



RIGOL



01189 786911 TELONIC.CO.UK

# DG6000 Series

Function/Arbitrary Waveform Generator

Data Sheet  
DSB19101-1110  
Dec. 2025

# DG6000 Series

## Function/Arbitrary Waveform Generator



## Key Specifications

- ◆ **DC~1 GHz**  
Sine Wave Frequency Range
- ◆ **350 ps**  
Square Wave Transition Time
- ◆ **4 CH**  
High-Voltage Differential  
Direct Drive
- ◆ **512 Mpts**  
Max. Arb Memory Depth
- ◆ **16-bit**  
Vertical Resolution
- ◆ **2.5 GSa/s**  
Max. Sample Rate





# Product Features

## High-bandwidth Differential Direct Drive

The generator features 1 GHz bandwidth, 16-bit fidelity, and 20 Vpp differential direct drive.

## Simplified Test Chain

Featuring 4-channel high-voltage differential direct drive technology, it eliminates the need for costly external power amplifiers or baluns, simplifying the test chain and reducing costs.

## Excellent Interactive Experience

The 10.1-inch HD touch screen delivers intuitive and efficient parameter configuration, supporting touch and drag gestures for seamless, more convenient measurements.



## Clean and Safe Output

All channels feature electrical isolation design, eliminating ground loops and protecting the DUT.

## 350 ps Square Wave Transition Time

350 ps square wave transition time and 300 MHz high-frequency output redefine the time-domain testing benchmark.

## Multiple Output Modes

It supports multiple standard output modes: Sequence, IQ modulation, PRBS, Multi-pulse, Multi-tone, Pattern, and Arb output, fulfilling all-scenario signal testing needs in one device.



## More Reliable Waveform Simulation

It offers a maximum memory depth of 512 Mpts, enabling precise reproduction of long-period, non-repetitive real waveforms.



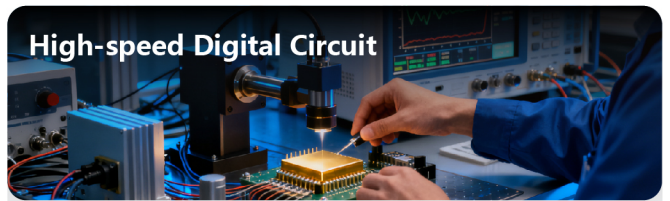
# Applications

## Power Semiconductor Testing



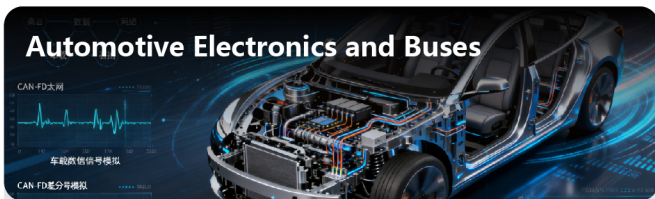
- SiC/GaN gate drive signal simulation

## High-speed Digital Circuit



- Clock source jitter tolerance test
- Logic level verification & eye diagram analysis

## Automotive Electronics and Buses



- Automotive Ethernet
- CAN-FD differential signal simulation
- Anti-Interference testing

## Advanced Scientific Research Experiment



- Advanced computing bit control pulse generation
- Multi-Channel synchronous physical experiments

# Product Features

## Product Features

- 2/4 channel models, 2/4-channel differential outputs or 4/8-channel single-ended outputs supported
- Full-channel isolation, clean signal without distortion
- Max. sample rate: 2.5 GSa/s
- Support 1 GHz bandwidth differential signal output and  $\pm 10$  V high-voltage differential signal output
- Vertical resolution: 16 bits
- A maximum Arb waveform length of 256 Mpts/CH (512 Mpts/CH optional)
- Built-in high-order harmonic generator (max. 20th order)
- Standard: Sequence, PRBS, Multi-pulse, Multi-tone, Pattern, IQ, and Advanced Arb
- 10.1" color touch screen, allowing you to configure and view the waveform parameters at the same time
- Standard Web Control function for easier remote cooperation
- Built-in Arb waveform editing function or PC software Ultra Station to generate Arb waveforms

---

With up to 2.5 GSa/s sample rate and 256 Mpts/CH memory depth (512 Mpts/CH optional), the DG6000 Series Function/Arbitrary Waveform Generator is an all-in-one generator that integrates Function Generator, Arbitrary Waveform Generator, Noise Generator, Pulse Generator, Harmonics Generator, and Analog/Digital Modulator. It is a multi-functional and cost-effective function/arbitrary waveform generator.

