

845GV-M3

Schematics Version History Table :

Circuit Ver.	PCB Ver.	Total Page	Modificatory Page	Date
A		29		05/21'2004
1.0		29		06/28'2004

\*\* Seeing the version history in last pages.

Page Title of Schematic :

Title	Page	Title	Page
Cover Sheet	1		
System Block Diagram	2		
P4 478P Part A	3		
P4 478P Part B	4		
P4 478P Part C	5		
Clock Generator	6		
I845G(GMCH)Part I	7		
I845G(GMCH)Part II	8		
I845G(GMCH)Part III	9		
DDIMM 1&2 ( DDR SDRAMs )	10		
DDR Serial Resistors	11		
DDR SSTL-2 Terminations	12		
DDR Power-BLANK	13		
AGP Express	14		
ICH4 Part I	15		
ICH4 Part II	16		
ICH4 Part III	17		
USB/FWH	18		
I/O Ports	19		
H/W Monitor	20		
IDE Connector	21		
AC97 Codec	22		
LPC_FDD/KB/M	23		
Audio Interface	24		
ATX Power & Front Panel	25		
LAN/CNR	26		
Vcore DC-DC	27		
MIS DC-DC	28		
PCI Slots	29		
VT6306(1394)-BLANK	30		

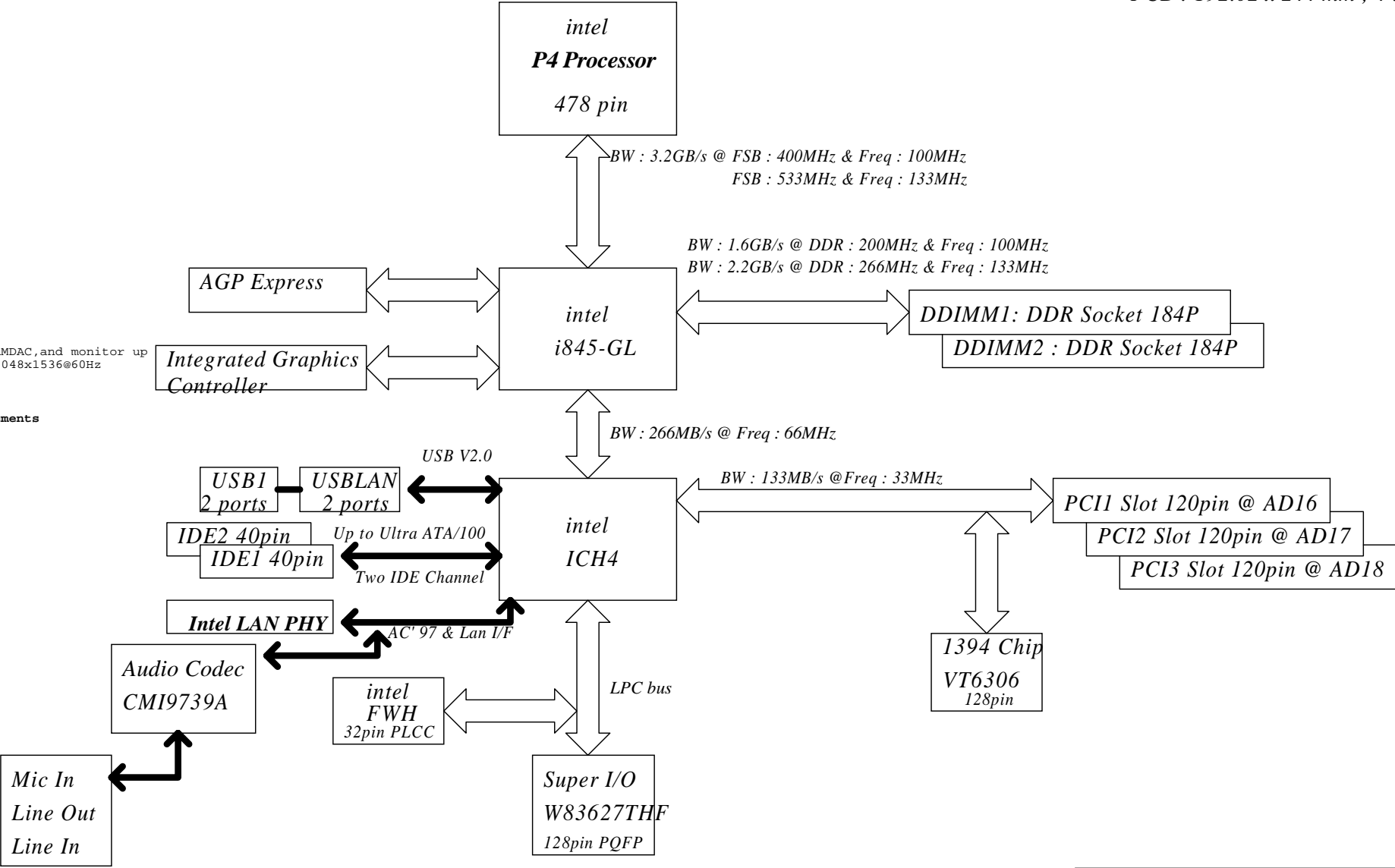
PCB:15-???-??????  
BOM:89-???-??????

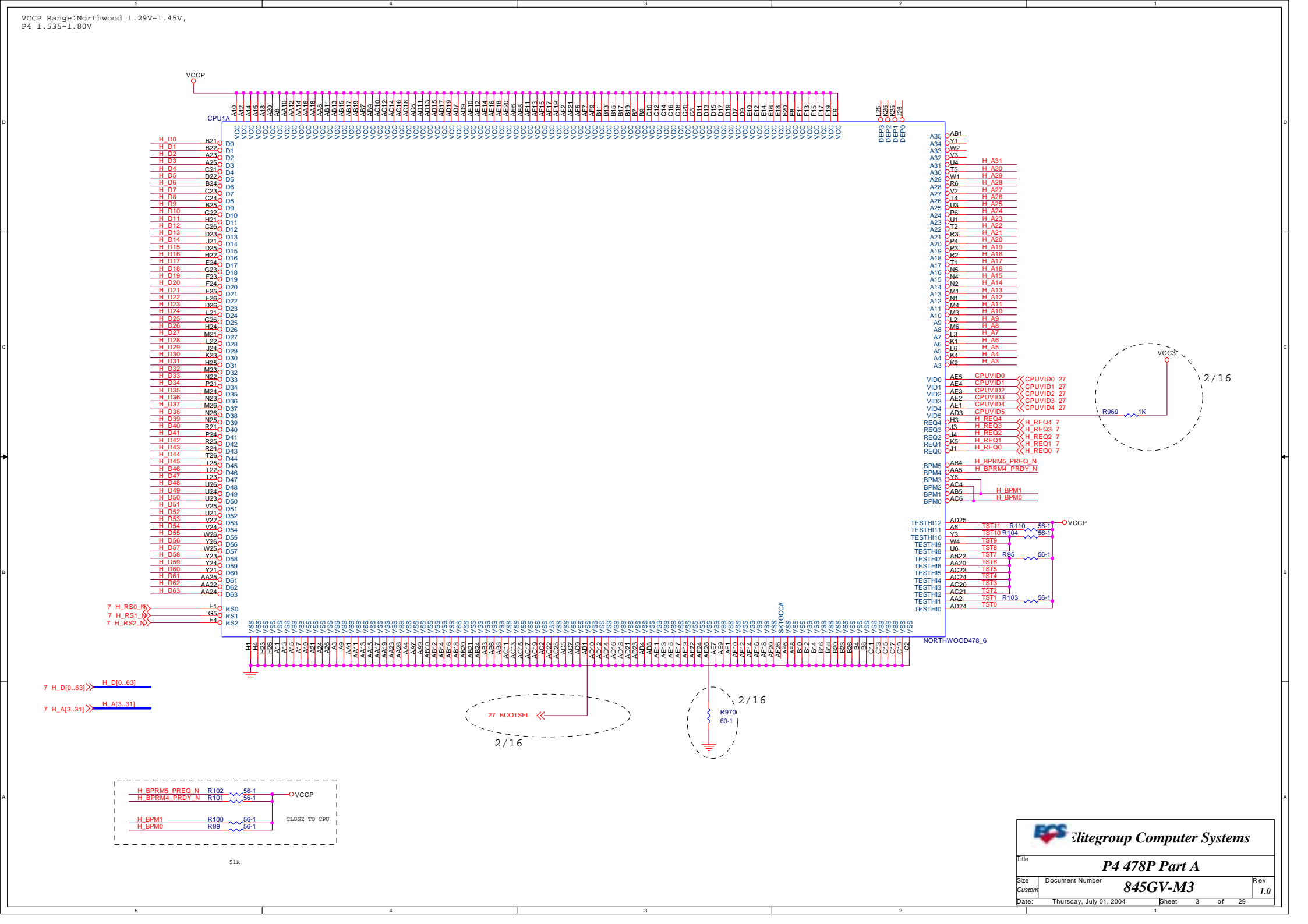
Job	Signature	Date
Schematics Designer		
Layout Company		
Approval		

Integrated 350MHz RAMDAC, and monitor up to a resolution of 2048x1536@60Hz

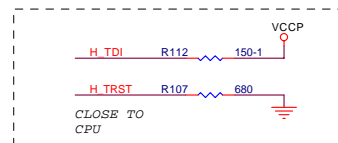
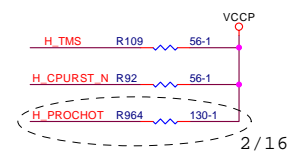
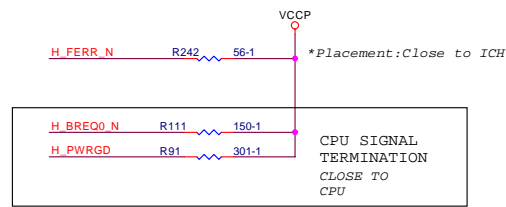
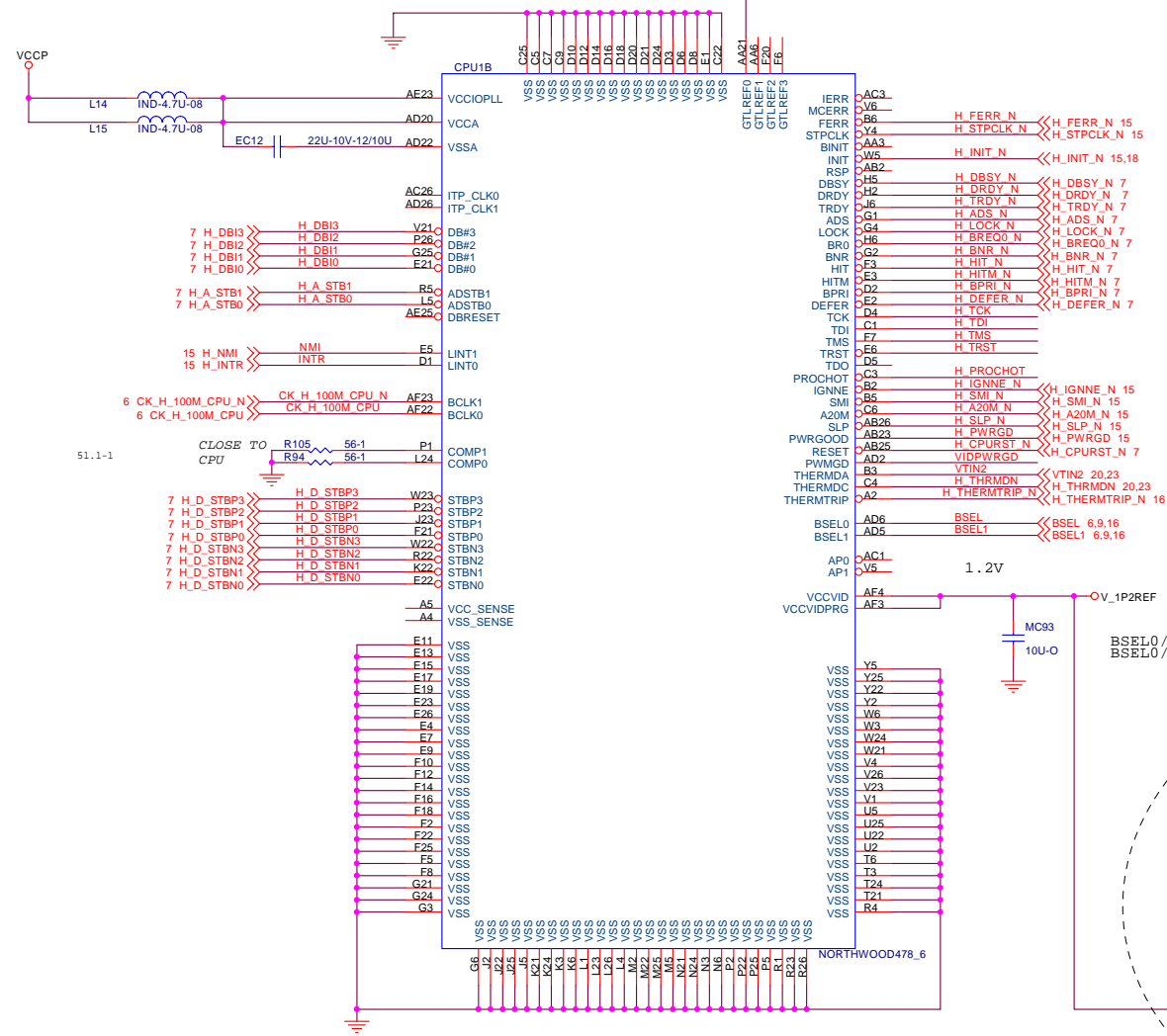
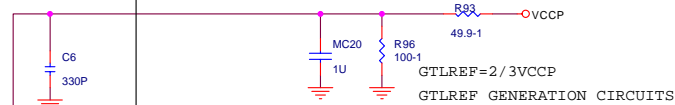
ICH4 Current Requirements

- VCC1.5 = 1060 mA
- VCC3 = 610 mA
- VCCHI(1.5) = 90 mA
- VCC1.5Sus = 85 mA
- VCC3Sus = 70 mA
- VCC3RTC = 5 uA in G3

