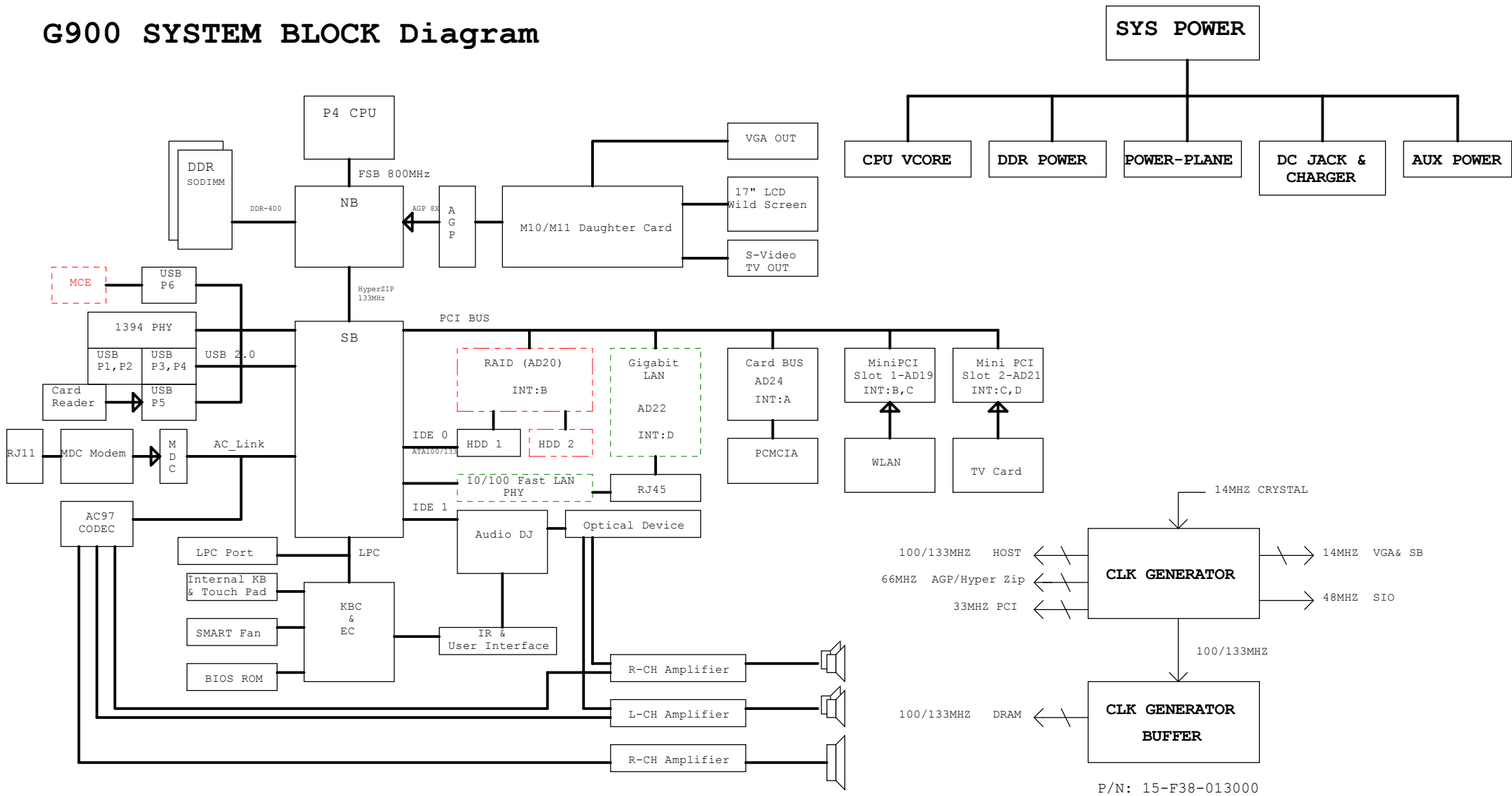


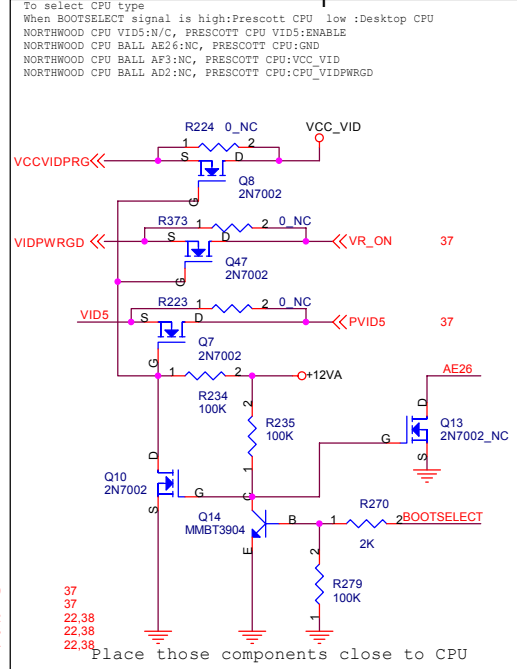
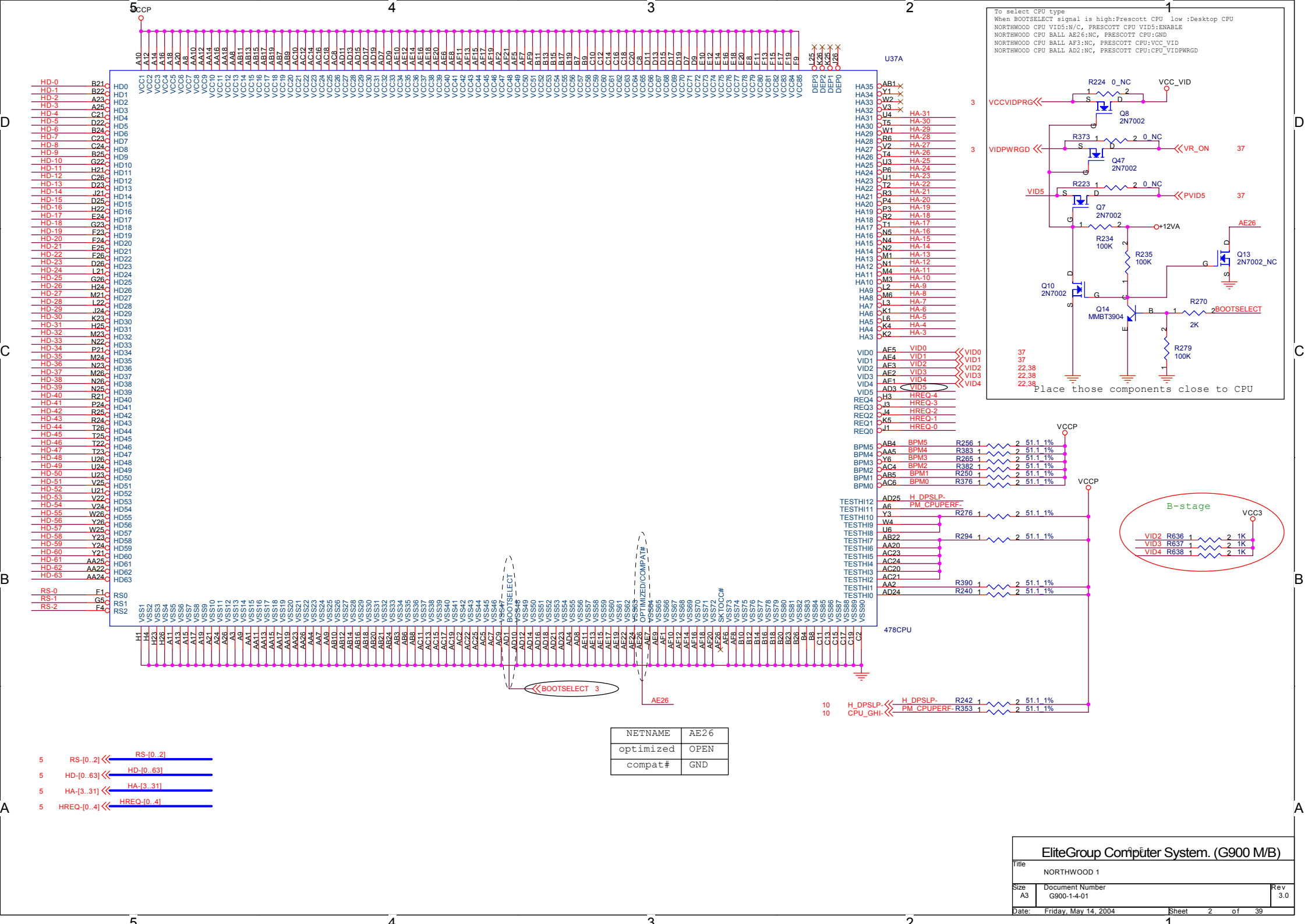
# G900 SYSTEM BLOCK Diagram



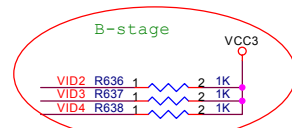
PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
DATE	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04

PAGE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
REV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
DATE	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04	04/14/04

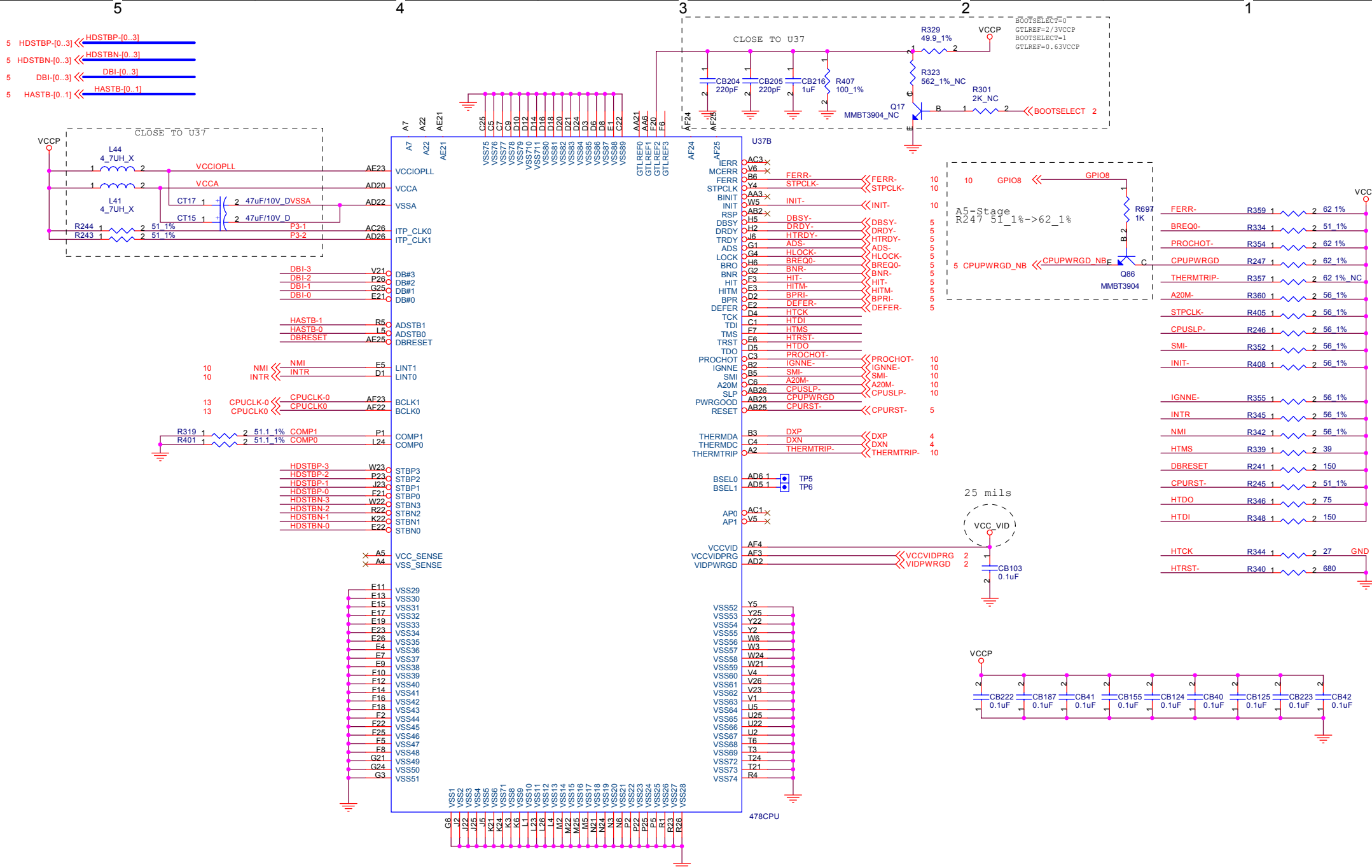
Approved by	Checked by	Designed by
<b>EliteGroup Computer System. (G900 MB)</b>		
Title: G900 BLOCK DIAGRAM		
P. Leader		
Size: Custom	Document Number: G900-1-4-01	Rev: 3.0
Date: Friday, May 14, 2004	Sheet: 1	of 39



NETNAME	AE26
optimized	OPEN
compat#	GND

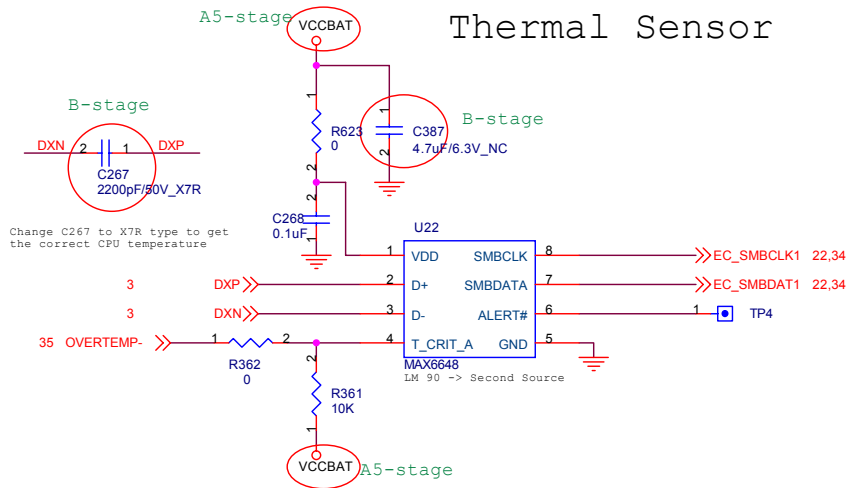


- 5 RS-[0..2] << RS-[0..2]
- 5 HD-[0..63] << HD-[0..63]
- 5 HA-[3..31] << HA-[3..31]
- 5 HREQ-[0..4] << HREQ-[0..4]

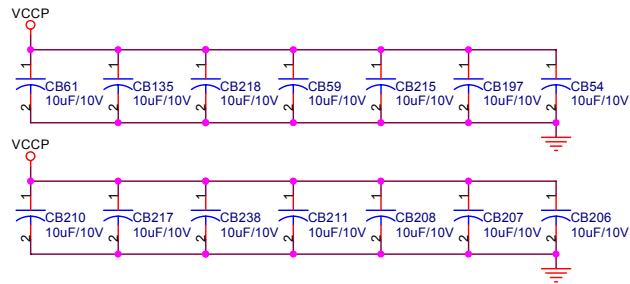


<b>EliteGroup Computer System. (G900 M/B)</b>		
Title NORTHWOOD 2		
Size A3	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 3	of 39

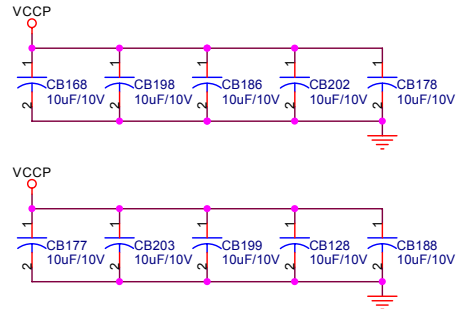
# Thermal Sensor



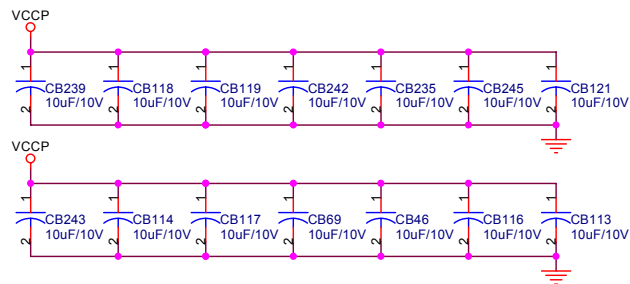
Put these capacitors at processor NORTH SIDE



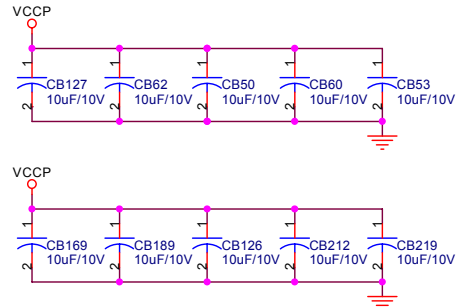
Put these capacitors INSIDE PROCESSOR CAVITY



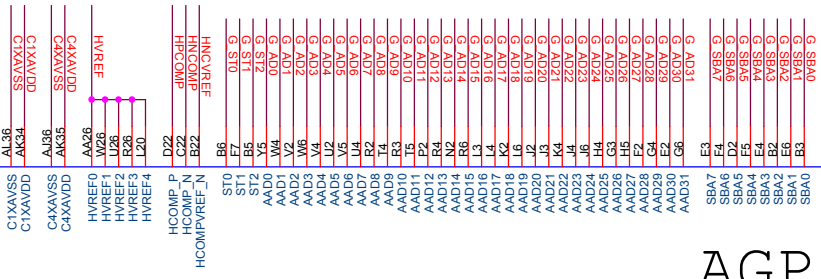
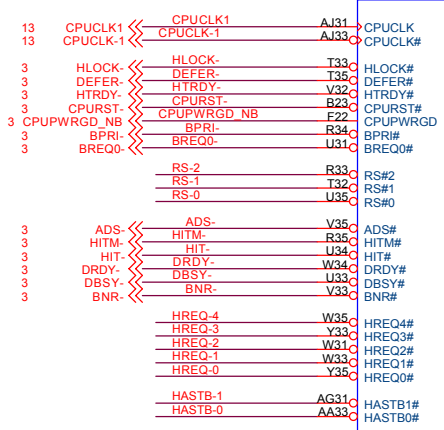
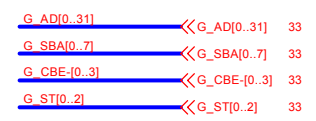
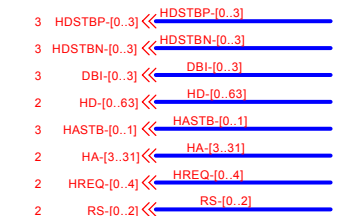
Put these capacitors at processor SOUTH SIDE



Put these capacitors at processor SOLDER SIDE

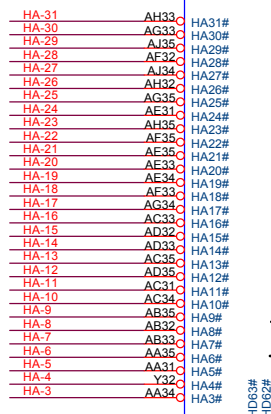


EliteGroup Computer System. (G900 M/B)		
Title	NORTHWOOD 3	
Size	Document Number	Rev
B	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 4 of 39

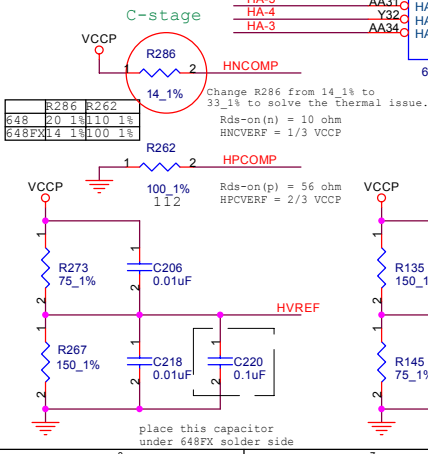
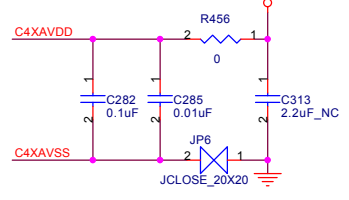
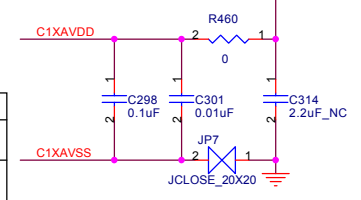
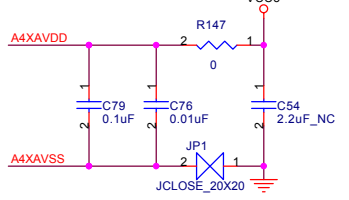
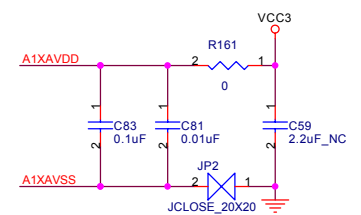
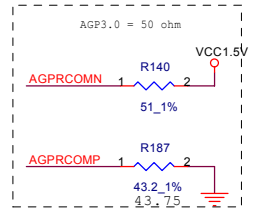
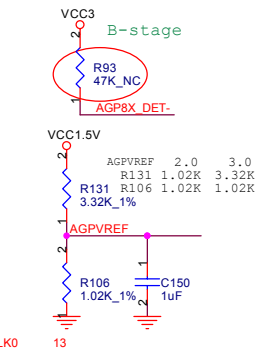
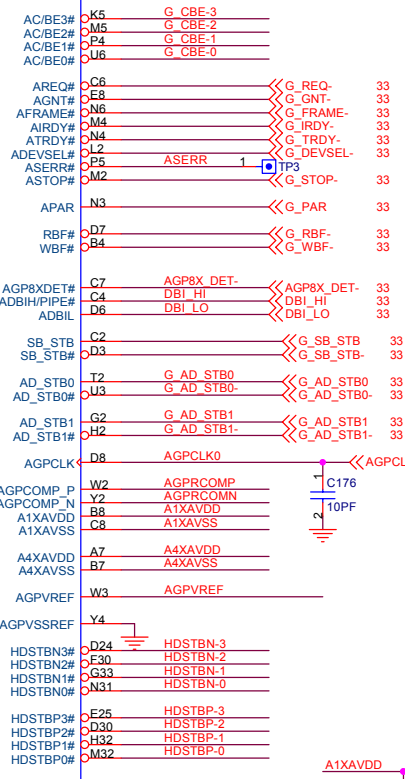


AGP

648FX-1



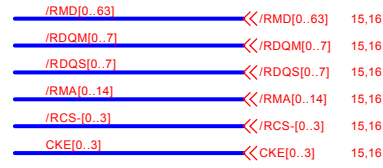
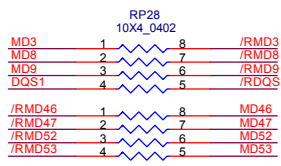
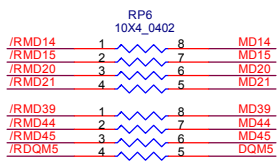
HOST



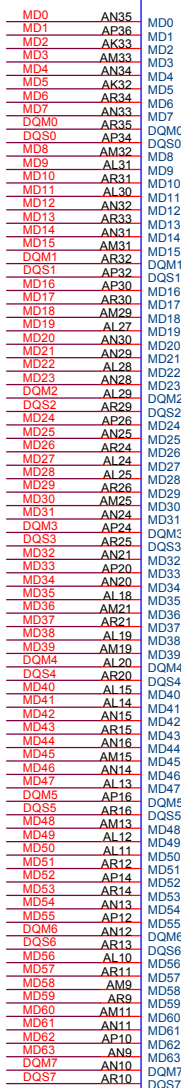
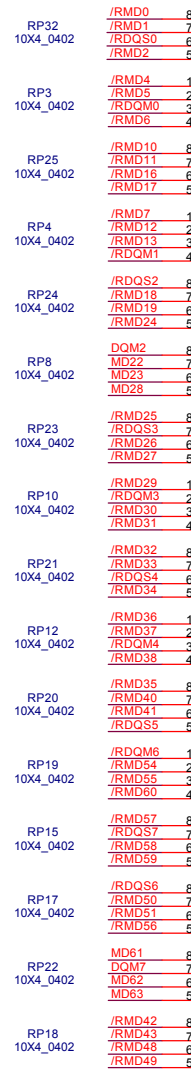
648	HNCVREF	pin B22	Voltage
648FX	NC	Divider	

EliteGroup Computer System. (G900 M/B)		
Title	SiS648FX-1 (HOST/AGP)	
Size	Document Number	Rev
Custom	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 5 of 39

