

# InfiniiVision Software Ordering Guide


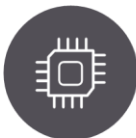





## Transitioning to the New Packages

This document is designed to introduce our latest subscription-based software models to Keysight InfiniiVision Oscilloscope customers and provide a configuration instruction.



## New Software Products

In June 2019, InfiniiVision Oscilloscope Software will begin a transition to Keysight's New Software Management product structure, support and licensing scheme. The new product structure affords customers flexibility in their purchasing, consistency across all product lines when placing orders, and a more robust support plan worldwide. This document will attempt to aid the transition from the old scheme to the new. Specific to InfiniiVision series, this transition will significantly simplify the product offering from "options" to 7 packages.

<u>Automotive</u>		<u>Embedded</u>		<u>USB</u>		<u>Ultimate Bundle</u>
						
<b>Dx000AUTA</b>	<b>Aerospace &amp; Defense</b>	<b>Dx000GENA</b>	<b>Power</b>	<b>Dx000USBA</b>	<b>NFC</b>	<b>Dx000BDLA</b>
CAN (.dbc symbolic) CAN-FD (.dbc sym) LIN (.ldf symbolic) SENT CXPI FlexRay User-definable Manchester User-definable NRZ Mask Limit Test FRA (Bode)	 MIL-STD 1553 ARINC 429 Video Analysis Mask Limit Test FRA (Bode)	I <sup>2</sup> C SPI UART/RS232/485 Audio/I <sup>2</sup> S USB-PD Video Analysis Mask Limit Test FRA (Bode)	 Power Analysis USB-PD Mask Limit Test FRA (Bode)	USB 2.0 Full/Low USB 2.0 Hi-speed USB-PD USB 2.0 Signal Quality Jitter Analysis (6000X only) Mask Limit Testing FRA (Bode)	 NFC Trigger NFC Automated Test Resonant Frequency	Dx000AUTA Dx000AERA Dx000GENA Dx000PWRA Dx000USBA Dx000NFCA

## The Benefit

Currently, Keysight offers a broad selection of hardware and software products. The new structure streamlines and standardizes software ordering and support models across the company. With our legacy software model, there was no promise that Keysight would make improvements, fix bugs, or otherwise support products once they were launched. It also forced customers to use capital expense to purchase something they may only need in the short term for one project. With the new software structure, we offer much more flexibility. Customers have the flexibility to choose what's best for their needs and budget. For example, perpetual or time-based license terms, and the support subscription period (6, 12, 24, 36, or 60 months depending on license term). Customers can renew the support subscription for a perpetual license allowing software costs to be operating expenses instead.

In summary, customers should be excited because:

- Financial flexibility: yearly or permanent, CAPEX or OPEX
- Access to support, with ensured response times (during their selected subscription period)
- Licensing structure will be the same for all Keysight products

## Automotive Software Packages

The Automotive Software Package for Keysight's InfiniiVision oscilloscopes enables protocol triggering and decode for a broad range of the most common automotive serial buses used today for power train and body control and monitoring. This package also enables other advanced analysis capabilities including eye-diagram mask testing and frequency response analysis to help test and debug automotive electronic systems.

InfiniiVision Series:		2000A	3000A	3000T	4000A	6000A	P9240	M9240
Automotive Package Model Number:		D2000AUTA	D3000AUTA	D3000AUTA	D4000AUTA	D6000AUTA	P9240AUTB	M9240AUTB
Serial Trigger & Decode	CAN <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓
	CAN FD <sup>1</sup>			✓	✓	✓	✓	✓
	LIN <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓
	FlexRay		✓	✓	✓	✓		
	SENT			✓	✓	✓	✓	✓
	PSI5 (User-definable Manchester)			✓	✓	✓	✓	✓
	User-definable NRZ			✓	✓	✓	✓	✓
	CXPI			✓	✓	✓	✓	✓
Advanced Analysis	Mask Test <sup>3</sup>	✓	✓	✓	✓	✓	✓	✓
	Frequency Response Analysis			✓	✓	✓	✓	✓
	Advanced Math	Std	✓	Std	Std	Std	Std	Std

## Aero Software Packages

The Aero Software Package for Keysight's InfiniiVision oscilloscopes enables protocol triggering and decode for the MIL-STD 1553 and ARINC 429 serial buses. This package also enables other advanced analysis capabilities including eye-diagram mask testing and frequency response analysis (FRA) to help test and debug electronic systems found in the aerospace & defense industries.

