RENESAS

Renesas R-Car

R-Car StarterKit BOM List

Renesas Electronics
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Rev.1.10 No 2016

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 Starter KIt Premier (H3)

This parts list corresponds to Schematic revision Rev110

R-Car_Gen3_StarterKit Materials

Item	Quantity	Reference	Value	part Number	Sub part		Maker	Note
					R-Car H3 SoC	Renesas		SoC on SiP
1	1	U1	H3_M3_SIP_BGA	R8J77950DX008G9YJ1	MT53B256M32D1NP-062 AAT(8Gb, -40°C to 105°C) :Micron	Micron		LPDDR4 on SiP
					K4F8E304HB-MGCJ(8Gb, -25°C to 85°C) :Samsung	Samsung		Hyper Flash on SiP
					HFS28KS512SDPBHV020	Cypress		MTFC8GACAENS-K1 AIT(8GB, -40°C to 85°C):Micron
2	1	U22	eMMC	MTFC8GACAENS-K1		Micron		KLM8G1GESD-B04P(8GB, -40°C to 85°C) :Samsung
				KLM8G1GESD-B04P		Samsung		
3	1	U72	BD9571MWV-M	BD9571MWV-M		ROHM		
4	1	U12	BR24T01FVMAV	BR24T01FVMAV		ROHM		
5	1	U15	BD82065FVJ	BD82065FVJ		ROHM		
6	1	U61	5P49V5925B508NLGI	5P49V5925B508NLGI		Integrated Device Technology(IDT)		
7	1	U87	9FGV0841AKILF	9FGV0841AKILF		Integrated Device Technology(IDT)		
8	1	U5	QSPI_Memory	S25FS128SAGMFV100		Cypress		
9	1	U38	AK4613VQ	AK4613VQ		ASAHI KASEI MICRODEVICES		
10	1	U78	KSZ9031RNXVA	KSZ9031RNXVA		MICREL		
11	1	U19	MIC94091YC6	MIC94091YC6		MICREL		
12	2	U82,U83	MAX9813LEKA	MAX9813LEKA		MAXIM		
13	1	U88	5M240ZM100	5M240ZM100C5N		ALTERA		
14	1	U41	CS2000-CP	CS2000CP-CZZR		CIRRUS LOGIC		
16	1	U122	FT232RQ	FT232RQ-REEL		FTDI		
17	1	U27	TPD12S016PWR	TPD12S016PWR		TEXAS INSTRUMENTS		
18	2	U33,U68	TXS0102DCUT	TXS0102DCUT		TEXAS INSTRUMENTS		
19	2	U84,U85	IPG20N04S4L-08	IPG20N04S4L-08		Infineon		
20	1	U37	ADP1706ARDZ-1.2-R7	ADP1706ARDZ-1.2-R7		Analog Devices		
21	2	U34,U123	HD74LV1GT08A	HD74LV1GT08ACME		RENESAS		
23	1	U35	HD74LV1G08A	HD74LV1G08ACME		RENESAS		
24	1	U89	SN74CB3Q3245RGYR	SN74CB3Q3245RGYR		TEXAS INSTRUMENTS		
25	1	U121	SN74AUP1T34DCK	SN74AUP1T34DCK		TEXAS INSTRUMENTS		
26	1	X1	2520 14.7456MHz/50ppm	SG-210SCB 14.745600 MHz L		SEIKO EPSON		
27	1	X4	2520 16.6666MHz/50ppm	SG-210SEB 16.666600 MHz L		SEIKO EPSON		
28	1	X6	2016 50.0000MHz/10pF/15ppm	FA-128 50.000000 MHz 10pf/15ppm		SEIKO EPSON		
29	3	X9,X23,X24	2016 25MHz/20pF/15ppm	FA-128 25.000000 MHz 20.0 +10.0-10.0		SEIKO EPSON		
30	1	X10	2520 125MHz/50ppm	SG-8003CG 125.000000 MHz SCB /SG8101CGA 125.000000 MHz		SEIKO EPSON		
