Statistics | Base ✔ | Standard ✔ | Premium ✔ |

Data Access and Management

- Data Prep features: Define Variable properties tool; copy data properties tool, Visual Bander, Identify Duplicate cases; Date/Time Wizard
- Data Restructure Wizard
  - single record to multiple records
  - multiple records to single record
- Direct Excel data access
- Export data to SAS and current versions of Excel
- Export to Database Wizard
- Import/export to/from Dimensions
  - (mrInterview and mr Heritage products)
- Long Variable names
- Longer value labels
- Multiple datasets can be run in one SPSS session
- ODBC Capture - DataDirect Drivers
- OLE DB data access
- SAS 7/8/9 data files including compressed files
- Text Wizard
- Unicode support
- Very long text strings

Graphs

- Auto and Crosscorrelation Graphs
- Basic Graphs
- Chart Gallery
- Chart Looks
- ChartBuilder UI for commonly used charts
- Charts for multiple response variables
- Graphics Production Language for custom charts
- Interactive Graphs - Scriptable
- Overlay and dual Y charts
- Panelled charts
- ROC analysis
- Time Series Charts

Data Editor

- Custom Attributes for user-defined meta-data
- Spell Checker
- Splitter controls
- Variable Sets for wide data

Help

- Application Examples • Tutorial
- Index
- Statistics Coach

Output

- Case Summaries
- Codebook
- Enhanced control over output when
- Exporting to MS Office
- Export model as XML to SmartScore
- Export to PDF
- Export to Word/Excel/PowerPoint
- HTML output
- Improved performance for Large Pivot Tables
- OLAP Cubes/Pivot Tables
- Output Management System
- Output Scripting
- Reports Summaries in Rows & Columns
- Search and replace
- Smartreader
- Table to Graph Conversion

Extended Programmability

- Custom UI Builder enhancements (work seamlessly with Python and R
- Flow control or syntax jobs
- Partial Least Squares regression
- Python for front end scripting
- SPSS equivalent of the SAS DATA STEP
- Support for R algorithms and graphics
- User defined procedures

Statistics | Base ✔ | Standard ✔ | Premium ✔ |

Basic Statistics

- ANOVA (in syntax only)
- Cluster
- Correlate- bivariate, partial, distances
- Crosstabs
- Define variable sets
- Descriptive Ratio Statistics (PVA)
- Descriptive Statistics
- Discriminant analysis
- Enhanced Model Viewer On Two-Step
- Explore
- Factor analysis
- Frequencies
- Matrix Operations
- Means
- Nearest Neighbor Analysis
- one way ANOVA
- Ordinal Regression (PLUM)
- Ordinary Least Squares Regression
- PP Plots
- QQ Plots
- Violin Plots
- Ratio
- Reliability and ALSCAL multidimensional scaling
- ROC Curve
- Rule Checking on Secondary SPC Charts
- Summarize data
- T Tests - Paired Samples, Independent Samples, One-Samples
- Two-Step Cluster: categorical and continuous data/large data sets

Non-Parametric Tests

One-sample tests:
- Binomial
- Chi-Square
- Kolmogorov-Smirnov
- Runs

Tests for two related samples:
- McNemar
- Sign
- Wilcoxon

Tests for k related samples:
- Cochran
- Friedman
- Kendall

Tests for two independent samples:
- Mann-Whitney
- Kolmogorov-Smirnov
- Wald-Wolfowitz
- Moses

Tests for k independent samples are:
- Kruskal-Wallis
- Median

Graphs

Legacy chart dialogs

Multithreaded Algorithms

SORT

Syntax

Syntax editor

Statistics : | Base ✔* | Standard ✔* | Premium ✔ |

* Bootstrapping and Data Preparation modules are only included in Base **version 31**

Bootstrapping*

SPSS Base Procedures that can be bootstrapped (All Grad Pack editions)

- Correlations/Nonparametric Correlations
- Crosstabs
- Descriptives
- Examine
- Frequencies
- Means
- Partial Correlations
- T-tests
- Discriminant
- Binary Multinomial Logistic ordinal regression
- Oneway
- UniAnova

Advanced Procedures that can be bootstrapped (Standard or Premium Grad Pack required)

- Cox Regression
- GENLIN
- GLM
- Linear Mixed Models
- Logistic Regression
- Nominal Regression
- Regression

