

Acute

DS-1000 series

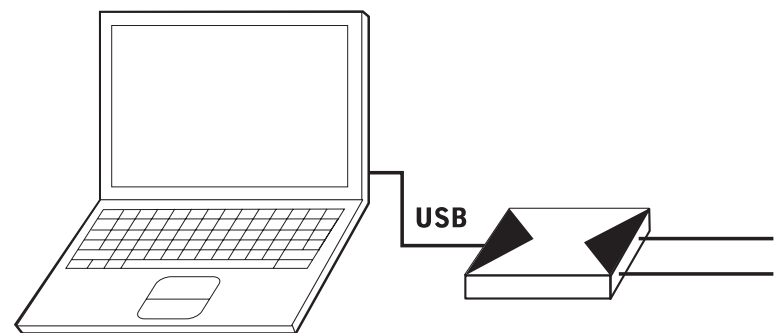
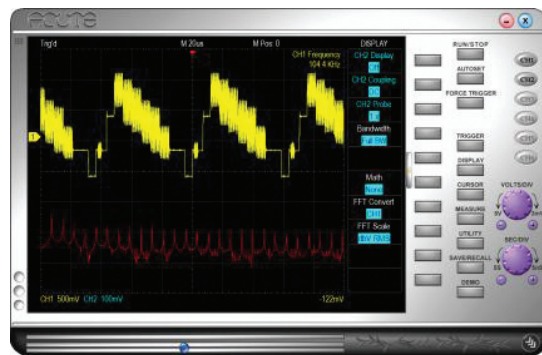
Digital Storage Oscilloscope

Features

- PC-based
- USB2.0 interface/powerd
- 2 channels (up to 6 channels)
- 200MS/s sampling (5GS/s Equivalent)
- 200MHz bandwidth
- 64k/512k/2M points/channel
- 20MHz bandwidth limitation
- TV (DS-1002 N/A), Delay, External trigger
- Scan line number (DS-1202, DS-1302 only)
- 9 bits/CH vertical resolution, 2mV/DIV to 10V/DIV
- RUN/STOP hardware button
- Pass/Fail Hot Key Setting
- FFT, Math, Save/Recall, Internet Control, etc.
- Export data to WORD, EXCEL, TEXT, HTML, etc.
- Data Logger (HD storage)

Model	R/T Sampling	Bandwidth	Samples
DS-1002	100MS/s	100MHz	64Kb/ch
DS-1102	200MS/s	200MHz	64Kb/ch
DS-1202	200MS/s	200MHz	512Kb/ch
DS-1302	200MS/s	200MHz	2Mb/ch

Software Window



System Requirements

- Above Intel Pentium 1.2G PC (2G recommended)
- One USB port (USB2.0 recommended)
- Windows 98SE/ME/2000/XP/2003/Vista 32/64/Win 7 OS
- 128M bytes memory (512M recommended)
- Disk space more than 10M bytes
- One CD-ROM drive for installation
- 800X600 VGA or higher (1280x1024 recommended)
- 101-Keys keyboard
- Mouse (with wheel recommended)

Acute
PC-based T&M Instruments

Acute Technology Inc.

Tel: 886-2-2999-3275 Fax: 886-2-2999-3276 E-mail: service@acute.com.tw <http://www.acute.com.tw>

DS-1000 series

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 (same model stack up to 4, max. 6 channels)
Vertical Resolution	9 bits/channel @ 5mV/DIV- 10V/DIV (8 bits @ 2mV/DIV)

Sensitivity	2mV/DIV to 10V/DIV (as 1-2-5 step)
Bandwidth	DS-1102, DS-1202, DS-1302: 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, DS-1302: 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	5ns/DIV to 10s/DIV (as 1-2-5 step)
-----------------	------------------------------------

Accuracy	100ppm
----------	--------

Range	10 Divisions
-------	--------------

Delay Trigger	320 Divisions (DS-1002, DS-1102) 2560 Divisions (DS-1202) 10240 Divisions (DS-1302)
---------------	---

Time Resolution	200ps
-----------------	-------

Record Length	DS-1002, DS-1102: 2k to 64k points DS-1202: 2k to 512k points DS-1302: 2k to 2M points
---------------	--

Trigger

Type	Rising, Falling, Delay-Trigger, TV-Trigger (DS-1002 no TV Trigger), Scan line number (DS-1202, DS-1302 only)
------	--

Mode	Auto, Normal and Single (with RUN/STOP hardware button on the DSO device)
------	---

Source	CH1, CH2, Ext-Trig
--------	--------------------

Coupling	DC
----------	----

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), Logger
------------------	---

Measurement	Vp-p, Vmax, Vmin, Vamp, Vmean, Vrms, Period, Frequency, ±Duty, ±Pulse Width
-------------	---

Cursor	Time difference, Voltage difference
--------	-------------------------------------

Math	Add, Sub, Multiplication, Division, XY
------	--

FFT	Rectangular (Vertical scale: dBV RMS, Linear RMS, dbm RMS)
-----	---

Export Data	WORD, EXCEL, CSV, TEXT, HTML, Clipboard, Hardcopy, Preview
-------------	--

Trigger Input/Output

EXT-TRIG Input	TTL Level
----------------	-----------

Limitation	1.6V to 5V, rising/falling edge
------------	---------------------------------

EXT-TRIG Input	1.6V to 5V, rising/falling edge
----------------	---------------------------------

Acknowledge Level	">10ns" and ">0.1 TIME/DIV"
-------------------	-----------------------------

EXT-TRIG Input	">10ns" and ">0.1 TIME/DIV"
----------------	-----------------------------

Acknowledge Time	">10ns" and ">0.1 TIME/DIV"
------------------	-----------------------------

TRIG-OUT	3.3v pulse, 20ns delay after trigger occurring
----------	--

Compensation Output

Level	Approx. 3.3V
-------	--------------

Frequency	1kHz ±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	135/80/26 mm³ (device only)
-----------	-----------------------------

Weight	230 g (device only)
--------	---------------------

Accessories

Probes	DS-1102, DS-1202, DS1302: 250MHz probe (1x/10x) x2 DS-1002: 100MHz probe (1x/10x) x2
--------	--

Others	Installation CD, USB2.0 cable, User manual, Soft case, Stack cable
--------	--

Limitations in Stack Mode

Acquisition

Mode	Equivalent sampling and Roll mode only available in Master-DSO
------	--

Time Base

Sampling Rate	Real-time sampling: the same as individual unit Equivalent sampling: the same as individual unit, only for Master-DSO
---------------	--

Time Base Range	5ns/DIV to 100ms/DIV (as 1-2-5 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	Quantity
1. DS-1000 device	1
2. Probe accessories pack	2
3. Stack function cable	1
4. USB2.0 cable (1.8m)	1
5. 250MHz probe (1x/10x)	2*
6. User manual	1
7. Soft case	1
8. Installation CD	1

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



Acute
PC-based T&M Instruments

Acute Technology Inc.

Tel: 886-2-2999-3275 Fax: 886-2-2999-3276 E-mail: service@acute.com.tw http://www.acute.com.tw