

All NEW HiRES Scope SDS3000X HD & SDS1000X HD

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All NEW Product new products release

On 2023/9/26, Siglent announced the release of two high-resolution oscilloscopes, **SDS3000X HD** and **SDS1000X HD** which have been known to provide more realistic waveforms with 4096 quantization levels, as well as more accurate waveform measurements.

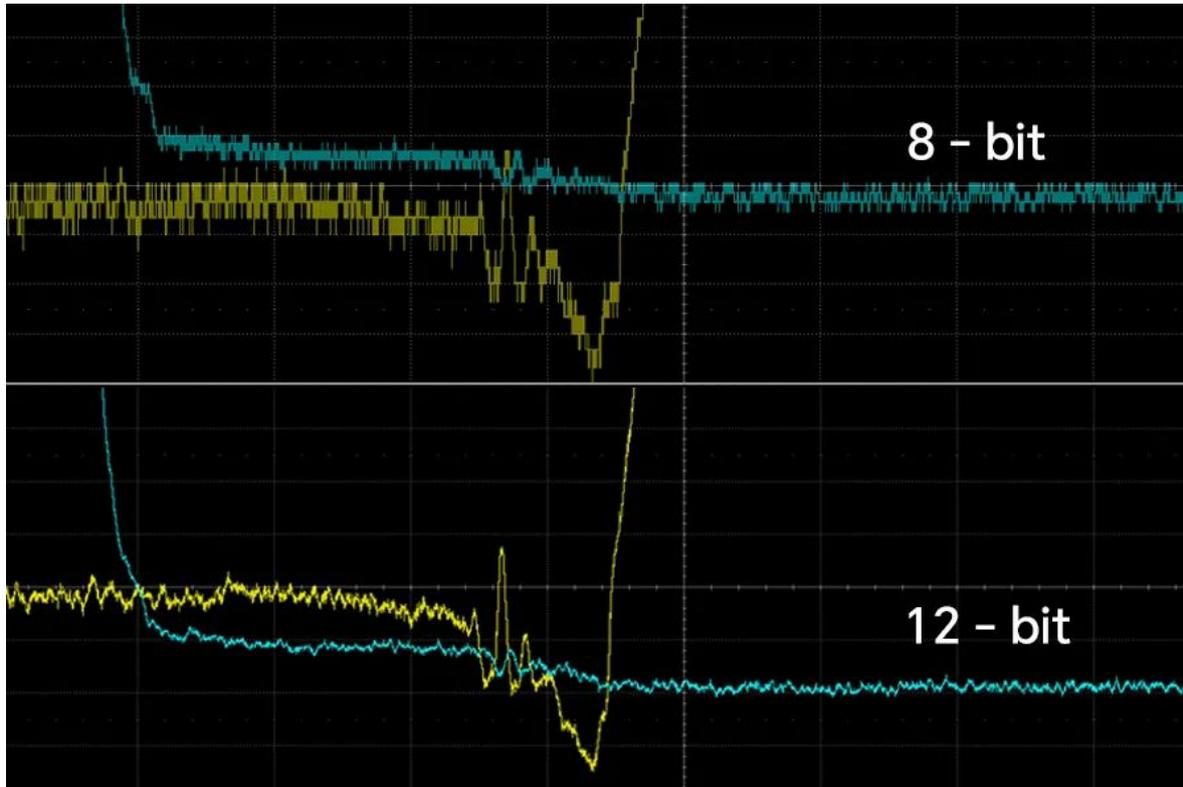
The products further strengthens Siglent's industry-leading position of wideband HiRes oscilloscopes, providing engineers 12-bit oscilloscopes with bandwidths ranging from 70 MHz to 4 GHz.



12-bit ADC——Capturing more Details

SDS3000X HD/SDS1000X HD series oscilloscopes all adopt 12-bit ADCs with quantization levels up to 4,096. The ERES mode can enhance the resolution to 16-bit, which, combined with the vertical and horizontal zoom functions, enables users to observe the details of the waveforms in a more detailed and clearer manner.

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ENOB – Effective number of Bits

