DreamSourceLab

DSCope Series

DSCope Series USB-based Digital Oscilloscope

DSCope is a series of USB-based oscilloscope, up to 100MHz bandwidth, max 1GSa/s sample rate, 2M real-time and 256M single record length.

DSCope is small(115mmx74mmx16mm), and can be packed in a shirt pocket. Combined with big screen and powerful performance computer, DSCope series oscilloscope can provide you amazing signal capture and analyzer experience.

📄 DSCope U2P20 Data Sheet

📄 DSCope U2B100 Data Sheet

📄 DSCope U3P100 Data Sheet

📄 DSView User Guide

		Bandwidth	Max Sample Rate	Record Length	Channels	Warranty
~~$199.00~~ $179.00 [Add to cart] **DSCope U2P20**		**50MHz**	**200MSa/s**	**2M Real-time / 32M Single**	**2**	**3-year**
~~$249.00~~ $199.00 [Add to cart] **DSCope U2B100**		**100MHz**	**1GSa/s**	**20K Real-time / 32K Single**	**2**	**3-year**
~~$399.00~~ $299.00 [Add to cart] **DSCope U3P100**		**100MHz**	**1GSa/s**	**2M Real-time / 256M Single**	**2**	**3-year**

How to choose an OSCILLOSCOPE?
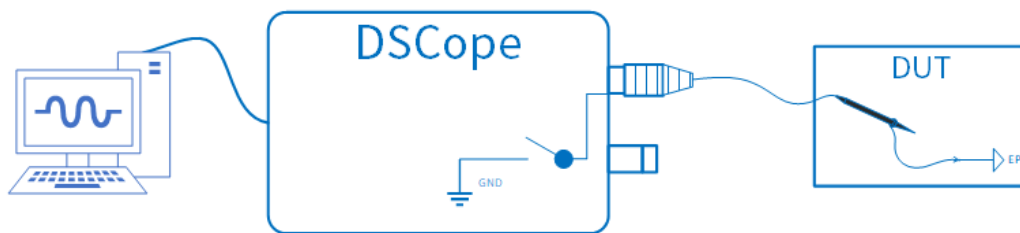# We have prepared A CHECKLIST for you

⌄

1. Stability and Safety

72 hours burn-in test

5 years，**1800** days and nights，**300** improvements

Patented **Ground Protection** technology

Ground Protection: If you accidentally connect the ground terminal of probe to certain power supply *, the ground connection will be **automatically disconnected** to protect your oscilloscope and computer from damage.
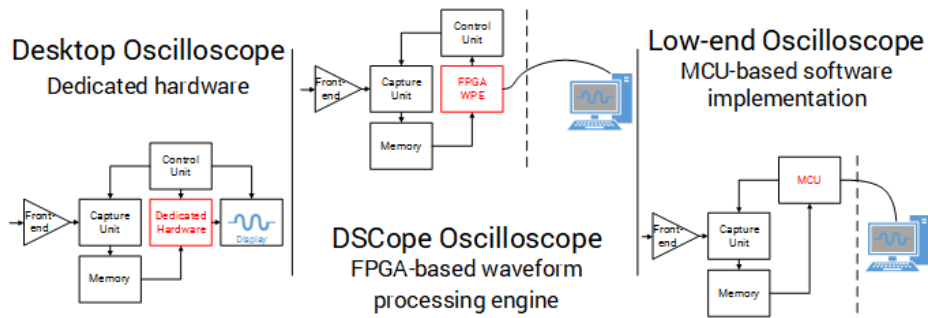
* For specific protection range, please refer to the specifications of different products

2. Capture Rate and Delay

DSCope has a **FPGA-based Waveform Processing Engine**, similar to the desktop oscilloscope, instead of an MCU-based software implementation

High Capture Rate and Smooth Waveform
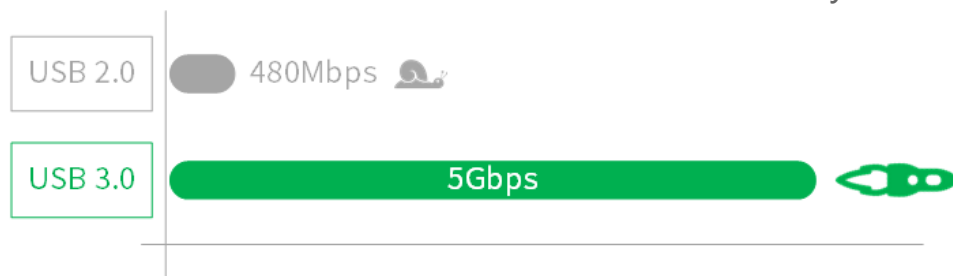
High Waveform Real-time Refresh Rate

