

Infiniium V-Series Oscilloscopes

Achieve Clarity Faster with Innovative Technology

Keysight Infiniium V-Series oscilloscopes incorporate innovative technology designed to deliver superior measurements. This groundbreaking oscilloscope technology provide up to 33 GHz performance with the industry's best signal integrity.



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For a description of key features, see the [Infiniium V-Series Oscilloscopes Technical Overview](#).

For a detail of specification, see the [Infiniium V-Series Oscilloscopes Data Sheet](#).

For one page overview and specification, see the [Infiniium V-Series Product Fact Sheet](#)

Infiniium V-Series Oscilloscope Configuration

Get the most out of your oscilloscope investment by choosing options and software to speed your most common tasks. Use option numbers when ordering at time of purchase. Use model numbers to add to an existing scope.

Step 1: Choose Your V-Series Oscilloscope Model

Choose your Infiniium V-Series real-time oscilloscope model

Model number			Analog bandwidth		Sample rate	
DSO models (4 Analog ch)	DSA models ¹ (4 Analog ch)	MSO models ² (4 Analog ch +16 digital ch)	2-channel	4-channel	2-channel	4-channel
DSOV334A	DSAV334A	MSOV334A	33 GHz	16 GHz	80 GSa/s	40 GSa/s
DSOV254A	DSAV254A	MSOV254A	25 GHz	16 GHz		
DSOV204A	DSAV204A	MSOV204A	20 GHz	16 GHz		
DSOV164A	DSAV164A	MSOV164A	16 GHz	16 GHz		
DSOV134A	DSAV134A	MSOV134A	13 GHz	13 GHz		
DSOV084A	DSAV084A	MSOV084A	8 GHz	8 GHz		

All Infiniium V-Series models come standard with:

- 100 Mpts/channel memory
- Serial Data Analysis/Mask Testing with Clock Recovery
- Front cover
- Power cord
- USB Keyboard
- USB Mouse
- Calibration cable
- ESD wrist strap
- Five coax adapters (female-to-female)
 - 8, 13, and 16 GHz models come with 3.5 mm female-to-female adapters rated to 25 GHz (part number 1250-3758).
 - All other models (20, 25, 33 GHz) come with 3.5 mm female-to-female adapters rated to 35 GHz (part number 5061-5311)
- The 8 and 13 GHz models come standard with two N5442A precision BNC adapters.

All DSA V-Series models come standard with:

- 200 Mpts/channel memory
- EZJIT Complete (not include phase noise measurement)

All MSO V-Series models come standard with:

- N2815A MSO/LA cable
- Hardware-based DDR2/3/4 and LPDDR2/3/4 decode/trigger

Step 2: Upgrade Your Oscilloscope Memory

Enable more capture depth with industry-leading deep memory. Get up to 2 Gpts per channel.

Acquisition memory depth upgrade	Description
DSOV000-200	200 Mpts per channel high performance memory
DSOV000-500	500 Mpts per channel high performance memory
DSOV000-01G	1 Gpts per channel high performance memory
DSOV000-02G	2 Gpts per channel high performance memory

Step 3: Add Optional Hardware Features

Add required hardware options for your tasks.

Option number	Description
MSOV001-DSA	DSA option for MSO models only (including 200 Mpts/channel, EZJIT Complete)
DSOV000-801	Upgrade - Removable SSD drive for V-Series - 1TB
DSOV000-805	GPIB Card-Interface - installed
DSOV000-808	Performance verification and deskew fixture (MX0104A)
DSOV000-810	12 Gbps hardware serial trigger (NOT available for MSO models)

Step 4: Add an Advanced or Accredited Calibration

Get a compliant or accredited calibration from the Keysight calibration test facility.

Option number	Description
DSOV000-A6J	Calibration (ANSI Z540-1-1994 Compliant ¹)
DSOV000-AMG	Calibration + Uncertainties + Guardbanding (ISO 17025 & ANSI Z540.3/Z540-1 Accredited ²)

¹ Compliant: Denotes the Keysight calibration test facility has passed an internal audit with the same processes as an external audit. A compliant calibration will not receive an accreditation body symbol on the certificate of calibration.

