Infiniium 80000 Series Oscilloscopes
InfiniiMax II Series Probes
13, 12, 10, and 8 GHz Oscilloscope Measurement Systems

Data Sheet

- 13, 12, 10, and 8 GHz bandwidth real-time oscilloscopes with up to 40 GSa/s sample rate
- Up to 2 Mpts MegaZoom deep memory at 40 GSa/s sample rates and 64 Mpts MegaZoom deep memory at 4 GSa/s
- Industry's lowest noise floor for both oscilloscopes and probes
- Industry's lowest jitter measurement floor
- Industry's lowest trigger jitter – less than 500 fs rms
- Industry's flattest frequency response
- Industry's only full bandwidth probe system for all use models – up to 13 GHz bandwidth for differential solder-in, browser and SMA connections
- Industry's only bandwidth upgradable series via the After-Burner upgrade program
- Industry's largest selection of application software packages

The superior signal integrity, probing and application software selection of Agilent Technologies' Infiniium 80000A Series and InfiniiMax II probing system will lead to improved measurements and increased design margins.

The signal integrity advantages of Agilent's Infiniium 80000A Series Scopes and InfiniiMax II Probing System include the industry's lowest noise floor, lowest jitter measurement floor, lowest trigger jitter and flattest frequency response. These foundational capabilities are crucial for achieving accurate and repeatable measurements. Superior signal integrity maximizes engineer's design margins by not wasting any measurement accuracy due to the poor noise, jitter or frequency response of the scope or probing system.

Agilent Technologies

Benefits

The probing advantages of the InfiniiMax II Series probe include the low noise and flat frequency response mentioned above. The InfiniiMax II Series also offers the industry's widest selection of probe amplifier bandwidths (currently six) and the industry's widest variety of different probe head types (currently nine). InfiniiMax II is also the only probing system to offer the full 13 GHz bandwidth for the differential solder-in, differential browsing and differential SMA use models. Since its inception, the award-winning InfiniiMax probe system has provided maximum performance with unmatched usability.

The application software for the Infiniium 80000A Series is the industry's largest – currently offering a choice of 22 different application packages to tailor the capabilities of the oscilloscope to your specific measurement requirements. Application specific software solutions include compliance test packages for industry standards such as: PCI-Express, DDR, FBD, SATA, SAS, FC, DVI, HDMI, USB, FW and Ethernet as well as more general purpose jitter and serial data analysis packages. Agilent is also the industry's only vendor to offer innovative packages for ultra-wideband vector signal analysis and noise reduction.

The industry leading signal integrity, probing and software application capabilities of the Infiniium 80000A Series and InfiniiMax II Series have recently won three industry awards.

80000 Series Infiniium oscilloscopes

Model	Bandwidth	Channels	Maximum sample rate
DSO81304A	13 GHz real-time DSP enhanced 12 GHz real-time 13 GHz equivalent-time 8 GHz real-time	on 2 channels on 2 channels on 4 channels on 4 channels	40 GSa/s 40 GSa/s 1.56 ps point spacing 20 GSa/s
DSO81204A	12 GHz real-time 12 GHz equivalent-time 8 GHz real-time	on 2 channels on 4 channels on 4 channels	40 GSa/s 1.56 ps point spacing 20 GSa/s
DSO81004A	10 GHz real-time 10 GHz equivalent-time 8 GHz real-time	on 2 channels on 4 channels on 4 channels	40 GSa/s 1.56 ps point spacing 20 GSa/s
DSO80804A	8 GHz real-time 8 GHz equivalent-time 8 GHz real-time	on 2 channels on 4 channels on 4 channels	40 GSa/s 1.56 ps point spacing 20 GSa/s

Maximum memory depth for all DSO 80000 Series

Standard acquisition memory	0.5 Mpts on 2 channels, 0.25 Mpts on 4 channels
Optional acquisition memory this option also enables	2 Mpts on 2 channels, 1 Mpts on 4 channels 64 Mpts on 2 channels at 4 GSa/s, 32 Mpts on 4 channels ≤ 2 GSa/s
Maximum memory in equivalent-time modes	always 0.25 Mpts per channel

U.S. Navy imagery used in illustration without endorsement expressed or implied.

Benefits (continued)

Example 1: How much bandwidth do I need to measure a given rise/fall time accurately?

Rise/fall time (20 - 80%)	3% accuracy	10% accuracy	20% accuracy
100 ps	5.6 GHz	4.8 GHz	4.0 GHz
75 ps	7.5 GHz	6.4 GHz	5.3 GHz
60 ps	9.3 GHz	8.0 GHz	6.7 GHz
50 ps	11.2 GHz	9.6 GHz	8.0 GHz
40 ps	14.0 GHz	12.0 GHz	10.0 GHz
30 ps	18.7 GHz	16.0 GHz	13.3 GHz

Notes:

Maximum signal frequency content = 0.4/rise time (20 - 80%)
Scope bandwidth required = 1.4 x maximum signal frequency for 3% accuracy measurements
Scope bandwidth required = 1.2 x maximum signal frequency for 5% accuracy measurements
Scope bandwidth required = 1.0 x maximum signal frequency for 10% accuracy measurements

Example 2: How much bandwidth do I need for a given high-speed serial bus clock rate?

Serial bus clock rate	Fundamental frequency of data signal	3rd harmonic frequency of data signal	5th harmonic frequency of data signal
2.5 Gb/s	1.25 GHz	3.75 GHz	6.25 GHz
4.25 Gb/s	2.125 GHz	6.375 GHz	10.625 GHz
5.0 Gb/s	2.5 GHz	7.5 GHz	12.5 GHz
6.0 Gb/s	3.0 GHz	9.0 GHz	15.0 GHz
7.0 Gb/s	3.5 GHz	10.5 GHz	17.5 GHz
8.5 Gb/s	4.25 GHz	12.75 GHz	21.25 GHz

Benefits (continued)

InfiniiMax II Series probe amplifiers

Model	Bandwidth	Description
1169A	12 GHz (spec) 13 GHz (typical)	InfiniiMax II probe amplifier – order one or more probe heads
1168A	10 GHz	InfiniiMax II probe amplifier – order one or more probe heads

InfiniiMax probe amplifier specifications: Dynamic range = 3.3 V, DC offset range = ± 16 V, maximum voltage = ± 30 V

InfiniiMax II Series probe heads

InfiniiMax II Series probe heads are recommended for 1169A/68A probe amplifiers. When used with a DSO81304A, the N5380A, N5381A, and N5382A will typically achieve 13 GHz bandwidth.

Probe head	Model number	Differential measurement (BW, input C, input R)	Single-ended measurement (BW, input C, input R)
Hi-BW differential SMA	N5380A	12 GHz	12 GHz
Hi-BW differential solder-in	N5381A	12 GHz, 0.21 pF, 50 kΩ	12 GHz, 0.35 pF, 25 kΩ
Hi-BW differential browser	N5382A	12 GHz, 0.21 pF, 50 kΩ	12 GHz, 0.35 pF, 25 kΩ

InfiniiMax I Series probe heads can be used with 1169A/68A probe amplifiers with limitations.

Probe head	Model number	Differential measurement (BW, input C, input R)	Single-ended measurement (BW, input C, input R)
Differential solder-in (Higher loading, high frequency response variation)	E2677A	12 GHz, 0.27 pF, 50 kΩ	12 GHz, 0.44 pF, 25 kΩ
Differential socket (Higher loading)	E2678A	12 GHz, 0.34 pF, 50 kΩ	12 GHz, 0.56 pF, 25 kΩ
Differential browser – wide span	E2675A	6 GHz, 0.32 pF, 50 kΩ	6 GHz, 0.57 pF, 25 kΩ
Differential SMA	E2695A	8 GHz	8 GHz
Single-ended solder-in (must bandlimit input to ≤ 6 GHz)	E2679A	N/A	6 GHz, 0.50 pF, 25 kΩ
Single-ended browser	E2676A	N/A	6 GHz, 0.67 pF, 25 kΩ

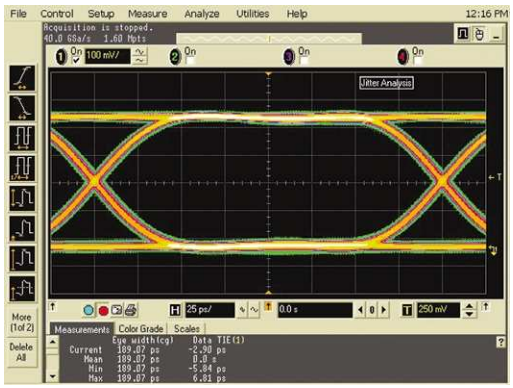
Benefits (continued)

Infiniium 80000A Series support for industry bus standards

				Serial data analysis (E2688A)				
Bus standard	**Bit rate**	**Recommended BW[1]**	**Jitter analysis[2]**	**SW clock recovery**	**8b/10b decode**	**Mask testing**	**Compliance testing**	**Test fixtures**
Ethernet	250 Mbs	2 GHz	Yes	Yes	N/A	Yes	N5392A	N5395B
USB 2.0	up to 480 Mbs	2 GHz	Yes	Yes	N/A	Yes	N5416A	E2649A
DDR I/II	up to 800 MTs	4 GHz	Yes	N/A	N/A	No	N5413A	No
SATA 1.5 Gbps	1.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	N5411A	Crescent Heart
SAS 150	1.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	N5412A	N5421A
DVI	1.65 Gbps	4 GHz	Yes	Yes	Yes	Yes	N5394A	Silicon Image
HDMI	up to 1.65 Gbps	4 GHz	Yes	Yes	Yes	Yes	N5399A	N5405A
Fibre Channel	2.125 Gbps	4 GHz	Yes	Yes	Yes	Yes	N5410A	No
PCI Express I	2.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	N5393A[3]	PCI-Sig
ExpressCard	2.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	N5393A[3]	PCMCIA.org
InfiniBand	2.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	No	Fujikura
Advanced TCA	2.5 Gbps	6 GHz	Yes	Yes	Yes	Yes	No	No
SATA 3Gbps	3.0 Gbps	10 GHz	Yes	Yes	Yes	Yes	N5411A[4]	Crescent Heart
SAS 300	3.0 Gbps	10 GHz	Yes	Yes	Yes	Yes	N5412A[4]	N5421A
10G Ethernet	3.125 Gbps	8 GHz	Yes	Yes	N/A	Yes	No	No
XAUI	3.125 Gbps	8 GHz	Yes	Yes	Yes	Yes	No	No
Serial Rapid IO	up to 3.125 Gbps	8 GHz	Yes	Yes	Yes	Yes	No	No
FireWire	up to 3.2 Gbps	8 GHz	Yes	Yes	N/A	N/A	Yes - QP	Quantum Para.
Fibre Channel	4.25 Gbps	10 GHz	Yes	Yes	Yes	Yes	N5410A[4]	No
FBD I	up to 4.8 Gbps	12 GHz	Yes	Yes	N/A	Yes	N5409A[4]	N4235A/36/38A
PCI Express II	5.0 Gbps	12 GHz	Yes	Yes	Yes	No	No	No
InfiniBand II	5.0 Gbps	12 GHz	Yes	Yes	Yes	No	No	No
SATA 6Gbps	6.0 Gbps	13 GHz	Yes	Yes	Yes	No	No	No
SAS 600	6.0 Gbps	13 GHz	Yes	Yes	Yes	No	No	No
Fibre Channel	8.5 Gbps	13 GHz	Yes	Yes	Yes	No	No	No
FBD II	up to 9 Gbps	13 GHz	Yes	Yes	N/A	No	No	No

