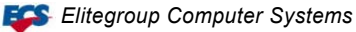
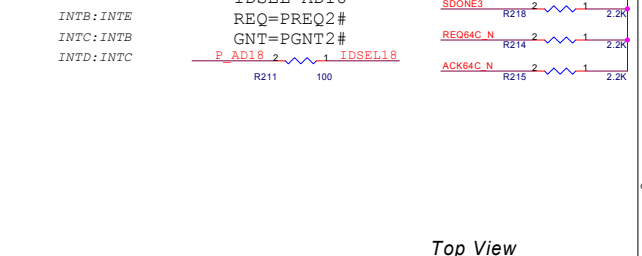
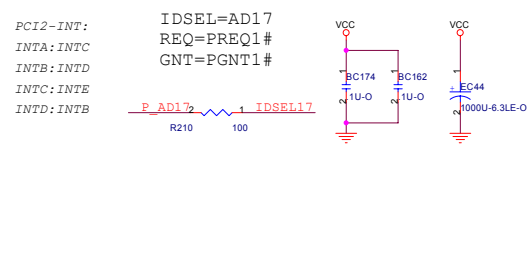
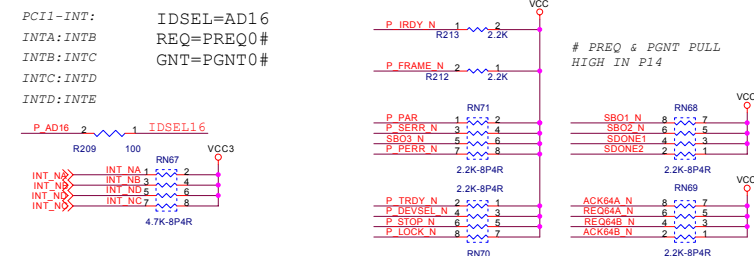
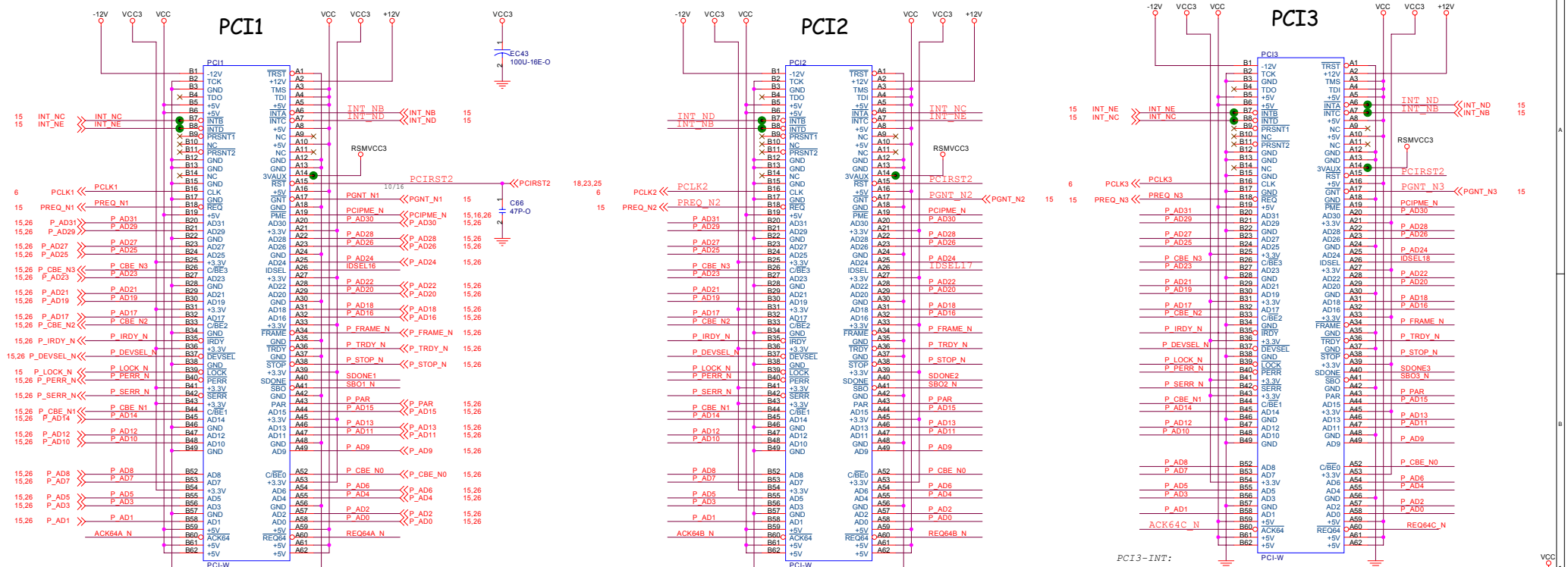


V1.2

1. Page27: Change RT9237 to RT9248
2. Page25: Add U39

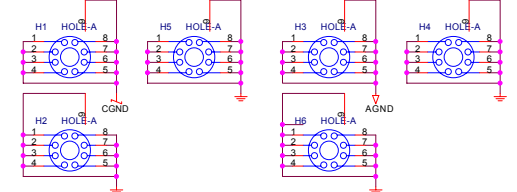
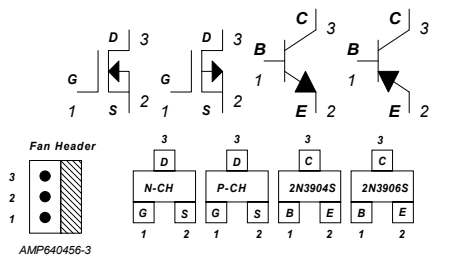
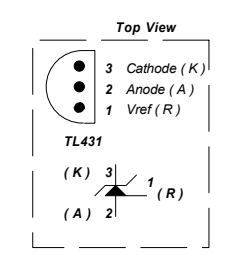
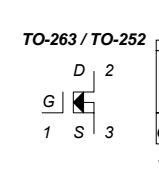
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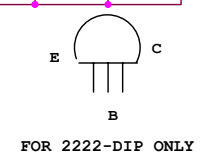
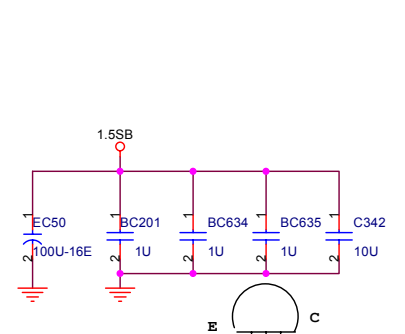
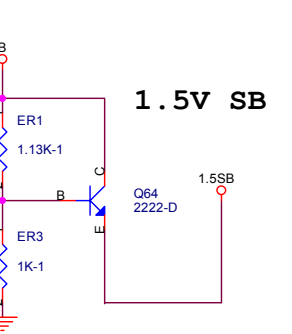
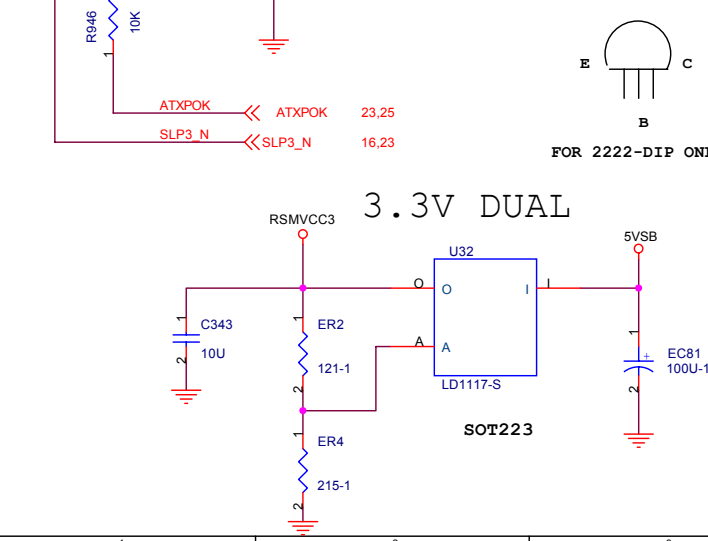
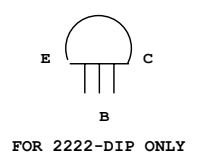
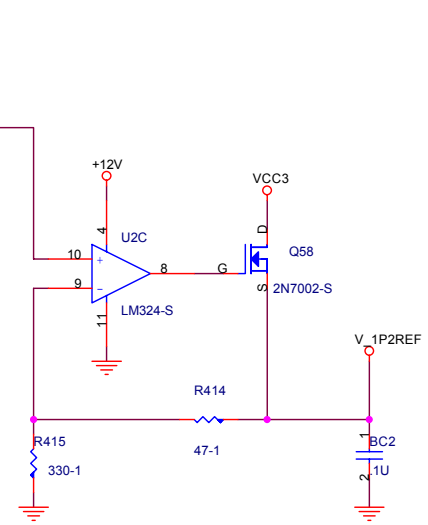
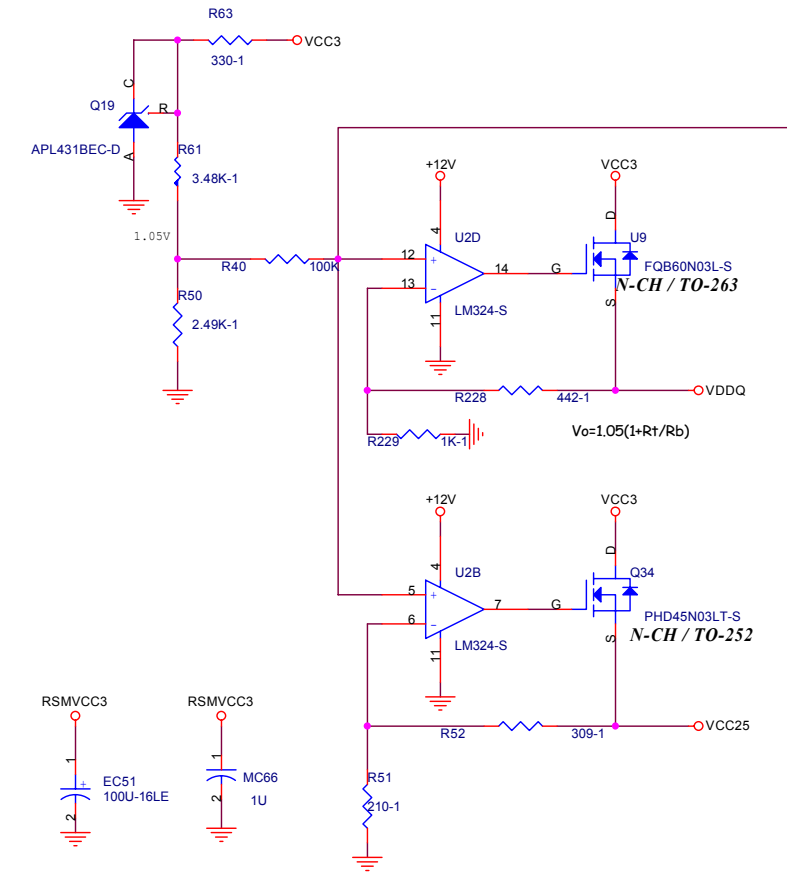
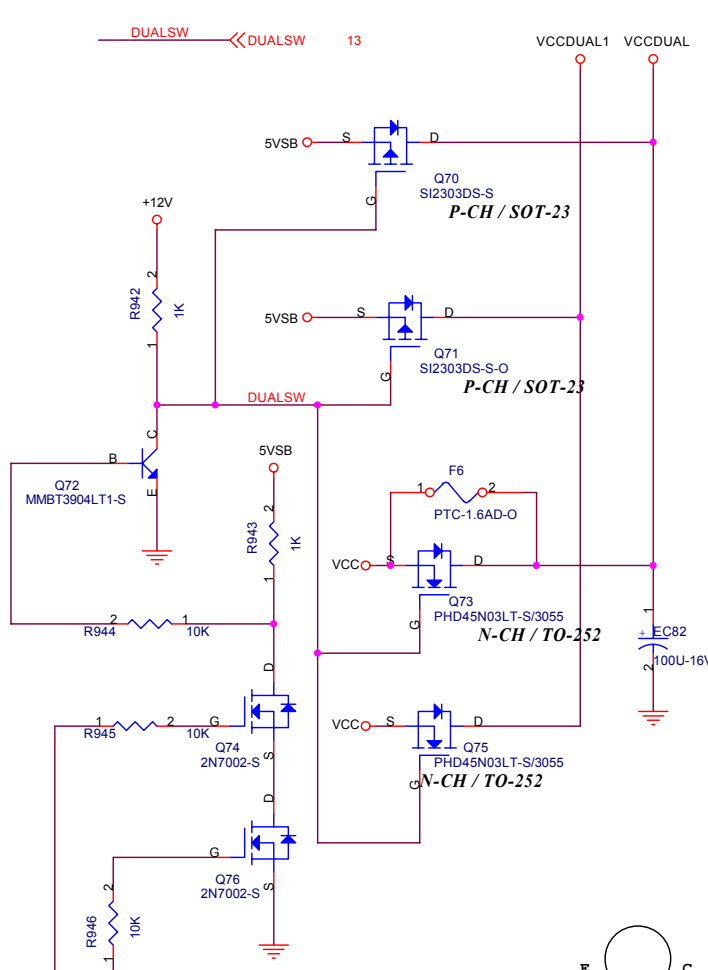
			
Title		845GV-M2	
Size	Document Number	Version History	
C			Rev 1.2
Date: Tuesday, May 18, 2004		Sheet	1 of 30



