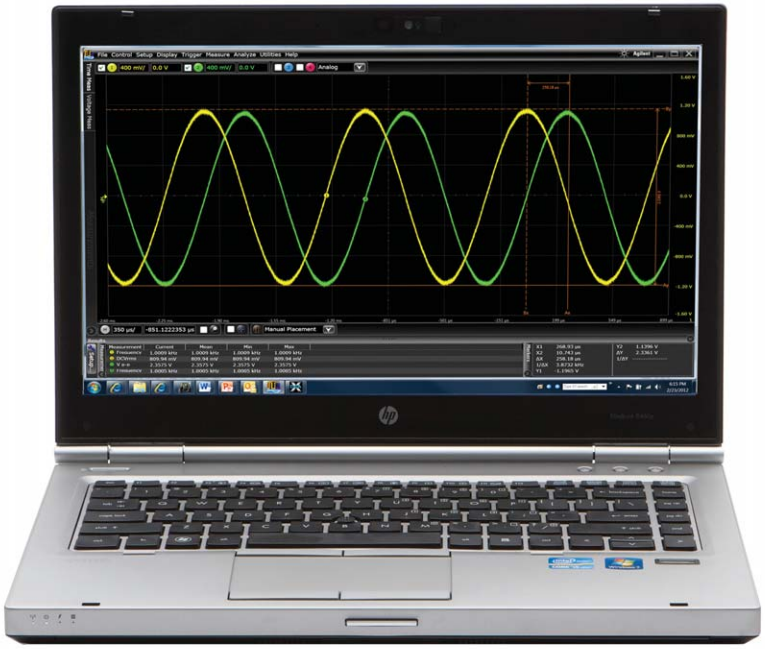
N8900A InfiniiView Oscilloscope Analysis Software

Data Sheet



Anticipate ___Accelerate ___Achieve

Agilent Technologies

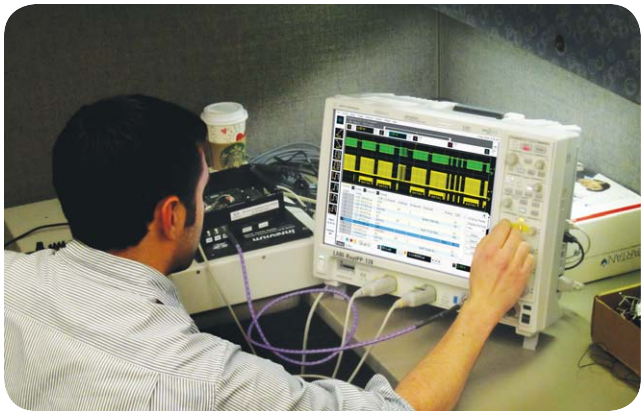
InfiniiView oscilloscope analysis software

View, analyze, share, and document, where, and how you want.

Free 14-day trial

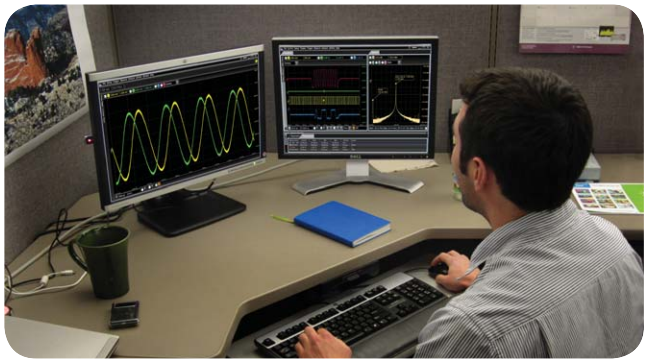
Download the N8900A software and use it free for 14 days. Import your your scope waveforms, or use our demo wizard to quickly evaluate the application using previously captured signals.