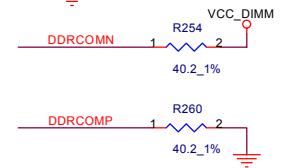
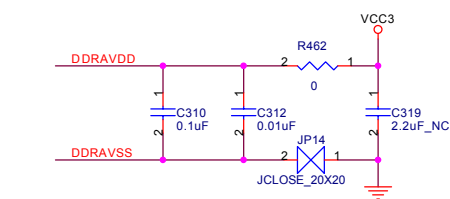
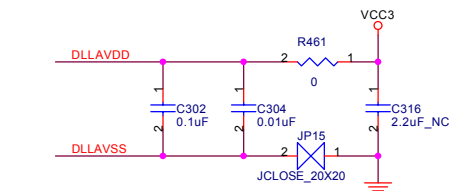
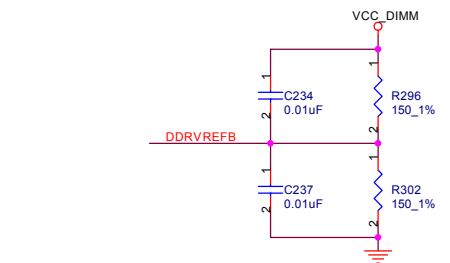
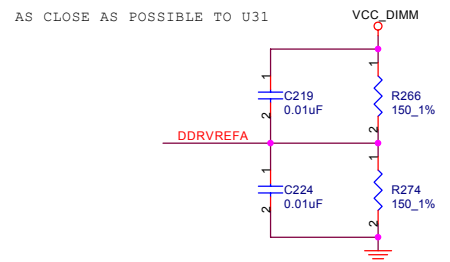
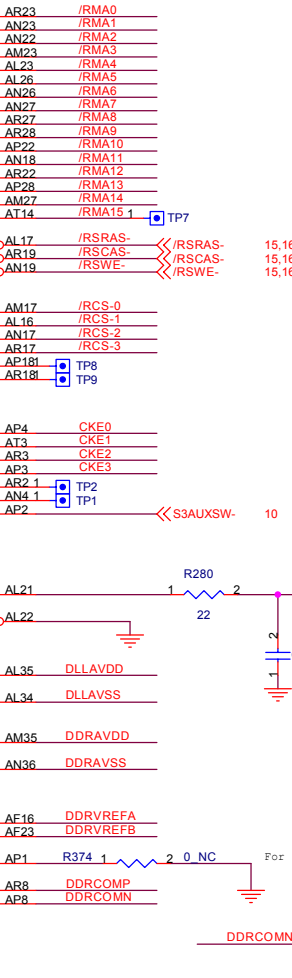
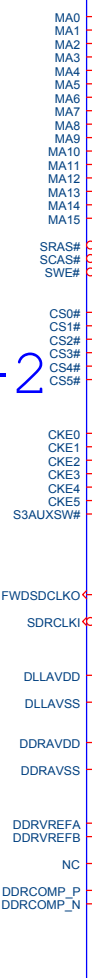
place this capacitor under 648FX solder side



Resistors place close to DIMM1

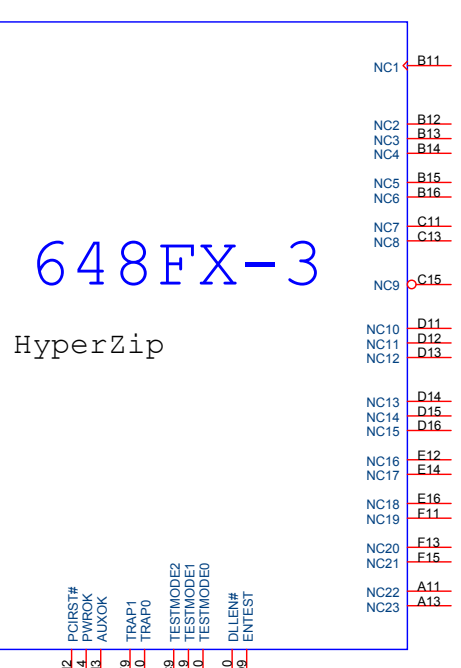
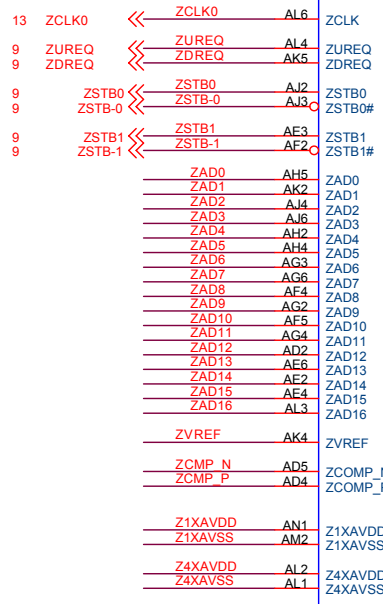
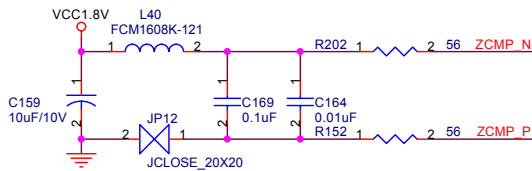
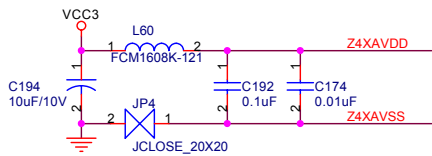
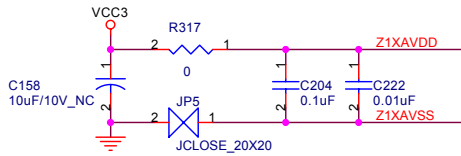
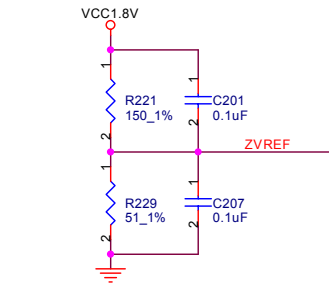


648FX-2

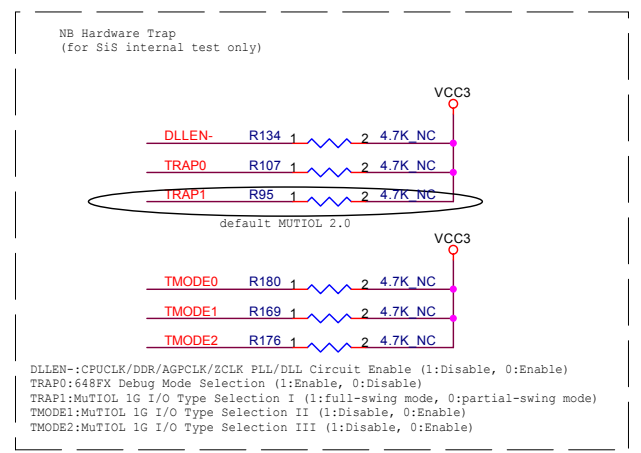
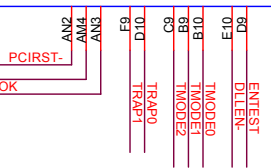


EliteGroup Computer System. (G900 M/B)			
Title	SIS648FX-2 (MEMORY for DDR)		
Size	Document Number	Rev	3.0
Custom	G900-1.4-01		
Date:	Friday, May 14, 2004	Sheet	6 of 39

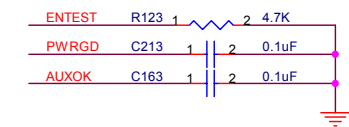
9 ZAD[0..16] >> ZAD[0..16]



9,17,18,22,23,24,26,30,31,33 PCIRST-  
10,38 PWRGD  
10,22,29,38 AUXOK



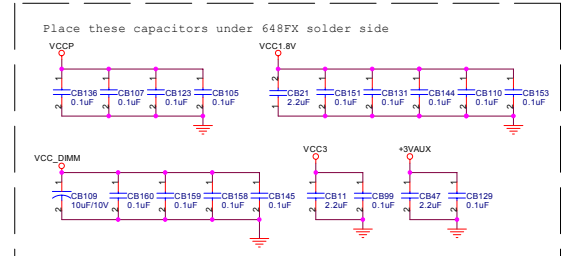
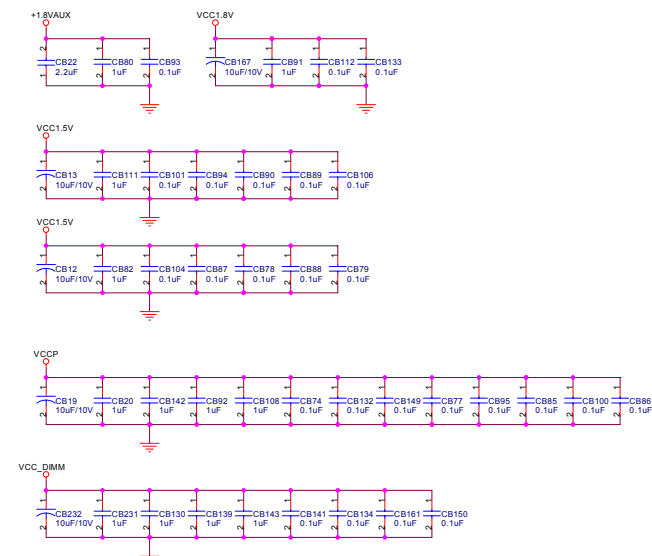
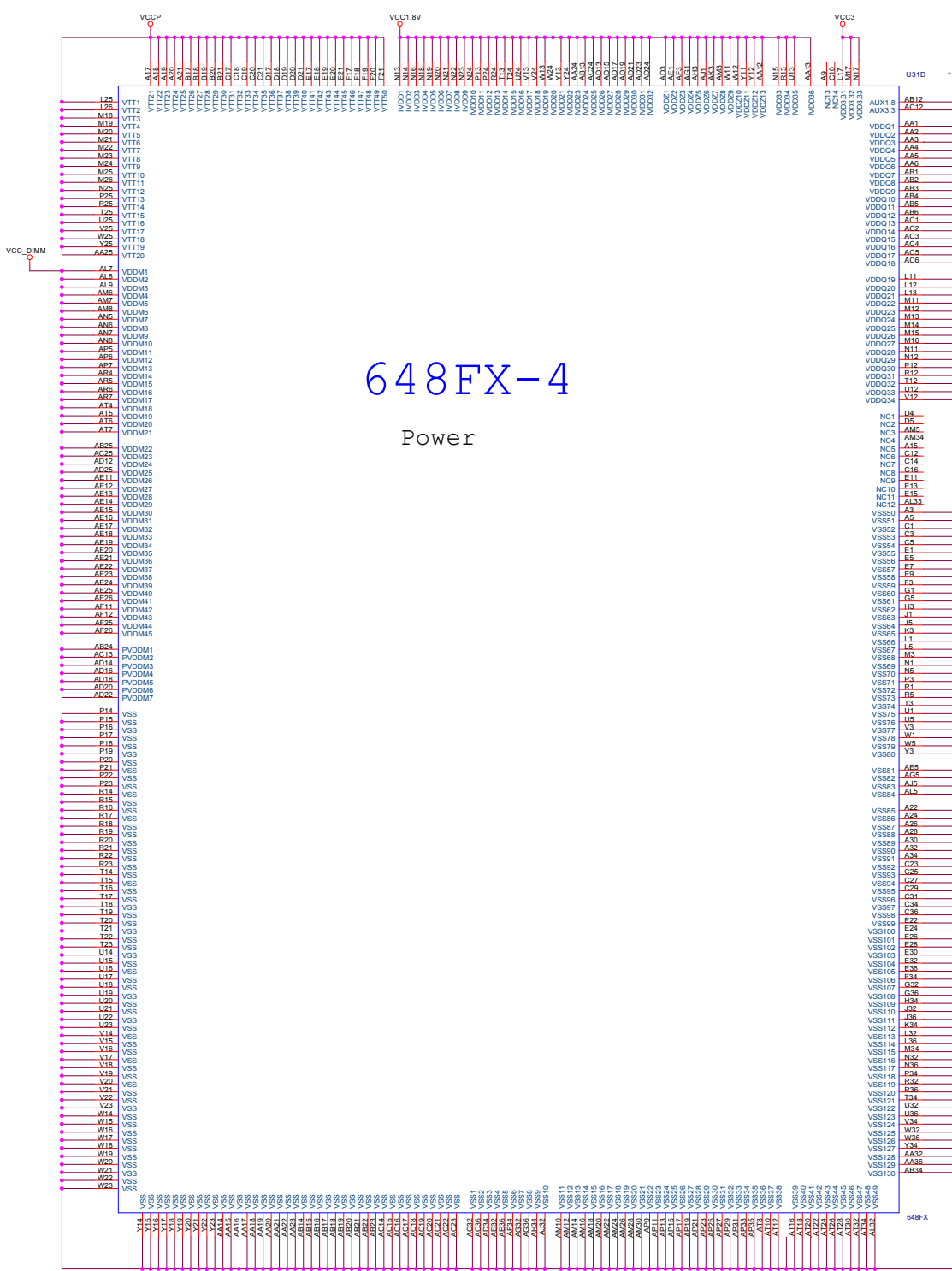
DLLEN-:CPUCLK/DDR/AGPCLK/ZCLK PLL/DLL Circuit Enable (1:Disable, 0:Enable)  
TRAP0:648FX Debug Mode Selection (1:Enable, 0:Disable)  
TRAP1:MuTIOL 1G I/O Type Selection I (1:full-swing mode, 0:partial-swing mode)  
TMODE1:MuTIOL 1G I/O Type Selection II (1:Disable, 0:Enable)  
TMODE2:MuTIOL 1G I/O Type Selection III (1:Disable, 0:Enable)



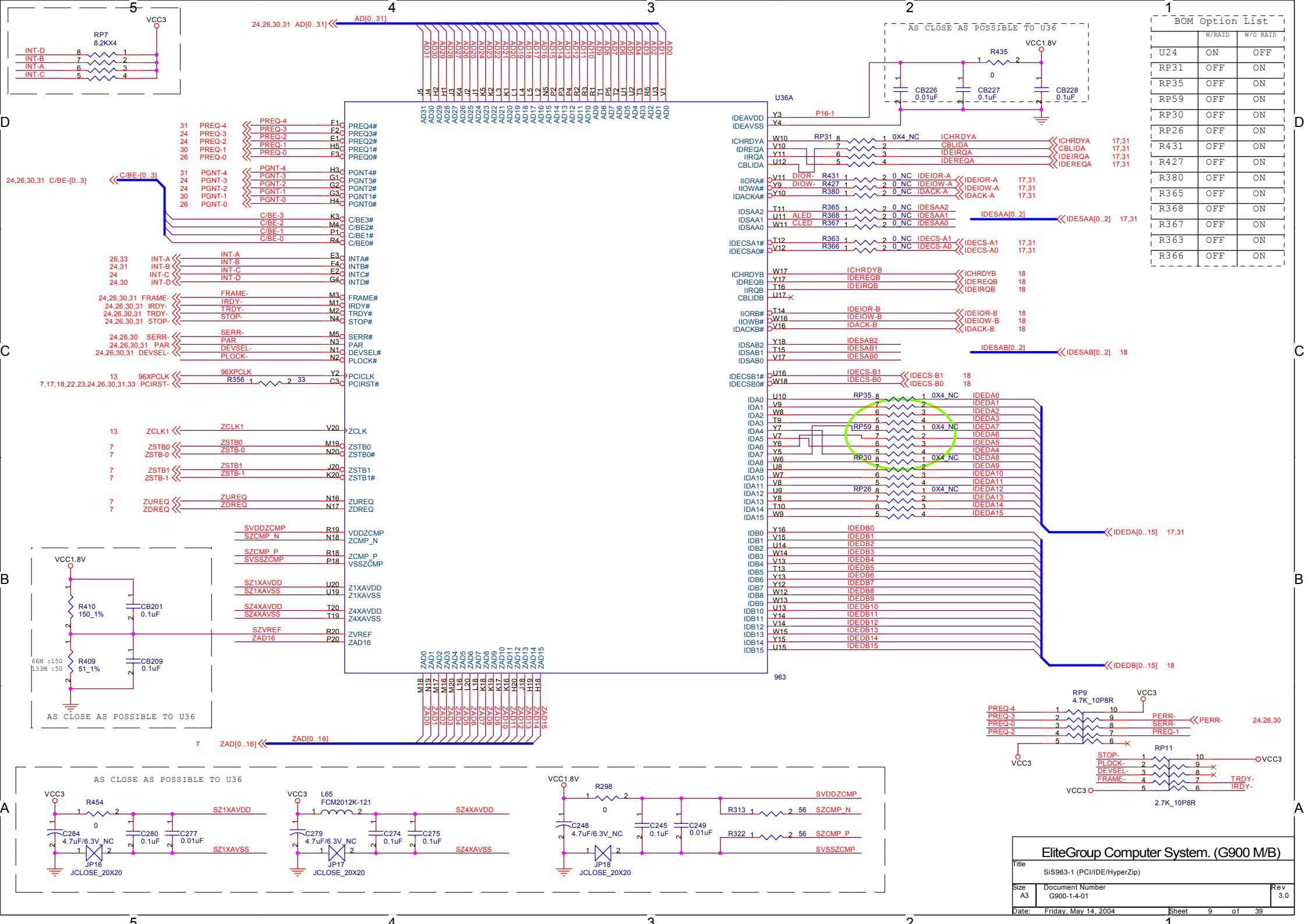
EliteGroup Computer System. (G900 M/B)		
Title	SIS648-3 (HyperZip/VGA/Misc)	
Size	Document Number	Rev
B	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 7 of 39

# 648FX-4

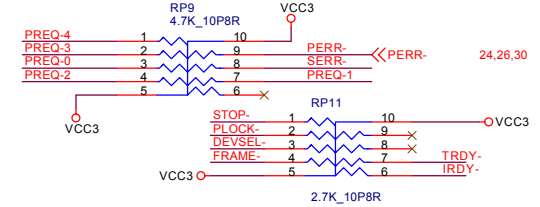
## Power



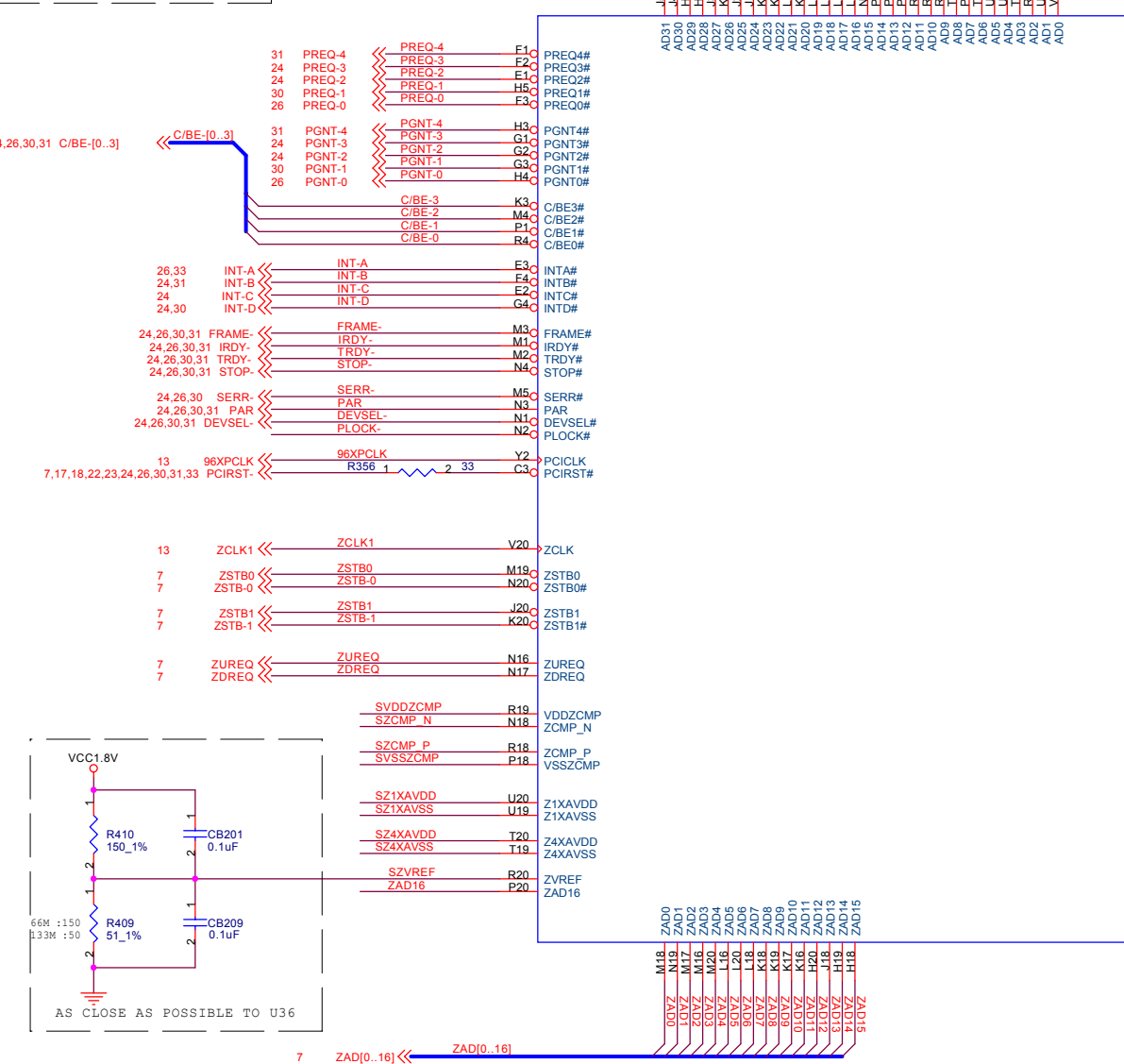
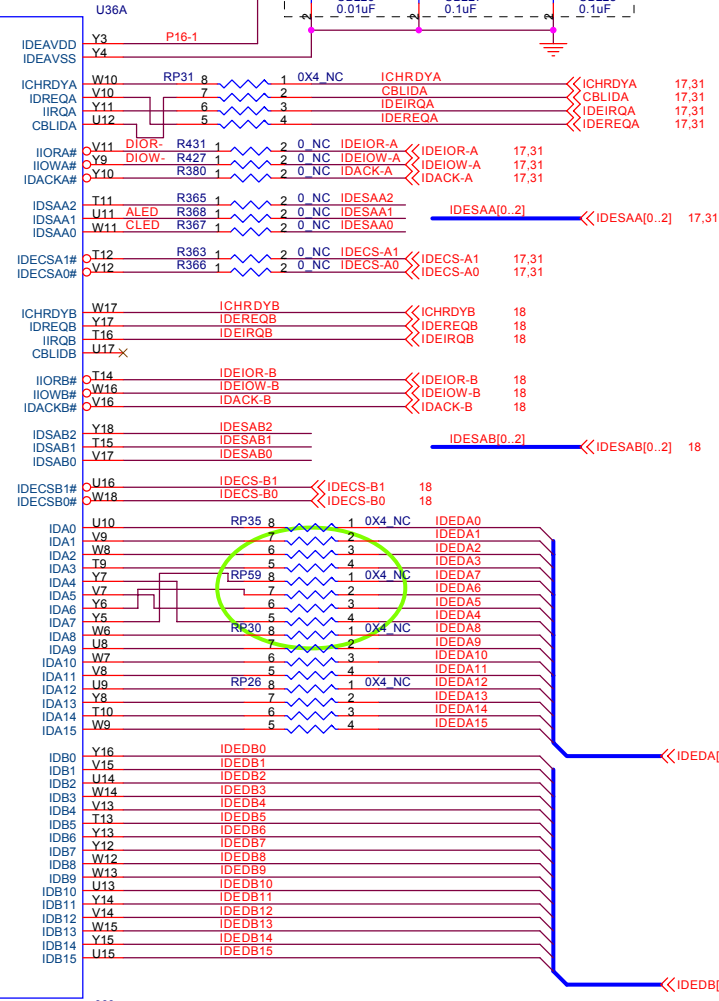
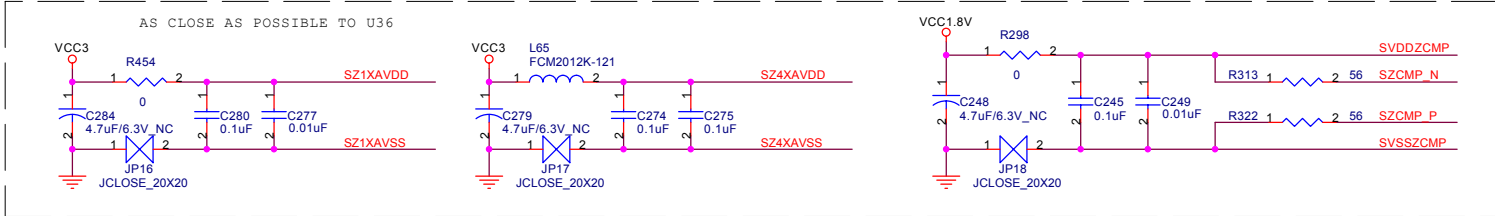
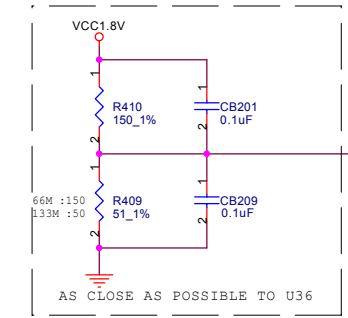
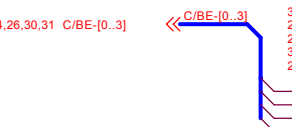
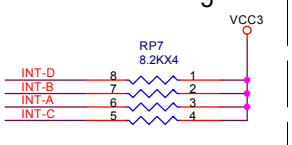


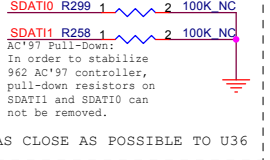
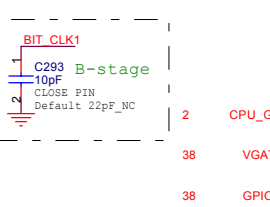
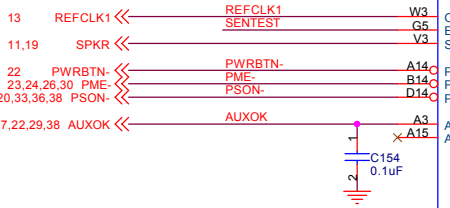
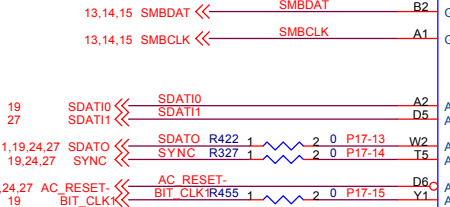
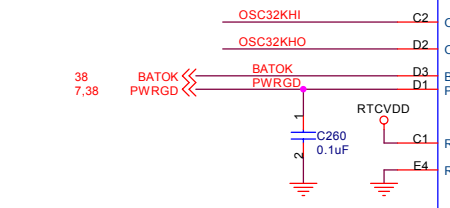
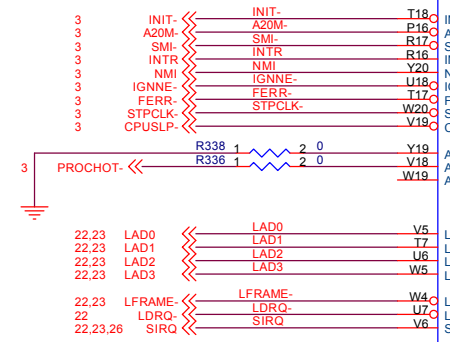