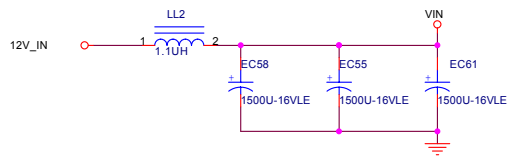
Top View

SOT-23

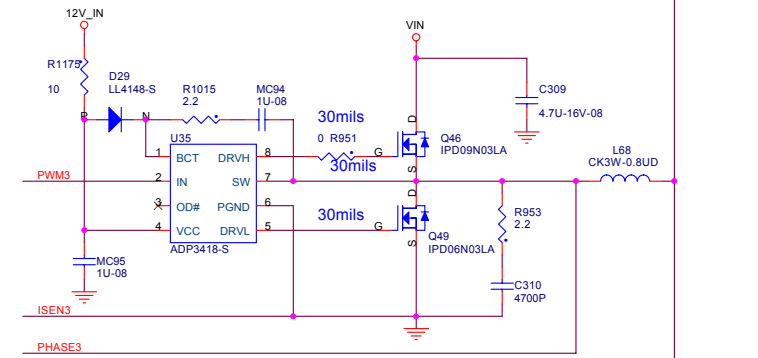
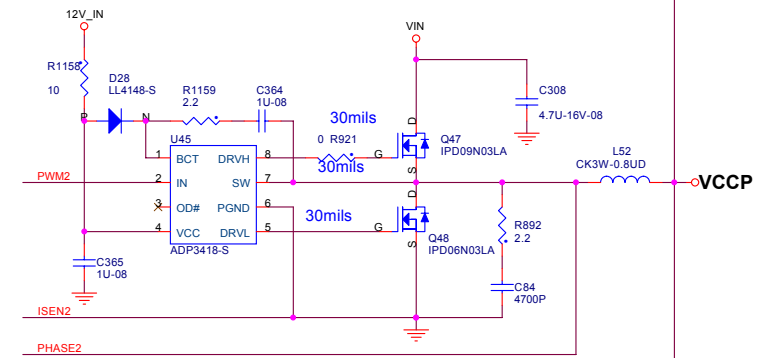
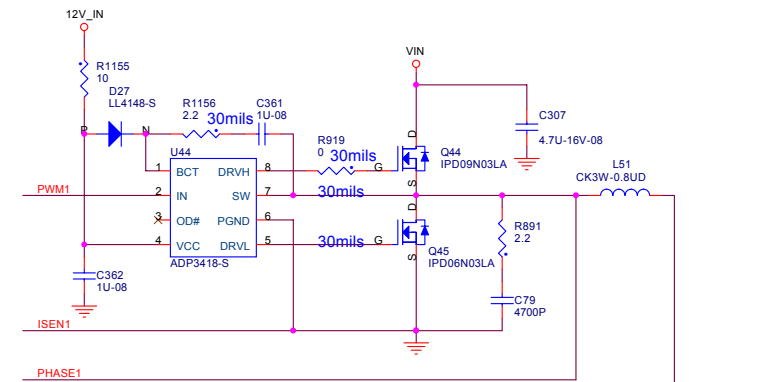
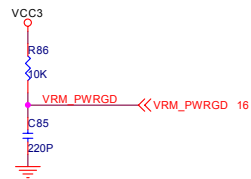
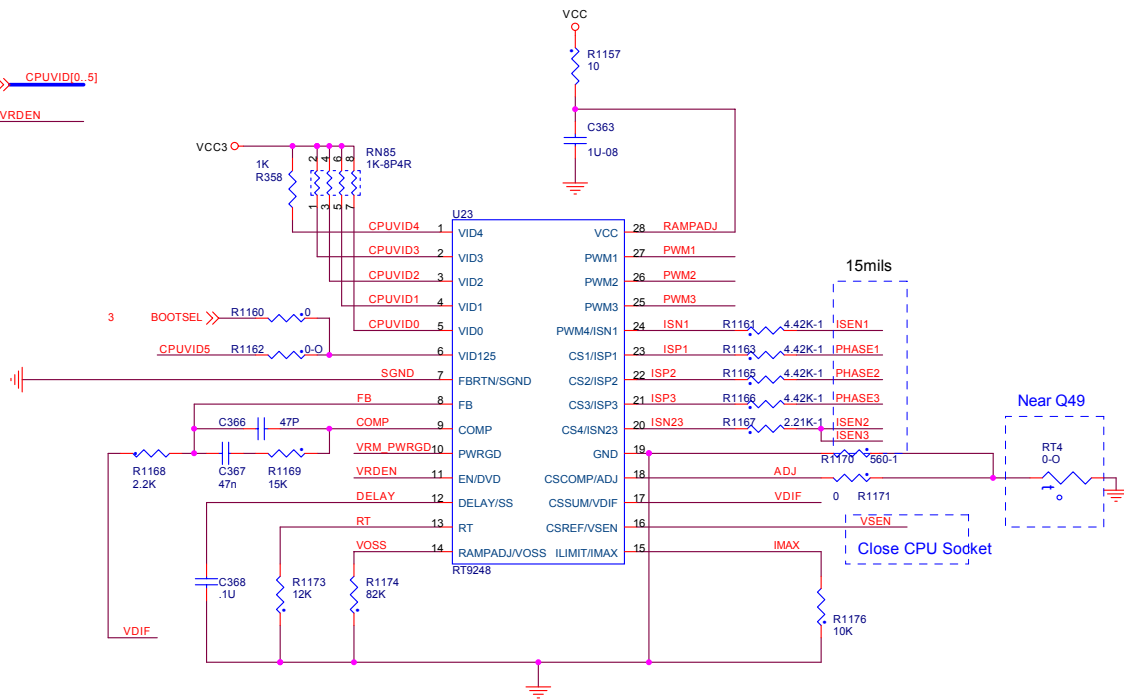




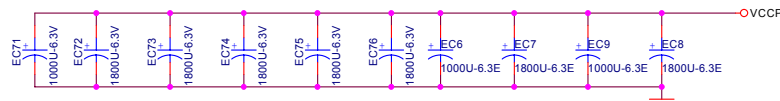
ECS Elitegroup Computer Systems		
Title		845GV-M2
Size	Document Number	MIS DC-DC
Custom		Rev 1.2
Date:	Tuesday, May 18, 2004	Sheet 3 of 30

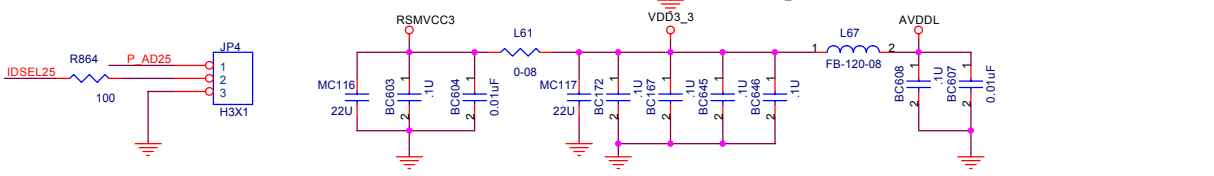
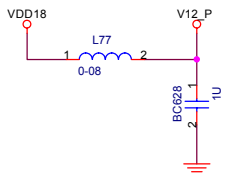
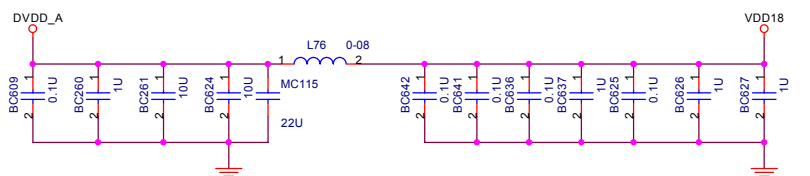
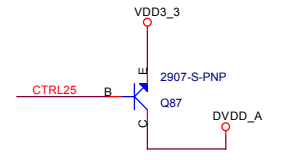
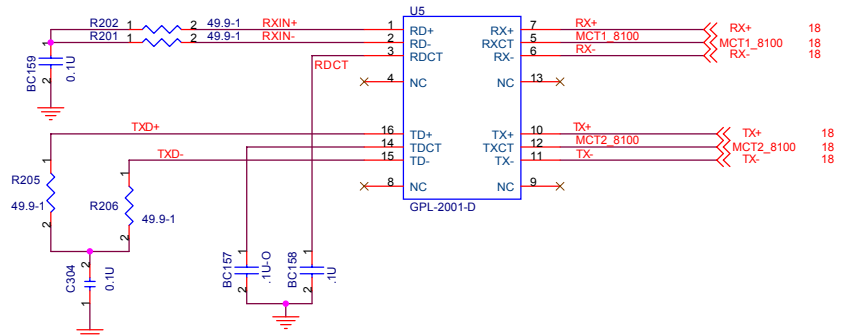
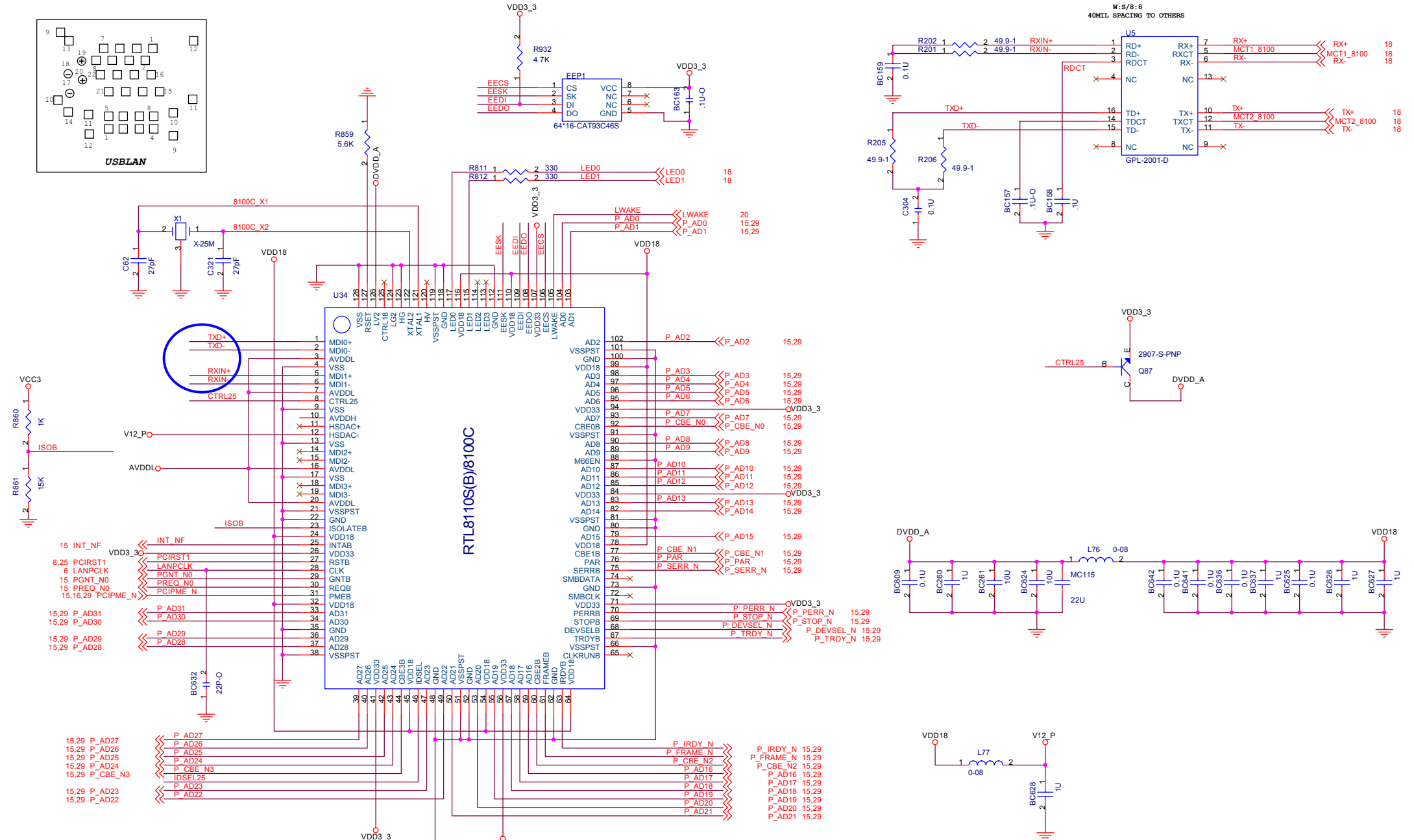
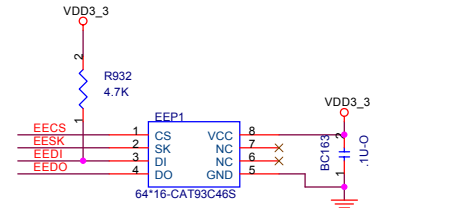
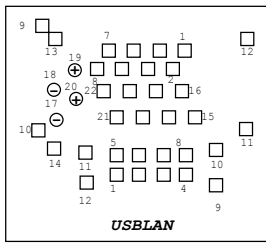


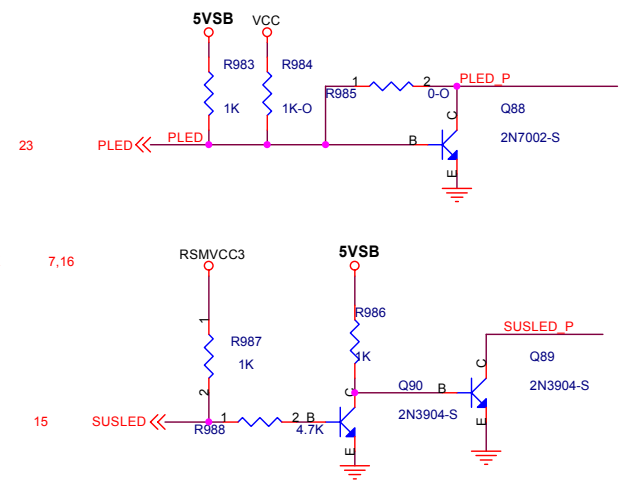
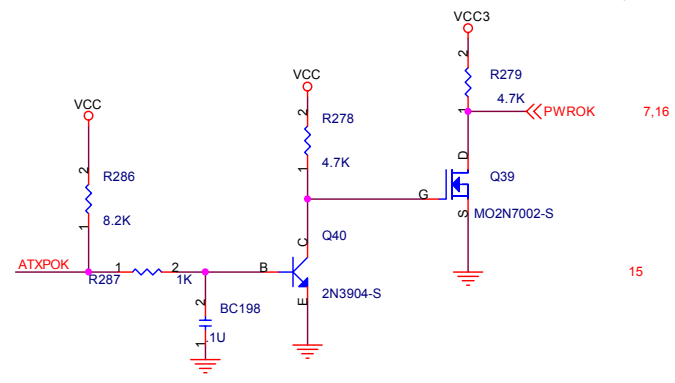
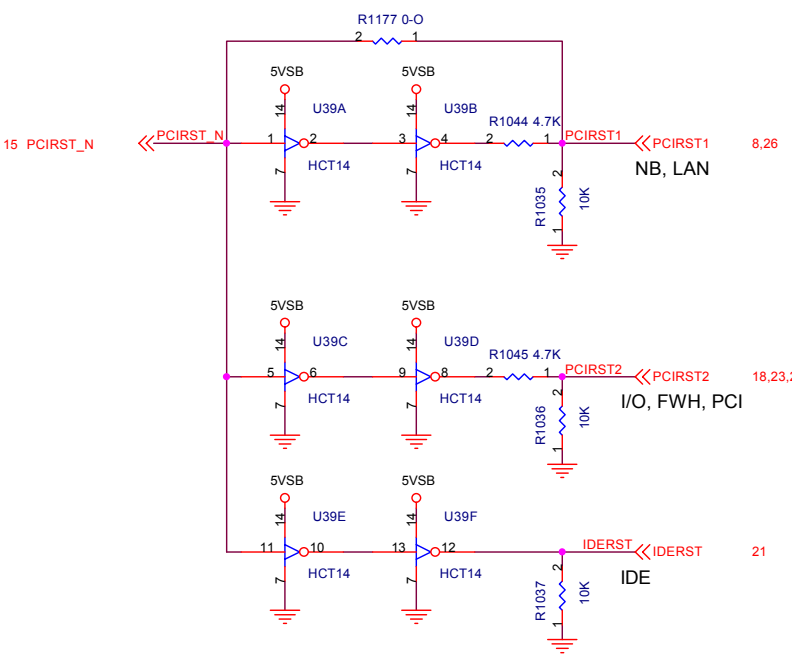
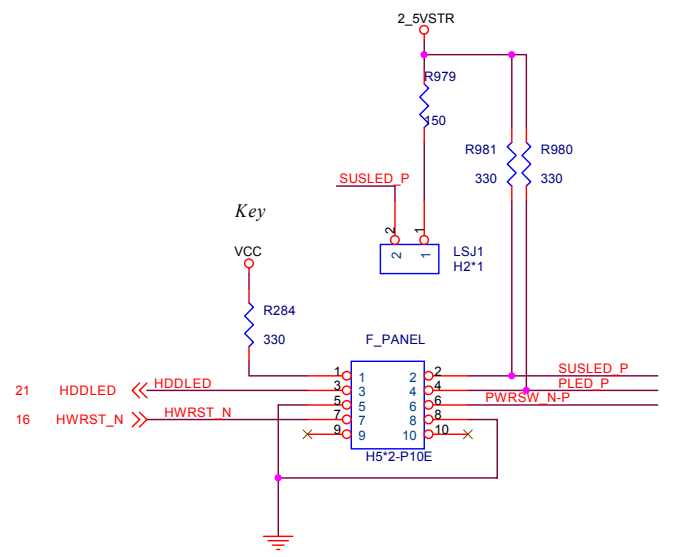
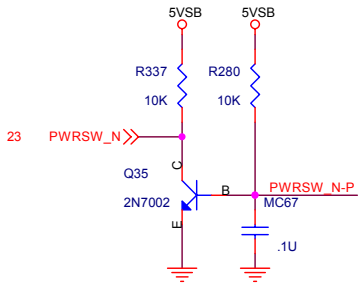
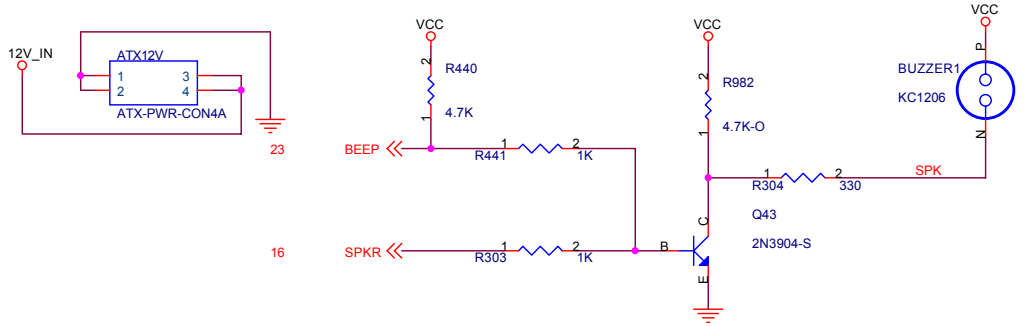
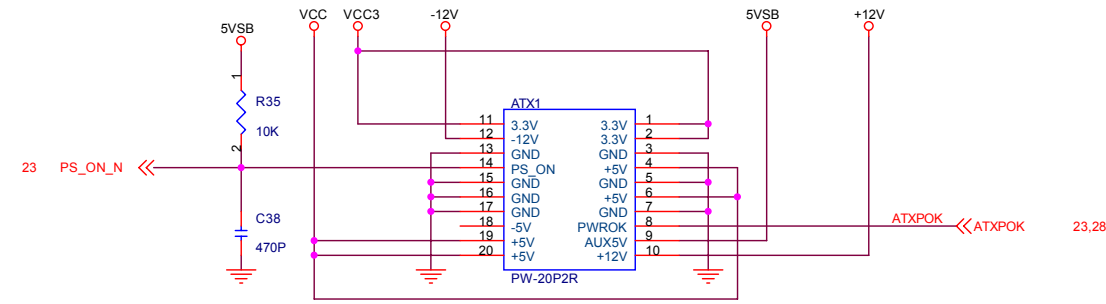
3 CPUVID[0..5] >> CPUVID[0..5]
 VRDEN >> VRDEN



