

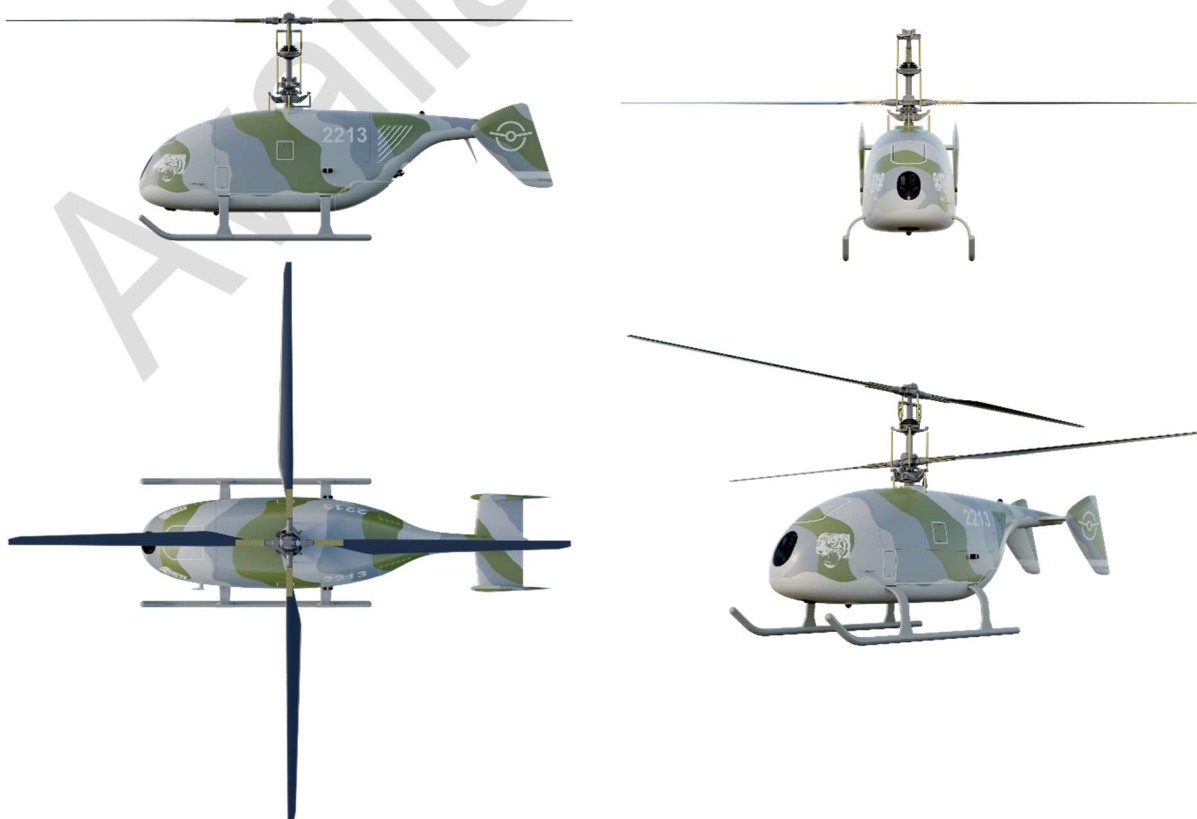
# RoboCopter

Width	70 in	1,775 mm
Height	81.9 in	2,080 mm
Fuselage length	184 in	4,675.5 mm
Rotor diameter	165.75 in	4,210 mm
DOM (Dry Operating Mass)	639 lbs	290 kg
Fuel capacity	30.1 US gal	114.2 liters
Maximum payload	551lbs	250 kg
MAUW (Maximum All Up Weight)	1,322 lbs	600 kg
Cruising speed	75 kts	139 km/hr
Maximum speed	98 kts	181 km/hr
Maximum endurance	6 hours	
Maximum hovering endurance	3.5 hours	
Range	155 miles	250 km
Telemetry range	100 miles	160 km

**Project (product) RoboCopter is the world's only fully autonomous robotic unmanned aerial vehicle (UAV) helicopter that is designed and complimented with features and functions integrated through end-user specification and demand. Developed by end-user mission requirements, the dynamic RoboCopter – UAV system provides a unique balance of advanced capabilities, operational flexibility and best-in-class performance. As a direct result of end-user demands, RoboCopter is able to either fly a fully autonomous pre-programmed mission or be under the constant command and control of a ground-based flight crew. RoboCopter is designed to EASA requirements and manned aviation standards ensuring ends been of reliability and safety in all mission roles. RoboCopter is designed for maximum performance in high and hot conditions and RoboCopter's robust design copes exceptionally well in wet and high wind conditions. RoboCopter is the master of complex terrain where no airfields or runways exist and has all weather capability beyond the performance envelop of all other UAV systems. With its complex array of flight guidance systems, avionics, synthetic flight vision, object sense and**

avoid detection and other safety-driven peripherals, end-users realize situational awareness benefits far exceeding other UAV systems. As a result of extensive use of artificial intelligence (AI), RoboCopter learns and shares its intelligence with other RoboCopter systems through an empirical database in real-time. Such high-tech enhancements are not available commercially with other UAV systems.