---

# Specifications

Specifications are valid under the following conditions:

- The instrument is within the calibration period
- The instrument has been running ceaselessly for over 30 minutes under the specified operating temperature ( $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

## Technical Specifications

Technical Specifications				
Model	DG6052	DG6054	DG6102	DG6104
No. of Channels	2	4	2	4
Output Type	SND/HBW/AMP			
Max. Frequency	500 MHz		1 GHz	
Max. Sample Rate	2.5 GSa/s			
Vertical Resolution	16 bits			
Waveform Memory Depth	256 Mpts/CH (standard), 512 Mpts/CH (optional)			

## Waveform Output

Waveform Output	
Output Mode	Continuous, Modulation, Sweep, Burst, Advanced
Continuous	Sine, Square, Ramp, Pulse, Noise, Arb, DC, Harmonic
Modulation	AM, FM, PM, SUM, ASK, FSK, PSK, PWM
Sweep	Linear, Log, Step
Burst	N-cycle, Gated
Advanced	Sequence, Pattern, Arb, PRBS, Multi-pulse, Multi-tone, IQ

## Output Characteristics

Output Characteristics
SND (BNC Output)

## Output Characteristics

Amplitude Range (into 50 $\Omega$ )	Range	$\leq 100$ MHz: 1 mVpp to 10 Vpp $\leq 250$ MHz: 1 mVpp to 5 Vpp $\leq 350$ MHz: 1 mVpp to 2 Vpp $\leq 500$ MHz: 1 mVpp to 1 Vpp
	Accuracy <sup>[1]</sup>	$\pm(1\%$ of the setting + 1 mVpp)
	Resolution	0.1 mVpp, 0.1 mVrms, 1 mV, 0.1 dBm or 4 digits (whichever is lower)
	Unit <sup>[2]</sup>	Vpp, Vrms, dBm, V (high level and low level)
Offset (into 50 $\Omega$ )	Range	$\pm 5$ Vpk (ac + dc)
	Accuracy	$\pm(1\%$ of  setting  + 1 mV + 0.5% of the amplitude (Vpp))
	Resolution	1 mV or 4 digits
Output Impedance	50 $\Omega \pm 1\%$	
Load Impedance Setting	Load (adjustable from 1 $\Omega$ to 10 k $\Omega$ ), High Z	

## AMP (BNC Output)

Amplitude Range (into 50 $\Omega$ )	Range	$\leq 100$ MHz: 2 mVpp to 20 Vpp $\leq 250$ MHz: 2 mVpp to 10 Vpp $\leq 350$ MHz: 2 mVpp to 4 Vpp $\leq 500$ MHz: 2 mVpp to 2 Vpp
	Accuracy <sup>[1]</sup>	$\pm(2\%$ of the setting + 2 mVpp)
	Resolution	0.1 mVpp, 0.1 mVrms, 1 mV, 0.1 dBm or 4 digits (whichever is lower)
	Unit <sup>[2]</sup>	Vpp, Vrms, dBm, V
Offset (into 50 $\Omega$ )	Range	$\pm 5$ Vpk (ac + dc)
	Accuracy	$\pm(1\%$ of  setting  + 1 mV + 0.5% of the amplitude (Vpp))
	Resolution	1 mV or 4 digits
Output Impedance	50 $\Omega \pm 1\%$	

## Output Characteristics

Load Impedance Setting Load, not settable

### HBW (SMB Output)

Amplitude Range	Range	≤500 MHz: 400 mVpp to 2 Vpp 500 MHz to 1 GHz: 400 mVpp to 1 Vpp
	Accuracy <sup>[3]</sup>	±(1% of the setting + 1 mVpp)
	Resolution	0.1 mVpp, 0.1 mVrms, 1 mV, 0.1 dBm or 4 digits (whichever is lower)
	Unit <sup>[2]</sup>	Vpp, Vrms, dBm, V
Offset (into 50 Ω)	Range	-200 mVdc to 200 mVdc
	Accuracy	±(1% of the setting + 5 mV)
	Resolution	1 mV or 4 digits

Output Impedance 50 Ω ± 1% (P/N); 100 Ω ± 1% (differential)

Load Impedance Setting Load, not settable

### Other Output Characteristics

Isolation

2-channel models: The channels are isolated from each other. However, when the output type is SND, there is no isolation between CH1 and CH3, nor between CH2 and CH4.

