DataCollection & Analysis Software

After 12 years as the premier data acquisition, display and analysis software for high school and university science, DataStudio has been superseded by a powerful, totally new software package —PASCO Capstone. With its new features this software will make your existing PASCO USB interfaces even more useful and will take advantage of the capabilities of the new 850 Universal Interface.

There will be no further developments of DataStudio software. Note: DataStudio does not support Windows 8.

Displays

Graphs

- DataStudio graphs are an extremely powerful way to analyze data.
- The multifaceted tools allow students to reveal and understand science in a way not easily accomplished otherwise.

Tables

- The table display shows the numerical coordinates in paired columns.

Digits

- The digits display shows the instantaneous value of the data as the experiment is running.
Meters

- Meter displays can be enlarged to fill your entire monitor — great for large classroom or lecture hall demonstrations.
- Multiple Meters can be displayed in one window.
- Our Analog Meter can be formatted in five different styles — Small Sweep, Semicircle, Large Sweep, Full Circle and Custom Sweep.
- The Digits Meter allows any number of decimal points to be added — limited only by your screen size.

FFT

- The FFT (Fast Fourier Transform) displays the spectral decomposition of the data.
- Higher sampling rates will yield finer definition of the data’s frequency spectrum.
- This display does not store data like other displays. It shows a ‘time-slice’ snapshot of the data.

Calculator

- Use recorded data to calculate quantities that can’t be directly measured, such as kinetic energy or inverse volume. Calculated quantities can be graphed in real-time or displayed in a table.
- Formulas can be entered as they appear in textbooks. No more cryptic formats or symbols.
- Experiment constants — Constants, such as a cart’s mass or a formula constant, can be defined and named.
- Data modeling — To examine the shape of a function, type the equation into the calculator, provide a variable range, and DataStudio will
graph it. Change parameters and see how the shape changes.

**Special Features**

**Editable Data**

- Manually input or import data from other sources.
- DataStudio can automatically create a copy of any data set so you can edit individual data points.
- Delete or hide extraneous data points so they do not affect your statistics or graph results.
- Create theoretical data sets with ease.

**Annotations**

Annotations can be added to the graph to explain points of interest.

**Incorporate Video**

Synchronize video and data to enhance the connection between data and real-world events.

**Customize Tool Bars**

Help students stay focused on the science rather than the learning tools.

**Settings**

Quick-pick, pull-down menus allow quick changes in the graph settings.
Analysis Tools

Robust graphing and analysis

Smart Tool
Show coordinate pair of data points. Measures actual data points - not points.

Scale-to-Fit Tool
The graph can be auto-scaled with a click of a button.

Curve Fitting
Fit many different functions to the data, including any user-defined function.

Annotations
Annotations can be added to the graph to explain points of interest.

Statistics
Show maxima, minima and other statistics for each of the measurements.

Settings
Quick-pick, pull-down menus allow quick changes in the graph settings.

Sketch
Students can draw directly on the graph to predict a relationship between two variables.

Slope Tool
The slope tool draws a line tangent to the curve and displays the slope of the tangent.

Video and More
Data collection rates, calculations, data displays and analysis tools can all be defined by the student, allowing them to ask “what if” questions that reveal a wide range of scientific principles.

**DataStudio’s Graphs**
DataStudio graphs are an extremely powerful way to analyze data. The multifaceted tools allow students to reveal and understand science in a way not easily accomplished otherwise.

**Editable Data**
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- DataStudio can automatically create a copy of any data set so you can edit individual data points.
- Delete or hide extraneous data points so they do not affect your statistics or graph results.
- Create theoretical data sets with ease.

**Basic Meter Displays**
- Meter displays can be enlarged to fill your entire monitor -- great for large classroom or lecture hall demonstrations.
- Multiple Meters can be displayed in one window.
- Our Analog Meter can be formatted in five different styles -- Small Sweep, Semicircle, Large Sweep, Full Circle and Custom Sweep.
- The Digits Meter allows any number of decimal points to be added -- limited only by your screen size.

**Experiment Calculator**
- Use recorded data to calculate quantities that can’t be directly measured, such as kinetic energy or inverse volume. Calculated quantities can be graphed in real-time or displayed in a table.
- Formulas can be entered as they appear in textbooks. No more cryptic formats or symbols.
- Experiment constants -- Constants, such as a cart’s mass or a formula constant, can be defined and named.
- Data modeling -- To examine the shape of a function, type the equation into the calculator, provide a variable range, and DataStudio will graph it. Change parameters and see how the shape changes.

