

FLUKE®



**Image blending
in infrared cameras**

What is image blending?

Along with the ability to display surroundings in infrared, many infrared cameras also have a built-in digital camera. This digital camera will take a visible light, non-infrared image simultaneously with the infrared shot. This might seem pretty simple, but this capability in a thermal imager can actually be very valuable. Infrared cameras that have a visible light (digital image) feature offer the ability to combine infrared and visible light images. This allows operators to quickly locate and identify potential problems.

Essentially, this means that the camera blends the two images together, pixel for pixel, in a single display, making it easier to see the source of a heat issue.

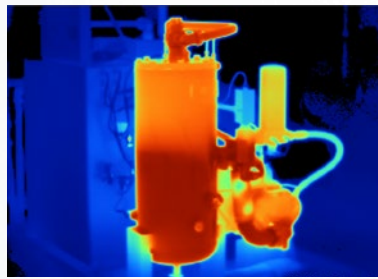
The Fluke Corporation has patented IR-Fusion® technology, a feature in portable, hand-held thermal imagers that allows you to automatically capture a digital, visible light image at the same time as an infrared image. A camera user can then view the image in full infrared, full visible light or at several degrees of blending in between.

Image blending with Fluke IR-Fusion®

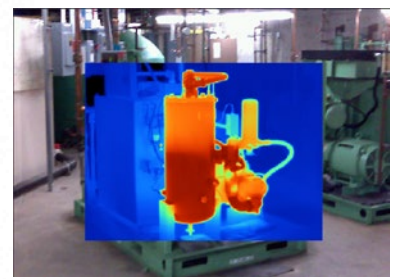
The five modes of IR-Fusion®



Full digital: displays a digital image, similar to what you get from a digital camera



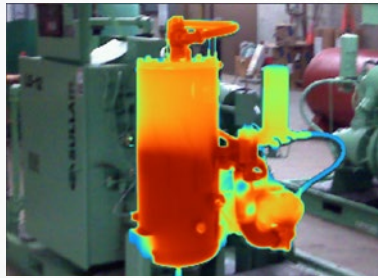
Full infrared: displays a full screen infrared view for maximum detail



Picture-in-picture: maintains a frame of reference by placing an infrared "window" within the digital image



AutoBlend™ mode: blends partially transparent infrared and visible images into a single view for easy problem detection

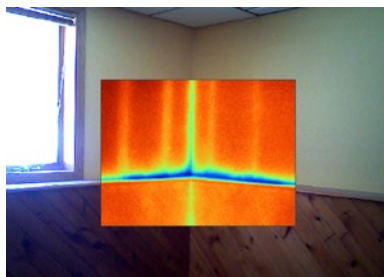
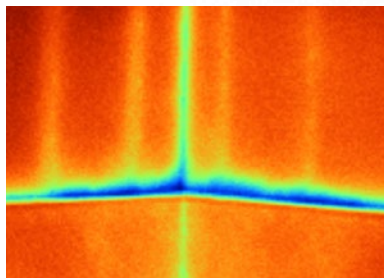


IR/color alarms: isolates problem areas within user-defined temperature ranges

Image blending in action

So now you know what image blending is, and the different modes you can use with Fluke IR-Fusion®. To help you see this from a practical perspective, here are some examples of image blending used in various infrared applications.

Building inspections



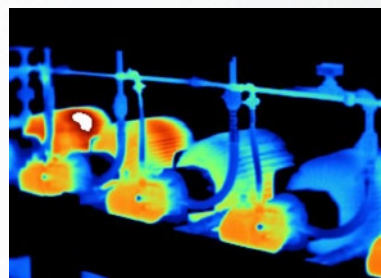
Picture-in-picture takes the guesswork out of locating problems by providing a frame of reference. In this mode, IR-Fusion lets you see an air leak that exists at the point where a wall meets the flooring.

Electrical



Picture-in-picture mode in an electrical panel can help identify location of hot spots compared to a panel door, or other surrounding equipment.

Mechanical



Using AutoBlend™ mode, problems in images can be easier to decipher. Here you can see that the differences in temperature between these tanks is clearer in the blended image.

Outdoor inspections

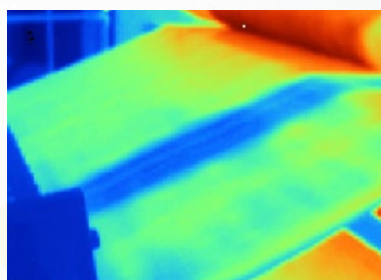


In an outdoor environment (perhaps when inspecting refinery equipment or utilities lines), picture-in-picture mode can be used to provide more reference to a problem's location in respect to its surroundings.

Manufacturing



Without an infrared image, temperature differences in this manufacturing machinery is invisible. With the help of a color alarm, the cold spot on this machinery is easily identified.



How infrared image blending capabilities can help you

- 1. More versions of 1 image:** You have access to digital, infrared, and everything in between to take the mystery out of infrared image analysis.
- 2. Easier to account for surroundings:** Picture-in-picture capabilities allow you to see your infrared image, in relation to what is around it.
- 3. Quick identification of problems:** Using color alarms, you can quickly identify temperature variations that require immediate attention. Additionally, blending the image allows you to spot the precise location of a problem area.
- 4. Better reporting:** Blended images make for great additions to reports, since they can easily highlight problem areas.

Here's what people have to say about Fluke IR-Fusion®

"It is truly state of the art. Prior to the IR-Fusion® technology, we had to carefully position ourselves with a second camera, a visible light camera, with the goal of taking a duplicate image in visible light. Then came the task of matching them up with the thermal image in a report. IR-Fusion® [has helped us] eliminate confusion."

—Thermography Instructor and Thermal Imager Specialist

"With IR-Fusion® infrared thermal imagers, we can control results much better because we can clearly see the temperature readings on the screen. We can immediately detect any spots that are not consistent with the minimum/maximum temperature ranges and have someone fix them before the job is complete."

—Engineer Project Manager

"The Fluke product we chose delivered the best combination of price, functions and features. A particular draw was the IR-Fusion® technology and software features."

—Loss Prevention Officer

"I like Fluke's IR-Fusion® technology. It lets me take infrared and regular pictures together so that I can precisely document any issues."

—Home Inspector

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