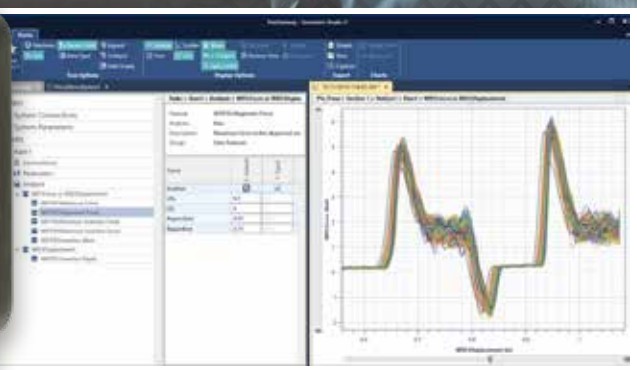# A Universal Platform to
Monitor and Control Your Process

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EDGE

Sciemetric EDGE: A Distributed Platform to Monitor and Control Your Process

Sciemetric EDGE helps you perfect your process in record time.

The platform performs digital signal processing and data analysis to offer in-depth insight into the performance, reliability and repeatability of a broad range of applications. Systems are remotely configurable for centralized management of your operations.

The Sciemetric EDGE platform provides industrial operations with an exciting new way to monitor a process, perform real-time control, and gain the visibility needed to optimize the process.

Close the Continuous Improvement Loop

The Sciemetric EDGE platform provides data-driven insights so you can implement continuous process improvements.
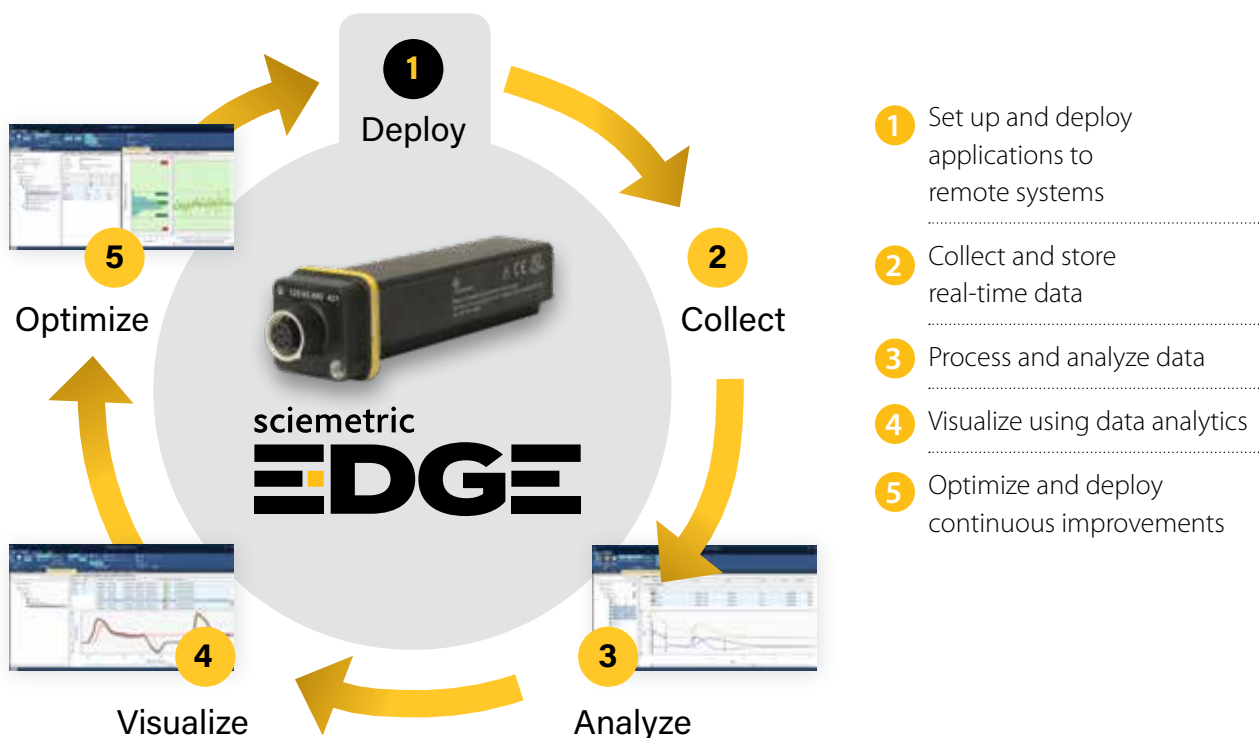
Sciemetric EDGE can help you achieve:

- Improved product quality
- Greater process reliability
- Increased efficiency
- Enhanced test repeatability

Digital Process Signatures

A digital process signature (also called a trace or waveform) contains a wealth of information about an industrial test or process. It is a non-destructive, high-resolution, visible representation of the operation.

Why is it called a signature? Because each combination of a part and a process is unique. With any controlled process – press fitting, leak testing, welding, power monitoring, machine monitoring and so on – the signature is repeatable and consistent when parts and machines are meeting specifications. A signature that does not match indicates a flawed process and potentially a defective part or machine.

With this rich data, more reliable and insightful pass/fail determinations can be made in real-time. Signatures can also be collected and organized into a central database for deeper analysis, to drive continuous improvement and quality gains.

