

VisIR[®] 640

INFRARED VISION

Thermal Innovation at Work



Why VisIR 640?

VisIR 640 has everything you need for all your professional thermography needs. Crystal clear images from a highly sensitive 640 x 480 uncooled infrared sensor, precise accurate temperature measurements and the most powerful range of easy to use camera tools and unique application software options.

With a rugged durable housing, articulated central optics pod for ergonomic, balanced, safe operation and high contrast DayBright™ touch screen, VisIR 640 provides high definition thermal and visual image clarity in any lighting conditions.

The VisIR **640-P** with high resolution detector and 1.3M pixel colour camera, integral LED illuminator/flash, laser pointer and voice recording, make Predictive Maintenance surveys more efficient and cost-effective. The Condition RED® asset database and integrated analysis, storage, trending and reporting make light work of repeated inspections and automated reporting.

The VisIR **640-S** model with uncooled Amorphous Silicon micro-bolometer detector, variable integration imaging gives the highest sensitivities for the demanding requirements of Scientific and R&D applications. High speed data and image capture direct to compact flash memory can be triggered by a wide variety of events, thermal, temporal and external connectivity to other equipment. Thermoteknix' leading edge ThermoGRAM® PC software connects directly to VisIR 640-S for the most sophisticated and problem-solving scientific needs.

Thermal Imaging and Predictive Maintenance

Predictive Maintenance, or Condition Monitoring, keeps a check on the health of assets through regular inspection. Effective Predictive Maintenance enables repair to be performed when it is most cost-effective, before assets lose optimum performance and when downtime is minimised.

VisIR 640 and Condition RED® fully integrate your thermal camera and asset database to create an automated data store, image analysis, route planning and report generation system.



Thermal, visible, laser & flash/illuminator



Re-chargeable high capacity Li-ion battery



High contrast 5" DayBrite Touch screen



DC operation and in-camera charging



Clip-on sun shield for clear viewing in bright conditions



Direct connection to PC with wide choice of software

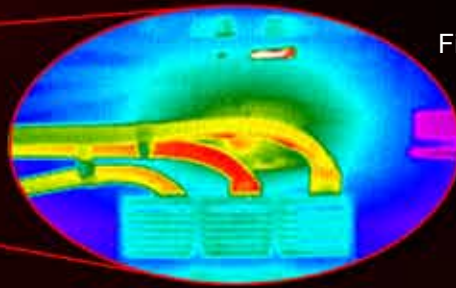
Powered by Thermoteknix

The 640 difference

VisIR 640's superior thermal resolution gives sharp, high definition images, making fault diagnosis fast and reliable. With 4 times the resolution of 320 x 240 infrared cameras and 16 times the resolution of 160 x 120 cameras, the VisIR 640 allows you to cover the same tasks in a fraction of the time.



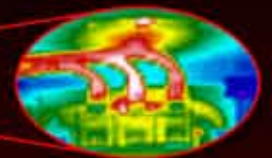
VisIR 640 x 480 Image



Fine details with
VisIR 640



160 x 120 Image



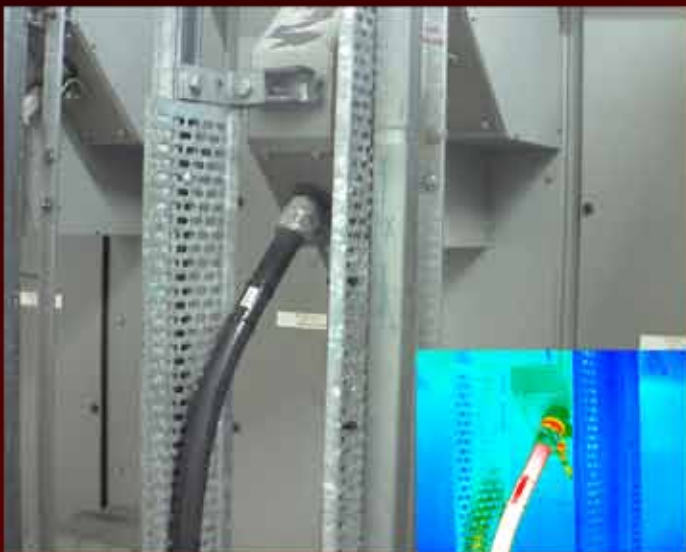
Lower Resolution
160 x 120 image

Greater Detail

Faults in a wide variety of applications can easily be detected thanks to the high resolution imagery from VisIR 640. The sharp visual images allow identification of secondary information such as mechanical damage or identification marks.

