

SIGLENT SNA6000A Fuses Precision, Performance and Versatility for Future Network

September 09, 2024



The rapid development of radio technologies increases the need for high-performance measurement technology. The new SNA6000A VNA series from Siglent meets these requirements with impressive specifications and numerous useful, powerful functions. The series contains a total of eight models, which are available in bandwidths of 13.5 GHz and 26.5 GHz. Both a 2-port and a 4-port model are available for each bandwidth. All models are available in both a standard version and an extended version with Direct Receiver Access (DRA).

Measurement Capability

High dynamics enable more precise and reliable measurements, which is of great importance in research, development and production. The SNA6000A impresses with a dynamic range of over 135 dB, which makes it ideal for the detailed analysis of weak signals, even when they occur alongside stronger signals. This makes the analyzer ideal for measuring filters with low insertion loss and high stopband attenuation. In addition, high dynamics help to minimize signal distortion, which improves signal integrity. It also increases calibration accuracy, especially in scenarios where external influences such as cables or adapters must be minimized.

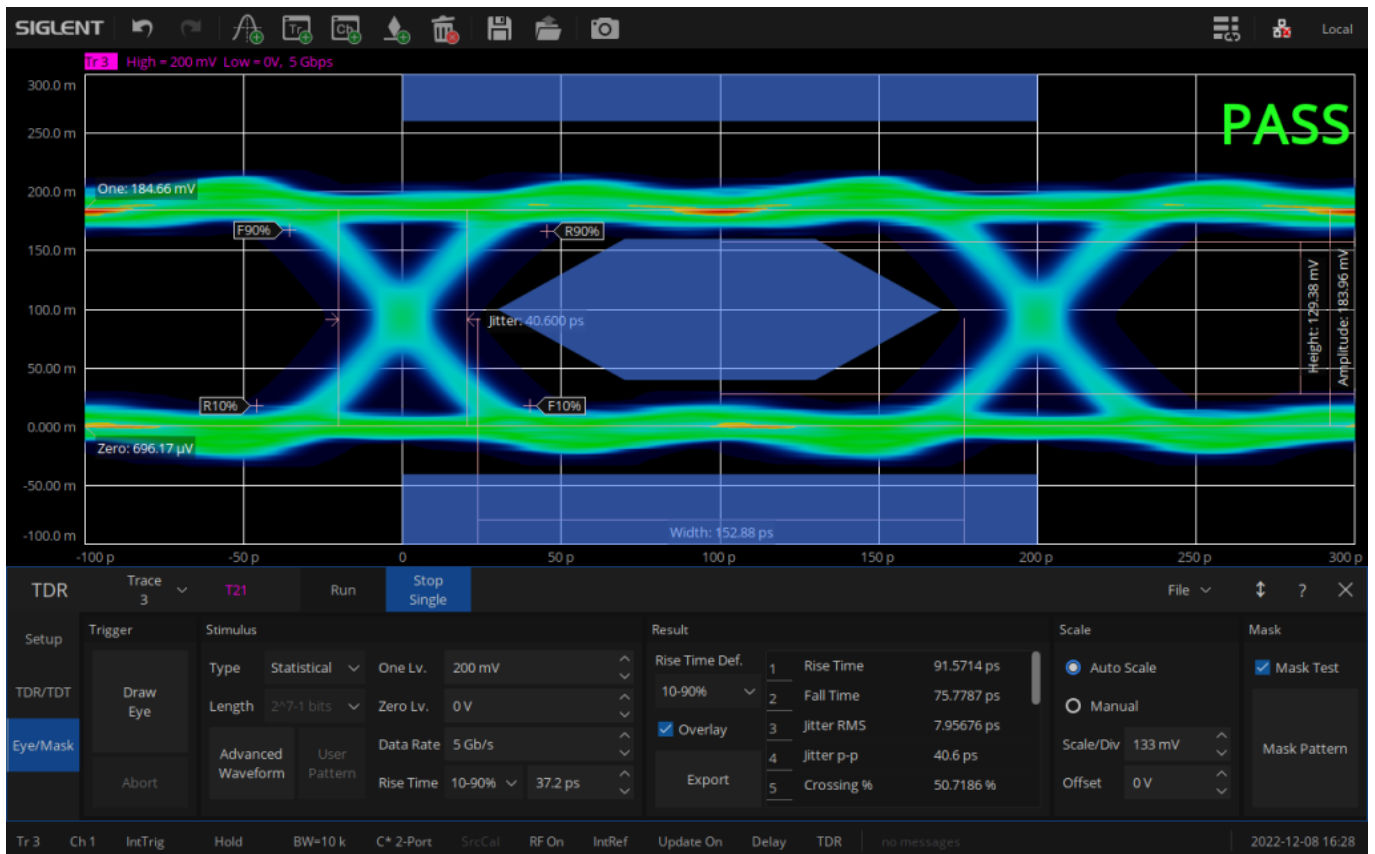
In practice, not all external influences can always be completely eliminated by calibration. It is therefore crucial to have suitable tools to eliminate interference from cables or test sockets. The SNA6000A series offers functions such as the adjustable reference plane, adapter removal and embedding/de-embedding.

