



#12 DRAM0\_D[31:0] <<<

>>>DRAM0\_A[12:0] #12

>>>DRAM0\_BA[1:0] #12

>>>DRAM0\_DM[3:0] #12

<<<>>> DRAM0\_QS[3:0] #12

>>>DRAM0\_CLK #12

>>>DRAM0\_CLK\_L #12

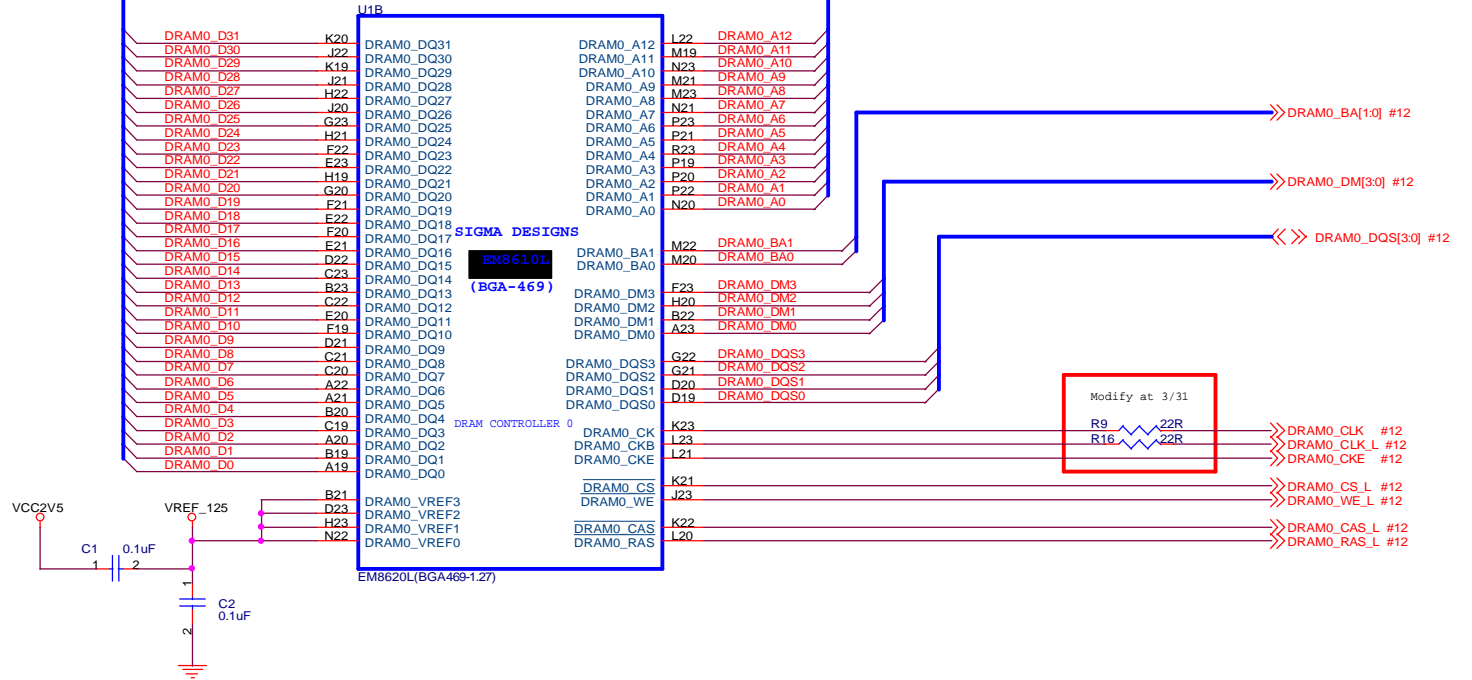
>>>DRAM0\_CKE #12

>>>DRAM0\_CS\_L #12

>>>DRAM0\_WE\_L #12

>>>DRAM0\_CAS\_L #12

>>>DRAM0\_RAS\_L #12



Modify at 3/31  
 R9 22R  
 R16 22R

**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

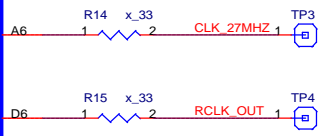
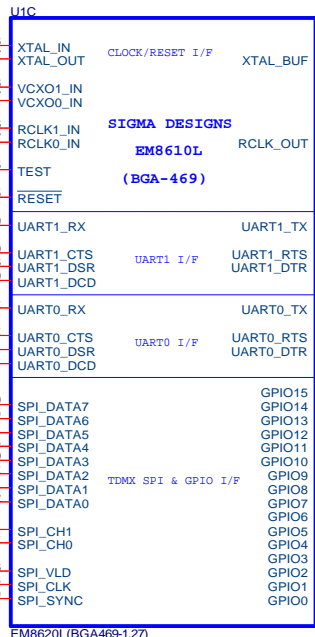
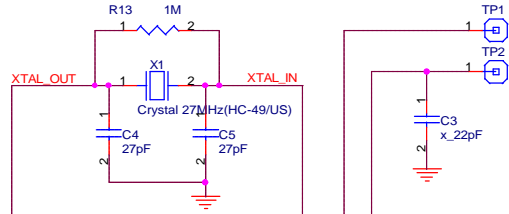
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Title: **EM8620L-SDRAM DDR I/F**

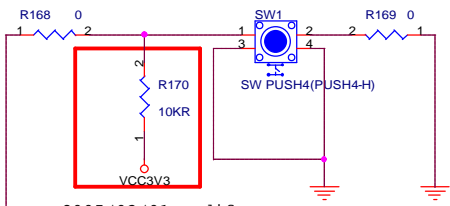
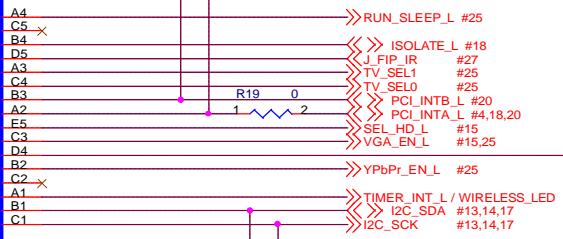
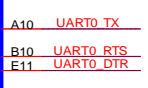
Size B	Document Number PCB : T2919101MA1A5	Rev 1A
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Date: 星期四, 五月 12, 2005 Sheet 3 of 25

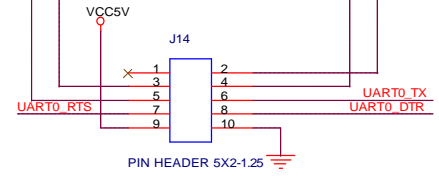
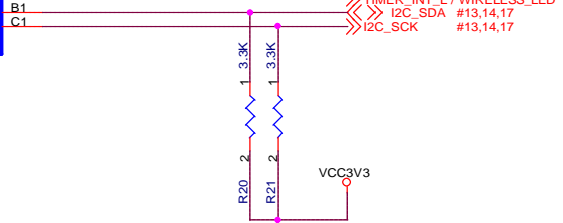
**27MHz XTAL**



#13,26 BRD\_RST1\_L >>  
TP6 1



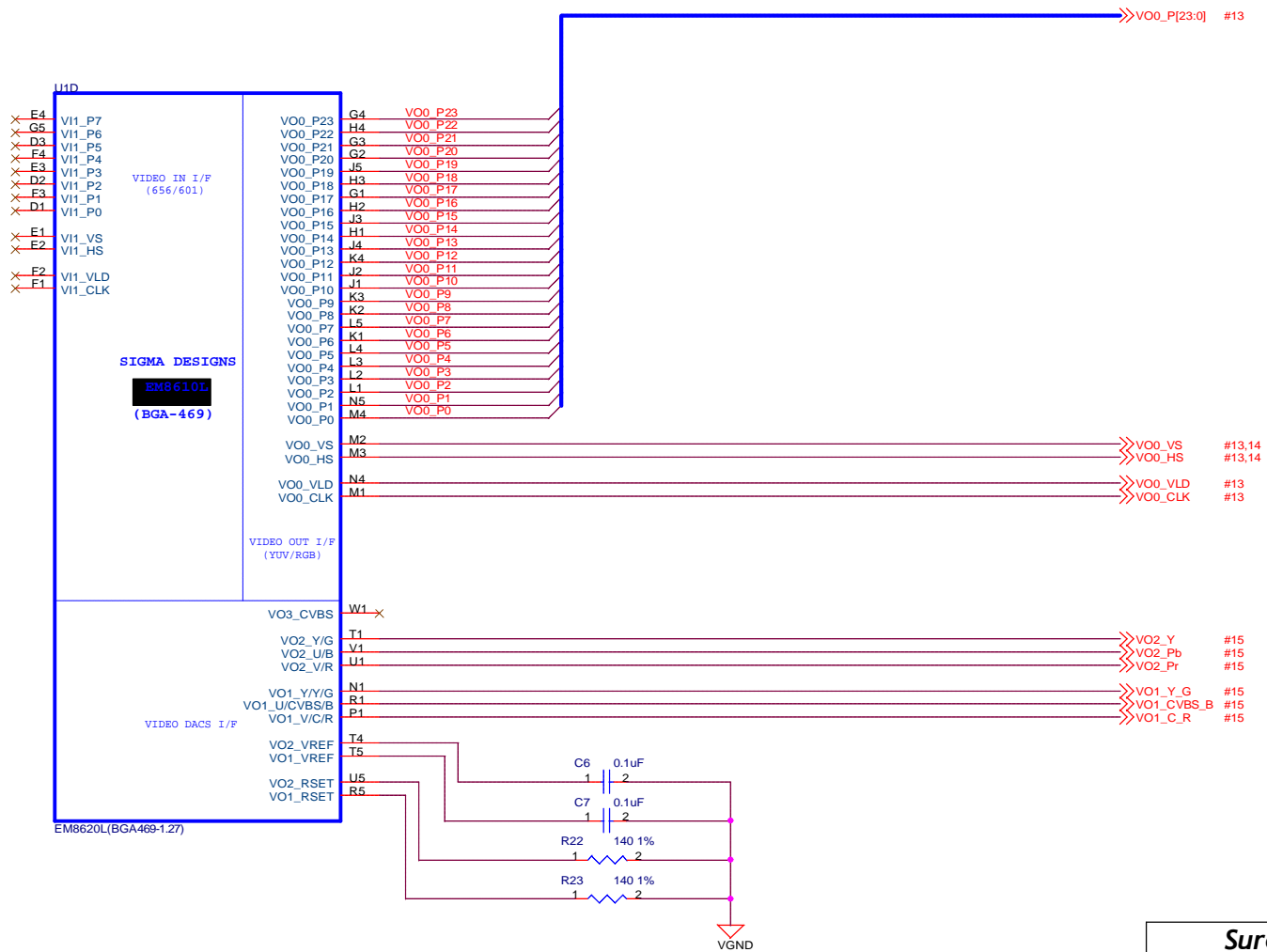
2005/03/01 modify



**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

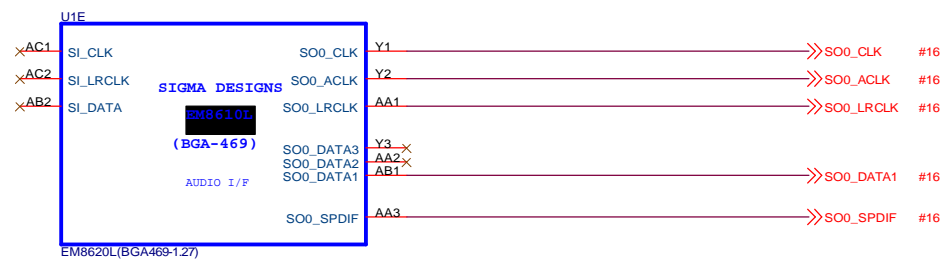
Title: **EM8620L-CLOCKS , UARTS , SPI & GPIOs I/F**

