⊙⊙LOTO

OSC802 series
USB Oscilloscope/Data logger Device Family

Features:

- Hand-held portable, 153(L) x 93(W) x 23(H) mm, up to 210g.
- General Purpose I/O interface (TTL 3.3V).
- 8 Bit ~ 13 Bit vertical resolution. **NEW**
- Open source hardware interface to support expansion modules.
- USB 2.0 interface, USB powered.
- 72 hours long time data logger.
- Optional isolated differential input support module.
- Waveform recording and playback review.
- Support waveform image import as the comparison reference for real-time waveform.
- Support Serial bus decoding (RS-232,RS-485, I²C, CAN).
- Supports a variety of current clamps and other physical volume custom probes.
- Support buffer waveform preview and mouse wheel operations.

APPLICATIONS:

- ✓ General-purpose and precision testing.
- ✓ Embedded in industrial testing equipment for use.
- ✓ Embedded electronics courses for the educational market.
- ✓ Ripple and noise measurements for power supply characterization.
- ✓ Multi-sensor systems and Serial bus decoding.
- ✓ Car inspection and maintenance.
- ✓ Current/Voltage recording and analysis System for Solar Power Supply and Lighting System.
- ✓ Diagnosis device for field engineers.
- ✓ Basic equipment for DIY makers to develop their own modules.

SPECIFICATIONS:

●	Connector type :	2 channels with BNC sockets, 20 mm spacing.
●	Vertical resolution:	8 Bit ~ 13 Bit . NEW
●	Maximum sampling rate (S/s):	80M
●	Bandwidth (−3 dB):	30MHz
●	Input coupling:	AC/DC.
●	Input characteristics:	1MΩ ‖ 25pF.
●	PC OS requirements:	Windows XP, Win 7, Win 8.1, Win10 (32 bit and 64 bit).
●	Overvoltage protection:	±60.0v (x1), ±600.0v (x10). (DC + AC peak)
●	Triggering type:	Rising/falling edge according to trigger level.
●	Triggering mode:	None, auto, normal, single.
●	pre-trigger capture:	50% of capture size.
●	Automatic measurements:	Maximum, minimum, average, RMS, frequency, period, positive pulse width, negative pulse width, duty cycle, rise time, peak-to-peak value.
●	Deep measurement:	With this function, the waveform jump points are automatically numbered and marked, and the time difference between the two adjacent numbers is automatically displayed.
●	Samples Interpolation:	Linear or sin(x)/x.
●	FFT:	1024 ~ 16K points.
●	FFT window function:	Rectangle, Hanning, Hamming, Blackman.
●	Math:	A+B, A-B, AxB, X-Y.
●	Acquisition Modes:	Normal mode / High Resolution mode / Peak detect mode.

●	Waveform recording and playback:	File format :	*.oscxxx.
		Record depth:	50 ~ 450 frames.
		File size:	6 MB ~ 20GB.

●	Comparison reference	Support waveform image import and real-time waveform comparison reference. It can import waveform pictures, set gray level and transparency, move up and down, and zoom in and out horizontally and longitudinally.
●	Data logger Sampling Interval:	1 second to 1 hour.
●	Data logger Record Duration:	1 minute ~ 72 hours.
●	Temperature range:	Operating: 0 °C to 40 °C (20 °C to 30 °C for stated accuracy). Storage: −20 °C to +60 °C.
●	Reference Output:	1K Hz, 1.5 V square wave output with 50% duty cycle.
●	Size:	153(L) x 93(W) x 23(H) mm.
●	Languages (full support):	English, Chinese (simplified).
●	Compliance:	CE, FCC.
●	Net weight:	210 g.
●	Input sensitivity (10 vertical	50 mV/div to 2 V/div.

	divisions):		
●	Input ranges(probe x1):		±250 mV to ±5 V full scale, in 6 ranges.
●	Timebase selection (10 horizontal divisions):		5 ns/div ~ 2 s/div, in 21 ranges.
●	Typical noise (peak to peak voltage):	50 mv/div	5.8 mv
		100 mv/div	8 mv
		200 mv/div	22 mv
		500 mv/div	38.8 mv
		1 v/div	88.2 mv
●	Memory depth (byte /Ch):	64k	≤100 ms/div
		258k	200 ms/div
		645k	500 ms/div
		1M	1 s/div
		2M	2 s/div
		2M	2 s/div
●	Trigger type:		Hardware
●	Trigger source:		Channel A
●	Power consumption:		5 v || (248~279) mA
●	Protocols decoding:	NEW	UART/RS-232, I²C,CAN
●	Custom probes	NEW	Support two-point calibration of any current clamp on the market.

