

Features:



- Hand-held portable, 153(L) x 93(W) x 30(H) mm
- 8 Bit ~ 13 Bit vertical resolution.
- Optional USB high-speed isolation, and optical fiber ultra-long distance transmission module
- Optional RS232, RS485, RS422/Bluetooth interface module. ★
- 72 hours long time data logger.
- Optional **logic analyzer**, **Signal generator**, and **isolated differential input** support module.
- Support single-point data acquisition and multiple curve fitting functions.
- Waveform recording and playback review, Support **eye diagram**.
- Support waveform image import as the comparison reference for real-time waveform.
- Support bus decoding (**RS232, RS485/422, I²C, CAN, SPI, Lin**).
- Supports a variety of current clamps and other physical volume **custom probes**.
- Support 500 frame data buffer and segment storage.
- Historical change trend statistics and **Histogram** analysis functions.
- Pass / Fail detection.
- Support FFT analysis and frequency response curve mapping.
- Support **FIR** Digital Filtering function.
- **Support LAN network remote monitoring**.
- Optional opensource software demo for secondary development by customers.

Characteristic	Support	Not support
FIR Digital Filtering function, eye diagram	OSC802/A02/2002/H02	OSC482
Optional RS232, RS485, RS422/Bluetooth communication interface module	OSCA02/2002/H02	OSC482
Support single-point data acquisition, support a variety of curve fitting functions	OSCA02/2002/H02	OSC482
Support local area network LAN network remote monitoring	OSCA02/2002/H02	OSC482
Multiple units can be cascaded into 4/6/8 channels	OSCA02/2002/H02	OSC482

LOTO

Comparison chart of the whole series of oscilloscopes

OSC482 Series	OSC802	OSCA02 Series	OSC2002 Series	OSCH02 Series	OSC980 Series
SPS: 50M	SPS: 80M	SPS: 100/200M	SPS: 1G/200M	SPS: 1G/250M	SPS: 100M
BW: 20M	BW: 25M	BW: 35/60M	BW: 50M	BW: 100M	BW: 35M
2 channels	2 channels	2/4/6 channels	2 channels	2 channels	2/4 channels
SW trigger	HW trigger	HW trigger	HW trigger	HW trigger	HW trigger
Modules can be expanded	Modules can be expanded	Modules can be expanded	Modules can be expanded	Modules can be expanded	Modules can be expanded
Entry-level	BASIC	Recommended	Improved	High-performance	For auto repair

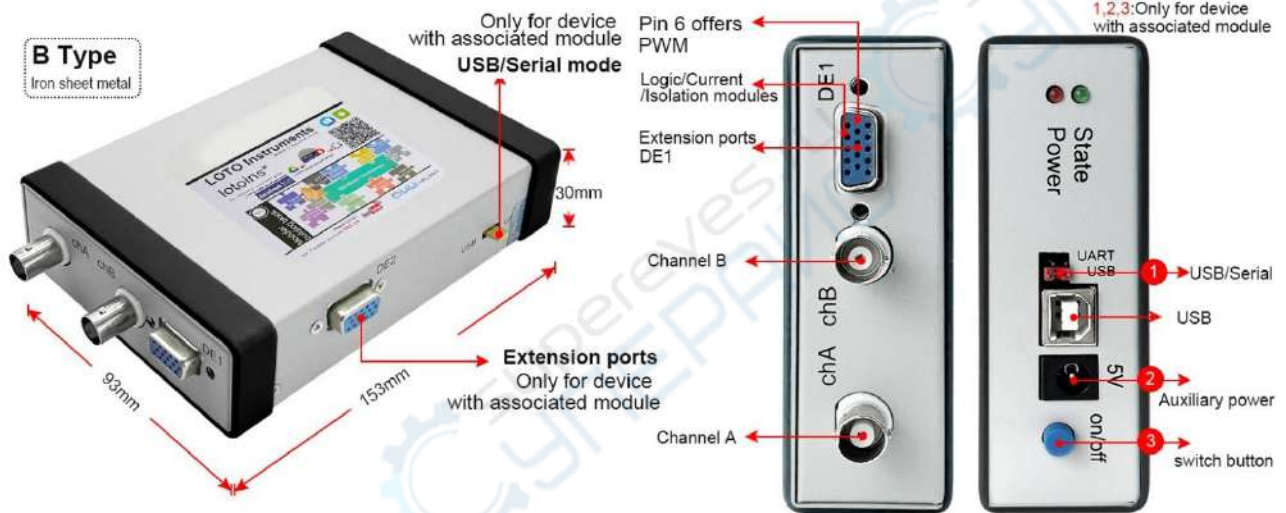


Table (1): Common hardware specifications of the oscilloscope host:

● Connector type :	2 channels with BNC sockets, 20 mm spacing.	
● Vertical resolution:	8 Bit ~ 13 Bit .	
● Input coupling:	AC/DC.	
● Input characteristics:	1MΩ 25pF.	
● PC OS requirements:	Windows XP, Win 7, Win 8.1, Win10, Win11 (32 bit and 64 bit).	
● Over-voltage protection:	±60.0v (x1), ±600.0v (x10). (DC + AC peak)	
● Triggering type:	Rising/falling edge according to trigger level, optional Pulse width trigger.	
● Trigger channel:	Standard channel A trigger	
● Triggering mode:	None, auto, normal, single.	
● Automatic measurements:	Maximum, minimum, average, RMS, frequency, period, positive pulse width, negative pulse width, duty cycle, rise time, peak-to-peak value. It can automatically measure the time and time difference of the extreme points of the waveform.★	
● Frequency response mapping	Scanning the frequency, record the process frequency and magnification data, and draw the frequency response curve.	
● Measurement statistical curve:	The historical trend of the automatically measured quantities can be plotted for statistics and Histogram analysis.	
● Pass / Fail detection:	You can set the upper and lower limits of the measurement quantity, and perform Pass / Fail detection and fault alarm function on the measured signal.	
● 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 ~ 64K points.	
● FFT window function:	Rectangle, Hanning, Hamming, Blackman.	
● Math:	A+B, A-B, AxB, X-Y, Invert .	
● Acquisition Modes:	Normal mode / High Resolution mode / Peak detect mode.	
● Waveform recording and playback:	File format :	*.oscxxx.
	Record depth:	1 ~ 500 frames.
	File size:	6 MB ~ 20GB.
● Save as file:	txt, csv, excel, oscxxx, jpg.	
● 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, 3.3 V square wave output with 50% duty cycle. Software-configurable PWM output with adjustable frequency and duty cycle.	
● Size:	153(L) x 93(W) x 30(H) mm.	
● Languages (full support):	English, Chinese (simplified).	
● Compliance:	CE, FCC.	
● Net weight:	210 g.	
● Typical noise (peak to peak voltage):	20 mV/div	2 mV
	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	
● PC buffer:	Up to 500 frames of PC online data waveform buffer.	
● Power consumption:	5 v (248~279) mA	
● Protocols decoding:	UART/RS-232/485/422, I ² C, CAN, SPI, lin	
● FIR Filtering:	Band-pass, Band-stop	
● Custom probes	Support two-point calibration of any current clamp on the market.	

Table (2): Hardware specifications of each series of oscilloscope host

item	OSC482 Series	OSC802	OSCA02 Series	OSC2002 Series	OSCH02 Series	OSC980 Series
● Highest sampling rate (S/s)	50M (real time)	80M(real time)	100M/200M(real time)	1G(equivalent), 200M(real time)	1G(equivalent), 250M(real time)	100M (real time)
● Bandwidth	20M Hz	25M Hz	35M/60M Hz	50M Hz	100M Hz	35M Hz
● External trigger	Not support	Not support	Optional	Optional	Optional	Not support
● Pre-trigger	50%	1~99%	1~99%	1~99%	1~99%	1~99%
● Digital filter	Not support	Support FIR digital filtering: low-pass, high-pass, band-pass, band-stop filtering				Not support
● eye diagram	Not support	Support eye diagram and persistence function				
● LAN:	Not support	Provide server software and client software to realize LAN remote monitoring.				Not support
● Communication interface	USB 2.0	USB 2.0, Optional expansion RS232, RS485, RS422, Bluetooth				USB 2.0
● Input sensitivity (10 vertical grids):	20 mV/div to 2V/div	20 mV/div to 2V/div				20 mV/div to 5V/div
● Input range (probe x1 gear):	±100mV to ± 5V, 6 ranges	±100mV to ± 8V, 7 ranges				±500mV to ± 25V, 6 ranges
● Input range (probe x10 gear):	±1V to ± 50 V, 6 ranges	±1V to ± 80 V, 7 ranges				±5V to ± 200 V, 6 ranges
● Time base range (10 horizontal grids):	50 ns/div~ 25s/div, 25 ranges.	5 ns/div (H02/2002) 20 ns/div (A02) 50 ns/div (802) ~ 72 min/div, about 50 ranges.				20ns/div~ 2s/div, 20 ranges

Table (3): Mainframe memory depth of each series of oscilloscopes

item	OSC482 series		OSC802 OSCA02 series OSC2002 series OSCH02 series OSC980 series	
	Memory depth	Time base	Memory depth	Time base
● Memory depth per frame (bytes):	1k	≤1 us/div	128K	≤50 ms/div
	64k	10 ms /div	512K	200 ms/div
	256k	100 ms /div	1290K	500 ms/div
	512k	200 ms /div	4M	1 s/div
	1M	0.5 s/div	16M	2 s/div
	2M	1 s/div	20M	10 s/div
	5M	2 s/div	40M	20 s/div
	12M	5 s/div	60M	30 s/div
	25M	10 s/div	80M	40 s/div
	37M	15 s/div	100M	50 s/div
	50M	20 s/div	120M	60 s/div
	62M	25 s/div	250M	Data acquisition card mode



Expansion modules & Accessories:

The LOTO oscilloscope host is a modular design of building blocks, so on the basis of the oscilloscope function, a variety of functional modules can be expanded as needed, such as signal source module, logic analyzer module, Android mobile phone support module, EMC detection module, isolation differential module, current probe module, external trigger module, and optical fiber long-distance transmission module and so on.

Different series of LOTO oscilloscope mainframes support different expansion modules. The following figure shows all the functional modules and accessories currently supported by the LOTO oscilloscope:



Table (4) Overview of modules and accessories:

	type	quantity	model	Host	details
①	Oscilloscope host device	1	OSC482/802/A02/2002/H02/980/984		
②	USB cable	1	U2100	Standard on all hosts	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	Standard on all hosts	10x: 60M Hz,10MΩ,600 V CAT II
					1x: 6M Hz,1MΩ,300 V CAT II
④	Logic analyzer module	1	L04/6/8	OSC482/A02/2002/H02	6 channels, TTL level, consistent with the performance of the host device.
⑤	Signal generator module	1	S02		1 channel, Sine wave, Triangle wave, Square wave.1 Hz ~ 13M Hz (Sine wave) output frequency range. 48M sampling rate.
⑥	Signal output cable	1	SO13		BNC connector to two clips
⑦	Adapters for Android phone	1	A2C0	OSC482/A02/2002/H02	When the customer selects a model that supports the Android mobile app, the adapter will be installed as an accessory on the support phone jack.
⑧	Isolated differential input module	1	IDM02/3	Support all hosts	Single channel, electrically isolated and differential input, can measure $\pm 20V$ to $\pm 800V$ high voltage, can be connected to the ground or reverse input. Bandwidth 50K Hz.
⑨	Current Probe	1	C05A/ C20A/ C30A		Current probe with 1.2 mΩ internal resistance and 1.2 KV isolation voltage protection. The range is $\pm 5A$ / $\pm 20A$ / $\pm 30A$. Can be used with any LOTO oscilloscope host.
⑩	Small signal amplification module	1	U01		Input range $\pm 250mV$, isolated differential input, resolution 0.1mV, 50K Hz bandwidth.
⑪	20:1 Attenuator	1	AN20		20: 1 attenuator. The external voltage signal can be attenuated by 20 times and input into the oscilloscope, effectively expanding the scope of the oscilloscope.
⑫	Current transformer module	1	AC05A/ AC20A/ AC30A/ AC50A/ AC100A		Current transformer module, open and close test, no need to access the circuit. Measuring frequency range 50Hz ~ 150K Hz. The model indicates the measurement range, such as

				AC100A, which means the range is 100A.
⑬	Carrying case	1	/	Non-standard, need to be purchased separately.
⑭	EMC detection module	1	E01	This module is equipped with 12V power supply and 3 magnetic near-field probes, 50 Ω input and output impedance, 10K~1G Hz bandwidth, 30DB gain. Use with the FFT spectrum function of the oscilloscope to detect EMC conditions.
⑮	Universal test line	1	/	Cascadable direct connection cable, equipped with three types of connector terminals.
⑯	mA small current probe	1	i01	The internal resistance is 0.8Ω, and the range of four gears can amplify the current waveform within the range of ±125 mA. The module bandwidth is 100KHz.
⑰	Audio probe	1	AUD01/ AUD02	Comes with an amplified microphone sound probe, which is convenient for customers to collect and analyze sound signals. Among them, AUD01 directly uses the expansion port of the LOTO oscilloscope and does not require an additional power supply, so it can only be used with the LOTO oscilloscope. AUD02 requires an external power supply and is compatible with other oscilloscopes.
⑱	Isolated differential input module	1	IDP01/3	2 channels, electrically isolated and differential input, can measure the high voltage of plus or minus 20V to plus or minus 800V, can be connected to thermal ground or reverse input. Bandwidth 100K/300K Hz is optional. Independent power supply can be used for any oscilloscope products, not limited to LOTO oscilloscopes.
⑲	High voltage differential active probe	1	T50/T100	Single channel, withstand voltage 1300V, bandwidth 50M/100M, high-voltage differential active probe, with higher bandwidth than the 8 and 18 isolation modules, suitable for high-speed hot ground and high-voltage signal detection.

20	Power amplifier module	1	PA1/PA2		The module can amplify the power of the signal, improve the load capacity of the signal, and is suitable for signal power amplification within 50K Hz. PA1 is a single channel, PA2 is a dual channel and has greater power amplification capabilities.
21	Arbitrary Waveform Generator	1	SIG852		The independent arbitrary waveform generator with USB interface can freely edit and generate arbitrary waveforms on the computer's upper computer software, and output in 2 channels. It is suitable for custom output of irregular and unconventional waveforms. The recommended waveform frequency is 0~3K Hz.
22	Ext Trigger Module	1	ET01		1 channel, external trigger module. Input impedance 1M. There are 4 optional input ranges, and the trigger voltage is continuously adjustable from 0.2V to 1.7V (0V to 5V range, other ranges are expanded by multiples).
23	Serial communication module	1	UT01	OSCA02/2002/H02	Serial communication module, you can choose RS232, RS485, RS422 mode. If you need to use serial port to communicate with the host computer, you can choose to buy this module.
24	Bluetooth communication module	1	UT01_B		Bluetooth communication module. If you need to use Bluetooth wireless communication with the host computer, you can choose to buy this module.
25	Clamp Type Mutual Inductance Current Probe	1	C10B C20B C50B C100B C200B	Support all hosts	Current transformer module, open and close test, no need to connect to the circuit. 5V power supply is required, which can be a computer USB interface or a power bank or a USB charging head. Measurement frequency range DC~25K Hz. The measurement range is stated in the model, such as C100B, which means the range is 100A.
26	Optical fiber network long-distance transmission module	1	OF01		Convert the USB port of the LOTO oscilloscope to an optical port, and then convert the optical port to a USB port and connect it to a computer after passing through a single-mode fiber that can be as long as 20 kilometers. This not only realizes photoelectric isolation transmission, but also realizes long-

					distance high-speed data transmission and control.
⑰	USB 2.0 high-speed isolation	1	USBO		480M high-speed isolation module, USB powered

The above are standard or optional modules, depending on the model purchased. If the purchased model includes the corresponding functional features, then they are standard modules. If the purchased model does not include their corresponding features, then these modules are optional and can be purchased later or returned to the factory to be added to match the host. use. For optional accessories, contact your provider to purchase if required.



