SigScopeLab

Oscilloscope on PC

UserManual

EN02A

SIGLENT TECHNOLOGIES CO.,LTD

Introduction

SigScopeLab is a professional time-domain signal analysis and oscilloscope control software running on the Windows operating system. This user manual aims to provide installation and easy operation tutorials for SigScopeLab. Please read this manual carefully before using the software.

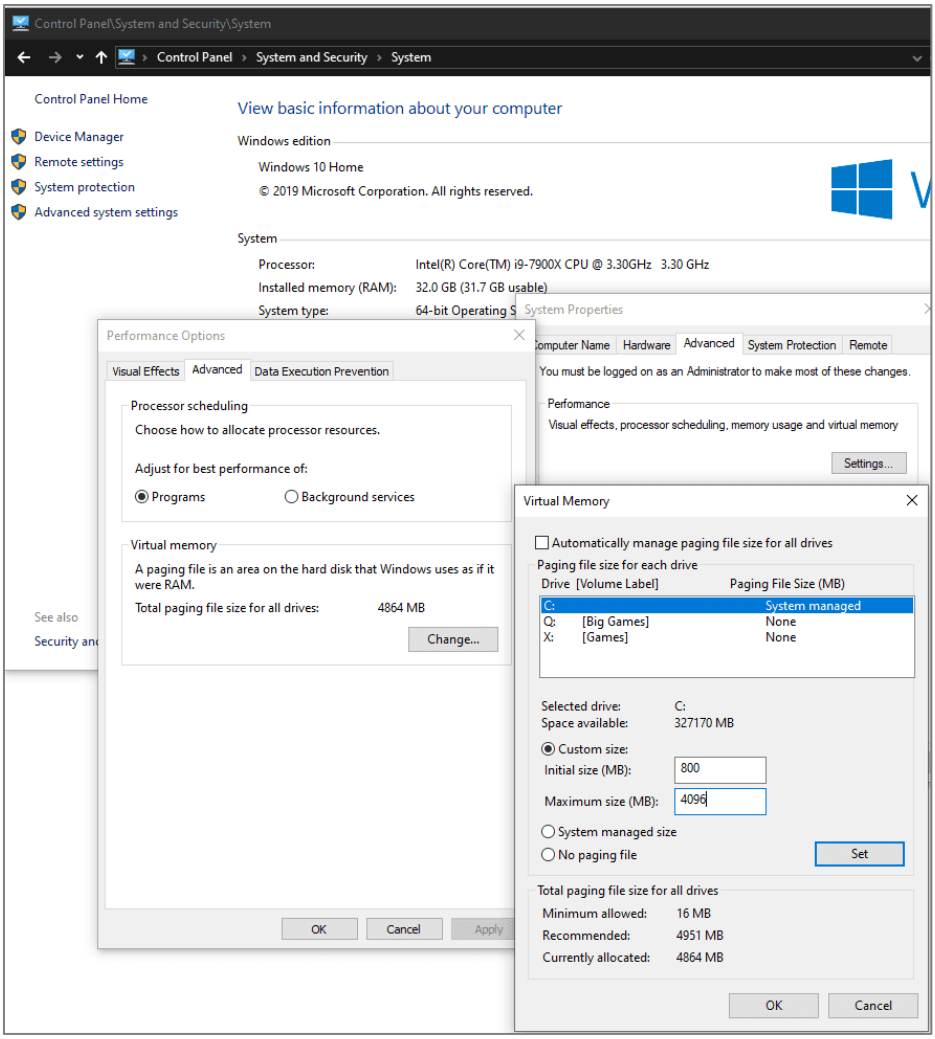
Installation and Operation

PC Requirements

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

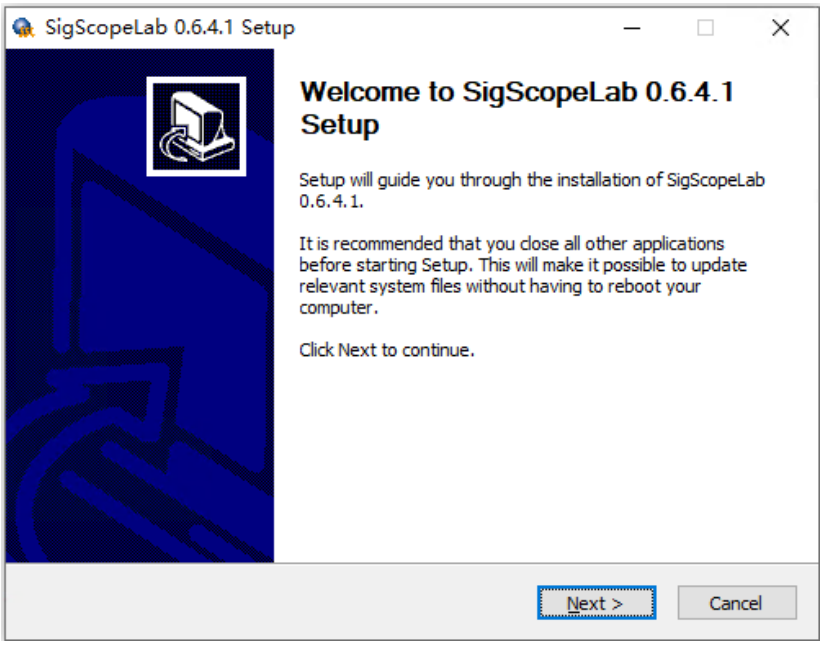
Minimum Requirements	
Operating System	Windows 10 or later 64-bit operating system
Processor	Intel® CoreTM i5 Processor or better
Memory	8 GB RAM or better
Hard Disk	600MB or more available free space
Display Resolution	Minimum 1280x720, recommended 1920x1080
Virtual Memory	4GB(Advanced version 25GB)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

