

STATISTICA

STATISTICA AXA will include Four Modules: STATISTICA Base, STATISTICA Advanced Linear / Non-Linear Models, STATISTICA Multivariate Exploratory Techniques & Power Analysis.

STATISTICA BGA will include Four Modules: STATISTICA Base, STATISTICA Design of Experiments, STATISTICA Quality Control Charts/ SIX SIGMA (DMAIC) TOOL BAR & STATISTICA Process Analysis.

STATISTICA AGA will include Seven Modules: STATISTICA Base, STATISTICA Advanced Linear / Non-Linear Models, STATISTICA Multivariate Exploratory Techniques. Power Analysis. STATISTICA Design of Experiment, Quality Control Chart/SIX SIGMA (DMAIC) TOOL BAR & STATISTICA Process Analysis.

❖ Various Modules under STATISTICA

➤ STATISTICA Base

- Descriptive statistics, breakdowns, and exploratory data analysis
- Correlations
- Basic Statistics from Results Spreadsheets (Tables)
- Interactive Probability Calculator
- T-Tests
- Frequency Tables, Cross tabulation Tables, Stub-and-Banner Tables, Multiple
- Response Analysis
- Multiple Regression Methods
- Nonparametric Statistics
- ANOVA
- Distribution Fitting

➤ STATISTICA Multivariate Exploratory Techniques

- Cluster Analysis Techniques
- Factor Analysis
- Principal Components & Classification Analysis
- Canonical Correlation Analysis
- Reliability/Item Analysis
- Classification Trees
- Correspondence Analysis

- Multidimensional Scaling
- Discriminate Analysis
- General Discriminant Analysis Models (GDA)

➤ **STATISTICA Advanced Linear/Non-Linear Models**

- Variance Components and Mixed Model ANOVA/ANCOVA
- Survival/Failure Time Analysis
- General Nonlinear Estimation (and Quick Logit/ Probit Regression)
- Log-Linear Analysis of Frequency Tables
- Time Series Analysis/Forecasting
- Structural Equation Modeling/Path Analysis (SEPATH)
- General Linear Models (GLM)
- General Regression Models (GRM)
- Generalized Linear Models (GLZ)
- General Partial Least Squares Models (PLS)

➤ **STATISTICA Power Analysis**

- 1-sample t-test
- 2-sample independent sample t-test
- 2-sample dependent sample t-test
- Planned contrasts
- 1-way ANOVA (fixed and random effects)
- 2-way ANOVA
- Chi-square test on a single variance
- F-test on 2 variances
- Z-test (or chi-square test) on a single proportion
- Z-test on 2 independent proportions
- McNemar's test on 2 dependent proportions
- F-test of significance in multiple regression
- t-test for significance of a single correlation
- Z-test for comparing 2 independent correlations
- Log-rank test in survival analysis
- Test of equal exponential survival, with accrual period
- Test of equal exponential survival, with accrual period and dropouts
- Chi-square test of significance in structural equation modeling
- Tests of "close fit" in structural equation modeling confirmatory factor analysis

➤ **STATISTICA Quality Control Charts**

- Offers fully customizable easy and Quick to use, versatile charts with selection of automations options, and user interface shortcuts to simplify routine works.
- Multiple Charts (Six Sigma style) Reports and displays
- X Bar and/or R Charts; s^2 , Np, P, U, C Charts
- Pareto Charts
- Process capability and Performance Indices
- Moving Average/range Charts, EWMA Charts
- Short Run charts (including nominal and target)
- CUSAM (cumulative sum) charts
- Runs tests
- Multiple process , streams and more

➤ **STATISTICA Process Analysis**

A comprehensive for process capability, Gage R&R, and other quality control /improvement applications

- Process/Capability analysis charts
- Ishikawa (cause and effects) diagram
- Gage repeatability and reproducibility
- Variance components for random effects
- Weibull Analysis, sampling plans and more

➤ **STATISTICA Design of Experiments**

- Design of Experiments
- Analysis of experiments: General features
- Residual analyses and transformations
- Optimization of single or multiple response variables: The response (desirability) profiler
- Standard two-level 2^{k-p} fractional factorial designs with blocks (Box-Hunter-Hunter minimum aberration designs).
- Minimum aberration and maximum unconfounding 2^{k-p} fractional factorial designs with blocks: General design search
- Screening (Plackett-Burman) designs
- Mixed-level factorial designs
- Three-level 3^{k-p} fractional factorial designs with blocks and Box-Behnken designs
- Central composite (response surface) designs
- Latin squares
- Taguchi robust design experiments
- Designs for mixtures and triangular graphs
- Designs for constrained surfaces and mixtures
- D- and A-optimal designs
- Alternative procedures for analyzing data collected in experiments.

