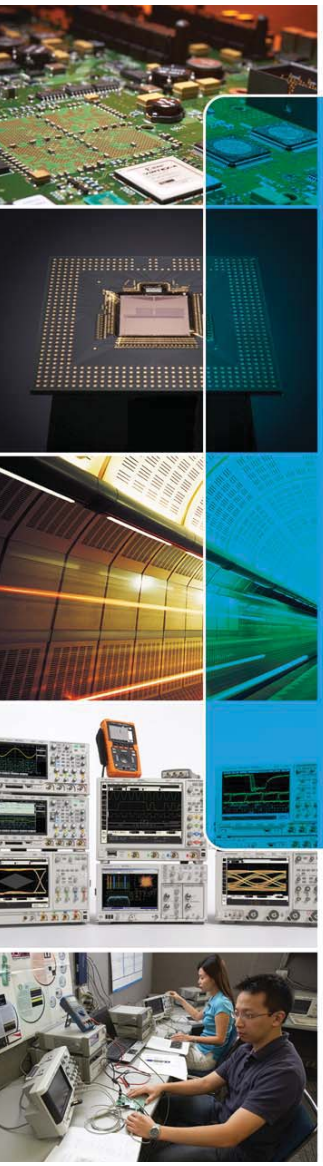


Agilent Technologies Oscilloscopes

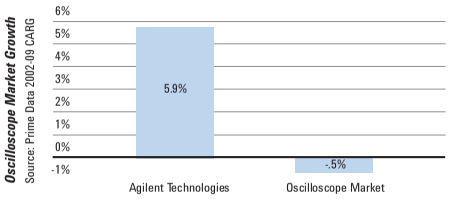
www.agilent.com/find/scopefamily

Agilent Technologies

Agilent Technologies: *We engineer our scopes for you*

When you tell us about the test and debug challenges you face, we listen.

We need your input to design scopes that help you master your challenges. We don't build "me-too" products and we don't develop technical solutions in search of a problem to solve. Instead we bring you products with imaginative capabilities that meet your toughest demands.



With our comprehensive portfolio, you'll find a scope that fits your needs perfectly.

Whether your main consideration is price point or performance level, we offer a variety of models that will work for you. Our platforms range from USB-modular units to high-performance real-time and sampling scopes, with bandwidths from 20 MHz to more than 90 GHz. When your requirements change, so can your scope, thanks to the availability of extensive hardware and software upgrades.

Each of our scopes incorporates the innovative technology you expect from Agilent.

As the world's largest test and measurement company, Agilent commands a breadth of engineering knowledge that enables us to deliver unique technology. Our custom MegaZoom IV ASIC powers InfiniiVision's unmatched waveform update rate. The Infiniium multi-chip module supports the industry's lowest noise floor at every bandwidth. And the InfiniiMax probing system provides the flattest frequency response on the market.

Our scopes give you the answers you need, not just measurements.

Technology alone isn't enough – you want fast, accurate answers to your questions. That's why we offer the largest range of application-specific software available anywhere, plus an outstanding selection of probes and accessories. With flexible solutions like these, you can easily customize your instrument as your design environment changes.

It's no surprise that Agilent is the fastest-growing vendor in the scope market.*

In the past three years, we've completely refreshed our scope lineup, with new entries from InfiniiVision portables to Infiniium powerhouses. We've received numerous industry awards for our breakthroughs. But more importantly, our scopes contribute to your success – and ultimately help you build the products that improve our world.

Here are just a few awards earned by Agilent scopes:

Elektra 08 WINNER — *Infiniium 90000 Series*

EDN INNOVATION Honoring Excellence in Electronics WINNER 2008 — *Infiniium 90000 Series*

Best of Test 2009 Test & Measurement World Finalist — *InfiniiVision 7000 Series*

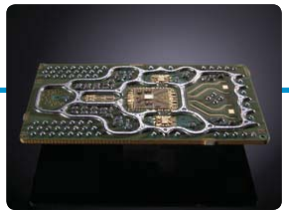
Electron d'Or 2010 — *Infiniium 90000 X-Series*

KTC 2006 Finalist Awards — *InfiniiVision 6000 Series*

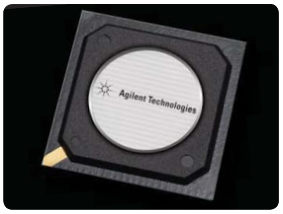
2008 design news Golden Mousetrap Finalist — *Infiniium 90000 Series*

Best of Test 2008 Test & Measurement World Honorable Mention — *InfiniiVision 5000 Series*

measures Palmares Technologique — *InfiniiVision 6000L Series*



Infiniium multi-chip module isolates EMI.
To enable our scopes to operate at high frequencies with minimal electromagnetic interference (EMI), we relied on our expertise in radio frequency (RF) technology. Instead of implementing each component of a digital circuit in a separate circuit block, we created a multi-chip module that uses a Faraday cage to isolate EMI. The result? High-bandwidth scopes with the lowest noise floor in the industry.



InfiniiVision ASIC chip enables MegaZoom.
InfiniiVision scopes incorporate acquisition memory, waveform processing, and display memory in an advanced .13m ASIC. This patented 4th generation technology, known as MegaZoom IV, delivers up to 1,000,000 waveforms (acquisitions) per second with responsive deep memory always available.

U1600B Handheld & U2700 USB Modular Oscilloscopes

2000 X-Series Oscilloscopes

3000 X-Series Oscilloscopes

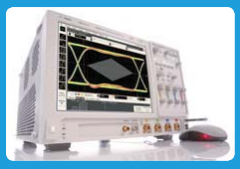
6000L Series Oscilloscopes

7000B Series Oscilloscopes

Model comparison chart

	U1600	U2700	2000X	3000X	7000	9000	90000A	90000X	86100D
Channels	2	2	2, 2+8, 4, 4+8	2, 2+16, 4, 4+16	2, 2+16, 4, 4+16	4 , 4+16	4	4	Up to 16
Bandwidth	20 MHz to 40 MHz	100 MHz to 200 MHz	70 MHz to 200 MHz	100 MHz to 500 MHz	100 MHz to 1 GHz	600 MHz to 4 GHz	2.5 GHz to 13 GHz	16 GHz to 32 GHz	Module dependent to 65 GHz optical, 90 GHz electrical
Sample rate	100 MSa/s	1 GSa/s	2 GSa/s	4 GSa/s	4 GSa/s	10 GSa/s	20 or 40 GSa/s on all 4 channels	40 GSa/s or 80 GSa/s on 2 channels	40 kSa/s
Memory depth	125,000 pts.	32 Mpts, std.	100 kpts	2 Mpts, std. Up to 4 Mpts, opt.	8 Mpts, std.	10 Mpts, std.	10 Mpts, std. Up to 1 Gpts, opt.	Up to 2 Gpts	Limited by hard drive
Connectivity & storage	USB device: std. USB host: opt.	USB device: std.	USB host (one front, one back), USB device, LAN: opt., VGA: opt., GPIB: opt.	USB host (one front, one back), USB device, LAN: opt., VGA: opt., GPIB: opt.	USB (device and host), LAN, XGA-out: std.	USB 2.0, LAN, I/O ports, RS-232, parallel, PS/2, dual-monitor video, auxiliary output	USB 2.0 host and device, Gigabit Ethernet: std., GPIB: opt.	USB 2.0 host and device, Gigabit Ethernet: std., GPIB: opt.	USB 2.0, LAN, RS-232, VGA-out, parallel, PS/2, GPIB:out
Waveform math & analysis	Waveform math and FFT. Complimentary PC link software, USB cable can be used to quickly transfer data to a PC for further post-processing and analysis.	Waveform math and FFT. Data can easily be transferred to an external PC for further post-processing and analysis.	Waveform math and FFT. Data can easily be transferred to an external PC for further post-processing and analysis.	Waveform math and FFT. Data can easily be transferred to an external PC for further post-processing and analysis.	Waveform math and FFT. Data can easily be transferred to an external PC for further post-processing and analysis.	Waveform math, FFT, jitter clock, QuickMeas, statistics, eye pattern.	Waveform math, FFT, jitter, eye pattern, protocol decode, standard bus compliance, user-definable function via MATLAB (opt), Windows XP based-system.	Waveform math, FFT, jitter, eye pattern, protocol decode, standard bus compliance, user-definable function via MATLAB (opt), user-definable application,: opt., Windows XP-based system.	TDR, S-Parameters, eye diagram analyzer, advanced jitter and amplitude analysis, de-embed, embed, FFT, phase noise analysis application, MATLAB: opt.
Market	Hand-held scope for installation and maintenance in the industrial automation, automotive and A/D industries.	Portable scope ideal for electronics troubleshooting and functional test as well as educational teaching and research labs. Also suitable for road warriors.	Portable economy oscilloscope for low-speed design and debug, as well as educational and design labs where bench space and budget are limited.	Portable economy oscilloscope with serial protocol analysis, ideal for mixed-signal and embedded designs as well as educational and design labs where bench space and budget are limited.	High-performance portable scope ideal for mixed-signal and embedded designs. Large high-resolution display makes it the best scope for signal viewing and capturing intermittent glitches and signal transients. Comprehensive software suite provides insight into application-specific problems.	General-purpose lab oscilloscope designed for engineers working on low-speed serial designs or doing oscilloscope-centric testing with logic and protocol analysis.	High-performance real-time oscilloscope provides superior signal integrity. Addressing the needs for high-speed digital and RF applications. More than 29 applications for compliance, debugging, and analysis.	High-performance, real-time scope provides industry's highest real-time scope measurement accuracy. Supports high-speed digital and RF applications and emerging technologies. More than 25 applications for compliance, debugging, and analysis.	High-performance, high bandwidth multi-function sampling scope for serial bus applications, optical, TDR/TDT and any signal requiring advanced jitter analysis.

9000 Series Oscilloscopes



90000A Series Oscilloscopes

90000 X-Series Oscilloscopes

86100D DCA-X Series Oscilloscopes

Probes and Applications

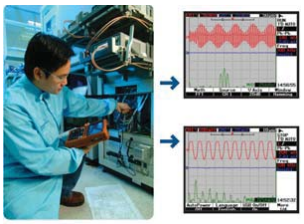
CONTENTS

U1600 Series Oscilloscopes

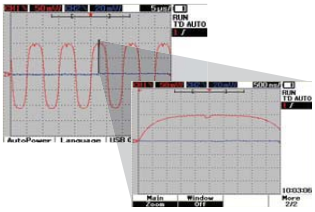
20 MHz to 40 MHz handheld scopes

Engineered for performance in rugged and portable applications

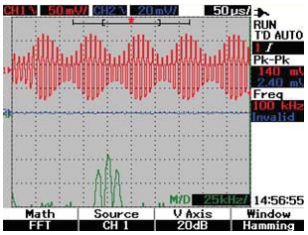
- See more clearly and differentiate simultaneous signals from both channels more easily with 4.5" LCD color display
- Up to 4 hours battery life and robust package – makes an ideal companion for I&M personnel and those on the go
- Application software and communication cable included at no extra cost
- Up to 200 MSa/s per channel real time sampling rate and 125,000 pts. recording length ensure you get high performance, even on a handheld!
- Three-in-one solution: Dual-channel scope, true RMS DMM and real time data logger
- USB host option (001) for quick and convenient saving of data into a USB flash drive



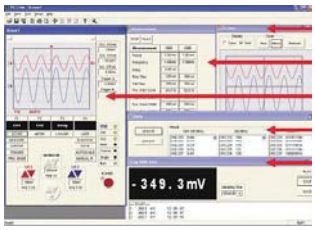
Handheld high performance. In-plant or off-site, take advantage of a fully featured scope with 22 automatic measurement functions, advanced triggering, high sampling rate and deep memory.



