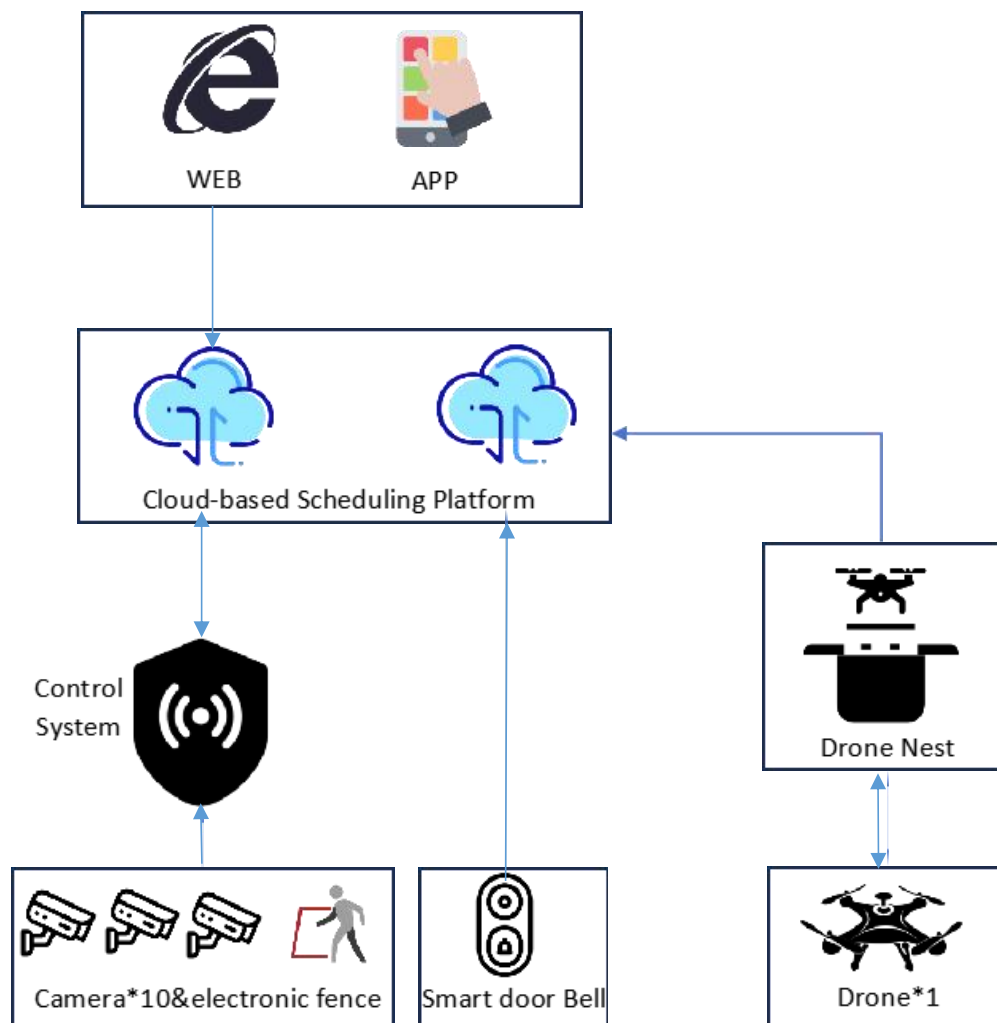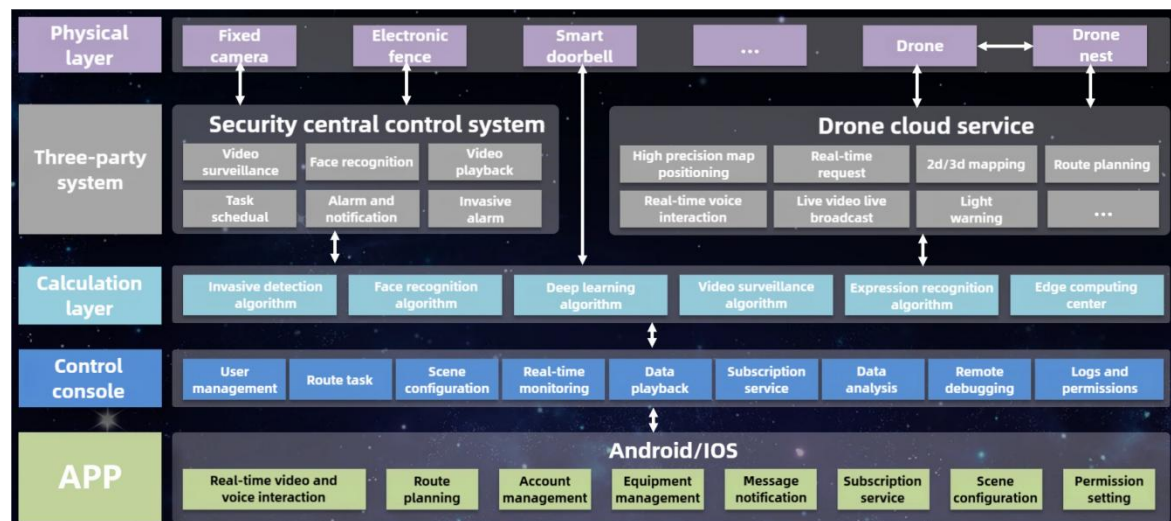