# Menta eFPGA IP

The industry first embedded FPGA soft IP

Menta eFPGA solution

Menta provides embedded FPGA (eFPGA) IP for integration into SoC / ASIC. **Menta is the proven eFPGA pioneer whose design-adaptive 100% third-party standard cells-based architecture** and state-of-the-art tool set provides the highest degree of design customization, best-in-class testability, and fastest time-to-volume for SoC design targeting any production node at any foundry.
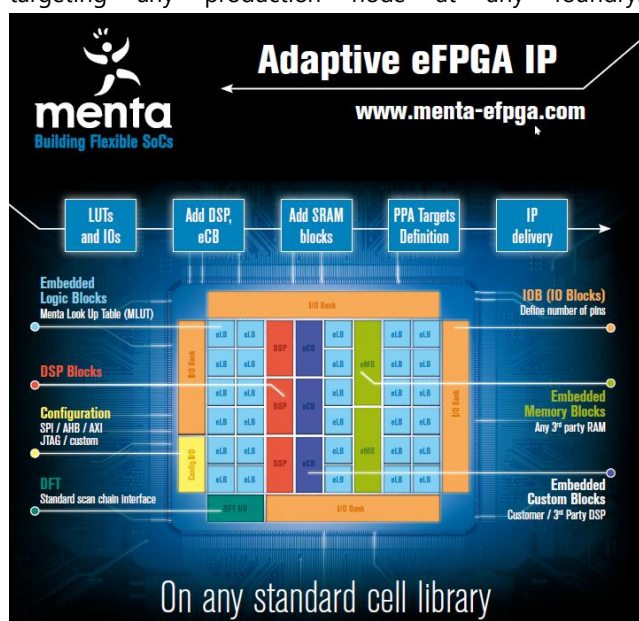
Menta standard-cell based approach enables engineers to rapidly port the eFPGA to whatever new process geometry/variant they need – Even in industrial and rad-hard grade versions. In addition, Menta IPs are fully verifiable within customer EDA environment, and are designed to address various markets and applications.

eFPGA for "design insurance"

eFPGA solution allows hardware to be reconfigured in the field, after manufacturing, giving end products more upgradeability and longer life cycles. For complex applications such like Artificial Intelligence, Machine Learning, Cryptography or Telecommunication algorithms for example, **the eFPGA acts as "design insurance" for SoCs and ASICs that implement complex algorithms** that could, for some times, evolve faster than the chip manufacturing cycle.

Menta eFPGA soft IP

In addition to offering the eFPGA IP as a GDSII hard IP, **Menta is now providing the possibility to buy soft IP. The IP hardening is then done by the customer.** Menta delivers the first eFPGA soft IP in the semiconductor Market. The eFPGA Soft IP is compatible with any standard EDA tool flow.

The Only eFPGA soft IP

This offering gives engineers greater flexibility in how they implement their SoC and ASIC designs. Menta's soft IP eFPGA can be implemented by the end user to any foundry, technology node and any standard cells, enabling customers to do the physical implementation in their own environment with their own EDA tool flow. In addition to Design flexibility, the customer achieves control of its IP implementation.

Fast and Reliable delivery

Menta's eFPGA soft IP enables customers to integrate eFPGAs in the same way as any other IP with lower cost and better control of their SoC / ASIC design. The Physical implementation of the soft eFPGA IP can be done easily by the customer, or a Design Service company of their choice.

Manufacturing and Post-Manufacturing flexibility

Hardware reconfiguration after SoC has been manufactured becomes a requirement for managing the future implementation changes. The semiconductor Market is growing, led by new market segments, such as Artificial Intelligence, Automotive, IoT, Cybersecurity. These new segments are evolving with changing requirements and complexity. **With its eFPGA soft IP, Menta is offering one more layer of Design flexibility and SoC customization: a soft IP, which can be implemented in any technology** node. It offers the opportunity to address any Semiconductor Market manufacturing requirement, vendor selection, and schedule. The flexibility is a key advantage of Menta eFPGA solutions.

Customer requirements are evolving

New Market segments require flexibility, low power and efficiency, for highly parallel computation, and deterministic behavior. The Customer demands are changing, requiring flexible design and use of assets, customized products, more

product variants and short Time-to-Market. **With eFPGA IP solution, Menta is answering customer requirements and is "accelerating" the implementation flow.**

DataFlow pre-production

The eFPGA soft IP is delivered based on the customer's specifications. **Menta eFPGA soft IP delivery includes the eFPGA RTL and documentation**. Physical implementation guidelines are also included to facilitate the IP hardening process. A methodology is provided to generate Menta timing files from output of sign-off EDA tools. This enables timing driven placement routing and STA within Menta Origami Programmer tool using back-annotated timing files. Menta hardware experts are available to support customers during the hardening phase of the eFPGA IP, if needed.

eFPGA Programming

Menta offers Origami programming software enabling Menta's eFPGA programming in an easy-to-use, intuitive FPGA programming tool environment. Menta's customers do not need to purchase or use any other FPGA programming tools. Origami Programmer software can be distributed to the SoC provider and their end customers.

Datasheets, Menta training & evaluation software on any process node are available. For more information visit our website at: www.menta-efpga.com