

## Engineering Plotting & Analysis

Tecplot Focus enables you to quickly plot all your engineering and test data exactly the way you want. Analyze and explore complex data sets, arrange multiple XY, 2D and 3D plots, and then communicate your results to colleagues and management with brilliant, high-quality output.

Save even more time and effort by automating routine data analyses and plotting tasks. Available on Windows, Linux and Mac platforms, Tecplot Focus meets the needs of your multi-platform engineering group.

### Easily Understand Complex Engineering Systems

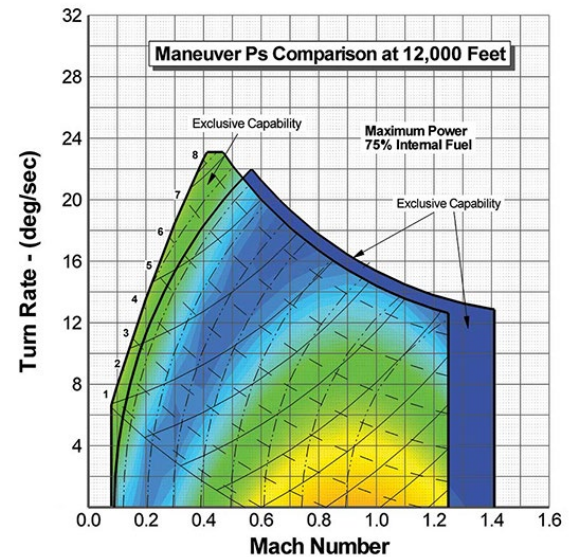
- Choose from an amazing array of XY, Polar, 2D and 3D plotting and animation tools—all in a single software package.
- Apply multiple constraints to define and create performance envelopes.
- Control over 2,500 attributes of your plot.
- View your work in multiple drawing windows and from different perspectives (XY, 2D, and 3D) in a unique multi-frame workspace.
- Assign arbitrary independent axes for specialty plots
- Create complex performance plots.
- Plot irregularly spaced data.
- Probe values over time.
- Perform discrete Fourier transform (DFT).

### Automate Plot Generation

- Instantly re-create an old plot or apply the same style attributes and layouts to a different set of data with layout and style files.
- Automate your work by recording macros or writing scripts.
- Use the Quick Macro Panel to access macros easily.
- Plot and print with batch processing.
- Extend Tecplot Focus functionality with the Add-on Developer's Kit (ADK).

### Get Recognized

- Copy and paste images or animations directly into Microsoft Office applications.
- Export professional, presentation-quality images in vector and raster formats.
- Make optimized animations for PowerPoint and the Web.
- Include formulae and mathematical notations with LaTeX support.



Learn About  
Tecplot Focus:

[tecplot.com/products/  
tecplot-focus](https://tecplot.com/products/tecplot-focus)



# Tecplot Focus™ Feature List

## Analysis

**Create, Alter and Transform Data:** Alter data or create new data using mathematical expressions. Store mathematical expressions. Create mirror images of data. Create new data as subset of existing data. Write conditional expressions using the IF() function. Rotate and duplicate data around an axis.

**Interpolate Data:** Choose from linear, inverse-distance, and kriging interpolation.

**Triangulate:** Create sets of triangles from data points defined in a 2D plane.

**Discrete Fourier Transform (DFT):** Transform one-dimensional ordered linear data into the frequency domain for visualization and further analysis.

**Multiple Data Sets (up to 5 million points):** Create and display plots from many different sets of data simultaneously. Use Variable Combining to combine variables with the same meaning but different names.

**Multiple Zones and Variables:** Include up to 1 million zones per data set, and up to 1 million variables per data point.

## Exploration

**Slicing Tool:** Interactively slice 3D volume and surface data displaying mesh, contours, and vectors on the slice plane. Set slice orientation by selecting 3 points.

**Iso-surface Tool:** Change iso-surface values interactively.

**Probing Tool:** Click on the surface to display interpolated variable values and cell indices. Snap selections to nearest grid point.

**Streamtrace Tool:** Interactively seed rakes of streamlines, streamrods, and streamribbons in 2D and 3D. Specify lines to terminate streamlines. Display markers along streamlines spaced by vector magnitude. Place streamline rakes. Generate surface streamtraces on a no-slip walls. Auto seed a specified number of streamtraces on a selected surface.

