Video smoke detection on IP surveillance cameras

Cost-effective detection software combining an early warning system with video surveillance
A fast and reliable early warning system for smoke...

When things get critical, fast smoke detection can save lives and infrastructure. FLIR’s video smoke detection technology detects smokes within 10 to 60 seconds, and thus enables emergency responders to intervene at a very early stage of the fire. FLIR’s video smoke detection technology is a highly reliable Very Early Warning System, because it is based on years of operational experience in more than 700 road tunnels worldwide. Updated and combined with the latest technologies, FLIR’s smoke detection software is now ready to address those environments where conventional smoke detection could fail or activate too many unwanted/ false alarms. FLIR’s solution has been designed to handle difficult environmental parameters such as dirt, dust, voluminous areas, high air flow and sudden light changes.

FLIR’s smoke detection software is ideal for use in high or voluminous buildings.

Fast smoke detection
Depending on the environment, FLIR’s video smoke detection will react within 10 to 60 seconds of smoke appearing in the detection field of view. This enables fast reaction and fast interventions in the first minutes when the fire is still in a controllable stage. Everyone in the fire safety sector knows that the first 5 minutes are crucial in a developing fire. After 7-10 minutes, the fire is already so widespread and temperatures so high that the risk of personal incidents and damaged infrastructure is very high. With FLIR’s solution, alarms can be validated accurately, thus enabling rapid emergency response and intervention.

Low false alarm rate
False alarms often lead to unnecessary interventions. This is not only a costly issue, but also leads to unavailability of emergency responders for real fires. FLIR’s solution has proven to be effective in road tunnels showing extremely low false alarm rates and very high detection rates.

Real-time visual verification
Visual verification via the surveillance system reduces the risk of injuries for emergency responders. Real-time visual verification also allows operators to assess the nature and severity of the fire as well as the stage it is in. Based on pre-incident recording, they can see whether people are present at the place of the incident and they can better assess the overall situation. This way, they can make better use of their emergency resources. After the incident, the video footage can be used for risk analysis and prevention of future incidents.

Easy to maintain
FLIR’s video smoke detection system has a self-test functionality that enables the device to notify when it is out of order. Operators only need to check for notifications in the video management system or check the camera view remotely.

Easy to install
The video smoke detection system is very straightforward to set up. Analytics are simply running on your existing IP surveillance system.
WHERE CONVENTIONAL SMOKE DETECTION FAILS

FLIR’s video smoke detection solution is a highly reliable alternative
- Where conventional detection technology fails
- Where there is a need for a very early warning system to enhance the primary smoke/fire detection system

FLIR’s video smoke detection solution is typically used for:

- **Harsh environments:**
  subway & railway platforms and tunnels, power generation halls, waste recycling plants, chemical factories, warehouses, underground car parks.

- **Stratification environments:**
  High or voluminous buildings of 10m+ have issues with the stratification of smoke whereby smoke will not rise high enough or quickly enough to reach ceiling mounted point, beam or aspirated detectors. This is the case for example in aircraft hangars, airport passenger terminals, factory production halls, retail areas, museums and many historical buildings.

- **Critical equipment infrastructure:**
  the visual benefit of video smoke detection in protecting critical equipment cannot be overrated. FLIR’s video smoke detection solutions is a perfect fit for spaces where turbine bearings, aircraft wings, mining equipment or other high valued/critical equipment are stored.

KEY FUNCTIONALITIES
- Fast smoke detection
- Visual verification
- Scalable alarm handling

KEY BENEFITS
- Fast & reliable very early warning
- Field-proven solution
- Low false and unwanted alarm rate
- Damage control & life-saving
- Robust solution for harsh environments
- Safe and remote verification of alarms
- Low installation & maintenance cost
MULTIPLE NETWORK COMPATIBLE INTEGRATION
- Compatible with existing surveillance systems: analytics on the edge
- Compatible with existing fire safety networks

SCALABLE MULTIPLE CHANNEL ALARM HANDLING
Depending on customer requirements, the system and alarm handling process can be cost-effectively designed for small-scale systems with a few cameras to large and complex surveillance systems.
Alarm handling can be done through one of the following ways or with a combination of:
- Fire control panel via a digital output on the camera direct to the fire safety network
- Video surveillance VMS integration
- BMS integration
- E-mail with snapshots, alarm recordings / SMS / MultiMedia services

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