

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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REV	REF	DATE	DRAWN BY
1.00	Release	11.03.2010	YOI

# Renesas Starter Kit for R8C/L3AC CPU Board Schematics

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2	R8C/L3AC Microcontroller
3	Switches, LEDs, RESET, PSU
4	E8a, Serial Port
5	Application Headers
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7	Microcontroller Pin Headers
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## Note:

**R** : Fixed Resistor  
**RV** : Potentiometer  
**U** : Integrated Circuit  
**X** : Crystal  
**RES** : Reset Switch  
**SW** : Switch  
**LED** : Light Emitting Diode  
**PWR** : Power Jack  
**J** : Connector, Jumper

\* "DNF" marking means that component does not fit by default.

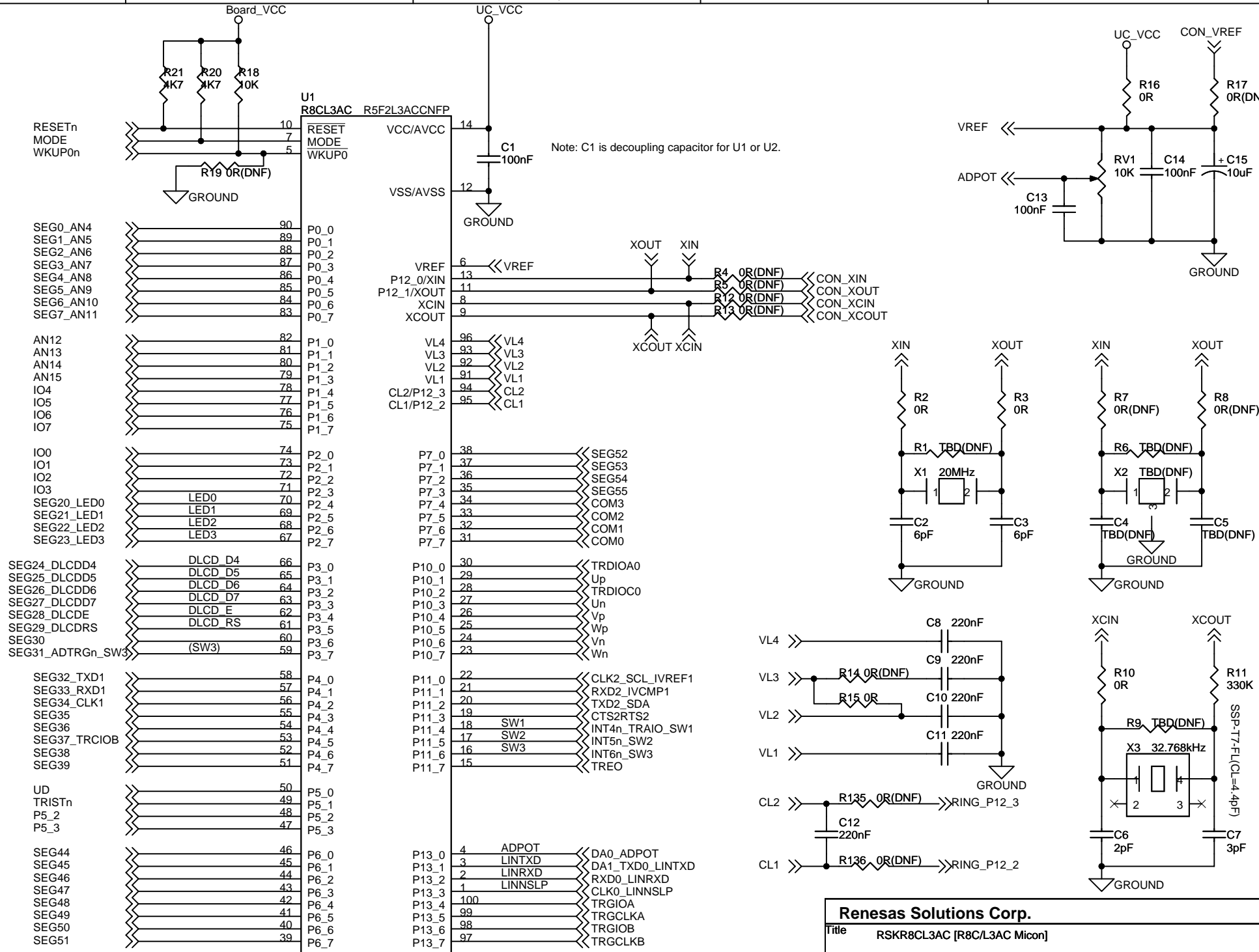
## Board Code:

