FNIRSI-1014D is a two in one oscilloscope and signal generator launched by FNIRSI. It has comprehensive functions and high practicability. It is a cost-effective dual channel desktop oscilloscope for the maintenance industry and R & D industry. The oscilloscope has a real-time sampling rate of 1GSa / s and 100MHz* 2 analog bandwidth; complete trigger function (single time / normal / automatic), both for periodic analog signal and aperiodic digital signal can be used freely; built in DDS function signal generator and the industry's original chopping output (@ 2.5vpp), all signal frequency step is 1Hz, support 14 kinds of standard function signal and a customizable chopping signal, chopping The output device intercepts part or the whole part of the complex signals measured by the oscilloscope as the output signal of the signal generator, which can store up to 1000 customized cut-off signals; the built-in high-voltage protection module can tolerate up to 400V continuous voltage, without worrying about the oscilloscope burning accident caused by the probe not moving to 10x gear. Large time base scrolling mode, which can monitor slow level changes; equipped with efficient one button auto, which can display the measured waveform without tedious adjustment; display high-definition LCD with 7-inch 800 * 480 resolution; cursor measurement function, when manually reading amplitude and frequency parameters, it does not need to read the background scale unit and quantity, and it does not need to convert to directly get peak to peak and frequency Extremely convenient screen capture and waveform storage function, built-in 1GB storage space, can store up to 1000 screen capture pictures + 1000 groups of waveform data, the storage process is simple and fast, save the current waveform with only one click, no cumbersome prompts and choices to save the current data, very convenient; powerful waveform image manager, support thumbnail browsing, view, view details The

functions of page turning, deleting and waveform enlarging, reducing and moving are convenient for secondary analysis. The fuselage is equipped with USB interface, which can be connected with the computer to realize the sharing of its own screen capture pictures and the computer, which is convenient for secondary analysis; Li Shayu's graphic display function can be used to compare and judge the amplitude, frequency and phase of two groups of signals; FFT viewing function can estimate the harmonic component of signals; Li Shayu's graphic display function can be used to compare and judge the amplitude, frequency and phase of two groups of signals;

Key features:

1：Built in DDS signal generator, support 12 kinds of function signal
2：Industry's original 【Capture output signal】 function，can store up to 1000 capture signals
3：Targeted high intelligent decoding algorithm, the encoder life is infinite
4：Intelligent anti-burn，1X Can withstand up to 400V withstand voltage
5：100MHz analog bandwidth @ 1GSa/s sampling rate（1X = 5MHz，10X = 100MHz）
6：Fully fit 7 inch 800 * 480 resolution color TFT LCD display with bright colors and high contrast
7：High measurement voltage range, 1X can measure 0 ~ 40 V, 10X can measure 0 ~ 400V，100X can measure 0 ~ 4000V
8：Up to 12 parameters measurement：VPP，VP，Vmax，Vmin，Vavg，Vrms，Frequent，Duty+，Duty-，Time+，Time-，Period
9：Cursor measurement function, it is convenient to manually measure the period and frequency and voltage
10：Complete triggering function (single, normal, automatic)
11：At any time, the waveform display (pause function) is frozen
12：Equipped with high efficiency One-button AUTO
13：One-button waveform storage and screenshot
14：Built-in 1GB storage space, can store up to 1000 screenshots + 1000 sets of waveform data
15：Powerful waveform picture manager supports thumbnail browsing, viewing, detailed viewing, page turning, deletion and waveform zooming in, zooming out, moving, etc.
16：Equipped with a USB interface, which can be connected to a computer to share its screenshots with the computer, which is convenient for secondary analysis
17：Lissajous figures graphic display function can be used to determine the amplitude, frequency, and phase contrast of two groups of signals
18：FFT display function, can analyze the spectral characteristics of the signal
19：Memory compression technology, waveform refresh screen does not flicker
20：Screen brightness adjustment
21：Background grid brightness adjustment
22：Ultra thin, easy to carry

Specifications:

1：Analog band width: 100MHz * 2

2：Number of channels：2 channels

3：Maximum real time sampling rate: 1GSa/s

4：Vertical sensitivity: 50 mV/div ~ 500 V/div

5：Horizontal time base range: 50S/div ~ 10nS/div

6：Maximum test voltage: 40 V (1X probe), 400 V (10X probe)

7：Storage depth: 240Kbit

8：Input resistance: 1MΩ

9：ADC precision: 8bits

10：Coupling mode: AC/DC

11：Trigger mode: Single, Normal, Auto

12：Trigger edge: Rising edge/Falling edge

13：External trigger voltage 0 – 40 V

14：Display: 7 inch - 800*480

16：Extension ports：USB picture export

18：Size: 340mm x 140mm x 70mm

19：Body weight: 1.5kg

Package includes:

1 x FNIRSI-1014D oscilloscope host

2 x Matching 100MHz probe（1X and 10X）

1 x Crocodile clip

1 x 5V2A Power Adapter

1 x USB data line

1 x User manual (English)

Parameter

Model	FNIRSI-1014D	Highest test voltage	1X：40V 10X：400V
Channels	2	Cursor	Position XY Trigger Y
LCD size	7 Inch	Roll mode	Support
LCD Resolution	800 * 480	One-button AUTO	Support
Display technology	LCD	Waveform storage	1000 pictrure + 1000 waveform
Bandwidth	100MHz	Waveform manager	Support
Sampling Rate	1GSa/s	Voltage accuracy	± 5%

Rise time	< 3nS	Frequency Precision	±0.01% High precision
Storage depth	240Kbit	Parameter	12 kinds in total
input resistance	1MΩ	Generator	14 kinds in total
Sensitivity	50mV ~ 500V	Capture output	Support
Time base	50S ~ 10nS	Extension	USB export
Trigger mode	Single/Normal/Auto	Power supply	5V 2A/3A/4A
Trigger edge	Rising / Falling	Dimensions	310mm * 145mm * 70mm
coupling	AC/DC	Accessories	100M Probe * 2，USB Charger，User Manual

Multi-fields

- Electronic DIY
- Appliance repair
- Car repair
- Equipment debug
- Scientific research
- Product development

Anti-burn | Auto set | Screenshot | Picture viewer | USB export | 7-inch screen | Gen Output | FFT display | X-Y mode | Capture output

Debugging weapon

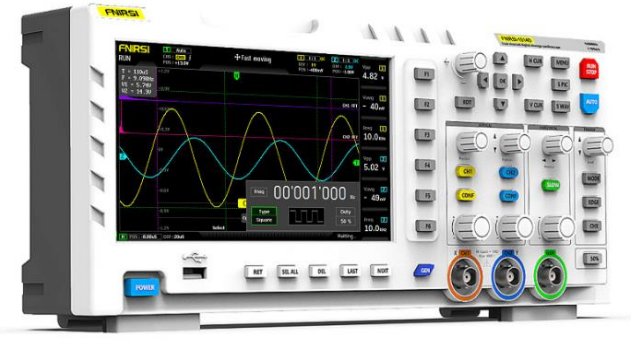
- Oscillating circuit
- Opamp circuit
- Inverter circuit
- PWM driver
- Mains measure
- Switch circuit
- Digital circuits
- Bus circuit

7-inch HD large screen

7-inch 800 * 480 resolution color TFT LCD, bright color, high contrast

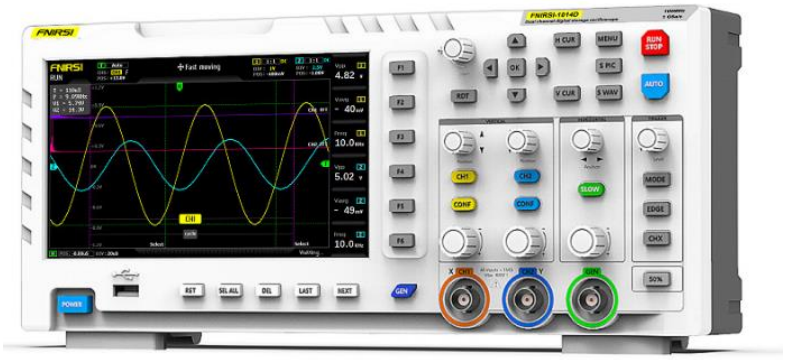
Built in DDS function signal generator

14 standard signals (@ 5vpp), including sine wave, square wave, triangle wave, sawtooth, anti sawtooth, ladder wave, half wave rectification, full wave rectification, exponential wave, logarithmic wave, pair index, open square wave, multi audio, sink pulse wave, as well as a cut-off output function that can customize the output signal freely, in which the sine wave frequency can reach 10MHz at most, and other standard signals can reach 2MHz, cut-off frequency can reach 2MHz The wave output device can reach 1MHz at most, and the frequency resolution of all signals can reach 1Hz (step). It is not the half frequency step mode of half frequency division produced by other handheld devices



Industry's original【Capture output】function

Capture output is to intercept part or the whole part of the complex signals from the oscilloscope as the output signal of the signal generator. It can store up to 1000 customized signals. It is different from the traditional arbitrary signal generator. Arbitrary signal generator can only describe the signal manually, with subjectivity and large characteristic distortion, but the interceptor output can intercept the signal The frequency can be adjusted freely in the range of 1Hz ~ 1MHz (@ 2.4vpp), and the resolution is as high as 1Hz, which has played a great help in many test and analysis occasions. At present, no professional oscilloscope or professional signal generator has this function