Method to modify the default virtual memory size:

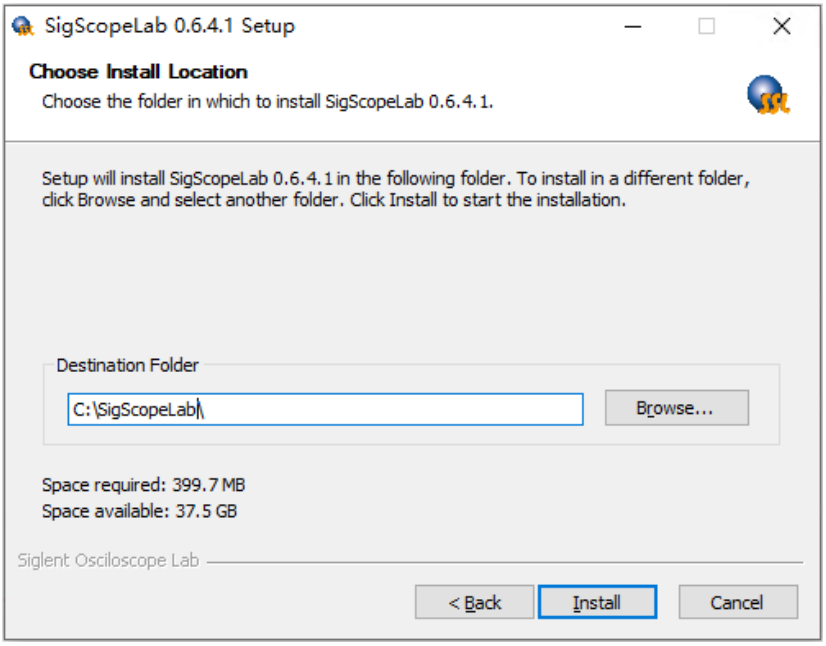


Installing Software

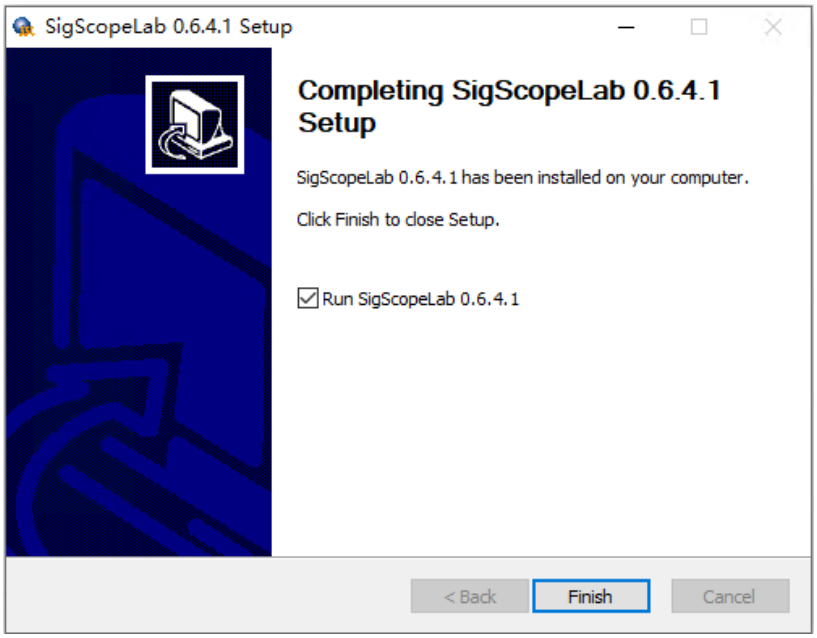
1. Double click on the installation program "SigScopeLab.exe" and click "Next" in the installation interface.