31	2	X11,X25	2520 22.5792MHz/50ppm	SG-210SCB 22.5792MHz L		SEIKO EPSON		
32	1	X12	2016 24.576MHz/20pF/15ppm	FA-128 24.576000 MHz/20pF		SEIKO EPSON		
33	1	X5	2520_32.768kHz/50ppm	KC2520M32K7680CM3E00_32.768kHz/50ppm		KYOCERA CRISTAL		
34	181	C1,C2,C3,C21,C22,C25,C26, C29,C30,C31,C32,C34,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,C275,C276,C277,C279, C280,C282,C287,C288,C289, C341,C343,C349,C350,C351, C352,C355,C356,C358,C359, C361,C376,C433,C434,C461, C464,C466,C467,C470,C471, C474,C475,C479,C531,C532, C544,C565,C604,C605,C606, C607,C608,C609,C610,C611, C616,C617,C618,C619,C620, C621,C622,C623,C671,C672, C673,C674,C675,C676,C677, C678,C734,C735,C736,C737, C738,C739,C740,C741,C747, C748,C749,C750,C752,C762, C763,C770,C771,C772,C773, C774,C793,C795,C796,C798, C799,C800,C802,C808,C809, C810,C813,C814,C816,C817, C818,C828,C829,C830,C831, C929,C930,C949,C951,C952, C953,C954,C957,C958,C959, C961,C963,C965,C966,C967, C968,C969,C970,C971,C972, C973,C974,C988,C1008, C1009,C1010,C1013,C1014, C1015,C1026,C1027	0.1uF	GRM033R61A104KE15D		MURATA		
35	3	C24,C27,C28	10pF	GRM0335C1E100JA01D		MURATA		
36	73	C33,C35,C41,C44,C46,C52, C58,C61,C74,C80,C86,C88, C102,C104,C106,C111,C112, C116,C117,C121,C122,C125, C173,C174,C175,C177,C180, 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,C754,C755,C756,C757, C758,C759,C760,C761,C764, C765,C766,C767,C768,C769, C776,C880,C882,C883,C885, C886	0.01uF	GRM033R11A103KA01D		MURATA		
37	43	C43,C51,C65,C70,C81,C107, C114,C119,C269,C273,C342, C564,C576,C578,C579,C580, C581,C582,C612,C613,C614, C615,C667,C668,C669,C670, C751,C792,C794,C797,C801, C811,C812,C815,C832,C955, C956,C986,C989,C990,C991, C992,C993	1uF	GRM155R61A105KE15D		MURATA		
38	16	C50,C55,C63,C69,C93,C353, C354,C357,C360,C362,C363, C476,C862,C863,C876,C877	2.2uF	GRM155R61C225KE11D		MURATA		
39	22	C85,C103,C110,C115,C120, C242,C243,C244,C245,C264, C265,C266,C267,C490,C491, C492,C556,C557,C803,C804, C807,C878	4.7uF	GRM155R61A475KEAAD		MURATA		
40	73	C131,C134,C137,C638,C639, C640,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, C696,C697,C698,C699,C700, C701,C702,C703,C704,C705, C706,C707,C708,C709,C710, C711,C712,C713,C714,C715, C716,C717,C718,C719,C720, C721,C722,C723,C724,C725, C726,C727,C728,C729,C730, C731,C732,C733	1000pF	GRM033R71E102KA01D		MURATA		

