



The ICI FMX 640 P-Series is a 30 Hz fixed mounted infrared camera with unmatched sensitivity and accuracy in a 640 x 512 radiometric imager. Operating on 6 W of power via a POE (Power over Ethernet) connection, the FMX 640 provides real time radiometric data streamed directly to any desktop, laptop, tablet or embedded system. Perfect for industrial and petrochemical monitoring. Powered by ICI's proprietary SmartIR software, which includes analytics, work order integration, alerts and notifications, and live video feeds for remote monitoring. Windows and Linux software, drivers and SDK are available for custom applications.

Features

- Unmatched image sensitivity
- Multi-device linking
- Radiometric data streaming
- Integrates into embedded systems
- Windows and Linux software
- Small size
- Light weight
- Low power < 6 W by USB
- Drivers and SDK available

Applications

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

Options & Accessories

- Optional: 9 Hz S-Series
- Optional: 1/4"-20 tripod
- Optional: 0°C to 500°C
- 8 mm Manual focus lens (80° x 60° FOV, +50 g)
- 12.5 mm Manual focus lens (50° x 37.5° FOV, +64 g)
- 14.25 mm Fixed focus lens (44° x 33° FOV, +25 g)
- 30 mm Manual focus lens (20° x 15° FOV, +100 g)
- 50 mm Manual focus lens (12.4° x 9.3° FOV, +170 g)
- 100 mm Manual focus lens (6.2° x 4.7° FOV, 565 g)

Specifications

- **Pixel Resolution:** 640 x 512
- **Accuracy:**
Standard: $\pm 1^{\circ}\text{C}$ ($\pm 1.8^{\circ}\text{F}$) or $\pm 1\%$
Hi-Temp: $\pm 5^{\circ}\text{C}$ ($\pm 9^{\circ}\text{F}$) or $\pm 5\%$
- **Temperature Range:**
Standard: -20°C to 120°C (-4°F to 248°F)
Hi-Temp (optional): 0°C to 500°C (32°F to 932°F)
- **Operation Range:** -40°C to 80°C (-40°F to 176°F)
- **Storage Range:** -40°C to 70°C (-40°F to 158°F)
- **Detector Array:** UFPA (VOx)
- **Pixel Pitch:** 17 μm
- **FOV:** lens dependent
- **Focus:** manual
- **Measurement Distance:** lens dependent
- **Spectral Band:** 7 μm to 14 μm
- **Thermal Sensitivity (NETD):**
< (20 mK) 0.02°C at 30°C (86°F)
- **Frame Rate:** 30 Hz P-Series
Optional: 9 Hz S-Series
- **Dynamic Range:** 14-bit
- **Humidity:** 5% to 95% non-condensing
- **Pixel Operability:** > 99 %
- **Shock/Vibration:** 75 G/4 G
- **Dimensions (without lens):**
157 mm x 70 mm x 70 mm (L x W x H ± 0.5 mm)
(6.18" x 2.76" x 2.76" (L x W x H ± 0.02 "))
- **Power:** 5 V DC 2 A, < 6 W
- **Weight (without lens):** < 520 g (1.15 lbs)
- **Interface:** RJ45/Ethernet + PoE
- **Video:** raw data
- **Emissivity Correction:** 0.01 to 1.0
- **IP Rating:** IP54
- Internal non-uniformity correction (NUC)



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