2. Select the installation path, which defaults to "C:\SigScopeLab", and click "Install" to the next step.



3. Finish the installation, checking "Run SigScopeLab" will immediately execute the program.



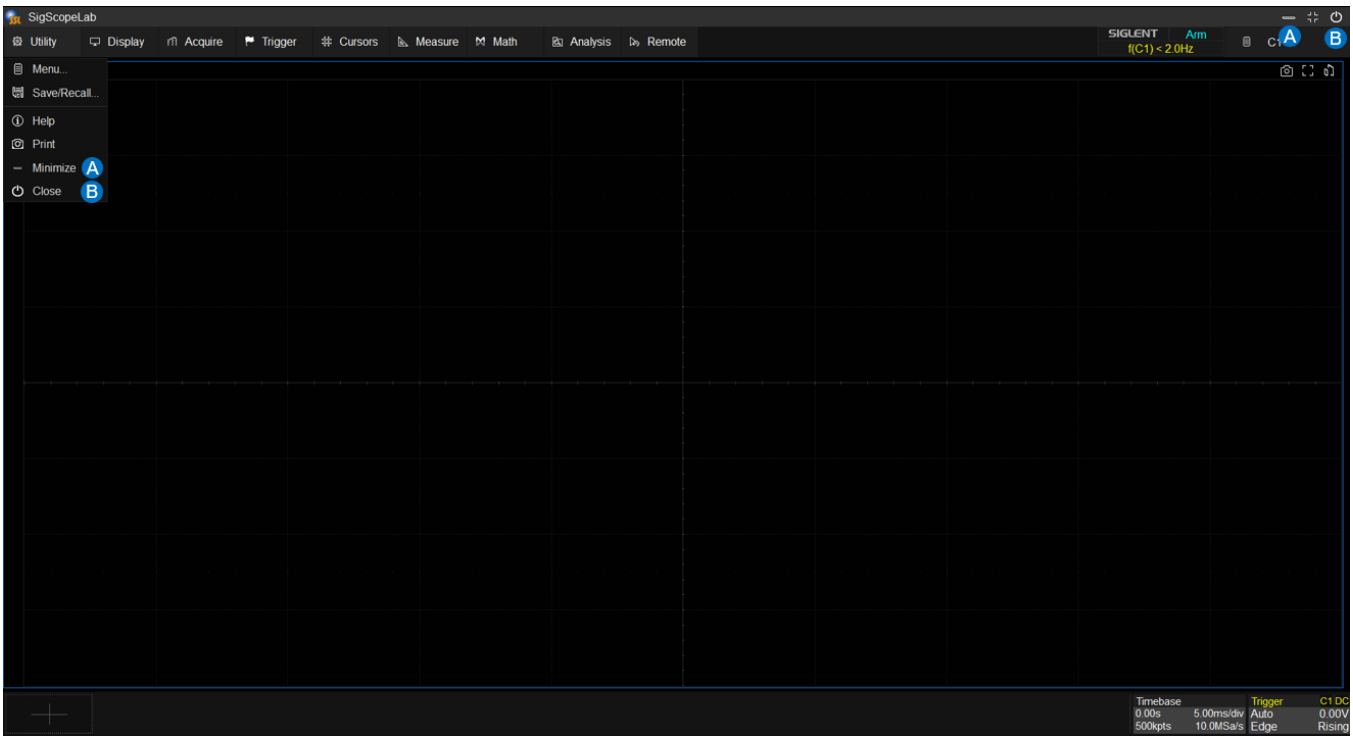
Running Software

There are multiple ways to run SigScopeLab software:

- Double click on the SigScopeLab icon on the PC desktop.
- Find SigScopeLab in the Start menu and click the icon to run it.
- Double click the icon in the installation path to run.