Model	Android support	Signal generator module	Logic analyzer module	Isolated and differential module	Parts List
OSC482	✘	✘	✘	optional	1+2+3
OSC482M	✓	✘	✘	optional	1+2+3+7
OSC482X	✘	✓	✓	optional	1+2+3+4+5+6
OSC482L	✘	✘	✓	optional	1+2+3+4
OSC482S	✘	✓	✘	optional	1+2+3+5+6
OSC482F	✓	✓	✓	optional	1+2+3+4+5+6+7
OSC482H	✓	✓	✓	✓	1+2+3+4+5+6+7+8
Custom model	The above standard model configuration does not cover all module combinations, users can also choose the host to combine any one or several modules to form a new model configuration.				

Model	Android support	Signal generator module	Logic analyzer module	232/485 serial port mode	USB high-speed isolation	Isolated and differential module	EMC testing	Parts List
OSCA02	✘	✘	✘	✘	✘	optional	optional	1+2+3
OSCA02L	✘	✘	✓	✘	✘	optional	optional	1+2+3+4
OSCA02M	✓	✘	✘	✘	✘	optional	optional	1+2+3+7
OSCA02X	✘	✓	✓	✘	✘	optional	optional	1+2+3+4+5+6
OSCA02S	✘	✓	✘	✘	✘	optional	optional	1+2+3+5+6
OSCA02U	✘	✘	✘	✓	✘	optional	optional	1+2+3+24
OSCA02i	✘	✘	✘	✘	✓	optional	optional	1+2+3+27
OSCA02F	✓	✓	✓	✘	✘	optional	optional	1+2+3+4+5+6+7
OSCA02H	✓	✓	✓	✘	✘	✓	optional	1+2+3+4+5+6+7+8
OSCA02HK	✓	✓	✓	✘	✘	✓	✓	1+2+3+4+5+6+7+8+14
Custom model	The above standard model configuration does not cover all module combinations, users can also choose the host to combine any one or several modules to form a new model configuration.							

Model	Android support	Signal generator module	Logic analyzer module	232/485 serial port mode	USB high-speed isolation	Isolated and differential module	EMC testing	Parts List
OSC2002	✗	✗	✗	✗	✗	optional	optional	1+2+3
OSC2002L	✗	✗	✓	✗	✗	optional	optional	1+2+3+4
OSC2002M	✓	✗	✗	✗	✗	optional	optional	1+2+3+7
OSC2002X	✗	✓	✓	✗	✗	optional	optional	1+2+3+4+5+6
OSC2002S	✗	✓	✗	✗	✗	optional	optional	1+2+3+5+6
OSC2002U	✗	✗	✗	✓	✗	optional	optional	1+2+3+24
OSC2002I	✗	✗	✗	✗	✓	optional	optional	1+2+3+27
OSC2002F	✓	✓	✓	✗	✗	optional	optional	1+2+3+4+5+6+7
OSC2002H	✓	✓	✓	✗	✗	✓	optional	1+2+3+4+5+6+7+8
OSC2002HK	✓	✓	✓	✗	✗	✓	✓	1+2+3+4+5+6+7+8+14
Custom model	The above standard model configuration does not cover all module combinations, users can also choose the host to combine any							

Model	Android support	Signal generator module	Logic analyzer module	232/485 serial port mode	USB high-speed isolation	Isolated and differential module	EMC testing	Parts List
OSCH02	✗	✗	✗	✗	✗	optional	optional	1+2+3
OSCH02L	✗	✗	✓	✗	✗	optional	optional	1+2+3+4
OSCH02M	✓	✗	✗	✗	✗	optional	optional	1+2+3+7
OSCH02X	✗	✓	✓	✗	✗	optional	optional	1+2+3+4+5+6
OSCH02S	✗	✓	✗	✗	✗	optional	optional	1+2+3+5+6
OSCH02U	✗	✗	✗	✓	✗	optional	optional	1+2+3+24
OSCH02I	✗	✗	✗	✗	✓	optional	optional	1+2+3+27
OSCH02F	✓	✓	✓	✗	✗	optional	optional	1+2+3+4+5+6+7
OSCH02H	✓	✓	✓	✗	✗	✓	optional	1+2+3+4+5+6+7+8
OSCH02HK	✓	✓	✓	✗	✗	✓	✓	1+2+3+4+5+6+7+8+14
Custom model	The above standard model configuration does not cover all module combinations, users can also choose the host to combine any							

For the modular design and function expansion of LOTO oscilloscopes, you can watch the demonstration video:

[《Building block function design of LOTO virtual oscilloscope》
youtube.com/watch?v=N5FpqYizxwI&t=8s](https://www.youtube.com/watch?v=N5FpqYizxwI&t=8s)

Table (5) The extended function modules are combined into a sub-model list:

The model of the LOTO oscilloscope host is like OSC???, OSC is the English abbreviation of oscilloscope, and??? represents the host series model, such as 482, A02, H02. So the model of the oscilloscope is OSCA02. For different function extensions selected by customers, we add different letter suffixes to the back of this model to represent different extended function combinations, such as S in OSCA02S, which is the sub-model suffix letter.

suffix letter	submodule	In addition to the oscilloscope function, additional extended functions
S	OSC??S	1 channel signal generator
E	OSC??E	Increase the combined acquisition function, double the sampling rate, and increase the bandwidth
M	OSC??M	Support Android phone/tablet
L	OSC??L	4/6/8 channel logic analyzer
ML	OSC??ML	Support Android phone/tablet + 4/6/8 channel logic analyz
MS	OSC??MS	Support Android phone / tablet + 1 channel signal generator
D	OSC??D	1 channel IDM02 isolated differential module
DD	OSC??DD	2-way IDP02 isolated differential module
U	OSC??U	Extended RS232/485/422 interface function
UB	OSC??UB	Expand the function of bluetooth interface
X	OSC??X	S+M, Signal Generator + Logic Analyzer
F	OSC??F	S+M+L, Signal Generator+Logic Analyzer+Android Phone/Tablet Support
H	OSC??H	S+M+L+D, signal generator+logic analyzer+Android phone/tablet support+isolated differential module
K	OSC??K	EMC Near Field Test Module
W4	OSC??W4	2 cascade expansion to 4 channels
W6	OSC??W6	3 cascade expansion to 6 channels
HK	OSC??HK	S+M+L+D+EMC, Signal Generator+Logic Analyzer+Android Phone/Tablet Support+Isolation Differential Module+EMC Near Field Electromagnetic Compatibility Detection Module

Table (6) OSC482 Series Submodel Configuration List:

model:	OSC482	OSC482M	OSC482S	OSC482L	OSC482X	OSC482F	OSC482H
Product name:	Basic	phone support	+ signal generation	+ logic analysis	multifunctional	Full-featured Type A	Full-featured Type B
Description:	Full range of Windows	Support Android phone/tablet , and full range of Windows	OSC482+13 M Hz signal generator module	OSC482+ 4-Channel Logic Analyzer	OSC482+13M Hz signal generator+4-channel logic analyzer	OSC482M+13 M Hz signal generator+4-channel logic analyzer	OSC482F+ Isolated Differential Module IDM02
Channels:	2	2	2	2	2	2	2
Maximum sample rate (S/s):	50M	50M	50M	50M	50M	50M	50M
BW (-3 dB):	20M Hz	20M Hz	20M Hz	20M Hz	20M Hz	20M Hz	20M Hz
FFT:	✓	✓	✓	✓	✓	✓	✓
Data Logger Software:	✓	✓	✓	✓	✓	✓	✓
I/O expansion:	✓	✓	✓	✓	✓	✓	✓
Serial bus decoding:	✓	✓	✓	✓	✓	✓	✓
Custom probe support:	✓	✓	✓	✓	✓	✓	✓
Signal generation support:	✗	✗	✓	✗	✓	✓	✓
Logic Analysis Support:	✗	✗	✗	✓	✓	✓	✓
Android phone/tablet support:	✗	✓	✗	✗	✗	✓	✓
Isolated Differential Module Support:	Optional	Optional	Optional	Optional	Optional	Optional	✓
Current clamp support:	✓	✓	✓	✓	✓	✓	✓
Current Differential Probe:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Frequency Response Mapping:	✓	✓	✓	✓	✓	✓	✓

Table (7) OSCA02 Series Submodel Configuration List:

model:	OSCA02	OSCA02E	OSCA02M	OSCA02L	OSCA02S	OSCA02X	OSCA02F	OSCA02H
Product name:	Basic	Enhanced Edition	phone support	+ logic analysis	+ signal generation	multifunctional	Full-featured Type A	Full-featured Type B
Description:	Full range of Windows	Full range of Windows	Support Android phone/tablet, and full range of Windows	OSCA02+6-Channel Logic Analyzer	OSCA02+13M Hz signal generator module	OSCA02+13M Hz signal generator+4-channel logic analyzer	OSCA02M+13M Hz signal generator+4-channel logic analyzer	OSCA02F+ Isolated Differential Module IDM02
Channels:	2	2	2	2	2	2	2	2
Maximum sample rate (S/s):	100M	200M	100M	100M	100M	100M	100M	100M
BW (-3 dB):	35M Hz	60M Hz	35M	35M Hz	35M Hz	35M Hz	35M Hz	35M Hz
FFT:	✓	✓	✓	✓	✓	✓	✓	✓
Data Logger Software:	✓	✓	✓	✓	✓	✓	✓	✓
I/O expansion:	✗	✗	✗	✗	✓	✓	✓	✓
Serial bus decoding:	✓	✓	✓	✓	✓	✓	✓	✓
Hardware trigger:	✓	✓	✓	✓	✓	✓	✓	✓
Signal generation support:	✗	✗	✗	✗	✓	✓	✓	✓
Logic Analysis Support:	✗	✗	✗	✓	✗	✓	✓	✓
Android phone/tablet support:	✗	✗	✓	✗	✗	✗	✓	✓
Isolated Differential Module Support:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	✓
Current Differential Probe:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Custom probe support:	✓	✓	✓	✓	✓	✓	✓	✓
Frequency Response Mapping:	✓	✓	✓	✓	✓	✓	✓	✓
Eye diagram:	✓	✓	✓	✓	✓	✓	✓	✓
External trigger:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
232/485 Mode:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Bluetooth interface:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
USB2.0 high-speed isolation:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Long-distance optical fiber transmission function:	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Table (8) OSC2002 Series Submodel Configuration List:

model:	OSC2002	OSC2002M	OSC2002L	OSC2002S	OSC2002X	OSC2002F	OSC2002H
Product name:	Basic	phone support	+ logic analysis	+ signal generation	multifunctional	Full-featured Type A	Full-featured Type B
Description:	Full range of Windows	Support Android phone/tablet, and full range of Windows	OSC2002+6-Channel Logic Analyzer	OSC2002+13M Hz signal generator module	OSC2002+13M Hz signal generator+4-channel logic analyzer	OSC2002M+13M Hz signal generator+4-channel logic analyzer	OSC2002F+ Isolated Differential Module IDM02
Channels:	2	2	2	2	2	2	2
Maximum sample rate (S/s):	1G	1G(PC)/100M(Phone)	1G	1G	1G	1G	1G
BW (-3 dB):	50M Hz	50M(PC)/35M(Phone)	50M Hz	50M Hz	50M Hz	50M Hz	50M Hz
FFT:	✓	✓	✓	✓	✓	✓	✓
Data Logger Software:	✓	✓	✓	✓	✓	✓	✓
I/O expansion:	✗	✗	✗	✓	✓	✓	✓
Serial bus decoding:	✓	✓	✓	✓	✓	✓	✓
Hardware trigger:	✓	✓	✓	✓	✓	✓	✓
Signal generation support:	✗	✗	✗	✓	✓	✓	✓
Logic Analysis Support:	✗	✗	✓	✗	✓	✓	✓
Android phone/tablet support:	✗	✓	✗	✗	✗	✓	✓
Isolated Differential Module Support:	Optional	Optional	Optional	Optional	Optional	Optional	✓
Current Differential Probe:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Custom probe support:	✓	✓	✓	✓	✓	✓	✓
Frequency Response Mapping:	✓	✓	✓	✓	✓	✓	✓
Eye diagram:	✓	✓	✓	✓	✓	✓	✓
External trigger:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
232/485 Mode:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Bluetooth interface:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
USB2.0 high-speed isolation:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Long-distance optical fiber transmission function:	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Table (8) OSC980 Series Submodel Configuration List:

model:	OSC980	OSC984
Product name:	Basic	4 channels version
Description:	Full range of Windows	Full range of Windows
Channels:	2	4
Maximum sample rate (S/s):	100M	100M
BW (-3 dB):	35M Hz	35M Hz
FFT:	✓	✓
Data Logger Software:	✓	✓
I/O expansion:	✗	✗
Serial bus decoding:	✓	✓
Hardware trigger:	✓	✓
Signal generation support:	✗	✗
Logic Analysis Support:	✗	✗
Android phone/tablet support:	✗	✗
Isolated Differential Module Support:	Optional	Optional
Custom probe support:	✓	✓
Frequency Response Mapping:	✓	✓

Table (10) OSCH02 Series Submodel Configuration List:

model:	OSCH02	OSCH02M	OSCH02L	OSCH02S	OSCH02X	OSCH02F	OSCH02H
Product name:	Basic	phone support	+ logic analysis	+ signal generation	multifunctional	Full-featured Type A	Full-featured Type B
Description:	Full range of Windows	Support Android phone/tablet, and full range of Windows	OSCH02+6-Channel Logic Analyzer	OSCH02+13M Hz signal generator module	OSCH02+13M Hz signal generator+4-channel logic analyzer	OSCH02M+13M Hz signal generator+4-channel logic analyzer	OSCH02F+ Isolated Differential Module IDM02
Channels:	2	2	2	2	2	2	2
Maximum sample rate (S/s):	1G	1G(PC)/250M(Phone)	1G	1G	1G	1G	1G
BW (-3 dB):	100M Hz	100M(PC)/50M(Phone)	100M Hz	100M Hz	100M Hz	100M Hz	100M Hz
FFT:	✓	✓	✓	✓	✓	✓	✓
Data Logger Software:	✓	✓	✓	✓	✓	✓	✓
I/O expansion:	✗	✗	✗	✓	✓	✓	✓
Serial bus decoding:	✓	✓	✓	✓	✓	✓	✓
Hardware trigger:	✓	✓	✓	✓	✓	✓	✓
Signal generation support:	✗	✗	✗	✓	✓	✓	✓
Logic Analysis Support:	✗	✗	✓	✗	✓	✓	✓
Android phone/tablet support:	✗	✓	✗	✗	✗	✓	✓
Isolated Differential Module Support:	Optional	Optional	Optional	Optional	Optional	Optional	✓
Current Differential Probe:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Custom probe support:	✓	✓	✓	✓	✓	✓	✓
Frequency Response Mapping:	✓	✓	✓	✓	✓	✓	✓
Eye diagram:	✓	✓	✓	✓	✓	✓	✓
External trigger:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
232/485 Mode:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Bluetooth interface:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
USB2.0 high-speed isolation:	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Long-distance optical fiber transmission function:	Optional	Optional	Optional	Optional	Optional	Optional	Optional

