

Item	Qty	Reference Designator	Description	Mfg	Part Number	Value	Pkg	Notes
1	6	C1, C5, C7, C9, C12, C63	Ceramic Chip Capacitor 0805 10uF Low ESR 10V X5R	MUR	GRM21BR61A106KE19L	10uF/10V	CAPC.0805	
2	21	C2, C3, C4, C6, C16, C21, C22, C24, C27, C38, C40, C46, C47, C51, C52, C54, C58, C59, C60, C61, C62	Ceramic Chip Capacitor 0402 0.1uF 6.3V 20% X7R	AVX	04026D104KAT2A	0.1uF/6.3V	CAPC.0402	
3	16	C8, C32, C33, C34, C35, C36, C37, C39, C42, C43, C44, C48, C50, C55, C56, C57	Ceramic Chip Capacitor 0201 0.01uF 6.3V 10% X5R	PIC	ECJ-ZEB0J103K	0.01uF/6.3V	CAPC.0201	
4	1	C10	Ceramic Chip Capacitor 0402 33pF 25V 5% COG	AVX	04023A330JAT2A	33pF/25V	CAPC.0402	
5	5	C11, C19, C28, C30, C41	Ceramic Chip Capacitor 0603 4.7uF 6.3V 10% X7R	AVX	06036C475KAT2A	4.7uF/6.3V	CAPC.0603	
6	2	C13, C23	Capacitor, Polarized Tantalum, D Case 470uF 4V	AVX	TAJD477K004R	470uF/4V	CAPCP.7343-31	
7	8	C14, C15, C17, C18, C20, C31, C45, C49	Ceramic Chip Capacitor 0402 1.0uF 6.3V 20% X5R	PIC	ECJ-0EB0J105M	1.0uF/6.3V	CAPC.0402	
8	2	C25, C26	Ceramic Chip Capacitor 0402 0.01uF 16V 10% X7R	AVX	0402YC103KAT2A	0.01uF/16V	CAPC.0402	
9	1	C29	Ceramic Chip Capacitor 0603 0.47uF 16V 10% X7R	AVX	0603YC474KAT2A	0.47uF/16V	CAPC.0603	
10	1	C53	Ceramic Chip Capacitor 0603 3900pF 50V 10% X7R	AVX	06035C392KAT2A	3900pF/50V	CAPC.0603	
11	6	D1, D2, D3, D4, D5, D6	Green LED 1206	EVL	QTLP650C4TR		LED\SMT	
12	1	D7	Blue LED 0603	LTP	LTST-C191TBKT		LED_LITE-LTST-C191TBKT	
13	2	FB1, FB2	Chip Ferrite Bead 1206 120 ohm, 3A	MUR	BLM31PG121SN1L	120-ohm/3A	FBC.1206	
14	1	J1	4-pin Header, Vertical, Thru-hole	AMP	5-146280-4	1x4	HDR1X4	
15	1	J2	Cypress ISSP Keyed Header 5-pin 2.54mm T/H	MLX	22-11-2052	1x5	MOLEX_22-11-2052	
16	1	J3	2.1mm Surface-Mount DC Power Jack	CUI	PJ-002A-SMT		CON_CUI-PJ-002B-SMT	
17	1	J4	20x2 0.1" Through-hole Header	AMP	7-146256-0	2x20	CON_SAM_TSW-120-07-F-D	
18	1	J5	2.0mm 7x2 shrouded header	MLX	87832-1420	2x7	CON_MLX-87332-1420	
19	2	J6, J7	6-pin Digilent Header, Right-Angle	MLX	22-15-2066	1x6	MOLEX_22-15-2066	
20	1	J8	6-pin Header, Vertical, Thru-hole	AMP	5-146280-6	1x6	HDR1X6	
21	3	JP1, JP3, JP6	0.1" 0.230" Post, 2-Pin Header, Thru-Hole	AMP	5-146280-2	1x2	JPR1X2	
22	4	JP2, JP5, JP7, J9	0.1" 0.230" Post, 3-Pin Header, Thru-Hole	AMP	5-146280-3	1x3	JPR1X3	
23	1	JP4	0.1" 0.230" post 4x2-Pin Header, Surface Mount	SAT	TSM-104-01-L-DV	2x4	CON_SAM-TSM-104-DV	
24	1	JT1	3-pad 0R0 0402 Jumper	DAL	CRCW04020000Z0ED	0R0	RESC.0402/DUAL	JT1 = 1:2
25	2	L1, L2	SMT Power Inductor, 3.3uH, 1.4A, DCR=0.080	CLF	LPS4018-332MLB	3.3uH/1.4A	IND/COILCRAFT-LPS4018	
26	1	P1	USB Mini-AB Connector	MLX	56579-0576		USBMIN-AB	
27	1	Q1	N-Channel enhancement mode FET	FSC	2N7002		SOT23C	
28	6	R1, R3, R5, R7, R8, R9	Chip Resistor 0603 681 1/10W 1%	DAL	CRCW0603681RFKEA	681R	RESC.0603	
29	1	R2	Chip Resistor 2512 10R0 1.0W 5%	DAL	CRCW251210R0JNEG	10R0		

