

	Product/Project: Quadraped V1.15				https://www.printables.com/@TomKnox
	Revision date: 2025-11-28				
Level	Description	Qty	ALIEXPRESS	AMAZON	Description
>	Electrical Components				
>>	0001-1202 Power_Dist PCB	1	www PCB online		Power Distribution PCB - PCB Files available for Clubmembers
>>	Servo Motors	12	AliExpress	Amazon	180 Degrees, 25kg (Approx 49 5x20 2x40mm)
>>	Servo Motors (Alternative)	12	AliExpress	Amazon	Budget friendly alternative
>>	Servo Motors (Alternative)	12	AliExpress	Amazon	Budget friendly alternative
>>	Raspberry Pi 4 Model B	1	AliExpress	Amazon	8gb Ram
>>	LiPo Battery	1	AliExpress	Amazon	4000mAh 4S 45-90C Lipo Pack w/XT-90
>>	IMU	1	AliExpress	Amazon	Integrated Measuring Unit
>>	Raspberry Pi Breakout Board	1	AliExpress	Amazon	Made by Dfrobot
>>	Fan	2	AliExpress	Amazon	60x60 12v
>>	Servo Driver PCA9685	1	AliExpress	Amazon	Communication via I2C interface
>>	Arduino Nano	1	AliExpress	Amazon	For IMU, Battery sensing, LCD screen
>>	DC to DC (Buck) converter 20A	1	AliExpress	Amazon	Adjustable, set to ~7V
>>	DC to DC (Buck) converter 3A	1	AliExpress	Amazon	For fans
>>	32GB MicroSD card	1	AliExpress	Amazon	32GB is maximum Pi supports
>>	RadiPi Cooling System	1	AliExpress	Amazon	To connect Pi to its breakout board
>>	Arduino Nano Breakout Board	1	AliExpress	Amazon	To connect Pi to its breakout board
>>	GPIO Cable	1	AliExpress	Amazon	To connect Pi to its breakout board
>>	Logic Level Converter	1	AliExpress	Amazon	For adjusting voltage between the pi and the nano
>>	XT60H Connector	1	AliExpress	Amazon	To connect LiPo to the robot
>>	LCD Screen	1	AliExpress	Amazon	1.47 inch
>>	PS4 Controller	1	AliExpress	Amazon	
>>	Digital Voltmeter	1	AliExpress	Amazon	DC 2.5-50V used to measure battery voltage
>	Mechanical Components				
>>	Bearing	4	AliExpress	Amazon	6709-2RS 25X32X4
>>	Thrust Bearings	4	AliExpress	Amazon	F4 10M 4x10x6mm
>>	Bearing	20	AliExpress	Amazon	6402 Mini Deep Groove Ball Bearing 4x4x4mm
>>	Servo horns	4	AliExpress	Amazon	RC Car Steering Servo Horn Arm 28T Teeth Long
>>	Heatinks	12	AliExpress	Amazon	6mm, black. Cut in half for each servo
>>	Servo Discs	10	AliExpress	Amazon	with screws
>>	Threaded rods - Long	4	AliExpress	Amazon	M3 x 110mm (cut to length if needed)
>>	Threaded rods - Short	4	AliExpress	Amazon	M2 x 25mm (cut to length if needed)
>>	Magnets	8	AliExpress	Amazon	Used to hold fans in place
>>	Ball Joint (Long joint)	8	AliExpress	Amazon	8 - 3mm L20mm M3
>>	Ball Joint (Short Joint)	8	AliExpress	Amazon	N - 3mm L20mm M3
>>	On/Off Switch	1	AliExpress	Amazon	IP64 at 4VDC rated
>>	Optics	1	AliExpress	Amazon	For battery latch mechanism, 35mm long x 7mm OD
>>	Smooth Rod 3x80	1	AliExpress	Amazon	For battery hinge mechanism 3x75-80mm (cut to length if needed)
>	Misc				
>>	Male Connector (for peripherals)	12	AliExpress	Amazon	B2BPH-K-SL(F)(S)
>>	Socket for Connectors	25	AliExpress	Amazon	SPR-0027 PB-SS
>>	Female Connector (for peripherals)	12	AliExpress	Amazon	PH0-2
>>	Capacitor	1	AliExpress	Amazon	2200uF 16VDC Electrolytic RB Capacitor For servo board
>>	Reverent Polarity Protection Diode	1	AliExpress	Amazon	8140-TPZ