➤ STATISTICA Solutions for Six Sigma

STATISTICA serves as an analytic software platform for Six Sigma programs and implementations of any size. Six Sigma's emphasis on measurement and analysis requires a full-featured statistical analysis software system. STATISTICA provides all necessary data management, analysis, and graphics capabilities to empower the Six Sigma Green Belts, Black Belts and Master Black Belts with the analytic tools to explore data, determine the most important factors, and perform data-driven decision-making.

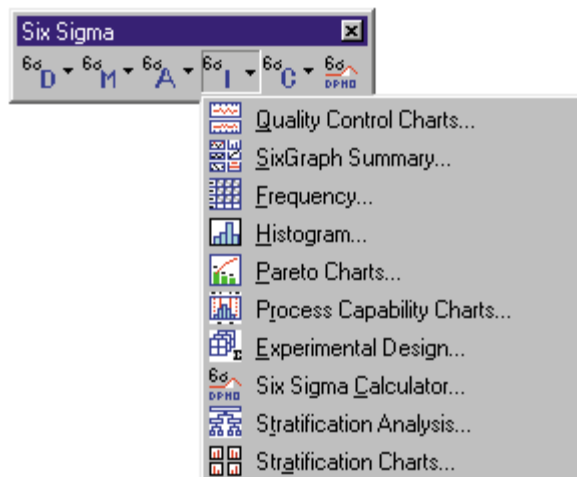
STATISTICA provides two categories of solutions for Six Sigma applications:

- **Desktop** - designed for use from a single workstation
- **Enterprise** - multi-user, collaborative, analytics platforms with security and access control, central administration, analysis templates, and automated Report generation

The **Enterprise version of STATISTICA** is specifically designed to facilitate collaborative work using a comprehensive (and fully configurable to the local needs and conditions) software environment. Based on state-of-the-art connectivity technologies, **Enterprise/QC** is designed for local and global enterprise quality control and improvement Six Sigma applications. It offers real-time monitoring and alarm notification for the production floor, a comprehensive set of analytical tools for engineers, and sophisticated reporting features for management.

The Industrial Statistics & Six Sigma menu of STATISTICA provides the power and comprehensiveness of the complete STATISTICA analytic routines; these tools are organized into groups of relevant methods according to the Six Sigma (DMAIC) Shortcuts strategy, following the DMAIC sequence of steps

You can launch a Six Sigma toolbar with five submenus representing the five DMAIC steps:



It also offers:

Web-enabled user interface and specific Six Sigma reporting tools and options with interactive querying tools

- User-specific interfaces for operators, engineers, managers, and analysts
- User-specific interfaces for all professional levels involved in the Six Sigma effort; from simple interfaces and shortcuts for support personnel, and more advanced tools for Green Belts, to the most sophisticated data analysis and data mining and graphing environment for Master Black Belts
- Groupware functionality for sharing queries, special applications, etc. that is invaluable in the implementation of Six Sigma projects across an organization
- Fully automated graphical monitoring of processes and quality improvements using the most advanced graphics technologies available to date
- Integration with your data repositories including MRP, LIMS, Process Information repositories, and ERP systems

STATISTICA Enterprise/QC is based on state-of-the-art connectivity, multitasking and distributed processing technologies. STATISTICA Enterprise/QC is designed for local and global enterprise quality control/improvement and **Six Sigma** applications. It includes a high performance database (or optimized interface to existing databases), real-time and remote monitoring and alarm notification for the production floor, a comprehensive set of analytical tools for engineers (all the functionality of **STATISTICA QC Charts**, **Process Analysis**, **Design of Experiments**, and much more), sophisticated, **Web-enabled user interface** and reporting features for management, Six Sigma reporting options, and much more.

STATISTICA Enterprise/QC is by far the most powerful, flexible, customizable, and comprehensive enterprise SPC solution available.

Here are some of the features:

- **Benefits**
- **Competitive Advantages**
- **Users with Varying Needs**
- **Integration with STATISTICA**
- **Flexible Data Entry**
- **Web-based Information Delivery - WebSTATISTICA Enterprise/QC**
- **Customizable Report Generation**
- **Ease of Administration**

❖ **Benefits**

STATISTICA Enterprise/QC features concise report selection menus, more advanced analytical tools, and a simple user interface for the shop floor.

