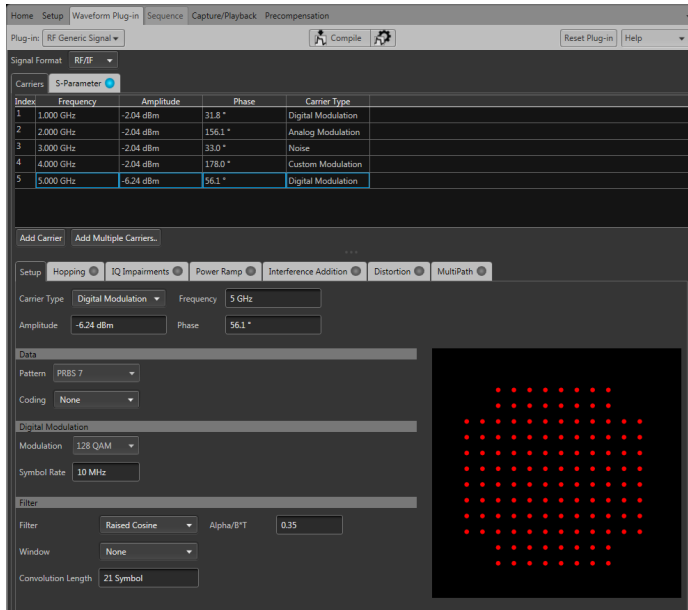


# Applications for SourceXpress® and AWG70000/5200 Series generators

## RF Generic Signal Datasheet



The Tektronix RF Generic application plug-in enhances the capabilities of the SourceXpress® waveform creation platform, and the AWG70000 series and AWG5200 series arbitrary waveform generators, 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
  - Capable to run on an external PC via the SourceXpress PC application, thereby reducing the time taken to synthesize large waveforms and leaving the instruments free for continued testing.
- Seamless transition between design and playback
  - The easy to use graphical user interface integrates seamlessly with the user interfaces of the SourceXpress PC application and the Tektronix AWG70000 series and AWG5200 series generators.

### 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 5.3 or greater
  - PC operating systems: Windows 7 (64 bit), Windows 8 (64 bit), Windows 10 (64 bit)
- Plug-in installed on compatible instruments:
  - AWG70000 Series, firmware version 5.3 or greater
  - AWG5200 Series, firmware version 6.0 or greater



## Ordering information

### Models

**RFGENFL-SS01** RF Generic Signal plug-in with a floating license that can be reassigned to different Tektronix instruments or PCs.

**RFGENNL-SS01** RF Generic Signal plug-in with a node locked license tied to a single instrument or PC.

The RF Generic Signal application plug-in can be downloaded for free and a trial license is available. Complete functionality and continued use requires the purchase of a license.

Visit the [SourceXpress](#), [AWG70000](#), or [AWG5200](#) product pages to obtain the software and license.

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 website to request a quote or contact your nearest sales representative.

### Additional information

This and other plug-ins are available for SourceXpress and compatible waveform generators.

Use the following website links to view available application plug-ins, downloads, and trial licenses.

- [SourceXpress website](#)
- [AWG70000 Series website](#)
- [AWG5200 Series website](#)

### Licensing

Each plug-in (for SourceXpress, the AWG70000 Series generators, and the AWG5200 Series generators) requires the purchase of a license before they are functional. Some plug-ins may require additional licenses to unlock specific plug-in features. Licenses are managed within the Tektronix Asset Management System (Tek AMS). The Tek AMS website 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 Host ID or product model/serial number.
- Floating licenses can be moved between different Host IDs or product models.

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



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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**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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