

Ultra 8000e™

Airborne Environmental Imaging and Fugitive Emission Detection System



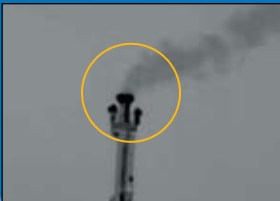
FLIR Systems Ultra 8000e - Airborne Environmental Imaging and Fugitive Emission Detection System



The Ultra 8000e is a stabilized thermal imaging system designed for environmental protection, improved pipeline and processing plant safety and economic loss prevention through the aerial location of fugitive gases. The system combines powerful 250mm continuous zoom optics from our proven 9 inch compact gimbal with FLIR's GasFindIR™ technology to allow you to detect fugitive Alkane and Volatile Organic Compound (VOC) gases from the air.

The U8000e's advanced stabilization provides smooth imagery regardless of aircraft movement, allowing you to rapidly scan large sectors or miles of pipeline capturing both thermal and visible imagery for later analysis or real-time reporting. Many industrial gases and chemical compounds are invisible to the naked eye, but with its specialized sensor, the U8000e displays these fugitive gases as black fumes.

Applications for thermal imaging in environmental management



Flare-off emissions



Waterway pollution detection



Underground steam leaks

- Natural Gas Transmission
- Right of Way Inspection
- Environmental Surveys
- Pumping Station Safety
- Refineries Gas Leaks
- Waterway Pollution
- Underground Steam Lines



Close-up daylight image of emissions



Close-up IR image of emissions

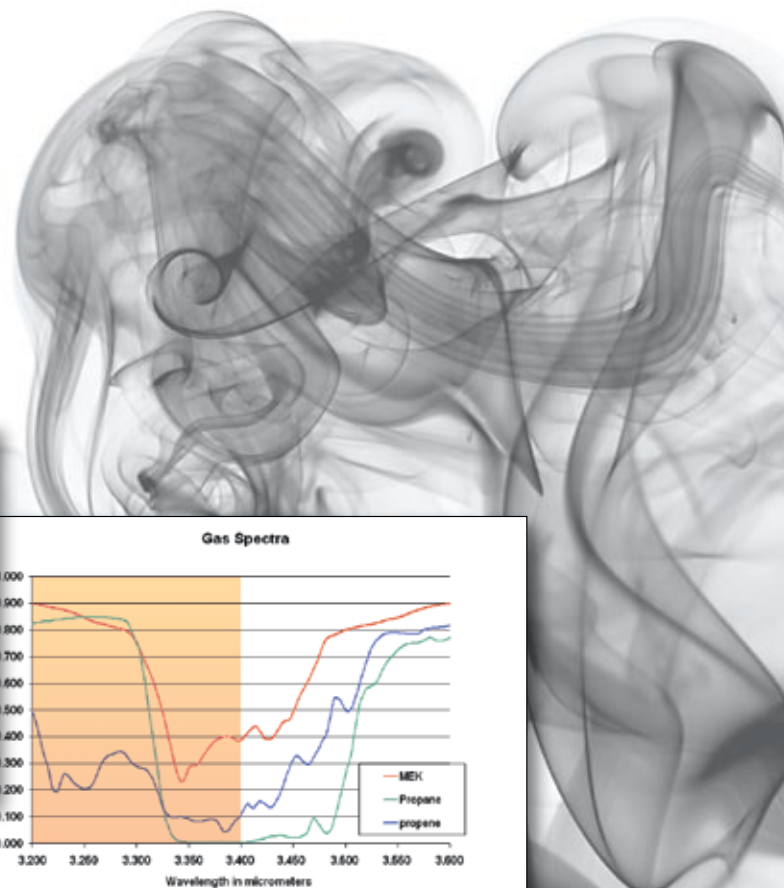
The Ultra 8000e gimbal can be installed on any helicopter or small fixed wing aircraft. At just 9" in diameter and weighing less than 30 lbs, it is easily moved from one aircraft to another and offers a low drag thus minimizing fuel consumption.



The joystick-equipped laptop or handheld control units are highly refined devices, intended for hours of comfortable operation.