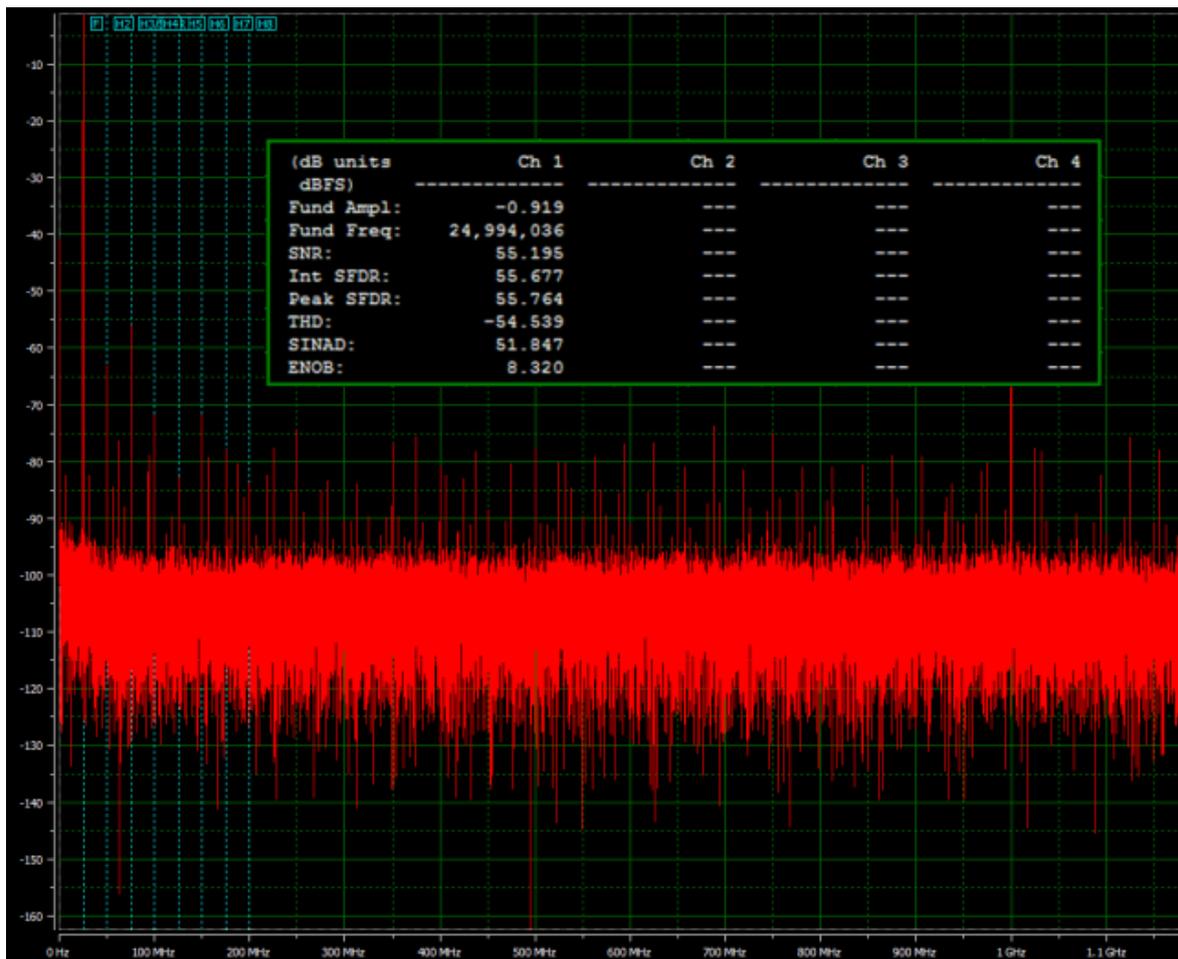
As high-speed ADCs perform data acquisition, because of noise and distortion, the ADC can not achieve its nominal bit performance.

In general the higher the oscilloscope bandwidth, the higher the internal noise.

As high-frequency noise may enter the high-bandwidth oscilloscope.

While the ADC is only one part of the system and not operational independently, a more meaningful parameter ENOB should be used to evaluate the system's performance.

The **SDS1000X HD has an ENOB of 8.4 bits**, **SDS3000X HD has 8.3 to 8.6 bits**, with relatively small time error and frequency variance, and low broadband noise, ensuring accurate measurements.



1GHz Bandwidth
SDS3000X HD ENOB up to 8.3-bit

All new SDS3000X HD

The **SDS3000X HD** has a max bandwidth of 1GHz/12bit, 16-bit resolution in high-resolution mode.

4GSa/s and 400Mpts/ch allow waveforms to be acquired over a long period of time without distortion, and 890,000 wfm/s can be captured in Sequence mode.

The SDS3000X HD provides not only the basic functions like search and navigation, frequency meter, multimeter, history mode, and zone triggering, but also advanced functions such as Power analysis, Bode plot, mixed-signal analysis.

All the above functions can be used in a wide range of fields, including third-generation semiconductors and high-precision power supplies.

