

# SDS7000A Series 4GHz, 12-bit High Resolution Oscilloscope Release

November 15, 2023

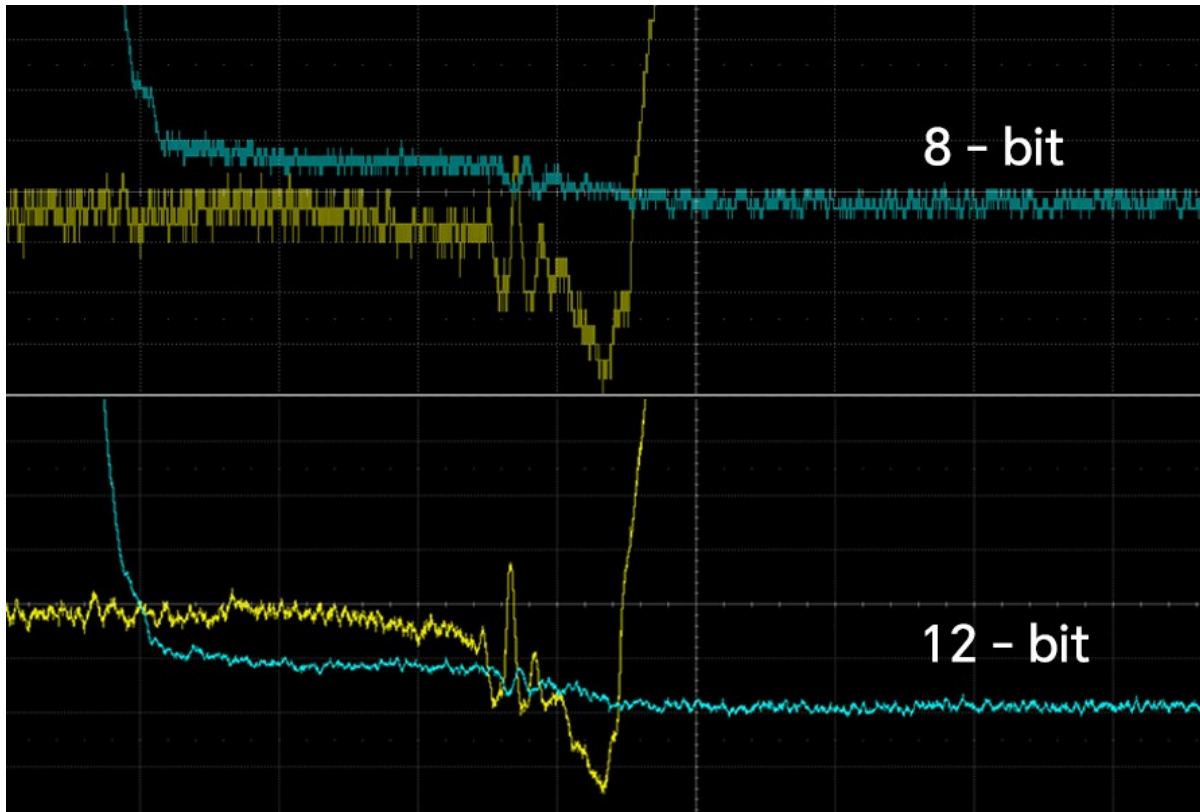
November 15, 2023, SIGLENT released a new product: SDS7000A series high resolution oscilloscope.

SDS7000A provides 4 analog channels and 16 digital channels, with bandwidths of 3GHz and 4GHz, expanding design applications to new test requirements. The sampling rate is as high as 20GSa/s, vertical resolution is 12-bit (by hardware), the storage depth is 500 Mpts/ch as standard, and 1 Gpts/ch is optional. The noise floor is as low as 220 $\mu$ Vrms at 4 GHz bandwidth. The waveform capture rate is as high as 1 million wfm/s, which can easily capture abnormal events, and has a 15.6-inch high-definition touch screen, which can quickly complete the setting and improve the user's efficiency.



## Restore the signal perfectly

The sampling rate of 20 GSa/s eliminates signal distortion. With a long storage depth of up to 1 Gpts/ch, capture complete signal sequences for up to 50 millisecond at max sampling rate without any gaps. Utilize search and navigate or history tools to analyze the entire stored trace. Each sample utilizes the 12-bit ADC, limiting the quantization error, which can help engineers to observe the details of the waveform clearly and measure the waveform accurately.