Quick Start

Minimize and Exit Software



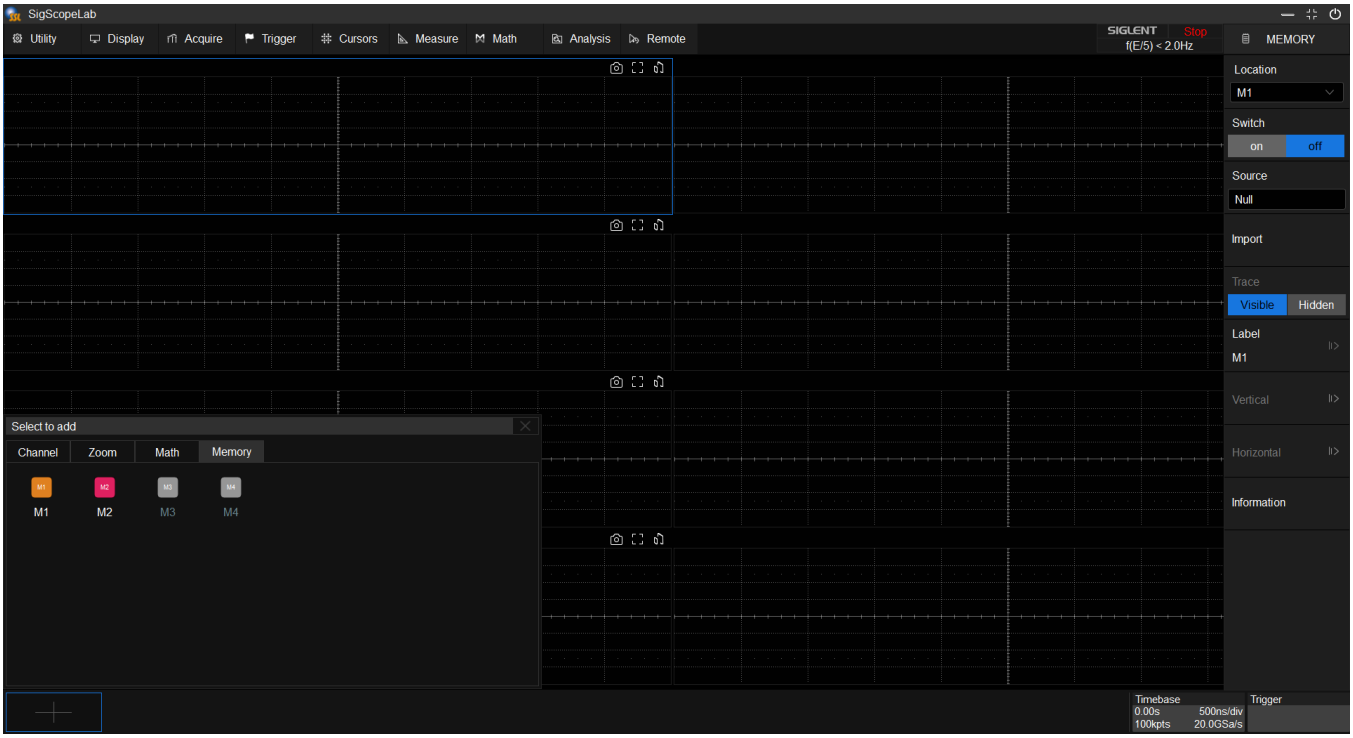
A. Software minimization

B. Exit software

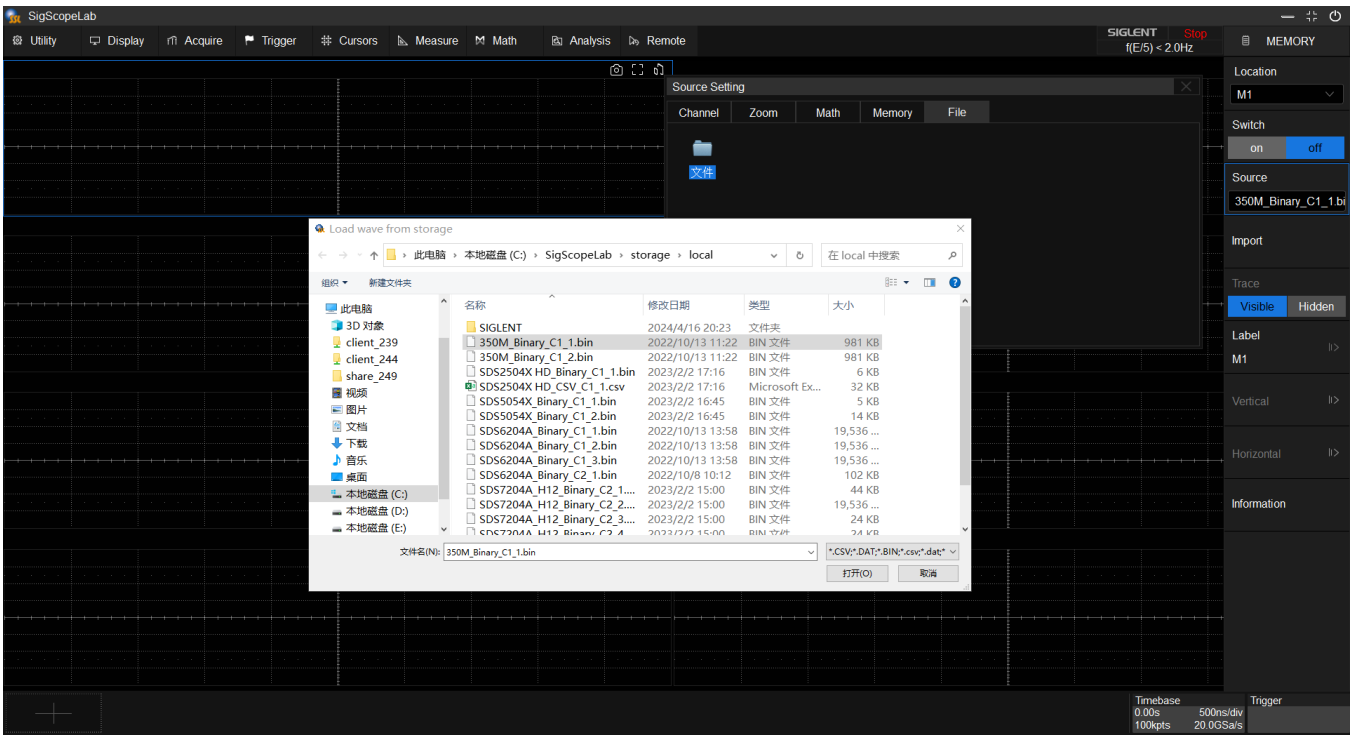
Waveform Data Offline Analysis

Firstly, export binary waveform files from any SDS-series oscilloscope and place them in any computer accessible location via a USB flash drive or network server.

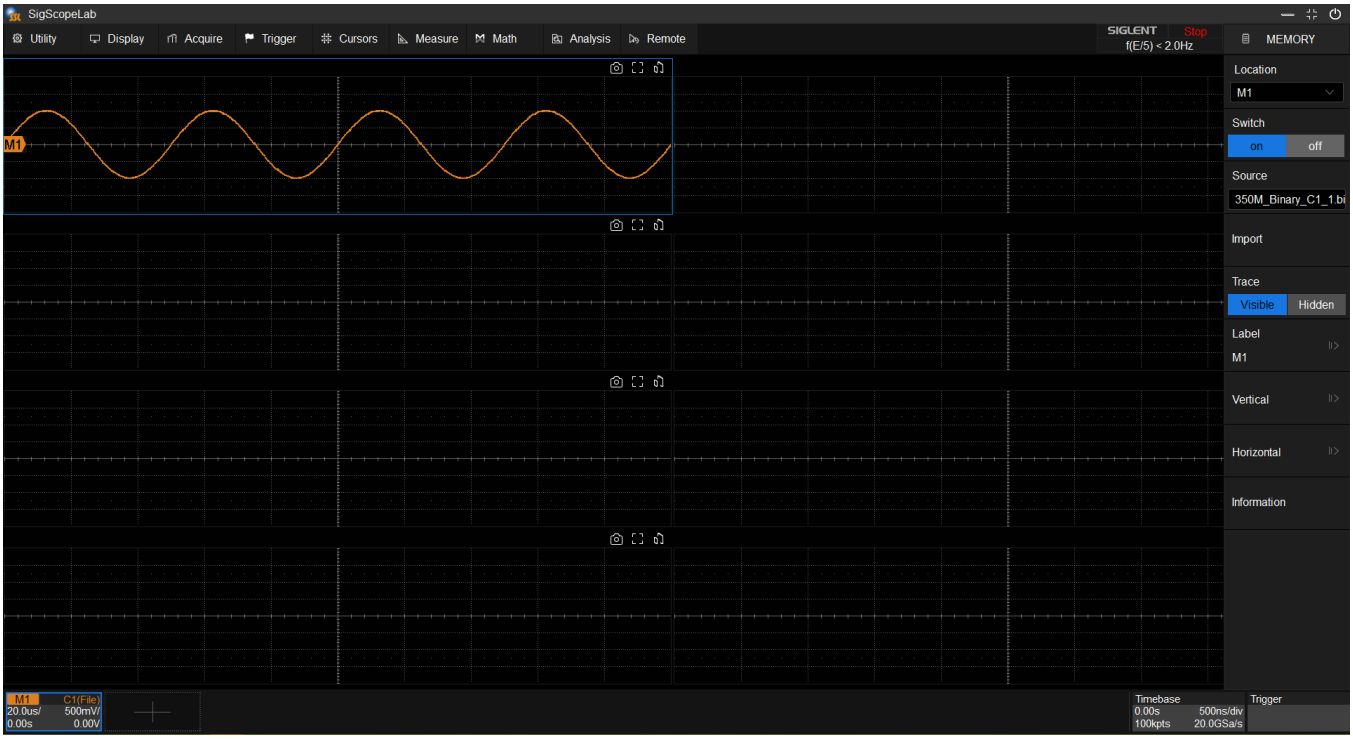
Then click on the icon + in the bottom left corner of SigScopeLab software, select any available Memory channel (M1~M2) in the pop-up source box, and the menu bar on the right side of Memory will pop up.



