The FLIR A315 / A615 is a series of compact and affordable thermal imaging cameras, fully controlled by a PC. Due to their compliance to standards, FLIR A315 / A615 are Plug&Play with third-party Machine Vision software like National instruments, Cognex, Matrox, MVtec and Stemmer Imaging.

EXCELLENT IMAGE QUALITY
The FLIR A615 is equipped with an uncooled Vanadium Oxide (VoX) detector that produces crisp thermal images of 640 x 480 pixels. This allows more accuracy and shows more details at a longer distance. The FLIR A615 also has a high-speed infrared windowing option.

Users that do not need the high image quality of the FLIR A615 can choose the A315 that produces thermal images of 320 x 240 pixels. Both cameras make temperature differences as small as 50 mk clearly visible. They come with a built-in 25° lens with motorized focus and autofocus. Optional lenses are available.

GigE VISION™ STANDARD COMPATIBILITY
An industry first, GigE Vision is a camera interface standard developed using the Gigabit Ethernet communication interface. GigE Vision is the first standard to enable fast image transfer using low-cost standard cables even over long distances. With GigE Vision, hardware and software from different vendors can interoperate seamlessly over GigE connections.

GenICam™ PROTOCOL SUPPORT
Another industry first: The goal of GenICam is to provide a generic programming interface for all kinds of cameras. The GenICam protocol also makes third-party software compatible with the camera.

16-BIT TEMPERATURE LINEAR OUTPUT
Allows you to do temperature measurements in a non-contact mode with any third-party software. A built-in Gigabit Ethernet connection allows real-time 16-bit image streaming to a computer.

ENVIRONMENTAL HOUSING (FLIR A315)
The FLIR A315 can be ordered with an environmental housing. The housing increases the environmental specifications of the FLIR A315 to IP66, protecting the camera’s from dust and water without affecting any of the camera features. The housing is available for cameras that are equipped with a 25°, 45° or 90° lens, and can be ordered separately as an accessory.

Your authorized FLIR distributor:

movitherm
advanced thermography solutions
15540 Rockfield Blvd, Suite C-110
Irvine, CA 92618

Phone: (949) 699-6600
Fax: (949) 699-6601
Email: info@movitherm.com
http://www.movitherm.com

www.flir.com
## Technical specifications FLIR A315 / A615

<table>
<thead>
<tr>
<th>Imaging &amp; Optical Data</th>
<th>FLIR A315</th>
<th>FLIR A615</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field of view (IFOV) / Minimum focus distance</td>
<td>25° × 18.8° / 0.4 m (1.31 ft.)</td>
<td>15° × 11° (19° diagonal) / 0.50 m (1.64 ft.)</td>
</tr>
<tr>
<td>Detector time constant</td>
<td>Typical 12 ms</td>
<td>Typical 8 ms</td>
</tr>
<tr>
<td>IR resolution</td>
<td>320 × 240 pixels</td>
<td>640 × 480 pixels</td>
</tr>
<tr>
<td>Spatial resolution (IFOV)</td>
<td>1.36 mrad</td>
<td>15°: 0.41 mrad 25°: 0.68 mrad 45°: 1.23 mrad 7°: 0.19 mrad 80°: 2.62 mrad</td>
</tr>
<tr>
<td>F-number</td>
<td>1.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Image frequency</td>
<td>60 Hz</td>
<td>50 Hz (100/200 Hz with windowing)</td>
</tr>
<tr>
<td>Focal length</td>
<td>18 mm (0.7 in.)</td>
<td>18 mm (0.7 in.)</td>
</tr>
<tr>
<td>Detector Pitch</td>
<td>25 µm</td>
<td>17 µm</td>
</tr>
<tr>
<td>Detector Time Constant</td>
<td>Typical 12 ms</td>
<td>Typical 8 ms</td>
</tr>
<tr>
<td>Detector Plane Array (FPA) / Spectral range</td>
<td>Uncooled microbolometer / 7.6–13 µm</td>
<td>Uncooled microbolometer / 7.6–14 µm</td>
</tr>
</tbody>
</table>