For module and oscilloscope selection, you can refer to the video demonstration: [youtube.com/watch?v=WbZzM-3z6MA&t=7s](https://www.youtube.com/watch?v=WbZzM-3z6MA&t=7s)

LOTO full function list

Oscilloscope

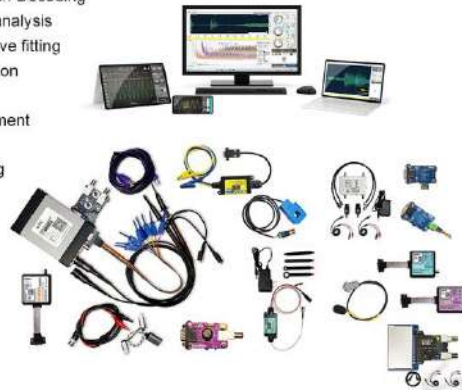
- USB interface, 2/4/8 channels
- Sampling rate:50M~1G, BW: 20M~100M
- 8~13 bit vertical resolution
- Support recording archive and playback
- Optional logic analyzer, signal generator
- Optional support for Android phones/tablets
- Support FIR digital filtering, eye diagram persistence
- RS232,RS485,RS422,PC 和 CAN,SPI,Lin Decoding
- Support Trend statistics and histogram analysis
- Support single-point acquisition, and curve fitting
- Buffer preview and mouse wheel operation
- Integrated Pass/Fail detection
- Automatic edge/extreme point measurement
- Supports custom probes
- Support LAN network remote monitoring
- Support 72-hour paperless recorder
- Optional external trigger function

DDS signal generator

- Optional module S02/SIG851
- 1 channel, wave type: Sine,Triangle,Square
- 48M Sampling rate, output range: $\pm 4V$
- Frequency output: 1 Hz~13M Hz(Sine)
- Amplitude/offset are continuously adjustable

Arbitrary waveform generator function

- Optional independent SIG852
- 100~70K sampling rate, 4000 pts buffer depth
- 2 ch, 8-bit resolution, 1 output
- Output range 0~3V, output resistance: 50/1K Ω
- Support Win XP ~ Win 11, support mouse drawing
- Waveform editing, addition/subtraction/multiplication
- Built-in sine/triangle/sawtooth/square/white noise/DC/Pulse/(Sinx/x)/Exponential Rise/Exponential Fall
- Support for exporting and importing waveform files
- Support waveform image import background as reference



Logic analyzer

- Optional module built-in oscilloscope host
- 4/6/8 inputs, display with oscilloscope chA
- Highest sampling rate: 50M~125M sps
- LVCMOS standard logic level input
- Rise/fall/edge/level trigger, optional external trigger
- RS232/422/485/IIC/SPI/LIN/CAN decoding
- Waveform can be recorded, saved and played back

Power output

- Default in DE-15 expansion port
- 3 power output, +5V,-5V,3.3V
- Easy for power expansion modules
- Drive capability : 50mA/100mA

Digital GPIO

- Not default, Shared with signal source module
- 3 input or output
- Software Setup and Read Status
- LVCMOS Standard logic level
- 1 PWM output,3.3V,200~22K Hz, adjustable duty cycle

FFT Spectrum Analyzer

- Real-time FFT, point range: 1024~65535
- Linear/logarithmic scale, 2D/3D display
- Automatic marking of peaks, support for THD
- Rectangular/Hanning/Hamming/Blackman
- Support FFT data saving to text file
- Support amplitude and phase spectral curves

EMC/EMI Near-field electromagnetic detection

- Optional external module
- BW: 10K~1G Hz, gain: 30DB
- 12V external power supply, 50 ohm output impedance
- 3 magnetic field probes and 1 electric field probe
- Real-time FFT spectrum display, EMC range is within the oscilloscope bandwidth

UART/232/485/422/Bluetooth

- Optional external module
- Optional RS232,RS485,RS422,Bluetooth
- USB or UART mode choose by jumper
- Can be powered externally
- Baud rate 9600~57600

High Voltage Isolated Differential Input Capability

- Optional external module
- 1/2 channel, galvanically isolated + differential input
- Input range: $\pm 800V$, afford hot ground or reverse input
- BW: 100K/300K Hz optional
- Input protection: $\pm 1200V$ DC+Peak A

SW secondary development

- Optional SDK development kit
- DLL,Lib,.H files (C language), providing descriptions
- Demo source, including c#,Labview,python,QT,C++

Current probe

- Optional external module
- Resistance 1.2 m Ω , BW: 150K Hz
- 1.2 KV isolation voltage protection
- Range $\pm 5A/\pm 20A/\pm 30A$ optional
- precision: 2%

Small current isolated differential input

- Optional external module
- Single-channel isolated differential input
- Resistance 0.8 Ω , input range: ± 125 mA
- BW: 100K Hz
- Precision: 2%

Small voltage isolated differential input

- Optional external module
- Single-channel isolated differential input
- Input range: $\pm 80mV$, resolution 0.1mV
- Input resistance: 1M, BW: 100K Hz
- Precision: 2%

USB isolation and fiber optics

- Optional USB high-speed isolation Module
- Optional network optical fiber long-distance transmission

Storage package:

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:



46 * 35 * 12 cm



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Logic Analyzer Module L06/08:

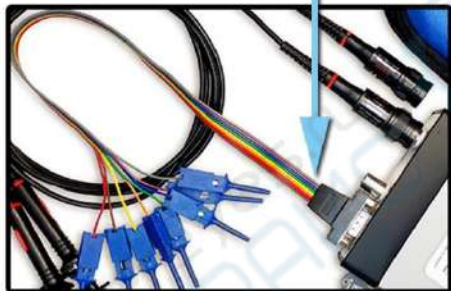
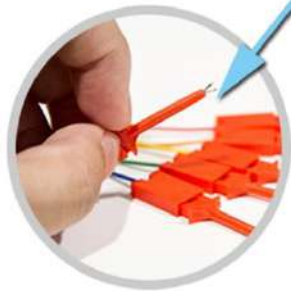
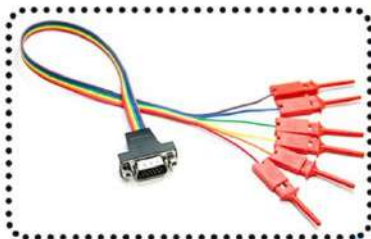
LOTO's scalable logic analyzer module has three types: 4-channel, 6-channel, and 8-channel. Currently, OSC482 series only supports 4-channel version, OSCH02 has fully supported 8-channel version, and other models are changing from 6-channel version to 8-channel version. In the version transition, the following takes 8 channels as an example to show the wiring definition. Other 4 channels or 6 channels are compatible. You can also refer to the wiring definitions below.

LOTO Oscilloscope Logic analyzer module

Work with Oscilloscope, synchronized

4/6/8 channels, 3.3V/5V TTL, trigger with chA

Same sampling rate with Oscilloscope, multiple decodings



Decoding

Channels

DE1 extension



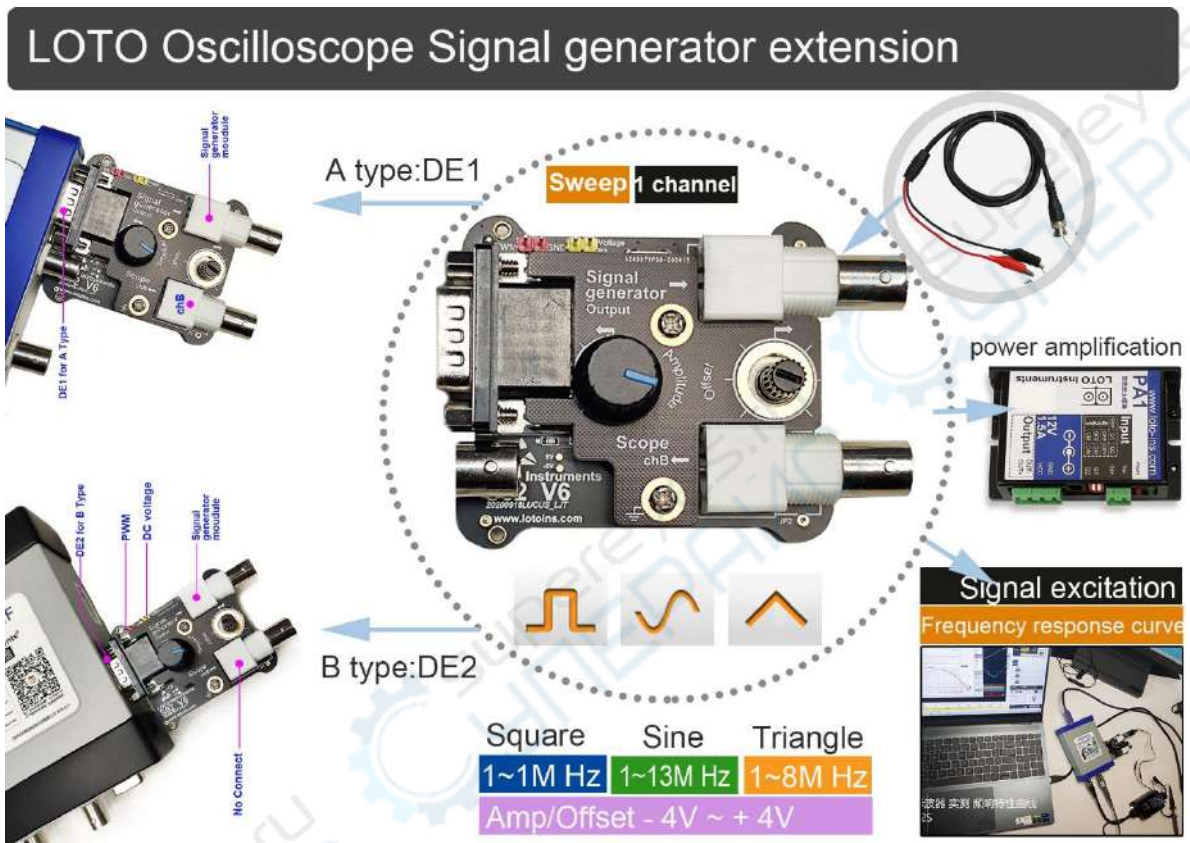
Color	Signal	Description
Yellow	GND	Common ground with oscilloscope and oscilloscope power supply
Purple	PWM/Square wave	The default is 1K Hz, 3.3V square wave output signal, which can be controlled by oscilloscope software as PWM wave with adjustable frequency and duty cycle, which is convenient for self-test logic analyzer function
Red	L0	Logic Analyzer Channels 0
Orange	L1	Logic Analyzer Channels 1
Blue	L2	Logic Analyzer Channels 2
Green	L3	Logic Analyzer Channels 3
Gray	L4	Logic Analyzer Channels 4 (The six-channel version)
Brown	L5	Logic Analyzer Channels 5 (The six-channel version)
White	L6	Logic Analyzer Channels 6 (The eight-channel version)
Black	L7	Logic Analyzer Channels 7 (The eight-channel version)

The use of this module can refer to the demo video:

[youtube.com/watch?v= GJZYLYm8TY](https://www.youtube.com/watch?v=GJZYLYm8TY)

Signal Generator Module S02:

For the OSCA02/OSC2002 and OSCH02 series models, this module needs to use the B-type shell, which is used through the DE2 interface on the side. For the OSC482 series, the DE1 expansion port is directly used. If you purchase the OSC482 series, you can purchase the S02 module independently later to complete the expansion yourself. If you purchase other series, you generally need to return to the factory to add the DE2 interface to complete the expansion of the S02 signal source module.



Signal generator module S02 specifications:

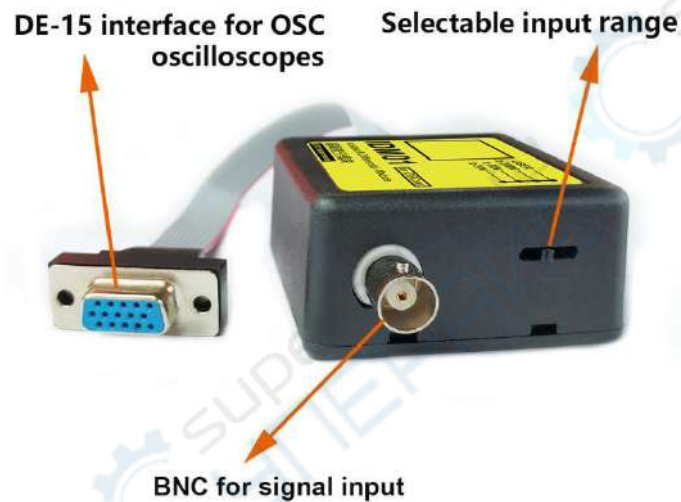
Number of channels	1
Output waveform	Sine wave, triangle wave, square wave
Amplitude range	-0 ~ 4V
Amplitude resolution	50mV
Amplitude noise	40mV ~ 80mV
Frequency Range	Sine wave: 1Hz ~ 13M Hz Triangle wave: 1Hz ~ 8M Hz Square wave: 1Hz ~ 1M Hz
DC offset range	0 ~ 4V
DC offset resolution	100mV
Automatic frequency sweep	Software support
Output stability	The output is stable after 30 seconds from the power-on

The use of this module can refer to the demo video:

[youtube.com/watch?v=NmVF-4yOPP4&t=9s](https://www.youtube.com/watch?v=NmVF-4yOPP4&t=9s)

Isolated differential module IDM0x:

This module can be purchased later and added by itself. It can be used with LOTO OSC482 series, OSC802, OSCA02 series, OSC2002 series, OSC980, OSCH02 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 DC+Peak AC	
Bandwidth	50K/100K/300K 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



2-channel isolated differential module IDP0x:

Some customers need to measure more than 2 channels of high-voltage thermal ground signals at the same time, such as three-phase motor signals. Therefore, on the basis of the IDMX described above, we have introduced a 2-channel isolated differential module IDP01 (100K bandwidth)/IDP03 (300K bandwidth). The performance of this type of isolated differential module is the same as that of the previous IDMX, except that an independent power supply is added, and the interface is changed to a common BNC interface for oscilloscopes. Therefore, it is not limited to LOTO oscilloscopes, but can be compatible with various other oscilloscopes, and The number of channels can be expanded arbitrarily.