BOM Option List		
	W/RAID	W/O RAID
U24	ON	OFF
RP31	OFF	ON
RP35	OFF	ON
RP59	OFF	ON
RP30	OFF	ON
RP26	OFF	ON
R431	OFF	ON
R427	OFF	ON
R380	OFF	ON
R365	OFF	ON
R368	OFF	ON
R367	OFF	ON
R363	OFF	ON
R366	OFF	ON

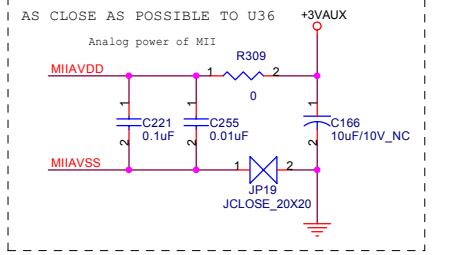
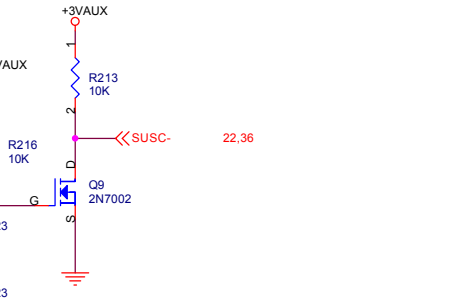
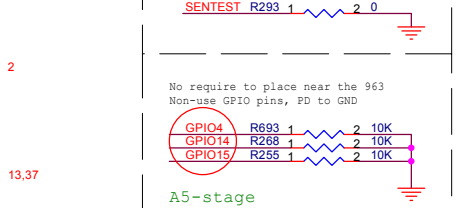
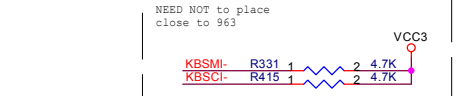
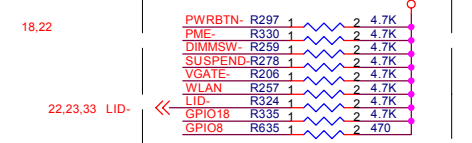
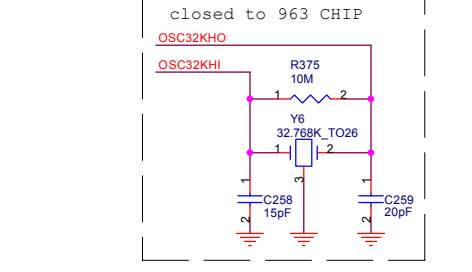
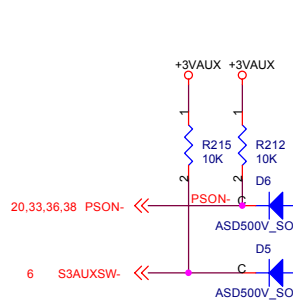
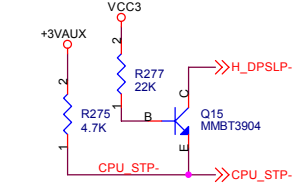
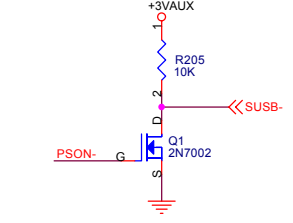
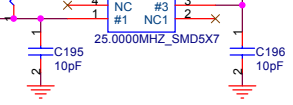
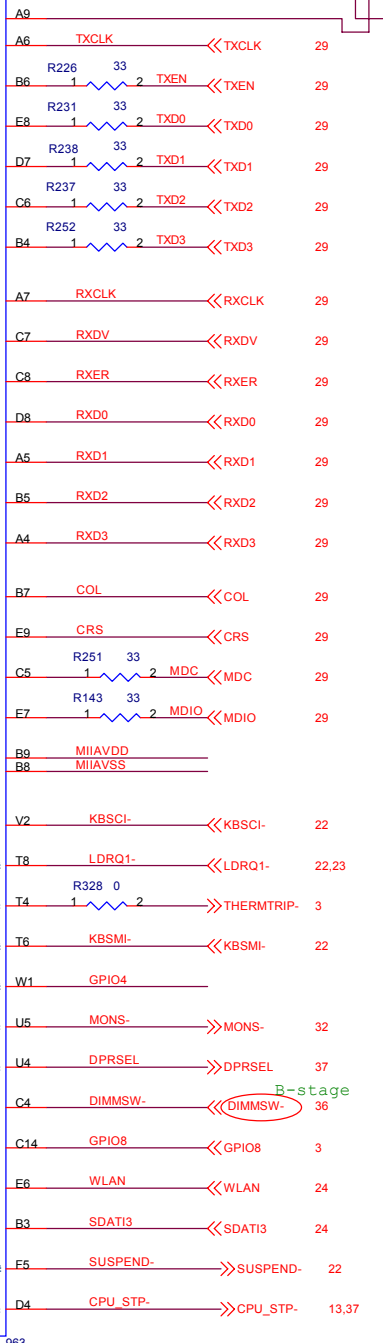
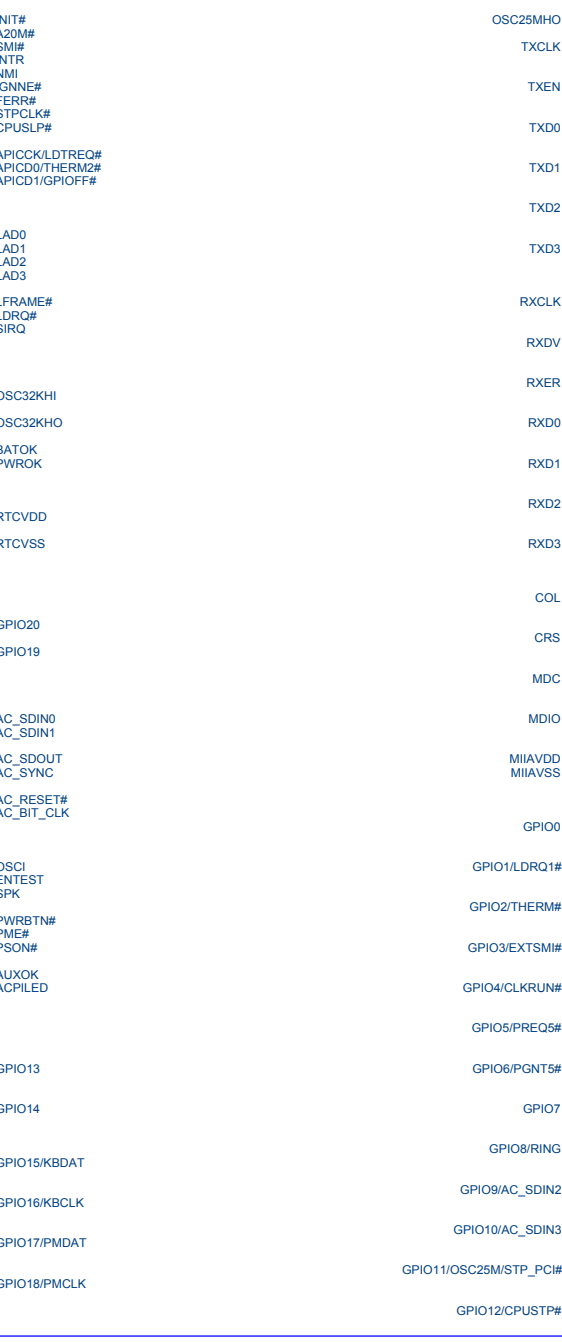


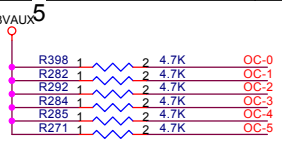
EliteGroup Computer System. (G900 M/B)		
Title	SiS963-1 (PCI/IDE/HyperZip)	
Size	Document Number	Rev
A3	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 9 of 39



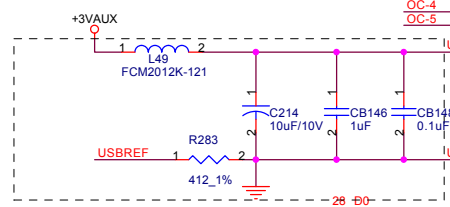
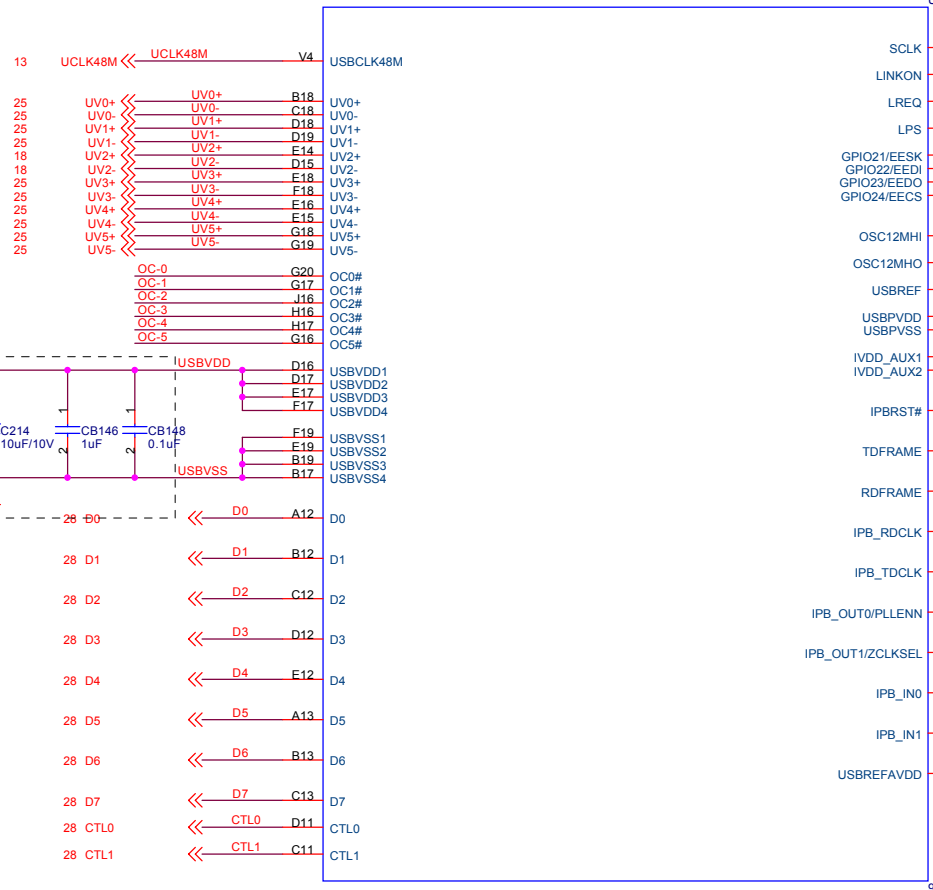


AS CLOSE AS POSSIBLE TO U36

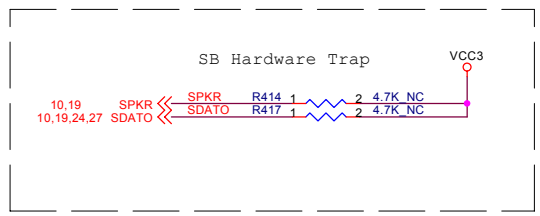
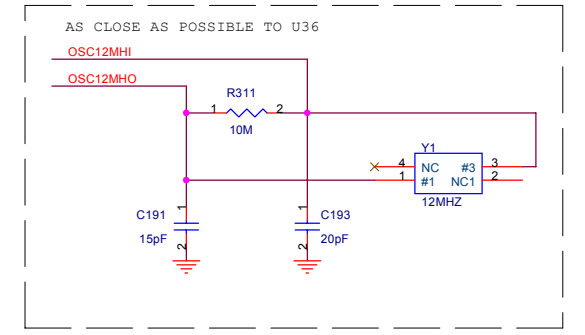
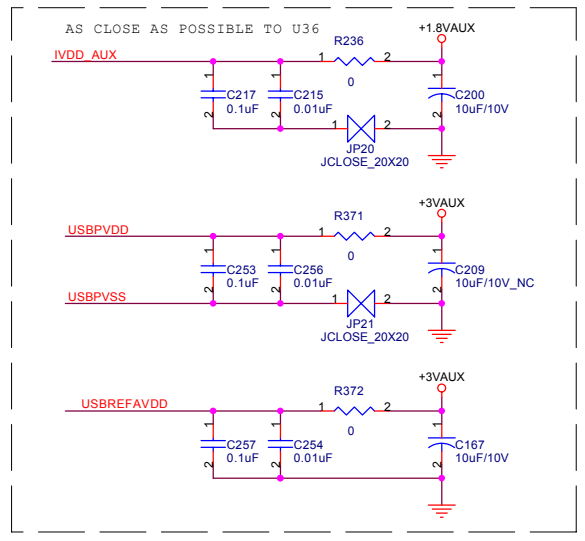
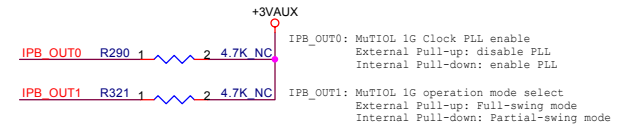
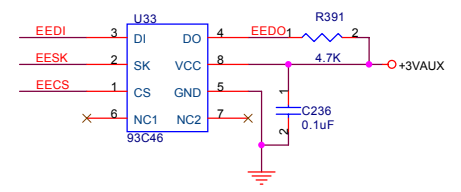




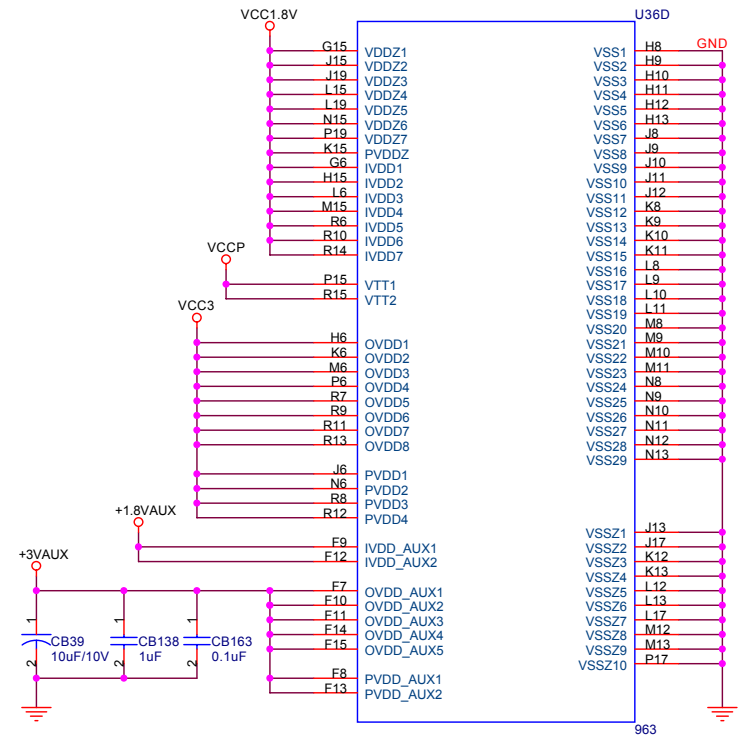
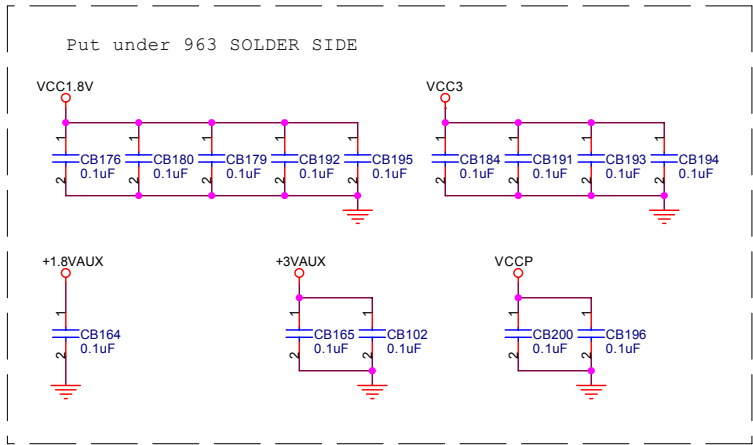
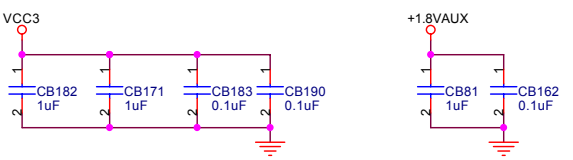
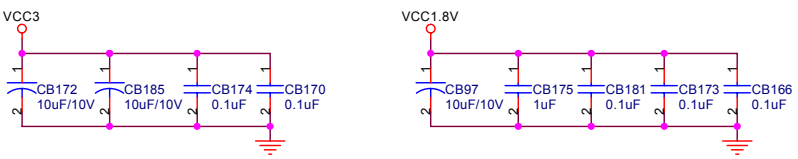
They don't need to be placed near the SiS963



AS CLOSE AS POSSIBLE TO U36

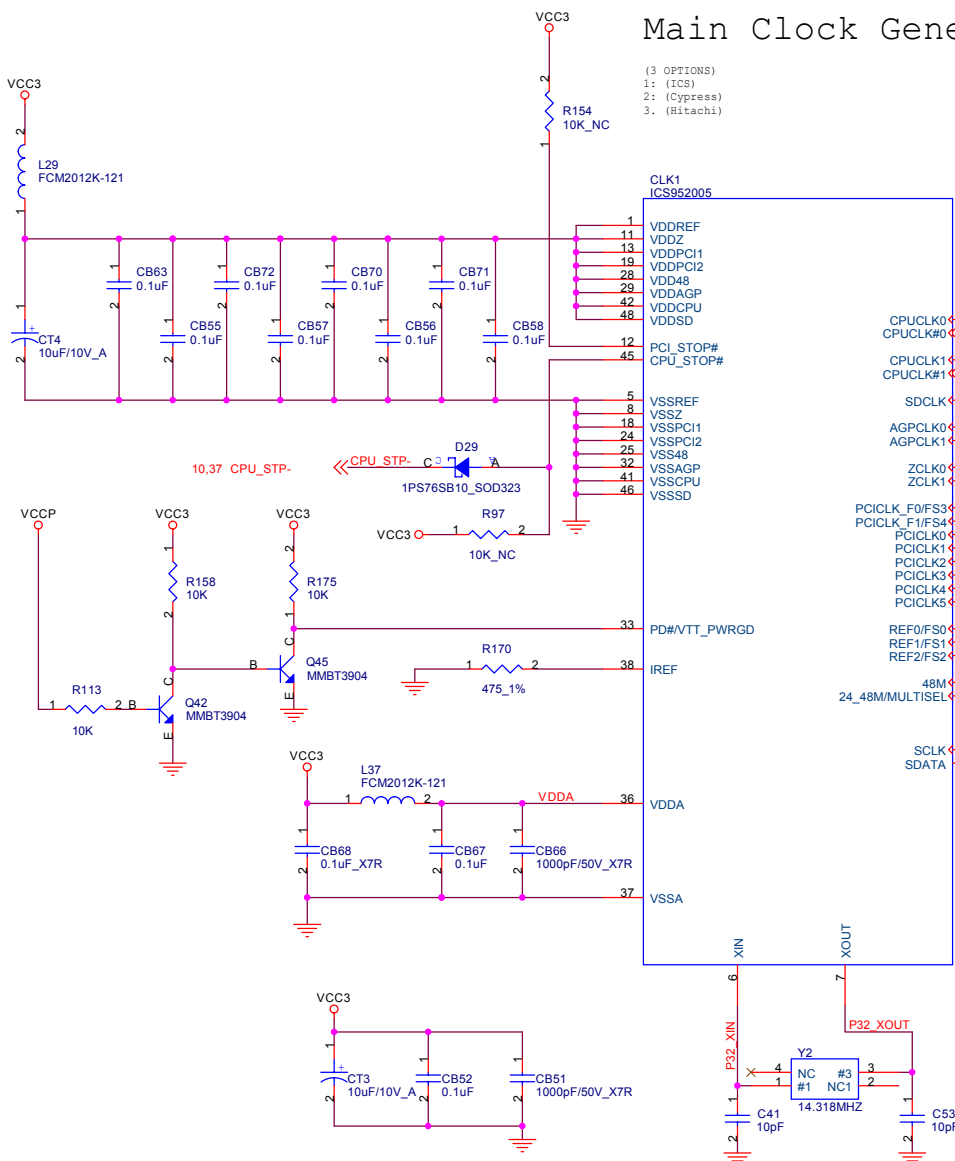


	0	1	Default	
SPKR (LPC address mapping)	disable	enable	R414 un-stuff	yes
SDATO (Trap from)	ROM	PCI_AD	R417 un-stuff	yes
SB debug mode	enable	disable		

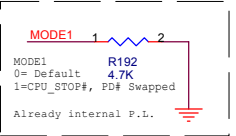
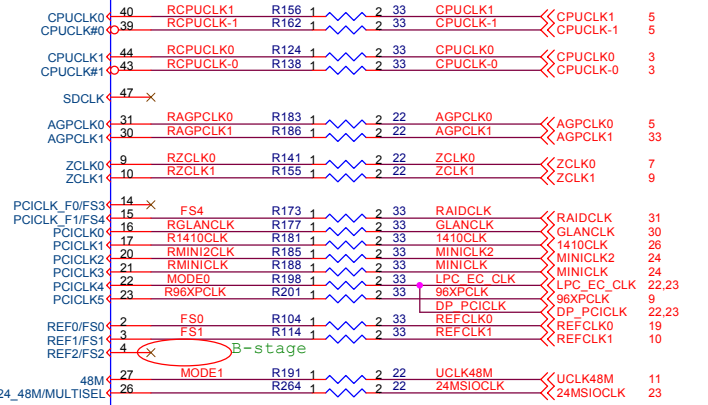
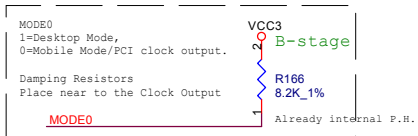


EliteGroup Computer System. (G900 M/B)		
Title	SIS963-4 (POWER)	
Size	Document Number	Rev
B	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 12 of 39

# Main Clock Generator



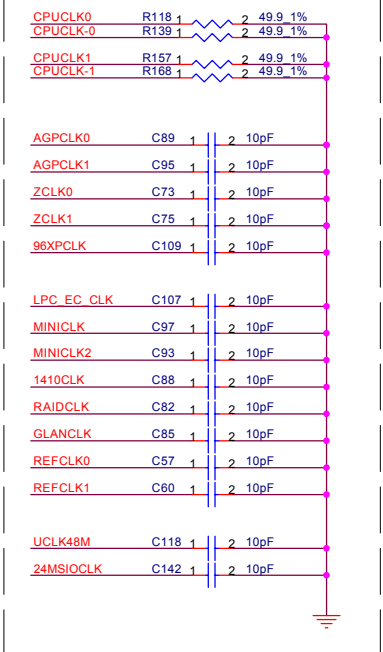
(3 OPTIONS)  
 1: (ICS)  
 2: (Cypress)  
 3: (Hitachi)



PIN12 ,26,45 INTERNAL PULL-UP

FS4	FS3	FS2	FS1	FS0	CPU	DDR	AGP	PCI	ZCLK
1	0	0	0	0	100	100	66	33	133
1	0	0	0	1	100	133	66	33	133
1	0	1	0	1	133	133	66	33	133
1	0	1	1	1	133	166	66	33	133
1	0	1	1	0	133	200	66	33	133
1	1	1	0	1	166	133	66	33	133
1	1	1	1	1	166	166	66	33	133
1	1	1	1	0	166	200	66	33	133
1	1	0	0	1	200	133	66	33	133
1	1	0	1	1	200	166	66	33	133
1	1	0	1	0	200	200	66	33	133

