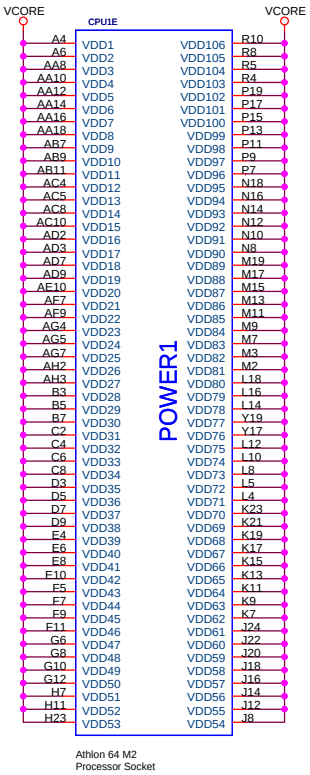
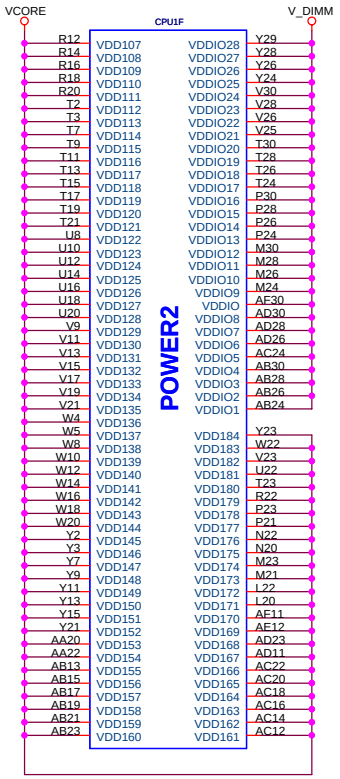
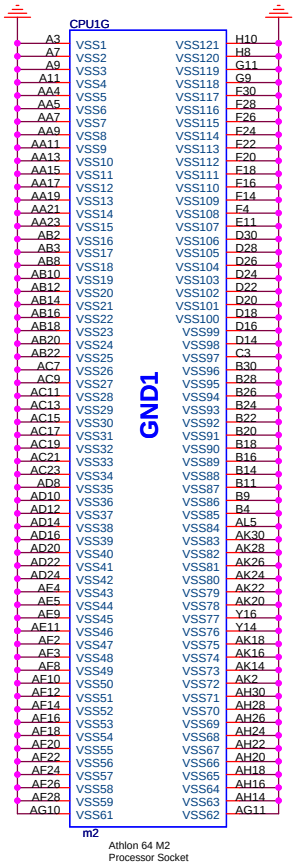
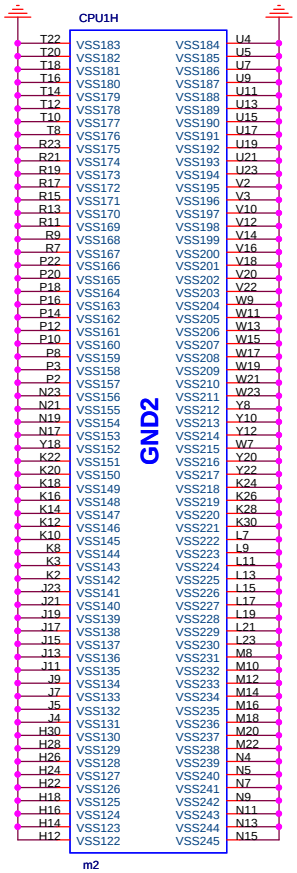
Processor Power and Ground

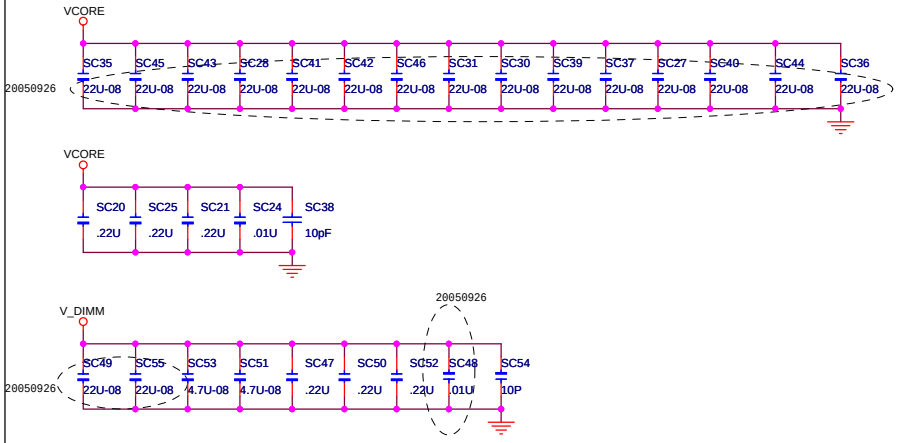


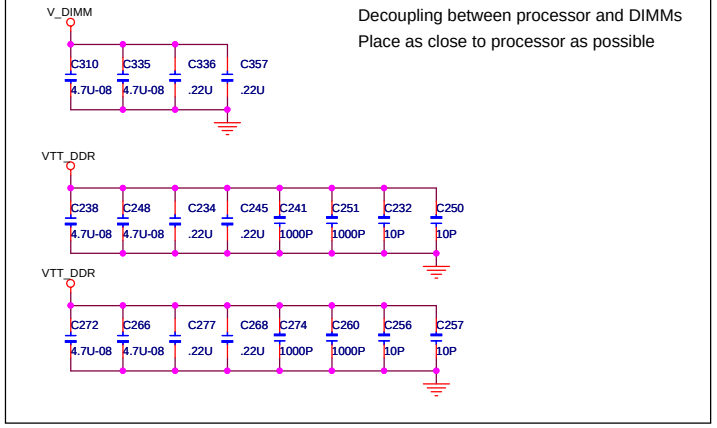






Bottomside Decoupling





Decoupling between processor and DIMMs
Place as close to processor as possible

Elitegroup Computer System

Title: M2 POWER & GND

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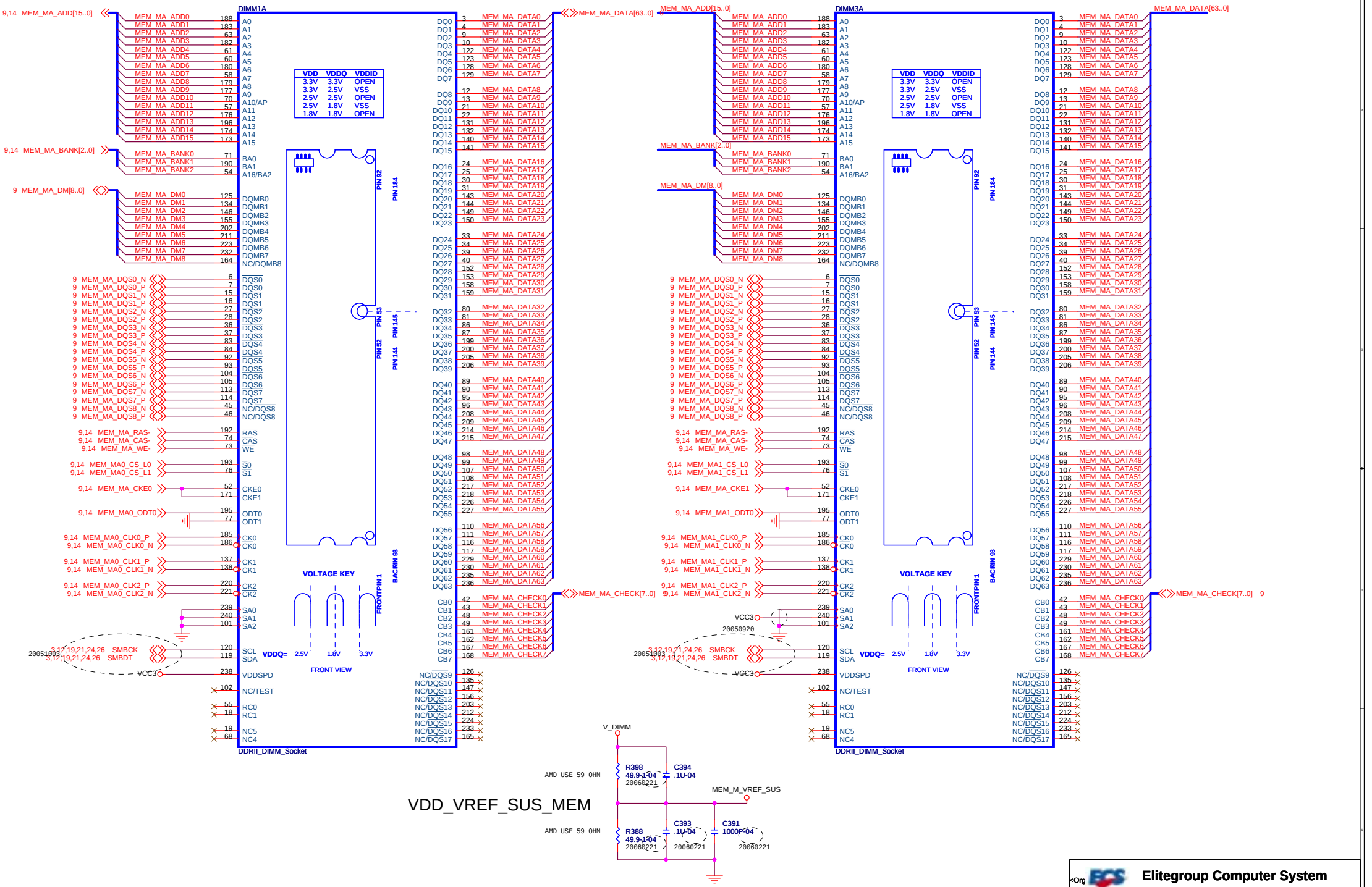

Org	Elitegroup Computer System
Title	DIMM1 & DIMM2 (184 PIN DDR)
Size	Custom
Document Number	RS485M-M
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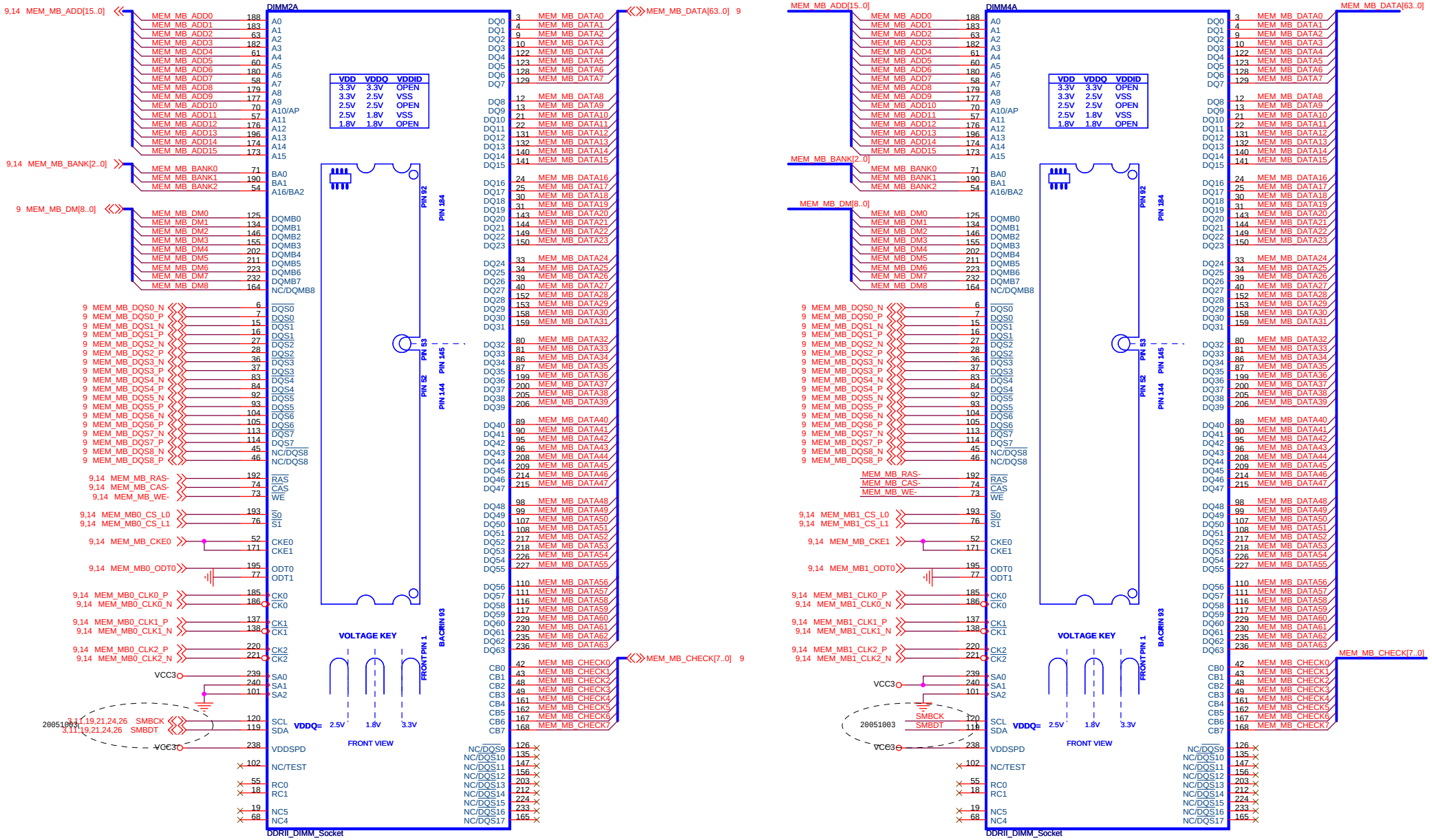

Elitegroup Computer System	
Title	DIMM3 & DIMM4 (184 PIN DDR)
Size: Custom	Document Number: RS485M-M
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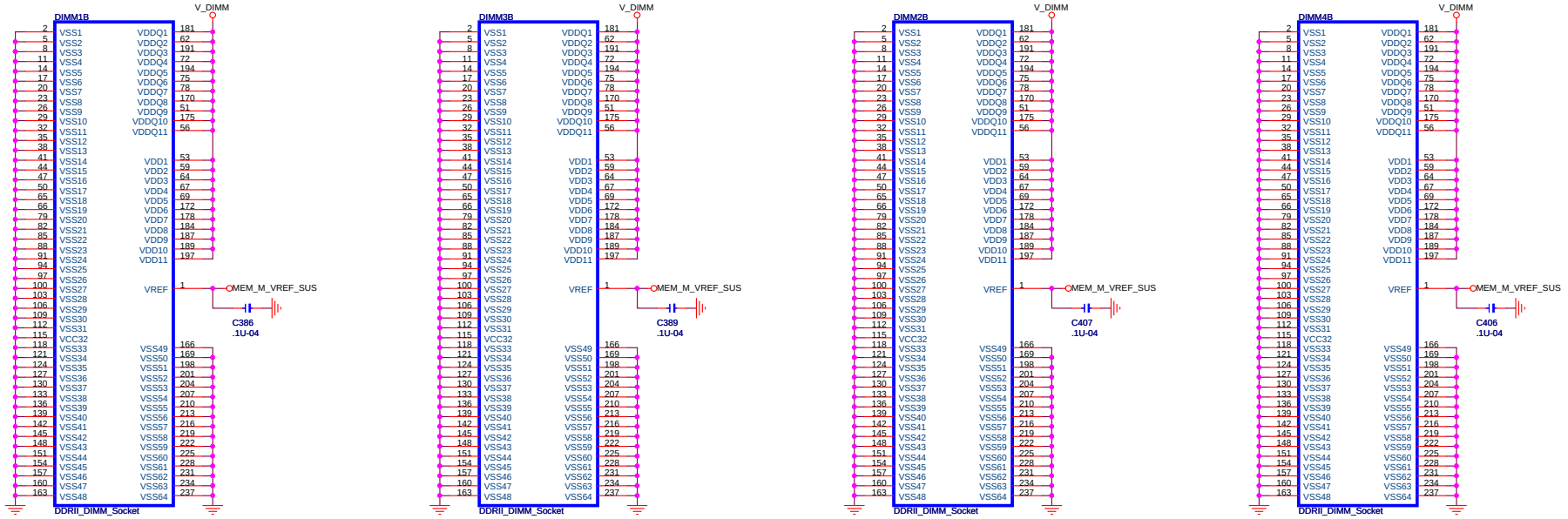

