

Bill Of Materials

Line #	Designator	Comment	Description	Footprint	Manufacturer Part Number	Quantity
1	C1, C2, C4, C5	22uF	CAP CER 22UF 6.3V X5R 0805	CAP0805	GRM21BR60J226ME39L	4
2	C3	22pF	CAP CER 22PF 50VDC 0402 1%	CAP0402	C1005C0G1H220F050BA	1
3	C17, C34	4.7uF	CAP CER 4.7UF 20% 10V X5R 0402	CAP0402	GRM155R61A475MEAAD	2
4	C18, C22, C30, C31, C32, C33, C35, C36, C37, C38, C39, C40, C41, C45, C49, C51, C54, C64, C70, C73, C74	100nF	CAP CER 0.1UF 10% 25V X7R 0402	CAP0402	GRM155R71E104KE14J	21
5	C19	100uF	Aluminium Electrolytic Capacitors - SMD 100uF 50V 20%	CAP-SMD-10X15	865230657013	1
6	C20, C21	4.7uF	CAP CER 4.7UF 50V X7R 1210	CAP1210	GRM32ER71H475KA88L	2
7	C24, C25	47uF	CAP CER 47UF 10V X7R 1210	CAP1210	GRM32ER71A476ME15L	2
8	C26, C72	1uF	CAP CER 1UF 10% 25V X5R 0402	CAP0402	GRM155R61E105KA12J	2
9	C27, C28, C29, C58, C59, C76, C77	22uF	CAP CER 22uF 20% 10V X5R 0603, CAP CER 22uF 10V X5R 0603	CAP0603	GRM187R61A226ME15D	7
10	C42, C46, C47, C48, C78	1uF	CAP CER 1UF 25V X7R 0603	CAP0603	GCJ188R71E105KA01D	5
11	C43, C44	10uF	CAP CER 10UF 20% 6.3V X5R 0603	CAP0603	GRM188R60J106ME84D	2
12	C50, C52, C53, C55, C56, C57	10nF	CAP CER 10000PF 50V X7R 0402	CAP0402	GRM155R71H103KA88J	6
13	C66	4.7nF	CAP CER 4.7nF 50V X7R 0402	CAP0402	GCM155R71H472KA37J	1
14	C69	47uF	CAP CER 47UF 6.3V X5R 0805	CAP0805	GRM21BR60J476ME15K	1
15	C75	100nF	CAP CER 100nF 50V X5R 0402 10%	CAP0402	GRM155R61H104KE19D	1
16	D1	BZX84C10W-7-F	Zener Diodes 200mW 10V Zener	SOT-323	BZX84C10W-7-F	1
17	D2, LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10, LED11, LED12, LED13, LED14, LED15, LED16, LED17, LED18, LED19, LED20, LED21, LED22, LED24, LED25, LED26	SML-LX0402GC-TR	Standard LEDs - SMD 0402 Green 565nm	LED0402	SML-LX0402GC-TR	26
18	FB1	MMZ1608R600A	FERRITE BEAD 60 OHM 0603 25%	FB0603	MMZ1608R600A	1
19	IC1	SLG46127M	Programmable Mixed-signal Matrix with Dual 44 mΩ / 2 A P-FET	16-MSTQFN-1.6x2.0	SLG46127M	1
20	IC2	ISL80030FRZ-T7A	Switching Voltage Regulators 3A, 1MHz, PWM adj , Low Iq, High Eff,	8-DFN-RENESAS	ISL80030FRZ-T7A	1
21	IC3	SLG59H1341C	Reverse Blocking 70 mΩ, 1.3 A nFET Load Switch	WLCSP-9-RENESAS	SLG59H1341C	1
22	IC4	MCP2562FD-H/SN	CANFD Interface IC CAN Flexible Data Rate Transceiver	8-SOIC-MICROCHIP	MCP2562FD-H/SN	1
23	IC7	RAA211450GNP#HA0	DC/DC Synchronous Step-Down Regulator with Internal Compensation and Programmable Frequency 4.5V to 42V, 5A	20-QFN-3.5x4-RENESAS	RAA211450GNP#HA0	1
24	IC8	ISL91133IIQZ-T	Switching Voltage Regulators High Efficiency 2.3A Boost Regulator with Input-to-Output By	16-WLCSP-RENESAS	ISL91133IIQZ-T	1
25	IC9	R7FS124773A01CFM#AA1	ARM Microcontrollers - MCU SYNERGY MCU PLATFORM S124 128K 64LQFP	LQFP-64	R7FS124773A01CFM#AA1	1
26	IC10, IC15	IP4234CZ6,125	ESD Suppressors / TVS Diodes Single USB 2.0 ESD Protection 6-Pin	6-TSOP-Nexperia	IP4234CZ6,125	2