Single channel high voltage differential active probe T50/T100:

Since the bandwidth of the isolated differential module is only a few hundred K, some customers will need a higher bandwidth module when measuring high-speed, high-voltage or thermal ground signals, such as measuring high-voltage power ripples and so on. LOTO has launched two new high-voltage differential active probes to deal with this occasion, T50 (50M bandwidth) and T100 (100M bandwidth).



items	high voltage differential active probe
Channel:	1
Interface:	BNC
Precision:	±2%
Common mode voltage:	±1300V DC+Peak AC
Maximum input voltage to ground:	600V CATIII 1000CATII Vrms
Bandwidth (-3dB) :	50M Hz (T50) /100M (T100)
Rise Time:	<7ns
Differential input range (attenuation ratio):	50X ±130V DC+Peak AC 500X ±1300V DC+Peak AC
Input resistance:	Single-ended to ground: 4MΩ//7pF, Between two inputs: 8MΩ //3.5pF
CMRR:	DC: >80dB , 100K Hz: >60dB , 1M Hz: >50dB
Noise level:	50X: <75mVrms , 500X: <500mVrms
Power:	DC 9V,1A

CxxA current probes:

The current probe is connected to the oscilloscope through the extended DE-15 interface of the LOTO oscilloscope, which can be used with any LOTO oscilloscope host, and can be used later. The oscilloscope software has corresponding settings to directly support this series of current probes.

Internal resistance	1.2 m Ω	
Isolation protection	1.2 KV	
Bandwidth	50K Hz	
Input range	C05A	$\pm 5A$
	C20A	$\pm 20A$
	C30A	$\pm 30A$



CxxB Current Transformer Probes:

The current mutual inductance probe is a standard BNC interface, which is compatible with LOTO oscilloscopes and oscilloscopes from other manufacturers. This series is an active probe, which requires a 5V power supply. We use the USB port to supply power. You can use a computer USB port, a power bank or a charging head with a USB port. This series has several sub-models with different ranges, 10A, 20A, 50A, 100A, 200A, etc.



Clamp opening	1.3cm X 1.3cm	
Isolation protection	2.5 KV 50 Hz 1min	
precision	1%	
Bandwidth	DC ~ 25K Hz	
Input range	C10B	±10A
	C20B	±20A
	C50B	±50A
	C100B	±100A
	C200B	±200A



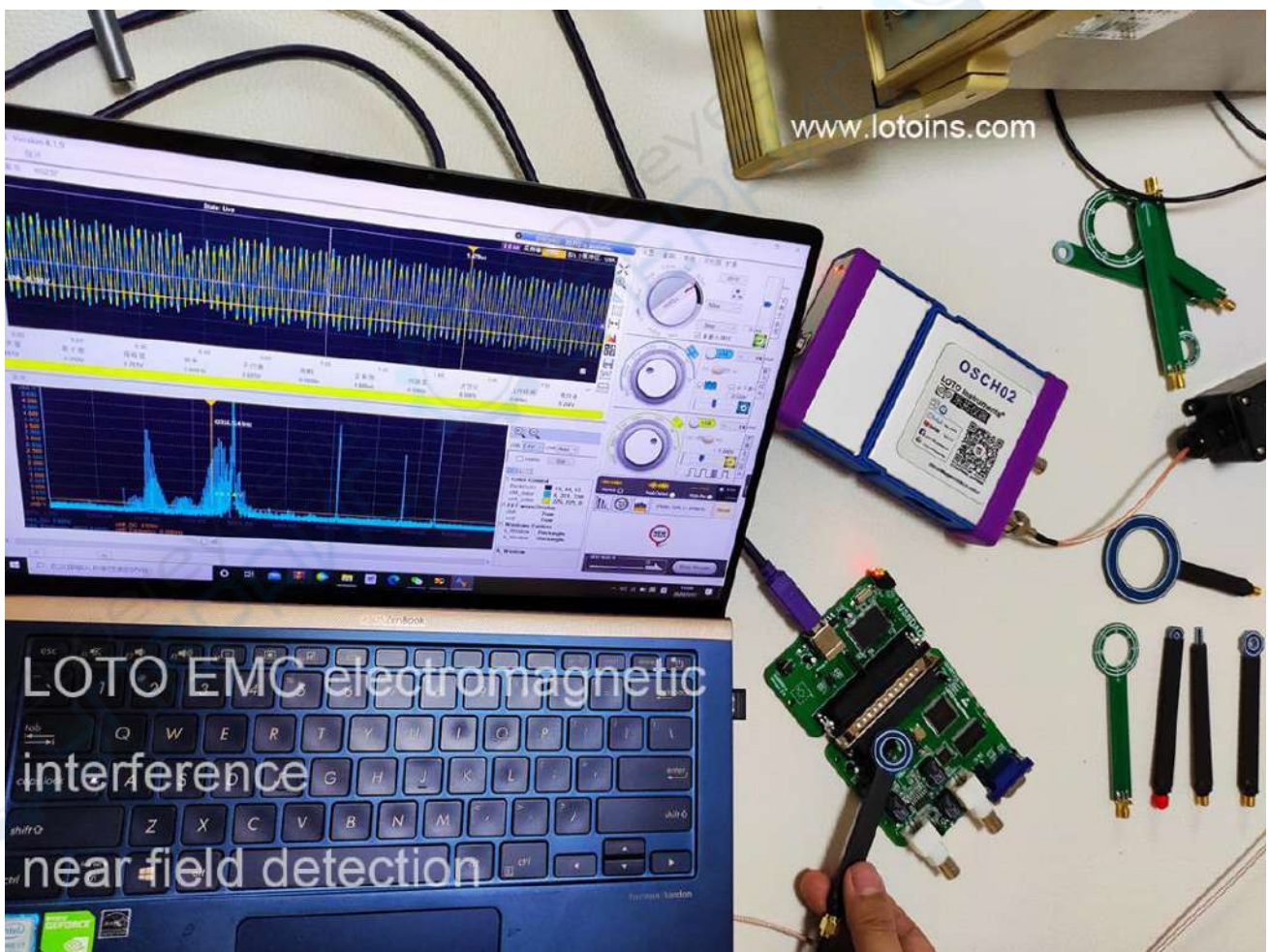
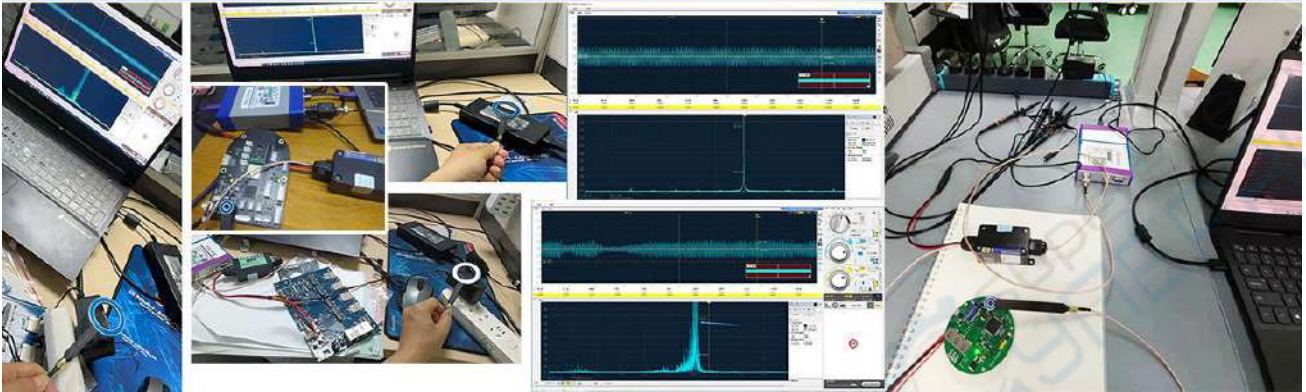
Power supply form optional:



EMC electromagnetic interference detection module:

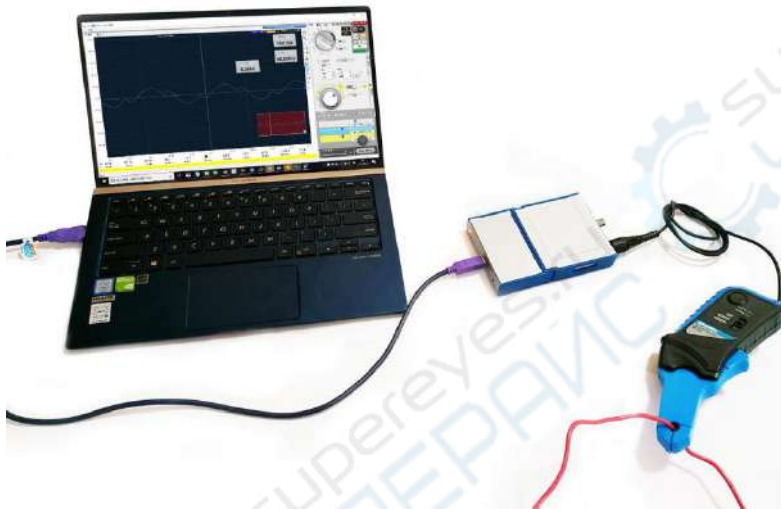
This model can be used with the module E01 to use the FFT function of the oscilloscope to perform spectrum analysis of EMC electromagnetic interference, so as to perform near-field testing of EMC interference on the PCB.

LOTO Customer cases: EMC near filed detection



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. Customers can also edit the XML file to add probes supported by default to the PC upper computer software.

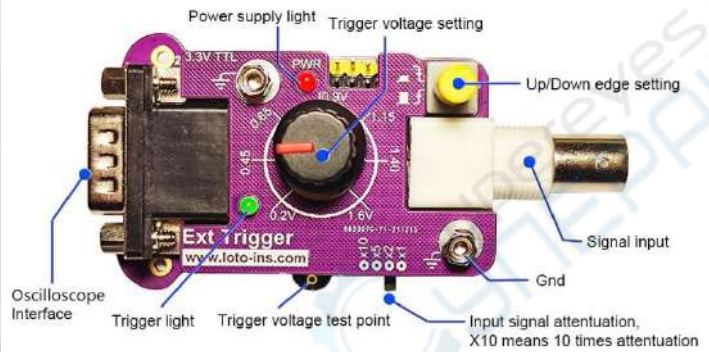


Ext Trigger Module(ET01): ★

When the OSCA02, OSC2002 and OSCH02 series need to trigger the third signal and monitor the waveform of the other two analog signals at the trigger time, the external trigger module ET01 can be purchased. The external trigger module needs to be plugged into the side expansion interface DE2 of the LOTO oscilloscope.



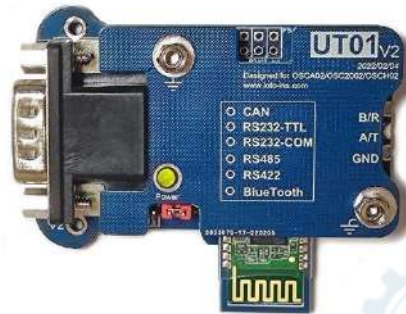
External trigger module (ET01)



Parameter	ET01		
Channel Number	1		
Input Resistance	1MΩ		
Output interface	DE-15		
Output signal	3.3V ttl		
Trigger level	0.2V~1.7V Continuously adjustable (0V~5V range, other ranges are expanded by multiples)		
Trigger edge	Rising edge/falling edge selectable		
bandwidth	10K Hz		
Input range(4 gears)	X1	No attenuation	Input range: 0V~5V
	X2	2 times attenuation	Input range: 0V~10V
	X5	5 times attenuation	Input range: 0V~25V
	X10	10 times attenuation	Input range: 0V~50V

Serial/Bluetooth Module:

LOTO's serial port 232/422/485/Bluetooth function modules are available. The host of the original series of oscilloscopes can be plugged into these function modules, and the original USB oscilloscope has become a 232/422/485/Bluetooth oscilloscope.



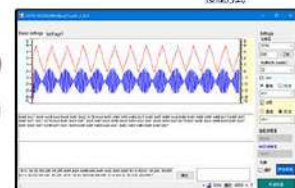
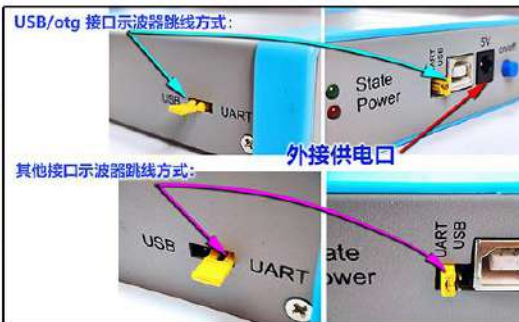
In addition to the previous function expansion, LOTO global oscilloscope can also be expanded into RS232 serial port, RS485/422, CAN, Bluetooth interface oscilloscope to meet the special requirements of different application fields. For example, if long-distance data transmission is required, the transmission distance can be used. The RS485 interface is more than 1 km, and the Bluetooth interface mode can be selected for data collection occasions that require wireless link. Of course, the transmission rate of these serial interfaces is far inferior to that of the USB interface, so the original USB oscilloscope method is still the fastest for waveform acquisition and transmission. Although the serial interface acquisition is as fast as the USB oscilloscope, when the data is sent back to the PC, due to the limitation of the baud rate, it will be relatively slower than the original USB port, so the real-time performance of the oscilloscope is not as good as that of the USB interface. However, it can meet some applications in a USB-unfriendly environment.

LOTO 全域示波器

- USB/otg
- RS232 串口
- RS485/422
- CAN
- Bluetooth 蓝牙

示波器

USB示波器可以切换成串口/蓝牙示波器



Suitcase set:

If you need to configure a wide variety of functional expansion modules around your LOTO oscilloscope, you can choose our suitcase set.



- 电脑示波器
- 手机示波器
- 信号源
- 逻辑分析仪
- EMC套装
- 电流探头
- 串口蓝牙模块
- 高压隔离模块
- 外触发模块
- 电源适配器
- USB线
- 示波器探头
- 鳄鱼夹线
- 手提箱

46 * 35 * 12 cm



USB high-speed isolation module:

We provide two USB high-speed isolation modules for the LOTO virtual oscilloscope, which effectively completely electrically isolate the LOTO oscilloscope and the customer's computer PC, protect the customer's computer in a special working environment, or resist the interference of the industrial harsh electromagnetic environment to USB transmission. . One is a commercial version, the model is USB0, which is small in size, low in noise, and has no external power supply. The other is an industrial application model, model USB-ISO, which can be powered externally. Customers who need it can buy it separately.



