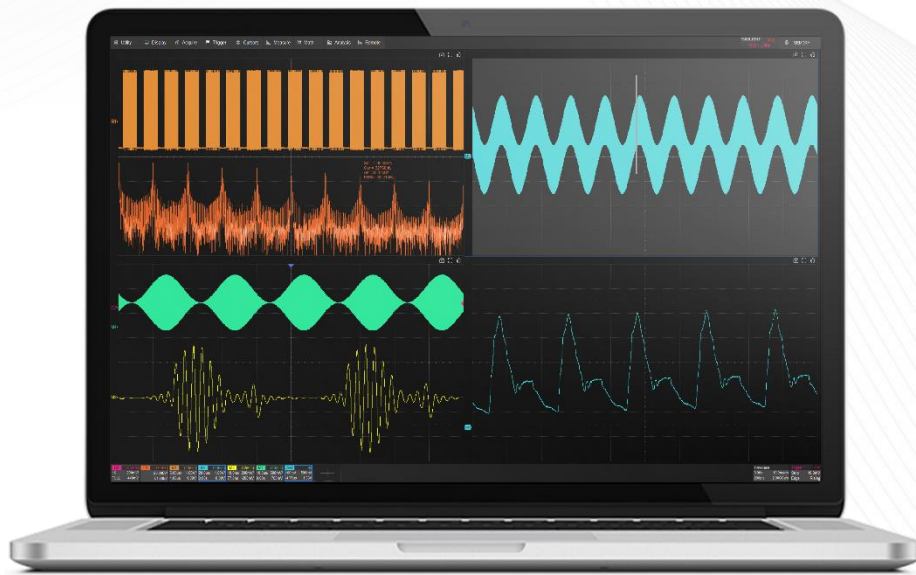


# SigScopeLab

## Oscilloscope on PC

Datasheet

EN04A



# SigScopeLab

## Product Overview

SigScopeLab is a professional time-domain signal analysis and oscilloscope control software running on the Windows operating system.

- Consistent operating experience. The same user interface as the newest SDS series oscilloscopes provides efficiency and ease of use.
- Comprehensive local analysis function. Supports offline analysis of original waveform files for all SDS models, including handheld oscilloscopes.

\* SigScopeLab features data online acquisition and offline analysis, while Webserver specializes in real-time control of oscilloscope and waveform observation.

## Features and Advantages

- Offline waveform data analysis on PC
  - Maximum 8 channels for offline waveform data analysis.
  - Offline waveform data volume up to 500Mpts per channel.
  - Support waveform data with 12 bit vertical resolution.
- Import measurement project on PC, fully restore channel, data, and measurement parameters, effortlessly resuming previous measurement scenarios..
- Control remote SDS acquisition, and fetch waveform data to PC online for local analysis.
- Control multiple oscilloscopes simultaneously online to form a multi-oscilloscope acquisition system:
  - Supports a maximum connection of 8 devices of the same model.
  - Capable of concurrently analyzing data from up to 64 channels simultaneously
- Familiar SDS platform enables measurement functions from the oscilloscope on the PC as post data analysis. Typical use cases include:
  - Dozens of automatic measurement functions. Support measurement statistics, Gating measurements, and Math measurements. Support histogram and trend chart statistics for measurement parameters.
  - 8 independent waveform operations. Support maximum 32Mpts FFT. Support digital filtering. More than 20 commonly used time-domain operations. Support custom expressions for complex nested operations
  - 2-way serial bus decoding. Support various protocols, including I2C, SPI, UART, CAN, LIN..
  - Multiple advanced data analysis and processing functions: Signalscan, Navigation, Mask test, etc
- Multi window display for more flexible observation
- Consistent operation interface with the SDS traditional operation interface, making it easy to get started.

## Design Features

### Waveform Data Offline Analysis



To begin, export binary waveform files from the oscilloscope. You can transfer these files to your computer's hard drive using a USB flash drive or by accessing a network server. After transferring the files, use the Memory function in SigScopeLab to import the waveform data for detailed analysis.

Supports analysis of up to 500Mpts of waveform data per channel.

