

eFPGA Creator[®]

The Programmable Logic Architecture Design Environment

Menta[®] eFPGA Creator[®] is the first complete design environment that allows designers to create customizable programmable logic architectures. eFPGA Creator gives designers the ability to define, build, analyze and validate the target capacity, performance, interconnect density and programming method by providing full control over the parameters of the eFPGA Core[®] technology. As part of a complete foundry-independent methodology, eFPGA Creator enables embedded-FPGA configurability for any SoC or ASIC, on any process technology.

The eFPGA Creator suite accelerates the development of flexible SoCs with Menta's customizable embedded-FPGA IP products. eFPGA Creator creates the eFPGA Core IP best suited to exactly match your application needs. Its Graphical User Interface (GUI) assists the designer through the definition of the "tiles" (the main building components of the Menta eFPGA Core technology), and core parameters such as capacity, size, aspect ratio and process constraints (technology, target performance, target power consumption).

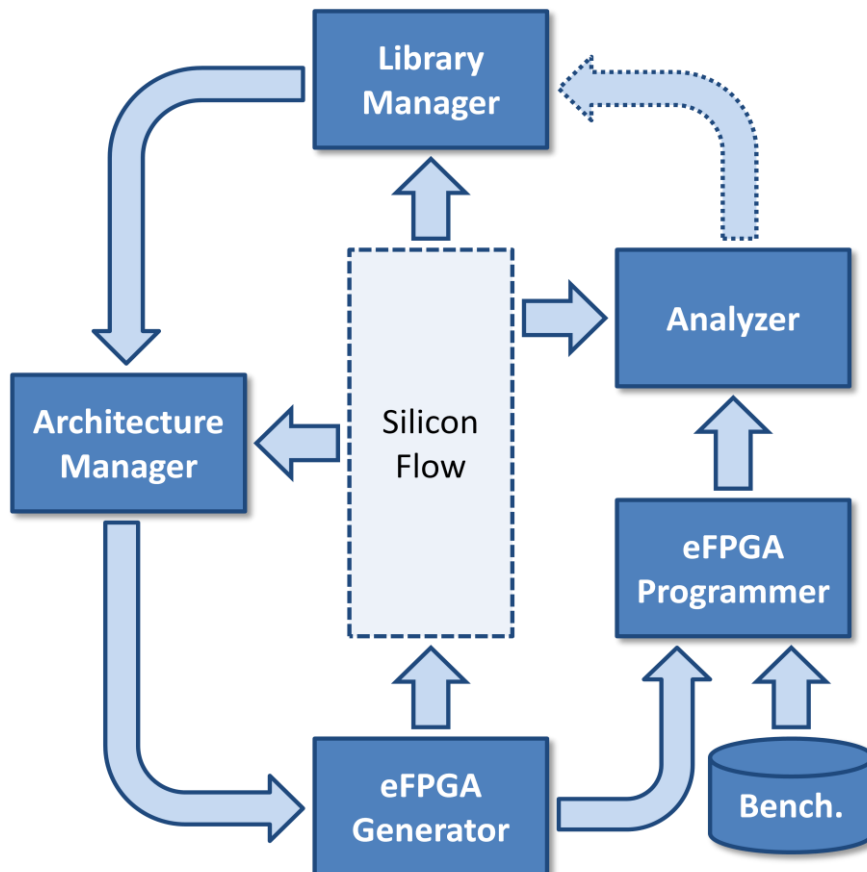


Figure 1: eFPGA Creator design environment

Key Benefits

- Rapid design of programmable logic architecture
- Unique architecture optimizations for differentiated solutions
- Graphical User Interface for accurate design entry
- Foundry independent methodology

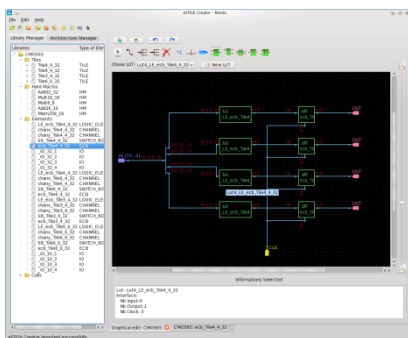
Introduction

The eFPGA Creator contains all the tools necessary to create and analyze high-performance programmable logic architectures.

