



R-Car StarterKit 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 Starter KIt Premier ($\rm H3$) This parts list corresponds to Schemalic revision Rev110

A 14 A A A A A A A A A		Quantity	vit Materials Reference	Value	part Number	Subpart D Cont D Sec	Maker	Note
Value						R-Car H3 SoC MT5382568627HNP-082 AAT/8Gb _40PC to 105PC 146cpm	Renesas Micron	SoC on SEP
Manual	1	1	U1	H3_M3_SIP_BGA	R8J77950DK00BG#YJ1	K4F8E304HB-MGCJ(8Gb, -25°C to 85°C) :Samsung		LPDDR4 on SiP
But						HF826K8512SDP8HV020		Hyper Flash on SIP
10 10 10 10 10 10 10 10	2	2 1	U22	eMMC				
10	3			RD0574MAAAAM	KLMBG1GESD-HD4P		Samsung	KLIM8G1GESD-B04P(8GB, -40°C to 85°C) :Samsu
10	4	i						
Total Content	5	j	U15	BD82065FVJ	BD82065FVJ		ROHM	
B	6	1		5P49V5925B508NLGI	5P49V5925B508NLGI		Integrated Device Technology(IDT)	
1	7	1		9FGV0841AKILF			Integrated Device Technology(IDT)	
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1					FA-128 24.576000 MHz/20pF	<u> </u>		
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Carl			C280.C282.C287.C288.C289.					
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C695_C646_C647_C648_C649, C695_C665_C657_C688_C659, C695_C665_C657_C688_C659, C695_C665_C665_C688_C659, C695_C665_C685_C688_C689, C695_C665_C685_C689_C700, C791_C7702_C7703_C7704_C705, C795_C770_C7708_C708_C705_C710, C795_C771_C7718_C7704_C705, C795_C771_C771_C7704_C705, C795_C771_C771_C7704_C7705_C705_C706_C706_C706_C706_C706_C706_C706_C706	38	3 16 9 22	1043,CS 1,658,C70,CS 1,C107, C114,C119,CS 2,C73,CS 2,CS 3,CS 2,CS 3,CS 3,CS 3,CS 3,CS 3,CS 3,CS 3,CS 3	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C880.0861.082.0863.0864. C886.0866.0876.0882.0884. C886.0881.0882.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0884.08865. C886.0881.0882.0884.08865. C886.0881.0882.0882.0884.08865. C886.0881.0882.0882.0884.08865. C886.0881.0882.0882.0884.08865. C886.0881.0882.0882.0884.08865. C886.0881.0882.0882.0882.0884.08865. C886.0881.0882.0882.0882.0882.0882.0882.0882	38	3 16 9 22	1043,153,1265,270,051,0107, 114,0119,052,073,052,073,052,053,0576,0578,0579,0591, 0551,0582,0578,0579,0583,0589,0570, 0751,0792,0794,0797,0591, 0511,0512,0516,0582,0565,0596,0596,0599,0599,05991, 0592,0593,0596,0599,0590,0591, 0592,0593,0596,0593,0596,0594,0592,0593,0596,0596,0599,0599,0591, 0592,0593,0576,0590,0591,0592,0593,0596,0596,0599,0599,05991,0592,0593,0596,0596,0599,0599,05991,0592,0593,0596,0599,0599,0599,0599,0599,0599,0599	