

# Tektronix DPO3000 Series vs. Agilent DSO5000A Series

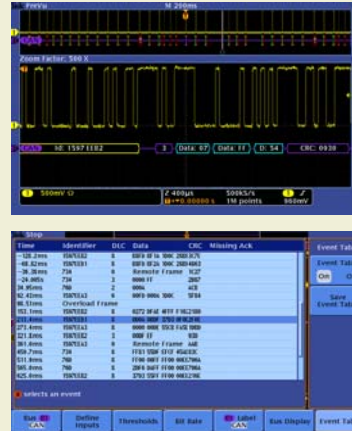


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## Serial Triggering and Decode

### Tektronix DPO3000

- Bus Display** – Provides a higher level, combined view of individual signals that make up your bus.
  - Bus Decoding** – Decodes each packet on the bus and displays the value in hex, binary, decimal, or ASCII (depending on standard).
  - Serial Triggering** – Trigger on packet content such as start of packet, specific addresses, and unique identifiers.
  - Event Table** – View captured packets in a tabular view.
- Search** – Use Wave Inspector to automatically search for and mark user-defined events on packet content like specific address, data, and unique identifiers.



Support for I<sup>2</sup>C, SPI, CAN, LIN, and RS-232/422/485/UART.

### Agilent DSO5000A

- Bus Display** – Single bus display anchored at the bottom of the screen.
- Bus Decoding** – Hardware decode of each packet on the bus in hex, but shifted in time from data.
- Serial Triggering** – Hardware triggering on packet content.
- No Event Table**
- No Search**



Decode is shifted in time from actual data.

Support for I<sup>2</sup>C, SPI, CAN, and LIN, and RS-232/UART.

## Key Specifications Comparison

	Tektronix DPO3000	Agilent DSO5000A
<b>Channels</b>	<input checked="" type="checkbox"/> 2, 4	<input checked="" type="checkbox"/> 2, 4
<b>Bandwidth</b>	<input checked="" type="checkbox"/> 100, 300, 500 MHz	<input checked="" type="checkbox"/> 100, 300, 500 MHz
<b>Max. Sample Rate (All channels on)</b>	<input checked="" type="checkbox"/> 2.5 GS/s	<input checked="" type="checkbox"/> 2 GS/s
<b>Max. Record Length (All channels on)</b>	<input checked="" type="checkbox"/> 5 M points	<input checked="" type="checkbox"/> 500 k points
<b>Input Impedance</b>	<input checked="" type="checkbox"/> 1MΩ, 75Ω, 50Ω	<input checked="" type="checkbox"/> 1MΩ, 50Ω
<b>Serial Triggering and Decode</b>	<input checked="" type="checkbox"/> I <sup>2</sup> C, SPI, CAN, LIN, RS-232/422/485/UART	<input checked="" type="checkbox"/> I <sup>2</sup> C, SPI, CAN, LIN
<b>Navigation and Search</b>	<input checked="" type="checkbox"/> Wave Inspector®	<input checked="" type="checkbox"/> Horizontal position knob

## Navigation and Search

### Tektronix DPO3000

- Wave Inspector®
- Pan/Zoom controls make easy work of scrolling through long records.
- Play/Pause button scrolls the waveform across the screen automatically.
- Search/Mark controls enable you to search for events of interest, mark them, then navigate through the record mark by mark.



### Agilent DSO5000A

- Only uses horizontal scale knob to zoom.
- Manual scrolling of horizontal position to scroll through data.
- No search capability.

No Navigation  
 No Search

[www.tektronix.com/realityzone](http://www.tektronix.com/realityzone)

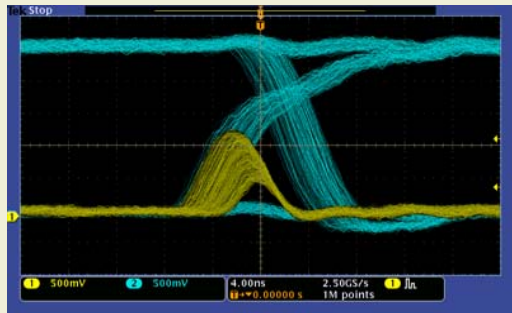
# Tektronix DPO3000 Series vs. Agilent DSO5000A Series

## Capturing an Intermittent Pulse

Persistence modes are critical for taking measurements on intermittent events, like this meta-stable pulse.

### Tektronix DPO3000

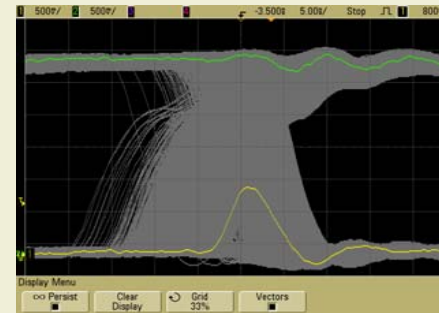
Infinite persistence display, stopped.



- Channels represented with different colors.
- Intensity grading shows frequency of occurrence.
- Intensity grading is preserved when stopped.
- Variable persistence also available.

### Agilent DSO5000A

Infinite persistence display, stopped.

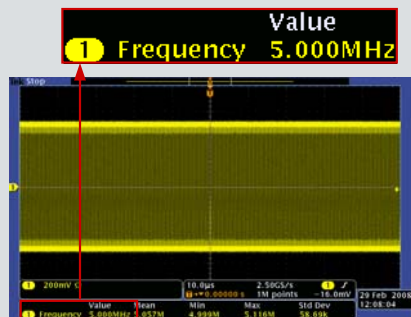


- No intensity grading in persistence mode – whether running or stopped.
- Cannot distinguish channel history when stopped – only last acquisition.
- No variable persistence.

## Measurement and Channel Math

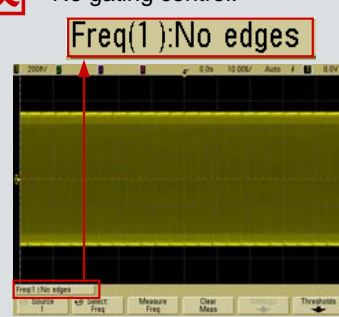
### Tektronix DPO3000

- Can use all the record length – up to 5M points for measurements, averaging, math, and up to 1M for FFT.
- Gate measurements by screen or cursors.



### Agilent DSO5000A

- Uses only 1000 on-screen points for measurements, averaging, FFT and math.
- Limited math choices.
- No gating control.



## Long Record Length

### Tektronix DPO3000

- Selectable record length – up to 5 M points on all channels, all the time.

### Agilent DSO5000A

Only maximum of 1 M samples:

- Must be in single shot mode.
- Slower than 50us/div horizontal scale.
- Turn off 2 channels on a 4-channel instrument, or turn off 1 channel on a 2-channel instrument.



*If long record length is critical, the Tektronix DPO Series provides the solution.*



3GW-21553-4