



Nimbus™

Think
Envision
Invent the future

A graphical modeling and simulation toolset that increases design productivity and reduces time-to-market, allowing users to rapidly model a design's behavior, simulate, and generate efficient VHDL or Verilog® codes.

With Nimbus's easy-to-visualize flowdiagram notation, you won't have to waste any more time reconstructing existing design descriptions or iteratively reworking your algorithm architecture. Now you can quickly create behavioral descriptions of your design and go straight to RTL without compromising the quality of your product.

Nimbus is a modeling and verification solution for large-scale systems that enables the design, analysis, and management of complex integrated circuits. Much more than just a design entry tool, Nimbus features behavioral simulation and generation of simulatable and synthesizable HDL code.



Visualize the behavior of large, complex systems

The key strength of Nimbus is the algorithmic state machine (ASM) methodology that allows users to model both data and control paths through its flowdiagram notation. A proven, patented methodology that enables true algorithm-to-hardware design with elegance and ease.

Create complex, functionally correct system models faster using cycle-based design animation

Nimbus generates VHDL or Verilog code for use with various simulators according to your HDL style preference. You can generate testbench fixtures to drive your design simulation downstream, ensuring consistency between cycle-based and event-based simulations.

Produce high-quality design documentation to help manage complex HDL design

Nimbus supports documentation at each stage of the design process through support for comments on data elements, flowdiagram objects, and state machines. These comments can be propagated to the translated HDL code. Nimbus also allows for the inclusion of synthesis directives in translated VHDL and Verilog codes.

Design systems and components which are easy to modify, maintain, and reuse

Well-documented designs reduce post-design documentation time, as well as encourage design reuse and communication among team members. High-quality, standardized HDL code makes design reuse easier.

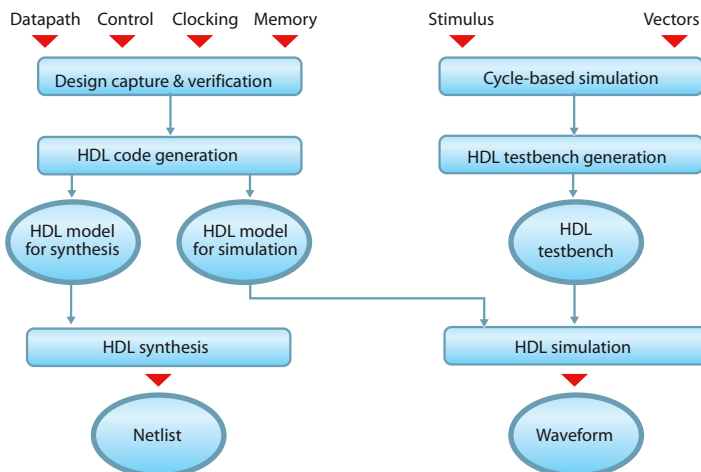
Reliability and robustness

An intelligent code generation engine provides codes that are competitive in quality to handcrafted HDL, while a robust, stable software foundation ensures that you're not constrained by the stability and performance of the tool.

Features

- **Signal definitions** to help you manage signals and properties of hardware constructs that will be automatically realized as the appropriate construct when synthesized.
- **Macro functions** for an extensive library of datapath elements simplifies the design of complex blocks and includes combinational logic datapath units, storage datapath units, and steering logic datapath units.
- **Cycle-based simulation** so that a completed design can be simulated in the behavioral simulator of Nimbus. Faster than downstream simulation, Nimbus's simulator allows you to quickly exercise the constraints on your design before translation to HDL code.
- **Testbench generation** to enable the stimulus you use during simulation to be translated to VHDL or Verilog code for consistent downstream simulation.
- **Translation into HDL codes** so that the design model can be translated into VHDL or Verilog code which can be used for specific downstream simulation or logic synthesis tools, according to a variety of user-defined style options.
- **Export function** so that design models from Nimbus can be exported and bound to component blocks in IPalette supporting better integration of design components.
- **Memory array modeling** for modeling-stored program machines, caches and memory banks.
- **Design rule-checking** for correct-by-construction through error flagging for mundane errors as well as serious design rule violations.

Functionality and Integration



O/S and System Requirements

Platform supports

- Sun OS 5.7 or Solaris 7.0
- Red Hat 7.2 or 7.3 with Lesstif

Memory Requirements

- 256MB and 3MB of disk space
- Node-lock and floating licenses available

For more information on Nimbus™ and how we can help you, please call, email or fax us at:



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