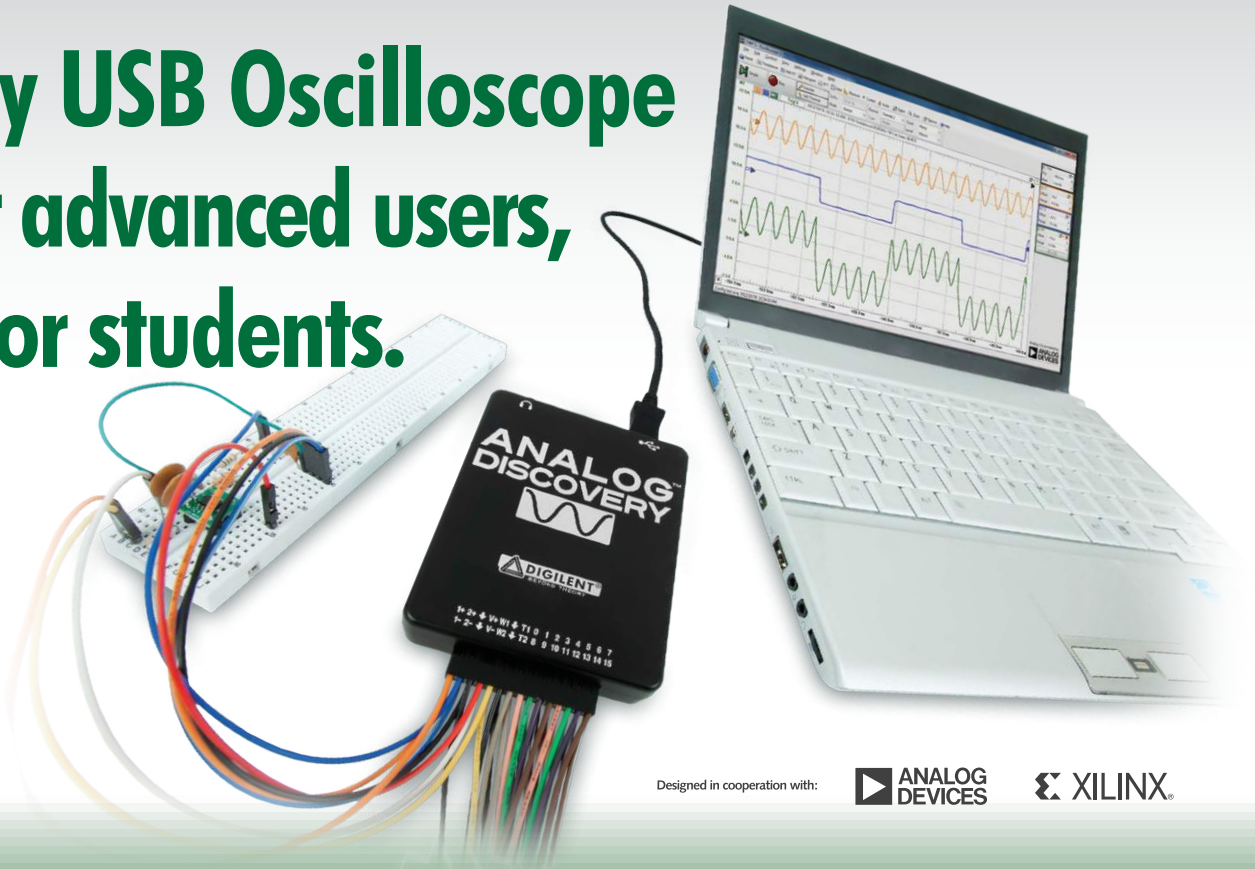
The only USB Oscilloscope built for advanced users, priced for students.



Designed in cooperation with: ANALOG DEVICES XILINX

Turn any PC into a powerful electrical engineering workstation! The USB-powered Analog Discovery lets you measure, visualize, analyze, record and control mixed signal circuits of all kinds. It's small enough to fit in your pocket, but powerful enough to replace a stack of lab equipment. Driven by the free WaveForms™ software, the Analog Discovery lets you build and test analog and digital circuits in virtually any environment, in or out of the lab.

