

Part Name	Description	Unit Quantity	Unit Prototype Cost	Total Prototype Co	Unit Production Cost	Total Production Cost	Manufacturer	Manufacturer Part Number	Vendor Link	Datasheet Link	Supplier	Supplier Part Number	# Ordered	Date Order	# Received	Surplus	Schematic Reference	Designators
PIC18F27Q84	Microcontroller	5	\$2.030	\$10.150	\$1.880	\$1.880	Microchip	PIC18F27Q84-E/SN	https://www.dig	https://www1.mic	Digkey	150-PIC18F27Q84-E/SN-ND	5	2/28/2025			PIC18F27Q84	
TI OPT4060	RGB Sensor	4	\$2.880	\$11.520	\$0.880	\$0.880	Texas Instruments	OPT4060DTSR	https://www.dig	https://www.ti.c	Digkey	296-OPT4060DTSRCT-ND	5	2/28/2025			TI OPT4060	
L6961C33DR	3.3V Regulator	3	\$2.800	\$8.400	\$1.220	\$1.220	STMicroelectronics	L6961C33DR	https://www.dig	https://www.st.c	Digkey	497-L6961C33DRCT-ND	5	2/28/2025			U1	
33uH Inductor	Regulator Inductor	5	\$0.350	\$1.750	\$0.144	\$0.144	TDK Corporation	VL56045EX-330M	https://www.dig	https://product1	Digkey	445-VL39501-1-ND	10	2/28/2025			L	
0.1 uF Capacitor	Decoupling Capacitors	20	\$0.006	\$0.120	\$0.003	\$0.003	Samsung Electro-Mechani	CL05B104KPSNNNC	https://www.dig	https://mm.digk	Digkey	1276-1002-1-ND	20	2/28/2025			C1,C5,Cboot	
1 uF Capacitor	Regulator Vcc Capacitor	10	\$0.008	\$0.080	\$0.004	\$0.004	Samsung Electro-Mechani	CL10B105KP8NNNC	https://www.dig	https://mm.digk	Digkey	1276-1946-1-ND	10	2/28/2025			Cvcc	
10 uF Capacitor	Regulator Vin Capacitor	10	\$0.050	\$0.500	\$0.014	\$0.014	Samsung Electro-Mechani	CL10A106MP8NNNC	https://www.dig	https://weblib.s	Digkey	1276-1871-1-ND	10	2/28/2025			Cin	
22 uF Capacitor	Regulator Vout Capacitor	10	\$0.059	\$0.590	\$0.017	\$0.017	Samsung Electro-Mechani	CL10A226MP8NNNE	https://www.dig	https://mm.digk	Digkey	1276-1274-1-ND	10	2/28/2025			Cout	
White LED	Illumination LED	20	\$0.120	\$2.400	\$0.060	\$0.060	Cree LED	JB2835BWT-G-U40EA0000-ND	https://www.dig	https://downloa	Digkey	2138-JB2835BWT-G-U40EA0000-N000P	20	2/28/2025			D2	
Green LED	Debugging LED	20	\$0.125	\$2.500	\$0.040	\$0.040	Lite-On Inc.	LTST-C150KGKT	https://www.dig	https://optoelec	Digkey	160-1404-1-ND	20	2/28/2025			D3	
Red LED	Debugging LED	20	\$0.125	\$2.500	\$0.125	\$0.125	Lite-On Inc.	LTST-C150KRKT	https://www.dig	https://optoelec	Digkey	160-1405-1-ND	20	2/28/2025			D4	
1.5 A Fuse	Regulator Fuse	5	\$0.158	\$0.790	\$0.056	\$0.056	Bel Fuse Inc.	OZCG0075FF2C	https://www.dig	https://www.bell	Digkey	5923-OZCG0075FF2CCT-ND	5	2/28/2025			F1	
250mA Fuse	Microcontroller Fuse	5	\$0.192	\$0.960	\$0.069	\$0.069	Bel Fuse Inc.	OZCM0010FF2G	https://www.dig	https://www.bell	Digkey	5923-OZCM0010FF2GCT-ND	5	2/28/2025			F2	
10 Kohm Resistor	10 Kohm Resistor	50	\$0.025	\$1.250	\$0.002	\$0.012	Stackpole Electronics Inc	RMCF0805FT10K0	https://www.dig	https://www.selk	Digkey	RMCF0805FT10K0CT-ND	50	2/28/2025			R1,R2,R7,R8,R9,R10	
62 Ohm Resistor	Debug LED Resistors	10	\$0.025	\$0.250	\$0.002	\$0.004	Stackpole Electronics Inc	RMCF0805FT62R0	https://www.dig	https://www.selk	Digkey	RMCF0805FT62R0CT-ND	10	2/28/2025			R5,R6	
15 Ohm Resistor	Illumination LED Resistor	10	\$0.025	\$0.250	\$0.002	\$0.002	Stackpole Electronics Inc	RMCF0805FT15R0	https://www.dig	https://www.selk	Digkey	RMCF0805FT15R0CT-ND	10	2/28/2025			R4	
FDV303N	Switch Transistor	10	\$0.207	\$2.070	\$0.046	\$0.139	Onsemi	FDV303N	https://www.dig	https://www.ons	Digkey	FDV303NCT-ND	10	2/28/2025			U2,U3,U4	
Barrel Jack	Wall Adapter Barrel Jack	2	\$0.950	\$1.900	\$0.446	\$0.446	Same Sky	PJ-006A-SMT-TR	https://www.dig	https://www.san	Digkey	CP-006APCT-ND	3	2/28/2025			J1	
2x4 Male Header	UART Headers	3	\$0.970	\$2.910	\$0.513	\$1.026	Würth Elektronik		https://www.dig	https://www.we	Digkey	732-5395-ND	3	2/28/2025			J2,J3	
2 x20 Male Header Pins	General Jumper Pins	2	\$1.810	\$3.620	\$0.886	\$0.886	Würth Elektronik		https://www.dig	https://www.we	Digkey	732-5310-ND	2/28/2025			J5,J6,J7,J8,J9,J11,J12		
Jumper	General Purpose Jumpers	50	\$0.034	\$1.700	\$0.025	\$0.250	Sullins Connector Solutior	QPC02SXGN-RC	https://www.dig	https://s3.amazn	Digkey	S9337-ND	50	2/28/2025			J5,J6,J7,J8,J9,J11,J13	
Test Points	Test points	10	\$0.262	\$2.620	\$0.143	\$1.043	Keystone Electronics		https://www.dig	https://www.key	Digkey	36-5006-ND	25	2/28/2025			TP1,TP2,TP3, TP4,TP5,TP6,TP7,TP8	