**Histogram**
- Stack bins
- Compare bins (side by side)
- Overlay bins
Oscilloscope

- Displays multiple traces (up to 5)
- White background on scope window for better readability

Licensing

What you get with DataStudio Lite:

- Collect data with PASPORT probeware
- Collect data with Science Workshop probeware
- Use with WAVEPORT sound wave software (WAVEPORT sold separately)
- EZscreen introductory level display and activities
- Cut and paste data into summary window
- Use Digits, Table and Graph Displays
- Export data
- Graph tools - Scale to Fit, Smart Tool
- Open and run full-featured Electronic Workbook experiment configuration files
- Resize displays
- Statistics - Maximum, Minimum, Mean
- Automatically upload data from your PASPORT Palm Probeware Kit
- Free Multimedia Tutorial

Additional Licensed Version features:

- Author Electronic Workbooks or full-featured experiment configuration files
- Create an editable data set
- Perform curve fitting
- Customize setup configuration
- Customize displays
- Access all displays - Workbook, Meter, Histogram, Scope, FFT, etc.
- Display legends
- Display multiple instances of the same display
- Display multiple runs of data - graph
- Utilize experiment calculator
- Utilize experiment clock
- Use Graph Tools - Annotations, Overlay Measurements, Predictive Sketch Tool, Slope Tool, Zoom in/out, Zoom Select
- Import data
- Statistics - Count, Standard Deviation
- Table functions - add and remove rows, show time
- Use with a Spec 20
- Collect Mass data in real-time with an OHAUS Balance
- Include video in Electronic Workbooks
- Synchronize video and data

DataStudio Software (Single User) (CI-6870G)

The award-winning DataStudio is the only software you need to collect, display and analyze scientific data. Single User version.

$99  See Product
DataStudio, Classroom License  (C-6859C)
The award-winning DataStudio is the only software you need to collect, display and analyze scientific data. Classroom License version.
$249  See Product

DataStudio Software (Site License)  (C-6871G)
The award-winning DataStudio is the only software you need to collect, display and analyze scientific data. Site License.
$359  See Product

Quick Tip Videos

Video Series: DataStudio 1.9 Features

New Graph Appearance Setting  (1:31)
Related Links:
• DataStudio Software

Direct Selection of Graph Axis Measurements  (1:48)
Related Links:
• DataStudio Software

Graph Data Point Deletion  (1:22)
Related Links:
• DataStudio Software

Predictive Sketching  (3:05)
Related Links:
• DataStudio Software

Data Symbol and Color Selection  (2:31)
Related Links:
• DataStudio Software

Playing Movies in Workbooks  (3:46)
Related Links:
• DataStudio Software

Adding Movies to Workbooks  (5:56)
Related Links:
• DataStudio Software
• BouncingBallData
• BouncingBall

Tips on Creating Movies for Workbooks  (8:21)
Related Links:
• DataStudio Software

Improved Curve Fitting  (5:49)
Related Links:
• DataStudio Software
Automatic Photogate Timing with ScienceWorkshop Interfaces  (4:41)  

Related Links:
- DataStudio Software

User Resources
- Download DataStudio Lite—free
- Get the last DataStudio update
- Feature Guide (PDF, 822 KB)
- Network Installation Guide (PDF, 15KB)
- DataStudio Starter Manual (PDF, 8935 KB)

Videos: DataStudio Software

Advanced DataStudio - Curve Fitting and the Ideal Gas Law  (3:46)  
A demonstration of creating a User-Defined Curve Fit in DataStudio to better analyze Pressure and Volume data collected from a syringe and Absolute Pressure Sensor connected by an unnecessarily long piece of tubing. Concludes with a calculation of the number of moles of gas in the syringe. Recorded live during one of PASCO’s free online training sessions.

Related Links:
- Download Video (.mp4)
- DataStudio Software

DataStudio Workbooks in the Classroom  (3:26)  
Learn how to effectively use DataStudio workbooks in the classroom.

Related Links:
- Download Video (.mp4)
- DataStudio Software

pH Sensor Calibration with DataStudio  (3:16)

Related Links:
- DataStudio Software