L53RI0 M/B

MADE IN TAIWAN -- DC1-DT1

L53RI0 M/B and Daughter P/N LIST:

82GL53000-B0	**MAIN BOARD ASSY L53RI0 REV.B**
37GL53000-B0	**PCB MAIN BD FOR L53RI0 REV:B**
80G2L7020-C0	**AUDIO BD ASSY L70II0 REV:C**
35G2L5020-C0	**PCB AUDIO BD FOR L50II0 REV:C**
80G8L5000-C0	**TOUCHPAD BD FOR L50RI0 R:C**
35G8L5000-C0	**PCB TOUCHPAD BD FOR L50RI0 R:C**
80G9L5000-C0	**MODEM BD FOR L50RI0 R:C**
35G9L5000-C0	**PCB MODEM BD FOR L50RI0 R:C**
80G5L5000-C0	**SWITCH BD FOR L50RI0 R:C**
35G5L5000-C0	**PCB SWITCH BD FOR L50RI0 R:C**
80GPL5000-C0	**ODD BD FOR L50RI0 R:C**
35GPL5000-C0	**PCB ODD BD FOR L50RIO R:C**
80GJL5100-B0	**3G BD ASSY L51AIx REV:B**
35GJL5100-B0	**PCB 3G BD FOR L51AIX REV:B**
80GYL5310-A0	**IR BD ASSY L53IIX VER.A**
35GYL5310-A0	**PCB IR BD FOR L53IIX VER:A**

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Title: **COVER PAGE**

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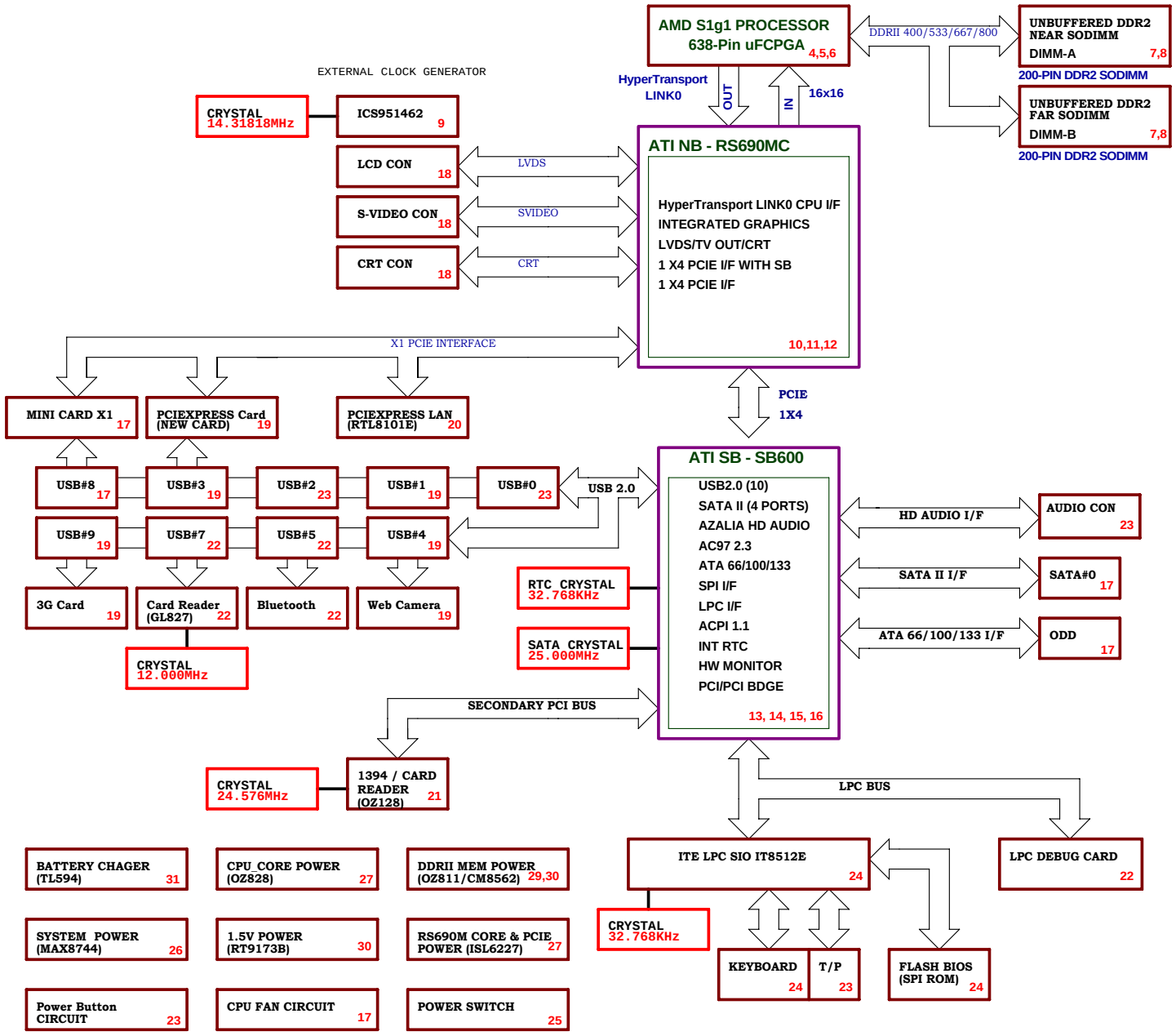
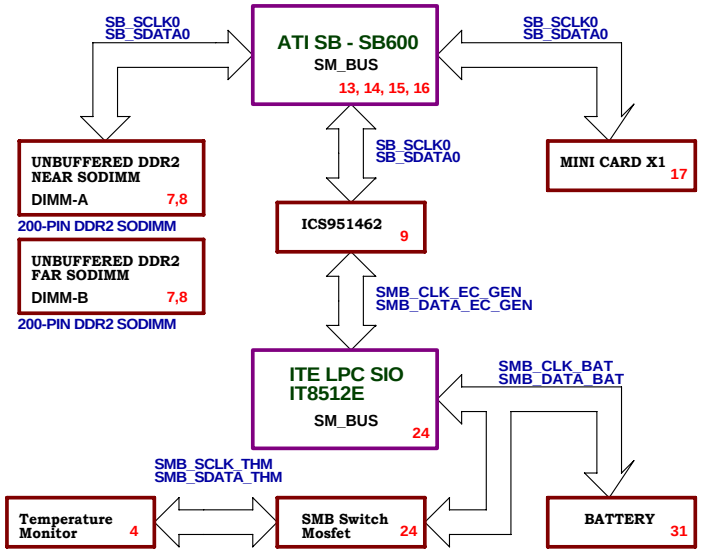
L53RI0 BLOCK DIAGRAM

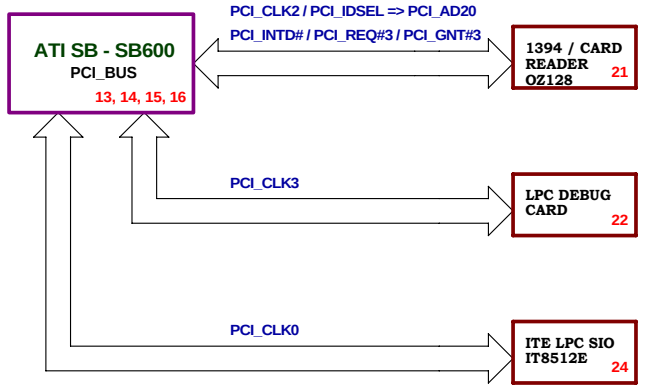
SYSTEM BLOCK DIAGRAM



SB_BUS BLOCK DIAGRAM



PCI_BUS BLOCK DIAGRAM



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Title	BLOCK DIAGRAM	
Size	Document Number 3721 Custom L53RI0	Rev B0.0
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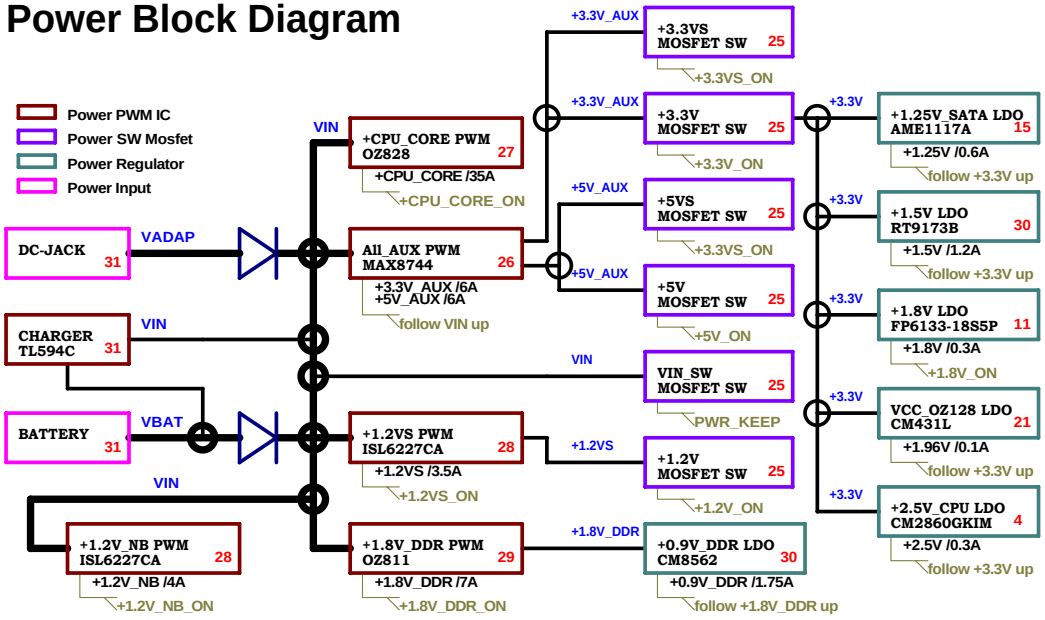
CPU AMD S1g1 POWER RAIL		LAPTOP MODE				
		S0	S1	S3	S4	S5
+CPU_CORE	VID[5:0]	ON	ON	OFF	OFF	OFF
CPU_VDDA	+2.5V	ON	ON	OFF	OFF	OFF
VLDT	+1.2V	ON	ON	OFF	OFF	OFF
VDDIO	+1.8V	ON	ON	ON	OFF	OFF
VTT	+0.9V	ON	ON	ON	OFF	OFF

NB RS690MC POWER RAIL		LAPTOP MODE				
		S0	S1	S3	S4	S5
AVDD	+3.3V	ON	ON	OFF	OFF	OFF
AVDDDI	+1.8V	ON	ON	OFF	OFF	OFF
AVDDQ	+1.8V	ON	ON	OFF	OFF	OFF
HTPVDD	+1.8V	ON	ON	OFF	OFF	OFF
LPVDD	+1.8V	ON	ON	OFF	OFF	OFF
LVDDR18D	+1.8V	ON	ON	OFF	OFF	OFF
LVDDR33	+3.3V	ON	ON	OFF	OFF	OFF
PLLVDD12	+1.2V	ON	ON	OFF	OFF	OFF
PLLVDD18	+1.8V	ON	ON	OFF	OFF	OFF
VDD_HT	+1.2V	ON	ON	OFF	OFF	OFF
VDD18	+1.8V	ON	ON	OFF	OFF	OFF
VDDA_12	+1.2V	ON	ON	OFF	OFF	OFF
VDDC	+1.0/1.2V	ON	ON	OFF	OFF	OFF
VDDPLL	+1.2V	ON	ON	OFF	OFF	OFF
VDDR	+1.8V	ON	ON	OFF	OFF	OFF
VDDR3	+3.3V	ON	ON	OFF	OFF	OFF

SB SB600 POWER RAIL		LAPTOP MODE				
		S0	S1	S3	S4	S5
PCIE_PVDD	+1.2V	ON	ON	OFF	OFF	OFF
PCIE_VDDR	+1.2V	ON	ON	OFF	OFF	OFF
PLLVDD_SATA	+1.25V	ON	ON	OFF	OFF	OFF
AVDD_SATA	+1.25V	ON	ON	OFF	OFF	OFF
XTLVDD_SATA	+3.3V	ON	ON	OFF	OFF	OFF
AVDD_HWM	+3.3V	ON	ON	OFF	OFF	OFF
VDDQ	+3.3V	ON	ON	OFF	OFF	OFF
VDD	+1.2V	ON	ON	OFF	OFF	OFF
CPU_PWR	+1.8V	ON	ON	OFF	OFF	OFF
V5_VREF	+5V	ON	ON	OFF	OFF	OFF
AVDDCK_3.3V	+3.3V	ON	ON	OFF	OFF	OFF
AVDDCK_1.2V	+1.2V	ON	ON	OFF	OFF	OFF
AVDD_USB	+3.3V	ON	ON	ON	OFF	OFF
AVDDC	+3.3V	ON	ON	ON	OFF	OFF
S5_3.3V	+3.3V	ON	ON	ON	OFF	OFF
S5_1.2V	+1.2V	ON	ON	ON	OFF	OFF
USB_PHY_1.2V	+1.2V	ON	ON	ON	OFF	OFF
SB_VBAT	+3.0V	ON	ON	ON	ON	ON

SYSTEM POWER RAIL		LAPTOP MODE				
Voltage Name	Control Pin	S0	S1	S3	S4	S5
+1.2V	+1.2V_ON	ON	ON	OFF	OFF	OFF
+1.2V_NB	+1.2V_NB_ON	ON	ON	OFF	OFF	OFF
+1.25V_SATA	follow +3.3V up	ON	ON	OFF	OFF	OFF
+1.5V	follow +3.3V up	ON	ON	OFF	OFF	OFF
+1.8V	+1.8V_ON	ON	ON	OFF	OFF	OFF
+2.5V_CPU	follow +3.3V up	ON	ON	OFF	OFF	OFF
+3.3V	+3.3V_ON	ON	ON	OFF	OFF	OFF
+5V	+5V_ON	ON	ON	OFF	OFF	OFF
+CPU_CORE	+CPU_CORE_ON	ON	ON	OFF	OFF	OFF
VCC_OZ128	follow +3.3V up	ON	ON	OFF	OFF	OFF
+0.9V_DDR	follow +1.8V_DDR up	ON	ON	ON	OFF	OFF
+1.2VS	+1.2VS_ON	ON	ON	ON	OFF	OFF
+1.8V_DDR	+1.8V_DDR_ON	ON	ON	ON	OFF	OFF
+3.3VS	+3.3VS_ON	ON	ON	ON	OFF	OFF
+5VS	+3.3VS_ON	ON	ON	ON	OFF	OFF
VIN_SW	PWR_KEEP	ON	ON	ON	OFF	OFF
+3.3V_AUX	follow VIN up	ON	ON	ON	ON	ON
+5V_AUX	follow VIN up	ON	ON	ON	ON	ON

Power Block Diagram



PCI DEVICES IRQ ROUTING TABLE				
DEVICE	IDSEL#	REQ/GNT#	PCI INT	CLOCK
LPC DEBUG	N/A	N/A	N/A	PCI_CLK3
EC ITE8512EX	N/A	N/A	N/A	PCI_CLK0
1394 OZ128	AD20	3 / 3	H	PCI_CLK2

USB PORTS DEVICES TABLE										
USB Ports	USBP0 USBN0	USBP1 USBN1	USBP2 USBN2	USBP3 USBN3	USBP4 USBN4	USBP5 USBN5	USBP6 USBN6	USBP7 USBN7	USBP8 USBN8	USBP9 USBN9
Devices	Audio BD USB_0	M/B USB_1	Audio BD USB_2	New Card USB_3	WEBCAM USB_4	Bluetooth USB_5	N/A	Card Reader USB_7	Mini Card USB_8	3G BD USB_9

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Title: MISCELLANEOUS

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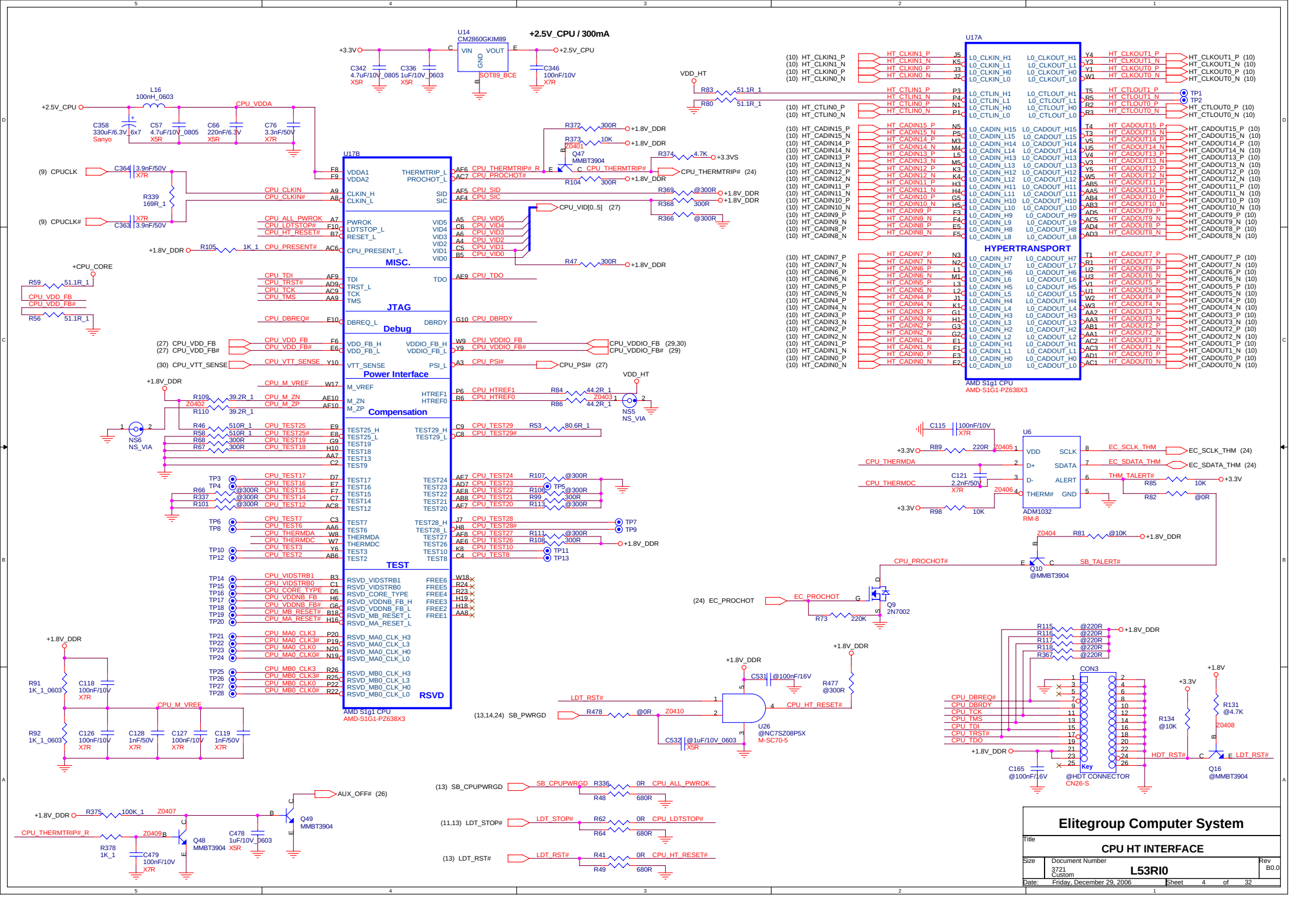
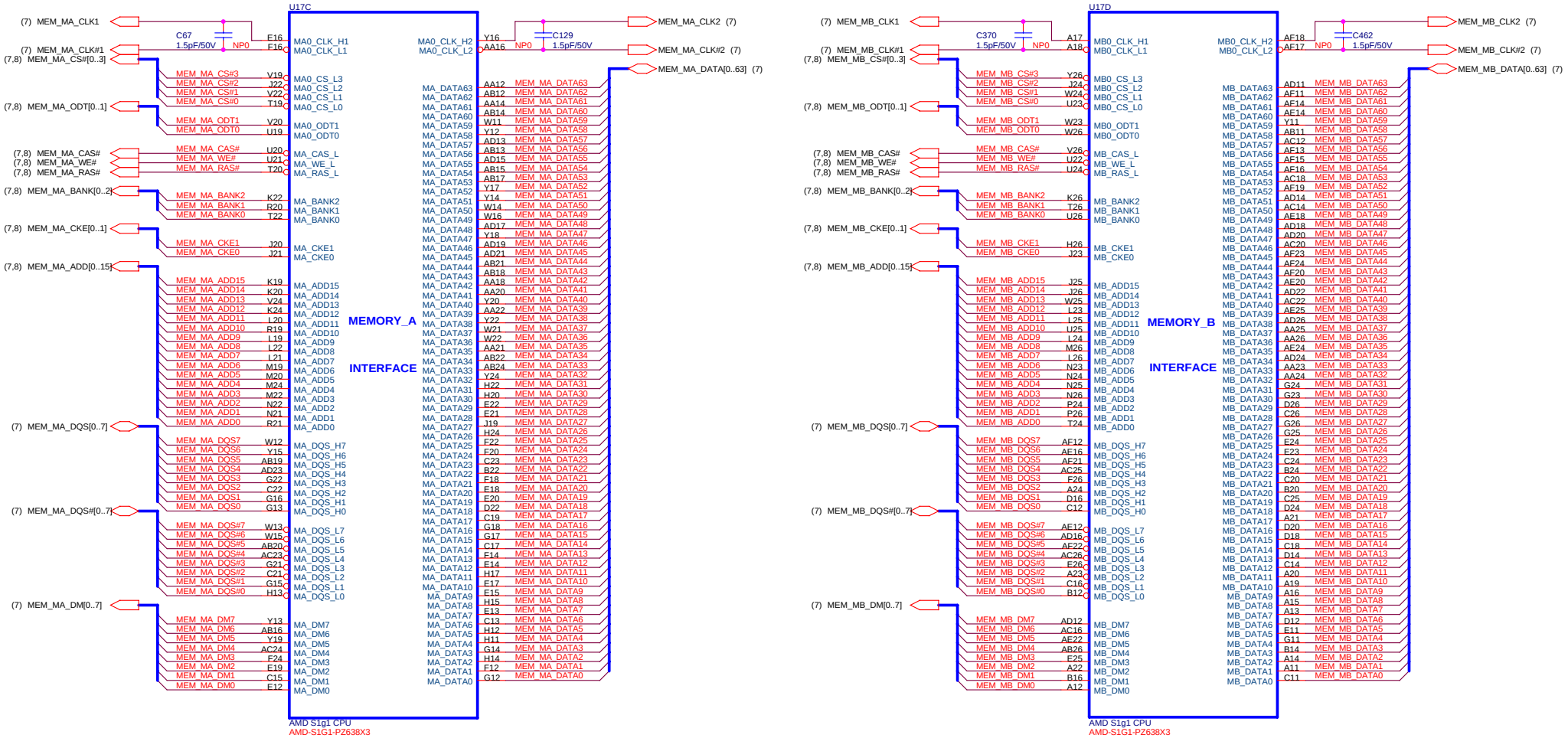

+2.5V_CPU / 300mA
U14
CM2860GKIM89
SOT89_BCE
U17A
HYPERTRANSPORT
AMD S1g1 CPU
AMD-S1G1-PZ638X3
U17B
MISC.
JTAG
Debug
Power Interface
Compensation
TEST
RSVD
AMD S1g1 CPU
AMD-S1G1-PZ638X3
U6
ADM1032
RM-8
U26
@NC7SZ08P5X
M-SC70-5
CON3
@HDT CONNECTOR
CN26-S
Q9
2N7002
Q10
@MMBT3904
Q16
@MMBT3904
Q47
MMBT3904
Q48
MMBT3904
Q49
MMBT3904
Elitegroup Computer System
CPU HT INTERFACE
L53RI0
Friday, December 29, 2006