### Measurement
- **Object temperature range**: -20 to +120°C (-4 to 248°F) 0 to +350°C (32 to 662°F)
- **Temperature**: -20 to +150°C (+0 to +250°C +0 to +2000°C)

### USB
- **USB**: N/A
- **USB, standard**: N/A
- **USB, connector type**: USB Micro-B
- **USB, communication**: N/A
- **USB, image streaming**: N/A
- **USB, protocols**: TCP, UDP, SMTP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMB, SVIB (CiFS), DHCP, MDNS (Bonjour), uPnP

### Ethernet
- **Ethernet, image streaming**: 16-bit 640 × 480 pixels at 25 Hz - Signal linear - Temperature linear - Radiometric
- **Ethernet, type**: Gigabit Ethernet
- **Ethernet, connector type**: RJ-45
- **Ethernet, standard**: IEEE 802.3
- **Ethernet, protocols**: TCP, UDP, SMTP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMB, SVIB (CiFS), DHCP, MDNS (Bonjour), uPnP
- **Ethernet, communication**: TCP/IP socket-based FLIR proprietary and GenICam protocol

### Digital input/output
- **Digital input**: 2 opto-isolated, 10–30 VDC
- **Digital input, purpose**: Image tag (start, stop, general), Image flow ctrl. (Stream on/off), Input ext. device (programmatically set)
- **Digital output**: 2 opto-isolated, 10–30 VDC, max 100 mA
- **Digital output, purpose**: Output to ext. device (programmatically set)
- **Digital output, connector type**: 6-pole jackable screw terminal
- **Digital output, supply voltage**: 12/24 VDC, max 200 mA
- **Digital output, isolation voltage**: 500 VRMS
- **Digital output, isolation voltage**: 500 VRMS
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### Power system
- **External power operation**: 12/24 VDC, 24 W absolute max
- **External power, connector type**: 2-pole jackable screw terminal
- **Voltage**: Allowed range 10–30 VDC

### Environmental data
- **Storage temperature range**: -40°C to +70°C (-40 to 158°F)
- **Humidity (operating and storage)**: +25°C to +40°C (77 to 104°F) relative humidity +35°C to +40°C (95%)
- **EMC**: • EN 61000-6-2:2001 (Immunity) • EN 61000-6-3:2001 (Emission) • FCC CDR Part 15 Class B (Emission)
- **Vibration**: 2 g (IEC 60608-2-6)

### Physical data
- **Housing material**: Aluminum

### Scope of delivery
- Hard transport case or cardboard box, Thermal imaging camera with lens, Utility CD-ROM, Calibration certificate, Ethernet™ cable, USB cable (FLIR A615), Mains cable, Power cable (pig-tailed), Power supply, Printed Getting Started Guide, Printed Important Information Guide, User documentation CD-ROM, Warranty extension card or Registration card, 6-pole jackable screw terminal (mounted on camera)

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**Measurement**

| Accuracy | ±2°C or ±2% of reading |

**Measurement analysis**

- **Atmospheric transmission correction**: Automatic, based on inputs for distance, atmospheric temperature and relative humidity
- **Optics transmission correction**: Automatic, based on signals from internal sensors
- **Emissivity correction**: Variable from 0.01 to 1.0
- **Reflected apparent temperature correction**: Automatic, based on input of reflected temperature
- **External optics/windows correction**: Automatic, based on input of optics/window transmission and temperature

**Ethernet**

- **Ethernet**: Control and image
- **Ethernet, standard**: IEEE 802.3
- **Ethernet, connector type**: RJ-45
- **Ethernet, type**: Gigabit Ethernet
- **Ethernet, communication**: TCP/IP socket-based FLIR proprietary and GenICam protocol

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**Imaging & Optical Data**

<table>
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<th>Lens identification</th>
<th>Automatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal sensitivity/NETD</td>
<td>&lt; 0.05°C @ +30°C (86°F) / 50 mK</td>
</tr>
<tr>
<td>Focus</td>
<td>Automatic or manual (built in motor)</td>
</tr>
</tbody>
</table>