Size B	Document Number PCB : T2919101MA1A5	Rev 1A
Date:	星期四, 五月 12, 2005	Sheet 4 of 25



<b>Surecom Technology Corp.</b>		
EP(NE)-9101MA-g(1A)		
EM8620L DMA		
Title <b>EM8620L-VIDEO I/F</b>		
Size B	Document Number PCB ; T2919101MA1A5	Rev 1A
Date:	星期四, 五月 12, 2005	Sheet 5 of 25

AUDIO DATA IN



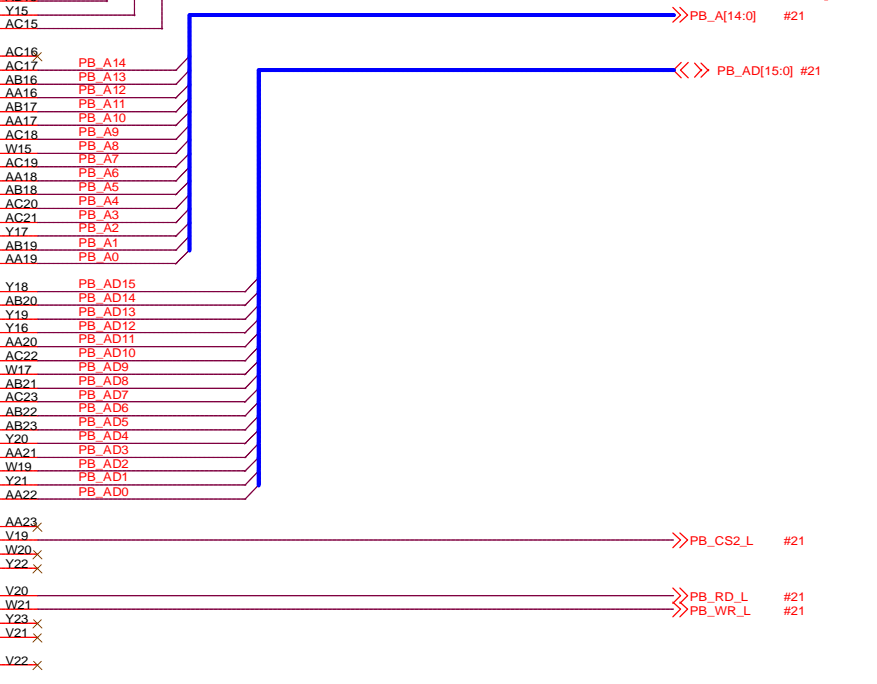
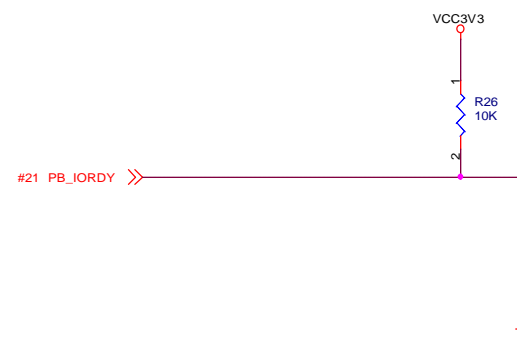
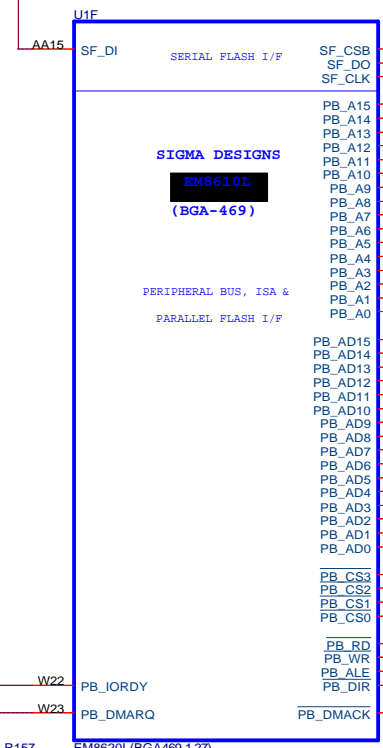
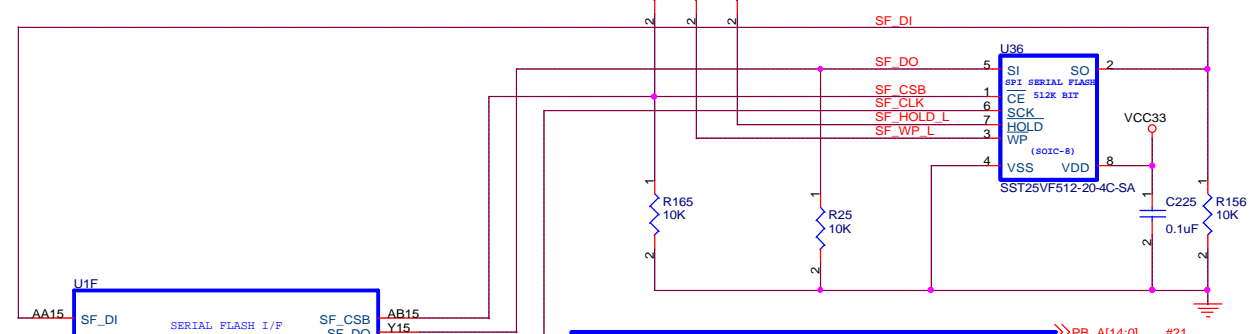
**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)

EM8620L DMA

Title		
EM8620L-AUDIO I/F		
Size B	Document Number	Rev
	PCB : T2919101MA1A5	1A
Date:	星期四, 五月 12, 2005	Sheet 6 of 25

VCC33  
 R158 10K R159 10K R160 10K  
 Boot serial flash : Remove R165  
 Boot parallel flash : Remove R158

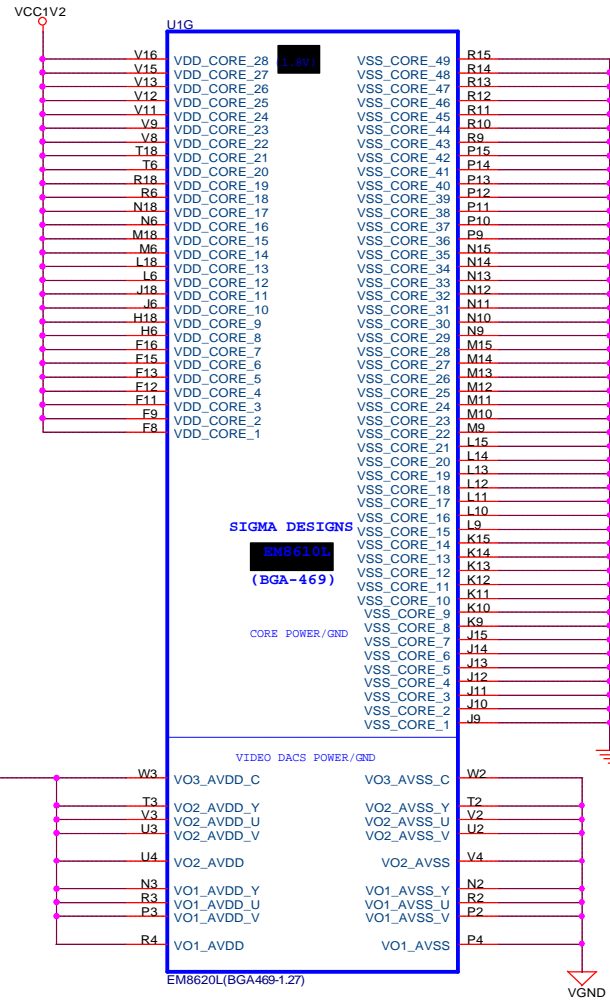
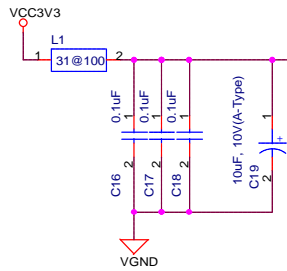
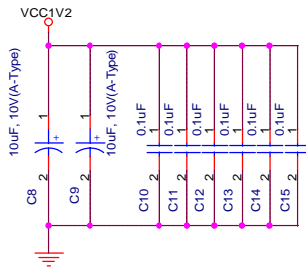


**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title: **EM8620L-PERIPHERAL I/F**

Size B	Document Number PCB : T2919101MA1A5	Rev 1A
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Date: 星期四, 五月 12, 2005 Sheet 7 of 25



1.2V 700mA  
 2.5V 30mA  
 3.3V 40mA

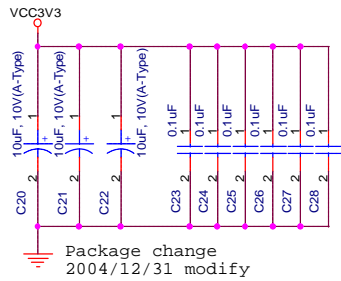
**SureCOM Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