An integrated formula editor and mask test support developers in analyzing the test object and speed up the evaluation. The large 12-inch touchscreen can be flexibly configured and enables a clear display of several windows with different measurements.

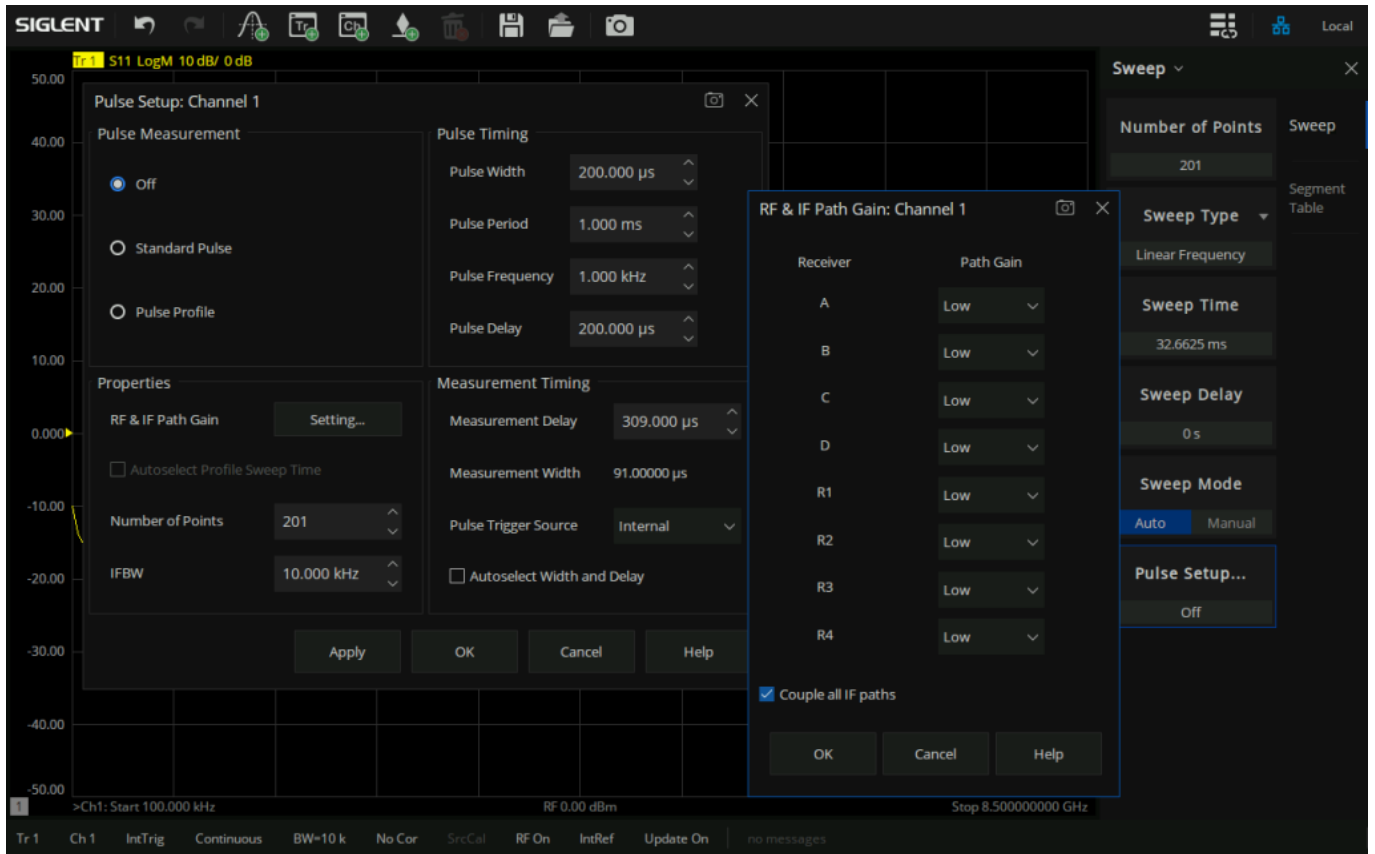


Useful Optional Enhancements

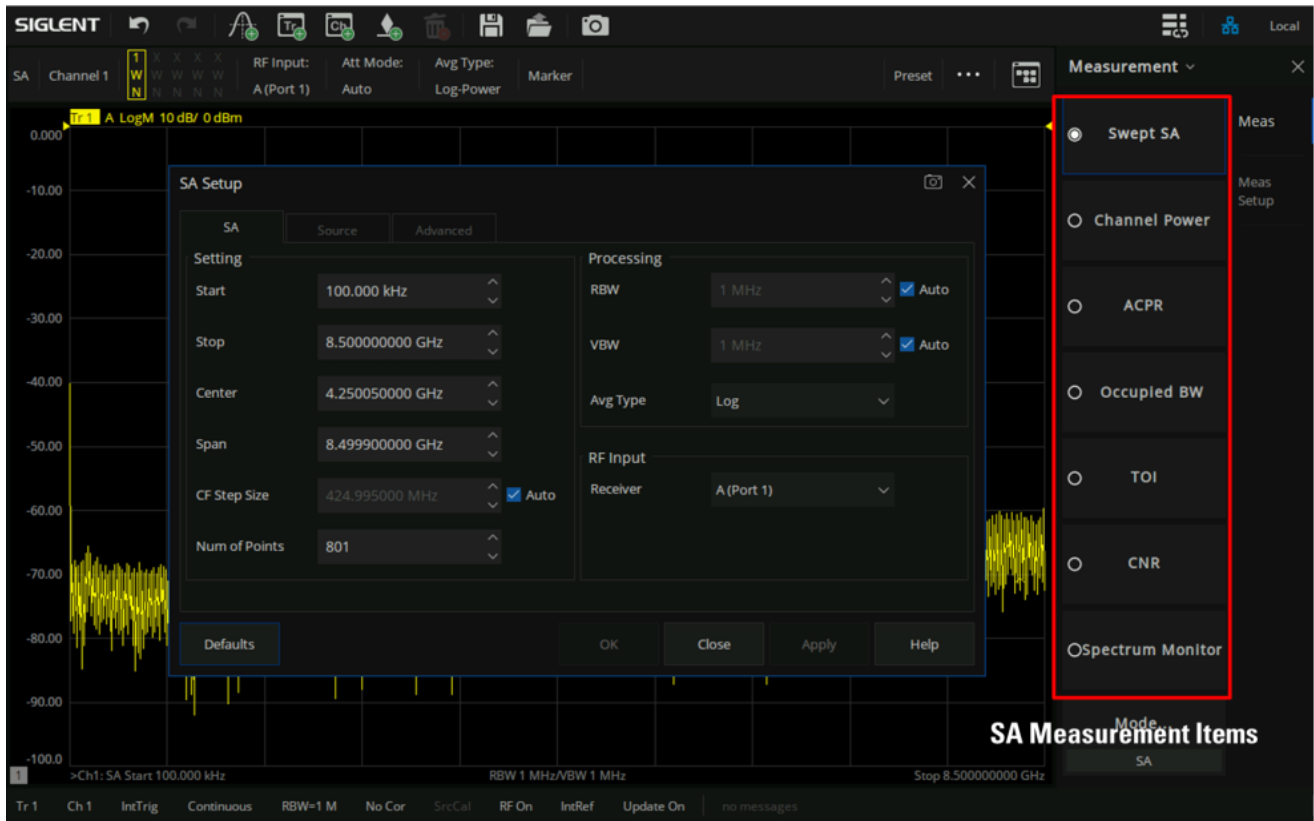
To be able to perform time domain analysis the options SNA6000-TDA and SNA6000-TDR are available. The Time Domain Reflectometry functions extend the VNA to include the ability to comprehensively diagnose and characterize signal paths, lines and cables. In addition, eye diagrams can be created, which are crucial for evaluating signal integrity in digital communications. The combination of TDR and VNA also enables the analysis of jitter, which is essential for investigating the temporal stability of signals. Both functions are of particular interest in high-speed digital development.