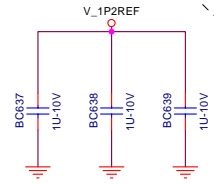
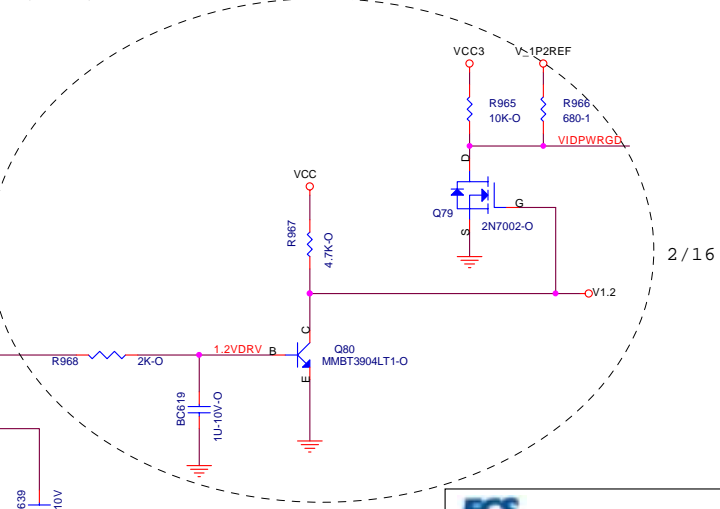