www.agilent.com/find/N8900A-trial



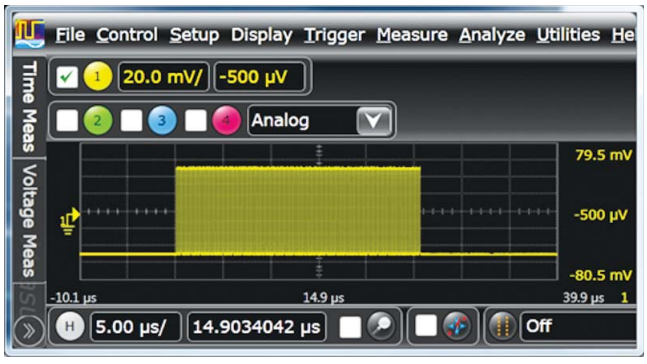
Expand scope measurement access

You depend upon your oscilloscope to capture an accurate picture of what's happening in your design. Ever wish you could do additional signal viewing, analysis and documentation tasks away from your scope and target system?



Get more insight from your limited test time

With Agilent's InfiniiView oscilloscope analysis software, now you can. You can capture waveforms on your scope, save to a file, and recall the waveforms into Agilent's InfiniiView application. The application supports a variety of popular waveform formats from multiple oscilloscope vendors.



Runs like a scope

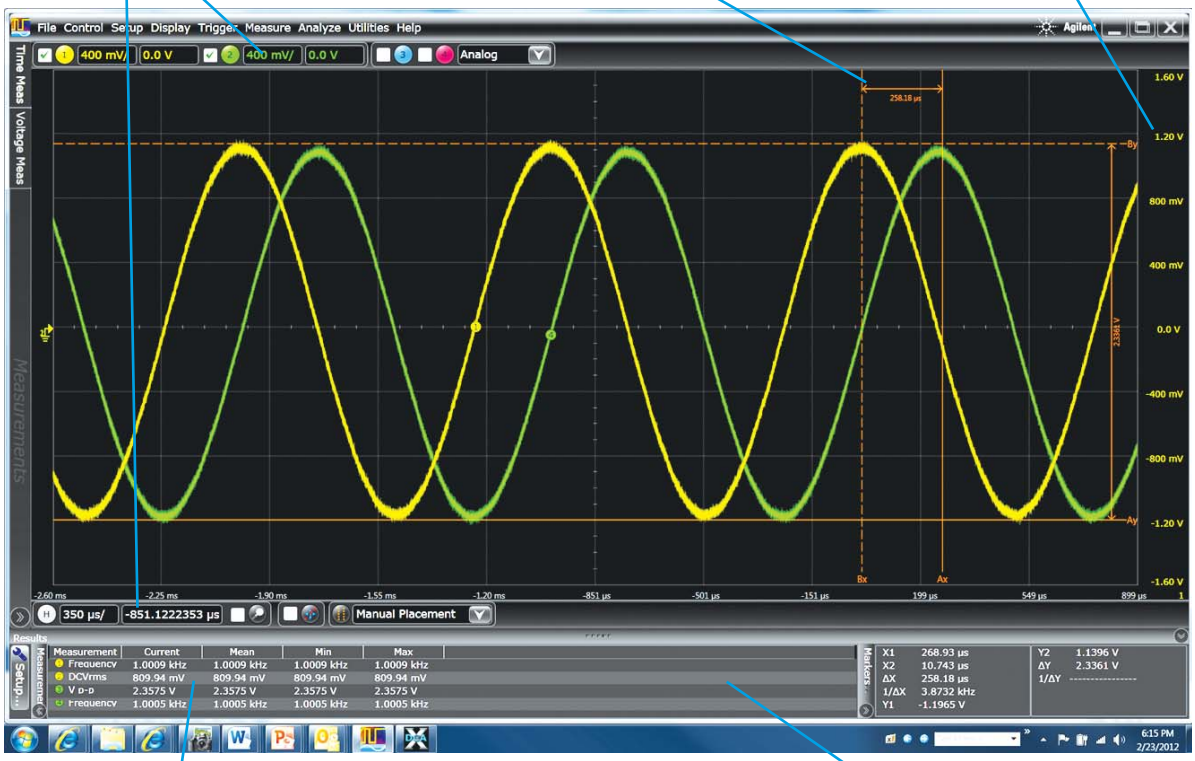
Now you can view, analyze, share, and document scope measurements anywhere your PC goes. Use familiar controls to quickly navigate and zoom in to any event of interest.

