

A VERY UNIQUE UAV

FLAMINGO MK1 UAV



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DESIGN BACKGROUND

The design was born out of a perceived need for a low capital cost, surveillance tool for large Farm/ Property owners.

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SIZE AND WEIGHT

The size, weight and operating conditions over many discussions, firmed to that of;

- Duration in excess of that common in its size and class,
- While carrying a moderate payload
- At a moderate speed and Altitude
- At a low initial and operating cost
- Simple Autonomous operation
- Capable of operating from relatively unprepared airstrips
- Modern clean design.



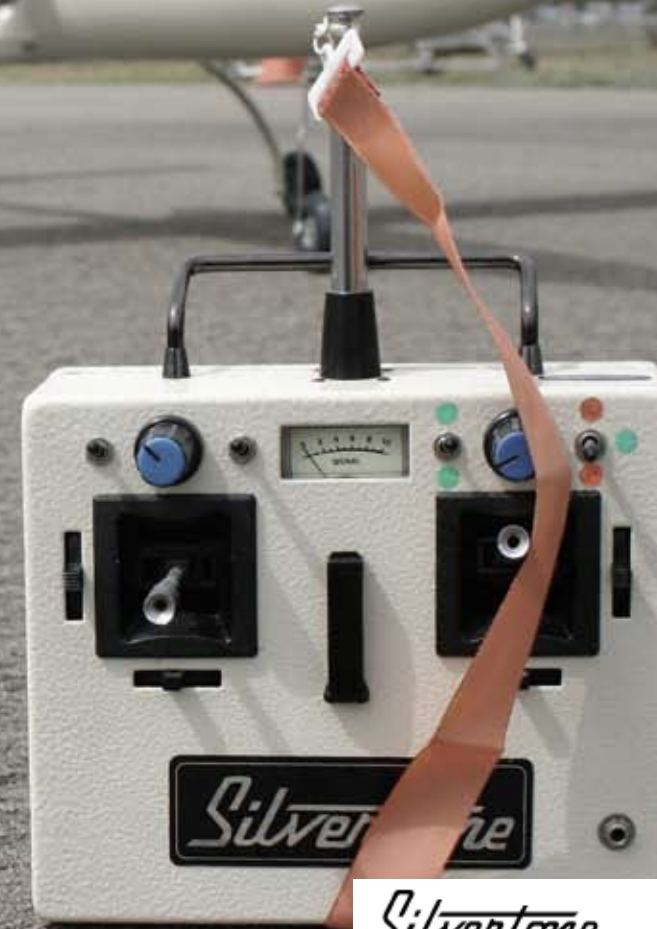
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AVIONICS AND PAYLOAD

- Comprehensive on board Auto Pilot with down link as part of Turnkey Package
- Minimum instruction required to operate Aircraft and Autopilot
- Flight information relayed back to ground control station and displayed on a monitor
- Simple quick access to on board avionics and payload instrumentation
- Large separation between motor and on board electronics – for better vibration isolation.
- Back up control systems incorporated into design



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PAYLOAD PANNIER

A truly novel feature of the Flamingo is the capacious quick change payload pannier.

The entire pannier section may be replaced to allow the aircraft to be re-configured quickly for different missions.

The pannier can be constructed to suit the customers requirements with the payload mounted above, below or even with the pannier plate mounted vertically, on each side of the pannier plate.

Access to the pannier and payload is virtually unrestricted and there are no awkward or difficult to access areas in the payload bay.



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MISSION CAPABILITIES

- Duration of 10 hrs - in excess of twice that of most UAV's in its class
- Low comparative wing loading
- Low landing speed and take off speeds
- Excellent range for size and class of UAV
- Strong – designed to handle winds up to approx. 32kph with safety margin
- Optimized layout for surveillance equipment
- Wing hard points for external payloads or additional fuel
- Full quadro wing surfaces – mixed Flaps and Ailerons for wider range of operating conditions

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UNDERCARRIAGE

A very important component and one that will dictate absolutely the final performance of the aircraft.

The Flamingo is designed in such a way that the undercarriage may be configured in three ways.

(1) Fixed undercarriage. Ideal for local missions, pilot training and other tasks where landing and take off requires a fixed undercarriage.

(2) Drop off dolly. This is the configuration that is absolutely mandatory for long range, long endurance missions. For maximum aerodynamic efficiency the fuselage is tough enough to permit belly landings on return. A special tape may be fitted to the fuselage underside to minimise damage on landing. This configuration is also ideal for catapult launching.