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C665,0666,0667,0668,0669, C660,0661, C660,0661, C660,0661,0661,0662,0663,0664, C660,0661,0662,0663,0664, C660,0669,0669,0669,0669,0669,0669,0669,	38	3 16 9 22	1043,CS 1,058,C70,CS 1,C107, C114,C119,CS 2,C73,CS 2,CS 2, C554,DT 6,C578,C578,C579,CS 9, C554,DT 6,C578,C579,C570, C754,DT 92,CT 7,CT 7,CS 1, C811,CS 1,CS 2,CS 2,CS 5, C821,CS 2,CS 2,CS 2,CS 2,CS 2,CS 2,CS 2,CS 2	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C085,0986,0894,0985, C000,	38	3 16 9 22	1043,CS 1,268,C70,CS 1,C107, C14,C1143,CS 262,C73,CS 24, C554,C576,C578,C578,C580,CS 26, C554,C576,C578,C579,CS 20, C551,C582,C584,C787,CS 20, C751,C792,C794,C797,CS 201, C951,CS 26,CS 2	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C086_C087_C086_C086_C700, C70_C700_C700_C700_C700_C700_C700_C700_	38	3 16 9 22	1043,154,1656,170,051,0107, 114,01149,052,073,054,073,053,053,053,053,053,053,053,053,053,05	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C701_5702_C703_5704_C705, C705_5707_C705_5703_C70,0 C711_5712_C73_5714_C715, C716_5717_C705_5714_C720,	38	3 16 9 22	1043,CS 1,GSS_C70,CS1,C107,C114,C1143,CS2,GZ70,CS1,C107,C114,C1143,CS2,GZ73,CS2,CS3,CS54,CS54,CS56,CS76,CS76,CS76,CS76,CS76,CS57,CS51,CS51,CS51,CS51,CS51,CS51,CS51,CS51	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
CTIG_CTOT_CTIG_CTIG_CTIG_CTIG_CTIG_CTIG_CTIG_CTI	38	3 16 9 22	1043,154,1656,270,051,0107, 114,01149,052,0273,0549, 10554,0576,0578,0579,0590, 10554,0576,0578,0579,0590, 10551,0578,0579,0579,0579, 10511,0572,0574,0779,0591, 10512,0574,0579,0591, 10512,0574,0579,0591, 10592,0586,0589,0580,0581, 10592,0586,0589,0580,0581, 10592,0587,0589,0589,0583,0583, 10592,0587,0589,0589,0583,0583, 10592,0589,0589,0589,0583,0583, 10592,0589,0589,0589,0589,0589,0589,0589,0589	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C7115712C735714C715, C7165717(7)7857146C720,	38	3 16 9 22	1043,CS 1,GSS_C70,CS1_C107,C114,C1143_CS2_GZ73_CS4_CS5_LC55_LC55_LC55_LC55_LC55_LC55_LC55_	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C716,C717,C718,C719,C720,	38	3 16 9 22	1043,153,1265,270,031,0107, 114,0119,025,027,034,035,035,035,035,035,035,035,035,035,035	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
	38	3 16 9 22	1043,154,1656,270,051,0107, 1144,01143,052,0273,054,055,0576,0578,0578,0578,0578,0578,0578,0578,0578	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
