

# Hydrocarbon Leak Detection Camera

## FV-3532-4

- Thermal hydrocarbon leak detection
- Intrusion detection
- Immediate alarm notifications
- 640x480 thermal and optical imagers
- Customizable detections zones
- Easily integrates with SCADA systems



### Detect fugitive hydrocarbon emissions

The FV-3532-4 is IVC's next generation hydrocarbon leak detection system. It can be a key component of an LDAR (Leak Detection and Repair) solution for manufacturers and distributors of liquid and gas hydrocarbon products. This rugged camera system is designed by Industrial Video & Control to detect fugitive hydrocarbon emissions.

A specialized thermal imaging sensor is optimized for persistent, 24-hour leak detection at locations used for the storage and distribution of hydrocarbon products. The fixed view thermal imager is precision-calibrated and programmed to sense the thermal signatures of hydrocarbon fluids and high-pressure gases. Up to four detection zones can be specified.

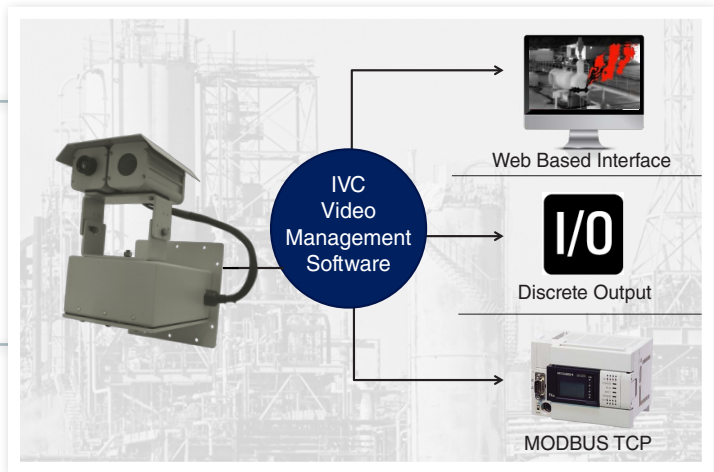
The assembly includes a fixed optical camera that is used to mitigate false alarms and for visual verification.

When a leak is detected within a defined zone, a contact closure is activated to generate an alarm. IVC's camera management software can be used to manage these alarms as well as communicate them to the site's SCADA or DCS system using industrial protocols such as OPC or MODBUS TCP.

The FV-3532-4 is offered with a variety of lens options to suit most application needs. It is housed in a rugged, weatherproof enclosure. A camera mount provides for multi-axis adjustment.

## Simplified architecture

Coupled with IVC's video management software, the FV-3532-4 provides a comprehensive leak detection solution that can be easily integrated with SCADA systems.



## The FV-3532-4 makes it easy to identify hydrocarbon leaks...

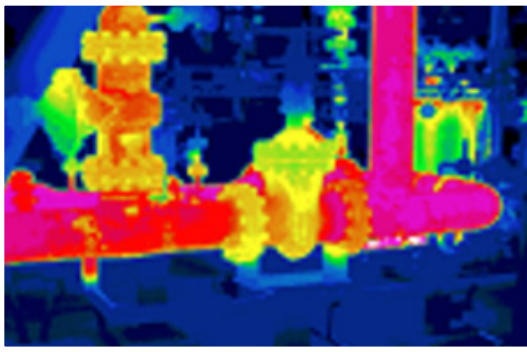


Image taken with a standard leak detection camera.

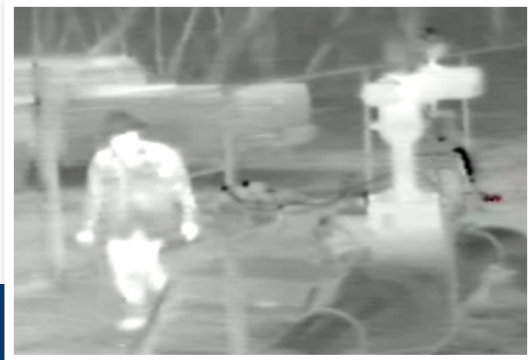


Image captured with IVC's specialized thermal camera.

## ...and visually verify what's happening in an area.



IVC's FV-3532-4 includes a fixed optical camera to provide visual verification and reduce false alarms.



