



RIGOL

DG2000

Series Function/Arbitrary Waveform Generators

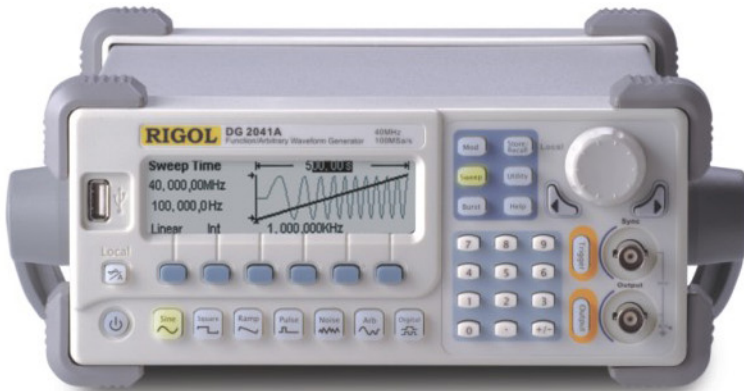


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DG2000 Series
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Application

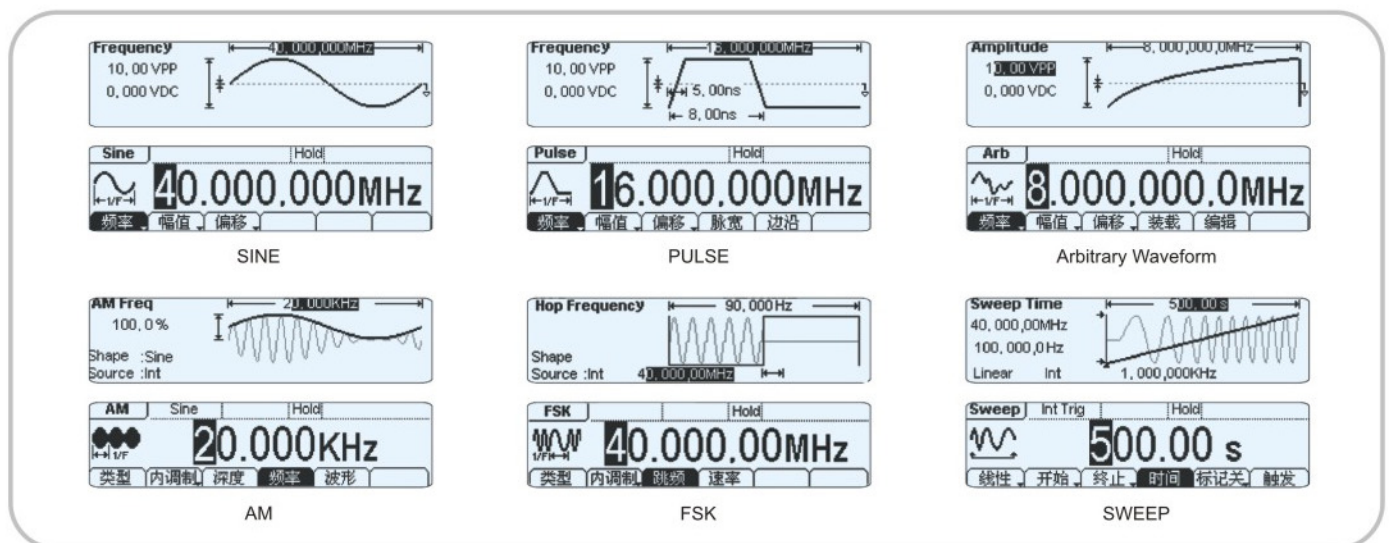
- Simulation of sensors and actual environment signals
- Circuit function test
- Serial bus test
- IC test

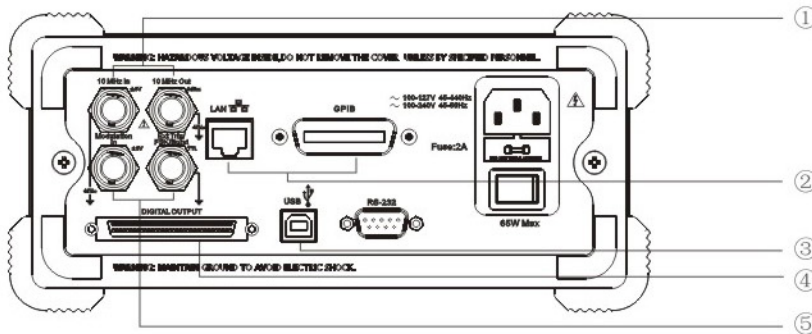
Product Dimensions: Width×Height×Depth=232mm×108mm×288mm

1. Mixed Signal Generator with digital logic output (16 data channels and 2 clock channels)
2. Advanced DDS technology, 100 MSa/s maximum sample rate and 40 MHz maximum output rate, 14 bits vertical resolution, 512K points of memory depth
3. Built-in pulse generator with adjustable width and edge
4. Built-in PWM generator
5. Versatile interface configuration: USB Device, LAN, GPIB, RS-232; USB Host to support USB disk, USB printer and seamless connectivity with DS series products