DSView software can efficiently process waveforms and display dynamic waveforms at a stable frame rate
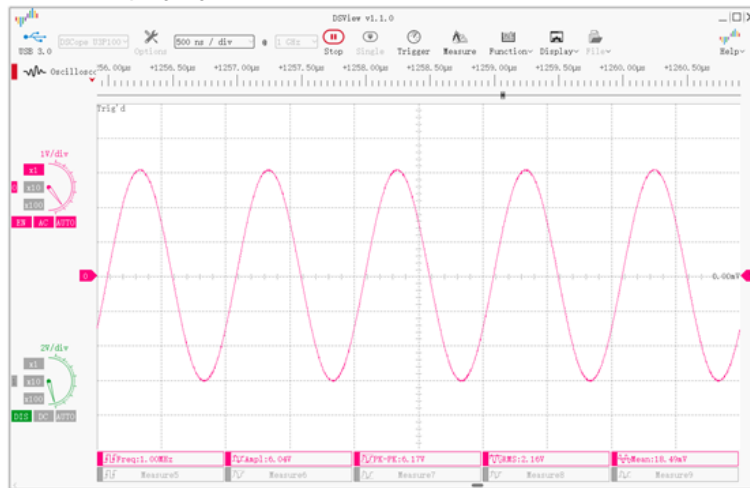
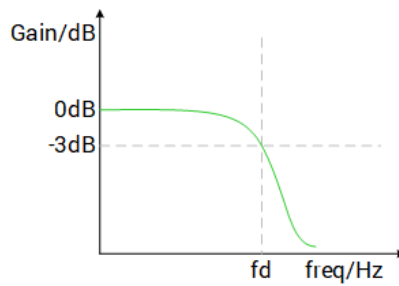
DSCope U3P100 support **USB3.0 interface**

Bandwidth up to **5Gbps**, **10 times** of USB 2.0

Achieve **microsecond** level transmission delay

3. Bandwidth and Sample Rate

Analog front-end bandwidth up to 100MHz

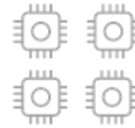## Single-chip high-speed ADC instead of low-end splicing scheme

single-chip　　　　　　　splicing scheme

VS

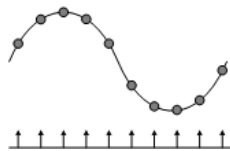High reliability　　　　　　Low reliability
High precision　　　　　　Low precision
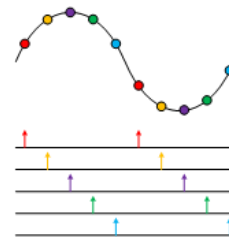High cost　　　　　　　　Low cost

Real-time sample rate up to 1GSa/s, not equivalent sample rate
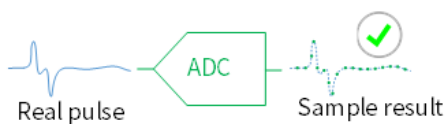
Ideal Case
repetitive signal

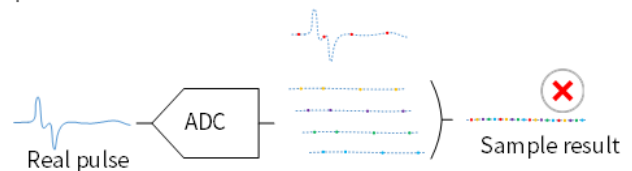**Real-time sampling**　　　　　　　**Equivalent sampling**
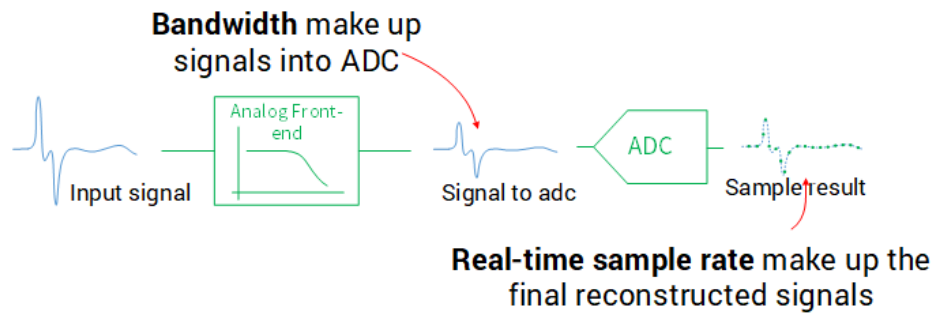
Real Case
One time pulse