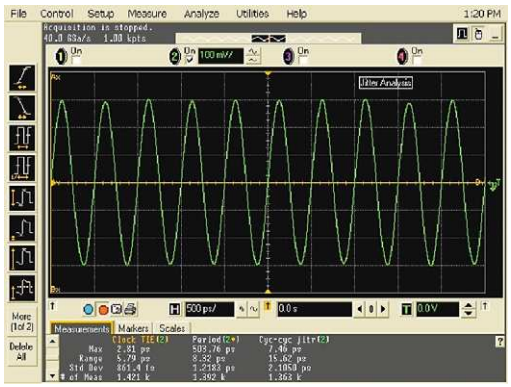
1 Recommended bandwdith is derived from a combination of data rate and edge speed
2 Jitter analysis solutions: EZJIT (E2681A), EZJIT Plus (N5400A), oscilloscope tools (E2690B)
3 Requires E2688A serial data analysis
4 Requires E2688A serial data analysis and N5400A EZJIT Plus jitter analysis

Benefits (continued)



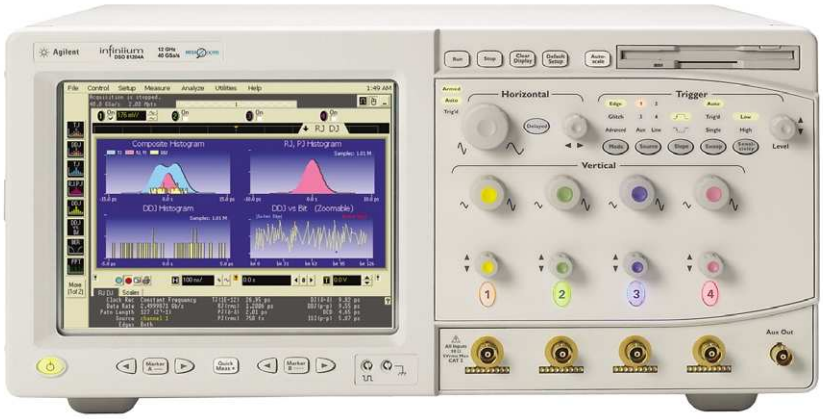
The industry's lowest noise floor delivers superior measurement results and maximizes design margins. (see page 12 for noise floor characteristics)

The industry's lowest trigger jitter, less than 500 fs rms, facilitates accurate waveform viewing of multiple waveforms.



The industry's lowest jitter measurement floor minimizes the oscilloscopes contribution to jitter measurements and results in superior compliance test results.

The industry's flattest frequency response leads to excellent correlation between scope only (white trace) and scope plus probe (red trace) measurements as shown in this dual infinite persistence eye diagram.



EZJIT Plus jitter decomposition supports arbitrary data patterns. Agilent's industry-leading selection of application software packages facilitate rapid analysis of acquired data into measurement results.

Overview of Infiniium 80000A Series Application Software

Jitter

Application software package	
E2681A	EZJIT jitter analysis (option 002)
N5400A	EZJIT Plus jitter analysis (option 004)
E2690B	Amherst oscilloscope tools

Analysis

Application software package	
E2688A	SDA high-speed serial data analysis (option 003)
N5391A	I^2C/SPI serial data analysis
N5402A	CAN serial data analysis
89601A	Vector signal analysis

Compliance

Application software package	
N5392A	Ethernet compliance
N5393A	PCI Express compliance
N5394A	DVI compliance
N5399A	HDMI compliance
N5409A	Fully Buffered DIMM compliance
N5410A	Fiber channel compliance
N5411A	SATA I/II compliance
N5412A	SAS compliance
N5413A	DDR2 clock characterization
N5416A	USB compliance
	Fire-wire compliance (Quantum Parametrics)

Utilities

Application software package	
N5403A	Noise reduction (option 005)
E2625A	Communications mask test kit
E2699A	My Infiniium integration package (option 006)
E2682A	Voice control option

Infiniium: "It's like someone who sits down and actually uses a scope designed this one."

Steve Montgomery, Director of Engineering, Linx Technologies

Up to 40 GSa/s sample rate on two channels significantly reduces the chances of aliasing, increases measurement accuracy, and delivers the full real-time bandwidth of the oscilloscope on two channels simultaneously.

Four channels at 20 GSa/s with 8 GHz real-time bandwidth or full bandwidth equivalent time modes are also available.

Get fast answers to your questions with the built-in information system. Infiniium's task-oriented Setup Guide provides step-by-step instructions for several advanced measurements and procedures.

See your signal more clearly with a large (8.4-inch) high-resolution color display. Infiniium's bright TFT display with anti-glare coating lets you see the details of your signal from all angles.

20 Gb hard drive, 3.5" 1.44 MB floppy drive and rear USB port make it easy to save setup files, data files, screen shots, etc.

Identify anomalies easily with color-graded persistence, a colorful visual representation of waveform distribution.

Label waveforms and add notes to your screen captures — Infiniium's keyboard makes it easy.

Drag and drop markers with your mouse or use the arrow keys.

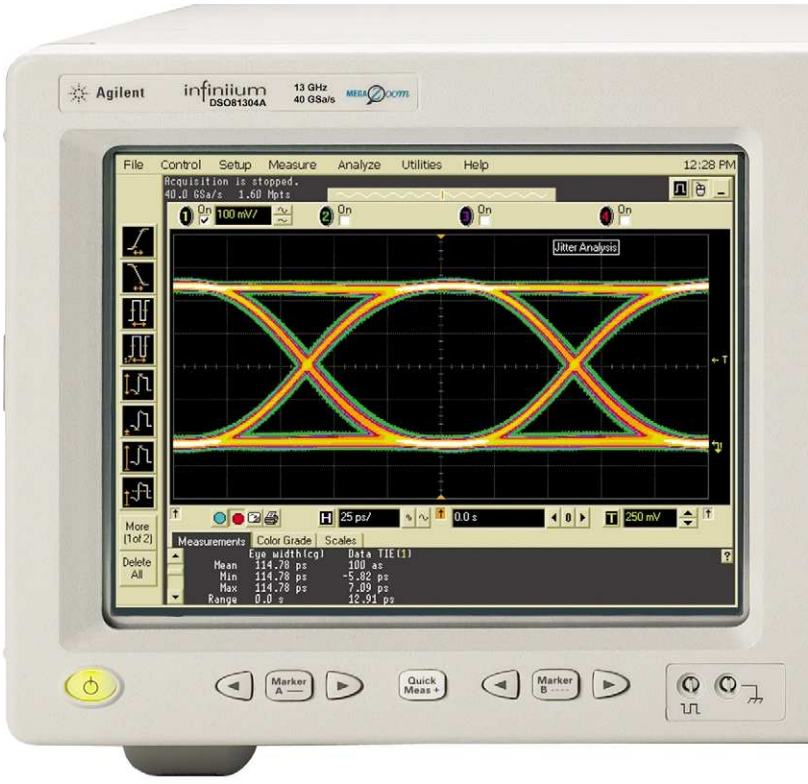
Easy access to advanced features like math functions and FFTs, is provided by the Windows-based graphical user interface. This GUI also gives you unique capabilities like drag-and-drop measurements and zooming, and offers a graphical equivalent to all front panel controls.

Remote access with Web-enabled connectivity, e-mail on trigger, and GPIB over LAN allows you to access your scope from remote locations.

Infiniium: Award-winning scopes

Infiniium has received ten industry awards to date, including EDN's "Innovation of the Year" award (twice) and T&M World's "Best in Test." Agilent is committed to breaking new ground and providing tools that bring unique value to our customers.

64 Mpts acquisition memory at 4 GSa/s sample rate on two channels allows you to capture long time windows at high resolution – such as identifying glitches due to a power supply start-up from reset.



QuickMeas+ key gives you any five automated measurements with a push of a button. You can also configure this key to print/save screen shots, save waveforms, or load a favorite setup.

Zoom and search with instant response. Zoom into your signal using the horizontal scale knob and search through your waveform with the position knob. MegaZoom technology allows you to find your area of interest quickly and easily – even with 64 Mpts waveforms.

Built-in CD-R drive on rear panel allows you to update the system software conveniently and can be used to install third-party application packages.

Hands-free operation with the Infiniium VoiceControl option. Just speak into the microphone to operate front-panel controls.

Segmented memory acquisition mode captures bursting signals at maximum sample rate without consuming memory during periods of inactivity.

Removable hard disk drive option is available for added data security.

Install third-party software packages such as Excel, LabView, Agilent Vee, MATLAB®, anti-virus software, and more to perform customized processing and automation of your oscilloscope or to make the scope compliant to the network environment of your company.

An external monitor allows you to run third-party applications on a large, high-resolution display while using the scope's built-in monitor for high-speed waveform display.

Windows® XP Pro operating system.

A familiar interface makes simple tasks simple. Infiniium's analog-like front panel has a full set of controls color coded to the waveforms and measurements, making simple tasks simple.

One-year standard warranty and a variety of Agilent support options protect your investment for the long term.

10 MHz reference clock can be input (optional) to or output (standard) from the scope to allow precise timebase synchronization with RF instruments or logic analyzers.

A new 18 GHz, BNC-compatible connector provides a high signal fidelity connection to Agilent active probes, SMA adapters, and standard BNCs.

