



FLIR Systems Thermal Imagers enhance security at Turin Airport

SAGAT Turin airport in Italy recently decided to increase its security even further by installing FLIR Systems thermal imagers. The airfield lies next to a military facility and the problem had been to detect intrusion along the 9 km long perimeter fence in darkness, haze and fog.

Even though the fence gives an alarm when someone is trying to get through, it has often been impossible to identify what caused the alarm and there was no system that could indicate a security threat outside of the fence.

SAGAT Turin Airport upgraded their security system and installed five Sentry Thermal Imaging systems from FLIR Systems into their security network. The Sentry systems, with integrated programmable pan-tilt, can easily be slaved to alarms from other sensors such as the alarms from the fence and provides a day and night situation awareness that covers most of the airport and also reaches a bit outside the fence line.

The Sentry system is a thermal imaging system and provides reliable, continuous day/night surveillance. The system consists of an uncooled thermal imager with an integrated

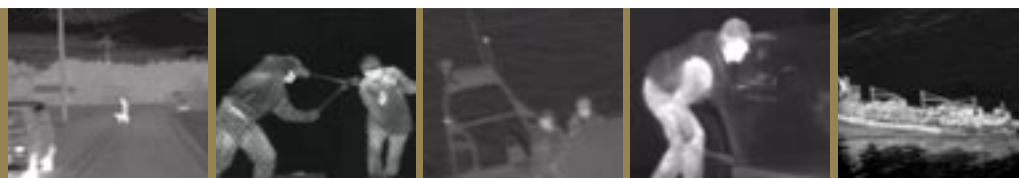
and programmable pan-tilt and a daylight TV camera. The thermal imager has two optical fields of view. The wide field of view is 20° and provides a good overview over the area. The narrow field of view is 5° and makes it quick and easy to zoom in to an object to identify potential threats or to identify the cause of false alarms. Persons can be detected at distances of over two kilometres. It can be quite foggy in Turin from time to time and it is a good thing that the thermal imager can see through fog to a certain extent.

The pan-tilt quickly responds to any alarm or command and allows an azimuth of 0-120° per second so it does not have to take more than approximately a second before it is pointing in the right direction. It has programmable auto scan and the speed, dwell time, field of view on the thermal imager and daylight camera used can be set in a scanning pattern.

ThermoVision™ Sentry, Mounted on a breakable coupling. The system consists of an uncooled thermal imager with an integrated and programmable pan-tilt and a daylight TV camera.



One of the ThermoVision Sentry infrared cameras at Turin airport.





Images from ThermoVision™ Sentry in TV mode. Control commands are well visible.



Image from ThermoVision Sentry in IR mode.

Easy integration into the existing network

The ThermoVision Sentry cameras are integrated to the existing network of security sensors. The networking software was developed by Gruppo IPL and allows for easy control of all security sensors that are installed into the network from one place. The networking software also allows for recording and storage of images for later review.

The integration of the Sentry cameras into the TCP/IP network is complete; from any client enabled workstation it is possible not only to see real time images, but also to move the cameras using arrow controls, select IR/TV source, autofocus, zoom, etc.

Advanced automatic image processing and analysis functionality was implemented: motion detection, history log, video recording, automatic direction change on alarm (slew to cue). It is also possible to have the camera's looking at any location simply by clicking on any point of the on screen map of SAGAT airport.

The installation along the 9 km long perimeter consist off: 26 standard CCTV cameras, 5 Sentry cameras, video server for every camera, more than 21 Km optical fiber, 16 optical routers at 100Mb, 4 optical routers at 1G, 24 intelligent I/O subsystems, 18 UPS and 15 thermal controlled rack cabinets.

Marco Morriale, Turin Airport General Manager, commented: "We already had a lot of different

cameras and sensors in our security network. What made us consider thermal imagers was the fact that with the thermal imaging technology and a pan-tilt solution we can ensure surveillance over a rather big area during day and night with only a few cameras. During the test evaluation of the thermal imagers we came to the conclusion that the systems over performed our expectations. The integration of the ThermoVision Sentry cameras has been handled by Gruppo IPL, the same company that had been integrating most of our security system here at SAGAT Turin airport."

"The integration went smooth since FLIR Systems uses common standards and the five systems are now fully up and running in our security network," concludes Mr. Morriale.

Ensuring passenger safety

Today we have five thermal cameras on-line 24 h/day and this allows us to see details and events that were previously impossible for us to detect. For example we are now aware that some rabbits are living in the airports, and that a lot of people come next to our fence to take photos of the landing or taking off aircrafts, even at nights.

"It is important for us to ensure the safety of the passengers travelling through SAGAT Turin Airport and I believe that it is important to continue evaluating and improving our security systems as new security threats arise. Even though thermal imagers are more expensive compared to CCTV camera's, the systems are

easily motivated by the performance and the fact that every single system covers such a big area. Today we are able to see things we have not been able to see before and this has definitely brought the security of SAGAT Turin airport to a higher level which I know our passengers will appreciate."



Total darkness



With the ThermoVision Sentry you can zoom in quick and easy to identify potential alarm situations. Even in total darkness objects can be detected at distances of over 2 km.



Ruggero Poli



Marco Morriale

Authors:
Ruggero Poli,
Venice Airport Engineering General Manager

Marco Morriale,
Turin Airport General Manager

(Pictures courtesy by SAGAT spa and Turin Airport "Polizia di Stato") Mr. Ruggero Poli Mr. Marco Morriale

For further information please contact:

FLIR Commercial Vision Systems B.V.

Verlengde Poolseweg 34-46

4818 CL Breda

Netherlands

Phone : +31 (0)76 524 46 86

Fax : +31 (0)76 524 46 86

www.flir.com