

# Keysight Infiniium S-Series Oscilloscopes

## The Standard for Superior Measurements

Whether you must debug your latest design or verify compliance, it is critical that your oscilloscope displays a true representation of your signal. This requires world-class signal integrity, and Infiniium S-Series oscilloscopes were designed with that in mind. The S-Series provides a superior time base, front-end, and ADC technology blocks. This gives you a platform with up to 16 bits of resolution, low noise, low jitter, and high ENOB – giving you visibility into the true performance of your device.



Hardware Option	Description
DSOS000-200	200 Mpts/ch memory
DSOS000-400	400 Mpts/ch memory
DSOS001-DSA	200 Mpts/ch memory + EZJit Complete
DSOS000-A6J	ANSI Z540 Compliant Calibration
N2902B	Rackmount Kit

S-Series Model Specifications							
Model <sup>[1]</sup>	DSOS054A/ MSOS054A	DSOS104A/ MSOS104A	DSOS204A/ MSOS204A	DSOS254A/ MSOS254A	DSOS404A/ MSOS404A	DSOS604A/ MSOS604A	DSOS804A/ MSOS804A
Bandwidth (BW)	500 MHz	1 GHz	2 GHz	2.5 GHz	4 GHz	6 GHz <sup>[4]</sup>	8 GHz <sup>[4]</sup>
10/90% rise time <sup>[2]</sup>	860 ps	430 ps	215 ps	172 ps	107.5 ps	71.7 ps	53.8 ps
Full BW ENOB <sup>[3]</sup>	8.1	7.8	7.5	7.4	7.2	6.8	6.4
Full BW Noise Floor <sup>[5]</sup>	74 uV	90 uV	120 uV	130 uV	153 uV	195 uV	260 uV
Sample Rate	20 GSa/s on two channels, 10 GSa/s on four channels						
Standard Memory	100 Mpts/ch, upgradeable up to 400 Mpts/ch						
Vertical Resolution	10 bits at full bandwidth; up to 16 bits in high resolution						
RF Noise Density <sup>[6]</sup>	-160 dBm/Hz						
SFDR <sup>[7]</sup>	72 dB						
Display Size	15" XGA Capacitive Touchscreen, VGA and Display Port for External Monitors						

1. DSO and MSO models have four analog channels. MSO models include 16 digital channels. 2. Calculation passed on 0.43/BW. 3. Measured at full bandwidth without high resolution mode enabled. Typical specification; not warranted. 4. 6 GHz and 8 GHz only possible when two channels are active. Four channel bandwidth is 4 GHz. 5. Measured at 2 mV/div at full oscilloscope bandwidth and sample rate, no high resolution. 6. Tested at 1 mV/div, -38 dBm, 1.0001 GHz CF, 500 kHz span, 3 kHz RBW. 7. Tested with 1 GHz, 0dBm signal at input, FFT with 3 GHz CF, 5 GHz span, 100 kHz RBW.

Key Probes and Applications	
N2873A	Passive, 10:1, 500 MHz Single Ended Probes (x4 Ship With All Models)
1130/31/32/34B	Active, 1.5 – 7 GHz, Single Ended OR Differential <b>InfiniiMax</b> Probe Family
N2750/51/52A	Active, 1.5 – 6 GHz, Single Ended AND Differential <b>InfiniiMode</b> Probe Family
N7020/24A	Active, 2 – 6 GHz, Single Ended <b>Power Rail Probe</b> (up to +/-24 V offset at 1 mV/div)
N2795/96/97A	Active, 1 – 2 GHz, Single Ended (N2797A: <b>Extreme Temperature</b> Probe (-40 C to +85 C))
N2792A, N2818/19A	Active, <800 MHz, Differential Low Voltage (20 V differential, 60 V common mode)
N2790A, N2804A, N2891A	Active, <300 MHz, Differential High Voltage (up to 7 kV)
N2780/81/82/83B	Clamp-On AC/DC Current Probe Family (up to 100 MHz, 500 A <sub>RMS</sub> )
N7026A	Clamp-On AC/DC Current Probe (30 A <sub>RMS</sub> , 150 MHz)
N7040/41/42A	Rogowski Coil AC Current Probe (up to 3 kA, 30 MHz)
D9010DMBA	De-Embedding: PrecisionProbe and InfiniiSim Basic for modeling cables, probes and fixtures
D9010JITA	EZJit Complete: Timing jitter, vertical noise, and phase noise analysis
D9010SCNA	InfiniiScan: Visual- and measurement-based triggering
D9010LSSP	Low-Speed Serial Trigger/Decode: I2C, SPI/eSPI, Quad SPI/eSPI, RS232/UART, JTAG, I2S, SVID, Manchester
D9010BSEO	Infiniium Offline: Use your scope GUI on a PC to do remote measurements, post-processing, and documentation with ease

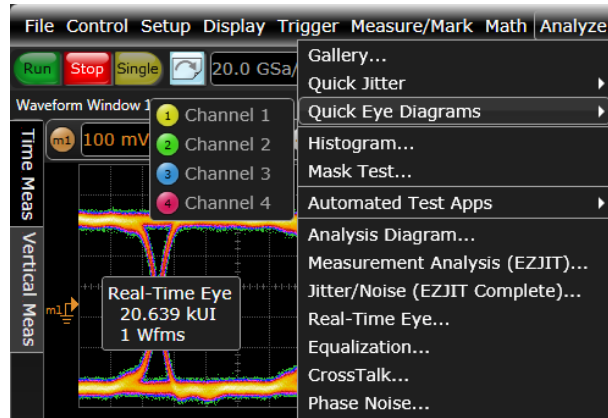
Find us at [www.keysight.com](http://www.keysight.com). More Information: [www.keysight.com/find/S-Series](http://www.keysight.com/find/S-Series)