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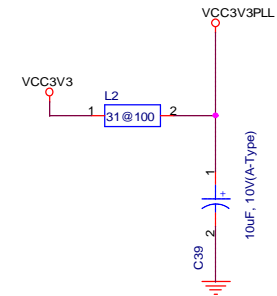
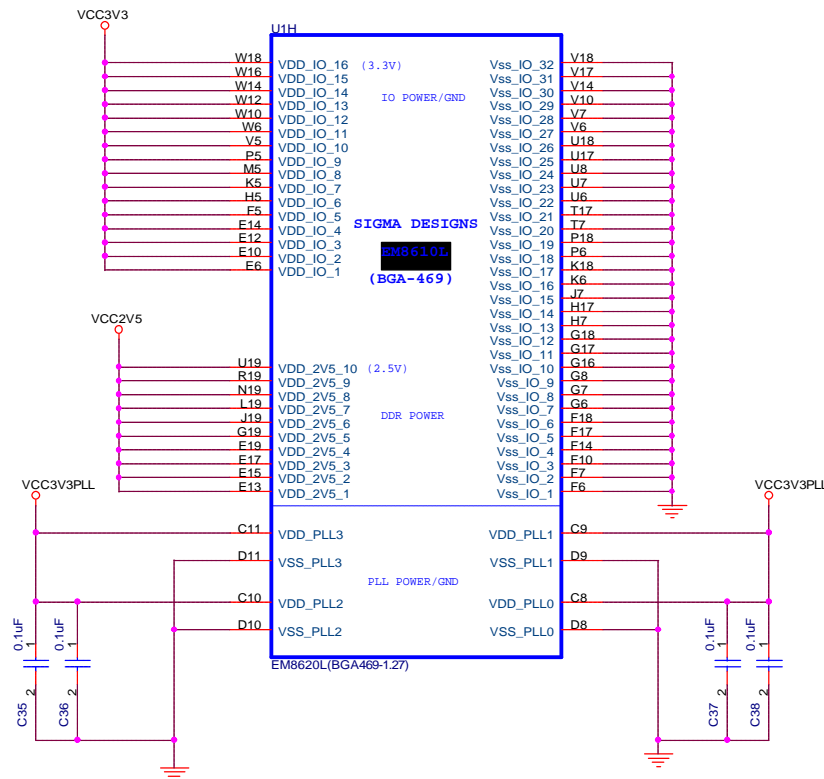
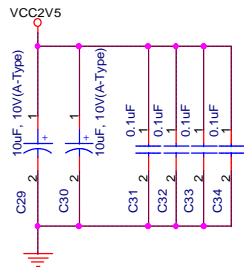
Title: **EM8620L-CORE/VIDEO DACS POWER & GND**

Size B	Document Number PCB : T2919101MA1A5	Rev 1A
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Date: 星期四, 五月 12, 2005 Sheet 8 of 25



Package change  
2004/12/31 modify

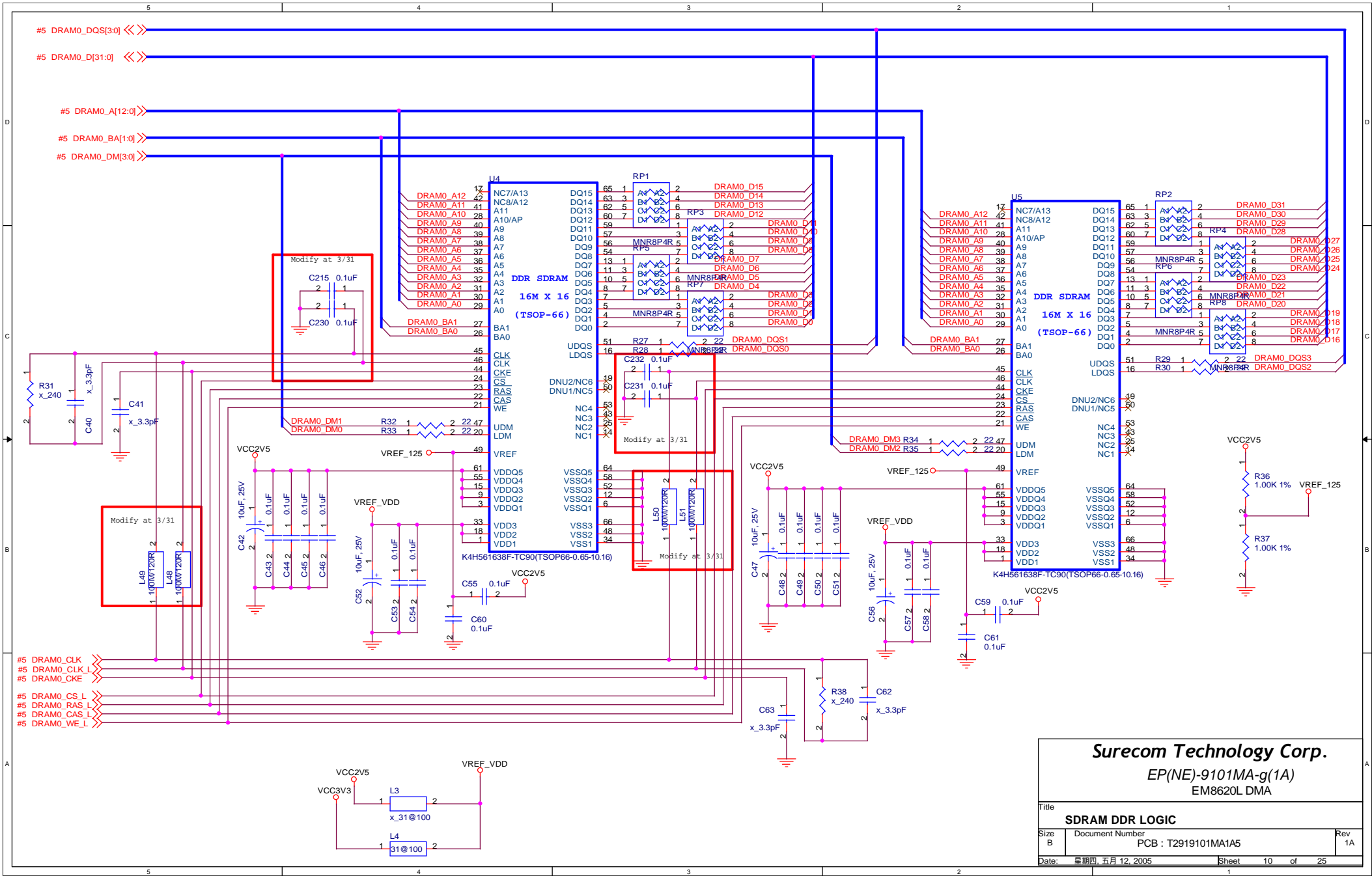


**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)  
EM8620L DMA

Title		
EM8620L-IO / DDR/ PLL POWER & GND		
Size	Document Number	Rev
B	PCB ; T2919101MA1A5	1A
Date:	星期四, 五月 12, 2005	Sheet 9 of 25





**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)  
EM8620L DMA

Title			SDRAM DDR LOGIC		
Size	Document Number				Rev
B	PCB : T2919101MA1A5				1A
Date:	星期四, 五月 12, 2005	Sheet	10	of	25

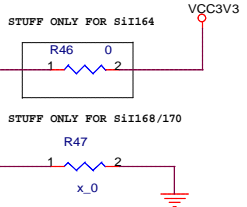
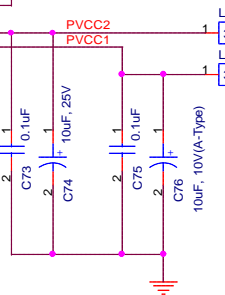
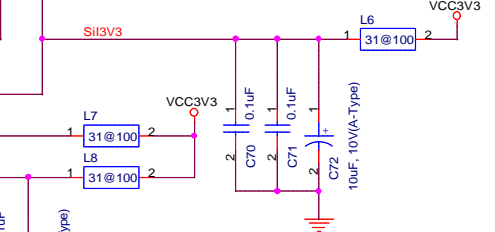
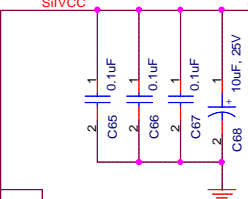
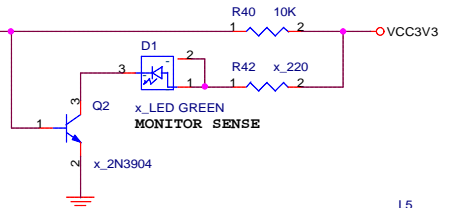
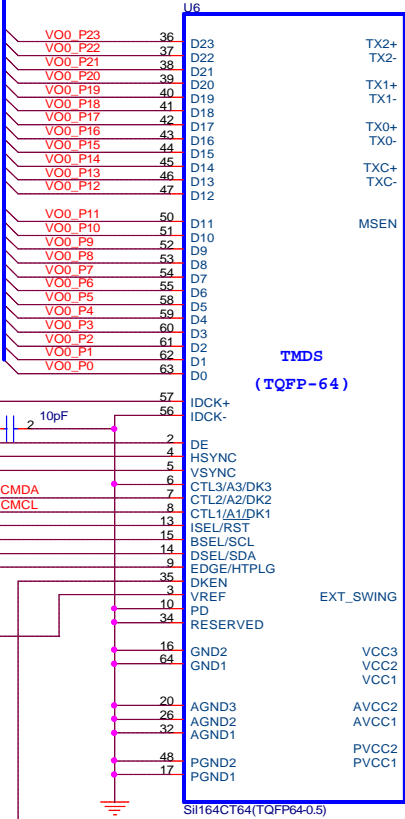
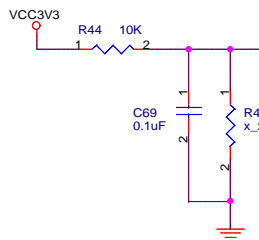
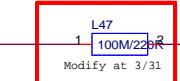
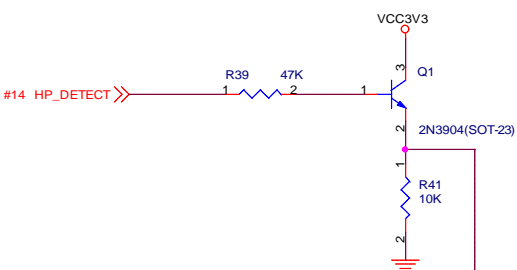
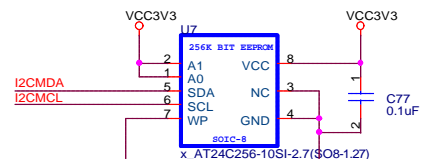
#7 VOO\_P[23:0]