Elitegroup Computer Systems

Title	DDR2 DIMMS POWER		
Size: Custom	Document Number: RS485M-M		Rev: 1.0
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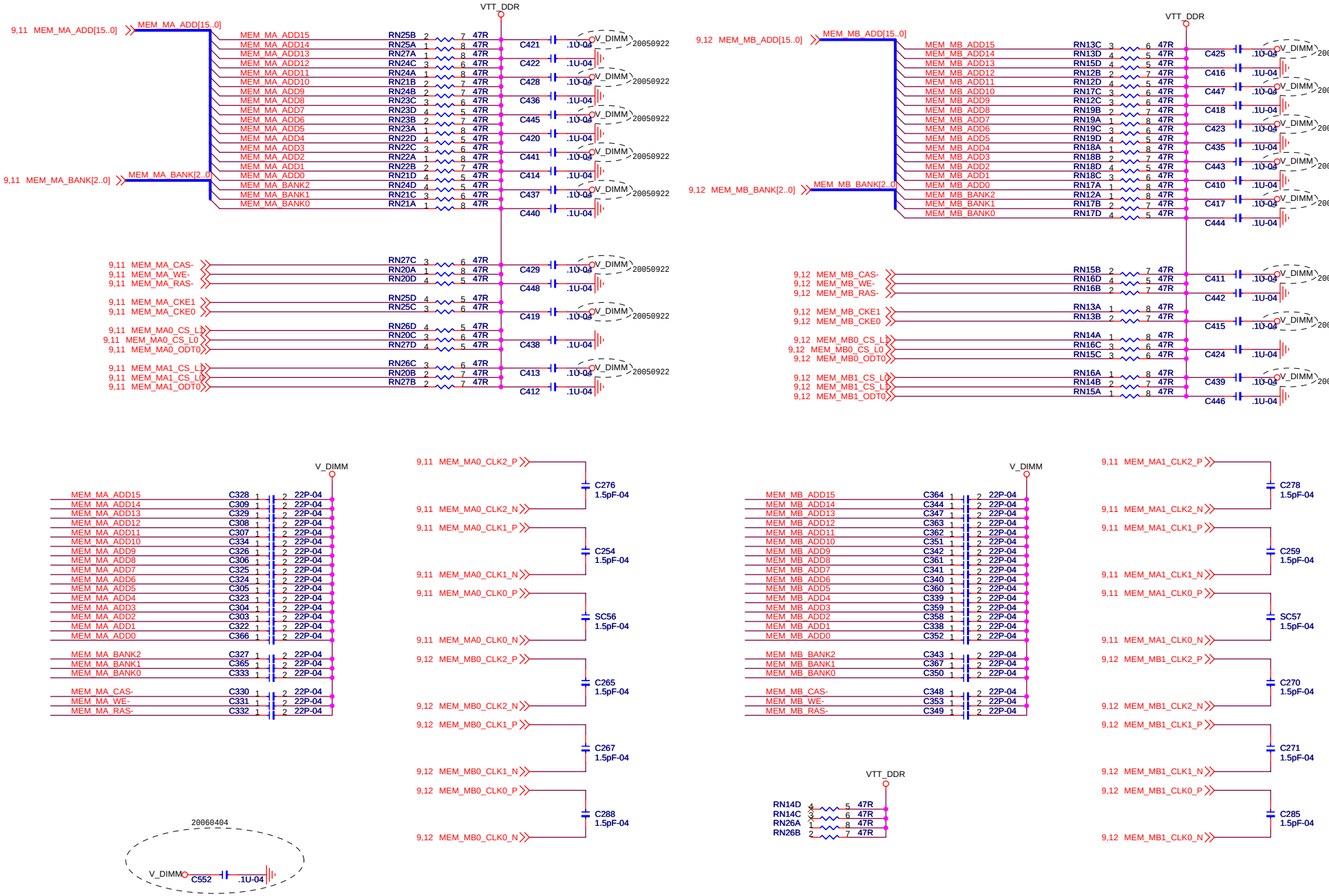


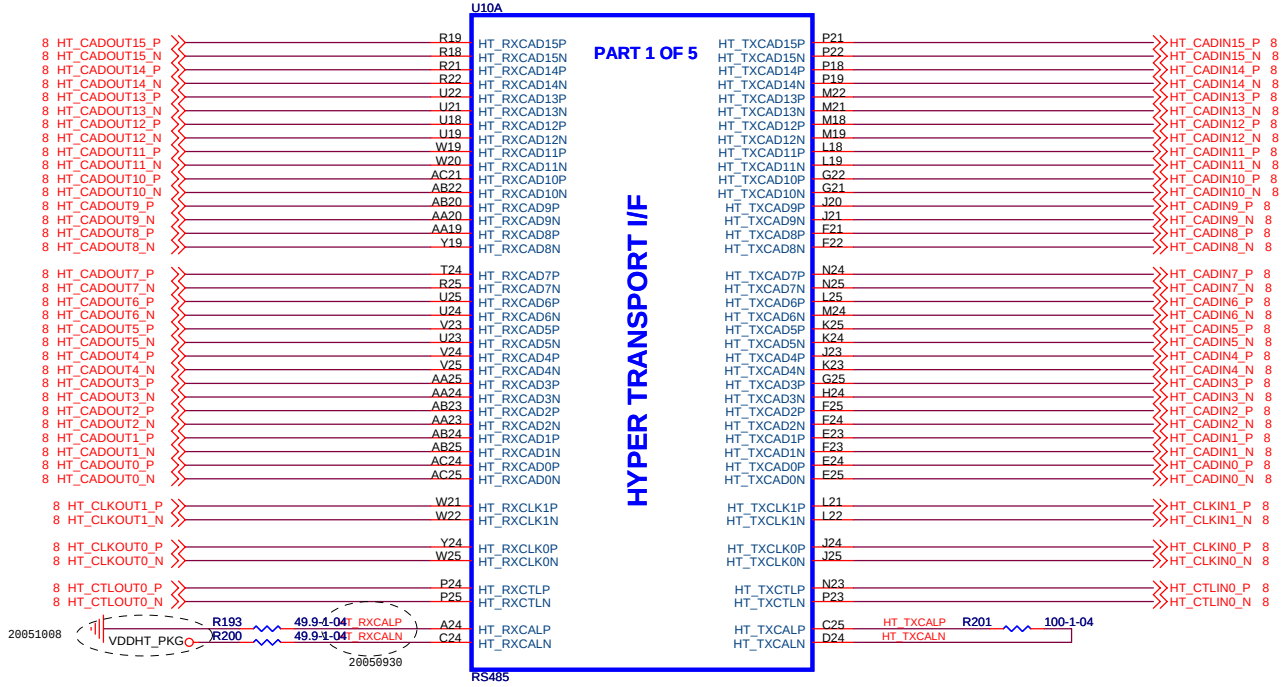
Elitegroup Computer System

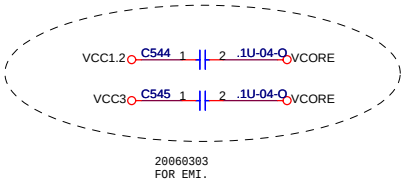
Title

DDR2 TERMINATION

Size	Document Number	Rev
C	RS485M-M	1.0

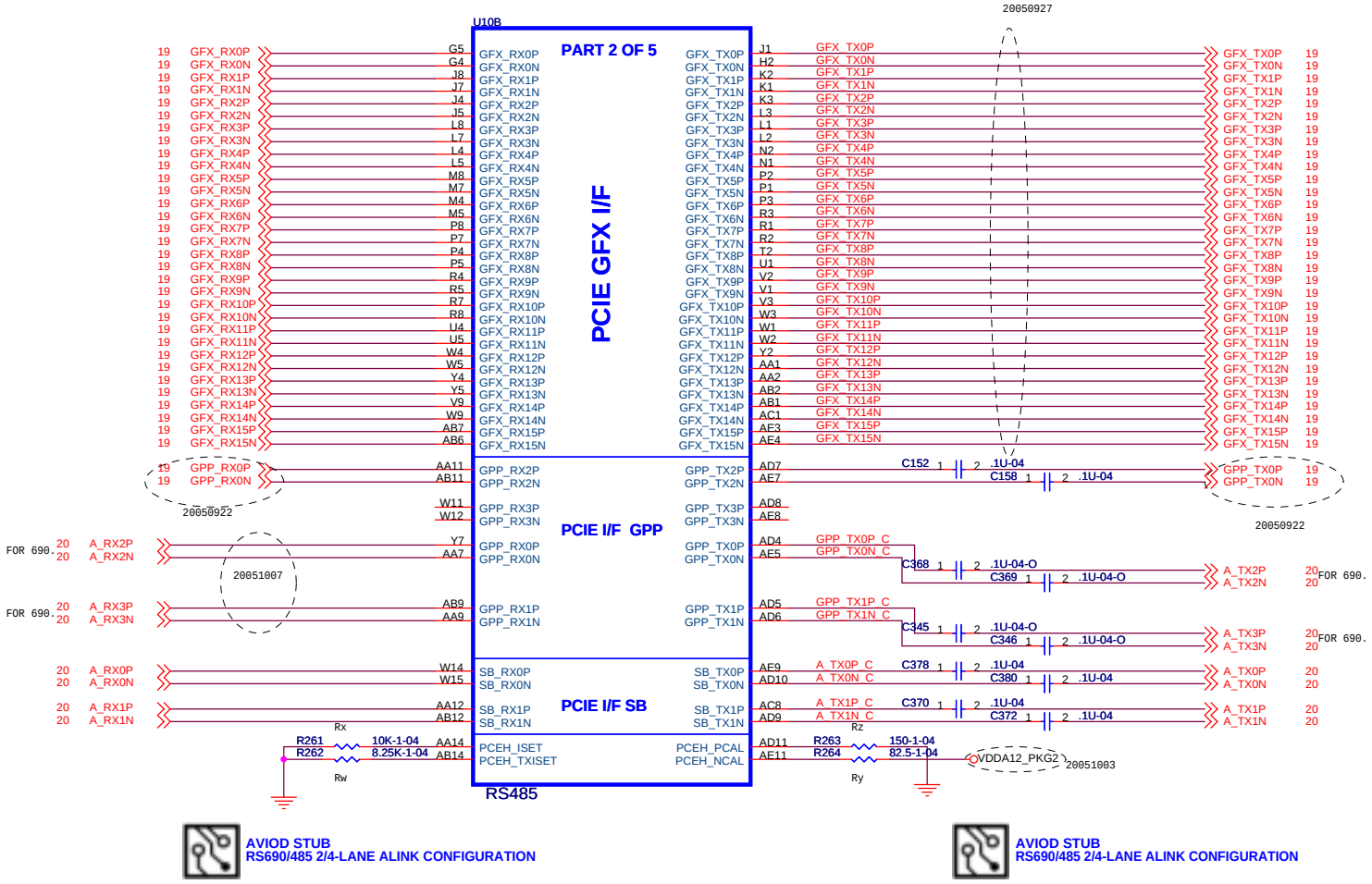
Date: Friday, April 07, 2006 Sheet 14 of 35





HT link stitching caps

Elitegroup Computer system		
Title: NB:ATI RS485/690 HT LINK I/F		
Size: C	Document Number: RS485M-M	Rev: 1.0
Date: Friday, April 07, 2006	Sheet 15 of 35	



AVIOD STUB
RS690/485 2/4-LANE ALINK CONFIGURATION

AVIOD STUB
RS690/485 2/4-LANE ALINK CONFIGURATION

RS690/RS485 CHANGE TABLE

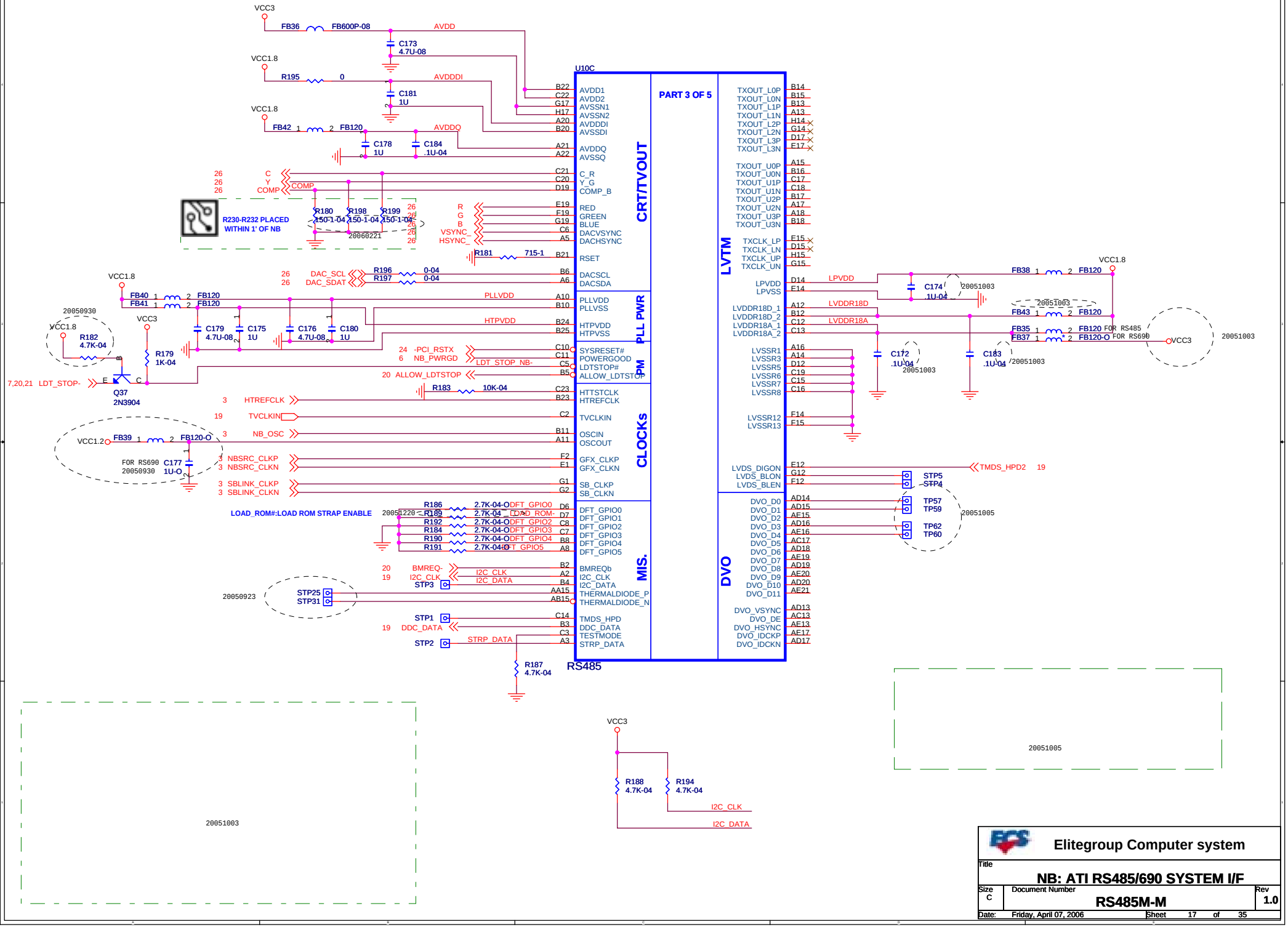
NB/DIFF	Rw	Rx	Ry	Rz
RS690	DNI	1.47K	2K	562R
RS485	8.25K	10K	82.5R	150R