	38	3 16 9 22	1043,154,1656,270,051,0107, 114,01149,052,027,054,070,051,0107, 114,01149,052,073,0549,073,0549,053,053,053,053,053,053,053,053,053,053	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	
C726C727,C728.C730, C731,C732.C733	38	3 16 9 22	1043,154,1656,270,051,0107, 1144,01143,052,0273,0542, 10554,0576,0578,0578,0579,0581, 10554,0576,0578,0578,0579,0570, 10514,0514,0574,0574,0574,0574,0574,0574,0574,057	22UF 47UF	GPM155P61C225KE11D GPM155P61A475KEAAD		MUPATA MUPATA	

41	36 C155,C156,C161,C220,C221,	10 uF	GRM188R61C106KAALD	Y	MURATA	
	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					
42	11 C162,C200,C201,C216,C285,	0.047uF	GRM155R71E473KA88D		MURATA	
	C286,C870,C871,C884,C889, C893					
43	8 C163,C165,C195,C198,C864,	0.22uF	GRM155R61C224KA12D		MURATA	
44	C865,C866,C874 11 C167,C211,C213,C214,C545,	0.022uF	GRM155R71H223KA12D		MURATA	
	C872,C873,C888,C890,C891,					
45	C892 14 C171,C172,C632,C633,C634,	4700pF	GRM033R71C472KE14D		MURATA	
	C635,C836,C637,C687,C688, C689,C890,C691,C692					
46	3 C333,C334,C1011	1uF	GRM188R61 C105 KA93D		MURATA	
47	2 C377, C378 2 C437, C438	4.7 uF 20 pF	GRM188R61C475KAAJD GRM0335C1H200JA01D		MURATA MURATA	
49	2 C478,C481	39 pF	GR M0335 C1 E390 JA01 D		MURATA	
51 52	4 C493,C976,C978,C1012 14 C533,C534,C535,C536,C537,	0.1 uF 100 uF	GRM155R71C104KA88D GRM21BR60G107ME15L		MURATA MURATA	
	C560,C564,C837,C842,C999, C1000,C1001,C1002,C1003					
53	2 C540,C542	47 uF	GRM32ER61C476KE15L		MURATA	
54	15 C546, C547, C548, C549, C573, C1004, C1005, C1006, C1016,	47 uF	GRM21BR61A476ME15L		MURATA	
	C1018,C1019,C1021,C1022,					
56	C1024,C1025 3 C567,C1020,C1023	22 u F	GRM188R61A226ME15D		MURATA	
57 59	2 C744,C745 6 C867,C868,C869,C875,C881,	24 pF 0.47 uF	GRM0335 C1H240JA01D GRM155R6YA474KE01D		MURATA MURATA	
	C887					
60 62	2 C962,C964 2 E17,E18	30 pF 22 uF	GR M0335 C1 E300 JA01 D GR M31 CR71A226 KE15L		MURATA MURATA	
63	5 C994,C995,C996,C997,C998	100 uF	EM K3 25 A B J 1 0 7 M M - T		TAİYO YUDEN	
64	66 R1,R24,R26,R27,R42,R43, R44,R45,R46,R47,R48,R51,	0	M CR006YLPJ000		ROHM	
	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					
65	46 R2,R4,R6,R7,R15,R25,R28, R50,R139,R196,R197,R198,	10 k	M CR006YLPJ103		ROHM	
	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,					
66	R825,R845,R861,R884		H ODOON W D OOD		DO.W.	
66	9 R3,R8,R9,R23,R334,R345, R346,R743,R744	22	M CR006 YLPJ220		ROHM	
68 69	2 R10,R33 22 R11,R12,R13,R14,R186,	100 k 2k	M CR006YLPJ104 M CR006YLPJ202		ROHM ROHM	
0.5	R340,R343,R364,R365,R366,	ZK	M 61000 1213202		IXOTIM	
