One Universal Platform to Monitor and Control Your Process

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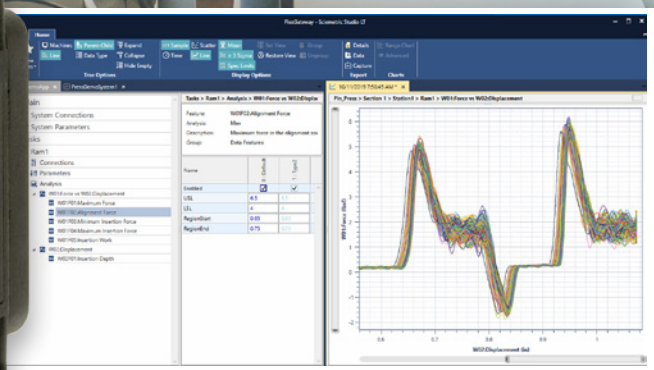
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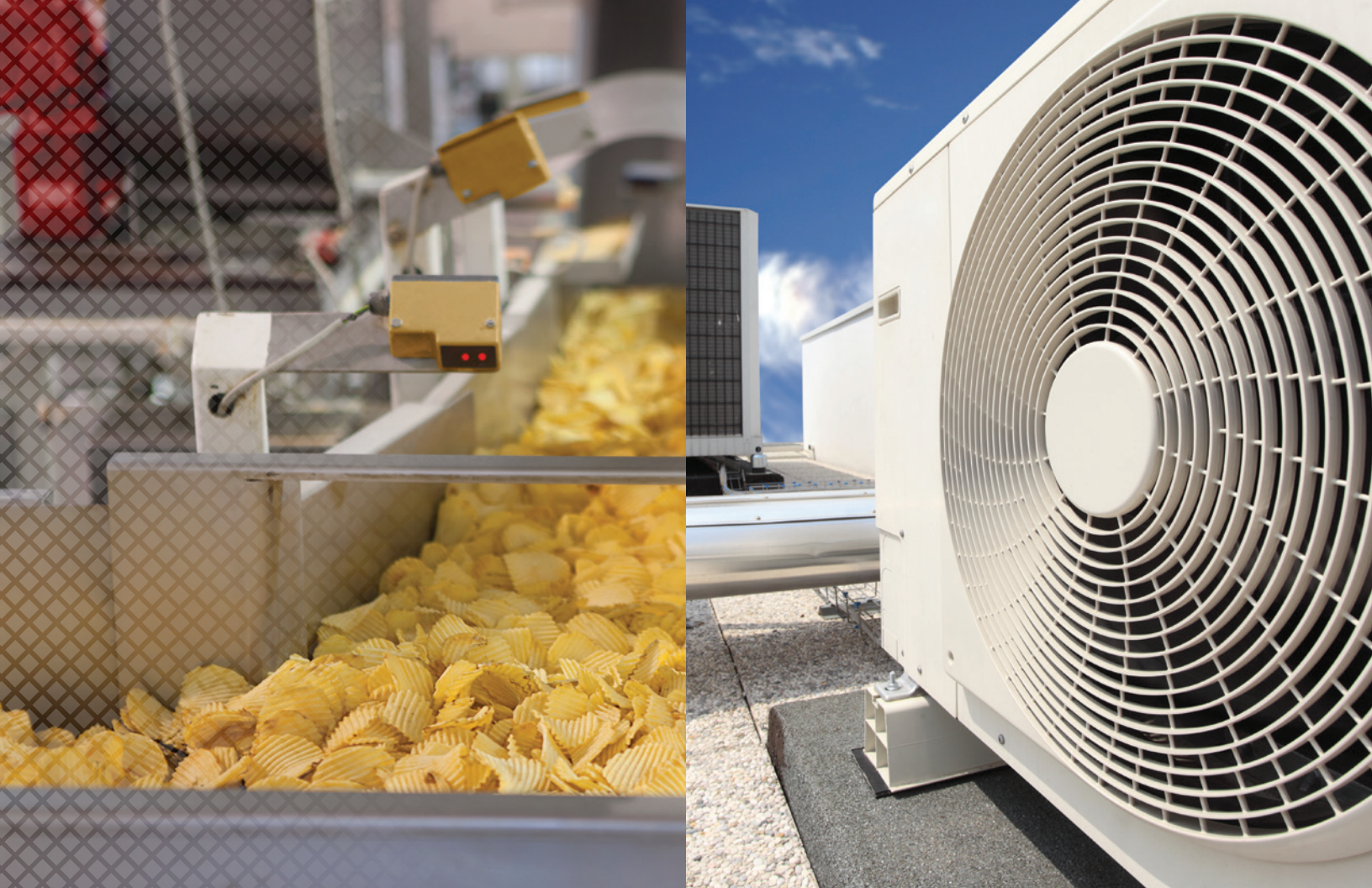
EDGE

