

\*1 Manufacturer Part Name is for reference purposes only. It is subject to change without notice.  
\*2 Parts with size codes are listed by mm size code.

No.	Qty (Mounted)	Reference Designator (Mounted)	Reference Designator (Not Mounted)	Manufacturer Part Name*	Description*	Part Name	Maker Name
1	1	U1		RF523E1DF2	RX23E-B AFE mounted 32-bit MCU	IC	Renesas
2	1	U2		ISL80410IBEZ	LDO Output 2.5 to 12V, 150mA	IC	Renesas
3	1	U3		ISL21000FB850Z-TK	5V reference, ultra-low noise, precision	IC	Renesas
4	1	U4		ISL29227M2	OSamp, precision, dual, low noise	IC	Renesas
5	1	U5		RAA78B15ZCSU	RS-485 422 transceiver	IC	Renesas
6	0		U7	ISL8002H232	Voltage supervisor	IC	Renesas
7	1	U8		ISL10900FB825Z-TK	2.5V reference, ultra-low noise, precision	IC	Renesas
8	1	Q1		RJF060A JPO	Nch MOSFET	MOSFET	Renesas
9	1	Q2		RJF060B JSP	Nch MOSFET	MOSFET	Renesas
10	1	Q3		RJF060A JPO	Pch MOSFET	MOSFET	Renesas
11	1	U6		MAX3232ESA*	CAN transceiver	IC	Maxim
12	1	U9		OPA2188IDGK	OSamp, dual, low-power, Rail-to-Rail	IC	TI
13	1	U10		FT232RL	Hi-Seeded Single Channel USB UART/FIFO IC	IC	FTDI
14	1	U11		SN74LVCT245DCU	Dual-bit dual-supply bus transceiver	IC	TI
15	0		U12	93LC58B-1/OT	EEPROM, 2k	IC	Microchip
16	2	Q4,Q5		US8M2TR	Nch+Pch MOSFET, 2.5V	MOSFET	Rohm
17	3	CN1,CN2,CN4		ML-700-NH-2P	Terminal block 2-pin	Terminal	SATO PARTS
18	3	CN3,CN5,CN6		ML-700-NH-4P	Terminal block 4-pin	Terminal	SATO PARTS
19	1	CN7		ML-700-NH-15P	Terminal block 15-pin	Terminal	SATO PARTS
20	1	CN8		FMTC-CU-PCB	Thermocouple connector	Connector	Labfacility
21	1	CN9		HTS1-107-Q1-T-0V	14-pin I/F connector	Connector	Santec
22	1	CN10		UB-M5BR-G14-4S	USB mini-B connector	Connector	JST
23	0		CN11	18742	18742 (DNF)	DC JACK	4JCON
24	2	PMOD1,PMOD2		SM41-06-02-Q-D	SM41-06-02-Q-D	Connector	Santec
25	0		R297,R298,R299,R302	RK73B1ETTP100J	10 (DNF), 1005size	Resistor	KOA
26	20	R23,R34,R56,R61,R69,R71, R87,R89,R94,R11,R206, R207,R239,R243,R252,R254, R262,R263,R281,R285	R270	RK73B1ETTP620J	62, 1005size	Resistor	KOA
27	7	R123,R125,R127,R128,R153, R208,R294		RK73B1ETTP101J	100, 1005size	Resistor	KOA
28	7	R10,R13,R284,R288,R289, R290,R291		RK73B1ETTP102J	11k, 1005size	Resistor	KOA
29	4	R6,R17,R261,R271		RK73B1ETTP292J	2k, 1005size	Resistor	KOA
30	23	R124,R126,R129,R130,R131, R225,R226,R227,R237,R240, R242,R244,R245,R247,R248, R250,R256,R257,R259,R264, R265,R266,R267	R146,R234,R236,R246,R249, R251,R269	RK73B1ETTP103J	10k, 1005size	Resistor	KOA
31	4	R262,R293,R295,R296		RK73B1ETTP104J	100k, 1005size	Resistor	KOA
32	1	R133		RK73B1JTTO132J	1.3k, 1608size	Resistor	KOA
33	4	R134,R135,R136,R137		RK73B1JTTO302J	3k, 1608size	Resistor	KOA
34	0		R37,R38,R39,R40,R45,R46	RK73B1JTTO104J	100k (DNF), 1608size	Resistor	KOA
35	1	R4		RK73B1JTTO304J	200k, 1608size	Resistor	KOA
36	2	R198,R200	R16	RK73B1JTTO105J	1M, 1608size	Resistor	KOA
37	1	R233		RK73H1ETTP120ZF	12k, 1%, 1005size	Resistor	KOA
38	1	R157,R158		RN73H1JTTO1000F100	100, 0.1%, 1608size	Resistor	KOA
39	8	R7,R9,R174,R175,R181, R182,R184,R185		RN73H1JTTO1001F100	1k, 1%, 1608size	Resistor	KOA