High-precision zoom-in capability. Deep memory and a high sampling rate let you capture long time spans and non-repeating signals, then zoom in to the segment of interest to scrutinize subtle details.



Advanced waveform analysis. Use dual waveform math (DWM) for signal addition and subtraction, and fast Fourier transform (FFT) functions to view the waveform in a frequency domain using four windowing techniques (U1604B only).



Easy connections. PC Link software handles your data collection, storage and documentation needs – or lets you control the unit remotely – using a USB 2.0 full-speed connection.

Models and specifications

	U1602B	*U1604B*
Bandwidth	*DC to 20 MHz*	*DC to 40 MHz*
Sample rate	*100 MSa/s per channel, 200 MSa/s single channel and interleaved*	
Channels	*2*	
Display	*4.5″ color CSTN LCD (320x240)*	
Memory	*125,000 pts.*	
Vertical resolution	*8 bits*	
Vertical sensitivity	*5 mV/div to 100 V/div*	
Maximum input	*CAT III 300 Vrms (up to 400 Hz) from terminal to ground*	
Input impedance	*1 MΩ II < 20 pF*	
Timebase range	*50 ns to 50 s/div*	*10 ns to 50 s/div*
Triggering	*Edge, pattern, pulse width, video*	
Dimensions	*24.1 cm high x 13.8 cm wide x 6.6 cm deep*	
Weight	*1.5 kg*	

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- All models come with the U1560A 1:1, 45 MHz passive probe and U1561A 10:1, 45 MHz passive probe
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster and more convenient, such as the Ni-MH battery pack, AC current clamp, temperature adapter, soft carrying case and USB host capability.

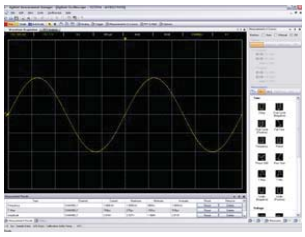
U2700 Series Oscilloscopes

100 MHz and 200 MHz USB modular scopes

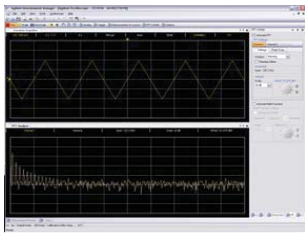
Engineered for versatility and portability without compromising performance

- Provides up to 1 GSa/s (interleaved) sampling and 32 Mpts of memory to help
  you gain better insight into signal details
- Advanced analysis capabilities built into the bundled AMM (Agilent Measurement Manager) scope software include waveform math and FFT with windowing
- Normal, averaging and peak-detect acquisition modes
- Advanced triggering including edge, pulse width and line-selectable video
- Manual, auto and tracking cursors with ΔT, ΔV and frequency measurements
- Over 25 measurement and math functions
- 1,250-point FFT, Hamming, Blackman-Harris and rectangular windowing
- Dual-screen display with FFT function and keyboard shortcut keys (with AMM software)
- Provides flexibility of standalone or chassis-based operation for dual-play capability

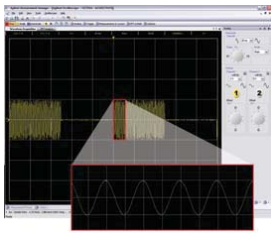
Dual-play capability. Carry powerful test equipment in your bag along with your laptop PC, or use it with other instruments in a chassis.



Simplify waveform analysis with automatic measurements such as rise time and duty cycle, and the measurement results panel.



Explore frequency domain characteristics of measured waveforms using FFT analysis (with four windowing functions) and search for peak values of the FFT.



Capture signal details effectively with deep memory.

Models and specifications

	U2701A	*U2702A*
Bandwidth	*100 MHz*	*200 MHz*
Sample rate	*1 GSa/s, 500 MSa/s each channel, max*	
Channels	*2*	
Memory	*Up to 32 Mpts*	
Vertical resolution	*8 bits*	
Vertical sensitivity	*2 mV/div to 5V/div*	
Maximum input	*CAT 1 30 Vrms, 42 Vpk*	
Input Impedance	*1 MΩ: ≈16 pF*	
Timebase range	*1 ns/div to 50s/div*	
Triggering	*Edge, pulse width, TV*	
Dimensions	*117.00 mm x 180.00 mm x 41.00 mm (with rubber bumper)* *105.00 mm x 175.00 mm x 25.00 mm (without rubber bumper)*	
Weight	*534 g (with rubber bumper)* *482 g (without rubber bumper)*	

Scope additions and enhancements

Probes – Improve your measurement reliability with our complete selection of probes:

- U2701A comes with the N2862B 10:1, 150 MHz passive probe; U2702A comes with the N2863B 10:1, 300 MHz passive probe
- See the complete list of compatible probes on page 31

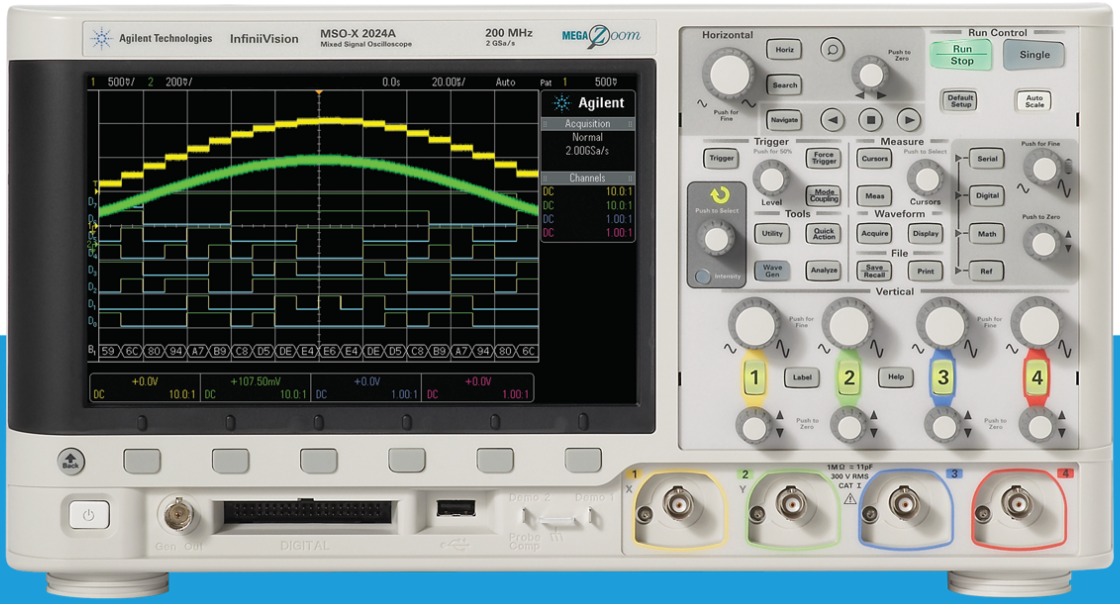
Accessories – Don't forget options that make measurements faster and more convenient, such as the six-slot USB MI chassis, BNC cable and USB secure cable.

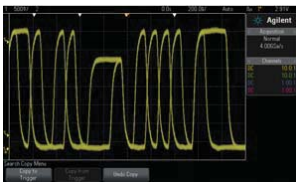
2000 X-Series Oscilloscopes

70 MHz to 200 MHz economy oscilloscopes

Breakthrough technology delivers more scope for the same budget

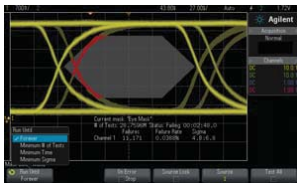
- 8.5-inch WVGA display, with 50% more signal viewing than other scopes, is the largest in this class
- 50,000 waveforms per second update rate so you can see more of your signal detail and infrequent anomalies more of the time
- Up to 100 kpts gives you 40 times more memory so you can capture long, non-repeating signals while maintaining a high sample rate
- 3 instruments in 1: oscilloscope, mixed-signal oscilloscope, and WaveGen function generator
- First fully upgradable oscilloscope: bandwidth, MSO, WaveGen, and measurement applications





See more of your signal more of the time with the largest screen in its class, the deepest memory and the fastest waveform update rates.

Do more with the power of 3 instruments in 1: oscilloscope, logic timing analyzer (optional) and WaveGen built-in function generator (optional).



Get more investment protection with the industry's only fully upgradable scope, including bandwidth.

Search and navigate front panel controls make it easy to find and view specific signal activity quickly play, stop, rewind and fast forward through waveforms.

Models and specifications

	DSO/MSO2002A	DSO/MSO2004A	DSO/MSO2012A	DSO/MSO2014A	DSO/MSO2022A	DSO/MSO2024A
Bandwidth	70 MHz		100 MHz		200 MHz	
Sample rate	1 GSa/s per channel, 2 GSa/s interleaved					
Channels	2	4	2	4	2	4
Memory	100 kpts					
Vertical resolution	8 bits					
Vertical sensitivity	1 mV/div to 5 mV/div					
Maximum input	CAT I 300 Vrms, 400 Vpk; transient overvoltage 1.6 kVpkCAT II 300 Vrms, 400 Vpk with 10073C 10:1 probe: CAT I 500 Vpk, CAT II 400 Vpk with N2862A or N2863A 10:1 probe: 300 Vrms					
Input impedance	1 MΩ ±2%					
Timebase range	DSO: 5 ns/div to 50 s/div MSO: 5 ns/div to 50 s/div		MSO: 2 ns/div to 50 s/div DSO: 5 ns/div to 50 s/div		DSO: 2 ns/div to 50 s/div MSO: 2 ns/div to 50 s/div	
Time scale accuracy	25 ppm ±5 ppm per year (aging)					
Triggering	Edge, pulse width (or glitch), pattern-trigger, video					
Dimensions	38.06 cm W x 20.44 cm H x 14.15 cm D					
Weight	8.5 lbs or 3.85 kg					

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- DSO/MSOX2012A and 2014A come with the N2862B 150 MHz passive probe, 10:1 attenuation
- DSO/MSOX2022A and 2024A come with the N2863A 300 MHz passive probe, 10:1 attenuation
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster and more convenient, such as the VGA/LAN or GPIB modules, soft carrying case, and rackmount kit.

