SDG1X firmware 1.01.01.33R1 adds TrueArb capability

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Starting at firmware version 1.01.01.33R1, the SIGLENT SDG1000X series of arbitrary waveform generators now feature TrueArb output capability.

Traditional arbitrary waveform generators use DDS (direct digital synthesis) to create waveforms. This technique is very powerful, but at higher output frequencies, DDS begins to lose resolution because it will skip or drop output samples in order to comply with the output frequency setting. This loss of resolution can be detrimental to many applications that require high fidelity.

DDS also uses fixed sample depths that are typically fixed to integers that are divisible by 2, which can complicate the creation of arbitrary waveforms by forcing the waveform to extend beyond the normal period termination.

The TrueArb feature was created to address a number of traditional issues with DDS.

TrueArb:

- Let's users set the exact number of samples used to create a waveform. Choose from a minimum sample count of 2 up-to-the maximum allowed for the specific instrument series: 16,384 for the SDG1X, 8,388,608 for the SDG2X, and over 20 Mpts for the SDG6X series)
- Let's users set the exact output sample rate.
- Provides confidence that the output waveform will match the programmed value exactly. No guesswork or missing samples.

If you have an existing SDG1X, upgrade today by downloading the latest firmware: [SDG1X Firmware](#)

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