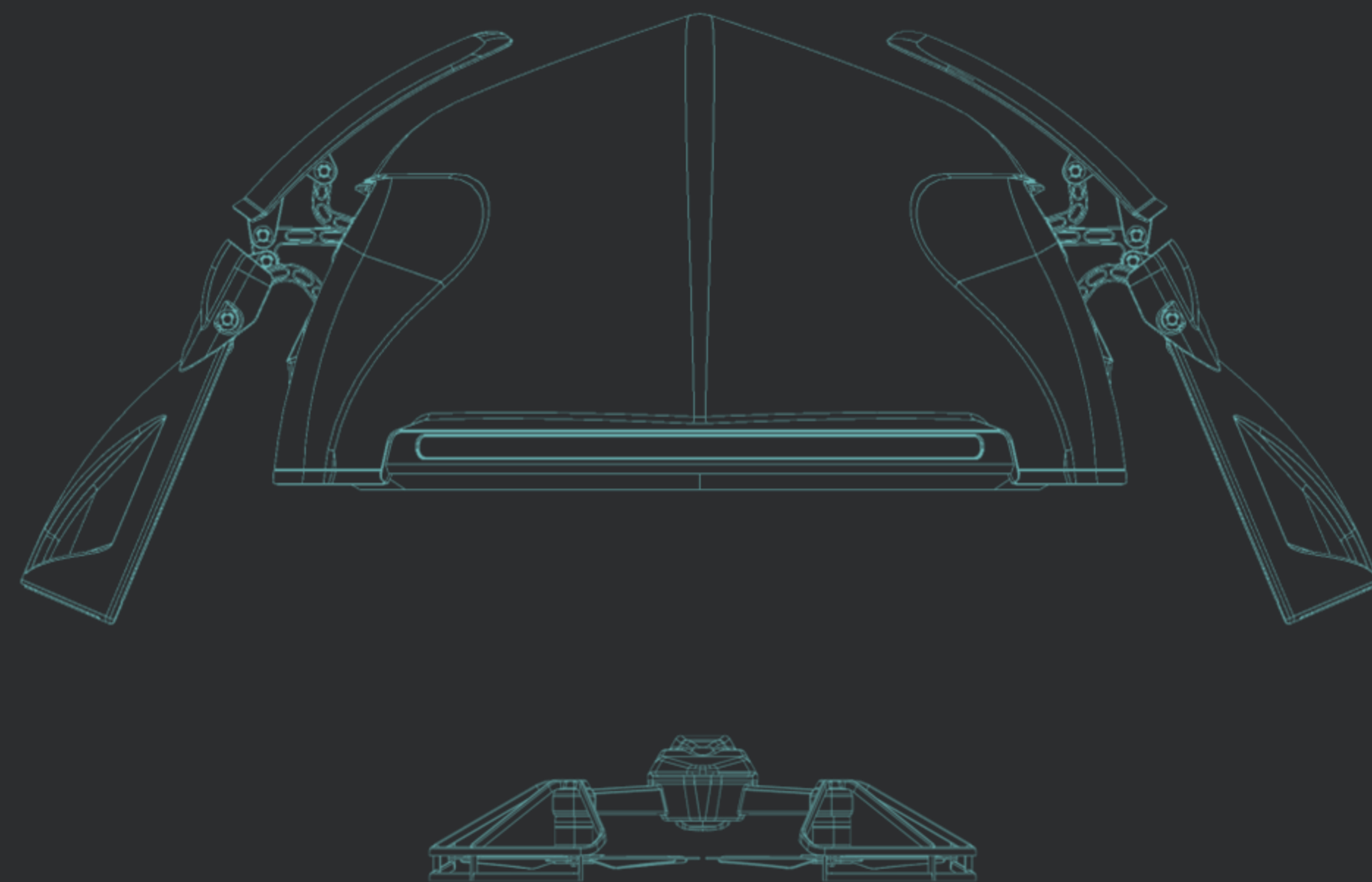




Dronus

DRONUS SYSTEMS

Drone in-a-box solutions



Dronus, an innovative small enterprise based in Trieste, is Italy's market leader in **industrial drone production**, specializing in **drone-in-a-box solutions**. These autonomous UAV systems operate from self-contained boxes that serve as landing pads, charging stations, and management hubs.

