LOTO

OSC802

USB Oscilloscope / Data logger Device Family

June 2019, Version 6.0 Data Sheet

Features:

- Hand-held portable, 153(L) x 93(W) x 23(H) mm, up to 210g.
- General Purpose I/O interface (TTL 3.3V).
- Open source hardware interface to support expansion modules.
- Open software API for third party development.
- USB 2.0 interface, USB powered.
- 72 hours long time data logger.
- Waveform recording and playback review.
- Support waveform image import as the comparison reference for real-time waveform. NEW
- Support Serial bus decoding (selected models).
- 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.	
● Maximum sampling rate (S/s):	80M	
● Bandwidth (−3 dB):	25MHz	
● 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:	202 g.	
● Input sensitivity (10 vertical	20 mV/div to 2 V/div.	

divisions):			
● Input ranges(probe x1):		±100 mV to ±5 V full scale, in 7 ranges.	
● Time base selection (10 horizontal divisions):		50 ns/div ~ 2 s/div, in 19 ranges.	
● Typical noise (peak to peak voltage):	20 mv/div	3 mv	
	50 mv/div	4.8 mv	
	100 mv/div	7.2 mv	
	200 mv/div	19.4 mv	
	500 mv/div	34.8 mv	
	1 v/div	87.8 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:		UART/RS-232, I²C	

AT A GLANCE

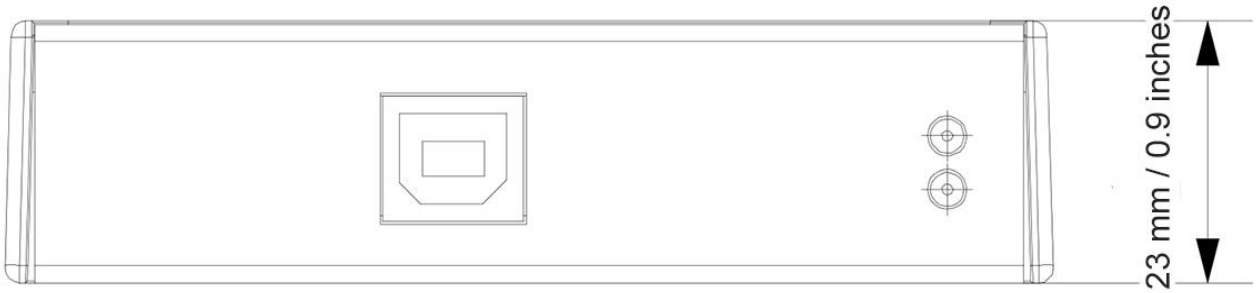
Model:	**OSC802**
Detail:	Support Windows XP, Win 7, Win 8.1, Win10 (32 bit and 64 bit).
Input channels:	2
Maximum sampling rate (S/s):	80M
Bandwidth (−3 dB):	25M Hz
FFT:	✓
Data logger:	✓
I/O extension:	✘
Serial bus decoding:	✓
Hardware trigger:	✓
Ext trigger support:	✓

