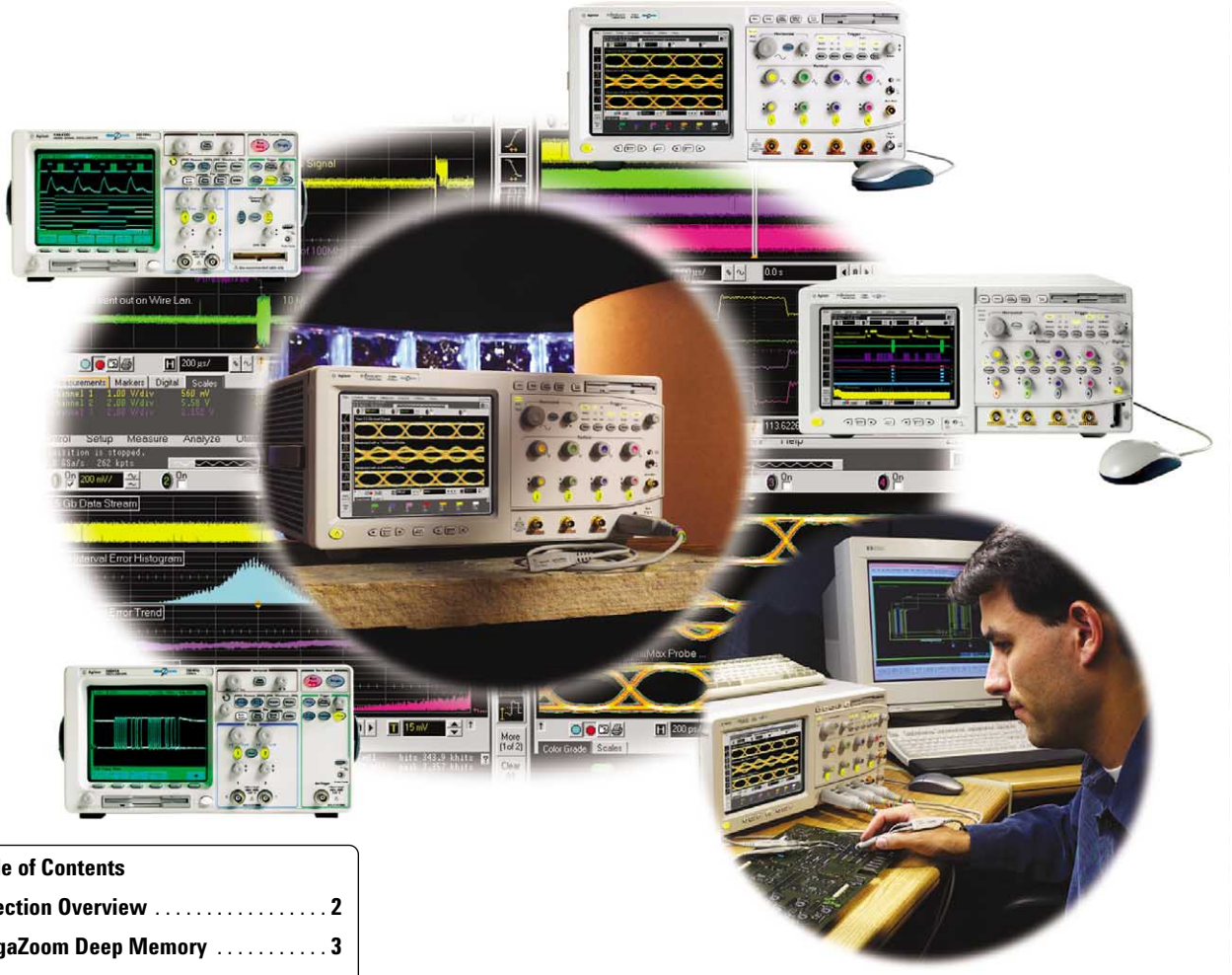
Agilent Technologies
Digital and Mixed Signal Oscilloscopes

Selection Guide



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Enabling easy utilization of advancing technology

Agilent Technologies

Choose the Oscilloscope that Meets your Needs

In this document
This document provides an overview of the features and benefits of Agilent's digital and mixed signal oscilloscopes. For more detailed information refer to "Related Literature" at the end of this document or the web sites listed on the last page in each section.

Accelerate your troubleshooting
Agilent oscilloscopes are designed to help you accelerate the troubleshooting process. Based on input from customers around the world, Agilent has engineered features and unique capabilities that will enable you to keep pace with the rapid changes in technology, yet are easier to use than most competitive products. The result is you spend more time troubleshooting your design and less time fighting your oscilloscope.