No	Qty	Location	Value	Part Number			Manufacturer	
41	36	C155,C156,C161,C220,C221,C255,C256,C442,C444,C451,C453,C454,C455,C456,C465,C468,C469,C472,C473,C482,C530,C541,C555,C561,C566,C571,C577,C746,C805,C806,C860,C861,C879,C960,C1007,C1017	10uF	GRM188R61C106KAALD			MURATA	
42	11	C162,C200,C201,C216,C285,C286,C870,C871,C884,C889,C893	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,C888,C890,C891,C892	0.022uF	GRM155R71H223KA12D			MURATA	
45	14	C171,C172,C632,C633,C634,C635,C636,C637,C687,C688,C689,C690,C691,C692	4700pF	GRM033R71C472KE14D			MURATA	
46	3	C333,C334,C1011	1uF	GRM188R61C105KA93D			MURATA	
47	2	C377,C378	4.7uF	GRM188R61C475KAAJD			MURATA	
48	2	C437,C438	20pF	GRM0335C1H200JA01D			MURATA	
49	2	C478,C481	39pF	GRM0335C1E390JA01D			MURATA	
51	4	C493,C976,C978,C1012	0.1uF	GRM155R71C104KA88D			MURATA	
52	14	C533,C534,C535,C536,C537,C560,C564,C637,C842,C999,C1000,C1001,C1002,C1003	100 uF	GRM21BR60G107ME15L			MURATA	
53	2	C540,C542	47 uF	GRM32ER61C476KE15L			MURATA	
54	15	C546,C547,C548,C549,C573,C1004,C1005,C1006,C1016,C1018,C1019,C1021,C1022,C1024,C1025	47 uF	GRM21BR61A476ME15L			MURATA	
56	3	C567,C1020,C1023	22uF	GRM188R61A226ME15D			MURATA	
57	2	C744,C745	24pF	GRM0335C1H240JA01D			MURATA	
59	6	C867,C868,C869,C875,C881,C887	0.47uF	GRM155R6YA474KE01D			MURATA	
60	2	C962,C964	30pF	GRM0335C1E300JA01D			MURATA	
62	2	E17,E18	22uF	GRM31CR71A226KE15L			MURATA	
63	5	C994,C995,C996,C997,C998	100 uF	EMK325ABJ107MM-T			TAIYO YUDEN	
64	66	R1,R24,R26,R27,R42,R43,R44,R45,R46,R47,R48,R51,R84,R86,R204,R225,R226,R227,R228,R229,R230,R231,R232,R233,R234,R235,R323,R412,R415,R430,R435,R625,R641,R645,R647,R649,R653,R658,R659,R661,R664,R668,R677,R680,R683,R684,R685,R687,R794,R813,R833,R834,R841,R842,R843,R844,R847,R849,R856,R857,R858,R859,R860,R862,R881,R882	0	MCR006YLPJ000			ROHM	
65	46	R2,R4,R6,R7,R15,R25,R28,R50,R139,R196,R197,R198,R199,R201,R202,R203,R244,R245,R313,R314,R318,R319,R325,R337,R341,R413,R437,R440,R461,R610,R679,R681,R763,R764,R765,R766,R767,R768,R769,R785,R793,R805,R825,R845,R861,R884	10k	MCR006YLPJ103			ROHM	
66	9	R3,R8,R9,R23,R334,R345,R346,R743,R744	22	MCR006YLPJ220			ROHM	
68	2	R10,R33	100k	MCR006YLPJ104			ROHM	
69	22	R11,R12,R13,R14,R186,R340,R343,R364,R365,R366,R615,R673,R674,R676,R752,R753,R754,R755,R756,R757,R759,R760	2k	MCR006YLPJ202			ROHM	
70	24	R29,R30,R31,R32,R38,R41,R187,R247,R358,R359,R360,R361,R362,R363,R421,R428,R463,R464,R706,R707,R747,R809,R810,R818	1k	MCR006YLPJ102			ROHM	
72	5	R35,R36,R37,R185,R321	4.7k	MCR006YLPJ472			ROHM	
74	11	R40,R74,R75,R76,R77,R646,R650,R672,R675,R826,R883	0	MCR01MZPJ000			ROHM	