Real-time sampling　　　　　　　**Equivalent sampling**

In the real world, most of signals we need to debug are
Not an ideal repetitive signal.

Equivalent sampling is ideal when observing the Perfect signals generated by the signal generator, **but it may not work well in the real world, especially for digital circuits.**
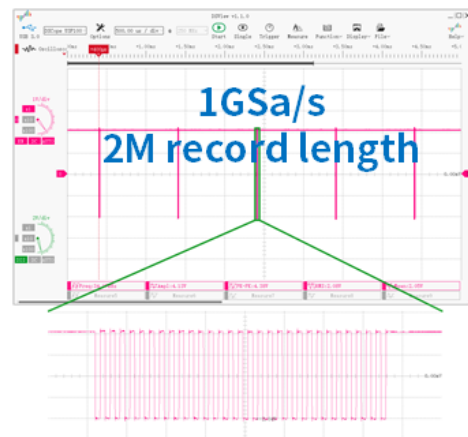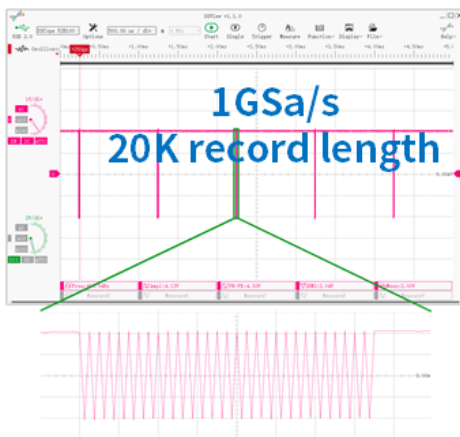
We recommend a classic design:

Real-time sample rate should be **10 times the bandwidth** of analog front-end circuits


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4. Record Length

Under the same highest sample rate, **different Record Length** will lead to **different waveforms**.



Most oscilloscopes only mark the highest sample rate, But most of the time, **actual sample rate depends on the Record Length.**

Actual Sample Rate = min {Highest Sample Rate，Record Length/Record Time}

For example: the highest sample rate of oscilloscope A and B is the same 1GSa/s. If record length of **A is 10K and B is 1M**, then the actual sample rate of **A is only 10MSa/s** at 100us/div , the actual sample rate of **B will remain at 1GSa/s**
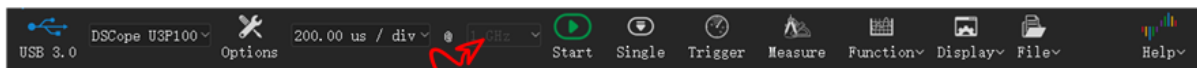
DSView **always display the actual sample rate**, providing an important reference for users
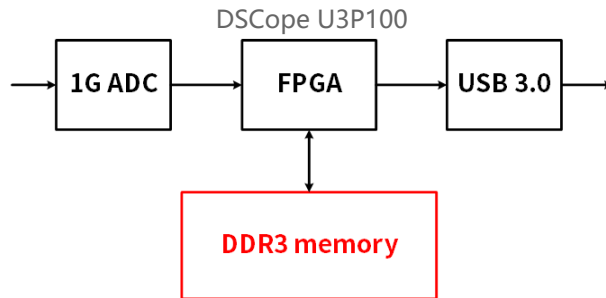
DSCope U3P100