27	IC11, IC12, IC13	SLG46537V	SPLD - Simple Programmable Logic Devices GPAK Mixed Signal Matrix	STQFN-20-2.0X3.0-A	SLG46537V	3
28	IC16, IC17, IC18, IC19	CDDFN10-3324P	ESD Suppressors / TVS Diodes 4 Ch 12KV 0.65pF	10-DFN-BOURNS	CDDFN10-3324P	4
29	IC20, IC21, IC22	ISL28213FUZ	Operational Amplifiers - Op Amps ISL28213FUZ DL GEN PURPOSE MIPR RRIO OP	8-MSOP-RENESAS	ISL28213FUZ	3
30	J1	TB006-508-02BE	Fixed Terminal Blocks Connector, 2 Pins, Screw Type, 5.08 Pitch	TB00650802BE	TB006-508-02BE	1
31	J2	FTSH-105-01-L-DV-007-K-P-TR	CONN HEADER SMD 9POS 1.27MM	FTSH-105-01-007	FTSH-105-01-L-DV-007-K-P-TR	1
32	J3	61300211121	Headers & Wire Housings 1x2 male socket THT straight 2.54	HDR-1x2-MALE-STRAIGHT	61300211121	1
33	J5	10118194-0011LF	USB Connectors Micro USB B-TYPE	Micro-USB-Type-B_Amphentol	10118194-0011LF	1
34	J6, J7	218-8LPST	DIP Switches/SIP Switches SPST 8 switch sections	218-8-SPST	218-8LPST	2
35	J8	61302021121	Headers & Wire Housings 2x10 male socket THT straight 2.54	HDR-2x10-MALE-STRAIGHT	61302021121	1
36	J9	SSQ-106-03-L-S	Arduino Headers & Wire Housings Tiger Buy Socket Strip with Square Tails, 0.100" Pitch	HDR-1x6-MALE/FEMALE-STRAIGHT	SSQ-106-03-L-S	1
37	J10	USB3085-30-A	USB Connectors Micro A/B Skt, Bottom-SMT, R/A, 30u", No Peg, T&R	Micro-USB-SMD/SMT-GCT-Type-AB	USB3085-30-A	1
38	J11	2301996-7	Modular Connectors / Ethernet Connectors RJ45 JACK INT.MAG. 1GB LED 1X2 INV.	23019967-2xRJ45-TEConnectivity	2301996-7	1
39	J12	61300711121	Headers & Wire Housings 1x7 male socket THT straight 2.54	HDR-1x7-MALE-STRAIGHT	61300711121	1
40	J13, J14	M20-7920642R	Headers & Wire Housings 6 +6 DIL HORIZ SMT SKT T&R	2x6-FEMALE-90DEGREE-HARWIN	M20-7920642R	2
41	J15	61301021121	Headers & Wire Housings 2x5 male socket THT straight 2.54	HDR-2x5-MALE-STRAIGHT	61301021121	1
42	J16	RZ_N2L_STAMP_V2	Stamp interfaces connectors Version 2	120-STAMP-RZN2L-RENESAS	N/A	1
43	J17	DLS1XP5AK40X	D-Sub Standard Connectors 9P MALE R/A .318 PCB CLIPS	9-DB9-AMPHENOL	DLS1XP5AK40X	1
44	J18, J19	61300311121	Headers & Wire Housings 1x3 male socket THT straight 2.54	HDR-1x3-MALE-STRAIGHT	61300311121	2
45	J20, J22	SSQ-108-03-L-S	Arduino Headers & Wire Housings Tiger Buy Socket Strip with Square Tails, 0.100" Pitch	HDR-1x8-MALE/FEMALE-STRAIGHT	SSQ-108-03-L-S	2

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46	J21	SSQ-110-03-L-S	Arduino Headers & Wire Housings Tiger Buy Socket Strip with Square Tails, 0.100" Pitch	HDR-1x10-MALE/FEMALE-STRAIGHT	SSQ-110-03-L-S	1
47	L1	2.2uH	SHIELDED POWER INDUCTORS, 2.2UH 21.5mOhm	XGL4020	XGL4020-222MEC	1
48	L3	4.7uH	SHIELDED POWER INDUCTORS, 4.7UH 44.1mOhms	XGL4020	XEL4030-472MEC	1
49	L4	470 nH	SHIELDED POWER INDUCTORS, 0.47UH 5.8A 20%	INDUCTOR1008	TFM252012ALMAR47MTAA	1
50	L6	B82789C0104N002	Common Mode Chokes / Filters 100uH 150mA -30%/50% 5.2x3.2mm SMD	4-IND1812-TDK	B82789C0104N002	1
51	LED23	SML-LX0402DRC-TR	Standard LEDs - SMD 0402 Red 20mA 2V	LED0402-RED	SML-LX0402DRC-TR	1
