Dronehub.ai datasheet

Autonomous all terrain hubs, industrial drones and AI-powered drone operations for inspection and deliveries.

Dronehub is a European leader in comprehensive drone-in-a-box solutions, which include industrial-grade drones, drone ground infrastructure, and AI-based software.

It is the only manufacturer in the world that offers an end2end system for various scenarios, including monitoring, inspection, and measurement system, cargo transport system, and mobile drone in a box solution. The measurement system enables to automation of drone operations and analyzes data with the power of Artificial Intelligence.

Dronehub is also the only European producer of a docking station with automatic battery replacement in a drone. Thanks to this innovative solution, drones can perform missions 24/7 without human intervention. Dronehub is the official partner of IBM, as the only drone manufacturer in Europe. The company cooperates with the European Space Agency and the European Defense Agency.

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Why Dronehub?

World's first
Mobile hub

It can be deployed ad-hoc at any location where drone services are required. The auto-leveling platform (patent-pending) enables all-terrain usage, including on a boat (for offshore projects).

All- weather hubs

The hub is equipped with climate control & a weather station - it can operate under all weather conditions making it perfect for 24/7 outdoor use. A climate control module allows controlling the temperature and humidity inside and to heat.

Operates
24/7

We provide uninterrupted, true 24/7, automated drone operations thanks to patent-pending battery-swapping and data-transfer technology.

All- purpose system

The exchangeable sensor mechanism allows changing of the cameras automatically so the drone could be used for multiple use cases. Multiple cameras can be used and exchanged in the drone automatically upon the client’s request.

2 mins. battery exchange

Dronehub is the world’s first hub with battery exchange. The hub replaces the drone’s battery in just 2 minutes thanks to a patent-pending an auto-switching system enabling uninterrupted drone service.

Intelligent Battery Management

To keep the drone batteries at optimum temperature level, dramatically extending its lifetime and performance during flight.

The Cartesian Mechanism in the battery

It has high reliability and precision when operating in three-dimensional space.
As a robot coordinate system, it is also effective for horizontal travel and for stacking bins.

Multiple battery storage (9 slots)

The ability to store energy on-site and use that power when required is an increasingly important capability for large manufacturing and industrial sites. On-board batteries power 24/7 drone operations.

Real-Time Kinematics

Allowing 1-2 cm precision (better than GPS). RTK technology allows the more accurately correct image location, in real-time as it flies.

Heavy duty
specification

Makes it truly vandal-proof and theft-resistant for most demanding use-cases.

API based software

API software enables integration with other service providers like IBM Maximo Visual Inspection to process raw data collected by drones.

Auto-positioning
landing plate

The auto-leveling platform (patent-pending) enables all-terrain usage, especially if it is mounted on a movable vehicle including on a boat (for offshore projects).

Technical specification

	Monitoring hub	Cargo hub	Mobile hub
Electrical characteristics			
Power supply	230V /3P 400V	230V /3P 400V	230V /3P 400V
Input frequency	50-60 Hz	50-60 Hz	50-60 Hz
Dimensions	2100 x 2100 x 1150 mm	2330 x 2650 x 2230 mm	2000 x 2000 x 1500
Weight	750kg	1200kg	900kg
Working area	2100 x 4300 mm	2330 x 5300 mm	2000 x 2000 mm
Roof	Sliding on both sides	Sliding on both sides	Integrated

	Monitoring hub	Cargo hub	Mobile hub
Communication interface			
Local network interfaces	Ethernet (RJ-45)	Ethernet (RJ-45)	Ethernet (RJ-45)
Network interfaces	3G / 4G / LTE / WiFi 2.4G/ETH	3G / 4G / LTE / WiFi 2.4G/ETH	3G / 4G / LTE / WiFi 2.4G/ETH
Remote control	Dronehub Operator application/ API	Dronehub Operator application/ API	Dronehub Operator application/ API
Environmental			
Protection	IP65 (weatherproof and dustproof)	IP65 (weatherproof and dustproof)	IP65 (weatherproof and dustproof)
Temperatures	-40°C – +60°C	-40°C – +60°C	-40°C – +60°C
Construction	Stainless steel/Aluminium	Stainless steel/Aluminium	Stainless steel/Aluminium
Charging system			
Power supply	230V	230V	230V
Input frequency	50Hz	50Hz	50Hz
Protection	IP65	IP65	IP65
Output voltage	25-50Vdc	25-50Vdc	25-50Vdc
Output current	5-40A	5-40A	5-40A
Output power	125-2000W	125-2000W	

Drone

Drone type	Hexacopter
Weight	5780g
Max. payload weight	1500g
Wingspan	900mm
Battery capacities	22.2V
Battery type	Li-Po battery 22ah 6S
Radio link	Wi-Fi 2,4GHz

Operations	
Flight speed	15m/s
Max flight time	40min
Max flight distance	20km
Wind resistance	14m/s
Operating temperature range	-10°C – 40°C

Sensors

Thermal Camera Specification	
Resolution Mode	Super Resolution Mode 1 266px IR images in one shot
10x Optical Antivibration zoom	Full HD 10x optical zoom camera with anti-vibration compensation
IR camera resolution	640 x 512 pixels
IR Super Resolution Mode	1 266 x 1 010 pixels (improvement of native resolution up to 1.3 Mpx)
Accuracy	±2 % or ±2 °C (in temperature range -10 °C to +150°C and 0 °C to +550°C, after stabilization, climate chamber and black body testing for all products)
Frame rate	30 Hz or < 9 Hz
Available lenses	18°, 32°, 45°, 69° (exchangeable lenses, all calibrated)
IR Digital zoom	1 – 12x continuous

Digital visual camera	
Resolution	1 920 x 1 080 pixels (Full HD), 1/3” sensor, Auto white balance, Wide dynamic range, Backlight compensation, Exposure and Gamma control
Optical zoom	10x optical zoom with vibration compensation
View angle	ultra zoom 6.9° - extra wide 58.2°, focal 33.0 mm - 3.3 mm
Noise reduction	Special 3D noise reduction function
Focus	Autofocus with Direct Focus Zoom synchronization

Dronehub Unmanned Analytics (DUA)

- Proprietary flight control and data management software
- Secure (AES-256 encrypted) communication system between hub and drone
- AI application created to analyze data collected by drones
- Cloud management platform or standalone server for various use cases
- AI algorithms for object detection, analysis, and recording of information on the ground
- Integration with 3rd party software providers
- API Based software
- GUI based workflow automation software
- Access to 3rd party Machine Learning algorithms
- Central system for multiple hub/drone’s operations management