

# Mini-RC CAR BOM

No.	Component	Quantity	Description	Status
1	ESP32-C3 Supermini	1	Main controller (Wi-Fi + Bluetooth)	In stock
2	DRV8833 (Motor Driver, SOP-16)	1	Dual H-bridge for brushed motors	Ordered
3	SG90 Servo Motor	1	For steering	Not ordered
4	Coreless Brushed Motors (716)	2	Drive motors with propellers	Not ordered
5	PS5 Controller	1	For wireless control via Bluetooth	In stock
6	LiPo Battery (1S or 2S)	1	3.7V 3000 mAh	Not ordered
7	TP4056 SOP-8	1	USB charging IC	Not ordered
8	DW01	1	Battery protection controller IC	Not ordered
9	USB4125-GF-A-0190	1	USB-C Port	Not ordered
10	8205A	1	Dual MosFETs for disconnecting load/charged	Not ordered
11	MT3608 Boost Converter IC	1	Boost 3.7V to 5V	Ordered
12	Inductor	1	4.7 $\mu$ H – 10 $\mu$ H, $\geq 1.5$ A	Not ordered
13	Schottky Diode (1N5819)	1	For boost converter	Not ordered
14	Input Capacitor (CIN)	1	22–47 $\mu$ F ceramic/electrolytic	Not ordered
15	Output Capacitor (COUT)	1	47–100 $\mu$ F	Ordered
16	Feedback Resistor R1	1	33k $\Omega$ to set 5.3V output	Ordered
17	Feedback Resistor R2	1	10k $\Omega$ to set 5.3V output	Ordered
18	Ceramic Capacitors	5	0.1 $\mu$ F, 1 $\mu$ F, 10 $\mu$ F for decoupling	Ordered
19	Electrolytic Capacitors	3	100 $\mu$ F, 220 $\mu$ F, 470 $\mu$ F @ 16–25V	Not ordered
20	LED + Resistor	1	Optional debug indicator	Ordered
21	Chassis Base	1	3D-printed or plastic base	Not ordered
22	Wheels	4	Match motor shaft type	Not ordered
23	Motor Mounts	4	To hold 716 motors	Not ordered
24	Screws, Nuts, Spacers	1	M2–M3 assorted	Not ordered
25	Silicone Wire (22–28 AWG)	1	Power and signal lines	In stock
26	Power Switch	1	Main ON/OFF	In stock
27	Battery Holder (Optional)	1	For 18650 or pouch	
28	Ultrasonic Sensor (HC-SR04)	1	Obstacle detection	
29	MPU6050 IMU	1	Gyroscope and Accelerometer	In stock
30	OLED Display (I2C)	1	For status/debug info	In stock