AT A GLANCE

Model:	OSC802
Detail:	Support Windows XP, Win 7, Win 8.1, Win10 (32 bit and 64 bit).
Input channels:	2
Maximum sampling rate (S/s):	80M
Bandwidth (−3 dB):	25M Hz
FFT:	✔
Data logger:	✔
I/O extension:	✘
Serial bus decoding:	✔
Hardware trigger:	✔
Ext trigger support:	✔
Signal generator module support:	✘
Logic analyzer module :	✘
Android Phone/ Tablet support	✘
Isolated differential input model NEW	Optional
Custom probes NEW	✔

Expansion modules & Accessories:

	type	quantity	model	details
①	Oscilloscope host device	1	OSCxxx	/
②	USB cable	1	U2100	USB2.0 compliant, length: 1m (or whatever length it is), USB Type A Male to USB Type B Male
③	Passive voltage probe, 60 MHz x1/x10	2	P2060	10x: 60M Hz,10MΩ,600 V CAT II
				1x: 6M Hz,1MΩ,300 V CAT II

    Users can also choose the carrying case to store the oscilloscope main unit and wiring and some modules, as shown below:

Or choose a box suitable for the user to display the scene, as shown below:

Isolated differential module IDM01:

This module can be purchased later and added by itself. It can be used with LOTO OSC482 series, OSC802, OSCA02 series, OSC2002 series, OSC980, OSCH00 to realize voltage measurement in high voltage or none-zero grounding circuit.
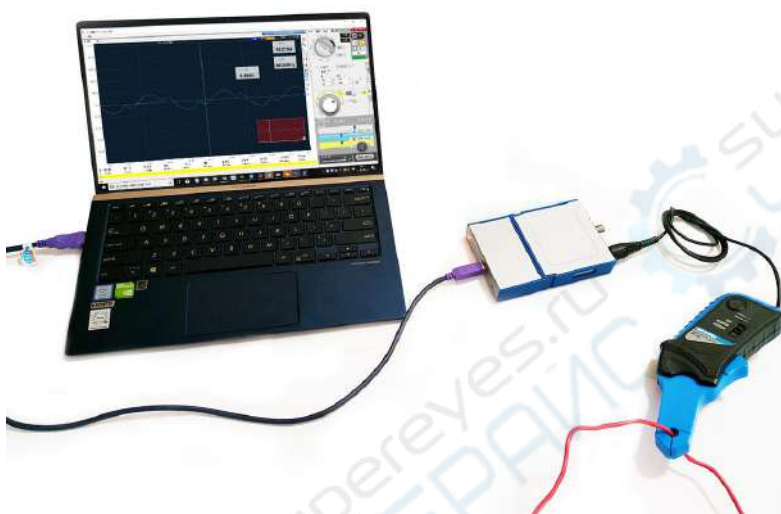

items	Isolated differential module	
channel	1 (chB with OSCxxx Oscilloscope)	
Input characteristics:	1MΩ	
Maximum working insulation voltage	1200V	
Bandwidth	50K Hz	
Input range(4 grades)	20V	Input range -20V~+20V
	80V	Input range -80V~+80V
	200V	Input range -200V~+200V
	800V	Input range -800V~+800V

