

WINTER-SPRING 2009

Pay less for high-quality waveforms for your device under test

NEW

Introducing the 33210A function/arbitrary waveform generator

- System-ready interfaces with GPIB, USB, and LAN (LXI-C)
- IntuiLink Waveform Editor software included

See page 6 to learn more.



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TESSCO



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All prices USD.

All pricing and technical data
subject to change.

Agilent Authorized Distributors

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Agilent Authorized Distributors meet rigorous qualifications for business ethics, financial stability and customer-driven culture. Many offer focused expertise in specific industries and technical sectors, and all are backed by training and support from Agilent factory experts.



Whatever your discipline, whatever your product, Agilent has the test technologies to help you meet today's challenges and prepare for tomorrow's.

With Agilent instruments, you get more features, more functionality, more performance, more value — more reasons than ever to call your Authorized Agilent Distributor.

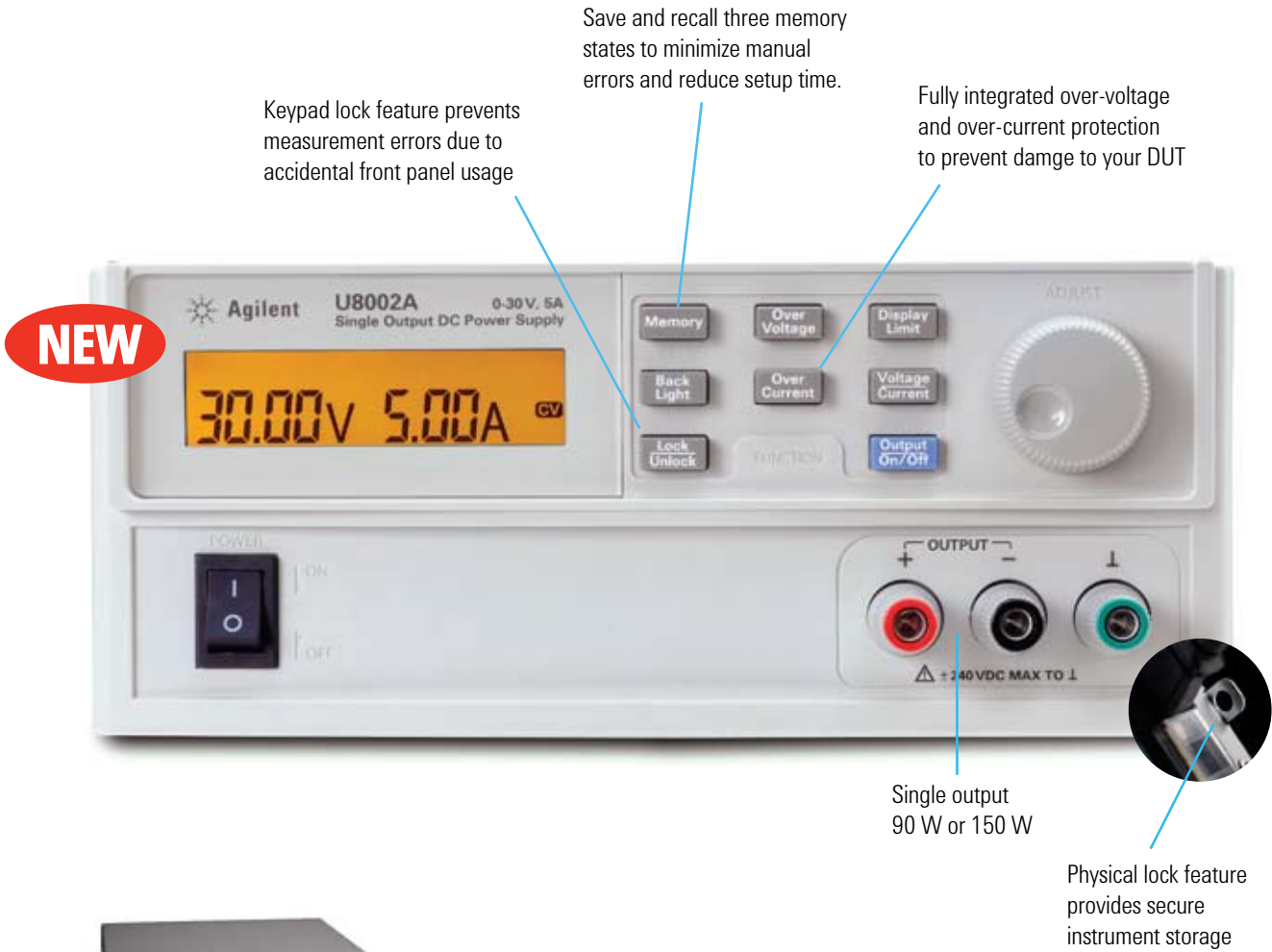
Agilent U8000 DC power supplies

Get extra features and functions without spending more

U8000 Series 90- to 150-W single-output, non-programmable DC power supplies include extra features — typically found only in more-expensive supplies. The U8000 Series delivers excellent value for applications in electronics manufacturing and educational settings.

Solid, reliable DC power at the right price

- Low output noise (as low as 1 mVrms) minimizes interference into your DUT
- Excellent 0.01% load and line regulation for steady output power levels
- Fast load transient response time (50 msec) reduces test time and manufacturing cost



	GPIB	Output	Range	Voltage	Current	Power	Price from (US)
U80001A	N	1	1	30 V	3 A	90 W	\$295
U80002A	N	1	1	30 V	5 A	150 W	\$370

Agilent E3600 Family of DC power supplies

Reliable power, repeatable results

Quiet, stable, reliable DC power. For environments that need to watch test costs as closely as they watch test results.

- Extremely low output noise—as low as 1 mVp-p/0.2mVrms
- Tight 0.01% load and line regulation for steady output power levels
- Fast load transient response time (<50 μ s)
- Choice of models from 30 to 200 W output power
- Convenient front-panel programming and/or GPIB and RS-232

E3610A-17A/20A/30A manual DC power supplies

- Up to 120 V and 6 A—just the power you need
- 30 to 60 W—single, double and triple outputs
- 10-turn pots—make fine adjustments easily

Price from: (US) \$433

E3631A-34A programmable DC power supplies

- System-level performance without the high price
- 80 to 200 W—single or triple output for more power options
- Rotary knob and self-guiding keypads—precise adjustments for output resolution

Price from: (US) \$1,085



E3640A-49A programmable DC power supplies

- Remote sensing—eliminate voltage regulation errors due to drop in load leads
- Front and rear output terminals—flexible measurement setup
- Internal non-volatile memory—store and recall setups fast

Price from: (US) \$709

E3610A-17A/20A/30A

	GPIB	Output	Range	Voltage	Current	Power	Price from (US)
E3610A	N	1	2	8 V 15 V	3 A 2 A	30 W	\$433
E3611A	N	1	2	20 V 35 V	1.5 A 0.85 A	30 W	\$433
E3612A	N	1	2	60 V 120 V	0.5 A 0.25 A	30 W	\$433
E3614A	N	1	1	8 V	6 A	48 W	\$678
E3615A	N	1	1	20 V	3 A	60 W	\$678
E3616A	N	1	1	35 V	1.7 A	60 W	\$678
E3617A	N	1	1	60 V	1 A	60 W	\$678
E3620A	N	2	1	25 V	1 A	50 W	\$590
E3630A	N	3	1	6 V 20 V -20 V	2.5 A 0.5 A 0.5 A	35 W	\$590