**R0K52L3A0C000BE**

RTE Drawing No. D008702  
RSO Drawing No. DK30774

<b>Renesas Solutions Corp.</b>			
Title		RSKR8CL3AC [INDEX]	
Size	Document Number	Rev	
A4	RJJ99J0069-0100	1.00	
Date:	Thursday, March 11, 2010	Sheet	1 of 8

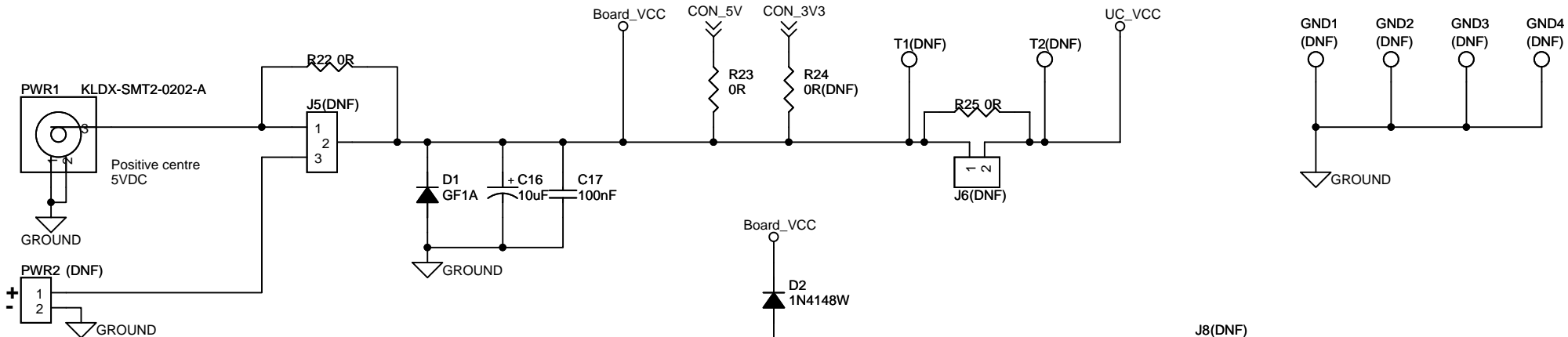
**Microcontroller**



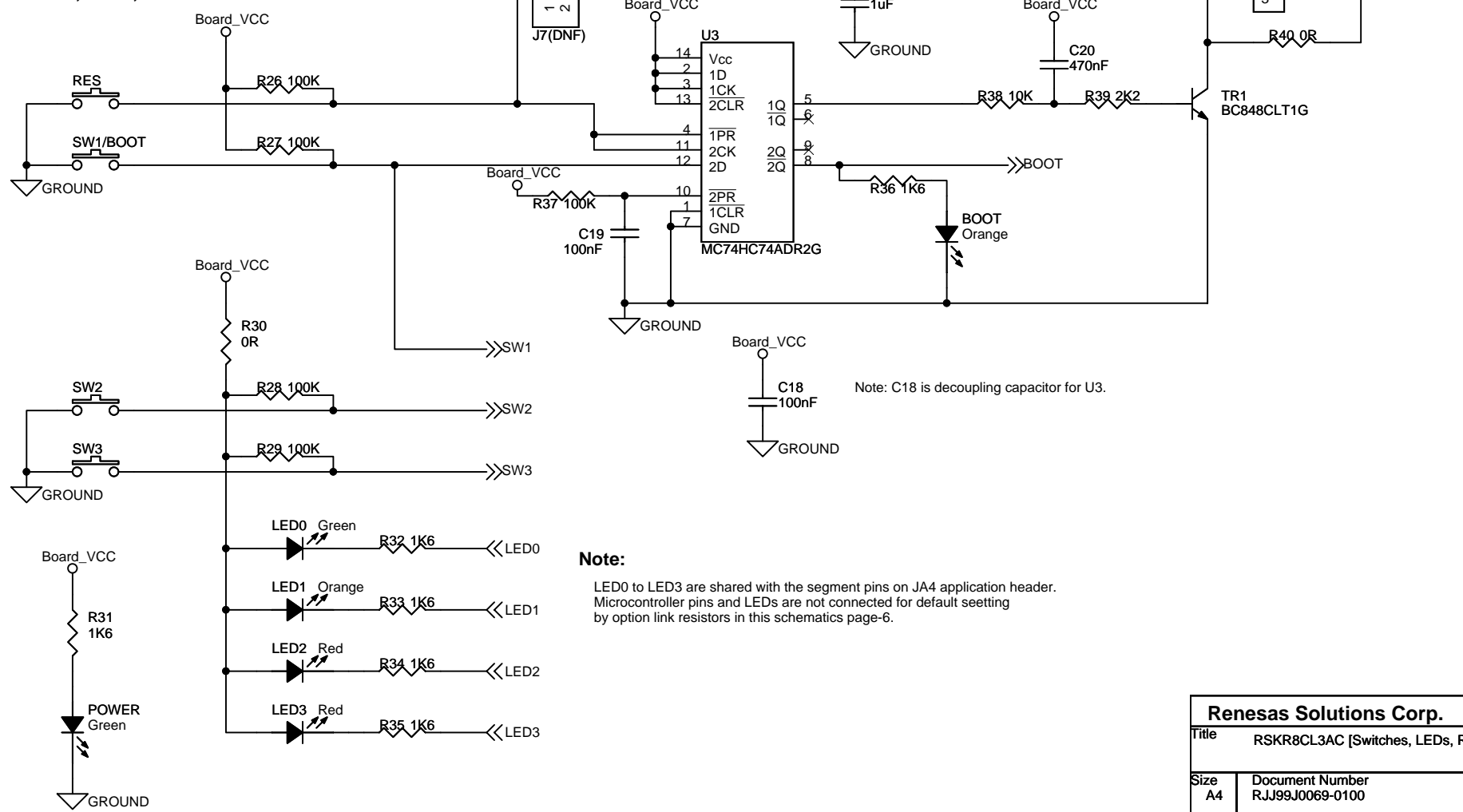
Note: C1 is decoupling capacitor for U1 or U2.