	R615,R673,R674,R676,R752, R753,R754,R755,R756,R757,					
	R759,R760					
70	24 R29,R30,R31,R32,R38,R41, R187,R247,R358,R359,R360,	1K	M CR006YLPJ102		ROHM	
	R361,R362,R363,R421,R428, R463,R464,R706,R707,R747,					
	R809,R810,R818					
72 74	5 R35,R36,R37,R185,R321 11 R40,R74,R75,R76,R77,R646,	4.7 k	M CR006YLPJ472 M CR01MZPJ000		ROHM ROHM	
	R650,R672,R675,R826,R883					
76	8 R52,R53,R54,R55,R56,R57, R58,R59	200	M CR006YLPF2000		ROHM	
77	9 R66,R67,R68,R69,R70,R71, R72,R73,R789	1	M CR01 MZPFL1R00		ROHM	
79	12 R91,R92,R94,R95,R99,R101,	240.0	M CR01 MZPF2400		ROHM	
	R102,R103,R108,R109,R110, R115					
81 83	1 R200	10 k	M CR01 MZPJ103		ROHM	
83	11 R223,R224,R236,R863,R864, R865,R866,R867,R868,R869,	47 k	M CR006YLPJ473		ROHM	
84	R870 2 R299,R305	130	M CR006YLPJ131		ROHM	
85	1 R320	130 12.1 k	M CR006 YLPF1212		ROHM	
87 88	2 R414,R416 1 R418	6.8 k 1 k	M CR006 YRTF6801 M CR006 YLPF1001		ROHM ROHM	
89 90	1 R425 1 R426	470 10 k	M CR006YRTF4700 M CR006YZ PF1002		ROHM ROHM	
91	1 R434	1k	M CR006 YLPF1001		ROHM	
92 93	1 R436 2 R450,R454	160 15 k	M CR006YLPF1600 M CR006YLPF1502		ROHM ROHM	
94 95	2 R451,R455 7 R601,R602,R611,R612,R795,	39 k 33	M CR006YLPF3902 M CR006YLPJ330		ROHM ROHM	
	R796,R797					
96 98	1 R613 6 R724,R725,R726,R727,R728,	2.2	M CR01 MZPFL2R20 M CR006 YLPF1000		ROHM ROHM	
100	R729					
101	2 R60,R63 4 R61,R62,R64,R65	1.62k 4.02k	ERJ-1 GEF 1621 C ERJ-1 GEF 4021 C		Panasonic Panasonic	
102	6 R642,R648,R654,R660,R665, R669	24.9	ERJ-1 GEF 24R9 C		Panasonic	
103	1 L53	0.12uH	DDFCUL0630-R12MB		токо	
104 105	2 L55,L56 2 L57,L58	0.24 uH 0.33 uH	D FE201612PD-R24M D FE201612PD-R33M		ТОКО ТОКО	
106	1 L54	0.15 uH	SPM3020T-R15M-CA02		TDK	
107 108	1 L62 7 L68,L69,L70,L71,L72,L108,	TCE0806 G-900-2P 2.0 nH	T CE0806 G-900-2P LQG15H H2N0 S02D		TDK MURATA	
109	L109 4 L80,L81,L103,L105	26 o hm_1 0 0 M Hz	BLM18KG260TN1		MURATA	
110	15 L3,L4,L5,L6,L8,L74,L75,	600 ohm_100 M Hz	BLM15AX601SZ1D		MURATA	
	L76,L96,L97,L98,L99,L100, L102,L110					
111	1 L104	NFM31HK223R1H3	NFM31HK223R1H3L		MURATA	
112 113	1 N1 1 CN7	10 k Ether_CN	N CU18 XH103 F6 SRB HFJ11-1 G41 E-L12RL		MURATA Halo Electronics	
114 115	1 CN4 1 CN5	HDMI_CN_0467651301 48204-0001	0467651301 48204-0001		MOLEX MOLEX	
116	1 CN14	22-04-1031	22-04-1031		MOLEX	
117 118	1 CN3 1 CN12	SICA2P20 S1000 ZX62D-AB-5P8 (30)	SICA2P20S1000 ZX62D-AB-5P8		TOKYO ELETECH HIROSE	
120	1 CN13	PJ-063AH	PJ-063AH		CUI Inc.	
120 121 122	2 CN8,CN9 1 CN6	SJ-3523-SMT DM3AT-SF-PEJM5	SJ-3523-SMT DM3AT-SF-PEJM5		CUI Inc. HIROSE	