Auto Suppress feature automatically disarms the camera when a person enters the scene.

## ► Features



**Thermal imager** allows for identification of hydrocarbon leaks in total darkness



**Fixed optical imager** provides visual verification of what's happening in an area



**Immediate alarm notifications** improve operator response to potential leaks



**Customizable zones** let you specify up to four detection and four exclusion zones



**Weatherized camera enclosure** ensures reliable video in the harshest conditions



**High resolution video (640x480)** provides crisp, clear video images



**Powered by PoE** means one cable transmits power and video to simplify your installation



**H.264 encoding** transfers high quality video at a lower frame rate for seamless motion

## ► List of hydrocarbons detectable by IVC's FV-3532-4 camera

	Leak State	LWIR
<b>Natural Gas (Dedicated Pipelines)</b>	Gas	ND
<b>Hazardous Liquid</b>		
Crude Oil	Liquid	T
Gasoline	Liquid	T
Diesel	Liquid	T
Fuel Oil	Liquid	T
Jet Fuel	Liquid	T
Kerosene	Liquid	T
<b>Highly Volatile Liquids</b>		
LPG (Propane/Butane)	Gas	A
Natural gas liquid (NGL)	Gas	CD, TR
Ethane	Gas	TR
Propane	Gas	T
Butane	Gas	A
ISO-butane	Gas	TR
Ethylene	Gas	A
Propylene	Gas	A
Butylene (C4H8, most forms)	Gas	TR
Mixtures	Gas	CD
<b>Other (High pressure leaks)</b>		
Hydrogen (liquid)	Gas	TR
Carbon Dioxide	Gas	ND
Ammonia Gas	Gas	A

### KEY:

**T=Tested and detectable**

**A=Analysis indicates detectable, not yet tested**

**CD=Composition Dependent**

**TR=Testing Required (Analysis inconclusive)**

**ND=Not Detectable**

## ► specifications

<b>Thermal Imager</b>	640x480 VOx microbolometer
<b>Spectral Range</b>	8-14um
<b>Pixel Pitch</b>	17um
<b>Thermal Sensitivity</b>	NetD 40mK T/1 60Hz
<b>Sample Rate</b>	60 Hz NTSC
<b>F-number</b>	1.4
<b>Detection Zones</b>	4
<b>Mask Zones</b>	4
<b>Focus</b>	Fixed
<b>Optical Imager</b>	1/3-inch DPS CMOS
<b>Minimum Illumination</b>	0.06 lux (B/W); 0.3 lux (color)
<b>Resolution</b>	768 (H) x 540 (V)
<b>F-number</b>	1.4
<b>WDR</b>	Built-in
<b>White Balance</b>	Auto
<b>Focus</b>	Fixed or vari-focal
<b>Ethernet</b>	100Base-TX/10BaseT (RJ-45)
<b>Compression</b>	M-JPEG, H.264
<b>Frame Rate</b>	30 FPS
<b>Voltage Required</b>	High-Powered Power over Ethernet* 110 VAC
<b>Power Consumption</b>	40 W
<b>Weight</b>	15 lbs.
<b>Operating Temperature</b>	-29° C to 50° C
<b>Dimensions</b>	12.5" H x 9"W x 12.3"D
<b>Mount</b>	Wall Mount Arm Standard
<b>Rating</b>	NEMA4, IP66

\*High power PoE injector included with PoE model

## ► accessories

<b>MB-100-4</b>	Pole Mount Kit
<b>ACC-115-08</b>	White LED illuminator option
<b>ACC-115-09</b>	IR LED illuminator option

## ► ordering information

FV-3532-4-L-V

<b>-V</b>	<b>Voltage Required</b>
<b>PoEu*</b>	High-Powered PoE
<b>110</b>	110 VAC

<b>-L</b>	<b>Lens Option</b>	
	<b>Focal Length</b>	<b>HFOV</b>
<b>7</b>	7.5mm	90°
<b>14</b>	14.25mm	44°
<b>25</b>	25mm	25°

## ► IVC camera management software

### Point & click camera management & control

Robust, enterprise class software to manage and control your cameras and video from anywhere in the world.



**MADE IN THE USA**

330 Nevada St., Newton, MA 02460 [www.ivcco.com](http://www.ivcco.com) 617-467-3059

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