Click on the *source* in the right menu bar, select the *file* icon in the *file* tab in the pop-up box, and open the waveform file on the PC through the file browser. The sample files provided by the software are located in the installation path directory:" C:\SigScopeLab\storage\local\"。



Click *Import*, the imported waveform will be drawn on the screen.



Users can then perform local offline analysis on the Memory waveforms. The local analysis operation method is consistent with the oscilloscope operation. SigScopeLab supports all functions such as Math, Measurement, Cursor, Decode, Save/Recall that can run offline, and user can also adjust the multi window display effect according to their own needs.

Measurement Project Offline Analysis

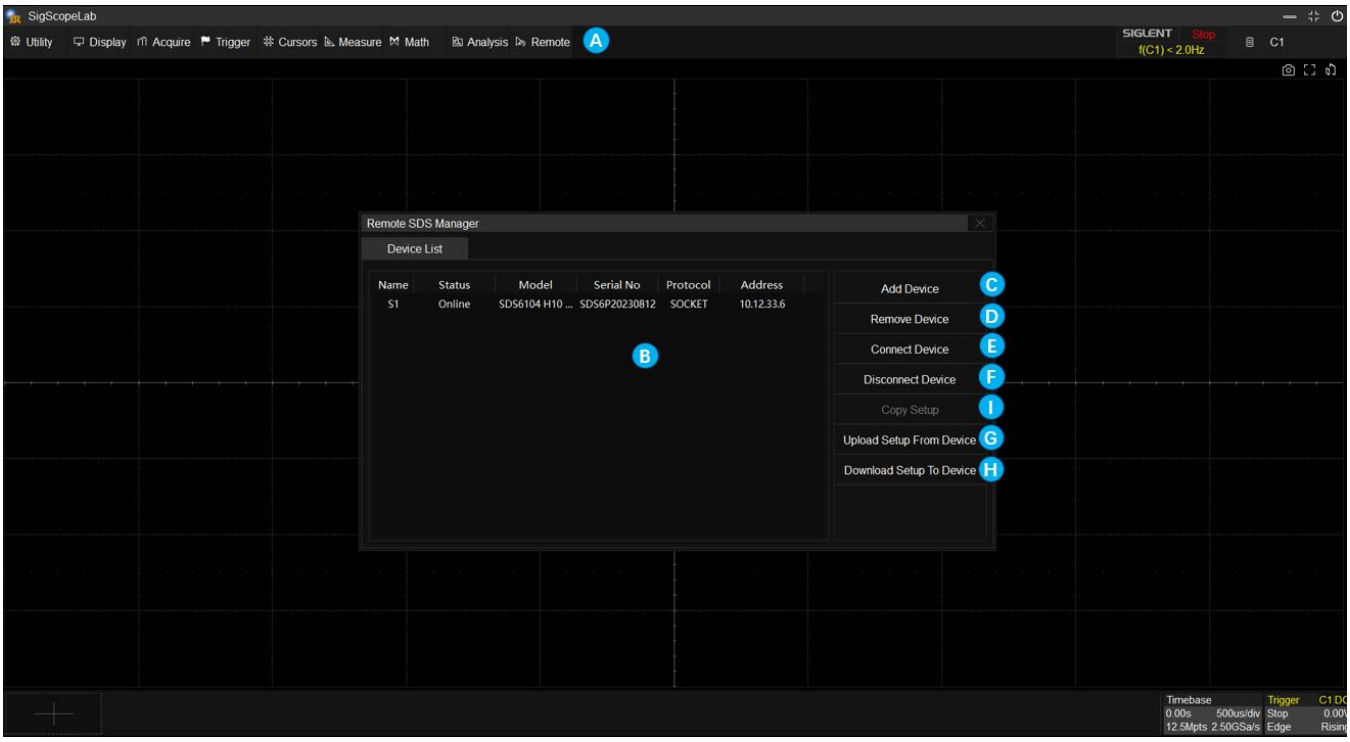
To further enhance the convenience of offline analysis, we also supports quick save and recall project. These projects enable the preservation of a comprehensive measurement environment. Upon importing a measurement project into SigScopeLab, it facilitates the complete restoration of parameters, including channels, data, and measurement configurations, thereby enabling a seamless recreation of the previous measurement scenario.

