# SIGLENT Launches SDG3000X Arbitrary Waveform Generator for Advanced Semiconductor Testing

**September 25, 2025**

In response to the increasing demands of modern electronic testing—from high-speed communication systems to power semiconductor characterization—SIGLENT has introduced the **SDG3000X Series Arbitrary Waveform Generator**. Featuring high sampling rates, deep memory, and advanced EasyPulse and TrueArb technologies, the SDG3000X delivers precise, low-jitter signal generation for complex test scenarios. Designed for both flexibility and performance, it addresses the need for reliable instrumentation in today's evolving test environments.


September 25(th)—SIGLENT launches the next-generation SDG3000X Series Arbitrary Waveform Generator. Designed for high fidelity and high precision signal generation, SDG3000X series offers up to 200 MHz output frequency, 40 Mpts arbitrary waveform length per channel, 16-bit vertical resolution and a maximum sampling rate of 1.2 GSa/s. Featuring a 7-inch capacitive touchscreen, an intuitive interface, and robust signal generation capabilities, the SDG3000X is well-suited for applications in communications, semiconductors, new energy technologies, and academic research.

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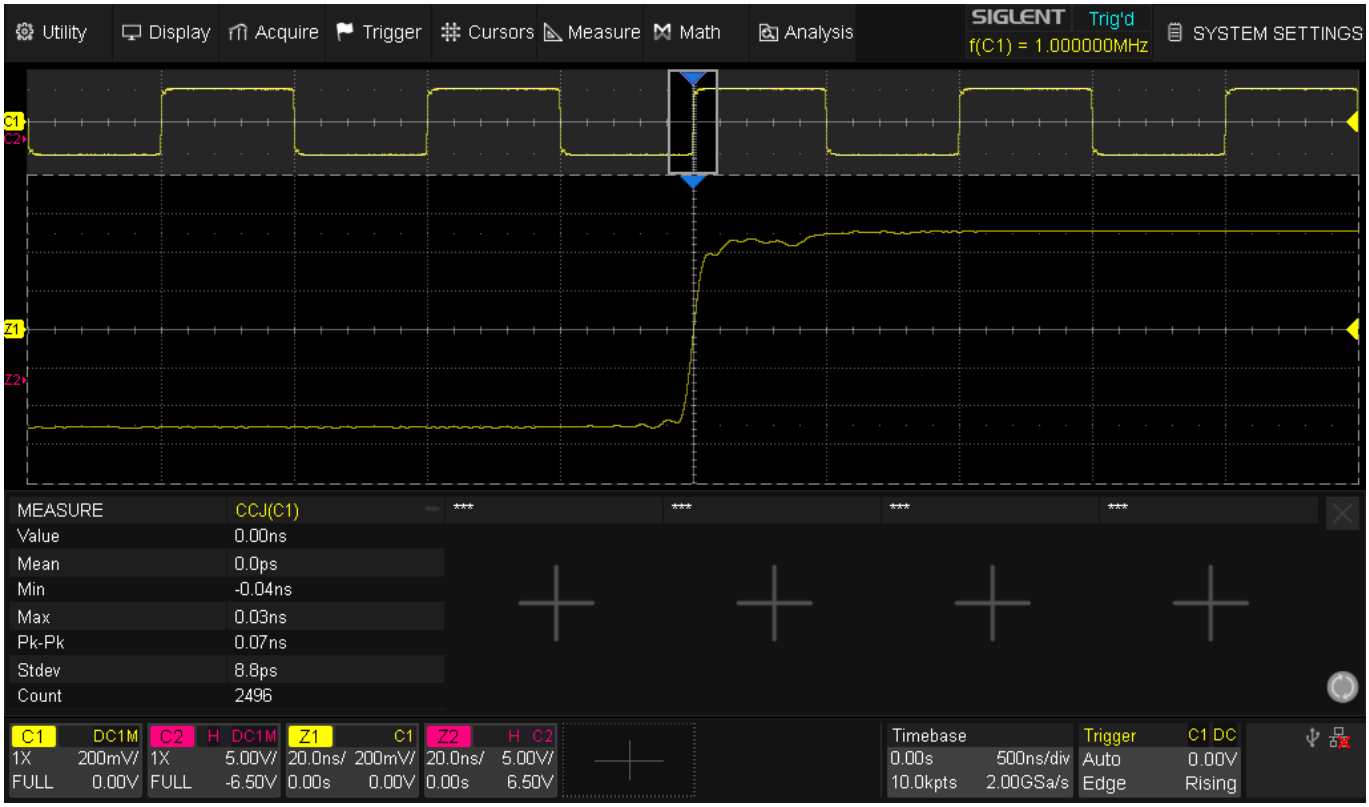
### High-Fidelity Signal Generation and Precision Pulse Output

The SDG3000X incorporates EasyPulse and TrueArb technologies to set a new benchmark for signal generation accuracy, which significantly improve upon the limitations of traditional DDS (Direct Digital Synthesis) waveform generation.

EasyPulse is optimized for pulse signal generation. It is capable of producing pulses as narrow as 8 ns with fast rising/falling edges that remain stable across frequency variations. It allows for wide-ranging, fine-grained adjustments of edge timing and pulse width, making it ideal tool for generating high-precision pulse signals.