40	1	R2		RK73H1JTTO220ZF	22k, 1%, 1608size	Resistor	KOA
41	1	R3		RK73H1JTTO800ZF	80k, 1%, 1608size	Resistor	KOA
42	0		R209,R210	RK73B2ATTDE20J	62 (DNF), 0.25W, 2012size	Resistor	KOA
43	1	R191	R166	RK73B2ATT0391J	390, 0.25W, 2012size	Resistor	KOA
44	2	R200,R222		RK73B2ATT0361J	360, 0.25W, 2012size	Resistor	KOA
45	2	R205,R231		RK73B2ETT121J	120, 0.5W, 3225size	Resistor	KOA
46	1	R282		ERA3AE102V	1k, 0.1%, 1608size	Resistor	Panasonic
47	1	R283		ERA3AE182V	1.8k, 0.1%, 1608size	Resistor	Panasonic
48	1	R190	R161	ERA3APB512V	5.1k, 0.1%, 1608size	Resistor	Panasonic
49	1	R277		CRT0603-BY-1002EAS	10k, 0.1%, 1608size	Resistor	Bourns
50	2	R276,R278		RGI108P-363-B	36k, 0.1%, 1608size	Resistor	Susumu
51	1	R280	R279	RK73B1JTTO100B25	100, 0.1%, 1608size	Resistor	KOA
52	1	R286		ERA3AE101V	100, 0.1%, 0.25W, 3216size	Resistor	Panasonic
53	101	R1,R18,R19,R20,R21,R22, R26,R29,R30,R31,R32,R33, R34,R35,R36,R47,R48,R50, R61,R62,R63,R65,R67,R68, R69,R60,R62,R63,R64,R65, R66,R67,R68,R70,R72,R73, R74,R75,R76,R77,R78,R79, R80,R81,R82,R83,R84,R86, R86,R90,R91,R92,R93,R96, R99,R100,R102,R103,R104, R105,R106,R107,R108,R109, R110,R111,R112,R113,R114, R115,R116,R117,R118,R119, R120,R121,R122,R136,R141, R143,R147,R211,R212,R213, R214,R215,R216,R217,R218, R219,R220,R221,R222,R223, R224,R228,R229,R253,R300, R301,R303	R12,R14,R24,R25,R27,R28, R40,R85,R95,R96,R97,R139, R140,R144,R145,R148,R149, R150,R151,R167,R168,R169, R170,R171,R172,R173	RK7321ETTP	0, 1005size	Resistor (Jumper)	KOA
54	37	R5,R6,R15,R132,R142,R154, R156,R159,R160,R162,R163, R164,R165,R176,R177,R178, R179,R180,R183,R186,R187, R188,R189,R192,R193,R194, R197,R201,R204,R235,R236, R241,R255,R258,R260,R272, R275	R41,R42,R43,R44,R152, R155,R195,R196,R202,R203, R273,R274,R287,R304,R305	RK7321JTTO	0, 1608size	Resistor (Jumper)	KOA
55	2	R1,R199		RK7322ATTDO	0, 2012size	Resistor (Jumper)	KOA
56	1	R268		RK7322ETTDO	0, 3225size	Resistor (Jumper)	KOA
57	0		VR1	3266W-1-104LF	100k (DNF), 0.25W, 12Turn	Potentiometer	Bourns
58	1	RTD1		PT5060301B100RP100	PT100, 1608size	RTD	Viabuy
59	2	C2,C4		EE-HDVA10AP	4.7uF, 35V	Electrolytic capacitor	Panasonic
60	2	C40,C42		GJM1555C1H2R0B001	2uF, 50V, 1005size	Ceramic capacitor	Murata
61	2	C33,C37		GJM1555C1H4R0B001	4uF, 50V, 1005size	Ceramic capacitor	Murata
62	2	C13,C117		GRM1555C1H5201A16	32uF, 10V, 0.05size	Ceramic capacitor	Murata
63	7	C24,C25,C26,C27,C97,C132, C135	C8,C126,C141,C142,C146, C147	GRM1552C1H1012JA01	1000uF, 50V, 1005size	Ceramic capacitor	Murata
64	4	C139,C140,C144,C145		GRM1555C1H222JA01	2200uF, 50V, 1005size	Ceramic capacitor	Murata
65	2	C32,C33		GRM1555C1H682JE01	6800uF, 50V, 1005size	Ceramic capacitor	Murata
66	0		C98	GRM155R72A42K7KA01	4700uF, 100V (DNF), 1005size	Ceramic capacitor	Murata
67	42	C1,C3,C6,C7,C11,C13,C16, C31,C32,C35,C36,C43,C45, C92,C93,C94,C95,C96,C100, C101,C102,C103,C106,C107, C108,C110,C111,C112,C114, C115,C116,C118,C120,C121, C122,C124,C127,C133,C134, C136,C138,C143	C12,C48,C49,C50,C51,C68, C99,C70,C71,C72,C73,C74, C119,C125	GRM155R71H104KE14	0.1uF, 50V, 1005size	Ceramic capacitor	Murata