InfiniiVision X-Series:		3000A	3000T	4000A	6000A	P9240	M9240
Aero Package Model Number:		D3000AERA	D3000AERA	D4000AERA	D6000AERA	P9240AERB	M9240AERB
<b>Serial Trigger &amp; Decode</b>	MIL-STD 1553	✓	✓	✓	✓	✓	✓
	ARINC 429	✓	✓	✓	✓	✓	✓
<b>Advanced Analysis</b>	Mask Test	✓	✓	✓	✓	✓	✓
	Frequency Response Analysis (Bode plots)		✓	✓	✓	✓	✓
	Enhanced HDTV Video Triggering & Analysis	✓	✓	✓	✓	✓	✓
	Advanced Math	✓	Std	Std	Std	Std	Std

## Embedded Software Packages

The Embedded Software Package for Keysight's InfiniiVision oscilloscopes enables protocol triggering and decode for a broad range of the most common serial buses used today for embedded and mixed-signal designs. This package also enables other advanced analysis capabilities including mask testing and frequency response analysis to help test today's electronic designs.

InfiniiVision Series:		2000A	3000A	3000T	4000A	6000A	P9240	M9240
<b>General-purpose Package Model Number:</b>		D2000GENA	D3000GENA	D3000GENA	D4000GENA	D6000GENA	P9240GENB	M9240GENB
<b>Serial Trigger &amp; Decode</b>	I <sup>2</sup> C	✓	✓	✓	✓	✓	✓	✓
	SPI	✓	✓	✓	✓	✓		
	UART (RS-232/485)	✓	✓	✓	✓	✓	✓	✓
	I <sup>2</sup> S (Audio)		✓	✓	✓	✓		
	USB-PD			✓	✓	✓	✓	✓
<b>Advanced Analysis</b>	Mask Test	✓	✓	✓	✓	✓	✓	✓
	Frequency Response Analysis (Bode Plots)			✓	✓	✓	✓	✓
	Enhanced HDTV Video Test		✓	✓	✓	✓	✓	✓
	Advanced Math	Std	✓	Std	Std	Std	Std	Std

## Power Software Packages

The Power Software Package for Keysight's InfiniiVision oscilloscopes enables a broad range of automated power supply characterization measurements including critical frequency response measurements such as power supply rejection ratio (PSRR) and control loop response. This package also enables hardware-based pass/fail mask testing and USB PD triggering and decode.

InfiniiVision Series:		3000A	3000T	4000A	6000A	M9240	
Power Package Model Number:		D3000PWRA	D3000PWRA	D4000PWRA	D6000PWRA	M9240PWRB	
Power Supply Characterization Measurements	Input Analysis	Real power	✓	✓	✓	✓	✓
		Apparent power	✓	✓	✓	✓	✓
		Reactive power	✓	✓	✓	✓	✓
		Power factor	✓	✓	✓	✓	✓
		Crest factor (V&I)	✓	✓	✓	✓	✓
		Phase angle	✓	✓	✓	✓	✓
		Current harmonics	✓	✓	✓	✓	✓
		Inrush current	✓	✓	✓	✓	✓
	Switching Device Analysis	Switching loss	✓	✓	✓	✓	✓
		R <sub>DS(ON)</sub>	✓	✓	✓	✓	✓
		V <sub>CE(SAT)</sub>	✓	✓	✓	✓	✓
		Slew rate (V&I)	✓	✓	✓	✓	✓
		Modulation analysis	✓	✓	✓	✓	✓
		Auto probe deskew	✓	✓	✓	✓	✓
	Output Analysis	Output ripple	✓	✓	✓	✓	✓
		Turn on/off time	✓	✓	✓	✓	✓
		Efficiency	✓	✓	✓	✓	✓
		Transient response	✓	✓	✓	✓	✓
	Frequency Response Analysis	PSRR		✓	✓	✓	✓
		Control loop response		✓	✓	✓	✓
Frequency Response Analysis (Bode plots)			✓	✓	✓	✓	
Other Advanced Analysis Capabilities	USB PD (Power Delivery) Trigger & Decode		✓	✓	✓	✓	
	Mask Test	✓	✓	✓	✓	✓	
	Advanced Math	✓	Std	Std	Std	Std	

## NFC Software Packages

Keysight's low-cost near field communication (NFC) test solution consists of an InfiniiVision X-Series oscilloscope, Trueform waveform generator, programmable 3-in-1 NFC reference antenna (poller, listener, and resonant frequency coils), and PC-based NFC compliance test software that performs thorough analog testing of NFC-enable devices. All 4-channel InfiniiVision 3000T and 4000 X-Series oscilloscopes (DSO or MSO models) are compatible with performing NFC compliance testing.

