SDS1000X
SDS1000X+
Series
Digital Oscilloscope

DataSheet-2016.05

SIGLENT TECHNOLOGIES CO.,LTD

SDS1102X
SDS1202X
SDS1102X+
SDS1202X+

Overview

SIGLENT's new SDS1000X/SDS1000X+ Series Super Phosphor Oscilloscopes are available in two bandwidths, 100 MHz and 200 MHz, have a sampling rate of 1 GSa/s and a standard record length of 14 Mpts. The most commonly used functions can be accessed with its user-friendly one-button design.

The SDS1000X/SDS1000X+ series employs a new generation of SPO technology. With its excellent signal fidelity, background noise is lower than similar products in the industry. It has a minimum vertical input range of 500 uV/div, an innovative digital trigger system with high sensitivity and low jitter, and a waveform capture rate of 60,000 frames/sec. It also employs not only the common 256-level intensity grading display function but also a color temperature display mode not found in other models in this class. Siglent's new oscilloscopes offering supports multiple powerful triggering modes including serial bus triggering and decoding. History waveform recording and sequential triggering allow for extended waveform records to be captured, stored, and analyzed. SDS1000X+ adds an integrated 25 MHz arbitrary waveform generator (standard), option for 16 digital channels. The features and high-performance of the SDS1000X/SDS1000X+ oscilloscopes cannot be matched else anywhere at this price.

Key Features

- 200 MHz, 100 MHz bandwidth models
- Real-time sampling rate up to 1 GSa/s
- New generation of SPO technology
  - Waveform capture rate up to 60,000 wfm/s (normal mode), and 400,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color temperature display
  - Record length up to 14 Mpts
  - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse Width, Window, Runt, Interval, Time out (Dropout), Pattern
- Serial bus triggering and decode, supports protocols IIC, SPI, UART, RS232, CAN, LIN
- Video trigger, supports HDTV
- Low background noise, supports 500μV / div to 10V / div voltage scales
- 10 types of one-button shortcuts, supports Auto Setup, Default, Cursors, Measure, Roll, History, Display/Persist, Clear Sweep, Zoom and Print
- Segmented acquisition (Sequence) mode, dividing the maximum record length into multiple segments (up to 80,000), according to trigger conditions set by the user, with a very small dead time segment to capture the qualifying event.
- History waveform record (History) function, the maximum recorded waveform length is 80,000 frames.
- Automatic measurement function on 37 parameters, supports Statistics, Gating measurement, Math measurement, History measurement and Ref measurement
- Math function (FFT, addition, subtraction, multiplication, division, integration, differential, square root)
- High Speed hardware based Pass/ Fail function
- 16 Digital channels (MSO), Maximum waveform capture rate up to 500 MSa/s, Record length up to 14 Mpt/CH (Option for SDS1000X+ models)
- 25 MHz DDS arbitrary waveform generator, built-in 10 kinds of waveforms (Standard for SDS1000X+ models)
- Large 8 inch TFT-LCD display with 800 * 480 resolution
- Abundant interfaces: USB Host, USB Device (USB-TMC), LAN (VXI-11), Pass / Fail, Trigger Out
- Supports SCPI remote control commands
- Supports Multi-language display and embedded online help

Models and Key Specifications

Model	SDS1102X SDS1102X+	SDS1202X SDS1202X+
Bandwidth	100 MHz	200 MHz
Sampling Rate (Max.)	1 GSa/s	
Channels	2+EXT	
Memory Depth (Max.)	7 Mpts/CH (Dual-Channel); 14 Mpts/CH (Single-Channel)	
Waveform Capture Rate (Max.)	60,000 wfm/s (normal mode), 400,000 wfm/s (sequence mode)	
Trigger Type	Edge, Slope, Pulse width, Window, Runt, Interval, Dropout, Pattern, Video	
Serial Trigger	I^2C, SPI, UART/RS232, CAN, LIN	
Decode Type (Optional)	I^2C, SPI, UART/RS232, CAN, LIN	
DDS Waveform Generator	Single Channel, Max. Frequency up to 25 MHz, 125 MSa/s sampling rate, 16 Kpts wave length	
	SDS1000X+ Supported (Standard); SDS1000X Not supported	
16 Digital Channels (MSO Option)	Maximum waveform capture rate up to 500 MSa/s, Record length up to 14 Mpts/CH	
	SDS1000X+ Supported (Optional); SDS1000X Not supported	
Logic Probe	SPL1016 (Optional)	
I/O	USB Host, USB Device, LAN, Pass/Fail, Trigger Out, 1 KHz Cal	
Probe (Std)	2 pcs passive probe PP510	2 pcs passive probe PP215
Display	8 inch TFT-LCD (800x480)	
Weight	Without package 3.26 Kg; with package 4.25 Kg	