4-channel models: Each channel is isolated from one another. However, when the output type is SND, CH1 and CH5, CH2 and CH6, CH3 and CH7, and CH4 and CH8 are not isolated from each other.

Protection Waveform outputs are automatically disabled when overloaded

## Frequency Characteristics

### Frequency Characteristics

Model	DG6052/DG6054	DG6102/DG6104
-------	---------------	---------------

## Frequency Characteristics

Sine	Continuous: 1 $\mu$ Hz to 350 MHz (SND/AMP); 1 $\mu$ Hz to 500 MHz (HBW) Modulation: 1 $\mu$ Hz to 350 MHz Burst: 126 $\mu$ Hz to 350 MHz	Continuous: 1 $\mu$ Hz to 500 MHz (SND/AMP); 1 $\mu$ Hz to 1 GHz (HBW) Modulation: 1 $\mu$ Hz to 350 MHz Burst: 126 $\mu$ Hz to 350 MHz
Square	Continuous: Fast edge enabled: 1 $\mu$ Hz to 170 MHz (SND); 1 $\mu$ Hz to 300 MHz (HBW) Fast edge disabled: 1 $\mu$ Hz to 120 MHz Modulation: 1 $\mu$ Hz to 120 MHz Burst: 126 $\mu$ Hz to 120 MHz	
Ramp	Continuous: 1 $\mu$ Hz to 5 MHz Modulation: 1 $\mu$ Hz to 2.5 MHz Burst: 126 $\mu$ Hz to 2.5 MHz	
Pulse	Continuous/Modulation: 1 $\mu$ Hz to 120 MHz Burst: 126 $\mu$ Hz to 120 MHz	
Arb	Continuous/Modulation: 1 $\mu$ Hz to 100 MHz Burst: 126 $\mu$ Hz to 100 MHz	
Harmonic	1 mHz to 175 MHz	1 mHz to 250 MHz
Noise (-3 dB)	Typical (1 Vpp), 500 MHz bandwidth	
Output Frequency Resolution	1 $\mu$ Hz or 12 digits	
Frequency Accuracy	$\pm 10^{-6}$ of the setting (except Arb), 0°C to 50°C $\pm 10^{-6}$ of the setting $\pm 1$ $\mu$ Hz (Arb), 0°C to 50°C	
Stability <sup>[4]</sup>	$\pm 2 \times 10^{-6}$ /year	
Clock Accuracy Aging	$\pm 1 \times 10^{-6}$ /year	

# Continuous Characteristics

Continuous Characteristics	
	Typ. <sup>[5]</sup>
	<p>&lt;5 MHz: <math>\pm 0.1</math> dB</p> <p><math>\geq 5</math> MHz to &lt;50 MHz: <math>\pm 0.2</math> dB</p> <p><math>\geq 50</math> MHz to &lt;100 MHz: <math>\pm 0.5</math> dB</p> <p><math>\geq 100</math> MHz to 200 MHz: <math>\pm 1.0</math> dB</p> <p><math>\geq 200</math> MHz to 1000 MHz: <math>\pm 2.0</math> dB</p>
Sine (into 50 $\Omega$ )	<p>Typical (0 dBm amplitude)</p> <p>10 Hz to &lt;10 MHz: &lt;-70 dBc</p> <p><math>\geq 10</math> MHz to &lt;50 MHz: &lt;-55 dBc</p> <p><math>\geq 50</math> MHz to &lt;200 MHz: &lt;-45 dBc</p> <p><math>\geq 200</math> MHz to &lt;500 MHz: &lt;-35 dBc</p> <p><math>\geq 500</math> MHz to &lt;10000 MHz: &lt;-25 dBc</p>
	<p>Total Harmonic Distortion (THD)</p> <p>Typical (0 dBm amplitude)</p> <p>10 Hz to 20 kHz: &lt;0.1%</p>
	<p>Typical (0 dBm amplitude)</p> <p>10 Hz to &lt;10 MHz: &lt;-65 dBc</p> <p><math>\geq 10</math> MHz to &lt;50 MHz: &lt;-60 dBc</p> <p><math>\geq 50</math> MHz to 1000 MHz: &lt;-50 dBc + 6 dBc/octave</p>
	<p>Spurious (non-harmonic)</p> <p>Typical (0 dBm amplitude, 10 kHz offset)</p> <p>10 MHz: &lt;-125 dBc/Hz</p>
	<p>Phase Noise</p> <p>Typical (0 dBm amplitude), -55 dBm</p>
	<p>Residual Clock Noise</p> <p>Typical (0 dBm amplitude), -55 dBm</p>
	<p>Phase</p> <p>-360° to +360°, 0.01° resolution</p>

