



**SIERRA-OLYMPIC**  
Technologies Inc.

# OPTICAL GAS IMAGING





# VENTUS OGI

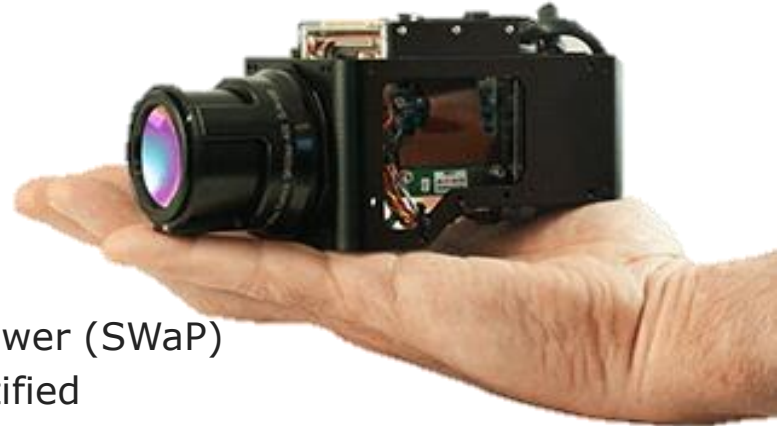
## OEM Optical Gas Imaging Camera

- “Hot MWIR” detector
- 640 x 512 Resolution
- Extended life cooler
- OGI Optimized Lens
- Small Size, Lightweight (542g/1.2 lbs.), Low Power (SWaP)
- EPA NSPS 40 CFR part 60, subpart OOOOa Certified

## Benefits of Ventus OGI

- Ideal for UAV/UAS platforms
- Ideal for fixed mounted continuous process safety monitoring systems
- Safely visualize gas leaks
- Scan large areas quickly & efficiently
- Reduce product loss/minimize emissions
- Meet regulatory requirements
- Monitor facility security 24 hours/day
- Ensure air quality
- Improve safety, (reduce potential for fires or explosions)

[Video Link to OGI Videos on DropBox](#)





# Ventus OGI ELECTRONICS

## Camera/Lens Interface/Electronics

- I/O
  - H.264 IP or Analog Video
  - 14-bit digital Camera Link Video Output
  - Unified Camera/Lens Control via Ethernet or Serial for motorized lenses
- On-board Image Processing
  - Automatic/Manual Gain Control
  - Contrast Limited Adaptive Histogram Equalization (CLAHE)
  - Local Area Processing (LAP)
  - Gas Enhancement Mode with colorization
  - AGC, Sharpening, DeNoise
  - Electronic Image Stabilization (EIS)
  - Multiple Color Palettes/Look up Tables (LUT's)
- 32GB Onboard Storage Video Sequence / Still Image Storage
- Shutter/Scene-based NUC's
- Optional Target Tracking
- Optional Telemetry, NMEA, GPS i/o
- Used on all SOTI LWIR/MWIR CZ cameras (universal integration)





# Ventus OGI ELECTRONICS

## Gas Enhancement Mode (GEM)

Gas Enhancement Mode (GEM that has some nice benefits: <https://youtu.be/vuTdhqJmGLk>

- When activating GEM you can select if you want to colorize the gas plume or leave it in grey scale.
- When using GEM the image is not constantly changing (pulsing) which can be dis-orienting especially when being used from an aerial platform.
- When using GEM you can increase or decrease the sensitivity and contrast and brightness.





# Ventus OGI Specifications

## Focal Plane Array:

- **Resolution:** 640 x 512
- **Sensor:** HOT MWIR
- **Pitch:** 15µm
- **Wavelength:** 3.2 - 3.42 µm
- **Framerate:** 30Hz

## Optics, Size and Weight:

- **Lens Focal Length:** 25mm
- **Lens F#:** 1.5
- **Weight** (approx): 542g (1.2 lbs)
- **Envelope Dimensions** (approx): 148mm x 71mm x 73mm (5.8 x 2.7 x 2.9in)
- **Digital Zoom:** 1x, 2x and 4x

## Interface:

- **Analog Video Output:** NTSC/PAL
- **Digital Video Output** 14-bit CameraLink
- **IP Video Output** MJPEG or H.264 Encoded
- **IP Broadcast** Unicast / Multicast
- **Onboard Video Storage** Up to 32GB microSD
- **Command and Control** RS422 / Ethernet
- **Power Consumption** 12VDC / 6W typical (12W peak)

## Environmental:

- **Operating Temperature Range:** -35 to +65C
- **Shock: Operating:** 15G / Non-operating: 40G
- **Mounting:** ¼-20 Tripod Mount, M4 Tapped Holes
- **Certification:** OOOOa Certified (<= 60 g/hr)





# Ventus OGI Specifications

## Detectable Gases:

- ✓ **Acetic Acid**
- ✓ **Ammonia**
- ✓ **Benzene**
- ✓ **Butadiene**
- ✓ **Butane**
- ✓ **Ethane**
- ✓ **Ethylbenzene**
- ✓ **Ethylene**
- ✓ **Heptane**
- ✓ **Hexane**
- ✓ **Isoprene**
- ✓ **Methyl Ethyl Ketone (MEK)**
- ✓ **Methane**
- ✓ **Methanol**
- ✓ **MIBK**
- ✓ **Octane**
- ✓ **1-Pentane**
- ✓ **Propane**
- ✓ **Propylene**
- ✓ **Sulphur Doioxide**
- ✓ **Toluene**
- ✓ **Vinyl Chloride**
- ✓ **Xylene**



The Ventus Optical Gas Imaging Camera can detect small (~60 g/hr) leaks from several meters away or large leaks from hundreds of meters away. Detection as low as 6g/hr depending on distance, focal length of lens, delta T between gas and background temperatures and environmental conditions such as sun, clouds, wind, rain, fog, sleet and snow.



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Thank you for your time and consideration of the Ventus  
Optical Gas Imaging Camera!