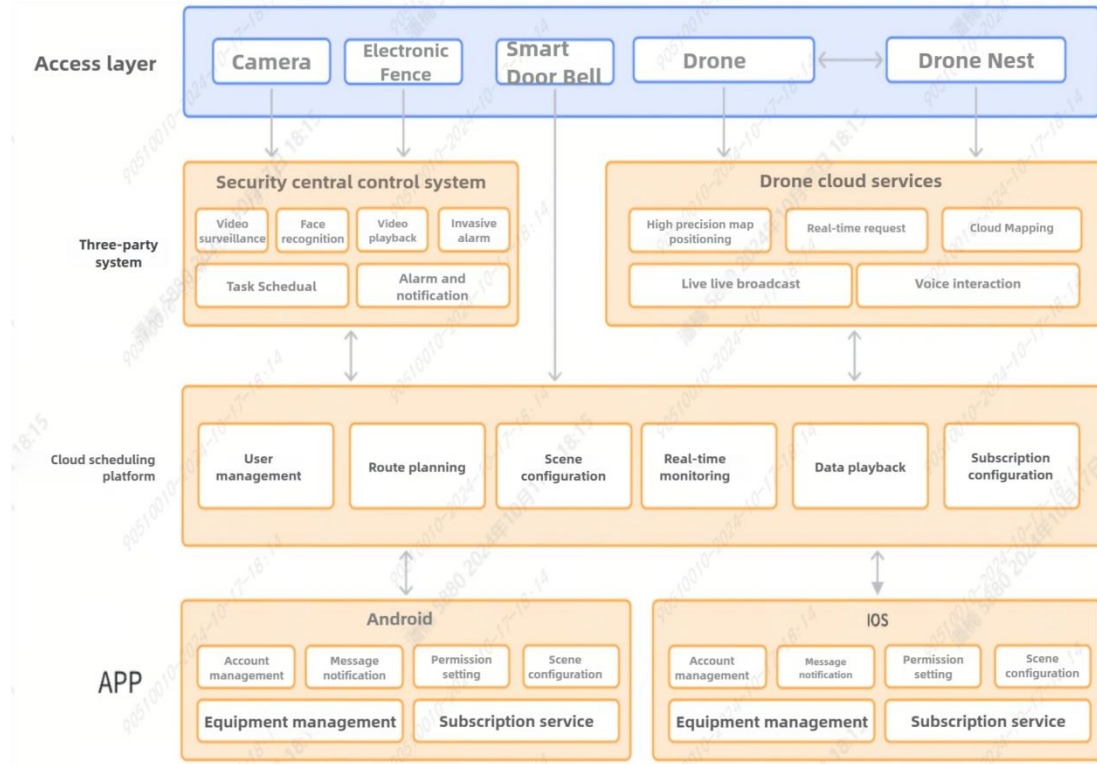# INSIGNIA MIND PROJECT SOLUTION

