



Uncertainty Sidekick Pro

A powerful uncertainty analysis tool at a bargain price

Uncertainty Sidekick Pro is a sophisticated measurement uncertainty analysis application that incorporates and extends methods found in the ISO Guide to the Expression of Uncertainty in Measurement (the ISO GUM). Uncertainty Sidekick Pro handles direct and multivariate measurements and utilizes interactive uncertainty analysis procedure checklists that access drill-down screens and worksheets that facilitate your uncertainty analysis.

ISO and ANSI / NCSL COMPLIANT

Uncertainty Sidekick Pro does not "dumb down" uncertainty analysis, does not require knowledge of statistics to use, and does not require a spreadsheet application to operate. Uncertainty Sidekick Pro is by far the most cost-effective measurement uncertainty analysis tool for achieving compliance with ISO 17025 and ANSI/NCSL Z540.3.

KEY FEATURES

Comprehensive On-Screen Information

- Interactive analysis procedure checklists provide a short, structured walk-through of the basic steps in estimating measurement uncertainty for typical measurement scenarios.
- All screens and worksheets have access to a full-featured on-screen Help with index, content, and search capabilities for over 400 topics.

Measurement Configuration Options

- Users can choose from a list of measurement configurations via the **Measurement Configurations Screen**.
- Selecting a measurement configuration instructs Uncertainty Sidekick Pro to deactivate screens and worksheets that are not required for the measurement uncertainty analysis.

Analysis of Direct Measurements

- Every aspect of the measurement uncertainty analysis process can be accessed via the Main Screen.
- Main Screen menu and tool bars and measurement uncertainty analysis procedure checklist provide quick access to drill-down analysis screens and worksheets.
- Information about the subject parameter being analyzed, key measurement process uncertainties, and the overall combined measurement uncertainty are all summarized on the Main Screen.

Analysis of Multivariate Measurements

- The Parameter **Multivariate Worksheet** is the primary screen for analyzing uncertainties for multivariate measurements.
- The equation for computing the parameter value of interest can contain up to 25 root variables or quantities.
- The parameter value equation can contain nested variables, each of which can be defined by a separate equation.
- Root variables and associated uncertainties are analyzed via **Error Source Uncertainty Worksheets**.
- Sensitivity coefficients for root variables are automatically computed via numerical partial differentiation of the parameter value equation.
- All equations are entered in the extremely versatile and nonproprietary **VB Script** format.
- Multivariate Analyses can be saved separately and imported into other Uncertainty Sidekick Pro analysis files.

Drill-down Worksheets for Analyzing Measurement Process Errors

- Parameter **Bias Uncertainty Worksheets** for estimating measurement uncertainty due to measuring and/or subject parameter bias.
- Measurement **Data Entry Worksheets** for estimating measurement uncertainty due to measuring and/or subject parameter random (repeatability) error.
- Parameter **Resolution Error Worksheets** for estimating measurement uncertainty due to measuring and/or subject parameter resolution error.
- **Operator Uncertainty Worksheet** for estimating measurement uncertainty due to operator bias.
- Measuring **Environment Uncertainty Worksheet** for estimating measurement uncertainty due to environmental factors.
- Other Error Worksheet for estimating measurement uncertainty due to other user defined errors.

Analysis of Type A, Type B and Type A,B Estimates

- The measurement uncertainty estimate type is automatically determined based on user data entry.
- Degrees of freedom are computed for all measurement uncertainty estimate types.
- Type B error limits can be computed as a linear or root-sum-square (RSS) combination of a fixed value, % of nominal or reading, % of full scale, and % of range or other components.

Data Importing

- Measurement units, measuring equipment and samples of measurement data can be imported into Uncertainty Sidekick Pro from external database or other file formats.
- The **Data Import Profile Screen** is used to develop an import profile, cross-reference external field data to Uncertainty Sidekick Pro fields and to run imports.
- The **Data Import Profile Screen** allows the user to view the data prior to importing into Uncertainty Sidekick Pro.
- The Windows Copy & Paste functions are also supported on all program screens and worksheets.

Correlation of Error Sources

- All error sources are assumed to be uncorrelated unless otherwise specified by the user.
- The **Correlation Coefficient Worksheet** assists the user in establishing correlations between error sources.
- Correlation coefficients are automatically included in the computation of the total, combined measurement uncertainty.

Charts and Plots

- Parameter bias distribution plots are automatically displayed on the Parameter Bias Uncertainty Worksheets.
- Combined error distribution plots are also displayed on the Main Screen.
- The Pareto Chart Screen displays a bar chart depicting the relative contributions of Type A, Type B, and Type A,B process uncertainties to the total, combined uncertainty.

Detailed and Summary Analysis Reports

- A variety of reporting levels are available including summary reports and "drill-down" reports for complete communication of analysis results.
- The Report Options Screen can be used to tailor the contents of each analysis report.
- Notes, charts and plots can be selected for inclusion on report pages.
- The Print Preview Screen provides navigation through reports pages prior to printing.
- Analysis reports can be saved in Rich Text or HTML file formats via the Print Preview Screen.
- Analysis reports can also be copied and pasted as images in Word, Excel, PowerPoint or other external application.

ADVANCED FEATURES

- **Bayesian analysis** to obtain the best estimates of both the subject parameter and measuring parameter values using Bayesian methods.
- A built-in **Type B Degrees of Freedom Calculator** provides a useful tool for estimating the degrees of freedom for heuristic (i.e., non-statistical) measurement uncertainty estimates.
- A **Measurement Units Database** that contains over eighty measurement areas and several hundred units in compliance with NIST Special Publication 811.
- An **Instrument Database** for storing and retrieving instrument and parameter specifications.
- An **Applications Launcher** for running external Windows programs from within Uncertainty Sidekick Pro.

UncertaintyAnalyzer Pricing

Uncertainty Sidekick Pro	\$195.00 + TX and S & H (USD)
Network License	See Our Web Site for Network Options

For More Information

Call 1-800-400-7866
Visit our Web Site www.isgmax.com
Contact us by E-mail sales@isgmax.com

Order on-line at www.isgmax.com.

