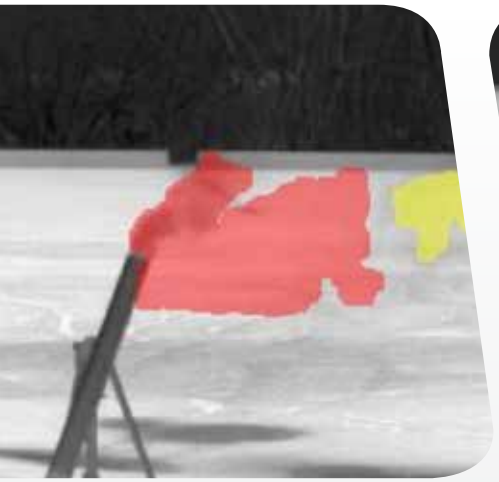
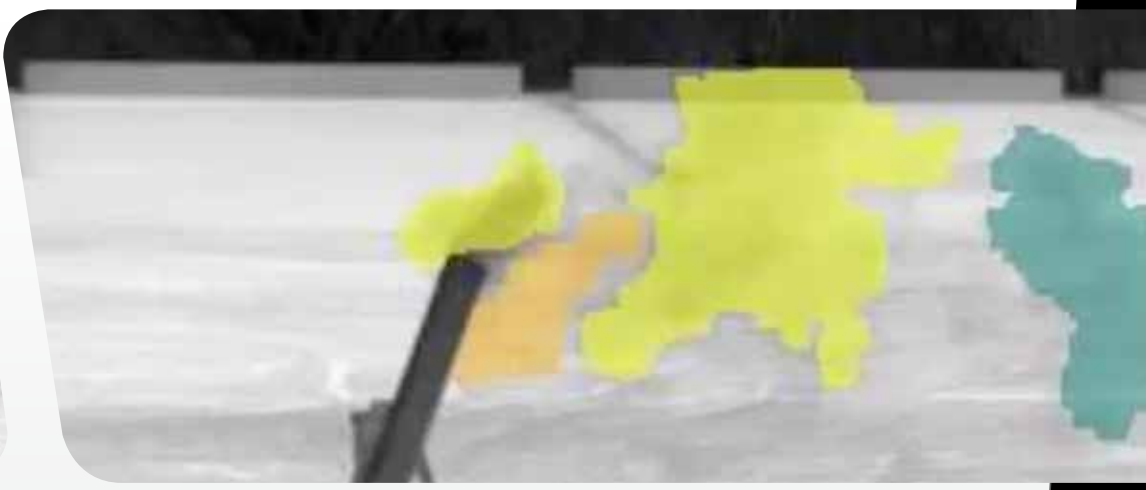
pixelvelocity™
Insight Accelerated

Maintain Critical Asset Operations and Safety

with Pixel Velocity's Continuous, Automated Gas Leak Detection System





Maintaining continuous business operations is vital to your organization's productivity and profitability. Pixel Velocity's **Leak Detection System** combines an optical gas imaging sensor with leak detection algorithms to automatically detect, visualize, and pinpoint gas leaks that are invisible to the naked eye. With our leak detection system, it is easy to continuously scan installations that are in remote areas or in zones that are difficult to access.

Continuous monitoring means that you will immediately see when a dangerous or costly gas leak appears so that immediate action can be taken, without the risk of having to manually inspect your site. Pixel Velocity's gas leak detection sensors are available in both a fixed and a PTZ solution and can operate in hazardous areas when enclosed in the optional Class 1 Division 2 housing.

Pixel Velocity's versatile software solutions integrated with intelligent edge sensor platforms, and industrial control systems (i.e., SCADA) automatically and continuously monitor complex operations and operating environments. Our smart systems alert you to potential issues before they become costly events.

