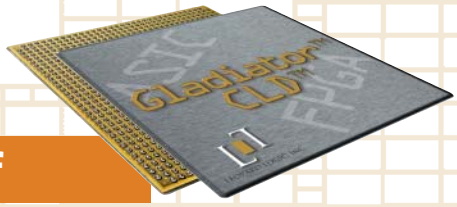


LEOPARD LOGIC, INC.

LL

Product Brief

ToolBlox™

Design Flow for the Gladiator™ CLD™ Device Family

Product Overview

ToolBlox is a suite of development tools and design kits that, in combination with industry standard Application Specific Integrated Circuit (ASIC) and Field Programmable Gate Array (FPGA) design tools create the design flow for the Gladiator CLD configurable logic device family.

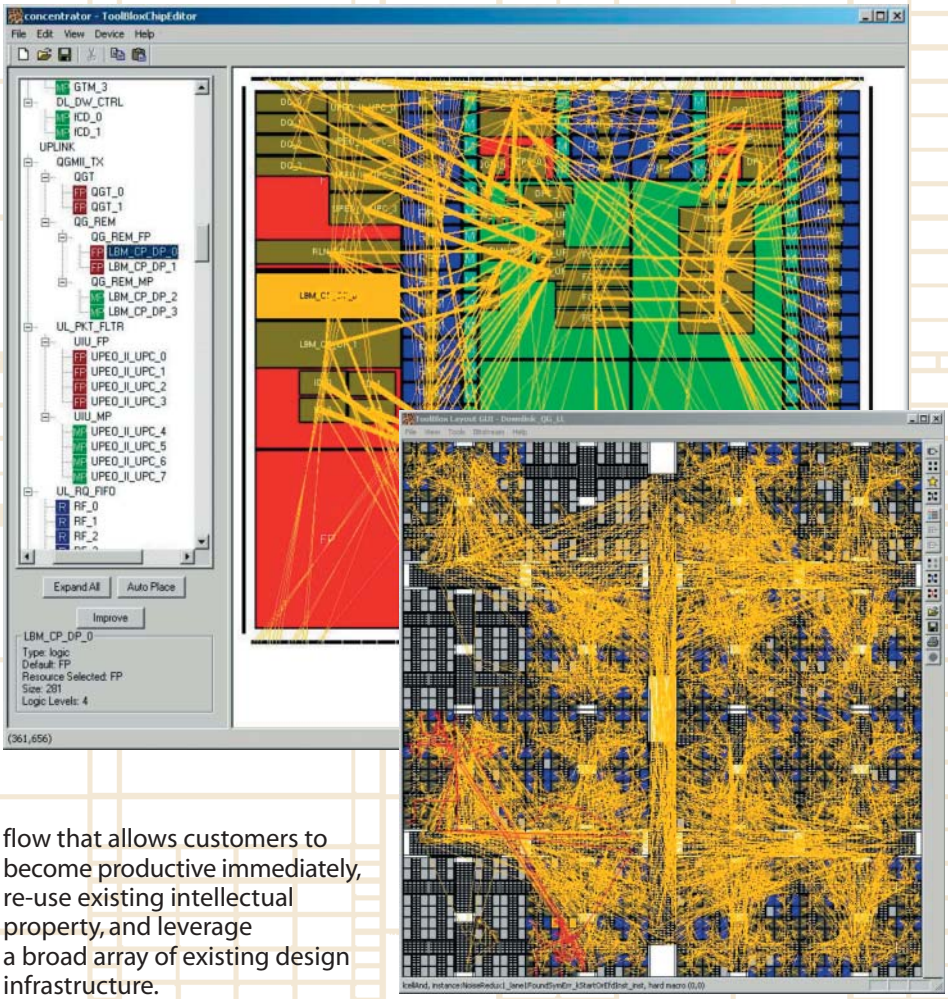
The resulting design environment enables users to quickly and easily target their RTL-based designs (Verilog or VHDL) into their device of choice.

For the front end design, ToolBlox design kits interface with third party synthesis and simulation tools to produce a netlist.

Implementation and back end processing times are significantly reduced by using Leopard Logic's highly optimized ToolBlox back end tools for floorplanning, mapping, and place & route (P&R).

Once the place and route is complete, accurate timing extraction is performed by the ToolBlox P&R tool, allowing users to perform rapid timing closure on their desktop.

The ToolBlox design tools combine the power of ASIC tools with the simplicity of FPGA tools in an easy-to-use design flow that allows customers to become productive immediately, re-use existing intellectual property, and leverage a broad array of existing design infrastructure.