DSO-to-MSO upgrades – Protect your investment with the flexibility to upgrade to an MSO at any point after purchase

Bandwidth – Increase bandwidth at any time

Memory – Increase memory depth at any time

Applications – Expand your scope's capabilities with our powerful lineup of applications:

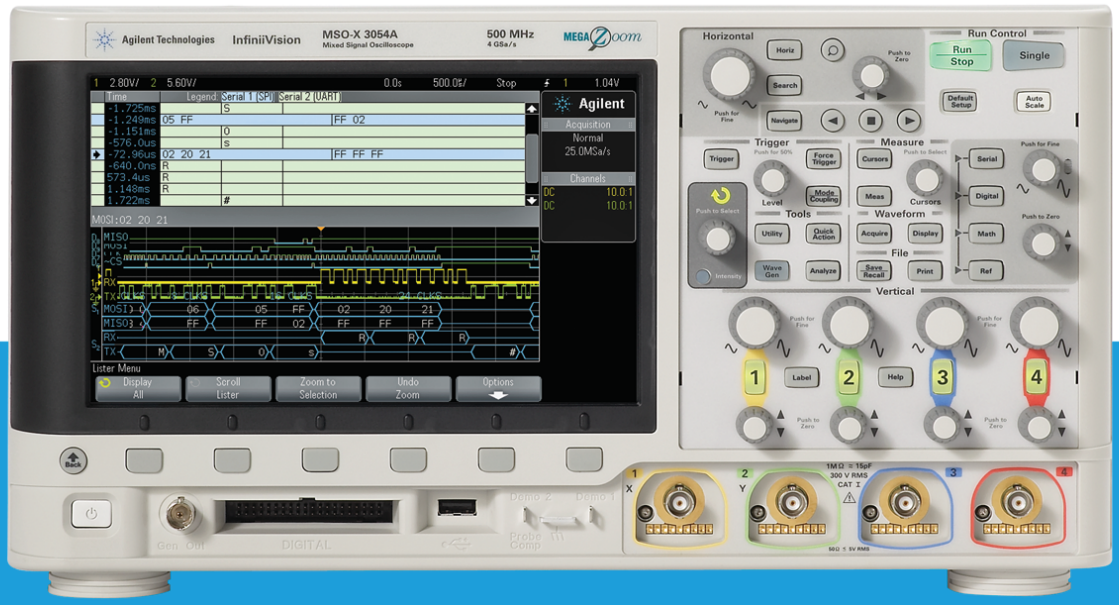
- Options include: WaveGen function generator, mask testing and segmented memory
- See our complete list of applications on page 26

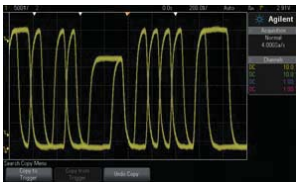
3000 X-Series Oscilloscopes

100 MHz to 500 MHz economy oscilloscopes

Breakthrough technology delivers more scope for the same budget

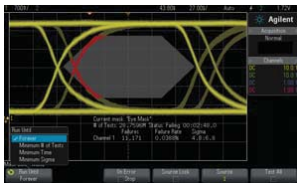
- 8.5-inch WVGA display, with 50% more signal viewing than other scopes, is the largest in this class
- 1,000,000 waveforms per second update rate so you can see more of your signal detail and infrequent anomalies more of the time
- Up to 4 Mpts gives you more memory so you can capture long, non-repeating signals while maintaining a high sample rate
- 4 instruments in 1: oscilloscope, mixed-signal oscilloscope, WaveGen function generator, and serial protocol analyzer
- First fully upgradable oscilloscope: bandwidth, MSO, WaveGen, and measurement applications





See more of your signal more of the time with the largest screen in its class, the deepest memory and the fastest waveform update rates.

Do more with the power of 4 instruments in 1: oscilloscope, logic timing analyzer (optional), WaveGen built-in function generator (optional), and serial protocol analyzer.



Get more investment protection with the industry's only fully upgradable scope, including bandwidth.

Serial bus triggering and hardware-based protocol decoding means you can efficiently debug your embedded designs that include serial bus communication.

Models and specifications

	DSO/MSOX3012A	DSO/MSOX3014A	DSOX3024A	DSO/MSOX3032A	DSO/MSOX3034A	DSO/MSOX3052A	DSO/MSOX3054A
Bandwidth	100 MHz		200 MHz	350 MHz		500 MHz	
Sample rate	2 GSa/s per channel, 4 GSa/s interleaved						
Channels	2	4	4	2	4	2	4
Memory	Up to 4 Mpts						
Vertical resolution	8 bits						
Vertical sensitivity	1 mV/div to 5 mV/div						
Maximum input	CAT I 300 Vrms, 400 Vpk; transient overvoltage 1.6 kVpkCAT II 300 Vrms, 400 Vpk with 10073C 10:1 probe: CAT I 500 Vpk CAT II 400 Vpk With N2862A or N2863A 10:1 probe: 300 Vrms 500 Vpk, CAT II 400 Vpk with N2862A or N2863A 10:1 probe: 300 Vrms						
Input impedance	Selectable: 1 MΩ ±1%; 50 Ω ±1.5%						
Timebase range	DSO: 5 ns/div to 50 s/div, MSO: 2 ns/div to 50 s/div		2 ns/div to 50 s/div,	DSO: 2 ns/div to 50 s/div, MSO: 5 ns/div to 50 s/div		DSO: 5 ns/div to 50 s/div, MSO: 2 ns/div to 50 s/div	
Time scale accuracy	25 ppm ±5 ppm per year (aging)						
Triggering	Edge, pulse width, pattern, Nth edge burst, runt, set up and hold, video, USB, serial (I^2C, SPI, RS232/UART, CAN, LIN, I^2S)						
Dimensions	38.06 cm W x 20.44 cm H x 14.15 cm D						
Weight	8.5 lbs or 3.85 kg						

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- DSO/MSOX3012A and 3014A come with the N2862B 150 MHz passive probe, 10:1 attenuation
- DSO/MSOX3022A and 3024A come with the N2863A 300 MHz passive probe, 10:1 attenuation
- DSO/MSOX3032A, 3044A, 3052A and 3054A come with the N2890A 500 MHz passive probe, 10:1 attenuation
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster and more convenient, such as the VGA/LAN or GPIB modules, soft carrying case, and rackmount kit.

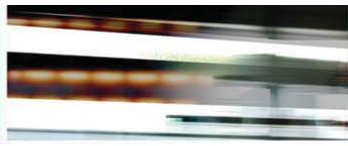
DSO-to-MSO upgrades – Protect your investment with the flexibility to upgrade to an MSO at any point after purchase

Bandwidth – Increase bandwidth at any time

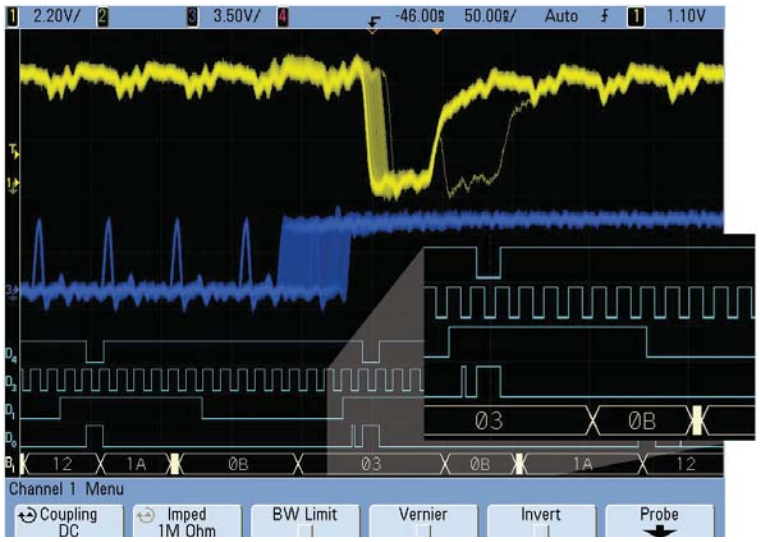
Memory – Increase memory depth at any time

Applications – Expand your scope's capabilities with our powerful lineup of applications:

- Options include: WaveGen function generator, mask testing and segmented memory I^2C, SPI, CAN, LIN, RS232/UART and I^2S
- See our complete list of applications on page 26



Mixed Signal Oscilloscopes: *Capture analog, digital and serial signals with a single acquisition in one instrument*



MSOs capture analog, digital and serial signals in a single measurement to identify critical interactions.

Should you consider a mixed signal oscilloscope for your next purchase?

Your design likely has a mix of analog, digital and serial signals. A mixed signal oscilloscope shows them to you all at once.

Do you need to see more than 4 channels at once? For example, if you're incorporating serial buses like I^2C or SPI or using microcontrollers or FPGAs, you might benefit from additional viewing capability.

Do you need to trigger on digital patterns? An MSO will allow you to do that and preserve your analog channels to observe behavior in other parts of your design.

A mixed signal oscilloscope integrates traditional analog channels with 16 digital channels.

Combining the familiar controls of an oscilloscope with the additional digital data collection and pattern recognition of a logic analyzer, Agilent MSOs seamlessly integrate the two capabilities in one instrument. Trigger across any combination of analog and digital channels. Integrate serial bus triggering and decode. You can even see inside your FPGA designs.

In 1996 Agilent pioneered the mixed signal oscilloscope.

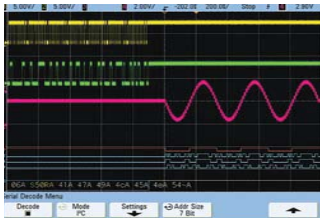
Innovative IC technology we called Mega*Zoom* delivered highly responsive deep memory so designers could see both cause and effect in digitally controlled analog phenomena. This first MSO was named *Test & Measurement World* Test Product of the Year in 1997.

Agilent continues to lead the way with MSOs.

While other vendors are just entering the MSO market, Agilent's fourth generation Mega*Zoom* IV technology continues to set the benchmark. You get uncompromised waveform update rates as you add digital, serial or deep memory capabilities to your scope.

Agilent's MSOs are engineered for the best signal visibility.

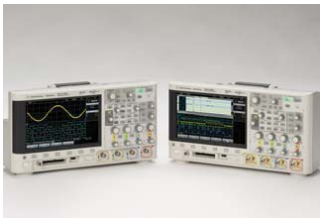
- See analog, digital and serial signals all at once with the industry's largest screen
- Get unmatched signal detail and catch infrequent events with the industry's fastest waveform update rates
- Speed your serial debug with the industry's only hardware-accelerated decode for I^2C , SPI, CAN, LIN, FlexRay, RS-232/UART, MIL-STD 1553, and I^2S
- Simplify common debug tasks with insightful applications software like FPGA dynamic probe, mask testing, segmented memory, and offline viewing and analysis
- Work without line power with our exclusive battery powered options (6000 Series)
- Upgrade previously purchased DSOs to MSOs



Use MSO digital channels to debug control signals and data buses.

Debug and validate your FPGA designs faster and more effectively with an MSO.

Hardware-accelerated serial decode and other application packages speed common debug tasks.



