ICI | INFRARED CAMERAS INC

# SMART CONDITION MONITORING SYSTEM

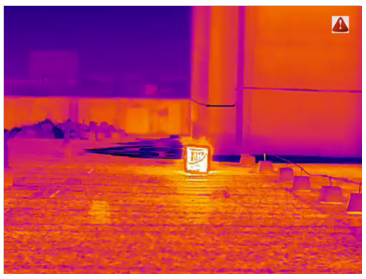
## 24/7 SECURITY MONITORING AND FIRE PREVENTION

With its non-contact method of measuring temperatures, the FM 700X thermal imaging camera assists in 24/7 security surveillance, fire detection, high temperature monitoring, and other condition monitoring applications. Detect area and tripwire intrusions, define alarm settings, and capture/send media on alarm triggers to protect facilities and maintain safe working environments.


FM 700X P-Series

## DUAL SPECTRUM MONITORING

The FM 700X thermal camera combines network functionality with dual spectrum imaging to meet the requirement of 24/7 security monitoring. Features 4 image modes: picture-in-picture, visible, infrared and ICI Dual Vision for situational awareness and target location.



## EARLY FIRE DETECTION

Fire can destroy buildings or installations within an extremely short time frame. The FM 700X features a state of the art fire detection algorithm and measures from -20 °C to 550 °C (-4°F to 1022°F) to prevent fires by detecting hot spots before they ignite. Built-in alarm features actively work 24/7 to keep personnel, property, and assets safe.

## SECURITY + COMMUNICATION

Stream up to 20 channels over a single network connection and keep constant communication with the field with a 2-way intercom system. Maintain up to 20 profiles each with their own levels of access: admin, operator, and user. Receive notifications of illegal access attempts.



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# FM 700X P-SERIES

Industry

The FM 700X thermal camera combines network functionality with dual spectrum imaging to meet the requirement of 24/7 security monitoring. Detects trip wire intrusions, captures and sends media on alarm trigger, and features a fire detection algorithm to keep assets and perimeters safe. View up to 20 channels at one time and review scenes with professional temperature analysis tools. The FM 700X provides high temperature measuring from -20°C to 550°C (-4°F to 1022°F) with an accuracy of ± 2°C (± 3.6°F) or ± 2%.

## Features

- State of the art fire detection algorithm
- Detects area and tripwire intrusions
- Alarm temperature threshold settings
- Capture, record, and email alarm notifications
- Stay safer with audio and visual alarms
- View up to 20 video channels at once
- Up to 20 profiles with levels: admin, operator, and user
- Notifications of illegal access attempts
- Supports 2-way voice intercom communication
- Multiple network options
- Customized point/line/area temperature analysis
- High-temperature measuring

## Applications

- Security monitoring
- Building security
- Perimeter defense
- Fire detection and monitoring
- Real-time inspections
- Day/Night surveillance
- High temperature monitoring

## Lens Options

- 9.1 mm: Athermal, F#1.0, 48°×38°, 1.32 mrad (visible: 4 mm (65°×50°))
- 13 mm: Athermal, F#1.0, 33°×26°, 0.92 mrad (visible: 6 mm (46°×35°))
- 19 mm: Athermal, F#1.0, 22°×18°, 0.63 mrad (visible: 6 mm (46°×35°))
- 25 mm: Athermal, F#1.0, 17°×14°, 0.48 mrad (visible: 12 mm (24°×18°))

