# Synopsys Custom Design Tools Enable Creative Chips to Achieve First-pass Silicon Success

Unified Cell-Based and Custom Implementation Solution Key to Accelerating Time-to-Market

MOUNTAIN VIEW, Calif., Aug. 5 /PRNewswire-FirstCall/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that Creative Chips, a mixed-signal semiconductor IC provider, has taped out its most complex mixed-signal chip to date using Synopsys' Galaxy™ Implementation Platform. The 180-nanometer (nm) CMOS industrial bus controller contains complex analog and digital blocks that were created using the Galaxy cell-based physical implementation solution and Synopsys' Galaxy Custom Designer® custom implementation solution as a unified platform to accelerate time-to-market. The Custom Designer solution was also used for full-chip editing and final chip-finishing tasks. Using this unified solution enabled Creative Chips to meet its aggressive schedule and die-size requirements.

"A single platform for both custom and cell-based design gives us the productivity gains we need to implement our complex mixed-signal designs more quickly," said Dr. Lutz Porombka, managing director of Creative Chips. "Custom Designer's tight integration within the Galaxy Implementation Platform provided us with a streamlined design flow, allowing us to focus more on our design and less on tool integration issues."

Creative Chips' latest design contains a large digital logic core and custom digital and analog components, including phase-locked loops (PLLs), voltage regulators and embedded RAM. Creative Chips' challenge was to integrate this complex mixed-signal design on a cost-effective mainstream process while meeting its customer's tight schedule and die size requirements. The Custom Designer solution was used to complete the layout for custom digital and analog blocks, Synopsys' HSPICE® circuit simulator was used for the pre-layout simulations, and the CustomSim™ FastSPICE simulator was used to verify the extracted netlists from the StarRC™ extraction tool. After final signoff using Synopsys' IC Validator for layout versus schematic (LVS) and design rule checking (DRC), the design was successfully taped out.

"Custom Designer continues to build momentum both in terms of customer adoption and technology innovation due to its open environment and integration within the Galaxy Implementation Platform," said Bijan Kiani, vice president of product marketing at Synopsys. "Customers such as Creative Chips are realizing higher productivity in designing complex mixed-signal devices by adopting Synopsys' unified solution for mixed-signal design."

**About Synopsys**

Synopsys, Inc. (Nasdaq: SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has more than 65 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at https://www.synopsys.com/.

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