Pin	Signal	Pin	Signal
10	RESETn	14	VCC/AVCC
7	MODE	12	VSS/AVSS
5	WKUP0n	6	VREF
90	SEG0_AN4	13	P12_0/XIN
89	SEG1_AN5	11	P12_1/XOUT
88	SEG2_AN6	8	XCIN
87	SEG3_AN7	9	XCOU
86	SEG4_AN8	96	VL4
85	SEG5_AN9	93	VL3
84	SEG6_AN10	92	VL2
83	SEG7_AN11	91	VL1
82	AN12	94	CL2
81	AN13	95	CL1
80	AN14	38	P7_0
79	AN15	37	P7_1
78	IO4	36	P7_2
77	IO5	35	P7_3
76	IO6	34	P7_4
75	IO7	33	P7_5
74	IO0	32	P7_6
73	IO1	31	P7_7
72	IO2	30	P10_0
71	IO3	29	P10_1
70	SEG20_LED0	28	P10_2
69	SEG21_LED1	27	P10_3
68	SEG22_LED2	26	P10_4
67	SEG23_LED3	25	P10_5
66	SEG24_DLCDD4	24	P10_6
65	SEG25_DLCDD5	23	P10_7
64	SEG26_DLCDD6	22	P11_0
63	SEG27_DLCDD7	21	P11_1
62	SEG28_DLCDE	20	P11_2
61	SEG29_DLCDRS	19	P11_3
60	SEG30	18	P11_4
59	SEG31_ADTRGn_SW3	17	P11_5
58	SEG32_TXD1	16	P11_6
57	SEG33_RXD1	15	P11_7
56	SEG34_CLK1	4	P13_0
55	SEG35	3	P13_1
54	SEG36	2	P13_2
53	SEG37_TRCIOB	1	P13_3
52	SEG38	100	P13_4
51	SEG39	99	P13_5
50	UD	98	P13_6
49	TRISTn	97	P13_7
48	P5_2	46	P6_0
47	P5_3	45	P6_1
46	SEG44	44	P6_2
45	SEG45	43	P6_3
44	SEG46	42	P6_4
43	SEG47	41	P6_5
42	SEG48	40	P6_6
41	SEG49	39	P6_7
40	SEG50		
39	SEG51		

<b>Renesas Solutions Corp.</b>		
Title RSKR8CL3AC [R8C/L3AC Micon]		
Size A4	Document Number RJJ99J0069-0100	Rev 1.00
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Switches, LEDs, RESET