DSCope U3P100 uses **2Gbits** DDR3 memory
Record length up to **2Mpts** for real-time acquisition
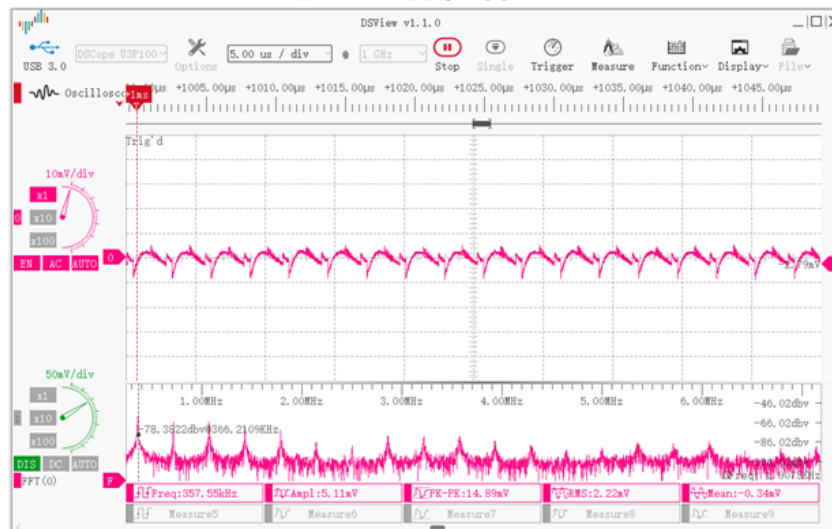up to **256Mpts** for single acquisition
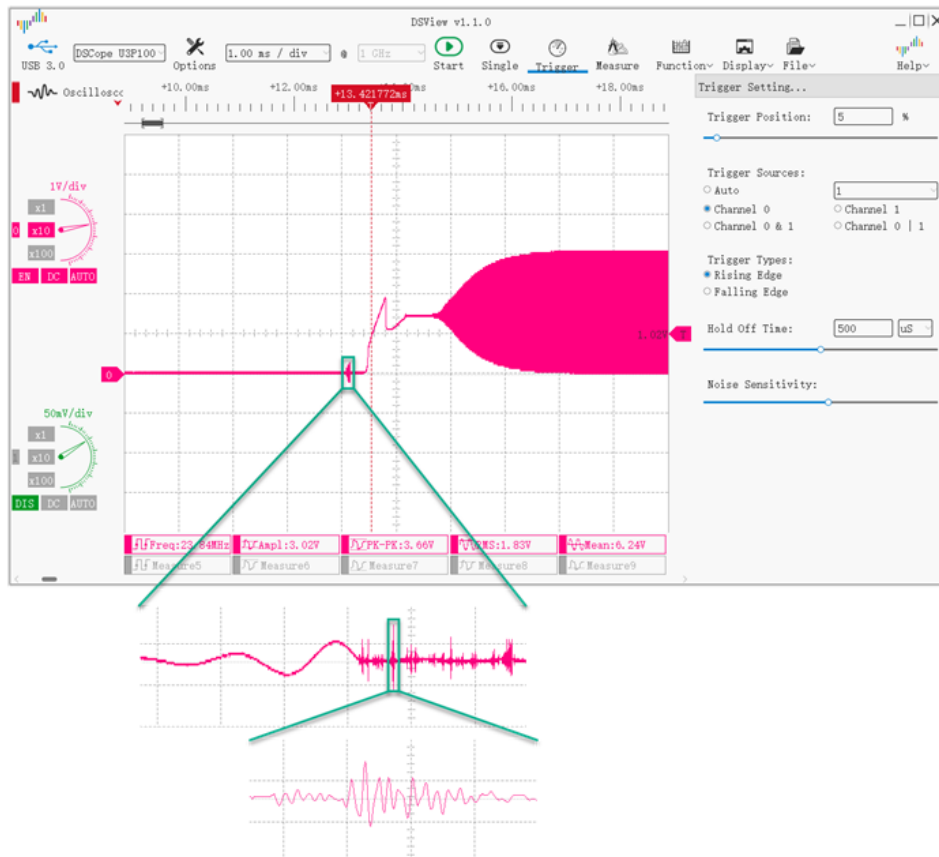
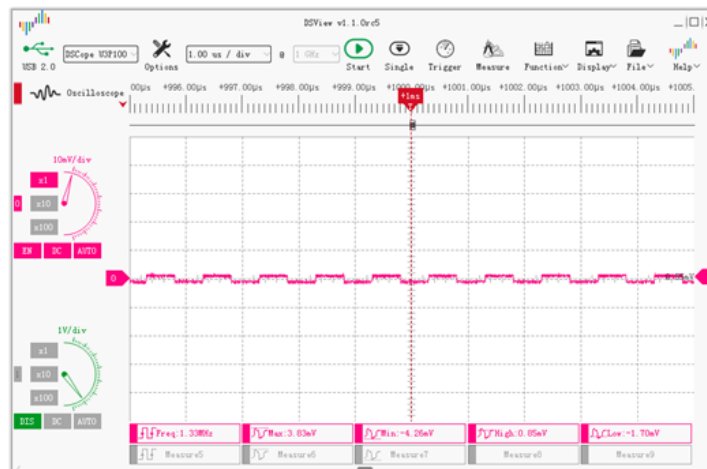**Long-time acquisition without losing details**
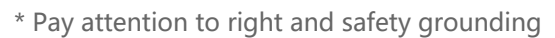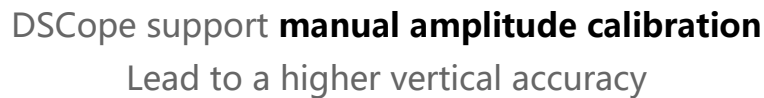
5. Vertical Sensitivity and Noise