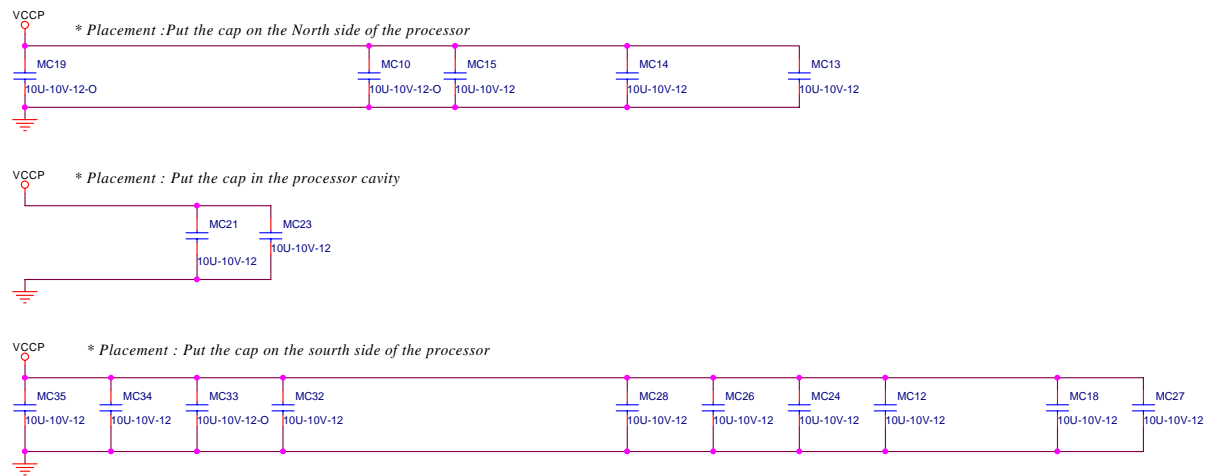


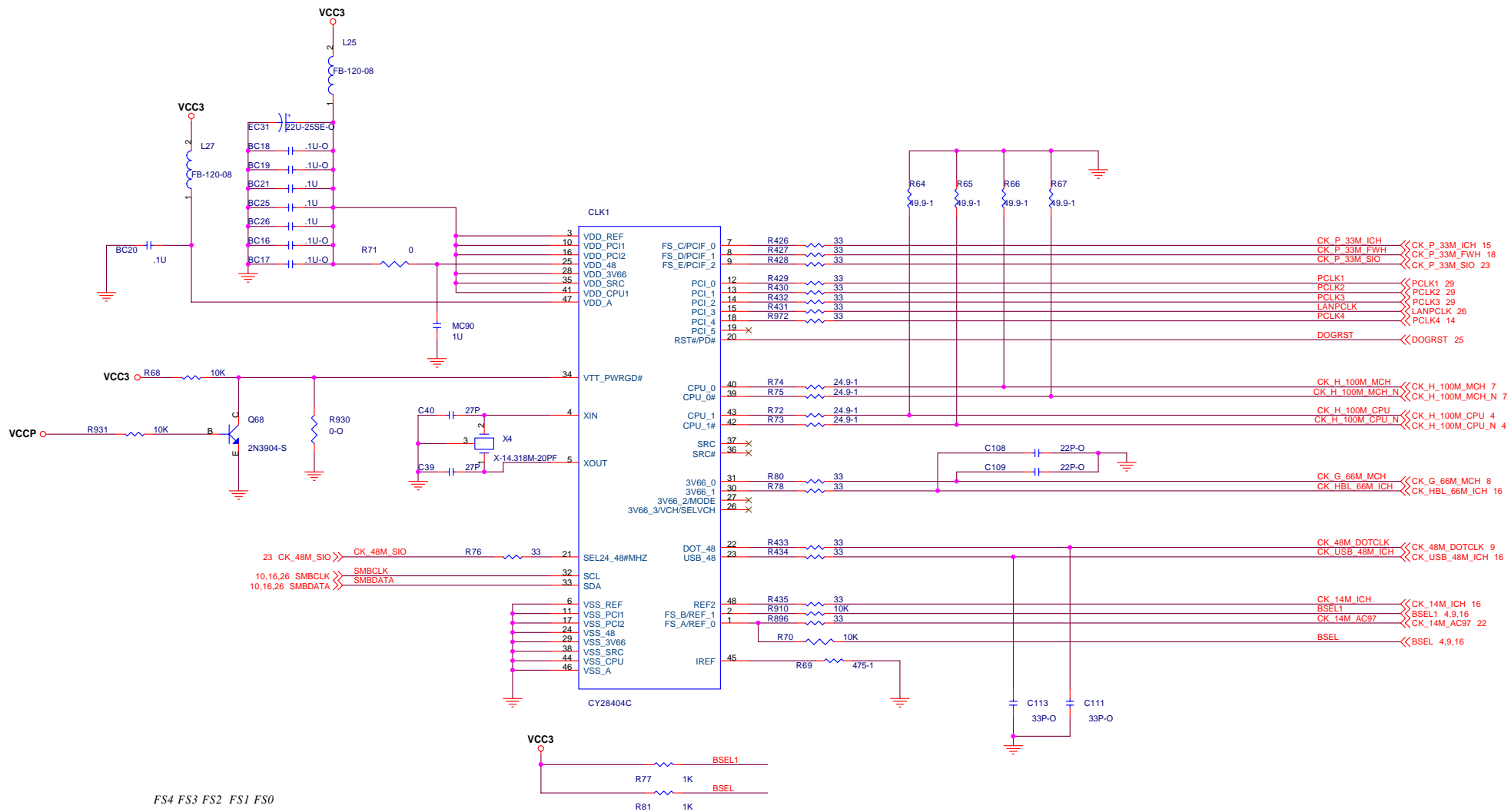
Place Inside  
CPU Cavity

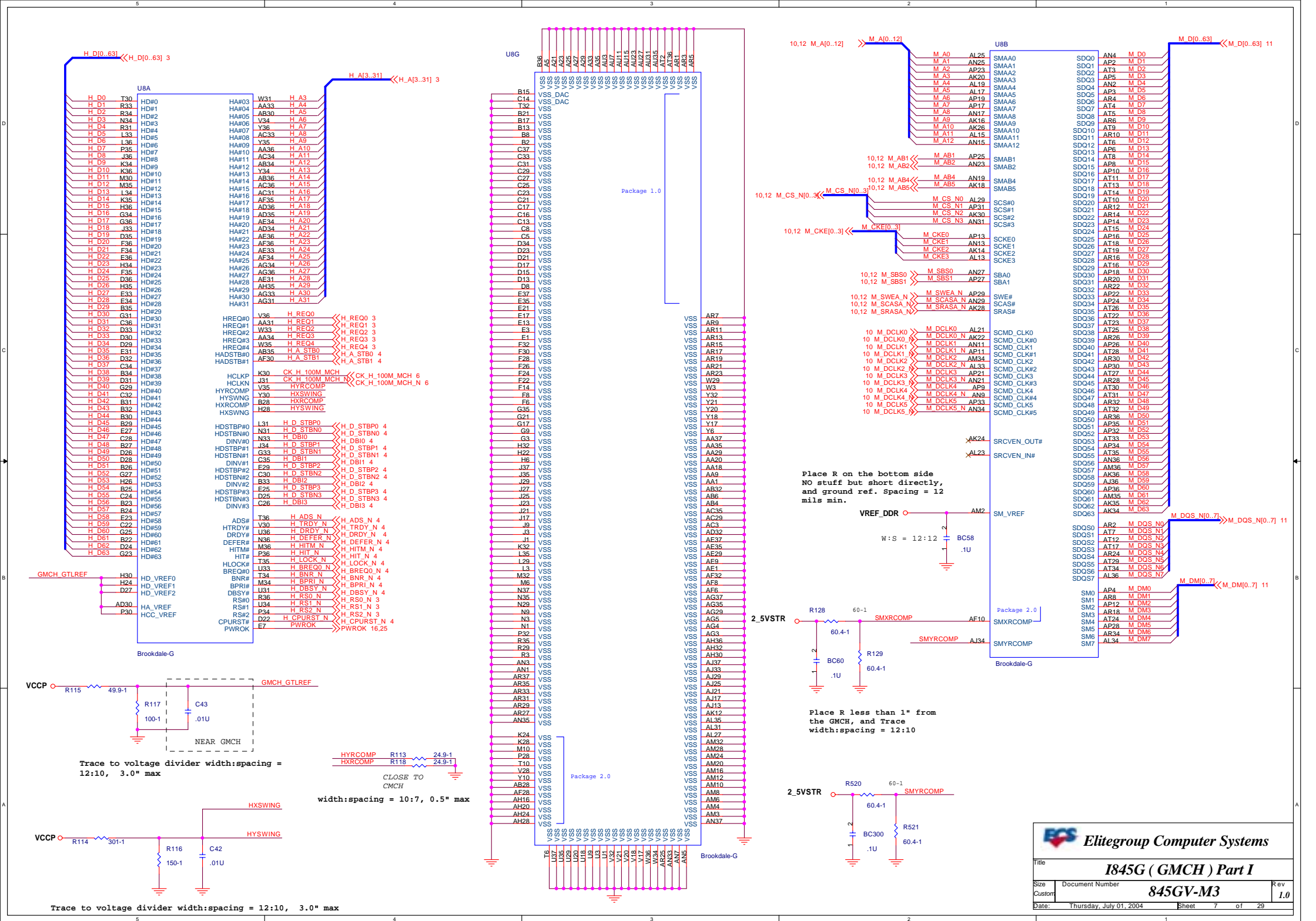


BSEL0/1 = 0/0 = 100MHZ  
BSEL0/1 = 1/0 = 133MHZ



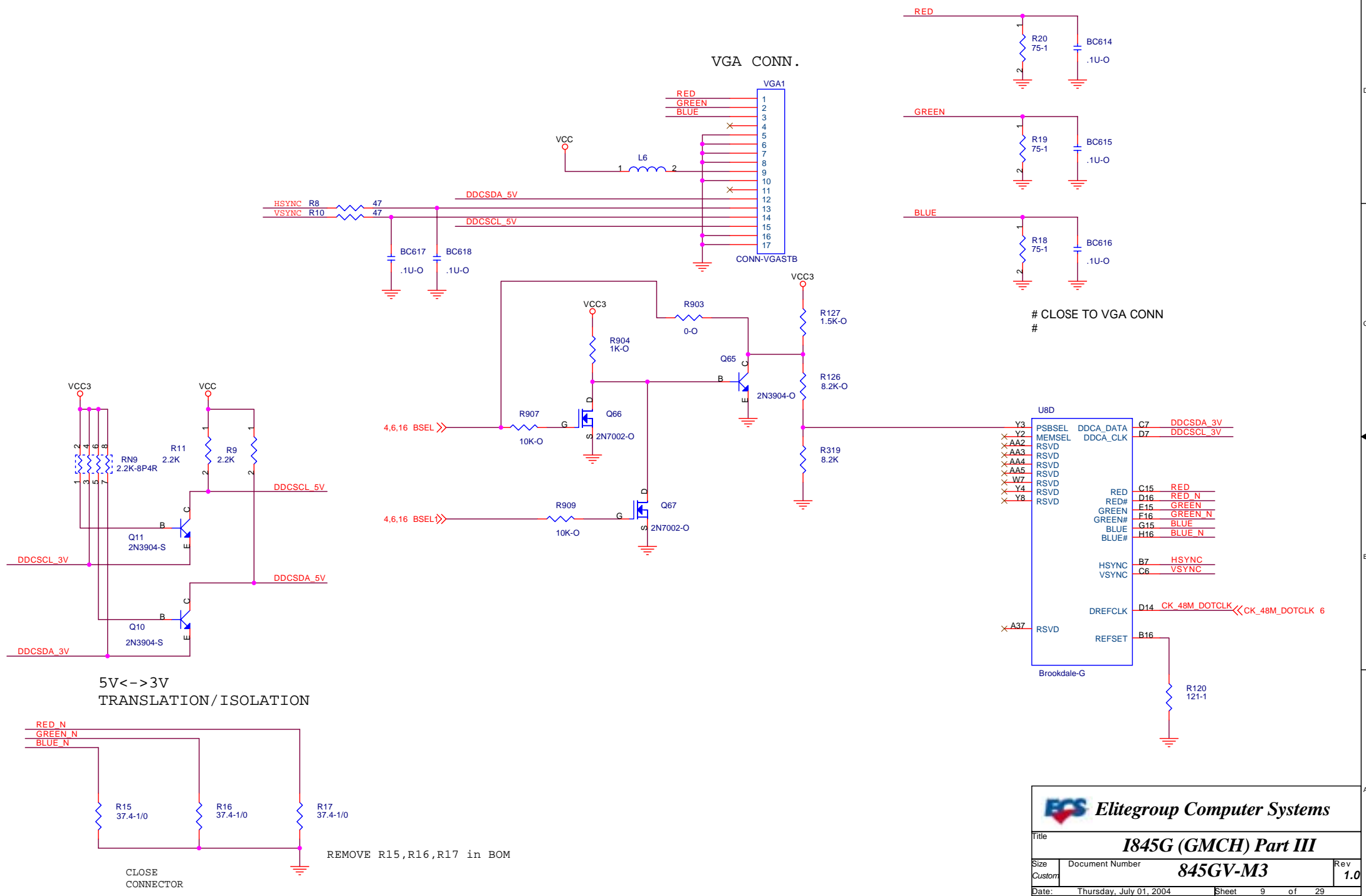


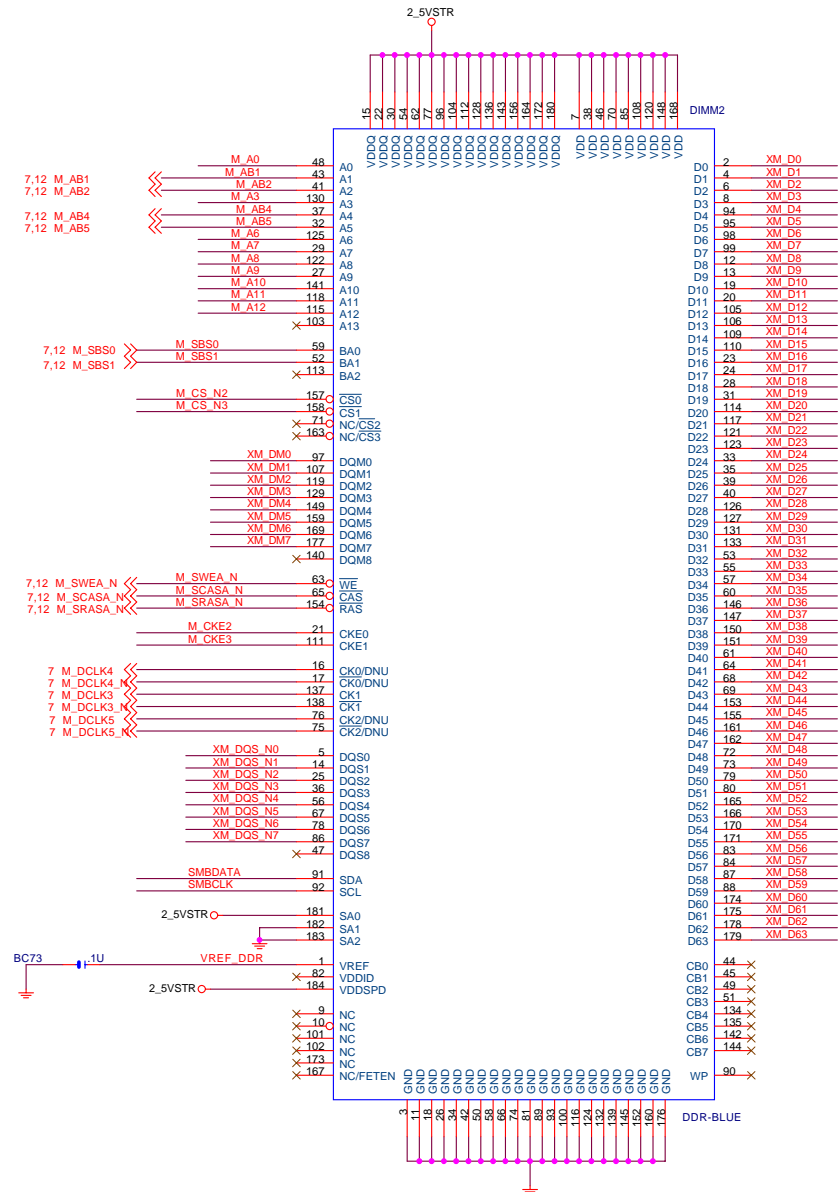
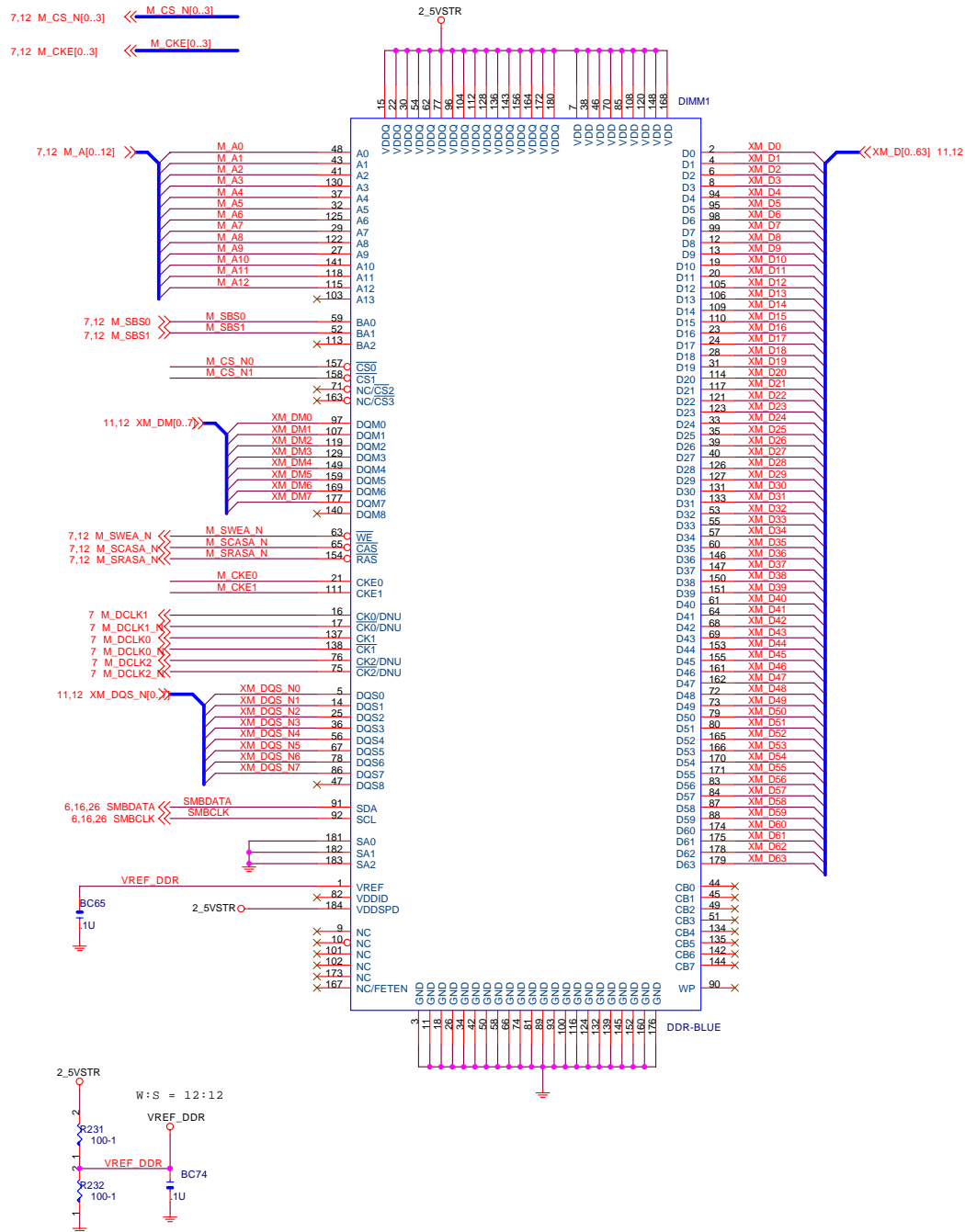


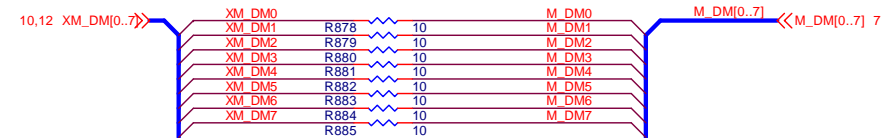
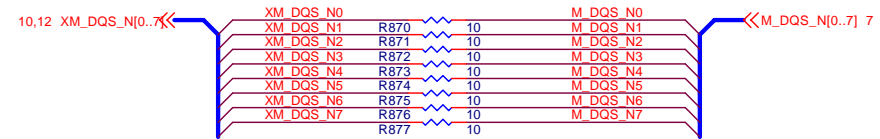
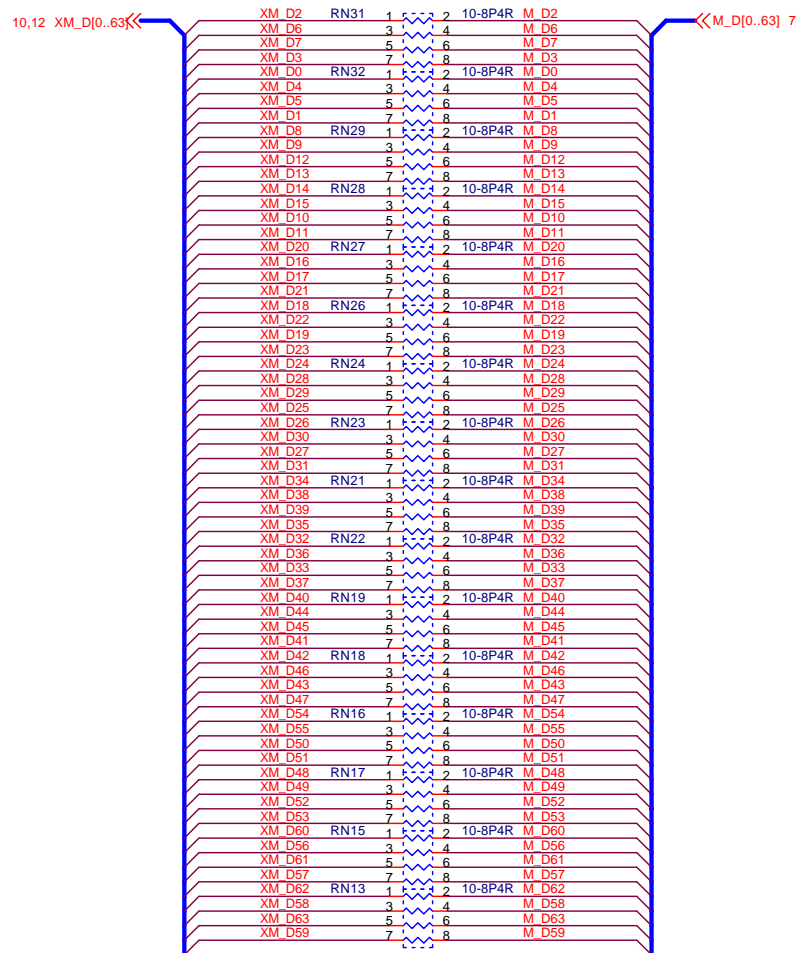


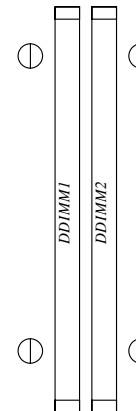
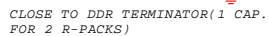




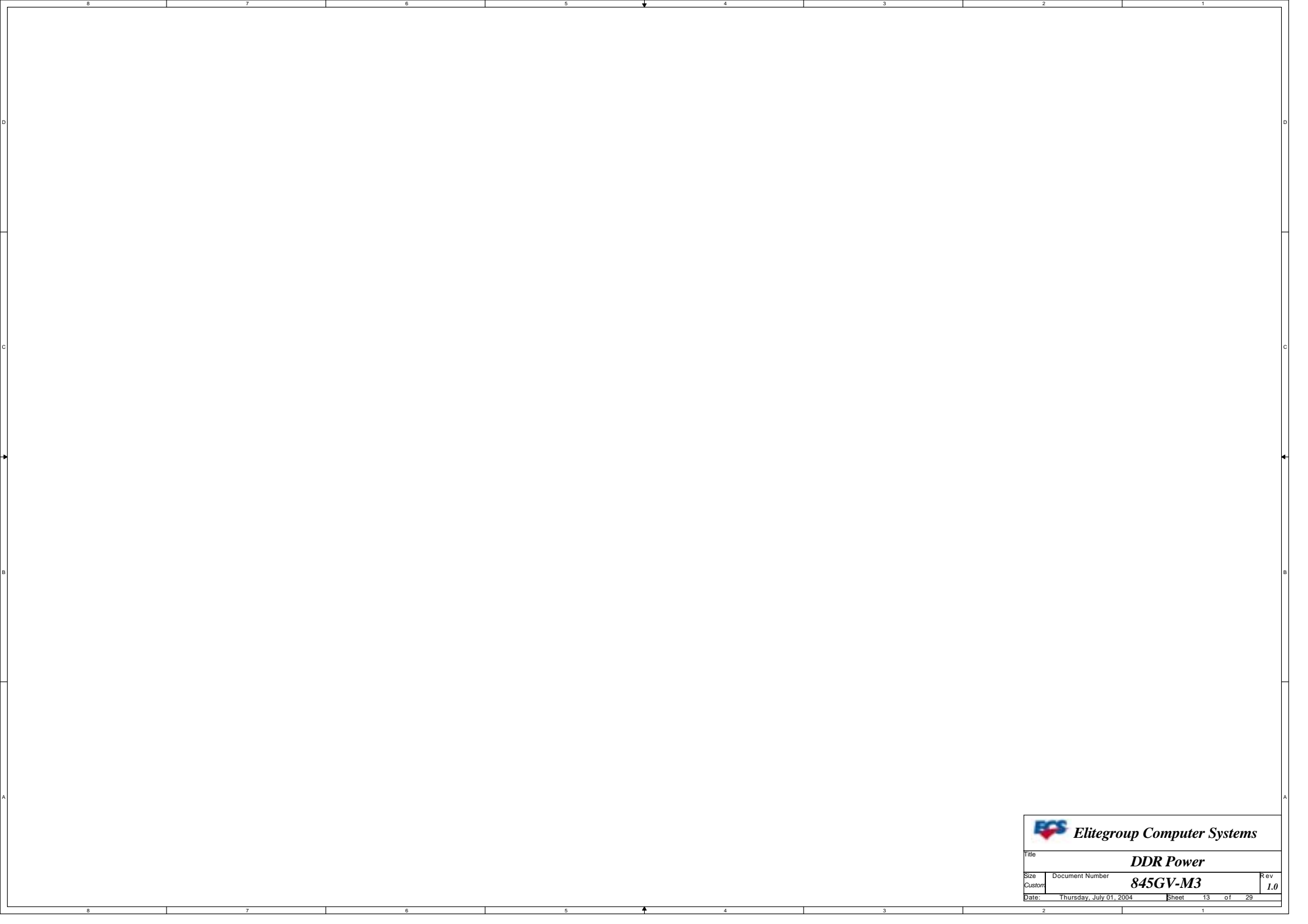







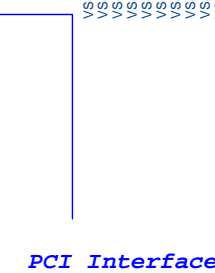
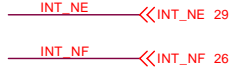
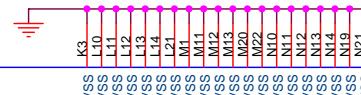
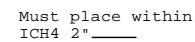