1.05V~1.825V 69A







Dual Color Led Status

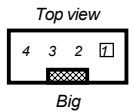
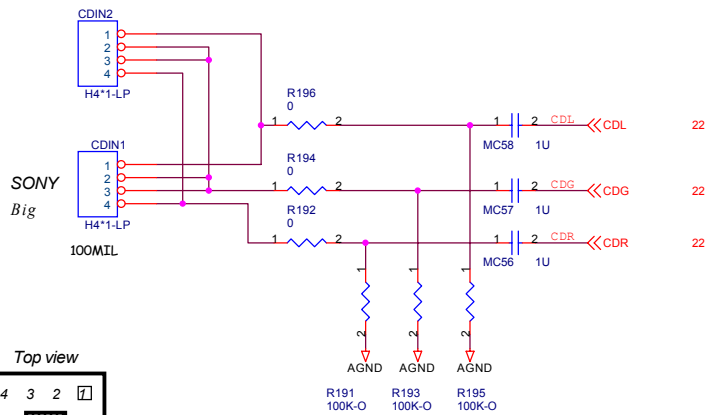
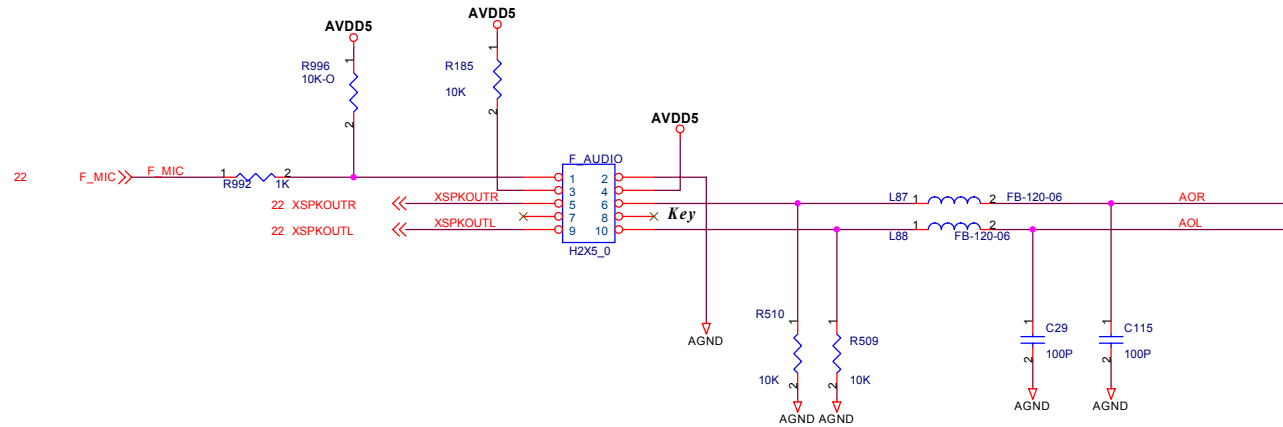
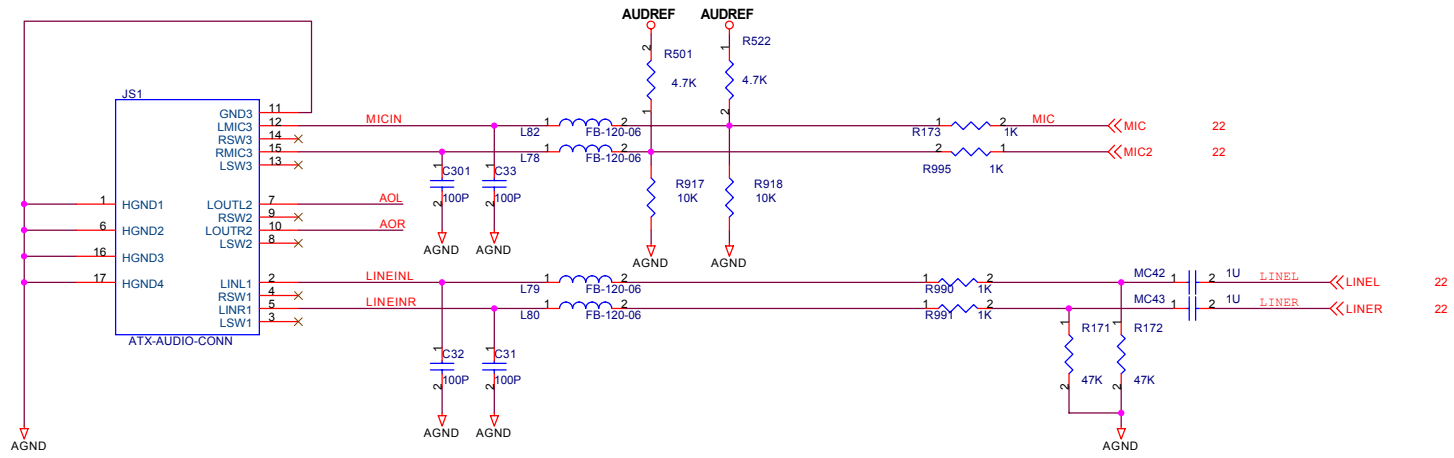
System State	LED State
S0	Stay Green
S1	Green Blinking
S3	Stay Yellow
S4/5	Off

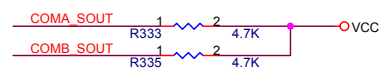
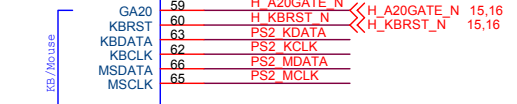
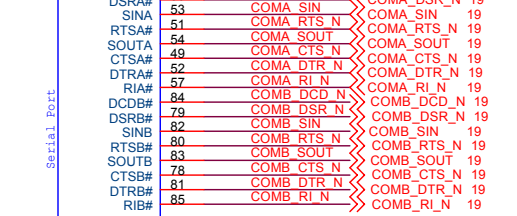
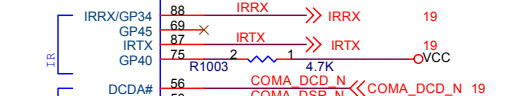
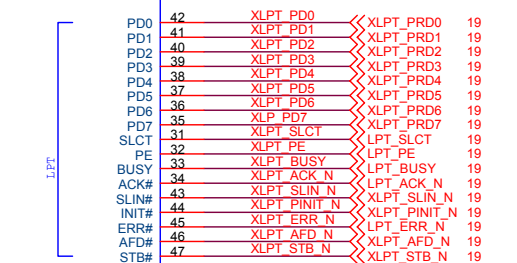
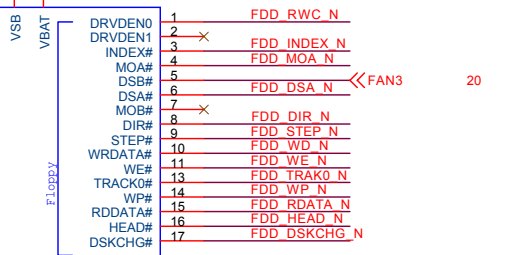
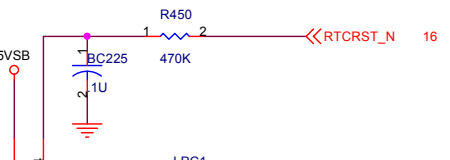
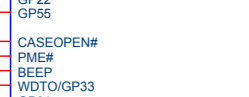
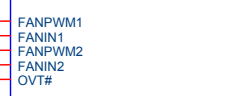
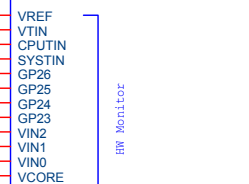
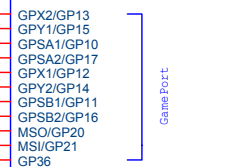
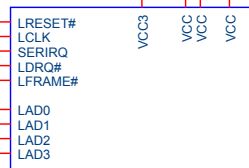
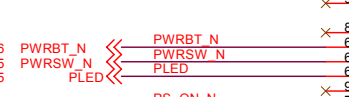
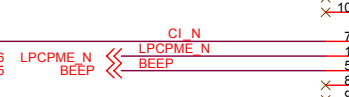
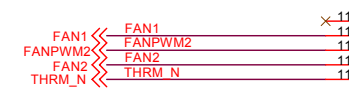
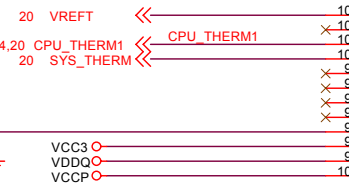
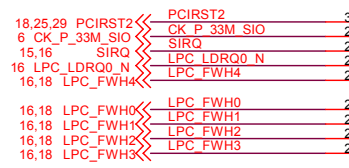
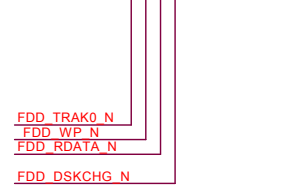
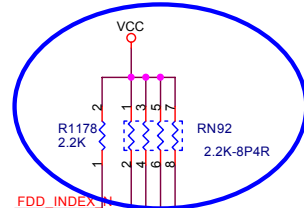
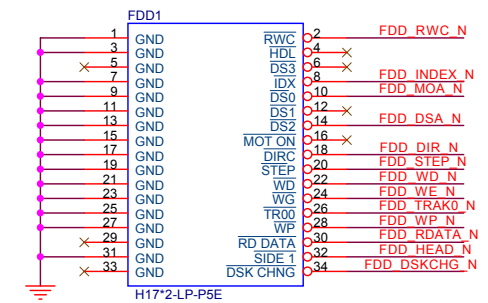
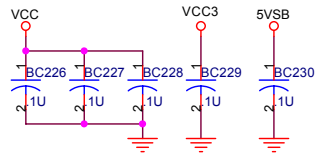
ECS Elitegroup Computer Systems