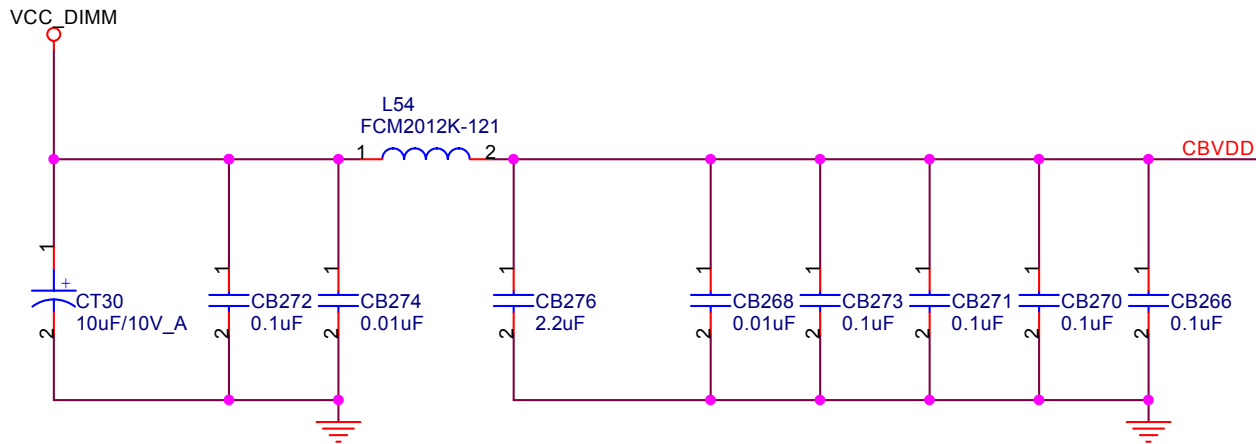
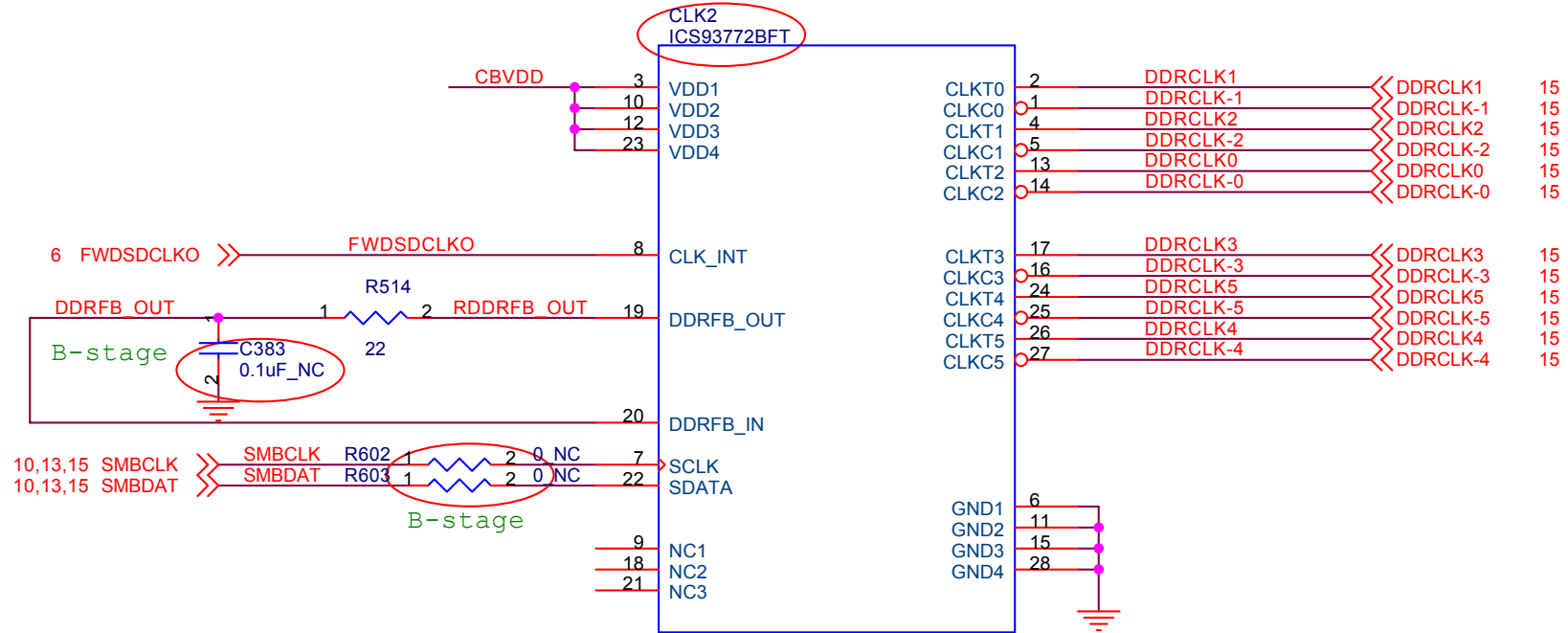
## By-Pass Capacitors Place near to the Clock Outputs



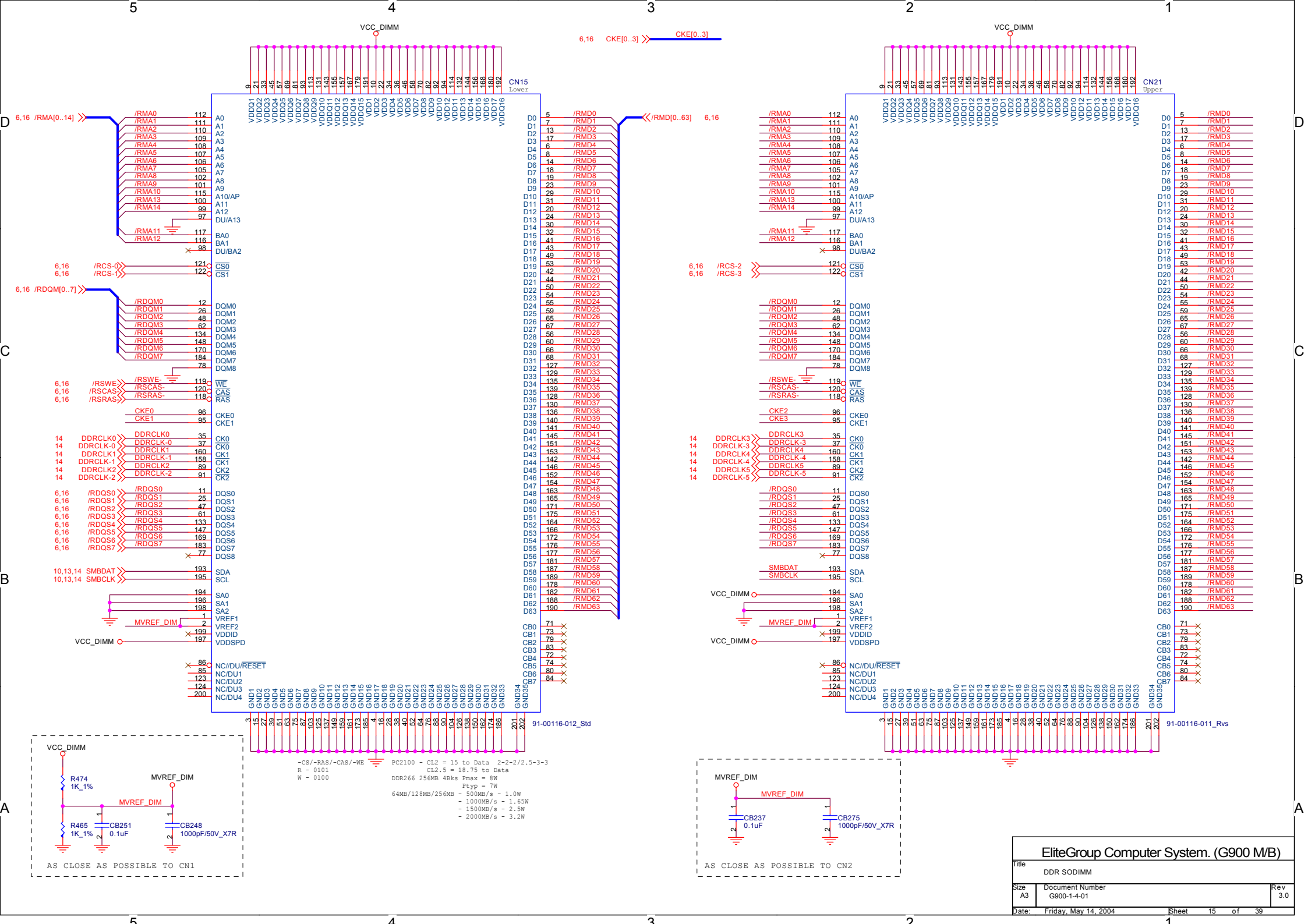
# Clock Buffer (DDR)

B-stage

Change from 93722 to 93772

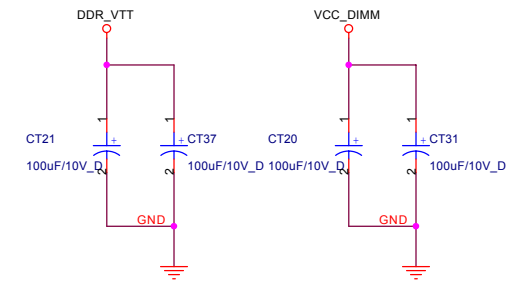
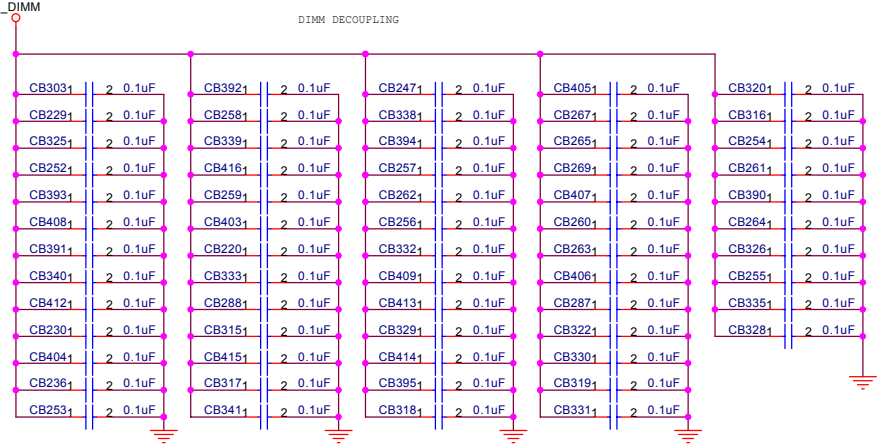
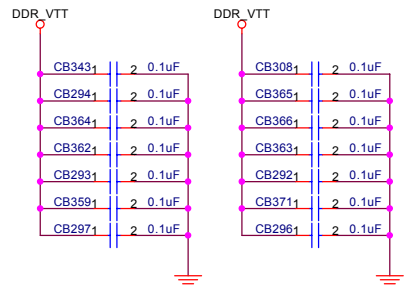
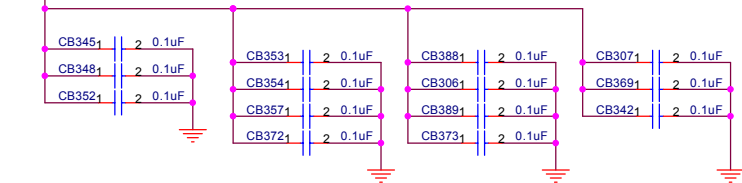
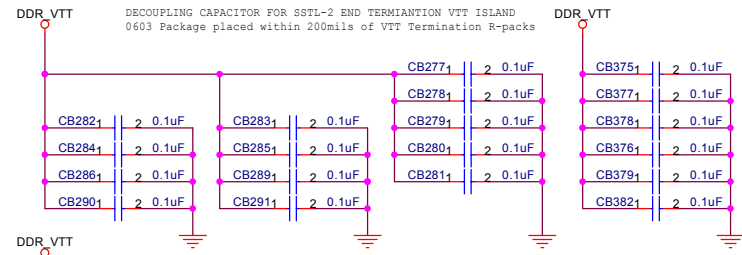
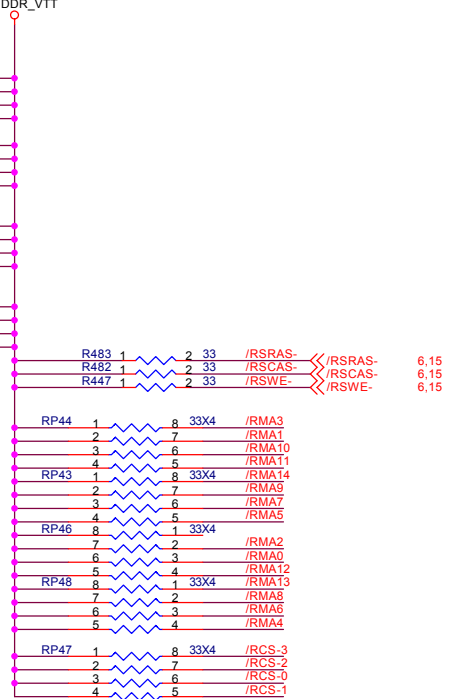
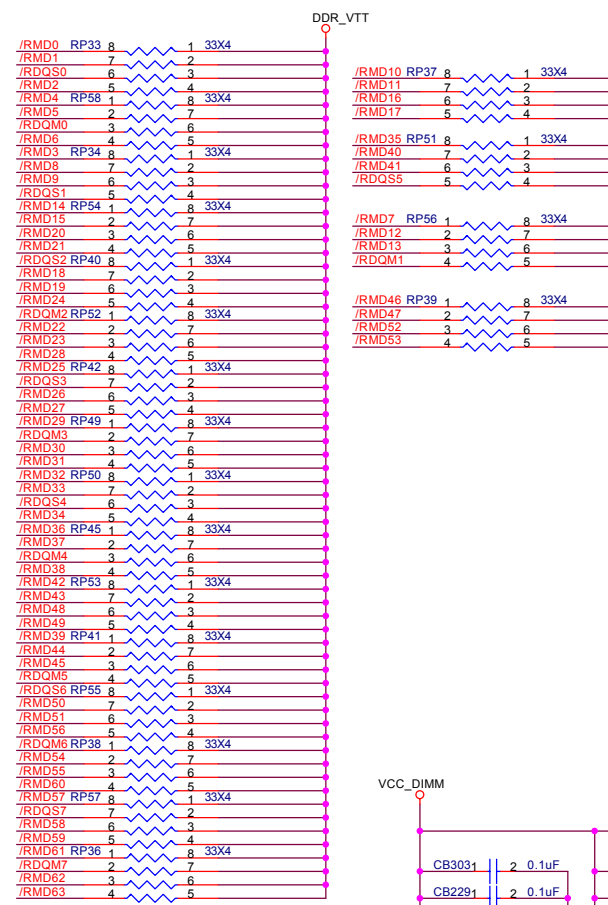
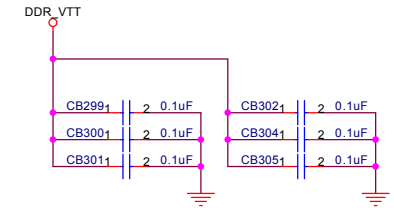
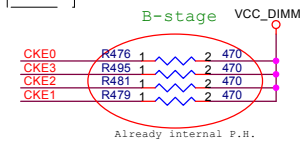


EliteGroup Computer System. (G900 M/B)		
Title CLOCK BUFFER (DDR)		
Size A	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 14	of 39



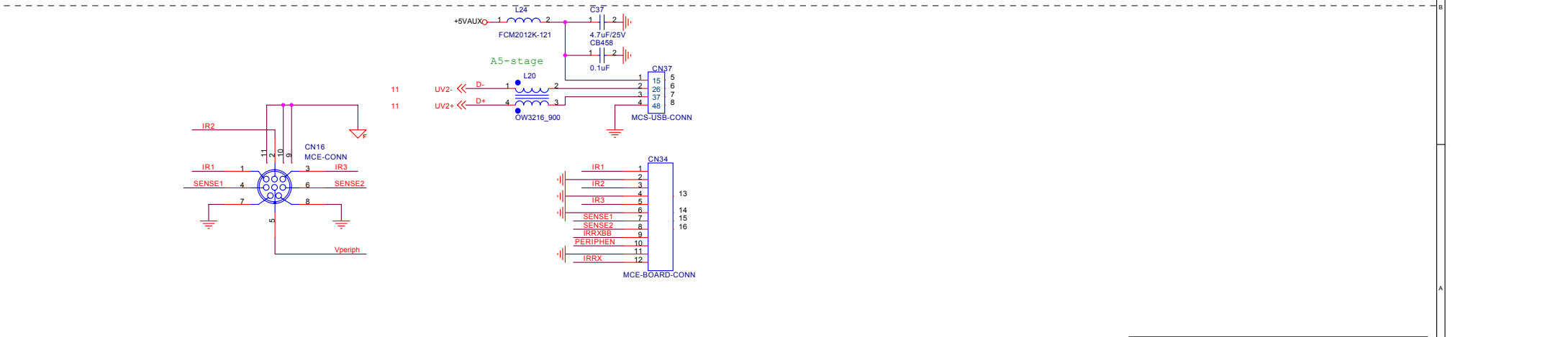
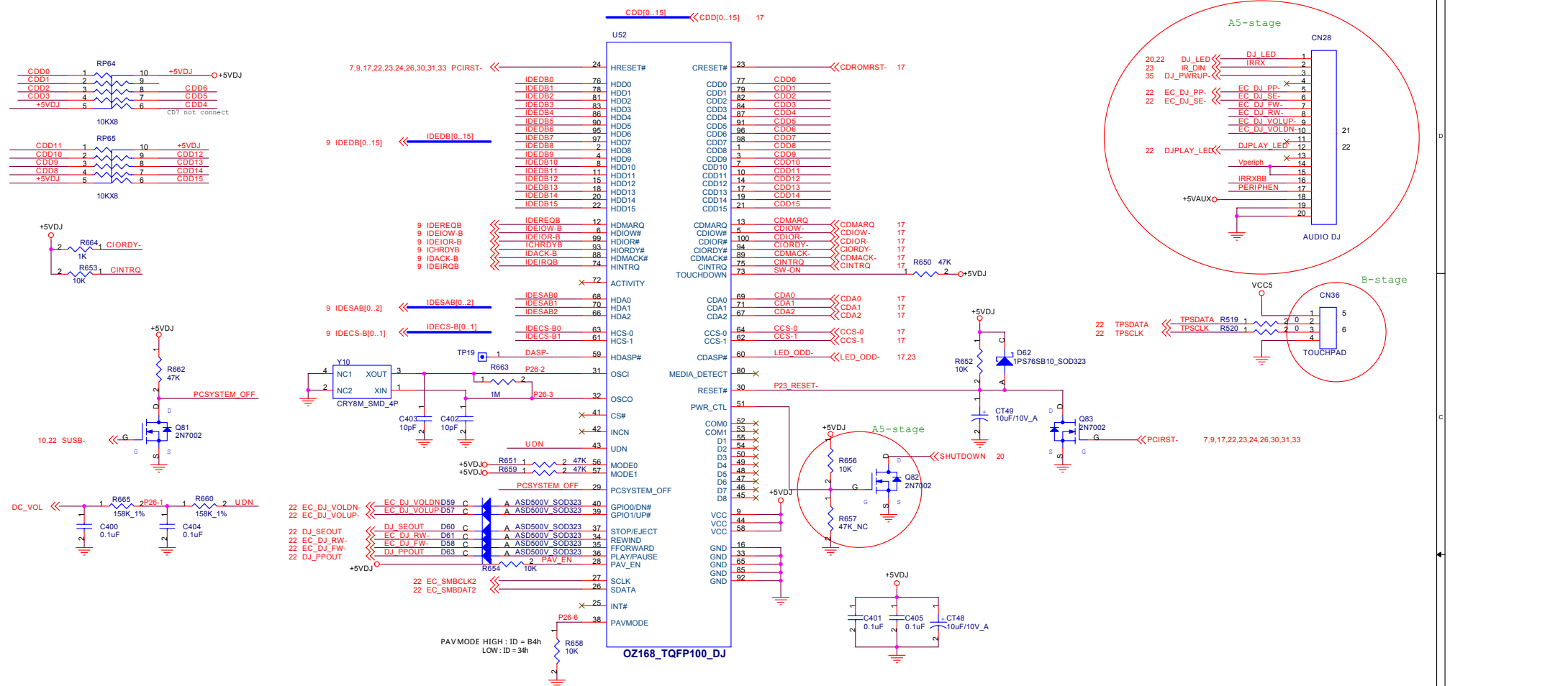
# SSTL-2 Termination Resistors

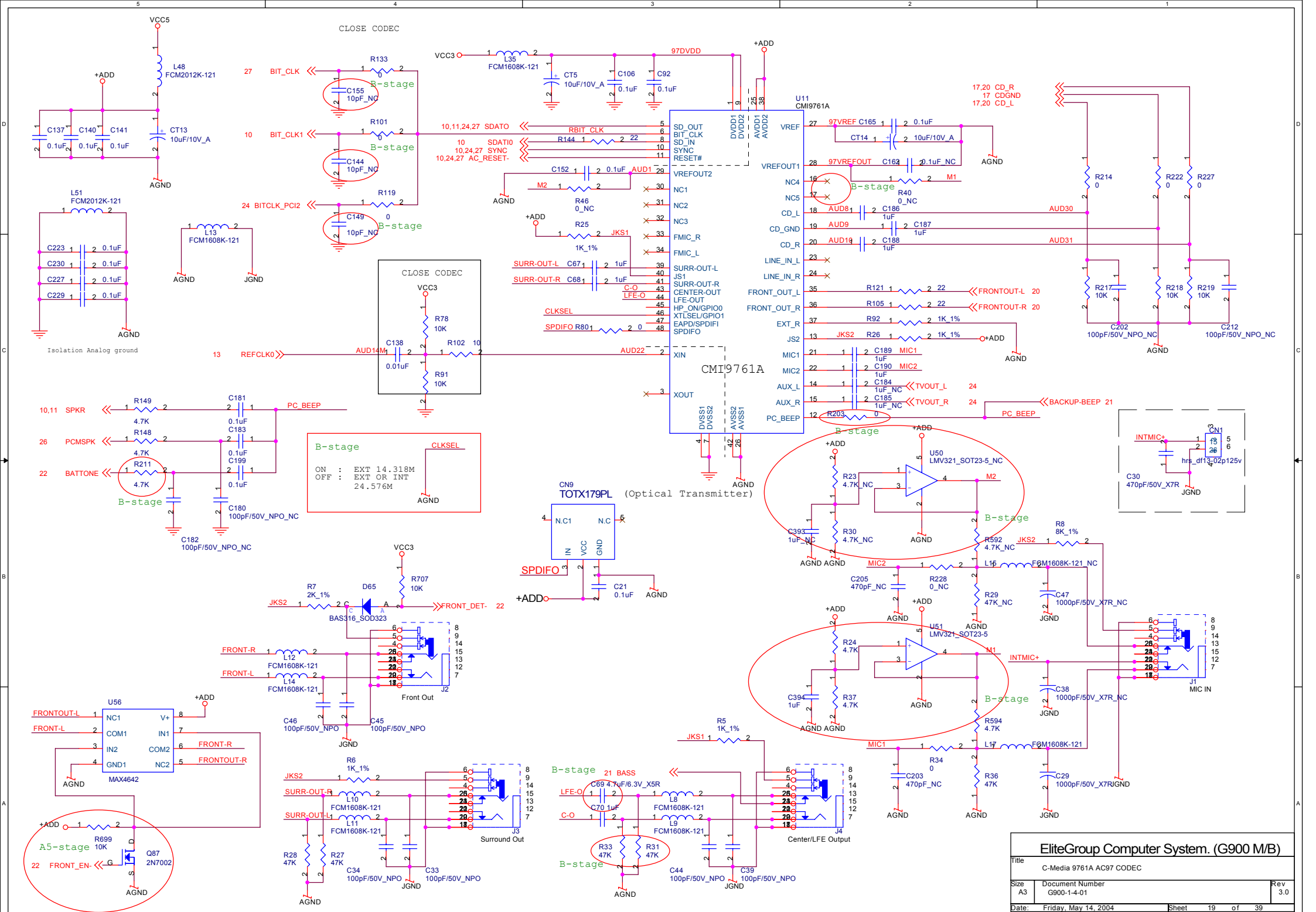
	SDR		DDR	
MD/DQM (/DQS)	LV-CMOS	R <sub>s</sub>	SSTL-2	R <sub>tc</sub>
MA/Control	LV-CMOS	0/10/-	SSTL-2	47
CS	LV-CMOS	0	SSTL-2	47
CKE	DD 3.3V	0	SSTL-2	47
			DD 2.5V	