Nov 23 2024

1. Technical Highlights

1. **Cloud Service Deployment**: Ready-to-use out of the box, saving a significant amount of deployment and debugging time. Cloud servers can be flexibly scaled on demand, saving resources.
2. **AI Motion Detection**, linked recording, and linked alarm output.
3. **Drone High-altitude Detection** and **Face Recognition**: Achieve comprehensive, highly controllable monitoring and security.
4. **Drone Integration with Security System**, automatic detection and inspection of abnormal points.
5. **Advanced Features and Playback Duration** can be subscribed to as needed, providing product value enhancement.

2. Solution Design

3. System Design

4. SOFTWARE FUNCTION LIST

Index	System	Module	Level 1	Level 2	Function description
1	APP	Device	Camera mgr	Add device	Add Camera to Account
2	APP	Device	Camera mgr	Del device	Delete Camera from Account
3	APP	Device	Camera mgr	Edit device	Rename Camera Setting Priority
4	APP	Device	Camera mgr	Device Combination	Camera Combination, unified Management and Viewing by Regio
5	APP	Device	Camera mgr	Real-time check	Real-time Check of Current Camera Feed
6	APP	Device	Camera mgr	History playback	View Historical Video
7	APP	Device	Drone mgr	Add device	Add Drone to Account
8	APP	Device	Drone mgr	Del device	Delete Drone
9	APP	Device	Drone mgr	Edit device	Drone Operation Parameter Configuration and rename Device
10	APP	Device	Drone mgr	Real-time check	Real-time check: Real-time Check of Drone Feed Voice Playback, Real-time Human-Machine Interaction Announcement
11	APP	Device	Drone mgr	Drone control	Manual Control Guided Flight
12	APP	Device	Drone mgr	History playback	Video PlaybackTrajectory Playback
13	APP	Device	Drone mgr	Airport mgr	Add and Manage Airport Equipment Remote Debugging Function (e.g., Hangar Opening/Closing, Drone Charging)
14	APP	Device	Electric fence mgr	Device Mgr	Add, Modify, Delete Electric fences
15	APP	Device	Smart door bell mgr	Device Mgr	Add, Modify, Delete Doorbells
16	APP	Device	Smart door bell mgr	Real-time check	Real-time Check of Doorbell Feed, Voice Call
17	APP	Device	Smart doorbell mgr	History playback	View Historical Video
18	APP	Scene	Scene conf	Line mgr	Add, Modify, Delete Routes, Integrate with Google Maps and Other Maps
19	APP	Scene	Scene conf	Patrol Route Planning	Enable RouteConfigure Flight Time, Flight Frequency, Flight Altitude, etc.

20	APP	Scene	Scene conf	Exception Scene conf	Configure Drone Policies for Abnormal Situations, such as Announcement Content, Flight Time
21	APP	Scene	Scene check	Alarm data browse	View Alarm and Early Warning, Monitor Video, Drone Video
22	APP	Shop	Subscrition Servce	Home page	Display Multiple Images and Automatically Rotate Display Basic Information of Products on the Home Page (Image, Name, Price)
23	APP	Shop	Subscrition Servce	Shop cart	Purchase Product, Payment Page
24	APP	Shop	Subscrition Servce	Order detail	Display Product Details, Services, and Required Amount
25	APP	Shop	Subscrition Servce	Order page	Order List, Payment Status
26	APP	Shop	Subscrition Servce	Payment page	Pull Up Cashier, Redirect to Payment Page
27	APP	Shop	Subscrition Servce	Order page	Order List, View Order Details, View Order Status
28	APP	Shop	Subscrition Servce	After-sales page	Refund Application
29	APP	My	Customer Servce	Online Customer Servce	Online Chat
30	APP	My	Customer Servce	Tel	Click to Display Customer Service Phone Number
31	APP	My	Account & Secrity	Account	Personal Information, Login Verification Multiple Logins, Account Sharing, etc.
32	APP	My	My order	List	Display Order Page, Including All Orders, Pending Payment, Pending Shipment, Pending Receipt, Historical Orders
33	APP	My	Auth mgr	Setting password	Set Control Password for Increased Security
34	APP	Setting	Clean cache	One-click clear app background cache	Clear App Cache
35	APP	Setting	Agreement and Personal Privacy	Personal Information Protection Policy	Overseas Data Security Regulations Set Corresponding Data List and Personal Privacy Agreement
36	APP	Setting	Agreement and Personal Privacy	User Service Agreement	
37	APP	Setting	Agreement and Personal Privacy	List of Collected Personal Information	
38	APP	Setting	Agreement and Personal Privacy	Third-Party Personal Information Sharing List	
39	APP	Setting	Agreement and Personal Privacy	App Permission Explanation	
40	APP	Setting	Agreement and Personal	Summary of Personal Information	