Elitegroup Computer system

Title: NB:ATI RS485/690 PCI-E I/F

Size	Document Number	Rev
C	RS485M-M	1.0

Date: Friday, April 07, 2006 Sheet 16 of 35

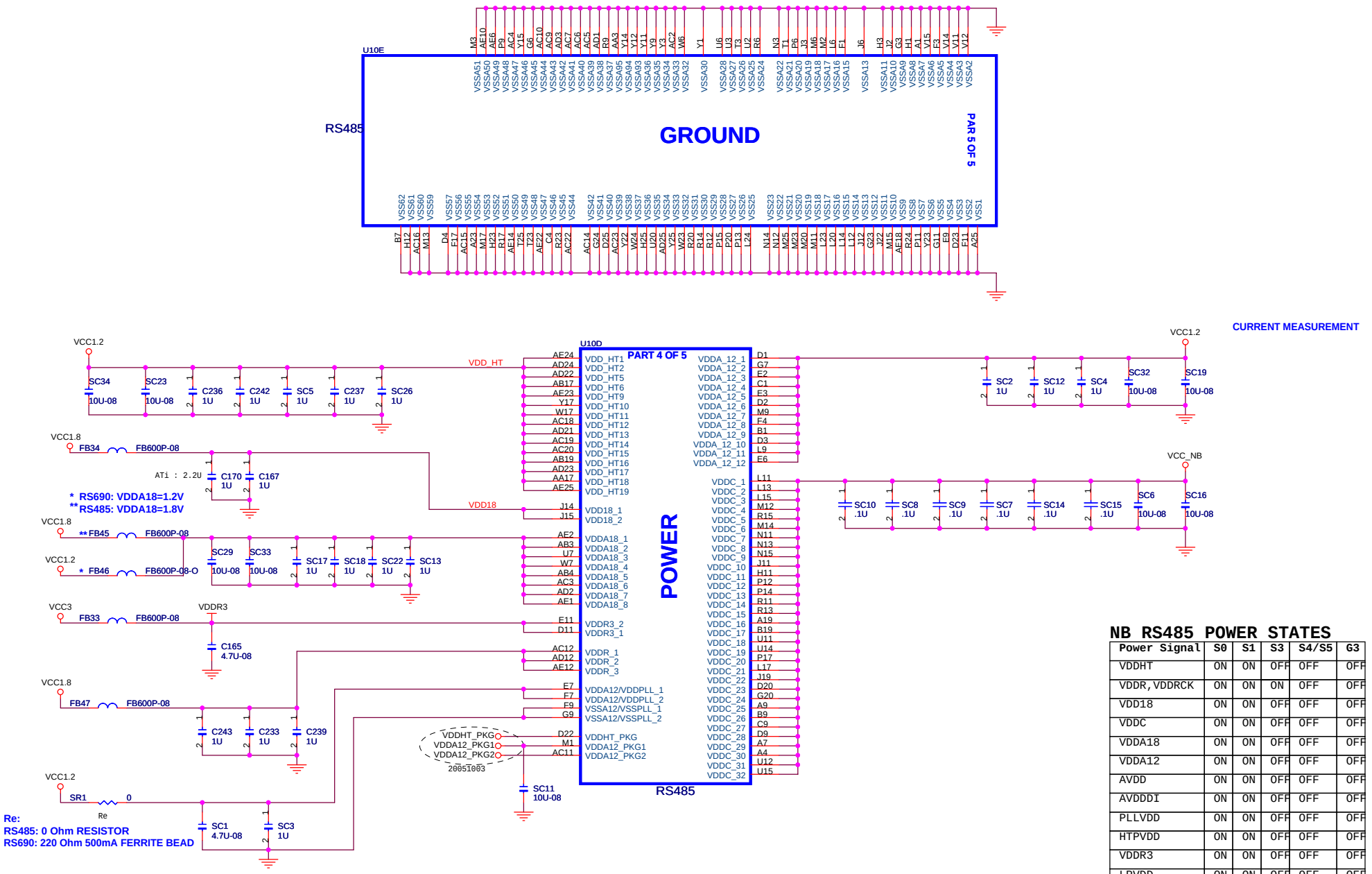


Elitegroup Computer system

Title: NB: ATI RS485/690 SYSTEM I/F

Size	Document Number	Rev
C	RS485M-M	1.0

Date: Friday, April 07, 2006 Sheet 17 of 35



NB RS485 POWER STATES

Power Signal	S0	S1	S3	S4/S5	G3
VDDHT	ON	ON	OFF	OFF	OFF
VDDR,VDDRCK	ON	ON	ON	OFF	OFF
VDD18	ON	ON	OFF	OFF	OFF
VDDC	ON	ON	OFF	OFF	OFF
VDDA18	ON	ON	OFF	OFF	OFF
VDDA12	ON	ON	OFF	OFF	OFF
AVDD	ON	ON	OFF	OFF	OFF
AVDDDI	ON	ON	OFF	OFF	OFF
PLLVDD	ON	ON	OFF	OFF	OFF
HTPVDD	ON	ON	OFF	OFF	OFF
VDDR3	ON	ON	OFF	OFF	OFF
LPVDD	ON	ON	OFF	OFF	OFF
LVDDR18D	ON	ON	OFF	OFF	OFF
LVDDR18A	ON	ON	OFF	OFF	OFF

Elitegroup Computer System

Title: NB RS485/690 POWER

Size: C | Document Number: RS485M-M | Rev: 1.0

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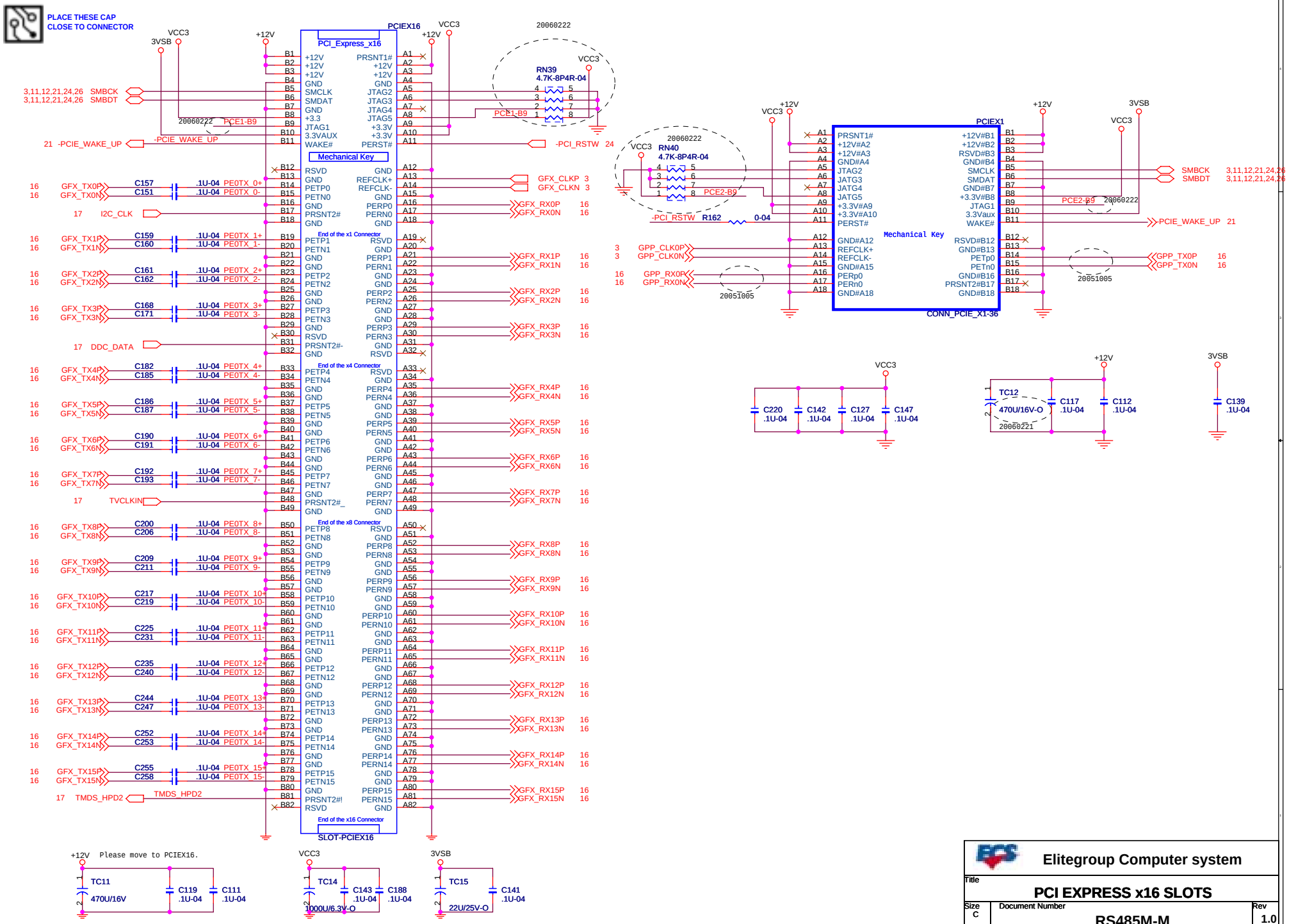
PCI_EXPRESS_x16

