SigIQPro Brings Signal Generation to the Desktop

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SIGLENT releases SigIQPro signal generation software to simplify signal creation and accelerate testing.

Constantly evolving technology up to 5G and beyond, new data-hungry use cases and the ever-present demand for economic efficiency are driving requirements for more complex signal design. The 3GPP mobile communications standardization organization specifies a few specification tests to ensure that base stations operate within well-defined RF and performance constraints. Regional standardization bodies, local regulators and network operators implement test standards according to their own requirements. Modern communication, IoT, and navigation devices require the generation of complex modulated signals and complex protocol signals for system performance verification during development. In all of these segments, engineers need more powerful signal generation to develop and debug tomorrow's wireless signal devices.

Increasing data rates and higher bandwidth requirements are driving the creation of more complex signals to verify device performance in real-world testing. Creating test waveforms is becoming increasingly difficult and engineers need to spend more and more time and effort to accurately generate the signals required by standard tests, creating significant test and measurement challenges across all stages of the product production cycle from components, RF, digital, and power design.

In order to allow engineers to focus their valuable energy on critical design and debug tasks, SIGLENT introduces SigIQPro signal generation software to conveniently generate complex signals for system development and verification. SigIQPro signal generation software generates a rich variety of IQ signals, supporting Bluetooth, IoT, Custom OFDM, Custom IQ, and in the future, 5G NR, LTE and WLAN, and more. It simplifies the test setup, dramatically reduces simulation time, lowers overall test costs as well as speeds up time-to-market in the design cycle.

SigIQPro signal generation software is a comprehensive PC-based software for general and standards-based signals creation that help speed up test operations and reduce costs.

SIMPLER AND FASTER SIGNAL GENERATION

SigIQPro is a flexible PC-based signal generation software that takes signal generation to a whole new level. It supports a wide variety of cellular and wireless connectivity standards, making it easy to generate complex signals that are fully compliant with Bluetooth, IoT and other communication standards, meeting the requirements of the Internet of Things, short-range communications, and other wireless cellular communications. Waveforms can be transferred directly to SIGLENT signal generator via GPIB, USB or LAN. Get interactive control of your signal generation through direct connection with a variety of SIGLENT instruments. Users can quickly import MATLAB-generated *.mat files or *.txt files, *.dat files, *.csv files and other ASCII files into SIGLENT signal generator for playback using the file conversion Toolkit function in SigIQPro software.

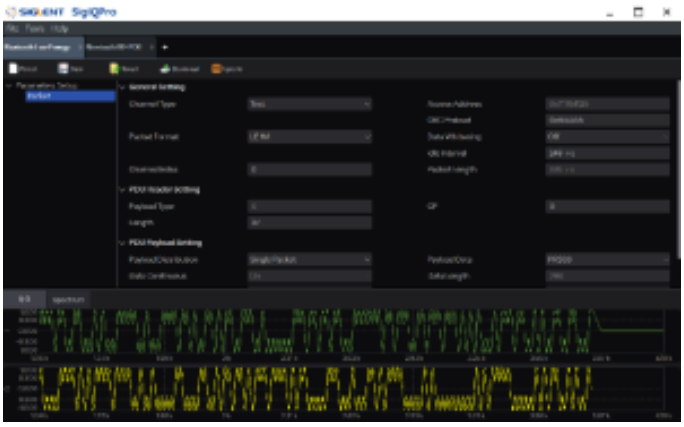
SigIQPro has a user-friendly interface that provides deep insights, displays a wide array of performance metrics and brings these powerful signal generation capabilities to the desktop. Users only need to set the basic parameter information of the required signals to generate the required waveforms quickly and easily. The tree view allows users to quickly switch between waveform settings and packet settings to help speed up test operations. In addition, the I/Q waveforms, frequency domain and constellation diagrams of the signals to be generated are visually displayed on the graph view. The entire signal generation process is intuitive, convenient and fast, minimizing the time engineers spend on signal generation and improving test efficiency.

A COMPREHENSIVE TESTING SOLUTION

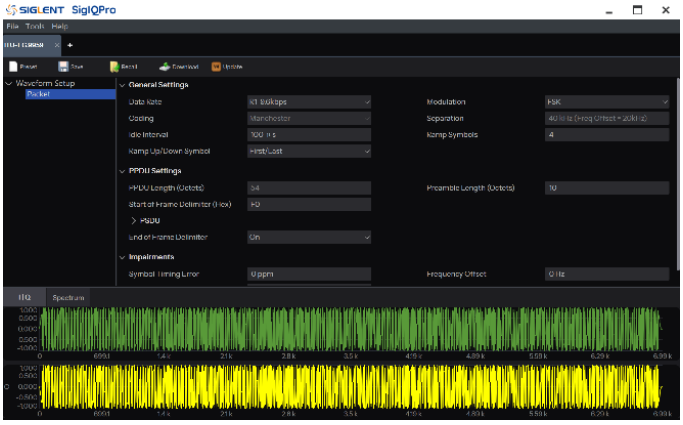
With the rapid growth in the number and upgraded functionality of mobile devices, increasing data rates and the need for greater coverage have led to the creation of more complex signals to validate the performance of the devices in real-world testing. SigIQPro is a perfect tool for the most demanding test applications, designed to generate complex, digitally modulated signals and protocol signals of high quality to meet the challenges of test and measurement in the design, R&D and production phases. SigIQPro software includes popular signal formats such as Bluetooth, SUN, and OFDM.