AutoProbe interface completely configures your scope for use with the InfiniiMax probing system and previous generation Agilent active probes.

10/100 Mbps LAN interface lets you easily print waveforms on networked printers, save your results on your office PC, share information with others, and control the scope over the Web.

InfiniiMax II: The World's Best High-Speed Probing System Just Got Better

InfiniiMax 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.

InfiniiMax probes have fully characterized performance for all of their various probe heads. This includes:

- Swept frequency response plot
- Common mode rejection vs. frequency plot
- Impedance vs. frequency plot
- Time-domain probe loading plot
- Time-domain probe tracking plot

One-year standard warranty on active probes and a variety of Agilent support options to choose from.

Controlled impedance transmission lines in every probe head deliver full performance versus the performance limitations produced by traditional wire accessories.

Probe interface software allows you to save the calibration information for up to 10 different probe heads per channel and will automatically retrieve calibration data for a probe amplifier as it is attached to the scope.

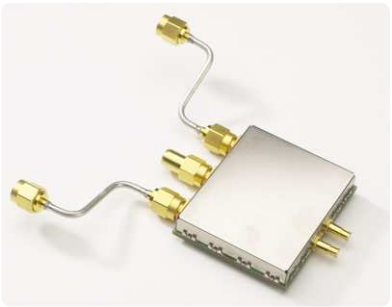
High-input impedance active probes minimize loading, support differential measurements and DC offset, and can compensate for cable loss.

Probe calibration software delivers the most accurate probe measurements, linear phase response and allows various probe combinations to be deskewed to the same reference time.

InfiniiMax II probe heads

12 GHz Hi-BW solder-in differential probe head provides maximum bandwidth and minimizes capacitive loading to ≤ 210 fF. Variable spacing from 0.2 to 3.3 mm (8 to 130 mills).

12 GHz Hi-BW differential browser provides maximum bandwidth for hand-held or probe holder use. Variable spacing from 0.2 to 3.3 mm (8 to 130 mills).



12 GHz Hi-BW differential SMA probe head provides maximum bandwidth for SMA fixtured differential pairs.

Two new high-bandwidth InfiniiMax II Series probe amplifiers have been added to the InfiniiMax product line. InfiniiMax I probe amplifiers and probe heads can also be used with DSO 80000 Series scopes for lower performance applications.

InfiniMax I probe heads

6 GHz differential browser is the best choice for general-purpose trouble-shooting of differential or single-ended signals with z-axis compliance and variable spacing from 0.25 - 5.80 mm (10 - 230 mills).

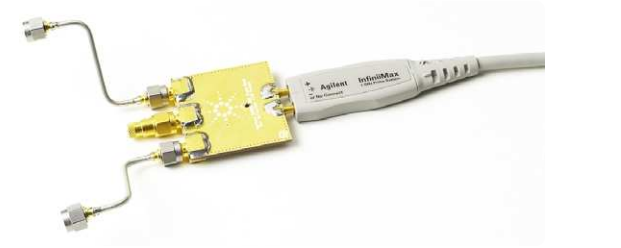
12 GHz solder-in differential probe head can be attached to very small geometry circuits for measuring both single-ended and differential signals.

12 GHz differential socket probe head can be used to measure either differential or single-ended signals.

Extremely small single-ended, solder-in probe heads support 6 GHz measurements of even the hardest-to-reach single-ended signals.

Single-ended browser is the best choice for general purpose probing of single-ended signals when small size of the probe head is the primary consideration. Bandwidths up to 6 GHz can be obtained in this configuration.

8 GHz differential SMA probe head allows you to connect two SMA cables to make a differential measurement on a single scope channel.



The 54006A 7.5 GHz resistive divider probe is available as a low-cost probing alternative for casual inspection of signals.

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.

Probe Performance Plots Available
The InfiniiMax II probe manuals contain an extensive set of performance plots (bandwidth, probe tracking, CMRR, step response, impedance) for various probe configurations. See the following web site for this information
www.cos.agilent.com/manuals/scopes/01169-9700_man.pdf

Infiniium 80000 Series Performance Characteristics

Vertical

Input channels	4				
Analog bandwidth (–3 dB)*[10]	81304A: 12 GHz	81204A: 12 GHz	81004A: 10 GHz	80804A: 8 GHz	
DSP enhanced bandwidth[9]	81304A: 13 GHz using DSP enhanced bandwidth mode				
Rise time/fall time	(20 - 80%)	81304A: 23 ps	81204A: 25 ps	81004A: 30 ps	80804A: 38 ps
	(10 - 90%)	81304A: 33 ps	81204A: 36 ps	81004A: 42 ps	80804A: 54 ps
Input impedance	50 Ω ± 3%				
Sensitivity[1]	1 mV/div to 1 V/div				
Input coupling	DC				
Vertical resolution[2]	8 bits, ≥ 12 bits with averaging				
Channel to channel isolation (any two channels with equal V/div settings)	DC to 3 GHz: 60 dB 3 GHz to 8 GHz: 40 dB 8 GHz to BW: 35 dB				
DC gain accuracy*[1]	± 2% of full scale at full resolution channel scale				
Maximum input voltage*	± 5 V				
Offset range	Vertical sensitivity:	Available offset:			
	0 mV/div to ≤ 40 mV/div	± 0.4 V			
	> 40 mV/div to ≤ 75 mV/div	± 0.9 V			
	> 75 mV/div to ≤ 130 mV/div	± 1.6 V			
	> 130 mV/div to ≤ 240 mV/div	± 3.0 V			
	> 240 mV/div	± 4.0 V			
Offset accuracy*[1]	≤ 3.5 V: ± (2% of channel offset + 1% of full scale) +1 mV > 3.5 V: ± (2% of channel offset + 1% of full scale)				
Dynamic range	± 4 div from center screen				
DC voltage measurement accuracy*[1]					
Dual cursor	± [(DC gain accuracy)+(resolution)]				
Single cursor	± [(DC gain accuracy)+(offset accuracy)+(resolution/2)]				
RMS noise floor (scope only)	Volts/div	DSO80804A	DSO81004A	DSO81204A	DSO81304A
	5 mV	280 µV	340 µV	390 µV	420 µV
	10 mV	310 µV	380 µV	440 µV	490 µV
	20 mV	470 µV	530 µV	610 µV	730 µV
	50 mV	1.1 mV	1.2 mV	1.4 mV	1.7 mV
	100 mV	2.1 mV	2.3 mV	2.7 mV	3.3 mV
	200 mV	4.1 mV	4.7 mV	5.3 mV	6.6 mV
	500 mV	11 mV	12 mV	14 mV	17 mV
	1 V	21 mV	24 mV	27 mV	34 mV
RMS noise floor (scope with probe)		DSO80804A + 1168A	DSO81004A + 1168A	DSO81204A + 1169A	DSO81304A + 1169A
	Volts/div				
	20 mV	2.7 mV	2.7 mV	2.9 mV	3.0 mV
	50 mV	2.8 mV	2.9 mV	3.1 mV	3.4 mV
	100 mV	3.3 mV	3.5 mV	3.8 mV	4.6 mV
	200 mV	5.2 mV	5.6 mV	6.2 mV	7.8 mV
	500 mV	12 mV	13 mV	14 mV	17 mV
	1 V	22 mV	24 mV	27 mV	34 mV

Infiniium 80000 Series Performance Characteristics (continued)

Horizontal

Main timebase range	5 ps/div to 20 s/div real-time, 5 ps/div to 500 ns/div equivalent-time			
Main timebase delay range	–200 s to 200 s real-time, –25 µs to 200 s equivalent-time			
Delayed timebase range	1 ps/div to current main time scale setting			
Channel deskew	± 25 µs range, 100 fs resolution			
Time scale accuracy[3]	± 1 ppm pk			
Delta-time measurement accuracy[6,7]				
≥ 256 Averages, rms	81304A: 45 fs rms	81204A: 35 fs rms	81004A: 35 fs rms	80804A: 55 fs rms
≥ 256 Averages, peak	500 fs peak			
Averaging disabled, rms	81304A: 0.9 ps rms	81204A: 0.8 ps rms	81004A: 0.8 ps rms	80804A: 0.9 ps rms
Averaging disabled, peak	5 ps peak			
Jitter measurement floor[6]				
Time interval error	81304A: 0.7 ps rms	81204A: 0.65 ps rms	81004A: 0.65 ps rms	80804A: 0.7 ps rms
Period jitter	81304A: 0.9 ps rms	81204A: 0.8 ps rms	81004A: 0.8 ps rms	80804A: 0.9 ps rms
N-cycle, cycle-cycle jitter	81304A: 1.4 ps rms	81204A: 1.3 ps rms	81004A: 1.3 ps rms	80804A: 1.4 ps rms

Infiniium 80000 Series Performance Characteristics (continued)

Acquisition

Maximum real-time sample rate	40 GSa/s (2 channels simultaneously) 20 GSa/s (4 channels simultaneously)	
Memory depth per channel		
Standard	524,288 (2 channels)	262,144 (4 channels)
Option 001	2,050,000 (2 channels)	1,025,000 (4 channels)
	65,600,000 at 4 GSa/s (2 channels)	32,800,000 ≤ 2 GSa/s (4 channels)
Sampling modes		
Real-time	Successive single-shot acquisitions	
Real-time with averaging	Selectable from 2 to 4096	
Real-time with peak detect	2 GSa/s peak detect (4 channels), 4 GSa/s peak detect (2 channels)	
Real-time with hi resolution	Real-time boxcar averaging reduces random noise and increases resolution	
Equivalent-time (alternating real-time)	Full bandwidth on all 4 channels, 262,144 sample points maximum memory. Acquires channels 1 and 3 simultaneously, followed by channels 2 and 4 simultaneously on subsequent triggers at 40 GSa/s each. High sample rate delivers excellent signal fidelity and throughput.	
Segmented memory	Captures bursting signals at maximum sample rate without consuming memory during periods of inactivity. Selectable number of segments up to 16,384 with Option 001 deep memory installed. Minimum intersegment time (the time between the end of the previous acquisition and the beginning of the next acquisition) of 20 µs. See the table below for various performance points.	