#14 HP\_DETECT

#7 VOO\_CLK  
#7 VOO\_VLD  
#7,14 VOO\_HS  
#7,14 VOO\_VS

#6,26 BRD\_RST1\_L  
#6,14,17 I2C\_SCK  
#6,14,17 I2C\_SDA

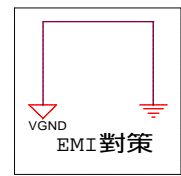
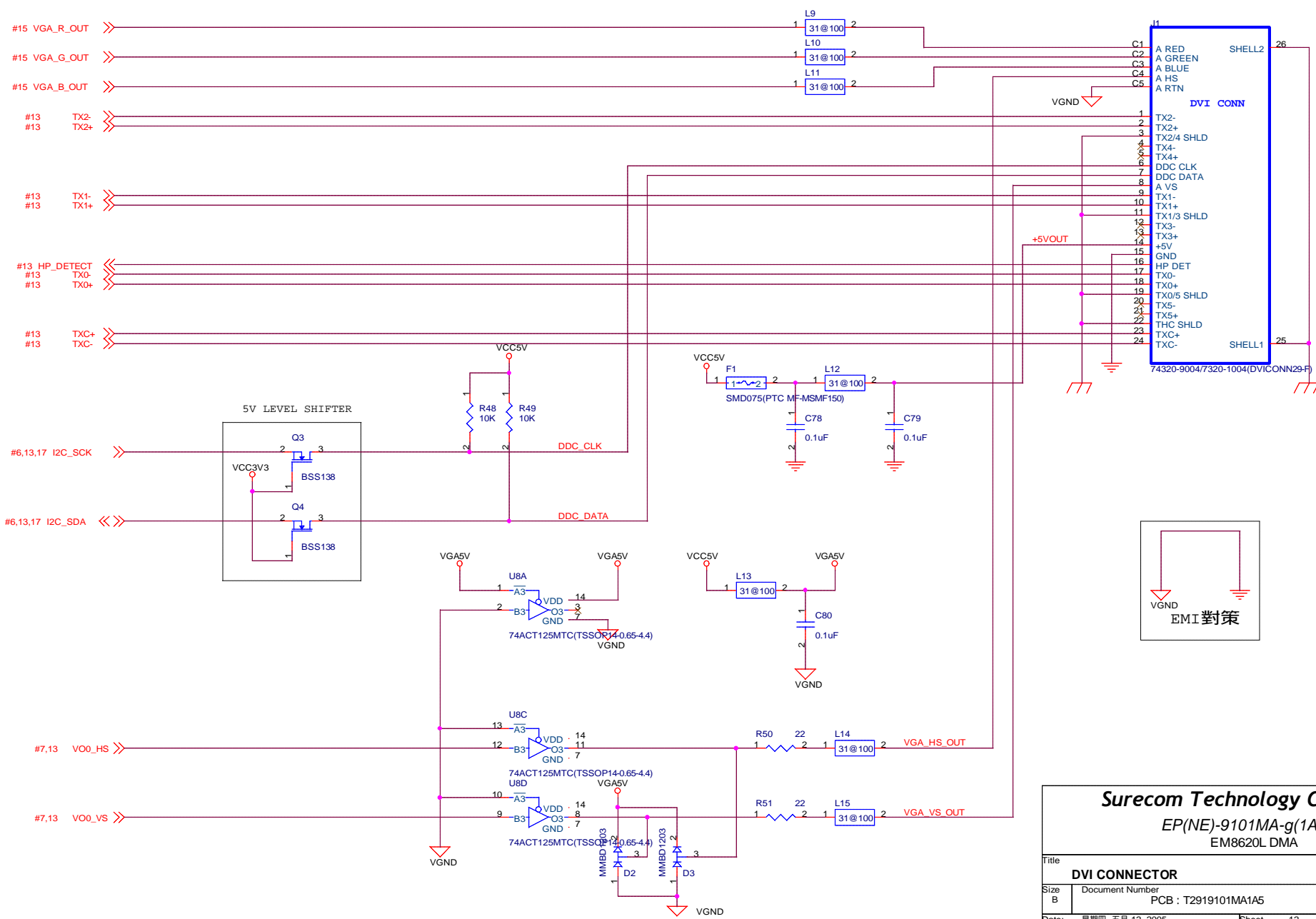
I2CMDA  
I2CMCL



TX2+ #14  
TX2- #14  
TX1+ #14  
TX1- #14  
TX0+ #14  
TX0- #14  
TXC+ #14  
TXC- #14

**Surecom Technology Corp.**  
EP(NE)-9101MA-g(1A)  
EM8620L DMA

Title		
DVI OUTPUT LOGIC		
Size B	Document Number	Rev
	PCB : T2919101MA1A5	1A
Date:	星期四, 五月 12, 2005	Sheet 11 of 25



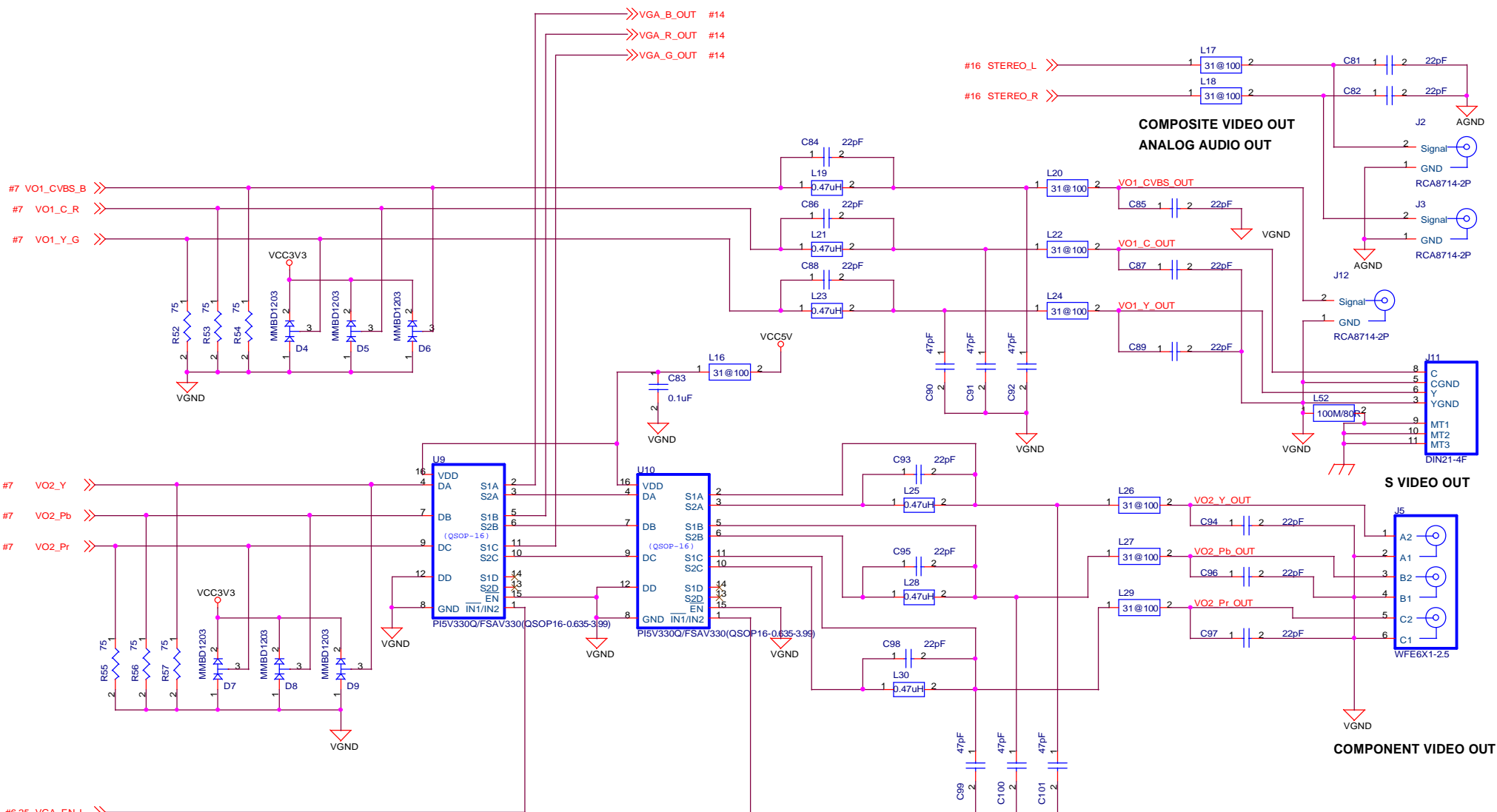
**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

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Title: **DVI CONNECTOR**

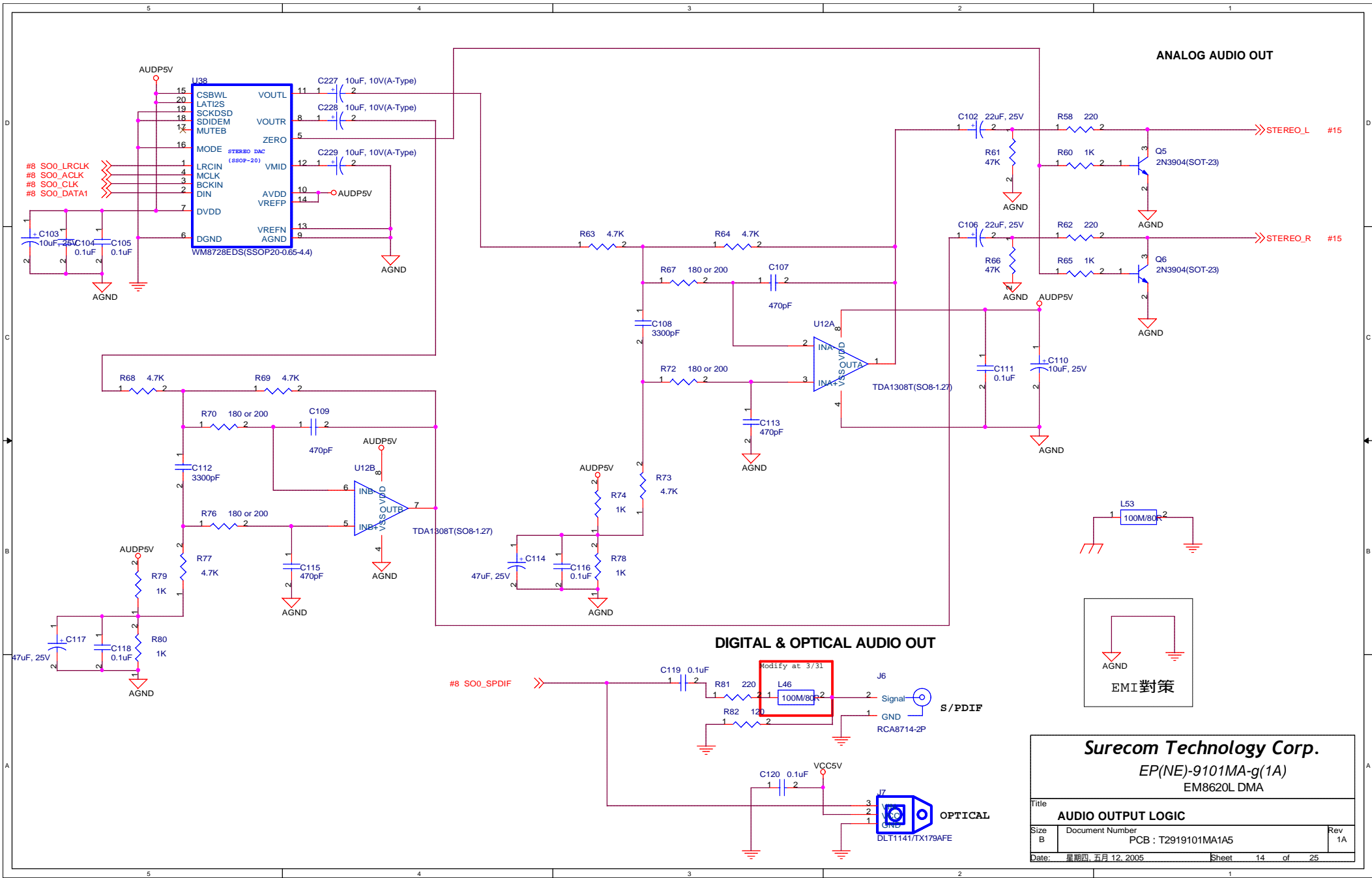
Size B	Document Number PCB : T2919101MA1A5	Rev 1A
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**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title		
<b>VIDEO OUTPUT LOGIC</b>		
Size B	Document Number	Rev 1A
	PCB : T2919101MA1A5	
Date: 星期四, 五月 12, 2005		Sheet 13 of 25

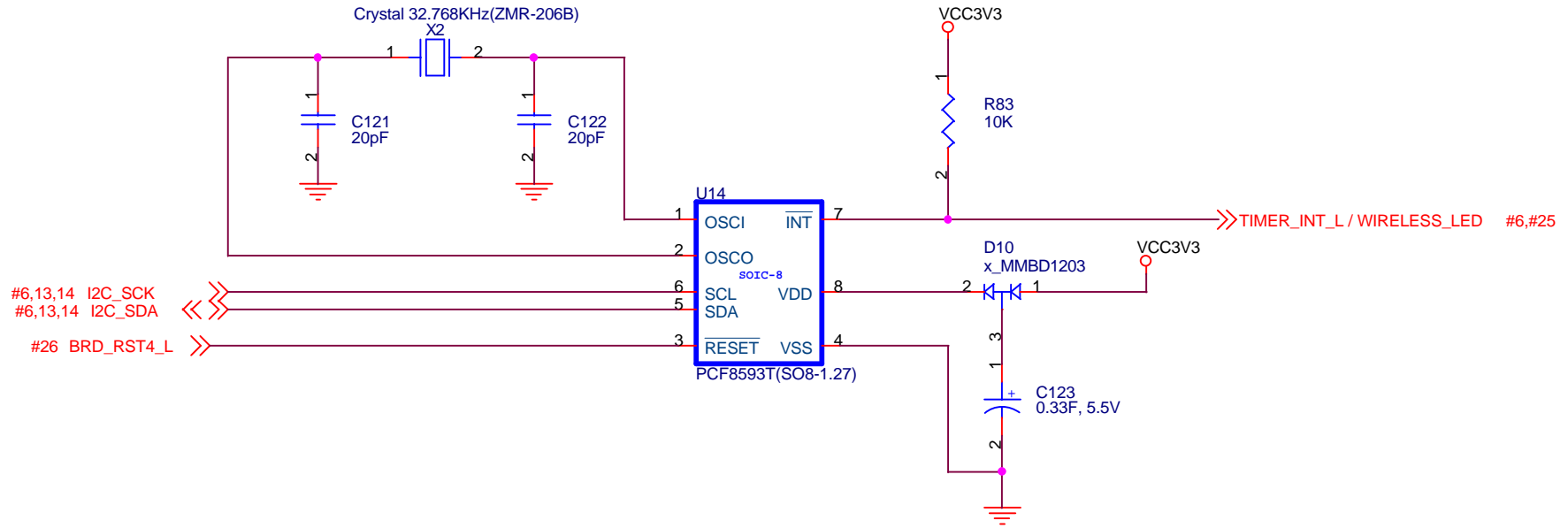


**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title: **AUDIO OUTPUT LOGIC**

Size B	Document Number PCB : T2919101MA1A5	Rev 1A
Date: 星期四, 五月 12, 2005 Sheet 14 of 25		

### REAL TIME CLOCK LOGIC



**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)

EM8620L DMA

Title

**PIO EXPANDER & REAL TIME CLOCK LOGIC**

Size  
A

Document Number  
PCB : T2919101MA1A5

Rev  
1A

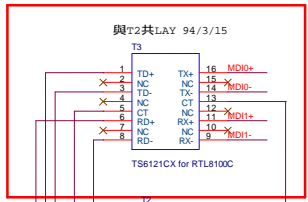
Date: 星期四, 五月 12, 2005

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2

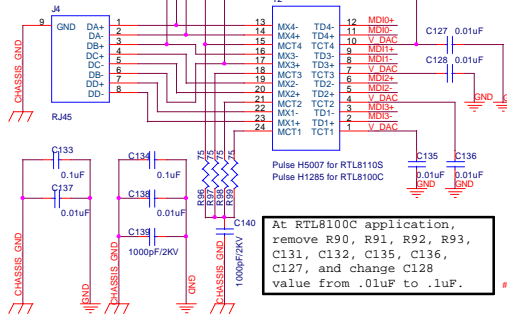
1

- #19 AVDDH >> AVDDH
- #19 AVDDL >> AVDDL
- #19 DVDD >> DVDD
- #19 DVDD\_A >> DVDD\_A
- #19 V\_12P >> V\_12P
- #19 CTRL18 << CTRL18



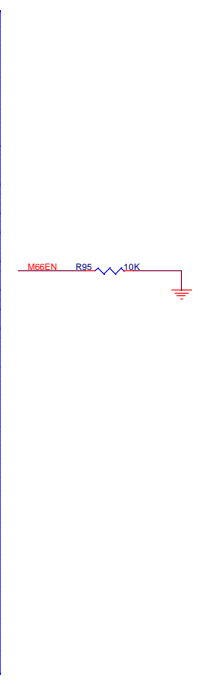
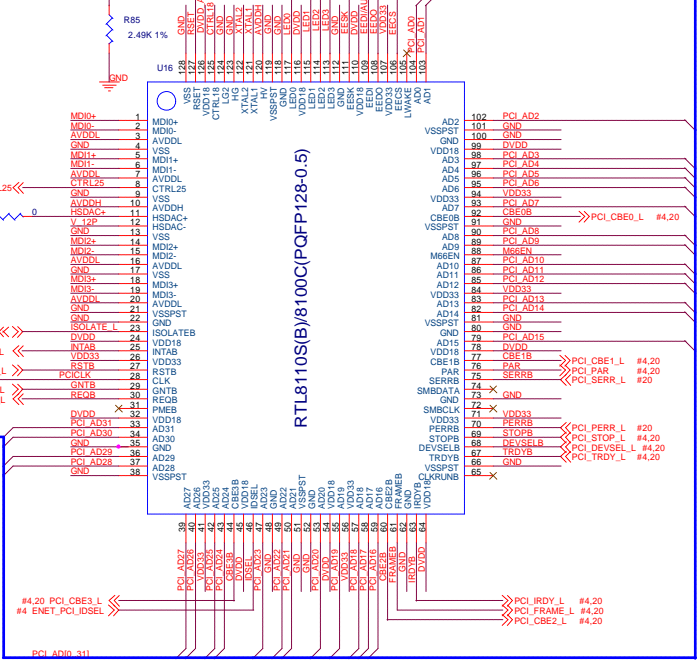
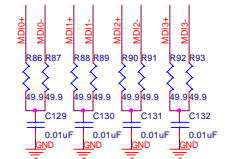
R85 value should be 5.6K (1%) at RTL8100C application, and 2.49K (1%) at RTL8110S(B) application.

R84 is used only at RTL8110S(B) application and only at 93C56 is used.



Keep R94 at RTL8110SB application.

R100 is reserved for RTL8110S & RTL8110SB. For RTL8100C application R100 must be removed.



**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title: GIGA ETHERNET CTRL & RJ45 CON  
 Document Number: PCB : T2919101MA1A5  
 Rev: 1A

Date: 2006年12月12日 Sheet 18 of 25

\* C141 to C147 are for U16  
RTL8110S(B)/RTL8100C VCC3V3 pins, such as  
26, 41, 56, 71, 84, 94 and 107.

RTL8100C : Use L32 , Remove R101,L31  
RTL8110S : Use L31 , Remove L32,R101  
RTL8110SB : Use L31.R101 , Remove L32

\* C148 and C149 are for  
U16 RTL8110S(B) AVDDH  
pins, such as 10 and 120.

\* C150 is for U16 RTL8110S(B)/RTL8100C pin 12.

\* C153 to C156 are for U16  
RTL8110S(B)/RTL8100C AVDDL pins, such as 3,  
7, 16, and 20.

RTL8100C : Use L33 , Remove Q7  
RTL8100S(B) : Use Q7 , Remove L33

1.8VDD 660 mA  
3.3AVDD 170mA

	RTL8100C	RTL8110S/ RTL8169S	RTL8110SB/ RTL8169SB
AVDDH	N/A	3.3AVDD	3.3AVDD
V_12P	2.5AVDD	N/A	3.3AVDD
AVDDL	3.3AVDD	2.5AVDD	2.5AVDD
V_DAC	N/A	2.5AVDD	2.5AVDD
DVDD	2.5VDD	1.8VDD	1.2VDD
DVDD_A	N/A	1.8AVDD	1.2AVDD

RTL8100C : Use Q9 , Remove Q8  
RTL8100S(B) : Use Q8 , Remove Q9  
RTL8100S : Use R102 , Remove R103  
RTL8100SB : Use R103 , Remove R102

\* C159 to C167 are for U16  
RTL8110S(B)/RTL8100C DVDD  
pins, such as 24, 32, 45, 54, 64,  
78, 99, 110 and 116.

