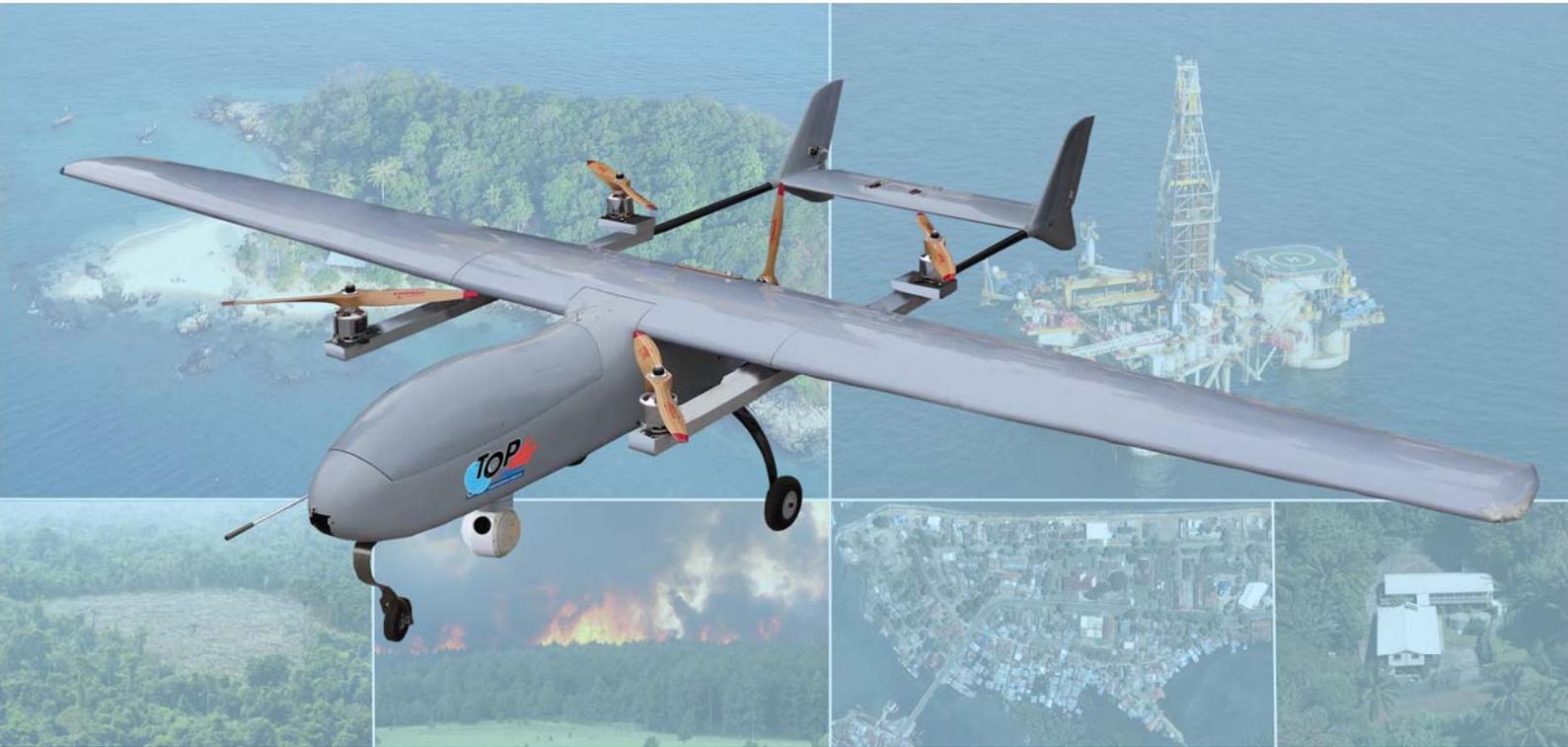


# FALCON-V

Fixed Wing VTOL (Vertical Take Off and Landing)  
UAV (Unmanned Aerial Vehicle) Aircraft



The Falcon-V is a hybrid between a quadcopter and an airplane, new technology of TOP Engineering Group allows for precision vertical take off and landing VTOL while retaining our proven long-duration and large payload capacities. It is a unmanned aerial platform designed for front-line day/night intelligence, surveillance and reconnaissance (ISR). Fully autonomous flight control is gained through the autopilot command center software which Fully autonomous flights from launch to land are easily operated by a two man crew.