E3631A-34A

	GPIB	Output	Range	Voltage	Current	Power	Price from (US)
E3631A	Y	3	1	25 V -25 V 6 V	1 A 1 A 5 A	80 W	\$1,242
E3632A	Y	1	2	15 V 30 V	7 A 4 A	120 W	\$1,085
E3633A	Y	1	2	8 V 20 V	20 A 10 A	200 W	\$1,312
E3634A	Y	1	2	25 V 50 V	7 A 4 A	200 W	\$1,312

E3640A-49A

	GPIB	Output	Range	Voltage	Current	Power	Price from (US)
E3640A	Y	1	2	8 V 20 V	3 A 1.5 A	30 W	\$709
E3641A	Y	1	2	35 V 60 V	0.8 A 0.5 A	30 W	\$709
E3642A	Y	1	2	8 V 20 V	5 A 2.5 A	50 W	\$756
E3643A	Y	1	2	35 V 60 V	1.4 A 0.8 A	50 W	\$756
E3644A	Y	1	2	8 V 20 V	8 A 4 A	80 W	\$923
E3645A	Y	1	2	35 V 60 V	2.2 A 1.3 A	80 W	\$923
E3646A	Y	2	2	8 V 20 V	3 A 1.5 A	60 W	\$991
E3647A	Y	2	2	35 V 60 V	0.8 A 0.5 A	60 W	\$991
E3648A	Y	2	2	8 V 20 V	5 A 2.5 A	100 W	\$1,185
E3649A	Y	2	2	35 V 60 V	1.4 A 0.8 A	100 W	\$1,185

Agilent makes over 200 models of power supplies — 5 W up to 6.6 kW.

Get more information at www.agilent.com/find/dcpower



Agilent N5700 Series system DC power supplies

Save valuable rack space with these compact, high-power, single-output power supplies

- 24 affordable models in a compact, 1U package to save you rack space
- Multiple I/O interfaces standard — LAN, USB and GPIB — to simplify test-system development
- Easy front-panel operation



Price from: (US) \$2,386 (750 W) and (US) \$2,827(1500 W)

750 W Models	
N5741A	6 V, 100 A, 600 W
N5742A	8 V, 90 A, 720 W
N5743A	12.5 V, 60 A, 750 W
N5744A	20 V, 38 A, 760 W
N5745A	30 V, 25 A, 760 W
N5746A	40 V, 19 A, 760 W

1500 W Models	
N5761A	6 V, 180 A, 1080 W
N5762A	8 V, 165 A, 1320 W
N5763A	12.5 V, 120 A, 1500 W
N5764A	20 V, 76 A, 1520 W
N5765A	30 V, 50 A, 1500 W
N5766A	40 V, 38 A, 1520 W

Agilent N6700 low-profile modular power system

Squeeze 4 DC power supplies in 1U of rack space with this fast and flexible modular power system

- Multiple-output power supply system lets you mix and match from 22 different 50-W, 100-W, or 300-W DC power modules
- Multiple interfaces standard – LAN, USB and GPIB – to simplify test-system development
- Improve your throughput with fast settling times and fast command processing (<1 ms)



Price from: (US) \$480 (50 W)
 Price from: (US) \$885 (100 W)
 Price from: (US) \$1,321 (300 W)

(Modules must be used with N6700 mainframe, sold separately)

50 W Models		100 W Models		300 W Models	
N6731B	5 V, 10 A	N6741B	5 V, 20 A	N6773A	20 V, 15 A
N6732B	8 V, 6.25 A	N6742B	8 V, 12.5 A	N6774A	35 V, 8.5 A
N6733B	20 V, 2.5 A	N6743B	20 V, 5 A	N6775A	60 V, 5 A
N6734B	35 V, 1.5 A	N6744B	35 V, 3 A	N6776A	100 V, 3 A
N6735B	60 V, 0.8 A	N6745B	60 V, 1.6 A	N6753A	HiPerform 20 V, 50 A
N6736B	100 V, 0.5 A	N6746B	100 V, 1 A	N6754A	HiPerform 60 V, 20 A
N6751A	HiPerform 50 V, 5 A	N6752A	HiPerform 50 V, 10 A		
N6761A	Precison 50 V, 1.5 A	N6762A	Precison 50 V, 3 A		

Agilent N6705A DC power analyzer

Gain insights into your DUT's power consumption — in minutes, not hours — without writing a single line of code

- Save time and increase your productivity for sourcing and measuring DC voltage and current into your DUT — this instrument integrates up to four advanced power supplies with DMM, scope, arb, and data logger features
- Tailor the N6705A to meet your needs using the same modules listed for the N6700 (above)



Buy the function/arbitrary waveform generator that you need — don't sacrifice quality

Agilent 33200 family function/arbitrary waveform generators

Produce clean, low-distortion signals with THD less than 0.04% and flatness as low as ± 0.1 dB

33220A: Low-cost and full-featured function generator provides arbitrary waveforms at no extra cost. Includes a 64K point arbitrary waveform generator standard as well as sine and square waves up to 20 MHz.

Price from: (US) \$1,860



33220A



33250A

33250A: Competitively priced 80-MHz function/arbitrary waveform generator — if you need higher frequency than the 33220A offers

Price from: (US) \$4,571

- Standard waveforms—including sine and square wave, ramp, pulse, noise and burst 10 MHz or 80 MHz
- Pulse generation with variable edge
- Arbitrary waveforms 2 points to 64 K points at 50 MSa/s or 200 MSa/s
Optional for the 33210A, standard on the 33220A and 33250A
- External frequency reference synchronizes to an external 10 MHz clock or another 33210A, 33220A, 33250A — Optional for the 33210A and 33220A, standard on the 33250A

NEW



33210A

Intuitive, task-oriented front panel

LXI

33210A: A cost-effective solution that provides low-distortion, highly accurate signals

Price from: (US) \$1,195

Triple versatility; optimum signal fidelity

81150A: Integrated 120 MHz pulse, function/arbitrary waveform and noise generator – three instruments in one – with pulse capabilities, higher bandwidth, 13 standard functions and more than 80 measurements available

- Intrinsic jitter < 8 ps RMS at any frequency
- Flexible noise and selectable crest factor for realistic test signals

Price from: (US) \$9,493



81150A

Helpful selection hints:

- The new **33210A** offers an entry level basic function generator with the ability to upgrade to an arbitrary waveform generator
- The **33250A** offers the same features as the **33220A** but with a higher frequency range (80 MHz)
- For greater flexibility, consider the **81150A**, which combines the capabilities of a pulse generator, a function/arbitrary waveform generator and a noise generator
- The **81100A** family provides bandwidth to 660 MHz and capabilities for specialty or digital applications

