New Product Introduction

DG1000Z Series
Function/Arbitrary Waveform Generator

Overview

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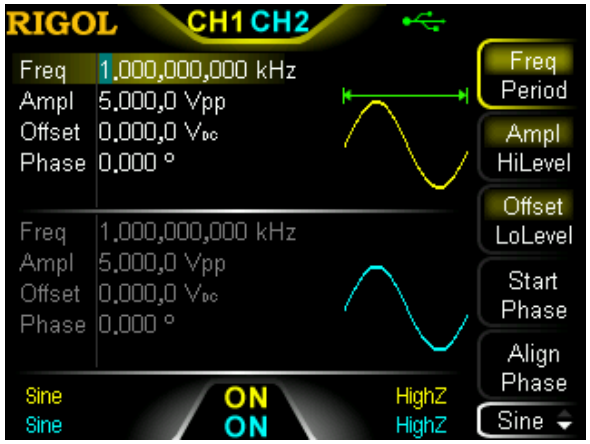
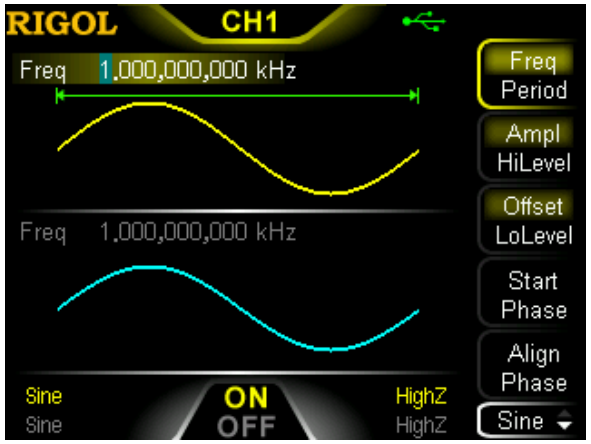
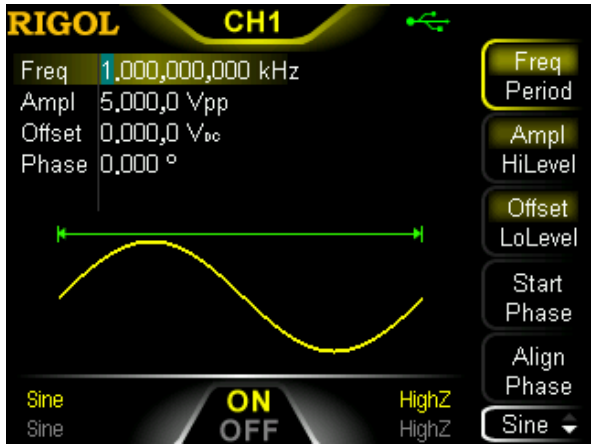
Highlights

- **Standard 2 full functional channels**
  Models: 30MHz, 60MHz
- **200MSa/s Sample Rate, 14bits Vertical Resolution**
- **Arbitrary waveform memory length:**
  8MPts (Std.), 16MPts (Opt.)
  Up to 160 built-in waveforms！
- **Output arbitrary waveform point by point**
  Up to 60MSa/s adjustable Sample Rate
- **Phase Noise <-125dBc/Hz，**
  Square&Pulse Jitter <200ps
- **Original creative waveform Summing, Tracking and Gated output functions**
- **Standard 7 digits/s counter with 200MHz bandwidth**

