



APPLICATION STORY



FLIR F-Series thermal imaging camera

FLIR thermal imaging cameras and Aimetis Symphony™ analytics software for improved and cost saving perimeter protection

Solarpack is a multinational integrated management company focusing on electricity generation projects in the field of solar photovoltaic energy and is specialized in the development, financing, construction, operation and management of these projects. Controlling a large area where high valuable equipment is deployed all over the site, is not an easy task and it usually requires investing a great amount of money to keep the facility well protected.

For one of the most important solar plants in the West of Spain, Solarpack is now protecting its perimeter of 41 acres with an intelligent analytics solution of Valencia based company CCTV CENTER, combining FLIR thermal imaging cameras and Aimetis Symphony™ powerful analytics software.



Thermal image of the perimeter

Business challenge

Solarpack is continuously investigating new security solutions to have a pragmatic security system to protect its installations, considering the complexity that involves a solar plant. In this project, the challenge was saving investment costs and maintenance costs, as well as improving the security system towards a more effective and reliable solution, offering automatic notification of alerts and events. Quick search and review of video images was also an essential requirement. A number of tests made with other security systems lead Solarpack to determine that thermal imaging cameras

were the best solution and, specially, FLIR thermal imaging cameras. It was then when Solar Pack contacted CCTV CENTER, FLIR's official distributor and integrator in Spain.

Solution

CCTV CENTER's presented a solution combining FLIR thermal imaging camera and Aimetis Symphony analytics software. Aimetis Symphony is award-winning intelligent video surveillance software that offers a single, innovative, open IP video platform for video management, video analytics, system integration and alarm management.

The superior quality images from the FLIR thermal imaging cameras together with Aimetis Symphony analytics were a really great solution for the whole system. The end user had a previous experience in projects with thermal imaging cameras and a good image quality was always a main requirement.

Due to the high contrast of their images, thermal imaging cameras are specially recommended for analytics and perimeter applications. Thermal imaging cameras can detect a human target at a distance of up to 2,000 m and produce clear and





Human targets are being tracked and will trigger the alarm when crossing the virtual fence.



Animals are considered as authorized intruders and will not trigger the alarm.

crisp images in total darkness, light fog and rain where color CCTV cameras can't. Thermal imaging cameras provide an ideal solution for 24/7 surveillance, saving costs in IR illuminators or any other additional illumination system.

Installation

For the perimeter protection of this solar plant 21 FLIR F-Series thermal imaging cameras with a resolution of 320x240 pixels are installed on 2 to 3 meter high poles, alongside a wired fence. The F-series are fully enabled for control and operation over digital and analog networks. The F-Series provide high contrast imagery optimized to get the most out of video analytics software. Digital Detail Enhancement ensures clear, properly contrasted thermal images in all weather conditions.



FLIR F-series

Thermal imaging cameras for Security & Surveillance applications

F-Series thermal security cameras let you see intruders and other threats to your facility clearly in total darkness and in bad weather. Fully enabled for control and operation over digital and analog networks, F-Series thermal imaging cameras are available in 160 x 120 pixels, 320 x 240 pixels, and high-resolution 640 x 480 pixels formats, providing up to sixteen times the image clarity and longer threat detection range performance than lower resolution cameras.

The thermal imaging cameras are working together with an intruder detection system, both connected to a CSA (Central Station Alarm). All the thermal imaging cameras are integrated with Aimetis Symphony software so they can be controlled from a server PC placed at a remote workstation. "Integrating the FLIR F-Series cameras with Aimetis software was a great solution", says Pablo Campos from CCTV CENTER, in charge of this project. "We used FLIR thermal imaging cameras before with Aimetis Symphony and the FLIR F-Series are included in the list of compatible devices. Once calibrated, analytics performance is outstanding."

Target detection

Aimetis Symphony software is configured with a virtual fence, so when an intruder crosses the virtual line, determined by the operator, an alarm is triggered. The alarm is then sent to the CSA, where the operator receives the signal. The operator then connects with Aimetis Symphony client and checks the video stream associated to verify if it's a false alarm or a real threat.

The system can make distinction between humans and animals. When the system identifies the target as a human, it will start tracking the target. The software doesn't trigger any alarm unless the target crosses

the virtual line configured by the operator. When the system identifies a target as an animal or unknown object, it will not send an alarm at all, even when an animal crosses the virtual fence. This is because "animals" are considered as authorized intruders in the system. The high quality of the thermal imaging cameras and the reliability of the analytics makes it possible to make this distinction, resulting in a drastically drop in the number of false alarms.

Cost savings

Before the new installation 10 to 15 security guards were hired to protect the premises. Now there are no security guards patrolling or controlling the access to the solar park anymore. Everything can now be managed from a remote workstation by only one or two operators.

"The new installation is saving a lot of money and is far more effective than having a team of security guards viewing daylight cameras that can't display images at night or in bad weather conditions. Furthermore, the use of thermal imaging technology saves costs of deploying and keeping an illuminating system running. Also not a lot of electricity is consumed, using thermal imaging cameras instead of other solutions, and maintenance costs are low as well", concludes Pablo Campos.



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