

If I could
...capture those elusive glitches
and intermittent events – the first time...



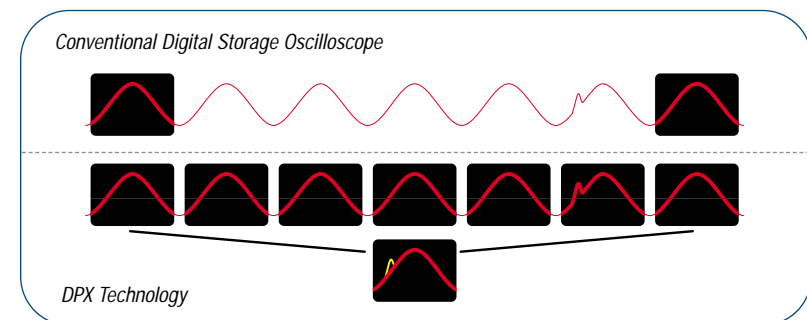
Keep Your Eyes Open

All digital oscilloscopes blink. That is, they open their eyes a given number of times per second to capture the signal, and close their eyes in between. This is the waveform capture rate, expressed as waveforms per second (wfms/s). Waveform capture rates vary greatly, depending on the type and performance level of the oscilloscope. Oscilloscopes with high waveform capture rates provide significantly more visual insight into signal behavior, and dramatically increase the probability that the oscilloscope will quickly capture transient anomalies such as jitter, runt pulses, glitches and transition errors.

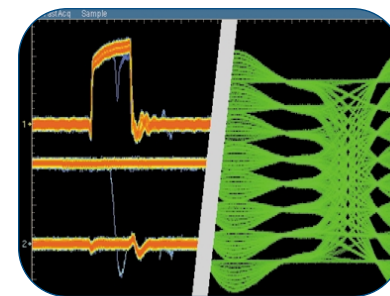
Digital storage oscilloscopes (DSOs) employ a serial-processing architecture to capture from 100 to 5,000 wfms/s. Some DSOs provide a special mode that alternates between bursting multiple captures into long memory, temporarily delivering higher waveform capture rates followed by long processing dead times that reduce the probability of capturing rare, intermittent events.

Most digital phosphor oscilloscopes (DPOs) employ a parallel-processing architecture to deliver vastly greater waveform capture rates. DPOs can acquire millions of waveforms in just seconds – hundreds of times more than the fastest DSO – significantly increasing the probability of capturing intermittent and elusive events and allowing you to see the problems in your signal more quickly. Moreover, the DPO's ability to acquire and display three dimensions of signal behavior in real time – amplitude, time and distribution of amplitude over time – results in a superior level of insight into signal behavior.

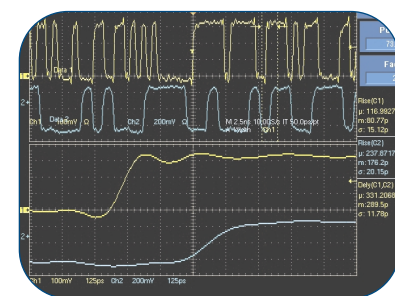
Currently, only Tektronix offers digital phosphor oscilloscopes, and delivers the highest performance solution in both DSOs and DPOs. Tektronix DPOs, enabled by our proprietary DPX™ technology, can save you hundreds of hours of troubleshooting and let you push your design to the absolute limits. The significantly higher bandwidths and sample rates of our DSOs let you capture single-shot acquisitions on all four channels simultaneously, and view up to four time-correlated events in a system.



▶ DPX technology delivers unrivaled design insight, enabling the TDS7000 Series DPO to capture more than 400,000 waveforms per second. That's 200 times more than other digital oscilloscopes.



▶ Tektronix' propriety DPX technology provides unprecedented waveform capture rate in the TDS7000 Series DPO, maximizing the probability of discovering hidden faults and revealing dynamic signal behavior.



▶ The TDS6604 provides an ideal solution for non-repetitive, high-speed, multi-channel digital design applications.

▶ DPO and DSO: General Purpose and Specialized Tools

If you are looking for the best general-purpose design and troubleshooting tool for a wide range of applications, select a DPO. DPOs are ideal for communication mask testing, digital debug of intermittent signals, repetitive digital design and timing applications.

For high performance in a single-shot, multi-channel instrument, choose a DSO. DSOs are ideal for non-repetitive, high-speed, multi-channel digital design applications. In the real world of digital design, an engineer usually examines four or more signals simultaneously, making the DSO a

critical companion. If you are working with signals of less than 200 MHz and budget is a major concern, the TDS1000 and TDS2000 Series DSOs provide excellent performance and affordability.