

Product Specifications

Analytics for Smart Manufacturing

Manufacturing is undergoing massive change as companies seek to continually improve the efficiency and productivity of their production processes and the quality of parts coming off the line. Understanding where and when things go wrong – and stopping them before the problems become bigger – is critical, but many manufacturers are not equipped with the tools they need to make sense of the volumes of data that their line produces. Concepts like Industry 4.0 and the Industrial Internet of Things (IIoT) promise to help manufacturers gain more insight into their processes by establishing a connected factory that allows for data collection and analysis for more informed decision-making. Tools like Sciometric Studio are key to that effort.

Sciometric Studio is a suite of manufacturing analytics software that enables manufacturers to easily visualize, review, report on, compare and analyze part data to improve quality and yield on the production line. With a range of features and capabilities, Sciometric Studio was designed to provide a quick path from analysis to answer.

Highlights

- Visualize all types of data including waveforms and images from machine vision systems
- Look for trends and compare data
- Drill down to the individual part's history across multiple stations
- Intuitive, contemporary ribbon-based interface
- Export data to CSV format

Data-driven intelligence to optimize test station performance

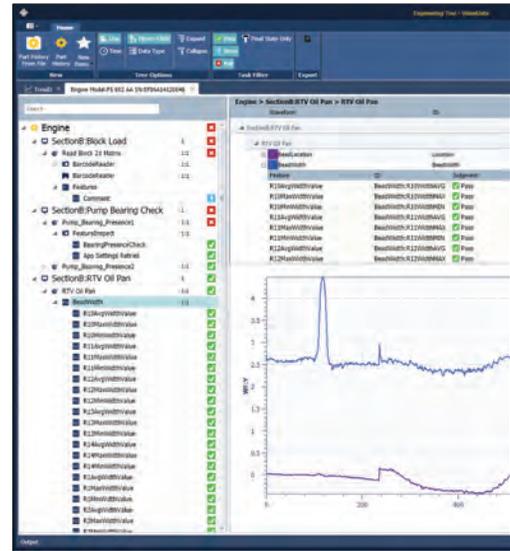
- Drill down into data to determine the cause of a part failure
- View the complete data history for a part
- Set optimized test limits on the station
- Evaluate the effectiveness of a test
- Compare and trend information across stations to determine variations



Part History

The Part History is an intuitive tree-based navigation that enables detailed investigation of pass/fail results, waveform or image characteristics and feature checks on a single serial number.

- View the history of a part in a single directory. Organized in a hierarchy of Station-Task-Waveform/Image-File-Feature you can click to the information you want to see for a given part. Compare different waveforms, images and/or features from any station or task.
- Collate data from multiple sources into a single part history report for a more detailed history and better analysis
 - Compare data from reruns of a task
 - See progress of part through various stations and tasks
 - Filter to show only the final state of the part
- Use the Part History to do a deep dive into data collected for a part to find the failure root cause
- Trend around a part to see if parts made around the same time exhibit similar characteristics.

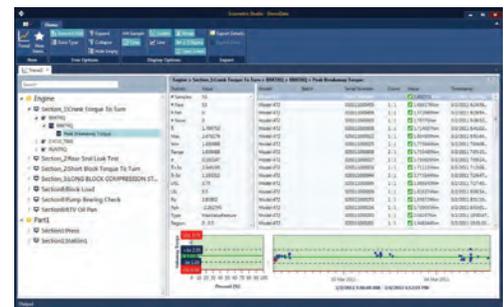


Single Part History drill down

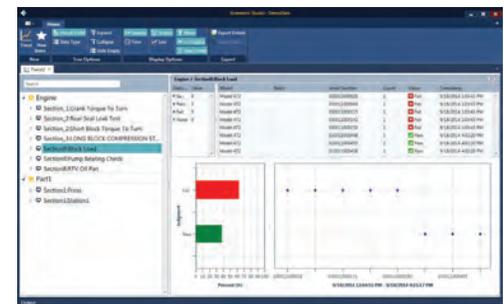
Trend

The Trend enables you to overlay multiple waveforms or data to spot variations over test stations and parts. Designed to enable drill-down to the serial number and single part history, it also offers a range of trend views.

- Flexible query engine enables you to isolate the data of interest and view it in different ways
- Review trends for any data type:
 - Statistics: part counts, pass/fail count, statistics for features
 - List of items in the data selection provided
 - Histogram of values
 - Trend by serial number or time stamp
 - Station/Task: Pareto or trend of judgment
 - Overlay waveforms
 - Filmstrip view of images trend
 - Histogram and trend of feature values and ranges



Statistics view



Pareto trend

- Information is organized in the same tree-based hierarchy as the Part History
- Trend reports enable you to drill down to the part history
- Use the Trend to identify the issues affecting quality and to determine ways to optimize the station's productivity
- The Advanced Trend report allows you to select up to 10 features and view them, either overlaid on the same graph or as stacked graphs, and compare their data

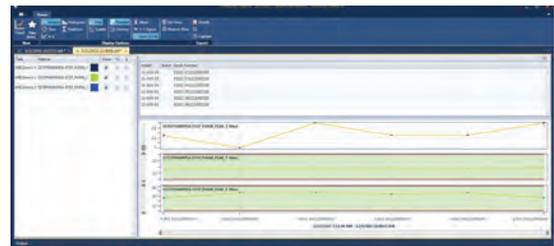
Many Features and Functions in Intuitive Interface

Sciometric Studio was designed to make data analysis quick and easy for smarter manufacturing.

