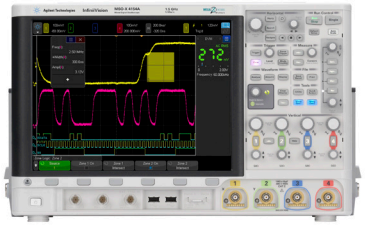
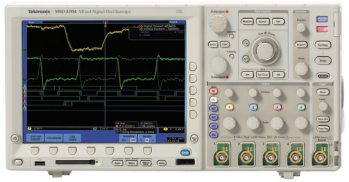
Competitive Comparison: Agilent InfiniiVision 4000 X-Series versus Tektronix 4000B Series Oscilloscope

Imagine an oscilloscope that sees everything, triggers on anything, has the ease-of-use of a tablet device...and grows with your projects.
The new 4000 X-Series oscilloscopes are engineered for next-generation performance, delivering waveform update rates 20 times faster than the competition to display the most signal detail. An industry-leading 12.1-inch capacitive touch screen with innovative hardware based InfiniiScan Zone touch triggering provides the most intuitive and responsive oscilloscope measurements. Coupled with a fully upgradable 5-instruments-in-1, the 4000 X-Series provide maximum investment protection.

It's without a doubt the best embedded-operating system oscilloscope in the market today.





InfiniiVision 4000 X-Series:

Oscilloscope experience redefined

- 12.1 inch capacitive touch display
- InfiniiScan Zone touch trigger
- 1,000,000 wfm/sec
- Standard segmented memory
- Bandwidth upgradable up to a class-leading 1.5 GHz
- Fully upgradable 5 instrument in 1
  - Analog channels
  - Digital channels (MSO)
  - Protocol analysis
  - Dual-channel WaveGen
  - Digital voltmeter (DVM)
- InfiniiView oscilloscope analysis software

Agilent-designed *MegaZoom* IV custom ASIC technology powers the fastest waveform update rates, responsive deep memory, integrated MSO, integrated industry-exclusive WaveGen, and integrated protocol analyzer.

	Agilent 4000 X-Series		Tektronix 4000B Series	
Bandwidth	200/350/500 MHz, 1/1.5 GHz	√	100/350/500 MHz, 1 GHz	x
Channels	2 or 4 analog + 16 digital	√	2 or 4 analog + 16 digital	√
BW and MSO upgrade	Yes	√	Not available	x
Sample rate	5 GSa/s	√	5 GSa/s	√
Standard memory depth	4 Mpts	x	20 Mpts	√
Segmented memory	Standard	√	Not available	x
Display size	12.1 inch	√	10.4 inch	x
Touch screen	Capacitive touch display	√	Not available	x
Waveform update rate (analog only)	> 1,000,000 wfm/s	√	> 55,000 wfm/s	x
Waveform update rate (with digital)	> 1,000,000 wfm/s	√	> 114 wfm/s	x
Hardware based zone trigger	InfiniiScan Zone touch trigger	√	Not available	x
WaveGen	Option, Dual-channel WaveGen	√	Not available	x
Integrated digital voltmeter	Option	√	Not available	x
Serial decode options	10 Options	√	10 Options	√
Hardware based serial decode and mask test	Yes	√	No, software post processing	x
Measurements	35, 10 simultaneously, cursor gating	√	29, 8 simultaneously, cursor gating	√
Math functions	Standard adv. math, Up to 4 cascades	√	Standard adv. math, equation editor	√
USB keyboard & mouse	Keyboard and mouse	√	Keyboard only	x
Standard passive probe	700 MHz passive	x	1 GHz passive	√
System bandwidth with passive probe	700 MHz for ≥ 1 GHz models	√	780 MHz for 1 GHz models	√
System bandwidth with 1 GHz active probe	1 GHz (rise time = 350 ps)	√	1 GHz (rise time = 350 ps)	√
Offline analysis software	Yes, N8900A InfiniiView	√	Not available	x

Anticipate ___Accelerate ___Achieve

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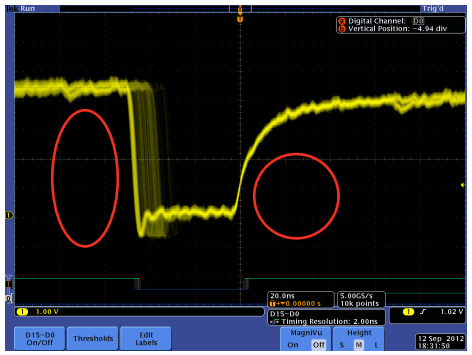
Experience the speed

With one million wfm/sec update rate:

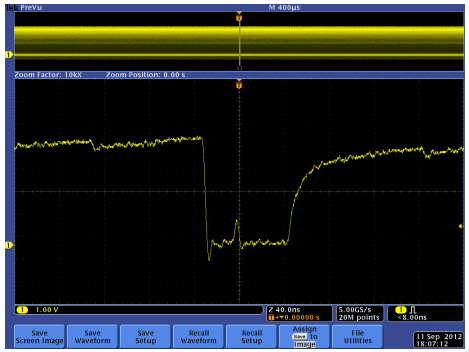
Both analog and digital channels are turned on. Many infrequent glitches and metastable signals were observed after 10 second of acquisition on the 4000 X- Series.