- 2-Channel Oscilloscope
- 2-Channel Waveform Generator
- 16-Channel Logic Analyzer
- 16-Channel Digital Pattern Generator
- ±5VDC Power Supplies
- Spectrum Analyzer
- Network Analyzer
- Voltmeter
- Digital I/O

Now supported by MATLAB / MATLAB student edition

Also Available:

Analog Parts Kit (APK)

- 20+ ICs from Analog Devices
- 200+ discrete components
- Solderless breadboard
- Perfect for Circuits 1&2 classes

Discovery BNC Adapter

- Allows the use of standard BNC-terminated probes
- Selectable AC & DC coupling

DIGILENT® BEYOND THEORY

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ANALOG DISCOVERY™ USB OSCILLOSCOPE+

Analog Inputs
- Two fully differential channels; 14-bit converters; 100 MSPS real-time sample rate
- 500uV to 5V/division; 1MΩ, 24pF inputs with 5MHz analog bandwidth
- Input voltages up to ±25V on each input (±50V differential); protected to ±50V
- Up to 16k samples/channel buffer length
- Advanced triggering modes (edge, pulse, transition types, hysteresis, etc.)
- Trigger in/trigger out allows multiple instruments to be linked
- Cross-triggering with Logic Analyzer, Waveform Generator, Pattern Generator or external trigger
- Selectable channel sampling mode (average, decimate, min/max)
- Mixed signal visualization (analog and digital signals share same view pane)
- Real-time FFTs, XY plots, Histograms and other functions always available
- Multiple math channels support complex functions
- Cursors with advanced data measurements available on all channels
- All captured data files can be exported in standard formats
- Scope configurations can be saved, exported and imported

Arbitrary Waveform Generator
- Two channels; 14-bit converters; 100 MSPS real-time sample rate
- Single-ended waveforms with offset control and up to ±5 V amplitude
- 5MHz analog bandwidth and up to 16k samples/channel
- Easily defined standard waveforms (sine, triangle, sawtooth, etc.)
- Easily defined sweeps, envelopes, AM and FM modulation
- User-defined arbitrary waveforms can be defined using standard tools (e.g. Excel)
- Cross-triggering between Analog input channels, Logic Analyzer, Pattern Generator or external trigger

Logic Analyzer
- 16 signals shared between analyzer, pattern generator, and discrete I/O
- 100 MSPS, with buffers supporting up to 16K transitions per pin
- LVCMOS logic level inputs
- Multiple trigger options including pin change, bus pattern, etc.
- Trigger in/trigger out allows multiple instruments to be linked
- Cross-triggering between Analog input channels, Logic Analyzer, Pattern Generator or external trigger
- Interpreter for SPI, I2C, UART, Parallel bus
- Captured signals can be saved and exported in standard file formats

Digital Pattern Generator
- 16 signals shared between analyzer, pattern generator, and discrete I/O
- 100 MSPS, with buffers supporting up to 16K transitions per pin
- Algorithmic pattern generator (no memory buffers used)
- Custom pattern editor supports up to 16K transitions per pin
- 3.3V outputs
- Data file import/export using standard formats
- Customized visualization options for signals and busses

Digital I/O
- 16 signals shared between analyzer, pattern generator, and discrete I/O
- LVCMOS (3.3 V) logic level inputs and outputs
- PC-based virtual I/O devices (buttons, switches & displays) drive physical pins
- Customized visualization options available

Power Supplies
- Two fixed power supplies derive power from USB port
- +5V up to 50mA and -5V up to 50mA (100mA total)

Network Analyzer
- Waveform generator drives circuits with swept sine waves up to 10MHz
- Input waveforms settable from 1Hz to 10MHz, with 5 to 1000 steps
- Settable input amplitude and offset
- Analog input records response at each frequency
- Response magnitude and phase delay displayed in Bode, Nichols, or Nyquist formats

Voltmeters
- Two independent meters (shared with Analog input channels)
- Automatic measurements include DC, AC RMS and True RMS values
- Single-ended and differential measurement capability
- Up to ±25V on each pin (±50V max peak-peak)
- Auto-range feature selects best gain range

Spectrum Analyzer New!
- Performs FFT or CZT algorithm on analog input channels and displays power spectrum
- Frequency range adjustments in center/span or start/stop modes
- Linear or logarithmic frequency scale
- Peak tracking option finds peak power and adjusts display to keep peak in center of display
- Vertical axis supports voltage-peak, voltage-RMS, dBV and dBu display options
- Windowing options include rectangular, triangular, hamming, Cosine, and many others
- Cursors and automatic measurements including noise floor, SFDR, SNR, THD and many others
- Data file export using standard formats

Other features
- USB powered; all needed cables included
- High-speed USB2 interface for fast data transfer
- Software Development Kit provided for custom applications
- Waveform Generator output can be played on stereo audio jack
- Two external trigger pins can link triggers across multiple devices
- Cross triggering between instruments
- Help screens, including contextual help
- Supported by MATLAB and the MATLAB student edition
- Instruments and workspaces can be individually configured; configurations can be exported

ANALOG DISCOVERY™
USB OSCILLOSCOPE+