



ADVANCED CENTRIC SYSTEMS B.V

AGILE MULTI-PURPOSE UNMANNED SURFACE VESSEL

Product brochure



THE PROBLEM

Marine defense and security operations include various activities that may be regarded as Dull, Dirty or Dangerous (DDD) missions.

This category includes such missions as harbor, coastal & territorial water protection, protection for offshore installations, search & rescue operations and various marine Intelligence, Surveillance & Reconnaissance (ISR) missions. Additionally, this mission category includes various civilian, HLS and law enforcement activities.

Pursuant to the tremendous success of Unmanned Airborne Systems (UAS) and the more recent emergence of effective Unmanned Ground Vehicles (UGVs), unmanned surface vessels are being developed, tested and introduced into operational service.

Today, many DDD marine missions may be assigned to USVs – Unmanned Surface Vessels.

THE SOLUTION

ACS presents AMPUSV – Agile, Multi-Purpose Unmanned Surface Vessel.

AMPUSV is a cutting-edge unmanned, versatile surface vessel controlled and operated from a mobile command and control station manned by a 3-man team.

The AMPUSV command & control station possesses extensive C4I capabilities along with mission planning, real-time control and data recording for post-operation analysis and debriefing.

In its unmanned configuration, AMPUSV provides an effective, agile and highly maneuverable prompt response solution to an extensive range of marine missions: harbor, coastal and territorial water protection, offshore installation security, law enforcement activities (e.g. prevention of illegal immigration, intrusion, smuggling & drug trafficking), marine firefighting, extended search & rescue operations and prolonged marine ISR operations.

The same platform may be operated as a fast combat vessel manned by a 5-man crew. Switching between the manned configuration and the unmanned configuration is accomplished through a short, uncomplicated process.

AMPUSV may be fitted with an extensive range of surveillance, situational awareness, communication and weapon systems.

AMPUSV offers an agile, powerful and versatile solution for various marine missions currently handled by manned vessels.

KEY FEATURES & MAJOR ADVANTAGES

Key Features & Major Advantages

- Versatile, dual-mode unmanned surface vessel doubles as a manned combat vessel
- Mobile C2 station manned by one mission commander & two operators offers cutting-edge C4I capabilities, mission planning, real-time control and data recording for post-operation analysis & debriefing
- Manual control or fully autonomous operation (unmanned configuration)
- All onboard systems are fully controllable from the C2 station
- Suitable for an extensive range of marine applications:
 - Harbor, coastal & territorial water protection
 - Marine homeland security
 - Protection for offshore installations (oil & gas rigs, etc.)
 - Search & rescue operations
 - Marine firefighting
 - Marine Intelligence, Surveillance & Reconnaissance (ISR)
 - Marine law enforcement (prevention of illegal immigration, intrusion, smuggling & drug trafficking)
- Vessel specifications:
 - Total length: 11.90 m
 - Total width: 2.81 m
 - Platform weight: 6,500 kg
 - Top speed: 60 knots
 - Cruising speed: 30 knots
 - Power plant: two 560 HP marine diesel engines
 - Range: 350 nautical miles
 - Payload weight: 2,200 kg
 - Payload options:
 - Day/night Electro-optical/thermal surveillance payloads
 - Radar systems
 - Navigation systems
 - Weapon systems
- Sample surveillance sensor: VESPA HD Designator:
 - Cutting-edge, stabilized surveillance payload
 - Easy to install, maintain & operate
 - HD continuous zoom daytime color camera
 - HD IR sensor
 - Laser rangefinder & designator (optional Laser pointer)
 - Automatic video tracking
- Sample weapon system: Laser-homing missiles
 - High-precision, cost-effective weapon system

- Small launcher footprint – requires small installation space
- Reduced launch signature
- Steep/flat trajectories for effective penetration
- Sample situational awareness camera system:
 - 360° panoramic video coverage
 - Day/night surveillance capabilities
 - Grouped or distributed configurations
 - Video recording & playback
 - Video motion detection
 - Interface with remote weapon systems