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EDGE

1. Deploy
2. Collect
3. Analyze
4. Visualize
5. Optimize

1. Set up and deploy applications to remote systems
2. Collect and store real-time data
3. Process and analyze data
4. Visualize using data analytics
5. Optimize and deploy continuous improvements

A Single Platform for Many Application Requirements

Sciemetric EDGE can be deployed for process monitoring and control in a wide variety of applications.

Discrete Manufacturing

- Part test and process monitoring to deliver quality parts (e.g., welding, stamping, crimping, leak test, dispensing, etc.)
- Real time manufacturing floor analytics and decision making
- Rapid part quality root cause determination

Process Manufacturing

- Monitoring of machines, systems and materials in continuous and batch processes for efficiency and process quality
- Historical trend
- Process correlations
- Real time alarming

Condition and Machine Monitoring

- Measurement, control and monitoring of machines, stations, and tools to track efficiency, uptime and operational conformance
- Historical trend
- Process correlations
- Real time alarming
- Distributed intelligence for continuous high-resolution analysis of all data, while filtering out critical data for storage

Data Acquisition and Measurement

- Versatility and power to meet a range of distributed intelligence requirements
- High-speed collection for ultimate time resolution
- Connect to virtually any sensor
- Network distributed modules into a system
- Integrated local database for immediate data analysis

Why Choose Sciemetric EDGE?

Sciemetric EDGE is an innovative solution for today's smart factory that provides many unique benefits to address your operational goals.

GOAL: Handle multiple applications

The Sciemetric EDGE solution is based on the concept of universality. The system is highly scalable, supports any combination of digital and analog I/O, can communicate with virtually any sensor at high speed, and supports any processing, analytics and control requirements. This flexibility means you can deploy a common platform with common spares and a single learning curve to achieve multiple applications.

GOAL: Reduce barriers to data

Sciemetric EDGE is easy to deploy, so you can start collecting and analyzing data in hours instead of days or weeks. The compact industrial modules offer direct machine mount and direct sensor connections with a low total system cost.

GOAL: Comprehensive data analysis with efficient storage

With Sciemetric EDGE, you can analyze all the data so you don't miss any anomalies that might be causing issues in your operations. The system's distributed intelligence can analyze all the data while storing critical information to reduce data load and network bandwidth.

GOAL: Manage applications easily

Sciemetric EDGE includes modular software that provides data-driven setup, rapid parameter editing, and application management. The result is a consistent deployment that is quick and easy to set up.

A Comprehensive Platform for Industrial Applications

Sciemetric EDGE Studio Software

Sciemetric EDGE software provides a comprehensive set of capabilities from module discovery and application creation through to data review and optimized application deployment.
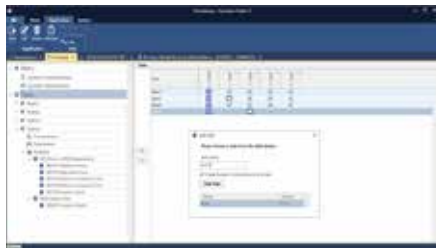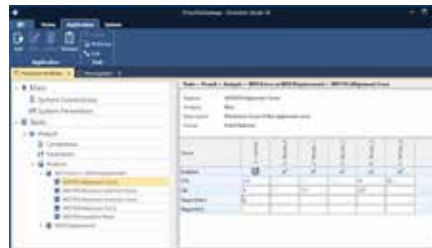
System Management

Module discovery

Live channel view

- Module discovery
- Live channel view
- Remote deployment
- System backup
- Log retrieval

Application Management

Task configuration

Parameter editing

- Task configuration
- Feature/Limit editing
- Parameter editing
- Variant management
- Validate changes

Data Review

Feature editing with trend data

Waveform overlay

- Feature trend
- Waveform trend
- Feature correlations
- Part/event history record
- Statistical data
- Limit tracking

Sciemetric EDGE Hardware

The Sciemetric EDGE modular form factor offers ease of deployment, maximal flexibility and system scalability for industrial applications.

Sciemetric EDGE 421 Module

Universal I/O works with virtually any type of sensor. Provides isolated 125 kS/s 24 bit analog input and 24 V, 100 mA 16 bit analog output.

Sciemetric EDGE 422 Module

High-speed data acquisition with 125 MS/s 14 bit analog input for accurate, time-critical measurements. (e.g., ignition testing, timing analysis or general oscilloscope-type measurements)

Sciemetric EDGE 431 Module

All in one, flexible 5 V digital I/O for collection and control of sensors, relays and switches.

Sciemetric EDGE 412 Dual Carrier Module

Mount directly on machines with IP65 rating (no cabinet required). Simplified power and communications using single wire Power over Ethernet (PoE).

For more info on how the Sciemetric EDGE platform can help you perfect your industrial process in record time, visit www.sciemetric.com/edge

About Sciemetric

Since 1981, Sciemetric's process monitoring and quality management systems and software have enabled some of the world's leading industrial companies to gain visibility into and control over their processes. Process Signature Verification (PSV) technology provides the most accurate determination of process health and part quality while collecting all data. Our customers use Sciemetric's analytic tools to transform the data into actionable information to reduce costs, manage quality, increase efficiency, and maximize yield while providing proof of process compliance and complete traceability. Visit sciemetric.com for more information.

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