### Measurement Project Offline Analysis



One-click save of measurement projects that encapsulate the complete measurement environment. Upon importing these projects into SigScopeLab, channels, data, and measurement parameters are fully restored, enabling you to easily revisit previous measurement scenarios.

Typical Scenario: Users export measurement projects from oscilloscope devices, transfer them to their computer hard drives via USB flash drives or network servers, then utilize SigScopeLab's project import function to restore configurations and channel waveforms, and finally proceed with waveform analysis.

Users can also export the current project content while analyzing waveforms using SigScopeLab, and re-import it for further analysis at a suitable time.

## Acquire Waveform Data to PC Online for Analysis



In this scenario, SigScopeLab only controls remote acquisition and does not control remote analysis and measurement.

SigScopeLab fetches waveform data from the remote device online after controlling the acquisition, and then performs local data analysis without relying on the analysis function of the oscilloscope.

### Online Multi-Oscilloscope Acquisition System



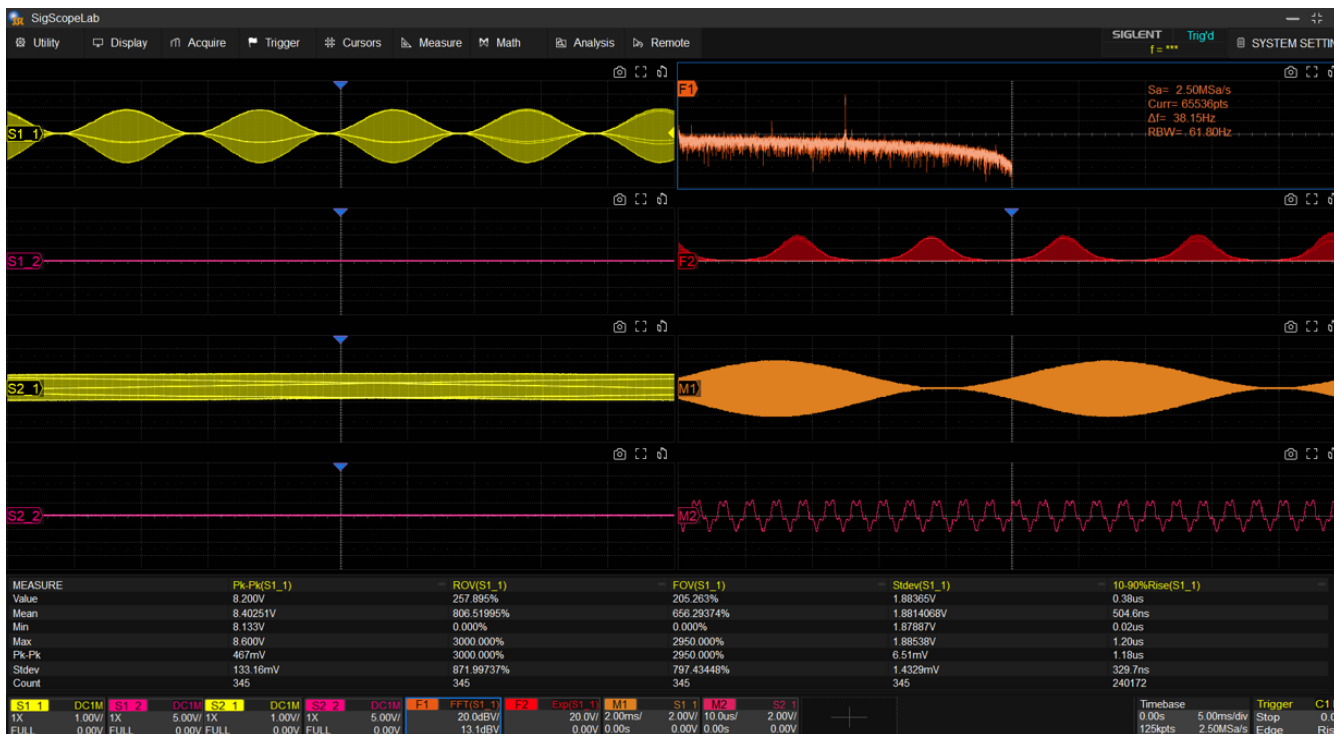
A multi-oscilloscope acquisition system can be formed by connecting multiple oscilloscopes of the same model. SigScopeLab uniformly maps and numbers the channels of these oscilloscopes, making the operation of multiple oscilloscopes as convenient as operating a single one.