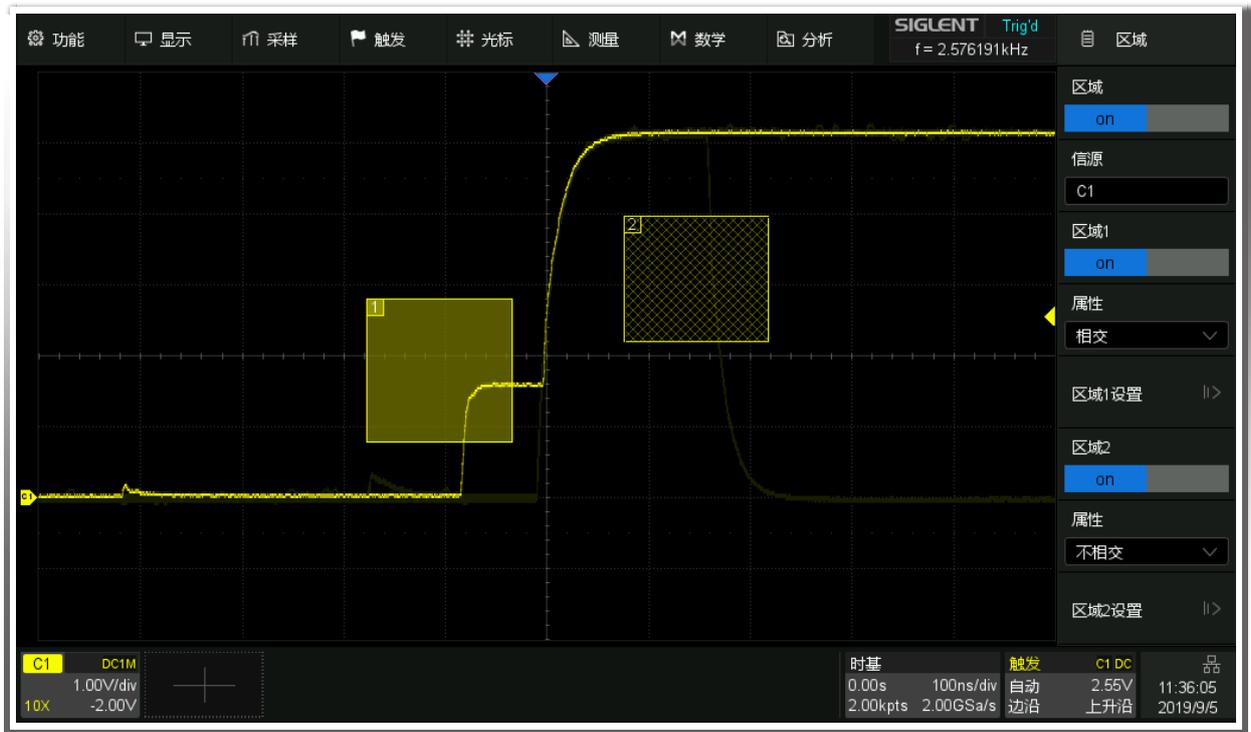


Rich Trigger Functions

SDS3000X HD Series oscilloscopes offer a wide range of triggers, including edge, interval, timeout, video, serial bus, and area triggers.

One of the above, the Area triggers are different from traditional triggers in that they can be used for episodic signals with unclear parameter characteristics, and can be captured by simply creating and defining an area with a mouse cursor or touch display.

Triggering supports including I2C, SPI, CAN, CAN FD, FlexRay, I2S, MIL-STD-1553B, and SENT buses. Providing solutions for embedded, automotive and computer serial buses.



Zone Triggering For Signals of interest

Power Analysis

The **SDS3000X HD** is equipped with the optional function of Power Analysis, together with Siglent's voltage probes (DPB5000 series) and current probes (CP6000 series), **SDS3000X HD** can accurately analyze 12 parameters such as power quality, current harmonics, inrush currents, transient response, and MOSFET Safe Operating Areas (SOAs), etc.,

SDS3000X HD is therefore able:

To enhance power supply efficiency by minimizing switching losses.

To assess components' operating stability by statistically analyzing probability of transient parameters exceeding the SOA.



Power Parameters Acquired by Power Analysis

SDS1000X HD UPGRADES!

On 2023/9/26, in response to the needs and expectation of customers, the Siglent Technology has upgraded SDS1000X HD for both software and hardware.

Being a oscilloscope deeply popular among engineers, electronics enthusiasts, educators, **G8G%\$\$\$L' <8** improves and upgrades its features while still keeps cost-effective and feature-rich.

Many features are enhanced to a certain extent:

1GSa/s to 2GSa/s, resulting in more realistic waveforms and measurement.

the waveform capture rate increased from 400,000 to 500,000 wfm/s in Sequence Mode.

the interval between triggers has been decreased from 2.5 to 2μs, resulting in a higher probability of capturing rare events.

Besides, some more other functions are upgraded while not mentioned here.



Serial bus triggering and decoding

All New Features, on the basis of **SDS1000X HD**, **IIC**、**SPI**、**UART**、**CAN**、**LIN**、**FlexRay** (decoder only) and **CAN FD** (decoder only) are newly added as standard option。

FlexRay is a high-speed, deterministic and fault-tolerant bus technology for automobiles that combines event-triggered and time-triggered features for high network utilization with system flexibility; CAN FD protocol, as an emerging automotive network technology, offers low-cost, high reliability, and high transmission rates, and is extensively used in vehicle and security systems.



CAN FD decoding is widely used in power, automation, security...etc.

Siglent's is now providing oscilloscope solutions covering from 70MHz to 4GHz, and multiple exclusive test solutions, widely suitable for 3rd Gen Semiconductor, Hi-Res Power, Medical, Vehicle Electronics.

In the market of wideband-high-Resolution, Siglent will keep staying ahead of the industry!