To save a project: on SigScopeLab and SDS-series oscilloscopes that support project saving, click on *Utility*>*Save/Recall…*, then select *Project* as the save type, and next open *File Manager* to specify the save path and project name (xx.spro).

To recall a project: on SigScopeLab and SDS-series oscilloscopes that support project recalling, click on

Utility>*Save/Recall…*, then select *Project* as the recall type, and next open *File Manager* to access the project file located in the project path.

Remote Oscilloscope Management



A. Remote Oscilloscope Manager

B. List of added oscilloscope information

C. Add Device – Add the oscilloscope to the device list with an initial state of -, indicating that it is not connected.

D. Remove Device – Remove the selected oscilloscope from the device list.

E. Connect Device – Switch the selected oscilloscope from an unconnected state to a connected state. After successful connection, the device status is updated to *online*, and remote control of the device takes effect.

   If a device in an *online* state does not respond (shut down or disconnected), it will switch to an *offline* state.

F. Disconnect Device – Switches the selected oscilloscope from connected state to unconnected (-) state, rendering remote control of the device ineffective.

G. Upload Setup From Device – Synchronize oscilloscope setup selected as *online* to SigScopeLab.

H. Download Setup To Device – Synchronize the setup from SigScopeLab to oscilloscope selected as *online*.

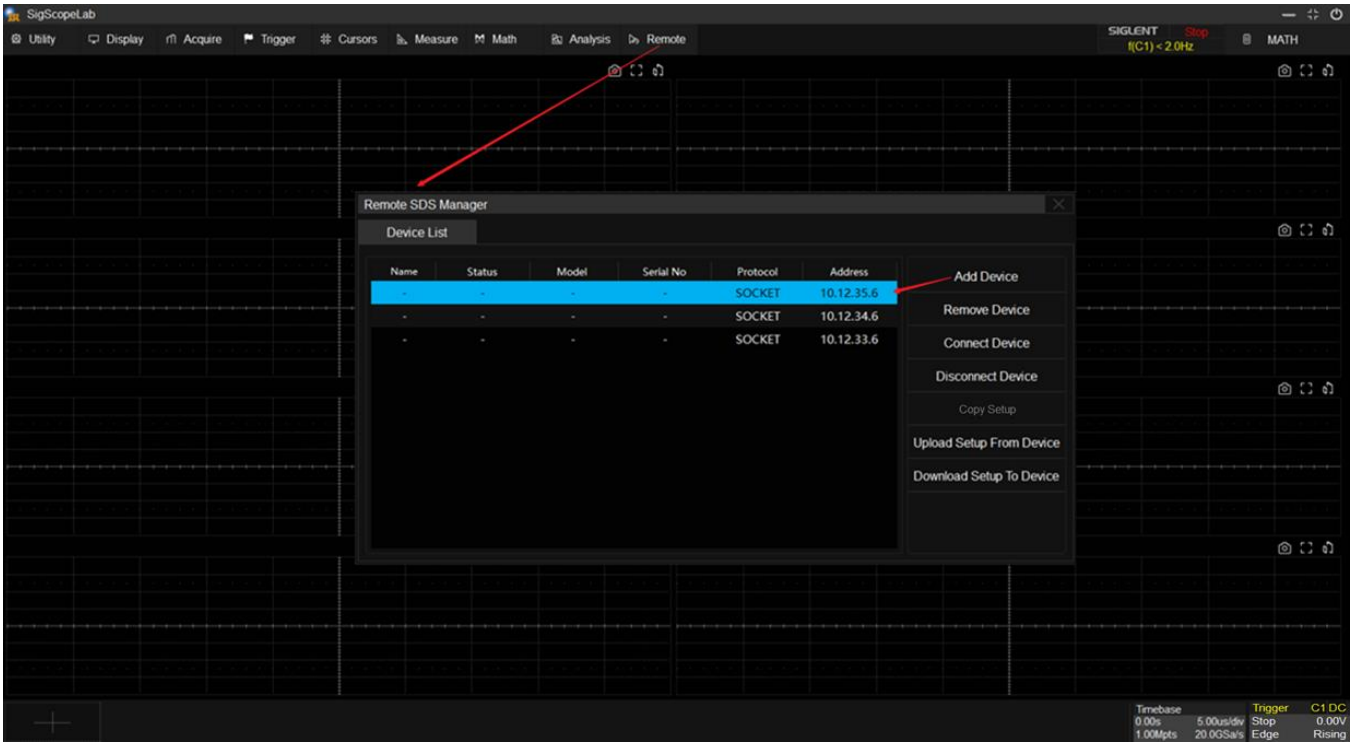
I. Copy Setup - Synchronize setup between two *online* oscilloscopes (currently not supported)