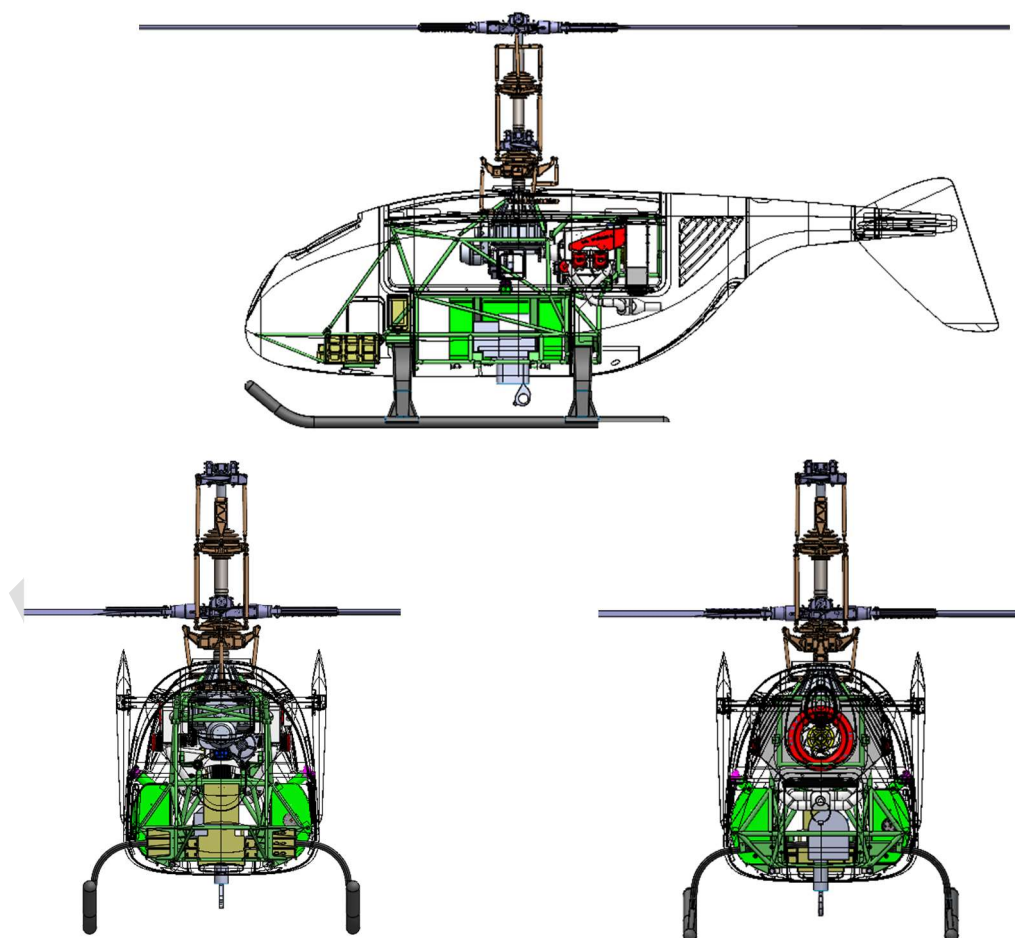
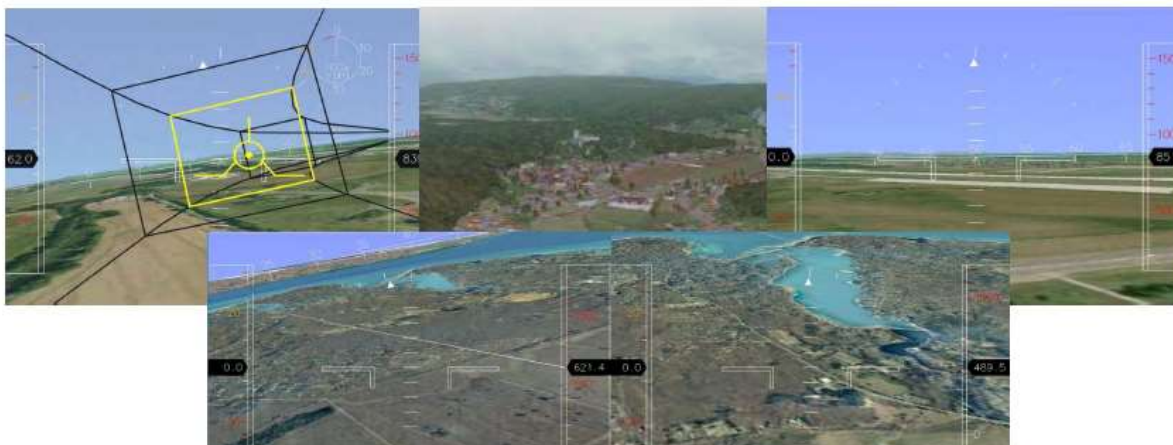
Co-axial rotor high efficiency, high stability, broad field of applications Long endurance (>4hours of flight)  
 Ceiling >4000m MSA  
 Professional design and projection  
 Helicopter and cargo module interface  
 In-height and landing cameras  
 Ballistic recovery parachute  
 In-flight and cargo telemetry  
 Transponder mode A, C, S  
 Surface finish as per customer's wish  
 Cargo module as per customer's specification  
 Power piston engines UL Power (total output 130 hp)  
 Airframe steel tube construction (L-CM3) with composite fuselage  
 Composite landing gear with Dural skids  
 The UAV is equipped with camera system and IR searchlight  
 12V el. system is powered with 2 generators (155W) and a backup 12 V battery. Avionics  
 Sense and Avoid  
 IFPS -inertial Flight Position System  
 DGPS Differential GPS  
 Altimeter and airspeed indicator  
 LASER Altimeter  
 Radar / Ladar  
 PCU -Pilot Control Unit  
 Measuring equipment  
 The SSR Transponder  
 The UAV is BRS (ballistic recovery system) equipped