- Real-time oscilloscopes with bandwidths from 60 MHz to 6 GHz
- Sampling oscilloscopes with bandwidths up to 80 GHz
- Unique mixed signal scopes with integrated oscilloscope and logic analysis features
- MegaZoom technology for fast and deep memory all the time
- High-definition displays with nearly twice the normal horizontal resolution

	Mixed Signal Pages 4 - 5	**Portable** Pages 6 - 7	**Infiniium General-Purpose** Pages 8 - 9	**Infiniium High-Performance** Pages 10 - 11	**Infiniium DCA** Pages 12 - 13
Bandwidth	60 MHz to 1 GHz	60 to 500 MHz	600 MHz to 1 GHz	2.25 to 6 GHz	3 to 80 GHz
Channels	2+16 and 4+16	2 and 4	2 and 4	4	Up to 4
Sampling Speed	Up to 4 GSa/s	200 MSa/s and and 2 GSa/s	Up to 4 GSa/s	20 GSa/s	40 KSa/s sequential
Memory	Up to 16 M	Up to 8 M	Up to 16 M	Up to 1 M (all sample rates) Up to 32 M (≤ 2 GSa/s)	4 K
Description	A 16-channel timing analyzer is seamlessly integrated into a full-featured scope for debugging complex mixed signal designs.	Low-cost scopes for the lab, the field, or the classroom with high-definition display, flexible triggering, and MegaZoom deep memory technology.	Lab scopes with unmatched usability and MegaZoom deep memory.	Performance for deployment of state-of-the-art technologies with Infiniium's Windows®-based interface and InfiniiMax probes.	Modular high-speed scopes that also function as digital communications analyzers and offer TDR capabilities.

Table 1. Agilent offers a wide range of oscilloscopes for use in the lab, benchtop, field, and classroom.

For more information about Agilent oscilloscopes, go to **www.agilent.com/find/oscilloscopes**

MegaZoom Deep Memory

Fast and deep memory all the time

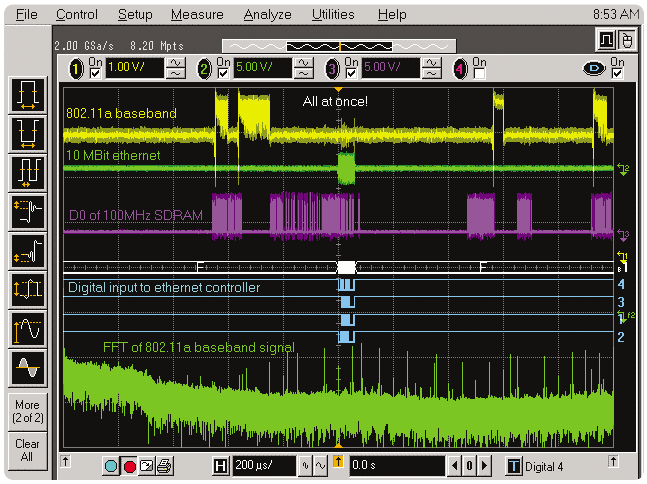

Figure 1. Using Agilent's MegaZoom deep memory, a mixed signal scope captures a full cycle of the device's operation and displays the time-aligned signals. The FFT is visable on the yellow trace.

Figure 2. Zooming in by a factor of 200,000: 1 brings the rise time of the SDRAM clock into view.

- Zoom in quickly on critical signals
- Eliminate performance problems with first generation deep memory
- Forget the hassle of manually resetting memory

What's so great about Agilent's patented deep memory? MegaZoom gives you memory that is simultaneously fast and deep all the time, unlike first generation deep memory oscilloscopes.

First generation deep memory oscilloscopes make you select a memory depth before acquiring any waveform data. Memory depth is not set to maximum all the time because the scope's response to user input and waveform update rate slows down as memory is increased. Consequently the re-arm and waveform processing time between acquisition cycles may be many orders of magnitude larger than the acquisition time needed to detect glitches. As a result, you can miss the very problems you are trying to detect.

When operating with a first generation deep memory scope, users must estimate how much memory they are going to need for a particular measurement — and if they are wrong they have to reset the memory and restart the measurement. This can be a very time-consuming process. In constrast, because MegaZoom deep memory is always available, you simply gather the waveform and then pan and zoom to observe the fine details of your critical signals.

The MegaZoom technology is based upon a custom processor that controls the flow of data into acquisition memory and rapid post-processing for display and measurements. The MegaZoom processor operates at the full speed of the scope's A/D. Processing the data in the MegaZoom greatly reduces the amount of data transferred to the scope's CPU, for post-processing. MegaZoom substantially increases the waveform update rate and front-panel responsiveness of Agilent's deep memory scopes, making these scopes better suited to working on today's complex digital-based designs.

MEGA Zoom

Mixed Signal Oscilloscopes

Seamless integration of scope and timing channels

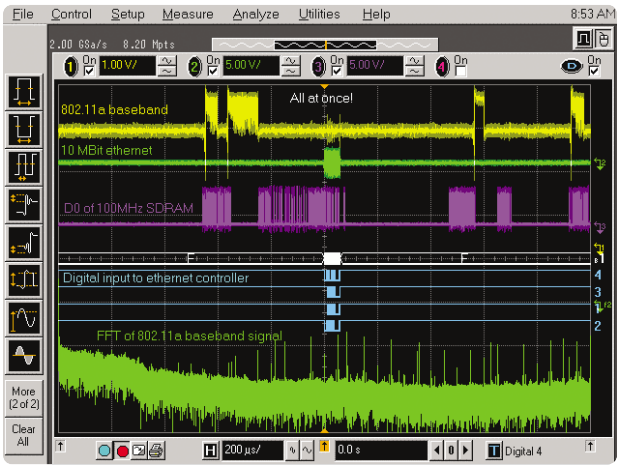

Figure 3. MegaZoom allows you to capture a full cycle of a device's operation while maintaining the ability to resolve fine details.

