

# TkFab™

Data management software

## Project management

- Choose directory (absolute or relative)
- Choose CSV file to read
- Choose project file
- Define a suffix for the created files
- Save configuration

## QuickField format conversion to CSV format (script)

- Transient Analysis.
- LabelMover.
- Circuit (voltage and current)
- Contour

## Syntax operation on file (script)

- CSV sanity check
- Headers filtering
- Data filtering (alphabet or digit, integer, or double)
- Formatting to CSV or Tkfab (CSV with header)
- Columns extraction (sorting)
- Data formatting (scientific, decimal)
- Data transformation (log, normalization)
- Units conversion
- Folding according to a sequence, a known period
- Assembling several files in one

## Mathematical operation on file (script)

- Linear interpolation
- Linear regression

## Calculator

- Operations on double and complex
- Generated data (Ex.:  $z = g(x,y)$ ,  $y = f(x)...$ )
- Operations on plots (CSV files input)
- Physical constants
- Numerous statistical functions
- Visualization before export (text format)

## Plots (data visualization)

- Bar graphs
- 2D plots
- Scattering plots
- Contours (colors gradient)
- 3D plots

## Specifications

### TkFab™ 0.2 : 1D aspect ( valid features are in red )

#### Spreadsheet

- Edition by line, column or value
- Erase, insert, replace value
- Formatting, units change

#### 1D measurements

- General : Value at X,Y, crossing, deltax, delty, derive@x
- Levels : AC rms, amplitude, average, maximum, references
- Time domain : delay, duty cycle, falltime, frequency, period, risetime,.
- Statistics : Cpk, Dpu mean, stats

#### 1D computations

- General : derivative, integrate, integrate 2.
- Curve fitting : linear, exponential, polynomial.
- Others : eye diagram, populate, relative difference.

#### Plot transformations

- Logarithm
- Sequence (for instance modulo  $2\pi$ )
- Normalization ( $yn = y / y_{max}$  for instance)
- Transformation into scattering plots
- Spline (2D)
- Zoom (2D)

#### Extra functions

- Automation programmation (ActiveField)
- Units converter
- Screenshot in one click
- Data export (CSV) in one click
- Curve selection in one click.
- Direct access to configuration parameters
- Visual messages : text or led-like
- Console

#### Hardware

- Recent computer.
- RAM : According to data volume (4 Gb per 10 000 lines)
- Optimum : 10 000 points

#### Software

- QuickField (latest version) for ActiveField
- Windows : Windows 10 or more recent
- Linux (Without ActiveField features)