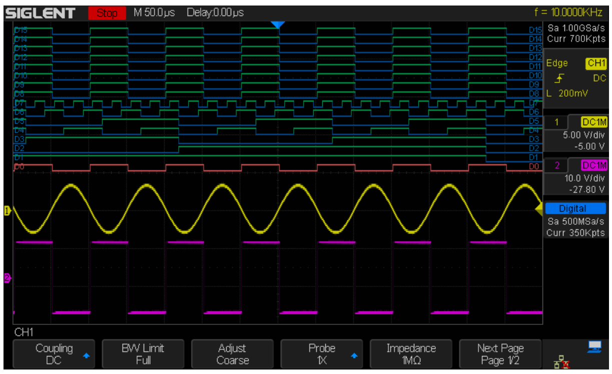
Function & Characteristics

8 inch TFT-LCD display and 10 one-button menus

8-inch TFT-LCD display with 800 * 480 resolution

Most commonly used functions are accessible using 10 different one-button operation keys: Auto Setup, Default, Cursor, Measure, Roll, History, Persist, Clear Sweep, Zoom, Print

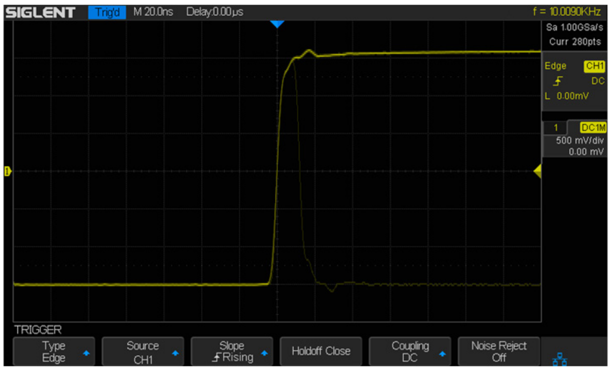
16 Digital Channels/MSO (Optional for SDS1000X+)



2 analog channels plus 16 digital channels enables users to acquire and trigger on the waveforms then analyze the pattern, simultaneously with one instrument.

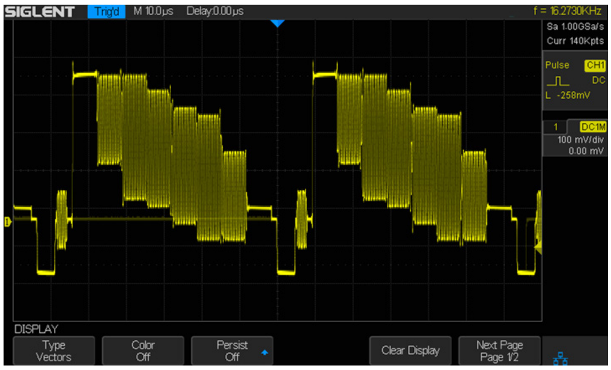
Characteristics

Waveform capture rate up to 400,000 wfms/s



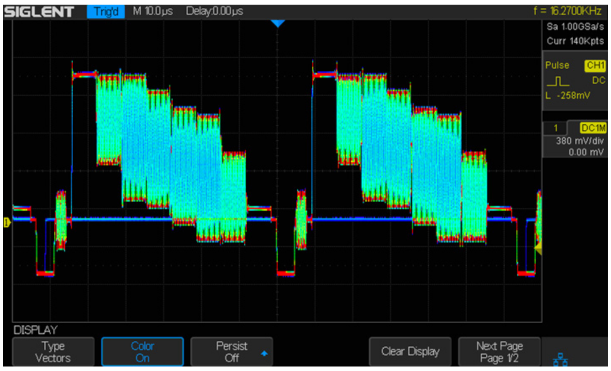
With a waveform capture rate of up to 400,000 wfm/s (sequence mode), the oscilloscope can easily capture the unusual or low-probability events.

256 intensity grading and color temperature display



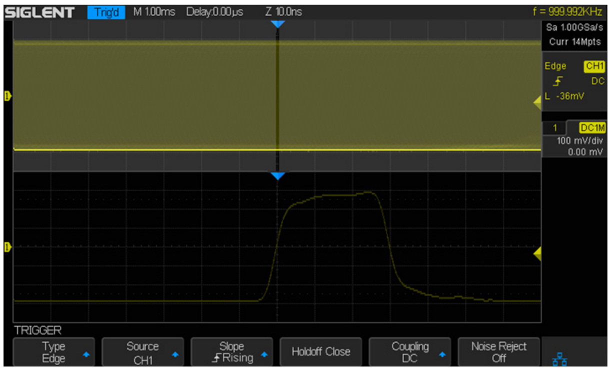
SPO display technology provides for fast refresh rates. The resulting intensity-graded trace is brighter for more often-occurring display points and dimmer in less-often-occurring points

Color Temperature Display



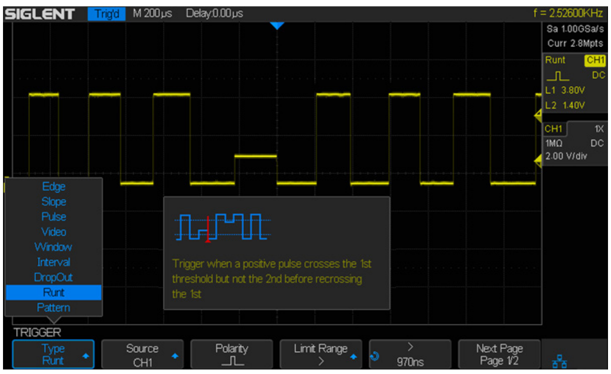
The color temperature display is similar to the intensity-graded trace except that the trace occurrence is represented by different colors (color "temperature") as opposed to changes in the intensity of one color. Red represents the most common occurrences or probabilities while blue is the least common points.