View and analyze away from your scope and target system

Use the application to pan and zoom to areas of interest.

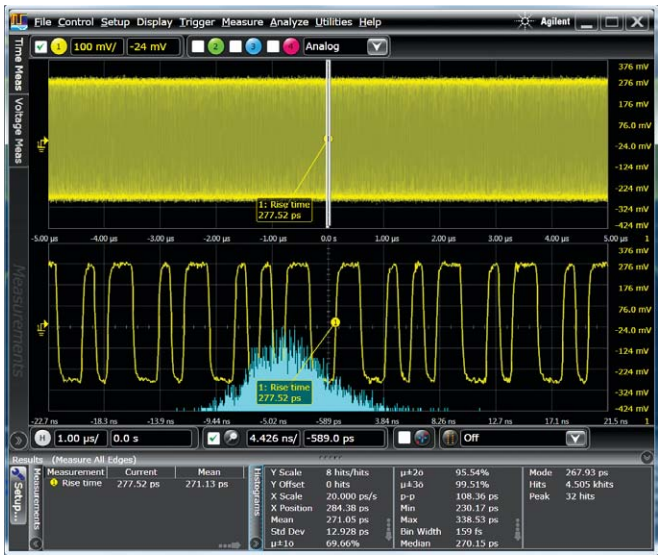
When moved, smart markers dynamically update delta values.

Quickly determine time and vertical values as they are prominently displayed



Make quick and precise measurements using drag and drop, or by choosing from any of the 50 built-in automated measurements

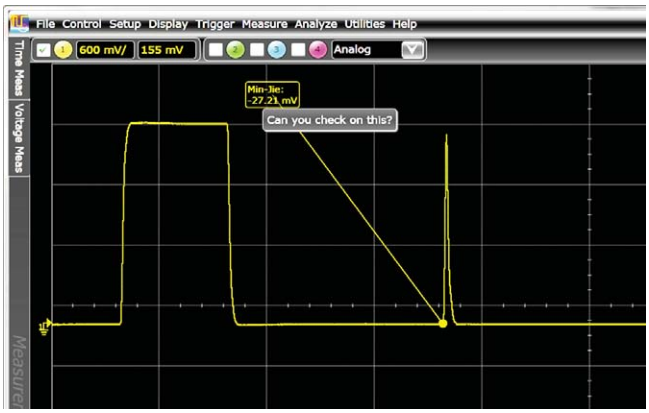
See up to 20 measurements simultaneously with user-selectable columns.



- The application allows you to be mobile.
- Use familiar scope controls to quickly navigate and zoom in to any event of interest.
- Access powerful viewing and analysis tools based on Agilent's Infiniium oscilloscopes.
- Use waveform math, filtering, and FFT spectral analysis and to get more insight. Need to see serial decode, analyze jitter, or view eye diagrams? InfiniiView helps you get insight in all of these areas.
- Multiple windows, sliders, and user-selectable sizing make for faster creation of custom views.

