

Why use IBM SPSS Statistics?

IBM SPSS Statistics is the world's leading statistical software. It enables you to quickly dig deeper into your data, making it a much more effective tool than spreadsheets, databases or standard multi-dimensional tools for analysts. SPSS Statistics excels at making sense of complex patterns and associations—enabling users to draw conclusions and make predictions. And it's fast—handling tasks like data manipulation and statistical procedures in a third of the time of many non-statistical programs.

Propel research and analysis with a comprehensive statistical software solution

IBM® SPSS® Statistics software delivers a powerful set of statistical features that enable your organization to make the most of the valuable information your data provides. By digging deeper into your data, you can discover information to improve decision making—ultimately expanding markets, improving research outcomes, ensuring regulatory compliance, managing risk and maximizing ROI to name a few.

IBM SPSS Statistics features robust and sophisticated functionality and procedures that address the entire analytics lifecycle:

- Addresses all facets of the analytical process from data preparation and management to analysis and reporting
- Improves forecasts and plans by imputing missing values with expected values using regression and expectation-maximization
- Provides automated methods to identify anomalies and statistical transformations to address outliers
- Delivers tables and visualizations to communicate results effectively
- Classifies cases into groups and predicts values of a target variables based on values of predictor variables
- Enables accurate modeling of linear and non-linear relationships

There are two ways to purchase IBM SPSS® Statistics: through a subscription plan or a traditional on-premises license edition. In this document we will be covering details of the on-premises version. Want to know about the SPSS Statistics Subscription plans?

[Read this datasheet.](#)

The on-premises version includes one year of technical support and you can choose either a perpetual or term license for Windows or Mac. The on-premise license option includes these editions – Base, Standard, Professional and Premium. These editions group essential features, functionality and usage requirements to offer a convenient way to acquire the capabilities you need. For details of the features included in each of the editions, visit these links

- [Base](#)
- [Standard](#)
- [Professional](#)
- [Premium](#)



Base

Standard

Professional

Premium

| Modules | Commercial Editions (Perpetual/Term Licenses) | | | |
|---|--|----------|--------------|---------|
| | Base | Standard | Professional | Premium |
| Statistics Base | ● | ● | ● | ● |
| Data Preparation | ● | ● | ● | ● |
| Bootstrapping | ● | ● | ● | ● |
| Advanced Statistics | | ● | ● | ● |
| Regression | | ● | ● | ● |
| Custom Tables | | ● | ● | ● |
| Missing Values | | | ● | ● |
| Categories | | | ● | ● |
| Forecasting | | | ● | ● |
| Decision Trees | | | ● | ● |
| Neural Networks | | | | ● |
| Direct Marketing | | | | ● |
| Complex Samples | | | | ● |
| Conjoint | | | | ● |
| Exact Tests | | | | ● |
| SPSS Amos*** (Windows, Desktop only) | Add-on | Add-on | Add-on | ● |



Want to know about the SPSS Statistics Subscription plans? [Read this datasheet.](#)

IBM® SPSS® Statistics Traditional License packages and features

Base

1 2 3

Standard

Professional

Premium

Base package

The Base package includes the following features:

Data access and management

- Compare two data files for compatibility
- 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
- Easier importing from Excel and CSV
- Export data to SAS and current versions of Excel
- Export/insert to Database wizard
- Import data from IBM Cognos® Business Intelligence
- Import/export to/from Dimensions
- Import Stata files (until V14)
- Long variable names
- Longer value labels
- Multiple datasets can be run in one SPSS session
- ODBC Capture—DataDirect drivers
- OLE DB data access
- Password protection
- SAS 7/8/9 data files including compressed files)
- Text wizard
- Unicode support
- Very long text strings

Data preparation

- Automated 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

Graphs

- Auto and cross correlation graphs
- Basic graphs
- Mapping (geospatial analysis)
- Chart gallery
- Chart options
- 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
- Relationship map



Base

1 2 3

Standard

Professional

Premium

Output

- Case summaries
- Style output
- Conditional formatting
- Codebook
- Export charts as Microsoft Graphic Object
- Export model as XML to SmartScore
- Export to PDF
- Export to Word/Excel/PowerPoint
- HTML output

Help features

- Application examples
- Index
- Tutorial
- Extensions
- Search

Data editor enhancements

- Custom attributes for user-defined metadata
- Spell checker
- Splitter controls
- Variable sets for wide data
- Variable icons
- Optimal binning
- Improved performance for large pivot tables
- OLAP cubes/pivot tables
- Output management system
- Output scripting
- Reports summaries in rows and columns
- Search and replace
- Smart devices (tablets and phones)
- Table to graph conversion
- Web reports

Extended programmability

- Custom UI builder enhancements (work seamlessly with Python and R and can be used in IBM SPSS Modeler)
- New Extensions hub
- Custom dialog builder for Extensions
- Flow control or syntax jobs
- Partial least squares regression
- Python, .NET and Java for front-end scripting
- SPSS equivalent of the SAS DATA STEP
- Support for R algorithms and graphics
- User-defined procedures



