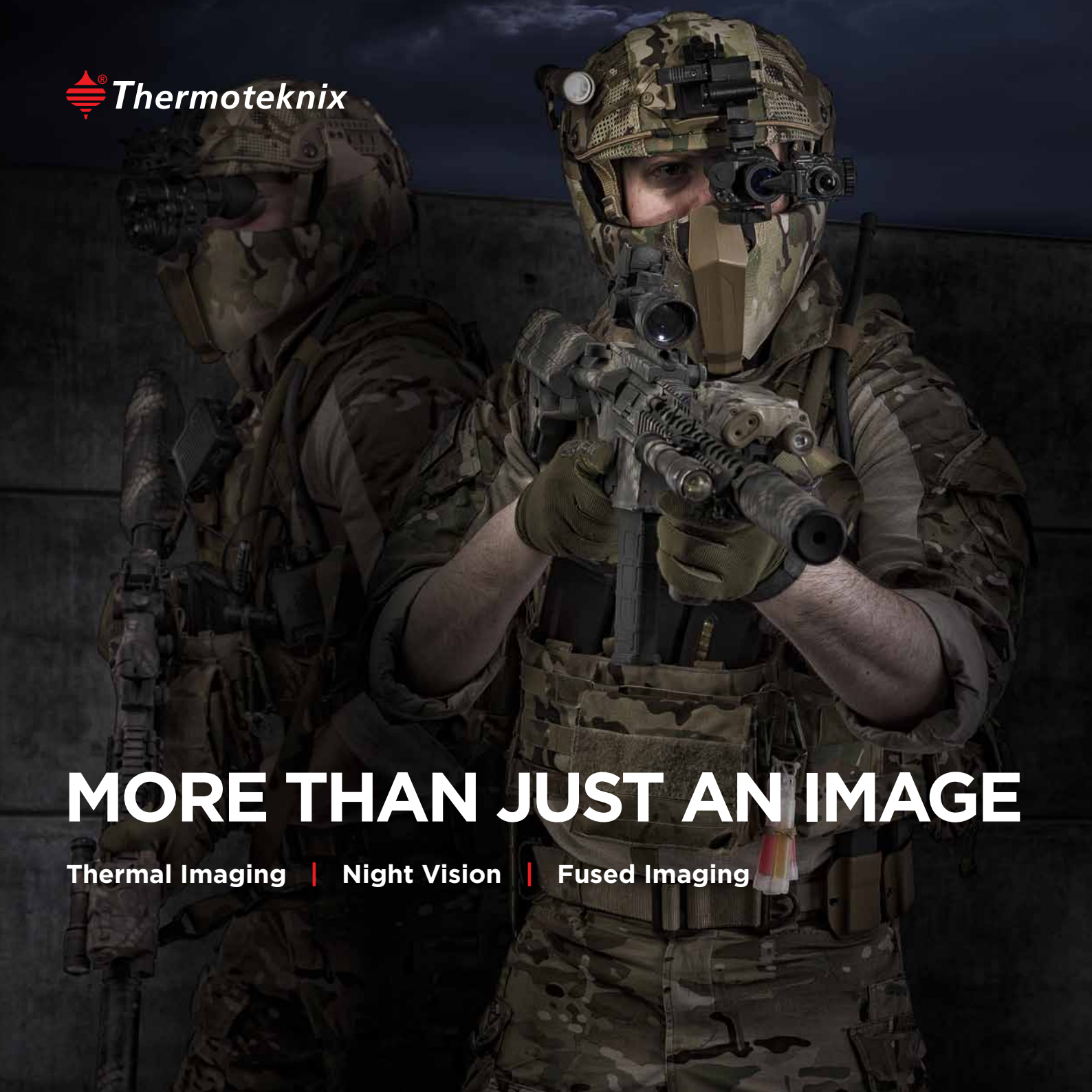
Thermoteknix
MORE THAN JUST AN IMAGE
Thermal Imaging | Night Vision | Fused Imaging

Main image - (Hand-held) TiCAM 1000B Target Location System, (Helmet mounted) NiCAM-14 and ClipIR Clip On Thermal Imager

MORE THAN JUST AN IMAGE

Thermoteknix Systems Ltd is one of Britain's most innovative thermal imaging companies with world leading technologies pioneered since its inception in 1982.

Our products are used and trusted by Law Enforcement, Defence and Special Forces world-wide.

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

Certificate Number 10088
ISO 9001

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 security, surveillance and defence environments.

Thermoteknix manufacture OEM modules for integration into a wide range of 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 and FuseIR are not for sale or use in USA.