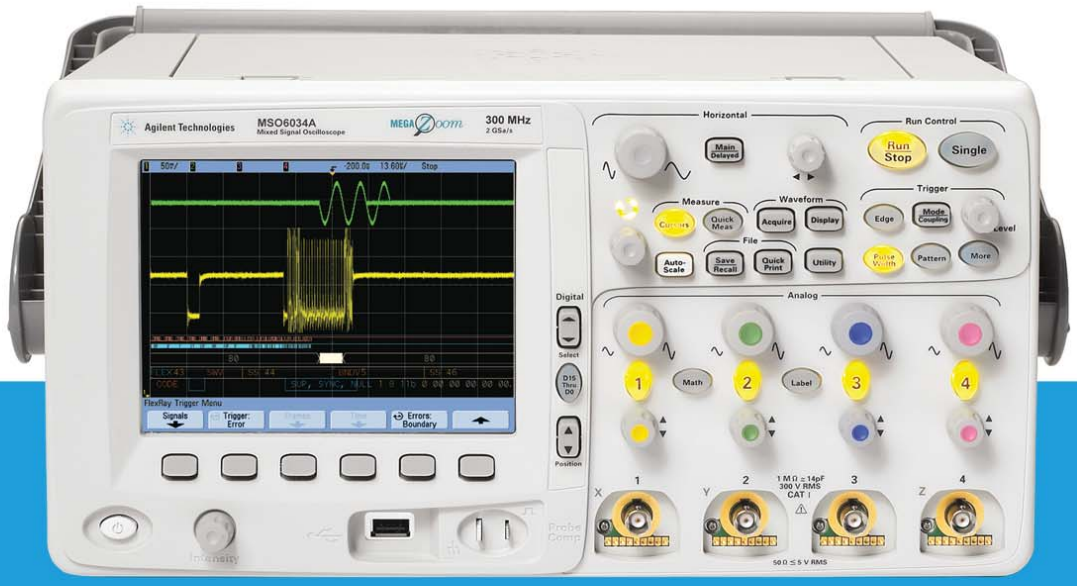
Agilent's MSO oscilloscopes offer the industry's largest screens to help you see both analog and digital signals.

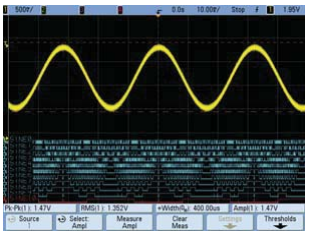
InfiniiVision 6000 Series Oscilloscopes

100 MHz to 1 GHz digital storage and mixed signal scopes

Engineered for the best signal visibility

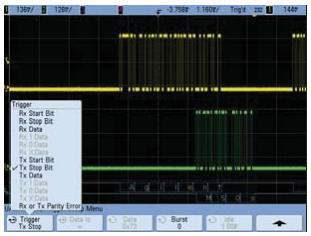
- Captures analog, digital and serial signals in real time
- 100,000 waveforms per second real-time update rate helps you catch the most elusive glitches
- Only high-performance scope with battery-power option – enabling 2+ hours without line power
- DSO models upgradeable to MSO whenever you need greater capabilities
- Serial bus trigger/decode options including I^2C, SPI, CAN, LIN, RS-232/UART and FlexRay
- 3-year return-to-Agilent warranty to protect your investment





Mixed signal capture and viewing. With 2 or 4 scope channels plus 16 logic channels, MSOs uniquely combine the detailed signal analysis of a scope with the multichannel timing measurements of a logic analyzer. 8 Mpts of memory captures long time periods and supports high sample rates, allowing you to quickly zoom in on areas of interest.

Battery-power option. Make measurements where line power isn't available with an optional, internal, rechargeable lithium ion battery.



Serial bus triggering and decoding (optional). Trigger on the industry's most popular standards, including I²C, SPI, CAN, LIN, RS-232/UART and Flexray. Your decoding options display responsive on-screen decode of serial bus.

Also available in a compact, rack-mountable design. The 6000L is 1U high and 19" wide to save valuable rack space. Side and rear air vents (no top or bottom air vents) let you mount other instruments directly above or below. Rack mount brackets and rack rails are standard with every unit.

Models and specifications

	DSO/MSO601xA	DSO/MSO603xA	DSO/MSO605xA	DSO/MSO610xA
Bandwidth	100 MHz	300 MHz	500 MHz	1 GHz
Sample rate	2 GSa/s each channel		4 GSa/s max, 2 GSa/s each channel	
Channels	2 or 4 scope channels on DSOs, 2 or 4 scope channels + 16 logic channels on MSOs			
Display	6.3" color XGA LCD (1024 x 768) with 256 intensity levels			
Display update rate	Up to 100,000 waveforms/sec in real-time mode			
Memory	Standard 8 Mpts			
Vertical resolution	8 bits, up to 12 bits in high-resolution or averaging modes			
Vertical sensitivity	1 mV/div to 5 V/div	2 mV/div to 5 V/div		
Bandwidth limit	20 MHz	25 MHz		
Maximum input voltage	CAT I 300 Vrms, 400 Vpk; CAT II 100 Vrms, 400 Vpk (1 Mohm) 5 Vrms CAT I (50 ohm)			
Input impedance	1 MΩ ± 1% || 11pF	1 MΩ ± 1% || 14 pF or 50 Ω ± 1.5% selectable		
Timebase range	5 ns/div to 50 s/div	2 ns/div to 50 s/div	1 ns/div to 50 s/div	500 ps/div to 50 s/div
Time scale accuracy	15 ppm ≤ ± (15+2*(instrument age in years)) ppm			
Triggering	Edge, pulse width, pattern, TV, duration, sequence, serial bus (I²C, SPI, RS-232/UART CAN, LIN and USB)			
Dimensions	39.9 cm wide x 18.8 cm high x 28.2 cm deep (with handle)			
Weight	4.9 kg			

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- DSO/MSO603xA, 605xA and 610xA come with the 10073D 10:1, 500 MHz passive probe; DSO/MSO601xA comes with the 10074D 10:1, 150 MHz passive probe
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster and more convenient, such as the hard transit case, scope cart, evaluation kit and rackmount kit.

Portable power – Consider the battery option for measurements on the go.

DSO-to-MSO upgrades – Protect your investment with the flexibility to upgrade to MSO after purchase.

Applications – Expand your scope's capabilities with our powerful lineup of applications:

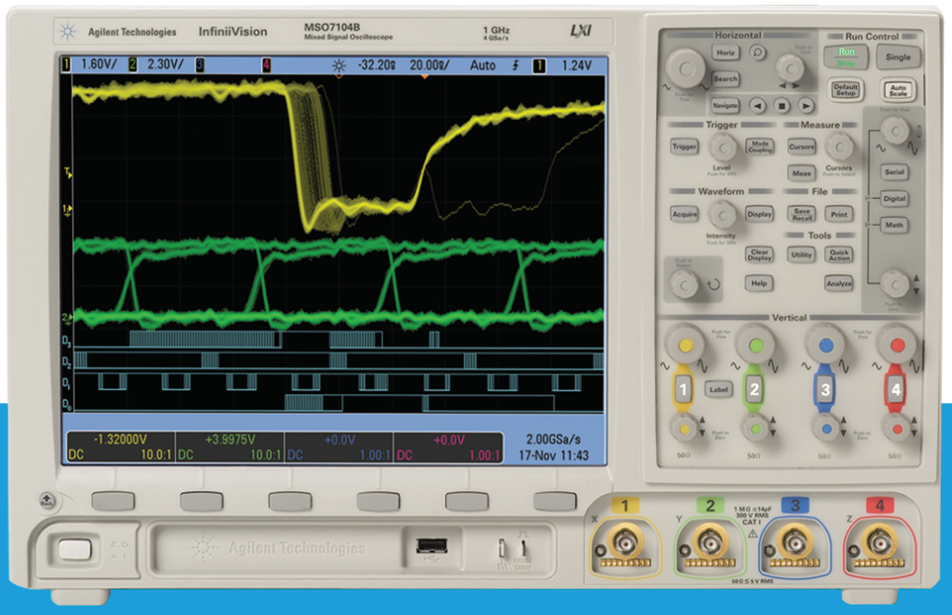
- Options include I²C, SPI, CAN/LIN, RS-232, FPGA, FlexRay, power, offline analysis, vector signal analysis, mask testing and segmented memory
- See our complete list of applications on page 26

InfiniiVision 7000 Series Oscilloscopes

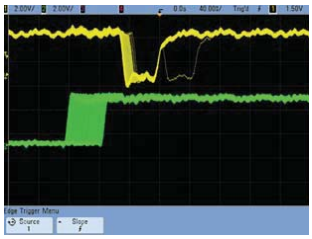
100 MHz to 1 GHz digital storage and mixed signal scopes

Engineered for the best signal visibility

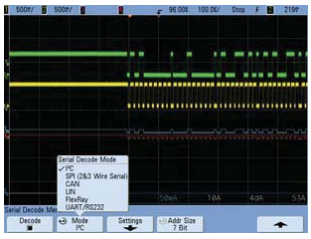
- Captures and compares analog, digital and serial signals
- High-resolution 12.1" display – nearly 40% larger than any others in this class
- Serial bus trigger/decode options including I^2C, SPI, CAN, LIN, I^2S, RS-232/UART, MIL-STD 1553 and FlexRay
- 100,000 waveforms/sec real-time update rate to capture infrequent events and elusive glitches
- DSO models upgradeable to MSO whenever you need greater capabilities
- 3-year return-to-Agilent warranty to protect your investment
- Front panel search and navigate controls



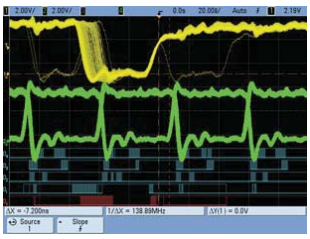
Attractive. The revolutionary large (12.1″), high-definition (1024 x 768) color display with 256 levels of intensity grading gives you a precise representation of the signals you're testing and easily accommodates up to 20 channels. Conserve bench space with the 6.5″ depth.



Fast. MegaZoom III technology delivers up to 100,000 waveform acquisitions per second so the scope responds instantly and you won't miss infrequent events and critical signal detail.



Smart. Customize your scope with a wide range of application packages that provide meaningful insight into application-specific problems.



Best signal visibility. See critical signal detail and infrequent events like you never have before. Try our InfiniiVision 7000 Series scopes side-by-side with your current scope and experience the difference.