Here are a few examples of **SIGLENT** signal generation solutions.

Bluetooth
- Create signals for BR, EDR, LE specifications
- Support 2 Ms/s symbol rate for higher data rate
- Basic and enhanced data rate modulated data streams
- Fully-coded Bluetooth packets with 2-DHx, 2-EVx, 3-DHx, and 3-EVx packet types

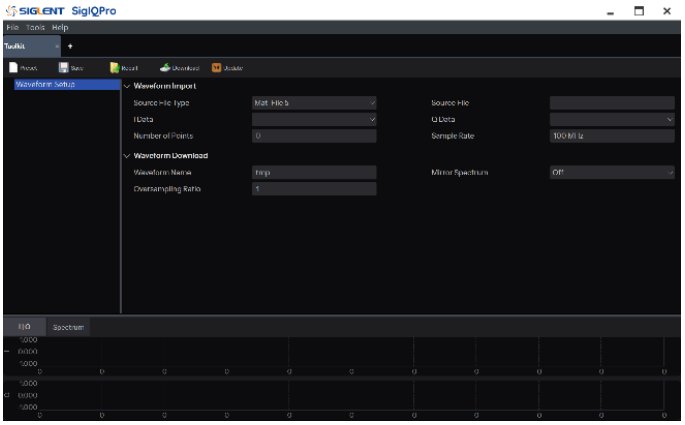


IoT (Internet of Things)
• A principally outdoor, low data rate wireless network
• Typically employ mesh or peer-to-peer multi-hop technology to communicate with an access point
• Create signals for IEEE 802.15.4 SUN FSK and IEEE 802.15.4 SUN OFDM specifications
• Create signals for IEEE 802.15.4 O-QPSK / BPSK ZigBee and ITU-T G.9959 FSK / GFSK Z-Wave specifications



Custom Modulation (Custom IQ and Custom OFDM)
• Custom IQ and Custom OFDM, including Digital modulation, Custom modulation, Multitone and LFM sweep
• Modulation Format:
-2ASK, PR-ASK
-2FSK, 4FSK to 16FSK, MSK
-8QAM, 16QAM to 4096QAM
-BPSK, OQPSK, QPSK, 8PSK, DBPSK, DQPSK, D8PSK, PI/4-DQPSK, PI/8-D8PSK, 16APSK, 32APSK

Toolkit
• A file conversion tool, compatible with conversion of various data formats
• Export waveform files (*.arb), project file (*.project) or state files (*.state)
• Import **SIGLENT** encrypted waveforms (*.arb) or user defined waveforms (*.txt/.csv/.dat, *.mat, *.project, *.state, etc)



COMPATIBLE INSTRUMENTS

Engineers need to simulate a variety of communication standards and protocol signals when verifying product performance. SigIQPro can cost-effectively generate signals that can be used with SIGLENT instruments to form a complete test system to meet your test needs during the design, R&D and production phases. Production test solutions for calibration and system verification ensure final product quality. Thus, SIGLENT SDG7000A and SSG5000X-V high performance instruments with excellent accuracy and output power add capability and flexibility to critical production test solutions.

SSG5000X-V Series
Professional device supporting multiple communication standards and protocols

SDG7000A Series
All-in-one test platform with multiple signal generator functions

The SSG5000X-V series is SIGLENT's first vector signal generator with frequency up to 6 GHz and internal baseband bandwidth of 150 MHz, which is ideal for users who need to measure basic RF characteristics or verify the function of wireless devices. It has powerful playback capability, supports protocol file playback, and contains built-in commonly used protocol files which can generate signals across a variety of communication protocols such as 5G NR, LTE, WLAN, WCDMA, and BLUETOOTH. It also includes pulse modulation, pulse generator, and power meter control which help engineers to complete the verification of general electronic devices.

The SIGLENT SDG7000A series high-end multifunction dual-channel Arbitrary Waveform Generator delivers RF performance and usability that feature up to 1 GHz bandwidth, a maximum sample rate of 5 GSa/s and 14-bit vertical resolution. It can generate arbitrary waveforms point by point with a maximum 2.5 GSa/s sample rate and vector signal with a maximum 500 MS/s. It also has the ability to generate a variety of signals such as continuous wave, Pulse, Noise, PRBS patterns, and a 16-bit digital bus. It supports the generation of complex signals such as modulation, sweeping, bursting and dual channel copying/coupling/tracking and superposition. The output are differential/single-ended and support a maximum output range of ±24 V. The instrument can ensure a large amplitude under high-frequency which eliminates an external power amplifier in some applications and addresses a wider range of requirements.

SIGLENT instruments and SigIQPro signal generation software integrate simulation, design and test to easily meet the needs of users at all stages of design, R&D, and production. SigIQPro is specially developed for easy generation of protocol and modulated signals, with a user interface that supports intuitive operation and provides relevant documentation that makes it easy to create standards-compliant waveforms for a wide range of applications, as well as support for downloading signal files to the SIGLENT signal generators for playback. **TRY BEFORE YOU BUY!** SigIQPro provides 30 free trials of each feature for unrestricted use of the functions with your existing compatible signal generators. Further SigIQPro signal generation software configuration, pricing, and device details can be found on the SIGLENT website.

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