



The Airboxer - Unmanned Helicopter System

MARITIME & CRITICAL SERVICES

Persistent monitoring from vessel, coast or remote operating site



4+ Hours
Endurance, standard configuration

7.0 kg Payload
Across multiple positions

VTOL
No runway, launch rail or net

Shipborne
Vessel, coast and offshore

Operational Applications

- ✓ Maritime domain awareness
- ✓ Coastal and offshore surveillance
- ✓ Vessel detection, tracking and identification
- ✓ Search and rescue support
- ✓ Offshore energy and infrastructure inspection
- ✓ Port, harbour and waterway monitoring
- ✓ Environmental observation and data collection
- ✓ Powerline, pipeline and critical-asset inspection
- ✓ Emergency assessment and incident response

Mission Profiles

MARITIME DOMAIN AWARENESS

SEARCH & RESCUE AND INCIDENT RESPONSE

POWERLINE, PIPELINE & ASSET INSPECTION

Description

The Airboxer is a long-endurance unmanned helicopter developed for maritime surveillance, offshore inspection, infrastructure monitoring and emergency-response missions requiring extended time on station, vertical deployment and dependable data collection.

The platform combines vertical take-off and landing, stable hover, controlled low-speed flight and multi-hour endurance. It can be deployed from coastal locations, offshore facilities, remote sites and configured vessels without requiring a runway or full-scale aviation infrastructure.

High Eye works with navies, coast guards, offshore operators, infrastructure owners, research organizations and system integrators to define the configuration required for the intended operation.

Define the operational configuration

The final system configuration is defined by the mission profile, operating location, required data product, sensor configuration, communication range, vessel integration and applicable operational approval.

Request a Maritime & Critical Services Operational Briefing.

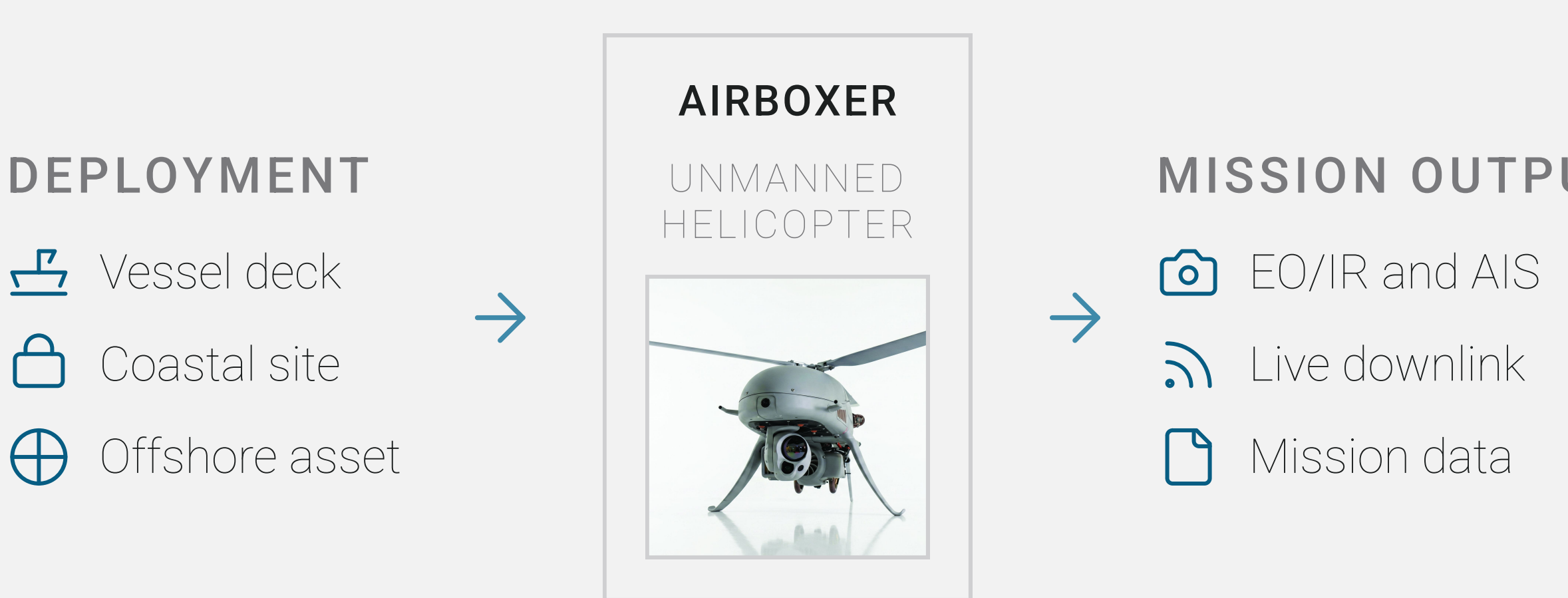
OPERATIONAL CAPABILITIES

- ✓ Extended time on station - 4+ hours, 5+ with ER tanks
- ✓ Vertical deployment without runway or deck area
- ✓ Maritime situational awareness with EO/IR and AIS
- ✓ Configurable C-band, MIMO, LTE/5G and SATCOM links

Core Specifications - General

GENERAL	VALUE
Maximum take-off weight	34.2 kg
Powerplant	80 cc two-stroke engine, dual injection, FADEC
Standard fuel capacity	8.86 L
Fuel capacity, ER tanks	11.86 L
Onboard electrical generation	28 V / 700 W alternator