Key Features

- Graphical user interfaces for fast learning curve
- Command line interface for scripting, advanced feature access and design flow automation
- Timing sensitive place & route flow for optimized device performance
- Identical design flow for HyperBlox™ FP and MP fabric types in Gladiator CLD devices
- Comprehensive design flow from RTL to silicon

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The ToolBlox Suite

ToolBlox Partition Editor

Facilitates the partitioning of the design through the use of scripts within the supported synthesis tools. Design modules are allocated to either HyperBlox FP or MP fabrics by simply tagging them.

The partitioning script system then automatically rearranges the design hierarchy to allow placement of the modules in the respective fabric within the device.

ToolBlox Packer

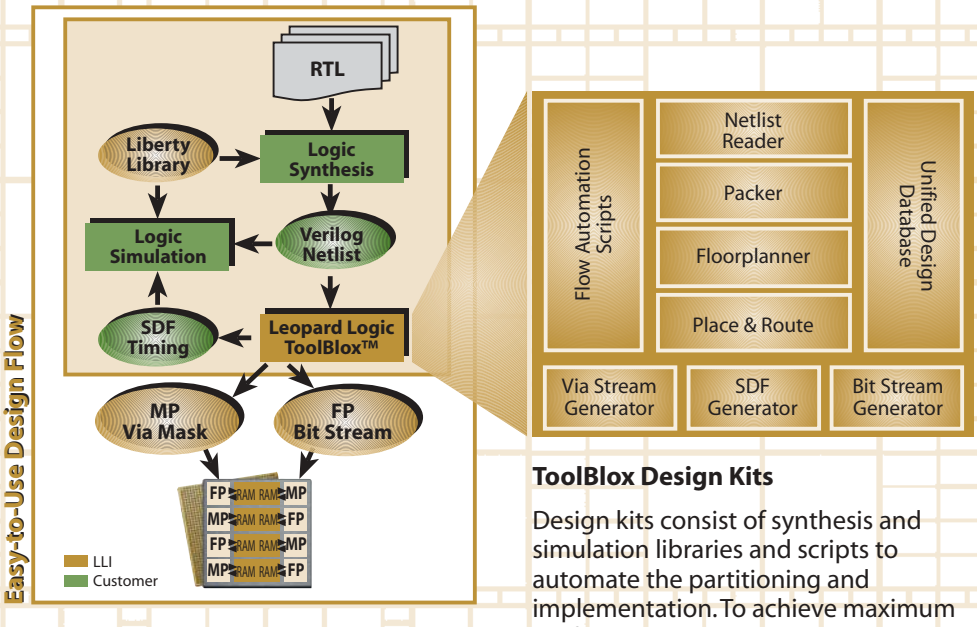
Utilizing proprietary algorithms to map the synthesized netlist into the HyperBlox core cells, the packer routinely delivers results up to 25% above other industry leading tools.

The packer takes optimum advantage of the architectural features available in the HyperBlox fabric, such as wide function support.

ToolBlox Floorplanner

Provides the graphical interface for floorplanning designs into the various Gladiator CLD devices.

The floorplanner reads the mapped netlist generated by the ToolBlox Packer and allows for device selection, module placement, I/O pad assignment, and PLL/DLL clock configuration.



ToolBlox Place & Route

A unified toolset to perform all back end layout of the design within the Gladiator CLD. Placement and routing engines utilize Leopard Logic proprietary technology to complete layout of complex designs, regularly in excess of 90% utilization. Timing is extracted into SDF files. Device programming is extracted into bitstream and GDSII files.

ToolBlox Design Kits

Design kits consist of synthesis and simulation libraries and scripts to automate the partitioning and implementation. To achieve maximum performance without manual user intervention, ToolBlox design kits also support extensive macro libraries. These libraries contain optimized macros such as adders, counters and comparators that take advantage of the Gladiator CLD hardware resources and are automatically inferred by the synthesis tools.

Supported OS Platforms

- Solaris
- Windows
- Linux

Benefits

Ease of Use

The Leopard Logic ToolBlox Suite supports all Gladiator CLD devices and provides an easy to use design flow that enables designers to rapidly implement RTL design for manufacturing in a Leopard Logic Gladiator CLD.

Integration with Industry Standard Design Tools

Third party synthesis and simulation tools are supported by Leopard Logic specific libraries and scripts. With its integrated back end tools, ToolBlox eliminates the need for expensive third party back end processing tools such as crosstalk analysis and IC level place and route, as required for other ASIC design flows.

Immediate Productivity

ToolBlox preserves existing design infrastructure and methodologies and thus allows designers to become productive within days. While the ToolBlox General User Interface (GUI) enables novice designers to get up to speed quickly, power users can use a fully script-driven methodology for maximum automation and reproducibility.