1231	1 CN11 1 CN2	PSS-710153-06 PSM-410336-09	PSS-710153-06 PSM-410336-09		HIROSUGI HIROSUGI	
124 125 126	1 SW1	CHS-01A	CHS-01A		COPAL ELECTRONICS	
126 127 128	2 SW2,SW6 3 SW3,SW4,SW5	CHS-04A B3U-1100 PM	CHS-04A B3U-1100PM	1	COPAL ELECTRONICS OMRON	
128 129	3 SW7,SW8,SW9 11 TR6,TR7,TR8,TR9,TR10,	SKRPABE010 RE1C001UNTCL	SKRPABE010 RE1C001UNTCL		ALPS ROHM	
128	TR11,TR12,TR20,TR21,TR26,					
130	TR30	DZ2S033M0L	DZ25033 M0 L		Panasonic	ļ
			4	.		4

LED14LED15	1.5		4	DCD	EDA O Investo health con	Nessara	OSmm v OSmm 4.0mm thickness 0 lovers steek build on
LE014_LE015	15		1 CN1	440p_ComExpress	3-5353652-6	TYCO	
LED14_LED15 HWP-3P-G HWP-3P-G MAGS	14		3 TP2,TP3,TP4	HK-2-G	HK-2-G	MA C8	
LED14,LED15 HWP-3P-G HWP-3P-G MACS MACS	13	4	1 JP2	MJ P-1.0	MJP-1.0	MA C8	
LEDIALEDIS HWF-3F-G HWF-3F-G MACS			1 (JP1)	(HWP-3 P- G)	JS-1		
LED/4LED/5	13	2	1 J P 1	HWP-3P-G	HWP-3 P-G	MA C8	
131 7 LED1, LED4, LED5, LED6, LED6, LED9, SML-P11MT SML-P11MT786 ROHM	L		LED14,LED15				
				SML-P11MT	SML-P11MTT86	ROHM	



R-Car Starter KIt Pro (M3) This parts list corresponds to Schematic revision Rev110

Mary	This parts I R-Car_Gen	3_Starterk	it Materials					
1				Value	part Number	Sub part R-Car H3 SoC. R-Car M3-W SoC		
Main	1	1	U1	H3_M3_SIP_BGA	R8J77980JA09BG#YJH	MT53B256M32D1NP-082 AAT(8Gb, -40°C to 105°C) :Micron	Micron	LPDDR4 on SiP
1	2				MTFCBGACAENS-K1	HFS26KS512SDPBHW020	Micron	MITFC8GACAENS-K1 AIT(8Gb, -40°C to 85°C): Micron
1	3 4							
The control of the	5	1	U15	BD62065FVJ	BD82065FVJ		ROHM	
Company	7	1	U87	9FGV0841AKILF	9FGV0841AKILF		Integrated Device Technology(IDT)	
The content of the	8 9						Cypress ASAHI KASEI MICRODEVICES	
Company Comp		1	U78	KSZ9031RNXVA	KSZ9031RNXVA		MICREL	
1	12	2	U82,U83	MAX9813LEKA	MAX9813LEKA		MAXIM	
Company				5M240ZM100 CS2000-CP	5M240ZM100C5N CS2000CP-CZZR			
1	16 17			FT232RQ TPD12S016PWR			FTDI TEXAS INSTRUMENTS	
Compared	18	2	U33,U68	TXS0102DCUT	TXS0102DCUT		TEXAS INSTRUMENTS	
Section Sect	20	1	U37	ADP1706ARDZ-1.2-R7	ADP1706ARDZ-1.2-R7		Analog Devices	
Section Sect	21 23							
The content of the	24	1	U89	SN74CB3Q3245RGYR	SN74CB3Q3245RGYR		TEXAS INSTRUMENTS	
Processor	26	1	X1	2520 14.7456MHz/50ppm	SG-210SCB 14.745600 MHz L		SEIKO EPSON	
Processor	27 28	1	X4 X6					
20	29	3	X9,X23,X24	2016 25MHz/20pF/15ppm	FA-128 25 000000 MHz 20.0 +10.0-10.0			
1.5 1.5				.	/SG8101CGA 125.000000 MHz			
Comment Comm				2520 22.5792MHz/50ppm 2016 24.576MHz/20pF/15ppm				