+12V:5.5Amp



	SB CALIBRATION RESISITOR VALUE	
	SB600	SB460
Ra	562 OHM 1%	150 OHM 1%
Rb	2.05K 1%	150 OHM 1%
Rc	DNI	4.12K 1%

FOR SB600 VCC_SB= 1.2V
FOR SB460 VCC_SB= 1.8V

PLACE PCIE CAPS CLOSE TO U600

PLACE THESE COMPONENTS CLOSE TO U600, AND USE GROUND GUARD FOR 32K_X1 AND 32K_X2

SB600 SB 23x23mm
Part 1 of 4
U18A
SB600 IXP600 A11, LF

PCI CLKS
PCI EXPRESS INTERFACE
PCI INTERFACE
LPC
CPU
RTC
XTAL

FOR SB460, THIS BALL IS SPDIF_OUT/GPIO41 ONLY

SB460 ONLY

LPC PULL UPS

FOR SB600, THIS BALL IS LDRQ1 ONLY
FOR SB460, THIS BALL IS BMREQ# ONLY

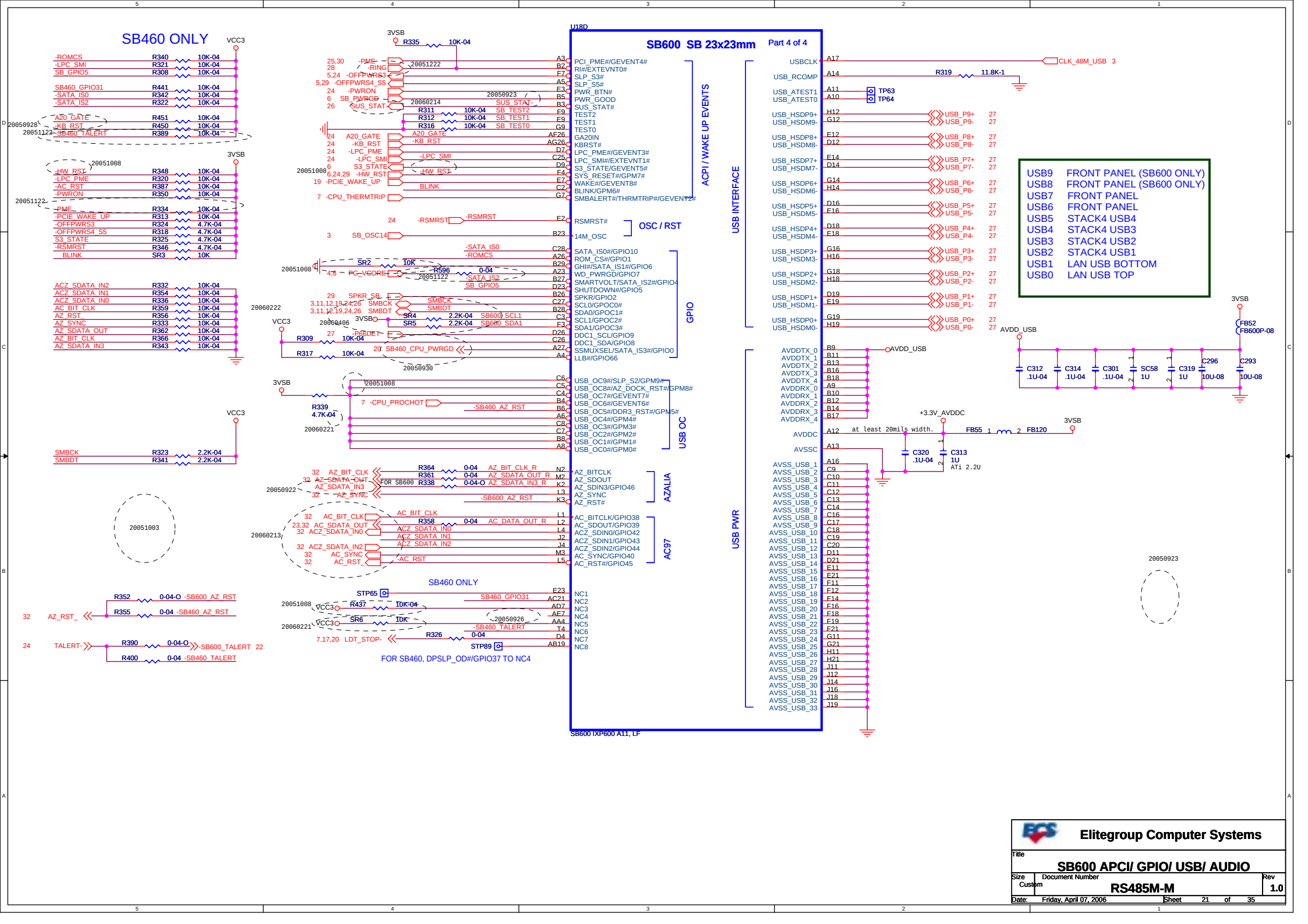
1-2: NORMAL
2-3: CMOS CLEAR

Elitegroup Computer Systems

Title: SB600 PCIE/ PCI/ CPU/ LPC

Size: Custom | Document Number: RS485M-M | Rev: 1.0

Date: Friday, April 07, 2006 | Sheet 20 of 35


SB460 ONLY
SB600 SB 23x23mm
Part 4 of 4
U18D
ACPI / WAKE UP EVENTS
USB INTERFACE
GPIO
OSC / RST
USB OC
AZALIA
AC97
USB PWR
SB460 ONLY
FOR SB460, DPSLP_OD#/GPIO37 TO NC4
SB600 IXP600 A11, LF
USB9 FRONT PANEL (SB600 ONLY)
USB8 FRONT PANEL (SB600 ONLY)
USB7 FRONT PANEL
USB6 FRONT PANEL
USB5 STACK4 USB4
USB4 STACK4 USB3
USB3 STACK4 USB2
USB2 STACK4 USB1
USB1 LAN USB BOTTOM
USB0 LAN USB TOP
at least 20mils width.
Elitegroup Computer Systems
SB600 APCI/ GPIO/ USB/ AUDIO
RS485M-M
1.0
Friday, April 07, 2006
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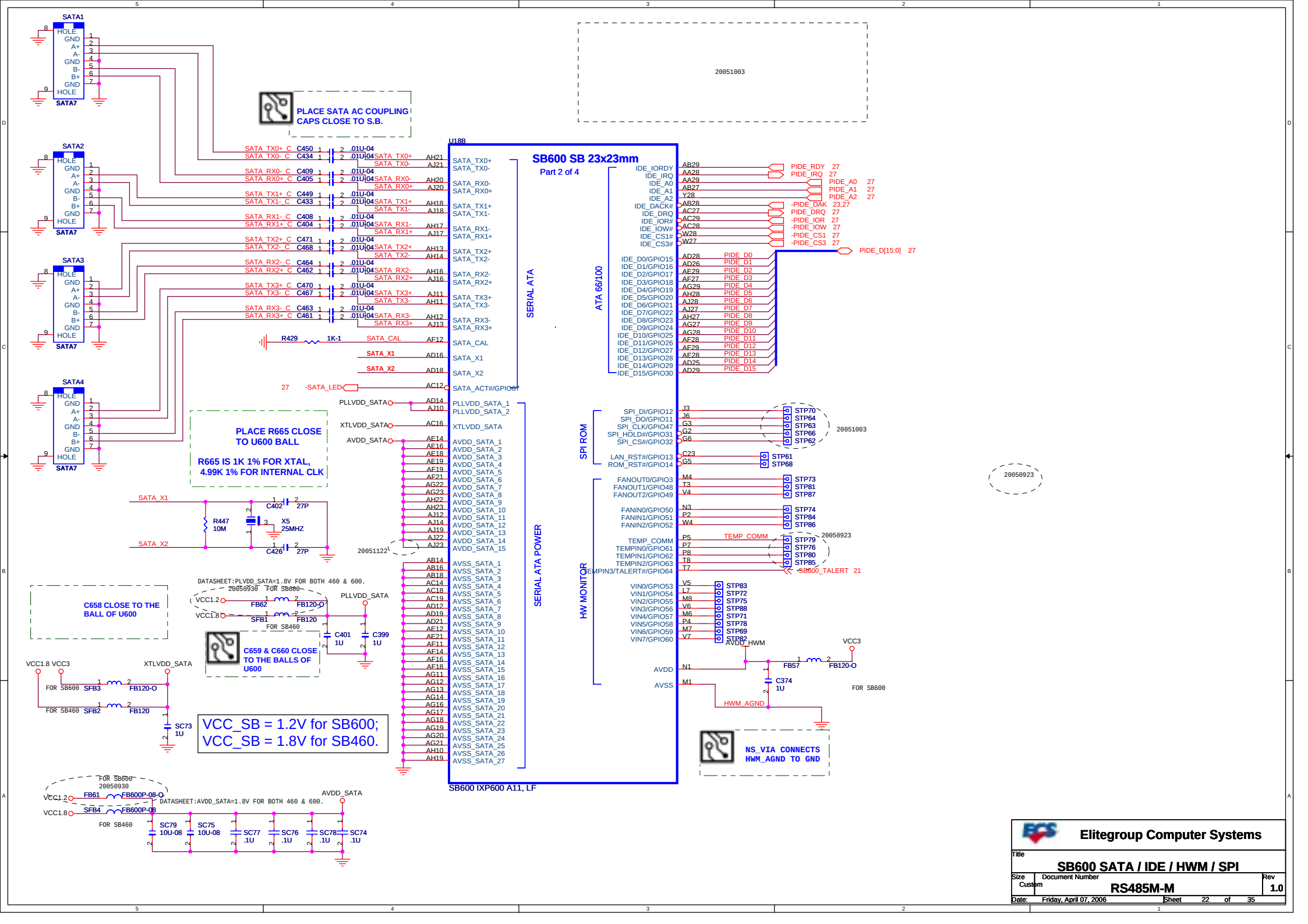
SATA1
SATA2
SATA3
SATA4
SATA7
PLACE SATA AC COUPLING CAPS CLOSE TO S.B.
U18B
SB600 SB 23x23mm
Part 2 of 4
SERIAL ATA
ATA 66/100
SPI ROM
HW MONITOR
SERIAL ATA POWER
SB600 IXP600 A11, LF
PLACE R665 CLOSE TO U600 BALL
R665 IS 1K 1% FOR XTAL, 4.99K 1% FOR INTERNAL CLK
C658 CLOSE TO THE BALL OF U600
C659 & C660 CLOSE TO THE BALLS OF U600
VCC_SB = 1.2V for SB600;
VCC_SB = 1.8V for SB460.
NS_VIA CONNECTS HWM_AGND TO GND
20051003
20050923
Elitegroup Computer Systems
SB600 SATA / IDE / HWM / SPI
RS485M-M
1.0
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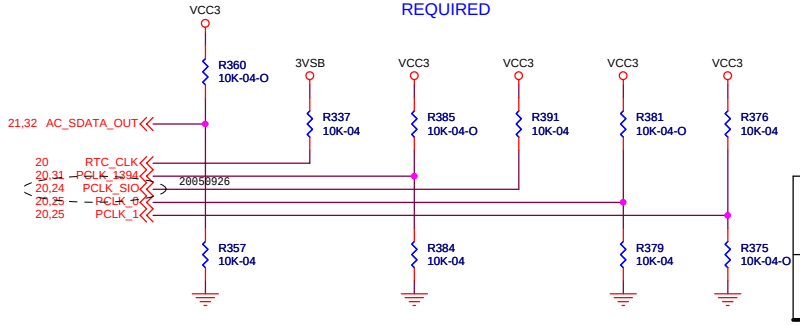
REQUIRED STRAPS

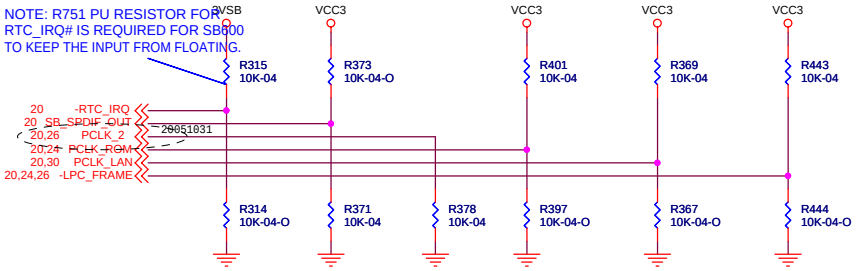
SB600 HAS 15K INTERNAL PD FOR AC_SDATA_OUT, 15K PU FOR RTC_CLK, EXTERNAL PU/PD IS NOT REQUIRED; FOR SB460, EXTERNAL PU/PD ARE REQUIRED



	AC_SDOUT	RTC_CLK	PCI_CLK4 (PCLK_1394)	PCI_CLK6 (PCLK_SIO)	SB600 PCI_CLK0 PCI_CLK1	SB460 PCI_CLK0 (PCLK_0) PCI_CLK1 (PCLK_1)
PULL HIGH	USE DEBUG STRAPS	INTERNAL RTC DEFAULT	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM DEFAULT L, L = FWH ROM	ROM TYPE: H, H = PCI ROM H, L = LPC I ROM DEFAULT L, H = LPC II ROM L, L = FWH ROM NOTE: FOR SB460, PCICLK[8:7] ARE CONNECTED TO SUBSTRATE BALLS PCICLK[1:0]
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	EXTERNAL RTC	USE EXT. 48MHZ DEFAULT	CPU IF=P4		

ADDITIONAL SB460 STRAPS

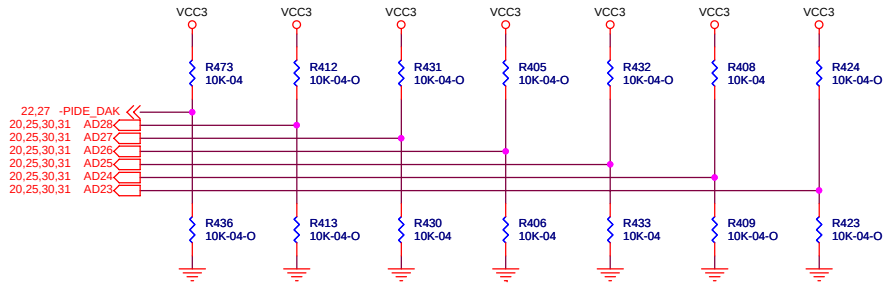
NOTE: R751 PU RESISTOR FOR RTC_IRQ# IS REQUIRED FOR SB600 TO KEEP THE INPUT FROM FLOATING.



	ACPWRON (RTC_IRQ_)	SPDIF_OUT	PCI_CLK2 (PCLK_2)	PCI_CLK3 (PCLK_ROM)	PCI_CLK5 (PCLK_LAN)	LFRAME# (-LPC_FRAME)
PULL HIGH	MANUAL PWR ON DEFAULT	SIO 24MHz	XTAL MODE NOT SUPPORTED	USB PHY POWERDOWN DISABLE DEFAULT	PCIE_CM_SET LOW DEFAULT	ENABLE THERMTRIP# DEFAULT
PULL LOW	AUTO PWR ON DEFAULT	SIO 48MHz	48MHZ OSC MODE DEFAULT	USB PHY POWERDOWN ENABLE	PCIE_CM_SET HIGH	DISABLE THERMTRIP#
	SB460 ONLY	SB460 ONLY	SB460 ONLY	SB460 ONLY	SB460 ONLY	SB460 ONLY

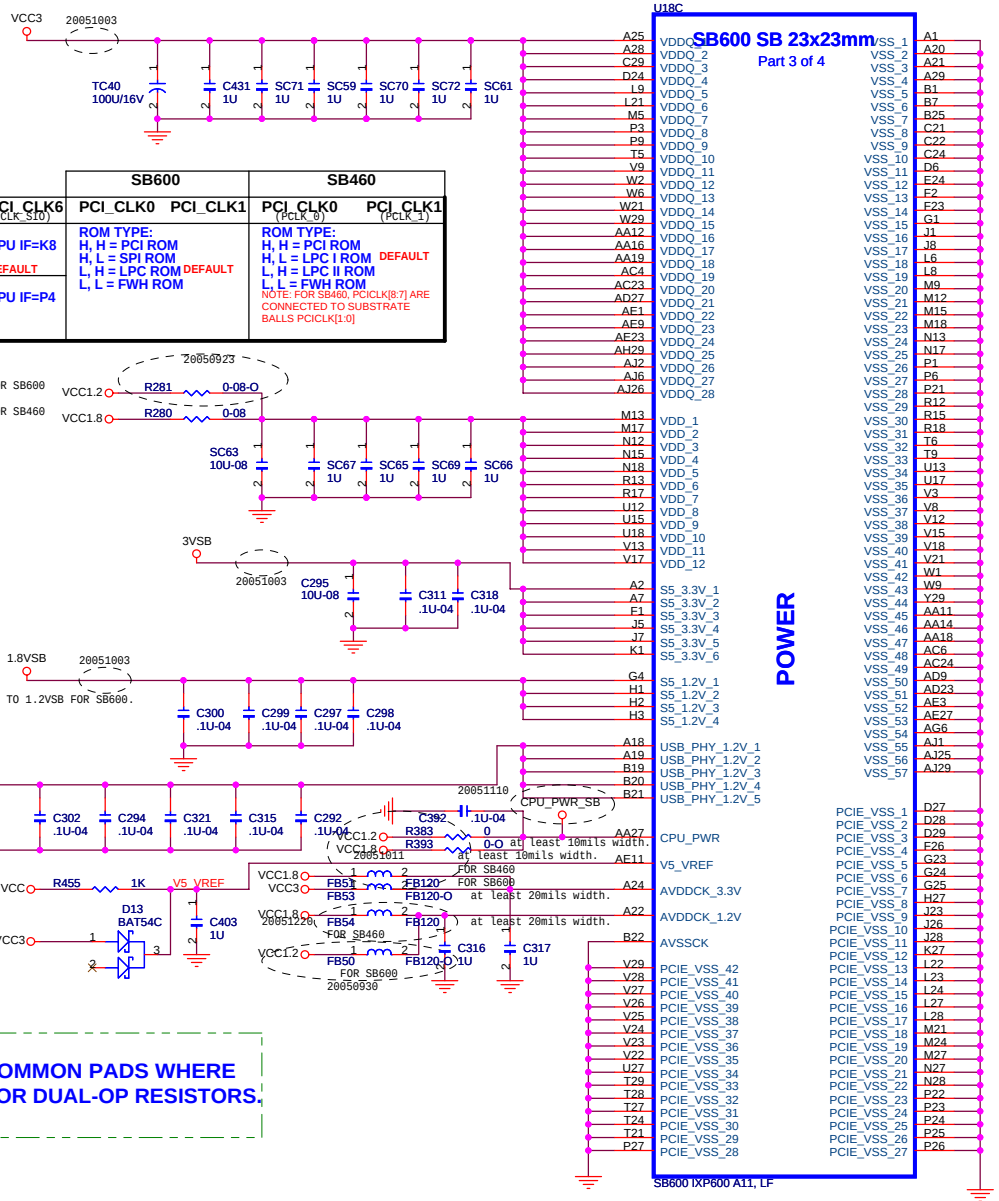
DEBUG STRAPS

SB600 HAS 15K INTERNAL PU FOR PCI_AD[28:23]



2.2K IF USED FOR SB600.
10K IF USED FOR SB460.

	IDE_DACK# (-PIDE_DAK)	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE LONG RESET	USE PCI PLL	USE ACPI BCLK	USE IDE PLL	USE DEFAULT PCIE STRAPS	BOOTFAILTIMER DISABLED DEFAULT
PULL LOW	USE SHORT RESET DEFAULT	USE SHORT RESET	BYPASS PCI PLL DEFAULT	BYPASS ACPI BCLK DEFAULT	BYPASS IDE PLL DEFAULT	USE EEPROM PCIE STRAPS DEFAULT	BOOTFAILTIMER ENABLED
	SB460 ONLY	SB600 ONLY					SB600 ONLY FOR SB460, PCI_AD23 IS RESERVED



OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.