New Features

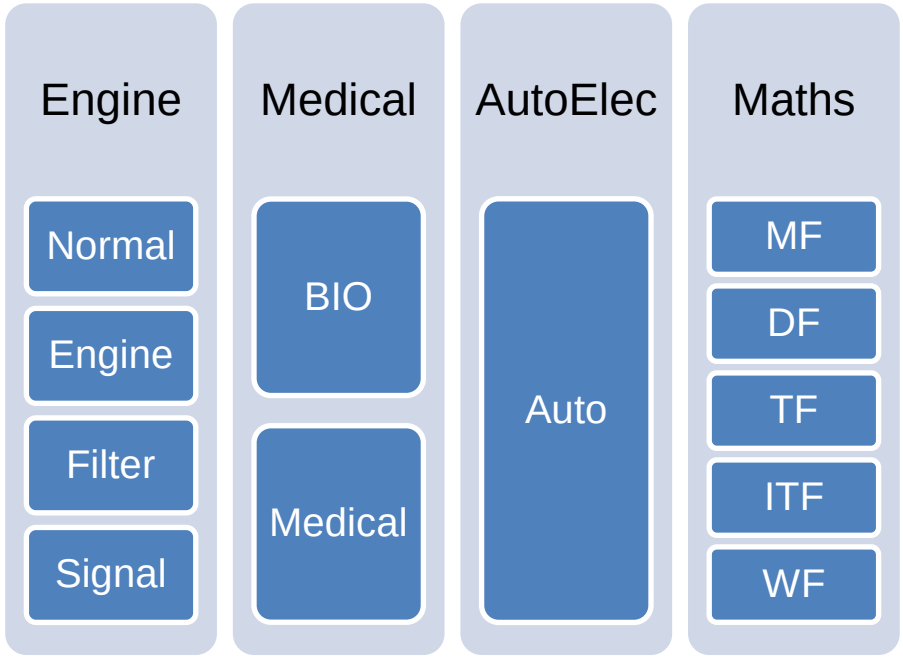


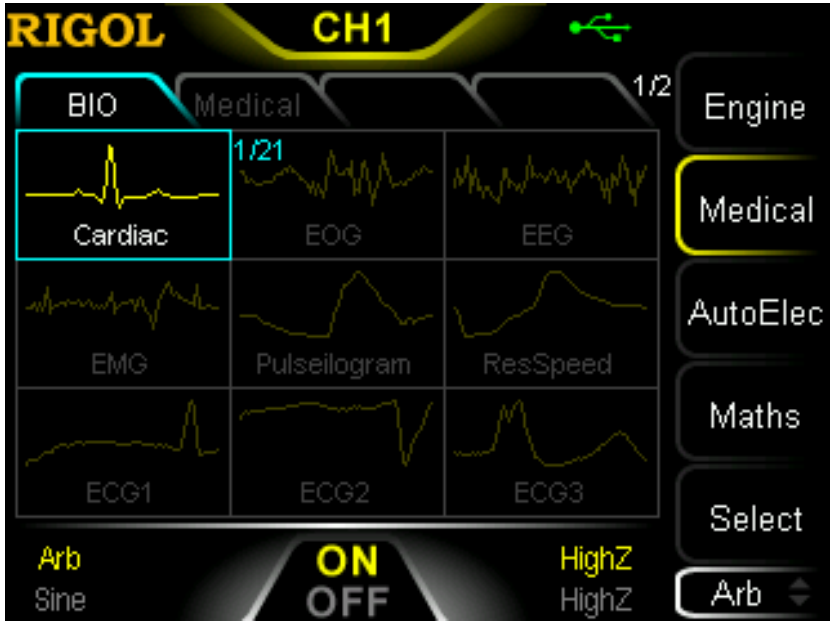




- **3.5” 320x240 LED backlight LCD**
- **Brief interface designed according to the appearance**
- **Support 3 display modes**

New Features

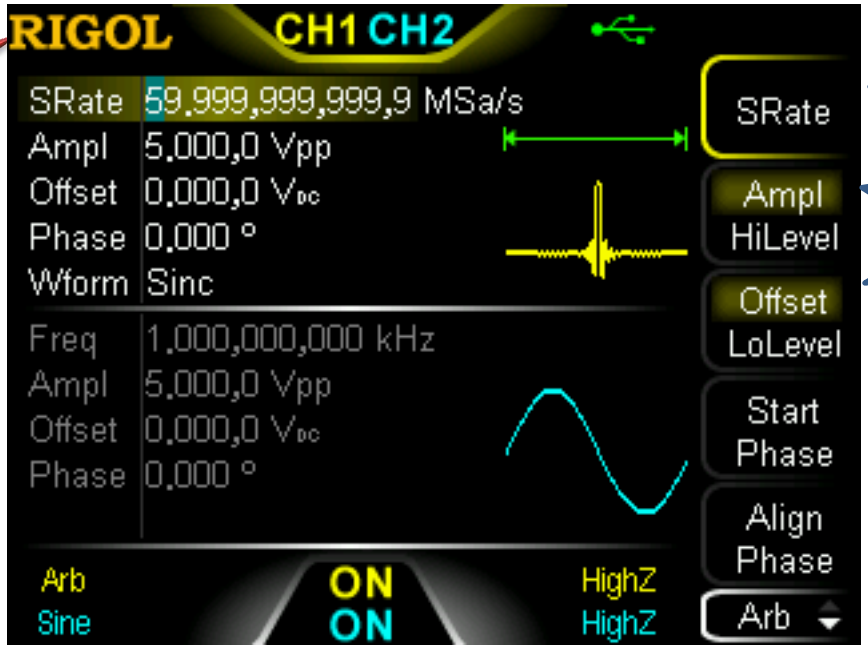




- **4 items, 11 sub-items**
  160 built-in arbitrary waveforms

New Features

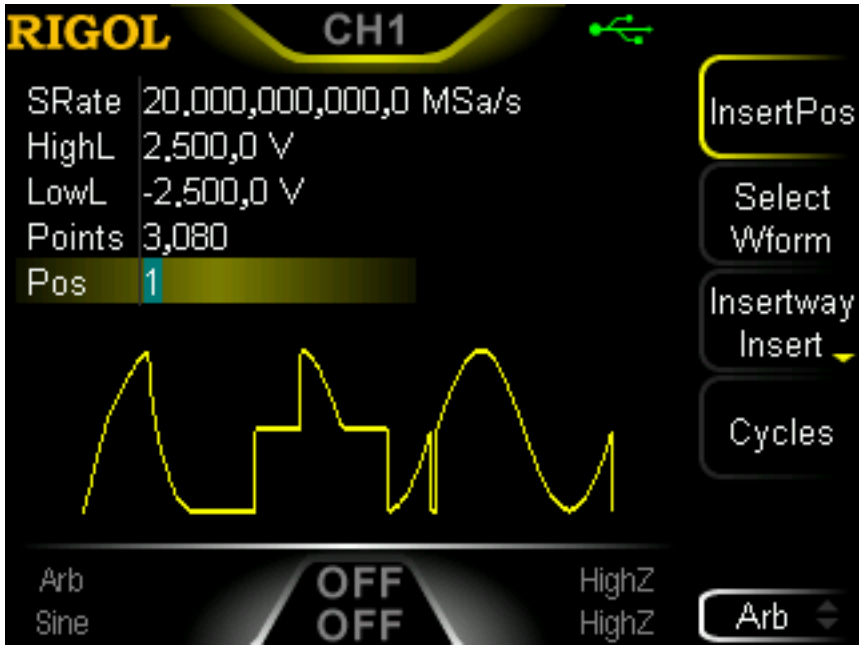
16MPts !