Main image - NiCAM-14 Monocular NVG and ClipIR Clip On Thermal Imager (left)
NiCAM-31 Binocular NVG (right)

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NiCAM™

NIGHT VISION IMAGE INTENSIFIERS

All NiCAM™ Image Intensifier devices enhance 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.

ClipIR®

All NiCAM™ Night Vision Devices are compatible with Thermoteknix ClipIR® products to deliver fused thermal and night vision. This increases situational awareness beyond the capability of Night Vision Goggles alone to give the night warrior tactical advantage in all lighting conditions or complete darkness.

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Main image - Helmet mounted NiCAM-31 NVG with ClipIR Clip On Thermal Imager

NiCAM-14
Night Vision Monocular

Miniature lightweight Night Vision Monocular with a choice of intensifier tubes to suit all requirements.

NiCAM-14 can be helmet mounted, hand-held or weapon mounted. An integrated **ClipIR** mounting bracket provides instant attachment.

Intensifier Tube	**18mm Gen 2+, Gen 3 or Gen 4** (subject to requirements)
FOV	**40°**
Magnification	**x1**
Batteries	**1 x AA**
Operating Time	**45 hours**
Weight	**276g**

NiCAM-14 Night Vision Monocular

NiCAM-7
Night Vision Biocular

A lightweight biocular Night Vision Goggle for helmet mounted or hand-held operation.

A custom designed optional bracket is available to attach **ClipIR** to this device for Fused Thermal and Night Vision.

Intensifier Tube	**18mm Gen 2+ or Gen 3** (subject to requirements)
FOV	**40°**
Magnification	**x1** (optional x3 and x5 lenses)
Batteries	**2 x AA**
Operating Time	**50 hours**
Weight	**520g**

NiCAM-7 Night Vision Biocular

NiCAM-31
Night Vision Binocular

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

A custom designed optional bracket is available to attach **ClipIR** to this device for Fused Thermal and Night Vision.

Intensifier Tube	**18mm Gen 2+, Gen 3 or Gen 4** (subject to requirements)
FOV	**40°**
Magnification	**x1**
Batteries	**1 x AA**
Operating Time	**60 hours**
Weight	**630g**

NiCAM-31 Night Vision Binocular

ClipIR®

FUSED THERMAL & NIGHT VISION

Fused Night Vision and Thermal Imaging enhance operational capability in low light, no light and urban environments for tactical advantage and improved situational awareness.

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

ClipIR Viewer

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

ClipIR is not for use or sale in the USA

Thermoteknix

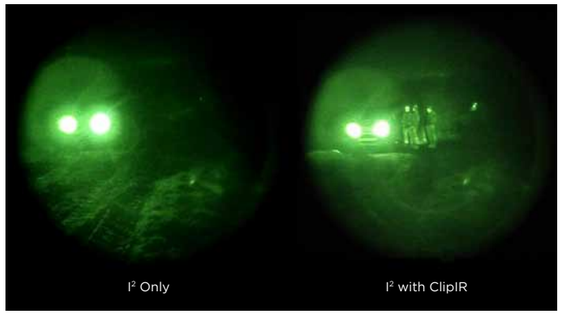
Main image - NiCAM-31 Night Vision Binocular with ClipIR Clip On Thermal Imager

ClipIR
Clip On Thermal Imager

A miniature self-contained uncooled thermal imager attaches to a Thermoteknix NiCAM-14, NiCAM-7, NiCAM-31 and most standard monocular, biocular and binocular 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 or forest missions.

Detector	**384 x 288 25µ LW**
FOV	**40°**
Man Detection	**340m**
Battery	**1 x AA**
Operating time	**4 hours**
Weight	**135g**



ClipIR XD
Clip on Thermal Imager

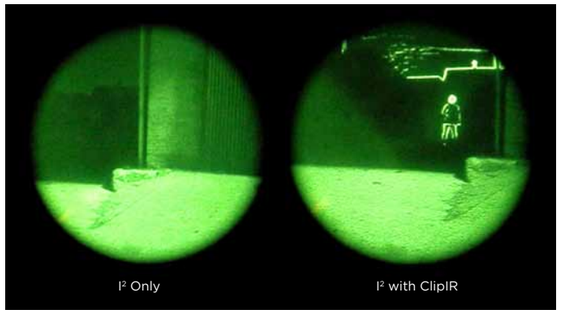
ClipIR XD-E

ClipIR XD-B

ClipIR XD has extended range performance and includes built-in Digital Magnetic Compass (DMC) and external video input. DMC provides azimuth and elevation displayed via the NVG. External video input provides mission critical information from Augmented Reality (AR) or other sources.

