

Synopsys Introduces HAPS-51T ASIC Prototyping System to Accelerate Time to Results

Newest Member in Popular HAPS Family of High-Performance Prototyping Boards Features Xilinx Virtex-5 LX330T Devices With Built-in PCIe and Ethernet Endpoints

MOUNTAIN VIEW, Calif., May 30 [PRNewswire-FirstCall](#)/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design and manufacturing, is introducing a new addition to the popular HAPS™ (High-performance ASIC Prototyping System™) product family from the company's Synplicity® Business Group. The HAPS-51T, leveraging the advanced capabilities of Xilinx's Virtex®-5 LX330T devices, is an ideal prototyping system for applications using high-speed serial interfaces like PCI Express, SATA and Gigabit Ethernet. The HAPS-51T utilizes the LX330T device's 24 RocketIO GTP transceivers, adding on-board DDR2 memory and the new HapsTrak high-speed daughterboard connectivity scheme in a compact form factor. These features enable HAPS-51T to deliver a significant advantage in performance and versatility.

The tight connection between the Virtex-5 LX330T FPGA and the on-board memory enables flexible, high-speed memory access to satisfy even demanding communication applications. The HAPS-51T's on-board memory includes:

- 1GByte of DDR2, expandable to 8GByte
- 2Mbit x 36bit synchronous SRAM
- 32Mbit x 16bit Flash PROM

The easily expandable, modular architecture of Synopsys' HAPS systems offer many sophisticated features designed to appeal to system-on-chip (SoC) designers and software engineers alike. As with all HAPS systems, the HAPS-51T utilizes the HapsTrak standard, a set of guidelines for pinout and mechanical characteristics to help ensure compatibility with previous and future generations of HAPS motherboards and daughterboards. In addition, the HAPS-51T introduces the new HapsTrak MGB multi-gigabit SERDES bus with up to 8 lanes. Implemented in an 80-pin HapsTrak MGB connector it accommodates a variety of MGB daughter boards including:

- PCIE-4_MGB: 4-lane PCI Express
- SATA-4_MGB: 4-channel serial ATA
- ETH-4_MGB: 4 Gbit Ethernet ports

Like all HAPS systems, the HAPS-51T is equipped with programmable clock generators, sophisticated monitoring and self-test features, as well as remote configuration and setup capabilities. Other integrated peripherals include:

- USB data port
- SelectMAP
- JTAG

"We continue to expand the HAPS family to address new applications and markets," said Juergen Jaeger, director, product marketing, Synopsys. "With the increased use of high-speed serial interfaces in today's communication and consumer designs, our customers asked for a prototyping solution to handle the specific verification requirements of high-performance serial interfaces. The HAPS-51T is a powerful, easy to use, expandable prototyping solution that was designed to meet this demand."

"We are pleased that Synopsys' Synplicity Business Group has chosen the Virtex-5 LX330T device for their newest HAPS prototyping system, the HAPS-51T," said Chuck Tralka, Senior Director of Virtex Product Marketing at Xilinx. "The combination of high logic density and high-speed serial transceivers in the LX330T device, combined with the flexibility of the HAPS system makes the HAPS-51T an ideal choice for development applications using high-speed serial interfaces."

Availability

Shipments of HAPS-51T for early adopters have already begun. Full production shipment of the HAPS-51T is currently expected to begin at the end of June 2008.

About HAPS

The HAPS (High-performance ASIC Prototyping System) solution is a high performance and high- capacity FPGA-based system for ASIC prototyping and emulation. The HAPS solution is a modular system, with multi-FPGA motherboards and standard or custom-made daughter boards, which can be stacked together in a variety of ways. Among the functions available on standard daughter boards are video processing, various memory types, and interfaces to Ethernet, USB and PCI Express. For more information about the HAPS solution visit <https://www.synopsys.com/verification/prototyping/haps.html>

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 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 60 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <https://www.synopsys.com/>.

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