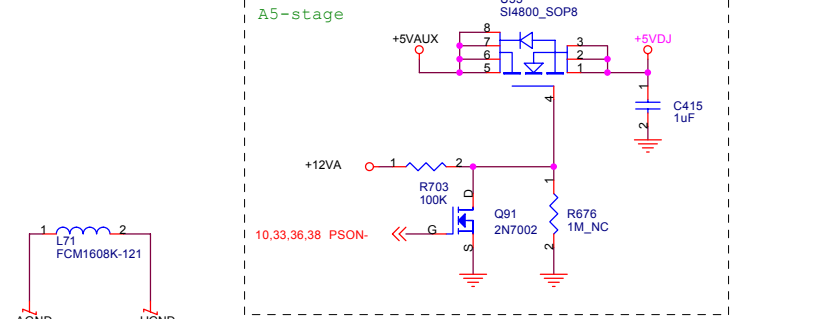
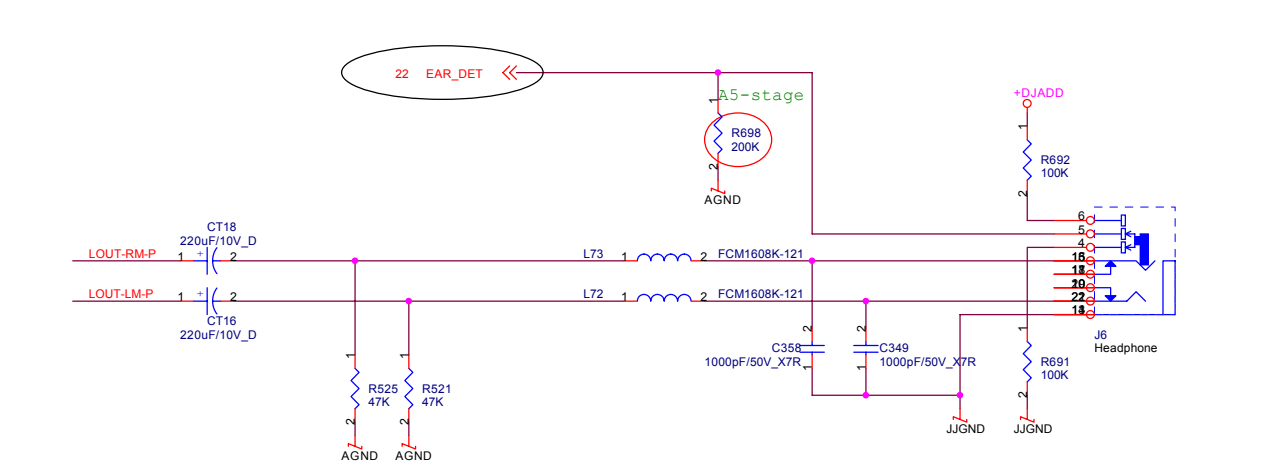
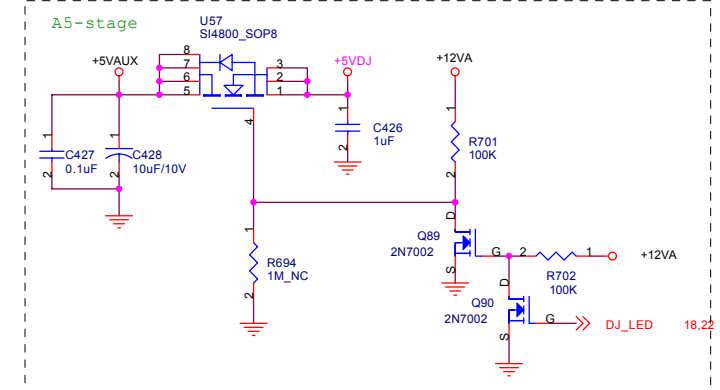
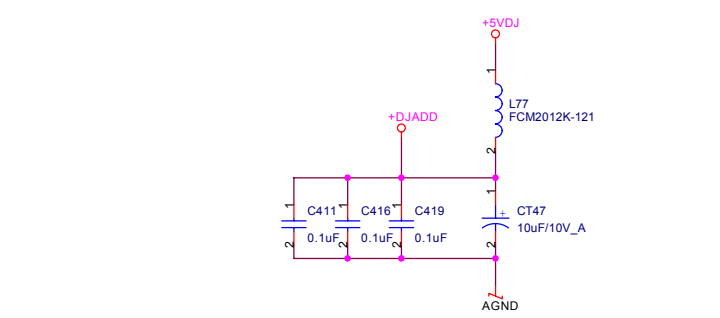
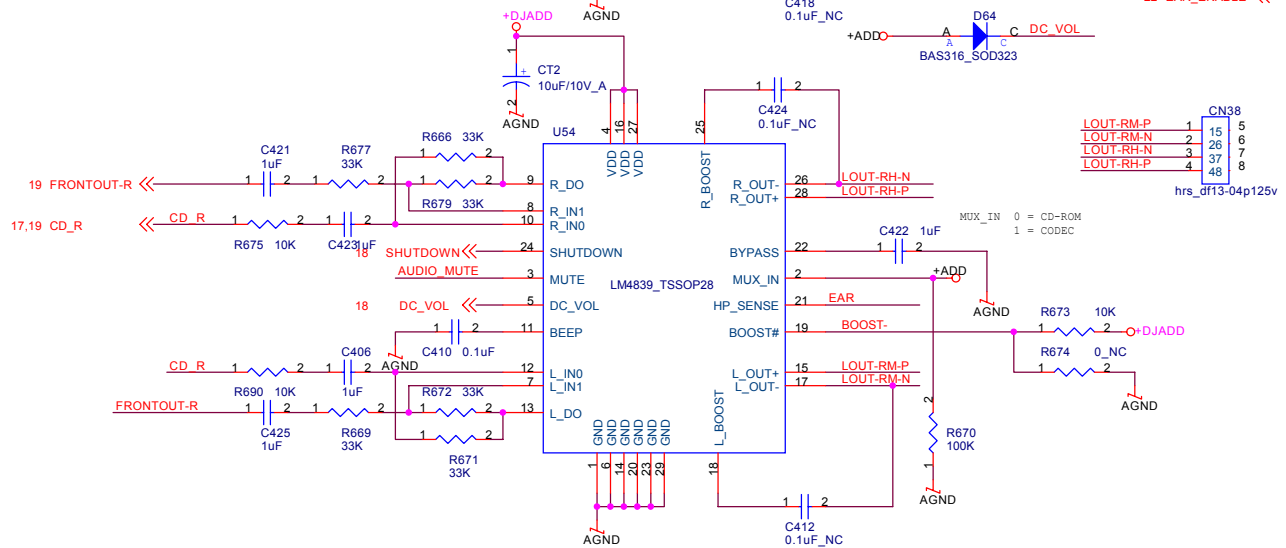
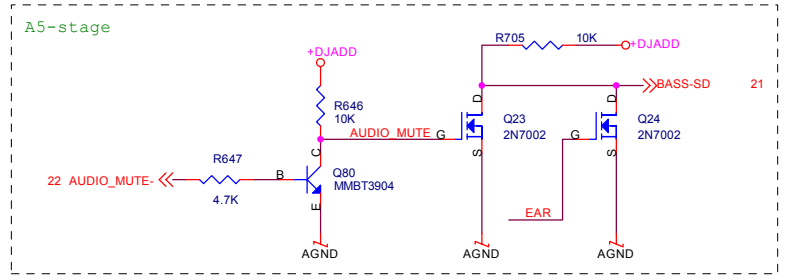
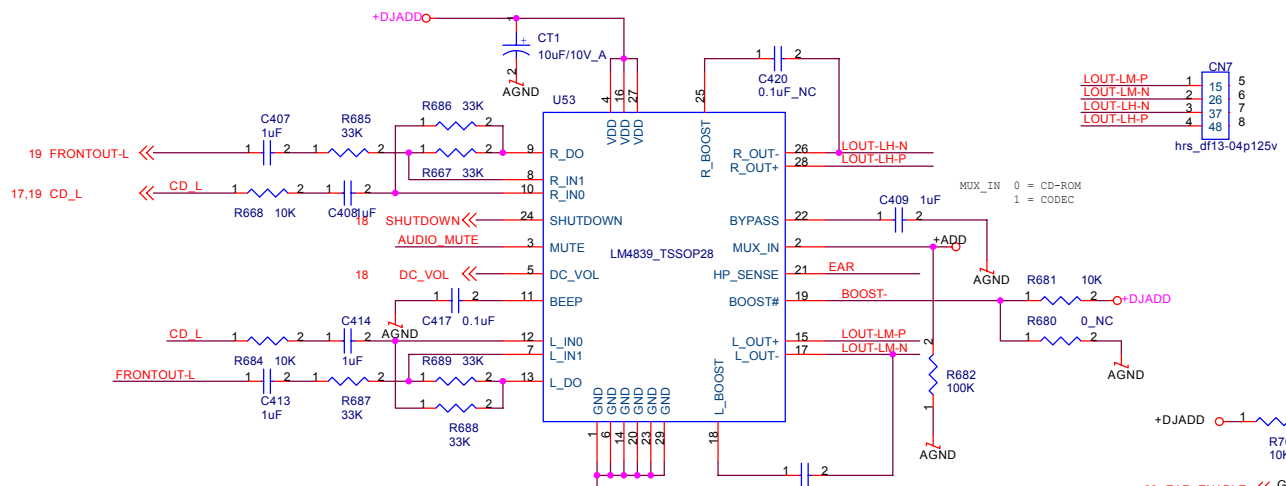




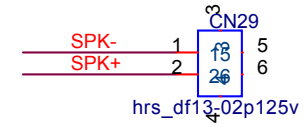
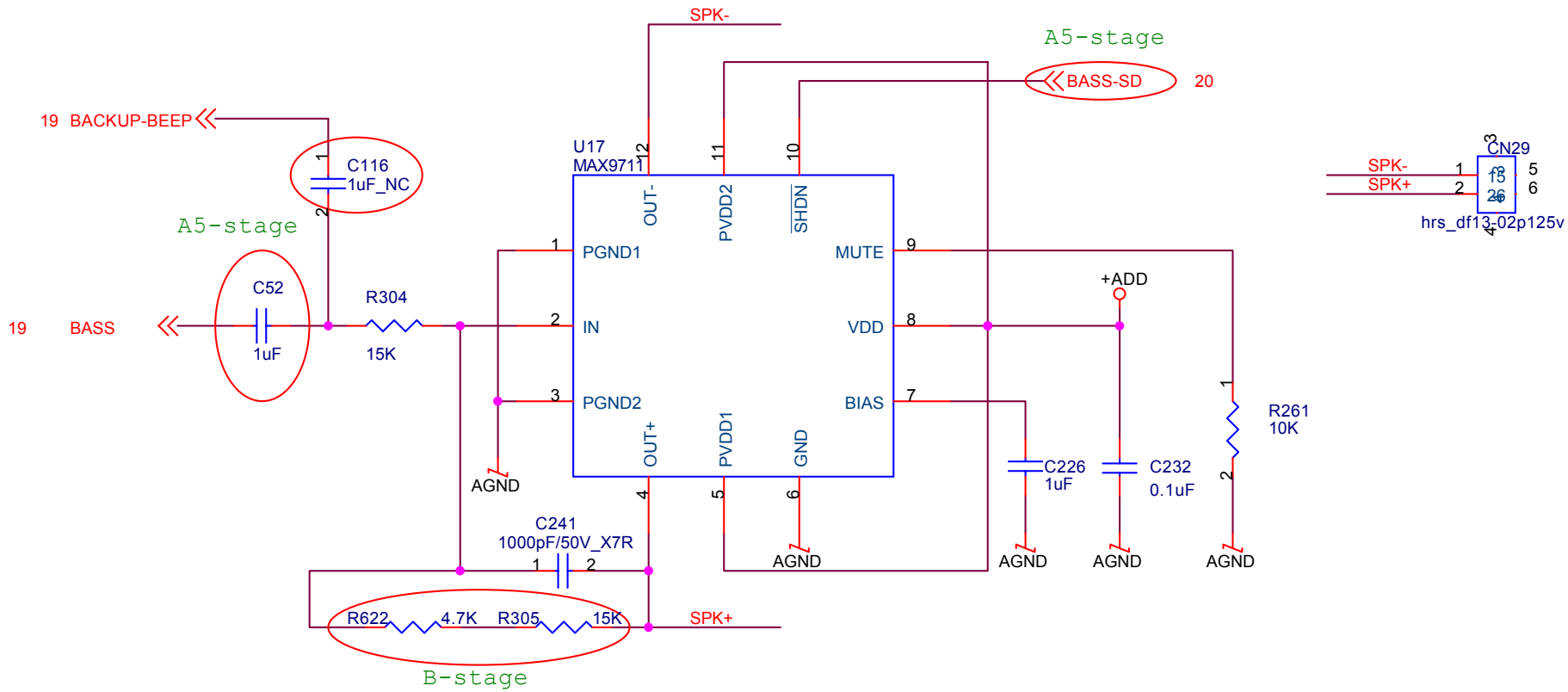




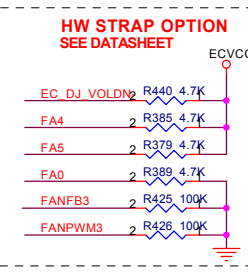
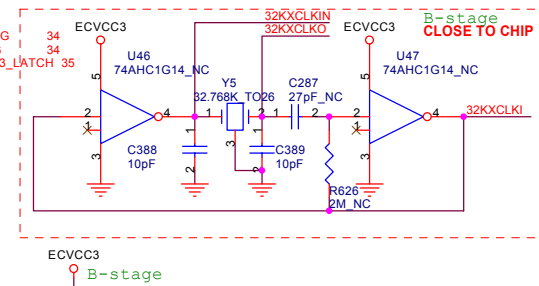
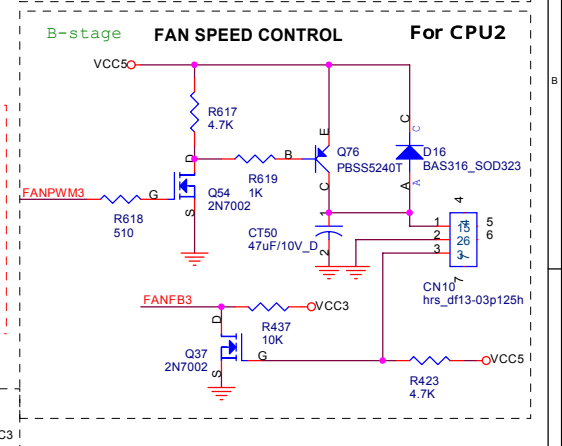
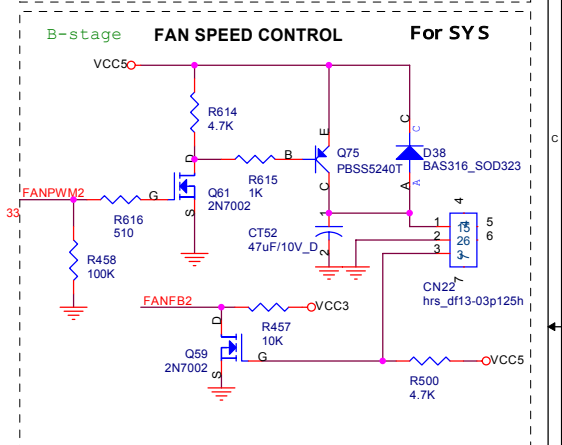
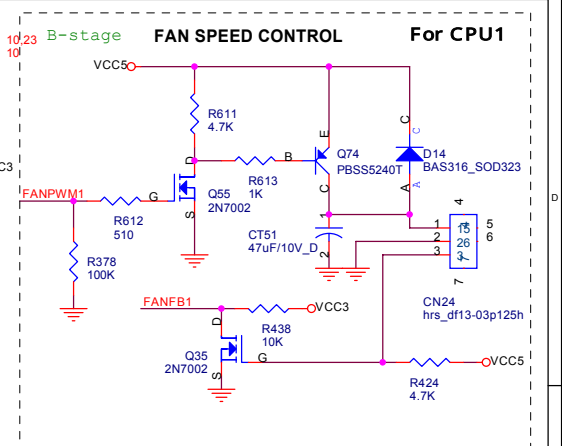
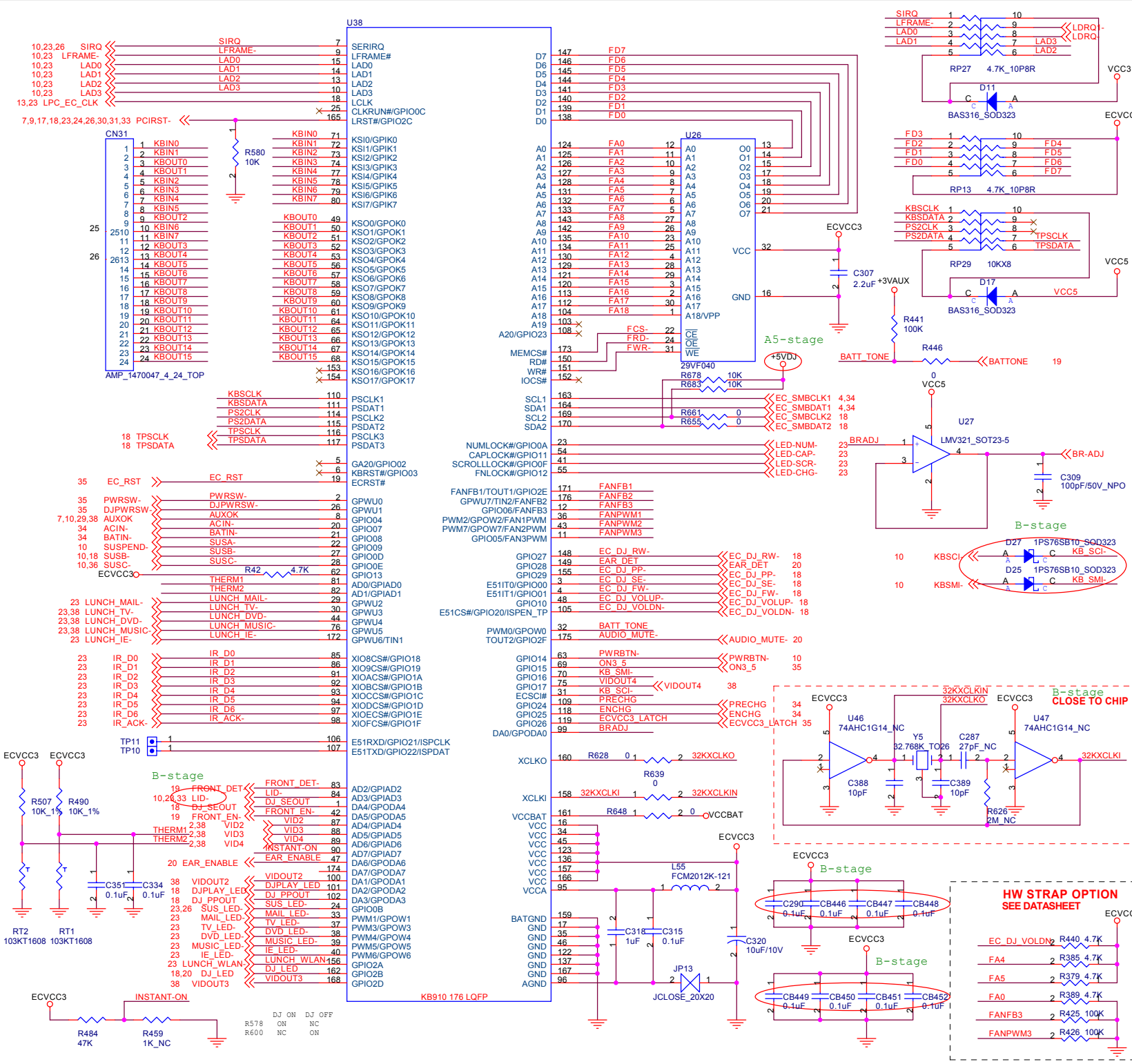
EliteGroup Computer System. (G900 M/B)		
Title	C-Media 9761A AC97 CODEC	
Size	Document Number	Rev
A3	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 19 of 39



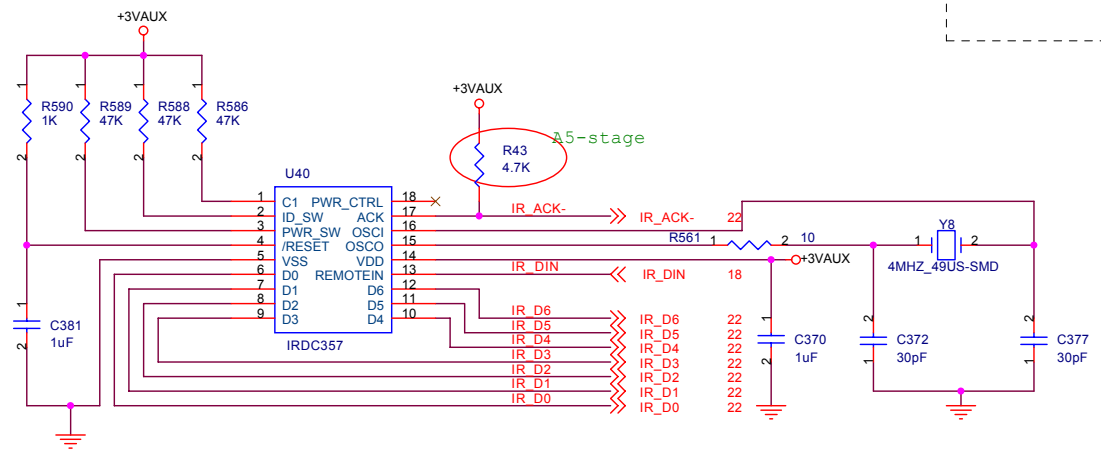
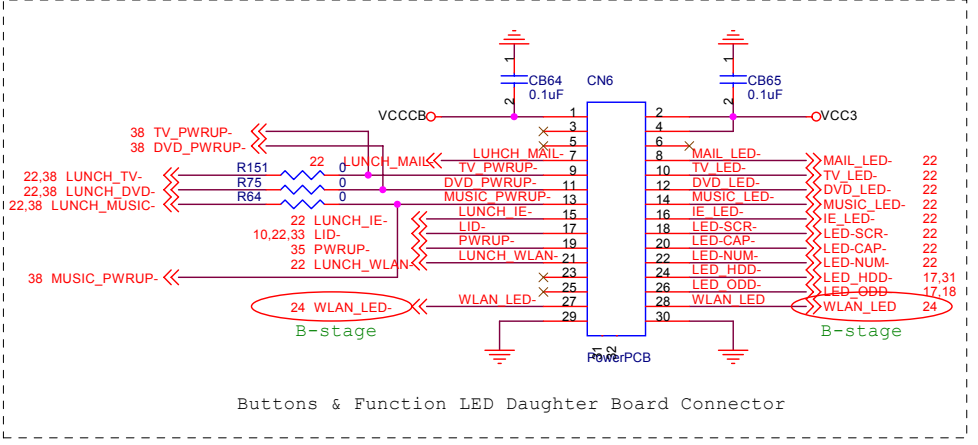
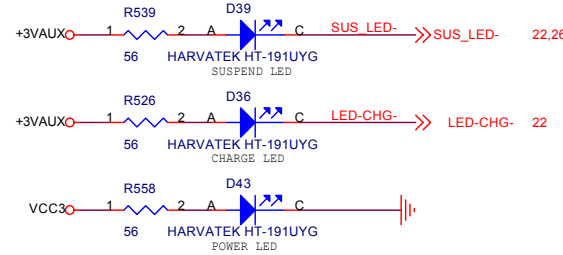
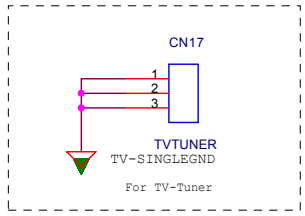
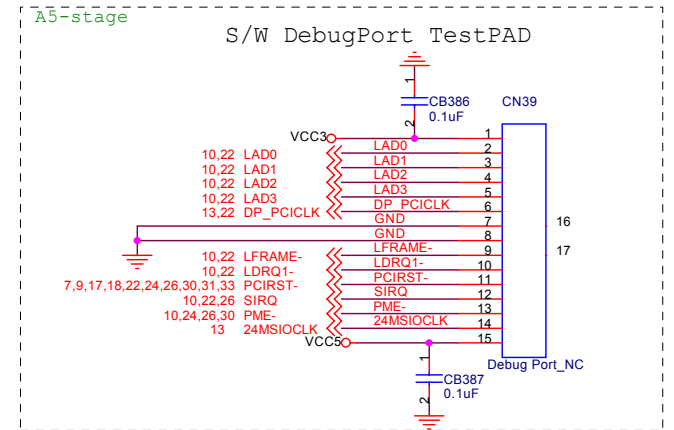
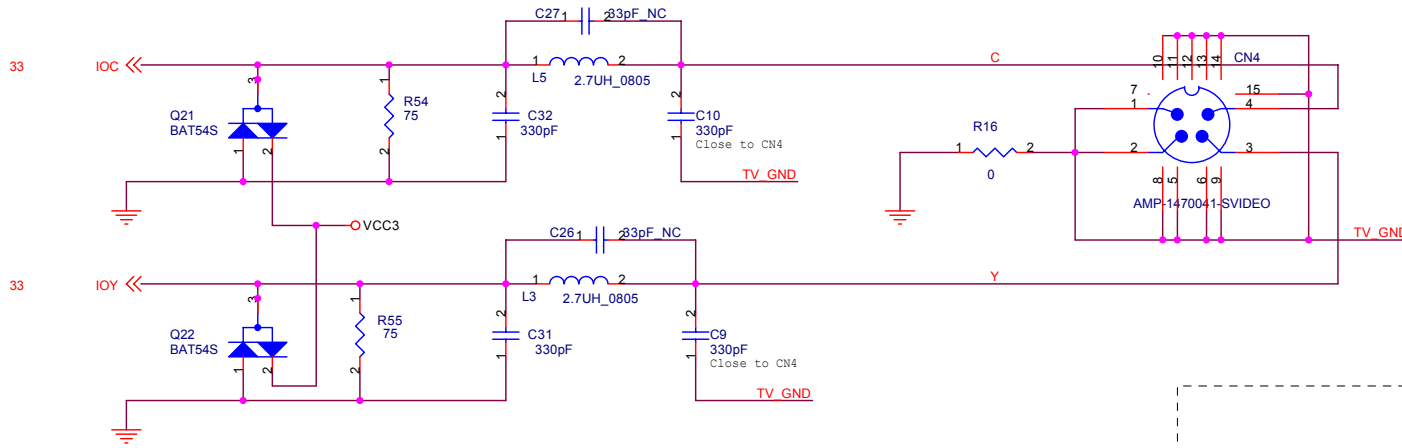
EliteGroup Computer System. (G900 M/B)		
Title	LM4839 2W AUDIO AMPLIFIER	
Size	Document Number	Rev
A3	G900-1.4-01	3.0
Date:	Friday, May 14, 2004	Sheet 20 of 39



EliteGroup Computer System. (G900 M/B)		
Title AUDIO AMPLIFIER FOR BASS		
Size A	Document Number G900-1-4-01	Rev 3.0
Date:	Friday, May 14, 2004	Sheet 21 of 39