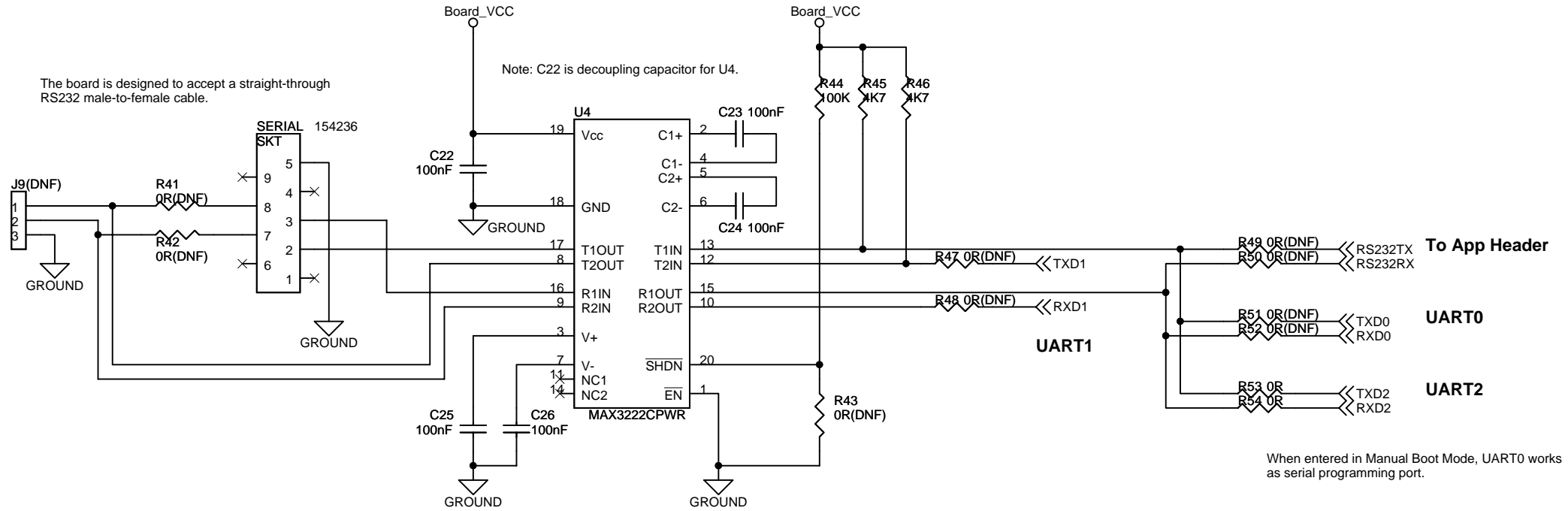
Note: C18 is decoupling capacitor for U3.

**Note:**  
LED0 to LED3 are shared with the segment pins on JA4 application header. Microcontroller pins and LEDs are not connected for default setting by option link resistors in this schematics page-6.

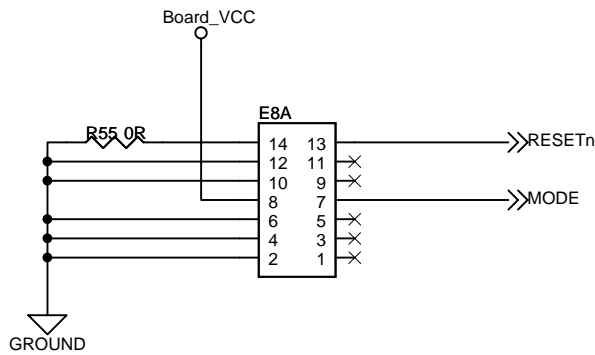
<b>Renesas Solutions Corp.</b>		
Title RSKR8CL3AC [Switches, LEDs, RESET, PSU]		
Size A4	Document Number RJJ99J0069-0100	Rev 1.00
Date: Thursday, March 11, 2010	Sheet 3	of 8

## Serial Port

The board is designed to accept a straight-through RS232 male-to-female cable.