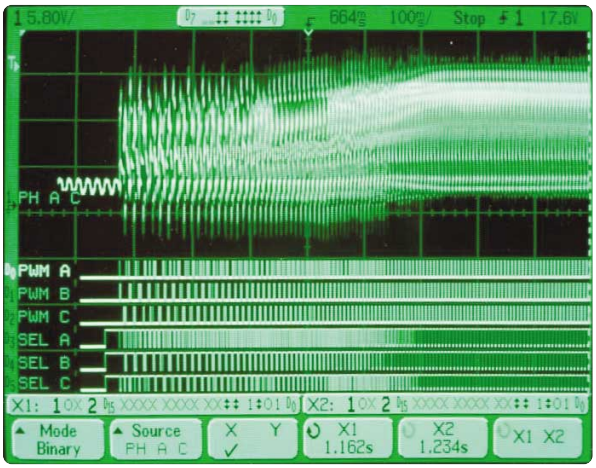

Figure 4. A high-resolution, analog-like display with 32-shades of gray helps you easily identify waveform irregularities (Agilent 54600 Series only).

- Choose from bandwidths ranging from 60 MHz to 1 GHz
- View 18 to 20 time-aligned scope and timing channels simultaneously
- Troubleshoot mixed analog and digital designs with responsive MegaZoom deep memory
- Reveal subtle details that the typical scope won't show with a patented high-resolution display
- Take advantage of standard serial triggering including I^2C, SPI, CAN frame, and USB frame

Using a scope without logic channels instead of an Agilent MSO is like using a slide rule when you could have a calculator!

More channels, more memory, more triggering

With the increasing digital content in today's designs, it is often difficult to capture enough channels simultaneously with a traditional 2 or 4 channel scope. To further complicate matters, the analog and digital sides are often operating at drastically different speeds.

Now you can capture, display, and analyze a variety of signals in one acquisition on one instrument screen, helping you narrow in more quickly on tough design problems. With mixed signal scopes, a 16-channel timing analyzer is seamlessly integrated into a full-featured scope. It's now easy to measure a combination of signal types and speeds all at once, including slow analog slow analog, fast digital, or baseband RF.

MegaZoom Memory

MegaZoom memory technology is fast *and* deep, so you can capture a full cycle of your device's operation with the resolution needed to view critical intervals of the highest speed signals. MegaZoom is available at all times and does not require a special operating mode.

Mixed Signal Oscilloscopes (continued)

Figure 5. Agilent's family of mixed signal oscilloscopes spans the frequency range from 60 MHz to 1 GHz, with models to meet your needs and budget.

	54832D Infiniium	54831D Infiniium	54830D Infiniium	54642D Portable	54641D Portable	54622D Portable	54621D Portable
Bandwidth	1 GHz	600 MHz	600 MHz	500 MHz	350 MHz	100 MHz	60 MHz
Channels Scope+Timing	4+16	4+16	2+16	2+16	2+16	2+16	2+16
Sampling	4 GSa/s	4 GSa/s	4 GSa/s	2 GSa/s	2 GSa/s	200 MSa/s	200 MSa/s
Maximum Memory	Up to 16 M	Up to 16 M	Up to 16 M	8 M	8 M	4 M	4 M
MegaZoom	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special Features	Infiniium's Windows®-based interface gives you unparalleled ease of use for both scope and logic channels. Powerful triggering, measurements, and math functions make this the scope of choice for embedded applications. LAN and Web connectivity let you share information easily and control the scope remotely.			High-definition display with 32 shades of gray to give a clear analog-like view of critical waveforms. Familiar knob-based controls for both scope and logic channels helps you put these scopes to work right out of the box. Serial triggering simplifies tracking down CAN, I^2C, SPI, USB and other serial-bus problems. IntuiLink software simplifies PC connectivity.			
Description	For high-performance 32-bit embedded applications with high-speed logic	For 32-bit applications with logic; ~2 ns edge speeds and 4 scope channels	For DSP-based systems requiring extended analysis and deep memory	For higher-speed embedded and DSP applications	For medium-speed embedded applications up to 50 MHz	For 8- and 16-bit microcontroller applications	The lowest-cost MSO; ideal for education and industrial applications
Notes	Standard memory is 4 M, options extend up to 16 M.			IntuiLink software is provided at no cost. Scopes have built-in parallel and RS-232 I/O. GPIB is an extra-cost option.			

Table 2. Mixed signal selection guide.

