Military Mobile Station Panoramic Surveillance with SPYNEL 360 IR Passive Sensors

Military bases, whether temporary or permanent, require to be secured against potential terrorist attack or enemy incursion. A range of security solutions are often deployed to detect potential hostile activity approaching the unit, including: entry control, perimeter security, persistent surveillance, warning and alert.

Deployed in a hostile and isolated environment, outside the base camp, the surveillance of military mobile station is key to ensure soldiers and operations are safe and secure.

A rapid deployment of a thermal imaging camera on the shelter roof or on a mast provides a protection bubble of the military mobile station and its surroundings whilst enabling soldiers to keep focused on their mission.

BACKGROUND

Military mobile shelters are commonly used for radar or jamming stations, air defense systems and coastal surveillance stations. Deployed on the field and highly strategic, these isolated units are the operations center used by the armed forces. Their objective was to find a **passive and automatic surveillance sensor** to detect and track in real-time multiple threats approaching the military shelter.

For communication missions, a **passive technology** is required to monitor the surroundings in order to be undetectable by the enemy and to not interfere with the mission. In case of radar or jamming stations, the SPYNEL passive technology ensures no interference with the mission. Moreover the SPYNEL sensor is also designed to **withstand such very harsh electromagnetic environment.**

The Armed Forces made also a focus on a **turnkey and mobile** IR surveillance solution allowing soldiers to deploy it anywhere, anytime on the field. Finally, the **HD panoramic video with automatic detection alarms** was a decisive criteria in the choice of the Armed Forces as it provides real-time situational awareness for effective decision making.

Key benefits of HGH SPYNEL IR panoramic sensors for the surveillance of military shelters include:

- Passive surveillance sensor, undetectable
- Designed to withstand harsh electromagnetic environment
- Detection, tracking and classification of multiple threats simultaneously
- Automatic detection in a changing, open environment, without any barrier
- Easy and fast parameter setting to create virtual fences around the shelter areas
- Lightweight, mobile, low power consumption thermal surveillance sensor
- Real-time 360° situational awareness with automatic classification for effective decision making
- 24/7, day/night surveillance, in any weather conditions
- Seamless integration of SPYNEL data into third party VMS software or remote Command and Control systems
- Limited infrastructure required for installation (on shelter roof or on fast deployable mast)

SOLUTION

A SPYNEL-M was deployed on the roof of a command-and-control shelter, ensuring a **short-range and panoramic protection** around the shelter up to a few hundred meters. Combined with Cyclope processing software, SPYNEL-M provides **automatic surveillance** to detect, locate, identify, classify and track any approaching threats, in all directions in daylight or total darkness, and in any weather conditions. With its real-time visualization and very low false alarm rate, SPYNEL-M uncooled thermal camera provides the operator the most **reliable situational awareness under 360°.**

Turnkey, mobile, easily deployable thermal surveillance sensor

SPYNEL-M is a **turnkey** panoramic IR camera designed to be rapidly deployed for on-field mobile station protection. SPYNEL-M is easily moved from one location to another. It can be installed on the roof of a shelter or deployed on a mast to secure several shelters. **Fully integrated**, the surveillance solution informs in real-time the operator inside the shelter about any hostile threats. Real-time high-quality video streams displayed by Cyclope help soldiers **make better decisions to ensure their optimal protection.**

Intelligent, scalable 24/7 detection, tracking and classification

Driven by Cyclope software, it provides a **simple and intuitive configuration** of warning and detection zones including pre-defined alarm trigger rules. The advanced alarm editor enables to **define specific area to secure**, whilst others are declared as non-detection area allowing soldiers to move freely around the shelter. It is also possible to define pre-alert, alert and warning areas depending on the level of danger.

Upon detection of a threat, Cyclope software sends an **automatic alert** to the operator. With its very low false alarm rate guaranteed, the operator can stay focus on his mission while benefitting from efficient protection.

Remote operations and Interoperability

In case of multiple shelters protection which can be deployed on the same area, several SPYNEL-M sensors can be installed especially to ensure a 360° surveillance without any blind zones. With these specific configurations, Cyclope Hypervisor allows the soldier to **centralize automatically all threats** detected and tracked by the multiple sensors.

It is also the ideal solution to **monitor several remote sites from one single control room saving time and ressources.**

Cyclope Hypervisor also centralizes **all video streams from other sensors** used for the mission such as Pan Tilt Zoom or access control cameras.

> "HGH SPYNEL 360 IR camera provides effective surveillance even in the most challenging environment. It allows freeing-up soldier resource to focus on their mission.", said Edouard Campana, Wide Area Surveillance BU Director.

CONCLUSION

Robust, fully passive and maintenance-free, SPYNEL-M is the ideal **surveillance sensor for the protection of military mobile stations.**

Cyclope software and Cyclope Hypervisor have a wide range of capabilities to support surveillance operations locally and remotely. The surveillance solution is characterized by extremely simple and intuitive user interfaces and therefore users only require absolute minimum of training prior to deployment.

Enlighten the Unseen

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