IBM® SPSS® Statistics Subscription: Base, add-ons and features

Base package
The Base subscription includes the following features:

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**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

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Add-on: Custom tables and advanced statistics

Add-on: Complex sampling and testing

Add-on: Forecasting and decision trees
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

- 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

Help features

- Application examples
- Index
- Statistics coach
- Tutorial
- Extensions

Data editor enhancements

- Custom attributes for user-defined metadata
- Spell checker
- Splitter controls
- Variable sets for wide data
- Variable icons

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
<table>
<thead>
<tr>
<th>Statistics</th>
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<tbody>
<tr>
<td>• ANOVA (in syntax only)</td>
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<tr>
<td>• Automatic linear models</td>
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<tr>
<td>• Cluster</td>
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<tr>
<td>• Correlate—bivariate, partial, distances</td>
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<td>• Crosstabs</td>
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<tr>
<td>• Define variable sets</td>
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<tr>
<td>• Descriptive ratio statistics (PVA)</td>
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<tr>
<td>• Descriptives</td>
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<tr>
<td>• Discriminant analysis</td>
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<tr>
<td>• Enhanced model viewer on two-step cluster and new nonparametrics</td>
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<td>• Explore</td>
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<tr>
<td>• Factor analysis</td>
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<tr>
<td>• Frequencies</td>
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<tr>
<td>• Geo-spatial analytics (STP and GSAR) (NEW!)</td>
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<tr>
<td>• Improved performance for frequencies, crosstabs, descriptives (Statistics Base Server)</td>
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<tr>
<td>• Matrix operations</td>
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<tr>
<td>• Means</td>
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<tr>
<td>• Monte Carlo simulation</td>
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<tr>
<td>• Nearest neighbor analysis</td>
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<tr>
<td>• New nonparametric tests</td>
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<tr>
<td>• One way ANOVA</td>
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<tr>
<td>• Ordinal regression (PLUM)</td>
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<tr>
<td>• Ordinary least squares regression</td>
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<td>• PP plots</td>
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<td>• QQ plots</td>
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<tr>
<td>• Ratio</td>
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<tr>
<td>• Reliability and ALSCAL multidimensional scaling</td>
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<tr>
<td>• ROC curve</td>
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<tr>
<td>• Compare ROC curves</td>
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<tr>
<td>• Rule checking on secondary SPC charts</td>
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<tr>
<td>• Summarize data</td>
</tr>
<tr>
<td>• T tests: paired samples, independent samples, one-samples</td>
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<tr>
<td>• Two-step cluster: categorical and continuous data/large data sets</td>
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<table>
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<tr>
<th>Multithreaded algorithms</th>
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<tr>
<td>• SORT</td>
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<table>
<thead>
<tr>
<th>Bootstrapping</th>
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<tbody>
<tr>
<td>• Sampling and pooling</td>
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<tr>
<td>• Descriptive procedures that can be bootstrapped</td>
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<tr>
<td>- Correlations/nonparametric correlations</td>
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<tr>
<td>- Crosstabs</td>
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<tr>
<td>- Descriptives</td>
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<tr>
<td>- Examine</td>
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<tr>
<td>- Frequencies</td>
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<tr>
<td>- Means</td>
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<td>- Partial correlations</td>
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<td>- T tests</td>
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### Add-on: Custom tables and advanced statistics

This add-on to the Base subscription includes the following features:

#### 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

#### 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
### Add-on: Complex sampling and testing

This add-on to the Base subscription includes the following features:

#### 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

#### 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

#### 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

#### Conjoint
- Estimate utilities (CONJOINT)
- For conjoint analysis (ORTHOPLAN)
- PLANCARDS
Add-on: Forecasting and decision trees
This add-on to the Base subscription includes the following features:

<table>
<thead>
<tr>
<th>Decision trees</th>
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<tbody>
<tr>
<td>• C&amp;RT</td>
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<tr>
<td>• CHAID</td>
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<tr>
<td>• Exhaustive CHAID</td>
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<tr>
<td>• QUEST</td>
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<table>
<thead>
<tr>
<th>Forecasting</th>
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<tbody>
<tr>
<td>• Auto regressive integrated moving average</td>
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<tr>
<td>• Autoregression</td>
</tr>
<tr>
<td>• Expert modeler exponential smoothing methods</td>
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<tr>
<td>• Forecast multiple series (outcomes) at once</td>
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<tr>
<td>• Temporal causal modeling</td>
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<tr>
<td>• Seasonal decomposition</td>
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<tr>
<td>• Spectral analysis</td>
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<tr>
<th>Neural networks</th>
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<tr>
<td>• Multilayer perception</td>
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<td>• Radial basis function</td>
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<thead>
<tr>
<th>Direct marketing</th>
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<tbody>
<tr>
<td>• Cluster analysis</td>
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<tr>
<td>• Contact profiling</td>
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<tr>
<td>• Control package test</td>
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<tr>
<td>• Propensity to purchase</td>
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<tr>
<td>• RFM analysis: recency, frequency, monetary</td>
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<tr>
<td>• Zip code response</td>
</tr>
</tbody>
</table>
Base features

Add-on: Custom tables and advanced statistics

Add-on: Complex sampling and testing

Add-on: Forecasting and decision trees

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