Infiniium 80000A Series

Maximum number of segments	**Standard memory**		**Optional memory**	
Sample rate	4 channel mode	2 channel mode	4 channel mode	2 channel mode
40 GSa/s	NA	128	NA	4096
20 GSa/s	64	128	4096	8192
5 GSa/s - 10 GSa/s	64	128	8192	8192
≤ 4 GSa/s	128	256	16384	16384

Maximum trigger rate (typical)	**1 channel on**		**2 channel on (2 ch mode)**	
Sample rate	1 k pts	10 k pts	1 k pts	10 k pts
40 GSa/s	33 kHz	22 kHz	31 kHz	21 kHz
20 GSa/s	41 kHz	24 kHz	37 kHz	22 kHz
5 GSa/s - 10 GSa/s	47 kHz	25 kHz	42 kHz	23 kHz
4 GSa/s	50 kHz	45 kHz	42 kHz	38 kHz
2 GSa/s	50 kHz	43 kHz	42 kHz	36 kHz

Filters	
Sin(x)/x Interpolation	On/off selectable FIR digital filter. Digital signal processing adds points between acquired data points to enhance measurement accuracy and waveform display quality.

Trigger

Sensitivity[1]	
Internal Low[1]	2.0 div p-p 0 to 5 GHz
Internal High[1]	0.3 div p-p 0 to 4 GHz, 1.0 div p-p 4 to 7.5 GHz
Auxiliary	DC to 1 GHz: 200 mV p-p into 50 Ω
Level range	
Internal	± 4 div from center screen or ± 4 Volts, whichever is smallest
Auxiliary	± 5 V, also limit input signal to ± 5 V
Sweep modes	Auto, triggered, single
Trigger jitter[6,8]	500 fs rms
Trigger holdoff range	100 ns to 320 ms
Trigger actions	Specify an action to occur and the frequency of the action when a trigger condition occurs. Actions include e-mail on trigger and QuickMeas+.
Trigger modes	
Edge	Triggers on a specified slope (rising, falling or alternating between rising and falling) and voltage level on any channel or auxiliary trigger.
Glitch	Triggers on glitches narrower than the other pulses in your waveform by specifying a width less than your narrowest pulse and a polarity. Triggers on glitches as narrow as 500 ps. Glitch range settings: < 1.5 ns to < 160 ms.
Line	Triggers on the line voltage powering the oscilloscope.
Pattern	Triggers when a specified logical combination of the channels is entered, exited, present for a specified period of time or is within a specified time range. Each channel can have a value of High (H), Low (L) or Don't care (X). Triggers on patterns as narrow as 500 ps.
State	Pattern trigger clocked by the rising, falling or alternating between rising and falling edge of one channel.
Delay by time	The trigger is qualified by an edge. After a specified time delay between 30 ns to 160 ms, a rising or falling edge on any one selected input will generate the trigger.
Delay by events	The trigger is qualified by an edge. After a specified delay between 1 to 16,000,000 rising or falling edges, another rising or falling edge on any one selected input will generate the trigger.
Violation triggers	
Pulse width	Trigger on a pulse that is wider or narrower than the other pulses in your waveform by specifying a pulse width and a polarity. Triggers on pulse widths as narrow as 500 ps. Pulse width range settings: 1.5 ns to 160 ms.
Setup/hold	Triggers on setup, hold or setup and hold violations in your circuit. Requires a clock and data signal on any two input channels as trigger sources. High and low thresholds and setup and/or hold time must then be specified.
Transition	Trigger on pulse rising or falling edges that do not cross two voltage levels in > or < the amount of time specified.

Infiniium 80000 Series Performance Characteristics (continued)

Measurements and math

Waveform measurements	
Voltage	Peak to peak, minimum, maximum, average, RMS, amplitude, base, top, overshoot, preshoot, upper, middle, lower, area.
Time	Period, frequency, positive width, negative width, duty cycle, delta time, rise time, fall time, Tmin, Tmax, channel-to-channel phase.
Frequency domain	FFT frequency, FFT magnitude, FFT delta frequency, FFT delta magnitude, FFT phase.
Statistics	Displays the mean, standard deviation, minimum, maximum and number of measurements value for the displayed automatic measurements.
Histograms	Vertical (for timing and jitter measurements) or horizontal (noise and amplitude change) modes, regions are defined using waveform markers. Measurements included: mean, standard deviation, peak-to-peak value, median, min, max, total hits, peak (area of most hits), and mean ± 1, 2, and 3 sigma.
Eye-diagram measurements	Eye-diagram measurements include eye height, eye width, eye jitter, crossing percentage, Q factor, and duty-cycle distortion.
Jitter analysis measurements (E2681A EZJIT or N5400A EZJIT Plus jitter analysis software)	Cycle-cycle jitter, N-cycle jitter, cycle-cycle + width, cycle-cycle – width, cycle-cycle duty cycle, data rate, unit interval, time interval error data, time interval error clock, setup time, hold time, phase, period, frequency, + width, – width, duty cycle, rise time, fall time.
Mask testing	Allows pass/fail testing to user-defined or Agilent-supplied waveform templates. AutoMask lets you create a mask template from a captured waveform and define a tolerance range in time/voltage or percentage. Test modes include test forever, test to specified time or event limit, and stop on failure. Communications Mask Test Kit option provides a set of ITU-T G.703, ANSI T1.102, and IEEE 802.3 industry-standard masks for compliance testing.
Waveform math	Four functions, select from add, average, differentiate, divide, FFT magnitude, FFT phase, integrate, invert, magnify, min, max, multiply, subtract, versus, common mode, smoothing, high pass filter, low pass filter.
FFT	
Frequency range[4]	DC up to 20 GHz (at 40 GSa/s) or 10 GHz (at 20 GSa/s)
Frequency resolution	Sample rate/memory depth = Resolution
Best resolution at maximum sample rate	20 kHz
Frequency accuracy	(1/2 frequency resolution)+(1 x 10^{-6})(signal frequency)
Signal-to-noise ratio[5]	60 dB to > 100 dB depending on settings
Window modes	Hanning, flattop, rectangular
Measurement modes	
Automatic measurements	Measure menu access to all measurements, five measurements can be displayed simultaneously.
QuickMeas+	Front-panel button activates five pre-selected or five user-defined automatic measurements.
Drag-and-drop measurement toolbar	Measurement toolbar with common measurement icons that can be dragged and dropped onto the displayed waveforms.
Marker modes	Manual markers, track waveform data, track measurements

Infiniium 80000 Series Performance Characteristics (continued)

Display

Display	
Display	8.4 inch diagonal color TFT-LCD
Resolution	640 pixels horizontally x 480 pixels vertically
Annotation	Up to 12 labels, with up to 100 characters each, can be inserted into the waveform area
Grids	Can display 1, 2 or 4 waveform grids
Waveform styles	Connected dots, dots, persistence (minimum, variable, infinite), color-graded infinite persistence.

Computer system and peripherals, I/O ports

Computer system and peripherals	
Operating system	Windows® XP Pro
CPU	Intel® Pentium® III 1 GHz microprocessor
PC system memory	512 MB
Drives	≥ 20 Gb internal hard drive (optional removable hard drive), CD-R drive on rear panel, standard 3.5 inch 1.44 MB floppy drive
Peripherals	Logitech optical USB mouse and compact keyboard supplied. All Infiniium models support any Windows-compatible input device with a serial, PS/2 or USB interface.
File types	
Waveforms	Compressed internal format, comma and tab separated X and Y pairs or voltage values
Images	BMP, PCX, TIFF, GIF or JPEG
I/O ports	
LAN	RJ-45 connector, supports 10Base-T and 100Base-T. Enables Web-enabled remote control, e-mail on trigger or demand, data/file transfers and network printing.
GPIB	IEEE 488.2, fully programmable.
RS-232 (serial)	COM1, printer and pointing device support.
Parallel	Centronics printer port.
PS/2	2 ports. Supports PS/2 pointing and input devices.
USB	2 ports. Allows connection of USB peripherals like storage devices and pointing devices while the oscilloscope is on.
Video output	15 pin VGA, full color output of scope waveform display.
Dual-monitor video output	15 pin XGA, full color output for using third-party applications.
Auxiliary output	DC (± 2.4 V); square wave (~715 Hz and 456 MHz); trigger output (255 mV p-p into 50 Ω).
Trigger output	5 V 50 Ω back-terminated.
Time base reference output	10 MHz filtered sine wave with all harmonics ≤ –40 dBc. Amplitude into 50 Ω: 800 mV p-p to 1.26 V p-p (4 dBm ± 2 dB) if derived from internal reference. Tracks external reference input amplitude ± 1 dB if applied and selected.
Time base reference input	Must be 10 MHz, input Z_0 = 50 Ω. Minimum 360 mV p-p (–5 dBm), maximum 2.0 V p-p (+10 dBm).

Infiniium 80000 Series Performance Characteristics (continued)

General characteristics

Temperature	Operating: 5° C to +35° C Non-operating: –40° C to +70° C
Humidity	Operating: Up to 95% relative humidity (non-condensing) at +40°C Non-operating: Up to 90% relative humidity at +65°C
Altitude	Operating: Up to 4,600 meters (15,000 feet) Non-operating: Up to 15,300 meters (50,000 feet)
Vibration	Operating: Random vibration 5-500 Hz, 10 minutes per axis, 0.3 g(rms). Non-operating: Random vibration 5-500 Hz, 10 minutes per axis, 2.41 g(rms); resonant search 5-500 Hz, swept sine, 1 octave/minute sweep rate, (0.75g), 5 minute resonant dwell at 4 resonances per axis.
Power	100 - 240 VAC @ 50/60 Hz; maximum input power 550 Watts
Weight	Net: 13 kg (28.5 lbs.) Shipping: 16 kg (35.2 lbs.)
Dimensions (excluding handle)	Height: 216 mm (8.5 in) Width: 437 mm (17.19 in) Depth: 440 mm (17.34 in)
Safety	Meets IEC 61010-1 +A2, CSA certified to C22.2 No.1010.1, self-certified to UL 3111

* Denotes warranted specifications, all others are typical. Specifications are valid after a 30-minute warm-up period, and ± 5°C from annual calibration temperature.

1 Full scale is defined as 8 vertical divisions. Magnification is used below 5 mV/div. Below 5 mV/div, full-scale is defined as 40 mV. The major scale settings are 5 mV, 10 mV, 20 mV, 50 mV, 100 mV, 200 mV, 500 mV, 1 V.

2 Vertical resolution for 8 bits = 0.4% of full scale, for 12 bits = 0.024% of full scale.

3 Within one year of previous calibration.

4 FFT amplitude readings are affected by scope and probe bandwidth limitations and input amplifiers roll-off (e.g. –3 dB roll-off at specified bandwidth of scope/probe).