1uSa/s

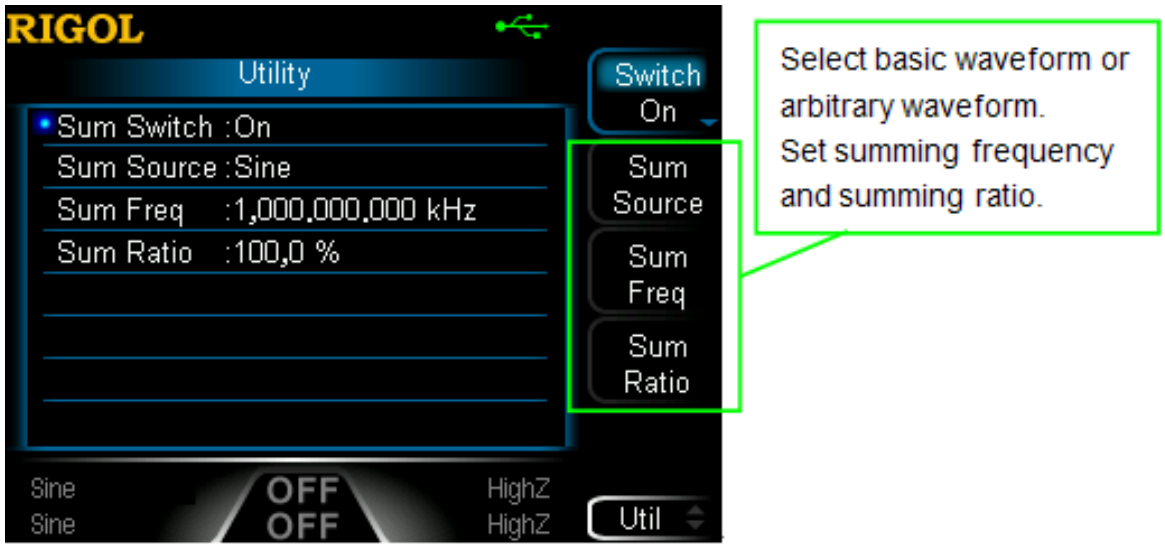
- **Support Frequency and Sample Rate arbitrary waveform output modes**
- **1uSa/s Sample Rate Resolution**
- **Accurately restore each waveform point and realize the minimum jitter**

New Features



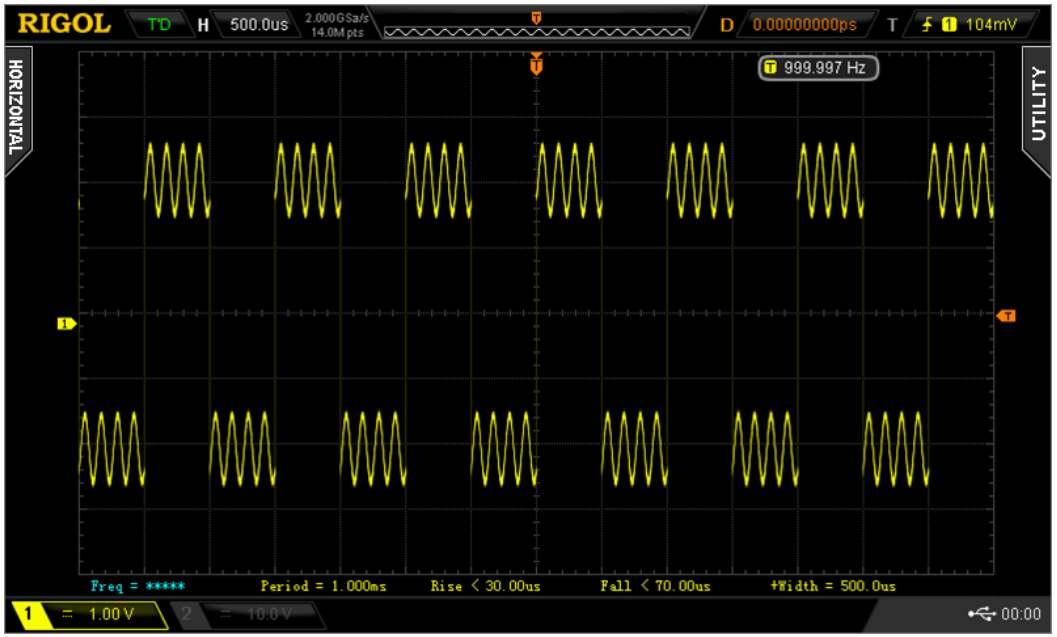
- **Powerful local arbitrary waveform editing function**
- **Insert built-in waveform at specified position to generate more complex arbitrary waveform by combining various built-in waveforms**