*Layout : DDR-VTT power line width must be > 150 mils*

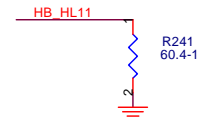
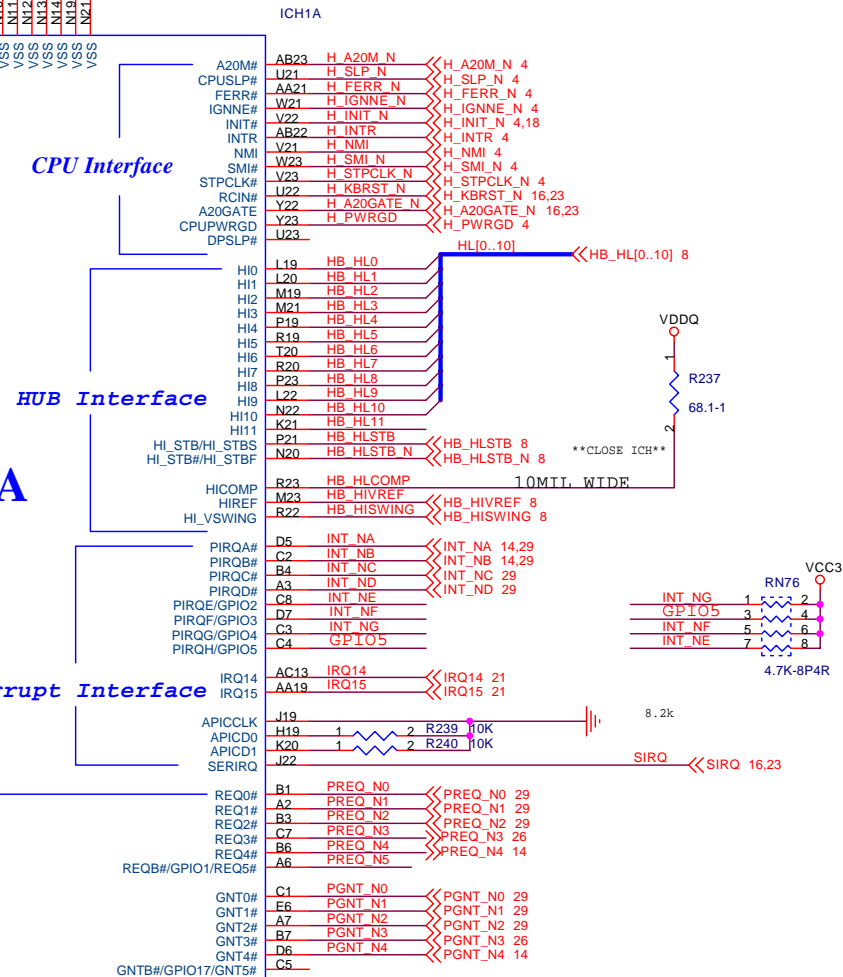
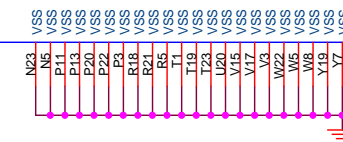


 <b>Elitegroup Computer Systems</b>		
Title <b>DDR Power</b>		
Size Custom	Document Number <b>845GV-M3</b>	Rev <b>1.0</b>
Date: Thursday, July 01, 2004 Sheet 13 of 29		



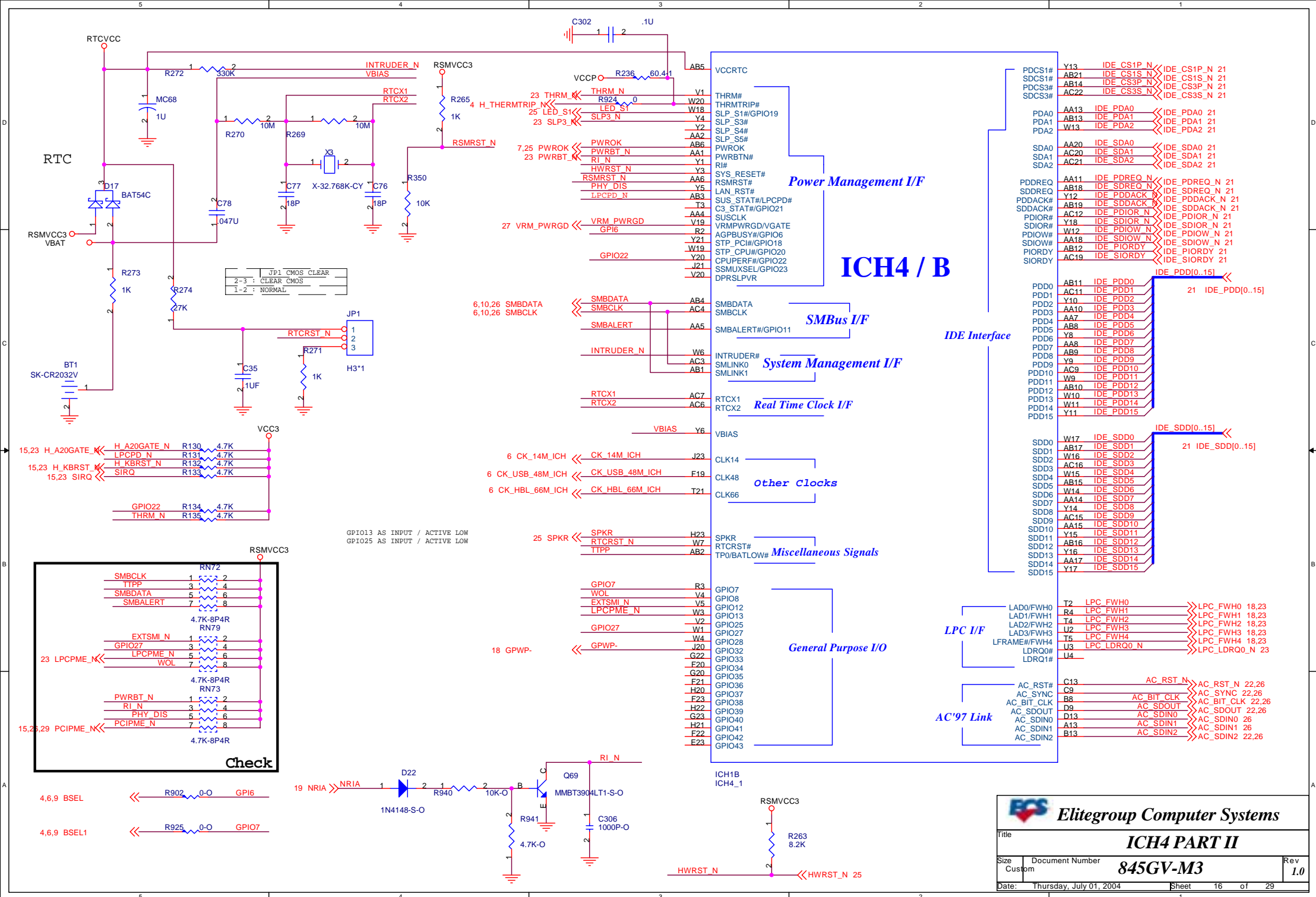


**ICH4 / A**

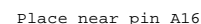
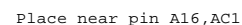
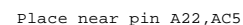


**Elitegroup Computer Systems**

Title			
<b><i>ICH4 PART I</i></b>			
Size	Document Number		Rev
Custom	<b><i>845GV-M3</i></b>		<b><i>1.0</i></b>
Date:	Thursday, July 01, 2004	Sheet	15 of 29







**USB PORT INTERFACE**

**FRONT\_SIDE**

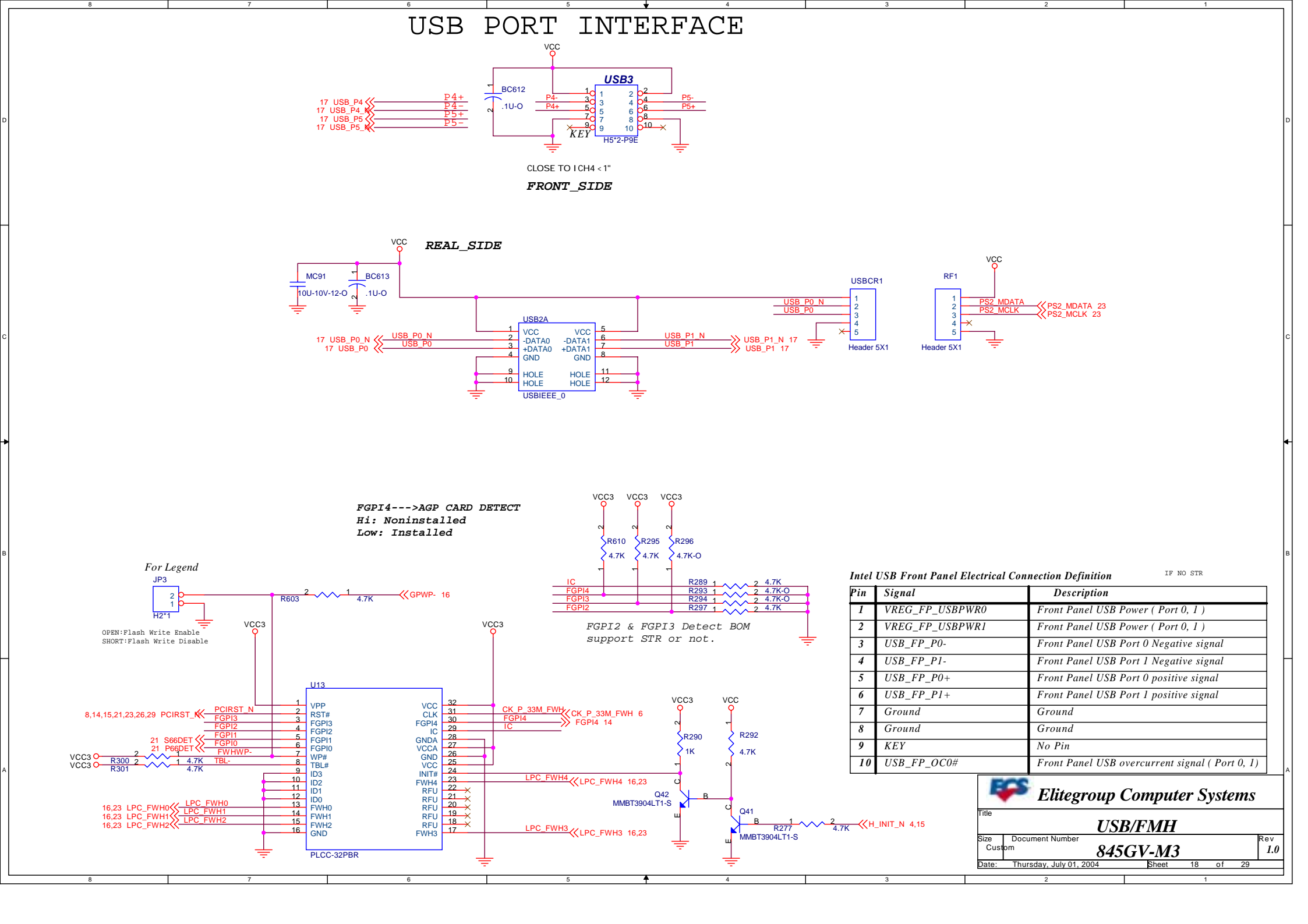
**REAL\_SIDE**

**FGPI4--->AGP CARD DETECT**  
**Hi: Noninstalled**  
**Low: Installed**

**For Legend**

**Intel USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB



**USB PORT INTERFACE**

**FRONT\_SIDE**

**REAL\_SIDE**

**AGP CARD DETECT**

**USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )

# USB PORT INTERFACE

**FRONT\_SIDE**

CLOSE TO ICH4 < 1"

**REAL\_SIDE**

**FGPI4--->AGP CARD DETECT**  
Hi: Noninstalled  
Low: Installed

**For Legend**

JP3 H2\*1

OPEN:Flash Write Enable  
SHORT:Flash Write Disable

VCC3

R603 4.7K

GPWP- 16

U13 PLCC-32PBR

VPP 1  
RST# 2  
FGPI3 3  
FGPI2 4  
FGPI1 5  
FGPI0 6  
WP# 7  
TBL# 8  
ID3 9  
ID2 10  
ID1 11  
ID0 12  
FWH0 13  
FWH1 14  
FWH2 15  
GND 16

PCIRST\_N PCIRST\_ 8,14,15,21,23,26,29  
S66DET S66DET 21  
P66DET P66DET 21  
LPC\_FWH0 LPC\_FWH0 16,23  
LPC\_FWH1 LPC\_FWH1 16,23  
LPC\_FWH2 LPC\_FWH2 16,23

