

## Competitive Comparison

# Keysight InfiniiVision 3000 X-Series versus Rohde & Schwarz RTM Series Oscilloscopes



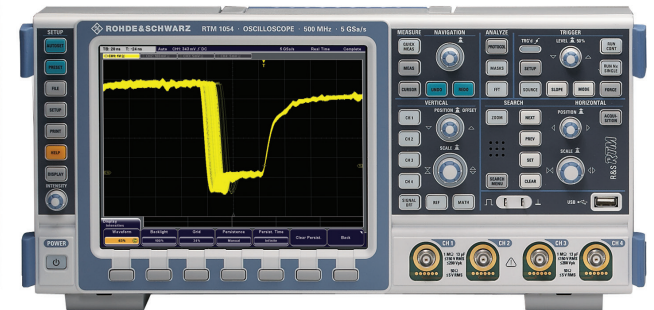
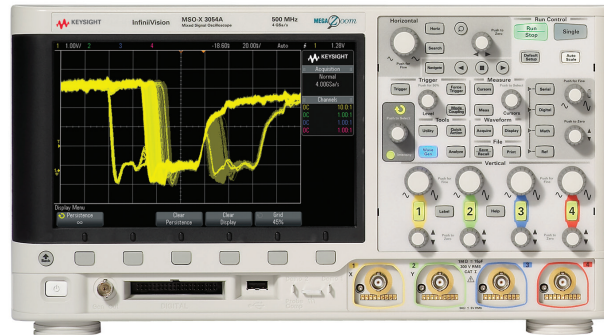
### It's five instruments in one

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

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



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



	Keysight 3000 X-Series		Rohde & Schwarz RTM Series	
Bandwidth	100 MHz, 200 MHz, 350 MHz, 500 MHz, 1 GHz	✓	500 MHz	x
Upgradable bandwidth	Yes	✓	Not available	x
Maximum sampling rate	Up to 5 GSa/s (1 GHz)	✓	Up to 5 GSa/s	✓
	Up to 4 GSa/s (100/200/350/500 MHz)	x		
Maximum memory depth	Up to 4 M	x	Up to 8 M	✓
Display	8.5-inch WVGA	✓	8.4-inch XGA	✓
Update rate	> 1,000,000 wfms/s	✓	Up to 10,000 wfms/s	x
Mixed signal oscilloscope	Yes – 16 channels integrated	✓	Not available	x
Upgradable MSO	Yes	✓	Not available	x
Advanced triggering	Runt, setup/hold, rise/fall	✓	Not available	x
WaveGen built-in function/ arbitrary waveform generator	Yes	✓	No	x
Integrated digital voltmeter	Yes	✓	No	x
Serial trigger, decode	I <sup>2</sup> C, SPI, RS232, CAN, LIN, MIL-STD 1553, ARINC 429, FlexRay, I <sup>2</sup> S	✓	I <sup>2</sup> C, SPI 2/3/4 wire, RS232, CAN, LIN	✓
Hardware-based serial decode	Yes	✓	No	x
Serial lister	Yes – all serial options	✓	Not available on I <sup>2</sup> C/ SPI/ RS232	x
Knob per channel	Yes	✓	No	x
Starting price	Lower	✓	Higher	x

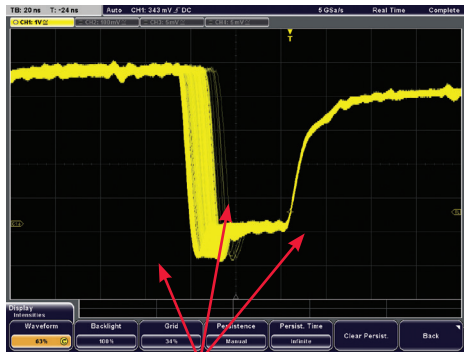
## See more

Of your signal, more of the time:

- > 1,000,000 waveforms per second update rate allows you to see infrequent events and subtle signal detail that the RTM will miss
- Hardware-accelerated serial decode ensures you don't miss infrequent errors



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



RTM after 20 seconds with  $\infty$  persist – it never sees the glitches and shows limited signal jitter due to slower update rate

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

## Do more

With the power of 5 instruments in 1:

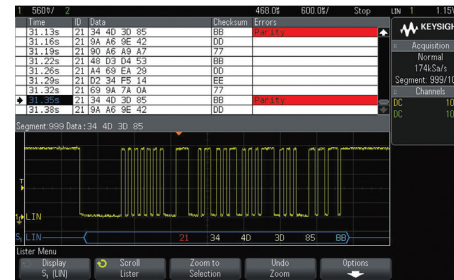
- Best-in-class oscilloscope**  
Provides features not normally found in this class of scope such as a large display, deep memory, and powerful triggering
- Protocol analyzer**  
Provides protocol-aware triggering, decode, search, and navigation for serial buses
- Logic timing analyzer (MSO)**  
Ideal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

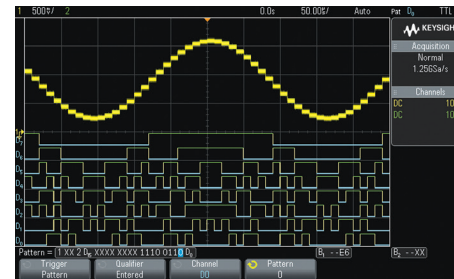
Investment protection and productivity:

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

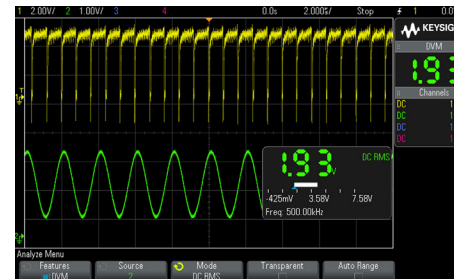
Buy only what you need today. Simple, after-purchase upgrades protect your investment and allow you to enhance your equipment as your needs change.



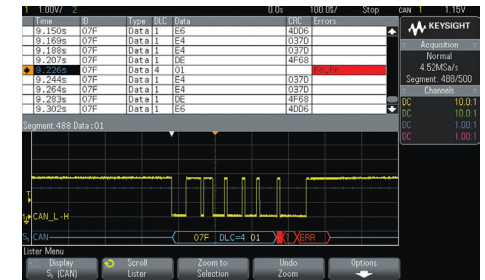
Infrequent LIN bus parity error captured on the 3000 X-Series in less than a second due to hardware-based serial decode



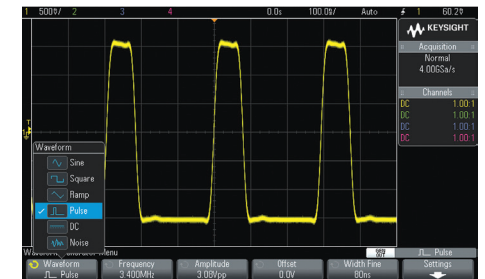
3000 X-Series MSO adds 16 integrated digital channels for extra triggering and analysis; DSO models are customer-upgradable to MSO models



Integrated digit voltmeter (DVM) allows you to characterize signals independent of the oscilloscope's triggering system



500 CAN serial packets over 9 seconds, captured at a high sample rate, using the 3000 X-Series's segmented memory



3000 X-Series industry-exclusive WaveGen function generator saves money and bench space

## KEYSIGHT SERVICES

Accelerate Technology Adoption. Lower costs.

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

Keysight Services helps you improve productivity and product quality with our comprehensive service offerings of one-stop calibration, repair, asset management, technology refresh, consulting, training, and more.