Stereo3

Indoor Inspection Drone

viZaar industrial imaging AG ®
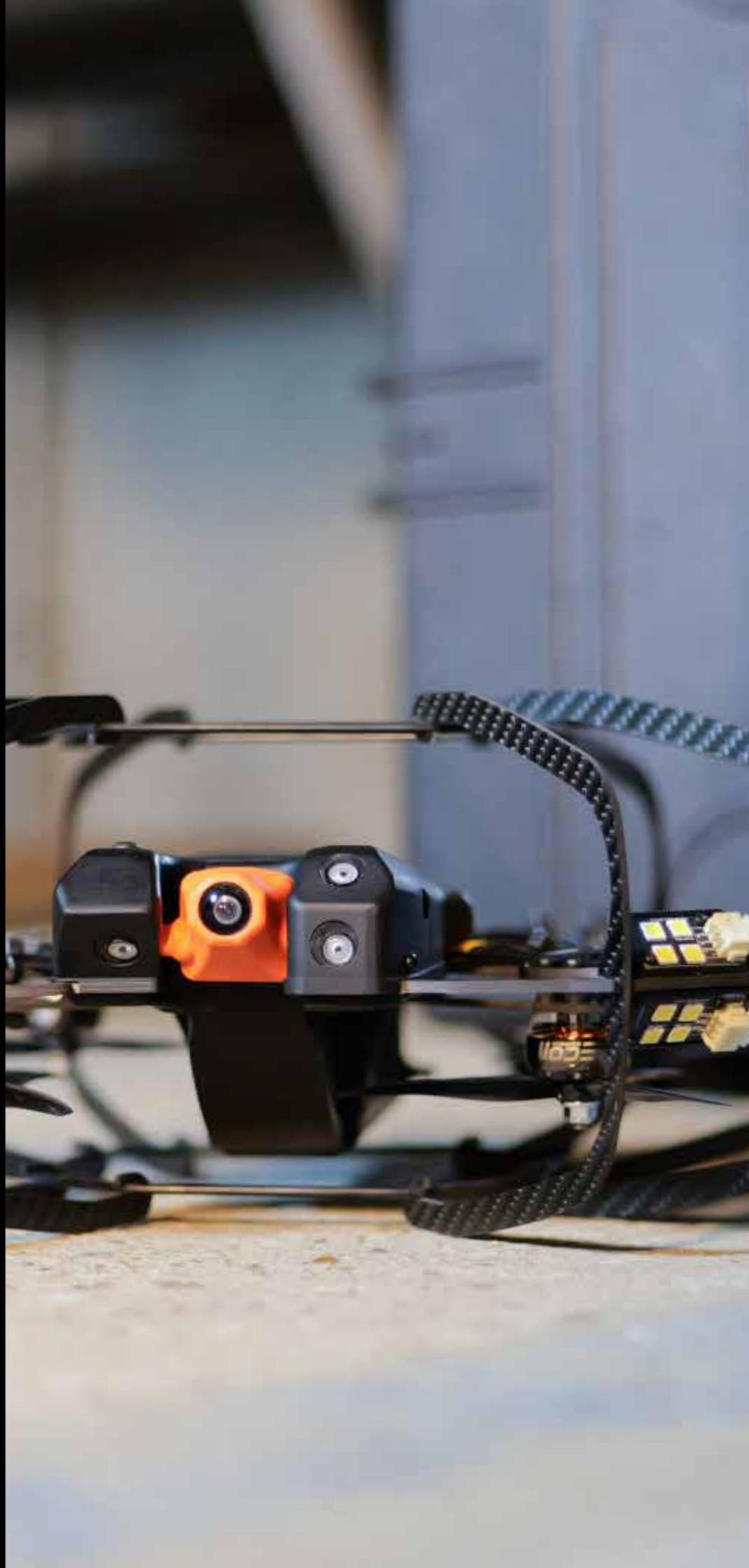
SUMMARY

01
AREAS OF APPLICATION

Confined Environments
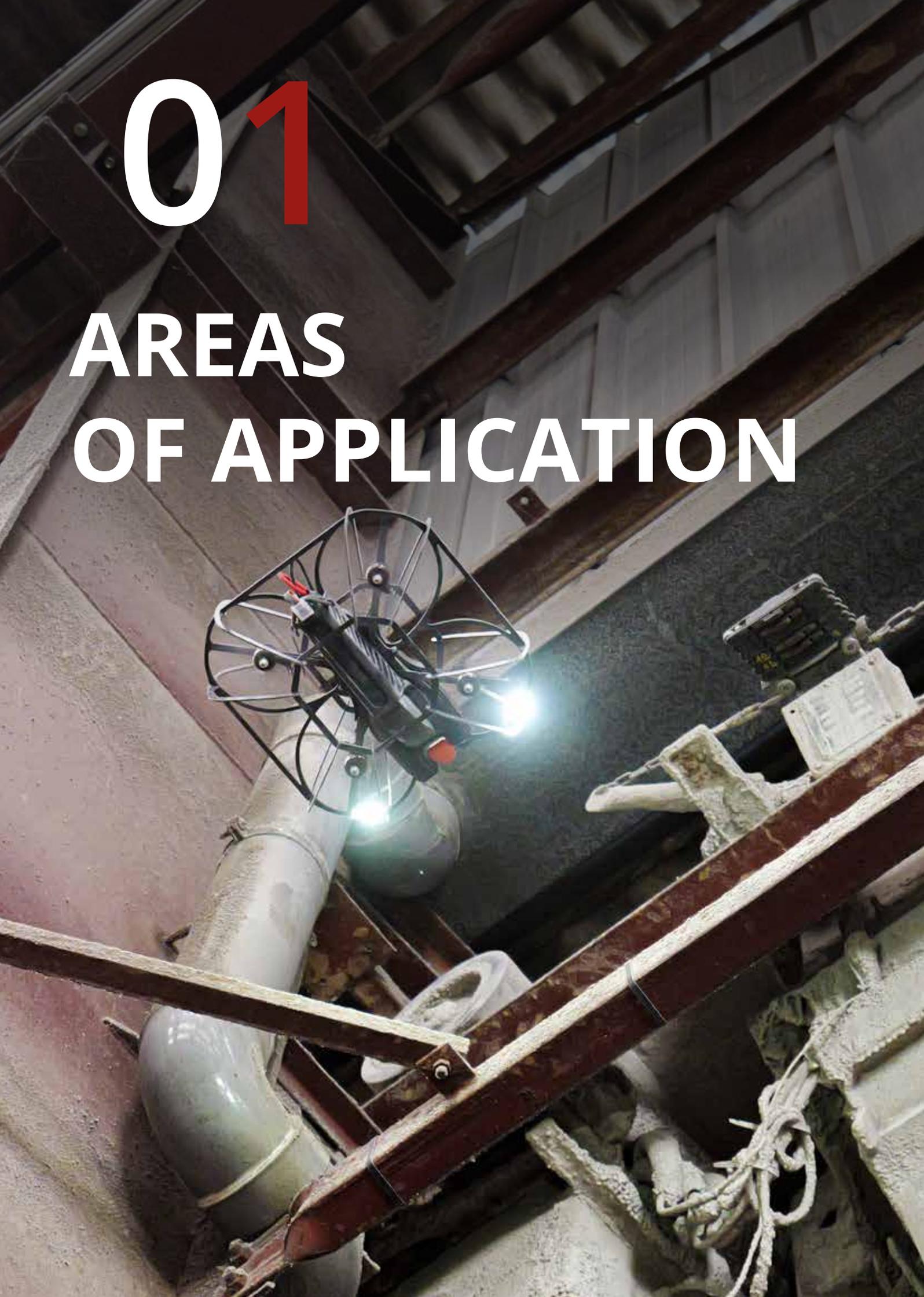
Inspecting confined spaces is a major challenge for industrial sites.

Whether it's silos, tanks, tunnels, pipes, or ship hulls, these hard-to-reach environments expose personnel to significant risks and make traditional inspection methods often complex and costly.

The Stereo 3 offers a reliable solution for working safely in these sensitive areas.

