

# GT-2303A

## Software Defined Vector Signal Generator

### 9 kHz to 3 GHz

#### Preliminary

#### Introduction

#### Benefits

#### Key Features

- 34 MHz (x4) Signal Bandwidth
- Up to 31 independent, simultaneous signals
- Dual independent RF Outputs
- Phase coherent for MIMO and diversity testing
- Stream / Play complex modulated waveforms
- Impairment simulation option

The GT-2303A Software Defined Vector Signal Generator enables the user to consolidate multiple conventional RF Signal Generators into one compact, cost effective RF test source. Generate up to 31 discrete signals in two independent 120 MHz wide blocks within the frequency range up to 3 GHz.

Many modern radio receivers gather information from multiple sources simultaneously. The multiple signals can be from more than one antenna, with independent carriers and different modulation formats. The GT-2303A with its unique architecture can create these complex signal environments to match the receiver test requirements. Each signal channel's center frequency and power level can be independently varied in real-time without reloading the waveform into memory or rewriting code.

- Software reconfigurable for testing today's and future software defined radios and modern receivers
- One compact multi-channel Source replaces multiple conventional signal generators saving you money and space
- Create complex signal scenarios for testing COMINT receivers easily and accurately
- Combine multiple GT-2303A's to produce a multitude of signals



## The Ultimate Test Source

The GT-2303A Software Defined Vector Signal Generator consists of state-of-the-art digital signal processing using a combined time/frequency domain approach for fast, efficient processing and combining of a large number of signals. The cumulative bandwidth of these signals can support up to 160 MSamples/sec (4x 40 Msamples/sec signals up to 31 channels x 5MSamples/sec signals).

With the Giga-Bit Ethernet interface option, the GT-2303A can receive data from a streaming server directly into the FPGA via two Gbit Ethernet ports. Each port can handle up to 24MSamples/sec at 16 bit resolution.

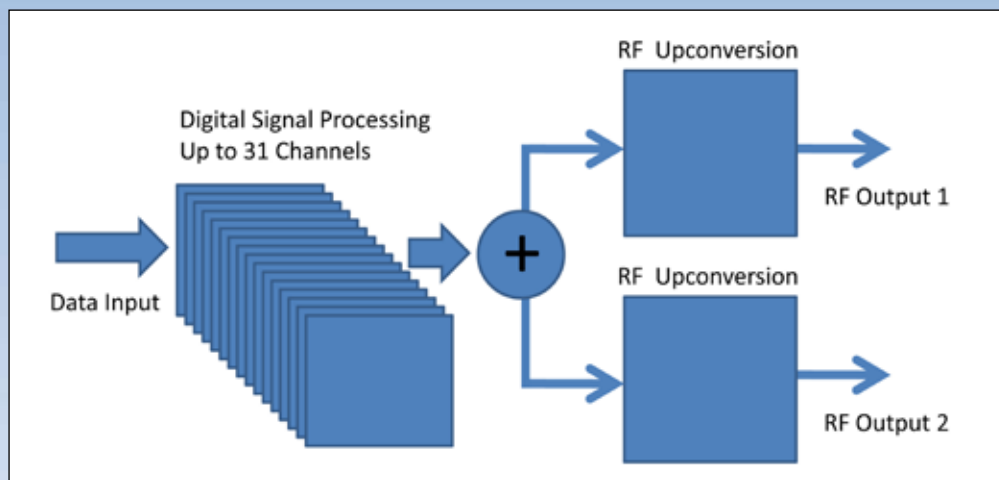
The GT-2303A also provides accurate frequency and time synchronization between signals and between the two RF outputs.

## Key RF Specifications:

- Frequency Range: 9 kHz to 3 GHz
- Resolution: 0.001 Hz
- Output Power: +20 dBm (Peak typical)
- Power Level Accuracy: +/- 0.5 dB
- Harmonics: < -30 dBc at +10 dBm
- Spurious: < -70 dBc (typical)
- Phase Noise: -120 dBc/Hz @ 1 GHz, 10 kHz offset

## Key Signal Generation Specifications:

- Channels: Up to 31
- Signal Bandwidth: 34 MHz (up to 4 signals simultaneously, option to 8 signals)
- Integrated Hard Disk: 320 GB
- Internal Memory: 8 GB
- Data Format: 12 and 16 bit I/Q
- Input Sample Rate: Up to 40 MS/s



GT-2303A Simplified Block Diagram

### About Giga-tronics:

Founded in 1980, Giga-tronics Incorporated (Nasdaq "GIGA"), an ISO 9001 and AS 9100 certified company, headquartered in San Ramon, California, is a leading engineering-and-design manufacturer of best-in-class RF and microwave signal generators, microwave power amplifiers, USB power sensors, microwave power meters and broadband switching matrices. R&D, production and test managers, scientists, engineers and technicians, around the world, use Giga-tronics test equipment to realize higher productivity and greater ease of use in many applications: ATE systems, aerospace & defense, communications and general microwave component test.



### Contact information:

4650 Norris Canyon Road, San Ramon, CA 94583-1320

Tel 800.726.GIGA (4442) | Fax 925.328.4700 | Email [inquiries@gigatronics.com](mailto:inquiries@gigatronics.com) | Web [www.gigatronics.com](http://www.gigatronics.com)