New Features



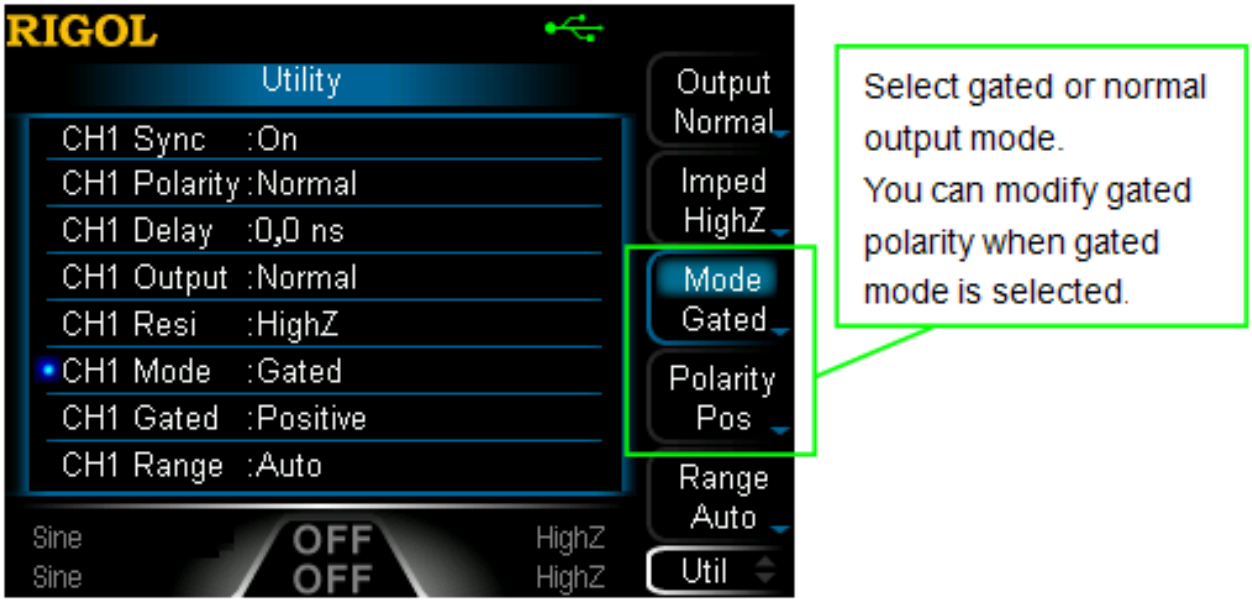
- **Increased waveform Summing function that you can superpose specified waveform onto the current waveform before output**
- **You can modify the Summing Frequency, Summing Ratio and Summing Source**

New Features



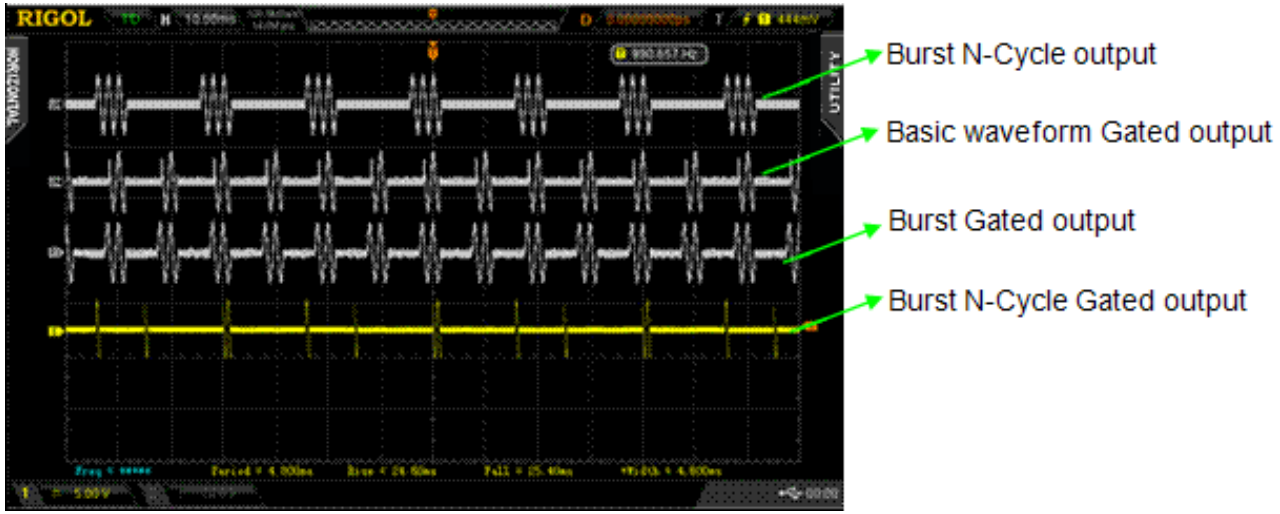
- **The output waveform after summing a Square onto a Sine**
- **20% Summing Rate, 8KHz Summing Frequency, 1kHz Carrier Frequency**

New Features



- **Support waveform output Gated mode in which the output is controlled by the external gated signal**
- **Different from Burst Gated mode**

New Features



- **The difference between Burst Gated mode and waveform output Gated mode**

New Features

On: the output of the dual channels are identical

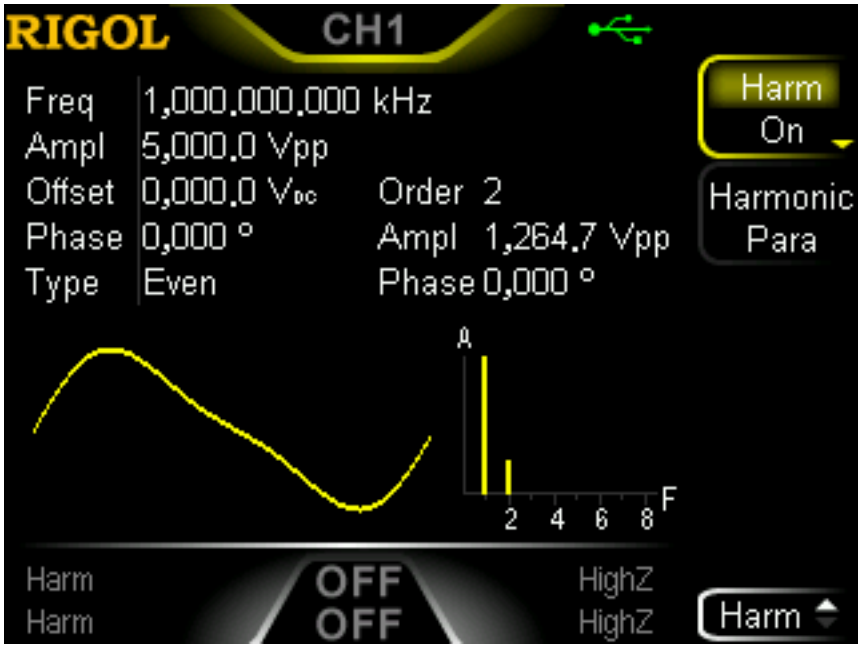
Invert: the output of the dual channels are inverted

