

## OpenScope: Open-source PICMZ All-in-one Instrumentation

SKU:  
410-324



### Product Description

#### As seen on Kickstarter!

OpenScope is a portable multi-function programmable instrumentation module. What does that mean? It's a device that you connect to your computer (through WiFi or a USB cable) that allows you to acquire, analyze, visualize, and control signals from circuits, sensors, and other electronic devices. Unlike typical USB instruments, OpenScope can also be programmed to run standalone like an Arduino or Raspberry Pi, but with high-speed precision analog and digital I/O. At the core of the OpenScope is a powerful Microchip PIC32 MZ Processor. This processor has many resources that we took advantage of to enable the functionalities found on OpenScope.

OpenScope also comes with WaveForms Live, which is a free, open-source, JavaScript-based software that runs in a browser and is inspired by our extremely popular software tool, WaveForms 2015.

Using the OpenScope + WaveForms Live, you will be able to configure the OpenScope to be an Oscilloscope, a Function Generator, a Logic Analyzer, a Power Supply, and even a Data Logger.

## Completely Open-Source!

We wanted to create OpenScope to enable everyone to learn electronics. This means that we need to invite as many people as possible to contribute ideas and collaborate with others in order to accomplish our mission on accessibility. OpenScope is designed to be as open-sourced as possible; therefore, the hardware, firmware, software, and the mechanical specifications will be made available to anyone who wants to change and/or improve upon the design.

### Features:

- 2 scope channels with 12 bits at 2MHz bandwidth and 6.25 MS/s max sampling rate
- 1 function generator output with 1MHz bandwidth at 10 MS/s update rate
- 10 user programmable DIO pins with 25MHz update rates
- User programmable power supplies supplying up to 50mA and  $\pm 4V$  power
- USB bus powered or externally powered
- On-board WiFi
- Browser-based WaveForms Live multi-instrument software
- Re-programmable through Arduino IDE or Microchip MPLAB X IDE

**We also offer an Accessory Kit add-on option for the OpenScope, which includes the following:**

- Regular-sized Project Box (sticker sheet not included)
- Mini Grabber Test Clips (6-pack)
- USB A to Micro-B Cable
- 8GB microSD Card with Adapter

**What's  
Included:**

- OpenScope
- Flywire cable assembly
- Digilent cardboard packaging with protective foam