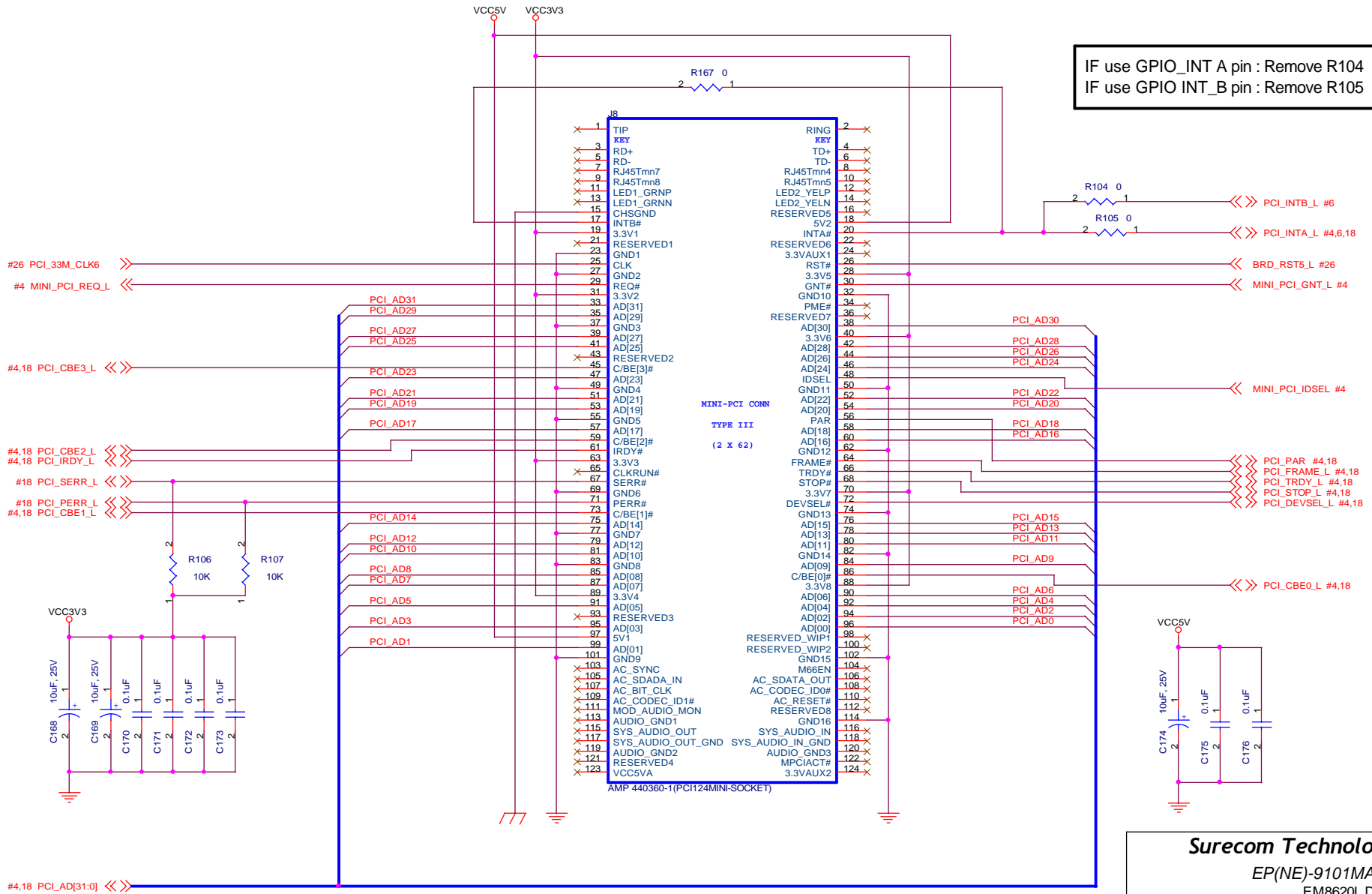
**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)  
EM8620L DMA

Title <b>Ethernet Power</b>		
Size A3	Document Number PCB : T2919101MA1A5	Rev 1A
Date: 星期四, 五月 12, 2005	Sheet 17	of 25

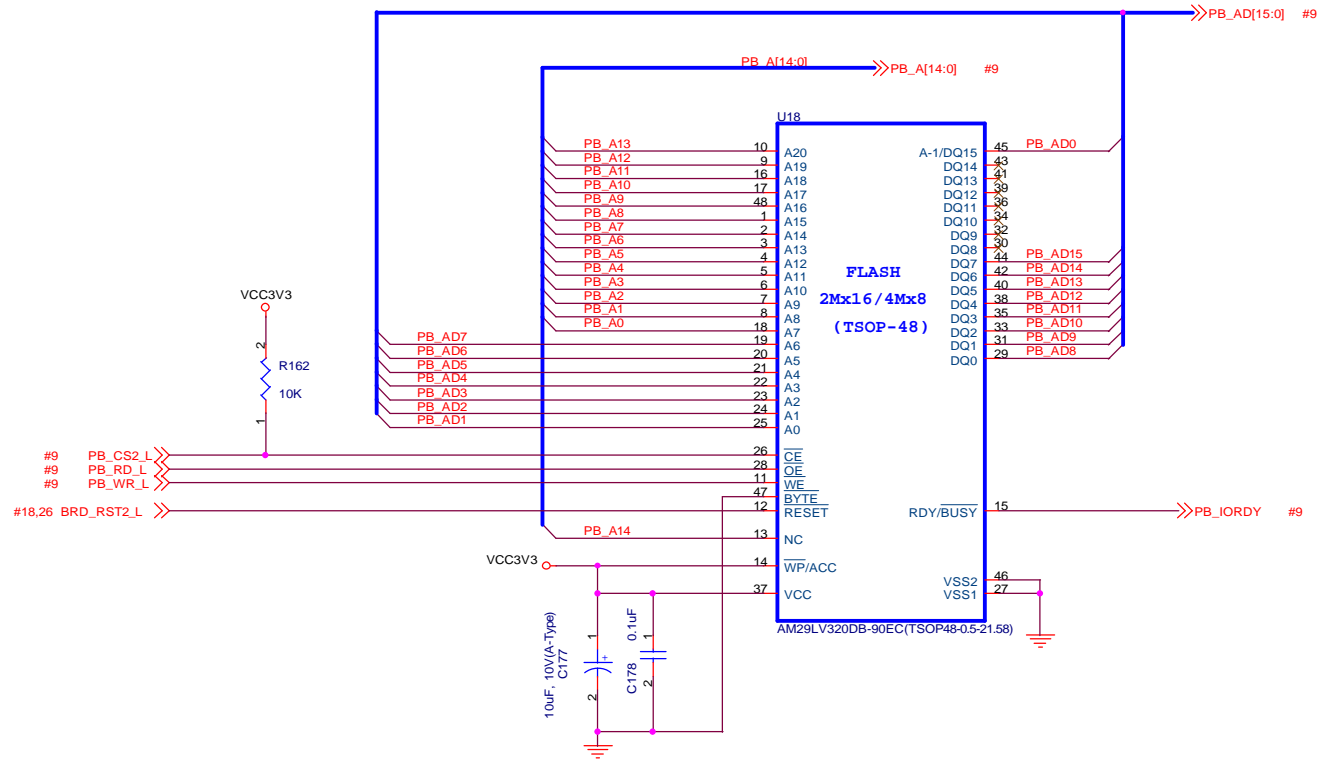


IF use GPIO\_INT A pin : Remove R104  
 IF use GPIO INT\_B pin : Remove R105



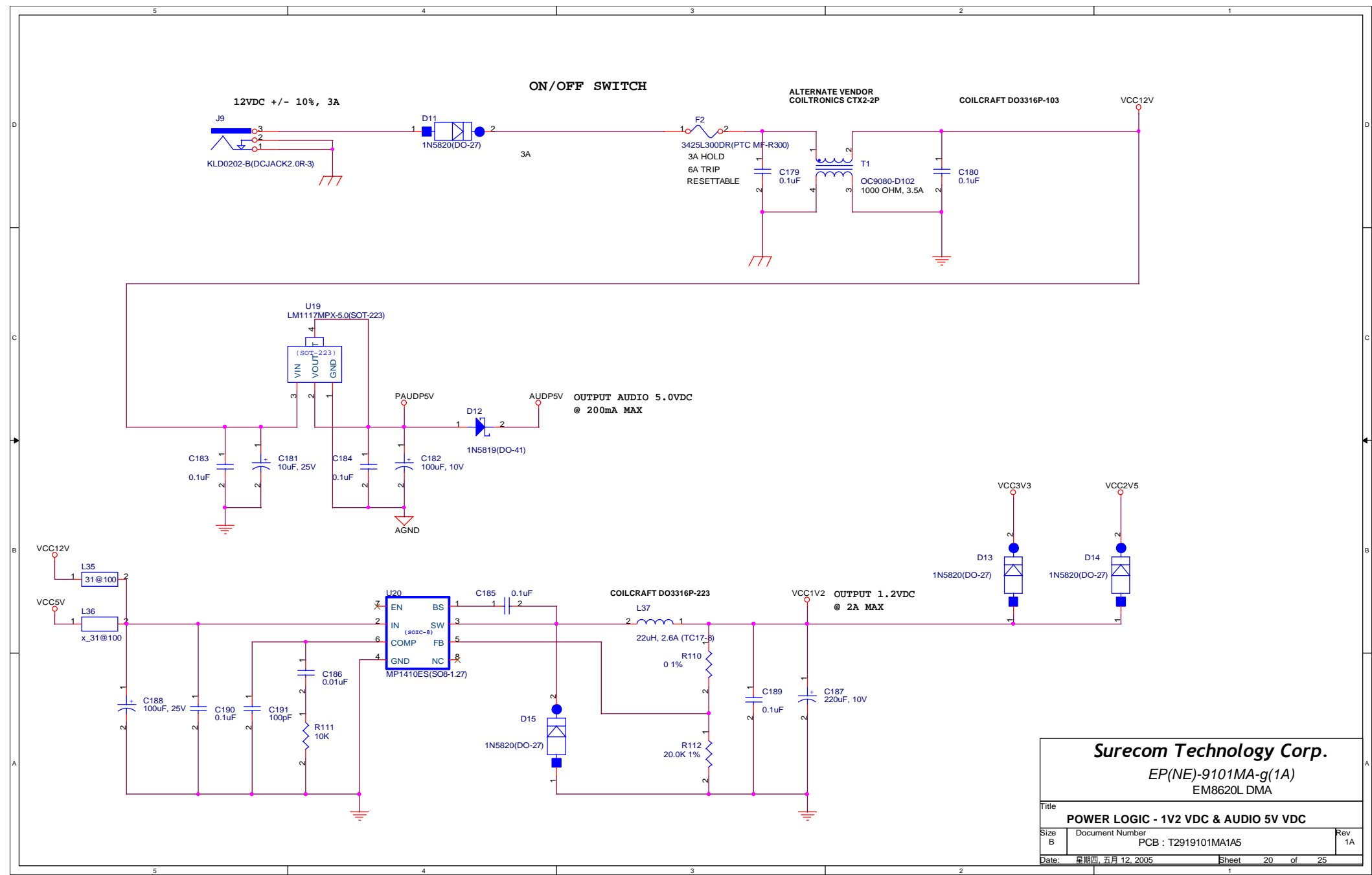
**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title			Rev
MINI-PCI I/F			1A
Size B	Document Number		
	PCB : T2919101MA1A5		
Date:	星期四, 五月 12, 2005	Sheet	18 of 25