Title: **845GV-M2**

Size B Document Number: **ATX Power&Front Panel** Rev 1.2

Date: Tuesday, May 18, 2004 Sheet 6 of 30





ECS Elitegroup Computer Systems

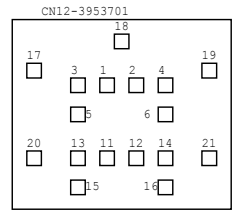
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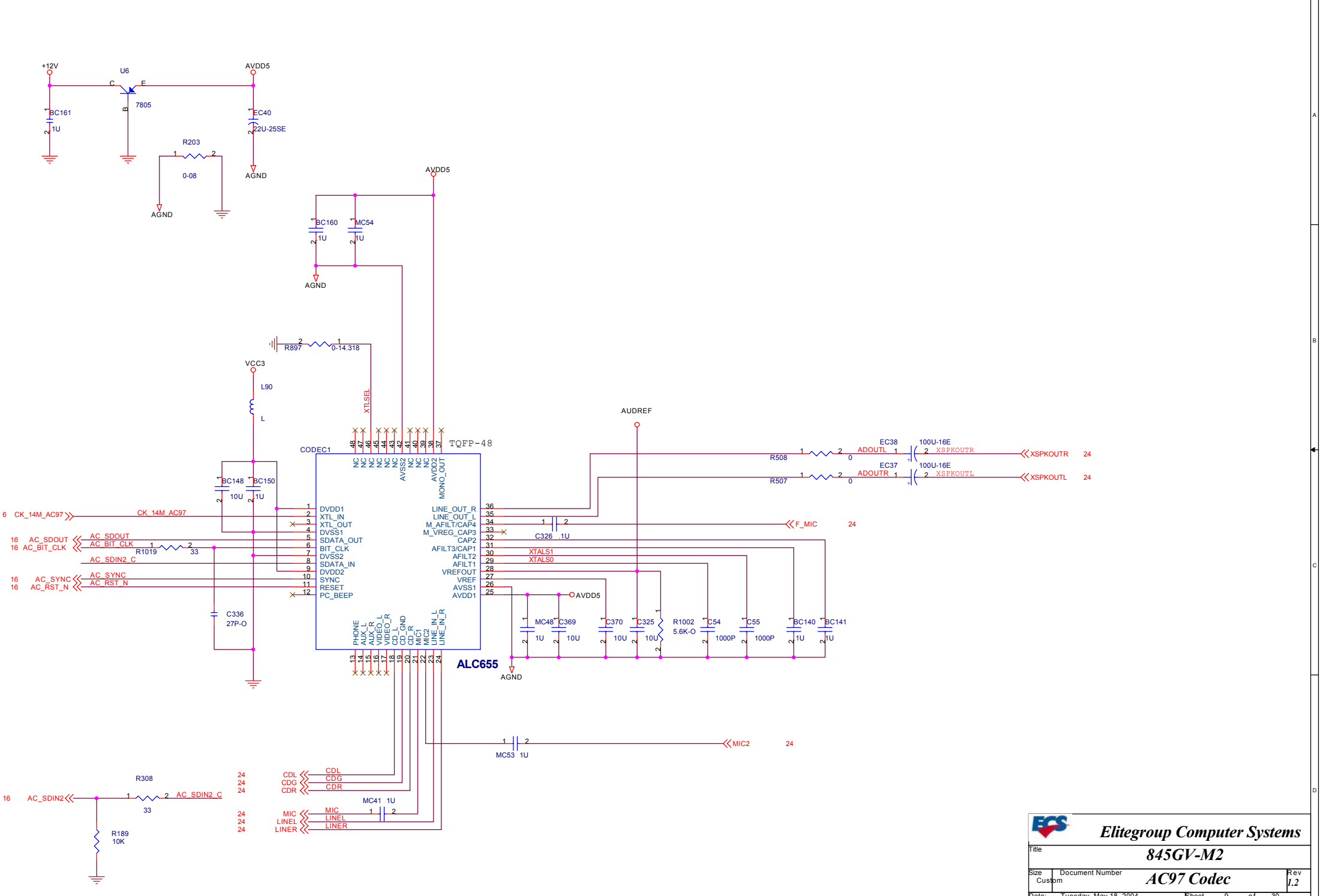
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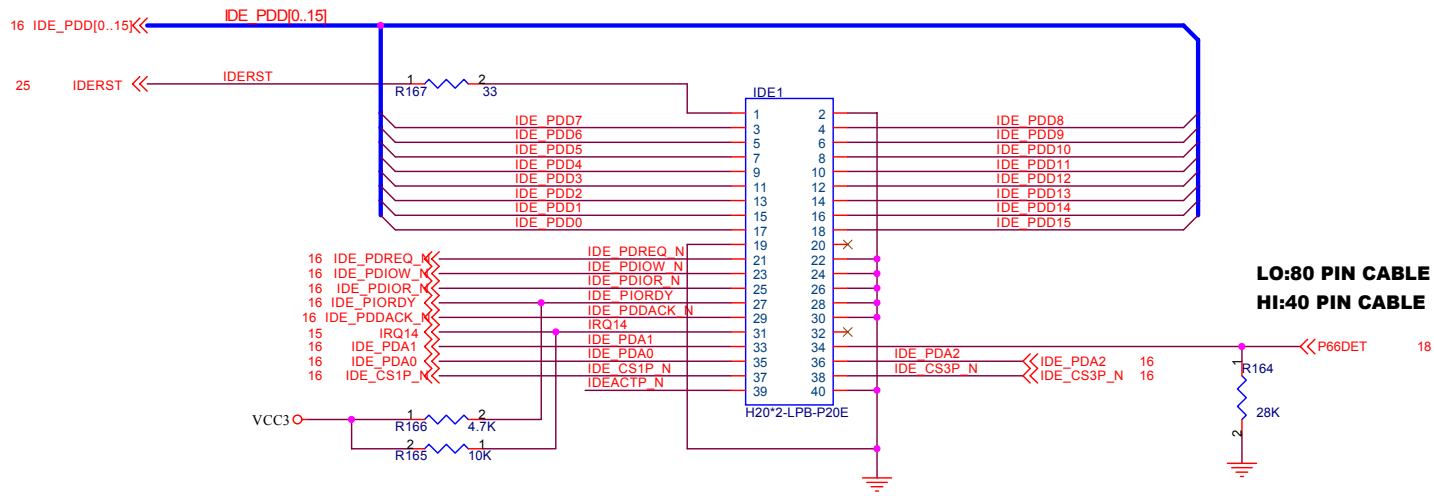
Rev: 1.2

Date: Tuesday, May 18, 2004

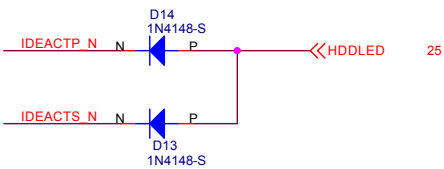
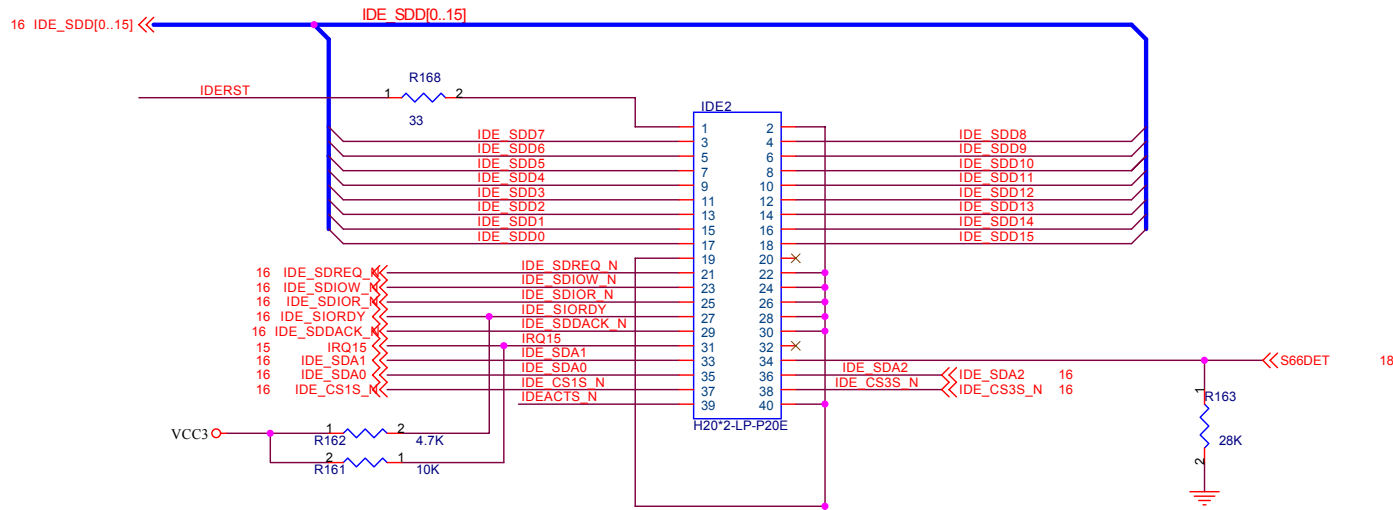
Sheet 8 of 30





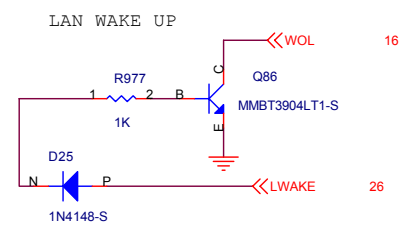
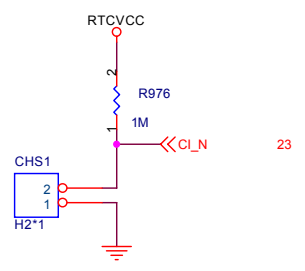
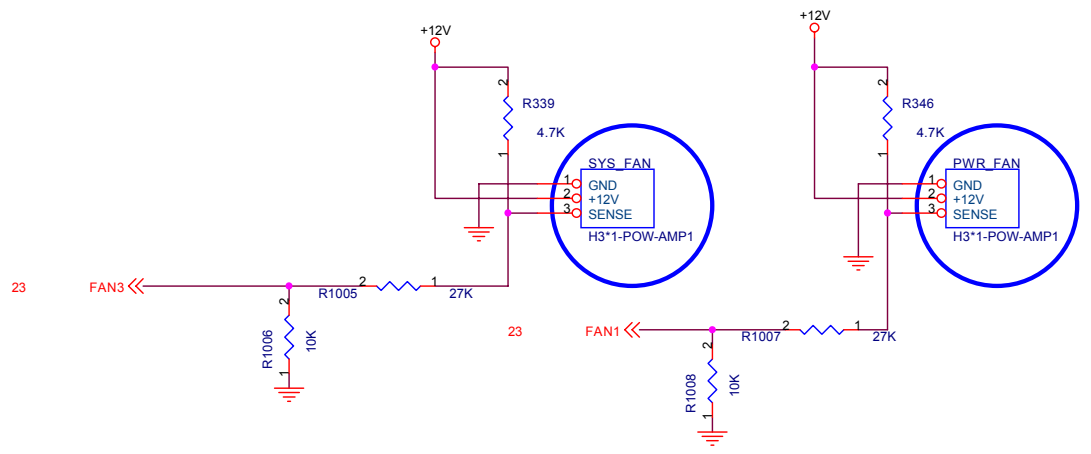
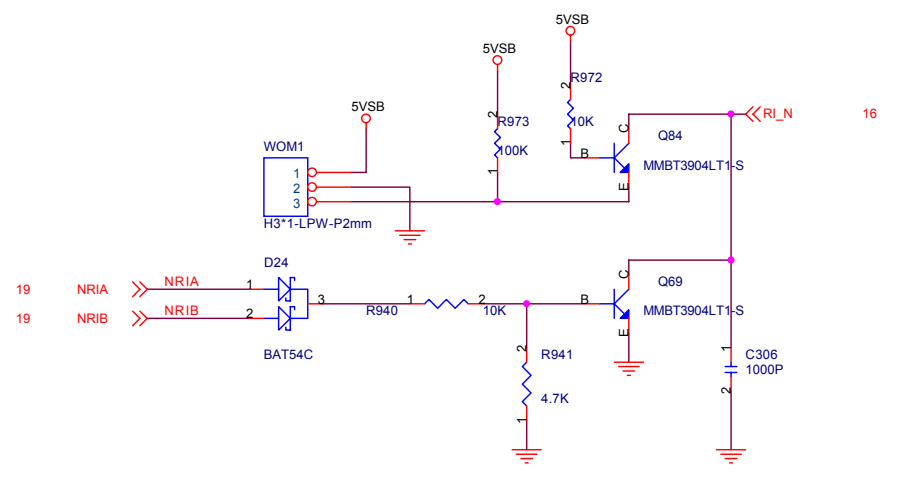
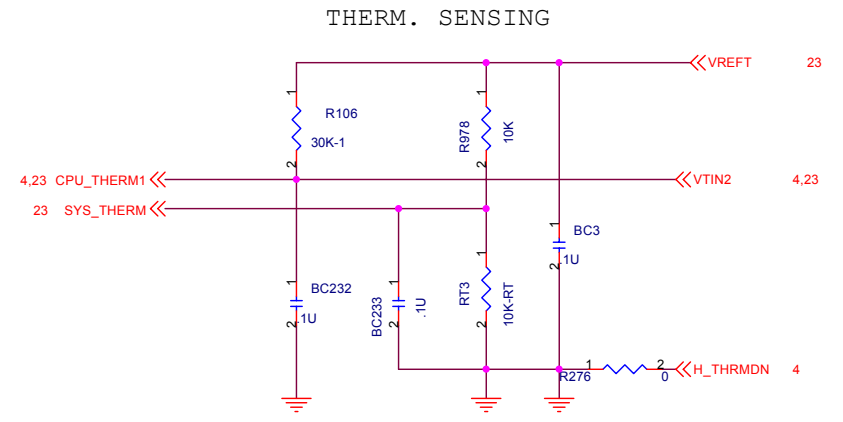
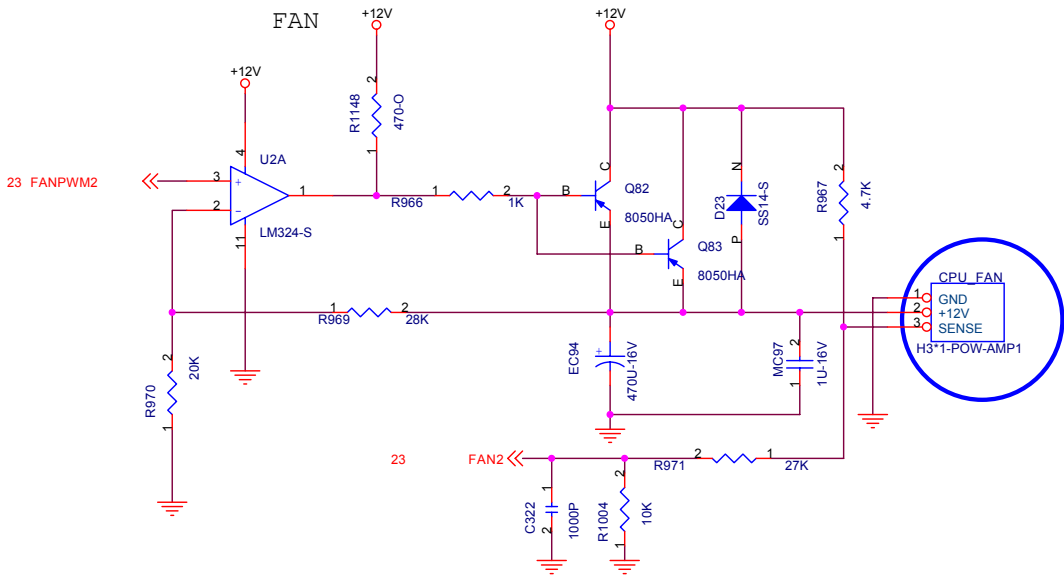


