AUTOMATION & DRONIZATION KIT

SEA PROVEN TECHNOLOGY FOR REMOTE OPERATIONS

Sirehna has developed an autonomous and remote control kit adaptable to existing platform and new build vessels to remotely control and perform remote operations.

Sirehna dronization kit includes:

- Remote ship control
- Remote payload control
- Communication systems for all range of operations
- Obstacle & collision avoidance
- Replication of the bridge including communication means (Shore center)

The operator is able to supervises the mission on the control station and has a direct control on the navigation and payloads. Sirehna's kit includes a situation awareness system processed by the drone using on-board sensors (radar, ais, video...) that is directly shared with the operator.

The communication system guarantees a high level of availability according to operational needs (PRU, wifi, 4G, S-band or VSAT).

- **REMOTE CONTROL NAVIGATION**
- **COMMUNICATION SYSTEM**
- **REMOTE PAYLOAD CONTROL**
- **OBSTACLE AVOIDANCE**
- **SHORE CENTER**
- **NEW BUILD OR REFIT**

SIREHNA
NAVAL GROUP

POWER AT SEA

SIREHNA DRONIZATION KIT

REMOTE SHIP CONTROL	REMOTE PAYLOAD CONTROL	COMMUNICATION SYSTEM	SHORE CENTER	OBSTACLE & COLLISION AVOIDANCE