	NEW 33210A	33220A	33250A	81150A
Sine wave frequency	10 MHz	20 MHz	80 MHz	240 MHz
Standard waveforms	Sine, square, ramp, pulse, noise, DC volts	Sine, square, pulse, triangle, ramp, noise, sin(x)/x, exponential rise and fall, cardiac, DC volts		Pulse, sine, square, triangle, sin(x)/x, ramp, noise
Arbitrary waveforms	Optional 8K-points, sin(x)/x, exponential rise and fall, cardiac,	2 to 64 K points		14-bit, 2 GSa/s
Sample rate	50 MSa/s	50 MSa/s	200 MSa/s	2 GSa/s
Modulation	AM, FM PWM, sweep and burst (all internal/external)	AM, FM, PM, FSK, PWM, sweep and burst (all internal/external)	AM, FM, FSK, sweep and burst (all internal/external)	FM, AM, PW, PWM, FSK modulation capabilities up to 10 MHz
Burst	Gated, N-cycle	Gated, N-cycle	Gated, N-cycle	Gated, N-cycle
Noise generation	7 MHz	9 MHz	50 MHz	120 MHz
Pulse width range	40 ns	20 ns	20 ns	4.16 ns (period – 4.16 ns)
Connectivity	GPIB, USB, LAN, LXI class C compliant (IntuiLink software included)	GPIB, USB, LAN, LXI class C compliant (IntuiLink software included)	GPIB/RS-232	GPIB, USB, LAN, LXI class C compliant (IntuiLink software included)
Price from: (US)	\$1,195	\$1,860	\$4,571	\$9,493

Agilent 81100A pulse pattern generator family

Flexible pulses and patterns for digital designs

A pulse pattern generator family covering a frequency range from 15 MHz up to 660 MHz. Fully triggerable and with variable width, delay and transition time.

Price from: (US)

8114A	15 MHz, 100 V/2A	\$17,599
81101A	50 MHz, 10 Vpp	\$7,997
81104A	80 MHz, up to 10 Vpp	\$10,212
81110A	165 MHz/10 V or 330 MHz/3.8 V	\$14,579
81130A	400 MHz/3.8 V or 660 MHz/2.5 V	\$17,061



8114A



81101A

Lab accuracy at production-line speeds

Choose the best benchtop DMM for your application

34401A 6½ digit:

The industry-standard DMM

system capable with configuration rates starting at 26/sec and autorange rate (DCV) >30/sec

- IntuiLink PC connectivity software included, GPIB and RS-232 standard, USB with adaptor, SCPI commands for easy system use
- 1,000 readings/sec in ASCII format across the GPIB bus at 4½ digits continuous

Price from: (US) \$1,070

34405A economy DMM:

5½ digits with dual display at an affordable price

- 16 measurement functions including temperature and capacitance
- 120,000 counts resolution
- 0.025% DC voltage accuracy

Price from: (US) \$749



5½ digit 34405A

12 measurement functions including 4 W Ohm, continuity and diode test

Store up to 512 readings in internal memory

Limit testing ratio and min/max average



6½ digit 34401A

3 Hz to 300 kHz AC bandwidth

Null allows you to remove lead resistance and other fixed offsets in your measurements

0.0035% 1-year DCV accuracy
0.06% 1-year ACV accuracy
01% basic Ohms accuracy

34410/11A 6½ digit high-performance DMM:
Fast, accurate and affordable bench and system testing

- Data logger with 50,000 reading non-volatile memory
- Built-in LAN, USB 2.0 and GPIB interfaces standard
- LXI Class C compliant
- Intuilink software included
- 1u high version available for manufacturing applications

Price from: (US) \$1,295 (34410A), **\$2,003** (34411A)



6½ digit 34411A

34420A 7½ digit nanovolt/micro-ohm meter:
High-sensitivity multimeter optimized for low-level measurements

- 0.1-ppm transfer accuracy
- High sensitivity for low-level measurements
- Low-noise voltage measurements with resistance and temperature functions
- 100 pV / 100 nOhm sensitivity

Price from: (US) \$3,820

3458A high-speed DMM:
Get both high accuracy and high system throughput

- 0.1-ppm transfer accuracy
- 8-ppm 1 year dcV accuracy, optional 4-ppm
- 0.05 ppm dcV transfer accuracy
- Superior AC voltage measurements

Price from: (US) \$8,080

Helpful selection hints:

- The **3458A** offers the highest resolution (8½ digits) but is the most expensive model
- **Lower-cost DMMs** do not include the more accurate 4-wire resistance measurements
- If the DMM will be **part of a system**, consider how fast readings can be transferred to the computer
- The **34411A** offers the highest reading speed for a 6½ digit unit (50,000 readings/sec)

	34405A	34401A	34410A	34411A	3458A	34420A
Description	Benchtop DMM, dual display	Benchtop DMM	Benchtop DMM, dual display		Benchtop DMM	Nanovolt/μΩ meter
	Slightly lower performance and price point than 34401A	Industry standard for accuracy, speed, measurement ease and versatility	More measurements, faster readings over the bus than 34401A	Highest throughput of benchtop DMMs, best choice for system use	Highest resolution and accuracy, recognized worldwide as the standard in high-performance DMMs	Very accurate, low-level measurements
Digits of resolution	5 ½	6 ½	6 ½		8 ½	7 ½
Measurement speed (rdgs/s)	19	1,000	10,000	50,000	100,000	250
Basic measurements	DC and AC voltage, DC and AC current, 2-wire Ω, frequency	DC and AC voltage, DC and AC current, 2- and 4-wire resistance, frequency, period and capacitance				DC voltage, 2- and 4-wire Ω, low power Ω, ratio
Temperature	Thermistor	N/A	Thermistor, RTD	Thermistor, RTD	Thermistor, RTD	Direct SPRT, RTD, thermistor, thermocouple
Connectivity	USB 2.0	GPIB, RS-232	LAN, USB 2.0, GPIB, plus LXI class C compliant		GPIB	GPIB, RS-232
	IntuiLink software—provides a toolbar in Microsoft® Word and Excel to import multimeter data for further analysis					IntuiLink software

Agilent U1600A Series handheld oscilloscopes

Get maximum versatility for troubleshooting in the factory or field

Use this full-featured, dual-channel scope with built-in DMM and data logger capability for high-performance troubleshooting on the go.

- Capture glitches easily with flexible triggering and 200 MSa/s sampling rate
- Uncover subtle details with 125 kB memory per channel, zoom functions and large 4½ color LCD display
- Perform quick waveform analysis with waveform math
- Document results easily using the standard USB 2.0 interface

Price from: (US) \$1,355

	U1602A	U1604A with FFT math functionality
Bandwidth	20-MHz	40-MHz
Sample rate	200 MSa/s interleaved, 100 MSa/s each channel (50 s/div to 125 ns/div)	200 MSa/s interleaved, 100 MSa/s each channel (50 s/div to 250 ns/div)
Memory depth	125 kilobytes/channel	
Price from (US)	\$1,355	\$1,692



20 MHz U1602A

Agilent U1200 Series handheld DMMs

Check more, fix more, spend less!

These affordable, rugged handhelds put precision measurements in the palm of your hand.

U1240 Series handheld DMMs feature true RMS readings on a 10,000-count display. Adjustable backlighting helps you do your job even in subdued lighting conditions, while prolonging battery life.

Price from: (US) \$200

U1250 Series handheld DMMs combine the functions of a full-featured DMM and frequency counter, so you can make temperature measurements and output square waves with one unit. And accessories are included at no extra cost.