76	8	R52,R53,R54,R55,R56,R57,R58,R59	200	MCR006YLPF2000			ROHM	
77	9	R66,R67,R68,R69,R70,R71,R72,R73,R789	1	MCR01MZPFL1R00			ROHM	
79	12	R91,R92,R94,R95,R99,R101,R102,R103,R108,R109,R110,R115	240.0	MCR01MZPF2400			ROHM	
81	1	R200	10k	MCR01MZPJ103			ROHM	
83	11	R223,R224,R236,R863,R864,R865,R866,R867,R868,R869,R870	47k	MCR006YLPJ473			ROHM	
84	2	R299,R305	130	MCR006YLPJ131			ROHM	
85	1	R320	12.1k	MCR006YLPF1212			ROHM	
87	2	R414,R416	6.8k	MCR006YRTF6801			ROHM	
88	1	R418	1k	MCR006YLPF1001			ROHM	
89	1	R425	470	MCR006YRTF4700			ROHM	
90	1	R426	10k	MCR006YZPF1002			ROHM	
91	1	R434	1k	MCR006YLPF1001			ROHM	
92	1	R436	160	MCR006YLPF1600			ROHM	
93	2	R450,R454	15k	MCR006YLPF1502			ROHM	
94	2	R451,R455	39k	MCR006YLPF3902			ROHM	
95	7	R601,R602,R611,R612,R795,R796,R797	33	MCR006YLPJ330			ROHM	
96	1	R613	2.2	MCR01MZPFL2R20			ROHM	
98	6	R724,R725,R726,R727,R728,R729	100	MCR006YLPF1000			ROHM	
100	2	R60,R63	1.62k	ERJ-1GEF1621C			Panasonic	
101	4	R61,R62,R64,R65	4.02k	ERJ-1GEF4021C			Panasonic	
102	6	R642,R648,R654,R660,R665,R669	24.9	ERJ-1GEF24R9C			Panasonic	
103	1	L53	0.12uH	DDFCUL0630-R12MB			TOKO	
104	2	L55,L56	0.24uH	DFE201612PD-R24M			TOKO	
105	2	L57,L58	0.33uH	DFE201612PD-R33M			TOKO	
106	1	L54	0.15uH	SPM3020T-R15M-CA02			TDK	
107	1	L62	TCE0806G-900-2P	TCE0806G-900-2P			TDK	
108	7	L68,L69,L70,L71,L72,L108,L109	2.0nH	LQG15HH2N0S02D			MURATA	
109	4	L80,L81,L103,L105	26ohm_100MHz	BLM18KG260TN1			MURATA	
110	15	L3,L4,L5,L6,L8,L74,L75,L76,L96,L97,L98,L99,L100,L102,L110	600ohm_100MHz	BLM15AX601SZ1D			MURATA	
111	1	L104	NFM31HK223R1H3	NFM31HK223R1H3L			MURATA	
112	1	N1	10k	NCU18XH103F6SRB			MURATA	
113	1	CN7	Ether_CN	HFJ11-1G41E-L12RL			Halo Electronics	
114	1	CN4	HDMI_CN_0467651301	0467651301			MOLEX	
115	1	CN5	48204-0001	48204-0001			MOLEX	
116	1	CN14	22-04-1031	22-04-1031			MOLEX	
117	1	CN3	SICA2P20S1000	SICA2P20S1000			TOKYO ELETECH	
118	1	CN12	ZX62D-AB-5P8(30)	ZX62D-AB-5P8			HIROSE	
120	1	CN13	PJ-063AH	PJ-063AH			CUI Inc.	
121	2	CN8,CN9	SJ-3523-SMT	SJ-3523-SMT			CUI Inc.	
122	1	CN6	DM3AT-SF-PEJM5	DM3AT-SF-PEJM5			HIROSE	
123	1	CN11	PSS-710153-06	PSS-710153-06			HIROSUGI	
124	1	CN2	PSM-410336-09	PSM-410336-09			HIROSUGI	
125	1	SW1	CHS-01A	CHS-01A			COPAL ELECTRONICS	
126	2	SW2,SW6	CHS-04A	CHS-04A			COPAL ELECTRONICS	
127	3	SW3,SW4,SW5	B3U-1100PM	B3U-1100PM			OMRON	
128	3	SW7,SW8,SW9	SKRPABE010	SKRPABE010			ALPS	
129	11	TR6,TR7,TR8,TR9,TR10,TR11,TR12,TR20,TR21,TR26,TR30	RE1C001UNTCL	RE1C001UNTCL			ROHM	
130	3	D37,D38,D39	DZ2S033M0L	DZ2S033M0L			Panasonic	

