NPTest's EXA3000 SOC tester gains analog, digital options

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NPTest (San Jose, CA; www.nptest.com), formerly known as Schlumberger Semiconductor Solutions, has introduced suites of analog and digital options that enable customers to test highly integrated system-on-chip (SOC) devices on the company’s EXA3000 ATE platform. The basic platform provides ±50-ps edge-placement accuracy, up to 3.2-Gbit/s data rates, true differential pin electronics, integrated source-synchronous timing capability, and a 120-dBc analog noise floor.

The new analog options support the test of mass-storage-drive chipsets as well as datacom and graphics devices. The options include a 4.8-Gsample/s arbitrary waveform generator (AWG) and a 10-GHz-bandwidth sampler. These combine to perform source and measurement functions for testing features such as the analog-PRML (partial-response, maximum likelihood) performance of front-end read/write head interfaces integrated within hard-disk-drive controller chips.

The AWG option for PRML tests provides one differential channel at 4.8 Gsamples/s, two channels at 2.4 Gsamples/s, or four channels at 1.2 Gsamples/s. It offers 8-bit resolution with a 1.9-GHz bandwidth. The sampler option targets the test hard-disk-drive components, DVI (Digital Visual Interface) TMDS (Transition Minimized Differential Signaling) circuits, USB 2.0 interfaces, and 3- to 10-Gbit/s Serdes devices. Its sampling capability extends to 10 GHz, acquiring 50 Msamples/s at 12-bit resolution. The sampler has 40-dB SNR for a 400-MHz signal.

The new digital options for the EXA3000 address the test of high-speed buses and interfaces, including Serdes devices. The options include source-synchronous timing capability, integrated TIA (timing interval analyzer) instruments for enhanced jitter measurements, and new pin electronics, designated the Giga3200, designed specifically to address multi-port Serdes device test in production environments. The Giga3200 provides 4-channel, 1.6-Gbits/s or 2-channel, 3.2-Gbit/s differential-I/O capabilities.