Two models are available -
ClipIR XD-B: A self contained unit powered by 1x integral AA battery or external helmet power.
ClipIR XD-E: A sub-compact batteryless device powered only by external source, eg helmet power system.

Detector	**640 x 480 17µ LW**
FOV	**40°**
Video Input	**Composite**
Compass	**Internal DMC**
Man Detection	**580m**
Power	**XD-E: External Power, XD-B: 1 xAA Battery or External Power**
Operating time	**3 hours (AA Battery)**
Weight	**<150g (XD-B including battery)**



FuseIR® & CoVid®

FUSION DEVICES

Fused Night Vision and Thermal Imaging enhance operational capability in low light and urban operations to give tactical advantages and improved situational awareness.

The combination of intensified and thermal imaging provide greater performance than either technology offers independently.

Thermoteknix Fusion Technology

Thermoteknix fusion technology can be used with either real-time low-latency images as with FuseIR or with external symbology generated by third-party Augmented Reality (AR) Systems such as ARC-4 from ARA. The lightweight CoVid Head-Up Display (HUD) allows a fluid AR experience under all lighting conditions.

FuseIR is not for use or sale in the USA

Thermoteknix

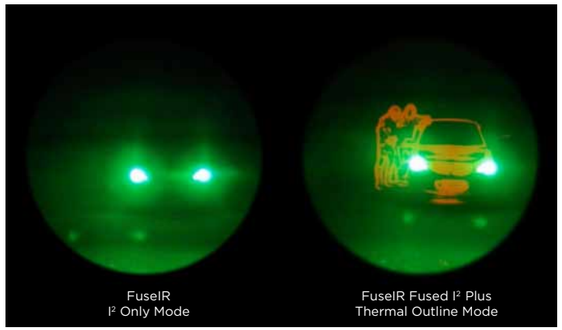
Main image - FuseIR Fused Night Vision Monocular

FuseIR
Fused Night Vision Monocular

A lightweight, integral helmet mounted fused thermal and night vision monocular goggle featuring 16mm intensifier tube technology combined with Thermoteknix' silent, shutterless thermal imaging camera.

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

Detector	**384 x 288 17µ LW 50Hz**
Thermal FOV	**31°**
Intensified FOV	**40°**
Man Detection (Thermal)	**340m**
Battery	**2 x AA**
Operating time	**6 hours (Fused)**
Weight	**400g**



FuseIR
I² Only Mode

FuseIR Fused I² Plus
Thermal Outline Mode

CoVid
Covert Video Head-Up Display (HUD)

CoVid is a covert, miniature video HUD which injects tactical data into Night Vision Goggles for mission or combat operations in all low light or no light situations.

CoVid's proprietary Thermoteknix optical system injects live or mission programmed situational information from Augmented Reality (AR) or Android Tactical Assault Kit (ATAK) devices into NVGs to identify friendly force or target information without loss of situational awareness or third party detection.

Compatible with binocular/mono NVGs, CoVid weighs less than 50g and takes power from helmet or body worn supply.

Display	Monochrome OLED
Frame Rate	50/60hz
FOV	40˚
Power Nominal	5V DC
Video Type	Composite Interlaced Analogue Video
Weight	<50g (excluding bracket)
Bracket:	Subject to NVG

CoVid-Enabled Night Vision AR

TiCAM®

HELMET MOUNTED & HAND-HELD THERMAL IMAGERS

The TiCAM® range of helmet mounted and hand-held thermal Imagers includes both monocular and bi-ocular devices for military and security applications. These include 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.

Main Image - TiCAM 600+ Hand-held Thermal Imager

Thermoteknix

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.

Detector	**90 : 384 x 288 17µ LW**
	90+ : 640 x 480 17µ LW
FOV	**40° Standard Lens**
Man Detection	**90: 351m**
	90+: 575m
Batteries	**1 x AA**
Operating time	**4 hours**
Weight	**208g**

TiCAM 90:
Helmet Mounted

TiCAM 600
Thermal Imager

High performance medium range monocular multifunction hand-held thermal imaging camera with GPS, Digital Magnetic Compass, Laser Target marker, Video Recording and Remote Operation.

Detector	**600 : 384 x 288 17µ LW**
	600+ : 640 x 480 17µ LW
FOV	**5.2° (600) / 10.4° (600+)**
Man Detection	**600: 2353m**
	600+: 2353m
Batteries	**4 x AA**
Operating time	**6 hours**
Weight	**630g**

TiCAM 600+:
Thermal Image

TiCAM 750
Thermal Imager

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

Detector	**640 x 480 17µ LW**
Lens	**75mm *f*/1.0**
FOV	**8.3°**
Man Detection	**2941m**
Batteries	**4 x AA**
Operating time	**8 hours**
Weight	**<2kg**

TiCAM 750:
Thermal Image

TiCAM®

TARGET LOCATION SYSTEMS

The TiCAM target location systems are man portable versatile target acquisition and observation systems for day and night time operation.