Test	NFC-A	NFC-B	NFC-F (212 kbps)	NFC-F (424 kbps)	NFC-V
<b>Listener mode tests</b>					
Overall Pass/Fail	✓	✓	✓	✓	✓
Frame delay time (FTD)	✓	✓	✓	✓	✓
Load modulation amplitude (LMA)	✓	✓	✓	✓	✓
Response data	✓	✓	✓	✓	✓
<b>Poller mode tests</b>					
Overall Pass/Fail	✓	✓	✓	✓	✓
t1	✓				✓
t2	✓				✓
t3	✓				✓
t4	✓				✓
t5	✓				✓
Data rate	✓	✓	✓	✓	✓
Field strength (Vov)	✓	✓	✓	✓	✓
Carrier frequency (Fc)	✓	✓	✓	✓	✓
Modulation depth	✓	✓	✓	✓	✓
Modulation index	✓	✓	✓	✓	✓
Response data	✓	✓	✓	✓	✓
Overshoot	✓	✓	✓	✓	✓
Undershoot		✓	✓	✓	
Rise time (tr)		✓	✓	✓	
Fall time (tf)		✓	✓	✓	
<b>Resonant frequency test</b>					
Frequency at highest return loss	✓	✓	✓	✓	✓

## USB Software Packages

The USB Software Package for Keysight's InfiniiVision oscilloscopes enables USB 2.0 low-, full-, and hi-speed protocol triggering and decode, as well as USB PD (Power Delivery) trigger and decode. This package also enables other advanced analysis capabilities including USB 2.0 automated signal quality testing, jitter analysis, mask testing, and frequency response analysis (Bode plots) to help test and debug high-speed digital signals, such as USB 2.0.

InfiniiVision Series:		4000A	6000A
USB Package Model Number:		D4000USBA	D6000USBA
<b>Serial Trigger &amp; Decode</b>	USB 2.0 Low- & Full-speed	✓	✓
	USB 2.0 Hi-speed <sup>1</sup>	✓	✓
	USB PD (Power Delivery)	✓	✓
<b>Advanced Analysis Capabilities</b>	USB 2.0 Signal Quality Test <sup>2</sup>	✓	✓
	Jitter Analysis		✓
	Mask Test	✓	✓
	Frequency Response Analysis	✓	✓

1. USB 2.0 hi-speed trigger & decode supported on  $\geq$  1-GHz bandwidth models only.

2. USB 2.0 hi-speed signal quality tests on  $\geq$  1.5-GHz bandwidth models only.



## Ultimate Software Packages

The Ultimate Bundle Software Package bundles all the serial bus protocol trigger & decode capabilities, as well as all the advanced measurement capabilities of the individual licensed industry/application software packages (Auto, Power, Aero, USB, and Embedded). In addition, this package enables the NFC trigger and automated NFC test software.

InfinitiVision Series:			2000A	3000A	3000T	4000A	6000A	P9240	M9240
Ultimate Package Model Number:			D2000BDLA	D3000BDLA	D3000BDLA	D4000BDLA	D6000BDLA	P9240BDLB	M9240BDLB
Serial Trigger & Decode	I <sup>2</sup> C		✓	✓	✓	✓	✓	✓	✓
	SPI	Embedded Package	✓	✓	✓	✓	✓		
	UART		✓	✓	✓	✓	✓	✓	✓
	I <sup>2</sup> S			✓	✓	✓	✓		
	CAN		✓	✓	✓	✓	✓	✓	✓
	CAN FD				✓	✓	✓	✓	✓
	LIN		✓	✓	✓	✓	✓	✓	✓
	FlexRay	Auto Package		✓	✓	✓	✓		
	SENT				✓	✓	✓	✓	✓
	PSI5 (User-definable Manchester)					✓	✓	✓	✓
	User-definable NRZ				✓	✓	✓	✓	✓
	CXPI				✓	✓	✓	✓	✓
	MIL-STD 1553	Aero Package		✓	✓	✓	✓	✓	✓
	ARINC 429			✓	✓	✓	✓	✓	✓
	USB-PD	USB/Pwr/Embd			✓	✓	✓	✓	✓
	USB low & full-speed					✓	✓		
USB hi-speed <sup>1</sup>	USB Package				✓	✓			
USB Signal Quality Test					✓	✓			
Jitter Analysis						✓			
Power Analysis	Power Package		✓	✓	✓	✓		✓	
Mask Test		✓	✓	✓	✓	✓	✓	✓	
Frequency Response Analysis	All Packages			✓	✓	✓	✓	✓	
Advanced Math		Std	✓	Std	Std	Std	Std	Std	
Enhanced HDTV Video Test	Embedded/Aero		✓	✓	✓	✓	✓	✓	
NFC Trigger and Automated Test <sup>2</sup>	N/A			✓	✓		✓	✓	