Record length of up to 14 Mpts



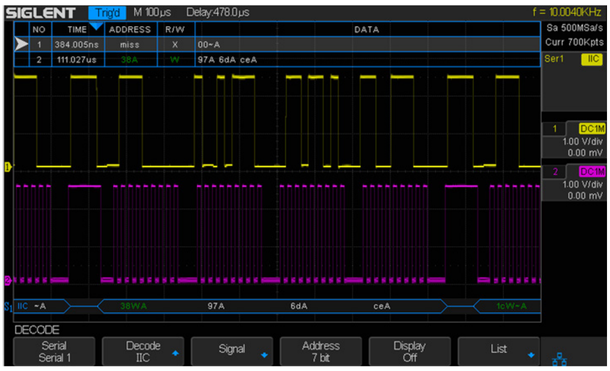
Using hardware-based Zoom technologies and record length of up to 14 Mpts, users are able to use a higher sampling rate to capture more of the signal, and then quickly zoom in to focus on the area of interest

Abundant trigger function



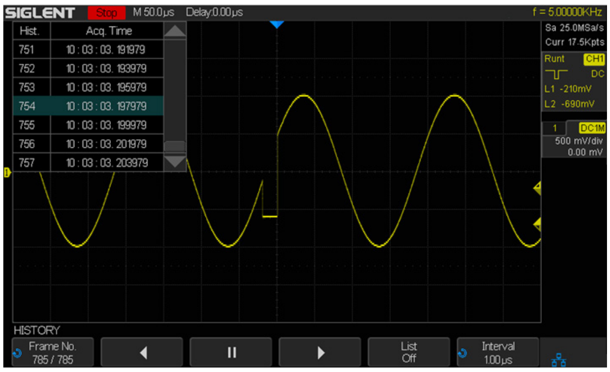
SDS1000X/SDS1000X+ has a wealth of trigger modes, including Edge, Slope, Pulse, Video, Windows, Runt, Interval, Time out (Dropout), Pattern, IIC, SPI, UART/RS232, LIN, CAN

Serial bus decoding function (optional)



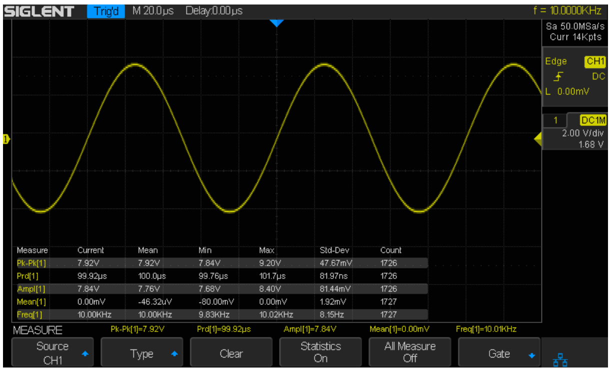
SDS1000X/SDS1000X+ displays the decoding through the events list. Bus protocol information can be quickly and intuitively displayed in table form.

History Waveforms (History) mode and segmented acquisition (Sequence)



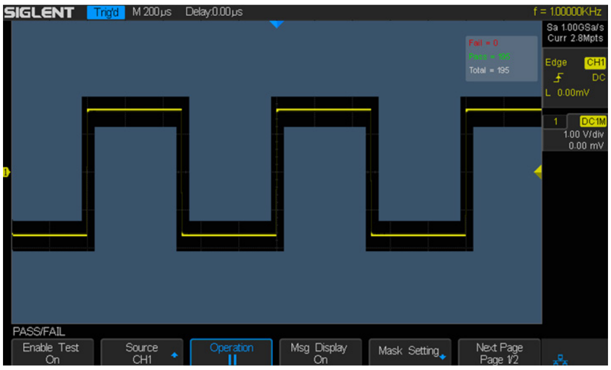
Playback history waveform to observe unusual events and locate the source quickly through the cursor or measurements, located on the keyboard Panel,this function is easily enabled. Segmented memory collection will store the waveform into multiple (up to 80,000) memory segments, each segment will store a triggered waveform and dead time information

Comprehensive statistical functions



Parametric statistical functions to display any parameters of the five measurements: current, average, minimum value, maximum value, and the standard deviation. The measurement count is also displayed. The maximum number of parameters that can be measured and simultaneously analyzed statistically is five. Supports Gating measurements, Math measurement, History measurement, Ref measurement.

