DEA SECURITY®

AIRPORT PERIMETER SECURITY

Since ever airports have been the most valuable targets in terms of security. As a matter of fact, they represent a potential target for terrorist attacks, criminal acts or vandalisms. The recent evolution of the international scenario has made it necessary to define new security plans able to respond to the increasing levels of risk in airports.

A complete and strong security infrastructure must include the control of the perimeter, protecting the airport from intrusion attempts that may occur in the remotest and less monitored areas of the site.

The perimeter intrusion detection systems produced by **DEA Security** fully respond to this need, detecting any intrusion attempts even before the intruder enters the protected area: in this way security officers may have more time to undertake the necessary defense actions.

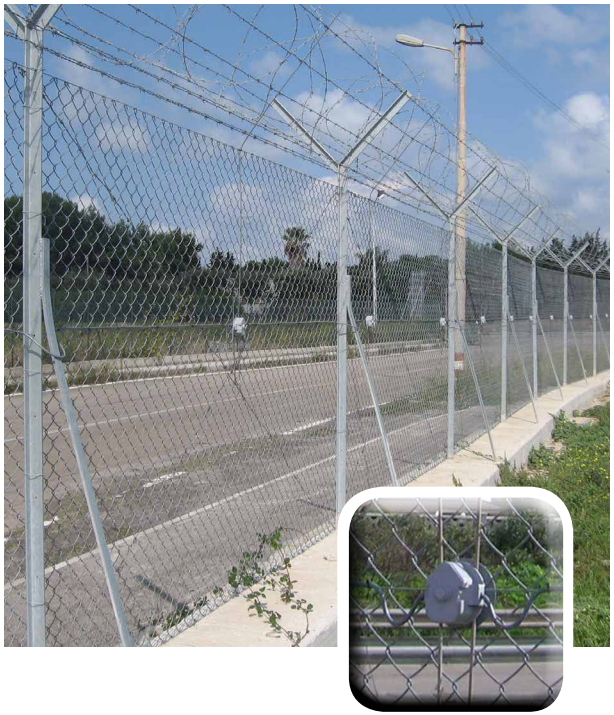
DEA detection systems

DEA Security design, develop and produce an exclusive and comprehensive range of perimeter intrusion detection systems. These systems are the result of a continuous and intense research and development activity and **are employed for the protection of perimeters of any size**, in very strategic fields such as military and government sites, seaports and airports, industrial and petrochemical compounds.

DEA provide two different lines of systems to protect the perimeter fence: **SERIR**, which can be installed on metal fences provided in rolls (chainlink or welded) or on semi-rigid fences; **TORSUS**, which is mounted on rigid metal fences.

SERIR line includes **SERIR P2P**, a new detection system with distributed intelligence designed for the protection of very large perimeters belonging to high or medium risk areas. This document deals with SERIR P2P as a solution for the protection of airport perimeter fences; however you may also take into consideration the possibility of using either **SERIR 50 or TORSUS 50** according to the site and the fence to be protected.

As for the protection of gates along the airport perimeter, **SISMA CP 50** buried system can be used where feasible. This system, which is invisible and cannot be circumvented, represent a very good alternative to magnetic contacts and IR/MW barriers.



SERIR P2P detection system

SERIR P2P is a new perimeter intrusion system with ***Point ID technology*** for the protection of metal fences. It represents the evolution of **SERIR 50** system which has been employed for more than 10 years for the protection of thousands of kilometres of fences, both in Italy and abroad.

SERIR P2P consists of special **piezodynamic detectors** equipped with **built-in analysis unit** and protected by a heavy-duty polyamide housing. They can be quickly installed on the fence thanks to the fastening antiremoval device they are provided with. SERIR P2P detectors perceive the vibrations of the fence during an intrusion attempt for **cut, climb and breakthrough actions**.

This system is **immune to adverse climatic events** such as wind, rain, snow and sudden changes of temperature and also to **man-made environmental factors** such as nearby roads or railways. In addition, the sensors highly tolerate the presence of **evergreen climbing plants** even if the fence is completely covered by them.

Although this system is particularly suitable for soft fences and semi-rigid panels, SERIR P2P can also effectively protect, by means of special metal rods, fences or walls with concertina topping.

SERIR P2P detection system

The state-of-the-art technology developed for SERIR P2P makes the latter one of the most reliable PIDS currently on the market.

Point ID detection. Each sensor is individually identified to allow you to precisely locate the point under alarm: an alarm zone (logical line) can be also composed of a single sensor.

Up to 500 sensors managed on two communication buses to protect a perimeter up to 1500 metres long with a single control unit (if the sensors are installed every 3 metres). Such a feature remarkably simplifies the system wiring infrastructure, especially in big sites.

