



# Rufous™ Unmanned Aircraft System for Defence Applications

## Versatility. Manoeuvrability. Performance.

The use of unmanned aircraft systems (UAS) in the defence arena is now an essential force multiplier for military operational agility and effectiveness. Whilst the defence community has an increasing requirement for the provision of imagery and data intelligence, over the horizon search and precision manoeuvres over a dispersed operational area which is best satisfied by Medium- and High- Altitude Long Endurance (MALE/HALE) systems, there remains a requirement for a tactical UAS that can support unit level operations.

The Rufous™ UAS is a modular counter-rotary-wing vehicle capable of carrying multiple specialist payloads and sensor equipment as required by the customer. The system has the ability to render high-resolution, full-motion tactical video to individual frontline personnel for real-time military applications. As well as optronic payloads, Rufous™ can also be utilised to carry ground and foliage-penetrating RADAR, high powered quad-band cellular jammers and military SIGINT/COMINT electronics. The stable aerial platform, with its electro-magnetic protected body, provides the versatility that allows close-up 360° assessment of the operational battlespace, whilst still allowing the ground-station Commander full control of the mission deployment.

Rufous™ achieves this with enhanced environmental and fuel performance, low visual and RADAR signatures, whilst minimising the risks, costs and through-life maintenance associated with manned air system use.

## Mounted & Dismounted Operations Support

The Rufous™ system can have a direct role in escorting mounted and dismounted troop movements and patrols. The vehicle has been specifically designed to be transportable, robust and multi-fuelled; with its small logistics footprint it can take-off and land from almost any unprepared surface. The modular construction of Rufous™ allows the system elements to be removed and replaced very easily, permitting front-line repair without the need for extensive facilities, the modularity also allows it to be tailored to suit multiple military purposes in the battlefield including:

- Landmine and IED locating applications.
- Radio and signal jamming.
- Communications relay.
- Precision small-payload and message delivery.
- Reconnaissance, intelligence and surveillance.
- Search missions.
- Ground forces and convoy escort.

## Artillery Support

Rufous™ can strengthen many artillery mission profiles in joint operational theatre applications. The capability to fit multiple sensors and to rapidly change roles between sensors means that Rufous™ can be an efficient contributor to support artillery operations, especially where integration of C4I systems is being undertaken. Specific tasks that Rufous™ has been designed for include:

- Multi-climate and terrain deployment.
- Increased sensor dwell-time in the battlespace.
- Target finding and fixing.
- Target tracking and designating.
- Damage evaluation and assessment.
- Provision of broadcast quality pictures.

## Ship-borne Operations

With its ability to hover, Rufous™ is ideally suited to operations not applicable to fixed wing vehicles. This is particularly true for utilization at sea where it can be easily deployed and recovered back on board small ships. Its remarkably low gust response makes for safe and simple ship-borne landings - even in relatively high sea states, and the vehicle's compact size and small logistic footprint give major stowage advantages. Rufous™ could be deployed for multi-hour missions at extended ranges from the launch vessel. In this mode as an 'elevated mast', the ship's operational area is greatly extended, enabling earlier detection of air, surface and sub-surface activity. Utilising the modular construction of Rufous™, a great variety of payloads can be employed, including:

- Maritime surveillance RADAR systems.
- SIGINT/COMINT electronics.
- Synthetic Aperture RADAR.
- Electronic support measures.
- Communications relay equipment.
- Day and night vision high resolution cameras.
- Precision payload delivery.

## Contact Us

To discuss your particular requirements and what we can do to help, please contact us at:

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