At the core of this technology is **NEST®**, a **patented aerial base** that autonomously handles all flight operations, including take-off, landing, and battery charging, ensuring precision and reliability. NEST® is easily installable, operates in adverse weather, and utilizes predictive maintenance software with 5G connectivity across public and private networks, with patents registered in several countries worldwide.

Our history



2018 - Establishment of the company

Dronus was founded in Trieste by Marco Ballerini together with a group of expert engineers.



2019 - International patent

The International Authority granted the patent title for the Nest charging station designed and developed by Dronus.



2019 - Capital increase

The entry of a group of investors provided Dronus with significant startup capital, which was crucial to finance its initial phase of development.



2019 - Change of legal form

With the entry of the new funds it became a joint-stock company.

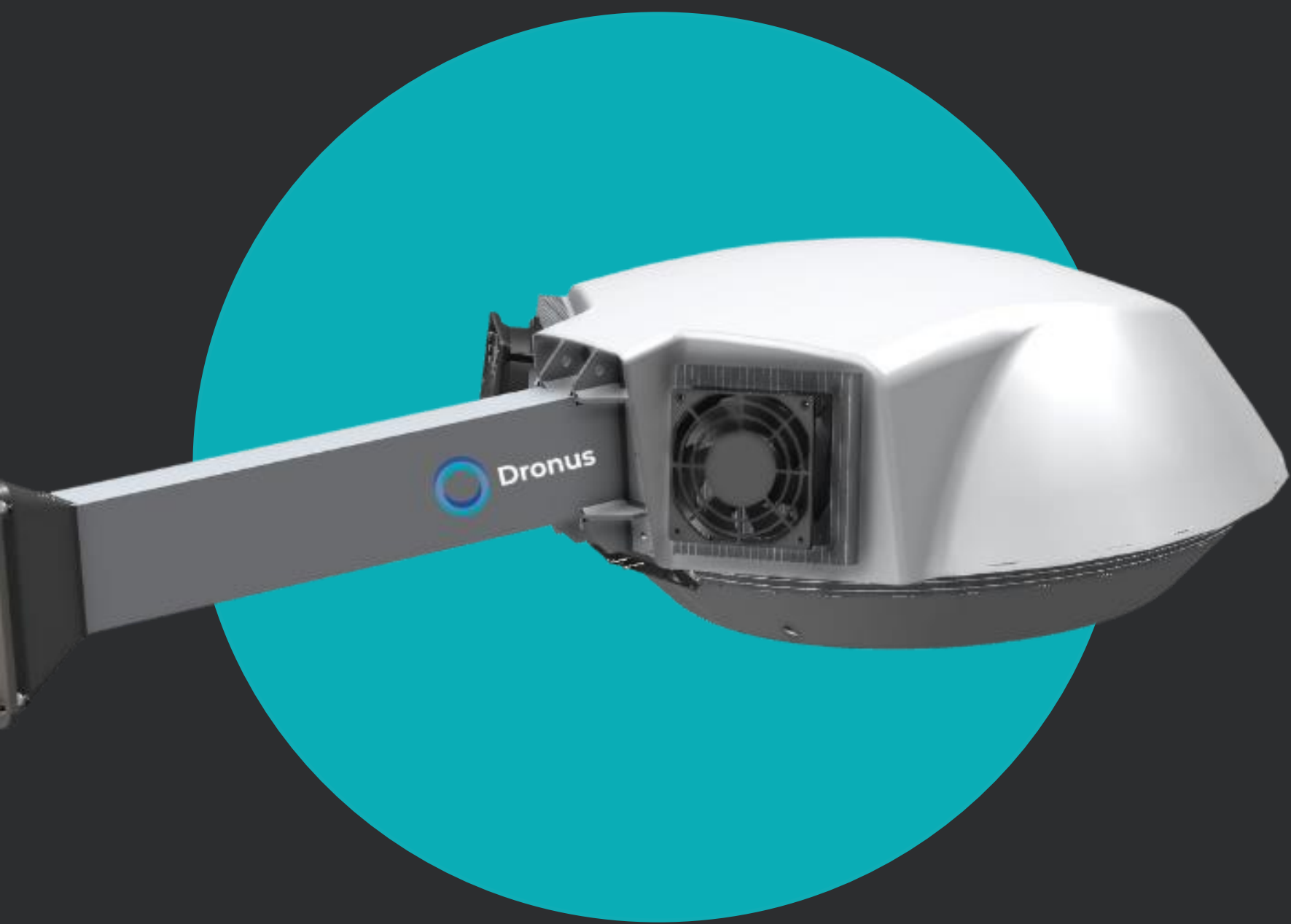


2020 - Siralab acquisition

Dronus purchased 70% of Siralab Robotics, one of the main Italian players in robotics and mechatronics technology.



