THermal Night Vision

Night Vision | Thermal Imaging | Fused Night Vision
Thermoteknix Systems Ltd is one of Britain’s most innovative thermal imaging companies with world leading technologies since its inception in 1982. Our products are used and trusted by Law Enforcement, Defence and Special Forces worldwide.

Thermoteknix Systems Ltd is an ISO 9001:2015 accredited company.

We manufacture a wide range of products including: Image intensifiers, helmet-mounted/hand-held thermal imaging cameras, target acquisition systems and fused devices combining Night Vision and Thermal Imaging.

We specialise in producing compact, lightweight, low power, high quality products for use in the harshest environments.

Thermoteknix manufacture OEM modules for integration into third party systems. All our products are designed and manufactured in the UK and are not subject to US ITAR controls.*

Thermoteknix holds the prestigious Queen’s Award for Enterprise: Innovation in recognition of its outstanding achievements in thermal imaging.

*Thermoteknix products are not subject to US ITAR control but may require UK export licence depending on the end-user country and specification. ClipIR is not for sale or use in USA.
NIGHT VISION IMAGE INTENSIFIERS

All NiCAM™ Image Intensifier devices enable surveillance and situational awareness in low light conditions. The range includes monocular, biocular and binocular models, supporting a wide range of 18mm Gen 2+, Gen 3 and Gen 4 tubes to suit all applications and budgets.

NiCAM-14
Night Vision Monocular

Miniature lightweight night vision monocular with a choice of intensifier tubes to suit all requirements.

The unit can be helmet mounted, hand-held or weapon mounted. An integrated ClipIR® mounting bracket provides instant attachment.

<table>
<thead>
<tr>
<th>Intensifier Tube</th>
<th>18mm Gen 2+, Gen 2 or Gen 4 (subject to requirements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOV</td>
<td>40°</td>
</tr>
<tr>
<td>Batteries</td>
<td>1 x AA</td>
</tr>
<tr>
<td>Operating Time</td>
<td>&gt;24 hours</td>
</tr>
<tr>
<td>Weight</td>
<td>276g</td>
</tr>
</tbody>
</table>

NiCAM-7
Night Vision Biocular

A biocular night vision goggle for helmet mounted or hand-held operation.

A custom designed optional bracket is available for mounting ClipIR® to this device.

<table>
<thead>
<tr>
<th>Intensifier Tube</th>
<th>18mm Gen 2+ or Gen 3 (subject to requirements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOV</td>
<td>40°</td>
</tr>
<tr>
<td>Magnification</td>
<td>x1 (optional x3 and x5 lenses)</td>
</tr>
<tr>
<td>Batteries</td>
<td>2 x AA</td>
</tr>
<tr>
<td>Weight</td>
<td>520g</td>
</tr>
</tbody>
</table>

NiCAM-31
Night Vision Binocular

Ultra lightweight high performance binocular Night Vision Goggle. Operable as binocular or monocular, hand-held or helmet mounted.

An optional ClipIR® mounting bracket provides fused night vision/thermal capability.

<table>
<thead>
<tr>
<th>Intensifier Tube</th>
<th>18mm Gen 2+, Gen 2 or Gen 4 (subject to requirements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOV</td>
<td>40°</td>
</tr>
<tr>
<td>Magnification</td>
<td>x1</td>
</tr>
<tr>
<td>Batteries</td>
<td>1 x AA</td>
</tr>
<tr>
<td>Weight</td>
<td>630g</td>
</tr>
</tbody>
</table>

All NiCAM™ Night Vision Devices are compatible with the Thermoteknix ClipIR® to upgrade them to Fused Night Vision and enable them to operate effectively in situations of poor contrast or complete darkness.
HELMET MOUNTED & HAND-HELD THERMAL IMAGERS

The TiCAM® range of helmet mounted and hand-held thermal imagers includes both monocular and biocular devices for military and civilian applications. These include as building entry, search & rescue, surveillance, border security, target acquisition, counter drug operations, wildlife monitoring, VIP protection and for general situational awareness in low light and complete darkness.

**TiCAM 90**
Thermal Imager

Miniature hand-held/helmet mounted thermal imaging monocular. Available with either 384 x 288 or 640 x 480 detectors and 40° or 24° lens.

<table>
<thead>
<tr>
<th>Detector</th>
<th>FOV</th>
<th>Batteries</th>
<th>Operating time</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 : 384 x 288</td>
<td>40° Standard</td>
<td>1 x AA</td>
<td>4 hours</td>
<td>208g</td>
</tr>
<tr>
<td>90+ : 640 x 480</td>
<td>5.2° (600) / 10.4° (600+)</td>
<td>4 x AA</td>
<td>6 hours</td>
<td>630g</td>
</tr>
</tbody>
</table>

**TiCAM 600**
Thermal Imager

Medium range multifunction hand-held thermal imaging camera with GPS, Digital Magnetic Compass, Laser Target marker and Video Recording.