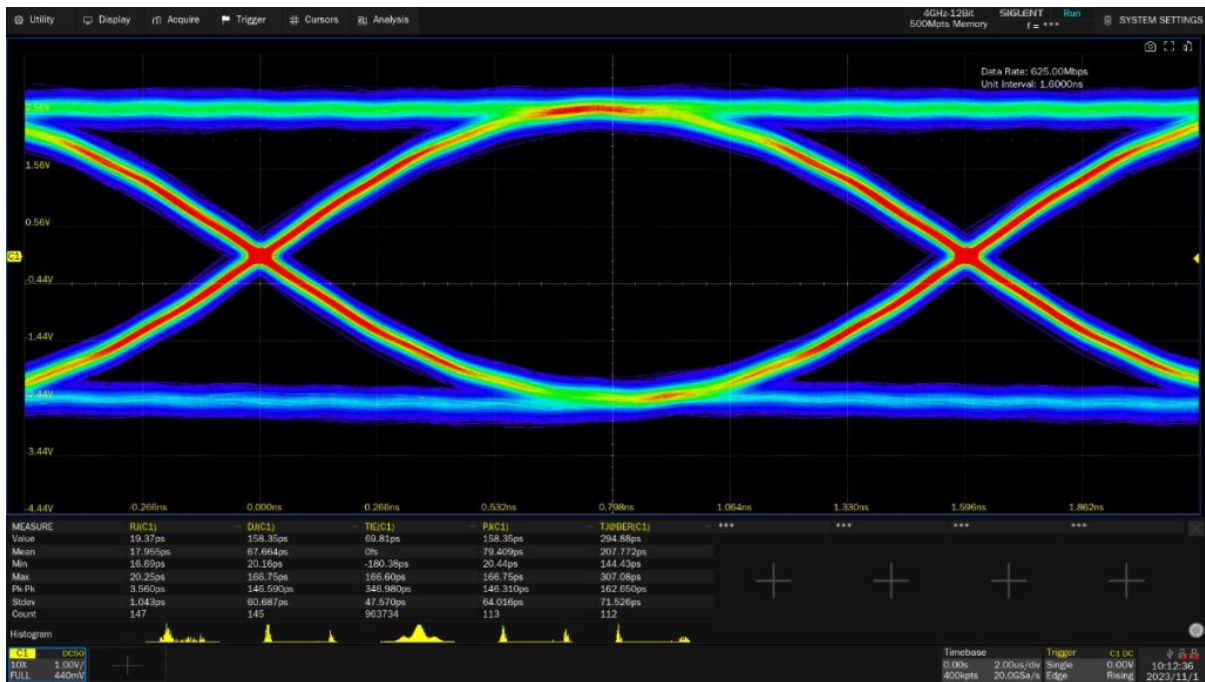
### All New High Speed Platform

The processor of SDS7000A has been fully upgraded. Utilizing an X86 processor greatly improves the response speed, measurement, operation and analysis speed of the system, and created more opportunities for future expansion of analysis functions.