For more information about Agilent MSOs, go to **www.agilent.com/find/mso**

54600 Series Portable Oscilloscopes
Performance packed at a budget price

- Choose from bandwidths ranging from 60 to 500 MHz
- Troubleshoot complex designs with responsive MegaZoom deep memory
- Reveal subtle details that the typical scope won't show with a patented high-resolution display
- Take advantage of powerful triggering feature set
- Pick a compact, lightweight scope that's ideal for benchtop, field, or classroom settings

Just because they're portable doesn't mean they've sacrificed performance. In fact, with the increasing digital content of today's electronic designs, you need a portable scope that packs more powerful features without sacrificing ease of use.

With bandwidths ranging from 60 to 500 MHz, MegaZoom deep memory technology, advanced triggering, a high definition display, the look and feel of an analog scope, and built-in help, Agilent's 54600 Series give you a view into your system performance that is unmatched by any other portable digital signal analyzer (DSO), at a price that fits within your budget.

Figure 6. Agilent 54600 Series portable oscilloscopes combine analog-like knobs with built-in help to make advanced features as easy to use as everyday scope functions.

Affordable deep memory

Now you can apply the power of deep memory at a price that won't break your budget. Although the Agilent portable deep memory scopes cost slightly more than competitive shallow memory scopes, the benefits are more than worth it.

MegaZoom technology gives you higher sampling speeds where you need them to observe the wide range of signals in your system rather than just the faster few sweep speeds. MegaZoom is available at all times and does not require a special operating mode.

Measurement data are mapped into a high-resolution screen with 32 levels of intensity and 1000 points resolution, nearly twice the display standard. Now glitches are more clearly identifiable.

Powerful triggering

Because of increased digital content in today's electronic circuits, traditional level and slope scope triggering is no longer enough. Agilent's 54600 Series portable oscilloscopes offer a rich triggering feature set that lets you easily isolate and analyze complex signals and fault conditions. Triggers include:

- CAN
- I^2C
- SPI
- USB
- Pulse width
- TV

Waveform measurements
You can find the root cause of your toughest problems with confidence that your measured data is a correct representation of your circuit's performance. Eight voltage and 11 timing measurements, as well as a 5-digit frequency counter, complement cursor measurements to translate your circuit's characteristics into repeatable and accurate measurement data.

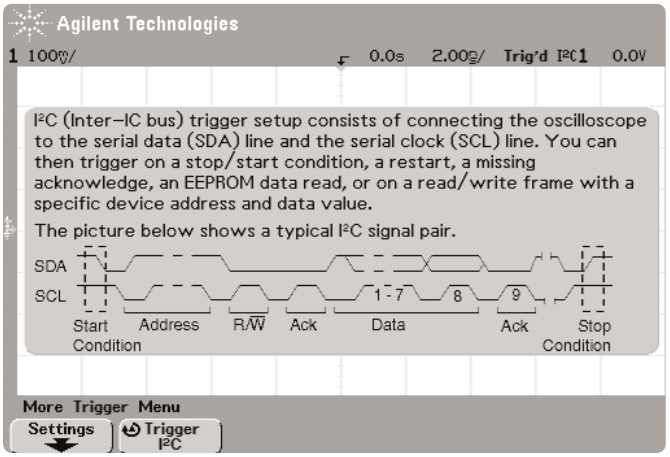

Figure 7. Simply press and hold a menu key for built-in help, such as this explanation of Inter-IC bus triggering.

	54642A	54641A	54624A	54622A	54621A
Bandwidth	500 MHz	350 MHz	100 MHz	100 MHz	60 MHz
Channels	2	2	4	2	2
Maximum Memory	8 M	8 M	4 M	4 M	4 M
MegaZoom	Yes	Yes	Yes	Yes	Yes
Special Features	Ease-of-use features such as dedicated controls for each channel, autoscale, and built-in help keep you focused on your test, instead of your test tools. Each of these scopes has a full triggering feature set with serial triggers, pulse width, and TV. Automatic and cursor measurements provide critical waveform characterization. MegaZoom deep memory and Agilent's unique high-resolution display show you exactly how your circuit is performing.				
Description	The personal lab scope for professionals needing high-bandwidth measurements at an affordable price. MegaZoom allows high-fidelity viewing of your fastest signals while viewing a full cycle of the system.	With 350 MHz bandwidth and 1 ns rise time, this is the scope for high-speed applications on a limited budget. This is the lowest-cost deep-memory scope to offer 1 ns performance.	Four full channels of MegaZoom deep memory make this the ideal scope for power electronics, electromechanical, and bio-physical applications. Each of the four channels has its individual dedicated control knobs for simplified operation.	The personal scope for professionals working with less than 50 MHz logic devices. Rich triggering and measurement capabilities make it an ideal lab scope for many applications.	Lowest-cost deep memory in the market. Ideally suited for electromechanical and education labs. Easily view your most demanding signals with MegaZoom and a high-resolution display.

Table 3. Agilent 54600 Series selection guide.