Operating concept





Flight Performance

FLIGHT PERFORMANCE	VALUE
Endurance, standard configuration	More than 4 hours
Endurance with Extended Range Fuel Tanks	More than 5 hours
Maximum flight range	More than 200 NM / 360 km
Endurance cruise speed	40 kts IAS
Range cruise speed	45 kts IAS
Maximum flight speed	75 kts IAS
Operational wind limit	25 kts, up to 40 kts including gusts

Payload & Environment

PAYLOAD & ENVIRONMENT	VALUE
Maximum payload capacity	7.0 kg across multiple payload positions
Payload capacity at full standard fuel	3.0 kg
Continuous payload power	300 W / 24 VDC
Payload data interface	IP Ethernet, IEEE 802.3
Operating temperature	−10 °C to +45 °C
Environmental protection	IP56 aircraft enclosure, IP67 avionics
Relative humidity	95% non-condensing
Electromagnetic field tolerance	At least 200 V/m

System Architecture

Flight-control system - the flight-control system manages aircraft attitude, heading, trajectory, airspeed and mission execution throughout the flight. Automated flight functions support repeatable operations and reduce pilot workload while maintaining operator authority.

Modular sensor integration - multiple payload positions, 24 VDC power and Ethernet connectivity support the integration of EO/IR, AIS, LiDAR, magnetometer, acoustic and other mission-specific sensors.

Operational Capabilities

- Extended time on station - the Airboxer provides more than four hours of endurance in standard configuration. Extended Range Fuel Tanks increase endurance to more than five hours, allowing longer monitoring periods and reducing the number of aircraft rotations.
- Vertical deployment - the rotary-wing configuration enables vertical take-off and landing, stable hover and controlled low-speed manoeuvring without a runway, launch rail, recovery net or large deck area.
- Maritime situational awareness - stabilized EO/IR payloads, AIS integration and mission-specific sensors support the detection, tracking, identification and assessment of vessels, offshore assets and activity within coastal or maritime operating areas.
- Reduced personnel exposure - remote inspection and observation reduce the need to place personnel in hazardous, elevated, offshore or otherwise difficult-to-access locations.
- Repeatable data collection - automated flight planning and controlled flight profiles support consistent inspection routes, repeatable measurements and comparable datasets across multiple missions.
- Configurable communications - the Airboxer supports maritime C-band, MIMO, LTE/5G and SATCOM options. Live video, telemetry and payload data can be distributed to the local operator, vessel systems or a remote operations centre.

Reference Mission Configuration

- Stabilized day and night EO/IR payload
- Automatic Identification System integration
- LiDAR, magnetometer, acoustic or other specialist sensors
- Maritime C-band or encrypted 2x2 MIMO data link
- Short- or medium-range tracking antenna
- LTE/5G or SATCOM backhaul
- Portable, vehicle-integrated or ship-integrated Ground Control Station
- Live video, telemetry and mission-data distribution
- Interface with vessel, command-centre, GIS or asset-management systems

A typical Maritime & Critical Services configuration may include the items above. The final configuration is defined by the mission profile, operating location, required data product, sensor configuration, communication range, vessel integration and applicable operational approval.

Ground Control Station & Communications

Ground Control Station - the ruggedized Ground Control Station supports mission planning, aircraft control, payload operation and the distribution of live video, telemetry and collected data.

Communications and data distribution - communication systems are selected according to the operating environment and required mission radius. Available architectures include maritime C-band, encrypted MIMO, directional tracking, LTE/5G and SATCOM-supported operation.



Maritime and Civil Deployment

- ✓ High Eye operates under a European LUC SAIL II authorization
- ✓ Portable and permanently integrated Ground Control Station options
- ✓ Configurable vessel-based communication and antenna systems
- ✓ AIS and external command-system integration
- ✓ Precision landing support for configured vessel operations
- ✓ Continued development and validation of automatic take-off and landing from moving vessels
- ✓ Defined operational, technical and environmental limitations
- ✓ Aviation-style configuration management and maintenance documentation
- ✓ ITAR-free platform
- ✓ Classified as a dual-use system under European export-control regulations

The Airboxer is developed for operation within professional and regulated aviation environments.

Operational authorization remains dependent on the intended mission, airspace, vessel or operating site, national regulatory framework and selected system configuration.

Training & Lifecycle Support

- ✓ Mission, vessel and site configuration analysis
- ✓ Payload and communication-system integration
- ✓ Pilot and mission-operator training
- ✓ Maintenance training
- ✓ Pilot Operating Handbook and Maintenance Manual
- ✓ Simulator and recurrent training
- ✓ Initial spare-parts and support packages
- ✓ Scheduled and unscheduled maintenance support
- ✓ Factory-level technical support
- ✓ Configuration control and obsolescence management

High Eye provides support throughout system introduction, operational deployment and the complete system lifecycle.

Define the Operational Configuration

High Eye works with the following organizations to define the configuration required for the intended operation:

- ✓ Navies and coast guards
- ✓ Offshore operators and infrastructure owners
- ✓ Research organizations and system integrators
- ✓ Aircraft, payload and communications definition
- ✓ Ground Control Station and vessel or site integration
- ✓ Training and support configuration

Request a Maritime & Critical Services Operational Briefing - higheye.com

Important notes

High Eye - professional unmanned helicopter systems. higheye.com

Published performance values are configuration-dependent. Actual endurance, range and payload capacity vary with fuel quantity, payload mass, atmospheric conditions, altitude, communication equipment and operating procedures.

Vessel-based operations are subject to vessel integration, deck layout, movement, communication configuration and applicable approvals. Final performance and system specifications are confirmed for the selected configuration and approved operational scenario.

Export and operation remain subject to applicable national and international regulations.