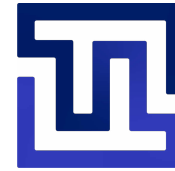


SDS1000X-U

Digital Oscilloscope

 **SIGLENT**[®]



INSTRUMENTS
**TECHNO
TEST**

Data Sheet

Rev. DS010AH_E01A Sept. 2020



SDS1104X-U

Product Overview

SIGLENT's SDS1000X-U Series Super Phosphor Oscilloscopes is available in one bandwidth, 100 MHz. It has a maximum sample rate of 1 GSa/s and a maximum record length of 14 Mpts. For ease-of-use, the most commonly used functions can be accessed with its user-friendly front panel design.

The SDS1000X-U series employs the Siglent SPO (Super - Phosphor Oscilloscope) technology that provides excellent signal fidelity and performance. It comes with an innovative digital trigger system with high sensitivity and low jitter, and a waveform capture rate of 400,000 frames/sec (sequence mode). The SDS1000X-U also employs a 256-level intensity grading display function and a color temperature display mode not found in other models in this class. SIGLENT's latest oscilloscope offering supports multiple powerful triggering modes including serial bus triggering. Serial bus decoding for IIC, SPI, UART, CAN, and LIN bus types are included. The X-U models also include History waveform recording and sequential triggering that enable extended waveform recording and analysis. Another powerful addition is the new 128k point FFT math function that gives the SDS1000X-U very high frequency resolution when observing signal spectra. The digital design includes a hardware co-processor that delivers measurements quickly and accurately without slowing acquisition and front-panel response. SDS1000X-U also supports searching and navigating. The features and performance of SIGLENT's new SDS1000X-U cannot be matched anywhere else in this price class.

Key Features

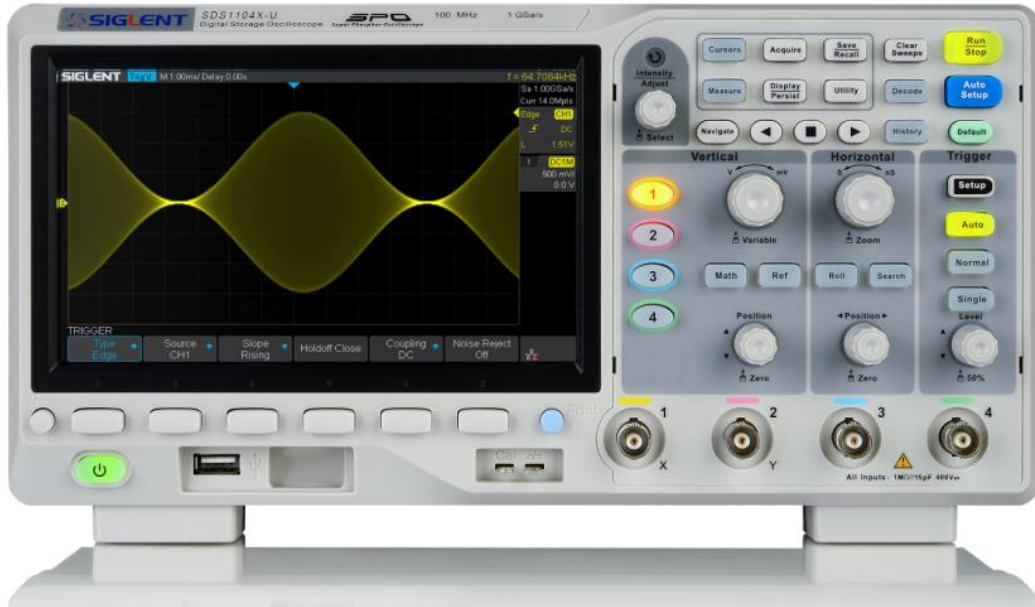
- 100MHz bandwidth
- Real-time sampling rate up to 1 GSa/s
- The Siglent SPO technology
 - Waveform capture rates up to 100,000 wfm/s (normal mode) and 400,000 wfm/s (sequence mode)
 - Supports 256-level intensity grading and color temperature display modes
 - Record length up to 14 Mpts
 - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse Width, Window, Runt, Interval, Time out (Dropout), Pattern
- Serial bus triggering and decoding (Standard), supports protocols IIC, SPI, UART, CAN, LIN
- Video trigger, supports HDTV
- 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, divides 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 (maximum recorded waveform length is 80,000 frames)
- Automatic measurement function for 38 parameters as well as Measurement Statistics, Zoom, Gating, Math, History and Reference functions
- 128k pts FFT, supports Peaks and Markers
- Math and measurement functions use all sampled data points (up to 14 Mpts)
- Math functions (FFT, addition, subtraction, multiplication, division, integration, differential, square root)
- Preset key can be customized for user settings or factory "defaults"
- Security Erase mode
- High Speed hardware-based Pass/ Fail function
- Search and navigate
- Large 7-inch TFT-LCD display with 800 * 480 resolution
- Multiple interface types: USB Host, USB Device (USB - TMC), LAN, Pass / Fail, Trigger Out
- Supports SCPI remote control commands
- VXI-11+SCPI, Telnet (Port 5024) +SCPI and Socket (Port 5025) +SCPI programming over LAN
- Supports Multi-language display and embedded online