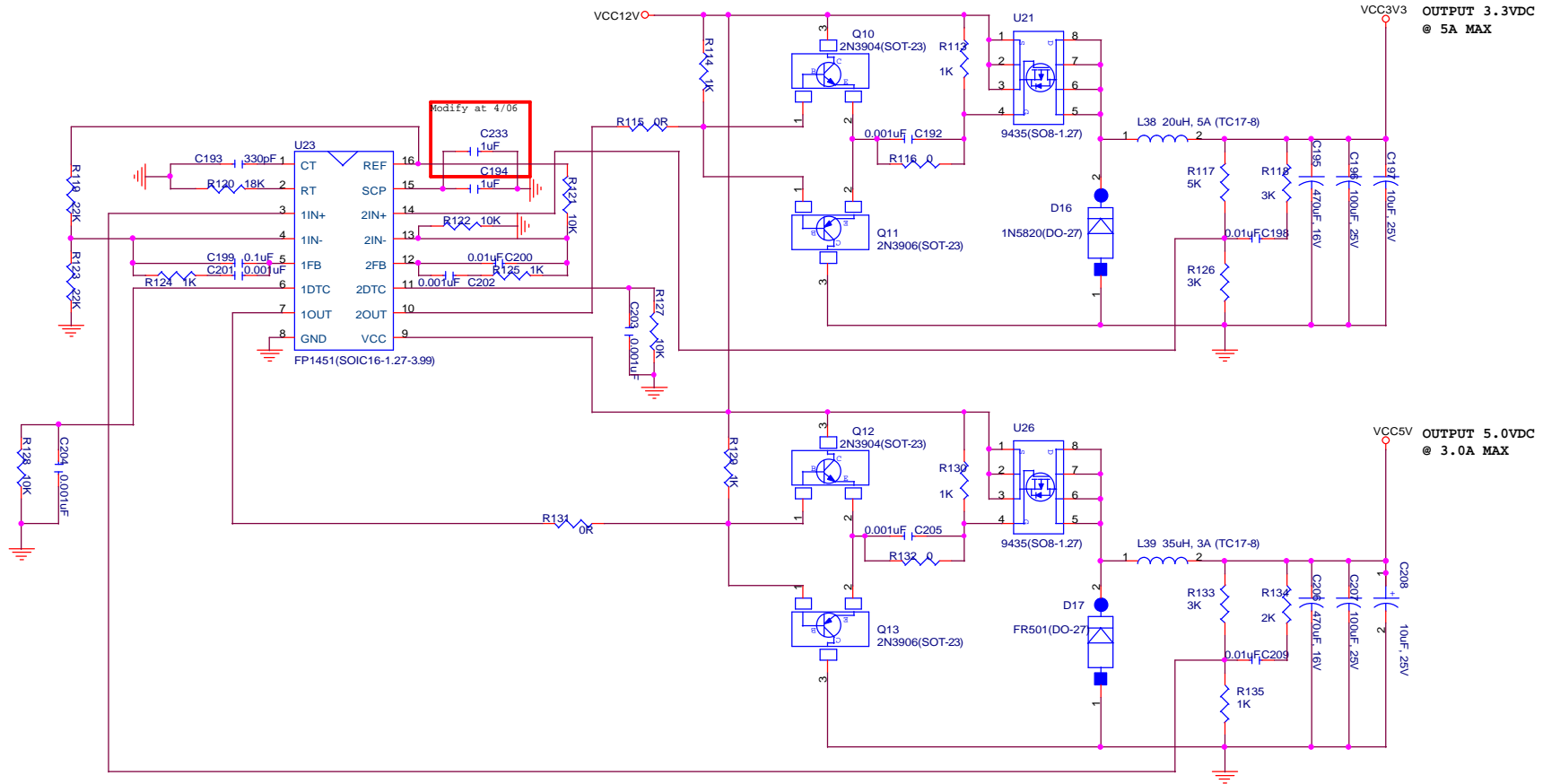


**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title		
<b>PARALLEL FLASH LOGIC</b>		
Size	Document Number	Rev
B	PCB ; T2919101MA1A5	1A
Date:	星期四, 五月 12, 2005	Sheet 19 of 25



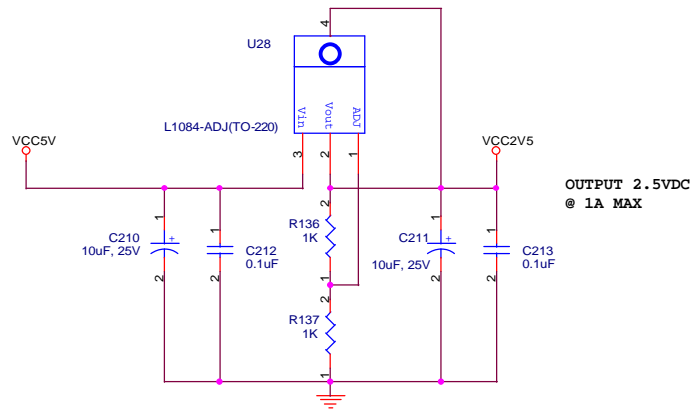
<b>Surecom Technology Corp.</b>		
EP(NE)-9101MA-g(1A) EM8620L DMA		
Title <b>POWER LOGIC - 1V2 VDC &amp; AUDIO 5V VDC</b>		
Size B	Document Number PCB : T2919101MA1A5	Rev 1A
Date:	星期四, 五月 12, 2005	Sheet 20 of 25



**Surecom Technology Corp.**

EP(NE)-9101MA-g(1A)  
EM8620L DMA

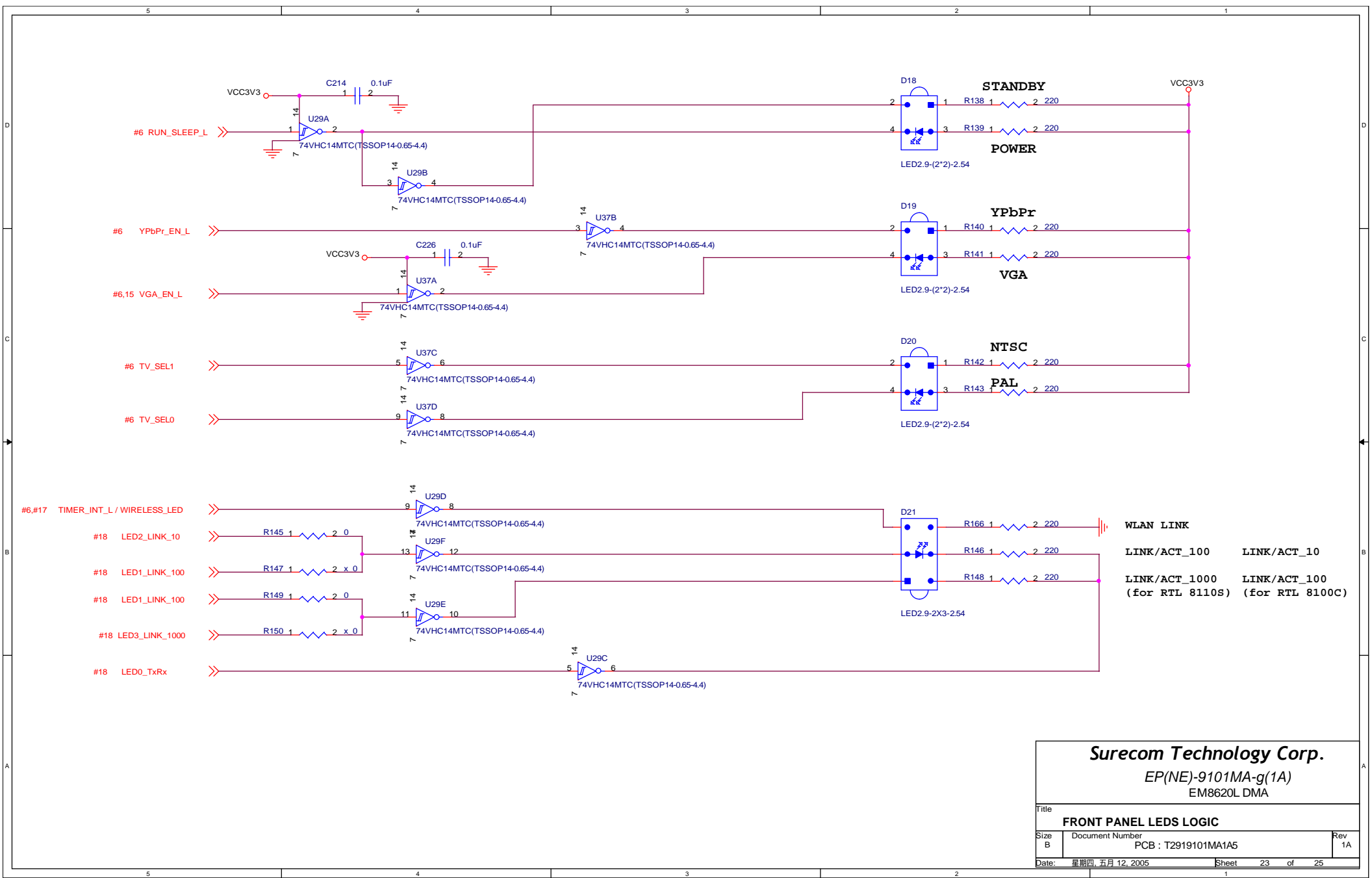
Title		
<b>POWER LOGIC - 3V3 VDC &amp; 5V VDC</b>		
Size	Document Number	Rev
B	PCB ; T2919101MA1A5	1A
Date:	星期四, 五月 12, 2005	Sheet 21 of 25



