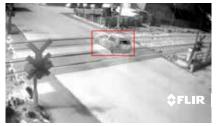


Platform, tunnel & trackside monitoring



Stopped vehicle detection



Fire detection in railway tunnels

FLIR**ITS-Series Rail**

Intelligent thermal camera for public transportation safety

The FLIR ITS-Series Rail is an integrated thermal camera and detector for obstacle detection in public transportation environments. The FLIR ITS-Series Rail camera does not need light to operate, but uses thermal energy emitted from obstacles to detect vehicles, people and large animals in the darkest of nights, over a long range and in the most difficult weather conditions. The result is reliable, 24/7 detection for a wide range of applications.

PLATFORM, TUNNEL AND TRACK SAFETY

The FLIR ITS-Series Rail is a cost-effective solution for the detection of people falling off a platform, entering a tunnel or walking on rail tracks. The system uses advanced detection algorithms in order to accurately detect people without being triggered by unwanted objects like small animals or passing trains.

OBSTACLE DETECTION AT LEVEL CROSSINGS

The FLIR ITS-Series Rail can be used to prevent collisions by detecting vehicles that are stuck on a level crossing and blocking the passage of an approaching train. The intelligent thermal sensor will transmit its detection information over contact closures or over a TCP/IP network to a control room, where the detection event and live thermal video is shown. This information can be used by an operator to decide whether an oncoming train must be stopped or slowed down.

FIRE DETECTION IN TUNNELS

Fires in railway tunnels, caused by the electrical systems, are always an actual risk. The calibrated FLIR ITS-Series Rail camera can measure the temperature of any object in its field of view, which allows it to detect fires at an early stage. The camera does not need to make physical contact with smoke or heated gasses to be able to detect excessive heat caused by fire or other malfunctions. As a result, fire is detected within seconds of ignition, long before it is capable of triggering any traditional fire detection system. The camera's smart video analytics take into account multiple parameters such, as size, dynamics, growth rate, movement, etc..., resulting in unprecedented fire detection accuracy.



Specifications

| System Overview | | | | | | | |
|------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------|-------------------|---------------|-------|-----------|--|
| Detector type | | Focal Plane Array (FPA) | | | | | |
| Spectral range | | uncooled VOx microbolometer 7.5 to 13.5 µm | | | | | |
| Resolution | | 640 x 512 | | | | | |
| riesolution | | 90° x 69° | | | | | |
| Field of View | 69° × 56° | | | | | | |
| | 44° × 36° | | | | | | |
| | 32° × 26° 25° × 19° | | | | | | |
| | 17° x 14° | | | | | | |
| Image processing | | Automatic Gain Control (AGC), | | | | | |
| | | Digital Detail Enhancement (DDE) | | | | | |
| System Features | | | | | | | |
| Automatic heater | | Clears ice from windows Automatic deicing | | | | | |
| Image presentation | I | | Auto | natic deichig | | | |
| Video over Ethernet | | Two independent channels of H.264 or M-JPEG | | | | | |
| Analog video output | | Configurable NTSC and PAL | | | | | |
| Analytics | | | ooninguru | | | | |
| | | omatic detection of people on and alongside | | | | | |
| Trackside Monitoring | | the tracks with advanced train filtering | | | | | |
| Level crossing safety | | Detection of stopped vehicles on a level crossing | | | | | |
| Fire Detection | | Early Fire detection in tunnels | | | | | |
| Power Consumption | | | | | | | |
| Consult product manuals for detailed power requirements | Source | POE (802.3af) | POE+ (802.3at) | 12VDC | 24VDC | 24VAC(VA) | |
| | Heater off | <5.5W | <5.5W | <5.5W | <5.5W | <8W | |
| | Heater on (@ 100%) | N/A | <25W | <25W | <25W | <32W | |
| Environmental | | | | | | | |
| IP Rating | | IP66 & IP67 | | | | | |
| Operating Temperature Range | | -50°C to 70°C (continuous operation) -40°C to 70°C (cold start) | | | | | |
| Storage Temperature Range | | -50°C to 85°C/-58°F to 185°F | | | | | |
| Humidity | | 0-95% relative humidity | | | | | |
| Shock | | MIL-STD-810G "Transportation" | | | | | |
| Vibe | | IEC 60068-2-27 | | | | | |
| Approvals | | | | | | | |
| Approvals | | CE: EN55022 Class A; FCC 47 CFR Part 15, Subpart B, Class A (within CISPR 22:2008 Class A limits) | | | | | |
| Surge Immunity on AC Power Lines | | EN 55024: 2010 and 55022: 2010 to 4.0kV on AC aux power lines; EN 50130-4:2011; IEC 62599-2:2010 | | | | | |
| Surge Immunity on Signal Lines | | EN 55024: 2010 and 55022: 2010 to 4.0kV | | | | | |
| Standard package | | | | | | | |
| Thermal imaging camera, operator man | Jal | | | | | | |

PORTLAND

Corporate Headquarters FLIR Systems, Inc. 27700 SW Parkway Ave. Wilsonville, OR 97070 USA PH: +1 866.477.3687

SANTA BARBARA FLIR Systems, Inc. 70 Castilian Drive. Goleta, CA 93117 USA PH: +1 866.477.3687

BELGIUM FLIR Systems Trading Belgium BVBA Luxemburgstraat 2 2321 Meer Belgium PH: +32 (0) 3665 5100 FLIR ITS Hospitaalweg 1B B-8510 Marke Belgium PH: +32 (0)56 37 22 00 UK FLIR Systems UK 2 Kings Hill Avenue Kings Hill West Malling - Kent ME19 4AQ United Kingdom PH: +44 (0)1732 220 011

www.flir.com NASDAQ: FLIR

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