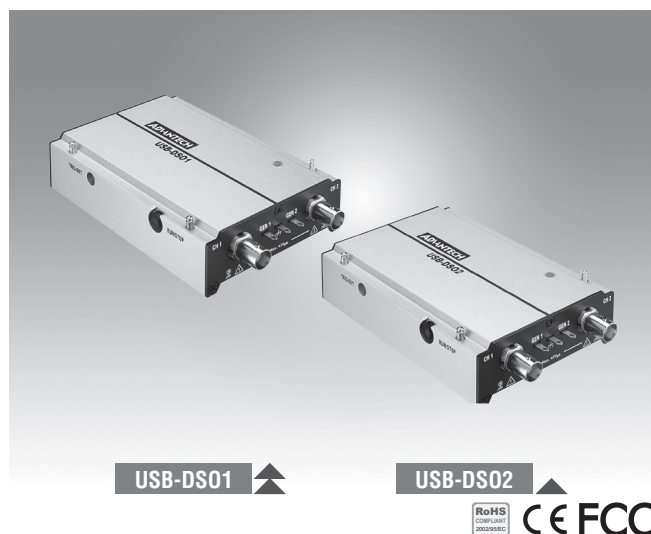


# USB-DSO1 USB-DSO2

## 8-bit ,1GS/s 2-ch Digital Storage Oscilloscope

## 16-bit ,1GS/s 2-ch Digital Storage Oscilloscope



### Features

- Up to 1GS/s maximum sample rate
- 200 MHz bandwidth
- Up to 128 MS/ch of waveform memory
- PC based user interface (USB 2.0)
- Stackable up to 12 channels
- Built-in two function generators
- Support Trigger and FFT function
- Small size for portable usage (135 x 80 x 26 mm<sup>3</sup>)
- 8 ~ 16 bits resolution for various applications (USB-DSO2 only)

### Introduction

USB-DSO are USB digital storage oscilloscopes which provide you a flexible and convenient way to measure signal. It provides 200MHz bandwidth and up to 1GS/s sample rate. It also equips up to 128MS/ch waveform memory for high speed data acquisition. You can acquire and analyze data in your laptop or PC by using friendly software.

### Specifications

#### Acquisition

- Mode** Sample, Average, Envelope, Peak detect, High resolution
- Sampling**
  - USB-DSO1: 1 GS/s @ 1 Ch; 500 MS/s @ 2 Ch
  - USB-DSO2: 8 bits, 1 GS/s @ 1 Ch; 500 MS/s @ 2 Ch
  - 12 bits, 500 MS/s @ 1 Ch; 250 MS/s @ 2 Ch
  - 14/15 bits, 100 MS/s @ 2 Ch
  - 16 bits, 100 MS/s @ 1 Ch
- Record length**
  - USB-DSO1: 8 bits, 128MS/ch @1 Ch; 64MS/ch @2 Ch
  - USB-DSO2: 8 bits, 128MS/ch @1 Ch; 64MS/ch @2 Ch
  - 12/14/15/16 bits, 32MS/ch

#### Input

- Input channels** 2 (Ch1, Ch2)
- Input coupling** AC/DC
- Input impedance** 1 M $\Omega$  || 18 pF
- Overvoltage protection**  $\pm 100$  V (DC+AC peak)
- Ch-Ch crosstalk**  $\geq 100 : 1$
- Ch-Ch skew** 100 ps between two channels with the same scale & coupling settings

#### Vertical

- Bandwidth** 200 MHz @ 1-channel; 100 MHz @ 2-channels
- Rise Time** 1.75 ns @ 200 MHz; 3.5 ns @ 100 MHz
- Resolution**
  - USB-DSO1: 8 bits
  - USB-DSO2: 8, 12, 14, 15, 16 bits
- Input Sensitivity** 2 mV/div to 10 V/div (Full Scale:  $\pm 4$  div/screen,  $\pm 1$  div beyond screen)
- Position range**  $\pm 4$  divisions
- Offset range**  $\pm 150$  V @ 2, 5, 10 V/div;  $\pm 1.5$  V @ 0.2, 0.5, 1 V/div;  $\pm 1.5$  V @ 2, 5, 10, 20, 50, 100 mV/div
- DC accuracy**  $\pm 3\%$  of full-scale
- Bandwidth limit** 20 MHz, 100 MHz or Full

#### Horizontal

- Time scale** 2 ns/div to 100 s/div (10 div/screen)
- Time resolution** 40 ps
- Time accuracy**  $\pm 10$  ppm
- Delay range** Pre-trigger: 0 to 100% of 1 screen; Post-trigger up to 50 sec.

#### Trigger

- Trigger mode** Auto, Normal, Single, Untriggered-Roll (Max S/R up to 250KS/s, maximum speed is PC-dependent)
- Source** Ch1, Ch2, Ext. (TTL only)
- Coupling** DC, LF reject (50kHz), HF reject (50kHz), Noise reject
- Trigger range**  $\pm 4$  div from window center
- Vertical sensitivity** 1 div or 5 mV @  $< 10$  mV/div; 0.6 div @  $\geq 10$  mV/div
- Trigger type** Edge, Video/TV, Pulse Width
- Basic trigger** Rising, Falling, Alternate, Either

#### I/O port

- Trig-In** TTL 3.3 V level (Rising/Falling)
- Trigger pulse approval**  $> 8$  ns
- Trig-Out** TTL 3.3 V

#### Function Generator

- Output channels** 2 (Gen.1, Gen.2)
- Output impedance** 600 $\Omega$
- Frequency** DC to 1MHz
- Amplitude** 0 V to 2.5 V (to 1 M $\Omega$  load)  $\pm 50$  mV
- FG mode** Sine, Square, Pulse, Triangle, Ramp, DC

#### Stack

- Max. channels expand** 12 ch (6x DSO, 1 Master & 5 Slaves)
- Trigger source** All channels available
- Skew between devices** Skew between Master & Slave  $\pm 1$  ns @ 1-channel; Skew between Master & Slave  $\pm 2$  ns @ 2-channel

### Ordering Information

- USB-DSO1-AE** 8-bit ,1GS/s 2-ch Digital Storage Oscilloscope
- USB-DSO2-AE** 16-bit ,1GS/s 2-ch Digital Storage Oscilloscope

Package includes DSO device, USB 2.0 Cable, Stack cable and two 250MHz Probe.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Advantech:](#)

[USB-DSO1-AE](#)