

# Mi-TEMS

## Tools and Equipment Monitoring System

Mi-TEMS is an advanced monitoring solution designed to boost productivity, reduce downtime, and elevate quality across your manufacturing operations. Engineered for high-mix, low-volume environments, Mi-TEMS gives you the power to see problems before they happen—and solve them before they cost you.

### Technology Overview

Mi-TEMS is an advanced system designed to improve manufacturing efficiency. It offers offline and online monitoring for key equipment like CNC machines, pogo-pin testers, and semiconductor testing systems. Using acoustic analysis, vibration analysis, ultrasound, and infrared thermography, Mi-TEMS helps detect tool wear, malfunctions, and equipment failures in real-time.

Focused on predictive maintenance, Mi-TEMS helps prevent problems before they cause downtime, reducing production defects and improving resource management in high-mix, low-volume manufacturing.

### Technology Benefits

- **Real-time Monitoring:** Continuous condition tracking ensures early detection of potential failures.
- **Predictive Maintenance:** Reduces unplanned downtime and extends equipment lifespan.
- **Multi-Sensor Integration:** Combines acoustic, vibration, ultrasound, and infrared data for comprehensive analysis.
- **Enhanced Production Quality:** Minimises defects and improves product reliability.
- **Data-Driven Optimisation:** Provides actionable insights for better resource utilisation and workflow efficiency.
- **Scheduling:** Orchestrating work and workloads to control and optimise the production or manufacturing process, thereby managing machines, people, processes, and materials.
- Customised solutions for OSAT ATE equipment.

### Key Features

- **High Accuracy ATE Solutions:** Uses force, angle, and distance sensor data for high precision engagement.
- **Automated Fault Detection:** AI-driven analytics identify abnormal tool wear and potential malfunctions.

- **Multi-Equipment Compatibility:** Supports CNC machines, testers, and other manufacturing tools.
- **User-Friendly Dashboard:** Intuitive interface for real-time status monitoring and historical data analysis.
- **Scalable Architecture:** Easily integrates with existing factory systems and IoT platforms.

### Applications

- Semiconductor Manufacturing
- CNC Machining & Tooling
- Automotive Industry
- Electronics Testing
- General Industrial Maintenance