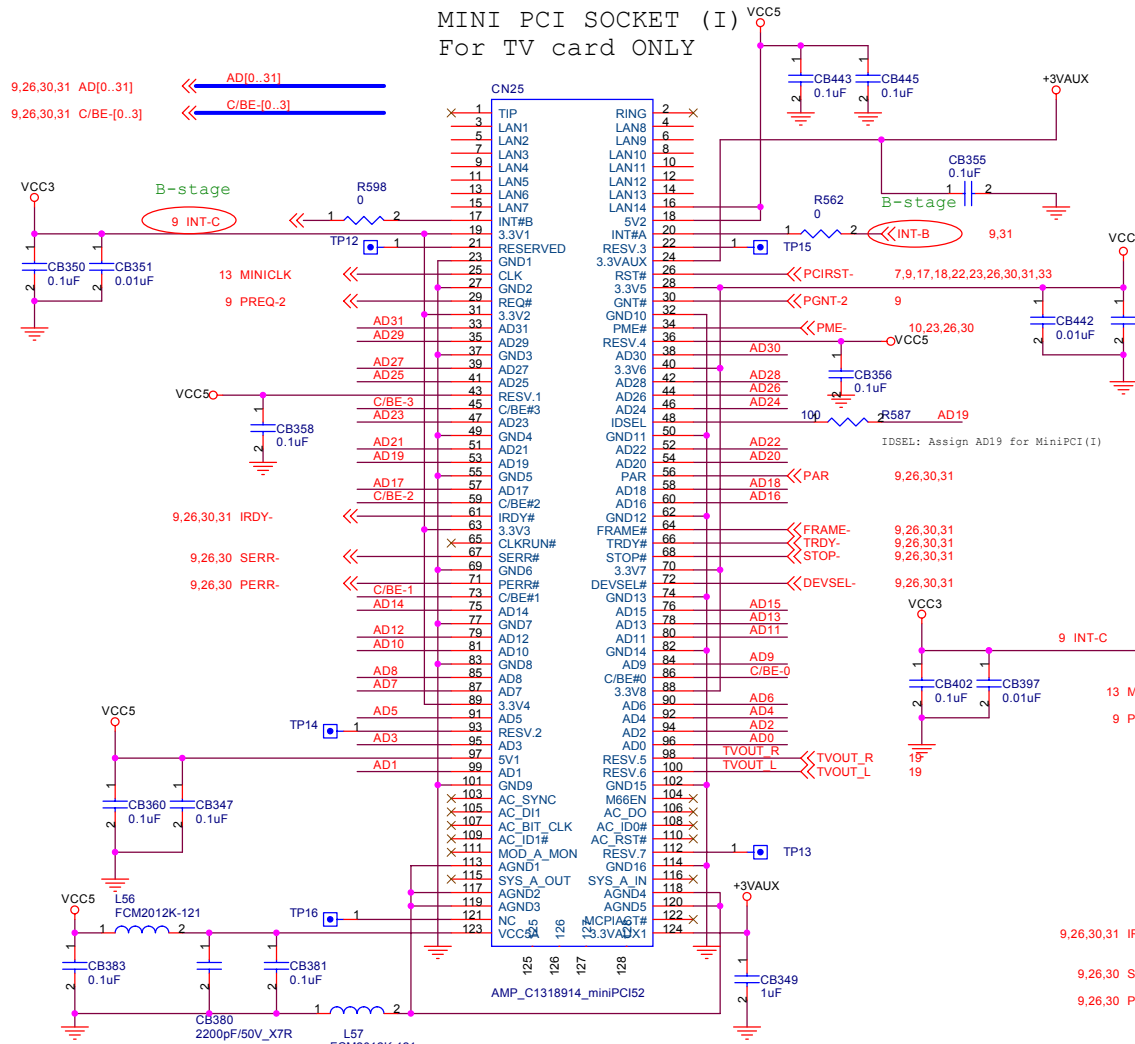
EliteGroup Computer System. (G900 M/B)			
Title	KEYBOARD CONTROLLER (ENE-3910)		
Size	Document Number		Rev
A3	G900-1-4-01		3.0
Date:	Friday, May 14, 2004	Sheet	22 of 39



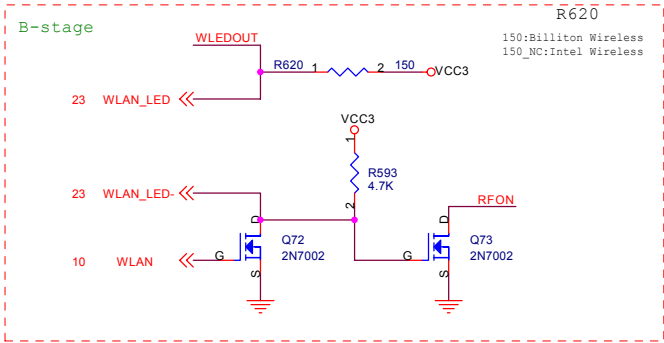
EliteGroup Computer System. (G900 M/B)		
Title	IR/SVIDEO/Daughter Card	
Size	Document Number	Rev
B	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 23 of 39



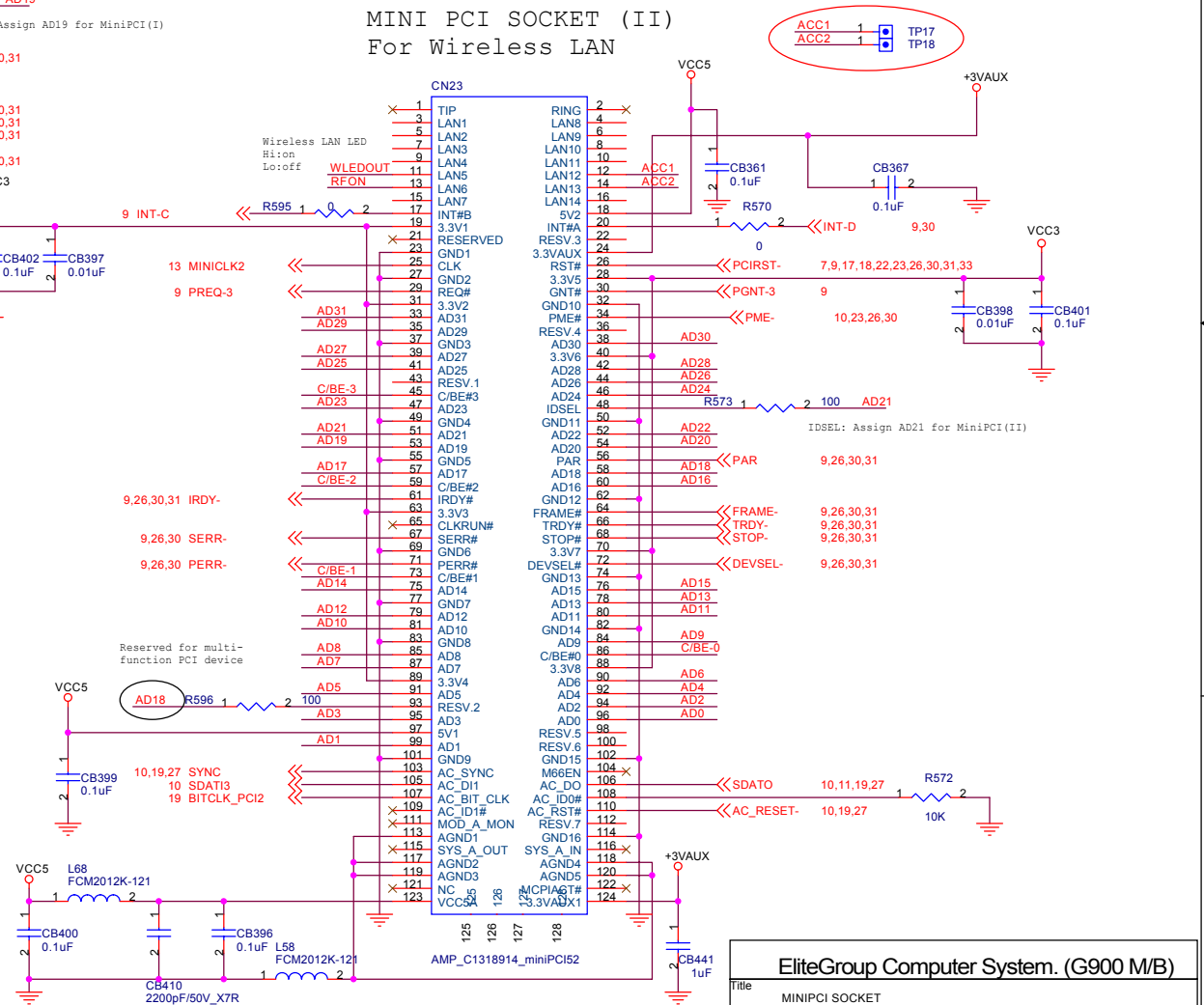
# MINI PCI SOCKET (I) For TV card ONLY



FootNote:  
 TP12:SVHS\_Y  
 TP13:SVHS\_C  
 TP14:CVBS  
 TP15:Audio-In\_R  
 TP16:Audio-In\_L

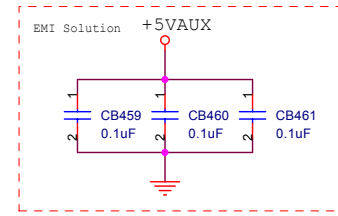
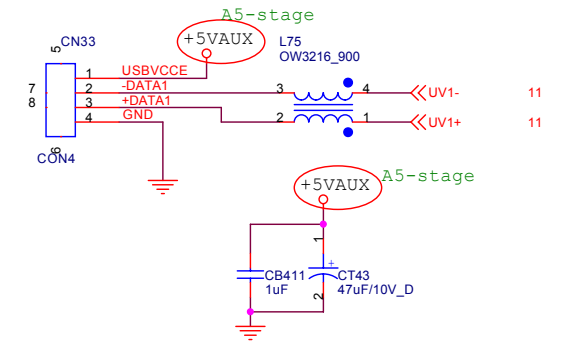
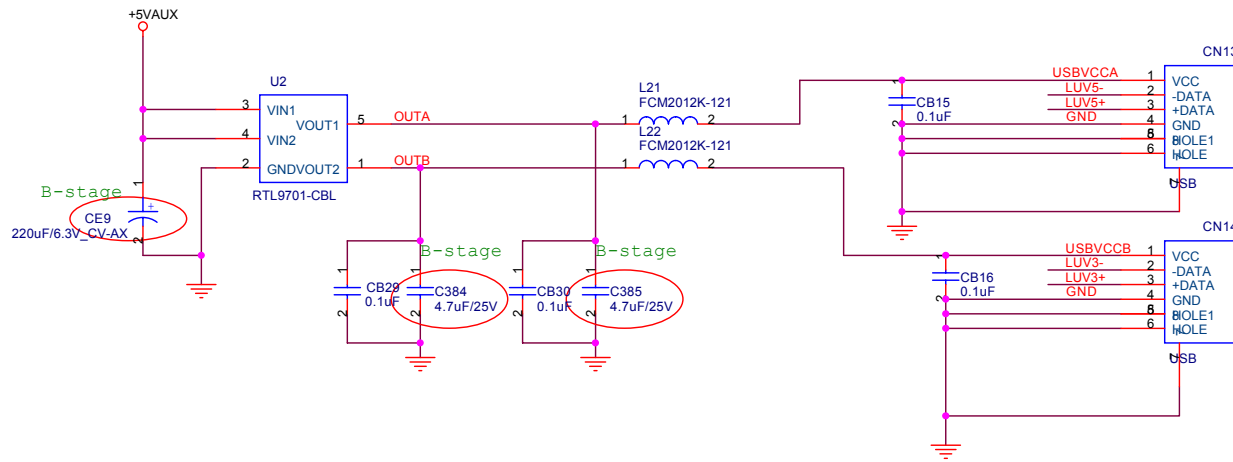
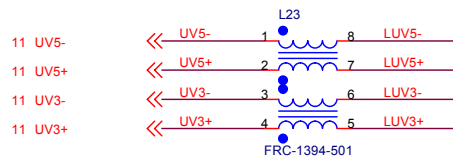


# MINI PCI SOCKET (II) For Wireless LAN

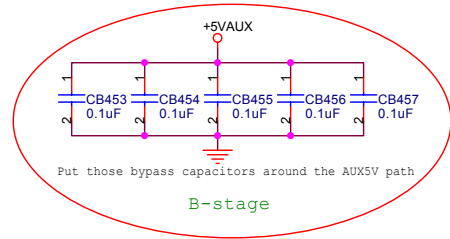
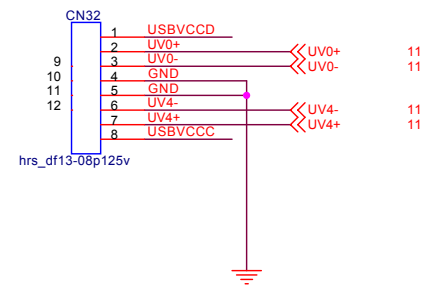
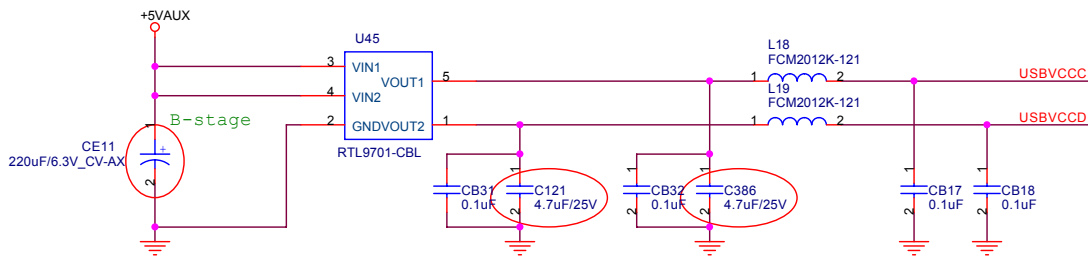


EliteGroup Computer System. (G900 M/B)		
Title	MINIPCI SOCKET	
Size A3	Document Number	Rev
	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 24 of 39

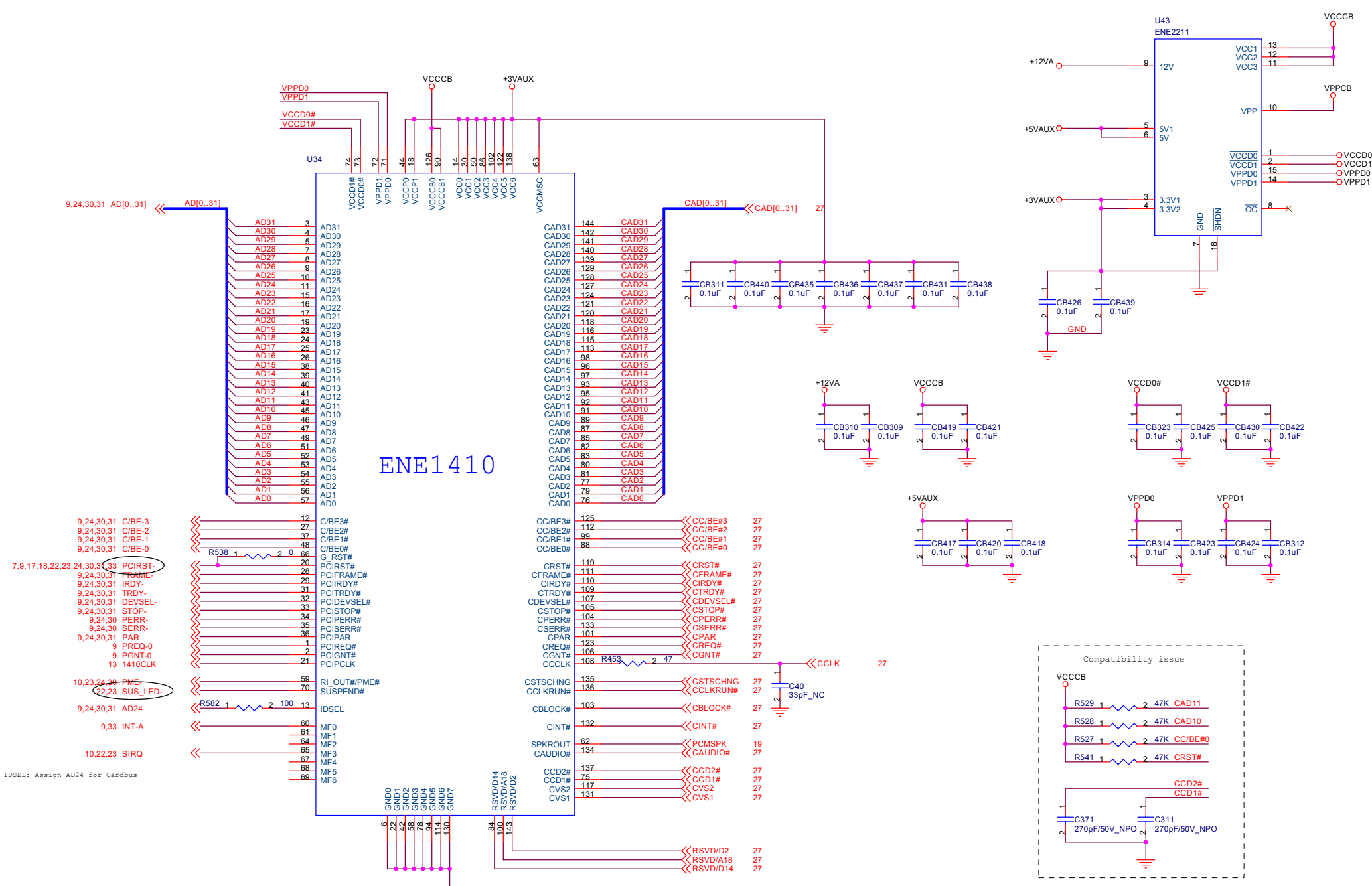




A5-stage  
To Double USB Connector



EliteGroup Computer System. (G900 M/B)		
Title	USB CONNECTOR	
Size	Document Number	Rev
B	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 25 of 39



# ENE1410

Compatibility issue

VCCCB

- R529 1 2 47K CAD11
- R528 1 2 47K CAD10
- R527 1 2 47K CC/BE#0
- R541 1 2 47K CRST#

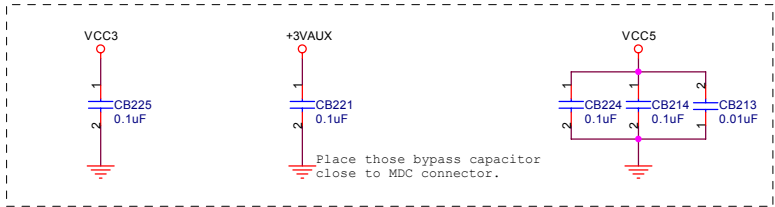
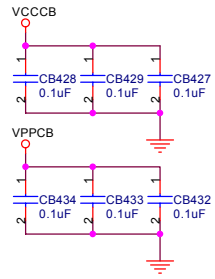
CCD2#

CCD1#

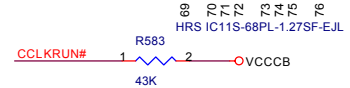
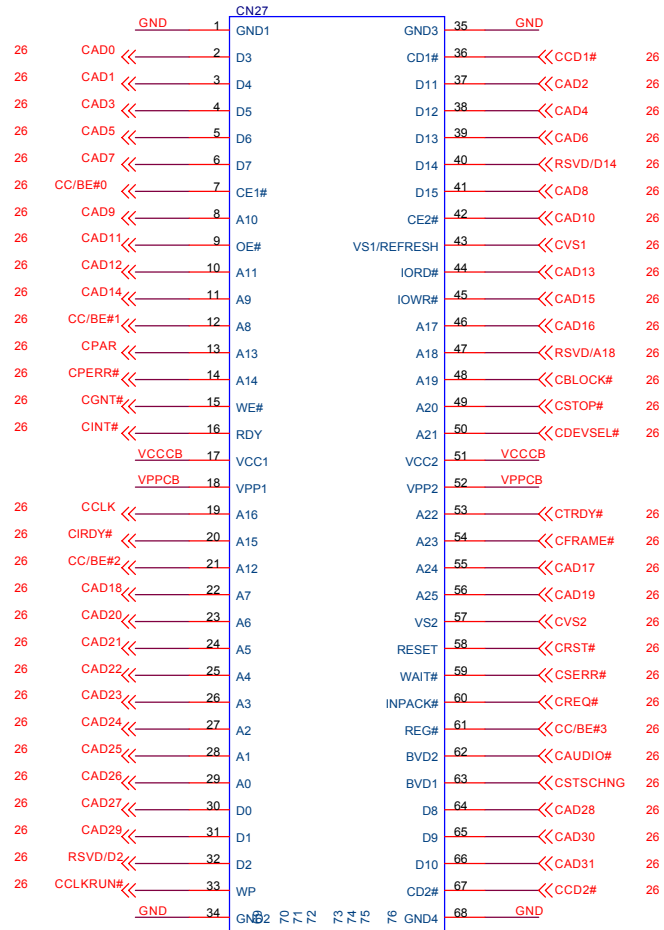
- C371 270pF/50V\_NPO
- C311 270pF/50V\_NPO

EliteGroup Computer System. (G900 M/B)		
Title		
ENE1410 CARDBUS		
Size	Document Number	Rev
A3	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 26 of 39

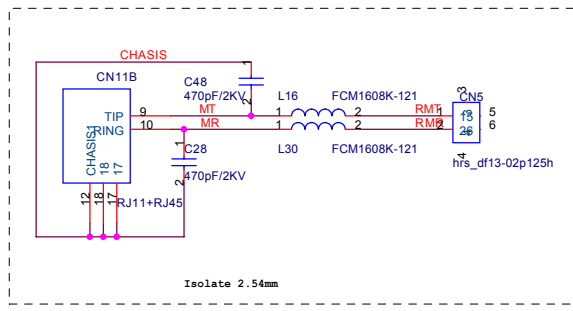
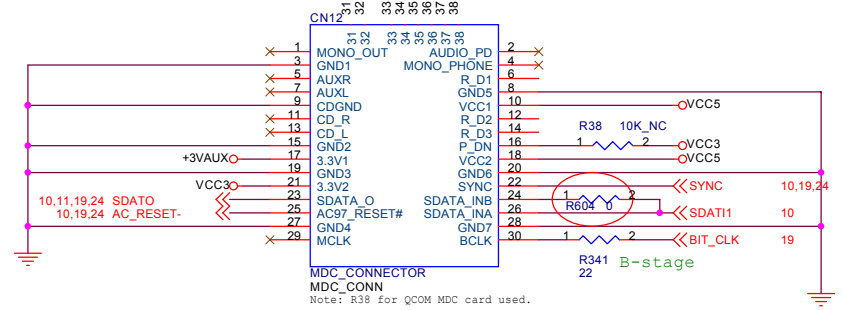
IDSEL: Assign AD24 for Carbus

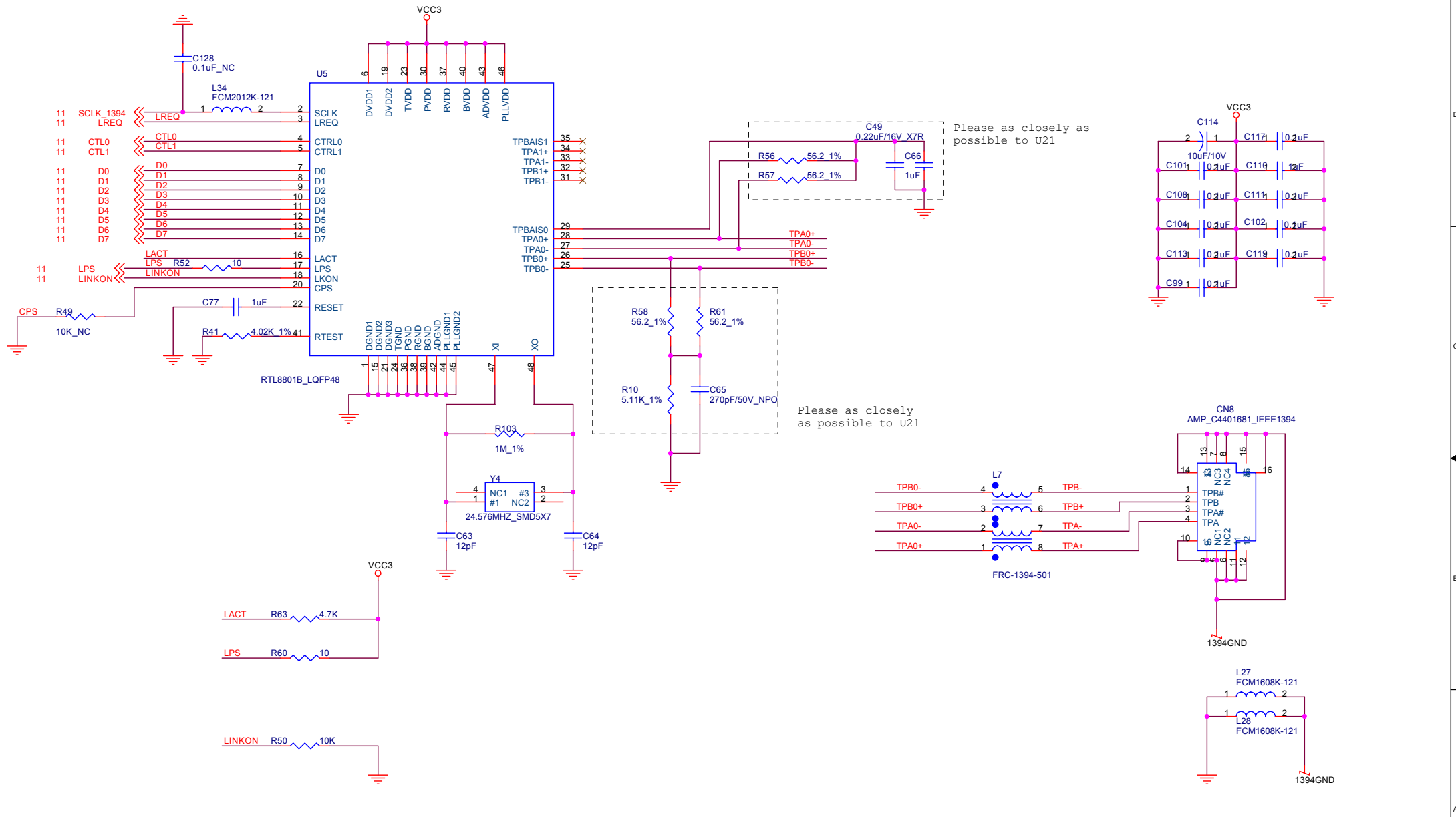


PCMCIA SLOT



Modem Daughter Card Connector



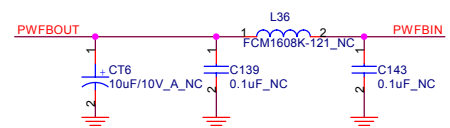
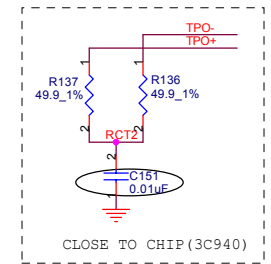
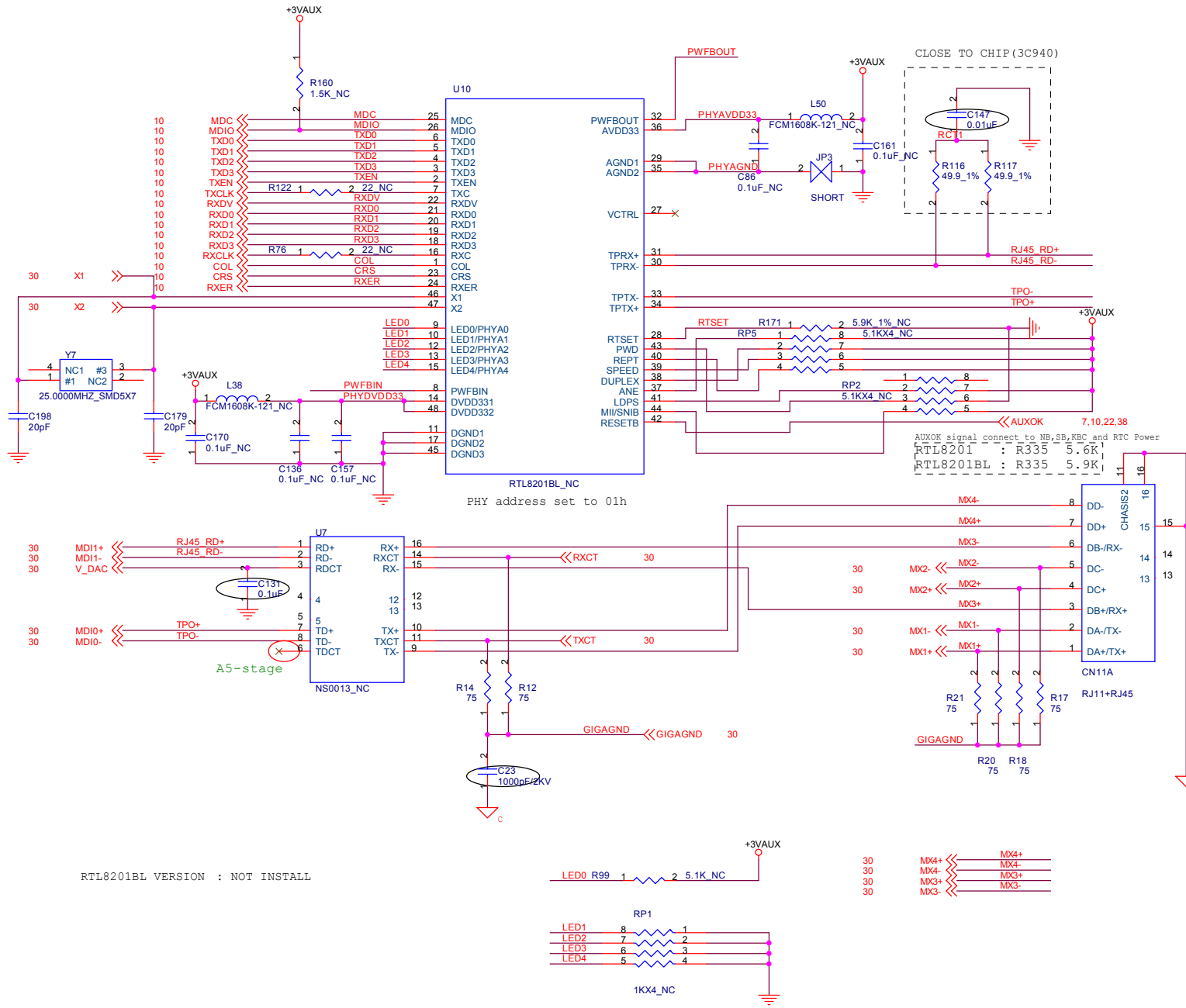


