

SMART DRONE PROJECT BY INNOVA

One of its Kind Autonomous Intelligent Aerial System

The SMART Drone Project by Innova represents an aspiring next-generation intelligent drone system focused on versatility, durability, autonomous intelligence, and adaptive movement freedom. This drone is envisioned as a one-of-a-kind aerial platform capable of rescue operations, surveillance, real-time interaction, and advanced terrain adaptability.

Project Features

- Interactive AI Communication — able to speak and interact intelligently in real time.
- Rescue and Emergency Response capabilities.
- Advanced Surveillance and Monitoring systems.
- Durable structure suitable for demanding conditions.
- Works efficiently on multiple terrains and environments.
- Adaptive umbrella-like upper shield structure for multifunctional usage.
- Autonomous and unrestricted movement freedom.
- Upgradeable and evolutionary architecture for future improvements.
- Designed as a futuristic intelligent assistant and operational drone platform

Core Objective

The core objective of this project is to empower this aerial system with unrestricted freedom in angular movement, momentum control, and structural adaptability. Designed as a highly adaptive autonomous robotic organism with unrestricted kinematic intelligence, the system enables near-complete freedom of motion across all joints and structural components, allowing advanced self-manipulation, adaptability, and real-time environmental responsiveness.

Alongside this, the project explores a next-generation autonomous learning framework focused on self-evolution, minimal supervision, and intelligent self-understanding through interaction and experience, combined with a strategically engineered sensory ecosystem — including environmental perception, spatial awareness, motion analysis, and contextual recognition — the system is envisioned to function as a highly

intelligent, adaptive, and interactive aerial platform.

AI DRONE CONCEPT UMBRA-X

Autonomous. Adaptive. Limitless.

Umbra-X is an advanced AI-powered aerial drone designed for unrestricted movement, intelligent decision making, and multi-environment adaptability.

SPECIFICATIONS

Height: 4 ft (122 cm)
Width (Max): 3.2 ft (97 cm)
Weight: 18.7 kg
Flight Time: 58 min
Max Speed: 36 m/s
AI System: Umbra Core™
Propulsion: 4x Vector Jets
Stability: AI Balance System
Materials: Carbon Fiber + Titanium Alloy

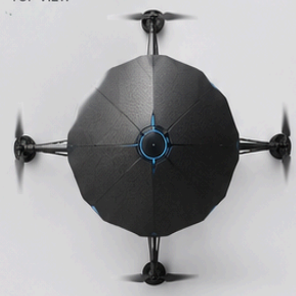


4 ft
(122 cm)

FEATURES

- AI Autopilot**
Real-time decision making & learning
- Adaptive Umbrella**
Weather shield, solar panel, comms relay
- Vector Jet Nozzles**
Vertical takeoff, omnidirectional movement
- Landing Stands**
Stable on any terrain, also act as jet nozzles
- 360° Propulsion**
Propellers fold out for agile flight
- Smart Sensors**
LIDAR, cameras, IR, environmental scan
- Modular Payload Bay**
Interchangeable tools & mission modules

TOP VIEW



FRONT VIEW



SIDE VIEW



FOLDED / COMPACT MODE



IN FLIGHT MODE



MISSION ADAPTABILITY

- Surveillance
- Relay / Communication
- Delivery / Logistics
- Search & Rescue
- Environmental Monitoring
- Custom Operations

COLOR SCHEME

All-Terrain Landing Weather Resistant Low Noise Operation Autonomous Return Obstacle Avoidance Swarm Compatible

Concept Architecture

Innova Vision

At Innova, we aspire that with proper support, research collaboration, engineering development, and investment, the SMART Drone Project can evolve into one of the best intelligent drone systems ever built. Our mission is to combine artificial intelligence, robotics, adaptive engineering, and futuristic innovation into practical systems that can serve humanity across multiple sectors.

This concept reflects Innova's commitment to pioneering advanced technologies and future-focused engineering solutions.