

TOP THREE WAYS VEHICLE-MOUNTED THERMAL IMAGING CAMERAS ARE USED

More wildland firefighting crews have been outfitted with personal hand-held thermal imaging cameras (TIC) over the last two decades. As this usage has increased, and the cost of thermal technology has gone down, many departments have expanded the use of such technology and started outfitting their fire fighting vehicles as well. This document outlines the top three uses for vehicle-mounted thermal imaging cameras.

1. SAFELY ESCAPING SMOKE

Although it's something all firefighters work very hard to avoid, the possibility of becoming enveloped in smoke exists, and it happens much more often than anyone would like. A sudden wind change can turn a routine event into a life-or-death situation.

When vision is obscured by smoke, a thermal imaging camera can quickly lead a firefighter to safety. A hand-held thermal camera is extremely valuable when moving on foot, but its value is limited when vehicles are involved. Using a camera meant for hand-held use while in the vehicle limits the firefighter's ability focus on escape. Since the imager can't see through glass it must be held out the window of the vehicle allowing smoke in the cab and forcing the operator to drive with one hand and to try to operate the camera with the other.

When the TIC is mounted on the exterior of the brush truck, moving to safety can be accomplished more quickly and from the safety of the cab. With their hands free to operate the vehicle the firefighter can look at the in-cab monitor to see the best path and can focus on the task of escape.

Moving a vehicle blindly through thick smoke is always a hazardous undertaking but especially when navigating over rough terrain. One wrong move can leave a vehicle immobilized and put the lives of the team in jeopardy. The vehicle-mounted thermal imaging camera

allows firefighters to evaluate the landscape while moving to a safe location as fast as possible. The TIC also helps them locate other firefighters and their equipment avoiding expensive and even life-threatening accidents.



Sudden wind speed or wind direction changes can turn routine work into life-or-death situations.

2. MORE EFFICIENT FIRE SUPPRESSION

Efficiently putting down fire as fast as possible is the goal of every wildland firefighting team. Vehicle-mounted thermal cameras allow for a quicker evaluation of the fire-line so efforts can be directed more effectively.

The progress of the fire can be seen easily using the thermal camera even when visually the flames are obscured by smoke, landscape or vegetation. The heat signature of the fire seen from inside the cab lets the firefighter know where the fire is hottest, allowing them to direct efforts for the most efficient suppression.

In addition, locations where hot spots exist can be identified and addressed quickly. Missed hot spots can smolder for long periods of time,

sometimes for days, and rekindle later causing the unnecessary effort and expense to again suppress the fire. Additional risk to property and life can be avoided by more effective use of thermal vision.



Vehicle-mounted TICs let firefighters see clearly in day or night resulting in the most efficient firefighting efforts.

When using vehicle-mounted thermal cameras the fire line can be evaluated more quickly than on foot and more efficient hot-spot evaluation can be accomplished saving the department time and money.

In many areas of the country wildland fires can threaten tank batteries that may be full of fuel or fumes creating additional concerns for the wildland firefighter.



Tank battery fuel levels can be determined from a safe distance with thermal imaging.

The fluid levels inside these tanks is a critical piece of information that can determine where firefighting efforts should be focused. Many times, as the fire line approaches this potentially dangerous fuel source, personnel who could provide this information can't be located quickly enough. This leaves the firefighter with no choice but to make

decisions based on guess work, leading to a loss of efficiency.

Vehicle-mounted thermal cameras allow quick evaluation of tank levels from a safe distance. With this information more readily at hand the threat level of fuel sources in the fires path can be determined and firefighting efforts directed where they will be most needed.

3. SEARCH & RESCUE

When trying to locate lost or injured individuals time is the critical factor. Further exposure to the elements can mean life or death to those in need, especially for children or the elderly. Hand-held thermal cameras are extremely valuable in these searches, but vehicle-mounted cameras can allow for even faster searching of broad areas.

When the thermal camera is attached to the vehicle the driver can focus on the search and keep both hands on the wheel while moving quickly to cover more ground. Search and rescue thermal cameras can be attached to brush trucks or similar vehicles. Even ATV's can be equipped for the most effective off-road searching.

MORE INFORMATION

For more information on the HyperSight vehicle-mounted thermal imaging solution please call us at (405) 564-4279 or visit our website at www.hyper-sight.com