² Accredited: Denotes the Keysight calibration test facility has passed an external audit performed by a 3rd party that has been authorized by an accreditation body. An accredited calibration will receive an accreditation body symbol on the certification of calibration.

Step 5: Choose Your Infiniium Probes and Probe Accessories

The V-Series is compatible with the Keysight InfiniiumMax probing system which includes probe amplifiers and tips ranging from 8 GHz to 30 GHz of low noise bandwidth. They are the most accurate and easiest to use probes in the market for measuring differential and single-ended signals across all high-speed digital designs.

Model number	Description	Notes
MSO probes and accessories		
E5382B	Single-ended flying lead set	The MSO is compatible with all Keysight 90-pin cable connectors. The N2815A MSO/LA cable comes standard with MSO models or MSO upgrade
E5390A	Single-ended soft touch connectorless probe	
E5398A	1/2 size soft touch connectorless probe	
E5387A	Differential soft touch probe	
E5381A	Differential flying leads	
InfiniiMax I/II/RC/Ultra probe amps (with RC architecture)		
MX0020A	10 GHz InfiniiMax Ultra probe amplifier	
MX0021A	13 GHz InfiniiMax Ultra probe amplifier	
MX0022A	16 GHz InfiniiMax Ultra probe amplifier	
MX0024A	20 GHz InfiniiMax Ultra probe amplifier	
MX0025A	25 GHz InfiniiMax Ultra probe amplifier	
1169B	13 GHz InfiniiMax II probe amplifier	Need adapter N5442A
1168B	10 GHz InfiniiMax II probe amplifier	Need adapter N5442A
InfiniiMax I/II/RC/Ultra probe heads and tips (NOT compatible with InfiniiMax III/+ probe amps)		
MX0100A-001	25 GHz micro probe head (set of 5)	
MX0100A-002	25 GHz micro probe head (set of 25)	
MX0100A-003	25 GHz micro probe head (set of 50)	
MX0105A	20 GHz SMA probe head	
MX0106A	23 GHz solder-in probe head	
N2839A	21 GHz browser head	
N2837A	21 GHz browser head replace tip kit (set of 40)	
N5425B	18 GHz ZIF probe head	
N5426A	18 GHz ZIF tip (set of 10)	
N5451A	4 GHz long-wired ZIF tip kit	

Model number	Description	Notes
N2884A	5 & 9.9 GHz fine wire tip	
E2675B	6 GHz Differential browser head	
E2677B	12 GHz solder-in head	
E2678B	12 GHz socketed probe head	
N2880A	Coaxial attenuators	
N2881A	DC blocking caps (set of 2)	
N2851A	16 GHz QuickTip probe head	
N2884A	Fine wire probing tips	
MX0104A	Performance verification and deskew fixture	

Model number	Description	Notes
InfiniMax III/+ probe amps (Highest bandwidth with RCRC architecture)		
N2803A	30 GHz InfiniiMax III probe amplifier	
N2802A	25 GHz InfiniiMax III probe amplifier	
N2801A	20 GHz InfiniiMax III probe amplifier	
N7003A	20 GHz InfiniiMax III+ probe amplifier	
N7002A	16 GHz InfiniiMax III+ probe amplifier	
N7001A	13 GHz InfiniiMax III+ probe amplifier	
InfiniMax III/+ probe heads and Tips (NOT compatible with InfiniiMax I/II/RC probe amps)		
N5445A	30 GHz browser probe head	
N5476A	30 GHz browser tip replacement (set of 4)	
N5444A	28 GHz 3.5/2.92 SMA probe head	
N5439A	28 GHz ZIF probe head	
N2838A	25 GHz PC board ZIF tips (set of five)	
N5440A	28 GHz 450-ohm ZIF tip kit (set of five)	
N5447A	28 GHz 200-ohm ZIF tip kit (set of five)	
MX0109A	26 GHz extreme temperature solder-in head	
N5381B	12 GHz wire tips	
N2849A	16 GHz QuickTip tips	

