

Abstract Submitted  
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**Technology Advancements in Digitizers: More than 8-bits, ultra-low noise and high ENOB** BRIAN HENSLEY<sup>1</sup>, Tektronix — The Tektronix ASIC development team spent years designing and developing the Tek049, to consolidate a wide range of previously separate chips into a single, highly-integrated package. The chip includes advanced ADCs, a high-speed memory interface, high-speed communication bus, trigger circuitry, logic analysis, display formatting, rasterization, and other DSP components. The new 12-bit ADC is the fastest in the world, running internally at 25 GS/ and with 12 bits allow for 4096 vertical digitizing levels, providing 16x more resolution than other oscilloscopes and digitizers in its performance range that typically utilize 8-bit ADCs. Each Tek049 includes four ADCs for a total throughput of 100 GS/s. Typical digitizer signal paths are quite complicated, as signals must pass through a variety of components including amplifiers, relays, filters, ADCs, and more before being processed for display. Furthermore, this new technology is paving the way for next generation digitizers with more performance, in less rack space. The next gen digitizers from Tektronix were specifically designed with the physics market. Labs such as Sandia, Los Alamos and Livermore were consulted for the use of diagnostics and monitoring needs. ¶Would like to announce the next generation digitizer from Tek¶

<sup>1</sup>Brian has worked at Tektronix for 9 years, the last few as a Product Marketing Manager working on current and next generation products such as Low Profile digitizers and oscilloscopes.

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