Share comprehensive scope measurements more easily

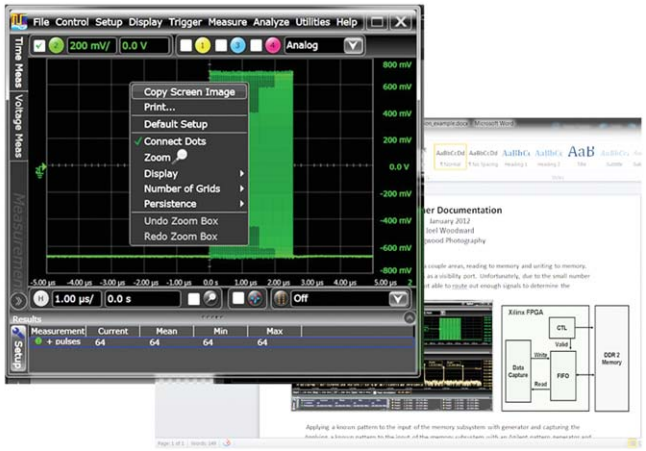
InfiniiView will help you share scope measurements more easily across your team, and if needed with customers and vendors. Share using common tools like a USB or network drive, email, and Web-based collaboration.

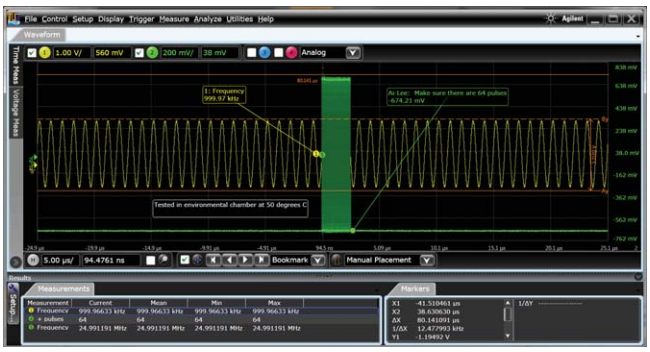


- Share entire waveform records instead of being limited exclusively to screen shots.
- Use bookmark annotations to share your personal insight more quickly and easily. Mouse-over bookmarks to reveal additional information.

- Easily collaborate with others even if they have different tools. InfiniiView's transportable licenses allow you to share not only the measurement data, but also to loan out the application and analysis options so others can see exactly what you are seeing.

Create more useful documentation faster





InfiniiView will help you create more useful documentation, faster. Here's how:

- Use right-click cut-and-paste to move screen images between applications, without ever having to save the image to a file.
- Quickly determine time and vertical values as they are prominently displayed.
- Size and populate measurements in the result window with just the information you need for your documentation.
- Add bookmarks and call outs to produce friendly and useful documentation.
- Save or open the entire measurement record in a mouse click in case there's a need to revisit later.
- Multiple windows and splitters allow you to document just what you want to see and how you want to see it.

InfiniiView: standard features

InfiniiView's standard feature set includes a large array of capabilities to help you view, analyze, share, and document better and faster.

Navigate

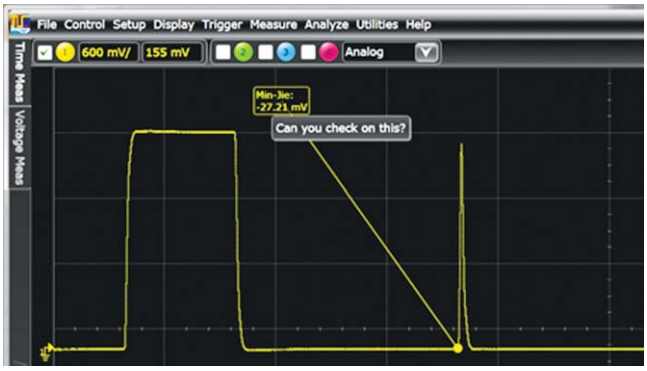
Pan and zoom to anywhere in the data record. Navigate in time, or between bookmarks.