For more information about Agilent 54600 Series scopes, go to **www.agilent.com/find/megazoom**

General-Purpose Infiniium Oscilloscopes

Advanced troubleshooting that's easy to use

- Choose from bandwidths up to 2.25 GHz, sample rates up to 8 GSa/s, and memory depths up to 16 M points
- Simplify measurement setup with familiar Windows-based graphical user interface and analog-like front panel
- Find answers quickly with advanced help system
- Share measurement resources with LAN connectivity
- Free hands for probing with VoiceControl option (English only)
- Get accurate insight into system performance with active probes

Agilent's Infiniium oscilloscopes combine ease of use and the right specifications with a broad feature set to help you get your job done faster. If you are tired of spending 80 percent of your lab time fighting your instrumentation and only 20 percent making meaningful measurements, Infiniium is the scope for you.

Windows interface

Infiniium's intuitive Windows-based graphical user interface (GUI), coupled with its analog-like control knobs, puts the scopes' powerful triggering, measurements, and waveform math functions at your fingertips. Infiniium's design has won eight industry awards and the hearts of oscilloscope users around the world.

Figure 8. Simplify your debugging using Infiniium's Windows-based interface, its analog-like control knobs, and built-in help system.

MegaZoom deep memory

MegaZoom is Agilent's unique, patented technology that gives you the advantages of deep memory without the usual drawbacks. With MegaZoom, deep memory is always available — it is not a special mode. MegaZoom deep memory lets you capture a full cycle of your system's operation and zoom in on specific areas of interest while applying Infiniium's rich measurement power.

Triggering power

To solve complex problems, you need to isolate specific events of interest. Infiniium scopes offer a full range of advanced triggers to help you isolate and capture critical areas of your waveform. Setup for advanced triggers is simple, with all the settings you need grouped in easy-to-access dialog boxes.

General-Purpose Infiniium Oscilloscopes (continued)

Signal integrity
If you need an easy-to-use yet powerful signal integrity tool, use the 2.25 GHz Infiniium with 8 GSa/s sampling along with Agilent's 4 GHz 1158A active probes to get a better look at your signal integrity problems. The 115XA probes are uniquely designed for a flat frequency response over the entire probe bandwidth, eliminating the distortion and frequency-dependent loading effects that are present in probes that have an in-band resonance.

Advanced help system
In addition to the usual how-to-do-it information you expect to find, Infiniium's help system contains measurement advice from the experts in Agilent's labs to help you quickly determine exactly what is going on in your device under test.

Information sharing
The scope's PC architecture and LAN interface makes it easy to share your work and communicate your results. Use a Java™-enabled Web browser to share access with team members working remotely.

	54832B Infiniium	54831B Infiniium	54830B Infiniium
Bandwidth	1 GHz	600 MHz	600 MHz
Channels	4	4	2
Maximum Sampling	4 GSa/s	4 GSa/s	4 GSa/s
Maximum Memory	Up to 16 M	Up to 16 M	Up to 16 M
MegaZoom	Yes	Yes	Yes
Special Features	11 trigger modes isolate circuit problems. 12 voltage, 11 time measurements, 14 waveform math functions, 7 eye diagram measurements, and 8 histogram measurements allow full circuit characterization.		
Description	The scope for projects where edge speeds are in the nanosecond range. Four deep MegaZoom channels show all the details.	Four channels of 16 M deep MegaZoom and Infiniium's ease of use bring your critical measurements into view.	When you need more than 500 MHz bandwidth and the power of Infiniium at a budget price.
Notes	Standard memory is 4 M, options available for up to 16 M. Option 100 communications mask test kit and Option 200 voice control kit may be used with all Infiniium models.		

Table 4. Agilent Infiniium 54800 Series selection guide.

For more information about Agilent 54800 Series scopes, go to **www.agilent.com/find/infiniium**

High-Performance Infiniium Oscilloscopes

Unmatched performance, accuracy, and connectivity

- Choose between 6 and 4 GHz bandwidth real-time oscilloscopes with 20 GSa/s sample rate on all four channels simultaneously
- Track down elusive glitches with up to 1 M points MegaZoom deep memory on all sample rates and 32 M points MegaZoom deep memory at 2 GSa/s and slower rates
- Improve reliability with solid state attenuators
- Take advantage of trigger jitter as low as 1.0 ps rms
- Ensure probing accuracy with highest performance differential and single-ended probes available (InfiniiMax 7, 5, and 3.5 GHz probing systems)

Experienced scope users know that their measurements are only as good as their probing system. And as bandwidth increases, it is increasingly important to make sure you are measuring your circuit, not your scope probe. Nothing is more frustrating than chasing down an apparent design problem, only to find that it was caused by an inferior scope probe.

Together, the newest Infiniium scopes and the breakthrough InfiniiMax high-performance probing systems offer an end-to-end measurement solution with unmatched performance, accuracy, and connectivity. The results are measurements you can trust and better insight into circuit behavior.