DC/DC power supply **ripple analysis**

DSCope has a minimum vertical sensitivity of **10mv/div**.

If a battery-powered notebook is used as a display terminal,

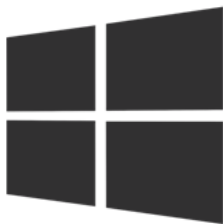**excellent noise performance** can be obtained.

A screenshot shows weak signal of **±1mv@1MHz**

DSCope is a **sharp tool** for **power ripple** measurement

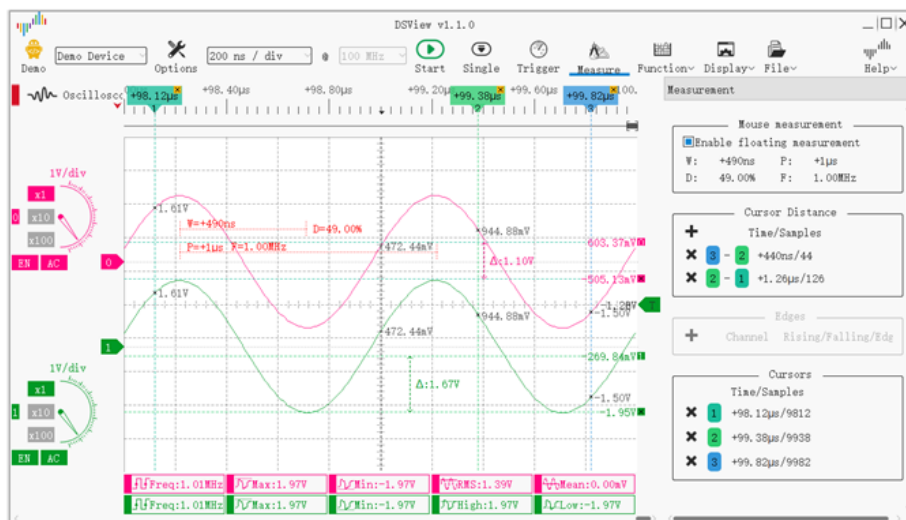DSCope support **manual amplitude calibration**

