

# Agilent InfiniiVision 3000 X-Series versus Tektronix TDS3000C Oscilloscopes

Agilent's new 3000 X-Series oscilloscopes use breakthrough technology to deliver value, functionality and flexibility at prices that fit into existing budgets. Using an Agilent-designed *MegaZoom IV* Custom ASIC technology, the 3000 X-Series provides unprecedented signal visibility with over 1,000,000 waveforms per second. The 3000 X-Series is the industry's first 5-in-1 product with a full-featured scope, logic analyzer, protocol analyzer, a function/arbitrary waveform generator and integrated digital voltmeter all integrated into one design with a large, 8.5-inch display.



## InfiniiVision 3000 X-Series

- 1,000,000 waveforms per second
- 5 instruments in 1
- Fully upgradable

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 3000 X-Series   |        | Tektronix TDS3000C  |             |
|--|---|--------|---|-------------|
| Bandwidth  | 100 MHz, 200 MHz, 350 MHz, 500 MHz, 1 GHz   | ✓      | 100 MHz, 300 MHz, 500 MHz   | ✗           |
| Upgradable bandwidth                                   | Yes   | ✓      | Not available   | ✗           |
| Maximum sampling rate                                  | Up to 4 GSa/s <sup>1,2,3</sup><br>Up to 5 GSa/s <sup>2,4</sup>                            | ✓<br>✓ | Up to 1.25 GSa/s <sup>1</sup><br>Up to 2.5 GSa/s <sup>2</sup><br>Up to 5 GSa/s <sup>3</sup> | ✗<br>✗<br>✓ |
| Maximum memory depth                                   | 4 M   | ✓      | Up to 10 K  | ✗           |
| Display  | 8.5-inch WVGA (800 x 480)   | ✓      | 6.5-inch VGA (640 x 480)  | ✗           |
| Update rate  | > 1,000,000 wfms/s  | ✓      | 3,600 wfms/s  | ✗           |
| Mixed signal oscilloscope                              | Yes – 16 channels integrated  | ✓      | Not available   | ✗           |
| WaveGen built-in function/arbitrary waveform generator | Yes   | ✓      | Not available   | ✗           |
| Integrated Digital Voltmeter                           | Yes   | ✓      | No  | ✗           |
| Serial trigger, decode, search                         | I <sup>2</sup> C, SPI, RS232, CAN, LIN, MIL-STD 1553, ARINC 429, FlexRay I <sup>2</sup> S | ✓      | Not available   | ✗           |
| Hardware-based serial decode                           | Yes   | ✓      | No  | ✗           |
| Segmented memory                                       | Yes   | ✓      | Not available   | ✗           |
| Hardware-based mask test                               | Yes – up to 240,000 tests per second  | ✓      | Not available   | ✗           |

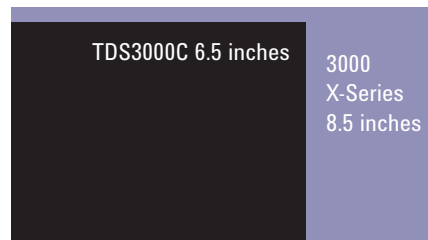
1. 100 MHz 2. 300/350 MHz  
3. 500 MHz 4. 1 GHz



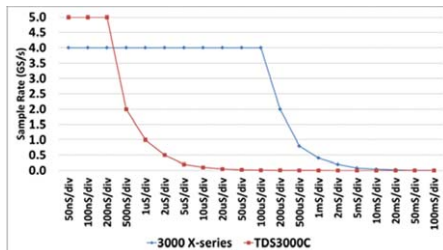
## See more

Of your signal, more of the time:

- An 8.5-inch WVGA display offers 50% more viewing area and 25% more resolution versus a 6.5-inch VGA display
- > 1,000,000 waveforms per second update rate allows you to see infrequent events and subtle signal details that the TDS3000C will miss
- Memory depth up to 4 M (400x the TDS3000C) allows you to keep your sample rate high at longer time/division settings