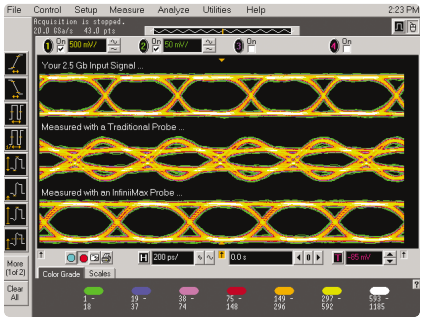

Figure 10. Compare the input on the top trace to that of a competitive probe in the center and an InfiniiMax on the bottom.

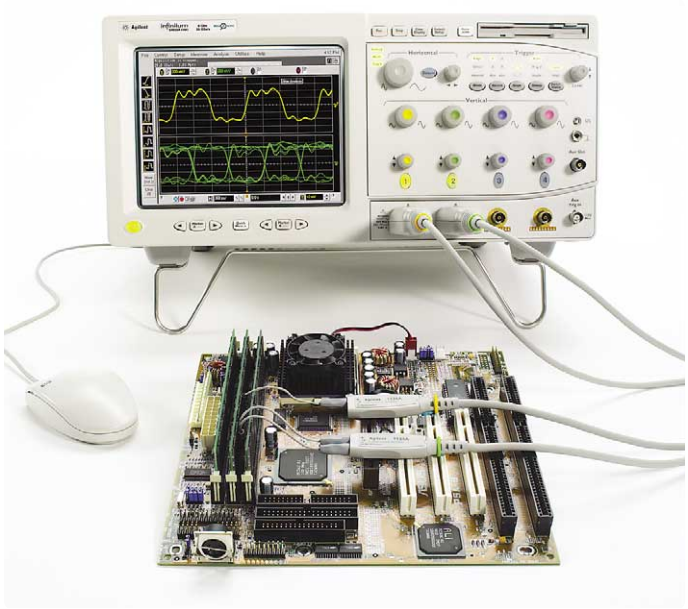

Figure 9. The newest members of Agilent's award-winning Infiniium Series are 6 and 4 GHz high performance real-time oscilloscopes. The InfiniiMax high bandwidth active probe offers unmatched performance, accuracy, and connectivity.

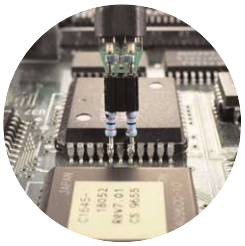

Figure 11. InfiniiMax 7 GHz differential socketed probe head.

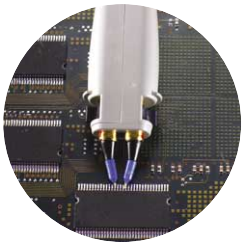

Figure 12. InfiniiMax 6 GHz differential browser probe head

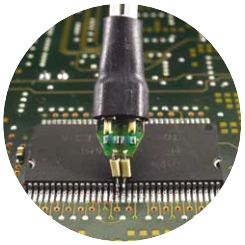

Figure 13. InfiniiMax 7 GHz differential solder-in probe head.

High-Performance Infiniium Oscilloscopes (continued)

Performance-enabling technology
When you need to make multi-channel measurements on projects that use sub-nanosecond logic, you need powerful instruments. These newest Infiniium oscilloscopes maintain their full sampling performance of 20 GSa/s on all channels, so you can make critical timing measurements at the full performance of the oscilloscope.

The combination of 6 GHz and 20 GSa/s on all channels makes the 54850 Series ideal for designs incorporating PCI-Express, Serial ATA, Rapid IO, HyperTransport, InfiniBand,or Gigabit Ethernet. MegaZoom deep memory enables the capture of the data transmission across these buses with the resolution required to perform high-resolution parametric measurements of the system's operation.

	54855A	54854A	54853A	54846B	54845B
Bandwidth	6 GHz	4 GHz	2.5 GHz	2.25 GHz	1.5 GHz
Channels	4	4	4	4	4
Maximum Sampling	20 GSa/s on all channels	20 GSa/s on all channels	20 GSa/s on all channels	8 GSa/s	8 GSa/s
Maximum Memory	1 M/32 M	1 M/32 M	1 M/32 M	64 K	64 K
MegaZoom	Yes	Yes	Yes	No	No
Special Features	Easy to learn, easy to use jitter and timing analysis software option (E2681A)			Cycle-to-cycle jitter and USB compliance testing	
Description	The industry leading measurement system with 4 Ch of 6 GHz at the probe tip.	The only 4 GHz scope available that offers 20 GSa/s on every channel.	The lowest cost 20 GSa/s scope with all the 54855A features.	A 2.2 GHz/ 8 Ga/sec scope ideally suited for USB 2.0 testing.	The affordable scope for greater than 1 GHz needs.
Notes	Standard memory is 256 K at all sampling speeds. Option 001 provides 1 M up to 20 GSa/s and 32 M at 2 GSa/s and slower sampling.			Option 014 adds one 1158A 4 GHz probe. Option 013 adds one 1157A 2.5 GHz probe.	

* Probes must be ordered separately

Table 5. Agilent Infiniium 54850 Series oscilloscopes selection guide.