- **Newly added Tracking function in which mode the output of dual channels are identical or inverted.**

New Features

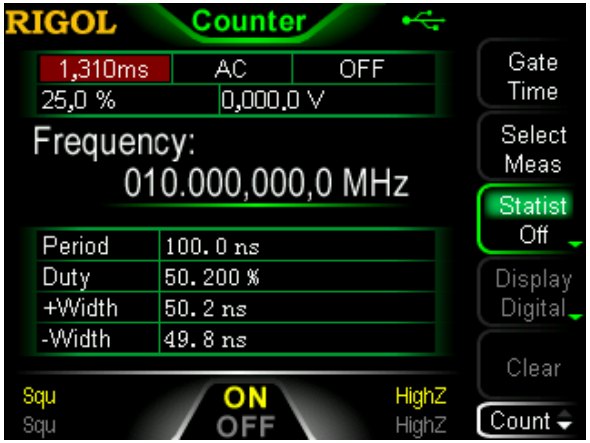
- **Support start-up interface customization which allows users to define the start-up interface**

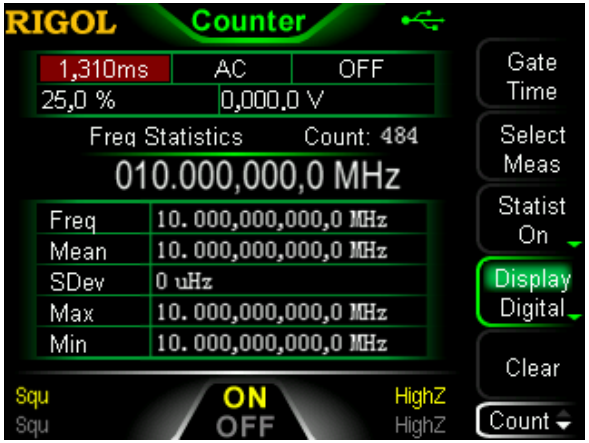
New Features

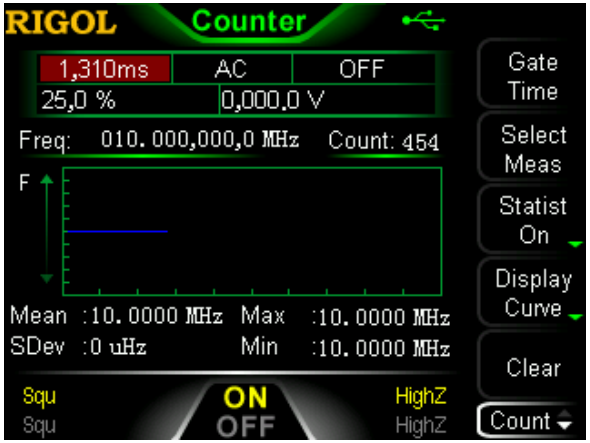


- **Dual channels can output harmonic waveform**
- **Up to 8 orders harmonics**
- **The phase and amplitude of each order harmonic can be set**

New Features







- **Built-in counter can measuring multiple parameters at the same time**
- **The frequency resolution is 7digits/s**
- **Multiple display modes**

New Features

- **Perfect multi-instrument remote management tool**
  UltraSigma
- **Arbitrary waveform editing tool easy to use**
  Ultra Signal Studio

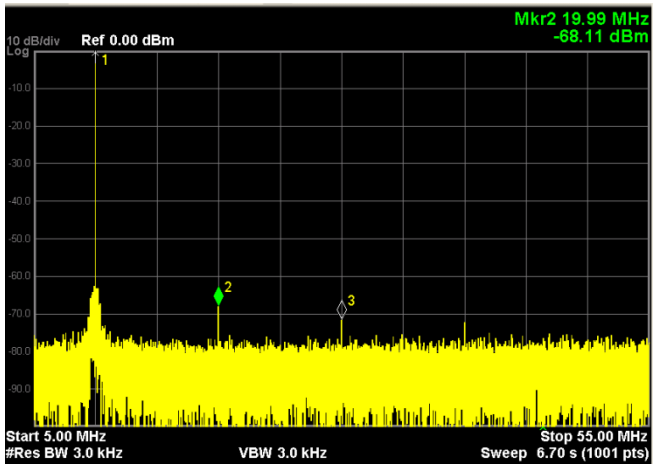
Performance Demonstrations

	Sine	Square	Ramp	Pulse	Noise
Frequency/ Bandwidth	60MHz	25MHz	1MHz	25MHz	60MHz
Sample Rate	200MSa/s				
Arb Length	8MPts (Std.), 16MPts (Opt.)				
Vertical Resolution	14bits				
Amplitude (HighZ)	2mVpp～20Vpp				