Based on bottom-up approach, eFPGA Creator builds and configures “tiles” as the main building components of the Menta eFPGA Core technology.

This tool suite includes the Library and Architecture Manager, the eFPGA Generator, the Analyzer and the eFPGA Programmer® tool.

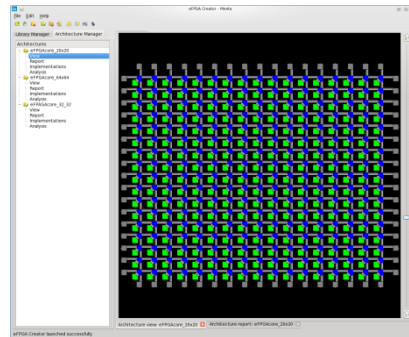
Library Manager



The Library Manager helps designers create and define “tile” parameters. Each “tile” includes configurable logic (eCB), memory (eMB), dedicated arithmetic

operator (eAB), such as multiplier, adder, shifter, etc., processor (ePB) or custom block (eCB) for dedicated functions or hard macro.

Architecture Manager



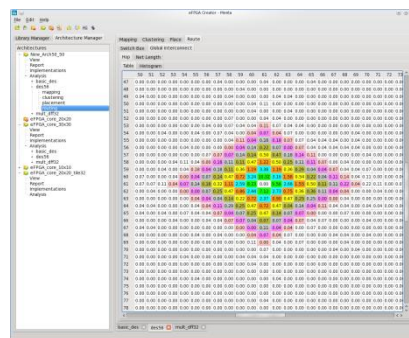
The Architecture Manager is used to build and define core parameters using the “tiles” previously created. These “tiles” are then interconnected to form the core.

eFPGA Generator

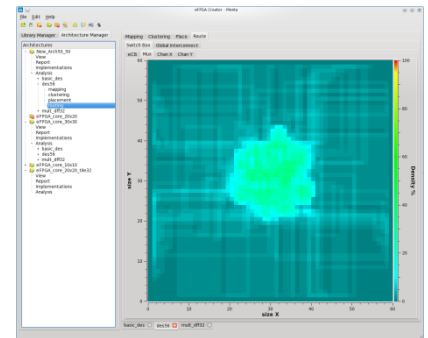
The eFPGA Generator creates all the necessary HDL and EDA scripts for the silicon flow with architecture files dedicated to the eFPGA Programmer tool.

At the end of this flow, all the necessary information required to embed the eFPGA Core IP into the target SoC is generated.

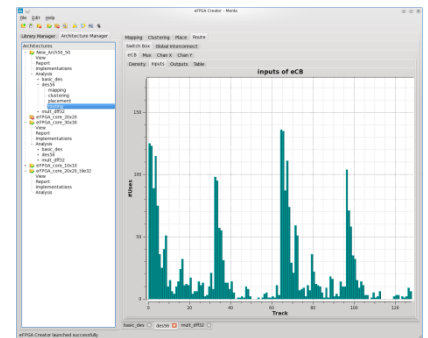
Analyzer



The Analyzer tool is used to investigate parameters of each “tiles” and core using a set of target applications (benchmarks).



It also provides a way to visualize and analyze simulation results and rapidly compare alternative silicon implementations of “tiles” or core.



Over 20 different scenarios and analysis are performed by the Analyzer to define the best suited eFPGA Core architecture.

Availability

The Menta eFPGA Creator design environment is now available for Linux (x86 and x86_64) 32/64 bit platform. It comes with an eFPGA Design Kit including “tile” library and core samples.

For more information about Menta products or support services, visit us on the web at: www.menta.fr or contact sales@menta.fr.

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