

# Improved drone structure



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## Invention



UAVs are a rapidly spreading reality to perform remote operations, for reasons of operational efficiency and / or safety of the pilot and operators. The patent relates to frame improvements aimed at significantly increasing the performance and safety of these aircraft, allowing the introduction of a new, recognizable and more performing generation of multicopter for monitoring, reconnaissance and transport.

Range, load capacity and flight safety are key and critical characteristics of a UAV. The patent relates to an innovative fully perimeter functional flying frame that allows weight reduction in multi-rotor configurations in favor of load capacity or flight range. Furthermore, the rigid connection between the engines, essential for correct flight dynamics, not occurring through the central structure reduces the vibrations transmitted to the acquisition or flight instruments. Flight safety is enhanced through the use of an automatic engine positioning system on the chassis that allows the propulsion to be reconfigured even in flight: in the event of a propulsion element failure, it is possible to rebalance the flight attitude in order to complete an emergency landing without damaging the load or uncontrolled crash causing danger to things and people.

Drawings  
& pictures



## Industrial applications



The technology allows the development of low-mass drones without worsening flight performance. The patented structure allows a greater autonomy of the vehicle or a greater payload. The structure and variable positioning system of the engines ensures greater safety in flight. The drone's design is highly distinctive.

The possible industrial applications are therefore to be identified in the sector of the production of drones for recreational or professional use, with useful use in remote reconnaissance and surveillance operations, transport, digital mapping and in search and rescue activities.

## Possible developments



The patent is available under an exclusive/non-exclusive license or sale. The license are available for the entire remaining term of the patent titles.

The research group is available for new research activities in collaboration and on behalf of third parties, technical insights, scientific advice, also aimed at raising the TRL of technology.

The global TRL of the invention is 5/6.

For more information:



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