Datasheet – NEST®



NEST® system – Just for representative purposes

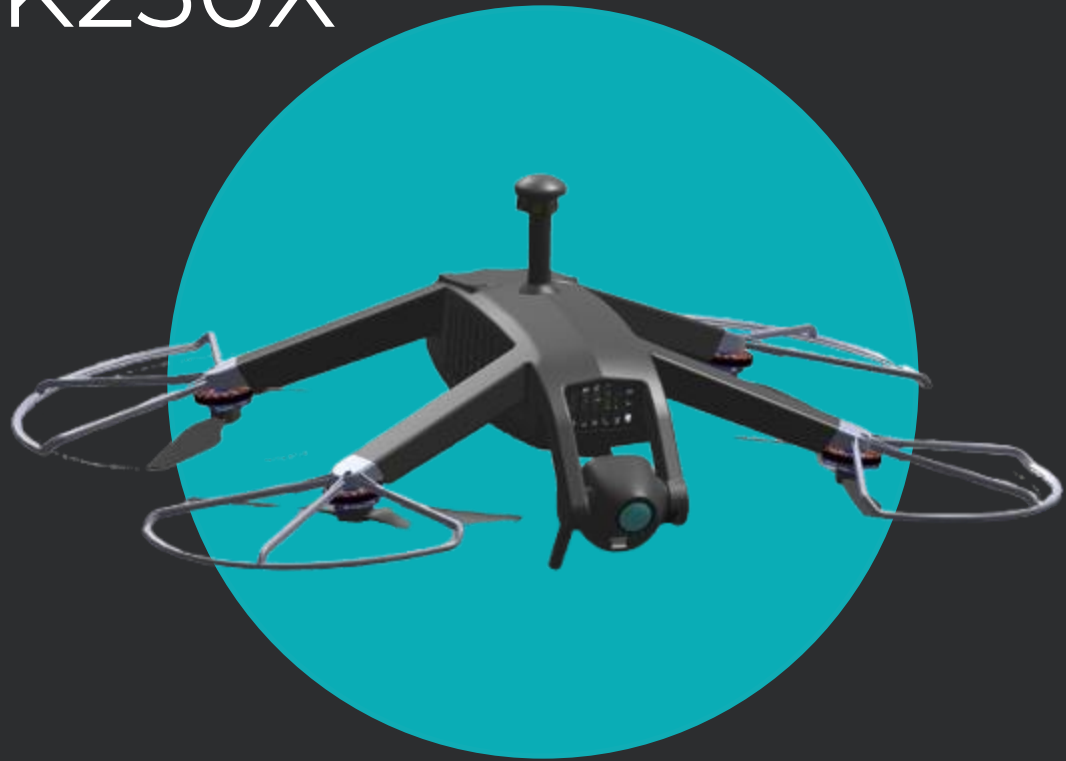
NEST® datasheet*

Weight	40 lbs (18.5 kg)
Dimensions	26 x 26 x 12 inch (65 x 65 x 30 cm)
Connectivity	Ethernet, 4G, 5G, Wi-Fi
Operating temperature	-20°C to +50°C (+60°C N.O.)
Mechanical I/F	4 screw M8
Video Broadcast	Up to 4K to 30fps