<table>
<thead>
<tr>
<th>Detector</th>
<th>FOV</th>
<th>Batteries</th>
<th>Operating time</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 : 384 x 288</td>
<td>5.2°</td>
<td>4 x AA</td>
<td>6 hours</td>
<td>630g</td>
</tr>
<tr>
<td>600+ : 640 x 480</td>
<td>3.1° / 6.2° (600+)</td>
<td>4 x AA</td>
<td>8 hours</td>
<td>&lt;2kg</td>
</tr>
</tbody>
</table>

**TiCAM 750LR**
Thermal Imager

Medium range biocular camera with GPS, Digital Magnetic Compass, Laser Target marker, Video Record and remote control software.

<table>
<thead>
<tr>
<th>Detector</th>
<th>FOV</th>
<th>Batteries</th>
<th>Operating time</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>750LR : 640 x 480</td>
<td>3.1° / 6.2° (600+)</td>
<td>4 x AA</td>
<td>8 hours</td>
<td>&lt;2kg</td>
</tr>
</tbody>
</table>
TARGET LOCATION SYSTEMS

The TiCAM target location systems are versatile target acquisition and observation systems for day and night time operation. They combine uncooled thermal imager with GPS, Digital Magnetic Compass, eye-safe Laser Range Finder, Target marker and video recording. Connections to C4I systems are available for infantry, border security, special forces and forward observation in a range of configurations.

TiCAM 1000
Target Acquisition and Location

Portable monocular uncooled thermal imager with direct view long range optical channel for 24 hour mission performance. GPS, Digital Magnetic Compass, eye-safe Laser Range Finder, Laser Target marker and video recording. Choice of 60mm, 75mm or 100mm lens.

Detector
640 x 480 17' LW

Thermal Imager FOV
6.2° x 3.8°

Optical Channel FOV
4.7° x 3.1°

Batteries
6 x AA or external power

Operating time
8 hours

Weight
3kg

TiCAM 1000B
Target Acquisition and Location

Bi-ocular medium range uncooled thermal imager with superior night capability. GPS, Digital Magnetic Compass, eye-safe Laser Range Finder, Laser Target marker and video recording.

Detector
640 x 480 17’ LW

Thermal Imager FOV
8.3° x 6.2° (standard 75mm lens)

Daylight CCD
1280 x 960 pixel (FOV 5.6° x 4.5°)

Batteries
8 x AA or external power

Operating time
8 hours

Weight
<2kg

TiCAM 1000C
Target Acquisition and Location

Bi-ocular medium range uncooled thermal imager with electronic daylight and night capability. High resolution Colour CCD, GPS, Digital Magnetic Compass, eye-safe Laser Range Finder, Laser Target marker and video recording.

Detector
640 x 480 17’ LW

Thermal Imager FOV
8.3° x 6.2° (standard 75mm lens)

Batteries
8 x AA or external power

Operating time
8 hours

Weight
<2kg

Tripod with Goniometer

Lightweight carbon fibre non-magnetic tripod with precision calibrated goniometer. Rugged and stable platform for all terrain use.

Main image - TiCAM 1000B

Thermal Module Range Performance (Johnson Criteria)

TiCAM 1000B (60mm lens - FOV 10.4° x 7.8°)

Tank Identification
650m

Tank Recognition
1350m

Tank Detection
5000m

Man Identification
290m

Man Recognition
575m

Man Detection
2350m

TiCAM 1000B (75mm lens - FOV 8.3° x 6.2°)

Tank Identification
825m

Tank Recognition
1600m

Tank Detection
6500m

Man Identification
360m

Man Recognition
735m

Man Detection
2900m

TiCAM 1000B (100mm lens - FOV 6.2° x 4.7°)

Tank Identification
1127m

Tank Recognition
2255m

Tank Detection
9020m

Man Identification
490m

Man Recognition
980m

Man Detection
3922m

TiCAM 1000C (60mm lens - FOV 10.4° x 7.8°)

Tank Identification
650m

Tank Recognition
1350m

Tank Detection
5000m

Man Identification
290m

Man Recognition
575m

Man Detection
2350m

TiCAM 1000C (75mm lens - FOV 8.3° x 6.2°)

Tank Identification
825m

Tank Recognition
1600m

Tank Detection
6500m

Man Identification
360m

Man Recognition
735m

Man Detection
2900m

TiCAM 1000C (100mm lens - FOV 6.2° x 4.7°)

Tank Identification
1127m

Tank Recognition
2255m

Tank Detection
9020m

Man Identification
490m

Man Recognition
980m

Man Detection
3922m
FUSED NIGHT VISION

Fused night vision and thermal imaging extend operational capability in low light and urban operations to give tactical advantages and enhanced situational awareness.