View:

Up to 8 waveforms simultaneously, 1, 2, or 4 grids (stacked, side by side, custom layout, zoom)

Controls

Horizontal (5ps/div to 20s/div)
Vertical (100uV/div to 1000 V/div)
Offset (+/- 1000V)

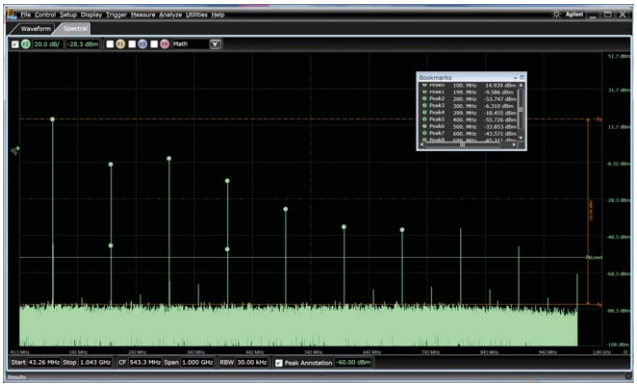


Measurements

Over 50 automated measurements
View up to 20 simultaneously
User-customizable result window (size, position, information)
X & Y markers with dynamic delta values

Analyze

20 math operators including FFT and filters
Up to four independent/cascaded math functions
Measurement histogram
Mask test
Measurement limit testing



View windows:

Analog, math, spectral, measurement results (simultaneous, tabbed, or undocked)

Documentation:

Right-click to copy
Up to 100 bookmarks
Annotated axis values
Markers with dynamic delta value updates when moved
User-definable views
One step save/load setup and all waveforms

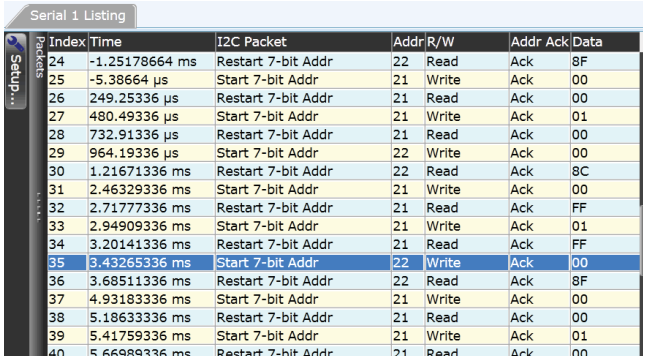
InfiniiView: Serial decode upgrades

Need additional capability? Take advantage of numerous serial decode and analysis upgrades. This can be included in initial InfiniiView purchase, or added at a later point in time.

Protocol decode

Quickly navigate between physical and protocol layers using time-correlated markers and serial decode views.

CAN	LIN	SATA
digRF v4	JTAG	SPI
I2C	MIPI D-Phy	SVID
Ethernet 10G KR	PCIe 1, 2, 3	USB 2, 3, HSIC
FlexRay	RS-232/UART	8B/10B

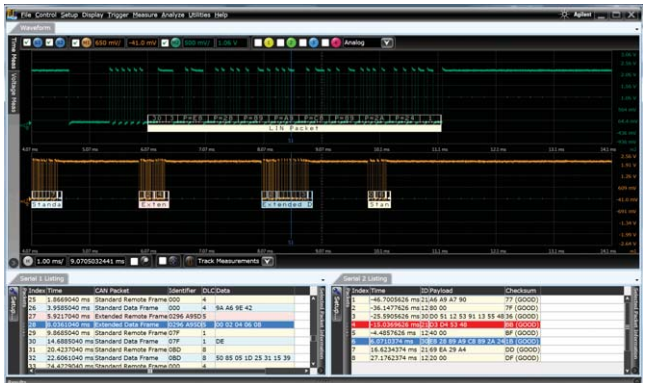

Serial 1 Listing

Setup...