Hardware-Based High Speed Pass/Fail Function

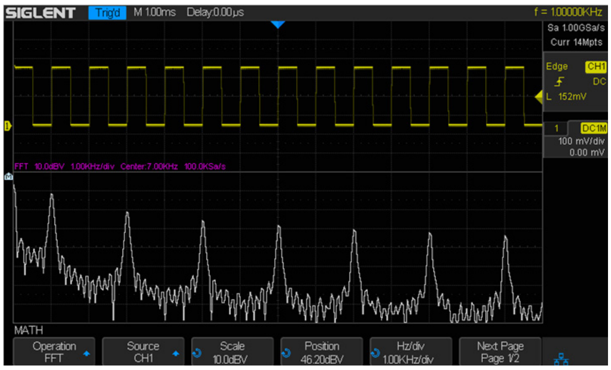


The SDS1000X/SDS1000X+ utilizes a hardware-based Pass / Fail function, performing up to 40,000 Pass / Fail decisions each second. With easy to generate user-defined test templates, the SDS1000X/SDS1000X+ compares the current measured trace to the template mask trace making it suitable for long-term signal monitoring or automated production line testing.

Built-in 25 MHz function/arbitrary waveform generator (Standard for SDS1000X+ Models)

The SDS1000X+ has a built-in 25 MHz function / arbitrary waveform generator (standard), including 10 built-in waveforms plus 4 ARBs. The arbitrary waveforms can be accessed and edited by the EasyWave PC software

Advanced Math Function



In addition to the traditional (+, -, X, /) operation, SDS1000X/ SDS1000X+ oscilloscopes supports FFT, integration, differentiation, and square root operations.

Complete connectivity

SDS1000X/SDS1000X+ supports USB Host, USB Device (USB-TMC), LAN(VXI-11), Pass/Fail and Trigger Out

Specifications

Acquire System	
Sampling Rate	1 GSa/s (Single-Channel), 500 MSa/s (Daul-Channel)
Memory Depth	Max 14 Mpts/Ch (Single-Channel), 7 Mpts/Ch (Dual-Channel)
Peak Detect	1 ns
Average	Averages: 4,16, 32,64,128,256,512,1024
Eres	Enhance bits: 0.5, 1, 1.5, 2, 2.5, 3 Selectable
Waveform interpolation	Sinx/x, Linear

Input	
Channel	2
Coupling	DC, AC, GND
Impedance	DC: (1 MΩ±2%) || (18 pF ±2 pF) 50 Ω: 50 Ω±2%
Max Input voltage	1 MΩ ≤400 Vpk(DC + Peak AC <=10 kHz), 50 Ω ≤5 Vrms
CH to CH Isolation	DC~Max BW >40 dB
Probe attenuator	1 X, 10 X, 50 X, 100 X, 500 X , 1000 X

Vertical System	
Bandwidth (-3 dB)	200 MHz (SDS1202X/SDS1202X+) 100 MHz (SDS1102X/SDS1102X+)
Vertical Resolution	8 bit
Vertical Scale (Probe 1X)	500 μV/div - 10 V/div (1-2-5)
Offset Range (Probe 1X)	500 μV ~ 150 mV: ± 1 V 152 mV ~ 1.5 V: ± 10 V 1.52 V ~ 10 V: ± 100 V
Bandwidth Limit	20 MHz ±40%
Bandwidth Flatness	DC ~ 10%(BW): ± 1 dB 10% ~ 50%(BW): ± 2 dB 50% ~ 100%(BW): + 2 dB / -3 dB
Low Frequency Response (AC-3 dB)	≤10 Hz (at input BNC)
Noise	ST-DEV ≤0.7 division (<1 mV/div) ST-DEV ≤0.3 division(<2 mV/div) ST-DEV ≤0.2 division(≥2 mV/div)
SFDR including harmonics	≥35 dB
DC Gain Accuracy	≤±3.0%: 5 mV/div ~10 V/div ≤±4.0%: ≤2 mV/div
Offset Accuracy	±(1%* Offset+1.5%*8*div+2 mV): ≥2 mV/div ±(1%* Offset+1.5%*8*div+500 uV): ≤1 mv/div
Rise time	Typical 1.8 ns (SDS1202X/SDS1202X+) Typical 3.5 ns (SDS1102X/SDS1102X+)
Overshoot (500 ps Pulse)	<10%

Horizontal System	
Time base Scale	2.0 ns/div ~ 50 s/div
Channel Skew	<100 ps
Waveform Capture Rate	Up to 60,000 wfm/s (normal mode), 400,000 wfm/s (sequence mode)
Intensity grading	256 Levels
Display Format	Y-T, X-Y, Roll
Time base Accuracy	±25 ppm
Roll Mode	50 ms/div ~ 50 s/div (1-2-5 step)