Title	CPU DDR2 INTERFACE
Size	Document Number 3721 Custom — L53RI0 — Rev B0.0
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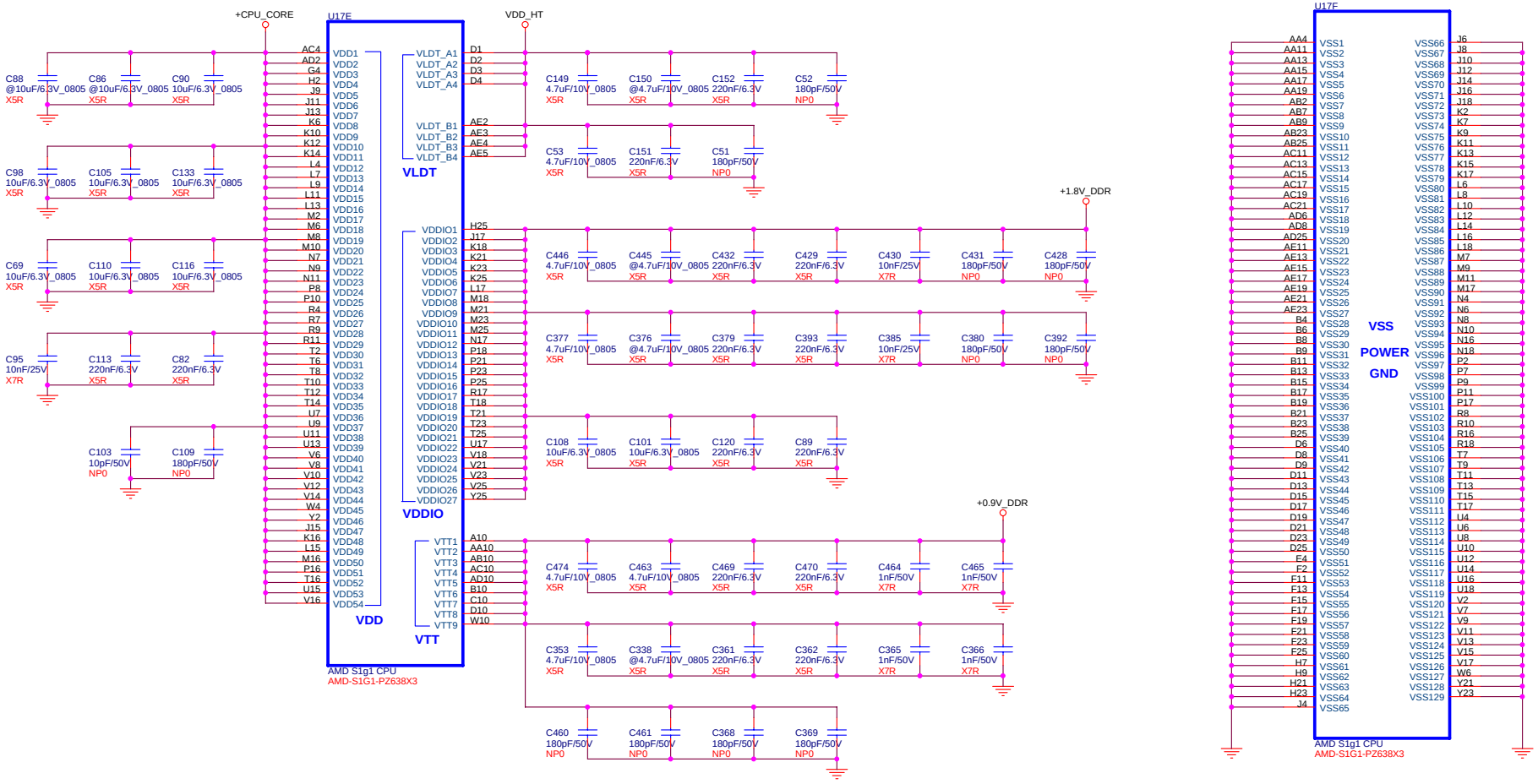

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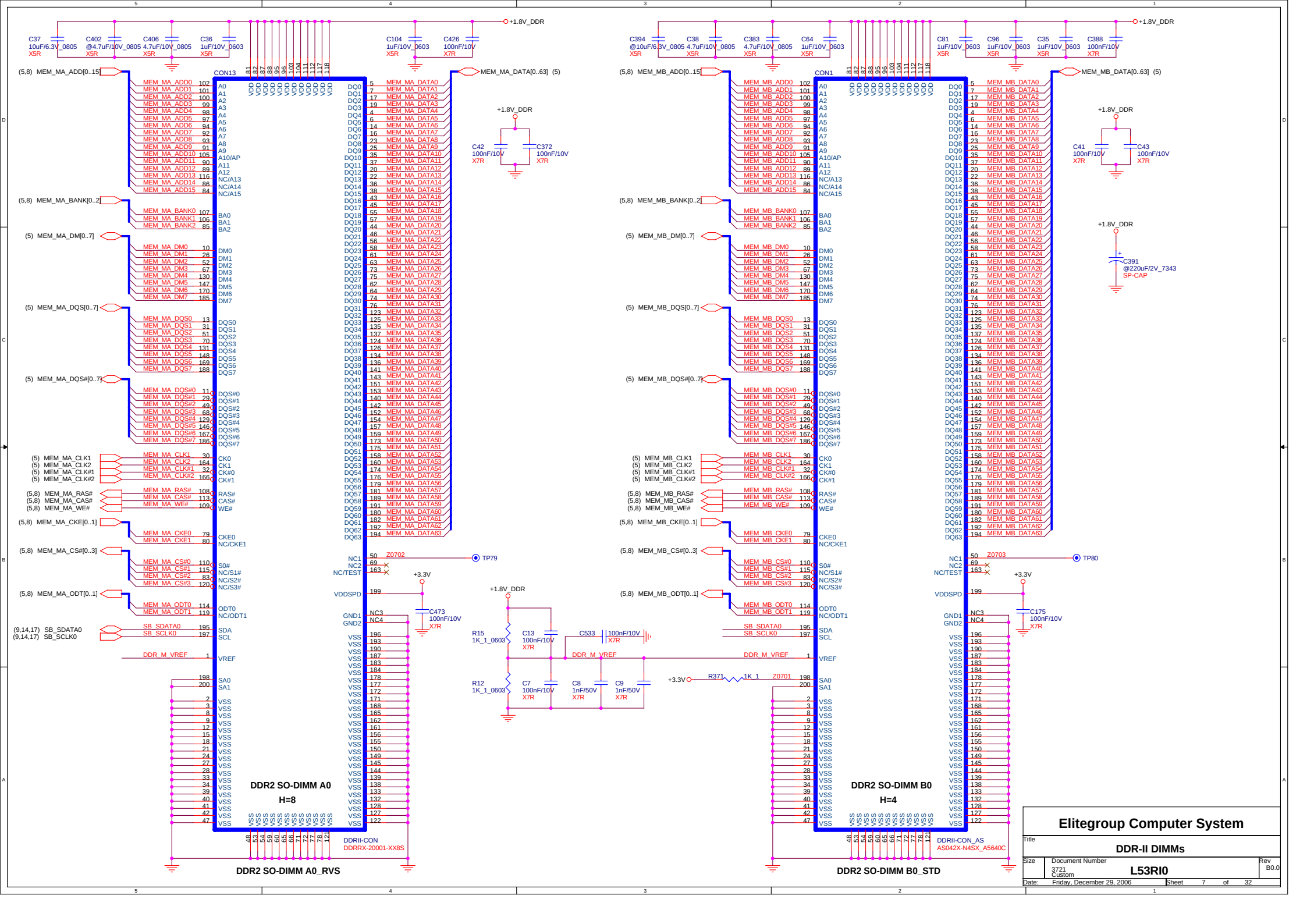
Title: **CPU POWER**		
Size	Document Number: 3721 Custom **L53RI0**	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 6 of 32	


C37 10uF/6.3V_0805 X5R
C402 @4.7uF/10V_0805 X5R
C406 4.7uF/10V_0805 X5R
C36 1uF/10V_0603 X5R
C104 1uF/10V_0603 X5R
C426 100nF/10V X7R
+1.8V_DDR
CON13
(5,8) MEM_MA_ADD[0..15]
MEM_MA_ADD0 102
MEM_MA_ADD1 101
MEM_MA_ADD2 100
MEM_MA_ADD3 99
MEM_MA_ADD4 98
MEM_MA_ADD5 97
MEM_MA_ADD6 94
MEM_MA_ADD7 92
MEM_MA_ADD8 93
MEM_MA_ADD9 91
MEM_MA_ADD10 105
MEM_MA_ADD11 90
MEM_MA_ADD12 89
MEM_MA_ADD13 116
MEM_MA_ADD14 86
MEM_MA_ADD15 84
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10/AP A11 A12 NC/A13 NC/A14 NC/A15
(5,8) MEM_MA_BANK[0..2]
MEM_MA_BANK0 107
MEM_MA_BANK1 106
MEM_MA_BANK2 85
BA0 BA1 BA2
(5) MEM_MA_DM[0..7]
MEM_MA_DM0 10
MEM_MA_DM1 26
MEM_MA_DM2 52
MEM_MA_DM3 67
MEM_MA_DM4 130
MEM_MA_DM5 147
MEM_MA_DM6 170
MEM_MA_DM7 185
DM0 DM1 DM2 DM3 DM4 DM5 DM6 DM7
(5) MEM_MA_DQS[0..7]
MEM_MA_DQS0 13
MEM_MA_DQS1 31
MEM_MA_DQS2 51
MEM_MA_DQS3 70
MEM_MA_DQS4 131
MEM_MA_DQS5 148
MEM_MA_DQS6 169
MEM_MA_DQS7 188
DQS0 DQS1 DQS2 DQS3 DQS4 DQS5 DQS6 DQS7
(5) MEM_MA_DQS#[0..7]
MEM_MA_DQS#0 11
MEM_MA_DQS#1 29
MEM_MA_DQS#2 49
MEM_MA_DQS#3 68
MEM_MA_DQS#4 129
MEM_MA_DQS#5 146
MEM_MA_DQS#6 167
MEM_MA_DQS#7 186
DQS#0 DQS#1 DQS#2 DQS#3 DQS#4 DQS#5 DQS#6 DQS#7
(5) MEM_MA_CLK1
(5) MEM_MA_CLK2
(5) MEM_MA_CLK#1
(5) MEM_MA_CLK#2
MEM_MA_CLK1 30
MEM_MA_CLK2 164
MEM_MA_CLK#1 32
MEM_MA_CLK#2 166
CK0 CK1 CK#0 CK#1
(5,8) MEM_MA_RAS#
(5,8) MEM_MA_CAS#
(5,8) MEM_MA_WE#
MEM_MA_RAS# 108
MEM_MA_CAS# 113
MEM_MA_WE# 109
RAS# CAS# WE#
(5,8) MEM_MA_CKE[0..1]
MEM_MA_CKE0 79
MEM_MA_CKE1 80
CKE0 NC/CKE1
(5,8) MEM_MA_CS#[0..3]
MEM_MA_CS#0 110
MEM_MA_CS#1 115
MEM_MA_CS#2 83
MEM_MA_CS#3 120
S0# NC/S1# NC/S2# NC/S3#
(5,8) MEM_MA_ODT[0..1]
MEM_MA_ODT0 114
MEM_MA_ODT1 119
ODT0 NC/ODT1
(9,14,17) SB_SDATA0
(9,14,17) SB_SCLK0
SB_SDATA0 195
SB_SCLK0 197
SDA SCL
DDR_M_VREF 1
VREF
SA0 198
SA1 200
VSS
MEM_MA_DATA[0..63] (5)
MEM_MA_DATA0 5
MEM_MA_DATA1 7
MEM_MA_DATA2 17
MEM_MA_DATA3 19
MEM_MA_DATA4 4
MEM_MA_DATA5 6
MEM_MA_DATA6 14
MEM_MA_DATA7 16
MEM_MA_DATA8 23
MEM_MA_DATA9 25
MEM_MA_DATA10 35
MEM_MA_DATA11 37
MEM_MA_DATA12 20
MEM_MA_DATA13 22
MEM_MA_DATA14 36
MEM_MA_DATA15 38
MEM_MA_DATA16 43
MEM_MA_DATA17 45
MEM_MA_DATA18 55
MEM_MA_DATA19 57
MEM_MA_DATA20 44
MEM_MA_DATA21 46
MEM_MA_DATA22 56
MEM_MA_DATA23 58
MEM_MA_DATA24 61
MEM_MA_DATA25 63
MEM_MA_DATA26 73
MEM_MA_DATA27 75
MEM_MA_DATA28 62
MEM_MA_DATA29 64
MEM_MA_DATA30 74
MEM_MA_DATA31 76
MEM_MA_DATA32 123
MEM_MA_DATA33 125
MEM_MA_DATA34 135
MEM_MA_DATA35 137
MEM_MA_DATA36 124
MEM_MA_DATA37 126
MEM_MA_DATA38 134
MEM_MA_DATA39 136
MEM_MA_DATA40 141
MEM_MA_DATA41 143
MEM_MA_DATA42 151
MEM_MA_DATA43 153
MEM_MA_DATA44 140
MEM_MA_DATA45 142
MEM_MA_DATA46 152
MEM_MA_DATA47 154
MEM_MA_DATA48 157
MEM_MA_DATA49 159
MEM_MA_DATA50 173
MEM_MA_DATA51 175
MEM_MA_DATA52 158
MEM_MA_DATA53 160
MEM_MA_DATA54 174
MEM_MA_DATA55 176
MEM_MA_DATA56 179
MEM_MA_DATA57 181
MEM_MA_DATA58 189
MEM_MA_DATA59 191
MEM_MA_DATA60 180
MEM_MA_DATA61 182
MEM_MA_DATA62 192
MEM_MA_DATA63 194
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15 DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23 DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31 DQ32 DQ33 DQ34 DQ35 DQ36 DQ37 DQ38 DQ39 DQ40 DQ41 DQ42 DQ43 DQ44 DQ45 DQ46 DQ47 DQ48 DQ49 DQ50 DQ51 DQ52 DQ53 DQ54 DQ55 DQ56 DQ57 DQ58 DQ59 DQ60 DQ61 DQ62 DQ63
NC1 NC2 NC/TEST
Z0702 50
TP79
VDDSPD 199
+3.3V
C473 100nF/10V X7R
GND1 GND2
NC3 NC4
DDRII-CON
DDRRX-20001-XX8S
DDR2 SO-DIMM A0
H=8
DDR2 SO-DIMM A0_RVS
+1.8V_DDR
C42 100nF/10V X7R
C372 100nF/10V X7R
R15 1K_1_0603
R12 1K_1_0603
C13 100nF/10V X7R
C7 100nF/10V X7R
C533 100nF/10V X7R
C8 1nF/50V X7R
C9 1nF/50V X7R
DDR_M_VREF
C394 @10uF/6.3V_0805 X5R
C38 4.7uF/10V_0805 X5R
C383 4.7uF/10V_0805 X5R
C64 1uF/10V_0603 X5R
C81 1uF/10V_0603 X5R
C96 1uF/10V_0603 X5R
C35 1uF/10V_0603 X5R
C388 100nF/10V X7R
CON1
(5,8) MEM_MB_ADD[0..15]
MEM_MB_ADD0 102
MEM_MB_ADD1 101
MEM_MB_ADD2 100
MEM_MB_ADD3 99
MEM_MB_ADD4 98
MEM_MB_ADD5 97
MEM_MB_ADD6 94
MEM_MB_ADD7 92
MEM_MB_ADD8 93
MEM_MB_ADD9 91
MEM_MB_ADD10 105
MEM_MB_ADD11 90
MEM_MB_ADD12 89
MEM_MB_ADD13 116
MEM_MB_ADD14 86
MEM_MB_ADD15 84
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10/AP A11 A12 NC/A13 NC/A14 NC/A15
(5,8) MEM_MB_BANK[0..2]
MEM_MB_BANK0 107
MEM_MB_BANK1 106
MEM_MB_BANK2 85
BA0 BA1 BA2
(5) MEM_MB_DM[0..7]
MEM_MB_DM0 10
MEM_MB_DM1 26
MEM_MB_DM2 52
MEM_MB_DM3 67
MEM_MB_DM4 130
MEM_MB_DM5 147
MEM_MB_DM6 170
MEM_MB_DM7 185
DM0 DM1 DM2 DM3 DM4 DM5 DM6 DM7
(5) MEM_MB_DQS[0..7]
MEM_MB_DQS0 13
MEM_MB_DQS1 31
MEM_MB_DQS2 51
MEM_MB_DQS3 70
MEM_MB_DQS4 131
MEM_MB_DQS5 148
MEM_MB_DQS6 169
MEM_MB_DQS7 188
DQS0 DQS1 DQS2 DQS3 DQS4 DQS5 DQS6 DQS7
(5) MEM_MB_DQS#[0..7]
MEM_MB_DQS#0 11
MEM_MB_DQS#1 29
MEM_MB_DQS#2 49
MEM_MB_DQS#3 68
MEM_MB_DQS#4 129
MEM_MB_DQS#5 146
MEM_MB_DQS#6 167
MEM_MB_DQS#7 186
DQS#0 DQS#1 DQS#2 DQS#3 DQS#4 DQS#5 DQS#6 DQS#7
(5) MEM_MB_CLK1
(5) MEM_MB_CLK2
(5) MEM_MB_CLK#1
(5) MEM_MB_CLK#2
MEM_MB_CLK1 30
MEM_MB_CLK2 164
MEM_MB_CLK#1 32
MEM_MB_CLK#2 166
CK0 CK1 CK#0 CK#1
(5,8) MEM_MB_RAS#
(5,8) MEM_MB_CAS#
(5,8) MEM_MB_WE#
MEM_MB_RAS# 108
MEM_MB_CAS# 113
MEM_MB_WE# 109
RAS# CAS# WE#
(5,8) MEM_MB_CKE[0..1]
MEM_MB_CKE0 79
MEM_MB_CKE1 80
CKE0 NC/CKE1
(5,8) MEM_MB_CS#[0..3]
MEM_MB_CS#0 110
MEM_MB_CS#1 115
MEM_MB_CS#2 83
MEM_MB_CS#3 120
S0# NC/S1# NC/S2# NC/S3#
(5,8) MEM_MB_ODT[0..1]
MEM_MB_ODT0 114
MEM_MB_ODT1 119
ODT0 NC/ODT1
SB_SDATA0 195
SB_SCLK0 197
SDA SCL
DDR_M_VREF 1
VREF
+3.3V
R371 1K_1
Z0701 198
SA0 SA1
VSS
MEM_MB_DATA[0..63] (5)
MEM_MB_DATA0 5
MEM_MB_DATA1 7
MEM_MB_DATA2 17
MEM_MB_DATA3 19
MEM_MB_DATA4 4
MEM_MB_DATA5 6
MEM_MB_DATA6 14
MEM_MB_DATA7 16
MEM_MB_DATA8 23
MEM_MB_DATA9 25
MEM_MB_DATA10 35
MEM_MB_DATA11 37
MEM_MB_DATA12 20
MEM_MB_DATA13 22
MEM_MB_DATA14 36
MEM_MB_DATA15 38
MEM_MB_DATA16 43
MEM_MB_DATA17 45
MEM_MB_DATA18 55
MEM_MB_DATA19 57
MEM_MB_DATA20 44
MEM_MB_DATA21 46
MEM_MB_DATA22 56
MEM_MB_DATA23 58
MEM_MB_DATA24 61
MEM_MB_DATA25 63
MEM_MB_DATA26 73
MEM_MB_DATA27 75
MEM_MB_DATA28 62
MEM_MB_DATA29 64
MEM_MB_DATA30 74
MEM_MB_DATA31 76
MEM_MB_DATA32 123
MEM_MB_DATA33 125
MEM_MB_DATA34 135
MEM_MB_DATA35 137
MEM_MB_DATA36 124
MEM_MB_DATA37 126
MEM_MB_DATA38 134
MEM_MB_DATA39 136
MEM_MB_DATA40 141
MEM_MB_DATA41 143
MEM_MB_DATA42 151
MEM_MB_DATA43 153
MEM_MB_DATA44 140
MEM_MB_DATA45 142
MEM_MB_DATA46 152
MEM_MB_DATA47 154
MEM_MB_DATA48 157
MEM_MB_DATA49 159
MEM_MB_DATA50 173
MEM_MB_DATA51 175
MEM_MB_DATA52 158
MEM_MB_DATA53 160
MEM_MB_DATA54 174
MEM_MB_DATA55 176
MEM_MB_DATA56 179
MEM_MB_DATA57 181
MEM_MB_DATA58 189
MEM_MB_DATA59 191
MEM_MB_DATA60 180
MEM_MB_DATA61 182
MEM_MB_DATA62 192
MEM_MB_DATA63 194
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15 DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23 DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31 DQ32 DQ33 DQ34 DQ35 DQ36 DQ37 DQ38 DQ39 DQ40 DQ41 DQ42 DQ43 DQ44 DQ45 DQ46 DQ47 DQ48 DQ49 DQ50 DQ51 DQ52 DQ53 DQ54 DQ55 DQ56 DQ57 DQ58 DQ59 DQ60 DQ61 DQ62 DQ63
NC1 NC2 NC/TEST
Z0703 50
TP80
VDDSPD 199
+3.3V
C175 100nF/10V X7R
GND1 GND2
NC3 NC4
DDRII-CON_AS
AS042X-N4SX_A5640C
DDR2 SO-DIMM B0
H=4
DDR2 SO-DIMM B0_STD
+1.8V_DDR
C41 100nF/10V X7R
C43 100nF/10V X7R
+1.8V_DDR
C391 @220uF/2V_7343 SP-CAP
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Title
DDR-II DIMMs
Size
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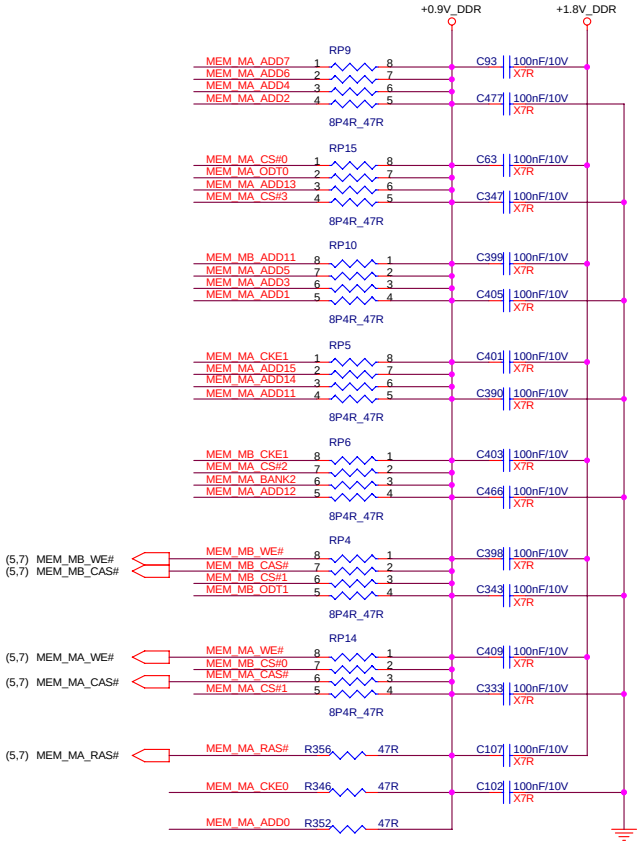
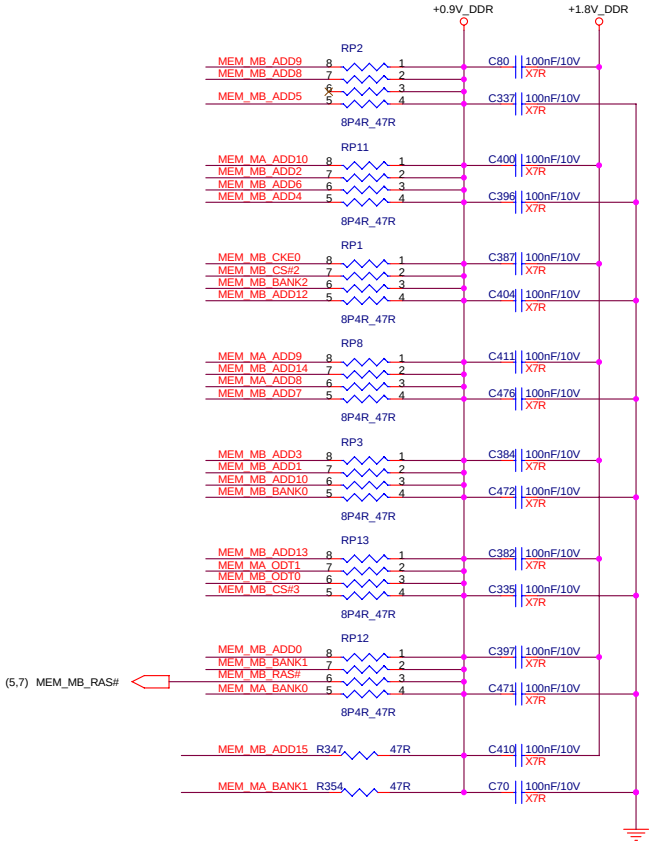
(5,7) MEM_MA_ADD[0..15] — MEM_MA_ADD[0..15]
(5,7) MEM_MA_CS#[0..3] — MEM_MA_CS#[0..3]
(5,7) MEM_MA_ODT[0..1] — MEM_MA_ODT[0..1]
(5,7) MEM_MA_CKE[0..1] — MEM_MA_CKE[0..1]
(5,7) MEM_MA_BANK[0..2] — MEM_MA_BANK[0..2]