InfiniiMax high-performance active probe system
The innovative InfiniiMax probing system provides either differential or single-ended probing solutions for the most demanding mechanical requirements, without sacrificing performance. A flat frequency response over the entire probe bandwidth eliminates the distortion and frequency-dependent loading effects that are present in probes that have an in-band resonance.

	1134A	1132A	1131A	E2669A	E2667A
Bandwidth	7 GHz	5 GHz	3.5 GHz	Differential kit	Single-ended kit
Description	Probe amplifier, order one or both of the connectivity kits per probe amplifier.			Connectivity kit, includes browser, solder-in and socket probe heads supporting the measurement type.	
Oscilloscope Compatibility	54855A	54854A	54853A 54845B/ 54846B		
Notes	Probe amplifier specifications: dynamic range = ± 2.5 V DC, offset range = ± 12 V				

Table 6. Agilent 1130 Series InfiniiMax probing selection guide.

For more information about Agilent 54850 scopes, go to **www.agilent.com/find/infiniimax**

Infiniium DCA
Three instruments in one

A full-featured wide-bandwidth oscilloscope, a digital communications analyzer (DCA), and a time-domain reflectometer

- Test digital communications waveforms beyond 40 Gb/s
- Select from a variety of plug-in modules for testing both optical and electrical signals
- Perform compliance mask and parametric testing at the touch of a button

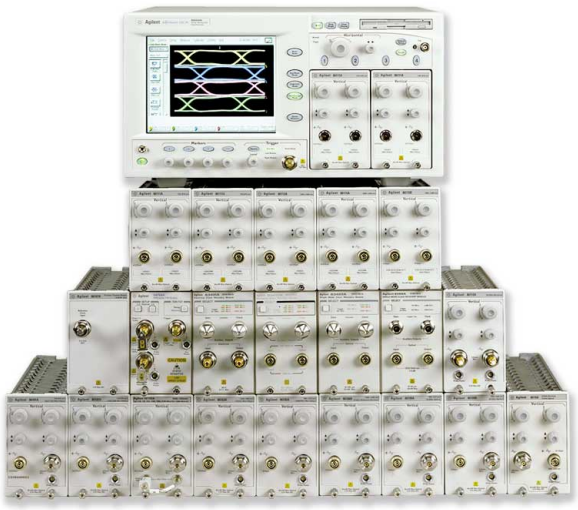

Figure 14. Infiniium DCA is easily configured to meet your needs, with a wide selection of measurement modules.

The Agilent 86100B Infiniium DCA wide-bandwidth oscilloscopes use equivalent time sampling to provide the highest measurement bandwidth in Agilent's scope family. Measurement bandwidth up to 80 GHz enables time domain analysis of repetitive signals up to and beyond 40 Gb/s.

Measurement speed
With the Windows-based graphical user interface, you won't have to waste time trying to figure out how to make a measurement. Infiniium DCA's usability combined with its high-speed hardware will cut valuable time out of your project's test phase.

Digital communications analysis
Accurate eye-diagram analysis is essential for characterizing the quality of transmitters used from 100 Mb/s to 40 Gb/s. Compliance mask and parametric testing no longer require a complicated sequence of setups and configurations.

You can perform a complete compliance test by simply pressing a button. The important measurements you need are right at your fingertips, including:

- Industry-standard masks
- Extinction ratio measurements
- Eye measurements

Eye-diagram mask testing
Infiniium DCA provides efficient, high-throughput waveform compliance testing with a suite of standards-based eye diagram masks. Infiniium's usability has been extended to provide a streamlined test at industry-standard data rates.

Time-domain reflectometry
TDR measurements are focused on high-speed applications where it is necessary to optimize electrical system components, when imperfections cause signal distortion and reflections. Signal integrity is a critical requirement in high-speed, digital signal transmission.

The Agilent 54754A provides two 18 GHz channels that have built-in TDR step generators. The two channels can work in tandem to provide differential and common-mode TDR stimulus/response, or they can be used independently. Either channel works as a normal oscilloscope vertical system when the TDR/TDT step generators are not operating.

Modules are listed in descending order of their electrical bandwidth.