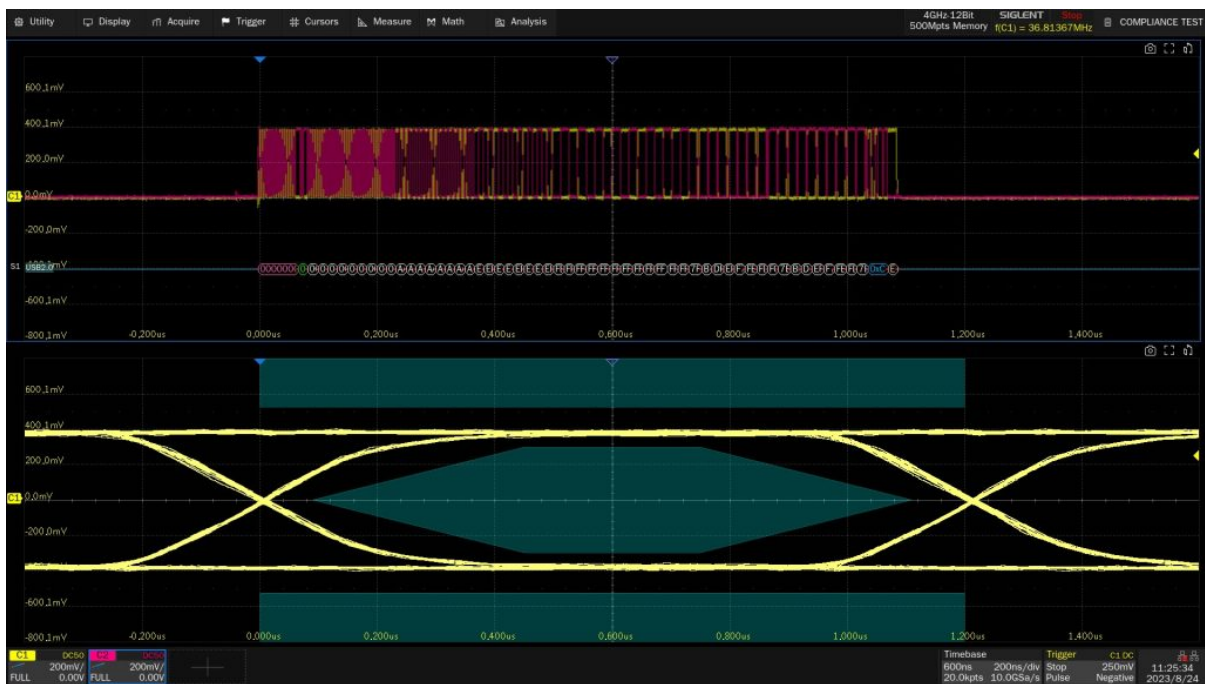
## Eye/Jitter Analysis

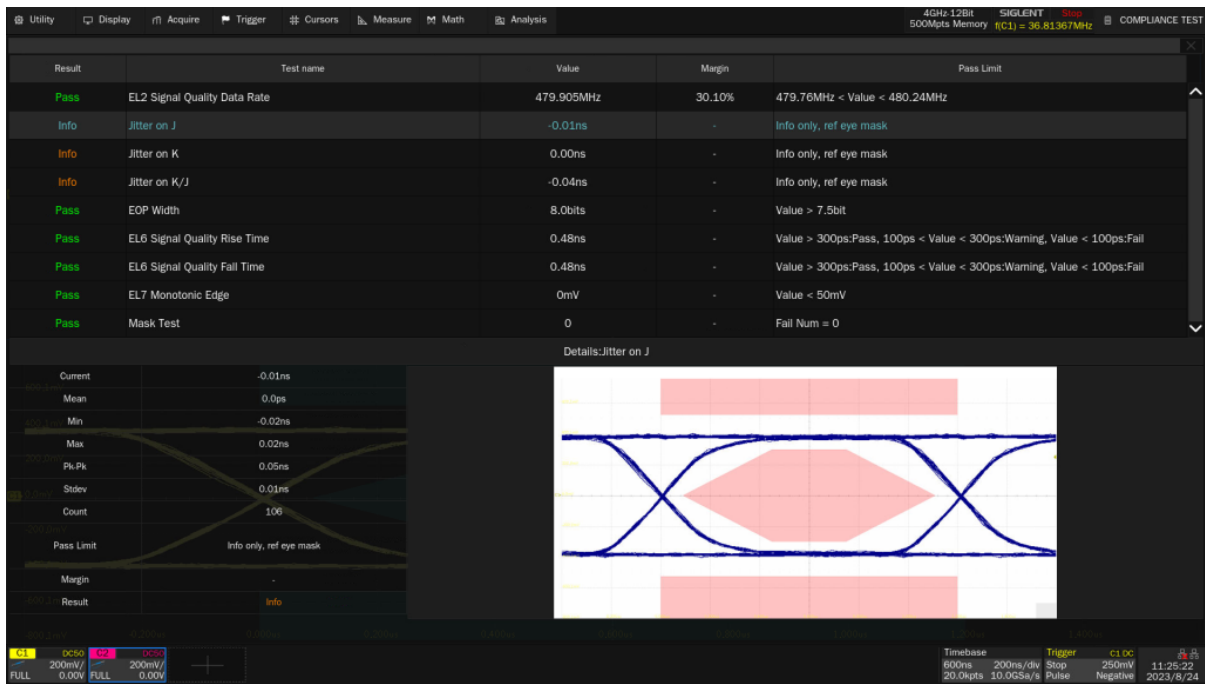
As the core of signal integrity analysis of high-speed systems, eye diagrams characterize high speed communication signals. The quality of the system can be evaluated by observing the influence of inter-symbol crosstalk, noise, and bandwidth. Jitter analysis characterizes the statistical distribution of small timing changes in a systems and is often used to debug digital communication systems and high-speed signal transmission. The SDS7000A series supports automatic parameter measurements for jitter and eye characterization. Easy setup and automatic measurements speed debugging and simplify engineering design testing.



### Protocol consistency analysis

With the SDS7000A, SIGLENT provides embedded compliance test solutions to evaluate systems versus communication standards including USB 2.0, 100base-TX, 1000base-T, 100base-T1 and 1000base-T1. Users can flexibly configure the test items, and the software can control the oscilloscope to automatically complete the test, and automatically give the signal test results (Pass/Fail) after comparing with the reference standards. This helps to identify and resolve critical signal and transmission issues quickly.





### SAP5000D active differential probe 5GHz

The SAP5000D is our highest performing active differential probe kit providing up to 5 GHz of bandwidth and low noise for detailed signal analysis. Its high input resistance and low input capacitance can ensure that the load introduced by the measurement system is minimized. SAP5000D active probe utilizes the SAPBus interface, making it suitable for oscilloscopes including the SDS5000X, SDS6000A and SDS7000A series. These probes do not need an additional external power supply and are automatically recognized by the oscilloscope.



**Additional information can be found on the [SDS7000A Web Page](#)**

#### About SIGLENT

SIGLENT TECHNOLOGIES started in 2002 with the development of their first oscilloscope. Now, the portfolio has rapidly expanded to cover many areas of general-purpose test instrumentation, including oscilloscopes, signal and function generators, digital multimeters, lab power supplies, electronic DC-Loads, spectrum analyzers, VNAs, and RF-signal generators.

With the Performance Series “A-Line” introduced in 2021, SIGLENT is advancing their technical solutions to address some of the most demanding applications. SIGLENT’s equipment has always combined innovative features and functionality with a strong commitment to quality and performance. SIGLENT’s product quality and environmental management programs are certified to ISO 9001:2000 and ISO 14001:2004.



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