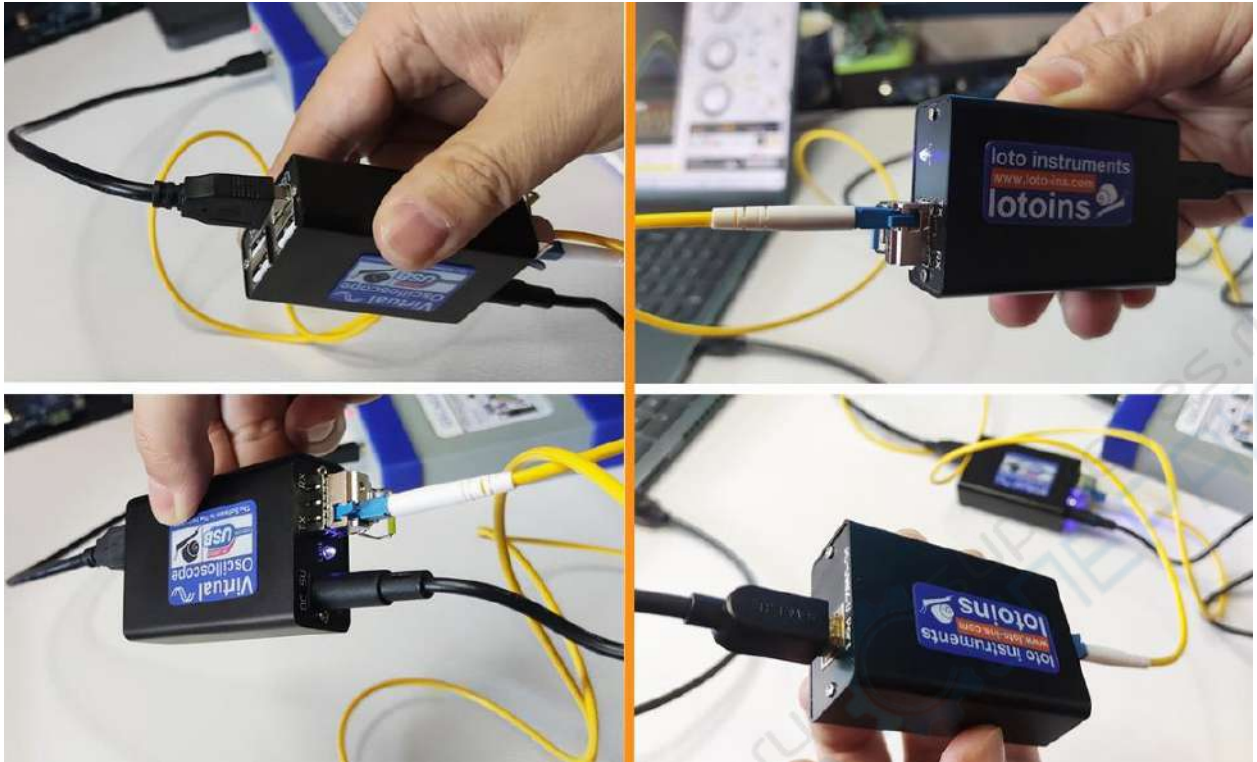
Optical fiber network long-distance transmission module:

The LOTO oscilloscope team launched the USB2.0 to fiber optic transmission module OF01 to help customers of the LOTO virtual USB oscilloscope solve the problems of data anti-interference and long-distance transmission in scenarios where the USB interface method cannot be applied.

In some industries or test sites, the original USB oscilloscope is no longer applicable when the environment is harsh, the electromagnetic interference is serious, or when the oscilloscope needs to be controlled more than ten kilometers away for data acquisition and waveform display analysis. Customers can use the LOTO optical fiber long-distance transmission module OF01 launched in this link to convert the USB port of the LOTO oscilloscope into an optical port, and then convert the optical port to a USB port and connect it to the computer after passing through a single-mode fiber that can be up to 20 kilometers. use. This not only realizes photoelectric isolation transmission, but also realizes long-distance high-speed data transmission and control.

OF01 consists of two modules, the device end and the host end. The device end needs 5v power supply and can be connected to 4 USB oscilloscopes. It is responsible for converting the USB of the oscilloscope device into an optical fiber interface. The host end does not need power supply and is responsible for connecting the single-mode fiber. The incoming optical port is converted into USB 2.0 for computer PC use.





The use of this module can refer to the demo video:

[youtube.com/watch?v=xJt_4xWeDCA](https://www.youtube.com/watch?v=xJt_4xWeDCA)

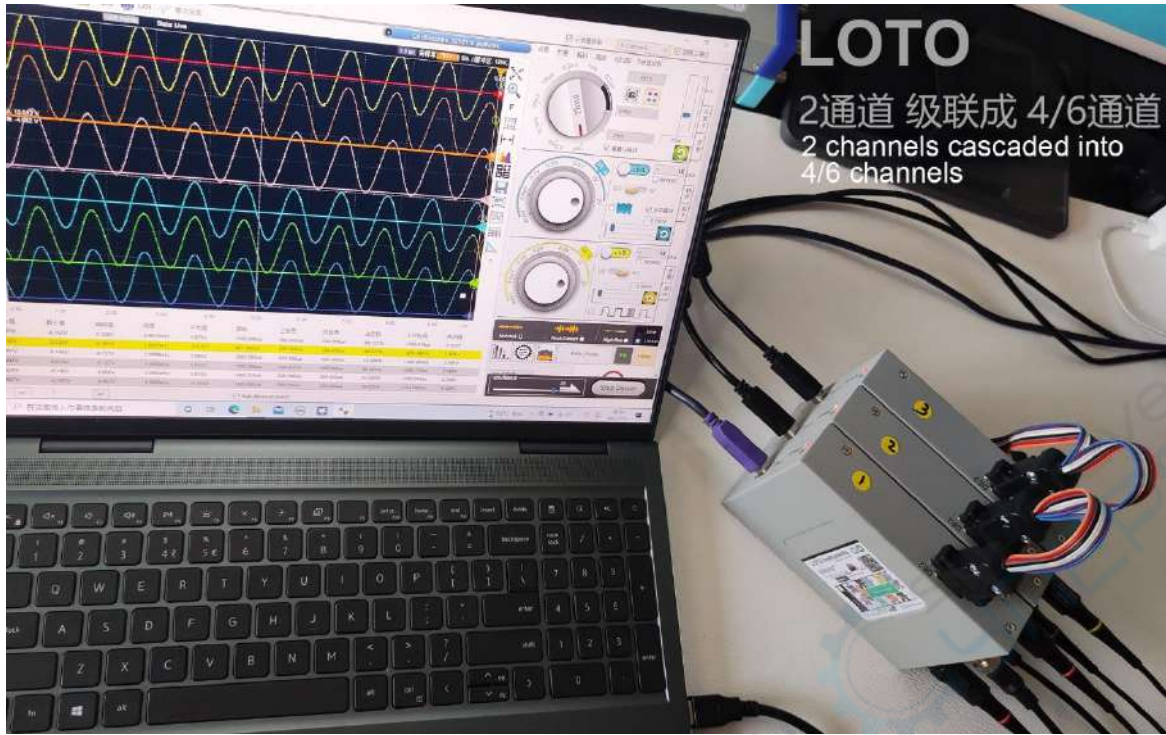
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Multiple oscilloscope mainframes are cascaded into multiple channels:

On the basis of standard 2-channel oscilloscopes, the LOTO oscilloscope team has developed multiple cascading functions, which can cascade 2-channel oscilloscope products into multi-channels, such as two OSCA02s, which are separated into two 2-channel oscilloscopes, which are combined together. It can be used as a 4-channel oscilloscope, and 3 sets can be used together as a 6-channel oscilloscope. If the cascading function is required, please contact the customer service personnel when purchasing. The cascading needs to configure the corresponding interface and synchronization cable.

This feature is suitable for team use. It is usually used by different members or teams as a conventional oscilloscope. At special moments, it can be put together to form a multi-channel use. It is also very suitable for the field of industrial automatic control to collect and display multi-channel signals at high speed.



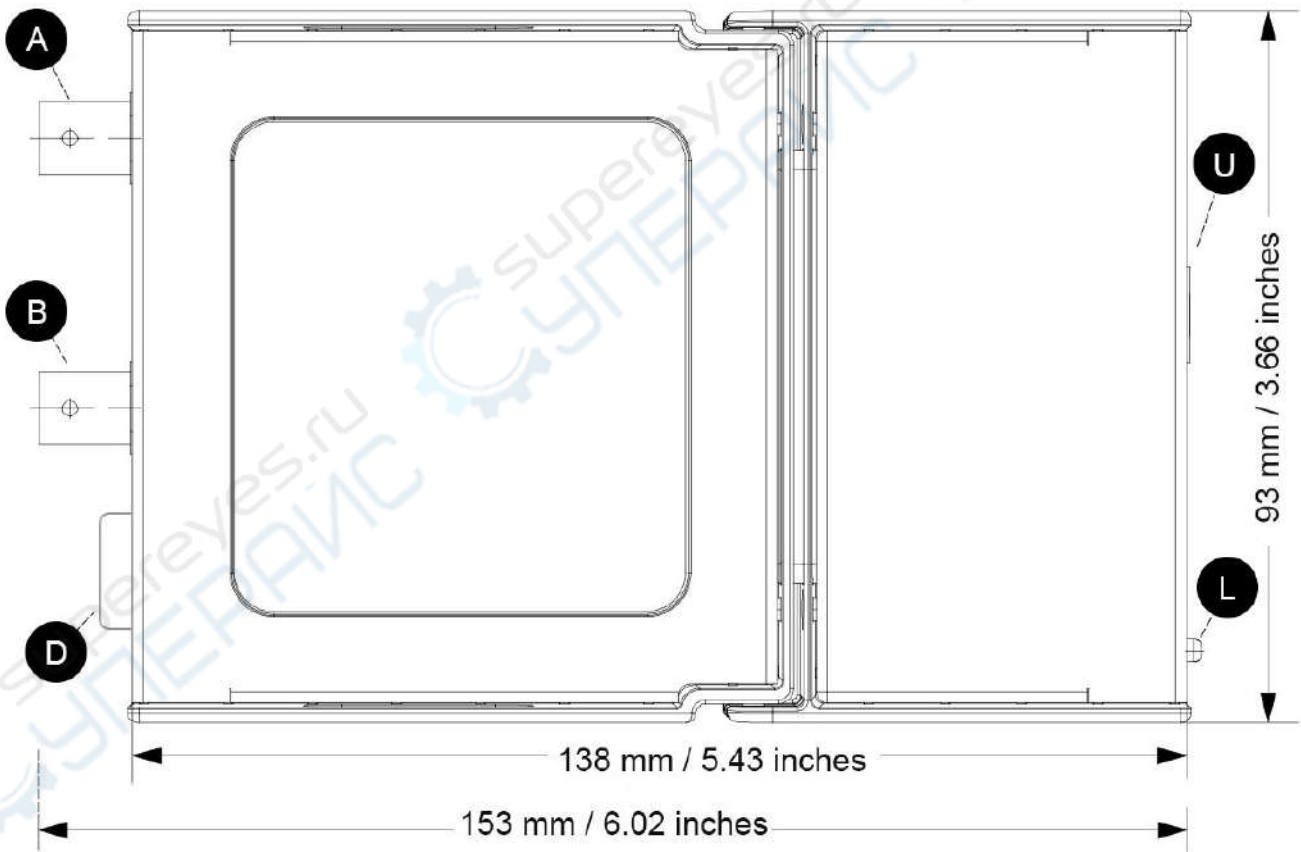
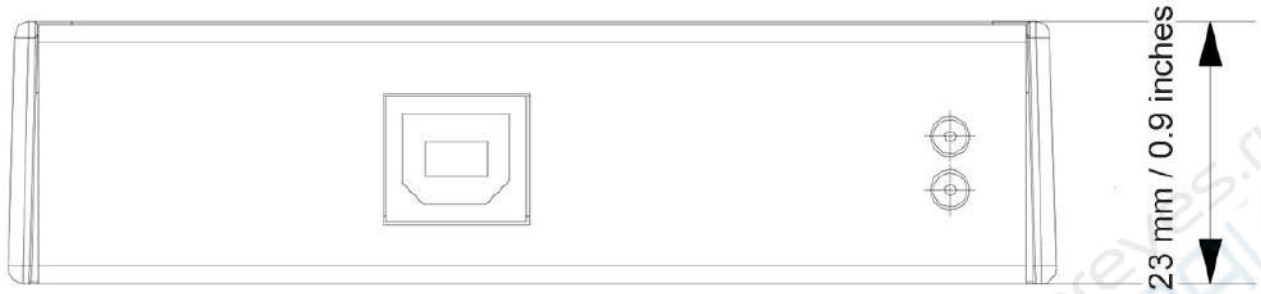


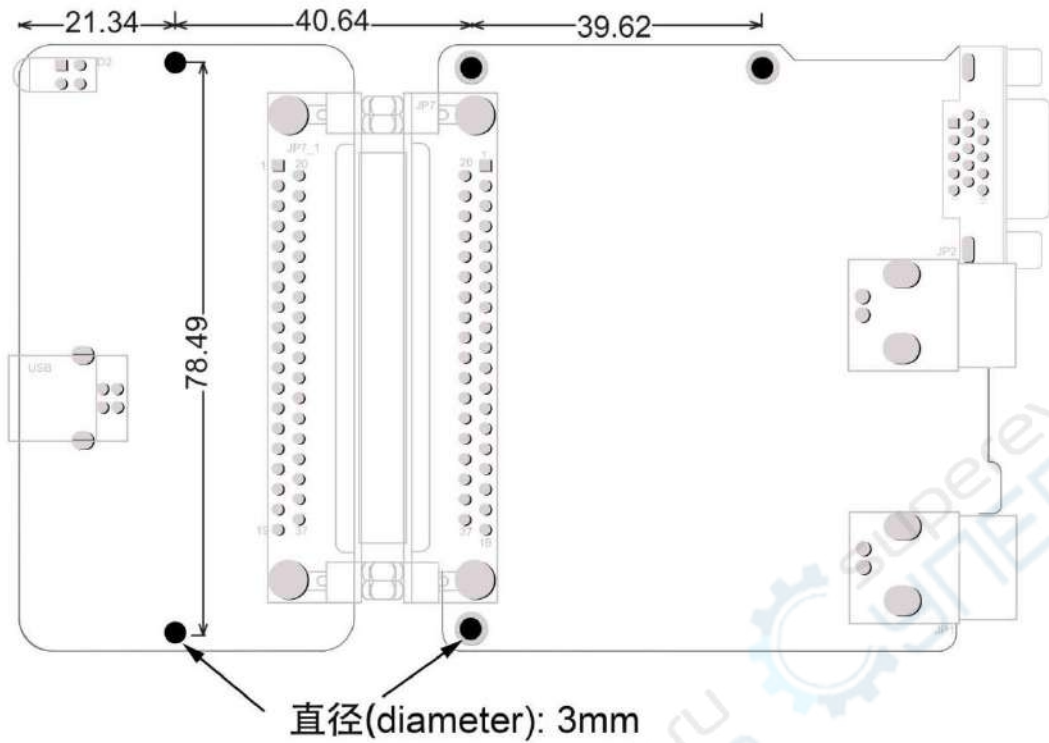
LOTO

2通道 级联成 4/6通道
2 channels cascaded into
4/6 channels

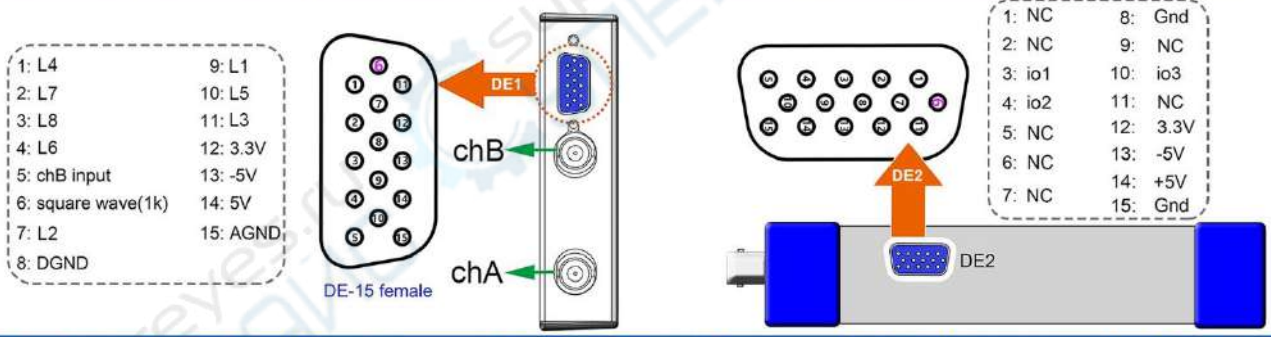
supereyes.ru
СУПЕРПАВК

INTERFACES(A type):