Trigger System

Trigger Mode	Auto, Normal, Single
Trigger Level	Internal: ±4.5 div from the center of the screen EXT: ±0.6 V EXT/5: ±3 V
Hold-off Range	80 ns ~ 1.5 s
Trigger Coupling	AC , DC, LFRJ, HFRJ , Noise RJ (CH1~CH2)
Coupling Frequency Response (CH1~CH2)	DC: Passes all components of the signal AC: Blocks DC components and attenuates signals below 5.8 Hz LFRJ: Blocks the DC component and attenuates the low-frequency components below 2 MHz HFRJ: Attenuates the high-frequency components above 1.27 MHz
Coupling Frequency Response (EXT)	DC: Passes all components of the signal AC: Blocks DC components and attenuates signals below 30 Hz LFRJ: Blocks the DC component and attenuates the low-frequency components below 300 Hz HFRJ: Attenuates the high-frequency components above 7 MHz
Trigger Accuracy (Typical)	Internal: ±0.2 div EXT: ±0.4 div
Trigger Sensitivity	CH1~CH2: DC~ Max BW 0.6 div EXT: 200 mVpp DC ~ 10 MHz 300 mVpp 10 MHz ~ BW frequency EXT/5: 1 Vpp DC ~ 10 MHz 1.5 Vpp 10 MHz ~ BW frequency
Trigger Jitter	<100 ps (CH1~CH2)
Trigger Displacement	Pre-Trigger: 0~100% Memory Delay Trigger: 0 to 10,000 div

Slope Trigger

Slope	Rising, Falling
Limit Range	<, >, <>, ><
Source	CH1/CH2
Time Range	2 ns ~ 4.2 s
Resolution	1 ns

Edge Trigger

Slope	Rising, Falling, Rising & Falling
Source	CH1/CH2 /EXT/(EXT/5)/AC Line

Pulse Trigger

Polarity	+wid , -wid
Limit Range	<, >, <>, ><
Source	CH1/CH2
Pulse Range	2 ns ~ 4.2 s
Resolution	1 ns

Video Trigger

Signal Standard	NTSC, PAL, 720p/50, 720p/60, 1080p/50, 1080p/60, 1080i/50, 1080i/60, Custom
Source	CH1/CH2
Sync	Any, Select
Trigger condition	Line, Field

Interval Trigger

Slope	Rising, Falling
Limit Range	<, >, <>, ><
Source	CH1/CH2
Time Range	2 ns ~ 4.2 s
Resolution	1 ns

Dropout Trigger

Time out Type	Edge, State
Source	CH1/CH2
Slope	Rising, Falling
Time Range	2 ns ~ 4.2 s
Resolution	1 ns

Runt Trigger

Polarity	+wid , -wid
Limit Range	<, >, <>, ><
Source	CH1/CH2
Time Range	2 ns ~ 4.2 s
Resolution	1 ns

Pattern Trigger

Pattern Setting	Invalid, Low, High
Logic	AND, OR, NAND, NOR
Source	CH1/CH2
Limit Range	<, >, <>, ><
Time Range	2 ns ~ 4.2 s
Resolution	1 ns

Window Trigger

Window Type	Absolute, Relative
Source	CH1/CH2

Serial Trigger

I^2C Trigger

Condition	Start, Stop, Restart, No Ack, EEPROM, 7 bits Address & Data, 10 bits Adress & Data, Data Length
Source (SDA/SCL)	CH1, CH2
Data format	Hex
Limit Range	EEPROM: =, >, <
Data Length	EEPROM: 1 byte
	Addr & Data: 1~2 byte
	Data Length: 1~12 byte
R/W bit	Addr & Data: Read, Write, Do not care

SPI Trigger

Condition	Data
Source (CS/CL/Data)	CH1, CH2
Data format	Binary
Data Length	4 ~ 96 bit
Bit Value	0, 1, X
Bit Order	LSB, MSB

UART/ RS232 Trigger

Condition	Start, Stop, Data, Parity Error
Source (RX/TX)	CH1, CH2
Data format	Hex
Limit Range	=, >, <
Data Length	1 byte
Data Width	5 bit, 6 bit, 7 bit, 8 bit
Parity Check	None, Odd, Even
Stop Bit	1 bit, 1.5 bit, 2 bit
Idle Level	High, Low
Baud (Selectable)	600/1200/2400/4800/9600/19200/38400/57600/115200 bit/s
(Custom)	300 bit/s ~ 334000 bit/s

CAN Trigger	
Condition	All, Remote, ID, ID + Data, Error
Source	CH1,CH2
ID	STD (11 bit), EXT (29 bit)
Data Format	Hex
Data Length	1~2 byte
Baud Rate (Selectable)	5k/10k/20k/50k/100k/125k/250k/500k/800k/1M bit/s
Baud Rate (Custom)	5 kbit/s~1 Mbit/s
LIN Trigger	
Condition	Break, Frame ID, ID+Data, Error
Source	CH1, CH2
ID	1 byte
Data Format	Hex
Data Length	1~2 byte
Baud Rate (Selectable)	600/1200/2400/4800/9600/19200 bit/s
Baud Rate (Custom)	300 bit/s~20 kbit/s