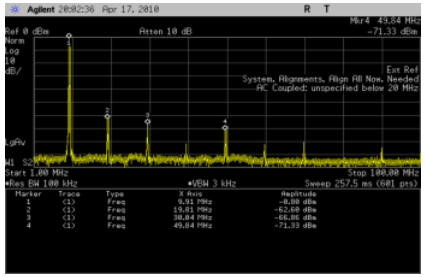
- **Dual channels with full function**
- **Output signal**
  - **Low Harmonic Distortion**
  - **Low Phase Noise**
  - **Pure small-signal output**

Performance Demonstrations

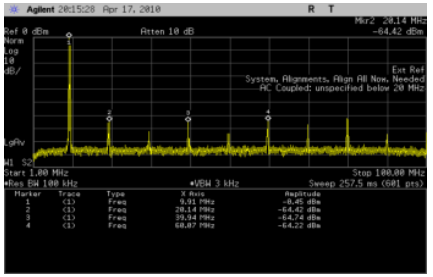
- **Low Harmonic Distortion** **@ 10MHz Sin, 0dBm, 50Ohm;**



RIGOL DG1000Z
HD2: -68dBm
HD3: -70dBm

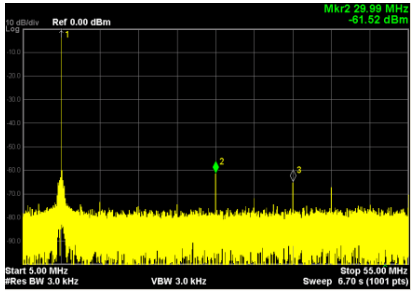


Agilent 33220A
HD2: -62dBm
HD3: -67dBm

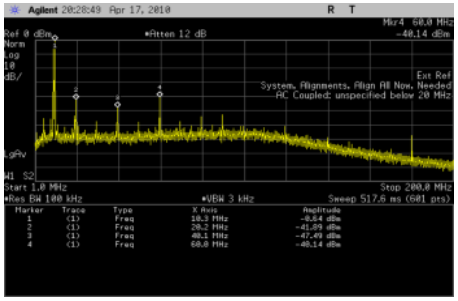


Agilent 33250A
HD2: -64dBm
HD3: -72dBm

10M Sine



Siglent SDG1020
HD2: -62dBm
HD3: -65dBm

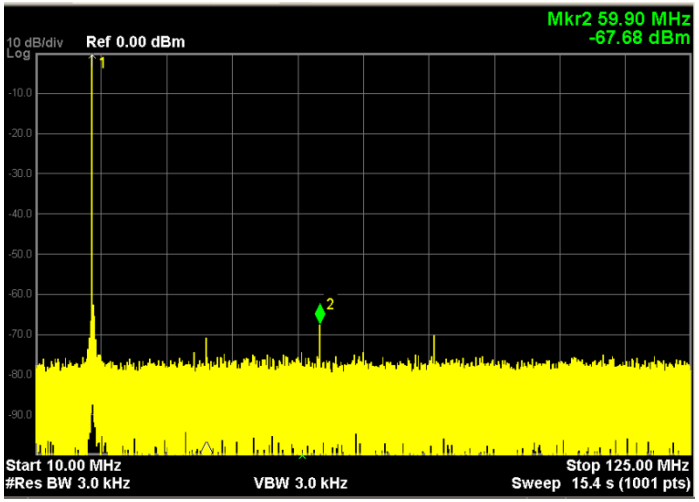


石无四TFG2050V
HD2: -41dBm
HD3: -56dBm

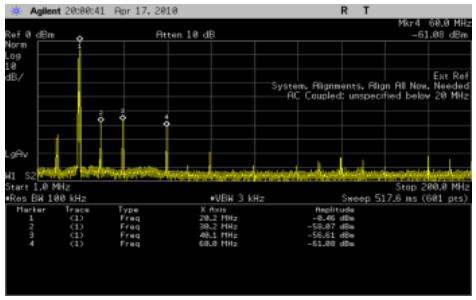
HD2: 2nd order Harmonic Distortion
HD3: 3rd order Harmonic Distortion

Performance Demonstrations

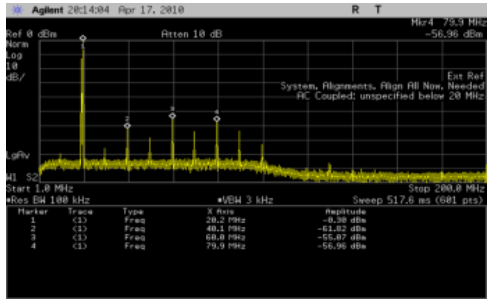
- **Low Harmonic Distortion** **@ 20MHz Sin, 0dBm, 50Ohm;**