Model number	Description	Notes
Other probes and accessories		
N2795A	1 GHz single-ended active probe	
N2796A	2 GHz single-ended active probe	
N2797A	1.5 GHz single-ended active probe	Extreme Temperature
N2873A	500 MHz high-impedance passive probe	Need adapter N5449A (N5449A includes one N2873A)
N7010A	30 GHz active termination adapter	
1147B	50MHz AC/DC Clamp-On Current Probe	Need adapter N5442A
N2893A	100MHz AC/DC Clamp-On Current Probe	Need adapter N5442A
N7024A	6 GHz power rail probe	Need adapter N5442A
DP0001A	High Voltage Differential Probe	Need adapter N5442A
N2804A/N2805A	High Voltage Differential Probe	Need adapter N5442A
N2750/1/2A	InfiniiMode Differential Active Probes	Need adapter N5442A
N7004A	33 GHz Optical-to-Electrical Converters	
N2823A	40 GHz 2.92 mm phase-matched cable pair (1m)	2.92 mm (m) to 2.92 mm (m)
N5448B	40 GHz 2.92 mm phase-matched cable pair (25cm)	2.92 mm (m) to 2.92 mm (m)
N5442A	3.5 mm to precision BNC adapter	
15442A	18 GHz Cable kit: 4 SMA (m) to SMA (m)	
15443A	18 GHz Matched cable pair within 25 ps SMA (m) to SMA (m)	
N2848A	16 GHz QuickTip probe head	
N5450B	extreme temperature extension cable	
N2787A	3D probe positioner	

Step 6: Choose Your Infiniium V-Series Oscilloscope Accessories

Get additional connectors, adapters, wrenches, and more to fully outfit your lab. Some of the below items come standard with certain models. See page 3 for what's already included before adding additional accessories.

Model number	Description
82357B	USB/GPIB interface, USB (UXR) to GPIB
N2117A	Stack mount kit option for stacking two frames
N5470A	Rack mount kit
1180CZ	Testmobile scope cart
8710-1765	Wrench-torque, 8 lb-in, 5/16 Inch
1250-3758	female-to-female adapters rated to 25 GHz
5061-5311	female-to-female adapters rated to 35 GHz
MX0104A	Performance Verification and Deskew Fixture for InfiniiMax Probes

Step 7: Upgrade Your V-Series Oscilloscope

The Infiniium V-Series is fully upgradeable. You might never need to buy a new oscilloscope again. You can easily upgrade the channel count, bandwidth, memory, frequency extension windows, and memory.

Model number	Description
Bandwidth upgrade	
DSOV13GBW	Bandwidth upgrade to 13 GHz
DSOV16GBWU	Bandwidth upgrade to 16 GHz
DSOV20GBWU	Bandwidth upgrade to 20 GHz
DSOV25GBWU	Bandwidth upgrade to 25 GHz
DSOV33GBWU	Bandwidth upgrade to 33 GHz
Memory upgrade	
N2810A-200	100 to 200 Mpts/channel memory upgrade
N2810A-500	200 to 500 Mpts/channel memory upgrade
N2810A-01G	500 Mpts/channel to 1 Gpts/channel memory upgrade
N2810A-02G	1 Gpts/channel to 2 Gpts/channel memory upgrade

Model number	Description
Other upgrade	
N2119AU	Hardware serial trigger upgrade ^{1, 2}
N2118AU	MSO upgrade ^{1, 2}
N2151A	Upgrade Kit - Windows 7 to Windows 10 OS software for Infiniium oscilloscopes (A flash drive-based upgrade)
N2152A	Additional removable SSD drive for V-series - 1 TB (Windows 10)

1. Return to Keysight service center is required to perform upgrade.

2. Either MSO or hardware serial trigger option can be added to the oscilloscope. Upgrade is not available when the oscilloscope already has the MSO or hardware serial trigger installed.

Step 8: Choose Your Infiniium V-Series Support, Services, and Training

Get more from your test investment with Keysight Services. Keysight's warranty and calibration services are the convenient way to ensure the ongoing accuracy and availability of all your test assets.

