

A grey, sleek, remote-controlled unmanned surface vehicle (USV) is shown in motion on a body of water, creating a white wake. In the background, there are yellow buoys, a small boat with a white cover, and a seagull flying in the sky.

LIVYATAN

Remote Controlled USV

LIVYATAN

LIVYATAN is an autonomous, remote controlled high speed USV naval patrol system. Compact and low profile, it can covertly fulfill a multitude of missions in high risk environments.

The USV is an effective tool to increase intelligence, surveillance and reconnaissance (ISR) coverage, especially when launched from a naval ship.

LIVYATAN hosts a variety of safety, data collection and electro-optic payloads for secure autonomous operation. Therefore, it can be used to patrol an area on a persistent basis thus lowering risk to manned vessels and personnel.

Applications:

- Reconnaissance & Surveillance
- Force Protection
- Law Enforcement
- Port, Oil Rigs And Sea Structures Defence
- Search And Rescue
- Battle Damage Assessment
- Monitoring Of Illegal Activities
- Pollution Detection And Treatment



LIVYATAN

Main Capabilities



REACH-TARGETS

REACH SPECIFIC POINT OF INTEREST/ PATHs



OBSERVATION

STATIC TARGETS OBSERVATION USING DATA COLLECTION SENSORS
(E.G. RADAR, VIDEO / AUDIO SENSORS)



PATROL

CONSTANT MOVEMENT BETWEEN KNOWN POIs USING DATA COLLECTION SENSORS



MANUAL CONTROL

HUMAN TAKE OVER WITH ROUTE RECORDING



***TRACK-TARGETS**

AUTOMATIC MARINE TARGET TRACKING



LIVYATAN

Electro Optic Payloads



Fixed Dual Sensor

Dual Sensor PTZ

Electro Optic Custom Tailored Payloads



Electro Optic Navigation Vision Enhancement

SAFEDRIVE is a powerful Day & Thermal vision system designed for augmented navigation security and safety. It allows the operator to see other vessels and targets at long ranges, even in total darkness.

The system addresses diverse needs of marine environments, such as patrol missions, crime detection, rescue operations, and more.