LO:80 PIN CABLE
HI:40 PIN CABLE

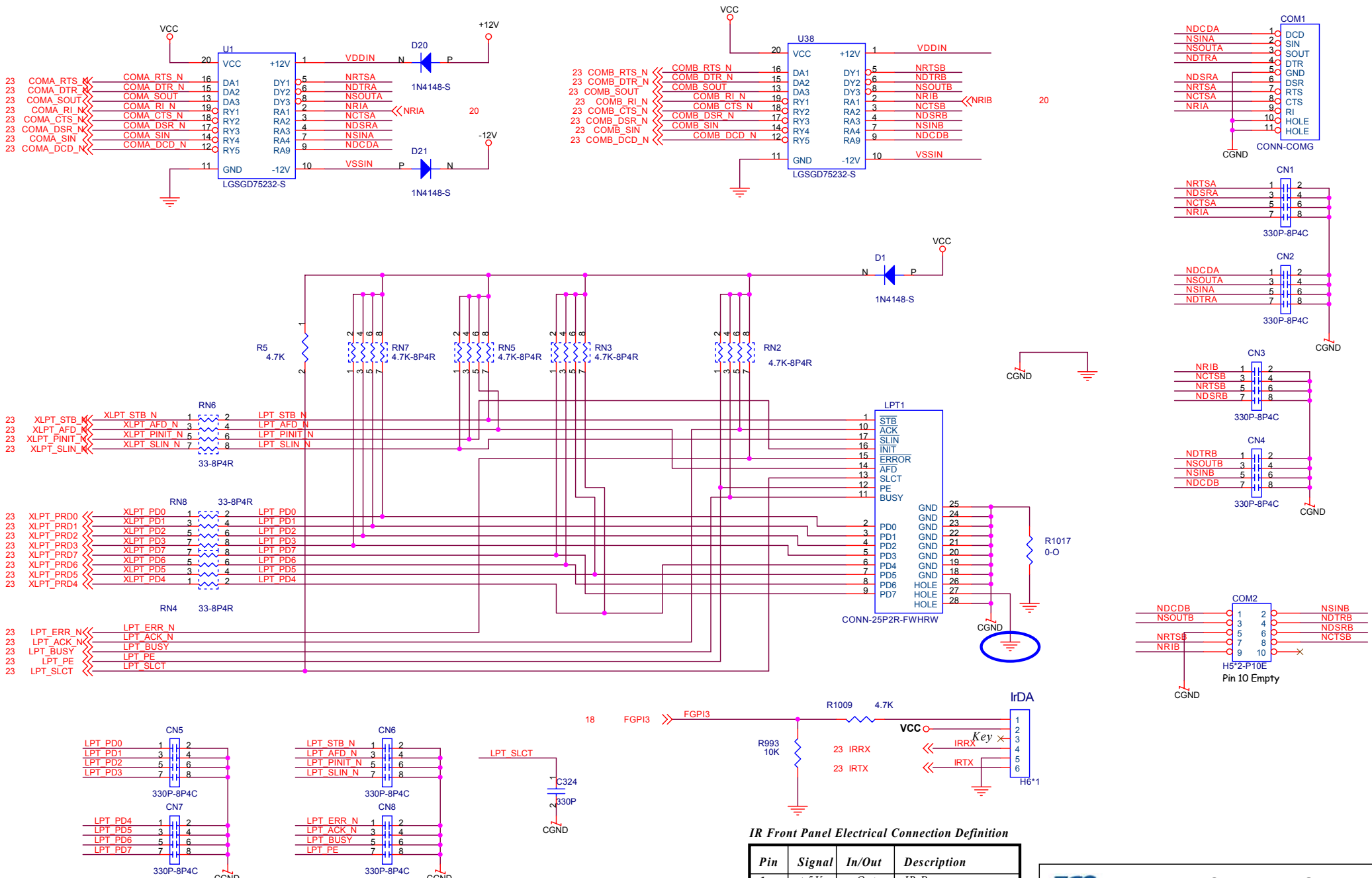


MAX TRACE LENGTH IS 8"

Title 845GV-M2		
Size Custom	Document Number IDE Connector	Rev 1.2
Date: Tuesday, May 18, 2004	Sheet 10	of 30



Title 845GV-M2		
Size Custom	Document Number H/W Monitor	Rev 1.2
Date: Tuesday, May 18, 2004	Sheet 11	of 30



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

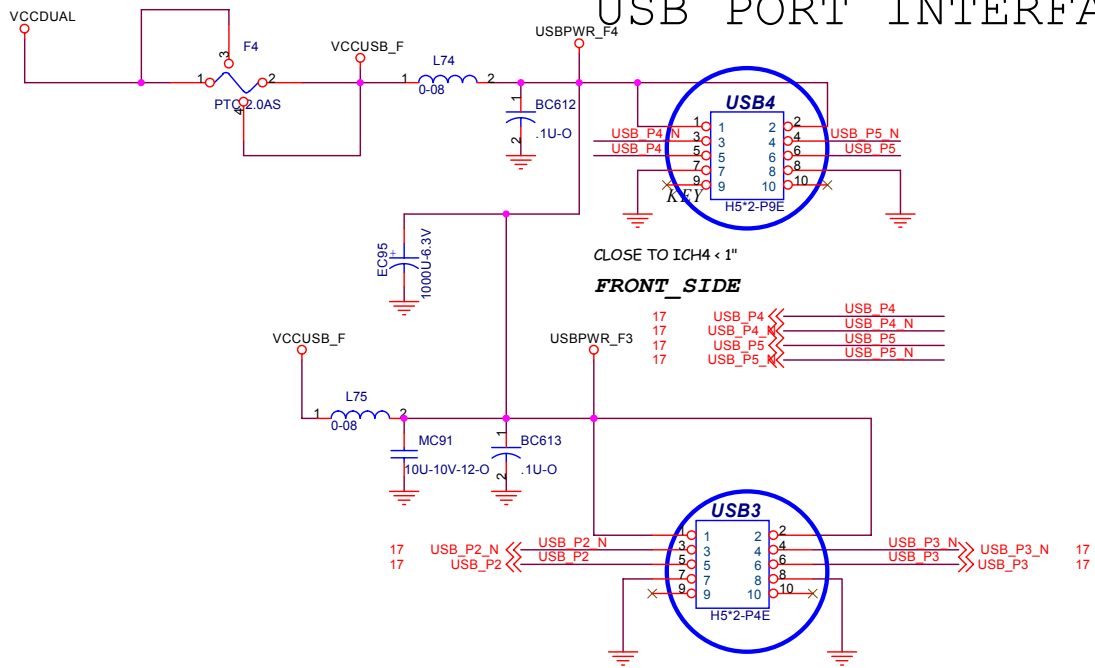
ECS Elitegroup Computer Systems

Title: **845GV-M2**

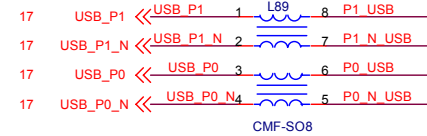
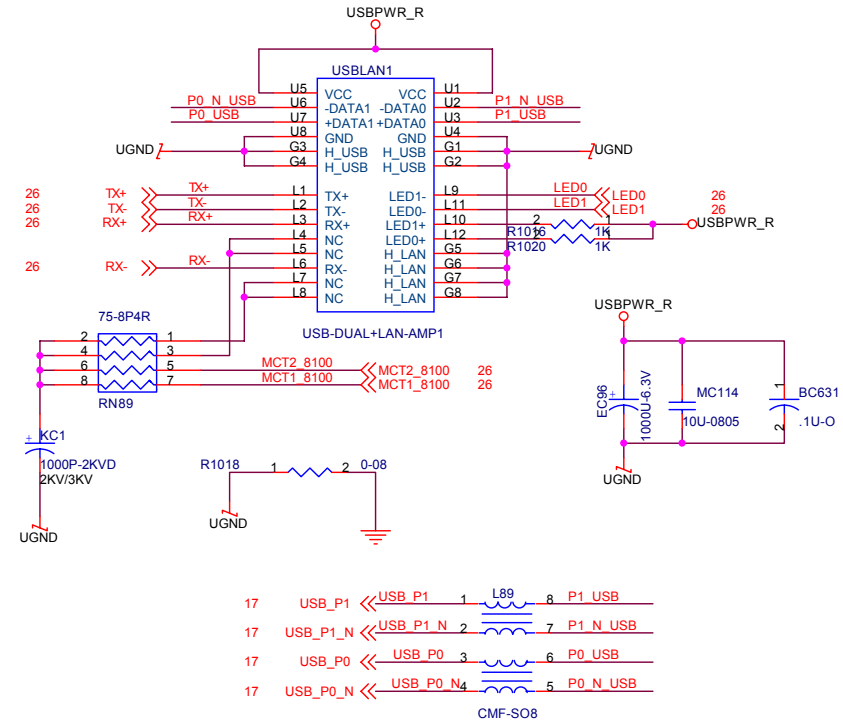
Size: Custom Document Number: **I/O Parts** Rev: 1.2

Date: Tuesday, May 18, 2004 Sheet: 12 of 30

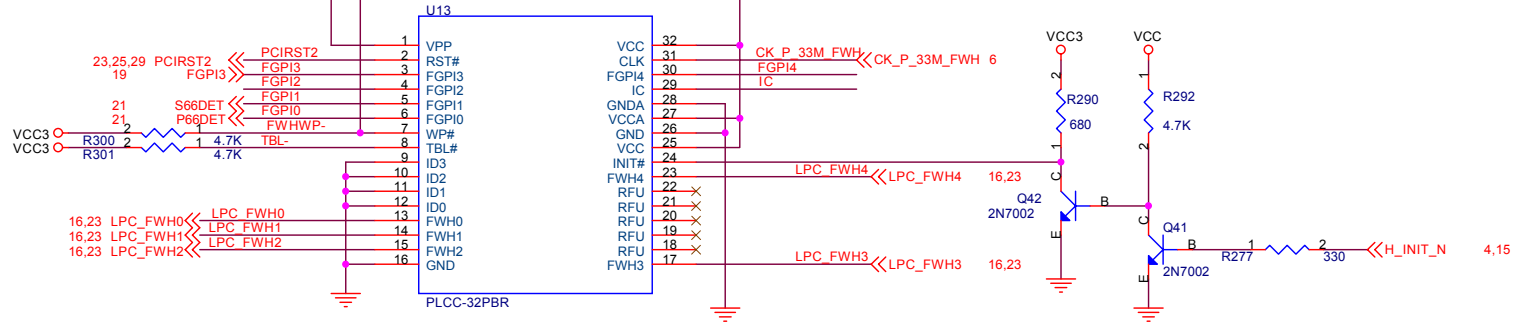
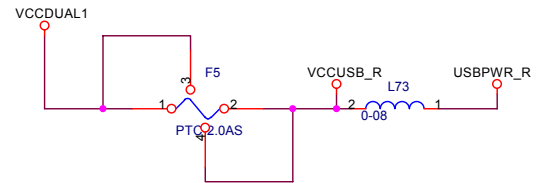
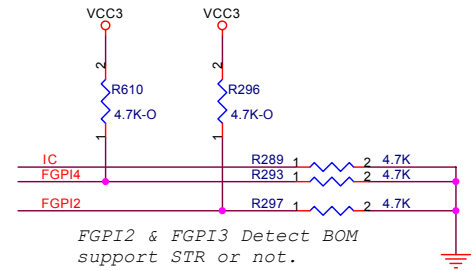
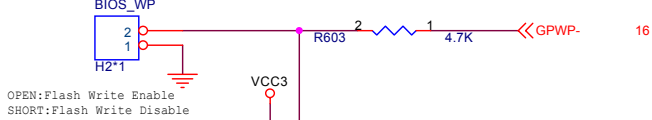
USB PORT INTERFACE



CLOSE TO ICH4 < 1"
FRONT SIDE



For Legend

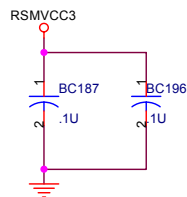


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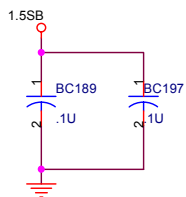
Title: **845GV-M2**

Size: Document Number **USB/FMH** Rev 1.2

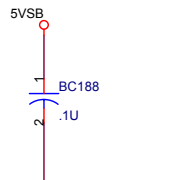
Date: Tuesday, May 18, 2004 Sheet 13 of 30



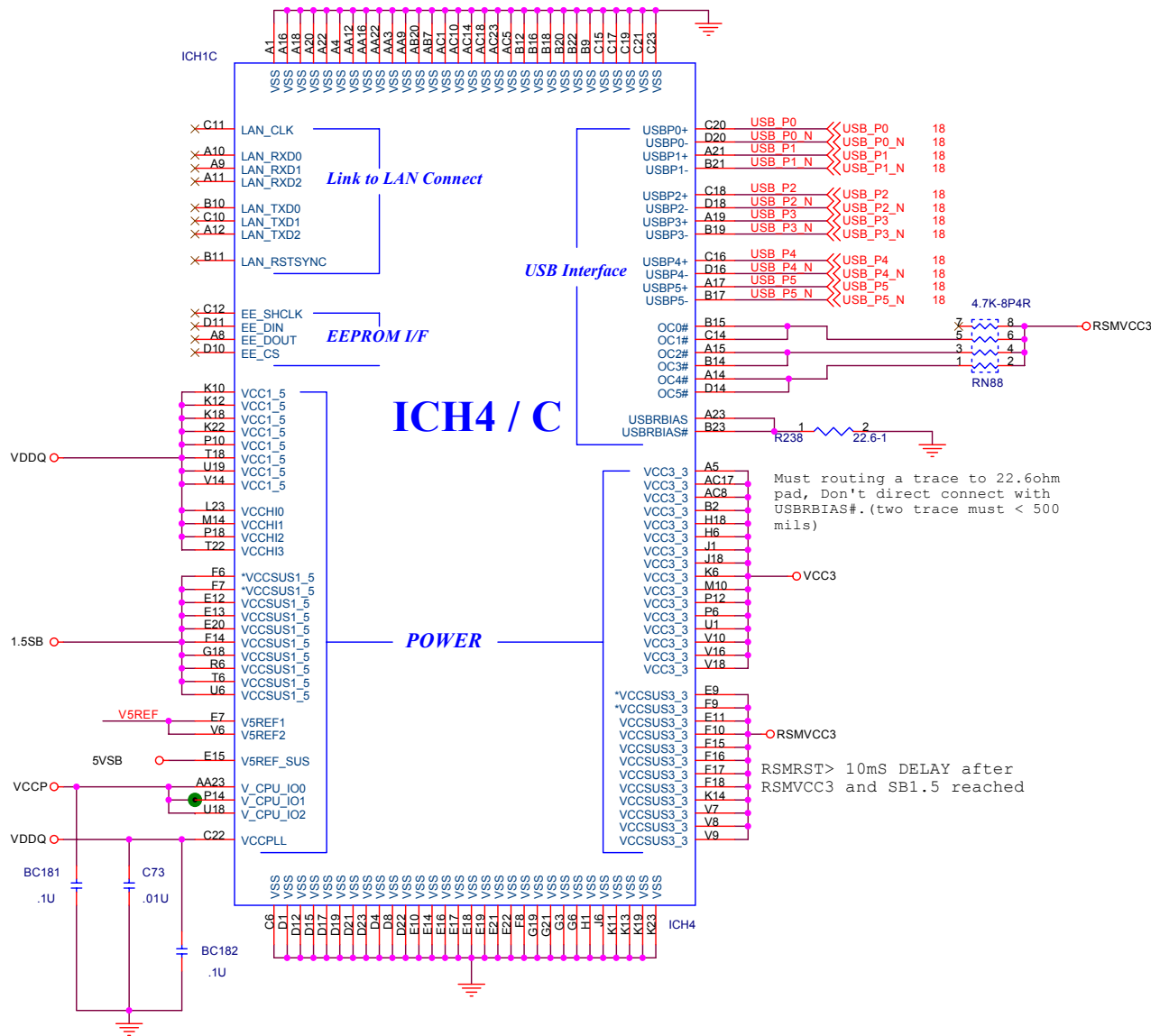
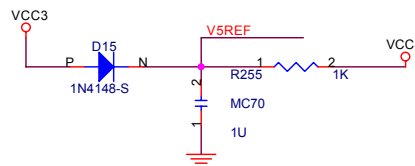
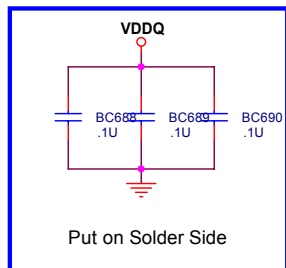
Place near pin A22,AC5