LOTO Oscilloscope HW expansion interface for modules and DIY

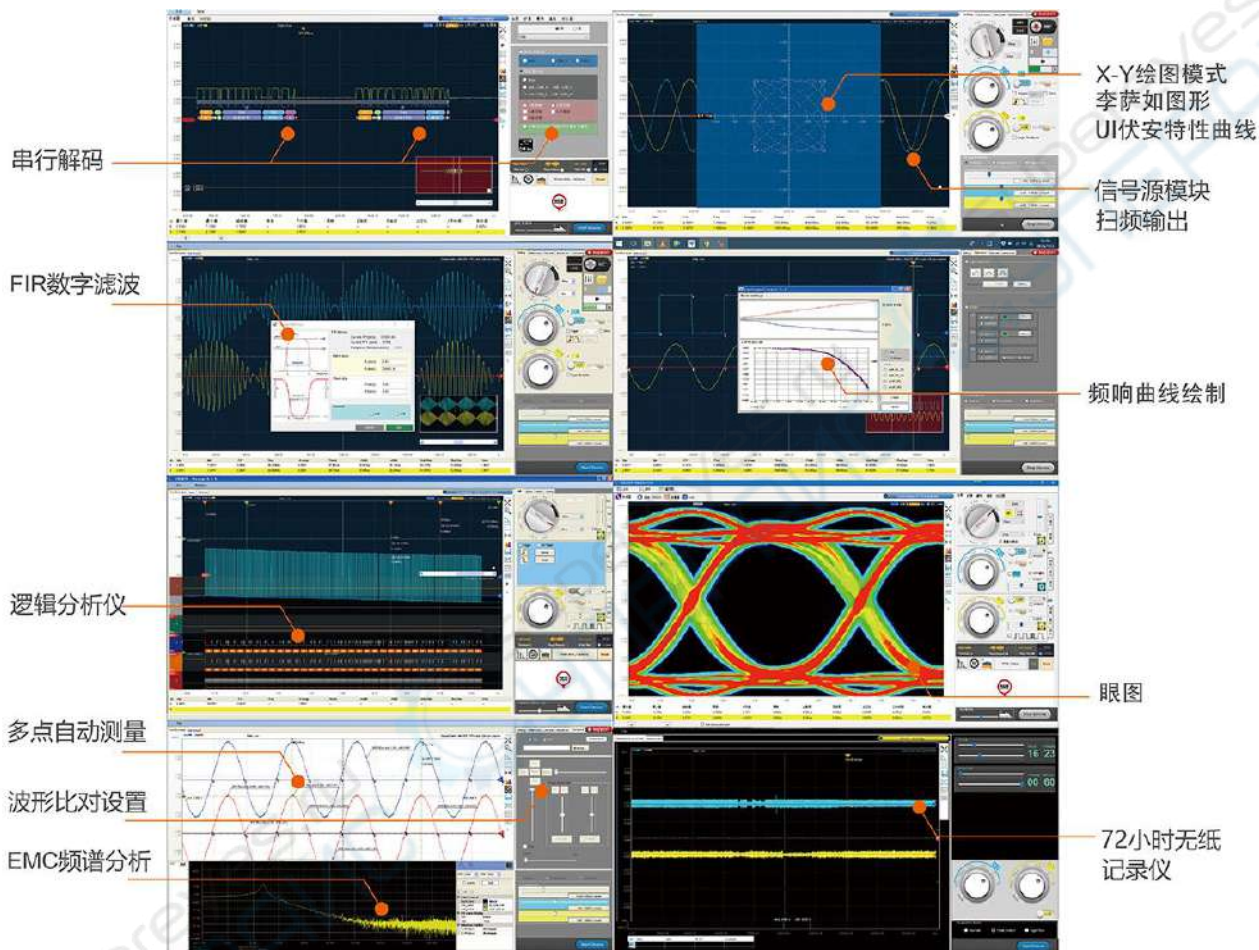


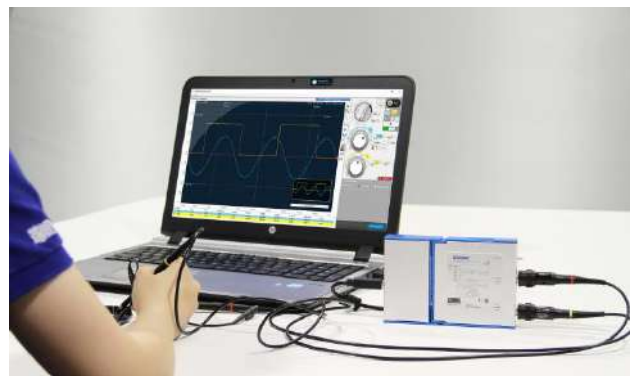
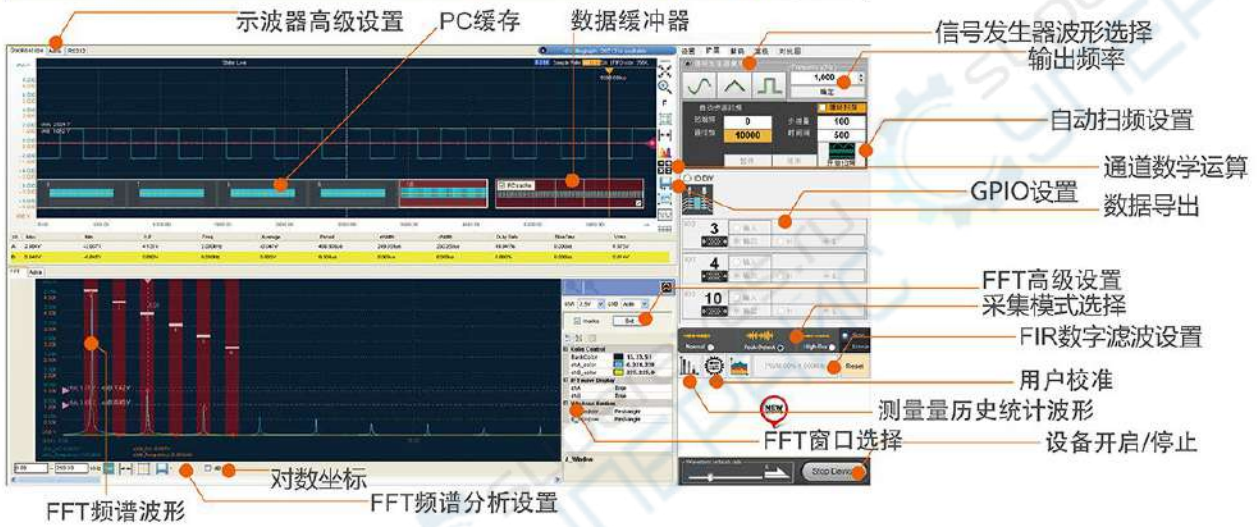
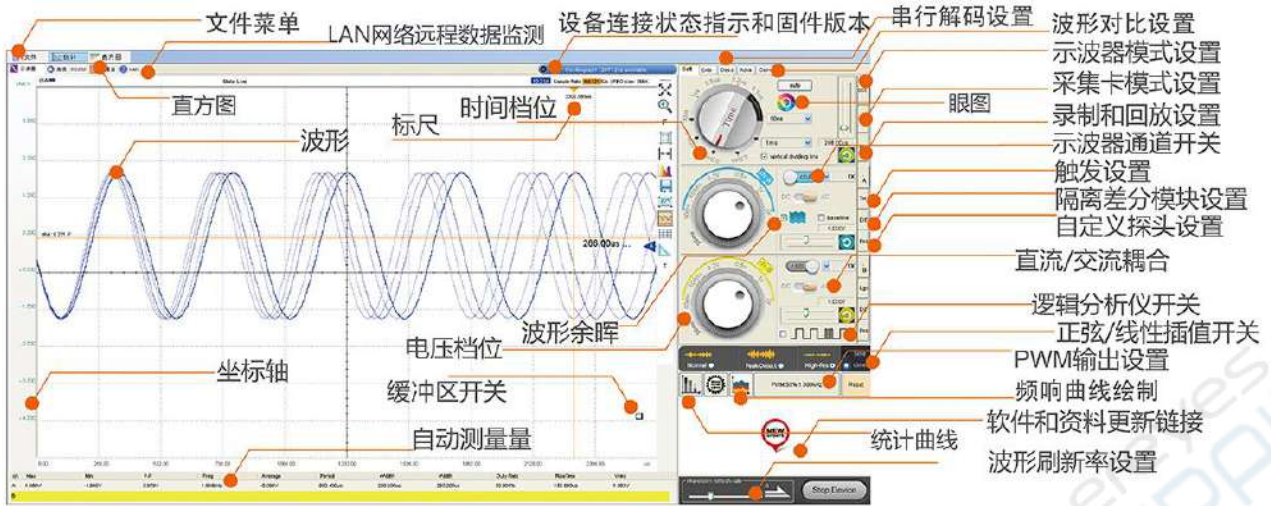
Collage of images showing various hardware modules connected to the interface. Labels include 'AUD01' and 'DE1', 'DE2'.

DE1: Current probe/Isolated module/Logic analyzer(OSC482)/Audio probe
DE2: Ext trigger/Bluetooth/Signal generator/Alarm/Cascade channels

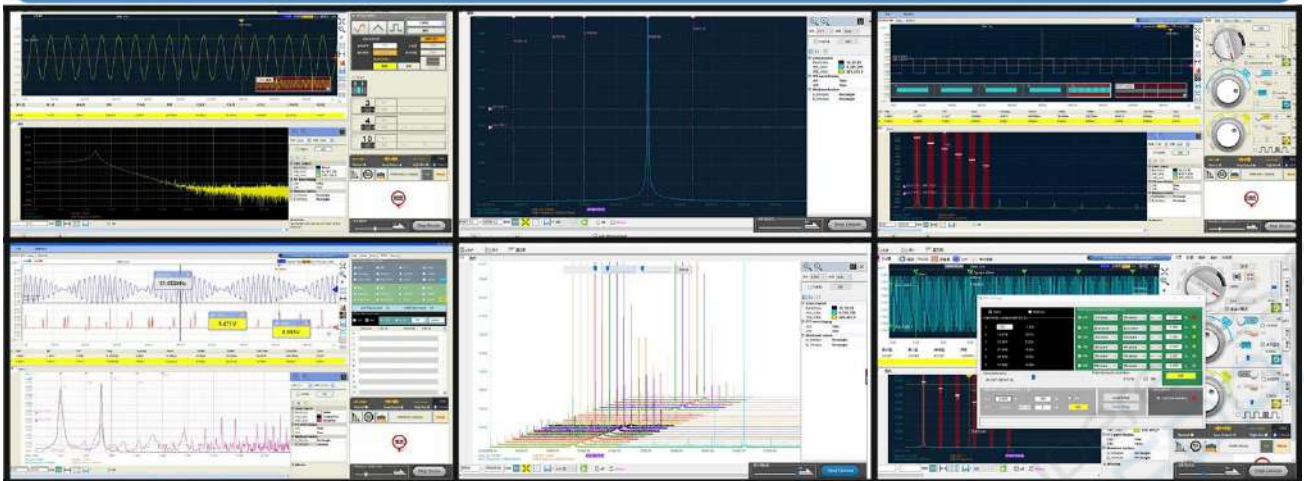
Windows Software

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, logic analyzer, printing, FFT spectrum analysis, paperless recorder.





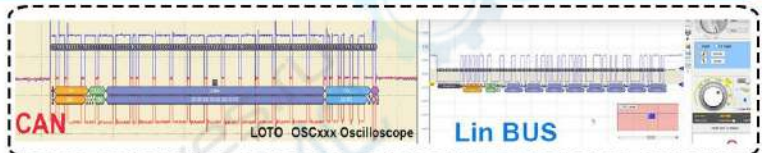
LOTO FFT spectrum analysis function



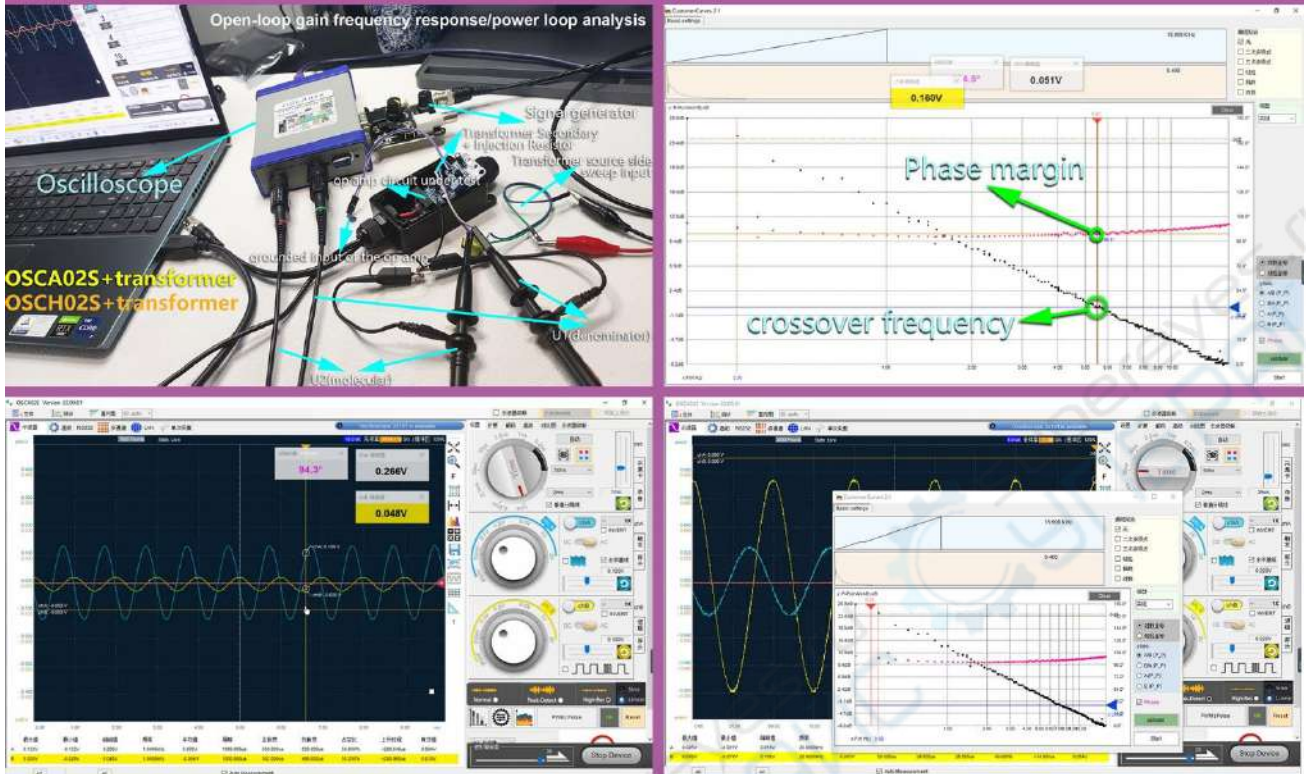
LOTO software decoding RS232+RS422+RS485+iIC+CAN+Lin+SPI Bus decoding

