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Agilent Technologies Introduces Second-Generation FlexRay Option for InfiniiVision Oscilloscopes

Agilent Technologies Inc. has introduced its second-generation FlexRay measurement option (Option FLX) on its popular InfiniiVision 5000, 6000 and 7000 Series oscilloscopes. In response to customer feedback on its first-generation FlexRay oscilloscope option, Agilent enhanced the measurement capabilities for testing the physical-layer robustness of FlexRay networks in Option FLX and significantly lowered the price for an entry-level FlexRay physical-layer test solution.

FlexRay in-vehicle networking is the automotive standard for deterministic, fault-tolerant, high-speed data communication. FlexRay technology delivers the networking performance required for newer automotive applications such as brake-by-wire and steer-by-wire. FlexRay networks have much higher bandwidth than existing controller-area networks (CAN), and are expected to be the communication backbone for emerging drive-by-wire applications. The advantage of CAN is reduced car weight and energy consumption and increased safety and reliability.

In addition to its existing frame triggering and hardware-based decoding capabilities, Agilent's new FlexRay option now offers eye-diagram mask testing and a comprehensive FlexRay physical-layer conformance test software package.

Eye-diagram mask testing is one of the most important physical-layer measurements that designers can use to test the overall signal quality of their FlexRay networks.

Engineers can download seven different FlexRay eye-diagram mask test files from Agilent's Web site at no charge. For TP4 testing at a receiver's input, Agilent's eye-diagram mask test algorithm uses a unique hardware-based clock recovery technique that closely emulates FlexRay receiver clock re-synchronization and provides the fastest throughput in the oscilloscope industry.

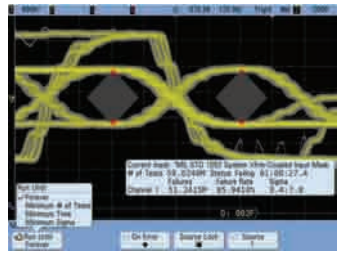
Engineers also can download the FlexRay physical layer conformance test software from Agilent's Web site at no additional charge. This PC software is based on Agilent's award-winning compliance test framework used in Infiniium oscilloscopes. FlexRay designers can now perform automated tests at receiver input or transmitter output test points. Up to 33 different physical-layer parameters can be tested, including the "signal integrity voting test" on isolated ones and zeros. The test report includes comprehensive pass/fail results and margin analysis based on published specifications.

In addition to offering enhanced measurement capabilities, Agilent's second-generation FlexRay option is much easier to use and configure. The option also has a significantly lower net price, as the VPT1000 vehicle protocol test module is no longer required.

Ref. Nº 1004501

Agilent Technologies Introduces Oscilloscope Triggering and Decode Option for MIL-STD 1553 Signals

Agilent Technologies Inc. has introduced a triggering and decode option (Option 533) for MIL-STD 1553 on its popular InfiniiVision 5000, 6000 and 7000 Series oscilloscopes. Option 533 allows engineers to easily capture and measure the electrical characteristics of MIL-STD 1553 signals. When Option 553 is combined with Agilent's mask test option, engineers also can perform MIL-STD 1553 eye-diagram mask testing for the first time based on electrical input specifications.



MIL-STD-1553 is a military standard published by the U.S. Department of Defense that defines the mechanical, electrical and functional characteristics of a 1-Mbs serial data bus. The standard was originally designed for military avionics, but now it is used in military and civil spacecraft onboard data handling (OBDH) subsystems. The standard features a dual-redundant balanced line physical layer, a (differential) network interface, time division multiplexing, half-duplex command/response protocol and up to 31 remote terminals (devices).

Until now, capturing and measuring the electrical characteristics of MIL-STD 1553 signals has been a difficult and tedious process using a conventional analog or digital oscilloscope. When engineers set up a scope to trigger and synchronize on specific transmitted words, they often required an external synchronization signal or had to guess at a specific trigger hold-off setting. To determine the contents of a captured and displayed communication packet/word, engineers had to use a visual "bit-counting" technique, which is slow and prone to errors. But with an Agilent InfiniiVision Series oscilloscope equipped with Option 553, engineers now can view MIL-STD 1553 protocol decoded communication time-correlated with their physical-layer signals. With Agilent's unique hardware-based protocol decoding, InfiniiVision scopes can provide the fastest uncompromised waveform and decode update rates in the oscilloscope industry.

Agilent InfiniiVision Series oscilloscopes equipped with Option 553 also can trigger on a wide range of conditions, including data words, command/status words, remote terminal addresses (RTA), sub-addresses and status bits. In

addition, the scope can be set up to trigger on, and decode, synchronization field errors, Manchester encoding errors and parity errors.

Engineers also can use InfiniiVision Series oscilloscopes to perform automatic pass/fail eye-diagram tests of 1553 electrical signals with the addition of the mask test option (Option LMT) and Option 553. Agilent provides eight MIL-STD 1553 eye-diagram mask test files that can be downloaded from Agilent's Web site at no charge. Engineers can use the mask test files to test various types of communication traffic to and from bus controllers and remote terminals.

Eye-diagram testing is used in a broad range of today's serial bus applications. An eye-diagram is an overlay of digitized bits that shows when bits are valid, which provides a composite picture of the quality of a system's physical layer characteristics. These characteristics include amplitude variations caused by transmission line effects, reflections, system noise, overshoot, ringing, signal edge placement shift, and jitter.

Ref. Nº 1004502