



ELT

technology for innovation

URBAN AND BORDER SURVEILLANCE

SURVEILLANCE



**A set of multispectral sensors
is designed to surveil your
area of interest.**

**Perfect to support permanent
installations on “hot spots”.**

**Specific composition of sensors for
Land Border Surveillance
Sea Border Surveillance
Urban Surveillance**

MUROS S Surveillance is equipped with a medium range radar sensor, connected with electro-optical/infrared cameras, communication monitoring devices and acoustic sensors.

The surveillance function relies on radar techniques for the detection of moving targets, on communication interceptors for the detection of suspect communication sources, and on acoustic sensors for the location of noise events.

The additional electro-optical/infrared sensors are aimed at fine tracking and recognition of the detected threats. MUROS S allows then fusing the information coming from all the available sensors in order to compile the tactical picture of moving actors in the Area of Interest, and attempt at classification and recognition of these entities.

The final aim is to assess the actual threat posed by the actors and recognize any anomalous or malicious action.

MUROS



AREA AND BORDER SURVEILLANCE



Multi-Sensor suite
FMCW Radar
Daylight camera
Night vision camera
Interception Wideband Receiver
Acoustic sensors

Setup for Maritime Application
AIS Receiver
Maritime VHF / UHF Radios
PCL (Passive Coherent Location) Techniques

Coverage for the detection of a
small car varies up to several Kilometers

Sensors and detection ranges
adapted to urban operations

Powerful Data Fusion and feature extraction
Intuitive user interface

Several hours of autonomous operation

Powerful data and voice
communication equipment

Climate control for operation in challenging
environmental condition

The Sensor suite of long-/short range radar systems, optical components and additional sensors is carefully selected according to the scenario for border surveillance and urban surveillance.

When **MUROS S** is targeted maritime scenario and specifically to the surveillance of "hot spots" (e.g., port areas, channels, oil rigs) in support of standard coastal vessel traffic monitoring systems, the vehicle is equipped with sensors that are specific for the maritime environment, such as maritime VHF/UHF radios and Automatic Identification System (AIS) receiver, and the corresponding IT infrastructure, such as Electronic Chart Display functions.

MUROS S is empowered with a very modern sensor suite for short or medium range observation in the area of interest. Key asset is the medium range FMCW (Frequency Modulated Continuous Wave) radar, which is adaptively tailored to the operations.

Innovatively, passive coherent location (PCL) techniques are integrated in MUROS S vehicles in order to perform "silent" observations without emitting radio signals. The adopted PCL systems use signals of opportunity (i.e., already in the environment such as GSM or GPS signals) in order to detect moving vehicles. This allows compiling a rough tactical picture while minimizing the probability of being seen in the electromagnetic spectrum or interfering with other systems.