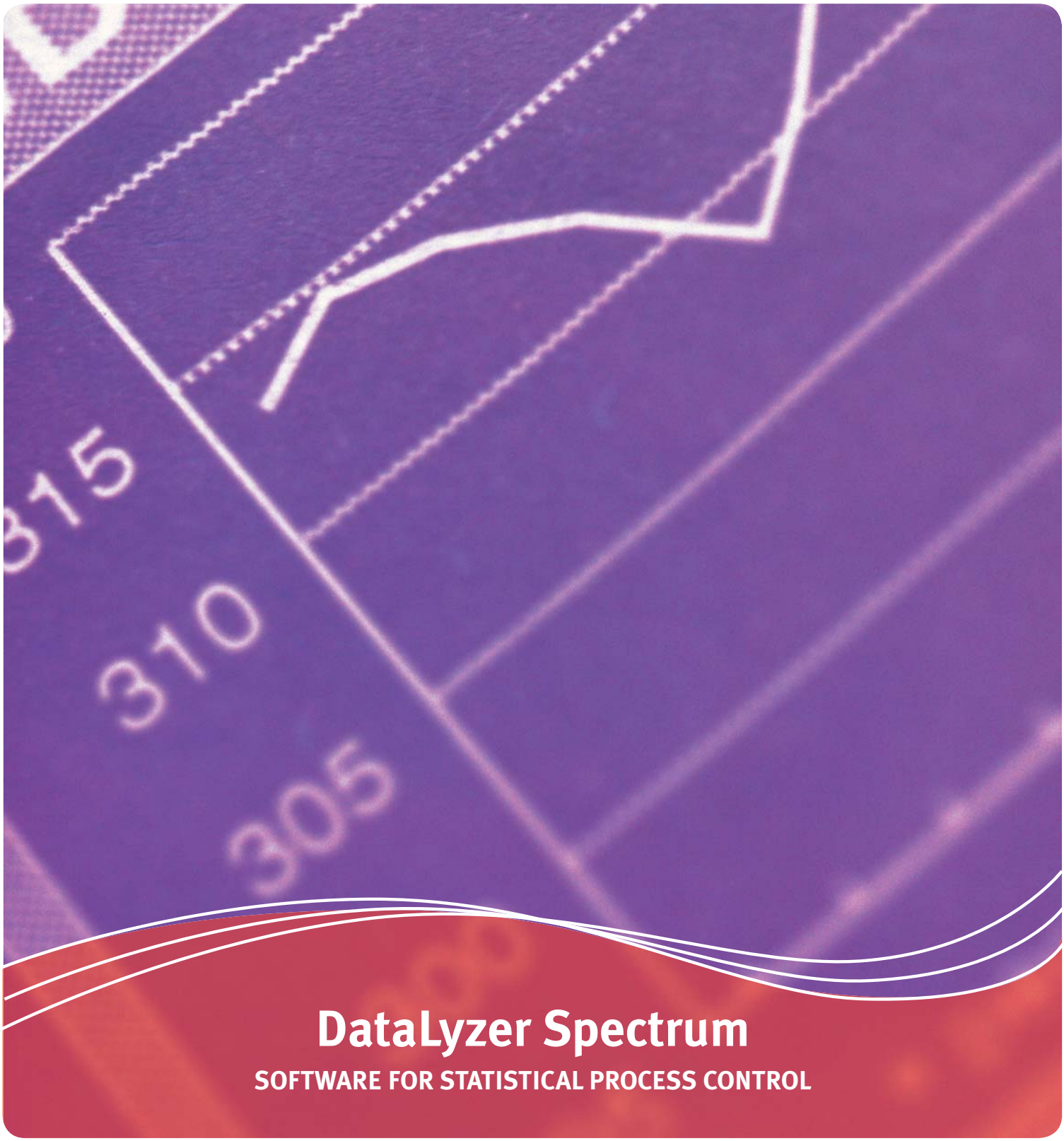


DataLyzer Spectrum

SOFTWARE FOR STATISTICAL PROCESS CONTROL

DATALYZER
International
Partners in Continuous Improvement

STAND ALONE SPC SOFTWARE

DataLyzer® Spectrum is a state-of the art, 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® Spectrum's open architecture allows data entry in various ways including keyboard, bar code, direct connection to gage interfaces, OPC clients along with other ODBC-compatible database tables and ASCII files.