Lead to a higher vertical accuracy

With **x100 high-voltage probe** (not include),

DSCope can measure signal **range of ± 1000v***

* Pay attention to right and safety grounding

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6. Ease-of-Use

Big screen + **High** resolution

Mouse-based operations

Support **touchpad gesture**

Small screen + **Low** resolution

Messy keys and knobs

Windows   **macOS**   **Linux**

Multi-platform support

Driver with digital signature

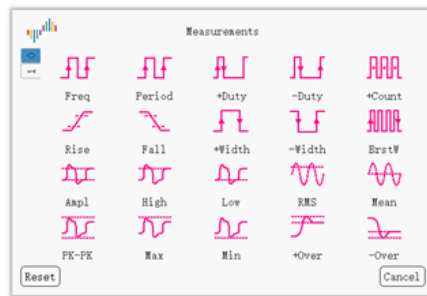## Rich measurements

auto, manual, x cursors, y cursors, ...
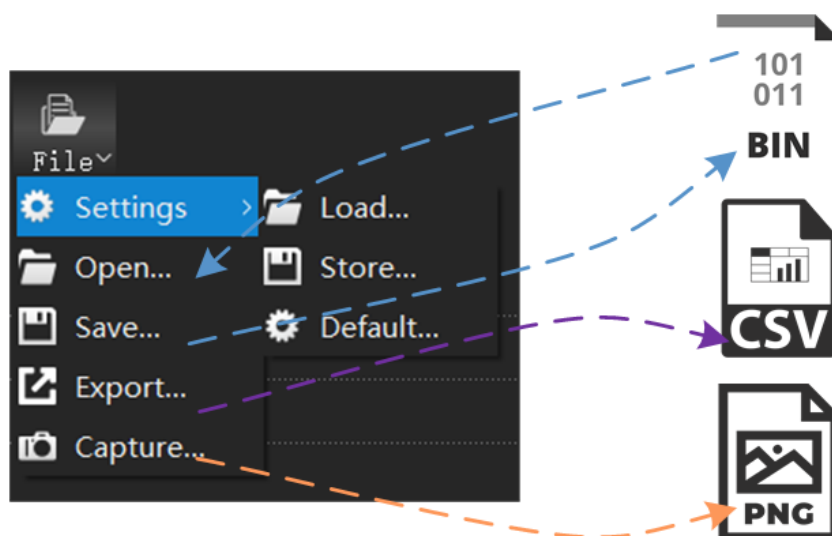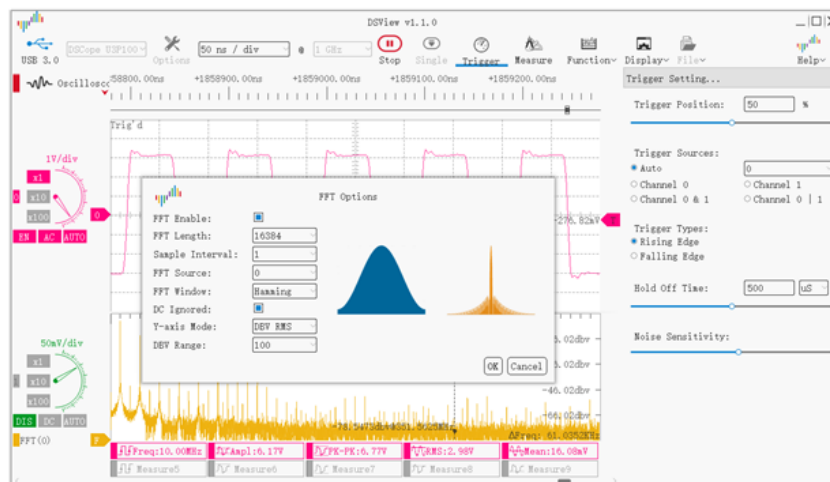

