

ThermoScope® 3



Precision IR NDT for In-Service Inspection

Portability for the field—that's the driving force behind ThermoScope® 3. Combining flash heating, image acquisition and analysis this unit allows a single user to perform the inspection with ease and simplicity. ThermoScope® 3 uses patented MOSAIQ® software with Thermographic Signal Reconstruction (TSR®) processing to provide an unprecedented degree of clarity, penetration depth and resolution for applications in the field.

The ThermoScope® 3 Advantage

ThermoScope® 3 puts the entire thermographic toolkit into a portable form factor, enabling you to perform inspections where the part is. The inspection head is equipped with a touch screen user interface control and display that is designed to be intuitive and practical for both experienced and novice inspectors.

- Fast / real time inspection
- Lightweight
- Single operator / easy to use
- Wide area
- Non-contact
- Reliable & repeatable
- Patented TSR processing
- Single side access
- A complete NDT solution



Features

ThermoScope® 3 combines flash heating, image acquisition and analysis in a truly portable system. ThermoScope® 3 offers the following essential features:

"The TWI TSR processing approach provides much greater defect detail and allows us to detect deeper flaws than ever before."

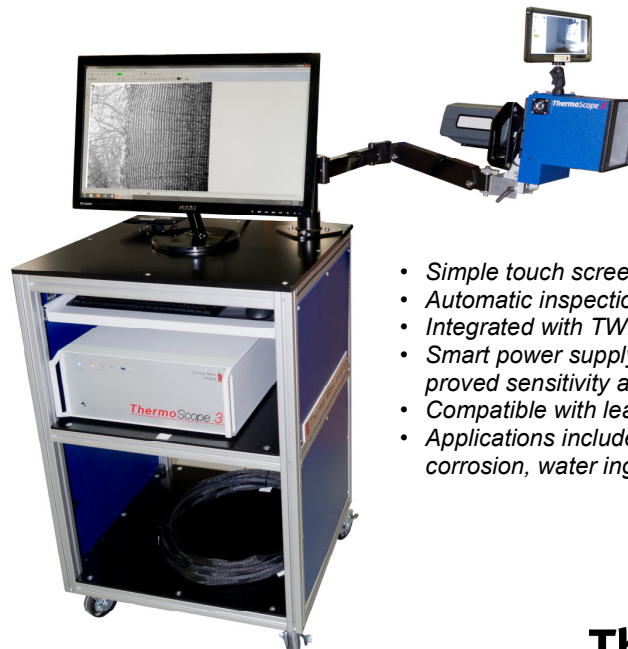
Jeff T.

Aerospace NDT Engineer

"The advancement of signal processing has been key to bringing pulsed thermographics to the forefront of inspection technologies."

Mike A.

Senior Test Engineer



- Simple touch screen user interface
- Automatic inspection routines for on the spot decisions
- Integrated with TWI's MOSAIQ® software
- Smart power supply / precision flash controller for improved sensitivity and measurement
- Compatible with leading IR cameras
- Applications include: delamination, FOD, adhesion, corrosion, water ingress, and impact damage

Thermal Wave Imaging 

ThermoScope® 3

ThermoScope® 3 System Specification

Input Power: 120 / 240 VAC, 50/60Hz, 20A (worldwide compatibility)

Variable Flash Power Output: 2KJ (nominal max.) adjustable in 8 steps.

Precise Flash Control: min. 2.0ms duration (adjustable in 0.1ms increments - requires optional Precision Flash Controller).

Nominal Shot Size: 7.5 x 6.0".

Nominal Capture Duration: 5 sec. per shot.

Integrated Illumination Head: 2 xenon flash lamps in optimized flash head, camera mounting bracket, 7" LCD touch screen user interface control and display – 18" x 8" x 6.5".

Data Acquisition & Analysis System: Integrated into intelligent system controller unit. Multi-core, multi-threading processor implementation, 32GB RAM, 1TB SSD and 250GB SSD, GPU, Gigabit Ethernet, USB 3.0, Windows 10 Pro.

High-Speed Digital Data Capture: CoaXPress, Camera Link, GigE or USB.

Integrated Intelligent System Control: multiple trigger I/O capability, synchronized capture, filtered and protected power distribution for all connected components (UL)

Plug-n-Play compatibility: with IR cameras supplied by major manufacturers – FLIR Systems, ICI, Telops, Xenics, Thermal Expert

Multi-Format / Wavelength FPA Support: 1280x1024, 1024x1024, 640x512, 640x480, 320x256, 320x240; InSb, MCT, QWIP, Microbolometer, PtSi, etc.

Integrated TSR® Processing: for advanced data analysis and evaluation capability - MOSAIQ®, Virtuoso® and VoyageIR® software.

Quantitative Measurement: depth/size of feature, coating/material thickness, thermal properties, Temperature vs. Time profiling, etc.

Active X Automation Interface: for customizable user front end applications, and automated report generation.

Smart Configuration: Portable; Fully Automated (optimized for rapid, wide-area inspection).

Umbilical Length: 10m standard (max. 15m).

Open Architecture Design: for simple, low-cost upgradeability.