Real-time control chart displays are clear and concise, supplying you with all necessary information 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 variety of graphic and video files as instructional visual aids for data entry on the plant floor.

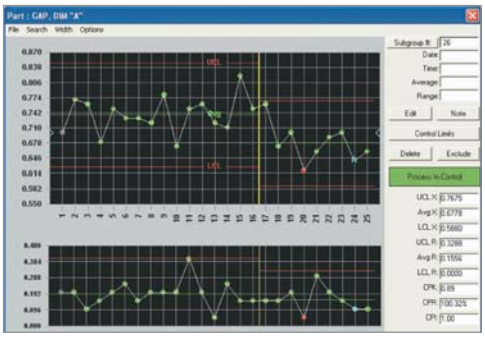
A wide variety of reports provides management, auditors and quality engineers with a complete set of informational tools for studying and refining manufacturing processes.

Database support for MS Access® is standard. SQL Server® and Oracle® platforms are also available.

ODBC (Open Database Connectivity) makes data universally available to other applications.

The DataLyzer® Spectrum single-user package is upgradeable to enterprise-wide data collection through the simple installation of Hub, Satellite and Executive Monitor software modules.

DataLyzer Spectrum Stand Alone



Variable control chart

General features

Fill out one simple form to define SPC variables. Duplicate individual variables or entire parts to hasten system setup.

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.

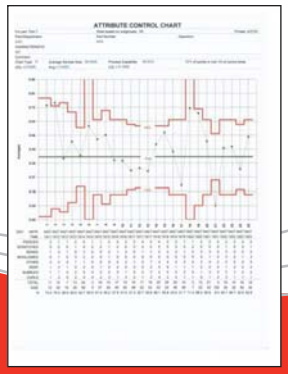
Each point is evaluated and flagged in color, corresponding to one of many different statistical alarm conditions. User-selectable process shift and stratification analysis, including Western Electric run and trend rules, allow immediate detection of process shifts and non-random conditions within control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

Store unlimited numbers 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.

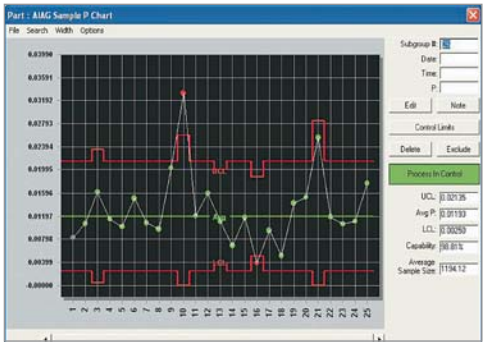
Use the 'measuring instructions' button to view attached work instruction or procedural documents, images, drawings, videos or spreadsheets. This feature promotes operator consistency and clarifies the data collection process.

Variable control chart

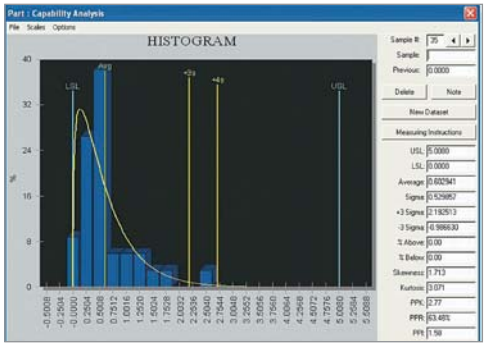
Attribute control chart



DataLyzer Spectrum Stand Alone



Attribute control chart



Histogram capability study

Multilingual operation provides international compatibility. One click converts all menus and prompts to 14 languages including English, Spanish, French, Dutch, German, Portuguese, Chinese or Russian. Other languages can quickly be added.

Create global and chart-specific lists of 60-character notes describing standard causes and corrective actions. Pareto these notes as they accumulate in the file. In addition, free-form notes containing up to 3,000 characters may be entered for each subgroup point. Corresponding points on the control charts are flagged with “C” for cause, “A” for action or “N” for free form notes.

