



# Dronehub.ai Booklet

**Automated industrial drones, all-weather hubs, and AI-powered software for inspections, deliveries and data collection.**

Dronehub helps industries automate data collection and data processing to accelerate business decisions. It is the European leader in comprehensive drone-in-a-box solutions including drone, docking station, and AI-powered software. We replace hazardous man-hours with a solution that collects intelligent drone data in a fully autonomous way.

Dronehub autonomous drone-in-a-box is designed to be used without a human operator. It combines ground infrastructure, advanced unmanned vehicles, and AI-powered software. As such, Dronehub is the future of data collection and asset management

SECURITY | MONITORING | INSPECTION | MEASUREMENT | DATA ANALYTICS | INDUSTRY REPORTS  
OIL AND GAS | RAILWAY | PUBLIC SAFETY | CRITICAL INFRASTRUCTURE | CARGO DELIVERIES

DRONEHUB





## Dronehub docking station - high-end, heavy-duty solution for all-weather conditions.

The world's first hubs for monitoring, cargo deliveries and mobile operations.

### MONITORING HUB

- The hub replaces the drone's battery in just 2 minutes thanks to a patent-pending auto-switching system enabling uninterrupted drone service 24/7.
- The hub is equipped with climate control & a weather station - it can operate under ALL weather conditions making it perfect for outdoor use.
- Intelligent Battery Management keeps the drone batteries at optimum temperature level, significantly extending their lifetime and performance during flight.
- The heavy-duty specification makes it truly vandal-proof and theft-resistant for most demanding use cases.
- Elon Musk's Starlink compatibility is already under development (provides 100% geographical coverage in Europe by 2022).



### CARGO HUB

- Designed as a "post-machine" to quickly deliver parcels from one hub to another.
- Automated drone loading and unloading process.
- Hub enables 24/7/365 flexible deliveries, including the option to deliver parcels in the evening or on Saturdays and Sundays.
- Deliveries to alternative locations (in case customers are away from home and miss package delivery attempts).
- Safe shipment method. The air delivery helps to avoid signs of loss or damage caused by traditional road transportation.
- Enhanced level of security because of fewer conflicts between delivery vehicles and other travel modes.
- Thanks to its reliability, Cargo hub is designed for time-sensitive deliveries in the urban environment, such as medicine, and for deliveries that would be difficult to make using traditional vehicles.
- Faster mode of transport suitable for transporting goods to any part of the world.

### MOBILE HUB

- It can be deployed ad-hoc at any location when drone services are required.
- The auto-leveling platform (patent-pending) enables all-terrain usage, including on a boat (for offshore projects).
- Made to service the drone automatically – without human intervention.
- Thanks to the remote drone operations center, an operator is not going to have to be in the place of completing a mission. The hub enables drones to land and recharge without the need for a drone operator.



## Custom-designed, industrial-grade, all-weather UAVs

### UAV for inspection and monitoring

- 2-3x longer battery life vs industry-standard - the drone battery is surrounded by a custom-designed, kevlar/carbon-fiber case, which protects it from the environment during the flight.
- All-weather conditions thanks to constant temperature in the hub.
- Real-Time Kinematics allowing 1-2 cm precision (better than GPS). RTK base station is integrated with hub.
- Universal Sensor Connector in the Drone (multiple cameras). LiDAR/Radar/FLIR/custom sensors compatible - automatically changeable inside Dronehub.
- Range up to 35 km, wind up to 15 m/s (it can cover 40ha area within 30mins flight).
- Long Range WiFi antenna for data transfer (10-15km range) providing 3C (command, control & user data communication).
- Optional C2 and data link via LTE and 5G
- Components redundancy (secondary critical parts like GPS, IMU placed for safety).
- Pyrotechnics emergency-landing parachute.
- End2End AES-256 Data Encryption.



### UAV with cargo module

- Fully autonomous.
- Prepared for operations in the wide specter of weather conditions.
- Max. flight time with 2,5 kg payload: 34 min.
- Max. flight time with 5 kg payload: 28.5 min.
- Max. speed: 20 m/s.
- Payload capability up to 5 kg and 15 km range.





# Dronehub Unmanned Analytics (DUA) Platform

## New industry standard in drone services

### Our workflow-based software was designed with scale in mind:

- Integration with 3rd party data systems like IBM cloud and Watson - we are independent of any data provider.
- Dronehub software enables fast data analysis using top-market IBM ML algorithms.
- API software enables integration with other service providers like IBM Watson® to process raw data collected by drones.
- Our customers get access to top-class ML algorithms.
- New integrations can be implemented within minutes (not days) thanks to workflow-based architecture (like IFTTT or Zapier).
- Cloud application enables live mission control.
- 1 operator can control multiple drones & dronehubs.
- Cloud management platform for various use cases.
- AI application created to learn from data collected by drones.



Dronehub is the official EU drone partner of IBM, European Space Agency (ESA) and European Defence Agency (EDA) - ready for public safety deployment.



### Dronehub and RCS Engineering - innovative property security system with drones.

RSC Engineering is a supplier of innovative teletechnical solutions related to the safety of people and property. The company specializes in perimeter protection of facilities with the use of wireless detectors mounted on a fence.



RCS Engineering integrates its technology with Dronehub to create an innovative monitoring and security system based on breach detectors that trigger an autonomous control raid of the drone. The integration of both companies will consist of combining the drone solutions provided by Dronehub with the building infrastructure management software with which RCS Engineering is integrated.

- The solution improves the level of security and reduces the cost of protecting the industrial and critical facilities.
- Increase the security of the facility while reducing costs and human labor.
- Allows managing accidents and information from various systems and buildings in one coherent interface.
- Increase the safety of facilities, significantly reducing the risk of adverse events, such as fire or burglary.