Models and specifications

	DSO/MSO7012A	DSO/MSO7014A	DSO/MSO7032A	DSO/MSO7034A	DSO/MSO7052A	DSO/MSO7054A	DSO/MSO7104A
Bandwidth	100 MHz		350 MHz		500 MHz		1 GHz
Sample rate	2 GSa/s		4 GSa/s max, 2 GSa/s each channel				
Channels	2 or 4 scope channels on DSOs, 2 or 4 scope channels + 16 logic channels on MSOs						
Display	12.1″ color XGA LCD (1024 x 768) with 256 intensity levels						
Display update rate	100,000 waveforms per second						
Memory	Standard 8 Mpts						
Vertical resolution	8 bits, up to 12 bits in high-resolution or averaging modes						
Vertical sensitivity	2 mV/div to 5 V/div						
Bandwidth limit	20 MHz selectable				25 MHz selectable		
Maximum input voltage	CAT I 300 Vrms, 400 Vpk; CAT II 100 Vrms, 400 Vpk						
Input impedance	1 MΩ ± 1% || 14 pF or 50 Ω ± 1.5% selectable						
Timebase range	2 ns/div to 50 s/div				1 ns/div to 50 s/div		500 ps/div to 50 s/div
Time scale accuracy	15 ppm						
Triggering	Edge, pulse width, pattern, TV, duration, sequence, serial bus (I^2C, SPI, RS-232/UART, CAN, LIN and USB)						
Dimensions	45.4 cm wide x 29.8 cm high x 22 cm deep						
Weight	5.9 kg						

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- DSO/MSO703xA, 705xA and 710xA come with the 10073D 10:1, 500 MHz passive probe (default) or the N2873A probe as an option (Opt 002)
- DSO/MSO701xA comes with the 10074C 10:1, 150 MHz passive probe (default) or the N2871A probe as an option (Opt 002)
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster and more convenient, such as a soft carrying case or rackmount kit.

DSO-to-MSO upgrades – Protect your investment with the flexibility to upgrade to an MSO after purchase.

Applications – Expand your scope's capabilities with our powerful lineup of applications:

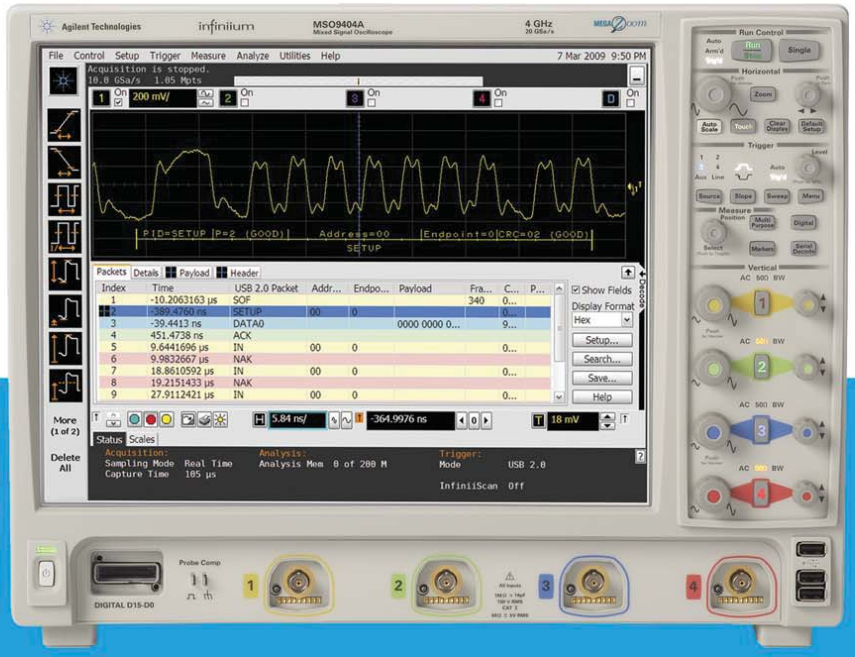
- Options include I^2C, SPI, CAN/LIN, I^2S, RS-232, FPGA, MIL-STD 1553, FlexRay, mask testing, power, offline analysis, vector signal analysis and segmented memory
- See our complete list of applications on page 26

Infiniium 9000 Series Oscilloscopes

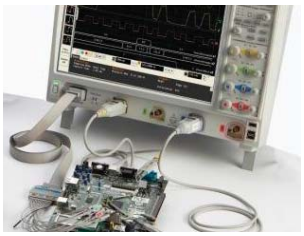
600 MHz to 4 GHz digital storage and mixed signal scopes

Engineered for the broadest measurement capability

- The combination of powerful Infiniium scope features, the world's fastest integrated MSO and the first multi-tab protocol viewer allows you to quickly debug and test a wide variety of designs, making it the best 3-in-1 instrument
- The industry's largest display, thinnest depth and lightest weight makes using, sharing or moving the scope easy
- Get fast and accurate answers to technology-specific problems with the widest range of applications
- Provides bandwidth, memory, triggering and signal fidelity triggering for debugging, characterizing and analyzing a wide variety of analog, serial, digital, and RF signals
- 15" XGA display, the largest in the industry, makes it easier to view analog, digital and serial signals



Powerful Infiniium scope. Fast sample and update rates let you see a precise representation of your signal. Use responsive deep memory to see longer periods of time.



Integrated mixed signal oscilloscope. With sample rates of up to 20 GSa/s, you can see critical timing relationships or use the 16 digital channels to see data values. Or, use the digital channels for protocol analysis. Trigger across the industry's largest range of time-correlated analog and digital channel combinations.

Protocol analysis capability. Extend your scope capability with protocol analysis. Trigger and view packets at the protocol level and drill up or down between the physical and protocol layers. The tracking marker/bar shows precise time alignment between protocol viewer and analog waveforms.

Sized to fit your environment. The Infiniium 9000 offers the largest display in the industry, with a smaller depth and lighter weight than any other scope in its class. It's an engineering feat with a 20 layer board, 27 ASICs and three workhorse FPGAs designed to deliver maximum performance.

Models and specifications

	DSO9064A MSO9064A		DSO9104A MSO9104A		DSO9254A MSO9254A		DSO9404A MSO9404A	
Bandwidth	600 MHz		1 GHz		2.5 GHz		4 GHz	
Sample rate	5 GSa/s, 10 GSa/s on 2 channels		10 GSa/s, 20 GSa/s on 2 channels					
Channels	4	4+16 logic	4	4+16 logic	4	4+16 logic	4	4+16 logic
Memory	20 Mpts std. Optional up to 1 Gpts							
Vertical resolution	8 bits ≥12 bits with averaging							
Vertical sensitivity	1 MΩ: 1 mV/div to 5 V/div, 50 Ω: 1 mV/div to 1 V/div							
Maximum input	1 MΩ:150V RMS or DC, CAT I ± 250 V (DC + AC) in AC coupling 50MΩ: 5 Vrms, CAT I							
Input impedance	50 MΩ ± 2.5%, 1 MΩ ± 1% (13pF typical)							
Timebase range	5 ps/div to 20 s/div							
Timebase accuracy	± (0.4 + 0.5 * YearsSinceCal) ppm pk							
Triggering	Edge, glitch, runt, timeout, pattern/pulse range, state, pulse width, line, window, setup and hold, video, serial							
Dimensions	42.4 cm W x31.8 cm H x 22.6 cm D							
Weight	13.9 kg							

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes:

- All models come with four N2873A 10:1, 500 MHz miniature passive probes
- MSO models include flying leads
- See our complete list of compatible probes on page 31

Accessories – Don't forget options that make measurements faster an more consistent, such as the removable hard drive and rackmount kit.

Memory – Increase memory depth to 500 Mpts at any time.

Applications – Expand your scope's capabilities with our powerful lineup of applications:

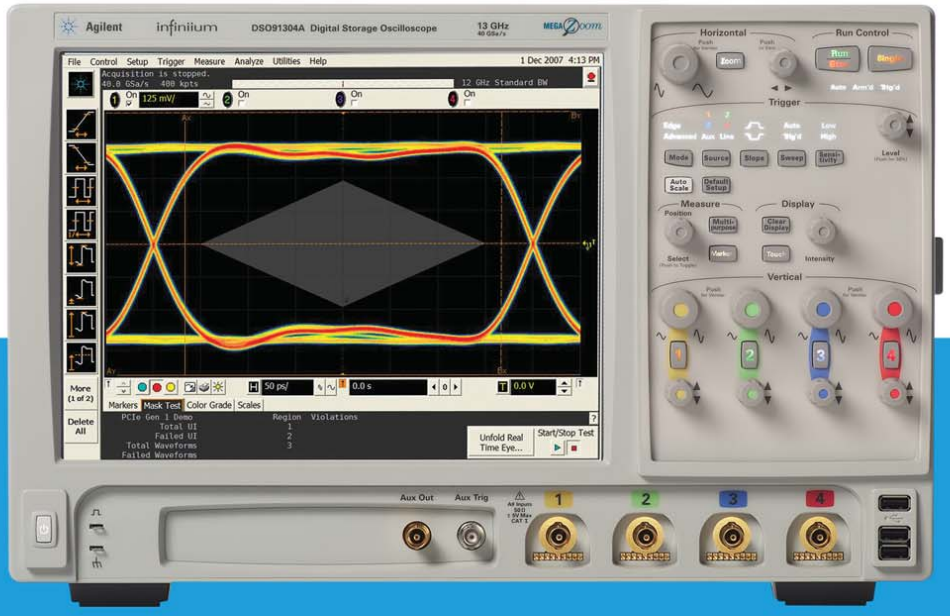
- Compliance testing: USB 2.0, Ethernet, DDR 1/2/3
- Protocol analysis: I²C, SPI, CAN, RS-232/UART, USB, PCI Express, JTAG, 8B/10B
- Other: Jitter, InfiniiScan, FPGA debug, VSA, power, comm. mask testing
- See our complete list of applications on page 26

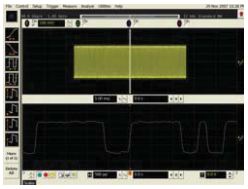
Infiniium 90000A Series Oscilloscopes

2.5 GHz to 13 GHz high-performance real-time lab scopes

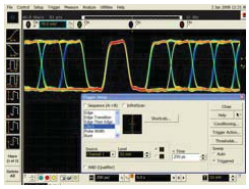
Engineered for superior signal integrity and measurement confidence

- Up to 13 GHz bandwidth and up to 40 GSa/s sample rate on four channels
- 122,000 measurements per second give you amazing measurement update throughput
- Bandwidth upgradeable from 2.5 GHz to 13 GHz
- Industry's only server-based oscilloscope application software license solution
- Industry's largest selection of application software packages, including: USB 2.0, PCI Express®, SATA, Wireless USB, DDR, HDMI, and more
- Industry's most flexible compliance software with new User-defined application add-in capability
- Low noise for both the oscilloscope and its probing system
- Industry leading Mega*Zoom* ultra deep memory – 1 Gpts at 40 GSa/s on all four channels
- Three level sequence triggering with InfiniiScan Plus trigger system

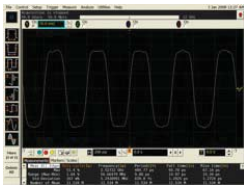




Powerful signal capture. Acquire 25 ms of PCI Express Gen2 data at 40 GSa/s using 1 Gpts of memory to capture your signal of interest.

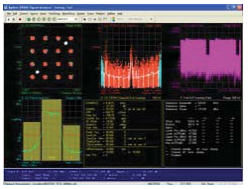


Leading glitch trigger. Consistently trigger on 200 ps single bit (one UI) of PCI EXPRESS Gen2 using industry – leading <250 ps glitch trigger.