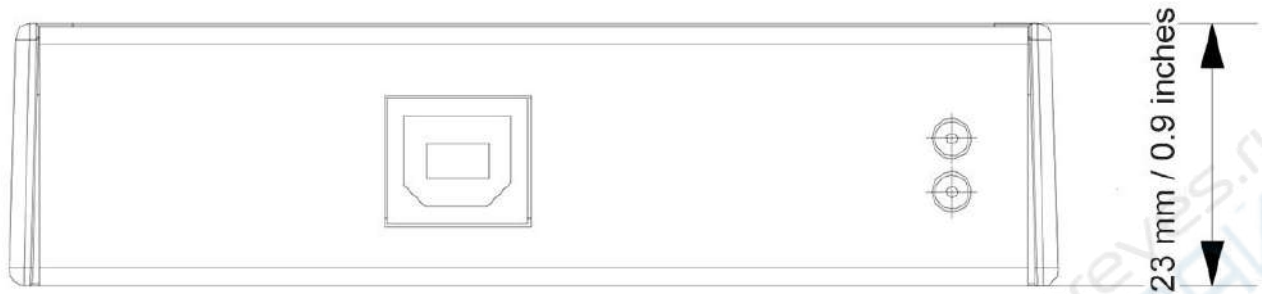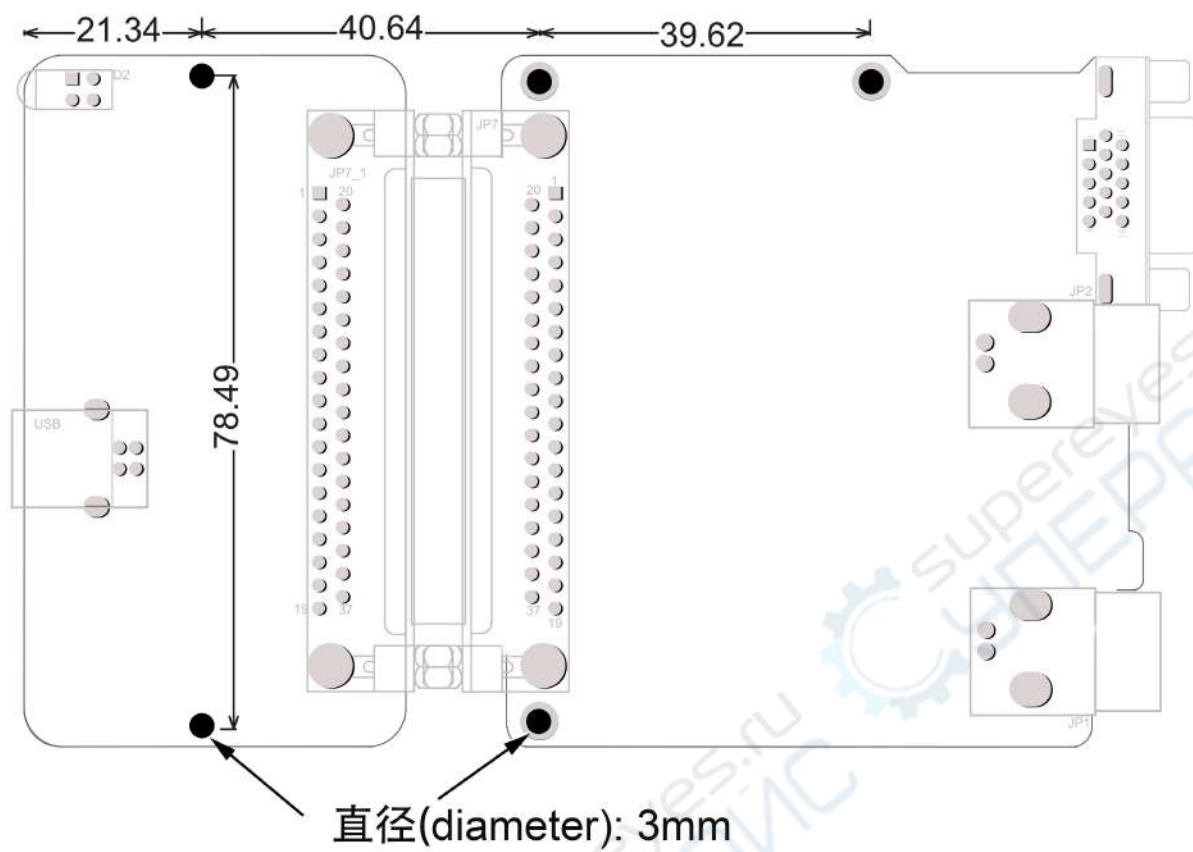# Custom probe:

Pure software features, no additional purchase required. The most typical applications are current clamps. The software interface provides two sets of data calibration functions for custom probes. It allows users to purchase other physical probes of any BNC interface, such as current clamps. After the software is set, it displays the curves and data of the corresponding physical quantities.
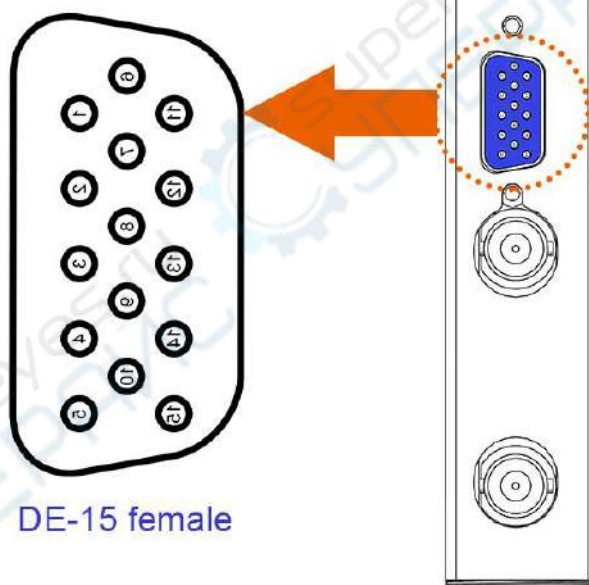
INTERFACES:

23 mm / 0.9 inches

A

B

D

U

L

93 mm / 3.66 inches

138 mm / 5.43 inches

153 mm / 6.02 inches

直径(diameter): 3mm

	Description:
A	Input channel A.
B	Input channel B.
L	Power LED (red), Status LED (green).
U	USB 2.0 interface, Type B female.
D	DE-15 interface for expansion modules.

1: L3
2: IO1/Lctrl
3: LO2/Ext trigger
4: IO3
5: chB input
6: square wave(1k)
7: L1
8: DGND