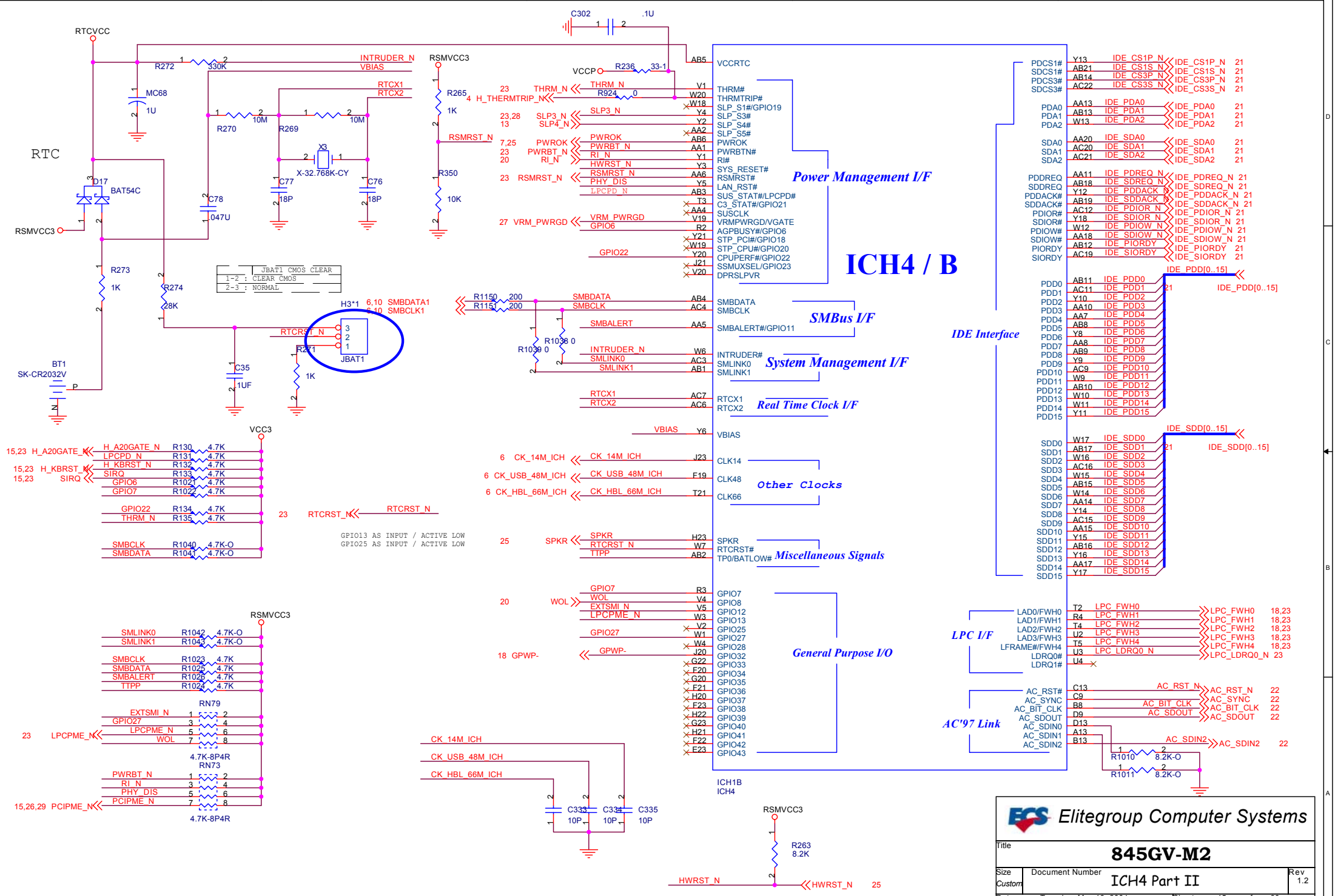


Place near pin A16,AC1



Place near pin A16



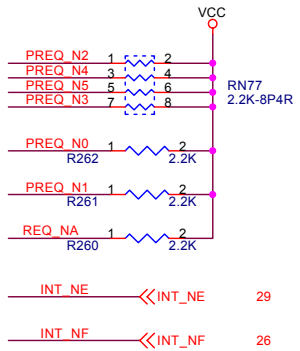
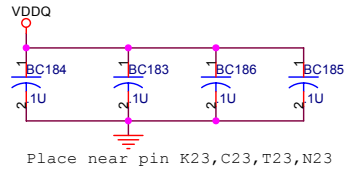
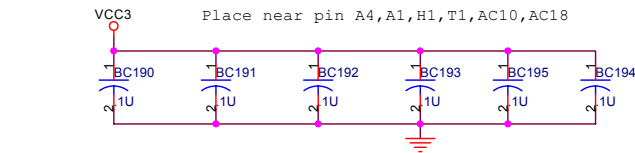


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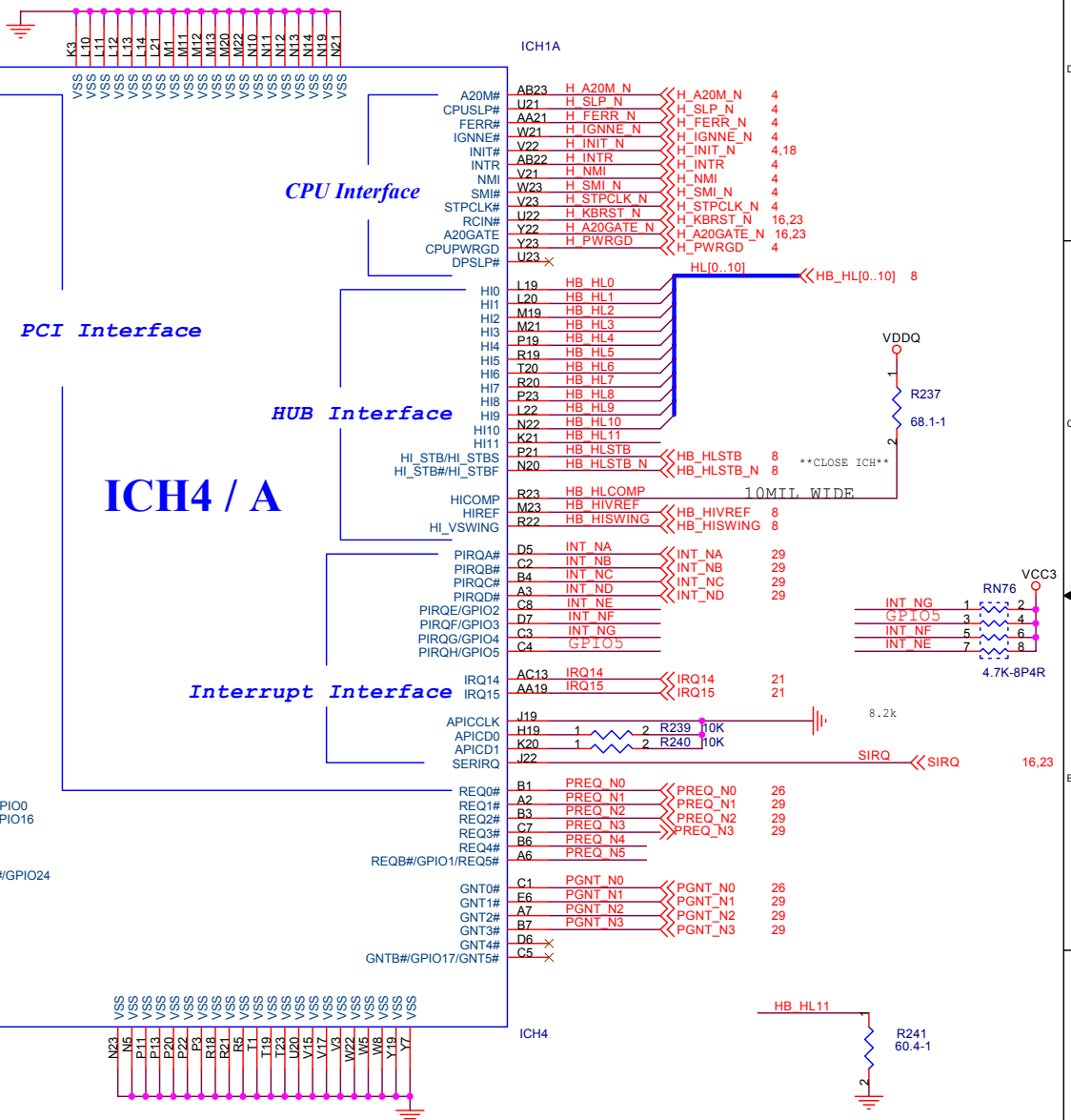
Title: **845GV-M2**

Size: Custom | Document Number: **ICH4 Part II** | Rev: 1.2

Date: Tuesday, May 18, 2004 | Sheet: 15 of 30



26,29	P_AD0	P_AD0	H5	AD0
26,29	P_AD1	P_AD1	J3	AD1
26,29	P_AD2	P_AD2	H3	AD2
26,29	P_AD3	P_AD3	K1	AD3
26,29	P_AD4	P_AD4	G5	AD4
26,29	P_AD5	P_AD5	J4	AD5
26,29	P_AD6	P_AD6	H4	AD6
26,29	P_AD7	P_AD7	J5	AD7
26,29	P_AD8	P_AD8	K2	AD8
26,29	P_AD9	P_AD9	G2	AD9
26,29	P_AD10	P_AD10	L1	AD10
26,29	P_AD11	P_AD11	G4	AD11
26,29	P_AD12	P_AD12	L2	AD12
26,29	P_AD13	P_AD13	H2	AD13
26,29	P_AD14	P_AD14	L3	AD14
26,29	P_AD15	P_AD15	F5	AD15
26,29	P_AD16	P_AD16	F4	AD16
26,29	P_AD17	P_AD17	N1	AD17
26,29	P_AD18	P_AD18	E5	AD18
26,29	P_AD19	P_AD19	N2	AD19
26,29	P_AD20	P_AD20	E3	AD20
26,29	P_AD21	P_AD21	N3	AD21
26,29	P_AD22	P_AD22	E4	AD22
26,29	P_AD23	P_AD23	M5	AD23
26,29	P_AD24	P_AD24	E2	AD24
26,29	P_AD25	P_AD25	P1	AD25
26,29	P_AD26	P_AD26	E1	AD26
26,29	P_AD27	P_AD27	P2	AD27
26,29	P_AD28	P_AD28	D3	AD28
26,29	P_AD29	P_AD29	R1	AD29
26,29	P_AD30	P_AD30	D2	AD30
26,29	P_AD31	P_AD31	P4	AD31
26,29	P_CBE_NK	P_CBE_N0	J2	C/BE#0
26,29	P_CBE_NK	P_CBE_N1	K4	C/BE#1
26,29	P_CBE_NK	P_CBE_N2	M4	C/BE#2
26,29	P_CBE_NK	P_CBE_N3	N4	C/BE#3
26,29	P_DEVSEL_N	P_DEVSEL_N	M3	DEVSEL#
26,29	P_FRAME_N	P_FRAME_N	F1	FRAME#
26,29	P_IRDY_N	P_IRDY_N	L5	IRDY#
26,29	P_TRDY_N	P_TRDY_N	E2	TRDY#
26,29	P_STOP_N	P_STOP_N	E3	STOP#
26,29	P_PAR_N	P_PAR_N	G1	PAR
26,29	P_CIRST_N	P_CIRST_N	L5	PCIRST#
29	P_LOCK_N	P_LOCK_N	M2	PLOCK#
26,29	P_SERR_N	P_SERR_N	K5	SERR#
26,29	P_PERR_N	P_PERR_N	L4	PERR#
16,26,29	PCIPME_N	PCIPME_N	W2	PME#
	REQ_NA	REQ_NA	B5	REQA#/GPIO0
			X E8	GNTA#/GPIO16
25	SUSLED		AC2	CLKRUN#/GPIO24
6	CK_P_33M_ICH	CK_P_33M_ICH	P5	PCICLK

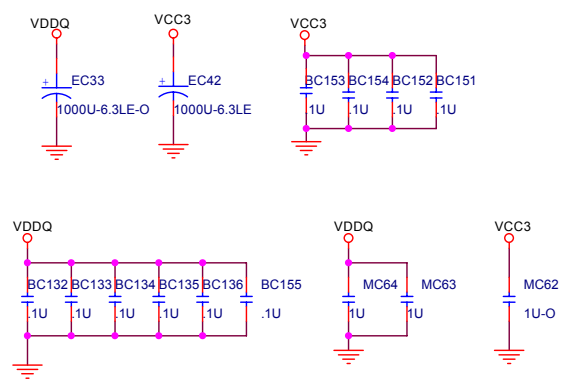
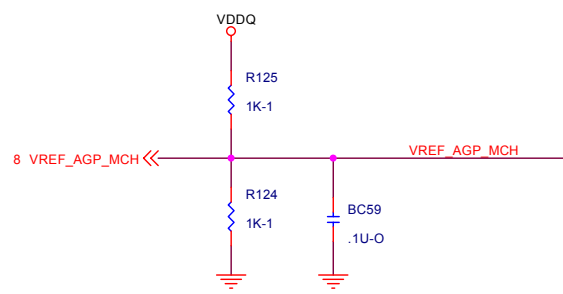



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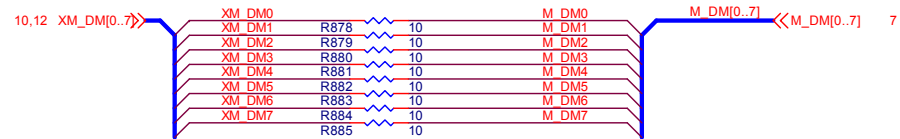
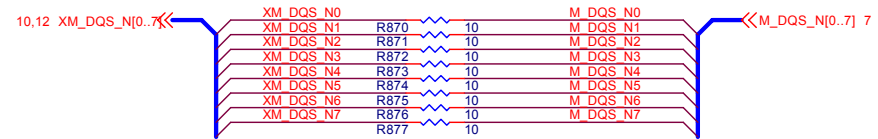
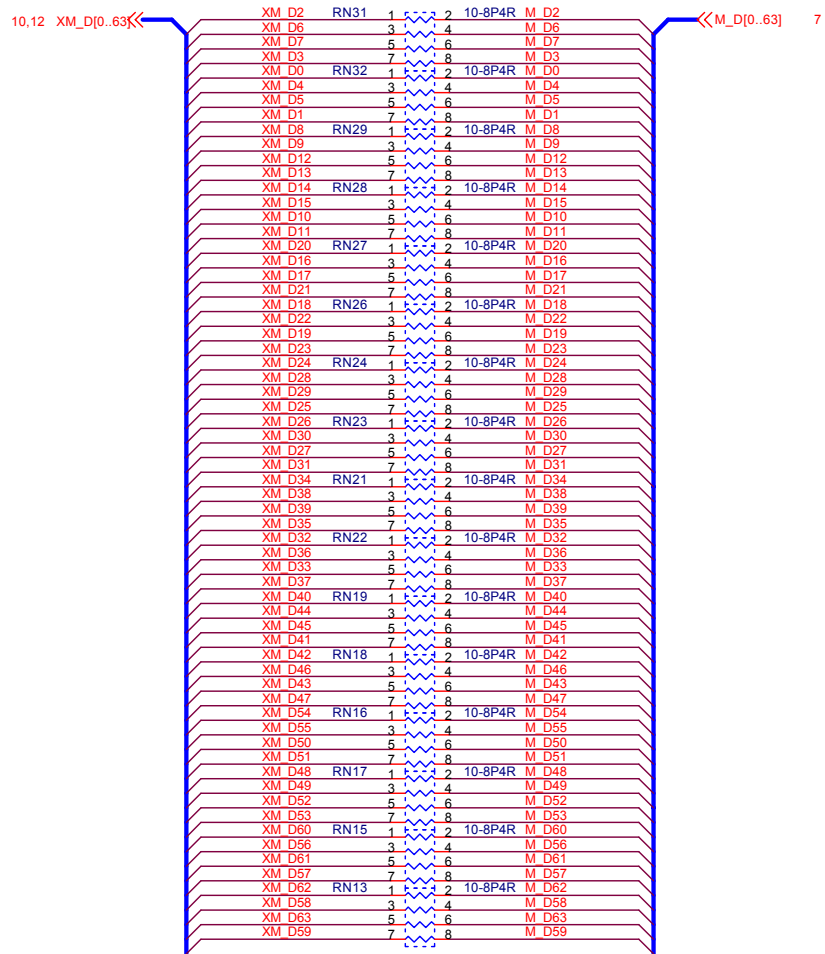
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Size: Custom Document Number: ICH4 Part I Rev: 1.2

