

Key Features

Use the following tables to check what new features have been added to Origin, compared to your version.

ORIGIN INTERFACE	9	8.6	8.5.1	8.5	8.1	8	7.5
Floating Graphs in Worksheet	✓						
Display Statistics on Status Bar for Selected Cells	✓						
Improved Data Info Dialog	✓						
Native 64-Bit and 32-Bit Application	✓	✓					
Auto-Hide Project Explorer Window and Other Dockable Windows	✓	✓					
New Message Log Window	✓	✓					
Zoom and Pan Inside Graph Layer Using Keyboard or Mouse	✓	✓					
Navigate Worksheets Dialog to Manage Worksheets in Workbook	✓	✓					
Horizontal and Vertical Dividers to Split Worksheet	✓	✓	✓				
Zoom and Pan on Graphs, Worksheets, Matrices and Layouts	✓	✓	✓	✓			
Embed and Edit Microsoft Word, Excel and Equation Objects Inside Graphs and Layouts	✓	✓	✓	✓			
Customizable Data Info Display Window	✓	✓	✓	✓			
Thumbnail and Metadata Support for Matrix	✓	✓	✓	✓			
Password Protection for Project, and Audit Log of Project Save with Optional Password Protection	✓	✓	✓	✓	✓		

GRAPH TYPES	9	8.6	8.5.1	8.5	8.1	8	7.5
3D OpenGL Graphs and Function Plots with Fast Rotation	✓						
3D Surface/Bar Plot From Worksheet XYZ Columns	✓						
3D Parametric Function Plot	✓						
3D Bar Plot with Z Error Bars	✓						
3D Scatter with Projections and Error Bars in X, Y, and Z Directions	✓						
Improved Scatter Matrix Plot	✓						
Support Special Point for 3D Scatter Graph	✓						
Improved Polar Graph to Support Negative Radius	✓						
Improved Pareto Chart to Combine Smaller Values	✓						
Radar/Spider Chart	✓	✓					
2D/3D Function Plot and 2D Parametric Function Plot	✓	✓					
Error Bar Improvement: Error Bar as Line, as Arc in Polar Graph, Option to Skip Error Bar, etc.	✓	✓	✓				
Contour Profile Plot from Worksheet Data with Uneven Spacing (Virtual Matrix or XYZ Columns)	✓	✓	✓				
3D Vector Plot	✓	✓	✓	✓			
3D Error Bar Plot	✓	✓	✓	✓			
Contour or 3D Plot from Worksheet Data (Virtual Matrix)	✓	✓	✓	✓			
Stock Charts: OHLC-Volume Chart and Japanese Candlestick	✓	✓	✓	✓			
Ternary Contour Plot	✓	✓	✓	✓	✓		
Pareto Chart	✓	✓	✓	✓	✓		
Probability Plot and Q-Q Plot	✓	✓	✓	✓	✓		
Polar Contour Plot	✓	✓	✓	✓	✓	✓	
Colormap Surface with Projection	✓	✓	✓	✓	✓	✓	✓
Image and Contour Profile Plot from Matrix Data	✓	✓	✓	✓	✓	✓	✓

GRAPH CUSTOMIZATION	9	8.6	8.5.1	8.5	8.1	8	7.5
Manually Move 3D Planes Along the Axis Direction	✓						
Flatten and/or Shift 3D Surface in Z Direction by Percent of Scale Range	✓						
3D Surface Improvements: Lighting Effect, Mesh	✓						
Move, Rotate and Resize 3D Graphs in an intuitive way	✓						
Support Combination of LabTalk Substitution for Legends	✓						
Use Context Menu to Quickly Change Data Plots	✓						
Support Clockwise/Counter Clockwise Ternary Plots	✓						
New Axis Dialog for 3D Graphs	✓						
Add Vertical or Horizontal Lines with Labels in 2D Graph Layers	✓						
Scale Distribution Curve for Histogram Plot, as % of Tallest Bar	✓	✓					
Output Distribution Curve Data and Parameters to Bin Worksheet for Histogram Plot	✓	✓					
New Layer Contents Dialog	✓	✓	✓				
Axis Tick Locations from Dataset	✓	✓	✓				
Color Palette Improvements	✓	✓	✓				
Legend Improvements	✓	✓	✓				
Transparency and Gradient Fill Control for Graph Objects	✓	✓	✓	✓			
Non-Linear Z-Axis and Y- and Z-Value Colormap Support for Waterfall Plots	✓	✓	✓	✓			
Ternary Plot with Flexible Scale	✓	✓	✓	✓			
Multiple Intersecting Surfaces in 3D Graphs	✓	✓	✓	✓			

