



Preliminary

# Starter Kit Premier / M3 Starter Kit Pro

## BOM List

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## **General Precautions in the Handling of Microprocessing Unit and Microcontroller Unit Products**

The following usage notes are applicable to all Microprocessing unit and Microcontroller unit products from Renesas. For detailed usage notes on the products covered by this document, refer to the relevant sections of the document as well as any technical updates that have been issued for the products.

### **1. Handling of Unused Pins**

Handle unused pins in accordance with the directions given under Handling of Unused Pins in the manual.

- The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible. Unused pins should be handled as described under Handling of Unused Pins in the manual.

### **2. Processing at Power-on**

The state of the product is undefined at the moment when power is supplied.

- The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the moment when power is supplied.  
In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the moment when power is supplied until the reset process is completed.  
In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the moment when power is supplied until the power reaches the level at which resetting has been specified.

### **3. Prohibition of Access to Reserved Addresses**

Access to reserved addresses is prohibited.

- The reserved addresses are provided for the possible future expansion of functions. Do not access these addresses; the correct operation of LSI is not guaranteed if they are accessed.

### **4. Clock Signals**

After applying a reset, only release the reset line after the operating clock signal has become stable.

When switching the clock signal during program execution, wait until the target clock signal has stabilized.

- When the clock signal is generated with an external resonator (or from an external oscillator) during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Moreover, when switching to a clock signal produced with an external resonator (or by an external oscillator) while program execution is in progress, wait until the target clock signal is stable.

### **5. Differences between Products**

Before changing from one product to another, i.e. to a product with a different part number, confirm that the change will not lead to problems.

- The characteristics of Microprocessing unit or Microcontroller unit products in the same group but having a different part number may differ in terms of the internal memory capacity, layout pattern, and other factors, which can affect the ranges of electrical characteristics, such as characteristic values, operating margins, immunity to noise, and amount of radiated noise. When changing to a product with a different part number, implement a system-evaluation test for the given product.

"R-Car HB Starter Kit"