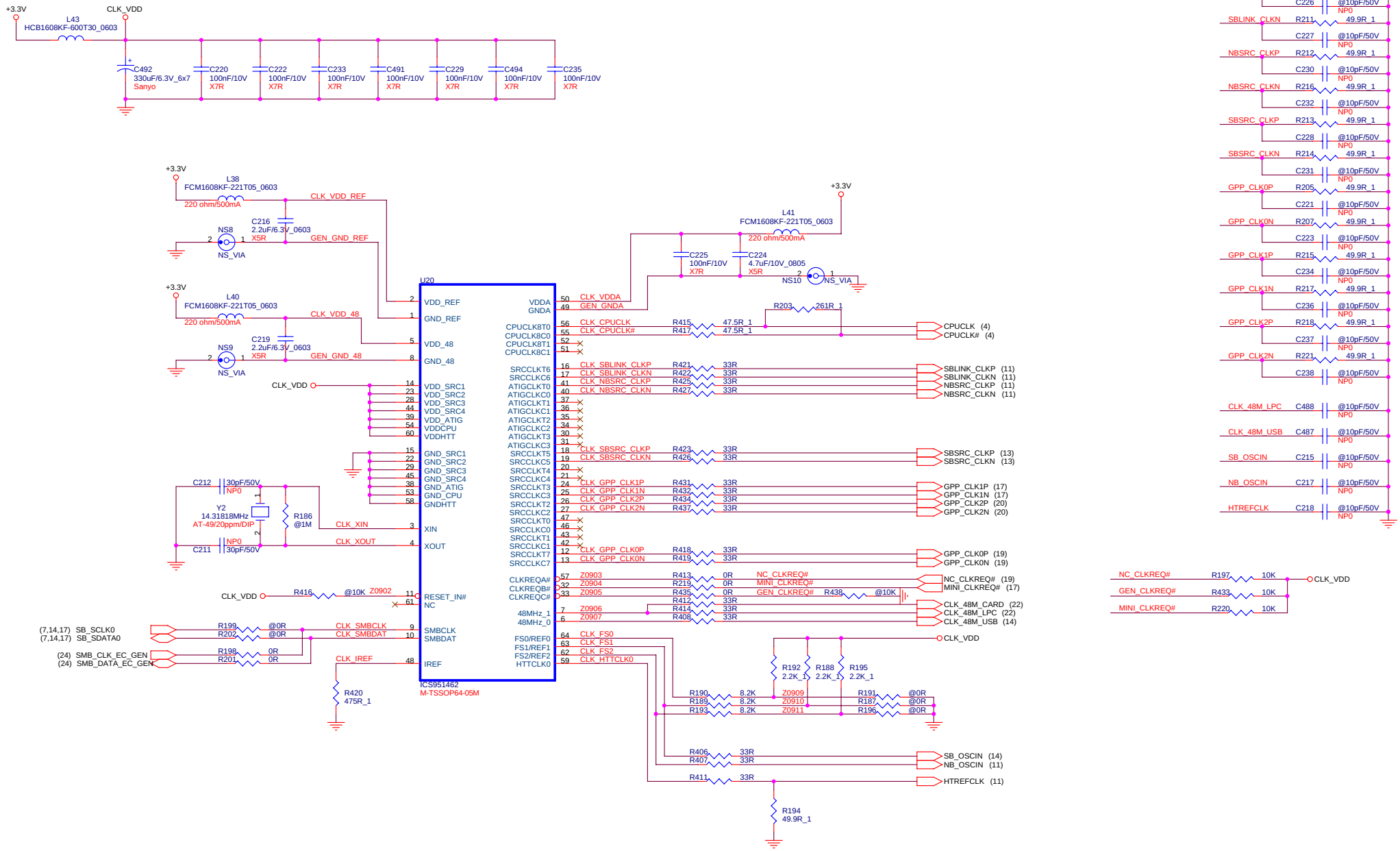
DDR2 SO-DIMM A0

(5,7) MEM_MB_ADD[0..15] — MEM_MB_ADD[0..15]
(5,7) MEM_MB_CS#[0..3] — MEM_MB_CS#[0..3]
(5,7) MEM_MB_ODT[0..1] — MEM_MB_ODT[0..1]
(5,7) MEM_MB_CKE[0..1] — MEM_MB_CKE[0..1]
(5,7) MEM_MB_BANK[0..2] — MEM_MB_BANK[0..2]

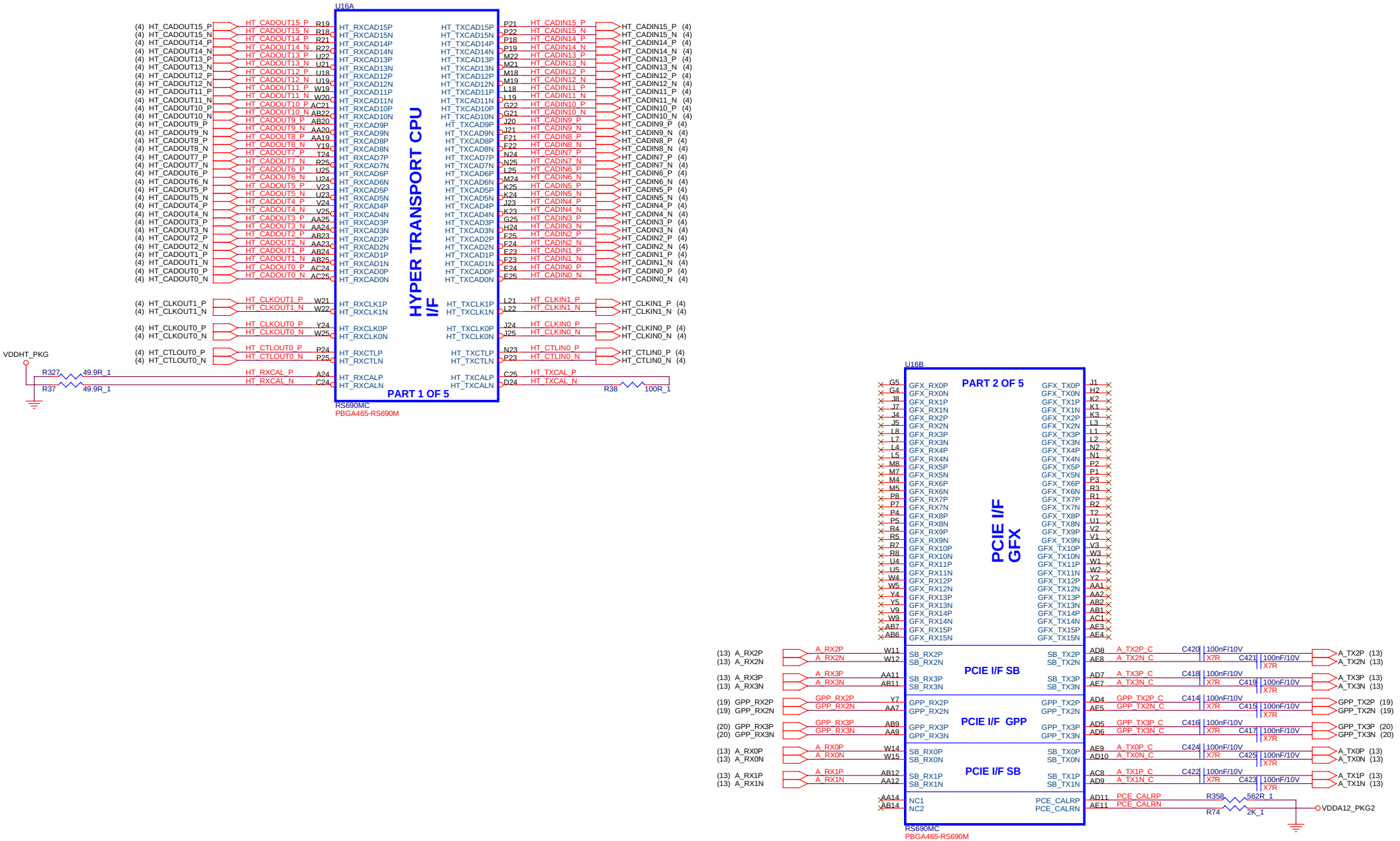


DDR2 SO-DIMM B0

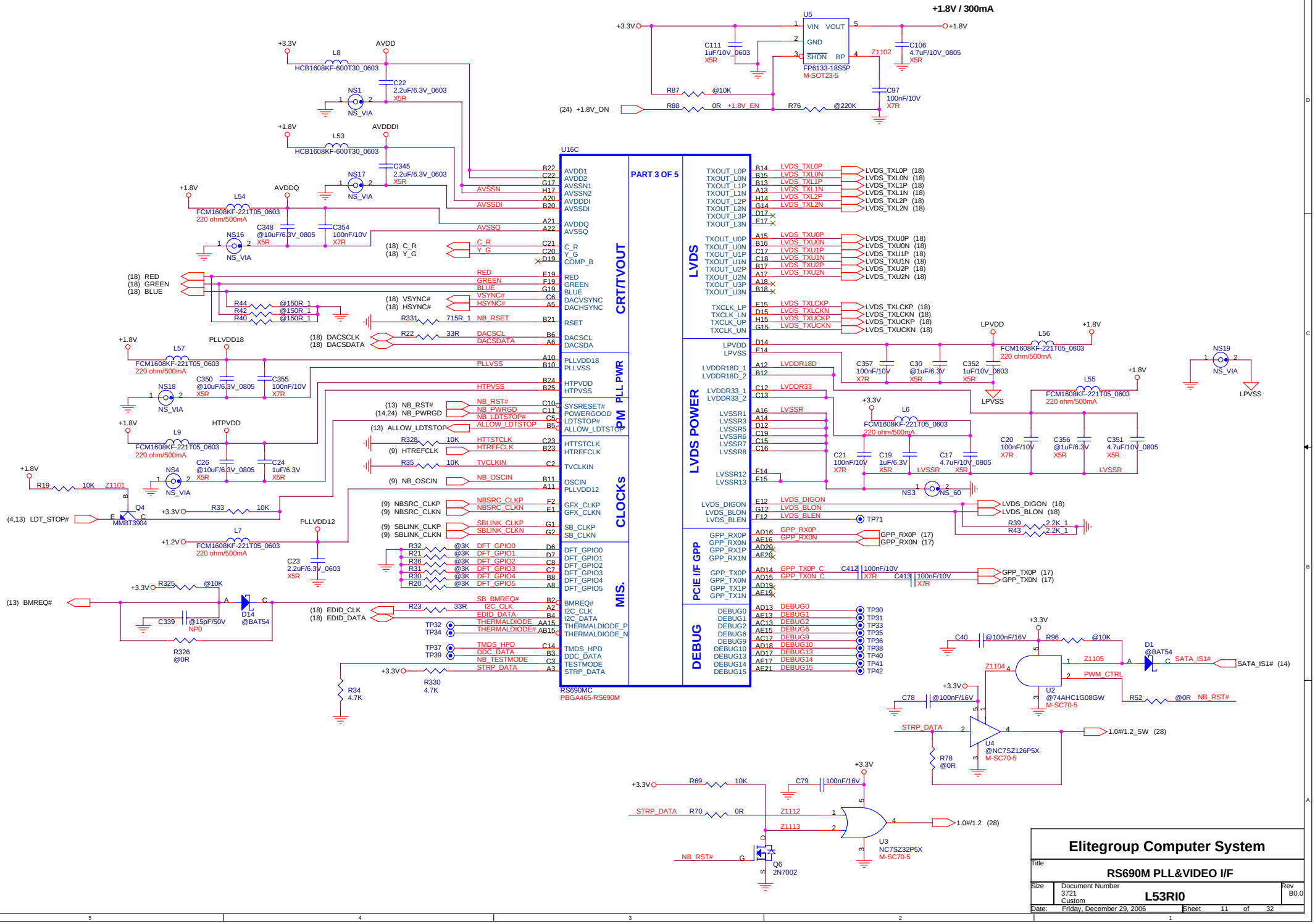
Elitegroup Computer System		
Title: DDR-II TERMINATIONs		
Size	Document Number: 3721 Custom — L53RI0	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 8 of 32	

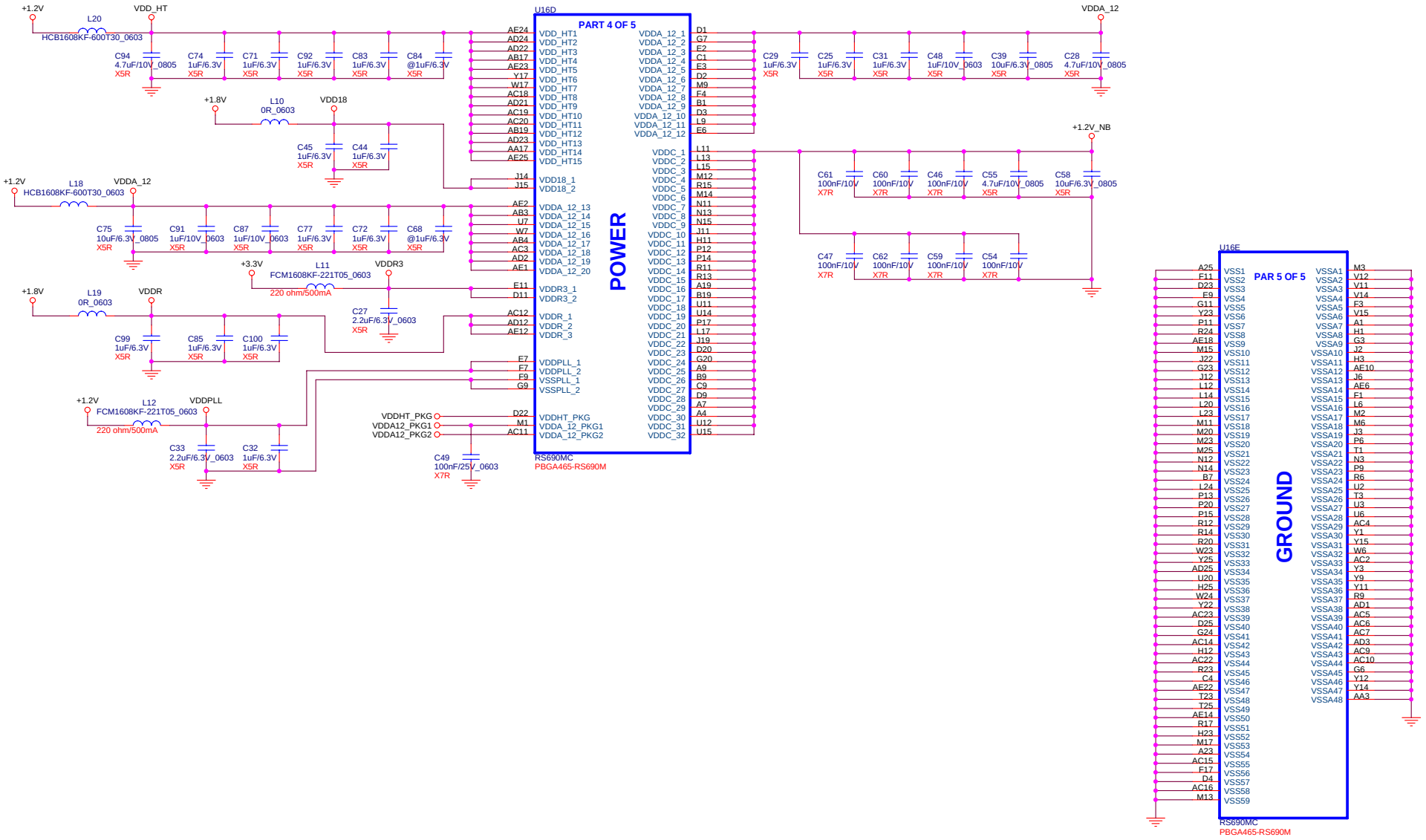


Elitegroup Computer System		
Title: **CLOCK GENERATOR**		
Size	Document Number: 3721 Custom **L53RI0**	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 9 of 32	

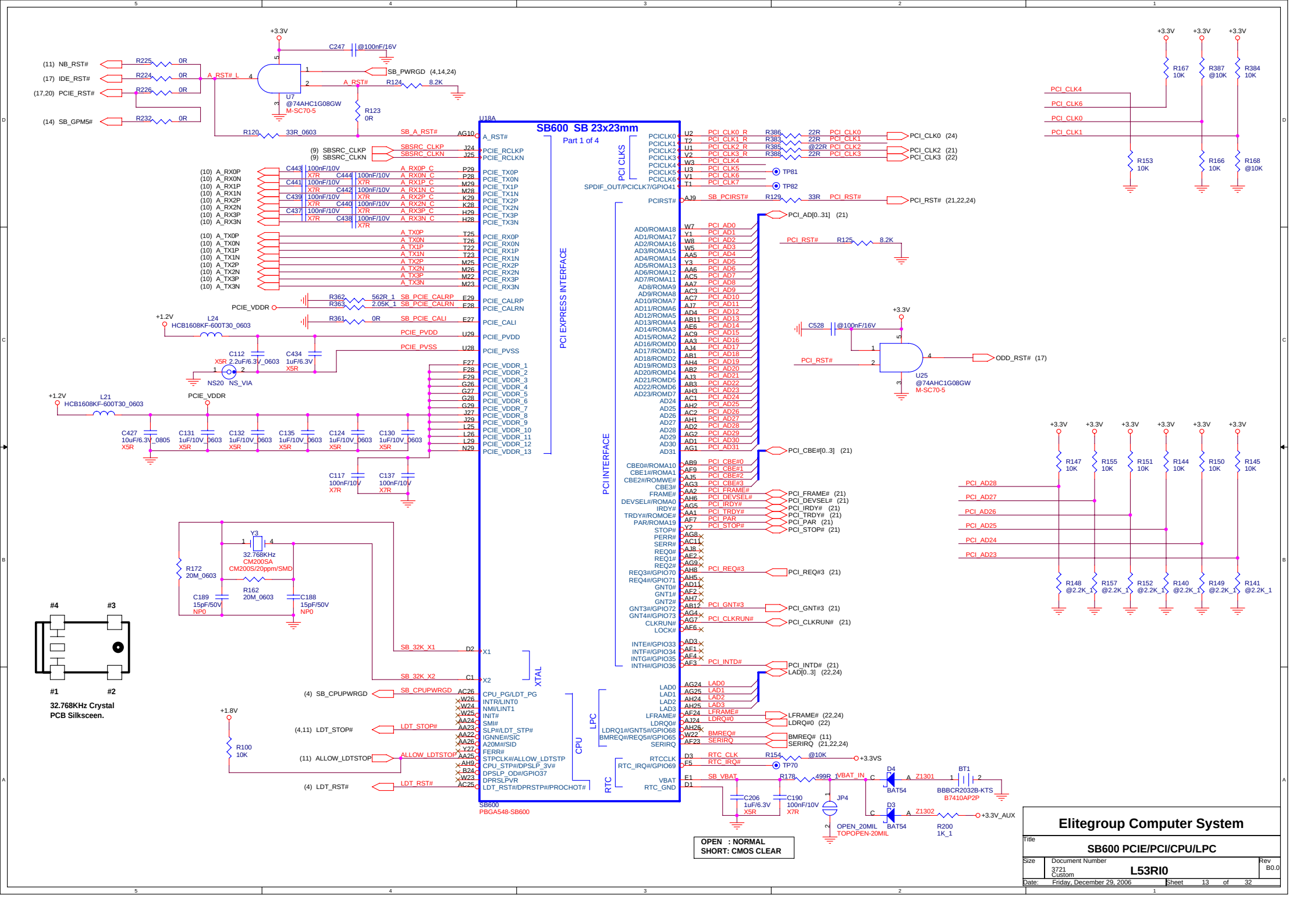


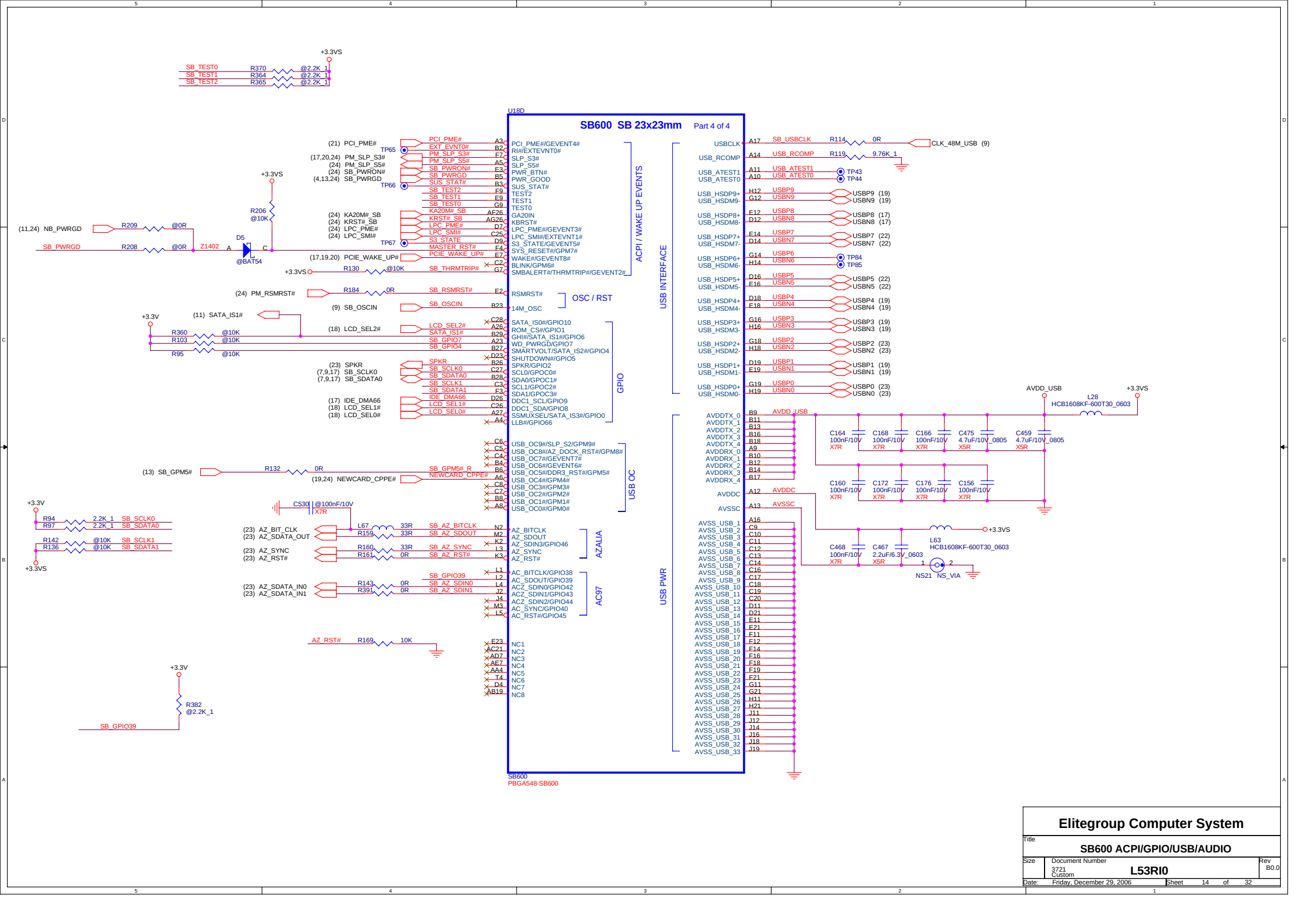
Elitegroup Computer System	
Title	RS690M HT&PCI-E LINK I/F
Size	Document Number: 3721 Custom — L53RI0 — Rev: B0.0
Date:	Friday, December 29, 2006 — Sheet 10 of 32