Date: Tuesday, May 18, 2004 Sheet: 16 of 30



 Elitegroup Computer Systems		
Title		845GV-M2
Size	Document Number	Rev
B	AGP 4X Slot 1.5V	1.2
Date:	Tuesday, May 18, 2004	Sheet 17 of 30



 Elitegroup Computer Systems			
Title		845GV-M2	
Size	Document Number	DDR Serial Resistors	
Date:	Tuesday, May 18, 2004	Sheet	20 of 30
			Rev 1.2

7.12 M_CS_N[0..3] << M_CS_N[0..3]
 7.12 M_CKE[0..3] << M_CKE[0..3]

2_5VSTR

7.12 M_A[0..12] >> M_A0
 M_A1
 M_A2
 M_A3
 M_A4
 M_A5
 M_A6
 M_A7
 M_A8
 M_A9
 M_A10
 M_A11
 M_A12

7.12 M_SBS0 >> M_SBS0
 7.12 M_SBS1 >> M_SBS1

M_CS_N0
 M_CS_N1

11.12 XM_DM[0..7] >> XM_DM0
 XM_DM1
 XM_DM2
 XM_DM3
 XM_DM4
 XM_DM5
 XM_DM6
 XM_DM7

7.12 M_SWEA_N << M_SWEA_N
 7.12 M_SCASA_N << M_SCASA_N
 7.12 M_SRASA_N << M_SRASA_N

M_CKE0
 M_CKE1

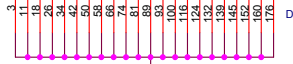
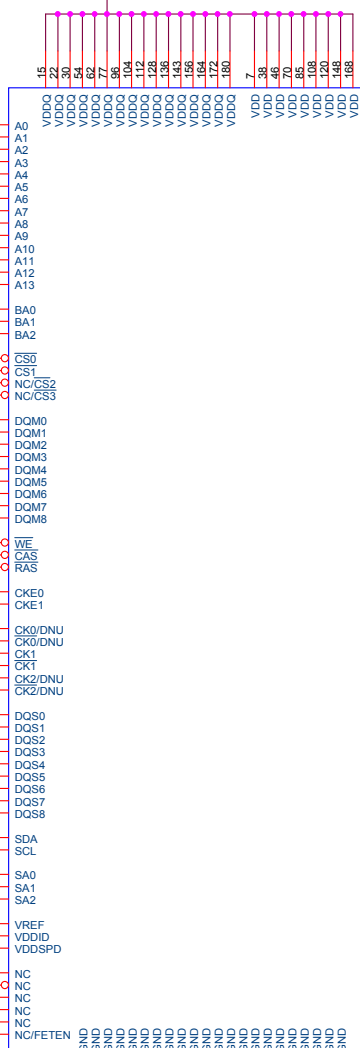
7 M_DCLK1 << CK0/DNU
 7 M_DCLK1_M << CK0/DNU
 7 M_DCLK0 << CK1
 7 M_DCLK0_M << CK1
 7 M_DCLK2 << CK2/DNU
 7 M_DCLK2_M << CK2/DNU

11.12 XM_DQS_N[0..7] >> XM_DQS_N0
 XM_DQS_N1
 XM_DQS_N2
 XM_DQS_N3
 XM_DQS_N4
 XM_DQS_N5
 XM_DQS_N6
 XM_DQS_N7

6.16 SMBDATA << SMBDATA1
 6.16 SMBCLK << SMBCLK1

VREF_DDR
 2_5VSTR

2_5VSTR
 W:S = 12:1:2
 R231 100-1
 VREF_DDR
 R232 100-1
 BC74
 10U



Place Near to DDR

2_5VSTR

7.12 M_AB1 >> M_AB1
 7.12 M_AB2 >> M_AB2
 7.12 M_AB4 >> M_AB4
 7.12 M_ABS >> M_ABS

7.12 M_SBS0 >> M_SBS0
 7.12 M_SBS1 >> M_SBS1

M_CS_N2
 M_CS_N3

7.12 M_SWEA_N << M_SWEA_N
 7.12 M_SCASA_N << M_SCASA_N
 7.12 M_SRASA_N << M_SRASA_N

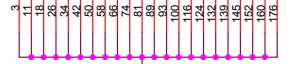
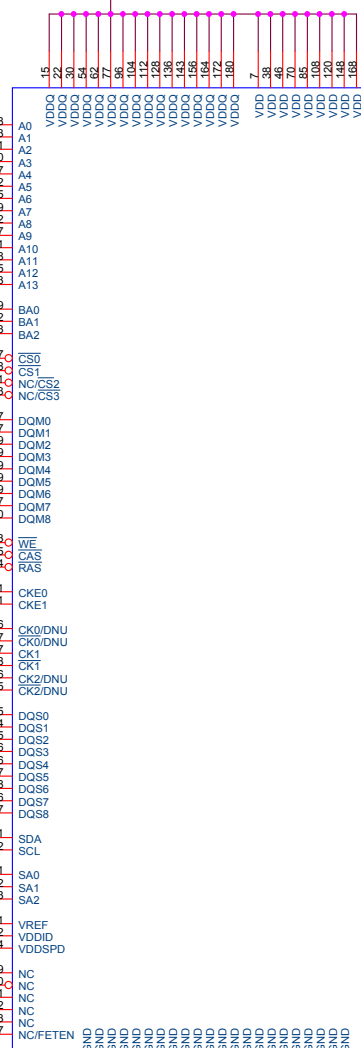
M_CKE2
 M_CKE3

7 M_DCLK4 << CK0/DNU
 7 M_DCLK4_M << CK0/DNU
 7 M_DCLK3 << CK1
 7 M_DCLK3_M << CK1
 7 M_DCLK5 << CK2/DNU
 7 M_DCLK5_M << CK2/DNU

XM_DQS_N0
 XM_DQS_N1
 XM_DQS_N2
 XM_DQS_N3
 XM_DQS_N4
 XM_DQS_N5
 XM_DQS_N6
 XM_DQS_N7

SMBDATA1
 SMBCLK1

2_5VSTR
 VREF_DDR
 1.1U
 BC644
 0.1U



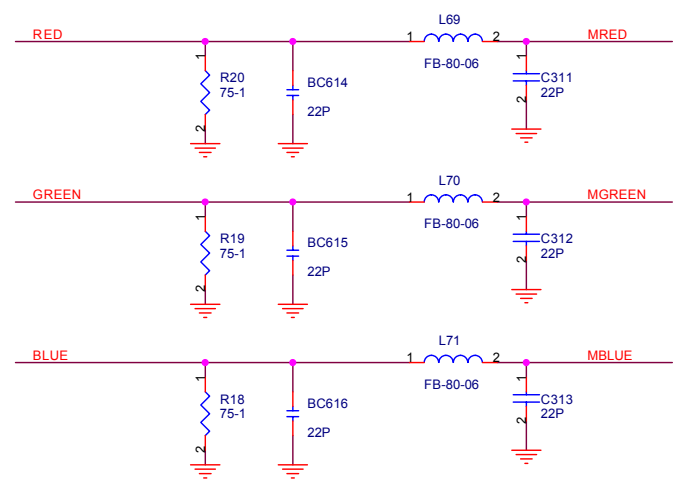
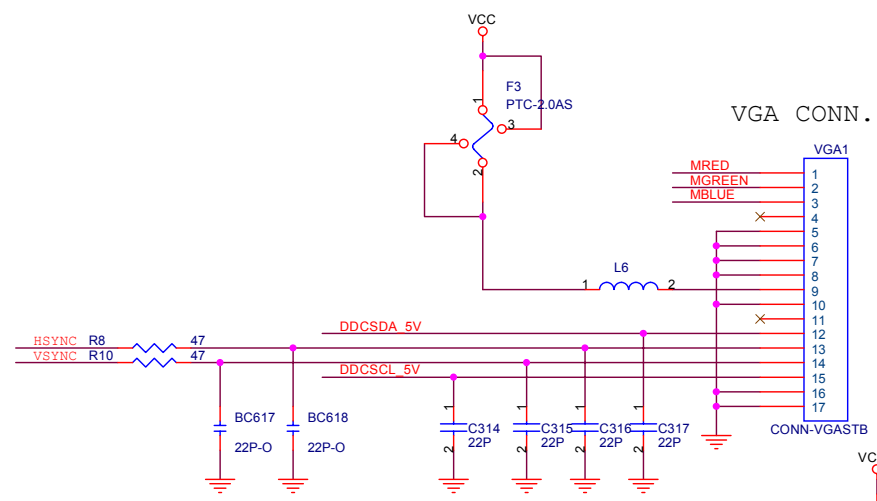
Place Near to DDR

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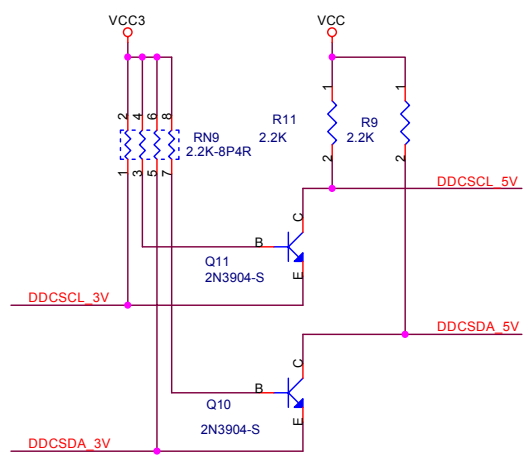
Title: **845GV-M2**

Size: Custom Document Number
 DIMM 1&2(DDR SDRAM) Rev 1.2

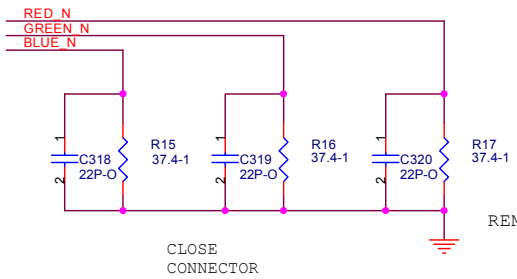
Date: Tuesday, May 18, 2004 Sheet 21 of 30



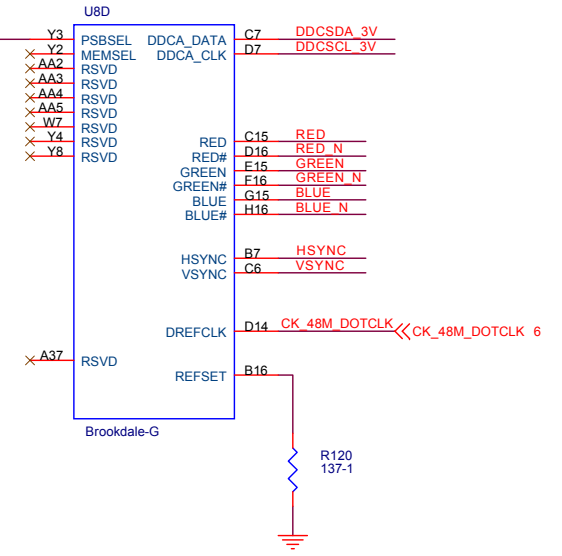
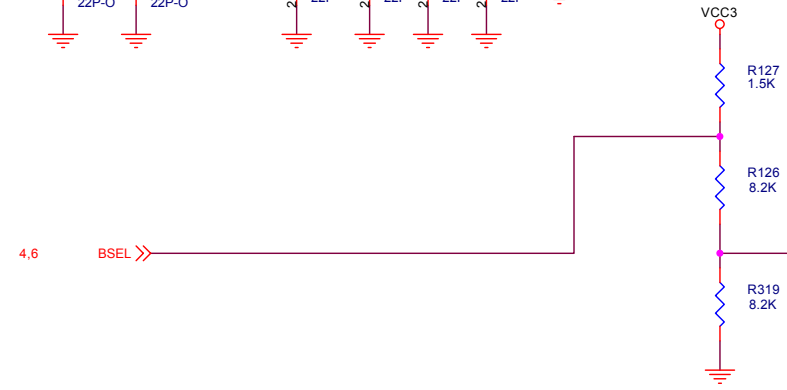
CLOSE TO VGA CONN
 #