Model number	Description
R-51B-001-3C	Warranty Assurance Plan – Return to Keysight – 3 years
R-51B-001-5C	Warranty Assurance Plan – Return to Keysight – 5 years
R-50C-001-3	Calibration Assurance Plan – Return to Keysight – 3 years
R-50C-001-5	Calibration Assurance Plan – Return to Keysight – 5 years
PS-S10	Remote scheduled productivity assistance. Select 1 to 999 hours.
PS-S20	On site startup assistance, daily
PS-T10-SCOPES	On site 0.5 day – H7240B-100 – Digitizing Oscilloscope Fundamentals class. Max 8 students.
PS-X10	Custom services

Step 9: Choose Your Infiniium Offline, Add-On Software, and Compliance Test

Keysight offers a wide variety of advanced measurement, analysis, compliance and decode software applications for the Infiniium V-Series. Choose your license term, license type, and KeysightCare software support subscription that best fits your needs and budget.

All Infiniium V-Series models come standard with:

- Serial data analysis (SDA) software to provide flexible clock recovery including 1st, 2nd, and 3rd-order PLL and constant algorithms. With a stable clock, you can look at real-time eyes of transition and non-transition bits.
- User defined function
- Fast Fourier Transform (FFT) for frequency domain (spectrum) analysis. Use the FFT to compute both magnitude and phase and take advantage of several useful features to assist in spectral analysis. The FFT can control span and resolution bandwidth.

Model number	Description
Offline analysis software	
D9010ASIO	Infiniium Offline – Adv signal integrity software (InfiniiSim Adv/EQ/Crosstalk)
D9010BSEO	Infiniium Offline – Base software
D9010HSPO	Infiniium Offline – High speed protocol software bundle
D9010JITO	Infiniium Offline – EZJIT complete software
D9010LSPO	Infiniium Offline – Low speed protocol software bundle
Measurement and analysis software	
D9110DMBA	De-embedding software (Precision Probe, InfiniiSim Basic)
D9120PAMA	Pulse amplitude modulation PAM-N analysis software
D9110POWA	Power integrity analysis software
D9110UDAA	User defined application software
D9120JITA	EZJIT complete – Jitter and vertical noise analysis software (recommended)
D9120SCNA	InfiniiScan event identification software (recommended)
D9120ASIA	Advanced signal integrity software (EQ, InfiniiSimAdv, Crosstalk) (recommended)

Model number	Description
Protocol decode and triggering software	
D9110AUTP	Automotive protocol decode/trigger software (CAN, LIN, CAN-FD, FlexRay ...)
D9120AUTP	High speed automotive protocol decode/trigger software (100/1000BASE-T1)
D9110EKR	10G/100GBASE-KR 64b/66b and link training decode/trigger software
D9110EMBP	Embedded protocol decode/trigger software (USB2.0, 10/100 ETH, PCIe 2/1 ...)
D9110LSSP	Low speed protocol decode/trigger software (I2C, SPI, RS232, I2S, JTAG ...)
D9110MCDP	MIPI CSI and DSI protocol decode/trigger software (C-PHY and D-PHY)
D9110MILP	Military protocol decode/trigger software (ARINC 429, MIL-STD 1553, SpaceWire)
D9110MPLP	Low speed MIPI protocol decode/trigger software (RFFE, I3C, SPMI)
D9110MPMP	MIPI M-PHY protocol decode/trigger software (DigRF, LLI, CSI-3, UniPro, UFS, SSIC)
D9110PCIP	Advanced PCIe protocol decode/trigger software (PCIe 5/4/3/2/1, SATA/SAS)
D9110USBP	USB 3.x protocol decode/trigger software (USB 3.1 - 5 and 10 Gbps)
D9111BDLP	Basic Infiniium Protocol Trigger/Decode Bundle for Infiniium Oscilloscopes
D9120BDLP	Complete Infiniium Protocol Trigger/Decode Bundle for Infiniium Oscilloscopes
MATLAB® software	
N8831A-001	MATLAB – Basic digital analysis
N8831A-002	MATLAB – Standard digital analysis
Compliance software (KeysightCare Support required)	
D9010SFPC	SFP+ and QSFP+ compliance test application (12 GHz+)
D9010XAUC	XAUI compliance test with 10GBASE-CX4, CPRI, OBSAI, and serial RapidIO support (13 GHz+)
D9010BJAC	Ethernet 40GBASE-CR4 and 100GBASE-CR10 compliance test application (25 GHz+)
D9010ETHC	10M/100M/1GBASE-T and energy efficient ethernet (1 GHz +)
D9010EBZC	Ethernet 10GBASE-T, NBASE-T and MGBASE-T compliance test application (4 GHz +)
D9010EAPC	Ethernet 10GBASE-KR and 40GBASE-KR4 compliance test application (25 GHz+)
D9010ONFC	ONFI (open NAND flash interface) compliance test application (4 GHz +)
D9020DDRC	DDR2 and LPDDR2 compliance test application (4 GHz +)
D9030DDRC	DDR3 and LPDDR3 compliance test application (8 GHz +)
D9040DDRC	DDR4 and LPDDR4 compliance test application (13 GHz +)
D9050DDRC	DDR5 TX compliance test application (16 GHz +)
D9010CPHC	MIPI C-PHY compliance test application (16 GHz +)
D9020DPHC	MIPI D-PHY compliance test application (13 GHz +)
D9040MPHC	MIPI M-PHY compliance test application up to Gear 4 (25 GHz +)
D9040PCIC	PCIe 1.0 to 4.0 transmitter electrical performance validation and compliance (25 GHz +)
D9010USBC	USB 2.0 transmitter compliance test application (2.5 GHz+)
D9020USBC	USB 3.2: 5 Gbps and 10 Gbps transmitter compliance (16 GHz+)
D9030TBTC	Thunderbolt 3 transmitter compliance (25 GHz +)
D9030SATC	SATA 6Gb/s compliance test application (13 GHz +)