File & settings load/store

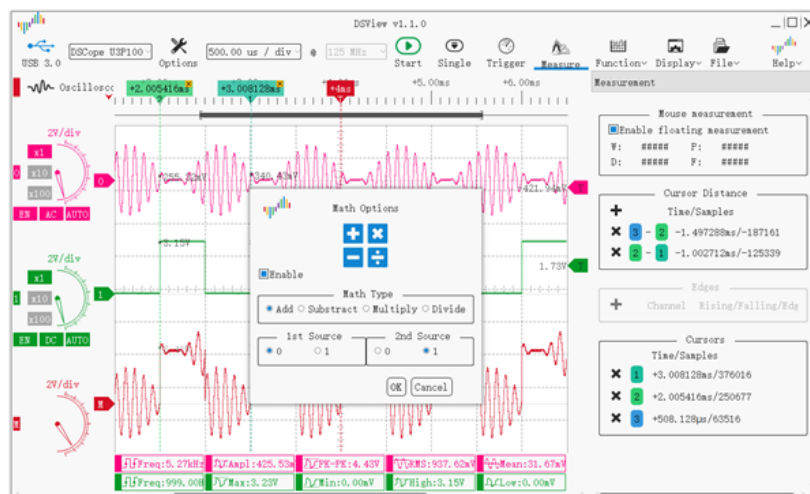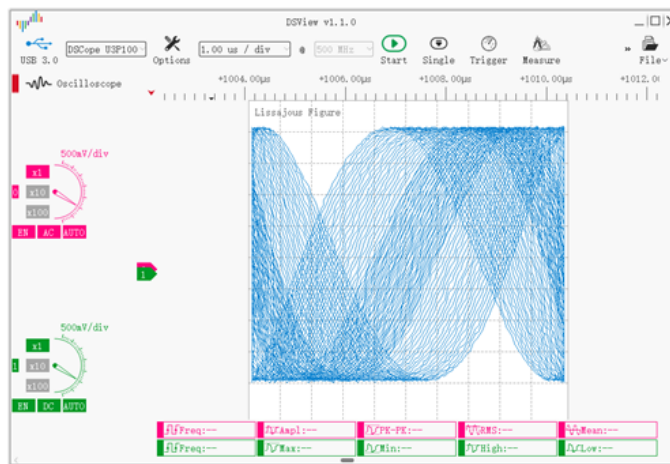easy to **review & share & reprocess**
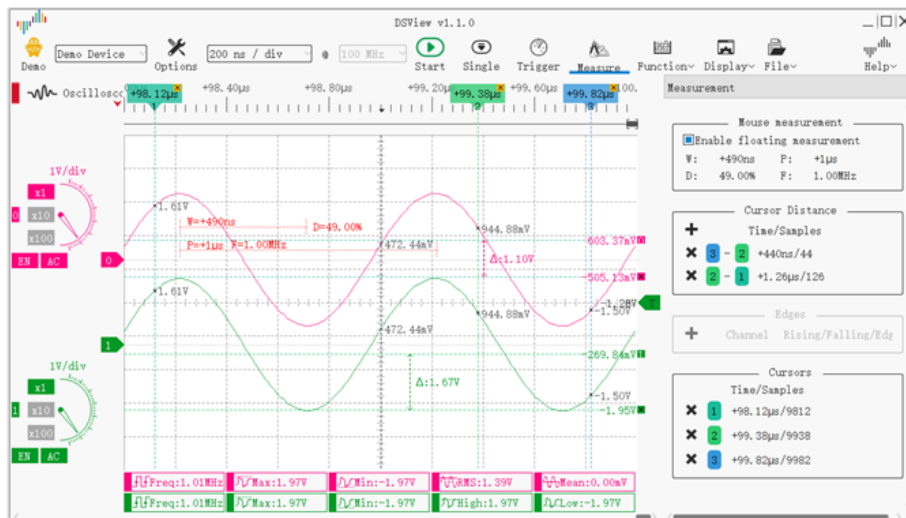
7. Feature Richness

Up to **20 Auto Measurements**

FFT-based Spectrum Analysis
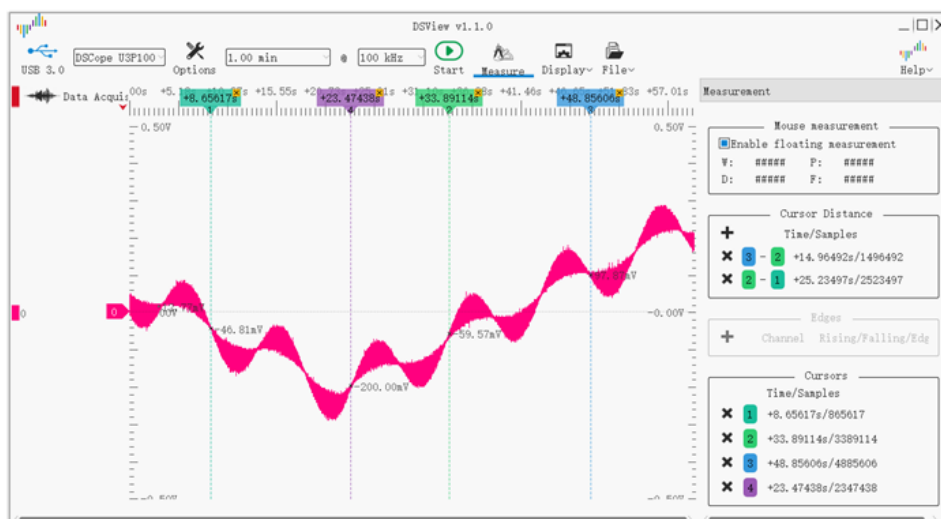

Math Functions (add/subtract/multiply/divide)