>>	Females	-	AliExpress	Amazon	Optional, if used need approx 20 across robot
>>	Terminal Blocks	8	AliExpress	Amazon	190ST76
>>	100k resistors	-	AliExpress	Amazon	For dividing the voltage at the buck converter so that it is reachable by the nano
>>	47k Resistor	1	AliExpress	Amazon	CHCQJ-206F-47K
>>	10k resistor	-	AliExpress	Amazon	CHCQJ0805F-10K
>>	Heat Shrink	-	AliExpress	Amazon	Only small amount required, for covering exposed solid-core wires
>>	Power Delivery Wire	-	AliExpress	Amazon	Minimum 12AWG, for wires expected to carry current above 2A and/or voltage above 5V
>>	Connection Wire	-	AliExpress	Amazon	19 30AWG, recommend solid core, used for all other wires
>	Fasteners				
>>	M3x5 M2x8	8	AliExpress	Amazon	M2 - Socket Head Cap Screw
>>	M3x5 M2x4	14	AliExpress	Amazon	M2 - Socket Head Cap Screw
>>	M3x5 M2 3x5	8	AliExpress	Amazon	M2 3 - Socket Head Cap Screw
>>	M3x5 M3x4H	38	AliExpress	Amazon	M3 - Socket Head Cap Screw
>>	M3x5 M3x10H	4	AliExpress	Amazon	M3 - Socket Head Cap Screw
>>	M3x5 M3x14H	6	AliExpress	Amazon	M3 - Socket Head Cap Screw
>>	M3x5 M3x20H	16	AliExpress	Amazon	M3 - Socket Head Cap Screw
>>	M3x5 M3x25	4	AliExpress	Amazon	M3 - Socket Head Cap Screw
>>	M3x5 M4x25H	4	AliExpress	Amazon	M4 - Socket Head Cap Screw
>>	M3x5 M4x16H	4	AliExpress	Amazon	M4 - Socket Head Cap Screw
>>	M3x5 M3x8	52	AliExpress	Amazon	M3 - Countersunk Socket Head Cap Screw
>>	M3S - M3x8	4	AliExpress	Amazon	M3 - Socket Button Head Screw
>>	M3S - M3x10	10	AliExpress	Amazon	M3 - Socket Button Head Screw
>>	M3S - M3x16	26	AliExpress	Amazon	M3 - Socket Button Head Screw
>>	M3S - M3x20	20	AliExpress	Amazon	M3 - Socket Button Head Screw
>>	M3S M3 (3.2x9x0.8)	4	AliExpress	Amazon	M3 Washer with Large O.D
>>	LMRM J44-70(M3)	24	AliExpress	Amazon	M3 Lock Nut
>>	M3 M3 M3 Nut	8	AliExpress	Amazon	M3 Nut - Low profile
>>	Heat Insert M3 3x5	96	AliExpress	Amazon	L-3 O.D-5
>>	Heat Insert M2 3x3	18	AliExpress	Amazon	L-3 O.D-3
>>	Heat Insert M2 5 x 3 x 5	8	AliExpress	Amazon	L-3 O.D-3
>>	Heat Insert M4 4x5	8	AliExpress	Amazon	L-4 O.D-6
>	Assortment Boxes				(Recommended - Usually Cheaper to buy in bulk)
>>	Socket Button Head Screw	-	AliExpress	Amazon	M2-M3 x 251(pcs)
>>	Socket head cap Screw	-	AliExpress	Amazon	250(pcs) M2/M2.5/M3
>>	Socket head cap Screw	-	AliExpress	Amazon	141(pcs) M3/M4/M5
>>	Countersunk Socket Head Cap Screw	-	AliExpress	Amazon	304(pcs) - M2, M3, M4, M5, M6, M8
>>	Heat Insert (with press)	-	AliExpress	Amazon	104(pcs) - M2-M4
>>	Heat Inserts	-	AliExpress	Amazon	145(pcs) - M2-M4
>>	Lock Nut	-	AliExpress	Amazon	23(pcs) M2,M4,M5,M6,M8
Filament					
>>	PC / ASA / ABS / PETG Filament	-	AliExpress	Amazon	
>>	PC-CF / PETG-CF / PA-CF / ABS+ (Engineering)	-	AliExpress	Amazon	
>>	PLA	-	AliExpress	Amazon	
>>	TPU	-	AliExpress	Amazon	
Tools					
>>	Soldering Iron TS101	-	AliExpress	Amazon	(Recommended)
>>	Heat Insert Tip Kit - For TS101	-	AliExpress	Amazon	(Recommended)
>>	Electric Precision Screwdriver	-	AliExpress	Amazon	(Recommended)
>>	Allen Key Set	-	AliExpress	Amazon	(Recommended)
>>	Tork Key Set	-	AliExpress	Amazon	(Recommended)
>>	Torque Screwdriver	-	AliExpress	Amazon	(Recommended)