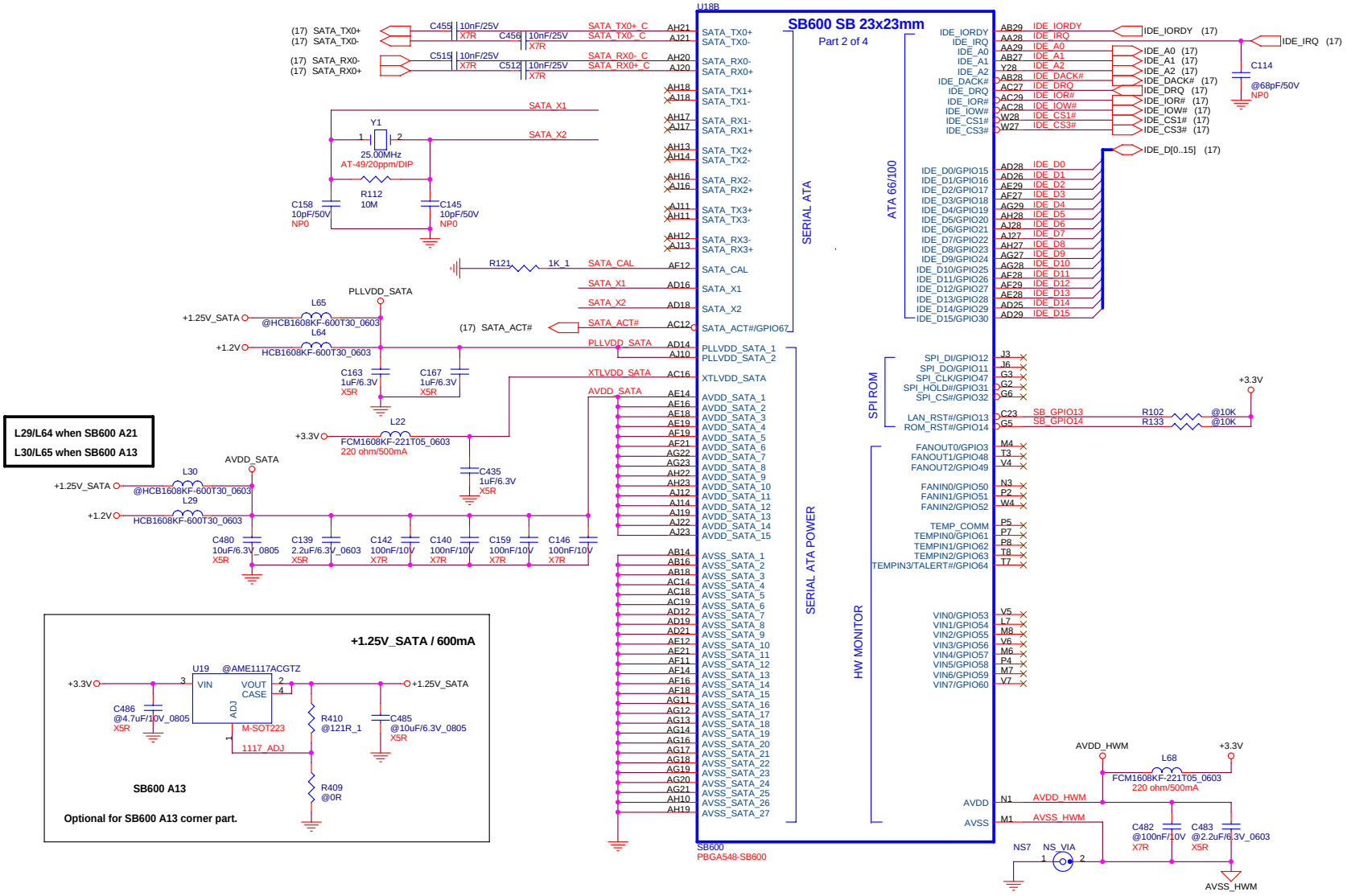

+1.8V / 300mA
U5
VIN VOUT
GND
SHDN BP
FP6133-18S5P
M-SOT23-5
+3.3V
+1.8V
C111 1uF/10V_0603 X5R
C106 4.7uF/10V_0805 X5R
Z1102
C97 100nF/10V X7R
R87 @10K
R88 0R +1.8V_EN
R76 @220K
(24) +1.8V_ON
U16C
PART 3 OF 5
RS690MC
PBGA465-RS690M
CRT/TVOUT
PLL PWR
CLOCKs
MISC.
LVDS
LVDS POWER
PCIE I/F GPP
DEBUG
AVDD1 AVDD2 AVSSN1 AVSSN2 AVDDDI AVSSDI AVDDQ AVSSQ
C_R Y_G COMP_B
RED GREEN BLUE
DACVSYNC DACHSYNC
RSET
DACSCL DACSDA
PLLVDD18 PLLVSS
HTPVDD HTPVSS
SYSRESET# POWERGOOD LDTSTOP# ALLOW_LDTSTOP#
HTTSTCLK HTREFCLK
TVCLKIN
OSCIN PLLVDD12
GFX_CLKP GFX_CLKN
SB_CLKP SB_CLKN
DFT_GPIO0 DFT_GPIO1 DFT_GPIO2 DFT_GPIO3 DFT_GPIO4 DFT_GPIO5
BMREQ# I2C_CLK I2C_DATA THERMALDIODE_P THERMALDIODE_N
TMDS_HPD DDC_DATA TESTMODE STRP_DATA
TXOUT_L0P TXOUT_L0N TXOUT_L1P TXOUT_L1N TXOUT_L2P TXOUT_L2N TXOUT_L3P TXOUT_L3N
TXOUT_U0P TXOUT_U0N TXOUT_U1P TXOUT_U1N TXOUT_U2P TXOUT_U2N TXOUT_U3P TXOUT_U3N
TXCLK_LP TXCLK_LN TXCLK_UP TXCLK_UN
LVDDR18D_1 LVDDR18D_2 LVDDR33_1 LVDDR33_2
LVSSR1 LVSSR3 LVSSR5 LVSSR6 LVSSR7 LVSSR8 LVSSR12 LVSSR13
LVDS_DIGON LVDS_BLON LVDS_BLEN
GPP_RX0P GPP_RX0N GPP_RX1P GPP_RX1N GPP_TX0P GPP_TX0N GPP_TX1P GPP_TX1N
DEBUG0 DEBUG1 DEBUG2 DEBUG6 DEBUG9 DEBUG10 DEBUG13 DEBUG14 DEBUG15
L8 HCB1608KF-600T30_0603
L53 HCB1608KF-600T30_0603
L54 FCM1608KF-221T05_0603 220 ohm/500mA
L57 FCM1608KF-221T05_0603 220 ohm/500mA
L9 FCM1608KF-221T05_0603 220 ohm/500mA
L7 FCM1608KF-221T05_0603 220 ohm/500mA
L56 FCM1608KF-221T05_0603 220 ohm/500mA
L55 FCM1608KF-221T05_0603 220 ohm/500mA
L6 FCM1608KF-221T05_0603 220 ohm/500mA
NS1 NS_VIA
NS16 NS_VIA
NS17 NS_VIA
NS18 NS_VIA
NS4 NS_VIA
NS3 NS_60
NS19 NS_VIA
LPVSS
LPVDD
Q4 MMBT3904
Q6 2N7002
U2 @74AHC1G08GW M-SC70-5
U3 NC7SZ32P5X M-SC70-5
U4 @NC7SZ126P5X M-SC70-5
D14 @BAT54
D1 @BAT54
TP71
(18) RED
(18) GREEN
(18) BLUE
(18) VSYNC#
(18) HSYNC#
(18) C_R
(18) Y_G
(18) DACSCLK
(18) DACSDATA
(13) NB_RST#
(14,24) NB_PWRGD
(13) ALLOW_LDTSTOP
(9) HTREFCLK
(9) NB_OSCIN
(9) NBSRC_CLKP
(9) NBSRC_CLKN
(9) SBLINK_CLKP
(9) SBLINK_CLKN
(18) EDID_CLK
(18) EDID_DATA
(4,13) LDT_STOP#
(13) BMREQ#
SATA_IS1# (14)
1.0#/1.2_SW (28)
1.0#/1.2 (28)
STRP_DATA
NB_RST#
Elitegroup Computer System
RS690M PLL&VIDEO I/F
L53RI0
Document Number 3721
Custom
Rev B0.0
Date: Friday, December 29, 2006
Sheet 11 of 32



Elitegroup Computer System		
Title: RS690M POWER		
Size: Custom	Document Number: 3721 L53RI0	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 12 of 32	

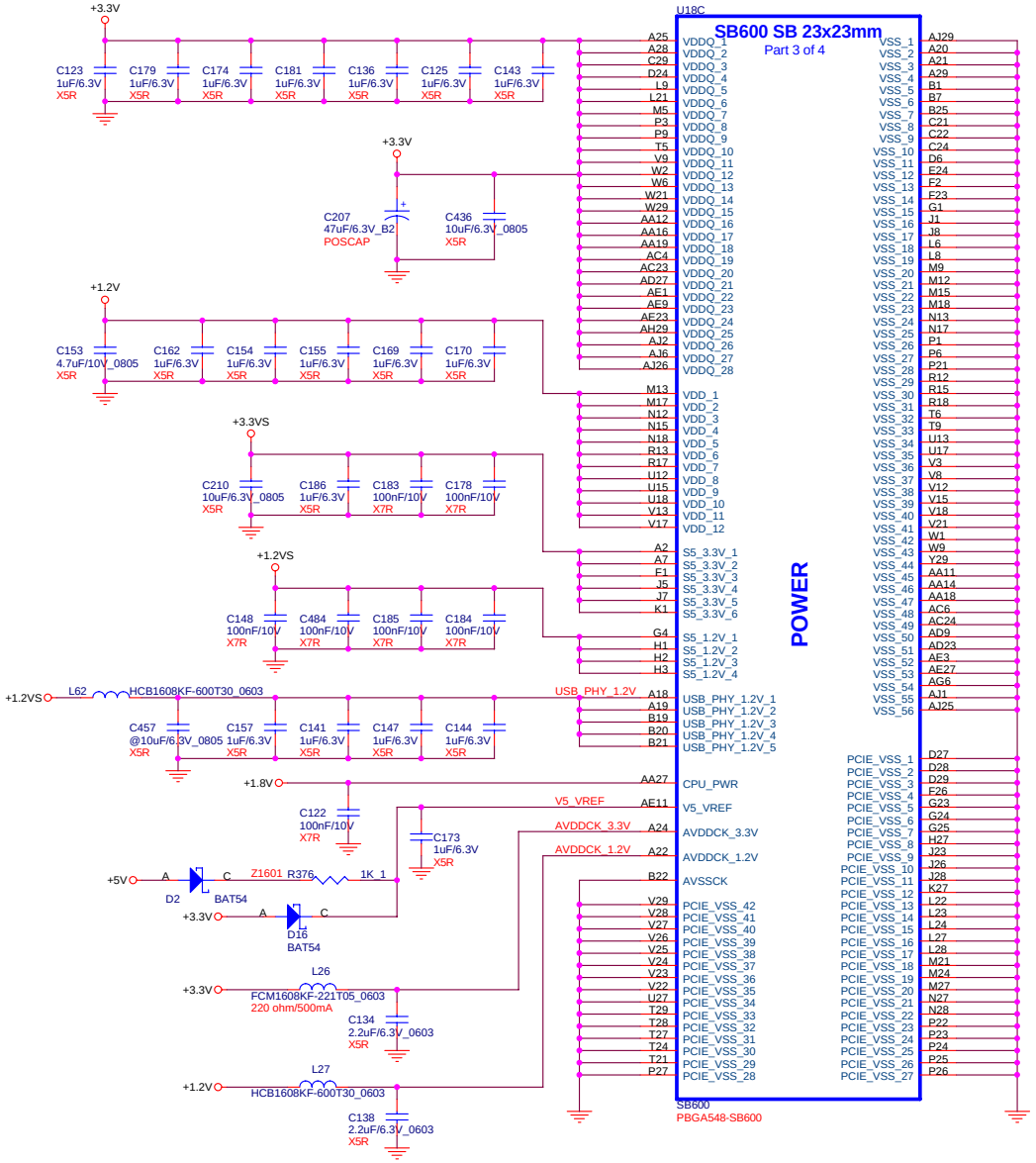

SB600 SB 23x23mm
Part 1 of 4
U18A
SB600
PBGA548-SB600
PCI EXPRESS INTERFACE
PCI INTERFACE
PCI CLKS
XTAL
LPC
CPU
RTC
A_RST#
PCIE_RCLKP
PCIE_RCLKN
PCIE_TX0P
PCIE_TX0N
PCIE_TX1P
PCIE_TX1N
PCIE_TX2P
PCIE_TX2N
PCIE_TX3P
PCIE_TX3N
PCIE_RX0P
PCIE_RX0N
PCIE_RX1P
PCIE_RX1N
PCIE_RX2P
PCIE_RX2N
PCIE_RX3P
PCIE_RX3N
PCIE_CALRP
PCIE_CALRN
PCIE_CALI
PCIE_PVDD
PCIE_PVSS
PCIE_VDDR_1
PCIE_VDDR_2
PCIE_VDDR_3
PCIE_VDDR_4
PCIE_VDDR_5
PCIE_VDDR_6
PCIE_VDDR_7
PCIE_VDDR_8
PCIE_VDDR_9
PCIE_VDDR_10
PCIE_VDDR_11
PCIE_VDDR_12
PCIE_VDDR_13
PCICLK0
PCICLK1
PCICLK2
PCICLK3
PCICLK4
PCICLK5
PCICLK6
SPDIF_OUT/PCICLK7/GPIO41
PCIRST#
AD0/ROMA18
AD1/ROMA17
AD2/ROMA16
AD3/ROMA15
AD4/ROMA14
AD5/ROMA13
AD6/ROMA12
AD7/ROMA11
AD8/ROMA9
AD9/ROMA8
AD10/ROMA7
AD11/ROMA6
AD12/ROMA5
AD13/ROMA4
AD14/ROMA3
AD15/ROMA2
AD16/ROMD0
AD17/ROMD1
AD18/ROMD2
AD19/ROMD3
AD20/ROMD4
AD21/ROMD5
AD22/ROMD6
AD23/ROMD7
AD24
AD25
AD26
AD27
AD28
AD29
AD30
AD31
CBE0#/ROMA10
CBE1#/ROMA1
CBE2#/ROMWE#
CBE3#
FRAME#
DEVSEL#/ROMA0
IRDY#
TRDY#/ROMOE#
PAR/ROMA19
STOP#
PERR#
SERR#
REQ0#
REQ1#
REQ2#
REQ3#/GPIO70
REQ4#/GPIO71
GNT0#
GNT1#
GNT2#
GNT3#/GPIO72
GNT4#/GPIO73
CLKRUN#
LOCK#
INTE#/GPIO33
INTF#/GPIO34
INTG#/GPIO35
INTH#/GPIO36
LAD0
LAD1
LAD2
LAD3
LFRAME#
LDRQ0#
LDRQ1#/GNT5#/GPIO68
BMREQ#/REQ5#/GPIO65
SERIRQ
RTCCLK
RTC_IRQ#/GPIO69
VBAT
RTC_GND
CPU_PG/LDT_PG
INTR/LINT0
NMI/LINT1
INIT#
SMI#
SLP#/LDT_STP#
IGNNE#/SIC
A20M#/SID
FERR#
STPCLK#/ALLOW_LDTSTP
CPU_STP#/DPSLP_3V#
DPSLP_OD#/GPIO37
DPRSLPVR
LDT_RST#/DPRSTP#/PROCHOT#
SB_32K_X1
SB_32K_X2
SB_CPUPWRGD
LDT_STOP#
ALLOW_LDTSTOP
LDT_RST#
SB_A_RST#
SBSRC_CLKP
SBSRC_CLKN
SB_PCIE_CALRP
SB_PCIE_CALRN
SB_PCIRST#
SB_VBAT
PCI_CLK0_R
PCI_CLK1_R
PCI_CLK2_R
PCI_CLK3_R
PCI_CLK4
PCI_CLK5
PCI_CLK6
PCI_CLK7
PCI_AD0
PCI_AD1
PCI_AD2
PCI_AD3
PCI_AD4
PCI_AD5
PCI_AD6
PCI_AD7
PCI_AD8
PCI_AD9
PCI_AD10
PCI_AD11
PCI_AD12
PCI_AD13
PCI_AD14
PCI_AD15
PCI_AD16
PCI_AD17
PCI_AD18
PCI_AD19
PCI_AD20
PCI_AD21
PCI_AD22
PCI_AD23
PCI_AD24
PCI_AD25
PCI_AD26
PCI_AD27
PCI_AD28
PCI_CBE#0
PCI_CBE#1
PCI_CBE#2
PCI_CBE#3
PCI_FRAME#
PCI_DEVSEL#
PCI_IRDY#
PCI_TRDY#
PCI_PAR
PCI_STOP#
PCI_REQ#3
PCI_GNT#3
PCI_CLKRUN#
PCI_INTD#
LAD0
LAD1
LAD2
LAD3
LFRAME#
LDRQ#0
BMREQ#
SERIRQ
RTC_CLK
RTC_IRQ#
SB_VBAT
PCI_CLK0
PCI_CLK2
PCI_CLK3
PCI_RST#
PCI_AD[0..31]
PCI_CBE#[0..3]
LAD[0..3]
ODD_RST#
+3.3V
+1.2V
+1.8V
+3.3VS
+3.3V_AUX
PCIE_VDDR
OPEN : NORMAL
SHORT: CMOS CLEAR
32.768KHz Crystal
PCB Silkscen.
Elitegroup Computer System
SB600 PCIE/PCI/CPU/LPC
L53RI0
Friday, December 29, 2006


SB600 SB 23x23mm
Part 4 of 4
U18D
SB600
PBGA548-SB600
ACPI / WAKE UP EVENTS
USB INTERFACE
OSC / RST
GPIO
USB OC
AZALIA
AC97
USB PWR
PCI_PME#/GEVENT4#
RI#/EXTEVNT0#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
SUS_STAT#
TEST2
TEST1
TEST0
GA20IN
KBRST#
LPC_PME#/GEVENT3#
LPC_SMI#/EXTEVNT1#
S3_STATE/GEVENT5#
SYS_RESET#/GPM7#
WAKE#/GEVENT8#
BLINK/GPM6#
SMBALERT#/THRMTRIP#/GEVENT2#
RSMRST#
14M_OSC
SATA_IS0#/GPIO10
ROM_CS#/GPIO1
GHI#/SATA_IS1#/GPIO6
WD_PWRGD/GPIO7
SMARTVOLT/SATA_IS2#/GPIO4
SHUTDOWN#/GPIO5
SPKR/GPIO2
SCL0/GPOC0#
SDA0/GPOC1#
SCL1/GPOC2#
SDA1/GPOC3#
DDC1_SCL/GPIO9
DDC1_SDA/GPIO8
SSMUXSEL/SATA_IS3#/GPIO0
LLB#/GPIO66
USB_OC9#/SLP_S2/GPM9#
USB_OC8#/AZ_DOCK_RST#/GPM8#
USB_OC7#/GEVENT7#
USB_OC6#/GEVENT6#
USB_OC5#/DDR3_RST#/GPM5#
USB_OC4#/GPM4#
USB_OC3#/GPM3#
USB_OC2#/GPM2#
USB_OC1#/GPM1#
USB_OC0#/GPM0#
AZ_BITCLK
AZ_SDOUT
AZ_SDIN3/GPIO46
AZ_SYNC
AZ_RST#
AC_BITCLK/GPIO38
AC_SDOUT/GPIO39
ACZ_SDIN0/GPIO42
ACZ_SDIN1/GPIO43
ACZ_SDIN2/GPIO44
AC_SYNC/GPIO40
AC_RST#/GPIO45
NC1
NC2
NC3
NC4
NC5
NC6
NC7
NC8
USBCLK
USB_RCOMP
USB_ATEST1
USB_ATEST0
USB_HSDP9+
USB_HSDM9-
USB_HSDP8+
USB_HSDM8-
USB_HSDP7+
USB_HSDM7-
USB_HSDP6+
USB_HSDM6-
USB_HSDP5+
USB_HSDM5-
USB_HSDP4+
USB_HSDM4-
USB_HSDP3+
USB_HSDM3-
USB_HSDP2+
USB_HSDM2-
USB_HSDP1+
USB_HSDM1-
USB_HSDP0+
USB_HSDM0-
AVDDTX_0
AVDDTX_1
AVDDTX_2
AVDDTX_3
AVDDTX_4
AVDDRX_0
AVDDRX_1
AVDDRX_2
AVDDRX_3
AVDDRX_4
AVDDC
AVSSC
AVSS_USB_1
AVSS_USB_2
AVSS_USB_3
AVSS_USB_4
AVSS_USB_5
AVSS_USB_6
AVSS_USB_7
AVSS_USB_8
AVSS_USB_9
AVSS_USB_10
AVSS_USB_11
AVSS_USB_12
AVSS_USB_13
AVSS_USB_14
AVSS_USB_15
AVSS_USB_16
AVSS_USB_17
AVSS_USB_18
AVSS_USB_19
AVSS_USB_20
AVSS_USB_21
AVSS_USB_22
AVSS_USB_23
AVSS_USB_24
AVSS_USB_25
AVSS_USB_26
AVSS_USB_27
AVSS_USB_28
AVSS_USB_29
AVSS_USB_30
AVSS_USB_31
AVSS_USB_32
AVSS_USB_33
SB_TEST0
SB_TEST1
SB_TEST2
R370 @2.2K_1
R364 @2.2K_1
R365 @2.2K_1
+3.3VS
(21) PCI_PME#
TP65
(17,20,24) PM_SLP_S3#
(24) PM_SLP_S5#
(24) SB_PWRON#
(4,13,24) SB_PWRGD
TP66
(24) KA20M#_SB
(24) KRST#_SB
(24) LPC_PME#
(24) LPC_SMI#
TP67
(17,19,20) PCIE_WAKE_UP#
R130 @10K
SB_THRMTRIP#
(24) PM_RSMRST#
R184 0R
SB_RSMRST#
(9) SB_OSCIN
SB_OSCIN
(11) SATA_IS1#
(18) LCD_SEL2#
R360 @10K
R103 @10K
R95 @10K
SB_GPIO7
SB_GPIO4
(23) SPKR
(7,9,17) SB_SCLK0
(7,9,17) SB_SDATA0
SB_SCLK1
SB_SDATA1
(17) IDE_DMA66
(18) LCD_SEL1#
(18) LCD_SEL0#
(13) SB_GPM5#
R132 0R
(19,24) NEWCARD_CPPE#
C530 @100nF/10V X7R
(23) AZ_BIT_CLK
(23) AZ_SDATA_OUT
(23) AZ_SYNC
(23) AZ_RST#
(23) AZ_SDATA_IN0
(23) AZ_SDATA_IN1
L67 33R
R159 33R
R160 33R
R161 0R
R143 0R
R391 0R
SB_AZ_BITCLK
SB_AZ_SDOUT
SB_AZ_SYNC
SB_AZ_RST#
SB_AZ_SDIN0
SB_AZ_SDIN1
SB_GPIO39
AZ_RST# R169 10K
R94 2.2K_1 SB_SCLK0
R97 2.2K_1 SB_SDATA0
R142 @10K SB_SCLK1
R136 @10K SB_SDATA1
R382 @2.2K_1
SB_GPIO39
(11,24) NB_PWRGD
R209 @0R
SB_PWRGD
R208 @0R
Z1402
D5
@BAT54
R206 @10K
USB_RCOMP R119 9.76K_1
USB_ATEST1 TP43
USB_ATEST0 TP44
USBP9 (19)
USBN9 (19)
USBP8 (17)
USBN8 (17)
USBP7 (22)
USBN7 (22)
USBP6 TP84
USBN6 TP85
USBP5 (22)
USBN5 (22)
USBP4 (19)
USBN4 (19)
USBP3 (19)
USBN3 (19)
USBP2 (23)
USBN2 (23)
USBP1 (19)
USBN1 (19)
USBP0 (23)
USBN0 (23)
SB_USBCLK R114 0R
CLK_48M_USB (9)
AVDD_USB
L28 HCB1608KF-600T30_0603
C164 100nF/10V X7R
C168 100nF/10V X7R
C166 100nF/10V X7R
C475 4.7uF/10V_0805 X5R
C459 4.7uF/10V_0805 X5R
C160 100nF/10V X7R
C172 100nF/10V X7R
C176 100nF/10V X7R
C156 100nF/10V X7R
C468 100nF/10V X7R
C467 2.2uF/6.3V_0603 X5R
L63 HCB1608KF-600T30_0603
NS21 NS_VIA
+3.3V
Elitegroup Computer System
SB600 ACPI/GPIO/USB/AUDIO
Size
Document Number
3721
Custom
L53RI0
Rev
B0.0
Date: Friday, December 29, 2006
Sheet 14 of 32