Targeted high intelligence decoding algorithm

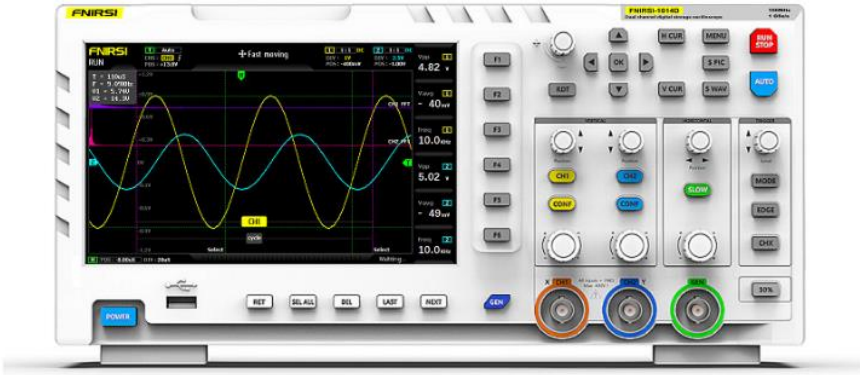
The encoder (knob) of desktop oscilloscopes below 10000 yuan will start to have poor halogen or oxidation contact after about one year of use. A large number of burr logic will be generated during rotation operation, which makes the oscilloscopes unable to operate normally. As soon as the adjustment is made, the oscilloscopes will jump wildly and can no longer be used. This is an unsolvable hardware problem, but ads1014d is specially designed to solve this problem Don't analyze and finally develop a perfect decoding algorithm to solve this problem. Even if the encoder is completely broken, it will not affect the normal use of the oscilloscope at all. Replacing the encoder that can't be used by ordinary oscilloscope with ads1014d still runs perfectly and operates correctly, getting rid of the limitation of the encoder's short life

Dual channel input

It has two input channels with an input impedance of 1m ohm. It can measure two groups of different signals at the same time. It can compare the two groups of input signals to judge and analyze the problems, such as the comparative analysis of the input and output signals of the power amplifier unit to test its amplification factor, distortion degree and output internal resistance, or the test of complementary PWM signals of half bridge full bridge switching power supply, compared with the single channel It has more extensive application

Intelligent anti burning

The two groups of input channels have built-in high-voltage protection module, which can tolerate up to 400V voltage input. There is no need to worry about the oscilloscope burning accident caused by the probe not being moved to 10x position when measuring high voltage

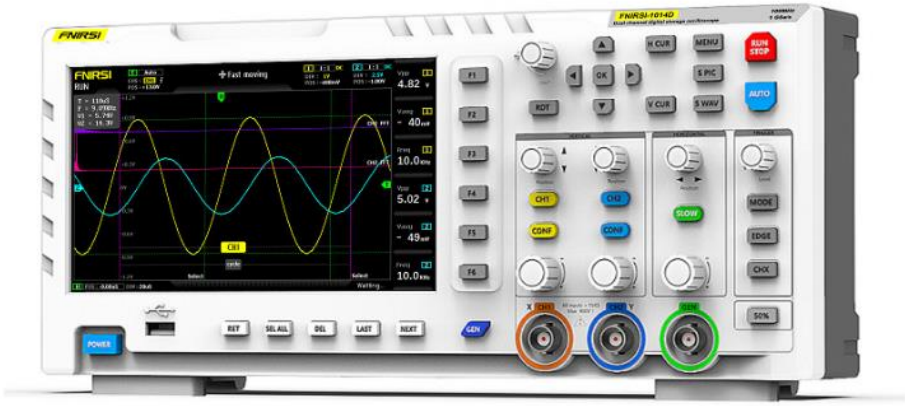


One button automatic adjustment

There is no need for tedious manual adjustment, one button automatic adjustment; built in high-efficiency tracking control algorithm, automatic identification of signal characteristics, adaptive 25%, 50%, 75% trigger level, even for the dead zone signal or multi edge signal can be adjusted, other desktops can not do anything; high accuracy of adjustment, the adjusted waveform appears in the center of the screen (when starting dual channel, channel 1 waveform is on the screen) It takes only 2 seconds to automatically adjust the 1V peak to peak signal, and it takes about 5 seconds for general desktop oscilloscope. The larger the amplitude of the measured signal is, the shorter the adjustment time is