>>	Wire stripper	-	AliExpress	Amazon	(Recommended)
>>	Wire cutter	-	AliExpress	Amazon	(Recommended)
>>	Heat Insert Press Tool	-	AliExpress	Amazon	(Recommended)
>>	Crimp Tool	-	AliExpress	Amazon	(Recommended)
>>	Soldering Iron - Generic (Alternative)	-	AliExpress	Amazon	Budget friendly alternative
>>	Heat insert tip - set (Alternative)	-	AliExpress	Amazon	Budget friendly alternative
>>	Precision Screwdriver Set	-	AliExpress	Amazon	Budget friendly alternative

>>	3D printed components	QTY	Material (From best to ok)	Color
>>	0001-0101 FrontCover	1	Cosmetic (non structural)	Primary (Yellow)
>>	0001-0102 BackCover	1	Cosmetic (non structural)	Secondary (Black)
>>	0001-0103 Top_Front	1	Cosmetic (non structural)	Primary (Yellow)
>>	0001-0104 Top_Rear	1	Cosmetic (non structural)	Primary (Yellow)
>>	0001-0105 Top_Structural_Support	1	PC / ABS / ASA / PETG	Primary (Yellow)
>>	0001-0201 LeftSideCover	1	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-0202 LeftServoHousing	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0203 ServoMotor_Bracket	4	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0301 RightSideCover	1	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-0302 RightServoHousing	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0401 RightUpperLeg	2	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-0402 RightLowerLeg	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0403 RightServoCam	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0404 Foot	4	TPU	White
>>	0001-0405 ServoWasher	4	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-0501 LeftServoCam	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0502 LeftUpperLeg	2	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-0503 LeftLowerLeg	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0901 Bottom_Structural_Support	1	PC / ABS / ASA / PETG	Primary (Yellow)
>>	0001-0902 BottomBelly_Bracket_Left	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0903 BottomBelly_Bracket_Right	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-0904 FrontEyes	1	Cosmetic (non structural)	Tertiary (Eyes)
>>	0001-0905 Rear_Structural_Support	1	PC / ABS / ASA / PETG	Secondary (Black)
>>	0001-0906 LCD_Bracket	1	Cosmetic (non structural)	Secondary (Black)
>>	0001-0907 Front_Structural_Support	1	PC / ABS / ASA / PETG	Secondary (Black)
>>	0001-1001 FanHousing_Bracket	2	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1002 Fan_FrontArmLeft	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1003 Fan_FrontArmRight	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1004 Fan_RearArmLeft	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1005 Fan_RearArmRight	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1101 Battery_Cover	1	Cosmetic (non structural)	Secondary (Black)
>>	0001-1102 Battery_Latch	2	PC / ABS / ASA / PETG / PLA	Primary (Yellow)
>>	0001-1103 Battery_Support	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1104 Battery_Hinge_Support	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)
>>	0001-1201 Middle_Electronics_Bracket	1	PC / ABS / ASA / PETG / PLA	Secondary (Black)