



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 as well as scientific research and building security. 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

## 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:  $-20^{\circ}\text{C}$  to  $120^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $248^{\circ}\text{F}$ )  
Hi-Temp (optional):  $0^{\circ}\text{C}$  to  $500^{\circ}\text{C}$  ( $32^{\circ}\text{F}$  to  $932^{\circ}\text{F}$ )
- **Operation Range:**  $-40^{\circ}\text{C}$  to  $80^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $176^{\circ}\text{F}$ )
- **Storage Range:**  $-40^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $158^{\circ}\text{F}$ )
- **Detector Array:** UFPA (VOx)
- **Pixel Pitch:** 17  $\mu\text{m}$
- **FOV:** lens dependent
- **Measurement Distance:** lens dependent
- **Spectral Band:** 7  $\mu\text{m}$  to 14  $\mu\text{m}$
- **Thermal Sensitivity (NETD):**  
< (20 mK) 0.02  $^{\circ}\text{C}$  at 30  $^{\circ}\text{C}$  (86  $^{\circ}\text{F}$ )
- **Frame Rate:** 30 Hz  
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  $\pm 0.5$  mm)  
(6.18" x 2.76" x 2.76" (L x W x H  $\pm 0.02$ "))
- **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)

## Options & Accessories

- Optional: 9 Hz S-Series
- Optional: 1/4"-20 tripod
- Optional:  $0^{\circ}\text{C}$  to  $500^{\circ}\text{C}$
- 8 mm Manual focus lens (80 $^{\circ}$  x 60 $^{\circ}$  FOV, +50 g)
- 9 mm Athermalized focus lens (70 $^{\circ}$  x 52 $^{\circ}$  FOV, +40 g)
- 12.5 mm Manual focus lens (50 $^{\circ}$  x 37.5 $^{\circ}$  FOV, +64 g)
- 16.7 mm Athermalized focus lens (37.5 $^{\circ}$  x 28 $^{\circ}$  FOV, +25 g)
- 25 mm Athermalized focus lens (24.8 $^{\circ}$  x 18.6 $^{\circ}$  FOV, +50 g)
- 30 mm Manual focus lens (20 $^{\circ}$  x 15 $^{\circ}$  FOV, +100 g)
- 35 mm Athermalized focus lens (17.6 $^{\circ}$  x 13.2 $^{\circ}$  FOV, +100 g)
- 50 mm Manual focus lens (12.4 $^{\circ}$  x 9.3 $^{\circ}$  FOV, +170 g)
- 100 mm Manual focus lens (6.2 $^{\circ}$  x 4.7 $^{\circ}$  FOV, 565 g)



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