5 The FFT signal to noise ratio varies with volts/division setting, memory depth and use of time or frequency averaging.

6 Test signal amplitude ≥ 5 divisions peak-to-peak, test signal rise time ≤ 2 times scope rise time, vertical scale ≥ 20 mV/div, sample rate = 40 GSa/s; sin(x)/x interpolation enabled, measurement threshold = fixed voltage at 50 % level.

7 Between two edges on a single channel. Rms value refers to the standard deviation of 256 consecutive measurements performed using an individual instrument.

8 Internal trigger. Trigger level contained within full scale display range of trigger channel.

9 13 GHz DSP enhanced bandwidth not applicable at 5 mV/div.

10 11.8 GHz analog bandwidth at 5 mV/div for DSO81304A and DSO81204A models.

InfiniiMax II Series Performance Characteristics

	1169A, 1168A	
Bandwidth*	1169A: > 12 GHz (13 GHz typical)	1168A: > 10 GHz
Rise and fall time • Probe only • When phase compensated by 80000 Series oscilloscope	Probe only, 1169A: 28 ps (20 - 80%), 40 ps (10 - 90%) 1169A with DSO81204A: 25 ps (20 - 80%), 36 ps (10 - 90%) 1169A with DSO81304A: 23 ps (20 - 80%), 33 ps (10 - 90%)	Probe only, 1168A: 34 ps (20 - 80%), 48 ps (10 - 90%) 1168A with DSO81004A: 30 ps (20 - 80%), 42 ps (10 - 90%) 1168A with DSO80804A: 38 ps (20 - 80%), 54 ps (10 - 90%)
System bandwidth (–3 dB)	1169A with DSO81304A: 13 GHz (typical) 1169A with DSO81204A: 12 GHz	1168A with DSO81004A: 10 GHz 1168A with DSO80804A: 8 GHz
Input capacitance[1]	Cm = 0.09 pF Cm is between tips Cg = 0.26 pF Cg is to ground for each tip Cdiff = 0.21 pF Differential mode capacitance = Cm + Cg/2 Cse = 0.35 pF Single-ended mode capacitance = Cm + Cg	
Input resistance*	Differential mode resistance = 50 kΩ ± 2% Single-ended mode resistance = 25 kΩ ± 2%	
Input dynamic range	3.3 V peak to peak, ± 1.65 V	
Input common mode range	6.75 V peak to peak dc to 100 Hz; 1.25 V peak to peak > 100 Hz	
Maximum signal slew rate	25 V/ns when probing a single-ended signal 40 V/ns when probing a differential signal	
DC attenuation	3.45:1	
Zero offset error referred to input	± 1.5 mV	
Offset range	± 16.0 V when probing single-ended	
Offset gain accuracy	< ± 1% of setting when probing single-ended	
Noise referred to input	2.5 mV rms, probe only	
Propagation delay	~6 ns (this delay can be deskewed relative to other signals)	
Maximum input voltage	30 V peak, CAT I	
ESD tolerance	> 8 kV from 100 pF, 300 Ω HBM	

* Denotes warranted specifications, all others are typical.

1 Measured using the probe amplifier and N5381A solder-in differential probe head.

Ordering Information
Infiniium 80000A Series Oscilloscopes and Accessories

Infiniium 80000A Series oscilloscopes

Model	Bandwidth	Channels	Sample rate	Standard acquisition memory
DSO81304A	12 - 13 GHz	4	40 GSa/s (2 channels) 20 GSa/s (4 channels)	524 kpts (2 channels) 262 kpts (4 channels)
DSO81204A	12 GHz	4	40 GSa/s (2 channels) 20 GSa/s (4 channels)	524 kpts (2 channels) 262 kpts (4 channels)
DSO81004A	10 GHz	4	40 GSa/s (2 channels) 20 GSa/s (4 channels)	524 kpts (2 channels) 262 kpts (4 channels)
DSO80804A	8 GHz	4	40 GSa/s (2 channels) 20 GSa/s (4 channels)	524 kpts (2 channels) 262 kpts (4 channels)

Note:
The DSO81304A uses DSP boost software to achieve 13 GHz bandwidth. It also adds a valuable DSP noise reduction feature to reduce noise at bandwidths of 10, 8, 6, 4, 2, and 1 GHz. The non-DSP boosted bandwidth of the DSO81304A is 12 GHz. The DSO81204A, DSO81004A, and DSO80804A have non-DSP boosted bandwidth specifications.

The above models include:

- Optical USB mouse
- Compact keyboard
- User's quick-start guide
- Documentation CD (service guide, programmer's guide, programmer's quick reference guide)
- Accessory pouch
- Power cord
- High-performance calibration cable
- E2655B probe deskew and performance verification kit
- Two 54855-67604 BNC-compatible to precision 3.5 mm (f) adapters
- One-year warranty.

Note: No probes are included with the 80000 Series oscilloscopes. The InfiniiMax II Series probes must be purchased separately.

After-Burner Upgrade program

If you find you need a little more speed after you purchase your Infiniium 80000 Series oscilloscope, the After-Burner Upgrade program is available. This upgrade program allows you to upgrade any 80000 Series scope to a higher bandwidth model, protecting your valuable Infiniium oscilloscope and probing system investment over the long term.

Upgrade	Description	Return to service center required
N5398A	DSO81204A to DSO81304A upgrade (12 GHz to 13 GHz)	No
N5398B	DSO81004A to DSO81204A upgrade (10 GHz to 12 GHz)	Yes
N5398C	DSO80804A to DSO81004A upgrade (8 GHz to 10 GHz)	Yes

Note: Order as many upgrades as needed to reach the desired final bandwidth of the instrument. For example, to upgrade from a DSO80804A to DSO81304A, order N5398C, N5398B, and N5398A.

Infiniium 80000A Series oscilloscope options and accessories

Options	Description
001	2 M (2 channels), 1 M (4 channels) memory upgrade 64 M (2 channels at 4 GSa/s) or 32 M (4 channels ≤ 2 GSa/s)
002	EZJIT jitter analysis software (installed at the factory)
003	High-Speed Serial Data Analysis/Mask Testing with clock recovery and 8b/10b decoding (installed at the factory)
004	EZJIT Plus jitter analysis software (installed at the factory)
005	Noise reduction software (installed at the factory). This software is included standard for DSO81304A.
006	My Infiniium Integration Package (installed at the factory)
017	20 Gb removable hard disk drive. Replaces internal hard disk with a removable hard disk. Order the N5390A for additional hard disk drive cartridges.

Instrument options	Description
1CM (E2609B)	Rack-mount kit

Service options	Description
A6J	ANSI Z540-compliant calibration

Ordering Information (continued)
Infiniium 80000A Series Oscilloscopes and Accessories

Infiniium 80000A Series oscilloscope options and accessories (continued)

Accessories	Description
N5404A	After-purchase memory upgrade. Order option 001 when purchasing a new Infiniium oscilloscope. The N5404A is for customers who own an oscilloscope and wish to upgrade the acquisition memory.
N5390A	Additional 20 Gb hard disk drive cartridge for Infiniium option 017.
54855-67604	18 GHz BNC-compatible to precision 3.5 mm (f) adapter. Allows highest fidelity connection of 3.5 mm or SMA cables.
E5850A 	Logic analyzer/osÏope time-correlation fixture Now you can more effectively verify and track down problems between the analog and digital portions of a design. Easily make time-correlated measurements between an Agilent 16900 Series logic analysis system and an Infiniium Series oscilloscope. With the E5850A time-correlation fixture, you can trigger the Infiniium from the logic analyzer (or vice versa), and automatically deskew the waveforms. The Infiniium time markers and the 16900 Series time markers are time-correlated and track each others. You can relate information on the oscilloscope and the logic analyzer precisely.
Foot Switch	Kinesis Savant 3-action programmable foot switch P/N FS004PS2 Allows you to easily program the 3-action foot pedals to perform the following scope functions: run, stop, toggle between run and stop, save waveform, save screenshot, measure any five waveform parameters and recall an instrument setup. See http://www.kinesis-ergo.com/ for additional information and ordering instructions.
1184A 	Testmobile Agilent's 1184A testmobile provides a convenient solution for your portability and storage needs. The 1184A includes a drawer for accessories and a keyboard tray with a mouse extension for either right- or left-handed operation.

Ordering Information (continued)
InfiniiMax Probing System

InfiniiMax II Series probing system

InfiniiMax II probe amplifiers	Description
1169A	12 GHz InfiniiMax probe amp – order one or more probe heads
1168A	10 GHz InfiniiMax probe amp – order one or more probe heads

InfiniiMax II probe heads	Recommended for use with InfiniiMax II probe amplifiers
N5380A	InfiniiMax II 12 GHz differential SMA adapter. Includes semi-rigid coax to change span between SMA connectors.
N5381A	InfiniiMax II 12 GHz differential solder-in probe head and accessories. Includes wire for replacement leads. Order 01169-21306 for 0.005 inch or 01169-81301 for 0.007 inch replacement nickel wire.
N5382A	InfiniiMax II 12 GHz differential browser. Includes wire for replacement leads. Order 01169-21304 for 0.007 inch replacement steel wire.

InfiniiMax I probe heads*	Can be used with InfiniiMax II probe amplifiers with limitations
E2675A	InfiniiMax differential browser probe head and accessories. Includes 20 replaceable tips and ergonomic handle. Order E2658A for replacement accessories.
E2676A	InfiniiMax single-ended browser probe head and accessories. Includes 2 ground collar assemblies, 10 replaceable tips, a ground lead socket and ergonomic browser handle. Order E2663A for replacement accessories.
E2677A	InfiniiMax differential solder-in probe head and accessories. Includes 20 full bandwidth and 10 medium bandwidth damping resistors. Order E2670A for replacement accessories.
E2678A	InfiniiMax single-ended/differential socketed probe head and accessories. Includes 48 full bandwidth damping resistors, 6 damped wire accessories, 4 square pin sockets and socket heatshrink. Order E2671A for replacement accessories. Order E5381-82103 for 34 damped wire accessories only.
E2679A	InfiniiMax single-ended solder-in probe head and accessories. Includes 16 full bandwidth and 8 medium bandwidth damping resistors and 24 zero ohm ground resistors. Order E2672A for replacement accessories.
E2695A	Differential SMA probe head. Includes semi-rigid coax to change span between SMA connectors.