"Measure all edges" mode. Make more than 5 million measurements in less than 1 minute using the "measure all edges" mode and long memory to increase your confidence in the measurement statistics.

Industry's deepest memory (1 Gpts). Reveal low frequency jitter components with deep memory.



Certified compliance testing. Use VSA (vector signal analysis software) and DSA91204A for Certified Wireless USB compliance testing.

Models and specifications

DSO and DSA	DSO/DSA90254A	DSO/DSA90404A	DSO/DSA90604A	DSO/DSA90804A	DSO/DSA91204A	DSO/DSA91304A
Bandwidth	2.5 GHz	4 GHz	6 GHz	8 GHz	12 GHz	13 GHz
Sample rate	20 GSa/s			40 GSa/s		
Channels	4 channels					
Display	12.1" XGA touch screen					
Display update rate	400,000 waveforms per second (in segmented memory mode)					
Memory	20 Mpts standard, optional up to 1 Gpts (50 Mpts std. on DSA)					
Vertical resolution	8 bits, ≥ 12 bits with averaging					
Vertical sensitivity	1 mV/div to 1 V/div					
Bandwidth limit	500 MHz (using E2697A 1 MΩ adaptor)					
Max input voltage	± 5 V					
Input impedance	50 Ω, ±3%					
Timebase range	5 ps/div to 20 s/div real-time					
Time scale accuracy	± (0.4 + 0.5 * YrsSinceCal) ppm pk					
Triggering	3-level sequence hardware (2 levels) and InfiniiScan software trigger: edge, edge transition, edge then edge, glitch, line, pulse width, runt, timeout, pattern/pulse range, state, setup/hold, window, HDTV, non-monotonic, measurement, and zone qualify					
Typical noise floor	147 µVrms	186 µVrms	234 µVrms	283 µVrms	365 µVrms	389 µVrms
Max data transfer rate	22 MSa/s					
Dimensions	43.2 cm wide x 28.3 cm high x 50.6cm deep					
Weight	20 kg					
Power	800 watts, max.					

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes, including the award-winning InfiniiMax probing system and the 1156A-58A single-ended active probes. See our complete list of compatible probes on page 31.

Accessories – Don't forget options that make measurements faster and more convenient, such as the rackmount kit, transit case and testmobile.

Memory – Increase memory depth at any time.

Bandwidth – Protect your investment with bandwidth upgrades after purchase.

Applications – Expand your scope's capabilities with our powerful lineup of applications:

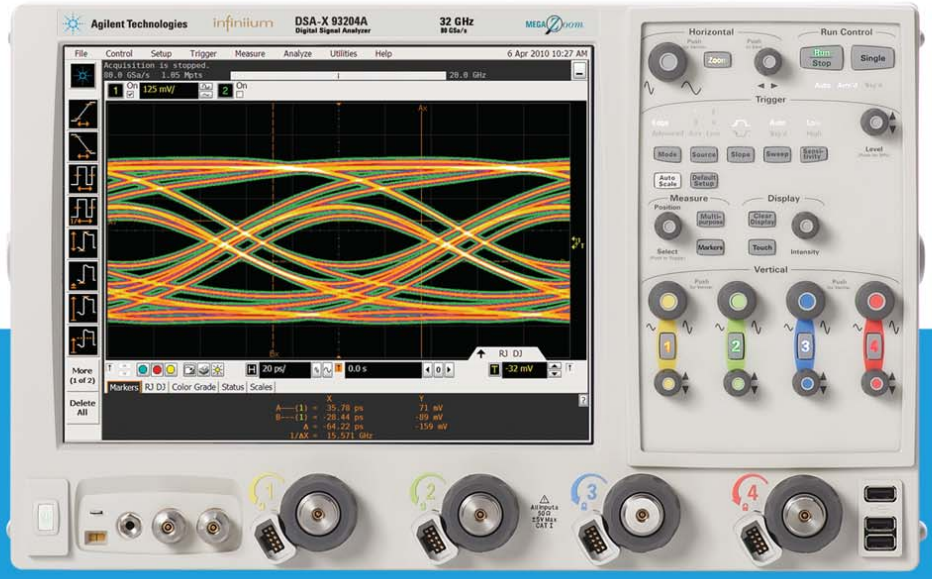
- Analysis and utility options include jitter analysis, eye pattern analysis, user defined function (MATLAB link), and more
- Compliance options include DDR1, 2, and 3, PCI Express, HDMI, DisplayPort, SATA, SAS, XAUI, USB and more
- Transport your scope application license from one Infiniium to another with the application server license
- See our complete list of applications on page 26

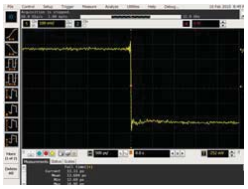
Infiniium 90000 X-Series Oscilloscopes

16 GHz to 32 GHz high-performance real-time lab scopes

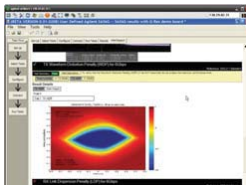
Engineered for 32 GHz true analog bandwidth that delivers

- The industry's highest real-time scope measurement accuracy
- Highest true analog bandwidth at 32 GHz
- Lowest oscilloscope noise floor of 2.04 mV at 50 mV/div
- Lowest jitter measurement floor at 150 fs
- The industry's first and only 30 GHz oscilloscope probing system
- Industry's most comprehensive application-specific measurement software

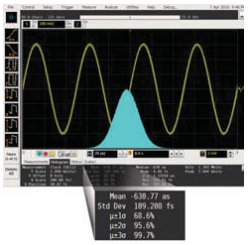




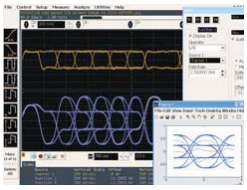
Custom front end technology. The fastest real-time oscilloscope bandwidth available is achieved directly through the scope hardware, without the noise and distortions introduced with boosting techniques used by other vendors. Capture rise times as fast as 12.4 ps with confidence.



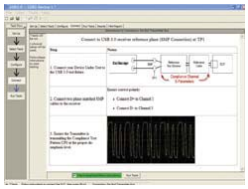
User-defined application software allows automated compliance testing on proprietary buses. Quickly program and automate any set of measurements with an interface similar to Agilent compliance test software while emerging test standards solidify. Applications are available today for: MIPI M-Phy, MDDI, GDDR5, and SAS 6G.



Lowest real-time scope jitter measurement floor. Your signal rise times are more accurately depicted.



Develop your own math functions. With user-defined function software you can seamlessly integrate your own math functions or filters using MATLAB.



Certified compliance testing. Use one of the many available compliance application software packages, for standards such as USB 3.0, to test.

Models and specifications

DSO and DSA	***DSO/DSAX91604A***	***DSO/DSAX92004A***	***DSO/DSAX92504A***	***DSO/DSAX92804A***	***DSO/DSAX93204A***
Bandwidth	*16 GHz*	*20 GHz*	*25 GHz*	*28 GHz*	*32 GHz*
Sample rate	*80 GSa/s on 2 channels, 40 GSa/s on 4 channels*				
Channels	*4 channels*				
Display	*12.1" XGA touch screen*				
Display update rate	*>400,000 waveforms per second (in segmented memory mode)*				
Memory	*20 Mpts standard, optional up to 2 Gpts (50 Mpts std. on DSA)*				
Vertical resolution	*8 bits, ≥ 12 bits with averaging*				
Vertical sensitivity	*1 mV/div to 1 V/div*				
Bandwidth limit	*500 MHz (using E2697A 1 MΩ adaptor)*				
Max input voltage	*± 5 V*				
Input impedance	*50 Ω, ±3%*				
Timebase range	*2 ps/div to 20 s/div real-time*				
Time scale accuracy	*± 0.1 ppm (immediately after calibration), ± 0.1 ppm/year (aging)*				
Triggering	*3-level sequence hardware (2 levels) and InfiniiScan software trigger: edge, edge transition, edge then edge, glitch, line, pulse width, runt, timeout, pattern/pulse range, state, setup/hold, window, HDTV, non-monotonic, measurement, and zone qualify*				
Typical noise floor	*1.34*	*1.53*	*1.76*	*1.862*	*2.03*
Max data transfer rate	*22 MSa/s*				
Dimensions	*10.5"x16.75"x18.7" (27cm x 43cm x 48cm)*				
Weight	*45.1 lbs (20.5 kg)*				
Power	*100 - 240 VAC at 50/60 Hz; maximum input power 800 Watts*				

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes, including the industry's first 30 GHz InfiniiMax III probing system. See our complete list of compatible probes on page 31.

Accessories – Don't forget options that make measurements faster and more convenient, such as the rackmount kit and transit case.

Memory – Increase memory depth at any time.

Bandwidth – Protect your investment with bandwidth upgrades after purchase.

Applications – Expand your scope's capabilities with our powerful lineup of applications:

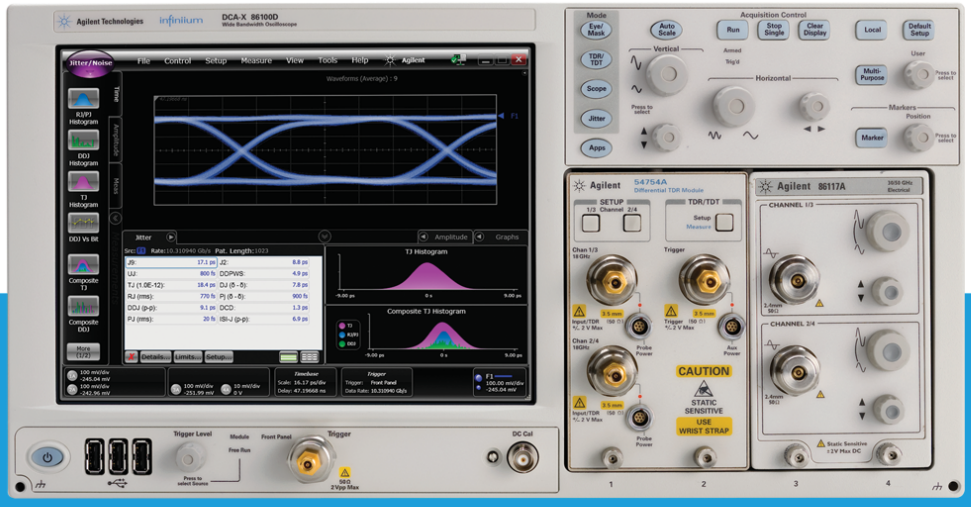
- Analysis and utility options include jitter analysis, eye pattern analysis, user defined function (MATLAB link), and more
- Compliance options include, DDR1,2 and 3, PCI Express, HDMI, DisplayPort, SATA, SAS, MIPI D-Phy, and USB 3.0
- Transport your scope application license from one Infiniium to another with the application server license
- See our complete list of applications on page 26

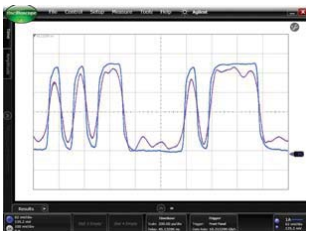
Infiniium 86100D Series Oscilloscopes

DC to > 90 GHz wideband sampling scope

Engineered for precise, accurate high-speed electrical and optical analysis

- Four powerful instruments in one unit: High-bandwidth scope, digital communications analyzer, time domain reflectometer and jitter analyzer
- Wide bandwidth with the lowest residual jitter and noise for the highest precision waveforms
- The industry standard for analysis of optical communication signals
- Calibrated reference receivers for optical transceiver compliance test
- Modular platform allows optical, electrical, TDR/TDT, and S-parameter measurements
- Advanced jitter and amplitude analysis at the push of a button
- Jitter spectrum, phase noise, and jitter transfer measurements on both electrical and optical signals
- Integrated de-embedding, embedding and equalization capability

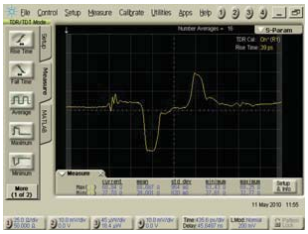




Full-function oscilloscope. Bandwidth of 65 GHz optical and > 90 GHz electrical ensures the most accurate waveform measurements.

