

Star International

Unmanned Anti-Piracy Surveillance Vessel



Meeting the demand for unmanned surveillance technology

- Piracy is on the increase – 24% rise in reported cases Jan – March 2020*
- Unmanned Surface Vessels (USVs) can protect vessels, crews, passengers and cargo from piracy threats
- The Narwhal Star USV has been specifically developed for shipping operators
- Developed by Star International, in co-operation with Narwhal and UTEK
- Uses proven technologies already used in military arenas
- Offers an affordable, effective unmanned surveillance solution
- Much cheaper than fully autonomous, drone technology





Star International: Marine and offshore services worldwide

'Star International is an established provider of marine and offshore services and equipment to a diverse range of clients that includes international shipping lines, ports, shipyards and navies.'



Narwhal: Market leaders in RIB design and manufacture

'Narwhal is an established designer and manufacturer of Rigid Inflatable Boats (RIBs). They are credited with the development of the unsinkable collar and their V shaped hull offers unrivaled performance and maneuverability.'



UTEK: Experts in
unmanned system
research and
development

'Unmanned Technologies Application SL (UTEK) is a cooperative of engineers and designers, working in collaboration with the European Space Agency (ESA) to design and build high performance unmanned vessels.'

Piracy tracking – 2020



 = Attempted Attack  = Boarded  = Fired upon  = Hijacked  = Suspicious vessel



The Narwhal Star USV

'The Narwhal Star USV is an extremely effective anti-piracy tool, allowing ship operators to complete reconnaissance missions ahead of a parent vessel, identify potential threats and take evasive action without putting personnel at risk.'

How the system works



Worldwide marine and offshore services

1 Deployment

The Narwhal Star USV can be quickly deployed at sea to scout ahead of its parent vessel.



3 Piracy detection

The USV's payload includes day and night vision cameras with a range of up to 35km, allowing pirate vessels to be identified without putting the USV or parent vessel in harm's way.



2 Remote surveillance

The USV is controlled remotely from a Ground Control Station (GCS) on-board the parent vessel.

4 Evasive action

Images of the piracy threat are transmitted to the parent vessel where they can be assessed, and its location triangulated. If necessary, evasive action can be taken and authorities informed.