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131	7	LED1,LED4,LED5,LED6,LED9,LED14,LED15	SML-P11MT	SML-P11MTT86		ROHM	
132	1	JP1	HWP-3P-G	HWP-3P-G		MAC8	
133	1	(JP1)	(HWP-3P-G)	JS-1		MAC8	
134	1	JP2	MJP-1.0	MJP-1.0		MAC8	
147	3	TP2,TP3,TP4	HK-2-G	HK-2-G		MAC8	
150	1	CN1	440p_ComExpress	3-5353652-6		TYCO	
151	1	-	PCB	FR4 8 layers build up		Kyocera	95mm x 95mm, 1.6mm thickness, 8 layers stack build up

Renesas Electronics Corporation

R-Car Starter KIt Pro (M3)

This parts list corresponds to Schematic revision Rev110

R-Car_Gen3_Starterkit Materials

Item	Quantity	Reference	Value	part Number	R-Car H3 SoC, R-Car M3-W SoC	Sub part	Maker	Note
1	1	U1	H3_M3_SiP_BGA	R8J77960JA09BG9YJ1	MT53B256M32D1NP-062 AAT(8Gb, -40℃ to 105℃) :Micron / HFS28KS512SDPBHV020		Renesas / Micron / Cypress	SoC on SiP / LPDDR4 on SiP / Hyper Flash on SiP
2	1	U22	eMMC	MTFC8GACAENS-K1			Micron	MTFC8GACAENS-K1 AIT(8Gb, -40℃ to 85℃):Micron
3	1	U72	BD9571MWV-M	BD9571MWV-M			ROHM	
4	1	U12	BR24T01FVMJ-W	BR24T01FVMJ-W			ROHM	
5	1	U15	BD82065FVJ	BD82065FVJ			ROHM	
6	1	U61	5P49V5925B508NLGI	5P49V5925B508NLGI			Integrated Device Technology(IDT)	
7	1	U87	9FGV0841AKILF	9FGV0841AKILF			Integrated Device Technology(IDT)	
8	1	U5	QSPI_Memory	S25FS128SAGMFV100			Cypress	
9	1	U38	AK4613VQ	AK4613VQ			ASAHI KASEI MICRODEVICES	
10	1	U78	KSZ9031RNXVA	KSZ9031RNXVA			MICREL	
11	1	U19	MIC94091YC6	MIC94091YC6			MICREL	
12	2	U82,U83	MAX9813LEKA	MAX9813LEKA			MAXIM	
13	1	U88	5M240ZM100	5M240ZM100C5N			ALTERA	
14	1	U41	CS2000-CP	CS2000CP-CZZR			CIRRUS LOGIC	
16	1	U122	FT232RQ	FT232RQ-REEL			FTDI	
17	1	U27	TPD12S016PWR	TPD12S016PWR			TEXAS INSTRUMENTS	
18	2	U33,U68	TXS0102DCUT	TXS0102DCUT			TEXAS INSTRUMENTS	
19	2	U84,U85	IPG20N04S4L-08	IPG20N04S4L-08			Infineon	
20	1	U37	ADP1706ARDZ-1.2-R7	ADP1706ARDZ-1.2-R7			Analog Devices	
21	2	U34,U123	HD74LV1GT08A	HD74LV1GT08ACME			RENESAS	
23	1	U35	HD74LV1G08A	HD74LV1G08ACME			RENESAS	
24	1	U89	SN74CB3G3245RGYR	SN74CB3G3245RGYR			TEXAS INSTRUMENTS	
25	1	U121	SN74AUP1T34DCK	SN74AUP1T34DCK			TEXAS INSTRUMENTS	
26	1	X1	2520 14.7456MHz/50ppm	SG-210SCB 14.745600 MHz L			SEIKO EPSON	
27	1	X4	2520 16.6666MHz/50ppm	SG-210SEB 16.666600 MHz L			SEIKO EPSON	
28	1	X6	2016 50.0000MHz/10pF/15ppm	FA-128 50.000000 MHz 10pf/15ppm			SEIKO EPSON	
29	3	X9,X23,X24	2016 25MHz/20pF/15ppm	FA-128 25.000000 MHz 20.0 +10.0-10.0			SEIKO EPSON	
30	1	X10	2520 125MHz/50ppm	SG-8003CG 125.000000 MHz SCB /SG8101CGA 125.000000 MHz			SEIKO EPSON	
31	2	X11,X25	2520 22.5792MHz/50ppm	SG-210SCB 22.5792MHz L			SEIKO EPSON	