This parts list corresponds to Schematic revision Rev12

RTP0RC77951SKBX010SA00

R Car Cap3: Starterkit Materials

Car Gen3 Starterkit Materials						
Item	Quantity	Reference	Value	part Number	Sub part	Make
1	1	1 UI	H8_M8_Si_P_BGA	R8J779500D00BGPY1	R-Car H8 SoC MT538256M2DINP-062 AAT(8G) -40° C to 105° Q : Micron K4F8304B-MG2 (8G) -25° C to 85° Q : Samsung HPS26KS12SDPBH020	Renesas Micron Samsung
2	1	1 U22	eMC	MFC91CAEN5-K1 KLMG1GSD-B04P	Cypress Micron Samsung	Hyper Flash on Si P LPDDR4 on Si P
3	1	1 U72	B02571MMW_M	B02571MMW_M	ROHM	KLMG1GSD-B04P(8G) -40° C to 85° Q : Samsung
4	1	1 U73	BB24T01FVMW	BB24T01FVMW	ROHM	
5	1	1 U75	BB2065FVU	BB2065FVU	ROHM	
6	1	1 U61	S449595258589NLG	S449595258589NLG	Integrated Devi ce Technolog(y)(ID)	
7	1	1 U87	9TQ00841AKLF	9TQ00841AKLF	Integrated Devi ce Technolog(y)(ID)	
8	1	1 U5	S25F0000000000000000	S25F0000000000000000	Cypress	
9	1	1 L98	A44613Q	A44613Q	DSI	
10	1	1 U98	K5Z9031RNWVA	K5Z9031RNWVA	Microchip	
11	1	1 U9	MC94091YCG	MC94091YCG	Microchip	
12	2	2 U6, U83	MW9813LEKA	MW9813LEKA	Nuvoton	
13	1	1 U88	SM402M00	SM402M00	ALTEA	
14	1	1 U41	C9202000000000000000	C9202000000000000000	TDI DRIB LOG C	
16	1	1 U22	TT23200	TT23200 REEL	HTD	
17	1	1 U7	TPD125016WR	TPD125016WR	TEXAS INSTRUMENTS	
18	2	1 U83, U68	TXS0102DUF	TXS0102DUF	TEXAS INSTRUMENTS	
19	2	1 U4, U85	I PG0N0454L-08	I PG0N0454L-08	I nfrared	
20	1	1 U7	ADP1706AR02-1, 2-R7	ADP1706AR02-1, 2-R7	Anal og Devi ces	
21	1	1 M65	ADP1706AR02-1, 2-R7	ADP1706AR02-1, 2-R7	Anal og Devi ces	
23	1	1 U5	HEPA1V1Q08A	HEPA1V1Q08A	RENEAS	
24	1	1 U89	SN44C93Q245RQR	SN44C93Q245RQR	TEXAS INSTRUMENTS	
25	1	1 U21	SN44UPT134DX	SN44UPT134DX	TEXAS INSTRUMENTS	
26	1	1 X1	2520_14_7456MHz/50ppm	SG_2105GB_14_7456MHz_L	SEI KO EPSON	
27	1	1 X4	2520_16_6666MHz/50ppm	SG_2105GB_16_6666MHz_L	SEI KO EPSON	
28	1	1 X6	2016_16_0000MHz/10ppm	FA-128_16_0000MHz/10ppm	SEI KO EPSON	
29	3	X9, X23, X24	2010_18_25000MHz/15ppm	FA-128_25_25000MHz/10.0	SEI KO EPSON	
30	1	1 X10	2520_125MHz/50ppm	SG_8003CG_125.000000MHz_SCB	SEIKO EPSON	
31	2	2 X11, X25	2520_22_5792MHz/50ppm	SG_2105GB_22_5792MHz_L	SEI KO EPSON	
32	1	1 X12	2016_24_576MHz/20ppm/15ppm	FA-128_24_57600MHz/20ppm	SEIKO EPSON	
33	1	1 X13	2520_32_788kHz/50ppm	NC22062AV0800A8E00_32_788kHz/50ppm	KYOCERA CR STAL	
34	18	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C49, C56, C64, C87, C89, C90, C92, C94, C99, C105, C126, C127, C128, C129, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C157, C158, C159, C160, C268, C270, C271, C272, C274, C272, C276, C277, C279, C30, C287, C288, C289, C34, C35, C36, C37, C38, C39, C51, C352, C353, C356, C358, C359, C361, C376, C433, C434, C446, C464, C466, C467, C470, C471, C474, C475, C479, C531, C532, C533, C534, C535, C536, C567, C608, C609, C610, C611, C616, C617, C618, C619, C620, C621, C622, C623, C671, C672, C673, C674, C675, C676, C677, C678, C734, C735, C736, C737, C748, C749, C750, C751, C762, C763, C770, C771, C772, C773, C774, C793, C795, C796, C798, C799, C800, C802, C808, C809, C810, C813, C814, C816, C817, C818, C819, C820, C821, C831, C832, C833, C834, C835, C953, C954, C957, C958, C959, C961, C963, C965, C966, C967, C968, C969, C970, C971, C972, C973, C974, C988, C1008, C1010, C1011, C1012, C1013, C1014, C1015, C1026, C1027	0.1UF	GRM033R1A104KE15D	MRATA	
35	3	C24, C27, C28	100F	GRM335CIE100JA01D	MRATA	
36	73	C33, C35, C41, C44, C46, C52, C58, C61, C74, C86, C88, C102, C104, C106, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C203, C204, C205, C206, C209, C210, C212, C215, C457, C458, C624, C625, C626, C627, C628, C629, C630, C631, C679, C680, C681, C682, C683, C684, C685, C686, C687, C688, C689, C757, C758, C759, C760, C761, C764, C765, C766, C767, C768, C769, C776, C880, C882, C883, C885, C886	0.01UF	GRM33R1A103KA01D	MRATA	
37	43	G1, G55, C78, C81, C107, C119, C269, C273, C342, C554, C576, C578, C579, C580, C581, C582, C612, C613, C614, C615, C667, C668, C669, C670, C751, C792, C794, C797, C801, C802, C803, C804, C815, C832, C955, C956, C980, C989, C990, C991, C992, C993	1UF	GRM55R61A105KE15D	MRATA	
38	16	C50, C55, C63, C69, C93, C953, C345, C357, C360, C362, C363, C476, C864, C865, C876, C877	2.2UF	GRM55R61C225KE11D	MRATA	
39	22	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C731, C732, C733	4.7UF	GRM55R61A75KEAAD	MRATA	
40	73	C131, C132, C133, C638, C639, C641, C642, C643, C644, C645, C646, C647, C648, C649, C650, C651, C652, C653, C654, C655, C656, C657, C658, C659, C660, C661, C662, C663, C664, C665, C666, C693, C694, C695, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709, C710, C711, C712, C713, C714, C715, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726, C727, C728, C729, C730, C731, C732, C733	1000pF	GRM33R71E102KA01D	MRATA	