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30	20	R4, R6, R15, R16, R17, R30, R42, R44, R45, R46, R47, R50, R51, R52, R53, R54, R55, R57, R58, R59	Chip Resistor 0402 10K 1/16W 1%	DAL	CRCW040210K0FKEA	10K	RESC.0402	
31	7	R10, R32, R33, R34, R35, R40, R41	Chip Resistor 0402 1.0K 1/16W 1%	DAL	CRCW04021K00FKEA	1K0	RESC.0402	DNP R33, R35, R41
32	1	R11	Chip Resistor 0603 806K 1/10W 1%	DAL	CRCW0603806KFKEA	806K	RESC.0603	
33	3	R12, R18, R19	Chip Resistor 0603 182K 1/10W 1%	DAL	CRCW0603182KFKEA	182K	RESC.0603	
34	2	R13, R21	Power Metal Strip Resistor, 0.010 ohm, 0.25W		WSL0805R0100FEA18	0R010	RESC.0805	
35	1	R14	Chip Resistor 0603 357K 1/10W 1%	DAL	CRCW0603357KFKEA	357K	RESC.0603	
36	1	R20	Chip Resistor 0603 432K 1/10W 1%	DAL	CRCW0603432KFKEA	432K	RESC.0603	
37	2	R22, R23	Chip Resistor 0402 24R3 1/16W 1%	VIS	CRCW040224R3FKED	24R3	RESC.0402	
38	4	R24, R27, R36, R37	Chip Resistor 0402 49R9 1/16W 1%	VIS	CRCW040249R9FKEA	49R9	RESC.0402	
39	2	R25, R39	Chip Resistor 0402 4.75K 1/16W 1%	VIS	CRCW04024K75FKEA	4K75	RESC.0402	
40	5	R26, R29, R31, R38, R43	Chip Resistor 0402 33R2 1/16W 1%	DAL	CRCW040233R2FKEA	33R2	RESC.0402	
41	1	R28	Chip Resistor 0603 330 1/10W 5%	DAL	CRCW0603330RJNEA	330R	RESC.0603	
42	2	R48, R49	Chip Resistor 0402 1.33K 1/16W 1%	DAL	CRCW04021K33FKEA	1K33	RESC.0402	
43	1	R56	Chip Resistor 0402 5.11K 1/16W 1%	DAL	CRCW04025K11FKEA	5K11	RESC.0402	
44	1	RP1	4-Resistor Array 3.2x1.6mm 1K ohm	BNS	CAY16-102J4LF	1K0	RPAK4LCC	
45	1	RP2	4-Resistor Array 3.2x1.6mm 10K ohm	BNS	CAY16-103J4LF	10K	RPAK4LCC	
46	2	RP3, RP4	4-Resistor Array 3.2x1.6mm 4.7K ohm	BNS	CAY16-472J4LF	4K7	RPAK4LCC	
47	1	SW1	Switch, Pushbutton SPST SMD	BNS	7914J-1-000E		SW_BOU-7914	
48	1	U1	Digital Temperature Sensor, I2C Interface	TIS	TMP100NA/250		SOT23-6	
49	1	U2	3pin Supply Voltage Supervisor, 2.93V Threshold	TIS	TPS3809K33DBVT		SOT23127P600-8N	
50	1	U3	3.3V Supply Voltage Supervisor	TIS	TPS3106K33DBVR		SOT23-6	
51	4	U4, U9, U21, U23	Single 2-Input AND Gate	FSC	NC7SV08P5X		SC70-5	
52	2	U5, U24	1A Adjustable Step-Down DC-DC Converter	TIS	TPS62290DRV1T		QFN65P200X200X80-6N	
53	1	U6	3-pin Silicon Oscillator 16 MHz	MAX	MAX7381AXR166-T		SC70-3	
54	4	U7, U8, U11, U13	Single Tri-State Bus Buffer (Active-Low Enable)	FSC	NC7SV125P5X		SC70-5	
55	1	U10	Spartan-3A I/O Optimized FPGA, 195 User I/Os, 256-Pin FTBGA, Standard Performance, Commercial Grade	XLX	XC3S400A-4FTG256C		FTG256	
56	1	U12	Cypress PsOC Mixed-Signal Array, QFN-56 package	CYP	CY8C24894-24LFXI		QFN50P800X800X100-56L	
57	1	U14	Single Gate Inverter	FSC	NC7SZ04P5X		SC70-5	
58	4	U15, U16, U17, U18	Single Tri-State Bus Buffer (Active-High Enable)	FSC	NC7SV126P5X		SC70-5	
59	1	U19	128 Mbit SPI Flash Memory	ADV	S25FL128P0XNF1001		SOIC127P1030X265-16N	
60	1	U20	4-bit 1 of 2 FET Mux/Demux Tpd=250pS	TIS	SN74CB3T3257PW		SSOP16-25.59	
61	1	U22	32 Mbit Page Mode Flash Memory	SPZ	S29GL032N90TF010		TSSOP50P2000X120-56N	
62	4	N/A	Protective Cushioners, Clear	MMM	SJ-5303			
63	6	N/A	0.1" Shunt	TYA	382811-6			JP6=1:2, JP7=1:2

Note: The PCB footprint for U22 is TSSOP-56; the part specified is a TSSOP-48. This part will mount to the TSSOP-56 footprint by placing Pin #1 of the TSSOP-48 package on pin #3 of the PCB footprint.