32	1	X12	2016 24.576MHz/20pF/15ppm	FA-128 24.576000 MHz/20pF			SEIKO EPSON	
33	1	X5	2520_32.768kHz/50ppm	KC2520M32K7680CM3E00_32.768kHz/50ppm			KYOCERA CRISTAL	
34	181	C1,C2,C3,C21,C22,C25,C26, C29,C30,C31,C32,C34,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,C275,C276,C277,C279, C280,C282,C287,C288,C289, C341,C343,C349,C350,C351, C352,C355,C356,C358,C359, C361,C376,C433,C434,C461, C464,C466,C467,C470,C471, C474,C475,C479,C531,C532, C544,C565,C604,C605,C606, C607,C608,C609,C610,C611, C616,C617,C618,C619,C620, C621,C622,C623,C671,C672, C673,C674,C675,C676,C677, C678,C734,C735,C736,C737, C738,C739,C740,C741,C747, C748,C749,C750,C752,C762, C763,C770,C771,C772,C773, C774,C793,C795,C796,C798, C799,C800,C802,C808,C809, C810,C813,C814,C816,C817, C818,C828,C829,C830,C831, C929,C930,C949,C951,C952, C953,C954,C957,C958,C959, C961,C963,C965,C966,C967, C968,C969,C970,C971,C972, C973,C974,C988,C1008, C1009,C1010,C1013,C1014, C1015,C1026,C1027	0.1uF	GRM033R61A104KE15D			MURATA	
35	3	C24,C27,C28	10pF	GRM0335C1E100JA01D			MURATA	
36	73	C33,C35,C41,C44,C46,C52, C58,C61,C74,C80,C86,C88, C102,C104,C106,C111,C112, C116,C117,C121,C122,C125, C173,C174,C175,C177,C180, 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,C754,C755,C756,C757, C758,C759,C760,C761,C764, C765,C766,C767,C768,C769, C776,C880,C882,C883,C885, C886	0.01uF	GRM033R11A103KA01D			MURATA	
37	43	C43,C51,C65,C70,C81,C107, C114,C119,C269,C273,C342, C554,C576,C578,C579,C580, C581,C582,C612,C613,C614, C615,C667,C668,C669,C670, C751,C792,C794,C797,C801, C811,C812,C815,C832,C955, C956,C986,C989,C990,C991, C992,C993	1uF	GRM155R61A105KE15D			MURATA	
38	16	C50,C55,C63,C69,C93,C353, C354,C357,C360,C362,C363, C476,C862,C863,C876,C877	2.2uF	GRM155R61C225KE11D			MURATA	
39	22	C85,C103,C110,C115,C120, C242,C243,C244,C245,C264, C265,C266,C267,C490,C491, C492,C556,C557,C803,C804, C807,C878	4.7uF	GRM155R61A475KEAAD			MURATA	
40	73	C131,C134,C137,C638,C639, C640,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, C696,C697,C698,C699,C700, C701,C702,C703,C704,C705, C706,C707,C708,C709,C710, C711,C712,C713,C714,C715, C716,C717,C718,C719,C720, C721,C722,C723,C724,C725, C726,C727,C728,C729,C730, C731,C732,C733	1000pF	GRM033R71E102KA01D			MURATA	
41	36	C155,C156,C161,C220,C221, C255,C256,C442,C444,C451, C453,C454,C455,C456,C465, C468,C469,C472,C473,C482, C530,C541,C555,C561,C566, C571,C577,C746,C805,C806, C860,C861,C879,C960, C1007,C1017	10uF	GRM188R61C106KAALD			MURATA	

