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FOR IMMEDIATE RELEASE

Ridgetop Group Announces Solution Developed for Intermittency Detection in Electronic Components

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Officials at Ridgetop Group, Inc., a leading designer of effective diagnostic and prognostic tools for complex electronic systems, have announced a solution for detection of intermittencies on programmable processors. SJ BIST™ (Solder Joint Built-In Self-Test™) is a Verilog-instantiated soft-core product that can easily be integrated into Xilinx® or Altera field programmable gate arrays (FPGAs).

Intermittent connections caused by cold or cracked solder joints plague modern equipment, and have been exacerbated by the lead-free solder mandates. These intermittencies, when occurring in critical systems, can cause catastrophic failures. Many field returns of electronic modules are found to have these intermittencies. In these cases, the reported anomalies or performance problems cannot be duplicated on the bench. Thus, a solution to detect these problems is very important.

FPGAs offer designers wide flexibility in combining, on a single package, functionality of CPU cores, memory cores, I/O cores, and now, with the introduction of SJ BIST, intermittency and health monitoring soft cores. Ball grid array (BGA) packages are widely used by FPGA manufacturers to achieve the high interconnection density that is required. BGAs can have ball counts exceeding 1,000 and these balls are, in turn, affixed to printed circuit boards (PCBs). When a PCB is subjected to vibration and other adverse environmental conditions, the solder balls can crack, oxidize, and eventually fail during operation.

In independent laboratory tests conducted by BAE Systems and automotive firms, SJ BIST has been extensively tested under highly accelerated life testing (HALT) conditions. The test results indicate 100% detection capability of solder joint faults with zero false alarms.

According to Phil Davies, Division Manager, "We are very pleased with the acceptance of SJ BIST for critical systems with FPGAs. We have found many critical aerospace and automotive applications where intermittencies have caused significant performance problems, and we have developed this solution to address them."

"BAE Systems always seeks advanced technology to provide improved capabilities to the warfighter," said Bill Berical, Vice President of Engineering at BAE Systems' Platform Solutions unit. "SJ BIST technology addresses the DoD push toward condition-based maintenance and prognostics, and this technology enables early notification of impending failure of electronic components."

About Ridgetop Group

Ridgetop Group, Inc. is the world leader in providing advanced electronic prognostics and health management (ePHM) solutions, semiconductor IP blocks, and built-in self-test (BIST) solutions for critical applications. Founded in 2000 with the purpose of introducing revolutionary tools to improve performance of mission-critical electronic systems, Ridgetop has built an impressive list of customers in North America, Europe, and Asia.

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