41	36	C155,C156,C161,C220,C221, C255,C256,C442,C444,C451, C453,C454,C455,C456,C465, C468,C469,C472,C473,C482, C483,C484,C485,C486,C487, C566,C571,C572,C573,C574, C571,C577,C746,C805,C906, C860,C861,C879,C960, C1007,C1017	10uF	GRM188R61C106KA	MURATA		
42	11	C162,C201,C201,C216,C285, C286,C870,C871,C884,C889, C890,C891	0.047uF	GRM155R71E473KA88D	MURATA		
43	8	C163,C165,C195,C198,C864, C865,C866,C874	0.22uF	GRM155R61C224KA12D	MURATA		
44	11	C167,C211,C213,C214,C545, C872,C873,C887,C890,C891	0.022uF	GRM155R71H223KA12D	MURATA		
45	14	C171,C172,C632,C633,C634, C635,C636,C637,C687,C688, C689,C690,C691,C699	4700pF	GRM03R71C472KE14D	MURATA		
46	3	C333,C34,C34,C1011	1uF	GRM188R61C105KA93D	MURATA		
47	2	C377,C78	4.7uF	GRM188R61C475KA01D	MURATA		
48	2	C378,C88	20uF	GRM188R61C475KA01D	MURATA		
49	2	C478,C881	39uF	GRM035C1E390U01D	MURATA		
51	4	C493,C926,C978,C1012	0.1uF	GRM155R71C104KA88D	MURATA		
52	14	C333,C34,C35,C36,C37, C560,C564,C837,C842,C999, C999,C1001,C1002,C1003	100uF	GRM188R61G07M15L	MURATA		
53	2	C404,C54	47uF	GRM188R61C476KE15L	MURATA		
54	15	C546,C547,C548,C549,C573, C1004,C1005,C1006,C1016, C1018,C1019,C1021,C1022, C1024,C1025	47uF	GRM188R61A476M15L	MURATA		
56	3	C144,C145,C146,C147,C148,C149, C149,C150,C151,C152,C153,C154, C154,C155,C156,C157,C158,C159	22uF	GRM188R61A226KE15D	MURATA		
57	2	C144,C145	24uF	GRM035C1H401A01D	MURATA		
59	6	C867,C868,C869,C875,C881, C887	0.47uF	GRM155R61A474KE01D	MURATA		
60	2	C962,C964	30pF	GRM033C1E300U01D	MURATA		
62	2	E17,E18	22uF	GRM188R61A226M15L	MURATA		
63	3	R1,R2,C05,C06,C07,C09B	100uF	GRM188R61G07M15L	TAKUMI TUDEN		
64	66	R1,R2,R3,R4,R5,R6,R7,R8, R84,R45,R46,R47,R48,R51, R48,R49,R50,R51,R52,R53,R56, R232,R233,R234,R235,R236, R245,R246,R247,R248,R249, R412,R415,R430,R435,R436, R641,R645,R647,R649,R653, R658,R659,R661,R664,R668, R677,R686,R683,R684,R685, R688,R689,R690,R691,R692, R694,R695,R697,R698,R699, R696,R697,R698,R699,R700, R701,R702,R703,R704,R705, R706,R707,R708,R709,R710, R711,R712,R713,R714	0	MD0006YLPI000	ROHM		
65	46	R2,R4,R6,R7,R15,R25, R50,R139,R196,R197,R198, R245,R246,R247,R248,R249, R325,R337,R341,R413,R437, R440,R461,R610,R679,R681, R763,R764,R765,R766,R767, R768,R769,R785,R793,R805, R806,R807,R808,R809,R810,R811	10k	MD0006YLPI103	ROHM		
74	11	R46,R47,R57,R76,R77,R646, R650,R672,R675,R826,R883	4.7k	MD0006YLPI147Z	ROHM		
76	8	R58,R59,R64,R65,R66,R67, R73,R74,R75,R75,R76,R77, R759,R760	200	MD0006YLPI2000	ROHM		
77	9	R66,R67,R68,B69,R70,R71, R72,R73,R789	1	MD010MPFL1R00	ROHM		
79	12	R91,R92,R94,R95,R99,R101, R101,R103,R108,R109,R110, R115	240.0	MD010MPF12400	ROHM		