GADGETS	9	8.6	8.5.1	8.5	8.1	8	7.5
Global Vertical Cursor Gadget Across Graphs	✓						
Vertical Cursor Gadget	✓	✓					
Intersect Gadget	✓	✓					
Quick Sigmoidal Fit Gadget	✓	✓					
Cluster Gadget	PRO	PRO	PRO				
Quick Peaks Gadget	✓	✓	✓				
Statistics Gadget Improvement	✓	✓	✓				
Differentiate Gadget	✓	✓	✓	✓			
Interpolate Gadget	✓	✓	✓	✓			
Quick Fit Gadget	✓	✓	✓	✓	✓		
Rise Time Gadget	PRO	PRO	PRO	PRO	PRO		
Integrate Gadget	✓	✓	✓	✓	✓		
FFT Gadget	✓	✓	✓	✓	✓		
Statistics Gadget	✓	✓	✓	✓	✓		
IMPORTING	9	8.6	8.5.1	8.5	8.1	8	7.5
Specify Channel When Importing MDF, NITDM, DIADem, Prism, pClamp, Matlab data files	✓						
File Import Menu Customization Dialog	✓	✓					
Digitizer Tool	✓	✓	✓				
SQL Editor for Database Import	✓	✓	✓				
Import Multiple Images into the Same Matrix Sheet	✓	✓	✓	✓			
Import Data in Unicode ASCII, CDF, and HDF5 Formats	✓	✓	✓	✓	✓		
Import Excel, Multi-Line CSV and Binary 2D Array	✓	✓	✓	✓	✓	✓	
3rd Party Formats Support for pCLAMP 2.0, NI DIADem/TDM, ETAS MDF, JCAMP-DX, NetCDF, etc.	✓	✓	✓	✓	✓	✓	
Graphically Construct SQL Queries	✓	✓	✓	✓	✓	✓	
ASCII and Binary Import Wizard Provides Visual Feedback during Import	✓	✓	✓	✓	✓	✓	✓
Drag-and-Drop Data File from Windows Explorer into Origin	✓	✓	✓	✓	✓	✓	✓

EXPORTING	9	8.6	8.5.1	8.5	8.1	8	7.5
Creating Movies from Origin Windows using GUI Tool or Script	✓						
Graph Export Supports Transparency for PDF and EPS Format	✓	✓	✓				
Export All Graphs to PowerPoint	✓	✓	✓	✓	✓		
Export Worksheet as Multi-Page PDF Document	✓	✓	✓	✓	✓		
Export ASCII Data to Existing File by Appending or Replacing	✓	✓	✓	✓	✓		
Slide Show Graphs and Layouts	✓	✓	✓	✓	✓		
Export Worksheet as Image File	✓	✓	✓	✓	✓	✓	
Export Workbook as NI TDM/TDMS File	✓	✓	✓	✓	✓	✓	
Export Worksheet as Wave File	✓	✓	✓	✓	✓	✓	
Graph Export Formats Include: AI, CGM, EPS, TIFF, PDF, JPEG, EMF, PSD, etc.	✓	✓	✓	✓	✓	✓	✓
Export Image to Raster File Format	✓	✓	✓	✓	✓	✓	✓
DATA MANIPULATION	9	8.6	8.5.1	8.5	8.1	8	7.5
Data Filter for Worksheets	✓						
Split a Worksheet into Multiple Worksheets by Number of Columns/Rows, or by Column Label	✓	✓					
Pivot Table Improvements	✓	✓	✓				
Stack Columns and Unstack Columns Improvements	✓	✓	✓				
XYZ Gridding in Logarithmic Scale	✓	✓	✓				
Reduce XY Data by Group, Reduce Data to Evenly Spaced X	PRO	PRO	PRO	PRO	PRO		
Reduce Duplicate X Data, Reduce Data by Skipping Every N Points	✓	✓	✓	✓	✓		
New Find and Replace Tool for Numeric and Text Values	✓	✓	✓	✓	✓		
Trim Missing Values in Worksheet	✓	✓	✓	✓	✓	✓	
Convert Table-Like Data into XYZ Columns	✓	✓	✓	✓	✓	✓	
Worksheet Query (Extract Values from Worksheet)	✓	✓	✓	✓	✓	✓	

