

# MSO/DPO5000B Series vs. Teledyne LeCroy HDO4000 Series

## Competitive Fact Sheet

### Signal Fidelity and Measurement Accuracy\*

#### Tektronix MSO/DPO5000B Series

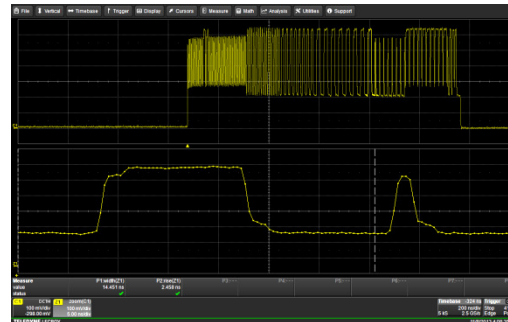
1 GHz and 10 GS/s with standard passive probes



- ✓ Up to 2 GHz analog bandwidth
- ✓ 10 GS/s max sampling rate
- ✓ 1 GHz, 3.9 pF standard probe on 1 GHz and 2 GHz models

#### LeCroy HDO4000 Series

500 MHz and 2.5 GS/s with standard passive probes

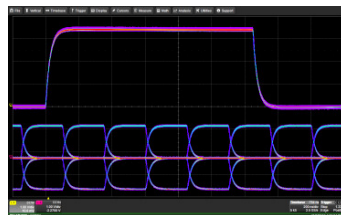
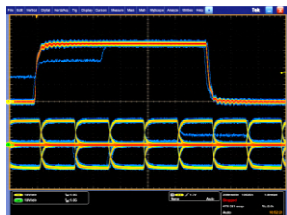


- ✗ Up to 1 GHz analog bandwidth
- ✗ 2.5 GS/s max sampling rate
- ✗ 500 MHz, 9.5 pF standard probe

### Waveform Capture Rate

#### Tektronix MSO/DPO5000B vs. LeCroy HDO4000

- ✓ >250,000 waveforms per sec
- ✓ Color graded persistence display
- ✓ Single button activation
- ✗ Not specified (<1000 tested)
- ✓ Color graded persistence display
- ✗ Nested menu setup



### Key Specifications Comparison

	Tektronix MSO/DPO5000B Series	LeCroy HDO4000 Series
<b>Channels</b>	✓ 4 (+16 digital MSO)	✓ 2, 4 (+16 digital -MS)
<b>Analog Bandwidth</b>	✓ 2 GHz, 1 GHz, 500 MHz, 350 MHz	✓ 1 GHz, 500 MHz, 350 MHz, 200 MHz,
<b>Max. Sample Rate 2 chan. (4 chan.) on</b>	✓ 10 GS/s (5 GS/s)	✗ 2.5 GS/s (2.5 GS/s)
<b>Max. Standard Record Length (All channels on)</b>	✓ 25 M points (125 M option)	✗ 12.5 M points (25 M option)
<b>Waveform Capture Rate</b>	✓ >250,000 wfm/sec	✗ <1000 (tested)
<b>Standard Passive Probes</b>	✓ 1 GHz, 3.9 pF, 10 MΩ (1-2 GHz oscilloscopes); 500 MHz, 3.9 pF, 10 MΩ	✗ 500 MHz, 10 pF, 10 MΩ
<b>Display</b>	✓ 10.4 in XGA (1024 x 768)	✓ 12.1 in WXGA (1280 x 800)

\* Shown with 480 Mb/s USB 2.0 signal

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## Competitive Fact Sheet

### Navigation and Search

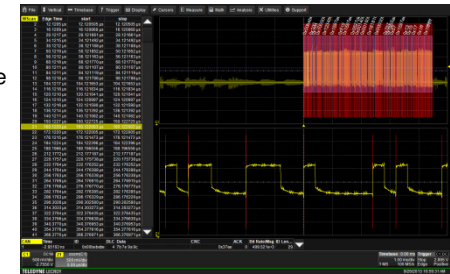
#### Tektronix MSO/DPO5000B Series

- ✓ Dedicated Wave Inspector® pan/zoom controls for easy scrolling through long records.
- ✓ Simultaneously search up to 8 types of events.
- ✓ Search/Mark controls enable you to search for events of interest, mark them, then navigate through the record mark by mark.
- ✓ View captured serial packets in time-stamped protocol event table format.



#### LeCroy HDO4000 Series

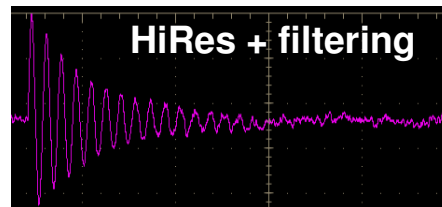
- ✗ Multiplexed horizontal math/zoom position control to scroll through data.
- ✗ WaveScan™ search limited to a single event type at a time.
- ✗ No search events found counter and no marks shown on display. Only zoom location of selected event is highlighted.
- ✓ Serial decode search available, but completely separate from WaveScan.



### High Resolution Measurements

#### Tektronix MSO/DPO5000B Series

- ✗ 8-bit vertical resolution by default
- ✓ By enabling HiRes acquisition mode, acquired signals can have comparable vertical resolution, even with single-shot acquisitions.
- ✗ In many small-signal applications, the signal-to-noise of the high-resolution acquisition is not adequate to make repeatable measurements.
- ✓ Built-in hardware, software, and math filters can improve signal-to-noise ratio and enable high-resolution signal measurements.
- ✓ Lower-attenuation probes, such as the TPP0502, can also improve signal-to-noise without compromising the performance and usability of passive probes.



#### LeCroy HDO4000 Series

- ✓ 12-bit vertical resolution by default
- ✓ 12-bit analog-to-digital converters provide 16X the resolution of 8-bit converters.
- ✗ In many small-signal applications, the signal-to-noise of the high-resolution acquisition is not adequate to make repeatable measurements.
- ✓ Built-in hardware and software filters, and ERES can improve signal-to-noise ratio and enable high-resolution signal measurements.
- ✗ High-attenuation probes compromise signal-to-noise ratio by reducing signal amplitude prior to acquisition.

