LEONARDO CYBER & SECURITY SOLUTIONS

IMSS

INTEGRATED MOBILE SECURITY SYSTEM

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IMSS (Integrated Mobile Security System) provides enhanced situational awareness in a mobile and rapidly deployable system. Based on full featured vehicles the solution offers a complete operational control room inside the vehicle and can integrate both existing and innovative sensor technologies.

Thanks to an integrated communications platform and flexible systems framework, IMSS delivers real time analysis for effective operations coordination and support in law enforcement, homeland security, CNI and civil protection and major events.

A close monitoring and control during any kind of event and a continuous communication with a central control room, improves intervention coordination and maximize the effectiveness of the operation.
In the same way, a fast intervention within hours and even minutes may drastically reduce the impact of an emergency. Within this context, IMSS has been designed to provide Blue Forces with increased situational awareness, by integrating advanced technologies and sensors, with an operational control room inside the vehicle itself.
Thanks to modular design capable to support various user requirements, IMSS can be deployed in any scenario:
- Homeland security and CNI protection
- Border control
- Major events
- Law enforcement
- Emergency support.

FUNCTIONS

Sensing and control
- IMSS can monitor cross-border and protected areas through an innovative surveillance system consisting of numerous sensors that allow operators to achieve a full situational awareness. In addition, specific video analytics algorithms detect anomalies, such as abandoned objects, over-crowding and suspicious behaviour, or perform real time identification by means of non-cooperative face recognition.

Communications
- IMSS guarantees the flow of messages and information between on-field-sensors, the vehicle and the central control room. Through the operative network operators can communicate, exchange data and perform their operational activities, while moving.

Enforce Checkpoint Control
- Using the mobile numberplate recognition software, IMSS can control gateways where vehicles enter or exist, and enforce identification and anti-theft actions.

Supervision and coordination
- The integrated communication with the central command allows IMSS to perform immediate intervention.

Data collection
- Information collected by different sensors in the area is rapidly interpreted, displayed on local screens and shared with the remote control room.

The IMSS can also be used as a central communications network platform for distributing messages and interfacing with other public or private networks.

REMOTE CONTROL ROOM

Power and ancillaries sub-systems

Videosurveillance & Localization

Wi-Fi access point

Automatic Number Plate Recognition

Radio Communication System

TECHNICAL FEATURES

The ability to integrate heterogeneous technologies makes the IMSS an autonomous mobile communication node capable of gathering and forward information among:
- Different sub-systems and sensors in the field
- Different hierarchical levels of a command chain
- Different operating forces (multi-agency operations).

Broadband communication-required to support video operations-is supplied via Wi-Fi access point.
This typically occurs when video feeds are required from zones that cannot be reached by the vehicle.
IMSS also provides a full integration platform which allows for local C2 (Command and Control) analysis before distributing messages to the remote Command centre, if an external communication infrastructure is available.

This feature makes the IMSS an ideal solution for operations in remote or critical areas, where it can support the local coordination and its connection with a remote control room.

LOCAL AND REMOTE CONNECTIVITY
- A compact TETRA mobile-radio system, with a "single cell" radio base station providing the coverage for the TETRA handheld radios to be used by Blue Forces on the field.
- A compact LTE system providing broadband coverage and professional features thanks to the Core Packet Network.
- A CSP ecosystem to perform multi-technology integration.
- A Wi-Fi access point, providing IP data transport to all data sub-systems and sensors deployed on the field.

IMSS can forward information to a remote C2 system accordingly to the command chain and configurable on the basis of users needs, where an external communication infrastructure is available.

SECURITY AND CONTROL ROOM FEATURES
- Integrated Security Systems and Solutions (SC2) for the implementation of highly integrated and geographically distributed physical security
- Automated Car plate reader to automatically control the number plate for security checking (stolen or wanted vehicles). The system uses the fixed LPR cameras installed in the IMSS
- 3 Dome cameras installed on the Van roof useful to acquire audio and video signals from the operational area.

POWER AND ANCILLARIES SUBSYSTEM
- 1 petrol fuelled generators to make IMSS totally autonomous for the power supply.
- An external power supply socket for complete operational autonomy.
- Hydraulic stiffening for the suspension to stabilize the vehicle and 2 additional stabilization legs.
- The Power subsystem is PLC controlled and able to be connected to an external power source (grid).

External dome camera

IMSS internal view

PUMA T4 - Handhelds for radio communications

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