## Applications

- Intelligence, surveillance, and reconnaissance (ISR)
- Chemical and radiation detection
- Communication repeater node
- Sensor and other payload testing platform
- Area mapping • erosion & environmental monitoring
- Agricultural, farming & commercial fishing management
- Fire & damage assessment
- Border, harbor, & and canal security
- Convoy, road & population protection
- Natural resource & wildlife management
- Pipeline monitoring • power line inspection
- Fire fighting observation and infrared heat detection
- Weather mapping and measurement
- High-altitude, high endurance (HALE) applications
- Search & rescue

## Primary features:

- Versatility: The Falcon-V can fly stably at any transition angle, meaning that it can take off vertically from almost anywhere, fly low and slow in small spaces or fast and aggressively in larger fields.
- Performance: Achieve endurance flight times of more than 6 hours, and forward autonomous range of more than 300 KM with cruising speed 100 - 120 Km/Hr. Capable of carrying 5 Kg of payload.
- Perch and Stare : Remote landing, perch and stare up to 6 hours with full motion video.
- Optics: High resolution day/night , gimbal operation OTUS L205, Zoom 200 time with IR. Down-look landing camera and forward look situational awareness camera.
- The Falcon-V's modular payload bays support multiple missions, including aerial reconnaissance, surveillance, route clearance, counter IED, mapping, hover-and-stare, perch-and-stare and payload delivery.

# FALCON-V

Fixed Wing VTOL (Vertical Take Off and Landing) UAV (Unmanned Aerial Vehicle) Aircraft

Falcon-V Fixed Wing VTOL (Vertical Take Off and Landing) UAV (Unmanned Aerial Vehicle) Aircraft

Falcon-V VTOL UAV airframe is built robust to withstand punishing applications and demanding flight conditions. Our hollow-molded, composite airframes use fiberglass and carbon fiber. User-friendly & serviceable in the field, modular design means quick reconfiguration or component replacement. Engine modules, wings and avionics components can be replaced in minutes. It provides a unique balance of advanced capabilities, operational flexibility and outstanding performance.

With its capability for autonomous flight and a fully redundant flight control system, the Falcon-V VTOL UAV can fly a programmed mission without operator intervention. It has a Vertical Takeoff and Landing system, eliminating the need for runways or launch and recovery systems. Whether for use at sea or on land, it has been engineered to aviation standards, ensuring reliability on all mission types.

## Reliable & Efficient

Falcon-V VTOL UAV has a Gasoline engine powered airframe and designed with reliability, durability, fuel efficiency, and low noise signature in mind. Our off-the-shelf airframes are known for their toughness, flying efficiency, and the ability to be configured for endurance more than 6 hours.

## Performance Flexibility

For the total performance flexibility, the Falcon-V VTOL UAV has the ability to complete an entire mission automatically and with zero operator intervention, or it can be reprogrammed at any time when airborne to perform alternative missions or react to task changes.

Programming for an autonomous mission is controlled via a simple point-and-click graphical user interface with payload imagery transmitted to the Ground Control Station (GCS) in real-time. Redundant Inertial Navigation Systems (INS) and Global Positioning System (GPS) ensure highly accurate navigation and stability. In the case of loss of link, an automatic Return To Launch (RTL) function is activated.

## Ground Control Station

The powerful multi-capable system software of the Falcon-V VTOL UAV is intuitively controlled through an easy-to-use operator interface.

Giving operators immediate access to vital data, the ground control workstation displays the position of the UAV as well as status information in real time on a user-friendly, aviation-style instrument panel.

The Ground Control Station allows the operator to control the payload while also having access to mission planning information, video-viewing, recording and frame capture.

The setup of the Ground Control Workstation itself is flexible depending on the user's needs - so the Falcon-V VTOL UAV can be commanded from a laptop computer or integrated into a larger system; from a static setup (container), to moving (vehicle) to integrated (ship).

## Antenna

There are a number of antenna options available out to 100 km range.



TOP ENGINEERING GROUP CO., LTD. | บริษัท ทีโอพี เอ็นจิเนียริ่ง กรุ๊ป จำกัด

233/187 Mu 5 Soi 11 Srinakarin Road, T. Bangmuang, Muang, Samutprakarn 10270 THAILAND | Tel: 662-759 8140 | Fax: 662 759 8922

URL : www.top-enggroup.com E-mail: info@top-enggroup.com