

MSO/DPO4000B Series vs. Agilent MSO/DSO3000 X-Series

Competitive Fact Sheet

Navigation and Search

Tektronix MSO/DPO4000B



- ✓ Wave Inspector® controls for easy scrolling through long records.
- ✓ Play/Pause button scrolls the waveform across the screen automatically.
- ✓ Search/Mark controls to find events of interest, mark them, then navigate through the record mark by mark.
- ✓ Manually mark events of interest.

Agilent MSO/DSO3000 X-Series



- ✗ Limited navigation buttons and multiplexed horizontal controls.
- ✓ Auto scrolling of horizontal position to scroll through data.
- ✗ No automated search for Setup/Hold, Logic/Pattern, and parallel buses.
- ✗ No manual marks.

Serial Triggering and Decode

Tektronix MSO/DPO4000B

Agilent MSO/DSO3000 X-Series

- ✓ **Serial Bus Support** – I²C, SPI, CAN, LIN, FlexRay, Ethernet, USB 2.0, RS-232/422/485/ UART, I²S/LJ/RJ/TDM, and MIL-STD-1553.
- ✓ **Bus Display** – View up to 4 serial buses simultaneously, positioned where you want.
- ✓ **Bus Decoding** – Decodes each packet on the bus and displays the value in hex, binary, decimal, or ASCII.
- ✓ **Serial Triggering** – Trigger on packet content.
- ✓ **Event Table** – View captured packets in a tabular listing view.
- ✓ **Bus Search** – Wave Inspector® navigation automatically searches for and marks user-defined events on packet content on the waveform.

- ✗ **Serial Bus Support** – I²C, SPI, CAN, LIN, RS-232/UART and I²S.
- ✗ **Bus Display** – View up to 2 serial buses, anchored at the bottom of the screen.
- ✗ **Bus Decoding** – Hardware decode of each packet on the bus in hex or binary only.
- ✓ **Serial Triggering** – Trigger on packet content.
- ✓ **Lister** – View captured packets in a tabular listing view. View 2 buses simultaneously.
- ✗ **Bus Search** – Automated search limited to lister table and a zoomed view of one event.

Key Specifications Comparison

	Tektronix MSO/DPO4000B Series		Agilent MSO/DSO3000 X-Series	
Channels	✓	2, 4 (+16 digital on MSO)	✓	2, 4 (+16 digital on MSO)
Bandwidth	✓	350 and 500 MHz, 1 GHz	✓	100, 200, 350, 500 MHz, 1 GHz
Max. Sample Rate (All channels on)	✓	5 GS/s (1 GHz non-L models) 2.5 GS/s (other models)	✗	2.5 GS/s (1 GHz models) 2 GS/s (100-500 MHz models)
Max. Record Length (All channels on)	✓	20 M points (non-L models) 5 M points (other models)	✗	250k (standard) 500k points (optional)
Display	✓	10.4-inch XGA	✗	8.5-inch WVGA
Navigation and Search	✓	Wave Inspector® controls	✗	Limited navigation buttons and multiplexed knobs
Standard Passive Probe	✓	1 GHz, <4 pF (1 GHz models) 500 MHz, <4 pF (other models)	✗	500 MHz, ~11 pF (350-500 MHz models) 150 – 300 MHz, ~12pF (other models)

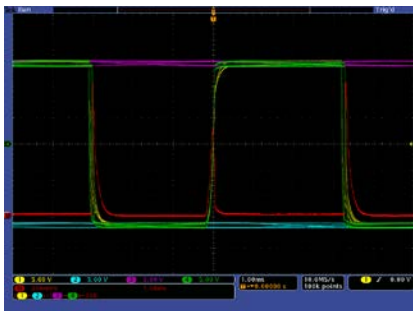
MSO/DPO4000B Series vs. Agilent MSO/DSO3000 X-Series

Competitive Fact Sheet

Measurements and Waveform Math

Tektronix MSO4000B

- ✓ Can use all the record length – up to 20 M points for measurements, averaging, and math, and up to 1 M for FFT.
- ✓ Advanced math with arbitrary expressions.
- ✓ Gate measurements by full record, screen/zoom, or cursors.



Agilent MSO3000 X-Series

- ✗ Uses only displayed points for measurements and math. FFT limited to 65,536 points.
- ✗ Limited standard math choices.
- ✗ No gating for measurements.

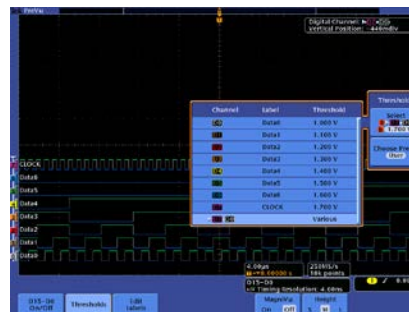


Measurements limited to screen or zoom window data.

Digital Debug with MSO

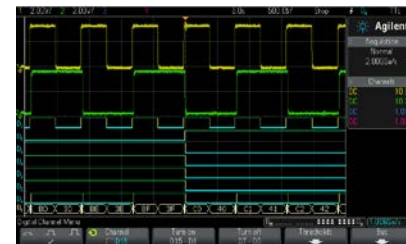
Tektronix MSO4000B

- ✓ Record length not dependent on number of channels used.
- ✓ Green for highs (1), blue for lows (0).
- ✓ Bus waveforms can be moved within the display.
- ✓ Event table for parallel bus decode.



Agilent MSO3000 X-Series

- ✗ Record length reduced if any analog channels are used.
- ✓ Green for highs (1), blue for lows (0).
- ✗ Bus waveforms anchored to bottom of the display.
- ✗ No event table for parallel bus decode.



Bus anchored to bottom of screen. Not all digital channels individually displayed.

Standard Passive Probe Performance

Tektronix MSO/DPO4000B

- ✓ One 10X passive probe provided per analog channel
- ✓ 1 GHz probe (1 GHz models)
500 MHz probe (350-500 MHz models)
- ✓ Probe Loading
Input Capacitance <4 pF



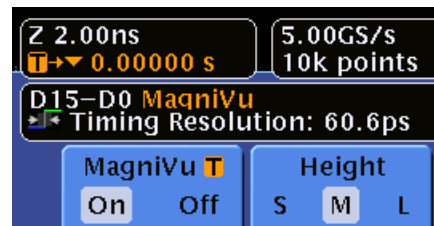
Agilent MSO/DSO3000 X-Series

- ✓ One 10X passive probe provided per analog channel
- ✗ 500 MHz probe (1 GHz models)
- ✓ 500 MHz probe (350-500 MHz models)
300 MHz probe (200 MHz models)
150 MHz probe (70-100 MHz models)
- ✗ Probe Loading
Input Capacitance ~11-12 pF

Digital Channels

Tektronix MSO4000B

- ✓ Maximum record length 20M, even with analog channels on.
- ✓ Minimum detectable pulse 1ns.
- ✓ MagniVu extends digital channel resolution to 61ps.



MagniVu offers timing resolution to 60.6ps.

Agilent MSO3000 X-Series

- ✗ Maximum record length 2M with no analog channels, 500k with analog channels on.
- ✗ Minimum detectable pulse 5ns.
- ✗ Digital channel timing resolution is 0.8 – 1 ns.



Digital channel timing resolution limited to 1ns.