VCC3

R300 4.7K  
R301 4.7K

VCC3

R290 1K  
R292 4.7K

Q42 MMBT3904LT1-S  
Q41 MMBT3904LT1-S

H\_INIT\_N 4,15

**Intel USB Front Panel Electrical Connection Definition**

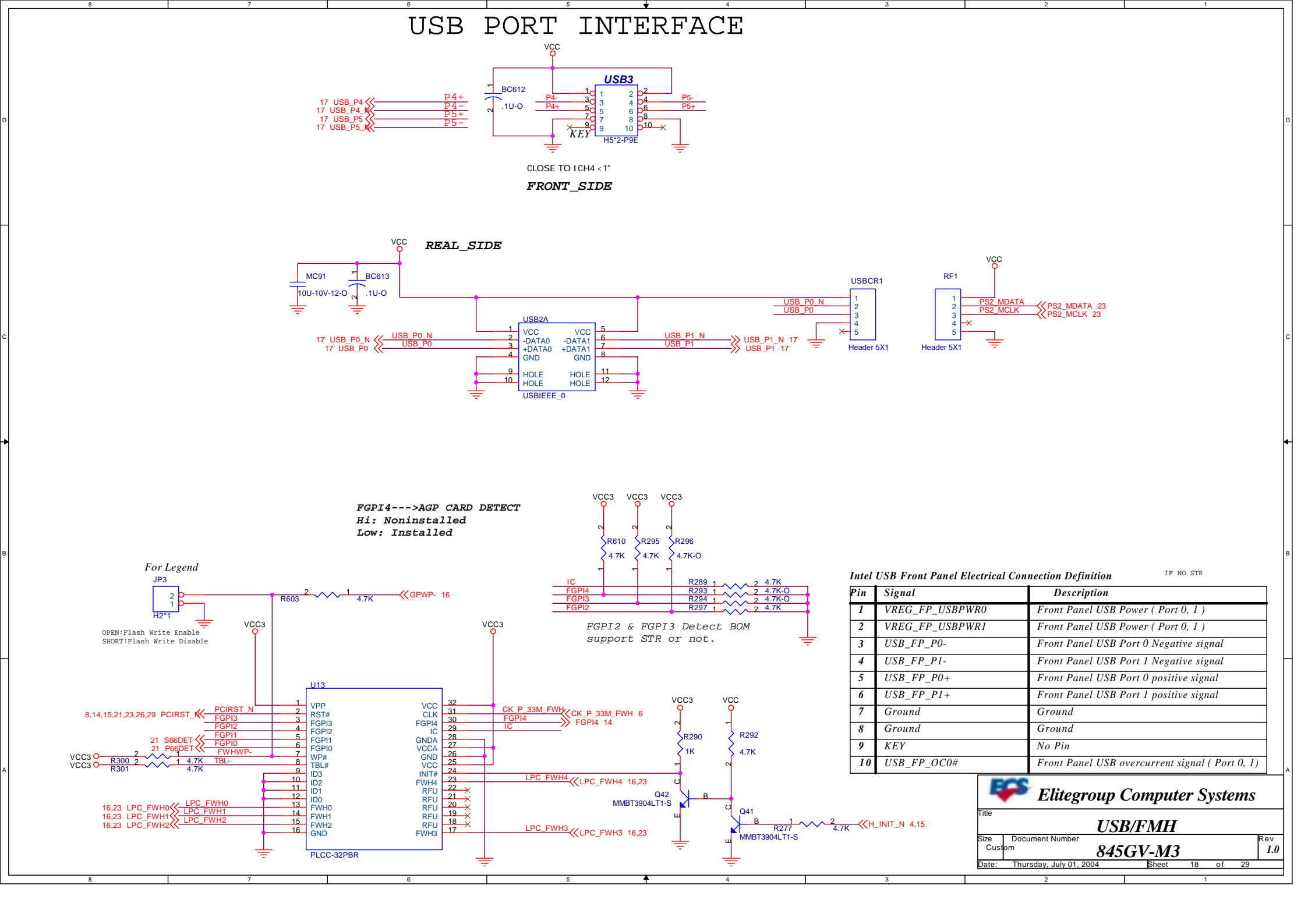
Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )

**Elitegroup Computer Systems**

Title: **USB/FMH**

Size: Custom Document Number: **845GV-M3** Rev: **1.0**

Date: Thursday, July 01, 2004 Sheet 18 of 29

[illegible]

**USB PORT INTERFACE**

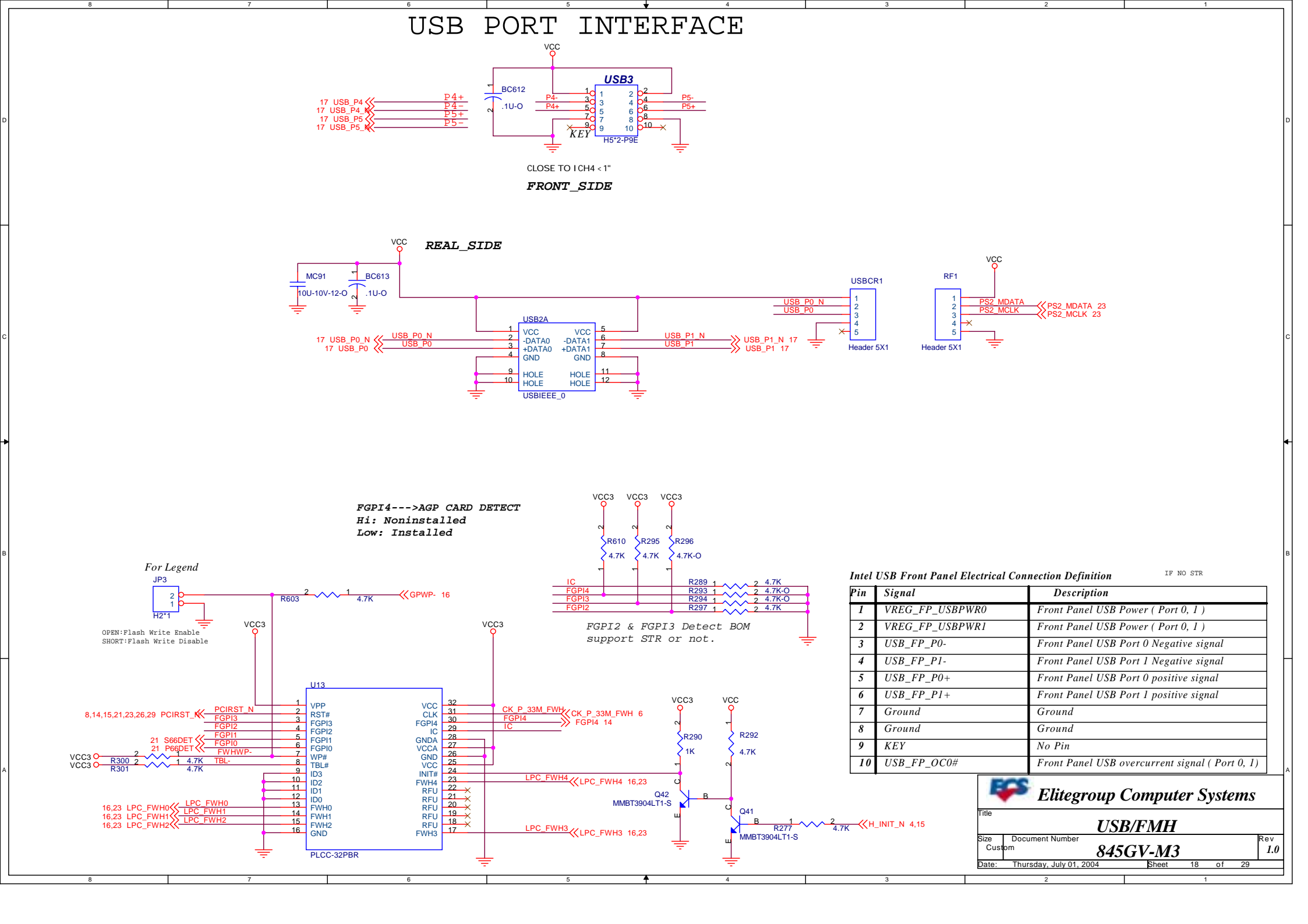
**FRONT\_SIDE**

**REAL\_SIDE**

**AGP CARD DETECT**

**USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )



**USB PORT INTERFACE**

**FRONT\_SIDE**

**REAL\_SIDE**

**AGP CARD DETECT**

**USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )

**USB PORT INTERFACE**

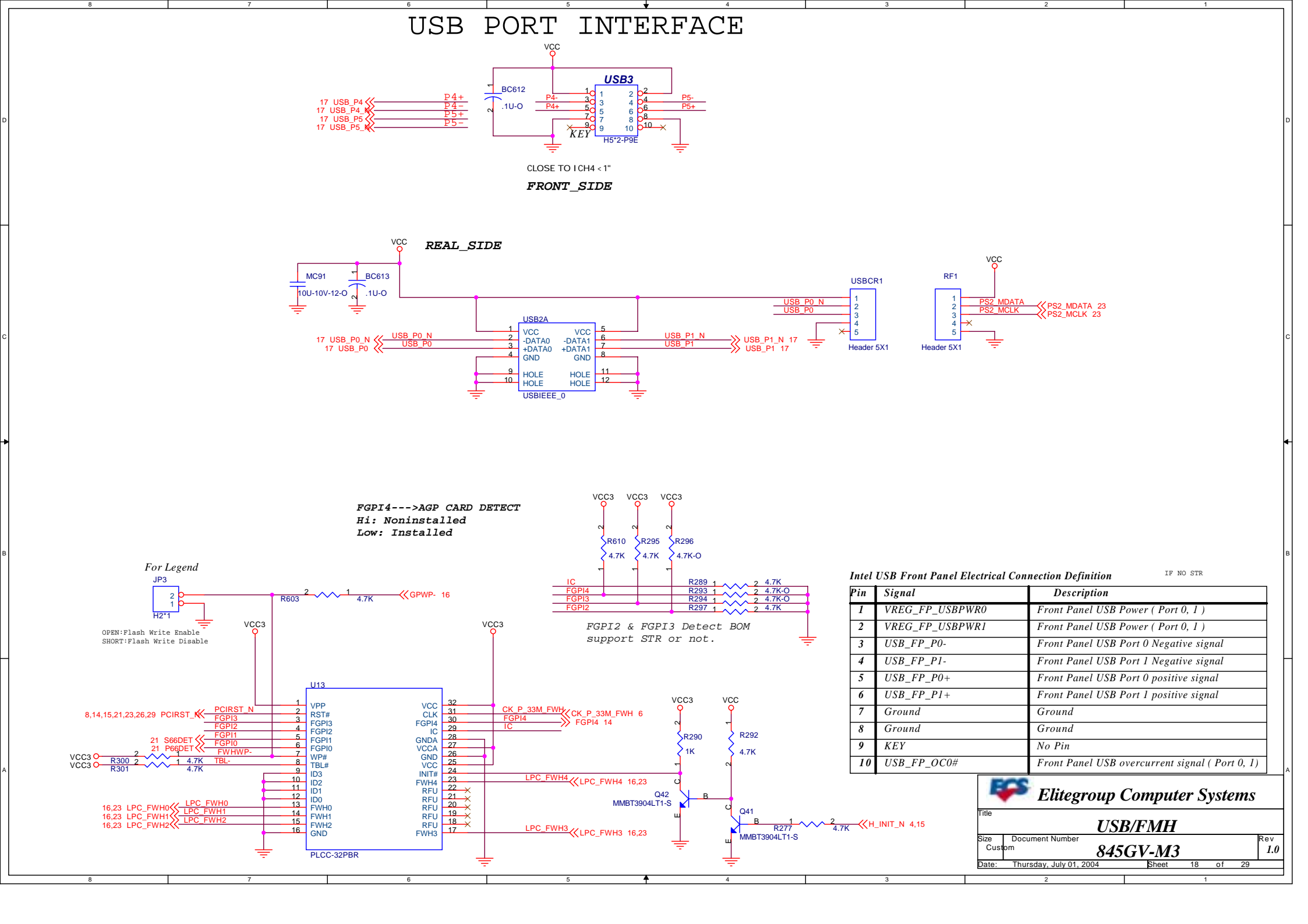
**FRONT\_SIDE**

**REAL\_SIDE**

**AGP CARD DETECT**

**USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )



**USB PORT INTERFACE**

**FRONT\_SIDE**

**REAL\_SIDE**

**AGP CARD DETECT**

**USB Front Panel Electrical Connection Definition**

Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )

**USB PORT INTERFACE**

**FRONT\_SIDE**

**REAL\_SIDE**

**FGPI4--->AGP CARD DETECT**  
**Hi: Noninstalled**  
**Low: Installed**

**For Legend**

JP3  
 H2\*1  
 OPEN:Flash Write Enable  
 SHORT:Flash Write Disable

**Intel USB Front Panel Electrical Connection Definition**

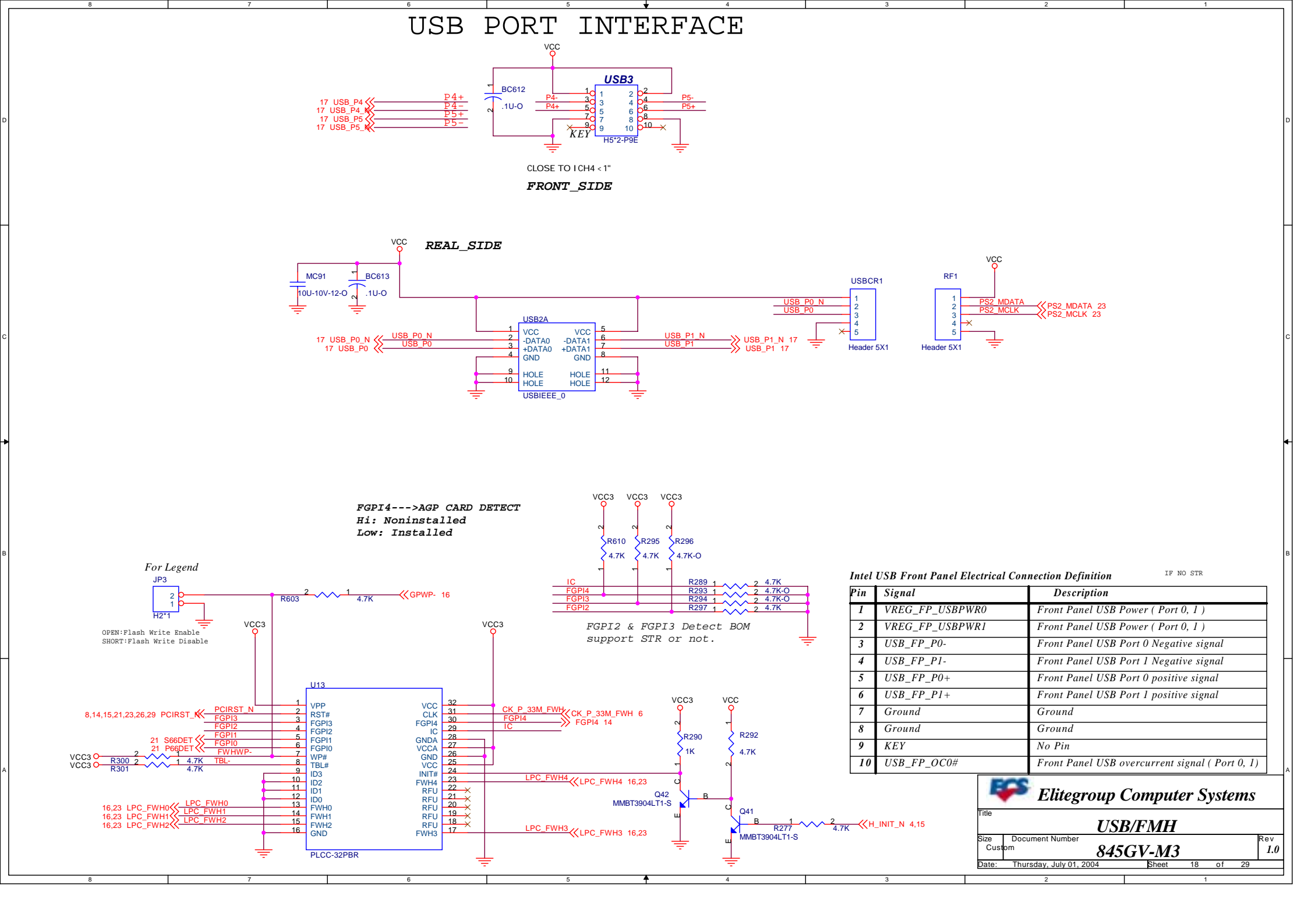
Pin	Signal	Description
1	VREG_FP_USBPWR0	Front Panel USB Power ( Port 0, 1 )
2	VREG_FP_USBPWR1	Front Panel USB Power ( Port 0, 1 )
3	USB_FP_P0-	Front Panel USB Port 0 Negative signal
4	USB_FP_P1-	Front Panel USB Port 1 Negative signal
5	USB_FP_P0+	Front Panel USB Port 0 positive signal
6	USB_FP_P1+	Front Panel USB Port 1 positive signal
7	Ground	Ground
8	Ground	Ground
9	KEY	No Pin
10	USB_FP_OC0#	Front Panel USB overcurrent signal ( Port 0, 1 )

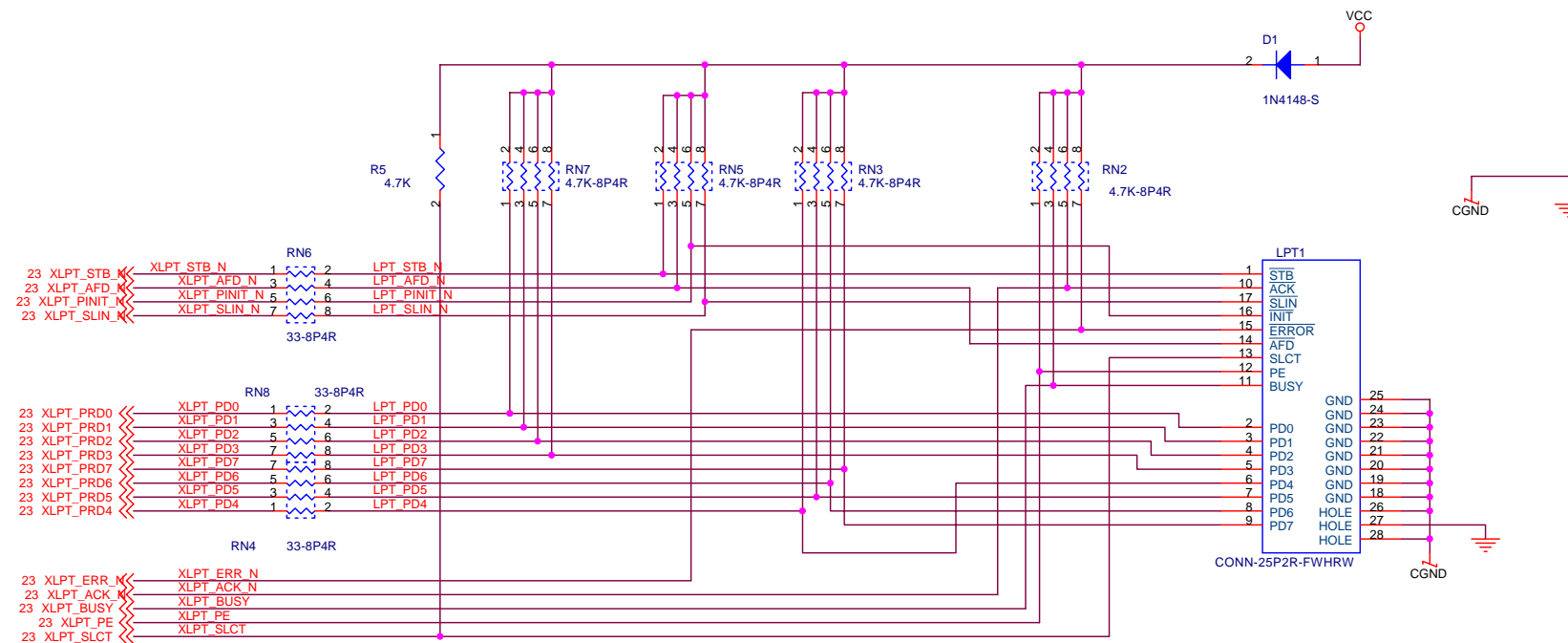
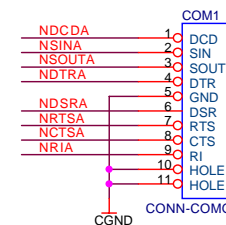
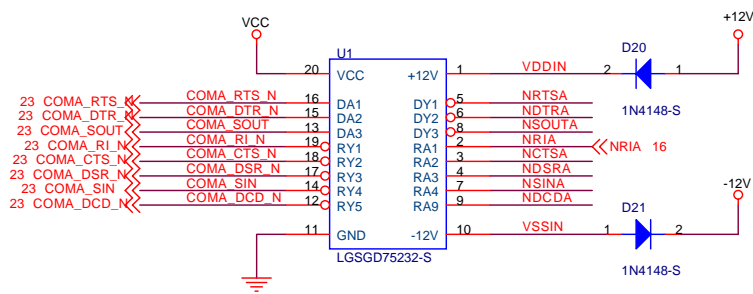
**Elitegroup Computer Systems**

**USB/FMH**

Size: Custom Document Number: 845GV-M3 Rev: 1.0

Date: Thursday, July 01, 2004 Sheet: 18 of 29





IR Front Panel Electrical Connection Definition

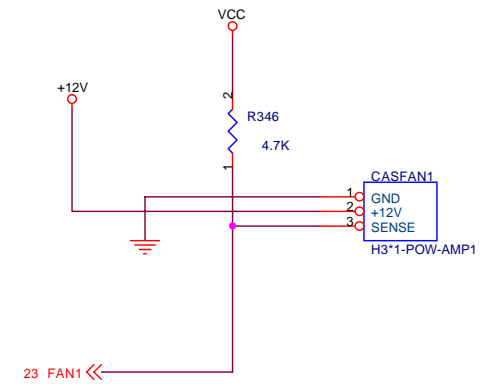
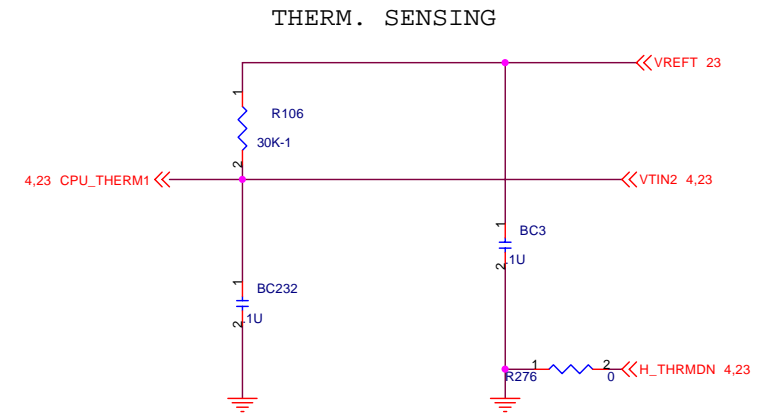
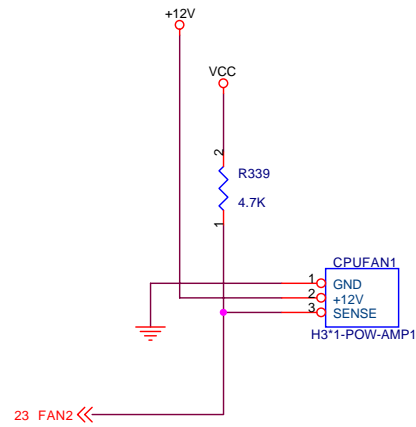
Pin	Signal	In/Out	Description
1	+5V	Out	IR Power
2	No pin	n/a	Key
3	IRRX	In	IrDA serial input
4	GND	In	Ground
5	IRTX	Out	IrDA serial output

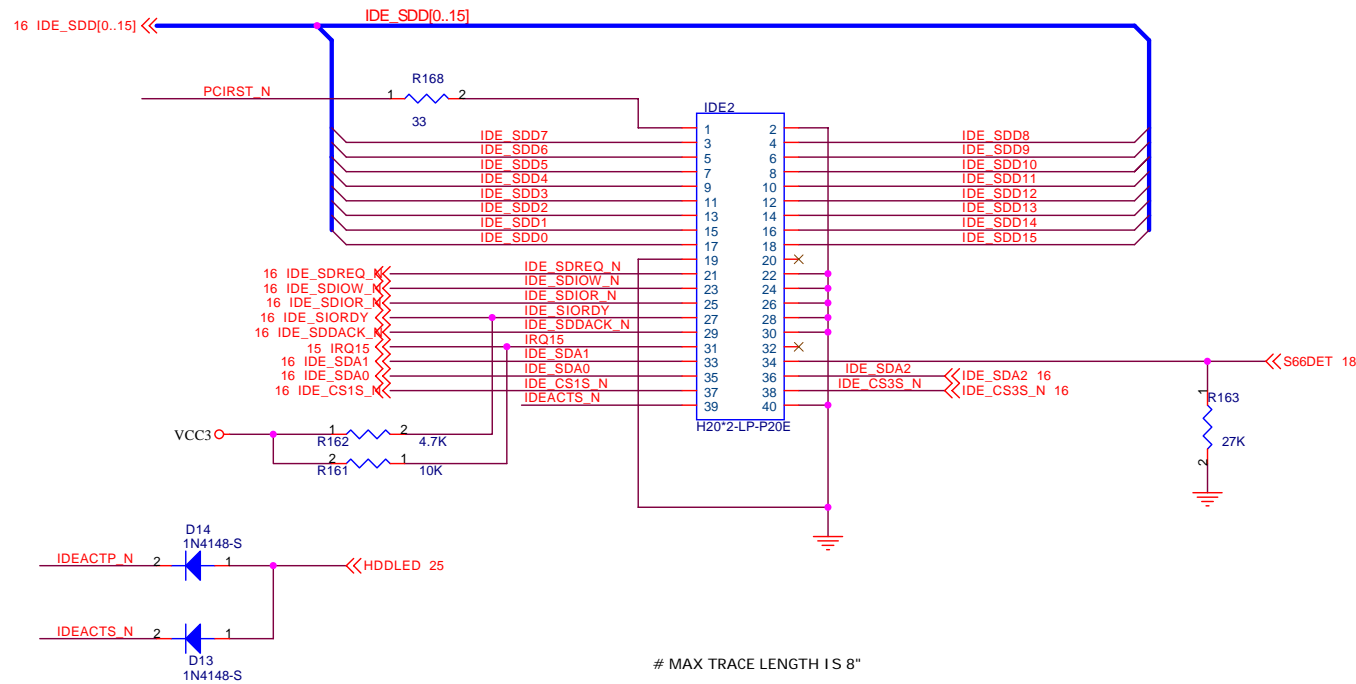
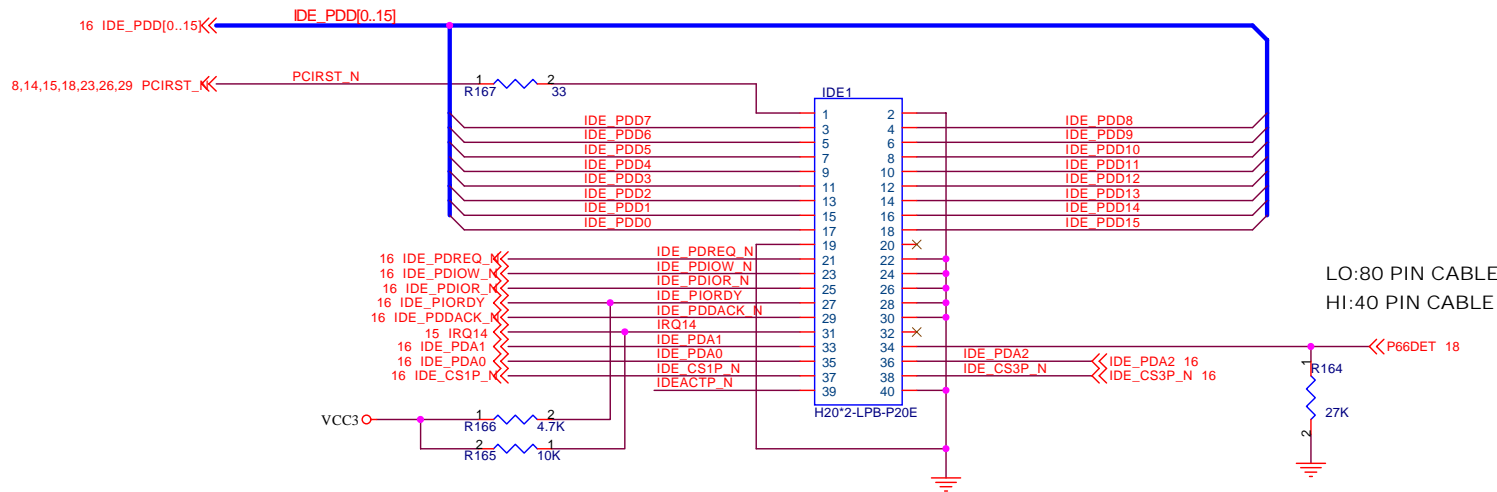
**Elitegroup Computer Systems**

