

Tektronix Speeds Debug for 400G PAM4 Designs

Introduces Industry's First 56 GBd Optical Probe for Real Time Oscilloscopes, Helping Designers to Shorten Validation Cycles, Reduce Time to Market

BEAVERTON, Ore., March 13, 2018 /[PRNewswire](#)/ -- Tektronix, Inc., a leading worldwide provider of measurement solutions, today introduced the industry's first 56 GBd 400G PAM4 optical probe for use with Tektronix [DPO70000SX](#) Series real-time oscilloscopes. Joining the award-winning 33 GHz DPO7OE1 introduced last year, the new 59 GHz [DPO7OE2 single mode optical probe](#) delivers the performance and advanced debug capabilities designers need to troubleshoot [400G PAM4](#) components and reduce time to market.

The DPO7OE2 and DPO7OE1 optical probes, along with the full set of Tektronix solutions for 100G/400G optical characterization and validation, are being demonstrated at the OFC optical networking and communication conference and exhibition taking place this week in San Diego, Calif. Tektronix also introduced new 400G PAM4 optical modules for its DSA8300 equivalent time oscilloscope at the event ([see separate release](#)).

Compared to 100G with NRZ modulation, 400G with PAM4 signaling is far more complex and has substantially increased the time required for design validation, debug and troubleshooting cycles. Although Tektronix also offers 400G equivalent time (sampling) solutions, the migration from NRZ to PAM4 modulation presents a number of validation and debug challenges that only a real time oscilloscope-based solution is equipped to solve.

"The switch to 400G and PAM4 is disruptive on many levels, not the least of which are the severe test and validation challenges facing engineers as they race to bring 400G solutions to market," said Sarah Boen, general manager, Wired Communications, Tektronix. "By delivering the industry's first and only 56 GBd real-time solution with PAM4 support, we are leading the way to the next generation of high-speed networking in the data center."

Delivering ORR (optical reference receiver) performance for 56 GBd PAM4, the DPO7OE2 allows engineers to more easily and quickly troubleshoot optical devices using a complete set of powerful debug capabilities including software clock recovery for PAM4 and NRZ, triggering, error detection, and the ability to capture time correlated or contiguous record of a signal for offline analysis. It also features best-in-class optical sensitivity and lowest noise to accommodate low PAM4 signal-to-noise ratio and channel effects.

The DPO7OE2 can also be used for legacy NRZ applications. Analysis packages support standard optical measurements including ER, AOP, OMA, eye height and eye width, as well as PAM4 IEEE and OIF-CEI standard specific measurements including TDECQ.

Availability

The DPO7OE2 optical probe is available worldwide. For ordering information contact a local Tektronix representative. For complete solution details go to: <https://www.tek.com/wired-communications/400g-pam4-testing>

Wondering what else Tektronix is up to? Check out the Tektronix [Bandwidth Banter blog](#) and stay up to date on the latest news from Tektronix on [Twitter](#) and [Facebook](#).


About Tektronix

Headquartered in Beaverton, Oregon, Tektronix delivers innovative, precise and easy-to-operate test, measurement and monitoring solutions that solve problems, unlock insights and drive discovery. Tektronix has been at the forefront of the digital age for over 70 years. Join us on the journey of innovation at TEK.COM.

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