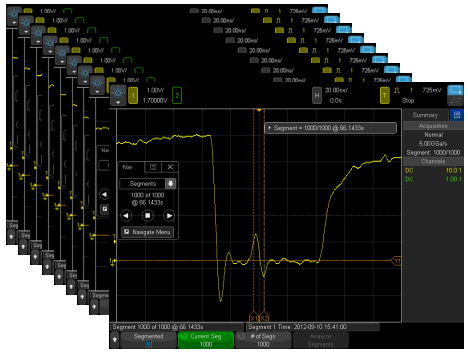
Both analog and digital channels are turned on. Even after 60 seconds of acquisition, Tektronix 4000B failed to capture any glitches or metastable signals.

> 1,000,000 waveforms per second update rate allows you to see infrequent events and subtle signals details that the Tektronix 4000B will miss. Because of the uncompromised MegaZoom IV memory architecture, the 4000 X-Series won't slow down even with digital channels, protocol decoding, measurements, and math functions turned on.

With the standard MegaZoom IV segmented memory:



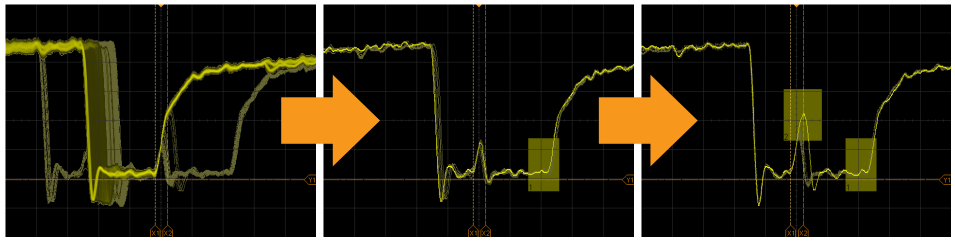
At 5 GS/s and 20 Mpts, a traditional memory architecture scope like the Tektronix 4000B can only capture 4 ms of signals. This may be able to capture 1 glitch, but certainly not to analyze inter-glitch timing correlations which are multi-milliseconds apart.



Optimized and efficient segmented memory architecture in the 4000 X-Series selectively captures critical signal details over 66 seconds at 5 GSa/s. It not only captures 1,000 metastable signals, but reveals critical delta time relationships among them.

Experience the usability

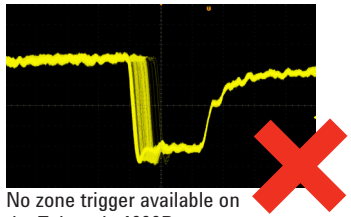
With the InfiniiScan Zone touch trigger and 12.1 inch capacitive touch screen:



With the InfiniiScan Zone touch trigger, if you can see it, you can trigger on it.

It is as simple as, finding the signal and drawing the zone. The metastable signal is isolated immediately.

Add a second zone to further isolate glitches above the logical threshold.



No zone trigger available on the Tektronix 4000B.

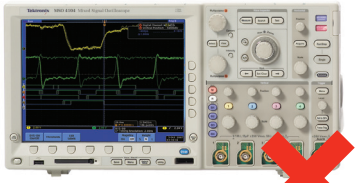
Three-Year Warranty

www.agilent.com/find/ThreeYearWarranty

Agilent's combination of product reliability and three-year warranty coverage is another way we help you achieve your business goals: increased confidence in uptime, reduced cost of ownership and greater convenience.

Experience the integration

With class' only fully upgradable 5 instruments in 1:



Bandwidth upgrade, MSO upgrade, dual-channel WaveGen, and DVM are not available with Tektronix 4000B.

Best-in-class oscilloscope

- Standard features like InfiniiScan Zone, segmented memory, advanced math, advanced triggers, and class-leading 1.5 GHz bandwidth and 12.1 inch capacitive touch screen.

Protocol analysis

- Provides hardware based protocol-aware triggering decode, search, and navigation for serial buses.

Logic timing analyzer (MSO)

- Ideal for R&D engineers and education institutes who need more than the traditional 2 or 4 analog channels.

Industry-exclusive 20 MHz dual-channel WaveGen

- With a modulation feature, it is ideal for educational or design labs where bench space and budget are limited.

Integrated digital voltmeter

- Provides 3-digit DVM and 5-digit counter measurements through the same probes as the oscilloscope channels.

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