

SIGLENT Launches New 8 GHz Digital Oscilloscope

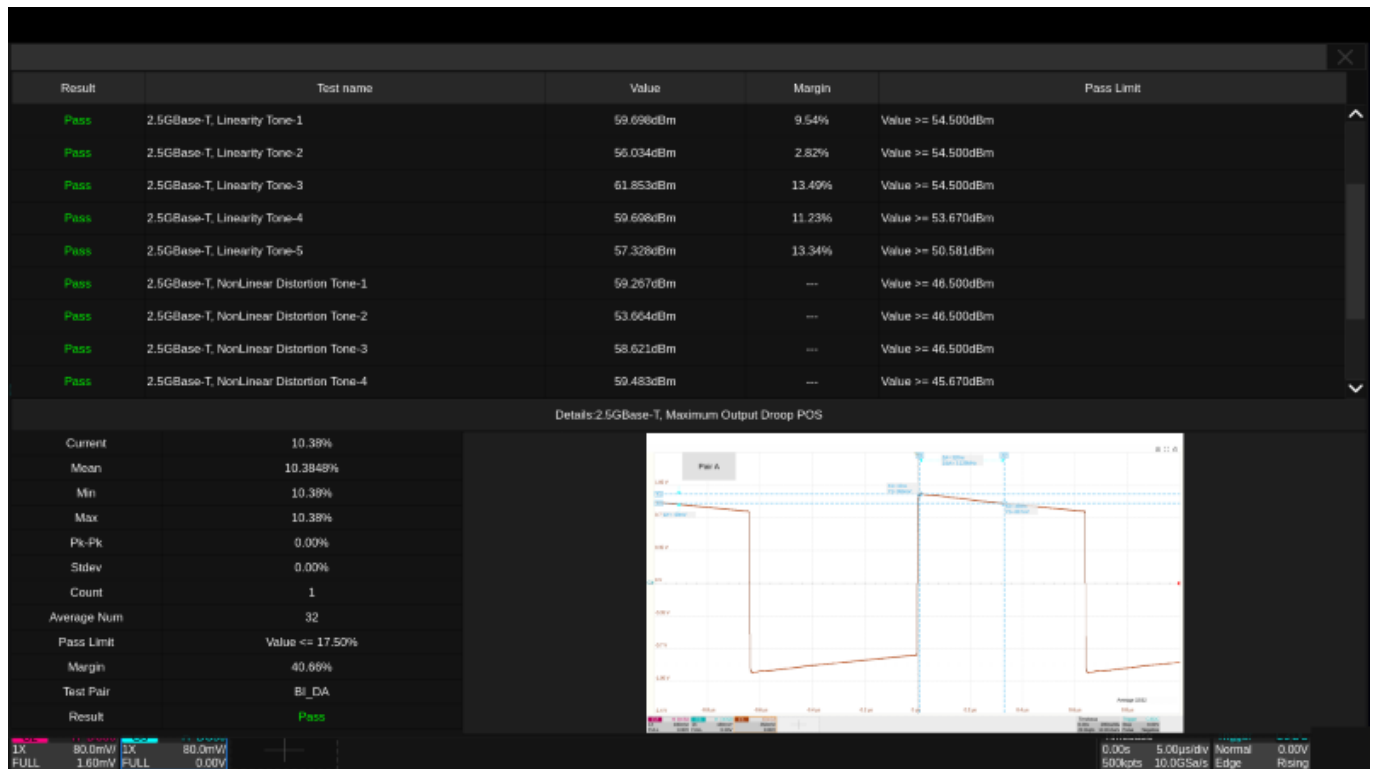
July 10, 2025

July 10, 2025 — SIGLENT has unveiled the enhanced SDS7000A/AP models, building on the success of its SDS7000A high-resolution digital oscilloscope series. The new models now feature bandwidth up to 8 GHz, a high-resolution 12-bit ADC, maximum 20 GSa/s sampling rate per channel, and a maximum memory depth of 2 Gpts/ch. New capabilities include 2.5G/5G/10GBase-T Ethernet Electrical Compliance Testing, MIPI-DPHY protocol analysis, Real-Time Spectrum Analysis (RTSA), Digital Down-Conversion (DDC), and upgraded CAN XL decoding.



2.5G/5G/10GBase-T Ethernet Electrical Compliance Testing

The upgraded SDS7000A series now supports full electrical compliance testing for 2.5G/5G/10GBase-T Ethernet, including critical parameters such as output drop, transmitter timing jitter, power spectral density, and MDI return loss. These features help ensure devices meet IEEE standards. Engineers can automatically generate IEEE 802.3-2018-compliant compliance test reports in HTML, XML, or PDF formats, including pass/fail status, threshold values, measured results, margin analysis, and waveform displays. This visually rich and data-driven reporting streamlines troubleshooting and product optimization.