Models and Key Specifications

| Model | SDS1104X-U |
|----------------------------------|---|
| Bandwidth | 100 MHz |
| Sample rate (Max.) | 1 GSa/s (One channel), 500 MSa/s(Two channels), 250 MSa/s(Four channels) |
| Channels | 4 |
| Memory depth (Max.) | 14 Mpts |
| Waveform capture rate (Max.) | 100,000 wfm/s (normal mode), 400,000 wfm/s (sequence mode) |
| Trigger type | Edge, Slope, Pulse Width, Window, Runt, Interval, Dropout, Pattern, Video |
| Serial Trigger and decoder (Std) | IIC, SPI, UART, CAN, LIN |
| I/O | USB Host, USB Device, LAN, Pass/Fail, Trigger Out |
| Probe (Std) | 4 pcs passive probe PP510 |
| Display | 7-inch TFT-LCD (800x480) |
| Weight | Without package 2.6 kg; With package 3.8 kg |

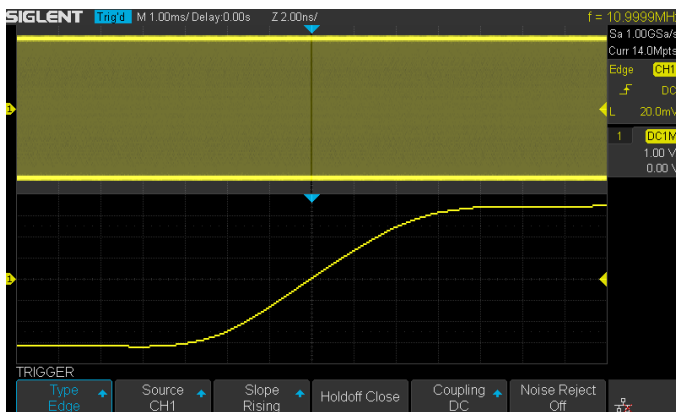
Functions & Characteristics

7 Inch TFT-LCD Display and 10 One-button Menus



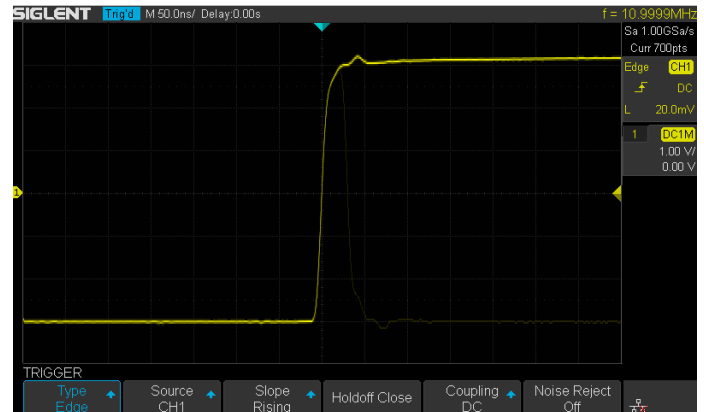
- 7 -inch TFT -LCD display with 800 * 480 resolution
- Most commonly used functions are accessible using 10 different one-button operation keys: Auto Setup, Default, Cursor, Measure, Roll, History, Persist, Clear Sweep, Zoom, Print

Record Length of up to 14 Mpts



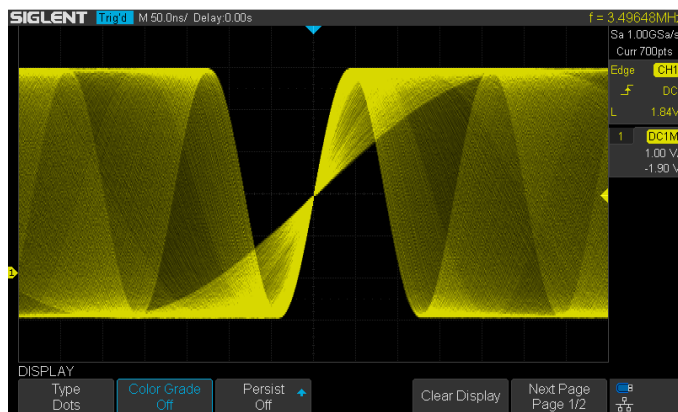
Using hardware-based Zoom technologies and max record length of up to 14 Mpts, users are able to oversample to capture for longer time periods at higher resolution and use the zoom feature to see more details within each signal.