Increased Safety

Another advantage of higher resolution is the ability to work further away from potentially hazardous plant and equipment such as high voltage systems.



Motors • Bearings • Low Voltage Electrical • Building Inspection • Refractory Condition
Process Analysis • High Voltage Inspection • Veterinary • Scientific • Petrochemical



- 1 High performance Radiometric Germanium 35 mm lens making full use of the detector performance
- 2 1.3 M pixel visible camera for photo quality colour images
- 3 Laser pointer
- 4 Powerful LED with flash or constant illumination modes for high quality images in all lighting conditions
- 5 One-handed operation and central articulation for ergonomic inspection at head and floor levels
- 6 Rugged Polycarbonate ABS Case
- 7 DC power: in-camera battery charging or continuous mains operation

Connections

- 8 Compact flash memory card
- 9 USB image download
- 10 RS 232 Connector
- 11 Ethernet 100 Base T connection
- 12 Analogue video output (NTSC / PAL)
- 13 High speed USB - Real Time Radiometric Video Output (ThermaGRAM[®])



Ergonomic and Safe One-Handed Operation



Multi-position central articulation for total flexibility



Ergonomics

The articulated lens/display of the VisIR 640 allows the camera to be used all day without stress to neck or wrist, whether imaging building roofs or floor level ports.

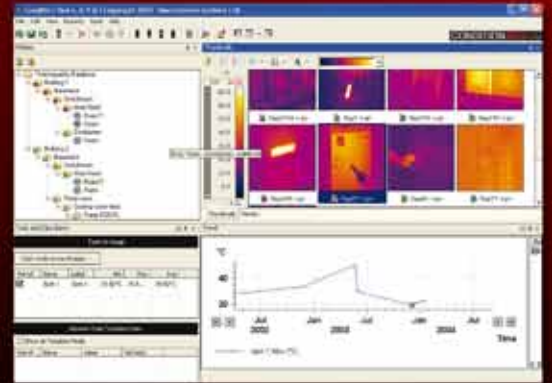
TAKE YOUR DATABASE WITH YOU

THERMALIGN

VisIR 640's unique ThermAlign™ system saves operators time during inspections and gives image to image registration by overlaying a reference onto the live thermal image during repeat inspections.

This ensures consistent, repeatable inspections, even when performed by different thermographers and ensures that trending and comparisons are accurate and meaningful everytime. ThermAlign™ automatically sets the same tool and image parameters used during the previous inspections.

VisIR 640 works in conjunction with Thermoteknix' PC based Condition RED® software to produce a powerful asset based database, which travels with you to the job.



- 14 User button to configure preferred menu function
- 15 Super Day Bright™ high resolution LCD touch screen, for precise image presentation
- 16 Built-in microphone and speaker for voice annotation of images and fault conditions
- 17 Joystick for single handed operation of all camera menu and analysis functions
- 18 Unique ThermAlign™ real-time image alignment technology built into all Condition RED® models
- 19 Sunshield attachment lugs
- 20 Neck strap attachment lugs

Software options are available to suit scientific and maintenance applications. Thermoteknix software packages are compatible with a wide range of different vendors' image file formats.

TherMonitor[®] **Reporter**

A user friendly package for analysing static images and generating thermographic reports in Microsoft Word format. Benefits include:

- Simple menu driven analysis tools
- Microsoft Word[®] based reports, including spell-check
- Customisable template outlines for rapid report generation
- In-place image analysis within Microsoft Word[®] document

Condition RED[®] asset based thermography

Thermography solution which combines assets with images that are automatically recorded in the database. Condition RED[®] generates more powerful reports, automatically files images according to their location, type and date - no more searching for meaningless alpha numeric file identifiers!