RS232 COMM
RS422 COMM
RS485 COMM
I²C COMM
SPI COMM
CAN bus
Lin bus

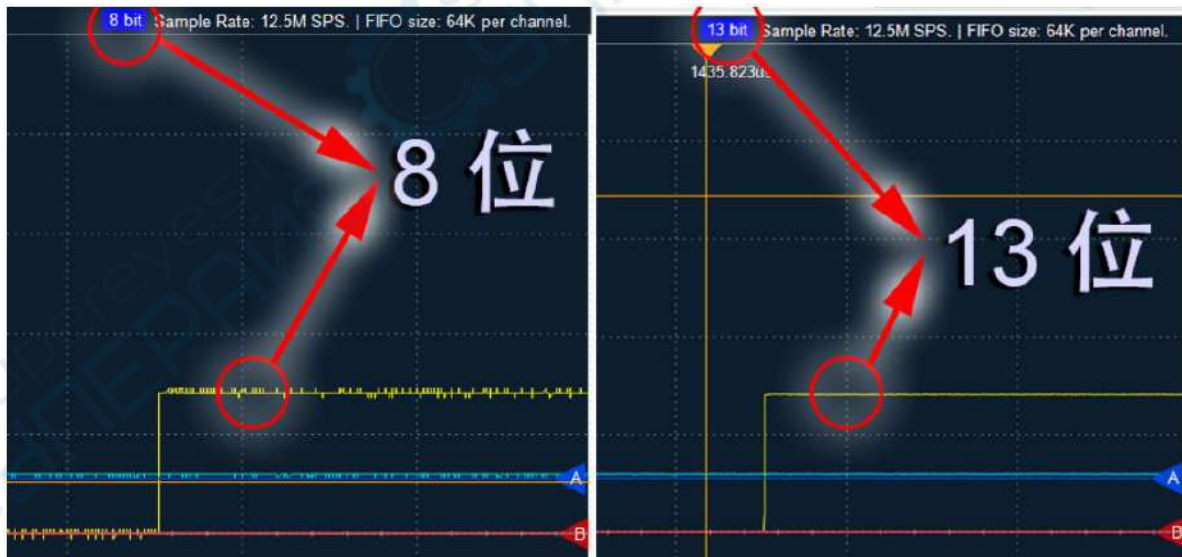
■ Oscilloscope decoding
■ Logic analyzer decoding



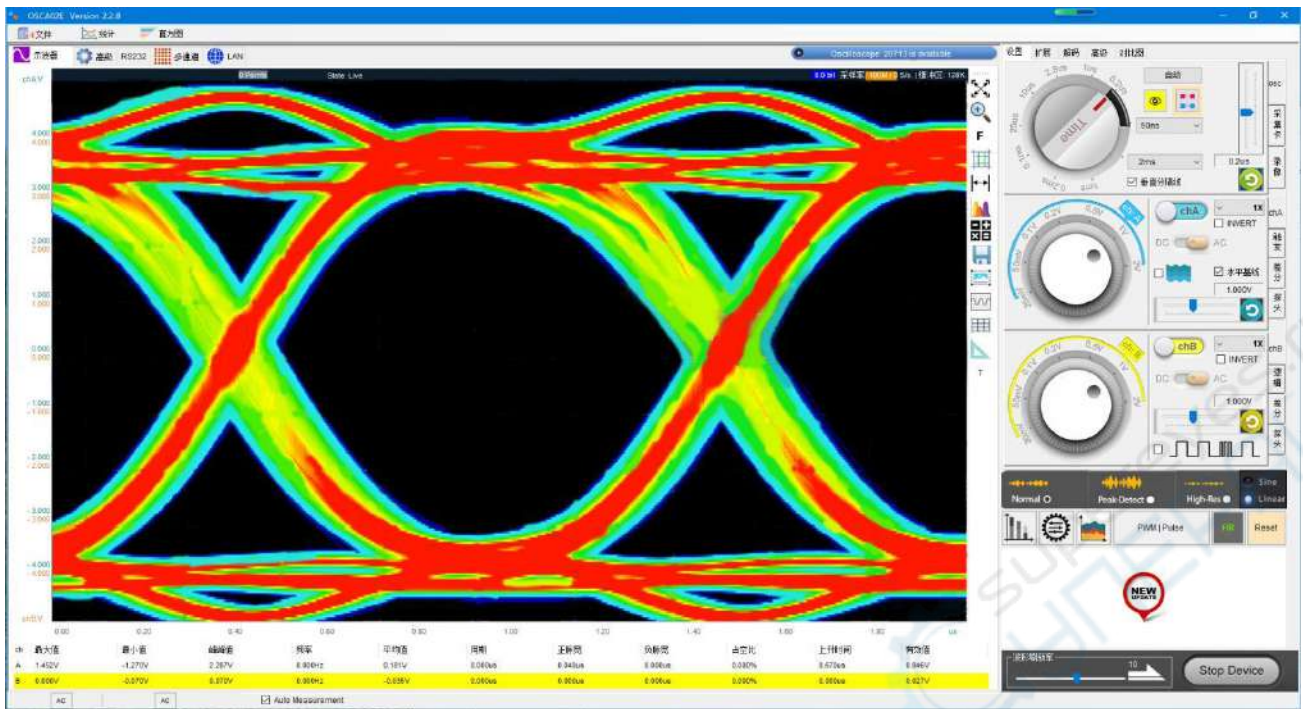
Open-loop gain frequency response curve/loop gain stability test



About 8~13 digits vertical resolution:



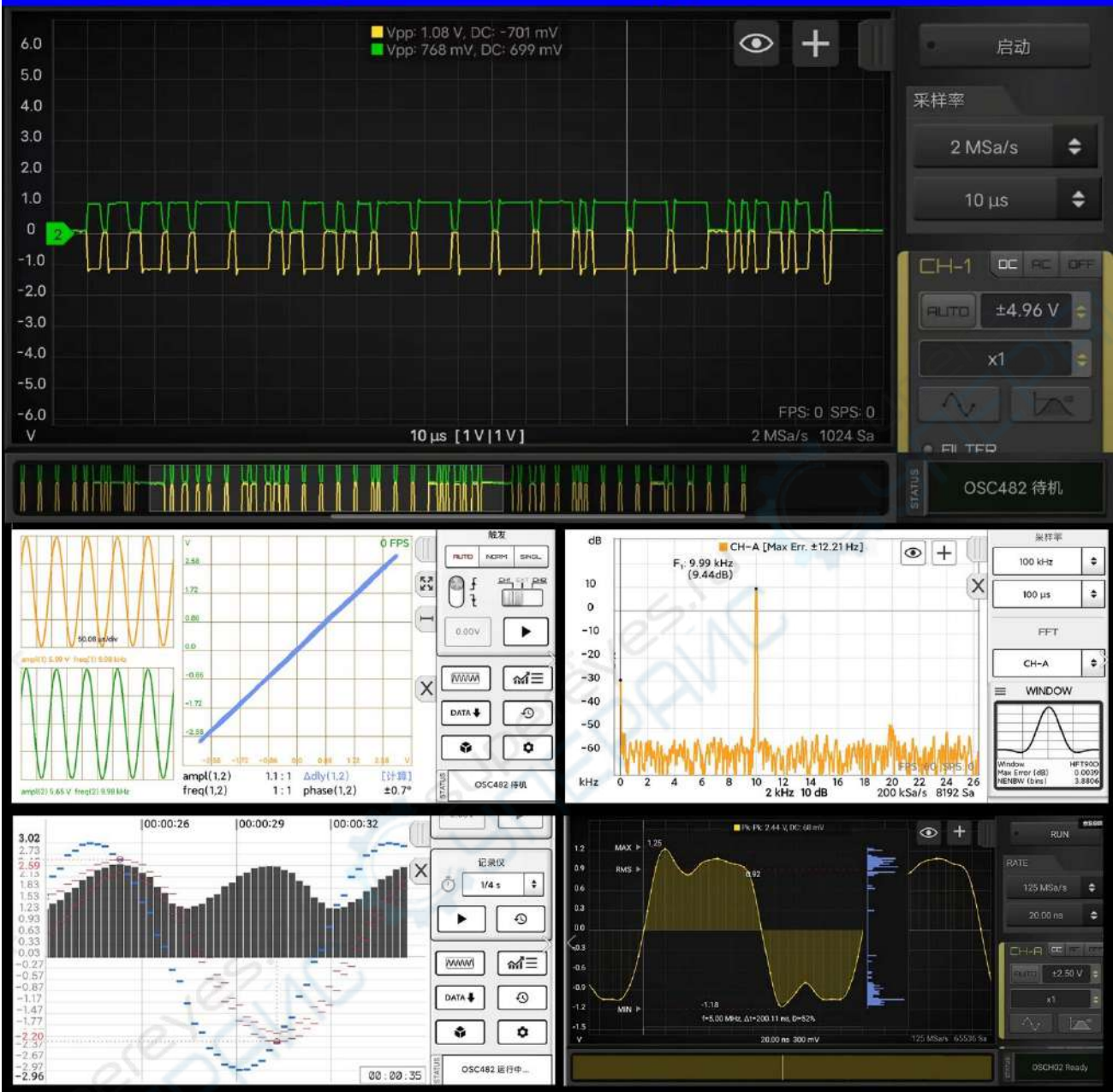
Eye diagram:



App for Android phone(OSCH02M/F/H):

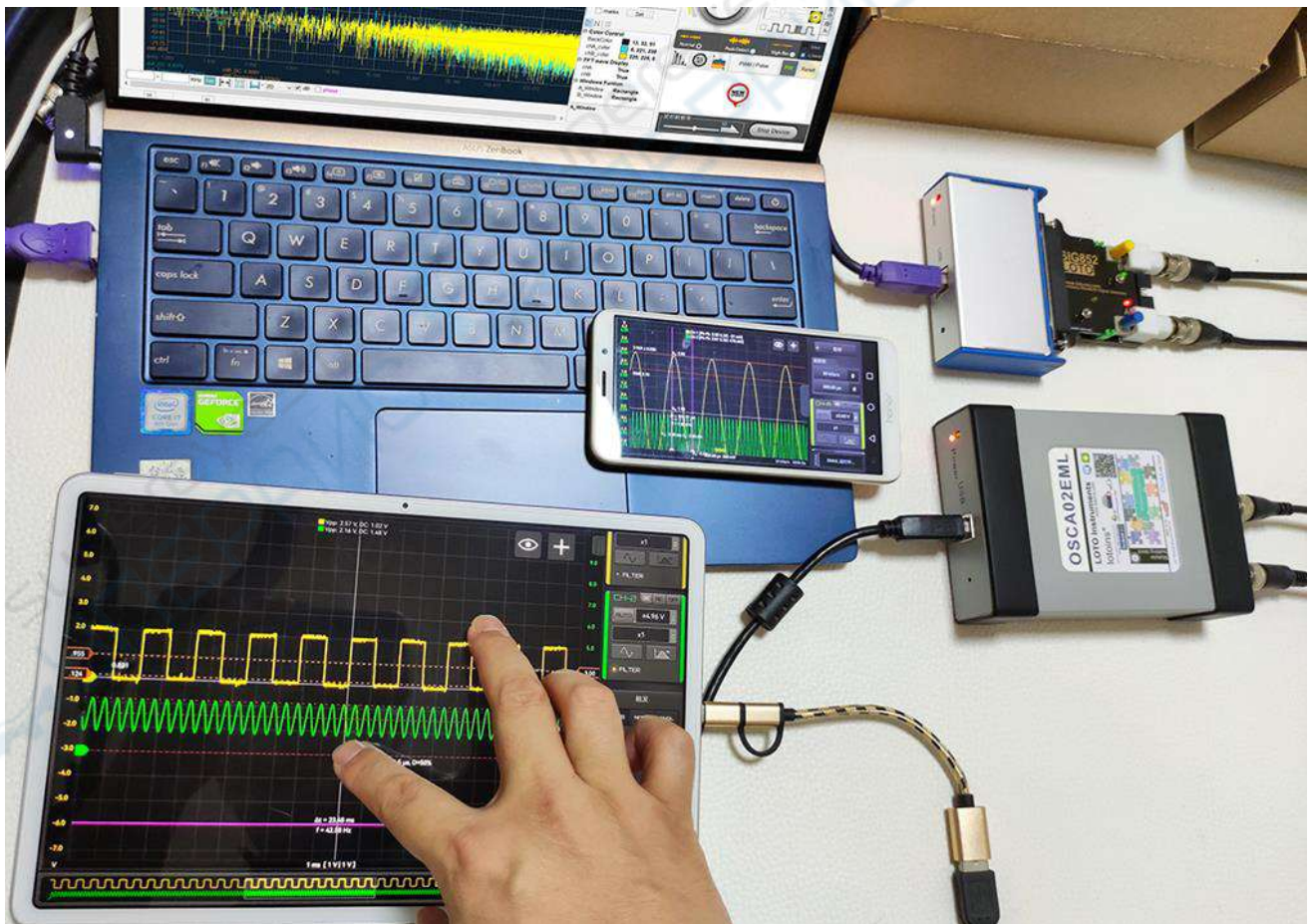


Android Smart phone/ Tablet App



Note:

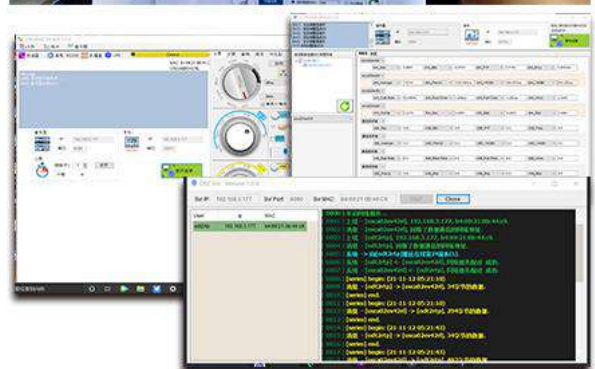
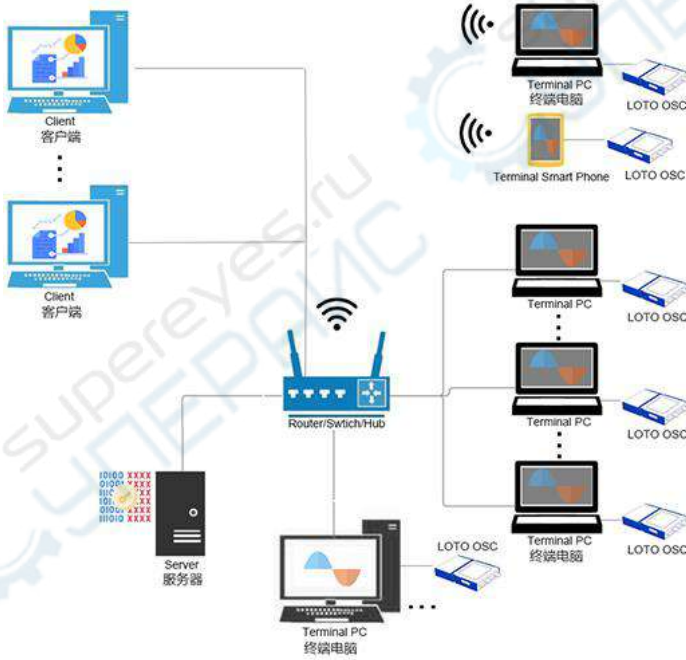
Although most Android phones/tablets are supported, it cannot be ruled out that individual models cannot be turned on due to the inability to enable OTG. We will maintain a list of tested phones and ask the supplier for the list before purchase.

