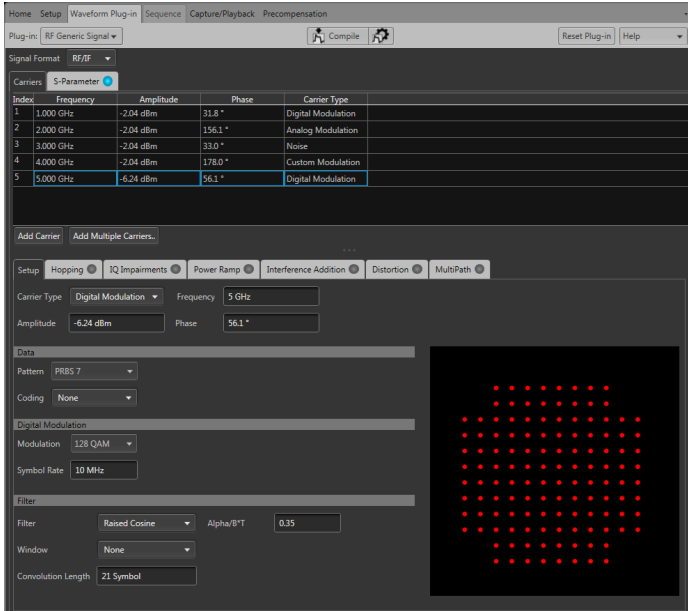


# Applications for AWG70000A Series and SourceXpress®

## RF Generic Signal Datasheet



The Tektronix RF Generic application plug-in enhances the capabilities of either the AWG70000A Series Arbitrary Waveform Generators or the SourceXpress® application software, adding the ability to synthesize digitally modulated waveforms.

### Key features

- Baseband Analog or Digital IQ, IF and RF/Microwave Signal Generation
  - Synthesize waveforms directly. Apply impairments such as quadrature error and imbalance or non-linear impairments, or add interferences and multipaths during waveform creation.
- Versatile Carrier Signal Generation
  - Create single or Multi-carrier signals where each carrier is independently defined. Also allows for easy addition of modulated analog signals or noise signals.
  - Define and create carrier frequency hopping patterns.
  - Apply a power ramping profile, defined by either a linear or cosine function, to the transmitted signal with control over duration, position and amplitude.
- Support for a Wide Range of Modulation Schemes
  - Define baseband I and Q signals using a variety of predefined modulation schemes such as, BPSK, QPSK, PI/4 QPSK, OQPSK, SDPSK, 8-PSK, O-8PSK, up to QAM1024, GMSK, up to 32-FSK, and analog modulations.

- Support for Custom Modulation
  - Define custom constellation points (IQ Symbols/ Magnitude Phase) or modify pre-defined constellation points.
- Designed with Integration in Mind
  - Programmatic Interface built-in, allowing for immediate integration into existing workflows.
- Offline Mode
  - Plug-ins are designed to also run on an external PC via the SourceXpress PC application, thereby reducing the time taken to synthesize large waveforms and leaving the AWG70000A instruments free for continued testing.
- The easy to use graphical user interface integrates seamlessly with the Tektronix AWG70000A series user interface and the SourceXpress PC application .

### Complex RF signals

RF signals are becoming more and more complex, making it more difficult to accurately create the signals required for the testing and characterization of RF systems. To address these challenges, the RF Generic plug-in delivers advanced capabilities to synthesize digitally modulated baseband, IF and RF/microwave signals supporting a wide range of modulation schemes.

### Digitally modulated

Signals are easily created with the RF Generic application plug-in. Supporting a wide range of modulation schemes, the software allows users to create standard waveforms or customized waveforms with specific modulation and frequency-hopping criteria. In Auto mode, the software automatically calculates the waveform length and the sampling rate required to accurately create the desired output from the arbitrary waveform generator.

### Requirements

- Plug-in installed with SourceXpress on PC:
  - SourceXpress software version 5.2 or greater
  - PC operating systems: Windows 7 (64 bit), Windows 8 (64 bit), Windows 10 (64 bit)
- Plug-in installed on AWG70000A Series instrument:
  - AWG70000A firmware version 5.2 or greater



## Ordering information

### Models

<b>RFGENFL-SS01</b>	RF Generic plug-in with a floating license that can be reassigned to different Tektronix instruments or PCs.
<b>RFGENNL-SS01</b>	RF Generic plug-in with a node locked license tied to a single instrument or PC.

Information on the RF Generic Signal application plug-in for SourceXpress or the AWG70000A Series along with free software download and trial licenses is available at [www.tektronix.com/product-software/rf-generic-plug-in](http://www.tektronix.com/product-software/rf-generic-plug-in).

An S-Parameter license is required to enable the S-Parameter feature of the RF Generic Signal application.

### How to purchase

To purchase, visit the Tektronix web site to request a quote or contact your nearest sales representative.

### Additional information

Refer to the SourceXpress web site ([www.tek.com/sourceexpress](http://www.tek.com/sourceexpress)) for information about:

- additional application plug-ins available for SourceXpress and the AWG70000A Series
- free software downloads and trial licenses

### Licensing

Each application plug-in for SourceXpress and AWG70000A Series instruments requires the purchase of a license before they are fully functional. Some plug-ins may require additional licenses to unlock certain plug-in features. Licenses are managed within the Tektronix Asset Management System (Tek AMS). The Tek AMS web site address is [www.tektronix.com/products/product-license](http://www.tektronix.com/products/product-license). Product license management requires a login account.

There are two types of licenses available: node-locked (NL) and floating (FL).

- Node Locked Licenses provide your own copy of the application on your instrument or personal computer and are permanently assigned to a specific Hostid or product model/serial number.
- Floating licenses can be moved between different Hostids or product models.

Use the Tektronix Asset Management system to check in and check out floating licenses.

### Certifications



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.



Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

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\* European toll-free number. If not accessible, call: +41 52 675 3777

**For Further Information.** Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tek.com](http://www.tek.com).

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