

EchoTherm®



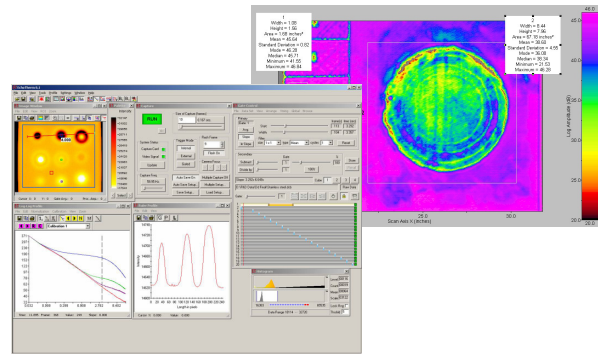
The Standard of Excellence for Thermographic NDE

EchoTherm is the system of choice for any tough NDE application – from automated manufacturing to aircraft inspection. EchoTherm provides fast, non-contact, wide area inspection of flat or curved structures, and can measure depth and area of sub-surface defects. Since its introduction in 1992, EchoTherm has been the benchmark system for Thermographic NDE.

The EchoTherm Advantage

EchoTherm defines state of the art in IR NDT for manufacturing, R&D and automated inspection applications. Achieve high quality, repeatable testing results quickly and cost effectively. EchoTherm gives you the following benefits:

- Fast
- Accurate
- Quantifiable
- Cost effective
- Wide area
- Non-contact
- Single-side process
- Easily interpreted
- Safe



Features

EchoTherm is a fully-integrated hardware and software system that enables you to identify, analyze and measure physical properties of materials using Pulsed Thermography.

- Quantitative measurement
- Open architecture
- Advanced analysis and processing routines
- Compatible with leading IR cameras
- Digital data acquisition
- Automation enabled
- LabView, Matlab and Visual Basic compatible
- Configurable for use in factory, field or lab
- Integrated with TWI patented signal processing

TWI – Leaders in Innovation

TWI is the world leader in the development and commercialization of Pulsed Thermography. Since 1992, our systems have become the worldwide standard of excellence in Thermography, and are used in the most demanding manufacturing, in-service and research applications in the aerospace, automotive and power generation industries. TWI is committed to “real world” solutions for your NDT needs.



“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*

**Thermal Wave
Imaging**



EchoTherm® System Specification

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

Variable Flash Power Output: 10KJ (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: 12" x 9".

Nominal Capture Duration: 5 sec. per shot.

Integrated Illumination Head: 2 xenon flash lamps in optimized reflectors for uniform heating, access door for on-the-spot part mark-up, universal camera mounting bracket, 10" LCD touch screen user interface control and display – 26" x 14" x 11".

Data Acquisition & Analysis System: Integrated rackmount design. Multi-core, multi-threading processor implementation, 32GB RAM, 1TB SSD and 250GB SSD, GPU, DVD±R/RW, Giga-bit 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: Stand-alone; Portable; Fully Automated (optimized for rapid, wide-area inspection).

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

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