They combine high resolution uncooled thermal imager with GPS, eye safe Laser Range Finder, Digital Magnetic Compass, Target marker and video recording. Connections to C4I systems are available for the dismounted soldier, border security, special forces and forward observation in a range of configurations.

ConnectIR

ConnectIR is an Android mobile App that enables direct communication of images and data between TiCAM 1000B/C operators and other users on connected mobile phones or tablets. Making use of standard Android phone apps such as email or Whatsapp enables target images and location information to be sent directly from your OP to senior commanders.

Thermoteknix

TiCAM 1000A
Geo-Location and Surveillance

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

Choice of 60mm, 75mm or 100mm lens.

Detector	640 x 480 17µ LW	
Thermal Imager FOV	60mm lens:	10.4° x 7.8°
	75mm lens:	8.3° x 6.2°
	100mm lens:	6.2° x 4.7°
Man Detection	60mm lens:	2350m
	75mm lens:	2900m
	100mm lens:	3922m
Batteries	8 x AA or external power	
Operating time	8 hours	
Weight	<2kg	

TiCAM 1000A: Thermal Image

TiCAM 1000B
Target Acquisition and Location

Bi-ocular medium range uncooled target locator with superior night capability. 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 17µ LW	
Thermal Imager FOV	60mm lens:	10.4° x 7.8°
	75mm lens:	8.3° x 6.2°
	100mm lens:	6.2° x 4.7°
Man Detection	60mm lens:	2350m
	75mm lens:	2900m
	100mm lens:	3922m
Batteries	8 x AA or external power	
Operating time	8 hours	
Weight	<2kg	

TiCAM 1000B: Thermal Target Acquisition

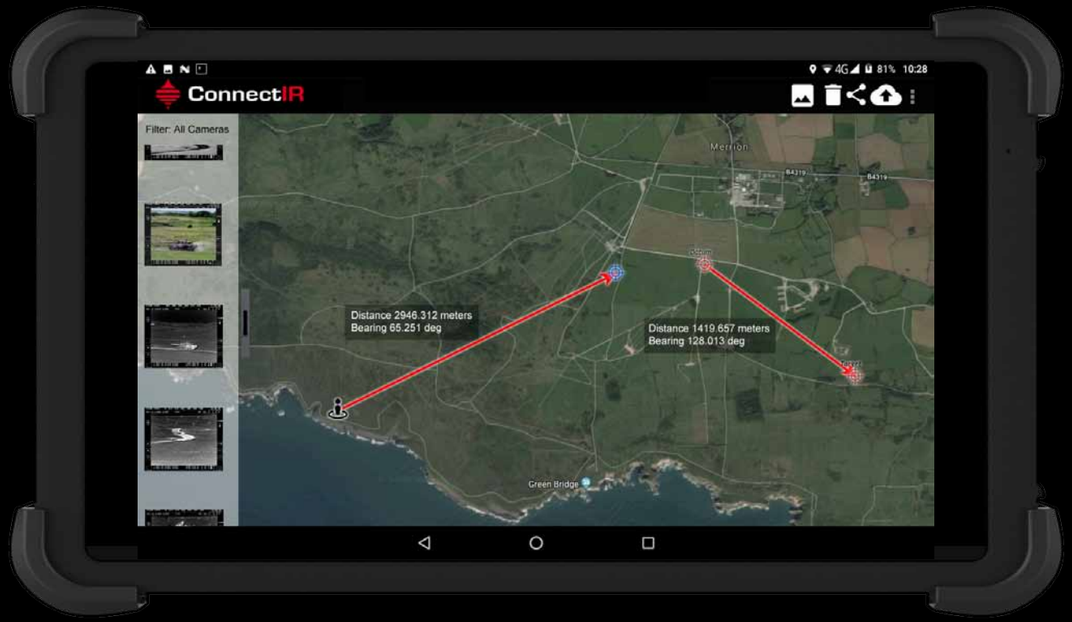
TiCAM 1000C
Target Acquisition and Location

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. Optional Triangulation modes with Fall of Shot capabilities.