## Continuous Characteristics

		Typical (0 dBm amplitude, 10 MHz frequency, 50 $\Omega$ load) Fast edge enabled: 800 ps to 1 ns (SND); 350 ps to 1 ns (HBW) The setting accuracy with the fast edge enabled: $\pm 20\%$ of the setting
Square	Rise/Fall Time	Typical (0 dBm amplitude, 120 MHz frequency, 50 $\Omega$ load) Fast edge disabled: $\leq 1.4$ ns (HBW)
	Overshoot	Typical (0 dBm amplitude, 10 MHz frequency), $< 5\%$ (fast edge disabled)
	Jitter (rms)	Typical (0 dBm amplitude, 10 MHz frequency), 200 ps (fast edge disabled)
	Duty Cycle	Typical (0 dBm amplitude, 10 MHz frequency) Fast edge enabled: 50% Fast edge disabled: 0.01%~99.9%
	Phase	$-360^\circ$ to $+360^\circ$ , 0.01 $^\circ$ resolution
Ramp	Linearity	Typical (1 kHz frequency, 0 dBm amplitude, 99.9% symmetry) $\leq 0.1\%$ of peak output (10% to 90% amplitude)
	Symmetry	0.1% to 99.9% (limited by the ramp period)
	Phase	$-360^\circ$ to $+360^\circ$ , 0.01 $^\circ$ resolution
Pulse	Pulse Width	4.2 ns to 999.9 ks (limited by the pulse period)
	Pulse Width Resolution	100 ps or 5 digits
	Duty Cycle	0.01% to 99.99% (limited by the pulse period)
	Rise/Fall Time	1.4 ns to 1 s (limited by the pulse width)
	Overshoot	Typical (0 dBm amplitude, 10 MHz frequency), $< 5\%$
	Jitter (rms)	Typical (0 dBm amplitude, 10 MHz frequency), 200 ps
	Phase	$-360^\circ$ to $+360^\circ$ , 0.01 $^\circ$ resolution
Noise	Type	White noise

## Continuous Characteristics

DC	Output Range	Single-ended output: -5 Vdc to +5 Vdc (50 $\Omega$ ), -10 Vdc to +10 Vdc (HighZ)
	Accuracy	$\pm(1\%$ of  DC setting  + 1mVdc), 50 $\Omega$
Arb	Type	Built-in waveforms, stored waveforms
	Rise/Fall Time	Typical (0 dBm amplitude), $\leq 3.5$ ns
	Jitter (rms)	Typical (0 dBm amplitude, 10 MHz frequency), 200 ps
	Phase	-360° to +360°, 0.01° resolution
Harmonic Output	Harmonic Order	$\leq 20$
	Harmonic Type	Order, Combine
	Harmonic Amplitude	The amplitude of each order of the harmonic can be set.
	Harmonic Phase	The phase of each order of the harmonic can be set.

## Modulation Characteristics

### Modulation Characteristics

Modulation Type	AM, FM, PM, ASK, FSK, PSK, PWM, SUM	
AM	Carrier Waveform	Sine, Square, Ramp, Arb
	Modulation Source	Internal/External
	External Modulation Port	Front port
	Internal Modulating Waveform	Sine, Square, Triangle, UpRamp, DnRamp, Noise, Arb
	Modulation Depth	0% to 120%
	Internal Modulation Frequency	2 mHz to 1 MHz

## Modulation Characteristics

FM	Carrier Waveform	Sine, Square, Ramp, Arb
	Modulation Source	Internal/External
	External Modulation Port	Front port
	Internal Modulating Waveform	Sine, Square, Triangle, UpRamp, DnRamp, Noise, Arb
	Internal Modulation Frequency	2 mHz to 1 MHz
PM	Carrier Waveform	Sine, Square, Ramp, Arb
	Internal Modulation Source	Internal/External
	External Modulation Port	Front port
	Internal Modulating Waveform	Sine, Square, Triangle, UpRamp, DnRamp, Noise, Arb
	Internal Modulation Frequency	2 mHz to 1 MHz
	Phase Deviation	0° to 360°, 0.01° resolution
ASK/FSK/PSK	Carrier Waveform	Sine, Square, Ramp, Arb
	Modulation Source	Internal/External
	External Modulation Port	Front port, rear port
	Internal Modulating Waveform	Square with 50% duty cycle
	Internal Keying Frequency	2 mHz to 1 MHz
	No. of Levels	2

