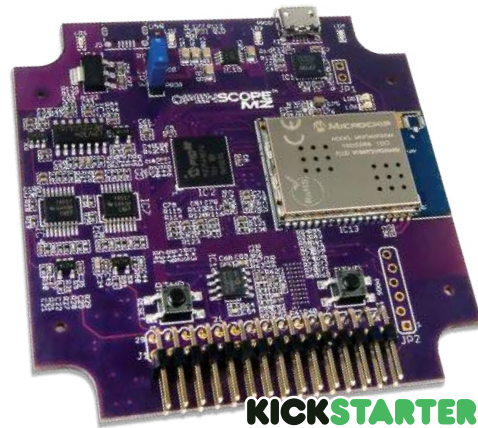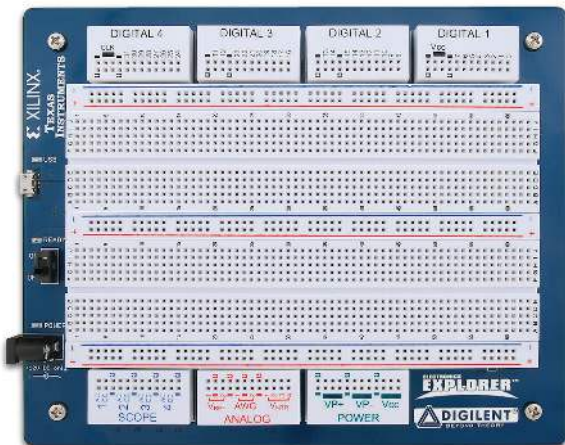# Digilent Instrumentation Family

Professional Electronics, without the constraints of a lab.

Start engineering on your schedule with Digilent Instrumentation. Modern engineers have to balance dynamic work environments without sacrificing technical standards. From troubleshooting on the production line, to viewing a few signals on the way to a business meeting, to jet-setting to a customer location; engineering problems can happen anywhere. With the perfect balance between portability and performance, our tools are designed to fit any work style.

Our Instrumentation hardware comes with WaveForms 2015, an industry ready software toolset. WaveForms 2015 was designed with the user in mind, providing a professional user interface with the option to customize to your needs. With one quick download and installation, it detects and customizes its tools and user interface to the instrumentation device connected. With Mac, Linux, and Windows compatibility, WaveForms 2015 and Digilent instrumentation can turn any computer into a versatile portable benchtop.

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Digilent Instrumentation Family Comparison Table

	Analog Discovery 2	Digital Discovery	Electronics Explorer	OpenScope (Kickstarter)
WaveForms Compatibility	Mac, Windows, Linux with WaveForms 2015	Mac, Windows, Linux with WaveForms 2015	Mac, Windows, Linux with WaveForms 2015	Chrome, Safari, Firefox, and Edge Browsers with WaveForms Live
Oscilloscope	2 channel, 14 bit, 100MS/s, 30Mz+ bandwidth, +-25V differential	NA	4 channel, 10 bit, 40MS/s, 100MHz, +-20V	2 channel, 12 bit, 6.25MS/s, 2MHz, +-20V
Waveform Generator	2 channel, 14 bit, 100MS/s, 12MHz+ bandwidth, +-5V	NA	2 channel, 14 bit, 40MS/s, 20MHz, +-10V	1 channel, 10 bit, 10MS/s, 1MHz+ bandwidth, +-3V
Network Analyzer	1Hz to 10MHz, Bode, Nyquist, and Nichols plots	NA	1mHz to 4MHz, Bode, Nyquist, and Nichols plots	NA
Spectrum Analyzer	2 channel, noise floor, SFDR, SNR, THD, Harmonic measurements, and More	NA	2 channel, noise floor, SFDR, SNR, THD, Harmonic measurements and more	NA
Voltmeter	2 channel, +-25V	NA	4 channel, +-20V	NA
Data Logger	Logging DC, True RMS, DC RMS, and math functions	NA	Logging DC, True RMS, DC RMS, and math functions	NA
Logic Analyzer	16 channel, 100MS/s, 3.3V CMOS, and 1.8V or 5V tolerant	Up to 32 channel, up to 800MS/s, 1.2V to 3.3V CMOS	32 channels, 100MS/s, 3.3V CMOS	10 channel, 50MS/s, 3.3V CMOS
Pattern Generator	16 channel,100MS/s, 3.3V CMOS	16 channel, 100MS/s, 1.2V to 3.3V CMOS	32 channels, 100MS/s, 3.3V CMOS	NA
Digital IO	16 channel, virtual buttons, switches, LEDs, 7-seg, progress bar, slider	24 channel, virtual buttons, switches, LEDs, 7-seg, progress bar, slider	32 channels, virtual buttons, switches, LEDs, 7-seg, progress bar, slider	10 channel, shared with LA, 4 LEDs, 1 BTN
Power Supplies	(-) channel 0 to -5V, (+) channel 0 to 5V, 500mW via USB, 2.1W via Aux supply, up to 700mA per channel	4 channel, 1.2V to 3.3V, up to 100mA, programmable voltage and threshold	2 reference voltage supplies with 10mA, 1 3.3/5V up to 2A supply, (+) channel 0 to 9V at 1.5A, (-) channel 0 to -9V at 1.5A	2 channel +-4V, 50 mA per channel
Protocol Analyzer	UART, SPI, I2C, more protocols in the Logic Analyzer	UART, SPI, I2C, more protocols in the Logic Analyzer	UART, SPI, I2C, more protocols in the Logic Analyzer	NA
Script Editor	JavaScript Interface	JavaScript Interface	JavaScript Interface	NA
Triggers	2	2	4	NA
Customizability	WaveForms SDK available for Custom Applications	WaveForms SDK available for Custom Applications	WaveForms SDK available for Custom Applications	Open source Hardware and Software

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