Waveform Capture Rate up to 400,000 wfm/s

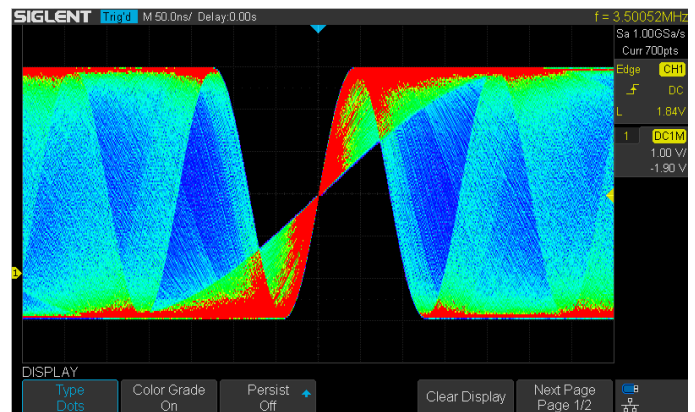


With a waveform capture rate of up to 400,000 wfm/s (sequence mode), the oscilloscope can easily capture the unusual or low-probability events.

256-Level Intensity Grading and Color Temperature Display

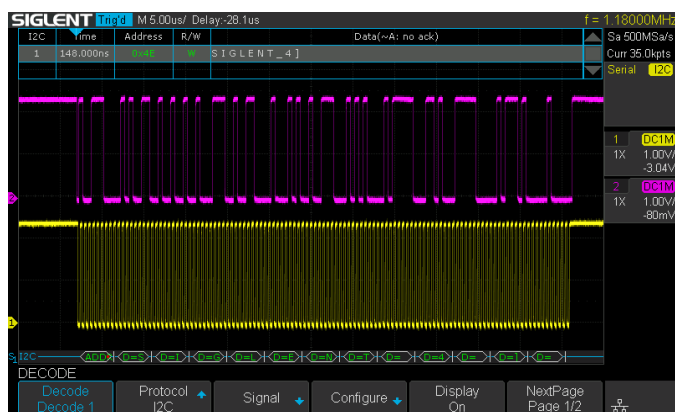


SPO display technology provides fast refresh rates. The resulting intensity-graded trace is brighter for events that occur with more frequency and dims when the events occur with less frequency.



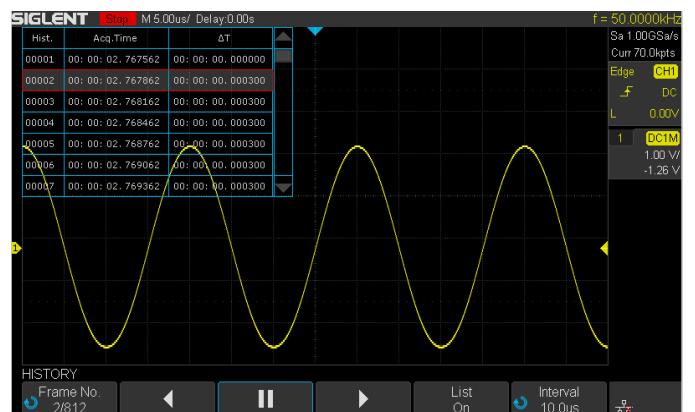
The color temperature display is similar to the intensity-graded trace function, but the trace occurrence is represented by different colors (color "temperature") as opposed to changes in the intensity of one color. Red colors represent events that occur more frequently, while blue is used to mark points that occur less frequently.

Serial Bus Decoding Function (Standard)



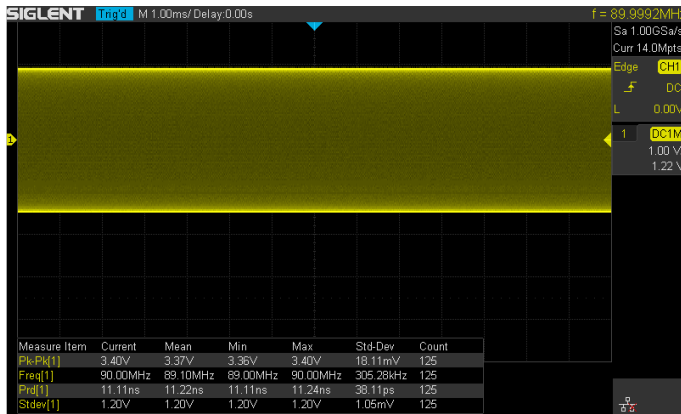
SDS1000X-U displays the decoding through the events list. Bus protocol information can be quickly and intuitively displayed in a tabular format.

