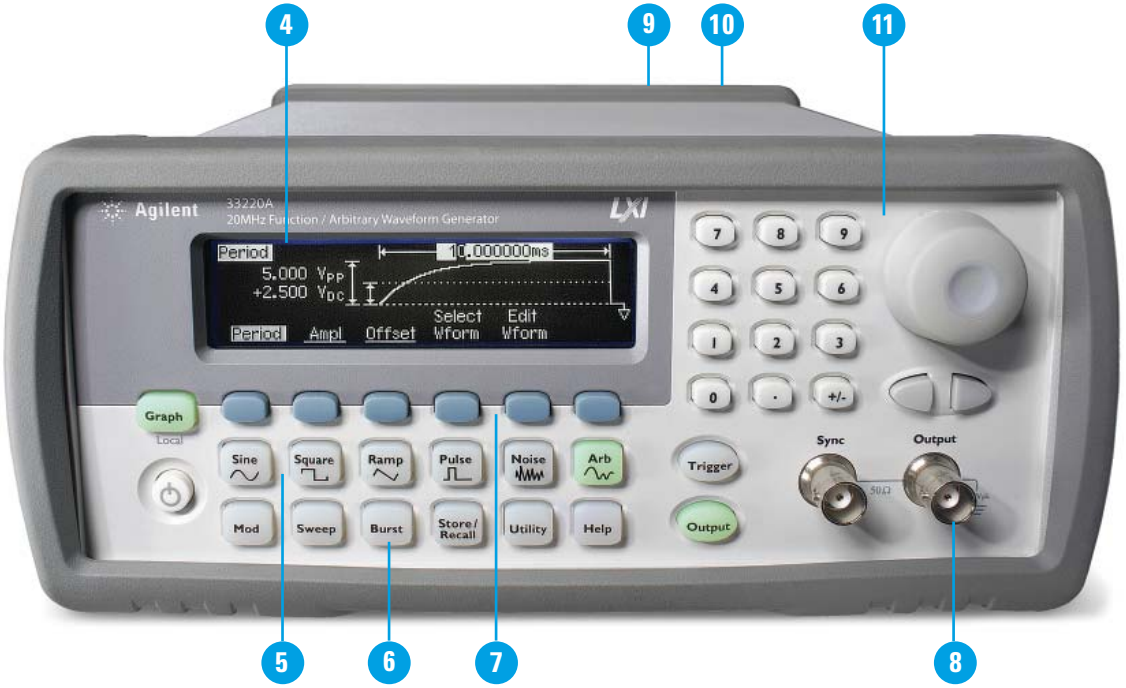
Quick Fact Sheet

Agilent 33210A/20A/50A Function/Arbitrary Waveform Generators



Key features

- Standard waveforms included: sine, square, pulse, noise, ramp, DC, triangle
- Arbitrary waveforms with up to 64 K-points of memory. 33210A has an optional 8K point arbitrary waveform generator.
- Standard modulations AM and FM on all instruments, FSK, PWM and PM on select models
- Linear/log sweep and burst
- Free IntuiLink Arbitrary Waveform Software

1. *33210A Function/Arbitrary Waveform Generator, 10 MHz*
2. *33220A Function/Arbitrary Waveform Generator, 20 MHz*
3. *33250A Function/Arbitrary Waveform Generator, 80 MHz*
4. *Graphic display for viewing and editing waveforms*
5. *One touch buttons for the standard waveforms*
6. *One touch buttons for modulation*
7. *Soft keys for setting parameters*
8. *Programmable output for matching load impedance*
9. *External reference time base input (33210A/20A Option 001)*
10. *Computer interfaces: GPIB, 33210A/20A provides USB and LAN (LXI)*
11. *SCPI programming language, PC SW and drivers included*

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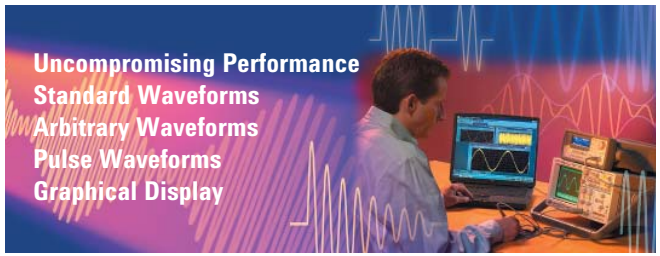
	33210A	33220A	33250A
Frequency range (sine and square)	1 MHz to 10 MHz	1 µHz to 20 MHz	1 µHz to 80 MHz
Arb resolution and sample rate	14-bit, 50 MSa/s (Option 002)	14-bit, 50 MSa/s	12-bit, 200 MSa/s
Harmonic distortion	-70 dBc (DC to 20 kHz)		-60 dBc (DC to 1 MHz)
Linear ramp rate	Up to 100 kHz	Up to 200 KHz	Up to 1 MHz
Phase noise	-115 dBc/Hz		< -65 dBc (10 MHz)
Square wave duty cycle	20% to 80%		
Pulse frequency range	1 MHz to 5 MHz	500 µHz to 5 MHz	500 µHz to 50 MHz
Modulation carrier waveforms	Sine, square	Sine, square, ramp, and arb	
Modulation capability	AM, FM, PWM, Burst	AM, FM, PM, FSK, Burst, PWM	AM, FM, FSK, Burst
Amplitude range	10 mVpp to 10 Vpp into 50 Ω load		
Amplitude accuracy	±2%, ±1 mVpp	±1%, ±1 mVpp	
Frequency accuracy	20 ppm + 3 pHz		2 ppm
External timebase reference	Option 001		Standard
Interface	GPIB, LAN, USB		GPIB, RS-232



34970A/34972A plug-in modules

Part	Description
33210A Option 001	External timebase reference
33210A Option 002	8K point Arbitrary Waveform Generator
33220A Option 001	External timebase reference
34131A	Carrying case
34161A	Accessory pouch
34190A	Rack mount kit (½ width)
10833A/B/C/D/F/G	GPIB cable
82350B	PCI high-performance GPIB card
82351A	PCIe-GPIB interface card
82357B	USB/GPIB interface (33250A only)
E5813A	Networked 5-port USB hub (33250A only)
E5810A	GPIB to LAN gateway (33250A only)

Recommended service options

Additional two years of Return-to-Agilent warranty
Additional two years of Return-to-Agilent calibrations
For more information go to **www.agilent.com/find/removealldoubt**

Technical data, availability, and pricing subject to change without notice.
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