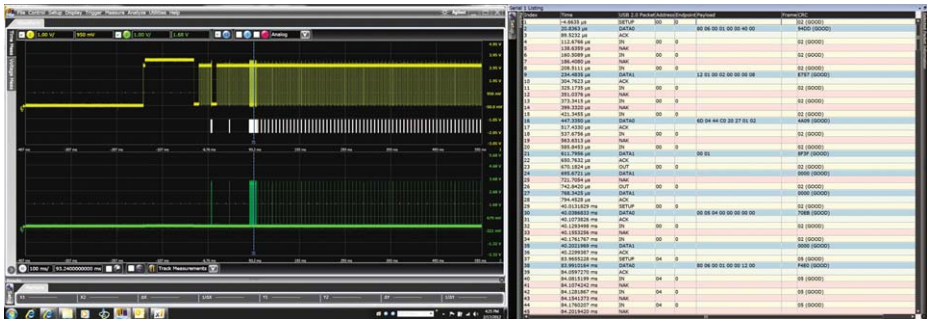
Packets

Index	Time	I2C Packet	Addr	R/W	Addr Ack	Data
24	-1.25178664 ms	Restart 7-bit Addr	22	Read	Ack	8F
25	-5.38664 µs	Start 7-bit Addr	21	Write	Ack	00
26	249.25336 µs	Restart 7-bit Addr	21	Read	Ack	00
27	480.49336 µs	Start 7-bit Addr	21	Write	Ack	01
28	732.91336 µs	Restart 7-bit Addr	21	Read	Ack	00
29	964.19336 µs	Start 7-bit Addr	22	Write	Ack	00
30	1.21671336 ms	Restart 7-bit Addr	22	Read	Ack	8C
31	2.46329336 ms	Start 7-bit Addr	21	Write	Ack	00
32	2.71777336 ms	Restart 7-bit Addr	21	Read	Ack	FF
33	2.94909336 ms	Start 7-bit Addr	21	Write	Ack	01
34	3.20141336 ms	Restart 7-bit Addr	21	Read	Ack	FF
35	3.43265336 ms	Start 7-bit Addr	22	Write	Ack	00
36	3.68511336 ms	Restart 7-bit Addr	22	Read	Ack	8F
37	4.93183336 ms	Start 7-bit Addr	21	Write	Ack	00
38	5.18633336 ms	Restart 7-bit Addr	21	Read	Ack	00
39	5.41759336 ms	Start 7-bit Addr	21	Write	Ack	01
40	5.66989336 ms	Restart 7-bit Addr	21	Read	Ack	00

See decode below signals in the waveform area, and create a serial decode listing window. Matching colorized packet enables quick navigation between time domain and listing windows. Size decode window as big or small as you want. Customize font size, and which columns you want shown.

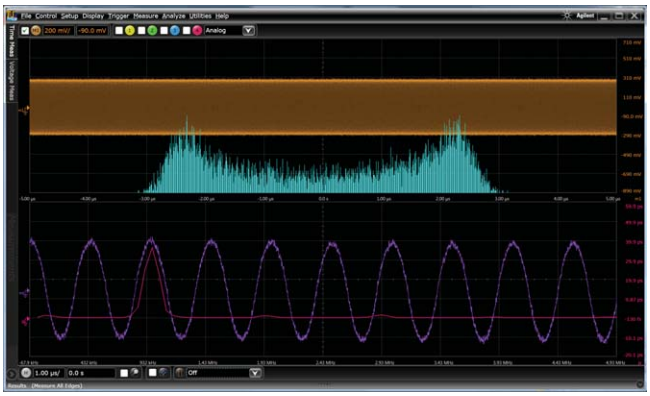


InfiniiView serial decode offers decode of up to four serial buses simultaneously. Additional listing windows show when decoding multiple buses, or choose to view time-aligned packet decode in the waveforms area.



The decode listing window can be displayed simultaneously with the waveform window, configured as an unique window tab, or undocked and moved to any location on your PC monitor including on extended or multi-displays.

