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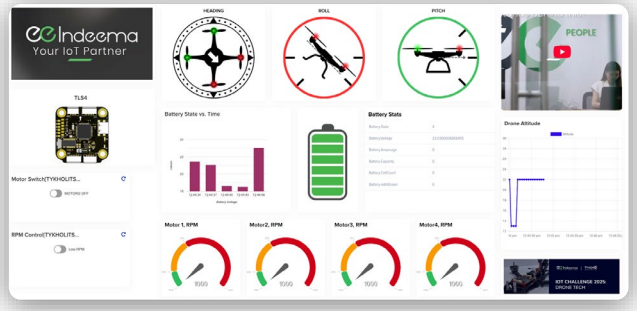
UAV Cloud Connectivity Platform by Indeema

Hardware & Software Engineering Services for IoT Solutions

INTRODUCING THE UAV CLOUD CONNECTIVITY PLATFORM BY INDEEMA

Lightweight, firmware-based bridge for STM32 flight controllers, connecting UAVs directly to AWS cloud infrastructure through Avnet's /IOTCONNECT™ .



Key Advantages:

- Eliminates the need for custom backend or dashboard development, enabling rapid, secure, and scalable drone-to-cloud and cloud-to-drone integration.
- Streams telemetry and mission data over secure MQTTS, visualized in Avnet's /IOTCONNECT™ dashboard.

Review Solution developed by Indeema YOUR IOT PARTNER

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INTRODUCING THE UAV CLOUD CONNECTIVITY PLATFORM BY INDEEMA

The Connected Drone UAV Platform is a lightweight, modular firmware foundation that links drones to the cloud, solving challenges like backend integration, poor data quality, and custom dashboard development. Powered by Avnet's /IOTCONNECT™ and Amazon AWS, the platform provides secure telemetry, real-time monitoring, and AI-driven analytics for aerial systems. With scalable connectivity and infrastructure, the UAV platform shortens development, reduces costs, and enables fleet management, mission tracking, and predictive insights all from a single pane of this. This helps support applications from agriculture and building inspection to logistics and remote asset monitoring.

Modular, Hardware-Agnostic Framework:

Flexible UAV firmware supports diverse hardware configurations - enabling faster development and scalable deployments.

Real-Time Fleet & Asset Tracking:

The platform provides live telemetry from drones and connected assets, giving operators instant visibility into fleet locations and mission progress for faster, smarter decision-making.

Simplified Cloud Integration:

/IOTCONNECT™ unifies AWS services into one platform, reducing backend complexity and speeding deployment

Actionable AI Insights:

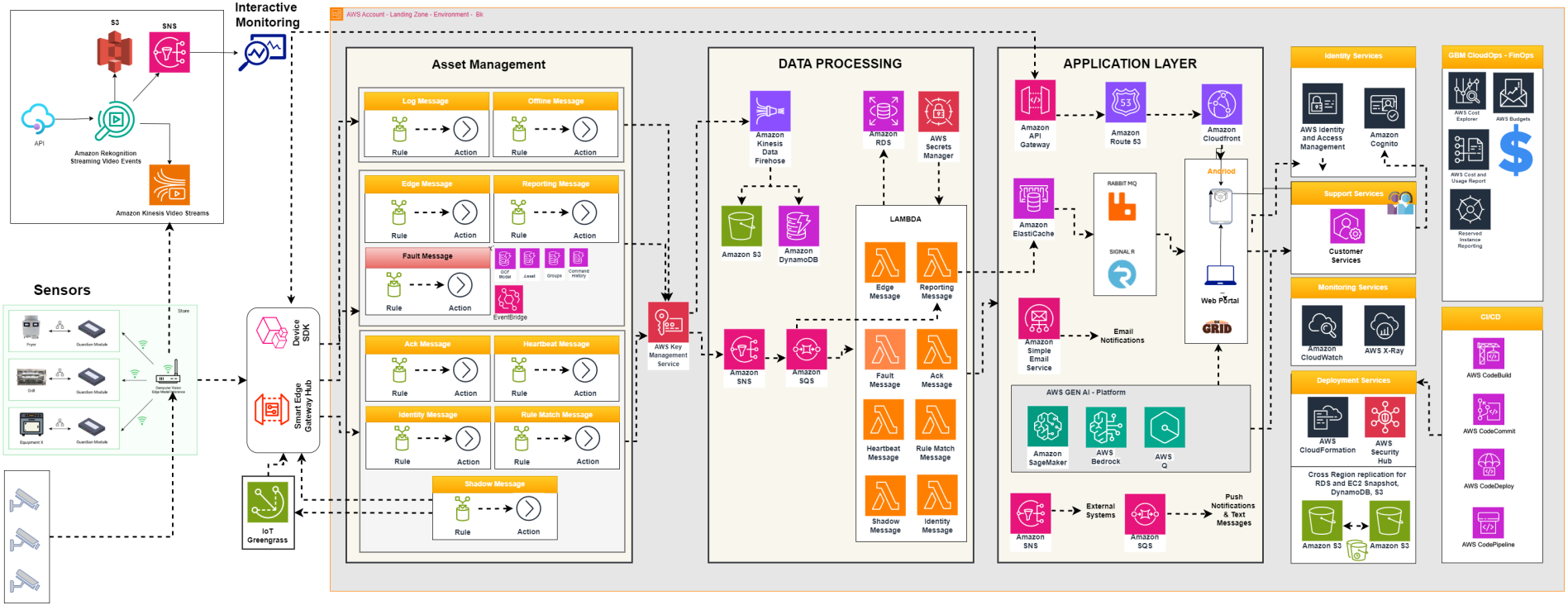
Built-in analytics transform drone data into predictive insights for smarter, proactive operations.

