

Shikkee Maintenance Drone – Technical Specification v1

Overview

The Shikkee Maintenance Drone is an autonomous inspection and service platform designed exclusively for Shikkee Iconic homes. It detects issues before the homeowner notices them, coordinates verified service providers, and automates maintenance and payment through the Shikkee Cloud API.

Core Maintenance Functions

- Autonomous Inspection Flight using LiDAR and GPS
- Leak Detection via infrared thermal and acoustic sensors
- Roof & Facade Monitoring for cracks and corrosion
- AI Damage Assessment comparing data with the home's digital twin
- Maintenance Alerts via Shikkee App
- Auto-Pay & Job Verification through Shikkee Wallet

Hardware Specifications

- Quadrotor flight system with silent brushless motors (≤ 65 dB)
- Battery life: 40–50 minutes, auto-return & self-charging pad
- Sensors: LiDAR, RGB, FLIR, ultrasonic, humidity, and acoustic leak detection
- Camera System: 4K HDR + 360° panoramic lens
- Connectivity: Wi-Fi 6 / LTE / BLE
- Onboard AI: Jetson-class processor for real-time analysis
- Weather Resistance: IP54 rated for outdoor mode

Software & Cloud Integration

- Shikkee Cloud API for maintenance and billing triggers
- AI Maintenance Engine predicts repairs before failure
- Service Marketplace integration for certified technicians
- Payment Layer via Shikkee Wallet
- Voice & App control integration

Automatic Safety Lock

Automatic Safety Lock — pauses operation when humans or pets are detected.

The drone uses AI motion and thermal sensors to detect people or pets nearby. It cancels or pauses flight until the area is clear, ensuring safe and quiet operation.

Security Capabilities

Smart Security, Built In.

Starts simple — watching your porch so no one steals your packages. Then grows smarter: learns your property, keeps an eye out for unusual activity, and can even link to local security if needed.

Phase 1 – Basic Security: Porch Guard, Motion Alerts, Voice Deterrent, Live Feed.

Phase 2 – Home Perimeter: Patrols, Facial Recognition, Geo-fence zones.

Phase 3 – Integrated Smart Security: Behavior Analysis, Emergency Response, and full ecosystem integration.