InfiniiView: Jitter and serial data analysis application upgrades



EZJIT

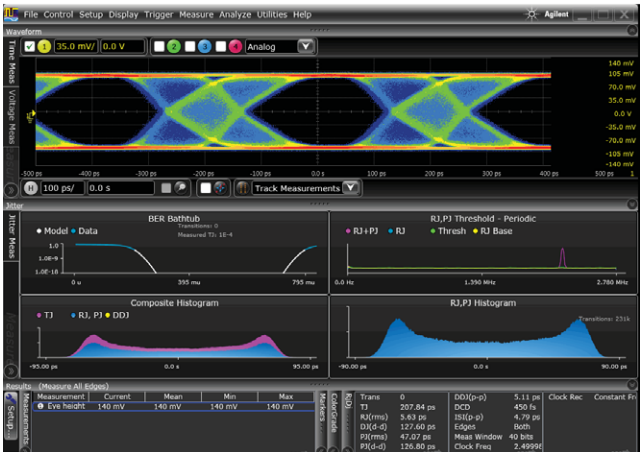
Characterize and evaluate most commonly needed jitter measurements including TIE, cycle-cycle, N-cycle, period using EZJIT. For any measurement, EZJIT's histogram enables showing a measurement distribution as well as the application provides measurement spectral and trending plots.

EZJIT+

EZJIT+ includes all the capability of EZJIT, plus the ability to separate Rj and Dj. On InfiniiView, jitter separation is displayed in it's own unique window, so you can simultaneously see jitter results and waveform information.

Serial data analysis

Quickly validate signal integrity for high-speed serial interfaces with embedded clocks. The application includes clock recovery and automated building of eye diagrams. 8B/10 protocol decode comes standard with the SDA option as well.



InfiniiView: Opening saved waveforms and setup files

InfiniiView file compatibility			
	Agilent Scopes		Other
	Infiniium	InfiniiVision	
Composite file (all data and setup)			
.osc	√		
Waveform data record(s) (open and save)			
.csv, tsv, txt	√	√	√
.bin, h5	√	√	
.wfm	√		
Oscilloscope setup file (open and save)			
.set	√		

The InfiniiView application supports a number of popular file waveform and setup formats. As well, you can open .csv, .tsv, and .txt files produced by EDA tools or other test equipment.

Open up to 8 signals one by one, or use Agilent's composite file to open/save everything in a single mouse click. Composite files include all setup settings, all analog and memory waveforms, and window positioning.

File size approximations				
# of saved scope channels	Scope memory settting	Saved File type	Resulting PC file size (Interpolation = Off)	Resulting PC file size (Interpolation = On)
1	100 Kpts	.osc	0.2 M	0.2 M
		.hd5	0.3 M	3.5 M
		.wfm	0.2 M	2 M
		.bin	0.4 M	6 M
		.csv	2.7 M	43 M

How big are waveform files? Depends on the number of channels, settings, and the file format. File sizes scale linearly with channels and memory depth.

PC requirements and InfiniiView characteristics

Host PC operating system and resources

- Recommended: Microsoft Win 7 64-bit, 4G RAM, 1G free hard drive space
- Required: Microsoft Win XP, 2G RAM, 1G hard drive space

Waveforms:

Open up to 8 waveforms simultaneously (four analog and four waveform memories). Application supports up to 16 vertical bits.

Supported file formats:

Infiniium .osc, .set, .bin, .h5, .wfm

InfiniiVision: .bin, .h5,

Other formats: csv, .tsv, .txt

View windows:

One timebase waveform, one spectral, measurement results (simultaneous, tabbed, or undocked), one for each decode, one for jitter.

Up to 8 waveforms simultaneously, 1, 2, or 4 grids (stacked, side by side, custom layout, zoom)

Controls

Horizontal (5ps/div to 20s/div)
Vertical (100uV/div to 1000 V/div)
Max Vertical offset: +/- 1000V)
FFT: 0 Hz to 1 THz, Start, stop, center, span, resolution BW, threshold for peak magnitude table

Documentation:

Right-click to copy
Up to 100 bookmarks
Annotated axis values
Markers with dynamic delta value update when moved

Application display resolution

User selectable, max of 1600 x 900

Save images:

Right-click copy to Windows buffer. File save images as .png, .jpg, .bmp .tif, user selection for setup information inclusion, time stamp appended to image saves

Measurements:

Result window user-customizable (size, position,) with up to 20 measurement results shown simultaneously.