Eye diagram analysis. Fast and accurate transmitter characterization using eye diagram analysis and automated mask margin measurements.

Advanced jitter and amplitude analysis. Accurate decomposition of jitter and amplitude impairments provides compliant total jitter (TJ) results and insight into root cause of eye closure.



Time domain reflectometer. Measure both impedance and S-parameters and verify transmission quality on cables, components and channels.

Models matching your applications

86100D Infiniium DCA-X mainframe

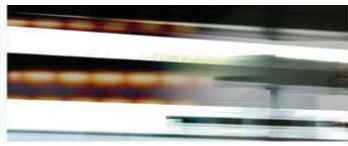
Electrical 1 to 14.2 Gb/s	*Highest precision view of serial bus waveforms*
86112A	*Dual channel electrical > 20 GHz*
83496B	*Electrical clock recovery (and PLL analysis)*
86108A	*Dual 35 GHz channels, jitter <60 fs, internal clock recovery*
Electrical 10 to > 43 Gb/s	*Electrical signals for 40/100G Ethernet, SONET/SDH*
86118A	*Dual remote heads 70 GHz*
86107A	*Precision timebase (jitter < 100 fs)*
86117A	*Dual channel electrical > 50 GHz*
Optical 1 to 14.2 Gb/s	*Fibre Channel, Ethernet, SONET/SDH, PON*
86105C	*9 GHz optical channel, 20 GHz electrical channel*
83496B	*Optical clock recovery (single-mode and multimode)*
86105D	*20 GHz optical channel, 35 GHz electrical channel*
86115D	*20 GHz optical, multi-channel*
Optical 10 to > 43 Gb/s	*40/100G Ethernet, SONET/SDH*
86116C	*65 GHz optical channel, 90 GHz electrical channel*
86107A	*Precision timebase (jitter < 100 fs)*
TDR	*Serial bus standards – PCIe, SATA, SAS, USB, S-parameters*
54754A	*Differential TDR, dual 18 GHz channels*

Scope additions and enhancements

Probes – Improve your measurement reliability with our comprehensive selection of probes.

Options – Mainframe options include an enhanced trigger, GPIB interface, removable hard drive and signal processing capabilities such as equalization, de-embedding and embedding of waveforms.

Modules – Choose from an extensive list of optical, electrical, TDR/TDT, dual electric channel, trigger and clock recovery modules.



Applications: *Engineered to turn measurements into answers*

You need more than data from your scope – you want fast, accurate answers to your questions.

Many scopes can churn out reams of data. But when you're looking for meaningful insight into designs under development, Agilent offers the broadest selection of oscilloscope solutions in the industry.

We deliver more than 80 powerful applications packages for debug, analysis, compliance and characterization.

Whether you're debugging low-speed serial bus operation or FPGA functionality, you're focused on signal integrity, or you're ensuring compliance to industry standards, Agilent has solutions to help you get to accurate answers more quickly.

Speed debug as you deploy FPGAs or debug serial bus designs with our innovative solutions.

Our integrated mixed-signal oscilloscope technology allows us to offer unique solutions like our FPGA dynamic probe to let you see inside your FPGA for faster debug. And our protocol level triggers and displays help you resolve the physical layer root cause of issues you discover at the protocol level.

Take advantage of the expertise Agilent gains by participating in key industry standards bodies.

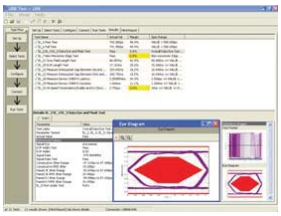
Our engineers sit on the board of directors of many standards groups, including the JEDEC Solid State Technology Association, the Video Electronics Standards Association (VESA) and the Peripheral Component Interconnect Special Interest Group (PCI-SIG). We help define the test standards so we can give you consistent measurement results and support you as you deploy these emerging technologies for your success.

Make your job simpler with automated setups and one-button compliance testing for more than 25 applications.

We make using our solutions easy so busy engineers can offload tedious characterization and still get accurate results. A test setup wizard guides you through selection, configuration, connection, execution and results reporting. And the results reports include configuration, measurements made, pass/fail status, margin analysis and waveforms.

We also offer user-definable application software that allows automated measurements for compliance testing on proprietary buses or while emerging test standards solidify.

The PCI Express® electrical performance validation and compliance software lets you test devices to ensure compliance with the PCIe 1.1 and PCIe 2.0 electrical specs for add-in cards and motherboards.

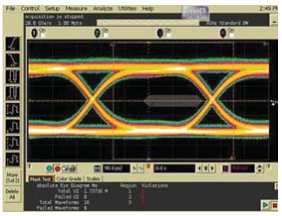


The USB 2.0 compliance test software makes USB signal integrity testing as simple as capturing the signals with your scope, eliminating the need to transfer waveforms to your PC.

Oscilloscope Compliance and Characterization Solutions

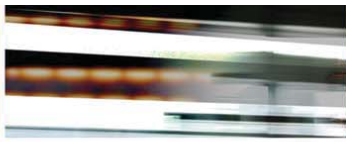
	Industry	Model number	Oscilloscope	Standards organization
10 Gb attachment unit interface (XAUI)	Wireline	N5431A	90000, 90000X Series	www.ieee802.org/3/ and www.ethernetalliance.org
10 Gb BaseT ethernet	Wireline	U7236A	90000 Series	www.ethernetalliance.org
Certified Wireless USB	Consumer electronics	89601A Option BHB	90000, 90000X Series	www.usb.org
DDR1/2/3	Computing and memory	U7233A	9000, 90000, 90000X Series	www.jedec.org
DDR2 and LPDDR2	Computing and memory	N5413B	9000, 90000, 90000X Series	www.jedec.org
DisplayPort	Media	U7232A	90000, 90000X Series	www.displayport.org
DVI	Media	N5394A	90000 Series	www.ddwg.org
Ethernet 1000/100/10BASE-T	Wireline	N5392A	9000, 90000 Series	www.ieee802.org/3/ and www.ethernetalliance.org
Fibre Channel	Storage	N5410A	90000 Series	www.fibrechannel.org
Fully buffered DIMM	Computing and memory	N5409A	90000 Series	www.jedec.org
GDDR5	Computing and memory	U7245A	90000, 90000X Series	www.jedec.org
HDMI 1.4	Media	N5399B	90000, 90000X Series	www.hdmi.org
IEEE1394a/b	Consumer electronics	QP-SIA or QP-SIA-DA*	90000 Series	www.1394ta.org
MIPI D-PHY	Consumer electronics	U7238A	90000, 90000X Series	www.mipi.org
PCI EXPRESS gen 1/2	Computing and memory	N5393A/B	90000, 90000X Series	www.pcisig.org
QPI	Computing and memory	U7241A	90000 Series	
SD UHS-1	Storage	U7246A	9000, 90000, 90000X Series	www.sdcard.org
Serial ATA I/II/III	Storage	N5411A	90000, 90000X Series	www.sata-io.org
Serial attached SCSI (SAS)	Storage	N5412A	90000, 90000X Series	www.scsita.org
USB 2.0 low, full and high speed	Consumer electronics	N5416A	9000, 90000 Series	www.usb.org
USB 3.0	Consumer electronics	U7243A	90000, 90000X Series	www.usb.org
WiMedia and wireless USB	Consumer electronics	U7239A	90000 Series	www.wimedia.org

*Quantum Parametrics: www.quantumparametrics.com



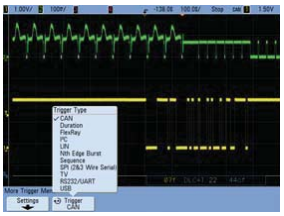
HDMI validation and compliance software gives you a fast way to verify and debug designs for set-top boxes, digital video recorders, DVD players, entertainment systems and motherboards.

The DDR2 compliance test application provides a fast and easy way to test, debug and characterize your DDR2 designs and includes crucial measurements, such as eye-diagram, mask testing and ringing.

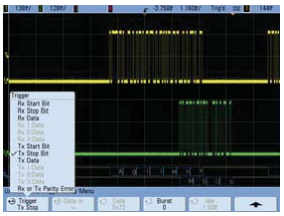


Oscilloscope Software Applications

	Model number	Oscilloscope solutions
Automotive serial data analysis	N5402A	90000, 90000X Series
CAN/LIN trigger and decode	DSOX3AUTO, N5424A, N8803A, and N8803B	3000X, 6000, 7000, 9000, 90000, 90000X Series
Communication mask test kit	E2625A	9000, 90000 Series
EZJIT and EZJIT Plus jitter analysis	E2681A and N5400A	9000, 90000, 90000X Series
FlexDCA	N1010A	86100 Series
FlexRay	N5432A , N8803B	6000, 7000, 9000 Series
FlexRay triggering and decode	N5432C	6000, 7000 Series
FPGA dynamic probe - Altera	N5434A and N5433A	6000, 7000, 9000 Series
FPGA dynamic probe - Xilinx	N5406A and N5397A	6000, 7000, 9000 Series
High-speed serial data analysis and clock recovery	E2688A and N5384A	9000, 90000, 90000X Series
I²C/SPI serial decode	DSOX3EMBD, N5423A , N5391A and N5391B	3000X, 6000, 7000, 9000, 90000, 90000X Series
I²S triggering and decode	DSOX3AUDIO and N5468A	3000X, 6000, 7000 Series
InfiniiScan event identification	N5414B and N5415B	9000, 90000, 90000X Series
InfiniiSim waveform transformation	N5465A , 86100D-SIM, and N1010A-SIM	9000, 90000, 90000X, 86100 Series
Infiniium user-defined function	N5430A	9000, 90000, 90000X Series
Jitter and amplitude analysis	86100D-200/300	86100 Series
JTAG triggering and decode	N8817A	9000, 90000, 90000X Series
USB 2.0/ USB 3.0 triggering and decode	N5464A, N5464B and N8805A	9000, 90000, 90000X Series



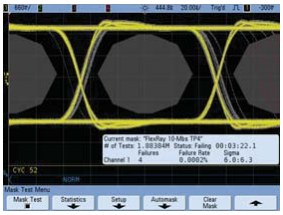
CAN/LIN triggering and hardware-accelerated decode helps you quickly find and debug errors and signal integrity problems on CAN and LIN serial buses.



