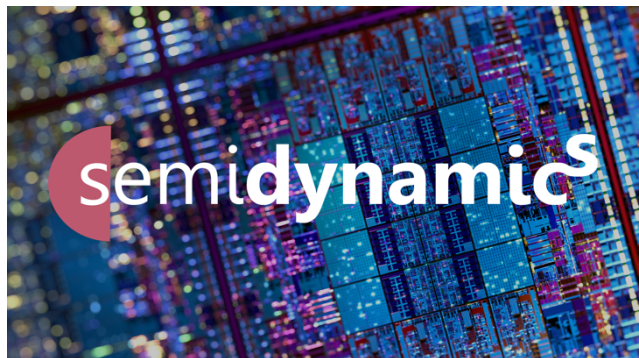# Semidynamics puts the power of full core customisation into hands of customers
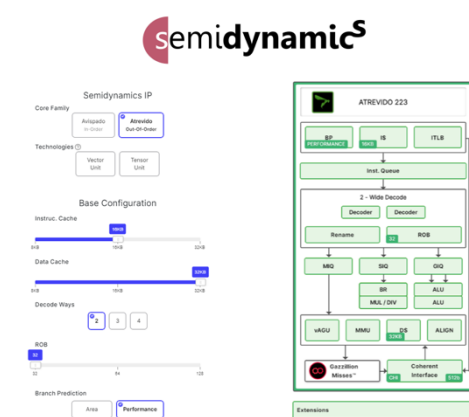
Free Configurator tool enables customers to specify exactly what they want their new RISC-V core to be

Barcelona, Spain – 5 March 2024. Semidynamics, the European RISC-V custom core specialist, has released its new tool called 'Configurator' that puts the power of Semidynamics' full customisation of a RISC-V processor core in the hands of the customer. It uses dozens of blocks that have already been verified by Semidynamics so that the final core is therefore also verified. This gives customers an incredible fast time to a workable core design in a matter of a few hours from the thousands of possible variants.

Semidynamics' unique '*Open Core Surgery'* allows the customer to tailor the Semidynamics IP to their needs, including adding new instructions, new interfaces and the customer's 'secret sauce' deep inside. This process entails two steps. First step is to configure the base parameters of the architecture, which is what Configurator enables. The second step is to describe the special features required by the customer; the Semidynamics engineering team will take those requests and implement them according to the customer's requirements. The newly released Configurator helps in both steps. First, it provides an easy way for the customer to specify the configuration parameters for the IP. Second, it allows the customer to describe the additional changes, beyond configuration, required.

Roger Espasa, Semidynamics' CEO, explained, "We are the only company offering fully customisable RISC-V IP cores so there are many choices to be made by customers when specifying their requirements. Our new Configurator tool makes this process extremely easy for the customer to do on their own computer screen. The tool has a sequential set of options that logically works through the thousands of possible variants. As each one option is selected, the resulting core configuration is immediately displayed on the screen so that the customer can see how the layout of blocks builds. The customer can go back and change any of the options to see the effect on the core layout. Naturally, we are available to help and advise customers in the choices to ensure the best possible core design for their application.

"When the customer has finalised the design, it is sent to us for a PPA and licensing quote. Once this is agreed and the contract signed, the RTL is sent to them immediately and as it is already verified by us they don't have that time consuming stage to do. The whole aim of

Configurator is to empower the customer with an easy-to-use way to have the exact custom core that they need in the shortest possible time so that they are fastest to market with their innovative product."

Some of the choices offered by the Configurator tool include instruction and data cache sizes, main memory bus size and type, and eight optional extensions. Additional options include Semidynamics' state-of-the-art Tensor and RISC-V 1.0 compliant Vector Units with a choice of number of cores and data configuration. On top of these, *Gazzillion*® technology that ensures constant data flow from memory.

The Semidynamics Configurator tool is web-based so it can be run on the customer's own computer system once they have registered which can be done at www.semidynamics.com/configurator

Semidynamics www.semidynamics.com
Founded in 2016 and based in Barcelona, Spain, *Semidynamics*® is the only provider of fully customisable RISC-V processor IP and specialises in high bandwidth, high performance cores with vector units and tensor units targeted at machine learning and AI applications. The company is privately owned and is a strategic member of the RISC-V Alliance.

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