It features:

- A high performance database with intuitive system administration tools and a built-in security system
- Different User Interfaces for Different Types of Users
- Easy-to-use database access facilities, including interactive queries
- A wide selection of analytical tools, including a Six Sigma DMAIC tool kit
- VB integration with database applications, macro recording
- One-click access to analyses & reports
- Groupware functionality for sharing queries, special applications, etc.
- Connectivity and integration with external applications (MS Word, MS Excel, browsers)
- Unlimited options for expansion and customization

Plus, something for everyone in your organization...

- One-click access to analyses & reports; comprehensive analytical tools for engineers
- Web-enabled user Interface & reporting; real-time, remote process monitoring for management
- Simple Interface for data entry; real-time charting & open-ended alarms including cause/action prompts for shop floor operators
- and much, much more...

❖ **Competitive Advantages**

Comprehensive, Optimized, and Flexible Database Structure

In one central location, for plant-wide or company-wide access, the *STATISTICA Enterprise/QC* data warehouse stores all information necessary for an SPC solution of practically any scale. Its structure is optimized so it is reliable and quick to query. The *STATISTICA Enterprise/QC* database includes pre-packaged, simple data entry forms. Operators can enter data either manually or electronically into an optimized, high-performance database schema, for efficient data access and analysis. The *STATISTICA Enterprise/QC* database is compatible with all standard database management systems,

including Oracle, SQL Server, and Access. (See [Central Management](#) and [Data and Knowledge-Sharing Environment](#)).

Scalability

STATISTICA Enterprise/QC is based on the most advanced, expandable, and compatible technologies designed to meet your needs in the 21st century. *STATISTICA Enterprise/QC* is specifically designed to be quantitatively and qualitatively scalable, that is, to grow with no limits as your needs grow. In other words, no architectural changes are necessary as you add new users, processes, categories of data, specific reports, analyses, or integration with new data sources.

Central Management

All information, including user permissions, measurements, how data are to be collected, SPC specifications, etc., is stored in the *STATISTICA Enterprise/QC* data warehouse. *STATISTICA Enterprise/QC* provides a suite of system administration tools for flexible and very efficient central management. Changes are made to the database once and are automatically reflected on all workstations.

Two Options for Web-enablement

STATISTICA Enterprise/QC offers two options for Web-enablement:

- *STATISTICA Enterprise/QC* Web Viewer (via [WebSTATISTICA Knowledge Portal](#))
- *WebSTATISTICA Enterprise/QC* Complete (via [WebSTATISTICA Server](#))

STATISTICA Enterprise/QC Web Viewer features a powerful report generation tool for creating highly customized reports automatically updated on your Web server, with secure access options (and formatted the way that you want).

WebSTATISTICA Enterprise/QC Complete (via *WebSTATISTICA* Server) adds full Internet enablement to *STATISTICA Enterprise/QC*, including the ability to interactively run *STATISTICA Enterprise/QC* from a Web browser. It enables users to easily and quickly access data and powerful analytical tools from virtually any computer in the world as long as it is connected to the Web.

Customized View of the Production Process

An SPC system should be intuitive and easy-to-use, otherwise end users will not be inclined to utilize its full capabilities (regardless of how powerful its arsenal of SPC analyses might be!). The system administration tools in *STATISTICA Enterprise/QC* allow you to determine how users will view the

production process. You can view information organized by product, process, department, report type, etc. *STATISTICA Enterprise/QC* is flexible, with no limits on how this information is structured. Instant system-wide changes can be implemented from any location depending only on system access privileges.

Truly Designed for the Enterprise

An SPC system designed for enterprise-wide use should accommodate the needs of many different types of users. From the straightforward data entry screens for shop-floor operators to the powerful analytic query-building interfaces for QC engineers, the system adapts for different user permissions and responsibilities. As a result, *STATISTICA Enterprise/QC* may look different for each user.

Data and Knowledge-Sharing Environment

All measurements and chart/report definitions are stored in the *STATISTICA Enterprise/QC* database. From the desktop, an engineer can view the latest data from a set of processes in QC charts as soon as new data are collected. Predefined sets of charts or reports are generated automatically with the press of a button.

STATISTICA

For its numerical and graphical processing, *STATISTICA Enterprise/QC* utilizes the state-of-the-art algorithms from *STATISTICA*, an industry-leader in SPC analyses. *STATISTICA* has been providing peerless SPC solutions for many years and has been ranked the highest in every comparative review in which it was featured since its first release. Read highlights of [reviews of *STATISTICA*](#).