Lissajous Figure (X-Y mode)

Rich measurements
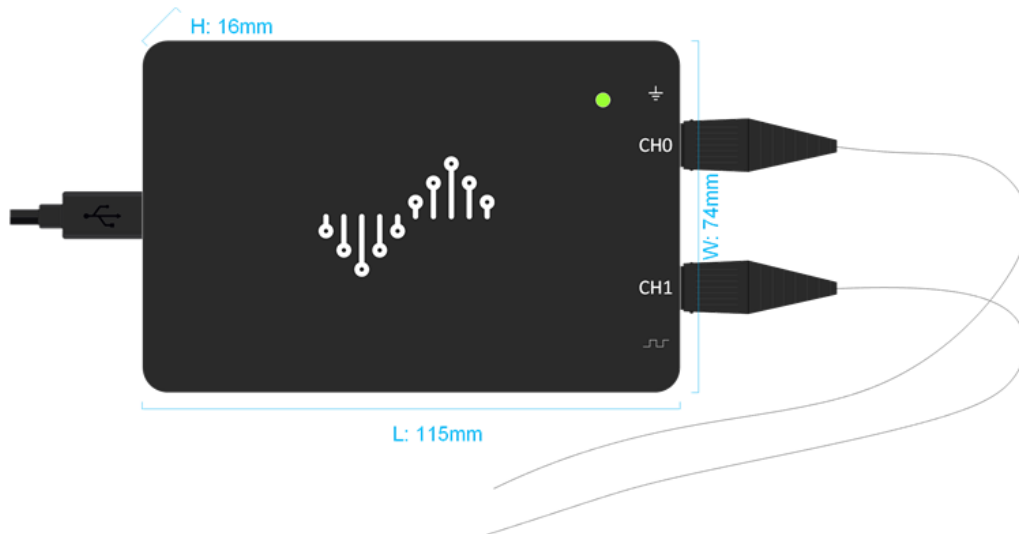
auto, manual, x cursors, y cursors, ...
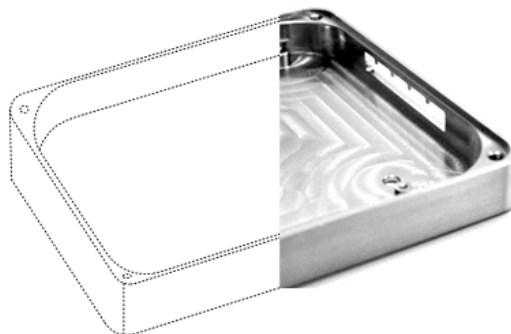

Data Acquisition Mode

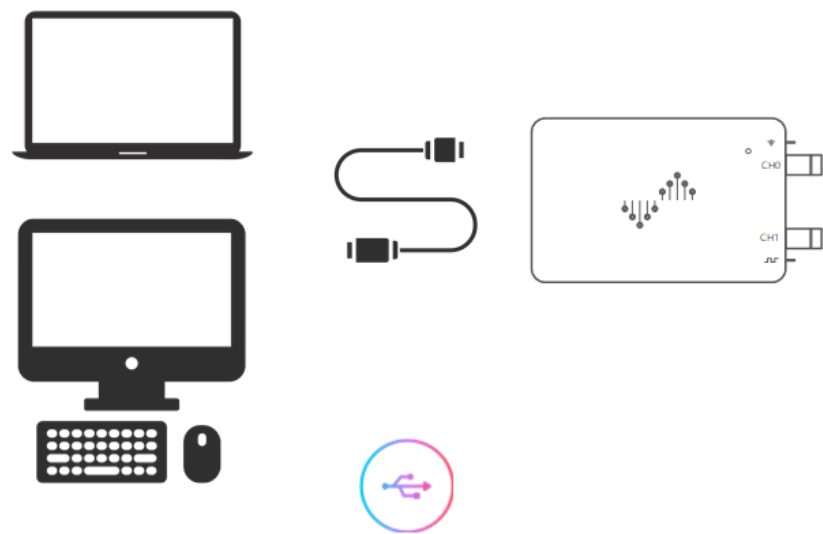long time continuous Record (>24hours@1KHz)

8. Portability

Oscilloscope in your pocket

CNC Aluminum Case

Fanless Design, No Noise

USB powered, plug and play

END

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