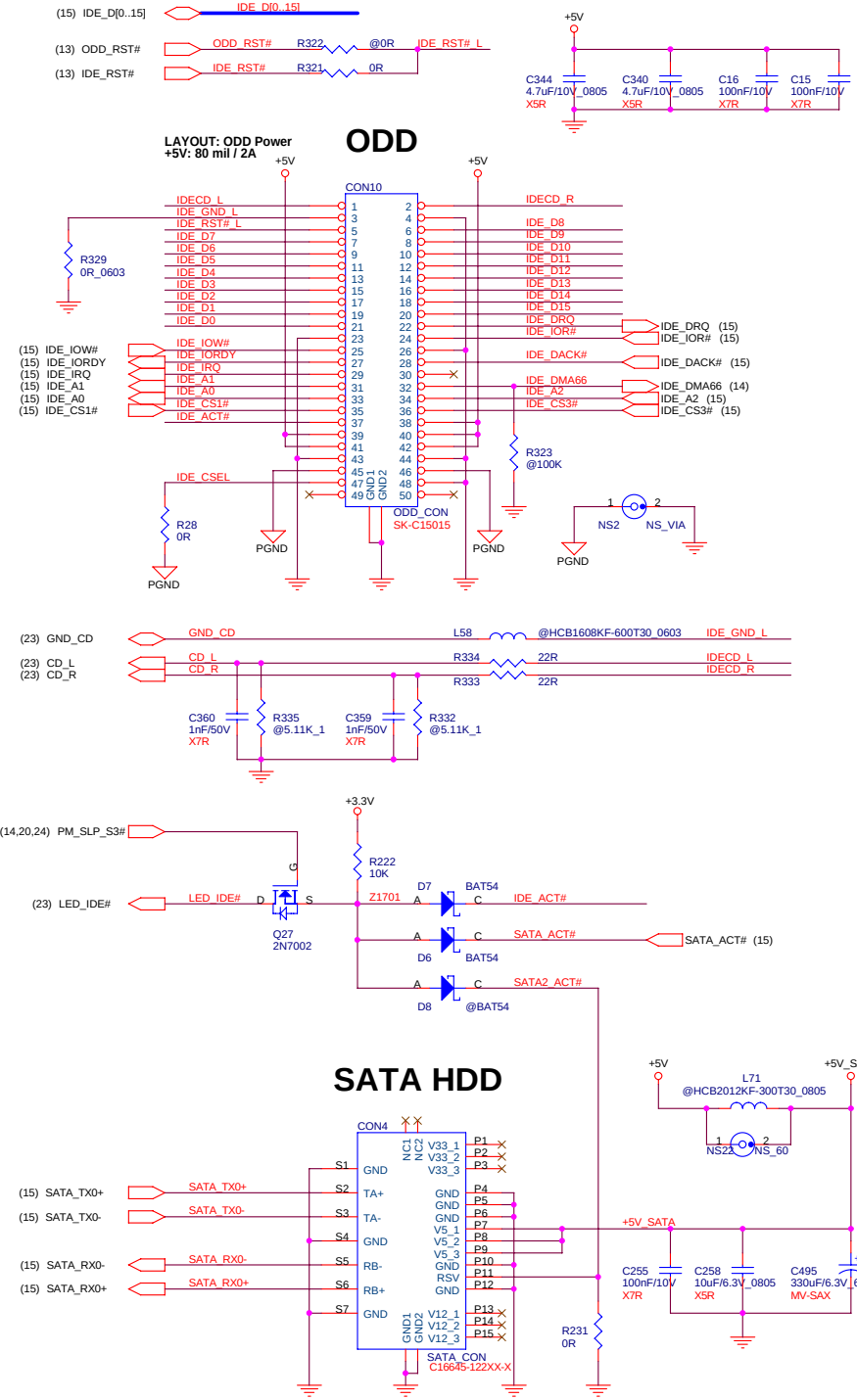


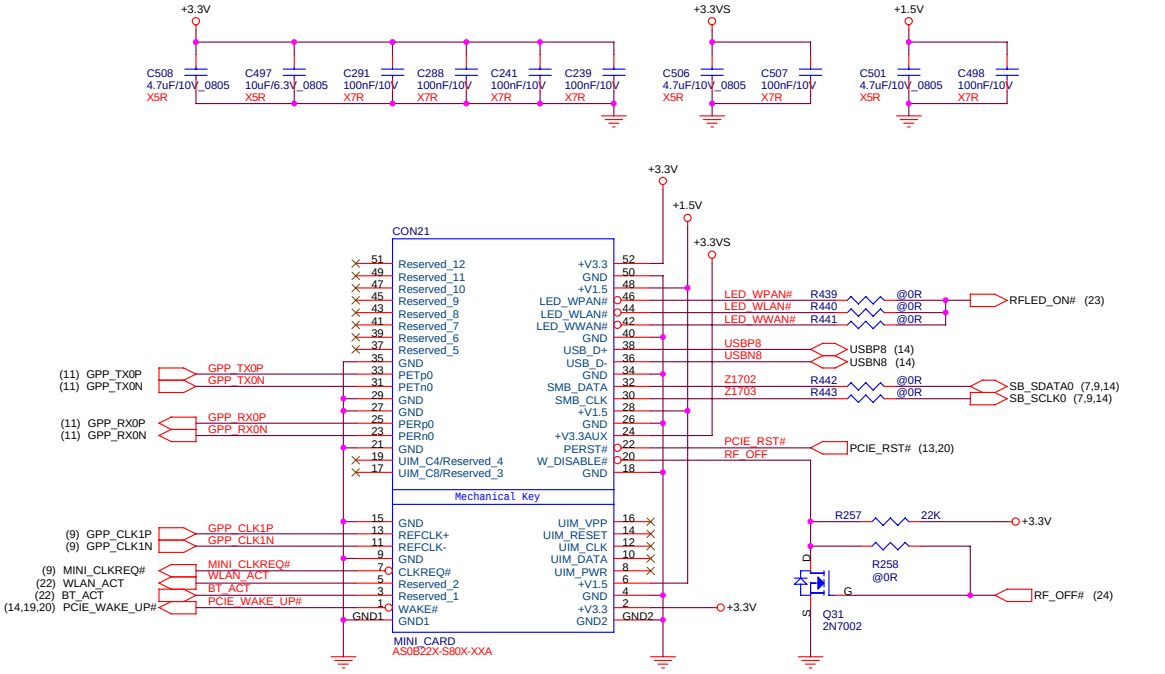
Elitegroup Computer System

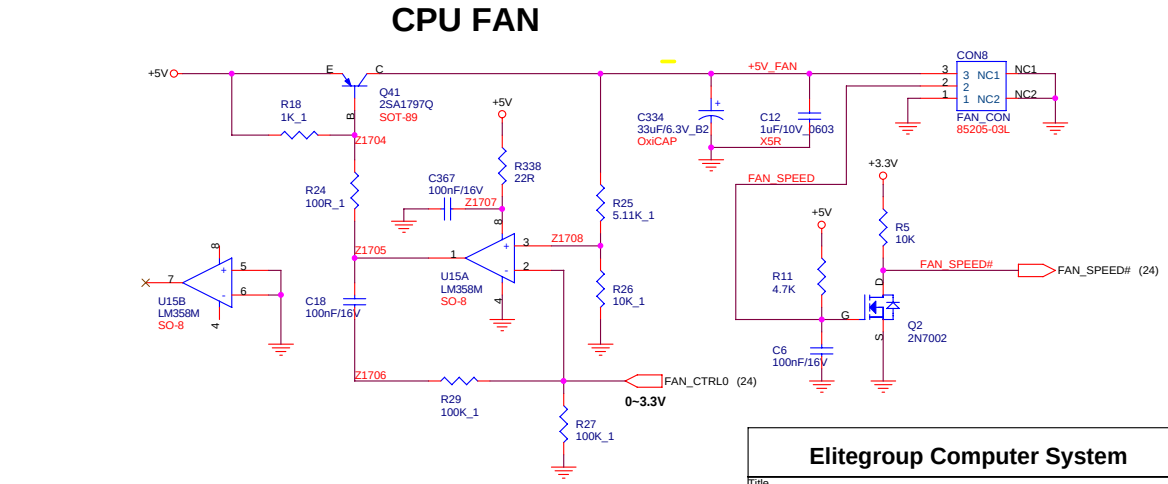
Title	SB600 SATA/IDE/HWM	
Size	Document Number: 3721 Custom — L53RI0	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 15 of 32	



Elitegroup Computer System	
Title	SB600 POWER
Size	Document Number 3721 Custom L53RI0
Rev	B0.0
Date:	Friday, December 29, 2006
Sheet	16 of 32

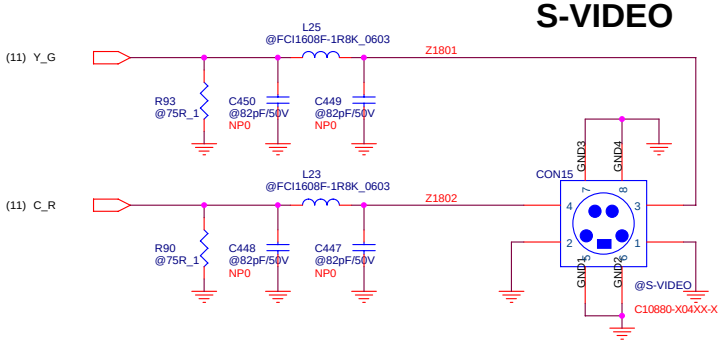






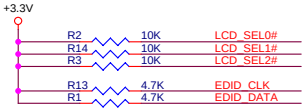
Elitegroup Computer System			
Title	**FAN/MINI CARD/ODD/SATA CON**		
Size	Document Number		Rev
	3721 Custom	**L53RI0**	B0.0
Date:	Friday, December 29, 2006	Sheet 17 of 32	

S-VIDEO

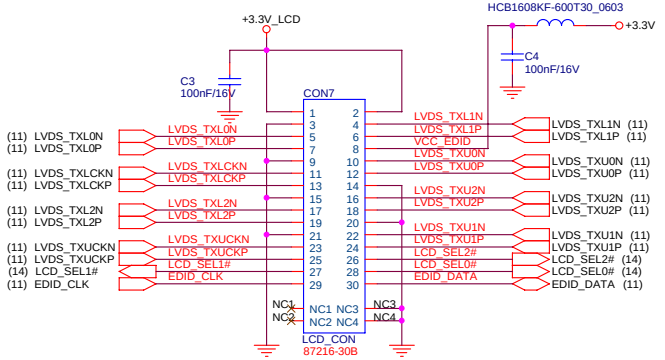


LCD Panel SELECT

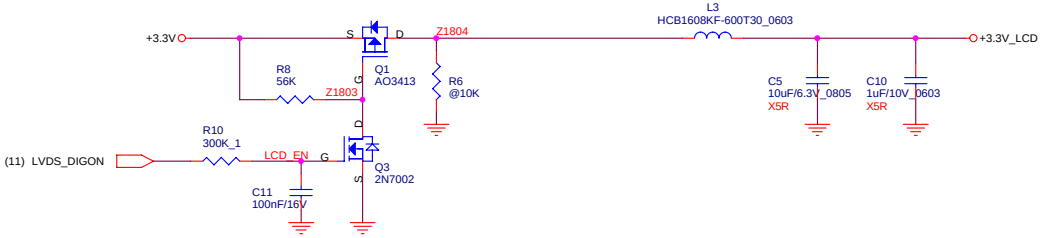
LCD_SEL2#	LCD_SEL1#	LCD_SEL0#	
L	L	L	reserved
L	L	H	1024X768
L	H	L	1400X1050
L	H	H	1280X800
H	L	L	reserved
H	L	H	1680X1050
H	H	L	1920X1200
H	H	H	1440X900



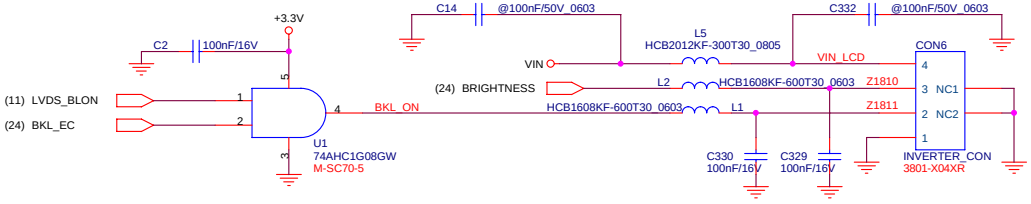
LCD

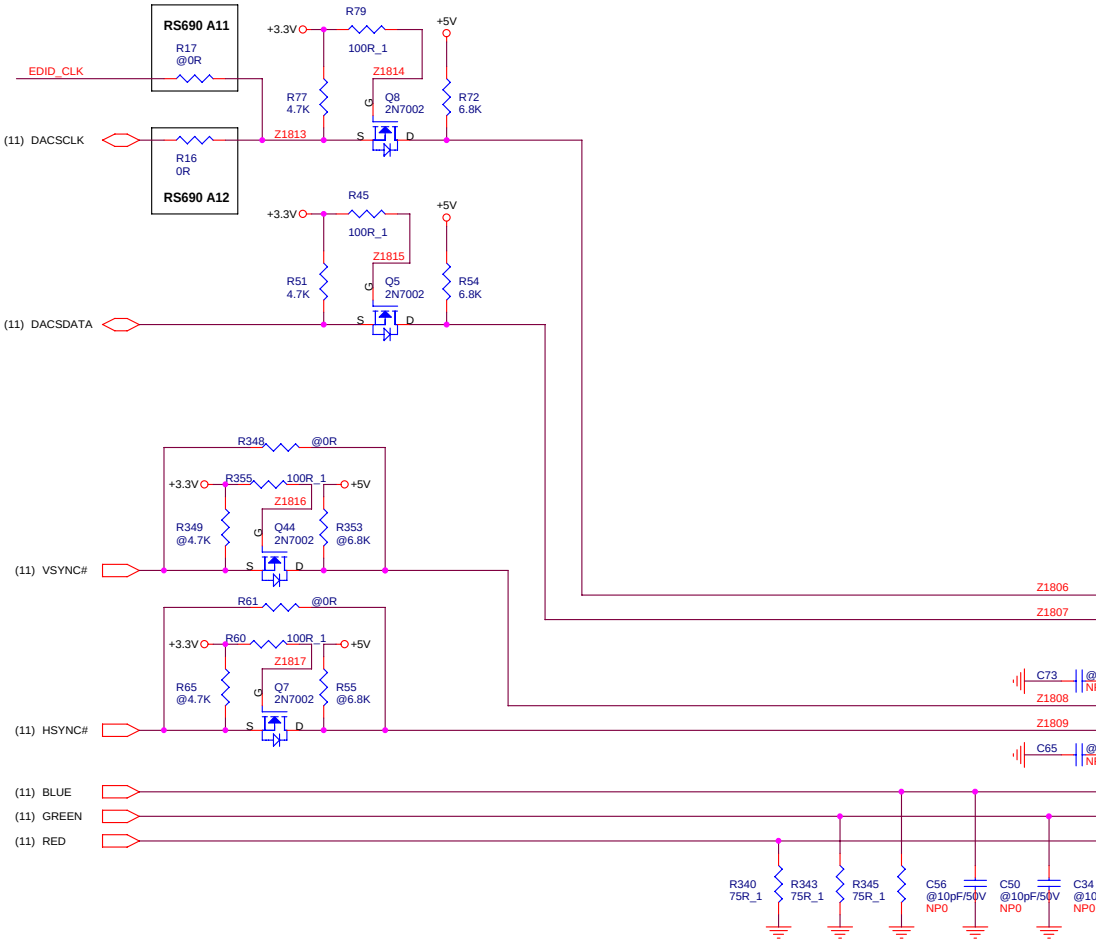


LCD VCC

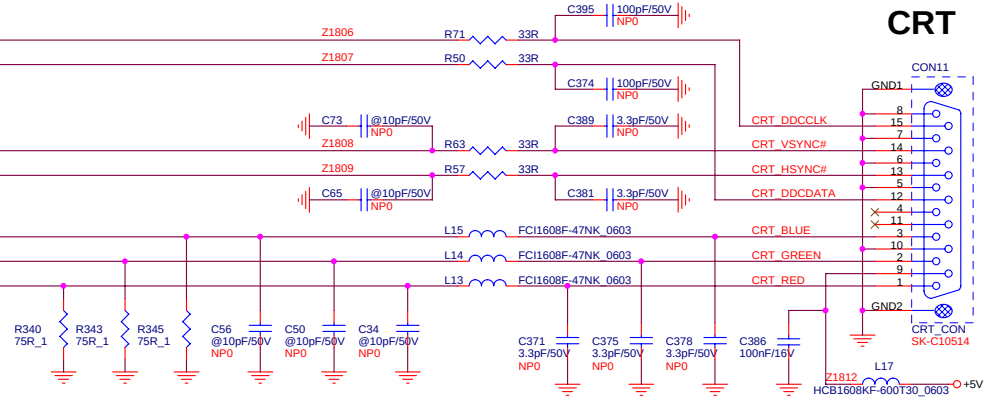


INVERTER





CRT



Elitegroup Computer System		
Title: CRT/LCD/S-VIDEO CON		
Size	Document Number: 3721 Custom — L53RI0	Rev: B0.0
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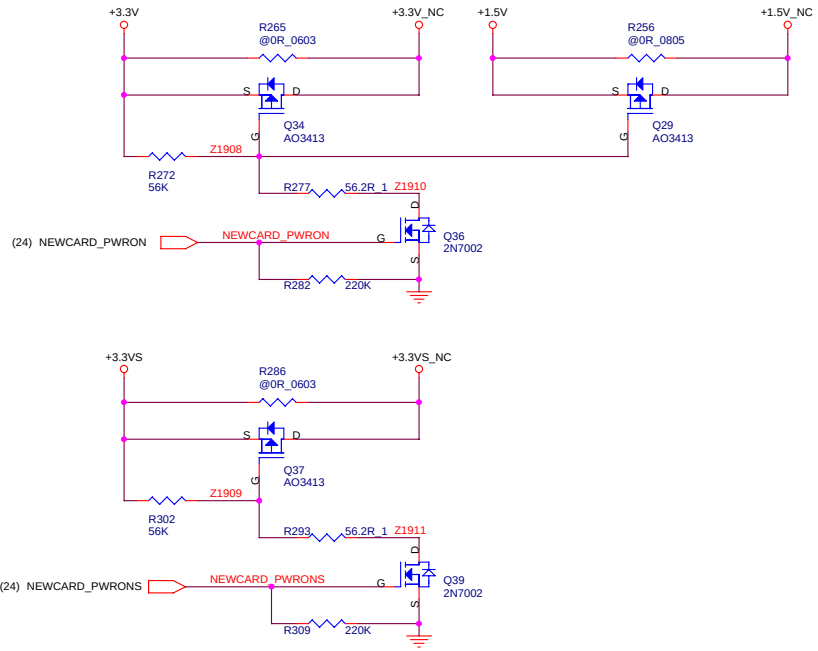
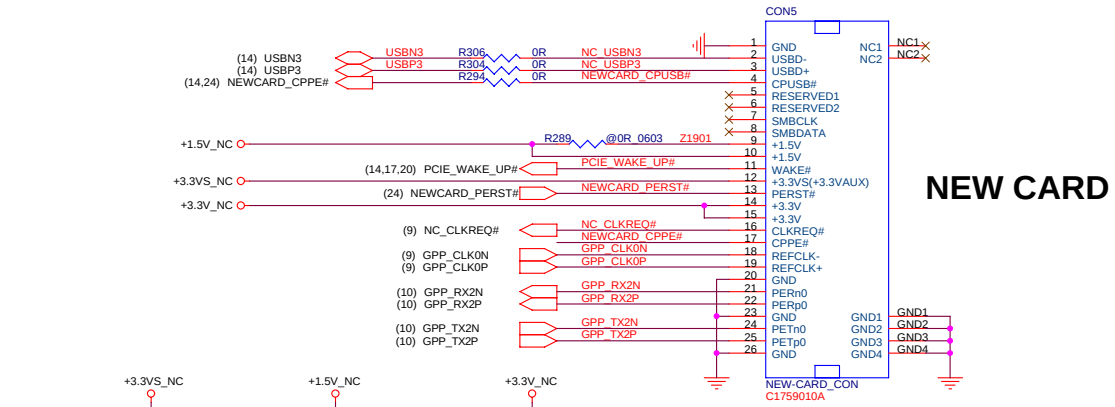
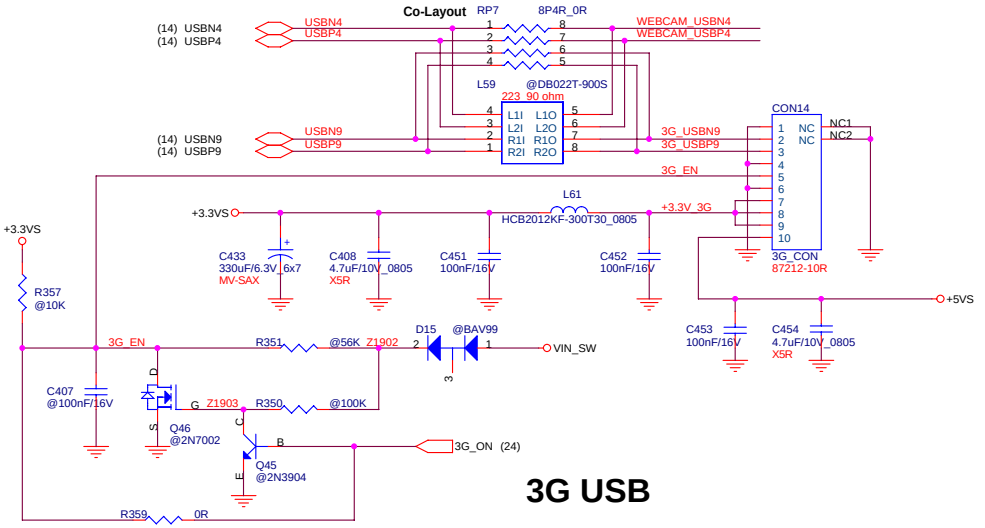
NEW CARD POWER