GENERAL ANALYSIS	9	8.6	8.5.1	8.5	8.1	8	7.5
Support Data With Y Error in Batch Processing	✓						
User Defined Data Identifier in Report Sheets	✓						
Repeat Analysis on All Plots in Graph or All Columns in Worksheet	✓	✓					
Batch Processing with Summary Report Using Analysis Templates™	✓	✓	✓	✓	✓		
Batch Peak Fitting of Multiple Datasets Using Peak Analyzer Theme	PRO	PRO	PRO	PRO	PRO		
Generate LabTalk Script Command from Current Dialog Settings	✓	✓	✓	✓	✓		
Compare Settings in Two Themes and List Differences	✓	✓	✓	✓	✓		
Analysis Templates™ with Custom Report Sheets for Repeat Analysis	✓	✓	✓	✓	✓	✓	
Consolidated Reports with Collapsible Tables	✓	✓	✓	✓	✓	✓	
Theme Support for Saving Dialog Settings	✓	✓	✓	✓	✓	✓	
Recalculation of Results on Data or Parameter Change	✓	✓	✓	✓	✓	✓	
Customize Graphs in Report Sheet	✓	✓	✓	✓	✓	✓	
Run Analysis with Theme Settings Without Opening Dialog	✓	✓	✓	✓	✓	✓	
CURVE FITTING	9	8.6	8.5.1	8.5	8.1	8	7.5
Orthogonal Regression for Implicit Functions	PRO						
Support Confidence Interval for Find-X/Find-Y Tool	✓						
Nonlinear Fit with Integral Function	✓	✓					
Independent Fit Improvements	✓	✓					
Calculate Standard Error for Derived Parameter	✓	✓					
Linear Fit with Support for X Error	PRO	PRO					
Surface Fit with Multiple Peaks	PRO	PRO	PRO				
New Fitting Function Builder for Fitting Function Creation	✓	✓	✓	✓			
Rotated 2D Gaussian Function for 2D Surface Fitting	PRO	PRO	PRO	PRO	PRO		
Partial Leverage Plot in Multiple Regression	✓	✓	✓	✓	✓	✓	
Improved Residuals Analysis with Additional Residuals Plots	✓	✓	✓	✓	✓	✓	
Improved Find-X/Find-Y Tool for Linear, Polynomial, and Nonlinear Fit	✓	✓	✓	✓	✓	✓	
New Find-Z Tool for Nonlinear Surface/Matrix Fit	PRO	PRO	PRO	PRO	PRO	PRO	
Fitting Comparison	PRO	PRO	PRO	PRO	PRO	PRO	PRO

PEAK ANALYSIS	9	8.6	8.5.1	8.5	8.1	8	7.5
Add More Baseline and Peak Finding Methods	✓	✓					
Multiple Peak Fit Tool Improvements	✓	✓	✓				
Improved Peak Analyzer Wizard	✓	✓	✓	✓			
Batch Peak Fitting	PRO	PRO	PRO	PRO	PRO		
Peak Analyzer: Fit Individual Peaks with Different Fitting Functions	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Fit Baseline with Peaks	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Peak Fitting	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Peak Integration	✓	✓	✓	✓	✓	✓	
Peak Analyzer: Peak Finding	✓	✓	✓	✓	✓	✓	
Peak Analyzer: Baseline Subtraction	✓	✓	✓	✓	✓	✓	
Peak Analyzer: Baseline Detection	✓	✓	✓	✓	✓	✓	
SIGNAL PROCESSING	9	8.6	8.5.1	8.5	8.1	8	7.5
IIR Filter Design	PRO						
2D FFT Filter	PRO	PRO	PRO	PRO			
Signal Envelope	PRO	PRO	PRO	PRO	PRO		
Signal Decimation to Reduce/Resample Data	PRO	PRO	PRO	PRO	PRO		
Coherence	PRO	PRO	PRO	PRO	PRO		
1D FFT, Inverse FFT and 1D FFT Filter	✓	✓	✓	✓	✓	✓	
2D FFT and 2D Inverse FFT	PRO	PRO	PRO	PRO	PRO	PRO	
Short-Time Fourier Transform (STFT)	PRO	PRO	PRO	PRO	PRO	PRO	
Wavelet Analysis: 1D and 2D Decompose, 1D and 2D Reconstruction, Smooth, Denoise, and Continuous Wavelet Transform	PRO	PRO	PRO	PRO	PRO	PRO	
Hilbert Transform	PRO	PRO	PRO	PRO	PRO	PRO	
2D Correlation	PRO	PRO	PRO	PRO	PRO	PRO	