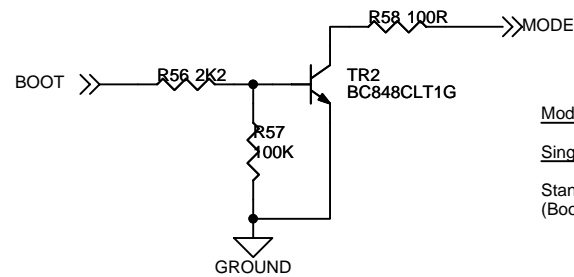


## E8a Debug Connector



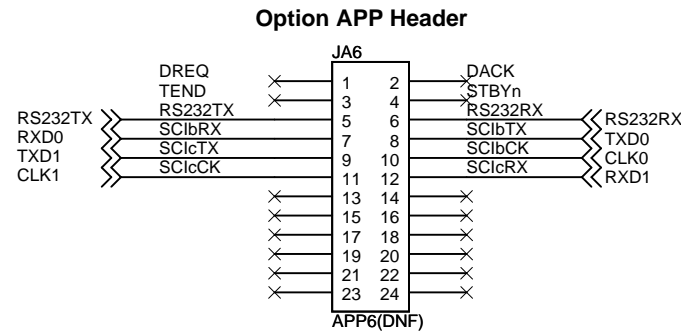
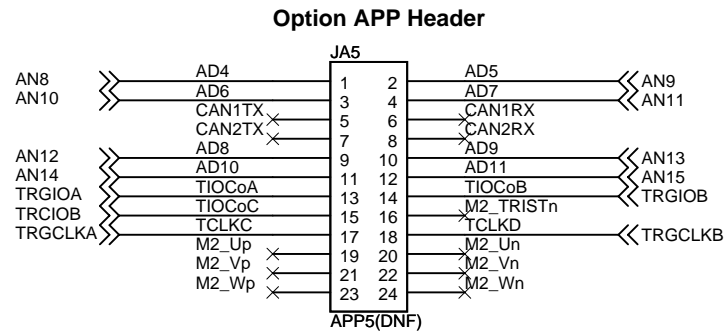
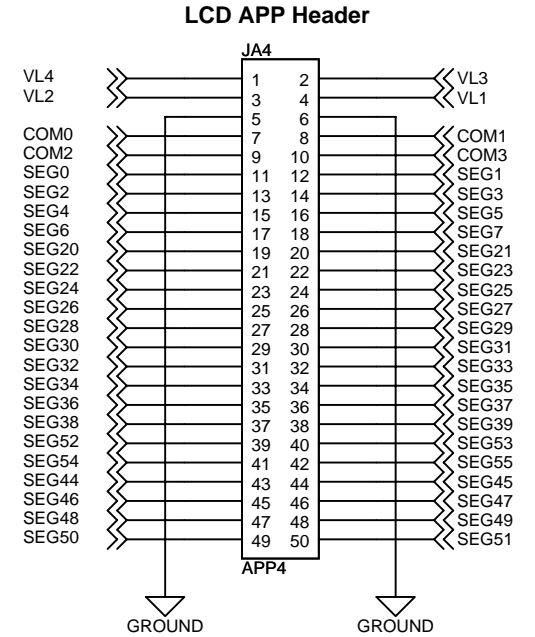
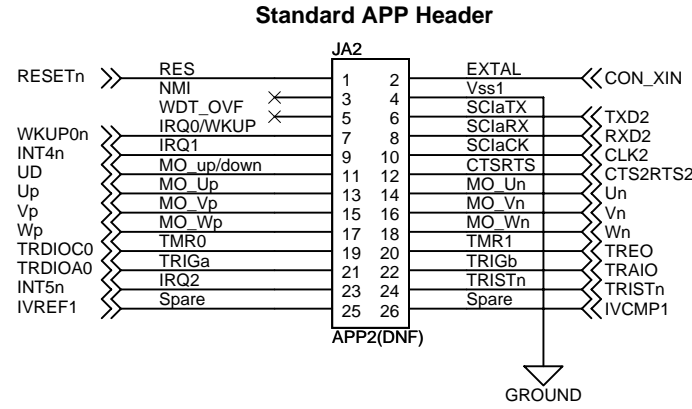
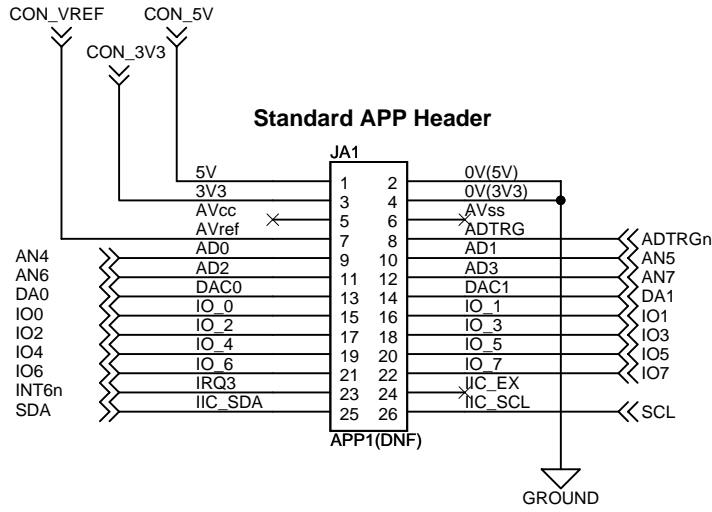
## CPU Mode Select

(for Manual Boot Mode Entry)