While other vendors offer SPC programs that can retrieve data from databases, as of now, no other SPC solution offers the true enterprise system integration and the full functionality of *STATISTICA Enterprise/QC*.

STATISTICA Enterprise/QC combines the highest performance system integration technology with unmatched customizability and scalability implemented in a way that allows tailoring the system to specific needs, adjusting and expanding it using simple self-explanatory wizards. *STATISTICA Enterprise/QC* can handle practically unlimited amounts of data, integrate with existing database management systems and data warehouses of practically any complexity to form seamlessly connected information delivery and decision support systems of unmatched power and ease of use.

User Feedback

In addition to achieving unprecedented success in formal reviews, both *STATISTICA Enterprise/QC* and *STATISTICA* have received positive recognition from users. Read [published comments](#) from *STATISTICA Enterprise/QC* users and *STATISTICA* users.

❖ Users and Varying Needs

Different users in an organization have different needs. *STATISTICA Enterprise/QC* allows the system administrator to determine how different users will view the production process. *STATISTICA Enterprise/QC* features concise report selection menus, more advanced analytical tools, and a simple user interface for all types of users.

❖ Integration with *STATISTICA*

STATISTICA Enterprise/QC offers unmatched analytic, exploratory, and reporting power through its fully integrated access to all data analysis tools of *STATISTICA* (the most comprehensive data analysis, [graphics](#), reporting, and application development system). Depending on the specific configuration, different components of the *STATISTICA* line of data analysis tools can be made available to different categories of *STATISTICA Enterprise/QC* users. Many of those tools are also available in single-user versions. These tools include the largest selection of [DOE](#) (design of experiments), [industrial process analysis](#), customizable [QC charts](#), [modeling](#), [exploratory](#), [data mining](#) and many other knowledge discovery tools (including the most comprehensive implementations of such specialized methods as [neural networks](#) and [power analysis](#) available on the market). Recorded or custom macros written in *STATISTICA* can be easily deployed in *STATISTICA Enterprise* analysis configurations. With *STATISTICA*'s integration with [R](#), these scripts too are easily deployed on a schedule or on demand.

Connectivity Options

STATISTICA Enterprise/QC features state-of-the-art connectivity options that allow data acquisition from virtually any external database (data warehouses, data marts, multi-dimensional databases, etc.).

❖ Flexible Data Entry

How is your data collected? Do your operators enter in SPC data by keyboard? Or do you use gages or automated data collectors?

Would you like to collect measurements one at a time or simultaneously?

STATISTICA Enterprise/QC includes very flexible interfaces that allow you to collect data in a variety of ways. Whether you collect data by keyboard or an automated data collector, the

data is fed directly into the *STATISTICA Enterprise/QC* system via a database or data warehouse without any operator data entry dialogs. This newly collected information can be viewed, queried, and used in reports that are automatically generated (see *STATISTICA Enterprise Reports*).

Data collection can be variable or attribute in nature and can be collected piecewise (all measurements for a piece or part are collected before moving on to the next part) or characteristic-wise (allows you to enter data for each characteristic). Sample-wide data entry allows an entire sample to be collected in one screen.

Options for Web-enablement

How much more efficient could you be if you were able to post up-to-date reports, charts, and tables on the Internet automatically, virtually in real-time, and without knowledge of HTML or Java programming languages?

Do you need a secure information delivery system where your colleagues and customers, even those without *STATISTICA Enterprise/QC*, can view this important information via the Internet?

STATISTICA Enterprise/QC offers options for Web-enablement with *WebSTATISTICA Enterprise/QC* (via **WebSTATISTICA Server**).

WebSTATISTICA Enterprise/QC (via *WebSTATISTICA Server*) adds full Internet enablement to *STATISTICA Enterprise/QC*, including the ability to interactively run *STATISTICA Enterprise/QC* from a Web browser. It enables users to easily and quickly access data and powerful analytical tools from virtually any computer in the world as long as it is connected to the Web. The product is provided with an Internet browser-based user interfaces (in the form of extremely simple to navigate and easy-to-use dialogs) allowing users to specify analyses and review results using an Internet browser. Also, tools are provided to customize these dialogs and easily set up new, customized user interfaces or to add new functions. For example, a simple dialog with only three buttons can appear in the browser, where pressing each of the buttons will run a series of analyses and generate a detailed report.