No.	Qty	Reference	Value	Part Number		Manufacturer	Notes
42	11	C162,C200,C201,C216,C285, C286,C870,C871,C884,C889, C893	0.047uF	GRM155R71E473KA88D		MURATA	
43	6	C163,C165,C195,C198,C864, C865,C866,C374	0.22uF	GRM155R61C224KA12D		MURATA	
44	11	C167,C211,C213,C214,C45, C872,C873,C888,C890,C891, C892	0.022uF	GRM155R71H223KA12D		MURATA	
45	14	C171,C172,C332,C633,C634, C635,C636,C637,C687,C688, C689,C690,C691,C692	4700 pF	GRM033R71C472KE14D		MURATA	
46	3	C333,C334,C1011	1uF	GRM188R61C105KA93D		MURATA	
47	2	C377,C378	4.7 uF	GRM188R61C475KAAJD		MURATA	
48	2	C437,C438	20 pF	GRM0335C1H200JA01D		MURATA	
49	2	C478,C481	39 pF	GRM0335C1E390JA01D		MURATA	
51	4	C493,C976,C978,C1012	0.1 uF	GRM155R71C104KA88D		MURATA	
52	14	C533,C534,C35,C536,C537, C560,C564,C337,C842,C999, C1000,C1001,C1002,C1003	100 uF	GRM21BR60G107ME15L		MURATA	
53	2	C540,C542	47 uF	GRM32ER61C476KE15L		MURATA	
54	15	C546,C547,C548,C549,C573, C1004,C1005,C1006,C1016, C1018,C1019,C1022, C1024,C1025	47 uF	GRM21BR61A476ME15L		MURATA	
56	3	C567,C1020,C1023	22uF	GRM188R61A226ME15D		MURATA	
57	2	C744,C745	24pF	GRM0335C1H240JA01D		MURATA	
59	6	C867,C868,C869,C875,C881, C887	0.47 uF	GRM155R6YA474KE01D		MURATA	
60	2	C962,C964	30 pF	GRM0335C1E300JA01D		MURATA	
62	2	E17,E18	22uF	GRM31CR71A226KE15L		MURATA	
63	5	C994,C995,C996,C997,C998	100 uF	EMK325ABJ107MM-T		TAIYO YUDEN	
64	66	R1,R24,R26,R27,R42,R43, R44,R45,R46,R47,R48,R51, R84,R86,R204,R225,R226, R227,R228,R229,R230,R231, R232,R233,R234,R235,R323, R412,R415,R430,R435,R625, R641,R645,R647,R649,R653, R658,R659,R661,R664,R668, R677,R680,R683,R684,R685, R687,R794,R813,R833,R834, R841,R842,R843,R844,R847, R849,R856,R857,R858,R859, R860,R862,R881,R882	0	MCR006YLPJ000		ROHM	
65	46	R2,R4,R6,R7,R15,R25,R28, R50,R139,R196,R197,R198, R199,R201,R202,R203,R244, R245,R313,R314,R318,R319, R325,R337,R341,R413,R437, R440,R461,R610,R679,R681, R763,R764,R765,R766,R767, R768,R769,R785,R793,R805, R825,R845,R861,R884	10 k	MCR006YLPJ103		ROHM	
66	9	R3,R8,R9,R23,R334,R345, R346,R743,R744	22	MCR006YLPJ220		ROHM	
68	2	R10,R33	100k	MCR006YLPJ104		ROHM	
69	22	R11,R12,R13,R14,R186, R340,R343,R364,R365,R366, R615,R673,R674,R676,R752, R753,R754,R755,R756,R757, R759,R760	2k	MCR006YLPJ202		ROHM	
70	24	R29,R30,R31,R32,R38,R41, R187,R247,R358,R359,R360, R361,R362,R363,R421,R428, R463,R464,R706,R707,R747, R809,R810,R818	1k	MCR006YLPJ102		ROHM	
72	5	R35,R36,R37,R185,R321	4.7 k	MCR006YLPJ472		ROHM	
74	11	R40,R74,R75,R76,R77,R646, R650,R672,R675,R828,R683	0	MCR01MZPJ000		ROHM	
76	8	R52,R53,R54,R55,R56,R57, R58,R59	200	MCR006YLPF2000		ROHM	
77	9	R66,R67,R68,R69,R70,R71, R72,R73,R789	1	MCR01MZPFL1R00		ROHM	
79	12	R91,R92,R94,R95,R99,R101, R102,R103,R108,R109,R110, R115	240.0	MCR01MZPF2400		ROHM	