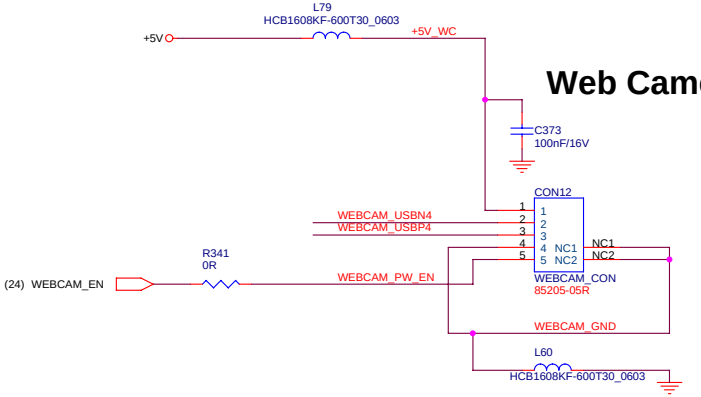
NEW CARD



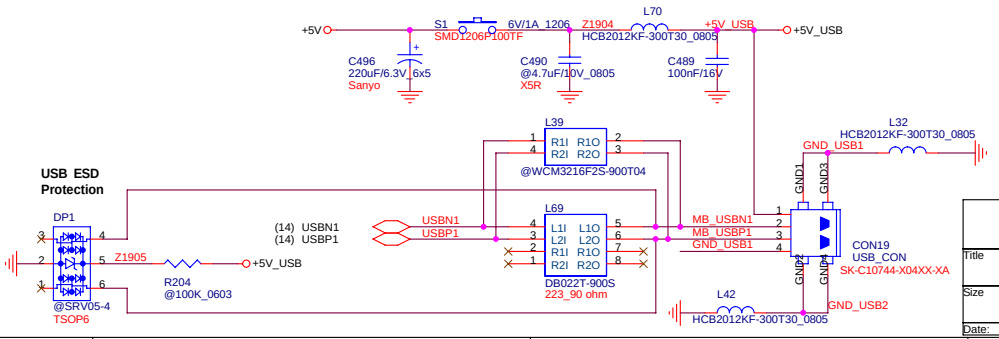
3G USB



Web Camera



ON BOARD USB



Elitegroup Computer System

Title: 3G/WEB CAM/NEW CARD/USB CON

Size	Document Number	Rev
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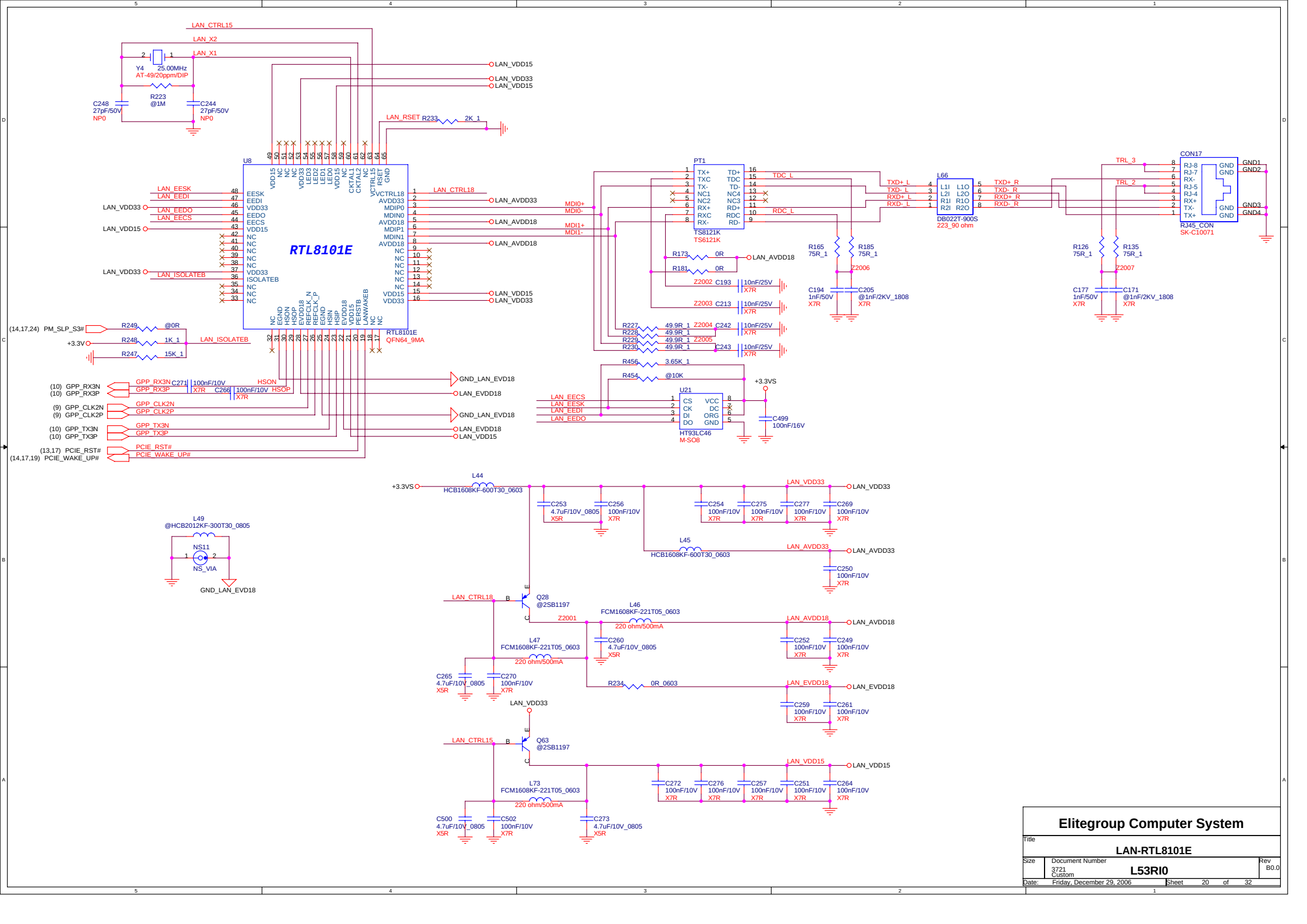
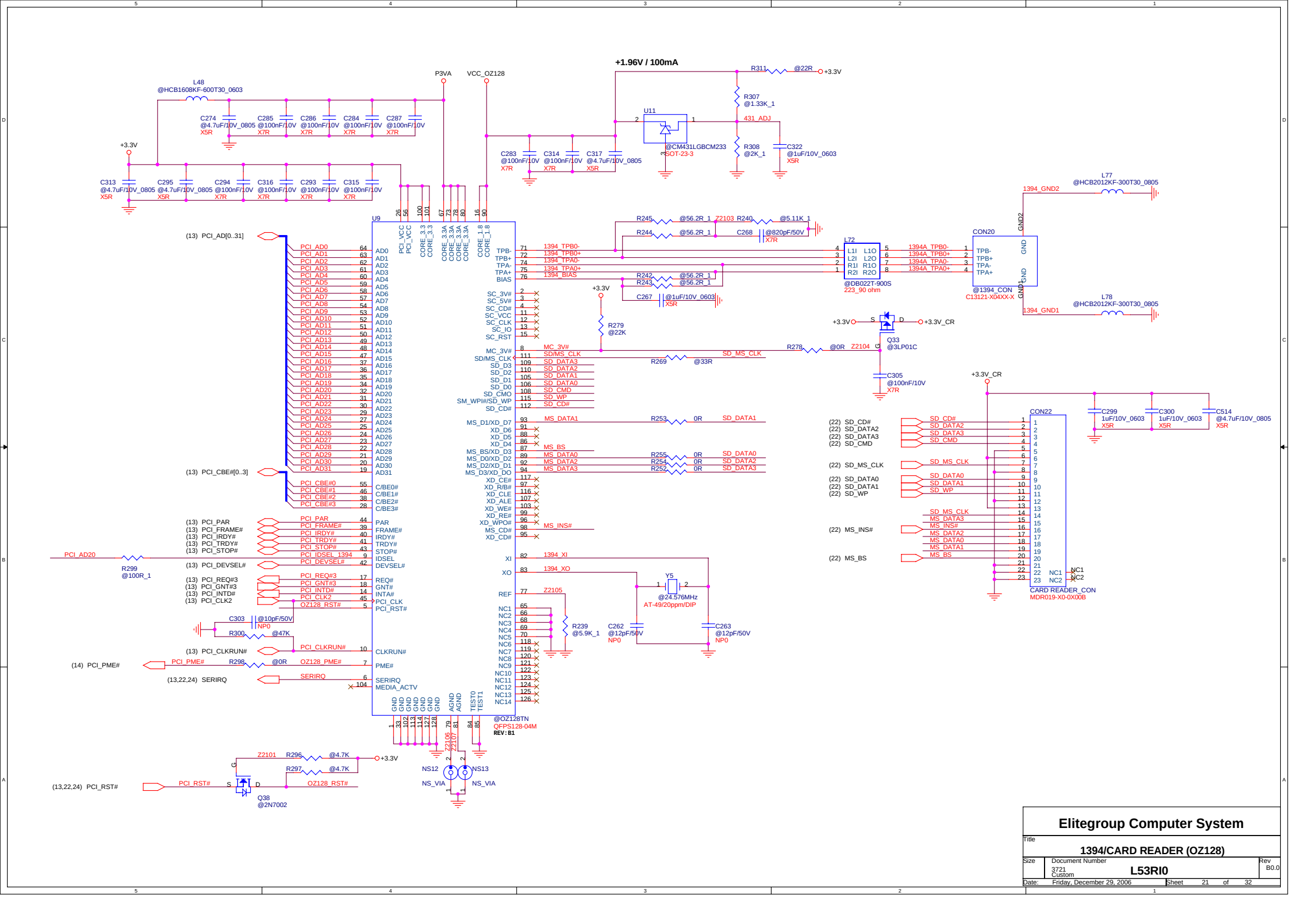


Elitegroup Computer System

Title	LAN-RTL8101E	
Size	Document Number: 3721 Custom — L53RI0	Rev: B0.0
Date: Friday, December 29, 2006	Sheet 20 of 32	


+1.96V / 100mA
P3VA
VCC_OZ128
L48
@HCB1608KF-600T30_0603
C274 @4.7uF/10V_0805 X5R
C285 @100nF/10V X7R
C286 @100nF/10V X7R
C284 @100nF/10V X7R
C287 @100nF/10V X7R
C313 @4.7uF/10V_0805 X5R
C295 @4.7uF/10V_0805 X5R
C294 @100nF/10V X7R
C316 @100nF/10V X7R
C293 @100nF/10V X7R
C315 @100nF/10V X7R
C283 @100nF/10V X7R
C314 @100nF/10V X7R
C317 @4.7uF/10V_0805 X5R
U11
@CM431LGBCM233
SOT-23-3
R311 @22R
R307 @1.33K_1
R308 @2K_1
C322 @1uF/10V_0603 X5R
431_ADJ
U9
@OZ128TN
QFPS128-04M
REV:B1
(13) PCI_AD[0..31]
(13) PCI_CBE#[0..3]
(13) PCI_PAR
(13) PCI_FRAME#
(13) PCI_IRDY#
(13) PCI_TRDY#
(13) PCI_STOP#
(13) PCI_DEVSEL#
(13) PCI_REQ#3
(13) PCI_GNT#3
(13) PCI_INTD#
(13) PCI_CLK2
(13) PCI_CLKRUN#
(14) PCI_PME#
(13,22,24) SERIRQ
(13,22,24) PCI_RST#
R299 @100R_1
C303 @10pF/50V NP0
R300 @47K
R298 @0R
Z2101
R296 @4.7K
R297 @4.7K
Q38
@2N7002
R245 @56.2R_1
R244 @56.2R_1
Z2103
R240 @5.11K_1
C268 @820pF/50V X7R
R242 @56.2R_1
R243 @56.2R_1
C267 @1uF/10V_0603 X5R
L72
@DB022T-900S
223_90 ohm
CON20
@1394_CON
C13121-X04XX-X
L77
@HCB2012KF-300T30_0805
L78
@HCB2012KF-300T30_0805
1394_GND2
1394_GND1
R279 @22K
R278 @0R
Z2104
Q33
@3LP01C
C305 @100nF/10V X7R
R269 @33R
R253 0R
R255 0R
R254 0R
R252 0R
Y5
@24.576MHz
AT-49/20ppm/DIP
C262 @12pF/50V NP0
C263 @12pF/50V NP0
R239 @5.9K_1
Z2105
Z2106
Z2107
NS12
NS13
NS_VIA
CON22
CARD READER_CON
MDR019-X0-0X00B
C299 1uF/10V_0603 X5R
C300 1uF/10V_0603 X5R
C514 @4.7uF/10V_0805 X5R
Elitegroup Computer System
1394/CARD READER (OZ128)
L53RI0
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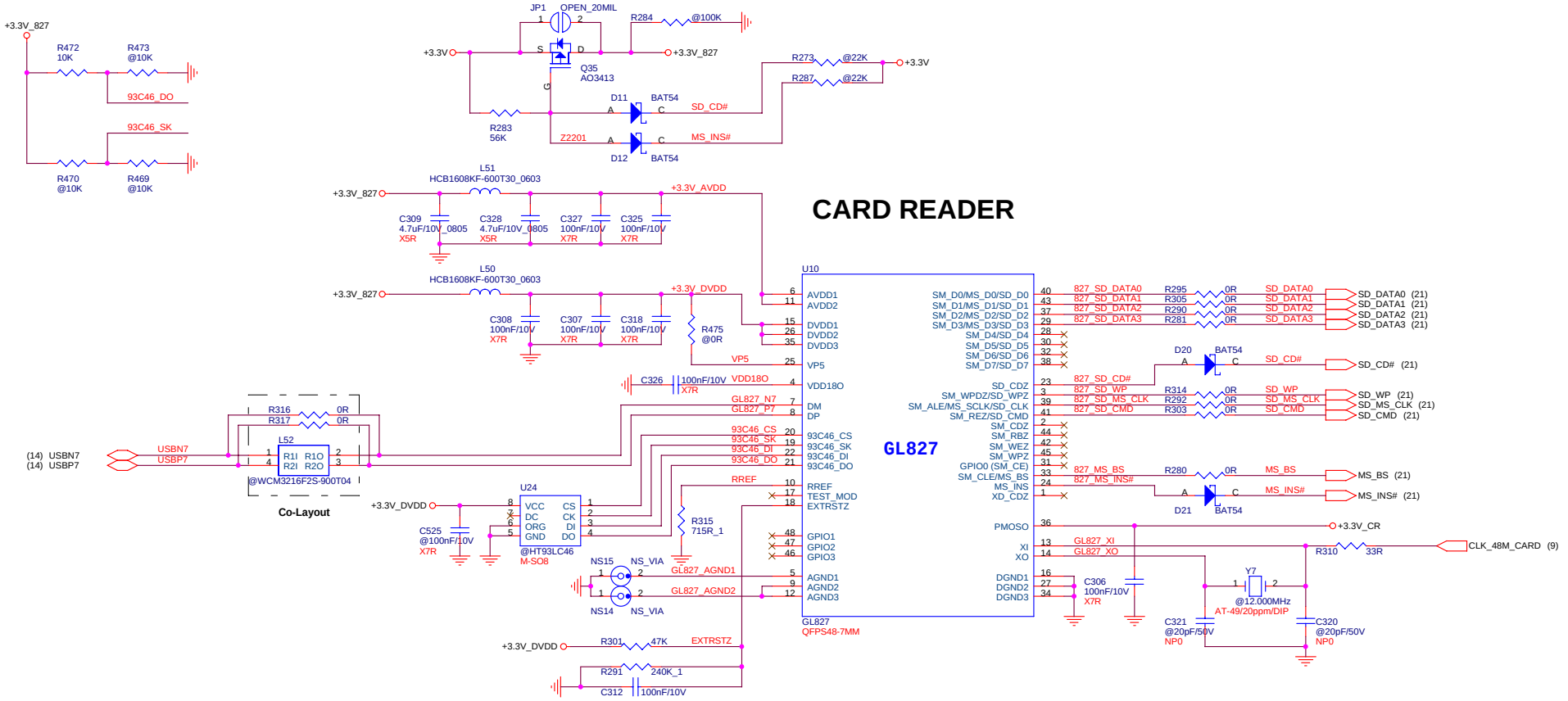

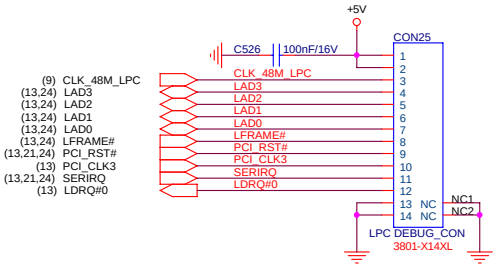

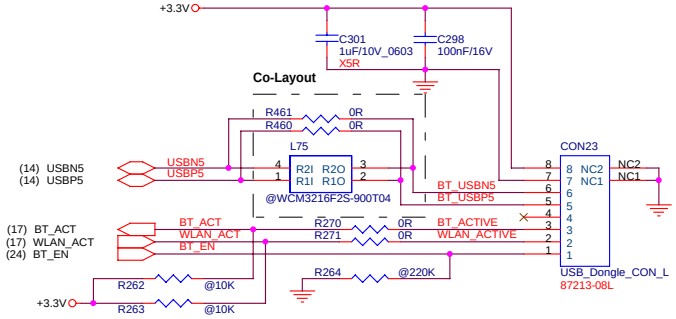

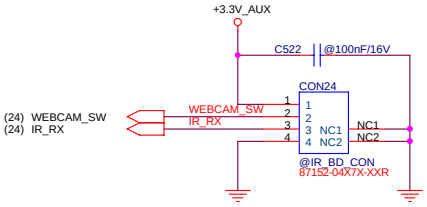

Elitegroup Computer System		
Title: CARD READER/DEBUG/BT/IR		
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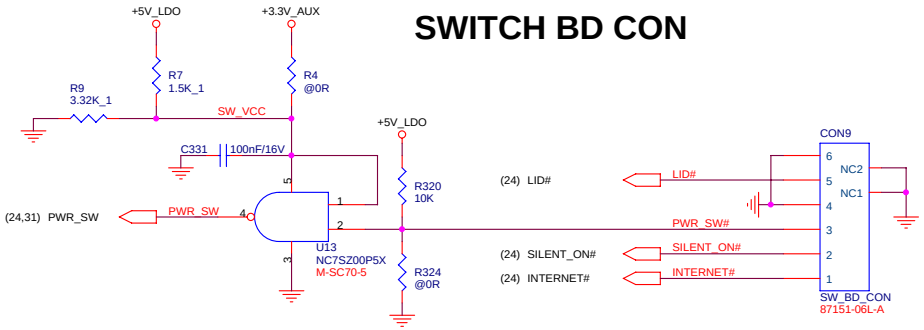
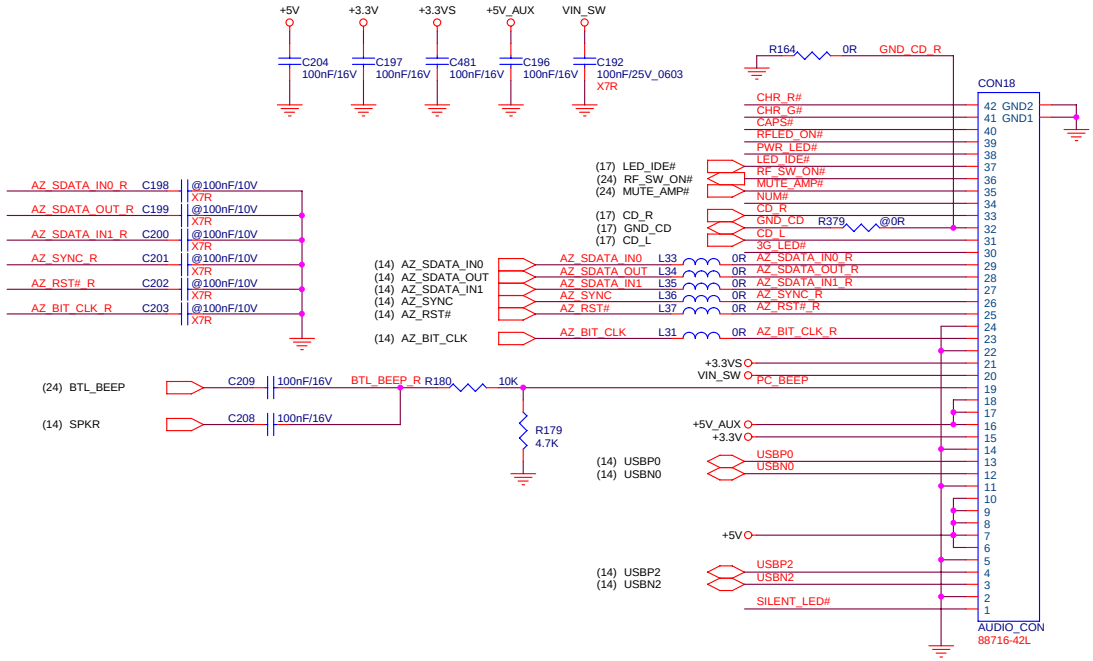
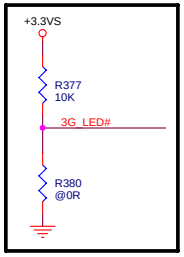
SWITCH BD CON

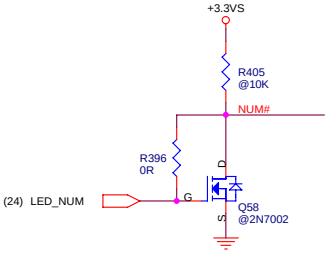


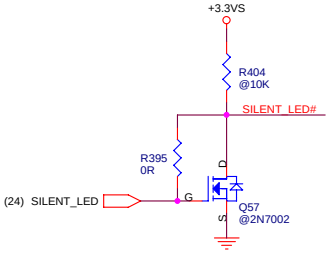
AUDIO / LED BD CON

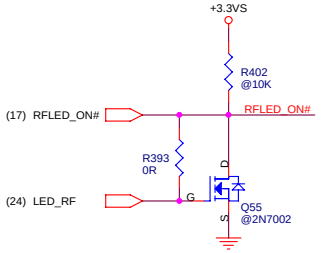


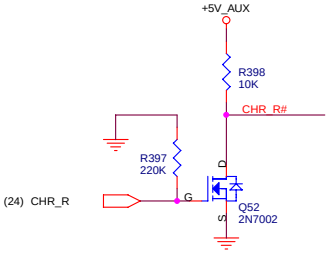
	L50IIx Audio BD	L51AI1 Audio BD
R377 10K	Add	Remove
R380 0R	Remove	Add

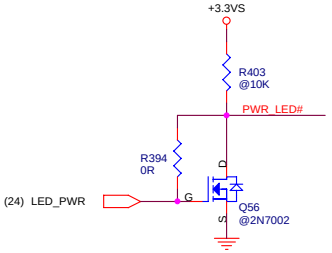


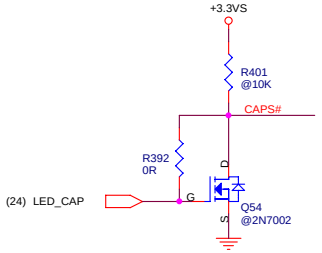


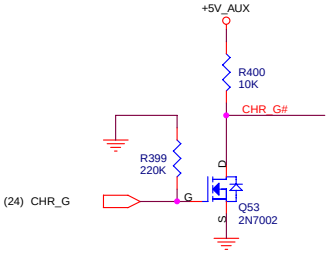




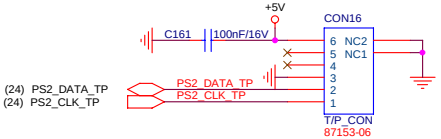








TOUCH PAD CON



Elitegroup Computer System	
Title	AUDIO/LED/SW BD/TP CON
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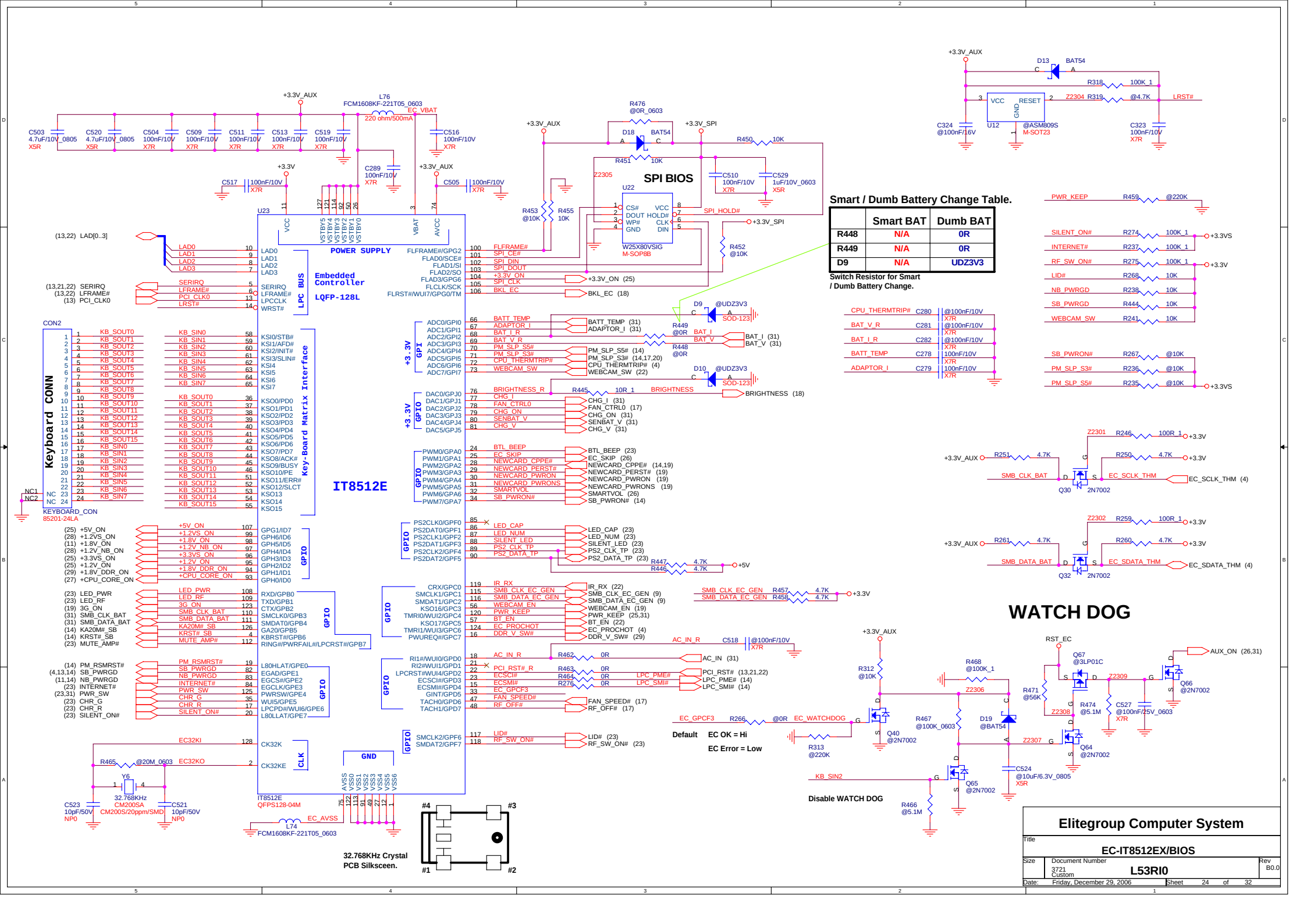
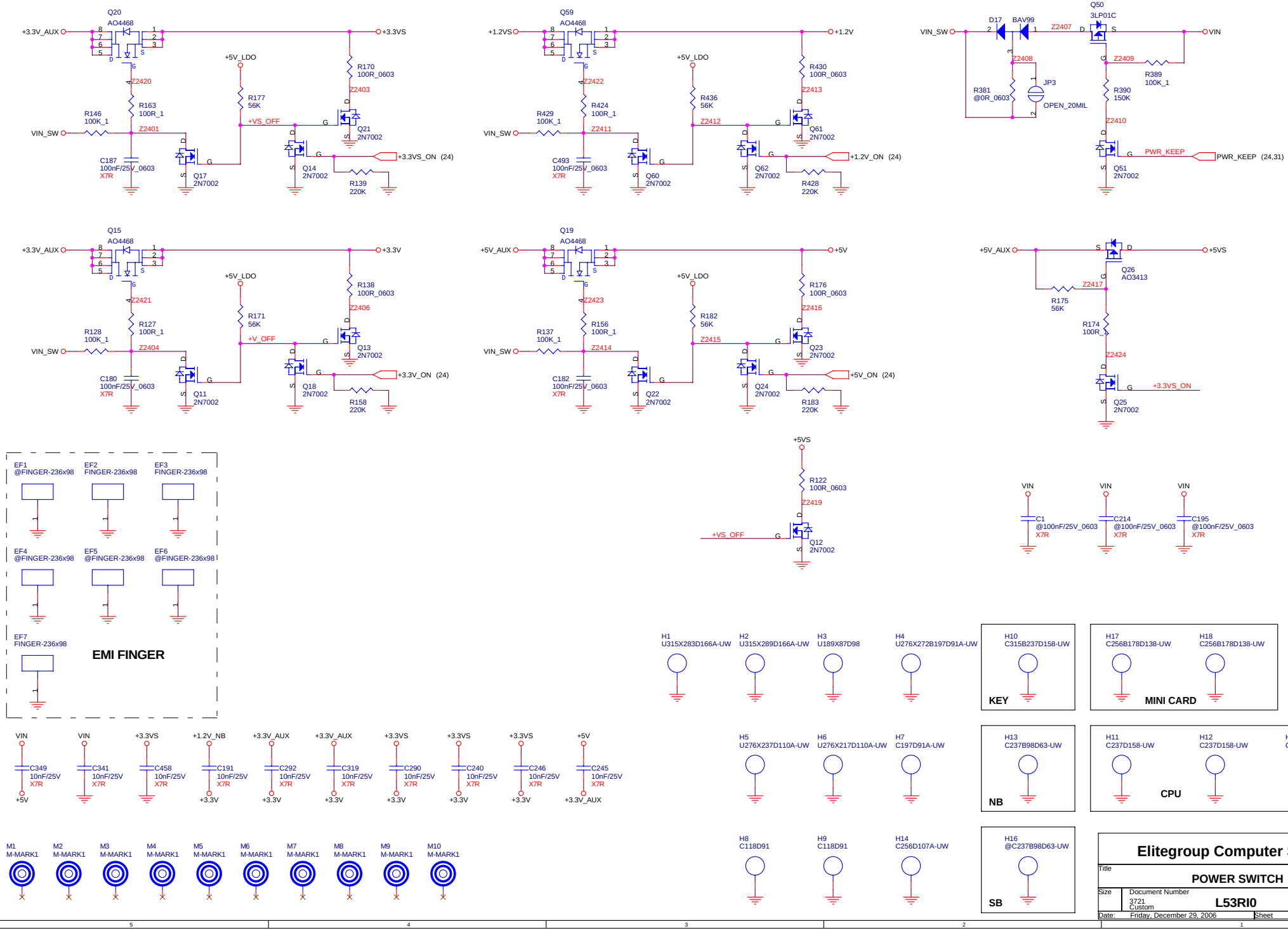

