

Component	Model/Type	Purpose	Est. Weight	Est. Cost (INR)
Processing Unit	Raspberry Pi Pico W / ESP32-CAM	Control system logic, run AI model	10g	₹800
Primary Sensor	ArduCAM Mini 2MP Plus	Visual detection of birds	25g	₹2,500
Audio Deterrent	2 x Mini Transducer Speakers	Broadcast bio-acoustic sounds	150g total	₹3,000
Visual Deterrent 1	2 x High-Intensity Green Laser Diodes (5mW)	Targeted visual disruption	50g total	₹1,500
Visual Deterrent 2	High-Lumen White LED Strobe Array	Disorientation at close range	100g	₹2,000
Ultrasonic Deterrent	Waterproof Ultrasonic Transducer (25-60 kHz)	Non-audible disruption to birds	150g	₹4,000
Power System	Small 2S LiPo Battery (500mAh) + Regulator	Independent power for the shield	100g	₹1,200
Enclosure & Mounts	3D Printed PETG/ABS with IP65 rating	Weatherproofing and aerodynamics	400g	₹3,000
Misc. (Wiring, etc.)	Conformal Coating, Connectors, PCB	System integration and waterproofing	100g	₹2,000
Sub-Total			1085g	₹20,000
Contingency (15%)			~165g	₹3,000
Total Estimated			~1.25 kg	~₹23,000