Please as closely as possible to U21

Please as closely as possible to U21

<b>EliteGroup Computer System. (G900 M/B)</b>		
Title REALTEK IEEE 1394 PHY		
Size B	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 28	of 39

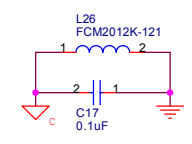
# RTL8201BL



Place CT25, C557, L51 close to PWFBOUT and place C558 close to PWFBIN

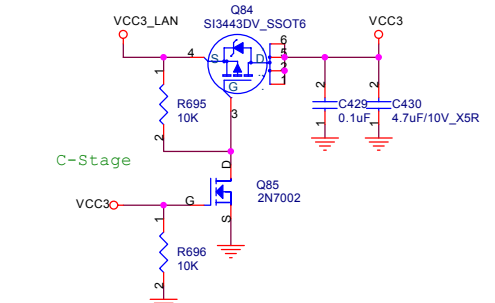
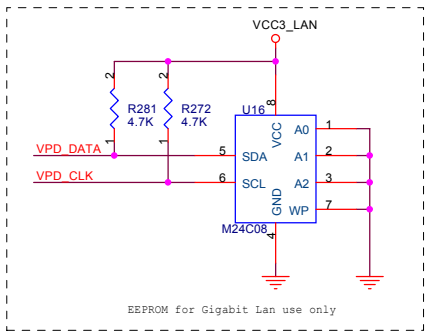
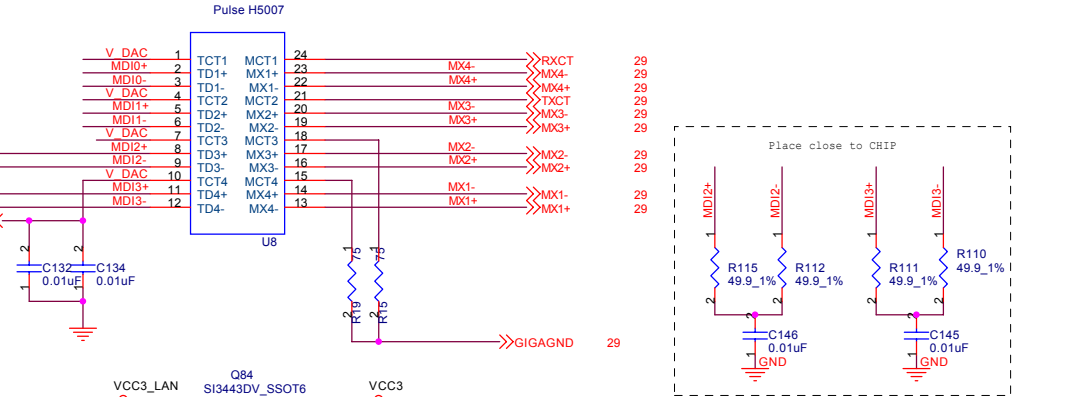
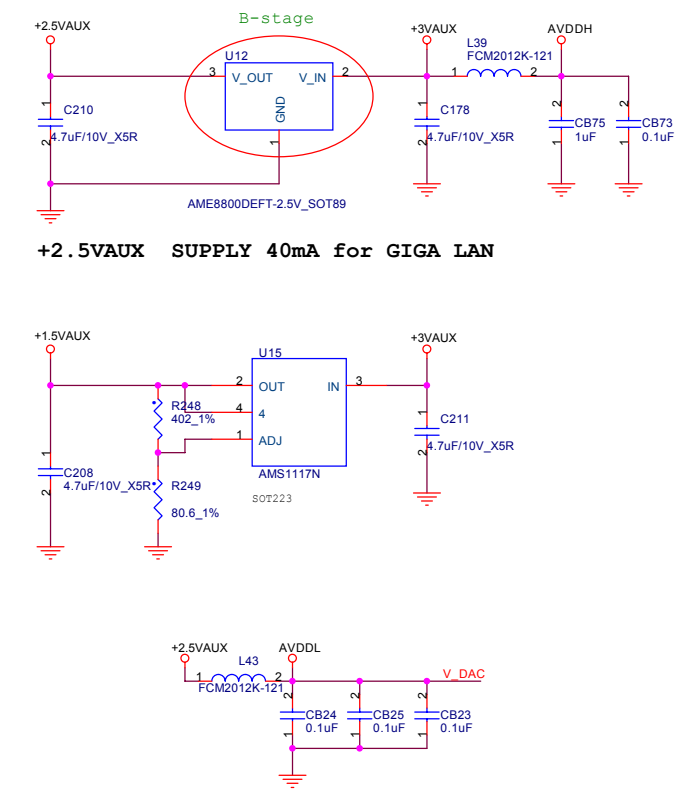
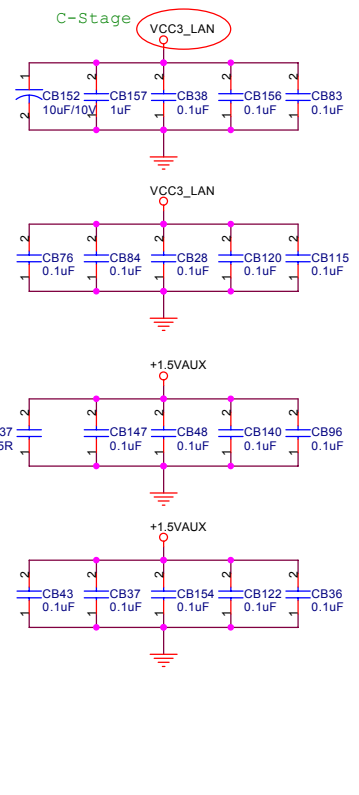
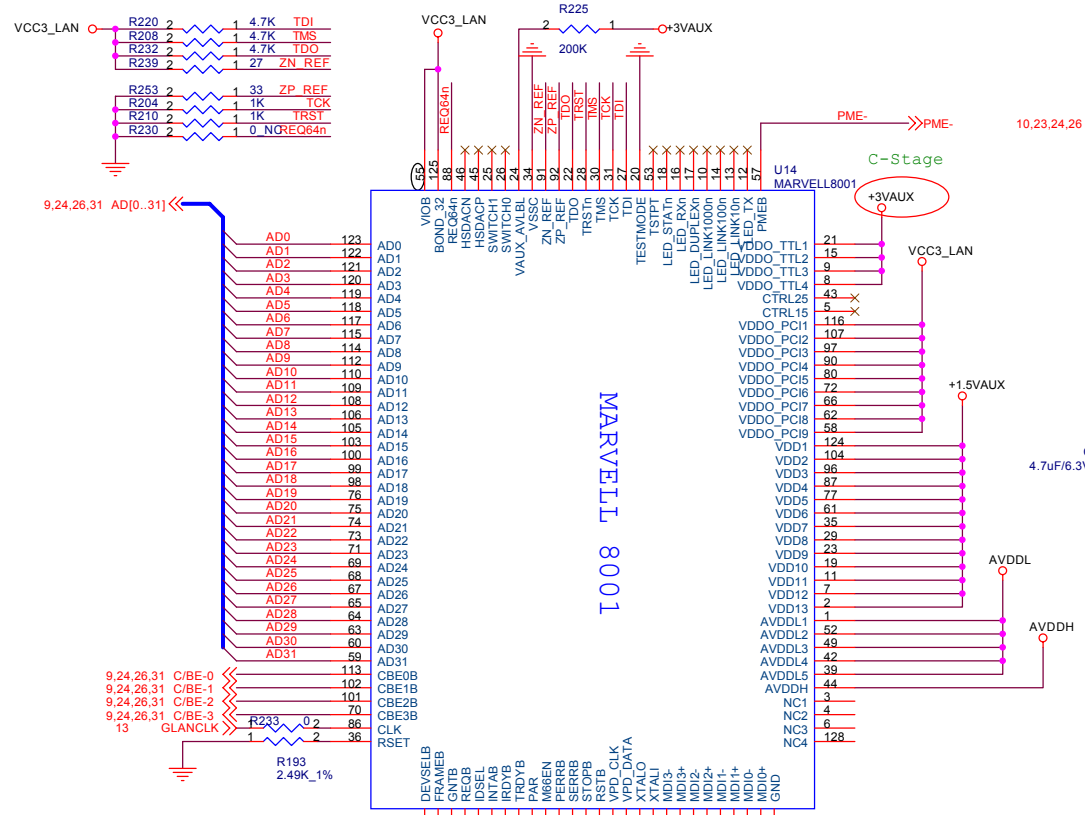
## Config:

Enable: N-way, Full duplex, 100Mbps, Link Down Power Saving  
 Disable: Isolate, Repeater Mode

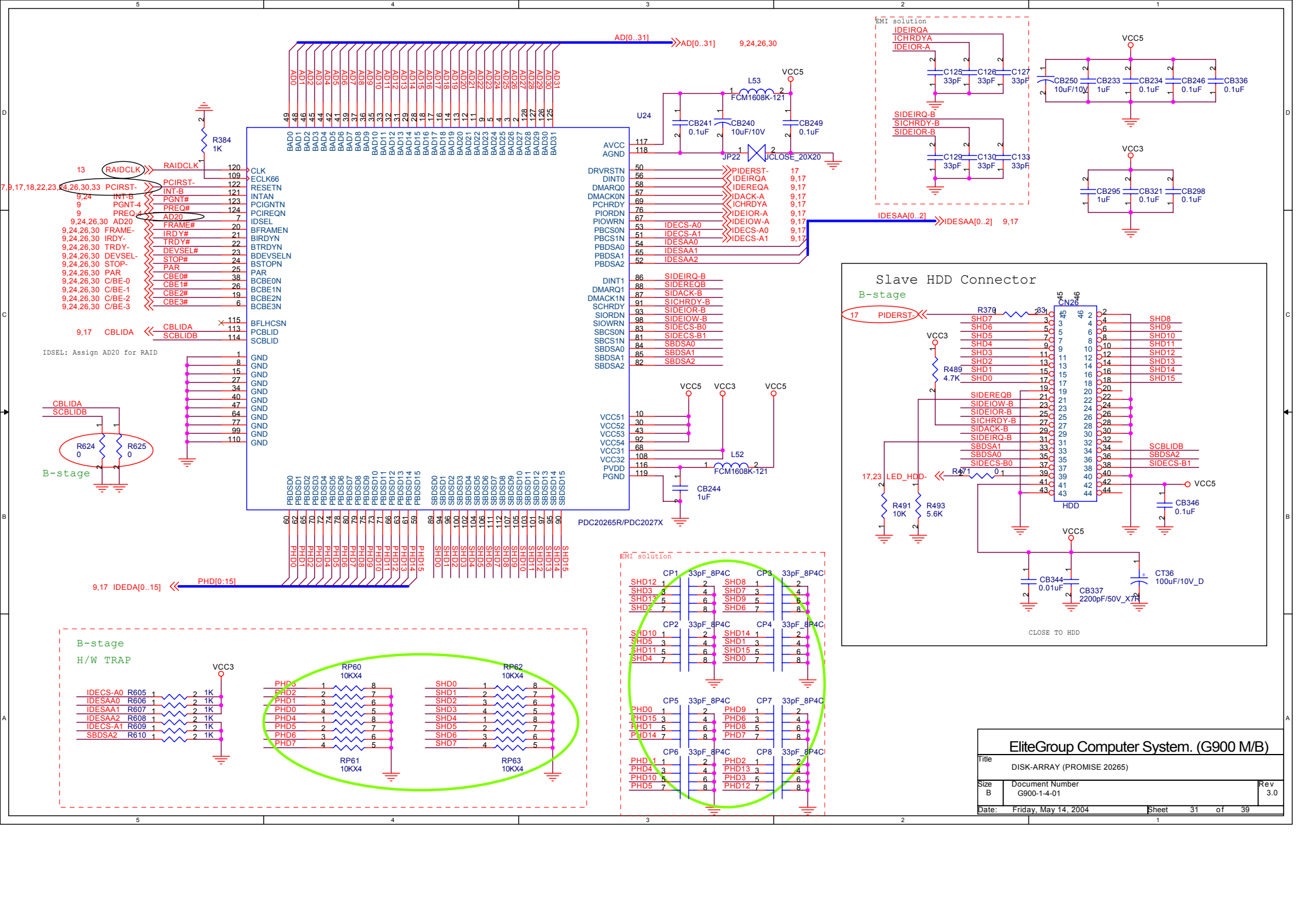


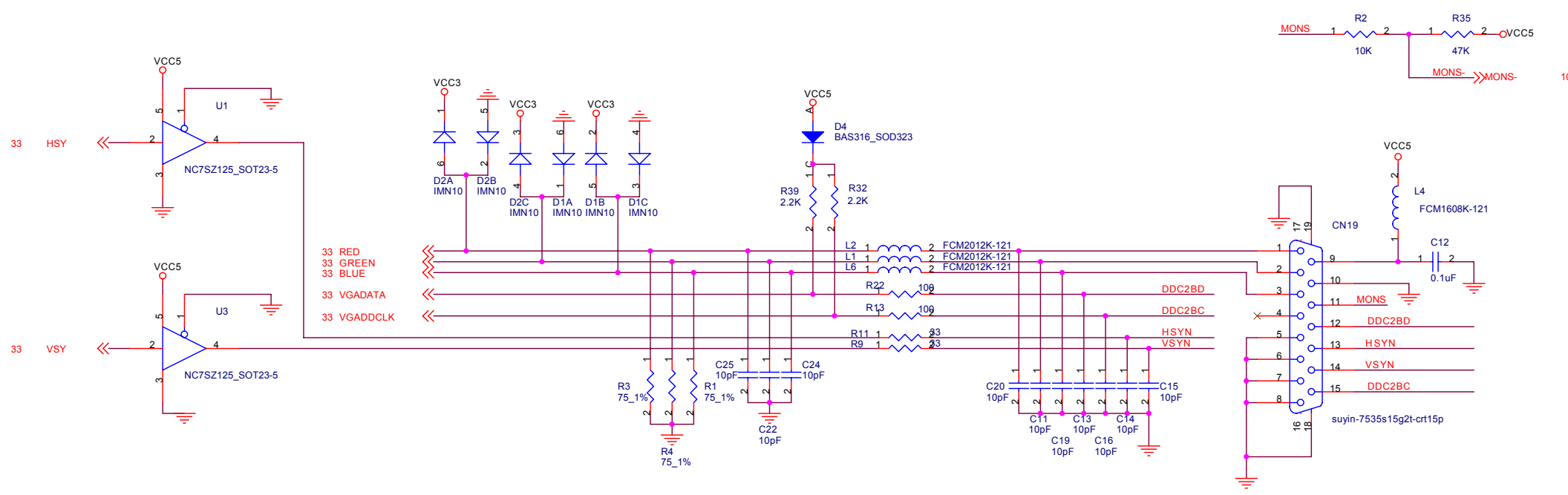
RTL8201BL VERSION : NOT INSTALL

EliteGroup Computer System. (G900 M/B)		
Title	REALTEK 8201BL LAN PHY	
Size	Document Number	Rev
A3	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 29 of 39



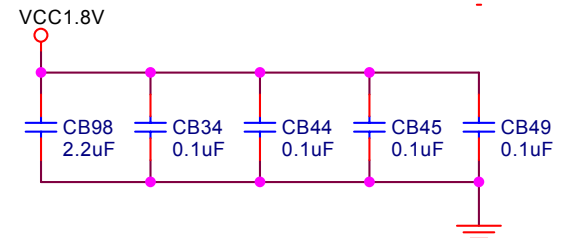
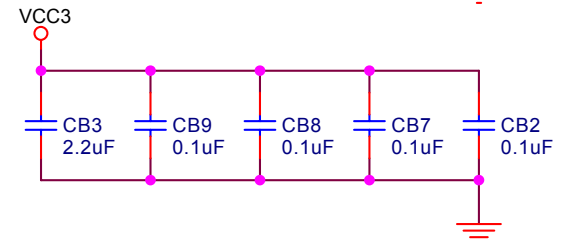
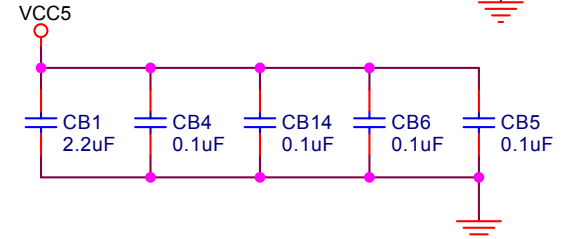
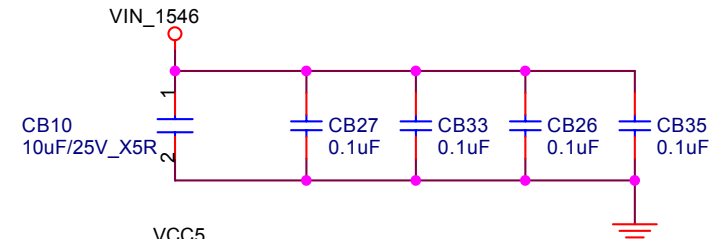
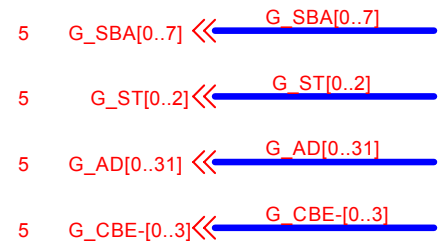
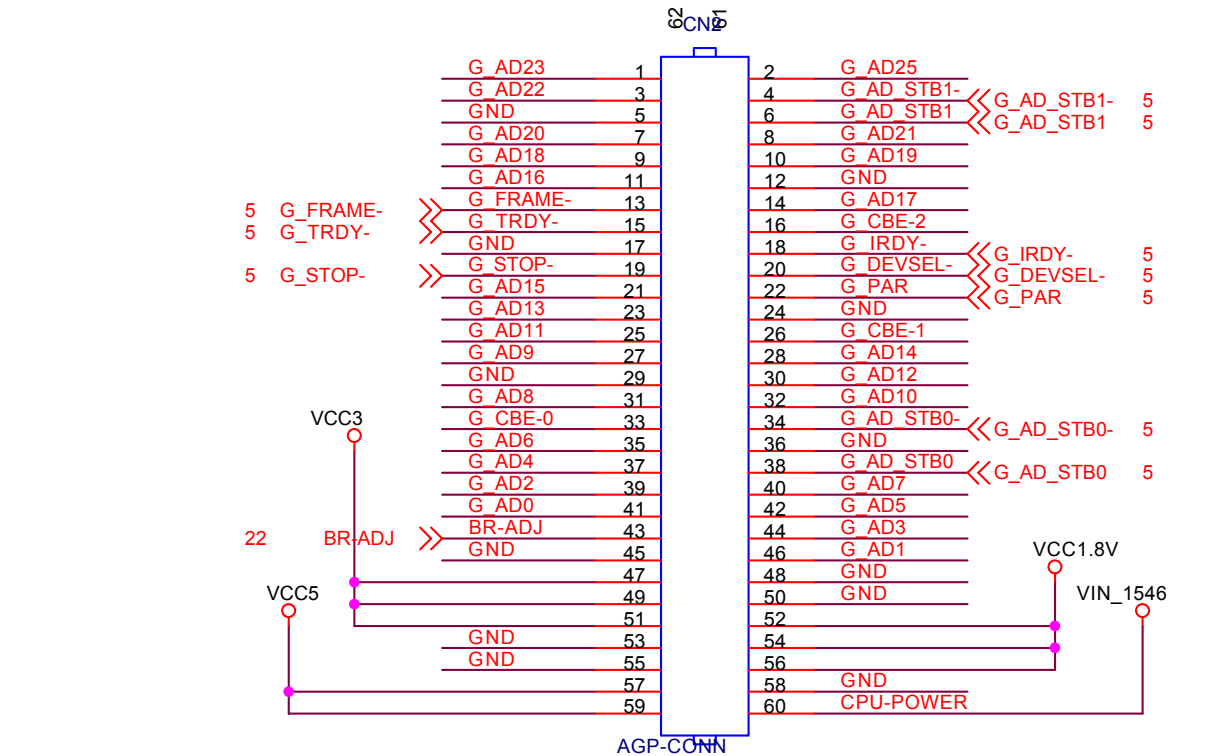
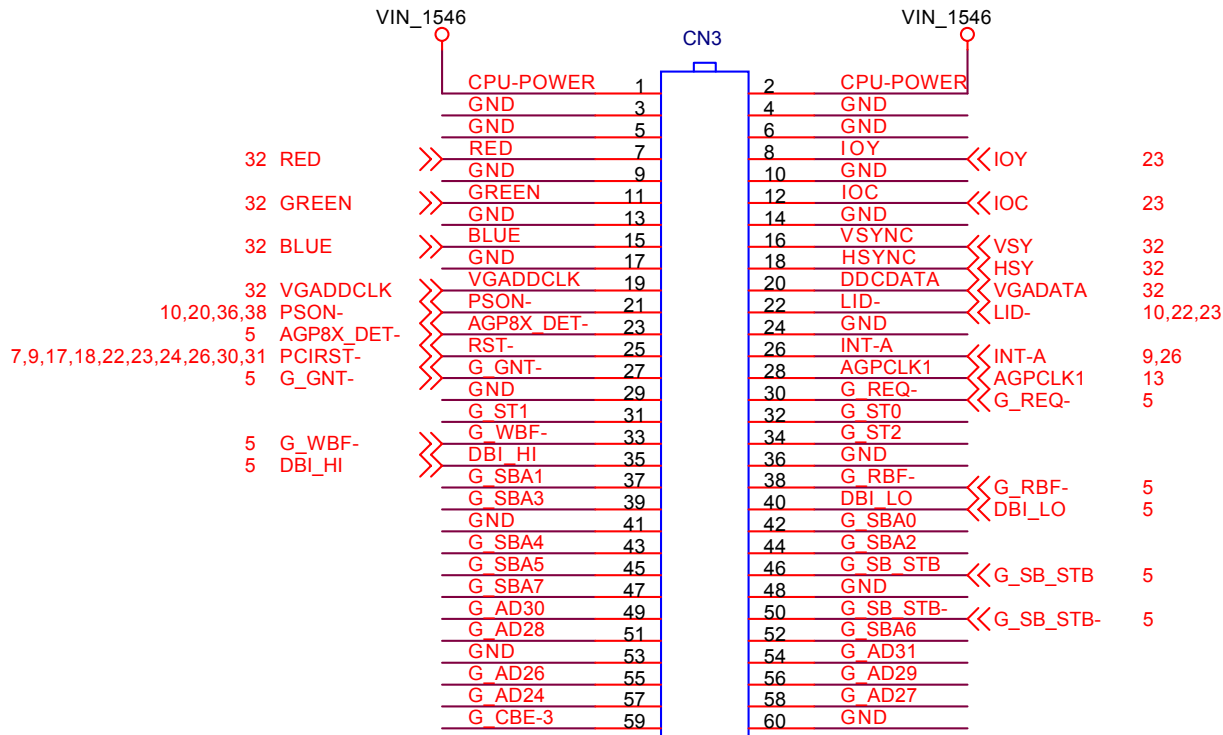
EliteGroup Computer System. (G900 M/B)		
Title	MARVELL 8001 GIGABIT LAN CONTROLLER	
Size	Document Number	Rev
A3	G900-1-4-01	3.0
Date:	Friday, May 14, 2004	Sheet 30 of 39