Sciemetric EDGE: A Versatile, Distributed Platform for Industrial Monitoring and Process Control
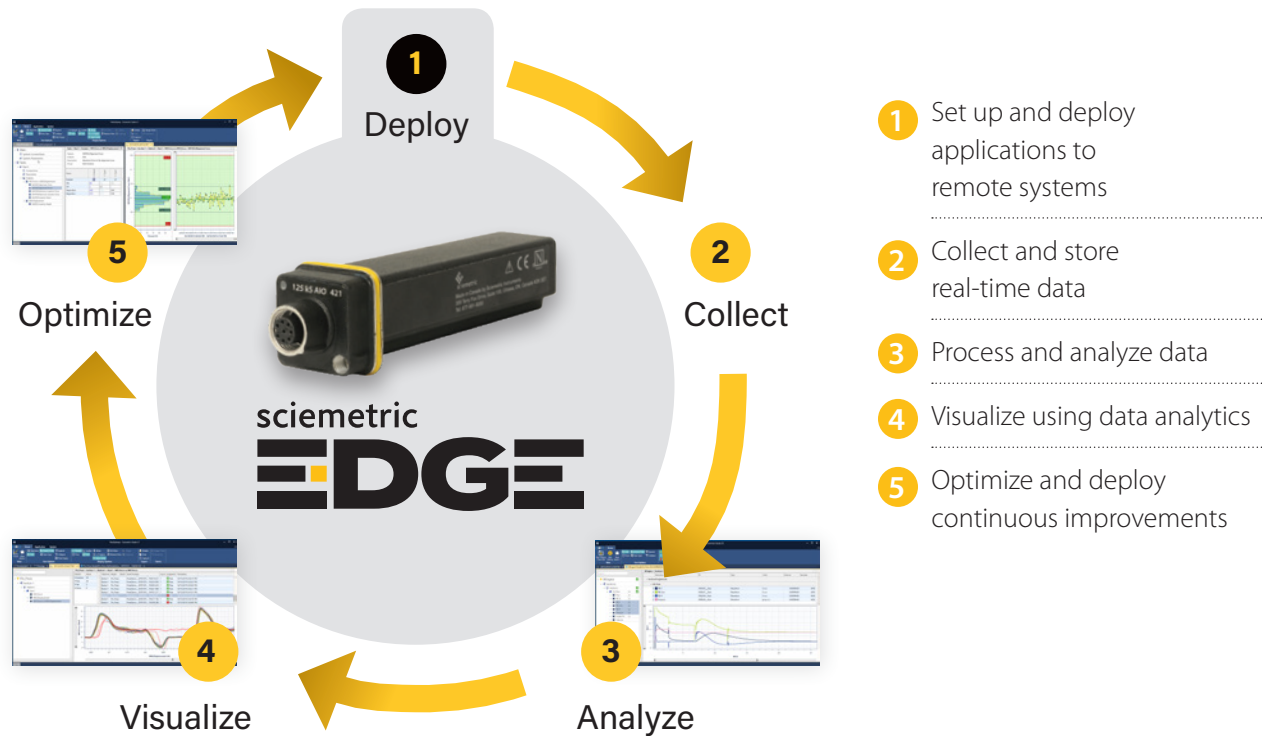
Sciemetric EDGE is a universal industrial analytics platform to help you perfect your process in record time. This distributed data analytics system removes barriers to collecting data, driving productivity improvements and cost savings.

The platform performs digital signal processing and signature analysis to offer in-depth insight into the performance, reliability and repeatability of a broad range of applications. Processing, analytics and control functions are remotely configurable, giving you a centralized management of your distributed operations.

