



# OFFSHORE AVIATION OA-2H

LARGE SCALE VTOL



**OAG**

Offshore Aviation Group

**AIRCRAFT SPECIFICATION**

# OA-2H

## VTOL WORKHORSE

The Offshore Aviation **OA-2H** is a large scale gas/electric VTOL hybrid with a 15 foot wingspan and carry an astonishing 55 lbs of payload.

The airframe is made entirely of carbon fiber which is lighter and stronger than other airframes that are made of fiberglass or composite materials.

The new VTOL features the quick-detach design which is easy to assemble and disassemble. The airframe utilizes a twin boom design which houses the quad lift motors.

Flight time can exceed 8 hours depending on payload and flight conditions.

The design allows for the recharging of the VTOL batteries in flight for multiple vertical takeoffs and landings in a single mission.

OA-2H

- Large Vertical take-off and landing (VTOL) Can hover, take off, and land vertically Fully autonomous operation
- Flight time in excess of 8 hours
- Flexible specification
- Custom configurations available

**PLUS** tailored builds to match exacting or project-specific needs



## GAS/ELECTRIC



The OA-2H is a large X4 VTOL with the ability to carry 55 lbs of payload.

The physical design of the aircraft can be adapted to configure the OA-2H for ISR, Comms Relay, or Cargo delivery.

The OA-2H can be equipped with standard, long range, or ultra-long range comm system with optional SATCOM backup.

The Aircraft comes with custom configurable GCS or optional hand held mobile GCS.

With a 215cc gas motor driving both the pusher prop and on-board generator, the aircraft can recharge its lift batteries multiple times during a standard mission.

For more information on each aircraft please see the individual specification tables below. Because the OA-2H build is essentially a custom built in the USA, we encourage you to discuss specific requirements with us from the outset of your project.

### Vertical Take-Off

The OA-2H can take off in a hover and transition to forward flight and sustain flight for up to 8 hours. Offshore Aviation incorporated its know how with multi-rotor aircraft combining the best of VTOL handling with the endurance of fixed wing flight. During take-off, the X4 lift motors lift the OA-2H in a hover allowing it to climb to a safe altitude. Once it is roughly 30 meters above the ground, the aircraft's pusher propeller provides forward thrust causing it to accelerate. As the 15 foot wingspan begins to generate lift, the lift motors disengage and the aircraft flies like a conventional aircraft allowing the OA-2H to stay aloft for extended periods.

### Vertical Landing

As the OA-2H approaches the landing zone, the lift motors are armed and spin up to a hover speed. In this configuration the pusher motor comes to a stop and forward velocity is reduced to a hover. The aircraft can be equipped with an autonomous maritime landing capability for shipboard launch and recovery.



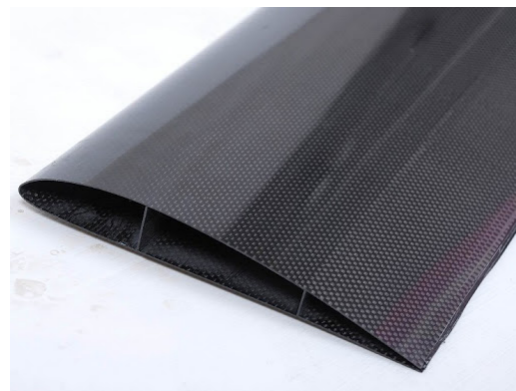
# OA-2H Gas-Electric Hybrid

The OA-2H Manticore is a large scale, rugged and dependable UAS. It can fly reliably in some of the worst conditions of any fixed wing, multi-rotor VTOL aircraft.

The aircraft can be equipped with a wide variety of EO/IR Sensors.

Flight times quoted are realistic and reflect what you are likely to see flying in real world conditions.

Optimization for your particular application is highly recommended. Contact us to discuss what you need to achieve and see what we can offer!



**Carbon fiber construction makes the OA-2H lighter and more durable than other airframes**

PHYSICAL	
Configuration	X4 VTOL Pusher Configuration
Wingspan	~ 4510mm
Empty weight*	~ 23 kgs (subject to spec)
Length	~ 3400mm
Height	~ 620mm
Payload Bay	920mm x 340mm x 350mm
Fuel Tank	27 L
Payload Anti-vibration mount	Optional
Flight controller	Various options available most commonly Pixhawk 2.1
FPV	1200 TVL 1 axis gimbal
Lights	DayBright navigation lights
FLIGHT	
Max speed	170 kph (105 mph)
Rate of climb/descent	Adjustable. 2 m/s default recommended
VTOL operating altitude	Up to 1.5km (5000 feet ASL)
Fixed Wing Stall Speed	56 kph (35 mph)
Max range	Subject to flight speed and weather conditions
Flight parameters	
Maximum Ceiling	15,000 feet
Flight Time No payload	> 8 hours
Operating temperature	0-35°C 32.19kph
Max wind resistance	(25 mph) 30kps
Max take off weight	(175 lbs)

## Gear Installed:

- Radio: Futaba 14SG, Futaba r7008SB 8ch rx
  - Standard Range Communications
- Autopilot: PixHawk Cube (2), Here 3 GNSS GPS
- Telemetry: RFDesign RFD900X 915Mhz 1W radio
  - Standard Range Communications
  - Long/Ultra Long Range Communications
- Telemetry: MicroHard pDDL
- Lighting: Day Bright LED Navigation & Strobes
- Video Transmitter: 1.3 GHz
- Pusher Motor: HFE 215cc EFI
- Pusher Propeller: 32" three blade prop
- VTOL Motor: (4) VTOL Motors
- VTOL Propeller: (4) 30" x 8" Propeller





# OA-2H MANTICORE

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