Base

1 2 3

Standard

Professional

Premium

Statistics

- ANOVA (in syntax only)
- Automatic linear models
- Cluster
- Correlate—bivariate, partial, distances
- Crosstabs
- Define variable sets
- Descriptive ratio statistics (PVA)
- Descriptives
- Discriminant analysis
- Enhanced model viewer on two-step cluster and new nonparametrics
- Explore
- Factor analysis
- Frequencies
- Geo-spatial analytics (STP and GSAR) (NEW!)
- Improved performance for frequencies, crosstabs, descriptives
- Power Analysis
- (Statistics Base Server)
- Matrix operations
- Means
- Monte Carlo simulation
- Nearest neighbor analysis
- New nonparametric tests
- One way ANOVA
- Ordinal regression (PLUM)
- Ordinary least squares regression
- Power Analysis
- PP plots
- QQ plots
- Ratio
- Reliability and ALSCAL multidimensional scaling
- ROC curve
- Compare ROC curves
- 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
- Weighted Cohen's kappa
- Meta-analysis

Multithreaded algorithms

- SORT

Bootstrapping

- Sampling and pooling
- Descriptive procedures that can be bootstrapped
 - Correlations/nonparametric correlations
 - Crosstabs
 - Descriptives
 - Examine
 - Frequencies
 - Means
 - Partial correlations
 - T tests



Base
1 2 3

Standard

Professional

Premium

Standard package

The Standard package includes the Base package plus the following features:

Regression

- Binary logistic regression
- Logit response models
- Multinomial logistic regression
- Nonlinear regression
- Probit response analysis
- Two stage least squares
- Weighted least squares
- Quantile regression

Advanced statistics

- Cox regression
- General linear modeling (GLM)
 - General factorial
 - Multivariate (MANOVA)
 - Repeated measures
 - Variance components
- Generalized linear models and generalized estimating equations
 - Gamma regression
 - Poisson regression
 - Negative binomial
- GENLOG for loglinear and logit
- Generalized linear mixed models (GLMM) (ordinal targets included)
- Bayesian statistics
- Hierarchical loglinear models
- Kaplan Meier
- Linear mixed-level models (aka hierarchical linear models)
- Survival
- Variance component estimation

Custom tables

- 35 descriptive statistics
- Drag and drop interface
- Inferential statistics
- Nested tables
- Place totals in any row, column, or layer
- Post computed categories
- Effective base for weighted sample results
- Put multiple variables into the same table
- Significance tests on multiple response variables
- Significance test in custom tables main table
- Significance values for column means and column proportion tests
- Specialized multiple response set tables
- False discovery correction method for multiple comparisons
- Syntax converter



Base

1 2 3

Standard

Professional

Premium

Professional package

The Professional package includes Base and Standard package features, plus the following:

Forecasting

- Auto regressive integrated moving average
- Autoregression
- Expert modeler exponential smoothing methods
- Forecast multiple series (outcomes) at once
- Temporal causal modeling
- Seasonal decomposition
- Spectral analysis

Categories

- Correspondence analysis (ANACOR)
- Principal components analysis for categorical data (CATPCA; replaces PRINCALS)
- Ridge regression, lasso, elastic net (CATREG)
- CORRESPONDENCE
- Nonlinear canonical correlation (OVERALS)
- Multidimensional scaling for individual differences scaling with constraints (PROXSCAL)
- Preference scaling (PREFSCAL; multidimensional unfolding)
- Multiple correspondence analysis

Missing values

- Data patterns table
- Imputation with means estimation or regression
- Listwise and pairwise statistics
- Missing patterns table
- Multiple imputation of missing data
- Pooling

Decision trees

- C&RT
- CHAID
- Exhaustive CHAID
- QUEST

Data preparation

- Automated 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



Base

1 2 3

Standard

Professional

Premium

Premium package

The Premium package includes Base, Standard and Professional features plus the following:

Exact tests

- 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

Complex samples (CS)

- CS Cox regression (also multithreaded)
- CS descriptives
- CS general linear models
- CS logistic regression
- CS ordinal regression
- CS selection
- CS tabulate
- Sampling wizard/Analysis Plan wizard

Neural networks

- Multilayer perception
- Radial basis function

Conjoint

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

Direct marketing

- Cluster analysis
- Contact profiling
- Control package test
- Propensity to purchase
- RFM analysis: recency, frequency, monetary
- Zip code response

AMOS (Structural Equation Modeling)

- Bayesian estimation
- Confirmatory factor analysis
- Enter the model into a spreadsheet-like table (no programming)
- Estimation of categorical and censored data
- Latent class analysis
- Non-graphical method of modeling
- Structural equation modeling/path analysis
- Specify path diagram using syntax



For more information

To learn more about IBM SPSS Statistics, to start a free trial or to make a purchase, visit:
www.ibm.com/spssstatistics

© Copyright IBM Corporation 2021

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the United States of America
May 2021

IBM, the IBM logo, ibm.com, Cognos and SPSS are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at ibm.com/legal/copytrade.shtml

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

91022091USEN-04