Serial Decoder (Optional)	
I^2C Decoder	
Signal	SCL, SDA
Address	7bit, 10 bit
Threshold	-4.5~4.5 div
List	1~7 lines
SPI Decoder	
Signal	SCL, MISO, MOSI, CS
Edge Select	Rising, Falling
Idle	Low, High
Bit Order	MSB, LSB
Threshold	-4.5~4.5 div
List	1~7 lines
UART/ RS232 Decoder	
Signal	RX, TX
Data Width	5 bit, 6 bit, 7 bit, 8 bit
Parity Check	None, Odd, Even
Stop Bit	1 bit, 1.5 bit, 2 bit
Idle Level	Low, High
Threshold	-4.5~4.5 div
List	1~7 lines
CAN Decoder	
Signal	CAN_H, CAN_L
Source	CAN_H, CAN_L, CAN_H-CAN_L
Threshold	-4.5~4.5 div
List	1 ~ 7 lines
LIN Decoder	
LIN Specification Package Revision	Ver1.3, Ver2.0
Threshold	-4.5 ~ 4.5 div
List	1 ~ 7 lines

Measure System		
Source	CH1, CH2, Math, Ref, History	
Number of Measurements	Display 5 measurements at the same time	
Measurement Range	Screen region, Gate region	
Measurement Parameters (37 Types)		
Vertical (Voltage)	Max	Highest value in input waveform
	Min	Lowest value in input waveform
	Pk-Pk	Difference between maximum and minimum data values
	Ampl	Difference between top and base in a bimodal signal, or between max and min in an unimodal signal
	Top	Value of most probable higher state in a bimodal waveform
	Base	Value of most probable lower state in a bimodal waveform
	Mean	Average of all data values
	Cmean	Average of data values in the first cycle
	Stdev	Standard deviation of all data values
	Cstd	Standard deviation of all data values in the first cycle
	VRMS	Root mean square of all data values
	Crms	Root mean square of all data values in the first cycle
	FOV	Overshoot after a falling edge;(base-min)/Amplitude
	FPRE	Overshoot before a falling edge;(max-top)/Amplitude
	ROV	Overshoot after a rising edge;(max-top)/Amplitude
	RPRE	Overshoot before a rising edge;(base-min)/Amplitude
	Level@X	the voltage value of the trigger point
Horizontal (Time)	Period	Period for every cycle in waveform at the 50% level ,and positive slope
	Freq	Frequency for every cycle in waveform at the 50% level ,and positive slope
	+Wid	Width measured at 50% level and positive slope
	-Wid	Width measured at 50% level and negative slope
	Rise Time	Duration of rising edge from 10-90%
	Fall Time	Duration of falling edge from 90-10%
	Bwid	Time from the first rising edge to the last falling edge ,or the first falling edge to the last rising edge at the 50% crossing
	+Dut	Ratio of positive width to period
	-Dut	Ratio of negative width to period
	Delay	Time from the trigger to the first transition at the 50% crossing
	Time@Level	Time from trigger of each transition at a specific level and slope, include: Current, Max, Min, Mean, Std-dev
Delay	Phase	Calculate the phase difference between two edges
	FRR	Time between the first rising edges of the two channels
	FRF	Time from the first rising edge of channel A ,to the first falling edge of channel B
	FFR	Time from the first falling edge of channel A ,to the first rising edge of channel B
	FFF	Time from the first falling edge of channel A ,to the first falling edge of channel B
	LRR	Time from the first rising edge of channel A ,to the last rising edge of channel B
	LRF	Time from the first rising edge of channel A ,to the last falling edge of channel B
	LFF	Time from the first falling edge of channel A ,to the last rising edge of channel B
Cursors	Manual : Time X1, X2, (X1-X2), (1/ΔT) Voltage Y1, Y2, (Y1-Y2) Track: Time X1, X2, (X1-X2)	
Statistics	Current, Mean, Min, Max, Std-Dev, Count	
Counter	Hardware 6 bits counter (channels are selectable)	

Math Function

Operation	+ , - , * , / , FFT , d/dt , ∫dt , √
FFT window	Rectangular, Blackman, Hanning, Hamming
FFT display	Full Screen, Split
Decoding number	2

Built-in Function Generator (Standard for SDS1000X+)

Channel	1
Max. Output Frequency	25 MHz
Sampling Rate	125 MSa/s
Frequency Resolution	1 μHz
Frequency Accuracy	±50 ppm
Vertical Resolution	14 bits
Amplitude Range	-1.5 ~ +1.5 V (50 Ω)
	-3 ~ +3 V (High-Z)
Waveform Type	Sine, Square, Ramp, Pulse, DC, Noise, Cardiac, Gaus Pulse, Exp Rise, Exp Fall, Arb
Output impedance	50 Ω±2%
Protection	Short-Circuit Protection

Sine

Frequency	1 μHz ~ 25 MHz
Offset Accuracy (100 KHz)	±(0.3 dB*Offset Setting Value +1 mVpp)
Amplitude flatness (100 kHz, 5Vpp)	±0.3 dB
SFDR	DC ~ 1 MHz -60 dBc
	1 MHz ~ 5 MHz -55 dBc
	5 MHz ~ 25 MHz -50 dBc
HD	DC-5 MHz -50 dBc
	5 MHz - 25 MHz -45 dBc