Control Contro	33	1	X5	2520_32.768kHz/50ppm	KC2520M32K7680CM3E00_32.768kHz/50ppm		KYOCERA CRISTAL	
\$ 3 (CALCATOR CANADA AND AND AND AND AND AND AND AND AN			C29.C30.C31.C32.C34.C36.C36.C37.C38.C49.C66.G34.C37.C38.C49.C69.C405.C105.C105.C105.C105.C105.C105.C105.C1					
40 403.051.056.070.051.051.051.051.051.051.051.051.051.05		3 73	C33,C35,C41,C44,C46,C52,C58,C51,C54,C51,C55,C51,C51,C52,C58,C51,C74,C165,C111,C112,C165,C111,C112,C122,C125,C173,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C152,C174,C175,C175,C175,C175,C175,C175,C175,C175					
CSS4_CST6_CST8_CST9_CSS0_CSS0_CSS0_CSS0_CSS0_CSS0_CSS0_CSS	37	43	C43,C51,C65,C70,C81,C107,	1uF	GRM155R61A105KE15D		MURATA	
38 16 (500,556,053,058),0582,0583, CSR (CSR 7) 39 (20,556,1035,103,105,105,125), C242,C243,C244,C245,C544, C255,C544, C255,C545,C357,C303,084, C245,C545,C356,C356,C354,C345,C354,C354,C354,C354,C354,C354			C554,C576,C578,C579,C580, C581,C582,C612,C613,C614, C615,C667,C686,C689,C670, C751,C792,C794,C797,C801, C811,C812,C815,C832,C965, C956,C986,C989,C990,C991, C992,C993					
CATELORIZORIZORIZORIZORIZORIZORIZORIZORIZORIZ	38	16	C354,C357,C360,C362,C363,	2.2uF	GRM155R61C225KE11D		MURATA	
C242_C243_C244_C245_C254_C254_C C256_C256_C76_C7490_C191_ C362_C756_C757_C903_C804_ C367_C758_C759_C758_C758_C758_C758_C758_C758_C758_C758	30	~	C476,C862,C863,C876,C877	47HF	CRM155R614475KEAAD		MI IRATA	
40 73 C131 C134 C137 (2588 (2589) 1000pF CRM038P7 IE102KA01D MURATA C840C45 (2684 (2	39	-22	C242,C243,C244,C245,C264, C265,C266,C267,C490,C491, C492,C556,C557,C803,C804,	THE STATE OF THE S	WHOM INW ONEARU		INICOSTA.	
OBS_DEBC_OBT_DEBC_OBS_OBS_ OBS_DEBC_OBS_DEBC_OBS_	40	73	C131,C134,C137,O638,O639,	1000pF	GRM033R71E102KA01D		MURATA	
	41	36	0345,0546,0347,0548,0569, 0565,0561,0562,0563,0569, 0565,0567,0562,0569, 0566,0567,0562,0569, 0566,0567,0562,0569, 0566,0567,0562,0569, 0566,0567,0562,0562,0562,0569, 0566,0567,0562,0562,0562,0562,0562,0562,0562,0562	10uF	GRM188R61C106KAALD		MURATA	
			C860,C861,C879,C960, C1007,C1017					

42	11	C286,C870,C871,C884,C889,	0.047uF	GRM155R71E473KA88D	MURATA	
43	8	C163,C165,C195,C198,C864,	0.22uF	GRM155R61C224KA12D	 MURATA	
44	11	C865,C866,C874 C167,C211,C213,C214,C545, C872,C873,C888,C890,C891, C892	0.022uF	GRM155 R71H223 KA12D	MURATA	
45	14	C171,C172,O632,C633,O634, C635,O636,O637,C687,O688,	4700 pF	GRM033R71C472KE14D	MURATA	
46	3	C689,C690,C691,C692 C333,C334,C1011	1uF	GR M188 R61 C105 KA93 D	 MURATA	
