

Acute DS-1000 series Digital Storage Oscilloscope



FEATURES

- ◆ PC-based DSO with 200MHz bandwidth
- ◆ 200MS/s Real-time & 5GS/s Equivalent sampling
- ◆ 9 bits/CH vertical resolution, 2mV/DIV to 10V/DIV
- ◆ 20MHz bandwidth limitation
- ◆ TV-trigger & External-trigger
- ◆ Hardware button for RUN/STOP on the DSO device
- ◆ 2 channels, stack up to 4 or 6 channels
- ◆ 64k/512k points in Single-Shot
- ◆ FFT, Math, Save/Recall, Internet Control, etc.
- ◆ Export data to WORD, EXCEL, TEXT, HTML, etc.
- ◆ Log with huge record length up to hard disk size
- ◆ USB2.0 interface (no power adapter needed)
- ◆ Pocket-sized DSO with all accessories in soft case

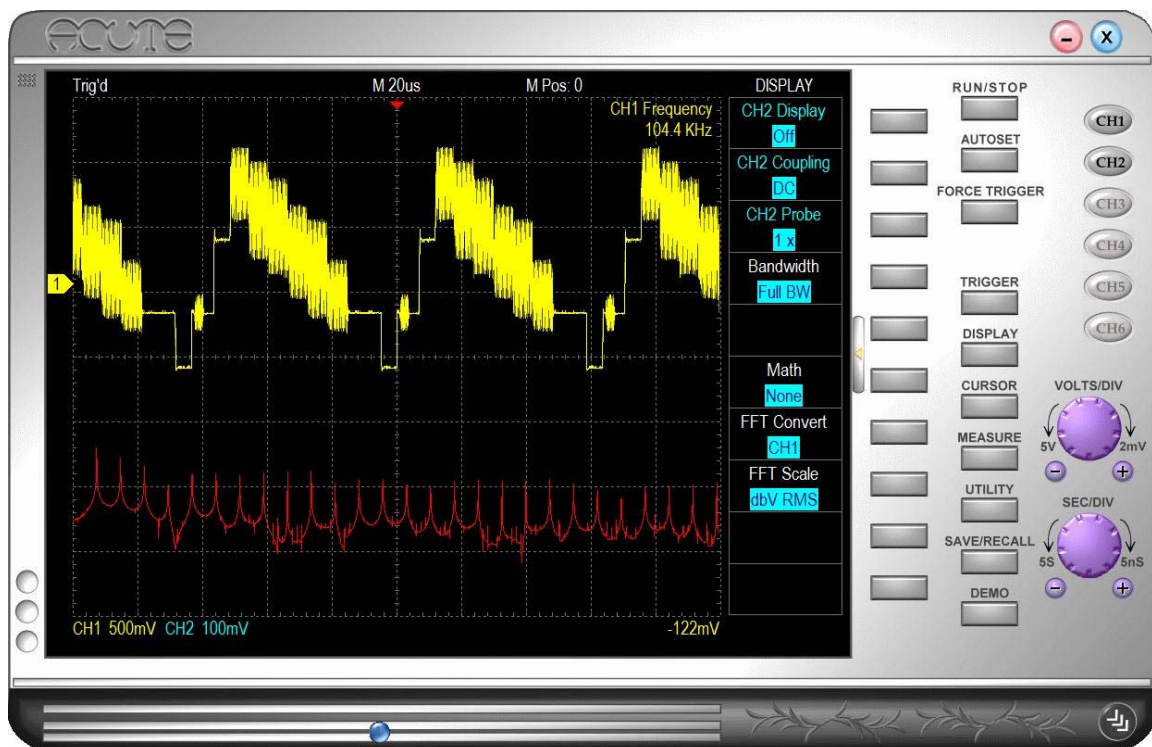
PRODUCT DESCRIPTION

The DS-1000 series (DS-1002, DS-1102, DS-1202) is a PC-based, pocket-sized digital storage oscilloscope (DSO) with various high-end functions. It is designed to support analog signals measurement and to store the data easily. Its portability allows engineers to enjoy their presentation with great convenience and confidence.

The DS-1000 series has up to 200MHz bandwidth, TV and External Trigger, RUN/STOP button and 20MHz bandwidth limitation functions. It is a tiny (135 x 80 x 26mm³) oscilloscope with memory size (64k/512k points) to save more sampling data in Single-Shot. The ROLL mode allows users to see low speed and long time signals. The Log function records huge waveform data up to hard disk size in ROLL mode, or in Trigger or Interval Timer event. With a precision vertical resolution, 8bits in 2mV/DIV and 9bits from 5mV/DIV to 10V/DIV, the DS-1000 provides wide vertical range and detail signal curve. For DS-1202 (only), user may STACK 2/3 sets to expand to 4/6 channels respectively to measure more signals in synchronous time, such as some audio signals. (Note: Some spec. limitations in STACK mode.)

The user-friendly interface provides easy-to-use and easy-to-learn features. You will find the high-end DSO functions such as FFT, Internet Control, Math and Export data to WORD/EXCEL in the DS-1000. If the user wants to integrate the DSO with their system, it is possible to use ACUTE DSO-AP's object to program their AP.

