

Protector[®]
usv

RAFAEL 
ADVANCED DEFENSE SYSTEMS LTD.

RELIANCE

Naval Systems



PROTECTOR

Unmanned Surface Combat System

The Operational Need...

Keeping personnel out of the danger



Identification / Interrogation

The target

- ❖ Cover a wide spectrum of **Dull, Dirty and Dangerous (D³)** missions
- ❖ **Modular mission design**



The Solution

The Protector[®] USV



Protector USVs Generations

Mod IV



11m Dual propulsion

Mod III



9m hull
Improved
Performance &
Capabilities

Mod II



7m hull
Unique Design

Mod I



Improved Drive

Mod 0



Commercial

Remote control - communication

Protector USV



Control Station

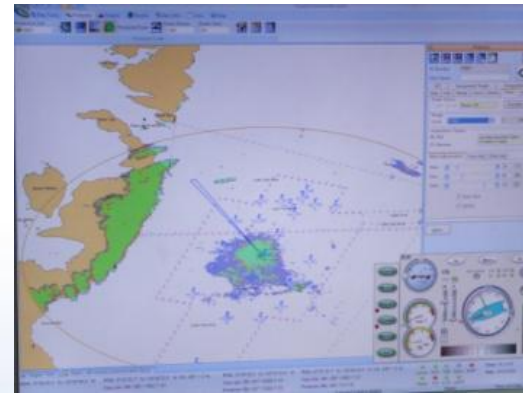


Remote Control Center

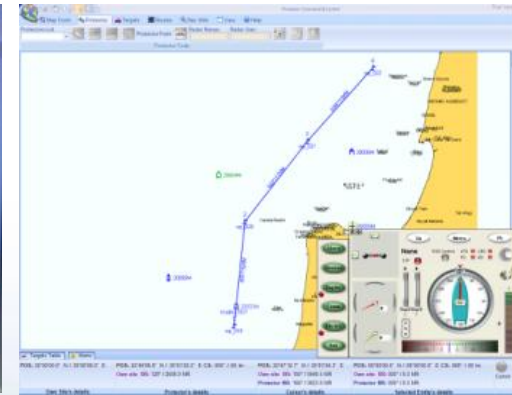
Mission Module
Console

Boat Control
Console

Situational Awareness



Boat Control



Data

- Map & Location
- Tracking Data
- Targets
- History

Maneuvering

- Course & Speed
- LOS Steering
- Way Point
- Route (multi WP)
- Manual



✓ Can be located either in shore base or onboard vessel.

Protector in typical AT/FP Mission Module



Security Payload

- Light Projector
- Public Address System
- Microphone

Protector USV mission modules

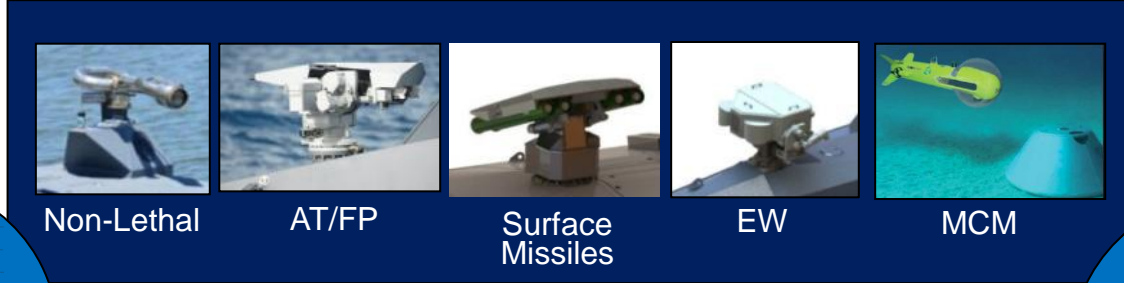
Non Lethal Configuration

Water Cannon



Multidisciplinary System of Systems

Unmanned Marine Systems



Acoustics & Signal Processing

Radar & Signal Processing

Electro-optics & Image Processing

Naval Architecture

Systems Engineering

Mission Management

Guidance & Navigation

System Control

Communications

Protector[®]USV

Protector Platform Major Specifications

- LOA - 9m, 11m
- Full Displacement (including fuel & payloads)
 - 7 Mt (9m hull).
 - 10 MT (11m hull)
- Top Speed (Sea state 1) :
 - 30 Kn (9m hull, one propulsion system).
 - 40 Kn (11m hull, dual propulsion system)
- Endurance :
 - > 48 hours @ low speed (2 engines), longer w/one engine.
 - > 8 hours @ top speed.
- Seaworthiness:
 - Full Performance @ Sea State 3
 - Limited Performance @ Sea State 5



Summary



Rafael's Protector is an
existing high
performance, operational
USV

Thank You!