Price from: (US) \$399



U1252A



	U1241A	U1242A	U1251A	U1252A
Digits	4	4	4½	4½
Standard functions	Voltage, current, resistance, frequency, continuity with beeper, diode test, min/max, hold		Capacitance, temperature, peak, dB/dBm	
Advanced functions	Switch counting		20 MHz frequency counter, programmable square wave generator	
Accuracy	Harmonic ratio, dual and differential temperature measurements		Up to 0.025% basic DC voltage accuracy	
Price from: (US)	\$200	\$220	\$399	\$429

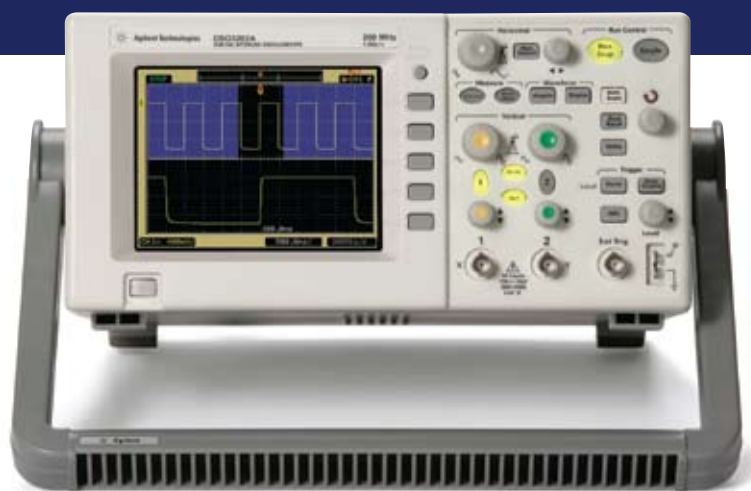
Agilent 3000 Series oscilloscopes

Full-featured scopes on a budget

The 3000 Series provides deep insight into signal details—without digging deep into your budget.

- Large 15-cm (5.9 in) color display
- Advanced measurement and triggering—edge, pulse-width, and line-selectable video
- 20 automatic measurements
- Segmented memory acquisition
- 5 standard math functions with FFT
- Pass/fail testing based on user-defined masks
- Digitally filter unwanted portions of input signals
- 3-year standard warranty

Price from: (US) \$1,152



	DSO3062A	DSO3102A	DSO3152A	DSO3202A
Bandwidth	60 MHz	100 MHz	150 MHz	200 MHz
Channels	2			
Sampling rate	1 GSa/s (1 channel), 500 MSa/s (2 channels)			
Memory	4 kpts per channel			
Connectivity	USB*, GPIB and RS-232 optional			
Price from: (US)	\$1,152	\$1,415	\$1,571	\$1,729

* USB device standard; USB host optional with module N2865A

Oscilloscope probes

Get the most from your oscilloscope

Using the right probe is the first step in making reliable measurements. For every oscilloscope we sell, we offer a variety of different probes, each with different strengths. To get the best performance from your oscilloscope, choose the right probes for your applications.

Recommended probes for Agilent oscilloscopes

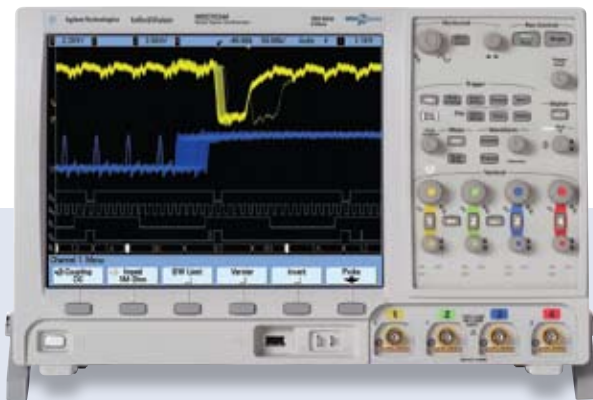
	U1600 Series	3000 Series		5000 Series		6000/7000 Series	
Scope bandwidth	20-40 MHz	60-150 MHz	200 MHz	100-300 MHz	500 MHz	100 MHz	300 MHz-1 GHz
Probe interface	BNC	BNC		AutoProbe Lite		BNC	AutoProbe Lite
Passive probe 1:1	U1560A			10070C			
Passive probe 10:1	U1561A	N2862A	N2863A	N2863A	10073C 1165A, 1171A	10074C	10073C 1165A, 1171A
High-voltage passive probe 100:1	U1562A			10076C			
High-voltage passive probe 1000:1				N2771A			
Low Z				1163A			
Active single-ended probe				1144A*	1156A 1145A* 1144A*	1156A, 1144A* or 1130A with SE probe accessory	
Active differential probe (high speed)		1144A*		1144A*	1130A* 1141A*	1130A* or 1141A*	
Active differential probe (high voltage)				N2771A*			
Current probe		1146A, N2780A/81A/82A/83A*		1146A 1147A, N2780A/81A/82A/83A*		1146A, N2780A/81A/ 82A/83A*	1146A, N2780A/81A/ 82A/83A*

* Requires additional accessories

Agilent InfiniiVision Series oscilloscopes

Engineered for the best signal visibility

Thanks to MegaZoom III technology, every InfiniiVision scope provides responsive deep memory allowing you to see subtle signal details and infrequent events that other scopes miss.



Agilent InfiniiVision 7000 Series oscilloscopes

Engineered for the best signal visibility

- 12.1" display—nearly 40% larger than the nearest competitor
- DSO and MSO models from 350 MHz to 1 GHz for analog, digital or serial measurements
- 8 Mpts memory standard

Price from: (US) \$6,950

All InfiniiVision 5000, 6000, and 7000 Series scopes feature:

- Patented MegaZoom III designed to uncover elusive details by capturing up to 100,000 deep-memory waveforms per second
- Responsive deep memory
- Standard 3-year warranty
- XGA display with 256 intensity levels to show subtle signal detail
- XVGA out standard, USB, LAN
- Wide range of applications—see table below right



Agilent InfiniiVision 6000 Series oscilloscopes

Integrated measurements for analog, digital, and serial designs

- DSO and MSO models from 100 MHz to 1 GHz for analog, digital, or serial measurements
- Battery option
- 8 Mpts memory standard
- 1U high version available for manufacturing applications

Price from: (US) \$4,720

	DSO6012A	DSO6014A	DSO6032A DSO7032A	MSO6032A MSO7032A	DSO6034A DSO7034A	MSO6034A MSO7034A
Bandwidth	100 MHz		300 MHz / 350 MHz			
Channels	2	4	2	2+16	4	4+16
Price	\$4,720	\$5,748	\$6,950	\$9,000	\$8,850	\$11,300

	DSO6052A DSO7052A	MSO 6052A MSO 7052A	DSO6054A DSO7054A	MSO6054A MSO7054A	DSO6102A	MSO6102A	DSO6104A DSO7104A	MSO6104A MSO7104A
Bandwidth	500 MHz				1 GHz			
Channels	2	2+16	4	4+16	2	2+16	4	4+16
Price	\$9,300	\$13,300	\$11,050	\$14,500	\$12,000	\$15,900	\$13,950	\$17,900

Agilent Infiniium 8000 Series oscilloscopes

Windows™-based, 4 or 4+16 channels, up to 1 GHz

Measure a huge variety of signal types and speeds to address a range of analog, digital and serial design challenges. Ideal for mixed-signal and embedded designs incorporating SDRAM, FPGA's microprocessors and DSPs. Up to 128 Mpts MegaZoom memory.

