OFFSHORE AVIATION OA-2F

HARPY

LONG ENDURANCE VTOL

Offshore Aviation Group

AIRCRAFT SPECIFICATION

OA-2F

VTOL WORKHORSE

GAS/ELECTRIC

Offshore Aviation Group

The Offshore Aviation **OA-2F** HARPY is a large scale gas/electric VTOL with a 13 foot wingspan. 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 dissemble. The airframe utilizes a twin boom design which houses the quad lift motors.

Flight time can exceed 4 hours depending on payload and flight conditions.

The design allows for an unprecedented vertical takeoff and transition to forward flight.

OA-2F

Vertical takeoff and landing (VTOL)

Can hover, takeoff, and land vertically

Fully autonomous operation

Flight time in excess of 4 hours

- Flexible specification
- Custom configurations available

PLUS tailored builds to match exacting or project-specific needs

The OA-2F is an X4 VTOL with the ability to carry 17.5 lbs of payload.

Payload, sensors, communications, flight control, even the physical design of the aircraft can be adapted to align the OA-2F aircraft with any real world demand a project requires.

For more information on each aircraft please see the individual specification tables below. Because the OA-2F 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-2F can takeoff in a hover and transition to forward flight and sustain flight for up to 4 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 takeoff, the X4 lift motors lift the OA-2F 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 13 foot wingspan begins to generate lift, the VTOL motors disengage and the aircraft flies like a conventional aircraft allowing the OA-2F to stay aloft for extended periods on aircraft battery alone.

Vertical Landing

As the OA-2F approaches the landing zone, the VTOL motors are engaged and spin up to hover speed. In this configuration the pusher motor slows to idle and forward velocity is reduced to a hover. The aircraft will normally be fitted with a single axis gimbal and small FPV camera in the nose for pilot view forward or straight down. This is a very useful aid for payload management and remote landing out of a hover.

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OA-2F Gas-Electric

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

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

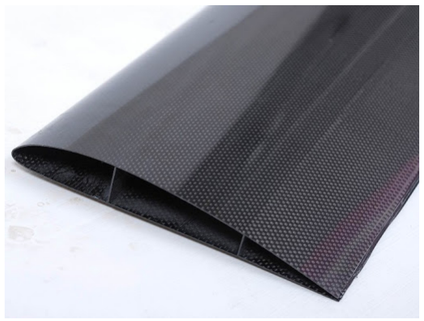
Flight times quoted are realistic and reflect what you are likely to see flying in real world conditions.

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

PHYSICAL	
Configuration	X4 VTOL Pusher Configuration
Wingspan	~ 4000mm
Empty weight	~ 17 kgs (subject to spec)
Length	~ 1900mm
Height	~ 590mm
Payload Bay	560mm x 210mm x 185mm
Propeller size	18x10" pusher, 24x8" VTOL
Fuel	5L tank, gas/oil mix
Flight controller	Various options available most commonly Pixhawk Cube
FPV	1200 TVL camera
Lights	DayBright navigation lights
FLIGHT	
Max and cruise speed	70 mph (112 kph), 50 mph (80 kph)
Rate of climb/descent	Adjustable. 2 m/s default recommended
Max operating altitude	10,000 feet ASL (3km)
Fixed Wing Stall Speed	31 mph (50 kph)
Max range	Subject to flight speed and weather conditions
Flight parameters	
Flight Time No payload	> 4 hours
Operating temperature	0–35˚C
Max wind speed (takeoff landing)	> 15 mph (24 kph)
Max takeoff weight	> 66 lbs (30 kgs)

Gear Installed (standard):

-Radio: Futaba 14SG, Futaba r7008SB 8ch rx
-Autopilot: PixHawk Cube, Here 3 GNSS GPS
-Telemetry: RFDesign RFD900X 915Mhz 1W radio
-Lighting: Day Bright LED Navigation lights
-Pusher Motor: DLE 35cc
-Pusher Propeller: 18 x 10" wood
-VTOL Motor: (4) VTOL 170kv Motors
-VTOL ESC: (4) 80A HV ESC
-VTOL Propeller: (4) 24 x 8" carbon fiber



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

OA-2F

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