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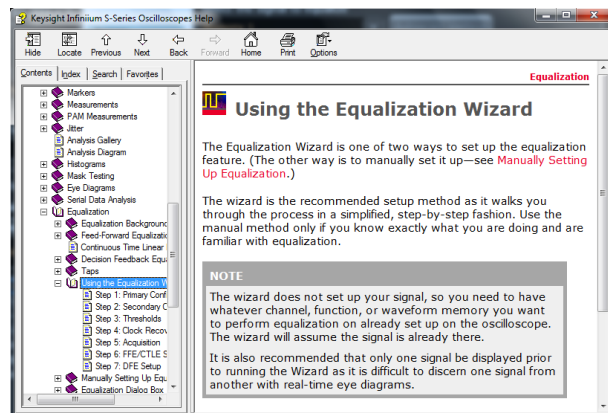


# The Keysight S-Series Offers the Most...

## Intuitive User Interface

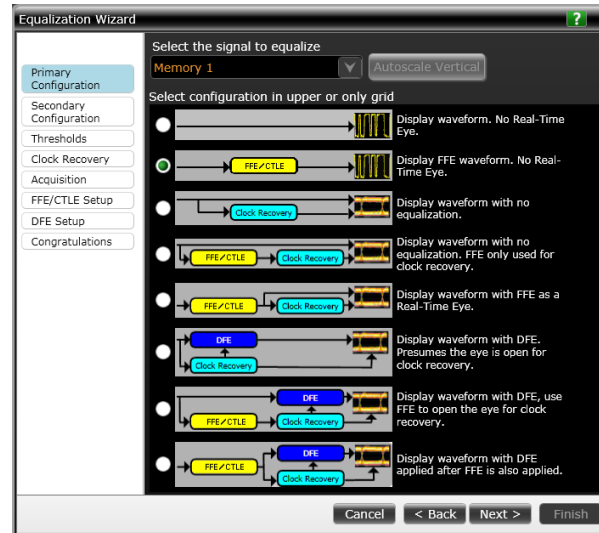


All menus and dialogs are accessible through a simple menu structure that is optimized for mouse or touch operation. Jitter tests, eye diagrams and more can be set up automatically with one click the Analyze menu, reducing your overall test time.

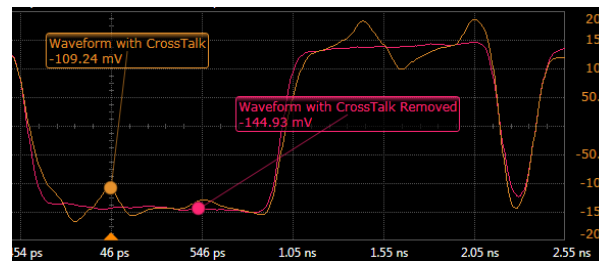


Access built-in help for any feature instantly from its dialog box, or by searching through the main help menu, ensuring you are maximizing the capabilities of your S-Series scope.

## Comprehensive Signal Integrity Applications

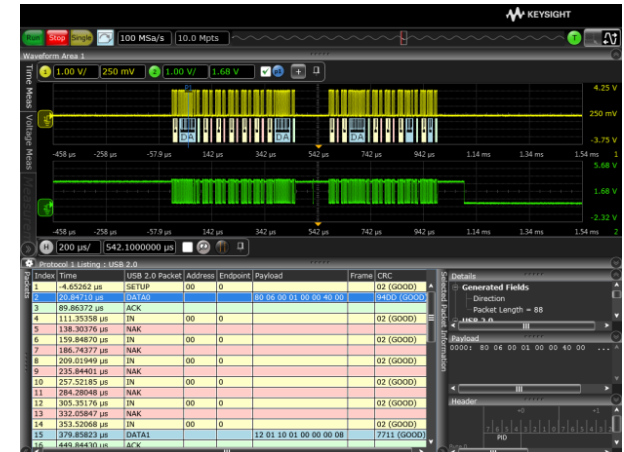


Setup wizards, exclusive to Infiniium, walk you step-by-step through every setting you need to adjust for the best measurements. This equalization wizard helps you open closed eyes on fast data streams using proprietary techniques to remove effects of cables, probes or fixtures from your measurement.

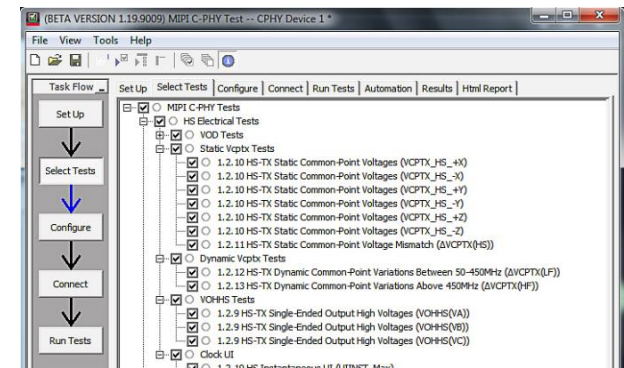


Determine the effects of aggressors on a signal before you do the design work to remove them using the exclusive crosstalk analysis application (D9020ASIA).

## Protocol Decode, Trigger, and Compliance Tools



Use one of Keysight's protocol decoding and triggering application packages for increased productivity. The software converts DSO or MSO physical layer acquisitions into packets for specific protocols. Only Keysight offers this breadth, with over 30 protocols available.



With over 20 compliance applications available, your S-Series is ready to ensure your design is robust and ready to meet the latest and greatest of industry standards, improving your product quality.

Learn more at: [www.keysight.com](http://www.keysight.com)

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