RS-232/UART serial decode and trigger eliminates the need to manually decode bus traffic. Using data captured on the scope or logic channels, the application lets you easily view the information sent over a RS-232 or other UART serial bus.

Oscilloscope Software Applications

	Model number	Oscilloscope solutions
Mask/waveform limit testing	DSOX2MASK, DSOX3MASK, and N5455A	2000X, 3000X, 6000, 7000 Series *(standard on Infiniium Series)*
MATLAB data analysis	Option-061 or -062	6000, 7000, 9000, 90000, 90000X, 86100 Series
MILSTD 1553	N5469A	6000, 7000 Series
MIPI D-Phy triggering and decode	N8802A	9000, 90000, 90000X Series
Offline PC-based analysis of acquired data	B4610A	2000X, 3000X, 6000, 7000 Series
PCI Express triggering and decode	N5463B and N5463A	9000, 90000X Series
Power measurement and analysis	U1881A and U1882A	3000X, 6000, 7000, 9000 Series
RS-232/UART triggering and decode	DSOX3COMP, N5457A , N5464A and N5462B	2000X, 3000X, 6000, 7000, 90000, 90000X Series
SATA triggering and decode	N8801A	9000, 90000, 90000X Series
Segmented memory	DSOX2SGM, DSOX3SGM, and N5454A	2000X, 3000X 6000, 7000 Series *(standard on Infiniium Series)*
Serial data analysis	E2688A and N5384A	90000 9000, 90000, 90000X Series
Serial data equalization	N5461A	9000, 90000 , 90000X Series
S-parameter measurements	86100D-202	86100D Series
TDR/TDT measurements	86100D and 54754A	86100 Series
USB 2.0 triggering and decode	N5464B and N5464A	9000, 90000, 90000X Series
USB 3.0 triggering and decode	N8805A	90000, 90000X Series
User-definable application	N5467A	9000, 90000, 90000X Series
User-definable function	N5430A	9000, 90000, 90000X Series
Vector signal analysis	89601A	6000, 7000, 9000, 90000, 90000X Series



Mask/waveform limit testing provides a fast and easy way to test your signals to specified standards, and uncover unexpected signal anomalies, such as glitches.

USB serial trigger and decode provides powerful time-correlated views of waveforms and symbols to the bit level, making it easy to isolate communication faults to logic or analog sources.

Probes & Accessories: *Engineered for signal access and measurement accuracy*

To get top performance from your scope, you need the right probe for your application.

Selecting the best probe for the job ensures you can access your signals and make reliable measurements. To complement the scopes we sell, Agilent offers a broad family of probes and accessories. Solutions range from simple, inexpensive passive probes to state-of-the-art high-frequency interposers that meet your toughest probing challenges.

Passive probes

When you need to measure high voltages, these are the most durable and economical probes and the most widely used.

Active probes

These single-ended or differential probes handle higher bandwidths with lower signal loading. Single-ended active probes provide the best overall combination of resistive and capacitive loading. With low loading, single-ended probes can be used on high-impedance, high-frequency circuits that would be overloaded with passive probes. Differential active probes are used to look at signals referenced to each other and also at small signals in the presence of large DC offsets or other common-mode signals, such as power line noise.

InfiniiMax Series

These specialized active probes complement the Infiniium Series scopes. The InfiniiMax III Series is the first 30 GHz probing system and gives you the industry's flattest frequency response and widest selection of probe heads and accessories. With capabilities such as 30 GHz bandwidth for differential measurements and bandwidth upgradability to higher performance as your needs evolve, the award-winning InfiniiMax probe system combines maximum performance with excellent usability.

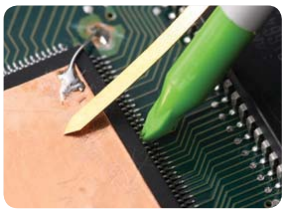
Current probes

These probes sense the current flowing through a conductor and convert it to a voltage that can be viewed and measured on your scope. Agilent's current probes use a hybrid technology that includes a hall effect sensor, which senses the dc current and a current transformer, which senses the ac current, making it unnecessary to make an electrical connection to the circuit.

Innovative probe accessories make connections a snap.

Connecting to components like fine-pitch devices, surface-mount integrated circuits and DDR ball-grid arrays can be challenging. We take the challenge away with accessories that let you connect easily – even hands-free.

InfiniiMax, the world's best high-speed probing system, offers you the highest performance available for measuring differential and single-ended signals, with flexible connectivity solutions for today's high-density ICs and circuit boards.



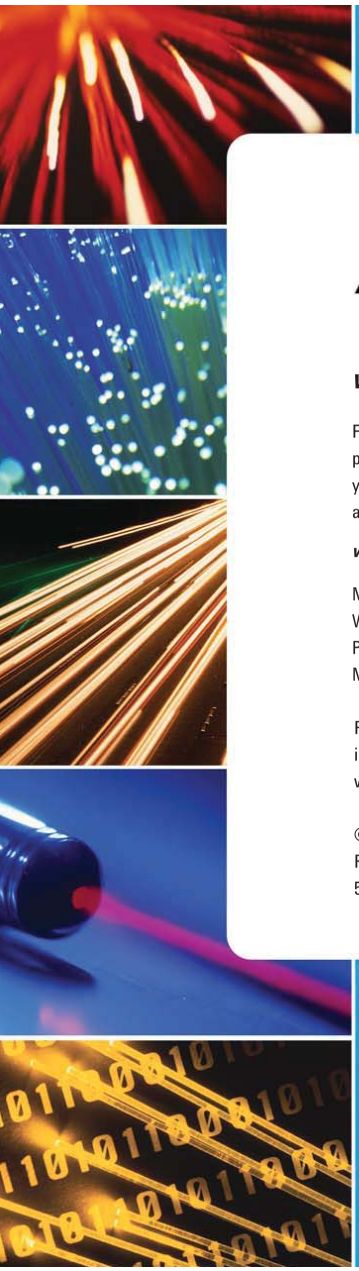
Compact 2.5-mm diameter probe heads with low input capacitance and various fine-pitch probe tip accessories make the N2870A Series passive probes ideal for probing densely populated IC components or surface-mount devices.

Recommended probes and accessories for Agilent oscilloscopes

	U1600 Series	U2700 Series		2000 X-Series	3000 X-Series	6000/7000 Series		9000 Series	90000A Series	90000 X-Series
Scope bandwidth	20-40 MHz	100 MHz	200 MHz	70-200 MHz	100-500 MHz	100 MHz	300 MHz-1 GHz	1 GHz - 4 GHz	2.5 GHz - 13 GHz	16-32 GHz
Probe interface	BNC	BNC		BNC	AutoProbe Lite	BNC	AutoProbe Lite	AutoProbe	AutoProbe	AutoProbe II
Passive probe 1:1	U1560A	10070C		10070D				N2870A	10070C with E2697A[4]	N2870A, 10070D with N5449A
Passive probe 10:1	U1561A	10074C, N2871A, N2872A		N2862B, N2863B	N2862B, N2863B, N2890A	10074D, N2871A	10073D, N2873A	N2873A (10:1), N2875A (20:1)	54006A (6GHz), 10073D or N2873A (500MHz) with E2697A[4]	N2873A with N5449A
High-voltage passive probe 100:1	U1562A	10076B		10076B		10076B, N2876A		10076B, N2876A	10076B with E2697A	10076B with N5449A
High-voltage passive probe 1000:1		N2771A		N2771B		N2771B			N2771B with E2697A	N2771B with N5449A
Low Z					N2874A, N2876A	N2874A (10:1), N2876A (100:1)				N2874A, N2876A with N5442A
Active single-ended probe					N2795A	1144A[1]	N2795A/96A or 1130A*	N2795A 1155A, 1130A*	1157/8A, 1131/2/4[5] or 1168/69A[5]*	N2795A,96A,1156A,57A,58A with N5442A
Active differential probe (high speed)					1130A[5]		1130A[5] or 1141A[1]	1130A[5]	1131/2/4[5] or 1168/69A[5] with differential probe accessory	N2800A/01A/02A/03A[2]
Active differential probe (high voltage)		N2791A, N2891A		N2791A, N2891A	N2790A/91A/ 92A/93A, N2891A	N2791A/ N2891A	N2790A/91A/ 92A/93A, N2891A	N2795A/96A 1130A*	N2791A, N2790A with E2697A[4]	N2790A,91A,891A with N5449A or N2792A,93A with N5442A
Current probe	U1583A	1146A, N2893A, N2780A, N2781A, N2782A, N2783A		1146A, N2780A/81A/82A/83A[3]	1146A, 1147A, N2893A N2780A/81A/82A/83A[3]	1146A, N2780A/81A /82A/83A[3]	1146A, 1147A, N2893A, N2780A/81A/82A/83A[3]		1146A, N2780A/81A/82A/83A[3] with E2697A[4]	1147A, N2893A with N5449A
Rackmount kit				N6456A	N6456A	N2916B	N2732A	N2902A	N5470A	
Carrying case				N6457A	N6457A	N2917B (hard) or N2733A (soft)		N5475A		

Notes:
* Includes SE probe accessory
1. Requires 1142A power supply
2. Order one or more InfiniiMax III probe heads -- N5445A, N5439A, N5444A or N5441A.
3. Requires N2779A power supply
4. Includes one 10073D passive probe
5. Order one or more InfiniiMax I probe heads or connectivity kits per amplifier. a. E2669A InfiniiMax connectivity kit for differential/single-ended measurements, b. E2668A InfiniiMax connectivity kit for single-ended measurements, c. E2675A InfiniiMax differential browser probe head and accessories, d. E2676A InfiniiMax single-ended browser probe head and accessories, e. E2677A InfiniiMax differential solder-in probe head and accessories, f. E2678A InfiniiMax single-ended/differential socketed probe head and accessories, g. E2679A InfiniiMax single-ended solder-in probe head and accessories, h. E2695A Differential SMA probe head
6. Order one or more 10073D InfiniiMax II probe heads or connectivity kits per amplifier. a. N5380A InfiniiMax II 12 GHz differential SMA adapter, b. N5381A InfiniiMax II differential solder-in probe head and accessories, c. N5382A InfiniiMax II 12 GHz differential browser, d. N5425A InfiniiMax I and II 12 GHz differential solder-in ZIF probe head. Requires N5426A or N5451Ae. N5426A InfiniiMax I and II 12 GHz ZIF tip, f. N5451A InfiniiMax I and II 9 GHz/5 GHz Long wire ZIF tip.

To see our entire portfolio of award-winning probes, see the probe catalog at www.agilent.com/find/Agilentprobes.



Agilent Technologies Oscilloscopes

www.agilent.com/find/scopefamily

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