

## Electronics and Processing

	Component	Description
1	<b>Nano PI + STM32</b>	Central processor for signal processing
2	<b>DC Motor</b>	For wing movement
3	<b>Servo Motor (x3)</b>	1 for claw, 2 for tail rudder & elevator
4	<b>IMU</b>	Inertial Measurement Unit for position/orientation
5	<b>Infrared LED</b>	Used as an active marker for OptiTrack indoor tracking
6	<b>Lithium Battery (4S)</b>	Power source

## Mechanical and Structural Components

	Component	Description
1	<b>Carbon Fiber Tube</b>	Lightweight tubing used for the main body structure
2	<b>3D Printed Parts (PLA)</b>	Small custom components used in structural assembly
3	<b>Carbon Fiber Rods</b>	Serve as internal supports ("bones") for wing structure
4	<b>Ripstop/Nylon Fabric</b>	Lightweight and durable material used as wing skin
5	<b>Spring used in Claw</b>	Aluminum Used for grasping or interacting with objects
6	<b>Gears</b>	Aluminum and 3D printed gears to reduce speed and increase torque from the actuator
7	<b>Hinge Mechanism</b>	Enables joint movement; made of aluminum or 3D printed