**Surecom Technology Corp.**

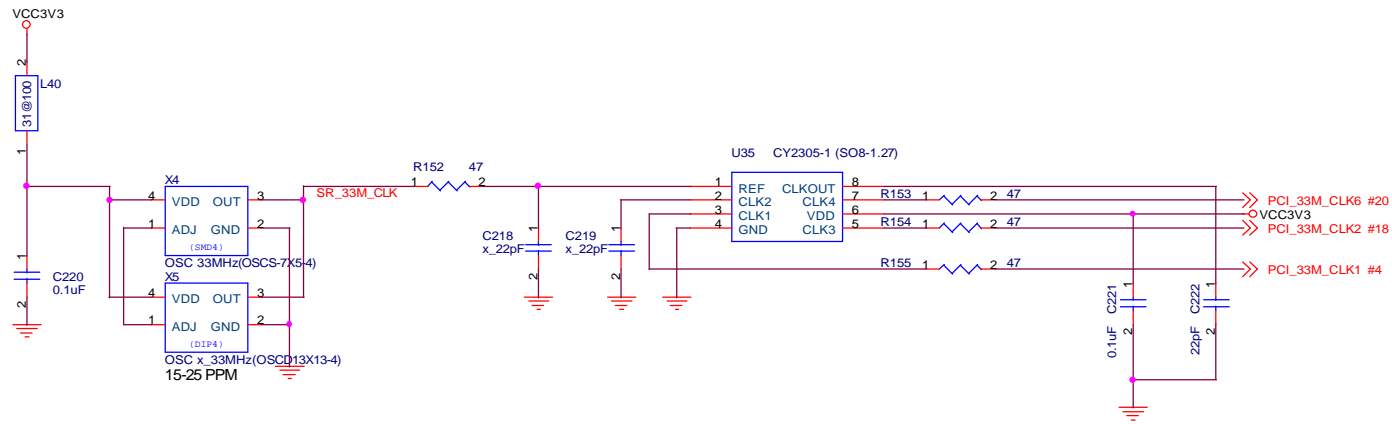
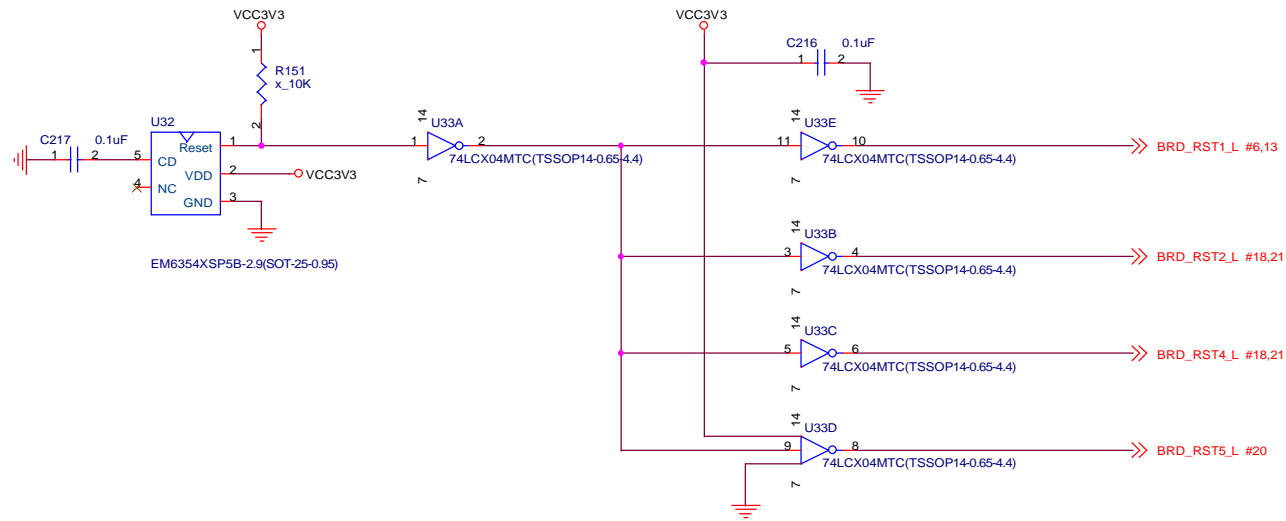
EP(NE)-9101MA-g(1A)  
EM8620L DMA

Title		
POWER LOGIC - 2V5 VDC		
Size B	Document Number PCB ; T2919101MA1A5	Rev 1A
Date:	星期四, 五月 12, 2005	Sheet 22 of 25

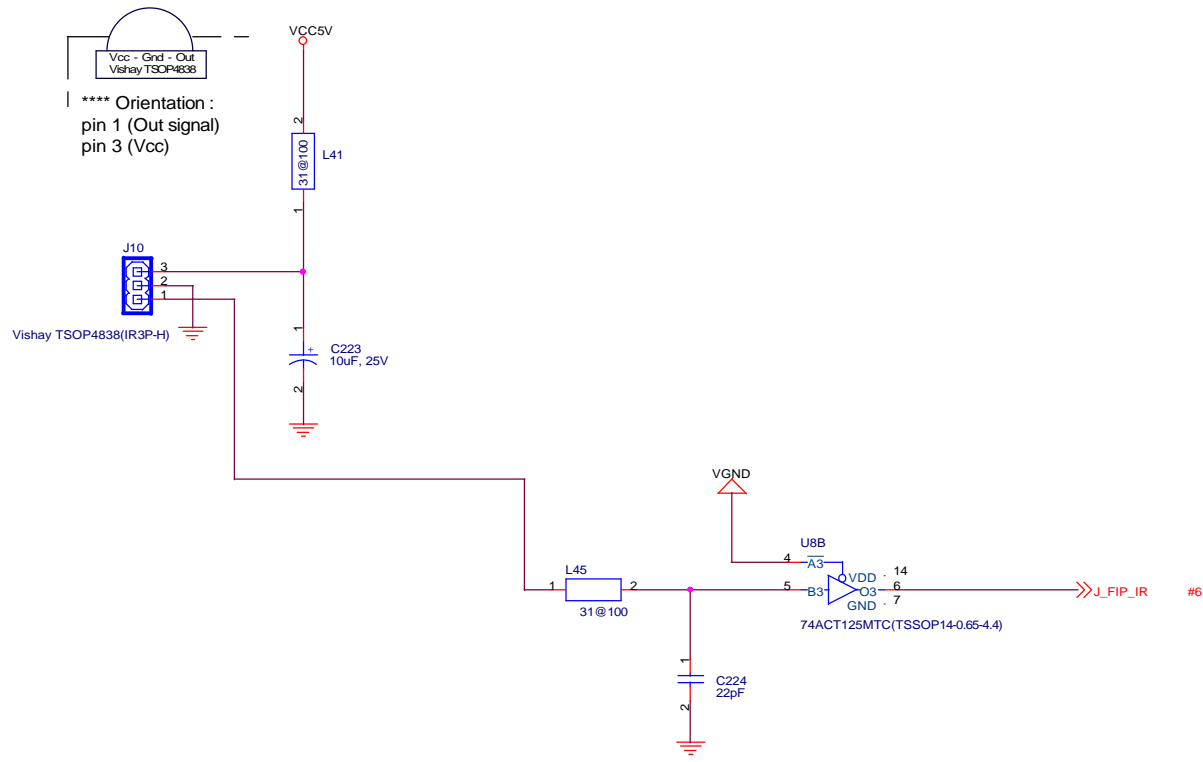


**Surecom Technology Corp.**  
 EP(NE)-9101MA-g(1A)  
 EM8620L DMA

Title			<b>FRONT PANEL LEDS LOGIC</b>		
Size	Document Number				Rev
B	PCB ; T2919101MA1A5				1A
Date:	星期四, 五月 12, 2005	Sheet	23	of	25

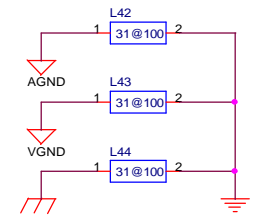


<b>Surecom Technology Corp.</b>			
EP(NE)-9101MA-g(1A) EM8620L DMA			
Title <b>POWER ON RESET &amp; PCI CLOCK LOGIC</b>			
Size B	Document Number PCB ; T2919101MA1A5		Rev 1A
Date:	星期四, 五月 12, 2005	Sheet	24 of 25



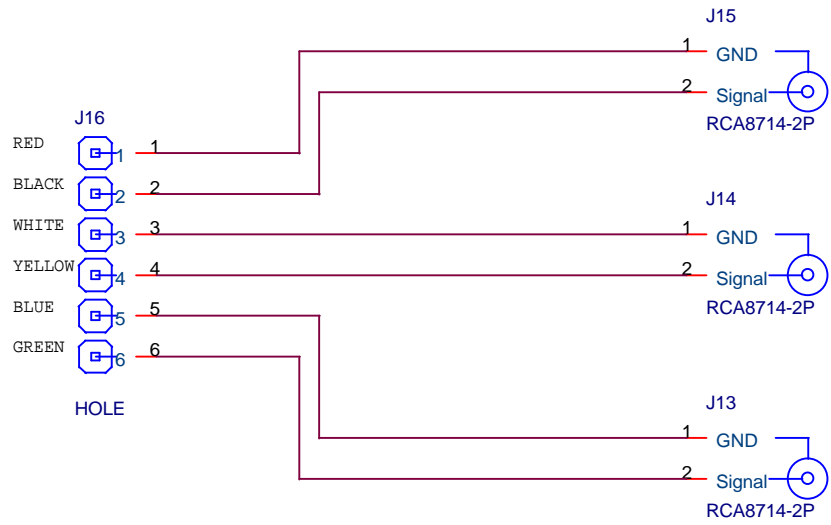
\*\*\*\* Orientation :  
 pin 1 (Out signal)  
 pin 3 (Vcc)

**GROUND CONNECTIONS**



<b>Surecom Technology Corp.</b>		
EP(NE)-9101MA-g(1A) EM8620L DMA		
Title <b>VFD &amp; IR I/F</b>		
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**Surecom Technology Corp.**

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Title

**EM8620L-RCA JACK**

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