			Privacy	Protection Policy	
41	APP	Message	Message type	Device Message	Device Abnormality Message Reminder (e.g., Fragile Parts) Inspection Abnormality Message Reminder Order Message Reminder Customer Service Online Message Reminder
42	APP	Message	Message type	orderMessage	
43	APP	Message	Message type	Customer ServceMessage	
44	APP	Message	Message type	Activity Message	
45	APP	Message	Message function	MessageSetting	
46	APP	Message	Message function	Notification	
47	APP	Message	Message function	Clean Message	
48	APP	Message	Message function	Alert Message	
49	APP	Message	Message function	Message notification	
50	Cloud platform	Device Mgr	Camera mgr	Basic information query	View Camera Basic Information Real-time Data Monitoring Historical Data Playback
51	Cloud platform	Device Mgr	Camera mgr	Real-time Monitoring	
52	Cloud platform	Device Mgr	Camera mgr	Data Playback	
53	Cloud platform	Device Mgr	Drone mgr	Basic Information Viewing	• View Drone Basic Parameters, Current Status • Video Real-time Monitoring, Historical Data Playback • Drone Control, Manual Control, and Guided Flight
54	Cloud platform	Device Mgr	Drone mgr	Video Real-time Monitoring	
55	Cloud platform	Device Mgr	Drone mgr	Data Playback	
56	Cloud platform	Device Mgr	Drone mgr	Drone Control	
57	Cloud platform	Device Mgr	Airport mgr	Airport Status Monitoring	• View Airport Basic Parameters, Airport Current Status • Airport and Drone Connection Status • Data Processing (Cloud Storage of Abnormal Data Segments) and Abnormal Analysis Reports
58	Cloud platform	Device Mgr	Airport mgr	Airport Control	
59	Cloud platform	Device Mgr	Fence mgr	Basic Information check	View Fence Device Information
60	Cloud platform	Device Mgr	Smart door bell mgr	Basic Information check	• View Doorbell Basic Information, View Status • Real-time Video Monitoring, Voice Call • Historical Data Playback
61	Cloud platform	Device Mgr	Smart door bell mgr	Real-time Monitoring	
62	Cloud platform	Device Mgr	Smart door bell mgr	Data playback	
63	Cloud platform	Scene conf	Default Scene conf	Scene conf	Default Scene Configuration, App Can Directly Select
64	Cloud platform	Scene conf	User Scene check	Scene check	User-configured Scenes, View in List
65	Cloud platform	Scene conf	Route mgr	Route check	View User-defined Trajectories

66	Cloud platform	Scene playback	Exception alarm	Alarm data check	View List of Abnormal Alarm Data and Associated Video Data Playback
67	Cloud platform	Scene playback	Exception alarm	Alarm video check	
68	Cloud platform	Scene playback	Video check	View by User	View Videos by User, Single Device, and Custom Device Combinations
69	Cloud platform	Scene playback	Video check	View by Device	
70	Cloud platform	Scene playback	Video check	View by Combination	
71	Cloud platform	Scene playback	Route playback	View Trajectory List	View Drone Operation Trajectory List, Click to Play Trajectory or Video
72	Cloud platform	Shop conf	Item Info	Product Information Configuration	Backend Configuration of Product Information, including Name, Price, Details, Images, etc.
73	Cloud platform	Shop conf	Order check	Order Query	Backend Can Query the List and Status of Each Subscribed Product
74	Cloud platform	System mgr	User mgr	Permission mgr	• Add Account Permissions • Query Account Permissions • Modify Account Permissions • Delete Account Permissions
75	Cloud platform	System mgr	User mgr	Permission mgr	Different Accounts Corresponding to Roles, Roles Associated with Permissions
76	Cloud platform	System mgr	Log mgr	Account Operation Record Management	Login and Operation Log Records
77	Cloud platform	System mgr	Menu mgr	Menu Configuration	Configure and Modify Menu Pages

APP	Problem warning	Receive warning information (receive identification information and coordinates from fixed cameras)
		Warning information prompt (propts issues at the movable terminal)
		Warning information is marked (instant questions are stated on the corresponding slot in the map)
	Question processing	To point the drone survey (according to the coordinate of the problem, automatically point no one to fly, and track the target)
		Drone shout (shout at the movable end and play sound in the drone mount device, and can interact with each other)
		Instruction drone return (when the problem is confirmed or processed, it indicates that the drone returns)
	Flight situation	Video surveillance (play the drone capture video on the page)
		Display flying map (display the drone flying instant route on the map)
		Real-time monitoring (display the real-time status data reference of the drone on the page, and display the dashboard)
		Flight control (control flight on the page, such as hovering, return, etc.)
		Finger-to-point flight (let the drone fly to the specified slot inspection)
	Personal information protection	Personal information maintenance, alarm notification (push/sms) and real-time talking
	Flight task	Newly built/modified flight plan
		Create a flight route
	Wearable parts	Service life display of consumable parts, expiration reminder, and consumable parts purchase link

Cloud Platform	Problem warning	Warning details	
		Warning notification	
	File management	Task archives (preserving overtime flight executives)	
		Image trajectory archives (save capture videos within a certain period of time	
		Question report archives	
	Resource management	Drone management (manage access drone)	
		Airport management (management accessed airport)	
		Mounting device management (manage the mounted device and pairing with the drone)	
	Route management	Route planning (planneling the route on the map and saving)	
		Route management (such as classification, belonging, whether it is available, etc.)	
	System management	Department, character and other management	
	Other	Data processing (alarm storage abnormal chip data) and abnormal analysis report	
		Map route planning has access to google	
		With remote debugging function (available in the library opening, closing, drone charging, etc.)	

5 Key Parameters

System	Index	Full Function	Key Parameters
Drone	1	Periodic Patrol and Auto Return	Horizontal Positioning ±1cm, Vertical ±2cm
	2	Omnidirectional Obstacle Avoidance Flight	Infrared/Lidar 6 Directions
	3	Object Recognition	Recognition Accuracy ≥98%
	4	Return to Charging Station for Wireless Charging	Charging Power 100W
	5	Drone Voice Announcement	Text/Real-time, Voice Delay <1s
	6	Provide Development Interface	Supports Secondary Development
	7	Night Imaging	≥384*288 pixels, Color and Black & White Palettes, Shows Highest and Lowest Temp
	8	Hover Function	±0.2m
	9	Emergency Takeoff for Point Patrol	Undefined

	10	Supports Multiple Communication Methods	Wi-Fi/4G/Ethernet
	11	HD Camera	Wide Angle 20MP, Telephoto ≥12MP
	12	Long Endurance	Flight Time ≥20min, Endurance 15km, Battery >400 Cycles, Max Altitude 500m
	13	Transmission Distance (with Interference/Obstruction)	≥2km
	14	Rain and Snow Takeoff and Landing	Precipitation <50mm/24h, Waterproof IP67, Salt Spray 1008h
	15	Wind Resistance	Can Take Off in Winds ≤8m/s
	16	Working Temperature	-30℃~60℃
	17	Lightweight (Including Battery)	Drone Weight <1100g
	18	Optional Handle	Can Independently Control the Drone
	19	Optional Charger	Can Independently Charge the Drone
Nest	1	Real-time Environmental Monitoring and Online Weather Forecast	Wind Speed Sensor, Rain Sensor, Temperature Sensor, Humidity Sensor, etc.
	2	Cooling Function	Power 30W (TBC)
	3	Heating Function	Power 30W (TBC)
	4	Wireless Charging	Charging Time ≤60min (full charge), 20%-90% in 35min
	5	Four-Protection for Hangar	Waterproof, Rustproof, Dustproof, Anti-theft; Salt Mist Resistance 1008h
	6	Auto Open for Drone Takeoff	Takeoff Time <20 seconds
	7	Cameras Inside and Outside Airport	1 Camera, 1080*720 resolution
	8	Backup Power (for Power Outage)	1 hour, 12AH (TBC)
	9	Manual Start and Stop Airport	Single-button manual start/stop, matches drone
	10	Lightweight Hangar	Hangar Dimensions 570$583465mm, Weight <35kg
	11	Compatible with Multiple Drones	≥2 Major Brands
	12	Working Temperature	-30℃~60℃