RIGOL DG1000Z
HD2: -67dBm
HD3: -70dBm

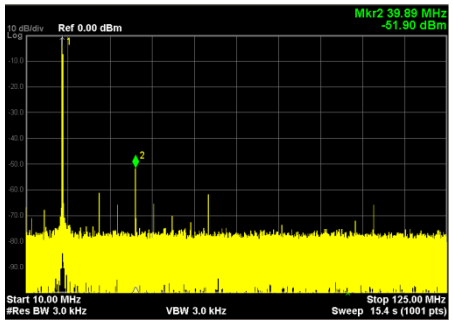


Agilent 33220A
HD2: -56dBm
HD3: -61dBm

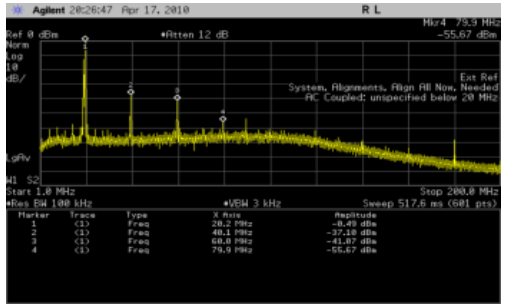


Agilent 33250A
HD2: -61dBm
HD3: -56dBm

20M Sine



Siglent SDG1020
HD2: -51dBm
HD3: -62dBm



石无四TFG2050V
HD2: -37dBm
HD3: -41dBm

HD2: 2nd order Harmonic Distortion
HD3: 3rd order Harmonic Distortion

Performance Demonstrations

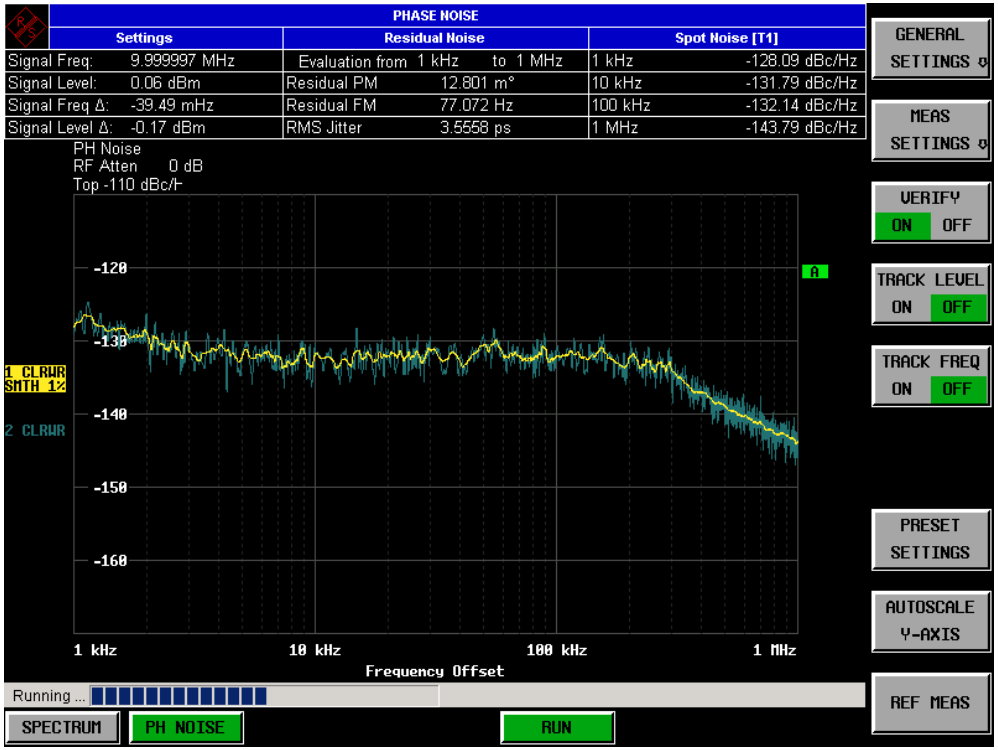
- **Low Phase Noise** @ 10MHz Sin, 0dBm, 50Ohm;

Siglent SDG1020

Spot Noise [T1]	
1 kHz	-97.03 dBc/Hz
10 kHz	-120.36 dBc/Hz
100 kHz	-125.98 dBc/Hz
1 MHz	-128.54 dBc/Hz

Rigol DG1000Z

Spot Noise [T1]	
1 kHz	-128.09 dBc/Hz
10 kHz	-131.79 dBc/Hz
100 kHz	-132.14 dBc/Hz
1 MHz	-143.79 dBc/Hz



RIGOL DG1000Z

Phase Noise =-131.79dBc/Hz @ 10kHz Offset @10MHz Sine

Performance Demonstrations

- **Low Phase Noise** **@ 10MHz Sin, 0dBm, 50Ohm;**

Siglent SDG1020

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1 kHz	-97.03 dBc/Hz
10 kHz	-120.36 dBc/Hz
100 kHz	-125.98 dBc/Hz
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Rigol DG1000Z