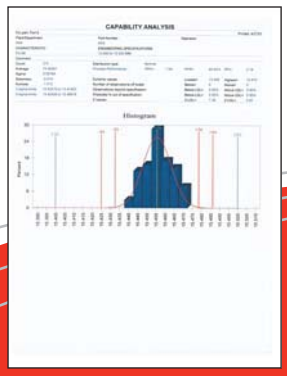
Use robust math functions to preprocess data as it is plotted in real time. Derive entire subgroups automatically from data collected elsewhere in the collection sequence.

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

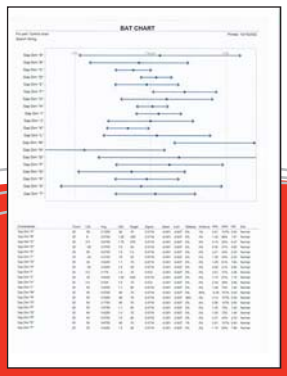
Use the “Exclude” screen button for instant point-and-click subgroup exclusion from upper and lower control limit calculations to eliminate the effects of isolated special causes of variation.

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.

Capability analysis/histogram



Bat chart



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.

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.

Import data from external sources. (Excel, ASCII files, database tables, OPC and DMP files)

All DataLyzer functions are also available through an Active X 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. During real-time data entry, use the “First Piece” button to enter control limit breaks.

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

Searchable help is available throughout the package.

A broad range of additional user-selectable and user-definable system features based on specific requirements from thousands of customers tailor DataLyzer® Spectrum operation to your individual needs.

DataLyzer Spectrum Stand Alone

Reports

Conveniently preview reports on the screen before printing.

Most common variable and attribute control charts and graphical analyses are supported including: X̄ & R, X Moving R, X̄ & -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.

Analyze specific subsets of data using the "Search" screen button and parameter filters.

8.5" x 11" or A4 report formats contain header, graphs and data for convenient analysis, faxing and filing.

Print most reports in HTML format for posting on the web or intranet, or e-mailing to customers.

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 analyze 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.

Create your own reports through ODBC access to the DataLyzer® Spectrum database.

DPMO (defects per million opportunities) reports are a variation of attribute control charts. The DPMO index plots graphically to provide a standardized metric for expressing component failure in terms of total opportunities for failure. It is often used for electronics assemblies, but applies to a wide variety of attribute data collection situations.

COMPANY HISTORY

DataLyzer International, Inc." (formerly Stephen Computer Services, Inc) was organized in the late 1970's to develop quality software for industry. Since that time we have established a solid reputation for innovation and customer responsiveness. DataLyzer International has contributed many firsts to its industry.

DataLyzer International was one of the first companies to provide a commercial SPC software package for industry in the early 1980's. Soon after, we developed the first commercial Gage Repeatability and Reproducibility software package. DataLyzer International was the first to introduce real-time data entry to its SPC packages and the first to introduce enterprise-wide solutions via local area networks as early as 1987. More recently, DataLyzer International was the first to offer multilingual SPC software products on multiple database platforms.

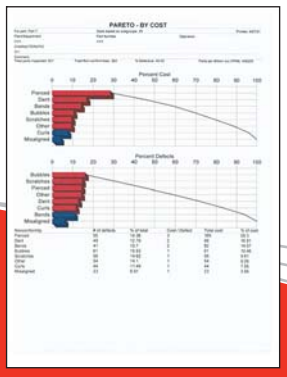
OUR MISSION

DataLyzer International, Inc. is in business to develop software for continuous improvement of quality and productivity.

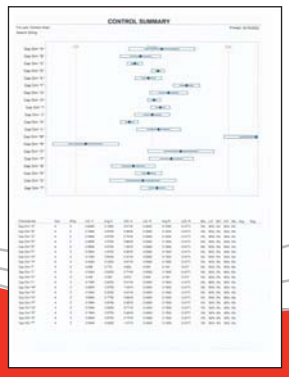
Our progress depends on successfully pursuing the following principles:

- Listen and respond to customers with strong, maintenance-free products and features.
- Offer maximum value in personal service with each customer contact, whether it be sales, support, documentation, consultancy or customer training.
- Be alert for opportunities to improve.
- Support customers for the long run.

