Automatic Incident Detection (AID)

FLIR ITS-Series AID cameras combine best-in-class thermal imaging technology with advanced video analytics to provide a complete solution for automatic incident detection, data collection and early fire detection. FLIR’s traffic video analytics have proven their effectiveness worldwide along highways and in tunnels and are now combined with the power of thermal imaging that allows traffic operators to see clearly in total darkness, in bad weather and over a long range.

THERMAL IMAGING

Thermal imaging cameras outperform other camera technologies by detecting the heat energy given off by everything in their field of view. Because they see heat, not visible light, they don’t get confused by sun glare, darkness, headlights, shadows, wet streets, snow and fog, like conventional video cameras do. FLIR thermal cameras do not get damaged at all by looking continuously in direct sunlight.

AUTOMATIC INCIDENT DETECTION

The FLIR ITS-Series AID camera provides critical traffic information, supporting traffic operators with alerts on stopped vehicles, wrong-way drivers, pedestrians, lost cargo, traffic flow data and much more.

EARLY FIRE DETECTION

The FLIR ITS-Series AID thermal camera can measure the temperature of any object in its field of view. This unique capability allows detecting fires at an early stage over the full detection range. Unlike other fire detection technologies, no contact is required with flames or heated gasses, nor is any smoke propagation needed for the camera to detect excessive heat generated by fire or another vehicle malfunction. As a result, the thermal camera is capable of detecting fires within seconds of ignition, long before any traditional fire detection system can trigger an alarm. The intelligent fire detection algorithm takes into account multiple parameters, including size, dynamics, growth rate, movement, etc., resulting in unprecedented fire detection accuracy.

SEE THROUGH SMOKE

Thermal cameras can penetrate smoke and as such provide a better view in case of fire as compared to visual cameras. This enhanced visibility can help guide emergency personnel to locate people inside the tunnel and save lives in critical situations.
## Specifications

### System Overview

<table>
<thead>
<tr>
<th>Detector type</th>
<th>Focal Plane Array (FPA) uncooled VOx microbolometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral range</td>
<td>7.5 to 13.5 μm</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 x 512</td>
</tr>
<tr>
<td>Field of View</td>
<td>90° x 69°, 69° x 56°, 44° x 36°, 32° x 26°, 25° x 19°, 17° x 14°</td>
</tr>
</tbody>
</table>

### System Features

**Automatic heater**
- Clears ice from windows
- Automatic deicing

**Image presentation**
- Video over Ethernet: Two independent channels of H.264 or MJPEG
- Analog video output: Configurable NTSC and PAL

### Analytics

#### Automatic Incident Detection
- Traffic events: Stopped vehicle, Speed drop, Levels of service, Overspeed, Wrong-way drivers, Traffic congestion, underspeed
- Non-traffic events: Pedestrian, Fallen object
- Technical alarms: Image quality, Camera tampering

#### Traffic Data Collection
- Traffic flow data per lane: Traffic flow speed, zone occupancy
- Integrated vehicle traffic data: Average speed per vehicle class per lane (headway, gap time per length, class per lane), occupancy
- Individual vehicle traffic data: Speed, gap time, headway, vehicle classification
- File Detection: Early Fire detection in tunnels

### Power Consumption

<table>
<thead>
<tr>
<th>Source</th>
<th>POE (802.3af)</th>
<th>POE+ (802.3at)</th>
<th>12VDC</th>
<th>24VDC</th>
<th>24VAC (VA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater off</td>
<td>&lt;5.5W</td>
<td>&lt;5.5W</td>
<td>&lt;5.5W</td>
<td>&lt;5.5W</td>
<td>&lt;8W</td>
</tr>
<tr>
<td>Heater on (@ 100%)</td>
<td>N/A</td>
<td>&lt;25W</td>
<td>&lt;25W</td>
<td>&lt;25W</td>
<td>&lt;32W</td>
</tr>
</tbody>
</table>

### 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

- Surge Immunity on AC Power Lines: EN 55024: 2010 and 55222: 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 manual

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Specifications are subject to change without notice.

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