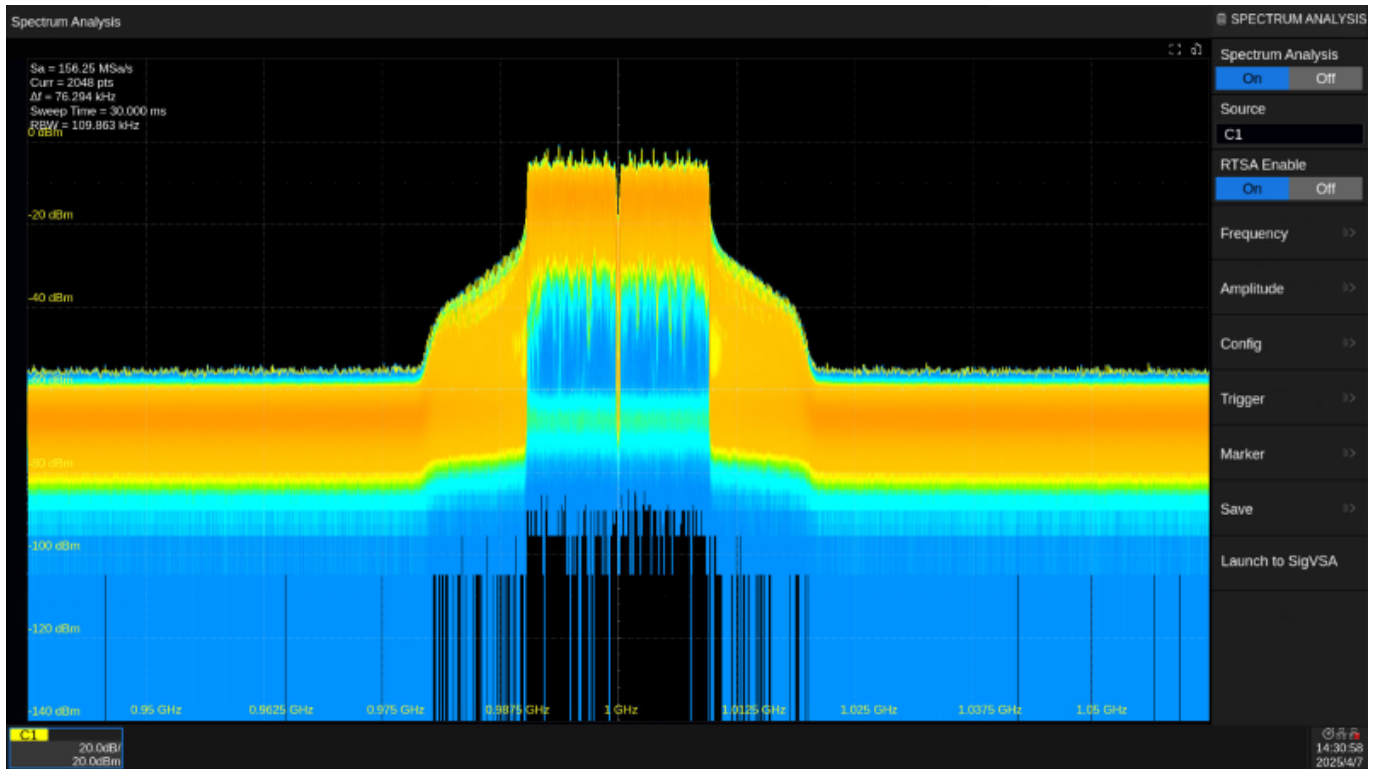
MIPI-DPHY Compliance Testing

The SDS7000A series also supports MIPI-DPHY compliance analysis based on the CTS 1.0 specification. The oscilloscope captures HS-TX and LP-TX signaling on both data and clock lanes using its 12-bit ADC and ≥ 4 GHz bandwidth, combined with 5 GHz active differential probes. Eye diagram functionality is integrated for evaluating signal integrity, with automated configuration and report generation.



Real-Time Spectrum Analysis (RTSA)

Equipped with RTSA and digital down-conversion (DDC) technologies, the SDS7000A supports up to 1 GHz Real-Time analysis bandwidth. Advanced display modes include density plots, spectrum monitoring, and 3D visualizations. Compared to traditional superheterodyne spectrum analyzers, the SDS7000A offers higher bandwidth and faster signal acquisition — ideal for capturing transient events in 5G NR, 4G LTE, and Wi-Fi.



Integrated Vector Signal Analysis (SigVSA)

The SDS7000A features SigVSA vector signal analysis software, allowing direct signal analysis from DDC output without external equipment. It supports demodulation of signal types ranging from basic BPSK to complex wideband signals, such as those in 4G LTE, 5G NR, IEEE 802.11b/a/g/n/ac/ax/be standards, and 4096QAM. Both real-time and offline waveform analysis are supported, providing flexibility for laboratory and post-processing workflows.



Enhanced CAN XL Decoding Support

The SDS7000A series oscilloscopes provide comprehensive CAN protocol testing capabilities, with full support for CAN XL decoding in addition to CAN/CAN FD, enabling seamless coverage of automotive bus systems from low-speed diagnostics (10 kbps) to high-speed domain control (20 Mbps). The instrument supports both low-power and high-speed modes, making it well-suited for automotive and industrial control applications. The oscilloscope features 16 total channels (4 analog and 12 digital) for synchronized decoding and comprehensive fault analysis, including collision detection and signal reflections.



The SDS7000A also supports Wake-on-LAN (WoL), enabling users to remotely power up the instrument via Ethernet — ideal for automated test environments where physical access is limited.

With these cutting-edge features, the SDS7000A/AP oscilloscopes provide a powerful and versatile platform for engineers in data centers, wireless communications, consumer electronics, and automotive applications.



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