* (See page 3 for specifications and limitations when used with InfiniiMax II Series probe amplifiers.)

Adapters	Description
N1022A	Adapts 113x/115x/116x active probes to 86100 Infiniium DCA.

Ordering Information (continued)
InfiniiMax Probing System

InfiniiMax probing system

Accessories	Description
E2654A	EZ Probe Positioner®: includes base, joystick, and articulating arm
E2655B	Additional probe deskew/performance verification kit for InfiniiMax probes
E2697A	High impedance adapter (includes 500 MHz passive probe)

The E2697A high impedance adapter allows connection of probes that require a high impedance input (e.g., passive probes, current probes) to the Infiniium 80000 Series of high-performance oscilloscopes. The E2697A high impedance adapter extends the capability of Agilent Infiniium high-performance oscilloscopes, making them ideal for a variety of general-purpose measurements such as power supplies, inverters, semiconductor measurements, etc. The E2697A provides switchable ac/dc coupling, as well as 10:1 and 1:1 attenuation settings.

Specifications/Characteristics

Bandwidth	Analog BW (–3 dB) System Bandwidth	500 MHz (with supplied 10073C passive probe) 500 MHz (with 10073C passive probe and 80000 Series oscilloscope)
DC attenuation	1.16:1 11.6:1	E2697A internal attenuator at 1:1 (at scale settings > 200 mV/div signal size limited by input dynamic range) E2697A internal attenuator at 10:1 (at scale settings > 200 mV/div signal size limited by input dynamic range)
Input dynamic range	E2697A internal attenuator setting of 1:1 E2697A internal attenuator setting of 10:1	± 0.8 V ± 8 V
Input dynamic range with 10073C passive probe	E2697A internal attenuator setting of 1:1 E2697A internal attenuator setting of 10:1	± 8 V ± 80 V
Input impedance*	1 MΩ ± 1% (~12 pF)	
Input coupling	dc, ac (7 Hz)	
Maximum input voltage	± 100V [dc + ac] [ac < 10 kHz], CAT I	
Offset range	E2697A internal attenuator setting of 1:1 E2697A internal attenuator setting of 10:1	± 5 V ± 50 V
Dc gain accuracy[1]	± 1.5% of full scale	
Offset accuracy[1]	± (1.5% of channel offset + 1.5% of full scale)	

* Denotes warranted specifications, all others typical. Specifications are valid after a 30 minute warm-up period and ± 5 °C from calibration temperature.

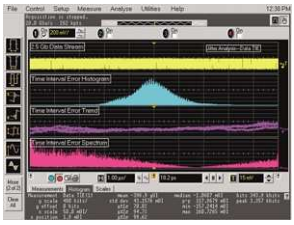
1 Full scale is defined as 8 vertical divisions.

nfiniiMax II Series probing system (continued)

Other compatible probes	Description
1144A	800 MHz active probe. Requires 1142A probe power supply when used with Infiniium scopes. Requires 01144-61604 probe power extender when using two or more 1144A active probes.
1145A	2-channel, 750 MHz active probe. Requires 1142A power supply when used with Infiniium oscilloscopes.
1156A	1.5 GHz single-ended active probe for Infiniium scopes
1157A	2.5 GHz single-ended active probe for Infiniium scopes
1158A	4 GHz single-ended active probe for Infiniium scopes
54006A	7.5 GHz (typical) passive resistive divider probe – 10:1 (500 ohms) or 20:1 (1 kohms)

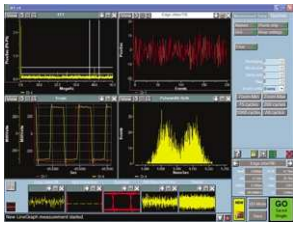
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software

Accessories	Description
E2681A	EZJIT jitter analysis software
	With faster edge speeds and shrinking data valid windows in today's high-speed digital designs, insight into the causes of jitter has become critical for success. EZJIT jitter analysis software, combined with Agilent's Infiniium oscilloscopes, is a key tool for identifying and quantifying jitter components that affect the reliability of your design. Time correlation of jitter to the real-time signal makes it easy to trace jitter components to their sources. Includes the following key measurements: cycle-to-cycle jitter, n-cycle jitter, period jitter, time interval error, setup and hold time, measurement histograms, measurement trending, and jitter frequency spectrum. Features: • Easy-to-use jitter measurements on high-speed signals • PLL clock recovery • Real-time trend, histogram, and spectrum displays
N5400A	EZJIT Plus jitter analysis software
	Building on the capabilities of the EZJIT software, EZJIT Plus adds additional compliance views and an expanded measurement setup wizard for simplifying and automating RJ/DJ separation for testing against industry standards. EZJIT Plus automatically detects embedded clock frequencies and repetitive patterns of the data on the oscilloscope inputs and calculates the level of data-dependent jitter (DDJ) that is contributed to the total jitter (TJ) PDF by each transition in the pattern, a feature not available on any other real time oscilloscope today. Order N5401A to upgrade E2681A EZJIT to N5400A EZJIT Plus analysis software. Features: • Automated data rate and pattern detection of repetitive data signals • New arbitrary data analysis mode allows for RJ/DJ separation on non-repetitive data waveforms • PLL clock recovery (1st order, 2nd order or explicit clock) • Real-time trend, histogram and spectrum displays • Composite histogram views of separated RJ, PJ, DJ, DDJ, DCD and ISI jitter subcomponents • Bathtub curve of total jitter versus eye-opening down to 10^{-18} BER • Simple, automated setup wizards for full user control over measurement type, clock recovery method and jitter measurement voltage threshold • 1-, 2- and 4-grid displays maximize information available in one screen

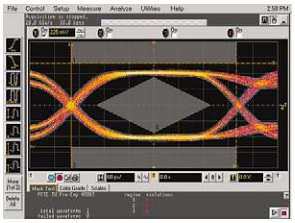
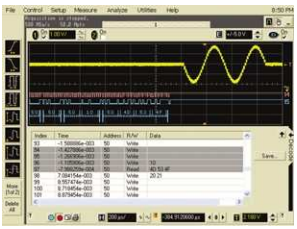
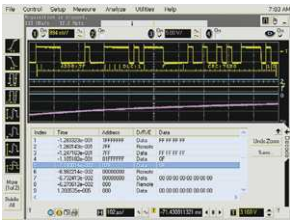
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
E2690B	Oscilloscope tools
	ASA's Oscilloscope Tools, licensed from Amherst Systems Associates (ASA), comprise the most powerful suite of analysis, debug, collaboration, and automation tools for Agilent real-time oscilloscopes. ASA's Oscilloscope Tools work in tandem with Agilent's mixed-signal oscilloscopes to provide measurements never before possible. Learn more about ASA Corp and Download the E2690B Oscilloscope Tools™ 7-day Demo. Features: • AutoMeasure® automatically detects which scope channels have signals, scales the signals, and sets the analysis software up to make the most frequently used set of measurements • Make measurements across analog and digital domains for unprecedented insight (with Agilent mixed-signal oscilloscopes) • Decompose jitter into random and deterministic jitter, including all components of jitter (Rj, Dj, Pj, DDj, DCD, and ISI) • Locate repetitive phenomena with repetition interval analysis tools • TestScript enables you to record repetitive sequences of measurements, button pushes, and limit comparisons • Record/playback console allows you to collect full record-length acquisitions over hours or days, then replay and analyze them

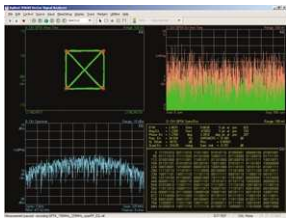
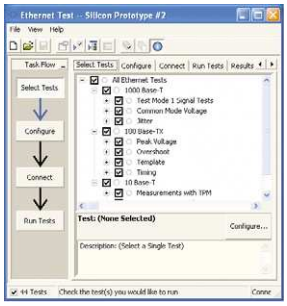
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
E2688A	High-speed serial data analysis/mask testing with clock recovery
	Easily perform mask testing and characterize serial data streams that employ embedded clocks. The E2688A provides mask templates and clock recovery for verifying compliance to computer, communication and datacom standards. You can even characterize proprietary serial buses with the built-in, general purpose golden PLL clock recovery. Features include: • Golden PLL clock recovery • Set up wizard to configure the clock recovery • Real-time eye diagram display with eye-mask unfolding • Recovered clock display • Time interval error (TIE) jitter measurement with statistics on the data stream • Mask template loading • 8b/10b decode with symbol trigger and search • Serial listing window for tabular view and navigation of 8b/10b codes Standard masks include: • PCI Express (2.5 Gbps) • Serial ATA (1.5 Gbps) • Fibre Channel Electrical (1.0625, 2.125, 4.25 Gbps) • Ethernet IEEE 802.3 (10/100/1000Base-T) • Serial Attached SCSI, XAUI
N5391A	I^2C/SPI serial data analysis software* (option 021)
	The N5391A low-speed serial data analysis (SDA) software provides a fast and easy way to debug Inter-Integrated Circuit (I^2C) and 2-wire or 3-wire Serial Peripheral Interface (SPI) serial communication busses. The low-speed SDA software provides the ability to capture and automatically display decoded serial data in numerical format synchronized with the analog or digital waveform view of I^2C or SPI serial data streams. The low-speed SDA software also features a listing window view with automatic click and zoom capability that contains a protocol decode list of all I^2C or SPI packets that have been captured. * This product works with all DSO80000 Series and 54850 Series Infiniium oscilloscopes and requires version A.03.50 or higher without the listing window capability, and vision A.04.20 or higher with the listing window capability.
N5402A	CAN serial data analysis software*
	The Agilent N5402A CAN serial data analysis (SDA) software allows engineers to view both protocol layer information and physical layer signal characteristics inside a single instrument, the Infiniium oscilloscope. Numerical decode values are automatically displayed and synchronized below the captured signal's waveform. A listing window view with automatic click and zoom capability shows the index number, time stamp value, address, data/remote/error frame type, and data content of all CAN packets that have been captured. * This product works with all DSO80000 Series and 54850 Series Infiniium oscilloscopes and requires version A.04.20 system software or higher.

