VarioCAM® HD head security
Infrared Thermal Imaging System for Security and Monitoring Tasks

Europe’s leading specialist for infrared sensors and measurement technology

Uncooled detector with up to (1,024 × 768) IR pixels
Opto-mechanical MicroScan with up to (2,048 × 1,536) IR pixels
Spectral range (7.5 ... 14) μm
Personnel detection range 6.1 km
Vehicle detection range 10.7 km
Solid light metal housing (IP67)
No US export license required

1) Vehicle-based surveillance
2) Monitoring of a parking lot

www.InfraTec.eu

Made in Germany
### Spectral range
\((7.5 \ldots 14) \mu\text{m}\)

### Detector
Uncooled Microbolometer Focal Plane Array

### Detector format (IR pixels)
- \((1,024 \times 768)\), with built-in opto-mechanical MicroScan unit \((2,048 \times 1,536)\)*
- \((640 \times 480)\), with built-in opto-mechanical MicroScan unit \((1,280 \times 960)\)*

### Temperature measuring range
\((-40 \ldots 2,000) \degree\text{C}\)

### Measurement accuracy
\(\pm 1 \degree\text{C} \text{ or } \pm 1 \%\text{C}\)

### Temperature resolution at 30 \degree\text{C}
Up to 0.02*K*

### Frame rate
- Full-frame: 30 Hz \((1,024 \times 768)\), sub-frame formats*:
  - 60 Hz \((640 \times 480)\)
  - 120 Hz \((384 \times 288)\)
  - 240 Hz \((1,024 \times 96)\)

### Storage media
- SDHC Card, external control computer for camera control and data acquisition*

### Image storage
- Time-, trigger- and temperature controlled recording of 16 bit single frames or image sequences with timestamp, video streaming in MPEG format

### Realtime storage*
Computer-aided storage of radiometric sequences by GigE interface with up to 240 Hz

### Lens mount
Bayonet to comfortably switch objectives, automatic objective detection and data transfer; screw-on interface*

### Focus
Motor-driven, automatic or manual, accurately adjustable

### Zoom
Up to 32× digital, stepless

### Personnel detection range
Up to 6.1 km

### Vehicle detection range
Up to 10.7 km

### Dynamic range
16 bit

### Interfaces; Trigger*
- GigE Vision*, DVI-D (HDMI), C-Video, RS232, USB 2.0, WLAN*, 2 × digital I/O, 2 × analogue I/O

### Power supply
- AC adapter, (12 ... 24) V DC, PoE*

### Storage and operation temperature
\((-40 \ldots 70) \degree\text{C}, (-25 \ldots 55) \degree\text{C}\)

### Impact strength; vibration resistance in operation
- 25 G (IEC 68 - 2 - 29)
- 2 G (IEC 68 - 2 - 6 )

### Dimensions; weight
\((221 \times 90 \times 44) \text{mm}\), 1.15 kg (basic configuration with standard lens)

### Further functions
- Camera internal emissivity correction, shutter free operation, use of various colour sets, contrast enhancement, user profile, language selection

### Analysis and evaluation software*
- IRBIS* 3, IRBIS* 3 report, IRBIS* 3 view, IRBIS* 3 plus*, IRBIS* 3 professional*, IRBIS* 3 remote HD, IRBIS* 3 control*, IRBIS* 3 online*, IRBIS* 3 process*, IRBIS* 3 active*, IRBIS* 3 mosaic*, IRBIS* 3 vision *

* Depending on model

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The **thermographic high-resolution system VarioCAM® HD head security** was conceived for demanding monitoring and measurement tasks in stationary or vehicle-mounted operation. Images with resolutions of up to 3.1 Megapixels can be taken in combination with the integrated MicroScan feature, which was designed for continuous operation. The VarioCAM® HD head security generates **brilliant 16-bit thermographic images of highest quality** and offers unprecedented measurement ranges and efficiency, especially during **day and night detection and identification of distant persons and vehicles**.

The **various sets of equipment** make it easy to adjust the setup to the respective measurement task: The application range includes automatic threshold recognition and signalling up to digital real-time image acquisition via Gigabit-Ethernet. The **all-weather light metal housing (IP67)** allows **trouble-free and inexpensive operation** under harsh weather conditions.

The **big standard temperature range**, a complete optical assortment as well as the extensive equipment and the powerful **IRBIS® 3 software** for thermographic data acquisition and evaluation make the VarioCAM® HD head security an **ideal tool for monitoring and investigation**. With the application-specific configuration, this stationary thermographic system is even suited for tasks, which require continuous and automatic operation.

**Application examples:**

- Remote sensing and monitoring
- Integration in system solutions for ground vehicles, helicopters and maritime applications
- Undercover investigations from greater distances
- Stationary protection of critical infrastructure

**Detector format (IR pixels)**

<table>
<thead>
<tr>
<th>Lens</th>
<th>Focal length (mm)</th>
<th>FOV (°)</th>
<th>FOV (°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super wide-angle lens</td>
<td>7.5</td>
<td>(93.7 × 77.3)</td>
<td>(98.5 × 82.1)</td>
</tr>
<tr>
<td>Wide-angle lens</td>
<td>15</td>
<td>(56.1 × 43.6)</td>
<td>(60.3 × 47.0)</td>
</tr>
<tr>
<td>Standard lens</td>
<td>30</td>
<td>(29.9 × 22.6)</td>
<td>(32.4 × 24.6)</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>60</td>
<td>(15.2 × 11.4)</td>
<td>(16.5 × 12.4)</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>120</td>
<td>(7.6 × 5.7)</td>
<td>(8.3 × 6.2)</td>
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