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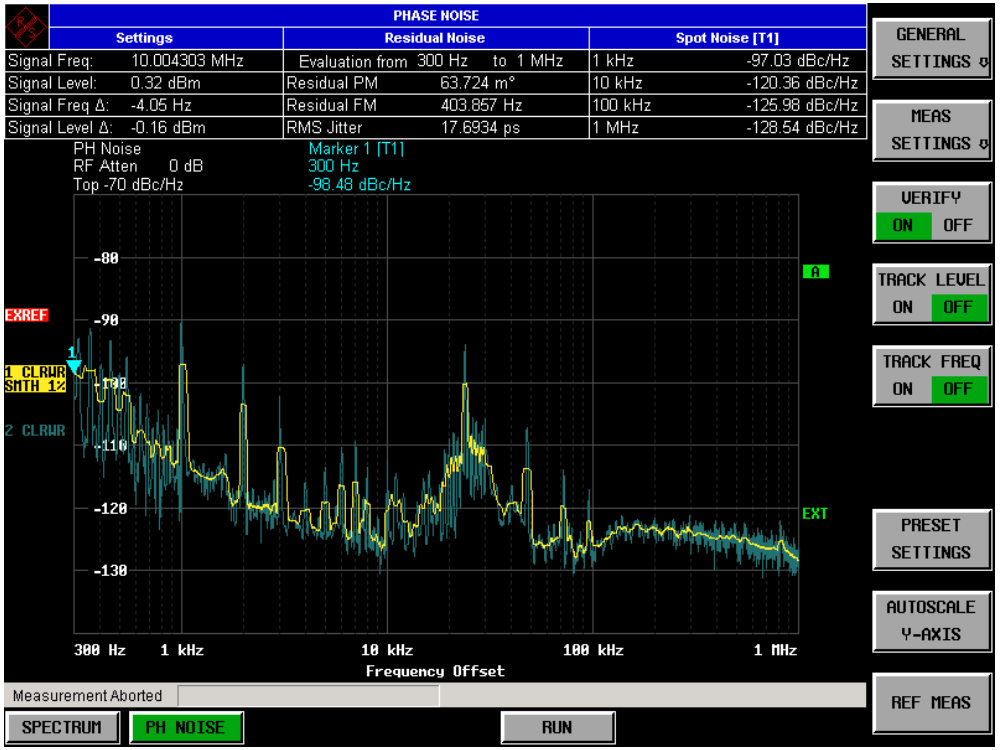
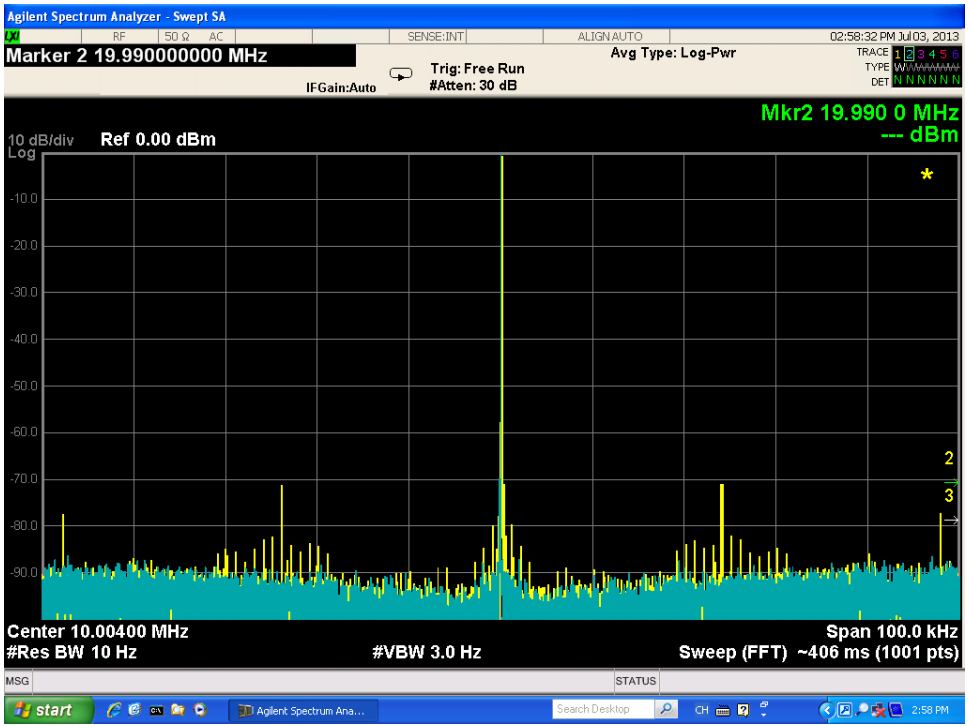


Siglent SDG1020

Phase Noise =-120dBc/Hz @ 10kHz Offset @10MHz Sine

Performance Demonstrations

- **Low Spurious** **@ 10MHz Sin, 0dBm, 50Ohm;**



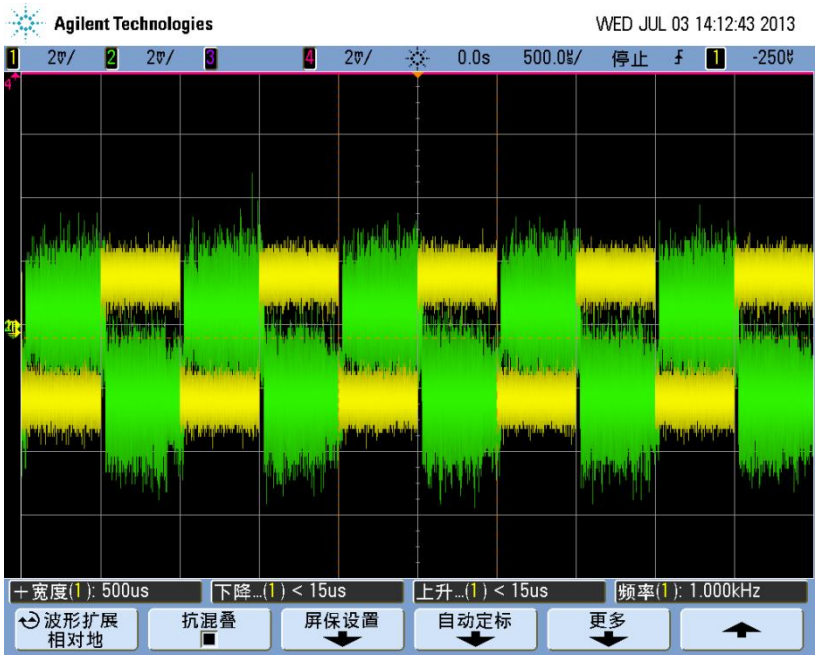
Siglent SDG1020

RIGOL DG1000Z

@10MHz Sine, Span 100kHz

Performance Demonstrations

- **Pure Small-Signal Output** **@ 1KHz, 4mVpp, No BW Limitation**



Siglent SDG1020

RIGOL DG1000Z


RIGOL
Thank You !
自主创新 合作共赢