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

Close the Continuous Improvement Loop

The Sciemetric EDGE platform provides data-driven insight from your operations so you can implement continuous process improvements. Whether your goals are improved product quality, greater process reliability, increased efficiency, or enhanced test repeatability, Sciemetric EDGE can help you achieve them.

1 Deploy

5 Optimize

sciemetric EDGE

2 Collect

4 Visualize

3 Analyze

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

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.
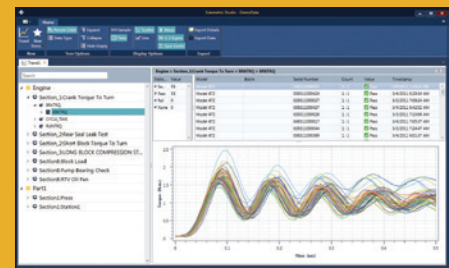
A Single Platform for Many Application Requirements

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, 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 (at the edge of the network in the modules) reduces the data load and network bandwidth by storing only critical data.

### GOAL: Manage applications easily

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

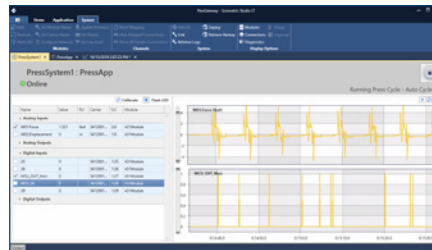# A Comprehensive Platform for Industrial Applications

Sciemetric EDGE Studio Software Capabilities

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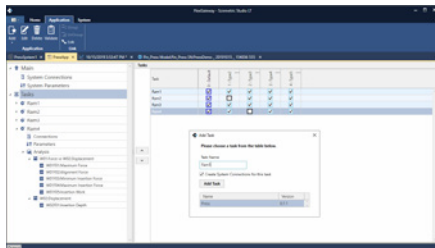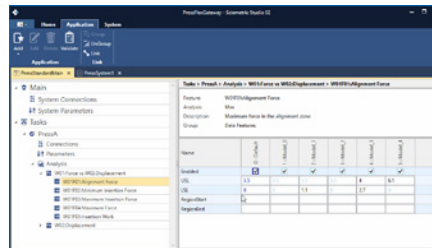
System Management
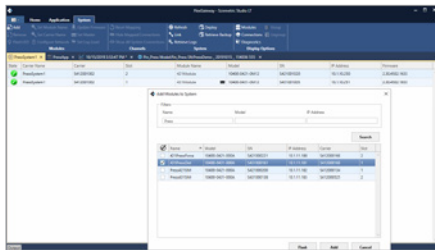
Module discovery

Live channel view

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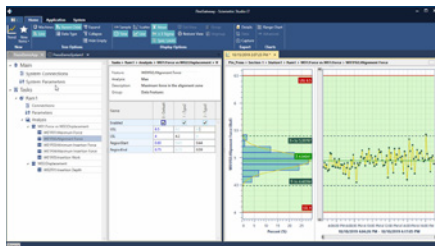- Log retrieval

Application Management
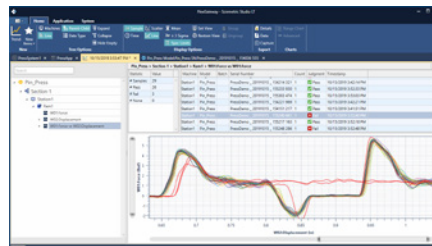

Task configuration

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

Sciemetric EDGE Hardware Modules

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

Carriers are simple to mount and install directly on machines without requiring a cabinet. Power over Ethernet (PoE) allows for simplified power and communications over a single wire.

Sciemetric EDGE 421

Offers universal input and output to work with virtually any type of sensor with isolated 125 kS/s 24 bit analog input and 24 V, 100 mA 16 bit analog output

Sciemetric EDGE 422

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

Sciemetric EDGE 431

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

Sciemetric EDGE 412 Dual Carrier

Innovative packaging with PoE, IP65 rating, real-time clock and hot swap modules, used to deploy two Sciemetric EDGE modules in harsh industrial environments

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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1.877.931.9200
inquiries@sciemetric.com

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