Learn more

Marketplace Listing

To be updated post listing

Solution Architecture – Connected UAV Platform



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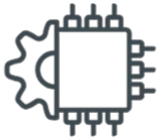
How the Solution Addresses the Challenges

Lower integration cost

The Indeema Drone Framework and firmware combined with /IOTCONNECT™'s SDK reduces development time and eliminates costly custom backend builds.

Data visualization without coding

/IOTCONNECT™ dashboard provides ready-to-use, actionable insights, removing the need for in-house dashboard development.



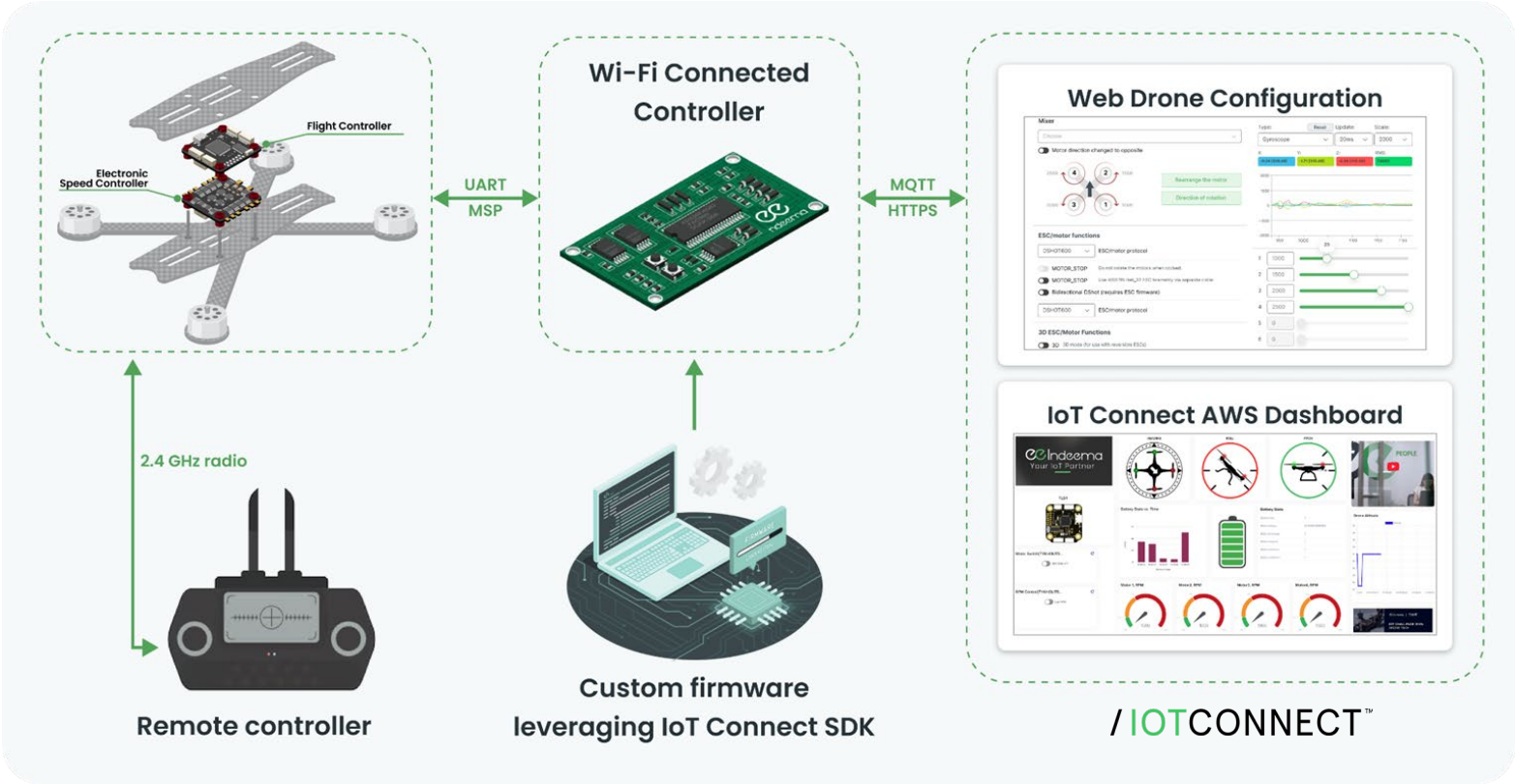
Hardware flexibility

Works with a variety of STM32-based flight controllers and multiple SoC-based Wi-Fi modules via UART interface.

Faster time-to-market

Move from concept to connected UAV deployment in days instead of months. Scale securely with /IOTCONNECT™ and AWS infrastructure to power your fleet.

Architecture



INDUSTRIES OF APPLICATION

The **UAV Cloud Connectivity Platform** provides a flexible foundation that can be further advanced and customized to meet the specific requirements of the following industries.

AGRICULTURE

Crop health monitoring, yield optimization;

INFRASTRUCTURE

Bridge, pipeline, and building inspections;

LOGISTIC

Real-time shipment tracking, route monitoring;

ENERGY

Solar farm inspections, wind turbine monitoring;

ENVIRONMENTAL MONITORING

Wildlife tracking, pollution detection.

Example Use Case: Agriculture

Challenge: Large farms need frequent inspections, but manual checks are slow, labor-intensive, and often miss early signs of crop stress.

Solution: Indeema's UAV Cloud Connectivity Platform, built on AWS and integrated with /IOTCONNECT™, enabled drones to automatically upload high-resolution field images in near real time. /IOTCONNECT™ simplified cloud integration, streamlined data management, and allowed immediate processing for actionable insights.

Benefit: Enables near **real-time** crop health insights, **early** problem **detection**, and data-driven **optimization** of irrigation and fertilizer application.

Example Use Case: Pipeline Inspection

Challenge: The customer has a large scale pipeline for water transport. Hidden damage was going unnoticed in many areas of the pipeline that were too difficult or dangerous for inspectors to access safely.

Solution: Indeema's UAV Cloud Connectivity Platform enabled drones to safely capture detailed images of entire pipeline and provide AI-driven insights into areas requiring repair and predictive maintenance for facility crews.

Benefit: Early damage detection reduced pipeline maintnance costs and enabled faster response to issues. Additionally, crews no longer had to trek to hard-to-reach areas for inspection purposes.

