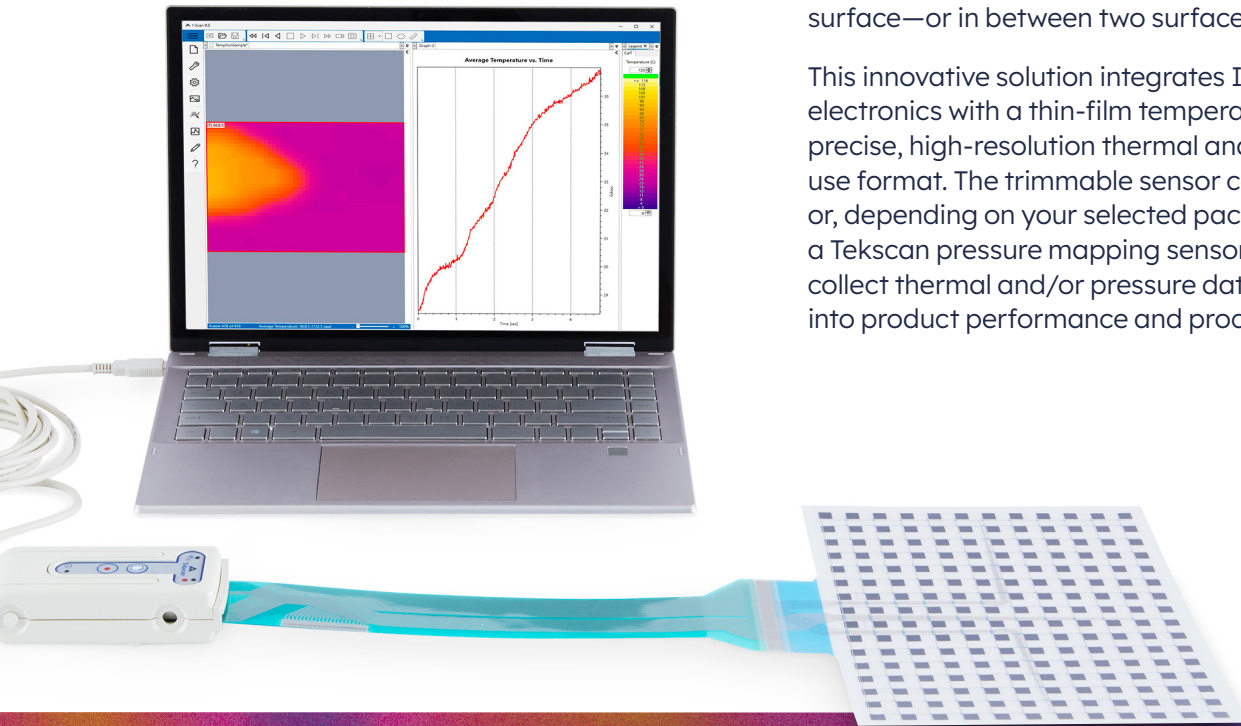




Temperature Mapping

Expand Your Insights with Temperature Mapping

POWERED BY I-SCAN™



Tekscan has enhanced the I-Scan™ platform with a new thin-film temperature mapping capability, enabling you to capture detailed temperature distribution across a surface—or in between two surfaces.

This innovative solution integrates I-Scan software and electronics with a thin-film temperature sensor to deliver precise, high-resolution thermal analysis in an easy-to-use format. The trimmable sensor can be used on its own or, depending on your selected package, paired with a Tekscan pressure mapping sensor—allowing you to collect thermal and/or pressure data for deeper insights into product performance and process optimization.

Key Benefits

Measure Where Thermal Cameras Can't

Accurately measure temperature in moving components, enclosed spaces, and multi-layer materials – even inside sealed machinery and rotating rollers where infrared cameras fail.

Not Sensitive to Emissivity

Unlike infrared cameras, which require emissivity adjustments for accurate readings, our temperature mapping sensors provide precise, direct-contact measurements regardless of material properties.

Visualize Thermal Propagation

Identify how heat moves through a surface and pinpoint critical areas for optimization in product design, material selection, and process control.

Comprehensive Data Insights

Capture high-resolution, real-time temperature distribution across a surface for deeper analysis.

Streamline Data Collection

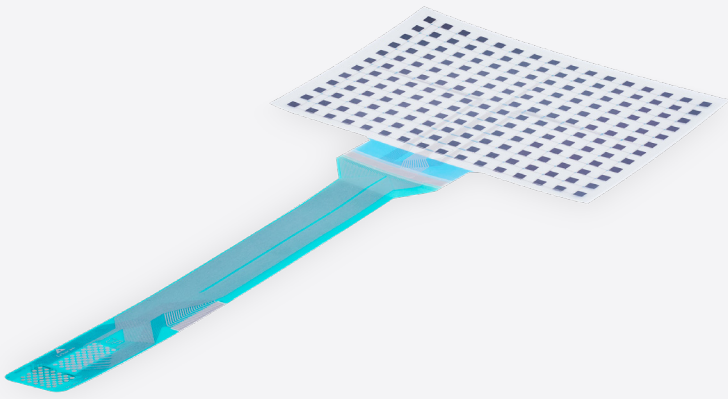
Eliminate the hassle of applying multiple thermocouples on a surface in favor of multiple sensing points (192) contained within a single, trimmable sensor.

Correlate Pressure & Temperature

Overlay with I-Scan Pressure Mapping to reveal critical relationships between pressure and temperature affecting product performance and reliability.

Seamless Integration with I-Scan

Works with the existing I-Scan 9.5 platform, allowing easy adoption for users already familiar with Tekscan pressure mapping technology.