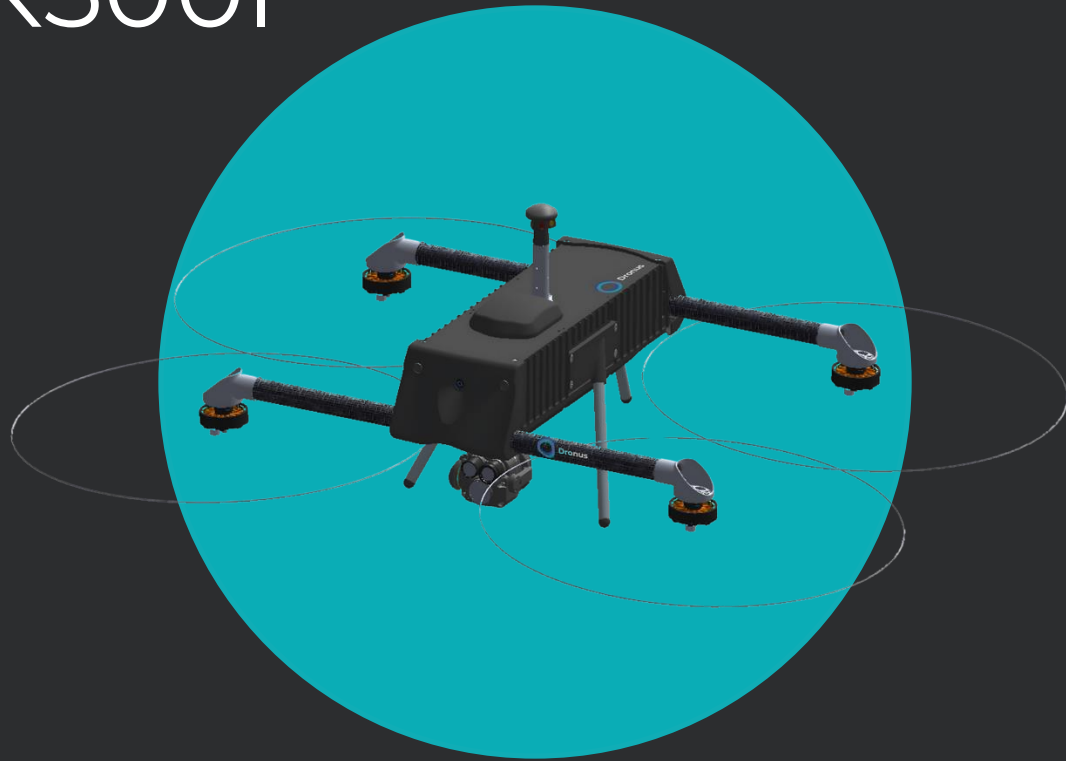
* Please note that this datasheet may be subject to change and may be updated to reflect the latest version of the system.

DRONUS UAS

K250X



K500I



K500L



KRYPTON



K3



K250X

The K250X is a harmless category drone with a total weight of less than 340 grams, making it suitable for flying over sparsely populated areas. It is equipped with sophisticated autonomous takeoff/docking and charging technology. Operators can monitor missions in real-time directly through the command and control center management system. The K250X autonomously communicates with the NEST® base via real-time high-definition data and image streaming.

Weight	0.75 lbs (340gr)
Dimensions	11" x 10" x 6" (28x25x15cm)
Flight time	Up to 25 min
Operating frequency	2.4 to 2.483 GHz, 5G
Optical camera	1080p Video (Full HD)
Thermal camera	160x120 px 57° FoV



Drone K250X – Just for representative purposes



Security

Despite the use of the most sophisticated video surveillance systems, perimeter, facility, and access control security has its limitations. Cameras are fixed and cannot provide a bird's-eye view; the same goes for security personnel.

The NEST®250 system can be programmed to operate autonomously remotely on demand. It can conduct scheduled or random perimeter patrols by time and route in the most vulnerable areas of industrial sites (gates, parking lots, warehouses, facilities) or in sensitive sites (data centers, banks).

Smart City

For Smart City projects, NEST®250 can be used in a wide range of applications such as traffic monitoring, infrastructure inspection, emergency management, security in public spaces, environmental disaster prevention for all those fields that may benefit from an aerial system capable of performing fully autonomous and complex missions remotely.

