

Electrical BOM

2025-07-22

D. Iacobacci

Note: This price is based on you being able to order exact amounts; If you are purchasing everything from scratch it will be much higher.

[Google Sheets Link](#)

Tr	Category	Tr	Attachment	Tr	Item	#	Quantity	☞	Approx. Unit Cost	☞	Approx. Total Cost	Tr	Notes	☑	Purchased
Accessory	N/A				60 LEDs WS2812B 5050 RGB LED Ring Lamp Light	1			\$15.99		\$15.99				<input type="checkbox"/>
Accessory	N/A				HDMI 5" 800x480 Display Backpack - With Resistive Touchscreen	1			\$74.95		\$74.95				<input type="checkbox"/>
Battery	N/A				Zeee 2S Lipo Battery 8000mAh 7.4V	1			\$39.59		\$39.59				<input type="checkbox"/>
Battery	N/A				Fireproof Explosionproof Large Capacity Battery Storage Guard Pouch	1			\$13.49		\$13.49				<input type="checkbox"/>
Battery	N/A				Tenergy TB-6AB Balance Charger Discharger 1S-6S Digital Battery Pack Charger	1			\$39.99		\$39.99				<input type="checkbox"/>
Battery	N/A				XT60-M	1			\$0.33		\$0.33		Alternatively, you could use an adapter Deans to XT60		<input type="checkbox"/>
Component	N/A				Momentary Switch	1			\$5.00		\$5.00				<input type="checkbox"/>
Component	N/A				Power Switch	1			\$1.40		\$1.40				<input type="checkbox"/>
Component	Main				1k ohm Resistor - 0805 SMD	1			\$0.01		\$0.01				<input type="checkbox"/>
Component	Main				200 ohm Resistor - 0805 SMD	1			\$0.01		\$0.01				<input type="checkbox"/>
Component	Main				Red LED - 0805 SMD	1			\$0.07		\$0.07				<input type="checkbox"/>
Component	Main				Blue LED - 0805 SMD	1			\$0.07		\$0.07				<input type="checkbox"/>
Component	Main				3.3v to 5v Logic Converter (SN74LVC1T45DBVR)	1			\$0.52		\$0.52				<input type="checkbox"/>
Component	Main				Voltage Divider (MPMT10014001AT1)	1			\$4.81		\$4.81				<input type="checkbox"/>
Component	Main				TALL GPIO FEMALE HEADERS - 2X20	1			\$1.95		\$1.95				<input type="checkbox"/>
Component	Main				Header Pins - 1 x 24	2			\$0.22		\$0.45				<input type="checkbox"/>
Component	Main				Mini Blade Fuse Block Holder (3557-2)	1			\$1.25		\$1.25				<input type="checkbox"/>
Component	Main				30A Mini Blade Fuse	1			\$0.34		\$0.34				<input type="checkbox"/>
Component	Main				DC-DC Buck Converter (DFR0753)	1			\$8.50		\$8.50				<input type="checkbox"/>
Connector	Leg, Main				JST-XH-02 - Pair	7			\$0.03		\$0.21		Any JST-XH kit will work		<input type="checkbox"/>
Connector	Leg, Main				JST-XH-03 - Pair	19			\$0.03		\$0.57		Any JST-XH kit will work		<input type="checkbox"/>
Connector	Main				JST-XH-04 - Pair	1			\$0.03		\$0.03		Any JST-XH kit will work		<input type="checkbox"/>
Connector	Leg, Main				JST-XH-06 - Pair	12			\$0.03		\$0.36		Any JST-XH kit will work		<input type="checkbox"/>
Connector	Main				XT30PW-M	3			\$0.96		\$2.88				<input type="checkbox"/>
Connector	Main				XT30-U	3			\$0.85		\$2.55				<input type="checkbox"/>
Connector	Main				XT60PW-M	1			\$2.00		\$2.00				<input type="checkbox"/>
Controller	N/A				Xbox Core Wireless Gaming Controller	1			\$47.00		\$47.00				<input type="checkbox"/>
Cooling	Raspberry Pi				Aluminum Heatsinks	3			\$0.30		\$0.90				<input type="checkbox"/>
Cooling	N/A				Noctua NF-A8 5V PWM, Premium Quiet Fan with USB Power Adaptor Cable, 4-Pin, 5V Version (80mm, Brown)	1			\$16.95		\$16.95				<input type="checkbox"/>
Compute	Raspberry Pi				128 GB SD Card	1			\$23.00		\$23.00		Any size over 32 GB should work		<input type="checkbox"/>
Compute	Main				Teensy 4.1	1			\$33.08		\$33.08				<input type="checkbox"/>
PCB	Main				Main Board (See Github)	1			\$2.18		\$2.18		Depends on how many you order		<input type="checkbox"/>
PCB	Leg				Leg Board (See Github)	6			\$0.48		\$2.88		Depends on how many you order		<input type="checkbox"/>
Servos	N/A				35KG Digital servo high Torque Full Metal Gear	18			\$13.28		\$239.04		Cheaper Option		<input type="checkbox"/>

Electrical BOM
2025-07-22
D. Iacobacci

Note: This price is based on you being able to order exact amounts; If you are purchasing everything from scratch it will be much higher.

[Google Sheets Link](#)

Tr	Category	Tr	Attachment	Tr	Item	#	Quantity	☞	Approx. Unit Cost	☞	Approx. Total Cost	Tr	Notes	☑	Purchased
Servos	N/A				GoBilda 2000 Series Dual Mode Servo (25-2, Torque)		18		\$31.44		\$565.92		Price includes 15% bulk discount if you order 20 or more -- email GoBilda directly.		<input type="checkbox"/>
Compute	Raspberry Pi				Raspberry Pi 5 - 8 GB RAM		1		\$80.00		\$80.00				<input type="checkbox"/>
Wiring	N/A				Micro HDMI to HDMI Wire A2-D2		0		\$2.35		\$0.00		Confirm orientation works for your screen and pi		<input type="checkbox"/>
Wiring	N/A				Main to Leg Connections <TBD>		0	\$ -							<input type="checkbox"/>
Wiring	N/A				12 Gauge Wire		1		\$0.66		\$0.66		Used for the power switch as it has the full battery current; Could likely go with a lower gauge		<input type="checkbox"/>
									\$0.66		\$0.00				<input type="checkbox"/>
									\$0.66		\$0.00				<input type="checkbox"/>
											\$663.01		Price with AliExpress servos		<input type="checkbox"/>
											\$989.89		Price with GoBilda servos		<input type="checkbox"/>