Our Leak Detection System monitors site activity and asset performance in real time to detect event precursors. This technologically advanced, constant vigilance creates these important benefits:

- **Business Continuity** - Immediate leak detection and response cycles
- **Increased personnel safety at each site** - End of reliance on manual and snapshot leak detection
- **Deliver regulatory oversight and compliance while setting industry-wide benchmarks** - Improved insurance risk profile with data streams that support reduced insurance costs

Ensure Business Continuity by Minimizing Disruptions

To deliver operational continuity, our leak detection system automatically pinpoints potentially dangerous hydrocarbon leaks. Integrated with our Event Velocity platform, anomalous events, operational malfunctions, and automated gas leak detection alert personnel automatically and immediately. The speed of detection supports rapid and accurate analysis resulting in proactive leak repair that can avoid disruption and costly shutdowns. Key personnel are immediately contacted about intentional, accidental, and natural events and coordinated system alerts improve mitigation response time.

Detect Gases Quickly and Accurately with Pixel Velocity

Pixel Velocity's real-time, multi-site intelligent sensor monitoring system helps manage and safeguard against operational disruptions caused by undetected gas leaks.

Ben Benzene	**But** Butane	**Eth** Ethane	**Etha** Ethanol	**Ethy** Ethy-benzene	**Ethl** Ethylene	**Hpe** Heptane	**Hex** Hexane	**Iso** Isoprene	**Met** Methane
Meth Methanol	**MEK** Methyl Ethyl Ketone	**Mib** MIBK	**M-xy** M-xylene	**Oct** Octane	**Pen** Pentane	**1-pe** 1-pentene	**Pro** Propane	**Prop** Propylene	**Tou** Toulene

Improve Asset and Personnel Safety through Continuous Leak Detection

With automated analytics and 24/7 coverage of assets and locations, pinpoint leaks are detected as they occur, not hours or days later. Benefits of continuous monitoring include:

- ➤ Leaks can be corrected immediately.
- ➤ Detection response personnel do not face unknown health and safety risks.
- ➤ Enhanced safety at local, regional and enterprise levels.
- ➤ Public relations advantages of fewer public, regulator and safety concerns.
- ➤ Safer operating conditions across new and aging infrastructure.
- ➤ Correlation of detection events into patterns to help operators and response teams prevent disruption in operations, safety, and security.

TECHNICAL SPECIFICATIONS

Imaging and Optical Data

- IR Resolution - 320 x 240 pixels
- Thermal Sensitivity/NETD - <15 mK @ +30°C (+86°F)
- Field of View (FOV) - 24° x 18° (23 mm); 14.5° x10.8° (38 mm)
- Minimum Focus Distance - 0.3 m (1.0 ft.) for 23 mm lens; 0.5 m (1.64 ft.) for 38 mm lens
- F-number - 1.5
- Focus - Automatic using SDK, or manual
- Zoom - 1–8x continuous, digital zoom
- Digital Image Enhancement - Noise reduction filter, High Sensitivity Mode (HSM)

Detector Data

- Detector Type – Focal Plane Array, Cooled InSb
- Spectral Range - 3.2–3.4 µm

Power system

- DC operation -10–28 V DC, polarity protected
- Start-up time -Typically 7 min. @ 25ÅãC (+77ÅãF)

Environmental data

- Operating temperature range –20°C to +50°C (–4°F to +122°F)
- Storage temperature range –30°C to +60°C (–22°F to +140°F)
- Humidity (operating and storage) -IEC 68-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F) (2 cycl)
- Directives -Low voltage directive: 2006/95/EC, EMC: 2004/108/EC, RoHS: 2002/95/EC, WEEE: 2002/96/EC
- EMC - EN61000-6-4 (Emission)/EN61000-6-2 (Immunity) / FCC 47 CFR Part 15 class A (Emission)/ EN 61 000-4-8, L5
- Shock - 25 g (IEC 60068-2-27)
- Vibration - 2 g (IEC 60068-2-6)

Physical data

- Weight -1.4 kg (3.1 lb.), incl. 14.5° lens
- Cameras size, incl. lens (L x W x H) 242x80x105mm (9.5x3.1x4.1 in.) incl. 14.5° lens

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Call Jason Slocum, Vice President of Business Development, at 734-904-8577 to discuss your specific needs or visit us at pixel–velocity.com to learn more.