A solution which is particularly effective to meet the need for a better surveillance, security and overall protection of a city by detecting and reporting violations in real time

Automatic response

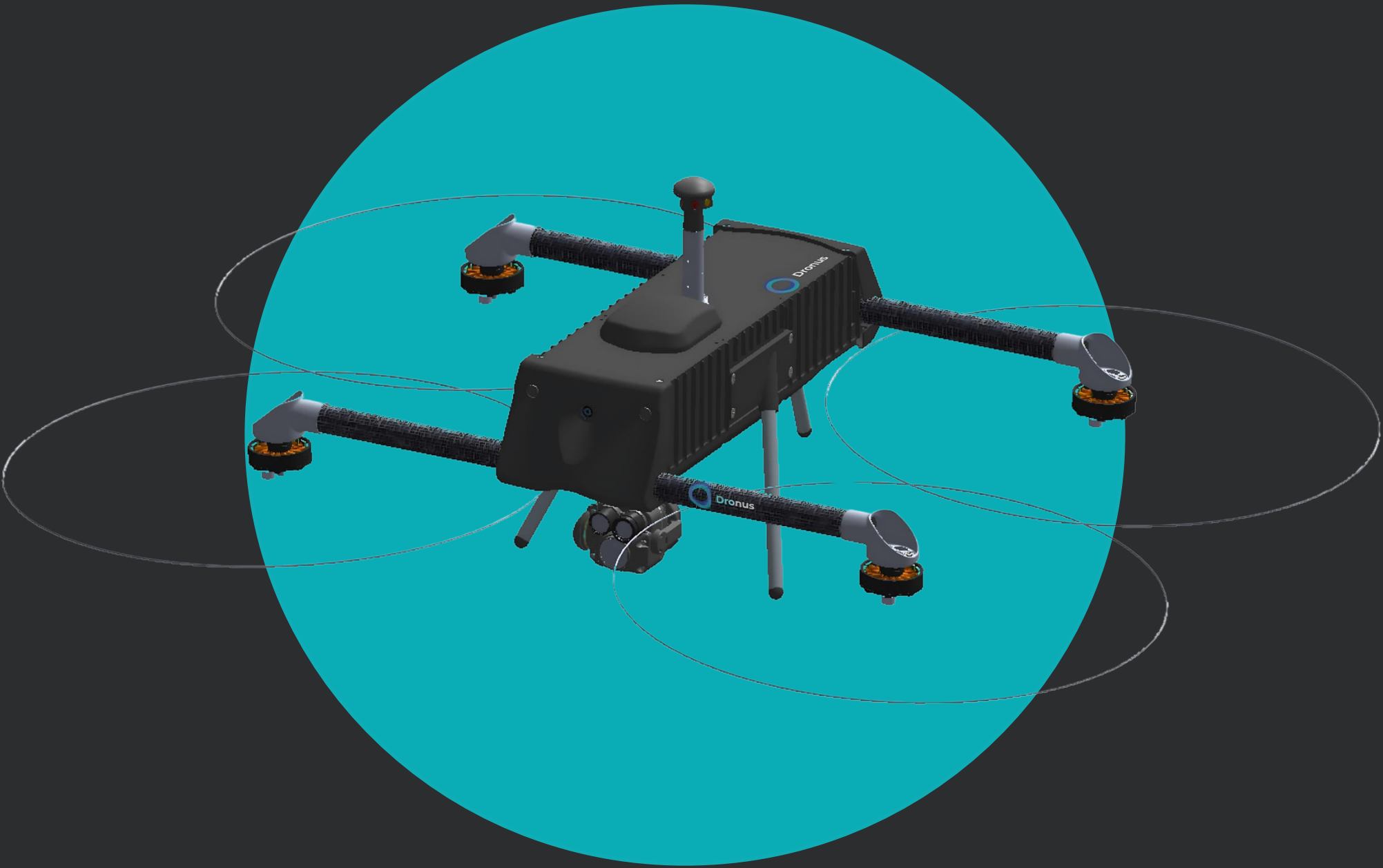
Upon activation of a security alarm, the system automatically sends (if provided) the location of the alarm source to the drone, which, following pre-planned logic, takes off autonomously, reaches the "alarmed" point, and transmits live video to the security team in the control room.

K500I

The K500I drone autonomously communicates with the NEST® base via a high-definition data and image stream in real time.

The design focuses on maximizing efficiency and reducing acoustic and visual invasiveness. Thanks to the combination of high-performance cameras and optical and thermal sensors, it can autonomously perform scheduled surveillance and inspection services with a wide range of actions. It is able to calculate its remaining flight time and return to the nearest NEST® base for recharging.