## Specifications

- **Pixel Resolution:** 640 x 512
- **Accuracy:** ± 2°C (± 3.6°F) or ± 2%
- **Temperature Range:** -20°C to 550°C (-4°F to 1022°F)
- **Operation Range:** -40°C to 70°C (104°F to 158°F)
- **Storage Range:** -20°C to 60°C (-4°F to 140°F)
- **Detector Array:** FPA (VOx)
- **Pixel Pitch:** 12 µm
- **FOV:** lens dependent
- **IFOV:** lens dependent
- **Focal Length:** lens dependent
- **Focus:** fixed
- **Spectrum Range:** 8 µm to 14 µm
- **Thermal Sensitivity (NETD):** < (40 mK) 0.04°C at 25°C (77°F)
- **Frame Rate:** 50 Hz - 60 Hz
- **Humidity:** 95% relative
- **Pixel Operability:** > 99 %
- **Shock/Vibration:** 25 G/2.5 G
- **Dimensions (without lens):** 319.5 mm x 121.5 mm x 103.6 mm (L x W x D ± 0.5 mm) (12.58” x 4.78” x 4.08” (L x W x H ± 0.02”))
- **Weight (without lens):** 1.8 kg (3.97 lbs)
- **Power:** 12V DC or PoE (802.3af); ≤ 8 W
- **Interface:** 1 RJ45 10M/100M port, 1 channel audio in/out, 2 channel alarm in/out, 1 RS485 channel (supports Pelco), Micro SD
- **Network:** IPv4, HTTP, HTTPS, QoS, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP
- **Interoperability:** ONVIF, GB28181, SDK
- **Video Format:** H.264/H.265
- **Audio Format:** G.711a/G.711u/AAC/PCM
- **Image Format:** JPG
- **Image Polarity:** 20 options
- **Image Modes**: IR, fusion (ICI Dual Vision), visible, picture-in-picture
- **Memory:** MicroSD card (up to 256 GB)
- **Digital Camera:** 5 MP, 2560 x 1920, 1/2.8” progressive scan CMOS, Day conversion (ICR auto) Night conversion (electronic color to B&W); filling light up to 40 m (131.2 ft)
- **IP Rating:** IP66
- **Language:** multi-language
- Automatic alarms
- On alarm settings: capture video and image; send email; audio and visible alarms; fire alarm
- Receive network disconnection notifications, IP address conflicts, and memory errors
- Supports viewing up to 20 channels
- 2-way voice intercom
- Supports IE browser



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# FM 700X P-SERIES

Industry

| Thermal Lenses | | | | |
|---|---|---|---|---|
| **Model No.** | **ICIFM700XP-I-48** | **ICIFM700XP-I-33** | **ICIFM700XP-I-22** | **ICIFM700XP-I-17** |
| **Lens** | 9.1 mm | 13 mm | 19 mm | 25 mm |
| **F#** | 1.0 | 1.0 | 1.0 | 1.0 |
| **Focus Type** | Athermal | Athermal | Athermal | Athermal |
| **FOV (HxV)** | 48°×38° | 33°×26° | 22°×18° | 17°×14° |
| **IFOV** | 1.32 mrad | 0.92 mrad | 0.63 mrad | 0.48 mrad |
| **Visible Lens** | 4 mm (65°×50°) | 6 mm (46°×35°) | 6 mm (46°×35°) | 12 mm (24°×18°) |

| Operating Distance* | | | | | | |
|---|---|---|---|---|---|---|
| **Lens** | **Detection** | | **Recognition** | | **Identification** | |
| | Vehicle | Human | Vehicle | Human | Vehicle | Human |
| **9.1 mm** | 1163 m | 379 m | 291 m | 95 m | 145 m | 47 m |
| **13 mm** | 1661 m | 542 m | 415 m | 135 m | 208 m | 68 m |
| **19 mm** | 2428 m | 792 m | 607 m | 198 m | 303 m | 99 m |
| **25 mm** | 3194 m | 1042 m | 799 m | 260 m | 399 m | 130 m |

| Operating Distance of Smart Features* | | | | | | |
|---|---|---|---|---|---|---|
| **Lens** | **Recognition** | | **Temperature Measurement** | | **Fire Detection** | |
| | Vehicle | Human | 2 m x 2 m | 1 m x 1 m | 2 m x 2 m | 1 m x 1 m |
| **9.1 mm** | 218 m | 71 m | 253 m | 126 m | 1011 m | 506 m |
| **13 mm** | 313 m | 102 m | 361 m | 181 m | 1444 m | 722 m |
| **19 mm** | 455 m | 148 m | 528 m | 264 m | 2111 m | 1056 m |
| **25 mm** | 599 m | 195 m | 694 m | 347 m | 2778 m | 1389 m |


FM 700X

* Recommended distance of detecting, recognizing and identifying humans (1.8×0.5m) and vehicles (1.4×4.0m).



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