47	2	C377,C378	4.7 uF	GR M188 R61 C475 KAAJ D	 MURATA	
48 49		C437,C438 C478,C481	20 pF 39 pF	GRM0335C1H200JA01D GRM0335C1E390JA01D	 MURATA MURATA	
51 52	14	C493,C976,C978,C1012 C533,C534,C535,C536,C537,	0.1 uF 100 uF	GRM155R71C104KA88D GRM21BR60G107ME15L	 MURATA MURATA	
		C560,C564,C837,C842,C999, C1000,C1001,C1002,C1003				
53 54		C540,C542 C546,C547,C548,C549,C573,	47 uF 47 uF	GRM32ER61C476KE15L GRM21BR61A476ME15L	MURATA MURATA	
		C1004,C1005,C1006,C1016, C1018,C1019,C1021,C1022,				
56	3	C1024,C1025 C567,C1020,C1023	22 u F	GR M188 R61A226 M E15 D	MURATA	
57 59		C744,C745 C867,C868,C869,C875,C881,	24 pF 0.47 uF	GR M0335C1H240JA01D GRM155R6YA474KE01D	 MURATA MURATA	
60	2	C887 C962,C964	30 pF	GRM0335C1E300JA01D	 MURATA	
62 63	2 5	E17,E18 C994,C995,C996,C997,C998	22 u F 100 u F	GR M3 1 CR7 1 A 226 KE 15 L EM K3 25 A B J 1 0 7 M M-T	 MURATA TAIYOYUDEN	
64	66	R1,R24,R26,R27,R42,R43, R44,R45,R46,R47,R48,R51,	0	MCR006YLPJ000	ROHM	
		R84, R86, R204, R225, R226, R231, R227, R226, R229, R230, R231, R222, R232, R234, R235, R234, R235, R234, R241, R2415, R430, R435, R625, R645, R645, R647, R649, R653, R677, R690, R683, R684, R685, R6794, R694, R684,				
		R849,R856,R857,R858,R859, R860,R862,R881,R882			 	
65		R2, R4, R6, R7, R15, R25, R28, R50, R139, R196, R197, R198, R199, R201, R202, R203, R244, R245, R313, R314, R316, R319, R325, R337, R341, R413, R437, R440, R461, R610, R679, R681, R763, R764, R765, R766, R767, R768, R769, R786, R793, R805,	10 k	MCR006YLPJ103	ROHM	
66	9	R825,R845,R861,R884 R3,R8,R9,R23,R334,R345,	22	MCR006YLPJ220	 ROHM	
68	2	R346,R743,R744 R10,R33	100 k	MCR006YLPJ104	ROHM	
69	22	R11,R12,R13,R14,R166, R340,R343,R364,R365,R366, R615,R673,R674,R676,R752, R753,R754,R755,R756,R757,	2k	MCR006YLPJ202	ROHM	
70	24	R759,R760 R29,R30,R31,R32,R38,R41,	1k	MCR006YLPJ102	ROHM	
		R187,R247,R358,R359,R360, R361,R362,R363,R421,R428, R463,R464,R706,R707,R747, R809,R810,R818				
72 74	5 11	R35,R36,R37,R185,R321 R40,R74,R75,R76,R77,R646,	4.7 k 0	MCR006YLPJ472 MCR01MZPJ000	ROHM ROHM	
76	8	R650,R672,R675,R826,R883 R52,R53,R54,R55,R56,R57,	200	MCR006YLPF2000	 ROHM	
77	9	R58,R59 R66,R67,R68,R69,R70,R71,	1	MCR01MZPFL1R00	 ROHM	
79		R72,R73,R789 R91,R92,R94,R95,R99,R101, R102,R103,R108,R109,R110, R115	240.0	MCR01MZPF2400	ROHM	
81 83	11	R200 R223 ,R224,R236 ,R863 ,R864, R865 ,R866 ,R867 ,R868 ,R869, R870	10 k 47 k	MCR01MZPJ103 MCR006YLPJ473	ROHM ROHM	
84 85	1	R299,R305 R320	130 12.1 k	MCR006YLPJ131 MCR006YLPF1212	ROHM ROHM	