- **X & Y markers** with dynamic delta values
- **Time:** rise time, fall time, +width, -width, delta time, edge-edge, +pulse count, -pulse count, period, frequency, duty cycle, burst width, burst period, burst interval, Tmin, Tmax, Tvolt, edge time, slew rate
- **Voltage:** Average, RMS, amplitude, base, top, overshoot, pre-shoot, crossing, V upper, V middle, V lower, pulse top, pulse base, pulse amplitude, area
- **Clock**[1]: Time interval error (with EZJIT or EZJIT+ options), N period, period-period, +width - +width, -width -width, duty cycle – duty cycle
- **Data**[1]: N-UI, UI-UI, data rate, clock recovery rate, DDPWS, de-emphasis
- **Mixed:** Area, slew rate
- **Frequency:** FFT magnitude, FFT phase, FFT delta frequency, FFT delta magnitude, magnitude peak table
- **Eye:** Eye height, eye width, eye jitter, eye crossing%, Q factor, duty cycle distortion

Analyze

- Measurement histogram, mask test, measurement limit testing
- Up to four independent/cascaded math functions
- **Simple math:** +, -, *, /, average, absolute value, magnify, max, min square, square root, Vs
- **Advanced math:** integrate, FFT magnitude, FFT phase, high-pass filter, low-pass filter, smooth: differential+, differential-
- **User-defined**[2]: import of .m Matlab file, Butterworth, FIR, LFE, RTEye, Sqrtsumofsquares,

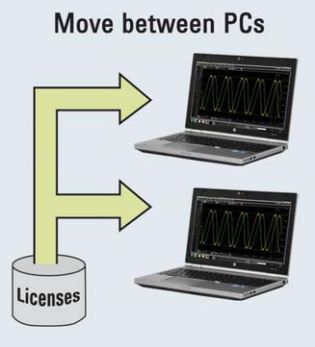
[1] Requires EZJIT or EZJIT+ option
[2] Requires MATLAB

InfiniiView ordering information

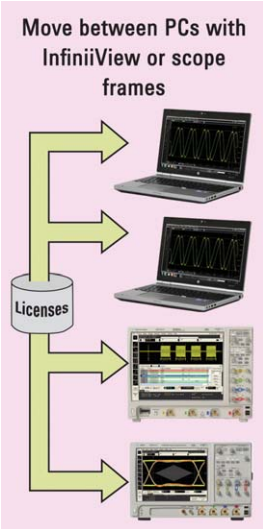
Order N8900A if your PC doesn't already have an InfiniiView baseline license. Add any desired options. The N8900A baseline license is transportable and can be moved from PC to PC. Upgrade options can be ordered as transportable or server-based licenses.

Order N8900AU to add additional application upgrade options to a previously purchased N8900A baseline license.

Transportable Licenses



Server-based Licenses



	Transportable license	Server-based license
InfiniiView PC-based scope analysis software	N8900A	NA
Application Options	N8900A and N8900AU options	N5435A options
Decode		
CAN, LIN, and FlexRay decode	042	033
Dig RF v4 decode	045	047
Ethernet 10GBase-KR (64b/66b) decode	049	045
I^2C, SPI, RS-232/UART decode bundle	052	NA
I^2C/SPI decode	053	006
JTAG decode	057	038
MIPI D-Phy decode	062	036
PCIe gen 1 and gen 2 decode	066	032
PCIe gen3 128b/130b decode	067	046
RS-232/UART decode	071	031
SAS/SATA decode	072	035
SVID decode	080	
USB 2.0 decode	081	034
USB 3.0 decode	082	
Analysis		
EZJIT	100	002
EZJIT+	101	004
SDA (Serial data analysis)	104	003
UDF (User definable function)	105	005

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