Square/Pulse

Frequency	1 μHz ~ 10 MHz
Duty Cycle	20% ~ 80%
Rise/Fall time	< 24 ns (10% ~ 90%)
Overshoot (1kHz, 1Vpp, Typical)	< 3%
Pulse Width	> 50 ns
Jitter	< 500 ps + 10 ppm

Ramp

Frequency	1 μHz ~ 300 kHz
Linearity(Typical)	< 0.1% of Pk-Pk (Typical, 1 kHz, 1 Vpp, 100% Symmetry)
Symmetry	0% ~ 100% (Adjustable)

DC

Offset range	±1.5 V (50 Ω) ±3 V (High-Z)
Accuracy	±(|offset|*1%+3 mV)

Noise

Bandwidth	>25 MHz (-3 dB)

Arbitrary Wave

Frequency	1 μHz ~ 5 MHz
Wave Length	16 Kpts
Sampling Rate	125 MSa/s
Lead in	EasyWave and U-Disk

Digital Channels (Optional for SDS1000X+)

No. of Channels	16
Max. Sampling Rate	500 MSa/s
Memory Depth	14 Mpts/CH
Min. Detectable Pulse Width	4 ns
Level Group	D0~D7, D8~D15
Level Range	-3 V~3 V
Logic Type	TTL, CMOS, LVCMOS 3.3, LVCMOS 2.5, custom
Skew	D0~D15: ±1 sampling interval Digital to Analog: ± (1 sampling interval +1 ns)

I/O

Standard	USB Host, USB Device, LAN, Pass/Fail, Trigger Out
Pass/Fail	3.3 V TTL Output

Display (Screen)

Display Type	8 inch TFT-LCD
Display Resolution	800×480
Display Color	24 bit
Contrast (Typical)	500:1
Backlight	300 nit
Range	8 x 14 divisions

Display (Waveform)

Display Mode	Dot, Vector
Persist Time	Off, 1 Sec, 5 Sec, 10 Sec, 30 Sec, Infinite
Color Display	Normal, Color
Screen Saver	1 min, 5 min, 10 min, 30 min, 1 hour, Off
Language	Simplified Chinese, Traditional Chinese, English, French, Japanese, Korean, German, Russian, Italian, Portuguese

Environments

Temperature	Operating: 10 ℃~ +40 ℃
	Non-operating: -20 ℃~ +60 ℃
Humidity	Operating: 85%RH, 40 ℃ , 24 hours
	Non-operating: 85%RH, 65 ℃ , 24 hours
Height	Operating: ≤3000 m
	Non-operating: ≤15,266 m
Electromagnetic Compatibility	2004/108/EC
	Execution Standard EN 61326-1:2006
	EN 61000-3-2:2006 + A2:2009, EN 61000-3-3:2008
Safety	2006/95/EC Execution Standard EN 61010-1:2010/EN 61010-2-030:2010

Mechanical

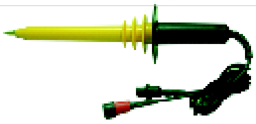
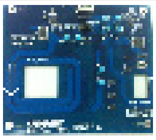
Dimensions	Length 340 mm
	Width 123 mm
	Height 184 mm
Weight	N.W: 3.26 Kg; G.W: 4.25 Kg

Power Supply

Input Voltage	100 ~ 240 VAC, CAT II, Auto selection
Frequency	50/ 60/ 400 Hz
Power	50 W Max

