

# WaveEasy

## ANALOG WAVEFORM DEVELOPMENT AND ANALYSIS SOFTWARE

- Create, edit waveforms using mathematical functions or hand-free drawings
- More than 40 functions and operators for creating waveforms
- Import or export waveforms to/from various file formats
- File compression tools for compact waveform file creation
- Seamless integration with Marvin Test Solutions' GX1100 and GX1120 Arbitrary Waveform Function Generators or other 3rd party waveform generators



## DESCRIPTION

WaveEasy is an interactive analog waveform editor software tool for creating and editing analog waveforms. To view or edit existing waveforms, you can open or save files using various file formats including WaveEasy, ASCII or text (txt, csv, prn), or the NI-HWS (hws) format which is used by many instrument drivers.

WaveEasy waveforms contain waveform segments and segment items which are described by a mathematical function or by an array of points - created by a line drawing, freehand drawing, or some other external source. The user can apply a mathematical function to each segment or segment item, allowing for the creation of complex waveforms, the addition of noise, filtering or other waveform attributes. After creating your waveform, you can save it to disk and then load it to your waveform generator from your application development environment, such as ATEasy, LabVIEW, LabWindows/CVI, or Microsoft Visual Studio.

## FEATURES

WaveEasy waveform files are created, saved, and edited using the WaveEasy file format. Using a formula based implementation to describe the waveform, the editing of segments and segment items is easily performed and results in small, compact waveform files. When used with the Marvin Test Solution's GTWAVE application software, you can upload and download waveforms directly from the GX1100 family of arbitrary function generators to WaveEasy's waveform display.

WaveEasy supports a wide range of mathematical functions and operators including:

- Operators: Add, Subtract, Multiply, Divide, Exponent
- Mathematical functions: Abs, Exp, Ln, Log, Log, Ceil, Floor, Rnd, and Sqrt
- Trigonometric functions: ArcCos, ArcCosh, ArcSinh, ArcTan, ArcTanh, Cos, Cosh, Cot, Sin, Sinc, Sinh, Tan, and Tanh
- Filtering functions: FFTBandpass, FIRBandPass
- Pseudo functions: Container, Clip, Noise, Sawtooth, Sketch, Square, and Triangle

For the creation and modification of waveforms, WaveEasy offers a full set of editing capabilities including:

- Insert, Delete, Cut, Copy and Paste; Split for range, segment items and segment selections; unlimited Undo/Redo
- Freehand and line draw functions
- Zoom in, Zoom out, and Area Zoom functionality

WaveEasy's development environment and user interface includes a range of features and attributes for creating and displaying waveforms including:

- Waveform segments pane and a waveform display pane
- Waveform pane which displays multiple horizontal and vertical axes including defined axes with range, units, grid, ticks, labels, name and cursor
- Waveform Frequency Spectrum Analysis display pane
- Preview window for viewing of the complete waveform with zoom capability
- Properties window which includes a formula editor for waveform segment and segment item editing
- Status bar - displaying waveform cursor, waveform range selection and mouse cursor positions
- Customizable menu, toolbar, keyboard shortcuts, and tools menu
- Support for importing and exporting of waveform files in multiple formats, including NI-HWS Files (National Instruments .hws files), CSV Files (Comma Delimited .csv files), Text Files (.txt), and PRN Files (Space Delimited .prn files)
- ActiveX component support for creating, editing and reading waveform files, and performing mathematical and DSP calculation

## APPLICATIONS

- Baseband test
- Simulation and verification test
- Mixed signal test

# WaveEasy

## ORDERING INFORMATION

WaveEasy	Waveform development software package for GX1110/GX1120
<b>ARBITRARY FUNCTION GENERATOR CARD</b>	
GX1110	Arbitrary Waveform Function Generator PXI Card
GX1120	250 MS/s, Two Channel, Arbitrary Waveform Function Generator PXI Card