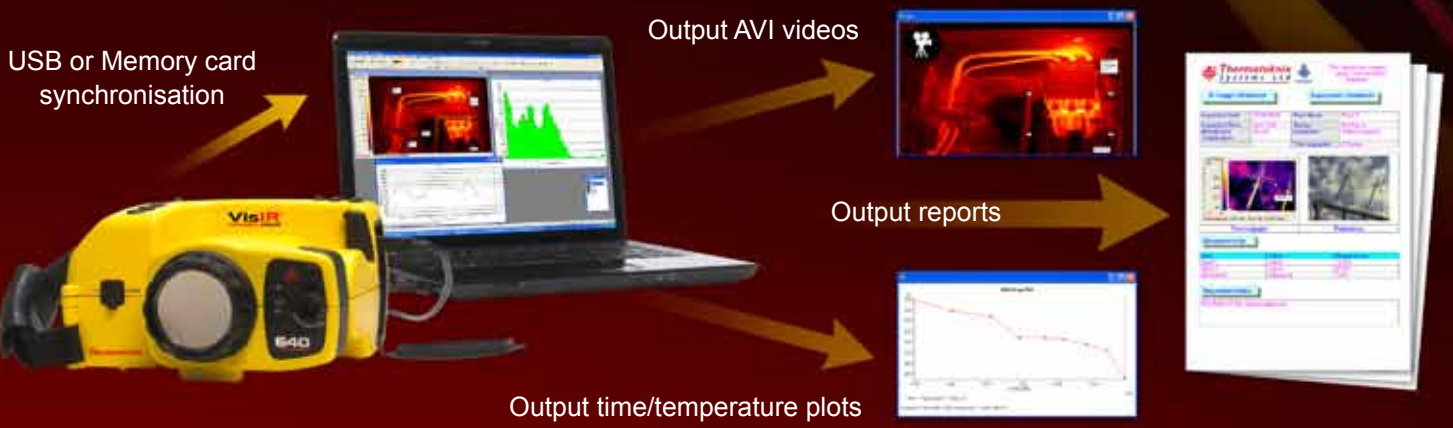
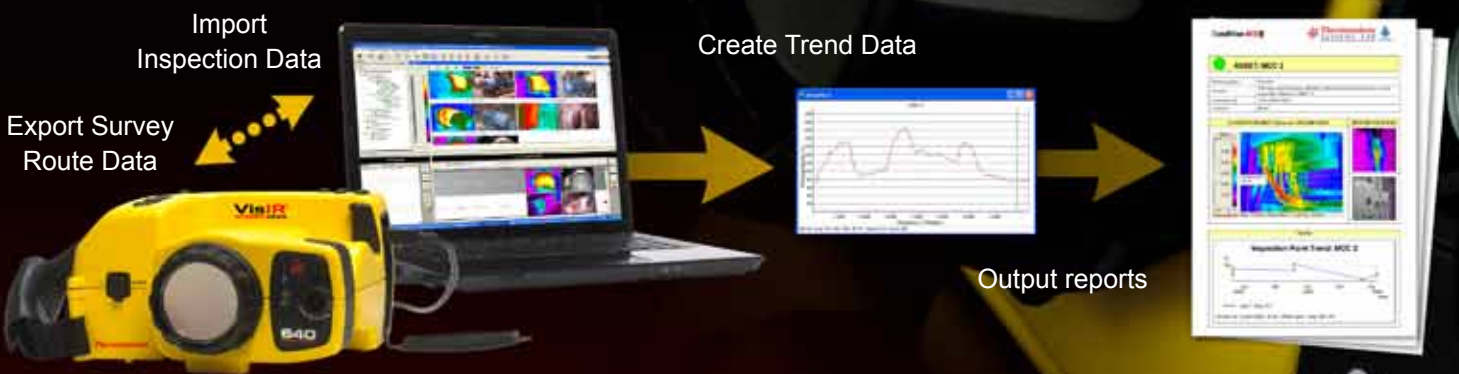
- Image data automatically associated with assets
- PC-based route design
- Full compatibility with a wide range of vendors' formats
- Auto-synchronisation of image and root data with camera via USB or memory card
- In-field route guidance and reference data
- Extensive standard and customisable reports to suite your in-house corporate style and reporting needs
- Repeat inspection image alignment and auto tool copy to new images - 'ThermAlign[™]'

ThermaGRAM[®]

Software for real time applications where thermal events are recorded and analysed. ThermaGRAM[®] can work with live data via the optional USB interface and post-processes *burst mode* files saved to the on-board CF memory card.

