## InfiniiVision 2000 & 3000 X-Series Oscilloscope Measurement Options

Agilent offers a variety of application-specific measurement options and PC-based software packages for the InfiniiVision 2000 and 3000 X-Series oscilloscopes that can make debugging and characterizing your designs more efficient.





# Serial bus options (3000 X-Series models only)

With one or more of the serial bus options on your Agilent InfiniiVision 3000 X-Series oscilloscope, your scope will automatically decode and trigger on serial bus traffic based on the specific protocol. The following serial busses are supported:

- I<sup>2</sup>C/SPI
- RS232/UART
- · CAN/LIN
- FlexRay
- I<sup>2</sup>S
- Mil-STD 1553/ARINC 429

With the industry's only hardware-based decoding, the waveforms and decoding are virtually real time. This insures that infrequent serial communication errors are quickly captured. Up to two serial busses can be decoded simultaneously with the industry's only time-interleaved "lister" display.

For more information, refer to the InfiniiVision X-Series Serial Bus Applications data sheet (5990-6677EN).

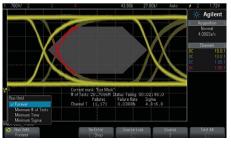


## Segmented memory option

When capturing low-duty cycle pulses or data bursts, segmented memory acquisition can be used to **optimize acquisition memory** by selectively capturing and storing important segments of signals without consuming memory on unimportant signal idle/dead-time.

Record up to 1000 occurrences of a trigger event and then play them back to easily spot anomalies for further examination. Segmented memory acquisition is ideal for applications including:

- · Pulsed laser
- · Radar bursts
- · High-energy physics experiments
- · Serial bus packets



### Mask testing option

Whether performing pass/fail tests to specified standards in the manufacturing test environment, or testing for infrequent signal anomalies in the R&D debugging environment, the mask test option on Agilent's InfiniiVision 2000 and 3000 X-Series oscilloscopes can be a valuable productivity tool. With the oscilloscope industry's only hardware-based mask testing, up to 200,000 waveforms can be tested each second on 3000 X-Series models, and up to 50,000 tests per second can be performed on the 2000 X-Series models.



#### MSO option

A mixed signal oscilloscope (MSO) is a synergistic combination of an oscilloscope with 2 or 4 channels of analog acquisition along with an easy-to-use logic timing analyzer with 8 or 16 channels of digital acquisition. Not only does an MSO provide additional channels of acquisition, it also enables additional parallel pattern and serial bus triggering possibilities to help you debug your digital and mixed-signal designs faster.

Although you can initially purchase an InfiniiVision 2000 or 3000 X-Series oscilloscope as a pre-configured MSO model, you can also upgrade your existing DSO to add MSO acquisition and display capabilities.



# InfiniiVision 2000 & 3000 X-Series Oscilloscope Measurement Options



## WaveGen Function/Arbitrary Waveform Generator option (AWG available in 3000 X-Series models only)

When you need to make stimulus-response measurements, the WaveGen option adds a built-in 20-MHz function generator. Wave shapes available on the InfiniiVision 2000 X-Series oscilloscope includes sine, square, pulse, ramp, noise, and DC.

The WaveGen option on the InfiniiVision 3000 X-Series oscilloscope includes additional wave shapes including sinc, exponential rise/fall, cardiac, Gaussian pulse, and arbitrary.

Arbitrary waveforms (3000 X-Series models only) can be edited and created in multiple wavs:

- Directly transfer a scope waveform into arbitrary waveform memory.
- Create a new arbitrary waveform using the built-in editor in the scope.
- Create an arbitrary waveform using Agilent's BenchLink Waveform Builder software.
- Import a previously stored, commaseperated (.CSV), waveform file.



# Power measurements option (3000 X-Series models only)

When working with switching power supplies and power devices, the DSOX3PWR power measurements application provides a full suite of power measurements and analysis that runs in the oscilloscope. Measurements include:

- · Current harmonics
- Efficiency
- · Inrush current
- Modulation
- · Power quality
- · Switching loss
- Transient response
- · Turn on/Turn off
- Output ripple
- Power supply rejection ratio (PSRR)
- · Slew rate

Also included, at no additional charge, is a license for the U1881A PC-based power analysis software package that provides additional offline power measurements and report generation. For more information, refer to the Power Measurements for Agilent InfiniiVision 3000 X-Series oscilloscope data sheet (5990-6619EN).

Measurement option	Compatible scope models	Option model number
I <sup>2</sup> C/SPI trigger and decode	3000 X-Series	DS0X3EMBD
RS232/UART trigger and decode	3000 X-Series	DS0X3C0MP
CAN/LIN trigger and decode	3000 X-Series	DS0X3AUT0
Flexray trigger and decode	3000 X-Series	DS0X3FLEX
I <sup>2</sup> S trigger and decode	3000 X-Series	DS0X3AUDI0
MIL-STD 1553/ARINC 429 trigger and decode	3000 X-Series	DS0X3AER0
Segmented memory	2000 and 3000 X-Series	DSOX2SGM or DSOX3SGM
Mask test	2000 and 3000 X-Series	DSOX2MASK or DSOX3MASK
WaveGen function/AWG (AWG available only in the 3000 X-Series)	2000 and 3000 X-Series	DS0X2WAVEGEN or DS0X3WAVEGEN
Power measurements	3000 X-Series	DS0X3PWR
HDTV video triggering	3000 X-Series	DS0X3VID
Advanced math analysis	3000 X-Series	DS0X3ADVMATH
Education training kit	2000 and 3000 X-Series	DSOXEDK
MSO	2000 and 3000 X-Series DSOs	DS0X2MS0 or DS0X3MS0