**Contour Tool:** Interactively add and delete contour lines or levels.

**Extraction Tools:** Interactively define sets of points or polylines to which 2D and 3D surface data is interpolated and extracted for display as a separate plot.

**Curve Fits:** Use least squares linear, polynomial, power, and exponential curve-fits. Use least squares curve fit of a linear combination of specified functions.

**Data Blanking and Clipping:** Set multiple constraints (or masks) to blank the display of data based on local field variables, functions of variables, grid indices, or depth from viewing position. Clip surfaces of 3D volume data to reveal internal variations. Omit zones or peel away surfaces to highlight specific details.

**Data Extraction:** Extract iso-surfaces, slices, subsets, streamtraces, polylines, the surface 3D volume finite-element data, and point sets from 3D data to new data segments (zones) for further plot customization.

## Automation

**Configuration File and Batch Files:** Set new defaults and perform initialization with configuration files and start-up batch files.

**Macros:** Use macros to perform multiple, repetitive changes.

**Layout Files:** Return to plots exactly as you created them by saving a layout file recording the frames, plotting attributes, and the data. Apply layout styles to the same data set or different data sets.

**Stylesheets:** Record all aspects and appearances of a plot frame in a stylesheet without the data. Apply a stylesheet to recreate a previous plot or to apply plot styles to another set of data.

## Collaboration

**Cross-Platform Capability:** Run Tecplot Focus on Windows, macOS, and Linux platforms. Interchange Tecplot Focus macro files, layout files, stylesheets, color map files, and data files between all platforms.

**Expanded Data and File Sharing:** Loads PLT (\*.plt), which is compatible with Tecplot 360.

## Plot Annotation

**Text:** Place text interactively on plot. Use all your system fonts with TrueType capabilities. LaTeX font support allows for complex formulae and Greek characters.

**Geometries:** Interactively create polylines, rectangular boxes, circles, and ellipses. Duplicate, reposition, and resize geometries. Create and modify geometries (point-by-point) interactively and read from a file.

**Images:** Import JPEG, BMP, and PNG files into your plot.

## Output Formats

**Vector-based and Raster Plot Files:** Export vector-based files in encapsulated PostScript (EPS) and Windows Metafile formats. Export raster files in PNG, JPEG, TIFF formats. Configure image resolution independent of screen resolution.

**Animations:** Export images to MPEG-4, Flash (SWF), WMV, and PowerPoint-compatible AVIs or to a sequence of images for customized animations using FFmpeg included with Focus.

## Data Input

**General Text Loader:** Scan ASCII data files for titles, variables and data, set filters, and preview processed data.

**Subset Data on Input:** Read subsets of variables, data blocks, and data points to accelerate plotting.

**Custom Data Reader:** Use the Tecplot Add-on Developer's Kit to create data loaders for your proprietary file formats.

**Auxiliary Data:** Attach supplementary information (name/value pairs) to data sets, frames, or zones.

**Excel Loader:** .xls format, Windows only.

**Excel Add-in:** Launch Tecplot Focus directly from Excel.

## Line, 2D, 3D, and Polar Plotting

**Time and Dates:** Display time and date on any axis.

**XY Features:** Create scatter plots, line plots, bar charts, semi-log plots, log-log plots, error-bar plots, splines, curve-fits, and more. Configure tick marks, symbols, legends and more. Work with multiple horizontal and vertical axes.

**Mesh layer:** Display 1D, 2D, and 3D grids. Color mesh lines by variable and remove hidden lines.

**Contouring:** Display contour lines, color flood between contour levels, and color fill cells (or elements). Use multiple contour variables to view and analyze interrelationships among several variables simultaneously.

**Vectors:** Display 2D and 3D vectors on planes, 3D surfaces, and in volumes. Display 3D vector components tangent to 3D surface. Specify length, color, line type, and head style. Color by variable.

**Polar Plot Features:** Create polar line plots ( $r$ ,  $\theta$ ). Configure angles in radians, degrees or arbitrary units. Select between linear or logarithmic radius.

**Edges:** Display the edges of data segments on 2D and 3D surfaces and volumes. Configure color and line type. Draw creases based on user-defined angle.

**Lighting Effects:** Set the level of translucency and include specular highlighting on 3D surfaces. Set the lighting model as uniform, paneled, or Gouraud. Create shade plots.

**Combine Plot Layers:** Assign combinations of mesh, contours, vectors, scatter, boundary, shade, lighting, and volume attributes to various data segments.