EliteGroup Computer System. (G900 M/B)		
Title CRT and PRINT PORT CONN		
Size B	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 32 of 39	

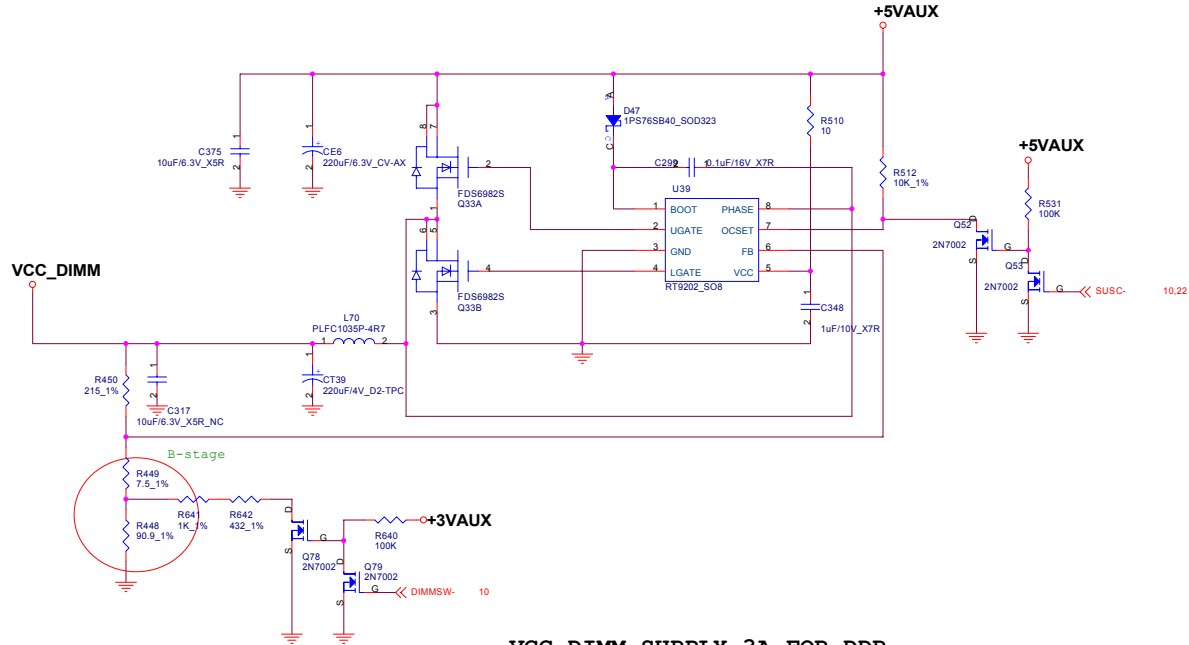




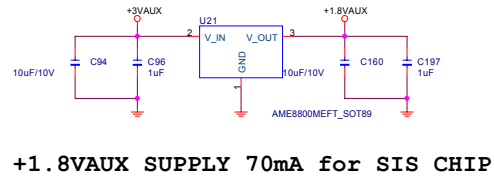
<b>EliteGroup Computer System. (G900 M/B)</b>		
Title VGA M10 CONN.		
Size A	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 33	of 39



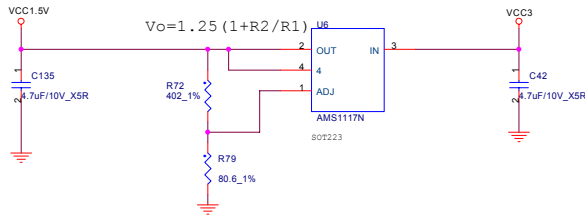




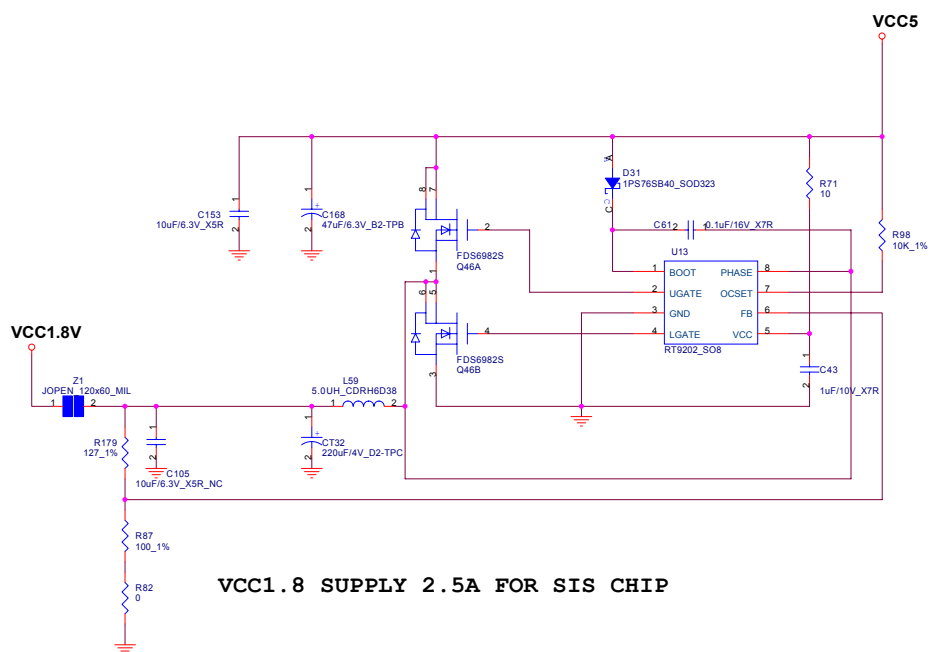
VCC\_DIMM SUPPLY 3A FOR DDR



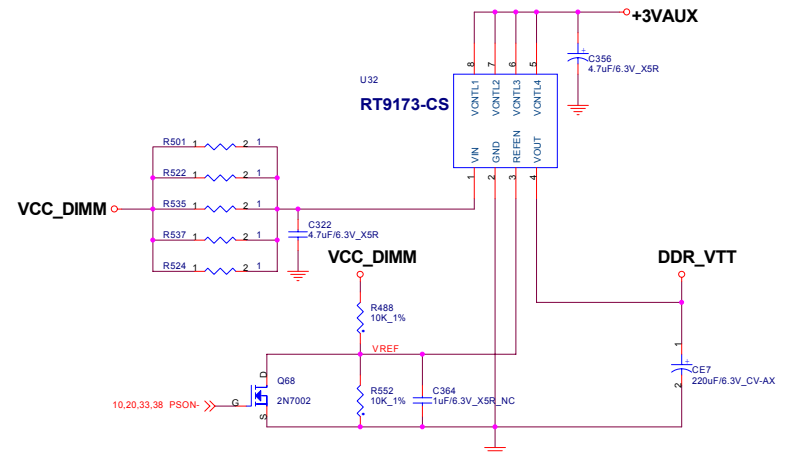
+1.8VAUX SUPPLY 70mA for SIS CHIP



VCC1.5 SUPPLY 200mA for 648 CHIP

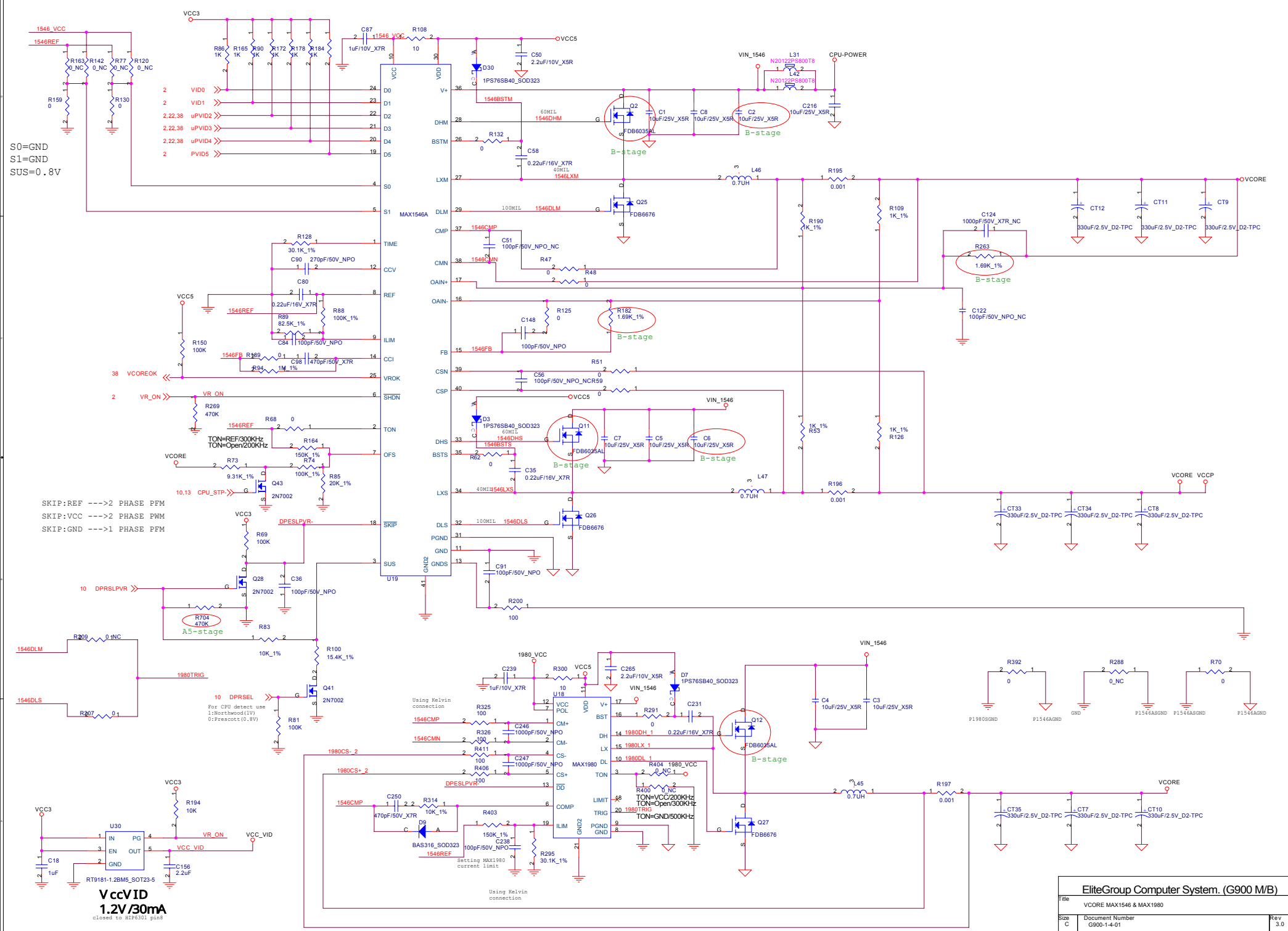


VCC1.8 SUPPLY 2.5A FOR SIS CHIP

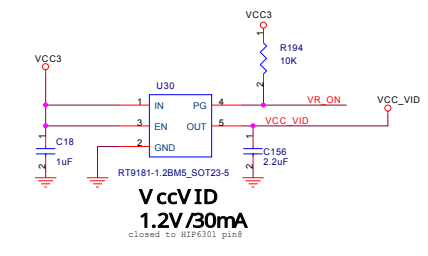


VTT1.25V for DDR

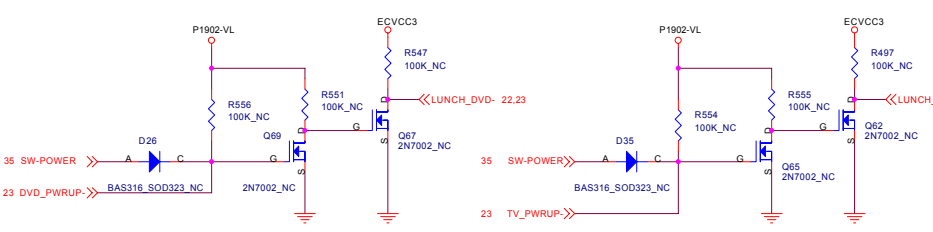
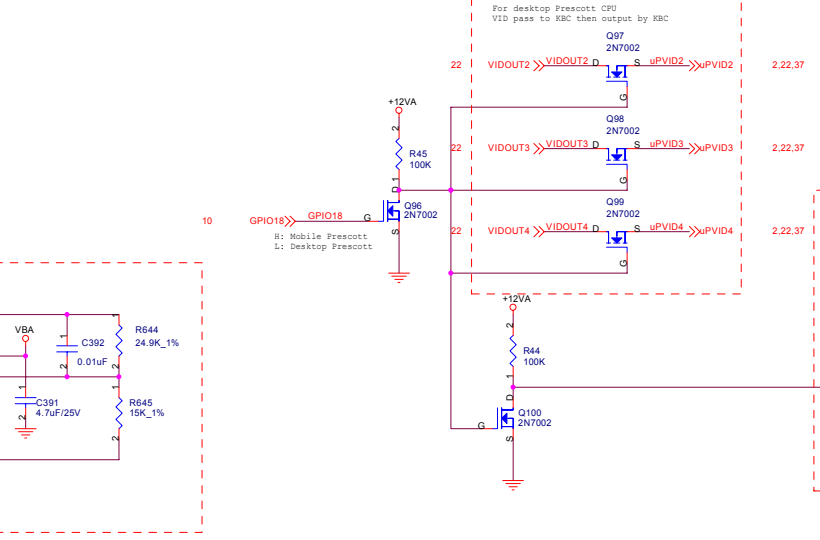
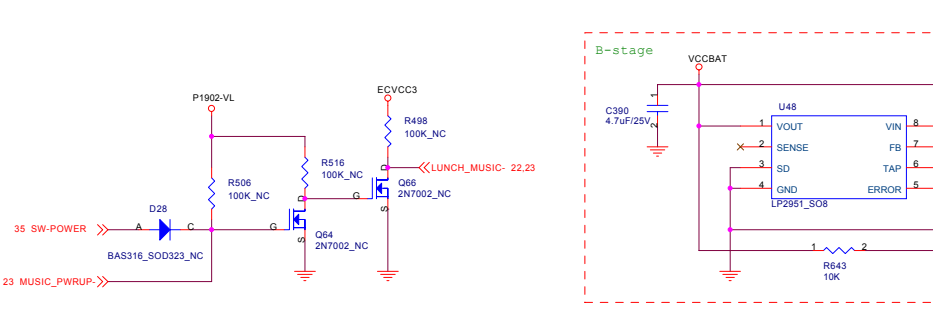
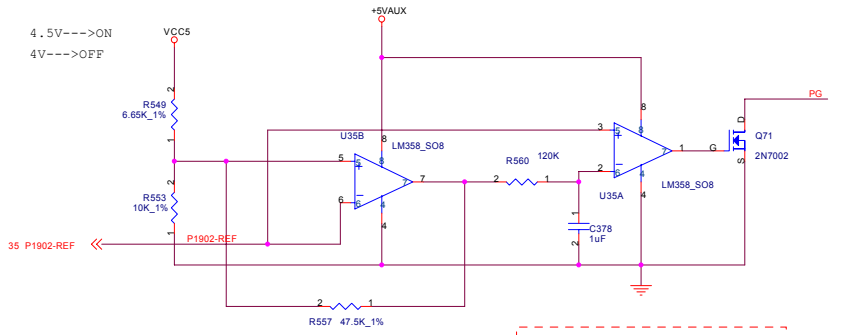
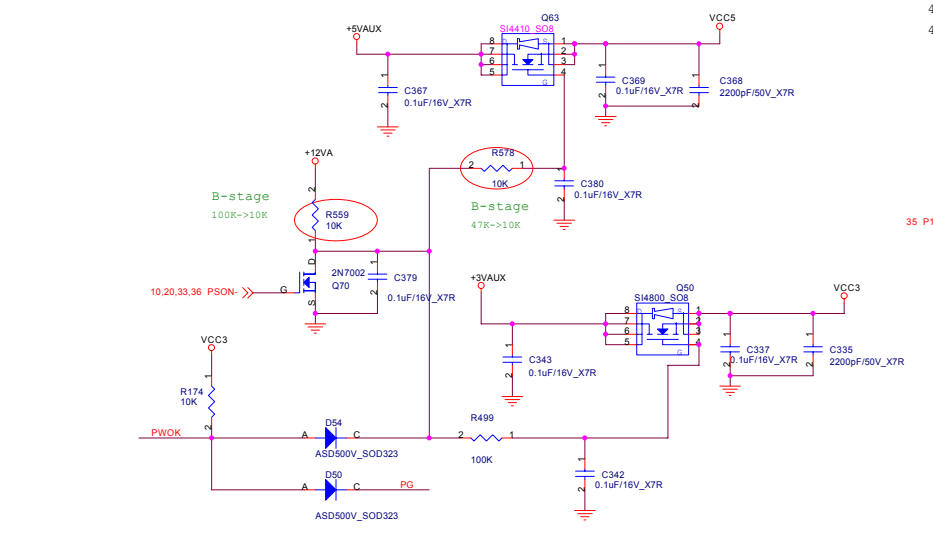
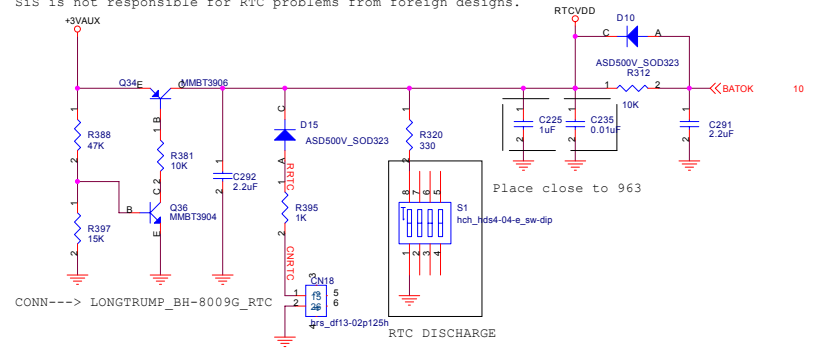
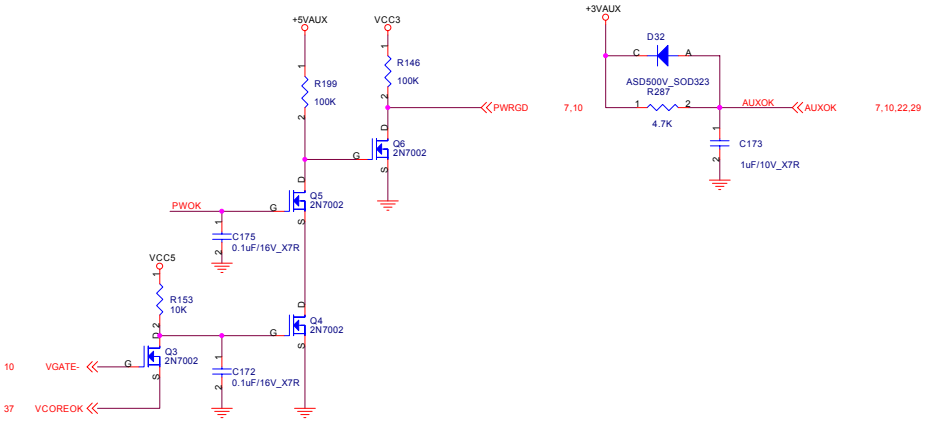
S0=GND  
S1=GND  
SUS=0.8V



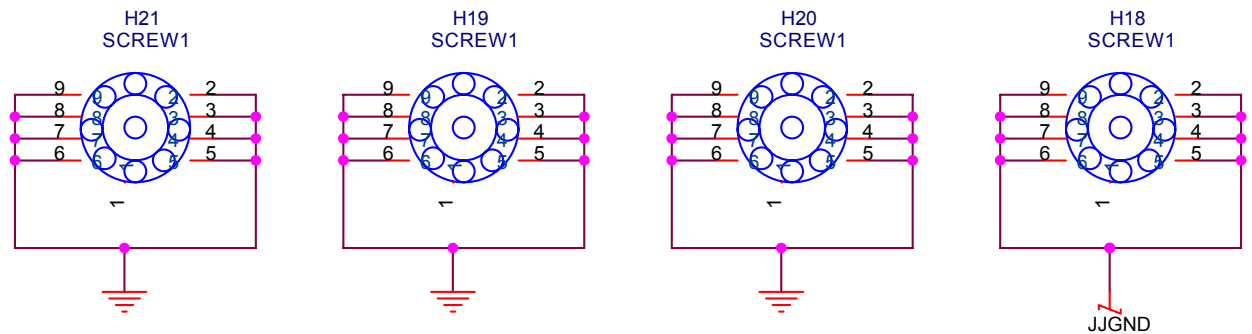
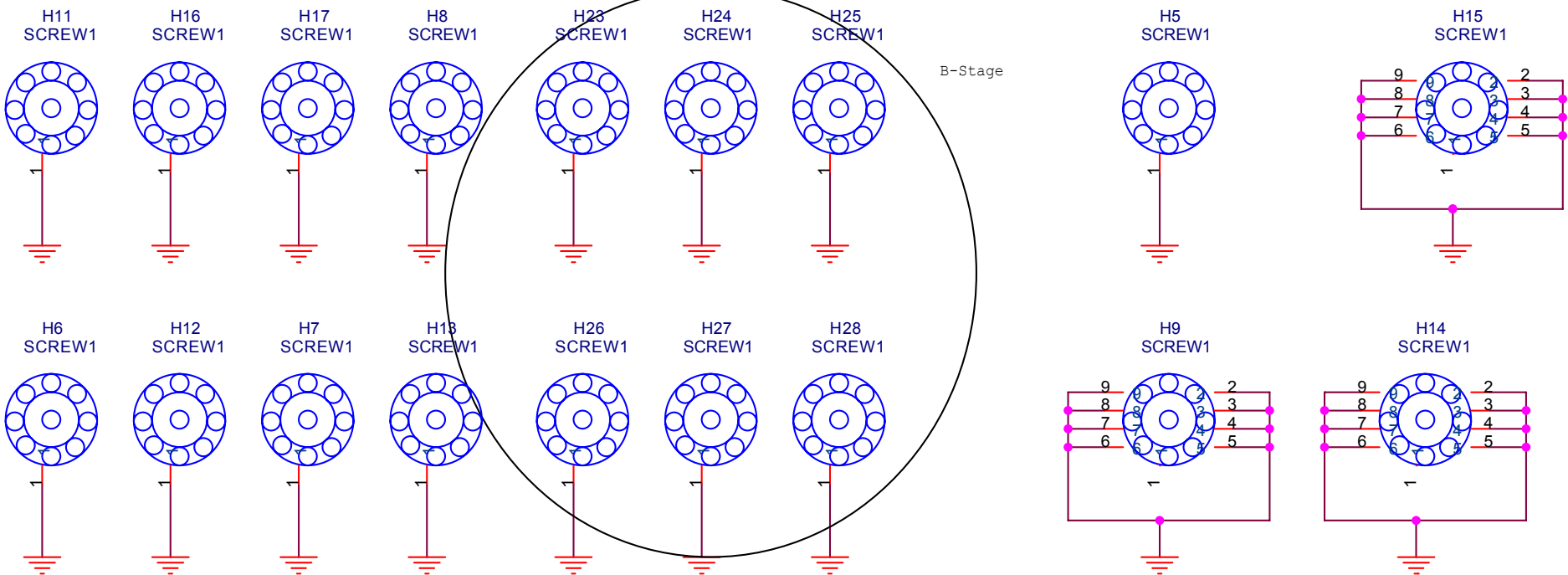
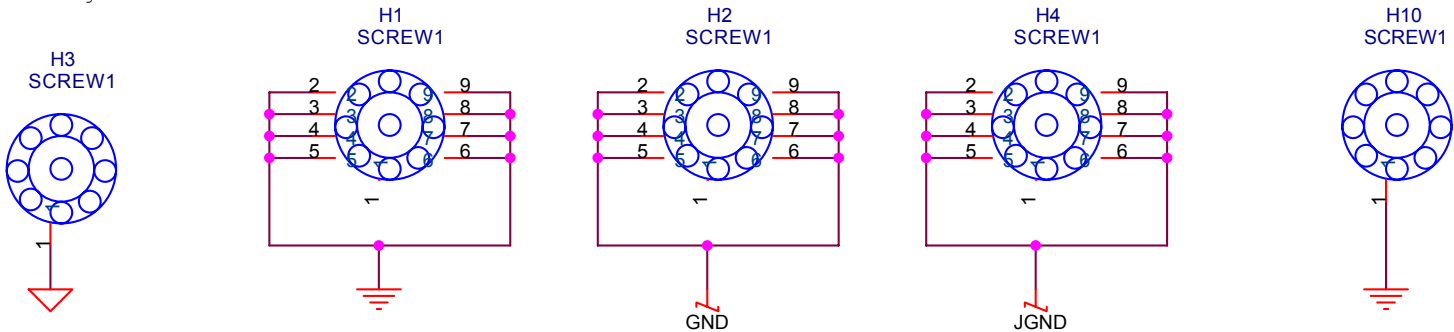
SKIP:REF --->2 PHASE PFM  
SKIP:VCC --->2 PHASE PWM  
SKIP:GND --->1 PHASE PFM



NOTE!  
 1.The RTCVDD is 3V  
 2.RTC circuit must strictly follow Sis's recommended design.  
 SIS is not responsible for RTC problems from foreign designs.



B-Stage



EliteGroup Computer System. (G900 M/B)		
Title HOLES		
Size A	Document Number G900-1-4-01	Rev 3.0
Date: Friday, May 14, 2004	Sheet 39	of 39