Data Preparation*

- Enhanced Model Viewer for Automated Data Preparation
- Validate data (Streamline the process of validating data before analyzing it)
- Anomaly detection (Identify unusual cases in a multivariate setting)
- Optimal Binning

Statistics : | Base ✗ | Standard ✓* | Premium ✓ |

* Custom Tables module is only included in the Standard **version 31**

Advanced Statistics

General Linear Modelling (GLM):

- General Factorial
- Multivariate (MANOVA)
- Repeated Measures
- Variance Components

Generalised Linear Models and Generalised Estimating Equations:

- Gamma Regression
- Poisson Regression
- Negative Binomial

- GENLOG for Loglinear and Logit
- Hierarchical Loglinear Models
- Kaplan Meier
- Linear Mixed-level Models (aka Hierarchical Linear Models)
- Survival Analysis
- Variance Component Estimation

Regression

- Binary Logistic Regression
- Logit Response Models
- Multinomial Logistic Regression
- Nonlinear Regression
- Probit Response Analysis
- Two Stage Least Squares
- Weighted Least Squares

Custom Tables*

- 35 descriptive statistics
- Drag and drop interface
- Inferential statistics
- Nested Tables
- Place totals in any row, column, or layer
- Post Computed Categories
- Put multiple variables into the same table
- Sig tests on multiple response variables
- Significance test in Custom Tables main table
- Specialized multiple response set tables
- Syntax converter
- Table preview

Statistics : | Base X | Standard X | Premium ✓ |

Missing Values

- Data Patterns Table
- Imputation with Means Estimation or Regression
- Listwise and Pairwise Statistics
- Missing Patterns Table
- Multiple imputation of missing data
- Pooling

Categories

- Correspondence analysis
- Principal components analysis for categorical data (replaces PRINCALS)
- Ridge Regression, Lasso, Elastic Net
- Nonlinear canonical correlation
- Multidimensional scaling for individual differences scaling with constraints
- Preference scaling (multidimensional unfolding)
- Multiple Correspondence Analysis

Complex Samples

- Complex Samples Cox Regression (also multithreaded)
- Complex Samples Descriptives
- Complex Samples General Linear Models
- Complex Samples Logistic Regression
- Complex Samples Ordinal Regression
- Complex Samples Selection
- Complex Samples Tabulate
- SamplingWizard/Analysis Plan Wizard

Decision Trees

- Classification and Regression Trees (C&RT)
- Chi-square Automatic Interaction Detector (CHAID)
- Exhaustive CHAID
- QUEST

Forecasting

- Auto Regressive Integrated Moving Average
- Autoregression
- Expert Modeler
- Exponential Smoothing Methods
- Forecast multiple series (outcomes) at once
- Seasonal Decomposition
- Spectral Analysis

Conjoint

- CONJOINT (Estimate Utilities)
- ORTHOPLAN (For conjoint analysis)
- PLANCARDS

Neural Networks

- Multilayer Perception
- Radial Basis Function

Direct Marketing

- Cluster Analysis
- Contact Profiling
- Control Package Test
- Propensity to Purchase
- RFM analysis- recency, frequency, monetary
- Zip code response

Exact Tests

Monte Carlo method & Exact Method can be applied to the following tests: >30 Tests for nonparametric & categorical data, 1-Sample Chi-square test, 1-Sample Kolmogorov-Smirnov test, 1-Sample Wald-Wolfowitz runs test, 2-Sample Kolmogorov-Smirnov test, Binomial test, Cochran's Q test, Contingency coefficient, Cramer's V, Fisher's exact test Somers' D—symmetric and asymmetric, Friedman test, Gamma, Goodman and Kruskal Tau, Jonckheere-Terpstra test, Kappa, Kendall's coefficient of concordance, Kendall's Tau-b and Tau-c, Kruskal-Wallis test, Likelihood ratio test, Linear-by-linear association test, Mann-Whitney U or Wilcoxon rank-sum W test, Marginal homogeneity test, McNemar test, Median test, Pearson Chi-square test, Pearson's R, Phi, Sign test, Spearman correlation, Uncertainty coefficient—symmetric or asymmetric, Wald-Wolfowitz runs test, Wilcoxon signed-rank test