Price from: (US) \$13,324



Agilent InfiniiVision 5000 Series oscilloscopes

*Affordable performance
in a compact package*

- DSO models from 100 MHz to 500 MHz for analog and/or serial measurements
- Compact form factor with GPIB
- Up to 8 Mpts memory

Price from: (US) \$4,151

Model	Bandwidth	Channels	Price from (US)
DS05012A	100 MHz	2	\$4,151
DS05014A	100 MHz	4	\$5,023
DS05032A	300 MHz	2	\$5,637
DS05034A	300 MHz	4	\$7,072
DS05052A	500 MHz	2	\$8,405
DS05054A	500 MHz	4	\$10,245

Gain even greater insight
into your problem
with powerful

InfiniiVision

applications

Model	Description	5000	6000	7000	Price from (US)
B4610A	Offline viewing	X	X	X	\$524
N5406A	Xilinx FPGA dynamic probe		MSO	MSO	\$1,535
N5423A	I ² C/SPI serial trigger and decode	4 ch	4 ch	4 ch	\$1,250
N5424A	CAN/LIN triggering and decode	4 ch	4 ch	4 ch	\$1,250
N5432A	FlexRay triggering and decode		MSO	MSO	\$3,061
N5434A	Altera FPGA dynamic probe		MSO	MSO	\$1,535
N5454A	Segmented memory	X	X	X	\$1,250
N5457A	RS-232/UART serial decode and trigger	4 ch	4 ch	4 ch	\$1,250
U1881A	Power measurement		X	X	\$1,500
89601A	Vector signal analysis		X	X	\$7,726

Agilent 34970A data acquisition/switch unit

Agilent performance at a fraction of the cost of other standalone data acquisition systems

- Get the flexibility you need with a 3-slot mainframe and your choice of 8 plug-in modules
- Standard GPIB and RS-232 interfaces let you program the instrument for automated tests
- Simplify your data gathering with the included BenchLink Data Logger software – configure and control tests, display results and move data for further analysis

Mainframe price from: (US) \$1,558



Battery-backed real-time clock for pacing scans and timestamping readings

6½-digit (22-bit) internal DMM measures 11 functions without external signal conditioning

50 k readings of non-volatile memory holds data when power is removed

Monitor display mode lets you keep an eye on tests in progress

Advanced data logging without spending hours programming

Scaling function for converting raw inputs into user-defined units

HI/LO alarm limits on each input channel, plus 4 TTL alarm outputs

Intuitive front panel: task-oriented, self-guiding menus

*For a convenient way to collect and analyze your data, expand the capabilities of Agilent 34970A data acquisition/switch units with **Agilent BenchLink 34830A Data Logger Pro software***

Eight modules to choose from:

	34901A	34902A	34903A	34904A	34905A	34906A	34907A			34908A
Description	20-channel multiplexer	16-channel multiplexer	20-channel actuator/GP switch	4x8 matrix	Dual 4-channel RF mux, 50 Ω	Dual 4-channel RF mux, 75 Ω	Multifunction module			40-channel single-ended
Type	2-wire armature (4-wire selectable)	2-wire reed (4-wire selectable)	SPDT/Form C	2-wire armature	Common low (underterminated)	Common low (underterminated)	Two 8-bit digital I/O ports	26-bit, 100-kHz event counter	Two 16-bit analog outputs	40-channel single-ended multiplexer
Speed (ch/sec)	60	250	120	120	60	60	N/A	N/A	N/A	60
Max voltage	300 V	300 V	300 V	300 V	42 V	42 V	42 V	42 V	±12 V	300 V
Max current	1 A	50 mA	1 A	1 A	0.7 A	0.7 A	400 mA	N/A	10 mA	1 A
Price from: (US)	\$471	\$555	\$406	\$471	\$649	\$649	\$352			\$471

Agilent 34980A multifunction data acquisition switch/measure unit

A compact platform at a compact price

This eight-slot mainframe includes a choice of 21 optional plug-in modules for custom configurations. This one-box solution is ideal for medium to high-density switch/measure applications in design verification, automated test and data acquisition applications.

- High-performance switching—up to 560 2-wire multiplexer channels or 1024 matrix cross-points in one mainframe
- Optional built-in 6½-digit DMM—make 11 measurements with more than 3000 readings/sec
- Built-in Ethernet, USB 2.0, and GPIB
- BenchLink Data Logger software (34826A) for high-speed data logging with no programming



LXI

Price from: (US) \$2,443

21 modules to choose from:

Model	Description	Key specifications	Price from (US)
34921A-25A	Multiplexers	Up to 300 V/1 A	\$809
34931A-33A	Matrix switches	Up to 128 crosspoints	\$910
34934A NEW	High-density switch	512-crosspoint reed matrix	\$5,099
34939A NEW	High-density switch	64-channel Form A channels up to 10 W	\$1,195
34937A/38A	GP switches	1A and 5A	\$910
34941A/42A	RF switches	50 to 75 Ohms	\$1,608
34945	µW switch/attenuation driver	Drive 64 coils	\$1,608
34946A/47A NEW	µW switches	SPDT switch to 20 GHz, 1- or 2-wire configurations	\$1,200
34950A-34959A	System control	D/A, DIO, Counter & breadboard to choose from	\$503



**Advanced
data logging
without spending
hours
programming**

For a convenient way to collect and analyze your data, expand the capabilities of Agilent 34980A data acquisition/switch units with **Agilent BenchLink 34832A Data Logger Pro software**

Agilent 53131A universal frequency counter

Fast, precise measurements and a host of high-end features at an affordable price

- Make accurate measurements quickly and easily with the intuitive interface and one-button access to frequently used functions
- Real-time digital signal processing for higher resolution measurements in a fraction of the time it takes other counters
- Automated limit tests and one-button measurement setups for fast, easy operation
- Choose an optional third channel for measurements up to 12.4 GHz.



Price from: (US) \$2,164

Additional Agilent frequency counters

Agilent 53132A universal frequency counter

For applications requiring higher resolution than the 53131A

- Up to 12-digits/sec frequency resolution and 150-ps time interval resolution
- Advanced arming mode for time interval measurements

Price from: (US) \$3,357

Agilent 53181A RF frequency counter

An easy-to-use counter that's optimized for RF applications

- Digit-blanking function lets you easily eliminate unnecessary digits when you want to read measurements quickly
- For higher-frequency measurements, choose an optional second channel that provides measurements up to 1.5 GHz, 3 GHz, 5 GHz, or 12.4 GHz

Price from: (US) \$1,885

Model	53131A	53132A	53181A
Type	2 Channel* Universal; optional 3rd Channel		1 Channel RF; optional 2nd Channel
Measurements	Frequency, frequency ratio, time interval, period, rise/fall time, positive/negative pulse width, duty cycle, phase, totalize, peak voltage, time interval average, time interval delay		Frequency, frequency ratio (with optional Channel 2), period, peak voltage
Analysis	Automatic limit testing, math (scale and offset), statistics (minimum, maximum, mean, standard deviation)		
Frequency range (optional)	DC to 225 MHz (3, 5 or 12.4 GHz)	DC to 225 MHz (3, 5 or 12.4 GHz)	DC to 225 MHz (1.5, 3, 5 or 12.4 GHz)
Resolution (frequency, time interval)	10 digits/s, 500 ps	12 digits/s, 150 ps	10 digits/s, RF
Connectivity	Standard IntuiLink software, GPIB, and RS-232 (print only)		

* Channel 2 can only be used to make frequency, period, ratio, and voltage measurements – measurements on Channel 1 and Channel 2 are made sequentially.