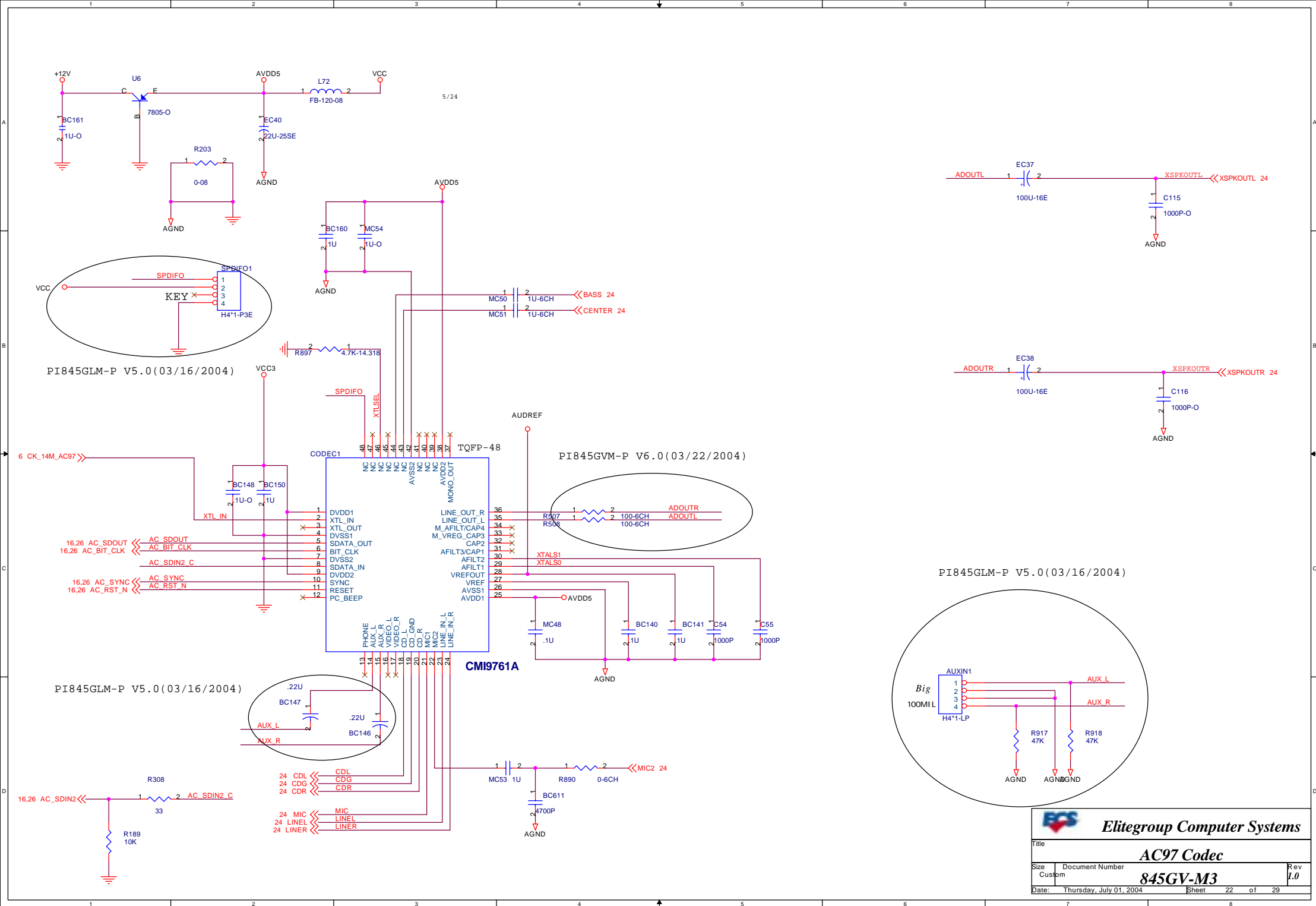
Title: **I/O Ports**

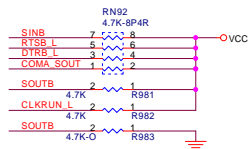
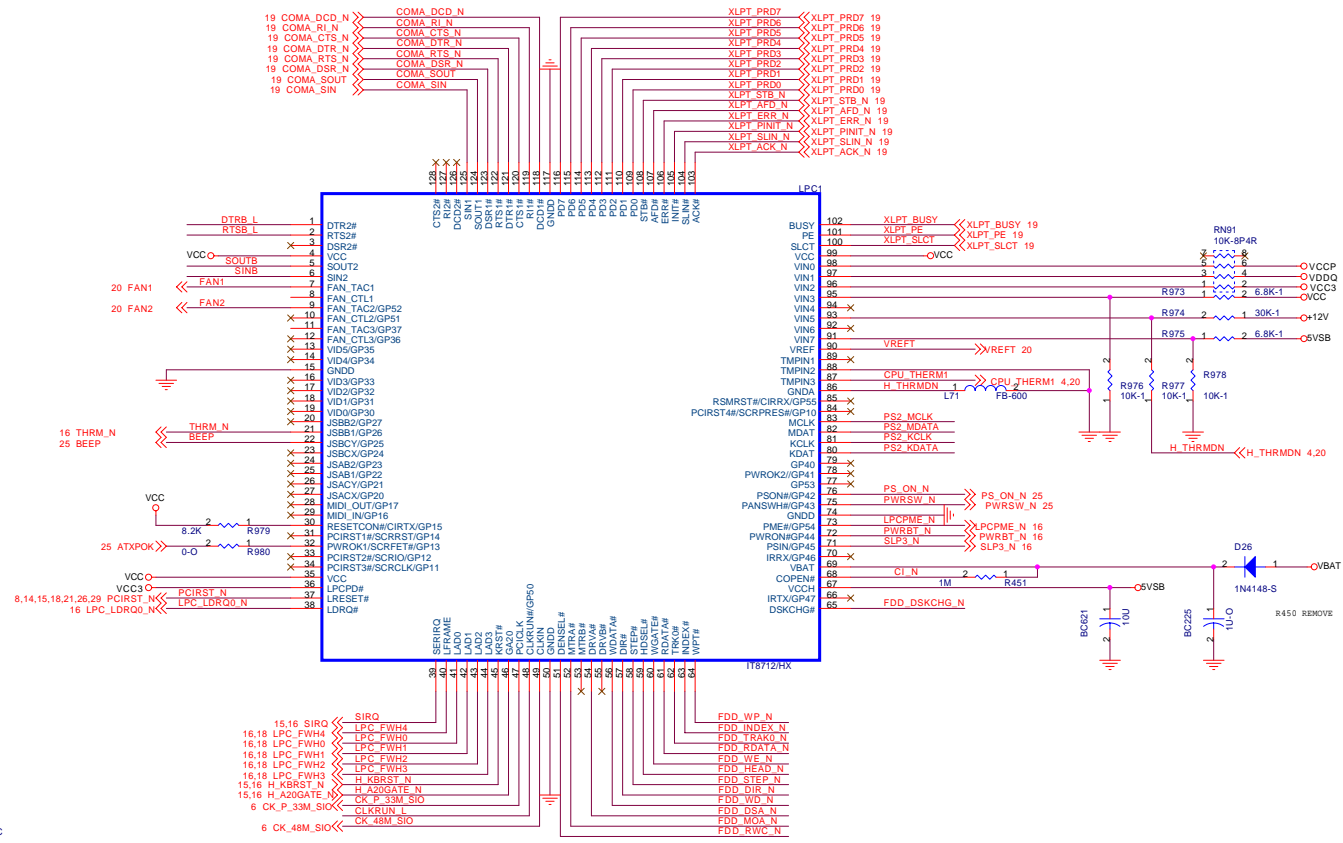
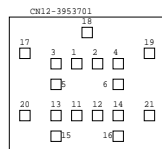
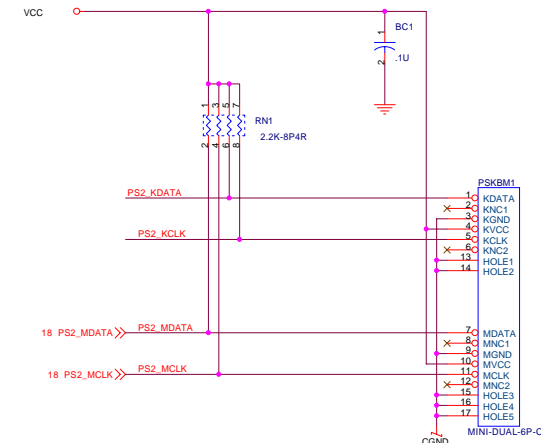
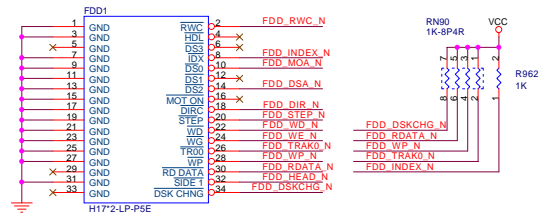
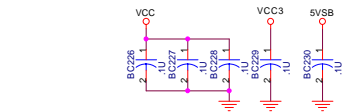
Size: Custom Document Number: **845GV-M3** Rev: **1.0**

Date: Thursday, July 01, 2004 Sheet 19 of 29



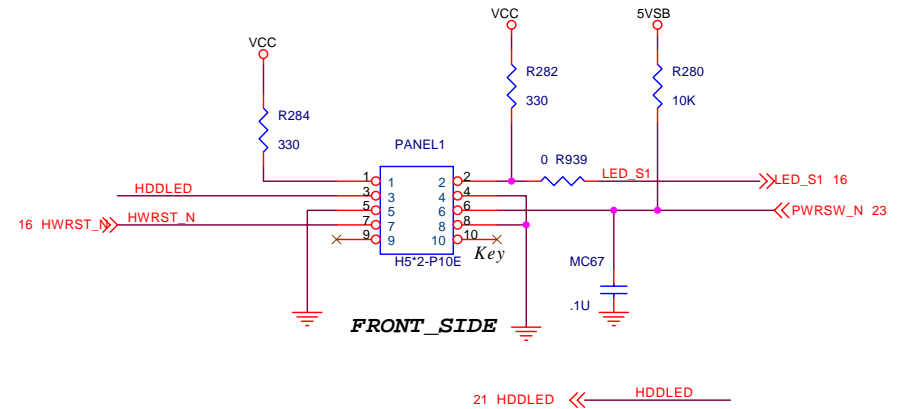
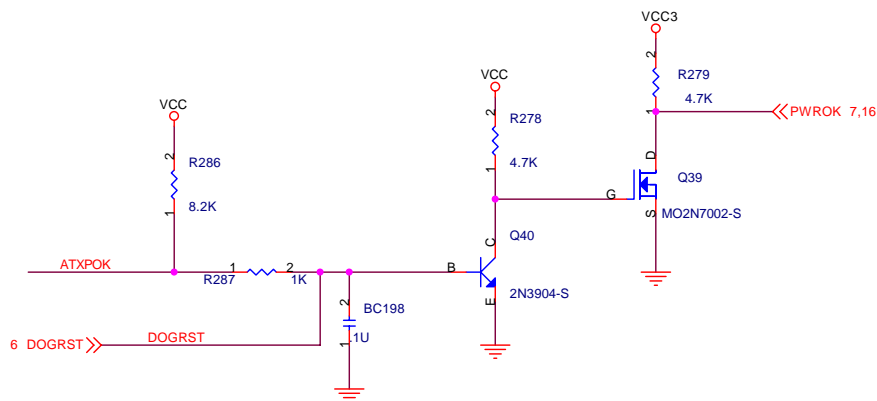
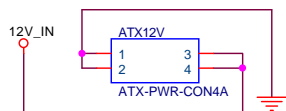
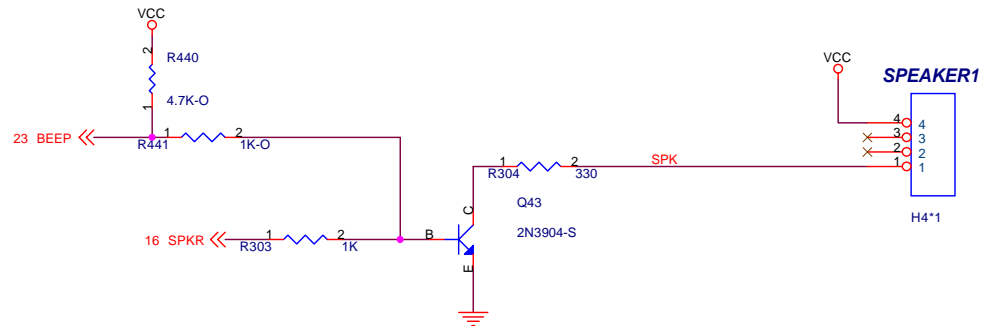
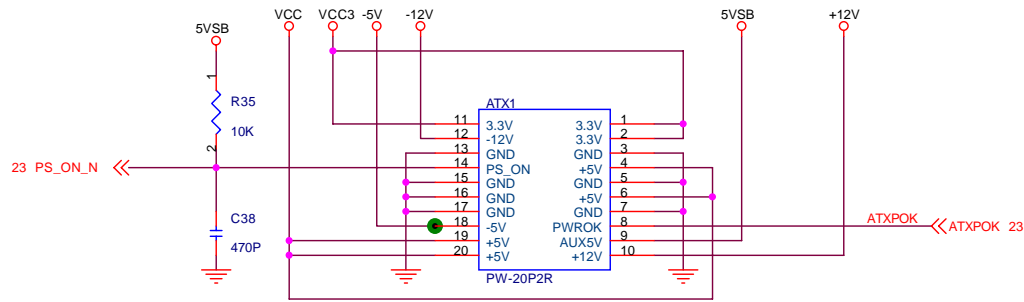