## UpAvionics by ORLIČAN

**Vision 4D:** Revolutionary, proprietary, pilot guidance system. The pilot receives complete real-time flight data and images, enabling precise and safe flight. A key feature is the visualization in 3D of the aircraft's future position over actual terrain.

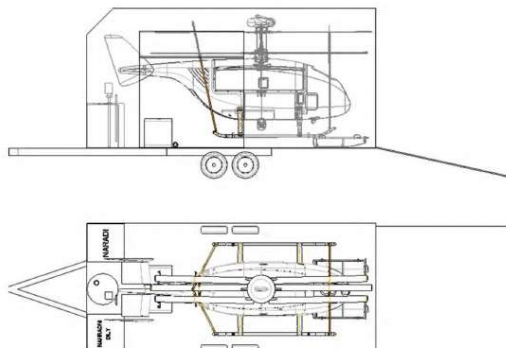
**System Accuracy:** 1m in terms of directional position and 0,3m in terms of altitude. The system is based on real-time elevation and geographical data synthesis.



Engineering and Design



Engineering and Design



### **Our Proprietary Intellectual Property (all developed and manufactured in-house)**

**RoboCopter VTOL UAV designs**  
**Flight Control software and hardware**  
**Mission Management software and hardware**  
**Navigation / Guidance System software and hardware**  
**RE 0 Ground Control software and hardware**  
**Communications sub-system software and hardware**  
**Sense & Avoid software and hardware**  
**Propulsion system control software and hardware**  
**Payload integration software and hardware**  
**Electro optical infra-red (IR)**  
**Synthetic Aperture Radar / Marine Radar**  
**Electronic warfare, jamming system**  
**Communications Relay, passive repeater, digitally tuned frequency**  
**Gimbal stabilized platform, 360 degree rotation**  
**Laser scanner with inertia platform and vibration compensation**  
**Hyperspectral scanner, 64 selectable wave lengths**  
**Mobile self-contained ground control station (608)**  
**All foreground and background IP's for the above products and systems**

**ORLIČAN s.r.o.**  
Londýnská 376/57,  
120 00 Praha 2 - Vinohrady  
Tel. +420 605 23 19 20  
[bervid@orlican.org](mailto:bervid@orlican.org)  
[www.orlican.org](http://www.orlican.org)  
[facebook.com/OrlicanAircraftCompany](https://facebook.com/OrlicanAircraftCompany)  
[instagram.com/OrlicanAircraftCompany](https://instagram.com/OrlicanAircraftCompany)



Výrobní závod / Production facility:

Sokolská 226  
562 04 Ústí nad Orlicí – Kerhartice