- Real-time full resolution data transferred to PC via USB connection
- Dynamic tool analysis + data display
- Real-time recording to PC hard disk
- AVI output files include tool data

FEATURES



VisIR® 640

INFRARED VISION



| | VisIR® 640-P (Predictive Maintenance) | VisIR® 640-S (Scientific - R&D) |
|--|--|------------------------------------|
| Camera Parameters | | |
| 640 x 480, 25 µm pitch (307,200 pixels) | ✓ | ✓ |
| Uncooled Focal Plane Array (FPA) micro-bolometer | ✓ | ✓ |
| Thermal frame rate | 60Hz | 60Hz Selectable Integration |
| Spectral Range 7.5 to 13 µm | ✓ | ✓ |
| Thermal sensitivity | 50mK | <40mK |
| Accuracy ± 2 °C (or ± 2 % of reading) | ✓ | ✓ |
| Field of View 25.8° x 19.5° (0.71 mRad) | ✓ | ✓ |
| Temperature range -20 to 500 °C (opt. 0 to 1,500 °C) | ✓ | ✓ |
| Lens - 35 mm #1.0 (minimum focus distance 250 mm) | ✓ | ✓ |
| Visible Camera 1.3 M pixel | ✓ | ✓ |
| Illuminator - LED (Flash or continuous modes) | ✓ | ✓ |
| Internal Memory 250 MB | ✓ | ✓ |
| CF Memory slot | Standard | High Speed |
| Laser pointer Class 2 | ✓ | ✓ |
| Battery - Lithium-ion rechargeable (5.5 Ah) | ✓ | ✓ |
| Camera Functions | | |
| Tool emissivity/background & materials list | ✓ | ✓ |
| Spots - 10 | ✓ | ✓ |
| Line profiles - 2 | ✓ | ✓ |
| Areas (rectangle, circle, ellipse) - 3 (Max, Min, Avg) | ✓ | ✓ |
| Difference - Between any two tool values | ✓ | ✓ |
| Palettes - 10 | ✓ | ✓ |
| Isotherms - 3 (Above, below, interval) | ✓ | ✓ |
| Humidity/Distance Compensation | ✓ | ✓ |
| Alarms - Auto, audible/visible | ✓ | ✓ |
| Environmental | | |
| Weight - 1.8 Kg (including battery) | ✓ | ✓ |
| Protection IP54 | ✓ | ✓ |
| Size 190 x 210 x 110 mm (d, w, h) | ✓ | ✓ |
| Battery Life > 2 Hours | ✓ | ✓ |
| Humidity 10 % to 95 % Non-condensing | ✓ | ✓ |
| Operating Temperature -20 to + 50 °C | ✓ | ✓ |
| Tripod Mount 1/4" - 20 | ✓ | ✓ |
| Camera Functions | | |
| Display - 5 inch diagonal 800 x 480 touch screen | ✓ | ✓ |
| Contrast Ratio 500:1 | ✓ | ✓ |
| Burst storage 90 seconds | x | ✓ |
| Voice annotation 30 seconds | ✓ | ✓ |
| Live Zoom & Pan (digital) continuous | to x8 | to x16 |
| Voice playback with built-in speaker | ✓ | ✓ |
| User button configurable to preferred menu option | ✓ | ✓ |
| Image Gallery with IR and Visual images | ✓ | ✓ |
| Displays - Thermal/Visible, Picture-In-Picture, Fused | ✓ | ✓ |
| Touch Screen QWERTY Keyboard | ✓ | ✓ |
| Real Time Integration (x2, x4) | x | ✓ |
| Battery charging - In-camera or external charger | ✓ | ✓ |
| Camera Connectivity | | |
| Digital Burst / Record Input | x | ✓ |
| USB 2 Internal image download | ✓ | ✓ |
| USB 2 Real-time Radiometric thermal video output | x | ✓ |
| Composite Video Output NTSC | ✓ | ✓ |
| Ethernet 100 Base T | ✓ | ✓ |

Accessories

External battery charger - Spare Batteries - External power supply (in-camera charging or continuous operation) - Sun shield - Touch screen stylus - Neck-strap



Web: www.thermoteknix.com Email: sales@thermoteknix.com

UK Head Office
Teknix House, 2 Pembroke Avenue, Waterbeach
Cambridge, CB25 9QR United Kingdom
Tel: +44 (0)1223 204000 Fax: +44 (0)1223 204010

USA Sales Office
14457 NE 16th Place Bellevue Washington 98007 USA
Tel: +1 425 746 6080 Fax: +1 425 746 4536

All trademarks acknowledged. VisIR, Condition RED, TherMonitor, ThermoAlign and ThermoGRAM are registered trademarks of Thermoteknix Systems Ltd. Thermoteknix Systems Ltd pursues a policy of ongoing product development and specifications are subject to change.

TERMING termografija d.o.o.
www.terming.si, info@terming.si

more than just an image...