On the same user interface, you can control the acquisition settings of multiple oscilloscopes and display and analyze waveform data from them.

This solution facilitates cross-oscilloscope measurements, mathematical operations, zooming, cursor manipulation, and more on waveform data, catering to your measurement and analysis needs in various scenarios.

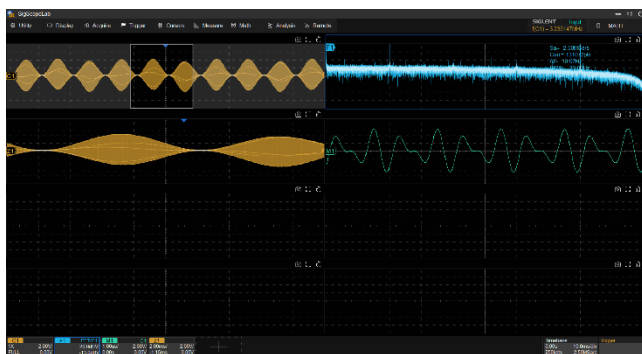
It supports the connection of up to 8 devices and the simultaneous analysis of up to 64 channels of data.

## Same Platform as SDS Software

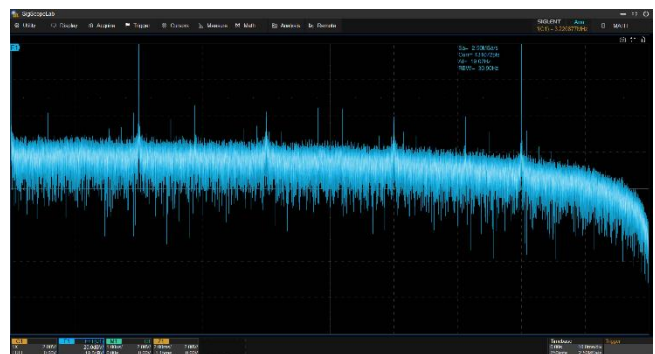


For the supported measurement and analysis functions, SigScopeLab and SDS devices have identical interaction and multi window display. Multi window mode provided, where users can measure and observe waveforms and analysis in different windows according to their needs, making it more flexible.

## Multiple Window Display Modes



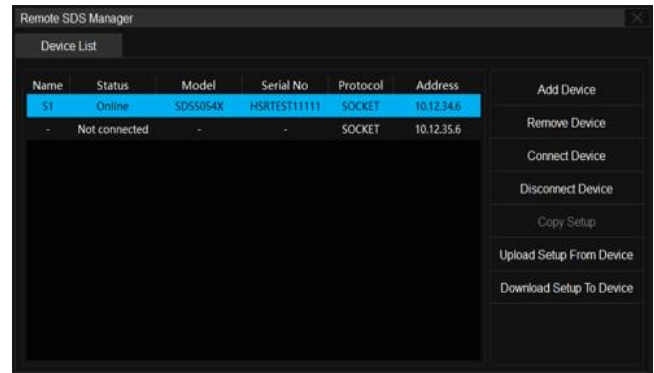
Seven window display modes to meet different observation needs.



In multi window mode, also possible to maximize or restore a certain display window.

## Remote Management and Setup Synchronization Function

A remote device list is provided for convenient switching between oscilloscopes; It can be configured synchronously from the SDS device to SigScopeLab or from SigScopeLab to the SDS device, meeting different application scenarios.