Its maneuverability indoors, stability in narrow passages, and ability to navigate cluttered environments allow it to quickly reach critical areas while drastically reducing human exposure to hazards related to confinement, height, or clutter.

Thanks to its precision and speed of deployment, the Stereo 3 modernizes inspection operations by reducing logistical constraints, optimizing the quality of observations, and improving the overall safety of interventions.

Industrial Sites

At industrial sites, inspection operations must combine efficiency, safety, and production continuity.

Between densely equipped areas, constantly evolving technical installations, and availability requirements, the tools deployed must provide reliable information without adding to logistical constraints or generating additional costs.

The Stereo 3 fits perfectly into this approach.

Its rapid implementation limits operational interruptions and reduces the need for heavy logistical equipment, which is often essential for traditional inspection methods.

It thus becomes a strategic tool, capable of supporting the daily demands of a modern industrial environment while improving the safety and overall performance of facilities.

Sewerage Systems

Sewage network management requires rigorous and constant monitoring of infrastructure.

Pipes, collectors, manholes, and treatment plants operate in environments subject to wear and tear, deposits, and hydraulic variations, all of which can quickly impair network performance.

For local authorities and operators, having a solution that can assess the condition of facilities without the need for heavy logistics is now a decisive advantage.

Designed to operate in the most difficult-to-access areas, the Stereo 3 allows the condition of networks to be monitored without the need for human intervention inside the pipes.
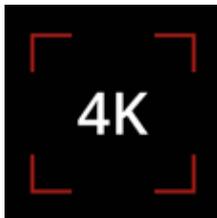
Its ability to move smoothly in confined spaces and maintain perfect stability in narrow environments ensures reliable and accurate inspection, even in the most challenging sections.

02

DISCOVER
THE Stereo 3

Design and Conception

The Stereo 3 has been designed from the ground up to meet the demands of indoor missions in confined spaces, combining precision, modernity, and ease of use.

Each element has been meticulously developed to guarantee exceptional maneuverability, an ultra-compact format, and optimized flight stability, offering perfect control even in the most confined environments.

Its mechanical and structural design has also been optimized to offer increased robustness and maximum resistance, ensuring reliable and consistent performance in the most demanding areas of operation.

Formats and Proportions

The Stereo 3 stands out thanks to its design, which makes it easy to transport and quick to deploy for indoor missions, even in the most confined spaces.

With its optical stabilization, the Stereo 3 ensures stable and precise navigation, even in confined environments, making it a high-performance solution for the most complex inspections.

03
CONTROL AND PERFORMANCE

4K Camera

The Stereo 3's 4K camera delivers exceptional image quality, with smooth 25 FPS recording that captures every detail with precision.

Thanks to its autofocus and automatic ISO adjustment, it adapts to changes in light to ensure sharp, balanced shots.

With 12 MP resolution and direct recording to the Stereo 3's internal storage, the camera combines performance and convenience for a reliable and immersive viewing experience.

Optical Stabilization

The Stereo 3 uses an advanced optical stabilization system based on three cameras, oriented in all directions to accurately capture the texture of the environment.

This omnidirectional analysis ensures precise and reliable stabilization, regardless of movement conditions, guaranteeing a smooth, stable, and consistent visual experience, even during rapid movement or in complex environments.

Advanced Telemetry

Radio Signal 1

On the radio control, an indicator displays the signal return between the machine and the radio. This display allows you to check the quality of the signal reception and ensure that communication between the two devices is working correctly.

Battery Level 2

An indicator displays the drone's battery charge level. This information allows you to monitor its flight time and ensure a safe return or landing before the battery becomes too low.

Altimetry 3

Thanks to its integrated altimeter, it instantly displays the height and depth at which the drone is flying, ensuring precise positioning in areas where every centimeter counts.

Flight time **4**

Flight time is recorded automatically, allowing you to accurately track the duration of operations and optimize mission management.

Distance traveled **5**

Thanks to continuous monitoring of the distance traveled, the device can accurately locate the areas inspected and any anomalies.

Stabilization Indicators **6**

The device's stabilization indicator provides instant visual feedback on the drone's stability: green for stable, yellow for average, red for unstable.