DSO Application Screen









DS-1000 Specifications

Acquisition	
Mode	Real-time sampling, Equivalent sampling, Roll mode, Average, Envelope
Input	
Input Coupling	AC, DC, GND
Input Impedance	1MΩ±1% // 21pF±5%
⚠Max. Input Voltage	42Vpk (DC + AC peak)
Vertical	
Channel	2 (DS-1202 allows to stack up to max. 6 channels.)
Vertical Resolution	9 bits/channel @ 5mV/DIV- 10V/DIV (8 bits @ 2mV/DIV)
Sensitivity	2mV/DIV to 10V/DIV (as 2-5-10 step)
Bandwidth	DS-1102, DS-1202: DC to 200MHz DS-1002: DC to 100MHz
BW Limit	Approx. 20MHz
Range	8 divisions
Offset Level	±4 divisions
Offset Increments	0.1 division
DC accuracy	±3%
Time Base	
Sampling Rate	DS-1102, DS-1202: Real-time sampling: 200MS/s @ 1Ch, 100MS/s @2Ch (Single Shot) Equivalent sampling: 5GS/s (Repetitive) DS-1002: Real-time sampling: 100MS/s @ 1Ch, 50MS/s @2Ch (Single Shot) Equivalent sampling: 2.5GS/s (Repetitive)
Time Base Range	2ns/DIV to 10s/DIV (as 2- 5-10 step)
Accuracy	100ppm
Range	10 Divisions
Pre/Post Trigger	+/- 64k points
Time Resolution	200ps
Record Length	DS-1002, DS-1102: 2k points/channel to 64k points/channel DS-1202: 2k points/channel to 512k points/channel Roll Mode: 32k points/channel (Log Length = Hard Disk limitation)
Trigger	
Type	Rising, Falling, Delay-Trigger, TV-Trigger (DS-1002 no TV Trigger)
Mode	Auto, Normal and Single (with RUN/STOP hardware button on the DSO device)
Source	CH1, CH2, Ext-Trig
Coupling	DC, HF rejection
Sensitivity	DC to 25MHz = 0.35div or 3.5mV; 25MHz to Max. = 1.5div or 15mV
Trigger Level	±4 divisions
Trigger Increments	0.1 division
Measurement and Processing	
Special function	Autoset, Monitor from Internet (TCP/IP)
Measurement	Vp-p, Vmax, Vmin, Vamp, Vtop, Vbase, Vupper, Vmiddle, Vlower, Vmean, Vrms, Positive overshoot, Negative overshoot, Period, Frequency, Pulse width
Cursor	Time difference, Voltage difference
Math	Add, Sub, Multiplication, Division
FFT	Rectangular (Vertical scale: dbV RMS, Linear RMS)
Export Data	WORD, EXCEL, CSV, TEXT, HTML, Clipboard, Hardcopy, Preview
Trigger Input/Output	
EXT-TRIG Input Limitation	TTL Level
EXT-TRIG Acknowledge Level	1.6V to 5V, rising/falling edge
EXT-TRIG Acknowledge Freq.	">10ns" and ">0.1 TIME/DIV"
TRIG-OUT	3.3v pulse, 20ns delay after trigger occurring (only for DS-1202 stack function)
Calibration Output	
Level	Approx. 3.3V
Frequency	1kHz ±0.5%
Environment	
Operation	0°C to +50°C
Storage	-10°C to +60°C
Physical	
Interface	USB2.0 (USB1.1 compatible)
Power	USB bus power
Dimension (device only)	135/80/26 mm ³
Weight (device only)	230 g
Accessories	
Probes	DS-1102, DS-1202: 250MHz probe (1x/10x) x2 DS-1002: 100MHz probe (1x/10x) x2
Others	Installation CD, USB2.0 cable, User manual, Soft case

DS-1202 Spec. Limitations in Stack Mode

Acquisition	
Mode	Real-time sampling, Average, Envelope Equivalent sampling and Roll mode only available in Master-DSO
Time Base	
Sampling Rate	Real-time sampling: 200MS/s @ 1Ch/DSO, 100MS/s @ 2Ch/DSO Equivalent sampling: 5GS/s only for Master-DSO
Time Base Range	2ns/DIV to 100ms/DIV (as 2- 5-10 step) for Master and Slave DSOs 200ms/DIV to 10s/DIV (Roll mode) only for Master-DSO
Trigger	
Source	CH1, CH2, Ext-Trig in Master-DSO (NA for Slave-DSO)
Jitter	+/- 200ps in Master-DSO; +/-10ns in Slave-DSO

Packing List of DS-1000 series

	Item	DS-1002 / DS-1102	DS-1202		
1.	Pocket DSO device	1			
2.	250MHz probes (with 1x/10x switch)	2*Note			
3.	Probe accessories pack	2			
4.	Stack function cable	0	1		
5.	USB2.0 1.8m cable	1			
6.	Installation CD	1			
7.	User manual	1			
8.	DSO soft case	1			
1.	2.	3.	4.	5.	6.
					

*Note: DS-1002 provides 2 pieces of 100MHz probes (1x/10x).



System Requirement

- ◆ INTEL Pentium 300M CPU or compatible PC (2G recommended)
- ◆ One USB port (USB2.0 recommended)
- ◆ Windows 98/ME/2000/XP operating system
- ◆ 128M bytes memory (512M recommended)
- ◆ Disk space more than 10M bytes
- ◆ One CD-ROM drive for installation
- ◆ 640x480 VGA or higher (1280x1024 recommended)
- ◆ 101-Keys keyboard
- ◆ Mouse (with wheel recommended)

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