87		R414,R416	6.8 k	MCR006YRTF6801	 ROHM ROHM	
89		R425	47.0	MCR006YRTF4700	 ROHM	
90 91	1	R426 R434	10 k 1k	MCR006YZPF1002 MCR006YLPF1001	ROHM ROHM	
92 93		R436 R450,R454	160 15 k	MCR006YLPF1600 MCR006YLPF1502	ROHM ROHM	
94 95	2	R451,R455 R601.R602.R611.R612.R795.	39 k 33	MCR006YLPF3902 MCR006YLPJ330	 ROHM ROHM	
96		R601,R602,R611,R612,R795, R796,R797 R613	2.2	MCR01MZPFL2R20	ROHM	
98		R724,R725,R726,R727,R728, R729	100	MCR006YLPF1000	 ROHM	
100		R60,R63 R61,R62,R64,R65	1.62k 4.02k	ERJ-1 GEF 1821 C ERJ-1 GEF 4021 C ERJ-1 GEF 24R9 C	 Panasonic Panasonic	
101 102	6	R642,R648,R654,R660,R665, R669	24.9	ERJ-1 GEF 24R9C	 Panasonic	
103		L53 L55,L56	0.12uH 0.24uH	DDFCUL0630-R12MB DFE201612PD-R24M	 токо токо	
104 105	2	L57,L58	0.33 uH	DFE201612PD-R33M	 токо	
106 107	1	L62	0.15 uH TCE0806 G-900-2P	SPM3020T-R15M-CA02 TCE0806G-900-2P	TDK TDK	
108	7	L68,L69,L70,L71,L72,L108, L109	2.0 nH	LQG15HH2N0S02D	MURATA	
109 110		L80,L81,L103,L105 L3,L4,L5,L6,L8,L74,L75, L76,L96,L97,L98,L99,L100, L102,L110	26ohm_100MHz 600ohm_100MHz	BLM18 K G280 TN1 BLM15 A X601 SZ 1 D	MURATA MURATA	
111 112	1	L104 N1	NFM31HK223R1H3 10k	NFM31HK223R1H3L NCU18XH103F6SRB	MURATA MURATA	
113	1	CN7 CN4	Ether_CN HDMI_CN_0467651301	HFJ11-1G41E-L12RL 0467651301	Halo Electronics MOLEX	
115	1	CN5 CN14	48 20 4-000 1 22-04-103 1	48 204-0001 22-04-1031	 MOLEX MOLEX	
116 117 118 120 121 122 123 124 125		CN3 CN12 CN13	SICA2P20S1000 ZX62D-AB-5P8(30) PJ-063AH	SICA2P20S1000 ZX62D-AB-5P8 PJ-063AH	TOKYO ELETECH HIROSE CUlling.	
121 122	1	CN8,CN9 CN6	SJ-3523-SMT DM3AT-SF-PEJM5	SJ-3523-SMT DM3AT-SF-PEJM5	CUIInc. HIROSE	
123 124	1	CN11 CN2	PSS-710153-06 PSM-410336-09	PSS-710153-06 PSM-410336-09	HIROSUGI HIROSUGI	
125	1	SW1 SW2,SW6	CHS-01A CHS-04A	CHS-01A CHS-04A	COPAL ELECTRONICS COPAL ELECTRONICS	
126 127 128	3	SW2,SW6 SW3,SW4,SW5 SW7,SW8,SW9	ESU-1100 PM SKRPA BE010	CHS-04A B3U-1100 PM SKRPABE010	 COPAL ELECTRONICS OMRON ALPS	
128	11	TR6,TR7,TR8,TR9,TR10, TR11,TR12,TR20,TR21,TR26, TR30	RE1C001UNTCL	SKRPABEUTU RE1C001UNTCL	 ALPS ROHM	
130 131	3 7	D37,D38,D39 LED1,LED4,LED5,LED6,LED9, LED14,LED15	DZ2S033M0L SML-P11MT	DZ2S033 M0 L SML-P11 MTT86	Panasonic ROHM	
132 133		J P1 (J P1)	HWP-3P-G (HWP-3P-G)	HWP-3P-G JS-1	MAC8 MAC8	
134 147	1	J P2 TP2,TP3,TP4	MJP-1.0 HK-2-G	MJP-1.0 HK-2-G	MAC8 MAC8	
150		CN1	440p_ComExpress	3-5353652-6	 TYCO	
151	1	-	PCB	FR4 8 layers build up	Kyocers	95mm x 95mm, 1.6mm thickness, 8 layers stack build up

R-Car Starter Kit Premier R-Car Starter Kit Pro