Weight	3.5 lbs (1,6kg)
Dimensions	17"x12"x8" (43x32x21cm)
Flight time	Up to 35 min
Operating frequency	2.4 to 2.483 GHz, 5G
Optical camera	Resolution 1280x720; Zoom: 20x optical + 2x digital
Thermal camera	Resolution 640x480; Zoom x4 continous digital



Drone K500I – Just for representative purposes



Scheduled inspection & monitoring

The system optimizes inspection cycles, even in hard-to-reach facilities, by detecting potential anomalies and malfunctions. Through advanced detection methods such as aerial photogrammetry, qualitative thermography, and morphological reconstruction (DSM), it enables continuous monitoring of facility status. This not only prevents issues before they occur but also provides real-time alerts about potential failures, significantly reducing the need for personnel intervention.

Dynamic security and control

The K500I drone is capable of conducting real-time "patrols" along a predetermined route, offering remote visual support. It can also monitor and assist entry points and guard stations to enhance overall security.

Patrols can be programmed by simply entering waypoints via the user interface; the drone can automatically follow the set route, pausing at designated points of interest or inspection for a predetermined duration. This allows the remote operator to oversee and examine the object of interest in real time.

Data analysis

The algorithm can be specifically trained to analyze the videos and images captured by the drone. With this data, we can optimize it to identify illegal activities, vehicles, people, unauthorized objects, and more. The level of customization and refinement depends on the specific needs of the customer.

K500L

With a similar design of the K500I, the L release integrate new sensors for the bar code reading and RFID detection.

Capable of providing a complete view of the warehouse through high resolution cameras for scanning barcodes, able to quickly identify the disposition of goods, share it with any WMS system owned by the customer and perform real-time analysis activities.

The drone calculates the remaining flight time and automatically returns to the nearest available NEST base to recharge, following a logic of constant learning.

Weight	3.5 lbs (1.6kg)
Dimensions	18"x12"x9" (46x30x23cm)
Flight time	Up to 35 min
Operating frequency	2.4 to 2.483 GHz, 5G
Sensors	Barcode/RFID reader



