# International DATALYZER
Partners in Continuous Improvement

# DataLyzer® Qualis 4.0 SPC
Software for Statistical Process Control

## DataLyzer® Qualis 4.0 Software Suite

DataLyzer® Qualis 4.0 is a state-of the art and integrated software suite for quality and process management. Our FMEA, MSA, OEE and SPC solutions are implemented at manufacturers worldwide in various industries.

In 2020, DataLyzer® released the 4th generation of our SPC software which perfectly fits in an Industry 4.0 roadmap.

The DataLyzer® Qualis 4.0 SPC software provides a real-time software package that automates the data collection, charting and analytical functions of Statistical Process Control.

The unique structure of this system produces sophisticated analysis without lengthy computer/ user interaction. Most facilities require only three steps.

DataLyzer® Qualis 4.0 its open architecture allows (full automatic) data entry in various ways including keyboard, bar code, direct connection to gage interfaces, OPC clients along with other ODBC-compatible database tables, SQL and Oracle databases as well as ASCII files.

Real-time control chart displays are clear and concise, supplying you with all necessary information on your process variation in an easy-to-understand format.

Visual aids during data entry include: a scroll bar to view previously entered points; mouse control for point-and-shoot data editing; multiple screen buttons and color-coded subgroup flags for runs, trends, stratification and process notes. Attach a wide range of graphics and video files as instructional visual aids for data entry on the plant floor.

A wide variety of reports provides management, auditors and quality engineers with a complete set of informational tools for studying and refining manufacturing processes.

The DataLyzer® Qualis 4.0 SPC software is available on Microsoft SQL Server® and can run both browser based and on a local client.

# DataLyzer® Qualis 4.0 SPC

## General features

Enter data 'by characteristic' to instantly see corresponding points plot on the graphs (real time) without switching to other program modes.

Real-time data collection can be sequenced to collect one characteristic after another with a user-defined delay between charts, or collect all characteristics at once using 'by part' sequencing. Variable and attribute charts can be sequenced together during data collection.



*Variable control chart*

Each point is evaluated and flagged in colour, corresponding to one of many different statistical alarm conditions. User-selectable process shift and stratification analysis, including Western Electric run and trend rules, allow immediate detection of process shifts and non-random conditions within control limits.

Store an unlimited amount of traceability parameters with the subgrouped data to filter specific conditions during analysis. This feature permits lot-to-lot comparisons, reporting by time period and filtering multilevel independent variable combinations. The control chart can display parameter changes real-time with vertical lines to see possible trends.

Measuring instructions can be linked to a control chart guiding the operator on the measurement procedures (work instruction or procedural documents, images, drawings, videos).

Multilingual operation provides international compatibility. DataLyzer® Qualis 4.0 SPC software will run in multiple languages soon for the Satellite (data-entry) module. The DataLyzer® Spectrum administrator module runs in 21 languages.

Create global and chart specific lists of notes describing standard causes and corrective actions. In addition, free-form notes containing up to 3.000 characters may be entered for each subgroup point. User notes will be clearly visible in the chart by the label in the chart, see below.



Overall Equipment Effectiveness (OEE) is fully integrated. Manual data entry, automatic entry and all OEE reports are supported.

Use robust math functions to pre-process data as it is plotted in real time. Derive entire subgroups automatically from data collected elsewhere in the collection sequence.

Scroll through points on the displayed graphs. Click any subgroup point to view and edit raw data and traceability information.

Use the "Exclude" screen button for instant point-and-click subgroup exclusion from upper and lower control limit calculations to eliminate the effects of isolated special causes of variation.

Use the "Search" facility to display all subgroups within date and time ranges along with parameter commonalities like lot#, shift, operator, etc. Stack virtually unlimited optional parameter combinations to filter data.

E-mail alerts transmit messages instantly as control charts go out of control. Notify production supervisors and/or quality engineers as soon as problems appear. These email alerts are also useful when measuring data fully automatic and import this data with our Import Service.

Minimum sampling restrictions suppress control limit and capability index calculations until user-specified statistical significance is attained.

Connect to virtually all RS-232- or USB-compatible gages and interfaces and import data from external sources: CMM, Excel, ASCII files, SQL and Oracle databases, OPC, PLC's, Cameras etc.

All DataLyzer functions are also available through an DLL component making it possible to integrate DataLyzer functionality in virtually any user interface.

Use the "Control Limits" button to modify, freeze or set unlimited sets of stepped control limits to track recurring process shifts.

Multiple levels of user management, security and password protection are available upon request.

## Reports

Most common variable and attribute control charts and graphical analyses are supported including: X&R, X Moving R, X&S, P, NP, C, U, DPMO, histogram, Pareto and user-defined reports (More than 30 reports in all).

Multiple "consolidated" summary reports are available for management to steer the improvement process.

Easy-to-read reports contain numerous, user-selectable fields and other features  tailoring information to suit you and your auditors.

User-defined titles personalize the masthead of your company's quality reports.

It is possible to filter reports and analyse specific subsets of data using the "Search" screen button and parameter filters.