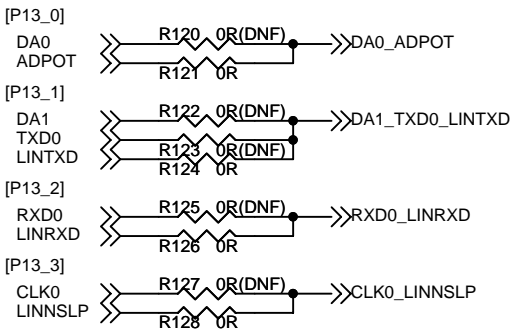
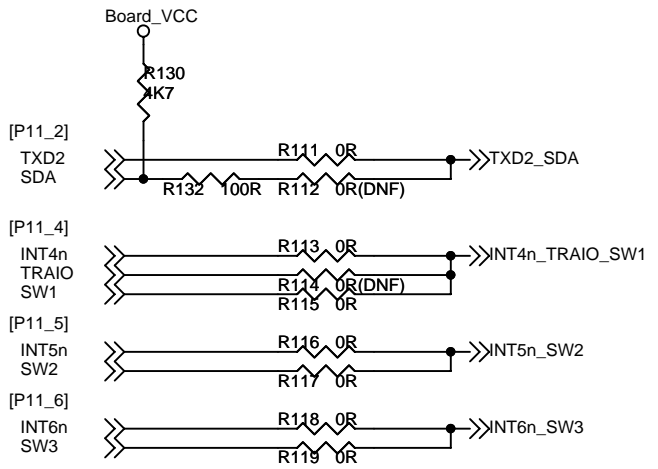
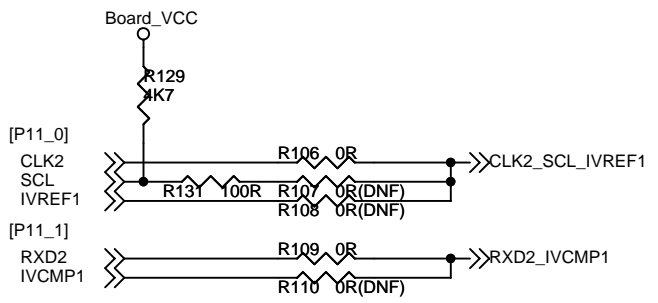
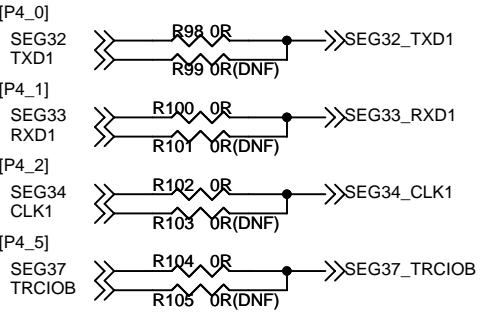
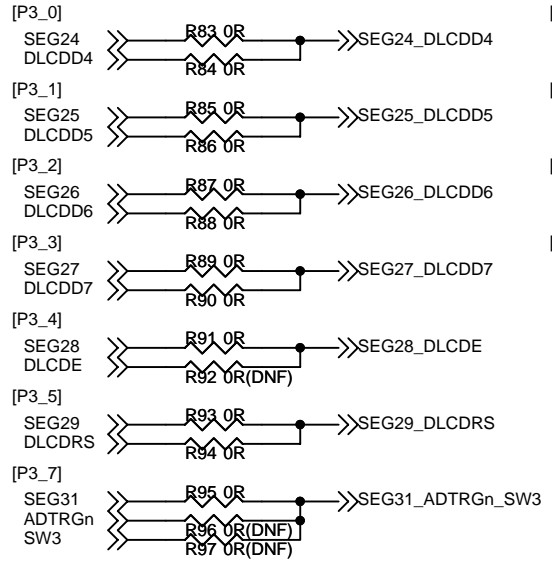
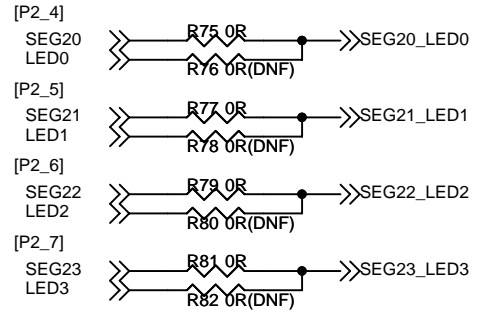
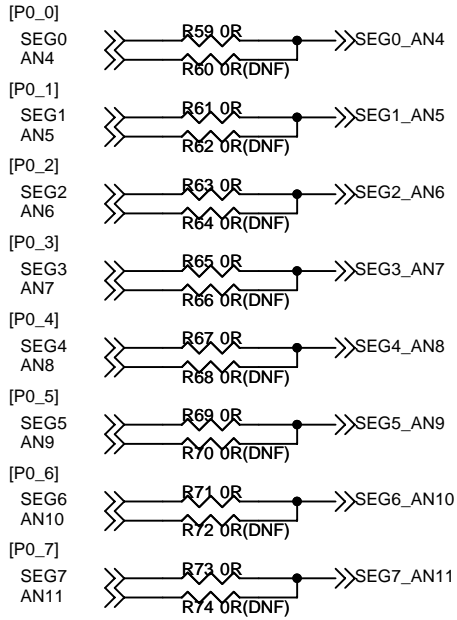