Self-diagnosis function. A self-diagnosis function is implemented in each sensor and checks the status of both the electronic part and the piezodynamic transducer. It also allows you to discriminate possible degrading factors before a failure may occur.

Anti-removal electronic device. It detects the removal of the sensor from the fence. During the installation phase, it signals, via software, the wrong fixing of the sensor.

Magnetic and thermal tamper device. It identifies and signals the attempts of tampering the sensor by exposing it to electromagnetic fields or extreme temperatures.

High tolerance to disturbances. The piezodynamic technology and the sophisticated detection algorithms make the system very tolerant to adverse weather conditions (wind, rain, snow and extreme temperatures), climbing vegetation and man-made factors (nearby heavy traffic roads and railways, machines operating near the fence).

SERIR P2P detection system

Simple and quick installation. SERIR P2P sensors are provided in prewired strings for an easy and quick installation. The sensors are also equipped with a quick fastening device.

Sensor automatic identification and sorting. Upon the first configuration of the system, the control unit automatically identifies all the sensors that are linked to the bus and, using an algorithm patented by DEA, sorts and distributes them on 64 alarm logical lines. The logical lines can be manually reconfigured according to the project requirements.

Calibration and configuration per logical lines o per sensor. Each sensor can be calibrated and configured together with the others of the same line or individually. The calibration is easied by a real time 3D chart of the analog signal coming from each sensor.

Capability of integrating thirt-party devices, such as magnetic contacts or IR/MW barriers, by means of a special input module. The module can be placed anywhere along the bus.

Comprehensive signal analysis. For each sensor the following signals can be discriminated: cut, climb, breakthrough, sporadic cuts, removal attempt, thermal and magnetic tamper, link quality, current and absorption, temperature and self-diagnosis.

Event memory. SERIR P2P is provided with a digital memory which accurately stores all the signals detected by the system with millisecond precision. This allows you to analyze the logs and determine the cause for each single alarm signal.

SISMA CP 50 detection system

SISMA CP 50 is a buried intrusion system which **detects the pression variations generated by a person walking along the protected surface**. It creates a completely invisible detection band and can be used to protect driveways and pathways.

The system employs heavy-duty and reliable geoseismic sensors which are specifically designed for being used underground and do not need any maintenance. The sensor technology, combined with the sophisticated analysis capability of the processing boards, guarantees a very high tolerance of the system towards environmental nuisances.

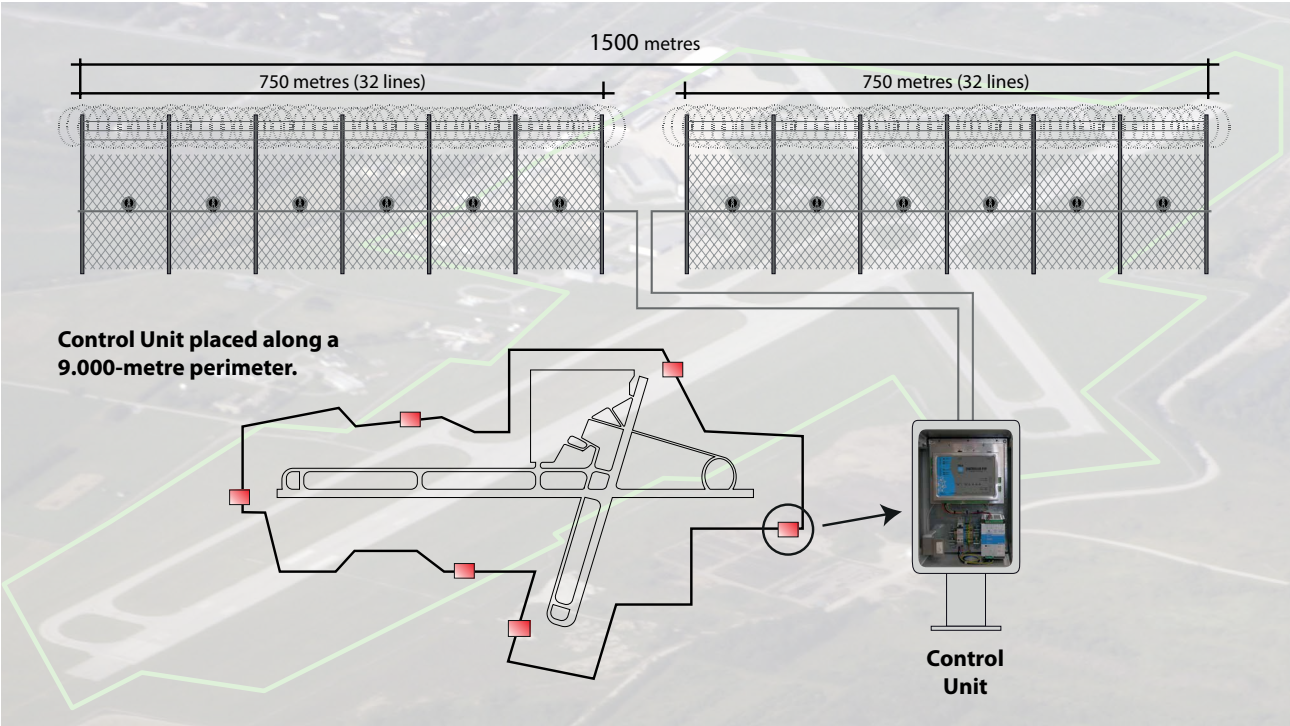
SISMA CP 50 is provided in prewired strings up to 50 metres. **The cable connecting the sensors along the string is provided with a thick galvanized iron braid armour** to protect it against rodents.