SD640-9mm

HUMAN RECOGNITION RANGE

85m

NATO RECOGNITION RANGE

235m



DAY SENSOR

THERMAL SENSOR



MIL.STD CONNECTOR

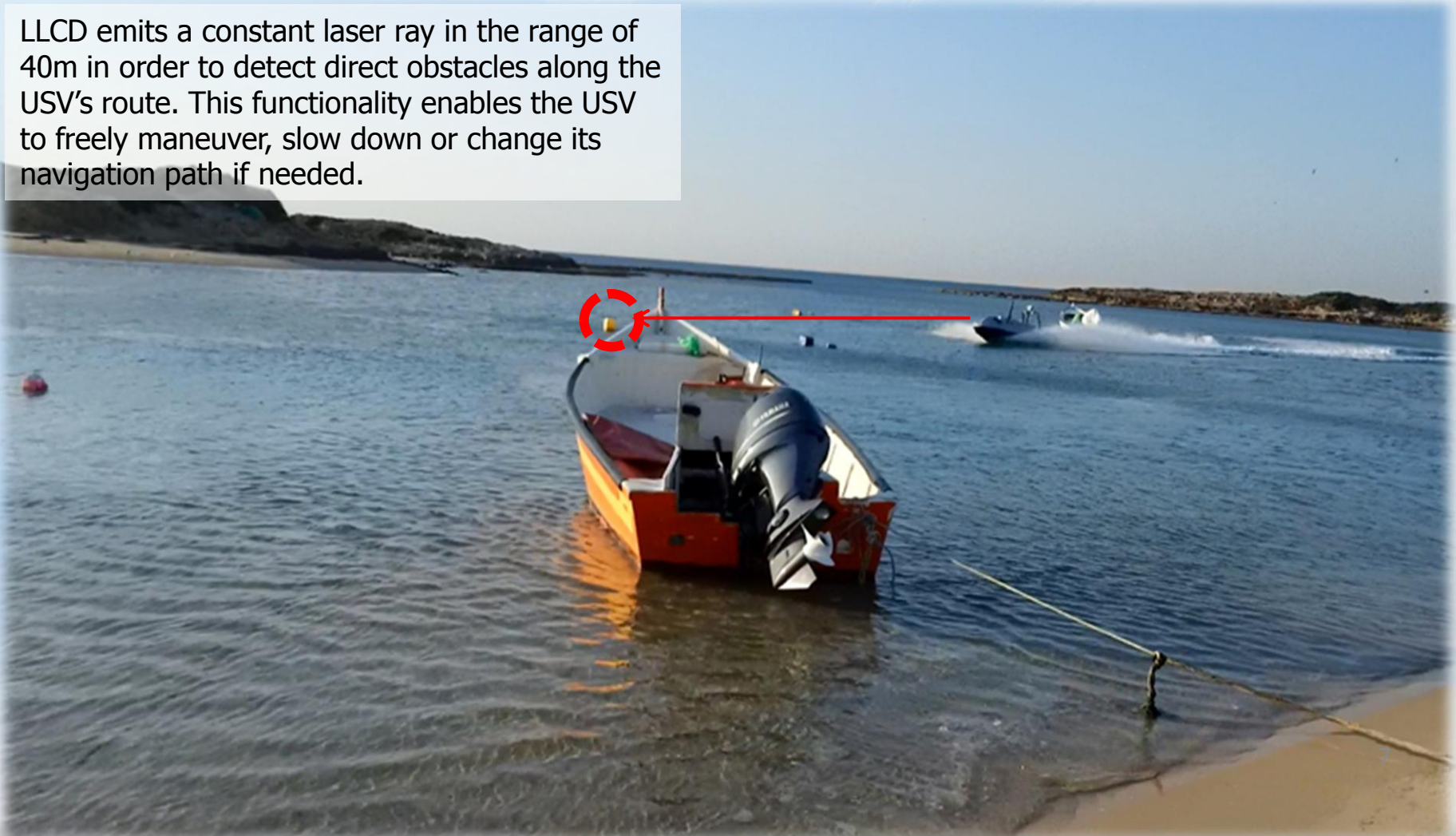


BALL MOUNT BRACKET

Safety Capabilities

Laser Line Collision Detector

LLCD emits a constant laser ray in the range of 40m in order to detect direct obstacles along the USV's route. This functionality enables the USV to freely maneuver, slow down or change its navigation path if needed.



Safety Capabilities

Sectorial Collision Detector

The SCD emits invisible high-frequency laser beams covering a 2D 110° virtual sector. As scanning is performed, the system alerts for any alleged obstacles.



Remote Vessel Deck



The remote deck panel is designed for the real time monitoring of USV's navigation, communication and driving system statuses. The panel serves as a constant checkpoint for the operator, providing him with full situational awareness and secure remote control.



Auto Navigation

GPS Guided Navigation Path

The USV is routed to the first predefined target accurately, and then moves on to the next point on the operator's command. The route of the USV can be calculated with turning speed and turning angle.



LIVYATAN

System Components



VESSEL CHASSIS



LASER COLLISION DETECTOR



BATTERY BANK



PA SYSTEM



MANUAL RC SYSTEM



TELEMETRIC COMMUNICATION



**NAVIGATION EO
PAYLOADS**



VIDEO COMMUNICATION



PTZ EO PAYLOADS



SEARCH LIGHT



ALARM BEACON LIGHT




RADAR



MISSION DECK

LIVYATAN

Dimensions



WIDTH
135 cm

LENGTH
325 cm

HEIGHT
130 cm

LIVYATAN

Vessel Specifications

ENGINE	Type	Rotax® 1503 SCIC 4-TEC® engine
	Intake System	Supercharged with intercooler
	Displacement	1,494 cc
	Cooling	Closed-Loop Cooling System (CLCS)
	Reverse System	Electronic iBR
	Starter	Electric
	Closed-Loop Cooling System	Maintains ideal engine temperature and keeps out corrosive saltwater and debris.
DIMENSIONS	Fuel Capacity	60 litre
	Length (Bumper to Bumper)	336.8 cm
	Width	123.1 cm
	Weight (Dry)	363 kg
	Storage Capacity	116.6 l
PROPULSION SYSTEM	iBR (Intelligent Brake & Reverse) system	First and only true brake on a watercraft recognized by the U.S. Coast Guard for improving boating safety since 2009.
FEATURES	High-performance electric VTS (Variable Trim System)	Provides pre-set positions for quick settings when adjusting boat trim, maximizes acceleration and high-speed stability.
	Interactive Multifunction Digital Information Center	VTS preset, Fuel consumption instant & average, Fuel level, Tachometer, Speedometer, Hour meter, Compass, Clock, Touring mode, Sport mode, ECO mode, F-N-R indicator and more.
	Off-Throttle Assisted Steering (O.T.A.S.™)	Provides the operator with additional steering effect in off-throttle situations for greater maneuverability.

LIVYATAN

Vessel Performance

PERFORMANCE DATA							
RPM	MPH	GPH	MPG	KM/H	LPH	KPL	Range
1000	3.50	0.70	5.00	5.63	2.65	2.13	79 miles / 127 km
2000	5.00	1.00	5.00	8.05	3.79	2.13	79 miles / 127 km
3000	6.50	1.80	3.61	10.46	6.81	1.54	57 miles / 92 km
4000	12.00	2.50	4.80	19.31	9.46	2.04	76 miles / 122 km
5000	28.00	3.60	7.78	45.06	13.63	3.31	123 miles / 198 km
6000	39.00	5.60	6.96	62.76	21.20	2.96	110 miles / 177 km
7000	51.00	8.70	5.86	82.08	32.93	2.49	92 miles / 149 km
7500	55.00	10.60	5.19	88.51	40.13	2.21	82 miles / 132 km