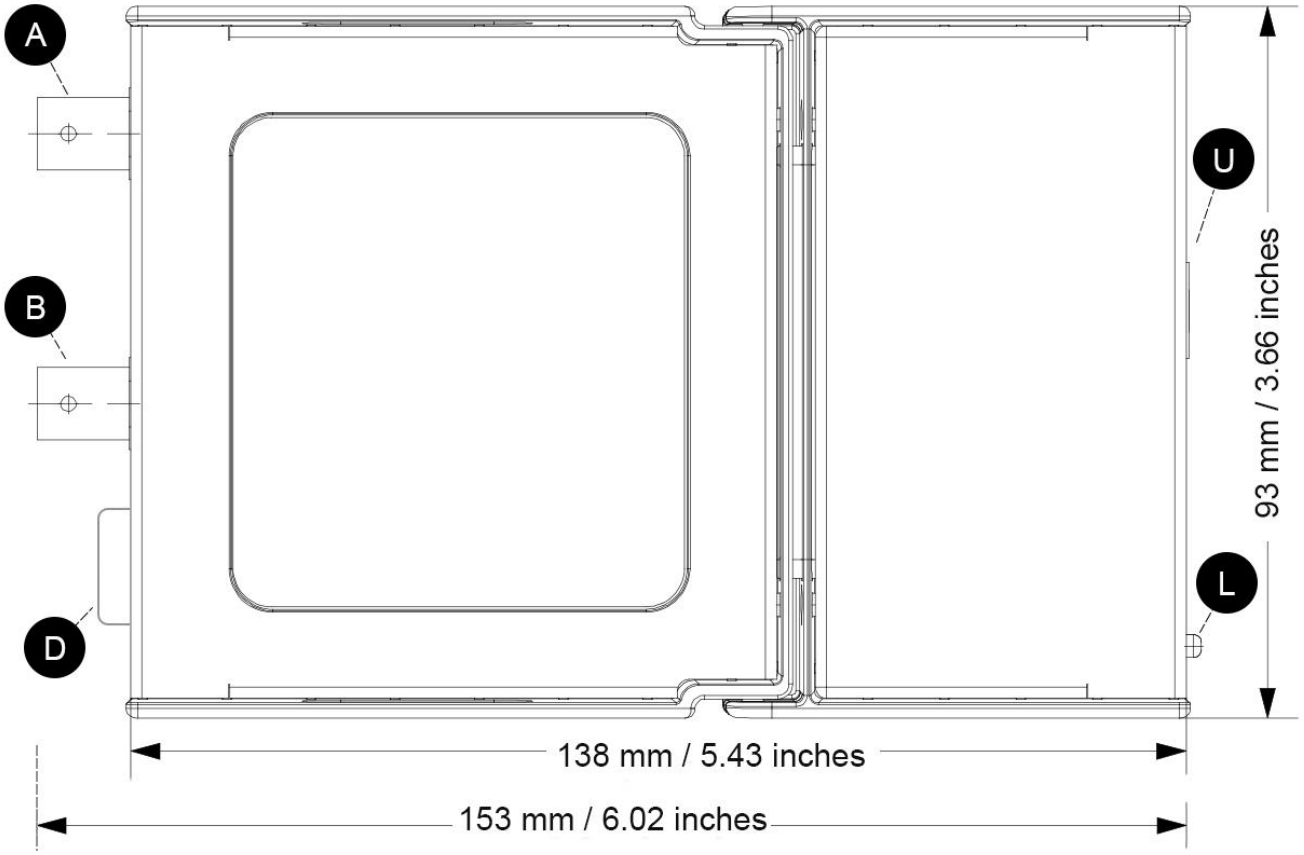
Signal generator module support:	✘
Logic analyzer module :	✘
Android Phone/ Tablet support	✘

Accessories:

	type	quantity	model	details
①	Oscilloscope host device	1	OSC802	/
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

INTERFACES:

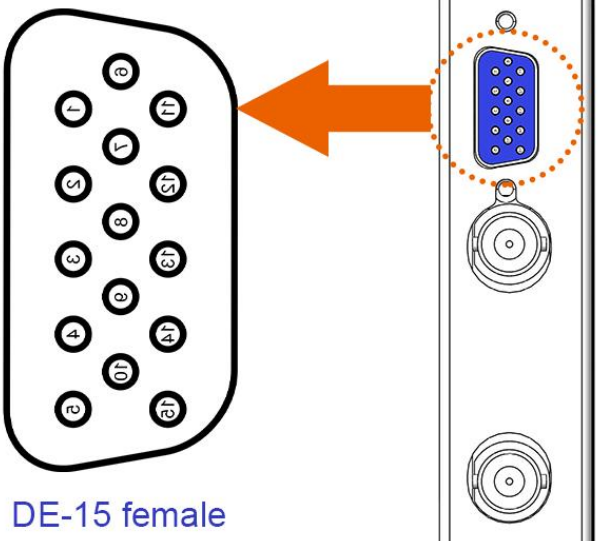

23 mm / 0.9 inches


A
B
D
U
L
93 mm / 3.66 inches
138 mm / 5.43 inches
153 mm / 6.02 inches

	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