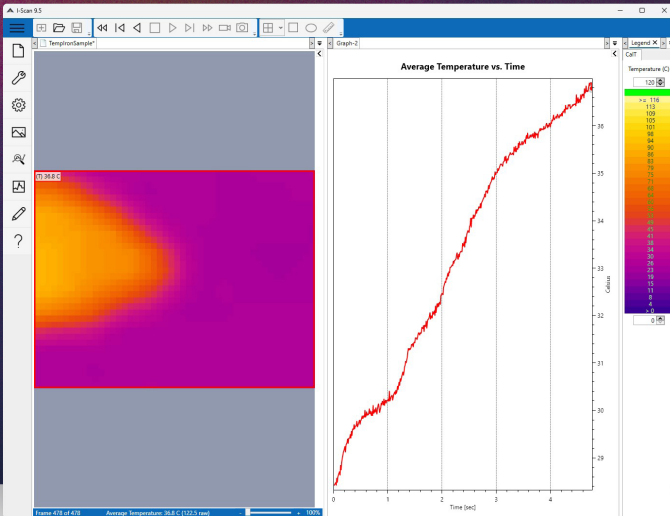
T800 Sensor

The thin, flexible, and trimmable sensor provides direct surface contact for accurate, high-resolution temperature mapping with 192 sensing points across a 0-120°C range. The technology is not impacted by emissivity or line-of-sight obstructions, making it ideal for complex applications.

- **High Resolution**
192 sensing points in a 16x12 array
- **Overall Sensing Area**
10.0 in (254 mm) x 7.17 in (182.1 mm)
- **Interface**
Compatible with Evolution Handle and I-Scan Software minimum version 9.5

Software

I-Scan software enabled for Temperature Mapping provides real-time temperature mapping and visualization for deeper analysis. Built on Tekscan's I-Scan 9.5 platform, it offers customizable heatmaps, streamlined calibration, and intuitive tools for efficient and accurate data analysis.



- **Simultaneous Temperature & Pressure Mapping**
When enabled, users can map, compare, and correlate temperature and pressure distribution across a surface.
- **User-Friendly Interface**
Runs on Tekscan's I-Scan 9.5 software, ensuring a familiar easy-to-use workflow for existing users.
- **Real-time Temperature Visualization**
Displays dynamic temperature distribution maps in both live and recorded mode for detailed analysis
- **Unique Temperature Gradient Scale**
Provides customized heatmaps to enhance visualization and analysis of thermal data
- **Graph and Overlay Pressure & Temperature**
Compare pressure and temperature trends over time to uncover critical correlations in material behavior and process performance

Streamlined Calibration Routine

Accurate calibration is necessary to ensure correct temperature measurement. Tekscan recommends the use of a hot plate and cover (sold separately) to ensure accurate calibration*. The aluminum plate ensures even heat distribution, while the cover minimizes heat loss through the top of the sensor—together enabling more accurate calibration. These components enable quick, reliable on-site re-calibration as needed.

* A customer-supplied environmental temperature chamber is a suitable alternative.



Laboratory-grade Hot Plates
Available for Calibration

(Recommended Accessory)

Applications for Temperature Mapping



Energy Storage

- Analyze thermal distribution in battery cells, modules, and packs during charge/discharge cycles to identify hot spots
- Assess the effectiveness of insulation layers for thermal management



Automotive

- Evaluate heat shield performance to optimize thermal protection in vehicles
- Assess electronic heating systems in EVs for efficient cabin climate control
- Monitor thermal dissipation in engines and high-temperature components



Packaging & Manufacturing

- Validate heat uniformity in sealing bars during machine setup to ensure consistent seals in packaging applications
- Measure temperature consistency in nip rolls for laminating and converting processes



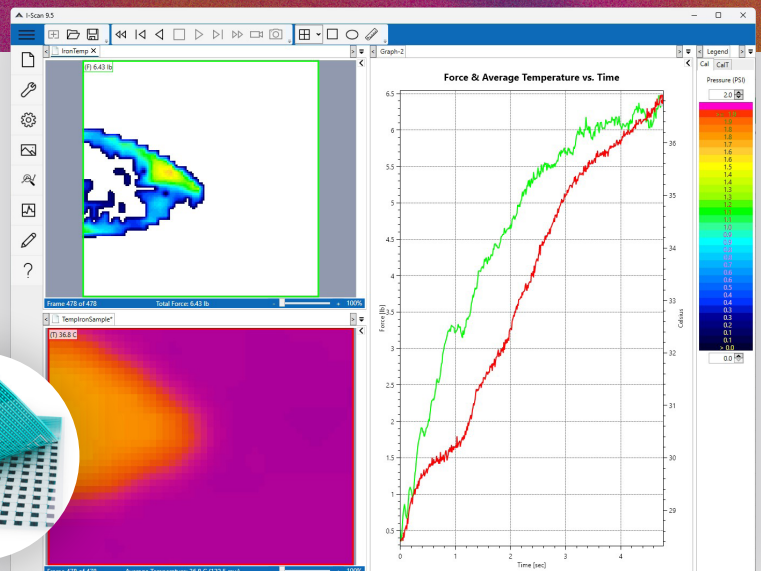
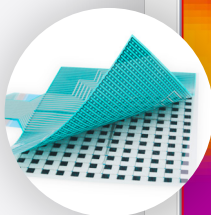
Electronics & Semiconductor

- Measure heat dissipation efficiency between components and heat sinks
- Evaluate temperature uniformity during wafer manufacturing for semiconductor reliability

Already using I-Scan for Pressure Mapping?

Upgrade to Add Temperature Mapping!

Contact Us or visit
tekscan.com/temperature-mapping-upgrade
to learn how to easily add temperature mapping capability to your existing system.



617.464.4282
1.800.248.3669

info@tekscan.com
tekscan.com/temperature-mapping

Call Today for a
Demonstration!