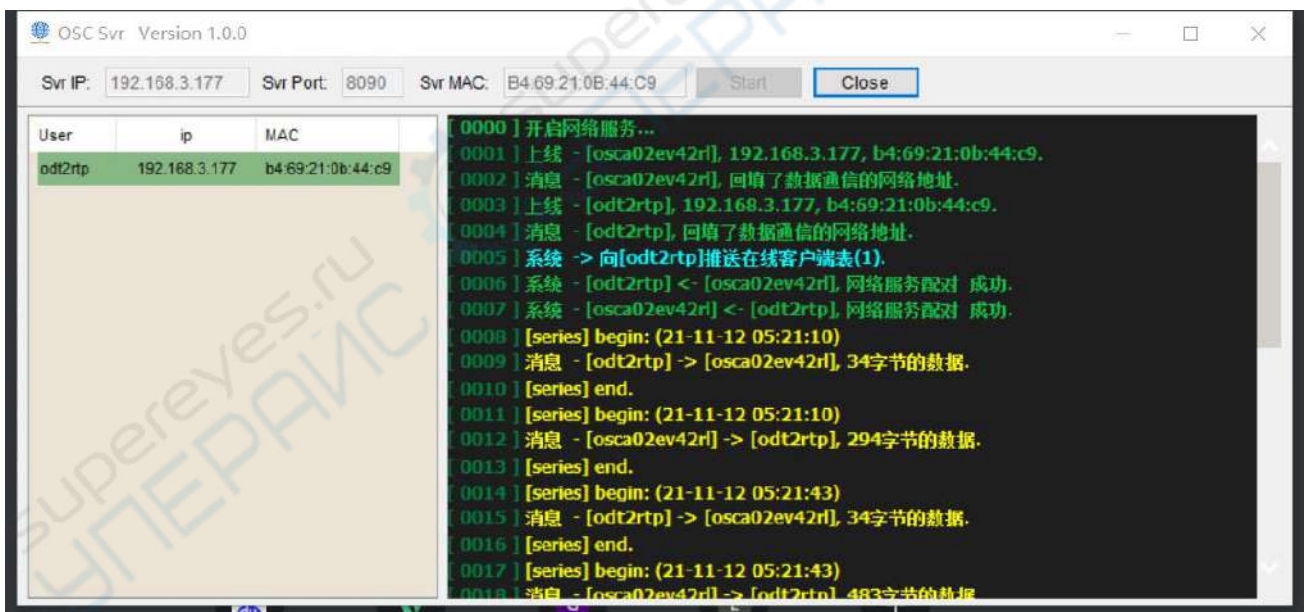
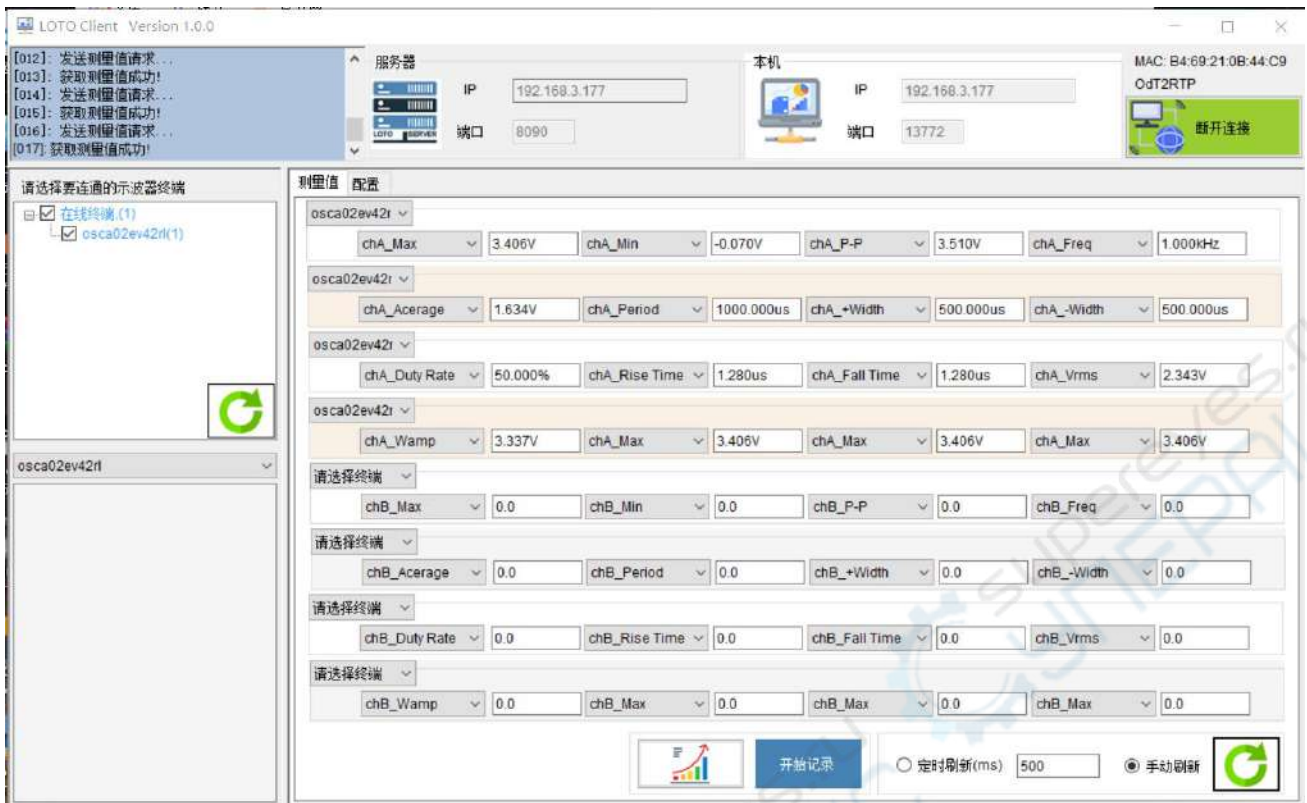


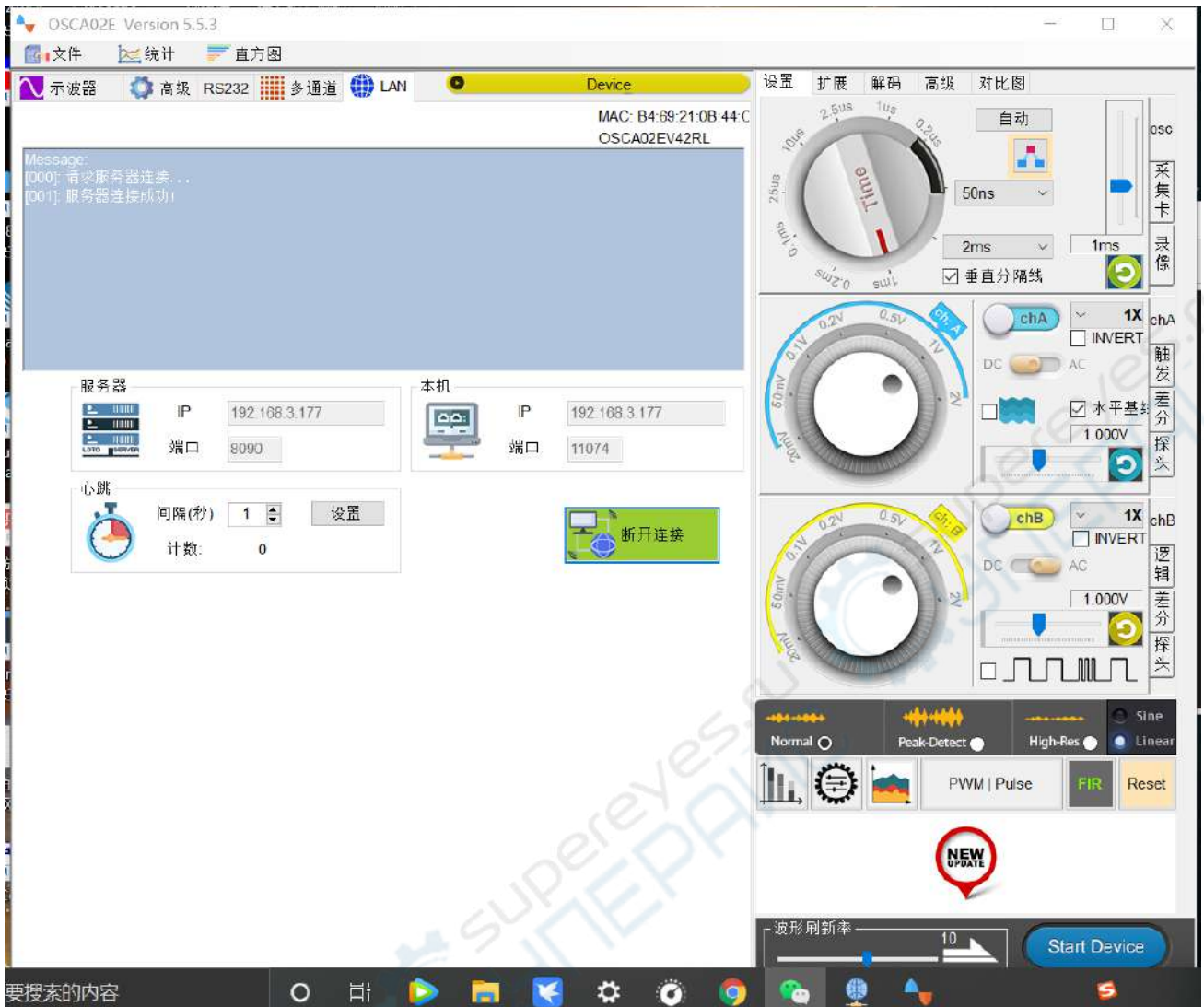
LAN Remote Monitoring

The host computer software on the computer side of the oscilloscope can open the networking function. Run LOTO server server software, remote monitoring client software, and oscilloscope host computer software to form a local area network, which can monitor the measurement data of the oscilloscope one-to-many.

LOTO Network remote data monitoring



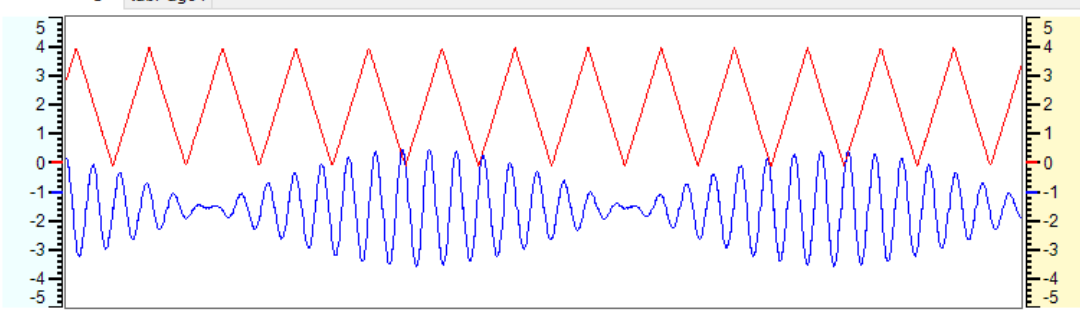




The following is a screenshot of the first version of the host computer software in the serial port mode:

LOTO RS232/485/Blue Tooth v1.0.0

Basic settings tabPage1



Settings

采样率
781K

500 OK

Buffer(K points)
32

chA
 直流 交流
±5V

chB
 直流 交流
±5V

当前波特率
19200

预设波特率
19200

采集
 循环

```

0x73 0xB5 0x75 0xB4 0x74 0xB2 0x76 0xB0 0x79 0xAE 0x7C 0xAC 0x7C 0xAB 0x7F 0xA8 0x83 0xA7 0x85 0xA5 0x87 0xA3 0x8A 0xA2 0x8D 0xA0 0x8D
0x9E 0x8F 0x9C 0x92 0x9B 0x94 0x99 0x94 0x97 0x95 0x95 0x96 0x93 0x96 0x91 0x96 0x90 0x96 0x8E 0x94 0x8C 0x92 0x8C 0x92 0x8D 0x91 0x8F 0x8E
0x90 0x8E 0x93 0x8C 0x94 0x89 0x96 0x86 0x98 0x86 0x9A 0x87 0x9C 0x85 0x9E 0x82 0x9F 0x82 0xA1 0x80 0xA3 0x7E 0xA5 0x7E 0xA6 0x7E 0xA8
0x7D 0xAA 0x7D 0xAC 0x7D 0xAE 0x7D 0xAF 0x7E 0xB1 0x7E 0xB3 0x7E 0xB5 0x7F 0xB7 0x81 0xB8 0x82 0xBA 0x82 0xBC 0x84 0xBE 0x85 0xC0 0x86
0xC2 0x87 0xC4 0x88 0xC5 0x89 0xC7 0x89 0xC9 0x8A 0xCB 0x8B 0xCD 0x8B 0xCE 0x8B 0xD0 0x8B 0xD2 0x8B 0xD4 0x8B 0xD5 0x8A 0xD8 0x8A 0xD9
0x89 0xDB 0x89 0xDD 0x89 0xDF 0x89 0xE1 0x88 0xE3 0x88 0xE4 0x88 0xE6 0x87 0xE8 0x87 0xEA 0x87 0xEC 0x86 0xED 0x86 0xF0 0x87 0xF1 0x86

```

S1:0 S3:33 S5:238 S6:255 0x86 0x24 0x0B 0x9A 0x64 0x20 0x00 0x00 S1:0 S3:33 S5:238
S6:255 S1:0 S3:33 S5:238 S6:255 S1:0 S3:33 S5:238 S6:255 S1:0 S3:33 S5:238 S6:255
S1:0 S3:33 S5:238 S6:255 S1:0 S3:33 S5:238 S6:255 S1:0 S3:33 S5:238 S6:255 S1:0

清空

Done 接收: 4701 1

Xi'an loto instruments Co.,Ltd

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