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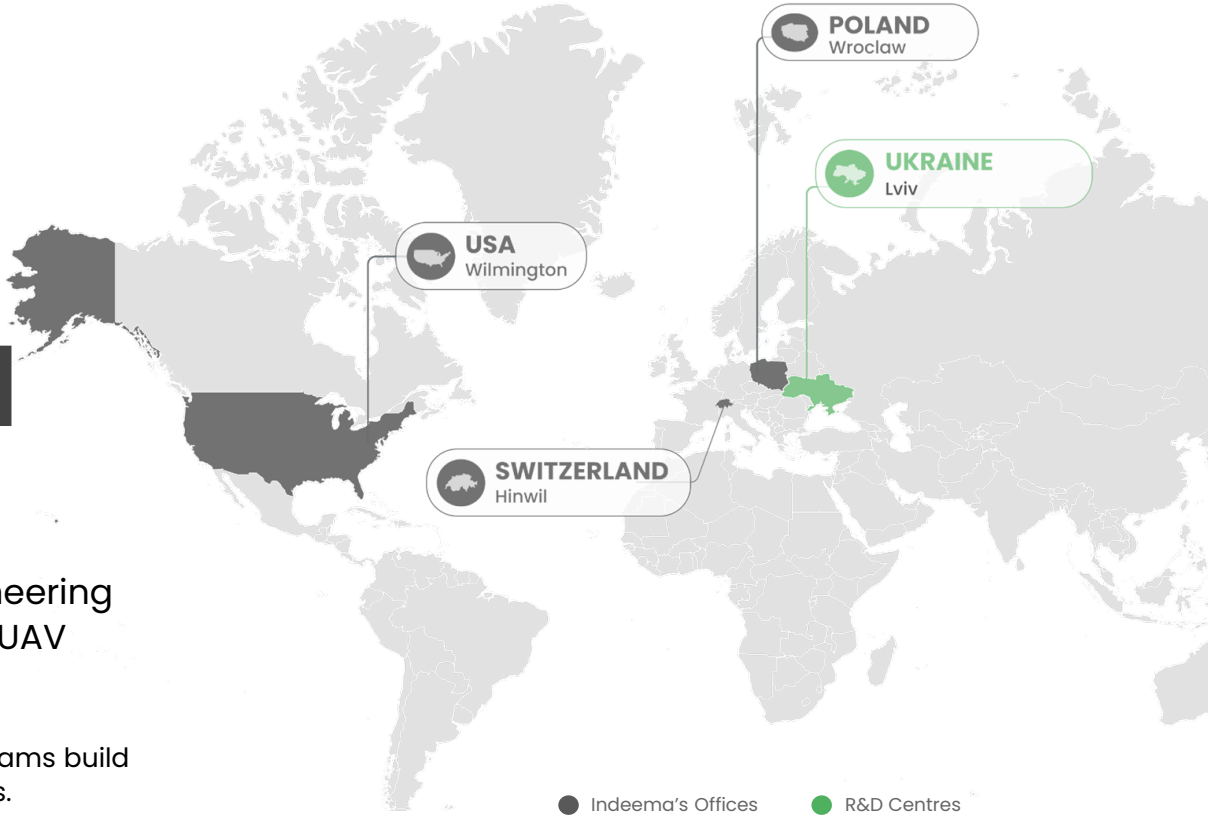
About Indeema



Indeema is a global full-cycle engineering company delivering mission-ready UAV solutions.

From embedded systems to AI software, our teams build drone technology for a wide range of industries.

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STRATEGIC GLOBAL PARTNERSHIPS

Indeema's success is powered by strong strategic partnerships that expand our expertise and accelerate innovation.

Collaborations with **AWS** and **Avnet** enable us to deliver secure, efficient, and future-ready IoT and UAV solutions to our clients.

aws PARTNER

AVNET IOT PARTNER PROGRAM MEMBER

AUTHORIZED MICROCHIP DESIGN PARTNER

BRAVE1 UKRAINIAN DEFENSE INNOVATIONS

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DRIVING INNOVATION ACROSS THE UAV DOMAIN

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SCHEDULE A CALL

Schedule

We Don't Just Build Hardware, Firmware, And Software.
We Bring The Power Of The Connected World To Businesses.

Additional Resources

Global Drone Market Overview

Market Growth

Commercial **UAV market** growth projected by 2030 (Statista):

$58B

Trends

Industry moves toward **end-to-end solutions:**



Drone → **Cloud** → **Insight**

Opportunity: Businesses seek **secure, connected UAV solutions** to unlock real-time insights and maximize operational value.

Current Challenges

High cost of integration	Many UAV solutions require expensive, one-off backend and IoT builds.
Disconnected systems	Most UAVs still rely on local storage and manual data transfer, blocking live telemetry.
Specialized expertise	Building dashboards and analytics from scratch is time-consuming.
Lack of standard connectivity	Inconsistent hardware and protocols complicate integration.

Impact: Longer deployments, higher costs, and slower, less data-driven decisions.