DEA integrated solution

SERIR P2P sensor-strings are connected to preassembled weatherproof cabinets, ***Control Units***, containing a controller capable of managing up to 500 sensors distributed on two communication buses (250 sensors per bus maximum). Assuming the installation of the sensors every 3 meters, **a single *Control Unit* can cover up to 1.500 metres**.

SISMA CP 50 sensor-strings are connected to a processing board placed inside a dedicated preassembled cabinet. This cabinet can also contain other boards, among which the boards needed to integrate SISMA CP 50 with other DEA systems or with third-party devices.

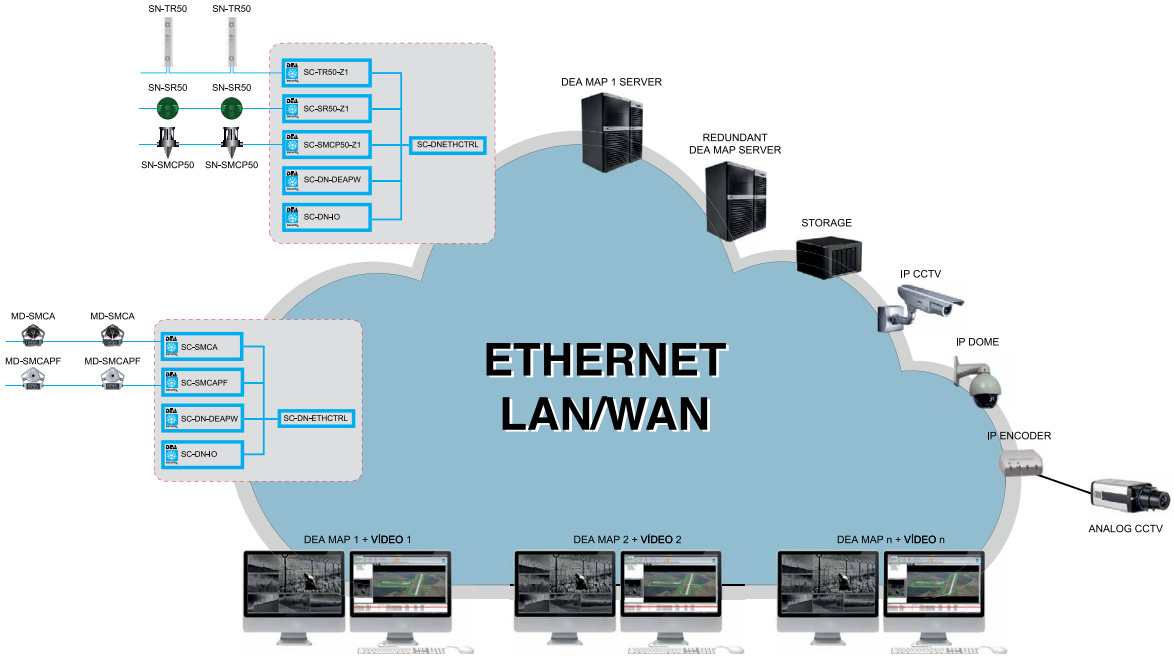
A SISMA CP 50 sensor-string can be composed of 56 detectors maximum to cover up to 50 metres. The relevant cabinet must be placed within 150 metres from the beginning of the sensor-string.



DEA integrated solution

For the **centralization of the signals** and the remote management of DEA systems, it is possible to use **DEA NET** proprietary network or an **Ethernet network with IP protocol** which can be shared with digital cameras and third-party security devices. SERIR P2P can directly interface
with both DEA and Ethernet networks, while SISMA CP 50 can communicate over Ethernet by means of a dedicated control board mounted in each peripheral cabinet.

