



The ICI 8320 P-Series infrared camera offers unmatched image sensitivity and accuracy in a 336 x 256 radiometric imager. With less than 5 in³ in overall dimension the imager fits in the tightest of areas. The ICI 8320 P-Series measures temperatures up to 120 °C (248 °F) with an optional range measuring up to 500°C (932 °F). Integrates into the Sensor Control Module for UAV applications. Includes IR Flash Pro software.

Features

- Unmatched image sensitivity
- Multi-device linking
- Radiometric data streaming
- Integrates into embedded systems
- Windows and Linux software
- Small size
- Light weight
- Low power < 1 W by USB
- Aluminum enclosure

Applications

- Process control
- Robotics
- Industrial vision systems
- Medical radiometric imaging
- Aerial radiometric imaging
- UAV integration
- Scientific research
- Building automation
- Security monitoring

Specifications

- **Pixel Resolution:** 336 x 256
- **Accuracy:**
 - Standard: ± 1°C (± 1.8 °F) or ± 1%
 - Hi-Temp: ± 5°C (± 9 °F) or ± 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:** FPA (VOx)
- **Pixel Pitch:** 17 µm
- **FOV:** lens dependent
- **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:** 60 Hz P-Series or 7.5 Hz S-Series
- **Dynamic Range:** 14-bit
- **Humidity:** 5% to 95% non-condensing
- **Pixel Operability:** > 99 %
- **Shock/Vibration:** 75 G/4.3 G
- **Dimensions (without lens):**
 - 44.5 mm x 44.5 mm x 46.5 mm (L x W x D ± 0.5 mm)
 - (1.75" x 1.75" x 1.83" (L x W x H ± 0.02"))
- **Power:** 5 V DC 500 mA, < 1 W (<1.2 W S-Series)
- **Weight (without lens):** 72 g (2.54 oz)
- **Interface:** USB Mini-B
- **Video:** Raw data
- **Emissivity Correction:** 0.01 to 1.0
- **IP Rating:** IP54
 - Internal non-uniformity correction (NUC)
 - Aluminum enclosure

Options/Lenses

- Optional: 7.5 Hz S-Series
- Optional: 0 °C to 500 °C (32 °F to 932 °F)
- 4.1 mm Manual focus lens (80° x 60° FOV, +116 g (4.09 oz))
- 5 mm Manual focus lens (58° x 44.5° FOV, +44 g (1.55 oz))
- 8 mm Manual focus lens (40° x 30° FOV, +50 g (1.76 oz))
- 9 mm Athermalized focus lens (35° x 26° FOV, +40 g (1.41 oz))
- 12.5 mm Manual focus lens (25° x 18.8° FOV, +64 g (2.26 oz))
- 16.7 mm Athermalized focus lens (18.8° x 14° FOV, +25 g (0.88 oz))
- 25 mm Athermalized focus lens (12.4° x 9.3° FOV, +50 g (1.76 oz))
- 30 mm Manual focus lens (10° x 7.5° FOV, +100 g (3.53 oz))
- 35 mm Athermalized focus lens (8.8° x 6.6° FOV, +100 g (3.53 oz))
- 50 mm Manual focus lens (6.2° x 4.7° FOV, +170 g (6 oz))
- 100 mm Manual focus lens (3.1° x 2.4° FOV, +565 g (1.25 lbs))
- Sensor Control Module
- Windows 32-bit SDK
- Linux SDK (x86, x64 and ARM)

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