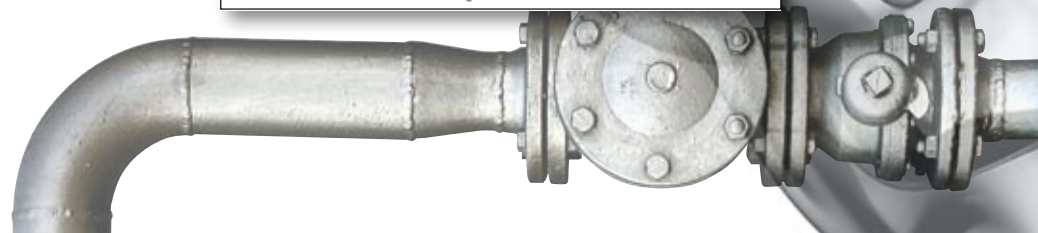
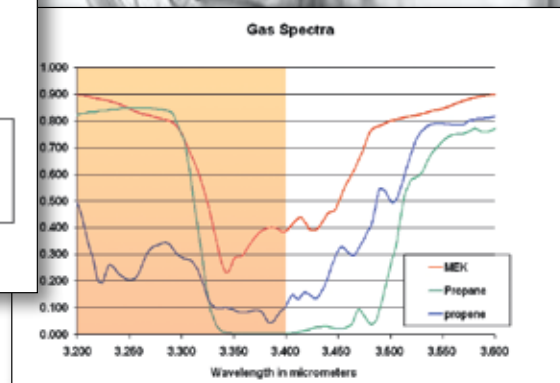
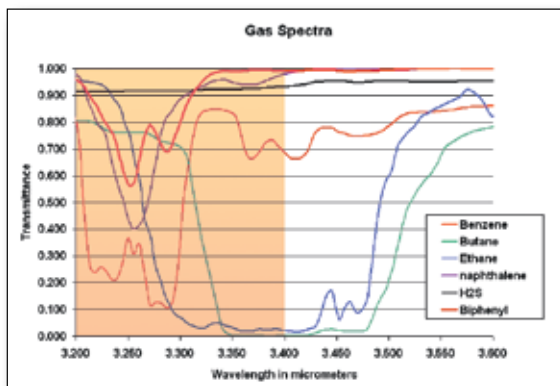
Peripheral options include FAA approved mounting provisions, sunlight readable portrait or picture-in-picture displays, digital video recorders and, integrated moving maps offering integrated utilities/right-of-way charts.



Some of the Many Detectable Gases

(Contact FLIR for other gases)

- Benzene
- Toluene
- Pentane
- 1-Pentene
- Octane
- MIBK
- MEK
- Methanol
- Isoprene
- Hexane
- Heptane
- Ethylbenzene
- Propylene
- Ethylene
- Propane
- Methane
- Ethane
- Butane
- Xylene



Ultra 8000

System Overview	
System Type	Airborne Gyro-Stabilized Multi-Sensor
Size	9" D x 13.5" H (22.9cm D x 34.3cm H)
Gimbal Camera Weight	29 lbs (13 kg)
Azimuth and Elevation Coverage	360° Continuous both axes
Thermal Imager	
	InSb Focal Plane Array
System focal length in mm	250mm
Field of View	Continuous 10x Optical Zoom
Wide	21.7° x 16.9°
Medium	8.0° x 6.0° or Continuous
Narrow	2.2° x 1.65°
Daylight Camera	
	18x Zoom, daylight/low-light high sensitivity CCD
Field of View Wide	48° x 32°
Field of View Narrow	2.2° x 1.65°
Central Electronics Unit	
	Control box provides video outputs, accommodates mapping inputs
Dimensions	10.6" x 9.9" x 5.9" (27cm x 25cm x 15cm)
Video Output	NTSC, or PAL
Power requirements	18V DC to 32V DC max surge 15 amps
Included Accessories in Standard Package	
	Stabilized Gimbal Assembly, Hand Control Unit, Central Electronics Unit, Standard Cable Kit
Options	
	Laptop control unit, moving maps, daylight readable LCD's, GPS input display on monitor, gimbal mounts

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