

CARBONIX VOLANTI

Fixed wing with vertical take-off & landing.

All electric, fully operational UAV.

VTOL Multi-Rotors

A clever VTOL system allows the UAV to take off and land vertically. Perfect for confined spaces and rough terrain.

Fixed Wing Flight

Once airborne, the electric pusher motor allows the UAV to fly in fixed-wing mode for up to 90 minutes. Petrol motor available in December for >6hr endurance in a single flight.

Flexible Payload

The nosecone payload bay supports a wide range of payloads & sensors to suit any mission ranging up to 1kg depending on power source. Payloads can easily be swapped out onsite.

Carbon Fibre Frame

Airframe is made from advanced carbon composites with proven capabilities. Strong and stable enough to withstand winds up to 60km/h in flight and light enough for easy transport.



Intuitive Avionics

The drone comes with fully autonomous avionics system and customised ground control station.

Built to Fly

The airframe is designed and built for aerodynamic efficiency. Using advanced composites, the airframe is built layer by layer to be optimised for efficient flight.

Packs into a box

Modular design means the wings, rotors, tail and nose clip off easily and fit into a small box. Despite the 3m wingspan, this drone can be handled by one person. You can be flying in five minutes.

Safe and easy to fly

This UAV is designed for commercial applications for both experienced pilots, and first-time users. It's designed to capture data accurately and quickly.



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VOLANTI: VTOL HYBRID UAV

Product summary	Our state-of-the-art fixed-wing VTOL hybrid RPAS is designed for long endurance and extreme weather conditions. Volanti is offered off-the-shelf with a wide range of specialised sensors for many applications or can be customised to your specific requirements. The aircraft is suited for surveying, surveillance, data capture, infrastructure inspection and 3D mapping, and is the first of its kind available in Australia. All Carbonix products are made in Australia.
Product variations	Operational Flying System: Includes airframe, avionics, ground control station, propulsion, flight planning software, carry case and power source. Fully Integrated System: Includes all features included in Operational System, as well as standard or customised sensors, sensor mounting, sensor actuator.
Development status	Fully tested, in use by customers.
Power supply	Current off-the-shelf system all electric. Petrol-powered system available.
Flight times	Upt o 90 minutes with all-electric system.
Payload capacity	Up to 1kg on all electric for optimal performance.
Payload space	Primary payload space: 382mm long x 180mm wide x 140mm tall. Easy access as the whole front fuselage/payload bay can come off. Dedicated avionics shelf area. Gimbal mountings and fishbowl bubble available for directional camera payloads. Secondary payload / avionics bay: In fuselage: 110mm long x 180mm wide x 140mm tall.
Sensor capability	Multiple sensor options for general surveying and mapping, 3D surveying and thermal imaging. Options available for RGB (Nadir), RGB (Oblique), LWIR, object tracking and NIR.
Navigation	Autopilot with GPS set with ground station with 5cm accuracy.
GCS communication	900MHz data transmission / >40km range depending on antenna configuration
MTOW	13kg
Structural weight	Airframe: 5kg Empty weight: 9kg
Speed	- 65 - 80km/h optimal airspeed depending on mission profile - 60km/h stall in 'clean' configuration. Slower with flaps deployed (if applicable).
Ceiling	2,000m
Airframe dimensions	Wingspan: 2,740mm Length: 1,950mm. Varies with tailboom length according to desired tail volume.
Composition	- Carbon fibre skins and structural spars - Honeycomb or structural foam core in highly loaded areas - Kevlar in areas of impact and hinges - Glass fibre in areas where transparency to RF signal is required.
Take-off/Landing	Full VTOL capability built in to airframe, take off on any terrain. UAV can alternate between hover and horizontal cruise throughout flight.
Standard box dimensions	165cm x 100cm x 32cm (can be put together and taken apart in 5 minutes). Customised carry cases available.



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BUSINESS OPERATIONS

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