Elitegroup Computer Systems

Title: SB600 STRAPS/ PWR/ DECOUPLING

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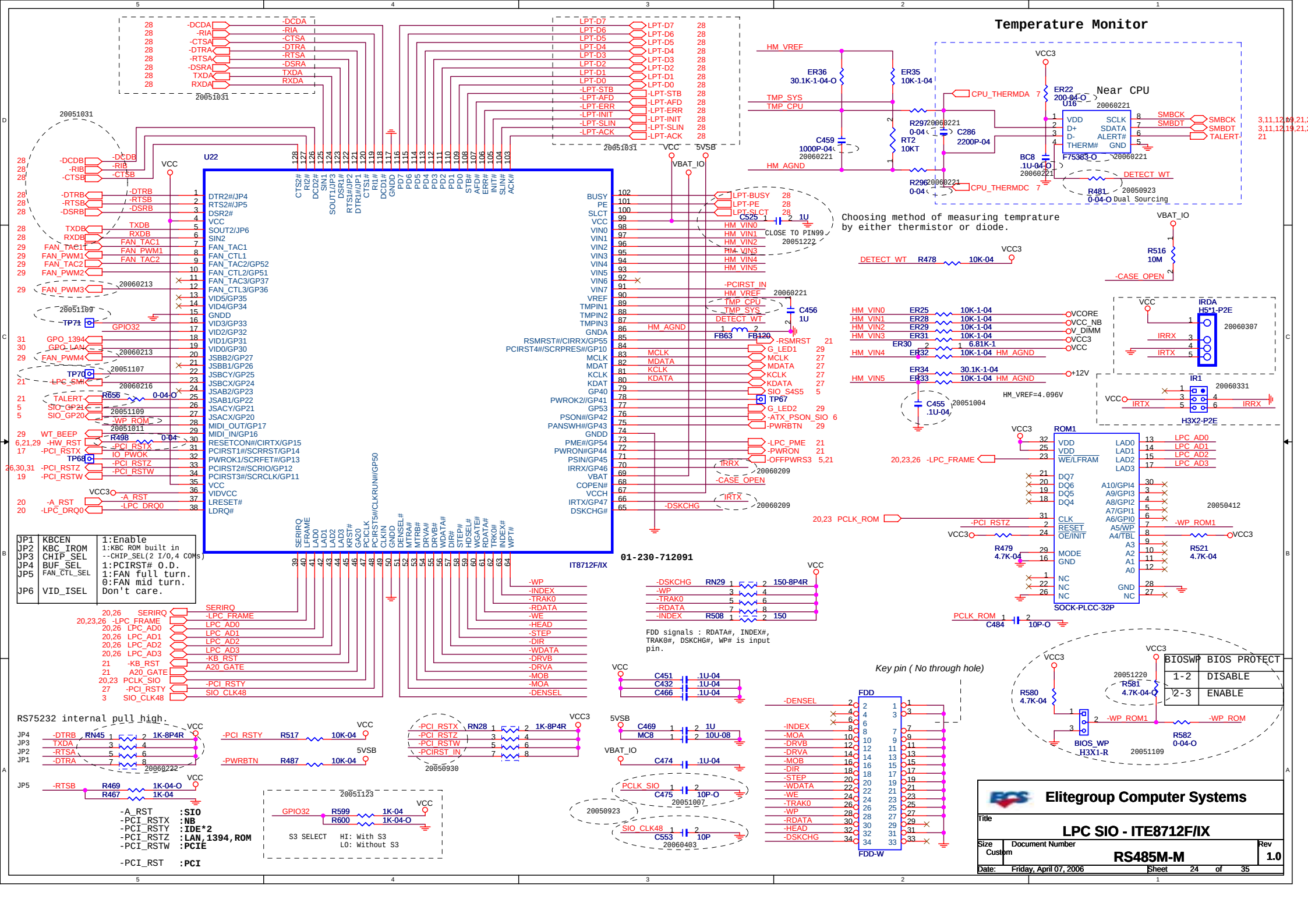
Temperature Monitor
Near CPU
U22
IT8712F/IX
01-230-712091
Choosing method of measuring temprature by either thermistor or diode.
Key pin (No through hole)
RS75232 internal pull high.
-A_RST :SIO
-PCI_RSTX :NB
-PCI_RSTY :IDE*2
-PCI_RSTZ :LAN,1394,ROM
-PCI_RSTW :PCIE
-PCI_RST :PCI
S3 SELECT HI: With S3
LO: Without S3
FDD signals : RDATA#, INDEX#, TRAK0#, DSKCHG#, WP# is input pin.
JP1 KBCEN 1:Enable
JP2 KBC_IROM 1:KBC ROM built in --CHIP_SEL(2 I/O,4 COMs)
JP3 CHIP_SEL
JP4 BUF_SEL 1:PCIRST# O.D.
JP5 FAN_CTL_SEL 1:FAN full turn. 0:FAN mid turn.
JP6 VID_ISEL Don't care.
BIOSWP BIOS PROTECT
1-2 DISABLE
2-3 ENABLE
Elitegroup Computer Systems
LPC SIO - ITE8712F/IX
RS485M-M
Rev 1.0
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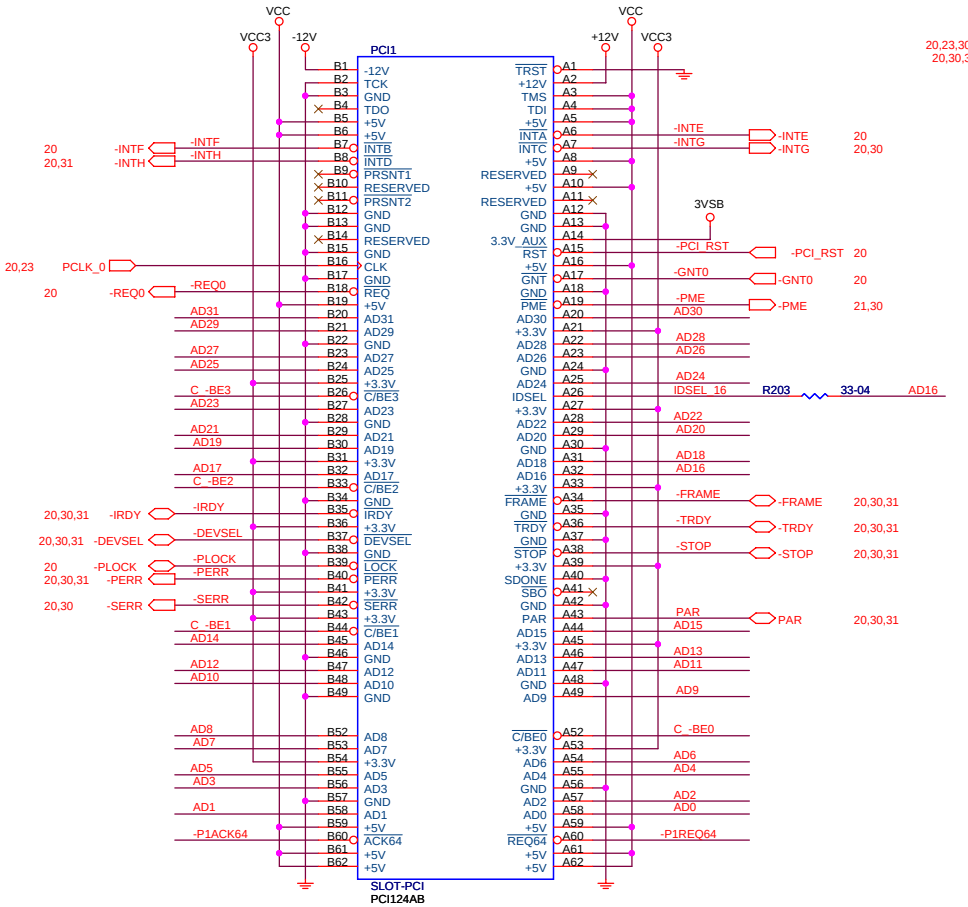

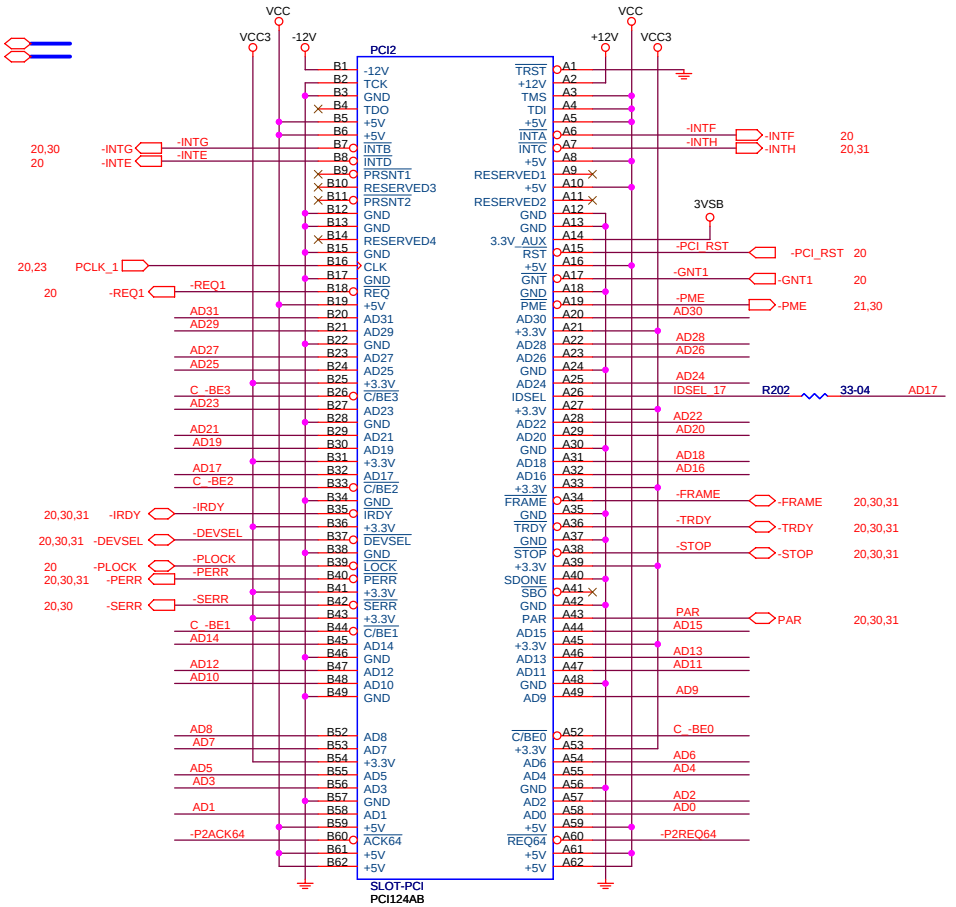

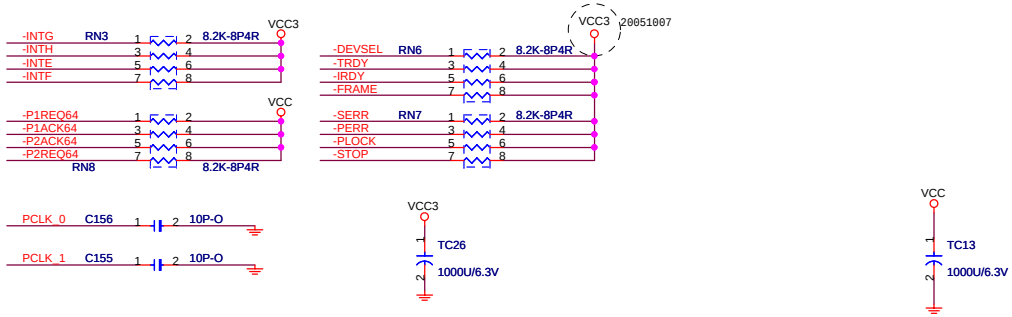

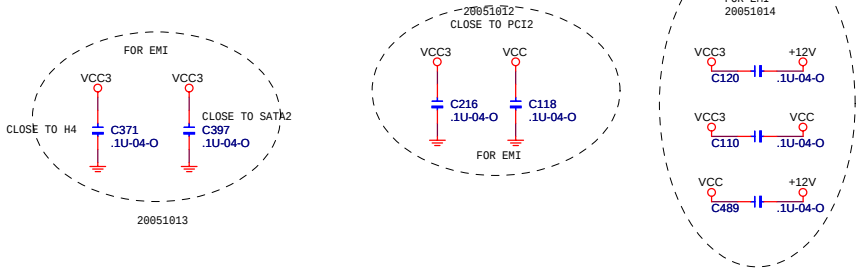

Elitegroup Computer Systems		
Title: PCI 1, PCI 2		
Size: Custom	Document Number: RS485M-M	Rev: 1.0
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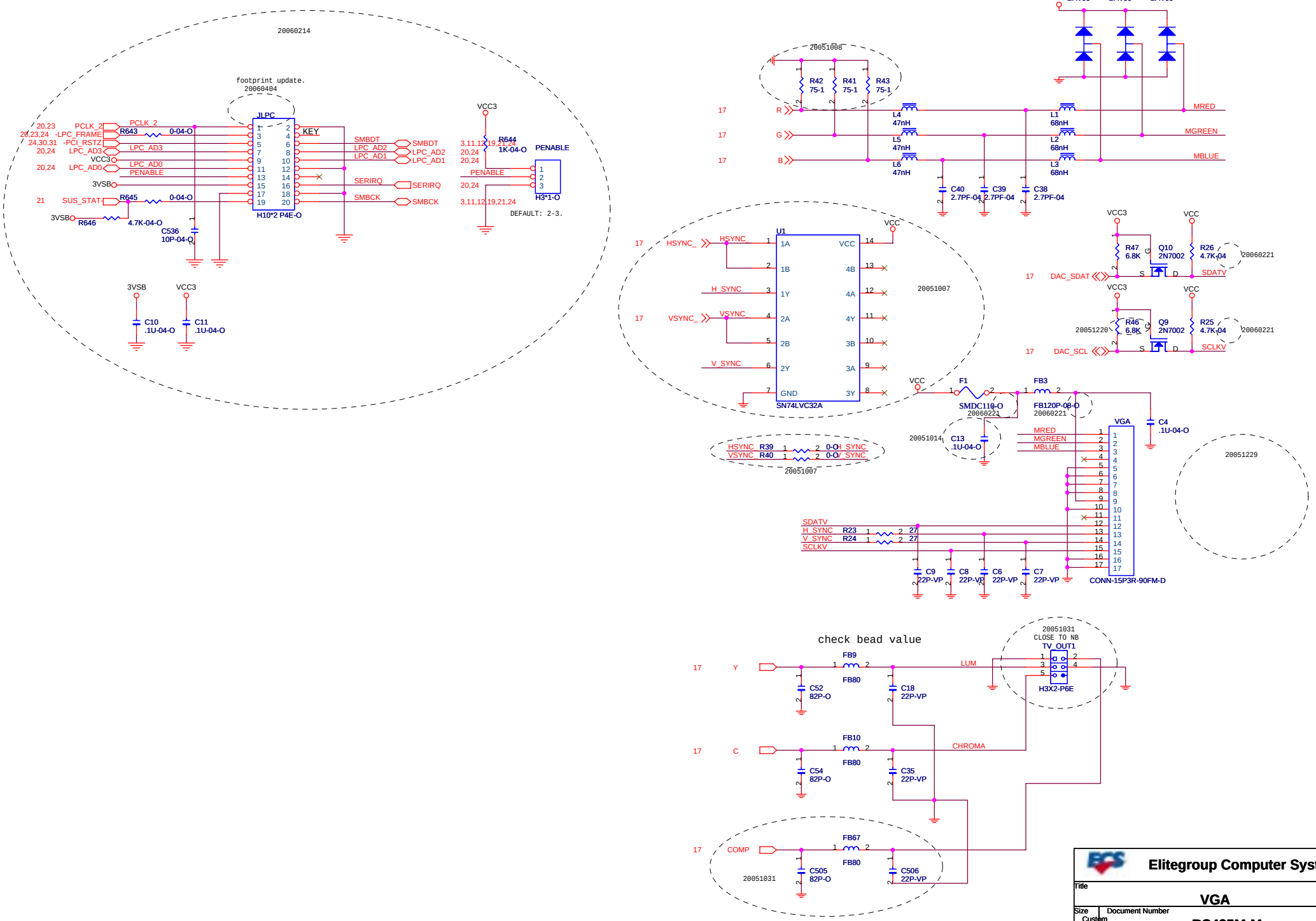
20060214
footprint update.
20060404
JLPC
H10*2 P4E-O
PCLK_2
R643
0-04-O
-LPC_FRAME
-PCI_RSTZ
LPC_AD3
LPC_AD0
PENABLE
SUS_STAT
R645
R646
4.7K-04-O
C536
10P-04-O
KEY
SMBDT
LPC_AD2
LPC_AD1
SERIRQ
SMBCK
3VSB
VCC3
C10
.1U-04-O
C11
.1U-04-O
R644
1K-04-O
H3*1-O
DEFAULT: 2-3.
20051008
R42
75-1
R41
R43
L4
47nH
L5
L6
L1
68nH
L2
L3
C40
2.7PF-04
C39
C38
XD3
XD2
XD1
BAV99
MRED
MGREEN
MBLUE
U1
SN74LVC32A
HSYNC_
VSYNC_
H_SYNC
V_SYNC
20051007
R47
6.8K
Q10
2N7002
R26
4.7K-04
20060221
DAC_SDAT
SDATV
R46
Q9
R25
20051220
DAC_SCL
SCLKV
F1
SMDC110-O
FB3
FB120P-08-O
C13
.1U-04-O
20051014
C4
.1U-04-O
VGA
CONN-15P3R-90FM-D
R39
R40
0-O
R23
R24
27
C9
22P-VP
C8
C6
C7
20051229
check bead value
20051031
CLOSE TO NB
TV_OUT1
H3X2-P6E
FB9
FB80
FB10
FB67
LUM
CHROMA
C52
82P-O
C18
C54
C35
C505
C506
Y
C
COMP
Elitegroup Computer Systems
Title
VGA
Size
Custom
Document Number
RS485M-M
Rev
1.0
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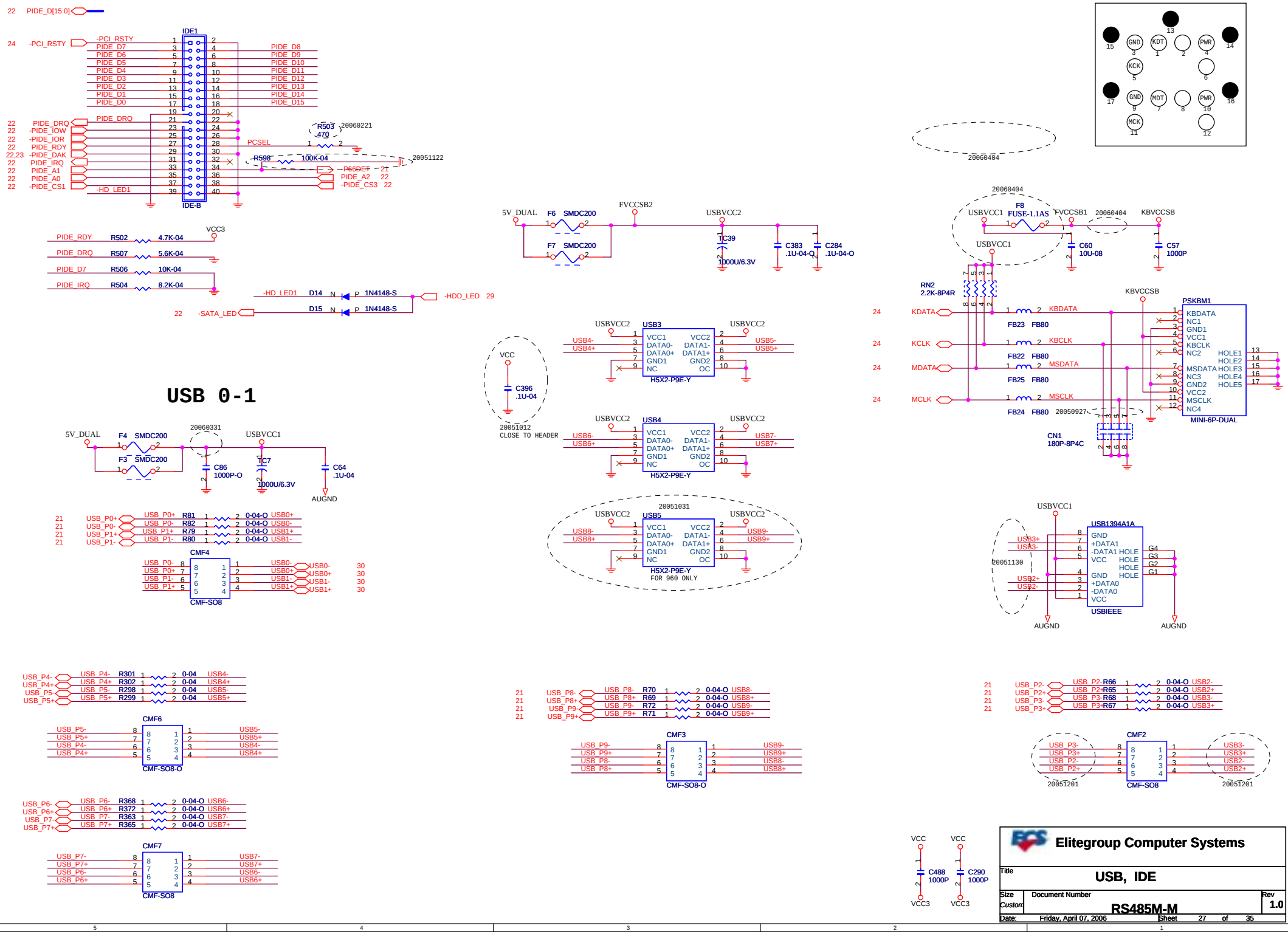
35