81	1	R200	10 k	MCR01MZPJ103		ROHM	
83	11	R223,R224,R236,R863,R864, R865,R866,R867,R868,R869, R870	47 k	MCR006YLPJ473		ROHM	
84	2	R299,R305	130	MCR006YLPJ131		ROHM	
85	1	R320	12.1k	MCR006YLPF1212		ROHM	
87	2	R414,R416	6.8k	MCR006YRTF6801		ROHM	
88	1	R418	1k	MCR006YLPF1001		ROHM	
89	1	R425	47.0	MCR006YRTF4700		ROHM	
90	1	R426	10 k	MCR006YZPF1002		ROHM	
91	1	R434	1k	MCR006YLPF1001		ROHM	
92	1	R436	160	MCR006YLPF1600		ROHM	
93	2	R450,R454	15 k	MCR006YLPF1502		ROHM	
94	2	R451,R455	39 k	MCR006YLPF3902		ROHM	
95	7	R601,R602,R611,R612,R795, R796,R797	33	MCR006YLPJ330		ROHM	
96	1	R613	2.2	MCR01MZPFL2R20		ROHM	
98	6	R724,R725,R726,R727,R728, R729	100	MCR006YLPF1000		ROHM	
100	2	R60,R63	1.62k	ERJ-1GEF1621C		Panasonic	
101	4	R61,R62,R64,R65	4.02k	ERJ-1GEF4021C		Panasonic	
102	6	R642,R648,R654,R660,R665, R669	24.9	ERJ-1GEF24R9C		Panasonic	
103	1	L53	0.12uH	DDFCUL0630-R12MB		TOKO	
104	2	L55,L56	0.24uH	DFE201612PD-R24M		TOKO	
105	2	L57,L58	0.33 uH	DFE201612PD-R33M		TOKO	
106	1	L54	0.15 uH	SPM3020T-R15M-CA02		TDK	
107	1	L62	TCE0806G-900-2P	TCE0806G-900-2P		TDK	
108	7	L68,L69,L70,L71,L72,L108, L109	2.0 nH	LQG15HH2N0S02D		MURATA	
109	4	L80,L81,L103,L105	26ohm_100MHz	BLM18KG260TN1		MURATA	
110	15	L3,L4,L5,L6,L8,L74,L75, L76,L96,L97,L98,L99,L100, L102,L110	600ohm_100MHz	BLM15AX601SZ1D		MURATA	
111	1	L104	NFM31HK223R1H3	NFM31HK223R1H3L		MURATA	
112	1	N1	10 k	NCU18XH103F6SRB		MURATA	
113	1	CN7	Ether_CN	HFJ11-1G41E-L12RL		Halo Electronics	
114	1	CN4	HDMI_CN_0467651301	0467651301		MOLEX	
115	1	CN5	48204-0001	48204-0001		MOLEX	
116	1	CN14	22-04-1031	22-04-1031		MOLEX	
117	1	CN3	SICA2P20S1000	SICA2P20S1000		TOKYO ELETECH	
118	1	CN12	ZX62D-AB-5P8(30)	ZX62D-AB-5P8		HIROSE	
120	1	CN13	PJ-063AH	PJ-063AH		CUI Inc.	
121	2	CN8,CN9	SJ-3523-SMT	SJ-3523-SMT		CUI Inc.	
122	1	CN6	DM3AT-SF-PEJM5	DM3AT-SF-PEJM5		HIROSE	
123	1	CN11	PSS-710153-06	PSS-710153-06		HIROSUGI	
124	1	CN2	PSM-410336-09	PSM-410336-09		HIROSUGI	
125	1	SW1	CHS-01A	CHS-01A		COPAL ELECTRONICS	
126	2	SW2,SW6	CHS-04A	CHS-04A		COPAL ELECTRONICS	
127	3	SW3,SW4,SW5	B3U-1100PM	B3U-1100PM		OMRON	
128	3	SW7,SW8,SW9	SKRPABE010	SKRPABE010		ALPS	
129	11	TR6,TR7,TR8,TR9,TR10, TR11,TR12,TR20,TR21,TR26, TR30	RE1C001UNTCL	RE1C001UNTCL		ROHM	
130	3	D37,D38,D39	DZ2S033M0L	DZ2S033M0L		Panasonic	
131	7	LED1,LED4,LED5,LED6,LED9, LED14,LED15	SML-P11MT	SML-P11MTT86		ROHM	
132	1	JP1	HWP-3P-G	HWP-3P-G		MAC8	
133	1	(JP1)	(HWP-3P-G)	JS-1		MAC8	
134	1	JP2	MJP-1.0	MJP-1.0		MAC8	
147	3	TP2,TP3,TP4	HK-2-G	HK-2-G		MAC8	
150	1	CN1	440p_ComExpress	3-5353652-6		TYCO	
151	1	-	PCB	FR4 8 layers build up		Kyocera	95mm x 95mm, 1.6mm thickness, 8 layers stack build up

R-Car Starter Kit Premier

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