



Enhancing Safety in Oil & Gas with RealWear Navigator® Z1 Thermal Camera Module

Elevate safety standards to unprecedented levels in Zone 1 environments with the power of Thermal.

The RealWear Navigator Z1 is an intrinsically safe, rugged, hands-free wearable device that integrates seamlessly with the FLIR Thermal Camera Module, providing real-time thermal imaging capabilities. This powerful combination equips industry professionals with unparalleled situational awareness, enabling early detection of anomalies, and proactive risk mitigation.



Use Cases



Identifying potential gas leaks or emissions

Gas leaks pose serious safety and environmental risks in Oil & Gas operations. RealWear allows workers to scan areas for temperature anomalies that indicate a leak allowing for instant action to prevent accidents and protect the workforce.



Inspecting pipelines for leaks or corrosion

By leveraging thermal imaging, workers can detect temperature variations that indicate potential leaks, allowing for early intervention, avoiding costly damage and ensuring the integrity of the pipeline infrastructure.



Monitoring equipment temperatures during inspections

Using RealWear and Thermal, workers can monitor equipment temperatures in real time without the need for physical contact, enabling proactive maintenance, reducing the risk of equipment failure, enhancing operational efficiency and safety.

Intrinsically Safe by RealWear, Thermal by FLIR

RealWear's Thermal Camera Module has been developed with Thermal by FLIR - the world's leading manufacturer of infrared products. It offers five modes including Teledyne FLIR's patented MSX®, which adds visible light details to thermal images for greater detail. Once you've got your image, you can take thermography to the next level with FLIR Thermal Studio Suite.



Technical Specification - Thermal Camera Module



Certifications

Intrinsically Safe (ATEX Zone 1 and CSA C1/D1)

Thermal Sensor

FLIR Lepton® 3.5

Thermal Resolution

160 x 120

Effective Frame Rate

8.7Hz

FOV

57° (H), nominal

71° (D), nominal

Object Temperature Range

-20 to 400° C

Thermal Sensitivity (NETD)

<50mK

Spectral Range

8 to 14µm

Accuracy

High Gain Mode: Greater of +/- 5° C or 5% (typical)

Low Gain Mode: Greater of +/- 10° C or 10% (typical)

Visual Camera

Sensor

48MP Sensor

Still Image

Up to 12MP

Video

Up to 1080p, 60fps