

# MSO4000 & MSO3000 Series vs. LeCroy's MS-xxx Series Mixed Signal Solution

## Competitive Fact Sheet

### Solution Comparison

#### Tektronix MSO4000 Series

- ✓ MSO4000 Series offers integrated digital channels.
- ✓ Convenient front-panel connection for digital probe keeps the setup simple and extends the reach of the probe.
- ✓ P6516 probe pod size  
1.7 in. x 1.2 in. (43 mm x 31 mm)

#### Tektronix MSO3000 Series

- ✓ MSO3000 Series offers integrated digital channels.
- ✓ Convenient front-panel connection for digital probe keeps the setup simple and extends the reach of the probe.
- ✓ P6316 probe pod size  
1.8 in. x 0.9 in. (46 mm x 23 mm)



#### LeCroy Mixed Signal Solution

- ✗ WaveSurfer Xs-A or WaveRunner Xi-A requires the MS-500 external probe to add digital channels.
- ✗ MS-500 probe pod size  
8.375 in. x 4.25 in. (213 mm x 108 mm)
- ✗ The MS-500 external probe requires multiple connections to the side of the oscilloscope.



### Waveform Display Comparison

#### Tektronix MSO4000 & MSO3000 Series

- ✓ Logical high values are colored green, and logical low values are colored blue for instant understanding of pattern values.
- ✓ Channels can be displayed as a bus and/or individual signals.
- ✓ Digital channels can be grouped and independently moved in the display.



#### LeCroy WaveSurfer Xs-A and WaveRunner Xi-A

- ✗ There is no color difference between a logical low and high value.
- ✗ Channels can be displayed as a bus waveform or as individual signals, but not both at the same time.
- ✗ Digital channels must be displayed in hardware order.



### Key MSO Specifications Comparison

	Tektronix MSO4000 & MSO3000 Series	LeCroy MS-xxx with WaveSurfer Xs-A or WaveRunner Xi-A
<b>Max. Digital Channel Timing Resolution</b>	✓ 60.6 ps – 4000 Series 121.2 ps – 3000 Series	✗ 0.5* - 1 ns
<b>Minimum Detectable Pulse Width</b>	✓ 1.5 ns – 4000 Series 2.0 ns – 3000 Series	✗ Not specified
<b>Probe Impedance</b>	✓ 3 pF    20 kΩ - 4000 Series 8pF    101 kΩ - 3000 Series	✓ 5pF    100k Ω
<b>Max. Digital Channel Record Length</b>	✗ 10 M points – 4000 Series 5 M points – 3000 Series	✓ 10 – 50* M points
<b>Threshold Settings</b>	✓ Per channel – 4000 Series Per pod – 3000 Series	✗ For each group of 9 channels
<b>Setup &amp; Hold Triggering</b>	✓ Across all analog & digital channels	✗ Not available
<b>Digital Channels</b>	✗ 16	✓ 18 - 36

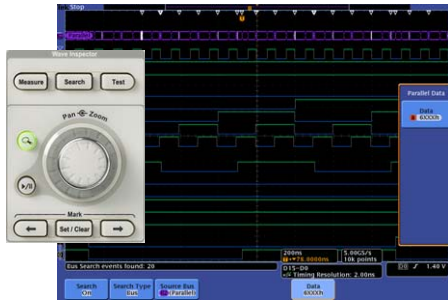
\* When only one 18-channel pod is used

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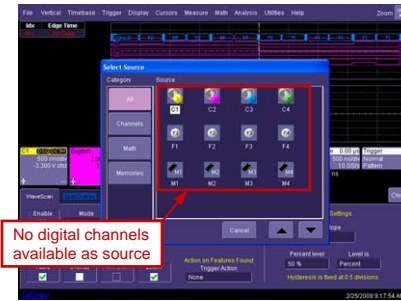
### Searching on Analog and Digital Data

#### Tektronix MSO4000 & MSO3000 Series



- ✓ Wave Inspector® automatically searches through analog, digital, and bus waveforms.
- ✓ Front-panel pan/zoom controls for easy scrolling through long records.
- ✓ User Mark controls enable you to mark events of interest.

#### LeCroy MS-xxx with WaveSurfer Xs-A or WaveRunner Xi-A



- ✗ Digital channels not an available source for WaveScan Search.
- ✗ WaveSurfer Xs uses multiplexed horizontal controls for pan/zoom.
- ✗ No automatic or manual user Marks.

### Setup and Hold Triggering

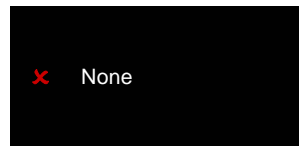
#### Tektronix MSO4000 & MSO3000 Series

- ✓ Setup and hold triggering standard, across up to 20 data lines simultaneously.



#### LeCroy MS-xxx with WaveSurfer Xs-A or WaveRunner Xi-A

- ✗ No setup and hold triggering.



### Setting Digital Thresholds

#### Tektronix MSO4000 Series Only

- ✓ Per-channel digital thresholds enable analysis of multiple logic families.



Note: On the MSO3000 Series, you can define one threshold per pod of 8 channels.

#### LeCroy MS-xxx with WaveSurfer Xs-A or WaveRunner Xi-A

- ✗ Digital thresholds limited to one per 9- channel digital probe pod.
- ✗ Limited ability to analyze multiple logic families

