

John Cockerill **Defense Sécurité**

# Cockerill®EO/IR

High performance  
Electro-Optical and Infrared systems  
for surveillance and homeland security



# EO/IR Systems

Our persistent surveillance and protection systems provide some of the most innovative solutions for surveillance and reconnaissance activities.

Large area automatic scanning systems to detect, track and recognize unauthorized intruders 24/7 in all weather conditions.

John Cockerill Defense Sécurité systems work simultaneously in their ability to observe the detected target while continuing the 360° scanning for additional intruders on a wide area and at a distance up to 40 km.

The systems operate automatically without intervention, by scanning and observing the zones for unauthorized activities. Once an intrusion is detected, the systems issue an alert and continue the identification and tracking of intruders.

The automated systems provide a level of performance that is unachievable by human operated systems.

Our **EO/IR Systems** operate in stand-alone or may be integrated with complementary components in order to offer a complete solution.

## 4 product families for all fields:

### ► Land

Designed for automatic intrusion detection at medium and long distance



### ► Sea

Gyro-stabilized systems for naval applications and marine environment



### ► Air

Line of optics for airborne applications such as surveillance and tactical aerostat or any other type of aircraft



### ► Vehicle

Gyrostabilized systems suitable for all types of patrol and surveillance vehicles



# Applications



## ▶ Land surveillance

- ▶ provide wide-area, high-resolution, all weather, day and night images which enables detection of moving targets
- ▶ activity observation and monitoring in a large area
- ▶ real-time, high-resolution imagery with highlighted moving targets



## ▶ Coastal surveillance

- ▶ proven for coastal surveillance and security by detecting swimmers or small boats as well as intruders by land
- ▶ scanning and observation of waters within the coastal boundaries, for unauthorized activities
- ▶ recognition, identification and tracking of intruders



## ▶ Perimeter security

- ▶ day & night systems provide perimeter protection solutions for sensitive sites such as airports, seaports, power plants and many more
- ▶ automatic scanning providing a virtual fence to detect intruders before they reach the area



## ▶ Force protection

- ▶ proven scanning and observation systems for the protection of forces at military bases
- ▶ ability to observe the detected target while continuing the scanning for additional intruders



## Airport security

- ▶ runway protection, flight safety and air control
- ▶ scanning and observation of the runways and other airport zones for unauthorized activities
- ▶ aircraft observation and tracking in the air and on the ground 24/7
- ▶ support to Air Traffic Control activities providing situational awareness



### ▶ **Airborne surveillance missions**

- ▶ wide variety of lightweight gyro-stabilized EO/IR camera payloads
- ▶ ideal for most airborne surveillance missions on UAVs, UAVs, Helicopters, VTOLs, Fixed-Wing Aircraft, Aerostats/ Balloons and more



### ▶ **Anti drone protection**

- ▶ EO/IR systems are integrated as a part of our complete C-UAS solution : Fortress Drone Defender
- ▶ can detect drones and track them with high precision infrared and daylight cameras and advanced video tracking



### ▶ **Harbor / Port safety and security**

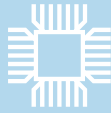
- ▶ designed to work 24/7 without affecting normal port activities, even in total darkness and in harsh weather environment
- ▶ surveillance of docks and storage areas
- ▶ providing a "virtual fence" over the water, detecting intrusion from the sea (small ships, boats and swimmers)
- ▶ vessels observation and tracking at sea and at the port with continuous zoom-in capabilities



### ▶ **Vehicles applications**

- ▶ proven gyro-stabilized EO/IR observation systems for most mobile missions
- ▶ panoramic automatic intruder detection and recognition
- ▶ can be integrated to various land vehicles including UGVs and trailer-based systems





## Technology

### Main features

- ▶ High sensitivity day and thermal cameras with various focal lengths adapted to specific uses
- ▶ Panoramic scanning
- ▶ Automatic detection
- ▶ Continuous surveillance
- ▶ Advanced Image Processing
- ▶ Possible integration and interaction with other systems
- ▶ Modularity : additional features available in option (Eyesafe Laser Range Finder, Laser Pointer, etc.)
- ▶ Superior gyro-stabilized image

- ▶ Electro-optical IR sensors : day and night vision
- ▶ Thermal imaging cameras, cooled and un-cooled
- ▶ Short-Wave IR (SWIR) Technology
- ▶ Optical lenses continuous zoom
- ▶ Inertial stabilization
- ▶ Real-time image enhancement and image processing
- ▶ Passive scanning & Target Acquisition
- ▶ Video tracker hardware / software
- ▶ Laser systems integration

**High performance vision  
for automatic, assisted and  
facilitated surveillance.**





**Our EO/IR Solutions can be deployed in multiple critical & sensitive infrastructures worldwide.**



**'The new frontiers of safety, security & sovereignty'**