1. USB hi-speed trigger & decode available in ≥ 1-GHz bandwidth models only.

2. NFC trigger available on the P9240 and M9240 Series, but automated NFC test software not compatible with these Series

## Ordering Information

### Compatibility requirements

New InfiniiVision software structure will be based on new released firmware 7.30 and 2.50.

New InfiniiVision Firmware Versions	Product Family
Firmware 7.30+	InfiniiVision 3000T, 4000A, 6000A and P924x series
Firmware 2.50+	InfiniiVision 2000A, 3000A X-series

## Flexible Software Licensing and KeysightCare Software Support Subscriptions

Keysight offers a variety of flexible licensing options to fit your needs and budget. Choose your license term, license type, and KeysightCare software support subscription.

### License Terms

**Perpetual** – Perpetual licenses can be used indefinitely.

**Time-based** – Time-based licenses can be used through the term of the license only (6, 12, 24, or 36 months).

### License Types

**Node-locked** – License can be used on one specified instrument/computer.

**Transportable (M9240 Series only)** – License can be used on one instrument/computer at a time but may be transferred to another using Keysight Software Manager (internet connection required).

### KeysightCare Software Support Subscriptions

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.

Time-based licenses include a software support subscription through the term of the license.

### KeysightCare Software Support Subscription provides peace of mind amid evolving technologies.

- Ensure your software is always current with the latest enhancements and measurement standards.
- Gain additional insight into your problems with live access to our team of technical experts.
- Stay on schedule with fast turnaround times and priority escalations when you need support.

## Selecting your license

1. Choose your software product (eg. D3000AUTA).
2. Choose your license term: perpetual or time-based.
3. Choose your license type: node-locked or transportable (available for the M9240 Modular Series oscilloscopes only).
4. Depending on the license term, choose your support subscription duration.

## Examples

If you selected:	Your quote will look like:	
D3000GENA node-locked perpetual license with a 12-month support subscription	<b>Part Number</b>	<b>Description</b>
	D3000GENA	Embedded Analysis Software for 3000 X-Series
	R-B5J-001-A	Node-locked perpetual license
	R-B6J-001-L	12-month software support subscription
M9240GENB transportable time-based 6-month license	<b>Part Number</b>	<b>Description</b>
	M9240GENB	Embedded Analysis Software for M924xA oscilloscopes
	R-B4N-004-F	6-month time-based, transportable license with software support subscription

To configure your product and request a quote:

<http://www.keysight.com/find/software>

Contact your Keysight representative or authorized partner for more information or to place an order:

[www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)

## FAQs and Resources

### What are the benefits?

You now have the flexibility to choose what's best for your needs and budget. For example, you are not limited to buying a license that is perpetually locked to one instrument – now you can, for example, purchase a time-based license that can be used for 6 months until the project is ended. This can help you save on software costs for short term projects or set your software costs on a recurring subscription instead of a costly one-time purchase.

With our recurring support subscription, software updates with enhancements and bug fixes are also guaranteed, along with ensured and tracked response times on all technical support inquiries for the duration of the support subscription.

### How can you convert your legacy software to the new software?

Keysight is offering an upgrade program for existing customers with legacy licenses on their products. They will only need to pay for 12 months of support to upgrade to the new software model that corresponds to their existing software. For many, this will be an excellent option since our new software products contain multiple licenses rolled into one!

There are a few options: you can press “Start my Upgrade” and fill in your own license info. We will then generate a quote for the support, and when the order is placed, generate your new license. You can also press “contact me” and enter in your company and Keysight contact information, and we'll take care of the rest.

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

