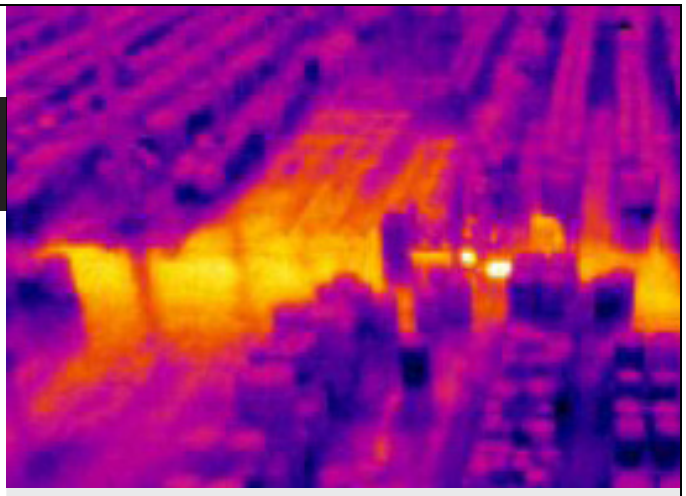
SOLUTIONS SPOTLIGHT

EARLY FIRE DETECTION FOR RAPID HEAT GENERATION



THE CUSTOMER'S CHALLENGE

Fires that are not caught early or extinguished quickly can cause serious financial, environmental, and commercial distress for a company, as well as distress to the community. The potential of such a heavy burden means many companies prioritize preventing or mitigating potential fires at all costs. Most current fire systems are designed to contain a fire once it starts—which isn't always the most effective solution. A system that allows companies to avoid fires or stop them before they spark can save lives, save money, and prevent downtime.

THE SOLUTION

Fire is caused by rapidly increasing and excessive heat. As the heat on an object continues to rise, it eventually bursts into a flame, combusting and spreading even faster. However, if a fixed-mount thermal imaging camera is trained on the target area, temperatures can be monitored to catch the rising heat before the target combusts. FLIR fixed-mount thermal cameras provide live temperature data updates up to 60 times per second to find rapidly heating areas before they catch fire. These thermal smart cameras use built in software to isolate regions of interest (ROIs) and report minimum, average, and maximum temperatures from the regions the user creates. Live data can be analyzed internally by the camera to report unfavorable conditions or be connected to other devices such as PLCs and computers to implement additional fire prevention action. Some companies choose to create more advanced solutions by assembling custom early fire detection solutions with FLIR automation cameras. These systems can send out alarms at early signs of rising temperatures, allowing companies to save stockpiles of assets or turn off equipment that is following a trend of catastrophic failure.

THE TECHNOLOGY

FLIR offers a range of fixed-mount thermal smart cameras with built-in software for analysis and alarming. Monitor assets by configuring up to 10 regions of interest (ROIs) using measurement shapes such as spots, boxes, or custom drawn areas in the frame using an easy-to-use web-based configuration window. Set conditions for alarming parameters and the response, such as data acquisition output type. Integrate FLIR smart cameras into a wide range of control processes using standard communication protocols, including RTSP, MQTT, RESTful API, MODBUS TCP & Master, Ethernet IP, and FTP.

In addition to the smart cameras, FLIR offers a range of automation cameras that can stream temperature linear data or radiometric data through communication protocols like GigE Vision and RTSP. These infrared cameras interpret images using software such as Cognex Designer Pro, NI Software, Pleora Ebus, Teledyne, and Spinaker SDK.

Uncompromised data is repeatably and reliably generated from thermal detector arrays in either 320 × 240 or 640 × 480 options offering up to ±2°C accuracy within temperature ranges of -40°C to 2000°C. FLIR thermal cameras can be tailored to your application: select manual or automatic focus or change the lens when the field of view needs to be modified. Thanks to its unique compressed radiometric output, these cameras avoid overburdening processors. They also add value to your system by pairing a built-in visual camera and LEDs in partnership with the infrared camera.

FLIR A310™
IR Temperature Sensor for
Critical Equipment Monitoring

FLIR A35/A65™
IR Temperature Sensor

FLIR A615™
Thermal Machine Vision Camera

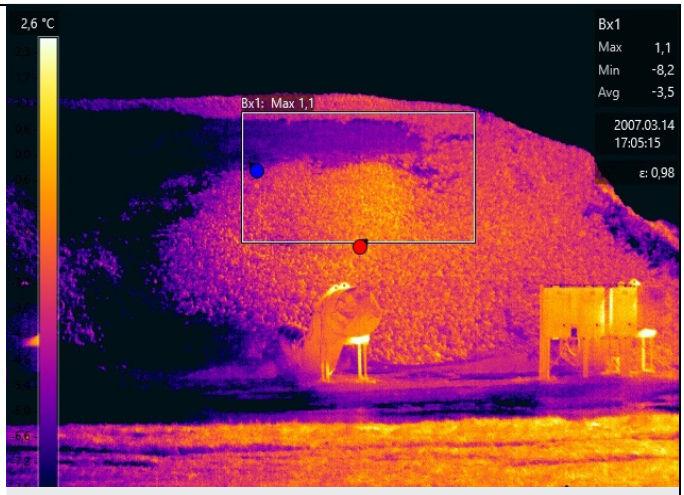
FLIR A400/A700™
Thermal Smart Sensor Camera

FLIR AX8™
Thermal Imaging Camera for
Continuous Monitoring and
Safety Monitoring

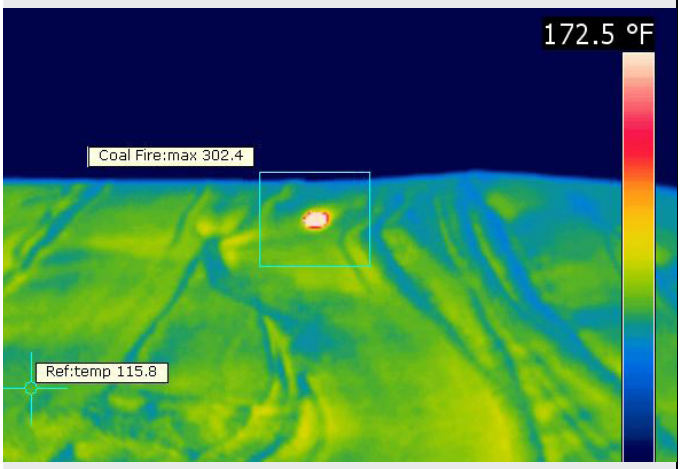
FLIR®

EFD APPLICATION AREAS

- Food storage
- Lithium battery banks
- Monitoring transmission lines for fallen trees that cause wild fires
- Recycling plants
- Chemical storage
- Manufacturing plants with oil equipment
- Forestry
- High value buildings
- Storage facilities
- Energy generation turbines



Food storage



Storage facilities

High value buildings

FLIR Thermal Automation:

UNITED STATES
Jake Sigmond
Automation Manager
Direct/Mobile: (720) 682-9015
Email: Jake.Sigmond@flir.com

CANADA
Rob Milner
Sales Manager, Automation & Science
Direct/Mobile: 647-290-4175
Email: rob.milner@flir.com

Learn more at www.flir.com/automation
Customer Support Site: flir.custhelp.com
Camera and Software Support: 866-477-3687
ITC Training website: www.infraredtraining.com

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