Acquire Waveform Data to PC Online for Analysis

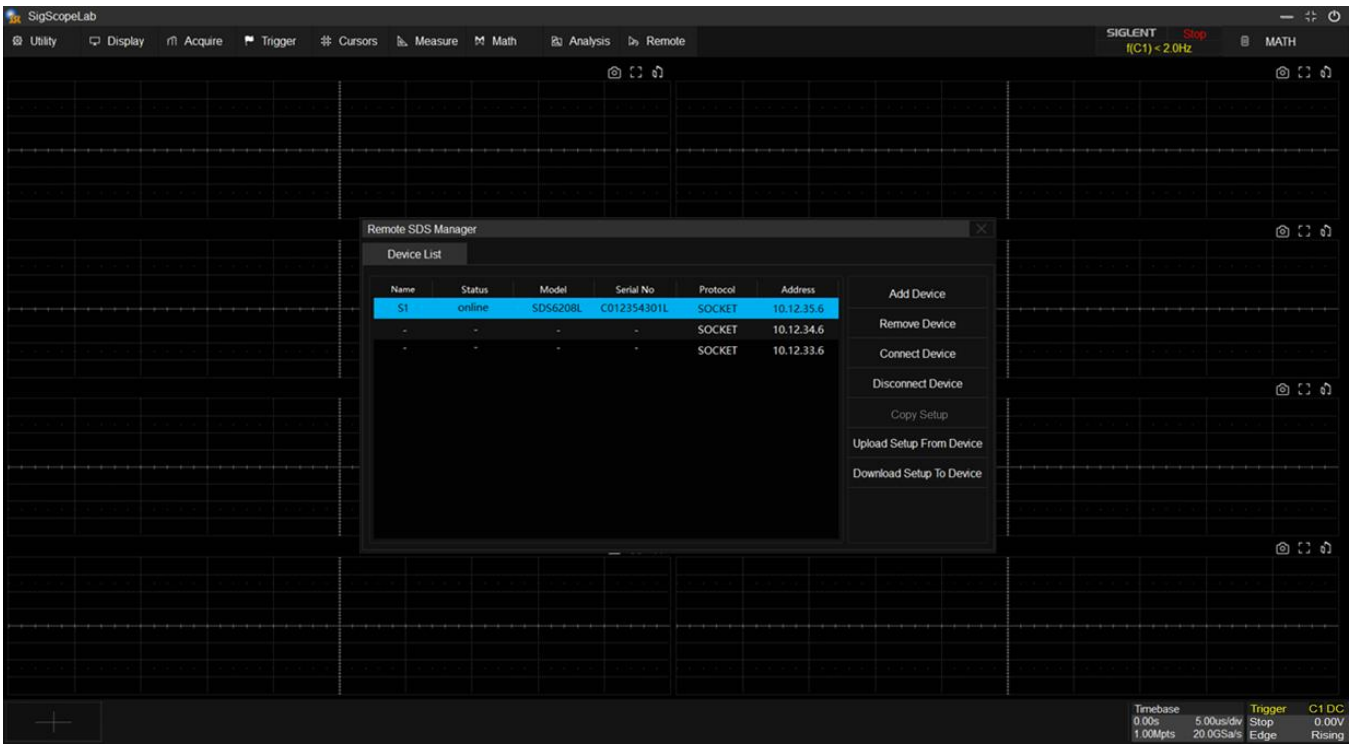
In this scenario, SigScopeLab only controls remote acquisition and does not control remote analysis and measurement. SigScopeLab fetchs waveform data from the remote device online after controlling the acquisition, and then performs local data analysis. Please refer to the following steps:

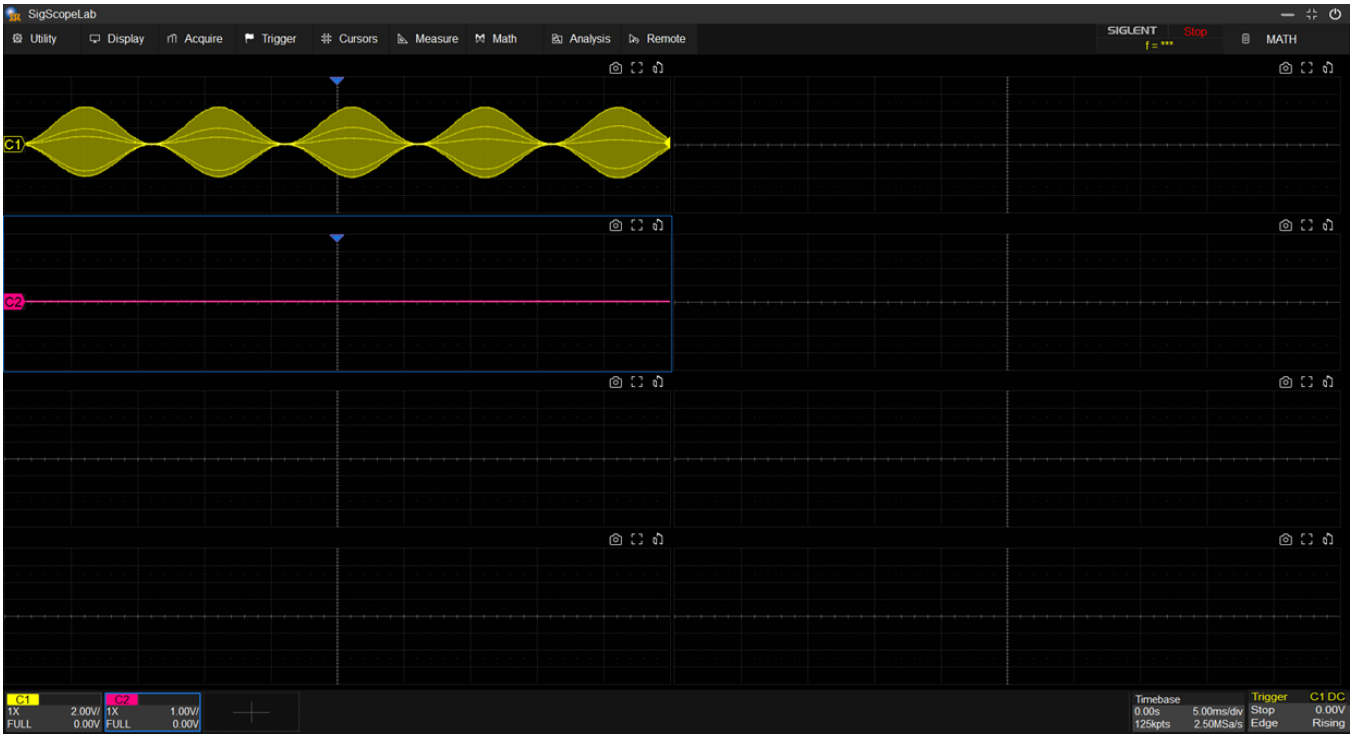
Step 1: Ensure that the network connection between the SDS device and the PC is OK, which can be determined by ping the IP address or accessing the SDS webpage.