History Waveforms (History) Mode and Segmented Acquisition (Sequence)



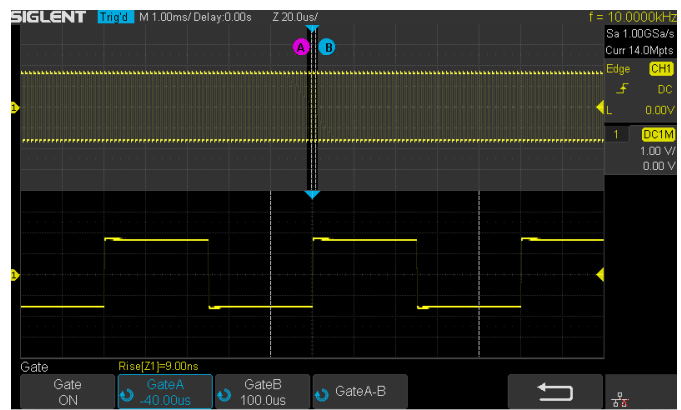
Playback the latest triggered events using the history function. Segmented memory collection will store trigger events into multiple (Up to 80,000) memory segments, each segment will store triggered waveforms and timestamp of each frame.

True measurement to 14 M points



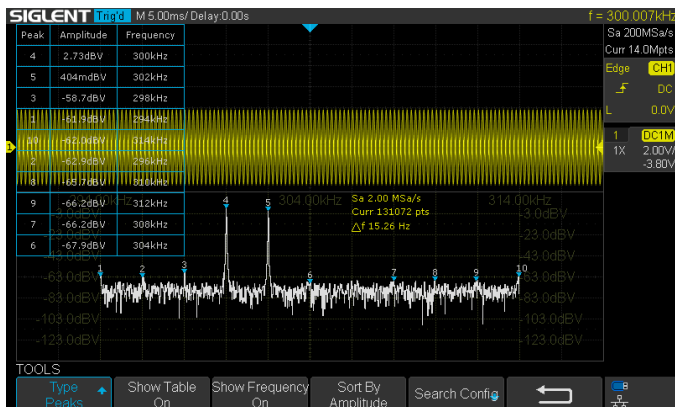
SDS1004X-U can measure all sampled data points up to 14 Mpts. This ensures the accuracy of measurements while the math co-processor decreases measurement time and increases ease-of-use.

Gate and Zoom Measurement



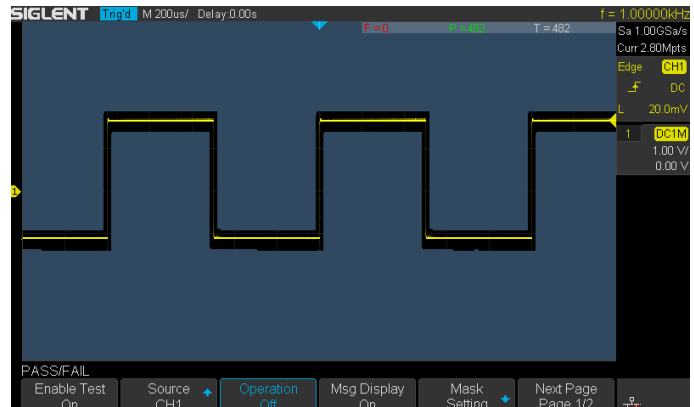
Through Gate and Zoom measurement, the user can specify an arbitrary interval of waveform data analysis and statistics. This helps avoid measurement errors that can be caused by invalid or extraneous data, greatly enhancing the measurements' validity and flexibility.

128k points used to calculate the FFT



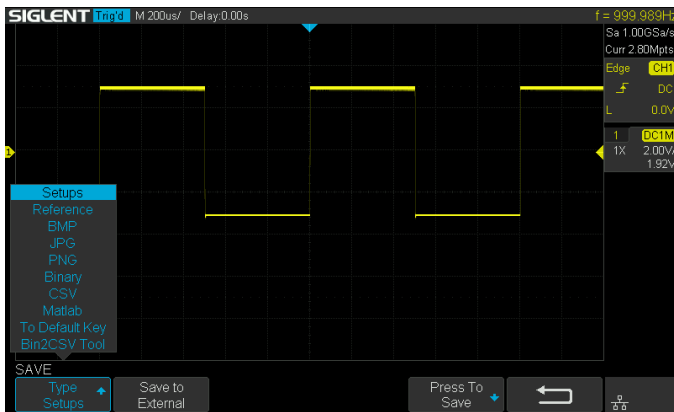
The math co-processor enables FFT analysis of incoming signals using up to 128k samples per waveform. This provides high frequency resolution with a fast refresh rate. The FFT function also supports a variety of window functions so that it can adapt to different spectrum measurement needs. It also supports Peaks, Markers, a variety of FFT points.