## Modulation Characteristics

	Carrier Waveform	Pulse
	Modulation Source	Internal/External
	External Modulation Port	Front port
PWM	Internal Modulating Waveform	Sine, Square, Triangle, UpRamp, DnRamp, Noise, Arb
	Internal Modulation Frequency	2 mHz to 1 MHz
	Width Deviation	0% to 49.99% of the pulse period (limited by the pulse width)
	Carrier Waveform	Sine, Square, Ramp, Arb
SUM	SUM Waveform	Sine, Square, Triangle, UpRamp, DnRamp, Noise, Arb
	Sum Frequency	2 mHz to 1 MHz
	Sum Ratio	0% to 100% of the amplitude setting (Vpp)

## Burst Characteristics

### Burst Characteristics

Carrier Waveform	Sine, Square, Ramp, Pulse, Noise, Arb
Burst Count	1 to 1,000,000/Infinite
Internal Burst Period	4 $\mu$ s to 8000 s
Burst Phase	-360° to +360°, 0.01° resolution
Trigger Delay	0 ns to 85 s (limited by the burst period)
Gate Source	External trigger
Trigger Source	Internal, External leading edge, External trailing edge, Manual, Timer (remote mode only)

## Sweep Characteristics

Sweep Characteristics	
Type	Linear, Log, Step
Carrier Waveform	Sine, Square, Ramp, Arb
Sweep Time	1 ms to 250,000 s
Hold/Return Time	0 s to 3600 s
Orientation	Up/Down
Trigger Source	Internal, external leading edge, external trailing edge, manual
Mark	Falling edge of the sync signal (programmable)

Sweep Start/Stop Frequency Range	
Sine	1 $\mu$ Hz to 350 MHz
Square	1 $\mu$ Hz to 120 MHz
Ramp	1 $\mu$ Hz to 2.5 MHz
Arb	1 $\mu$ Hz to 100 MHz

## Advanced Mode Characteristics

Advanced Mode Characteristics		
Type	Arb, Sequence, PRBS, Multi-pulse, Multi-tone, Pattern, IQ	
Arb	Sample Rate	1 $\mu$ Sa/s to 1.25 GSa/s
	Jitter (rms) period-period	Typical (0 dBm amplitude), 200 ps
	Waveform Length	32 pts/CH to 128 Mpts/CH (256 Mpts/CH optional)
	Filter Mode	Normal, Step, Edge, Interpolation

## Advanced Mode Characteristics

Sequence	Sample Rate	1 $\mu$ Sa/s to 1.25 GSa/s
	Length	32 pts/CH to 128 Mpts/CH (256 Mpts/CH optional)
	No. of Steps	1 to 512
	Loop	1 to 256
	Wait/Event	Off, external trigger (rising/falling edge), manual trigger, timer
	Event Jump Destination	Next, First, Last, Specify SN
	Go To Destination	Next, First, Last, End, Specify SN
	Timer	4 $\mu$ s to 8000 s
	Filter Mode	Normal, Step, Edge, Interpolation
PRBS	Bit Rate	1 $\mu$ bps to 300 Mbps
	Sequence Length	$2^n - 1$ , $n = 3, 4, \dots, 32$
	Edge Time	2 ns to 1 $\mu$ s (limited by the bit rate)
	Jitter (rms)	200 ps
Multi-pulse	Pulse Count	2 to 30
	Trigger Source	Off, external trigger (rising/falling edge), manual trigger, timer
	Trigger Delay	5 $\mu$ s to 1 s
	Timer	5 $\mu$ s to 8000 s (limited by the trigger delay time and the high/low level width)
	High/Low Level Width	20 ns to 150 $\mu$ s
	Edge Time	2 ns to 1 $\mu$ s (limited by the min. high/low level width)
Multi-tone	Tone Count	2 to 16

## Advanced Mode Characteristics

Pattern	Bit Rate	1 $\mu$ bps to 300 Mbps
	Input Data Type	Pattern, File
	Encoding Type	NRZ, RZ, Manchester
	Data Type	Binary, Hexadecimal (supporting 4B5B encoding), KD Symbol (supporting 8B10B encoding)
	Max. Data Length	Pattern: 4000 characters (binary), 1000 characters (hexadecimal/KD symbol) File: 64M characters (binary), 12M characters (hexadecimal/KD symbol)
	Preset Amplitude	TTL, CMOS5.0, CMOS3.3, CMOS2.5, CMOS1.8, ECL, PECL
IQ	Symbol Rate	100 Sa/s to 100 MSa/s
	Data Length	10 to 20 M
	Modulation Type	BPSK, QPSK, 8PSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
	Code Type	OFF, Differential, Gray, Differential+Gray
	Center Frequency	0 Hz to 500 MHz

## AUX IN/OUT Characteristics

### AUX IN/OUT Characteristics

External Modulation Input	Input Range	ASK, FSK, PSK: 3.3 V logic level AM, FM, PM, PWM: $\pm 5$ V full range
	Frequency Range	Front-panel SMB: DC to 100 kHz (1 MSa/s) Rear-panel BNC: DC to 10 Mbps
	Input Impedance	10 k $\Omega$
	Connector	ASK, FSK, PSK: BNC (rear panel) or SMB (rear panel), selectable AM, FM, PM, PWM: SMB (front panel)

## AUX IN/OUT Characteristics

External Trigger/ Gated Burst Input	Level	TTL-compatible
	Impedance	10 k $\Omega$
	Edge	Positive/negative(selectable)
	Min. Pulse Width	100 ns
	Trigger Delay Range	0 ns to 85 s
	Trigger Delay Resolution	100 ps or 5 digits
	Jitter (rms)	Typical (trigger input to signal output, Burst mode), 800 ps
Connector	BNC (rear panel)	
Trigger Output	Level	3.3 V CMOS
	Output Impedance	50 $\Omega$
	Jitter (rms)	Typical (Continuous mode), 400 ps
	Connector	SMB (front panel)
Sync Output	Level	TTL-compatible
	Impedance	50 $\Omega$
	Connector	SMB (front panel)
10 MHz Reference Input	Impedance	1 k $\Omega$
	Input Coupling	AC coupling
	Lock Range	10 MHz $\pm$ 100 Hz
	Required Input Voltage	100 mVpp to 5 Vpp
	Connector	BNC (rear panel)

## AUX IN/OUT Characteristics

10 MHz Reference Output	Impedance	50 $\Omega$
	Level	Typical (50 $\Omega$ ), 1.2 Vpp
	Output Coupling	AC coupling
	Connector	BNC (rear panel)

## Protection

### Protection

Overvoltage Protection	Occurred when: The instrument amplitude setting is greater than 4 Vpp or the output AC + DC is greater than  2 Vdc  and the input voltage is greater than $\pm 12 \times (1 \pm 5\%)V$ (<10 kHz). Disruptive voltage: $\pm 18(V_{ac} + dc)$
	The instrument amplitude setting is less than or equal to 4 Vpp or the output AC + DC is less than  2 Vdc  and the input voltage is greater than $\pm 2.5 \times (1 \pm 5\%)V$ (<10 kHz). Disruptive voltage: $\pm 3.5(V_{ac} + dc)$
	Note: Differential output ports cannot withstand reverse injection voltages exceeding $\pm 2$ V.

## Characteristics

### Characteristics

Display	10.1-inch touch screen, 1280x800 (screen area) 16:9
Stabilization Time	At least 30-minute warm-up
Internal Non-volatile Memory	128 GB (actual available memory less than 128 GB due to factors such as system file usage)

## Power Supply

### Power Supply

Input Voltage	AC 100 V to 240 V, 50 Hz/60 Hz
Consumption	270 W (max.)
Fuse	5 A, Class T, 250 V

## Interface

Interface	
LAN Interface	1 at rear panel, 10/100/1000 BASE-T port, supporting LXI-C
Web Control	Support Web Control (input the IP address of the instrument into the Web browser to display the operation interface)
HDMI	1 at rear panel, HDMI (type A) used to connect to an external monitor or projector
USB 3.0 Host	1 at front panel
USB 3.0 Device	1 at rear panel, supporting TMC

## Mechanical Characteristics

Mechanical Characteristics	
Dimension	358 mm (W) x 215 mm (H) x 122 mm (D)
Rack Mount Kit	5 U
Weight (Package Excluded)	DG6054/DG6104: 5.35 kg DG6052/DG6102: 5.28 kg

## Environment

Environment		
Temperature Range	Operating	0°C to +40°C
	Non-operating	-20°C to +60°C
Humidity Range	Operating	0°C to +40°C, ≤80% RH (without condensation)
	Non-operating	-20°C to 40°C, ≤90% RH (without condensation)
		below 60°C, ≤80% RH (without condensation)
Altitude	Operating	Below 3,000 m
	Non-operating	Below 12,000 m

## Regulation Standards

### Regulation Standards

Electromagnetic Compatibility	Compliant with EMC Directive (2014/30/EU)
	EN IEC 61326-1:2021
	EN IEC 61000-3-2:2019+A1
	EN 61000-3-3:2013+A1+A2
	BS EN IEC 61326-1:2021
	BS EN IEC 61000-3-2:2019+A1
	BS EN 61000-3-3:2013+A1+A2
	FCC Part 15, Subpart B:2021
	ICES-001:2020
Safety	EN 61010-1:2010+A1
	IEC 61010-1:2010+A1
	BS EN 61010-1:2010+A1
	UL 61010-1: 2012 R6.23
	CAN/CSA-C22.2 NO. 61010-1-12+GI1+GI2 (R2017) +A1

## Warranty and Calibration Interval

### Warranty and Calibration Interval

Warranty	3 years (excluding the accessories)
Recommended Calibration Interval	12 months

### NOTE:

[1]: 1 kHz Sine, amplitude >1 mVpp, 0 V offset, unit: Vpp.

[2]: dBm is available only when the load impedance is not set to HighZ; Vrms is not available for Arb; Vpp and V (high level and low level) are available for all waveform types.

[3]: 1 kHz Sine, amplitude >400 mVpp, unit: Vpp.

[4]: Total reference frequency error one year after factory adjustment at the specified operating temperature (23°C ± 5°C).

[5]: 1 µHz to 200 kHz relative to 1 kHz Sine, >200 kHz relative to 1 MHz Sine; 0 dBm amplitude.

# Order Information and Warranty Period

## Order Information

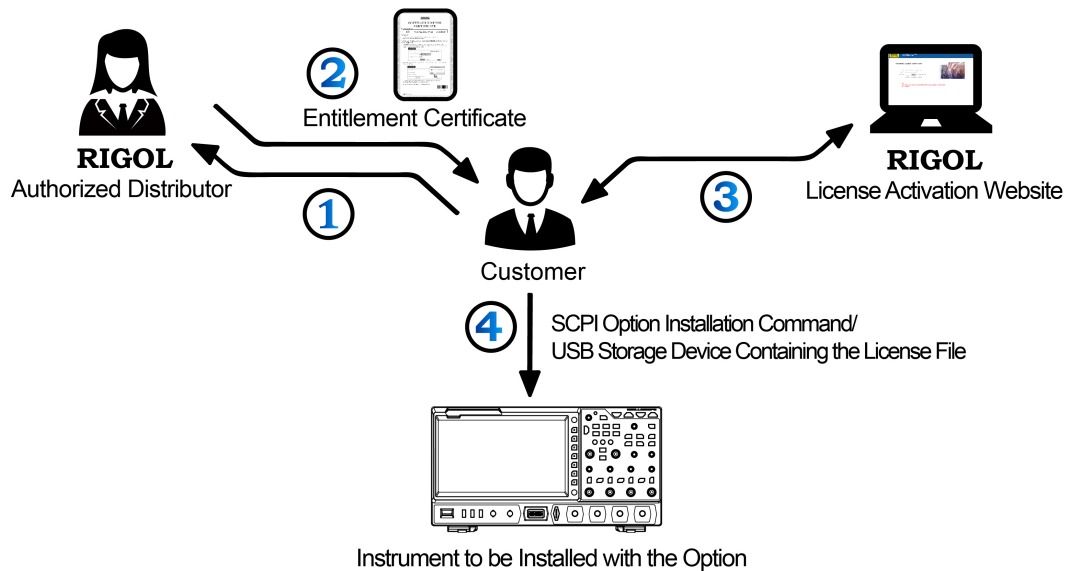
Order Information	Order No.
<b>Model</b>	
500 MHz Bandwidth, 2.5 GSa/s Sample Rate, Dual-channel	DG6052
500 MHz Bandwidth, 2.5 GSa/s Sample Rate, Four-channel	DG6054
1 GHz Bandwidth, 2.5 GSa/s Sample Rate, Dual-channel	DG6102
1 GHz Bandwidth, 2.5 GSa/s Sample Rate, Four-channel	DG6104
<b>Standard Accessories</b>	
Power Cord Conforming to the Standard of the Destination Country	— —
SMB Pin Insertion/extraction Tool	— —
USB Cable	CB-USBA-USBB-FF-150
4/8 BNC Cables	CB-BNC-BNC-MM-100
<b>Option</b>	
512 Mpts/CH Max. Arb Length Upgrade Option	DG6000-2RL
<b>Optional Accessories</b>	
40dB Attenuator (50 $\Omega$ , 1 W)	RA5040K
SMB(F) to SMB(F) Cable (1 m)	CB-SMB-SMB-FF-100
SMB(F) to BNC(F) Cable (1 m)	CB-SMB-BNC-FF-100
SMB(F) to BNC(M) Cable (1 m)	CB-SMB-BNC-FM-100
BNC to Alligator Clip Cable	CB-BNC-AC-100-L

# Warranty Period

---

Three years for the mainframe, excluding the accessories.

# Option Ordering and Installation Process



1. According to the usage requirements, please purchase the specified function options from **RIGOL Sales Personnel**, and provide the serial number of the instrument that needs to install the option.
2. After receiving the option order, the **RIGOL** factory will mail the paper software product entitlement certificate to the address provided in the order.
3. Log in to **RIGOL** official website for registration. Use the software key and instruments serial number provided in the entitlement certificate to obtain the option license code and the option license file.
4. Install the option by running the SCPI command concerning the option installation. You can also save the option license file to the root directory of the USB storage device. Then insert it to the instrument. After being recognized, follow the instructions to install the option.

## NOTE:

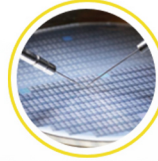
If any problems occur during the option installation process, please contact **RIGOL** technical team.

# Boost Smart World and Technology Innovation

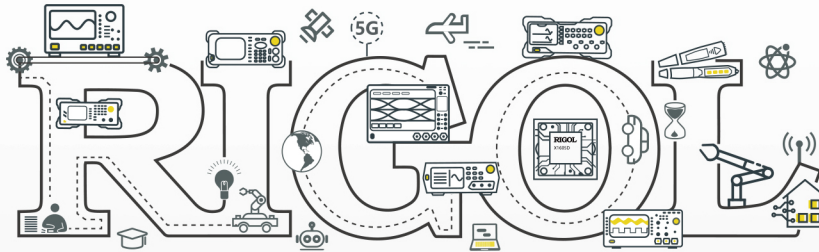
Industrial Intelligent  
Manufacturing



Semiconductors



Education &  
Research



Communication



System Integration



New Energy



- Cellular-5G/WIFI
- UWB/RFID/ ZIGBEE
- Digital Bus/Ethernet
- Optical Communication

- Digital/Analog/RF Chip
- Memory and MCU Chip
- Third-Generation Semiconductor
- Solar Photovoltaic Cells

- New Energy Automobile
- PV/Inverter
- Power Test
- Automotive Electronics

*Provide Testing and Measuring Products  
and Solutions for Industry Customers*

## HEADQUARTER

**RIGOL TECHNOLOGIES CO., LTD.**  
No.8 Kelling Road, New District,  
Suzhou, Jiangsu, P.R.China  
Tel: +86-400620002  
Email: info-cn@rigol.com

## JAPAN

**RIGOL JAPAN CO., LTD.**  
5F, 3-45-6, Minamiotsuka, Toshima-Ku,  
Tokyo, 170-0005, Japan  
Tel: +81-3-6262-8932  
Fax: +81-3-6262-8933  
Email: info.jp@rigol.com

## EUROPE

**RIGOL TECHNOLOGIES EU GmbH**  
Friedrichshafener Str. 5  
82205 Gilching  
Germany  
Tel: +49(0)8105-27292-21  
Email: info-europe@rigol.com

## KOREA

**RIGOL KOREA CO., LTD.**  
5F, 222, Gonghang-daero,  
Gangseo-gu, Seoul, Republic of Korea  
Tel: +82-2-6953-4466  
Fax: +82-2-6953-4422  
Email: info.kr@rigol.com

## NORTH AMERICA

**RIGOL TECHNOLOGIES, USA INC.**  
10220 SW Nimbus Ave.  
Suite K-7  
Portland, OR 97223  
Tel: +1-877-4-RIGOL-1  
Email: sales@rigol.com

## For Assistance in Other Countries

Email: info.int@rigol.com

**RIGOL®** is the trademark of **RIGOL TECHNOLOGIES CO., LTD.** Product information in this document is subject to update without notice. For the latest information about **RIGOL's** products, applications and services, please contact local **RIGOL** channel partners or access **RIGOL** official website: [www.rigol.com](http://www.rigol.com)