SDS1000X/SDS1000X+ Probes & Accessories

Type	Model	Picture	Specifications
Passive Probe	PP470		Bandwidth: 70 MHz, 1 X/10 X, 1 M/10 Mohm, 300 V/600 V
	PP510		Bandwidth: 100 MHz, 1 X/10 X, 1 M/10 Mohm, 300 V/600 V
	PP215		Bandwidth: 200 MHz, 1 X/10 X, 1 M/10 Mohm, 300 V/600 V
Logic Probe	SPL1016		16 Channel Logic Probe
Current Probe	CP4020		Bandwidth: 100 KHz; Maximum continuous current 20 Arms; Peak current 60 A; Switching ratio: 50 mV/A; 5 mV/A; DC measurement accuracy: 50 mV/A (0.4 A-10 ApK) ± 2%; 5 mV/A (1 A-60 ApK)±2%; 9 V battery-powered
	CP4050		Bandwidth: 1 MHz; Maximum continuous current 50 Arms; Peak current 140 A; Switching ratio: 500 mV/A; 50 mV/A; DC measurement measurement accuracy: 500 mV/A (20 mA-14 ApK) ±3%±20 mA; 50 mV/A (200 mA-100 ApK)±4%± 200 mA; 50 mV/A (100 A-140 ApK)±15% max; 9 V battery-powered
	CP4070		Bandwidth: 150 KHz; Maximum continuous current 70 Arms; Peak current 200 A; Switching ratio: 50 mV/A; 5 mV/A; DC measurement accuracy: 50 mV/A (0.4 A-10 ApK)±2%±5 mV/A (1 A-200 ApK)±2%; 9 V battery-powered
	CP4070A		Bandwidth: 300 KHz; Maximum continuous current 70 Arms; Peak current 200 A; Switching ratio: 100 mV/A;10 mV/A; DC measurement accuracy: 100 mV/A (50 mA-10 ApK) ±3%±50 mA; 10 mV/A (500 mA-40 ApK) ±4%±50 mA; 10 mV/A (40 A-200 ApK) ±15% max; 9 V battery-powered
	CP5030		Bandwidth: 50 MHz; Maximum continuous current 30 Arms; Peak current 50 A;Switching ratio: 100 mV/A, 1 V/A; AC/DC measurement accuracy: 1 A (±1%±1 mA); 100 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter
	CP5030A		Bandwidth: 100 MHz; Maximum continuous current 30 Arms; Peak current 50 A; Switching ratio: 100 mV/A, 1 V/A; AC/DC measurement accuracy: 1 A (±1%±1 mA); 100 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter
	CP5150		Bandwidth: 12 MHz; Maximum continuous current 150 Arms; Peak current 300 A; Switching ratio: 100 mV/A, 1 V/A; AC/DC measurement accuracy: 100 mV/A (±1%±1 mA); 10 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter
	CP5500		Bandwidth: 5 MHz; Maximum continuous current 500 Arms; Peak current 750 A; Switching ratio: 100 mV/A, 10 mV/A; AC/DC measurement accuracy: 100 mV/A (±1%±1 mA); 10 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter
High Voltage Differential Probe	DPB4080		Bandwidth: 50 MHz; Maximum input differential voltage 800 V (DC + Peak AC); Range selection (attenuation ratio):10 X/100 X; Accuracy: ±1%; Standard DC 9 V/1 A power adapter
	DPB5150		Bandwidth: 70 MHz; Maximum input differential voltage 1500 V (DC + Peak AC); Range selection (attenuation ratio): 50 X/500 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter

Type	Model	Picture	Specifications
High Voltage Differential Probe	DPB5150A		Bandwidth: 100 MHz; Maximum input differential voltage 1500 V (DC + Peak AC); Range selection (attenuation ratio): 50 X/500 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
	DPB5700		Bandwidth: 70 MHz; Maximum input differential voltage 7000 V (DC + Peak AC); Range selection (attenuation ratio): 100 X/1000 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
	DPB5700A		Bandwidth: 100 MHz; Maximum input differential voltage 7000 V (DC + Peak AC); Range selection (attenuation ratio): 100 X/1000 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
High Voltage Probe	HPB4010		Bandwidth: 40 MHz; Maximum measurement voltage DC: 10 KV; AC (rms) : 7 KV (sine) ; AC (Vpp) : 20 KV (Pulse); attenuation ratio 1:1000; Accuracy: ≤3%
Isolated front end	ISFE		USB 5 V power supply, plug and play, the maximum input voltage 600 Vp-p, floating test. Work with oscilloscopes.
Demo board	STB Test Board		Optional accessories for experimental teaching and product demos
Deskew fixture	DF2001A		Deskew fixture for voltage and current probes

Ordering information

Product Description	Product Name
100 MHz Two Channels	SDS1102X
200 MHz Two Channels	SDS1202X
100 MHz Two Channels, Built-In Waveform Generator (Standard), 16 Digital Channels (Option, *Requires SPL1016 & SDS-1000X-LA)	SDS1102X+
200 MHz Two Channels, Built-In Waveform Generator (Standard), 16 Digital Channels (Option, *Requires SPL1016 & SDS-1000X-LA)	SDS1202X+

Standard Accessories
USB Cable -1
Quick Start-1
Certification-1
Passive Probe-2
Power Cord -1
CD (Included User Manual and EasyScopeX software)-1

Optional Accessories	
I2C,SPI,UART/RS232,CAN,LIN Decoder	SDS-1000X-DC
16 Channels MSO (Software)	SDS-1000X-LA
16 Digital Channels Logic Probe	SPL1016
Isolated Front End	ISFE
STB Demo Source	STB
High Voltage Probe	HPB4010
Current Probe	CP4020/CP4050/CP4070/ CP4070A/CP5030/CP5030A/ CP5150/CP5500
Differential Probe	DPB4080/DPB5150/DPB5150A/DPB5700/DPB5700A

SDS1000X
SDS1000X+
Series
Digital Oscilloscope

SIGLENT®

About SIGLENT

SIGLENT is an international high-tech company, concentrating on R&D, sales, production and services of electronic test & measurement instruments.

SIGLENT first began developing digital oscilloscopes independently in 2002. After more than a decade of continuous development, SIGLENT has extended its product line to include digital oscilloscopes, function/arbitrary waveform generators, digital multimeters, DC power supplies, spectrum analyzers, isolated handheld oscilloscopes and other general purpose test instrumentation. Since its first oscilloscope, the ADS7000 series, was launched in 2005, SIGLENT has become the fastest growing manufacturer of digital oscilloscopes. We firmly believe that today SIGLENT is the best value in electronic test & measurement.

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