IDE1
IDE-B
PIDE_D[15:0]
-PCI_RSTY
PIDE_D7
PIDE_D6
PIDE_D5
PIDE_D4
PIDE_D3
PIDE_D2
PIDE_D1
PIDE_D0
PIDE_D8
PIDE_D9
PIDE_D10
PIDE_D11
PIDE_D12
PIDE_D13
PIDE_D14
PIDE_D15
PIDE_DRQ
-PIDE_IOW
-PIDE_IOR
PIDE_RDY
-PIDE_DAK
PIDE_IRQ
PIDE_A1
PIDE_A0
-PIDE_CS1
-HD_LED1
R503 470 20060221
PCSEL
R598 100K-04 20051122
P66DET
PIDE_A2
-PIDE_CS3
VCC3
R502 4.7K-04
R507 5.6K-04
R506 10K-04
R504 8.2K-04
D14 1N4148-S
D15 1N4148-S
-HDD_LED
-SATA_LED
5V_DUAL
F6 SMDC200
F7 SMDC200
FVCCSB2
USBVCC2
TC39 1000U/6.3V
C383 .1U-04-O
C284 .1U-04-O
20060404
USBVCC1
F8 FUSE-1.1AS
FVCCSB1
KBVCCSB
C60 10U-08
C57 1000P
RN2 2.2K-8P4R
KDATA
KCLK
MDATA
MCLK
FB23 FB80
FB22 FB80
FB25 FB80
FB24 FB80
PSKBM1
MINI-6P-DUAL
CN1 180P-8P4C
USB 0-1
F4 SMDC200
F3 SMDC200
20060331
C86 1000P-O
TC7 1000U/6.3V
C64 .1U-04
AUGND
USB_P0+
USB_P0-
USB_P1+
USB_P1-
R81 0-04-O
R82 0-04-O
R79 0-04-O
R80 0-04-O
CMF4
CMF-SO8
VCC
C396 .1U-04
20051012
CLOSE TO HEADER
USB3
USB4
USB5
H5X2-P9E-Y
FOR 960 ONLY
USB1394A1A
USBIEEE
20051130
USB_P4+
USB_P5+
R301 0-04
R302 0-04
R298 0-04
R299 0-04
CMF6
CMF-SO8-O
USB_P6+
USB_P7+
R368 0-04-O
R372 0-04-O
R363 0-04-O
R365 0-04-O
CMF7
CMF-SO8
USB_P8+
USB_P9+
R70 0-04-O
R69 0-04-O
R72 0-04-O
R71 0-04-O
CMF3
USB_P2+
USB_P3+
R66 0-04-O
R65 0-04-O
R68 0-04-O
R67 0-04-O
CMF2
20051201
C488 1000P
C290 1000P
Elitegroup Computer Systems
USB, IDE
RS485M-M
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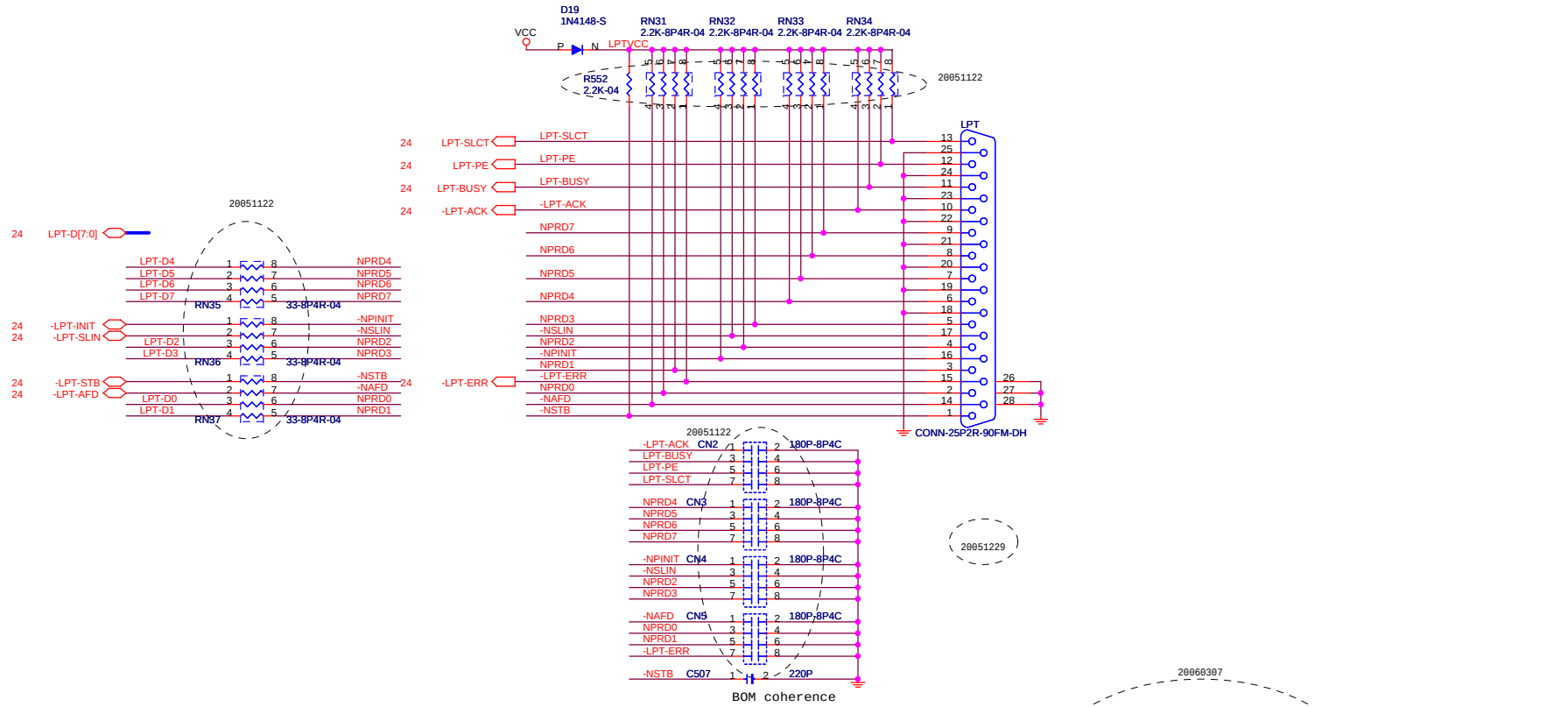
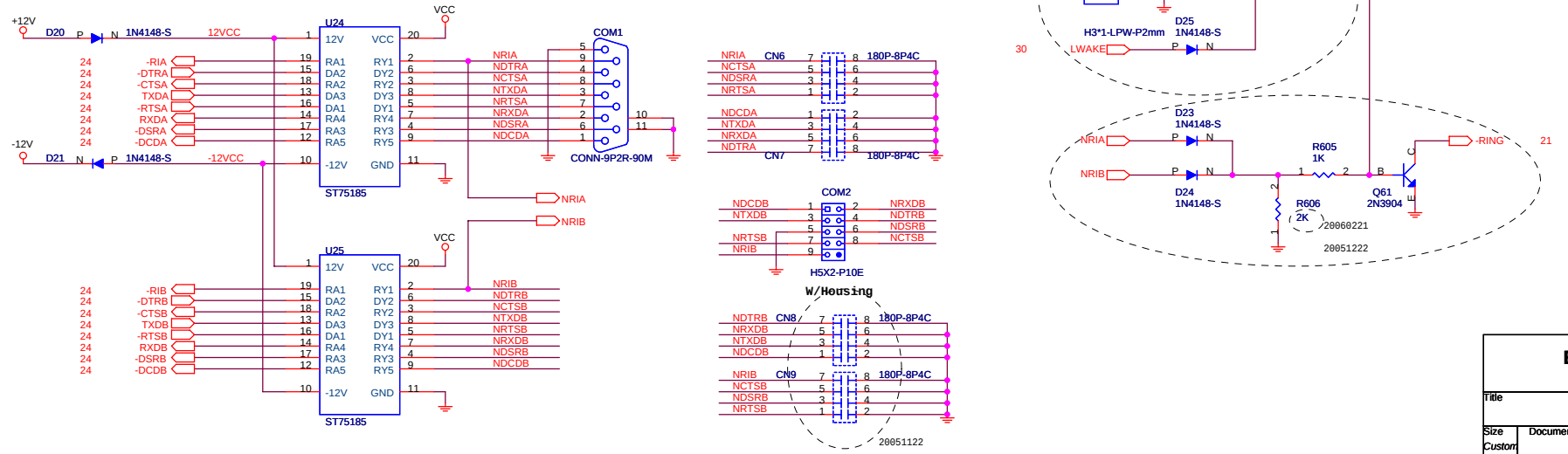
LPT