Hardware-Based High-Speed Pass/Fail



The SDS1000X-U utilizes a hardware-based Pass/Fail function, performing up to 40,000 Pass / Fail decisions each second. Easily generate user defined test templates provide trace mask comparison making it suitable for long-term signal monitoring or automated production line testing.

Customizable Default Key



The current parameters of the oscilloscope can be preset to Default Key through the Save menu.

Search and Navigate



The SDS1000X-U can search events specified by the user in a frame. It can also navigate by time (delay position) and historical frames.

Complete Connectivity



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

Specifications

| Acquisition System | |
|------------------------|--|
| Sampling Rate (Max.) | 1 GSa/s (One channel), 500 MSa/s(Two channels), 250 MSa/s(Four channels) |
| Memory Depth (Max.) | 14 Mpts |
| Peak Detect | 2 ns |
| Average | Averages: 4,16, 32, 64, 128, 256, 512, 1024 |
| ERES | Enhance bits: 0.5, 1, 1.5, 2, 2.5, 3 |
| Waveform interpolation | Sin(x)/x, Linear |

| Input | |
|--------------------|---------------------------------------|
| Channels | 4 |
| Coupling | DC, AC, GND |
| Impedance | DC: (1 MΩ±2%) (11 pF ±2 pF) |
| Max. Input voltage | 1 MΩ: ≤400 Vpk (DC + Peak AC ≤10 kHz) |
| CH to CH Isolation | DC-Max BW :>40 dB |
| Probe attenuation | 1E-6X ~ 1E6X |

| Vertical System | |
|--|---|
| Bandwidth (-3dB) | 100 MHz |
| Vertical Resolution | 8-bit |
| Vertical Scale (Probe 1X) | 1 mV/div - 10 V/div (1-2-5 sequence) |
| Offset Range (Probe 1X) | 1 mV- 200 mV: ± 2 V 206 mV- 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 coupling -3 dB) | ≤2 Hz (at input BNC) |
| Noise | ST-DEV ≤ 0.2 division (<2 mV/div) ST-DEV ≤ 0.1 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 3.5 ns |

| | |
|--------------------------|-------|
| Overshoot (500 ps Pulse) | < 10% |
|--------------------------|-------|

Horizontal System

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

Trigger System

| | |
|-----------------------------|---|
| Mode | Auto, Normal, Single |
| Level | Internal: ±4.5 div from the center of the screen |
| Hold off range | 80 ns- 1.5 s |
| Coupling | AC DC LFRJ HFRJ Noise RJ |
| Coupling Frequency Response | DC: Passes all components of the signal AC: Blocks DC components and attenuates signals below 8Hz LFRJ: Blocks the DC component and attenuates the low-frequency components below 2 MHz HFRJ: Attenuates the high-frequency components above 1.2 MHz |
| Accuracy (typical) | Internal: ±0.2 div |
| Sensitivity | DC - Max BW 0.6 div |
| Jitter | <100 ps |
| Displacement | Pre-Trigger: 0 - 100% Memory Delay Trigger: 0 to 10,000 div |
| Edge Trigger | |
| Slope | Rising, Falling, Rising & Falling |
| Source | All channels/AC Line |
| Slope Trigger | |
| Slope | Rising, Falling |
| Limit Range | <, >, <>, >< |
| Source | All channels |
| Time Range | 2ns- 4.2s |
| Resolution | 1ns |
| Pulse Width Trigger | |
| Polarity | +wid, -wid |
| Limit Range | <, >, <>, >< |

| | |
|-------------------------|--|
| Source | All channels |
| Pulse Range | 2 ns - 4.2s |
| Resolution | 1 ns |
| Video Trigger | |
| Signal Standard | NTSC, PAL, 720p/50, 720p/60, 1080p/50, 1080p/60, 1080i/50, 1080i/60, Custom |
| Source | All channels |
| Sync | Any, Select |
| Trigger condition | Line, Field |
| Window Trigger | |
| Window Type | Absolute, Relative |
| Source | All channels |
| Interval Trigger | |
| Slope | Rising, Falling |
| Limit Range | <, >, <>, >< |
| Source | All channels |
| Time Range | 2 ns - 4.2 s |
| Resolution | 1 ns |
| Dropout Trigger | |
| Timeout Type | Edge, State |
| Source | All channels |
| Slope | Rising, Falling |
| Time Range | 2 ns - 4.2 s |
| Resolution | 1 ns |
| Runt Trigger | |
| Polarity | +wid, -wid |
| Limit Range | <, >, <>, >< |
| Source | All channels |
| Time Range | 2 ns - 4.2 s |
| Resolution | 1 ns |
| Pattern Trigger | |
| Pattern Setting | Invalid, Low, High |
| Logic | AND, OR, NAND, NOR |
| Source | All channels |
| Limit Range | <, >, <>, >< |
| Time Range | 2 ns - 4.2 s |
| Resolution | 1 ns |
| Serial Trigger | |
| I2C Trigger | |
| Condition | Start, Stop, Restart, No Ack, EEPROM, 7-bits Address & Data, 10-bits Address & Data, Data Length |
| Source(SDA/SCL) | All channels |
| Data format | Hex |
| Limit Range | EEPROM: =, >, < |
| Data Length | EEPROM: 1 byte |