IT8512E
POWER SUPPLY
Embedded Controller
LQFP-128L
LPC BUS
Key-Board Matrix Interface
GPIO
CLK
Keyboard CONN
KEYBOARD_CON
85201-24LA
SPI BIOS
W25X80VSIG
M-SOP8B
Smart / Dumb Battery Change Table.
Smart BAT
Dumb BAT
R448 N/A 0R
R449 N/A 0R
D9 N/A UDZ3V3
Switch Resistor for Smart / Dumb Battery Change.
WATCH DOG
Default EC OK = Hi
EC Error = Low
Disable WATCH DOG
32.768KHz Crystal
PCB Silkscreen.
Elitegroup Computer System
EC-IT8512EX/BIOS
L53RI0
Friday, December 29, 2006


Q20
AO4468
+3.3V_AUX
+3.3VS
+5V_LDO
R170
100R_0603
Z2403
R177
56K
Z2420
R163
100R_1
R146
100K_1
VIN_SW
Z2401
+VS_OFF
Q21
2N7002
C187
100nF/25V_0603
X7R
Q17
2N7002
Q14
2N7002
+3.3VS_ON (24)
R139
220K
Q59
AO4468
+1.2VS
+1.2V
+5V_LDO
R430
100R_0603
Z2413
R436
56K
Z2422
R424
100R_1
R429
100K_1
VIN_SW
Z2411
Z2412
Q61
2N7002
C493
100nF/25V_0603
X7R
Q60
2N7002
Q62
2N7002
+1.2V_ON (24)
R428
220K
Q50
3LP01C
D17
BAV99
Z2407
VIN_SW
VIN
Z2408
Z2409
R389
100K_1
JP3
R381
@0R_0603
OPEN_20MIL
R390
150K
Z2410
PWR_KEEP
PWR_KEEP (24,31)
Q51
2N7002
Q15
AO4468
+3.3V_AUX
+3.3V
+5V_LDO
R138
100R_0603
Z2406
R171
56K
Z2421
R127
100R_1
R128
100K_1
VIN_SW
Z2404
+V_OFF
Q13
2N7002
C180
100nF/25V_0603
X7R
Q11
2N7002
Q18
2N7002
+3.3V_ON (24)
R158
220K
Q19
AO4468
+5V_AUX
+5V
+5V_LDO
R176
100R_0603
Z2416
R182
56K
Z2423
R156
100R_1
R137
100K_1
VIN_SW
Z2414
Z2415
Q23
2N7002
C182
100nF/25V_0603
X7R
Q22
2N7002
Q24
2N7002
+5V_ON (24)
R183
220K
+5V_AUX
+5VS
Q26
AO3413
Z2417
R175
56K
R174
100R_1
Z2424
+3.3VS_ON
Q25
2N7002
+5VS
R122
100R_0603
Z2419
+VS_OFF
Q12
2N7002
VIN
C1
@100nF/25V_0603
X7R
VIN
C214
@100nF/25V_0603
X7R
VIN
C195
@100nF/25V_0603
X7R
EF1
@FINGER-236x98
EF2
FINGER-236x98
EF3
FINGER-236x98
EF4
@FINGER-236x98
EF5
@FINGER-236x98
EF6
@FINGER-236x98
EF7
FINGER-236x98
EMI FINGER
H1
U315X283D166A-UW
H2
U315X289D166A-UW
H3
U189X87D98
H4
U276X272B197D91A-UW
H10
C315B237D158-UW
KEY
H17
C256B178D138-UW
H18
C256B178D138-UW
MINI CARD
VIN
C349
10nF/25V
X7R
+5V
VIN
C341
10nF/25V
X7R
+3.3VS
C458
10nF/25V
X7R
+1.2V_NB
C191
10nF/25V
X7R
+3.3V
+3.3V_AUX
C292
10nF/25V
X7R
+3.3V_AUX
C319
10nF/25V
X7R
+3.3V
+3.3VS
C290
10nF/25V
X7R
+3.3V
+3.3VS
C240
10nF/25V
X7R
+3.3V
+3.3VS
C246
10nF/25V
X7R
+3.3V
+5V
C245
10nF/25V
X7R
+3.3V_AUX
H5
U276X237D110A-UW
H6
U276X217D110A-UW
H7
C197D91A-UW
H13
C237B98D63-UW
NB
H11
C237D158-UW
H12
C237D158-UW
H15
C237D158-UW
CPU
M1
M-MARK1
M2
M-MARK1
M3
M-MARK1
M4
M-MARK1
M5
M-MARK1
M6
M-MARK1
M7
M-MARK1
M8
M-MARK1
M9
M-MARK1
M10
M-MARK1
H8
C118D91
H9
C118D91
H14
C256D107A-UW
H16
@C237B98D63-UW
SB
Elitegroup Computer System
Title
POWER SWITCH
Size
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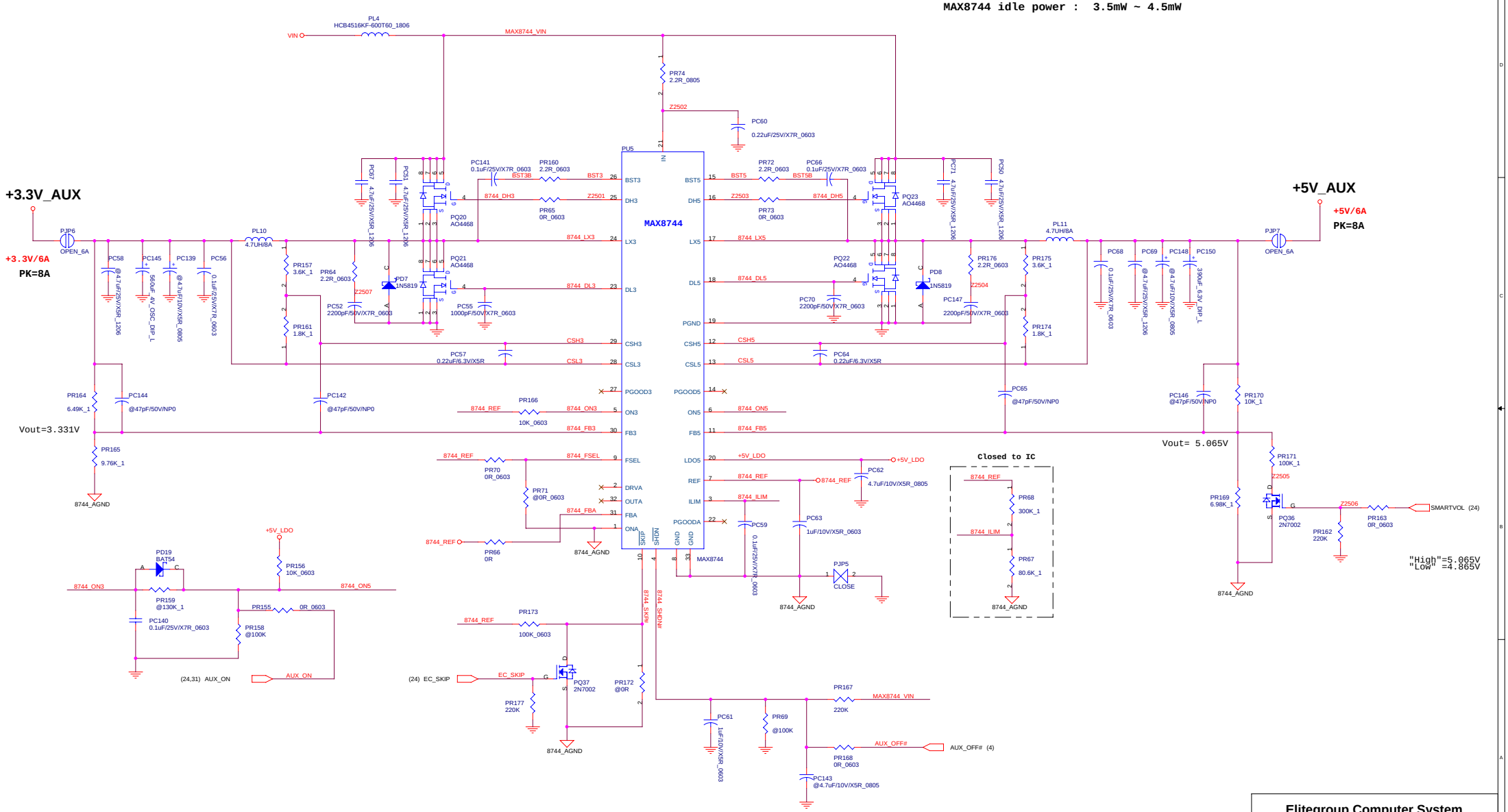
MAX8744 shutdown current : 8~ 20 uA(SHDN# pin = low)
MAX8744 standby current : 65 ~ 120 uA
MAX8744 idle power : 3.5mW ~ 4.5mW



Elitegroup Computer System			
Title: SYSTEM POWER (MAX8744)			
Size	Document Number: 3721 Custom L53RI0		Rev: B0.0
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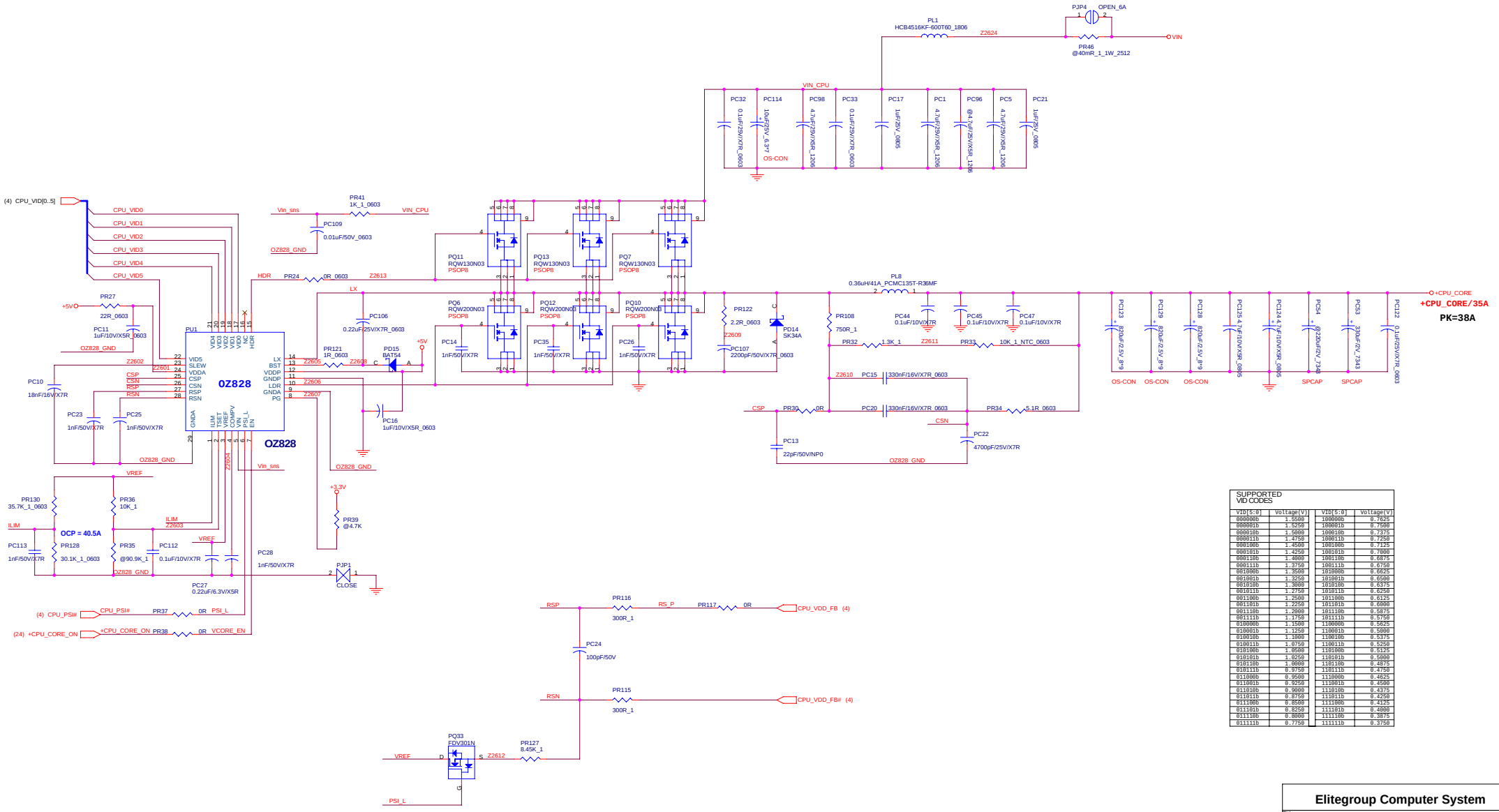

SUPPORTED VID CODES

VID[5:0]	Voltage(V)	VID[5:0]	Voltage(V)
000000b	1.5500	100000b	0.7625
000001b	1.5250	100001b	0.7500
000010b	1.5000	100010b	0.7375
000011b	1.4750	100011b	0.7250
000100b	1.4500	100100b	0.7125
000101b	1.4250	100101b	0.7000
000110b	1.4000	100110b	0.6875
000111b	1.3750	100111b	0.6750
001000b	1.3500	101000b	0.6625
001001b	1.3250	101001b	0.6500
001010b	1.3000	101010b	0.6375
001011b	1.2750	101011b	0.6250
001100b	1.2500	101100b	0.6125
001101b	1.2250	101101b	0.6000
001110b	1.2000	101110b	0.5875
001111b	1.1750	101111b	0.5750
010000b	1.1500	110000b	0.5625
010001b	1.1250	110001b	0.5500
010010b	1.1000	110010b	0.5375
010011b	1.0750	110011b	0.5250
010100b	1.0500	110100b	0.5125
010101b	1.0250	110101b	0.5000
010110b	1.0000	110110b	0.4875
010111b	0.9750	110111b	0.4750
011000b	0.9500	111000b	0.4625
011001b	0.9250	111001b	0.4500
011010b	0.9000	111010b	0.4375
011011b	0.8750	111011b	0.4250
011100b	0.8500	111100b	0.4125
011101b	0.8250	111101b	0.4000
011110b	0.8000	111110b	0.3875
011111b	0.7750	111111b	0.3750

Elitegroup Computer System		
Title: +CPU_CORE (OZ828)		
Size:	Document Number: 3721 Custom L53RI0	Rev: B0.0
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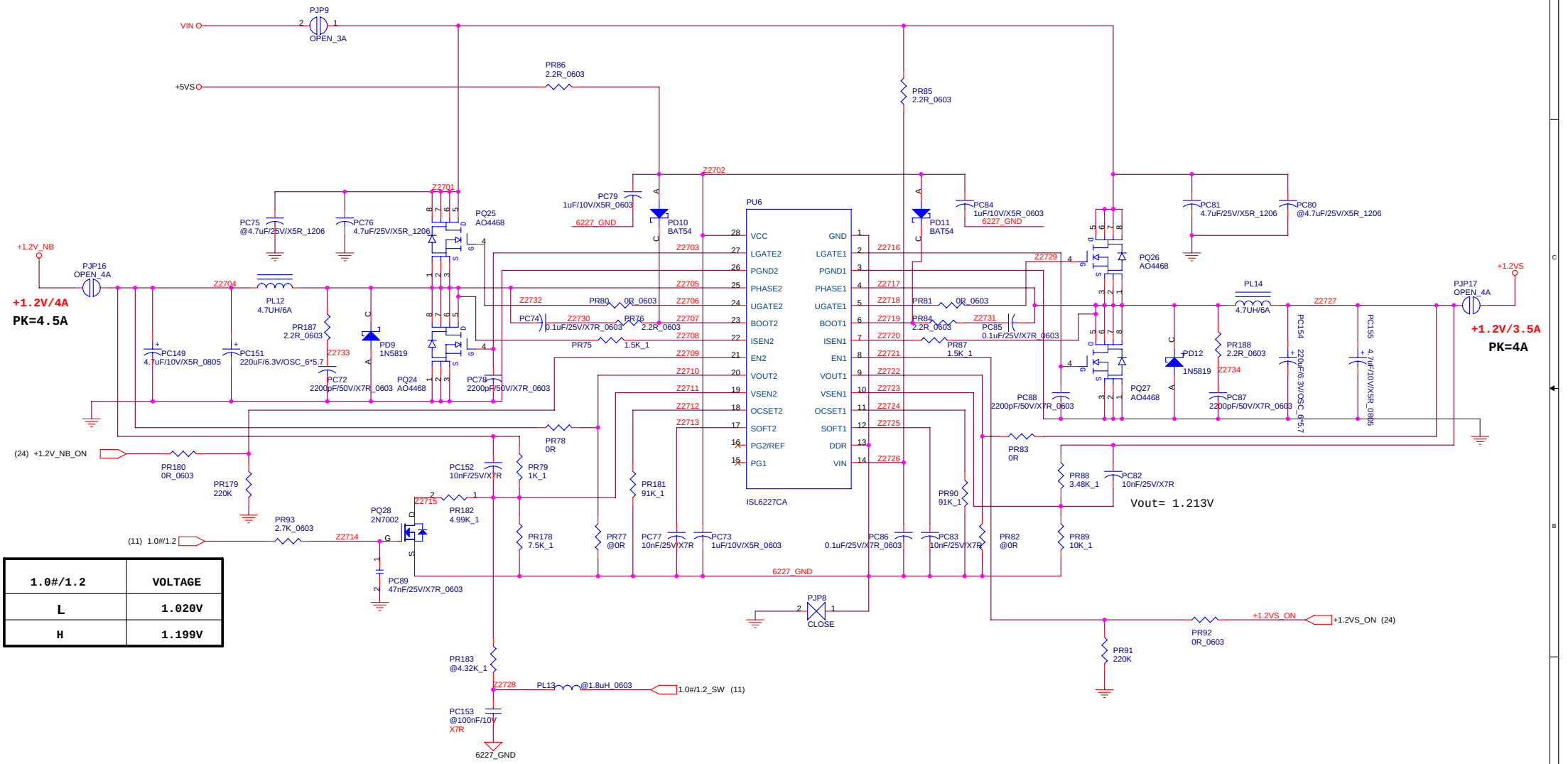

1.0#/1.2	VOLTAGE
L	1.020V
H	1.199V

Elitegroup Computer System

Title: +1.2VS/+1.2V_NB (ISL6227)

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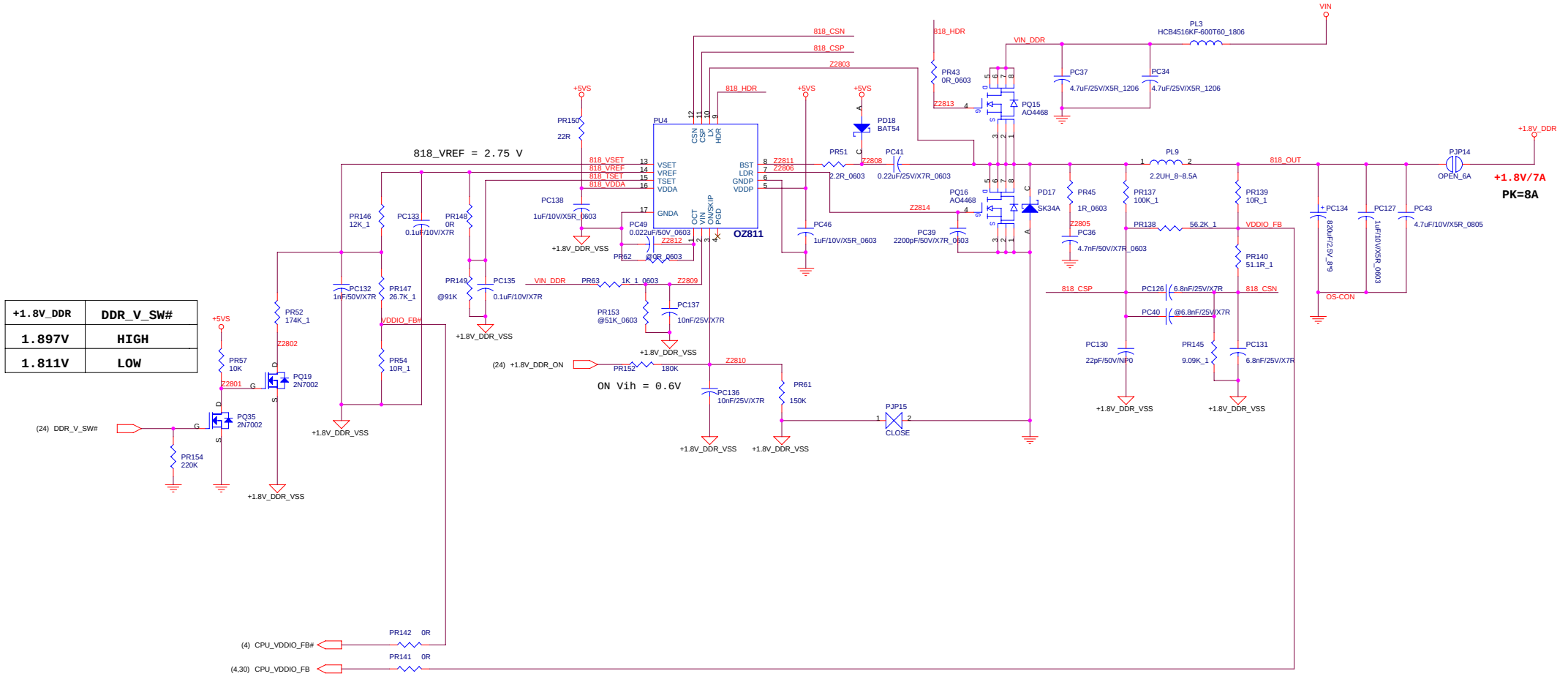

+1.8V_DDR	DDR_V_SW#
1.897V	HIGH
1.811V	LOW

Elitegroup Computer System

Title: +1.8V_DDR (OZ811)

