

# CRITICAL MONITORING AT A DISTANCE

## EASILY MONITOR EQUIPMENT

Remote fixed mounted thermal management systems are designed to provide detection capabilities of hard-to-reach areas or places where safety is a concern. FMX 400 devices have been utilized to monitor critical equipment, flares, flare pilots, electrical connections, and tank levels in real-time. Perfect for finding and locating critical failures as well as abnormal temperatures in pipelines and storage facilities. Powered by ICI's proprietary SmartIR software, which includes analytics, work order integration, alerts and notifications, and live video feeds for remote monitoring.

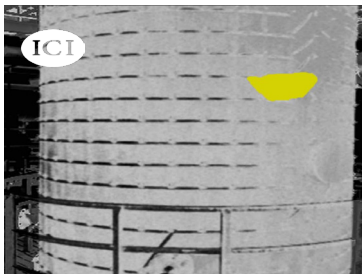


FMX 400 P-Series



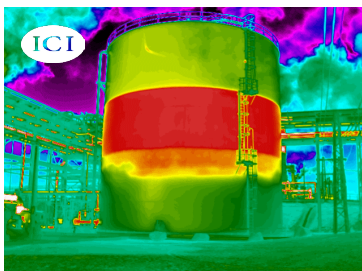
## ENVIRONMENTALLY PROTECTED

ICI's FMX 400 Series (ITMS) is built with a robust 20 lb stainless steel enclosure, designed to withstand harsh environments and protect against dirt, dust, and particulates. The environmentally protected system is explosion proof, making it ideal for imaging flares and monitoring gasification reactors for elevated temperatures. Our industrial systems act efficiently and proactively while ensuring personnel safety and preventing disruptions to operations.



## ALARMING FUNCTIONS

Equipped with ICI's SmartIR software, the ITMS includes built-in alarming features. This software allows for the visualization of heat signatures and provides maintenance personnel with the ability to generate reports and receive notifications when temperature thresholds are exceeded. The alarming functions reduce response time in critical situations, enabling quick action to mitigate risks and prevent catastrophic failures. With these features, the system helps to reduce repair costs, insurance premiums, and potential operational downtime.



## REAL-TIME THERMAL IMAGING

The system incorporates a 384 x 288 thermal imager, offering unmatched sensitivity and accuracy. It provides real-time thermal imaging of temperatures ranging from 0°C to 60°C (32°F to 140°F), with an optional high-temperature calibration available. The system enables personnel to detect abnormal temperatures in pipelines, storage facilities, and other critical equipment. By collecting quantitative temperature data and offering quality resolution thermal images the system allows for in-depth thermal analysis and the ability to locate failures before they occur.

# FMX 400 P SERIES FOR CRITICAL MONITORING



The FMX 400 P-Series is a 384 x 288 imager with unmatched sensitivity and an accuracy of  $\pm 0.3^{\circ}\text{C}$  ( $0.54^{\circ}\text{F}$ ). It provides real-time thermal imaging of temperatures between  $0^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $32^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ ). Our FMX 400 is designed for fixed mounted applications and has IP54 protection. Integrate the device with our stainless steel, explosion proof housing for imaging objects in hard-to-reach areas or extreme environments. Powered by ICI's proprietary SmartIR software, which includes analytics, work order integration, alerts and notifications, and live video feeds for remote monitoring.

## Features

- Unmatched image sensitivity
- Radiometric data streaming
- 10 pseudo-color palettes
- Alarms trigger
- Spot/Area/Isotherm
- Small Size, light weight
- Low power, < 3 W

## Applications

- Process control monitoring
- Industrial vision systems
- Predictive maintenance
- Reliability engineering
- Electrical/electronics monitoring
- Scientific research
- Building automation
- Security monitoring

## Options

- Optional: 1/4"-20 tripod
- Optional: explosion proof housing for NEMA 9 Class 1, Div.1, Class 1 Div.2

## Specifications

- **Pixel Resolution:** 384 x 288
- **Accuracy:**  $\pm 0.3^{\circ}\text{C}$  ( $0.54^{\circ}\text{F}$ )
- **Temperature Range:**  $0^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $32^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ )
- **Operation Range:**  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ )
- **Storage Range:**  $-20^{\circ}\text{C}$  to  $65^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $149^{\circ}\text{F}$ )
- **Detector Array:** UFPA
- **Pixel Pitch:** 17  $\mu\text{m}$
- **Focal Length:** 19 mm
- **FOV:**  $47^{\circ}$  x  $35.6^{\circ}$
- **Measurement Distance:** lens dependent
- **Spectral Band:** 8  $\mu\text{m}$  - 14  $\mu\text{m}$
- **Thermal Sensitivity (NETD):**  
< (40 mK)  $0.04^{\circ}\text{C}$  at  $30^{\circ}\text{C}$  ( $86^{\circ}\text{F}$ )
- **Frame Rate:** 50 Hz NTSC/PAL
- **Dynamic Range:** 14-bit
- **Humidity:** 5% to 95% non-condensing
- **Pixel Operability:** > 99%
- **Shock/Vibration:** 30 G/4.3 G
- **Dimensions:**  
119 mm x 55 mm x 55 mm (L x W x H +/- 0.5 mm)  
(4.69" x 2.17" x 2.17" (L x W x H  $\pm$  0.02"))
- **Power:** DC 110V 10 - 36, < 3 W
- **Weight (without lens):** < 370 g (13.05 oz)
- **Interface:** RJ-45 Ethernet
- **Video:** raw data
- **Emissivity Correction:** 0.01 to 1.0
- **Protection:** IP54
- Internal non-uniformity correction (NUC)
- 1/4"-20 tripod support



FMX 400 P-Series