| | |
|------------------------|--|
| | Addr & Data: 1-2byte |
| | Data Length: 1-12byte |
| R/W bit | Addr & Data: Read, Write, Do not care |
| SPI Trigger | |
| Condition | Data |
| Source(CS/CL/Data) | All channels |
| Data format | Binary |
| Data Length | 4-96-bit |
| Bit Value | 0, 1, X |
| Bit Order | LSB, MSB |
| UART Trigger | |
| Condition | Start, Stop, Data, Parity Error |
| Source(RX/TX) | All channels |
| Data format | Hex |
| Limit Range | =, >, < |
| Data Length | 1 byte |
| Data Width | 5, 6, 7, 8-bits |
| Parity Check | None, Odd, Even, Space, Mark |
| Stop Bit | 1, 1.5, 2-bits |
| Idle Level | High, Low |
| Baud Rate(Selectable) | 600/1200/2400/4800/9600/19200/38400/57600/115200 bit/s |
| Baud Rate (Custom) | 300-5000000 bit/s |
| CAN Trigger | |
| Condition | Start, Remote, ID, ID + Data, Error |
| Source | All channels |
| ID | STD (11-bits), EXT (29-bit) |
| Data Format | Hex |
| Data Length | 1 -2 byte |
| Baud Rate | 5k/10k/20k/50k/100k/125k/250k/500k/800k/1 Mbit/s |
| LIN Trigger | |
| Condition | Break, Frame ID, ID+Data, Error |
| Source | All channels |
| ID | 1byte |
| Data Format | Hex |
| Data Length | 1-2byte |
| Baud Rate (Selectable) | 600/1200/2400/4800/9600/19200 bit/s |
| Baud Rate (Custom) | 300 bit/s -20 kbit/s |

Search

| | |
|--------------|------------------------------------|
| Event | Edge, Slope, Pulse, Interval, Runt |
| Event Number | Y-T: 700 |

| |
|---|
| ROLL: No limitation Stop After ROLL: 700 |
|---|

Serial Decoder

| | |
|-----------------------|------------------------------|
| Decoders | 2 |
| I²C | |
| Signal | SCL, SDA |
| Address | 7, 10 bits |
| Threshold | -4.5 - 4.5 div |
| List | 1- 7 lines |
| SPI | |
| Signal | SCL, MISO, MOSI |
| Edge Select | Rising, Falling |
| Idle Level | Low, High |
| Bit Order | MSB, LSB |
| Threshold | -4.5 - 4.5 div |
| List | 1- 7 lines |
| UART | |
| Signal | RX, TX |
| Data Width | 5, 6, 7, 8 bits |
| Parity Check | None, Odd, Even, Space, Mark |
| Stop Bit | 1, 1.5, 2 bits |
| Idle Level | Low, High |
| Threshold | -4.5 - 4.5 div |
| List | 1- 7 lines |
| CAN | |
| Signal | CAN_H, CAN_L |
| Source | CAN_H, CAN_L |
| Threshold | -4.5 - 4.5 div |
| List | 1- 7 lines |
| LIN | |
| LIN Specification | Ver1.3, Ver2.0 |
| Package Revision | |
| Threshold | -4.5 - 4.5 div |
| List | 1- 7 lines |

Measurement

| | |
|------------------------|--|
| Source | All channels, All channels in Zoom, Math, All References, History |
| Number of Measurements | Display 4 measurements at the same time. 5 measurements displayed in statistics table. |
| Measurement Range | Screen or Gate region |
| Measurement | 38Types |

| Parameters | | |
|------------|--|--|
| Vertical | 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 | Period | Time between the middle threshold points of two consecutive, like-polarity edges |
| | Freq | Reciprocal of period |
| | +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 | Time difference between the 50% threshold of a rising edge to the 50% threshold of the next falling edge of the pulse |
| | -Dut | Time difference between the 50% threshold of a falling edge to the 50% threshold of the next rising edge of the pulse |
| | Delay | Time from the trigger to the first transition at the 50% crossing |
| | Time@Level | Time from the trigger to each rising edge at the 50% crossing. When Statistics is Off, it shows the time from the trigger to the last rising edge at the 50% crossing. When Statistics is On, it shows the Current, Mean, Min, Max, Standard Deviation of time from the trigger to each rising edge at the 50% crossing in multiple frames (number = Count). |
| Delay | Phase | Phase difference between two edges |
| | FRR | Time from the first rising edge of channel A to the following first rising edge of channel B |
| | FRF | Time from the first rising edge of channel A to the following first falling |