68	8	C17,C75,C76,C81,C82,C83, C84,C131	C56,C57,C58,C59,C77,C78, C79,C80,C85,C86,C87,C88, C129,C130	GRM1885C1H103JA01	0.01uF, 50V, 1608size	Ceramic capacitor	Murata
69	5	C19,C20,C21,C23,C34	C22	GRM188R71A47K4A88	0.47uF, 16V, 1608size	Ceramic capacitor	Murata
70	10	C15,C29,C30,C38,C39,C54, C55,C60,C90,C137	C41	C1606XSRH105K080AB	1uF, 50V, 1608size	Ceramic capacitor	TDK
71	2	C28,C99,C109	C104,C105	GRM188C91E475KE11	4.7uF, 25V, 1608size	Ceramic capacitor	Murata
72	1	C44		GRM21B5C1H223JA01	0.022uF, 50V, 2012size	Ceramic capacitor	Murata
73	3	C45,C61,C64	C46,C47,C62,C63,C66,C67	GRM3195C1H104JA05	0.1uF, 50V, 3216size	Ceramic capacitor	Murata
74	9	C5,C9,C10,C14,C18,C89, C91,C123,C128		CGA6P3X75H106M250AE	10uF, 50V, 3225size	Ceramic capacitor	TDK
75	3	L1,L2,L3		LQM18DN100M70	10uH, 300mA, 1608size	Inductor	Murata
76	3	F1,F2,F3		BLM18AG01SN1D	600, 100MHz, 1608size	Ferrite bead	Murata
77	1	RF1		RD63L003-36	30mA, 30V, 1608size	Resettable fuse	Littelfuse
78	2	D1,D2		RD60L6M-40	Schottky barrier diode	Diode	Rohm
79	5	D3,D4,D5,D6,D10		RB168MM-40	Schottky barrier diode	Diode	Rohm
80	1	D17		DSVGL03150	200 TVS diode, bi-directional	Diode	Diodes
81	1	D8		RCLAMP0502BA	2ohm TVS diode, ESD & CDE Protection	Diode	Semtech
82	1	D9		SM712 TCT	2ohm TVS diode, asymmetrical	Diode	Semtech
83	0		Z1	PDZVTR3086	Zener Diode, 1W, 30V	Diode	Rohm
84	1	Z2		PDZVTR12B	Zener Diode, 1W, 12V	Diode	Rohm
85	2	LED0,LED2		SML-E12J8W	LED Red	LED	Rohm
86	2	LED1,LED3		SML-E12Y8W	LED Yellow	LED	Rohm
87	1	ED4		SML-E12P8W	LED Green	LED	Rohm
88	3	SW1,SW2,SW4		FSM1LPAS	Round Actuator Style, 50mA, 24VDC	Tactile switch	TE Connectivity
89	1	SW3		CFS-0202TB	DIP slide switch	Slide switch	NIDEC COPAL
90	1	Y1		EC5-80-12-33-JEN	8MHz, 50ppm	Quartz crystal unit	ECS
91	1	Y2		SSP-T7-FL	32.768kHz, 20ppm, 3.7uF	Quartz crystal unit	SII
92	1	Y3		ABM3B-12.000MHZ-22-D3W	12MHZ, 25ppm	Quartz crystal unit	Abracon
93	8	J1,J2,J3,J4,J5,J6,J7,J10, JP11,JP12		M20-8770342	HEADER 3X1 SMD	Pin header	Harwin
94	1	JP2,1		M20-8750242	HEADER 2X2 SMD	Pin header	Harwin
95	1	JP5		M20-8750342	HEADER 3X2 SMD	Pin header	Harwin
96	4	JP1,JP6,JP8,JP9		M20-8750442	HEADER 4X2 SMD	Pin header	Harwin
97	0		JP13,JP14,JP15,JP16,JP17, JP18,JP19,JP20,JP21, JP2,JP22,JP23	M20-9990245	HEADER 2X1 TH (DNF)	Pin header	Harwin
98	0		J3	M20-9990445	HEADER 4X1 TH (DNF)	Pin header	Harwin
99	0		JAT1,JA3	M20-9981245	HEADER 12X2 TH (DNF)	Pin header	Harwin
100	0		JA2	M20-9981345	HEADER 15X2 TH (DNF)	Pin header	Harwin
101	0		JA4	HF3H-500A-2.54DSA(61)	Pin socket, 25X2, Straight	Pin header	HRS
102	0		TH2,TH3,TH4	M20-9980245	HEADER 2X2 TH (DNF)	Pin header	Harwin
103	2	TP2,TP4		LC-22-G(Black)	Check terminal for oscilloscope	Test point	Mac8
M1	8			PC-0306	Polycarbonate, M3 6mm	Screw	Hirosugi
M2	8			AS-313	Polycetal, both-sides female spacer	Spacer	Hirosugi
M3	2			UF-0212	Stainless, M2, 12mm	Flat head screw	Hirosugi
M4	1			UNT-02	Stainless, M2	Hexagon nut	Hirosugi
M5	10			M7582-05	2 position, 2.54mm pitch	Jumper socket	Harwin
M6	2			JS-42060-02	4 position, 2.54mm pitch, consolidated	Jumper socket	Hirosugi