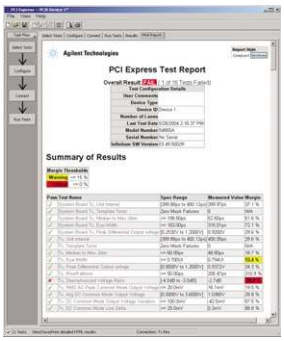
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
89601A	Vector signal analysis software
	Agilent Infiniium oscilloscopes team up with the 89601A vector signal analysis software to provide powerful, flexible, wideband signal analysis with up to 13 GHz bandwidth for applications including wideband communications and modulated radar. Features include: • Measurement bandwidth up to 13 GHz • Flexible analog and digital demodulation supports the most advanced, complex modulation formats • Deep memory in the Infiniium oscilloscopes allows excellent dynamic range and frequency resolution • Flexible, powerful displays including spectrogram provide rapid insight into dynamic signal behavior • For signal integrity and jitter measurements up to 13-GHz bandwidth the high performance Infiniium DSO 80000 Series digital oscilloscopes offer InfiniiMax active probes, MegaZoom deep memory, and 40 GSa/s sample rates
N5392A	Ethernet electrical performance validation and compliance software for Infiniium 54830, 54850, and 80000 Series oscilloscopes
	The Agilent N5392A Ethernet electrical performance validation and compliance software for Infiniium 54830 and 54850 Series oscilloscopes provides you with a fast and easy way to verify and debug your 1000Base-T, 100Base-TX and 10Base-T Ethernet designs. The Ethernet electrical test software allows you to automatically execute Ethernet physical-layer (PHY) electrical tests, and it displays the results in a flexible report format. In addition to the measurement data, the report provides a margin analysis that shows how closely your device passed or failed each test. The Ethernet electrical performance validation and compliance software performs a wide range of electrical tests to meet the Ethernet electrical specifications for 1000Base-T, 100Base-TX and 10Base-T systems as documented in the IEEE 802.3-2002 and ANSI X3.263-1995 standards. Features: • Test setup wizard guides you through test selection, configuration, connection, execution, and results reporting • Wide-range of electrical tests are performed for 1000Base-T, 100Base-TX and 10Base-T standards • Measurement connection setups are displayed when you must change the test setup • Oscilloscope setup is automatically configured for each test • Test results report formally documents your test configuration, measurements made, pass/fail status, and waveforms • Pass/fail margin analysis provides an indication of how close your device is to meeting a test specification • The updated N5395B test fixture simplifies signal connections and supports all the tests of the N5392A Ethernet compliance test software including the new return loss and disturbing signal tests as specified in the standard

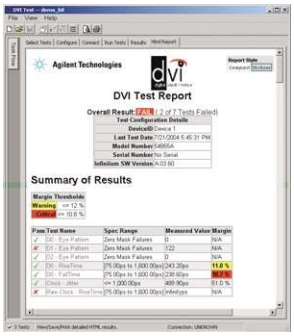
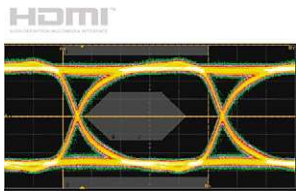
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5393A	PCI Express electrical performance validation and compliance software
	The Agilent N5393A PCI Express electrical performance validation and compliance software provides you with a fast and easy way to verify and debug your PCI Express designs. The PCI Express electrical test software allows you to automatically execute PCI Express electrical checklist tests, and it displays the results in a flexible report format. The N5393A PCI Express electrical test software utilizes the clock recovery method used in the official PCI-SIG Signal Quality Test Methodology ("SigTest") application, ensuring that your test results are consistent with results from the SigTest application. The PCI Express electrical performance validation and compliance software performs a wide range of electrical tests as per the PCI Express 1.0a electrical specifications for add-in cards and motherboard systems as documented in section 4 of the base specification and section 4 of the card electromechanical specification. Requires the E2688A serial data analysis software and one of the PCI-SIG approved compliance test fixtures (CBB or CLB). Features: • Test setup wizard guides you through test selection, configuration, connection, execution, and results reporting • Wide-range of electrical tests are performed, significantly more than SigTest • PCI-SIG SigTest clock recovery algorithm is used to ensure consistency with SigTest • Measurement connection setups are displayed when you must change the test setup • Oscilloscope setup is automatically configured for each test • Test results report formally documents your test configuration, measurements made, pass/fail status, and waveforms • Pass/fail margin analysis provides an indication of how close your device is to meeting a test specification

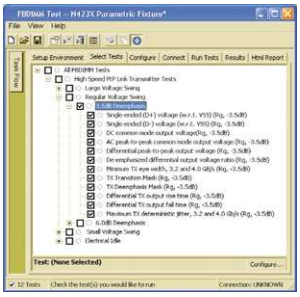
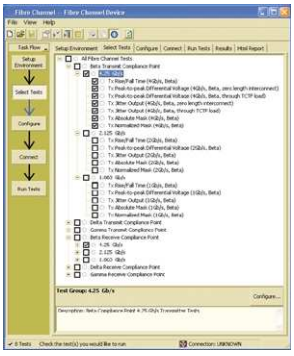
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5394A	DVI electrical performance validation and compliance software for Infiniium 54850 and 80000 Series oscilloscope
	The Agilent N5394A DVI electrical performance validation and compliance software provides you with a fast and easy way to verify and debug your digital visual interface (DVI) designs for add-in cards, cables and motherboard systems. The DVI electrical test software allows you to automatically execute DVI electrical checklist tests, and it displays the results in a flexible report format. In addition to the measurement data, the report provides a margin analysis that shows how closely your device passed or failed each test. The N5394A DVI electrical performance validation and compliance software offers the four fundamental DVI electrical tests. The software automatically configures the oscilloscope for each test, and it provides an informative results report that includes margin analysis indicating how close your product is to passing or failing that specification. Features: • Test setup wizard guides you through test selection, configuration, connection, execution, and results reporting • Wide-range of electrical tests are performed • Uses the Silicon Graphics DVI Compliance test fixtures for measurements and hardware clock recovery • Measurement connection setups are displayed when you must change the test setup • Oscilloscope setup is automatically configured for each test • Test results report formally documents your test configuration, measurements made, pass/fail status, and waveforms • Pass/fail margin analysis provides an indication of how close your device is to meeting a test specification
N5399A	HDMI transmitter compliance test software
	The N5399A HDMI transmitter compliance test software handles all the electrical waveform tests as specified in the HDMI compliance test specification. These include, Data Eye, Under and Overshoot, Clock Jitter and Dutycycle as well as Inter and Intra pair Skew. Ease of signal access is provided by the N5405A HDMI test access fixture which allows for both, differential and single-ended probing.

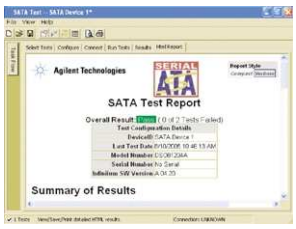
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5409A	Fully buffered DIMM
	The Agilent N5409A fully buffered DIMM compliance application tool provides you with a fast and easy way to characterize and evaluate the signal integrity of both your high-speed FB-DIMM signals as well as your reference clock. The tests performed by the N5409A are based on the JEDEC high-speed point-to-point link specification. Requires E2688A serial data analysis software and the N5400A EZJIT Plus jitter analysis software. Three Agilent designed test fixtures are available for testing AMBs, DIMMs and mother boards. Features: • Easy-to-use graphical test selection and setup • Automatic HTML report generation • RJ/DJ jitter analysis at 10^{-12} BER • Supports both JEDEC and Intel eye masks • Built-in AMB control for test setup (DIMM and AMB testing) • User configurable margin analysis • Debug mode allows changes in test parameters giving you better insight into problems
N5410A	Fibre Channel compliance application
	The Agilent N5410A Fibre Channel compliance application provides you with a fast and easy way to characterize and evaluate the signal integrity of your electrical Fibre-Channel devices. Supporting FC4, FC2, and FC1 speeds, the N5410A allows you to specify the measurement point at which you are probing your signal (Delta, Gama, etc.). The tests performed by the N5409A are based on the FC-PH (ANSI X3.230-1994) and FC-PH-2 Fibre Channel - Physical and Signaling Interface specification. Features: • Easy-to-use graphical test selection and setup • Supports 4.250 GBit/s, 2.125 GBit/s, and 1.0625 GBit/s speeds • Supports testing at Beta, Delta, and Gamma compliance points • Automatic HTML report generation • RJ/DJ jitter separation analysis at 10^{-12} BER • Physical layer measurements for rise/fall time, jitter, differential voltage, and eye mask • Supports TCTF compliance load filter • Debug mode allows changes in test parameters giving you better insight into problems

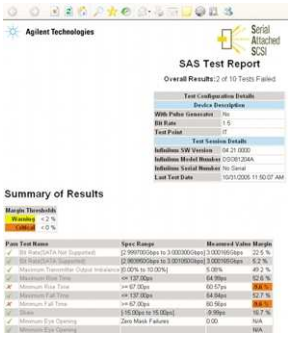
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5411A	SATA compliance test software
	The N5411A SATA electrical performance validation and compliance software for Infiniium 80000 Series oscilloscopes provides you with a fast and easy way to validate and debug your SATA 1.5 Gbps (Gen 1) and 3.0Gbps (Gen 2) silicon, host bus adapter, port multiplier, high-density disk drive or optical disk drive. The SATA electrical test software allows you to automatically execute SATA II electrical checklist tests at each of the i, m and x interface points, and displays the results in a flexible report format. In addition to the measurement data, the report provides a margin analysis that shows how closely your device passed or failed each test. Simplify your SATA measurement process by using the TF-SATA-NE/XP SATA electrical test fixture board from Crescent Heart Software, Inc. The fixture provides access to the electrical measurement points required for the transmitter compliance testing. More information on the TF-SATA-NE/XP test fixture can be obtained from SATA compliance test fixture data sheet Requires the E2688A serial data analysis software and the N5400A EZJIT Plus jitter analysis software. Features: • Test setup wizard for ease-of-use • Complete set of SATA transmitter electrical tests • Measurement process configurability • Automated scope measurement setup • Test results report generation • Debug mode provided • Pass/fail margin analysis

