

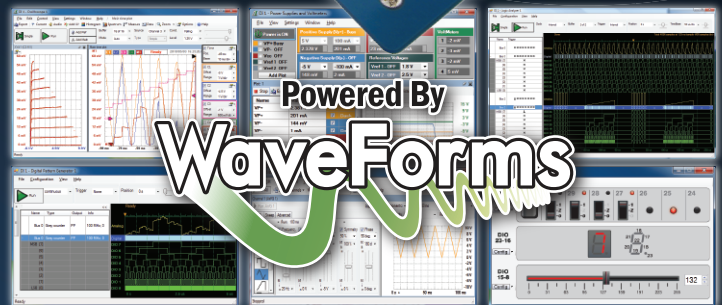
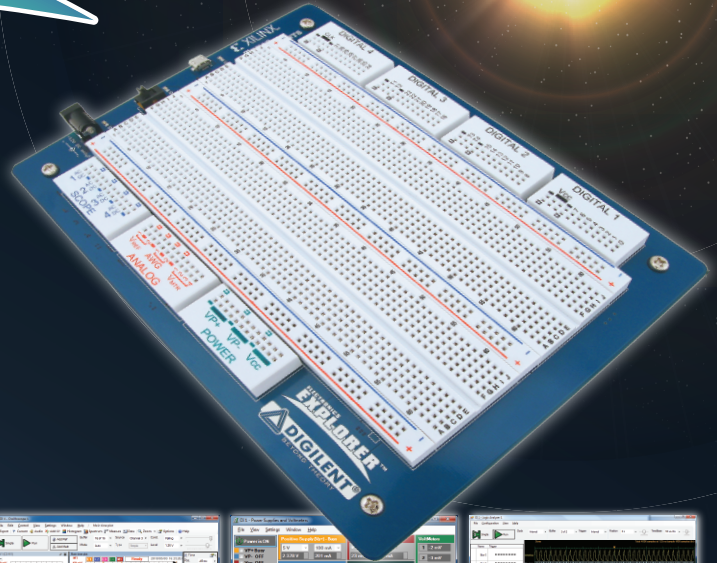
ELECTRONICS EXPLORER™

Integrated Analog/Digital Circuit Design Station

4-channel, 40MSa Oscilloscope
4-channel voltmeter
2 programmable reference voltages
2-channel Arbitrary Waveform Generator
Triple-Output Power Supply (two programmable)
32-Channel Logic Analyzer
32-Channel Pattern Generator
Discrete digital I/O's (buttons, switches, LEDs, etc)

Complete System!

Includes EE Board + WaveForms Software



The Digilent Electronics Explorer board (EE board) includes all of the test and measurement equipment needed to design and test analog and digital circuits of all types. Built around a large solderless breadboard, the EE board includes oscilloscopes, waveform generators, power supplies, voltmeters, reference voltage generators, and thirty-two digital signals that can be configured as a logic analyzer, pattern generator, or any one of several static digital I/O devices. All of these instruments can be connected to circuits built on the solderless breadboards using simple jumper wires.

Designed for daily use and intended for every student to own, the EE board combines everything needed to design and test circuits in a single "all in one" device. Even in introductory classes, students can complete, test, and analyze real circuit designs as a part of every homework assignment. No more once a week labs; now every student can complete designs in virtually any setting – any residence can be a complete, 24-hour design studio!

The EE board is powered by the free, PC-based WaveForms™ software that makes it easy to acquire, store, analyze, produce and reuse analog and digital signals. WaveForms™ runs well on virtually any notebook PC, including low-cost Netbooks. A high-speed USB2 connection ensures all EE board instruments respond in near real-time.

WaveForms™ data files are stored using standard formats, making it easy to share data between instruments, and to export data to word processors or graphics editors. This means well documented student lab/project reports can be completed using standard office tools, and submitted electronically.



ELECTRONICS EXPLORER

Integrated Analog/Digital Circuit Design Station

Oscilloscope

- 4 channels, 40MSa/sec sampling frequency
- 70MHz analog input stage bandwidth
- 9M Ω /10pF input impedance
- +/-20V input range
- AC/DC coupling
- 10 bits Analog to Digital converter
- 0.8mV to 40mV/LSB resolution
- Input protection up to +-200V
- Up to 16KSa buffer depth
- Advanced triggering(edge, pulse, transition types and hysteresis, holdoff parameters)
- Channels filtering: average, decimate, min/max
- FFT, XY, and Histogram functions
- Recording and audio functions
- Advanced data measurements for each channel and global measurements
- Export data and waveform options

Arbitrary waveform generator

- 2 channels, 40MSa/sec
- 4 MHz bandwidth
- 10V amplitude with +/-10 V offset
- Open loop impedance 35 Ω
- 14 bits Digital to Analog converter
- Standard and user defined waveforms
- 2KSa buffer depth for carrier and up to 32KSa buffer depth for the modulator signal
- AM/FM modulation with frequencies of up to 4MHz
- Swept and damped waveforms
- Import data options

Power supplies and voltmeters

- V+ and V- programmable voltage/current supplies of up to +/-9V and up to 1.5 A
- fixed 5V/3.3V supply with up to 2 A
- 4 voltmeters with +/-10V inputs
- Input impedance 1.2M Ω
- Voltmeter input protection up to +-200V
- Two reference voltages with +/-10V
- Auto scale and plot functions for each supply(voltage, current and power) and voltmeter
- Save data and waveform options

Logic Analyzer

- 32 digital pins
(shared with Digital Signal Generator and Static I/O)
- 100MSa/sec
- Internal/External clock
- Up to 16KSa per pin buffer depth
- Trigger options
- Save signals values option
- Customized visualization for each signal or bus
- Tabular data visualization

Digital signal generator

- 100MSa/sec
- 32 digital pins (shared with Logic Analyzer and Static I/O)
- Algorithmic pattern generator (no memory buffers used)
- Custom pattern editor in up to 16KSa per pin buffer depth
- Import data from files options
- Customized visualization for each signal or bus
- Tabular data visualization for custom signal types only

Static I/O

- 32 digital pins
(shared with Logic Analyzer and Digital Signal Generator)
- PC-based virtual I/O devices including push buttons, LEDs, switches, seven segments displays, sliders, progress bars
- Customized visualization

General

- Large breadboard for design implementation
- High-speed USB2 interface for fast data transfer
- 4 external trigger sources (used by any instrument)
- Possibility to reallocate resources according to the user needs
- External Power Supply DC 12V 2A
- Dimension 198 mm x 160 mm



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