Reports include all industry-standard statistics like Cpk, Ppk and Ppm.

Fully user-defined reports can be created in two parts: a graphical header and a statistical table containing statistics the user has selected. The report is defined once but can be used to repeatedly analyse data from various processes.

Print sets of reports by grouping them together into batches. Use the batch report facility to automatically produce recurring sets of customer or management reports. Quickly and easily activate the batch and let it process the reports required.

With our DataLyzer Dashboard Designer and Dashboard Viewer, you can  create your own reports or dashboards through ODBC access to the DataLyzer® Spectrum database.
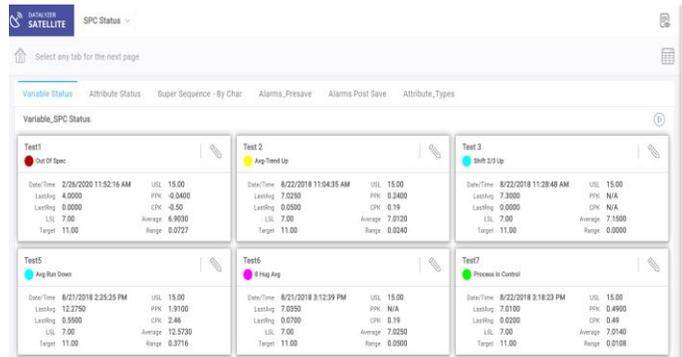
# DataLyzer Network Modules

The DataLyzer® Qualis 4.0 SPC system offers a simple set of modules to suit almost any manufacturing or service organization. Each module is designed to equip a different area of the organization, according to its specific data entry, analytical and reporting requirements.

The goal is to provide management, administration and engineering with the specific data entry, analytical and reporting tools needed at those areas.

DataLyzer® Stand Alone can be scaled up to offer enterprise-wide monitoring and administration by adding an administrative Hub module. This accessory adds two powerful resources to the DataLyzer® SPC system: the ability to assign charts to the plant floor for data collection and a system-wide monitoring facility for statistical status, chart review and editing.



The Hub maintains a color-coded status screen giving administrators an overview of all processes being monitored. Each block on the Hub screen represents a process, and rows of blocks represent Satellites. The Qualis 4.0 Satellite shows per Satellite either a grid view or tile view to immediately show the important information on the current status to the user.



Up to 1,600 processes can be viewed at a glance and virtually unlimited numbers of processes can be seen by scrolling. The Hub user can highlight and select any block on the status screen to instantly display the corresponding control chart or histogram showing the latest data from the shop floor or lab. The Hub can edit this data, display process notes or print reports as necessary.

Satellites are used by production operators and lab personnel whose responsibilities include data collection and process adjustment. Satellites can be implemented wherever data will be entered. Operators are encouraged to enter notes for problem processes. Each Satellite maintains a summary of its characteristics, organized by sequence.

The local status screen provides an overview of the station in terms of many statistical and process control conditions. Charts are created at the Hub and assigned to the Satellites locally, so minimal system access is available.

The DataLyzer® Qualis 4.0 Satellite pages, sequences and data entry forms can be customized in their lay-out. The user can design the data entry forms. Control Charts, Histograms and the Raw data table can be visible for the operators if desired.

The Executive Monitor operates like a read-only Hub. It displays the same system-wide status screen as the Hub and offers control chart views, notes and data from the plant floor. However, the Executive Monitor has no administrative capabilities and cannot reassign charts for remote data collection. These tasks are performed by the administrative Hub.

The Executive Monitor is often used by upper management or supervisory personnel who need system-wide status information and report printing capability without the responsibility of system-wide setup and administration. In addition, we can offer Webbased reports.

## Customer Support

Technical support for the DataLyzer® Qualis 4.0 system is available by phone, e-mail or by our automated Support Desk.
USA: Monday through Friday, 8:30 to 5:30 ET
Europe: Monday through Friday, 8:30 to 6:30 GMT -1
Asia: Monday through Friday IST 8:30 to 6:30

Support agreements are renewable annually for a modest fee. Services include new versions upon request and personal telephone, fax or e-mail support. Custom software modifications can be quoted individually.

## Database Compatibility

DataLyzer® Qualis 4.0 software versions are available for use with Microsoft SQL Server databases.

## Operating System Compatibility

DataLyzer® Qualis 4.0 modules work with the following Microsoft Windows operating systems: Windows 7, 8, 10. DataLyzer Spectrum is network-compatible with Windows Server. Citrix® and Microsoft Terminal Services thin client/server configurations can also be used.

## Associated Modules

- DataLyzer Gage Management System
- DataLyzer SPC Wizard (data analysis and training module)
- DataLyzer Dashboard Module
- DataLyzer OEE
- DataLyzer Qualis 4.0 FMEA
- DataLyzer Qualis 4.0 Certificate of Analysis/FAIR

Download demonstration versions at www.datalyzer.com.

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**International Distributors**
DataLyzer® International has a very capable international distributor network. Most distributors have a long term relationship with our company and years of experience with the implementation of SPC, OEE, FMEA and DataLyzer® software.

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