TrueArb enables point-by-point waveform generation across a sampling range of 10 mSa/s to 600 MSa/s, maintaining waveform integrity while delivering ultra-low jitter (as low as 150 ps) and total harmonic distortion (THD) below 0.075%, ensuring superior signal fidelity.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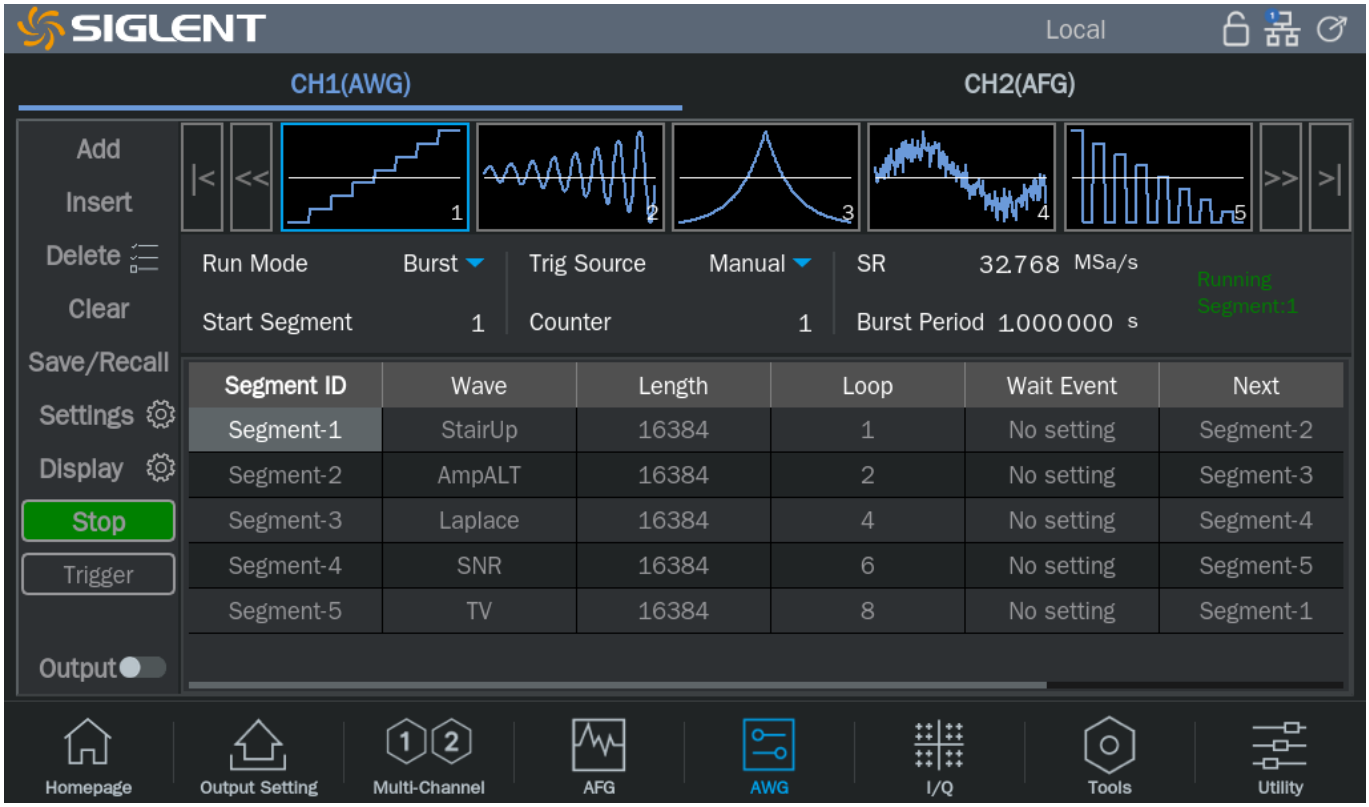
### Advanced Arbitrary and Complex Signal Generation

With 196 built-in arbitrary waveforms and a memory depth of up to 40 Mpts per channel, the SDG3000X provides the capacity to store and accurately reproduce complex signals. It also features a flexible sequence mode, allowing users to define playback order and loop counts for each waveform segment—ideal for custom and repetitive test scenarios.




It supports PRBS signal output up to 120 Mbps, baseband and IF IQ signal generation with symbol rates from 250 to 50 MSymb/s, and a wide range of modulation types including AM, DSB-SC, FM, PM, FSK, ASK, PSK, and PWM. With built-in Sweep and Burst modes, the SDG3000X delivers comprehensive support across a variety of test environments—from education and R&D to industrial power device testing.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**Double-Pulse Testing for Power Semiconductors**

Double-pulse testing is critical in analyzing the dynamic behavior of power semiconductor devices such as IGBTs and SiC MOSFETs, particularly for evaluating switching losses and conduction characteristics. The SDG3000X offers an ideal platform for this application.

With channel tracking and phase synchronization, users can precisely control pulse widths and timing intervals to simulate realistic switching behavior. Combined with remote control via USB/LAN, and oscilloscope synchronization, the SDG3000X simplifies the creation of automated test systems—enhancing both testing efficiency and data reliability.

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**Intelligent User Experience**

Equipped with a 7-inch touchscreen, the SDG3000X allows intuitive parameter settings and signal viewing. It supports MATLAB and Python script import and oscilloscope linkage for automatic calibration. A built-in high-precision frequency counter, along with multiple communication interfaces such as LAN, USB, and GPIB, and a built-in WebServer, ensures easy remote access and synchronization across multiple devices—streamlining workflows and boosting productivity.

## Conclusion

With the launch of the SDG3000X Series, SIGLENT delivers a more complete, high-performance signal generation solution. Combining high fidelity, advanced technologies like EasyPulse and TrueArb, versatile applications, and user-friendly interface, the SDG3000X is designed to address the complex requirements of contemporary testing environments across sectors including communications, semiconductor fabrication, renewable energy, and education.

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