Imagine the invisible

**XTM-640-Analog 17µm**

High resolution uncooled thermal OEM module

**Ready-to-integrate thermal OEM module consuming ultra-low-power**

Xenics’ XTM-640-Analog is an extremely compact and versatile thermal imaging module with unique image quality and stability for a broad range of OEM applications. These applications include security, night vision, firefighting, airborne and land-based reconnaissance and surveillance.

We guarantee you unparalleled uniform and crisp thermal images thanks to on-board image processing and full shutter control.

The module interface can be PAL/NTSC video for a regular CCTV security network. The module is controlled by RS232. The integration and use of these infrared modules are so easy, that no operator training is required.

The small pixel pitch of 17 µm allows for longer Detection, Recognition and Identification (DRI) values in critical security applications.

**Key features**

- Low power
- High resolution
- Easy connectivity
- Small size, 17 µm pixel pitch
- 25 or 30 Hz frame rate worldwide

**OEM applications**

- UAV / UGV
- Gimbal
- Night vision
- Thermal sights
- Border security
- Fire fighting
- Driver assistance
- Police surveillance
- Search & Rescue (SAR)
- Electro optical payloads

**Designed for use in**

- Thermal security
- Vision enhancement
- Police surveillance
- Border security
### Specifications

#### Module specifications | XTM-640-Analog 17 µm
---|---
**Lens** | Fixation holes for multiple lens mount
**Optical interface** | -
**Imaging performance** | -
**Frame rate (full frame)** | 25 Hz (PAL)
| 30 Hz (NTSC)
**Window of Interest** | Minimum size 160 x 120
**Integration time** | 1 µs - 80 µs
**Shutter** | Full control by serial command
**Temperature stabilization** | No ThermoElectric Cooling required (TEC-less)
**Integration type** | Rolling shutter
**On-board image processing** | NUC (Non-Uniformity Correction)
| Bad pixel detection algorithm
| Auto-offset & Auto-gain (selectable region of interest)
| XIE (Xenics Image Enhancement)
| Histogram equalization
| Digital zoom
**A to D conversion resolution** | 16 bit
**Interfaces** | PAL or NTSC
**Module control** | XSP protocol (RS-232)
**Trigger** | In or out (via SMA)
**Power requirements** | < 2 W
**Power supply** | 12 V
**Physical characteristics** | 40 g, 11 ms according to MIL-STD810G
**Vibration** | 5 g (20 Hz to 2000 Hz) according to MIL-STD883J
**Ambient operating temperature** | -40 °C to 60 °C
**Storage temperature** | -45 °C to 85 °C
**Dimensions** | 45 x 45 x 44.6 mm³
**Weight module** | 99 g

#### Array specifications | XTM-640-Analog 17 µm
---|---
**Array type** | Uncooled microbolometer (a-Si)
**Spectral band** | 8 to 14 µm
**# pixels** | 640 x 480
**Pixel pitch** | 17 µm
**NETD** | 50 mK @ 30°C with F/1 lens
| 75 mK @ 30°C with F/1 lens
**Array cooling** | Uncooled
**Pixel operability** | > 99 %

#### Product selector guide

<table>
<thead>
<tr>
<th>Part number</th>
<th>NETD (mK)</th>
<th>Frame rate (Hz)</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xenics-000302</td>
<td>50</td>
<td>25</td>
<td>PAL</td>
</tr>
<tr>
<td>Xenics-000450</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenics-000461</td>
<td>75</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Xenics-000457</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenics-000430</td>
<td>50</td>
<td>30</td>
<td>NTSC</td>
</tr>
<tr>
<td>Xenics-000451</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenics-000417</td>
<td>75</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Xenics-000458</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>