## Parameters and Specifications

### Key Parameters

|                                      | Free Version      | Advanced Versionr (Optional) |
|--------------------------------------|-------------------|------------------------------|
| Number of Memory Functions           | 2                 | 8                            |
| Data Points of Memory Function       | 2Mpts per channel | Maximum                      |
| Number of Math Functions             | 2                 | 8                            |
| Number of Measurements               | 5                 | Maximum                      |
| Maximum Mem Depth for Online Control | 2Mpts per channel | Maximum                      |
| Maximum Number of Oscilloscopes      | 2                 | 8                            |
| Maximum Number of Channels           | 16                | 64                           |
| Measurement Project                  | √                 | √                            |
| Math on Measurements                 | √                 | √                            |

After installation, SigScopeLab defaults to the free version. To upgrade to the advanced version, simply install the corresponding advanced license on the free version.

### Analysis Function Features

| Features    |  |
|-------------|--|
| Decode      | Decoder module   |
| Measurement | Measurement function module                                    |
| Display     | Configure persistence,color grade, intensity, etc              |
| Horizontal  | Horizontal parameter settings                                  |
| Vertical    | Vertical parameter settings                                    |
| Math        | Mathematical operation function                                |
| SignalScan  | Search and locate waveform events                              |
| Navigate    | Play control for timebase and SignalScan                       |
| Pass/Fail   | Mask test function   |
| Cursors     | Cursor measurement analysis                                    |
| Gate        | Analysis gating setting  |
| Save/Recall | Save and restore product configurations, binary waveforms, etc |

|         |  |
|---------|--|
| Project | Quick save and recall configurations and channel waveforms |
| Help    | Help document  |

## Online Acquisition, Configurable SDS Parameters

Mainly related to waveform acquisition parameters

| Configurable Parameters |                                |
|-------------------------|--------------------------------|
| Channel                 | Channel related parameters     |
| Trigger                 | Trigger related parameters     |
| Acquire                 | Acquisition related parameters |
| Horizontal              | Horizontal related parameters  |

## Remote SDS Device Management

| Management Features                           |
|---|
| Add or remove SDS devices                     |
| List of SDS devices                           |
| Upload setup from SDS device to SigScopeLab   |
| Download setup from SigScopeLab to SDS device |
| Multiple oscilloscope acquisition system      |

## Models List for Remote SDS Device Management

|             |               |
|-------------|---------------|
| SDS8000A    | SDS3000X HD   |
| SDS7000A    | SDS2000X HD   |
| SDS7000L    | SDS1000X HD   |
| SDS6000 Pro | SDS800X HD    |
| SDS6000L    | SDS5000X      |
| SDS5000X HD | SDS2000X Plus |
| SDS5000L    |               |

## PC Requirements

Unless otherwise specified, all specifications must meet the following conditions:

| Minimum Requirements |  |
|----------------------|--|
| Operating System     | Windows 10 or later 64-bit operating system                    |
| Processor            | Intel® Core™ i5 Processor or better                            |
| Memory               | 8 GB RAM or better   |
| Hard Disk            | 600MB or more available free space                             |
| Display Resolution   | Minimum 1280x720, recommended 1920x1080                        |
| Virtual Memory       | 4GB(Advanced version 25GB) or more of available virtual memory |

## Ordering Information

| Options | Description                  |
|---------|------------------------------|
| SSL-AD  | SigScopeLab Advanced Version |



## 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.

### Headquarters:

SIGLENT Technologies Co., Ltd  
Add: Bldg No.4 & No.5, Antongda Industrial  
Zone, 3rd Liuxian Road, Bao'an District,  
Shenzhen, 518101, China  
Tel: + 86 755 3688 7876  
Fax: + 86 755 3359 1582  
Email: sales@siglent.com  
Website: int.siglent.com

### North America:

SIGLENT Technologies America, Inc  
6557 Cochran Rd Solon, Ohio 44139  
Tel: 440-398-5800  
Toll Free: 877-515-5551  
Fax: 440-399-1211  
Email: info@siglentna.com  
Website: www.siglentna.com

### Europe:

SIGLENT Technologies Germany GmbH  
Add: Staetzlinger Str. 70  
86165 Augsburg, Germany  
Tel: +49(0)-821-666 0 111 0  
Fax: +49(0)-821-666 0 111 22  
Email: info-eu@siglent.com  
Website: www.siglenteu.com

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