81	1	R200	10k	MD001MPF1103	ROHM		
83	11	R223,R224,R236,R263,R864, R865,R866,R867,R868,R869, R870	47k	MD0006YLPI473	ROHM		
84	2	R45,R46,R505	130	MD0006YLPI131	ROHM		
85	1	R320	12.1k	MD0006YLPI212	ROHM		
87	2	R414,R416	6.8k	MD0006YRTF6801	ROHM		
88	1	R418	1k	MD0006YLPI1001	ROHM		
89	1	R425	470	MD0006YRTF4700	ROHM		
90	1	R426	10k	MD0006YRTF10002	ROHM		
91	1	R434	1k	MD0006YRTF10001	ROHM		
92	1	R436	160	MD0006YLPI1600	ROHM		
93	2	R450,R454	15k	MD0006YLPI1502	ROHM		
94	2	R451,R455	39k	MD0006YLPI3902	ROHM		
95	7	R601,R602,R611,R612,R795, R796,R797	33	MD0006YLPI330	ROHM		
96	1	R797	2.2	MD010MPFL2R00	ROHM		
98	6	R724,R25,R26,R27,R728, R729	100	MD0006YLPI1000	ROHM		
100	2	R60,R63	1.62k	ERU-1GEF1621C	Panasonic C		
101	4	R61,R62,R64,R65	4.02k	ERU-1GEF4021C	Panasonic C		
102	6	R648,R654,R660,R665	24.9	ERU-1GEF249C	Panasonic C		
103	1	L53	0.12uH	CDPCLL0630-R12M	TOKO		
104	2	L55,L56	0.24uH	CFE201612PD-R24M	TOKO		
105	2	L57,L58	0.33uH	CFE201612PD-R33M	TOKO		
106	1	L58	0.15uH	SPW0201-R15M CA02	TDK		
107	1	L68	TC0080GG-900-2P	TC0080GG-900-2P	TOKO		
108	7	L68,L69,L70,L71,L72,L73, L79	2.04H	LQD3H2NDS2D	MURATA		
109	4	L80,L81,L103,L105	260ohm,100MHz	BLM18K2G601TN1	MURATA		
110	15	L3,L4,L5,L6,L8,L74,L75, L196,L197,L198,L199,L100, L102,L110	600ohm,100MHz	BLM18A601S21D	MURATA		
111	1	L104	NFM11H223R1H8	NFM11H223R1H8L	MURATA		
112	1	N1	10k	NLM18XH03F65RB	MURATA		
113	1	Q1,Q7	Ether_CN	HJ11-TG1E-L12RL	Hirose		
114	1	Q1,Q5	HDM-CN_046/651301	046/651301	MDEX		
115	1	Q1,Q4	48.004	48.004	MDEX		
116	1	Q1,Q8	22-04-1031	22-04-1031	MDEX		
117	1	Q1,Q8	SI CA292051000	SI CA292051000	TOKYO ELETCH		
118	1	Q1Q2	Z62D2 AB-SPIR30	Z62D2 AB-SPIR30	H Rose		
120	1	Q1Q3	PJ-063AH	PJ-063AH	CL Inc.		
121	2	Q1,Q9	SJ-352-SM	SJ-352-SM	CL Inc.		
122	1	Q1,Q6	DMM-SF-PUM16	DMM-SF-PUM16	H Rose		
123	1	Q1Q1	PSS-710153-06	PSS-710153-06	H Rose		
124	1	Q1Q2	PSM41033-09	PSM41033-09	H Rose		
125	1	Q1W	CH-01A	CH-01A	COPAL ELECTRON CS		
126	2	SW1,SW6	CH-04A	CH-04A	COPAL ELECTRON CS		
127	3	SW2,SW4,SW5	BSU-100PM	BSU-100PM	OMRON		
128	3	SW3,SW4,SW5	SK9949610	SK9949610	ALPS		
129	11	TR8,TR9,TR8,TR9,TR10, TR11,TR12,TR20,TR21,TR26, TR30	RECO3UUNFL	RECO3UUNFL	ROHM		
130	3	Q97,D88,D99	D225033ML	D225033ML	Panasonic C		
131	7	LED4,LED5,LED6,LED7, LED14,LED15	SML-P11MT86	SML-P11MT86	ROHM		
132	1	J1P1	HWP-3P-G	HWP-3P-G	MC3		
133	1	J1P2	(HWP-3P-G)	J5-1	MC3		
134	1	J1P3	MP-1.0	MP-1.0	MC3		
147	3	TP2,TP3,TP4	HK-2-G	HK-2-G	MC3		
150	11	CN1	440p ComExpress	440p ComExpress	TCC		
151	1	-	PCB	FR 8 layers build up	Kicera		

R-Car Starter Kit Premier

R-Car Starter Kit Pro



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