GPIB, LAN and USB tools for PC/instrument connectivity

The easiest way to plug instruments into the work environment

CONVERTERS

Mix and match virtually any combination of instruments and interfaces.

You can establish error-free connections in less than 15 minutes using Agilent IO Libraries Suite.

From...	To converter...	To PC via...	Features
GPIB...	▶ Agilent 82357B USB/GPIB interface	▶ ...USB	<ul style="list-style-type: none"> • High-speed USB 2.0 with auto configuration • GPIB transfer rate of more than 1.15 MB/s • Connect to up to 14 instruments <p>Price from: (US) \$526</p>
GPIB...	▶ Agilent E5810A LAN/GPIB gateway	▶ ...LAN	<ul style="list-style-type: none"> • Share equipment and collaborate globally • 10BASE-T/100BASE-TX LAN for remote control of GPIB instruments • Digital display and built-in Web browser for easy setup/configuration <p>Price from: (US) \$1,061</p>
GPIB...	▶ Agilent E5813A networked 5-port USB hub	▶ ...USB	<ul style="list-style-type: none"> • Connect USB devices anywhere on the LAN • Eliminates 5-meter distance limitation for USB • No switches to set, no PC cards to install <p>Price from: (US) \$456</p>

GPIB CARDS

Easily control instruments and exchange data with maximum throughput

Agilent 82350B PCI high-performance GPIB interface card

Speed	Built-in buffering: speeds up to 900 KB/s
Size	Full PCI height
Power	5 V
Price from: (US)	\$511

Agilent 82351A PCIe™-GPIB interface card

Speed	1.4 MB/s transfer rate
Size	Compact half-height
Power	3.3 V
Price from: (US)	\$543



GPIB CABLES

Easily connect your GPIB instruments with a PC GPIB interface using reliable and durable Agilent GPIB cables. These cables are available in various lengths ranging from 0.5 meter (1.6 ft) to 8 meters (26.2 ft). Daisy-chain multiple cables together if necessary.




10833A/B/C/D/F or G GPIB Cables

Price from: (US) \$77



Low-cost spectrum analyzers

Choose from a growing selection of portable, low-cost instruments

	N9320B spectrum analyzer	N9340B handheld spectrum analyzer	N1996A CSA spectrum analyzer
	Basic and affordable spectrum analyzer offering the best performance and speed in its class, boosts productivity and reduces costs	Optimized for field use, superior performance with lowest DANL, narrowest minimum RBW and fastest test speed in its class	Basic spectrum analyzer covering broadest frequency range from 100 kHz to 6 GHz, with built in VSWR bridge and powerful stimulus response measurement suite
			
Frequency range	9 kHz to 3 GHz	100 kHz to 3 GHz	100 kHz to 6 GHz
Resolution bandwidth (RBW)	10 Hz to 1 MHz	30 Hz to 1 MHz in 1-3-10 sequence	10 Hz to 5 MHz
DANL	-130 dBm/Hz -148 dBm/Hz w/preamp	-144 dBm/Hz w/preamp	-156 dBm/Hz w/preamp
TOI	+13 dBm	+10 dBm at 200 kHz offset	+18 dBm
Price from: (US)	\$7,555	\$7,982	\$8,999

N9320B spectrum analyzer**Professional performance, compact size and unbeatable value**

Now get improved measurement reliability and new features to make your job easier with the N9320B, the optimized basic spectrum analyzer for effective and accurate measurements

- Overall amplitude accuracy: $<\pm 1.5$ dB
- Minimum non-zero span sweep: <10 ms
- Optional tracking generator: 100 kHz to 3 GHz
- Optional AM/FM demodulation
- Power meter function with Agilent U2000 series USB power sensor support
- LAN and USB connectivity, with optional GPIB interface
- Multi-language user interface: 11 languages

Price from: (US) \$7,555



Pair the N9320B spectrum analyzer with an N9310A signal generator.

See page 20 for details.

N9340B 3-GHz handheld spectrum analyzer

New bright display and powerful features for testing in the field

If you need a reliable, accurate and detailed picture of your spectrum, put the speed and performance of Agilent spectrum analysis to work.

Exceptional usability

- 6.5" TFT color screen with bright display for use in all lighting conditions
- Back-lit keys for night use
- 4 hours of continuous battery operation – recharge or swap the battery in the field
- Modern USB and LAN connectivity for data transfer and remote control

Superior performance and powerful features

- Lowest DANL and narrowest RBW in its class
- Optional AM/FM and ASK/FSK modulation analysis
- 1-button power measurements: channel power, OBW, and ACPR

Price from: (US) \$7,982



N1996A Agilent CSA spectrum analyzers

Price, performance, portability... PERFECT

The N1996A combines low price, great performance, and a highly portable design that takes quality measurements anywhere, anytime.

- Best-in-class usable dynamic range
- Two models: 100 kHz to 3 or 6 GHz
- Wide range of video bandwidths
- Adjustable sweep time
- Enhanced channel power measurements for radio standards analysis
- 2 hours of continuous battery operation
- Only 7.5 kg (16.5 lbs)
- Many options available to customize your spectrum analyzer

Price from: (US) \$8,999



Agilent N9010A signal analyzer

Make every millisecond count

From product design to the production line, every device demands tradeoffs in your goals—customer specs, throughput, yield. Whether you're focused on time-to-market, time-to-volume or cost of test, the Agilent EXA signal analyzer eliminates the compromise between speed and price. The EXA also lets you accelerate the transition from design into manufacturing and helps reduce your overall cost of test. When you need speed without compromise, the Agilent EXA signal analyzer lets you make every millisecond count.



- The industry's fastest economy-class signal analyzer: Up to 300% faster than other spectrum and signal analyzers
- Unprecedented performance: +13 dBm TOI, -146 dBm/Hz DANL, 0.3 dB absolute amplitude accuracy, and 68 dB W-CDMA ACLR dynamic range
- Unmatched application coverage: Optional measurement application software includes spectrum analysis, mobile WiMAX™, W-CDMA, HSDPA/HSUPA, GSM/EDGE, and phase noise measurement applications (see list on next page)
- World's leading signal analysis software, 89601A VSA software, runs inside the EXA
- Advanced signal analysis user interface: All measurement features and functions are intuitively grouped and accessible from the front panel or via a USB keyboard and mouse
- Open Windows® XP Professional operating system

Model	Frequency range	Price from: (US)
N9010A-503	9 kHz to 3.6 GHz	\$17,322
N9010A-507	9 kHz to 7.0 GHz	\$26,547
N9010A-513	9 kHz to 13.6 GHz	\$31,673
N9010A-526	9 kHz to 26.5 GHz	\$34,740

Migrate from the ESA to the EXA signal analyzer and do more—faster!

Upgrade your Agilent ESA spectrum analyzer to the new EXA signal analyzer to take advantage of the open Windows operating system, demodulation hardware, and faster sweep speeds — all standard. Trade in your ESA spectrum analyzer today and start making more measurements — faster!

The applications you need

With 13 embedded applications, including phase noise and noise figure, the EXA has you covered. Use the table below to quickly find the right application for your test needs.

Code compatibility

Code compatibility between the ESA and EXA ensures a smooth and economical migration. The EXA provides many standard features that are offered only as options on the ESA and provides more tools for signal analysis.

