

inferno

thermal third eye

a wireless hands-free thermal imager
for firefighting and search and rescue

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Currently, firefighters face a serious visual problem when fighting fires: smoke. One of the current solutions to "see through" the smoke is the use of a thermal imaging camera (TIC), which allows firefighters to see heat emanated from objects in the infrared (IR) band just outside of human vision. However, the major drawback when using existing TICs on the market is that they require one, sometimes both, hands to operate effectively, which means that the firefighter must make a decision to either fight the fire, carry a person in search and rescue operations, or use a camera.

The FLIR Inferno is a waterproof and heat resistant hands-free IR camera with a linked heads up display (HUD) that will enable the firefighter to fight the fire, carry out search and rescue operations, and use the camera at the same time to aid in navigating poor visibility fire zones. The Inferno consists of two units (Figure 1); the camera unit that is mounted on the side of the helmet equipped with FLIR's revolutionary small, light, and low-power Lepton IR Camera, and the HUD unit that is mounted in the firefighter's Self Contained Breathing Apparatus (SCBA) (Figure 2). The Infrared video stream from the camera unit is transmitted wirelessly using standard 802.11 protocols to the HUD unit where it is displayed on a small screen so that it does not block the firefighters normal field of view. The FLIR Inferno adds a sixth sense, a thermal third eye.



Figure 1: Camera and Display



Figure 2: View from inside SCBA