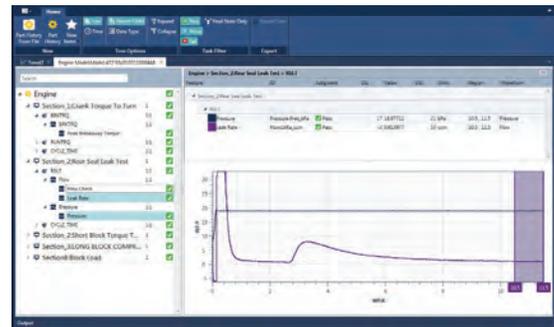
- Modern design features context-sensitive ribbon menus
- View several reports simultaneously in tabbed windows
- Expand, magnify and customize data views
- Use the Export function to save your report as a CSV file for sharing or additional analysis
- Multi-select different waveforms in part history
- Drill down to the part history from the trend view



Waveform overlay trend



Advanced Trend



Line trend with matching data point highlight

Analyze Images and Data from Machine Vision Systems

The Machine Vision capability of Sciometric Studio SE enables the collection and storage of images and image data in a centralized location, whether it's a single station or across a production line. More importantly, it allows you to review and analyze historical image data to help improve quality and productivity. This optional feature removes the silos and integrates vision data into the full birth history for the part (e.g., leak test, dispense, fastening, repair bays), all traceable in one database.



Sciometric Studio LT

Use Sciometric Studio LT today to start analyzing the information collected by your Sciometric test systems without the need of a database or special infrastructure. The best option if you only have a small number of stations to analyze data from.

- Simple installation
- No database required
- Drag and drop or load up to 1000 part records to be analyzed at the same time
- Collate data by part from multiple stations into one project

Sciometric Studio SE

Choose Sciometric Studio SE for the flexibility of creating local projects or pulling data from a QualityWorX database in real-time, as well as these capabilities:

- Access any data in the QualityWorX database (see specifications)
- Create Advanced Trend reports
- View images and data from machine vision systems (option)
- Drag and drop or load up to 10,000 part records into a Local Project to be analyzed at the same time

Admin

Admin is a user who handles user security, configures Enterprise Settings (set password policies and assigns users/roles/features), and monitors user activity, security and management events, and errors in the Audit Log.

Feature Comparison

This chart shows the features available for each type of Sciometric Studio license.

Feature	Studio LT	Studio SE	Studio Admin
Local Projects	✓ 1,000 part records	✓ 10,000 part records	
Enterprise Projects		✓	
Default Views	✓	✓	
Data and Details export	✓	✓	
Part History reports	✓ Trend Around in Part History is not available in the LT version	✓	
Trend reports	✓ Component Property and Property Data filters in Trend Data Criteria dialog box are not available in the LT version.	✓	
Advanced Trend reports		✓	
Trend Around reports	✓	✓	
Enterprise Settings		✓ You can configure Enterprise Settings if your login credentials allow for it.	✓
Audit Logs		✓ You can view audit logs if your login credentials allow for it.	✓
Machine Vision		✓ Optional feature	

Technical Requirements

MINIMUM SYSTEM REQUIREMENTS

- 1 GHz 64-bit processor
- 4 GB RAM
- 3 GB hard disk
- DirectX 10 graphics device with WDDM 1.0 driver

OPERATING SYSTEM

- Windows 7 or 10 64-bit (.NET 4.5)

FILE TYPES SUPPORTED

- Sciometric Single Part History (SPH) files*

ADDITIONAL REQUIREMENTS FOR SCIOMETRIC STUDIO SE

- Sciometric Studio SE can only connect to a QWX 3.41 database or higher
- Enterprise Management Services must be installed (see QualityWorX datasheet for details)

* Data from non-Sciometric systems are converted to SPH when stored in QualityWorX.

Contact Sciometric to learn more
about Sciometric Studio.

sciometric.com

About Sciometric

Since 1981, Sciometric's process monitoring and quality management systems and software have enabled some of the world's leading automotive, medical and industrial manufacturers to gain visibility into and control over their manufacturing processes. On the production floor, Process Signature Verification (PSV) technology provides the most accurate determination of process health and part quality while collecting all data. Manufacturing managers use Sciometric's analytic tools to transform the data into actionable information to reduce costs, manage quality, and maximize yield while providing proof of process compliance and complete line-wide traceability. Visit sciometric.com for more information.

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