Drone K500L – Just for representative purposes

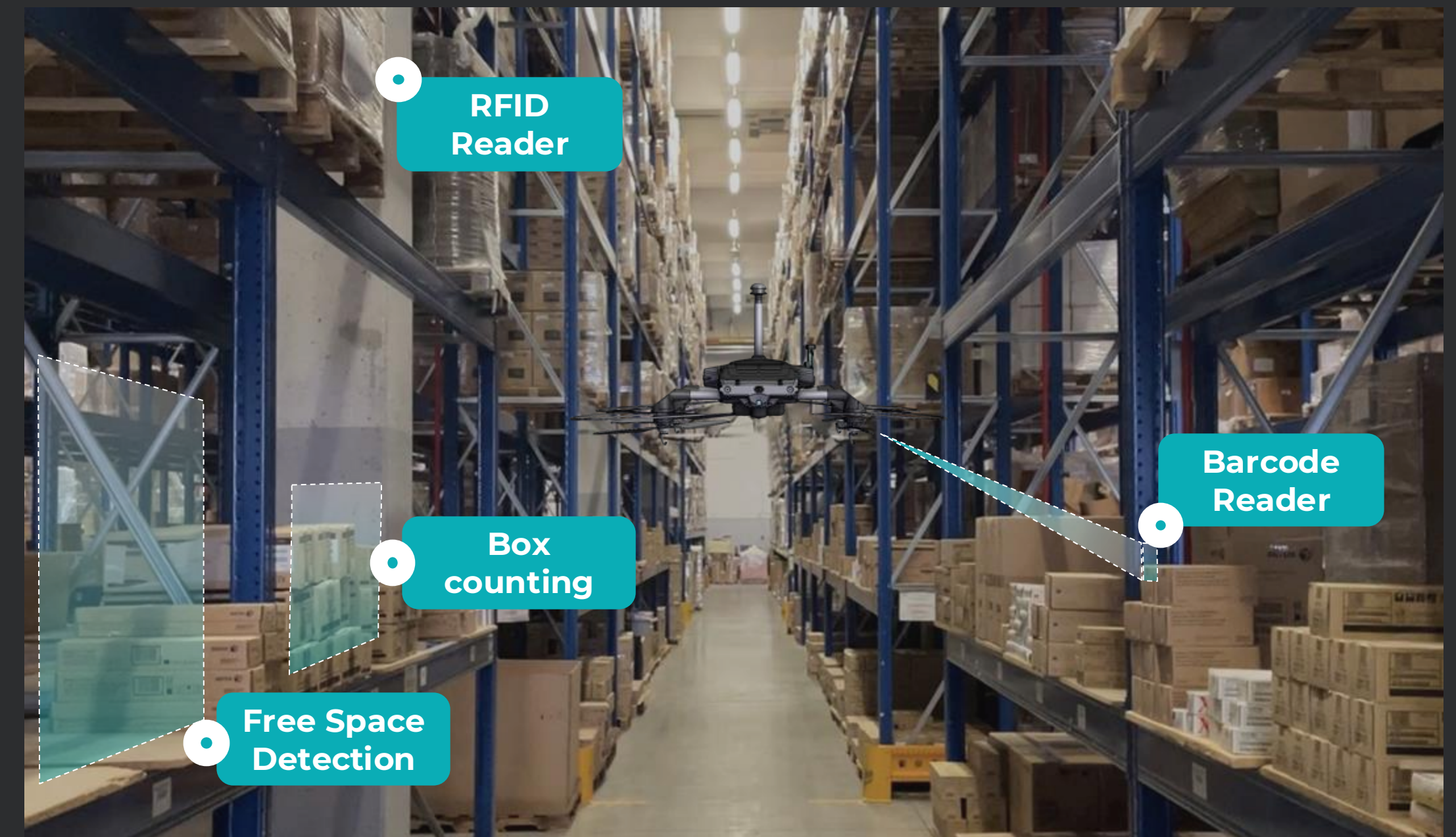
K500L - Warehouse IOT LOGISTICS

With the use of mounted sensors (barcode readers or RFID sensors) **and AI, the drone is able to locate and inventory the goods.** Thanks to a specific software it can capture the image of the goods, recognize it and associate it to the positions already assigned inside of the warehouse with annexed analysis and management of the data.

Equipped with an anti-collision and centimetric localization system which allows autonomous navigation even in complex environments.

Benefits

- **Increased cost – effectiveness**
Lower costs by improving inventory accuracy and increasing the frequency of inventory counting.
- **Increased productivity and economic welfare**
An automated system together with RPA intuitive software, will effectively help warehouse operations reduce headcount, enhance business decisions, and stop lost inventory.



Krypton

The Krypton system is a fixed-wing aircraft capable of taking off and landing like a multi-rotor drone. Upon reaching the desired flight altitude, a transaction takes place, during which the rotors rotate from the vertical takeoff position to a horizontal flight position. In the landing phase, the reverse transaction takes place. Thanks to this solution, **the Krypton can perform long-range inspection and control missions while maintaining high flexibility in operations.** With a wingspan of only 1.65 m and a low weight (less than 2 kg), it combines VTOL vertical takeoff and landing capability with a strong focus on performance in terms of endurance and range.

Weight	Less than 2kg
Dimensions	65” x 24” x 99” (165 x 60 x 25 cm)
Connectivity	Wi-Fi, 4G, 5G
Flight time	Up to 1.5 hours
EO Camera	1280x720 Zoom x20 + x2 digital
Thermal Camera	640x480 Zoom x4 continous digital



Krypton – Just for representative purposes

Krypton - Patrolling

The Krypton, with its ability to quickly and efficiently monitor large areas is an invaluable solution for patrolling and ensuring a high level of security of any site, whether it is public or private.

The Krypton provides complete site coverage and enhances the standard of security with advanced artificial intelligence capabilities, thermo-optical cameras with very powerful zooms capable of framing details from distance. It avoids detection by possible malicious attackers, and it enables to receive and transmit data in real time.

The drone can easily plan and execute patrols and shifts autonomously, including launching and landing, planning charging time, coordinating input information, and providing complete coverage of the selected site.