COM 1



Elitegroup Computer Systems		
Title: COM, LPT		
Size: Custom	Document Number: RS485M-M	Rev: 1.0
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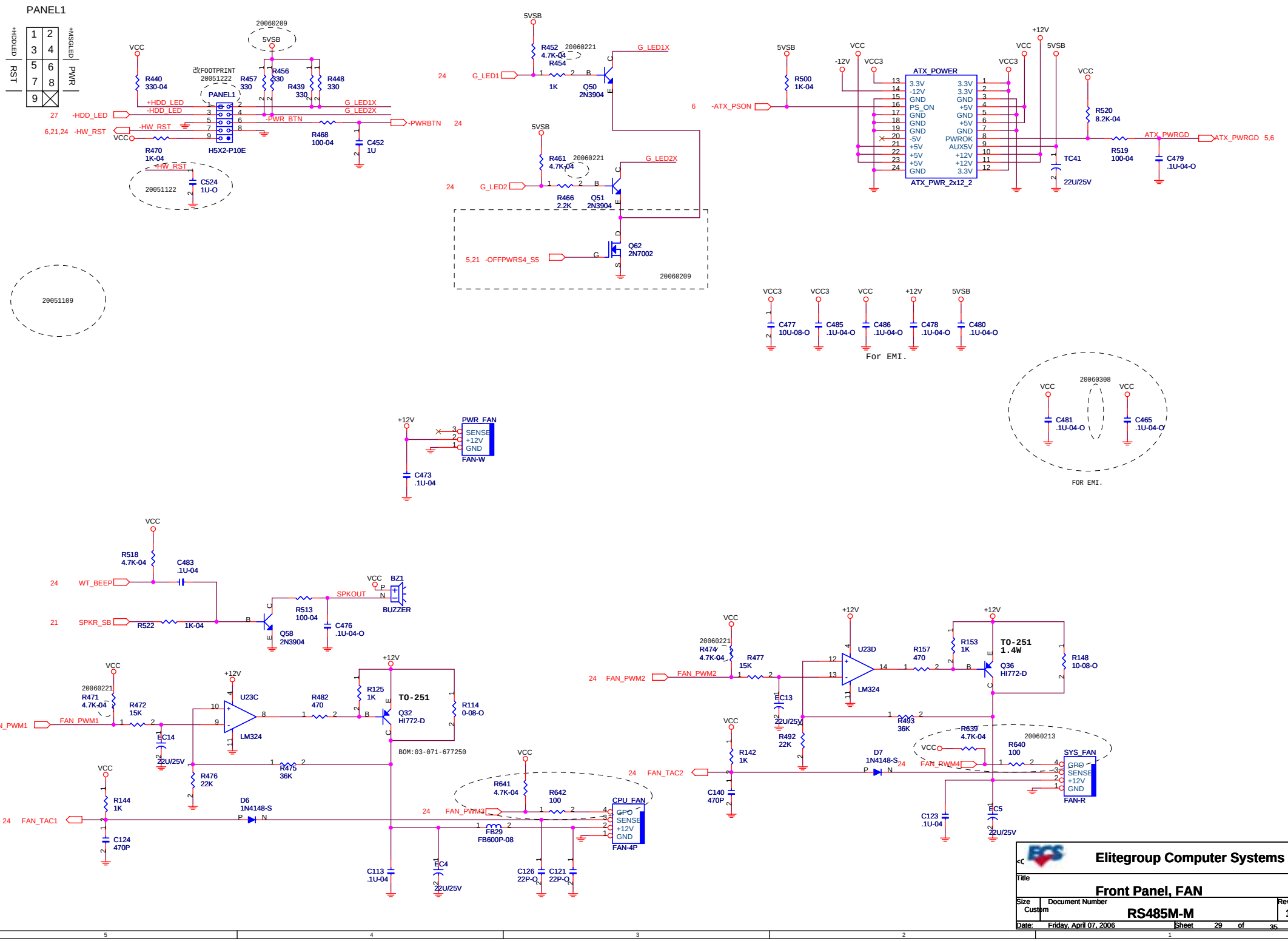
PANEL1
+HDDLED
+MSGLED
RST
PWR
R440 330-04
R456 330
R457 330
R439 330
R448 330
PANEL1
H5X2-P10E
-HDD_LED
-HW_RST
-PWR_BTN
-PWRBTN
G_LED1X
G_LED2X
R468 100-04
C452 1U
R470 1K-04
C524 1U-O
20060209
20051222
20051122
5VSB
VCC
R452 4.7K-04
R454 1K
Q50 2N3904
G_LED1
G_LED1X
R461 4.7K-04
R466 2.2K
Q51 2N3904
G_LED2
G_LED2X
Q62 2N7002
-OFFPWRS4_S5
20060209
20051109
R500 1K-04
-ATX_PSON
ATX_POWER
ATX_PWR_2x12_2
R520 8.2K-04
R519 100-04
C479 .1U-04-O
TC41 22U/25V
ATX_PWRGD
C477 10U-08-O
C485 .1U-04-O
C486 .1U-04-O
C478 .1U-04-O
C480 .1U-04-O
For EMI.
20060308
C481 .1U-04-O
C465 .1U-04-O
FOR EMI.
PWR_FAN
SENSE
+12V
GND
FAN-W
C473 .1U-04
R518 4.7K-04
C483 .1U-04
WT_BEEP
SPKR_SB
R522 1K-04
R513 100-04
C476 .1U-04-O
SPKOUT
BZ1
BUZZER
Q58 2N3904
R471 4.7K-04
R472 15K
FAN_PWM1
U23C
LM324
R482 470
R125 1K
Q32 HI772-D
TO-251
R114 0-08-O
BOM:03-071-677250
EC14 22U/25V
R476 22K
R475 36K
R144 1K
C124 470P
D6 1N4148-S
FAN_TAC1
R641 4.7K-04
R642 100
FB29 FB600P-08
CPU_FAN
FAN-4P
FAN_PWM3
C113 .1U-04
EC4 22U/25V
C126 22P-O
C121 22P-O
R474 4.7K-04
R477 15K
FAN_PWM2
U23D
LM324
R157 470
R153 1K
Q36 HI772-D
R148 10-08-O
EC13 22U/25V
R493 36K
R492 22K
R142 1K
C140 470P
D7 1N4148-S
FAN_TAC2
R639 4.7K-04
R640 100
SYS_FAN
FAN-R
C123 .1U-04
EC5 22U/25V
20060213
Elitegroup Computer Systems
Front Panel, FAN
Size Custom
Document Number RS485M-M
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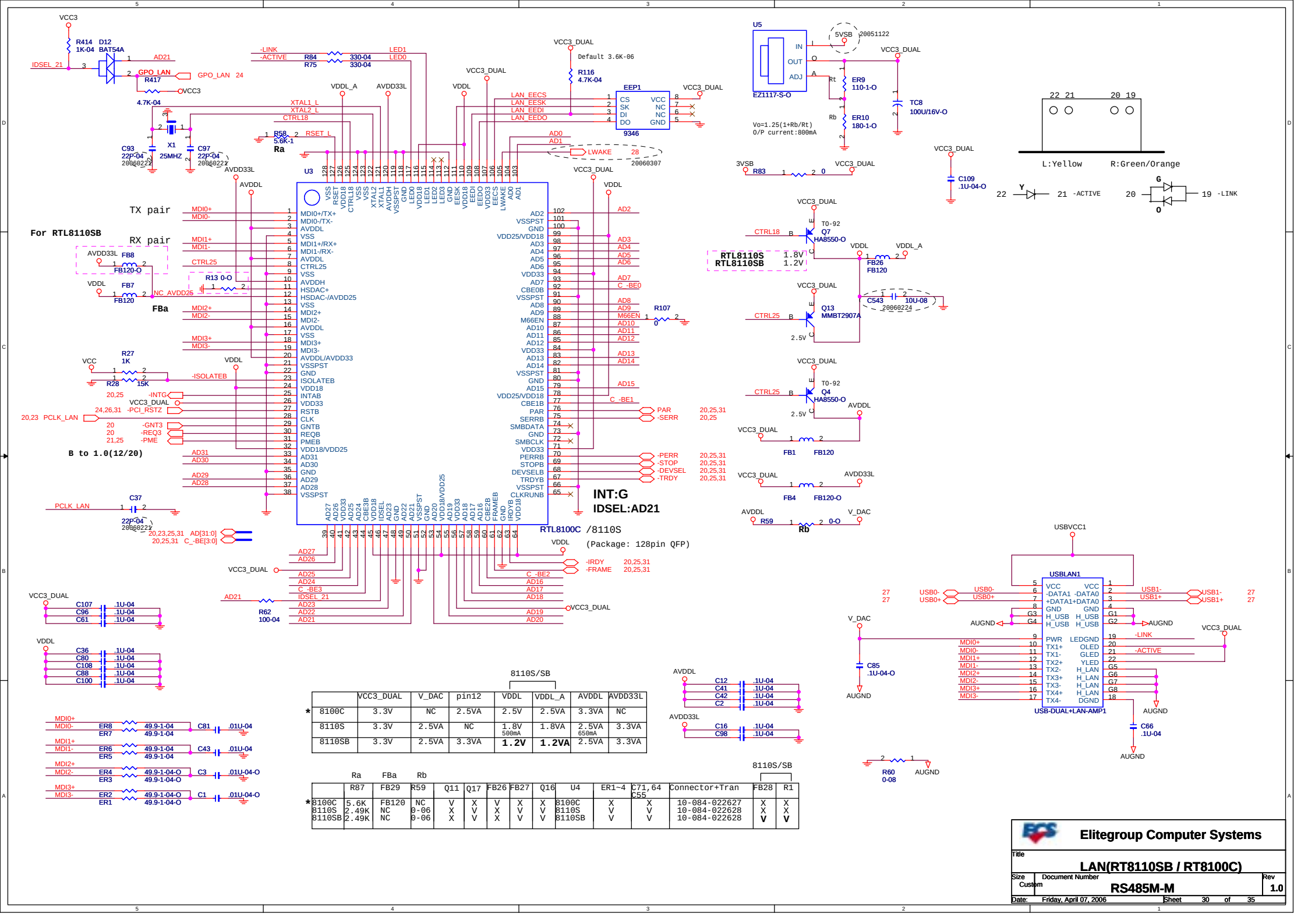
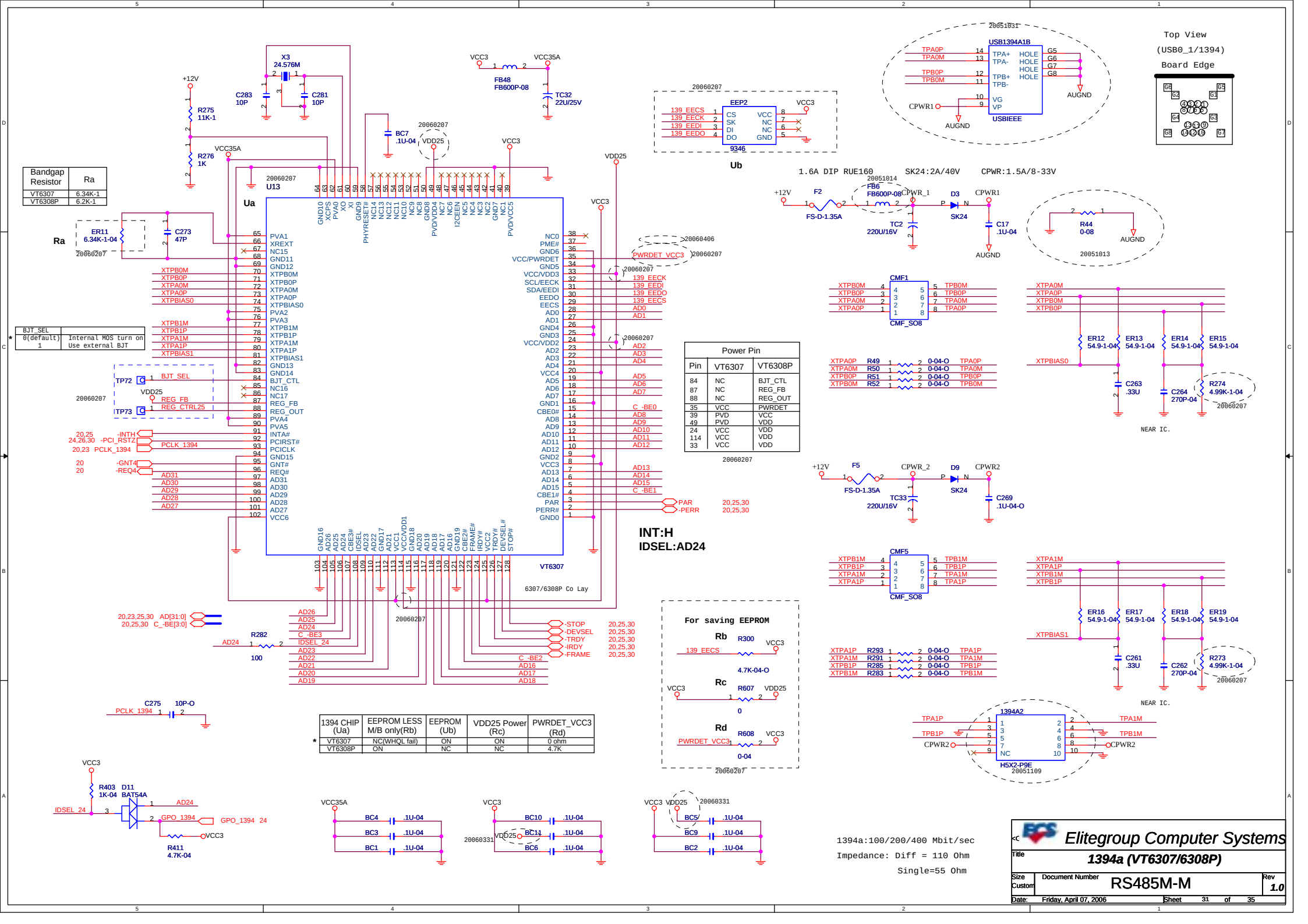


	VCC3_DUAL	V_DAC	pin12	VDDL	VDDL_A	AVDDL	AVDD33L
* 8100C	3.3V	NC	2.5VA	2.5V	2.5VA	3.3VA	NC
8110S	3.3V	2.5VA	NC	1.8V 500mA	1.8VA	2.5VA 650mA	3.3VA
8110SB	3.3V	2.5VA	3.3VA	**1.2V**	**1.2VA**	2.5VA	3.3VA

8110S/SB

	Ra	FBa	Rb										
	R87	FB29	R59	Q11	Q17	FB26	FB27	Q16	U4	ER1~4	C71,64 C55	Connector+Tran	FB28	R1
* 8100C	5.6K	FB120	NC	V	X	V	X	X	8100C	X	X	10-084-022627	X	X
8110S	2.49K	NC	0-06	X	V	X	V	V	8110S	V	V	10-084-022628	X	X
8110SB	2.49K	NC	0-06	X	V	X	V	V	8110SB	V	V	10-084-022628	**V**	**V**

8110S/SB


Bandgap Resistor
VT6307 6.34K-1
VT6308P 6.2K-1
Ra
ER11 6.34K-1-04
C273 47P
X3 24.576M
C283 10P
C281 10P
R275 11K-1
R276 1K
BC7 .1U-04
FB48 FB600P-08
TC32 22U/25V
U13
Ua
VT6307
6307/6308P Co Lay
BJT_SEL
0(default) Internal MOS turn on
1 Use external BJT
REG_FB
REG_CTRL25
-INTH
PCLK_1394
-PCI_RSTZ
-GNT4
-REQ4
R282 100
C275 10P-O
R403 1K-04
D11 BAT54A
R411 4.7K-04
GPO_1394
IDSEL_24
BC4 .1U-04
BC3 .1U-04
BC1 .1U-04
BC10 .1U-04
BC11 .1U-04
BC6 .1U-04
BC5 .1U-04
BC9 .1U-04
BC2 .1U-04
20060331
EEP2
9346
Ub
139_EECS
139_EECK
139_EEDI
139_EEDO
R300 4.7K-04-O
R607 0
R608 0-04
For saving EEPROM
Rb
Rc
Rd
PWRDET_VCC3
Power Pin
Pin VT6307 VT6308P
84 NC BJT_CTL
87 NC REG_FB
88 NC REG_OUT
35 VCC PWRDET
39 PVD VCC
49 PVD VDD
24 VCC VDD
114 VCC VDD
33 VCC VDD
1394 CHIP (Ua) EEPROM LESS M/B only(Rb) EEPROM (Ub) VDD25 Power (Rc) PWRDET_VCC3 (Rd)
VT6307 NC(WHQL fail) ON ON 0 ohm
VT6308P ON NC NC 4.7K
INT:H
IDSEL:AD24
USB1394A1B
USBIEEE
AUGND
CPWR1
Top View
(USB0_1/1394)
Board Edge
1.6A DIP RUE160 SK24:2A/40V CPWR:1.5A/8-33V
FB6 FB600P-08
F2 FS-D-1.35A
D3 SK24
TC2 220U/16V
C17 .1U-04
R44 0-08
CMF1
CMF5
CMF_SO8
ER12 54.9-1-04
ER13 54.9-1-04
ER14 54.9-1-04
ER15 54.9-1-04
ER16 54.9-1-04
ER17 54.9-1-04
ER18 54.9-1-04
ER19 54.9-1-04
C263 .33U
C264 270P-04
R274 4.99K-1-04
C261 .33U
C262 270P-04
R273 4.99K-1-04
NEAR IC.
F5 FS-D-1.35A
D9 SK24
TC33 220U/16V
C269 .1U-04-O
1394A2
H5X2-P9E
1394a:100/200/400 Mbit/sec
Impedance: Diff = 110 Ohm
Single=55 Ohm
Elitegroup Computer Systems
1394a (VT6307/6308P)
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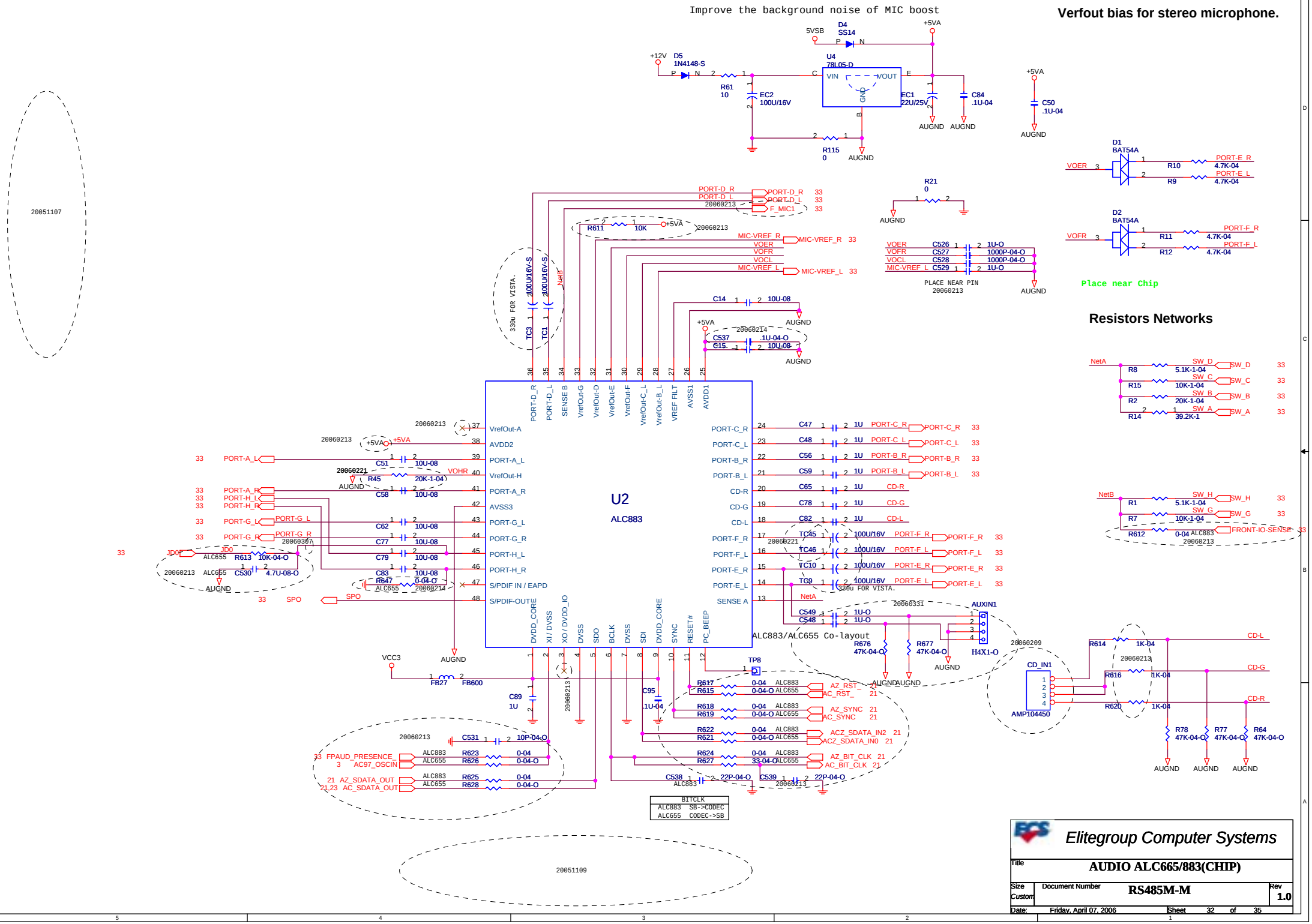
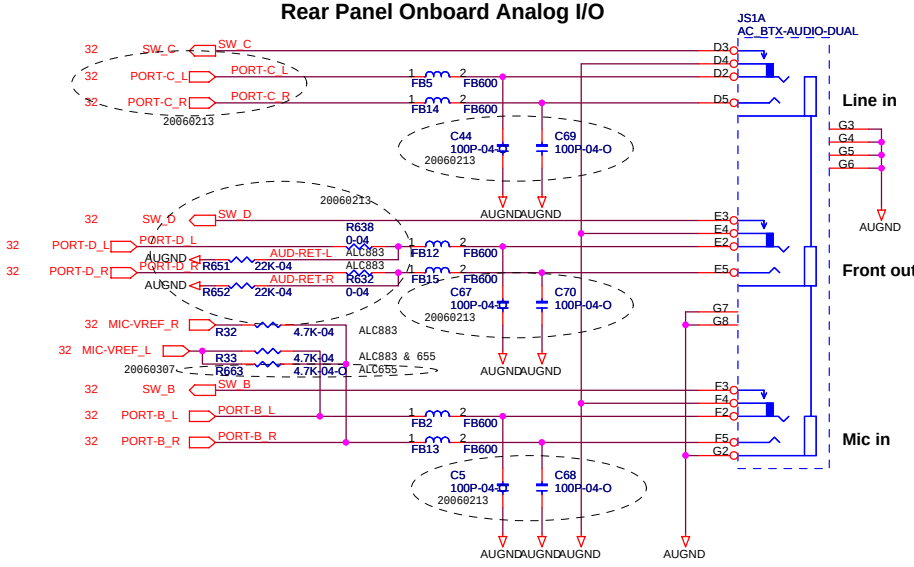
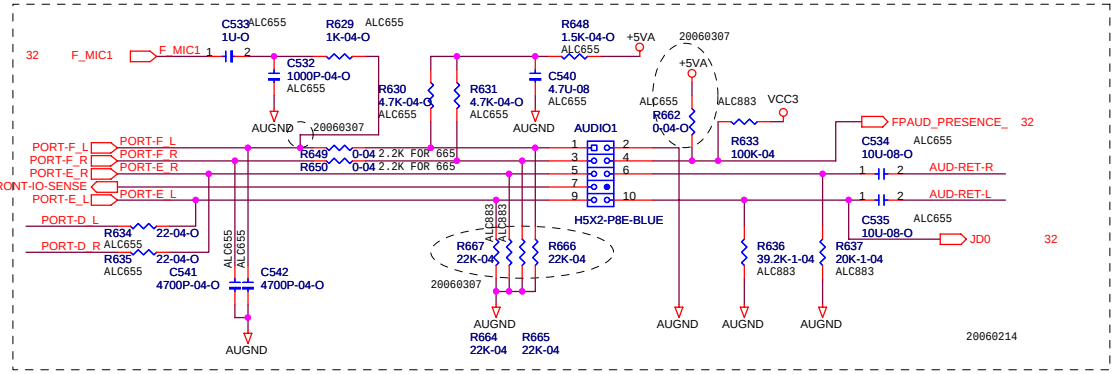
Improve the background noise of MIC boost