| | | |
|------------|--|--|
| | | edge of channel B |
| | FFR | Time from the first falling edge of channel A to the following first rising edge of channel B |
| | FFF | Time from the first falling edge of channel A to the following 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 |
| | LFR | Time from the first falling edge of channel A to the last rising edge of channel B |
| | LFF | Time from the first falling edge of channel A to the last falling edge of channel B |
| | Skew | Time of source A edge minus time of nearest source B edge |
| 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, Stdev, Count | |
| Counter | Hardware 6-digit counter (channels are selectable) | |

Math

| | |
|-------------|---|
| Operation | +, -, *, /, FFT, d/dt, ∫dt, √ |
| FFT window | Rectangular, Blackman, Hanning, Hamming, Flatop |
| FFT display | Full Screen, Split, Exclusive |

I/O

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

Display(Screen)

| | |
|--------------------|------------------|
| Display Type | 7-inch TFT LCD |
| Display Resolution | 800×480 pixels |
| Display Color | 24-bit |
| Contrast(Typical) | 500:1 |
| Backlight | 300 nits |
| 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: 0°C - +40°C Non-operating: -20°C - + 60°C |
| Humidity | Operating: 85% RH, 40 °C, 24 hours Non-operating: 85% RH, 65 °C, 24 hours |
| Height | Operating: ≤ 3000 m Non-operating: ≤ 15,000 m |

Standards

| | | | |
|-------------------------------|--|------------------------------|--|
| Electromagnetic compatibility | Meets EMC directive (2014/30/EU), meets or exceeds IEC 61326-1:2012/EN61326-1:2013 (Basic) | | |
| | Conducted disturbance | CISPR 11/EN 55011 | CLASS A group 1 , 150kHz-30MHz |
| | Radiated disturbance | CISPR 11/EN 55011 | CLASS A group 1 , 30MHz-1GHz |
| | Electrostatic discharge (ESD) | IEC 61000-4-2/EN 61000-4-2 | 4.0 kV (Contact), 8.0 kV (Air) |
| | Radio-frequency electromagnetic field Immunity | IEC 61000-4-3/EN 61000-4-3 | 10 V/m (80 MHz to 1 GHz) ; 3 V/m (1.4 GHz to 2 GHz) ; 1 V/m (2.0 GHz to 2.7GHz) |
| | Electrical fast transients (EFT) | IEC 61000-4-4/EN 61000-4-4 | 2kV (Input AC Power Ports) |
| | Surges | IEC 61000-4-5/EN 61000-4-5 | 1kV (Line to line) 2kV (Line to ground) |
| | Radio-frequency continuous conducted Immunity | IEC 61000-4-6/EN 61000-4-6 | 3 V, 0.15-80MHz |
| | Voltage dips and interruptions | IEC 61000-4-11/EN 61000-4-11 | Voltage Dips : 0% UT during 1 cycle; 40% UT during 10/12 cycles; 70% UT during 25/30 cycles Voltage interruptions: 0% UT during 250/300 cycles |
| Safety | UL 61010-1:2012/R: 2018-11; CAN/CSA-C22.2 No. 61010-1:2012/A1:2018-11. UL 61010-2-030:2018; CAN/CSA-C22.2 No. 61010-2-030:2018. | | |







Power Supply










| | |
|---------------|--|
| Input Voltage | 100 ~ 240 Vrms 50/60Hz 100 ~ 120 Vrms 400Hz |
| Power | 50 W Max |

Mechanical



| | |
|------------|--------------------------|
| Dimensions | Length: 312 mm |
| | Width: 132.6 mm |
| | Height: 151 mm |
| Weight | N.W: 2.6 kg; G.W: 3.8 kg |