Application name	ESA option	EXA measurement application	Price from: (US)
Noise figure application	219	N9069A	\$7,175
Phase noise application	226	N9068A	\$4,818
Modulation analysis application	229	89601X	\$5,610
cdmaOne application	BAC	N9072A	\$7,482
Speed-enhanced cdma2000 measurement applications	NA	N9073A-XFP	\$1,893
GSM application	BAH	N9071A	\$6,150
EDGE application	252	N9071A	\$6,150
Speed-enhanced GSM/EDGE measurement application	NA	N9071A-XFP	\$1,893
MATLAB® basic signal analysis package	NA	N6171A-M01	\$2,939
MATLAB standard signal analysis package	NA	N6171A-M02	\$4,763
MATLAB advanced signal analysis package	NA	N6171A-M03	\$6,790
Analog demodulation measurement application	AM is standard FM = BAA	N9063A	\$3,075
W-CDMA measurement application	NA	N9073A-1FP	\$7,586
HSDPA/HSUPA measurement application	NA	N9073A-2FP	\$5,843



Agilent N9310A signal generator

Capability, reliability and affordability for generating CW and modulated RF signals

- Ideal for benchtop R&D, education, field measurements, and signal monitoring and manufacturing
- Rugged body, lightweight frame, large display and full-size front panel
- Standard USB connectivity for test automation and memory stick support
- 9 kHz to 3 GHz frequency coverage with 0.1 Hz resolution
- Wide bandwidth (40 MHz) IQ modulator for generating digital modulated signals from your own custom IQ signals

Price from: (US) \$6,843



Pair the N9310A signal generator with the N9320B spectrum analyzer to maximize your productivity, minimize your cost.

- Both start at 9 kHz to meet EMC testing requirements
- Both are easy to use with additional functionality built in

The N9320B spectrum analyzer offers built-in one button measurements for Channel power, ACPR, SEM, OBW, TOI.

The N9310A signal generator has built-in analog modulation capabilities to generate modulated AM, FM, ϕ M and pulse signals easily. Add the optional analog IQ input capability and generate complex IQ modulated signals such as GSM, CDMA and OFDM signals from custom IQ inputs.



Agilent MXG analog signal generators

Designed for the most demanding manufacturing and R&D testing

Increase your throughput, maximize uptime and save rack space with the MXG analog signal generators. The MXG analyzers can be configured to meet your test needs today and easily upgraded to meet your needs in the future. The reliable design, with simplified self-maintenance options, ensures low cost of ownership.

Agilent N5181A MXG RF analog signal generator

The N5181A MXG is optimized to provide the accurate and repeatable reference signals you need on the R&D bench and on the production line. It features fast switching speeds and high output power.

Agilent N5183A MXG microwave analog signal generator

N5183A MXG signal generators deliver the performance you need for broadband component manufacturing up to 40 GHz. They deliver fast frequency and amplitude switching speeds along with excellent power and level accuracy.



Application name	N5181A MXG RF analog signal generator	N5183A MXG microwave analog signal generator
Frequency ranges	100 kHz to 1, 3 or 6 GHz	100 kHz to 20, 32 or 40 GHz
Output power	+23 dBm at 1 GHz	+18 dBm at 20 GHz
Phase noise	≤ -121 dBc/Hz (typ) at 1 GHz and 20 kHz offset	≤ -98 dBc/Hz typical at 20 kHz offset
Switching speed	≤1.2 ms in SCPI mode; ≤900 μs simultaneous frequency and amplitude switching in list mode	≤ 900 μs frequency
Modulation	AM, FM, ØM, and pulse	
Sweep	Digital step and list sweep with simultaneous switching of frequency and power	Digital and step; < 10 ns pulse rise/fall time and 20 ns pulse widths
Interfaces	100BaseT LAN, USB 2.0 and GPIB	
Standards	LXI class-C compliant; SCPI and IVI-COM drivers	
Price from (US)	\$6,380	\$18,486

Agilent E4428C ESG-C analog signal generator

Excellent all-inclusive RF and analog modulation performance for your general-purpose test needs

The E4428C ESG analog signal generator delivers outstanding spectral purity, level accuracy, output power and analog modulation up to 3 or 6 GHz. Use the E4428C ESG to generate CW, AM, FM and phase-modulated receiver test signals in the cellular, ISM and UNII frequency bands. With SSB phase noise performance of -134 dBc/Hz at 20-kHz offset from 1-GHz carrier, the E4428C ESG is a great choice for LO substitution, blocking/interference signals, adjacent-channel selectivity and in-channel sensitivity tests.



E4428C ESG analog signal generator	
Frequency ranges	250 kHz to 3 or 6 GHz (.01 Hz resolution)
Output power	-136 to 17 dBm at 1 GHz and 10 dBm at 6 GHz
Level accuracy	+/-0.5 to +/-0.9 dB (> -110 dBm)
Spectral purity	-134 dBc/Hz SSB phase noise at 20 kHz offset, 1 GHz carrier (typ) High-stability timebase: oven-controlled crystal oscillator (OXCO)
Modulation	AM, FM, Φ M, and pulse; DC to 10 MHz FM modulation rates, maximum deviations up to 8 MHz
Sweep	Step and list sweep (frequency and power)
Waveforms	Dual internal function generators: sine, square, ramp, triangle, noise, DC, pulse, swept sine, dual sine
Interfaces	100BaseT LAN and GPIB
Instrument control	SCPI and IVI-COM drivers
Price from (US)	\$18,856

Agilent E4418B/19B power meter

Make accurate CW and average power measurements faster and more affordably

- Accelerate tests with faster range switching and measurement throughput up to 200 readings/s over GPIB
- Simple operation via uncluttered front panel
- Optional battery operation for field use

Price from: (US) \$3,663



Additional power meters and sensors

EPM-P Series power meters (E4416A/17A)

Advanced capabilities for advanced power measurements

- Accurately profile complex modulation formats of up to 5 MHz video bandwidth with 20 M-samples per second continuous sampling rate
- PC software included for power and statistical analysis
- High throughput—up to 1,000 corrected readings/s via GPIB

Price from: (US) \$4,754

P-Series power meters (N1911A/12A)

Accurate, fast and repeatable power measurements for R&D and manufacturing environments

- Ideal for aerospace/defense, wireless communications and wireless 802.11a/b/g networking
- Capture single-shot and repetitive events over a wide bandwidth with 30-MHz video bandwidth and 100 Msamples per second continuous sampling capability
- Comprehensive power, time, and statistical measurements

Price from: (US) \$7,501

Agilent power sensors

Stable, repeatable measurements for a wide variety of applications

NEW N8480-Series family: Thermocouple-based sensors offer exceptional accuracy and superior usability

- Built-in EEPROM feature for ease of use
- Extended dynamic range of 5 dB at lower range
- Improved linearity and accuracy
- Backward compatibility with EPM, EPM-P and P-Series power meters

- **8480 family:** Average power using both diode and thermocouple technology
- **E-Series family:** Includes E441x wide dynamic range CW sensors, E9300 wide dynamic range average power sensors, E9320 peak and average power sensors
- **P-Series family:** Peak and average power measurements of wide-bandwidth modulated signals using diode technology