Dual Color Led Status

System State	LED State
S0	Stay Green
S1	Green Blinking
S3	Stay Yellow
S4/5	Off


**Elitegroup Computer Systems**

Title

**ATX Power & Front Panel**

Size B

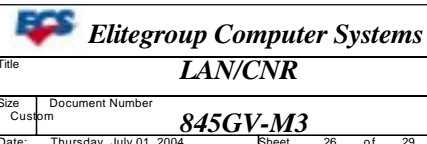
Document Number

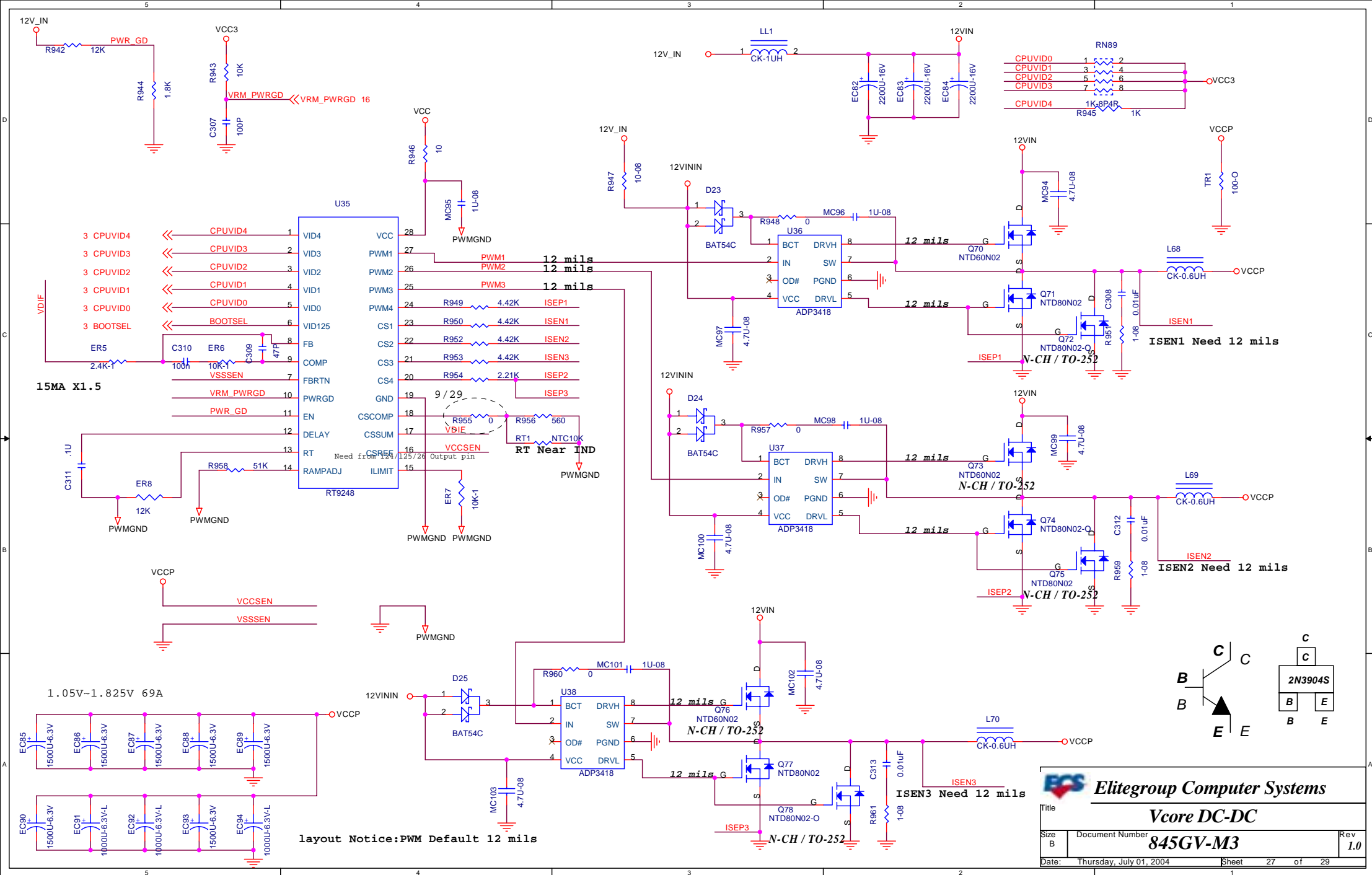
**845GV-M3**

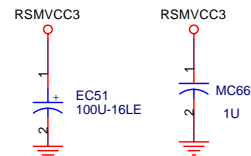
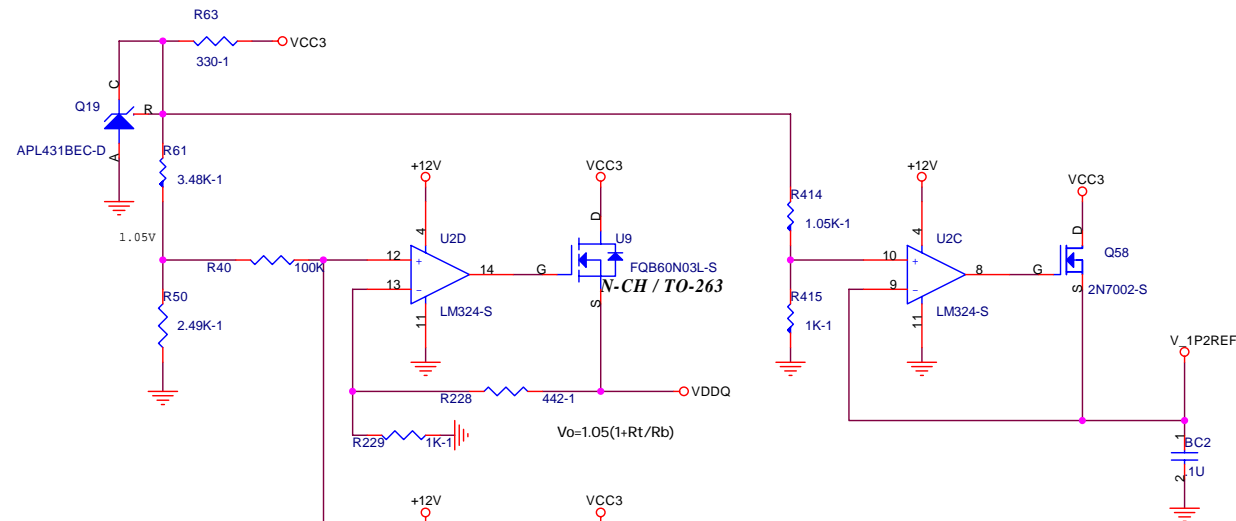
Date: Thursday, July 01, 2004

Sheet 25 of 29

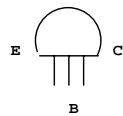
Rev 1.0







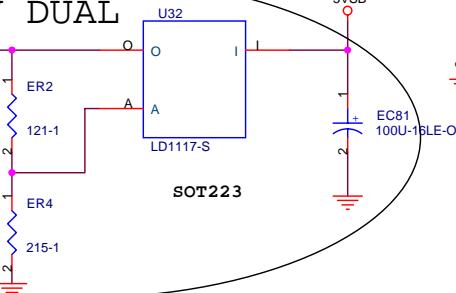
Dummy for PI845GLM-P V5.0(03/16/2004)



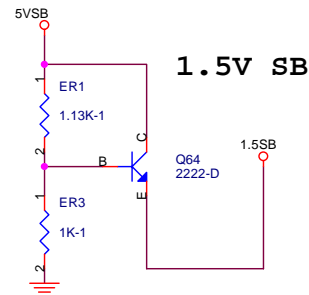
FOR 2222-DIP ONLY

PI845GLM-P V5.0(03/16/2004)

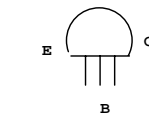
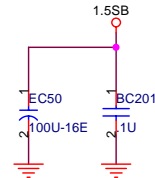
3.3V DUAL



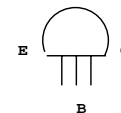
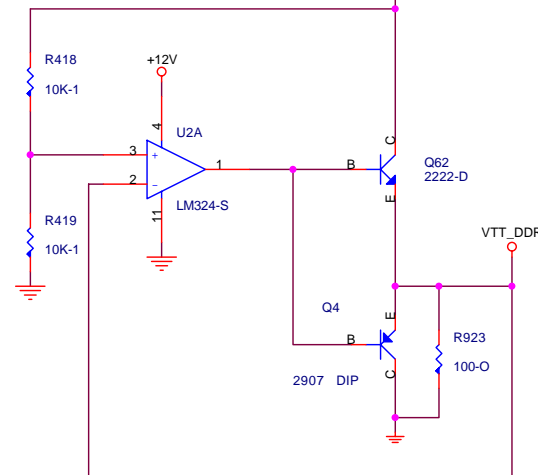
SOT223



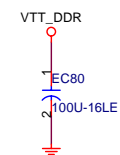
1.5V SB

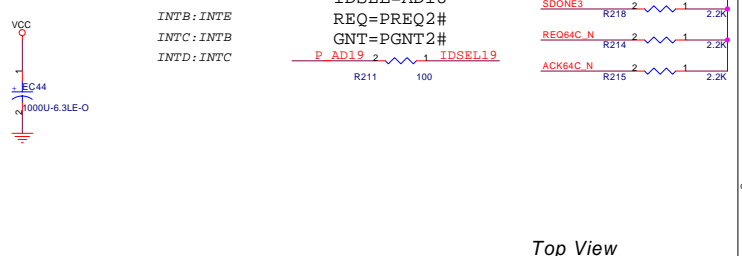
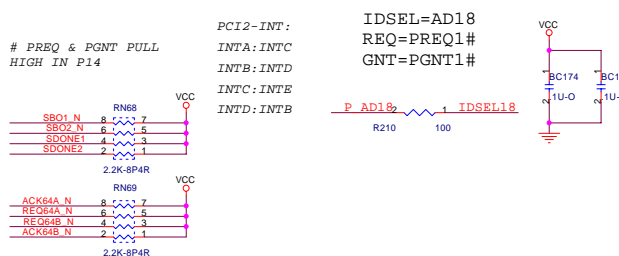
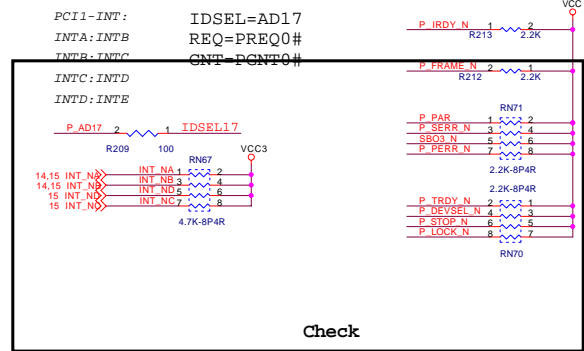
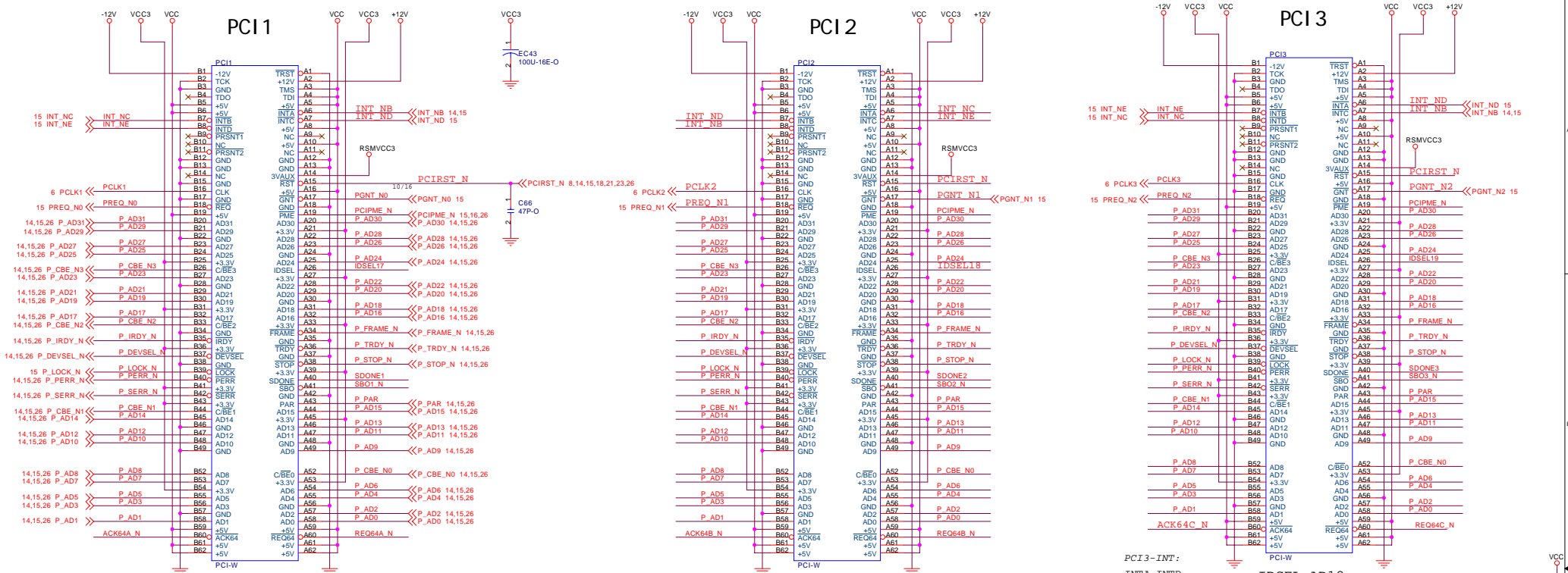


FOR 2222-DIP ONLY



FOR 2222-DIP ONLY





Top View

SOT-23