STATISTICS	9	8.6	8.5.1	8.5	8.1	8	7.5
More Distance Measures for Hierarchical Cluster Analysis	PRO						
Grubbs Test and Q-test to Detect Outliers	✓						
Multivariate Analysis: Principal Component Analysis, Cluster Analysis, Discriminant Analysis, Canonical Discriminant Analysis	PRO	PRO					
Raw and Indexed Data Support for More Statistics Tools	✓	✓					
Cutoff Value and Test Direction are Added for ROC Curve	PRO	PRO					
More Normality Test Methods: Anderson-Darling, D'Agostino-K Squared, and Chen-Shapiro	✓	✓					
Significance Level Support for Most of the Statistics Tools	PRO	PRO	PRO	PRO			
Support for Periodic Data in 2D Binning	✓	✓	✓	✓	✓		
Survival Analysis: Kaplan-Meier Estimator, Cox Proportional Hazard Model, Weibull Fit, Test Equality of Survival Functions (Log-Rank, Breslow and Tarone-Ware)	PRO	PRO	PRO	PRO	PRO	PRO	
Nonparametric Tests: Sign Test, Wilcoxon Test for One Sample and Paired Sample, Two Sample Kolmogorov-Smirnov Test, Mann-Whitney Test, Kruskal-Wallis ANOVA, Mood's Median Test, Friedman ANOVA	PRO	PRO	PRO	PRO	PRO	PRO	
Power and Sample Size (One, Two and Paired-Sample t-Test, One Way ANOVA)	PRO	PRO	PRO	PRO	PRO	PRO	
One Way ANOVA, Two Way ANOVA	✓	✓	✓	✓	✓	✓	
One Way and Two Way Repeated ANOVA	PRO	PRO	PRO	PRO	PRO	PRO	
Hypothesis Testing: One Sample and Two-Sample t-Test, Pair-Sample t-Test, Welch Corrected t-Test	✓	✓	✓	✓	✓	✓	
Hypothesis Testing: One Sample and Two Sample Hypothesis Tests for Variance	PRO	PRO	PRO	PRO	PRO	PRO	
ROC Curve	PRO	PRO	PRO	PRO	PRO	PRO	
Correlation Coefficient and Discrete Frequency	PRO	PRO	PRO	PRO	PRO	PRO	
Basic Descriptive Statistics	✓	✓	✓	✓	✓	✓	✓
1D and 2D Frequency Count	✓	✓	✓	✓	✓	✓	✓
Normality Test	✓	✓	✓	✓	✓	✓	✓

