# CASE STUDY

## SPECIAL FORCES PROTECTION

DETECT WITHOUT BEING DETECTED

## > Overview

**Customer:** Special Forces

**Challenge:** Need for light and compact systems which can be deployed quickly for temporary surveillance. The thermal sensors should not be detected, decoyed or jammed by the enemy, and should have a long autonomy on the ground.

**Solution:** SPYNEL fast deployment thermal sensors are entirely passive and undetectable. Lightweight, they can be carried in a backpack and are rugged enough to operate under any weather condition.
Battery-operated with a low power consumption, they can be monitored remotely using a rugged laptop via a wireless link.

## > Customer

SPYNEL thermal cameras are used by Special Forces in many countries. Special Forces often face urgent surveillance needs for temporary protection of a perimeter during a mission, before an intervention, to secure the visit of a VIP, or even to identify suspects during intelligence phases. In an increasingly complex environment, they continuously adapt the scale and scope of their actions. It is essential that Special Forces operate quickly, with complete discretion through passive systems which can be controlled remotely.

## > Challenges

In a context of growing international and national security threats, the need for discretion and stealth is more and more relevant. Installing security systems is often risky, like in OPEX areas (External Operations), in hostile territory. Surveillance requirements are often temporary and Special Forces have to be very quick at deploying and dismantling the sensor if an unexpected event happens.
One of the main challenges is to remain discreet and undetectable at all times. This is why passive means are key to avoid being detected by the enemy. Radar solutions are thus prohibited because of the electromagnetic waves they emit. In addition, surveillance systems must be as light and as compact as possible.

## > Solution

**SPYNEL-M** is the ideal 360° infrared sensor to cover the needs of Special Forces in terms of temporary surveillance and perimeter protection. One single SPYNEL-M sensor is able to perform 24/7 early human intrusion alerts over a 1.5 km-diameter area and can replace up to 16 traditional cameras over 360 degrees.
It is important for a security system used during unexpected events and crucial operations to be intuitive, even without training.
SPYNEL sensors and their CYCLOPE software are easily handled by Special Forces who often change missions

### Mobility Pack for SPYNEL-M :

The "**Mobility Pack**" addresses the needs of Special Forces for quick deployment. The pack includes:

- A battery enabling autonomy for several hours in operation
- A rugged laptop
- A Wi-Fi connection

With this innovative pack, the soldiers directly receive alerts on their rugged laptop via a wireless link. It allows them to be mobile and to be assigned to other functions in parallel. Another strong point is the low bandwidth, which allows access to the camera from one or several remote control centers.

Rugged laptop with CYCLOPE Software

Mobility pack with battery and SPYNEL-M sensor

### SPYNEL-M Features:

- **Rapid deployment**: SPYNEL-M is particularly appreciated by Special Forces for its very rapid deployment capabilities, during a convoy stop, on a supply plot or to protect an improvised camp.

- **Low constraint power supply and autonomous**: The 360° SPYNEL sensor can be battery-powered, enabling autonomy for several days. It can also be powered via POE or solar panels.

HGH
Enlighten the Unseen

• **Compact and lightweight**: SPYNEL-M measures 12x20 cm and weighs 1.8 kilograms. It is easily transportable, for example in a backpack. Their low weight is a key feature for Special Forces, usually deployed far from their rear operational bases. They must remain highly mobile while transporting technologies that are often heavy and cumbersome.

• **Completely passive and undetectable** when used in enemy zones for survey or infiltration missions. The system requires no additional light source and is unaffected by jamming and decoying.

• **Equipped with the CYCLOPE detection, classification & tracking software:** The CYCLOPE sofware offers features particularly used by Special Forces; when a threat is automatically detected, the radar view gives the geolocation of detected targets. The GPS position of the target is also part of the data provided by the CYCLOPE software. The Digital Elevation Model available with CYCLOPE provides a 3D representation of the land surface for a more accurate distance measurement of a target.

## > Results

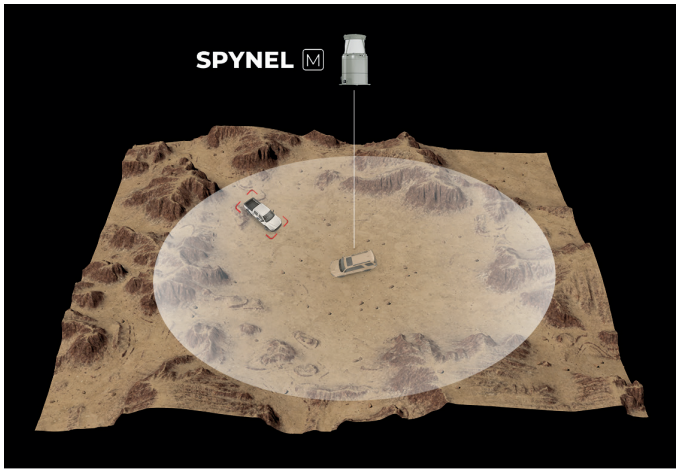
Special Forces use the HGH 360° perimeter surveillance systems for many different applications. Here are some examples:

• **Surveillance of isolated/desert areas**: Successful desert operations require adaptation to the environment and to the limitations its terrain and climate impose. SPYNEL is adapted to a dusty and harsh environment and has proven efficiency where visibility often changes and temperature swing between extremes.
To ensure the safety of the installer in isolated areas, SPYNEL can be installed at the core of the site to be protected, or abandoned ahead of the area, allowing the installer not to expose himself to danger by avoiding a risky zone.

With CYCLOPE Hypervisor, soldiers can remotely monitor on one single GUI, all threats detected by several SPYNEL sensors deployed over one or several theater of operations.

• **Special event security/VIP procession:** The SPYNEL system can be installed in all the places visited by a VIP during their trip, securing the area from a roof for example. SPYNEL also provides waterfront surveillance, protection of ground-based aircrafts, rural or desert areas in the event of an unexpected stop of a VIP convoy. The sensor is deployed swiftly and the reduced bandwidth allows the camera to be connected to a remote control centre.

• **Vehicle surveillance:** Autonomous vehicles have demonstrated their value in a wide range of recent military operations, and will be given more and more importance in the years to come. SPYNEL-M cameras are easily and quickly installed on autonomous cars to conduct reconnaissance missions




*Spynel-M monitoring area*

**SPYNEL-M** is a cost-effective, rugged, and compact solution for wide area surveillance, taking advantage of fifteen years of expertise in major military operations. The sensor benefits from the functionalities and performance of the intuitive advanced intrusion detection software **CYCLOPE**, which automatically detects, tracks and classifies an unlimited number of targets from any direction at any time of day or night and under any type of weather conditions.



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