(3) A small single wheel fitted to the fuselage as in full size gliders

The single boom configuration allows the safe use of the more efficient wooden propellers even with the drop-off undercarriage

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OPERATIONAL BENEFITS

- Low demand on consumables
- good fuel consumption
- Low maintenance costs – simple, strong design with good access
- Low initial and replacement cost
- Modular construction – flexible use- specific mission adaptable-
- Easy to fly and operate

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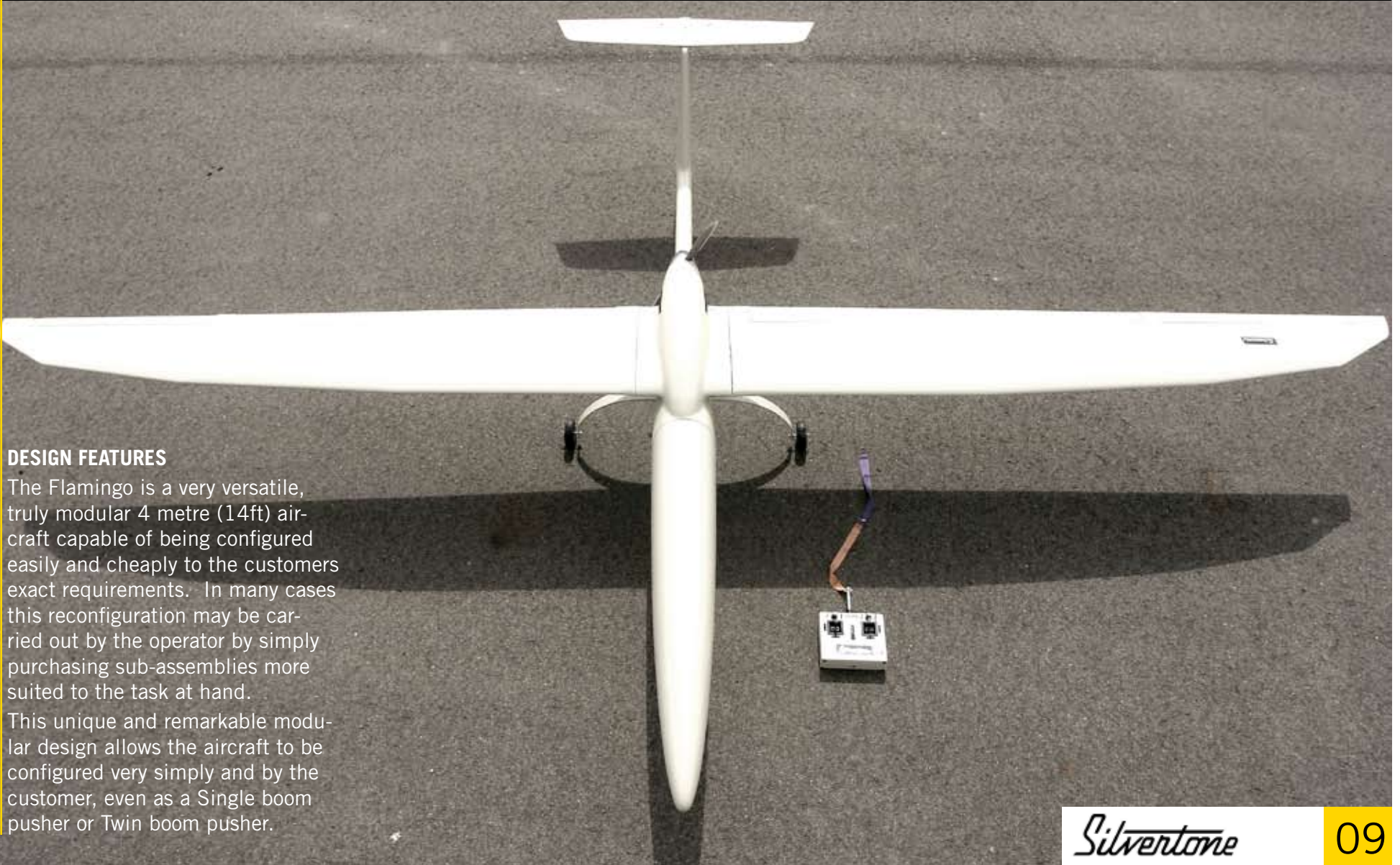
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DESIGN FEATURES

The Flamingo is a very versatile, truly modular 4 metre (14ft) aircraft capable of being configured easily and cheaply to the customers exact requirements. In many cases this reconfiguration may be carried out by the operator by simply purchasing sub-assemblies more suited to the task at hand.

This unique and remarkable modular design allows the aircraft to be configured very simply and by the customer, even as a Single boom pusher or Twin boom pusher.



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MARKETS LOCAL/EXPORT

- Pastoral
Live stock inventory; Mustering
- Agriculture -
Farm management; crop growth;
crop damage; water storage.
- Environmental monitoring;
fence damage.
- Security/Military - Surveillance;
Intelligence; Target drones.
- Real Estate/Mining - Property
images/mine layout/environmental
monitoring

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FOR MORE INFORMATION

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