8.5-inch WVGA display offers 50% more viewing area and 25% more resolution



400x the memory allows you to keep sample rates higher on longer time/div settings

## Do more

With the power of 5 instruments in 1:

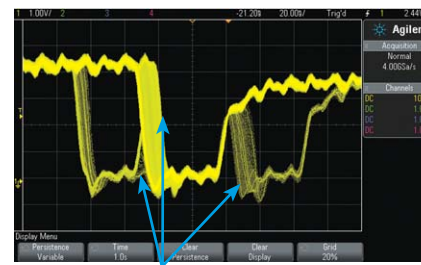
- **Best-in-class oscilloscope**  
Provides features not normally found in this class of scope such as a large display, deep memory, and powerful triggering
- **Protocol analyzer**  
Provides protocol-aware triggering, decode, search, and navigate for serial buses.
- **Logic timing analyzer (MSO)**  
Ideal for R&D engineers on a tight budget who need more than the traditional 2 or 4 analog channels.
- **Industry-exclusive WaveGen built-in 20 MHz function/arbitrary waveform generator**  
Ideal for educational or design labs where bench space and budget are limited
- **Integrated Digital Voltmeter**  
Provides a 3-digit voltmeter measurements (DVM) and 5-digit counter measurements inside the oscilloscope. The voltmeter operates through the same probes as the oscilloscope channels

## Get more

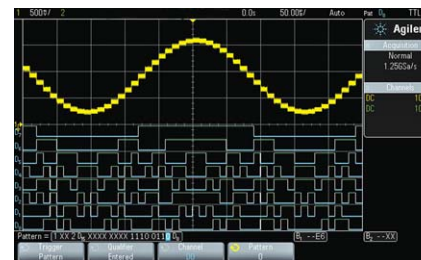
Investment protection and productivity:

- Upgradable bandwidth
- Upgradable MSO
- Upgradable memory
- Upgradable WaveGen 20 MHz built-in function/arbitrary waveform generator
- Upgradable Digital Voltmeter
- Optional measurement applications

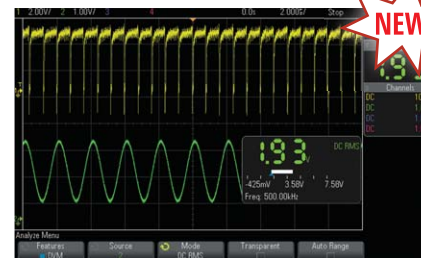
Buy only what you need today. Simple, after purchase upgrades protect your investment and allow you to enhance your equipment as your needs change.



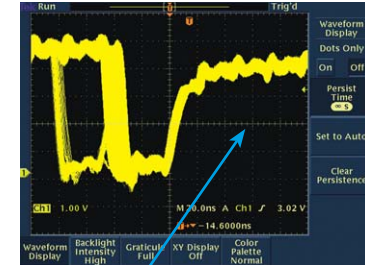
Infrequent glitches and signal jitter captured after 1 second on 3000 X-Series with > 1,000,000 wfms/s



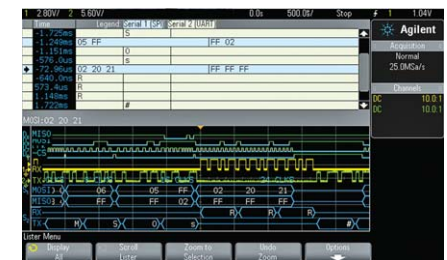
3000 X-Series MSO adds 16 integrated digital channels for extra triggering and analysis; DSO models are customer-upgradable to MSO models



Integrated digit voltmeter (DVM) allows you to characterize signals independent of the scopes triggering system.



TDS3000 after 40 seconds—it never sees the glitch due to its slower update rate



3000 X-Series protocol-aware triggering, decode, search, and navigate for serial buses; hardware-based to maintain fast waveform update rates and capture elusive events

[www.agilent.com](http://www.agilent.com)  
[www.agilent.com/find/3000X-Series](http://www.agilent.com/find/3000X-Series)

Product specifications and descriptions in this document subject to change without notice.