MATHEMATICS	9	8.6	8.5.1	8.5	8.1	8	7.5
More Functions in Set Column/Matrix Values Dialog	✓	✓					
Compute Polygon Area	✓	✓	✓	✓			
Compute Surface Area and Matrix Area	PRO	PRO	PRO	PRO			
Normalization Across Multiple Columns or Curves	✓	✓	✓	✓	✓		
3D Interpolation	PRO	PRO	PRO	PRO	PRO	PRO	
1D Interpolation and Extrapolation	✓	✓	✓	✓	✓	✓	
Interpolation and Extrapolation of Y From X	✓	✓	✓	✓	✓	✓	
Trace Interpolation on XY Data	PRO	PRO	PRO	PRO	PRO	PRO	
Trace Interpolation on XYZ Data	✓	✓	✓	✓	✓	✓	
2D Interpolation and Extrapolation	PRO	PRO	PRO	PRO	PRO	PRO	
2D Volume Integration	PRO	PRO	PRO	PRO	PRO	PRO	
Set Column or Matrix Values by Using Mathematics Operations	✓	✓	✓	✓	✓	✓	✓
IMAGE HANDLING							
Image Crop, Rotate, Flip, Shear, Resize, Offset, Auto Trim	✓	✓	✓	✓	✓	✓	
Spatial Image Filter (Average Filter, Gaussian Filter, Median Filter, Noise, Sharpen, Edge Detect)	✓	✓	✓	✓	✓	✓	
User-Defined Spatial Image Filter	PRO	PRO	PRO	PRO	PRO	PRO	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary	✓	✓	✓	✓	✓	✓	
RBG Merge and RBG Split for Image	PRO	PRO	PRO	PRO	PRO	PRO	
Image Adjustment: Brightness, Contrast, Gamma, Hue, Saturation, Histogram Contrast, Histogram Equalization, etc.	✓	✓	✓	✓	✓	✓	
Image Math: Alpha Blend, Pixel Logic, Replace Background, Subtract Background, Subtract Interpolated Background, etc.	PRO	PRO	PRO	PRO	PRO	PRO	
Morphological Filter	PRO	PRO	PRO	PRO	PRO	PRO	
Function Look Up Table	PRO	PRO	PRO	PRO	PRO	PRO	
Mathematical Function for Pixel Values of Image	PRO	PRO	PRO	PRO	PRO	PRO	

WORKING WITH EXCEL	9	8.6	8.5.1	8.5	8.1	8	7.5
Import or Open XLSM File (Excel with Macro)	✓	✓					
Maintain Cell Formats When Importing Excel File	✓	✓	✓	✓	✓	✓	
Import or Open XLSX File	✓	✓	✓	✓	✓	✓	
Set Column Designations When Importing Excel File	✓	✓	✓	✓	✓	✓	
User-Defined Maximum Number of Empty Columns When Importing Excel File	✓	✓	✓	✓	✓	✓	
Convert Excel Column Headers into Origin Column Headers	✓	✓	✓	✓	✓	✓	
Link to External Excel File for Relative Path to Project Path	✓	✓	✓	✓	✓	✓	
Open XLS File Inside Origin	✓	✓	✓	✓	✓	✓	✓
Plot from XLS Sheet Inside Origin	✓	✓	✓	✓	✓	✓	✓
Save Excel File as External/Internal File of the Project	✓	✓	✓	✓	✓	✓	✓
CONNECTIVITY W/ OTHER APPLICATION							
Mathematica Link for Data Exchange Between Origin and Mathematica	✓	✓	✓	✓	✓	✓	
MATLAB® Console with GUI Support to Transfer Data Between Origin and MATLAB®	✓	✓	✓	✓	✓	✓	
LabVIEW Connectivity	✓	✓	✓	✓	✓	✓	✓
Automation Server Support	✓	✓	✓	✓	✓	✓	✓
Use Excel As a Client Application	✓	✓	✓	✓	✓	✓	✓
Use Visual Basic As a Client Application	✓	✓	✓	✓	✓	✓	✓

PROGRAMMING	9	8.6	8.5.1	8.5	8.1	8	7.5
Improved Code Builder	✓						
Origin C: Access to Full NAG Mark 9 Library	✓	✓					
LabTalk: Support for User-Defined Function	✓	✓	✓	✓	✓		
LabTalk: Support for Event-Triggered Script Execution	✓	✓	✓	✓	✓		
LabTalk: Data Types Include Integer, Double, Constant, Range, String, Dataset, Function and Tree	✓	✓	✓	✓	✓	✓	
X-Function: Easy Creation of Custom Tools with Automatic GUI by X-Function	✓	✓	✓	✓	✓	✓	
X-Function: Execute X-Function from LabTalk Script and Menu	✓	✓	✓	✓	✓	✓	
Command Window: Auto-Complete Support for Scripting	✓	✓	✓	✓	✓	✓	
Developer Kit: Run Tools and Wizards Created with Microsoft Visual C++	✓	✓	✓	✓	✓	✓	
Origin C: Create Custom Dialog for Your Routine	✓	✓	✓	✓	✓	✓	✓
Origin C: User-Defined Class Support	✓	✓	✓	✓	✓	✓	✓