Mode Type	MODE
Single Chip Mode	H
Standard Serial I/O Mode (Boot Mode)	L

# Application Board Interface



# Microcontroller Pin Function Select

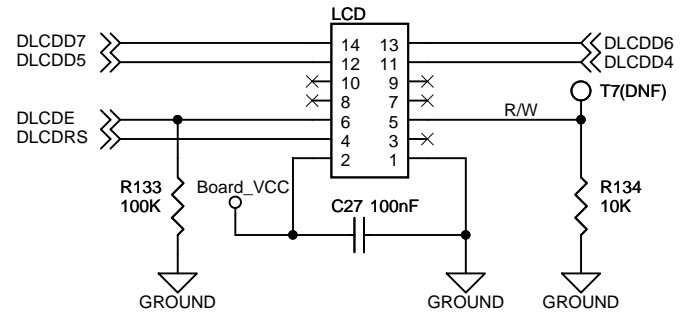


## Debug LCD

### Note:

Do not use if VCC is not equal to 5V.

Debug LCD pins are shared with the segment pins on JA4 application header. Microcontroller pin and DLCDE pin is not connected for default setting by option link resistor in this page.

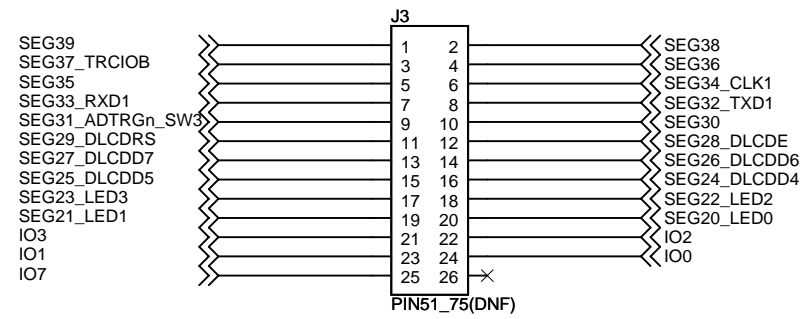
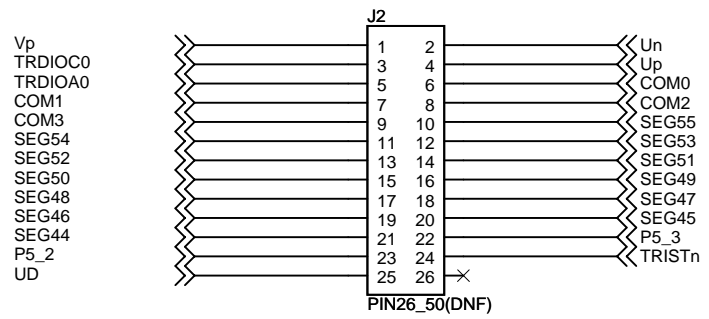
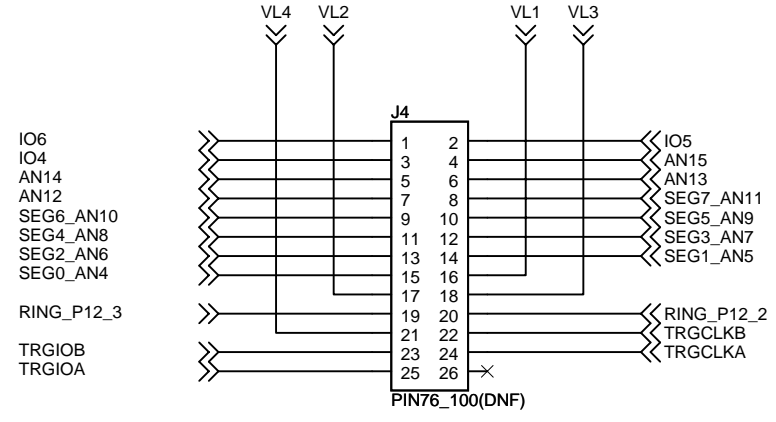
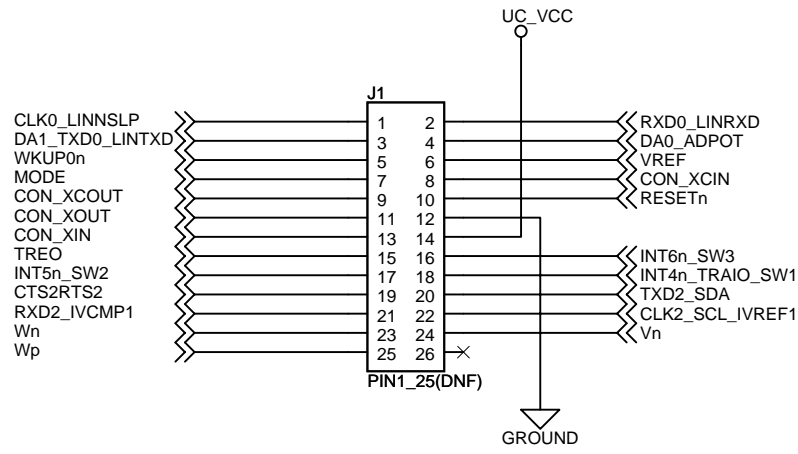