## Shore center – Ground control station

Sirehna's shore center & supervision station allows remote piloting & management of active payloads/navigation equipment. The operator is able to pilot the vessel remotely depending on the communication system setup (PRU, wifi, 4G, S-band or VSAT).
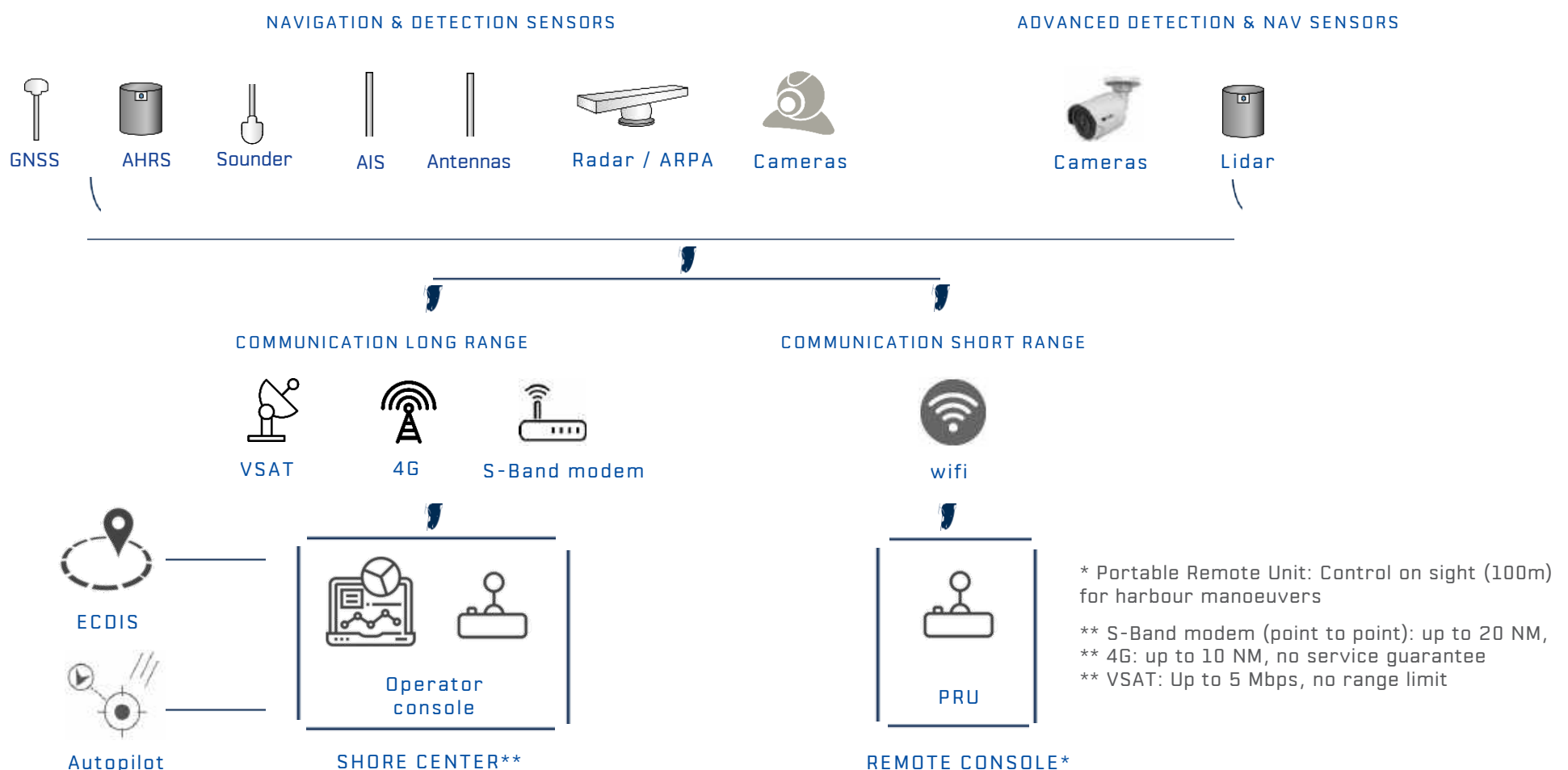
System enable the multi-sensors data fusion and display in real time the scalable tactical/operational/environment situation, in compliance with the operational applications.
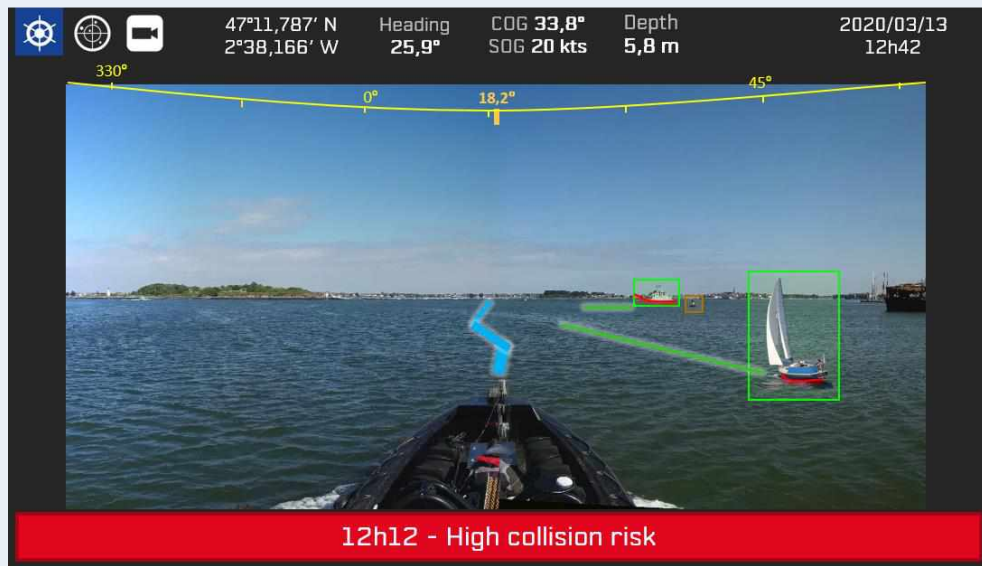
Situational awareness – Obstacles avoidance

- Collision detection & obstacle avoidance (COLREG)
- Dedicated graphical user interface or integrated in shore center
- Augmented Reality (AR)
- Suggested manoeuvre indicating all the possible trajectories
- Surface target tracking & identification

SIREHNA DRONIZATION KIT ARCHITECTURE

NAVIGATION & DETECTION SENSORS

GNSS   AHRS   Sounder   AIS   Antennas   Radar / ARPA   Cameras

ADVANCED DETECTION & NAV SENSORS

Cameras   Lidar

COMMUNICATION LONG RANGE

VSAT   4G   S-Band modem

COMMUNICATION SHORT RANGE

wifi

ECDIS

Operator console

Autopilot

SHORE CENTER**

PRU

REMOTE CONSOLE*

* Portable Remote Unit: Control on sight (100m) for harbour manoeuvers

** S-Band modem (point to point): up to 20 NM,
** 4G: up to 10 NM, no service guarantee
** VSAT: Up to 5 Mbps, no range limit

afaq ISO 9001 Qualité
AFNOR CERTIFICATION

Certified management system

Technocampus site in Bouguenais