❖ Customizable Report Generation

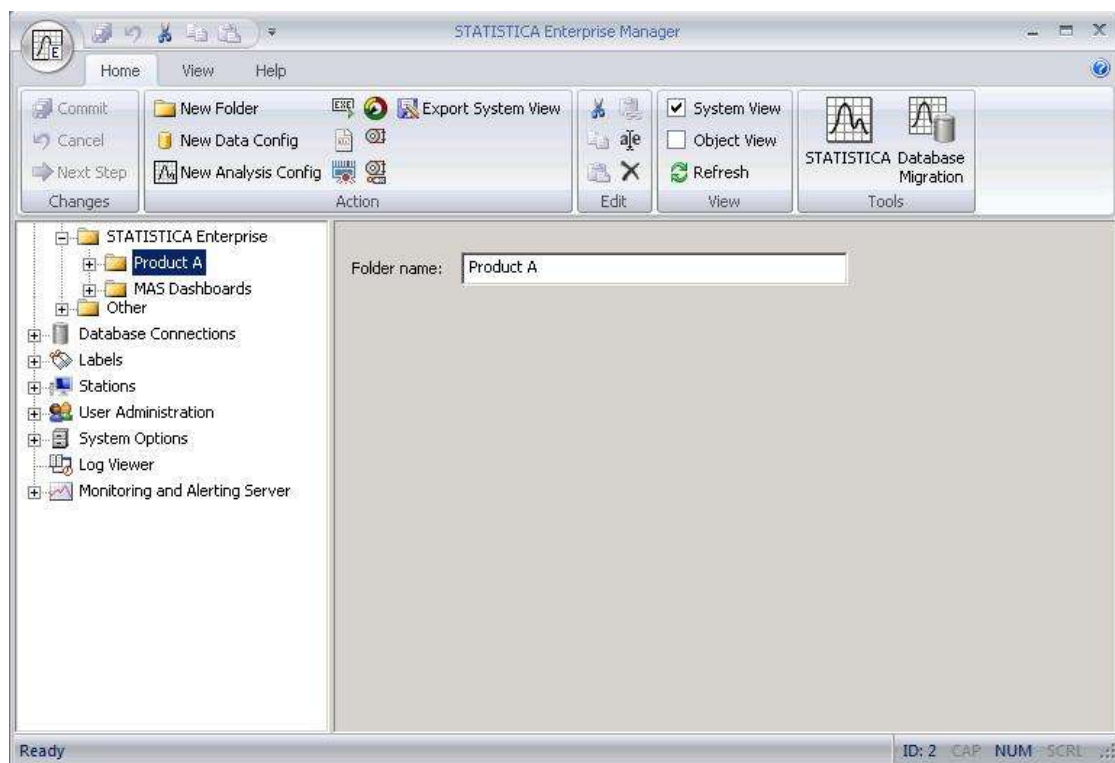
Do you need reports automatically generated according to your specifications?

The *STATISTICA Enterprise/QC* includes a powerful **report generation tool**. You can create highly customized reports - formatted the way that you want, created at times that you choose, with output generated according to your specifications.

❖ Ease of Administration

STATISTICA Enterprise/QC includes a suite of easy-to-use administration tools. They provide you with the power to define who can use the system, the permissions of users, the measurements collected, how they are collected, how they are analyzed, etc. These tools contribute to the flexibility and scalability of the system. For example, when you decide to begin data collection on another production line, it is as simple as making the necessary additions to the system with the administration tools. Unlike other SPC packages, *STATISTICA Enterprise/QC* is centrally managed for the entire enterprise. Changes made to the system through the administration tools are immediately reflected on all workstations.

Here is a picture of the Enterprise Manager administration tool:



STATISTICA Enterprise is compatible with Windows XP, Windows Server 2003, Windows Vista, Windows 7, and Windows Server 2008.

This product requires the installation of a database. StatSoft supports the use of ODBC compliant databases such as Access, SQL Server, Oracle, and others.

System Requirements are based on an average size implementation. Server requirements are based on the number of concurrent users simultaneously accessing the system.

Minimum System Requirements

Operating System: Windows Server 2003

RAM: 2 GB

Processor Speed: 1 GHz

Recommended System Requirements

Operating System: Windows Server 2003 or later

RAM: 8 GB

Processor Speed: 2.0 GHz, 64-bit, dual core

Notes:

- System Requirements are based on an average sized implementation.
- The 64-bit version of *STATISTICA* Enterprise Server requires a 64-bit processor and operating system.
- For the 32-bit version of *STATISTICA*, a 64-bit processor and operating system is recommended due to the better memory management of the 64-bit operating systems.