Pareto chart



Control summary



DataLyzer Network Modules

Hub status

Satellite status

The DataLyzer® Spectrum SPC system offers a simple, inexpensive 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, labor, administration and engineering with the specific data entry, analytical and reporting tools needed at those areas. All modules actively interact, using the common database as a reference point.

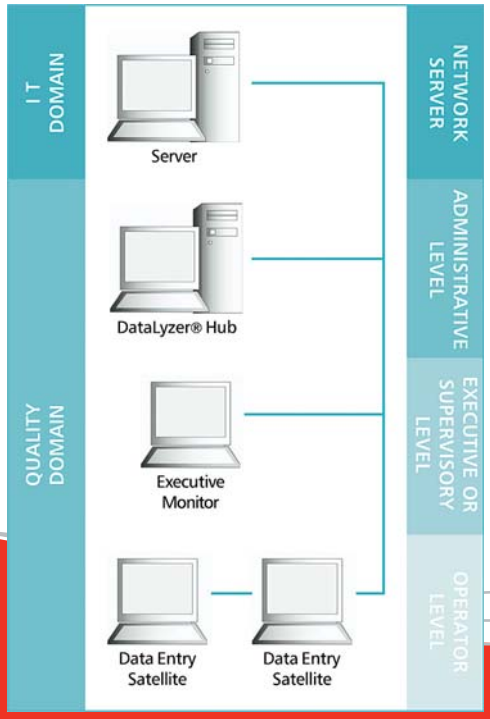
DataLyzer® Spectrum's foundation module is the Stand Alone package. It is used autonomously to create charts, enter data and print more than 30 different reports for management, engineers, auditors or customers. In some cases, multiple Stand Alone packages are employed by engineering staff to produce various offline analyses from one shared quality database.

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® Spectrum 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. Many different process statuses offer reference information at a glance, from statistical condition to whether checks were done on time. 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. Multiple, inexpensive Satellite packages are used for remote, real-time data entry and basic analysis.
Data entry is accomplished using graphical control charts like $\bar{X}$ & R and P charts or Histogram. Tabular (by-part) formats are also supported. Operators are encouraged to enter notes for problem processes. Each Satellite maintains a summary of its characteristics, organized by sequence. This local status screen provides an overview of the station in terms of many statistical and process control conditions. Satellite users enter data instantly by accessing any displayed collection sequence. Charts are created at the Hub and assigned to the Satellites locally, so minimal system access is available. Reporting is available and direct interfacing is included for most RS-232 gaging systems. "Local backup" can be used in SQL Server® and Oracle® systems to continue using local Satellites during network or database failure.

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. The Executive Monitor package is the same price as a Satellite, making them commercially interchangeable for licensing.



Customer Support

Technical support for the DataLyzer Spectrum system is available by phone, fax, or e-mail.
USA: Monday through Friday, 8:30 to 5:30 ET
Europe: Monday through Friday, 8:30 to 6:30 GMT -1
Other continents: Contact local reseller

Software purchases include no-charge updates for six months.

Support agreements are renewable annually for a modest fee. Services include new versions upon request and personal telephone, fax or e-mail support.

Training seminars are available in our offices or on site. Contact your salesperson for more information.

Custom software modifications can be quoted individually.

All registered users may access the DataLyzer International knowledgebase website. It contains hundreds of application notes about product support, industry specific applications, and suggestions for optimizing system performance.

Database Compatibility

DataLyzer Spectrum software versions are available for use with Microsoft Access databases, Microsoft SQL Server databases and Oracle databases (prices vary).

Operating System Compatibility

DataLyzer Spectrum modules work with the following Microsoft Windows operating systems: Windows 98, Windows 2000, Windows Me, Windows XP, Windows NT, Windows Vista and Windows 7. DataLyzer Spectrum is network-compatible with Windows NT and Novell® NetWare®. Citrix® and Microsoft Terminal Services thin client/server configurations can also be used.

Associated Modules

- DataLyzer Spectrum - Gage Management System
- DataLyzer SPC Wizard (data analysis and training module)

Download demonstration versions at www.DataLyzer.com

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