9: IO4/L0
10: DGND
11: L2
12: 3.3V
13: -5V
14: 5V
15: AGND

DE-15 female

Windows Software

For the function of the PC software, please refer to the corresponding software manual, which will be described in detail. The following screenshots briefly show some of the features: Serial port decoding, X_Y drawing, carrier analysis, multi-point automatic measurement, printing, FFT spectrum analysis, paperless recorder.
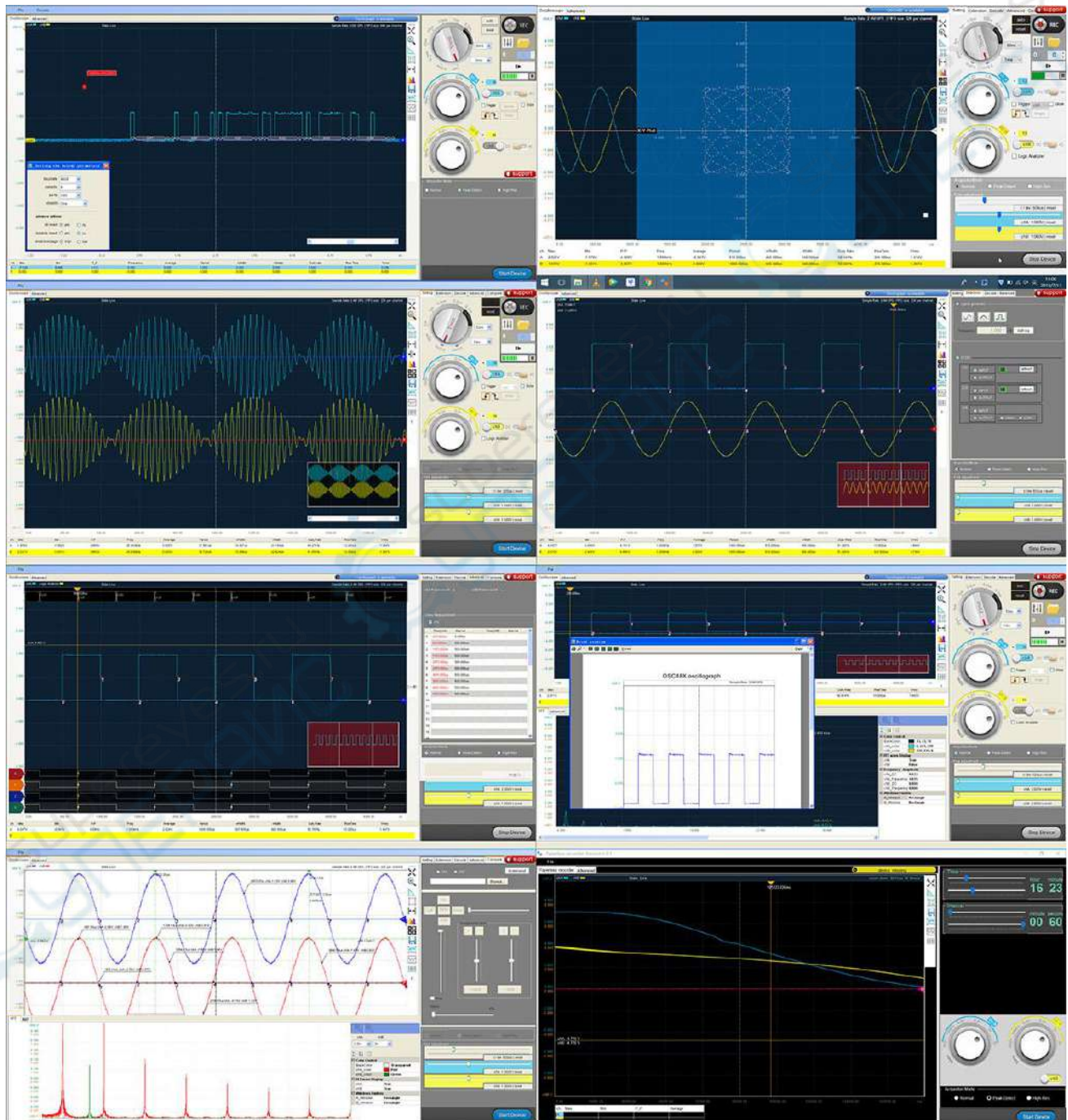
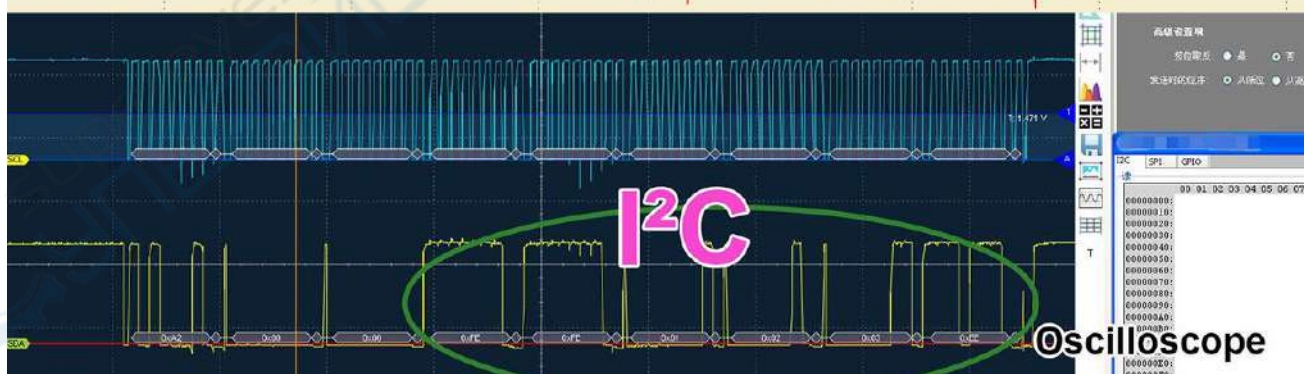About the serial decoding function:
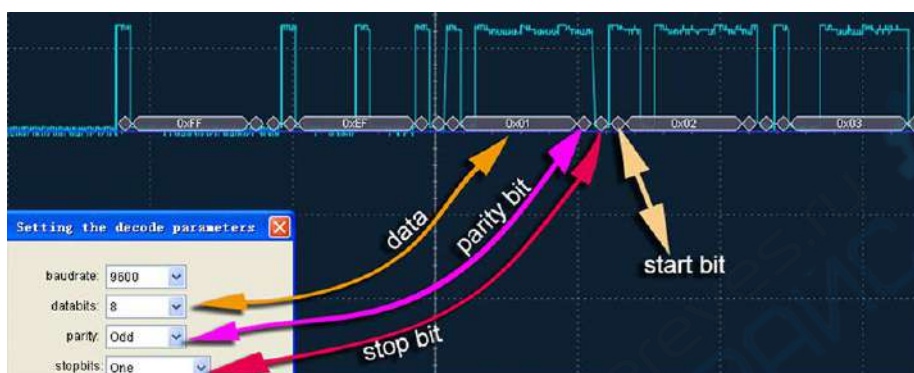
About 8~13 digits vertical resolution: