

Waveform Generators



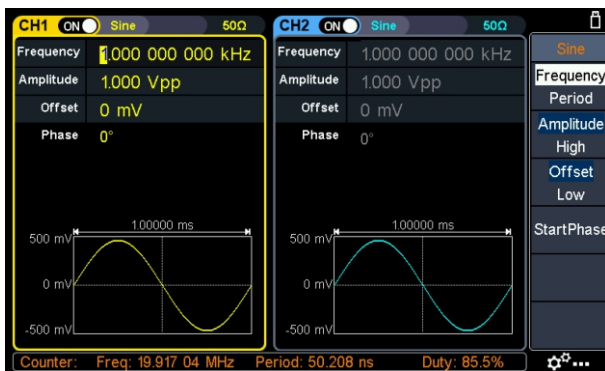
Dual-channel Arbitrary Waveform Generator

- XDG2000 Series

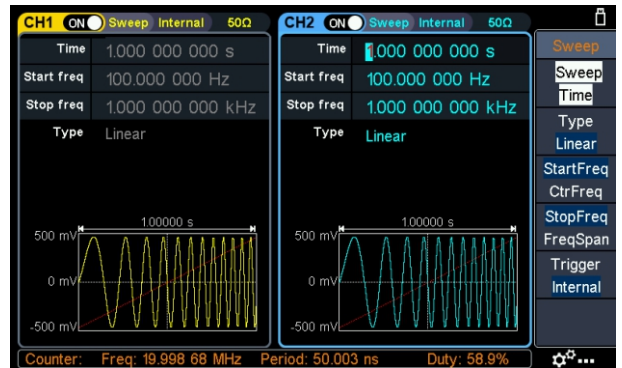


- + Max 100MHz frequency output
- + 500MSa/s Sample rate, Vertical resolution 1 μ Hz
- + 14 bits Vertical Resolution, 10Marb waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 170 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, DSB-AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM and SUM
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + SCPI, and LabVIEW supported
- + 7 inch (800 \times 480 pixels) LCD

Equal performance dual channel output



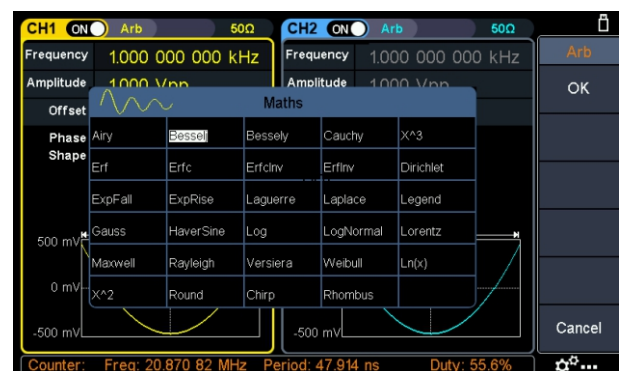
Rich sweep function



Rich analog and digital modulation



Build-in 152 arbitrary waveforms



Model	XDG2100	XDG2080	XDG2060	XDG2035
Channel	2			
Frequency Output	100MHz	80MHz	60MHz	35MHz
Sample Rate	500MSa/s			
Vertical Resolution	14 bits			
Waveform				
Standard Waveform	sine, square, pulse, ramp, noise, and harmonic			
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 170 built-in waveforms, and user-defined arbitrary waveform			
Frequency (resolution 1μHz)				
Sine	1μHz - 100MHz	1μHz - 80MHz	1μHz - 60MHz	1μHz - 35MHz
Square	1μHz - 30MHz	1μHz - 30MHz	1μHz - 30MHz	1μHz - 15MHz
Pulse	1μHz - 25MHz	1μHz - 25MHz	1μHz - 25MHz	1μHz - 15MHz
Ramp	1μHz - 3MHz	1μHz - 3MHz	1μHz - 3MHz	1μHz - 3MHz
Noise (-3dB, typical)	100MHz	80MHz	60MHz	35MHz
Arbitrary Waveform	1μHz - 15MHz	1μHz - 15MHz	1μHz - 15MHz	1μHz - 15MHz
Harmonic	1μHz - 50MHz	1μHz - 40MHz	1μHz - 30MHz	1μHz - 17.5MHz
Accuracy	±2ppm, 25°C±5°C			
Waveform Length	2 points - 10M points			
Amplitude				
into 50Ω load	1mVpp - 10Vpp (≤ 25MHz), 1mVpp - 5Vpp (≤60MHz), 1mVpp - 2.5Vpp (≤100MHz)			
Modulation				
Type	AM, DSB-AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM, SUM			
Frequency Counter				
Function	Frequency, period, +width, -width, +duty, and -duty			
Frequency Range	100mHz - 200MHz			
Frequency Resolution	7 digits			
Input / Output				
Input mode	frequency counter, external modulation input, external trigger input, Internal clock output, external reference clock input / output			
Communication Interface	USB Host, USB Device, LAN, RS232 (optional)			
Mechanical specifications				
Size	340mm x 177mm x 90mm			
Weight	Approx. 2.3kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Q9 Cable

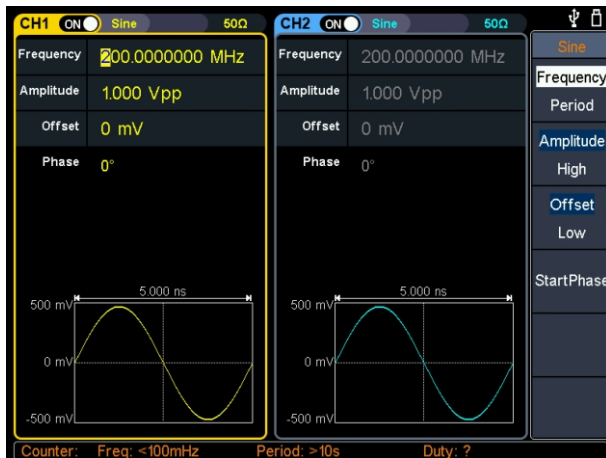
Dual-channel Arbitrary Waveform Generator

- XDG3000 Series

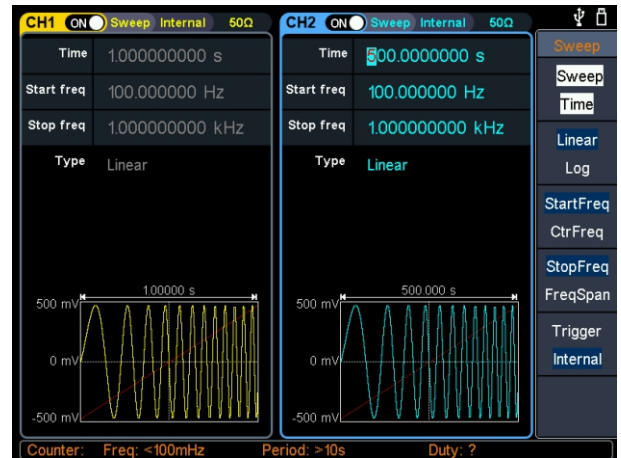


- + Advanced DDS technology, Max 250MHz frequency output
- + Max 1.25GS/s sample rate, and 1 μ Hz frequency resolution
- + Vertical Resolution :14 bits, max 1M arb waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 152 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, 3FSK, 4FSK, PSK, OSK, ASK, BPSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + SCPI, and LabVIEW supported
- + 8 inch (800 x 600) high resolution LCD, multi-point touch screen, more user-friendly operation experience

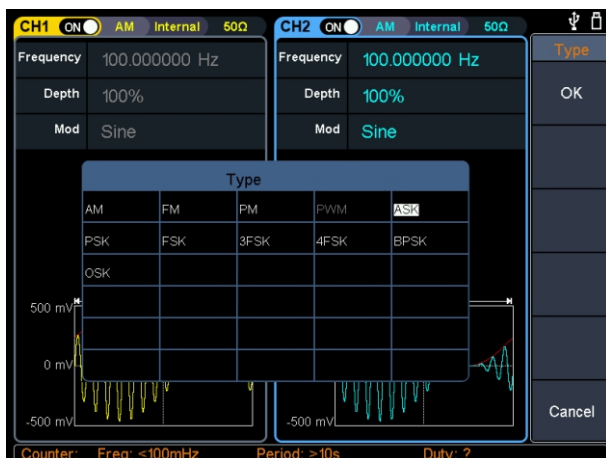
Equal performance dual channel output



Rich sweep function



Rich analog and digital modulation



Build-in 152 arbitrary waveforms



Model	XDG3252	XDG3202	XDG3162	XDG3102	XDG3082
Channel	dual				
Frequency Output	250MHz	200MHz	160MHz	100MHz	80MHz
Sample Rate	1.25GSa/s				
Vertical Resolution	14 bits				
Waveform					
Standard Waveform	Sine, Square, Pulse, Ramp, Noise, and Harmonic				
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 152 built-in waveforms, and user-defined arbitrary waveform				
Frequency (resolution 1μHz)					
Sine	1μHz - 250MHz	1μHz - 200MHz	1μHz - 160MHz	1μHz - 100MHz	1μHz - 80MHz
Square	1μHz - 50MHz			1μHz - 40MHz	1μHz - 30MHz
Pulse	1μHz - 25MHz				
Ramp	1μHz - 5MHz				
Harmonic	1μHz - 250MHz	1μHz - 200MHz	1μHz - 160MHz	1μHz - 50MHz	1μHz - 80MHz
Noise	120MHz (-3dB, type)				
Wave Length	2 - 1M pts				
Amplitude					
Amplitude (high resistance)	2mVpp - 20Vpp (≤ 40MHz), 2mVpp - 10Vpp (≤80MHz) 2mVpp - 5Vpp (≤120MHz), 2mVpp - 2Vpp (≤200MHz)				
Modulation					
Type	AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, OSK, ASK, BPSK, Sweep, and Burst				
Frequency Counter					
Function	Frequency, Period, +Width, -Width, +Duty, and -Duty				
Frequency Range	100mHz - 200MHz				
Frequency Resolution	7 digit				
Input / Output					
Type	counter, external modulation input, external trigger input, external reference clock input / output				
Communication Interface	USB Host, USB Device, LAN				
Mechanical					
Dimension (W x H x D)	340 x 177 x 90 (mm)				
Device Weight	Approx. 2.50 kg				

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



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Single-channel Arbitrary Waveform Generator

- AG-S Series



- + Advanced DDS technology, upto 10MHz frequency output
- + 125MS/s sample rate, and 1uHz frequency resolution
- + Vertical Resolution : 14 bits, and 8K arb waveform length
- + Comprehensive waveform output :
 - 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions :
 - AM, FM, PM, FSK, Sweep, and Burst
- + SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels)LCD
- + could work with OWON SDS Series DSO smoothly

Model	AG051	AG051F	AG1011	AG1011F
Channel	single + trigger			
Frequency Output	5MHz	10MHz		
Sample Rate	125MS/s			
Vertical Resolution	14 bits			
Waveform				
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise			
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform			
Frequency (resolution 1μHz)				
Sine	1μHz - 5MHz	1μHz - 10MHz		
Square	1μHz - 5MHz			
Pulse	1μHz - 5MHz			
Ramp	1μHz - 1MHz			
Noise	5MHz (-3dB) (typical)			
Wave Length	2 - 8K pts			
Amplitude				
Amplitude	1m Vpp - 12.5 Vpp (50Ω), 1m Vpp - 25 Vpp (high impedance)			
Modulation (optional)				
Modulation Waveform	/	AM, FM, PM, FSK, Sweep, and Burst	/	AM, FM, PM, FSK, Sweep, and Burst
Modulation Frequency	/	2mHz to 20.00KHz (FSK 2mHz - 100KHz)	/	2mHz to 20.00KHz (FSK 2mHz - 100KHz)
Counter Specification(optional)				
Function	Frequency, period, positive Pulse width, Duty cycle			
Frequency Range	Single channel: 100 mHz - 200MHz			
Input / Output				
Display	4 inch (480 x 320 pixels) LCD			
Type	external reference clock input	external modulation input, external trigger input, and external reference clock input	external reference clock input	external modulation input, external trigger input, and external reference clock input
Communication Interface	USB device			
Mechanical				
Dimension (W x H x D)	235 x 110 x 295 (mm)			
Device Weight	3.00 kg			

Specifications subject to change without prior notice.

Dual-channel Arbitrary Waveform Generator

- AG Series



- + Advanced DDS technology, max 60MHz frequency output
- + Up to 300MS/s sample rate, and 1uHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output :
 - 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions :
 - AM, FM, PM, FSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz+SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels)LCD
- + could work with OWON SDS Series DSO smoothly

Model	AG1012	AG1012F	AG1022	AG1022F	AG2052F	AG2062F
Channel	dual					
Frequency Output	10MHz		25MHz		50MHz	60MHz
Sample Rate	125MS/s			300MS/s		
Vertical Resolution	14 bits					
Waveform						
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise					
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform					
Frequency (resolution 1μHz)						
Sine	1μHz - 10MHz		1μHz - 25MHz		1μHz - 50MHz	1μHz - 60MHz
Square	1μHz - 5MHz		1μHz - 5MHz		1μHz - 25MHz	1μHz - 30MHz
Pulse	1μHz - 5MHz		1μHz - 5MHz		1μHz - 10MHz	1μHz - 15MHz
Ramp	1μHz - 1MHz					
Noise	25MHz (-3dB) (typical)					
Wave Length	2 - 8K pts			2 - 1M pts		
Amplitude						
Amplitude	1mVpp - 10Vpp (50Ω), 1mVpp - 20Vpp (high impedance)					
Modulation						
Modulation Waveform	/		AM, FM, PM, FSK, Sweep, and Burst		AM, FM, PM, FSK, Sweep, and Burst	
Modulation Frequency	/		2mHz to 20.00KHz (FSK 2mHz - 100KHz)			
Mechanical						
Dimension (W x H x D)	235 x 110 x 295 (mm)					
Device Weight	3.00 kg					
Power Amplifier Module (optional)						
Bandwidth (at full power)	DC - 100kHz	Max Output Power	10W	Max Input Voltage	22Vpp	

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+ Accessories

The accessories subject to final delivery.



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Dual-channel Arbitrary Waveform Generator

- DGE2000 Series



- + Up to 70MHz frequency output, Max 300MSa/s sample rate
- + Vertical Resolution :14 bits, max 8K Arb waveform length
- + Comprehensive waveform output :
 - 5 basic waveforms, and 150 built-in arbitrary waveforms
- + Comprehensive modulation functions :
 - AM, FM, PM, FSK, Sweep, Burst, etc.
- + SCPI, and LabVIEW supported
- + 3.6 inch TFT LCD, all settings can be fully displayed
- + Ultra-thin body, easy to operate

Standard equivalent performance dual channel.

ch1	ch2
Freq 60.000,0 MHz	Freq 60.000,0 MHz
Ampl 10.000 Vpp	Ampl 10.000 Vpp
Offset 0 mV	Offset 0 mV
Phase 0°	Phase 0°

with more than 150 kinds of built-in arbitrary waveforms.

Arb		
Butterworth	Combin	CPulse
CWPulse	RoundsHalf	BandLimited
BlaseiWave	Chebyshev1	Chebyshev2
DampedOsc	DualTone	Gamma

support AM, FM, PM, FSK modulation mode, and Sweep, Burst function.

Mode	
Shape	Sine
Frequency	1.000,000 kHz
Depth	100 %
AM	
FM	
PM	
FSK	

Support PC remote control.



Model	DGE2035	DGE2070
Channel	2	
Frequency Output	35MHz	70MHz
Sample Rate	125MSa/s	300MSa/s
Vertical Resolution	14 bits	
Waveform		
Standard Waveform	sine, square, pulse, ramp, and noise	
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 150 built-in waveforms, and user-defined arbitrary waveform	

Model	DGE2035	DGE2070
Frequency		
Sine	1μHz - 35MHz	1μHz - 70MHz
Square	1μHz - 15MHz	1μHz - 20MHz
Pulse	1μHz - 15MHz	1μHz - 20MHz
Ramp	1μHz - 1MHz	1μHz - 2MHz
Noise	20MHz (-3dB, typical)	
Arbitrary Waveform	1μHz - 10MHz	
Frequency Resolution	1 μHz or 7 significant figures	
Frequency Stability	±30 ppm at 0±40°C	
Frequency Aging Rate	±30 ppm per year	
Arbitrary		
Waveform Length	2 - 8K points	
Sample Rate	125Ma/s	300Ma/s
Amplitude		
into 50Ω Load	1mVpp - 10Vpp (≤10MHz); 1mVpp - 5Vpp (≤70MHz)	
DC Offset Range (AD+DC)	±(10 Vpk - Amplitude Vpp/2) high resistance; ±(5 Vpk - Amplitude Vpp/2) 50 Ω	
DC offset Resolution	1mV or 4digits	
Load Impedance	50Ω (typical)	
DC offset Accuracy	±(1 % of setting + 1 mV + amplitude Vpp x 0.5%)	
Modulation		
Type	AM, FM, PM, FSK, sweep, Burst	
Internal Modulation Frequency	2 mHz to 100 kHz	
Sweep		
Carrier	Sine, rectangular wave, ramp wave, arbitrary wave(Except DC)	
Minimum/Maximum Starting Frequency	2mHz (minimum) / maximum frequency of corresponding carrier	
Minimum/Maximum Termination Frequency	2mHz (minimum) / maximum frequency of corresponding carrier	
Trigger Source	internal, manual	
Burst		
Waveform	Sine wave, square wave, ramp wave, pulse wave and arbitrary wave (Except DC)	
Types	N-Cycle	
Trigger source	Internal, manual	
Carrier frequency	1μHz ≤ Offset ≤ Maximum frequency of corresponding carrier / 2	
Input / Output		
Display	3.6-inch TFT LCD with resolution 480 x 272	
Communication Interface	USB Device	
Mechanical Specifications		
Dimension (W×H×D)	200mm x 68.5mm x 74.5mm	
Weight (without package)	0.5kg	

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USB to DC Cord



Power Adapter



Q9 Cable



BNC to Alligator Clip