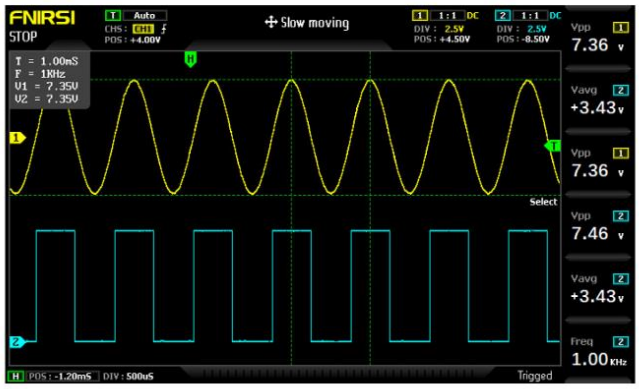
Complete trigger function

It has three trigger modes: automatic, single trigger mode and normal trigger mode. Single trigger mode tests sudden aperiodic burst signal, such as automobile ignition signal; normal trigger mode tests aperiodic digital logic signal, such as infrared remote control signal; automatic trigger mode tests periodic analog signal, such as sinusoidal signal; it is widely used



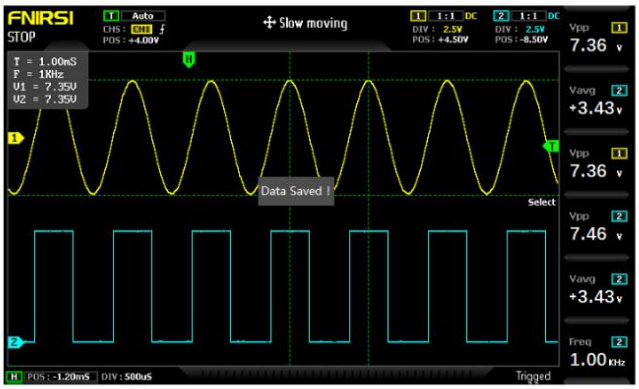
Manual cursor measurement

When the test signal noise is too large or contains the square wave of the peak signal, the parameters automatically measured by the system will be affected and become inaccurate, so it is necessary to manually read the amplitude or period of the signal to calculate its peak value and frequency. With the cursor function, it is easy to manually read the value, and there is no need to read the background scale unit and number, and there is no need to carry out the calibration The peak to peak value and frequency can be obtained directly by conversion, which is very convenient



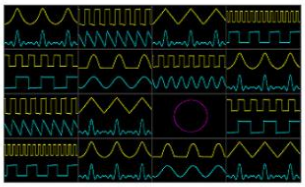
One button screen capture and save waveform

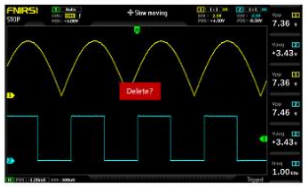
Built in 1GB storage space, can store up to 1000 screen capture pictures and 1000 groups of waveform data, the storage process is simple and fast, screen capture and save the current waveform only need one click, no cumbersome prompt and selection to save the current screen capture pictures or waveform data, very convenient



Powerful wave image manager

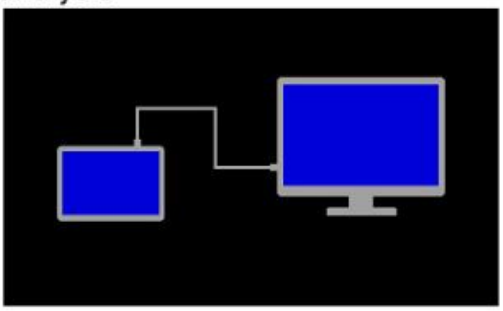
The wave image manager provides powerful wave data and image management capabilities, and supports the browsing, viewing, measuring parameter viewing, page turning, deleting and other operations of the file thumbnail. Just like the image viewer on the mobile phone, the wave viewer can conduct secondary analysis on the saved wave data, including zooming, panning, cursor measurement, screen capture and other operations Users provide a very convenient platform for file management after storage, which is much more flexible than other ordinary oscilloscopes

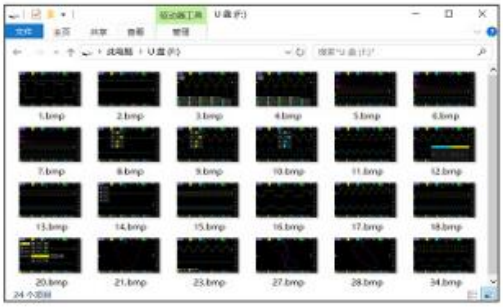




USB image export

The fuselage is equipped with USB interface, which can connect the computer to realize the sharing of its own screen capture pictures and computers. After connecting the computer, the oscilloscope will exist in the form of U disk. The computer can find the screen capture pictures of the oscilloscope in the folder of the removable disk, copy the pictures to the computer or send them to the mobile phone, so as to facilitate secondary analysis





Lissajous graphic display

Lissajous figure is a curve figure generated by the input value of channel 1 as the x-axis coordinate and channel 2 as the y-axis coordinate, which can be used to compare and judge the amplitude, frequency and phase of two groups of signals