52	Q9	UPA2738GR-E1-AX	MOSFET POWER TRANSISTOR	8-SOP-MOSFET-RENESAS	UPA2738GR-E1-AX	1
53	Q11	T2N7002AK,LM		SOT-23-3	T2N7002AK,LM	1
54	R1, R92, R93	1k	RES SMD 1K OHM 1% 1/10W 0603	RES0603	RC0603FR-131KL	3
55	R2, R5	100k	RES SMD 100K OHM 1% 1/16W 0402	RES0402	RC0402FR-07100KL	2
56	R3	453k	Thick Film Resistors - SMD 453 kOhms 62.5mW 0402 1%	RES0402	RC0402FR-07453KL	1
57	R6, R32, R33, R34, R35, R36, R37, R38, R39, R41	10k	RES SMD 10K OHM 1% 1/16W 0402	RES0402	RC0402FR-0710KL	10
58	R7	2.32k	RES SMD 2.32K OHM 0.1% 1/16W 0402	RES0402	RT0402BRD072K32L	1
59	R8, R22	0R	RES SMD 0 OHM JUMPER 1/16W 0402	RES0402	RC0402FR-070RL	2
60	R9, R10, R78, R79, R95, R98, R100, R104, R106, R107, R109, R111	0R	RES SMD 0 OHM 1% 1/10W 0603	RES0603	RC0603FR-070RL	12
61	R11, R26, R31, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R80, R81, R84, R87	1k	RES SMD 1K OHM 1% 1/16W 0402	RES0402	RC0402FR-071KL	40
62	R19	2k	RES SMD 2k OHM 1% 1/16W 0402	RES0402	RC0402FR-072KL	1
63	R21	100k	RES SMD 100K OHM 0.1% 1/16W 0402	RES0402	RT0402BRD07100KL	1
64	R23	105k	RES SMD 105K OHM 1% 1/16W 0402	RES0402	RC0402FR-07105KL	1
65	R25	20k	RES SMD 20K OHM 1% 1/16W 0402	RES0402	RC0402FR-0720KP	1
66	R27, R112, R115, R116, R121, R122, R127	3.3k	RES SMD 3.3K OHM 1% 1/10W 0603	RES0603	RC0603FR-133K3L	7
67	R28, R30	1k	RES SMD 1K OHM 0.1% 1/16W 0402	RES0402	RT0402BRD071KL	2
68	R29	1Meg	RES SMD 1Meg OHM 1% 1/16W 0402	RES0402	RC0402FR-071ML	1
69	R40	30k	RES SMD 30K OHM 1% 1/16W 0402	RES0402	RC0402FR-0730KL	1
70	R75, R76, R82, R83, R136, R137, R138, R139	560R	RES SMD 560 OHM 1% 1/16W 0402	RES0402	RC0402FR-07560RL	8
71	R85	1.87k	RES SMD 1.87K OHM 0.1% 1/16W 0402	RES0402	RT0402BRD071K87L	1
72	R88, R89, R90, R91	330R	RES SMD 330 OHM 1% 1/16W 0402	RES0402	RC0402FR-07330RL	4
73	R113, R117, R118, R123, R125, R128	100R	RES SMD 100 OHM 1% 1/16W 0402	RES0402	RC0402FR-07100RL	6
74	R114, R119, R120, R124, R126, R129	10k	RES SMD 10K OHM 1% 1/10W 0603	RES0603	RC0603FR-1010KL	6
75	R131, R132, R133, R134	0R	RES SMD 0 OHM JUMPER 1/4W 1206	RES1206	RC1206JR-070RL	4
76	R135	4.7k	RES SMD 4.7K OHM 1% 1/16W 0402	RES0402	RC0402FR-074K7L	1
77	R140, R141	220R	RES SMD 220 OHM 1% 1/16W 0402	RES0402	RC0402FR-07220RL	2
78	R142, R144	60.4R	RES SMD 60.4R OHM 1% 1/16W 0402	RES0402	RC0402FR-0760R4L	2
79	S1	PTS636 SP43 SMTR LFS	Tactile Switches Tact 50mA 12VDC, 6.0x3.5	PTS636SP43SMTRLFS	PTS636 SP43 SMTR LFS	1
80	S2	SLB1470	Slide Switches Mini slide vertical actuator SP4T 0.3A 125VAC ON-ON-ON-ON	SP4T-APEM	SLB1470	1
81	S3	JS202011SCQN	Slide Switches DPDT SMT .3A	6-DUAL-SWITCH-SLIDER-C&K	JS202011SCQN	1
82	S4	416131160803	3-pin low profile dip-switch 1.27mm pitch	3-DIP-WE	416131160803	1
83	S5, S6	416131160801	1-pin low profile dip-switch 1.27mm pitch	WE-1-DIP	416131160801	2
84	TP1, TP2, TP3	5001	PC TEST POINT MINIATURE BLACK	TP_5001-BLACK	5001	3