Verfout bias for stereo microphone.

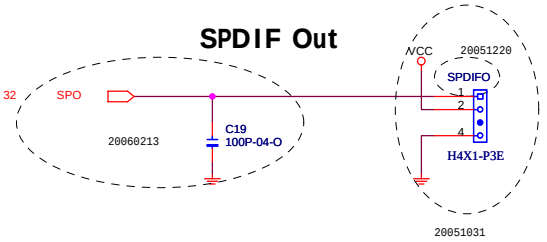


Rear Panel Onboard Analog I/O

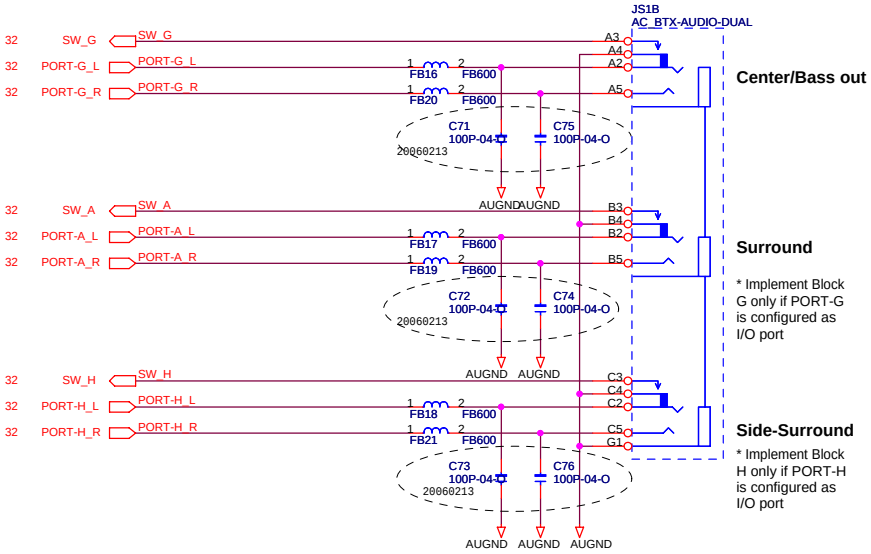




SPDIF Out

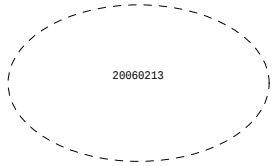


Rear Panel (Optional Rear Audio Panel)



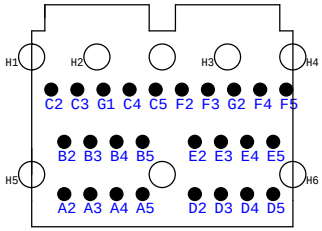
* Implement Block G only if PORT-G is configured as I/O port

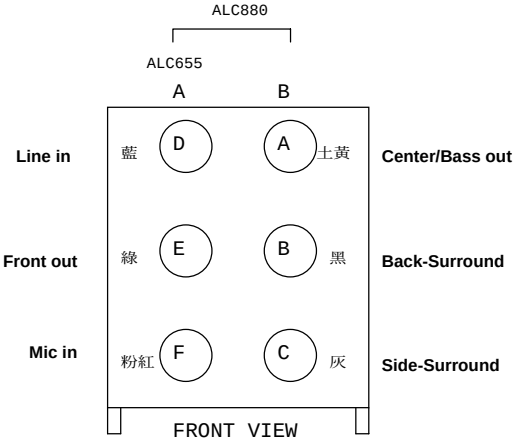
* Implement Block H only if PORT-H is configured as I/O port



The schematic should consist with PINs define of I/O connecter.

TOP VIEW





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Title	AUDIO AL655/C883 (PANEL)	
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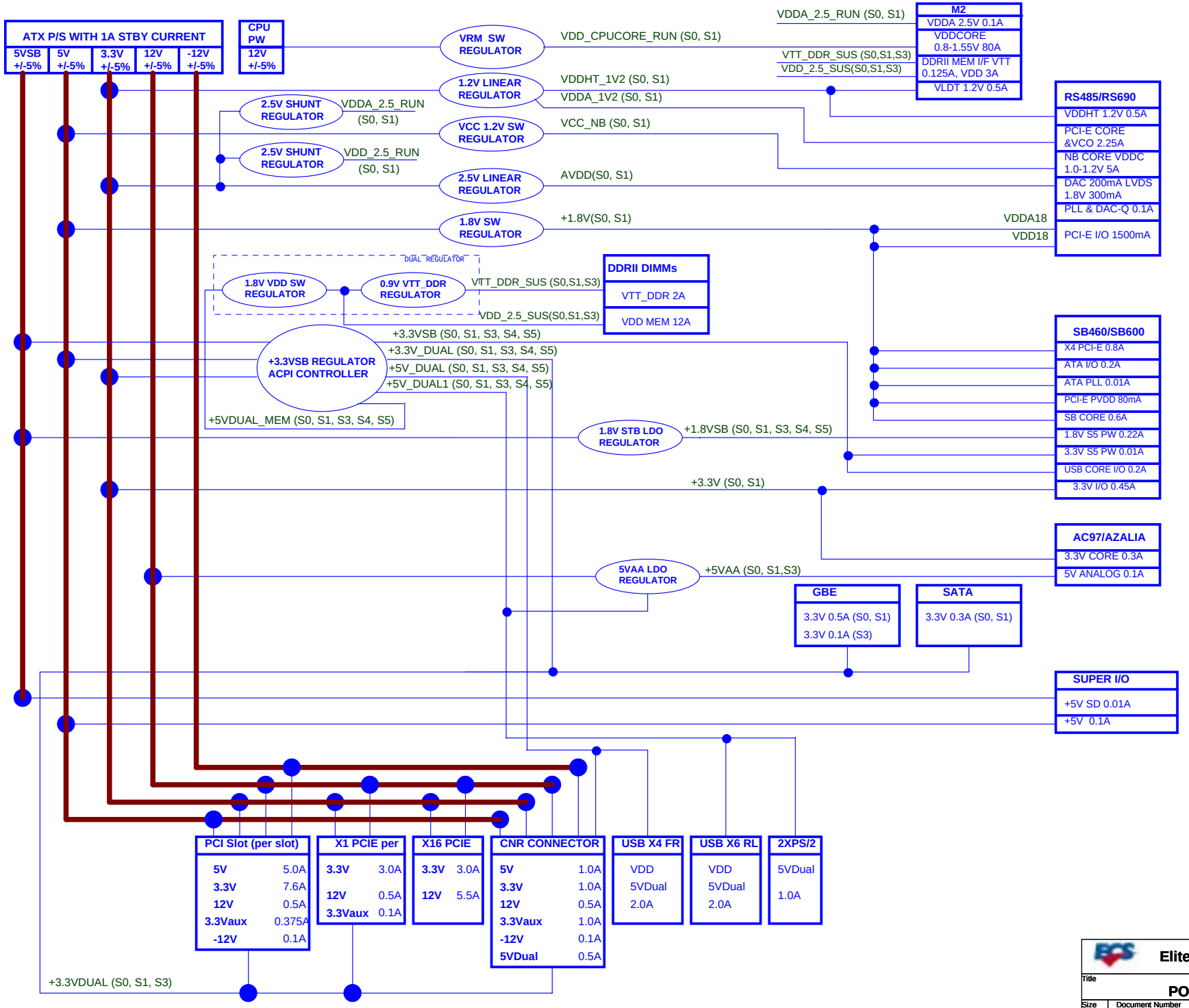

Elitegroup Computer Systems

Title: POWER DELIVERY CHART

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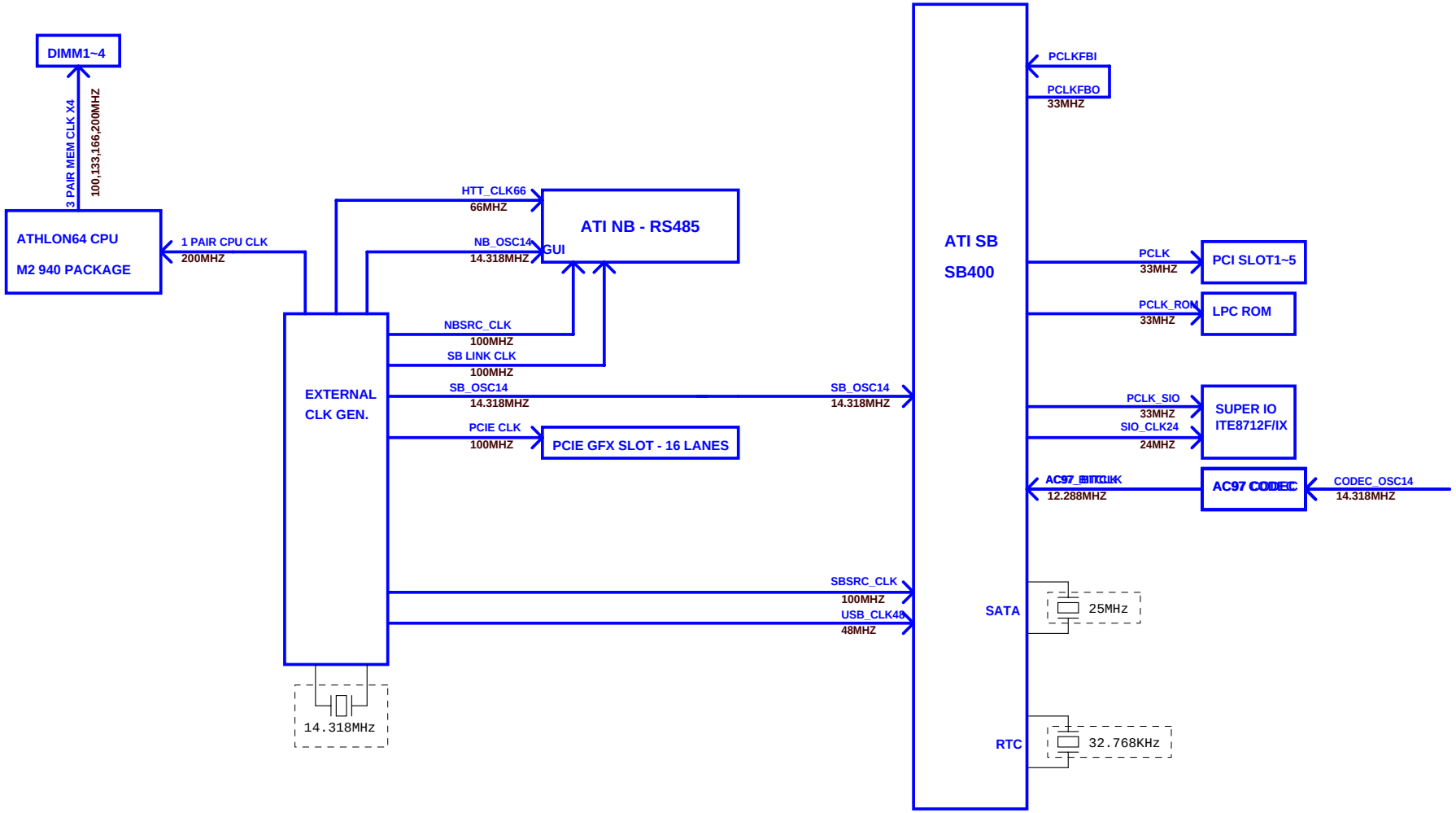
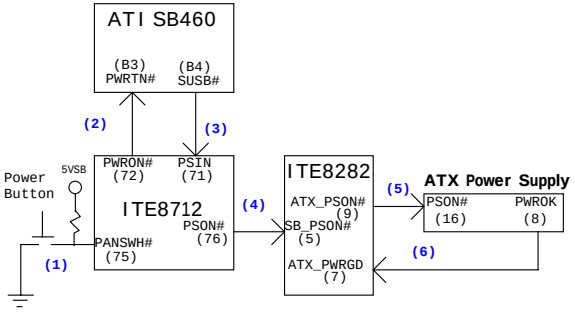
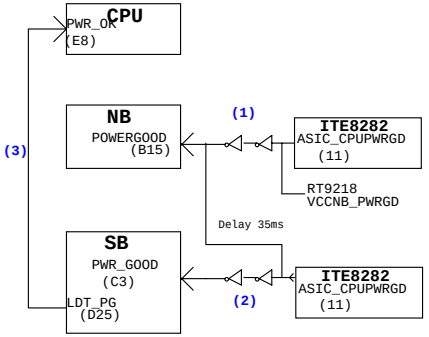


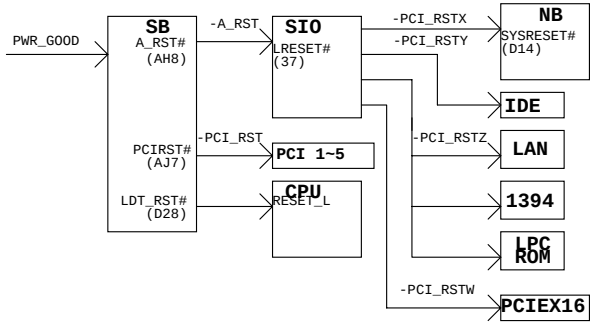
Power On



Power Good



Reset Tree



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Title: CLOCK DISTRIBUTION

Size	Document Number	Rev
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