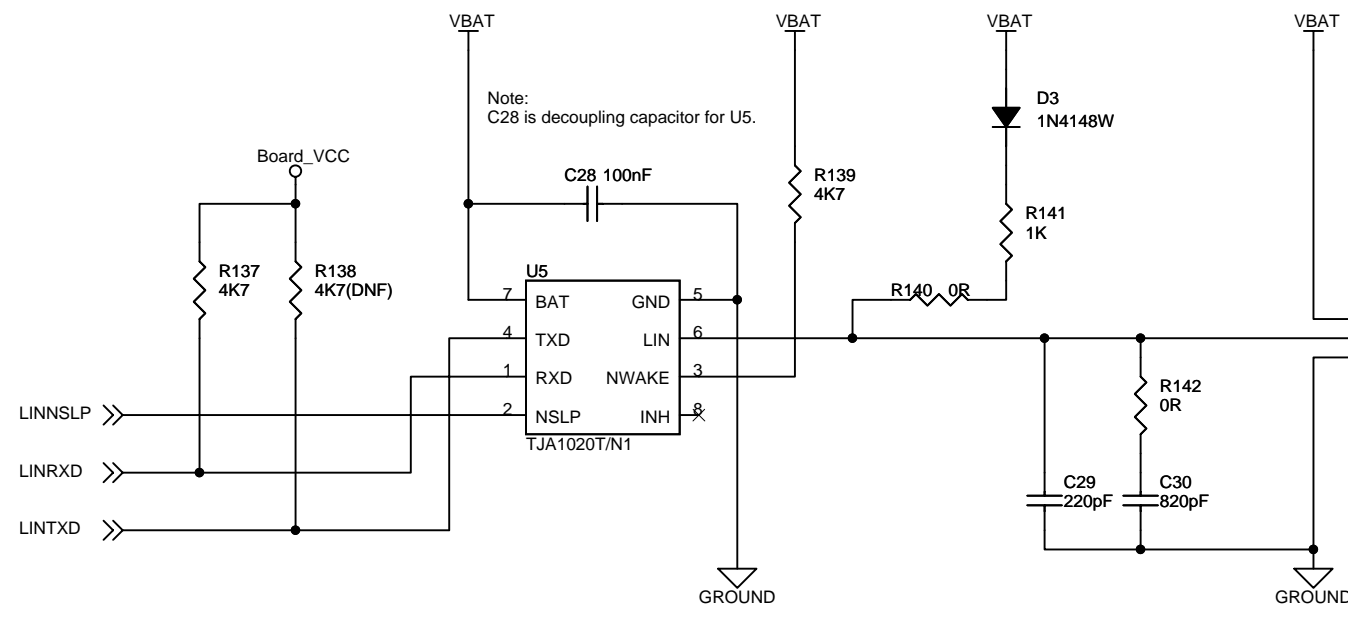
Note: C27 is decoupling capacitor for LCD module.

<b>Renesas Solutions Corp.</b>		
Title RSKR8CL3AC [Micon Pin Function Select, Debug LCD]		
Size A4	Document Number RJJ99J0069-0100	Rev 1.00
Date: Thursday, March 11, 2010	Sheet 6	of 8

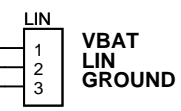


# Microcontroller Pin Headers





Note:  
C28 is decoupling capacitor for U5.



LIM Mode Select	Fitted	Removed
R140, R142	Master	Slave