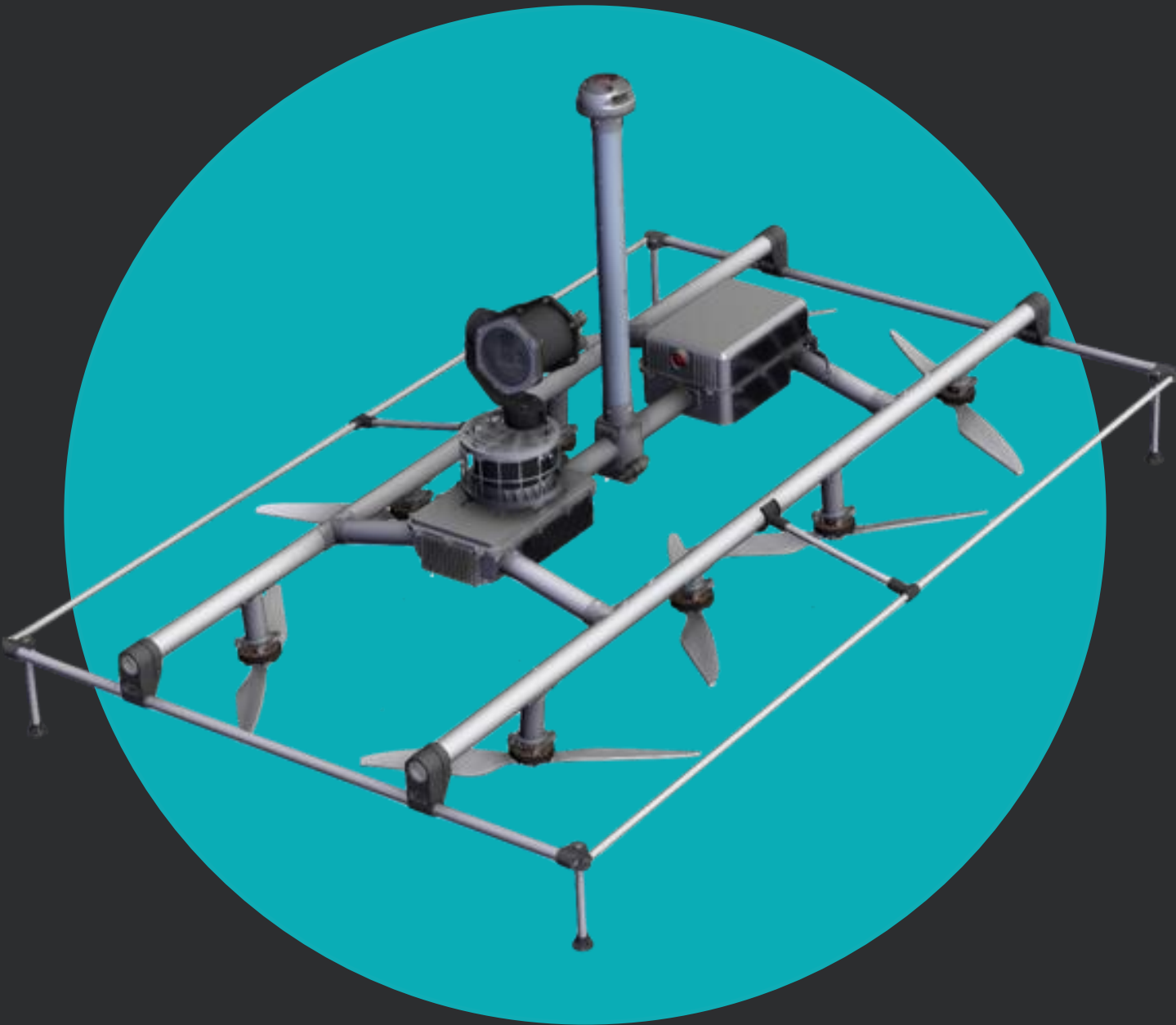


K3

The K3 is a drone designed for **automated industrial inspections** in complex and congested environments. Thanks to its high payload capacity (up to 1 kg) and **ATEX certification for Zone 2**, it can fly even in explosive environments, performing **gas measurements, leaks detection, thermographic analysis, and visual inspections**.

Zone 2 is an area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

Weight	11.9 lbs (5,4 kg)
Dimensions	45"x29"x24" (115x73x59cm)
Connectivity	Wi-Fi, 4G, 5G
Streaming Video	Up to 4K/30fps
Operating temperature	-20° ; +45°



Drone K3 – Just for representative purposes

K3 – Gas leaks detection

Thanks to its emission detection system, the drone can automatically and real-time alert of any potential gas leaks.

Being able to perform this type of operation using drones presents a significant advantage, as human lives are not put at risk and monitoring activities can be intensified.





Dronus

THANK YOU