Model	DG2041A	DG2021A
Maximum Output Frequency	40 MHz	25 MHz
I/Q	USB Host, USB Device, RS-232, LAN/GPIB	
Optional Configuration	Digital Logic Output Module	

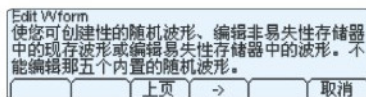
Typical Output





1. Clock reference, multiple machines synchronization
2. Interface: LAN/GPIB interface, web remote access
3. Optional configuration: Digital Logic Output Module, true Mixed Signal Generator
4. USB Device, virtual terminal display and control
5. External source input, external modulation and trigger

Human-oriented Design



Press key to enter help system



File system (USB Disk)

Digital Logic Output Module

Just because of the external 16 data channels plus 2 clock channels DG series become true Mixed Signal Generators. Then all general digital protocols can be created easily so that more actual mixed signals can be recurred together with analog channels.



Digital Logic Output Module

Advanced Features

- Optional digital logic module: more actual mixed signals can be recurred together with analog channels
- DDS technology: Output signals become more accurate and stable with lower distortion
- 300 MSa/s of sample rate, 14 bits of vertical resolution, 1M points of memory depth
- 10 standard waveforms: Sine, Square, Ramp, Pulse, Noise, Exponential Rise, Exponential Fall, Sin(x)/x, Cardiac, DC
- Arbitray waveform defined by user
- Versatile modulation and variety of waveforms: AM, FM, PM, FSK, PWM, SWEEP, BURST
- Versatile input and output signals: Waveforms output, Digital synchronous signals output, External modulation source, External clock reference (10 MHz), External trigger and internal clock output (10 MHz)
- I/O: USB Device, RS-232, GPIB, LAN
- USB Host to support USB disk, USB printer and direct system upgrade
- Seamless connectivity with DS series digital oscilloscopes: Lossless recurrence of stored waveforms obtained from DS oscilloscopes
- Multi-language user interface, built-in help system

DG2000 Series Function/Arbitrary Waveform Generators

Performance Characteristics

Waveforms	
Standard Waveforms	Sine, Square, Ramp, Pulse, Noise, Exponential Rise, Exponential Fall, Sin(x)/x, Cardiac, DC
Arbitrary Waveform	
Waveform Length	1 to 512K points
Non-Volatile Memory	Maximum 4 waveforms
PULSE	
Period	100.0 ns to 2000.0 s
Pulse Width	20.0 ns to 1999.9 s
Variable Edge Time	10.0 ns to 1.00 ms
Vertical Resolution	14 bits
Sample Rate	100 MSa/s
Frequency Characteristics	
Sine	1 μ Hz to 40 MHz
Square	1 μ Hz to 40 MHz
Ramp	1 μ Hz to 400 kHz
White Noise	20 MHz of Bandwidth
Resolution	1 μ Hz; except Pulse, 5 bits
Other Characteristics	
Amplitude (into 50 Ω)	10 mVpp to 10 Vpp
Accuracy (1 kHz)	$\pm 1\%$ of setting ± 1 mVpp
AM Modulation	
Modulating Waveforms	Any internal waveform
Modulating Frequency	2 mHz to 20 kHz
Depth	0% to 120%
FM Modulation	
Modulating Waveforms	Any internal waveform
Modulating Frequency	2 mHz to 20 kHz
Deviation	DC to 40 MHz

FSK Modulation	
Internal Frequency	2 mHz to 1 MHz
Frequency Range	1 μ Hz to 40 MHz
PM Modulation	
Modulating Waveforms	Any internal waveform
Modulating Frequency	2 mHz to 20 kHz
Deviation	0° to 360°
PWM	
Carrier Waveforms	Pulse
Modulating Source	Internal/External
Internal Modulation	Sine, Square, Ramp, Noise, Arbitrary Waveform (2 mHz to 20 kHz)
Duty Cycle	0% to 100%
SWEEP	
Type	Linear or Logarithmic
Direction	Up or Down
Start/Stop Frequency	100 μ Hz to 40 MHz
Sweep Time	1 ms to 500 s
Marker	Fall Edge of Sync Signal
BURST	
Frequency	1 μ Hz to 40 MHz
Burst Count	1 to 1,000,000 cycles or infinite
Start/Stop Phase	- 360° to + 360°
Internal Period	1 μ s to 500 s
Other Parameters	
Clock Reference	10 MHz
I/O	USB Host, USB Device, RS-232
Optional Configuration	Digital Logic Output Module
Built-in Help	Multiple languages
Power	Worldwide Use, 100 - 240 V 65 VA Max
Weight	2.7 kg

Standard Accessories



Power Cord



USB Data Wire



Ultrawave Software CD-ROM (Waveforms Editor)



User Manual

Optional Accessories



BNC Cable



RS-232 Cable



Digital Logic Module



Data Connection Cable

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