Model number	Description
D9040SASC	SAS-4 (serial attached SCSI-4) compliance test application (33 GHz +)
D9040DPPC	DisplayPort 1.4 compliance and validation (16 GHz+)
D9042DPPC	DisplayPort UHBR Tx compliance test software (25 GHz +)
D9040EDPV	eDP 1.4 (embedded DisplayPort) electrical performance and characterization (16 GHz+)
D9021HDMC	HDMI 1.4 and HDMI 2.1 electrical performance, validation and compliance (20 GHz +)
D9010AGGC	Compliance test software measurement server license
AE6920T	Automotive Ethernet Tx Compliance Software 10 M to 10 Gbps (13 GHz +)
AE6910T	Automotive Ethernet Tx Test Software 10 M to 5 Gbps
AE2000T	Automotive SerDes Transmit Compliance Test Solution (MIPI A-PHY, ASA)

Software Licensing and KeysightCare Compliance Software Support Subscriptions

Each of the Infiniium compliance software options are offered as various software licensing options. Choose your license term, type, and support contract for each software product.

Select your software license:

1. Choose your software product (for example: D9040DPPC).
2. Choose your license term: perpetual or subscription.
 - a. **Perpetual** – Perpetual licenses can be used indefinitely.
 - b. **Subscription** – Subscription licenses can only be used through the term of the license (6, 12, 24, or 36 months license options available).
3. Choose your license type: node-locked, transportable, USB portable, or floating.
 - a. **Node-locked** – License can be used on one specified instrument/computer.
 - b. **Transportable** – License can be used on one instrument/computer at a time but may be transferred to another using Keysight Software Manager (Internet connection required).
 - c. **USB portable** – License can be used on one instrument/computer at a time but may be transferred to another using a certified USB dongle (available for additional purchase with Keysight part number E8900-D10).
 - d. **Floating (single site)** – Networked instruments/computers can access a license from a server one at a time. Multiple licenses can be purchased for concurrent usage.
4. Choose your support subscription duration.
 - a. Perpetual licenses are sold with a **12 (default), 24, 36, or 60-month software support subscription**. Support subscriptions can be renewed for a fee after that.
 - b. Subscription licenses include a **software support subscription through the term of the license**.

More Information

Thank you for choosing a Keysight Infiniium V-Series Oscilloscope. The Keysight Infiniium V-Series oscilloscopes set a new standard for real-time oscilloscope accuracy, with models ranging from 8 to 30 GHz. Extreme signal integrity, and ultra-low noise floor specifications allow for the truest representation of signals. Invest with confidence today, knowing you have the ability to meet the needs of technology advancements tomorrow. For more information on the V-Series, check out the following:

- [Infiniium V-Series Data Sheet](#)
- [Infiniium V-Series Product Fact Sheet](#)
- [Infiniium Oscilloscope Probes and Accessories](#)
- [Infiniium V-Series Technical Overview](#)

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications, or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