Speed Modes **7**

The device has three speed modes: Slow for precision, Medium for a balance between maneuverability and speed, and Fast for rapid movement in open areas.

Lighting System **8**

The device has four LED panels providing total illumination of up to 13,000 lumens, with four adjustable intensity levels to suit all conditions.

Operational Characteristics

HD Video Feedback

The 1080p video feedback provides a clear and detailed image of the surroundings, facilitating accurate observation of the elements around.

This image quality significantly improves the ability to navigate in difficult or inaccessible areas.

Lighting

In confined environments, light is often lacking, making visual inspection difficult or even impossible.

To compensate for this, the Stereo 3 features a wide, diffused, powerful, and dustproof lighting system delivering up to 13,000 lumens.

Autonomy

Its high-performance battery provides up to 12 minutes of autonomy, allowing for complete inspections in demanding environments.

It guarantees continuous and efficient use, optimizing mission productivity.

04

SUPPORTS AND ACCESSORIES

Range Extender

The Range Extender provides real freedom of placement, allowing the transmission and reception points to be installed where they will be most effective for your mission.

It significantly extends the range of the system and ensures reliable transmission, even when the environment complicates operations.

With this accessory, the Stereo 3 can be used at depths of up to 10 meters, while maintaining stable performance and perfectly controlled operation.

Additional Screen

Ensure control and coordination during your operations with the Stereo 3's additional screen.

It allows the pilot to remain fully focused on the radio control, while a second operator monitors the real-time video feed to double the vigilance.

This accessory is particularly useful in complex environments or during missions requiring simultaneous surveillance and optimal communication between pilot and observer.

05

TECHNICAL INFORMATION

General Data Stereo 3

All the essential specifications you need to understand the performance of the Stereo 3 at a glance.

CONFIGURATION	Quadrotor
ENGINES	4 motors – 1950 kv
PROPELLERS	4 three-bladed 5-inch propellers
WEIGHT (WITH BATTERY)	1300 g
DIMENSIONS (L × W × H)	34 × 33 × 15 cm
MATERIALS	Carbon, SLA
OPERATING TEMPERATURES	−20°C to +40°C
STABILIZATION	Optical cameras
FREQUENCY OF USE	2400 to 2483 MHz
STANDARD NORMS	CE / SRR / FCC / MIC
OPERATIONAL STANDARDS	IN84 (CNPE – RF output power < 50 mW)
LIGHTING	13,000 lumens
BATTERY TYPE	LiPo
CHARGING TIME	1 hour
FLIGHT MODES	Assisted / Manual
SOUND LEVEL	80 dB (A)

Camera

The technical specifications of the Stereo 3 camera are detailed here to highlight its main features.

SENSOR	4K Sony IMX477 / 12.3 MP
VIDEO FORMAT	MP4
PHOTO FORMAT	JPG
VIDEO RESOLUTION	3840 × 2160 – 25 fps
PHOTO RESOLUTION	3840 × 2160
METADATA	Georeferencing of photos in X/Y/Z
VIDEO STREAMING	1920 × 1080 – 30 fps
FIELD OF VIEW (FOV)	88° diagonal / 75° horizontal
LENS	2.1 mm – fixed focus
ISO	Automatic management
FILE BACKUP	100 GB internal storage
SUPPORTED FORMATS	FAT 32

Radio Control

This section presents the main technical specifications of the Stereo 3 radio control, allowing you to fully understand its features and performance.

OPERATING FREQUENCIES	2400 to 2483 MHz
STANDARD NORMS	CE / SRR / FCC / MIC
OPERATIONAL STANDARDS (EMC)	IN84 (CNPE – RF output power < 50 mW)
RADIO LINK	2.4 GHz – 20 dBm (CE) / 23 dBm (FCC), duplex
OUTDOOR RANGE	12 km (CE) / 20 km (FCC)
RANGE IN CONFINED SPACES	Up to 1,000 m
DISPLAY	5.46-inch touchscreen
WEIGHT	520 g
OPERATING TEMPERATURE	–20°C to +40°C
BATTERY	4950 mAh LiPo / USB charging
RECEPTION SENSITIVITY	–120 dBm
ANTENNAS	1 omnidirectional / 1 directional

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