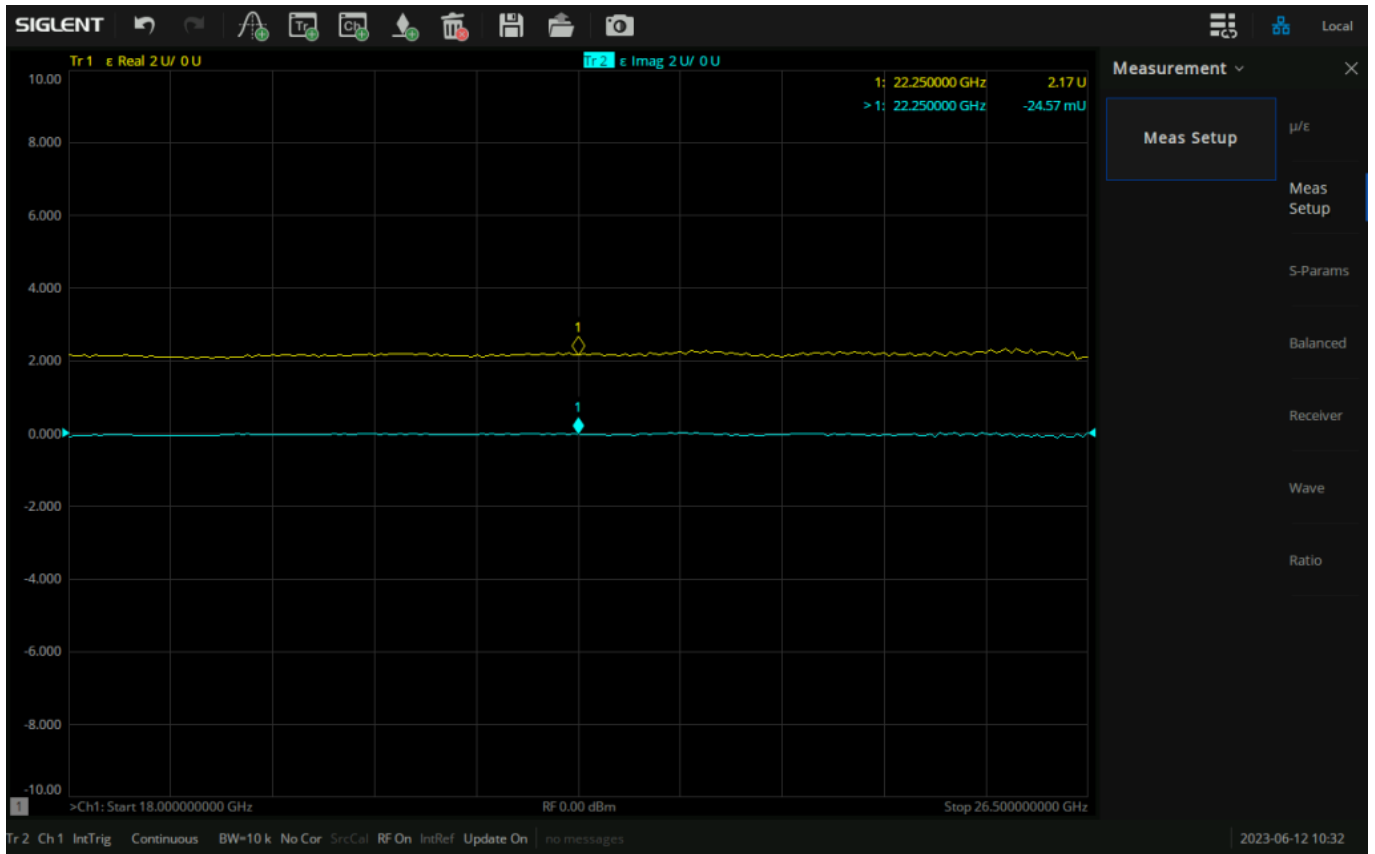
The SNA6000A can also be extended to include the ability to perform pulsed measurements, which is particularly advantageous when characterizing high-frequency components under real operating conditions, such as in radar and communication systems. This measurement method makes it possible to analyze the behavior of components with short pulses, precisely evaluate fast switching operations and optimize performance in time-critical applications.



The integration of a spectrum analysis function into a vector network analyzer (VNA) opens up expanded possibilities, especially in the development and testing of high-frequency amplifiers, oscillators and communication systems. This extension is also available as an option namely SNA6000-SA. It allows precise analysis of harmonics, intermodulation products and other nonlinear effects, while simultaneously optimizing signal quality and bandwidth utilization in communication applications. The combination of VNA and spectrum analysis in one device not only offers space and cost-saving advantages, but also enables deeper and more comprehensive signal characterization. This expanded measurement functionality leads to more efficient diagnostics and improved insight into the behavior of high-frequency components and systems.



In addition to the functions and extensions described, two further options are currently available. Firstly, the SNA6000-SMM scalar mixer analysis, i.e. measurement on frequency-converting components. Secondly, the material analysis option. This enable the VNA to determine important parameters for electronic applications, especially the permittivity and permeability of materials.



In summary, the SNA6000A series from Siglent offers a powerful solution for the increasingly demanding challenges in the field of high-frequency technology. The series impresses with its excellent basic specifications and flexibility in use and useful expansion options. Overall, the SNA6000A series represents a versatile, powerful and user-friendly solution for the measurement and analysis needs in modern electronics.



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