The combination of intensified and thermal imaging provides greater detection and awareness than either technology independently.

ClipIR

Clip On Thermal Imager

A miniature self-contained uncooled thermal imager which clips onto a Thermoteknix NiCAM-14, NiCAM-7, NiCAM-31 and most standard PVS-14 type NVG’s to extend and provide improved operational capabilities in all dark and low light conditions. ClipIR provides enhanced situational awareness, essential for search and rescue, cave/building entry, urban and jungle missions.

- Detector: 384 x 288 25µ LW
- FOV: 40°
- Battery: 1 x AA
- Operating time: 4 hours
- Weight: <135g

ClipIR Viewer

The ClipIR Quick View Eyepiece accessory enables the ClipIR unit to be used as a miniature hand-held thermal imager.

FuseIR

Fused Night Vision Monocular

Lightweight, helmet mounted fused night vision monocular featuring 16mm intensifier tube technology combined with Thermoteknix’ shutterless thermal imaging camera.

The system can be operated in intensified mode with extended battery life or in full thermal and intensified fused modes.

- Detector: 384 x 288 17µ LW
- Thermal FOV: 31°
- Intensified FOV: 40°
- Battery: 2 x AA
- Operating time: 6 hours (Fused)
- Weight: 400g

ClipIR is not for use or sale in the USA.
Thermal Weapon Sights

Thermoteknix TiSIGHT thermal weapon sights are based on our industry leading low-power thermal core providing up to 14 hours operation on 4xAA batteries. Machined from high grade Aluminium, the housings offer long term durability combined with low weight.

TiSIGHT provides today’s soldiers with excellent range performance at enhanced stand-off distances.

TiSIGHT-DV50 is a direct view weapon sight with standard Picatinny mount for use on automatic and semi-automatic assault rifles.

TiSIGHT-DV50 utilises Thermoteknix’s shutterless technology to give silent operation without the interruption to live image display usually found in other thermal weapon sights.

Detector Options
- 384 x 288 17μm LW
- 640 x 480 17μm LW

FOV
- 6.2° x 4.7° (284) / 12.4° x 9.3° (640)

Batteries: 4 x AA

Operating time: Up to 14 hours

Weight: <1.1kg

TiSIGHT-CO50 is a clip-on shutterless thermal weapon sight which is optimised for use with an existing day sight, providing flexibility for 24 hour missions.

TiSIGHT-CO50 has built-in calibration tools to allow collimation between day and night sight systems and is also shutterless.

Detector Options
- 384 x 288 17μm LW
- 640 x 480 17μm LW

FOV
- 6.2° x 4.7° (284) / 12.4° x 9.3° (640)

Batteries: 4 x AA

Operating time: Up to 14 hours

Weight: <1.1kg
MicroCAM 3
Thermal Imaging Modules

MicroCAM™ 3 is a next generation miniature, low power thermal imaging core for cost-effective OEM applications. Shuttered and shutterless XTi™ options are available with a range of different detectors.

Low latency and excellent high shock resistance ensure smooth operation under the harshest of operating conditions. MicroCAM 3 is the first choice for integrators and developers.

Features:
- Detector: 384 x 288 17µm LW, 640 x 480 17µm LW
- Amorphous Silicon
- Operation: Uncooled (TEC-less)
- Spectral response: LW Broadband
- Sensitivity: ≤0.55/0.75W
- Power consumption: <0.55/0.75W
- Outputs: Analog/Digital
- Zoom: x2, x4 incremental/Smooth
- Operating temp.: -40°C to +70°C
- Size: 36.0Ø x 24.0mm
- Weight: 32g

MicroCAM irGO
Rugged Thermal Camera

The irGO is a shock resistant, waterproof miniature thermal imaging camera ideal for integration into OEM applications such as UAV’s, Unattended Ground Sensors and Helmet-Mounted applications.

A waterproof connector provides power, communication and video connections.

Features:
- Detector: 384 x 288 17µm LW, 640 x 480 17µm LW
- Amorphous Silicon
- Sensitivity: <50mK or <40mK (optional)
- Power consumption: <0.55/0.75W
- Operating temp.: -40°C to +70°C
- Size: 40Ø x 67mm
- Weight: 63g

MicroCAM Integrator
OEM Thermal Camera Kit

The MicroCAM 3 Thermal Camera Kit is based on a MicroCAM 3 core along with a smart application board and OLED display ready for integration into your housing for virtually any OEM thermal imaging project or application.

Thermoteknix provide a range of application specific hardware and software solutions for OEMs and integrators.

Features:
- Detector: 384 x 288 17µm LW, 640 x 480 17µm LW
- Amorphous Silicon
- Sensitivity: <50mK or <40mK (optional)
- Power consumption: <0.55/0.75W
- Operating temp.: -40°C to +70°C
- Weight: 60g