Probes and Accessories

| Probe | Picture | Model | Specifications &Description |
|---------------|---|---------|--|
| Passive |  | PP510 | Bandwidth: 100MHz, 1X/10X, 1M/10Mohm,300V/600V |
| Current Probe |  | CP4020 | Bandwidth: 100 KHz, Max. continuous current: 20Arms Peak current: 60A Switch Ratio: 50mV/A, 5mV/A, Accuracy: 50mV/A (0.4A - 10Apk)±2%, 5mV/A (1A-60Apk) ±2%, 9V battery source |
| |  | CP4050 | Bandwidth: 1MHz, Max. continuous current: 50Arms, Peak current: 140A Switch Ratio: 500mV/A, 50mV/A Accuracy: 500mV/A (20mA - 14Apk)±3%±20mA , 50mV/A (200mA - 100Apk) ±4%±200mA, 50mV/A (100A - 140Apk) ±15%max, 9V battery source |
| |  | CP4070 | Bandwidth: 150kHz, Max. continuous current: 70Arms, Peak current: 200A Switch Ratio: 50mV/A, 5mV/A, Accuracy: 50mV/A (0.4A - 10Apk)±2% , 5mV/A(1A - 200Apk) ±2%, 9V battery source |
| |  | CP5030 | Bandwidth: 50 MHz, Max. continuous current: 30Arms, Peak current: 50A Switch Ratio: 100mV/A, 1V/A, Accuracy: 1V/A (±1%±1mA), 100mV/A (±1%±10mA), DC12V/1.2A power adapter |
| |  | CP5030A | Bandwidth: 100 MHz, Max. continuous current: 30Arms, Peak current: 50A Switch Ratio: 100mV/A, 1V/A, Accuracy: 1V/A (±1%±1mA), 100mV/A (±1%±10mA), DC12V/1.2A power adapter |

| | | | |
|--------------------|---|---|--|
| |  | CP5150 | Bandwidth: 12 MHz, Max. continuous current: 150Arms, Peak current: 300A Switch Ratio: 100mV/A, 10mV/A, Accuracy: 100mV/A ($\pm 1\% \pm 10\text{mA}$), 10mV/A ($\pm 1\% \pm 100\text{mA}$), DC12V/1.2A power adapter |
| |  | CP5500 | Bandwidth: 5 MHz, Max. continuous current: 500Arms, Peak current: 750A Switch Ratio: 100mV/A, 10mV/A, Accuracy: 100mV/A ($\pm 1\% \pm 10\text{mA}$), 10mV/A ($\pm 1\% \pm 100\text{mA}$), DC12V/1.2A power adapter |
| Differential Probe |  | DPB4080 | Bandwidth: 50MHz, Differential Range: 800V (DC + Peak AC), 100X/200X/500X/1000X, Accuracy: $\pm 1\%$, DC 9V/1A power adapter |
| |  | DPB5150 | Bandwidth: 70MHz, Differential Range: 1500V (DC + Peak AC),50X/500X Accuracy: $\pm 2\%$, DC 5V/1A USB adapter |
| |  | DPB5150A | Bandwidth: 100MHz, Differential Range: 1500V (DC + Peak AC), 50X/500X , Accuracy: $\pm 2\%$ DC 5V/1A USB adapter |
| |  | DPB5700 | Bandwidth: 70MHz, Differential Range: 7000V (DC + Peak AC), 100X/1000X , Accuracy: $\pm 2\%$, DC 5V/1A USB adapter |
| |  | DPB5700A | Bandwidth: 100MHz Differential Range: 7000V (DC + Peak AC), 100X/1000X Accuracy: $\pm 2\%$ DC 5V/1A USB adapter |
| | High Voltage |  | HPB4010 |
| Isolated front end |  | ISFE | Provides isolation between standard oscilloscope channels, isolation between the measured signal and ground. Uses USB 5V power supply, plug and play. The maximum input voltage allowed is up to $\pm 600\text{Vpk}$. |

SDS1000X-U Series Digital Oscilloscope

| | | | |
|-------------------|---|-------------------------|--|
| <p>Demo Board</p> |  | <p>STB-3 Test Board</p> | <p>Output signals including square, sine, AM, fast edge, pulse, PWM, I2C, CAN, LIN etc. Used in teaching and demonstrations.</p> |
| <p>Rack Mount</p> |  | <p>SDS1X-E-RMK</p> | <p>The height is 4U.</p> |

Ordering Information

| Ordering information | | |
|----------------------|---------------------------------|---|
| Product Name | SDS1104X-U 100MHz Four Channels | |
| Standard Accessories | USB Cable -1 | |
| | Quick Start -1 | |
| | Passive Probe -4 | |
| | Certification -1 | |
| | Power Cord -1 | |
| Optional Accessories | Isolated Front End | ISFE |
| | STB Demo Source | STB-3 |
| | High Voltage Probe | HPB4010 |
| | Current Probes | CP4020/CP4050/CP4070/ CP4070A/CP5030/CP5030A/ CP5150/CP5500 |
| | Differential Probes | DPB4080/DPB5150/DPB5150A /DPB5700/DPB5700A |
| | Rack Mount | SDS1X-E-RMK |

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, isolated handheld oscilloscopes, function/arbitrary waveform generators, RF/MW signal generators, spectrum analyzers, vector network analyzers, digital multimeters, DC power supplies, electronic loads and other general purpose test instrumentation. Since its first oscilloscope 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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