Step 2: Click *Remote*, in the device management interface, click *Add Device* to add the IPv4 address of the SDS device that needs to be connected.



Step 3: Click to select the item of device list to be connected, then continue to click *Connect Device*. After the device status is updated to *online*, local analysis can be performed with the waveform data acquired in real time from the device.





The construction of a remote acquisition system for a single oscilloscope has been completed. Any acquire settings made by users on SigScopeLab will be synchronized to the remote device, and users can also choose to download setup to the device or upload setup to SigScopeLab.

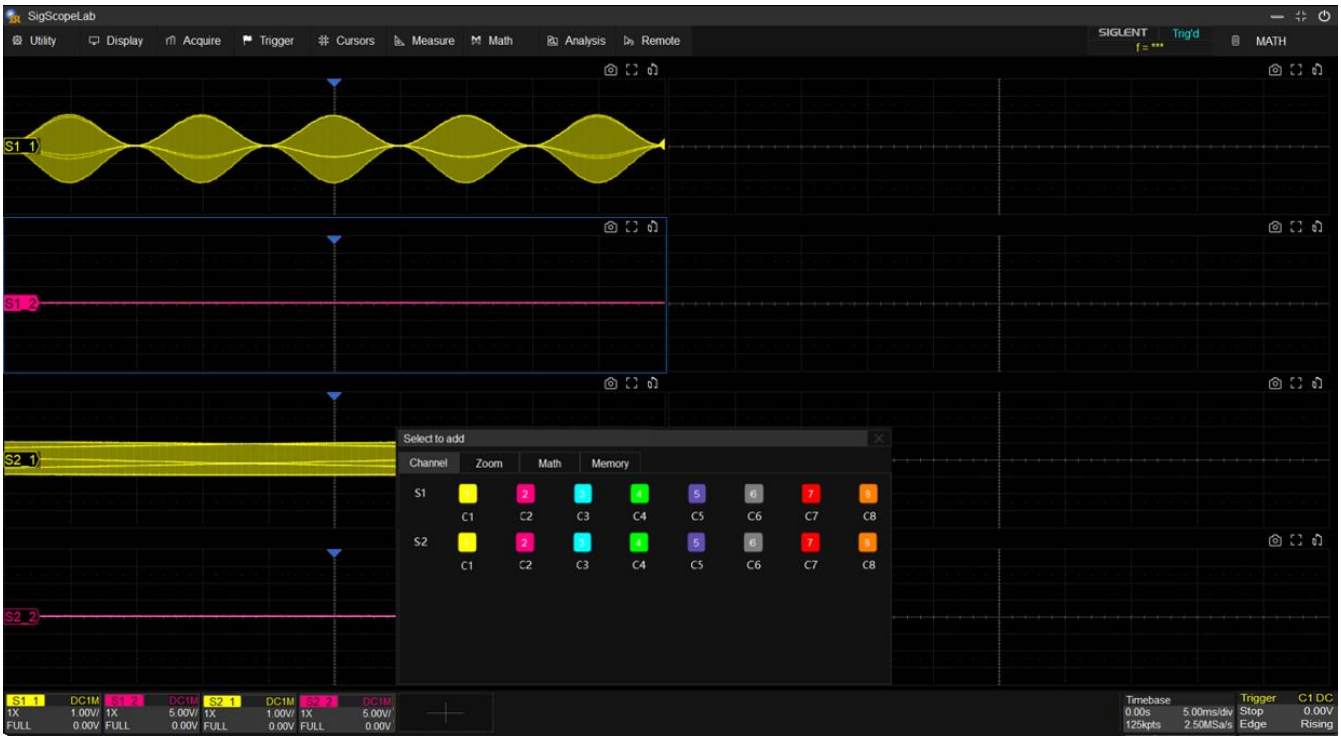
Online Multi-Oscilloscope Acquisition System

If you need to build a remote acquisition system with multiple oscilloscopes, please continue with steps 4&5. SigScopeLab supports combining multiple machines of the same model and vertical resolution into a multi oscilloscope remote acquisition system.

Step 4: Click to select another device to connect to, then continue clicking on *Connect Device* and wait for the device status to update to online.

Step 5: Click on the icon + in the bottom left corner of the software, and in the pop-up source box, you can see that the device name description has been added to distinguish the channels of different devices. Click

on the channel you want to open.



Next: Continue with analysis work, consistent with the operation of a single device. Please note that the format of the source channel is oscilloscope name+channel number, such as "S1-1".

Same Analysis and Measurement Operation as A Siglent Oscilloscope

Same platform as the SDS software, for the supported measurement and analysis functions, SigScopeLab and SDS devices have identical interaction. Multi window mode provided, where users can measure and

observe waveforms and analysis in different windows according to their needs, making it more flexible.

The SigScopeLab and Siglent touchscreen models have identical user interactions in terms of functionality, so the operation methods for each function can be found in the oscilloscope user manual, which will not be elaborated here.

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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