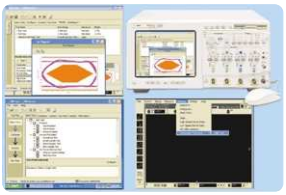
Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5412A	Serial Attached SCSI (SAS)
	Agilent's N5412A Serial Attached SCSI (SAS) electrical performance validation and compliance software for Infiniium 80000 Series oscilloscopes provides you with a fast and easy way to validate and debug your SAS 1.5 Gbps (SAS 150) and 3.0 Gbps (SAS 300) silicon, host bus adapter, initiator, high-density disk drive or enclosure backplane. The SAS electrical test software allows you to automatically execute SAS electrical checklist tests at each of the IT, CT, IR and CR interface points, and displays the results in a flexible report format. In addition to the measurement data, the report provides a margin analysis that shows how closely your device passed or failed each test. To make measurements with the N5412A SATA electrical test software, you will also need a method of connecting to the SAS compliance interface on the electrical mating surfaces of your SAS connector. Agilent currently provides a full set of compliance test fixtures for the SFF-8482, SAS x2 Internal Drive/Backplane connector interfaces. The N5421A SAS SFF-8482 compliance test fixture kit offers connectivity from the SFF-8482 primary and secondary transmitter and receiver differential ports to SMA for connection to Agilent Infiniium 80000 Series ultra-high performance oscilloscopes. The N5421A kit also includes the necessary Transmitter Compliance Transfer Function (TCTF) for emulating the worst-case backplance loss function for far-end (IR and CR) physical layer compliance testing, as well as the TX and RX Transient Circuit Test Loads. Each of these test circuits is defined in Section 5.3.2, Test Loads, in the "Project T10/1601-D: Serial Attached SCSI 1.1 Working Draft, Revision 9, March 18, 2005." Features: • User configurable test setup wizard for ease-of-use • Complete set of SAS IT/CT and IR/CR transmitter electrical tests • Time-saving oscilloscope test setup automation • Graphical HTML test results report generation • Trials test capability for quick comparison of multiple port configurations • Pass/fail margin analysis for simple characterization

Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
N5413A	DDR2 clock characterization application
	The Agilent N5413A DDR2 clock characterization application tool provides you with a fast and easy way to characterize and evaluate your reference clock in your DDR2 design. The tests performed by the N5413A are based on the Intel DDR2 667/800 JEDEC specification addendum 0.7. Features: • Automated test executive saves you time and ensures you get accurate repeatable result • Automatic HTML report generation speeds the documentation of worst case conditions • Performance tuned algorithms speed the analysis of 50 million clock cycles • Configuration menu allows you to optimize the tool for your application needs
N5416A	USB compliance test software
	The N5416A USB 2.0 compliance test software makes USB signal integrity testing as simple as capturing the signals with your oscilloscope; eliminating the need to transfer scope waveforms to a PC. Features: • MATLAB scripts used with the N5416A USB 2.0 test software come from the USB-IF organization and are incorporated into a convenient test setup wizard • The USB-IF recognizes Infiniium as a recommended scope for use in compliance testing • Compatible with Infiniium 5483xB/D 4 and 4 + 16 ch, 5485xA 4-ch, and DSO80000 Series 4-ch oscilloscopes with the Windows® XP Pro operating system • Included with the N5416A are the USB-IF MATLAB scripts and wizard based test executive that not only simplifies the measurements but provides extra information such as margin analysis • Ordering Information: For USB 2.0 hi-speed testing, order the N5416A test software as well as the E2649A for a complete set of six hi-speed test fixtures and power supply. For low/full speed testing order the Signal Quality inrush Droop/Drop (SQiDD) E2646A. For USB 2.0 hi-speed testing, a differential probe is required. Please order either the InfiniiMax 1131A 3.5 GHz, 1132A 5 GHz or 1134A 7 GHz probe amplifiers, along with the E2669A differential connectivity kit. See N5416A data sheet for complete ordering details.
Partner product	IEEE-1394 pre-compliance test option A pre-compliance test solution is available from Quantum Parametrics for use in conjunction with Agilent 80000 Series oscilloscopes. This test solution automates the compliance test process for the IEEE-1394 standard. See http://www.quantumparametrics.com for additional information.

Infiniium 80000 Series application software (continued)

Accessories (continued) | **Description**

N5403A — Noise reduction software

DSP noise reduction capability to reduce noise for a given measurement bandwidth as shown in the tables below. Included standard for DSO81304A.

80000 scope noise floor (typical in mV rms)

Volts/div	1 GHz	2 GHz	4 GHz	6 GHz	8 GHz	10 GHz	12 GHz	13 GHz
5 mV	100 µV	135 µV	180 µV	230 µV	280 µV	340 µV	390 µV	400 µV
10 mV	125 µV	165 µV	220 µV	270 µV	310 µV	380 µV	440 µV	480 µV
20 mV	205 µV	265 µV	340 µV	410 µV	470 µV	530 µV	610 µV	720 µV
50 mV	390 µV	580 µV	790 µV	960 µV	1.1 mV	1.2 mV	1.4 mV	1.7 mV
100 mV	665 µV	1.1 mV	1.5 mV	1.9 mV	2.1 mV	2.3 mV	2.7 mV	3.3 mV
200 mV	1.3 mV	2.1 mV	3.0 mV	3.6 mV	4.1 mV	4.7 mV	5.3 mV	7.2 mV
500 mV	3.2 mV	5.5 mV	8 mV	9.5 mV	11 mV	12 mV	14 mV	17 mV
1 V	7.8 mV	11 mV	16 mV	18 mV	21 mV	24 mV	27 mV	34 mV

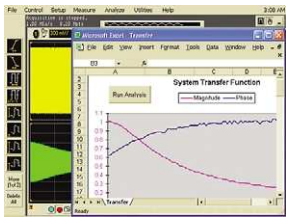
80000 scope with 1169A InfiniiMax II probe (typical in mV rms)

Volts/div	1 GHz	2 GHz	4 GHz	6 GHz	8 GHz	10 GHz	12 GHz	13 GHz
20 mV	2.2 mV	2.3 mV	2.4 mV	2.5 mV	2.7 mV	2.7 mV	2.9 mV	3.0 mV
50 mV	2.3 mV	2.4 mV	2.5 mV	2.6 mV	2.8 mV	2.9 mV	3.1 mV	3.4 mV
100 mV	2.5 mV	2.6 mV	2.9 mV	3.0 mV	3.3 mV	3.5 mV	3.8 mV	4.6 mV
200 mV	3.0 mV	3.4 mV	3.9 mV	4.4 mV	4.9 mV	6.6 mV	7.1 mV	8.5 mV
500 mV	6.6 mV	7.2 mV	8.7 mV	10 mV	12 mV	13 mV	14 mV	17 mV
1 V	11 mV	13 mV	16 mV	19 mV	22 mV	24 mV	27 mV	34 mV

Agilent offers the industry's only noise reduction capability that allows you to reduce the noise in your measurement to match the required bandwidth of the measurement so you don't include any more noise in your measurements than you have to.

Ordering Information (continued)
Infiniium 80000A Series Application Software

Infiniium 80000 Series application software (continued)

Accessories (continued)	Description
E2625A	Communication mask test kit
	Take the frustration out of communications testing and prove your designs conform to industry standards with the E2625A communications mask test kit option. Infiniium's familiar Windows interface makes it easy for you to access the masks you need and configure your tests. In addition, the E2625A communication mask test kit comes with a set of electrical communication adapters to ensure convenient, reliable and accurate connections to your device under test. Included are more than 20 industry standard ANSI T1.102 and ITU-T G.703 communication signal mask templates.
E2699A	My Infiniium integration package
	My Infiniium allows you to extend the power of your Windows XP-based Infiniium oscilloscope by letting you launch customized applications, such as those written for Agilent VEE Pro, NI LabVIEW, MATLAB® or Microsoft Excel, directly from the oscilloscope's front panel or graphical user interface. For more detailed information, please request Agilent publication number 5988-9934EN.
E2682A	VoiceControl option
	If you're making measurements on target systems with densely packed Ics, your hands are tied up holding probes, making it difficult to turn knobs and press buttons on the front panel of your scope. Infiniium's award-winning VoiceControl option solves this problem. Just speak into the collar-mounted microphone to operate your Infiniium's front-panel controls without using your hands. Simply tell the scope what you want it to do, using natural English-language commands, such as "set channel one to 1 volt per division." The VoiceControl system does not require the scope to be trained to understand a particular user.

The Agilent Serial BERT generator N4901B (N4902B) option 200 provides high speed digital stimulus to your device with PRBS or memory based pattern from 150 Mb/s up to 13.5 Gb/s (7 Gb/s). For mor information, see www.agilent.com/find/pulse-generators.

Ordering Information (continued)

Related Literature

Publication Title	Publication Type	Publication Number
Infiniium 54850 Series Oscilloscopes	Data Sheet	5988-7976EN
Infiniium 54830 Series Oscilloscopes	Data Sheet	5988-3788EN
N5400 EZJIT Plus Jitter Analysis Software	Data Sheet	5989-0109EN
E2681A EZJIT Jitter Analysis Software	Data Sheet	5989-0109EN
E2690B Advanced Time Interval & Jitter Analysis Software	Data Sheet	5989-3525EN
E2688A High-Speed Serial Data Analysis Software	Data Sheet	5989-0108EN
N5391A I^2C and SPI Analysis Software	Data Sheet	5989-1250EN
N5402A CAN Analysis Software	Data Sheet	5989-3632EN
89601A Vector Signal Analysis Software	Data Sheet	5989-0947EN
N5392A Ethernet Compliance Test Package	Data Sheet	5989-1527EN
N5393A PCI-Express Test Package	Data Sheet	5989-1240EN
N5394A DVI Compliance Test Software	Data Sheet	5989-1526EN
N5399A HDMI Compliance Test Software	Data Sheet	5989-3047EN
N5409A FBD Compliance Test Software	Data Sheet	5989-4128EN
N5410A Fibre Channel Compliance	Data Sheet	5989-4209EN
N5411A SATA Compliance Test Software	Data Sheet	5989-3662EN
N5412A SAS Compliance Test Software	Data Sheet	5989-4208EN
N5413A DDR2 Clock Characterization	Data Sheet	5989-3195EN
N5416A USB Compliance Test Software	Data Sheet	5989-4044EN
E2699A My Infiniium Integration Package	Data Sheet	5988-9934EN
Using Agilent InfiniiMax Probes with Test Equipment other than Agilent Infiniium Oscilloscopes	Configuration Guide	5989-1869EN
Infiniium 54800 Series Oscilloscope Probes, Accessories and Options	Selection Guide	5968-7141EUS

Product Web site

For the most up-to-date and complete application and product information, please visit our product Web site at:

www.agilent.com/find/infiniimaxII

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Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

Our Promise
Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you receive your new Agilent equipment, we can help verify that it works properly and help with initial product operation.

Your Advantage
Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

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www.agilent.com/find/open
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