SERIR P2P and SISMA CP 50 provide several possibilities of integration with other systems and software such as DEA MAP graphical software or third-party applications through a dedicated software library. In addition, the two systems provide standard relay outputs for the direct connection to a control panel.



DEA MAP supervision software

DEA MAP is a security management software which **integrates both the perimeter intrusion detection system and the videosurveillance system (CCTV) into a unique management system**, displaying the protected area on a graphical map. This software is user-friendly and allows you the immediate identification of the alarm zone.

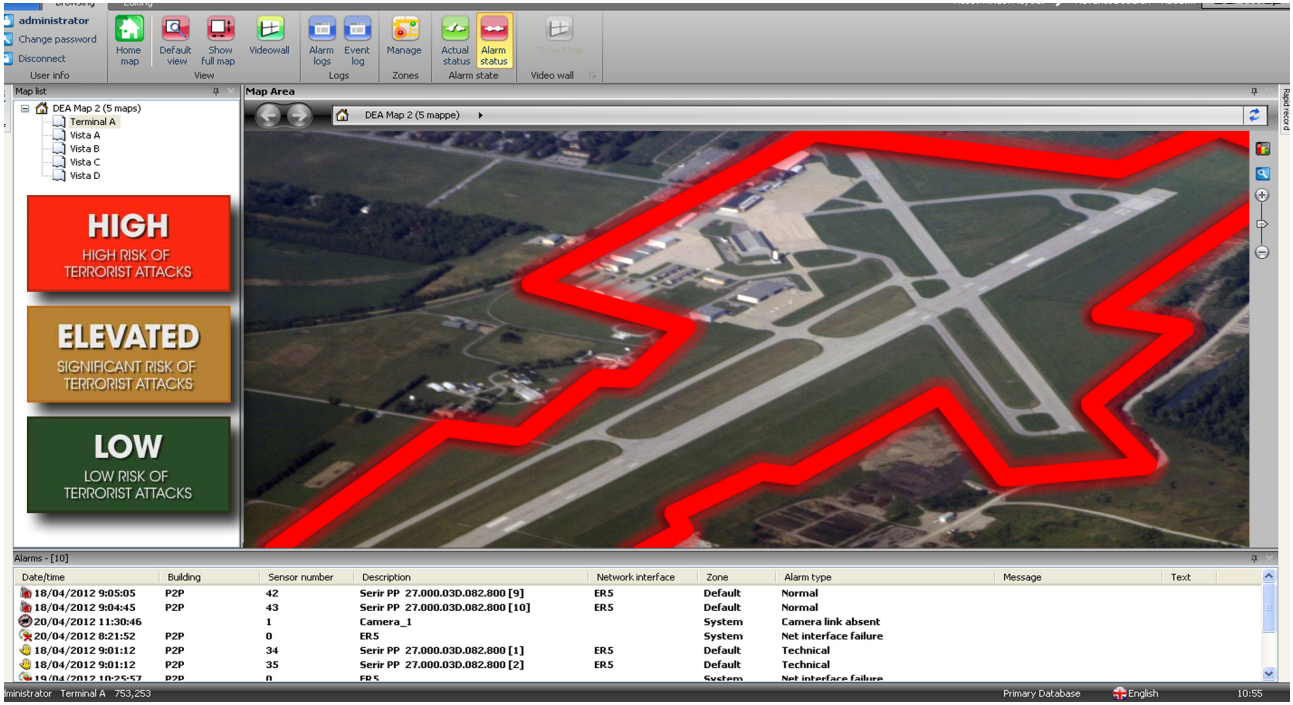
DEA MAP enables you to interact with DEA processing boards installed in the field and to manage, by means of dedicated interface boards, third-party equipment provided with relay outputs (such as magnetic contacts and IR/MW barriers).

According to the version, **this software provides a comprehensive management of IP cameras and their video streamings**, which can be recorded, stored and replayed. DEA MAP software can be used on different terminals (*multi-terminal mode*) and allows you to set up different privileges for each user (*multi-user*).

DEA MAP - Security levels

Thanks to their experience in signal analysis and following the states of alert used by the armed forces, DEA have introduced the concept of "security level" in their systems . It is the ability to modify, with a single click of mouse, the level of readiness with which the entire system, or a part of it, responds to the typical signals generated by an intrusion attempt: for example, under high state of alert, a single shock on the fence triggers an alarm.

The change of the system security level, which can be executed by DEA MAP software or third-party compatible software, may be necessary when suspicious or unusual activities take place outside the fence or when the security forces issue notices about security alert.




LIMITE INVALICABILE
AREA AEROPORTUALE
AIRPORT BOUNDARY
NO ENTRY

version 1.0.1

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