Detector	640 x 480 17µ LW	
Thermal Imager FOV	60mm lens:	10.4° x 7.8°
	75mm lens:	8.3° x 6.2°
	100mm lens:	6.2° x 4.7°
Daylight CCD	1280x960 pixel (FOV 5.6° x 4.5°)	
Man Detection	60mm lens:	2350m
	75mm lens:	2900m
	100mm lens:	3922m
Batteries	8 x AA or external power	
Operating time	8 hours	
Weight	<2kg	

TiCAM 1000C: Visible Target Acquisition

ConnectIR



ConnectIR

ConnectIR is a Thermoteknix Android Application that networks images and data between TiCAM 1000 cameras and other devices including phones, tablets and computers.

ConnectIR is indispensable for Surveillance, Homeland Security, Counter Terror, Military and Police forces, providing near real-time sharing of thermal and visible images with Operator and Target location data using commercial or military networks.

The ability to display simultaneous information from multiple cameras enables shared situational awareness.

ConnectIR

The Thermoteknix ConnectIR app can communicate via Wi-Fi, Cellular or Bluetooth networks including MANET battlefield data radios. ConnectIR Professional users can connect multiple cameras to a secure cloud-based server where an unlimited number of authorised users can view the data.

Thermoteknix

ConnectIR Standard

Single image and data sharing

ConnectIR Standard can be installed on the user's own Android phone or tablet and connects to the TiCAM 1000B/C via Thermoteknix proprietary USB cable. Images and target data including co-ordinates and distance can be transferred directly to ConnectIR from the TiCAM 1000B/C.

Once transferred to the Android device the image, range and map location can be shared via currently installed Apps such as WhatsApp or email using Wi-Fi or Cellular networks.

Operating system:	**Android**
Image and Data sharing	**Installed Apps/email**
Number of images on device:	**One**
Map display:	**Normal (Vector)**
Number of users:	**Subject to licence**

Integration with TiCAM 1000C

ConnectIR Professional

Multiple image sharing with advanced features

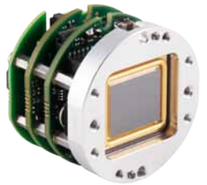
ConnectIR Professional includes multiple downloaded images available through on-screen gallery for real-time or scheduled display on remote devices via Wi-Fi, Cellular or Bluetooth networks. Ideal for in-mission tracking. Visible or Thermal images and locations can be designated as reference datum or target points for built-in triangulation to determine actual and relative distances between them and for pre-mission planning or fall of shot determination. Remote access to the secure Cloud storage provides administration permissions for groups and individual user access.

Multiple devices can connect to the Cloud storage to view and download images and location data in real time, filtered for ease by selection criteria. Reference and targets can be displayed on map views for co-ordinated missions.

Operating system:	**Android**
Image and Data sharing:	**Live/scheduled via Cloud or Installed Apps/email**
Number of images on device:	**Unlimited (subject to capacity)**
Number of images on cloud:	**Unlimited (subject to storage plan)**
Map Display:	**Normal, Satellite, Terrain, Hybrid**
Number of cameras:	**Unlimited**
Number of users:	**Subject to licence**

Image Data Sharing

MicroCAM 3
Thermal Imaging Modules



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

Low latency, industry leading low power consumption and excellent high shock resistance ensure smooth operation under the harshest of mission 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** **≤8µm to ≥14 µm**
Sensitivity	**(*f*/1.0 no lens)** **<50mK or <40mK** (optional)
Power consumption	**<0.55W / <0.75W**
Outputs	**Analog/Digital**
Zoom	**x2, x4 incremental/Smooth**
Operating temp.	**-40°C to +70°C**
Size	**36.0Ø x 24.5mm** **(1.427 Ø x 0.96 inch)**
Weight	**32g**

MicroCAM irGO
Rugged Thermal Camera

Thermoteknix irGO is a shock resistant, waterproof miniature, “power in, picture out” 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 interface.

Features:	
Detector	**384 x 288 17µm LW** **640 x 480 17µm LW** **Amorphous Silicon**
Sensitivity	**(*f*/1.0 no lens)** **<50mK or <40mK** (optional)
Power consumption	**<0.55W/ <0.75W**
Operating temp.	**-40°C to +70°C**
Size	**40Ø x 67mm** **(1.57Ø x 2.64 inch)**
Weight	**132g**

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	**(*f*/1.0 no lens)** **<50mK or <40mK** (optional)
Power consumption	**<0.55W / <0.75W**
Operating temp.	**-40°C to +70°C**
Weight	**<60g**

Thermoteknix

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ISO 9001

Performance range figures (where stated) are for guidance only.

Thermoteknix pursue a program of continuous product development and enhancement, all specifications in this document are subject to change and not all features are present on all models.
MicroCAM thermal imaging modules are designed and manufactured in the UK.
Thermoteknix MicroCAM™ based products are not subject to US ITAR control but may require UK export licence depending on the end-user country and specification.
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