Size	Document Number	Rev
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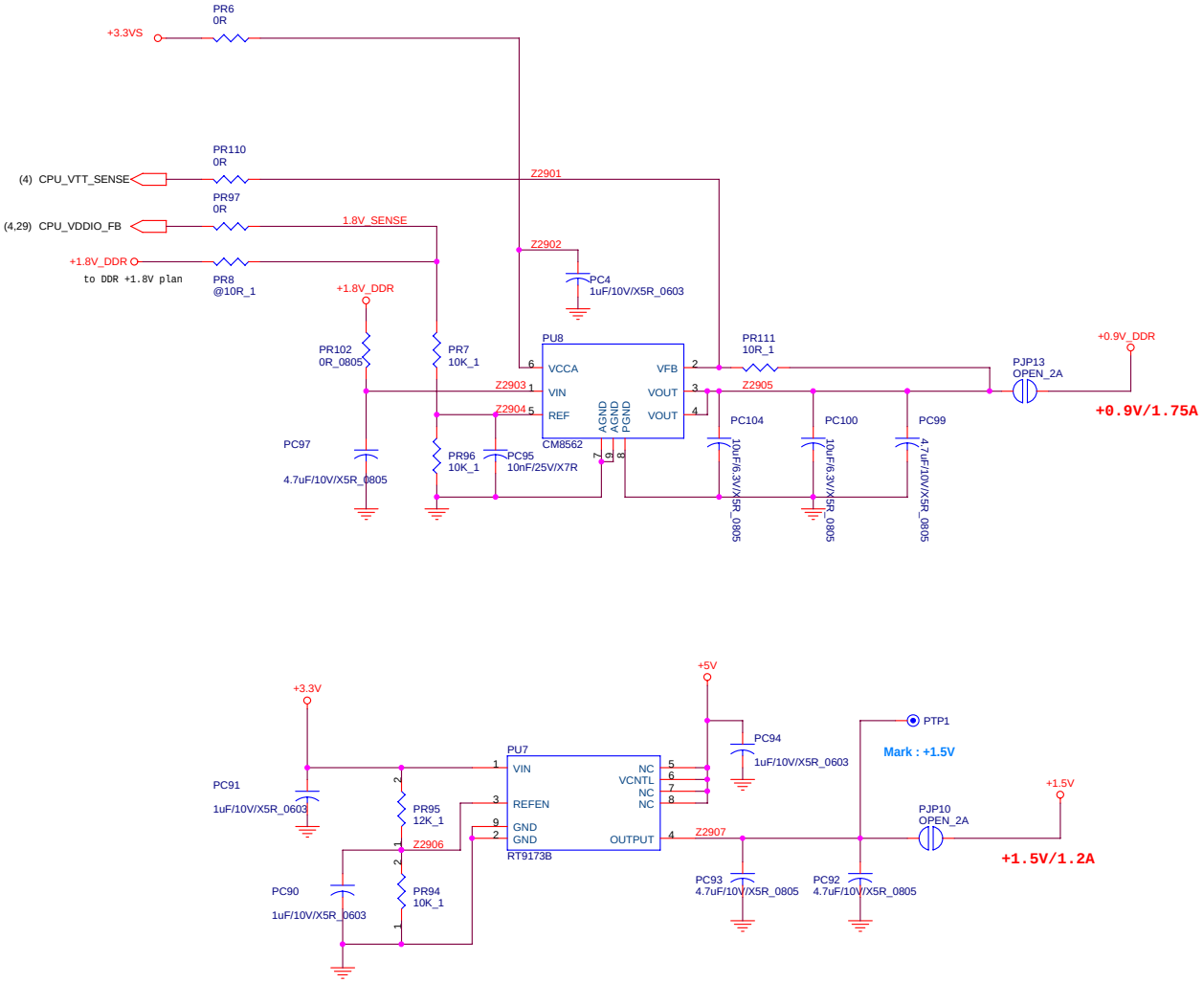
DDR Termination Power



Elitegroup Computer System		
Title: +0.9V_DDR/+1.5V		
Size:	Document Number: 3721 Custom L53RI0	Rev: B0.0
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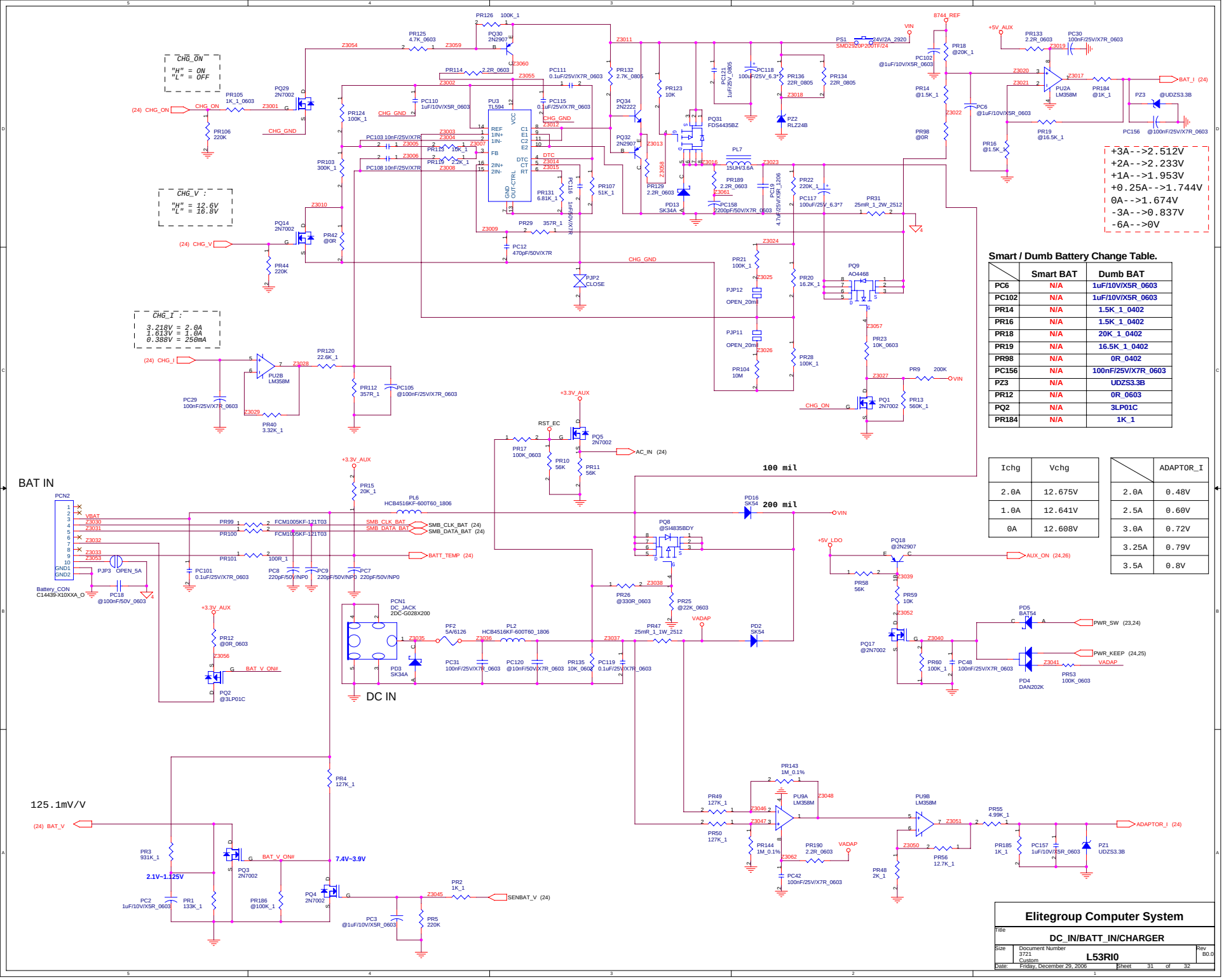
CHG_ON
"H" = ON
"L" = OFF
CHG_V :
"H" = 12.6V
"L" = 16.8V
CHG_I :
3.218V = 2.0A
1.613V = 1.0A
0.388V = 250mA
+3A-->2.512V
+2A-->2.233V
+1A-->1.953V
+0.25A-->1.744V
0A-->1.674V
-3A-->0.837V
-6A-->0V
Smart / Dumb Battery Change Table.
PC6 N/A 1uF/10V/X5R_0603
PC102 N/A 1uF/10V/X5R_0603
PR14 N/A 1.5K_1_0402
PR16 N/A 1.5K_1_0402
PR18 N/A 20K_1_0402
PR19 N/A 16.5K_1_0402
PR98 N/A 0R_0402
PC156 N/A 100nF/25V/X7R_0603
PZ3 N/A UDZS3.3B
PR12 N/A 0R_0603
PQ2 N/A 3LP01C
PR184 N/A 1K_1
Ichg Vchg
2.0A 12.675V
1.0A 12.641V
0A 12.608V
ADAPTOR_I
2.0A 0.48V
2.5A 0.60V
3.0A 0.72V
3.25A 0.79V
3.5A 0.8V
BAT IN
DC IN
100 mil
200 mil
125.1mV/V
2.1V~1.125V
7.4V~3.9V
Elitegroup Computer System
DC_IN/BATT_IN/CHARGER
L53RI0
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Sch Rev.	PCB Rev.	Data	REVISION DESCRIPTION
A.01	37GL53000-A0	2006/10/14	1. Change R311/R314/R319 2.2K_1 to @2.2K_1 (Page.14) 2. Modify System Block Diagram (Page.2) 3. Change R426 @220K to 91K_1 (Page.23) 4. Add PCI DEVICES IRQ ROUTING TABLE (Page.3) 5. Add USB PORTS DEVICES TABLE (Page.3) 6. Add Power Block Diagram (Page.3) 7. Add CPU/NB/SB/SYSTEM POWER RAIL TABLE(Page.3) 8. Add Disable WATCH DOG circuit WQ1 2N7002 / WR1 5.1M (Page.23) 9. Change PC9 @1uF/10V/X5R_0603 to 100K_0603, PR16 @1.5K_1 to 100K, PR22 @16.5K_1 to 100K (Page 30.) 10. Add Smart / Dumb Battery Change Table (Page.30) 11. Change U2/U6/U18 @NC7SZ08M5 to @NC7SZ08P5X (Page.4) 12. Change U4 74HC1G32GW to NC7SZ32P5X , U27 @74AHC1G126DCKR to @NC7SZ126P5X (Page.11) 13. Change U3/U5 74AHC1G126DCKR to NC7SZ126P5X (Page.18) 14. Change U15 74HC1G00 to NC7SZ00P5X (Page.22) 15. Change R202 10K to @10K (Page.14) 16. Modify Battery mode +xV_AUX ON/OFF TABLE (Page.25) 17. Add Battery mode +xV_AUX ON/OFF TABLE (Page.22) 18. Change R428 10K to @10K (Page.23) 19. Change R108/R337 @100R_0603 to 100R_00603, Q11/Q53 @2N7002 to 2N7002 (Page.24) 20. U13 pin10 (NEWCARD_CPPE#) jump the line to connect CON5 pin17 (EXPCARD_CPPE#) (Page.19) 21. Add Add to stop leakage voltage circuit, WD1 BAT54 (Page.16) 22. Change PR160 1mR_1_2W_2512 to 0.5mR_1_2W_2512, PR121 30K_1_0603 to 24K_1_0603 (Page.26) 23. Change R325 @100K_1 to 100K_1 (Page.4)
A.02	37GL53000-A0	2006/10/23	1. Change R41 @2K to 2K (Page.11) 2. Modify SB600 Required Straps (Page.13) 3. Change R411 33R to 22R (Page.21) 4. Change PR180 10K_0603 to @560K_0603 (Page.25)
A.03	37GL53000-A0	2006/10/26	1. Change PR55 @10mR_1_1W_2512 to @40mR_1_1W_2512 (Page.26) 2. Change PR124 2.2R_0603 to 0R_0603 (Page.26) 3. Change PR72 15K_0603 to 1K_1_0603, PR166 51K_0603 to @51K_0603 (Page.28) 4. Change PR167 100K_1 to 220K (Page.28)
A.04	37GL53000-A0	2006/11/11	1. Change C105 @10uF/6.3V_0805_X5R to 10uF/6.3V_0805_X5R (Page.6) 2. Change C208 / C209 22pF/50V_NP0 to 30pF/50V_NP0 (Page.9) 3. Change R36 @2K to 2K_1, R37 / R40 / R42 150R_1 to @150R_1 (Page.11) 4. Change L60 QT1608RL060HC-3A to FCM1608JF-221T05 (Page.15) 5. Modify U22 SPX1117A7M3 to AME1117ACGTZ (Page.15) 6. Change L14 / L15 / L16 100nH_0603 to FCI1608-47NK_0603, R291 / R292 / R293 150R_1 to 75R_1 (Page.18) 7. Modify L25 / L26 QT1608-1R8K-LF_0603 to FCI1608F-1R8K_0603 (Page.18) 8. Change PR181 9.76K_1 to 6.98K_1, PR188 15K_1 to 10K_1, PR193 120K_1 to 100K_1 (Page.25) 9. Modify PR194 @20K to @22K (Page.25) 10. Change PC45 220uF/2V/7343_SPCAP to 330uF/2V/7343_SPCAP, PR26 0R to @0R (Page.26) 11. Change PR86 1.33K_1 to 1K_1, PR195 10K_1 to 3.01K_1, PR199 6.04K_1 to 4.53K_1 (Page.27) 12. Change PR63 560K_1 to 174K_1, PR158 20K_1 to 12K_1, PR159 41.2K_1 to 26.7K_1 (Page.28) 13. Change PC88 4.7uF/10V/X5R_0805 to 10uF/6.3V/X5R_0805 (Page.29)
A1.0	37GL53000-A1	2006/11/21	1. Because the revision scope is widespread, all components again rename. 2. Modify Cover Page. (Page.1) 3. Modify Block Diagram. (Page.2) 4. Modify Miscellaneous. (Page.3) 5. Del Voltage level switch circuit. (Page.4) 6. Add EC control CPU_PROCHOT# circuit, CPU_SIC Pull-low resistor. (Page.4) 7. Add Net CLK_48M_CARD resistor, Net GPP_CLK2P / GPP_CLK2N for PCIE-LAN. (Page.9) 8. Add Net GPP_CLK2P / GPP_CLK2N Pull-low resistor / Capacitors. (Page.9) 9. Change Net GPP_TX3P / GPP_TX3N / GPP_RX3P / GPP_RX3N for PCIE-LAN. (Page.10) 10. Modify RS698MC BMREQ# / Power shift circuit. (Page.11) 11. Add Net GPP_TX0P / GPP_TX0N / GPP_RX0P / GPP_RX0N for MINI Card. (Page.11) 12. Modify SB A_RST# / CMOS BAT / PCI_CLK4 circuit. (Page.13) 13. Change SB 32.768KHz crystal / CMOS Reset Jump PCB Footprint. (Page.13) 15. Change SB600 pin.B27 Net SB_SMARTVOL to SB_GPIO4, SB600 pin.B29 SB_GPIO6 to SATA_IS1#. (Page.14) 16. Change SB600 pin.A6 Net EXPCARD_CPPE# to NEWCARD_CPPE#. (Page.14) 17. Del SB600 pin.C4 Net NEWCARD_OC#, SB600 RSMRST# H/W circuit, SB_TEST0 / 1 / 2 Pull-low resistor. (Page.14) 18. Add SB600 Net USBP4 / USBN4 / USBP5 / USBN5 / USBP7 / USBN7. (Page.14) 19. Change Net MASTER_RST# Pull-Hi resistor voltage +3.3V to +3.3VS. (Page.14) 20. Add Prevention leakage voltage schottky diode. (Page.16) 21. Add Net BT_ACT, WLAN_ACT. (Page.17) 22. Del Net PCIE_WAKE_UP# Pull-Hi resistor. (Page.17) 23. Change FAN power a wave filter capacitor 10u/6.3V/X5R_0805 to 33uF/6.3V_B2. (Page.17) 24. Change Net GPP_RX3N / GPP_RX3P / GPP_TX3N / GPP_TX3P to GPP_TX0N / GPP_TX0P / GPP_RX0N / GPP_RX0P. (Page.17) 25. Modify CRT VSYNC# / HSYNC# level voltage circuit. (Page.18) 26. Del LCD_VCC portect fuse. (Page.18) 27. Modify NEW CARD power switch circuit, 3G control circuit, USB ESD protect circuit. (Page.19) 28. Modify 3G Power +3.3VS Trace wide 110mil / 2.6A to 130 mil / 3.25A (Page.19) 29. Change 3G control voltage +12V to VIN_SW, 3G power +5V to +5VS. (Page.19) 30. Add Web Camera control circuit. (Page.19) 31. Rename NEWCARD Con. pin.17 EXPCARD_CPPE# to NEWCARD_CPPE#. (Page.19) 32. Change LAN IC RTL8100C to RTL8101E. (Page.20) 33. Co-Layout Card Reader IC GL827 circuit. (Page.22) 34. Add USB Dongle (Bluetooth) and IR_SW circuit. (Page.22) 35. Change LPC Debug Con PCB Footprint 3801-X14XR to 3801-X14XL. (Page.22) 36. Modify PWR_SW circuit. (Page.23) 37. Del Passive type watch-dog circuit. (Page.23) 38. Change SW_Con PCB Footprint to GB1006X-X051-7F_87151. (Page.22) 39. Change Audio_Con PCB Footprint to 6701-X42N-00X. (Page.22) 40. Change Audio_Con pin.20 +12V to VIN_SW. (Page.22) 41. Change EC IC ITE8510Rx to ITE8512E. (Page.24) 42. Modify Power Switch circuit. (Page.25) 43. Del +12V power switch circuit, +1.5V / +12V / +CPU_CORE / +1.2V_NB Discharge circuit. (Page.25) 44. Add VIN_SW power switch circuit. (Page.25) 45. Change System power IC MAX8734A to MAX8744. (Page.26) 46. Change CPU power IC MAX8760 to OZ828. (Page.27) 47. Modify ISL6227 power circuit. (Page.28) 48. Add RS690MC IGP Power Shift Level Table. (Page.28) 49. Modify OZ811 power circuit. (Page.29) 50. Modify RT9173B / CM8562 power circuit. (Page.30) 51. Modify TL594C charger circuit. (Page.31) 52. Modify Dumb Battery circuit. (Page.31)
A1.1	37GL53000-A1	2006/12/12	1. Add Y3 32.768KHz Crystal PCB Silksceen. (Page.13) 2. Change R16 @0R to 0R, R17 0R to @0R. (Page.18) 3. Change R173 / R181 @0R to 0R. (Page.20) 4. Change R248 link power +3.3VS to +3.3V. (Page.20) 5. Change CON24 pin1 +5V to +3.3V_AUX. (Page.22) 6. Add Y6 32.768KHz Crystal PCB Silksceen. (Page.24) 7. Change H16 C237B98D63-UW to @C237B98D63-UW. (Page.25) 8. Change PC148 @4.7uF/10V/X5R_0805 to 4.7uF/10V/X5R_0805 , PR163 @0R_0603 to 0R_0603. (Page.26) 9. Change PR128 9.1K_1_0603 to 12.4K_1_0603. (Page.27) 10. Change PL7 4.7UH/6A to 15UH/3.6A. (Page.31)
B0.0	37GL53000-B0	2006/12/27	1. Add C531 @100nF/16V, C532 @1uF/10V/X5R_0603, R477 @300R, R478 @0R, U26 @NC7SZ08P5X. (Page.04) 2. Change U14 AME8800DEFTZ to CM2860GKIM89, C358 220uF/6.3V_6*5 to 330uF/6.3V_6*7. (Page.04) 3. Change R91 / R92 1K_1 to 1K_1_0603, R48 / R49 / R64 10K to 680R. (Page.04) 4. Add C533 100nF/10V/X7R. (Page.7) 5. Change R12 / R15 1K_1 to 1K_1_0603. (Page.7) 6. Change C492 220uF/6.3V_6*5 to 330uF/6.3V_6*7. (Page.9) 7. Change C97 100pF/50V/NP0 to 100nF/10V/X7R, R76 2.05K_1 to @220K, U5 AME804AEEYZ to FP6133-18S5P. (Page.11) 8. Del R75 1K_1. (Page.11) 9. Add C528 @100nF/16V, U25 @74AHC1G08GW. (Page.13) 10. Change Y3 PCB Footprint CM200S to CM200SA, R385 22R to @22R, R178 1K_1 to 499R_1. (Page.13) 11. Change C188 / C189 18pF/50V/NP0 to 15pF/50V/NP0, C112 10uF/6.3V/X5R_0805 to 2.2uF/6.3V/X5R_0603. (Page.13) 12. Add C530 @100nF/10V/X7R. (Page.14) 13. Change R119 11.8K_1 to 9.76K_1. (Page.14) 14. Change R322 Net PCI_RST# to ODD_RST#. (Page.17) 15. Originally above parts change to not above parts : C447 / C448 / C449 / C450 / CON15 / L23 / L25 / R90 / R93. (Page.18) 16. Add Net WEBCAM_GND, L79 HCB1608KF-600T30_0603. (Page.19) 17. Change L60 @HCB1608KF-600T30_0603 to HCB1608KF-600T30_0603, link net WEBCAM_PW_EN to WEBCAM_GND. (Page.19) 18. Del Net Z1907, JP2 OPEN_20MIL, Q42 @2N7002, Q43 @AO3413, R342 @56K, R344 @220K. (Page.19) 19. Change R248 Pull-Hi voltage +3.3VS to +3.3V. (Page.20) 20. Add L77 / L78 @HCB2012KF-300T30_0805. (Page.21) 21. Originally above parts change to not above parts : C262 / C263 / C267 / C268 / C274 / C283 / C284 / C285 / C286 / C287 / C293 / C294 / C295 / C303 / C305 / C313 / C314 / C315 / C316 / C317 / C322 / CON20 / L48 / L72 / Q33 / Q38 / R239 / R240 / R242 / R243 / R244 / R245 / R269 / R278 / R279 / R296 / R297 / R298 / R299 / R307 / R308 / R311 / U9 / U11 / Y5. (Page.21) 22. Add D20 / D21 BAT54, R475 @0R. (Page.22) 23. Change CON24 pin.1 power +5V to +3.3V_AUX, Q35 @3LP01C to AO3413. (Page.22) 24. Change Change C522 100nF/16V to @100nF/16V, IR_BD_CON to @IR_BD_CON. (Page.22) 25. Del R285 / R288 @0R. (Page.22) 26. Swap Q35 pin.S / D. (Page.22) 27. Originally not above parts change to above parts : D11 / D12 / R280 / R281 / R283 / R290 / R292 / R295 / R303 / R305 / R314 / U10. (Page.22) 28. Change CON9 PCB Footprint GB1006X-X051-7F_87151 to 87151-06L-A. (Page.23) 29. Change CON18 PCB Footprint 6701-X42N-00X to 88716-42L. (Page.23) 30. Change R7 15K_1 to 1.5K_1, R9 30.1K_1 to 3.32K_1. (Page.23) 31. Add C529 1uF/10V/X5R_0603, R476 @0R_0603. (Page.24) 32. Change Y6 PCB Footprint CM200S to CM200SA. (Page.24) 33. Change U22 S25FL008A to W25X80VSIG. (Page.24) 34. Change U23 pin.17 Net RF_SW_ON# to CHR_R, U23 pin.35 Net LID# to CHR_G. (Page.24) 35. Change U23 pin.117 Net CHR_G to LID#, U23 pin.118 Net CHR_R to RF_SW_ON#. (Page.24) 36. Change H10 PCB Footprint C315D158A-UW to C315B237D158-UW. (Page.25) 37. Originally not above parts change to above parts : EF2 / EF3 / EF7. (Page.25) 38. Change PC56 1uF/10V/X5R_0603 to 0.1uF/25V/X7R_0603, PC58 4.7uF/25V/X5R_1206 to @4.7uF/25V/X5R_1206. (Page.26) 39. Change PC68 1uF/10V/X5R_0603 to 0.1uF/25V/X7R_0603, PC69 4.7uF/25V/X5R_1206 to @4.7uF/25V/X5R_1206. (Page.26) 40. Change PC139 PCB Footprint @220uF/6.3V/OSC_6*5.7 to @4.7uF/10V/X5R_0805. (Page.26) 41. Change PC148 4.7uF/10V/X5R_0805 to @4.7uF/10V/X5R_0805. (Page.26) 42. Change PR138 63.4K_1 to 56.2K_1, PR145 @6.49K_1 to 9.09K_1. (Page.29) 43. Add PTP1 +1.5V Testpoint [Mark +1.5V]. (Page.30) 44. Add PC157 1uF/10V/X5R_0603, PR184 @1K_1, PR185 1K_1, PR186 @100K_1, PR190 2.2R_0603. (Page.31) 45. Change PR29 / PR112 576R_1 to 357R_1, PR48 10K to 2K_1, PR55 10K to 4.99K_1, PR56 10K to 12.7K_1. (Page.31) 46. Change PR31 40mR_1_1W_2512 to 25mR_1_2W_2512, PR47 40mR_1_1W_2512 to 25mR_1_1W_2512.. (Page.31) 47. Change PR49 / PR50 47K_0.5% to 127K_1, PR143 / PR144 560K_0.5% to 1M_0.1%. (Page.31) 48. Change PS1 Net VADAP to VIN, PR123 link Net Z3013 to Z3058. (Page.31) 49. Del Net Z3017 / Z3049, PC38 1uF/10V/X5R_0603, PD1 SK34A, PF1 @3A_1206. (Page.31)

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