FLIR ITS-SERIES AID

Intelligent Thermal Camera for Automatic Incident Detection

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 sun light.

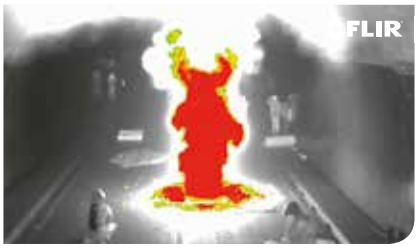
AUTOMATIC INCIDENT DETECTION

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.

Automatic Incident Detection (AID)

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.



Early fire detection

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.

Imaging Specifications

System Overview		
Detector type	Focal Plane Array (FPA) uncooled VOx microbolometer	
Spectral range	7.5 to 13.5 µm	
Resolution	320 x 240	640 x 480
Field of View	24° x 18° 44° x 36° 17° x 13° 32° x 26 ° 9.0° x 7.0° 5.4° x 4.1° 4.3° x 3.3°	44° x 36° 32° x 26° 17° x 14° 10° x 8.2° 8.6 x 6.6°
Image processing	Automatic Gain Control (AGC), Digital Detail Enhancement (DDE)	
System Features		
Automatic heater	Clears ice from windows, Automatic deicing	
Image presentation		
Video over Ethernet	Two independent channels of H.264 or M-JPEG	
Streaming Resolutions	D1: 720x576, 4CIF: 704x576, Native: 640x512, Q-Native: 320x256, CIF: 352x288, QCIF: 176x144	
Analog video output	NTSC or 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	
Fire Detection	Early Fire detection in tunnels	
Power		
Input voltage	11-44 VDC (no lens heaters) 16-44 VDC (with lens heaters) 14-32 VAC (no lens heaters) 16-32 VAC (with lens heaters) PoE (IEEE 802.3af-2003) PoE+ (IEEE 802.3at-2009)	
Power consumption	5W nominal at 24VDC (21W peak) 8VA nominal at 24VAC (29VA peak)	
Environmental		
IP Rating	IP66 & IP67	
Operating temp. range	-50°C to 70°C (continuous operation) -40°C to 70°C (cold start)	
Storage temperature range	-55°C to 85°C	
Network		
Supported Protocols	IPV4, HTTP, UPnP, DNS, NTP, RTSP, RTCP,RTP, TCP, UDP, ICMP, IGMP, DHCP, ARP, SNMP	
Network Application Programming Interfaces (APIs)	ONVIF Compatible	
Approvals		
FCC	FCC Part 15, Subpart B, Class B	
CE	EN 55022 Class B	
Surge Immunity on AC power lines	EN 55024:2010 and 55022:2010 to 4.0kV on AC aux power lines	
Surge Immunity on Signal Lines	EN 55024:2010 and 55022:2010 to 4.0kV	
Shock	MIL-STD-810F "Transportation"	
Vibe	IEC 60068-2-27	
Standard package		
Thermal imaging camera, operator manual		

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