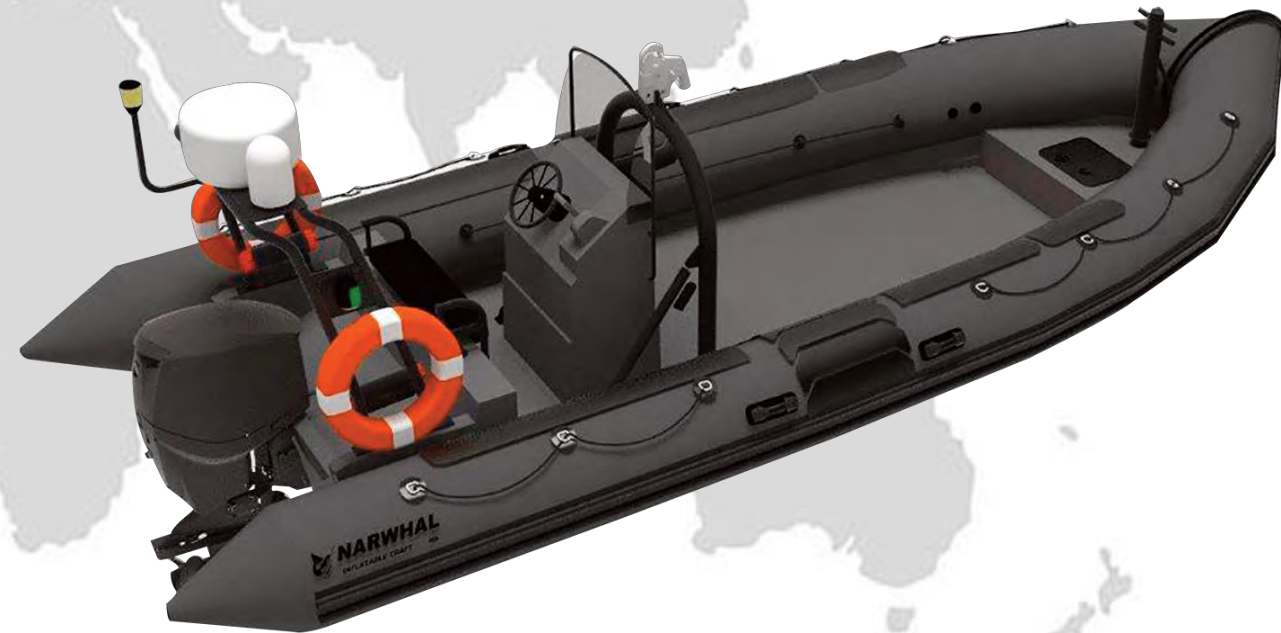


Demonstration video



The Narwhal Star USV

- Cheaper and more reliable than autonomous drone technology
- Can be used as an unmanned or conventionally piloted vessel
- Up to 30 hour running time
- Fast mobilisation at sea using davit / cargo crane
- Marine grade, gyrosopic cameras (35km viewable range)
- Infrared cameras (night vision)
- Laser targeting
- Flare and smoke cannons
- Decor buoy
- Laser dazzler



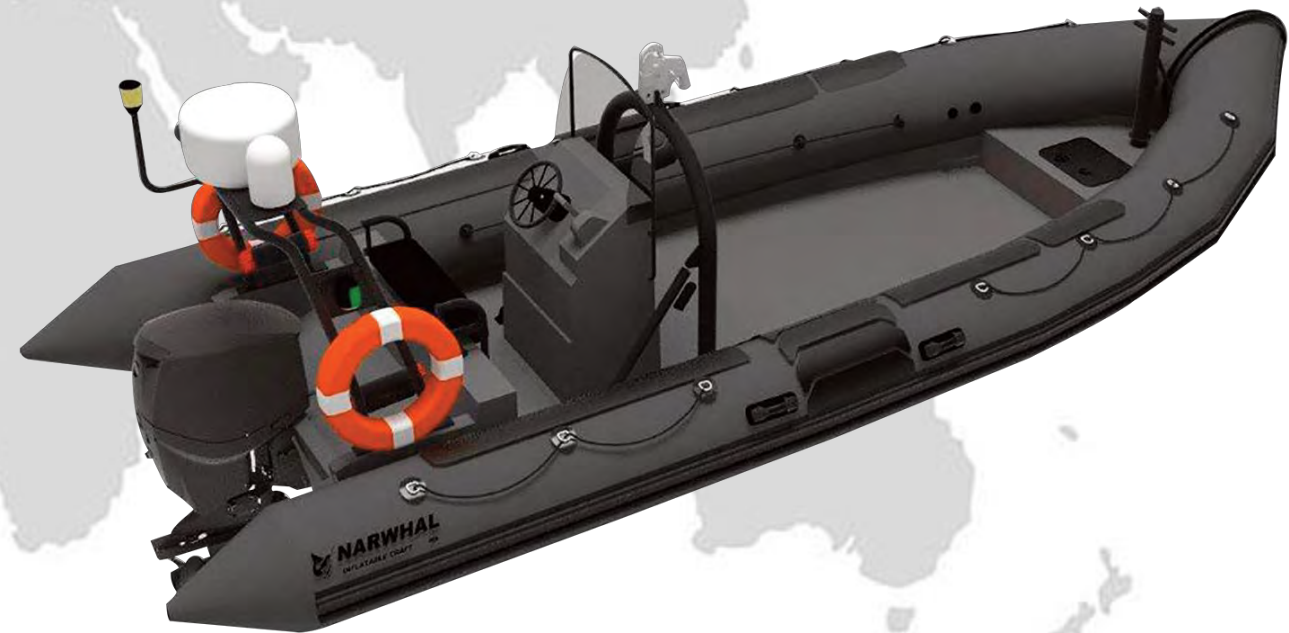
The Narwhal Star USV: Piloting modes

- Vessel is controlled from a mobile Ground Control Station (GCS)
- GCS can be installed on parent vessel
- Controlled by one pilot
- Four piloting modes:
 - Manned
 - Remote manual
 - Semi-autonomous
 - Autonomous



The Narwhal Star USV: Options

- Satellite communications link (global range)
- LIDAR
- AIS
- Robotic arm
- Service and warranty packages



Do you have
any
questions?

Star International,
Star House, Turbine Road,
Turbine Business Park,
Birkenhead, Merseyside

T: +44 (0) 1244 504 500

E: enquiries@star-international.co.uk

www.star-international.co.uk