Price from: (US) \$1,113

Model number	Number of channels	Frequency range	NEW N8480-Series sensors	P-Series sensors	E-Series E9320 sensor	E-Series E9300 sensors	E-Series CW sensors	8480 Series sensors	Standard interfaces
E4416A	1	9 kHz to 110 GHz	-35 dbm to +20 dBm	N/A	-65 dBm to +20 dBm	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, RS-232
E4417A	2	9 kHz to 110 GHz	-35 dbm to +20 dBm	N/A	-65 dBm to +20 dBm	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, RS-232
E4418B	1	9 kHz to 110 GHz	-35 dbm to +20 dBm	N/A	N/A	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, RS-232
E4419B	2	9 kHz to 110 GHz	-35 dbm to +20 dBm	N/A	N/A	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, RS-232
N1911A	1	9 kHz to 110 GHz	-35 dbm to +20 dBm	-35 dBm to +20 dBm	-65 dBm to +20 dBm	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, LAN, USB
N1912A	2	9 kHz to 110 GHz	-35 dbm to +20 dBm	-35 dBm to +20 dBm	-65 dBm to +20 dBm	-60 dBm to +44 dBm	-70 dBm to +20 dBm	-70 dBm to +44 dBm	GPIB, LAN, USB

Agilent U2000 Series USB power sensors

Fast, accurate measurements over long distances

Travel light, save space, and get measurements on the go. The U2000 Series provides fast average-power measurements from RF and microwave devices over long cables via the USB port—no separate power meter required.

- Precision power sensors plug directly into PC- or USB-enabled Agilent instruments (with firmware upgrade)
- Simple setup via USB plug-and-play—no external power needed
- Long-distance measurements using USB-to-LAN hub internal zeroing without disconnecting the DUT—Up to 250 average power readings per second
- >1,000 readings/sec average power measurement under-buffer mode
- Accuracy: < 0.12 dB (50 MHz at 0 dBm)
- Now compatible with handheld spectrum analyzer turning it into an accuracy power meter particularly useful for installation and maintenance.



High-power USB average-power sensors

NEW

- Enhanced firmware enables time-gated measurements and frequency sweeping (free and self-upgrade firmware for existing USB power sensor users)
- Built-in attenuator to enable power measurement up to +44 dBm. Eliminates the use of external attenuator and improve mismatch.



Price from: (US) \$2,603

Model	Frequency range	Power range	Connector type
U2000A	10 MHz to 18 GHz	-60 dBm to +20 dBm	Type-N
U2000B	10 MHz to 18 GHz	-30 dBm to +44dBm	Type-N
U2000H	10 MHz to 18 GHz	-50 dBm to +30dBm	Type-N
U2001A	10 MHz to 6 GHz	-60 dBm to +20 dBm	Type-N
U2001B	10 MHz to 6 GHz	-30 dBm to +44dBm	Type-N
U2001H	10 MHz to 6 GHz	-50 dBm to +30dBm	Type-N
U2002A	50 MHz to 24 GHz	-60 dBm to +20 dBm	3.5 mm
U2002H	50 MHz to 24 GHz	-50 dBm to +30dBm	3.5 mm
U2004A	9 kHz to 6 GHz	-60 dBm to +20 dBm	Type-N

Agilent RF and microwave test accessories

Over 200 accessories—the key to getting great performance, accuracy, and flexibility

Agilent J7211A/B/C attenuation control unit

Highly accurate and automated measurements for benchtop and ATE applications of attenuators

Price from: (US) \$5,997



Attenuators

32 models for signal conditioning and control

- Long operating life—5 million cycles
- RF repeatability 0.03 dB
- Average power: 1 W, 2 W, 25 W

Price from: (US) \$220

Agilent 11713B/C switch driver

Remote or front-panel drive control for programmable attenuators and electromechanical or solid state switches

Price from: (US) \$2,665

L-Series electromechanical switches

Reliable, economical switching with low insertion loss

- 0.03 dB insertion loss repeatability—guaranteed for 2 million cycles
- Excellent isolation, typically >80 dB at 26.5 GHz



Price from: (US) \$803

Model	Frequency range	Type	Attenuation
8490G	DC to 67 GHz	Fixed	3, 6, 10, 20, 30, 40 dB
8491A	DC to 12.4 GHz	Fixed	3, 6, 10, 20, 30, 40, 50, 60 dB
8494B	DC to 18 GHz	Manual	0 to 11 dB, 1 dB steps
8496B	DC to 18 GHz	Manual	0 to 110 dB, 10 dB steps
8494H	DC to 18 GHz	Programmable	0 to 11 dB, 1 dB steps
8496H	DC to 18 GHz	Programmable	0 to 110 dB, 10 dB steps

Model	Frequency range	Type	Connector
L7104A/B/C	DC to 4/20/26.5 GHz	Terminated/SP4T	SMA (f)
L7106A/B/C	DC to 4/20/26.5 GHz	Terminated/SP6T	SMA (f)
L7204A/B/C	DC to 4/20/26.5 GHz	Unterminated/SP4T	SMA (f)
L7206A/B/C	DC to 4/20/26.5 GHz	Unterminated/SP6T	SMA (f)
L7222C	DC to 26.5 GHz	Transfer	SMA (f)

LCR Resistance Meter

Agilent E4980A precision LCR meter

Precise, reliable, high-speed test for both high and low impedance measurements

- Five times faster than the Agilent 4284A LCR meter
- Make accurate, repeatable measurements from 20 Hz to 2 MHz

Price from: (US) \$15,189

Simple and intuitive operation

Easily configure measurements with soft keys (same interface as Agilent 4284A) and one-touch front panel keys

High-resolution LCD display

Full, 7-digit display and 6 display modes for clear and easy viewing

USB interface

(memory devices only)
Easily save measurement states, data logs, and screen captures to USB memory devices

LXI



DC source

Low-noise DC source port provides more measurement flexibility, and enables a one-box solution, making an additional DC source or multimeter unnecessary. 0 to ±10 V

100 μV to 2 Vrms/20 Vrms variable test signals

Provides high signal levels to evaluate AC voltage characteristics

TESSCO

As a leading provider of products and solutions for wireless communications for more than 20 years, TESSCO supplies the entire wireless industry – voice, data, messaging, location tracking and Internet systems – with over 30,000 products from 350 manufacturers. TESSCO is your total source for network infrastructure equipment, mobile devices and accessories, and installation, test and maintenance equipment and supplies. We serve a diverse, growing customer base that seeks to improve the way they do business. Our customers range from public network operators, private network operators, integrators, resellers, and contractors to large industrial and commercial users and government agencies. At TESSCO, we used cutting-edge information technology to track every product that is on order, on its way to us, within our distribution centers, or in transit to our customer—and react instantly to changing conditions. We're Your Total Source® supplier because we aim for total efficiency at every step of every transaction. Call or click to view our catalog or get a quote.

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Agilent Technologies

Authorized Distributor



**Professional performance, compact size
and unbeatable value**

**Now get improved measurement reliability
and new features to make your job easier
with the N9320B spectrum analyzer.**

- Frequency range: 9 kHz to 3 GHz
- Minimum non-zero span sweep: < 10 ms
- Resolution bandwidth (RBW): 10 Hz – 1 MHz
- Overall amplitude accuracy: ± 1.5 dB

*Find out how to make your RF tests better, faster,
and more affordably with the ideal combo:
the N9320B and N9310A signal generator.*

See pages 18 and 20 for complete details.



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