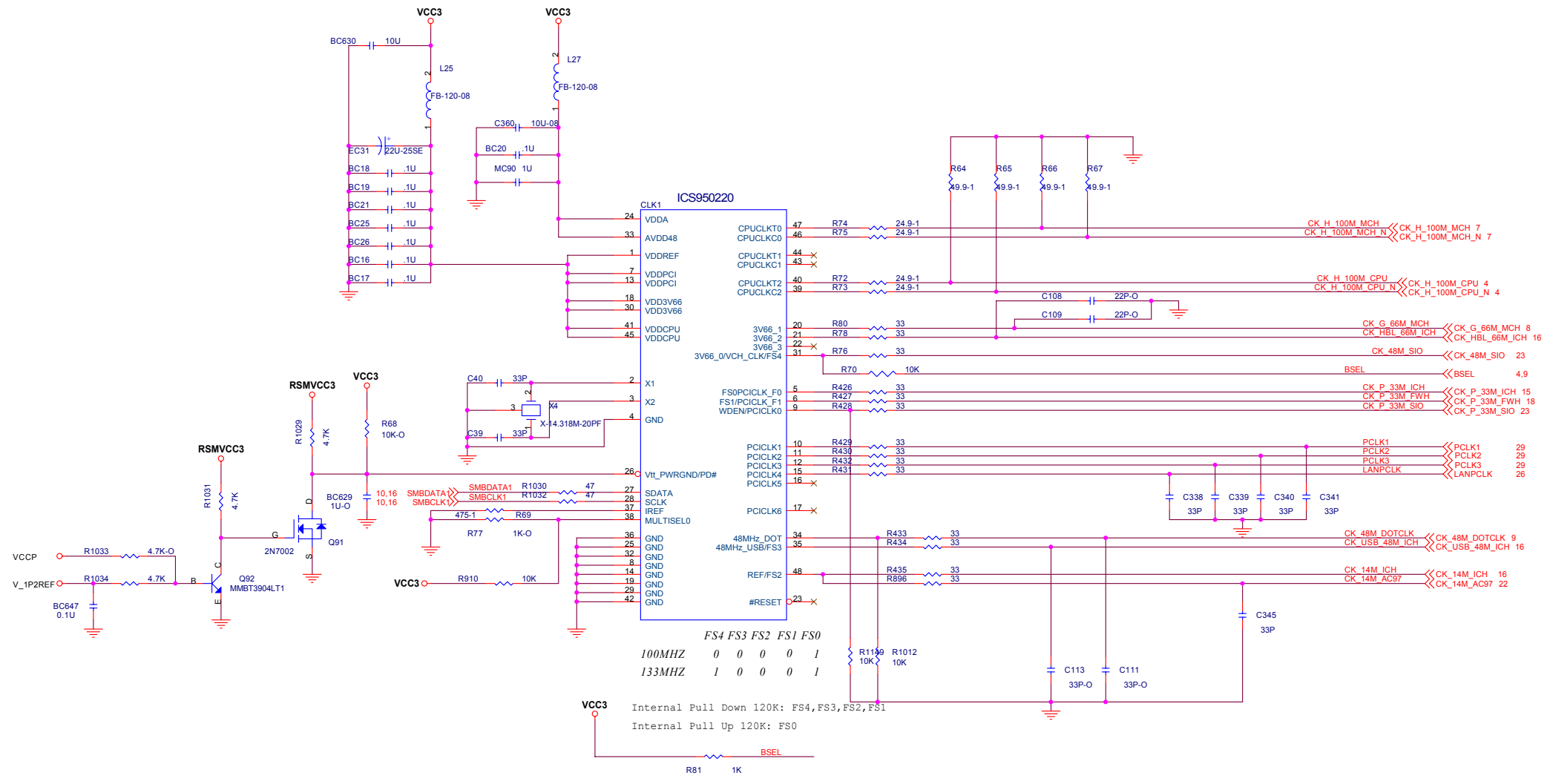
5V<->3V
 TRANSLATION/ISOLATION

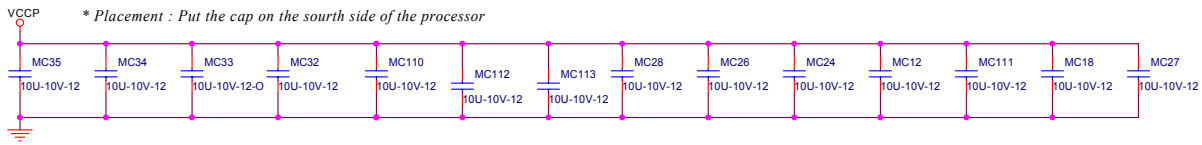
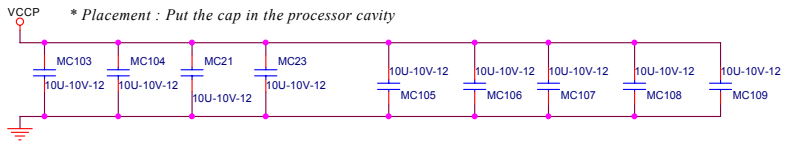
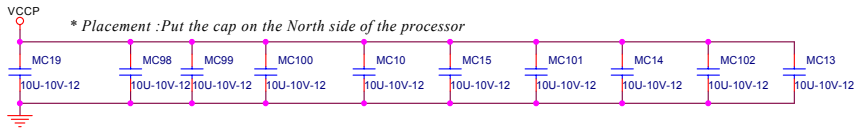


REMOVE R15,R16,R17 in BOM

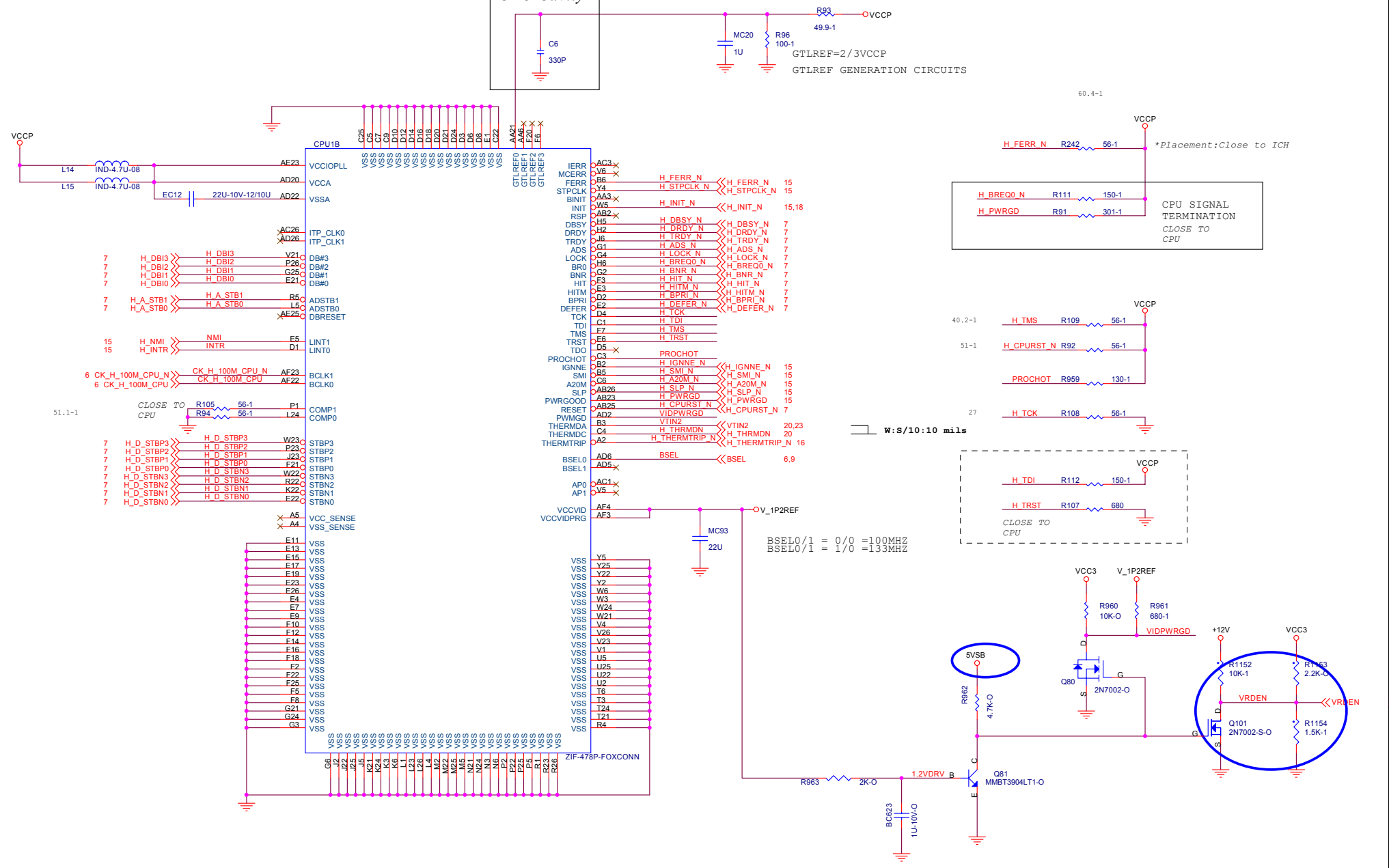


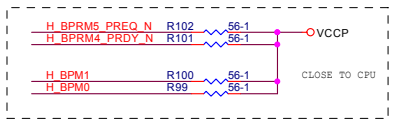
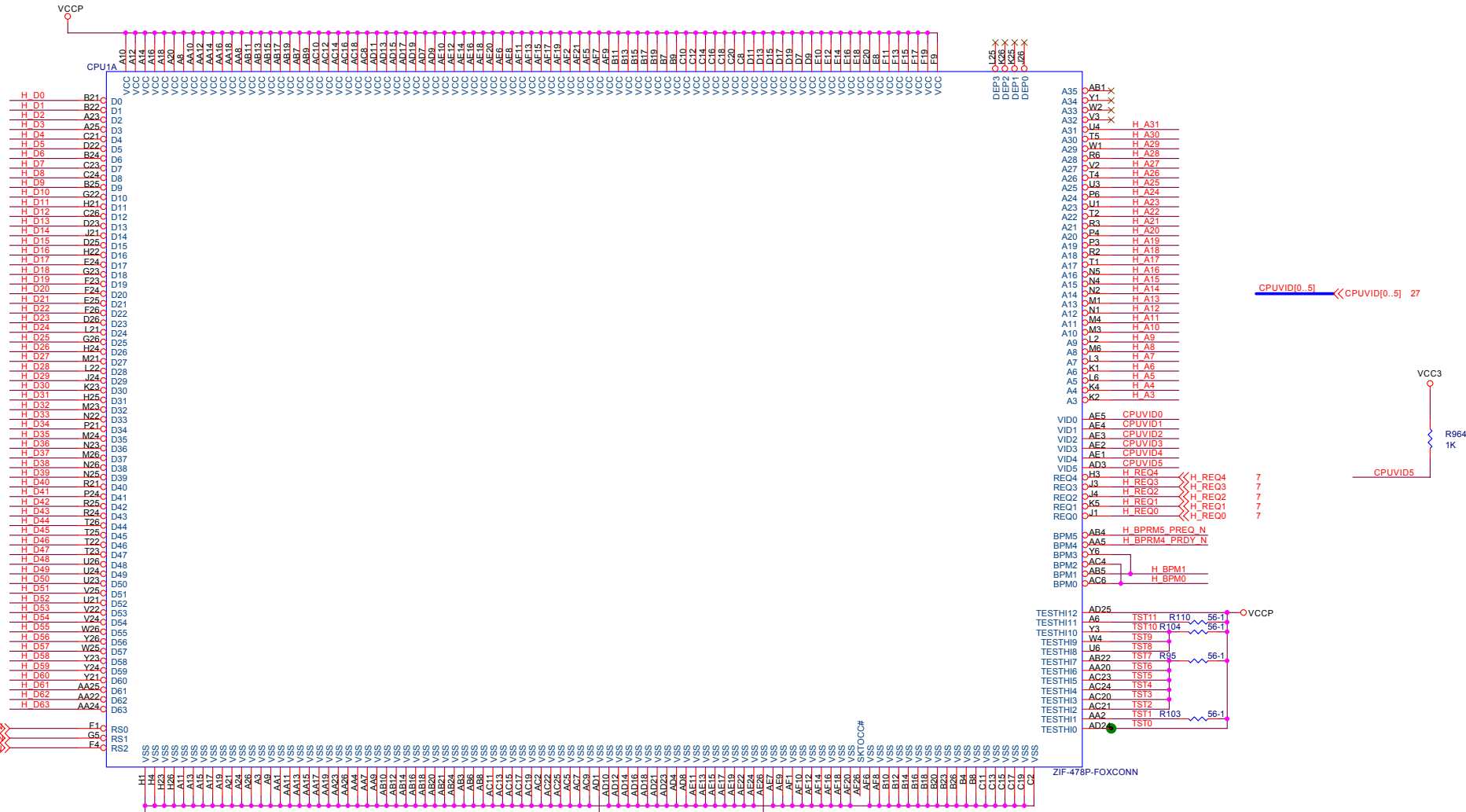
Title 845GV-M2		
Size Custom	Document Number I845G(GMCH) Part III	Rev 1.2
Date: Tuesday, May 18, 2004		Sheet 22 of 30





Place Inside CPU Cavity





51R

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Title: **845GV-M2**

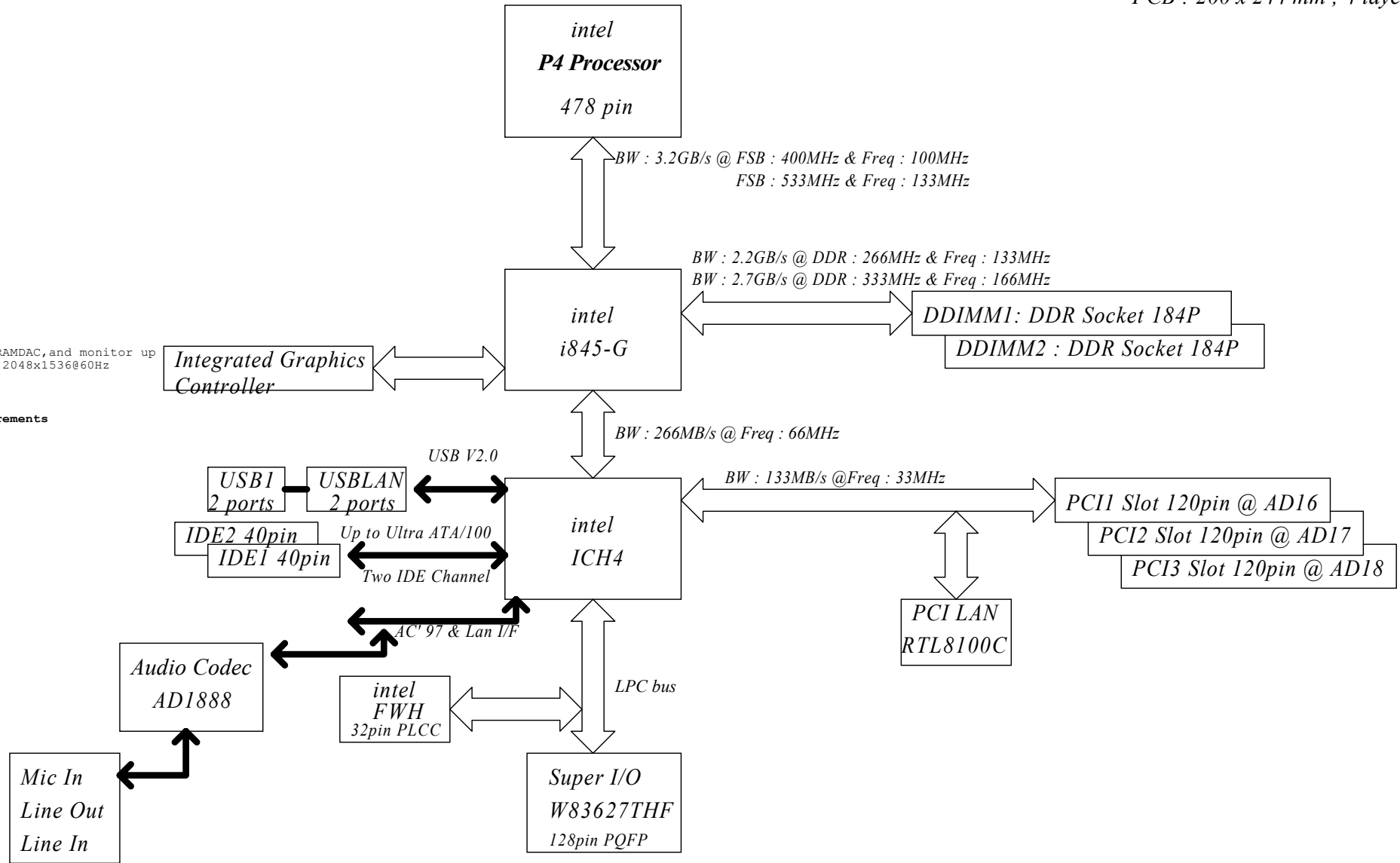
Size: Custom | Document Number: P4 478P Part A | Rev: 1.2


Date: Tuesday, May 18, 2004 | Sheet: 28 of 30

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



 Elitegroup Computer Systems			
Title		845GV-M2	
Size	Document Number	System Block Diagram	
		Rev	1.2
Date:	Tuesday, May 18, 2004	Sheet	29 of 30

845GV-M2

PCB:15-???-??????

BOM:89-???-??????

Schematics Version History Table :


Circuit Ver.	PCB Ver.	Total Page	Modificatory Page	Date
A		30		
1.0		30		
1.1		30	Page25, Page27	

** 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	13		
AGP 4X Slot 1.5V	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		
Version History	30		

Job	Signature	Date
Schematics Designer		
Layout Company		
Approval		



845GV-M2

Title: 845GV-M2

Size: Custom Document Number: Cover Sheet Rev: 1.2

Date: Tuesday, May 18, 2004 Sheet 30 of 30