Module	Electrical Bandwidth	Channels	Wavelength Range (nm)	Unfiltered Optical Bandwidth	Fiber Input (nm)	Mask-Test Sensitivity
86116B	80 GHz	1 of each	1480 to 1620	65 GHz	9	NA
86118A With two remote sampling heads	70 GHz	2 electrical	NA	NA	NA	NA
86117B	65 GHz	2 electrical	NA	NA	NA	NA
86116A	63 GHz	1 of each	1000 to 1600	53 GHz	9	NA
86117A	50 GHz	2 electrical	NA	NA	NA	NA
86109B	50 GHz	1 of each	1000 to 1600	40 GHz	9	NA
86109A	40 GHz	1 of each	1000 to 1600	30 GHz	9	NA
86106B	40 GHz	1 of each	1000 to 1600	28 GHz	9	–7 dBm
86105B	20 GHz	1 of each	1000 to 1600	15 GHz	9	–12 dBm
86112A	20 GHz	2 electrical	NA	NA	NA	NA
86102U	20 GHz	1 of each	750 to 860	15 GHz	62.5	–7.5 dBm
86102A	20 GHz	1 of each	750 to 860	10 GHz	62.5	–13.5 dBm
86103B	20 GHz	1 of each	1000 to 1600	10 GHz	62.5	–15 dBm
86103A	20 GHz	1 of each	1000 to 1600	2.58 GHz	62.5	–20 dBm
869101A	20 GHz	1 of each	750 to 860	2.85 GHz	62.5	–17dBm
54754A with TDR	18 GHz	2 electrical	NA	NA	NA	NA
85115B	NA	2 optical	1000 to 1600	28 GHz	9	–7 dBm
86111U	NA	2 optical	750 to 860	15 GHz	62.5	–7.5 dBm
86111A	NA	2 optical	750 to 860	2.85 GHz	62.5	–17 dBm
86113A	NA	2 optical	1000 to 1600	2.85 GHz	62.5	–20 dBm

Table 7. Agilent Infiniium 86100B DCA module selection guide.

Probes

Infiniium Oscilloscopes

- All Agilent oscilloscopes with bandwidths less than 1 GHz are supplied with two passive probes.
- For information on the InfiniiMax probes for scopes in the 4 to 6 GHz range see page 11.
- The 1 to 2 GHz scopes allow probe selection to best fit your measurement needs (see below).

Probe Model	Description	System Bandwidth with 1 GHz Scope
1165A	10:1 passive	600
1162A	1:1 passive	25
1153A	200 MHz differential	200
1154A	500 MHz differential	450
1159A	1 GHz differential	700
1156A	1.5 GHz active probe	1 GHz

54600 Series Oscilloscopes

Probe Model	Description
10076A	250 MHz, 4 kV high voltage
1141A*	200 MHz differential probe
1144A*	800 MHz active probe
1145A*	2-channel 750 MHz active probe
1146A	100 kHz current probe
N2774A (requires N2775A power supply)	50 MHz current probe
N2772A (requires 9 Vdc battery or N2773A power supply)	20 MHz high-voltage differential probe

* Requires an Agilent 1142A power supply.

Related Literature

Publication Title	Publication Type	Publication Number
Agilent Technologies 54600 Series Oscilloscopes	Data Sheet	5968-8152EN
Agilent Technologies Infiniium 54800 Series Oscilloscopes	Brochure	5988-3788EN
Infiniium 54850 Series Oscilloscopes InfiniiMax 1130 Series Probes	Data Sheet	5988-7976EN
Infiniium 86100B DCA: Modular platform for fast, accurate waveform testing up to 40 Gb/s	Brochure	5988-5235EN

The following literature provides useful information on using oscilloscopes for specific applications.

Optimizing Oscilloscope Measurement Accuracy on High-Performance Systems with Agilent Active Probes	Application Note 1385	5988-5021EN
Debugging a PCI Bus with a Mixed-Signal Oscilloscope	Application Note 1417	5988-7745EN
Mixed Analog and Digital Signal Debug and Analysis Using a Mixed-Signal Oscilloscope Wireless LAN Example Application	Application Note 1418	5988-7746EN
Finding Hidden Problems Using Agilent's Deep-Memory Oscilloscope: How IBM Solved a Mystery	Customer Success Story	5988-5655EN
The Truth About the Fidelity of High-Bandwidth Voltage Probes	Application Note 1404	5988-6515EN
Verifying Bluetooth™ Baseband Signals Using Mixed-Signal Oscilloscopes	Application Note 1333-3	5988-2181EN
Spectral Analysis Using a Deep-Memory Oscilloscope Fast Fourier Transform (FFT) For Use with Infiniium 54830B Series Deep-Memory Oscilloscopes	Application Note 1383-1	5988-4368EN
54622D Agilent I^2C Debugging	Application Note1351	5980-0796EUS
Debugging Digital Cameras: Detecting Redundant Pixels	Application Note	5988-3358ENUS
54622D Agilent MSO and CEBus PL Communications Testing	Application Note 1352	5980-0794EUS
Debugging Serial Bus Systems with a Mixed-Signal Oscilloscope	Application Note 1395	5988-5997EN
54622D Agilent Debugging Modern Power Electronics: Seeing the Whole Picture	Application Note 1350	5980-0797EUS
Agilent Infiniium Oscilloscopes Performance Guide Using 89601A Vector Signal Analyzer Software	Product Note	5988-4096EN

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(fax) (31 20) 547 2390

Japan:
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(fax) (81) 426 56 7840

Korea:
(tel) (82 2) 2004 5004
(fax) (82 2) 2004 5115

Latin America:
(tel) (305) 269 7500
(fax) (305) 269 7599

Taiwan:
(tel) 0800 047 866
(fax) 0800 286 331

Other Asia Pacific Countries:
(tel) (65) 6375 8100
(fax) (65) 6836 0252
Email: tm_asia@agilent.com

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