

SignatureIP Makes Network-on-Chip (NoC) Design Widely Accessible with Cloud-Based iNoCulator™ Platform

First cloud-based NoC design tool now available at iNoCulator.ai



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SignatureIP, the pioneer of next generation interconnect and interface solutions, announces early access availability of its cloud-based iNoCulator™ NoC design tool. Available at iNoCulator.ai, it is the first cloud-based platform for design of a Network on Chip (NoC). A NoC provides the interconnect infrastructure between key compute, storage, memory and I/O blocks in a semiconductor chip.

The iNoCulator tool simplifies the process of interconnect design from architectural exploration to RTL generation and physical implementation. Its cloud-based interface makes it fast and easy to get up and running, and the tool's innovative and intelligent capabilities enable users to rapidly find an optimal NoC configuration to reduce costs and speed their time to market.

Purna Mohanty, CEO, SignatureIP, said, "At SignatureIP we are making NoC design accessible, fast and configurable. Today's chip designs are becoming increasingly complex, but our novel tool reduces the complexity. Because our tool is cloud-based, architects and engineers can get going quickly via a simple evaluation agreement, with no need for lengthy negotiations with their finance or legal teams, and no need to wait for IT to install any software."

How iNoCulator works

With iNoCulator, users can explore the design space at the top level of their chip before making major architectural decisions. They can easily change the NoC topology, experiment with different configuration settings, and instantly simulate the results to optimize the top-level design.

The system architect simply sets the target power, performance, area and timings into iNoCulator, and the tool creates possible topologies that can be easily and quickly tweaked to find the optimal solution. Built-in intelligent capabilities automate and speed up many of the processes involved in scenario building that would have otherwise required manual

configuration. The result is an optimized, custom-configured NoC design delivered in clear, readable Register Transfer Level (RTL) format.

SignatureIP provides support to help customers understand the full range of available features.

Flexibility for today's complex designs

The iNoCulator tool is processor-agnostic so it can be used with Arm®, RISC-V or other processors. It can connect other on-chip IP blocks such as PCIe, CXL, and AI acceleration, enabling designers to create complex, high-performance heterogeneous systems on chips (SoCs) that can support a wide range of applications, from data center acceleration to edge AI devices.

iNoCulator can generate NoCs in a variety of topologies, supporting multiple protocols, bus widths, and clocking and power control schemes that integrate easily with block-level RTL designs. It also has support for popular interface protocols (AXI, AHB, APB, SRAM) and various bus widths. The multiple clocking schemes include GALS, and the power control has power island generation and UPF output. It creates a layered, scalable, physically aware network.

The tool has multi-factor authentication, and each customer's designs are secured in their own private area with no access from other users or from SignatureIP unless requested. iNoCulator is multi-user enabled for collaborative engineering.

SignatureIP at the Design Automation Conference

You can find SignatureIP in booth 2544 at the Design Automation Conference (DAC) 2024, being held at the Moscone Convention Center in San Francisco, June 24-26. Upon request, SignatureIP will provide a personal demonstration of iNoCulator during the show. Please contact info@signatureip.ai to arrange a demonstration.

Pricing and Availability

The iNoCulator platform is available now at [iNoCulator.ai](https://www.signatureip.ai). Customers can register for an evaluation period of two weeks at no charge (with the possibility of extending the trial period upon request). After initial evaluation, customers can take an annual subscription license that can be used for interactive architectural exploration of any number of designs. This includes full access to all aspects of the tool and enables downloading final RTL with a per design license fee.

For more information about iNoCulator, visit <https://www.signatureip.ai/iNoCulator>.

About SignatureIP

SignatureIP is building the industry's first web-based Network-on-Chip (NoC) design and development tools, and a portfolio of high-performance NoC Interconnect IP and High-Speed Interface (PCIe, CXL, UCIe) IPs for developers of AI/ML, HPC and other systems-on-chip (SoCs).

SignatureIP offers the industry's first web-based, fully customer-configurable "DIY" NoC development tool for both monolithic and chiplet-based SoCs that lowers the entry barrier for SoC architects and developers. The company also offers the lowest-power, highest-performance PCIe Gen6 and CXL 3.0 IPs on the market based on a ground-up fresh design without the legacy overhead of existing competitors. SignatureIP was founded in 2021 and is based in Milpitas, California. See: <https://www.signatureip.ai/>.

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